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The   
RADIO-ELECTRONIC  
**MASTER**

29th Edition

**1965**

**CERTIFIED  
ELECTRONICS INC**



*Wholesale Distributors*

- TELEVISION & RADIO COMPONENTS
- SOUND & HI FIDELITY SYSTEMS
- TEST EQUIPMENT



**CERTIFIED ELECTRONICS INC.**  
**1313 POWHATAN ST.** **ALEXANDRIA, VIRGINIA**

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29th EDITION

# THE RADIO ELECTRONIC MASTER

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Catalog of the Electronic  
Industry for products sold by  
distributors.

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# THE RADIO ELECTRONIC MASTER

1965  
29th EDITION

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# GUIDE TO PRODUCT SECTIONS

As publishers of The Radio-Electronic MASTER, we take great pride in the fact that this publication has reflected the progress and growth of the electronic industry for more than 28 years.

The 30 Product Sections listed below broadly categorize related electronic products and services so that you can quickly compare similar items within the sections. However, to locate specific products, always refer to the General Index. NOTE: Catalog pages are arranged alphabetically by manufacturers' names within each section.

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<b>Sec. 1300</b> Pages 66 thru 112	Audio: High Fidelity Tuners, Amplifiers, Sound Systems, Intercoms, Kits	<b>Sec. 3100</b> Pages 994 thru 997	Insulators, Insulating Materials & Parts
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<b>Sec. 1400</b> Pages 196 thru 300	Cabinets, Chassis, Racks, Boxes	<b>Sec. 3900</b> Pages 1011 thru 1034	Pilot & Signal Lamps, Lights & Accessories
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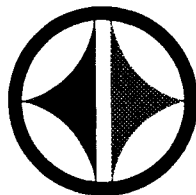
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Zip Cord (See Cable, Multiconductor)	
Zipper Tubing (See Tubing, Zipper)	



In quality communications  
antennas and standby AC electric power,  
the antenna specialists  
make everything . . .

**FROM TO**

**A Z**



**antenna specialists  
antennas, accessories, communication**

Antenna Specialists offers the most complete line of two-way radio antennas and accessories for every band. Our engineering design experience, skilled craftsmanship, use of the finest materials obtainable, quality control and extensive manufacturing facilities provide the highest quality antennas at the lowest possible cost. There's an antenna for every type of system and every antenna is fully warranted.



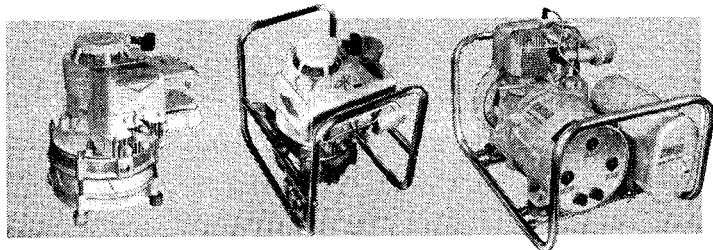
Citizens band (27 Mc.)  
Professional band (30 through 470 Mc.)  
Amateur (2-6-10 meter)  
Marine band—(27 Mc.) and (2000 through 2830 kc.)  
Broadcast band (car radio)

Major suppliers of special telescopic antennas. Our facilities are also equipped for special design system antennas. Write for full information.

**ZEUS<sup>®</sup> generator division  
generators, portable AC electric**

Reliable, instant power with only one moving part—the exclusive Permanent Magnet Alternator.

- Burn-out-proof, regardless of excessive overloading or sudden surges
- No brushes, windings, belts, slip rings, commutators or voltage regulator to cause power failure
- 115/220 volts, 60 cycles, AC—export models available
- 26% -33% lighter in weight
- Propane or gasoline—ideal for civil defense

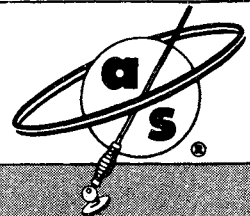


Available in ten models from 1000 to 3000 watt, AC continuous duty rating.



"Stripes of Quality"

**the antenna specialists co.**

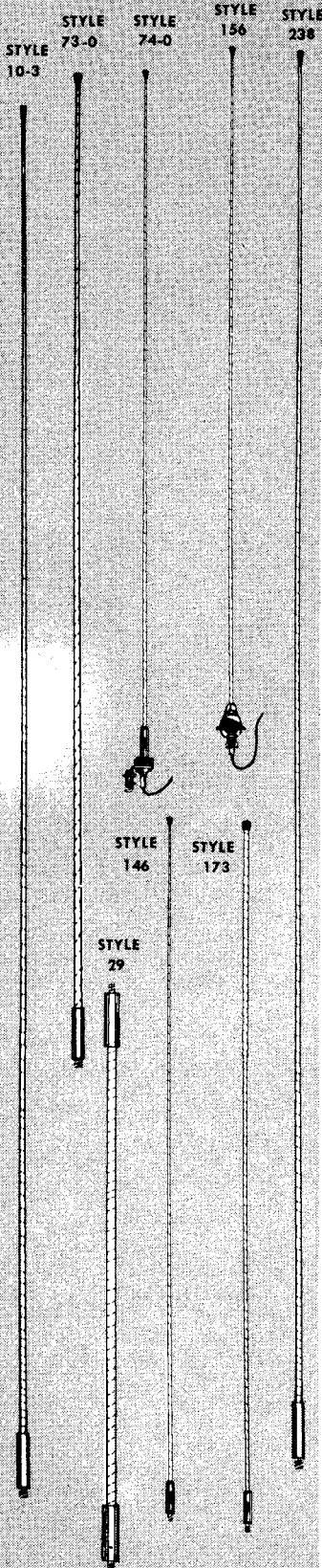






**WONDERSHAFT** Antennas. Every WonderShaft antenna is a sleek shaft of fiberglass. These rugged, lightweight antennas insulate effectively when operated under live wires, won't corrode, withstand salt water, oil, common chemicals and fumes. Fiberglass sheath provides precipitation static barrier, improving reception; withstands repeated flexing in action.

**MOBILE WHIPS**



**MOBILE WHIPS**

- STYLE 10 — Quarter wave whip. Chrome plated brass ferrule with  $\frac{3}{8}$ "-24 thread termination.
- STYLE 10-1 — 54"-60" \_\_\_\_\_ \$6.95
- STYLE 10-2 — 60"-104" \_\_\_\_\_ \$7.50
- STYLE 10-3 — 96" 27MC CB \_\_\_\_\_ \$7.50
- STYLE 29 — Base extensions,  $\frac{1}{2}$ " dia., to accommodate loading coil or attach directly to whips.
- STYLE 29-1 — 18" \_\_\_\_\_ \$5.95
- STYLE 29-2 — 27" \_\_\_\_\_ \$6.29
- STYLE 29-3 — 36" \_\_\_\_\_ \$6.95

**NORMAL MODE HELICAL ANTENNAS**

STYLE 73 — Distributed-load antenna eliminates additional loading coils; mounts in choice of positions.

Style	Range	Style	Range	Style	Range
73-0	27 MC (CB)	73-5	20 Meters	73-8	40 Meters
73-1	30-35 MC*	73-6	40 Meters	73-9	80 Meters
73-2	35-42 MC*	73-7	80 Meters	73-10	Ch. 5
73-11	42-50 MC*				4.58 MC
73-3	10 Meters				
73-4	15 Meters				

\*specify frequency  
4 ft. — \$11.25      6 ft. — \$15.90      8 ft. — \$18.75

**CB (27 MC) LOADED 4' WHIPS**

- STYLE 74-0 — Rain gutter mounted antenna, detachable installation; cadmium plated steel mounting hardware; includes 9' RG 58/U coaxial cable, shielded phono plug \_\_\_\_\_ \$14.37
- STYLE 156 — Cowl mount looks and installs like ordinary car antenna. Add antenna coupler to convert for dual CB-AM use. Includes molded plastic ball, chrome plated cap and nut, gasket.
- STYLE 156-1 — 4 $\frac{1}{2}$ ' cable \_\_\_\_\_ \$11.85
- STYLE 156-2 — 9' cable \_\_\_\_\_ \$12.12
- STYLE 156-3 — 20' cable \_\_\_\_\_ \$12.78
- STYLE 146 — Base loaded whip terminated with  $\frac{3}{8}$ "-24 thread ferrule. Fits either standard ball mount or adjustable cowl mount (Style 192) \_\_\_\_\_ \$8.95
- STYLE 173 — Top loaded whip with chrome plated brass ferrule,  $\frac{3}{8}$ "-24 thread; fits either standard ball mount or adjustable cowl mount (Style 192) \_\_\_\_\_ \$5.75

**6 METER MOBILE WHIP**

STYLE 238 — 2.7 db. average gain over quarter wave whip. 108" max. length. Chrome plated brass ferrule with  $\frac{3}{8}$ "-24 thread termination \_\_\_\_\_ \$12.50

**BASE STATION ANTENNAS**

- STYLE 72-0 — Shortened half wave antenna. Loaded top whip, folded stub in base; 10' 6" overall. U-bolts for mounting on tubing up to 1 $\frac{1}{2}$ " dia. \_\_\_\_\_ \$47.97
- STYLE 176 — Full half wave, 2-section antenna for maximum aperture. Top whip; lower section with choke stub in base. U-bolts for mounting on 1 $\frac{1}{2}$ " dia. pipe; female UHF connector; 18' 6" overall \_\_\_\_\_ \$34.62
- STYLE 61 — Ground plane antenna with high strength fiberglass radiating elements. Cadmium plated steel support bracket for mounting on 1 $\frac{1}{4}$ " pipe thread. May be trimmed to accommodate any operating frequency between 27 mc and 88 mc; cutting curve furnished \_\_\_\_\_ \$35.28

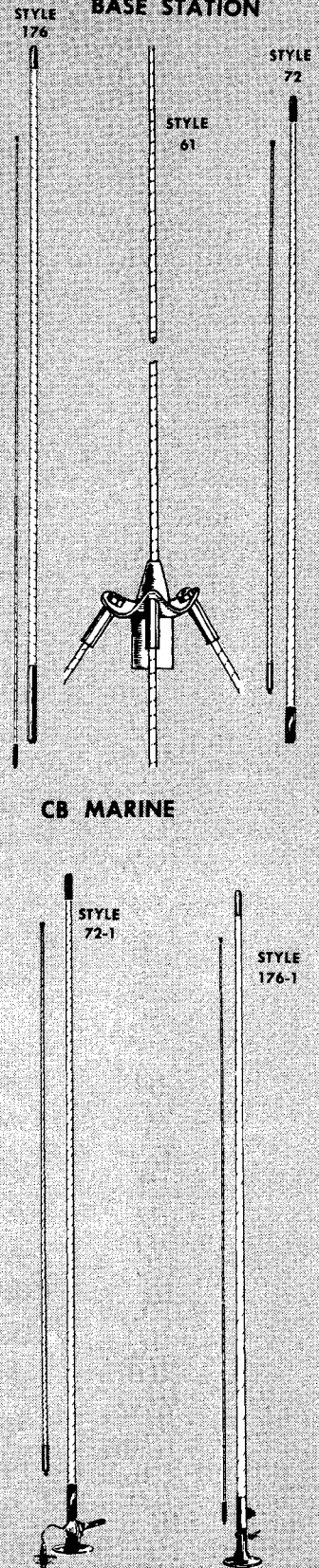
**CB MARINE ANTENNAS**

- STYLE 72-1 — Marine version of Style 72-0. Ideal for run-about boats. Chrome plated deck mount for swift, easy raising and lowering. No ground plates necessary for installation. Feed-through fitting for deck or bulkhead thickness up to 1". PL-259 UHF connector. 10' 6" overall \_\_\_\_\_ \$67.50
  - STYLE 176-1 — Marine version of Style 176 provides base station performance for larger boats. No ground plates necessary for installation. Complete with chrome plated fold-down base and insulated plastic stand-off bracket. SO-239 UHF connector. 18' 6" overall \_\_\_\_\_ \$54.95
- All prices net.

**COLUMBIA PRODUCTS COMPANY**  
COLUMBIA, S. C. Subsidiary of Shakespeare Co.

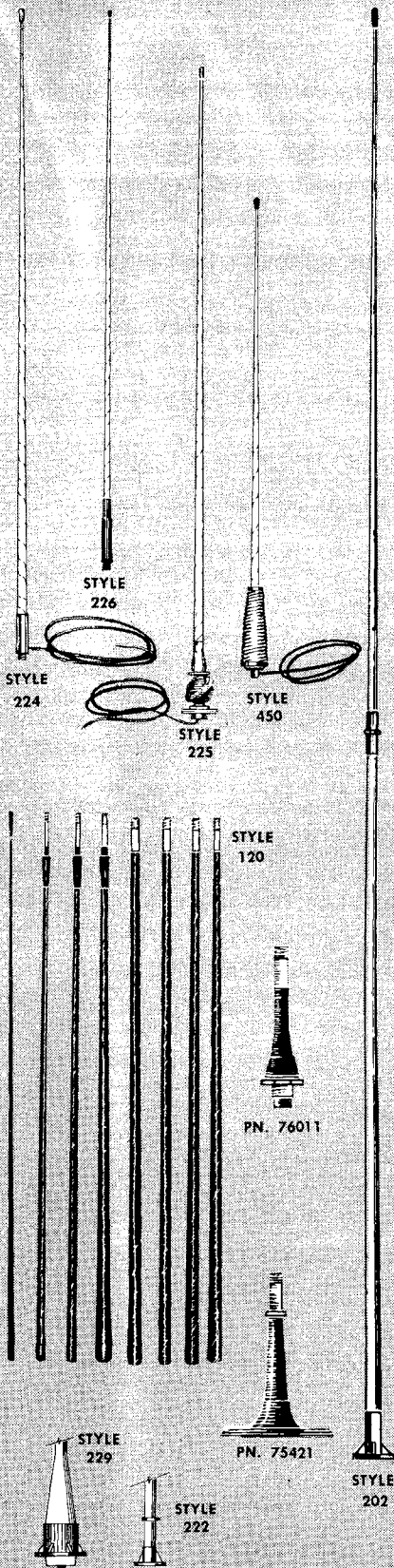


**BASE STATION**



**WONDERSHAFT** **ANTENNA**  
COLUMBIA PRODUCTS CO.

COMMERCIAL ANTENNAS



3 DB HIGH GAIN MOBILE ANTENNAS

**STYLE 225** — Center fed, half wave coaxial antenna for maximum efficiency. Antennas are independent of mounting location and length of transmission cable. Provides 3 db. gain over quarter wave whip. 148-166 mc. Cutting curve furnished for trimming antenna to correct resonant length. Aluminum ball mount through which coaxial cable passes; choice of BNC or UHF plug. 76" maximum length \_\_\_\_\_ \$25.50

**STYLE 224** — Same antenna as Style 225 except terminates with 3/8"-24 thread; chrome plated brass ferrule. Fits standard ball mount and spring. 72" maximum length \_\_\_\_\_ \$18.75

**STYLE 450** — Center fed, coaxial half wave antenna that covers the 450-470 mc band. Isolating choke stub suppresses standing wave on transmission cable. Unit includes 12' RG 58/U cable; chrome spring; choice of BNC or UHF connector. 19" overall height \_\_\_\_\_ \$20.00

BASE STATION ANTENNA

**STYLE 226** — Center fed, half wave coaxial antenna. 148-166 mc. Economy design rated as unity gain compared with a half wave dipole. Chrome plated brass mounting tube; UHF connector; U-bolts. Cutting curve furnished for trimming antenna to correct resonant length. 78" maximum length \_\_\_\_\_ \$18.75

WHIP ANTENNAS

**STYLE 120** — Fiberglass-encased antenna, forerunner of AT-1011/U military antenna. 4 tapered sections form rugged 16' mobile antenna; 4 base extension sections to extend to 32' stationary antenna. Choice of Stand-off Base, PN 75421 or Feed-through Base, PN 76011 \_\_\_\_\_ \$295.00

**STYLE 202** — Heavy duty whip antenna excellent for ship-board or base station use. 2-sections; 3/4" tip dia., 3 1/4" base dia. Stainless steel center joint; 35" overall height. Conductor terminates in naval bronze mounting fitting with 7 5/8" dia. flange; four 21/32" mounting holes equally spaced on a 6" bolt hole circle \_\_\_\_\_ \$295.00

**STYLE 222** — Same as Style 202 except conductor terminates in a metal band 12" above mounting flange \_\_\_\_\_ \$329.25

**STYLE 229** — Same as Style 202 except bottom of antenna is designed to function as its own feed-thru insulator mounting base. Bolt hole pattern is eight 23/32" holes equally spaced on 10 3/4" dia. bolt circle \_\_\_\_\_ Not available

ACCESSORIES

**STYLE 70-1** — Saturn Ball Mount — universal swivel mount has locking ring, faces serrated for positive adjustments; low-loss molded fiberglass insulator plate mounts watertight on flat and curved surfaces \_\_\_\_\_ \$7.95

**STYLE 192** — Adjustable Cowl Mount — mounts and looks like a conventional AM auto antenna. Molded plastic ball; chrome plated cap, nut; gasket. Choice of RG 58/U coaxial transmission cable lengths.

**STYLE 192-1** — 4 1/2' \_\_\_\_\_ \$3.81

**STYLE 192-2** — 9' \_\_\_\_\_ \$4.65

**STYLE 192-3** — 20' \_\_\_\_\_ \$6.57

**STYLE 97** — Bumper Mount — rugged, no-holes assembly; bright cadmium plated chains, brackets adjust to all bumpers; attach in minutes. Special low-loss molded insulator \_\_\_\_\_ \$7.50

**STYLE 197** — Mounting Package — used for bulkhead mounting Style 72-0 on boat. 2 insulated stand-off brackets, complete with chrome plated brass bolts, nuts and lock washers \_\_\_\_\_ \$9.77

**STYLE 190** — Chrome Plated Swivel Base — with stainless steel external hardware. UHF coaxial termination \_\_\_\_\_ \$9.57

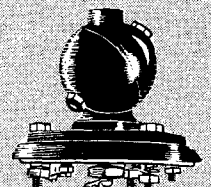
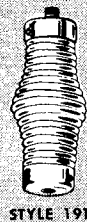
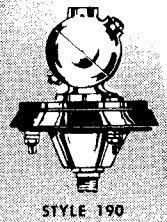
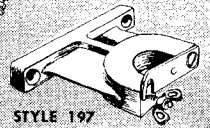
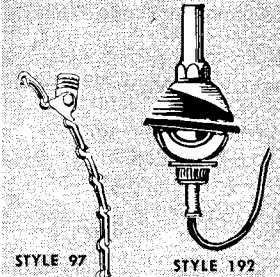
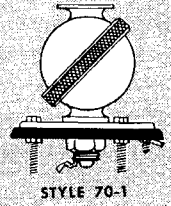
**STYLE 191** — Chrome Plated Spring — heavily plated to improve appearance, protect against corrosion. Lock washer included \_\_\_\_\_ \$5.37

**STYLE 71-1** — Barrel Type Base Spring — cadmium plated. Faces ground flush to assure perfect alignment \_\_\_\_\_ \$4.50

**STYLE 155** — Ball Mount — universal swivel base mount; black painted finish \_\_\_\_\_ \$5.94

All prices net.

ACCESSORIES For Your WonderShaft Antennas



COLUMBIA PRODUCTS COMPANY

subsidiary of the Shakespeare Company • Columbia, South Carolina

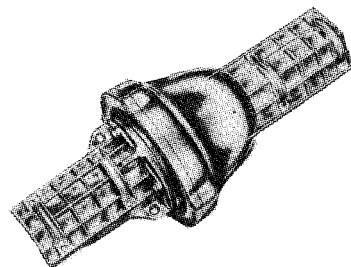


# Heavy Duty Antenna Rotor Systems

## ROTORS FOR TV, COLOR TV, FM & FM-STEREO

Class
252 • 00

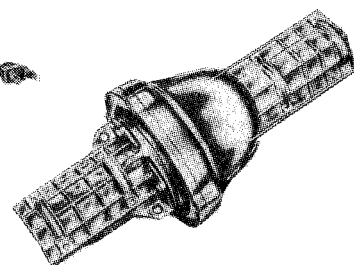
Previously considered necessary only for deep fringe area reception, antenna rotors are now required in nearly every location due to the more demanding performance requirements of color TV and FM stereo broadcasting. The Cornell-Dubilier antenna rotors are the only heavy duty TV-FM antenna rotors available. They are designed to support the heaviest antennas and provide reliable performance under the most severe conditions. All CDE TV-FM antenna rotors are supplied with the heavy duty weatherproof bell casting motor unit illustrated. This unit provides four to five times the turning and braking torque of competitive models, features a 6" diameter built-in thrust bearing, and utilizes heavier gears and construction throughout. Coupled with the wide selection of control boxes offered, the CDE rotor is clearly the outstanding buy in antenna rotors.



## MANUAL COMPASS PATTERN MODEL

Class	Model
252 • 11	TR-2C

The TR-2C antenna rotor system combines the smart styling of a Raymond Loewy/William Snaith Inc. control box design with the rugged CDE bell motor unit. The control box is extremely small and blends with any decor. CDE's exclusive compass pattern indicating light system and end of rotation light provide for rapid rough tuning with fine tuning visually or by FM tuning indicator. The touch-bar control system provides precise and accurate antenna orientation. TR-2C uses 8 wire cable. 110v AC model is standard; 220v AC model optional at added cost.

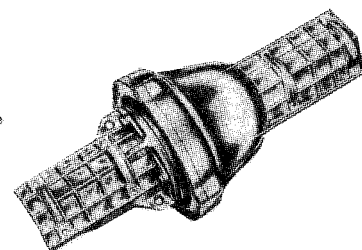
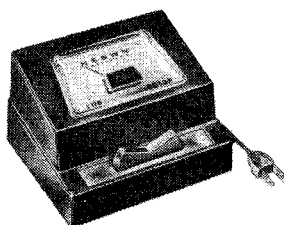


**LIST PRICE \$39.95**

## MANUAL METER MODEL

Class	Model
252 • 12	TR-4A

The model TR-4A couples a meter control system with the heavy duty CDE bell casting motor unit. The compass calibrated meter provides for rapid rough tuning with fine tuning visually or by FM tuning indicator. The touch bar control system permits rapid and precise antenna orientation. The TR-4A model uses 4 wire control cable. Standard model is 110v AC; 220v AC models are available at added cost.

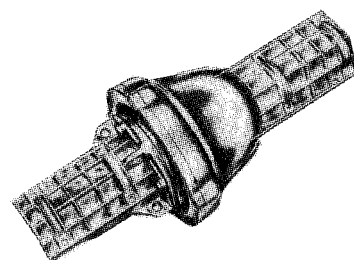
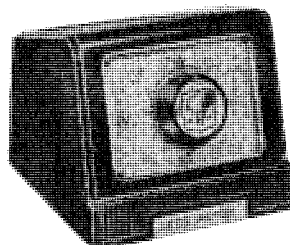


**LIST PRICE \$39.95**

## AUTOMATIC MODEL

Class	Model
252 • 15	AR-22

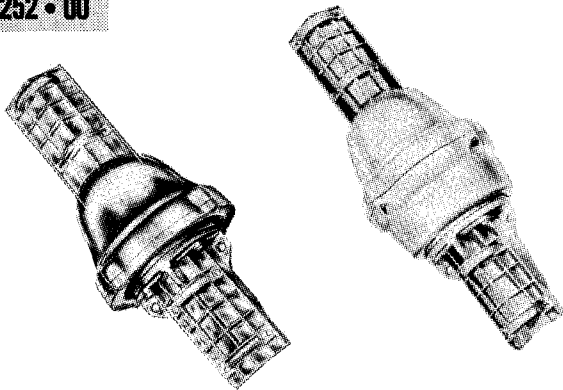
The model AR-22 rotor system combines automatic control and the heavy duty bell motor unit. When the AR-22 control knob is turned to the desired antenna direction, the motor unit follows in precise 6 degree steps. When the desired direction is reached, the unit shuts itself off automatically. The automatic model represents the ultimate in convenient and precise antenna direction control. The system uses 4 wire cable. 110v AC is standard; 220v AC models available at added cost.



**LIST PRICE \$49.95**

# Heavy Duty Antenna Rotor Systems

Class  
252 • 00

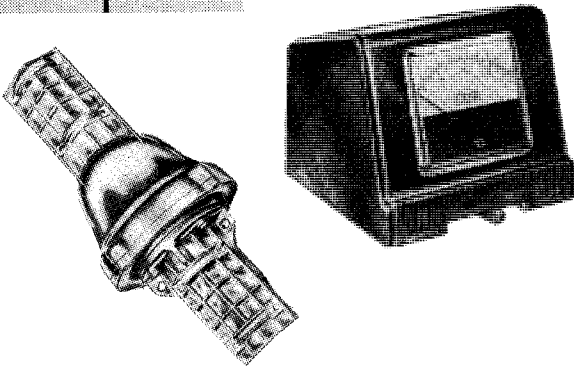


## ROTORS FOR AMATEUR APPLICATIONS

Cornell-Dubilier antenna rotors are the standby of amateurs throughout the world. Both amateur models utilize the famous CDE bell casting motor units. Both types are designed for mast or tower mounting. The famous HAM-M model is designed to support and operate the heaviest amateur beams available. The recently introduced model TR-44 is designed specifically for intermediate loads — large VHF arrays and small HF combination antennas. The two types cover the range of amateur requirements for accurate, precisely calibrated antenna rotors.

Model  
TR-44

Class  
252 • 45



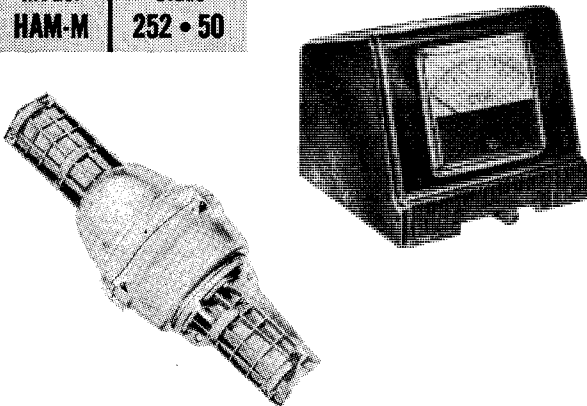
## INTERMEDIATE AMATEUR MODEL

Although dimensionally identical to CDE TV rotors, the TR-44 has been designed specifically for intermediate amateur requirements. It greatly surpasses TV rotors in wind resistance, torque and dead weight capability. In addition it features a positive braking system built into the motor unit. The control is precisely calibrated to provide for rotation and indication through a complete 360 degree range. 110v AC is standard; 220v AC models available at added cost.

**AMATEUR NET PRICE \$59.95**

Model  
HAM-M

Class  
252 • 50



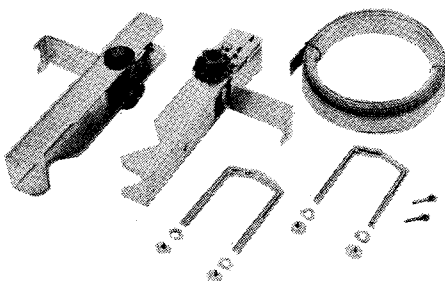
## ADVANCED AMATEUR MODEL

The famous HAM-M is the best unit available for amateur use. It supports 1000 pounds dead weight and features a positive brake to lock the rotor in position against 3500 inch-pounds of torque from wind-pressure. Designed for tower or mast mounting, the HAM-M is supplied with a precisely calibrated control for complete 360 degree rotation and indication. Double stage switch provides for direction indication without moving antenna. 110v AC standard; 220v AC models available at added cost.

**AMATEUR NET PRICE \$119.50**

Type  
AK-85

Class  
252 • 00



## ROTOR ACCESSORIES - CHIMNEY MOUNT

The patented Cornell-Dubilier "SPEE-DEE" mount chimney mount provides a convenient means for quickly securing any TV or FM antenna mast or rotor mast. The patented ratchet type tightening device permits quick and easy installation. All parts used are corrosion resistant. The AK-85 includes two corner brackets with ratchet tighteners and mast mounting provisions, two lengths of banding strap, two mast U-bolts with hardware and two cotter pins for locking ratchet pawls.

**LIST PRICE \$4.95**



# BT BLONDER-TONGUE

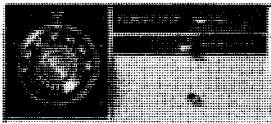
## UHF PRODUCTS

### UHF CONVERTERS



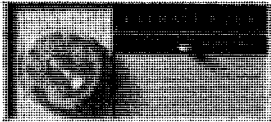
**ALL-CHANNEL, ALL TRANSISTOR UHF CONVERTER BTX-99** Adds all UHF channels (14 to 83) to any TV set. The ideal converter for prime signal areas. In many of these areas, it performs well with an indoor antenna. The many quality features that made the original '99' America's best selling converter are incorporated in this unit.

The all-transistor circuit enhances the performance of the BTX-99 by providing maximum signal power and drift-free, distortion free performance. UL approved. Net **\$19.85**



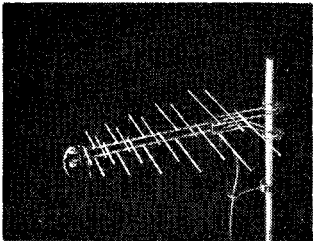
**DELUXE ALL-CHANNEL, ALL TRANSISTOR UHF CONVERTER/AMPLIFIER, MODEL BTX-11** Adds all UHF channels (14 to 83) to any TV set. The most powerful and stable UHF converter ever engineered for the home. It is the perfect selection almost anywhere within the range of a UHF station producing superlative TV pictures even in weak signal areas.

The BTX-11 features easy pinpoint tuning with a dual-speed channel selector and vernier tuning. This deluxe converter also incorporates a powerful low-noise signal amplifier as well. It triples TV signal strength. The result: sharp, clear black and white pictures, full fidelity, brilliant color TV—no ghosts, no snow. UL approved. Net **\$31.20**



**ALL-CHANNEL TUNNEL DIODE UHF CONVERTER, MODEL BTD-44** Adds UHF channels (14 to 83) to any TV set. Especially recommended for prime signal areas as the most economical quality converter available today. Utilizes tunnel diode for maximum reliability. Uses penny pinching modern cordless power for convenience and economy of operation. Operates on ordinary flashlight battery which lasts from 6 to 9 months. Net **\$13.20**

### UHF ANTENNAS



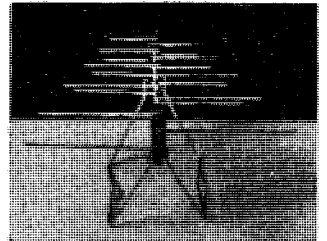
Blonder-Tongue UHF antennas are designed to match the high performance standards on all UHF channels of its famed UHF converters. They employ the well-known Periodic principle.

#### **GOLDEN DART OUTDOOR UHF ANTENNA**

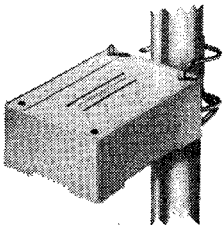
The unique use of the Periodic principle contributes to a uniform, high gain across the entire UHF spectrum for sharp, ghost-free pictures. Full bandwidth — makes the Golden Dart excellent for color and black & white TV. Completely pre-assembled — nothing to snap out, no screws to tighten, the Dart mounts to the mast in seconds. Smallest and most compact of all UHF antennas, it's easy to piggyback with any VHF antenna. Rugged, unitized and welded construction means no moveable joints to cause trouble. For deep fringe area reception, two Darts can be stacked with sturdy, easy-to-use stacking bars (model 3519). Dart Net **\$3.55** Stacking bars Net **.95**

#### **GOLDEN ARROW INDOOR UHF ANTENNA**

Outperforms other available indoor UHF antennas by providing peak performance on all UHF channels 14-83. The Golden Arrow employs 10 working elements to provide constant high gain and matched impedance on all channels. The excellent design minimizes ghosts and other interference. Full bandwidth, flat response means sharp black and white reception and true fidelity color pictures. Sturdily built, the Golden Arrow snaps together easily and securely. Net **2.70**



### UHF AMPLIFIERS AND COUPLERS

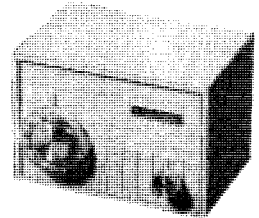


**ABLE-U2 CHANNEL 14 to 83 MAST-MOUNTED UHF AMPLIFIER** Where black and white pictures are fuzzy, where color pictures lack brilliance, the addition of the Able-U2 will produce a dramatic improvement. The Able-U2 uses a 2 transistor circuit to provide maximum gain, excellent impedance match and assure low-noise, snow-free reception. Remote AC power supply sends a safe 15 volts to the mast mounted amplifier on the same down lead that delivers the signals to the set. 300 ohm stripless screws at terminals. Miracle Mount for instant mast mounting. Net **\$26.95**

**UHF COUPLER, MODEL UHF-2** Recommended for all UHF areas — can be used to combine or split UHF channels. Low loss, high isolation. Net **\$2.30**

**ALL CHANNEL COUPLER — MODEL UV-2** World's first channel 2 to 83 coupler capable of delivering full power signals to 2 UHF or 2 VHF and UHF receivers operating on the same antenna. Excellent intersets isolation, low loss. Net **\$2.00**

**U/BOOST CHANNEL 14 to 83 INDOOR UHF AMPLIFIER, MODEL UTB-1** Though not as effective as the Able-U2, it can be used in some poor signal areas to bring in sharper, clear pictures. Effective with weak TV sets or non-amplified converters. A.C. convenience receptacle for UHF converters or all-channel TV set. 300 ohm stripless terminals. Net **\$17.35**



**UHF-VHF ANTENNA COUPLER, MODEL A-107** Combines UHF and VHF antennas, or provides separate VHF and UHF output from a single antenna. Isolation 15db. 300 ohm. Net **\$3.15**



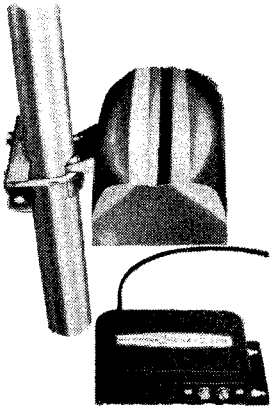


# BLONDER-TONGUE

## PRODUCTS TO IMPROVE HOME TV RECEPTION

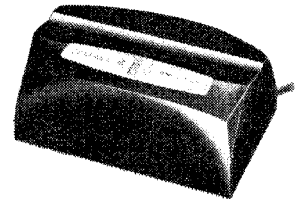
### WORLD'S FIRST ALL CHANNEL UHF/VHF AMPLIFIERS

World's first channel 2-83 amplifiers. The perfect mate to any all-channel TV receiver, they also improve reception when used with sets equipped with UHF converters. Only obsolescence-proof TV amplifiers on the market.

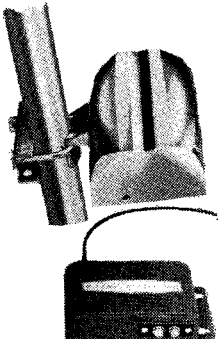


**U/VAMP-2 WORLD'S FIRST MAST-MOUNTED UHF/VHF AMPLIFIER** The world's first channel 2 to 83 amplifier. Mounts at antenna to achieve optimum signal-to-noise ratio. Unique two transistor circuit provides power to turn fuzzy pictures into sharp, clear ones, and handle strong local TV signals without overloading. Built-in FM filter reduces overload caused by local FM stations. Remote AC power supply sends AC power up to the mast mounted amplifier on the same downlead that delivers the signal to the set. Stripless 300 ohm screws. Rugged weather-protected cast aluminum amplifier housing. Other U/Vamp-2 features: separate antenna inputs for UHF and VHF allow the use of the best antenna for each band. Built-in low-loss UHF/VHF splitter which means that no additional unit is required to separate the signals at the TV set or UHF converter antenna terminals. Net \$33.25

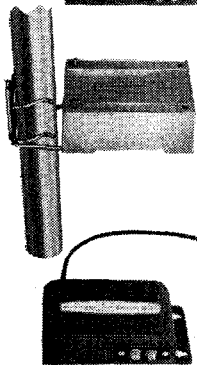
**VU-ALL 2, WORLD'S FIRST INDOOR UHF/VHF AMPLIFIER** Installs easily anywhere in the home. Unique two-transistor circuit design achieves excellent gain, low noise figure for superior reception on up to two TV sets. For 2-set operation it provides an excellent impedance match, necessary isolation between sets, plus an increase in the antenna signal power. Single 300 ohm input accepts combined UHF/VHF twinlead. Low noise 2-transistor circuit provides gain to bring in weak channels and minimize overloading on strong local station. Built in FM filter prevents overload from strong local FM Stations. 300 ohm stripless terminals. Net \$27.50



### MAST MOUNTED VHF AMPLIFIERS

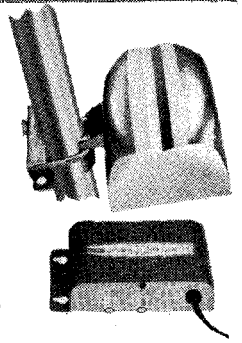


**VAMP-2 MAST-MOUNTED, 2-TRANSISTOR, 2-SET VHF AMPLIFIER** Deluxe home TV amplifier. Costs a few dollars more than most all-transistor amplifiers, but outperforms them all. Powerful 2-transistor circuit brings in weak, distant channels with sparkling clarity. All new circuit minimizes overload from strong local TV or FM stations. When used with one set—amplifier increases signals five times. Convenient splitter at the power supply, provides connections to 2 sets. Excellent for color. Easy installation on the mast in seconds. The remote power supply can be installed anywhere indoors, sends a safe 15 volts to the amplifier on the same twinlead that brings the signal down. The amplifier is housed in a rugged weather-proof aluminum cast housing. Stripless 300 ohm screws. Net \$25.85



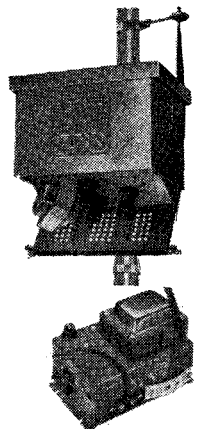
**VAMP-1 MAST-MOUNTED TRANSISTOR VHF AMPLIFIER** Has a lower noise figure than any tubed booster on the market, lower than most transistor boosters. Designed for mast mounting to take advantage of best signal-to-noise ratio and provides clean snow-free reception. Especially designed transistor circuit increases antenna signals up to five times. Especially designed FM trap—reduces overload from strong local FM stations. Easy installation with famous 'Miracle Mount' which snaps on any antenna mast in seconds. Separate remote power supply can be installed at set. Patented 300 ohm stripless terminals. Net \$17.10

**VAMP-2-75 75 OHM HOME TV AMPLIFIER SYSTEM** Powerful, low-noise 2-transistor TV amplifier is ideal as the heart of the small professional system in the home, TV showroom or service shop. Delivers all the signal power to bring in the weak signals, will not overload due to strong local TV or FM stations. Excellent for color. Most important, it is equipped for use with 75 ohm coax cable. Single 75 ohm output can be split to deliver signals to as many as 8 TV sets. Input is 300 ohm, eliminating the need for a separate balun. Rugged, weatherproof cast aluminum amplifier housing. Can be mounted on mast in seconds. Remote AC power supply, which can be installed anywhere indoors, sends a safe 15 volts to amplifier on the same coax cable that brings the signal down. Net \$29.55



**MAST-MOUNTED TV/FM AMPLIFIER (with remote power supply) — MODEL AB-3** — Low-noise amplifier virtually eliminates snow. Can be used in a fringe area home installation, or as a pre-amplifier in a master TV system.

The remote power supply sends AC power up to the mast-mounted amplifier on the same downlead that carries the antenna signal down. It provides the correct power to the amplifier for any length of connecting cable up to one mile (when open twin-lead is used). Amplifier uses low noise frame-grid tubes. Provides 25 db minimum gain on all VHF-TV and FM stations. Choice of 300 ohm or 75 ohm output. Stripless terminals for 300 ohm twin-lead; solderless "quick-disconnect" terminals for 75 ohm coax. No balun is needed because the input is matched to 300 ohm antennas. Net \$78.50



# BT BLONDER-TONGUE

## PRODUCTS TO IMPROVE HOME TV RECEPTION

### IN-THE-HOME VHF/FM SIGNAL AMPLIFIERS

**TRANSISTOR 4-SET TV/FM BOOSTER, MODEL IT-4**—The IT-4 "Quadrabooster," designed around a rugged, long-life transistor, is very inexpensive to operate and requires almost no maintenance. The transistor takes so little power that it need never be turned off. Specially designed for weak signal areas, the "Quadrabooster" provides crisp, brilliant pictures for as many as four TV or FM sets from a single antenna. Used for one set it increases signal strength 4 to 8 times. Used for two, three or four sets, it has amplifying power to spare and provides necessary isolation between sets.

Net \$19.95

**2-SET TV/FM BOOSTER, MODEL B-42** Low-cost combination booster-distribution system provides clear, sharp reception for up to 2 TV or FM sets from one antenna. The B-42 more than doubles signal voltage for a single set, with excellent isolation. Its frame-grid tube amplifier is ideal where there are both strong and weak signals because it can handle strong signals without overloading.

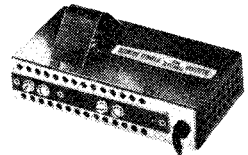
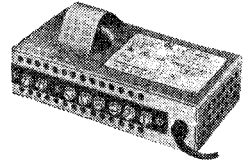
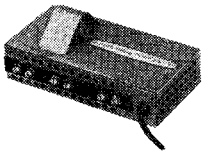
Net \$14.25

**4-SET TV/FM BOOSTER, MODEL B-24c** Triples signal power to one set. Also acts as an amplified coupler to operate up to 4 TV or FM sets. Provides proper impedance match and isolation between sets and increases picture power when used with 2 or 3 sets. With 4 sets it insures that each TV or FM set receives more than 90% of the signal power picked up by the antenna.

Net \$17.25

**FM STEREOBOOSTER, FMB** — Covers the entire FM band, increases signal strength 8 times (18 db) prior to the signal entering the tuner or radio. This assures the most powerful, distortion-free reception. Extremely low noise figure—absolutely essential in FM stereo where overall signal-to-noise ratio may be degraded by a factor of 20 db or more over regular FM reception. Signal handling capability—won't overload when there are strong local stations present. Low VSWR eliminates distortion resulting from phase and amplitude variation and standing waves caused by impedance mismatch. Compact, easy to install anywhere indoors—near the FM tuner or radio, on the base board.

Net \$14.55



### EXACT-MATCH COUPLERS

**4-SET COUPLER, COLOR-4** — Super deluxe 4-set coupler, especially for Color TV. Offers maximum inter-set isolation (16 to 24 db), excellent impedance match and only a 6.5 db insertion loss. The Color-4 uses ferrite broadband transformers in balanced bridge design and it has a VSWR of less than 1.5. Result: Lower inherent insertion loss, less smear and ghosts, sharper pictures than any other 4-set coupler.

Net \$6.85

**2-SET COUPLER MODEL A-102**—Delivers more signal to each TV or FM set, with greater inter-set isolation than other couplers. Isolation: 10-20 db.

Net \$2.00

**UHF COUPLER, MODEL UHF-2**—Recommended for all UHF areas—can be used to combine or split UHF channels. Low loss, high isolation.

Net \$2.30

**ALL CHANNEL COUPLER—MODEL UV-2**—World's first channel 2 to 83 coupler. Capable of delivering full power signal to 2 UHF or 2 VHF and UHF receivers operating on the same antenna. Excellent inter-set isolation, low loss.

Net \$2.00

**4-SET COUPLER MODEL A-104**—Directional coupler with flat response from 50-220 mc. Feeds 4 VHF receivers from one antenna, or mixes 4 antennas into one line. Isolation: 12-20 db.

Net \$3.00

**HI-LO ANTENNA COUPLER MODEL A-105** Combines high and low band VHF antennas, or provides separate high and low output from a single antenna. Isolation: 21 db.

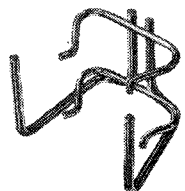
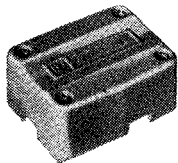
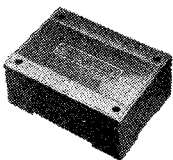
\$3.10

**UHF-VHF ANTENNA COUPLER, A-107** The choice in UHF areas throughout the country. It combines VHF and UHF antennas, or provides separate VHF and UHF outputs from a common line or antenna. Less than 1.0 db loss.

Net \$3.15

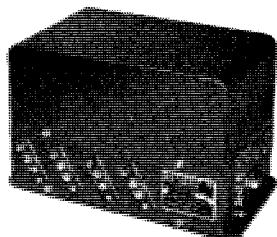
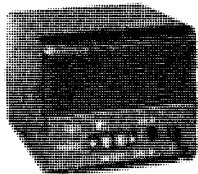
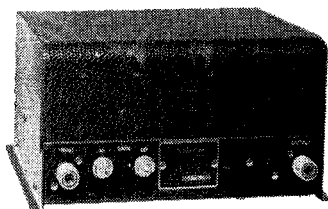
**NEW — MIRACLE MOUNT**—snaps on any mast. Fits all B-T couplers.

Net \$.73



# BT BLONDER-TONGUE

## MASTER ANTENNA SYSTEM COMPONENTS



### BROADBAND AMPLIFIERS

#### MODEL MLA-C, BROADBAND 40 DB VHF AMPLIFIER

Broadband VHF amplifier with all the features essential for easy installation and superior reception in large or small TV systems. More than 40 db amplification on all VHF channels. Separate high and low band tilt and gain controls.

MAX. OUTPUT (across 75 ohms) 2.0 volts per band for less than 1% cross-modulation 3.5 volts per band for less than 3% cross modulation. Net **\$94.85**  
**MODEL MLA-FM** — Similar to MLA-C but includes FM band. Net **\$107.50**

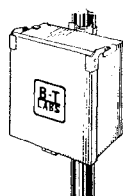
#### MODEL HAB, BROADBAND VHF/FM AMPLIFIER

For use in master, community and home TV systems, 25 db min. gain. Both 300 and 75 ohm inputs and outputs. Separate hi and lo band gain controls. Uses frame grid tubes. Max. Output (across 75 ohms): 0.9 volts for less than 1% cross modulation (low band); 0.6 volts for less than 1% cross modulation (high band); 2.5 volts for less than 3% cross modulation (low band); 1.0 volts for less than 3% cross modulation (high band). Net **\$49.65**

#### MODEL DA8-B, 8 OUTLET VHF DISTRIBUTION AMPLIFIER

Ideal for garden apartments, motels, TV showrooms, deluxe home installation and other small TV systems. Provides 8 amplified, isolated TV outlets from one input. Choice of 75 ohm or 300 ohm input and output. 10 db minimum gain on all channels at each outlet. 22 db isolation. Low noise, all triode circuitry. Prevents overload through 10:1 gain control range. Net **\$64.55**

### HOUSINGS



#### MODEL MWH-2 WEATHERPROOF HOUSING

Weatherproof enclosure for Master TV equipment. Has perforated mounting surface and adjustable support brackets. Front-opening sealed door and sturdy hasp. Irridite-finish, cadmium-plated steel. 18¼"x14"x6".

Net **\$33.70**

#### MODEL MRH-A WEATHERPROOF & RADIATION-PROOF HOUSING

Same as MWH-2 except is also radiation-proof. Net **\$42.20**

#### MODEL BH-1 INDOOR BREEZEWAY HOUSING

Fully ventilated. Perforated mounting surface. Keyed slots for vertical or horizontal mounting. Provision for locking. 20"x27"x10½".

Net **\$36.60**

### INSTRUMENTS

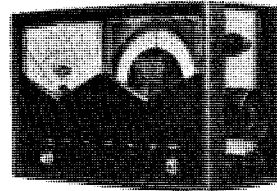
#### MODEL 4102 RF SWITCHER (DC to 900 MC)

Permits two signal tracings to be simultaneously displayed on an oscilloscope, either superimposed or alternatively at the rate of 30 cps. Also permits either tracing to be seen independently for making direct, immediate comparisons between input and output voltages of any circuit under test; for precisely measuring VSWR, amplifier gain or attenuation; and other applications involving equipment performance evaluation against given standards. Provision for 360° phase adjustments. Net **\$215.00**

#### MODEL FSP 3B TRANSISTOR FIELD STRENGTH WATTMETER

Portable — weight 10 lbs. Rechargeable, battery-powered. Frequency: 52-220 mc in one range; Sensitivity: 5 microvolts minimum readable signal and 60 microvolts full scale; Bandwidth: 3 db points, 0.5 mc. Percentage Modulation Ranges: 0 to 5% and 0 to 50%. Measurement Range: 10.0 microvolts to 3 volts in 18 ranges 0.25 micro-watts to 10 watts in 10 ranges. Input impedance 75 ohm unbalanced and 300 ohm balanced.

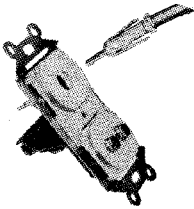
Net **\$440.75**



# BT BLONDER-TONGUE

## SPLITTERS, TAPOFFS, FEED-THRU, BALUNS, CONNECTORS

### VERSA-TAPS, FLUSH-MOUNTED MATV OUTLETS



Use separate cover plates so that Versa-Taps can be installed and system checked out before rooms are painted—at the same time electrical outlets are installed.

- Can be covered with any standard AC well-plates to eliminate problems of matching decor.
- Wide variety available for VHF, FM or UHF, plus any combination.
- All Versa-Taps available with 23 db, 17 db or 12 db isolation.

MODEL	DESCRIPTION	PRICE
V-1PFT	75 ohm Feed Thru	\$1.70
V-1SMT	Matching Transformer	3.10
V-1S12-X	300 ohm output 12db Tapoff	2.00
V-1S17-X	300 ohm output 17db Tapoff	2.00
V-1S23-X	300 ohm output 23db Tapoff	2.00
V-1P12	75 ohm output 12db Tapoff	2.15
V-1P17	75 ohm output 17db Tapoff	2.15
V-1P23	75 ohm output 23db Tapoff	2.15
V-1M12	75 ohm output 12 db Tapoff	2.65
V-1M17	75 ohm output 17db Tapoff	2.65
V-1M23	75 ohm output 23db Tapoff	2.65
V-2P12	75 ohm, two 12 db outputs Tapoff	3.15
V-2P17	75 ohm, two 17 db outputs Tapoff	3.15
V-2P23	75 ohm, two 23 db outputs Tapoff	3.15
V-1U12	75 ohm, output 12 db Tapoff	2.50
V-1U17	75 ohm, output 17db Tapoff	2.50
V-1U23	75 ohm, output 23 db Tapoff	2.50
V-2U12	Two 75 ohm outputs, 12 db Tapoff	3.70
V-2U17	Two 75 ohm outputs, 17 db Tapoff	3.70
V-2U23	Two 75 ohm outputs, 23db Tapoff	3.70
V-3156-12	27db FM (300 ohm) with 12db TV (75 ohm) Tapoff	3.30
V-3156-17	27db FM (300 ohm) with 17db TV (75 ohm) Tapoff	3.30
V-3156-23	27db FM (300 ohm) with 23db TV (75 ohm) Tapoff	3.30

S = 300 ohm striplless screws (no mating connector needed)  
 P = Solderless autoplug (mating plug supplied)  
 M = Benconnector (mating plug M-73 supplied)  
 U = UHF connector (order mating plug separately)

### INDOOR TAPOFFS

- MODEL TF-731B.** Flush mounted. Bridge input connector. One output striplless screws output 17 db isolation. Net \$2.00
- MODEL TF-771B.** Flush mounted. Striplless bridge input connector. (1) 75 ohm output with QD connectors. 17 db isolation. Net \$2.55
- MODEL TS-731B.** Surface mounted. QD input connector. One 300 ohm outlet with striplless screws. 17 db isolation. Net \$2.75
- MODEL TS-771B.** Surface mounted. QD input connector. One 75 ohm output with QD connectors. 17 db isolation. Net \$2.70
- MODEL T02-75.** Surface mounted. QD input connector. Two auto type output connectors. 17 db isolation. Net \$4.80
- MODEL T02-300.** Surface mounted. Bridge type input connector. Two 300 ohm outputs with striplless screws. 17 db isolation. Net \$4.80



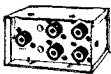
### OUTDOOR TAPOFFS

**MODEL MT-11.** Outdoor tapoff. Spliceless. One 75 ohm tapoff from RG-11/U cable. Available with 12, 17 or 23 db isolation loss. Net \$4.50

### FEED-THRU OUTLETS

- MODEL TF-771.** Flush-mounted, feed-thru wall plate. Input and output both 75 ohms. Net \$1.95
- MODEL TF-331.** Flush-mounted feed-thru wall plate. Input and output both 300 ohms. Net \$1.30

### SPLITTERS

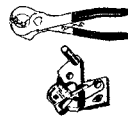
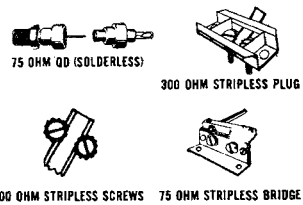


**MODEL TS-772.** Indoor surface mounted 2-way Hybrid Splitter. Splits or combines two 75 ohm cables. QD connectors. Net \$3.55



**MODEL TS-774.** Indoor surface mounted 4-way splitter. Splits four 75 ohm cables. QD connectors. Net \$5.00

### \*TERMINAL CONNECTORS



**MODEL S-1.** Rotary coax Cutter and Stripper. Net \$2.50

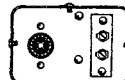


**MODEL CR-1.** Crimping tool and cutting pliers for QD connectors. Net \$10.50

### CABLE CONNECTORS

- P-11S** "UHF" type solderless male plug for RG-11/U cable. Net \$1.10
- P-59T** "UHF" type solderless male plug for RG-59/U cable. Net 1.10
- MC** "UHF" type cable connector. Connects two male plugs or one plug and an MPT-75 terminator. Net 1.65
- CL-1111** Couples two RG-11/U cables together. Net 1.90
- CL-1159** Couples RG-11/U cable to RG-59/U cable. Net 1.90
- CL-5959** Couples two RG-59/U cables together. Net 1.90
- AC-1000** Feed-thru bushing. Use with CL-5959, CL-1111, CL-1159. Net 2.40
- AD-1** Adapts Q.D. to UHF SO-239 connectors. Net 2.55
- AD-2** Benconnector to SO-239 adaptor. Net 3.85
- P-75S** Male solderless auto type plug. Net .42
- POU-59** Push-on UHF plug for RG-59/u. Net 2.25
- POB-59** Push-on Benconnector plug for RG-59/u. Net 1.45

### MATCHING TRANSFORMERS



**MBb** Outdoor balun matches 75 ohms to 300 ohms or vice versa. Net \$6.15



**CABLEMATCH** Indoor. 75 ohm to 300 ohm. VHF and FM high impact plastic eliminates grounding problem with 'hot chassis' sets. Solderless AUTOPLUG for coax connection. Net \$1.90



**TS-731** Indoor, surface mounted. Matches 75 ohms to 300 ohms or vice versa. Net \$2.65



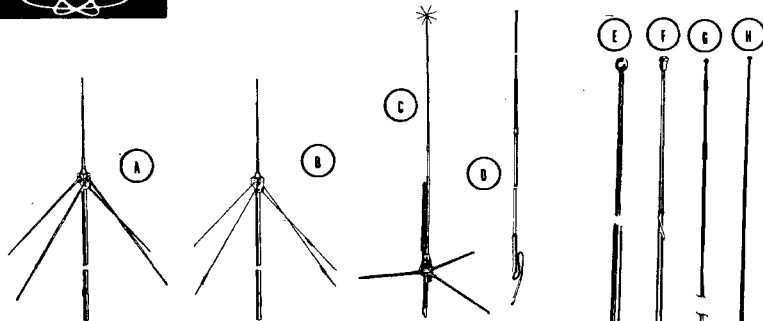
**TF-731** Indoor, flush mounted. Matches 75 ohms to 300 ohms or vice versa. Net \$2.85

### 75 OHM TRAPS & ATTENUATORS

- MODEL MWT-2 LO-BAND/FM TRAP.** Can be tuned to attenuate any frequency from 54 thru 180 mc. Less than 0.25 db loss. Net \$41.25
- MODEL MWT-3 HI-BAND TRAP.** Can be tuned to attenuate any frequency from 135 thru 216 mc. Less than 0.25 db loss. Net \$42.25
- MODEL SA-3 VARIABLE ATTENUATOR.** 0 to 38 db. Lab. accuracy. Steps of 6 db, 12 db and 20 db. 75 ohm input and output. QD connectors. Net \$12.00
- MODEL SA-7 VARIABLE ATTENUATOR.** 0 to 62 db in steps of 1 db. Lab accuracy. 75 ohm input and output. "UHF" SO-239 type connectors. Net \$22.05



# CITIZENS BAND ANTENNAS and ACCESSORIES



**(A) GROUND PLANE ANTENNA KIT ROD RADIAL TYPE**—Complete Base Station Antenna, pre-assembled and including mast, cable and all hardware. No guy wires. Radial elements are durable aluminum tubing. For use with chimney, wall or tripod mount. Cat. No. 29-740 **Net \$25.50**

**(B) GROUND PLANE ANTENNA KIT RADIAL WIRE TYPE**—Base station antenna kit—including mast, co-ax cable and all hardware. Most parts are pre-assembled average installation time is 1/2 hour. 4 guy wires act as "ground plane." Cat. No. 29-730 **Net \$15.90**

**(C) COLINEAR GAIN GROUND PLANE ANTENNA**—3.4 Db Gain: Doubles effective radiated power of your Citizens Band transceiver in all directions... achieves gain through concentration of power at lower angles to the horizon, both receiving or transmitting. Cat. No. 29-748 **Net \$29.97**

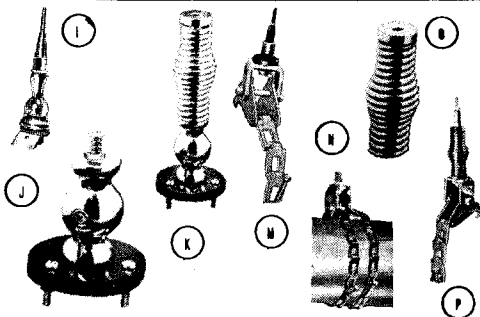
**(E) 102" STAINLESS STEEL TAPERED WHIP**—High-impact, flexible whip made of selected alloy. Standard threaded fitting used with body mount or bumper mount. Cat. No. 29-700 **Net \$6.90**

**100" STAINLESS STEEL TAPERED WHIP**—Same as 102" Whip #29-700, but designed for use with flexing spring type body mount or bumper mount. Cat. No. 29-702 **Net \$6.90**

**(F) "TEL-COIL" WHIP (Pat. Pend)**—48" tapered fibre glass whip, "loaded" type. Step-taper wound helical conductor is superior to other "short" Whips which use base or center loading coils. Standard threaded fitting for any body or bumper mount, truck lid mount. Cat. No. 29-710 **Net \$7.20**

**(G) TOP LOADED WHIP STAINLESS STEEL**—Utilizes top loading to raise radiating portion of antenna to highest possible point. Raises radiation resistance to 52 ohms for perfect match to coax cable. Improved matching, increased effective height of radiating portion. Single hole, top-loading body mount and coaxial receptacle. Cat. No. 29-704 **Net \$8.90**

**(H) CITIZENS WHIP**—Chrome-plated whip designed for transceiver mounting. High efficiency base loading coil completely enclosed in polypropylene plastic. With PL-259 connector. Cat. No. 29-708 **Net \$5.97**



**(I) TRUNK LID MOUNT**—Unique mount requiring no outside holes on car. Designed specifically for "Telcoil" 29-710 antenna, but may be used with other short "whips." Cat. No. 29-716 **Net \$3.30**

**(J) BODY MOUNT**—Heavy-duty, chrome plated body mount fastens to side, cowl, or fender. Ball swivel provides all angle adjustment, from vertical to horizontal. Cat. No. 29-718 **Net \$4.80**

**(K) BODY MOUNT**—Same as Body Mount #29-718 except this model is supplied with flexing spring #29-276. Cat. No. 29-720 **Net \$8.40**

**(M) BUMPER MOUNT**—Durable, chrome plated chain type bumper adjusts to most bumpers from sports car to truck. Cat. No. 29-722 **Net \$7.95**

**(N) BUMPER MOUNT**—Double chain mount for greater stability. Cat. No. 29-723 **Net \$14.20**

**(O) FLEXING ANTENNA SPRING**—Tapered, heavy-duty, chrome plated steel spring built-in flexible center conductor. Cat. No. 29-726 **Net \$3.90**

**(P) BUMPER MOUNT**—Same as Bumper Mount #29-722 except this model includes flexing spring #29-726. Cat. No. 29-724 **Net \$11.85**

**CABLE ASSEMBLIES**—Made of RG 58/U cable, terminated on one end with PL 259 plug, other end stripped and terminated with lugs.

Cat. No.	Length	Net
29-760	6 ft.	\$2.91
29-762	10 ft.	3.21
29-764	15 ft.	3.57

**CALL LETTERS**—Metal foil, pressure sensitive labels to mark mobile station with FCC call letters. Set of 78 numerals plus two "W"s Characters 3/4" high.

Cat. No.	Descrip.	Net Per Set
29-776	Gold Letters on White	\$1.20
29-778	Silver Letters on Black	1.20

**DIS-CONNECT**—Remove mobile whip antennas in two seconds—without tools. Incorporates bayonet lock device... made of stainless steel. Cat. No. 29-772 **Net \$2.97**

**INSULATOR REPLACEMENT**—Replacement insulator for Ground Plane Antennas No. 29-744 and 29-746. Also general purpose insulator. Cat. No. 29-738 **Net \$ .60**

**ANTENNA CONNECTOR**—For connections on auto antennas and ground lines. Cat. No. 1747 **Net \$ .16**

**AUTO ANTENNA PLUG**—Shielded positive connector plug, same as used on Motorola and other radios. Cat. No. 1740 **Net \$ .11**

**ANTENNA CONNECTOR JACK**—Shielded type jack fits No. 1740 plug for auto antenna and phonograph connections. Cat. No. 1741 **Net \$ .15**

**GENERATOR NOISE SUPPRESSOR**—Reduce generator noise when motor is accelerated. For Citizens and three Amateur bands. 3 minutes to install. Complete with Mounting Bracket and Instructions. Cat. No. 65-510 **Net \$4.95**

**ADAPTERS**—Adapts a PL 259 plug to a phono pin (RCA type) plug. Cat. No. 29-784 **Net \$ .45**

**ADAPTER**—Adapts a SO 239 Socket to a standard auto radio (Motorola type) socket. Cat. No. 29-786 **Net \$ .45**

**ADAPTER**—Adapts a standard auto radio (Motorola type) plug to a phono pin (RCA type) plug. Cat. No. 29-788 **Net \$ .24**

**GUTTER CLAMP**—Holds long whip antennas down when not in use. Fastens easily to drain rails on any car. Cat. No. 29-770 **Net \$ .99**

**5 FT. TOWER**—Self supporting. Made of electro galvanized tubing. Folds and unfolds like an umbrella. Cat. No. 9143 **Net \$9.54**

**CITIZENS BAND COUPLER**—Use any Citizens Band mobile antenna for both Citizens Band and AM broadcast. Complete with SO-239 coaxial chassis receptacle for attachment of Citizens Band antenna. 2-ft. lead and auto plug for connecting broadcast radio and two feet of lead with PL-259 coaxial plug for C-B transceiver. Cat. No. 29-824 **Net \$8.97**

**FUSE CONNECTOR (Regular Type)**—Same as used on auto radios and other equipment. 2 1/2" long x 3/8" diam. For 1/4" fuses. Cat. No. 1749 Regular Fuse Connector **Net \$ .18**

**JUMBO FUSE HOLDER**—Large size fuse holder; 2 1/4" long x 1/2" dia. 14 amps. Cat. No. 1748 Jumbo Fuse Holder **Net \$ .17**

**REPLACEMENT PARTS FOR ANTENNA AND FUSE CONNECTORS**

Cat. No.	Net
1791	Sleeve of Fuse Connector <b>.04</b>
1792	Sleeve of Antenna Connector <b>.02</b>
1793	End piece for Antenna and Fuse Connector <b>.03</b>
1796	Spring for Antenna and Fuse Connector <b>.01</b>
1795	Bakelite Bushing <b>.02</b>

**PL-259 CONNECTOR**—To mate with Adapters 29-780, 29-782, 29-784, 29-786. For use with RG-/U cables 8-9-10-11-12-13-58-63-65. Cat. No. 29-790 PL-259 Connector **Net \$1.05**

**RIGHT ANGLE ADAPTER**—For attaching Tel Coil Whip #29-710 or similar antenna to base station. Fits all transceivers using #PL 259 plug. Makes base station antenna where it is impractical to install a roof-top antenna or where base station has to be movable. Cat. No. 29-780 **Net \$3.45**

**ADAPTER**—Adapts a PL 259 plug to a standard auto radio (Motorola type) plug. Cat. No. 29-782 **Net \$ .45**

**GC HAS A COMPLETE LINE OF C-B CONDENSER AND SUPPRESSORS**  
Write for Catalog  
**GC ELECTRONICS, ROCKFORD, ILL.**



**JERROLD****TV-FM RECEPTION PRODUCTS FOR THE HOME****POWERMATE SOLID-STATE AMPLIFIERS****NOW**

A Powermate for every area, every application, and every budget. Get the most from any VHF, UHF, or FM broad-band antenna. See crystal-clear black and white or vivid, glowing color TV. Hear brilliant FM sound.

**7 ANTENNA AMPLIFIERS**

Powermate outdoor antenna amplifiers each comprise a universal mounting (mast, boom, or flat surface) amplifier and a remote power supply (usually mounted on back of TV set). All models shipped complete with necessary mounting hardware and (if necessary) coaxial cable connectors.

**NEW MODEL LPM-102 (TV-FM)**

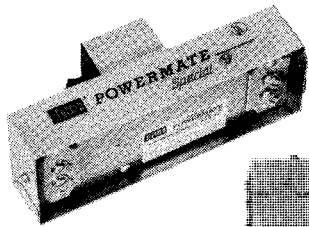
Hi-gain (11.5 db av) single-transistor Powermate Special for areas with no overload problems. Net \$19.95.

**MODEL APM-102 (TV-FM)**

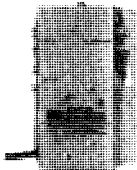
Super-gain, low-noise, twin-transistor Powermate for fringe areas with no overload problems. Net \$26.63.

**MODEL SPM-102 (TV)**

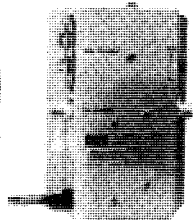
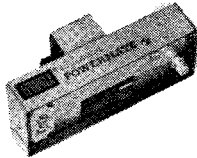
Super-overload, hi-gain, low-noise, twin-transistor Super Powermate for overload problem areas. Net \$29.95.



Model LPM-102

**NEW MODEL SPC-103 (TV)**

Coaxial cable version of SPM-102. For areas with down-lead pick-up problems. Net \$31.97.

**NEW MODEL SPC-132 (TV)**

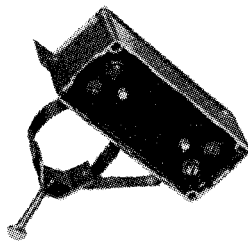
The "De-Snow." For details of this super-gain Powermate see page 36. Net \$65.50.

**NEW MODEL ULP-104 (UHF)**

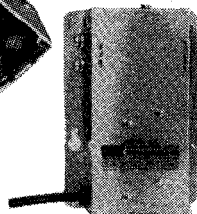
Hi-gain (4.7 db av.), single-transistor, UHF Powermate Special for better viewing on UHF receivers or easier conversion by UHF converters. Net \$23.30.

**NEW MODEL UPM-104 (UHF)**

Super-gain (13.7 db av.), twin-transistor UHF Powermate for fringe and deep-fringe areas. Net \$33.50.



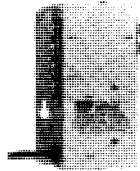
Model ULP-104

**5 AMPLIFIED COUPLERS**

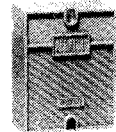
Powermate indoor amplified couplers mount on any flat surface and are equipped with universal (strip or no-strip) crown washer screw terminals for simple connection of 300-ohm twin-lead. Each is attractively housed and is powered from any 117-v ac source.

**NEW MODEL TA-12 (TV-FM)**

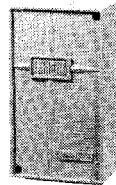
This transistorized, amplified, Indoor Powermate Special 2-set coupler provides sufficient gain (3 db av lo-band, 4.5 db av hi-band) to more than adequately supply two sets from a single antenna in areas with no overload problems. Net \$11.95.

**NEW MODEL TA-24 (TV-FM)**

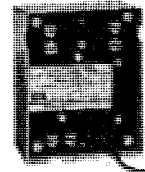
A special transistor in this Indoor Powermate provides sufficient gain (3.2 db av lo-band, 4.5 db av hi-band) to adequately supply four sets from a single antenna in areas with no overload problems. If only two or three sets are connected more signal is available at each of two outputs or at one of three outputs. Net \$16.75.

**MODEL TA-66 (TV)**

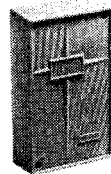
The twin-transistor Indoor Super-Powermate 4-set amplified coupler is the hi-gain (7.5 db av. lo-band, 5.6 db av hi-band super overload unit for fringe areas with overload problems. With only 2 or 3 sets connected has same advantages as TA-24. Net \$22.95.

**NEW MODEL TAU-12 (UHF)**

First transistorized UHF amplified 2-set coupler, the Indoor Powermate Special provides sufficient gain (2.5 db av.) to more than adequately supply each of two UHF sets from a single antenna, 10 db isolation between outputs. Net \$19.95.

**NEW MODEL SRX (FM)**

Jerrold Model SRX Stereo Range Extender (the Indoor Powermate for the FM band) provides excellent gain (15.5 db average) across the entire FM band (88-108 mc) and incorporates an input filter which splits FM from the TV bands to permit using a single broad-band TV antenna for both TV and FM reception. The filter has a maximum loss of only one db across the entire TV band except for channel 6 (82-88 mc). Model SRX should not be used with a TV antenna for color reception on channel 6. The SRX performs exceptionally well with FM antennas (only one output is used). Two outputs are provided so that both an FM and a TV set may be connected to the amplifier in areas where TV channel 6 reception is not disturbed. Net \$19.95.

**TOP-OF-THE-SET UHF CONVERTERS**

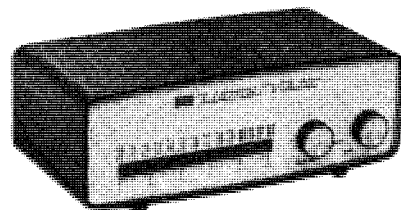
The Super-Vista and Vista convert all UHF channels, 14 to 83, to either of VHF channels 5 or 6. The Ultra-Vista, specially-designed for MPAT and translator areas, converts UHF channels 70 to 83 to either of VHF channels 7 or 8. All units feature nuvistor oscillator for 12-second warm-up and no-drift performance. Decorator-styled to blend with any decor.

**SUPER-VISTA MODEL SVC-560 (UHF 14-83 to VHF 5 or 6)**

Featuring exceptionally high-gain, low-noise circuitry, Model SVC-560 provides top-flight reception of all uhf channels in all signal areas. Net \$27.50.

**VISTA MODEL VC-100 (UHF 14-83 to VHF 5 or 6)**

Economical Model VC-100 gives strong-signal-area residents excellent reception of all uhf channels. Net \$19.95.

**ULTRA-VISTA MODEL UVC-7083 (UHF 70-83 to VHF 7 or 8)**

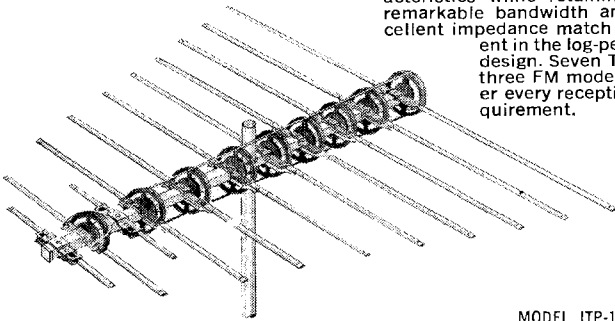
Ultra-sensitive MPAT and translator area converter. Pre-amplifies UHF signals, converts them, and amplifies VHF output for unparalleled reception in all areas. Net \$31.75.

**JERROLD****TV-FM RECEPTION PRODUCTS FOR THE HOME****ANTENNAS**

A complete line of the world's finest antennas for VHF, UHF, and FM reception in every area.

**VHF ANTENNAS****PARALOG (TV)**

The unique Paralogs are true broad-band log-periodic antennas with added parasitic elements to improve gain characteristics while retaining the remarkable bandwidth and excellent impedance match inherent in the log-periodic design. Seven TV and three FM models cover every reception requirement.



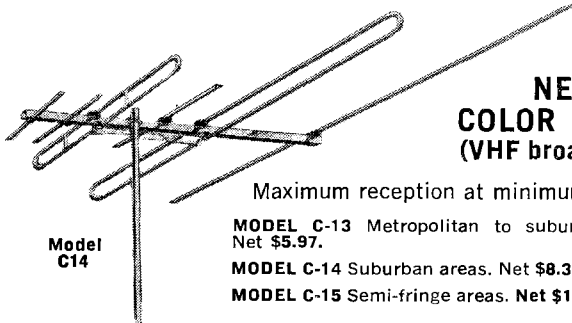
MODEL JTP-100

**PARALOG (TV)**

MODEL JTP-40	4 driven and 2 parasitic elements.....	Net \$11.97
MODEL JTP-60	6 driven and 2 parasitic elements.....	Net \$17.97
MODEL JTP-100	8 driven and 3 parasitic elements.....	Net \$23.97
MODEL JTP-130	10 driven and 4 parasitic elements.....	Net \$29.97
MODEL JTP-160	10 driven and 7 parasitic elements.....	Net \$35.97
MODEL JTP-190	10 driven and 10 parasitic elements.....	Net \$41.97
MODEL JTP 220	10 driven and 13 parasitic elements.....	Net \$47.97

**PARALOG (FM)**

MODEL FMP-8	for fringe areas.....	Net \$17.97
MODEL FMP-10	for deep-fringe areas.....	Net \$23.97
MODEL FMP-16	for extreme fringe areas.....	Net \$35.97

**NEW COLOR GUARD (VHF broad-band)**

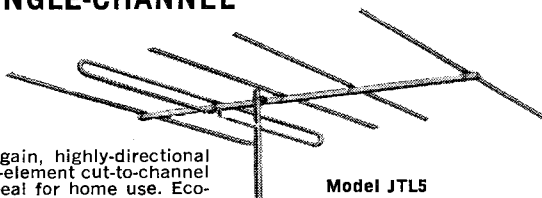
Maximum reception at minimum price.

MODEL C-13 Metropolitan to suburban areas. Net \$5.97.

MODEL C-14 Suburban areas. Net \$8.37.

MODEL C-15 Semi-fringe areas. Net \$10.17.

Model C14

**NEW SINGLE-CHANNEL YAGIS**

Model JTL5

These high-gain, highly-directional five and ten-element cut-to-channel yagis are ideal for home use. Economical yet incorporate the same care in construction and the same quality materials used in all Jerrold-Taco antennas.

**LOW TV CHANNELS**

MODEL JTL5-2	Net \$7.70	MODEL JTL5-4	Net \$6.30
MODEL JTL5-3	Net \$6.57	MODEL JTL5-5	Net \$5.97
MODEL JTL5-6	Net \$5.83		

**HIGH TV CHANNELS**

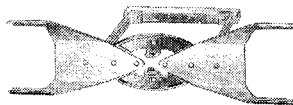
MODEL JTH10—(indicate hi-channel desired 7 thru 13) Net (any one) \$5.61.

**NEW BROAD-BAND YAGIS**

MODEL JLB-26 For several low channels in the same direction. Net \$20.25.  
MODEL JHB-713 For several high channels in the same direction. Net \$7.65.

**UHF ANTENNAS  
NEW PARACYL (UHF)**

The revolutionary Paracyl UHF antennas feature the extended resonance driver, a new concept in driver construction. The only antenna in the industry which operates effectively over the entire UHF band with a single dipole. Five models cover every UHF-TV reception requirement.

**EXTENDED RESONANCE DRIVER**

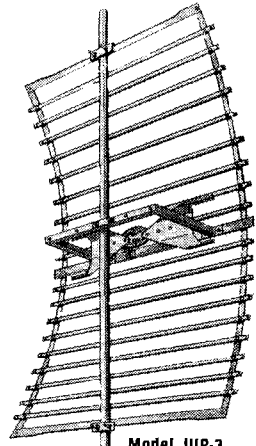
MODEL JUP-1 Local to suburban areas. Net \$4.17.

MODEL JUP-2 Difficult local to suburban areas. Net \$6.57.

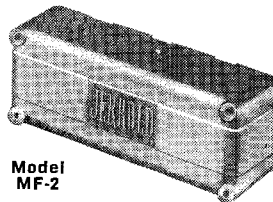
MODEL JUP-3 Suburban to medium fringe areas. Net \$17.97.

MODEL JUP-4 Difficult suburban to fringe areas. Net \$23.97.

MODEL JUP-5 Fringe to deep fringe areas. Net \$32.70.



Model JUP-3

**LOW-LOSS COUPLERS**

Model MF-2

Permit connection of 2, 3, or 4 TV and/or FM sets to antenna down-load. Feature positive match, low forward loss, and high isolation. Housed in rugged plastic case and equipped with "no-strip" serrated washers.

MODEL MF-2 Two-set coupler for VHF fringe areas. Minimum forward loss. Net \$2.70.

MODEL MF-4 Four-set coupler for all VHF areas. Design similar to MF-2. Net \$3.45.

NEW MODEL UF-2 UHF two-set coupler. Feeds two UHF sets from single antenna. Low-loss device with good inter-set isolation. Net \$2.70.

MODEL 820-2 Economy two-set coupler for metropolitan area. Net \$2.20.

MODEL 820-3 Economy three-set coupler for metropolitan area. Net \$2.55.

**FILTERS AND TRAPS****NEW MODEL TX-HP (high-pass filter)**

Blocks interference from interfering signals below 50 mc. Net \$3.57.

**MODEL TX-FM (band-pass filter)**

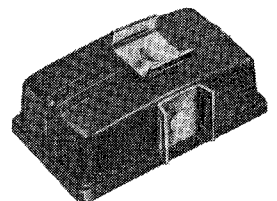
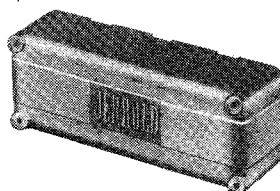
Separates FM and TV signals from a down-lead carrying both and delivers each to respective sets with negligible loss. Net \$3.95.

**MODEL 1435-\* (Single-channel trap)**

Attenuates any single TV channel (2-13) 20 db min. Net \$4.77.  
\*Specify channel desired.

**MODEL 1435-FM**

Attenuates FM band 20 db min. Net \$4.77.



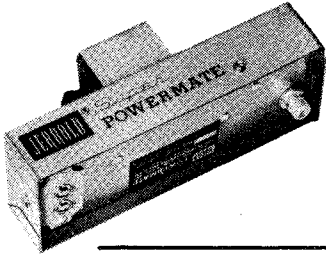
**JERROLD**

## TV-FM DISTRIBUTION SYSTEMS EQUIPMENT

For Motels, Apartment Houses, Dealer Showrooms, Homes

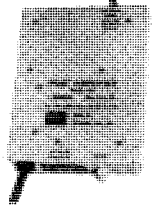
# TV AND FM AMPLIFIERS

## MAST-MOUNTED "DE-SNOWER" AMPLIFIERS



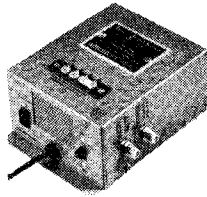
### NEW MODEL SPC-132 (TV)

Jerrold Model SPC-132 "De-Snower" is a super hi-gain (29 db average in the hi TV band) preamplifier for use in extreme fringe areas and when high driver gain is needed. Preamplification is supplied by the twin-transistor mast-mounted head, Model SPC. The coaxial down-lead insures against spurious signal or noise pick-up and the input to remote power supply Model 132 is back-matched to prevent any ghosting or smearing of pictures due to mis-match. The signal is again amplified by a three-transistor post amplifier integral with the Model 132 power supply. The most powerful of the famous Powermates. Shipped complete with 3 F-59-A connectors and all necessary mounting hardware. Net \$65.50.



### MODEL DSA-\* (\* = ANY SINGLE TV CHANNEL)

This single-channel TV amplifier features 28 db gain and  $\pm 1/4$  db max. response flatness for any single TV channel. Provides a choice of 75 or 300 ohm antenna inputs. Amplifier output is 75 ohms and the remote power supply Model 405-P provides either 75 or 300 ohm output. Net \$65.67.



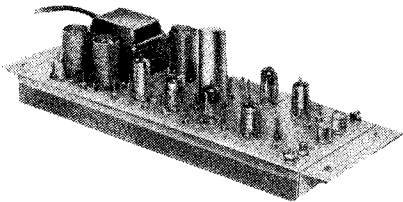
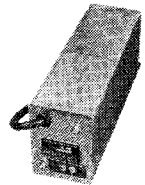
### MODEL DSA-FM (FM ONLY)

Provides 25 db min. gain for entire FM band. Response flatness  $\pm 1/2$  db. max. Otherwise similar to DSA-\*. Net \$65.67.

### INDOOR "DE-SNOWER" AMPLIFIERS

#### MODELS 406A-\* and 406A-FM

Similar electrical specifications to those of Models DSA-\* and DSA-FM except that the 406A Models have self-contained power supplies. Plug into any 115v ac source. Net (either) \$46.17.

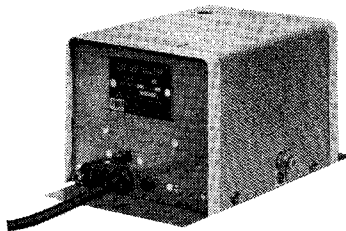
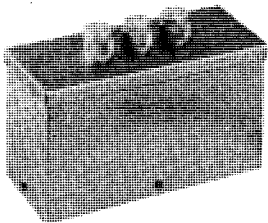


## BROAD-BAND AMPLIFIERS

### MODEL 2880 (TV-FM)

One full volt output per channel (highest in the industry for broad-band amplifiers) makes Model 2880 the ideal amplifier for a large system. Other features include 41 db min. gain lo-band, 44 db min. hi-band, plug-in cable equalization, and dual manual gain control with a 14 db range. Net \$225.75.

## NEW UHF TO VHF CONVERTERS

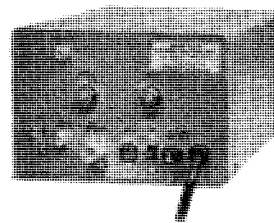


### MODEL U4V

Better Fringe-Area Reception—Features a mixer head (Model 454T) incorporating a solid-state VHF amplifier installed right at the UHF antenna where signal-to-noise ratio is optimum. The unit provides a conversion gain (7 db min. low-band VHF, 5 db min. hi-band VHF) and an excellent noise figure (10 db typical, 14 db max). The oscillator-power supply (Model 463) may be conveniently mounted on a shelf or wall indoors at a distance of up to 100 feet from the head. Oscillator signals and dc power are carried via one coaxial cable up to the head and amplified VHF signals are carried via another coaxial cable down to the power supply. Model U4V will convert any UHF channel to any VHF channel. Order by specifying UHF channel to be converted to a specific VHF channel. Net \$135.00.

### MODEL U3V

Better Local Area Reception—Features a mixer head (Model 454) similar to that used with U4V but without solid-state amplifier. The remote oscillator-power supply (Model 463) is the same as that used with the U4V. The conversion loss is low (9 db typical, 12 db max.) and the noise figure depends on the noise figure of the following VHF amplifier. Net \$105.00.

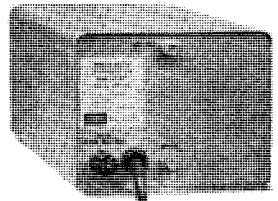


### MODEL 2300A (TV-FM)

The amplifier for medium systems featuring excellent overload capability, 0.3 volts output, 40 db gain (hi-band), plug-in cable equalization, and a dual manual gain control with 14 db range. Net \$113.08.

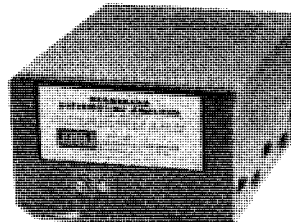
### MODEL ABD-1A (TV-FM)

The small system amplifier which accommodates the new 8-way splitter Model G-1518. 0.3v output capability and 22 db gain (lo-band). Net \$68.95.



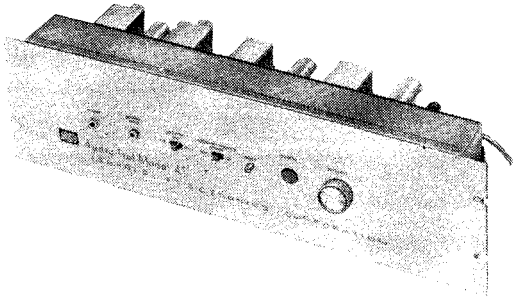
### MODEL ACL-200 (TV-FM)

Ideal for dealer showrooms and deluxe home installations, Model ACL-200 combines high-gain (20 db lo-band) and high overload capability with an excellent noise figure. 75 or 300 ohm output selected by switch. Net \$40.50.





# AM/FM SOUND INSERTER FOR TV SYSTEMS



## AUDIO-TROL Model AT-\*

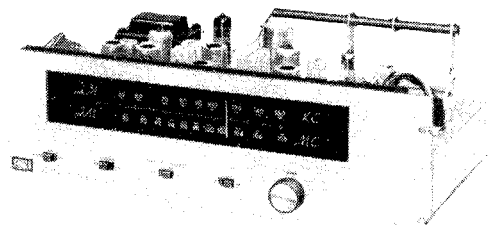
Jerrold's latest audio modulation equipment Model AT-\* uses the unused TV channels to transport music, voice, radio, etc. to every receiver in a TV distribution system. The audio source may be an FM tuner, an AM radio, records, tape or microphone. Any commercial TV receiver can be used to reproduce the audio program through the speaker. Simply installed at the head-end, there is no need for additional equipment or alterations in any room. Model AT-\* presents a unique method to add audio to an existing or planned TV distribution system in Hotels, Hospitals, Schools and Apartment Houses. Net \$204.75.

\*Order by channel number.

## AM/FM TUNER MODEL AFT-300

A highly selective and sensitive, drift-free tuner for converting any AM or FM broadcast signal into an audio source for Jerrold's "AUDIO-TROL" Model AT-\*

While absolutely independent in its function, Model AFT-300 is the perfect companion piece to Model AT-\* and can be incorporated together with the Audio-Trol in a single cabinet, or can be rack-mounted separately. Net \$139.73.



## ANTENNAS—J55/105 - SERIES

### ORDERING INFORMATION CUT-TO-CHANNEL MODELS

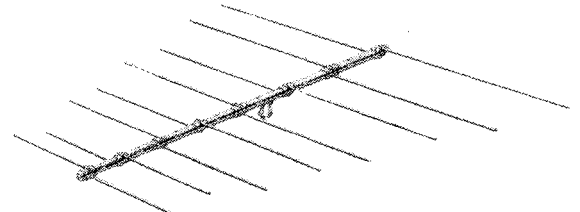
Channels 2 thru 13 and FM. Order J55—(specify lo-channel) for lo-band and J105—(specify hi-channel) for hi band or J55-FM for the FM band. Net (any one) \$37.50.

### BROAD-BAND MODELS

Lo-Band J55-Lo. Net \$74.25.  
Hi-Band J105-Hi. Net \$74.25.

Average Shipping Weight  
Cut-to-Channel Models: 10 lbs.  
Broad-Band Models: 14½ lbs.  
Stacking kits for multiple arrays of cut-to-channel models are available:  
For a 2-bay vertical array order Model JSS1 and specify channel. Net \$17.97.  
For a 2-bay horizontal array order Model JSS2 and specify channel. Net \$17.97.  
For a 4-bay vertical array order Model JSS4 and specify channel. Net \$53.91.  
For a quad-array order Model JSS3 and specify channel. Net \$53.91.

These 75-ohm heavy-duty VHF and FM antennas are built to last as long as the systems fed by them. Primarily for large systems in difficult reception areas, these antennas are highly-directional and pull in the hard to get signals.

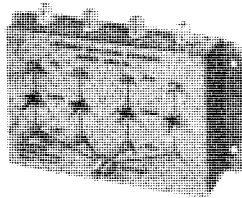


## ANTENNA MIXING/SPLITTING NETWORKS

### 75-OHM VHF

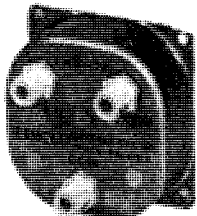
#### MODELS AMN-HI and AMN-LO

Tuneable splitting or mixing networks for hi and lo TV bands respectively. Used at system head end. AMN-HI splits or mixes up to 4 non-adjacent hi-band channels (7 to 13) with less than 1 db insertion loss. AMN-LO splits or mixes up to 3 non-adjacent lo-band channels (2 to 6) with less than ½ db insertion loss. Net (either) \$18.15.



#### MODEL LHS-76

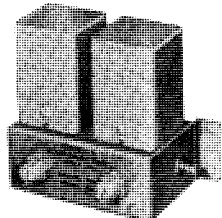
Splits or mixes TV hi and lo-bands. Less than 0.6 db insertion loss. VSWR less than 1.2:1. Rejection greater than 30 db on either side of cross-over (140 mc). Net \$14.50.



#### 75-OHM VHF TRAPS

MODEL TLB (59.75-83.75 mc), TFM (88-108 mc), and THB (179.75-211.25 mc)

Each trap consists of two tunable L-C circuits in a modified bridged-tee network. Tuning is by Teflon-dielectric trimmers with screwdriver adjustment. With both circuits tuned to an interfering signal, rejection is 40 db minimum with insertion loss only 1 db at 1 mc off the interfering frequency. Complete with two F-59 connectors for RG-59/U cable. Net (any one) \$38.55.

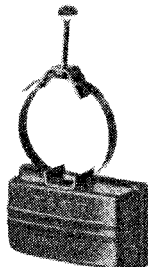


#### 300-OHM VHF MODELSTX-HP, TX-FM, 1435-\*, and 1435-FM

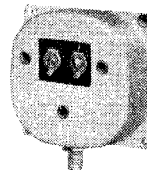
For details see page 35.

#### MODEL 1460A (UHF)

Mixes or splits UHF/VHF antennas. Net \$2.46.

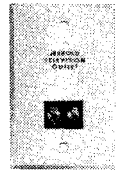


## MATCHING TRANSFORMERS—VHF



#### MODEL T-732

Surface mounting. Flat response 50-250 mc. VSWR 1.26. Isolates line from ac-dc receivers. C-52 male connector included. Net \$3.60.

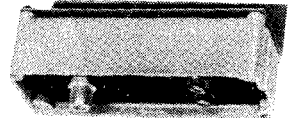


#### MODEL T-373

Flush Mounting version of T-732. Net \$3.60.

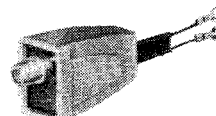
#### NEW MODEL T0-374A

New Model T0-374A is an impedance matching transformer (300 ohms to 75 ohms) which by-passes low-frequency ac or dc current. Allows replacement of twin-lead with coaxial lead-in to both preserve color signals and prevent reception problems caused by spurious signal or noise pick-up. For antennas with POWERMATE antenna amplifiers, two T0-374A units are used back-to-back between the amplifier and the remote power supply. For unamplified antennas, a Model T-378 matching transformer can be used in combination with the Model T0-374A. Shipped complete with necessary hardware for mast-mounting, an F-59A connector and a weatherboot. Net \$2.95.



#### NEW MODEL T-378

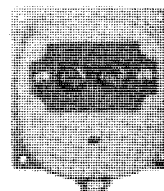
Economical, receiver-mounting matching transformer (300 to 75 ohms) featuring built-in isolation. Shipped complete with F-59A male connector. Net \$1.95.



#### UHF MODELS MTU-372 and MTUO-374

Model MTU-372 (indoor) and Model MTUO-374 (outdoor) are newly-designed wideband 300/75 ohm impedance matching units. Response is flat over entire uhf range (470 to 890 mc). Maximum insertion losses from 0.6 db at 470 mc to 1.2 db or less at 890 mc. Shipped with an F-59A connector.

Model MTUO-374 Net \$6.00  
Model MTU-372 Net \$3.60





## ACCESSORIES

### SOLDERLESS COAXIAL CABLE FITTINGS

#### G-SERIES

New chassis fittings mate with new connectors for simplest, fastest, most-reliable push-type connection or disconnection of RG-59/U coaxial cable, twin-lead (antenna wire) or 75-ohm terminators.

##### MODEL G-61

Chassis fitting incorporating the new, positive-grip clutch and a special spring which insures a good ground connection while permitting the quick-disconnect feature. Model G-61 has a threaded shank (identical with that of the popular F-61A) and requires  $\frac{3}{8}$ " mounting hole. Net \$**.48**.

##### MODEL G-59

Male cable connector provides solderless connection to RG-59/U cable. Features built-on ferrule. Pushes on or pulls off new G-61 chassis fitting for firm, reliable connections or rapid disconnections. Net \$**.48**.

##### MODEL G-300

New 75-300 ohm adapter combines new G-59 type push-on fitting with new "no-strip" crown washer terminal to provide simple, quick connection or disconnection of 300 ohm twin-lead to G-61 chassis fitting. Net \$**.60**.

##### MODEL TR-75G

75-ohm terminating resistor for G-61 or G-62 chassis fittings. Net \$**.90**.

#### F-SERIES

Can be permanently installed on all types of RG-59/U, RG-6/U and RG-11/U cables with simple crimping tools. Carefully machined of brass. All exposed surfaces heavily silver plated. Accurately matched to 75 ohms with a VSWR less than 1.05:1 up to 200 mc. "F" connectors can be wrench tightened and all sizes will adapt to each other.

##### MODEL F-59

Male Cable Connector—For RG-59-type cables. Mates with F-61, F-81, A-61, AF-101 and AF-201. With separate ferrule. Net \$**.48**.

##### MODEL F-59A

Male Cable Connector—Same as F-59 with attached ferrule. Net \$**.48**.

##### MODEL F-56

Male Cable Connector—For RG-6-type cables. Mates with F-61A, F-81, A-61, AF-101 and AF-201. Net \$**.62**.

##### MODEL AF-101

Adapta-Fit Male Connector—For RG-11/U type cables. Mates with F-81, F-61A, and A-61. Requires Crimping Tool PL-602. Net \$**1.26**.

##### MODEL AF-201

Same as AF-101, but for RG-11 Poly Foam Cables. Net \$**1.26**.

##### MODEL F-61A

Female Chassis Fitting—Direct replacement for F-61. Incorporates new clutch collet. Net \$**.55**.

#### MODEL F-81

Female Coupling—Accepts F-59 or F-56. Mounts in  $\frac{3}{8}$ " diameter panel hole for use as feed-thru. Net \$**.75**.

#### MODEL F-71

Male Coupling Adapter—Mates with F-61A, F-81 or A-61. Net \$**.96**.

#### MODEL TR-72F

Similar to TR-72. Mates with F-61A, F-81 or A-61. Net \$**.90**.

#### MODEL A-61

Adapter—Adapts older type C-61 female fittings to F-59 or F-56 male connectors. Net \$**1.25/25**.

#### C-SERIES

##### MODEL C-52

Male Connector mates with C-61. For RG-59/U type cables use Crimping Tool PL-601 or PL-602. Net \$**.48**.

##### MODEL C-61

Female Chassis Fitting—Accepts C-52 or A-61. Mounts in  $\frac{3}{8}$ " diameter chassis hole. Net \$**.48**.

##### MODEL C-81

Female Coupling—Accepts two C-52, or A-61. Mounts in  $\frac{1}{4}$ " diameter panel hole for feed-thru. Net \$**.60**.

##### MODEL TR-72

Close-tolerance 72 ohm resistor for line or equipment termination. Mates with C-61 or C-81. Net \$**.90**.

##### MODEL TR-72B

Inexpensive 72 ohm terminator for use with B-59 type bushings. Terminates UT-22 or UT-33. Net \$**.90**.

### FERRULES

For use with Jerrold Solderless Connectors.

**1026**—For use with RG-6/U type cables. Net \$**2.86**. C

**1051**—For use with RG-59/U type cables. Net \$**1.43**. C

**1095**—For use with RG-11/U type cables. Net \$**4.29**. C

### TOOLS

**PL-601**—Crimps type 1051 and 1026 ferrules. For F-59, F-56 and C-52 connectors and B-59 bushings. Net \$**4.29**.

**PL-602**—Crimps all three ferrules—1051, 1026 and 1095. For F-59, C-52, AF-101 and B-59 bushings. Net \$**5.39**.

**CD-11**—Cuts attenuator opening in coax cable for Jerrold pressure taps. Net \$**2.16**.

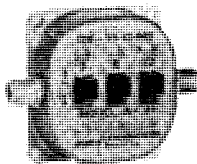
**CT-2**—Replacement cutting tip for CD-11. Net \$**1.10**.

### PLUG-IN ATTENUATOR PAD

**MODEL PIP**—For use with Model 2880 or 2300A low band equalization. These pads are available in attenuation values of 0, 3, 6, 9, 12 and 15 db. Net \$**1.35**.

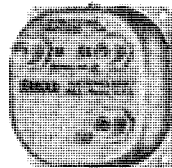
### IN-LINE ATTENUATOR

**MODEL PDL**—Fixed attenuator pad for 75 ohm circuits. Shipped with two F-59 connectors for in-line applications. For chassis mounting, order an F-71 connector. Specify 3, 6, 10 or 20 db. Net \$**3.51**.



#### VARIABLE ATTENUATOR

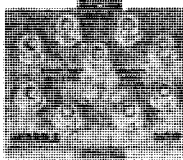
**MODEL A-21** Switch type, Variable RF Attenuator providing precise attenuation over the frequency range of 0 to 250 megacycles. The unit is matched to 75 ohms with a VSWR of less than 1.05 and is capable of handling 500 milliwatts of power. Model A-21 attenuates from 0 to 21 db in 3 db steps. Two F-59 connectors are included. Net \$**12.87**.



#### DIRECTIONAL COUPLER

**MODEL DC-8** is a back-matched directional-coupler type tap unit with a band pass from 7 mc to 216 mc. The insertion loss is 1.5 db and tap loss is 8 db. Isolation between line and tap outputs is 30 db at channel 6. Excellent 75 ohm match on all three terminals. VSWR is 1.3. Shipped complete with 3 mating F-59A connectors. Shipping weight—6 oz. Net \$**8.47**.

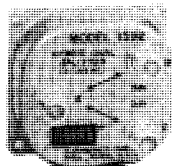
### 75-OHM LINE SPLITTERS



Jerrold line splitters feature hybrid circuitry for excellent 75-ohm impedance match and isolation between outputs. Terminal unused outputs of 1514 with TR-75F and of G-1518 with TR-75G.



Model 1562



Model 1592

Model G-1518

8-Way Coaxial Splitter

Model G-1518 Net \$**18.58**

2-Way Splitter

Model 1562 Net \$ **5.20**

4-Way Splitter

Model 1514 Net \$ **9.13**

Hybrid Two-Way Splitter

Model 1592 Net \$ **7.87**

Model 1514

### RESISTIVE SPLITTER

**MODEL MTP-20** matches the trunk line in and out as well as the tap. The band width is 0-216 mc. The insertion loss is 2 db and tap loss is 20 db. Excellent 75 ohm match on all three terminals. VSWR better than 1.2:1. Shipped complete with 3 F-59A connectors. Shipping weight—6 oz. Net \$**6.50**.

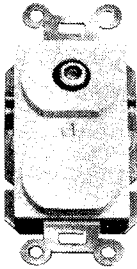


Model	Description	Bandwidth	Maximum Splitting Loss	Isolation Between Outputs	Shipped with Connectors	Shipping Weight
1562	2-way	54-216 mc	3.5 db	15-20 db	Not Required	6 oz.
1592	2-way	7-216 mc	3.5 db	15-20 db	F-59	6 oz.
1514	4-way	24-216 mc	6.5 db	12 db	F-59	7 oz.
G-1518	8-way	54-216 mc	10.0 db	7-17 db	G-59	1½ lbs.



# ULTRA-TAPS

Flush or surface-mounting 300 or 75-ohm output devices incorporating one basic tap-off unit.



## BASIC TAP-OFF UNIT FOR TV OR FM

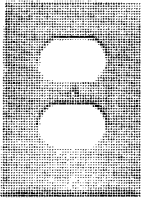
### MODEL UT-22 (W, R, or Y)

Provides a choice of three isolation and feed-thru values and is used to tap TV or FM signals from RG-59 type feeder cables. Simple crimp-on bushings and new positive-gripping clutch provide fast solderless connections to the feeder. Model UT-22 can be flush or surface mounted. For flush-mounting the unit fits a standard 2" x 4" (or combination) wall box, and new cover plates are available in a variety of types. A special housing is also available for surface mounting. Equipped with a "Gamma" receptacle, the unit accepts the new 75 or 300 ohm push-on plugs. Net \$2.70.

## ISOLATION AND FEED-THRU CHART

Ch.	A—Isolation		B—Feed-Thru		
	Values in db				
	MODELS UT-22 and UT-33				
COLOR CODE					
		White	Red	Yellow	
2	A	35	27	22.5	
	B	0.2	0.4	0.2	
6	A	34	25	19	
	B	0.2	0.4	0.3	
7	A	31	21	13	
	B	0.25	0.5	0.4	
13	A	30	20	11.5	
	B	0.25	0.5	1.0	

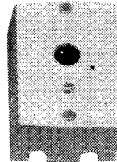
### FLUSH COVER PLATES



**MODEL UT-PI**  
Single outlet ivory cover plate, sturdy molded plastic. Net \$2.1.

**MODEL UT-PS**  
Single outlet cover plate, brushed stainless steel. Net \$6.0.

### SURFACE HOUSING



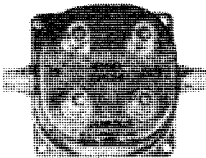
**MODEL UT-SH**  
Single outlet ivory surface mounting box, sturdy molded plastic. (Not for use with UT-33). Net \$3.0.

## SPECIAL WALL TERMINAL UNIT (Without Isolation or Feed-Thru)

### MODEL UT-12

A wall terminal unit providing connection to a TV or FM set from a remotely mounted isolation unit such as G-1401, 1401, or PT-1461. Similar to Model UT-22 in all other respects. Net \$2.10.

## ISOLATION NETWORKS



### MODEL G-1404

This four-outlet tap-off comprises a network providing high isolation between the four outputs. Equipped with new "Gamma" chassis fittings, the unit permits quick connect and disconnect of coaxial cables to the receivers. Line output and input terminals use F-59 connectors for permanent feed-thru continuity. Two F-59 and four G-59 cable connectors included. Shipping weight 8 oz. Net 10.39.

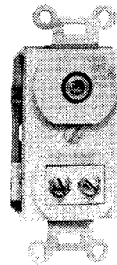
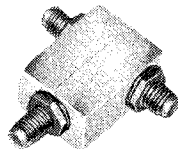
### ISOLATION BY CHANNEL

Isolation in db's (col. A). Feed-through loss in db's (col. B).

2		6		7		13	
A	B	A	B	A	B	A	B
22	.25	18	.50	15	1.2	13	1.4

### IN-LINE TAP MODEL 1401

Surface mounting, capacitive line tap for RG-59/U type feeders. Color-coded attenuation values permit use with highest gain amplifiers. Specify R, Y or GR. Complete with mounting bracket and three C-52 cable connectors. Terminate the last tap on a feeder line with TR-72 terminator. Net \$3.75.



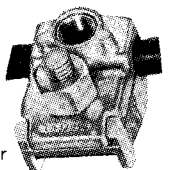
## COMBINATION TAP-OFF UNIT FOR TV AND FM

### MODEL UT-33

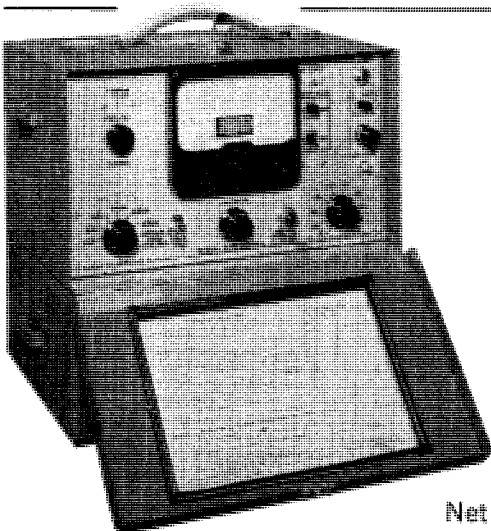
Available in the same isolation and feed-thru values as Model UT-22. Has additional isolation to separate TV and FM signals for simultaneous connection of a TV receiver and an FM receiver and is flush-mounted in the same manner as Model UT-22. For surface mounting a standard surface mounting box is required. Net \$3.30.

### PRESSURE TAPS MODEL PT-1461A

Pressure tap for RG-11/U (single shield) type feeders. Surface mounting. Removable color coded isolation units. (Specify R, Y or GR.) Unique design minimizes shunt capacity. (Requires use of CD-11 Cutting Punch.) Complete with F-59 cable connector. Terminate the last tap on a feeder line with TR-72F terminator. (Use AF-101 cable adapter with F-81.) Net \$3.75.



**MODEL PT-1462A** Same as PT-1461A, but for use with double-shielded RG-11/U. Net \$3.75.



## FIELD STRENGTH METER

### MODEL 704B

Reads Down to 5 Microvolts and Up to 3 Volts

Recognized throughout the industry as outstandingly accurate and reliable, the Model 704B—Jerrold's Top-of-the-Line in field strength meters—is a calibrated, direct reading instrument for TV and FM measurements. It is a professional quality instrument for making measurements of RF signal strength within the frequency range of 54 to 220 mc. Its specially-designed tuner assures increased selectivity, 75 ohm impedance and uniform gain—as required for highest accuracy. Extremely versatile, its range of uses includes field intensity surveys, orienting antennas, measuring RF attenuation of coaxial cables and balancing TV distribution systems.

### FEATURES

- Reads down to 5 microvolts and up to 3 volts, in 8 ranges.
- Bandwidth is 0.6 mc.
- Separates audio carriers from adjacent video carriers.
- Precise readings in db or microvolts ±0.8 db over entire range.
- Reads percent of amplitude modulation of FM carriers, percent of AM distortion of FM amplifiers and percent of AM of RF generators.
- Lightweight, durable aluminum cabinet with carrying handle.
- Calibration card on hinged door panel for permanent reference.
- Phone output for listening to FM signals.
- Oscilloscope output for examining composite video.

Net \$395.00.

DISTRIBUTORSALES DIVISION



PHILADELPHIA 32, PENNA.

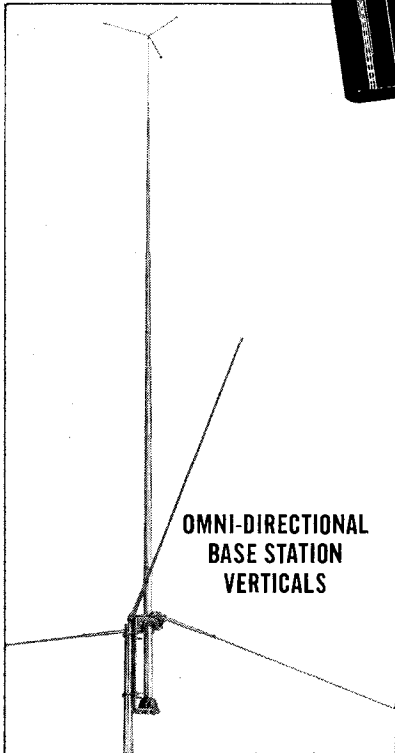
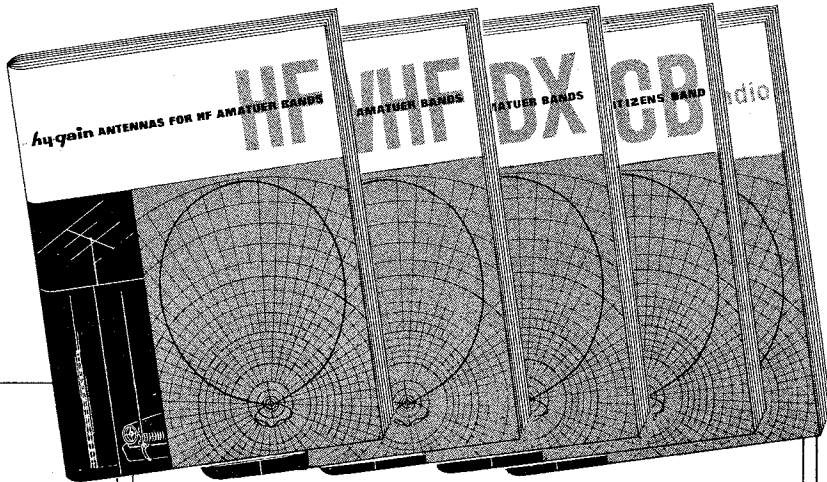
A subsidiary of THE JERROLD CORPORATION



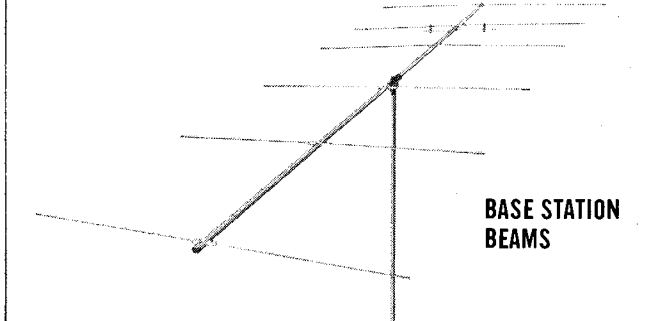


THE ANTENNA MANUFACTURER WITH A RECORD OF "FIRSTS"

# OVER 300 MODELS OF COMMUNICATIONS ANTENNAS AND ACCESSORIES FOR 1.5 THRU 1,000 MEGACYCLES



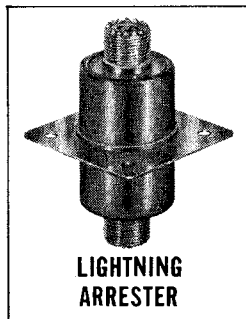
OMNI-DIRECTIONAL  
BASE STATION  
VERTICALS



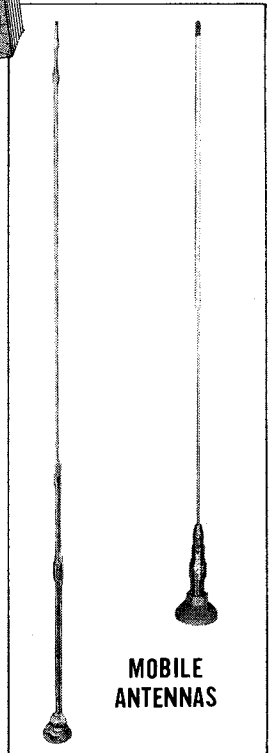
BASE STATION  
BEAMS



MOBILE BODY MOUNTS  
MOBILE  
BUMPER MOUNTS



LIGHTNING  
ARRESTER



MOBILE  
ANTENNAS

**CITIZENS BAND:** Base Station Beams and Verticals, Mobile Antennas and Accessories

**AMATEUR BANDS:** Base Station Beams, Verticals, Doublets, Halos - Mobile Antennas  
3, 1 1/2, 2, 6, 10, 15, 20, 40, 80 and 160 Meters

**PROFESSIONAL:** Base Station and Mobile Antennas for the 25 to 470 megacycle  
Business Radio Bands

**COMMERCIAL-INDUSTRIAL-MILITARY:** Log Periodics, Parasitic Arrays for Discrete  
Frequencies, Verticals, Vehicular Antennas, Rotators, Direction Indicators, Rotating Mast  
Assemblies. Research and Development on all Antenna Types - Any Frequency Range

**HY-GAIN ANTENNA PRODUCTS CORPORATION**  
Lincoln, Nebraska

**JONTZ MFG. CO.**

MISHAWAKA, INDIANA

# SELF-SUPPORTING *Super Kwick-Climb* TOWERS

**SELF-SUPPORTING UP TO 60 FEET HIGH**  
**HOT DIP GALVANIZED HEAVY DUTY MODELS**  
**ZINC ELECTROPLATED ECONOMY MODELS**  
**NO LOST TOWER FOOTAGE**  
**FAST, EASY SECTIONAL ERECTING**

With these two Jontz Tower models you can fill any tower needs... from small suburban to heavy-duty commercial installations. Sectional construction and special drive-in bases make erection fast and simple. The Zinc Electroplated Economy Model No. 300 will easily withstand high wind loads normally encountered in most parts of the country. The Hot Dip Galvanized Heavy Duty Model No. 500 will withstand hurricane force winds having been tested at wind loads of 80 mph.

Model No. 500 is self-supporting up to 60 feet high. Model 300 can be extended to 200 ft. by use of guys every 20 feet and Model 500 up to 500 ft. by use of guys every 20 feet. There is no lost tower footage when mounting in either concrete or the special drive-in base. Since the tower is separate from the base, it may be moved to another location without impairing strength.

Both towers are fabricated in 10'0" sections and can be erected in one piece or by sections. Model 300 is made from 1 1/4" x 18

ga. tubular uprights and is zinc electroplated and dipped in clear Butyrate lacquer. The Model 500 is made from 1 1/4" x 16 ga. tubular uprights and is hot dip galvanized.

New, extra-wide corrugated cross-braces give 75% more weld contact with uprights. Tower sections lock together with 2 self-locking 3/8" bolts in each leg. The splined bolts prevent thread damage and stop hole stretch when tower moves in the wind.

**HOW TO ORDER:** 1. Specify if to be mounted in concrete or drive-in base. 2. Order by specific sections, starting at the base. See illustration for section numbers.

**SHIPPING:** For best freight rates, 40 ft. and over towers will be shipped in section combinations permitting 2 telescoped bundles, unless otherwise specified. (Example: a 60 ft. tower will consist of section A, C, D, E, and 2 F's.)

### ZINC ELECTROPLATED ECONOMY MODEL NO. 300

Size	Net	Ship Wt.
40'0"	\$ 63.95	130 lbs.
50'0"	82.50	172 lbs.
60'0"	99.95	215 lbs.
70'0"	115.95	245 lbs.
80'0"	134.25	292 lbs.

### HOT DIP GALVANIZED HEAVY-DUTY MODEL NO. 500

Size	Net	Ship Wt.
40'0"	\$ 93.00	160 lbs.
50'0"	117.00	211 lbs.
60'0"	141.00	262 lbs.
70'0"	164.00	302 lbs.
80'0"	188.00	357 lbs.

Add 15 lbs. per Tower for hardware.

Add approximately 3 lbs. per section for galvanized No. 300 Towers.

TOWER SECTIONS AVAILABLE AS ILLUSTRATED

SECTION  
300A or 500A  
1 1/2" x 10'  
7 Crossbraces

SECTION  
300B or 500B  
1 1/2" x 10'  
8 Crossbraces

SECTION  
300C or 500C  
1 1/2" - 16" x 10'  
8 Crossbraces

SECTION  
300D or 500D  
16" x 10'  
8 Crossbraces

SECTION  
300E or 500E  
16" - 20 1/4" x 10'  
8 Crossbraces

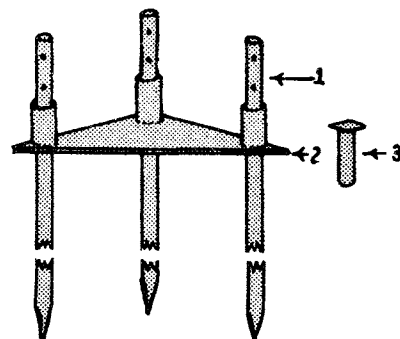
SECTION  
300F or 500F  
20 1/4" x 10'  
9 Crossbraces

### HEAVY DUTY DRIVE-IN BASE

For Jontz self-supporting towers

#### Specifications:

- 1—Drive-in legs: 1 1/4" x 16 gauge x 36"
- 2—Base plate: 18" triangle x 14 gauge for 40' towers—22" triangle for towers 50' or higher—state tower height
- 3—Driving cap: 2" x 1 1/4" to drive individual legs.

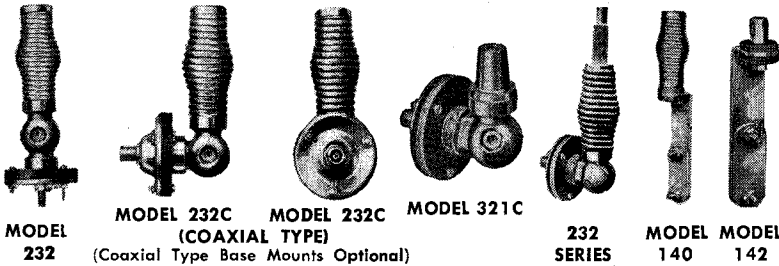


# ANTENNAS MOUNTS

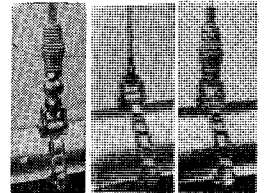
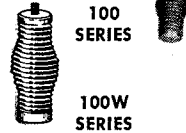


**Master Mobile Mounts**  
Division of Whitehall Electronics  
Los Angeles 16, California

All products are for Universal Use — Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.



**SEPARATE SPRINGS FOR  
UNIVERSAL MOUNTS**



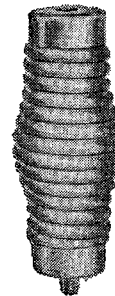
No. 444 Universal Mount \$17.80  
No. 445 Mount \$7.95  
No. 446 Mount \$13.45

**MOUNT SPECIFICATIONS**

(All types are tapped for 3/8" Stud Fitting on Antenna End. Shipping Weight Approx. 3 lbs.)

232	Base Mount—Double Tapered Spring—Swivel Base	\$ 8.75
232C	Base Mount—Double Tapered Spring—Swivel Base Coax Conn.	8.75
232SS	Base Mount—Double Tapered Spring—Spec. Stainless	12.95
232SSC	Base Mount—Double Tapered Spring—Spec. Stainless—Coax. Conn.	12.95
232X	Base Mount—Heavy Duty—Double Tapered Spring—Swivel Base	9.85
232XC	Base Mount—Heavy Duty—Double Tapered Spring—Coax. Conn.	9.85
232XSSC	Base Mount—Heavy Duty—Double Tapered Spring—Spec. Stainless—Coax. Conn.	14.95
232XSS	Base Mount—Heavy Duty—Double Tapered Spring—Spec. Stainless	14.95
232XX	Base Mount—Extra Heavy Duty Spring	10.85
232XXC	Base Mount—Extra Heavy Duty Spring—Double Tapered Spring—Coax. Conn.	10.85
232XXSS	Base Mount—Extra Heavy Duty Spring—Double Tapered—Spec. Stainless	15.95
232XXSSC	Base Mount—Extra Heavy Duty Spring—Double Tapered—Spec. Stainless—Coax. Conn.	15.95
321 or 321C	Base Mount—Where no spring desired—with spec. rigid type ball joint	7.95
140	Universal Mount—Double Tapered Spring	6.95
140X	Universal Mount—Heavy Duty—Double Tapered Spring	7.95
140SS	Universal Mount—Special Stainless	9.65
140XSS	Universal Mount—Special Heavy Duty Stainless	10.95
140XX	Universal Mount—Extra Heavy Duty—Double Tapered Spring	8.95
140XXSS	Universal Mount—Extra Heavy Duty—Stainless Steel	11.95
142	Universal Mount—Less Spring, with Insulators for Direct Mounting by Series 100 Ant. or 92 Ext. and 106 Antenna	3.95
446SS	Universal Mount—Special Stainless—Chain Mount	14.90
446XSS	Universal Mount—Heavy Duty—Special Stainless—Chain Mount	15.90
446XXSS	Universal Mount—Extra Heavy Duty—Special Stainless—Chain Mount	16.90
446	Universal Mount—Heavy Duty Spring—Chain Mount	13.45
446L	Universal Mount—Double Tapered Spring—Chain Mount	12.45
446XX	Universal Mount—Extra Heavy Duty Double Tapered Spring—Chain Mount	14.45
444	Universal Mount—Heavy Duty Spring—Swivel Base—Chain Mount	17.80
444L	Universal Mount—Double Tapered Spring—Swivel Base—Chain Mount	16.70
444XX	Universal Mount—Extra Heavy Duty Spring—Swivel Base—Chain Mount	18.80
444SS	Universal Mount—Special Stainless—Swivel Base—Double Tapered Spring—Chain Mount	20.90
444XSS	Universal Mount—Special Stainless—Heavy Duty—Swivel Base—Chain Mount	22.90
444XXSS	Universal Mount—Extra Heavy Duty—Special Stainless—Swivel Base—Chain Mount	23.90
445	Universal Mount—Threaded, 3/8"-24—Chain Mount	7.95

**HEAVY DUTY  
UNIVERSAL  
SPRINGS**



Heavy duty flexible mounting spring mounts on the base and holds the antenna. Special flexible "give" spring prevents sharp impacts and breakage. Maintains vertical antenna position under normal wind loads.

3/4-24 tapped hole for antenna mast. 3/8-24 stud for antenna base. 5" h. Tightening wrenches supplied.

Model MMW-7 ..... \$4.50  
Cad plated with black painted ends. Lockwasher included.

Model MMW-7HC ..... \$5.50  
Heavy Cad plated for extra protection. Lockwasher included.

Model MMW-7SS ..... \$8.95  
Deluxe—Stainless Steel spring high quality appearance. Lockwasher included.

**BASE  
MOUNT**

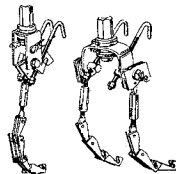


New design incorporating the last word in modern design for strength and service. Easy one-man installation, no special tools needed. Mounts watertight on flat or curved surface. Mounting template provided. 3/4-24 thread mounting hole for whips and antennas.

Model MMW-3AE High gloss ebony finish \$6.95  
Model MMW-3AP High gloss polished finish \$7.95  
Model MMW-3AES Ebony finish. St. St. hardware \$8.95  
Model MMW-3APS Polish finish St. St. hardware \$9.25

**WHIP ANTENNA SPECIFICATIONS**

Model Overall St. Steel Length	Base Specifications	Net Price
100-60S	60" Threaded 3/8" Stud to fit all Mounts...	\$4.95
100-72S	72" Threaded 3/8" Stud to fit all Mounts...	4.95
100-78S	78" Threaded 3/8" Stud to fit all Mounts...	5.00
100-86S	86" Threaded 3/8" Stud to fit all Mounts...	5.15
100-90S	90" Threaded 3/8" Stud to fit all Mounts...	5.20
100-96S	96" Threaded 3/8" Stud to fit all Mounts...	5.20
100-103S	103" Threaded 3/8" Stud to fit all Mounts...	6.95
106-60S	Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.15
106-72S	72" Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.15
106-78S	78" Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.20
106-86S	86" Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.35
106-90S	90" Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.40
106-96S	96" Pl. End 3/16" Dia. (Fits Mod. 92 Ext.)	4.50
106-103S	103" Pl. End 3/8" Dia. (Fits Mod. 92 Ext.)	6.45
Comb. 106-96" whip with #92 Ext. (18") gives up to 112" adj.		Net \$8.00



**UNIVERSAL  
MOUNTINGS**

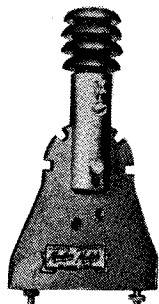
Unique shaped links adjustable to fit any width surface. For use with spring and or whip. (3/8"-24 thread). Easily attaches in minutes.

MM530 Deluxe Double Mount Stain. Steel. Net \$21.95  
MM531 Deluxe Single Mount Stain. Steel. Net 11.95  
MM520 Double Mount S-Cad. Plated ..... Net 7.95  
MM519 Single Mount S-Cad. Plated ..... Net 4.95

New Model No. 132-J Junior Body Mount — Same design as standard No. 232 Master Mount but smaller size. Built to approved Master spec. for quality, workmanship and finish. Net \$4.17  
Model No. 132-JC — Same as above with Coax Connector ..... Only \$5.17  
New Model No. 140-J Junior Bumper Mount — Same design as our standard No. 140 Master Mount but smaller spring — yet of same high quality construction and finish ..... Net \$4.17  
Coaxial Conversion Kit — No. 118 fits No. 232 and No. 118J fits No. 132J Models. Net \$1.00

**SEPARATE SPRINGS FOR  
BUMPER MOUNTS**

	Net
100 — Regular	\$4.50
100-X — Heavy Duty	5.50
100SS — Stainless Steel	6.95
100XSS — Heavy Duty Stainless Steel	7.95
100WX — Heavy Duty w/Male stud	5.50
100XX — Extra Heavy Duty Spring	6.50
100WXX — Extra Heavy Duty Spring — Male Stud on one end	6.50
100XXSS — Extra Heavy Duty Spring — Stainless Steel	8.95



**Retractable  
CB Antenna  
CG-275 GUTTER MOUNT**

This new precision-built mobile antenna mount enables you to achieve maximum gain and coverage with a car roof level antenna — WITHOUT DRILLING HOLES IN YOUR CAR TOP!

**\$7.95**

NET

**POSITIVELY LOCK** — positively locks antenna in position. **RETRACTABLE** — won't dip even at high speed! **ADAPTABLE** — attaches easily and quickly to your car's rain gutter. Any standard 3/8" 24-thread whip mounts in just seconds. **RUGGED** — steel and aluminum construction, ruggedly built to take a tremendous beating!



**UNIVERSAL MOUNT**

For use with any antenna having 3/8" 24-thread. Entire assembly of alloy steel, chrome plated.

**\$4.45**

NET

**UNIVERSAL MOUNT MMM-75**



For Trunk Lid, Cowl Mounting. Adjustable to fit any curved or flat surface. Special fiberglass insulation. Equipped with coaxial connector.

**\$7.95**

NET

**CB MARINE  
Antenna CBM-16**

New top-loaded "Ocean Sentry" design for greater radiation efficiency, less wind resistance, perfect match to transceiver, operation independently of ground. 72" high with 1/2 wave end fed fiberglass antenna with EZ-off quick disconnect. 1.5 db gain. SWR at resonance 1.5:1. 50 ohms input. Complete with cable, mounting and antenna.

**\$19.95**

NET

**DARTLINE FOLD-OVER  
ANTENNA WITH COIL**



Power Rating: AM-C input, 250 watts — SSB dc input, 700 watts. AM-29: 36" Stain. Steel Laydown Ext. breaks at 18" for fender or deck mount. \$11.95

AM-35: 48" Stain. Steel Laydown Ext. breaks at 36" for bumper mount. \$14.25

**COIL & WHIP**

AM-30 80 Meter \$9.95  
AM-31 40 Meter 8.95  
AM-32 20 Meter 7.95  
AM-33 15 Meter 6.95  
AM-34 10 Meter 5.95

# ANTENNAS MOUNTS



**Master Mobile Mounts**  
Division of Whitehall Electronics  
Los Angeles 16, California

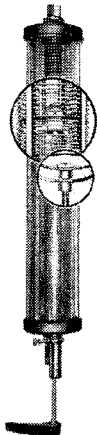
All products are for Universal Use — Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.

HY "Q" construction with wider spacing of turns for high frequency bands. Use as center or base loaded antenna with 60" whip.

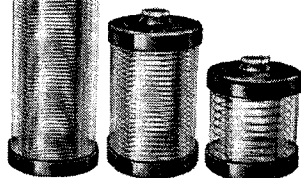
## No. 750 MASTER DELUXE ALL-BANDER

Covers 10 thru 75 and all intermediate frequencies. Silverplated single turn contact, positive spring. Eccentric cam contact, easy selection of turn. Automatic lock prevents damage to coil.

Net \$14.95



## Ultra-Hi "Q" COILS



FOR 80-40-20 & 15, METERS

After many years of experimentation, here is the coil with the highest "Q" ever obtained. Tested and found to have a "Q" of well over 515. Use with 36" base section, 60" whip.

Ruggedized construction • Greater efficiency • Precision made • 2 3/4" Diameter

ANY BAND . . . AMATEUR NET EA. \$5.25

NEW

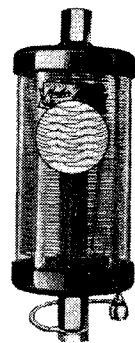
## MULTI-BAND TRANS. ANTENNA COILS

New Plug-In Coils! Just plug into desired pair of jacks and presto! . . . your coil is ready for operation on the desired band. No switches, no sliding contacts, no loose connections. Built and tested for maximum resonance.

- Rigidly tested and engineered — found to have a "Q" of 525
- Operates into a 25-ohm cable
- Positive contact — noise-free, trouble-free operation
- Weathersealed
- Ruggedized construction
- Factory pre-tuned — no adjustment is necessary
- Higher efficiency — lower loss



THE VICTORY No. 999  
10-15-20 METERS ONLY



MODEL SSB 156  
75 & 40 METERS ONLY

YOUR CHOICE \$14.95

## DELUXE ULTRA-HI "Q" COILS

Extremely efficient for SSB operation and with power units.

New design for higher "Q", top efficiency and lighter weight. No arcing with high power transmitters. For use with 3 ft. base section and 60" whip.

15 meter	\$ 6.95	2374 Kc.	\$15.95
20 meter	6.95	2738 Kc.	15.95
40 meter	8.95	2768 Kc.	15.95
75/80 meter	9.95	4507.5 Kc.	10.95
160 meter	14.95	4585 Kc.	10.95
2251 Kc.	15.95	4325 Kc.	10.95

## ULTRA HY "Q" C.A.P. COILS

UH "Q" 2374 Kc.	(Additional HY "Q" C.A.P. Coils to be used with HY "Q" C.A.P. Antennas according to frequency desired. These coils are interchangeable. Other freq. coils priced upon request.)	\$ 8.95
UH "Q" 2738 Kc.		8.95
UH "Q" 2768 Kc.		8.95
UH "Q" 4507.5 Kc.		7.95
UH "Q" 4585 Kc.		7.95
UH "Q" 4325 Kc.		7.95
UH "Q" 160 Meters		12.95
UH "Q" 2251 Kc.		12.95

Deluxe UHQ coils are ideal for use with the Master Mobile K-73 500 watt SSB Linear Amplifier or any other high power SSB amplifier.

## 2 METER "J" ANTENNA

Mobile/Fixed

Provides 2 db. gain over standard co-axial antennas. Vertically polarized. Perfect impedance match for 52 ohm line. Factory-cut balun supplied. Overall height is 86". Ideal antenna for 2-meter mobile or fixed station use.

Model AM-28  
Amateur Net  
\$14.95

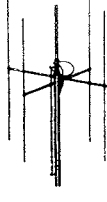


## "CLOVERLEAF" ANTENNA

Provides 3 db. gain. VSWR less than 1.5:1. Omnidirectional pattern with gain equal to 2 el. beam. Complete balun to match 52 ohm coax. Factory pre-tuned. All aluminum.

AM-23 .....420-450 mc.  
AM-24 .....320-325 mc.  
BR-1 .....150-174 mc.  
AM-25 .....144-148 mc.

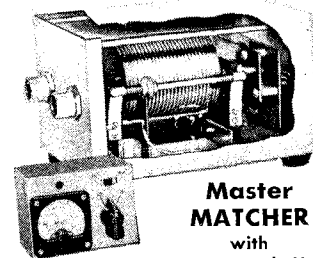
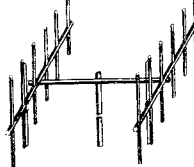
Amateur Net \$12.95  
Model AM-26—  
50-54 mc. \$19.95



## TWIN-SIX 2 METER BEAM

Sturdy, lightweight stacked beam. 12 db. forward gain. 25-30 db. front-to-back ratio. Easy to assemble for horizontal or vertical polarization. Complete with all hardware for stacking and assembly, balun, matching harness for 52 ohm coax, and 3-foot mast. Pre-tuned at factory. All heavy-duty aluminum.

Model AM-5 Amateur Net \$16.95  
Model AM-4 Six element beam 8.95



**Master MATCHER**  
with  
Field Strength Meter

Automatically tunes Band by remote control  
Motor-driven variable inductance controlled by a switch from the operating position. Makes possible tuning the antenna to the exact resonant frequency. QSY in any particular band without moving to adjust antenna loading coil. All guess work is eliminated, and the field strength meter, with automatic panel light indicator, shows when roller is at minimum inductance position. With the Master Matcher maximum efficiency is possible with minimum effort.

For 6 volts: Model 2495-6  
For 12 volts: Model 2495-12  
Amateur Net \$24.95 Complete

## The GIANT CUBICAL QUAD . . . a giant in CB performance!

**INCREASES RANGE** — The Q-11 was designed specifically for Citizens Band use, and is particularly effective in increasing communications range with the power limitations on this band.

**HEAVY DUTY but LIGHT WEIGHT** — Beam element clamps are constructed of heavy-duty cad-plated steel treated to resist corrosion while the elements are made of rigid aluminum and fiberglass tubing to give maximum service. Its light weight enables it to be used with most TV-type rotors.

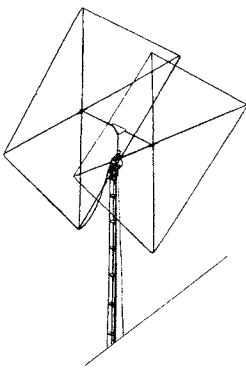
**RUGGED** — The Quad Antenna is a square loop beam which is light weight and still rugged enough to withstand high winds.

**EASILY ASSEMBLED** — It can be assembled on the ground and lifted into place, or assembled on the tower.

**SPECIFICATIONS:** Forward Gain, 8 db; Front to Back, Up to 40 db; Type of Feed, 52 ohm coax; Polarization, Horizontal or Vertical; Longest Element, 9'3"; Boom Length, 65 1/2".

For class D, 27-mc operation

MODEL Q-11 \$39.95 Net



## AIR SENTRY "SHORTY"

Whip only, 18" —  
Overall length, 23"

Top loaded fiberglass antenna complete with mount designed especially for CB class D, 27 mc operation.

CB-1 (for passenger cars)	\$10.95
CB-3 Spare antenna for CB-1	5.25
CBM-14 (with mount for marine use)	12.40
CBA-15 (with 12 ft. coax cable and mount for aircraft application)	8.45
AM-7 2 meter 1 1/2 wave antenna with mount	16.75
AM-10 6 meter shortened 3/4 wave antenna with mount	10.95

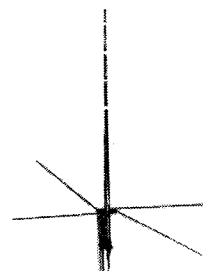


AM-7, AM-10, CB-1, CBA-15

## DYNA-MASTER DYNAMIC CO-LINEAR

Compare these BASE STATION GROUND PLANE features • Up to 20 db signal to noise improvement • Linear impedance matching insures maximum signal transfer from antenna to receiver without the losses of conventional matching transformer • Completely weathersealed in epoxy • Lower angle of radiation gives increased range • Built-in lightning protection • On SSB radiated power will be doubled • Antenna is equally effective on upper, lower or double sideband • Terminates in SO-239 connector • Elements are heavy wall aluminum with tightly swaged telescoping sections.

ABR-365 1 1/2 Wave, adjustable, (144-174 mcs), 5.8 db gain	\$34.95
AM-106 3/4 Wave, (50-54 mcs), 3.7 db gain	34.95
CR-133 3/4 Wave, (80-85 mcs), 3.7 db gain	34.95
CR-137 3/4 Wave, (85-90 mcs), 3.7 db gain	34.95
CR-145 3/4 Wave, (40-50 mcs), 3.7 db gain	34.95
CB-5 3/4 Wave, Class D, 27 mc, 3.7 db gain	24.95



## AIR-SENTRY

Less than 47" long

Can be mounted on top, fenders or trunk lid. Simple peaking adjustment provided. Omnidirectional in horizontal plane; vertically polarized.

For class D, 27-mc operation in automotive, aircraft, marine applications.

MODEL CBS-311

\$5.25

NET

52 ohms  
60 watts  
RG/58 or equivalent  
1.5 mc minimum  
1:1 to 1:1 at resonant frequency

# ANTENNAS MOUNTS

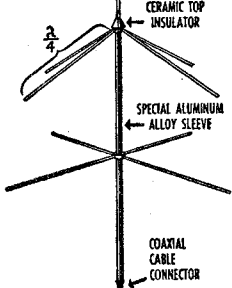


**Master Mobile Mounts**  
Division of Whitehall Electronics  
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All products are for Universal Use — Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.

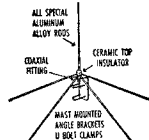
## 2 METER ANTENNAS — FIXED • MOBILE

Can be cut for the following freq.  
220 to 225  
140 to 170  
460 to 465



### GROUND PLANE ANTENNA

**Model 300** — Master DeLuxe . . . NEW! . . . brings in that DX. Outperforms any type of vertical dipole. "Drooping" Type Ground Plane plus four straight radials to give a low angle of radiation for general coverage, an almost perfect circle radiation pattern. Ideal for CD and defense nets. Covers complete Amateur and with Broad and char. Matches 52 ohm coax cable through threaded coax fitting at end. Straight radials are adjustable (up or down) to eliminate standing waves on trans. lines. For medium or low-powered trans. Sturdily built of finest alloys to withstand corrosion, high winds and extreme icing. With 3/8" length of 3/4" pipe for mounting purposes.  
Model 300 Amateur's . . . . . Net \$12.95  
MB-1 — Mounting Bracket . . . . . Net 1.00



**Model GP-4** — Four "Drooping" Radials for perfect match to 52 ohm coax cable. Complete amateur band coverage. Specify other frequencies. Attaches to Mast with U-Bolts. (U-Bolts and Mounting Brackets furnished). Also attachable to side of building. Sturdy, with special alloys, to withstand corrosion and extreme weather.  
**MODEL GP-4 Amateur's Net \$5.95**

### TWO METER COAX ANTENNAS

**No. 214** — MASTER DE-LUXE . . . ruggedly constructed, vertically polarized, frequency range 140 to 170 MC. Completely waterproofed. Highly polished chrome enhances appearance of any vehicle. Furnished with 10 ft. of 72 Ohm Coax Cable.  
**Type 1** — On side with 2 brackets furnished. **\$15.95**  
**Type 2** — Master Mount (No. 292X or 140X) . . . . . Mounts sold separately. Complete **\$17.45**  
Adjustable mtg.—adjusts to 17".



### 2 METER STANDARD MODEL

**No. 114 COAX VHF ANTENNA** — At a popular price! For OPEN TYPE VEHICLES using 140 MC to 165 MC. Mounts any convenient place with standard Master Mounts. Baked enamel finish. With 10 ft. Coax Cable and 18" Adjustable Section.  
**Net, Only \$9.95**



**No. 460**  
with 10' Coax (RG 58/U)  
**\$7.95**  
465-mc

**No. B-20**  
**\$2.25**

**No. CB-19**  
**\$5.45**  
465-mc

New improved CB-2 Meter antennas for high performance. Stainless steel and chrome plated brass. Self-tapping threads. Easy to install with one 7/16" hole.

### MICRO-Z-MATCH

MICROMETER IMPEDANCE MATCHING INDUCTANCE for MOBILE ANTENNAS

- Used on all bands with any type coaxial cable to match any mobile antenna.
- Roller coil construction with rear cap rotating the inductance within the case. 4 microhenries maximum inductance.
- Silver plated coil and roller contacts for low loss.
- Micrometer type calibration permits infinite adjustment and positive resetting.
- Adjustability — Easily adjustable for minimum standing wave ratio (1:1).

Without coax adapter kit Micro-Z-Match may be connected between antenna connector and ground connection.

**No. 925**  
Complete with Coax Adp. Kit  
Net **\$9.95**

### EXTENSIONS — with 3/8"-24 thread, fits all mounts and coils

88	36"	Lower section for all bands, gray hammertone	\$4.05
88S	36"	Stainless Steel	5.25
90	26"	Extension for 100 Series Whips	3.55
92	18 1/4"	Extension for 106 Series Whips	3.50
94	36 1/4"	Extension for 106 Series Whips	4.06
115	36"	Extension for Models No. 114 and No. 215	4.25
12*	12"	Base Section for AB Antenna (baked enamel)	2.75
12C*	12"	Chrome Base Section for AB Antenna	3.25
18*	18"	Base Section for AB Antenna (baked enamel)	2.75
18C*	18"	Chrome Base Section for AB Antenna	3.25
24*	24"	Base Section for AB Antenna (baked enamel)	3.25
24C*	24"	Chrome Base Section for AB Antenna	3.65

\*NOTE: Base Sections for use with ALL-BANDER Antenna Coils.

Model 92    Model 90    Model 88    Model 115

### E-Z-OFF Antenna Connector

Noise-free. Connect or remove loading coils, whips, or mounts in a fifty. No wrenches, pliers or screwdriver needed. High-grade stainless steel. . . will not corrode.

- Precision made
- Maximum efficiency
- Positive lock

Model No. E-Z-295  
Amateur Net **\$2.95**

### NEW MASTER FLEX-R No. 711

Designed to relieve stress and strain and prevent damage that could be transmitted to the loading coil

**\$1.95**

### 11 METER CITIZENS BAND ANTENNA

A base-loaded stainless-steel whip antenna with an overall height of 40 inches. The bottom of the whip has been wound into a coil which is potted in a pliable plastic to add rigidity to the coil. The base of the whip is fitted with a 1/4" diameter brass slug, for use with a standard-broadcast 8-ball type coil mount; also roof-top or trunk-rod type mounting. The antenna is cut to offer very low standing-wave ratio over most of the band when fed with a 52-ohm coax.

**YOUR CHOICE EACH \$12.95**

**5B-27**    **ANTENNA WITH PL-259 PLUG**    **8B-27**

Model No. PL-259..\$6.95

### MASTER MAGIC WAND TUNABLE

Combination Coil & Whip  
New Magic-Wand Top-Loaded Antenna Mounts On Any Standard Base Mount

A newly designed single band coil and whip antenna in 1 compact and attractive unit. Top loaded to provide top performance and efficiency at the most useful radiation angle for communications. Built and tested in the Master Mobile Laboratories, the Master Magic-Wand provides a minimum wind resistance which minimizes detuning effects at high speeds. Antenna wound over tapered fiberglass whip for maximum strength.

Available in 5 ft. & 6 ft. Lengths

No. MM810	—10 Meters—5 Ft. L.	\$8.95
No. MM811	—11 Meters—5 Ft. L.	8.95
No. MM811-35	—11 Meters—35"	8.95
No. MM811-45	—11 Meters—45"	8.95
No. MM815	—15 Meters—5 Ft. L.	8.95
No. MM820	—20 Meters—5 Ft. L.	8.95
No. MM840	—40 Meters—6 Ft. L.	9.95
No. MM880	—80 Meters—6 Ft. L.	9.95

**No. 613**    **No. 613** — NEW IMPROVED MASTER VHF ROOF TOP ANTENNA. This new high performance antenna features an improved type positive-lock coaxial connector. Designed for police, fire, taxi cabs and amateurs using 140 MC to 165 MC. Stainless steel wire with threaded fitting. Easily changed without disturbing mounting. Comes with 10 ft. coax cable . . . . . Net \$4.95

**No. 113** — ROOF TOP ANTENNA without De Luxe Connections . . . . . Net 3.96

**No. 117** — Extra Antenna for No. 113 . . . . . Net .97

**No. 116** — Extra Antenna for No. 214 and No. 613 . . . . . Net 1.70

### GROUND PLANE (Drooping Type) FOR 6 METERS No. MGP-6

**NEW SLIM-JIM**  
All-Band BASE LOADING Antenna Coil

For 10, 11, 15, 20, 40, 80 Meters.

96" S.S. Whip included. Positive locking action whip provides accurate and tight contact wherever set. Just slide in or out to final loading point and lock whip into position.

**No. B-10B0**  
**\$17.95**

**No. 10-H**  
Tennaclip Fits all cars  
Amateur Net..... **\$1.00**

### TENNACLIP

Designed to store mobile whip in convenient "storage" position. Instant release. Fits all cars.

No. 20-C    Amateur **\$1.00** Net

### MASTER FIBRE-GLAS WHIPS

FLEXIBLE, INDESTRUCTIBLE UNIVERSAL ANTENNA

- Completely Weatherproof — permanent and rust resistant, corrosion proof.
- Break-Proof — specially designed flexibility prevents failure due to fatigue or breakage.
- Safe — permanent insulation featured in Master Whips make it absolutely safe, prevents burns.
- Base Fitting — 3/4" x 24 thread with male brass—chrome plated fittings.

FG-60	60"	Amateur Net.....	\$4.95
FG-72	72"	Amateur Net.....	\$4.95
FG-84	84"	Amateur Net.....	\$5.15
FG-96	96"	Amateur Net.....	\$5.25
FG-103	103"	Amateur Net.....	\$6.95

### CLAMP-ON ANTENNAS

Same as CG-120 but without removable whip feature.

CG-360	108 to 470 Mc	Net \$8.95
CG-110	11 Met. Cit. Bd. 27 Mc	Net \$10.30



# ANTENNAS MOUNTS



**Master Mobile Mounts**  
Division of Whitehall Electronics  
**Los Angeles 16, California**

All products are for Universal Use — Mobile, Home, Marine, C.A.P., Civil Defense, Emergency, etc.

## SKYMASTER COAX ANTENNA

Skymaster gives you a lower "radiation angle" of your antenna for a better contact for vertically polarized stations in the citizens band. The Skymaster has a nominal impedance of 72 ohms, used with 72 ohm cable. Matches RG59/U coax cable for perfect match to most transmitters and improves receiving.

Both radiator and skirt are of heavy-gauge aluminum tubing, and a resilient machined polyethylene insulator is used for low weight and high strength. Silverplated coax connector is used for easier connection and lowest SWR.

- Easily installed on any existing mount
- Concentrated signal for best coverage
- Perfect match for transmitting and receiving
- Highest quality components
- Tested and approved in Master Mobile's own laboratory

SM-700-2 — 2 Meters	Net \$10.95
SM-700-6 — 6 Meters	Net \$15.95
SM-700-10 — 10 Meters	Net \$17.95
SM-700-11 — 11 Meters	Net \$17.95

## BASE STATION MONOPOLE ANTENNA

Designed around a foiled radiating element, intended for service in installations requiring a ground plane configuration and a wider useful frequency range for a single antenna than is possible in the standard ground plane design using a coaxial stub tuner. Antenna is fed by an end seal type termination, through a Type SO 239 female connector mating with a PL 259 plug. Radiating elements and all ground plane elements are permanently grounded, therefore, damage by lightning is reduced to a minimum.

- VSWR (using 50 ohm cable).....\$1.31
- Bandwidth (under 2:1 VSWR).....±4%
- Maximum power input.....750 watts
- Internal feedline.....RG-8A/U
- Nominal input impedance.....50 ohms
- Termination.....SO. 239

SR-600-2 — 2 Meters	Net \$14.95
SR-600-6 — 6 Meters	Net \$16.95
SR-600-10 — 10 Meters	Net \$24.50
SR-600-11 — 11 Meters	Net \$24.50

## CITIZENS BAND ANTENNA

### "RANGE BUSTER"

#### MODEL CB-35

Under field test conditions, this antenna outperformed any other CB unit and maintained a 1:1 Standing Wave Ratio over the entire CB frequency. Anyone can install it... it's universal... can be mounted anywhere on auto without affecting performance. AND, it folds over neatly. Overall length is 6'3" it's adjustable.

- Weather-sealed
- Precision-engineered
- All parts individually replaceable

CB NET **\$1995**

#### MODEL CB-29

Adjustable to resonant frequency, this Citizen Band mobile antenna is designed especially for deck or fender mounting with unique lay-over feature. Consists of special stainless steel 86" whip plus 36" lay-down extension. Adjusts from 104" to 119"

CB NET **\$15.95**

#### MODEL CB-32

Combined with the stainless steel lay-down extension is a vinyl covered 47" top loaded fiberglass whip for greater radiation efficiency and increased range. Adjustable peaking. Signal to noise, improvement of 4 db or more 83" overall length.

CB NET **\$16.95**

#### MODEL CB-33

Same as CB-32 except top loaded fiberglass whip is only 18", reducing overall to 57" without reducing range and radiation efficiency.

CB NET **\$16.95**

## ASTRONAUT ANTENNA FOR CITIZENS BAND

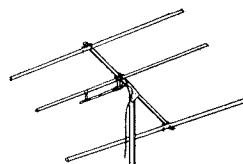
Can be resonated precisely to any frequency between approx. 20 and 30 mc. by means of the tip rod attached to top of antenna. Provides outstanding performance. Swivel connection permits installation either horizontally or vertically on curved or flat surfaces. Length approx. 60"

For class D, 27-mc operation

MODEL CBV-6 **\$15.95**

## 3-ELEMENT BEAM ANTENNA

Handles up to 1 Kw. Input



Sturdy and lightweight 3 element beam provides a power gain of approximately 2 1/2 (8 DB) in the forward direction and reduces interference from the sides and rear by approximately 10 to 1 (Front to back ratio 20 DB).

A coaxial gamma match is pretuned at the factory to give an excellent VSWR of 1.1 to 1 at band center when fed with a 52 OHM coax.

SR-500-2, 2 Meters	\$10.95
SR-500-6, 6 Meters	\$12.95
SR-500-10, 10 Meters	\$24.95
SR-500-11, 11 Meters	\$24.95

## MASTER MARINE MARVEL MARINE ANTENNA

Designed, built and tested in Master Mobile's own floating laboratory, the new center-loaded Master Marine Antenna is the latest result of many years of experience in producing the finest in Antennas used throughout the world! The Marine Marvel, seasure and powerful, provides maximum power radiation on all marine frequencies from 2 to 3 megacycles. Here is the Antenna that was made for your boat!... engineered to withstand the most severe type of marine service, with long life assurance by being fabricated of the highest quality material available.

- 10 1/2 Ft. Overall Length.
- Capacity 4 Ft. Stainless Steel Plastic-Coated Whip.
- 18" Center-Loaded Impregnated Coil
- 5 Ft. Anodized Base Section
- Absolutely Waterproof-Weatherproof.
- No Electrolysis.
- Rugged Insulators.
- Adjustable Antenna Lead

#### COLORS AVAILABLE —

- WHIP — Yellow, Blue or Black.
- COIL — Yellow, Blue or Black.
- BASE — Gold (Spec. Saltwater Anodized)
- No. MMM-2710 Antenna % Solid Mounts — 5 Ft. Base ..... \$29.95
- No. MMM-2715 Antenna & Solid Mounts — 10 Ft. Base ..... \$35.95
- No. MMM-2700 Antenna — 5 Ft. Base less Mounts) ..... \$27.95
- No. MMM-2705 Antenna — 10 Ft. Base (less Mounts) ..... \$33.95
- MMM-10 SOLID MOUNTS...per set \$5.50

## MARINE MOUNTING BRACKETS

MMM-1 for 1" mast	\$5.95
MMM-15 for 1 1/2" mast	\$6.75

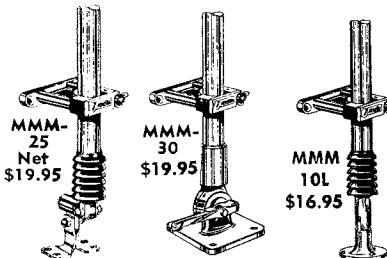


## MASTER SUPER MARINE ANTENNA No. MMM-2750

The Master Super-Deluxe Marine Antenna in 12 ft. anodized 1 3/8" tubing. Coil section is 35" long. Impregnated coil covered with phenolic tubing. 8' fiberglass whip. Here is the ultimate in Marine Antennas!

MMM-2750 Antenna & Solid Mounts	\$49.95
Without Mounts.....	\$47.95

## MARINE LAYDOWN MOUNTS



MMM-25 Net \$19.95  
MMM-30 Net \$19.95  
MMM 10L \$16.95

**Additional Brackets Available**  
New deluxe series. Can be mounted on side of cabin or upright on deck. Mounts swivel, and are adjustable to any position. Chrome-plated brass with high impact waterproof-weatherproof phenolic insulator.



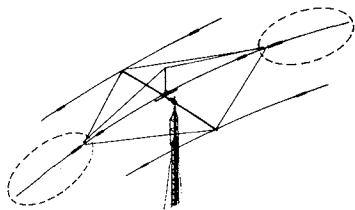
LOS ANGELES, CALIFORNIA 90016



**Mosley****Mosley**

# TA-40KR

## 40 METER OPERATION



In only a few minutes time you can now convert your Mosley Model TA-33, TA-32, TA-31, or TA-36 for operation on 40 meters as a single rotatable dipole. Beam operation on 10, 15 and 20 meters is virtually unaffected. The Model TA-40KR, when installed on the driven element of a Model TA-33, TA-32, TA-31 or TA-36, will exhibit a typical figure eight pattern obtained from a half wave antenna.

This new, easily assembled 40 meter conversion kit, Model TA-40KR incorporates the same precision engineering and high quality aluminum construction you expect in a Mosley beam. No additional feed line is needed for 40 meter operation. Complete instructions for assembly are provided.

Only a Mosley conversion kit which incorporates the famous Mosley trap assembly design with features that maintain stability of resonance under all weather conditions assures you of continued top performance with your "Trapmaster" beam on 40 meters.

Because of the difference in mechanical strength of some antennas as well as possible differences in electrical design, use of the Model TA-40KR conversion kit is not recommended on any antennas other than Mosley Models TA-33, TA-32, TA-31, and TA-36.

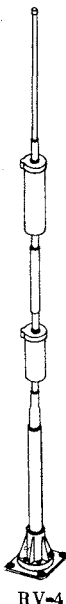
SWR 1.5/1 or better at resonant frequencies. Maximum element length 38 ft. 7 in. Turning radius 19 ft. 6 in. Assembled weight 10 lbs. Trap Assemblies, Hardware, mast and line for guying is supplied. Shipping weight Mosley TA-40KR ..... \$44.79

### RV-4 VERTICAL ANTENNA

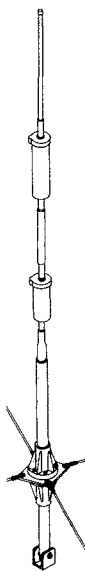
A pace setter in 10, 15, 20 and 40 meters is the Mosley RV-4 Vertical Antenna. Operate on 1 quarter wave on all four bands. This antenna features Trap-Master traps, Automatic band switching on all four bands, Self supporting and completely factory pretuned to maintain low SWR over entire range.

The RV-4RK kit for roof mounting includes radial wire, mast and hinged mounting. No radials required for ground mounting if a good ground connection can be provided within a few inches of the antenna base. Maximum power rating 750 watts on AM phone, final amplifier. Uses single 52 ohm coax line. Antenna height 20' 8-5/8" above insulator, with roof mount 25' 2-5/8". Weight of antenna 10 lbs., with roof mount 14½ lbs.

Mosley RV-4 ..... \$30.42  
Mosley RV-4RK ..... \$16.77

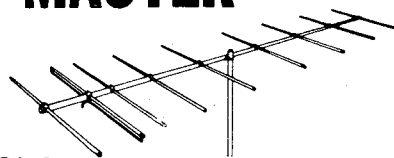


RV-4

RV-4 with  
RV-4RK Kit

# SCOTCH-MASTER

## 2 & 6 Meter Antennas



### MOSLEY Model A-92-S ..... Amateur Net \$16.40

New Mosley SCOTCH-MASTER two meter beam is a nine element antenna. May be mounted vertically or horizontally, will handle maximum legal power, amplitude modulated or 2,000 watts P.E.P. SSB. Mounting bracket fits masts up to 1½" OD. Antenna is matched for 300 ohm balanced line. Boom is of sturdy medium weight wall 1¼" OD aluminum tubing to achieve maximum strength with minimum weight and wind loading characteristics. Stacked arrays feature 300 or 75 ohm balanced feed.

**SPECIFICATIONS AND PERFORMANCE DATA:** Forward gain, 14 Db. Front-to-back, 20 Db. SWR, 1.5 to 1 or less at resonant frequencies. Maximum element length, 41 inches. Boom length, 12 feet. Turning radius, 6.5 feet. Assembled weight, 4 pounds. Maximum wind surface area, 1.25 square feet. Wind load, 25 pounds. Antenna is shipped in kit form.

### MOSLEY Model A-76-S ..... Amateur Net \$35.10

The Mosley SCOTCH-MASTER six meter beam has seven elements. Provides maximum forward gain and excellent directivity. SCOTCH-MASTER will handle the full legal power, amplitude modulated. Mounting bracket fits up to 1½ inch OD mast. Antenna is "Gamma" matched for 52 ohm unbalanced line. Boom is of heavy gauge 1¼" OD aluminum. Easily rotated with TV rotor and can be mounted vertically or horizontally.

**SPECIFICATIONS AND PERFORMANCE DATA:** Forward gain, 12 Db. Front-to-back, 20 Db. Boom length, 24 feet. Turning radius, 13 feet. Assembled weight, 12.5 pounds. Maximum wind surface area, 2.5 square feet. Wind load, 51 pounds. Antenna is shipped in kit form, complete with detailed instructions.

### MOSLEY Model A-56-S ..... Amateur Net \$28.16

The New Mosley SCOTCH-MASTER six meter beam features five elements, maximum forward gain and excellent directivity. This gamma matched beam will handle the full legal power amplitude modulated. Can be mounted vertically or horizontally. Feed with 52 or 75 ohm line.

**SPECIFICATIONS AND PERFORMANCE DATA:** Forward gain, 10 Db. Front-to-back, 20 Db. or better. SWR, 1.5 to 1 or less at resonant frequencies. Maximum element length, 118 inches. Boom length, 12 feet. Turning radius, 7 feet 8¾ inches. Assembled weight, 6.5 pounds. Wind load, 32 pounds horizontally, 56 pounds vertically. Antenna is shipped in kit form, complete with detailed instructions.

### •• Mosley SCOTCH-MASTER Stacking Kits ••

#### MOSLEY Model A-92-S-SK1 ..... Amateur Net \$3.15

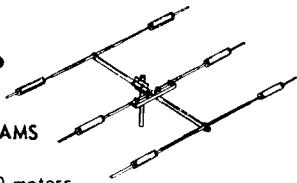
A kit for stacking two horizontally polarized A-92 SCOTCH-MASTER beams, one above the other. Comes complete with matching transformer, insulator, complete instructions and phasing line. Feed point impedance - 300 ohm balanced line. This stacked array will attain 3 Db additional gain over single horizontally mounted beam.

#### MOSLEY Model A-92-S-SK2H ..... Amateur Net \$44.35

A kit for stacking four horizontally polarized A-92 SCOTCH-MASTER beams, two over two. Complete with support members, mounting plates, phasing line, insulators, hardware and instructions. Feed point impedance - 75 ohm balanced line. This stacked array will attain 6 Db additional gain over a single horizontally mounted beam.

#### MOSLEY Model A-92-S-SK2V ..... Amateur Net \$44.35

A kit for stacking four A-92 SCOTCH-MASTER beams, two over two, in the vertical plane. Comes complete with support members, mounting plates, insulators, phasing line, hardware and instructions. Feed point impedance - 75 ohm balanced line. This stacked array will attain 6 Db additional gain over a single vertically mounted beam.



**3 BAND BEAMS**

10 - 15 - 20 meters.

3 ELEMENT beam provides outstanding performance on 10, 15 and 20 meter bands. Up to 8 db., forward gain with 25 db., or better, front-to-back, 1.1/1 or less, SWR at resonant frequencies.

Model TA-33 . . . . . Amateur Net, \$104.75

2 ELEMENT version of the famed TRAP-MASTER Beam rated to a full KW. 5.5 db. forward gain with 20 db. front-to-back. 7' boom and 28' maximum element length.

Model TA-32 . . . . . Amateur Net, \$72.98

3 BAND DIPOLE is rated to 1 KW. For the Ham who wants to begin with an inexpensive three band dipole and in two additional steps have the Famous TA-33 "Trap-Master" Beam.

Model TA-31 . . . . . Amateur Net, \$27.14

Conversion kit to make the TA-31 a TA-32. Model TA-31-32 . . . . . Amateur Net, \$44.52

Conversion Kit to make the TA-32 a TA-33. Model TA-32-33 Amateur Net, \$30.86

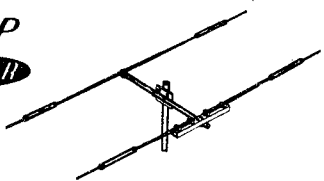
**"JR" FOR 300 WATTS or LESS**

10 - 15 - 20 meter bands.

Trap-Master "Junior" Beams provide the same fine performance as the world famous Model TA-33. Traps are rated to 300 watts (AM).

3 ELEMENT "JUNIOR" Beams provide the forward gain and 25 db. front-to-back. SWR is usually less than 1.5/1 at resonant frequencies. Aluminum boom is 1 1/2" OD. x 12". Maximum element length, 26' 8". Turning radius is 14' 9". Wind load, 86 pounds. Assembled weight, 20 pounds. Recommended feed-line, RG-8/U.

Model TA-33 Jr. . . . . Amateur Net, \$72.98



2 ELEMENT "JUNIOR" with 5.5 db. forward gain with approximately 20 db. front-to-back. Aluminum boom is 6' long and maximum element length is 26' 8". Has turning radius of just 13' 9". Assembled weight, 14 pounds. Wind load, 62 pounds.

Model TA-32 Jr. . . . . Amateur Net, \$51.98

3 BAND DIPOLE rated to 300 watts. For the Ham who wants to begin with an inexpensive three band dipole and in two additional steps have the famous TA-33 Jr. "Trap-Master" Beam.

Model TA-31 Jr. . . . . Amateur Net, \$23.85

Conversion Kit to make the TA-31 Jr. a TA-32 Jr.

Model TA-31-32 Jr. . . . . Amateur Net, \$30.35

Conversion Kit to make the TA-32 Jr. a TA-33 Jr.

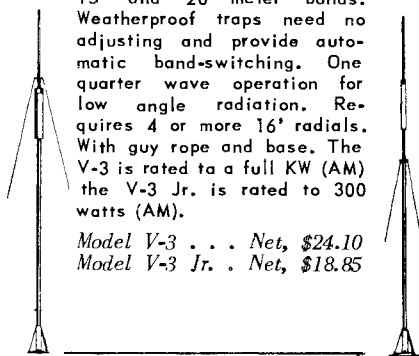
Model TA-32-33 Jr. . . . . Amateur Net, \$26.37

**"TRAP-MASTER"**

**VERTICAL ANTENNAS**

3 BAND VERTICAL for 10, 15 and 20 meter bands. Weatherproof traps need no adjusting and provide automatic band-switching. One quarter wave operation for low angle radiation. Requires 4 or more 16' radials. With guy rope and base. The V-3 is rated to a full KW (AM) the V-3 Jr. is rated to 300 watts (AM).

Model V-3 . . . . . Net, \$24.10  
Model V-3 Jr. . . . . Net, \$18.85



**10 thru 40 meters**

Automatic bandswitching with this vertical. Electrical 1/4 wavelength each band with low angle radiation makes this an excellent low cost DX antenna. Low SWR with exceptionally flat response over full bandwidth. Traps are weather and dirt proof for long, reliable service. Will handle full KW (AM). Sturdy aluminum construction. Requires 4 radial wires, 30' each. With guy rope and base.

Model V-4-6. . . . . Amateur Net, \$28.50



80 Meter BASE LOADING COIL. Base loading coil for operating V-4-6 Vertical on 75 and 80 meter bands. Space wound on heavy ceramic form. Handles full KW (AM). Mounts on base section of vertical. With coax connectors.

Model D-4BC Amateur Net, . . . . . \$16.45

Work 10, 15, 20, 40 and 80 with one antenna . . . one RG-8/U feed line. Designed and built to meet United States Air Force electrical and structural specifications. The V-5 is 100% rust proof and performs brilliantly on each of the 5 bands. It is capable of handling power of 1 KW to the antenna! Weather proof trap assemblies are used throughout . . . no external loading coil needed. Maximum length of antenna is 43 ft., 8 in. Supplied complete with polyethylene guy rope, heavy duty base with internal coax fitting and all necessary hardware.

Model V-5. . . . . Amateur Net, 124.43



**HEAVY DUTY BASE MOUNT**

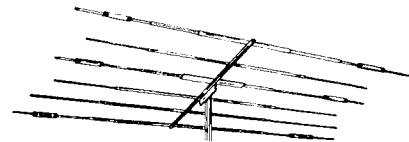
Supplied with the V-5 and V-4-8 Antennas.

For 40 and 80 meter bands. 1/4 wavelength vertical on each band. Over-size trap assembly handles 1 KW (AM). Maximum overall length of antenna is 52' 3". Requires 12 radials each 64' in length. Complete with base mount (heavy duty), polyethylene guy rope and hardware

Model V-4-8. . . . . Amateur Net, \$89.25



**3 BAND BEAM**



This wide spaced, six element configuration employs 4 operating elements on 10 meters, 3 operating elements on 15 meters and 3 operating elements on 20 meters. Automatic bandswitching built for operation at maximum legal amateur power. Forward gain on 10 meters is 8 db., on 15 meters is 8.5 db. on 20 meters is 8 db. Front-to-back is 20 db. or better on all 3 bands. SWR is 1.5/1 or better at resonance. maximum element length is 29'. Boom is 24'. Turning radius is 19' 3". Assembled weight is 69 lbs. just one coaxial feed line needed. 52 ohm. RG-8/U is recommended.

Model TA-36. . . . . Amateur Net, \$132.10



3 ELEMENT BEAM for 20 and 40 meters. Forward gain on 20 meters, 8 db.; on 40 meters, 5.0 db.; front-to-back on 20 meters, 25 db.; on 40 meters, 20 db.; maximum element length, 54' 8"; turning radius, 29"; boom length, 20'. Antenna weight (with Tilting Head), 150 lbs. Just one coaxial feed-line is needed. 52 ohm, RG-8/U is recommended.

Model TA-20-40. . . . . Amateur Net, \$354.39

**"TRAP-MOBILE"**

for 10, 15 and 20 meters.

Automatic Bandswitching! 3 Band Mobile Antenna functions without switches. Overall length of 7' 8" provides electrical 1/4 wavelength on each band assuring excellent performance with low SWR over full bandwidth. Stainless steel whip sections permit antenna to lay forward over car for garaging. Stainless steel base stud, 3/8"-24, fits standard mounts. Feed with RG-8/U coax, preferably 22 1/2 feet in length.

Model MA-3 Amateur Net, \$22.00

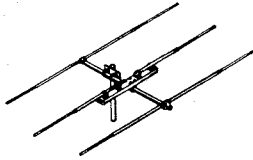


Whip-Klip - Universal clip for mobile whip antennas.

Model MWK. . . . . Amateur Net \$1.03



**"POWER-MASTER" BEAM ANTENNAS**



"Power-Master" Antennas are full sized arrays, each designed for a single band, 10, 15, or 20 meter. All are 100% rust-proof, stainless steel hardware, high impact polystyrene insulators with aluminum elements and boom. "Power-Master" is fed with 52 ohm coax.

Forward gain - 8.9 db., front-to-back - 25 db., SWR - 1.1/1, maximum element length - 18' 7", boom - 12' x 1 1/4" OD x .058, turning radius - 11' 1", wind load - 69 lbs.

Model A-310 . . . . . Net, \$41.36

Forward gain - 8.5 db., front-to-back - 25 db., SWR - 1.1/1, maximum element length - 23' 4", boom - 12' x 1 1/4" OD x .058, turning radius - 13' 2", wind load - 87 lbs.

Model A-315 . . . . . Net, \$46.87

A-203-C is a wide spaced, three element, 20 meter beam. "Gamma" matched for 52 ohm impedance, featuring anti-flutter design. VSWR-1.5/1 or better. Feed impedance - 52 ohm. Gain 8 db. or better. Front-to-back 24 db. Boom length 24 ft. Maximum element length 37 ft. Turning radius 22 lbs. Shipping weight 49 1/2 lbs. Wind load (80 mph wind) - 140 lbs. Handles full legal power.

Model A-203-C . . . . . \$113.95

**EL TORO.**

This three band compact antenna was designed for 20, 40 and 75/80 or 15, 40 and 80 meters. Installs in minutes, comes in kit form, weighs less than two lbs. and has automatic band switching is just a few of the outstanding features of the EL TORO antennas. They are trap type grounded quarter wave length antennas, using 52 ohm coax line. Antenna length 58 ft. Kit contains 65 ft. of 450 ohm open wire, two condensers of suitable rating and three antenna insulators.

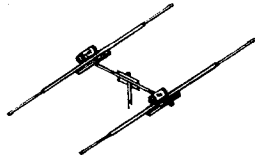
Available in three pretuned models TW-3X....Rated to 1000 watts input to the final amplifier on AM and CW, 2000 watts PEP on SSB. Tuned for 20, 40 and 75/80. Model TW-3X . . . . . \$19.95

TW-3X Jr. ...Rated to 300 watts on CW and 1000 wattd PEP input to the final amplifier on SSB. Tuned for 20, 40 and 75/80. Model TW-3X Jr. . . . . \$14.95

NS-3....Rated same as Model TW-3X Jr. except that it is tuned for the 15, 40 and 80 meter Novice bands.

Model NS-3 . . . . . \$14.95

**"SIGNAL-MASTER" ANTENNAS**



This 2 element Signal-Master is the antenna for 40 meters. Rated to 1 KW. 100% rust proof. Forward gain - 5 db., Transmission line - 52 ohm coax (RG-8/U), Boom - 2" OD x .110" wall x 20', Maximum element length - 44' 3", Turning radius - 24' 4", Wind load (EIA Standard) - 200 lbs., Antenna weight - 58 lbs. F/B - 20 db. Model S-402 . . . . . Net, \$130.73

**TRAP DIPOLES**

Resonates at 40 and 80 meters. 1/2 wavelength on each band. Rated to 1 KW. Antenna length, 114' 11". Ideal where a bi-directional pattern is desired. Antenna weight, 7 lbs.

Model TD-2 . . . . . Net, \$39.42

Will operate on 10, 15 and 20 meters. Rated to 300 watts AM. Overall wire length of 24 feet. 1/2 electrical wavelength on each of three bands. Antenna weight, 1 1/4 lbs.

Model TD-3 Jr. . . . . Net, \$15.23

**DIPOLE LOADING COILS**

Coils are space-wound with plated No. 12 copper wire and are rated to 1 KW.

Type 40-D . . . . . Net, \$8.78

Type 75/80-D . . . . . Net, \$8.78

**MAST PLATE ADAPTER KIT**

Mast Plate Adapter for 2" OD Mast complete with Aluminum Angle and hardware.

Model AK-60 . . . . . Net, \$4.88

**CITIZENS BAND ANTENNAS**

**DELUXE LINE**

3 element beam for best point-to-point communication. 9.3 db. gain. Use the A-311 on each end to develop 80 watts ERP. Less mast, coax line and rotor.

Model A-311. . . . . Net, \$39.75

Coaxial ground plane vertical antenna. 100% rust and corrosion proof. Can be mounted on tower, pole or chimney mount. Excellent base station antenna.

Model CA-27 . . . . . Net, 38.54

**CITIZENS BAND ANTENNAS**

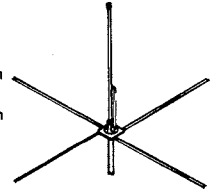
**DELUXE LINE**

Ground Plane Vertical is ideal as base station antenna. 360 degree pattern and vertical polarization for effective communication with mobiles. High impact polystyrene base with internal coax fitting, less coax line.

Model V-27-GP . . . . . Net, \$36.70

**STANDARD LINE**

The V-11-UGP is ideal as base station antenna. 360 degree pattern and vertical polarization for effective communication with mobiles. Rugged, 6061-T6 aluminum. 100% rust and corrosion proof.



Model V-11-UGP. . . . . Net, \$23.06

**SCOTCH-MASTER UL-27**

For Citizen Band operation, the Uni-Linear tops Mosley's New Scotch-Master Line. The UL-27 is an Omni-Directional Vertical Ground Plane Antenna.

**SPECIFICATIONS AND PERFORMANCE**

DATA: Gain over standard ground plane up to 4 db. VSWR: 1.5:1 over entire band. Feed Point Impedance: 52 ohm coax Unbalanced line. Assembled Weight: 8 pounds. Wind Load (EIA STD): 50 pounds. Antenna Height: Less than 20 ft. Number of Radials: 3. Antenna mounting fits masts up to 1 1/2"

UL-27 . . . . . Net, \$34.35

**A-311-S**

Mosley A-311-S, 3 element beam is designed for the economy minded CB'er who wants the utmost in dependable two-way communications.

**SPECIFICATIONS AND PERFORMANCE DATA:**

Number of elements - 3. Antenna Weight - 12.5 lbs. Boom Length - 12 ft. Maximum Element Length - 18' 8 3/4". Front-to-Back - 20 db. Vertical Wind Load - 65 lbs. Horizontal Wind Load - 35 lbs. Forward Gain - 8 db. Type Matching - Gamma. Impedance Point - 52 ohms. Radiation - Uni-Directional.

A-311-S . . . . . Net, \$35.00

**A-511-S**

Number of Elements - 5. Antenna Weight - 16.5 lbs. Boom Length - 24 ft. Maximum Element Length - 18' 8 3/4". Front-to-Back 20 db. Vertical Wind Load - 112 lbs. Horizontal Wind Load 62 lbs. Forward Gain - 9.5. Type Matching - Gamma. Impedance Point - 52 ohms. Radiation - Uni-Directional.

A-511-S . . . . . Net, \$55.00

**for SHORT WAVE LISTENERS**

A seven band receiving dipole that offers real "DX-Ability" on 11, 13, 16, 19, 25, 31 and 49 meters. Made of No. 16 tinned copper wire with glazed porcelain insulators. Entire antenna weighs just 2 lbs. and is 40 feet in length. 75 ohm twin-lead transmission line supplied.

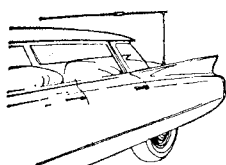
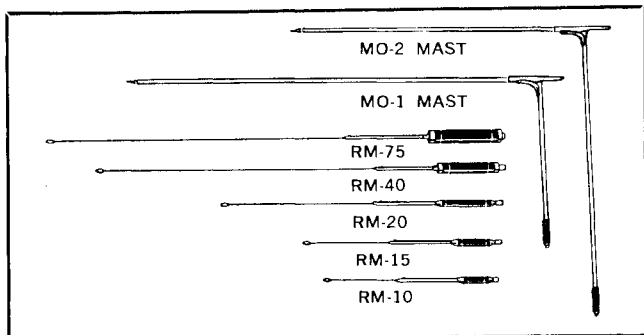
Model SWL-7 . . . . . Net, \$15.04

A receiving dipole for 10, 15, 20, 40 and 75/80 meters. Antenna is 69 feet in length. Has all the same mechanical construction as the Model SWL-7.

Model RD-5 . . . . . Net, \$16.54

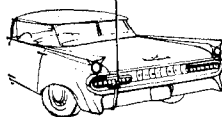
# NEW-TRONICS ANTENNAS AND ACCESSORIES

## HUSTLER MOBILE ANTENNA 10-15-20-40-75 METERS



Mast and resonator in mobilizing position

Mast and resonator folded over



One mast and five resonators permit operating on any of five bands with exceptional results. Fold over aluminum mast is 54" long. When opened to full length, the two sections of the mast are rigidly held in a vertical position. Each resonator has a special coil for maximum radiating efficiency. Tuning for center frequency is by the adjustable stainless steel rod of the resonator. Mast has 3/8-24 base stud to fit all standard mobile mounts. SWR is less than 2 to 1 for any center frequency setting within the band as follows: 10m., 100 to 120 kc; 15m., 100 to 120 kc; 20m., 80 to 100 kc; 40m., 40 to 50 kc; 75m., 25 to 30 kc (all approximations). Power rating: Input 500 W PEP. NO NEED FOR MATCHING DEVICES. USE ANY FEED LINE LENGTH OF 52 OHM CABLE.

Model	Description	Mount or Height	Net
MO-1	54" mast folds at 15" Fr. Base	Rear deck or fender	\$7.95
MO-2	54" mast folds at 27" Fr. Base	Bumper	7.95
RM-10	10 meter resonator	80" max.—75" min.	5.95
RM-15	15 meter resonator	81" max.—76" min.	6.95
RM-20	20 meter resonator	83" max.—78" min.	7.95
RM-40	40 meter resonator	92" max.—87" min.	9.95
RM-75	75 meter resonator	97" max.—91" min.	11.95

ANY MAST OR RESONATOR MAY BE PURCHASED SEPARATELY

## HUSTLER CB MOBILE ANTENNA

### FOLD-OVER TYPE FOR FENDER OR BUMPER MOUNT:

Sturdy mast and an 11 meter tunable center loaded resonator provides exceptional results with every CB transceiver. Less signal fading when car is in motion. Total extended height is only 83 inches. The 54-inch aluminum mast folds over to permit assembly to clear openings in garages, etc. When opened to full height, the two sections of the mast are held rigidly in a vertical position. Mast has 3/8-24 stud to fit standard mobile mounts. SWR less than 2 to 1.

Model CB-111 for Rear Deck or Fender. MO-1 mast with 11 meter resonator. Mast folds over 15" from base ..... \$13.90  
 Model CB-211 for Bumper Mount. MO-2 mast with 11 meter resonator. Mast folds over 27" from base ..... \$13.90  
 RM-11 11 meter resonator ..... \$5.95

### RESONATOR SPRING



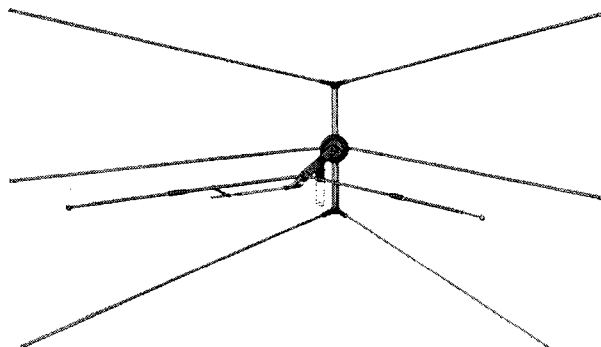
Stainless steel spring designed to be used between mast and resonator of HUSTLER antenna. Also useful for other light duty applications. Has 3/8-24 female thread on one end and 3/8-24 stud on other. RSS-2 ..... 3.45

### BUMPER MOUNTS



Model BM-1 Stainless steel strap fits tightly against any shape large and small bumpers. Will fit any car where clearance between top of bumper and car body is as low as 1/4". Whip receptacle is a heavy chrome plated 1 1/2" die cast ZAMAK swivel ball with 3/8-24 thread. All metal parts are heavy cadmium plated ..... \$6.95  
 MODEL BM-2 Same as Model BM-1 except without swivel ball base ..... \$4.95

## 6 METER BASE STATION ANTENNA COVEYA-6



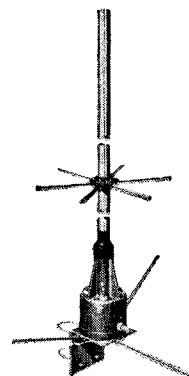
Unusual antenna configuration that produces a cardioid pattern without side nulls

- 10 DB gain over 1/2 wave dipole
  - Band width—1000 KC with VSWR under 2 to 1
  - Gamma Matched
  - Adjustable for center frequency 50 to 54 mc.
  - Made entirely of seamless heat treated aluminum tubing
  - Aluminum castings and hardware are iridized.
  - Power capacity — 1 KW
  - Boom length 34 inches
  - 25DB front to back ratio
  - 52 ohm coax feed line
  - Weight 8 1/2 pounds
  - Tuning radius 55 inches
- Coveya-6 ..... \$39.90

## PRO-27 CB BASE STATION ANTENNA

### OUTSTANDING FEATURES:

- 19'-8" high
- .64 wave length antenna
- Feedline RG8 or RG58 not limited to 60 feet in length
- Only available base station antenna tunable for low SWR of 1.1 to 1.
- Extremely low angle radiation
- Field strength exceeded by no other antenna
- Omni-directional
- Die cast aluminum base with iridite finish
- Seamless aluminum tubing, heat treated
- 3/16" thick steel angle mounting bracket with iridite finish.



Pro-27 ..... \$32.95

## PHANTOM CB MOBILE ANTENNA

First and only Fiberglass Antenna armored with copper braid and waterproofed with vinyl. Exception performance provided by heavy copper conductor which exposes the area of greatest radiation or antenna current. Fiberglass core has exceptional strength and flexibility. Has 17-7PH stainless tip rod for tuning 23 channels. No critical feedline length required. Low standing wave ratio with 52 ohm line. Only 48 inch high.

Model FG-27. Antenna with 3/8-24 stud. Fits all standard mounts ..... \$4.7

Model FGB-27. Antenna with swivel base, 60" lead and PL-259 connector ..... \$5.9

# NEW-TRONICS CORPORATION

Cleveland, Ohio

"The Home of Originals"

# NEW-TRONICS ANTENNAS AND ACCESSORIES

## CLIFF-DWELLER

REMOVABLE TUNED ROTATABLE DIPOLE DESIGNED SPECIALLY FOR 40 AND 75 METERS IN LIMITED ANTENNA SPACE. ALSO FOR 10 METERS.



### ELECTRICAL FEATURES:

- Band switching and antenna resonance finger tip controlled from transmitter location in shack
- VSWR: 1.1 to 1 or less across entire band
- Feed-point variable to compensate to antenna environment
- No traps . . . no baluns . . . no matching devices
- Feed direct with any length 52 ohm cable
- Power handling capacity—maximum legal limit.

### MECHANICAL FEATURES:

- Approximate lengths—
 

28'-6"-26'	7.0-7.3mc.	40 plus 10 meters
30'-6"-26'	3.5-4.0mc.	75 plus 10 meters
31'-4"-26'	Two-bander	40, 75 plus 10 meters
- Self supporting, accepts 1 1/4" threaded pipe for mounting in standard rotators
- Maximum turning radius approx. 15'-8"
- Sturdy, iridized aluminum die cast housing for motors and gear trains which drive end sections of dipole
- Heat treated air craft type, 1 1/4" heavy wall aluminum tube
- Completely waterproofed resonators and housings

Model No.	Freq. mc.	Weight	Price
CD 40	7.0-7.3	20 lbs.	\$ 92.50
CD 75	3.5-4.0	20 lbs.	\$ 99.50
CD 40-75	Two bander	24 lbs.	\$129.50

## EXTENDABLE CB ANTENNA FOR COWL OR FENDER MOUNT

Model CB-27 23 channel coverage . . . tunable . . . low SWR. 4 section, heavy duty chrome plated brass tubing assembly. Opens to 60". Collapses to 27". Swivel base, mounts on any car surface. Fits any hole 15/16" or 1". Sealed loading coil solidly affixed to tubing. Stainless tuning rod with etched tuning scales. 5 feet of detachable RG-58/U coaxial cable with PL-259 connector. . . . \$10.44

Assembly may be used for Amateur (28-30 MC.)

Model CB-2 This mast has same features as mast on Model CB-27 except has standard 3/8-24 male threaded stud. It may be used in combination with Model CB-1A or any other standard base . . . . . \$8.64

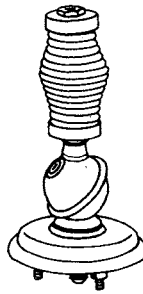
Model CB-1A Base has chrome plated split ball to meet severe angle requirements of fender beyond 30°. 3/8-24 female thread. Ball swivels up to 180° . . . . . \$1.80  
(Series BL lead required)

Model AD-1 Adapter to convert Model CB-1A to accept PL-239 . . . . . \$1.10

## 6 AND 2 METER ANTENNA FOR COWL OR FENDER MOUNT

HF-62 Similar in appearance and construction as the CB-27, however, electrical characteristics of this tunable antenna and low SWR permit extensive coverage on the 6 and 2 meter bands. Includes 5 feet of detachable RG-58/U cable with PL-259 connector. 52 ohm match. Tuning range: 30-54 mc; 144-148 mc. . . . . \$10.44

HF-2 Mast has same features and appearance as mast on Model HF-62 except has 3/8-24 male thread stud. May be used with Model CB-1A or any other standard base to meet individual requirements . . . . . \$8.64



### COMMERCIAL BASE AND SPRING

No exposed mounting bolt heads. One man installation. Lighter weight. Reduced spring assembly length. Tough, molded mounting pad. Engineered and built to meet the most critical standards, the improved design embodied in the ball, base and spring has no equal in appearance and performance.

### ALL STAINLESS MODELS

Stainless 2" ball, stainless spring. (17-7-PH) THE ONLY ALL STAINLESS ASSEMBLY ON THE MARKET.

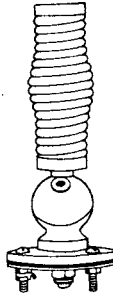
NTS-1 Base, ball and spring assembly	.....	\$19.44
NTS-2 Base and ball assembly only	.....	8.97
NTS-3 Spring only	.....	10.47

### CHROMIUM PLATED MODELS

Same as stainless models except all elements are triple chrome plated.

NT-1 Base, ball and spring assembly	.....	\$8.49
NT-2 Base and ball assembly only	.....	5.01
NT-3 Spring only	.....	3.51

### PROFESSIONAL BASE AND SPRING



C-29-32 — Assembly includes heavily chrome plated 1 1/2" die cast ZAMAK ball, 3/8-24 female thread. Adjustable to 180°. Stainless steel spring sturdily built to withstand sharp impacts. Gray Cyclocac insulator and cadmium plated hardware . . . . . \$5.07

C-30-32 Same as C-29-32 except has chrome plated spring . . . . . \$4.11

C-32 Base 3/8-24 female thread . . . . . \$2.01

C-29 Stainless steel spring only. Has 3/8-24 threaded stud . . . . . \$3.06

C-30 Chrome plated, oil-tempered spring only . . . . . \$2.10



### GUTTER CLIP:

Model GC-1 Plastic holder swivels on cadmium plated clamp. Attaches firmly to gutter. Since whip is contained in plastic, it will not rattle . . . . . \$9.00

### STAINLESS STEEL WHIPS WITH REMOVABLE ADAPTOR

Made of 17-7PH taper ground stainless steel; the best available for this purpose. Adaptors are heavy cadmium plated. Two hex hollow head screws firmly seize whip. 3/8-24 male thread. Wrench included.

SW60R 60" Stainless Whip	.....	\$3.27
SW96R 96" Stainless Whip	.....	\$3.93
SW102R 102" Stainless Whip	.....	\$4.23
SW108R 108" Stainless Whip	.....	\$4.50

### CADMIUM PLATED WHIPS WITH FIXED ADAPTOR

Made of special alloy cadmium plated oil tempered steel. Taper ground. Heavy cadmium plated adaptor permanently attached to whip. 3/8-24 male thread.

TW60 60" Cadmium Plated Whip	.....	\$2.85
TW96 96" Cadmium Plated Whip	.....	\$3.45
TW102 102" Cadmium Plated Whip	.....	\$3.75
TW108 108" Cadmium Plated Whip	.....	\$3.90

### COAXIAL LEADS

RG-58/U with PL-259 on one end and live terminal and ground terminal on other end, split end.

L-14-60 5 ft.	.....	\$2.43
L-14-144 12 ft.	.....	\$3.12
L-14-240 20 ft.	.....	\$3.90

### HIGH IMPEDANCE LEADS

With Pin Plug on one end and live terminal and ground terminal on other end, split end.

L-13-60 5 ft.	.....	\$1.23
L-13-144 12 Ft.	.....	\$1.56
L-13-240 20 ft.	.....	\$1.95

### SPECIAL LEADS

RG-58/U with PL-259 and specially designed end to fit CB-27 and HF-62.

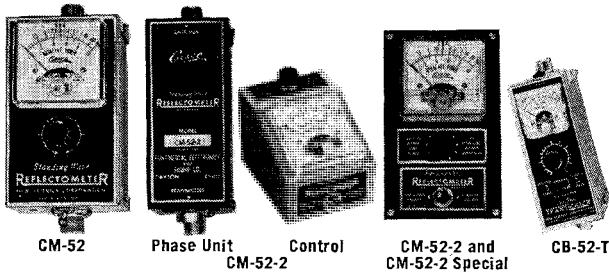
BL-14-60 5 ft.	.....	\$2.70
BL-14-144 12 ft.	.....	\$3.35
BL-14-240 20 ft.	.....	\$4.00

**NEW-TRONICS CORPORATION** Cleveland, Ohio

"The Home of Originals"



# NEW-TRONICS ANTENNAS AND ACCESSORIES



## STANDING WAVE REFLECTOMETERS MODEL CM-52

Mutual inductance and capacity coupling are employed between linear conductors for continuous measurement of standing waves on transmission lines. For continuous line insertion 25 to 1,000 watts, at frequencies from 3 to 200 mc. Operates on power input of 10 watts, 7 mc and up. Requires only five watts input, 25 mc and up. Line insertion loss, less than 1 db at 30 mc. Ideal for inserting in to coax feed lines at antenna for visual reading in SWR while making antenna adjustments; SWR observed immediately, at all times, without adjustment of Reflectometer. No balancing adjustments, no reversing. Prevents false loading from antenna tuner, match box, pi network, etc. Reduces line reflection, making possible increased radiated power. Uses 0-100 ua meter calibrated directly in standing wave ratio and relative power. Each unit hand calibrated and perfectly balanced. Includes loading control and forward to reflected power reversing toggle switch. With 83-IR (SO-239) connectors at each end. Gray hammertone aluminum case, 3"wx2 1/4"dx5 1/4" h. Shipped with key-type mounting on back and full instructions.

Cesco Model CM-52 (52-ohm coax line) ..... **\$29.95**

### MODEL CM-52-2

Dual units electrically identical to CM-52 but built in two units for remote control. With 10 ft. cable and plug wired to control and indicator unit. 52-ohm phase unit may be used with control and indicator unit; permits purchasing second phase unit separately, when required. Size, Control unit, 3 7/8"wx2 7/8"dx2 3/4" with sloping panel; Phase Unit, 2 1/4"wx2 1/4"dx5 1/4" h. Cesco Model CM-52-2 (52-ohm coax line) ..... **\$34.95**

Cesco Model CM-52-2 Phase Unit—Less Control unit ..... **\$12.95**

Cesco Model CM-52 or CM Special—Same as standard dual unit but with control panel for Collins grille or built-in installation ..... **\$34.95**

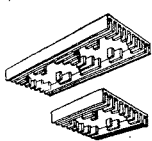
## CITIZENS' BAND INLINE TRANSICHECK

The Inline Transicheck, a patented development by CESCO employing a miniature true coaxial cylindrical unit utilizing mutual inductance and capacity coupling between linear conductors for conducting test, measuring power output and standing wave ratio on Citizen Band transceivers operating in the 26 and 27 MC bands. No power loss or detuning is created when placed in line for continuous use. All units are supplied with detailed instruction book.

Cesco Model CB-52-T ..... **\$22.95**

## TRANSISTOR HEAT SINKS

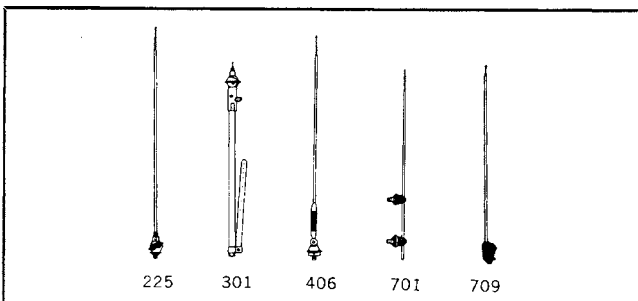
\$1.25 ea.



\$1.95 ea.

Cesco's unique method of producing heat sinks from match plate greens and aluminum castings increases heat radiating efficiency with less heat sink area. Heat sinks are poured from a special aluminum bullion with a copper additive which produces an even heat flow over the entire surface area. Heat sinks are fabricated standard in several types. Other patterns of fabrications are available on quantities of twenty-four (24) or more. Each Heat Sink is packaged with a transistor mechanical data sheet.

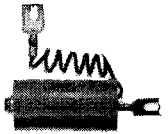
## NEW-TRONICS AUTOMOBILE ANTENNAS



## VOLTAGE REGULATOR FILTER

A fixed type L/C combination for the elimination of noise created by points of generator control relay in the voltage regulator which is prevalent in communication receivers. No tuning or adjusting required. Unit is not voltage critical. Works on 6-12-24 and 32 volt systems.

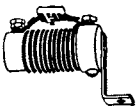
Cesco Model VR-30 ..... **\$2.95**



## GENERATOR NOISE FILTER

Tunable for 6, 12 or 24 volt generators; stops noise in mobile gear caused by generator brushes. For aircraft, amateur, C-B and industrial mobile uses. Conservatively rated at 30 amps. Phenolic coil form, brass hardware and die cast mtg. bracket. Easily installed.

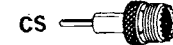
Cesco Model 3-30 (Standard, 3-30 mc) ..... **\$2.95**



## PHANTOM ANTENNA LOAD

Non-inductive 52-ohm substitute antenna load has adequate power rating for any C-B transceiver in the 26-27 mc. range. Suited for testing and repairing citizens band units. Also useable as a coaxial line terminator.

Cesco Phantom Antenna Load ..... **\$1.49**



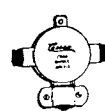
## CABLE ADAPTERS



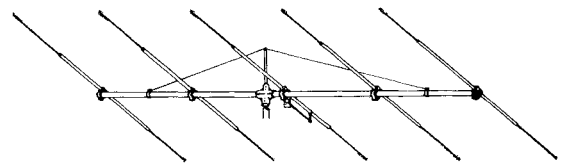
Cesco Model CS—Permanent connector comprises 83-IR, SO-239 coaxial socket and auto radio type spade lug. One-piece construction. **\$1.29**

Cesco Model SC—Rugged, permanent adapter connects auto radio spade plug to coaxial socket 83-IR or SO-239. No floating pins. **\$1.29**

## COAX DIPOLE DRI-FIT CONNECTOR



Ideal connector for; dipole antennas. Completely moisture-proof, one-piece aluminum alloy construction. Handles power to maximum legal limits. Can be installed easily in a few minutes. For use with coaxial cables RG-8, RG-58, RG-11 or RG-59, or with 300-ohm twin lead. Has eye pull up for inverted V's. Weight, 2 oz. **\$2.95**



## C-B BEAM ANTENNAS

Ruggedly built from high quality aluminum tubing. 1 1/4" diameter boom. Elements have 1/2" diameter center sections with 3/8" diameter inserts. Elements can mount either horizontally or vertically. Factory pre-tuned with Gamma Match for perfect match and efficiency. Resonated at 27.085 mc. on Channel 11. Works exceptionally well on all channels with low VSWR of 1.2 or less. Has maximum forward gain and front to back ratio for this type configuration. Assembles in minutes and is permanently secured with special locking rings. Lightweight. Fits on 1 1/4" O.D. mast.

Cesco Model 11M3—3 element beam 9' 4" boom ..... **\$29.95**

Cesco Model 11M4—4 element beam 14' 1" boom ..... **\$39.95**

Cesco Model 11M5—5 element beam 18' 10" boom ..... **\$49.95**

No. 225 Hi-ball black plastic base with chrome hood, 3-section mast 48" detachable lead. Extends to 40"; collapses to 17" ..... **\$3.95**  
 No. 226 Same as No. 225 except with 2-section mast. Extends to 40" collapses to 21" ..... **\$3.95**  
 No. 227 Same as No. 225 except with 54" detachable lead. Mast extends to 57 1/2"; collapses to 22 1/4" ..... **\$4.50**  
 No. 301 Disappearing type antenna with 54" permanent lead. 3-sector antenna extends to 53 1/4" and collapses completely ..... **\$6.95**  
 No. 303 Same as No. 301 except with 36" lead. 3-section mast extends to 25" and collapses to 3 3/4" ..... **\$5.95**  
 No. 410 Flex-O-Matic Ball-Tronic Antenna. Adjustable to any angle up to 180°. 23 3/8" stainless steel whip. 48" detachable lead ..... **\$5.95**  
 No. 406 Same as No. 410 except has 3-section mast which extends to 56 1/4" and collapses to 24". 54" detachable lead ..... **\$7.95**  
 No. 701 Side-cowl antenna with 2 plastic insulators and 36" detachable. 3-section mast extends to 57 1/2" and collapses to 22 1/2" ..... **\$6.95**  
 No. 709 Volkswagen side cowl antenna with single stanchion and molded insulator. 36" detachable lead. 3-section mast extends to 56 1/4" and collapses to 20 1/2" ..... **\$5.95**

ABOVE PRICES FOR BOX PACKAGING

# NEW-TRONICS CORPORATION Cleveland, Ohio

"The Home of Originals"



# PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

## SERIES C CENTER-LOADED MARINE ANTENNAS

A Center-Loaded Collapsible type Antenna, consisting of two telescoping, adjustable base sections on which the loading coil is mounted, with a tapered top whip section, giving a total extended length of about 19 feet. This Antenna collapses to a single unit with the whip section telescoping through the coil into the lower section, making a collapsed length of 7 feet. The sections are of seamless aluminum, or stainless steel and the coil is wound on low-loss bakelite tubing and treated after assembly with weatherproof coating.

No.	Type	Base O.D.	Base I.D.	Wt. Lbs.	List Price
CLA-619	Aluminum	1.000"	.834"	5	\$50.00
CLS-1119	Stainless	1.000"	.900"	7	110.00

## SERIES B CENTER-LOADED ANTENNAS FOR MOBILE & MARINE USE

Center-Loaded Whip-Type Antennas consist of a standard base section or spring-type on which is mounted a special Premax coil. The top is a taper-ground stainless steel whip 6 ft. in length, giving a total overall height of 9 ft. Various coils are available or the standard 75-meter coil can be adapted by shorting out turns on the coil. Antennas can be used with any of the Standard Premax Mountings shown below, or will fit any 3/8" x 24-thread mounting.

NO.	FREQ.	PRICE
BXS-14	14,000 kc. (20M.)	\$16.00
BXS-23	2374 kc. (CAP)	16.50
BXS-31	3105 kc. (APT)	16.50
BXS-38	3800 kc. (75M.)	16.50
BXS-43	4325 kc. (CAP)	16.50
BXS-46	4585 kc. (CAP)	16.50
BXM-25	2000 to 3000 kc. (Marine)	16.50
(Same as BXS but with Spring)		
BSS-14	14,000 kc. (20M.)	26.50
BSS-23	2374 kc. (CAP)	27.50
BSS-31	3105 kc. (APT)	27.50
BSS-38	3800 kc. (75M.)	27.50
BSS-43	4325 kc. (CAP)	27.50
BSS-46	4585 kc. (CAP)	27.50
BSM-25	2000 to 3000 kc. (Marine)	27.50

### SERIES B COILS

Premax also supplies the Series "B" coils in the standard frequencies above. Special frequencies available on request.

List Price ..... \$9.00 ea.

### MAST EXTENSIONS

Polished Stainless Mast Extensions—threaded 3/8"-24 on both ends and supplied with stainless nuts and lockwashers. Available in 12", 18", 24", 30" and 36" lengths.

Prices range from \$4.00 to \$8.00 list each



BX Mast Type Extension BXS



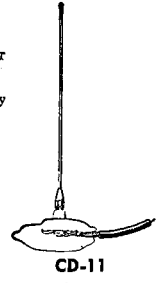
Type BSS

## MOBILE VHF WHIPS

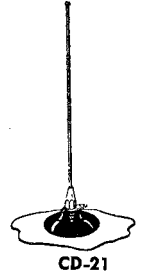
Style CD-11 Series—Permanent type. Porcelain insulator mounts thru 1/2" hole in rooftop.

Style CD-21 Series—Emergency type. Attaches by heavy duty suction cup.

NO.	FREQ.	PRICE
CD-112	108 to 120 mc.	\$4.00
CD-114	144 mc.	4.00
CD-115	152 to 162 mc.	4.00
CD-212	108 to 120 mc.	2.80
CD-214	144 mc.	2.80
CD-215	152 to 162 mc.	2.80



CD-11

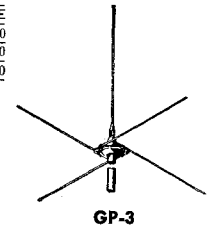


CD-21

## GROUND PLANE ANTENNAS FOR POINT-TO-POINT USE

For point-to-point installations, Premax has two VHF Antennas: The Style GP-3 which has elements of heavily-plated spring steel with skirt wires that can be bent down to any angle to match coax cable. Mounting is within a water-proof housing that fits standard 1/2" pipe. Cable carries down thru pipe.

NO.	FREQ.	USE	PRICE
GP-312	120 mc.	For aircraft and CAP.	\$8.00
GP-314	140 mc.	For 2 meter and CD.	8.00
GP-315	150 mc.	For police and taxi	8.00

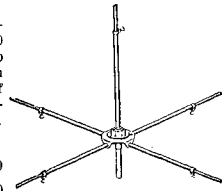


GP-3

## PREMAX ADJUSTABLE GROUND PLANE ANTENNAS 20-60 mc

Another low-cost type Ground Plane Antenna is adjustable from 20 to 40 mc. or 40 to 60 mc. Standing wave ratio matching to 52-ohm line is 1.07 to 1.13 and to 72-ohm line is 1.27 to 1.23 depending on type of transformer cable. All-aluminum construction employing adjustable tubular elements.

GP-430	Adjustable 20-40 mc.	\$50.00
GP-450	Adjustable 40-60 mc.	40.00



GP-400 Series

## MOBILE MOUNTINGS FOR USE WITH WHIPS WITH 3/8"-24 MALE THREAD



Type CA

### CA BUMPER MOUNTING

"Chain Style" — clamps on any bumper with 1" clearance; no drilling; theft-proof.

Price ..... \$11.00



Type R-3

### R-3 UNIVERSAL MOUNTING

Solid Polished Aluminum Swivel Ball. Heavy stainless steel back-up plate with grounding screws. Stainless steel hardware.

Price ..... \$15.00



Type RS-2

### TYPE RS-2 COMBINATION

Similar to R-2 except has spring as shown under SA-2.

Price ..... \$25.00

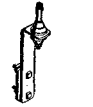


Type SA-2

### SA-2 SPRING ADAPTOR

Stainless steel Spring Adaptor—can be attached to types R-2, R-3, L-1, CA and NA-1 to provide greater flexibility. Height 4 1/4", diameter 2 3/8".

Price ..... \$12.50



Type NA-1

### TYPE NA-1

Bumper mounting with ceramic cone insulator and steel bracket.

Price ..... \$8.50



Type F

### TYPE F

30° adjustable mounting for fender, cowl or gravel pan. Chrome-plated brass with phenolic insulation.

Price ..... \$14.50

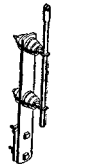


Type R-2

### R-2 UNIVERSAL COAX TYPE MOUNTING

Solid Polished Aluminum split-ball can be adjusted to any angle. Has shielded coax connection and stainless hardware.

Price ..... \$15.00

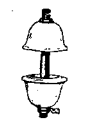


Type L-1

### TYPE L-1

Bumper mounting, 2 pairs ceramic cone insulators with steel bracket, 10" adjustment.

Price ..... \$14.00



Type V

### TYPE V

Thru-deck mounting designed for Style BX and BS Center-Loaded Marine Antennas. White porcelain cones with a maximum opening for 1-1/2" deck. Stud threaded 7/16"-24.

Price ..... \$9.00

PREMAX PRODUCTS, DIV. CHISHOLM-RYDER CO., NIAGARA FALLS, N. Y.

# PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

## VERTICAL TELESCOPING ANTENNAS PREMAX STAINLESS STEEL ANTENNAS

Premax stainless steel antennas, fully telescoping and adjustable, have a locking device that holds the sections firmly at any desired point insuring a perfect electrical contact. Made of a high grade polished stainless steel tubing, hard-drawn to an extremely high tensile and yield strength, they are well suited for the most severe strains from high seas or winds.

## PREMAX ALUMINUM ANTENNAS

Premax aluminum antennas are lightweight, corrosion resistant and have adequate strength to meet practically all needs for marine, commercial and mobile installations that demand convenience in erecting and dependable performance. They are constructed of highly polished, specially tempered aluminum tubing engineered to withstand wind velocities up to 60 miles per hour.

## PREMAX STEEL ANTENNAS

Inexpensive, popular, fully adjustable telescoping steel antennas for commercial, amateur, civil defense or other installations, made of high-tensile copper-nickel steel tubing, are heavily cadmium-plated. A positive locking device insures proper electrical contact between sections. *Not recommended for marine use on salt water.*

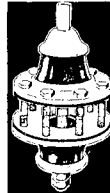
## BASE MOUNTINGS FOR VERTICALS



### TYPE 1 BASE INSULATOR

Heavy-duty type Base Mounting Insulator with compression rating up to 10,000 lbs. Has wet-process brown-glazed porcelain cones. Available in galvanized malleable iron, and chrome-plated brass, in rigid-post, hinged-post. Ht. to post base, 7 to 9 inches. Wt. 8 lbs.

List Price.....\$52.00 to \$105.00



### TYPE 6 BASE INSULATOR

For marine, mobile unit, roof-top or tower. Lead-thru construction permits connections below deck. Flanges 6" in diameter with 6 bolts on a 5" circle. For 1/2" to 3" deck. Available in galvanized malleable iron, and chrome-plated brass. Rigid post, and hinged post styles. Ht. from flange to post base, 3" to 5". Wt., 11 1/2 lbs.

List Price.....\$78.00 to \$170.00

## SPECIFICATIONS & DESCRIPTIONS OF TELESCOPING VERTICALS

NO.	DESCRIPTION	EXTD.	COLL.	BASE O.D.	BASE I.D.	WGT.	LIST PRICE
SS-1118	3-Sec. Stainless	18'4"	6'3"	.750"	.680"	6	\$ 90.00
SS-1124	4-Sec. Stainless	24'3"	6'3"	1.000"	.900"	9	135.00
SS-1130	5-Sec. Stainless	30'0"	6'4"	1.250"	1.120"	13	185.00
SS-1135	6-Sec. Stainless	35'7"	6'4"	1.500"	1.370"	19	255.00
AL-312	2-Sec. Aluminum	12'4"	6'4"	.500"	.334"	1 1/2	15.00
AL-518	3-Sec. Aluminum	18'5"	6'4"	.750"	.584"	3	25.00
AL-324	4-Sec. Aluminum	24'4"	6'4"	1.000"	.834"	5	35.00
AL-530	5-Sec. Aluminum	30'0"	6'5"	1.250"	1.084"	7	55.00
AL-535	6-Sec. Aluminum	35'8"	6'5"	1.500"	1.310"	12	75.00
112-M	2-Sec. Steel	11'8"	6'0"	.656"	.556"	4	12.00
318-M	3-Sec. Steel	17'3"	6'2"	.875"	.775"	7	18.00
224-M	4-Sec. Steel	22'9"	6'3"	1.063"	.963"	11	25.00
130-M	5-Sec. Steel	28'3"	6'4"	1.250"	1.150"	15	30.00
136-M	6-Sec. Steel	33'9"	6'5"	1.500"	1.400"	20	38.00

## STANDOFF INSULATORS



### TYPE 10-5

A heavy-duty Insulator with chrome-plated brass base and head caps—regular or hinged clamps. Insulator is brown-glazed porcelain in extra heavy style. Ht. to center of clamp, about 4 1/2". Wt., 3 lbs.

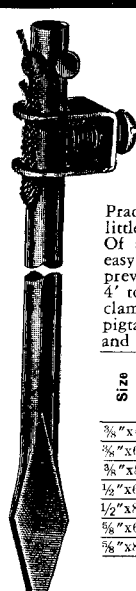
List Price.....\$60.00 to \$87.50



### TYPE 13-5

Heavy, rugged cast caps and base plates in aluminum, or chrome-plated brass. Heavy brown-glazed porcelain insulator, 3 inches in diameter. Ht. to center of clamp, 4 3/4". Wt., 2 1/2 lbs.

List Price.....\$15.50 to \$34.00



**PROTECT YOUR EQUIPMENT WITH A PREMAX GROUND ROD!**

Practical and efficient Ground Rods, costing so little that it doesn't pay to fuss with makeshifts! Of smooth, hard-drawn steel, chisel-pointed for easy driving and heavily copper-plated for rust prevention and to insure clean electrical contact. 4' to 8' lengths in 3/8", 1/2" and 5/8" with screw clamp (illustrated) or in 6' and 8' lengths in pigtail wire, drilled hole or plain style, 1/2" and 3/8" only.

Size	Screw No.	Clamp List	Hole		Pigtail		Plain	
			No.	List	No.	List	No.	List
3/8"x4'	J-44	\$ 90						
3/8"x6'	J-66	115						
3/8"x8'	J-68	165						
1/2"x6'	G-86	240	H-86	\$225	P-86	\$240	X-86	\$210
1/2"x8'	G-88	295	H-88	280	P-88	300	X-88	275
3/8"x6'	G-106	335	H-106	330	P-106	335	X-106	310
3/8"x8'	G-108	420	H-108	410	P-108	420	X-108	395

All 3/8" Dia. Rod—25 per bundle  
All 1/2" Dia. Rods—20 per bundle  
All 5/8" Dia. Rods—10 per bundle

## MOBILE WHIP ANTENNAS

### HEAVY DUTY TAPERED STAINLESS—TYPE ES

Solid one-piece taper-ground whips, 1/4" at base tapering to 3/32" at tip with top ball. High-tensile stainless steel fabricated by special formula, comparing favorably with the best spring steel, yet having excellent corrosion-resistant properties.

### HEAVY DUTY TAPERED CHROME-SILICON—TYPE EC

Same as above only fabricated from chrome-silicon steel of exceptionally high-tensile strength and uniformity of temper, with high fatigue values developed by special heat treatment during fabrication.

### STANDARD WEIGHT TAPERED STAINLESS WHIP WITH NON-REMOVABLE ADAPTOR—TYPE TS

Stainless steel whips of extremely high tensile strength with a permanent type stainless adaptor, with 3/8" male thread.

### STANDARD WEIGHT WHIP WITH REMOVABLE ADAPTOR—TYPE VS

Same whip as above except supplied with a removable adaptor locked in place by dual set screws.

NO.	LENGTH	PRICE
ES-760	60"	\$7.00
ES-772	72"	7.00
ES-784	84"	8.00
ES-796	96"	8.00
EC-660	60"	5.50
EC-672	72"	5.50
EC-684	84"	6.50
EC-696	96"	6.50

NO.	LENGTH	PRICE
TS-860	60"	\$7.00
TS-872	72"	7.00
TS-884	84"	7.50
TS-896	96"	7.50
VS-8108	108"	8.00
VS-960	60"	8.00
VS-972	72"	8.00
VS-984	84"	8.50
VS-996	96"	8.50
VS-9108	108"	9.00

AD-700 — Separate Stainless Adaptor with 3/8" male thread for ES and EC series whips. \$2.25

AD-900 Same as AD-700 except drilled for VS series whips. \$2.25

ALL PRICES SHOWN ARE LIST PRICES SUBJECT TO USUAL COMMERCIAL DISCOUNTS.

PRICES EFFECTIVE AT TIME OF PRINTING AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

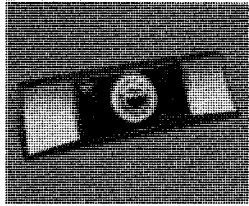
PREMAX PRODUCTS, DIV. CHISHOLM-RYDER CO., NIAGARA FALLS, N. Y.



# INDOOR ANTENNAS

FOR SUPERIOR SOUND AND PICTURE QUALITY

**PARTS & ACCESSORIES**



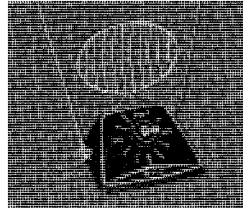
**RCA STARLINER**

- ARMS FOLD OUT OF SIGHT
- 12 POSITION ELECTRONIC SWITCH
- COLOR — B & W — UHF — VHF-FM
- TELESCOPING ARMS EXTEND 102"
- 14" x 4" x 3½" — WT. 2½ LBS.

STOCK No. 10A1000  
10A1001  
10A1002

FINISH: MAHOGANY  
WALNUT  
IVORY

**\$9.95** OPTIONAL LIST PRICE



**RCA SENTRY**

- NEW RADAR COIL DESIGN
- SELECTOR SWITCH
- 4 SECTION ARMS
- 6 FT. LINE—SOLDERED LUGS
- WT. — 2½ LBS.

STOCK No. 10A1010  
10A1011  
10A1012

FINISH: MAHOGANY  
WALNUT  
IVORY

**\$7.35** OPTIONAL LIST PRICE

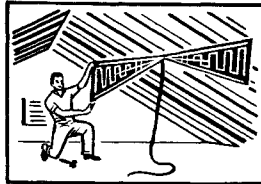
**UHF-VHF**



**NEW RCA "BRITE SITE" TV AND FM ANTENNA**



- Covers Entire VHF-TV and FM Bands
- Can Be Completely Concealed
- Printed Circuit for Simple Installation



Economical TV-FM indoor antenna that produces excellent results when used in locations up to thirty miles from station. Actually a full-size conical antenna projected on a flat surface 52x12" in size. Extremely convenient where use of an outdoor antenna is impractical. Designed for use in attics, on garage or utility room ceilings, beneath rugs, on walls, under sofas, etc. Antenna elements are deposits of finely powdered pure silver in plastic binder, imprinted on a tough, flexible, fibrous sheet. Recommended for use at the highest practical level within the home (away from metallic plumbing and heating systems). Very simple to install—just set it in position that provides best reception—tack it and forget it. Since it is not exposed to the weather, it will last for years. Gain characteristics are similar to those of standard outdoor conical antennas. Supplied complete with 10 feet of 300-ohm twin line—ready to use. Shpg. wt., 1¼ lbs.

**\$3.95** OPTIONAL LIST PRICE

Model Series	Stock No.	Model Series	Stock No.	Model Series	Stock No.
	102382		109920		109920
	104457		109921		109920
	104458		109920		107261
	104458		112691		109139
	104457		109921		109921
	104457		109139		109920
	104458		109921		109920
	104458		112691		109921
	104457		109921		109920
	104458		112691		109921
	104457		109921		109920
	103052A		112691		109920
	103052A		112691		109921
	103052A		109139		109920
	104457		107261		107261
	104458		107260		109139
	104457		107261		109921
	104457		107260		112691
	104457		107261		112691
	104457		109139		109921
	104457		107260		109920
	104458		107261		104458
	104457		107261		104457
	104458		109139		104458
	104457		107261		104457
	103890		109139		104458
	109921		109139		104458
	109920		109921		104457
	109921		109920		104457
			109921		

**RCA**  
**portable TV antennas**

**RADIO CORPORATION OF AMERICA**

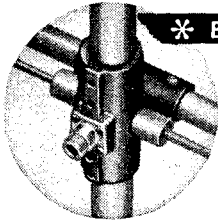
**RCA PARTS AND ACCESSORIES**

**CAMDEN, N. J.**

# UHF · VHF — Complete Antenna Coverage —

## Precision Industrial Antennas by **SCALA**

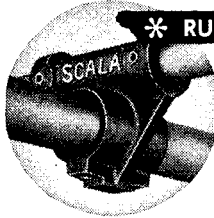
### Why you get better performance with Scala Antennas —



#### \* BUILT-IN BALUN

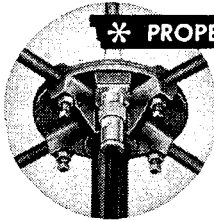
(pat. pending)

Provides a balanced feed system assuring equal distribution of current to the driven element, greater electrical and mechanical stability. The balun allows the driven element to be supported by metal and eliminates the necessity of using the insulator as a mechanical support.



#### \* RUGGED CONSTRUCTION

Elements are supported by machined castings providing a larger support area, damping vibrations and reducing the concentration of stress and metal fatigue. Mechanical splices are never used. All units are available in metals other than aluminum if desired.



#### \* PROPER STRUCTURAL DESIGN

A machined casting, webbed for extra strength and structural support is used to hold parasitic elements in the ground plane antenna. Set screws and lock nuts provide simple assembly and easy installation.

#### \* BUILT-IN HEATER

Most of the antennas described below can be obtained with a 24 volt heating system for maximum weather protection and assured winter operation.

#### \* TESTING AND INSPECTION

Each antenna is tested twice for impedance match—once during manufacture and again prior to dis-assembling for shipment. New models are field-tested for one year before released for production.

*\* Shipped complete—all U-bolt mounting clamps and brackets are included. Unit is ready for installation.*

### 1 YAGI—VHF

The Scala Model CA5-150 is a 52-ohm 5 element yagi. Nine db gain on the major lobe is assured by careful design and Scala's exclusive feed system which eliminates radiation from the feed line and provides equal distribution of current to the driven element. The VSWR is less than 1.3 to 1. For complete weatherproofing and year-around operation, the boom can be provided with a 24 v heater. The unit is anodized and dichromate sealed.

### 2 YAGI—UHF

The Scala Model CA5-450 general communications antenna is a product of years of extensive research. Its construction is possible only because of developments in foam plastics and Teflon insulated cable. A Teflon insulated balun is located within a chamber filled with a special foam plastic for complete moisture and corrosion protection. High strength 7/16" solid aluminum rod is used for the parasitic elements. VSWR is less than 1.3 to 1. Gain is 10 db. Two units may be mounted in an array for an increase in gain up to 3 db and greater directivity. Shipped completely assembled, the unit is anodized and dichromate sealed.

### 3 GROUND-PLANE—40-170 MC

The Scala Model GPC-150 ground-plane antenna is ideal for non-directional, all weather communications. It is the first ground-plane antenna that can be obtained with 24 v heaters throughout—including the radial elements, providing a completely weatherproof and safe year-round operating antenna. Another version of this unit, comes equipped with a reflector and provides a cardioid radiation pattern with increased gain. In all cases the VSWR is less than 1.3 to 1. The unit is anodized and dichromate sealed.

### 4 OMNI-DIRECTIONAL GAIN ANTENNAS

Scala's Omni-Directional Gain Antennas—150 Mc and 450 Mc—use half-wave independently fed radiators. Model OG-4 (150 Mc) provides 4 db plus gain over dipole; Model OG-6 (450 Mc) 6 db plus gain over dipole. All elements at DC ground supported by metal. Extremely rugged anodized aluminum construction. Shipped ready for installation.

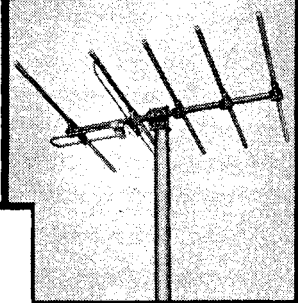
### 5 PARAFLECTOR®—350-1000 MC

The Scala Model PR-450 Paraflector® is a major contribution toward the improvement of antenna construction and performance in the 350 to 1000 mc range. Essentially, a parabolic section in one plane, the driver is positioned to approach a point source. Over the 350 to 1000 mc range, the Paraflector® is equal to a parabolic dish of the same aperture and has the advantage of lower cost, lighter weight, ease of assembly, installation and rugged construction.

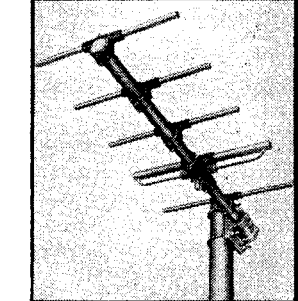
#### EXACTING DESIGN—TESTED MATERIALS—PRECISION MANUFACTURE

In addition to the antennas described above, and other standard communications, telemetering and community systems, Scala maintains a complete engineering service to design and manufacture special antennas to your specific requirements.

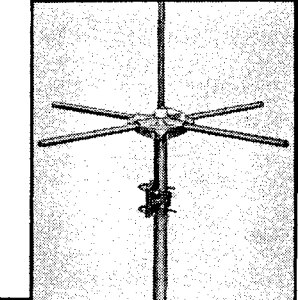
*Write for complete catalog on Scala antennas and engineering services.*



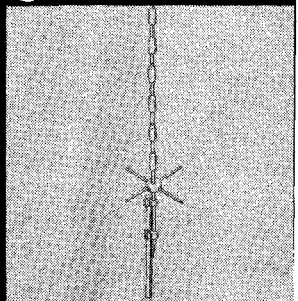
1 MODEL CA5-150



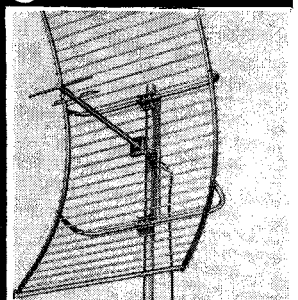
2 MODEL CA5-450



3 MODEL GPC-150



4 MODEL OG-6



5 MODEL PR-450

## SCALA RADIO COMPANY

# telrex "The-performance-line" WITH A "MATERIAL" DIFFERENCE

"BEAMED-POWER" — "BALANCED-PATTERN" — "PERFECT-MATCH" ARRAYS

LABORATORY TUNED, MATCHED, & CALIBRATED TO ASSURE PROPER AND EXACT ASSEMBLY

for "TOP-MAN"-ON-THE-FREQUENCY-RESULTS AT YOUR SITE!

10, 15 and 20 Meter MODEL TC-99D Amateur net price \$249.00

**TC-99D**  
49 LBS OF "EDUCATED-ALUMINUM"

EXCLUSIVE DESIGN:  
3 OPTIMUM SPACED OPTIMUM TUNED REFLECTORS, PROVIDE OPTIMUM GAIN, F/B RATIO AND GOOD IMP GAIN BANDWIDTH ON 10, 15 AND 20 METERS.

EXCLUSIVE DESIGN:  
3 OPTIMUM SPACED OPTIMUM TUNED REFLECTORS, PROVIDE OPTIMUM GAIN, F/B RATIO AND GOOD IMP GAIN BANDWIDTH ON 10, 15 AND 20 METERS.

**TC-99D SPECIFICATIONS**

<b>FREQ. RANGE</b> 10, 15 AND 20 METERS	<b>POLARIZATION</b> LINEAR, HORIZONTAL	<b>GAIN - MEASURED</b> 8.5 DB, AVERAGE
<b>SIZE IN LBS.</b> 35 DB	<b>F/B RATIO</b> 28 DB+	<b>V. S.W.R.</b> 1.5/1 AT RESONANCE, 3 BANDS
<b>WEIGHT</b> 49 LBS	<b>ENVIRONMENTAL</b> 95 MPH	<b>BEAMWIDTH TO 1/2 PWR. PT.</b> 60° - 3 BANDS
<b>SHIPPING WT.</b> 60 LBS	<b>WIND SURFACE AREA</b> 8.5 SQ. FT.	<b>WIND LOAD AT 100 MPH.</b> 200 LBS
<b>LONGEST EL. LGTH.</b> 36 FT.	<b>TURNING RADIUS</b> 25 FT.	<b>RECOMMENDED SUPPORT MAST</b> 2" O.D.
<b>POWER RATING</b> 2 KW P.E.P.	<b>CONSTRUCTION</b> ALUMINUM CUBICAL MICARTA INSULATION, STAINLESS STEEL ELEC. HWYR. HEAVY-DUTY Q.D. M.T. STEEL GUSSET PLATE MOUNTING.	<b>RECOMMENDED ROTATOR</b> 75 MPH AREAS - GOOD TV ROTATOR 120 MPH AREAS - TELREX MODEL TS-250-RIS
<b>BOOM</b> ALUM. 3" O.D. X 18" LONG		

**TM-30C SPECIFICATIONS**

<b>FREQ. RANGE</b> 10, 15 AND 20 METERS	<b>POLARIZATION</b> LINEAR, HORIZONTAL	<b>GAIN - MEASURED</b> 10 DB, AVERAGE
<b>SIZE IN LBS.</b> 35 DB	<b>F/B RATIO</b> 30 DB	<b>V. S.W.R.</b> 1.5/1 AT RESONANCE, 3 BANDS
<b>WEIGHT</b> 45 LBS	<b>ENVIRONMENTAL</b> 95 MPH	<b>BEAMWIDTH TO 1/2 PWR. PT.</b> 58° - 3 BANDS
<b>SHIPPING WT.</b> 55 LBS	<b>WIND SURFACE AREA</b> 8.5 SQ. FT.	<b>WIND LOAD AT 100 MPH.</b> 200 LBS
<b>LONGEST EL. LGTH.</b> 36 FT.	<b>TURNING RADIUS</b> 25 FT.	<b>RECOMMENDED SUPPORT MAST</b> 2" O.D.
<b>POWER RATING</b> 2 KW P.E.P.	<b>CONSTRUCTION</b> ALUMINUM CUBICAL MICARTA INSULATION, STAINLESS STEEL ELEC. HWYR. HEAVY-DUTY Q.D. M.T. STEEL GUSSET PLATE MOUNTING.	<b>RECOMMENDED ROTATOR</b> 75 MPH AREAS - GOOD TV ROTATOR 120 MPH AREAS - TELREX MODEL TS-250-RIS
<b>BOOM</b> ALUM. 3" O.D. X 18" LONG		

10, 15 and 20 Meter MODEL TM-30C Amateur net price \$378.00

**TM-30C**  
45 LBS OF "EDUCATED-ALUMINUM"

THE BEST THAT MONEY AND LOVE OF THE SAME CAN PRODUCE, FOR THE AMATEUR!

ALSO AVAILABLE "TRI-BAND" MODEL TC88D..... \$149.00  
4 BAND SINGLE TRANS-LINE ARRAY.  
4 EL ON 10, 4 EL ON 15, 3 EL ON 10 & 3 EL ON 40..... \$999.99

"DUO-BAND" MODEL DC-105, 3 EL ON 10 & 3 EL ON 15M..... \$195.00  
"DUO-BAND" MODEL DB-99D, 3 EL ON 15 & 3 EL ON 20M..... 249.00  
"DUO-BAND" MODEL DB-30C, 4 EL ON 15 & 3 EL ON 20M..... 378.00

# telrex OPTIMUM SPACED "MONARCH" MONO-BAND ARRAYS

"BALUN"-FED, LABORATORY TUNED, MATCHED AND CALIBRATED TO PROVIDE OPTIMUM PERFORMANCE & BANDWIDTH PER ELEMENT, PER DOLLAR

"BALUN"-FED "BALUN" SUPPLIED "HARBIN" RESONATED

**10 METER 3 EL. OPTIMUM-SPACED "SUPER-DELUXE" MODEL 10M-313B**  
AN OPTIMUM 3 EL. PERFORMER AND VALUE --- USED BY ALL THE "BIG-BOYS"

\$98.00

RATING - 110 MPH 1.5 KW RAIN OR SHINE

GAIN IN DB	10.0	BOOM LGTH. & DIA.	116X2"
F/B RATIO IN DB	24	LONGEST ELEM. LGTH.	80"
1/2 POWER BEAMWIDTH	57°	TURNING RADIUS	120"
WIND AREA SQ. FT.	2.25	NET WEIGHT LBS.	21
WIND LOAD, 100 MPH LBS.	82	SHIPPING WEIGHT LBS.	28

"BALUN"-FED "BALUN" SUPPLIED "HARBIN" RESONATED

**15 METER 3 EL. OPTIMUM-SPACED "SUPER-DELUXE" MODEL 15M-317B**  
AN OPTIMUM 3 EL. PERFORMER AND VALUE --- USED BY ALL THE "BIG-BOYS"

\$135.00

RATING - 120 MPH 1.5 KW RAIN OR SHINE

GAIN IN DB	10.0	BOOM LGTH. & DIA.	117X2"
F/B RATIO IN DB	26	LONGEST ELEM. LGTH.	84"
1/2 POWER BEAMWIDTH	57°	TURNING RADIUS	120"
WIND AREA SQ. FT.	3.05	NET WEIGHT LBS.	37
WIND LOAD, 100 MPH LBS.	107	SHIPPING WEIGHT LBS.	48

**MODEL 40M-346**

\$785.00

CUSTOM-BUILT TO ORDER

SPECIFICATIONS

GAIN IN DB OVER WAVE DIPOLE	9.0
F/B RATIO IN DB	30
BEAMWIDTH TO -3DB POINT	58°
WIND AREA IN SQ. FT.	13.50
WIND LOAD AT 100 MPH IN LBS.	427
BOOM LGTH. & DIA. APPROX.	461X31/2"
LONGEST ELEM. LGTH. APPROX.	64"
TURNING RADIUS APPROX.	40"
NET WEIGHT LBS. APPROX.	177
SHIPPING WT LBS. APPROX.	222

"BALUN"-FED "BALUN" SUPPLIED "HARBIN" RESONATED

**20 METER 3 EL. OPTIMUM-SPACED "MONARCH" MODEL 20M-326B**  
AN OPTIMUM PERFORMANCE 3 ELEMENT PERFORMER USED BY THE "BIG-GUNS"

\$235.00

RATING - 100 MPH 4 KW RAIN OR SHINE

GAIN IN DB	10	BOOM LGTH. & DIA.	116X2"
F/B RATIO IN DB	28	LONGEST ELEM. LGTH.	80"
1/2 POWER BEAMWIDTH	57°	TURNING RADIUS	120"
WIND AREA SQ. FT.	8.55	NET WEIGHT LBS.	71
WIND LOAD, 100 MPH LBS.	266	SHIPPING WEIGHT LBS.	85

**ALSO AVAILABLE**

10 METER 5 ELEMENT MODEL	10M-518B	\$165.00
10 "	5 "	"
10 "	5 "	"
15 "	6 "	"
15 "	5 "	"
15 "	5 "	"
20 "	5 "	"
20 "	5 "	"
40 "	3 "	"

MANY MORE - WRITE FOR CONDENSED SPEC & PRICE LIST PL-65

## telrex "BALUN" FED INVERTED "V" ANTENNA KITS

SIMPLE-TO-INSTALL, HI-PERFORMANCE ANTENNA SYSTEMS:

- 1 KW P.E.P. Mono-Band Kit ..... \$16.95\*
- 2 KW P.E.P. Mono-Band Kit ..... \$21.00\*

\*Kit comprises, encapsulated, "Balun," copperweld, insulators, plus installation and adjustment instructions for any Mono-band 80 thru 10 Meters. Also available 2, 3, 4, 5 Band Models.



## TELREX ROTATOR-INDICATOR System MODEL TS250RIS

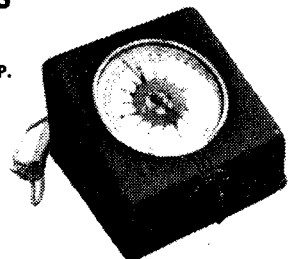
Mast Feeds Thru Rotator For Safe, Easier, Installation

- 1200 IN./LBS ROTATION TORQUE
- SELF LOCKING BY STURDY WORM GEARS
- SELSYN AZIMUTH INDICATION
- ACCOMMODATES 2" O.D. MASTING
- MALLEABLE CAST MASTING CLAMP SUPPLIED
- OUTPUT SPEED APPROX. 1 RPM

A Really Sturdy ROTATOR-INDICATOR SYSTEM - NOT a Modified TV Rotator! Designed To Out-Perform, Outlast!

\$2500 f.o.b. A.P. ALSO

- TS325RIS...\$325.00
- TS435RIS...\$435.00
- TS535RIS...\$535.00
- TS585RIS...\$585.00

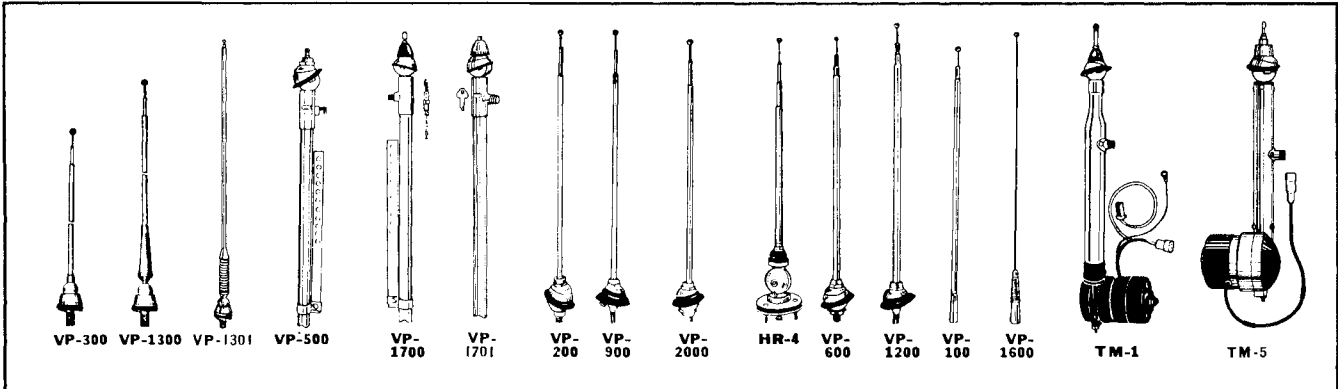


TELREX LABS. ASBURY PARK, N.J.

# Tenna Auto Antennas and Mounts

THE TENNA MANUFACTURING COMPANY, INC., CLEVELAND, OHIO

World's largest  
maker of  
Auto Aerials



### SWIVEL BALL TYPE TOP MOUNT ANTENNAS

#### "DELUXE" SATELLITE

Ball rotates full 360° in any direction. Mast may be locked at any angle. Mounts from outside. Extends 23" to 57", with 48" cable.  
Model VP-300\* ..... Net 2.75

#### "FLEXO-MAST" SATELLITE

Swing-back spring resists impact for maximum flexibility. Extends 23" to 57", with 48" cable.  
Model VP-1300\* ..... Net 4.20

### NEW FLEXO-MAST SATELLITE

A new improved Spring antenna for rugged duty and high impact use. Stainless Steel Spring for the maximum in flexibility. Universal Swivel-Ball base. Mounts on top, side or any angle. 3 sections extend 23" to 57" with 48" cable.  
Model VP-1301 ..... Net 4.20

### SIDE MOUNT AND CONCEALED ANTENNAS

#### "DELUXE" SIDE MOUNT

Triple chrome plated with chrome cap-nuts and screw-on connectors. Extends 23" to 57", with 48" polyethylene cable.  
Model VP-400\* ..... Net 2.75

#### ECONOMY SIDE MOUNT

Same as VP-400, but with gray cap-nuts.  
Model VP-1000\* ..... Net 3.55

#### "DELUXE" CONCEALED TYPE

Large seamless steel tube reduces capacity losses. Tilts 40° from vertical. Extends 0" to 50", with 48" radar-type cable.  
Model VP-500\* ..... Net 3.50  
Model VP-1100\* —Economy type, extends 4" to 35". ..... Net 3.35

#### SAF-KEY ANTENNA

Mast completely disappears. Breakproof! Mast can only be raised with combination key; key ring included with antenna. Sweeps back 40°. Extends 0" to 50", with 48" cable.  
Model VP-1700\* ..... Net 4.25

### ECONOMY SAF-KEY ANTENNA

Built along the lines of VP-1700 disappearing antenna except that Mast extends to 48" cable — 39° from 0".  
Model VP-1701\* ..... Net 4.20

### 3 SECTION TOP MOUNT ANTENNAS

#### "DELUXE" BALL AND ROCKER

Quick top mounting on cowl, rear deck or fenders. Diecast body; diecast rocker and chrome cover cap. Extends 23" to 57", with 48" radar-type cable.  
Model VP-200\* ..... Net 2.65

#### "LEADER" WITH SPLIT WASHER BASE

Similar to VP-200, but with black Tenite and split washer base for simple top mounting. Extends 23" to 57", with 48" cable.  
Model VP-900 ..... Net 2.45  
Model VP-1800\*—"Economy Shorty" extends 17" to 35", with 48" cable. .... Net 2.05  
Model VP-1900\*—"Leader Shorty" extends 23" to 50", with 48" cable. .... Net 2.15

### POPULAR BALL AND ROCKER

Triple chrome finish, sweeps back 40° and locks. Die cast rocker has positive grounding teeth. Extends 23" to 57", with 54" cable.

Model VP-2000\* ..... Net 2.65  
Model VP-800\*—Economy type. Same as 2000, but has stamped rocker design and 48" cable. .... Net 2.55

### 2 SECTION

### TOP MOUNT ANTENNAS "DELUXE" ALL CHROME

"Ball and rocker" base, sweeps back 40°. Die cast rocker has positive grounding teeth. Has chrome cover cap. Extends 22" to 39", with 48" cable.  
Model VP-600\* ..... Net 2.15

#### "LEADER" MAGIC MOUNT

Triple chrome plated, mounts easily by one person. Has split-washer base. Looks like 3 sections. Extends 22" to 39", with 48" cable.  
Model VP-1200\* ..... Net 2.05

#### "ECONOMY" BALL AND ROCKER

Triple chrome plated with stamped rocker and plastic ball. Extends 22" to 39", with 48" cable.  
Model VP-1500\* ..... Net 2.00

### REPLACEMENT MASTS

#### "DELUXE" THREE SECTION

Installs instantly by slipping base over broken portion of old mast and tightening set screws. Weatherproof, anti-rattle construction with chrome finish. Extends 23" to 57".  
Model VP-100\* ..... Net 1.75

#### FLEX-O-ROD MAST

Single section, chrome plated 26" rod bends to 90°. Polished, high tempered stainless steel spring.  
Model VP-1600\* ..... Net 1.65

### SPECIALTY ANTENNAS

#### TENNAMATIC ELECTRIC ANTENNA

Universal design approved by all major auto manufacturers. Unconditionally guaranteed for one year. For 12-volt systems only. Mast extends 39"; collapses to less than 1". Patented motor design can't "burn out"; give positive 15 lb. thrust for free action in sub-zero weather. Comes with switch and bracket, 54" radar cable (copper shielded), 72" electric harness, cable clips, anchor brackets, metal screws and installation instructions.  
Model TM-1—Front mount. .... Net 21.55  
Model TM-2—Rear mount. .... Net 22.55

With 18' cable and 20' electric harness. Extra clips supplied. Rear mount adapter pad for crown rear fenders.  
Model TM-3—Rear mount kit of 15' cable extension, 14' harness extension and rear mount adapter pad. Converts TM-1 to TM-3. Net 3.55

#### NEW TENNAMATIC

New Electric Antenna patterned after TM-1 but designed to fit more cars. New dress parts — 4 section mast extends to 35" from 14". Includes same hardware as above models.  
TM-5—Front Mount 54" lead ..... Net 27.55  
TM-6—Rear Mount 216" lead ..... Net 28.55

#### "HOT-ROD" POLICE ANTENNA

Police type antenna for the "hot-rod" enthusiast. Four sturdy sections. Ninety-two inches when extended. Fifteen-foot coaxial lead. Uses MB-2 swivel mounting base.  
Model HR-4 ..... Net 6.42

\*NOTE: Prices shown are for Skin Pack—VP Available in box (X suffix) .05 decrease. Available in bulk (A suffix) .08 decrease. Specify on order VP, X or A.

### RADAR TYPE LEAD CABLES

Radar type ultra high "Q" coaxial cables with polyethylene insulation and 100 per cent shielding. Type L has aircraft connector to antenna and pin plug. Extension Type LE has male and female pin plug fittings.

Model	Length	Model	Length
LE-12	12"	L-72	72"
LE-18	18"	LE-48	48"
LE-24	24"	LE-108	108"
LE-36	36"	LE-144	144"
L-36	36"	LE-180	180"
L-48	48"	LM-144*	144"
L-54	54"	LM-180*	180"
L-60	60"	MRC-54†	54"

\*\*Communication lead. † Universal replacement cable. Equipped with three different mounting nuts for all or any assemblies.

## EXACT REPLACEMENT ANTENNAS

### Complete Kit, Model ER-1

Kit contains handsome, gold finished, floor display stand with 3 each of 47 Exact Replacement models. Gives Distributor an exact replacement for every original equipment installation. Completely assembled, ready for quick and profitable installation. Skin packed on attractive display cards. Small display space required.

## SMALLER STAND FOR DEALERS

Dealer gold finished, rotating counter display holds 12 antennas of dealer's choosing to suit local needs. Write for leaflet explaining full Exact Replacement Program. Multiplies sales at most attractive profits.



A SURE WAY TO INCREASE ANTENNA PROFITS!

RACK MODEL ER-1

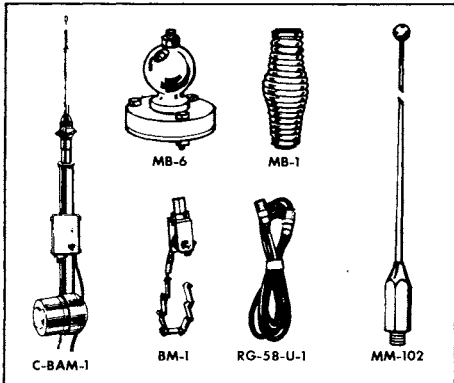
WHERE PROGRESS IS A HABIT AND SALES LEADERSHIP AN ESTABLISHED FACT



# TENNA COMMUNICATION ANTENNAS

THE TENNA MANUFACTURING COMPANY, INC., CLEVELAND, OHIO

*World's largest  
maker of  
Auto Aerials*



## C-BAM DUAL PURPOSE ELECTRIC ANTENNA

Receives CB, AM and FM. Top loaded coil eliminates need for long, cumbersome whips. Extends to 55", collapses to 9 1/2", complete coil disappears. Completely automatic. Sturdy, 4 section. Installs front or rear. C-BEE model same as C-BAM but receives CB only.

- C-BAM-1—front.....Net \$23.49
- C-BAM-2—rear.....Net \$24.98
- C-BEE-1—front.....Net \$19.49
- C-BEE-2—rear.....Net \$20.98

## COMMUNICATION GEAR BASES

- MB-4—Chrome plated Ball and Phenolic Base.....Net \$4.02
- MB-5—Cadmium plated, resistant painted black Ball and Phenolic Base.....Net \$3.52
- MB-6—Same as above, except contains Cadmium plated Ball with plated hardware.....Net \$3.03

## SPRINGS

- SP-1—Stainless steel Spring.....Net \$4.04
- SP-2—Cadmium plated, black resistant painted Spring.....Net \$2.75
- SP-3—Cadmium plated Spring.....Net \$2.04

## STAINLESS STEEL WHIPS

MM Series: Number denotes length. MM-40, MM-55, MM-60, MM-72, MM-84, MM-96, MM-102, MM-108

Add following letters to MM numbers for type of adapter desired. A for non-removable. B for removable. C for set-screw type. D no adapter.

## BUMPER MOUNTS

For any standard spring or whip assembly.

- BM-1—Single Chain Mount.....Net \$4.85
- BM-2—Double Chain Mount.....Net \$6.14

## CABLES

- RG-58-U-1 Split end to PL-259
- RG-58-U-2 PL-259 on each end. specify length: 6', 12', 15', 22'

# TENNA Mileage-Metered YAGIS and CONICAL ANTENNAS

## NEW MILEAGE-METERED YAGIS — ESPECIALLY SUITED FOR COLOR TV

Six VHF antennas for clear-cut Television reception from any transmitter far or near. Designed for excellent color reception and black and white.

A Model for the 100 mile range — with models for distance in between.

Features are "quick-rig" design... good solid gain across channels 2-6 and 7-13... Gold Anodized Finish. Big 3/4" dipoles and 1" booms for rugged duty and wind resistance.

### MODEL TM-60 Reception Range: 1-40 miles

Ideal replacement for "conical" antenna. Yagi directness assures precise picture clarity and positive reception.

Two low band driven elements offer gain and directivity across channels 2-6.

High band has driven element, reflector and two directors for channels 7-13.

All aluminum. Low wind resistance. And... BIG 3/4" dipoles! Shipping wgt. for carton of two: 9.7 lbs. Net \$6.17

### MODEL TM-65 Reception Range: 40-60 miles

A compound broadband antenna On channels 2-6, four elements. On channels 7-13, five elements. All phased for maximum gain and directivity.

All aluminum. One-inch boom and "Sure Grip" mast clamp. Reflectors reinforced with aluminum dowels. And... BIG 3/4" dipoles! Net \$11.37

Shipping wgt. for carton of two: 14.2 lbs.

### MODEL TM-75 Reception Range: 60-80 miles

On low band channels five elements used, two driven and phased for maximum front to back ratio.

On high band channels, seven elements active and adjusted for maximum gain and directivity.

Ideal for color because of flat gain characteristics. Aluminum dowel reinforced reflector. One inch diameter boom. And... BIG 3/4" dipoles! Net \$13.77

Gold anodized finish, order TM-75A.

Shipping wgt. for carton of two: 9.1 lbs.

### MODEL TM-70 Reception Range: 80-90 miles

Nine element broadband Model with three driven dipoles including separate high band dipole. Competitive but equally priced models have only 2 dipoles.

Preassembled. Aluminum dowel reinforced 7/16" reflector. Newly designed clamp. Net \$10.77

Gold anodized finish, order TM-70A. Net \$13.77

Shipping wgt. for single carton: 7 lbs.

### MODEL TM-88 Reception Range: 80-90 miles

A broadband compound array with seven active elements on low band; eight active elements on high band. Plus three driven dipoles.

All aluminum. Quick rigged. "Sure Grip" mast clamp. Low wind resistance. Higher sensitivity for all channels. One-inch boom. And... BIG 3/4" dipoles! Net \$14.97

Gold anodized finish, order TM-88A. Net \$18.19

Shipping wgt. for single carton: 10 lbs.

### MODEL TM-99 Reception Range: 90-100 miles

Tenna's finest Model designed for extreme fringe areas, and proved for pinpoint color reception!

Four driven dipoles; two on high band, two on low. Maximum front to back ratio. Ideal for rotor installation. And... BIG 3/4" dipoles! Reflector System (shown): Makes TM-99 40 times more sensitive. Composed of 1 element spaced behind and in the same plane as the rear driven element of the array w/2 elements mounted below, thus providing the finest possible front to back ratio across the maximum number of channels.

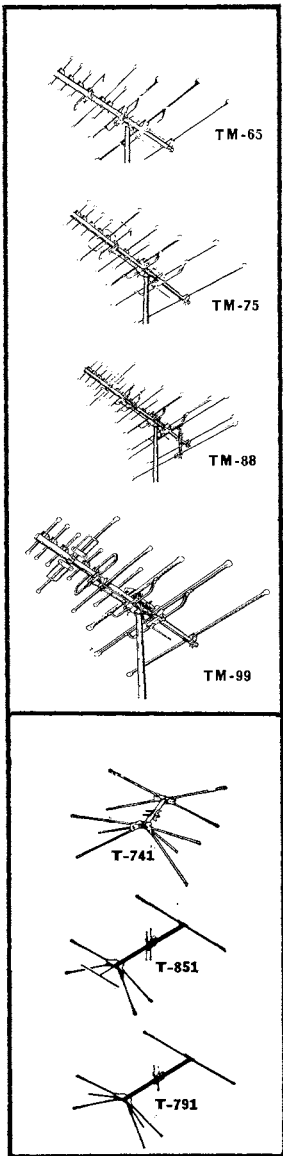
Order TM-99R for Reflector System, TM-99RA for Gold Anodized Reflector, or TM-99A for Gold without Reflector. Net \$18.17

TM-99. Shipping wgt. 13 lbs. Net \$20.97

TM-99R and TM-99RA. Shipping wgt. 15 lbs. Net \$26.97

## CUT-CHANNEL YAGIS

Cut-to-channel Yagis available upon request. Specify channels and number of elements (5 or 10).



## UHF ANTENNAS

Tenna Model U-Z1—All-Aluminum construction, pre-assembled. Minimum wind resistance. Very high front-to-back ratio; increased gain. Covers channels 14 through 83. Shpg. wt. 3 1/4 lbs.

Tenna Model U-Z2—Horizontally stacked, highly directive. Pre-assembled all-aluminum construction. Low wind resistance. Covers channels 14 through 83. Shpg. Wt., 4 lbs.

## CONICAL YAGI MIRACLE ANTENNAS

Deluxe antenna for areas where co-channel interference is a problem. Provide high gain, broad band width and high directivity for near fringe areas. Miracle Reflector System gives front to back ratio as high as 30 to 1. Usable on channels 2 through 13.

All aluminum elements are completely preassembled.

Tenna Model CY-8R Yagi—Ten elements. Reflector system eliminates need for stacking. Shipping Weight, 6 lbs.

Tenna Model CY-8RA—Same, but gold anodized.

Tenna Model CY-7 Yagi—Seven elements. Includes "Presto" instant mount assembly and stacking bars. Shipping Weight 4 1/2 lbs.

Tenna Model CY-7A—Same, but gold anodized.

Tenna Model CY-8 Yagi—Eight elements. With stacking bars. Shipping Weight, 5 lbs.

Tenna Model CY-8A—Same, but gold anodized.

## CONICAL ARRAYS

Full size, all aluminum antennas cover all channels 2 through 13. Available with high-channel Director Bar for greatly improved reception on upper channels. Choice of four or six forward elements and two or four reflector elements. Stacked arrays consist of two bays with connecting bars for stacking. Completely pre-assembled with Instant Mount Assembly. Includes high impact molded polystyrene insulator.

## SINGLE ARRAYS

Tenna Model	Forward Elements	Ref. Elements	HF Stubs	Director Bar	Shpg. Lbs.
T-751	4	4	—	1	3
T-801	4	2	—	—	2 1/2
T-811	4	4	—	—	2 1/2
T-741	4	4	2	—	3
T-851	4	2	—	1	2 1/2
T-791	4	2	2	—	2 1/2
T-771	6	2	—	—	2 1/2
T-761	6	2	—	1	3 1/2

## STACKED ARRAYS

Tenna Model	Forward Elements	Ref. Elements	HF Stubs	Director Bar	Shpg. Lbs.
T-752†	8	8	—	2	6 1/2
T-802†	8	4	—	—	5 1/2
T-812†	8	8	—	—	6
T-742†	8	8	4	—	6 1/2
T-852†	8	4	—	2	5 1/2
T-792†	8	4	4	—	5 1/2
T-772†	12	4	—	—	5 1/2
T-762†	12	4	—	2	6

\*Bulk-packed 6 per master carton; for individually boxed antennas, packed four per master carton, add suffix A to number (example: T-751A). †Bulk-packed three per master carton; for individually boxed units, packed four per master, add suffix A.

## CONICAL ANTENNA KITS

Contain conical arrays, mount, masts, cable and all necessary hardware. "Do-It-Yourself" kits.

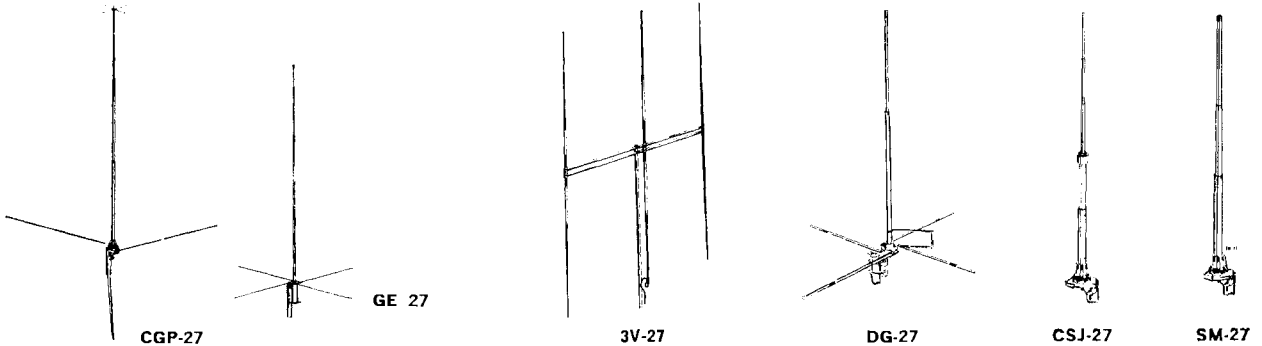
## CHIMNEY MOUNT

Tenna Model	Array Type	Shpg. Lbs.	Tenna Model	Array Type	Shpg. Lbs.
DK-801	T801A	8 1/2	DK-741	T741A	9
DK-802	T802A	13	DK-742	T742A	13 1/2
DK-811	T811A	8 1/2	DK-751	T751A	9
DK-812	T812A	13 1/2	DK-752	T752A	14
DK-791	T791A	8 1/2	DK-851	T851A	8 1/2
DK-792	T792A	13 1/2	DK-852	T852A	13 1/2
DK-771	T771A	8 1/2	DK-781	T781A	9 1/2
DK-772	T772A	13 1/2	DK-782	T782A	13 1/2

## SWIVEL MOUNT

DK-801-3	T801A	6 1/2	DK-741-3	T741A	7
DK-802-4	T802A	11 1/2	DK-742-4	T742A	12
DK-811-3	T811A	6 1/2	DK-751-3	T751A	7
DK-812-4	T812A	12	DK-752-4	T752A	12 1/2
DK-791-3	T791A	6 1/2	DK-851-3	T851A	6 1/2
DK-792-4	T792A	11 1/2	DK-852-4	T852A	11 1/2
DK-771-3	T771A	6 1/2	DK-781-3	T781A	7 1/2
DK-772-4	T772A	11 1/2	DK-782-4	T782A	12

# TENNA BASE STATION ANTENNAS



## 1/4 WAVE LENGTH 20-FOOT COLINEAR GROUND PLANE ANTENNAS

Omni-directional fixed base station antenna concentrates RF energy at lower radiation angle than any other design. 1/4 wave length gives 3.4 db gain over a ground plane, doubles effective radiated power, vastly increases useable CB range.

### TWO MODELS AVAILABLE

**CGP-27 GOLD ANODIZED** Net \$32.97  
**CGP-27 STANDARD SILVER** Net \$29.97

Closely-fitted assembly mostly pre-constructed to reduce installation time. Coaxial fitting at front of base; line goes to CB set on outside of supporting mast. Reactance cancelling coil provides very close match, lowers VSWR. BASE: cast aluminum. MAST HOLDER: reinforced phenolic. EXPOSED FITTINGS: epoxy-sealed against corrosion.

### CHARACTERISTICS:

Impedance — 50 ohms  
 Termination — SO-239  
 VSWR — 1 to 1.2  
 Lightning protection — gap  
 Polarization — vertical

### SPECIFICATIONS:

Radiating element — tapered hi tensile  
 1/4 wave length with capacity hat  
 Support pipe — up to 1 1/2" diameter  
 Height — 20 feet  
 Weight — 8 lbs.  
 VERTICAL RADIATION PATTERN

### HALF WAVE END FEED ANTENNA

Provides a 3 db gain over standard ground plane. Antenna is 17'3" high, has weather-protected matching transformer mounted in base. Heavy construction throughout for many years of trouble-free service. Greatly improves effective power of base station transmitter and effective sensitivity of receiver. Direct ground furnished for lightning protection, reduction of static noise.

**MODEL GE 27 . . .** Net \$28.43

### CHARACTERISTICS:

Impedance — 50 ohms  
 Termination — accepts PL 259 connector  
 VSWR — 1.3 to 1  
 Lightning protection — direct ground  
 Polarization — vertical, pattern semi-directional

### SPECIFICATIONS:

Radiator — 1/2 wave length tapered aluminum

Radials — 3 full lengths

Potted transformer

Height — 17'3"

Weight — 9 lbs.

### VERTICAL RADIATION PATTERN

### YAGI ANTENNA

3V-27

Net \$36.00

This Citizens Band Yagi sets new industry standards for performance and mechanical sturdiness. Light, versatile, rugged and easy to install — these are features Citizens and enthusiasts expect and get from Tenna. Use this Yagi to substantially increase your CB range, reduce interference.

The special configuration of the 3V-27 yagi uses a 2 db gain half wave end-fed antenna as its heart. Most other CB yagis employ a 0 db dipole. High angle of radiation seriously limits the expected gain. The half wave end-fed radiator used in the new 3V-27 has an inherently low angle of radiation, placing an enhanced signal out low along the ground. Transmitted signal is far stronger, received signal is clearer and sharper.

Constructed of aircraft-type aluminum, it is light and strong, made to mount vertically. Greater strength and rigidity through the use of a truss construction on the boom.

Light, versatile, rugged and EASY TO INSTALL. TENNA has completely eliminated the guesswork and possibility of assembly error through a fool-proof design. Element positions are predetermined, then elements and their corresponding sockets are numbered for easy matching.

The 3V-27 is designed to give a light and balanced load on supporting masts and can be turned with TV types of rotators.

### CHARACTERISTICS

Impedance — 50 ohms  
 VSWR — Within 1.6 to 1  
 Lightning protection — gap  
 Polarization — vertical  
 Double heavy wall aluminum structure  
 Tapered 3 section elements

### SPECIFICATIONS

Separate clamps for vertical and horizontal mounting  
 Weight — 10 lbs. Length — 9 ft.

### QUARTER WAVELENGTH RADIATOR ANTENNA

STANDARD GROUND PLANE ANTENNA

DG-27

Net \$15.99

Featuring the only inductively shortened radials available.

The DG-27 is a 1/4 WAVELENGTH RADIATOR ANTENNA — nine feet long — that makes an efficient inconspicuously fixed base station antenna. The radiator is aluminum tubing rigidly held to prevent whipping. The radiator holder is a rugged machined aluminum heavy-duty casting; has an open bracket design for easy mounting of the coaxial cable.

On the DG-27 model the radials are shortened to 50" and loaded with an inductor coil to compensate for length. Four short radials are used to provide: a better match, improved ground effect, less wind resistance, lighter weight, less wind whipping and easier mounting, takes up less space.

### CHARACTERISTICS

Impedance — 50 ohms  
 Termination — accepts PL-259 connector  
 VSWR — 1.3 to 1  
 Lightning protection — direct ground  
 Polarization — vertical

### SPECIFICATIONS

Radiator — heavy duty aluminum tubing  
 Radials —  
 has shortened inductively loaded radials  
 Will mount on up to 1 1/2" mast  
 Height — 9 ft. Weight — 3 1/2 lbs.

### COAXIAL SLEEVE ANTENNA

CSJ-27

Net \$19.95

The CSJ-27 is a COAXIAL SLEEVE CITIZENS BAND ANTENNA, neat, light, trim and mechanically superior. Its slim lines blend into the surroundings whether mounted on a mast or a chimney. The skirt or sleeve of the antenna is made from 1 inch diameter aluminum tubing, with an insulated sleeve on the bottom for mounting. The tapered radiator consists of 1/2" diameter aluminum tubing tapering to a second section 3/4" O.D. It has an inherent low angle of radiation which makes it a naturally better performer. This efficient, hard working antenna will give many faithful years of trouble-free service. No radials required — the coaxial provides this function. The base, made of reinforced molded phenolic, is supported by a cast aluminum bracket.

### CHARACTERISTICS

Impedance — 50 ohms  
 Termination — 50 ohm feedline  
 VSWR — less than 1.5 to 1  
 Lightning protection — gap  
 Polarization — vertical

### SPECIFICATIONS

Radiator — tapered two sections  
 Coaxial Sleeve — 1" aluminum tubing  
 Height — 18 ft. Weight — 3 lbs.

### HALF WAVELENGTH END-FED ANTENNA

REQUIRES NO RADIALS

SM-27

Net \$19.95

The SM-27 is 1/2 WAVELENGTH END-FED ANTENNA which provides a 2 db gain vertically polarized, omnidirectional base station antenna for Citizens and use. The radiator is rigidly constructed tapering from 1 1/2" to 1 inch O.D. to 3/4" O.D. tubing. The base, made of reinforced molded phenolic, is supported overall by a cast aluminum bracket. No radials are required — makes this antenna easy to install. Comes complete with launch cable.

### CHARACTERISTICS

Impedance — 50 ohms  
 Termination — takes PL-259 connectors  
 VSWR — 1.3 or 1  
 Lightning protection — Gap  
 Polarization — vertical

### Pattern — omnidirectional

### SPECIFICATIONS

Radiator — tapered aluminum sections  
 Base —  
 cast aluminum with two U-bolt assemblies  
 Height — 17 ft. Weight — 7 lbs.

## DELUXE CITIZENS BAND ANTENNA KITS OUTSTANDING TENNA VALUES!

Springs are End Bell design that will bend through a 90° arc without breaking. (Try this on any other antenna on the market!) Every mast is a full 102" stainless steel whip with adaptor.

**MODEL P-100** — Complete kit includes 102" stainless steel whip. Rugged full-size spring with heavy-duty, double cadmium-plated steel coils; 3/8" phenolic insulator and all mounting hardware. Cadmium-plated for weather-resistance. Heavy-duty MB-6 2" diameter ball with double cadmium plate. Net \$8.97

**MODEL P-100-D** — Same as above, except spring is polished stainless

steel, ball is heavy-duty chrome-plated. Net \$16.95

**MODEL P-200-D** — with complete bumper assembly. Fits all cars. No holes to drill. 102" stainless steel whip. Double chain bumper mount. Heavy-duty cadmium-plated steel spring. Net \$12.20

### ECONOMY KITS

**MODEL P-10-102** stainless steel whip, heavy-duty cadmium-plated steel spring and 2" ball, base. Net \$7.75

**MODEL P-20** — Same as P-200-D, except bumper mount is single chain. Net \$10.90

## TENNA UNIVERSAL TOP LOADED MANUALS GIVE TOP-NOTCH SALES PERFORMANCE!

**MODEL TL-1 "DELUXE" SATELLITE WITH ROTATING BALL** — Rotates full 360°. Locks at any angle, fits anywhere on car. Triple chrome-plated 3-section mast. Extends 23" to 57". 48" detachable cable. Easily installed. Net \$7.17

**MODEL TL-2 "DELUXE" BALL & ROCKER BASE** — Quick, easy top mounting, 40° sweepback. Extends 23" to 57". 48" radar-type polyethylene cable, 3-section mast. Net \$7.17

**MODEL TL-3 "DELUXE" CONCEALED-TYPE** — Top-loaded coil completely disappears, 40° sweepback. Extends 0" to 57". Large seamless steel tube reduces capac-

ity losses. 48" radar-type polyethylene cable. Net \$8.14

**MODEL TL-4 "SPECIAL" BALL & ROCKER MOUNTING** — Triple chrome-plated base to tip. 40° sweepback. Locks at angle. Die-cast rocker has positive grounding teeth. Extends 23" to 57", has 54" cable. Net \$7.47

**MODEL TL-5 "FLEX-O-MAST" SATELLITE** — Bounces back when hit! Spring gives maximum flexibility, prevents breaking. Triple chrome-plated mast. Easily installed, extends 23" to 57". 48" cable. Net \$8.37

**COMMUNICATION ANTENNAS by**



for every mobile frequency and application

**CBI B ANTENNA**



This is a low priced Mobile Communications Antenna

- Black Painted Swivel Base
- Cadmium Steel Spring
- 102" Cadmium Whip

**CBIA ANTENNA**



A Deluxe Mobile Communications Antenna

- Chrome Swivel Base
  - Chrome Spring
  - Stainless Steel 102" Whip
- May be adapted for citizen band

**CB-IB S BASE-SPRING**



- Cadmium Steel Spring
- Black Painted Swivel Base

**CB-IAB S BASE-SPRING**



- Chrome Spring
  - Chrome Swivel Base
- May be adapted for citizen band

**CB-II S SPRING**



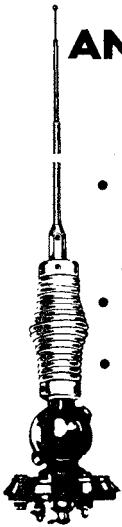
- Triple Cadmium Plated Spring

**CB-III S SPRING**



- Triple Chrome Plated Barrel Type Spring Bends Through 100 Degrees

**CBII ANTENNA**



**FEATURES**

- Universal Swivel Base Heavily Plated and Painted
- Triple Cadmium Plated Spring
- 102" Stainless Steel Tapered Whip

**CBIII ANTENNA**



**FEATURES**

- Chrome Plated Swivel Base With Stainless Steel Hardware
- Triple Chrome Plated, Barrel Type Spring Bends Through 100 Degrees
- 102" Stainless Steel Tapered Whip

**CB-II B BASE**



- Universal Swivel Base Heavily Plated and Painted
- Deluxe

**CB-III B BASE**



- Chrome Plated Swivel Base\* With Stainless Steel Hardware
- Deluxe \*Coaxial

**CB-IW WHIP**



- 102" Cadmium Whip With Press Fit Cadmium Plated Adapter

**CB-IAW WHIP**



- 102" Stainless Steel Whip With Press Fit Chrome Plated Adapter

**THE FOLLOWING CABLES ARE AVAILABLE**

**SPECIFY NO. 85-187 . . .**  
15' Lead for Deluxe Hot Rod Antenna.

**SPECIFY NO. 85-189 . . .**  
15' Coaxial Lead for Citizen Band Antenna.

**SPECIFY NO. 85-180 . . .**  
17' Communication Lead for Citizen Band Antenna.

**SPECIFY NO. 85-11 . . .**  
20' Communication Lead for Citizen Band Antenna.



**PRODUCTS CORPORATION**





**AMSTERDAM, NEW YORK**




# DISGUISE ANTENNAS

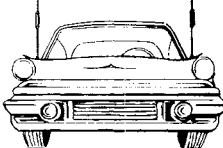
INTRODUCING TWO NEW DESIGNS

NOW AVAILABLE IN 5 MODELS . . .

<p><b>Model WCAB-71</b></p> <p><b>Completely Disguised Mast and Base</b></p> <p>Looks exactly like ordinary 3-section car radio aerial. Uses triple chrome plated brass tubing and stainless steel tip rod. Length is fixed at 55½" by permanent connections at the telescopic joints. Model includes mast and base only.</p> 	<p><b>Model WCA-143</b></p> <p><b>Partially Disguised</b></p> <p>Same as WCAB-71 except mast is made of 55½" type 17-7 PH stainless steel tapered rod. Use where exceptionally high strength is a necessity. Model includes mast and base only. Shipping Weight 2 lbs. 8 oz.</p> 	<p><b>Model WCA-248</b></p> <p><b>Completely Disguised Mast and Base</b></p> <p>Looks exactly like ordinary 3-section car radio aerial. Uses triple chrome plated brass tubing and stainless steel tip rod. Length is fixed at 55½" by permanent connections at the telescopic joints. Model includes mast and base only. Shipping Weight 1 lb.</p> 	<p><b>Model WCA-249</b></p> <p><b>Partially Disguised</b></p> <p>Same as WCA-248, except mast made of 55½" type 17-7 PH stainless steel tapered rod. Use where exceptionally high strength is a necessity. Model includes mast and base only. Shipping Weight 1 lb.</p> <p><b>Model WCA-235</b> Same as WCAB-71 except with 70" mast. Shipping Weight 2 lbs. 8 oz.</p> 
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**NEW FOR '63**  
**L-COIL CITIZEN BAND ANTENNA**



**WHY USE TWO ANTENNAS WHEN ONE WILL DO?**

The new Ward L-COIL Citizen Band Antenna may be used for Standard Broadcast AND Citizen Band without the necessity of installing an extra antenna on your automobile. The only accessory the Citizen Band enthusiast will need is a switch box for instant changeover from standard broadcast to citizen band.

**MODEL WCA-LC-1**  
27MC  
54" Lead Cable Included

Eliminate this with the Ward L-COIL!

**HEAVY DUTY MASTS**

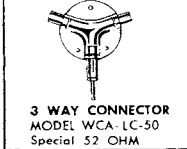
Finest stainless steel: heavy-duty performance. 84½" mast bends to bring tip and base 30" apart without distortion. All base studs ¾-24 threads. All taper ground with ball tip. WCA-320 series — 60" long, choice of adapters: Chrome press fit, cadmium plated press fit; ¾" hex steel, cadmium plated with set screws; ½" hex stainless steel with set screws.

**WCA-321 series** — 72", same choices.  
**WCA-322 series** — 84", same choices.  
**WCA-323 series** — 96", same choices.  
**WCA-324 series** — Fiberglass in all 4 lengths.

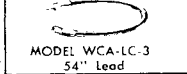
Ward recommends for rough terrain conditions the Dual L-COIL antenna kit. This will give you the ultimate in reception. The modulation is excellent and you will be surprised at the distance it brings in from base stations.

**MODEL WCA-LC-2**  
Dual Ward L-COIL Antennas with 54" leads

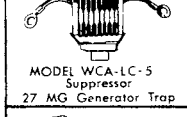
Note: WCA-LC-50 3 Way Connector must be used with Dual Antenna kit.




**3 WAY CONNECTOR**  
MODEL WCA-LC-50  
Special 52 OHM




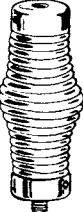

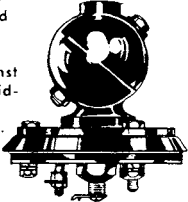
**MODEL WCA-LC-3**  
54" Lead






**MODEL WCA-LC-5**  
Suppressor  
27 MG Generator Trap



**MODEL WCA-LC-4**  
ADAPTER

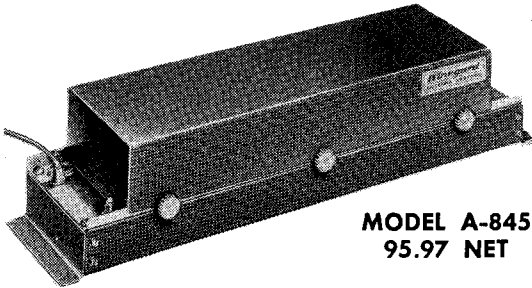
<p><b>ROOF TOP ANTENNAS</b> 3 efficient models</p> <p><b>WCA-250</b> 2 Meter whip 143-149 mc.</p> <p><b>WCA-252</b> 1 ¼ Meter whip 220-225 mc.</p> <p><b>WCA-254</b> Plug in 2 Meter whip 143-149 mc.</p> 	<p><b>SPRINGS</b> <b>WCA-301</b></p> <p>Stainless steel spring and mounts. Deluxe model for that high quality appearance and extremely high corrosion conditions. Lock-washer included.</p> <p><b>WCA-3ACH</b> Heavily Chrome Plated for extra protection in areas where corrosion is a greater problem. Lock-washer included.</p> <p><b>WCA-3A</b> Heavily Cadmium Plated with lockwasher included.</p> 	<p><b>BASES</b></p> <p><b>WCA-315</b> <b>CHROME PLATED SWIVEL BASE</b> With external hardware of stainless steel. For smarter, dressed-up appearance and added protection. Individually packed. Wt. 1 lb., 8 oz.</p>  <p><b>WCA-310</b> Universal swivel base plated and painted parts provide double protection against corrosion. Individually packed. Wt. 1 lb., 8 oz.</p> 
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<p><b>ADAPTERS</b></p> <p><b>MODEL 89-358</b> ¾" Hex steel, cadmium plated with set screws. ¾-24 thread for use on any standard WARD mast as listed. Lockwasher included.</p> 	<p><b>MODEL 89-357</b> ½" Hex stainless steel, with set screws. ¾-24 thread for use on any standard WARD mast as listed. Lockwasher included.</p> 	 <p><b>PRODUCTS CORPORATION</b> AMSTERDAM, NEW YORK</p>
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# Winegard

# DISTRIBUTION SYSTEM EQUIPMENT

## AMPLIFIERS



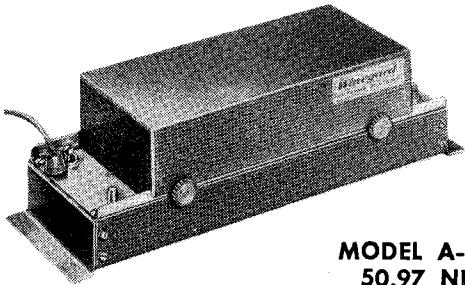
8-TUBE  
45db  
GAIN

**MODEL A-845**  
95.97 NET

A high gain amplifier for large distribution systems in hotels, motels, hospitals, schools, etc. Has all the features needed for a top quality installation. Underwriters' Laboratories, Inc. Listed.

### SPECIFICATIONS

**TUBES:** six 6HA5; two 6DJ8. **GAIN:** +45db. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:**  $\pm .25$ db per 6MC channel. **NOISE FIGURE:** 3.7db lo-band; 5db hi-band. **MAX. SIGNAL INPUT:** gain control at max., .008V per band; gain control at min., .025V per band. **MAX. SIGNAL OUTPUT:** 3.2V. **CONTROLS:** gain, 0-10db; tilt, 3-6db. **INPUT:** 75 ohm. **OUTPUT:** 75 ohm. Blue baked enamel perforated steel cabinet, 2 7/8" x 14 1/2" x 3 3/8". AC cord. **SWITCHES:** OFF-ON; power to pre-amplifier. AC fuse. 117V 60CPS 48 watts.



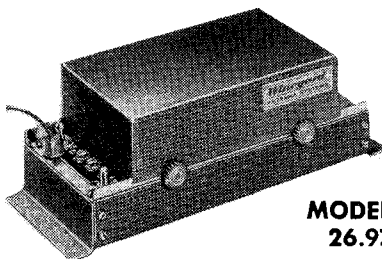
4-TUBE  
30db  
GAIN

**MODEL A-430**  
50.97 NET

A high gain amplifier designed to drive up to 40+ TV outlets. Recommended for smaller motels, apartments, etc., and deluxe home systems. Finest quality. Underwriters' Laboratories, Inc. Listed.

### SPECIFICATIONS

**TUBES:** four 6HA5. **GAIN:** +30db. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:**  $\pm .25$ db per 6MC channel. **NOISE FIGURE:** 3.7db lo-band, 5db hi-band. **MAX. SIGNAL INPUT:** gain control at max., .02V per band; gain control at min., 1V per band. **MAXIMUM SIGNAL OUTPUT:** 2V. **CONTROLS:** gain, 0-10db. **INPUT:** 75 or 300 ohm. **OUTPUT:** 75 ohm. Two C-59 75 ohm connectors supplied. Blue baked enamel perforated steel cabinet, 2 7/8" x 11" x 3 3/8". AC cord. **SWITCHES:** OFF-ON; power to preamplifier. AC fuse. 117V 60CPS 25 watts.



2-TUBE  
15db  
GAIN

**MODEL A-215**  
26.97 NET

The ideal home system amplifier for up to 10 outlets. Will also function as power supply for Winegard's transistor antenna preamplifier, Models AP-220T and AP-275T. Underwriters' Laboratories, Inc. Listed.

## SPECIFICATIONS

**TUBES:** two 6HA5. **GAIN:** +15db. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:** flat,  $\pm .25$ db per 6MC channel. **NOISE FIGURE:** 3.7db lo-band, 5db hi-band. **MAX. SIGNAL INPUT:** 350,000 microvolts. **MAX. SIGNAL OUTPUT:** 2V. **INPUT:** 75 or 300 ohm. **OUTPUT:** 75 or 300 ohm. Two C-59 75 ohm connectors supplied. Blue baked enamel perforated steel cabinet, 2 7/8" x 9 1/4" x 3 3/8". AC cord. **SWITCHES:** ON-OFF; power to preamplifier. AC fuse. 117V 60CPS 14 watts.

## LINE SPLITTERS



2-WAY  
MODEL  
LS-275  
5.40  
NET



4-WAY  
MODEL  
LS-475  
8.25  
NET

Model LS-275 is a matched, reactive type splitter to split trunk line into two legs.

Model LS-475 is a matched, reactive type splitter to split trunk line into three or four legs. Unused outputs must be terminated with 75 ohm resistor.

**IMPEDANCE:** 75 ohms (all terminals)

**ATTENUATION:** (2-way) 3db at all outputs

(4-way) 6db at all outputs

**MOUNTING:** Surface mount, 2 wood screws provided.

**FITTINGS:** (2-way) 3 C-59 cable connectors provided

(4-way) 5 C-59 cable connectors provided

## ATTENUATION PADS

### Mod. VP-3 — 300 ohm



2.70  
NET

Reduces incoming signal from -6 to 20db. Used ahead of distribution amplifier it smooths incoming signal.

### Mod. VP-7 — 75 ohm



7.77  
NET

Identical to above, but 75 ohm in and out. C-59 connectors included.

### 300 ohm — FIXED



MOD.	db	NET
FP3-6	6	1.80
FP3-12	12	1.80
FP3-20	20	1.80

### 75 ohm — FIXED

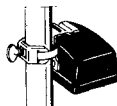


MOD.	db	NET
FP7-3	3	5.37
FP7-6	6	5.37
FP7-12	12	5.37
FP7-20	20	5.37

Includes C-59 connectors

## MATCHING TRANSFORMERS

MOD. T-5911M 3.72 NET



Mast Mount

MOD. T-5911S 3.72 NET



Surface Mount

Weatherized housing. Will pass AC-DC current. To block AC-DC current remove 2 coils in circuit. Antenna mount.

Identical to above, but mounts inside on wall. (T-5911S)



"Pigtail Transformer" for back of TV set

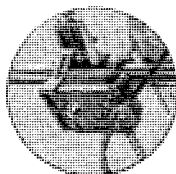
Mod. T-73 1.80 NET

Attractive, durable back-of-set matching transformer. Use to run RG-59/U direct to TV sets.

# Winegard

# DISTRIBUTION SYSTEM EQUIPMENT

## CHANNEL CONTROL COUPLERS



**MOD. CCC-2 (thru 13) . . . . . 7.98 NET\***

Does all three — 1. Couple any number of yagis to single down-lead. 2. Equalize signal to pre-determined level on every channel. 3. Match 300 ohm yagi antenna to 75 ohm coaxial cable. Versatile, convenient, inexpensive.

### SPECIFICATIONS

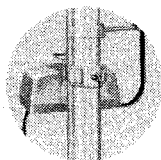
**INSERTION LOSS:** max. —1.7db lo-band, —2.5db hi-band. **BANDPASS:** single 6MC channel. **RESPONSE:**  $\pm 1/4$  db per 6MC channel. **ISOLATION FIGURE:** min. 18db lo-band, 14db hi-band. **VSWR:** 1.2:1. **INPUT:** 300 ohm. **OUTPUT:** 75 ohm.

\* **PLUG-IN ATTENUATION PADS — 7 MODELS FROM — 3db TO —20db . . . . . 98 NET**

## VHF YAGI COUPLERS

**MOD. CA-\* 3.30 NET**

Allow you to couple up to 8 different cut-channel yagis on mast, using a single down-lead. Or couple cut-channel yagis with any TV VHF broad-band or all-channel antenna.



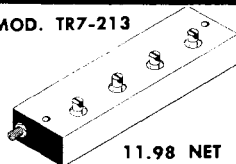
### SPECIFICATIONS

**INSERTION LOSS:** lo-band, max. .75db; hi-band, max. 2db. **BANDPASS:** 6MC. **RESPONSE:** flat,  $\pm 2.5$ db per 6MC channel. **VSWR:** max. 1.3:1. **ISOLATION FIGURE:** lo-band, min. 20db; hi-band, min. 16db. **INPUT:** 300 ohm. **OUTPUT:** 300 ohm.

\* Specify Channel

## TV-FM CHANNEL TRAPS

**MOD. TR-213**

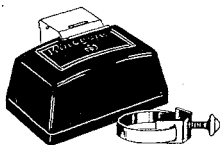


11.98 NET

General-purpose wavetrap. 4 independent traps together cover the entire VHF TV-FM spectrum. 1st and 2nd or 3rd and 4th traps tuned together attenuate by an average of 50db. Undesirable frequencies outside of these bands are effectively eliminated by a VHF TV-FM bandpass filter by an average of 37db.

**MOD. TR-213, 4.60 NET**

General-purpose wavetrap. 3 independent traps together cover the entire VHF TV-FM spectrum. Any trap can be used individually or in conjunction with the others. Each trap attenuates —12 to 30db.



MOUNTS INSIDE OR OUT

**MOD. TR-713, 6.00 NET**

For very severe interference in the high VHF TV band. It has 3 independent traps which can be used individually or in combination to attenuate 1, 2 or 3 separate frequencies. 3 traps tuned together attenuate —40db.

**MOD. TR-2FM, 6.00 NET**

For very severe interference in the low VHF TV-FM bands. It has 3 independent traps which can be used individually or in combination to attenuate 1, 2 or 3 separate frequencies. 3 traps tuned together attenuate —49db.

**MOD. TR-FM, 3.00 NET**

Preset by the factory to attenuate the entire FM band without affecting TV frequencies by 25db.

## COAXIAL CABLE CONNECTORS



For RG-59/U

For attaching RG-59/U coax to any standard miniature jack, including all Winegard products having 75 ohm jacks.

MOD. C-59 . . . . . 59 NET



For RG-11/U

For attaching RG-11/U coax to any standard miniature jack, including all Winegard products having 75 ohm jacks.

MOD. C-11 . . . . . 1.47 NET

**CABLE-TO-CABLE CONNECTOR (For 59/U or 11/U) Mod. C-81, .70 NET**

**CONNECTOR FERRULE CRIMPING TOOL . . . . . Mod. CR-1, 5.39 NET**

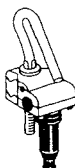
## LINE DROP TAPS



Drops branch lines from either RG-59/U or RG-11/U trunk lines. Branch lines must be RG-59/U.

	MODEL	ISOLATION	NET
SINGLE DROP TAP	LTD-175	9db	3.57
SAME, TERMINATED	LTD-175T	9db	3.57
DOUBLE DROP TAP	LTD-275	16db	5.73
SAME, TERMINATED	LTD-275T	16db	5.73
QUAD	LTD-475T	15db	11.70

## RG-11/U PRESSURE TAP

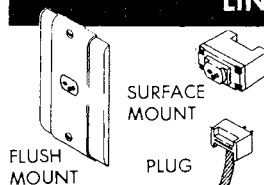


Drops RG-59/U branch line from RG-11/U trunk line. Includes attenuator. Ideal for outdoor use.

MODEL	ISOLATION	NET
C-11PTY	15db avg.	4.14
C-11PTR	20db avg.	4.14
C-11PTG	10db avg.	4.14

**RG-11/U COAX CONNECTOR (Terminated) . . . . . MOD. C-11T, 1.80 NET**  
**PRESSURE TAP GOUGING TOOL . . . . . MOD. GT-1, 6.00 NET**

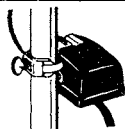
## LINE TAP-OFFS



Complete and preassembled. Includes wall plate, receptacles, divider plate and nylon plug. Standard Ivory matches convenience outlets. Specify isolation: 6, 10, 15 or 20db.

DESCRIPTION	MODEL	NET
TV TAP — FLUSH MOUNT — 75 OHM INPUT, 300 OHM OUTPUT	LTF-73	2.10
SAME AS ABOVE, BUT SURFACE MOUNT	LTS-73	1.77
TV TAP — FLUSH MOUNT — 300 OHM INPUT, 300 OHM OUTPUT	LTF-33	2.10
SAME AS ABOVE, BUT SURFACE MOUNT	LTS-33	1.77
TV TAP — FLUSH MOUNT — 75 OHM INPUT, 75 OHM OUTPUT	LTF-77	2.10
SAME AS ABOVE, BUT SURFACE MOUNT	LTS-77	2.10

## HI-LO ANTENNA COUPLER



**MOD. F-100 2.40 NET**

Couples high and low band TV VHF antennas or splits signals in order to amplify high and/or low band. Mounts indoors or out.

**75-OHM MODEL F-175 5.97 NET**

## FM COUPLER-SPLITTER



**MOD. CA-FMB 2.70 NET**

Couples FM antenna and VHF TV antenna on same mast with single down-lead. Or splits signals for use as a TV and FM set coupler.

**75-OHM MODEL CA7-FMB 6.60 NET**



# Winegard

## ANTENNA AMPLIFIERS COUPLERS • ACCESSORIES

### VHF-COLOTRON TWIN NUVISTOR PREAMPL.

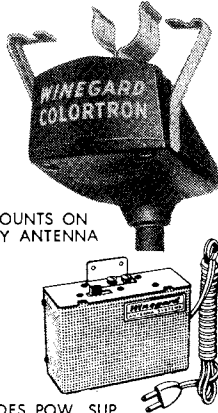
#### MOD. AP-220N, 23.97 NET

America's most popular all-channel antenna amplifier. Can be used almost anywhere, even near local stations without overloading. Fits directly on Colotron antenna driven element, yet mounts easily on any VHF antenna. Weatherproof design.

#### SPECIFICATIONS

**NUVISTORS:** two 13CW4. **GAIN:** +15db lo-band, +10db hi-band. **BANDPASS:** 54-88MC, 174-216MC. **RESPONSE:**  $\pm 1/4$ db per 6MC channel. **VSWR:** 1.5:1, or better, input and output. **NOISE FIGURE:** max. 4db lo-band, max. 5.1db hi-band. **MAX. SIGNAL INPUT:** 200,000 microvolts per band. **MAX. SIGNAL OUTPUT:** 1,100,000 microvolts lo-band; 635,000 microvolts hi-band. **INPUT:** 300 ohm. **OUTPUT:** (2) 300 ohm. **SWITCH:** OFF-ON-AUTO. AC fuse. 117V 60CPS 4.8 watts.

MOUNTS ON ANY ANTENNA



INCLUDES POW. SUP.

ALSO 75-OHM MODEL AP-275, 26.97 NET

### VHF-COLOTRON TWIN TRANSIS. PREAMPL.

#### MOD. AP-220T, 26.97 NET

New high gain VHF-TV and FM antenna preamplifier boasts a flat 18db gain across low and high bands plus FM 88 to 108 mc. Can be used closer to stations than other transistor amplifiers without overloading.

#### SPECIFICATIONS

**TRANSISTORS:** one 2N2495, one 2N2966. **GAIN:** +18db per band. **RESPONSE:** flat,  $\pm 1/4$ db per 6MC band. **BANDPASS:** 54-108MC, 174-216MC. **VSWR:** Input 1.5:1 max. Output 1.75:1 max. **NOISE FIGURE:** max. 4.5db lo-band, max. 3.7db hi-band. **MAX. SIGNAL INPUT:** 45,000 microvolts lo-band, 30,000 hi-band. **MAX. SIGNAL OUTPUT:** 360,000 microvolts lo-band, 240,000 hi-band. **INPUT:** 300 ohm. **OUTPUT:** 300 ohm. 117V 60CPS 1.8 watts.

ALSO 75-OHM MODEL AP-275T, 29.97 NET

### SUPER COLOTRON TRANSIS. PREAMPL.

#### MOD. AP-75T, 47.97 NET

High-powered, VHF-TV and FM transistor antenna preamplifier for deluxe installations. (New 75 ohm model replaces the AP-215N 300 ohm model.)

#### SPECIFICATIONS

**TRANSISTORS:** one 2N2495, one 2N2966. **TUBES:** two 6HA5. **GAIN:** +30db. **RESPONSE:** flat,  $\pm 1/4$ db per 6MC channel. **BANDPASS:** Mod. AP-75T is designed to increase signals on VHF TV-FM bands (54-108MC, 174-216MC). **NOISE FIGURE:** max. 4.5db lo-band, 4.7db hi-band. **MAX. SIGNAL INPUT:** 30,000 microvolts. **MAX. SIGNAL OUTPUT:** 2V. **INPUT:** 300 ohm. **OUTPUT:** 300 or 75 ohm. **SWITCHES:** (on amplified power supply) OFF-ON, OFF-ON REMOTE AMPL. AC fuse. 117V 60CPS 14 watts.



### STEREOTRON FM NUVISTOR PREAMPL.

#### MOD. AP-320, 23.97 NET

Same as Model AP-220N except circuit designed especially for FM frequencies 88-108 megacycles. Mounts on Stereotron antenna driven element or on any other FM antenna. 300 ohm terminals. Extends FM reception distance up to 200 miles and more. Also 75 ohm model.

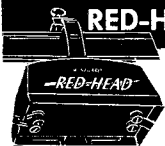
### RED-HEAD VHF TRANSIS. PREAMPL.

#### MOD. RD-300, 17.97 NET

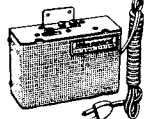
Biggest selling single transistor preamplifier for fringe area use. Mounts on any TV or FM antenna. Powers up to 6 TV/FM sets.

#### SPECIFICATIONS

**TRANSISTOR:** 2N2360. **GAIN:** +18db lo-band, +14db hi-band. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:**  $\pm 1/4$ db per 6MC channel. **VSWR:** 1.5:1 or better, input and output. **NOISE FIGURE:** 3.8db on Ch. 2 to 4.9db on Ch. 13,  $\pm .5$ db. **MAX. SIGNAL INPUT:** 20,000 microvolts. **MAX. SIGNAL OUTPUT:** 160,000 microvolts. **INPUT:** 300 ohm. **OUTPUT:** (2) 300 ohm. **SWITCH:** OFF-ON. 117V 60CPS 1.4 watts.



MOUNTS ON ANY ANT.



POWER SUPPLY

### UHF ANTENNA TRANSIS. PREAMPL.

#### MOD. UHF-212, 29.97 NET

New twin transistor preamplifier with high gain circuit for use in almost any UHF reception area. Exceptionally uniform frequency response on all UHF channels 14-83. Measured gain of +12db. VSWR 1.65:1. 300 ohm input and output. Mounts on any UHF antenna. Includes power supply.



POWER SUPPLY

#### MOD. UHF-110X, 20.97 NET

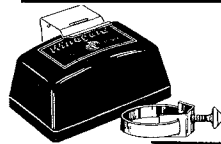
Single transistor preamplifier for use in fringe areas. Has less gain than Mod. UHF-212 and lower maximum signal input limit. 300 ohm input and output. Mounts on any UHF antenna. Includes power supply.



### MULTI-SET TV-FM COUPLERS

#### TWO-SET MOD. CC-23, 2.37 NET

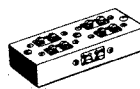
America's most popular two-set coupler. Maintains best possible impedance match. High signal isolation prevents interaction. VSWR with both outputs loaded: 1.25:1 or better. Can be installed inside or out. 300-ohm input and outputs. High impact polystyrene case.



#### 4-SET MOD. LT-43 3.45 NET

300 ohm input and four 300 ohm outputs. VSWR with all outputs loaded: 1.26:1. Mounts inside. No-strip terminals.

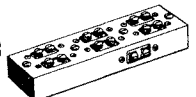
75-OHM MOD. LT-47 3.45 NET



#### 6-SET MOD. LT-63 4.77 NET

300 ohm input and six 300 ohm outputs. VSWR with all outputs loaded: 1.15:1. Mounts inside. No-strip terminals.

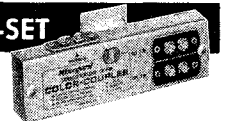
75-OHM MOD. LT-67 4.77 NET



### ELECTRONIC TWO-SET

#### MOD. EC-230, 10.80 NET

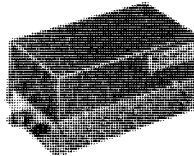
Transistorized coupler "boosts" signal min. +10db to provide sharp, clear reception to two sets, even in deep fringe areas. Cross modulation level: 45,000 microvolts. Ideal for color or black and white.



### 4-SET BOOSTER-COUPLER

#### MOD. BC-208, 17.98 NET

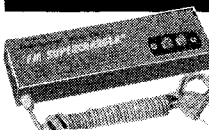
Runs 1-4 sets (or outlets). Provides +8db gain to each output. Boosts signal, cuts snow. Uses two 6HA5 amplifiers shielded triodes to produce higher gain and less noise than similar products. Complete isolation between sets. Can be used for FM, too.



### TRANSIS. FM BOOSTER-AMPLIFIER

#### MOD. FM-318, 10.80 NET

Transistorized to boost FM signal from antenna by minimum +17db. Greatly improves FM reception. Flat frequency response, maximum signal input 45,000 microvolts.



### TV-FM OUTLETS

Disconnect type outlets are complete and preassembled. Include wall plate, receptacle(s), divider plate(s) and nylon plug(s). Choice of ivory or brown — match standard AC electric outlets. 0db loss.

DESCRIPTION	MODEL	NET
300SL, 1 TV-FM, FLUSH MOUNT	T-3	1.29
SAME, SURFACE MOUNT	T-35	1.08
75SL, 1 TV-FM, FLUSH MOUNT	T-7	1.71
SAME, SURFACE MOUNT	T-75	1.21
300SL, TV-ROTOR, FLUSH	TR-3	2.39
SAME, 75SL	TR-7	2.52
300SL, VHF, UHF, ROTOR, FLUSH	TR-320	2.39
300SL, VHF, UHF, ROTOR, FLUSH	TR-32U	2.39



FLUSH MOUNT

SURFACE MOUNT

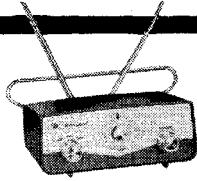


PLUG

# Winegard

# ANTENNAS : VHF : UHF : FM

## UHF CONVERTERS

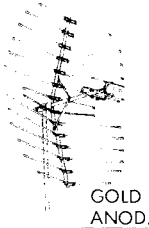


Sized right, styled right. Superior circuitry gives superb performance. Models for every UHF reception area. Autumn brown cabinet blends with any TV set.

- 2-TUBE MOD. WITH BUILT-IN UHF AND VHF ANTENNAS. UC-200-A, **33.47 NET.**
- SAME, WITHOUT BUILT-IN ANTENNAS. UC-200, **29.95 NET.**
- 1-TUBE MOD. WITH BUILT-IN UHF AND VHF ANTENNAS. UC-100A, **23.28 NET.**
- SAME, WITHOUT BUILT-IN ANTENNAS. UC-100, **19.95 NET.**

EXTRA FEATURES . . . .  
EXTRA PERFORMANCE!

## UHF ANTENNAS



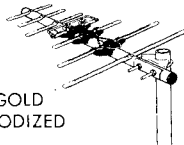
### "TRACKER" MOD. U-540, 17.98 NET

Our most powerful! Uses incident wave principle with tangent paraboloid reflector system. Extremely uniform frequency response on all UHF channels 14-83. Measured gain of +13db. 4-ft. size, completely factory preassembled. Recommended for all UHF reception areas.

GOLD ANOD.

### "TRACER" MOD. U-807, 3.57 NET

Modified high gain yagi design. Very flat frequency response on all UHF channels 14-83. Small, compact, completely factory preassembled.

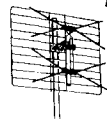


GOLD ANODIZED



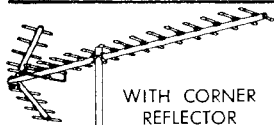
### 4-BAY BOW-TIE MOD. KU-420 4.70 NET

Popular fringe area model. Sturdy construction. Factory preassembled.



### 2-BAY MOD. KU-220 3.90 NET

Smaller version of 4-bay model for primary signal areas.



WITH CORNER REFLECTOR



UHF YAGIS 16-ELEMENT

WITHOUT CORNER REFLECTOR

High gain cut-to-channel yagis for regular or translator UHF. Ask for complete list and prices.

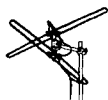
## FM ANTENNAS



### "STEREOTRON" Mod. SF-8, 14.18 Net

High gain FM yagi brings in those distant stations, improves the locals and helps stereo reception as well. Finest quality. Completely factory preassembled. Accepts Nuvistor preamplifier Mod. AP-320 or AP-375.

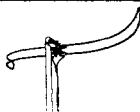
GOLD ANOD.



### MOD. FM-3T "TURNSTILE" 7.53 NET

GOLD ANODIZED

Popular FM antenna for primary signal areas. Has exclusive offset mount allowing it to be mounted on mast with TV antenna. Can be stacked.



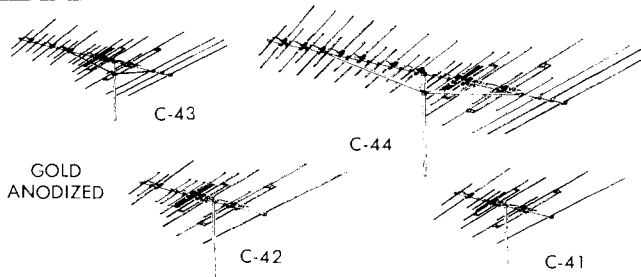
### "RANGER" MOD. FR-1 4.17 NET

GOLD ANODIZED

Low cost FM antenna for primary areas. "S" design.

COMPLETE INSTALLATION MOD. FR-1K, 5.38 NET

## ALL-CHANNEL VHF



No finer antennas anywhere.. Extremely high gain models for every reception area. Incorporates Winegard's patented Electro-Lens\* director system. Super sensitive, super efficient. Uniform frequency response, high front-to-back ratio, pinpoint directivity. VSWR 1.5:1 or better. Corrosion-proof, completely factory preassembled. Nationally advertised in LIFE, etc.

- MOD. C-44 . . . 38.97 NET      MOD. C-42 . . . 20.97 NET  
MOD. C-43 . . . 31.14 NET      MOD. C-41 . . . 14.97 NET  
MOD. C-40 (Not Shown) . . . 8.98 NET



### "SUPER POWERBEAM" MOD. G-415, 11.97 NET

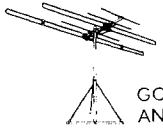
9-element fringe area antenna with Winegard's Electro-Lens\* director system. Finest antenna for the money anywhere. Preassembled.

GOLD ANOD.

NON-ANODIZED MOD. K-415, 9.61 NET

### "POWERBEAM" KIT MOD. G-41K, 13.05 NET

Ideal for primary reception areas. Outperforms conicals, in-lines, rabbit ears, etc. Complete installation includes mount, mast, wire, etc. Preassembled.



GOLD ANOD

NON-ANODIZED MOD. K-41K, 8.07 NET



### "TWILIGHT" MOD. TL-283, 15.72 NET

VHF, UHF and FM reception all from one antenna. Patented design. Complete installation includes mast mount, wire and all hardware. Preassembled.

GOLD ANOD.

## VHF CUT-CHANNEL & BROAD-BAND YAGIS



GOLD ANODIZED

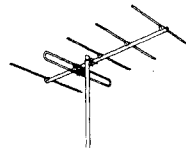
"TY" SERIES LOW BAND

"TY" SERIES HI BAND

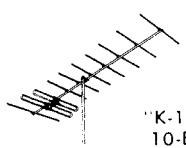
Extra rugged, extra high gain yagis for use whenever the very fines is desired. Models for each channel and each band. Precision tuned for maximum performance.

EXAMPLES — NET

- MOD. TY-3 (Ch. 3) 24.69      MOD. TY-7 (Ch. 7) 12.90  
MOD. TY-6 (Ch. 6) 21.99      MOD. TY-12 (Ch. 12) 12.90



"K-5" SERIES 5-ELEMENTS



"K-10" SERIES 10-ELEMENT

Compare with folded dipole yagis at twice the cost! Full size, wide spaced elements. Complete series in both 5 and 10-element model

EXAMPLES — NET

- 5-ELEMENT      10-ELEMENT  
MOD. K5-02 (Ch. 2) 6.56      MOD. K10-02 (Ch. 2) 12.4  
MOD. K5-07 (Ch. 7) 2.65      MOD. K10-07 (Ch. 7) 4.4

# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS - MOTELS - INSTITUTIONS



AMERICAN COMMUNICATIONS CORPORATION now offers all the materials (and supervision) to complete a wide variety of electronic Systems installations. AMERICAN'S Professional Engineers will lay out these installations on architectural plans gratis, where AMERICAN'S equipment is used. Systems include:

**Status Controls** — for hotel/motel rooms; hospitals; factory production, test, inspection, count-down, etc.

**Closed-circuit TV** — for hotel and motor-inn registration and check-out; hospitals; apartment buildings; schools; industrial inspection and remote monitoring.

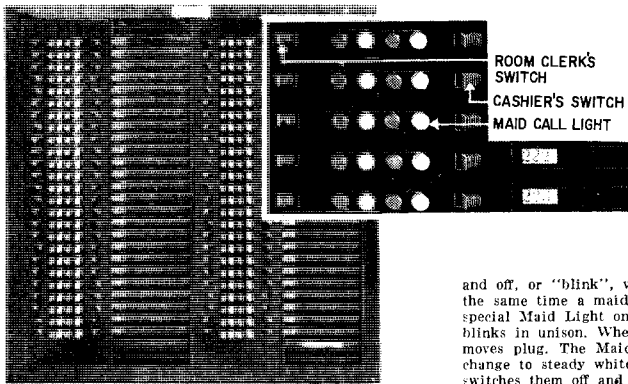
**Additional Systems:**

- Signal Mail Rack
- Message-at-Desk
- Maid Call
- Master Radio/TV Antennas
- Centralized Radio
- Room TV • Stereo Sound
- Public Address
- Background Music
- Automatic Wake-up
- Selective Paging
- Motel-O-Phone
- Area Sound/Lighting
- Emergency Alert
- Automatic Fire Alarm
- Audio/Visual (silent) Call
- Doctor's Call Board

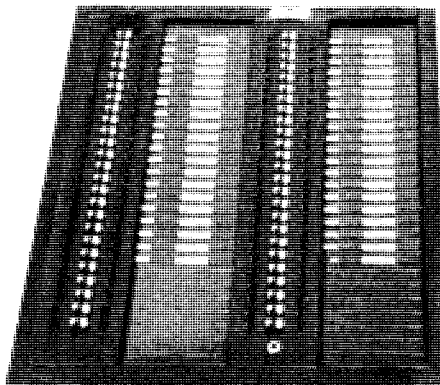
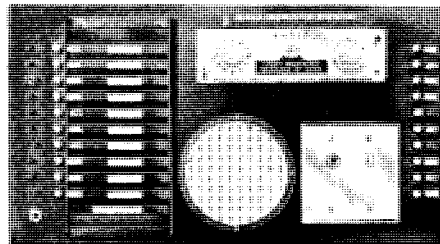
ACC's Newest — TV-SET THEFT ALARM

## ROOM STATUS CONTROLS

ONLY ONE CONTROL WIRE REQUIRED PER ROOM!  
LITERATURE AVAILABLE (SPECIFY NUMBER OF ROOMS).



(left) A-L3/50 (50 rooms, 4 lights). Switches: left row, Room Clerk; right, Cashier.  
(upper-right) A-L5/10 (10 rooms, 1 light). Demonstration Panel. Shows Room Speaker, two types of Room Units; House-keeper lights are at right.  
(lower-right) A-L4/50 (50 rooms, 2 lights). House-keeper panel has only lights.



**ROOM STATUS CONTROLS**, originated by AMERICAN COMMUNICATIONS CORPORATION, are now considered an essential facility in the efficient and economical operation of hotels and motels; 4 basic designs now make this electronic aid available to occupancies of all sizes, to instantly signal to Front Office and Housekeeper the changing rental status of all guest rooms.

In addition, such instantaneous sequential control and monitoring is adaptable to 1) hospitals, for bed status ("available", "occupied", "on change") control between Admitting Office, Cashier, and Floor Supervisor, 2) restaurants, for table reservation control between Reservation Desk, Maitre d', and Waiter, and 3) Schools, Factories, Laboratories, Missile Centers, etc.

**OPERATION** — Operating procedures depend upon the particular model. All, however, utilize switches and lamps for maximum reliability — relays are NOT used in AMERICAN'S room status controls systems.

**No. A-L1-2 (2 board), A-L1-3 (3 board): 3 lights.** (No Maid Light, and does not connect to guest rooms.) When guest has registered, Room Clerk switches color from Green — Room Available, to Amber — Room Rented. When guest checks out, Cashier switches signal to Red — Room on Change. Housekeeper signals when room is ready for occupancy by switching from Red to Green.

(†) Net: \*A-L1-2/—, \$25.00; \*A-L1-3/—, \$30.00.

**FOLLOWING SYSTEMS CONNECT TO GUEST ROOMS**  
**No. A-L3-2 (2 board), A-L3-3 (3 board): 4 lights.** Room Unit has jack and light. Status board Maid lights — the 4th row of lamps — show white, and start to pulse on

and off, or "blink", when maid plugs into room jack; at the same time a maid paging circuit is connected, and a special Maid Light on guest-room Room Unit lights, and blinks in unison. When room has been serviced, maid removes plug. The Maid Lights on the control boards now change to steady white, and remain on until Housekeeper switches them off and changes the status lights on all the control boards from Red to Green — Room Available; the special Maid Light on the Room Unit goes out automatically when maid removes plug.

(†) Net: \*A-L3-2/—, \$40.50; \*A-L3-3/—, \$45.50.

**No. A-L4-2 (2 board); 2 lights.** For reasons of economy, this Room Checkout model, especially designed to meet the needs of the smaller occupancies, such as motels and motor inns, permits maid to automatically change status indication directly from guest room! Also, it has only 2 status lights (one Green, one White) on Front Office board, and 1 (White) light on Housekeeper panel. "Green", signals Room Available; No Light, Rented. Green and White, blinking, indicates Maid in Room and that Maid Call circuit is connected. White (steady) indicates room On Change.

(†) Net: \*A-L4-2/—, \$25.00.

**No. A-L5-2 (2 board); 1 light.** This Room Checkout system is the ultimate in design economy! One light on Front Office board lights to show Room Available; No Light, Rented. When guest checks out, front office clerk moves status switch so light starts to blink — room on Change. Upon instruction from Housekeeper, or upon noting blinking light on a hall signal unit, maid enters room and plugs into Room Unit. This connects Maid Call circuit (even if room is not on change). Upon completing room, maid removes plug, which automatically changes Front Office and Housekeeper lights to steady — Room Available.

(†) Net: \*A-L5-2/—, \$15.00.

**GENERAL INFORMATION** — In a 2-board system, Front Office board includes switching facilities and lights for Room Clerk, Cashier; a 3-board installation provides separate panels for these offices. All front office boards include standard guest Room Rack. Controls may be on wall panels, flush or surface mounted, or in desk consoles, depending upon size. Monitor boards (lights only) can be supplied for supervisory personnel.

—"Room Ready"; she can now switch light off at her convenience.

Installation includes Room Jacks, Maid Plugs, an A-MC1/- Light Panel (with lamps and switches), Power Supply, Blinker Unit.

## MAID CALL SYSTEMS

**No. A-MC-A/-** is visual type. Maid plugs into room jack, which lights a lamp on a Light Panel in Housekeeper's office. Can then be paged if paging circuit is connected. Light goes out when Maid removes plug from jack. This system includes room jacks, Maid Plugs, A-MC Light Panel (lights only), Power Supply.

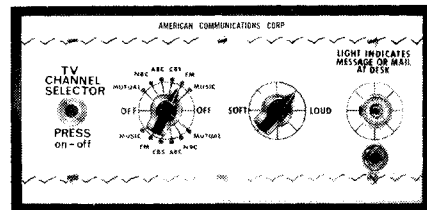
**No. A-MC-B/-** \*Blink Light type. This newest design makes room recovery extremely rapid, through its Maid Monitor/Housekeeper "blink lights".

Soon as Maid enters guest room she plugs into Maid Jack on Room Unit. Immediately a tiny light under the jack slowly blinks on and off; at the same time, a second light blinks on Housekeeper's Light Panel, indicating "Maid in Room". Housekeeper can now page Maid if paging is provided.

When Maid has readied room, she plugs all the way into room jack, then removes plug. Maid's light now goes out but Housekeeper's light changes to steady-on



A-P5-A Room Unit, includes jack and light for "blink light" Room Status and Maid Call. Net \$15.00.



A-ELP1 Electroluminous Panel. Operates on A-C. Diffuses a night-light glow in room. Mounts on standard outlet box. Manufactured to order.

(†) Priced per room, up to 100 rooms; less cable, Room Unit (where required).  
\* Protected by Pending Patents.

Room Clerk can use a No. A-MC Light Panel to monitor room status shown on Housekeeper panel.

**SPECIFICATIONS**

**Maid Call Light Panels** are built for Desk, Flush, or Surface mounting, in sizes to suit needs. Material: steel; standard finish: gray Hammertone enamel. Designation strips identify rooms. Lamps have long operating life, on 24 V. circuit.

Net Prices (Discounts on larger units.)

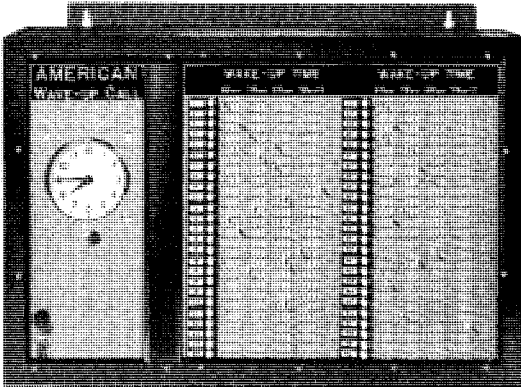
**No. A-MC-A/-** Maid Call System, w/No. A-MC Light Panel, Power Supply, and 1 Maid Plug per 10 rooms, but less Room Unit, \$5.00 per room.

**No. A-MC-B/-** Maid Call System, w/No. A-MC-1 Light Panel, Power Supply, Blinker Unit, and 1 Maid Plug per 10 rooms, but less Room Unit, \$8.50 per room. Prices are for up to 100 rooms.

# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS — MOTELS — INSTITUTIONS

REQUIRES ONLY ONE CONTROL WIRE PER GUEST ROOM

## AUTOMATIC WAKE-UP CALL\*



No. A-WA1/50 Automatic Wake-up Call.

AMERICAN'S No. A-WA-1/- Automatic Wake-up Call is a tremendous time-saver for occupancies of any size. Model A-WA-1/50 here illustrated is for a 50-room hotel or motel.

Master Control Panel has for each guest room a room designation strip, lamp, and 17 Time Jacks — one for each quarter-hour from 6 to 10 AM. When telephone Operator receives guest's wake-up call time, she inserts a plug into the respective Time Jack. Operation now is fully automatic: Wake-up Call "remembers" calling time and sends an insistent to the room, at the proper calling time.

This calling signal is both visible and audible: (a) at 2-second intervals a light blinks at both the office control panel, and in guest room; and, (b) in one model a recording advises guests to "shut me off" and in another a buzzer sounds loudly, when guest pushes a button (at blink light on Room Unit), signal light goes out in guest room and on office panel, and audio signal stops.

### GENERAL SPECIFICATIONS

No. A-WA-1/- System includes Master Control Panel with Time Clock for 4-hour timing (up to 6 hours can be supplied); complete set of Time-set Plugs; either an AMERICAN No. A-TD continuous-play Tape Deck and pre-recorded Tape (not sold separately) or a Buzz Generator; 2-second Timer; and, guest-room Unit. Long-life, low-current signal lamps are used. Fuse holder, Off-On Power Switch, are front-mounted. Satin-black steel case is approx. 31 x 21 (plus 2" mtg. skirt at top) x 4" deep (50-room unit, illustrated); wgt. approx. 100 lbs. Operates on 115 V., 60 cy. A-C. Net \$20.00 per room, less room units; materials only. Room Unit (light, switch, wired and assembled on lettered metal plate, to mount on 2-gang outlet box). Net \$8.75 ea. Cable extra.

\* This system protected by pending patents.

MORNING  
WAKE-UP CALL  
1. ADVISE OPERATOR  
TIME OF CALL  
2. PUSH SWITCH TO  
SHUT OFF ALARM



No. A-P8-A Wake-up Call room unit.

## SIGNAL MAIL RACK & MESSAGE-AT-DESK

REQUIRES ONLY ONE CONTROL WIRE PER GUEST ROOM

AMERICAN COMMUNICATIONS manufactures two signal systems, either of which may be used to expedite message and/or mail handling in hotels, motels, schools, factories, hospitals, and other institutions.

The Mail (and Message) Rack Signal System is comprised of numbered pockets, one for each room (or other unit), and a lamp and switch for each pocket. Each pocket is wired to a guest-room. When clerk files mail (or messages) in pocket, he switches on a corresponding lamp; simultaneously, a duplicate lamp in the remote room lights, and remains lit until guest acknowledges the signal.

A new 2-Way model, No. A-MR2, with access from either side and lamps and switches on both, enables Mail Clerk to insert mail from one side and silently signal guest and for Telephone Operator to insert messages from the opposite side (and also signal the guest).

The Message-at-Desk Signal is identical with the Mail Rack System, except that there are no pockets — only lamps and switches mounted on a control panel. Message clerk — usually the telephone operator — signals to guest that there is a message (or mail) by moving a switch as above described. Model A-MD1/85 (illus.), for example, is a desk-top model for 85 guest rooms.

The Racks and Panels are available in a variety of constructions to suit individual requirements as to location and number of rooms, and in standard or special finishes as decor dictates. The Mail Rack is available with shelf at top of each pocket for room key.

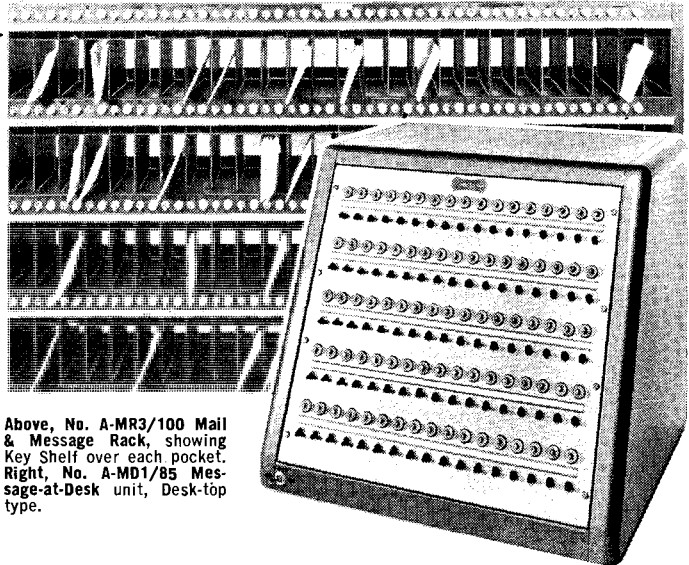
If guest room is not wired for radio, a separate wall plate, A-P20-3-A, is provided for the signal lamp; otherwise, it can be included on the radio control panel (See Room Unit on facing page).

Long-life lamps in Signal Mail Racks and Message-at-Desk units are easily replaced from front. A metal stop strip across the back of each row of pockets, in the standard or A-MR3 Mail/Message Rack, permits insertions only from front. Model A-MR3/100 (illus.), is for 100 rooms, but units can be built to 1,000 or more.

They may be made for Flush-wall recessed), Surface-wall or Desk (table-top) mounting. An easily removable end cover plate permits access to wiring. Power Supply unit (included) is controlled by a switch. House signal wiring carries only low, safe voltage.

AMERICAN'S No. A-22X/- Multi-conductor Cable is used for connection to distribution point, and A-19/1 or A-19/2 wire for runs to Room Units.

### KEY SHELF →



Above, No. A-MR3/100 Mail & Message Rack, showing Key Shelf over each pocket. Right, No. A-MD1/85 Message-at-Desk unit, Desk-top type.

### SPECIFICATIONS — Signal Mail/Message Racks

Standard finish, velvet black enamel. Material is steel. Standard pocket measurements: approx. 8" deep x 7 3/4" high (incl. 1 1/8" for Key Shelf, where used) x 2" wide. Specify whether wiring termination board is to be placed at left or right end of Rack.

### NET PRICES

A-MR2/- Signal Mail Rack System, 2-way type, \*\$17.50.

A-MR3/- Signal Mail Rack System, 1-way type, standard, \*\$12.50.

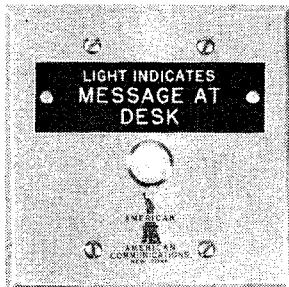
### \*Per pocket

The foregoing Net Prices are less connecting wire and Room Unit, but including Power Supply for up to 100 rooms. Discounts apply on larger installations.

### SPECIFICATIONS — Message-at-Desk\*

Standard finish, Flush or Surface mounting type, velvet black or gray enamel; Desk-top type, gray enamel. Other colors to suit decor are special. Material is steel. NET PRICE

A-MD1/- Message-at-Desk System, Desk type; and, A-MD2/- Message-at-Desk System, Flush Panel type, \$7.50 per room for up to 100 rooms. Above Net Price is less connecting wire and Room Unit, but including Power Supply.



No. A-P20-3-A Signal Plate, in guest room, measures 4 5/8" sq.



# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434

# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS — MOTELS — INSTITUTIONS

## MASTER RADIO OR TV ANTENNA SYSTEM (& CATV)

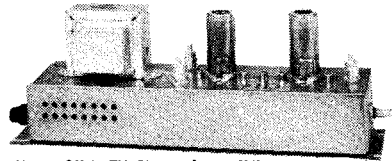
Installation requirements for an **AMERICAN COMMUNICATIONS** Master Antenna System whether for Radio or TV — or both — mainly depend upon field signal strength and local interference. A field-strength survey must be made to determine whether the received signals are sufficiently strong and reasonably "clean".

If TV signal strength in the area is low, a weatherproof **No. A-BA Broadband Booster Amplifier** (shown mounted on mast) located at the antenna may be used, for an additional 25 db gain on all VHF channels; power supply and Off-On control are a separate, remote unit, **No. A-BAP** (not shown), which may be up to 500 ft. distant. Input and Output, each 300 or 75 ohms. Terminals permit use as Broadband, High-band, or Low-band Amplifier.

The Radio signals are fed to the **Centralized Radio System**, and the TV signals are distributed to the various TV risers.

TV signals on UHF channels may be converted to unused non-adjacent VHF channels by means of a **No. A-U/V-C Converter** (not shown); its UHF Mixer head mounts at antenna, and delivers VHF signal to remote oscillator. Specify the UHF and VHF channels. Converters are also available to cover VHF High to VHF Low, **No. A-V/V-C**.

To deliver adequate signal strength at each TV outlet, it usually is necessary to use low noise, high gain, head-end amplifiers, one for each channel. **No. A-CH/- TV Amplifier Strip** is shown here. A group of up to 7 such channel amplifiers can be assembled in one steel cabinet, **No. A-C/CH/-** (not shown here).



**No. A-CH/- TV Channel Amplifier.**

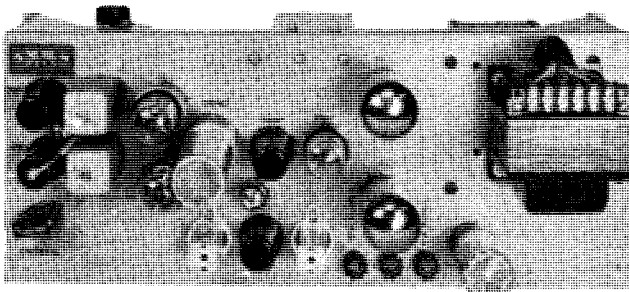
**No. A-BA  
TV Booster  
Amplifier.**

- No. A-BA Weatherproof Broadband TV Booster Amplifier**, w/No. A-BAP Power Supply. Net \$79.50.  
**No. A-U/V-C Converter**, w/UHF Mixer Head. Specify UHF and VHF channels. Net \$75.00.  
**No. A-V/V-C Converter**, w/Mixer Head, for VHF to VHF. Specify channels. Net \$75.00.  
**No. A-CH/- Channel Amplifier**. Specify which of channels 2 to 13. Net \$44.00.  
**No. A-C/CH/- Channel Amplifiers in Metal Cabinet**. Specify channels. Net, Cabinet A (only) (for 1-3 Amplifier Strips), \$8.50; Cabinet B (1-5), \$14.80; Cabinet C (1-7), \$32.50.

For Community Antenna TV (CATV) installations, special towers, high-gain directional antenna arrays, and low-noise amplifiers can be supplied.  
 For Coaxial Fittings, see last two pages.

### SPECIFICATIONS

**No. A-CH/- TV Channel Amplifier.**  
 Bandwidth, 6 mc.; gain, 45 db.  
 Low-noise cascode input. Output, 1 V. per ea. two outputs.



**No. A-300C Radio Receiver, crystal controlled.**

The control center of **AMERICAN COMMUNICATIONS'** "Channelized" Radio System is the **No. A-CR Rack Unit** shown here. Signals from the Antenna System are fed to the Rack-and-Panel assembly, and then to remote speakers (guest rooms, public areas, etc.) through a system of properly selected cable and matching components as specified by the Supervising Engineer.

**No. A-CR Rack** can be modified to suit requirements. The standard Rack, however, is comprised of 4 **AMERICAN** No. A-300C AM Crystal-controlled Radio Receivers, 1 No. A-300T AM Tunable Radio Receiver, a panel-controlled **No. A-P/M Pre-amplifier/Mixer** (for mixing a high-impedance microphone and phonograph), Monitor Speaker, power supplies and controls, and Timer. The Radio Receivers deliver a minimum of 40 watts audio power. (Additional amplification, if needed, is incorporated in a second Rack).

If the tunable receiver is a **No. A-300F** (for FM reception), the house manager may tune it, like the **A-300A** AM Radio Receiver, to a continuous-music station for background music, available to guest when he switches to this channel—within the operating hours, automatically controlled by the Timer.

The Monitor Speaker (optional), hinged to Rack, has same response as room speakers for true check of programs as received in guest rooms. Switching permits its use on background music, P.A., etc.

If Rack is to be used with **AMERICAN'S** Emergency Alert System, the standard model will include 8 hermetically-sealed relays—one each for the 5 radio receivers, one in pre-amplifier/mixer, one in the automatic timer circuit, and one in a booster amplifier circuit. These enable remote Emergency Alert equipment to assume control and deliver to all the loudspeakers a suitably high signal whenever needed, regardless of off-on status of Rack, room speaker channel-selector switch, or P.A. system.

## CENTRALIZED RADIO SYSTEM

Rack can include additional facilities, as for example switching into Muzak or other wire line, or use of tape or record player, for background music. For **Stereo FM** reception, using a multiplexed FM station as the source of both stereo channels, a Stereo Multiplex Adaptor is added to the existing FM receiver, and the two resulting audio channels are fed to stereo equipment.

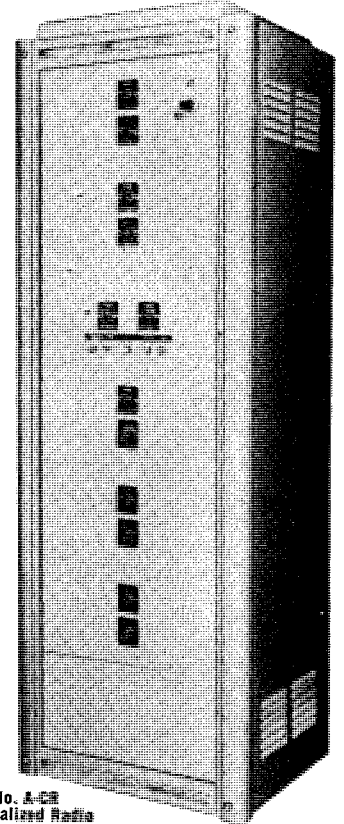
Receivers are high-fidelity type, with push-pull output. The **No. A-300C Radio Receiver** is shown here; **No. A-300T**, and **-F**, have same physical dimensions and general appearance. Several features make these receivers exceptionally reliable and efficient: (A) the single electrolytic capacitor is plug-in type for servicing convenience; (B) circuits are triple-fused (one each for power line, filament supply, high-voltage supply); and (C) voltage regulator tubes limit surge potentials to safe values. For trouble-free performance over long periods of continuous operation in commercial service, only close-tolerance, high-quality components are used, and operated within wide safety margins, in a ruggedized receiver design.

### SPECIFICATIONS

#### Radio Receivers

Tuning range, 540-1,720 kc.; sets have 1 RF and 2 IF stages. Output transformer has taps that present balanced load impedances to the following lines: 8, 16, 32, 250 (70 V.), and 500 ohms. Rated audio output, 40 W.—Each Receiver has a Selector Switch, knob-controlled from front of panel, for selection of (1) Radio; (2) Microphone or Phonograph; and (3) Muzak, or other wire line.

Tube complement, **No. A-300T**: 1, 6SA7; 2, 6SK7; 2, OD3/VR150; 1, 6SR7; 1, 6SN7GTB; 1, 6AL5; 1, 5R4; 2, 6L6GC. **No. A-300C** has same complement, except 6K8 replaces 6SA7.



**No. A-CR  
Centralized Radio  
Rack, complete**

### Rack

The **No. A-CR Centralized Radio Rack** is made of cold-rolled steel  $\frac{1}{4}$ " thick; panels are aluminum,  $\frac{1}{2}$ " thick. Standard finishes, Rack and Panels, slate gray or black ripple enamel. Rack amply ventilated by louvers on 3 sides. Easy-access rear door has slip-joint hinges. Rack measures approx. 68 x 22 x 18" deep. Fully fused; use on 20 A. mains service, 115 V., 60 cy. Supplied completely equipped as described.

**No. A-CR, complete, incl. Time Clock, Net Price \$250.00 per channel. (Monitor Speaker, extra.)**



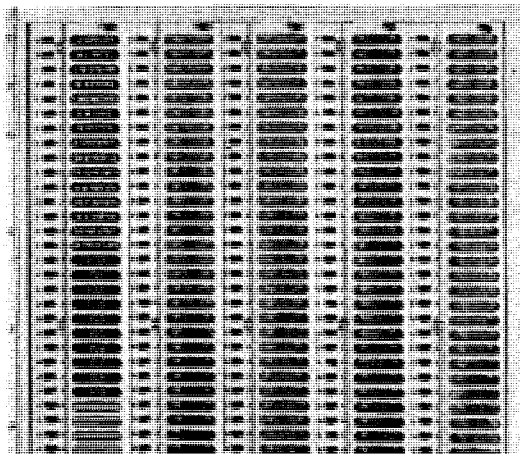
# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434



# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS — MOTELS — INSTITUTIONS

## DOCTORS CALL BOARDS

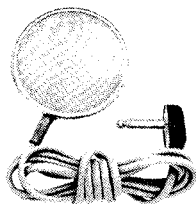


No. A-DCB/- Doctors "IN" or Call Board. Also available w/Message Signal, Intercom, etc.

No. A-DCB/- Doctors "IN" and "OUT" Call Board shows on-duty status of doctors at all times. AMERICAN also can supply this Call Board with Message Signal, Intercom, etc.; in double-sided construction (names on both sides, switches one side); and, less switches (for monitoring). Doctor may receive message (shown by blinking light), and leave special instructions (via intercom) with front desk — usually remote from exit — where these facilities are provided. Flush-mounting type shown. Steel panel is hinged, as are the illuminated nameplate panels.

Net Price, A-DCB/100 Doctors Call Board, basic unit for 100 rooms, \$10.00 per room, per Board, less connecting wire but w/Power Supply for 115 V., 60 cy. AC. Other quotations upon request.

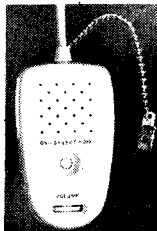
## PILLOW SPEAKER / "MIKE"



No. A-S/M Pillow Speaker, may serve also as Microphone! Ideal for hospital use: waterproof (may be sterilized), stainless steel case, rugged construction, exceptional fidelity, has bedclothes clip and chain (not shown), and special flat-to-wall plug. Alnico magnet; available voice coil impedances: 3.2, 2,000, 5,000, and 10,000 ohms.

Measures 7/8" x 3" dia. Cord is 10 ft. long (other lengths to order). Net Price, \$8.25. Quantity discounts.

## PILLOW SPEAKER CONTROLS



The No. A-S/C-T Pillow Speaker and Remote Control (illustrated) has dynamic earphone w/3.2 ohm voice coil. Unit connects to adaptor in TV set. Button controls set OFF-ON, and selects station; wheel adjusts volume. High-impact plastic case (ivory) w/suspension chain and bed-clip. Cord w/adaptor plug is 5 ft. long. Size: 4 1/2 x 2 1/2 x 1 1/8 ins. deep. Use with GE Hospital-model TV set CBM620 VVY, or equal. Net Price, \$16.00.

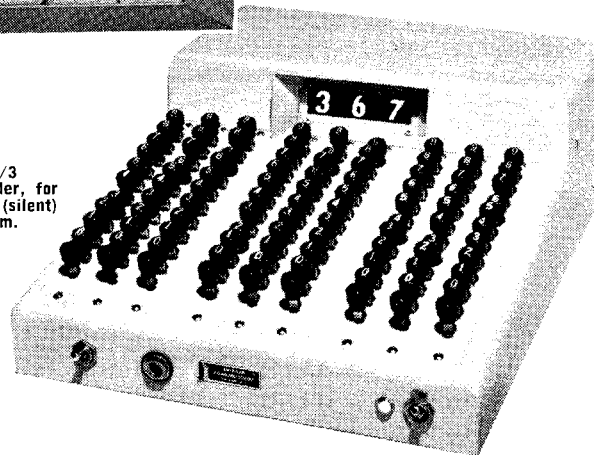
The No. A-S/C/N-RT (not illustrated) is a combination Radio and TV Pillow Speaker, Remote Control and Nurse Call. Operates in conjunction with stepper relay (not supplied). Net Price, \$29.32.

## AUDIO/VISUAL (SILENT) PAGING SYSTEM



No. A-A/VP-D Decoder. Has 4" numerals. Also available without speaker.

No. A-A/VP-E/3 3-bank Encoder, for Audio/Visual (silent) Paging System.



Designed for use with a Call Board, AMERICAN'S Audio/Visual Paging System presents an efficient means of personnel paging in hospitals, department stores, schools, hotels, factories, offices, etc.

In operation, a designated person (Telephone Operator, for instance, in a hospital) sets up on a desk-top Encoder, the call number assigned to a person (doctor or nurse) whose attention is wanted. This can be any number from 1 to 999 per bank of push-buttons. This number then instantly appears in the window of remote readout indicators or Decoders, wherever located. The called person can acknowledge the call in a variety of ways — house phone, Intercom, etc.

Encoder No. A-A/VP-E/3 shown here has two additional banks of buttons which permit two additional calls to be set up at the same time, and by automatic switching, each will be signaled, in sequence, 20 seconds after the preceding one. Or, by operating a switch, any one of the three sets of numbers can be held in view and shown steadily until acknowledged.

A jack on the front skirt, for microphone, permits audio paging, emergency instructions, etc. A pilot light indicates the "ON" condition. Encoders may be located in sev-

eral offices, and Decoders at any number of remote points.

### SPECIFICATIONS

Encoder No. A-A/VP-E/3, 3-bank, is a desk-top unit in metal housing. Dimen., approx. 11 x 5 3/4 x 14" deep. Operates on 115 V., 60 cy. A-C.

Decoder No. A-A/VP-D is a signal/speaker assembly in metal housing approx. 25 (incl. flanges) x 5 3/4 x 15 1/2" deep. This unit is surface-ceiling mount type; other types of mounting can be supplied. Speaker is 5" PM type in an acoustic chamber designed for maximum intelligibility. Readout unit displays numerals 4" high that are readable at over 60 ft. Available without speaker.

Standard finishes: Encoder, buff enamel; Decoder, flat polar white enamel.

### Net Prices:

Encoders: A-A/VP-E/1, \$450.00; A-A/VP-E/2, \$550.00; A-A/VP-E/3 (3 digits, as illus.), \$650.00. Priced per # of digits, as below.

Decoders: A-A/VP-D/1, \$125.40; A-A/VP-D/2, \$234.40; A-A/VP-D/3 (3 lights, as illus.), \$354.40. Priced per number of lights.

Auxiliary Equipment (for Paging) — A-PS Paging Set (Microphone and Amplifier, 1 each for paging — not illustrated), Net \$75.00/set.

## PATIENT'S RADIO WALL-PLATE

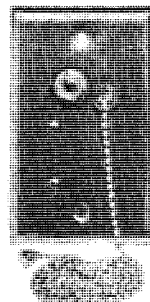
Although designed for use by patients in hospitals, the No. A-RW1 Radio Wall-plate shown here, is a convenience wherever used. Operates by pull chain.

Has stepper switch and a jack. Switch has continuous rotation through "Off", 5 positions for selection of radio programs, and back to "Off", and so-on. Jack provides connection for pillow speaker.

### SPECIFICATIONS

No. A-RW1 Radio Wall-plate. Switch is pull-chain actuated, continuous rotation, double-pole, 5 positions and "Off". Either single-circuit or circuit-opening jack available, for PL-55 plug; specify which desired. Plate steel, approx. 2 3/4" x 4 1/2" high; overall depth, from front of plate, 2 1/4". Fits standard outlet box. Bead chain is steel, 3 ft. long; cut to desired length. Net Price, \$6.85.

No. A-RW1 Radio Wall-plate.



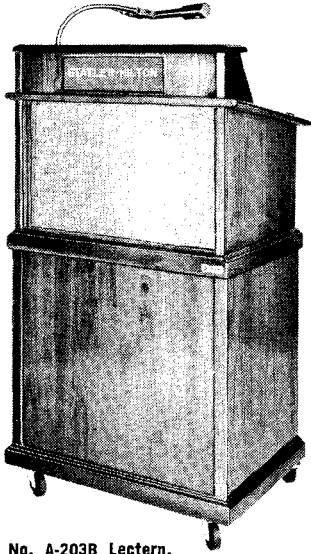
# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434



# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS - MOTELS - INSTITUTIONS

## NEW PORTABLE ELECTRONIC LECTERN



No. A-203B Lectern. New, improved model includes two separate Column Speakers!

### UNQUESTIONABLY THE BEST HEAVY-DUTY ELECTRONIC LECTERN MADE

- The greatest advance in Lecterns — 2 separate Column Speakers!
- Completely self-contained. Demountable Base is optional!
- Use anywhere. More built-in features than any other make!
- Most RUGGED, RELIABLE Portable Electronic Lectern on the market!
- IDEAL for banquets, conventions, auctions, sales meetings, dances, at Churches, Schools, Hospitals, etc.

AMERICAN'S improved No. A-203 Electronic Lectern is efficient, portable and unified — nothing else to buy (includes microphone, amplifier, two separate Column Loudspeakers and reading light, with provision for optional equipment). When combined with Base, it constitutes a Podium. High-quality cardioid microphone, w/Off-On switch, is adjustable in height and position; side mounted for maximum desk room. Amplifier is high-quality, reliable, high-fidelity type, w/separate Bass and Treble controls to suit any acoustic situation of speaker or audience, and for maximum voice fidelity and minimum feedback. Loudspeakers, two in number, are AMERICAN'S new Column type, each with 3 speakers. Lectern (top section) lifts off Base (bottom section) for table top use, and has space for reference material under sloped reading desk. Base folds for easy, convenient storage!

Optional equipment: (1) jack with extra speaker for covering large audiences; (2) tape machine for background music or recording; (3) jack for patching into existing P.A. system; (4) jack, and neck microphone with long lead, for speaking away from Lectern (as for audience participation, etc.); (5) built-in or remote timer, and signal light. Engraved bakelite Nameplate is extra, Net \$10.00.

#### SPECIFICATIONS

No. A-203A Lectern (only) is fully equipped, ready to use, as described. A-203B is above Lectern, plus Base; latter has quiet, ball-bearing casters. Made of selected hard wood, in rich walnut. A-203B, overall: 28" x 19" x 50" high. Approx. weights: A-203A, 75 lbs.; A-203B, 105 lbs. Microphone has gooseneck stand. Amplifier audio output, 10 watts. Junction box for A-C linecord; specify cord length required. Operates on 115 V., 60 cy. No. A-203C is A-203B w/jack for second, auxiliary speaker (supplied).

Net Prices: A-203A, \$305.00; A-203B, \$405.00; A-203C, \$435.00.

## PRE-SIGNAL FIRE ALARM SYSTEM

The Emergency Alert warble-tone signal is also part of AMERICAN'S Pre-signal Fire Alarm System designed to protect hospitals, schools, hotels, etc., against panic due to sounding of general evacuation bells by operation of heat detectors or manual break-glass stations. A Control Panel Assembly connects these detectors or manual stations to the warble-tone signal box, allowing an attendant in the occupancy to exercise judgment as to the urgency of the alert before sounding the general alarm.

## BUILDING ALERT SYSTEM

AMERICAN'S Emergency Alert System may be used with AMERICAN'S Building Alert System (particularly suited to apartment building complexes), in which a warble tone is fed to outdoor speakers to summon the patrolman on the beat, if any emergency arises.

## SPECIAL SERVICES FOR AMERICAN'S CUSTOMERS

Our Registered Professional Engineers will assist in planning installations anywhere. Also, technically-accurate drawings will be prepared for those who wish to accompany their quotations with drawings, but lack the facilities to prepare them.

## FINANCING

AMERICAN COMMUNICATIONS CORPORATION can arrange financing of its Systems installation and/or equipment, including TV Receivers.

## CLOSED-CIRCUIT TELEVISION

AMERICAN COMMUNICATIONS CORPORATION will design your CCTV System (for Monitoring, Surveillance, Guest Registration, Inspection, etc.), and sell the complete equipment and parts as a "package" — either outright or conditional sale.

## APARTMENT "ANNUNCITEL"

AMERICAN'S new No. A-AA/"Annuncitel" solves many problems of Apartment House owners and architects. It is a low-cost, combination multiple station 2-way telephone and transistorized annunciator, for intercommunication and signaling between apartments and lobby, service entrance, garage, etc.

#### WITH ANNUNCITEL —

- 1) House manager can tell which apartment called his office in his absence.
- 2) Tenants can be signaled from service entrance when a package arrives.
- 3) Service attendant can handle all apartment calls that arrive simultaneously, without neglecting any call.
- 4) Arriving visitors can have immediate contact with tenants.
- 5) Tenants can reach doorman or superintendent immediately, in an emergency.
- 6) Attendant can contact garage or other in-building locations, or automatically leave signal to be called.

The Master Station or lobby unit has hanger-type telephone handset, and 25-name apartment designation strip. Apartment Station is a wall-mount panel that fits a 3-gang outlet box. Both available in stainless steel or color-anodized aluminum.

The annunciator, a transistorized design employing new solid-state techniques, can be built into either unit, or both, to show which station is calling and which is being called. The transistorized design virtually eliminates service problems.

Net Price, Master and 25 Apartment Stations, \$30.00 per apartment.



## BACKGROUND MUSIC MAKER

Where recorded tape is to be used for highest fidelity background music, AMERICAN manufacturers the No. A-BM/- Background Music Maker (illustrated). Unit is also available recessed in cabinet and closed-over by a front door.

Ideal for hotels, motor-inns, travel terminals, medical centers, bowling alleys, restaurants, shopping centers (one A-BM Background Music Maker can supply hi-fi sound to all the units in a center), etc. Will play up to 16, 8 or 4 hours of original music; then automatically repeat. Can be supplied for stereo systems. Includes facilities for public address or paging.

Rack includes tape transport with 10 1/2" reels, preamplifier, standard 30 W hi-fi audio amplifier (other power outputs to order), phono and 2 microphone inputs, and controls (separate Bass and Treble tone controls, Phono Gain control, and 2 Microphone Gain controls).

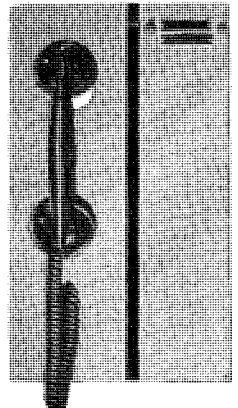
#### SPECIFICATIONS

No. A-BM/- Background Music Maker. Cabinet overall dimen. approx. 48 (high, incl. footing) x 22 x 20" deep. Rear (servicing) door has slip-joint hinges. Material is 1/4" steel. Fully louvered for maximum ventilation. Standard finishes: slate gray or black ripple enamel.

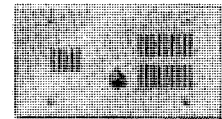
No. A-RT/- Recorded Tape, long-play Background Music (choice of mood-music library).

Catalog of extensive library of mood-music supplied to purchasers. Model A-BM/- is supplied for 4-, 8- or 16-hour play. Net Prices: A-BM/16, \$1,400.00; A-BM/4-8, \$985.00. Tapes: A-RT/16, \$178.00; A-RT/8, \$90.00; A-RT/4, \$39.60.

MASTER  
STATION



APARTMENT  
STATION

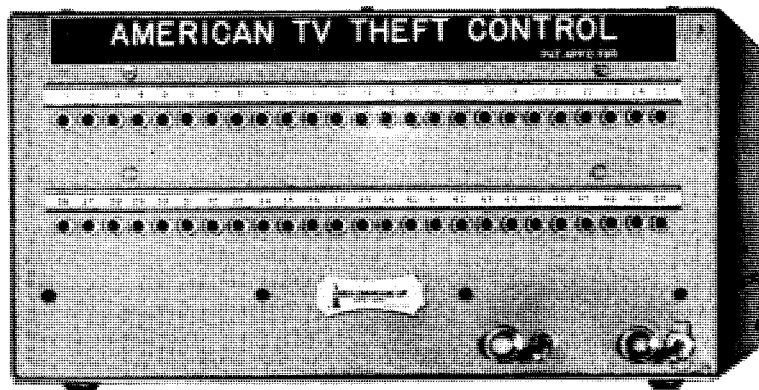


# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434

# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS - MOTELS - INSTITUTIONS

## AMERICAN'S New TV-set THEFT ALARMS\*



**A-TA-B/50 TV-set Theft Alarm for Hotels.**

AMERICAN'S TV-set Theft Alarm is now available in designs that meet the needs of occupancies of any size; in addition to the Model B, for hotels of 50 rooms or more, there is the new Model C, for motels of under 50 room units.

Both models operate to signal any attempt to steal the television set it protects.

In addition, AMERICAN'S Theft Alarm has other uses:

In Apartment Houses, to signal doorman of any attempt to illegally enter an apartment.

In Apartment Houses, so tenant can alert superintendent or doorman, in an emergency, without sounding an alarm. (A "panic button" is provided in each apartment.)

In Stores, Factories, Churches, etc., to signal any attempt to steal valuable electric appliances, tools, money boxes, etc.

Installation may be made by any electrician, following detailed instructions supplied with each System (Control Panel or Console, and Room Units). Requires only one control wire per guest room.

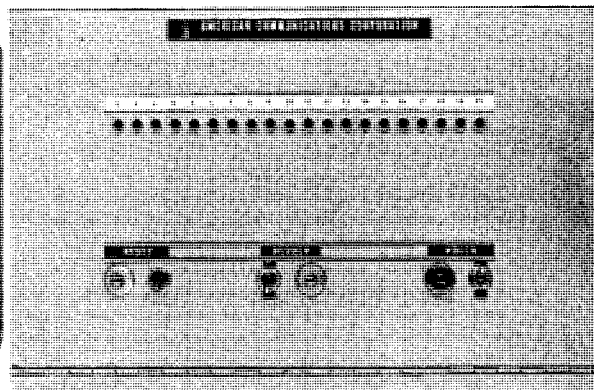
Operation: Equipment under protection (TV-set, appli-

ance, etc.) is electronically "booby trapped" during the process of being plugged into the wall outlet. Any attempt by unauthorized persons to remove connection from wall outlet, or cut power cord, starts alarm signal. This signal is indicated at the Front Office as a flashing light, loud buzz or both, on either a desk-mount assembly (Console unit), or on a wall panel; both designs are here illustrated. The latter is more suited to hotels of several hundred rooms.

Note that the flashing light can be an existing signal system, such as AMERICAN'S Message-at-Desk.

There is no alarm in the guest room to alert the thief, but the Front Office signal, once triggered, cannot be stopped until Front Office attendant has operated a Reset switch (which cancels buzz and flashing light); a room indicator lamp remains lit, however, until house personnel has checked the guest room and restored the circuit to its normal alert condition.

Apartment House owners can now offer their tenants maximum security at negligible cost. Tenant is protected against an unlawful entry going undetected, can signal for help in an emergency.



**NEW! A-TA-C/20 TV-set Theft Alarm for Motels.**

Price is same, for either Console or Panel type (surface- or flush-mounted).

### SPECIFICATIONS

**No. A-TA-B/- TV-set Theft Alarm**, including Front Office Control Console, complete w/room lights, loud-sounding buzzer, bright alarm light, flasher, alarm reset and power on-off switches and bullseye, solid state devices, and power supply; and, Room Kit (Conversion Cord, Conversion Outlet, one each per room). Control Console (A-TA-B/50) measures approx. 15" x 7 3/4" x 9" deep; wt., approx. 30 lbs.; finish, gray crackle enameled steel. Operates on 115 V., 60 cy. A-C. **Net Price, A-TA-B/-, \$12.00/room**, incl. Room Kit; minimum 50 rooms. Cable not included.

**No. A-TA-C/- TV-set Theft Alarm**, incl. Front Office Control Panel, and Room Kit. Panel may be hinged (illus.); includes room lights, reset switch and indicator light, alarm switch and light, and power off-on switch and indicator light. Panel (A-TA-C/20) measures approx. 15 1/2" x 10" x 9" deep; wt., approx 22 lbs.; finish gray crackle enameled steel. Current supply, same as A-TA-B/-. **Net Price, A-TA-C/-, under 50 rooms, \$15.00/room**, incl. Room Kit. Cable extra \*Protected by Pending Patents.

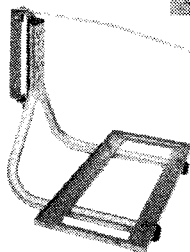
## TV TABLE



**No. A-TVT-B Table.** For TV sets. Control panel and speaker (A-BW4/- Baffle Cabinet, equipped) will fit underneath (illus.). Black, or color to suit. Metal legs. **Net \$10.14.**

No. A-TVT-B Table. Room Unit (A-BW4/-, equipped) fits below.

## TV MOUNTS



**No. A-TVB1 Bracket** (left). Swivel wall-mounted support for 19" TV sets, particularly the Designer series, or equivalent, for hospitals, hotels, etc. Saves floor space. Set easily positioned for best viewing. **Net \$6.78.** (Other sizes to order.)

**No. A-TVS Roll-away TV Stand** (right). Easily positioned under, for example, a hospital bed. Shelf holds set over bed. Hard-rubber casters, bolted 7/8-in. diam. steel tubing. Shipped KD. Bar holds pillow speaker cord or, as shown, TV Remote Control Cord. **Net \$25.49.**



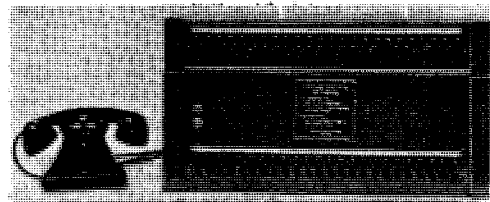
## MOTEL-O-PHONE SYSTEM

AMERICAN developed this interior telephone System specially for Motels, Motor Inns, and small Hotels. This Multiple Telephone Switchboard is described as "selective ringing, common talking." Unit illustrated is for 48 telephones, add units for each 24 telephones.

You increase the basic Interior Telephone System

from a maximum of 24 stations by adding 24-station units on top (illus.).

**Net Prices: No. A-MTS Basic Unit**, for 24 phones, w/115 V. A-C Power Supply, **\$350.00**; **No. A-MTS--A Add-A-Board**, for 24 phones, **\$150.00**; **A-FP French-style Desk Phones**, **\$25.00**.



AMERICAN'S Interior Telephone, 48 stations.



# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434

# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS — MOTELS — INSTITUTIONS

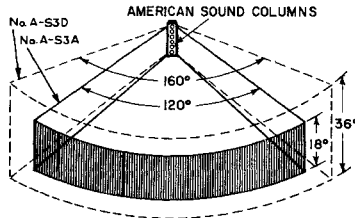
No. A-S3A — 8, 8-in. Hi-Fi, 80 watts, 72 x 12 x 8", 50 lbs., Net \$95.95.

No. A-S3B — 6, 8-in., Hi-Fi, 60 watts, 53 x 12 x 7", 35 lbs., Net \$85.95.

No. A-S3C — 6, 6-in., Wide-range, 30 watts, 40 x 9 x 5 1/2", 20 lbs., Net \$64.95.

No. A-S3D — 5, 4-in., Budget, 20 watts, 27 x 7 1/2 x 4", 12 lbs., Net \$29.95.

(No. A-S3E, not illus., 8, 6-in., Wide-range, 48 watts, 52 x 10 x 6", 25 lbs., Net \$74.95.)



## NEW "MULTICOUSTIC" COLUMN SPEAKERS

Newest addition to AMERICAN'S Sound System equipment is the series of Column Speakers shown above. Due to the narrow vertical and wide horizontal dispersion pattern of these in-line speaker arrays (see diagram), approx. 90% of the sound is beamed more effectively.

- Result: (a) Less sound reflection and reverberation;  
(b) Less microphone feedback (howl);  
(c) Less need for acoustic treatment;  
(d) More audience coverage;  
(e) Improved intelligibility.

Nominal line match, 8 ohms or 70 volts. Standard finish; walnut, on 3/4-in. hardwood, except A-S3D (five 4-in. speakers), 1/2-in. Interior specially designed in accordance with AMERICAN'S famous Acoustical Labyrinth.

## COLUMN SPEAKERS

## NEW! 50 W. AUDITORIUM SPEAKER

No. A-S5/50 High-power Speaker, 50 watts, for large-auditorium use. Newest addition to AMERICAN'S line of advanced sound equipment. Specially designed to meet the growing needs of hotels and other institutions for a speaker that will reproduce all the sound within hearing capability, and at adequate volume. This is the type of service required, for example, by the newest Discotheque technique (pioneered by AMERICAN in the first such sound installation—the famous Shephard's room, The Drake Hotel, New York).

Its unsurpassed sound quality results from a careful choice of woofer, tweeter and crossover network, combined with an acoustic system comprised of an L.F. labyrinth and H.F. multi-cellular projector assembled in a functional housing suitable for any type of decorative enclosure.

Approx. 30" wide x 54" high x 24" deep; approx. wt., 180 lbs.; finish, slate gray. Grille cloth covers front area. Frequency range: approx. 30-20,000 cps. Power rating, up to 50 W. A-S5/50, Net \$160.00.

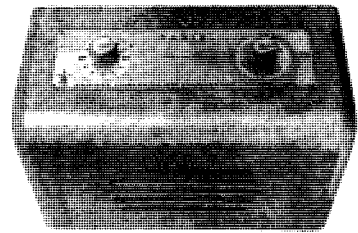
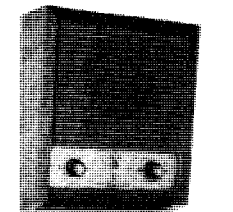
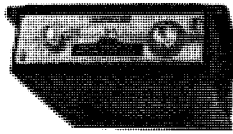
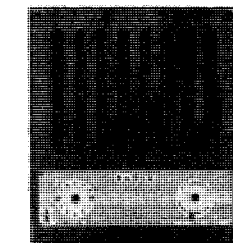
## WOOD BAFFLES

(NOTE: All Baffles, both wood and metal [A-B4/-], priced less escutcheon, controls, etc., unless otherwise specified.)

**VERTICAL VENTS — No. A-BW/2-** Baffle is hardwood, finished in light mahogany. This vertical-vent baffle is a popular number. For 6" or 8" speaker, as specified. Baffle only, A-BW/2-, Net \$11.88.

**UNDER-TABLE BAFFLE — No. A-BW4-** Baffle mounts under table, has pressure-release vents on sides, projects sound downward. Hardwood baffle is dull black. Cable opening in rear. Grille cloth backed by wire mesh. Mounting holes in flanges. For 6" or 8" speaker. Baffle only: A-BW4/6, Net \$11.06; A-BW4/8, Net \$13.15.

**SLANTING FRONT — No. A-BW3/-** Baffle, surface mount, slanting front. Hardwood, light mahogany. Choice of grille cloth. A general-purpose design, for 6" or 8" speaker. Baffle only, for either size speaker, A-BW3/-, Net \$12.75.



**BUDGET BAFFLE — No. A-BW5/6** Bentwood Baffle. Solidly constructed Danish maple, standard finish, other finishes to order. Louvered, slanting surface allows baffle to be wall or under-table mounted; louvered ends contribute to voice intelligibility. Sound projection and pressure-release areas grille cloth covered. For speakers only. Dimen.: approx. 11 1/2" w. x 8" h. (max.) x 4" d. at base and 4 7/8" at top. Baffle only, for 6" speaker, A-BW5/6, Net \$7.85; w/escutcheon, controls, knobs, jacks, 6" speaker (illus.), A-BW5-A/6, Net \$12.75.

## LOUDSPEAKERS

No. A-S1/- High-fidelity Speaker, with dual cones for wide frequency response. 6". A-S1/6, Net \$4.27; A-S1/8 (illus.), \$6.05.

No. A-S2/- Wide-range Speaker, 6" (illus.). A-S2/6, Net \$3.08; A-S2/8, Net \$4.86.

No. A-S4/12 High-fidelity Speaker, 12". Power rating, 25 W.; frequency response, approx. 35-15,000 cy.; voice coil 1 1/2" diam.; impedance 8 ohms. Mtg. centers 11 5/8". A-S4/12, Net \$21.15.

## METAL BAFFLES

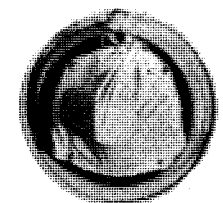
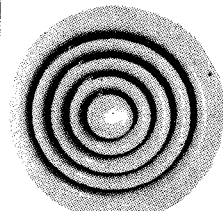
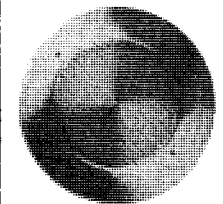
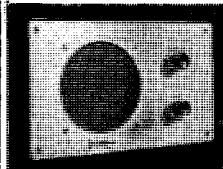
**"DECORATOR" BAFFLE (top) — No. A-B4/-** Baffle, Decorator style. Brushed aluminum (standard finish); gold anodized available. For 6" or 8" speaker, as specified. Baffle only, A-B4A/6-8 (illus.), Net \$11.23; A-B4G, Net \$16.18.

**CEILING BAFFLE, STANDARD — No. A-B2/-** Baffle, standard model. Brushed aluminum (standard finish), or gold anodized. A-B2/6, for 6" speaker, Net \$2.55 (A-PR/6 Plaster Ring, Net \$1.19); A-B2/8, Net \$2.67 (A-PR/8, Net \$1.49).

**CEILING BAFFLE, LOUVERED — No. A-B3/-** Baffle, louvered type. Enamelled iron, white; colors to order. A-B3/6, for 6" speaker, Net \$4.15; A-B3/8..... Net \$5.25; (A-PR/8..... Net \$1.49); A-B3/12..... Net \$7.43; (A-PR/12..... Net \$2.06).

## DUST BAG

No. A-D/- Speaker Dust Bag. Fungus, vermin proofed. 6". A-D/6, Net 45c. A-D/8 (illus.), 57c. A-D/12, 59c.

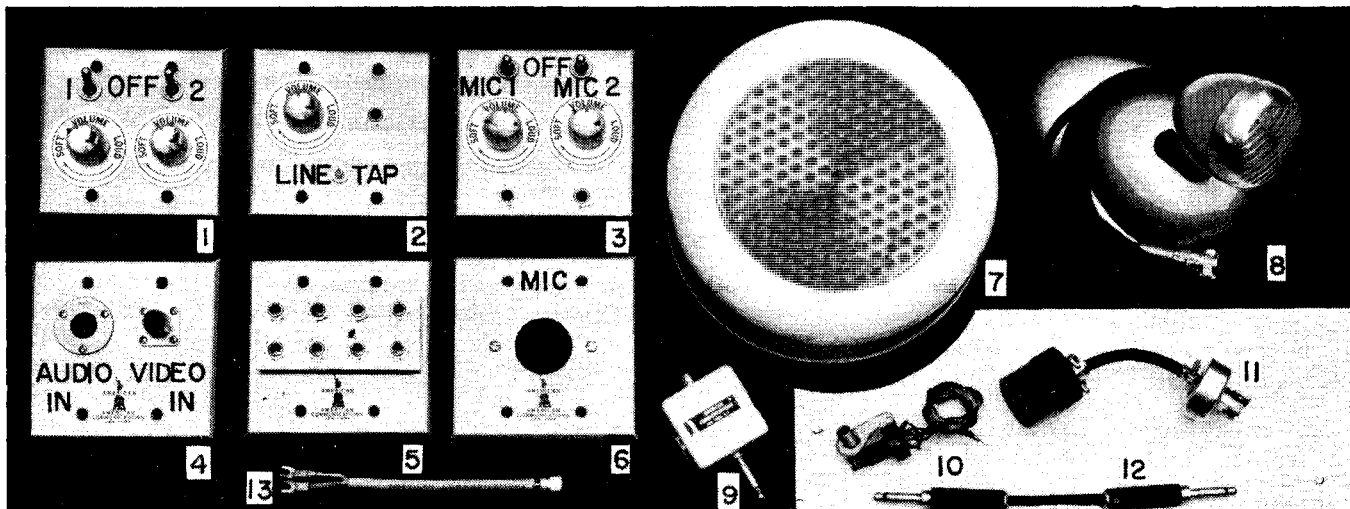


# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434

# AUDIO/VISUAL/SIGNAL SYSTEMS & PARTS FOR HOTELS — MOTELS — INSTITUTIONS

## PUBLIC ADDRESS PARTS & ACCESSORIES



Following is description of the items shown above. Additional specifications will be supplied upon request.

- (1) No. A-SVC Speaker Volume Control. Has 2 controls, w/dials, for 2 public areas, and switches to control background music. Net \$22.50.
- (2) No. A-A/TVC Audio/TV Control. Includes 3.3K ohm volume control w/dial, seize jack, and master antenna outlet. Net \$14.40.
- (3) No. A-IC Integrating Control on 2-gang plate, w/2 ea. center-off switches, Volume Controls and seize jacks. Net \$22.20.

Items 1, 2 and 3, above, operate on 70-volt lines. Other impedances available.

- (4) No. A-A/V-JP Closed-circuit unit — Audio/Video Jack Plate — on 2-gang plate, w/Cannon XLR-314 socket for Audio In, and socket for PL-239 for Video In. Net \$11.88.
- (5) No. A-PP-F Flush Patch Plate, on 2-gang plate, w/4 circuit jacks. Net \$2.97 per circuit (4 circuits shown).
- (6) No. A-MOP Microphone Outlet Plate, flush type, on 2-gang plate, w/Hubbell Polarized socket. Net \$4.00.

- (7) No. A-PAS-I Indoor P.A. Speaker, surface mount type, 8" (only). Metal is enamel finished. Supplied less speaker. Net \$5.81.
- (8) No. A-PAS-O Outdoor P.A. Speaker (not illus.), on swivel mount, w/weather-proof housing and A-T3 output transformer. Net \$23.71

- (9) No. A-A Adaptor — PL-55 one end, Amphenol 75-PC1M connector opposite end, to adapt seize jack to Amphenol adaptor. Net \$2.24.
- (10) No. A-SJ-1 Seize Jack (circuit opening), wired assembly. Net \$2.70.

- (11) No. A-MEC Microphone Extension Cord, SJ cord w/Hubbell 7554 plug one end, 7555 other end. Net \$6.72.
- (12) No. A-MCPC Maid Call Patch Cord, 2-conductor cord w/PL-55 ea. end. Net \$1.51.
- (13) No. A-TVH TV Hook-up Lead, A-TV92-S Coax., w/lugs one end, A-C59 other end. Net \$2.50.

- \* Standard length 6 ft., other lengths — and constructions — to order.

## MICROPHONE MIXERS

No. A-6M  
6-channel Portable  
Microphone Mixer

AMERICAN'S A-6M Portable Microphone Mixer has 200-ohm inputs for 6 microphones, individual gain controls (mixers) for each of the 6 microphones, master gain control, Cue Jack for headphone monitoring of broadcast-quality program material, pilot light, and "Off-On" switches for Service and Standby power supplies; separate Bass, Treble electronic tone controls available.

The 6 mixers work from individual low-noise preamplifiers into the master gain control; gain is adequate for remote operation.

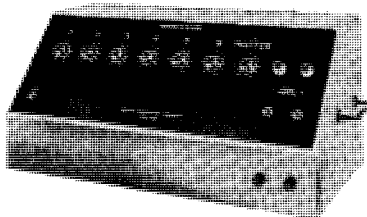
Output is +15 dbm; gain, 55 db; frequency range, 30-15,000 cy./sec.  $\pm 1$  db. Output is universal (50-600 ohms impedance). Operates on 115-120 V., 60 cy. A-C.

No. A-10M Portable Microphone Mixer (not shown) for 10 microphones is similar in construction.

### SPECIFICATIONS

Slope-front metal cabinet (A-6M) measures approx. 22" x 7" x 8" high. Gray crackle finish. Carrying handle. Fused power supplies. Terminations at rear of cabinet. Instrument furnished w/Hubbell or Cannon connectors. Net Prices, No. A-6M, \$495.00; No. A-10M, \$825.00.

Stereo Microphone Mixers available, on order, for 2 or 4 outputs.



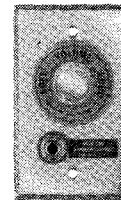
## WEATHERPROOF MICROPHONE

No. A-WM Weatherproof Microphone. New! Rugged, high-fidelity dynamic microphone in diecast aluminum housing. Supplied complete w/coupling to fit all standard stands and with neoprene cable gland, and gland nut. Grille opening protected by metallic screen and non-resonant, waterproof covering. Waterproof push-to-talk button permits talk-back for intercom use; signal light indicates "Microphone in Use". Available without switch or light. Impedance 35-50 ohms; can be supplied w/built-in matching transformer tapped for 200/600 ohm lines (other impedances to order). Frequency response 40-15,000 cps. Approx. 3 3/8" x 6 1/4" x 2 3/4" deep, overall, (less fittings); approx. wt. 3 lbs. Net \$45.85.

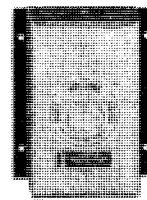


## NEW P.A. CONTROL UNITS

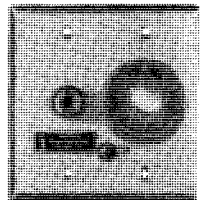
These new Control Units by AMERICAN meet the everyday needs of the Public Address technician. Each includes a 4-watt, wire-wound volume control, either 3.3K ohms (for 70 volt line) or AMERICAN's patented, continuous-rotation 12.5 ohm (voice coil) control. Seize jacks are circuit-opening type, for PL-55 plug. Standard plates are brushed stainless steel; also available in white enamel, and brushed or bright brass finish.



No. A-CU1/- Speaker Control w/Seize Jack — With 3.3K ohm (A-CU1/1) or 12.5 ohm (A-CU1/2) control, dial, knob; seize jack. Plugging into jack disconnects speaker from its feed line, connects speaker to plug circuit (paging assembly, etc.). Plate mounts on std. 1-gang outlet box. Net \$8.55.



No. A-CU2/- Speaker Volume Control.—A surface-mount, general purpose unit. With 3.3K ohm (A-CU2/1) or 12.5 ohm (A-CU2/2) control, dial, knob. Metal case 1" deep has 1/2" flange on sides, black finish (std.); plate is single gang. Metal-bushed holes for wire entry through top or bottom. Net \$7.25.



No. A-CU3/- Speaker Volume Control w/Seize Jack, Master TV Antenna Connector.—Used in conference rooms, etc. With 3.3 K ohm (A-CU3/1) or 12.5 ohm (A-CU3/2) control, dial, knob. Metal case 1" deep has 1/2" flange on sides, black finish (std.); plate is single gang. Metal-bushed holes for wire entry through top or bottom. Net \$7.25.

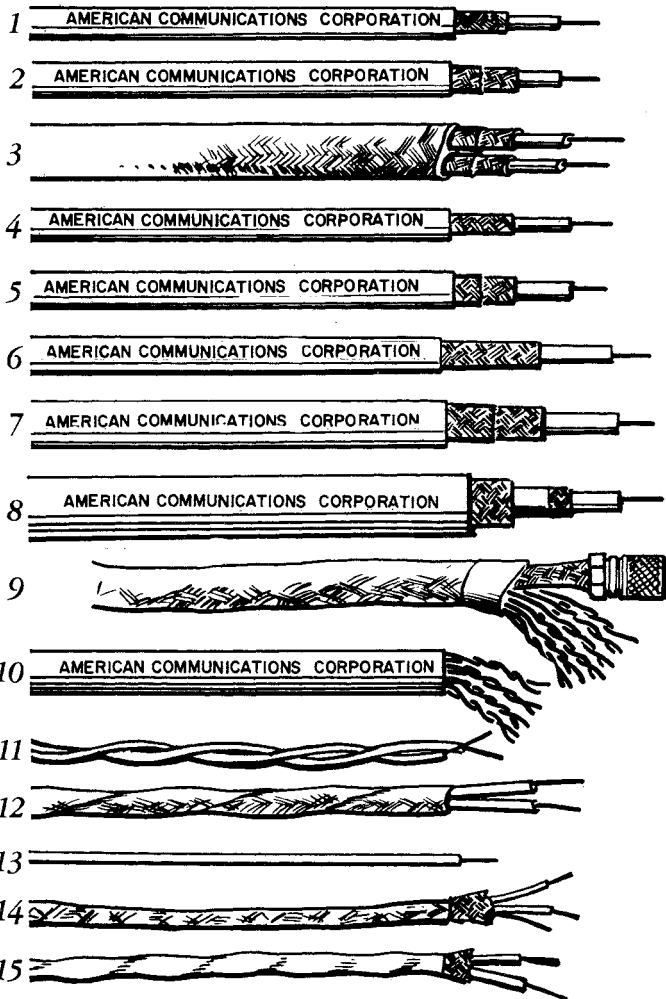


# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434

# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS — MOTELS — INSTITUTIONS

## CABLE & WIRE



Special Wire and Cable combinations can be fabricated on quantity orders. Types here listed meet all specifications for the respective types, and are those used in making AMERICAN'S Systems installations. Specification sheets supplied upon request.

### TV COAXIAL CABLE

	Net Per Ft.
(1) A-TV91-S (RG-59/U w/1 shield) .....	\$.04
(2) A-TV92-S (RG-59/U w/2 shields) .....	.06
(3) A-2TV92-S (twin A-TV92-S) .....	.20
(4) A-TV61-S (RG-6A/U w/1 shield) .....	.05
(5) A-TV62-S (RG-6A/U w/2 shields) .....	.07
(6) A-TV11-S (RG-11/U w/1 shield) .....	.09
(7) A-TV12-S (RG-11/U w/2 shields) .....	.10
(8) A-TV12-S-2J (A-TV12-S w/shields insulated from each other) .....	.20

### TV & RADIO COMBINATION CABLE

(9) A-TV/R92-S/- (combo: A-TV92-S w/4 to 7 twisted pr.)	
Net/ft.: -4/11¢; -5/12¢; -6/13¢; -7/14¢	

\*Request quotations for -91-S, -61-S, -62-S; or more pairs.

### MULTI-CONDUCTOR RADIO CABLE

(10) A-22/2/- (4 to 9 twisted prs. No. 22, for Centralized Radio Systems). Net/ft.: -/4 5¢ -/5 6¢; -/6 7¢; -/7 8¢; -/8 9¢; -/9 10¢.	
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### SPEAKER & SYSTEM WIRING

(11) A-19/2 (No. 19 twisted pr., black & white, no jacket) ....	\$.02
(12) A-19/2/J (No. 19 twisted pr., black & white, white cotton jacket) .....	.03
(13) A-20/1 (No. 20, 1 conductor, red or black) .....	.01

### MICROPHONE CABLE

(14) A-20/2-G-S (No. 20 2-conductor twisted pr. plus ground wire and shield, woven cotton jacket) .....	\$.04
(15) A-20/2-S (No. 20 2-conductor twisted pr. w/shield & plastic sheath) .....	.04

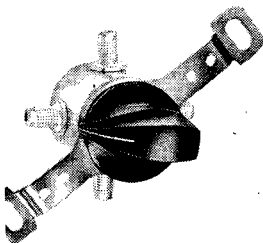
### MULTI-CONDUCTOR STATUS BOARD & MESSAGE CABLE

(16) A-22X/27 (No. 22 — also No. 24 or No. 26 — twisted pr. w/plastic jacket over 27 prs.) .....	†*
(17/20) (Ditto as No. 16, except 101, 201, 301 or 401 prs.)....	†*
	(†) Not illustrated

\*Prices on request.

Prices subject to change without notice.

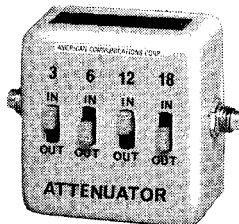
## NEW! COAX. SWITCHES



No. A-SW/4 Coaxial Switch. Inexpensive, functional equivalent of lab-type switching units, for general-purpose use.

No. A-SW/- Coaxial Switch. Low-cost, small-space, light-weight coaxial switch; C-type UHF connectors for coax. cable. Illustrated is a 1-pole, 4-position unit for switching one input to four circuits (antennas, transmitters, exciters, receivers, test equipment, etc.). Other multi-pole, multi-position types available, to meet ham radio, TV, lab. and other requirements. Power rating up to 1 kw., amplitude modulated; impedance, 52-75 ohms. Approx. 2" x 2" diam. Supplied w/hardware (pointer knob, mounting saddle, and 5 C-type male connectors w/ferules). A-SW/2, 1-pole, 2-position, Net \$5.75; A-SW/4 (illus.), Net \$6.50.

## DB ATTENUATORS



No. A-DB/39 Attenuator. Pays for itself in the time it saves determining loss required for best TV picture, etc. Slide switches are used.

AMERICAN'S No. A-DB/39 and No. A-DB/59 Attenuators (the latter not illustrated) provide at low cost, quick and convenient means for determining losses in a number of essential tests in TV installations. These include: measurement of amplifier gain, and equipment losses.

### SPECIFICATIONS:

Insertion loss of A-DB/39 is in fixed steps of 3 to 39 db, and, of the A-DB/59, 3 to 59 db, for TV frequencies, when used in 75-ohm circuits. Two, A-CH61 solderless TV connectors afford connection to 75-ohm coaxial connectors. Housing is steel, ecru enameled; overall, 2" x 2" x 1" deep (A-DB/39).

Net: A-DB-39, \$7.75; A-DB/59, \$19.90.



# AMERICAN COMMUNICATIONS CORPORATION

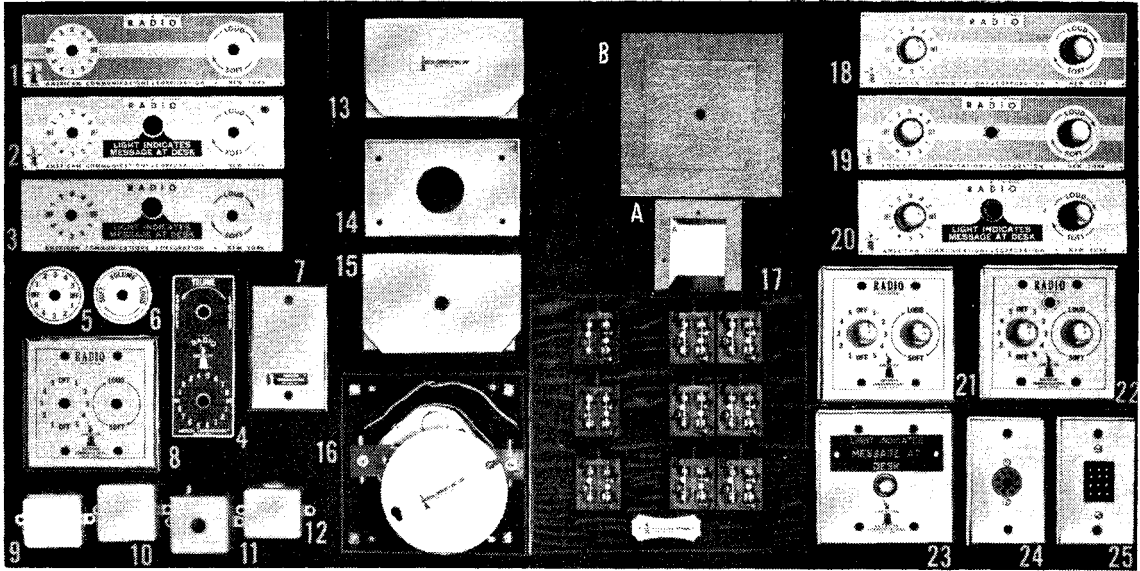
JAMAICA, NEW YORK 11434



# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS

## FOR HOTELS — MOTELS — INSTITUTIONS

### RADIO PARTS & ASSEMBLIES



#### BLANK (UNASSEMBLED) ESCUTCHEON PLATES

Measurements: No. 1—No. 3, 9 x 2 1/2"; No. 4, 2 1/8" x 5 5/8"; No. 5, No. 6 (dials), 2" diam. (hole in latter is 3/8" diam.). No. 7, 2 3/4" x 4 1/2". No. 8, 4 5/8" sq.

- (1) No. A-P1 Radio Escutcheon. Patterned bronze, clear lacquered. Lettered: Off — 1 (through) 5 — Off and Loud-Soft. Net \$2.15.  
No. A-P2 Radio/Maid Call Escutcheon (not shown). Same as A-P1, except w/hole, centered between controls, for jack. Net \$2.18.  
No. A-P3 Radio/Message Escutcheon (not shown). Same as A-P1, except w/added hole in center for lamp socket, and wording: Light indicates Message-at-Desk. Net \$2.23.
- (2) No. A-P4 Radio/Message/Maid Call Escutcheon. Same as A-P3, except w/added hole at upper-right for jack. Net \$2.27.  
No. A-P5 Radio/Message/Maid Call/Status Escutcheon (not shown). Same as A-P4, except w/added hole, below hole for jack, for Status Maid Light. Net \$2.67.
- (3) No. A-P3P Radio Escutcheon, plastic. Same as A-P3, except material is translucent plastic. For use with incandescent or luminescent light source. Net \$1.90.
- (4) No. A-P1V Radio Escutcheon, vertical. Brown enameled brass. Lettering same as A-P1, except radio numerals to 8. Net \$1.61.
- (5) No. A-D1/5 Selector Plate. Aluminum disc, black lettered Off — 1 (through) 5 — Off. Net 66¢.
- (6) No. A-D2 Volume Plate. Aluminum disc, black lettered: Loud — Volume — Soft. Net 59¢.
- (7) No. A-P10 Wall Plate, 1-gang, blank. Available in aluminum, stainless steel, plain steel and brass, in various finishes, to order. Standard finishes: brushed stainless steel, brushed aluminum. Net 57¢.  
No. A-P20 Wall Plate, 2-gang, blank (not illus.). Materials and finishes as A-P10. Net 63¢.
- (8) No. A-P20-1 Radio Wall Plate. Uses 2-gang plate A-P20. Same lettering as A-P1. Net \$2.15.  
No. A-P20-2 Radio/Maid Call Wall Plate (not shown). Same as A-P20-1, except w/added hole for Maid Call jack. Net \$2.30.  
No. A-P20-3 Message Wall Plate (not shown). Has hole for lamp socket, on 2-gang plate. Net \$2.10.

#### BLANK HOUSINGS

Standard finish: ecru enamel; material; steel.  
Measurements: (small housings) No. 9, No. 12, 2" x 1 3/4" x 3/4" deep; No. 10, No. 11, 2" sq. x 1 3/8" deep; (large housings) No. 13—No. 15, 5 1/4" x 3 3/8" x 1 3/8" deep. Mounting tabs on No. 9—No. 12.

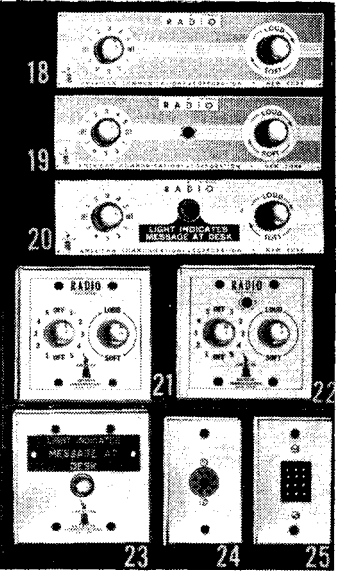
- (9) No. A-BC1 Accessory Box, small, blank. Net 36¢
- (10) No. A-BC2 Accessory Box, large, blank. Net 45¢.
- (11) No. A-BC3, Accessory Box, large, w/metal grommet and TV feedthrough A-FT 81. Used as TV Outlet and Cable Accessory Box. Net \$1.05.
- (12) No. A-BC4 Accessory Box, small, w/rubber grommet. Net 42¢.
- (13) No. A-BC10 Termination (Accessory) Box, large, surface mounted. Open at 2 corners for feedthrough; back plate has opening (optional) for cable, and back-to-back mounting. Net \$1.16.
- (14) Shows opening at back of No. A-BC10.
- (15) No. A-BC11 Radio Outlet Box, surface mounted. Has metal grommet in top. Net \$1.29.

#### APPARATUS

- (16) No. A-SB-R Radio Splice Box, on wood or masonite board 6" sq. x 1/4" thick. Suspension wire is shown. Includes outlet box (shown open), 4 insulated cable clamps, and 2 A-1601 line taps. Net \$6.88.
- (17) No. A-RS-A Riser Switchboard. Has 9 D.P.S.T. knife switches (one switch per riser pair) on wood (or masonite) mounting approx. 9 1/2" sq. 1/2" thick. Net 99¢ per switch (illus., 9 switches), assembled and wired.

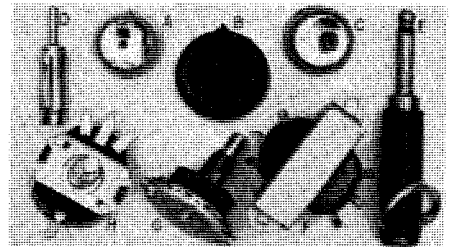
#### PANEL ASSEMBLIES

- (18) No. A-P1-A Radio Control Panel. This is A-P1 Escutcheon assembled with Radio Selector Switch and Volume Control. Net \$9.15.
- (19) No. A-P2-A Radio/Maid Call Panel. Same assembly as A-P1-A, except w/A-MJ Maid Call jack added, on A-P2 Escutcheon. Net \$10.50.
- (20) No. A-P3-A Radio/Message Panel. Switch, Control, and Message light, on A-P3 Escutcheon. Net \$10.80.  
No. A-P4-A Radio/Message/Maid Call Panel (not shown). Same items as on A-P3-A panel, plus Maid Call jack, all on A-P4 Escutcheon. Net \$12.15.
- (21) No. A-P20-1-A Radio Wall Plate assembly, w/Switch and Volume Control. On aluminum 2-gang plate. Net \$9.15.
- (22) No. A-P20-2-A Radio/Maid Call assembly. Same as A-P20-1-A, but w/Maid Call jack added. On aluminum 2-gang plate. Net \$10.50.
- (23) No. A-P20-3-A Message-at-Desk Wall Plate assembly, w/instructions and lamp. On aluminum 2-gang plate. Net \$3.50.
- (24) No. A-P10-TV-A TV Remote Plate assembly. On 1-gang plate, w/octal socket. Net \$1.05.

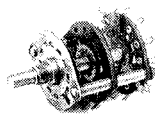


- (25) No. A-P10-C-A Connector Plate assembly. On aluminum 1-gang plate. Has Jones connector; specify number of connections. Net \$2.61. (12-oin, illus.).
- (A) No. A-CB-S Connection Box, surface mfg. Accessible from rear. For mounting control plates. Bushing one side. Enameled steel. Net \$2.08.
- (B) No. A-CB-F Connection Box, flush mounting. Shown with bushed plate, for cable. Steel, Hamertone enameled. Net \$4.46.

#### PARTS



- (A) No. A-K1 Knob, clear plastic. Silver insert, short pointer, 1 screw. Net 22¢.
  - (B) No. A-K3 Pointer Knob, black plastic. Has 1 screw. Net 24¢.
  - (C) No. A-K2 Knob, beige plastic. Gold insert, short pointer, 1 screw. Net 22¢.
  - (D) No. A-MP Plug, quick-disconnect type. Net 18¢
  - (E) No. A-MSP Maid Call Plug, w/belt ring. Net \$1.44
  - (F) No. A-T1 Transformer, 70 volts to 3.2 ohms. Net \$1.03.
  - (G) No. A-CS Radio Selector Switch. Ceramic wafer dual wiper, 5 positions, center off, 360° continuous rotation. Net \$2.30.
  - (H) No. A-VC Volume Control. A patented potentiometer with 360° continuous rotation. Standard resistance 12.5 ohms. Net \$2.30.
- (Items G and H for Centralized Radio use.)



No. A-CS-A/5 Radio/Alert Selector Switch. AMERICAN'S 360° continuous-rotation radio channel selector switch, is equipped with extra circuit wafer for AMERICAN'S patented emergency alert system. Net \$4.98



# AMERICAN COMMUNICATIONS CORPORATION

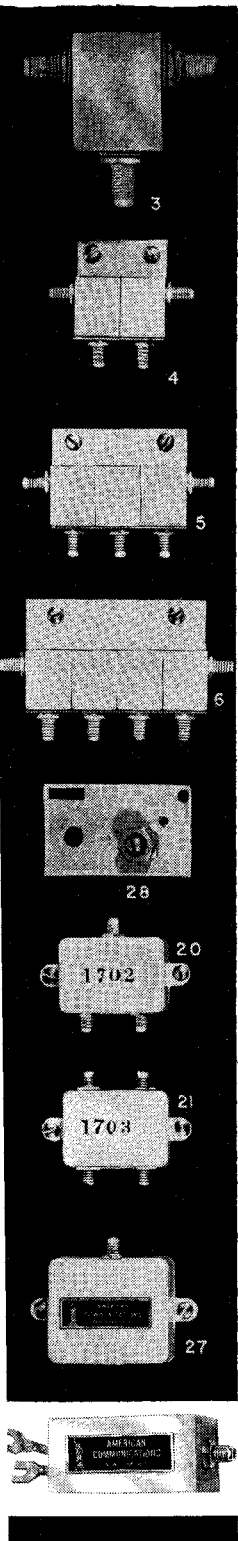
JAMAICA, NEW YORK 11434



# AUDIO/VISUAL/SIGNAL SYSTEMS & PARTS

## FOR HOTELS - MOTELS - INSTITUTIONS

### MASTER ANTENNA SYSTEM COMPONENTS



(1) No. A-1601-1 Isolation Unit. A Single-unit TV line tap. Attenuation color codes per Note 1. Outdoor housing; 75 ohms. Net \$1.80.

(2) No. A-1602-1 Double-unit Line Tap, for 2 TV sets. (Notes 1, 2) Net \$3.20.

(3) No. A-1603-1 Triple-unit Line Tap. (Notes 1, 2) Net \$4.60.

(4) No. A-1604-1 Quad-unit Line Tap. (Notes 1, 2) Net \$6.00.

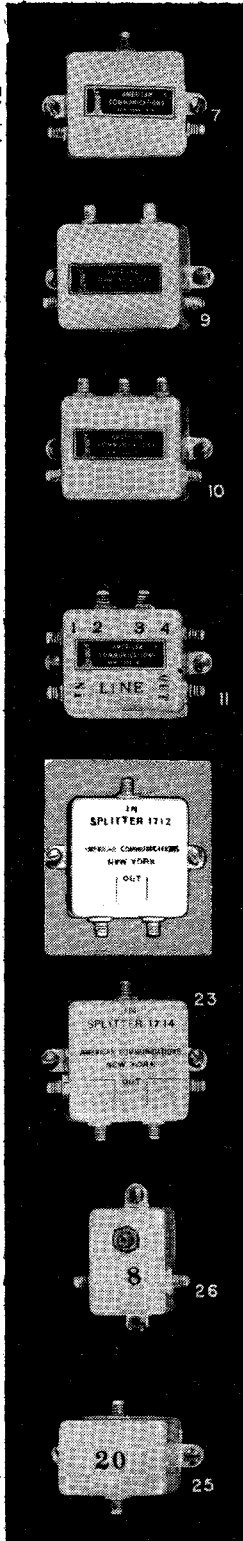
(5) No. A-VLC Volume Limiter Control. For use within TV set to limit audio volume of regular volume control. Net \$3.81.

(6) No. A-1702 Line Splitter, 2-way. Has 6 db forward attenuation. (Note 5) Net \$1.80.

(7) No. A-1703 Line Splitter, 3-way. Has 10 db forward attenuation. (Note 5) Net \$2.80.

(8) No. A-CTVB Convenience TV Box, w/connector A-CH61. (Note 3) Net 77¢.

(9) No. A-MT Matching Transformer, 75 to 300 ohms. Solderless connector for RG-59/U one end, 3-in. leads w/lugs other end. Up to 6 db voltage step-up. Net \$2.87.



(10) No. A-1601-2 Single-unit Line Tap, 75 ohms (Notes 1, 3) Indoor housing. Net \$1.80.

(11) No. A-1602-2 Double-unit Line Tap, for 2 TV sets. (Notes 1, 3) Net \$3.20.

(12) No. A-1603-2 Triple-unit Line Tap. (Notes 1, 3) Net \$4.60.

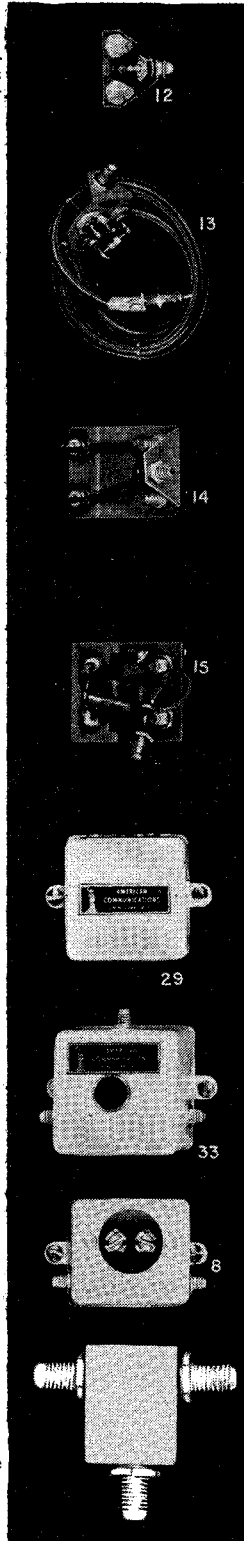
(13) No. A-1604-2 Quad-unit Line Tap. (Notes 1, 3) Net \$6.00.

(14) No. A-1712 Line Splitter, hybrid 2-way. Has 3 db forward attenuation. (Note 3) Net \$3.25.

(15) No. A-1714 Line Splitter, hybrid 4-way. Has 6 db forward attenuation. (Note 3) Net \$4.75.

(16) No. A-T/R-T Trunk/Riser Tap. Various db values of isolation. Creates Risers form Trunk Line. (Note 5) Net \$1.80.

(17) No. A-DBLA-DB Line Attenuator Pad. 3-6-10-6 20-30. (Note 5) Net \$1.77.



(18) No. A-1601-G Single-unit Line Tap. Gem flush-mount. 75 ohms. (Note 1) Net \$1.80.

(19) No. A-1602-G Double-unit Line Tap for 2 TV sets. (Notes 1, 7) Net \$3.20.

No. A-1602-GL (illus.). Same as A-1602-G, except per Note 8. Net \$3.20.

(20) No. A-1603-G Triple-unit Line Tap. (Notes 1, 7) Net \$4.60.

No. A-1603-GL (Not illus.). (Notes 1, 7, 8) Net \$5.20.

(21) No. A-1604-G Quad-unit Line Tap. (Notes 1, 7) Net \$6.00.

No. A-1604-GL (Not illus.). (Notes 1, 7, 8) Net \$6.70.

(22) No. A-CTVB/MJ Convenience TV Box, w/A-MJ jack. (Note 3) Net 77¢.

(23) No. A-1601/R-FT Combination Unit. Combination TV room tap with bushed box for centralized radio cable feed-through. (Note 1) Net \$2.80.

(24) A-1601-3 Single-unit Line Tap, 75 ohms, screw terminals. (Note 3) Net \$1.80.

(25) No. A-1600 Feed-through Tap. No isolation. Net \$1.80.

(See Notations on facing page)

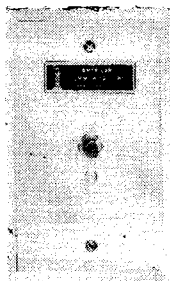


# AMERICAN COMMUNICATIONS CORPORATION

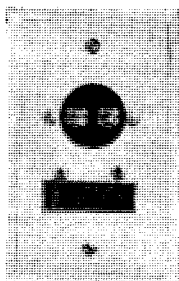
JAMAICA, NEW YORK 11434

# AUDIO / VISUAL / SIGNAL SYSTEMS & PARTS FOR HOTELS - MOTELS - INSTITUTIONS

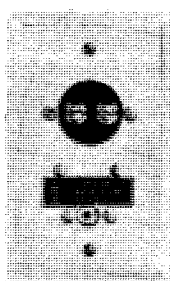
## MASTER ANTENNA SYSTEM COMPONENTS



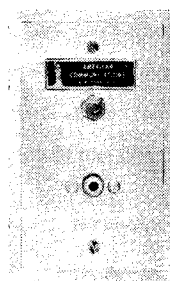
No. A-1601-4 Single-Unit Line Tap, TV outlet, 75 ohms. (Note 4) Net \$1.90.



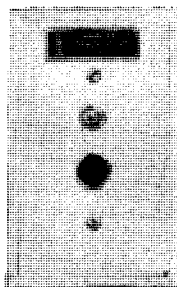
No. A-1601-5 TV Outlet, 300 ohms, screw terminals. (Note 4) Net \$2.70.



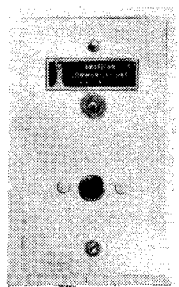
No. A-1601-6 TV Outlet, 75 ohms, screw terminals, FM outlet. (Note 4) Net \$4.05.



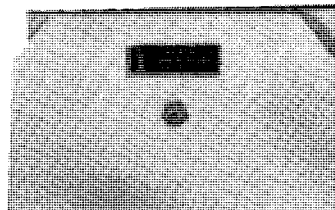
No. A-1601-7 Outlet, 75-ohm Tap, w/FM outlet. (Note 4) Net \$4.05.



No. A-1601/R, 1601 & Radio Plate. Wall plate grommets for cable. Net \$2.40.



No. A-TV/75 Tap, 75 ohms, w/A-MJ jack for FM. (Note 4). Net \$4.05.



No. A-TV/R-SB TV/Radio Splice Box, surface mount, w/A-1601. In A-BC10 Termination Box. Net \$2.95.

### ADDITIONAL PARTS (not illustrated)

No. A-WN Porcelain Wire Nut. Net 2¢.  
No. A-CC Cable Clamp, insulated. Net 6¢.  
No. A-RP Plastic Rawl Plugs. For mounting various radio and TV boxes; 5 per strip. Net 5¢, per strip of 5. No. A-P8-A Plate. "Morning Wake-up Call" control assembly. Net \$7.50. No. A-P10-P Plate, punched. (Note 6) Net 61¢. No. A-R-BP Radio Plate, bushed. (Note 6) Net 77¢. No. A-TV/R-P TV or Radio Plate, blank. (Note 6) Net 61¢. No. A-CT-1 Crimping Tool, light duty. For A-F59 ferrules. Net \$4.50. No. A-CT-2 Crimping Tool, heavy duty. For A-F59 and A-F6 ferrules. Net \$7.75.

(Note 1) Attenuation coded red, yellow, green, blue.

(Note 2) On mounting bracket.

(Note 3) Surface mount, in A-BC1 Accessory Box.

(Note 4) Flush mount, on single-gang wall plate A-F10.

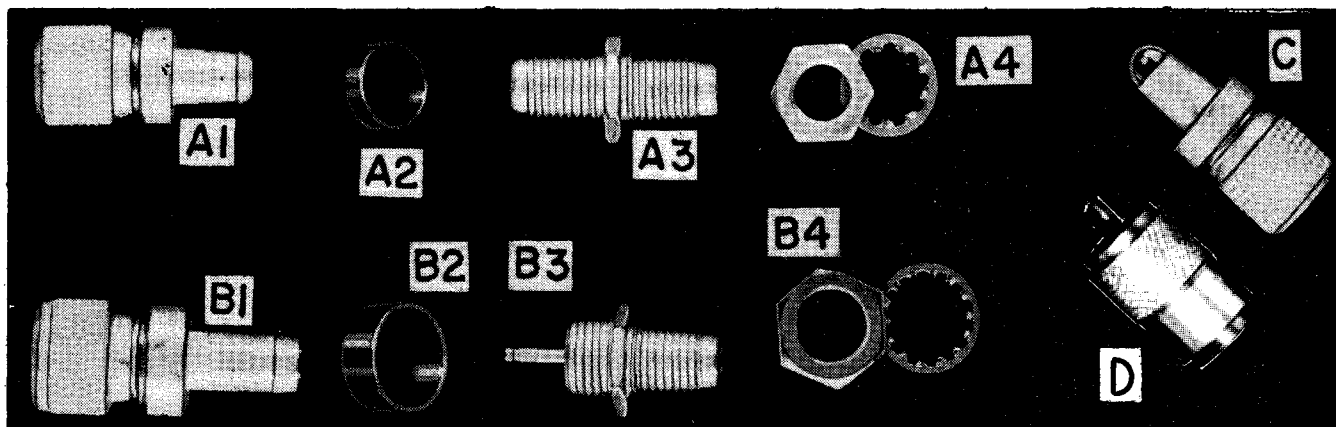
(Note 5) Surface mount.

(Note 6) Single or double gang, flush mount

(Note 7) Gem flush-mount, 75 ohms.

(Note 8) GL is G type, plus 8-in. (standard length) coax. lead from 2nd tap, for back-to-back mounting.

## TV COAXIAL CONNECTORS



(A1) No. A-C59 Solderless TV Connector for RG-59/U coaxial cable, w/A-F59. Net 31¢.

(A2) No. A-F59 Ferrule. Crimping ring for A-C59. Net \$1.65/C.

(A3) No. A-FT81 Feedthrough TV Connector or TV convenience connector w/1/4" A-NW-FT81. Net 42¢.

(A4) No. A-NW-FT81 Nut & Washer, 1/4", for A-FT81. Net 3¢.

(B1) No. A-C6 Solderless TV Connector for RG-6/U coax. Net 39¢.

(B2) No. A-F6 Ferrule. Crimping ring for A-C6. Net \$2.50/C.

(B3) No. A-CH61 Convenience Connector, chassis mount, w/3/16" A-NW-CH61. Net 35¢.

(B4) No. A-NW-CH61 Nut & Washer, 3/16", for A-CH61. Net \$0.47.

(C) No. A-TR72 Terminator, 72 ohms. Net 53¢.

(D) No. A-PL259 Connector, for RG-11/U or RG-8/U, or double-shielded equivalent coax. Net 26¢.



# AMERICAN COMMUNICATIONS CORPORATION

JAMAICA, NEW YORK 11434

# BOGEN SOUND SYSTEMS

## FLEX-PAK<sup>®</sup> DELUXE PA AMPLIFIERS

	*MTX30A All Transistor	MX60A	MX30A	M330A	M60A
<b>POWER OUTPUT</b>	30 w. @ 2% (Full power: 30-20,000 cps)	60 w. @ 2% (Full power: 30-25,000 cps)	30 w. @ 2% (Full power: 25-50,000 cps)	30 w. @ 2%	60 w. @ 3%
<b>PEAK POWER</b>	50 watts	85 watts	50 watts	50 watts	100 watts
<b>POWER CONSUM.</b>	60 watts	180 watts	125 watts	120 watts	160 watts
<b>FREQ. RESPONSE</b>	±1 db, 15-25,000 cps	±1 db, 10-30,000 cps	±1 db, 10-30,000 cps	±2 db, 20-20,000 cps	±2 db, 20-20,000 cps
<b>SENSITIVITY</b>	Mic.: 2 MV (high imp); Mag.: 3 MV; Aux.: 0.3-v	Mic.: 3.5 MV (high imp); Mag.: 2 MV; Aux.: 0.15-v	Mic.: 3.5 MV (high imp); Mag.: 2 MV; Aux.: 0.15-v	Mic.: 6 MV; Mag.: 50 MV; Aux.: 0.3-v	Mic.: 9 MV; Mag.: 24 MV; Aux.: 0.4-v
<b>GAIN</b>	Mic.: 125 db; Mag.: 120 db; Aux.: 95 db	Mic.: 125 db; Mag.: 120 db; Aux.: 85 db	Mic.: 125 db; Mag.: 120 db; Aux.: 85 db	Mic.: 120 db; Mag.: 105 db; Aux.: 95 db	Mic.: 122 db; Mag.: 115 db; Aux.: 96 db
<b>HUM and NOISE (below rated output)</b>	Mic. -70 db; Mag. -65 db; Aux. -85 db.	Mic. -70 db	Mic. -70 db	Mic. -65 db; Aux. -80 db	Mic. -65 db; Aux. -80 db
<b>INPUTS</b>	4 mic. (convert to low impedance with T200, T500 or T50 transformer); 2 mic. (high imp.); 2 mag. phono or tape playback heads; 2 aux. (high imp., high level); 1 600-ohm balanced telephone line with WATT1 transformer; 2 bridging. Note: 4 mics. and any two of the other nine inputs may be simultaneously mixed and faded.	4 mic. (convert to low impedance with T200, T500 or T50 transformer); 1 mic. (high imp. or mag. tape); 2 aux. (high imp., high level/fader); 1 600-ohm balanced telephone line with WATT1 transformer; 1 bridging input/output. Note: 6 inputs can be simultaneously mixed and faded.	4 mic. (convert to low impedance with T200, T500 or T50 transformer); 1 mic. (high imp. or mag. tape); 2 aux. (high imp., high level/fader); 1 600-ohm balanced telephone line with WATT1 transformer; 1 bridging input/output. Note: 6 inputs can be simultaneously mixed and faded.	3 mic. (high or low imp. — 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WATT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.	3 mic. (high or low imp. — 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WATT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.
<b>OUTPUT IMPEDANCE</b>	4, 8, 16 ohms, tape and booster jacks, 25-v, balanced (21 ohms), 70-v, balanced (163 ohms)	4, 8, 16 and 83 ohms, balanced 25-v. line, balanced 70-v. line	4, 8, 16 and 163 ohms, balanced 25-v. line, balanced 70-v. line	4, 8, 16 ohms, balanced 25-v (16 ohms), 70-v (163 ohms)	4, 8, 16 ohms, balanced 25-v (16 ohms), balanced 70-v (82 ohms)
<b>CONTROLS</b>	4 individual mic. (each with speech filter or wide-range switch) • 1 high imp. mic./mag. phono/tape head/aux.-fader control with speech filter switch • 1 high imp. mic./mag. phono/tape head/aux.-600 ohm line fader control with speech filter switch • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of any of 6 inputs • provision for remote control or precedence of all six inputs and master vol.	4 individual mic. (each with speech filter switch) • 1 mic./mag./tape with speech filter switch • aux. 1/aux. 2 • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of all inputs • provision for remote control or precedence of all six inputs and master vol.	4 individual mic. (each with speech filter switch) • 1 mic./mag./tape with speech filter switch • aux. 1/aux. 2 • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of all inputs • provision for remote control or precedence of all six inputs and master vol.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.
<b>TONE CONTROL ACTION</b>	Treble (10 kc) +12 db to -14 db; Bass (50 c) +15 db to -9 db	Treble (10 kc) +13 db to -15 db; Bass (50 c) +15 db to -10 db	Treble (10 kc) +13 db to -15 db; Bass (60 c) +15 db to -10 db	Treble (10 kc) +10.5 db to -14.5 db; Bass (50 c) +13.5 db to -9 db	Treble (10 kc) +12 db to -15.5 db; Bass (50 c) +15 db to -9.5 db
<b>TRANSISTORS or TUBES</b>	32-transistors, 3-silicon diodes, 2-zener diodes	8 tubes: 3-12AX7A, 3-7247, 2-8417 plus 5-silicon rectifiers	8 tubes: 3-12AX7A, 3-7247, 2-7868 plus 5-silicon rectifiers	5 tubes: 2-7868, 1-7247, 2-6EU7 plus 2-silicon rectifiers and 1-bias silicon diode	5 tubes: 2-8417, 1-7247, 2-6EU7 plus 2-silicon rectifiers and 1-bias silicon diode
<b>DIMENSIONS</b>	16½" W, 12" D, 4¾" H	16½" W, 12" D, 4¾" H	16½" W, 12" D, 4¾" H	1478" W, 978" D, 5¾" H	1478" W, 978" D, 5¾" H
<b>SHIP. WEIGHT</b>	24 lbs.	40 lbs.	34 lbs.	20 lbs.	28 lbs.
<b>LIST PRICE</b>	\$398.75 (Zone 2: \$403.00)	\$324.40 (Zone 2: \$329.35)	\$262.40 (Zone 2: \$266.75)	\$188.75 (Zone 2: \$191.75)	\$231.25 (Zone 2: \$235.45)

\*Operates on 105-125 VAC or 12-15 VDC — from -20°C to +70°C (158°F)

MMS-1: monitor meter and speaker for models MTX30A, MX60A, MX30A — allows operator to check sound levels both by ear and by eye. List Price: \$59.90 (Zone 2: \$60.05)

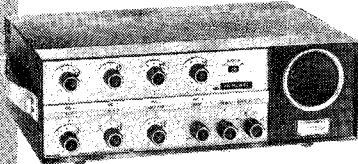
MSK-1: monitor speaker for models MTX30A, MX60A, MX30A, M330A, M60A — allows operator to check sound levels. List Price: \$14.90 (Zone 2: \$15.05)

The outstandingly versatile Flex-Pak accessories include: matching, removable phono-top, wall mounting kit, control-guard locking plate, plug-in lo-impedance transformers . . . and many more.

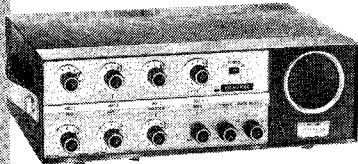
### VERSATILE BOGEN PREAMPLIFIER

#### MXM . . . MIXER-PREAMPLIFIER

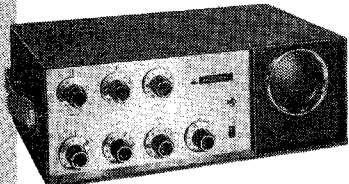
The self-powered MXM accommodates 5 microphones or 4 microphones and a tuner or phonograph (both crystal and magnetic cartridges). Features include: separate gain control for each channel; master gain control; individual speech filters for each channel, output level meter, sockets for plug-in low-impedance transformers; feedback-type distortion-free tone controls plus new Memory Markers which permit instant resetting of controls to previously determined levels. May be remote controlled with SR2 and SR4 remote controllers. **Output:** +18 db at less than 1% distortion. **Power Consumption:** 27 w. **Frequency Response:** ±2 db, 20 to 20,000 cps. **Hum:** (below rated output) mic., -60 db. **Output Impedance:** Hi-impedance, cathode follower driven, 600 ohms with T161 or T165B (broadcast quality) accessory plug-in transformers. **Input Sensitivity:** Hi-impedance, 4 mv.; Lo-impedance, 0.4 mv.; mag., 4 mv.; Xtal, 0.2 v.; aux., 0.5 v. **Tubes:** total of 9 (4 — EF86, 2 — 12AX7, 1 — 6CG7, 1 — 6BF6, 1 — 6X4). **Tone Controls:** treble (10 kc) +12 db to -12 db; bass (60 c) +12 db to -12 db. **Dimen.:** 16¼" W, 13" D, 5¾" H. **Ship. Wt.:** 21 lbs. **List Price:** \$267.35 (Zone 2: \$271.10)



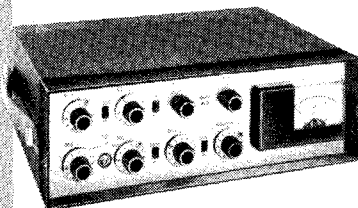
MTX30A Shown with MMS-1



MX60A/MX30A Shown with MMS-1



M330A/M60A Shown with MSK-1



MXM

**BOGEN "MU" PA AMPLIFIERS**

The handsomely styled new "MU" series amplifiers offer: 1 or 2 microphone inputs, a variety of auxiliary inputs, individual and master volume controls, separate bass and treble controls, Memory Markers for resetting controls to previously determined levels, constant voltage output taps and many more features as outlined below.

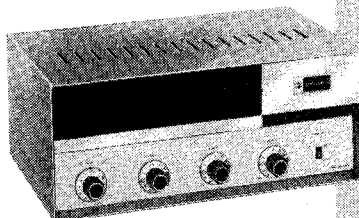
**BOGEN  
SOUND SYSTEMS**

	<b>MU1250 ALL TRANSISTOR*</b>	<b>MU130</b>	<b>MU15A</b>	<b>MU10A</b>
<b>POWER OUTPUT</b>	50 w. at 10% (continuous)	30 w. at less than 2% distortion	15 w. at less than 2% distortion	10 w. at less than 3% distortion
<b>PEAK POWER</b>	70 watts	50 watts	25 watts	15 watts
<b>POWER CONSUMPTION</b>	Full power: 116 w (117-VAC), 6.7 amps. (12VDC) Quiescent: 16 w (117VAC); .3 amps (12VDC)	120 w	90 w	70 w
<b>FREQUENCY RESPONSE</b>	±2 db 30 to 15,000 cps	±2 db 20 to 20,000 cps	±2 db 20 to 20,000 cps	±2 db 20 to 20,000 cps
<b>GAIN</b>	Mic. 125 db Aux. 95 db	Mic. 122 db Aux. 95 db	Mic. 125 db Aux. 100 db	Mic. 125 db Aux. 100 db
<b>HUM AND NOISE (below rated output)</b>	Mic. -65 db Aux. -70 db	Mic. -65 db Aux. -80 db	Mic. -60 db Aux. -80 db	Mic. -60 db Aux. -80 db
<b>OUTPUT IMPEDANCE</b>	4, 8 and 16 ohms; 25-v balanced line; 70-v (122 ohms) balanced	4, 8 and 16 ohms (16 ohms balanced); 25-v balanced (use 16 ohm tap), 70-v 163 ohms)	4, 8 and 16 ohms (16 ohm balanced); 25-v balanced (42 ohms); 70-v (326 ohms)	4, 8 and 16 ohms; 25-v balanced (62 ohms); 70-v (500 ohms)
<b>INPUTS</b>	2-mic. (hi-or-low impedance, no transformer required) 2 aux. 1 mag. phono or tape	1 mic. (hi-impedance converts to low-impedance with T200, T500 or T50 transformers) 1 aux. (hi-impedance, hi-level)	2 mic. (hi-impedance, converts to low-impedance with T200, T500 or T50 transformers) 2 aux. (hi-impedance, hi-level)	1 mic. (hi-impedance converts to low-impedance with T-155/6/7 transformers) 2 aux. (hi-impedance, hi-level)
<b>TUBES and/or TRANSISTORS</b>	Total of 11 transistors and 3 silicon rectifiers: 2-2N3053 7-2N2712 2-2N1557 3-MR322	Total of 4 tubes and 3 silicon rectifiers: 1-6EU7 1-7Z47 2-7868	Total of 4 tubes and 3 silicon rectifiers: 1-6EU7 1-6AV6 2-6GW8/ECL86	Total of 3 tubes and silicon rectifier 1-6EU7 2-6GW8/ECL86
<b>STONE CONTROLS</b>	Treble (10 kc) -17 db Bass (50 cps) +10 db to -17 db	Treble (10 kc) +12 db to -14 db Bass (50 cps) +15 db to -9 db	Treble (10 kc) +12 db to -14 db Bass (50 c) +15 db to -9 db	Treble (10 kc) -17 db Bass (50 c) -17 db
<b>DIMENSIONS</b>	15 3/4" W, 10" D, 6 3/4" H	15 3/4" W, 10" D, 6 3/4" H	15 3/4" W, 10" D, 6 3/4" H	15 3/4" W, 10" D, 6 3/4" H
<b>SHIPPING WEIGHT</b>	14 lbs.	20 lbs.	19 lbs.	15 lbs.
<b>LIST PRICE</b>	\$237.50 (Zone 2: \$239.65)	\$149.90 (Zone 2: \$152.90)	\$139.90 (Zone 2: \$143.05)	\$97.40 (Zone 2: \$99.65)

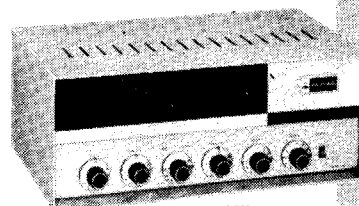
\*Operates on 12-VDC or 117-VAC. Will operate within a temperature range of -20°C to +65°C (-4°F to +149°F) Accessories: matching phono-top, control-guard locking plate, rack panel mounting kits, carrying cases, remote volume controls . . . and more.



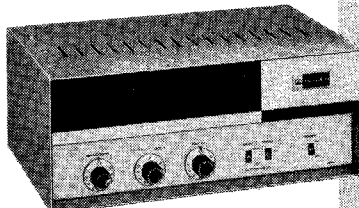
MU1250 Shown with phono-top



MU130



MU15A



MU10A

**MOBILE AMPLIFIERS**

**BT35; 35-WATT COMPACT TRANSISTOR MOBILE PA AMPLIFIER**  
55-watts when used as electronic siren

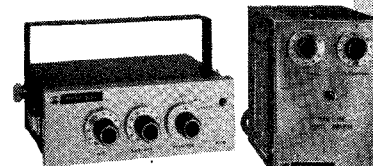
Excellent for police, fire, CD and boats; radio receiver connects easily to aux. input. Splashproof-gasket seals chassis in cabinet. Temperature range -20°C to +65°C (149°F). Polarity protection. Accessory siren tone-fog horn generator. Adjustable fixed-lock bracket. Built-in RF/line filters.

**Power Output:** 35 watts @ less than 10% (continuous); 55 watts with siren generator **Peak Power:** 55 watts **Power Consumption:** Full power: 4 amps; Quiescent: 0.6 amps 12-15 VDC **Frequency Response:** 150-15,000 cps ±3 db. **Inputs:** 1 mic. (low impedance) • 1 aux. #1 (high level) tuner/tape/phono, 1 aux. #2 (high level) accessory (tone signal) **Gain:** microphone, 110 db.; auxiliary, 90 db. **Hum and Noise:** microphone, -90 db. (below rated output); aux., -95 db. (below rated output) **Sensitivity:** mic.: 1 mV; aux.: 0.4 volts **Output Impedance:** 4, 8, 16 ohms (output socket for accessory siren/fog horn generator) **Controls:** 1 mic. • 1 aux. volume • 1 selector switch/power (4 positions); power off, mic., radio, Aux. **Transistors:** 5 transistors - 1 silicon diode: 2 - 2N2431, 1 - 2N555, 2 - 2N1557, 1 - silicon diode **Dimensions:** 8" W, 6 1/4" D, 3" H **Shipping Weight:** 8 lbs. **List Price:** \$132.40 (Zone 2: \$133.35)

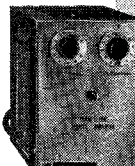
**SF-1 SIREN/FOG HORN GENERATOR.** All-silicon transistor, easily attaches to dashboard or bottom of BT35. Furnished with 6 ft. cable and plug for attaching to BT35. Provision for remote/accessory foot switch for generator activation. Siren may be operated automatically or manually. **List Price:** \$91.20 (Zone 2: \$91.60)

**BT20; 20-WATT TRANSISTOR MOBILE PA AMPLIFIER**

**Power Output:** 20 watts @ less than 10% (continuous) **Power Consumption:** Full power: 3.8 amps; Quiescent: 0.8 amps; 12-15 VDC **Frequency Response:** 250 to 12,000 cps ±3 db. **Inputs:** 1 mic. (low impedance) • 1 aux. (tuner, tape, phono) **Gain:** mic., 110 db.; aux., 90 db. **Hum and Noise:** mic., -90 db. (below rated output); aux., -95 db. (below rated output) **Sensitivity:** mic.: 1 mV; aux.: 0.4 volts **Output Impedance:** 4, 8, 16 ohms **Controls:** 1 mic.; 1 aux./power **Transistors:** (5): 2 - 2N2431, 1 - 2N555, 2 - 2N669 **Dimensions:** 4 1/2" W, 4" D, 6 1/2" H **Shipping Weight:** 5 lbs. **List Price:** \$99.90 (Zone 2: \$100.85)



BT35



BT20

All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.

# BOGEN SOUND SYSTEMS

## "CHB" SERIES PA AMPLIFIERS

Models CHB100, CHB1250, CHB50 and CHB35A share these outstanding features: systems-tested circuitry for continuous, heavy-duty operation; protection against circuit damage caused by accidental shorting or disconnecting of loudspeaker lines; no "double duty" control devices; built-in remote control circuit permits volume adjustment from up to 2,000 feet away; Memory Level Markers.



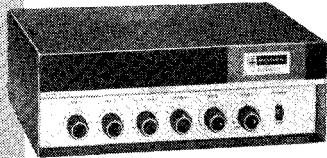
CHB100



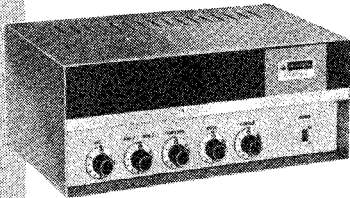
CHB1250 Shown with phono-top



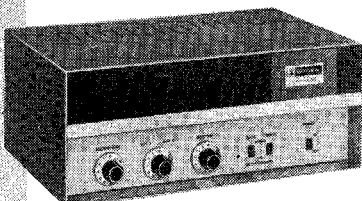
CHB50/CHB35A



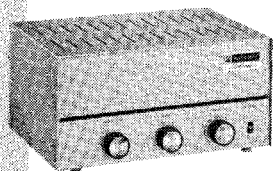
CHB1225



CHB20A



CHB14A



CHB10

	CHB100	CHB1250*	CHB50	CHB35A	CHB1225**	CHB20A	CHB14A	CHB10
<b>POWER OUTPUT</b>	100 w. at 5% distortion	50 w. at 10% continuous	50 w. at 5% distortion	35 w. at 10% distortion	20 w at 10% continuous	20 w at 5% distortion	14 w. at 5% distortion	10 w.
<b>FREQUENCY RESPONSE</b>	±2 db, 20 to 20,000 cps	±2 db, 30 to 15,000 cps	±2 db, 20 to 20,000 cps	±2 db, 20 to 20,000 cps	±2 db, 60 to 20,000 cps	±2 db, 20 to 20,000 cps	±2 db, 20 to 20,000 cps	±2 db, 40 to 12,000 cps
<b>INPUTS</b>	2 Mic. (hi-impedance) 1 Mag. Phono 2 Aux. (hi-impedance hi-level) Provision for WMT 1	2 Mic. (hi- or low impedance) or mag. phono/tape head 2 Aux. (hi-impedance hi-level)	2 Mic. (hi-impedance) 1 Mag. Phono 2 Aux. (hi-impedance hi-level) Provision for WMT 1	2 Mic. (hi-impedance) 1 Mag. Phono 2 Aux. (hi-impedance hi-level) Provision for WMT 1	2 Mic. (hi- or low impedance) 2 Aux. (hi-impedance hi-level)	1 Mic. (hi-impedance) 2 Aux. (hi-impedance hi-level) Provision for WMT 1	1 Mic. (hi-impedance) 2 Aux. (hi-impedance hi-level) Provision for WMT 1	1 Mic. (hi-impedance) 1 Phono (hi-impedance hi-level) Provision for WMT 1
<b>HUM &amp; NOISE (below rated output)</b>	Mic. -70 db Aux. -80 db	Mic. -65 db Aux. -80 db	Mic. -70 db Aux. -80 db	Mic. -65 db Aux. -80 db	Mic. -65 db Aux. -70 db	Mic. -65 db Aux. -80 db	Mic. -55 db Aux. -80 db	Mic. -60 db Phono -75 db
<b>SENSITIVITY</b>	Mic. 5 mv Aux. .3-v Mag. Phono 15 mv	Mic. less than 1 mv (low impedance) 2.5 mv (hi-impedance) Aux. .5-v	Mic. 5 mv Aux. .3-v Mag. Phono 15 mv	Mic. 4 mv Aux. .2-v Mag. Phono 12 mv	Mic. 3 mv (hi-impedance) Mic. 2 mv (low impedance) Aux. 0.5-v	Mic. 3 mv Aux. .5-v	Mic. 4 mv Aux. .4-v	Mic. 6 mv Phono .2-v
<b>GAIN</b>	Mic. 125 db Aux. 100 db Mag. Phono 115 db	Mic. 125 db Aux. 95 db	Mic. 120 db Aux. 95 db Mag. Phono 110 db	Mic. 125 db Aux. 100 db Mag. Phono 115 db	Mic. 120 db Aux. 90 db	Mic. 125 db Aux. 100 db	Mic. 120 db Aux. 95 db	Mic. 110 db Phono 90 db
<b>OUTPUT IMPEDANCE</b>	4, 8 and 16 ohms, 25-v line balanced, (6 ohms) 70-v line (50 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line balanced, (6 ohms) 70-v line, 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (12 ohms) 70-v line (100 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (18 ohms) 70-v line (143 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (25 ohms) balanced, 70-v line (196 ohms) balanced	4, 8 and 16 ohms, 25-v line balanced (31 ohms), 70-v line (250 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (45 ohm) (355 ohm) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (62 ohms), 70-v line (500 ohms) 1-speaker socket and screw terminals
<b>STONE CONTROL ACTION</b>	Treble (10 kc) ±12 db to -15 db Bass (50 cps) +14 db to -9 db	Treble (10 kc) -17 db Bass (50 cps) +10 db to -17 db	Treble (10 kc) +10 db to -15 db Bass (50 cps) +11 db to -10 db	Treble (10 kc) +10 db to -16 db Bass (50 cps) +14 db to -10 db	Treble (10 kc) -11 db Bass (50 cps) +9 db to -9 db	Treble (10 kc) +10 db to -15 db Bass (50 cps) +14 db to -10 db	Treble (10 kc) -15 db Bass (50 cps) -17 db	Treble (10 kc) -24 db
<b>TUBES or TRANSISTORS</b>	Total of 7 tubes and silicon rectifier: 1-6EU7 1-12AX7 4-7868 1-6C4	Total of 9 transistors and silicon rectifier: 6-2N417 2-2N1557 1-2N669 1-MR322	Total of 5 tubes and silicon rectifier: 1-6EU7 2-6L6GC 1-6C4	Total of 5 tubes, 2 silicon rectifiers and 1-silicon diode: 1-6EU7 2-7868 1-12AX7 1-6C4	Total of 11 transistors and 3 silicon rectifiers: 9-2N2712 2-RCA 40050 (matched) 1-50D100D 2-50D100A	Total of 3 tubes, 2 silicon rectifiers and 1-silicon diode: 1-6EU7 2-6GW8	Total of 3 tubes, 2 silicon rectifiers: 1-12AX7/ ECC 83 1-7868 1-6AU6/ E280	Total of 3 tubes: 1-12AX7/ ECC 83 1-7868 1-6AU6/ E280
<b>POWER CONSUMPTION</b>	300 w 105-125 VAC 50-60 cycles	No signal 0.8A (12 VDC) Max. signal 7.5A (12 VDC)	150 w. 105-125 VAC 50-60 cycles	125 w 105-125 vac 50-60 cycles	No Signal 12 w (117 vac) 0.3A (14 VDC) Max. Signal 50 w (117 VAC) 2.5A (14 VDC)	90 w 105-125 (VAC) 50-60 cycles	70 w 105-125 (VAC) 50-60 cycles	50 w 105-125 (VAC) 50-60 cycles
<b>DIMENSIONS</b>	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	4-7/16" H, 13¾" W, 10" D	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	5¾" H, 11¾" W, 8¾" D
<b>SHIPPING WEIGHT</b>	25 lbs.	17 lbs.	21 lbs.	21 lbs.	17 lbs.	17 lbs.	16 lbs.	Model CHB10 12 lbs. Model CHB10-LC (less cage) 10 lbs.
<b>LIST PRICE</b>	\$194.85 (Zone 2: \$198.60)	\$187.25 (Zone 2: \$189.80)	\$142.35 (Zone 2: \$145.50)	\$122.35 (Zone 2: \$125.35)	\$182.25 (Zone 2: \$184.50)	\$99.90 (Zone 2: \$102.45)	\$79.85 (Zone 2: \$82.40)	Model CHB10 \$64.75 (Zone 2: \$66.50) Model CHB10-LC (less cage) \$60.00 (Zone 2: \$61.50)

\*Operates on 12-15 VDC \*\*Operates on 12-15 VDC and 117 VAC

Accessories: matching phono-top, control-guard locking plate, rack panel mounting kits, carrying cases, remote volume controls . . . and more. WMT1 transformer provides 500/600 ohm telephone line input for wired background music.

LEAR SIEGLER, INC.

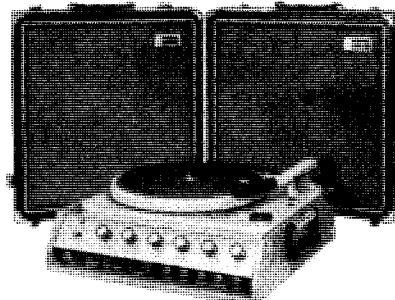
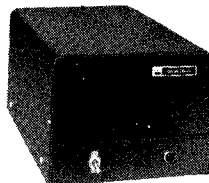


BOGEN COMMUNICATIONS DIVISION



## "MO" SERIES BOOSTER AMPLIFIERS

	MO100A	MO60A	MO30A	MT30 ALL TRANSISTOR BOOSTER
<b>POWER OUTPUT</b>	100 w. at less than 2% distortion	60 w. at less than 2% distortion	30 w. at less than 2% distortion	30 w. at less than 1% distortion
<b>POWER CONSUMPTION</b>	250 watts	160 watts	105 watts	60 watts (117 VAC or 12-15 VDC)
<b>FREQUENCY RESPONSE</b>	±1 db, 8 to 50,000 cps	±1 db, 4.5 to 70,000 cps	±1 db, 4.5 to 70,000 cps	±1 db, 10 to 25,000 cps
<b>INPUTS</b>	High impedance: 0.5 megohms Low impedance: 500 ohms with T161 transformer	High impedance: 0.5 megohms Low impedance: 500 ohms with T161 transformer	High impedance: 0.5 megohms Low impedance: 500 ohms with T161 transformer	High impedance convertible to low impedance with T161, T163, T165B line transformers
<b>SENSITIVITY</b>	High impedance: better than 2-v; Low impedance: with T161 transformer, better than 0.5-v	High impedance: better than 2-v; Low impedance: with T161 transformer, better than 0.5-v	High impedance: better than 2-v; Low impedance: with T161 transformer, better than 0.5-v	High impedance: 1-v; Low impedance: with T161 transformer 0.25-v
<b>HUM (below rated input)</b>	-80 db	-80 db	-80 db	-85 db
<b>OUTPUT IMPEDANCE</b>	16 ohms balanced, 25-v C.T. balanced (6.25 ohms), 70-v C.T. balanced (49 ohms), and 115-v output (for industrial applications)	4, 8, 16 ohms, 25-v (10 ohms) balanced, 70-v (83 ohms) balanced	4, 8, 16 ohms, 25-v (21 ohms) balanced, 70-v (163 ohms) balanced	4, 8, 16 ohms, 25-v (21 ohms) balanced, 70-v (163 ohms) balanced
<b>TUBES or TRANSISTORS</b>	(5) tubes and (3) silicon rectifiers: 1-7247, 4-8417	(3) tubes, (2) silicon rectifiers (1) bias sil-diode 1-7247, 2-8417	(3) tubes, (2) silicon rectifiers, (1) bias sil-diode: 1-7247, 2-7868	(6) transistors (2) silicon diodes
<b>DIMENSIONS</b>	8" W, 13" D, 6¾" H	8" W, 13" D, 6¾" H	8" W, 13" D, 6¾" H	8" W, 13" D, 5" H
<b>SHIPPING WEIGHT</b>	29 lbs.	28 lbs.	23 lbs.	19 lbs.
<b>LIST PRICE</b>	\$227.40 (Zone 2: \$232.65)	\$176.25 (Zone 2: \$180.45)	\$144.90 (Zone 2: \$148.40)	\$173.15 (Zone 2: \$176.35)

BOGEN  
SOUND SYSTEMSMO100A  
MO60A  
MO30A  
MT30

VP50-DS

"VP" SERIES  
PORTABLE TRANSCRIPTION PLAYERS

## VP25 &amp; VP50 ALL-TRANSISTOR SYSTEMS

**Phono Mechanism:** high-fidelity B51 turntable; automatic tone arm cueing; continuously variable speed from 29 to 86 rpm — plus 4 click-stop speed positions (16, 33-1/3, 45, and 78 rpm); rubber turntable mat; up to 16" records; separate motor power switch; complete with G.E. variable reluctance cartridge with dual sapphire-tipped styli.

**Amplifier:** — **Power Output:** VP25 — 20 w. (continuous sine wave), 30 w. (peak); VP50 — 40 w. (continuous sine wave), 60 w. (peak). **Transistor and Diodes:** VP25 (total 15); 11 — 2N2712 silicon, 2 — 2N2147 germanium, 2 — silicon diodes; VP50 (total 17); 9 — 2N2712 silicon, 2 — 2N3053 silicon, 4 — 2N2147 germanium, 2 — silicon diodes. **Frequency Response:** ±1 db, 45-18,000 cps. **Power Consumption:** VP25 — 50 w. (117 VAC); Ampl: 2 amp. 12-15 VDC; VP50 — 120 w. (117 VAC); Ampl: 6 amp. 12-15 VDC (Note: inverter is required for both VP25 and VP50 to operate phono mechanism on 12-15 VDC). **Inputs:** (4) Mic. 1; Radio/Tape; Phono (internal); Mic. 2. **Outputs:** VP25 — 2-8 ohm speaker sockets 10 w. each; Monitor; Tape. VP50 — 2-speaker sockets on panel; 2-speaker sockets on bottom — all in parallel — connected to impedance selector lug. Terminal strip: 4, 8, 16 ohm and 25 v. balanced 70 v.; Monitor; Tape. **Controls:** Channel 1: Treble; Bass; Vol; Selector Switch; Channel 2: Vol; Four position Tone Switch, Power Switch.

**Systems:** VP25 — in single portable case; heavy 12" loudspeaker in lid; 25' cable and plug. Dimen.: 15¾" W, 16¼" D, 10¾" H (less handle and projections). **Ship. Wt.:** 34¼ lbs. **List Price:** \$236.30 (Zone 2: \$240.25) VP50-DS: in two portable cases; split speaker case offers two 12" loudspeakers each with 25' cable and plug. Dimen.: transcription player case: 15¾" W, 16¼" D, 7" H (less handle and projections). Speaker case: 15¾" W, 16¼" D, 11½" H (less handle and projections). **Ship. Wt.:** combined 48 lbs. **List Price:** \$332.35 (Zone 2: \$338.15).

VP-25-SC: same as VP25 with the addition of one SC-35 sound column with one type C2 cable (25') **List Price:** \$339.60 (Zone 2: \$346.65).

VP50-SC: same as VP50-DS but with two SC-35 sound columns instead of the two 12" speakers. **List Price:** \$461.85 (Zone 2: \$471.75).

VP50-LS: same as VP50-DS but without speakers. **List Price:** \$255.25 (Zone 2: \$259.15).

**Accessories:** DS-12 speaker case — split case mounts 2-12" loudspeakers with cables and plugs. **Wt.:** 16 lbs. **List Price:** \$77.10 (Zone 2: \$79.05).

DS-12AD — similar to DS-12 but with cables and plugs which permit using 4 or more speakers. **Wt.:** 16 lbs. **List Price:** \$77.10 (Zone 2: \$79.05).

SC-35 Sound Column — 35 w. sound column complete with cable and plug. 42" H, 6" D, 9½" W. **Wt.:** 25 lbs. **List Price:** \$103.35 (Zone 2: \$106.35).

MON-2 Monitor Amplifier System includes 10 w. high gain amplifier and 8" Alnico PM speaker in carrying case. **List Price:** \$87.65 (Zone 2: \$90.90).

C3 Battery Connector Cable: used to operate VP25 and VP50 amplifiers from 12-15 v. battery. **List Price:** \$6.15 (Zone 2: \$6.40).

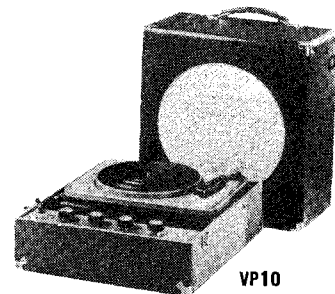
Several types of microphones are available.

**VP10** — budget-priced portable. **Phono Mechanism:** silent-operating, sturdy B41 record player with automatic motor start will play all records up to 12" at 4 standard speeds (16, 33-1/3, 45 and 78 rpm).

**Amplifier:** wide-range 10-watt peak; speaker connector on front panel; power switch; bass & treble controls; volume controls for phono and microphone; input for mic. jack. **Tubes:** total of 4 (1 — 6AV6, 1 — E281, 1 — 12AX7, 1 — 7355). **Dimen.:** 15½" x 14" x 11½". **Ship. Wt.:** 26 lbs. VP10 in single carrying case with 1 heavy-duty 12" speaker and 25' cable mounted in removable cover. **List Price:** \$129.10 (Zone 2: \$133.10). Lectern Accessory LEC-1 is available.



VP25



VP10

All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.



# BOGEN SOUND SYSTEMS

## SERIES "T" INTERCOMS

Fully transistorized intercoms of unlimited flexibility, high intelligibility, simple installation and unique styling.

**TIA-6 MASTER STATION** (can call any other station). For systems up to 6 stations — all masters or one master plus remotes. Vol. control, talk-listen bar and 7-position selector (including "mute" and "all-call" positions.) Operates from 117 v. AC; 8 w. power consumption, 8 ohm speaker impedance. Dimen.: 7 $\frac{3}{4}$ " W, 7" D, 4" H. Ship. Wt.: 4 lbs. List Price: \$59.40 (Zone 2: \$60.00)

**TIA-12 MASTER STATION**. For systems up to 12 stations. Similar to TIA-6 in design and operation but does not permit calling all stations simultaneously. Dimen. and Ship. Wt. same as TIA-6. List Price: \$66.25 (Zone 2: \$66.85)

**RIA-1 REMOTE STATION** (can call only 1 pre-selected master and reply when called). Similar in appearance to TIA-6 with matching loudspeaker. Dimen.: same as TIA-6. Ship. Wt.: 3 lbs. List Price: \$18.10 (Zone 2: \$18.55)

**TIM-12 MASTER STATION**. For intermix systems combining up to 12 masters and remotes in any combination. Same features as TIA-6 plus 12-position selector switch. Specifications, dimensions, and ship. wt.: same as TIA-6. List Price: \$79.90 (Zone 2: \$80.50)

**RIM-6 SELECTIVE REMOTE STATION** (can call any of 6 pre-selected masters). Features, dimensions: same as TIM-12. Ship. Wt.: 3 lbs. List Price: \$39.85 (Zone 2: \$40.30)

## SERIES "X" INTERCOMS

Rugged utility intercoms, used in an 11 or 22 station system (all masters or mixed masters and remotes); featuring push-button convenience, high intelligibility, and simple installation, housed in handsome tan and gold steel cabinets.

**Power Supply:** 117 v. AC, 35 w. **Output Impedance:** 50 ohms balanced. **Tubes:** 3 (1 — 12AX7, 1 — 6W6GT, 1 — 6X4). **Dimen.:** X120B & X220B — 10" W, 7 $\frac{1}{2}$ " D, 7" H.

**X120B MASTER STATION** can call up to 10 masters or remotes. 10 selector push-buttons, 6 ft. master cable ending in plug for solderless connections to junction box, complete with tubes. Ship. Wt.: 15 lbs. List Price: \$141.50 (Zone 2: \$143.75)

**X220B MASTER STATION** can call up to 21 masters or remotes. 21 selector push-buttons, same features as X120B. Ship. Wt.: 16 lbs. List Price: \$173.90 (Zone 2: \$176.30)

**REM-1A REMOTE** with call-initiating switch to 1 master — with vol. control and 6-ft. cable. Ship. Wt.: 3 lbs. List Price: \$31.00 (Zone 2: \$31.40)

**REM-3A REMOTE** with selective call-initiating switch to 3 masters — with vol. control and 6-ft. cable. Ship. Wt.: 3 lbs. List Price: \$37.75 (Zone 2: \$38.15)

**HSX HANDSET** for private conversation — attaches to X120B and X220B. List Price: \$66.60 (Zone 2: \$67.00)

**JB-2 JUNCTION BOX** (one required for X120B; two for X220B) List Price: \$9.85 (Zone 2: \$10.15)

## INTERNAL PHONE SYSTEMS

**TSL-BOGEN-PHONES** — a unique and extremely flexible telephone system that provides multiple, simultaneous conversations without a costly central exchange. To call, lift phone, press selector button, and then ring-button . . . buzzer sounds at called station, person called lifts phone and starts conversation . . . no switching, no dialing, no switchboard delay. System provides 100% trunkage.

**TSL-16** with 1 ring button and 15 station selector buttons. Dimen.: 9 $\frac{1}{2}$ " W, 3 $\frac{1}{4}$ " D, 3 $\frac{3}{4}$ " H. Ship. Wt.: 4 lbs. List Price: \$53.25 (Zone 2: \$53.75)

**TSL-8** with 1 ring button and 7 station selector buttons. Same dimensions and Ship. Wt. as TSL-16. List Price: \$45.65 (Zone 2: \$46.00)

**PRS-16 Power Supply** (1 required for each telephone system). Dimen.: 6" W, 2" D, 3 $\frac{1}{2}$ " H. Ship. Wt.: 5 lbs. List Price: \$48.80 (Zone 2: \$49.40)

**TRC Phone-Page Adapter** allows paging from Series TSL phones: List Price: \$42.20 (Zone 2: \$42.50)

**TQ BOGEN-PHONES** — low-cost telephone system. To call, lift phone, press station button . . . buzzer sounds at called station . . . bypassing the switchboard. Selective ringing with common talk line. Handset with base is 9 $\frac{1}{2}$ " x 3 $\frac{3}{4}$ " x 3 $\frac{3}{4}$ ", Ship. Wt.: 5 lbs.; comes supplied with 4' snarlproof cord and junction box.

**TQ-1** (pair) for 2-station systems. List Price: (pair) \$51.45 (Zone 2: \$52.05)

**TQ-1B TWIN-PHONE** — 2-station battery-operated phone system. Requires 4 standard Type D Flashlight cells. Supplied complete with 2 instruments, 50' of cable, battery case and connectors. List Price: \$45.80 (Zone 2: \$46.40)

**TQ-6A** phone for up to 7-station system. List Price: (each) \$29.35 (Zone 2: \$29.65)

**TQ-12A** phone up to 13-station system. List Price: (each) \$36.00 (Zone 2: \$36.35)

**PRS-1A Power Supply** (1 required for each system) List Price: \$31.55 (Zone 2: \$31.85)

**TRA Phone-Page Adapter** allows paging from Series TQ phones: List Price: \$42.20 (Zone 2: \$42.50)

**PRS-5 Multi-mix Power Adapter** to combine TQ-12A or TQ-6A phones with trumpets and PA amplifier. List Price: \$147.37 (Zone 2: \$148.25)

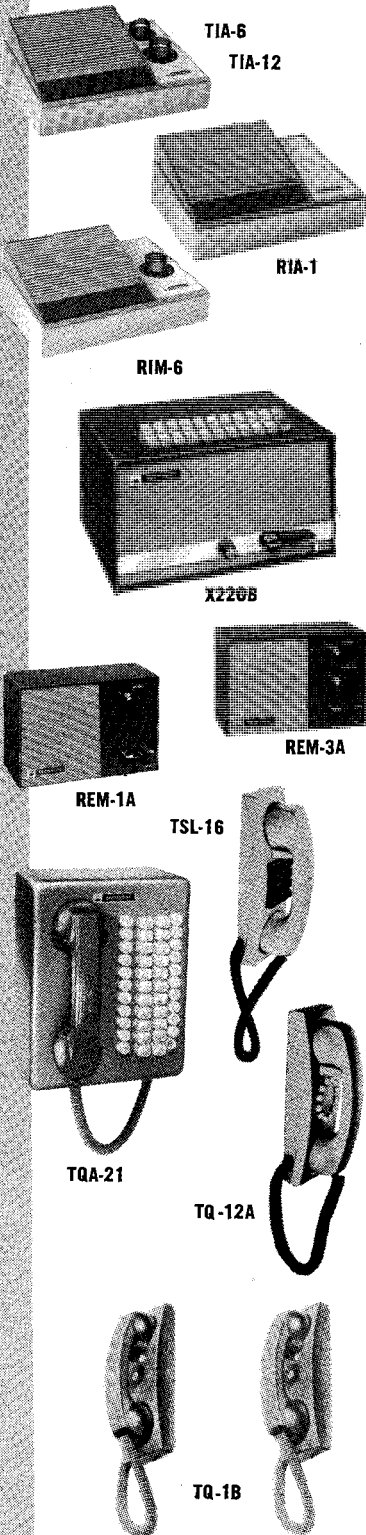
**TQA ATTEND-A-PHONE** System gives communication between a central location and each of a number of remote stations. May be used with TRA adapter for paging through amplifier and loudspeakers. Features: low-cost installation, easily expanded, simple to use, completely private.

**TQA-21 Central Switchboard** — master station with handset and 21 pushbuttons with signal lamps, signal bell and power supply which plugs into standard 110 v. AC outlet, 6' cables and plugs. Dimen.: 8 $\frac{1}{2}$ " W, 7 $\frac{1}{2}$ " D, 10 $\frac{1}{4}$ " H. Ship. Wt.: 14 $\frac{1}{2}$  lbs. List Price: \$270.25 (Zone 2: \$271.10)

**XQA-21 Expansion Board** — used in connection with TQA-21 to provide switching facilities for additional 21 remote stations. No additional power equipment needed. Dimen.: 5 $\frac{3}{4}$ " W, 5 $\frac{3}{4}$ " D, 10 $\frac{1}{4}$ " H. Ship. Wt.: 9 lbs. List Price: \$204.35 (Zone 2: \$205.00)

**TQX Remote Station Phone** — composed of handset, coiled cord, base and junction box, which may be desk or wall mounted. Dimen.: 3 $\frac{1}{4}$ " W, 3 $\frac{1}{4}$ " D, 9 $\frac{1}{2}$ " H. Ship. Wt.: 4 lbs. List Price: \$31.85 (Zone 2: \$31.95)

**JB2 Junction Box** (2 required for each TQA-21 and XQA-21). List Price: \$9.85 (Zone 2: \$10.15)

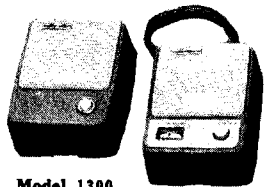


# FAJON-MASCO

# INTERCOMS

The complete intercom line styled for the modern office and home at economy prices.

## WIRED SYSTEMS



Model 1300

**Model 1300**—The most economical 2-station transistorized intercom system, complete with 50 ft. cable. Suitable for 117V. AC or optional battery use. Remote can call master even if turned "off." Ideal for the home or office. Volume control and press-to-talk switch. Weight 3½ lbs.

**\$15.95 Net**

**Model 1300DC**—Similar to Model 1300 (above) but suitable for 9V battery use only. (Eveready 216 or equivalent). Battery not supplied.

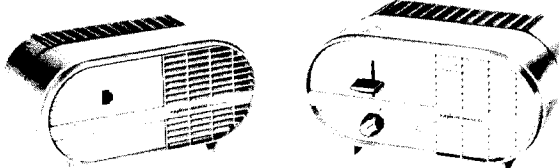
**\$13.50 Net**

**Model PS-13**—A special power supply used with Model 1300DC to adapt if for AC operation. May also be used as a 9V battery recharger.

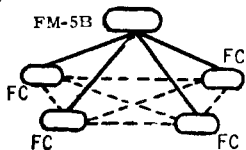
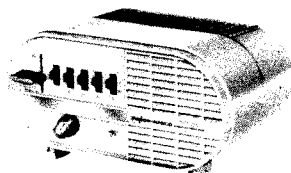
**\$3.20 Net**

**Model 131**—Outdoor remote for use with Model 1300 to expand system and provide door intercom. **\$5.25 Net.**

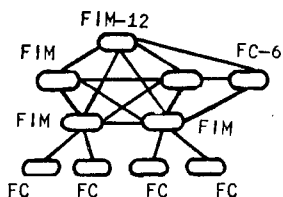
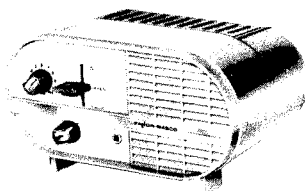
**Model 132**—Indoor remote to be used with Model 1300 to expand number of stations in system. **\$4.50 Net.**



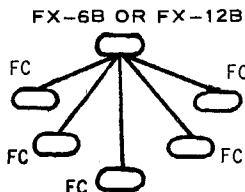
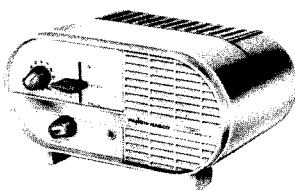
**FX-2B TWIN**—\$23.90 Ultra-sensitive 2-station system with 50 ft. cable. Powerful amplifier picks up slightest noise. Three way Dictate-Talk-Listen switch. Remote has TALK-LISTEN switch to permit originating calls to master: Use it anywhere—home or business. Extra remote FSB may be added: **\$7.95.** Weight: 6 lbs.



**FM-5B MONITOR**—\$25.40. A master used with up to four FCB remotes in a MASTER-TO-REMOTE system. "Switch-board" feature provides direct remote-to-remote conversations. Master can monitor any or all remotes. Master can "set-up" remotes to monitor other remotes. Remotes can originate calls to master and to other remotes. Busy-light flashes during conversations. Weight: 4 lbs.



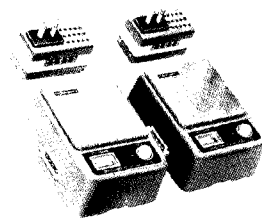
**FIM-12B INTERMIX**—\$31.20. A deluxe twelve station intermix master which can be used in any combination of masters and/or remotes. Master has 3 position Talk-Listen-Dictate switch. Use in conjunction with two types of remotes: FC-6 which can selectively call any one of six masters, and FCB which can call only one master. Weight: 4 lbs.



**FX-12B MANAGER**—\$28.40. A dual purpose master for use with up to ten FC remotes, in a MASTER-TO-REMOTE system, or up to eleven masters in ALL MASTER system. Twelve position rotary selector switch with "All-Call" and "Standby". Dictate-Talk-Listen switch. Five private conversations may be held in an all master system. New: Masters can be non-private "hands free" operation. Weight: 4 lbs.

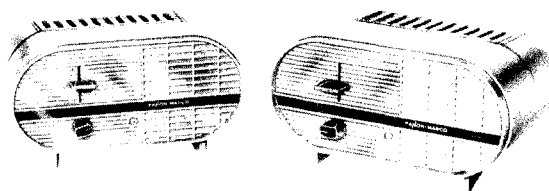
**FCB, REMOTE**—\$8.40—Used in conjunction with FM-5B, FX-6B, FIM-12B.

## WIRE-LESS SYSTEMS

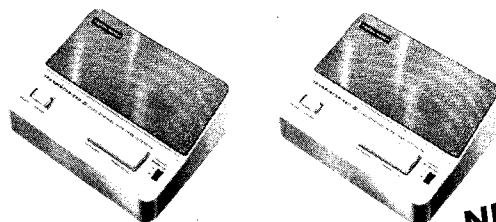


**NEW!**

**Model 1340—Economy WIRELESS—39.95.** A complete transistorized 2 station wireless system ready to operate. Simply plug them into AC outlets (on same power line). These operate on very low voltage from their own AC power supply. Each unit 4½"x3½". Special noise-free, high sensitivity circuit is used. All metal construction. Sandalwood tan and gold. 2½ pounds. Model 1341, Additional single station wireless units. **\$20.95**

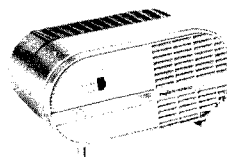


**FW-50B DeLuxe WIRELESS—49.95.** A complete 2 station system ready to operate. No wires—no installation—just plug into any AC or DC outlet. Four tubes plus silicon rectifier amplifier. Three way Talk-Listen Dictate switch. Weight: 7 lbs. Model FW-51, additional single station for above, may be added. **\$25.45.** 4 lbs.



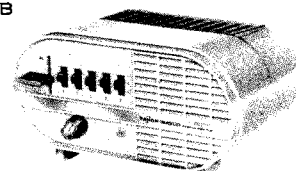
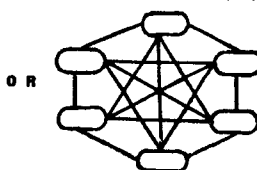
**NEW!**

**FW-60—Dual Channel WIRELESS—59.95**—Extremely sensitive 2-station wireless has 5 transistors—3 diodes and can be operated on two separate communication frequencies. This permits two systems to be operated independently of one another or permits selective call. Portable—can be moved from room to room or between buildings. A.V.C. circuit eliminates noise and distortion. Each 6½"x5¼". Five pounds. Model FW-61, additional single station wireless units. 2½ lbs. **30.70**



**RB-1, BABY-COM—14.50:** A one-station, wire-less radio intercom. No installation, no wires required—merely plugs in to any AC or DC outlet and voice is heard through any radio (even car or battery radios). Ideally suited as a portable baby-sitter. Extremely sensitive, can be heard 300 ft. away. Blue & pink cabinets. Weight: 4 lbs.

All FX-6B OR FX-12B



**FX-6B EXECUTIVE—23.90** A dual purpose master, for use with up to five FC remotes in a MASTER-TO-REMOTE system, or up to six masters in ALL MASTER system. Five individual station selector switches. Dictate-Talk-Listen switch. In all master systems, 3 private conversations or conference of all stations may be held. Weight: 4 lbs.

**FC-6B, REMOTE—13.20**—Six station selective remote used with FIM-12B

# FANON-MASCO

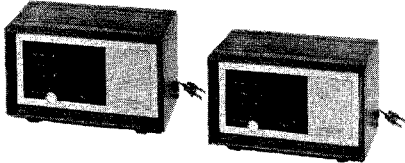
# INDUSTRIAL INTERCOMS

## Exciting New EXECUTIVE Series

Characterized by its distinctive walnut cabinetry, an exciting new line of intercoms fills the need for deluxe intercommunication equipment.

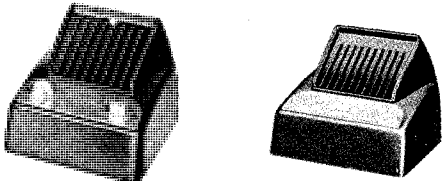
Moderately priced, the FANON-MASCO "Executive" series offers exceptional styling and skilled craftsmanship. Finished in rich, hand-rubbed oil walnut, each unit is 9½" x 5" x 4¼" deep. Black and gold appointments.

The "Executive" series is offered as a 2-station wired or 2-station wireless system to which additional units can be added. A 6 station selective master as well as a non-selective master are also available.



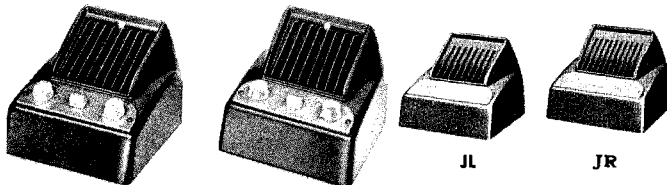
### WIRELESS

**X-604 Executive WIRELESS.** \$62.95 Net. —A complete two-station system ready to operate—just plug in any AC or DC outlet, turn on and talk. Four tubes and silicon rectifier amplifier. Special squelch circuit for noise-free operation. Three-way talk-listen-dictate switch. Additional stations Model X-602 may be added to wireless system—Each \$32.95 Net.



**DELUXE JMR**—Highly sensitive two-station intercom system in heavy duty die-cast metal cabinets with durable enamel finish. Rugged pushbar talk-listen switch on both master and remote. Remote can answer "hands free" or be completely private. Volume control and pilot light on master. 7½" x 6¾" x 5½" high. Weight of 2 station system with 50' of cable: 10 lbs. \$41.25 Net.

**MODEL JR**—Additional remote station for above. Weight: 5 lbs. \$11.35 Net.



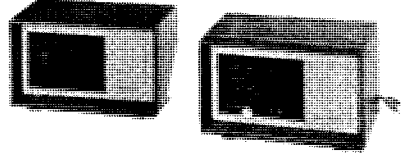
**SIX AND ELEVEN STATION MASTERS—IJM-5 and IJM-10.** These famous dual-purpose masters are designed for both master-to-remote and master-to-master operation. No modification is required as units have built-in switch for immediate conversion. Heavy duty die-cast cabinets in durable enamel finish. **IJM-5** can be used with up to 5 other masters or remotes. **IJM-10** for use with up to 10 other masters or remotes. All masters can carry on up to 5 separate conversations at the same time. Any master can be called even if its power is off. All have station selector switch, volume control and pushbar "talk-listen-lock" position. A paging horn can be added. Size each: 7½" x 6¾" x 5½"

**IJM-5** six station master \$33.00 Net.

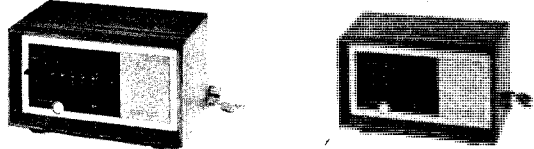
**IJM-10** eleven station master \$38.25 Net.

**REMOTES FOR USE WITH ABOVE IJM-5 and IJM-10:**  
**JL** remote, less talk-listen switch. Weight: 3½ lbs. \$10.65 Net.  
**JR** remote, with talk-listen switch. Weight: 3½ lbs. \$11.35 Net.

### 2-STATION WIRED

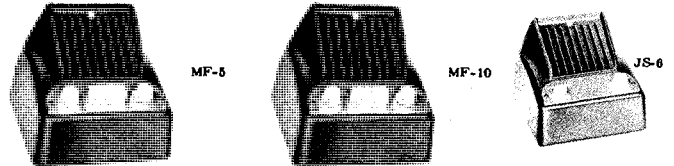


**X-600 Executive WIRED.** \$37.50 Net. —Ultra-sensitive two station system includes X-601 master and XR-01 remote with 50 feet of cable. Master has talk-listen-dictate switch; Remote has talk-listen switch to originate calls to master and may be used as private or non-private remote. Additional XR-01 units may be added to system. Each \$14.95 Net.



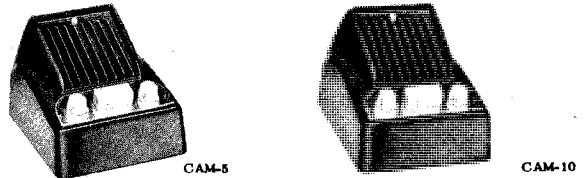
**X-606 Executive 6-station MASTER.** \$29.95 Net. —Selective master for use with five other X-606 in all-master system or with five XR-01 remotes. All master system provides 3 simultaneous conversations.

**X-601 Executive NON-SELECTIVE Master.** \$23.95 Net. Can be used with up to five XR-01 remotes. Call originating at master is heard by all remotes simultaneously. Remotes can call master at will.



### INTERMIXED SYSTEM MASTERS BALANCED LINE

Model MF-5 six station master and MF-10 eleven station master units for use in combination with other remotes or other masters. Heavy duty, "big job" masters of die-cast metal in durable enamel. Each has station selector switch, volume control and push-bar "talk-listen" switch. In an eleven station all-master system up to five separate conversation lines are available. A master may be called even though it is turned off. Cabinet size: 7½" x 6¾" x 5½". Weight per unit: 7 lbs. MF-5 six station master \$41.25 Net. MF-10 eleven station master \$46.80 Net.



### INTERMIXED SYSTEM MASTERS

#### AC POWER TRANSFORMER

**MODEL CAM-5** six station master and **MODEL CAM-10** eleven station master similar to above but with higher audio power output and AC power transformer. **CAM-5** six station master weight: 7 lbs. \$51.75 Net. **CAM-10** eleven station master weight: 7 lbs. \$57.75 Net.

#### REMOTES

**MODEL JL** remote, less talk-listen switch. Weight: 3½ lbs. \$10.65 Net  
**MODEL JS** remote, with talk-listen switch. Weight: 3½ lbs. \$13.75 Net  
**MODEL JS-6** six-station selective remote to call up to six masters in system, Talk-listen switch. Weight: 3½ lbs. \$22.70 Net.

## 7 and 13 Station BALANCED LINE Masters

A completely flexible system designed for most comprehensive installations. The Model JMP-6B accommodates up to six master or remote stations and the Model JMP-12B can handle up to twelve additional masters or remotes. The masters can call any of the remotes in the system at the same time and can also page and receive replies from paging horns. Conferences can be arranged between masters and up to 6 separate conversation lines are available in a 13 station master-to-master system.

Cabinet is heavy-duty die-cast metal with durable grey enamel finish. Size overall: 13" x 8½" x 5½" high.

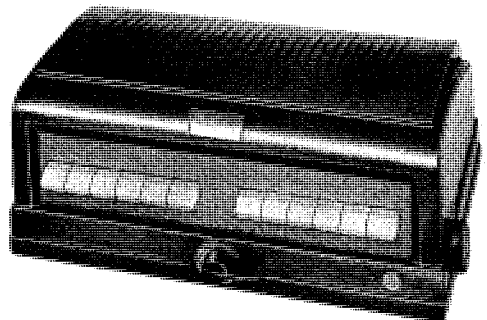
**JMP-6B** Seven station master. Weight: 10½ lbs. \$71.70 Net.

**JMP-12B** Thirteen station master. Weight: 10½ lbs. \$77.60 Net.

## AC POWER TRANSFORMER BALANCED INTERMIX SYSTEMS

**MODEL AC-12B** Thirteen station. Weight: 12½ lbs. \$108.60 Net.

**MODEL AC-24B** Twenty-five station. Weight: 12½ lbs. \$126.75 Net.



# FANON-MASCO

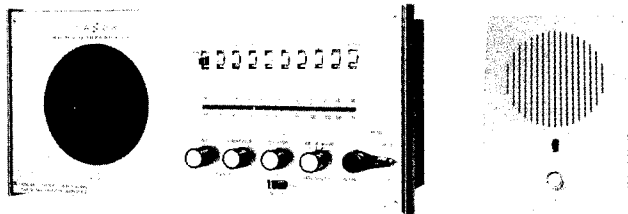
## FLUSH-WALL INTERCOMS

### AM/FM, MUSIC AND INTERCOM SYSTEM FOR HOME

**FANON MASCO 5500** Master provides up to nine remotes for AM or FM reception plus phono music or voice. Input accommodates record player or tape recorder. Highly sensitive and selective AM and FM tuners and wide band noise free amplifier rated at 2 watts. AFC on tuner with AFC-OFF switch for tuning weak stations. Master and remote can call each other at any time. Remotes can call each other by switching at master. Master may monitor all remotes. Each remote has volume control. Satin chrome or copper front panel: 15 $\frac{1}{4}$ " x 7" x 1". Rough-in dimensions: 13 $\frac{3}{4}$ " x 5 $\frac{3}{8}$ ". Ship wt.: 12 $\frac{1}{2}$  lbs. **\$104.95 Net.**

**MODEL 56 INDOOR REMOTE**—High styled indoor remote with talk-listen switch and volume control. Five inch speaker. Satin chrome or copper finish. 6" x 8 $\frac{1}{2}$ ". Rough-in dimensions: 4 $\frac{7}{8}$ " x 8". Ship wt.: 2 $\frac{1}{2}$  lbs. **\$9.75 Net.**

**MODEL BD OUTDOOR REMOTE**—Weatherproof gasket sealed Weatherized speaker. Remote can originate call to master. Durable copper enamel finish. 4 $\frac{3}{4}$ " x 6 $\frac{3}{4}$ ". Rough-in dimension: 3 $\frac{3}{4}$ " x 5 $\frac{1}{4}$ ". Ship wt.: 2 lbs. **\$5.95 Net.**  
**BDR REMOTE** same as above with pushbutton. **\$7.50 Net.**

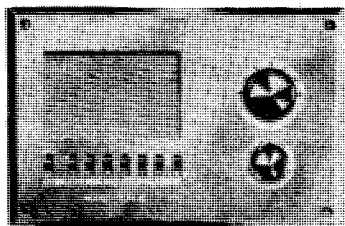


COMPLETE SYSTEM CONSISTS OF:

**FANON MASCO 55EK** . . . 1 master, 3 Model 56 indoor remotes, 1 Model BD outdoor remote, hardware. Ship wt.: 24 lbs. **\$119.95 Net.**

**FANON MASCO 55IK** . . . complete installation kit of rough-in materials, plaster rings, 200 feet of cable for 55EK. Ship wt.: 8 lbs. **\$14.95 Net.**

### MUSI-TALK AM RADIO AND INTERCOM SYSTEM



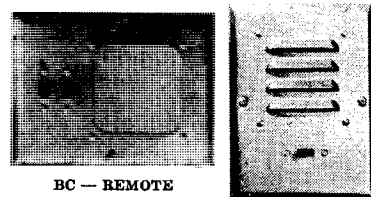
MC — MASTER CONTROL

#### FANON MASCO MC, MASTER CONTROL

A six tube, six-station master from which you may converse with any or all remotes. The master can "set-up" two or more remotes for direct communication with one another. "Monitor" feature enables master and remotes to eavesdrop any other locations. Powerful printed circuit radio can be "piped" to as many rooms as desired. Simultaneous radio and intercom operation is featured. Stylish satin copper panel is 11" x 7 $\frac{3}{4}$ ". **\$52.50 Net.** Rough-in dimensions: 5 $\frac{1}{2}$ " x 10 $\frac{1}{4}$ " x 3 $\frac{1}{2}$ ".

#### FANON MASCO MCL, MASTER CONTROL

Has all the intercom features listed above, less the radio. A phono input jack enables you to plug in any external music source for complete music distribution. **\$32.95 Net.**



BC — REMOTE

BD — REMOTE

**BC, INDOOR REMOTE**—Four indoor remotes provide instant 2-way conversation among themselves and the master, as well as radio-music throughout the home. Remotes can originate calls to the master, or to other remotes. Remotes may also "monitor" any other locations. Talk-Listen switch and Privacy switch. Satin copper panel is 6 $\frac{1}{4}$ " x 4 $\frac{3}{8}$ ". **\$5.95 Net.**

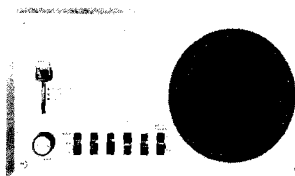
**BD, DOOR REMOTE**—Has weatherproof rubber gasket and "weatherized" speaker to withstand all types of weather. Door remote can originate calls to the master and any indoor remote. Enables you to answer the door from within the house and to "pipe" music to the porch or patio. Copper finish panel 6 $\frac{3}{4}$ " x 4 $\frac{3}{8}$ ". List: **\$5.95.** EDR outdoor remote w/pushbutton **\$5.95 Net.**

**FANON-MASCO EK** (Electronic Kit) — Consists of 1 MC Master Control, (with radio), 3 BC Indoor Remotes, 1 BD Door Remote and hardware. **\$62.95 Net.**

**FANON MASCO EKL** (Electronic Kit) — Consists of 1 MCL Master Control, (less radio), 3 BC Indoor Remotes, 1 BD Door Remote and hardware. **\$44.95 Net.**

**FANON MASCO IK** (Installation Kit) — Consists of 1 master plaster box, 4 remote plaster boxes, 200 ft. of wire and hardware. This installation kit is used in conjunction with either the EK or EKL electronic kits. **\$11.95 Net.**

### TRANSISTORIZED SIX STATION INTERCOM SYSTEM



COMPLETE SYSTEM CONSISTS OF:

**FANON MASCO 44EK** . . . One master, 3 model BC indoor remotes, 1 model BD outdoor remote, hardware. Ship wt.: 13 lbs. **\$42.60 Net.**

**FANON MASCO 44IK** . . . complete installation kit of rough-in materials, plaster rings, 200 feet of cable. Ship. wt.: 5 lbs. **\$11.25 Net.**

**FANON MASCO 4400** —Built-in and battery operated the master provides for up to five remotes. Complete two-way communication from master to all remotes or master can set up remote to remote. Long battery life when master is in "standby" since no battery drain occurs until signalled with "beep" tone from remote. "Battery saver" switch limits drain when in monitor or baby-sitting position. Music can be added to system, by plugging radio or phono into jack on BJ remote. Satin chrome or copper front panel: 10 $\frac{1}{2}$ " x 5 $\frac{3}{4}$ ". Rough-in dimensions: 9 $\frac{5}{8}$ " x 4 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ ". Ship wt.: 5 lbs. **\$35.25 Net.**

**MODEL BC INDOOR REMOTE**—Remotes may originate calls to master or monitor other remotes. Talk-listen switch and "privacy" switch. Satin chrome or copper finish panel: 6 $\frac{1}{4}$ " x 4 $\frac{3}{8}$ ". Rough-in dimensions: 5 $\frac{3}{4}$ " x 3 $\frac{3}{8}$ " x 2". Ship wt.: 2 lbs. **\$5.95 Net.**

**MODEL BJ REMOTE** same as above with phono jack to add music source. **\$8.95 Net.**

**MODEL BD OUTDOOR REMOTE**—Weatherized speaker in gasket sealed cover. Remote can call master. Baked copper enamel finish. 4 $\frac{3}{4}$ " x 6 $\frac{3}{4}$ ". Rough-in dimensions: 3 $\frac{3}{8}$ " x 5 $\frac{1}{2}$ ". Ship wt.: 2 lbs. **\$7.50 Net.** BDR same w/pushbutton. **\$5.95 Net.**

### NEW "ENTRY-SENTRY" 2 STATION INTERCOM FOR THE HOME

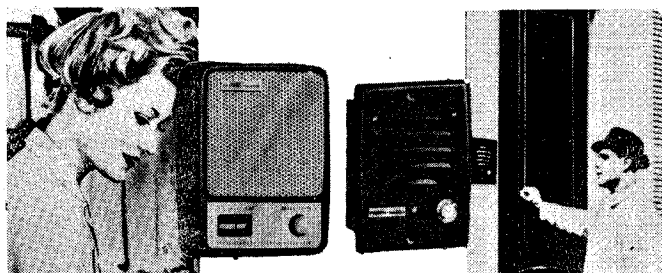
Protect Your Loved Ones . . .  
Don't Open the Door — "Answer" it!

**Model ES-13**—New ultra-sensitive transistor intercom between inside and outside the front door for greater convenience and safety. Remote unit can signal master even when system is turned off. Safe, low voltage power supply operates system. Additional remotes can be added. All metal construction. Remote can surface mount or be recessed. Complete system with 50' cable. Weight 2 $\frac{1}{2}$  lbs. **\$16.75 Net.**

**Model ES-13 DC**—Same as ES-13 less power supply. For use with battery (Eveready 216, etc.) only. Not supplied. **\$14.50 Net.**

**Model 132**—Additional indoor remote to expand system. **\$4.50 Net.**

**Model 131**—Additional outdoor remote to expand system. **\$5.25 Net.**



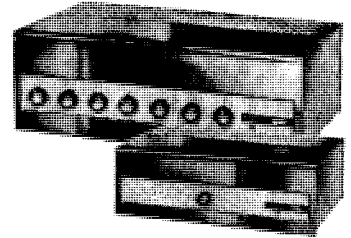
# FANON-MASCO

# AMPLIFIER SYSTEMS POWER-FLEX P. A.

## MODEL FMA-100 POWER-FLEX 100 WATT AMPLIFIER

**Power Output:** 100 watts at less than 5% RMS distortion. **Peak Power Output:** 130 watts (music wave-form rating). **Frequency Response:** 50-15,000 cps,  $\pm 3$  db. **Inputs:** 3 high impedance microphone inputs (expandable to 5). One mike input is convertible to magnetic phono cartridge; 1 phono input and 1 radio input on fader control. **Model LZT** low impedance mike transformers (2) can be added or 1 low impedance balanced line transformer for wired music can be used. **Input Sensitivity:** Microphone—4 millivolts, Phono-Radio—0.3 volts, Phono/magnetic—4 millivolts, Low impedance mike—0.3 millivolts. 600 ohm balanced line—0.1 volts. **Gain:** Microphone—130 db, Phono-Radio—90 db. **Regulation:** 25 volts and 70 volts, no load-full load —3 db at 1 KC. **Hum and Noise:** Fundamental —80 db below rated output. Phono —75 db below rated output. Microphone —65 db below rated output. **Input Impedance:** Microphone high impedance 0.5 meg. Phono-radio—1 meg. **Speaker Outputs:** 4, 8, 16 ohms; 25 volt line—6.2 ohms; 70 volt line—50 ohms. **Booster/Tape Recorder Output:** 1 volt—low impedance. **Controls:** 3 microphone volume; 1 phono-radio fader; 1 master; 1 bass; 1 treble; 1 power on/off switch. (chassis) 1 phono magnetic switch; 1 bias adj; 1 regulator voltage adj; 2 hum adj. **Tone Controls:** Bass —17 db boost at 50 cps; 14 db cut at 50 cps. Treble—14 db at 15 KC and 15 db cut at 15 KC. **Power Consumption:** 280 watts at 117 volts AC (60 cycle). **Fuse:** 4 amp—3 AG slo-blo. **Tubes:** (2)12AX7A; (1)6AU6A; (1)12AZ7; (1)6L6-GC; (1)6CY7; (1)NE-51H; 1 full wave bridge silicon rectifier for power supply; 1 silicon rectifier for bias supply. **Dimensions:** 18"x6 1/2"x10 1/2" including knobs and feet. \$113.95 Net.

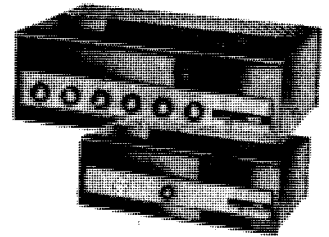
**MODEL FMB-100 100 WATT BOOSTER AMPLIFIER.** Similar to above amplifier less microphone and tone controls. Single high impedance input (0.5 volt at full output). Volume and On/Off controls. \$98.95 Net.



## MODEL FMA-65 POWER-FLEX 65 WATT AMPLIFIER

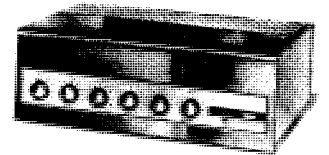
**Power Output:** 65 watts at less than 5% RMS distortion. **Peak Power Output:** 80 watts (music wave form rating). **Frequency Response:** 50-15 KC,  $\pm 3$  db. **Inputs:** 2 high impedance microphone inputs (expandable to 4). One mike input is convertible to magnetic phono cartridge; 1 phono input and 1 radio input on fader control. 2 model LZT low impedance mike transformers can be added or 1 low impedance balanced line transformer for wired music can be used. **Input Sensitivity:** Microphone—5 millivolts, Phono-radio—0.3 volts, Phono/magnetic—5 millivolts, Low impedance mike—0.3 millivolts. 600 ohm balanced line—0.1 volts. **Gain:** Microphone—125 db; Phono-Radio—86 db. **Regulation:** 25 volt and 70 volt line, no load-full-load —3 db at 1 KC. **Hum and Noise:** Fundamental —80 db at rated output; Phono—75 db below rated output; Microphone—65 db below rated output. **Input Impedance:** Microphone high impedance—0.5 meg.; Phono Radio—1 meg. **Speaker Outputs:** 4, 8, 16 ohms; 25 volt line—9.6 ohms; 70 volt line—75 ohms. **Booster/Tape Recorder Output:** 1 volt; low impedance. **Controls:** 2 microphone volume; 1 phono-radio fader; 1 master; 1 bass; 1 treble; 1 power on/off switch. (Chassis) 1 phono-mag switch; 1 bias adj; 1 regulator voltage adj; 1 hum adj. **Tone Controls:** Bass—17 db boost at 50 cps; 14 db cut at 50 cps. Treble—14 db boost at 15 KC; 15 db cut at 15 KC. **Power Consumption:** 210 watts at 117 volts AC (60 cycle). **Fuse:** 3 amp—3 AG slo-blo. **Tubes:** (2)12AX7A; (1)7199; (2)EL-34; (1) 6CY7; (1)NE-51H; 1 full wave bridge silicon rectifier for power supply; 1 silicon rectifier for bias supply. **Dimen.:** 18"x6 1/2"x10 1/2" incl. knobs and feet. \$95.95 Net.

**MODEL FMB-65 65 WATT BOOSTER AMPLIFIER.** Similar to above amplifier, less microphone and tone controls. Single high impedance (0.5 volt at full output). Volume and On/Off controls. \$83.95 Net.



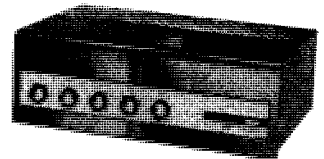
## MODEL FMA-35 POWER-FLEX 35 WATT AMPLIFIER

**Power Output:** 35 watts at less than 5% RMS distortion. **Peak Power Output:** 50 watts (music wave form rating). **Frequency Response:** 50-15,000 cps,  $\pm 3$  db. **Inputs:** 2 high impedance microphone inputs (expandable to 4). One mike input is convertible to magnetic phono cartridge; 1 phono input and 1 radio input on fader control. 2 model LZT low impedance mike transformers can be added or 1 low impedance balanced line transformer for wired music can be used. **Input Sensitivity:** Microphone—5 millivolts; Phono/Radio—0.3 volts; Phono/magnetic—5 millivolts Low impedance mike—0.3 millivolts; 600 ohm balanced line—0.1 volt. **Gain:** Microphone—123 db; Phono/Radio—83 db. **Regulation:** 25 volt and 75 volt line, no load-full load —3 db at 1 kc. **Hum and Noise:** Fundamental—80 db at rated output; Phono—70 db at rated output; Microphone—65 db. below rated output. **Input Impedance:** Microphone high impedance—0.5 meg; Phono/Radio—1 meg. **Speaker Outputs:** 4, 8, 16 ohms; 25 volt line —18 ohms; 70 volt line —140 ohms. **Booster/Tape Recorder Output:** 1 volt —low impedance. **Controls:** 2 microphone volume; 1 phono-radio fader; 1 master; 1 bass; 1 treble; 1 power on/off switch. (chassis) 1 phono-mag switch; 1 bias adj; 1 hm adj. **Tone Controls:** Bass —17 db at 50 cps; 14 db cut at 50 cps; Treble —14 db boost at 15 KC; 15 db cut at 15 KC. **Power Consumption:** 115 watts at 117 volt AC (60 cycle). **Fuse:** 2 amp —3AG slo blo. **Tubes:** (2)12AX7A; (1)6AV6; (2)6L6-GC; (1)5AR4/GZ34; 1 silicon rectifier for bias supply. **Dimen.:** 18"x6 1/2"x10 1/2". \$74.95 Net.



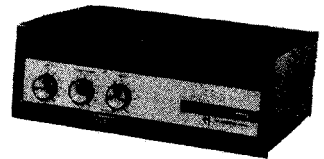
## MODEL FMA-20 20 WATT AMPLIFIER

**Power Output (Rated):** 20 watts at less than 5% distortion. **Peak Power Output (Music Wave-Form Rating):** 25 watts. **Frequency Response:** 20 to 20,000 cps.  $\pm 1$  db. **Regulation:** 25 & 70v line; no load-full load, 3 db at 1 kc. **Inputs:** 1 microphone, 1 phono-radio (fader control). **Gain:** 123 db microphone, 88 db phono. **Input Sensitivity:** Microphone 3 millivolts, phono 0.32 volts. **Hum and Noise:** Fundamental —78 db, microphone —67 db, phono —72 db. **Tone Control:** Treble cut: 2,500 cps at 3 db; 10,000 cps at 12 db. **Output Impedance:** 4, 8, 16 $\Omega$ , 70 volt line. **Input Impedance:** High impedance 0.5 megohms, convertible to low impedance by use of optional input transformer for 50 $\Omega$  unbalanced or 150-260 ohms balanced. **Controls:** (4) Two microphone volume, one phono-radio fader. One tone, one master, one bias adjustment. **Power Consumption:** 70 watts at 117 volts, 60 cps. **Tubes:** 2—12AX7/ECC83, 2—7189A, 1—6CA4/EZ81 and one selenium rectifier. **Shipping Weight:** 14 lbs. **Dimensions:** 13 1/2" W, 10 1/4" D, 5 1/4" H. \$59.95 Net.



## MODEL FMA-11 11 WATT AMPLIFIER

**Power Output (Rated):** 11 watts at less than 5% distortion. **Peak Power Output Music Wave-Form** 14 watts. **Frequency Response:** 50 to 15,000 cps  $\pm 3$  db. **Regulation:** 25 & 70 volt; no load-full load, 3 db at 1 kc. **Inputs:** 1 microphone, 1 phono (fader control). **Gain:** 120 db microphone, 82 db phono. **Input Sensitivity:** Microphone 5 millivolts phono 0.4 volts. **Hum & Noise:** Fundamental —90 db, microphone —65 db, phono —75 db. **Tone Control:** Treble cut: 2500 cps at 3 db; 10,000 cps at 12 db. **Output Impedance:** 4, 8, 16 ohms, 25 & 70 volt line. **Input Impedance:** High impedance 0.5 megohms, convertible to low impedance by use of input transformer for 50 ohms unbalanced or 150-260 ohms balanced. **Controls:** (3) 1 microphone volume, 1 phono-radio fader, 1 tone with AC switch. **Power Consumption:** 60 watts at 117 volts, 60 cps. **Tubes:** 1—12AX7, 1—6V4, 1—6L6GC. **Shipping Weight:** 13 pounds. **Dimensions:** 13 1/2"W, 10 1/4"D, 5 1/4"H. \$39.90 Net.

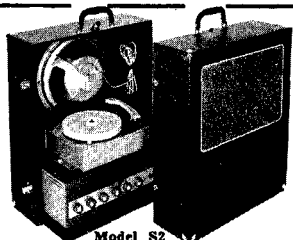


### UNIVERSAL 4-SPEED PHONO MODEL 3600

Phonograph attachment designed for use on all FANON-MASCO amplifiers from 11 to 100 watts. Easily mounts to top of amplifier with two set screws. Heavy duty uniform speed motor with dynamically balanced turntable with constant-contact disc mat. Monaural ceramic dual sapphire cartridge is included. Four speed 16, 33, 45 and 78. Overall: 12" x 9 1/2" x 4 1/2". Wt.: 10 lbs. 27.00 Net.

3612—Same as above for 12 Volt DC. For use with transistor mobile amplifiers. \$34.50 Net.

3604—Automatic record changer with four speeds. For use on 117 V AC. Overall: 12 1/2" x 12 1/2" x 8". Wt.: 12 lbs. \$44.95 Net.



### Model S2 PORTABLE PA SYSTEM CASE (Dual speakers)

Handsome split carrying case with two 12" speakers, each with 25' connecting cable. Accommodates FANON amplifier models 3920, 3335, 3345 plus the model 3600 turntable. Durable fashion fabric covering. Size: 31" x 15" x 15". \$50.95 Net.

## CENTRAL CONTROL SOUND, INTERCOM

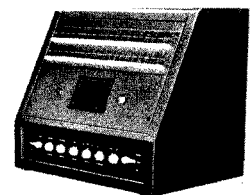
27 WATTS

SC-10 (10 station)

SC-20 (20 station)

SC-30 (30 station)

SC-40 (40 station)



Complete systems for the distribution programming controlled intercommunications. 27 Watt systems for 10, 20, 30, 40 Stations. Individual selection of all stations and separate volume control for incoming intercommunication.

WRITE FOR CATALOG

# FANON-MASCO

# PA AMPLIFIERS AND SYSTEMS

## TRANSISTORIZED MOBILE AMPLIFIERS

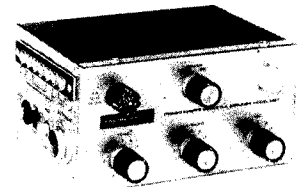
Versatile, fully-transistorized mobile amplifiers ideally suited for continuous duty by Civil Defense, police, fire and other civic organizations where compact quality audio power is required. Their design and performance is unexcelled for every portable PA operation for carnivals, sporting events, yachting, buses and general mobile application.

### MODEL 3527 27 WATT MOBILE AMPLIFIER

Exceptionally compact transistorized mobile amplifier for dash or glove compartment mounting where a high audio power is required. Operates on 12 volts DC with very low current drain in standby. Can be used with a 12 volt power supply from 110 volt AC. Complete with mounting fixtures. This unit is finished in black and satin chrome.

**Power Output**—27 watts at less than 10% distortion @ 1 kc. **Frequency Response**: 150 cycles to 10 kc. 3 db. **Inputs**: 1 microphone, 1 X-tal phono, 1 radio input (fed from radio receiver voice coil). **Gain**: 110 db—microphone; phono 70 db. **Input Sensitivity**: low impedance microphone (50-2,000 ohms) 0.5 millivolts for full output X-tal Phono 3 millivolts full output. X-tal Phono 0.5 volts for full output. Radio 0.25 volts—for full output (from voice coil 3.2-16 ohms). **Hum and Noise**: 70 db.—below full output. **Tone Control**: Max. treble position—10 db. down at 4 kc. **Output Impedance**: 4, 8, 16 ohms. **Input Impedance**—Microphone 2,000 ohms, (aux.) 50 K. ohms radio 3.2-16 ohms. **Controls**: (5): Microphone volume, radio or phono volume (microphone input may be mixed with radio or phono input), tone control, power on-off switch, radio-aux. selector slide switch (interaction between controls less than 1 db). **Power Consumption**: 3.5 amps @ 12.6 V for 27 watts output. **Transistors**: 2—2N408; 3—2N669. **Cable Connectors**: (not supplied) Microphone—Amphenol Plug #91-MC4M, phono—RCA type phono plug (Cinch-Jones #13A). **Power plug** and 7' cable with battery clamps supplied. **Dimensions**: 6½" W, 3¼" H, 4¾" D. **Shipping Wt**: 4 lbs. **\$62.95 Net.**

**Power Supply** — Model PS-27 with 117 volt AC primary and 12.6 volt output. **Ship. Wt.** 3¼ lbs. **\$37.50 Net.**

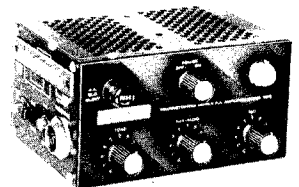


### MODEL 3512 12 WATT MOBILE AMPLIFIER

High power in a small package! Here's a fully transistorized mobile featuring high gain and a minimum of distortion. Can be used with 12 volt power supply from 110 volt AC.

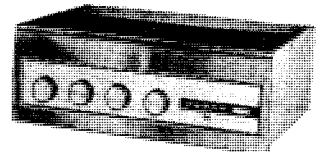
**Power Output (Rated)**: 12 watts at less than 10% distortion. **Frequency Response**: 150 cycles—10 kc, 3 db down. **Inputs**: One microphone, one X-tal phono, (aux.) radio input (to be fed from radio receiver voice coil). **Gain**: Microphone 105 db, phono 65 db. **Input Sensitivity**: Low impedance microphone (50-2000 ohms) 0.5 millivolts for full output. X-tal microphone 3 mv for full output. X-tal phono 0.5 volts for full output. **Hum and Noise**: 70 db below full output. **Tone Control**: Max. treble position: 10 db. down at 4 kc, 3 db down at 1.5 kc. **Output Impedance**: 4, 8 and 16 ohm. **Input Impedance**: Microphone 2000 ohms, Phono 50 K ohms, Radio 3.2-16 ohms. **Controls**: (5): Microphone volume, aux. radio volume, tone control, power on-off switch, radio-aux. selector slide switch, (interaction between controls less than 1 db). **Power Consumption**: 24 watts at 12.6 volts (2A) for 12 w. output. **Transistors**: Two—2N408, one—2N669, two—3577. **Cable Connectors**: (not supplied) Microphone input: Amphenol #91-MC4M. **Phono**: RCA type phono plug (Cinch-Jones #13A). **Power plug** and 7 ft. cable with battery clamps supplied. **Shipping Wt**: 4 lbs. **Dimensions**: 6½" W, 3¼" H, 4¾" D. **\$52.50 Net.**

**Power Supply** — Model PS-27 with 117 volt AC primary and 12.6 volt output. **Ship. Wt.** 3¼ lbs. **\$37.50 Net.**



### MODEL FM-35 AD 35 WATT MOBILE AMPLIFIER WITH POWER SUPPLY

May be operated on 12 volts DC or 117 volts AC. A medium-high power transistorized amplifier designed to give maximum efficiency and dependable mobile service. Compactly styled with tamper-proof input and output connectors, the 3535 utilizes conservatively-rated transistors that operate at low temperature under continuous duty. **Power Output (Rated)**: 35 watts at less than 5% distortion. **Frequency Response**: 250-7,000 cycles — 3 db. down. **Inputs**: (1) low imp. mic.; (1) 600 ohm balanced line (optional); (1) high impedance mic.; (1) phono. **Gain**: microphone: 105 db, phono, 85 db. **Input Sensitivity**: low impedance mic. — 0.5 millivolts for full output; high impedance mic. — 5 millivolts for full output; phono — 0.5 volts for full output. **Hum and Noise**: Fundamental: 65 db below full output. **Microphone**: 55 db below full output. **Phono**: 62 db below full output. **Tone Control**: Treble cut 3 db at 2000 cps, 20 db at 10,000 cycles. **Output Impedance**: 4, 8, 16 ohms and 70 volt line. **Input Impedance**: low imp. — mic. — 200 ohm; phono — 0.5 meg.; high imp. mic. — 0.1 meg. **Controls**: one microphone volume. One phono volume. One tone control. "Power on-off" switch. **Transistors**: (6) 2 — 2N1544, 3 — 2N408, 1 — 2N564. **Power Consump.** 95 watts for max. output. 117 volts AC at 0.9 amps. 12.6 v D.C. at 4.3 amps. **Shipping Wt**: 16 lbs. **Dimensions**: 13½" W., 10¼" D., 5¼" H. **\$104.95 Net.**



## NEW "ADD-ON" SYSTEM ACCESSORIES FOR POWER-FLEX SERIES



### TWO CHANNEL MICROPHONE PRE-AMPLIFIER MP2

Model MP-2 permits the addition of two mike inputs to the amplifier as you need them. It may be used with high impedance mikes or low impedance mikes (when LZT transformer added). Unit mounts on top of 35, 65 or 100 watt amplifier and connects to special input plug on chassis of amplifier. Equipped with two separate volume controls, the MP-2 utilizes a 12AX7 twin triode for channel pre-amplification. Only 3" x 4" x 2" the MP-2 is designed to be mounted on top of FANON-MASCO's new POWER-FLEX amplifiers. **Weight**: 2 lbs. **\$13.50 Net.**

### CONTROL COVER PLATE MODEL CCP-1

Cover panel for control settings discourages tampering and readjustment. Unit snaps into place — no keys to lose. 18" x 2½". **Weight** 1 lb. Used with 35, 65 and 100 watt amplifiers. **\$5.95 Net.**



### SPEAKER AREA SELECTOR CONTROL BOARD ASC-10

You can select any location or loudspeaker group to receive programming with the Model ASC-10. Up to ten different areas can be set to receive program from main amplifier source singularly or as a group. A special switch is provided to override the selective slide switches to provide a general "all-call" to all speaker areas. With the Selector-board personnel can be paged in one area at a time without disturbing others. Unit mounts to top of any POWER-FLEX series amplifier and is 10" x 4" x 2" high. **Wt.**: 2 lbs. **\$13.50 Net.**



### PRIORITY PAGING ELECTRONIC CONTROL PPC-1

A solid state electronic control device that automatically cuts out normal program source from amplifier to speakers in favor of one microphone for special announcements. The unit, Model PPC-1, is controlled by the mike on/off switch, remotely. There is no need to adjust levels or perform any switching at the amplifier. A high or low impedance mike with switch can be used. Plugs into 35, 65 or 100 watt amplifiers. PPC-1 is 2" x 2" x 3½" high and weighs 8 ounces. **\$7.50 Net.**



### BALANCED LINE WIRED MUSIC TRANSFORMER BMT

Adapts any FANON-MASCO 35, 65 or 100 watt amplifier for wired music reproduction. To be used with 500-600 ohm balanced line. 2" dia. x 4". **Wt**: 1 lb. **\$14.95 Net.**

### LOW IMPEDANCE MICROPHONE TRANSFORMER LZT

For use with 50 ohm unbalanced microphone or 200 ohm balanced mike input. Permits a low impedance microphone to be used at a long distance from the amplifier. Size: 2" diam x 4" high. **Wt**: 1 lb. **\$11.95 Net.**

### REMOTE VOLUME CONTROL MODEL RMC-2

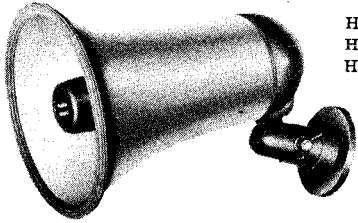
Special control unit to adjust the gain of two mike channels from a remote location. The RMC may be mounted directly to a microphone or be used separately. Connects with shielded conductor cable. 3" x 4½" x 1" overall. **Shpg. wt.** 8 ozs. **\$8.25 Net.**



# FANON-MASCO

## P. A. HORNS & SPEAKERS

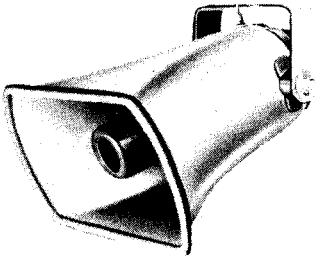
### PAGING & TALK-BACK P.A. LOUDSPEAKERS



HDA-5  
HDA-6  
HDA-10

Compact, high power rated speakers for continuous duty with excellent response and high acoustical efficiency. 8 ohm. 45 ohm available at slightly higher price. Weatherproof.

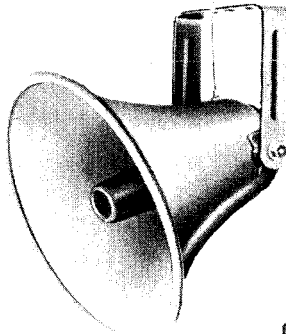
HDB-8  
HDB-10



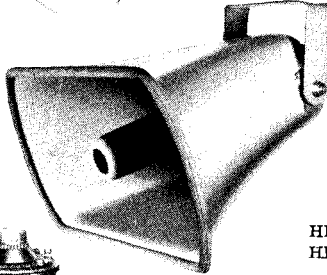
High power rated wide angle dispersion outdoor speakers for uniform sound pattern. Heavy duty U-bracket. Weatherproof. 8 ohm. 45 ohm available at slightly higher price.

Model No.	Power (rated)	Freq. Response	Size "	Net 8 Ohm
HDA-5	15w	400-12kc	5¼x6	\$10.95
HDA-6	15w	350-13kc	6½x8	19.77
HDA-10	30w	250-13kc	10¼x9	14.97
HDB-8	25w	350-13kc	8¼x5½	20.37
HDB-12	30w	250-13kc	11x6½	25.50

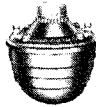
### ROUND & WIDE ANGLE TRUMPETS & DRIVERS



HA-15  
HA-20



HB-15  
HB-20



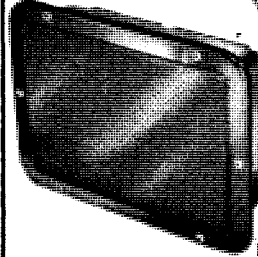
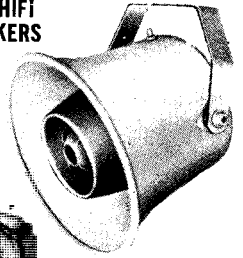
DU-35

### HORN SPECIFICATIONS

Model No.	Low Freq. Cut Off	Air Column	Size "	Net
HA-15	200cps	2½ ft	15x11½	\$17.10
HA-20	150cps	3½ ft	20x16	20.37
HB-15	200cps	2½ ft	15x8¼	22.77
HB-20	150cps	3½ ft	20x10½	25.77

### SPECIAL PURPOSE HIFI AND BUILT-IN SPEAKERS

HFA-12 Hifidelity outdoor loudspeaker for music with wide response. Weatherproof. 8 ohms.



HS-9 Special cabinet type speaker for flush mount in wall or cabinet. Designed for voice frequencies. 8 ohm.

Model No.	Freq. Resp.	Power rated	Size "	Net
HFA-12	100-15kc	10w	12x9	\$32.97
HFA-8	150-10kc	5w	8x5½	14.97
HS-9	250-6kc	10w	7x9x3	17.10

### DRIVER SPECIFICATIONS—all 16 ohms

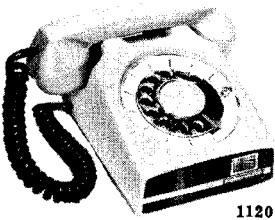
Model No.	Freq. Resp.	Power rated	Size "	Net
DU-25	120-6.5kc	25w	3x3	\$14.10
DU-35	85-7.5kc	35w	4¼x4	17.97
DU-45	80-12kc	45w	4½x4	22.17
DU-60	70-12kc	60w	5½x5	28.77
DU-35T	85-7.5kc	35w	4¼x5	25.17
DU-60T	70-12kc	60w	5½x6	35.97

See complete P.A. horn line and specifications in Catalog #11

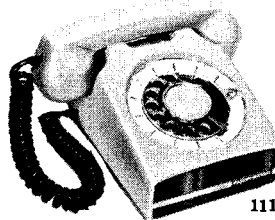
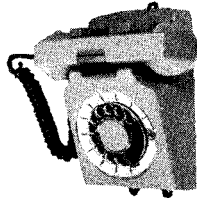
# FANON-MASCO TELEPHONE SYSTEMS

### SELECTIVE TALKING SELECTIVE RINGING

A complete line of telephone intercommunication equipment, designed to meet the needs of any home, office, factory and institution.



1120

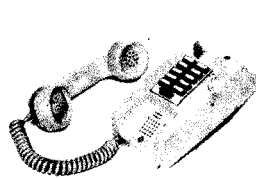


1110

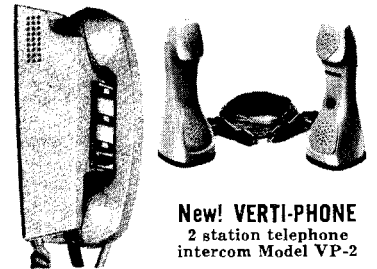
### 1100 SERIES DIAL TELEPHONE SYSTEMS—10 and 20 station

Deluxe, precision-made that permit as many private lines in system as there are pairs of phones. Private talking. Conference call facility. Model 1120 has decade switch and can be used with 19 other masters in system. Model 1110 can be used with 19 others. Master to remote system uses one 1120 or 1110 and Model 1101 remotes.

- 1120—20 station master dial phone. \$59.95 Net.
- 1110—10 station master dial phone. \$49.95 Net.
- 1101—Remote station telephone. \$39.95 Net.
- PS-111—AC Power Supply for 1100 series. \$25.90 Net.
- WB-11—Universal Wall Mount for 1100 series. \$3.75 Net.
- PR-11—Paging Relay for 1100 series. \$22.50 Net.

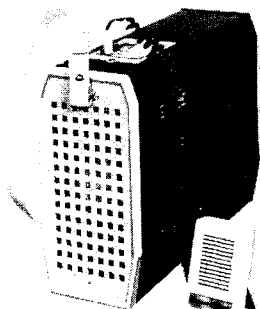


"88" SERIES PUSHBUTTON  
TELEPHONE SYSTEMS



New! VERTI-PHONE  
2 station telephone  
intercom Model VP-2

- Fanon-Masco's new telephone intercom system that provides multiple conversation lines (full trunkage) without a switchboard. Six, ten or single button masters may be intermixed within the system. Excellent voice quality and "soft tone" signalling. Sturdy high impact styrene construction in handsome beige with gold trim. Loud Buzzer optional. For wall or desk mounting. May be mounted to standard gem box for hidden wiring. Any multi-button master may be connected to an unlimited number of master or remote phones depending upon the situation requirement. Paging from any phone is possible with optional paging relay.
- 8811—An 11 station master telephone with 10 station buttons and one ringer button. With coiled cord and terminal box. \$38.95 Net.
- 8807—A seven station master phone with 6 station buttons and one ringer button. With coiled cord and terminal box. \$31.50 Net.
- 8801—Single station remote telephone for use with 6 or 10 button phones. Can ring one master only. With coiled cord. \$23.95 Net.
- PSA-88—6 volt DC power supply from 115 volt AC line to power above system. \$17.95 Net.
- PR-10—Special paging relay activated by a predesignated position on master phones that closes circuit to P.A. paging system. \$22.50 Net.
- EB-881—Optional loud buzzer mounts inside phone, for noisy areas. \$2.25 Net.
- VP-2—Unique vertical design 2 station intercom system for "private" talking. Transistorized. Excellent voice quality. Each stands 8" high. 50 ft. cable. \$29.95 Net.

**FANON-MASCO****ELECTRONIC SPECIALTIES****COMPLETE PORTABLE PA SYSTEM****Model MVS-5**

Amplifies voice and music simultaneously. Ideal for speeches, square dances, music, guided tours, etc. Slip it over your shoulder and away you go. Handy mike with coil cord. Powerful 8 watt amplifiers operates on 6 standard "D" cells. Separate inputs for mike or use with radio, recorder or phono. Volume control with on/off switch. Complete system weighs 9½ pounds. Acoustical range is over 600 yards. Height: 7¼ inches, Width: 3¼ inches, Length: 11¼ inches, Color: Sea Green, \$67.50 Net.

**FANON MEGAVOX MODEL MV-8 Transistorized Megaphone**

Fully portable lightweight megaphone with 600 yard range. Indispensable for police, fire, CD, industry communication. Lightweight aluminum, baked enamel finish, waterproof microphone, carrying strap. No connecting cables or power supply required. Pistol grip trigger and volume control.

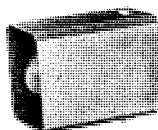
**Power Output:** 5 watts-10 watts peak. **Amplifier:** Five transistors including 2 RCA 3577 in push-pull class B. **Current:** Eight 1½V flashlight batteries "C" size with life of 10 hours continuous average. **Weight:** 4.6 lbs. **Size:** 9"x14". \$67.50 Net.

**MEGAVOX MODEL MV-1**

Popular and compact, this megaphone has range of approx. 300 yds. Powered by 4 "D" size flashlight cells. Separate "low" and "high" volume switches. Over 6 hours continuous operation. **Weight:** 3¼ lbs. **Size:** 6½" x 12½". \$26.95 Net.

**HAND SIZED TRANSISTORIZED MEGAPHONE**

Model MV-2 with built-in 1 watt amplifier—3 transistors. Durable, high-impact plastic case with built-in microphone. Exceptional range for a small package—150 yards. Operates on 8 penlite cells. Handy wrist strap. Press-to-talk/lock switch. Only 4"x7"x3" in size and weighs 1½ lbs. \$14.95 Net.

**CITIZENS BAND TRANSCEIVERS****9 TRANSISTORS**

100 milliwatts

Model FCB-99A is a pair of precision made transistorized receivers that provides 2 way radio communication in the 27 mc band. Extremely compact and all-metal construction.

No license required. For all outdoor activities, meetings, crowd control, hunting, boating, etc. Each 9 transistor unit is crystal controlled and is standard on channel 9. Up to 22 channels can be used. Metal cases are 6½"x2½"x1½" with 48" telescoping antenna.

Specify FCB-99A for a pair that is complete with batteries, carrying cases and earphones. **MODEL FCB-99A (pair)** \$64.95 Net.

Model FCB-9A. A single transceiver complete with batteries, case and earphone. \$34.95 Net.

**5 TRANSISTORS**

80 milliwatts

Model FCB-55 is a pair of high quality super-heterodyne transceivers for radio communication in the 27 mc citizens band. No license is required and a range of up to 1½ miles may be obtained depending upon the terrain on which they are used. Suits all out door/indoor CB requirements where limited range is acceptable.

Each 5 transistor transceiver is crystal controlled on channel 9. Optional channel crystals are available for 5, 15, 10 and 11. Up to 22 channels can be used. Cases are metal and 6"x2½"x1½" plus 48" telescoping antenna. Specify FCB-55 for a pair that are equipped with earphones **MODEL FCB-55 (pair)** \$44.95 Net.

Model FCB-5 — A single transceiver complete with earphone. \$24.40 Net.

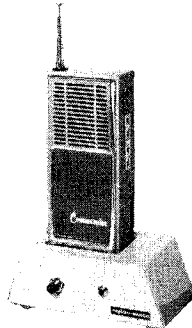
**¾ WATT**

13 Transistors Exclusive "Free-Call"

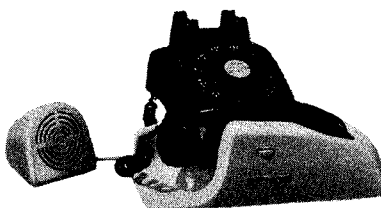
Model FCB-13—Powerful Class D Citizens Band transceiver for extended range. Twice the distance of 100 milliwatt transceivers. Superhet receiver has push-pull audio section for best intelligibility.

Well modulated transmit signal over long distances. Exclusive "Free-Call" permits unit to receive at all times with minimal battery drain. Features Variable Squelch Adjust, Automatic Volume Control and Battery-Life Indicator. Powered by 8 penlite cells. Case is metal construction with 48" telescope antenna. Standard channel 9. Channel 5, 11 and 15 optional. Permit required. Unit is 8"x3½"x2" and weighs 1½ pounds. Complete with earphone, leather case, batteries and set X-tals. \$64.95 Net.

Model PS-130—AC power supply for FCB-13 converts 117 volt AC to 12 volt DC to use unit as base station. Weighs 1½ lbs. \$9.95 Net.

**MODEL PHA-4 TRANSISTORIZED TELEPHONE AMPLIFIER with EXTENSION SPEAKER**

Frees hands while telephoning and fills room with sound for conferences. 4 transistors. Uses one 9 v. battery included. 10" x 4½" x 3". Ship wt. 4 lbs. \$12.95 Net.

**A COMPLETE LINE OF TAPE RECORDERS**

including High fidelity Stereo and Monaural machines as well as quality Battery/AC recorders is now available from FANON-MASCO. Write for complete catalogs!

**FANON****ELECTRONIC INDUSTRIES, INC****NEWARK NEW JERSEY**

Warehouses in Los Angeles, San Francisco, Dallas, Seattle, Honolulu and Toronto

All prices shown are net. Add 5% on West Coast.

**MCGOHAN****PUBLIC ADDRESS AMPLIFIERS  
M SERIES**

McGohan Amplifiers have long been recognized as high quality, sensibly priced units whose performance invariably exceeds the rated specifications. These amplifiers are ruggedly constructed of fine components to assure dependable performance under the toughest operating conditions. Each is capable of fine fidelity distortionless sound at its full rated output. Attractive styling in two-tone grey color combination. Control knobs have adjustable indicators for reset to pre-determined setting. All models have an AC outlet on rear of chassis.

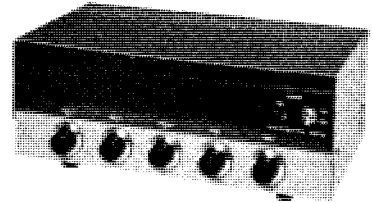
M 102 10 watt amplifier — with separate bass and treble controls, constant voltage output taps, socket for plug-in low impedance transformer, one phono and one microphone channel.

**SPECIFICATIONS** — R.M.S. POWER OUTPUT: 10 watts at less than 1% distortion. **POWER RESPONSE:** within 1 db, 40 to 15,000 c.p.s. **FREQUENCY RESPONSE:**  $\pm 1.5$  db 20 to 20,000 c.p.s. **REGULATION:** 1 db at 50 and 1,000 c.p.s. no load to full load. **GAIN:** mic. 120 db, phono 80 db. **HUM:** (below rated output), mic. —55 db, phono—75 db. **TONE CONTROLS:** treble (15 k.c.) +15 db to —18 db, bass (50 c.p.s.) +18 db to —18 db. **OUTPUT IMPEDANCE:** 4, 8, and 16 ohms, 25 volt and 70 volt line. **TUBES:** total of 6 (1-6AU6, 1-6CA4, 2-6EU7, and 2-6BQ5). **POWER CONSUMPTION:** 50 watts. Uses Cannon XLR-3-11C microphone connector. **DIMEN:** 10½"Wx7"Dx 5½"H. **SHIP WT:** 13 lbs. **LIST PRICE:** \$87.50.



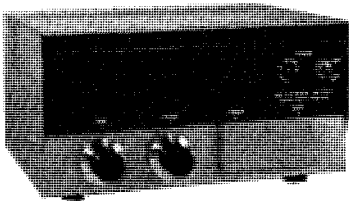
M 203 20 watt amplifier — with separate bass and treble controls, constant voltage taps, sockets for plug-in low impedance transformers, one phono and two microphone channels.

**SPECIFICATIONS** — R.M.S. POWER OUTPUT: 20 watts at less than 1% distortion. **POWER RESPONSE:** within 1 db, 40 to 15,000 c.p.s. **FREQUENCY RESPONSE:**  $\pm 1.5$  db, 20 to 20,000 c.p.s. **REGULATION:** 1.5 db at 50 and 1,000 c.p.s. no load to full load. **GAIN:** mic. 120 db, phono 80 db. **HUM:** (below rated output), mic. —60 db, phono—75 db. **TONE CONTROLS:** treble (15 k.c.) +15 db to —18 db, bass (50 c.p.s.) +18 db to —18 db. **OUTPUT IMPEDANCE:** 4, 8, and 16 ohms, 25 volt and 70 volt line. **TUBES:** total of 6 (3-6EU7, 2-7868, and 1-6CA4). **POWER CONSUMPTION:** 70 watts. Uses Cannon XLR-3-11C microphone connector. **DIMEN:** 14"Wx9"Dx5½"H. **SHIP WT:** 18 lbs. **LIST PRICE:** \$124.50.



M 305 30 watt amplifier — with separate bass and treble controls, constant voltage taps, sockets for plug-in low impedance transformers, one phono and four microphone channels.

**SPECIFICATIONS** — R.M.S. POWER OUTPUT: 30 watts at less than 1% distortion. **POWER RESPONSE:** within 1 db, 40 to 15,000 c.p.s. **FREQUENCY RESPONSE:**  $\pm 1.5$  db, 20 to 20,000 c.p.s. **REGULATION:** 1.5 db at 50 and 1,000 c.p.s. no load to full load. **GAIN:** mic. 120 db, phono 85 db. **HUM:** (below rated output), mic. —60 db, phono—75 db. **TONE CONTROLS:** treble (15 k.c.) +15 db to —18 db, bass (50 c.p.s.) +18 db to —18 db. **OUTPUT IMPEDANCE:** 4, 8, 16, and 163 ohms. Balanced 25 volt line and 70 volt line. **TUBES:** total of 7 (4-6EU7, 2-7868, and 1-5AR4). **POWER CONSUMPTION:** 85 watts. Uses Cannon XLR-3-11C microphone connector. **DIMEN:** 14"Wx9"Dx5½"H. **SHIP WT:** 23 lbs. **LIST PRICE:** \$169.50.



MX 102 10 watt Wired Music Amplifier — with separate bass and treble controls, constant voltage taps, sockets for plug-in low impedance transformers. One music and one microphone channel.

**SPECIFICATIONS** — same as M 102; except, tone controls are screw driver adjusted and covered to prevent improper use. Amplifier has "limit control" for music channel—which enables the maximum volume to be pre-set so that the adjustment of volume by front control will not result in excessive level. Amplifier microphone response is unaffected by tone controls. Use LT-2 transformer for isolation between telephone line and amplifier. **DIMEN:** Same as M 102. **SHIP WT:** 13 lbs. **LIST PRICE:** \$90.00.

MC-1 input matching transformer — provide low impedance inputs for all McGohan amplifiers equipped for plug-in microphone input transformers. Has 60 d.b. electro-magnetic shielding; frequency response  $\pm 1$  d.b. 30-15,000 c.p.s.; Impedance 50 ohms or 200 ohms (with center tap) to 50,000 ohms.

MC-1 . . . List \$18.75



LT-2 plug in matching transformer — provides for use of telephone or wired music line when used with McGohan MX 102 music amplifier. Frequency response  $\pm 1$  d.b. 30-20,000 c.p.s.; Impedance 150 ohms or 600 ohms (with center tap) to 15,000 ohms.

LT-2 . . . List \$15.00



All prices and specifications subject to change without notice.  
Prices 5% higher west of Denver, Colo.

**DON MCGOHAN, INC., CHICAGO 24, ILL.****MCGOHAN**

# NEWCOMB

PORTABLE PHONOGRAPHS &  
TRANSCRIPTION  
PLAYER / P. A. SYSTEMS

**R**  
SERIES

Efficient teaching tools of moderate cost and excellent quality, Newcomb R Series models are built with many extra features for convenience, performance, safety, and reliability. All are UL approved. All are transformer-powered for maximum safety and best performance. Made in the U.S.A.

Handy bid specifications are available from the factory to authorized personnel. Condensed instructions, sealed in plastic, permanently attached inside lid. SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

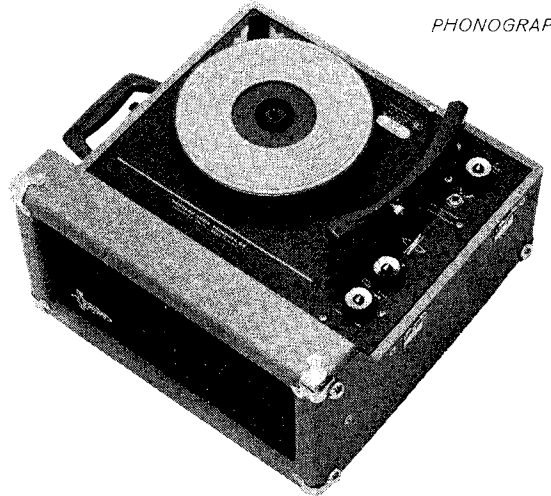
**R-124V** variable speed  
4 speed

**R-124** fixed speed  
4 speed

The Newcomb Model R-124V high fidelity, transformer-powered classroom phonograph is an extraordinary combination of ruggedness and high fidelity sound... an outstanding value. It has Newcomb's four-speed, variable-speed motor; big two-way, 9" oval, dual-cone high fidelity loudspeaker; "Bi-Coupled" 12 watt output system; jeweled pilot light; "Power Point" type plug-in ceramic high fidelity cartridge; rubber record mat and "twist-up" 45 center spindle; standard jack for external speaker, headphones, or Headphone Listening Center Accessory; idler release interlocked with separate motor switch; spring-suspension feet, Hideaway cord compartment, bass-treble dual-acting tone control, compensated volume control, Tempo Control that smoothly varies speed as much as 20%. Case is crack-proof, warp-proof, glue-blocked plywood covered with warm gray, washable, scratch-resistant vinyl; further protected with metal corners, come-apart hinges; kickproof, die-formed, perforated metal grill. Service access through bottom vent plate. Dimensions: 8¼" x 14¾" x 14¾"; weight 20 pounds. Power consumption: 55 watts, 117 volts, 60 cycles a.c. MODEL R-124V PROFESSIONAL NET \$85.95 plus excise tax.

MODEL R-124 FIXED SPEED, except for the absence of Tempo Control, is identical to the R-124V. PROFESSIONAL NET \$69.50 plus excise tax.

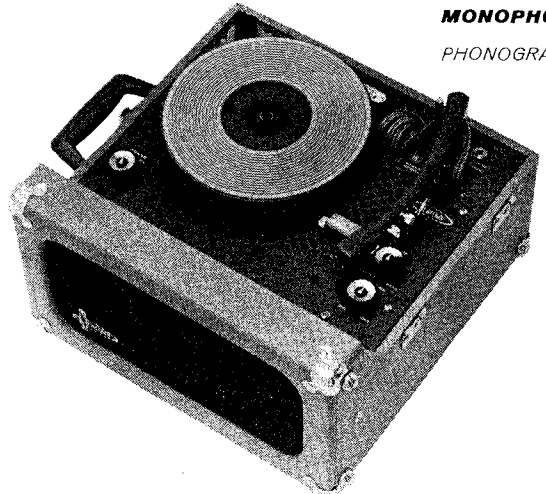
**MONOPHONIC**  
PHONOGRAPH



**R12-C4** fixed speed  
4 speed

The Newcomb Model R12-C4 is a transformer-powered, 10 watt utility model that offers safety, dependability, and high performance at low cost. The good sound of the R12-C4 begins with the heat- and moisture-resistant ceramic "Power Point" type cartridge with turnover dual sapphire styli. The powerful 10 watts peak output system is amply stabilized with inverse feedback to give clean, highly intelligible sound at all volume levels. The compensated, wide-range tone and volume controls tailor the sound to its specific function. The output system is matched to a big, two-way 9" oval, dual-cone speaker. The tweeter cone greatly improves distribution and treble response. The R12-C4 is equipped with a rubber record mat and "twist-up" 45 center post, output jack for headphones or external speaker, drop pad to protect pickup, positive tone arm lock screw, pilot light, spring suspension feet, and a compartment in the deck in which to stow the power cord. Main power switch turns off everything including idler pressure. DIMENSIONS: 8¼" x 14½" x 14½"; weight 19 pounds. Power consumption: 55 watts, 117 volts, 60 cycles a.c. PROFESSIONAL NET: \$62.50 plus excise tax.

**MONOPHONIC**  
PHONOGRAPH

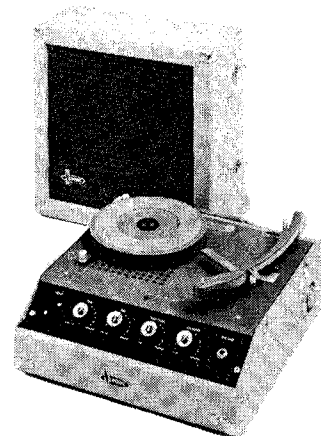


**R-164V** variable speed  
4 speed

**R-164** fixed speed  
4 speed

The Newcomb Model R-164V is a versatile, medium-power, portable combination transcription player/public address system that will play any size record up to 17¼" masters. The R-164V has a big 12" round, dual cone high fidelity loudspeaker with 25 foot cord and "Bi-Coupled" 12 watt output system. Speaker enclosure forms lid of case. It has a jeweled pilot light and lighted operating panel, "Power Point" type plug-in ceramic high fidelity cartridge, rubber record mat and "twist-up" 45 center spindle. Microphone input jack. Mixing controls. Bass tone control does not affect voice. Separate treble control. Output jack for speaker, headphones or Newcomb Headphone Listening Center Accessory. The R-164V has a long tone arm of cast metal, protective drop pad, Hideaway power cord, 4 speed settings, tempo control which smoothly varies speed as much as 20%, pickup stop post, pickup lock screw, separate motor power switch that automatically retracts idler. Hinged deck lifts for servicing. Dimensions: 11" x 15½" x 15½"; weight 25 pounds. Power consumption: 55 watts, 117 volts, 60 cycles a.c. PROFESSIONAL NET: \$107.50

**MONOPHONIC**  
PORTABLE  
COMBINATION  
TRANSCRIPTION  
PLAYER  
P.A. SYSTEM



MODEL R-164 FIXED SPEED, except for the absence of Tempo Control is identical to the R-164V. PROFESSIONAL NET: \$93.25 plus excise tax.

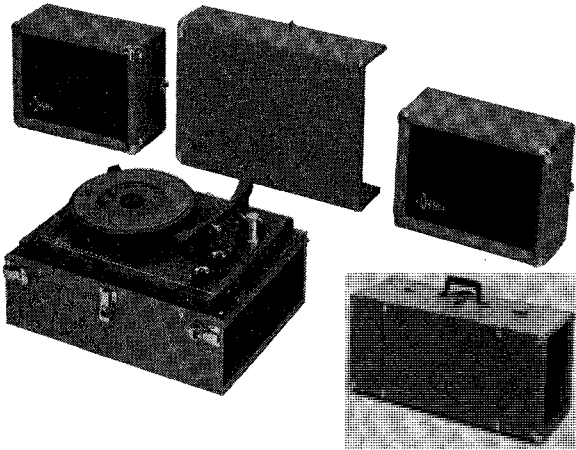
NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

**NEWCOMB**

# NEWCOMB

STEREO PHONOGRAPHS,  
TRANSCRIPTION PLAYERS,  
HEADPHONE LISTENING  
CENTERS, TABLE RADIOS

**R**  
SERIES



## RS-20 4 speed, fixed speed

The highly portable and compact Newcomb RS-20 has two full-range, nine-inch oval, dual-cone speakers which can be spaced to create a realistic illusion of dimensional sound. The RS-20 provides true stereo reproduction or high fidelity monophonic sound at the flip of a switch, plays any record size up to twelve-inch at any standard speed. Rubber-matted turntable has twist-up 45 spindle. Separate turntable on-off switch retracts idler. There are also a dual-acting bass-treble tone control and a volume control. Power cord tucks into Hideaway compartment. Ventilation is through grills in ends of player unit which remove for access to tubes and motor. Closed, the RS-20 measures 8½" x 11½" x 24¾", weighs 28 pounds. For use on 117 volts, 60 cycles a.c. | **PROFESSIONAL NET: \$149.50 plus excise tax.**

The RS-20 phonograph player unit is available with other loudspeaker combinations:

**MODEL RS-20-2** is in 2 cases with 2 dual-cone 12" reproducers in a split case measuring 16¼" x 16½" x 13½", 21 lbs. Player case alone is 10½" x 11½" x 15½", 21 lbs. **PROFESSIONAL NET: \$184.00 plus excise tax**

**MODEL RS-20-C2** is in 3 cases with 2 C-100 two-way, fully enclosed, ducted port reproducers each 10¼" x 14¼" x 20", 10½ lbs. **PROFESSIONAL NET: \$278.50, plus excise tax**

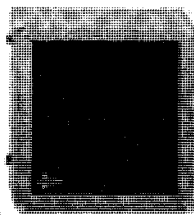
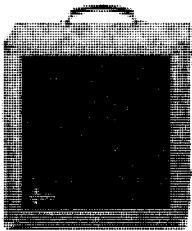
**MODEL RS-20-KN2** is in 3 cases with 2 KN-200 hyper-efficient, two-way, ducted port, fully enclosed reproducers each 10¼" x 16½" x 23½", 35 lbs. **PROFESSIONAL NET: \$385.00, plus excise tax**

## RS-1620V 4 speed, variable speed

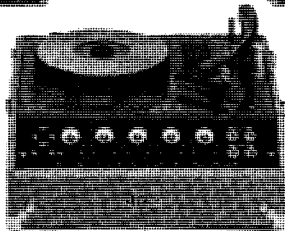
## RS-1620 4 speed, fixed speed

### STEREOPHONIC

PORTABLE  
COMBINATION  
TRANSCRIPTION  
PLAYER  
P.A. SYSTEM



20 WATTS  
PEAK

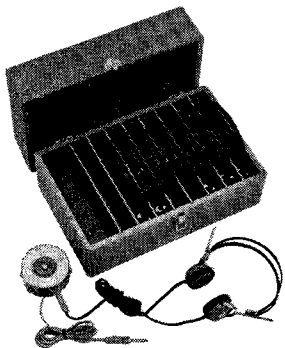


Shown with  
Acra-Set tone  
arm lifting  
accessory  
available  
at additional  
cost

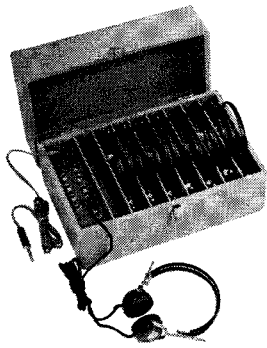
Newcomb RS-1620V stereophonic/monophonic portable combination transcription player/public address systems are simple to operate, durable, economical. Stereo or mono at the flip of a switch. Bi-Coupled output system delivers 10 watts peak per channel, 20 watts peak combined. Compatible cartridge is a turnover ceramic, plug-in type with jeweled styli. Rubber-matted turntable plays records to 17¼" masters. Tempo control +5% to -15%. Two mike inputs and left and right input jacks for radio or tape. On lighted, slanted panel are separate mixers for each mike and phono, voice filters, separate bass and treble tone controls ganged for both channels, but bass does not affect voice. Player unit measures 8" x 15½" x 16½". For use on 117 volts, 60 cycles a.c.

	Variable Speed Model Number	Prof. Net	Fixed Speed Model Number	Prof. Net
With S-212 split case containing two 12" dual cone hi-fi drivers. Closed case: 16¼" x 16¼" x 13½", 21 lbs.	RS-1620V-2	\$215.00	RS-1620-2	\$205.00
With S-212HF split case containing two 2-way systems—12" woofers, 3½" tweeters. Closed: 16¾" x 16¼" x 13½", 23 lbs.	RS-1620V-HF2	\$239.00	RS-1620-HF2	\$229.00
With 2 C-100 2-way reproducers ea. in sep. encl. Each measures 10¼" x 14¼" x 20", 19½ lbs.	RS-1624V-C2	\$309.50	RS-1620-C2	\$299.50

## NEWCOMB HEADPHONE LISTENING CENTER KITS AND PARTS



LC8BP KIT



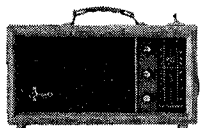
R-HDBB KIT

Designed for library use, language study, group-within-a-group listening, a multiple-headphone adapter plugs into the output jack found on all Newcomb phonographs, radios, and transcription players. Up to 8 pairs of phones and an additional adapter may be connected to each adapter unit. The adapter takes two forms—either a separate, circular terminal box, or a jack strip built into the carrying case. Newcomb headphones are sturdy, sensitive, double phones colored bright red and black. Generous six foot cords. Carrying case is made of plywood covered with gray vinyl, has a full-size carrying handle, compartments for 8 sets of phones and adapter, measures 14" x 8¾" x 7½"

**HDP HEADPHONE SET ONLY** with pin tips. **PROF. NET: \$3.95.**  
**HDPB HEADPHONE SET ONLY** with standard phone plugs. **PROF. NET: \$4.60.**  
**8AP CIRCULAR ADAPTER ONLY** takes up to 8 HDP phone sets, has standard phone plug for source connection, standard phone jack for additional adapter. **PROF. NET: \$14.95.**  
**8BP CIRCULAR ADAPTER ONLY** takes up to 8 HDPB phone sets, has standard phone plug for source connection, standard phone jack for additional adapter. **PROF. NET: \$17.50.**  
**LC8AP KIT** includes 8AP adapter, compartmented case, 8 sets of HDP headphones. **PROF. NET: \$59.55.**  
**LC8BP KIT** includes 8BP adapter, compartmented case, 8 sets of HDPB headphones. **PROF. NET: \$67.30.**  
**R-HDBB KIT** includes compartmented case with built-in phone jack strip and 8 HDPB phones. Source connector is a phone plug. Phone jack for additional kit. **PROF. NET: \$59.55.**  
**R-HDBB-J KIT** is same as above but with Jones plug on connecting cord and Jones socket for additional kits in jack strip. **PROF. NET: \$59.55.**

## TABLE MODEL RADIOS

### AFM-1500 AM & FM



Highly sensitive, rendered very stable by a.f.c. and temperature-compensated oscillators, the AFM-1500 provides high fidelity sound through its 15 watts peak push-pull amplifier and 20 watt, 9" oval, dual-cone loudspeaker. It has a telescoping FM antenna, "Hi-Q" ferrite rod AM antenna, tuning eye, reference scale, large tuning knob, compensated volume control, external antenna terminals, jack for external speaker or headphones, jack for external amplifier, p.a. or tape recorder. 16¾" x 9¾" x 8¾", 20½ lbs. 70 watts, 117 volts, 60 cycles a.c. **PROF. NET: \$164.50 plus excise tax**

### AM-500 AM



Trim, rugged, easy to carry, the AM-500 is an economical, continuous-duty transformer-powered radio with a 5 watts peak, inverse-feedback amplifier and 8" oval, dual-cone loudspeaker whose special tweeter cone gives improved distribution and high frequency response. It has a built-in "Hi-Q" antenna and terminals for external antenna. Pilot light index illuminates direct-driven dial. Same jacks as AFM-1500. Neat power cord stowage on back of both 6½" x 8" x 15½", 10 lbs. 40 watts, 117 volts, 60 cycles a.c. **PROF. NET: \$59.95 plus excise tax**

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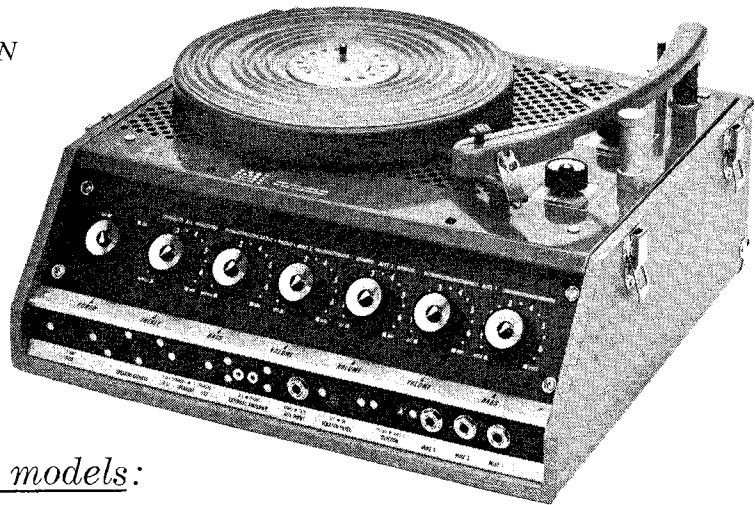
**NEWCOMB**

# NEWCOMB

**TR  
SERIES**

*HIGH POWER, PORTABLE, COMBINATION  
TRANSCRIPTION PLAYER  
PUBLIC ADDRESS SYSTEMS*

*...outstanding for their  
highest quality sound,  
intelligibility, portability, versatility,  
and simplicity of operation...*



## *features common to all TR models:*

**FOUR SPEED, VARIABLE SPEED**, play any size record up to 17 $\frac{1}{4}$ " masters.

**AMERICAN-MADE MOTOR** delivers full starting torque at any speed setting, no warm-up required, stable under all conditions, requires no more attention than conventional fixed-speed motors.

**INDEPENDENT MOTOR SWITCH** automatically retracts idler.

**TEMPO CONTROL**, separate from speed selector, varies speed +5% to -15%. No flutter-producing friction discs or cone drives.

**SPEED-O-SCOPE** neon strobe.

**BIG TURNTABLE**—10", 2 lbs.

**STA-KLEEN**, deep-ribbed rubber mat, special groove for handling 45's.

**LONG TONE ARM**, one-piece, cast metal, raises upright for stylus inspection, mounted on resilient acoustical filter, has stylus pressure adjustment for 78's or LP's.

**RUGGED STOP POST** prevents putting arm in wrong position.

**LOCK SCREW** secures arm during transportation.

**DROP PAD**, rubber-covered, protects stylus and cartridge.

**PHONO PICK-UPS**: GE twist-needle with individually replaceable sapphire styli in "M" models; high fidelity ceramic in others.

**STEREO CONVERSION**: ceramic cartridge may be replaced with stereo cartridge. Then a patch cord is connected between stereo output jack to auxiliary input jack on second player for perfectly balanced, fully controllable stereo.

**HIGH POWER AMPLIFIERS**, low distortion, inverse feedback, some have ultra-linear circuits, all engineered for optimum performance with speakers used. Frequency response  $\pm 2$  db 20-20,000 cycles.

**TRANSFORMER-POWERED** for safety and performance.

**BROAD-BAND OUTPUT TRANSFORMERS** humidity-protected with mylar or acetate. Impedance selector—4 or 8 ohms (16, 8, & 4 on TRS-1680).

**FUSE POST** accessible from front panel.

**COMPLETE, FLEXIBLE CONTROLS**: separate volume mixers for phono and mike; voice filter, scratch filter; phono bass control does not affect voice mike; bass controls electrically interlocked with phono volume to automatically protect against bass overload at high levels, greatly reducing operating experience required for perfect results.

**OUTPUT JACKS**: "ALL" used to feed entire program to external amplifier, amplified monitor, or tape recorder. "PHONO" delivers phono signal only; useful for caller or m.c. who wants to monitor music only without interference from own voice. "STEREO" on ceramic models.

**INPUT JACKS**: One for each mike; number depends on model. "AUXILIARY" for signal from radio, tape machine, or stereo channel.

**ILLUMINATED, SLOPING OPERATING PANEL**.

**TWO JEWELLED PILOT LIGHTS**.

**RUGGED CASE** made of warp-proof, crack-proof  $\frac{3}{8}$ " plywood, glue-blocked, covered with scratch-resistant, washable, gray vinyl.

**METAL CORNER PROTECTORS**.

**COME APART HINGES**.

**SPRING-FLOATED FEET**.

**HEAVY #18 GAUGE STEEL MOTOR BOARD**, reinforced.

**THROUGH VENTILATION** for long parts life.

**EASY ACCESS**. Hinged motor board raises to reach tubes and motor. Perforated bottom plate unscrews to check wiring.

**KICKPROOF GRILLES** of die formed metal and armored baskets protect speakers.

**25' SPEAKER CORDS** with stowage provisions. Straps for wall hanging.

**HIDEAWAY COMPARTMENT** for 8' power cord.

**FULL-SIZE HANDLES** on all cases and a hand-hold slot on player units for assistant carrier.

**PERMANENT SERIAL NUMBER** stamped in metal and riveted to motor board.

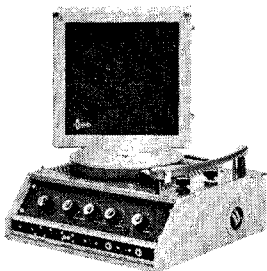
**TRANSPARENT PLASTIC CARD HOLDER** on each case

**PRINTED INSTRUCTION BOOK** with each system.

**CONDENSED INSTRUCTIONS** sealed in plastic permanently attached inside lid.

**BID SPECIFICATIONS AVAILABLE** from factory to authorized personnel.

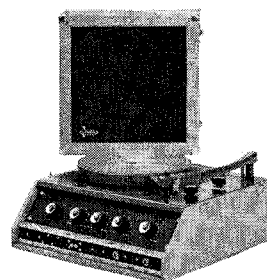
MADE IN U.S.A.



### TR-1625 SERIES 25 WATT CERAMIC PICKUP STEREO JACK

TR-1625 Series player-amplifier units are carefully matched to the reproducers for great efficiency and better coverage than has heretofore been possible with a system in this class. It is equipped with a plug-in, "power point" type, high fidelity ceramic cartridge with separate jeweled standard and microgroove styli. It has a separate treble tone control, bass control that does not affect mike, phono volume mixer, mike volume mixer, scratch filter switch, voice filter switch. There are output jacks for 2 speakers, "Phono," "All," stereo; input jacks for one mike and another for auxiliary equipment.

	PROF. NET
MODEL TR-1625 in a single split case with one 12" dual-cone 30-watt speaker, 35 lbs. ....	139.50
MODEL TR-1625-2, two cases, includes one S-212, 50 lbs. ....	172.50
MODEL TR-1625-NE2, three cases, two N-12ET, 63 lbs. ....	237.00
MODEL TR-1625-CS2, three cases, two CS-48, 73 lbs. ....	247.00
MODEL TR-1625-SCS2, three cases, two SCS-412, 124 lbs. ....	387.00



### TR-1625M SERIES 25 WATT MAGNETIC PICKUP

When monophonic music reproduction is to be a player's primary function, a Newcomb TR model equipped with a magnetic cartridge is your best choice. The TR-1625M is equipped with a GE variable reluctance, twist-needle cartridge with sapphire styli and necessary preamplifier built in. Motor is a 4-pole deluxe unit. Player has a separate treble tone control, bass control that does not affect mike, phono volume mixer, mike volume mixer, scratch filter switch, voice filter switch. There are output jacks for 2 speakers, "Phono," and "All"; input jacks for mike and auxiliary.

	PROF. NET
MODEL TR-1625M in a single split case with one 12" dual-cone 30-watt speaker, 36 lbs. ....	154.50
MODEL TR-1625M-2, two cases, includes one S-212, 51 lbs. ....	187.50
MODEL TR-1625M-NE2, three cases, two N12ET, 64 lbs. ....	252.00
MODEL TR-1625M-RHF, two cases with one 2-way speaker system in base reflex enclosure, 18" x 24" x 12 $\frac{1}{2}$ ", 65 lbs. ....	211.50
MODEL TR-1625M-CS2, three cases, two CS48, 74 lbs. ....	262.00
MODEL TR-1625M-SCS2, three cases, two SCS-412, 125 lbs. ....	402.00

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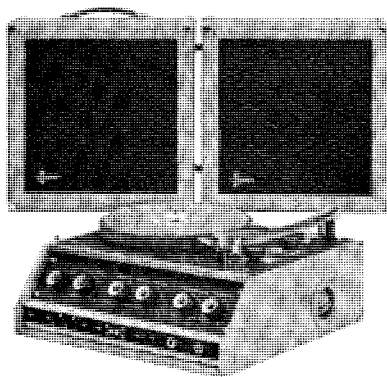
**NEWCOMB**



# NEWCOMB

HIGH POWER PORTABLE  
TRANSCRIPTION PLAYER  
P. A. SYSTEMS

**TR**  
SERIES

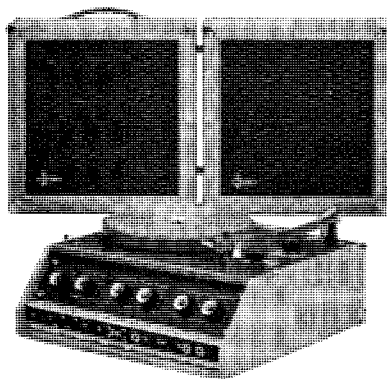


## TR-1640 SERIES 40 WATT CERAMIC PICKUP STEREO JACK

PROF.  
NET

TR-1640 models provide impressive audience coverage at moderate cost. Motor is a heavy-duty, four-pole unit. Player is equipped with a plug-in, "power point" type, high fidelity ceramic cartridge with separate jeweled standard and microgroove styli, ultra-linear amplifier. It has a treble tone control for all channels, bass tone for phono, phono volume mixer, mike volume mixer, bass tone for mike, impedance switch for speakers, scratch filter switch. There are output jacks for 2 speakers, "Phono," "All," stereo. Inputs for one mike auxiliary.

MODEL TR-1640 in a single split case with one 12" 50-watt speaker, 36 lbs.	169.95
MODEL TR-1640-E2, two cases, includes one S-212, 51 lbs.	196.50
MODEL TR-1640-E4, three cases, one S-212, one S-212E, 72 lbs.	261.00
MODEL TR-1640-2, two cases, one S-212H, 51½ lbs.	209.50
MODEL TR-1640-4, three cases, one S-212H, one S-212E, 72½ lbs.	273.05
MODEL TR-1640-NE2, three cases two N12ET, 64 lbs.	261.00
MODEL TR-1640-NE4, five cases, four N12ET, 98 lbs.	390.00
MODEL TR-1640-NH2, three cases, two N12HT, 78 lbs.	331.00
MODEL TR-1640-NH4, five cases, four N12HT, 126 lbs.	530.00
MODEL TR-1640-CS2, three cases, two CS48, 74 lbs.	271.00
MODEL TR-1640-CS4, five cases, four CS48, 118 lbs.	410.00
MODEL TR-1640-SCS2, three cases, two SCS-412, 125 lbs.	411.00
MODEL TR-1640-SCS4, five cases, four SCS-412, 220 lbs.	690.00

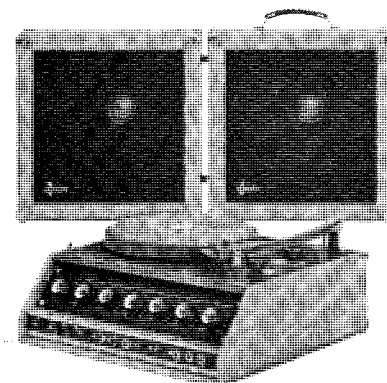


## TR-1640M SERIES 40 WATT MAGNETIC PICKUP

PROF.  
NET

A more powerful music room model which handles with ease four speakers, the TR-1640M player unit has an ultra-linear output system, two-way crossover-network loud-speaker systems, and the GE variable reluctance cartridge. The phono circuit is converted to a second mike channel by flipping a selector switch. It has a treble tone control for all channels, phono volume mixer, phono bass tone control, mike bass tone, mike volume mixer, impedance switch for speakers, scratch filter. There are output jacks for 2 speakers, "Phono," and "All"; input jacks for 2 mikes and auxiliary.

MODEL TR-1640M-HF in a single split case with 2-way speaker system including a 12" 50-watt woofer, crossover and separate 3½" tweeter, 36½ lbs.	205.00
MODEL TR-1640M-E2, two cases, includes one S-212, 52 lbs.	220.00
MODEL TR-1640M-E4, three cases, one S-212, one S-212E, 73 lbs.	284.50
MODEL TR-1640M-HF2, two cases, one S-212HF, 54 lbs.	244.00
MODEL TR-1640M-HF4, three cases, one S-212HF, one S-212E, 75½ lbs.	309.50
MODEL TR-1640M-KN, two cases, one KN-200, 66 lbs.	288.25
MODEL TR-1640M-KN2, three cases, two KN-200, 101 lbs.	421.00
MODEL TR-1640M-NE2, three cases, two N12ET, 65 lbs.	284.50
MODEL TR-1640M-NE4, five cases, four N12ET, 99 lbs.	413.50
MODEL TR-1640M-NH2, three cases, two N12HT, 79 lbs.	354.50
MODEL TR-1640M-NH4, five cases, four N12HT, 127 lbs.	553.50
MODEL TR-1640M-NN2, three cases, two N12NT, 86 lbs.	394.50
MODEL TR-1640M-NN4, five cases, four N12NT, 141 lbs.	633.50
MODEL TR-1640M-CS2, three cases, two CS48, 75 lbs.	294.50
MODEL TR-1640M-CS4, five cases, four CS48, 119 lbs.	433.50
MODEL TR-1640M-SCS2, three cases, two SCS-412, 126 lbs.	434.50
MODEL TR-1640M-SCS4, five cases, four SCS-412, 221 lbs.	713.50



## TR-1656M SERIES 56 WATT MAGNETIC PICKUP

PROF.  
NET

These fully integrated systems achieve phenomenal acoustic output. They include 56 watts peak output system, four-pole deluxe motor, GE variable reluctance cartridge. The phono channel converts to a *third* microphone channel by flipping a switch. First mike channel has separate bass attenuating control for voice clarity. Second mike is flat. Phono tone controls regulate third mike. There are a separate treble tone control for all channels, bass tone for phono, phono volume mixer, mike 2 mixer, mike 1 mixer, mike 1 bass tone, speaker impedance switch, scratch filter. Output jacks for 2 speakers, "Phono," and "All"; input jacks for 3 mikes and auxiliary.

MODEL TR-1656M-HF2, two cases, includes one S-212HF, 57 lbs.	288.50
MODEL TR-1656M-HF4, three cases, one S-212HF, one S-212HFE, 80 lbs.	377.00
MODEL TR-1656M-X2, two cases, one S-212X, 59 lbs.	311.00
MODEL TR-1656M-X4, three cases, one S-212X, one S-212XE, 84 lbs.	421.50
MODEL TR-1656M-NF2, two cases, one S-212NF, 63 lbs.	329.85
MODEL TR-1656M-NF4, three cases, one S-212NF, one S-212NFE, 92 lbs.	459.35
MODEL TR-1656M-KN2, three cases, two KN-200, 104 lbs.	465.85
MODEL TR-1656M-KN4, five cases, four KN200, 176 lbs.	731.35
MODEL TR-1656M-NE2, three cases, two N12ET, 68 lbs.	329.00
MODEL TR-1656M-NE4, five cases, four N12ET, 102 lbs.	458.00
MODEL TR-1656M-NH2, three cases, two N12HT, 82 lbs.	399.00
MODEL TR-1656M-NH4, five cases, four N12HT, 130 lbs.	598.00
MODEL TR-1656M-NN2, three cases, two N12NT, 89 lbs.	439.00
MODEL TR-1656M-NN4, five cases, four N12NT, 144 lbs.	678.00
MODEL TR-1656M-CS2, three cases, two CS48, 78 lbs.	339.00
MODEL TR-1656M-CS4, five cases, four CS48, 122 lbs.	478.00
MODEL TR-1656M-SCS2, three cases, two SCS-412, 129 lbs.	479.00
MODEL TR-1656M-SCS4, five cases, four SCS-412, 224 lbs.	758.00

### DIMENSIONS OF NEWCOMB TR PLAYERS

Single speaker TR players form a single case with the speaker mounting used as the lid. They measure 16¾" x 16¼" x 13¼". In multiple-speaker models (except TRS-1680) the phono-

amplifier unit closed measures 16¾" x 16¼" x 8½". Speaker dimensions are given on facing page. Accessory speakers may be added to one- or two-speaker models at any time.

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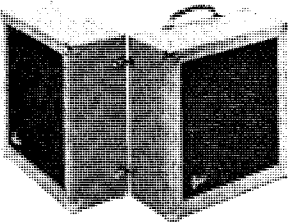
# NEWCOMB

PORTABLE  
LOUDSPEAKERS

TR  
SERIES

Newcomb makes many types of portable loudspeakers for use with Newcomb Portable Combination Transcription Player/Public Address Systems. They vary in portability, directivity, efficiency, and frequency response. For example, the column speaker is highly directive, but not nearly as easy to carry as the compact S-212 Series models. The KN-200 reproducer combines widest frequency range with highest efficiency and exceptional intelligibility. The N-12 Series speakers are highly efficient, directive, intelligible and portable. All are excellent instruments, built to withstand rough treatment. Construction and finish matches player units.

## ON THIS PAGE ARE SHOWN THE VARIOUS LOUDSPEAKER MODELS USED WITH NEWCOMB TR SERIES SYSTEMS

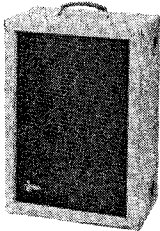


### NEWCOMB S-212 SERIES

These open-back designs are the most popular of all square dance system reproducers because they provide a unique combination of light weight, high output per watt input, and low cost. Their wide-range response makes them ideal for general use. Each model includes two independent reproducers in a split case. Speakers snap together back-to-back for carrying. Case size: 16 $\frac{3}{4}$ " x 16 $\frac{1}{4}$ " x 13 $\frac{1}{8}$ ". 25' cords stow on hooks inside case.

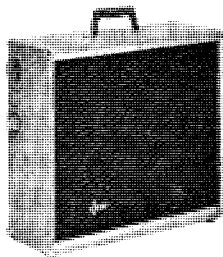
- **MODEL S-212** includes two 12" dual-cone wide range 30 watts peak reproducers of good conversion efficiency. Impedance per speaker is 8 ohms. Weight: 21 lbs. **PROFESSIONAL NET: \$64.50**
- **MODEL S-212E** is same as S-212 but has series extension jacks. **PROFESSIONAL NET: \$64.50**
- **MODEL S-212H** includes two 50 watts peak 12" reproducers of wide-range and excellent conversion efficiency. Impedance per speaker is 8 ohms. Weight 21 $\frac{1}{2}$  lbs. **PROFESSIONAL NET: \$77.50**
- **MODEL S-212HE** is same as S-212H but has series extension jacks. **PROFESSIONAL NET: \$77.50**
- **MODEL S-212HF** includes two 50 watt speak 12" woofers and two 3 $\frac{1}{2}$ " tweeters with crossover. Impedance per reproducer is 8 ohms. Weight 23 lbs. **PROFESSIONAL NET: \$88.50**
- **MODEL S-212HFE** is same as S-212HF but has series extension jacks. **PROFESSIONAL NET: \$88.50**
- **MODEL S-212X** includes two 60 watts peak super-power, aluminum-dome 12" dual-cone loudspeakers of superior efficiency and very wide range. Impedance per speaker is 8 ohms. Weight: 25 lbs. **PROFESSIONAL NET: \$110.65**
- **MODEL S-212XE** is same as S-212X but has series extension jacks. **PROFESSIONAL NET: \$110.65**
- **MODEL S-212NF** includes two 60 watts peak super-power woofers and two 3 $\frac{1}{2}$ " tweeters with crossover. These systems combine exceptional response range with super efficiency. Impedance per reproducer is 8 ohms. Weight: 29 lbs. **PROFESSIONAL NET: \$129.50**
- **MODEL S-212NFE** is same as S-212NF but has series extension jacks. **PROFESSIONAL NET: \$129.50**

**MODELS WITH "E" SUFFIX are only for use with other speakers and are not intended for use alone.**



### NEWCOMB KN-200 REPRODUCER

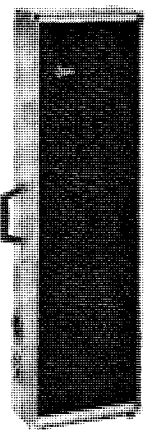
Designed to give you all the sound, all the quality, all the range, all the coverage inherent in your fine Newcomb sound system, the KN-200 is a fully-enclosed, ducted-port, two-way speaker system of advanced design. It is highly efficient, delivers the widest frequency response possible with a portable speaker... full music reproduction plus crisp high frequency intelligibility. The KN-200 includes a massive 12" woofer, crossover, horn tweeter and treble control. It includes a parallel extension jack and impedance change switch for 8 or 16 ohms. 25 foot cord stows into "Hideaway" compartment. Size: 10 $\frac{1}{4}$ " x 16 $\frac{7}{8}$ " x 23 $\frac{1}{2}$ ". Weight: 35 lbs. **PROFESSIONAL NET: \$132.75**



### NEWCOMB N-12 SERIES SPEAKERS

Most unusual for a portable speaker, Newcomb N-12 models are back-loaded, dual-labyrinth reproducers for those who want high directivity, firm bass, crisp and clean highs. They provide the advantages of a closed-back reproducer in problem halls and auditoriums. 25 foot cord stows in "Hideaway" compartment. Enclosure measures 7 $\frac{7}{8}$ " x 18 $\frac{1}{4}$ " x 19 $\frac{1}{2}$ ". Offered in three models...

- **MODEL N12ET** is a 30 watts peak system using an efficient 12" woofer and two 3 $\frac{1}{2}$ " tweeters and crossover. Included is a series-type extension jack with shorting switch which permits using the N12ET as either a regular or extension speaker. Impedance is 8 ohms. Weight 17 pounds. **PROFESSIONAL NET: \$64.50**
- **MODEL N12HT** is a 50 watts reproducer with a 12" heavy duty woofer, a directional horn tweeter and full crossover network. This reproducer provides highest sound output per watt input. Included are a parallel extension jack and impedance changing switch. Impedance: 8 and 16 ohms. Weight: 24 pounds. **PROFESSIONAL NET: \$99.50**
- **MODEL N12NT** is a 60 watts peak reproducer with an extra heavy duty 12" woofer, a directional horn tweeter and full crossover network. This reproducer provides highest sound output per watt input. Included are a parallel extension jack and an impedance changing switch. Impedances: 8 and 16 ohms. Weight 27 $\frac{1}{2}$  pounds. **PROFESSIONAL NET: \$119.50**



### NEWCOMB COLUMN SPEAKER, MODEL CS48

This is one of the most practical of all column speakers. It combines exceptional directivity with portability, has good efficiency and greater effective range than most columns. Power handling capacity is 60 watts peak. 25 foot cord and plug tuck into "Hideaway" cord compartment. It has an extension jack and switch for use with extension speakers. Size: 39 $\frac{7}{8}$ " x 11 $\frac{1}{4}$ " x 6 $\frac{3}{8}$ ". Weight: 22 lbs. **PROFESSIONAL NET: \$69.50**

### NEWCOMB SUPER COLUMN, MODEL SCS-412

Here's the best column speaker you've ever heard. The Newcomb SCS-412 gives you super intelligibility, super efficiency, super power handling capacity. It contains four *twelve-inch* speakers specially developed for column use. Its peak power handling capacity of 120 watts makes for dependability and unusually low distortion when used with conventionally-powered systems. Each amplifier watt is converted into more sound than is available from any other column. The SCS-412 makes small amplifiers sound like big ones. It will project your voice clear as crystal, syllable-perfect over the noisiest big crowd. It takes a man-size system to produce these results. The SCS-412 stands 56" high, is 15" wide, 7 $\frac{1}{2}$ " deep, weighs 42 $\frac{1}{2}$  pounds. Impedance is 8 ohms. It has a 25 foot cord, "Hideaway" cord compartment, series type jack with shorting switch. **PROFESSIONAL NET: \$139.50**

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NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

**NEWCOMB**

# NEWCOMB

STEREOPHONIC SYSTEMS  
MICROPHONES, ACCESSORIES

**TR**  
SERIES



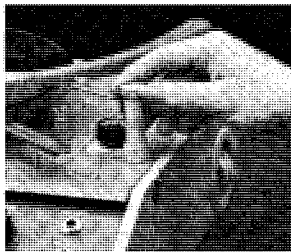
Built with a great reserve of power for most uses — 40 watts peak per channel — the Newcomb TRS-1680 is perhaps the most complete and flexible portable sound system ever built. It reproduces stereo or mono with the turn of a knob. Stereo or mono tape or radio can be fed to the system. Live music and speech are reproduced either stereo- or monophonically.

## TRS-1680 SERIES 80 WATT

It has three mike channels. The central mike puts the speaker or square dance caller in the middle, midway between the reproducers. There are separate treble, bass, and volume controls for phono or other reproduced sound. Each mike channel has its own, individual tone and volume controls. Mike tone controls are rotated for treble adjustment, pushed or pulled for bass. There is a blend control to provide any degree of stereo you wish. There are "Left" and "Right" inputs for radio, tape, or auxiliary; a scratch filter; "All" or "Phono" monitor jacks; jacks for two or four speakers with an impedance-matching switch. Turntable-amplifier unit DIMENSIONS: 9 1/4" x 17 7/8" x 18 5/8"; 43 lbs. POWER CONSUMPTION: 180 watts, 117 volts, 60 cycles a.c. A wide choice of reproducers to meet specific assignments is offered...

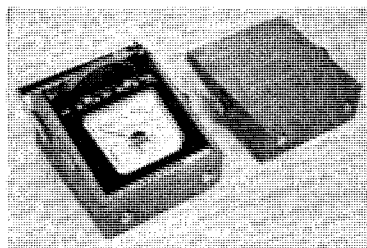
	PROF. NET
MODEL TRS-1680-NF2, two cases, includes one S-212NF, 72 lbs.	\$429.00
MODEL TRS-1680-NF4, three cases, two S212NF, 101 lbs.	\$558.50
MODEL TRS-1680-KN2, three cases, two KN-200, 113 lbs.	\$655.00
MODEL TRS-1680-KN4, five cases, four KN-200, 183 lbs.	\$830.50
MODEL TRS-1680-NH2, three cases, two N12HT, 91 lbs.	\$498.50
MODEL TRS-1680-NH4, five cases, four N12HT, 139 lbs.	\$697.50
MODEL TRS-1680-NN2, three cases, two N12NT, 98 lbs.	\$538.50
MODEL TRS-1680-NN4, five cases, four N12NT, 153 lbs.	\$777.50
MODEL TRS-1680-CS2, three cases, two CS48, 87 lbs.	\$438.50
MODEL TRS-1680-CS4, five cases, four CS48, 131 lbs.	\$577.50
MODEL TRS-1680-SCS2, three cases, two SCS-412, 138 lbs.	\$578.50
MODEL TRS-1680-SCS4, five cases, four SCS-412, 233 lbs.	\$857.50

### ACRA-SET TONE ARM LIFTER AND RECORD-CUEING DEVICE MODEL A-1

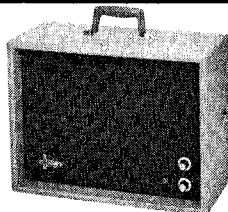


Acra-Set is an accessory available at additional cost for repeating passages and protecting records. You simply twist the knob on top to gently lift or lower tone arm. Lifter has a 100-division scale and a traveling stop with a pointer. It is simply installed by drilling a 3/16" hole which is readily located with a template. Holes are pre-drilled at the factory on current transcription players. Specify your model number when ordering; correct template and C-1 cue sheets will be supplied. PROF. NET: \$12.50

### MODEL VU-1 PORTABLE VISUAL OUTPUT METER



Model VU-1 Output Meter permits you to see that your voice is being amplified to the proper level, helps you make the most of your fine Newcomb TR system. Meter is high quality instrument with jeweled d'Arsonval movement and a scale calibrated in both db and volume units from 0 to 100 over the working range of the system. Also indicates overloading. Simple internal adjustment matches meter to any TR player; instructions are permanently mounted in lid. One end of the supplied patch cord connects player to "All" monitor jack, other end to "Input" on meter. Supplementary "All" monitor jack on meter. PROF. NET: \$29.95



### AMPLIFIED MUSIC MONITORS

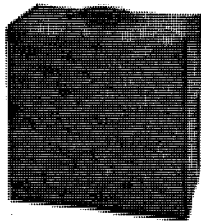
With a Newcomb Amplified Monitor you can hear reproduced music without interference or feedback squeal from caller's or speaker's voice. Connected to

"Phono" channel of transcription player, monitor reproduces music only, not mike channels. Or, it may be connected to "All" jack to reproduce voice and music. It can also be used as a stereo channel with a TR-1625 or TR-1640.

MODEL M-12: 12" speaker; 10 watt amplifier; 17 7/8" x 13 3/8" x 7 1/2"; 17 1/4 lbs. PROF. NET: \$79.50

MODEL M-9: 9" oval, dual-cone speaker; 10 watt amplifier; 13 1/4" x 10 1/8" x 7"; 10 lbs. PROF. NET: \$69.50

### PROTECTIVE CANVAS COVERS



Made of tightly woven, fleece-lined, rubberized mackintosh covert, with stout zipper closure and flap that tucks under handle. Transparent slot for identification.

No. CA-102 for use with TR-1625, TR-1625M, TR-1640, TR-1640M amplifier sections only. PROF. NET: \$5.95

No. CA-103 for use with S-212 type split case speaker assemblies and all TR series systems with single speaker in case lid. PROF. NET: \$5.95

No. CA-104 for use with TRS-1680 amplifier section only. PROF. NET: \$5.95

No. CA-110 for use with KN-200 or K-400 reproducers. PROF. NET: \$6.63

No. CA-111 for use with C-100 or J-200 reproducers. PROF. NET: \$5.95

No. CA-119 for use with M-12 monitor. PROF. NET: \$5.95

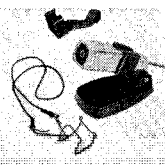
No. CA-132 for use with M-9 monitor. PROF. NET: \$5.95

No. CA-136 for use with all N-12 series reproducers. PROF. NET: \$5.95

No. CA-137 for use with CS48 column speaker. PROF. NET: \$9.30

No. SCS-412 for use with SCS-412 column speaker. PROF. NET: \$12.63

### MICROPHONES



Model N-30 Crystal Microphone with lavaliere cord, stand adapter, switch, and shielded plug.

PRO. NET 13.95  
Model N-30D Desk Mounting for N-30 only. PROF. NET 1.85

Model N-36 Dynamic Professional Quality Microphone is the perfectionist's choice with any TR system, especially intended for use with TR-1640M, TR-1655M and TRS-1680 series models. Supplied with shielded cord and plug and on-off switch. PROF. NET 50.00

Model N-23 Dynamic Microphone of very high quality with switch and shielded plug, recommended for general purpose use with all TR series systems. PROF. NET 39.50

Model MS-23 Accessory Bag, of heavy plastic, zippered, for microphones, etc., can be attached inside lid of speaker case. PROF. NET 2.10

Model PP-61 Stereo Conversion Pickup Cartridge, plug-in type, for any TR series player equipped with stereo output jack and plug-in ceramic cartridge. PROF. NET 4.65

Model WC-64 Connecting Cable, four feet long with plugs for connecting two TR ceramic models together for stereo. PROF. NET 4.65

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

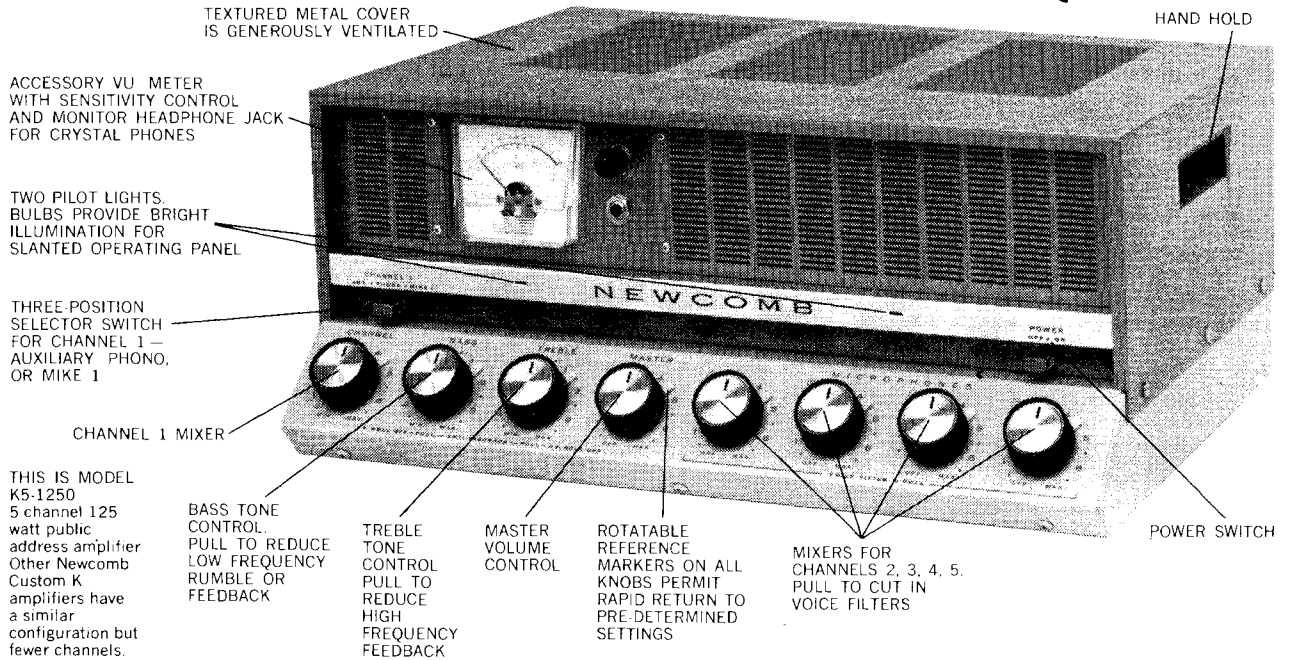
**NEWCOMB**

# NEWCOMB

MODULAR  
PUBLIC ADDRESS  
AMPLIFIERS

CUSTOM  
SERIES **K**

## MODULAR PUBLIC ADDRESS AMPLIFIERS OF THE VERY BEST QUALITY



TEXTURED METAL COVER IS GENEROUSLY VENTILATED

HAND HOLD

ACCESSORY VU METER WITH SENSITIVITY CONTROL AND MONITOR HEADPHONE JACK FOR CRYSTAL PHONES

TWO PILOT LIGHTS BULBS PROVIDE BRIGHT ILLUMINATION FOR SLANTED OPERATING PANEL

THREE-POSITION SELECTOR SWITCH FOR CHANNEL 1—AUXILIARY PHONO, OR MIKE 1

CHANNEL 1 MIXER

THIS IS MODEL K5-1250 5 channel 125 watt public address amplifier. Other Newcomb Custom K amplifiers have a similar configuration but fewer channels.

BASS TONE CONTROL. PULL TO REDUCE LOW FREQUENCY RUMBLE OR FEEDBACK

TREBLE TONE CONTROL. PULL TO REDUCE HIGH FREQUENCY FEEDBACK

MASTER VOLUME CONTROL

ROTATABLE REFERENCE MARKERS ON ALL KNOBS PERMIT RAPID RETURN TO PRE-DETERMINED SETTINGS

MIXERS FOR CHANNELS 2, 3, 4, 5. PULL TO CUT IN VOICE FILTERS

POWER SWITCH

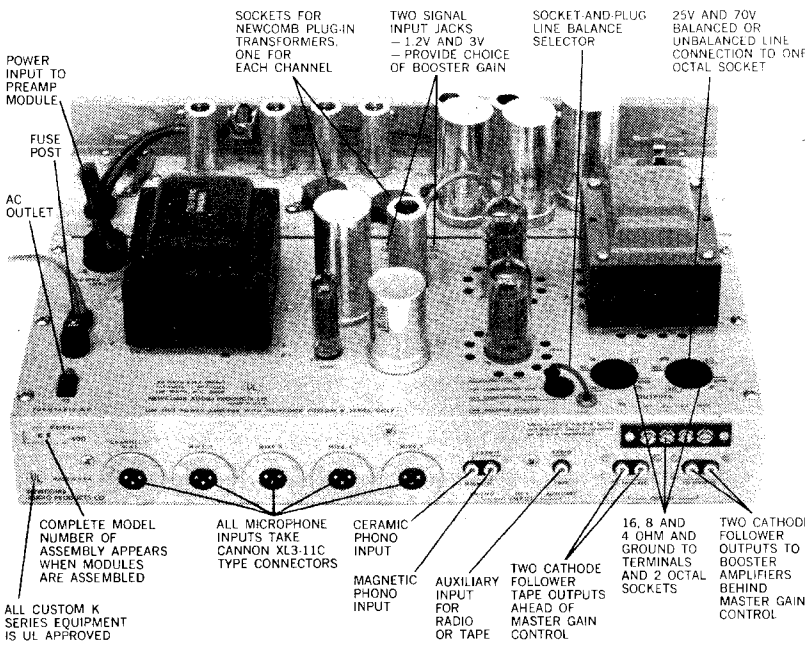
Flexibility and performance without equal are provided by Newcomb Custom K Series public address amplifiers. "Custom" has a very real meaning in this instance. Within minutes you can assemble exactly the right combination of channels, power and features to custom fit a particular situation. You are not faced with the hours of assembly labor and testing necessary with conventional modular designs. You simply select the Newcomb Custom K mixer/preamplifier with the number of channels — three, four, or five — you need. Then choose the power amplifier module — 40, 60, or 125 Watts — needed for the location. Drop the power amplifier into the preamplifier chassis. Two plug-in connections. No soldering. Drive a few sheet metal screws and you're in business. Take your choice of a well-ventilated cabinet cover or a rack panel mount. A VU meter accessory with a phone jack is available and can be quickly added to any front end. A remote control accessory is available for the four-channel module.

Any preamplifier may be used as a mixer by itself by inserting a Model P Power Supply instead of a power amplifier module. Any power output module becomes a straight power amplifier when it is mounted in the Newcomb Model KB Booster Chassis. The Newcomb Custom K modular system is so simple and straightforward that it's a wonder public address

amplifiers weren't made this way to begin with. All modules are completely interchangeable.

The latest developments in vacuum tube technology and skilled hanc craftsmanship are united to produce superb performance. Performance of Newcomb Custom K Series amplifiers has no equal. They operate with extremely low distortion at all power levels, supply unusually high useful power, run unbelievably cool. Vacuum tube design was chosen for the Custom K Series because no other method of amplification today provides the same combination of maximum performance, stability, reliability extended life, and outright value. With vacuum tubes, repairs are easier and faster to make, cost less.

Visually, Custom K Series assemblies are exceedingly handsome, finished in soft, light shades of green. The control panel is slanted for convenient operation either seated or standing, and it is well illuminated. Custom K Series models abound with such refinements as movable reference markers on all knobs. To cut in a voice filter you simply pull the appropriate mixer knob. To kill feedback, pull tone control knobs. When you're out to prove what you can do, when you're putting in a model job a job you'll be proud to put your nameplate on, that's the time to build with Newcomb Custom K.



SOCKETS FOR NEWCOMB PLUG-IN TRANSFORMERS. ONE FOR EACH CHANNEL

TWO SIGNAL INPUT JACKS — 1.2V AND 3V — PROVIDE CHOICE OF BOOSTER GAIN

SOCKET-AND-PLUG LINE BALANCE SELECTOR

25V AND 70V BALANCED OR UNBALANCED LINE CONNECTION TO 0NF OCTAL SOCKET

POWER INPUT TO PREAMP MODULE

FUSE POST

AC OUTLET

COMPLETE MODEL NUMBER OF ASSEMBLY APPEARS WHEN MODULES ARE ASSEMBLED

ALL MICROPHONE INPUTS TAKE CANNON XL3-11C TYPE CONNECTORS

CERAMIC PHONO INPUT  
MAGNETIC PHONO INPUT

AUXILIARY INPUT FOR RADIO OR TAPE

TWO CATHODE FOLLOWER TAPE OUTPUTS AHEAD OF MASTER GAIN CONTROL

16, 8 AND 4 OHM AND GROUND TO TERMINALS AND 2 OCTAL SOCKETS

TWO CATHODE FOLLOWER OUTPUTS TO BOOSTER AMPLIFIERS BEHIND MASTER GAIN CONTROL

ALL CUSTOM K SERIES EQUIPMENT IS UL APPROVED

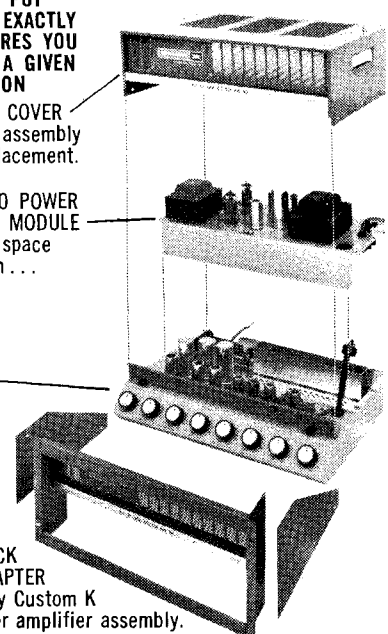
**INSTANTLY PUT TOGETHER EXACTLY THE FEATURES YOU NEED FOR A GIVEN INSTALLATION**

MODEL KC COVER drops over assembly for shelf placement.

MODEL 600 POWER AMPLIFIER MODULE drops into space provided in...

MODEL K5 MIXER/PREAMP MODULE

MODEL KR-875 RACK PANEL ADAPTER accepts any Custom K mixer-power amplifier assembly.



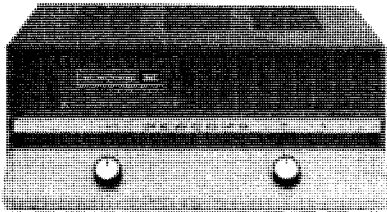
# NEWCOMB

MODULAR.  
PUBLIC ADDRESS  
AMPLIFIERS

CUSTOM  
SERIES **K**

## 70 COMBINATIONS FROM 14 UNITS

The modular concept makes it possible for you to get exactly the features you need without delay. Four chassis and four power units combine to form 15 basic assemblies. The VU meter may be added to 12 assemblies. 8 models (K4R assemblies with and without VU meter) become remote-control units with the addition of the RB4 accessory. All 35 may be rack panel mounted or covered for free-standing use. (UL requires that they be purchased with one or the other.)



MODEL KB BOOSTER CHASSIS WITH MODEL KCB COVER

## SPECIFICATIONS — K3, K4R, K5 MIXER-PREAMPLIFIERS

All of the Newcomb Custom K mixer-preamplifier modules have space at the back of the chassis into which may be inserted either a Model 400, 600 or 1250 power amplifiers or the Model P power supply. Power is normally supplied to the front end by the power amplifier module; Model P is used when the preamp section is to be used as a separate mixer-control unit. Mixer models differ principally in the number of input channels. Each has one mike channel that is convertible by switch to use with a magnetic or ceramic phono pickup (preamp provides full RIAA response curve) or with a flat tuner or tape input. **Outputs:** 2 from each of two cathode followers, one before and one after the master control. Maximum output from followers: 10 volts into high impedance load. **Distortion:** less than 1/2%. D.C. on all filaments. **Frequency response:** ±1 db 20-20,000 cycles. **Bass tone control range:** -18 db to +18 db. **Low frequency roll off:** 3 db at 100 cycles, -12 db at 20 cycles. **Treble tone control range:** -18 db to +18 db. **High frequency roll off:** 3 db at 5,000 cycles, -12 db at 20,000 cycles. **Microphone impedance:** 2 megohms convertible to low impedance by Newcomb hum-free plug-in transformer. **Input volts required for 1 volt output from cathode followers:** Mikes, .0028 volts, gain 54° db, 2 megohms. **Magnetic,** .0022 volts, 100,000 ohms. Equalized to full RIAA curve. **Ceramic pickup,** .086 volts. Equalized to RIAA curve. **Tuner or Tape input (Aux.),** .34 volts, 1/2 meg., gain 6.4° db. \*Gain stated is with 1 meg. output load. With 600 ohm output using TR-100 add 13 db. **Hum below 10 volts output (inputs shorted):** Mikes, -80 db. **Magnetic pickup,** -70 db. **Aux. input,** -80 db. **All controls off,** -100 db. Socket supplies power for VU-2T volume indicating meter. Note: K4R provides for remote control of all inputs. **Dimensions,** all models: 17" x 13 3/8" x 7 3/8" (height dimension includes KC cover). **Weight,** all models: 7 pounds. All microphone inputs require Cannon XL3-11C type connectors.

	Model K3	Model K4R	Model K5
Number of Channels and mixing controls	3	4	5
Number of Channels with voice filters	2	3	4
Tubes	two 6AB4 three 12AX7	three 6AB4 three 12AX7	four 6AB4 three 12AX7
LIST: (with tubes, without cover)	\$199.50	\$225.00	\$239.50



## FOR SEPARATE MIXER-PREAMPLIFIER ONLY...

MODEL P POWER SUPPLY takes the place of the power amplifier in the space provided in the K3, K4R, and K5 preamp modules, and supplies power to them through an octal socket. (It is never needed when a Model 400, 600, or 1250 power amplifier is used.) Model P includes a socket for a plug-in output transformer and output terminals for a balanced or unbalanced 600 ohm line. **Maximum 600 ohm output = 0 VU.** Input power: 117 volts, 60 cycles, 22 watts. **Wt.** 4 1/2 lbs. **List:** (with tubes) \$37.50.

needed when a Model 400, 600, or 1250 power amplifier is used.) Model P includes a socket for a plug-in output transformer and output terminals for a balanced or unbalanced 600 ohm line. Maximum 600 ohm output = 0 VU. Input power: 117 volts, 60 cycles, 22 watts. Wt. 4 1/2 lbs. List: (with tubes) \$37.50.

## AS SIMPLE TO SPECIFY AS THEY ARE TO ASSEMBLE

Model number of a basic assembly consists of a combination of preamp model number and power amplifier model number as follows:

Preamp Mixer ↓ / Power Amp →	Model 1250 125 watts	Model 600 60 watts	Model 400 40 watts	Model P Power Supply
Model K5 5 Channel	K5-1250 \$439.00	K5-600 \$399.00	K5-400 \$369.00	K5-P \$277.00
Model K4R 4 Channel	K4R-1250 \$424.50	K4R-600 \$384.50	K4R-400 \$354.50	K4R-P \$262.50
Model K3 3 Channel	K3-1250 \$399.00	K3-600 \$359.00	K3-400 \$329.00	K3-P \$237.00
Model KB Booster Chassis	KB-1250 \$224.50	KB-600 \$184.50	KB-400 \$154.50	Complete Mixer-Preamp Only Complete Power Amplifier Only

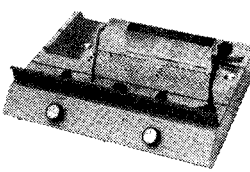
Specifications For Complete Mixer-Preamplifier Power Amplifier Assemblies	Model 1250	Model 600	Model 400
Mike Gain	133 db	130 db	128 db
Auxiliary Gain	85.4 db	82.4 db	80.4 db
Hum, input shorted:	Mike, -60 db below full output Magnetic pickup, -50 db below full output Auxiliary input, -60 db below full output All controls off, -80 db below full output		

List prices of combinations are shown without cover, rack mounting or VU meter.

## SPECIFICATIONS — 400, 600, 1250 POWER AMPLIFIER MODULES

The power amplifier modules in Newcomb's Custom K Series are not usable alone; they must be installed in a K3, K4R, or K5 mixer-preamplifier chassis. If they are to be used simply as a booster amplifier, they can be mounted in a Model KB Booster Chassis. Circuits in all power amplifier modules are resistance-capacity coupled, screen-regulated, with fixed bias and inverse feedback. They include power supply for K3, K4R, and K5 preamps. All have an a.c. outlet and an external fuse post. All three models have some identical specifications: **Input impedance:** 1 megohm convertible to low impedance with hum-free plug-in line or bridging transformers. **Output impedances:** 4, 8, and 16 ohms to a terminal strip and two octal sockets; 25 and 70 volts balanced or unbalanced line to one octal socket. **Hum and noise:** 80 db below steady state power rating.

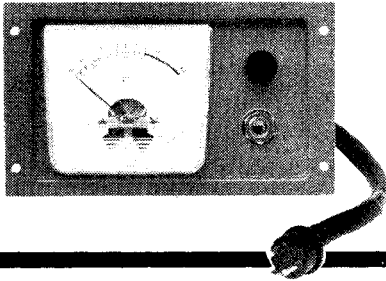
	Model 400	Model 600	Model 1250
POWER OUTPUT: steady state RMS at less than 5% T.H.D.	40 watts	60 watts	125 watts
POWER OUTPUT: at less than 1% T.H.D.	35 watts	50 watts	110 watts
PEAK POWER: (Note: Music power peak rating is higher)	80 watts	120 watts	250 watts
INPUT — 1.2 V or 3 V required for maximum rated steady state power output			
GAIN: at 1 meg. input 1.2 V in 3 V in	74 db 70 db	76 db 72 db	79 db 75 db
GAIN: at 600 ohms input using TR-100 1.2 V in 3 V in	61 db 57 db	63 db 59 db	66 db 62 db
FREQUENCY RESPONSE: ±1 db 20-20,000 cps at			
all ±0 db 20-20,000 cps at	35 watts	60 watts	110 watts
POWER CONSUMPTION: 117 volts, 60 cycles a.c.	1 watt	1 watt	1 watt
TUBES: All models include 5 silicon rectifiers	110 watts	145 watts	185 watts
WEIGHT:	one 7199 two 6878 one 6CU5	one 7199 two 6L6GC one 6CU5	two 12AU7 two 6550 one 6CU5
LIST: (with tubes)	16 1/2 lbs.	21 1/4 lbs.	30 1/2 lbs.
	\$129.50	\$159.50	\$199.50



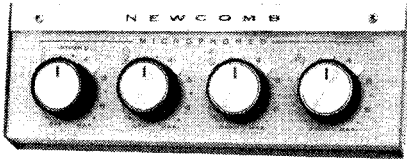
## FOR COMPLETE POWER AMPLIFIER ONLY

MODEL KB CHASSIS is the same size as the K3, K4R, and K5 preamp modules and accommodates Model 400, 600, or 1250 power amplifier modules when they are to be used as boosters. Model KB includes volume control, low frequency roll-off switch, power switch, and pilot lights. It has a lighted, slanted operating panel and factory-wired socket for Newcomb plug-in, hum-free transformers. **Dim.:** 17" x 13 3/8" x 7 3/8". **Wt.:** 5 lbs. (without cover). **List:** \$25.00.

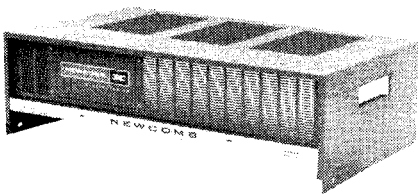


**NEWCOMB**MODULAR  
PUBLIC ADDRESS  
AMPLIFIERS**CUSTOM  
SERIES K****MODEL VU-2T ACCESSORY  
TRANSISTORIZED VU METER**

for use with Newcomb Custom K Model K3, K4R or K5 mixer/preamp, the VU-2T has sensitivity control and a monitor head-phone jack for wide-band crystal headphones only. The VU-2T obtains power from the preamp, is installed in place of the removable front plate, simply plugs into the socket provided. LIST: \$49.50

**MODEL RB4 ACCESSORY  
REMOTE CONTROL UNIT**

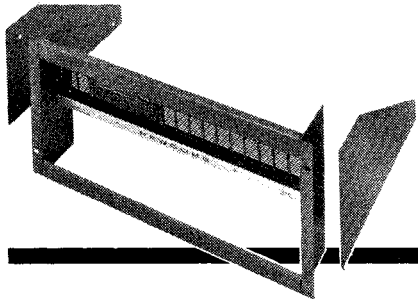
for use with the K4R only. A four-channel unit, it may be placed up to 2,000 feet from the amplifier. A 5 wire unshielded cable is required. Cable extra. Dimensions: 3" x 9" x 1 1/2". Weight: 1 1/2 pounds. LIST: \$19.50

**MODEL KC COVER**

for assemblies incorporating Model K3, K4R, or K5 mixer-preamplifier modules. Size: 17 1/4" x 12 1/4" x 5 1/4". Weight: 5 pounds. LIST: \$25.00

**MODEL KCB COVER**

for booster amplifier assemblies incorporating Model KB Booster Chassis. Size: 17 1/4" x 12 1/4" x 5 1/4". Weight: 5 pounds. LIST: \$25.00

**MODEL KR-875 RACK PANEL ADAPTER**

for assemblies incorporating Model K3, K4R, or K5 mixer-preamplifier modules. Size: 19" x 8 3/4". Weight: 5 pounds. LIST: \$25.00

**MODEL KR-875B RACK PANEL ADAPTER**

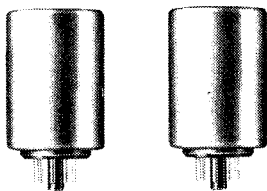
for assemblies incorporating Model KB Booster Chassis. Size: 19" x 8 3/4". Weight: 5 pounds. LIST: \$25.00

**HUM-FREE PLUG-IN TRANSFORMERS**

MODEL TR-91 input transformers are designed for all Newcomb amplifiers wired to accept them. They provide 30/50 ohms or 200/250 ohms input impedance depending on wiring of transformer socket. Normal Newcomb amplifier wiring connects the TR-91 for 30/50 ohms. Frequency response: 20 to 20,000 cycles. Wt: 1 1/4 lbs. LIST: \$25.

MODEL TR-100 input transformers are identical to TR-91 models. They provide 125/150 ohms or 500/600 ohms impedance depending upon wiring of socket with 125/150 ohms normal. Frequency response: 20 to 20,000 cycles. Weight: 1 1/4 pounds. LIST: \$37.50

MODEL TR-92B is a bridging transformer, otherwise identical to above models. Weight: 1 1/4 pounds. LIST: \$37.50

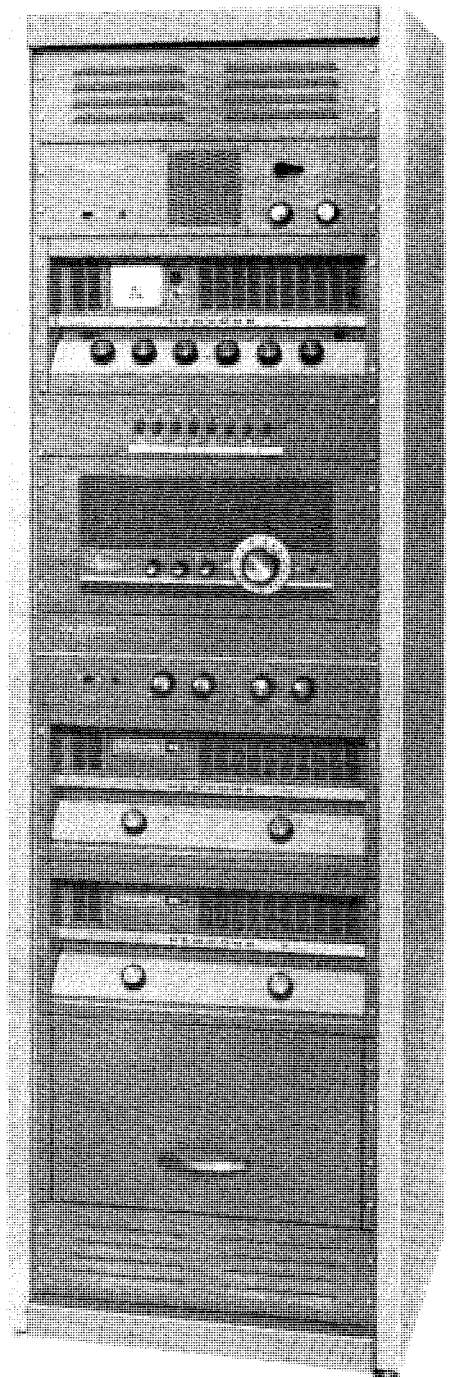
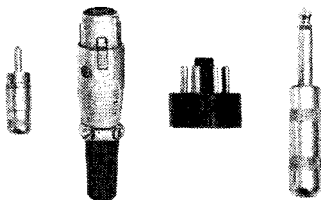
**CONNECTORS**

MODEL PW-157 is a phono, tape, or radio input plug for all Custom K mixer/pre-amplifiers. LIST: \$.75

MODEL PW-139 is a Cannon XL3-11C type microphone connector. LIST: \$2.50

MODEL PW-156 is an octal plug for speaker line outputs. LIST: \$.45

MODEL PW-142 is a two-contact shielded phone plug for monitor phones. LIST: \$1.50

**THE RICHEST-LOOKING  
RACK PANEL INSTALLATIONS IMAGINEABLE**

are provided by Newcomb Custom K amplifiers. The two-tone soft green tints of the finish, recessed panels, the stimulating design of the equipment combine to give an impression of professionalism and permanence. Mounted in the Model 70-1 Cabinet Rack illustrated above, top to bottom, are a Newcomb louvered panel, Newcomb TB2-525G Intercom, K3 Mixer-preamp, lever key panel AFM-750-875G AM-FM Radio, E2-525G Industrial Preamplifier, two KB-1250 complete power amplifiers, 1050CG Phono Changer Drawer, louvered panel. All Newcomb rack panel equipment, except Custom K series, is listed in the last two Newcomb Pathfinder pages in this section.



**NEWCOMB**STEREO TAPE RECORDERS,  
TWO-CHANNEL AMPLIFIER,  
SYSTEMS**TAPE  
RECORDERS**

Essentially a machine for the perfectionist, the Newcomb TX-10 incorporates virtually all of the features professional users have said they would like to see in a portable recorder. The TX-10 is thoroughly dependable, a high precision instrument, with a transport mechanism that is probably the most foolproof, the gentlest on tape of any machine in the world. Tape movement is controlled with a telescoping joy stick. Operation is intuitive. The natural thing to do is the right thing to do. You can record sound on track one. For example, you first record on track one. Twist the selector and you record on track two while the signal from track one is being transferred to track two. Twist the switch again and you are adding new material to track one while the previously combined signal from track two is being re-recorded on track one. There is no limit to the number of times this can be done. Tape loads in a straight line. No pressure pads on heads. All tape guides are stainless steel. Shuts off automatically at reel's end. Head covers remove for easy cleaning and editing. A pause-

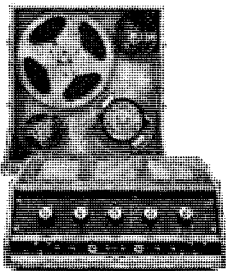
**NEW TX-10 SERIES**

CYBERNETICALLY ENGINEERED FOR INTUITIVE OPERATION ■ SOUND ON SOUND RECORDING ■ THREE HEADS ■ HYSTERESIS MOTOR ■ MONITOR BEFORE OR AFTER RECORDING ■ ANY SIZE REELS—3" TO 10½" ■ MIXING CONTROLS ■ POINTER-TO-POINTER METERS ■ DIFFERENTIAL BRAKING

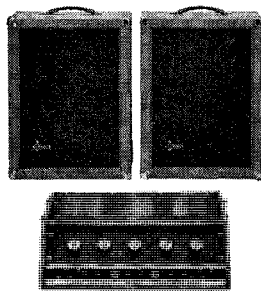
edit position of the joystick permits inching tape to exact location desired. The TX-10 is a two-speed machine—7½ ips and 3¾ ips—selected by push button with automatic speed-frequency correction. (15/7½ ips machines available on special order.) A relatively powerful, cool-running hysteresis synchronous motor and dynamically-balanced flywheel drive keep flutter and wow below .2% at 7½, .25% at 3¾, or .1% at 15 ips. The TX-10 has three heads—record, playback, and erase. 100KC bias and erase oscillators with indicators. Response is ±2 db 30-18,000 cps at 7½ ips, or ±3 db 30-13,000 cps at 3¾ ips. The TX-10 may be operated either vertically or horizontally. The dual volume indicating meters are illuminated, arranged pointer-to-pointer, show playback as well as recording levels. To prevent accidental erasure, you must push a separate interlock button to record. The four-digit counter permits close measurements even with a 10½" reel fully loaded with thin-base tape. There are separate "mike" and "line" input mixing controls for each channel, a balance control, a ganged volume control, a pilot light. A roomy opening on the left-hand side of the case provides for all inputs and power cord storage. There are sockets for Cannon XLR-3-12C male connectors, easily accessible sockets for Newcomb plug-in input transformers to permit use of low impedance microphones. Outputs are on the right side of the case.

Dimensions: 12¾" x 16¾" x 9½". Weight: 36½ lbs. Power requirements: 95 watts, 117 volts, 60 cycles a.c.

**PROFESSIONAL USERS NET: \$750.00. Unmounted CA-133 carrying case \$25.00**

**MODEL SA-80B****2 CHANNEL POWER AMPLIFIER WITH TONE, VOLUME, AND BALANCE CONTROLS**

The Newcomb SA-80B is a two channel, stereo/monaural, portable, power amplifier designed especially for use with the Newcomb TX-10 Series Tape Recorders. The amplifier puts out 40 watts peak per channel, a total of 80 watts peak. The controls are conveniently grouped on a slanted operating panel that is brightly illuminated by two pilot lights. Controls are ganged. They consist of a bass boost and attenuation control, treble boost and attenuation, volume control, and a balance control. There is an input jack for each channel, a stereo-monaural selector switch, output impedance selectors, and two-speaker sockets for each channel. The removable cover carries tape reels of all sizes up to and including 10½". A plastic zippered bag for miscellaneous cords is included. Frequency response—20-20,000 cycles ±1 db. Distortion per channel at 20 watts r.m.s.—less than 1%. Hum below —65 db. Output impedances per channel—16, 8, 4 ohms. 8½" x 16¾" x 16¾"; 32 pounds. **PROFESSIONAL USERS NET: \$199.50.**

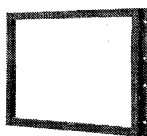
**PORTABLE AMPLIFIER-REPRODUCER SYSTEMS**

**MODEL SA-80B-J2** consists of one SA-80B and two Model J-200 Reproducers. Latter are two-way speaker systems with tweeter level controls, enclosed in compact cases, use latest techniques to provide excellent, full-range coverage in music rooms and small auditoriums. Each measures 14¾" x 20" x 10¼". Three-case system weighs 71 pounds. **PROFESSIONAL NET: \$368.40.**

**MODEL SA-80B-K2** consists of one SA-80B and two Model K-400 Reproducers. Latter are three-way loud-speaker systems developed for those who seek the very best possible reproduction that can be provided by translating advanced engineering concepts into portable form. Each measures 16¾" x 23½" x 10¼". Three-case system weighs 102 pounds. **PROFESSIONAL NET: \$468.40.**

**MOUNTING HARDWARE FOR THE TX-10**

**MODEL SR-85** is a custom frame for mounting the TX-10 in home high fidelity installations. **PROFESSIONAL NET: \$10.**



**MODEL SR-86** is a frame for rack mounting the TX-10 in Newcomb Model 35-19 or 70-19 cabinet racks. (cannot be used with door.) **PROFESSIONAL NET: \$15.95.**



**MODEL SR-97** is a pair of rack brackets for mounting the TX-10 in standard 19" racks. (Cannot be used in Newcomb Models 35-19 and 70-19 cabinets.) **PROFESSIONAL NET: \$3.95.**

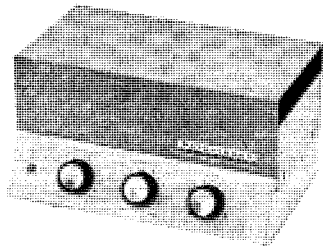
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**NEWCOMB**

# NEWCOMB

# PATHFINDER PUBLIC ADDRESS EQUIPMENT

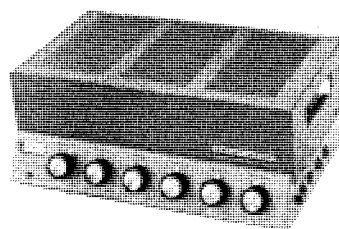


## MODEL E-10B

10 watt  
amplifier  
Low priced, deluxe,  
full push-pull output

The Newcomb E-10B offers a surprising number of deluxe features for so compact and economical an amplifier. It has the slanted operating panel and control markers which distinguish all Pathfinder models. The E-10B has separate mixers for microphone and ceramic phono pickup (or radio or tape). Mike input is a standard 3-contact phone jack suitable for high or low impedance mike. The E-10B is wired for plug-in transformers for instant conversion for use with low impedance mike. Output impedances to socket are 4, 8, 16 ohms, plus 25 and 70 volt line taps. Output jack for recorder or booster amplifier. Unit has a wide-range treble tone control, 25,000 hour pilot light. UL approved.

**SPECIFICATIONS:** Power Output: 10 watts RMS, 20 watts peak at less than 5% distortion. Frequency Response:  $\pm 2$  db 30 through 15,000 cycles. Mike Gain: 118 db at 2 meg. .0055 volts delivers full power. Phono Gain: 79 db at 1 meg.; 33 volts delivers full power. Output To Tape Jack: Delivers 4.4 volts max. or 1 volt at  $\frac{1}{2}$  watt output. Hum: Fundamental, 70 db below rated output. Power Response:  $\pm 3$  db, 70 through 13,000 cycles at 5% distortion. Size:  $10\frac{1}{4}$ " x  $6\frac{1}{2}$ " x  $5\frac{3}{4}$ " high. Weight: 9 lbs. Power Consumption: 60 watts, 117 volts, 60 cycles. Tubes: 1-12AX7, 1-6AU6, 2-6V6, 1-6X4. LIST: (with tubes) \$75.00.



## MODEL E-5P

5-channel  
mixer  
preamplifier

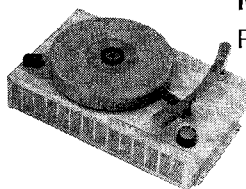
The Newcomb E-5P is a high performance, low-priced, multi-purpose mixer-preamplifier with 4 microphone channels (one convertible to magnetic phono), one high level channel with two inputs (chosen by selector switch) — one for ceramic phono pickup, the other for tape or radio. Master gain control. Each mike input jack is standard 3-contact phone jack. Each mike channel is wired for plug-in transformers for instant conversion to low impedance microphone usage. The E-5P has a vU meter with concealed sensitivity adjustment, outputs for tape, booster, and a.c., 25,000-hour pilot lamp. Operating panel is slanted for easy viewing and operating sitting or standing. Performance is excellent with individual mike input tubes for minimum crosstalk and d.e. on all filaments. UL approved.

**SPECIFICATIONS:** Cathode Follower Outputs: 6 volts at less than 2% into high impedance load. Volume Indicating Meter: Adjustable from 2 to 6 volts. Frequency Response:  $\pm 2$  db 30 through 20,000 cycles. Mike Inputs: 2 meg.; .0025 volts for 2 volts out. Ceramic Phono or Radio or Tape Input: 1 meg. .32 volts for 2 volts output. Magnetic Phono Input: .011 volts for 2 volts output. Hum: Fundamental, 80 db below 6 volts output. Size:  $14\frac{1}{8}$ " x  $8\frac{1}{16}$ " x  $5\frac{1}{2}$ " high. Weight:  $11\frac{3}{4}$  lbs. Power Consumption: 31 watts 117 volts 60 cycles A.C. Tubes: 4-12AV6, 1-12AU6, 5-0C5, 1 power silicon rectifier. LIST: (with tubes) \$139.50.

## HIGH QUALITY, LOW PRICE PUBLIC ADDRESS AMPLIFIERS WITH MANY DELUXE FEATURES

### MODEL P-4

#### PHONO TOP



The Newcomb P-4 is a 4-speed record player that is designed to fit on top of the E-20, E-40 or E-75 Pathfinder amplifier.

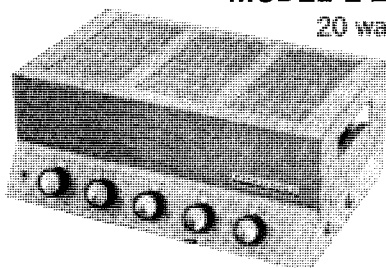
It includes an automatic idler release on the power switch to prevent flat spots, a plug-in turnover-type dual-sapphire-styli ceramic cartridge, pickup hold-down screw and drop pad. Dimensions:  $8\frac{5}{16}$ " x  $14\frac{1}{2}$ " x  $5\frac{1}{2}$ " high over all. Weight: 6 lbs. LIST: \$39.95.



All Newcomb Pathfinder power amplifiers and the E-5P preamplifier have slanted operating panels for convenient control in either a sitting or standing position. This feature is important, too, with rack mounted installations where units may be mounted near the floor as well as at eye level. All control knobs have white, rotatable reference markers for quick return to a pre-determined setting. All have a 25,000 hour pilot light. All are UL approved. Newcomb public address amplifiers Models E-20, E-40, and E-75 all have the following features: Each has two microphone channels with mixer controls and one high level channel with mixer for ceramic phono pickup, radio or tape. Mike channels are wired for Newcomb plug-in transformers for instant conversion to use with low impedance microphones. High level control is compensated; as volume is reduced, bass is proportionately sustained. Mike not affected by this control. There are separate bass and treble master tone controls. Output taps on terminal strip and two sockets are for 25 volt balanced or unbalanced line plus 70 ohms unbalanced, and 16, 8, and 4 ohms. There is an output jack for recorder or booster and an a.c. output receptacle. Pathfinder equipment has a distinctive two-tone finish in soft tints of olive-gray and spruce.

### MODEL E-20

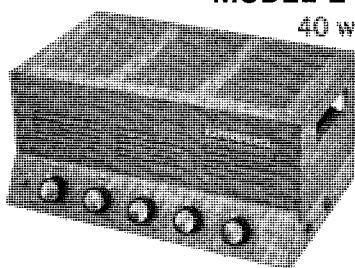
20 watt



**SPECIFICATIONS:** Power Output: 20 watts RMS, 40 watts peak at less than 5% distortion. Frequency Response:  $\pm 2$  db 30 through 15,000 cycles. Mike Gain: 122 db at 2 meg.; .005 volts delivers full power. Phono Gain: 83 db at 1 meg.; 3 volts delivers full power. Output To Tape Jack: Delivers 6 volts max. or 1 volt at  $\frac{1}{2}$  watt output. Hum: Fundamental, 70 db below rated output. Power Response:  $\pm 3$  db 50 through 20,000 cycles at 5% distortion. Size:  $14\frac{1}{8}$ " x  $9\frac{1}{2}$ " x  $5\frac{3}{4}$ " high. Weight:  $14\frac{1}{4}$  lbs. Power Consumption: 80 watts, 117 volts, 60 cycles A.C. Tubes: 1-12AX7, 1-6BR8, 2-EL-84, 1-5Y3. LIST: (with tubes) \$99.50.

### MODEL E-40

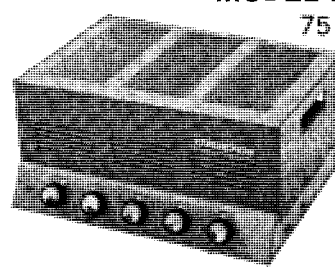
40 watt



**SPECIFICATIONS:** Power Output: 40 watts RMS, 80 watts peak at less than 5% distortion. Frequency Response:  $\pm 2$  db 30 through 15,000 cycles. Mike Gain: 125 db at 2 meg.; .005 volts delivers full power. Output To Tape Jack: Delivers 6 volts max. or 1 volt at 1 watt output. Hum: Fundamental, 70 db below rated output. Power Response:  $\pm 2$  db 40 through 20,000 cycles at 5% distortion. Size:  $14\frac{1}{8}$ " x  $9\frac{1}{2}$ " x  $6\frac{3}{4}$ " high. Weight:  $19\frac{1}{4}$  lbs. Power Consumption: 160 watts, 117 volts, 60 cycles A.C. Tubes: 1-12AX7, 1-6BR8, 4-EL84, 1-5U4. LIST: (with tubes) \$129.50

### MODEL E-75

75 watt



**SPECIFICATIONS:** Power Output: 75 watts RMS, 150 watts peak at less than 5% distortion from a fixed bias, screen regulated, output system. Frequency Response:  $\pm 2$  db 30 through 15,000 cycles. Mike Gain: 128 db at 2 meg.; .005 volts delivers full power. Phono Gain: 88 db at 1 meg.; 3 volts delivers full power. Output To Tape Jack: Delivers 6 volts max. or 1 volt at 1.87 watts output. Hum: Fundamental, 70 db below rated output. Power Response:  $\pm 2$  db 50 through 20,000 cycles at 5% distortion. Size:  $17\frac{1}{2}$ " x  $14\frac{1}{8}$ ". Weight: 26 lbs. Power Consumption: 185 watts, 117 volts 60 cycles. Tubes: 2-12AX7, 1-6CA 2-7027A, 1-6V6GT, 3 power silicon rectifiers. LIST: (with tubes) \$189.50.

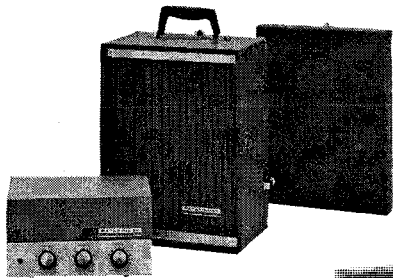
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# NEWCOMB PATHFINDER

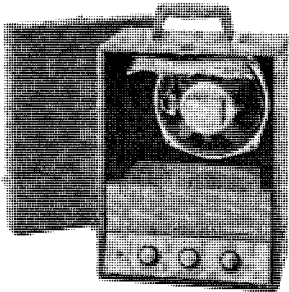
## PUBLIC ADDRESS SYSTEMS



### MODEL E-1008S

10 watt  
PORTABLE  
system

The Newcomb E-1008S System consists of one E-10B amplifier and one P-108 speaker assembly. The P-108 contains an efficient 8" loudspeaker protected by a kickproof, perforated metal grille, microphone carrying straps (but no mike), and space for carrying the E-10B amplifier. Size: 11¼" x 14¾" x 9" deep. System weight: 17½ lbs.  
**LIST: \$115.00.**



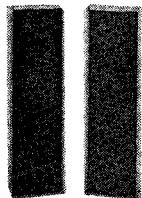
### MODEL E-20-212R

20 watt  
PORTABLE  
system

This 20 watt system consists of one Newcomb E-20 amplifier and one P-212R dual speaker assembly which also acts as a carrying case for the amplifier. The P-212R includes two efficient 12" dual-cone loudspeakers, each with a 25 foot cord and plug. Speaker baffles snap together back to back. Inside are mike carrying straps but no microphone. Speakers are protected by kickproof perforated metal grilles. System closed measures 13½" x 15¼" x 23", weighs 37 lbs.  
**LIST: \$199.50.**

**MODEL E-40-212H** 40 watt PORTABLE system. Included in the E-40-212H are one Newcomb E-40 amplifier and one P-212H dual speaker case assembly which also acts as a carrying case for the amplifier. There are two 12" heavy duty loudspeakers each with a 25 foot cord and plug, kickproof perforated metal grilles and mike carrying straps but no microphone. Size 13½" x 15¼" x 23", weight 44 lbs.  
**LIST: \$242.00.**

## COLUMN SPEAKER PERMANENT SYSTEMS



**MODEL E-20-2C8F** 20 watt consists of one E-20 amplifier, two Model C-8 column speakers, and 100 feet of speaker cord. No microphone. Weight: 54¾ lbs.  
**LIST: \$336.20.**

**MODEL E-40-2C8F** 40 watt consists of one E-40 amplifier, two Model C-8 column speakers, and 100 feet of speaker cord. No microphone. Weight: 60 lbs.  
**LIST: \$366.20.**

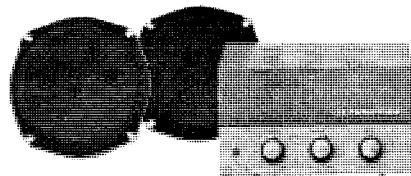
**MODEL E-75-4C8F** 75 watt consists of one E-75 amplifier, four Model C-8 column speakers, and 200 feet of speaker cord. No microphone. Weight: 107 lbs.  
**LIST: \$662.90.**

**MODEL E-20-2C12F** 20 watt consists of one E-20 amplifier, two model C-12 super column speakers, and 100 feet of speaker cord. No microphone. Weight: 93¼ lbs.  
**LIST: \$569.50.**

**MODEL E-40-2C12F** 40 watt consists of one E-40 amplifier, two model C-12 super column speakers, and 100 feet of speaker cord. No microphone. Weight: 98½ lbs.  
**LIST: \$599.50.**

**MODEL E-75-2C12F** consists of one E-75 amplifier, two model C-12 super column speakers, and 100 feet of speaker cord. No microphone. Weight: 105 lbs.  
**LIST: \$659.50.**

**MODEL E-75-4C12F** 75 watt consists of one E-75 amplifier, four model C-12 super column speakers and 200 feet of speaker cord. No microphone. Weight: 184 lbs.  
**LIST: \$1129.50.**



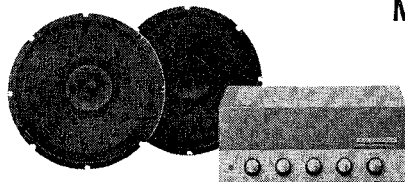
### MODEL E-10-28F

10 watt  
PERMANENT  
system

This system includes one Newcomb Model E-10B amplifier, two eight-inch extended range loudspeakers, and 100 feet of speaker cord. No microphone included. System weight: 12 lbs.  
**LIST: \$99.00.**

### MODEL E-20-48F

This is a 20 watt sound system for permanent installation consisting of one Newcomb Model E-20 amplifier, four 8" extended range loudspeakers, and 200 feet of speaker cord. No microphone. System weight: 20¼ lbs.  
**LIST: \$147.50.**



### MODEL E-20-212F

20 watt  
PERMANENT  
system

This twenty watt system includes one Newcomb E-20 amplifier, two 12" dual-cone loudspeakers, and 100 feet of speaker cord. No microphone included. System weight: 20¼ lbs.  
**LIST: \$143.50.**

**MODEL E-40-212FH** 40 watt PERMANENT system includes one Newcomb E-40 amplifier, two heavy duty 12" loudspeakers, and 100 feet of speaker cord. No microphone. System weight: 28 lbs.  
**LIST: \$184.50.**

**MODEL E-40-412F** 40 watt PERMANENT system includes one Newcomb E-40 amplifier, four dual-cone loudspeakers, and 200 feet of speaker cord. No microphone. System weight: 32½ lbs.  
**LIST: \$217.50**

**MODEL E-75-412FH** 75 watt PERMANENT system includes one Newcomb E-75 amplifier, four heavy duty 12" loudspeakers, and 200 feet of speaker cord. No microphone. System weight: 43 lbs.  
**LIST: \$299.50**

## SPEAKER ASSEMBLIES

**MODEL P-108** is an 8" speaker in a portable case fitted for carrying the Newcomb E-10B amplifier. It has a kickproof, perforated metal grille, 25 foot cord with octal plug and microphone straps. Dimensions: 11¼" x 14¾" x 9" deep. Weight: 9 lbs.  
**LIST: \$40.00.**

**MODEL P-212R** consists of two efficient 12" dual-cone speakers, each with 25 foot cord and octal plug, in a split portable case designed to carry the E-20 amplifier with or without the P-4 phono top. Case is covered with gray vinyl, has kickproof, perforated metal grilles, and microphone-carrying straps. Dimensions: 13½" x 15¼" x 23". Weight: 22½ lbs.  
**LIST: \$100.00.**

**MODEL P-212H** consists of two heavy duty 12" loudspeakers, each with 25 foot cord and octal plug, in a split portable case designed to carry the E-40 amplifier with or without the P-4 phono top. Case is covered with gray vinyl, has kickproof, perforated metal grilles, and microphone-carrying straps. Dimensions: 13½" x 15¼" x 23". Weight: 24½ lbs.  
**LIST: \$112.50.**

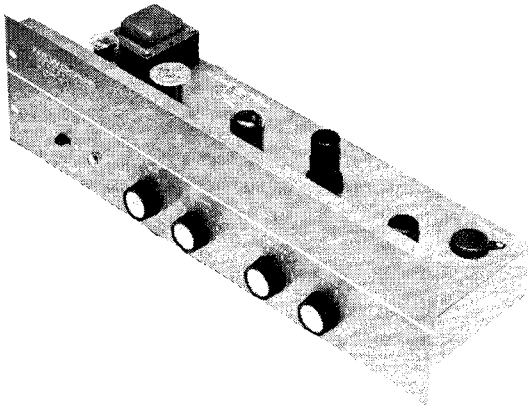
**MODEL C-8 COLUMN SPEAKER** combines exceptional vertical directivity with broad horizontal coverage. Enclosure tapered front to back for ganging. Contains four efficient 8" speakers. Dimensions: 6½"D x 11¾"W 40" H. Weight: 20¼ lbs.  
**LIST: \$115.85.**

**MODEL C-12 SUPER COLUMN SPEAKER** with four 12" speakers provides super intelligibility, super efficiency, super power handling capacity—120 watts peak. Dimensions: 7½" D x 15¼" W x 56" H. Weight: 39½ lbs.  
**LIST: \$232.50.**

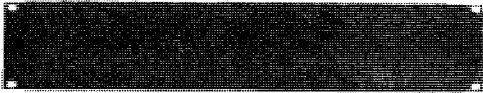
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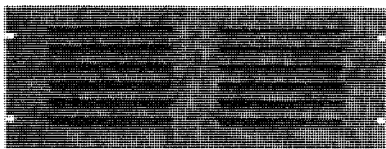
# NEWCOMB

**NEWCOMB****PATHFINDER**  
PUBLIC ADDRESS EQUIPMENT**MODEL E2-525G INDUSTRIAL PREAMPLIFIER**

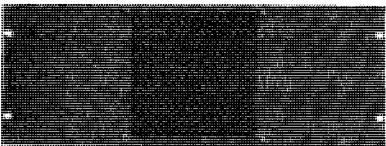
Designed for industrial sound systems, the Newcomb E2-525G has 125 to 600 ohm balanced line output. Maximum output at 600 ohms = 10 volts line output. Inputs: one mike at 2 meg impedance, convertible to low impedance by means of Newcomb plug-in transformer (socket provided) · one high level crystal phono; one radio or tape. At 600 ohm line output: mike output of .0015 volts delivers 1 volt; phono input of .15 volts delivers 1 volt out. Frequency response:  $\pm 2$  db 30 to 15,000 cycles. Electronic remote switching turns mike on and music off when paging. Remote switching line may be unshielded 3-conductor cable up to several thousand feet long. No relays required. There are separate tone controls for mike and phono. Mike input socket is a standard 3-contact phone jack usable with low or high impedance microphones. Tubes: 1-6SF5, 1-6SN7, 1-6J5, 1-6X5, 25 watts, 117 volts, 60 cycles a.c. Dimensions: 19" x 5 $\frac{1}{4}$ " x 6 $\frac{1}{8}$ " deep. Weight: 9 lbs. **LIST: \$129.50.**

**PANELS FOR CABINET RACK****BLANK  
PANELS**

Model Number	Dimensions	Weight lbs.	List
175G	1 $\frac{3}{4}$ " x 19"	1 $\frac{3}{4}$	\$3.00
350G	3 $\frac{1}{2}$ " x 19"	1 $\frac{3}{4}$	\$3.50
525G	5 $\frac{1}{4}$ " x 19"	2 $\frac{1}{2}$	\$4.00
700G	7" x 19"	3	\$4.50
875G	8 $\frac{3}{4}$ " x 19"	3 $\frac{1}{2}$	\$5.00
1050G	10 $\frac{1}{2}$ " x 19"	4 $\frac{1}{4}$	\$5.50

**LOUVERED  
PANELS**

Model Number	Dimensions	Weight lbs.	List
L-525G	5 $\frac{1}{4}$ " x 19"	2 $\frac{1}{2}$	\$5.00
L-700G	7" x 19"	3	\$5.75
L-875G	8 $\frac{3}{4}$ " x 19"	3 $\frac{1}{2}$	\$6.50
L-1050G	10 $\frac{1}{2}$ " x 19"	4 $\frac{1}{4}$	\$7.25

**MONITOR  
PANEL**

**MODEL 700MPG** measures 7" x 19", has perforated metal grille, requires 6" speaker, weight 3 lbs. (See also radio panels.) **LIST: \$10.00.**

**LEVER KEY  
PANELS**

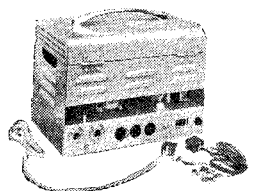
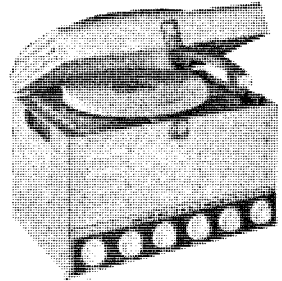
All lever key panels have 1" slots 1" apart with 1 $\frac{1}{8}$ " mounting holes. Each panel measures 3 $\frac{1}{2}$ " x 19". Weight of each panel is 1 $\frac{3}{4}$  lbs.

Model No.	No. of slots	LIST
LK-350-6G	6	\$5.00
LK-350-8G	8	\$5.50
LK-350-10G	10	\$6.00
LK-350-12G	12	\$6.50
LK-350-14G	14	\$7.00
LK-350-16G	16	\$7.50

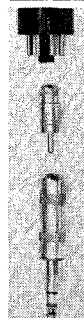
Name strip Model No.	LIST
SR-6	\$2.50
SR-8	\$2.60
SR-10	\$2.70
SR-12	\$2.80
SR-14	\$2.90
SR-16	\$3.00

**MOBILE AMPLIFIERS 12-VOLT**

Newly developed E-253M Series Newcomb Amplifier designed for use anywhere. Ultra modern 25 watt unit available in several styles with and without turntable (see below). May be used on either 12-volt storage battery or 117 volt 60 cycle AC power source with equal effectiveness. Consumes as much as 20% less battery current, weighs up to 30% less. Separate bass and treble tone controls; two microphone channels each with the new standard broadcast type connectors and convertible to low impedance with Newcomb humless plug-in input transformers; high gain separate phono channel for ceramic pickups; extra input for tape; standby switch to reduce idle battery consumption more than 70%; new freedom from vibrator hash; heat resistant ceramic pickup and turret type motor in 3-speed phono top; completely U/L Approved.



**POWER OUTPUT:** 25 watts at less than 3% total harmonic distortion, peak power 40 watts. **FREQUENCY RESPONSE:** 30 — 20,000 cycles  $\pm 2$  db. **HUM LEVEL:** 70 db below 25 watts. **INPUTS:** Two mike (2 meg.) gain 122 db; one phono (2 meg.) gain 90 db; one tape (2 meg.) gain 90 db. Mike inputs convertible to low impedance using Newcomb plug-in transformers. **CONTROLS:** On stand-by switch, one power switch and treble tone control, on bass tone, one phono, two microphone, one phono motor control (on phono top models), and one hum balance control. **OUTPUT IMPEDANCE:** 4, 8, 16, and 500 ohms and a 70 volt tap to impedance selector and two output sockets. **POWER CONSUMPTION:** On 117 volts 60 cycles AC, 100 watts. On 12 volts DC, 8.85 amp (with phono top, 10.3 amps.). Stand-by current less than 3 amps. **SIZE:** 14 $\frac{1}{8}$ " x 9 $\frac{1}{2}$ " x 8" high (with cover (height 10 $\frac{1}{4}$ ")). **TUBES:** 1-12AX7 1-12AU6, 2-6L6G, 2-6X5GT, 1-12AV7, E-253M — plain top model list price \$214.50. (Weight, 24 lbs.). E-253M3 — 3-speed phono-top model, list price \$248.10. (Weight, 28 $\frac{1}{4}$  lbs.). PC — Protective turntable cover with "king-sized" handle for use on Model E-253M only, list price \$15.00. (Weight, 2 $\frac{3}{4}$  lbs.). Above prices include both battery and AC power cables.

**CONNECTORS**

**MODEL PW-156** is an octal speaker plug for all Pathfinder model **LIST: \$4.45.**

**MODEL PW-157** is a phono tap or radio input plug for all Pathfinder models. **LIST: \$3.75.**

**MODEL PW-144** is a three contact, shielded mike plug for all Pathfinder models. **LIST: \$1.75.**

SPECIFICATIONS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

NEWCOMB AUDIO PRODUCTS CO. • HOLLYWOOD 38, CALIFORNIA

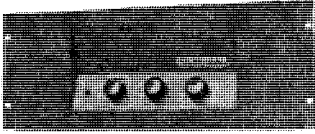
**NEWCOMB**

# NEWCOMB PATHFINDER

PUBLIC ADDRESS EQUIPMENT

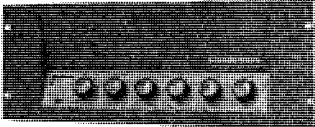
## RACK AND PANEL EQUIPMENT

### AMPLIFIER PANELS — MODEL E-10-700PG



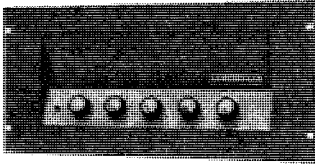
Panel only for rack mounting a standard Newcomb E-10B amplifier. Dimensions: 19" x 7". Weight: 3 lbs. LIST: \$17.50.

### MODEL E-52040-700PG



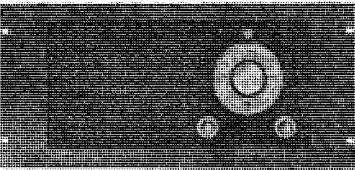
Panel only for either the Newcomb E-5P pre-amplifier, the E-20 or E-40 amplifier. Dimensions: 19" x 7". Weight: 3½ lbs. LIST: \$18.50.

### MODEL E75-875PG



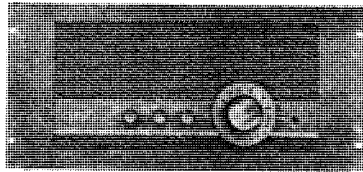
Panel only for rack mounting a standard Newcomb E-75 amplifier. Dimensions: 19" x 8¾". Weight: 4 lbs. LIST: \$19.50.

### PANEL MOUNTED RADIOS—MODEL AM-500-875G AM RADIO



This is a complete, transformer-powered AM radio in which the output amplifier and 8" oval speaker act as a monitor. The output to external amplifiers is taken off ahead of the volume control so adjustment of monitor volume has no effect on output to sound system or tape recorder. The AM-500-875G is a dependable, rugged, continuous duty receiver with a large, direct-driven tuning dial with conelrad markings, lighted index. 40 watts, 117 volts, 60 cycles a.c. Dimensions: 19" x 8¾" x 7½" deep. Weight: 12¼ lbs. LIST: \$109.00.

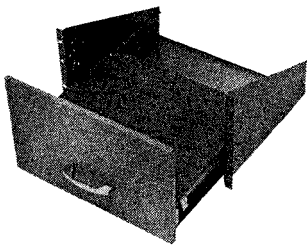
### MODEL AFM-750-875G AM-FM RADIO



A complete, transformer-powered AM-FM radio in which the output amplifier and 8" oval speaker act as a monitor, the AFM-750-875 has AFC (and defeat switch) and temperature-compensated oscillators for exceptionally stable performance. Output to external amplifier is taken off ahead of the volume control so adjustment of monitor volume has no effect on output to sound system or recorder. 54 watts, 117 volts, 60 cycles a.c. Dimensions: 19" x 8¾" x 7½" deep. Weight 14½ lbs. LIST: \$249.00.

### MODEL 1050CG

#### PHONO CHANGER DRAWER

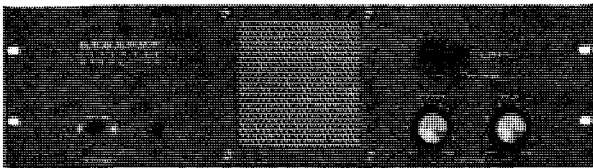


The front panel dimensions of the 1050CG phonograph changer drawer is 19" x 10½". It has a 16½" x 15" removable motor board. Depth from the top of the motor is 3¾". Clearance above top of motor board is 6¾". Weight 19¼ lbs. Finest double-extension, roller bearing glides provide a stable level platform for player. LIST: \$65.00.

### MODEL TB-525G

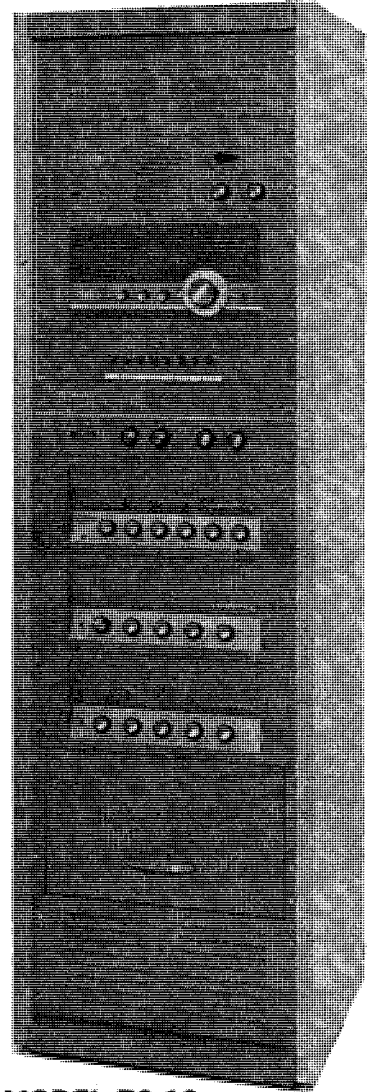
#### PANEL-MOUNTED

#### INTERCOM



A complete intercom amplifier and speaker, the TB-525G is designed for industrial installations wherein paging speakers are used for intercommunication. Input and outgoing impedances: 500 ohms. Separate incoming and

outgoing volume controls. Talk-listen switch. Pilot light. Tubes: (3) 1-6SL7, 1-6V6, 1-6X5. 40 watts, 117 volts, 60 cycles a.c. Dimensions: 19" x 5¼" x 6¾" deep. Weight: 9¼ lbs. LIST: \$103.50.



### MODEL 70-19

#### CABINET RACK

Contemporarily styled, solidly built, beautifully finished in an olive-gray tint compatible with Newcomb Pathfinder equipment, the 70-19 has a ventilated back, provides 70" of panel space. Panels are standard 19" width. Last three digits of model number indicate panel depth, e.g. "875" stands for 8¾" panel depth. Dimensions: 21 7/8" x 74" x 18½" deep. Weight 84 lbs. LIST: \$262.00.



MODEL 70D Door with lock for front of 70-19 cabinet. Weight: 23 lbs. LIST: \$50.00.

MODEL 35-19 CABINET RACK A short cabinet rack with ventilated back, 35" of panel space. Dimensions: 21 7/8" x 39" x 18½" deep. Weight: 52 lbs. LIST: \$187.50.

MODEL 35D Door with lock for front of 35-19 cabinet. Weight: 12 lbs. LIST: \$29.50.





# INTERCOMS

RCA offers a complete line of quality intercoms designed for office, home, farm or factory use at an economical price. Manufactured at RCA's traditionally high standards of engineering and design, the intercoms shown here are suitable for almost any possible application from simple wireless 2-way talk listen systems

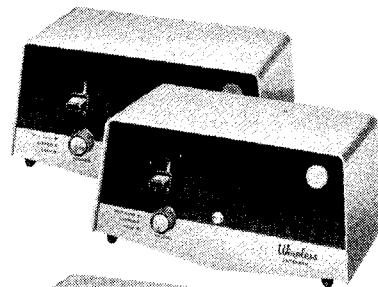
to flexible multi-unit systems with a variety of talk-listen-monitor options. The unsurpassed styling of these fine intercoms will harmonize beautifully with any decor. Installation, in all cases, is simple and inexpensive. Complete instructions are furnished with all units.

## WIRELESS INTERCOM SYSTEM

### Type 17641

The RCA Wireless Intercom makes use of the existing power lines for the transmission of voice. Just plug the units into any standard home electrical outlet and the installation is complete. Ideal for use anywhere . . . home, office, farm or factory, the RCA Wireless will operate between rooms, office floors and even between adjacent buildings if on the same power line.

2 station system **\$99.50\***  
Add'l. station (17646) **\$49.75\***

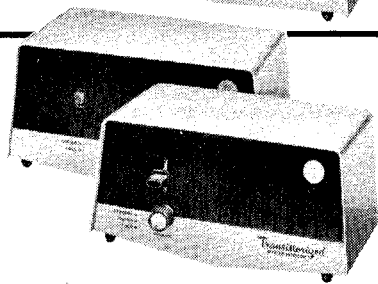


## TRANSISTORIZED INTERCOM SYSTEM

### Type 17642

The ultimate in low-cost installation. Battery operated (inexpensive penlight cells) it can be installed anywhere independent of ac current. Ideal outdoor system for farms, camps, storage yards, warehouses. Comes complete with master, remote and 50 feet of cable. As many as four additional remotes may be added to system.

1 master and 1 remote **\$52.95\***  
Add'l. remote (17648) **\$15.50\***

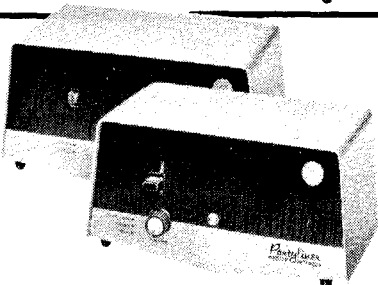


## PARTYLINER INTERCOM SYSTEM

### Type 17640

Ultra-sensitive "Partyliner" system comes complete with master, remote and 50 feet of cable. Powerful amplifier picks up the slightest noise. Remote can answer calls from a distance without operating switch making the "Partyliner" ideal for use as an electronic baby sitter. As many as four additional remotes can be added to system. Range of master to any remote is about 500 feet.

1 master and 1 remote **\$39.00\***  
Add'l. remote (17647) **\$15.50\***

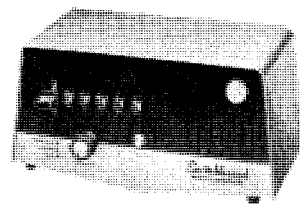


## SWITCHBOARD MASTER INTERCOM

### Type 17643

Used with as many as four remotes, the switchboard feature provides direct remote-to-remote conversations. Master can monitor any or all remotes or can set-up remotes to monitor other units. Remotes can originate calls to master and other remotes. Busy light flashes during conversation.

Master only **\$49.95\***

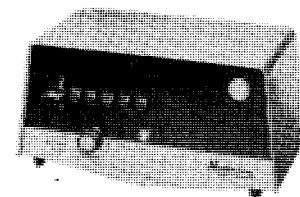


## MASTERCOM MASTER INTERCOM

### Type 17644

A dual-purpose master, the "Mastercom" can be used with as many as five remotes in a master-to-remote system or with as many as five additional masters in an all-master hook-up. In all-master systems, three private conversations can be held simultaneously or a conference may be held using all six stations.

Master only **\$49.95\***

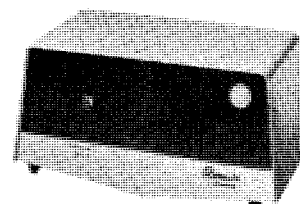


## REMOTE STATION

### Type 17645

The RCA Intercom Standard Remote Station can be used with either the RCA Mastercom or Switchboard unit. It can be installed for private or non-private operation. When private, its Call switch must be used to converse, but there's no interception by Master. When non-private, the Remote may reply to the master from a distance without using its switch, but its Call switch must be used to originate calls to its master. The RCA Remote Station can also be installed so that the call switch is inoperative and thereby unable to originate calls.

**\$15.50\***

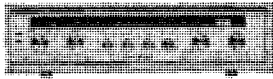


\* Optional List Price



# Sherwood TUNERS • AMPLIFIERS • SPEAKERS

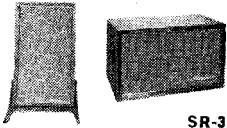
MOST HONORED OF THEM ALL



S-8000 IV

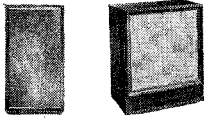


S-7700 II



SR-2

SR-3



SR-1

SR-4

**40 + 40 FM/MX STEREO RECEIVER.** Combines in one unit the famed performance of Sherwood's FM tuner and multiplex circuitry, two phono preamplifiers and stereo control amplifiers. Features professional-quality zero-centered tuning meter, Stereo Indicator Light, balanced fly wheel tuning, friction-locked stereo bass and treble controls, ganged loudness control, phono level control, stereo balance control, stereo function and input selector switch. Slide switches control scratch and rumble filters, FM Inter-Channel Hush, phase reverse, and tape monitor. Inputs for tape playback, tape monitor, phono, and two auxiliaries. Outputs for recording and 4, 8, 16 ohm speakers. Has powered center channel for mono extension speakers, and front panel stereo headphone jack and separate speaker disabling switch.

**General Specifications**—Power Output: Stereo 40 + 40 watts (80 watts mono) at 1½% IM distortion. Frequency Response: 20-20,000 cps ± ½ db. @ rated output. Hum and noise: phono input 63 db. below 40 watts. DC filament supply. Phono sensitivity 1.4 mv. Typical sensitivity: FM; 0.95 μv. for 20 db. quieting, 1.8 μv. for -30 db. noise and distortion IHF. Capture ratio: 2.4 db. Selectivity: FM 200 kc. @ -3 db. FM Detector: 1.0 mc peak-to-peak. Tubes: 19 plus 3 silicon rectifiers, 9 diodes. Power consumption 115-125V, 60 cps fused, 225w.

- Size: 16¼" x 4" x 14" deep
- S-8000 IV (less case) Fair Trade Net .....\$329.50
- S-7700 II, similar to above, but with AM reception added, (less case) Fair Trade Net .....\$374.50
- "TANGLEWOOD" 4-WAY SPEAKER SYSTEM. Response: 29-17,500 cps ±2½ db. Power: handles 75-watts program. Features two 10" woofers with staggered 17½ and 18½ cps resonance, 8" midwoofer, 8" midrange, and two 3½" tweeters. Crossovers at 200, 600, and 3,500 cps. Size: 13½" x 24" x 13" deep
- SR-4, hand-rubbed Walnut finish .....\$219.50
- "RAVINIA" 3-WAY SPEAKER SYSTEM. Response: 48 cps to 17,500 cps ± 2½ db. Power: handles 60-watts program. High compliance 12" woofer, 8" mid range and 3" ring radiator tweeter. Crossovers at 600 and 3,500 cps. Size: 26¼" x 15" x 13¼" deep
- SR-3, hand-rubbed Walnut finish .....\$139.50
- "BERKSHIRE" 3-WAY SPEAKER SYSTEM. Response: 53 cps to 17,500 cps ± 2½ db. Power: handles 50-watts program material. High compliance 10" woofer. Mid range and tweeter same as Ravinia. Same crossover network. Size: 24" x 13" x 9½" deep
- SR-2, hand-rubbed Walnut finish .....\$99.50
- "NEWPORT" 2-WAY SPEAKER SYSTEM. Response: 53-17,000 cps ±2½ db. Power: handles 45-watts. Has 10" woofer and 4" midtweeter. Crossover at 1800 cps. Size: 24" x 13" x 9½" deep
- SR-1, hand-rubbed Walnut finish .....\$84.50



S-3000 V, S-3000 III



S-2000 IV



S-2100 II

Sherwood is best known for its outstanding FM tuners, the first ever to achieve 0.95 μv sensitivity. All four models S-3000 V FM/MX STEREO, S-3000 III FM, S-2000 IV FM/AM, and S-2100 II FM/MX STEREO/AM feature: FM Interchannel Hush which automatically eliminates noisy "hash" between FM channels; velvet-smooth Flywheel Tuning; professional Zero-Centered Tuning Meter; 20% Longer Dial Scales.

**General Specifications**—Typical Sensitivity: FM, 0.95 μv for 20 db. quieting, 1.8 μv for 30 db. quieting; IHF. Capture ratio: 2.4 db. Sensitivity: 1.8 μv for -30 db. noise and distortion below 100% FM, AM-2μv @ 60% mod. for 0.5V output, 6 db. S/N; Typical Selectivity: FM—200 kc @ -6 db.; AM—(wide) 15 kc @ -6 db., (narrow) 5 kc @ -6 db.; FM Detector: 1.0 mc peak-to-peak; Frequency Response: FM 20-20,000 cps ± ½ db., AM—(wide) 20-7,500 cps @ -6 db.; Distortion: FM—less than 1½% IM @ 100% mod. Hum and Noise Level: FM -60 db. below 100% mod., AM -55 db. below 100% mod.; Audio Output: 2.0 volts output @ 100% FM; Tube Complement: 9 plus 2 rectifiers. Power Consumption: 80 watts, 115-125V, 50-60 cps; Dimensions: 14" x 4" x 10½" deep.

- S-3000 V, with Tuning Meter and Stereo Indicator Light; Fair Trade Price (less case) .....\$165.00
- S-2100 II, with Tuning Meter and Stereo Indicator Light; Fair Trade Price (less case) .....\$209.50
- S-3000 III, Fair Trade Price (less case) .....\$120.50
- S-2000 IV, Fair Trade Price (less case) .....\$170.50



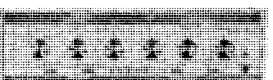
S-5000 II

S-5500 IV

Sherwood's top-rated S-5000 II—STEREO DUAL AMPLIFIER—offers the maximum flexibility in stereo and monophonic operation.

**General Specifications**—Bass and treble controls have friction type dual knobs to adjust one channel separately from the other or together. Power output: Stereo, 40 + 40 watts music power (80 watts mono IHF music power). Frequency Response: 20-20,000 cps ± db. at 36 watts. IM Distortion: 1½% at rated output. Hum and Noise: phono input, 60 db. below rated output. DC filament supply. Sensitivity: Radio, 0.25 volt; phono, 1½ mv. Inputs: phono (RIAA); tapehead (NAB) and 6 high-level. 2 cathode follower recording outputs. Controls include: 12 db/octave scratch and rumble filters and presence rise switch. Tubes: 4-7868, 6-12AX7/ECC83, 4 silicon rectifiers. Power consumption: 110 watts, 115-125V, 60 cps, fused.

- Size: 14" x 4" x 12½" deep
- S-5000 II, Fair Trade Price, (less case) .....\$199.50
- S-5500 IV, Same as S-5000 II without presence rise feature, (less case) .....\$179.50



S-1000 III

The famous Sherwood "Music Center" monophonic amplifier offers music power output of 40 watts. This amplifier design is recognized for providing the many features and flexibility appreciated by the high-fidelity expert, yet, offering the utmost in simplicity of operation.

**General Specifications**, S-1000 III—similar to one channel of S-5000 II. Five tubes, Size: 14" x 4" x 10½" deep.

- S-1000 III, Fair Trade Price (less case) .....\$124.50



**STEREO INDICATOR LIGHT SL-1.** Gives instant identification when FM/Stereo is tuned. Special sensing circuitry prevents false indications (frequent with some other identification devices) due to noise impulses. Operates with any type FM tuner. Size: 2½" x 2¼" x 7½" deep.

SL-1 .....\$29.50

CASES for amplifiers and tuners (Walnut tone leatherette), \$7.50; for receivers \$9.50. **GENUINE WALNUT WOOD CASES** for receivers; richly finished, \$29.50

**RACK PANEL MOUNTING** for tuners. Fit standard relay racks. Panel size 5¼" x 19", Price: \$7.50.

**SPEAKERS** used in Sherwood speaker systems are available separately. Complete specs on request. R12 woofer (21 cps res.), \$37.50; R10T woofer (18 cps res.), \$26.90; R10 woofer (23 cps res.), \$24.90; R8T midwoofer. \$16.95; R8 midrange, \$14.95; R4 tweeter, \$16.95; R. tweeter \$14.95.

**CROSSOVER NETWORKS.** The Sherwood line of crossover networks features performance precise enough for the finest 2, 3 or 4-way high fidelity speaker system at a cost within the reach of the budget-wary experimenter. All networks feature 12 db/octave attenuation, 16 ohms impedance.

Model	Crossover Frequency	Speaker Application	Dimensions	Net Price
SX6	600 cps	2-way	4x7½x3	\$16.90
SX8	800 cps	2-way	4x7½x3	15.50
SX36	3500 cps	2-way	4x5x3	6.50
SRX63	600,3500 cps	3-way	6x6x3	15.50

**ONE YEAR WARRANTY**—Every Sherwood product is covered by a full one-year warranty against defects in material and workmanship. Tubes carry standard EIA 90-day warranty.

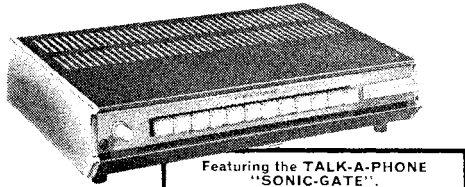
# NEW TALK-A-PHONE WIRELESS AND HOME INTERCOM SYSTEMS

**TWO NEW WIRELESS SYSTEMS**

Two NEW, high-quality wireless intercoms, featuring the exclusive TALK-A-PHONE "SONIC GATE" circuit. Provides dependable communication where permanent, wired systems are not practical. Ideal for use in offices, factories, stores, homes, apartments, nurseries, farms, etc. Distinctively styled cabinets combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray with brushed chrome side panels. Each station has a translucent indicator which illuminates when "On." All stations must be connected to outlets on the same electric company service transformer. Built-in Ground Adapter provides greater sensitivity where electrical wiring is routed over long paths. U.L. Approved.

## NEW TALK-A-PHONE 12-STATION SELECTIVE WIRELESS\* SYSTEM

- 6 Separate 2-Way Conversations Simultaneously
- Selective Paging with Reply • Push-Button Channel Selector
- Start a System with any number of Masters and Staffs



Featuring the TALK-A-PHONE "SONIC-GATE" circuit.

Your Voice Goes Through . . . Noise and Hum are Screened Out . . .

The Sonic Gate circuit effectively suppresses line noises and hum by 30 db while system is in actual operation, as well as when in Stand-By position.

- No Installation
- No Wiring
- No Cables
- Just Plug-in and Talk

Provides selective communication. Each Master is equipped with a 6 or 12-channel selector; can converse with any other station selectively; can receive calls on any channel Master elects to use. As many as 6 separate conversations may be held simultaneously, with 12 Masters. Masters can talk with any station in system; can also set up conferences.

Wireless Staff Stations are for use where calls need not be originated, but where reply must be made. They are available for operation on any single channel desired—to match that of Master. They also can be used to receive Paging Calls from any Selective Wireless Master in the system . . . use as many Wireless Staffs as needed (all Staffs must operate on same channel for this

purpose). Two or more Wireless Staffs on the same channel will function as a 2-Station System (without Master); they can originate calls and reply to each other.

Start a system with any number of Masters and Staffs. Where up to 12 stations are used, each on a separate channel, Master can converse selectively with any channel. If more than 12 stations are used, channels must be shared; stations on same channel will receive all calls to that channel. To change location, merely pick up unit and move . . . no rewiring or new installation is necessary. All stations are equipped with the original TALK-A-PHONE UNI-TRANS feature, which permits continuous one-way transmission for periods when you wish to dictate or "listen-in."

**T-LCM-8912. 12-Station Selective Wireless Master.** Complete, with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size 14"wx8 3/4"dx3 1/2" h. Shipping weight, 12 1/2 lbs. List Price Per Station \$154.00. . . . . Net 89.80

**T-LCM-8906. 6-Station Selective Wireless Master.** As above except for 6-Station Capacity. Shpg. Wt. 10 lbs. List Price Per Station \$136.00. . . . . Net 79.50

**Wireless Staff Stations.** Receive and reply on a single channel only.

- T-LCS-901 Channel 1
- T-LCS-902 Channel 2
- T-LCS-903 Channel 3
- T-LCS-904 Channel 4
- T-LCS-905 Channel 5
- T-LCS-906 Channel 6

Complete with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size, 10 1/2"wx8 3/4"dx3 1/2" h. Shipping weight, 7 lbs. List Price Per Station \$77.00. . . . . Net 45.00

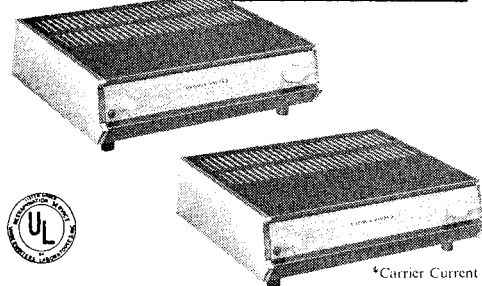
## NEW TALK-A-PHONE 2-STATION WIRELESS\* SYSTEM

A complete system of 2 stations, ready to use. Simply place each unit where desired, plug each into nearest electrical outlet, and talk! Add more stations anytime. All stations will receive any messages transmitted from any point. Move units anywhere, plug into electrical outlet and use—no re-wiring or new installation necessary. The original TALK-A-PHONE UNI-TRANS is built in—provides continuous one-way transmission; ideal for dictation, or listening-in on baby. 110-120 V. AC-DC. Size, 10 1/2"wx8 3/4"dx3 1/2" h.

**T-LC-33.** Complete with tubes and instructions. Weight 16 lbs. List Price Per System \$138.00 . . . Net 79.90

**T-LC-17.** Additional Single Station. Weight 8 lbs. List Price Each \$69.00. . . . . Net 39.95

**CRADLEPHONE** - Optional for all units above. Add H to model No. when ordering. List Price per Station add \$59.95. . . . . Net add \$35.00



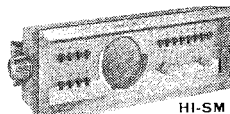
## NEW TALK-A-PHONE All-Transistor HOME INTERCOM-RADIO SYSTEMS



HI-9 or HI-8



HI-9R or HI-29R



HI-SM



HI-4



HI-1



T-LR-2R

This new TALK-A-PHONE Intercom System saves the housewife and homeowner miles of tiresome steps, hours of time . . . Makes home life easier, more comfortable and more enjoyable . . .

**LISTEN-IN ON BABY, CHILDREN OR SICK ROOM . . .** from any room in the house, day or night • **ANSWER OUTSIDE DOORS FROM ANY ROOM . . .** in any part of the house—without opening doors to strangers • **TALK FROM ROOM TO ROOM . . .** back and forth, upstairs or downstairs, any time, day or night • **YOUR FAVORITE RADIO PROGRAMS . . .** follow you throughout the house with the flick of a switch.

TALK-A-PHONE All-Transistor Home Intercom units are beautifully finished in gold, polished and satin silver tones. All Masters and Staff Stations are designed for flush mounting; or with optional Housing Assembly, these stations can be mounted on walls, cabinets, or set on tables, shelves, etc. Plaster Ring included for 8 and 16-Station units require 14 1/8" w, 4 1/4" h, 3 1/2" d wall opening. Front panel size: 15 1/4" w, 5 1/4" h. HI-4 requires 4 1/8" w, 6 1/4" h, 2" d wall opening. Front Panel size: 4 1/8" w x 7 3/4" h. Sub-Stations are designed for flush mounting only, do not need Plaster Ring. Requires 2" square wall opening, 2" deep. Front Panel size: 3 3/8" w, 5 3/8" h. Stations do not plug into electrical outlet. Operates from Battery or HI-PS Power Supply Unit. Total capacity: up to 16 stations including Central Master. With full instructions.

**CENTRAL MASTER STATIONS.** Only one used per system. Contains the All-Transistor Amplifier (and radio when built-in). Place in any room. Master can call and converse with any other station (or stations) in system; can listen-in to any Station that user makes "non-private". If system has Model HI-9R Central Master (built-in radio), the Master and any Staff can listen to standard AM radio broadcasts. "Additional" Masters can be used in rooms where it is desired to listen to AM radio programs different from those tuned in at Central Master.

**HI-9 Central Master Station.** Without radio, less battery. List Price, Each, \$99.50. . . . . Net Each 58.00

**HI-9R Central Master Station.** With built-in radio. Less battery. List Price, Each, \$154.00. . . . . Net Each 89.50

**HI-17 Central Master Station.** Same as HI-9 except has total 16 station capacity. Without built-in radio. List Price Each \$146.00. . . . . Net Each 85.50

**HI-29R Additional Master Station.** With built-in radio. Less battery. List Price, Each, \$154.00. . . . . Net Each 89.50

**STAFF STATIONS.** 4, 8 and 16-Station Capacity Staff Stations can be combined within the same system and used with choice of one 8-station capacity or one 16-station capacity Central Master Station. (When HI-9R is used, any HI-4, HI-8 and HI-16 staff, can listen to radio of HI-9R).

**HI-4 Staff Station.** Provides same facilities as HI-8 but has 4-Station capacity. For flush mounting in wall. With accessory T-SM-L, can be surface mounted. List Price Each \$29.95. . . . . Net Each 17.50

**HI-8 Staff Station.** Use as needed to call and converse with one or more Staff, Master or Sub-Stations. Can be switched to "private" or "non-private" operation as desired. When "non-private", as in baby or sick room use, another Staff or Master can listen in. Staff can listen to standard AM radio programs of HI-9R Central Master. List Price Each \$54.00. . . . . Net Each 31.50

**HI-16 Staff Station.** Same as HI-8 except has total 16 station capacity. List Price Each \$99.95. . . . . Net Each 58.50

**HI-SM HOUSING ASSEMBLY.** For enclosing any 8 or 16-Station Capacity Master or Staff, to permit mounting on walls or cabinets, or placing on tables, shelves, etc. List Price Each \$19.00. . . . . Net Each 11.00

**HI-1 OUTDOOR SUB-STATION.** For front and rear entrance applications. Complete with push-button for connection to regular house chime, bell or buzzer. Has illuminated nameplate. When caller rings bells, any Master or Staff may reply and converse with caller. Caller operates no controls. List Price Each \$27.50. . . . . Net Each 15.95

**T-LR-2R ALTERNATE OUTDOOR SUB-STATION.** For flush mounting. Requires wall opening 4 1/2" square, 2" deep. Stainless steel front panel measures 4 1/8" square. Complete with plaster ring. Without push button or illuminated nameplate. List Price Each \$21.00. . . . . Net Each 11.95

**Model T-SM** Optional accessory for surface mounting T-LR-2R on wall. List Price Each \$6.86. . . . . Net each 4.00

**Model TSM-L** Optional accessory for Surface mounting HI-4 Staff on wall. List Price Each \$7.80. . . . . Net Each 4.60

**HI-JBB JUNCTION BOX** for connecting Masters and Staffs up to a total of 8 stations. See #2 of "How to Determine Cable Needs." List Price Each \$7.00. . . . . Net Each 4.00

**HI-JB16 JUNCTION BOX** Same as above except for up to 16 stations. List Price Each \$9.95. . . . . Net Each 5.95

**BATTERY.** Use any 9-volt dry battery, such as ignition or telephone battery; or six standard #6 dry cells in series—available from local sources. Note: When battery is used, power supply is not required.

**HI-PS POWER SUPPLY UNIT.** One required per system (only when battery is not used). Plugs into any 110-120 volt, 60 cycle AC electrical outlet in basement, attic, etc. List Price Each \$27.50. . . . . Net Each 15.95

### HOW TO DETERMINE CABLE NEEDS

**Masters and Staff Stations.** Use #6226 cable in one of 2 ways: (1) Measure from 1st unit to 2nd unit only; from 2nd unit to 3rd unit only, etc., until last unit is reached—then total. Cable between last and 1st unit not needed. (2) Place a Common Junction Box (Model HI-JB) in attic, basement, closet, etc. Measure from each Master and Staff to Junction Box and total. Double length #6226 required for 16-Station units. Connect HI-4 to nearest 8 or 16-Station unit or to HI-JB with #6214 cable.

**Outdoor Sub-Stations:** Connect to nearest Master or Staff only with #6202 cable.

**Battery or Power Supply Unit:** Connect with #6202 cable to Master Stations only.

**CABLE.** For indoor or outdoor use.

Type No.	No. Pairs	Approx. O.D.	LIST, Per Ft.	NET, Per Ft.
6226	13	3/16"	.47c	28c
6214	7	1/16"	.24c	14c
6202	1	3/16"	.06c	3 1/2ct



All Prices Slightly Higher West of Rockies. All Prices and Specifications Subject to Change Without Notice. Manufactured under exclusive TALK-A-PHONE Patents

**TALK-A-PHONE CO.**  
CHICAGO 25, ILLINOIS





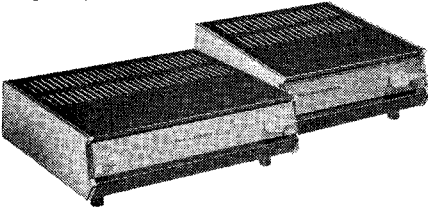
# NEW TALK-A-PHONE Deluxe Intercom Systems



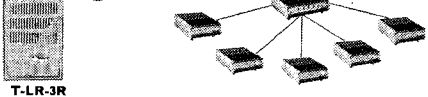
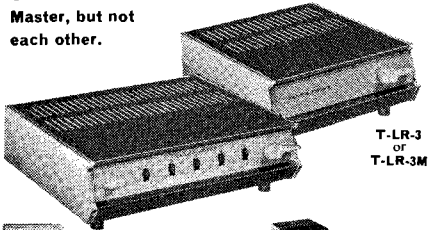
Quality intercommunication systems designed for the Office, Business, Plant, House, Farm, Professional Man, or any other private or commercial application. A flick-of-a-finger gives you instant and direct two-way conversation between any two points—anywhere. Masters have translucent indicator which illuminates when system is "on." In cabinets

that combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray and brushed chrome. Resists industrial liquids and atmospheres. Size: Masters, 10 1/4" w x 8 3/4" d x 3 1/2" h.; Subs, 7 1/2" w x 8 3/4" d x 2 1/2" h. U.L. Approved.

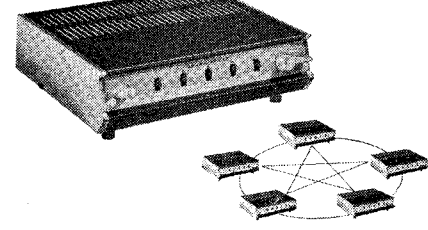
**2-way voice communication between any two points**



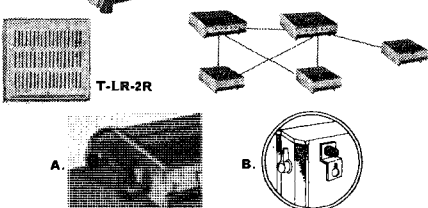
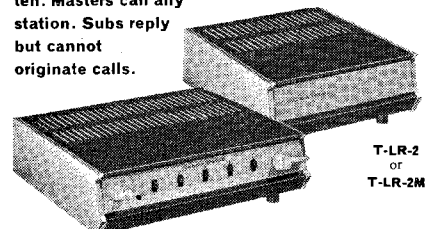
**A system of one Master Station which can communicate with from one to ten Sub-Stations. Subs can call Master, but not each other.**



**A system of up to ten Master Stations. Each station can call and communicate with any other.**



**A system combining one or more Master Stations with one or More Sub-Stations up to a combined total of ten. Masters call any station. Subs reply but cannot originate calls.**



- A. CRADLEPHONE**—Optional for any unit above (except T-CL-5, T-CL-10, T-AC-605, T-AC-610, T-C-20, T-HP-3, T-LR-3R and T-LR-2R.) Add "H" to Model No. when ordering. List Price Per Station, add \$59.95.....Net, add **35.00**
- B. WALL MOUNTING BRACKETS**—Optional accessory for use with TALK-A-PHONE Models T-LR-3, T-LR-3M, T-LR-2, T-LR-2M, T-C-41, T-C-41M, T-C-42, T-C-42M, and T-LC-2 Sub Station to enable mounting on wall, side of desk, etc. One pair required per station. Permits mounting with front panel upward, downward or sideward. Model T-WI Mounting Brackets, per pair. List Price \$1.25. Net **75**

## TALK-A-PHONE 2-STATION SYSTEM

**T-LC-2** A complete, high-quality intercommunication system. Includes a Master Station, a Sub-Station and 50 feet of interconnecting cable. Additional cable available for distances up to 2000 feet. Easy to install and operate. Master and Sub-Station can originate calls to each other and carry on a 2-way conversation. Sub-Stations can be used "privately" or "non-privately." When "private," Master cannot listen-in on Sub-Station; yet Sub can answer and originate calls. When "non-private," persons at Sub-Station can answer calls at a distance without operating controls, as well as originate calls. Master is equipped with a translucent indicator, illuminated by permanent-type bulb, to show when system is "on." Rugged, high-gain amplifier is built to withstand continuous use and to require a minimum of maintenance. Adjustable Volume. Only Master plugs into electrical outlet, 110-120 volts, AC or DC. Master in deluxe cabinet finish, Sub-Station cabinet is of same

style and color, but is in grained, baked enamel finish. U.L. Approved.  
**Model T-LC-2** 2-Station System complete with tubes, easy-to-follow instructions, and 50 feet of cable. Wt. 13 lbs. List Price complete \$62.00.....Net complete **36.00**  
**No. 6303** (3 conductor) cable. 175° F. individually covered conductors with overall plastic jacket and mild shield. Provides noise-free cable lines in Industry, Office and Home. For indoor and outdoor use where additional lengths are required between the Master and Sub-Station. List Price per foot 6 1/2c.....Net per foot **.04**  
**No. 5303** (3 conductor) cable for indoor use. List Price per foot 5c.....Net per foot **.03**  
 Optional Wall Mounting Brackets for Model T-LC-2 Sub-Station are available. See description below.

## TALK-A-PHONE MASTER SELECTIVE SYSTEMS

**T-LM** A new system consisting of one Master Station and from one to ten Sub-Stations. Master Station can talk and listen to any one Sub-Station, several Sub-Stations or with all Subs simultaneously. Sub-Stations do not communicate with each other. Only the Master Station plugs into an electrical outlet. You may start with only one Master and one or two Sub-Stations and then add later as necessary. Installation of system has optional feature whereby Sub-Stations can be connected "privately," or "non-privately" and still originate calls to the Master under either application. Once a conversation has been initiated with a "non-private" system, persons at Sub-Stations need operate no controls and can reply from a distance. When the system is connected "privately" Master unit cannot "listen in" on Sub-Stations. However, they can reply when called, and also originate calls to the Master. Operates universally on 110-120 volts, AC-DC. U.L. Approved.

**Model T-AC-5411** Master Station. 10 sub-station capacity. High Volume Output. Wt. 8 lbs. List Price each \$89.95.....Net each **52.50**  
**Model T-LR-3** Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt. 6 lbs. List Price each \$27.50.....Net each **15.95**  
**Model T-LR-3M** Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of above Masters. Wt. 6 lbs. List Price each \$21.00.....Net each **11.95**  
**Model T-LR-3R** Flush mounted Sub-Station for use with any of above Masters. Requires wall opening 4 1/2" W. x 6 1/2" H. Stainless steel front panel measures 4 1/2" W. x 7 3/4" H. Complete with plaster ring. List Price each \$21.00.....Net each **11.95**  
**Model T-SM-L** Optional accessory for surface mounting T-LR-3R on wall. List Price each \$7.90.....Net each **4.60**  
**Model T-HP-3** Hi-Power Staff Station for wall mounting. Charcoal Gray metal case. Wt. 8 lbs. List Price each \$28.00.....Net each **16.50**  
**Model T-C-20** Nine-inch weatherproof re-entrant horn. Charcoal Gray color. Wt. 5 lbs. List Price each \$44.95.....Net each **26.50**  
**T-S-100** Wall Switch for origination of call through T-C-20 or T-HP-3. List Price each \$6.00.....Net each **3.50**  
**No. 6303** (3 conductor) cable. 175° F. individually covered conductors with overall plastic jacket and mild shield. Provides noise-free cable lines in Industry, Office and Home. For indoor and outdoor use to connect Sub-Station to Master. List Price per foot 6 1/2c.....Net per foot **.04**  
**No. 5303** (3 conductor) cable for indoor use. List Price per foot 5c.....Net per foot **.03**

**T-AC** The T-AC-5406 and T-AC-5411 Master Stations operate as above with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for paging. Operates on 110-120 volts, AC only.

**Use only one Master in each System.**  
 Optional Wall Mounting Brackets for Models T-LR-3 and T-LR-3M are available. See description below.  
**Model T-LM-5** Master selective Station for 5 Sub-Stations, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each \$59.95.....Net each **34.95**  
**Model T-LM-10** Master Selective Station for 10 Sub-Stations, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each \$75.00.....Net each **44.00**  
**Model T-AC-5406** Master Station. 5-sub-station capacity. High Volume Output. Wt. 8 lbs. List Price each \$75.00.....Net each **44.00**

## TALK-A-PHONE SUPER SELECTIVE SYSTEMS

**T-LS** A new system of all Master Stations. Any Station can call any other Station in system. Several completely private 2-way conversations are possible at same time. A versatile, low cost intercom system offering extreme flexibility, meeting many requirements in industry, offices, homes, etc. Any Station can call and carry on a conversation with any other Station or Stations in the system with absolute "privacy." Have a visitor in your office and your mind is at ease that no one can eavesdrop on your conversation. Stations can be located even 1000 feet apart. Variable volume, adjustable at each unit, controls incoming voice. You can start with two or three masters, and then add later as required. Operates universally on 110-120 volts, AC-DC. U.L. Approved.

**Model T-LS-5** Super Selective Station for five Masters, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each \$59.95.....Net each **34.95**  
**Model T-LS-10** Super Selective Station for ten Masters, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each \$75.00.....Net each **44.00**  
**Model T-AC-595** Super-Selective Station for 5 Masters. Hi-Volume Output. Wt. 8 lbs. Complete with instructions. List Price \$75.00.....Net each **44.00**  
**Model T-AC-510** Same as T-AC-505 except for 10 Masters. List Price each \$89.95.....Net each **52.50**  
**No. 5506** (6-conductor) Cable for connecting T-LS-5 or T-AC-505 Masters. List Price per foot 13c.....Net per foot **.07 1/2**  
**No. 9911** (11-conductor) Cable for connecting T-LS-10 or T-AC-510 Masters. List Price per foot 24c.....Net per foot **.14**

**T-AC** The T-AC-505 and T-AC-510 Master Stations operate as above but provides a system with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for calling many stations at once. T-AC-505 and T-AC-510 Masters cannot be intermixed with any other master. For 110-120 volts, AC only.

## TALK-A-PHONE COMBINATION SYSTEMS

**T-CL** For the more flexible type of communication system requiring the operation of more than one Master Station, along with Sub-Stations which need not originate calls. Personnel can answer incoming calls even though they are 25 to 40 feet from their unit. Master Stations may talk to each other and to all Sub-Stations in the system selectively; or you can have one or more Sub-Stations which are exclusive to only one Master Station (as illustrated in the diagram at left). Master Stations have the option of making themselves "private" or "non-private" at will. You can begin with two stations (at least one must be a Master) and add other units as required. Model T-CL-5 Master Station has a total inter-connecting capacity of five stations, including Masters and Sub-Stations; while Model T-CL-10 Master Station has a total capacity of ten stations. Sub-Stations are not plugged into electric current. U.L. Approved. 110-120 volts, AC-DC.  
 Optional Wall Mounting Brackets for Models T-LR-2 and T-LR-2M are available. See description below.  
**T-AC** The T-AC-605 and T-AC-610 Master Stations operate as above but provides a system with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for calling many stations at once. T-AC-605 and T-AC-610 Masters cannot be intermixed with any other master. For 110-120 volts, AC only.  
**Model T-CL-5** Combination Master for five station use, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each \$72.00.....Net each **42.00**  
**Model T-CL-10** Combination Master for ten station use, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each \$87.00.....Net each **51.00**  
**T-AC-605** Combination Master for 5-Station use. Hi-Volume Output. Wt. 8 lbs. Complete with instructions. List Price each \$87.00.....Net each **51.00**

**T-AC-610** Same as T-AC-605 except for 10-Station use. List Price each \$102.00.....Net each **59.95**  
**Model T-LR-2** Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt. 6 lbs. List Price each \$27.50.....Net each **15.95**  
**Model T-LR-2M** Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of above Masters. Wt. 6 lbs. List Price each \$21.00.....Net each **11.95**  
**Model T-LR-2R** Flush mounted Sub-Station for use with any of above Masters. Requires wall opening 4 1/2" square. Stainless steel front panel measures 4 1/2" square. Complete with plaster ring. List Price each \$21.00.....Net each **11.95**  
**Model T-SM** Optional accessory for surface mounting T-LR-2R on wall. List Price each \$6.80.....Net each **4.00**  
**Model T-HP-3** Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs. List Price each \$28.00.....Net each **16.50**  
**Model T-C-20** Nine-inch weather proof re-entrant horn. Charcoal Gray color. List Price each \$44.95.....Net each **26.50**  
**No. 6210** (5 pair) Cable for interconnecting T-CL-5 or T-AC-605 Masters. List Price per foot 14c.....Net per foot **.14**  
**No. 6226** (13 pair) Cable for interconnecting T-CL-10 or T-AC-610 Masters. List Price per foot 47c.....Net per foot **.28**  
**No. 6902** (2-conductor) Cable for connecting Sub-Station to T-CL-5, T-CL-10, T-AC-605 or T-AC-610. List Price per foot 3 1/2c.....Net per foot **.02**

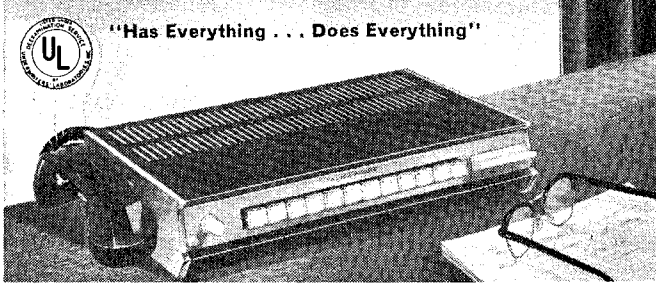
### HOW TO DETERMINE CABLE REQUIREMENTS

For Master Selective Systems measure from each Sub-Station to the Master and order total. For Super Selective Systems—measure from first Master to second Master only, from second Master to third Master only, etc., and total. Cable between first and last Master not necessary. For Combination Systems—Master cable; measure from first Master to second Master only, from second Master to third Master only, etc., and total; Sub-Station cable; measure from each Sub-Station to nearest Master only.

## TALK-A-PHONE CO., CHICAGO 25, ILLINOIS

All Prices Slightly Higher West of Rockies—All Prices and Specifications Subject to Change Without Notice. Manufactured under exclusive TALK-A-PHONE Patents

**THE ALL-NEW, ALL-TRANSISTOR TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" INTERCOMMUNICATION SYSTEMS**



"Has Everything . . . Does Everything"

One Model Meets Every Requirement



Setting a new standard in quality, design and performance, the new TALK-A-PHONE "CHIEF" and "CHIEF REDI-POWER" meets every intercom need of office, factory, institution, or any other commercial or private application. "CHIEF" Master Stations of 6, 12, 20, 30, 40 or 50 station capacity can be intermixed with "CHIEF REDI-POWER" Masters of different capacities, together with Staff Stations and Horns within the same system in any desired combination. Masters can talk with any other Master or Staff . . . page . . . and can utilize other optional equipment shown as well. Staffs can answer any Master and can originate calls to one Master, or to two Masters selectively.

**ONLY THE TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" GIVE YOU ALL THESE FEATURES**

- **DISTINCTIVELY STYLED**—Less than 3-inches high, in cabinets that combine the look and feel of fine-grained leather with the strength and rigidity of steel. Attractively finished in charcoal gray and brushed chrome.
- **"PRIVATE" OR "NON-PRIVATE" MASTERS AND STAFFS**—Exclusive Dynasone Design enables stations to perform "privately" (so no one can listen-in), or "non-privately" (for reply without use of controls). The same station can be "private" to one or more Masters and "non-private" to others, and retain full communication facilities.
- **INCOMING CALL CHIME**—A standard feature of Masters. Indicates that your station is being called. Caller talks, you reply.
- **MONITORING SIGNAL**—A standard feature of Masters and Staffs. Visually indicates to a "non-private" station that it is being monitored.
- **BUSY SIGNAL**—A standard feature of Masters and Staffs. Visually indicates when station you call is "busy." All units have facility to override "busy signal" for important calls.
- **DYNASONIC SELECTOR**—An exclusive TALK-A-PHONE feature that permits intermixing of stations and variation of performance. Add to system at anytime without discarding original equipment.
- **MULTI-MAGIC STATION SELECTOR**—A patented, exclusive TALK-A-PHONE feature that enables selection of up to 30 stations with only 12 push buttons . . . 40 and 50 stations with 14 push buttons . . . in the same attractive cabinet style and size.
- **UNI-TRANS DICTATION CONTROL**—No need to operate or hold down controls when one-way transmission is desired or when Cradle Phone is used.
- **EXTERNAL RELAY CONTROL**—A standard built-in feature of Masters. Enables Master to activate external relays for operating siren, gong, light, etc. For use in extremely high noise level areas to signal personnel, who can then communicate with caller from Master in quieter location or in sound booth.
- **RECIPROCAL POWER SUPPLY**—Each Master operates on 110-120 volts, AC only, and should be plugged-in. Where no electrical outlet is available, up to 30% of the Masters in the system can operate without being plugged-in.
- **NOISE-FREE VOICE RANGE POWER**—The rugged, all-transistor high-gain amplifier provides unsurpassed clarity and naturalness of tone. The exclusive, patented TALK-A-PHONE circuit enables performance without noise, hum or distortion when used with TALK-A-PHONE cable.
- **HI-POWER STAFF STATIONS AND HORNS**—For use with any TALK-A-PHONE Master where exceptionally high volume at Staff locations is needed. Ideal for paging speakers, T-HP-3 provides more than twice the volume of universal Staff; T-C-20 provides about 4 times greater volume. . . more with REDI-POWER Masters.
- **WALL SWITCH**—Combine with TALK-A-PHONE Horn or Hi-Power Staff to add origination-of-call feature.
- **"LD" LONG DISTANCE**—(optional accessory on "CHIEF" Masters). For use over cable lines of 2,000 ft., 5,000 ft., 10,000 ft. or more without loss of volume. Functions only between Masters with LD . . . not between an LD Master and Staff. Built-in at factory at additional cost.
- **CRADLE PHONE**—(optional accessory on Masters or Staffs). Has live microphone. Provides listening privacy and greater speaking convenience. Diminishes background noises in noisy areas. Eliminates use of controls in conversation between Masters. Cuts off incoming voice from loudspeaker when in use.
- **RIGHT-OF-WAY RELAY**—(optional accessory). Use with "CHIEF REDI-POWER" Masters to page any group of stations with a single button. Paged stations can also be used for intercommunication. RW-10 capacity, 10 stations. For greater capacity use more RW-10's. Connects to one Master, other Masters also utilize facilities.
- **POWER PAGING BOOSTER**—(Optional accessory). Use with "CHIEF" Masters to page a group of speakers with a single button. 30 watts output. Requires its own paging speakers (as T-C-20, T-HP-3). Provides paging facility only . . . paged stations cannot reply or originate calls through paging speakers. Connects to one Master, other Masters can also utilize facilities.

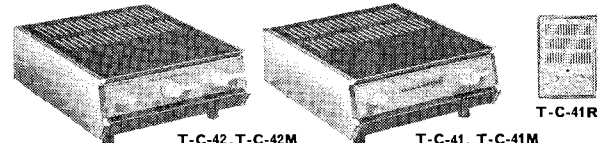
All "CHIEF" and "CHIEF REDI-POWER" Master Stations come complete with junction box and built-in power supply attached by 6' flexible cable. Master size: 14" w, 3 1/2" h, 8 3/4" d. For 110-120 volts, AC only. U.L. Approved.

<b>T-C-4906 Master</b> 6 station capacity. Wt. 13 lbs. List Price Per Station \$136.00 . . . . .	<b>Net 79.50</b>
<b>T-C-4912 Master</b> 12 station capacity. Wt. 14 lbs. List Price Per Station \$154.00 . . . . .	<b>Net 89.80</b>
<b>T-C-4920 Master</b> 20 station capacity. Wt. 17 lbs. List Price Per Station \$184.00 . . . . .	<b>Net 107.40</b>
<b>T-C-4930 Master</b> 30 station capacity. Wt. 20 lbs. List Price Per Station \$214.00 . . . . .	<b>Net 125.00</b>
<b>T-C-4940 Master</b> 40 station capacity. Wt. 23 lbs. List Price Per Station \$244.00 . . . . .	<b>Net 142.60</b>
<b>T-C-4950 Master</b> 50 station capacity. Wt. 26 lbs. List Price Per Station \$274.00 . . . . .	<b>Net 160.20</b>

**How to Determine Cable Requirements.** To inter-connect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., until the last unit in the system is reached, and total. For T-C-4920 and T-C-RP-5920, use two lengths of 6226 Cable; and for T-C-4930 use three lengths of 6226 Cable, etc. To connect T-C-41, T-C-20, T-C-42 or T-HP-3 Staff Stations, measure from Staff Station to the one Master, to which Staff Station originates calls. To connect the T-C-42 Staff Station measure a separate length of cable from Staff Station to each Master Station to which Staff originates calls (for each T-C-41 or T-C-42, follow same procedure).

**TALK-A-PHONE ALL-TRANSISTOR "CHIEF REDI-POWER" MASTERS**  
These units have all the operational features of the "CHIEF," plus the additional feature of built-in extra power (up to 20 watts) for use when and as needed. Provides additional volume for calling many stations at once, or noisy locations singly. Needs no separate power booster, which would eliminate return speech. Return speech is received at normal room volume. REDI-POWER Masters have a self-compensating amount of volume, whether you call 2, 10 or 20 stations simultaneously. Each station receives its pre-determined volume with no division of output as you call more stations at once. Use REDI-POWER Masters with "CHIEF" Masters and Staffs in same system. Add RW-10 and REDI-POWER Masters can page any group of stations with a single selector button. Paged stations can also be used for intercommunication. Operates on 110-120 volts, AC only. U.L. Approved.

<b>T-C-RP-5912 Redi-Power Master</b> 12 station capacity. Wt. 18 lbs. List Price Per Station \$235.00 . . . . .	<b>Net 138.00</b>
<b>T-C-RP-5920 Redi-Power Master</b> 20 station capacity. Wt. 21 lbs. List Price Per Station \$265.00 . . . . .	<b>Net 155.00</b>



**TALK-A-PHONE "CHIEF" UNIVERSAL STAFF STATIONS** For use with any "CHIEF" or "CHIEF REDI-POWER" Master. Like Masters, Staff Stations can be connected "privately" or "non-privately," and can originate calls. When "non-private", calls can be answered at a distance from Staff without using controls. Persons at "non-private" Staffs may reply to all Masters in the system (whether directly connected to them or not) and can originate calls to one Master or two Masters, depending upon Staff's capacity. Connected "privately" no one can listen-in to Staff, but any Master can call. "Private" Staffs can originate calls and reply to one or two Masters. Each Staff has "busy signal" and "monitoring signal" features. Staffs do not connect to an electrical outlet . . . are distinctively styled in modern cabinets that combine the look and feel of fine grained leather with the strength and rigidity of steel. Attractively finished in charcoal gray and brushed chrome. Size: 7 1/2" w x 8 3/4" x 2 7/8" h.

<b>T-C-41</b> Staff Station for origination-of-call to one Master. Wt. 8 lbs. List Price, Each \$36.50 . . . . .	<b>Net 21.50</b>
<b>T-C-41M</b> Same operation as T-C-41 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each \$29.95 . . . . .	<b>Net 17.50</b>
<b>T-C-42</b> Staff Station for origination-of-call to two Masters. Wt. 8 lbs. List Price, Each \$45.00 . . . . .	<b>Net 26.50</b>
<b>T-C-42M</b> Same operation as T-C-42 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each \$38.50 . . . . .	<b>Net 22.50</b>
<b>T-C-41R</b> Flush mounted Staff Station for use with any of above Masters. Requires wall opening 4 1/8" W. x 6 1/2" H. Stainless steel front panel measures 4 3/8" W. x 7 3/8" H. Complete with plaster ring. List Price Each \$29.95 . . . . .	<b>Net each 17.50</b>
<b>T-SM-L</b> Optional accessory for surface mounting T-C-41R on wall. List Price each \$7.80 . . . . .	<b>Net each 4.60</b>
<b>T-HP-3</b> Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs. List Price, Each \$28.00 . . . . .	<b>Net 16.50</b>
<b>T-C-20</b> Nine-inch weatherproof re-entrant horn. List Price, Each \$44.95 . . . . .	<b>Net 26.50</b>

Optional Wall Mounting Brackets for Models T-C-41, T-C-41M, T-C-42 and T-C-42M are available. See description on preceding page.

**Optional Equipment**

<b>Cradle Phone</b> Available on all Models. Add "H" to Model No. when ordering. List Price, Each—add \$59.95 . . . . .	<b>Net add 35.00</b>
<b>LD—Long Distance Feature</b> Available on "Chief," Master Stations. Add "LD" to Model No. when ordering. List Price, Each—add \$20.00 . . . . .	<b>Net add 11.75</b>
<b>T-S-101 Wall Switch</b> For origination of call to one Master through T-C-20, or T-HP-3 in Chief systems. List Price, Each \$11.95 . . . . .	<b>Net 6.95</b>
<b>T-S-102 Wall Switch</b> For origination of call to two Masters through T-C-20, or T-HP-3 in Chief systems. List Price, Each \$19.95 . . . . .	<b>Net 11.70</b>
<b>T-RW-10</b> Right-of-Way Relay. List Price, Each \$63.00 . . . . .	<b>Net 37.00</b>
<b>T-HP-30</b> Power Booster. List Price, Each \$138.00 . . . . .	<b>Net 81.00</b>

**Cable (For Indoor and Outdoor Use)**

<b>6206</b> Cable for connecting T-C-41, T-C-42, T-HP-3, T-C-20 with origination of call. List Price per Ft. 14c . . . . .	<b>Net per Ft. 8 1/2c</b>
<b>6214</b> Cable for inter-connecting T-C-4906 Masters. List Price per Ft. 24c. Net per Ft. 14c	
<b>6226</b> Cable for inter-connecting T-C-4912, T-C-4920, T-C-4930, T-C-4940, T-C-4950, T-C-RP-5912 and T-C-RP-5920 Masters. List Price per Ft. 47c . . . . .	<b>Net per Ft. 28c</b>
<b>6902</b> Cable for connecting T-HP-3, T-C-20 without origination of call. List Price per Ft. 3 1/2c . . . . .	<b>Net per Ft. 2c</b>

All Prices Slightly Higher West of Rockies—All Prices and Specifications Subject to Change Without Notice. Manufactured under exclusive TALK-A-PHONE Patents

*How* "Built-in Business Intercom" for offices, stores, medical centers, etc. can be supplied on request. Write today for details.

**TALK-A-PHONE CO.**  
CHICAGO 25, ILLINOIS

# TECH-MASTER CUSTOM-QUALITY TV and Hi-Fi



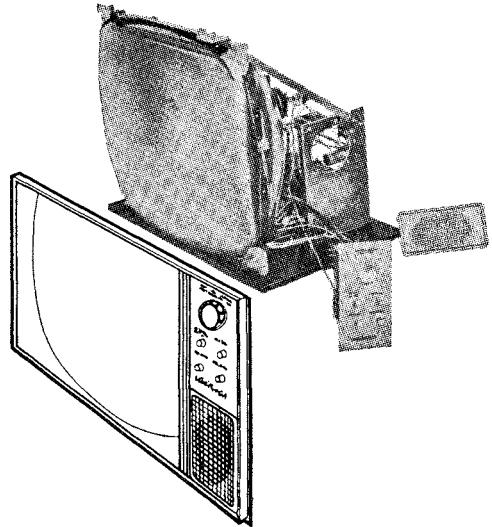
## CUSTOM CRAFTED CONSTELLATION TV CHASSIS

A magnificent tribute to fine television design and engineering. Extremely versatile! Perfect for custom installations in newly designed cabinetry or for replacing worn out sets in existing consoles. Especially desirable for use in family heirloom or antique cabinets.

The Tech-Master Custom-Crafted Constellation T.V. Chassis is truly a star performer. This A.C. transformer powered model is not commercially mass-produced, but hand crafted with the same care as our highest priced receivers. Super sensitive for fringe or troublesome areas, the custom crafted receiver operates efficiently with any standard indoor antenna in normal signal area. 15 tubes, 2 silicons, 3 diodes, power-packed circuit delivers bright, sharp, rock steady picture and clean, undistorted static-free sound. Rarely will you find a comparable, quality receiver such as this.

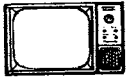
### FEATURES

- Advanced and latest super-sensitive turret tuner with PRE-SET fine tuning (set it once and forget it)
- Deflection 110-114 degrees.
- Operates new low-voltage electrostatic focus kinescopes 17" to 27"
- High Voltage 18-20 KV.
- Full power transformer for SAFE chassis operation. No Shock Hazard.
- Power THERMISTOR for line surge elimination.
- Silicon full wave power rectifiers.
- Sensitivity 8 UV for 20 Vpp.
- Audio output 4.7 watts.
- 3 stage video I.F. stagger-tuned bifilars.
- Bandwidth 3.25 MC. at 3 DB.
- Video detector transformer with diode and tweet filter built in (minimum radiation.)
- DC coupled video Amplifier stage.
- Adjacent channel video and sound traps.
- Keyed A.C.C. continuously adjustable for local to fringe area.
- Automatic noise cancellation circuit continuously adjustable for area characteristics.
- Bright spot eliminator circuit.



Model No. 5116 (Shown above) Chassis, speaker, and knobs, less picture tube with mtg. hardware.....Price \$199.00

TUBES: 6GK5, 6CG8, 2-6BZ6, 6CB6, 12BY7, 6U8, 6DT6, 6BQ5, 6BU8, 6DE7, 6CG7, 6DQ6, 6AX4, 1K3, 2 Silicon rectifiers, 3 Diodes



### ACCESSORY UNITS FOR MODEL NO. 6115



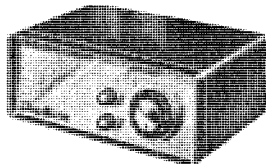
MK23B-23" mask (bonded tube)...\$10.00  
MK23-23" mask (unbonded tube)..\$10.00  
BR23-23" bonded tube mounting brackets .....\$10.00

## DUO MASTER TV PLUG-IN TUNER

### A Super Sensitive Black & White or Color TV Remote Control System

An ideal self-contained remote-control system for all TV sets. Just plug a single, thin coaxial lead into your TV receiver and you can select your station, fine-tune both picture and sound, and adjust picture intensity... right from your armchair, from up to 50 feet from the set. There is a separate loudspeaker in the handsomely styled DUO-MASTER cabinet... or you can use the speaker in your TV set or hi-fi system... or any extension speaker... or plug headphones right into the DUO-MASTER for private listening.

**FEATURES:** 3 IF stages; 2 audio stages; jacks with low impedance connections for external amplifier or tape recorder take-off; a complete television sound receiver. Positive or negative going video signal output.



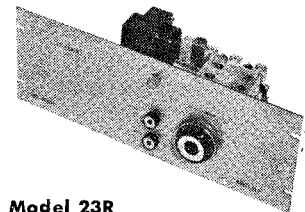
Model 23A  
Net Price .....\$79.50

**TUBES:** 9 plus rectifier; separate audio detector; improved color response thru isolation circuit design.

**SIZE:** 12½" x 8" x 6"; **WGT.:** 15 lbs.

## TECH-MASTER TV TUNER

Industrial Model  
TV Tuner  
Designed for  
Continuous Duty



Model 23R

Specially designed, high quality TV Tuner incorporating exceptionally rugged, heavy duty components. The 7" x 19" front panel permits convenient rack mounting installation. Specifications same as Model 23A. The outstanding design features are augmented by superb construction and top quality, unusually sturdy, foolproof components that will withstand long, continuous service with maximum efficiency.

Model 23R, Rack Mounting TV Tuner Net Price \$150.00  
Model 23B, Same as above, except 4 Mc bandwidth  
Net Price \$195.00

### Model 39A — A Most Versatile

## 28 WATT STEREO AMPLIFIER and PREAMPLIFIER

Ideal for 90% of all Hi-Fi and Stereo Layouts

This highly adaptable Stereo Amplifier System contains two channels of faithful audio, faultlessly designed and superbly produced. It provides a high degree of efficiency at a very low price. Performance is outstanding; it compares with units generally available at much higher prices. This is possible because of Tech-Master's diversified background and long experience in providing outstanding products at minimum cost. All the desirable features for modern high fidelity stereo performance are included, without skimping. But efficiency in design and production make the low price possible. Servicemen recommend this unit for its high quality and ease of installation. For the budget conscious this amplifier provides excellent value.

### FEATURES

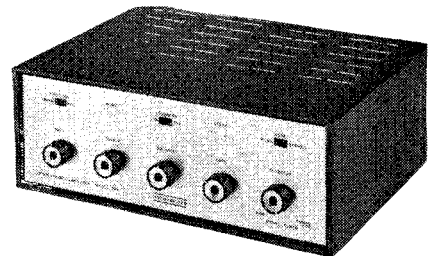
Completely hand wired • Dual Channel • Provisions for Crystal or Ceramic Phono, Tuner, and Auxiliary Inputs • Controls: Ganged Bass, Ganged Treble, Ganged Volume/Loudness, Balance Controls • Additional Functions: Selector Switch, Speaker Reverse Switch, Loudness Switch, Mono/Stereo Switch, Indicator Lights • Power Transformer Supply for complete line isolation.

**Power:** 117 volts, 60 cycles. 50 watts.

**Tubes:** 2-6BQ5, 12AX7, EZ80.

**Size:** 12½" W x 4¼" H x 8" D.

**Weight:** 9 lbs.



Model 39A, Stereo Amplifier and Preamplifier  
Net Price \$69.50  
Model PA39+, with Magnetic Preamp ..Net Price \$89.50



**TECH-MASTER** corporation—Brooklyn, New York



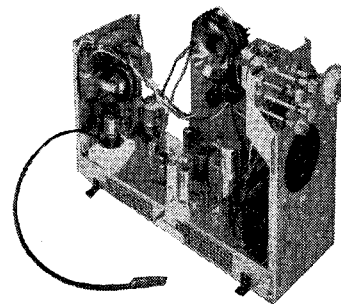
# TECH-MASTER QUALITY KITS AND COMPONENTS



## POPULAR VIDEOLA TV CRAFT KIT

The most up-to-date TV kit, with the latest improvements in tubes and circuitry. Ideal for student work or home project. This kit not only provides excellent training in television, but builds into a first-class, top quality modern receiver that anyone would be proud to own. Coils are preadjusted and tuned at

the factory. Quality components, carefully selected and packed by personnel experienced in the TV-kit field insure satisfaction. Step-by-step instructions with pictorial and schematic diagrams are easy to follow — leave nothing to the imagination. Sockets, terminal strips and connectors riveted on chassis.



### FEATURES

- Advanced and improved, super-selective, 12-channel tuner • Full power transformer for safe cold chassis operation • Operates new low-voltage electrostatic-focus kinescope (17" to 27" — including 19" and 23" sizes) — 110° to 114° deflection • 18 to 20 KV anode voltage • High-efficiency circuit-sensitivity of 9 uv at 20V peak-to-peak • High power audio output • Three-stage stagger-tuned IF using high-gain bi-filar coils • Keyed Automatic gain control • Adjustable noise cancellation circuit • Bright spot eliminator circuit — removes bright spot when set is turned off • Ceramic core horizontal output transformer with beam power amplifier • 6" x 17" x 1 3/4" chassis size — Weight 21 lbs.

MODEL 1561.....PRICE \$99.95

### TUBE COMPLEMENT

6CY5 RF Amplifier; 6AT8 RF Oscillator and converter; 2-6BZ6 1st, 2nd IF Amplifier; 6CB6 3rd IF Amplifier; 12BY7 Video Amplifier; 6U8 4.5 mc Amplifier, Sync Splitter; 6DT6 Sound detector; 6BQ5 Audio Output; 6BU8 Noise cancellation, sync separator, keyed AGC; 6DE7 Vertical oscillator, vertical output; 6CG7 Horizontal oscillator; 6DQ6 Horizontal output; 6AX4 Damper; 1K3 H.V. rectifier; 2 Silicon rectifiers for low voltage supply; 2 Diodes horizontal phase detector; 1 Diode Video detector.

### QUANTITY PURCHASES

— TV kits and wired chassis available for schools, export (in all voltages) and other special applications. Quotations and Specifications supplied on request.

## New Model 50 FM TUNER WITH MULTIPLEX

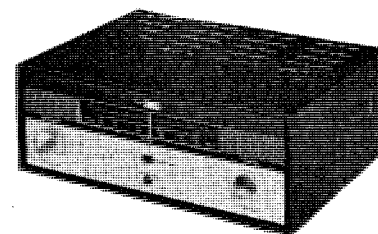
This new FM Tuner provides the ultimate in up-to-the-minute high fidelity performance. It is a super-sensitive instrument, superbly engineered and beautifully built, leaving little to be desired. Operation is exceptionally smooth and efficient. Circuits are designed to be electronically trouble free and they meet every critical standard. Here is maximum quality in minimum space. Specifications are equivalent to the very finest equipment available, incorporating every modern technical feature. The complete unit is hand crafted. Designed for operation with Model 49 Stereo Amplifier below or with any high quality stereo amplifier.

### FEATURES

- Frequency Coverage: 87.5 Mc to 108.5 Mc.
- IF Frequency: 10.7 Mc.
- Sensitivity: 1.8 uv for 20 db quieting.
- Frequency Response: 20 to 20,000 cps.
- Harmonic Distortion: Less than 1%.
- Variable AFC Control: 0 to 100 Kc/volt.
- Wide Band Ratio Detector.
- Controls: Power/AFC, Tuning, FM/FM Stereo Switch, Stereo Beam Indicator.
- Antenna: 300 ohms input.
- 5 Tubes, 1 silicon rectifier

### MULTIPLEX ADAPTER Switching Type

- Separation: 32 db at 400 cycles.
- Stereo Indicator Light
- 2 Tubes, 4 germanium rectifiers.
- Stereo Beam Indicator on front panel.
- Weight: 9 lbs.
- Power: 117 volts, 60 cycles. 30 watts.



Model 50 FM Tuner with Multiplex  
Net Price .....\$99.50

## SUPER QUALITY FM TUNER-AMPLIFIER and STEREO AMPLIFIER

### Model 51 STEREO TUNER with SOLID STATE AMPLIFIER



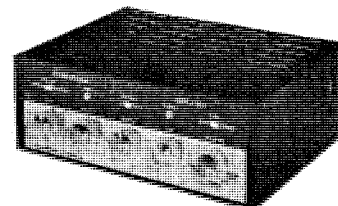
A super de luxe Stereo Tuner, same as Model 50 described above, combined with a top quality Solid State Stereo Amplifier of ultra modern design. Provides the last word in stereo performance at moderate cost. All the latest development in versatility and construction features are included, with a full complement of controls. The additional convenience of a complete stereo system housed on one compact chassis fills a need for those who have limited space but desire all the advantages of separate high fidelity components.

### FEATURES

- Tuner specifications same as Model 50 above.
- Amplifier Power Output: 20 watts total.
- Harmonic Distortion: Less than 2%.
- Hum and Noise: 60 db.
- Cross Talk: Better than 60 db.
- Frequency Response: 30 to 15,000 cps.
- Controls: Tuning, Dual Bass, Dual Treble, Dual Volume, Balance and Variable AFC Controls, Selector Switch, for Magnetic Pickup, Ceramic Pickup, FM Monaural, FM Multiplex, Auxiliary.
- Stereo Beam Indicator on front panel.
- Output: 8 ohms.
- Additional Inputs: Magnetic Phono, Ceramic Phono, Auxiliary.
- Power: 117 volts, 60 cycles. 65 watts.
- 7 Tubes, 5 silicon rectifiers, 4 germanium diodes, 10 transistors.
- Size: 12 1/2" W x 4 1/4" H x 10" D.
- Weight: 13 lbs.

Model 51, FM Stereo Tuner with Solid State Amplifier ....Net Price \$169.50

### Model 49 STEREO AMPLIFIER



This high quality 32 watt Stereo Amplifier meets all the requirements of the most critical high fidelity enthusiast. It combines exceptional design features and unexcelled hand crafted construction to provide truly outstanding performance over the full 30 to 15,000 cycle range, with minimum distortion. Here is a modern stereo amplifier at a very attractive price that will operate at maximum efficiency with either of the fine tuners shown above or with any other good tuner for broadcast reception. Or, coupled with a record player or turntable it will provide a low cost, highly satisfying hi-fi phono system with plenty of power.

### FEATURES

- Power Output: 32 watts total; 64 watts peak.
- Frequency Response: 30 to 15,000 cps ±1 db.
- Harmonic Distortion: Less than 1%.
- Hum and Noise: 75 db (low level) with magnetic preamp.
- Cross Talk: 55 db at 1,000 cps.
- Controls: Dual Bass, Dual Treble, Balance, Ganged Volume/Loudness.
- Additional Functions: Stereo/Mono Switch, Channel Reverse Switch, Loudness Switch, Selector Switch.
- Output: 4 ohms.
- Inputs: Ceramic Cart., Tuner, Auxiliary, Magnetic w/added-on preamp.
- Tubes: 4-7189, 2-ECC83/12AX7, 2-silicon diodes, 2-ECC83/12AX7 in magnetic preamp.
- Power: 117 volts, 60 cycles. 110 watts.
- Size: 12 1/2" W x 4 1/4" H x 8" D.
- Weight: 10 lbs.

Model 49, Stereo Amplifier .....Net Price \$ 99.50  
Model 49+, Stereo Amplifier with Magnetic Preamp ....Net Price \$119.50



**TECH-MASTER** corporation—Brooklyn, New York



# UNIQUE "COMPONENT SYSTEMS"

THE VOICE OF MUSIC  
COMPATIBLE COMPONENTS

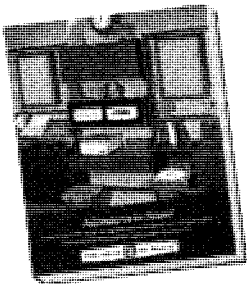
THE VOICE OF MUSIC  
COMPATIBLE COMPONENTS

## SELLING PLAN



## NEW, "2-way" Component Selling Centers in Fine Furniture Designs . . .

1. Sell V·M Compatible Component Systems FIRST . . .
2. Then go home with the buyer as choice furniture!



V-M has produced a new, easy to understand, full-color booklet telling how to select a component music system. Be sure to see this invaluable merchandising aid and learn how it can play an important part in building your component business.

Just look at all V·M has done to make your components selling easier and more effective! First, we designed three separate component selling and demonstration centers with one characteristic in common: each was created specifically to sell *complete V·M compatible component systems* . . . most acceptable to your customer, most profitable for you.

Then, we designed them for effective step-up selling to help every salesman do a better job, more easily.

Finally, we planned these centers so V·M identification can be removed in a jiffy, and they are ready to go home with the customer to help you complete the sale. We had them

built to a fine-furniture standard of quality so they would be welcome anywhere . . . quality walnut is used throughout. What a closer! No need to ever discount when you have selling tools like these.

**What's more you get the complete package of selling center and the components it contains for the price of the components alone! Fair enough?**

Discover for yourself all the profit potential built into this unique "2-way" selling center plan . . . a telephone call is all it takes. And, we have two important new speaker systems to show you, too, designated Model 43 and Model 33. See them soon!

THE VOICE  OF MUSIC®

**whatever electronic products  
you require...**



**...you'll find it  
faster in  
this catalog...**

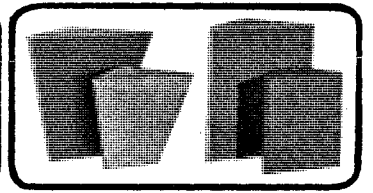
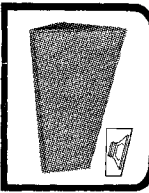
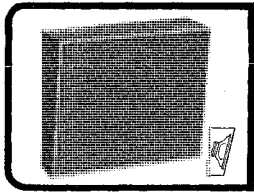
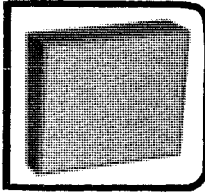
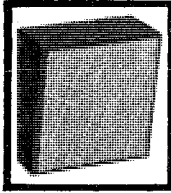
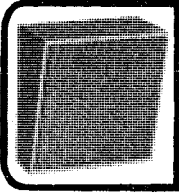
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of electronic  
products  
sold through  
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**Argos**  
PRODUCTS COMPANY

Quality by design  
in sound reproduction

**WALL BAFFLES • BAFFLES WITH SPEAKERS  
HIGH FIDELITY SPEAKER SYSTEMS • KITS**



REGULAR

DELUXE

PROFESSIONAL

THINLINE BAFFLES with SPEAKERS

CORNER BAFFLES

Argos offers three lines of WALL BAFFLES designed to satisfy your most critical requirements. All use the famous Argos Speedy Mounting Clip for fast installation.

**Regular Wall Baffles**—WB4/5D, etc., are the standard of the industry for quality. Available in wood-grained vinyl, blonde or walnut. Beautifully sculptured, cane grille.

**Deluxe Wall Baffles**—DWB-8A, etc., are made of satin-smooth birch and are available in either American Walnut or Whited Birch finish. Cane grille.

**Professional Wall Baffles**—PWB-8C, designed for use where a larger cubic content baffle is desired but only an 8" speaker is required. Wood-grained vinyl, blonde or walnut. Cane grille.

Thin, wide, with a sculptured shadow line around attractive cane grille, Argos Thinlines provide heavy-duty public address performance. Walnut or blonde wood-grained vinyl looks like wood. Many component options, installed, pre-wired to screw terminals. Mount to wall with clip.

- Deluxe Series**, 8" Jensen speakers, 6 oz. ceramic magnet, 15 watts, 8 ohms, 9 1/4" H x 12 1/4" W x 4 3/4" D.
- WB-208C-8" Baffle only. Wt. 3 1/2 lbs. **List \$7.25**
  - WB-208CS-8" Baffle, spkr. Wt. 5 1/2 lbs. **List \$17.85**
  - WB-208CSL-8" Baffle, spkr., L pad. Wt. 5 1/2 lbs. **List \$21.40**
  - WB-208CSLT-8" Baffle, spkr., 70.7V trans. Wt. 6 1/2 lbs. **List \$21.40**
  - WB-208CSLT-8" Baffle, spkr., L pad, 70.7V trans. Wt. 6 1/2 lbs. **List \$25.50**
- Deluxe Series**, 12" Jensen speakers, 10 oz. ceramic magnet, 18 watts, 8 ohms, 14" H x 16 1/4" W x 6 1/4" D.
- WB-212C-12" Baffle only. Wt. 5 1/2 lbs. **List \$10.00**
  - WB-212CS-12" Baffle, spkr. Wt. 9 1/2 lbs. **List \$25.60**
  - WB-212CSL-12" Baffle, spkr., L pad. Wt. 9 1/2 lbs. **List \$29.40**
  - WB-212CSLT-12" Baffle, spkr., 70.7V trans. Wt. 10 1/2 lbs. **List \$29.40**
  - WB-212CSLT-12" Baffle, spkr., L pad, 70.7V trans. Wt. 10 1/2 lbs. **List \$33.40**
- Efficiency Series**, 8" Jensen speakers, 2.4 oz. ceramic magnet, 10 watts, 8 ohms, 9 1/4" H x 12 1/4" W x 4 3/4" D.
- WB-308CS-8" Baffle, spkr. Wt. 5 lbs. **List \$14.85**
  - WB-308CSV-8" Baffle, spkr., vol. contr. Wt. 5 lbs. **List \$18.15**
  - WB-308CST-8" Baffle, spkr., 70.7V trans. Wt. 5 1/2 lbs. **List \$19.20**
  - WB-308CSVT-8" Baffle, spkr., vol. contr. 70.7V trans. Wt. 5 1/2 lbs. **List \$21.60**
- Economy Series** 8" Jensen speakers, 1 oz. ceramic magnet, 6 watts, 8 ohms, 9 1/4" H x 12 1/4" W x 4 3/4" D.
- WB-108CS-8" Baffle, spkr. Wt. 4 1/2 lbs. **List \$12.35**
- Slanting Corner Baffle** 8" Jensen speaker, 6 oz. ceramic magnet, 15 watts, 8 ohms, 18" H x 12 1/4" W x 6 1/4" D.
- SCB-208S-8" Baffle, spkr. Wt. 8 lbs. **List \$22.75**

Long-time contractor favorites for clutter-on mounting ease, Argos Corner Baffles are better-looking and sound-better than ever. Corner location increases effective air mass. Bass reflex design is used.

Using Argos Speedy Mounting Clips, wall mounting is fast and not visible. Leads for your speaker are pre-wired to screw terminals placed on top of the baffle. The cane grille is held in place by clips; not marred by visible screws. Grilles come off easily for speaker attachment.

Sturdily built, the baffles are available in the new Blonde or Walnut wood-grained vinyl.

**Slanting Corner Baffles**

**SCB-8D**—Takes 8" spkr. up to 5 1/2" deep. Internal volume: 680 cubic inches. Size: 15" H x 17 1/4" W x 9" D. Wt. 6 lbs. **List Price \$14.20**

**SCB-12D**—Takes 12" spkr. up to 6 1/2" deep. Volume: 1240 cubic inches. Size: 20" H x 20 1/4" W x 10 1/2" D. Wt. 8 lbs. **List Price \$19.95**

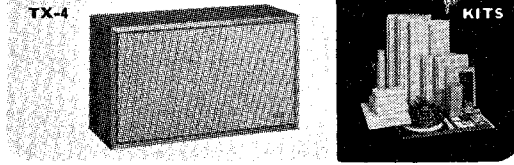
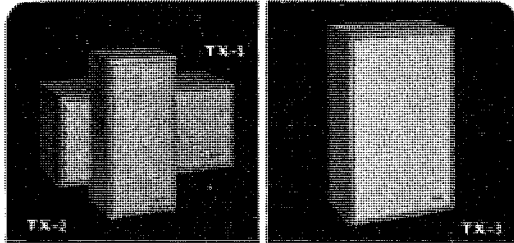
**Regular Corner Baffles**

**CB-8D**—Takes 8" spkr. up to 4 1/2" deep. Volume: 525 cubic inches. Size: 14" H x 12 1/4" W x 6 1/2" D. Wt. 4 1/2 lbs. **List \$11.65**

**CB-12D**—Takes 12" spkr. up to 6 1/4" deep. Volume: 1520 cubic inches. Size: 20" H x 17 1/4" W x 9" D. Wt. 8 1/2 lbs. **List \$18.40**

Model	Spkr. Cap.	Width, Height, Depth, in.	Cubic In.	Shp. Wt. Lbs.	List Each
WB-4/5D	4/5	6 1/2 x 6 3/4 x 4	100	2 3/4 *	\$5.00
WB-6D	6	8 3/4 x 8 3/4 x 5	210	4 1/2 *	6.10
WB-6/9D	6/9	10 x 10 3/4 x 6 1/2	400	6 1/4 *	7.25
WB-8D	8	10 x 10 3/4 x 6 1/2	400	6 1/4 *	7.25
WB-10D	10	12 1/2 x 12 1/2 x 7 1/2	800	8 *	8.75
WB-12D	12	13 3/4 x 14 1/4 x 9 1/4	1180	11 *	10.00
DWB-8A	8	9 3/4 x 10 1/2 x 6 1/2	400	5 1/2 *	10.00
DWB-12A	12	13 3/4 x 14 x 9 1/4	1180	9 *	14.00
PWB-8C	8	16 1/4 x 14 x 6 1/4	1000	6	10.00

\* Shipping weight of two in carton.



**TX-1 & TX-2 High Fidelity Speaker Systems**

Here are two versions of a system unequalled for pure value. Both are 24" x 11" x 9" deep and feature a special 8", 45 cycle woofer and 3 1/2" tweeter. Response 45 to 17,000 cycles. Impedance is 8-ohms. Terminals are marked for stereo phasing. Optional-use miniature legs provided.

- TX-1—System, walnut wood-grain vinyl finish. Wt. 18 lbs. **Audiofile net, each \$29.95**  
**Special STEREO PAIR**..... **Audiofile net, pair \$54.00**
- TX-1E—Enclosure only. Wt. 15 lbs. **Audiofile net, each \$39.95**  
**Special STEREO PAIR**..... **Audiofile net, pair \$79.90**
- TX-2—System in genuine walnut enclosure. Wt. 23 lbs. **Audiofile net, each \$44.50**  
**Special STEREO PAIR**..... **Audiofile net, pair \$79.50**
- TX-2E—Enclosure only. Wt. 19 1/2 lbs. **Audiofile net, each \$29.95**  
**Special STEREO PAIR**..... **Audiofile net, pair \$54.00**

- TX-3—Two-way system with 12" woofer and 3 1/2" tweeter. Overall response 50 to 17,000 cycles. 25" x 14 1/4" x 9" deep enclosure. Finished in walnut wood-grain vinyl. Distinctive sculptured shadow line around modern cane grille. Terminals marked for stereo phasing. Impedance is 8-ohms. Wt. 23 lbs. **Audiofile net, each \$39.95**  
**Special STEREO PAIR**..... **Audiofile net, pair \$72.00**
- TX-3E—Enclosure only. Wt. 19 lbs. **Audiofile net, each \$24.95**  
**Special STEREO PAIR**..... **Audiofile net, pair \$45.95**

- TX-4—Has three magnificent speakers: a 12" woofer, 8" solid back midrange, and 1 1/2" direct radiator type tweeter. Response 35 to 17,000 cycles. Input is 8-ohms and terminals are marked for stereo phasing. Hand-rubbed oiled walnut cabinet 25" x 14 1/4" x 9" deep. Perfect for use in either horizontal or vertical position. Wt. 29 lbs. **Audiofile net, each \$79.95**  
**Special STEREO PAIR**..... **Audiofile net, pair \$145.00**
- TX-4E—Enclosure only. Wt. 23 lbs. **Audiofile net, each \$39.95**  
**Special STEREO PAIR**..... **Audiofile net, pair \$72.00**

**KITS**—Complete, two- and three-way system kits, plus individual cabinet kits are available.

**TX-5 High Fidelity Speaker Systems**

The TX-5 has sound fidelity normally associated with more costly and far larger high fidelity speaker systems.

The 7/8" hand-rubbed oiled walnut cabinet is a modest 12 1/2" x 13 3/4" x 10" deep. Has 8" woofer and a 3 1/2" tweeter. Overall response 50 to 17,000 cycles. Speakers are wired through a crossover network to a terminal strip, marked for stereo phasing. Input is 8 ohms.

- TX-5—Wt. 16 lbs. **Audiofile net, each \$32.50**
- Special STEREO PAIR**..... **Audiofile net, pair \$59.00**

**TX-12**—Has superb tonal realism from full-bass to the most crisp, high frequency passages. Features 12" woofer, 8" solid back midrange, 3 1/2" tweeter. Response from 40 to 17,000 cycles.

Enclosure is richly oiled and hand-rubbed 3/4" American Walnut. 24" x 19" x 5 1/2" deep. Gracefully metal legs. Impedance 8 ohms; terminals marked for stereo phasing.

- TX-12—Wt. 25 lbs. **Audiofile net, each \$54.95**
- Special STEREO PAIR**..... **Audiofile net, pair \$99.95**

Brass legs furnished with TX-12 available as accessory for any speaker system.

**Model HFA-1**—Set of cabinet legs. **Audiofile net \$2.95**

**Space Saver**

**Extension Speaker System**

Features 8" woofer, 3 1/2" tweeter, crossover network. Handles 12-watts, 8 ohms input. Volume control. Furniture-finished hardwood enclosure 18" x 12" x 3 1/4" thin. Walnut or whited birch finish.

- HFB-8SV**—Wt. 6 1/2 lbs. **Audiofile net, each \$17.95**

**Patio OUTDOOR SPEAKER**

Durable redwood and cane have been combined with special moisture-resistant full-range, 10-watt power capacity 8" speaker. Input is 8-ohms. Handy volume control saves running indoors to adjust audio level.

The 3/4" redwood enclosure has sealer coat; can be stained or painted. Baffleboard marine grade plywood. Place 14" x 10 1/2" x 3 1/2" enclosure in sheltered spot and it will provide delightful listening for years to come.

- PAT-10**—Wt. 5 1/2 lbs. **Audiofile net, each \$14.95**

**Petite High Fidelity Speaker System**

Special high compliance woofer and separate tweeter are skillfully matched to the petite-size 18" x 12" x 3 1/4" enclosure. Richness and fullness of sound is almost unbelievable. Response is 50 to 17,000 cycles. Input is 8-ohms.

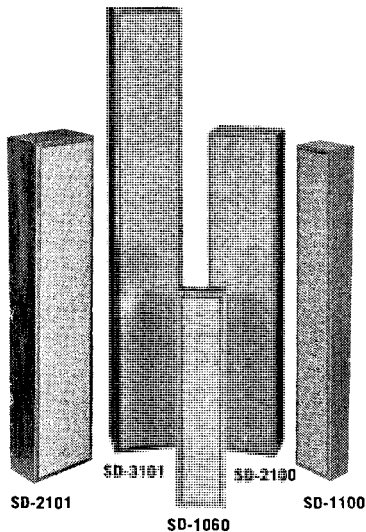
Enclosure is 3/4" American Walnut, hand-rubbed and oiled to a lustrous finish. Grille is contemporary cane. Recessed volume control. Graceful brass feet, wall hangers included.

- PHF-1**—Wt. 8 1/2 lbs. **Audiofile net, each \$29.95**
- Special STEREO PAIR**..... **Audiofile net, pair \$54.00**

**Argos**  
PRODUCTS COMPANY

Quality by design  
in sound reproduction

**SOUND COLUMNS • SPEAKER SYSTEMS**  
**PORTABLE SOUND SYSTEMS • TUBE CADDIES**



**SOUND DIRECTOR Sound Columns**

Working elements field-proven in use 6-years before release by Argos. Provide completely intelligible P.A. system coverage of large audiences in churches, school and public auditoriums, hotel meeting rooms and restaurants. Available in 6-speaker columns and 10-speaker columns with 8-speaker option. Speakers 16-ohms. Simple to install. Neat in appearance. Complete detailed instructions.

- SD-1060:** (6 speakers) Rooms up to 60-feet in length. Power 30-watts. Finished in walnut grain vinyl; cane grille. Size: 30 1/4" x 7" x 3 3/8". Wt. 10 lbs. List Price \$66.50
- SD-1100:** (10 speakers) Power 50-watts. Rooms up to 200' in length. Converts to 8 speakers for rooms up to 125-feet. Walnut grain vinyl finish; cane grille. Tilts to focus sound "beam." Built-in focusing scale. Size 49 1/4" x 7" x 6". Wt. 26 1/2 lbs. List Price \$108.00
- SD-1101:** Same as SD-1100, except deluxe housing is oiled, hand-rubbed walnut. Wt. 29 lbs. List Price \$125.00
- SD-2100:** (10 speakers) Power 50-watts. Same characteristics as SD-1100. Speaker column tilts inside housing for focusing. Built-in focusing scale. Size: 50 1/2" x 10 3/4" x 8 1/4". Wt. 43 lbs. List Price \$132.50
- SD-2101:** Same as SD-2100, except deluxe housing is oiled, hand-rubbed walnut. Wt. 50 lbs. List Price \$165.00
- SD-3101:** A deluxe feature, (10 speakers) 50-watt, walnut enclosed unit. Has internal focusing plus speaker column—may be moved up and down within the housing. Useful where enclosure should be at different height than the speaker column. Focusing scale reads directly in feet. Size 69 1/2" x 10 3/4" x 8 3/4". Wt. 63 lbs. List Price \$249.50

Complete line of speaker components and mounting hardware. For technical specs., instructions, other details, write for special information sheets.

**MUSIC COLUMN**

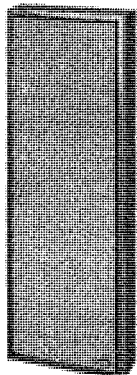
Designed especially for music reproduction where acoustics make conventional speaker systems unworkable.

The Argos MUSIC COLUMN is the long-sought for answer for controlling excessive echo reverberation and for projecting high-quality music over a large area. Using the SOUND DIRECTOR sound column principle the MUSIC COLUMN projects sound in a pattern which is wide horizontally and narrow vertically. Audio levels throughout the audience are remarkably uniform.

Frequency response of the 12 speaker, six woofer, six tweeter speaker system and crossover network is 50 to 17,000 cycles. Power handling capacity is 30-watts.

Enclosure is richly finished, oiled and hand-rubbed American Walnut. An attractive cane grille covers the speakers. Size: 42" x 14 1/2" x 5". Wt. 43 lbs.

**MSB-1121** List Price \$188.00



**THE NEW VOICE DIRECTOR**

Another sound solution by Argos — with a sound column. Combines unique "audience-reaching" characteristics of a sound column, and the portability of a battery-powered transistor amplifier to create a completely different kind of sound system. — includes:

- battery powered 25-watt transistor amplifier operates up to 400 hours on long-life flashlight batteries, or up to 200 hours on standard "D" flashlight cells.
- proven Argos SOUND DIRECTOR reproduction system gives completely uniform, intelligible coverage of large audiences — indoors or outside. Six speakers.
- microphone and 18-foot cable, microphone stand and lavaliere.
- all neatly contained in an attractive, compact, fitted case measuring only 6 7/8" x 9 3/4" x 29 3/4". The Voice Director gives absolutely intelligible audience coverage which is 50% to 100% greater than any system of comparable power. Ideally suited for use by schools, churches, public speakers, entertainers, conference groups, etc. Wt. 30 lbs.

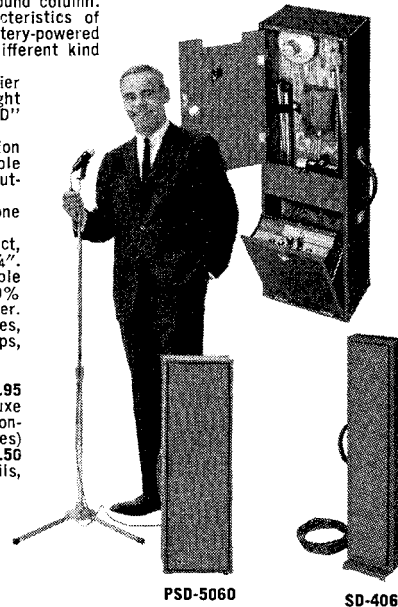
**PSD-5060**, professional net (less batteries) \$169.95

**PSD-5060-1**, identical to above but with deluxe microphone incorporating a built-in volume control. Wt. 30 lbs. Professional net (less batteries) \$199.50

For technical specs., accessories, other details, — write for special Voice Director sheet.

Extension Satellite SOUND DIRECTOR.

Use with VOICE DIRECTOR for extended coverage or with any P.A. system. 6-speakers; 30-watts; 16-ohms has self-storing stand and 50-feet of cable. Size: 30 5/8" x 6 7/8" x 3 3/4". **SD-4060** Wt. 12 1/2 lbs. Professional net \$54.95



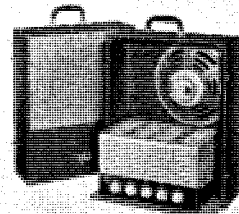
**SOUND CADDY SYSTEM**

Highly serviceable portable case. Has two Jensen 12-in. heavy-duty 18-watt PA speakers (10 oz. ceramic magnet), 8-ohms. Space below for most amplifiers (with turntable) up to 35-watts, and many of greater power capacity. Amplifier mounting board can slip out when case is opened but holds firmly in place when closed. Heavy plywood construction, steel corner angles.

Double coated, tough, grey vinyl covering. Has matching Saran plastic grille. 17 3/4" wide x 22" high x 13 1/8" deep. Wt. 28 1/2 lbs.

**SC-2DS** List Price \$66.50

**SC-2D**—Same as above without speakers. Wt. 20 lbs. List Price \$41.50

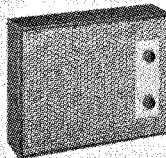


**MULTI-BAFFLES for walls, ceilings**

Solve all your intercom problems with these 14" x 10" baffles. Surface mount models 3 1/2" deep; recessed models 1 1/2". Mount on ceiling with screws; walls with clips. Blonde or walnut vinyl finish, plastic cane grille.

- MBX8**, surface mount series, baffle. Wt. 3 3/4 lbs. List \$ 9.75
- MBX8S**, with 8" Jensen speaker. Wt. 5 1/2 lbs. 19.85
- MBX8SL**, with speaker, L-pad, trans. Wt. 5 1/2 lbs. 24.00
- MBX8SLT**, speaker, L-pad, trans. Wt. 6 lbs. 28.10
- MBX8SLTC**, speaker, L-pad, trans., 6-pos. select switch. Wt. 6 1/4 lbs. 34.95

Recessed mount MBR series, slightly less.



**MUSIC COLUMN**

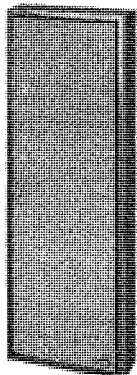
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Frequency response of the 12 speaker, six woofer, six tweeter speaker system and crossover network is 50 to 17,000 cycles. Power handling capacity is 30-watts.

Enclosure is richly finished, oiled and hand-rubbed American Walnut. An attractive cane grille covers the speakers. Size: 42" x 14 1/2" x 5". Wt. 43 lbs.

**MSB-1121** List Price \$188.00



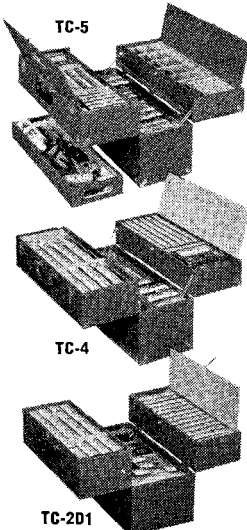
**TUBE CADDIES, vinyl-clad**

**TC-5 \$21.95 Super Tube Caddy.** Our largest Tube Caddy . . . a real man-size case with space for everything. Has ove 3300 cu. in. volume, roughly 1/3 larger than TC-4. Design for the man who believes in carrying a full load to save extra trips. Holds countless tubes and tools, soldering gun, meter accessories. Tool tray clearance 2 3/4 in. Handsome, new brown vinyl covering. Size 24" W x 16 1/2" H x 8 1/2" D. Wt. 19 lb.

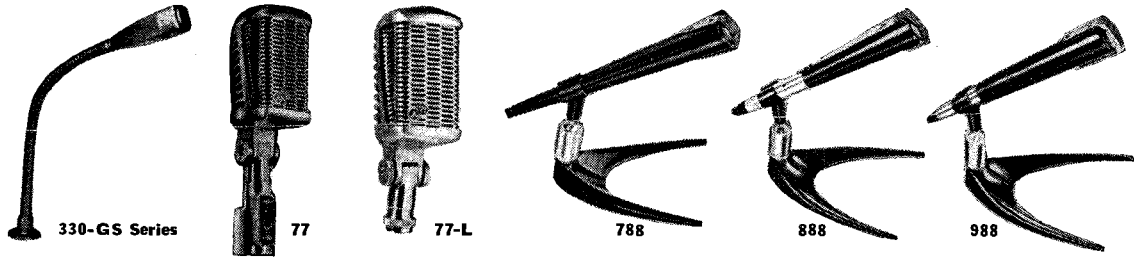
**TC-4 \$15.95 Carry-All Tube Caddy** — most popular Tube Caddy ever made. Gives quick availability to all section: Holds up to 262 tubes . . . less with tools and meter. Durable, new brown vinyl covering. Size 21" W x 15" H x 8" D. Wt. 12 lb

**TC-100 \$13.95 The Pacemaker Tube Caddy** (Not illust. Same size as TC-4 but built for the thrifty buyer. Popul: break-away design gives quick access to all sections. Hold up to 262 tubes . . . less with tools and meter. Durable, new brown vinyl covering. Size 21" W x 15" H x 8" D. Wt. 11 lb

**TC-201 \$9.95 The Pacemaker Junior.** Smaller, easy-to-car size for quick trips or as a matched companion to other Arg Tube Caddies. Holds up to 143 tubes . . . less with tools ar meter. Durable, new, brown vinyl covering. Size 15 3/4" W 12 1/2" H x 8" D.



# ASTATIC Microphones, Accessories



### SERIES 330-GS GOOSENECK MICROPHONES

Professional performing, all purpose gooseneck microphones for intercommunications, tape recording, amateur language laboratories and many other applications. Gooseneck is permanently attached, 13" in length. Satin chrome finish for both microphone and gooseneck assembly. Complete with 7' single conductor, shielded cable. (335L-GS: 2-cond. for balanced line).

**Model 332-GS Crystal**—Output, -54 db; response, 30-15,000 cps. List Price... **\$24.50**

**Model 333-GS Ceramic**—Output, -58 db; response, 30-10,000 cps. List Price... **\$24.50**

**Model 335H-GS Dynamic Hi-Z**—Output, -56 db; response, 100-12,000 cps. List Price... **\$33.00**

**Model 335L-GS Dynamic Lo-Z**—Output, -57 db; response, 100-12,000 cps. List Price... **\$30.00**

### MODEL 77 DYNAMIC CARDIOID

Most positive anti-feedback mike ever built. Also available in gold finish. Unidirectional design has suspended cartridge; eliminates external shock mounts. Built-in impedance selector. **Front-to-Back Pick-up:** 18 db differential. **Output:** -48 db. **Frequency Response:** 30-15,000 cps. **Impedance:** Low-Z, 30-50 ohms; medium, 150-250 ohms; high, 40,000 ohms. Shipping Weight, approximately 3 lbs., less stand.

**Model 77**—With on-off switch and provisions for locking in "on" position. List Price... **\$82.50**

**Model 77 Gold Finish**—List Price... **\$92.50**

**Model 77-L**—Head only for mounting on G Stand. List... **72.50**

**Model 77-L Gold Finish**—List Price... **82.50**

**Model G-77**—Includes G Stand and 8' cable. List Price... **97.45**

### MODEL 788 "METRO" DYNAMIC

Wide range and rugged construction for voice and music reproduction in PA, recording and TV, indoor or outdoor. **Response:** 60-13,000 cps. **Output:** -58 db, lo-Z; -56 db, hi-Z. Black die cast alloy housing with brushed gold trim. Omnidirectional. Balanced high or low imped. by simple change. Max. dia. 1 3/8" x 8 3/8" h. Built-in On-Off switch. Desk-floor stand adapter, lavalier cord and assembly, belt clip, 20' cable. Net Weight, 8 oz. **Model 788**—Dynamic Microphone. List Price... **\$79.50**

### MODEL 888 "TEMPO" DYNAMIC

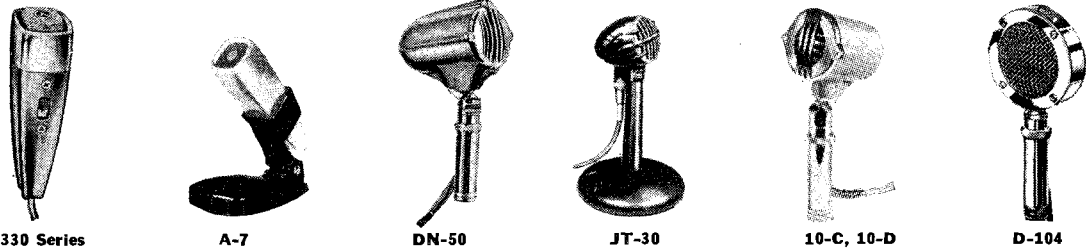
High fidelity and advance styling for applications in color TV, sound stage and deluxe PA systems. **Response:** 50-15,000 cps. Multi-impedance, 50-200, balanced, and hi-Z. **Output Level:** -58 db, lo-Z; -56 db, hi-Z. Die cast alloy housing in satin black with brushed chrome finish; 9 1/2" long x 1 1/2" max. dia. Includes SA-8 desk-floor stand adapter, lavalier cord and assembly with belt clip and 20' two-wire shielded cable. Weight, 9 oz. **Model 888**—Dynamic Microphone. List Price... **\$110.00**

### MODEL 988 "VOGUE" DYNAMIC

Beauty and high fidelity for the most exacting color TV and broadcast requirements. **Response:** 40-17,000 cps. **Output Level:** -56 db, hi-Z. Adjustable imped.: 50, 150 or 250 ohms for balanced line. Black housing with brushed gold finish. 9 1/2" long x 1 1/2" max. dia. With desk-floor stand adapter, lavalier cord and assembly and 20' cable. Net Weight, 8 3/4 oz. **Model 988**—Dynamic Microphone. List Price... **\$150.00**

### MODEL A-8 "FUTURA" DESK STAND

For Models 788, 888, and 988 mikes. Has 3/8"-27 thread. **Model A-8 Desk Stand** (illus. on Models listed)—List... **\$82.50**



### SERIES 330 MICROPHONES

Small, slim mikes with quality performance for various applications at real low price. Model 331 has momentary on, spring-return switch, furnished with hang-up bracket. Cable provides for audio and relay connections. All other models have slide switch with "lock-on" position complete with lavalier and stand adapter with 3/8"-27 thread. High impedance except No. 335L.

Model	Type	Output	Freq.	Body	Grille	Cap	List
331	Ceramic	-58 db	300-7000	Black	Black	Chrome	\$17.90
332	Crystal	-54 db	30-15000	Chrome	Black	Chrome	17.90
333	Ceramic	-58 db	30-10000	Black	Black	Chrome	17.90
335H	Dynamic	-56 db	100-12kc	TV Gray	Chrome	Chrome	26.50
335L	Dynamic	-57 db	100-12kc	TV Gray	Chrome	Chrome	23.50

**Model A-7 Desk Stand**—With adjustable swivel. List... **\$2.45**

### MODEL DN-50 "THE COMMENTATOR"

General purpose. Unitary moving coil system, carefully proportioned acoustic circuit. **Response:** 50-10,000 cps. **Output:** DN-50, -51 db; DN-HZ, -52 db. Semi- or non-directional. Opalescent gray and bright chrome finish. With 10' cable. **Size:** 6 3/4" h. 2 3/8" grille dia. 4 3/8" d. Net Wt., 1 lb. 12 oz. (mike only). **\$33.50**

**Model DN-50**—Dynamic Mike, 50 ohms imped. List... **\$33.50**

**Model GDN-50**—Same as above with grip-to-talk stand, 6' two conductor shielded cable. List Price... **\$52.70**

**Model UG8-DN50**—Same as above, but balanced. List... **57.70**

**Model DN-HZ**—Same, but Hi-Z. List Price... **39.70**

**Model GDN-HZ**—Same as DN-HZ with grip-to-talk stand, 6' two conductor shielded cable. List Price... **\$59.90**

**Model G Stand**—With grip-to-talk On-Off switch. List... **24.95**

**Model UG8 Stand**—Same as Model G; use with DN balanced line. List Price... **\$29.95**

### SERIES JT-30 "SPOKESMAN"

Streamline die-cast alloy housing; gray Hammerlin finish with chrome grille and fittings; includes handle and interlocking base. Concentric cable connector. For general PA, recording and communication. 8" high, 2 3/8" grille dia., 5 1/4" base dia. Weight, 21 oz.

**Model JT-30 Crystal**—Output, -49 db; impedance, 1-5 megs; response 30-10,000 cps. Complete with 8' single-conductor shielded cable. List Price... **\$18.40**

**Model JT-30-C Ceramic**—Same as JT-30 except with -54 db output and 5' cable. List Price... **\$18.90**

**Model JT-30-F Crystal (Head Only)**—Same as Model JT-30, except less handle and desk stand. Threaded 3/8"-27 for mounting. List Price... **\$15.90**

**Model JT-30-CF Ceramic (Head Only)**—Same as Model JT-30-C, except less handle and desk stand. Threaded 3/8"-27 for mounting. List Price... **\$16.40**

### MODELS 10-C, 10-D "THE VOICE"

Ideal for SSB, AM transmitters, paging and industrial applications. High impedance. **Output:** -52 db, Model 10-D; -54 db, Model 10-C. **Range:** 300-3,000 cps. Plug-in 3/8"-27 thread mounting with 5' cable. **\$29.70**

**Model 10-C Ceramic**—Gray chrome grille. List Price... **\$29.70**

**Model G-10-C Ceramic**—Same as above, but with "G" (grip-to-talk) stand. List Price... **\$49.90**

**Model 10-D Dynamic**—Chrome body and grille. List... **\$39.70**

**Model G-10-D Dynamic**—Same as above, but with "G" (grip-to-talk) stand. List Price... **\$59.90**

### SERIES D-104 "PREMIER"

The radio amateur's first choice. Balanced performance. Machined brass parts; heavy mesh grille; chrome finish. Standard 3/8"-27 thread mounting; adaptable to SC-11 lock-switch adapter or can be mounted on Model G (grip-to-talk) stand. Metal seal crystal offers protection against moisture and dryness. Ceramic immune to excessive heat and humidity. 3" dia., 1 3/4" deep. Weight, 14 oz. Complete with 5' single conductor shielded cable.

**Model D-104 Crystal**—Output, -46 db; impedance, 1-5 megs; response, 30-7,500 cps rising 500-4,000 cps. List... **\$31.00**

**Model D-104C Ceramic**—Output, -49 db; all other characteristics similar to D-104. List Price... **\$31.00**

**Model SC-11 Adapter**—List Price... **9.00**

**Model G Stand**—With grip-to-talk On-Off switch. List... **24.95**

### ASTATIC PHONO CARTRIDGES

For over 25 years Astatic has maintained its number one position as the world's leader in supplying the most complete line of phonograph pickup cartridges for both original equipment manufacturers and distributors.



### THE ASTATIC CORP.

CONNEAUT, OHIO, U.S.A. • In Canada: Canadian Astatic Ltd., Toronto, Ontario  
 Export Sales: Roburn Agencies, Inc., New York 13, N.Y., U.S.A.  
 MANUFACTURERS OF PHONOGRAPH CARTRIDGES • NEEDLES • PICKUPS • MICROPHONES  
 RECORDING TAPE • ELECTRONIC DEVICES

# ASTATIC Microphones, Accessories

## MICROPHONES



**MODEL 513H MOBILE MICROPHONE**  
Dynamic mike for Citizens' Band and other communications. Low background noise, feedback and hum. Semi-directional polar pattern. Wide temperature range; humidity-proof. **Frequency Response:** 200-9,000 cps. **Output Level:** -50 db at 1 v./dyne/cm<sup>2</sup>. **Impedance:** 40,000 ohms. With press-to-talk switch, snap-removal mounting bracket and three-conductor (one shielded) coiled cable 5½" long, extended. **Size:** 2¼" w. x 2½" d. x 6" h. **Weight,** 10 oz. **Model 513H Mobile Mike—List Price..... \$34.50**

**MODEL 511 MOBILE MICROPHONE**  
Ceramic element mike for Citizens' Band and similar uses. Low background noise, feedback and hum. Semi-directional polar pattern. **Frequency Response:** 200-4,000 cps. **Output Level:** -50 db at 1 v./dyne/cm<sup>2</sup>. **Impedance:** 250,000 ohms (1000 cps). With press-to-talk switch, snap-removal mounting bracket and three-conductor (one shielded) coiled cable extending to 5½" long. **Size:** 2¼" w. x 2¼" d. x 6" h. **Weight,** 7 oz. **Model 511 Ceramic Mike—List Price..... \$19.95**

**MODEL 531 MOBILE MICROPHONE**  
High performance ceramic mike for amateur and Citizens' Band applications. Carefully calculated response characteristic for maximum clarity and intelligibility. Semi-directional polar pattern. Fully shielded to minimize hum pickup. **Frequency Response:** 150-3,500 cps with 6 db rise in 2,000 cps range. **Output Level:** -50 db at 1 v./dyne/cm<sup>2</sup>. **Impedance:** 250,000 ohms, approx. at 1,000 cps (EIA, 100,000 ohms). With press-to-talk switch, molded Cycloac\* housing and three-conductor (one shielded) coiled vinyl cord, 5' long extended. **Size:** 2¾" w. x 1½" d. x 3¾" h. **Weight,** 7½ oz. **Model 531 Mobile Mike—List Price..... \$12.75**  
\*Borg-Warner trademark.

**SERIES 150 RECORDER MIKES**  
For tape recorder use. Low cost; high output; outstanding performance; compact in size. **Size:** 2¾" sq. x 1¼" d. Plastic housing with rigid metal grille. With 5' cable.  
**Model 150 Crystal Mike—Frequency response, 30-10,000 cps. Output, -44 db. List Price..... \$6.50**  
**Model 151 Ceramic Mike—Frequency response, 30-8,000 cps. Output, -48 db. List Price..... \$6.50**

**MODEL 10M5A "COMMUNICATOR"**  
For mobile, ship-shore, etc. Sensitive and rugged. **Response:** 100-4,000 cps. Press-to-talk DPST switch. Retracting cable 12-in. coiled extends to 8'. Gray finish. **Model 10M5A Carbon Microphone—List Price..... \$29.50**

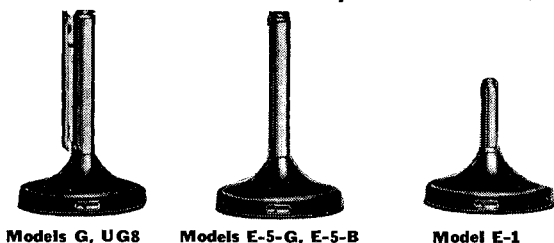
**MODEL L-1 CRYSTAL LAPEL MIKE**  
Tiny dual diaphragm with spring clip and 15' of small diameter single conductor shielded cable. Machined brass housing with wire mesh front and rear grilles; black melamine finish. **Output:** -62 db. **Impedance:** 1-5 megohms. **Response:** 30-10,000 cps. 1½" dia., ¾" deep. **Weight,** 7 oz. **Model L-1 Crystal Lapel Microphone—List Price..... \$27.35**

**"VELVET VOICE" CRYSTAL MICROPHONES**  
For PA, home recording, ham, paging, radio. Use with floor or desk stand or in hand. Gold finished housing and handle; chrome grille; brown detachable base. ¾"-27 mounting, 8" high, 2½" grille dia., 5½" base dia. **Weight,** 24 oz.  
**Model 200—Output, -50 db; impedance, 1-5 megs; \$19.50 response, 30-7,000 cps. With 8' cable. List Price.....**  
**Model 200-S—With on-off switch in handle. List Price..... \$21.50**  
**Model 241-S—Same as 200-S, except response 30-10,000 cps with rising response from 1,500-5,500 cps. List Price..... \$21.50**

**MODEL T-3 CRYSTAL**  
For studios, intercom, amateur, PA, recording. **Response:** 30-10,000 cps. **Output Level:** -54 db. Semi- or non-directional. With connector, 10' cable. All chrome finish. **Model T-3 Crystal Microphone—List Price..... \$29.30**

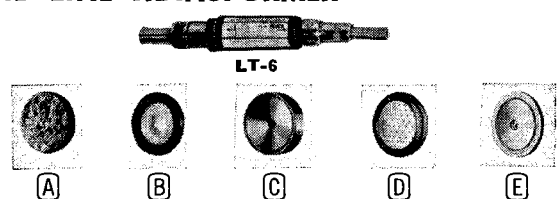
**MODEL 551 INDUSTRIAL MICROPHONE**  
Dynamic industrial mike provides high intelligibility in noisy areas. Housing and transformer shielded. Withstands temperatures to 200° F; 180° F indefinitely. Moisture-sealed. Semi-directional polar pattern. **Frequency Response:** 300-6,000 cps, high impedance; 300-6,500 cps, low impedance. **Output Level:** -50 db at 1 mw/10 dynes/cm<sup>2</sup>, low impedance; -46 db at 1 v./dyne/cm<sup>2</sup>, high impedance; both open circuit, 1000 cps. **Impedance:** 150 or 40,000 ohms, adjustable. With press-to-talk switch, virtually unbreakable Delrin\* housing, and four-conductor (shielded mike, two relay) coiled cord extends to 8' long. **Size:** 1½" x 2" x 6¾". **Weight,** 20 oz. **Model 551 Industrial Mike—List Price..... \$69.50**  
\*DuPont trademark.

## STANDS, CARTRIDGES AND LINE TRANSFORMER



**Models G, UG8      Models E-5-G, E-5-B      Model E-1**

**MICROPHONE STANDS**  
**Model G Desk Stand**—Has grip-to-talk SPST on-off switch, sliding bar for "lock-on". Use with DN-50, DN-HZ, T3, D-104, D-104-C, 10-C, 10-D and 77L. Finish: Bright chrome, gray Hammerlin base. **List Price..... \$24.95**  
**Model UG8 Stand**—Same as Model G, with DPDT switch for balanced or unbalanced line. Thread, 13/16" x 27; eight-terminal strip in base adapts to any circuit. **List Price..... \$29.95**  
**Model E-5-G and E-5-B Desk Stands**—Finish: Gray or brown Hammerlin base with bright chrome stem. Has 3/8"-27 thread. Overall height 8". **List Price..... \$7.75**  
**Model E-1 Desk Stand**—Finish: Gray Hammerlin base, bright chrome trim. Has 3/8"-27 thread. Overall hgt., 5½". **List..... \$8.25**



**REPLACEMENT MICROPHONE CARTRIDGES**

Model	Fig.	Use with Astatic Mike Model	List
MC 151	D	CX, CX-1, 200, 241, JT-30, JT-30-F, JT-40, T-3	\$7.00
MC 127	D	CC, CC-1, VC, VC-1, JT-30-C, JT-30-CF, JT-40-C, T-3C	7.00
MC 451	E	10M5, 10M5A, 11M5	8.75
MC 563	B	DN-50, DN-500, DN-HZ, DN-MZ, 10-D	16.50
MC 320	A	D-104	9.50
MC 321	A	D-104-C	7.00
MC 551	C	M-301	7.00
MC 558*	....	332	7.00
MC 559-2*	....	331	7.00
MC 560*	....	335H, 335L	7.75

\*Mikes without screw-fastened caps should be returned to factory for repairs.

## MODEL LT-6 LINE-MATCHING TRANSFORMER

Matches low impedance microphone to high impedance amplifier input; or high impedance dynamic microphone to low impedance amplifier input. Permits long length of cable on the low impedance side of the transformer. Eliminates high frequency loss and objectionable hum pickup. Completely shielded. **Input:** 30-50 or

150-250 ohms. **Output:** 40,000 ohms or higher. **Response:** ±1 db, 20-20,000 cps. Supplied with Amphenol 91-852 and 75-MCIF end connectors. Opalescent gray body with chrome finish connectors. **Size:** ¾" dia. **Model LT-6 Transformer—List Price..... \$17.50**



THE ASTATIC CORP.

CONNEAUT, OHIO, U.S.A. • In Canada: Canadian Astatic Ltd., Toronto, Ontario  
Export Sales: Roburn Agencies, Inc., New York 13, N. Y., U.S.A.  
MANUFACTURERS OF PHONOGRAPH CARTRIDGES • NEEDLES • PICKUPS • MICROPHONES  
RECORDING TAPE • ELECTRONIC DEVICES

## ASTATIC PHONO NEEDLES

Needle for needle, Astatic always has the highest quality with the most complete stocks of any maker anywhere. No matter who the original equipment maker of the phonograph, Astatic has just the needle made for that particular cartridge on hand, ready for immediate delivery.



# ATLAS SOUND

## ATLAS PAGING AND TALK BACK SPEAKERS

All speakers approved by Federal Civil Defense Administration.

NEW

The HU and CJ models listed below are all equipped with the well-known "Versalock" mounting bracket. This rigid, rugged and dependable bracket is completely adjustable on both a horizontal and vertical plane, affording "pin-point" directivity and simple secure mounting. The HU and TP horns are constructed of aluminum, while the CJ horns are molded of indestructible Fiberglas. Rugged diecastings and tough steel parts add strength wherever necessary. All models are 100% weatherproof under all climatic conditions.

**HU-12N** Small in size and low in cost. Excellent for low power paging and talk-back systems where limited coverage is required.

**HU-15N** The famous ATLAS SOUND "work horse," HU-15N is the most popular all-purpose, trouble-free speaker of its type and size.

**HU-24N** Similar to HU-15N. The larger horn improves low frequency response and increases overall efficiency. For paging and talk-back systems that are also required to reproduce music.

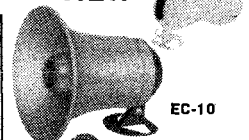
**CJ-14N** A wide angle speaker with a rectangular horn opening which gives broad sound dispersion in the horizontal plane while maintaining good vertical coverage.

**EC-10** The lowest priced American-made speaker designed specially for low power systems requiring limited coverage. Made possible by a breakthrough in design, materials and performance, EC-10 gives improved results and high efficiency for intercom and other applications formerly using cone speakers.

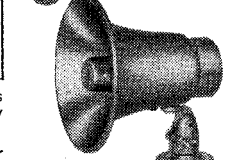
Horn sections are molded of a new, tough, all-weather, acrylic plastic and the handsome beige-brown color combination blends with any decor. The tough steel bracket is adjustable and makes mounting simple and secure. Model EC-10 is unmatched where size, weight, appearance and high efficiency combined with low cost are factors.

**CJ-30N** Similar to CJ-14N, except the power handling capacity is increased and the larger, wide angle horn improves low frequency response.

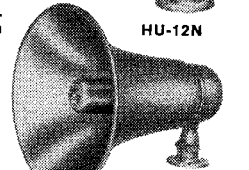
**TP-15N** One high efficiency driver unit does the work of two for low cost bi-directional coverage in long corridors and outdoors. The universal bracket mounts the dual horns at a 10° angle down or out from wall surface or pole.



EC-10



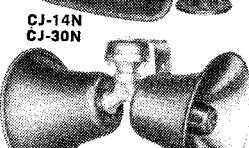
HU-12N



HU-15N



HU-24N



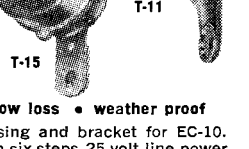
CJ-14N



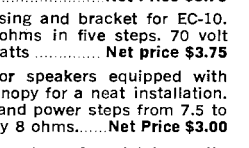
CJ-30N



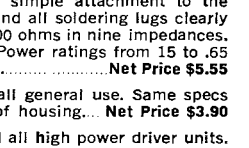
TP-15N



TP-24N



DU-12N



DC-5

MODEL	POWER	IMPEDANCE (specify)	FREQUENCY cps	SOUND LEVEL#	DISPERSION	DIMENSIONS	SHIPPING WEIGHT	NET PRICE
EC-10	6 Watts	8 or 45 ohms	400-13,000	112 db	125°	6 1/4" Bell dia. 6 3/4" deep	2 1/2 lbs.	80¢ \$14.25 45¢ \$15.15
*HU-12N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	120°	7 1/2" Bell dia. 7 1/4" deep	3 1/2 lbs.	80¢ \$16.80 45¢ \$17.70
*HU-15N	25 Watts	8 or 45 ohms	250-13,000	123 db	100°	9 3/4" Bell dia. 8 3/4" deep	6 lbs.	80¢ \$20.70 45¢ \$21.60
HU-24N	25 Watts	8 or 45 ohms	200-13,000	124 db	95°	11 1/4" Bell dia. 12" deep	6 lbs.	80¢ \$23.10 45¢ \$24.00
CJ-14N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	120° x 60°	5 1/2" high 9 3/4" wide 8" deep	3 1/2 lbs.	80¢ \$18.60 45¢ \$19.50
CJ-30N	25 Watts	8 or 45 ohms	250-13,000	121 db	120° x 60°	8" high 14" wide 11 1/4" deep	7 lbs.	80¢ \$26.10 45¢ \$27.00
TP-15N	25 Watts	8 or 45 ohms	250-13,000	120 db Each horn	100° Each horn	9 3/4" Bell dia. 18 1/2" long	7 1/2 lbs.	80¢ \$32.10 45¢ \$33.00
TP-24N	25 Watts	8 or 45 ohms	200-13,000	121 db Each horn	95° Each horn	11 1/4" Bell dia. 23" long	8 lbs.	80¢ \$35.70 45¢ \$36.60
DU-12N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	110°	7" Bell dia. 14" long	4 lbs.	80¢ \$21.60 45¢ \$22.50
DC-5	6 Watts	8 ohms	120-7,000	105 db	—	7" Bell dia. 14" long	3 lbs.	80¢ \$14.25

\* Available with factory preassembled and prewired T-11 weatherproof line transformer. Model HU-12NT: Net Price \$23.25. Model HU-15NT: Net Price \$27.15.

# Measured at 4 ft. on axis rated power.

**TP-24N** Same as TP-15N but equipped with oversized horns for improved low frequency response. Excellent for bi-directional paging locations required to reproduce music.

The DéCor speakers described below are designed to simulate a lamp, handsomely styled for contemporary interiors. All horn parts, fully adjustable bracket and base-canopy, are finished in brushed satin aluminum. Base-canopy conceals wiring and matching transformer, if required. All mounting hardware included. May be used outdoors in sheltered locations.

**DU-12N** Equipped with a driver type reproducer unit for high efficiency, directivity and intelligibility.

**DC-5** Equipped with a high efficiency weather-resistant 5" diameter cone speaker for pleasing reproduction of low level voice and music. Ideal for locations where appearance is a critical factor, such as churches, conference halls, restaurants and similar quiet surroundings.

## ATLAS Columair SOUND COLUMNS

(with exclusive EASY-MOUNT Universal Bracket)

The "Columair" consists of an in-line array of six frequency adjusted cone speakers. The in-line configuration produces a sound pattern having a broad horizontal and narrow vertical distribution. Provides uniform sound intensity even at varying distances from the sound column. EASY-MOUNT swivel bracket permits optimum adjustment of critical beam pattern. Transformer cover plate located at top of enclosure. Constructed of heavy gauge steel finished in light beige two tone spatter. Plastic grill cloth in contrasting shade covers front plywood panel. Interior lined with "Tufflex" acoustic padding. Fine appearance blends with most décors.

### SPECIFICATIONS

	C-46	C-66
Speaker Array	Six, Four-Inch	Six, Six-Inch
Frequency Range	200-10,000 cps	125-10,000 cps
*Power Capacity	20 Watts	40 Watts
**Vert. Distribution Angle	26-36 Degrees	22-32 Degrees
**Hor. Distribution Angle	120-160 Degrees	120-160 Degrees
Impedance (Total)	16 Ohms	16 ohms
Dimensions	28" x 5 1/4" x 5"	42" x 7 3/4" x 6"
Net Weight	8 1/4 Lbs.	18 1/2 Lbs.
Net Price	\$37.50	\$57.00

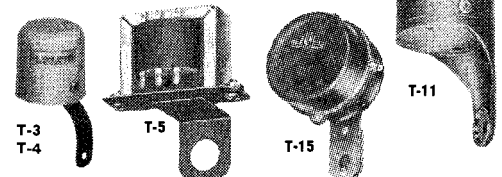
Model MK-1 Columair stand attachment kit. Net Price \$ 1.20  
Model SS-4 Speaker stand for Columair. Net Price \$13.50

## ATLAS WR-7 DECORETTE TWO-WAY SPEAKER SYSTEM

**WR-7** A high fidelity design woofer/tweeter system for speech and music installations requiring above average sound quality. Positions horizontally or vertically on concealed wall brackets. Beige finish and grill cloth match ATLAS SOUND Columair. Construction is similar to C-46 and C-66. Ideal for auxiliary use with sound columns. Net Price \$22.50

**WR-7 Specifications:** Power: 15 watts. Impedance: 8 ohms. Response: 70-15,000 cps. Speakers: special 5" x 7" ellipsoid woofer with 6 oz. ceramic magnet, special 3" tweeter. Dimensions: 18" long, 8" wide, 5 1/2" thin. Shipping wt. 8 lbs.

## ATLAS LINE MATCHING TRANSFORMERS



• convenient • efficient • low loss • weather proof

**T-3** includes weatherproof housing and bracket for EC-10. Primary from 45 to 2,000 ohms in six steps. 25 volt line power taps from 5 to .31 watts. Net Price \$3.75

**T-4** includes weatherproof housing and bracket for EC-10. Primary from 1000 to 16,000 ohms in five steps. 70 volt line power taps from 5 to .31 watts. Net price \$3.75

**T-5** for DU-12 and DC-5 DéCor speakers equipped with bracket to mount under wall canopy for a neat installation. Primary marked in impedance and power steps from 7.5 to .31 watts in six steps. Secondary 8 ohms. Net Price \$3.00

**T-11** for HU, CJ, TP and WT-6 speakers. Completely weather proof, includes bracket for simple attachment to the speaker, varnish impregnated and all soldering lugs clearly marked. Primary from 45 to 8,000 ohms in nine impedances. Also marked for 70v. and 25v. Power ratings from 15 to .65 watts. Secondary 4, 8, 16 ohms. Net Price \$5.55

**T-10** for "Columair" C-46 and all general use. Same specs as T-11 above, less weatherproof housing. Net Price \$3.90

**T-15** for CJ-44 Cobra-Jector and all high power driver units. Includes weather proof housing and universal mounting bracket. Primary from 100 to 2,000 ohms in seven steps. Also marked for 70v. line from 50 to 2.5 watts. Secondary 4, 8, 16 ohms. Net Price \$9.90

**T-16** for "Columair" C-66 and for general application. Specs same as T-15 above, less weatherproof housing. Net Price \$5.10



# ATLAS SOUND

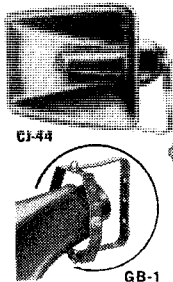


## ATLAS COBRA-JECTOR

MODEL CJ-44 ALL PURPOSE WIDE ANGLE PROJECTOR—COMPLETE WITH SUPER POWER DRIVER—POLYESTER FIBRE GLASS CONSTRUCTION

All weather speaker with "Acousti-Matched" built in driver unit. The projector and reproducer is a single package, matched design resulting in maximum conversion efficiency. (Power input in watts versus sound pressure output.) The CJ-44 controlled response has been carefully restricted within frequency limits most useful in PA and high level music reproduction. As a result, speaker output energy is not wasted in the reproduction of frequencies that do not contribute to efficient performance.

Net Price \$47.70



All speakers approved by Federal Civil Defense Administration.

## ATLAS DR PROJECTORS

NON-RESONANT—STURDY—WEATHERPROOF

Atlas DR projectors are the result of many years of acoustic research. This costly engineering and elaborate tooling has resulted in projectors that are without acoustical or mechanical equal. All acoustical sound paths are clean and uniform without steps or pockets to disturb the normal function of the horn. These critical design features eliminate conditions of turbulence, frequency cancellation and resultant signal distortion. All models are equipped with a heavy duty "U" bracket. This bracket is securely fastened to a main body casting which will not fail when subjected to extreme conditions of stress, strain and vibration.

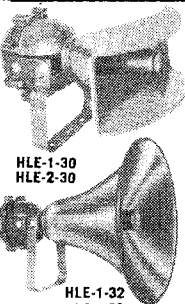
Input Power (cont.)	40 watts
Power Equalized Response*	60 watts
Input Impedance	16 ohms
Response	115-12,000 cps
Dispersion	120° x 60°
Dimensions—Bell	23" x 13"
Overall length	19"
Weight	16 lbs. net 19 lbs. shipping

\*Input range limited to frequencies above horn cut off.

### MOUNTING BRACKET FOR CJ-44 AND ALL DR PROJECTORS

MODEL GB-1 For all Atlas projectors using "U" type bracket mounting, it permits the speaker to be quickly adjusted in both a horizontal and vertical plane and securely locked in position. Average adjustment limits 160° on the horizontal and 65° on vertical direction. Bonderized steel, baked enamel finish, all hardware supplied. Shipping weight 3 lbs. Net Price \$3.60

SPECIFICATIONS	DR-54	DR-42	DR-32
Air Column	4½ ft.	3½ ft.	2½ ft.
Low Frequency	115 cps	140 cps	190 cps
Bell Diameter	26 inches	21 inches	16½ inches
Length (less driver)	19 inches	16 inches	12½ inches
Shipping Weight	23 lbs.	14 lbs.	10 lbs.
Net Price	\$29.40	\$21.60	\$18.00



## ATLAS EXPLOSION-PROOF HIGH EFFICIENCY SPEAKERS

APPROVED BY UNDERWRITERS LABORATORIES FOR USE IN HAZARDOUS LOCATIONS WHERE EXPLOSIVE ATMOSPHERES EXIST

Highly efficient due to exclusive design of explosion barrier. Class 1 speakers for use in atmospheres containing ethyl ether, cyclopropane, gasoline, naphtha, benzene, butane, acetone, lacquer, natural gas, etc. Class 2 can be used in Class 1 conditions as well as in atmospheres containing dust of magnesium, coal, coke, flour, starch, grain, etc.

HLE-30 type speaker preferred where space limitations exist; excellent for paging and talk back applications. HLE-32 type more efficient due to larger horn size—where maximum coverage is required.

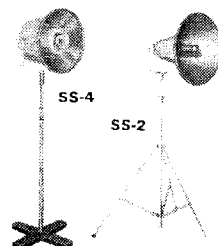
SPECIFICATIONS	HLE (1 or 2) 30	HLE (1 or 2) 32
Power Input	60 watts	60 watts
Voice Coil Impedance	16 ohms*	16 ohms*
Freq. Response	250 to 12,000 cps	190 to 12,000 cps
Overall Length	17½ inches	21½ inches
Bell Opening	14 in. x 6 in.	16½ inch diameter
Cable Entrance	½" conduit	½" conduit
Shipping Weight	22 lbs.	25 lbs.
Net Price	HLE-1-30 \$73.50 HLE-2-30 \$85.50	HLE-1-32 \$82.20 HLE-2-32 \$94.20

\*Available with 45 ohm V.C. add \$1.50 to net price. T-16 line trans. mounting facilities available within explosion-proof housing. For details see description of T-16.

## ATLAS SUPPORT STANDS

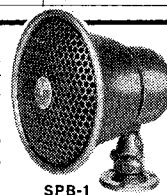
Model SS-4 for permanent and portable use, for all types of speakers of medium weight and size. Easy-Off top fitting supplied for convenient attachment of speaker. Cast iron base offers adequate stability for average use. Upright polished chrome steel tubing adjustable to over 6 ft. Beige shrivel base. Weight 20 lbs. Net Price \$13.50

Model SS-2. Heavy duty, all purpose support. Maximum stability due to wide surface spread. All parts plated steel and paint finish. Equipped with Easy-Off top adaptor to facilitate removal of speaker. Height extension 5 to 10 ft. Weight 29 lbs. Net Price \$26.40



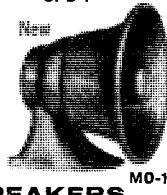
## ATLAS HEAVY DUTY SPEAKER

Model SPB-1 Ruggedized, weatherproof speaker for industrial service. Heavy gauge bell with protective screen and fully adjustable "Versalock" bracket. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 cps. Dispersion: 110°. Dimensions: 7¼" bell diameter, 6¾" deep. Shipping wt. 5½ lbs. Net Price \$27.00

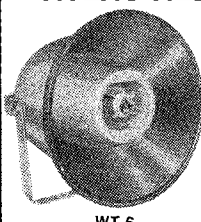


## ATLAS MOBILE SPEAKER

Model MO-1 Weatherproof speaker with special, rigid, one-piece cast bracket for fail-safe use on vehicles. Concealed wiring and special, one-piece horn discourage tampering. High efficiency for use with mobile radio transceivers. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 cps. Dispersion: 120°. Dimensions: 7¼" bell diameter, 6¾" deep. Shipping wt. 4½ lbs. Net Price \$26.40

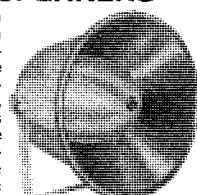


## ATLAS ALL WEATHER HI-FI SPEAKERS



WT-6

Model WT-6 Weatherproof, high fidelity type two-way system with horn-loaded woofer and coaxial horn tweeter. Attractive beige color for indoor and outdoor use wherever wide range, clean music reproduction is important. Fully adjustable bracket. Power: 15 watts. Impedance: 8 ohms. Response: 100-15,000 cps. Dispersion: 120°. Dimensions: 15" bell diameter, 12" deep. Shipping wt. 16 lbs. Net Price \$36.00



W-6

Model W-6 Identical to WT-6, but less tweeter. Extended range to 8,000 cps with special cone speaker. Shipping wt. 14 lbs. Net Price \$27.00

## ATLAS BI-DIRECTIONAL BAFFLES WITH SPEAKER

Models TW-10 and TW-11 Baffle/Speaker combinations complete with 8 cone speaker. Grill openings on both sides of baffles give bi-directional coverage in corridors and outdoors in sheltered locations. Decorative beige finish. Dimensions: 9" diameter and 5" thin.

TW-10 with adjustable bracket, special 8 ohm, 8" speaker. Shipping wt. 5 lb. Net Price \$9.4

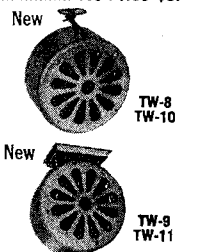
TW-11 with 5" x 6" bracket, universal mounting plate for flat surfaces at electrical boxes, special 8 ohm, 8" speaker. Shipping wt. 5½ lbs. Net Price \$11.4

## ATLAS BI-DIRECTIONAL BAFFLE!

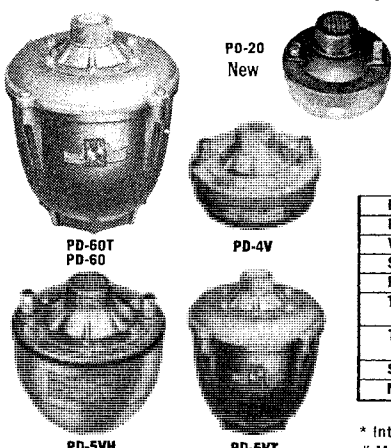
Models TW-8 and TW-9 Identical to TW-10 and TW-11 but less the special ATLAS SOUND speaker. Will accommodate any standard 8" cone.

TW-8 Baffle only with adjustable bracket. Less speaker. Shipping wt. 3½ lbs. Net Price \$6.4

TW-9 Baffle only with 5" x 6" bracket. Less speaker. Shipping wt. 4 lbs. Net Price \$8.



## ATLAS DRIVER UNITS • SUPER POWER—SUPER EFFICIENT



Lifetime guarantee against electro-acoustical failure when operated to specifications. New designs, materials and double weather sealing give the ultimate in response, efficiency and trouble-free, reliable service. Models PD-5VH, PD-5VT, PD-60 and PD-60T feature self-aligning, field replaceable diaphragm assemblies. Excellent for replacement in any trumpet with standard 1¾" x 18 driver threads.

SPECIFICATIONS	PD-60T	PD-5VT	PD-5VH	PD-4V	PD-20
Power (continuous)*	60 watts	40 watts	40 watts	30 watts	20 watts
Power (equalized response)†	100 watts	60 watts	60 watts	50 watts	25 watts
Voice Coil Impedance	16 ohms	16 ohms	16 ohms	16 ohms	16 ohms
Sound Intensity#	136 db	131 db	131 db	128 db	125 db
Frequency Response cps	70-12,000	80-12,000	80-12,000	85-7,000	120-7,000
Transformer Imp. ohms	16, 85, 125, 250, 500, 1000, 2000	16, 125, 250, 500, 1000, 2000			
Trans. Power Taps, Watts 70 Volt Line	60, 40, 20, 10, 5, 2.5	40, 20, 10, 5, 2.5			
Shipping Weight	8 lbs.	7 lbs.	5 lbs.	4 lbs.	2½ lbs.
Net Price	\$37.20	\$30.60	\$22.50	\$17.70	\$13.80

PD-60 Same as PD-60T Less Transformer \$30.60

\* Integrated speech and music full range. † Input range limited to frequencies above horn cut off.

# Measured 4 ft. on axis, 6 ft. air column with integrated full power input.

ATLAS SOUND, Division of AMERICAN TRADING AND PRODUCTION CORPORATION, Brooklyn, N. Y. 11218 Canada: Atlas Radio Corp., Toronto

# ATLAS SOUND

## ATLAS "FULL GRIP-VELVET ACTION" MICROPHONE STANDS

NO SLIPPING—NO RATTLE—NO NOISE—NO SCRATCHING—NO WEAR

The "Full Grip" clutch is standard on all models—it offers an extended length clutch body, permitting a secure, full hand grip. The clutch mechanism of all "Velvet Action" stands is inner-lined with a wear-proof bakelite locking collet which grips without jamming, slipping or sudden dropping. All chrome plated surfaces are carefully polished prior to plating to assure a uniform "Super-Chrome" wear resistant, lifetime finish. All threads on tube assemblies are individually inspected to assure a perfect fit when assembled to the base castings. All bases are functionally designed to offer maximum stability for a given base weight. The maximum base mass is located at the outer periphery of the casting where the concentrated weight is most effective. All bases include self leveling, shock absorbing base pads, plus three additional "anti-tip" points located between the base pads. All models terminate with a  $\frac{5}{8}$ "-27 thread at the microphone end.

**MS-10C** Economy model suitable for most applications where a low cost stand is required. Offers adequate base stability for average weight microphone.

**MS-12C** Similar to above but increased base weight offers an added advantage. Flat design of base is modern in appearance and is finished in a dark gun metal shrivel finish. Equipped with base pads to absorb shock.

**MS-11C** Full chrome design. Entire stand base and upright tube assembly completely finished in "Super-Chrome." Excellent for use where fine appearance is a requirement. An excellent choice for use with full chrome plated microphones. Equipped with base pads.

**MS-4** Three section telescoping microphone stand permitting a wide variation of adjustment. Can be adjusted from 26 inches to 61 inches in height. Excellent for use in schools, etc. where it is necessary to adjust the stand over a wide range of height adjustment. Minimum collapsed length offers convenience in transportation.

**MS-20** DeLuxe model. Maximum stability suitable for use with heavy, expensive microphones. Large oversize tube assembly,  $\frac{7}{8}$ " diameter telescoping tube,  $1\frac{1}{8}$ " diameter base tube, base diameter 12 inches. Oversize clutch assembly assures secure locking adjustment. Top adaptor included for  $\frac{5}{8}$ "-27 microphones.

**MS-25** Professional Microphone Stand. The ultimate in microphone stands. Features the "Safety Air Lock Cushion." This sensational feature prevents any accidental or sudden slippage of the telescoping section. If the clutch mechanism is accidentally released the stand cannot suddenly crash down—thus prevents damage to the microphone from severe mechanical shock. The telescoping section is at all times "cushioned on air" and the controlled escapement of air will only permit a slow smooth and quiet collapse of the stand. Base finished in a combination of chrome and shrivel. Heavy duty tube assembly,  $1\frac{1}{8}$ " and  $\frac{7}{8}$ " combination— $\frac{5}{8}$ "-27 top adaptor.

**MS-11S - MS-12S** Automatic "Sleeve Action" models. A fully automatic means of adjusting the height of the stand. A slight downward pressure on the "Sleeve Action" control permits the telescoping section to be lowered—cannot change its position without a deliberate pressure on the actuating sleeve control. Two models full chrome base or shrivel finish.

**CS-1** Fully collapsible, portable stand quick and simple to set up. Collapsible to a minimum overall length of 23 inches.

**CS-52** A unique three-legged floor stand which combines handsome design with maximum stability. The cast iron base, with base pads on each leg, is finished in dark gun-metal shrivel. Standard full chrome upright tube

assembly. Two piece base disassembles easily for compact handling. Packed: One complete stand packed in a single carton, suitable for reshipment.

**CS-42** Similar to CS-52 in design, except that base is readily collapsible for portable use or convenient storage. Packed: One complete stand packed in a single carton, suitable for reshipment.

Model	Weight	Base Finish	Tube Finish	Height Adj.	Base Dia.	Net Price
MS-10C	10 lbs.	Grey Shrivel	Full Chrome	35" to 64"	10 inches	\$ 6.00
MS-12C	12 lbs.	Grey Shrivel	Full Chrome	35" to 65"	10 inches	\$ 6.45
MS-11C	13 lbs.	Full Chrome	Full Chrome	35" to 65"	10 inches	\$ 8.25
MS-4	11 lbs.	Grey Shrivel	Full Chrome	26" to 61"	10 inches	\$ 9.45
MS-20	15 lbs.	Grey Shrivel	Full Chrome	37" to 66"	12 inches	\$10.20
MS-25	22 lbs.	Chrome & Grey	Full Chrome	37" to 66"	17 inches	\$16.80
MS-11S	13 lbs.	Full Chrome	Full Chrome	35" to 65"	10 inches	\$15.00
MS-12S	12 lbs.	Grey Shrivel	Full Chrome	35" to 65"	10 inches	\$13.50
CS-1	5 lbs.	Chrome & Cad	Full Chrome	23" to 62"	collapsible	\$12.60
CS-52	9 lbs.	Grey Shrivel	Full Chrome	34" to 62"	15 inches	\$ 7.05
CS-42	9 lbs.	Grey Shrivel	Full Chrome	34" to 62"	16 inches	\$ 8.25

**CS Type Demountable Microphone Floor Stands**—with full grip—"Velvet Action," fully collapsible—quick and simple "Come Apart" base design. This new and revolutionary design in microphone stands is ideal for fixed as well as portable applications. Excellent for use when it is desired to contain the stand within the amplifier or speaker carrying case. The stability of the assembled stand is equal to many types employing heavy cast iron base construction. The base legs are easily removed to permit minimum size, lightweight transportation. The spring lock leg-holding mechanism of this ingenious design offers a quick and simple "Come Apart" feature. No tools or screw fastenings are required to hold the base assembly together. No small parts to become lost. The self-leveling legs are chrome plated, tipped with skid-proof rubber shock absorbent bumpers—eliminates vibrational conductivity... protects polished floor surfaces against damage.

Model	Finish	Height Adj.	Shipping Weight	Net Price
CS-32	Full Chrome	36" to 64"	5 lbs.	\$ 7.50
CS-33	Full Chrome	26" to 64"	4 lbs.	\$ 8.70

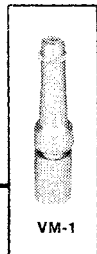
Each stand is individually packed complete in a single carton.

Model CS33 can be collapsed to a total length of only 22 $\frac{1}{2}$ ".

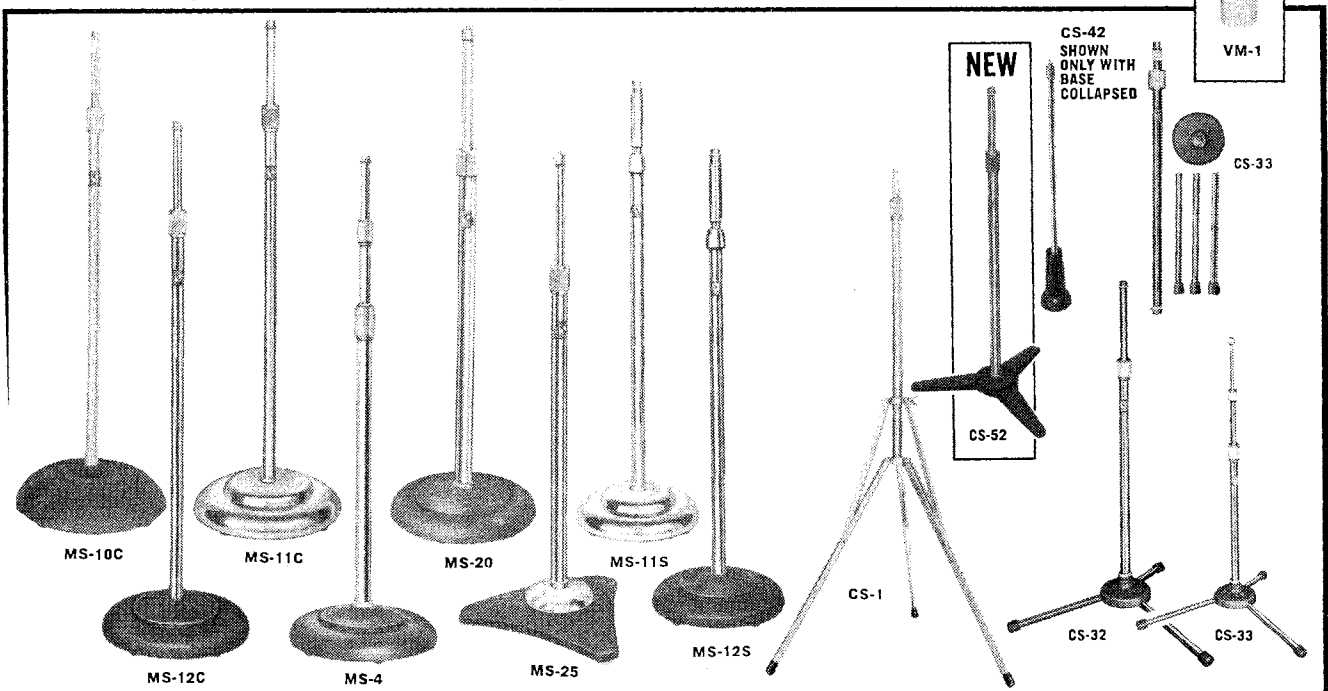
**VM-1 SHOCK MOUNT** The VM-1 shock mount will eliminate or greatly reduce microphone pick up of external mechanical shock and stand vibrations.

The shock mount is equipped with male and female  $\frac{5}{8}$ "-27 threads permitting convenient insertion between the microphone and the microphone stand.

The VM-1 is constructed of die castings and brass turnings finished in bright polished chrome—overall length 4 $\frac{3}{4}$ ", diameter 1" Net price \$ 4.50



VM-1



ATLAS SOUND, Division of AMERICAN TRADING AND PRODUCTION CORPORATION, Brooklyn, N. Y. 11218 Canada: Atlas Radio Corp., Toronto



# ATLAS SOUND



## ATLAS MICROPHONE DESK STANDS AND ACCESSORIES

**DS-4** Highly polished molded phenolic base is light beige in color with chrome upright tube. The smooth base will not scratch or mar table tops. Upright tube can be easily removed from base. Base diameter 5", height of tube 4", thread size 5/8"-27. Shipping weight 1/2 lb. **Net Price \$1.50**

**DS-5** Non-Adjustable Desk Stand. Base cast iron, finished in gun metal shrivel. Stable base is equipped with pads to prevent damage to desk or table tops. Base diameter 6", tube height 4" chrome finish. Shipping Weight 2 lbs. **Net Price \$1.95**

**DS-7** Same as above but equipped with upright adjustable from 8 to 13 inches. Equipped with standard "Velvet Action" clutch adjustment. Thread 5/8"-27. Shipping Weight 3 lbs. **Net Price \$3.30**

**DS-10** "Stream Liner" Desk Stand. Features "Rear Cable Exit". Mike cable is concealed under center section of chrome trim and directed out at rear of base; results in added stability and improved appearance. Constructed of precision die castings, finish gun metal grey, bright chrome trim. Rubber bumpers prevent damage. 5/8"-27 thread. Shipping Weight 1 1/2 lbs. **Net Price \$3.30**

**TS-8** Adjustable Banquet Stand. Low silhouette base is a trim, modern design. Upright adjustable from 14 1/2" to 26". Both base and upright finished in full super-chrome. Shipping wt. 5 1/2 lbs. **Net Price \$6.15**

**DS-9** Professional Desk Stand. Handsome appearance of modern, low silhouette base and tapered upright, both finished in satin chrome, complements the finest microphones. Stable 8" diameter base protects against accidental microphone damage. 4" upright tube. 5 felt base pads (4 lbs.) **Net Price \$5.10**

**DS-14** Desk stand is functionally and aesthetically suited to slim, elongated microphones. Gun-metal shrivel finished base with protective felt pads and 3" polished chrome upright tube with 5/8"-27 thread (2 lbs.) **Net Price \$2.70**

**SB-1** Dispatcher and Switchboard Mike Support. For use over telephone switchboards, dispatcher's desk, dais, banquet table, etc. 12 inch long, flexible, chrome plated "goose neck" arm is mounted on a spring loaded swivel, can be swung aside when not in use. A feed thru hole is located at the mike end of the "goose neck" so that the mike cable can be concealed within the flexible arm. Base casting is rear loaded so that the base will not tip forward. Finish grey shrivel. Shipping Weight 13 lbs. **Net Price \$10.05**

**SW-1** Gyromatic Swivel permits microphone to be adjusted to any angle, up, down, around. Locks in any position. Die cast finished in chrome. **Net Price \$2.85**

**LO-2** "Lock-On" accessory for instantaneous microphone attachment or removal without threading on or off any stand or support. One half of LO-2 remains fastened to the microphone, the other half stays on the stand. Excellent for floor show, sports announcing and similar uses where microphones must often be removed. Positive lock holds microphone safely in hanging positions on booms, ceiling supports and stage battens. Chrome finish. **Net Price \$2.10**

**S0-1** "Snap-On" accessory. Identical to LO-2 but less locking feature. Spring loaded, ball bearing design for secure, safe microphone attachment and quick disconnect on any upright floor stand. **Net Price \$1.65**

**FS-1** Foot Switch for press-to-talk paging applications using any microphone with a single ended input. May also be hand operated on desks and switchboards. Easily rewired for press-to-open circuit requirements. **Net Price \$7.80**

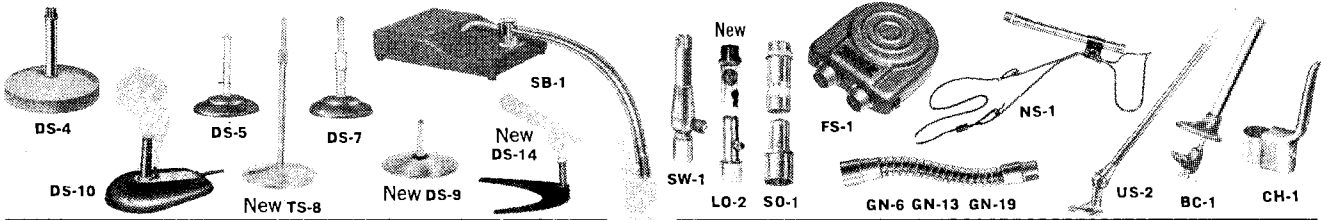
**NS-1** "The Chesty" Neck Supported Mike Holder. Permits a quick and simple "three way" adjustment. Mike is always in a suitably "close talking" position reducing acoustic feedback problems. Wide comfortable chest support prevents rolling due to sudden movement. Cool and lightweight, weighing only 6 oz. **Net Price \$3.60**

**GN** "Goose Necks" can be attached to any microphone stand or fixture; ends have 5/8"-27 male and female threads—all finished in bright chrome, model numeral indicates overall length of "goose neck" in inches. **Net Price GN-6 \$1.20, GN-13 \$1.65, GN-19 \$2.40**

**US-2** The Atlas US-2 Multi-Purpose microphone support. Excellent for use with language laboratories, dispatcher desks, telephone switchboards, pulpit, etc. The boom arm vertical adjustment and the rotation motion is spring loaded and will "float" the mike in the desired position without requiring a locking adjustment. The microphone cable may be concealed within the boom arm and will feed thru the swivel assembly and base flange. A small opening is provided at the microphone end of the boom for cable entry. Finished in "super-chrome". Specifications—Boom arm length 12 3/4"; vertical adjustment of boom 180°; rotation 360°; base length 2 5/8". **Net Price \$5.70**

**BC-1** Bracket Clamp. A multitude of useful applications. Can be used with a boom arm, goose neck, etc. Chrome tube 6" long. Clamp can be removed and top flange screwed or bolted in position. 5/8"-27 thread. **Net Price \$2.10**

**CH-1** Cable Hanger. Fits all tubes 7/8" to 1 1/4" diameter. The mike cable can be quickly coiled and looped over the cable hanger when moving, storing or transporting the mike and stand. Finished in polished chromium. **Net Price \$1.65**



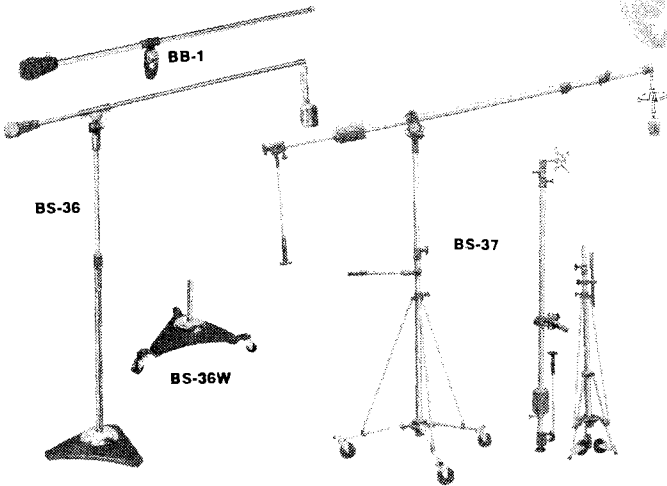
## ATLAS BOOM STANDS

**BB-1** "Baby Boom" Attachment. Versatile device that can be attached to any type of floor stand. All swivel parts are precision die castings resulting in smooth operation and secure positioning. Length of boom 31"—Chrome plated 5/8"-27 thread. Shipping weight 3 1/2 lbs. **Net Price \$4.81**

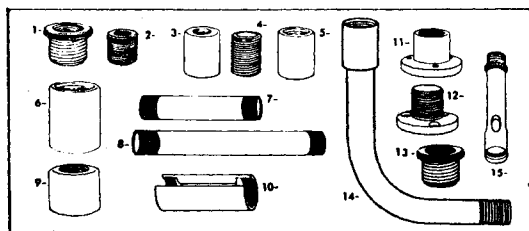
**BS-36** Professional Boom Stand with "Safety Air Lock Cushion" offers all the advantages of "Floating Action" plus a secure and dependable locking adjustment. The Air Lock built into the vertical section prevents any accidental or sudden slippage of the upright section. A gyromatic swivel joint is provided at the microphone end. The base casting is equipped with shock absorbent chrome plated, "domes of silence". Specifications: Boom length 62" (extension may be added). Vertical extension from 48" to 72". All tubular sections super-chrome plated. Base finished in polished chrome and gun metal. Shipping weight 36 lbs. **Net Price \$39.9**

**BS-36W** Mobile Model. Identical to the BS-36 except that the base is supplied with ball bearing swivel casters, permitting the entire stand to be wheeled to various positions in the studio. Shipping weight 40 lbs. **Net Price \$45.9**

**BS-37** Porto Boom. For most exacting TV studio, sound motion picture application, etc., ideal for portable service. Fully collapsible down to dimension permitting its transportation in all automobiles. Air check prevents any accidental collapse of the upright. Detailed description sheet available. Specifications: Upright retracted 5 1/4 ft., extended 9 ft. Boom retracted 7 ft. extended 18 ft. All tubular sections aluminum processed in "Alumilite Counter weight cast iron with bronze locking mechanism. Base casters swivel type. Base spread 42" on radius. Shipping weight 73 lbs. **Net Price \$390.1**



## ATLAS MICROPHONE ADAPTORS AND FITTINGS



Model	Description	Net Price
AD-1	1-5/8"-27 female to 1/2" pipe thread male (RCA Adaptor)	\$.54
AD-2	1-1/4" pipe female to 5/8"-27 male	.39
AD-3	1-1/4" pipe female to 5/8"-27 female	.39
AD-4	4-3/4" long, 5/8"-27 male running thread	.21
AD-5	5-5/8"-27 female to 5/8"-27 female, coupling	.39
AD-6	7-7/8"-27 female to 7/8"-27 female, coupling	.72
AD-7	3" long tube 5/8"-27 male each end	.42
AD-8	8" long tube 5/8"-27 male each end	.48
AD-9	7-3/8"-27 female to 5/8"-27 female	.45
AD-10	5/8"-24 female to 5/8"-27 female (W. E. Adaptor)	.78
AD-11	Flange, 5/8"-27 female, Base Diameter 1 3/4"	.45
AD-12	Flange, 5/8"-27 male. Base holes on 1 1/4" mounting centers	.45
AD-13	7-5/8"-27 male to 5/8"-27 female	.51
AD-14	Right angle bent tube: 5/8"-27 male and female each end	.90
AD-15	Cable "Feed-Thru" adaptor: 5/8"-27 male and female each end	.90

Note: Thread sizes specified as 1/8" pipe is I.P.S. (Electrical fitting) Measures Approx. 3/8" dia. All adaptors chrome plated.

**Electro-Voice**

**BC-TV-RECORDING  
MICROPHONES-DYNAMICS**

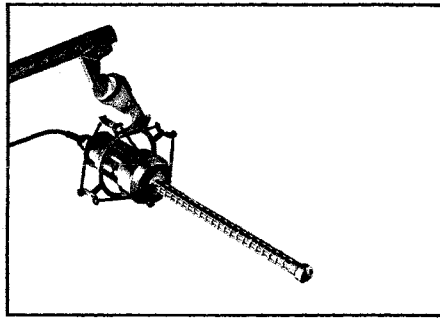
**Cardiline™ Unidirectional Microphones**

**MODEL 642**—A highly directional dynamic microphone combining the best characteristics of cardioid and distributed front-opening designs.\* Essentially cardioid unidirectional up to 500 cps; highly directional over balance of range. Working distance is 2 to 3 (or more) times that of conventional types. Excellent for boom use with Model 356 shock mount. Minimum mechanical shock transfer and wind noise interference. Response: Flat from 30 to 10,000 cps or choice of 5 or 10 db low frequency reduction steps by screwdriver adjustment. Acoustalloy® diaphragm. Impedance: 50, 150 and 250 ohms, externally adjustable. Output level: —48 db. Cast aluminum case with non-reflecting gray finish. Supplied with Cannon UA-3-14 connector, 20' 3-conductor shielded broadcast cable and UA-3-11 Cannon connector. Length, 17<sup>7</sup>/<sub>8</sub>" ; max. diameter, 3<sup>3</sup>/<sub>16</sub>". Must be used with Model 356 or 327. Net weight, 3 lbs., 4 oz.

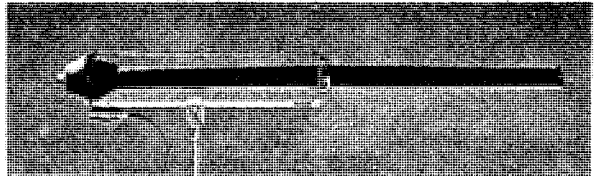
Net Each .....\$234.00

**MODEL 643**—Similar to Model 642 above but designed for more specialized and extended long-range pickup. Provides cardioid pickup pattern to 100 cps and is highly directional over balance of range. Includes integral 2-position bass tilt-down switch and 100 cps cutoff filter. Impedance: 50, 150 or 250 ohms changed by internal connector pin. Lightweight cast and extruded aluminum case with integral shock mount and removable wind filter. Output level: —47 db; Response: 30 to 10,000 cps. Length, 7' 2"; max. diam. 4". Cannon UA-3-14 and UA-3-11 connectors; supplied with 20' cable and storage case. Fits 5/8"-27 or 1/2" pipe threads. Net Each.....\$936.00

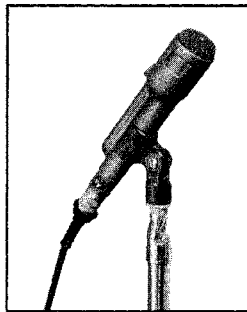
\*U.S. Patent No. 3,095,084



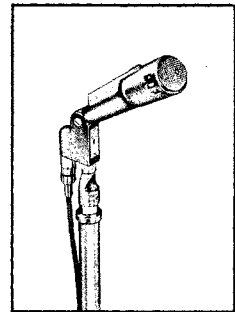
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643



666



665

**Cardioid Unidirectional Microphones**

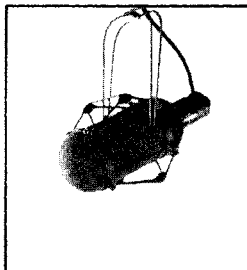
**MODEL 666 SUPER CARDIOID**—Variable-D®\* principle for high discrimination against sounds from back. Permits close talking without bass accentuation. Working distance increased by 1.7:1 over pressure microphones. Single moving element is exclusive, rugged Acoustalloy® diaphragm. Response: 30 to 6,000 cps. Output: —58 db. Internal connector pin impedance range. Wired for 150 ohms; taps at 50 and 250 ohms. Non-reflecting gray finished aluminum case. Built-in Cannon UA-3 connector. Clamp-on stand mount with 5/8"-27 thread and 1/2" pipe thread adapter, 20' cable. Length, 7<sup>3</sup>/<sub>4</sub>" ; diameter, 1<sup>3</sup>/<sub>4</sub>". Net weight, 11 oz. Net Each.....\$153.00

**MODEL 666R RISING RESPONSE CARDIOID**—Like Model 666, but with response which rises 4<sup>1</sup>/<sub>2</sub> db from 100 to 2,000 cps, reducing pickup of low frequency reverberations, room "rumble" and prop noise. Particularly suited to boom use. Output: —57 db. Net Each.....\$153.00

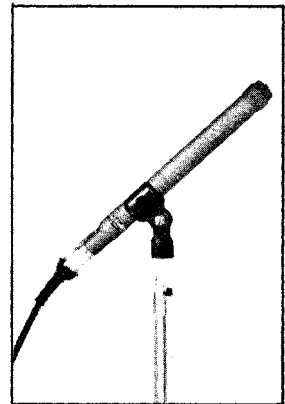
**MODEL 665 CARDIOID**—Similar in design and function to the Model 666, but for less exacting applications. Uniform response to 14,000 cps. Recessed switch provides 50 or 250 ohms. Pressure-cast zinc case. Non-reflecting gray finish. Diameter, 5/8"; length, 7<sup>3</sup>/<sub>16</sub>"; 18' cable. Fits 5/8"-27 threaded stand. Net weight, 1 lb. 10 oz. Net Each.....\$90.00

**MODEL 668**—Entirely new Continuously-Variable-D®\* cardioid designed specifically for boom use in broadcasting and recording. Extremely smooth cardioid pattern for maximum reduction of ambient noise and reverberation. Integral windscreen eliminates noise caused by motion of boom-mounted microphone through the air. Built-in equalizer provides choice of four response curves in both high and low frequency ranges. Acoustalloy® diaphragm. Response: 40-12,000 cps. Output: —51 db. Internal impedance selector permits 50, 150 or 250 ohm connection. Non-reflecting gray finished aluminum case. Two-foot mechanical isolation cable and twenty-foot three-conductor shielded broadcast type cable included. Supplied complete with shock isolating boom mount. Length: 6", diameter: 3/4". Net Each.....\$297.00

\*U.S. Patent No. 3,115,207



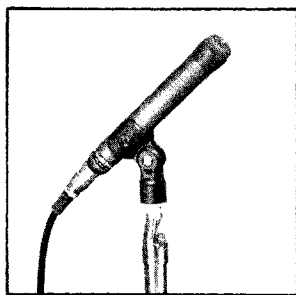
668



655C

**Omnidirectional Microphones**

**MODEL 655C SLIM-TRIM TV DYNAMIC**—Frequency response, 40 to 20,000 cps. Output level, —58 db. Excellent level affords high signal-to-thermal noise ratio. Can be used on stand, in hand or on boom. Easily concealed in studio props. Acoustalloy® diaphragm. Pop-proof grille. Impedance: 50, 150 and 250 ohms. Impedance easily changed. Non-reflecting gray finish. Cannon UA-3 connector. Clamp-on stand mount included with 5/8"-27 thread and 1/2" pipe thread adapter. Length, 10<sup>1</sup>/<sub>2</sub>" w/o connector; diameter, 1"; 20' cable. Net weight, 7 oz. Net Each.....\$120.00



654A

**MODEL 654A SLIM-TRIM BROADCAST DYNAMIC**—Frequency Response, 50 to 16,000 cps. Output level: —58 db. Can be used stand-mounted, hand-held or as lavalier. Matches all low impedance inputs. Built-in Cannon XLR-3 connector. Acoustalloy® diaphragm. 18' cable. Length, 6<sup>15</sup>/<sub>16</sub>" diameter, 1<sup>1</sup>/<sub>8</sub>". Non-reflecting gray finish. Net weight, 16 oz. Supplied with Model 300 clamp and lavalier neck cord.  
Net Each.....\$60.00



635

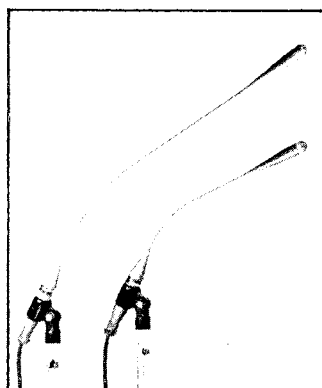
**MODEL 635 BROADCAST DYNAMIC** — Compact, rugged, versatile. Omnidirectional. Response: 40 to 13,000 cps. Acoustalloy® diaphragm. Output level: —55 db. 50-250 ohms impedance selector. Head tilts through 90° arc. Cannon XL-3 connector. 3/8"-27 thread; size 2" x 6<sup>1</sup>/<sub>4</sub>". Satin chrome finish, 18' cable. Net weight, 1 lb. Net Each.....\$49.20



649B

**MODEL 649B MINIATURE LAVALIER**—Smallest dynamic lavalier—weighs only 31 grams without cable; length, 2<sup>1</sup>/<sub>4</sub>"; diameter, 3/4". Ideal for programming where unobtrusive or concealed microphone placement is desirable. Frequency response: 60 to 12,000 cps. Output: —61db. Acoustalloy® diaphragm. Omnidirectional. Matches all low impedance inputs. 30' shielded cable. Aluminum case finished in non-reflecting gray. Complete with neck cord, belt clip and stand mounting clamp.  
Net Each.....\$63.00

**"Thin-Trim" Dynamic Microphones**



652  
652A

**MODEL 652**—Almost invisible dynamic microphone. Microphone is mounted on the end of the semirigid tube bringing the moving coil element closer to the user for full range, pop free response. Breath and wind filter is an integral part of the microphone. Two clear plastic baffles provided to give either 8 db or 5 db boost in the brilliance range of 5,000 cps for added articulation. The microphone without the baffles gives a smooth response from 80 to 8,000 cps. Acoustalloy® diaphragm. The Model 652 is mounted in a 3/16" steel tube and finished in non-reflecting gray. Output level, —60 db. Matches all low impedances. Furnished with 3-conductor shielded 20' cable and Model 300 stand coupler. Length of microphone, 25". Weight 11 oz. Net Each.....\$72.00

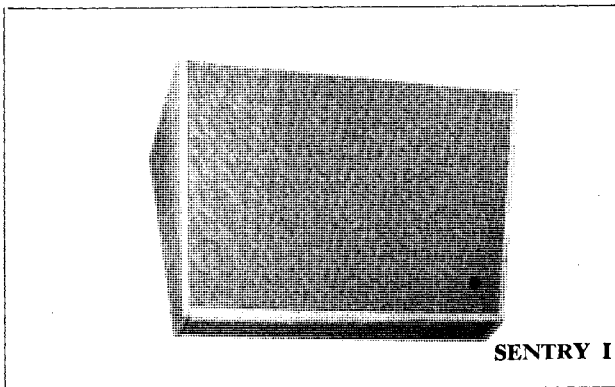
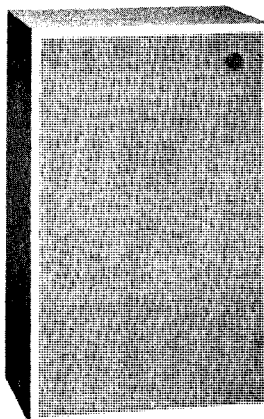
**MODEL 652A**—Same as Model 652 except 15" long.  
Net Each ..... \$72.00

**Sentry Series Studio Monitor Speaker Systems**

**SENTRY I WALL OR CEILING MODEL** — The first loudspeaker system designed specifically for monitor use in recording and broadcast studios. Permits precise monitoring and equalization uncolored by monitor speaker. Extremely wide, flat response allows use as studio reference standard. Precision driver components include 12" Radax loudspeaker, Diffraction Horn high frequency driver and special crossover. Provides smooth frequency response from 30 to 20,000 cps. Internal matching transformer accommodates 16, 150, and 600-ohm amplifier impedances. Quality hardwood cabinet, smooth sanded and sealed, ready for finishing in your choice of colors if desired. Neutral cane grille cloth. Dimensions: 21<sup>3</sup>/<sub>4</sub>" h x 37" w x 17" d.  
Net Each.....\$149.00

**SENTRY II FLOOR MODEL** — Same specifications as the shown for Sentry I. Finished on all four sides to permit vertical or horizontal mounting. Includes protective metal trunk-type corners which may be attached for portable applications. Dimensions: 32" x 20" x 13" deep. Net Wt. 68 lbs. Net Each...\$159.00

SENTRY II



SENTRY I

*ElectroVoice®*



# Electro-Voice®

## GENERAL PURPOSE MICROPHONES

### Unidirectional Line Microphone

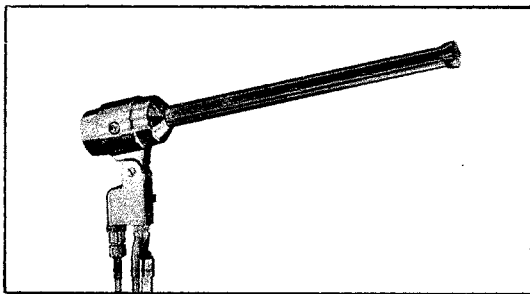
**MODEL 644 SOUND SPOT®** — Another Electro-Voice revolutionary development, the Sound Spot Model 644 is a combination cardioid and distributed front opening\* instrument, making it the most directional P.A. microphone ever. The Model 644 has the farthest front pickup, or better than 2.5 times the working distance of pressure types. Work close or far away without change of frequency response.

Cancellation from the rear and sides exceeds 20 db above 700 cps giving practically complete rejection of unwanted sound. Cardioid below 700 cps. This feature gives extremely high rejection of random noise. Reverberation and feedback are vastly lower than with any other P.A. microphone, allowing much greater leeway in loudspeaker placement.

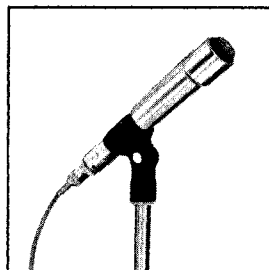
The effective front acceptance angle is 45° each side of center, providing best isolation of individual performers. The Model 644 is 9 db better on the reduction of wind noise and has far less response to shock than most other microphones.

Frequency response is smooth from 40 to 10,000 cps. Acoustalloy® diaphragm. High output: —53 db. Dual high and low impedance selected by changing one tap on MC4M cable connector. The case is high-pressure die-cast zinc with 3/4" aluminum tube; satin chrome finish. Rear diameter 2 5/16", length 16". Cable is 16'. Weight, 2 lbs. 9 oz. Net Each.....\$66.00

\*U.S. Patent No. 3,095,084



644



676

### Cardioid Unidirectional Dynamic Microphones

**NEW MODEL 676 CARDIOID DYNAMIC** — Radically new design brings truly professional quality to public address, recording, communications, and other general purpose microphone applications. Exclusive Continuously-Variable-D® principle assures uniform, symmetrical cardioid pattern at all frequencies. Frequency response 40 to 15,000 cps. Highest discrimination against feedback and unwanted sound. Exclusive three position switch offers controlled low-frequency attenuation to overcome rumble and feedback when microphone is used at a distance. Slim design permits full view of person speaking. May be used hand held or with stand mounting clamp supplied. Rugged high pressure die-cast construction. Acoustalloy® diaphragm. 150 ohms or high-Z; impedance changed by moving one wire in cable connector. Output level — 58 db. Satin chrome finish. 16' cable. Size 7 3/8" by 1 1/4" diameter. Net weight 12 oz., less cable. Net Each.....\$60.00

**MODEL 676A**—Non-reflecting Gray finish. Shipped wired for 150 ohms. Net Each.....\$60.00

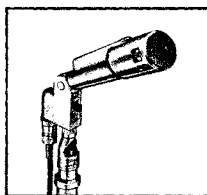
**MODEL 676G**—Gold finish. Net Each.....\$66.00

**MODEL 664 CARDIOID DYNAMIC** — Similar to Model 666 in function, but designed for quality tape recording, communications, and public address applications. Cardioid pattern at all frequencies, with Variable-D\* feature. Permits close talking without "booming" or bass accentuation. Provides better discrimination against unwanted sound. Blast filter minimizes wind effect. Acoustalloy® diaphragm shielded from dust and magnetic particles. Response 40-15,000 cps. Output —58 db. On-Off switch. 150-ohm and high impedance. Impedance changed by moving one wire in MC4 cable connector. Pressure-cast case. Chrome finish. 16' cable. Size 7 3/8" long, less wind coupler, 1 7/8" diameter. Net weight, 1 lb. 10 oz. Net Each.....\$51.00

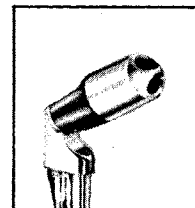
**MODEL 664A**—Non-reflecting Gray finish. Shipped wired for 150 ohms. Net Each.....\$51.00

**MODEL 664G**—Gold finish. Net Each.....\$54.00

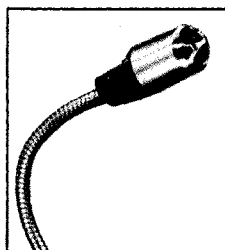
**MODEL 641**—Modern two-tone design dynamic microphone. High output level, wide-range response. For public address, recording, communications, electronic teaching aids, paging systems. Integral On-Off switch, wide frequency response. Response to 10,000 cps. Output —57db. 16 foot cable. Case is chrome plated die-cast zinc and gray high impact plastic. Standard 3/8"-27 stand connector. Available in Hi-Z or balanced 150 ohms. Specify when ordering. Shipping weight: 1 lb. Net Each.....\$21.00



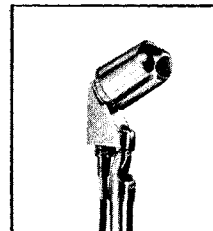
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634A



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**MODEL 634A**—Similar to Model 641 (above) except furnished without stand mounting stud or on-off switch. Fits any stand, boom or gooseneck with complete cable concealment. Ideal for desk mounting on electronic teaching aids, amateur and commercial communications and switchboard mounting for paging systems. 6 foot cable and standard 3/8" -27 threads in rear of case. Hi-Z or balanced 150 ohms. Specify when ordering. Net Each.....\$18.00

**MODEL 638**—Rugged, compact general purpose microphone. Ideal for all applications requiring maximum performance from microphone of minimum size. Response: 70 to 10,000 cps. Output: —57 db. 16-foot cable. Die-cast case with satin chrome finish. Standard 3/8"-27 stand connector. Available in Hi-Z or balanced 150 ohms; specify when ordering. Shipping weight: 1 lb. Net Each.....\$20.10

\*U.S. Patent No. 3,115,207

**MODEL 636 "SLIMAIR" DYNAMIC**—Exceptionally fine for PA, recording and general use. Response 60-13,000 cps. Output —58 db. Pop-proof head. Wide pickup range. On-Off switch. Satin chrome finish. Tilttable head. Built-in MC-4 connector.  $\frac{5}{8}$ "-27 thread. Hi-Z or Lo-Z by changing one wire in connector. 16' cable. 10 $\frac{1}{4}$ " long including stud, 1 $\frac{1}{8}$ " max. diameter. Net Each.....\$43.50

**MODEL 636G**—Gold finish. Net Each.....\$46.50

**MODEL 630 HIGH FIDELITY, HIGH-OUTPUT DYNAMIC**—Famous for quality at low cost. Response 60-11,000 cps; output level—55 db. Unaffected by heat or humidity. Acoustalloy® diaphragm. Tilttable head. Built-in MC-3 connector. On-Off switch. Satin chrome finish. Available in Hi-Z or 150 (matches 50-250) ohms. Lo-Z balanced to ground. Size: 2" x 6 $\frac{1}{4}$ ". 16' cable. Net weight, 1 lb. Net Each.....\$31.50

**MODEL 647A DYNAMIC LAVALIER**—Smallest high quality microphone in the entire public address field delivers big microphone performance. Extremely rugged dynamic construction assures long life. Frequency response, 60 to 12,000 cps. Acoustalloy® diaphragm. Impedance Hi-Z or balanced 150 ohms, selected from free end of cable. Size 3 $\frac{3}{4}$ " long,  $\frac{3}{4}$ " diameter, net weight 2 oz. Output level —60 db, finish is non-reflecting gray. 18' cable attached. Shipped complete with neck cord, belt clip and stand mounting clamp. Net Each.....\$49.50

**MODEL 623 SLIM DYNAMIC**—Ideal for PA, recording and general use. Use on stand or in hand. Omnidirectional. Response 60-12,000 cps; output level —56 db. Acoustalloy® diaphragm. Hi- or Lo-Z by changing one wire in connector. Pressure cast; satin chrome finish. Tilttable head. On-Off switch. Built-in MC-4 connector.  $\frac{5}{8}$ "-27 thread. 7 $\frac{1}{2}$ " x 1 $\frac{5}{16}$ ". 16' cable. Net Weight, 15 oz. Net Each.....\$34.20

**MODEL 611 "MERCURY" DYNAMIC**—Traditional styling, fine performance for general sound pickup. Response 50-9000 cps; output level—55 db. Omnidirectional. Acoustalloy® dia-

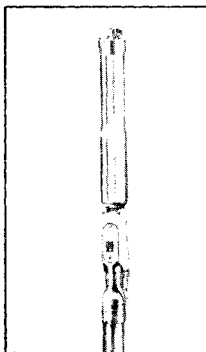
phragm. Tilttable head. On-Off Switch. Built-in MC-3 connector.  $\frac{5}{8}$ "-27 thread. Satin chrome finish. Available in Hi-Z or 150 (matches 50-250) ohms. Lo-Z balanced to ground. 2 $\frac{3}{8}$ " x 3 $\frac{3}{8}$ " x 6 $\frac{1}{4}$ " inc. stud. 16' cable. Net Weight 1 $\frac{1}{4}$ lbs. Net Each..\$27.00

**MODEL 624 DYNAMIC LAVALIER**—Most economical dynamic lavalier on the market. For chest or hand use. Supplied with neck cord, support clip and 18' cable. Non-reflecting gray finish. Wire mesh head acoustically treated for wind and moisture protection. Output —56 db, response 100-7,000 cps. Acoustalloy® diaphragm. Available in Hi-Z or 150 ohm, not balanced to ground. 3 $\frac{3}{8}$ " x 1 $\frac{1}{2}$ ". Cable has integral strain relief. Net Weight, 14 oz. Net Each.....\$25.50

**MODEL 615 "CENTURY" DYNAMIC**—Incomparable for paging, home recording, amateur, or any low-cost applications. Can be used in hand, on table, on stand, or overhead. Omnidirectional. Acoustalloy® diaphragm. Withstands extreme temperature, humidity, corrosion and shock. Response: 80-8,000 cps. Output: —55 db. Available in Lo-Z (matches 50-250 ohms) or Hi-Z. Lo-Z not balanced to ground. 5' cable. Pressure cast case, Metalustre gray. Rugged, lightweight. Size 3" x 2 $\frac{3}{16}$ " x 1". With  $\frac{5}{8}$ "-27 thread stand adapter. AC-DC insulated. Net Each.....\$15.30

**Crystal and Ceramic Microphones**

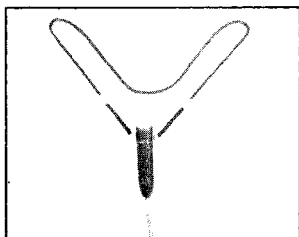
**MODEL 951 CARDIOID CRYSTAL**—Uses same Variable-D® principle as E-V's BC-TV cardioids to obtain uniform directivity at all frequencies, high discrimination against unwanted sound. The 951 is an excellent wide-range, all-purpose PA microphone for a great variety of acoustic conditions, and especially useful where background noise and reverberation are a problem. Response 50-11,000 cps. Output —60 db. Hi-Z On-Off switch. Pressure-cast case. Metalustre gray finish. 16' cable. MC-1 connector. 5 $\frac{3}{8}$ " l. (excluding stud), 1 $\frac{3}{4}$ " dia overall. Net wt., less cable, 1 $\frac{1}{4}$  lbs. Net Each.....\$32.70  
\*U.S. Patent No. 3,115,207



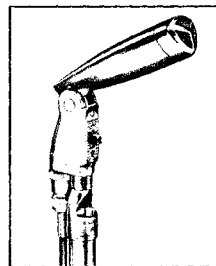
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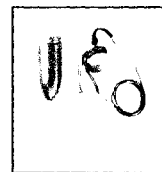
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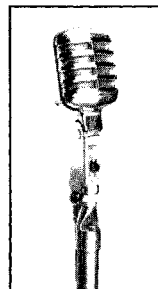
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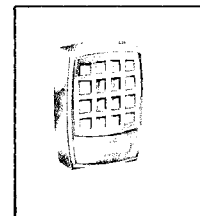
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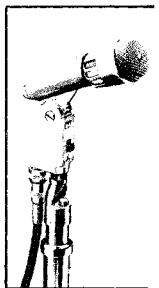
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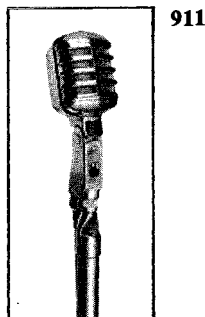


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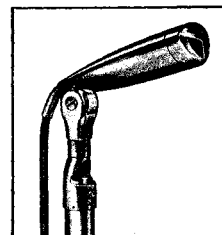
951

**MODEL 911 CRYSTAL**—Same smart design and fine performance as Model 611. Response 50-10,000 cps. Output—50 db. Metal Seal Crystal. MC-1 connector. Hi-Z. 16' cable. Net weight 1½ lbs. Net Each.....\$19.50



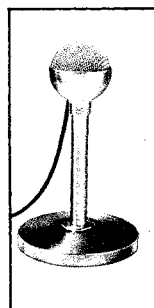
911

**MODEL 926 SLIM CRYSTAL**—Level and response ideal for general purpose use. Response 60-8000 cps; output level —60 db. Hi-Z. Pressure cast case, satin chrome finish. Tilttable head. 5/8"-27 thread. 6¾" x 1 15/16". 16' cable with integral strain relief. Net Weight 11 oz. Net Each.....\$17.70

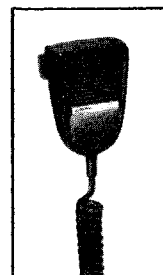


926

**MODEL 920 "SPHEREX" CRYSTAL**—Omnidirectional pick-up. Response 60-10,000 cps; output level —50 db. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Hi-Z. Satin chrome. 5/8"-27 thread. Diam. 2¼". 16' cable. Net Weight 8 oz. Net Each.....\$16.50



920



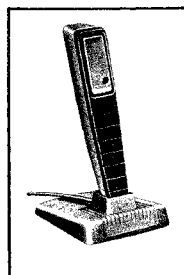
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**MODEL 924 LAVALIER CRYSTAL**—Unique crystal lavalier for chest or hand use. Supplied with neck cord, support clip and 18' cable. Non-reflecting gray finish. Wire mesh head acoustically treated for wind and moisture protection. Output—60 db. Response 60-8000 cps. Hi-Z. 3 3/8" x 1 1/2". Cable has integral strain relief. Net Weight 8 oz. Net Each.....\$12.00

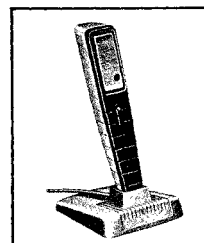
**MODEL 714**—A high output, ceramic hand-held communications microphone for paging, ham radio, and Citizens Band use. Molded, tough, gray Cyclocac case, usually found only in most expensive mobile microphones, assures long life and protection from accidental shock damage. Response tailored for maximum intelligibility. High level, high impedance output —55 db over range of 60 to 7,000 cps. DPDT switch shorts microphone in "off" position and closes relay circuit in "on" position. 2½" x 1 7/16" x 3 5/8"; 3-conductor coiled cord 10" retracted. Net weight is 8 oz. including cable. Shipped complete with hang-up bracket. Net Each.....\$9.90

**MODEL 717**—Similar to Model 714 above except close talking cardioid pickup pattern for rejection of unwanted background noise and feed-back. Specially designed ceramic element with apertures on either side of diaphragm provides effective attenuation of sounds arriving from the rear and sides. Output level —55 db. Frequency response 100 to 7000 cps. Net Each..\$11.70

**MODEL 729 CERAMIC CARDIOID**—The Model 729 is the lowest priced cardioid ever built. Random noise, reverberation and feedback reduced by a factor of 67%. Front pickup range nearly double that of pressure microphones. For public address, call and paging systems, home recorders, especially stereo, and general communications. Discrimination against sound from the rear makes the 729 excellent for amateur radio VOX operations. Tailored for single sideband. Output: —60 db. Response: 60 to 8,000 cps. High impedance only. Metalustre gray front with medium gray back. Attractive desk stand and floor stand adapter supplied. Net weight, less cable and stand, 9 oz. Net Each.....\$14.70



729



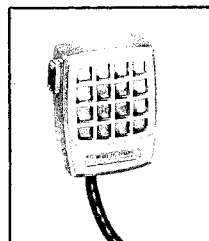
727SR

**MODEL 729SR**—With relay control switch. Net Each.....\$15.90

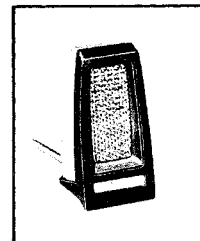
**MODEL 727 SLIM CERAMIC**—A new approach to the design of ceramic microphones for PA, recording and general use; similar in appearance to Model 729. Withstands extremes of temperature and humidity. Response 60-8000 cps. Output —55 db. High impedance only. 5' cable. Metalustre gray front with medium gray back. Size: 7¾" x 1 3/8" x 1 1/2". Supplied with attractive desk stand and floor stand coupler. Net Weight less cable, stand, 9 oz. Net Each.....\$10.80

**MODEL 727SR**—With relay control switch. Net Each....\$12.00

**MODEL 715 "CENTURY" CERAMIC**—Use in any position—in hand, on table, on stand or overhead. Ceramic element. 60-7000 cps; output —55 db. Hi-Z. 5' cable. Omnidirectional. Metalustre gray finish. Rugged, lightweight. 3" x 2 3/16" x 1". With 5/8"-27 adapter. AC-DC insulated. 6 oz. Net Each...\$7.80



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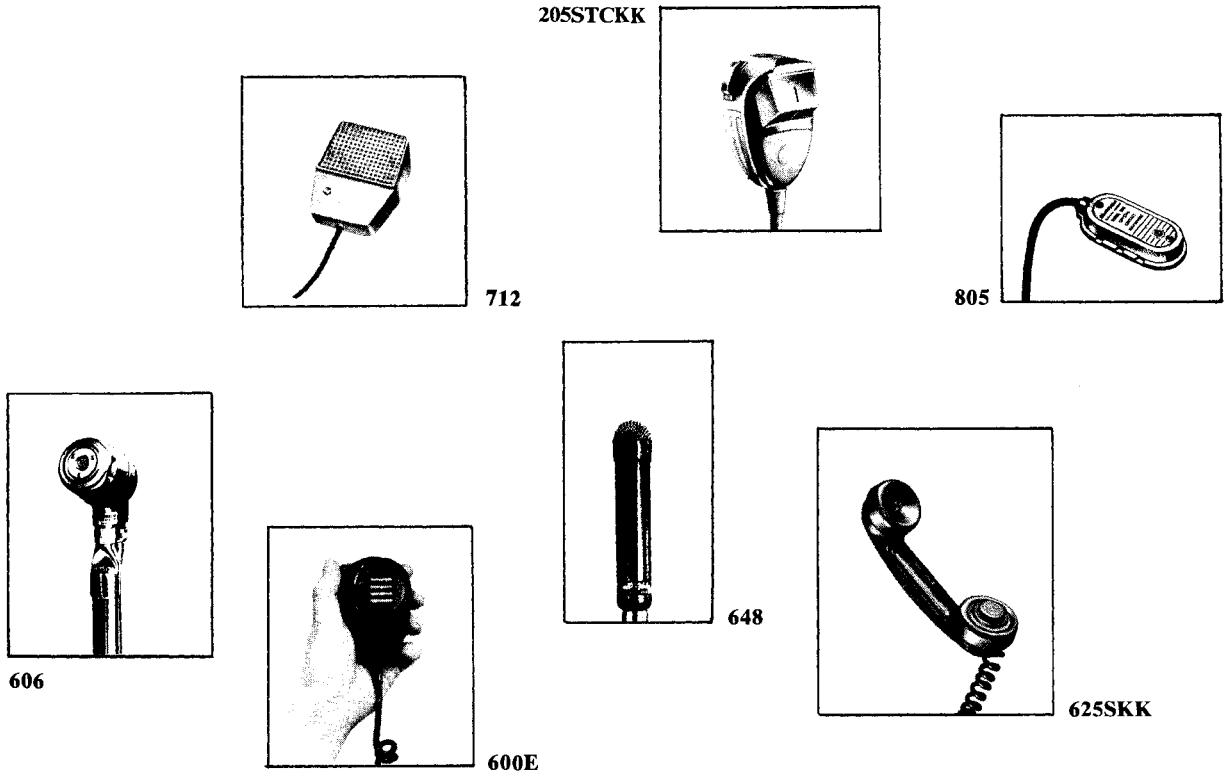


718

**MODEL 715SR**—With switch. Net Each.....\$9.00

**MODEL 715SR**—With relay control switch. Net Each....\$10.50

**MODEL 718 CERAMIC**—An improved replacement for home recording microphones. 5' cable includes a molded-on phono plug, with adapter, to match all late model home recorders. Improved high-level (—55 db) ceramic element resists damage from temperature, humidity extremes. Response: 60 to 6000 cps. 3 3/16" x 1 3/4" x 1 13/16". Net Weight 8 oz. Net Each.....\$7.20



**MODEL 712 CERAMIC**—Low cost ceramic microphone. Fits need of low cost PA, home recording, paging and general use. Handheld. Moisture sealed ceramic. Response 70-7000 cps. High output —55 db. Hi-Z. Attractive gray Styron case. Size 3" x 2¼" x 1⅜". 5' cable. Net Weight 4 oz. Net Each.....\$4.50

talk switch. Shielded coiled cord, 1' retracted, 6' extended. Available in Hi-Z or balanced line 150 ohm. Weight, less cable, 8 oz. Net Each.....\$34.50

*Electro-Voice*

**Differential And Special Purpose Microphones**

**MODEL 606 DIFFERENTIAL DYNAMIC**—Close talking, noise cancelling. Accepts sounds of close origin (¼") and rejects sounds of distant origin. Response: 100 to 5,000 cps. Output at ¼": —55 db. Acoustalloy® diaphragm. ⅝"-27 thread. Built-in connector. Satin Chrome. 2" x 3¼" x 2½" including stud. Lo-Z balanced line (matches 50-250 ohms) or Hi-Z. 16' cable. Net Each.....\$31.50

**MODEL 210E CARBON**—Similar to Model 600E but single button carbon. Output —50 db. Press-to-talk switch. 6' coiled cord. Net Each.....\$21.00

**MODEL 205STCKK Differential Carbon** — Close-talking, noise cancelling, single button carbon. For aircraft and emergency communications. FAA approved — Certificate No. 1040. Blastproof: waterproof and shock resistant. Output at ¼": —50 db. Black phenolic case. Press-to-talk switch. Mounting bracket, 6' coiled cord. Size: 2¼" x 2¼" x 4". Net weight, less cable, 8 oz. Net Each.....\$30.00

**MODEL 205STCKKP** — Same as above with PJ-068 plug. Net Each.....\$32.80

**MODEL 625SKK DYNAMIC DIFFERENTIAL HANDSET** —For paging, intercom and communications. Sturdy bakelite housing contains noise-cancelling 250 ohm microphone and 150 ohm magnetic receiver. Response: 100-5,000 cps. Output level: —55 db. Switch closes microphone and relay circuit. Six-foot five conductor coiled cord. Dimensions: 8½" x 3" 2⅝". Net weight: 1½ lbs. Net Each.....\$51.00

**MODEL 600E DYNAMIC MOBILE MIKE**—Reliability factors have been improved over all previous designs. High-impact Cyclac case and rugged dynamic construction assure protection against shock damage. Easy-action switch provides years of use—shorts microphone in "off" position to eliminate electrical noise pickup and closes relay circuit when depressed. High output level —55 db. Response 100 to 7,000 cps specifically matched to high intelligibility requirements. Size 2½" x 1½" x 4" long; color, communications gray. Shielded coiled cord, 1' retracted, 6' extended. Weight 10 oz. Complete with hang-up bracket. 150 ohms or Hi-Z. Net Each.....\$23.40

**MODEL 625TRSKK**—Identical to Model 625SKK above except with two-stage transistor amplifier for direct replacement in carbon microphone circuits. FAA type certificate: 3R42-Net Each.....\$73.00

**MODEL 648 INTERCOM MICROPHONE**—Extremely versatile for satellite paging, intercom, or PA mike. Response: 50-10,000 cps. Output —58 db. Choice of Lo-Z (matches 50-250 ohms) or high impedance. Omnidirectional. Acoustalloy® diaphragm. No reflecting gray. Less Cable. Size: 6¼" x 1" (including ⅝"-thread adapter). Net Weight (with adapter), 8½ oz. Net Each.....\$33.00

**MODEL 602E**—Similar to model 600E but noise-cancelling dynamic microphone for use in areas of heavy background noise. It accepts sounds of close origin (¼") and rejects sounds of a distant origin. Output level: —55 db, 100-7,000 cps. Press-to-

**MODEL 805 CONTACT**—For guitar, banjo, other string instruments. Hi-Z. Sealed crystal. Chrome finish. 15' cable. Net Each.....\$12.00

# Electro-Voice®

## MICROPHONE ACCESSORIES

**MODEL 327 WINDSCREEN PACKAGE**—Consists of 324 shock mount and 326 windscreen, for use with Model 642 microphone. Fabricated of Acoustifoam\*. eliminates "blast" caused by fast panning of boom, or when used outdoors. Net weight, 1 lb., 8 oz. Net Each.....\$60.00

**MODEL 324 SHOCK MOUNT**—Suspension mount for Model 642 microphone. Will accept Model 326 windscreen. Net Each.....\$36.90

**MODEL 326 WINDSCREEN KIT**—Acoustifoam\* windscreen for Model 642 microphone. Compatible with Model 324 Shock mount. Net Each.....\$26.10

**MODEL 356 SUSPENSION SHOCK MOUNT**—For use with Model 642 on boom or floor stand when no windscreen is used. Net Each.....\$30.00

**MODEL 335A WINDSCREEN**—Acoustifoam\* windscreen fits 630, 641, 634, 635 microphones. Net weight, ½ oz. Net Each.....\$7.50

**MODEL 355 WINDSCREEN**—Designed to reduce or eliminate wind noise, this windscreen is constructed of Electro-Voice Acoustifoam\*, a material which will not alter frequency response or polar characteristics of microphone. Also protects against mechanical shock damage and pickup of dust and magnetic particles. For use with models 655C, 654A, 676, 636, 623, 647 and 926. Size, 9" x 3¼". Net weight, ½ oz. Color: gray. Net Each.....\$6.60

**MODEL 524A WINDSCREEN**—Designed specifically for use with Model 666 microphone. Minimizes wind effect on boom operation or when used outdoors. Made of Acoustifoam\*. Weight, ½ oz. Net Each.....\$7.20

**MODEL 300 DETACHABLE MICROPHONE CLAMP**—Light weight adapter fits any 1" cylindrical microphone providing positive mounting to either ½" pipe thread or ⅝"-27 stand. Net Each.....\$4.50

**MODEL 310 DETACHABLE MICROPHONE CLAMP**—Similar to Model 300 above, but designed for ¾" diameter microphones. Net Each.....\$3.60

**MODEL 366 SUSPENSION SHOCK MOUNT**—Extremely light. Designed for use with 666 microphone. Installs without tools. Pigtail cable connection with UA-3 connectors provides cable loop isolating boom shock noises. For any microphone with 1" diameter. Net Each.....\$24.00

**MODEL 448 SWIVEL BOOM MOUNT**—Designed specifically for use with Model 648 microphone. Holds mike 11⅞" off mounting surface. 62° elbow bend. MC-2M connector. Satin chrome finish. Extends 4" below mounting surface, 2½" diam. mounting base. Net Weight, 1 lb. 5 oz. Net Each.....\$14.40

**MODEL 502A MATCHING TRANSFORMER**—Designed for use in series with mike line. Transformer windings have low distributed capacity and are amply shielded against inductive hum by a shield inside pressure-cast case. Designed for 50, 150, 250 and 500 ohms—to Hi-Z. Broadcast fidelity—response 40-20,000 cps ± 1 db. 2⅞" x 1⅜" diameter. Net Each.....\$10.50

**MODEL 513 FILTER**—Designed for use with low impedance microphones, has switch to match 50, 150 or 250 ohms. When used in line between microphone and preamp., it rejects unwanted noise below 100 cps. 2¼" diameter, 5⅝" long. Net weight 1 lb. 10 oz. Net Each.....\$42.00

Electro-Voice Trademark

### Microphone Stands

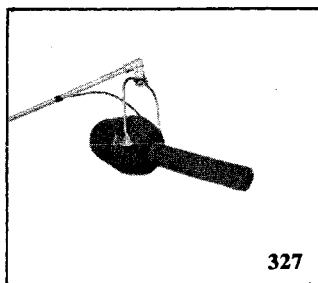
**MODEL 415 RECLINING DESK STAND**—Mounts 615, 715, 15S at 15° tilt. Metalustre gray. Size 2⅝" x 2¾" x 1". Net Weight, 4 oz. Net Each.....\$1.05

**MODEL 418 DESK STAND**—Use with microphones using ball-type stud such as Models 611, 623, 630, 641, 635, 636, 911, and 951. Die cast base. Gray finish. Net Each.....\$6.00

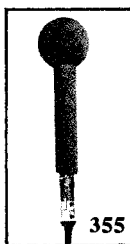
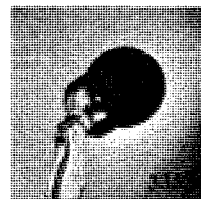
**MODEL 418-S**—With switch. Net Each.....\$9.00

**MODEL 419 DESK STAND**—Similar to Model 418 but for use with microphones using large-type stud such as Models 644, 664, and 665. Net Each.....\$6.00

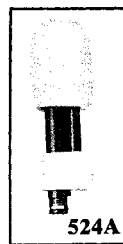
**MODEL 419S**—With switch. Net Each.....\$9.00



327



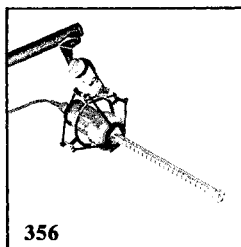
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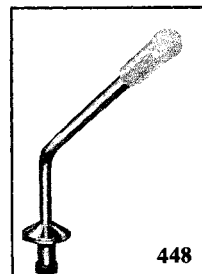
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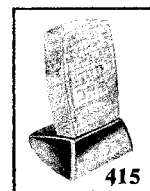
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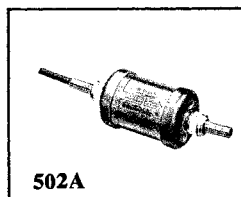
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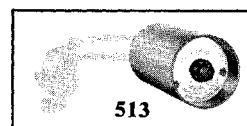
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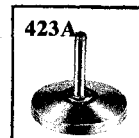
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502A



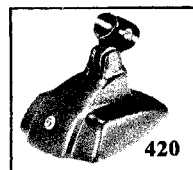
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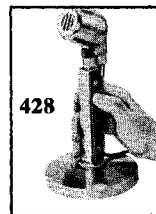
423A



418



420



428

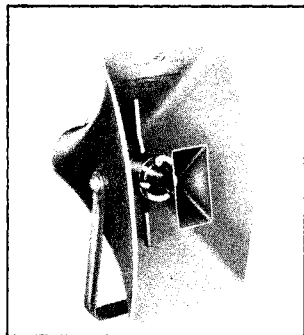
**MODEL 420 DESK STAND**—Heavy cast iron stand finished in TV gray. Specifically designed for use with E-V 666, 655C, 654A, 652, 652A, 676 or other microphones with 1" diameter. Clamp attachment for mounting 1" cylindrical mikes, without tools. Base holds mike in position when subjected to ordinary strain. Net Weight, 3 lbs. Net Each.....\$12.00

**MODEL 423A DESK STAND**—Sturdy smartly styled, round die-cast base, 5⅞" diameter. Rests firmly on rubber base buttons. Rich satin chrome. ⅝"-27 thread. 5" matching stem riser. Net Weight, 1 lb. Net Each.....\$3.00

**MODEL 428 TOUCH-TO-TALK STAND**—Fits standard ⅝"-27 thread. Lever-type DPDT switch for relay operation or microphone On-Off—closes or opens instantly or locks in "talk" position. Satin chrome; gray plastic switch lever with locking button. 7" x 5⅞" base diameter. Net Weight, 1¾ lbs. Net Each.....\$10.50

# Electro-Voice®

## PUBLIC ADDRESS HORNS AND DRIVERS



848

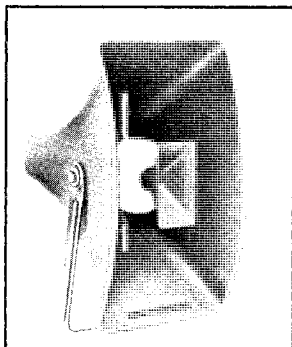
### Compound Diffraction Projector

**MODEL 848**—Combines FC100 Compound Diffraction Horn plus DC30 Compound Driver for finest wide-angle sound, lowest distortion, highest quality of any projector. Specifications: Frequency response, 150-10,000 cps; impedance, 16 ohms; dispersion, 90° x 120°; power handling capacity, 30 watts; sound pressure level, 117 db; dimensions, 10½" x 20½" x 20". Net Weight, 13½ lbs.; Shpg. Wt. 17 lbs. Complete. Net Price.....\$49.50

### Projector Horns

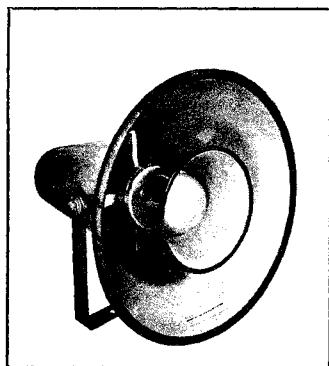
Completely new designs assure finest performance with Electro-Voice projector horns. Two basic types from which to choose . . . compound and reentrant.

**EXCLUSIVE COMPOUND HORNS** permit widest range at lowest distortion, plus complete directional control of both highs and lows. Best wide-angle coverage with exclusive diffraction horns means better sound through entire coverage area. Concentrating compound horn provides highest efficiency at lowest distortion. Natural voice and music reproduction result in higher intelligibility without annoying peaks.



FC100

**MODEL FC100**—Similar to the famous CDP®, the FC100 provides two diffraction horns for uniform wide-angle coverage. Frequency response is not compromised since both horns are ideally designed to handle a specific portion of the range. Compound horn reduces distortion far below any other projector design. Flexible coverage control provided by individual adjustment of each horn. Large horn is fiberglass with Mesa Tan finish molded in. Use any E-V convertible driver. Specifications: Low-frequency horn — cut-off, 100 cps; taper, 100 cps; air column length, 58"; sound distribution, 90° x 120°. High frequency sound distribution, 90° x 120°; crossover, 1,000 cps. Mouth size 10½" x 20½", depth (less driver), 20". Net Wt. (less driver), 10¾ lbs. Shpg. Wt., 12¾ lbs. Net Price.....\$30.00



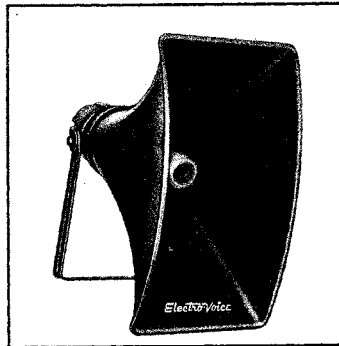
AC100

**MODEL AC100**—Concentrating version of CDP®. Has all of the quality advantages of FC100, except utilizes round horns for most concentrated coverage with greatest efficiency. Retains compound design for lowest distortion—widest range. Use any E-V convertible driver. Specifications: Low-frequency horn—cut-off, 100 cps; taper, 100 cps; air column length, 58"; sound distribution, 80°. High-frequency sound distribution, 30°; crossover, 1,000 cps. Diameter, 21"; depth (less driver), 21"; Net Wt. (less driver), 11 lbs. 6 oz. Shpg. Wt., 13½ lbs. Net Price....\$33.00

**REENTRANT HORNS** provide wider range than ever before at lowest cost. Unique E-V ring reflector design provides better balanced highs than possible with conventional exponential designs, by reducing high-frequency losses often encountered in reentrant horns. Smoother response plus added useful range increases intelligibility and adds to more natural sound. Rugged aluminum die-cast mounting plate plus precision die-cast reentrant tubes assure long-lasting performance. Heavy spun aluminum round bell or fiberglass rectangular horn provides either concentrated coverage or medium angle coverage. Electro-Voice Reentrant Horns accept any standard driver with 1½"-18 threads.

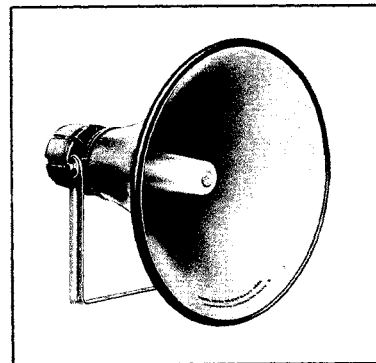


**MODEL FR150**—Reentrant Horn. Medium-angle low-cost rectangular horn provides good coverage at low cost. Virtually indestructible fiberglass horn has Mesa Tan color molded in. Adjustable mounting angle allows best coverage. Can be stacked for multiple speaker applications. Ideal for car-top installation or wherever low silhouette is needed, and where bass response cannot be sacrificed. Accepts Electro-Voice convertible drivers or any standard driver with 1 3/8"-18 thread. Specifications: Low-frequency cut-off, 150 cps; taper, 150 cps; air column length, 45"; sound distribution, 70° x 100°; mouth size, 10 1/2" x 20 1/2"; depth (less driver), 21"; Net Wt. (less driver), 9 1/2 lbs. Shpg. Wt., 12 lbs. Net Price.....\$23.40



FR150

**MODEL AR150**—Reentrant Horn. Round concentrating horn for maximum penetration at lowest cost. E-V ring reflector plus precision new exponential design contributes to widest range yet achieved from this horn type. Smoother curve results in high intelligibility, and remarkably natural voice and music quality. Rubber edge-damping ring eliminates resonances. High-efficiency design allows more useful volume from driver over entire range. Accepts Electro-Voice Convertible drivers or any standard driver with 1 3/8"-18 thread. Specifications: Low-frequency horn—cut-off, 150 cps; taper, 150 cps; air column length, 41"; sound distribution, 85°; diameter, 21"; depth (less driver), 17". Net Weight (less driver), 6 1/2 lbs. Shipping Weight, 8 lbs Net Price....\$23.40



AR150

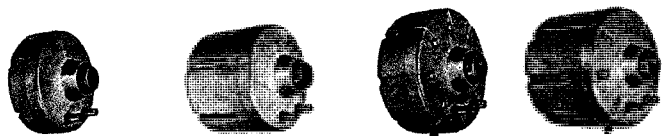
**Versatile Convertible Drivers**

Now, for the first time, here are drivers that can be used interchangeably in compound or reentrant horns. Used on either type of horn, the new Electro-Voice Convertible Drivers feature highest efficiency available. Increased power handling plus extra increased efficiency make the 40- and 50-watt drivers uniquely useful where high power at minimum cost is essential. The high efficiency of all E-V Convertible Drivers is achieved without resorting to "peaked" response which may increase loudness, but does reduce intelligibility. The smooth response of these drivers insures most natural reproduction of voice and music for more satisfying quality with vastly reduced feedback problems and greatly increased tonal range. Double flux ceramic magnets provide long-lasting high efficiency in entirely new low-loss magnetic circuits. Edgewise-wound ribbon voice coils give 18% more efficiency.

The drivers are rugged and weatherproof; conversion to either reentrant or compound use can be made instantly in the field. Voice coils are also field replaceable, thus reducing repair costs to a minimum. E-V Convertible Drivers are available with 16-ohm voice coils or with built-in 70.7-volt line constant voltage transformers. This entirely new design concept gives better performance at minimum cost, making E-V Drivers your best buy.

**Diaphragm Replacement Kits** allow easy field maintenance of E-V Drivers.

DRIVER	8 Ohm	16 Ohm
828 or DC30 (Used on Model 848)	....	82016
DS30 (Used on Model 844)	8410	....
DC30B	....	83137
DC40	....	82088
DC50	....	82089
Net Price	\$7.20	\$7.20



DC30B

DC30BT

DC40

DC50

Replacement kits not available for DC30BT, DC40T or DC50T.

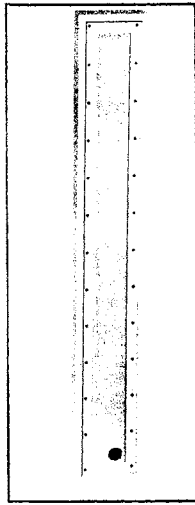
	DC30B	DC30BT	DC40	DC40T	DC50	DC50T	
Frequency Response††	150-10,000	150-10,000	140-11,000	140-11,000	140-11,000	140-11,000	
Program Power Capacity	30	30	40	40	50	50	
Sound Pressure Level†	FC100 Compound Horn	117 db	117 db	120 db	120 db	124 db	124 db
	AR150 Reentrant Horn	126 db	126 db	129 db	129 db	133 db	133 db
Voice Coil Impedance	16	16	16	16	16	16	
Transformer Impedances, Ohms	.....	167, 333, 1000, 2000	.....	125, 250, 500, 1000	.....	100, 143, 200, 500	
Transformer Power Taps, Watts	.....	30, 15, 5, 2.5	.....	40, 20, 10, 5	.....	50, 35, 25, 10	
Dimensions (overall)	5 1/2" dia. 3" l.	5 1/2" dia. 5 1/2 l.	6 1/4" dia. 4 1/4" l.	6 1/4" dia. 6" l.	6 1/4" dia. 4 1/4" l.	6 1/4" dia. 6" l.	
Net Price	\$19.80	\$25.80	\$25.20	\$32.70	\$32.70	\$39.30	

Measured at 4' on-axis with full rated power from 750-1250 cps.

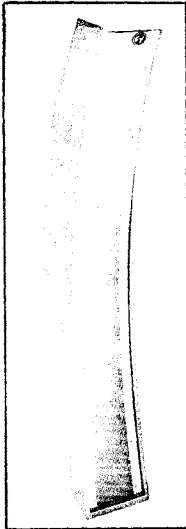
††Measured on-axis with FC100 horn.



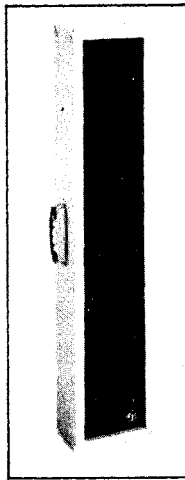
LR4A



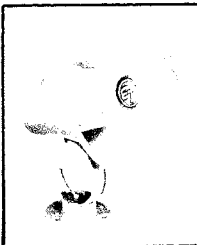
LR4S



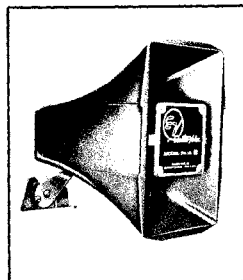
LR7



PC7



PA7



PA15

## Line Radiator™ Loudspeakers

Three new, wide-angle speaker designs permit wide horizontal dispersion while almost eliminating sound output above or below speaker. Superb for voice-reinforcement systems. Unusually wide frequency range coverage.

**MODEL LR4A**—Curved design\* overcomes unwanted high-frequency dispersion at ends, eliminating echo and feedback. Contains nine 3" x 5" and three 3½" cone speakers, 160° horizontal dispersion; 60° vertical dispersion. Frequency response: 200–15,000 cps. Power handling capacity: 25 watts program, 50 watts peak. Nominal impedance: 8 ohms. Size 49" h. x 7" w. x 13" d. Mesa tan finished wooden enclosure. Shipping weight: 30 lbs. Net Price.....\$75.00

**MODEL LR4S**—Electrical filter removes end speakers from circuit as frequencies increase, eliminating high-frequency lobes at ends. Specifications like LR4A, except that dispersion is 160°, horizontal; 30°, vertical. Weatherproof enclosure with mesa tan finish. Size 52" h. x 7½" w. x 4½" d. Shipping weight: 32 lbs. Net Price.....\$84.00

**MODEL LR7**—The largest of the revolutionary Electro-Voice Line Radiators. Both low- and high-frequency response extended. Utilizes nine 5" x 7" loudspeakers and two T35 vhf drivers for frequency range of 100 to 20,000 cps. Full half-section crossover at 3500 cps. Horizontal coverage 160°, vertical coverage 45°. Power handling capacity 50 watts, impedance 8 ohms. Non-resonant, curved\* wood enclosure finished in Mesa Tan. Universal mounting brackets supplied. Dimensions: 60" high x 11" wide x 14" deep. Shipping weight 57 lbs. Net Price.....\$165.00

\*U.S. Patent No. 3,125,181

**MODEL PC7**—Compact, light-weight columnar loudspeaker specifically designed for portable applications. Features wide frequency range combined with wide horizontal and restricted vertical distribution pattern. Utilizes 6 heavy duty 5" x 7" cone speakers in rugged wood cabinet. Tastefully finished in durable gold leatherette with contrasting black grille. Equipped with convenient carrying handle. Frequency response 100 to 10,000 cps. Horizontal coverage 160°, vertical coverage 40°. Power handling capacity 60 watts peak; impedance 16 ohms. Connecting jack accommodates standard ¼" phone plug. Dimensions: 42" h. x 8½" w. x 5¾" d. Shpg. Wt. 21 lbs. Net Price.....\$58.2

# Electro-Voice®

## Paging Speakers

**MODEL PA7 REENTRANT PROJECTOR** — Attractive styled horn is constructed completely of Cylolac — virtually indestructible. Non-resonant horn won't dent, finish can't wear off. Electro-Voice diaphragm design eliminates loading problem provides cleanliness of reproduction never before achieved in small projectors. Handles 7½ watts over a range of 400 to 13,000 cps. Wide 120° dispersion angle provides excellent coverage. Mounting bracket allows horn to be positioned at any angle. 6¾" diameter by 6" deep. Weight 3¼" lbs. Net Price.....\$16.7

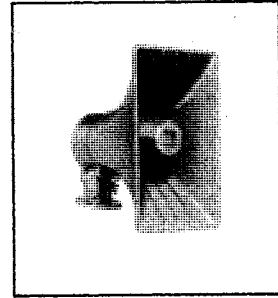
**PA7-45**—Same as above but with 45-ohm voice coil. Net Price.....\$17.

**MODEL PA15**—A compact speaker of rugged, die-cast construction finished in mesa tan. Smooth, rising response provides high intelligibility and efficiency. Field-replaceable drive Universal swivel mount. Frequency response: 350–13,000 cps. Power handling capacity: 15 watts program. Nominal impedance: 8 ohms. Dispersion: 120°. Size: 9" h. x 6" w. x 9½" Weight, 4¼ lbs. net. Net Price.....\$20.

**MODEL PA15T**—Same, but with integral matching transform for 70.7-volt lines. Transformer taps: 1.5, 2.5, 5, 10, 15 watt 3300, 2000, 1000, 500, 350 ohms. Weight, 4½ lbs. Net Price.....\$24.

**MODEL PA15-45**—Same, but with 45-ohm impedance. Net Price .....\$21.

**MODEL PA30**—Entirely new thirty watt paging projector. Rectangular horn design for maximum versatility, wide dispersion. Rugged, high-impact horn and conservatively rated driver assure maximum reliability. Smooth response for both voice and music. Universal swivel bracket permits placement in any position. Accepts Model TR3 line matching transformers for convenient, attractive installation in large systems. Frequency response: 250 to 14,000 cps. Power handling capacity: 30 watts. Nominal impedance: 8 ohms. Dispersion: 120 degrees by 90 degrees. EIA sensitivity rating 54 db. Sound pressure level 123 db. Dimensions: 11" H x 6½" W x 8½" D. Net weight: 5 lbs. 9 oz. Shipping weight: 7½ lbs. Net Price.....\$20.70

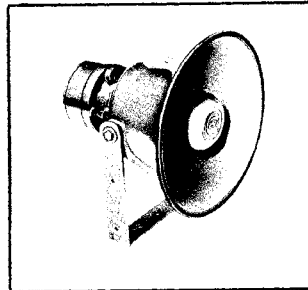


PA30

**MODEL PA30-45**—Same as standard PA30, but with 45 ohm voice coil for simple installation in intercom systems. Net Price.....\$21.60

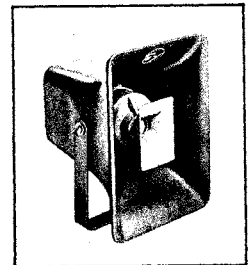
**MODEL 844**—For medium-angle sound distribution. Features smooth response with better lows to provide natural paging without feedback. Handles 30 watts—to reduce costs. Rugged die-cast horn, plus field-replaceable voice coil keeps service costs at a minimum. Frequency response, 250–13,000 cps; power handling capacity, 30 watts; nominal impedance, 8 ohms; dispersion, 90°; EIA sensitivity rating, 51 db; sound pressure level, 120 db; dimensions, 9¾" diameter x 8¾" deep; Net Weight, 5 lbs. 10 oz.; Shipping Weight, 8½ lbs. Net Price.....\$23.40

844



**MODEL 844-45**—Same as standard 844, but with 45-ohm voice coil for simple installation in intercom systems. Net Price..\$24.30

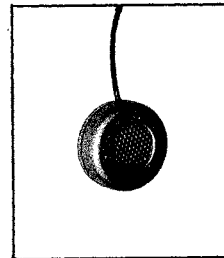
**MODEL 847**—Utilizing the famous CDP® Principle—this wide-angle speaker provides higher articulation without annoying "peaked" response over a uniform 120° x 90° area. Low distortion results from use of TWO diffraction horns. 25-watt power handling capacity. Fiberglass horn has mesa tan color molded in. Frequency response, 250–10,000 cps; power handling capacity, 25 watts; sound pressure level, 114 db; dispersion, 90° x 120°; impedance, 16 ohms; dimensions, 11¾" x 7¾" x 10½"; Net Weight, 8 lbs.; Shipping Weight, 10 lbs. Net Price....\$30.60



847

### Underwater Loudspeakers

**MODEL DU30**—Pool Speaker. For use in swimming pools to provide voice and music audible underwater. May be mounted at any depth down to 4 feet. Specifications: Impedance, 16 ohms. Power handling capacity, 30 watts. Frequency response, 40 to 10,000 cps. Size, 5¾" diameter x 2¾" deep. Weight (with cable), 8 lbs. 4 oz. Twelve-foot Underwriters approved cable. Resistant to chlorine, bromine, salt water, oil, grease, gasoline. Net Each.....\$58.50



DU30

## Electro-Voice®

### E-V Musicaster Hi-Fi Outdoor Weatherproof Speaker Systems

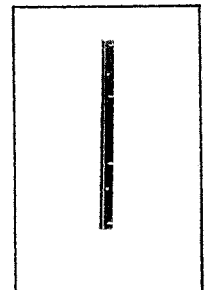
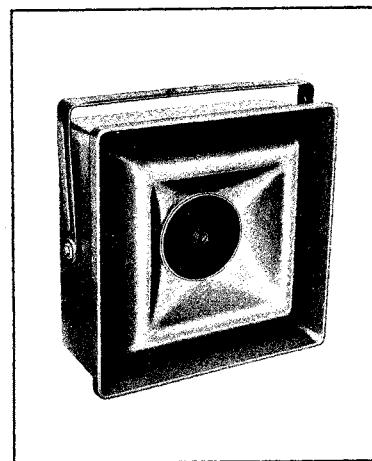
**MUSICASTER**—Provides high fidelity performance in a compact, portable system. Sturdy aluminum diecast housing protects weatherproof cone speaker and extends bass response through ack-loaded folded horn. Dual Radax cone radiates smooth useful highs through 120° angle. Provision for mtg. 70.7-volt ne transformer inside. Specifications: Frequency response, 60–3,000 cps; nominal impedance, 8 ohms; dispersion, 120°, power handling capacity, 30 watts program; sound pressure level, 110 db; dimensions, 21½" x 21½" x 8½"; Net Weight, 31 lbs.; Shipping Weight, 34 lbs. Net Price.....\$60.00

**MUSICASTER II**—Same fine performance as the Musicaster except has added brilliance and wider coverage from Very-High-frequency Range Extender. Smooth response to 18,000 cps. Complete with crossover. Net Weight, 33 lbs. Shipping Weight, 5 lbs. Net Price.....\$81.00

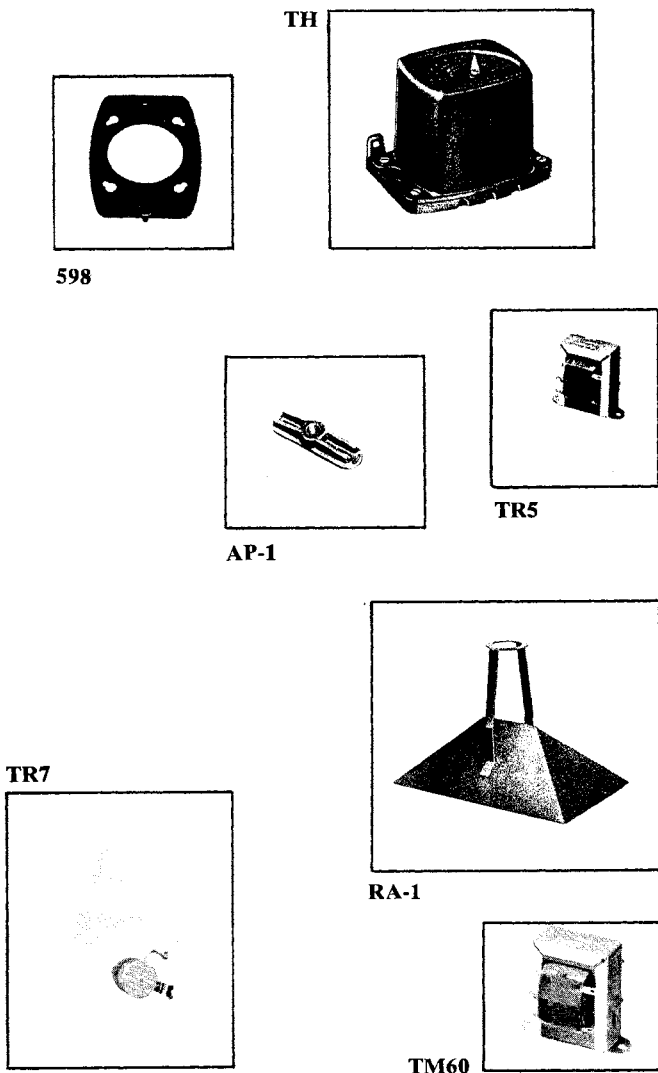
**MODEL MB-1**—Surface mounting bracket allows mounting of any Musicaster flat against wall for neat unobtrusive installation. Replaces standard "U" bracket. Shipping Weight, 1 lb. Net Price.....\$3.60

Note: Sound Pressure Level is measured at 4' on-axis with full test power from 750 to 1250 cps.

### MUSICASTER



MB-1



**MODEL TR5**—5-watt 70.7-volt line transformer. 5, 2.5, 1.25 and .625-watt line power taps. 4, 8 and 16 ohms secondary impedances. Accepts solderless terminals in TH housing. Frequency response  $\pm 2$  db, 35–20,000 cps. Insertion loss 0.8 db. Overall dimensions 2" x 1 $\frac{1}{16}$ " x 1 $\frac{3}{8}$ ". Mounting hole centers, 1 $\frac{3}{4}$ ". Shipping Weight, 1 lb. Net Price.....**\$3.00**

**MODEL TR15**—Same as TR5 except 15-watt capacity with 15, 10, 5, 2.5-watt line power taps. Overall dimensions 1 $\frac{3}{4}$ " h., 2 $\frac{7}{8}$ " w., 2 $\frac{5}{16}$ " d. Shpg. Wt. 1 $\frac{1}{2}$  lbs. Net Price.....**\$3.60**

**MODEL TR30**—Same as TR5 except 30-watt capacity with 30, 20, 10 and 5-watt line power taps. Overall dimensions 1 $\frac{3}{4}$ " h., 2 $\frac{7}{8}$ " w., 2 $\frac{5}{16}$ " d. Mounting hole centers, 2 $\frac{3}{8}$ ". Shpg. Wt., 1 $\frac{1}{2}$  lbs. Net Price.....**\$5.20**

**MODEL TR50**—Same as TR5 except 50-watt capacity with 50, 40, 25 and 15-watt line power taps. Overall dimensions 2 $\frac{1}{4}$ " h., 2 $\frac{9}{16}$ " w., 2 $\frac{1}{4}$ " d. Mounting hole centers, 2 $\frac{3}{8}$ ". Shpg. Wt., 2 lbs. Net Price.....**\$5.40**

**MODEL TM5**—Universal 5-watt 25- and 70.7-volt line transformer. Primary line power taps 5, 2.5, 1.25, .625 watts. Secondary impedance 8, 16 ohms. Accepts solderless terminals in TH housing. Frequency response  $\pm 2$  db, 35-20,000 cps. Insertion loss 0.8 db. Overall dimensions 2 $\frac{3}{8}$ " x 1 $\frac{15}{16}$ " x 1 $\frac{5}{8}$ ". Mounting hole centers, 2". Shipping weight 1 lb. Net Price.....**\$3.60**

**MODEL TM15**—Same as TM5 except 15-watt capacity with 15, 7.5, 3.75, 1.875 watt line power taps. Overall dimensions, 2 $\frac{7}{8}$ " x 2 $\frac{3}{8}$ " x 1 $\frac{7}{8}$ ". Mounting hole centers, 2 $\frac{3}{8}$ ". Shipping weight 1 $\frac{1}{2}$  lbs. Net Price.....**\$4.20**

**MODEL TM30**—Same as TM5 except 30-watt capacity with 30, 15, 7.5, 3.75 watt line power taps. Overall dimensions 3 $\frac{1}{8}$ " x 2 $\frac{3}{4}$ " x 2". Mounting hole centers, 2 $\frac{13}{16}$ ". Shipping weight 2 lbs. Net Price.....**\$5.40**

**MODEL TM60**—Same as TM5 except 60-watt capacity with 60, 30, 15, 7.5 watt line power taps. Overall dimensions 3 $\frac{9}{16}$ " x 3 $\frac{1}{16}$ " x 2 $\frac{1}{2}$ ". Mounting hole centers, 3 $\frac{1}{8}$ ". Shipping weight 2 $\frac{1}{2}$  lbs. Net Price.....**\$7.20**

**MODEL TR7-2**—7 $\frac{1}{2}$ -watt 25-volt line transformer and weatherproof housing designed specifically for use with the Model PA7. Mounts quickly and easily inside PA7 bracket. Primary impedance taps 83, 156, 312, 624, and 1248 ohms; 7 $\frac{1}{2}$ , 4, 2, 1, and  $\frac{1}{2}$  watt line power taps. 8 ohms secondary impedance. Shipping Wt. 1 $\frac{1}{2}$  lbs. Net Price.....**\$3.60**

**MODEL TR7-7**—Same as TR7-2 above except designed for 70.7 volt line applications. Primary impedance taps 660, 1250, 2500, 5000 and 10,000 ohms; 7 $\frac{1}{2}$ , 4, 2, 1 and  $\frac{1}{2}$  watt line power taps. 8 ohms secondary impedance. Shipping weight 1 $\frac{1}{2}$  lbs. Net Price.....**\$3.60**

**MODEL TR3-2**—30-watt 25-volt line transformer and weatherproof housing designed specifically for use with the Model PA30. Line power taps at 30, 15, 8, 4, 2 watts. Secondary impedance 8 ohms. Shipping weight 1 $\frac{1}{2}$  lbs. Net Price.....**\$9.00**

**MODEL TR3-7**—Same as TR3-2 above except designed for 70.7-volt line applications. Net Price.....**\$9.00**

### Accessories

**MODEL AP-1**—Pipe stand adapter for mounting any E-V speaker "U" bracket to standard  $\frac{1}{2}$ " pipe. Shipping Weight 1 lb. Net Price.....**\$3.00**

**MODEL AD-1**—Driver adapter allows use of E-V Convertible Driver on horns with 1 $\frac{1}{16}$ "-16 thread (W.E.—RCA) for improved performance. Shipping Weight, 1 lb. Net Price.....**\$1.8**

**MODEL AD-2**—Horn adapter allows use of E-V reentrant horns with drivers having 1 $\frac{1}{16}$ "-16 thread (W.E.—RCA) for improved performance. Shipping Weight, 1 lb. Net Price.....**\$1.8**

**MODEL RA-1**—Radial Adapter instantly converts FC100 horn or 848 projector to "radial" applications. Superior to typical "360°" projectors. Diffraction horns give better spread an adapter reflects sound off-axis, to eliminate hot spot. No tool required. Extends 2 $\frac{1}{2}$ " in front of FC100 horn with DC30A Shipping Weight, 1 lb. Net Price.....**\$3.6**

**MODEL 879**—Joining Kit for two or more 848, FR150 or FC100 horns in multiple array. One kit required for each junction of two horns. Shipping Weight, 1 lb. Net Price.....**\$1.6**

# Electro-Voice®

## PA TRANSFORMERS AND ACCESSORIES

### Transformers

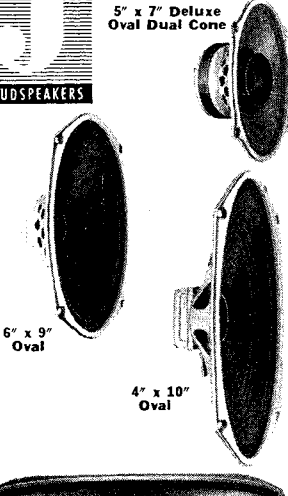
**MODEL TH**—Transformer Housing provides neat weatherproof mounting of any E-V transformer. Mount vertically or horizontally on any flat surface or on horn bracket. Exclusive wattage indicator tells power setting at a glance. No soldering required with E-V transformers. Size: 4" h., 5" w., 3 $\frac{1}{2}$ " d. Net Weight, 1 lb. 11 oz. Shipping Weight, 2 $\frac{1}{2}$  lbs. Net Price..**\$5.10**

**MODEL 598**—Mounting Bracket. Facilitates easy mounting of transformer housing to standard wall box. Net Price.....**\$1.50**



# Concert Series Speakers

5" x 7" Deluxe Oval Dual Cone



3 1/2" Model

12" Super Shallow

12" Model

2" Miniature

## MINIATURE GROUP

For small-space use in new or replacement applications. DP-Alnico 5 magnets. P20001 thru P20003, 2" sq. x 3/4" d. for 1 1/2" baffle; mag. wt., .47 oz. P27501 and 2, 2 3/4" sq. x 1 1/4" d. for 2 1/2" baffle; mag. wt., .65 oz.

Nom. Size, In.	Jensen No.	Mag. Wt., Oz.	Imp. Ohms	Power Watts†	Di., In.	Net Each
2	P20001	6-8	10	1 1/2	1 1/2	\$3.30
2	P20002	10-12	10	1 1/2	1 1/2	3.30
2	P20003	100	10	1 1/2	1 1/2	3.48
2 3/4	P27501	6-8	25	3 1/2	2 1/2	3.90
2 3/4	P27502	12-16	25	3 1/2	2 1/2	3.90

## OVAL GROUP

Nom. Size, Inches	Jensen No.	Mag. Wt., Oz.	Voice Coil			Dimensions, Inches			Baffle Opening	Net Each
			Imp. Ohms	Power Watts†	Di., In.	H. x W.	Depth			
2 x 6	P2X6X3	.68	3.2	3.5	3/8	2 1/4 x 6 1/4	2 1/4	1 1/4 x 5 1/4	\$ 2.97	
3 x 5	P3X5X3	.68	3.2	4.0	3/8	3 x 5	2 1/4	2 3/4 x 4 1 1/2	2.70	
3 x 5	P3X5X8	.68	8	4.0	3/8	3 x 5	2 1/4	2 3/4 x 4 1 1/2	2.70	
3 x 14	P3X14T3	3.16	3.2	7.5	3/4	3 1/2 x 14 3/8	3 1/2	2 3/4 x 13 3/8	10.17	
4 x 6	P4X6X3	.68	3.2	4.0	3/8	4 3/8 x 6 3/8	2 1/4	3 1/4 x 5 1 1/2	2.88	
4 x 6	P4X6W3	1.00	3.2	4.5	3/8	4 3/8 x 6 3/8	2 1/4	3 1/4 x 5 1 1/2	3.09	
4 x 6	P4X6V3	1.47	3.2	5.0	3/8	4 3/8 x 6 3/8	2 1/4	3 1/4 x 5 1 1/2	3.24	
4 x 8	P4X8V8	1.47	8	7.0	3/8	4 x 8	2 1/4	3 3/8 x 7 1/8	3.90	
4 x 8	P4X8U8	1.73	8	7.0	1	4 x 8	2 1/4	3 3/8 x 7 1/8	4.50	
4 x 8	P4X8U40	1.73	40 CT	7.0	1	4 x 8	2 1/4	3 3/8 x 7 1/8	4.80	
4 x 10	P4X10V8	1.47	8	7.0	3/8	4 1/2 x 10	2 1/4	3 3/4 x 9 3/8	4.26	
4 x 10	P4X10U8	1.73	8	7.5	1	4 1/2 x 10	2 1/4	3 3/4 x 9 3/8	4.86	
4 x 10	P4X10U20	1.73	20 CT	7.5	1	4 1/2 x 10	2 1/4	3 3/4 x 9 3/8	5.16	
4 x 10	P4X10U40	1.73	40 CT	7.5	1	4 1/2 x 10	2 1/4	3 3/4 x 9 3/8	5.16	
5 x 7	P5X7V3	1.47	3.2	6.0	3/8	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	3.66	
5 x 7	P5X7V8	1.47	8	6.0	3/8	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	3.66	
5 x 7	P5X7VD3†	1.47	3.2	6.0	3/8	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	4.05	
5 x 7	P5X7VD8†	1.47	8	6.0	3/8	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	4.05	
5 x 7	P5X7U3	1.73	3.2	8.0	1	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	4.50	
5 x 7	P5X7U8	1.73	8	8.0	1	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	4.50	
5 x 7	C5X7RD3†	10.0	3.2	10.0	1	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	6.99	
5 x 7	C5X7RD8†	10.0	8	10.0	1	5 5/8 x 7 3/8	2 1/4	4 1/4 x 6 3/8	6.99	
6 x 9	P6X9V3	1.47	3.2	7.5	3/8	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	4.17	
6 x 9	P6X9V8	1.47	8	7.5	3/8	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	4.17	
6 x 9	P6X9VD3†	1.47	3.2	7.5	3/8	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	4.53	
6 x 9	P6X9VD8†	1.47	8	7.5	3/8	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	4.53	
6 x 9	P6X9V20	1.47	20 CT	7.5	3/8	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	4.47	
6 x 9	P6X9U3	1.73	3.2	9.0	1	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	4.74	
6 x 9	P6X9U8	1.73	8	9.0	1	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	4.74	
6 x 9	C6X9T40	4.8	40 CT	10.0	1	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	5.70	
6 x 9	C6X9RD3	10.0	3.2	11.0	1	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	10.17	
6 x 9	C6X9RD8	10.0	8	11.0	1	6 3/8 x 9 3/8	3 1/4	5 1/4 x 8 3/8	10.17	

## GENERAL PURPOSE GROUP

Nom. Size, Inches	Jensen No.	Mag. Wt., Oz.	Voice Coil			Dimensions, Inches			Baffle Opening	Net Each
			Imp. Ohms	Power Watts†	Di., In.	H. x W.	Depth			
3	P3W3	1.00	3.2	3.5	3/8	3	1 3/4	2 3/4	\$ 2.85	
3 1/2	P35W3	1.00	3.2	4.0	3/8	3 1/2	2 1/4	3 3/4	2.85	
4	P4W3	1.00	3.2	4.5	3/8	4 1/8	2 1/4	3 3/4	2.61	
4	P4V3	1.47	3.2	5.0	3/8	4 1/8	2 1/4	3 3/4	2.82	
5	P5W3	1.00	3.2	5.0	3/8	4 1/2	2 1/4	4	2.67	
5	P5V3	1.47	3.2	5.5	3/8	4 1/2	2 1/4	4	2.91	
5	C5T3	4.8	3.2	6.0	3/8	4 1/2	2 1/4	4	4.77	
5 1/4	P525W3	1.00	3.2	5.5	3/8	5 1/4	2 1/4	4 1/2	2.85	
5 1/4	P525V3	1.47	3.2	6.0	3/8	5 1/4	2 1/4	4 1/2	3.03	
5 1/4	C525T3	4.8	3.2	6.5	3/8	5 1/4	2 1/4	4 1/2	4.95	
6	P6W3	1.00	3.2	6.0	3/8	6 1/2	2 1/4	5 1/4	3.06	
6	P6V3	1.47	3.2	6.5	3/8	6 1/2	2 1/4	5 1/4	3.27	
6	C6T3	4.8	3.2	7.5	3/8	6 1/2	2 1/4	5 1/4	4.95	
7	P7V3	1.47	3.2	7.0	3/8	7	3 1/4	6 3/4	4.26	
8	P8V3	1.47	3.2	8.0	3/8	7 1 1/2	3 1/4	6 3/4	3.66	
8	P8U3	1.73	3.2	9.0	1	7 1 1/2	3	6 3/4	4.32	
8	C8T3	2.5*	3.2	10.0	1	7 1 1/2	3 1/2	6 3/4	5.04	
8	C8V3	4.8	3.2	10.5	1	7 1 1/2	3 1/2	6 3/4	5.10	
8	CRS8	6.0	8	11.0	1	7 1 1/2	3 1/2	6 3/4	5.97	
8	CRS8*	6.0	8	11.0	1	8 1/4	2 1/2	6 3/4	6.00	
8	CR8	10.0	8	12.0	1	7 1 1/2	3	6 3/4	6.57	
10	C10T3	4.8	3.2	11.0	1	10 3/8	5 1/4	8 3/4	8.37	
10	C10S8	6.0	8	12.0	1	10 3/8	5 1/4	8 3/4	8.10	
10	C10S58*	6.0	8	12.0	1	10 3/8	5 1/4	8 3/4	8.16	
12	C12T3	4.8	3.2	12.0	1	12 3/8	6 1/4	10 1/2	9.45	
12	C12S8	6.0	8	13.0	1	12 3/8	6 1/4	10 1/2	8.94	
12	C12S58*	6.0	8	13.0	1	12 3/8	6 1/4	10 1/2	8.97	
12	C12R8	10.0	8	14.0	1	12 3/8	6 1/4	10 1/2	9.57	
12	C12R58*	10.0	8	14.0	1	12 3/8	6 1/4	10 1/2	9.60	
12	C12P8	16.0	8	18.0	1 1/2	12 3/8	6 1/2	10 1/2	17.97	
12	C12N8	27.0	8	20.0	1 1/2	12 3/8	6 1/2	10 1/2	23.70	
15	C15P8	16.0	8	20.0	1 1/2	15 3/8	7	13 1/4	23.97	
15	C15N8	27.0	8	25.0	1 1/2	15 3/8	7	13 1/4	29.70	

\*All model numbers beginning with "C" have SYNTAX-6@ ceramic magnets. All others DP-Alnico 5. †Program power. Peak power is twice program rating. ‡Dual cone. §Performance equivalent to EIA 2.15 oz. ¶Dual cone and high-compliance annulus. \*Super-shallow dual cone. \*Performance equivalent to EIA 3.16 oz.

## ELECTRONIC MUSICAL INSTRUMENT GROUP

All models have SYNTAX-6@ ceramic magnets.

### BASS GUITAR

Nom. Size, Inches	Jensen No.	Mag. Wt., Oz.	Voice Coil			Dimensions, Inches			Baffle Opening	Net Each
			Imp. Ohms	Power Watts†	Di., In.	H. x W.	Depth			
12	EM-1200	16	8	50	1 1/2	12 1/2	10 1/2	13 1/4	\$21.57	
15	EM-1500	27	8	60	1 1/2	15 1/2	7	13 1/4	31.20	

### GUITAR

8	EM-801	10	8	25	1	8 1/4	4 1 1/2	6 3/4	\$11.97
10	EM-1001	10	8	30	1	10 3/8	5 1/4	8 3/4	12.90
12	EM-1201	11	8	40	1 1/4	12 3/8	6 1/2	10 1/2	17.70
12	EM-1202	16	8	50	1 1/2	12 3/8	6 1/2	10 1/2	21.57
15	EM-1501	27	8	60	1 1/2	15 3/8	7	13 1/4	31.20

### ACCORDION

12	EM-1202	16	8	50	1 1/2	12 1/2	6 3/4	10 1/2	\$21.57
15	EM-1501	27	8	60	1 1/2	15 3/8	7	13 1/4	31.20

### ORGAN

6 x 9	EM-6900	10	8	12	1	6 3/8 x 9 3/8	3	5 1/4 x 8 3/8	\$ 8.85
8	EM-802	10	8	15	1	8 1/4	3 1/2	6 3/4	11.97
10	EM-1002	10	8	18	1	10 3/8	5 1/4	8 3/4	12.90
12	EM-1203	10	8	20	1	12 1/8	6 1/2	10 1/2	13.50
12	EM-1204	16	8	25	1 1/2	12 3/8	6 1/2	10 1/2	21.57
15	EM-1502	27	8	30	1 1/2	15 3/8	7	13 1/4	31.20

†Program power. Peak power is twice program rating.

**FOR PROFESSIONAL SERIES HORNS, DRIVERS AND ACCESSORIES . . . SEE JENSEN CATALOG 1070**  
**FOR HIGH FIDELITY UNITARY LOUDSPEAKERS AND SYSTEMS . . . SEE JENSEN CATALOG 165**

# Concert Series Speakers



## SPECIAL AUTOMOTIVE GROUP

Superior performance in confined mounting areas. No. C4T8 intended for Jaguar, MG and other British cars; C525T8 for Volkswagen and Karman-Ghia; C6T8 installs between rear seats where provided for in Chevrolet SS, Buick, Pontiac and Oldsmobile.

Nom. Size, Inches	Jensen Number	Mag. Wt., Oz.	Voice Coil			Dimensions, Inches				Net Each
			Imp., Ohms	Power Watts	Dia., In.	H. x W.	Depth	Baffle Opening		
4	C4T8	4.8	8	5.5	3/4	4 3/8	1 1/4	3 1/2	\$4.20	
5 1/4	C525T8	4.8	8	6.5	3/4	5 1/4	2 1/4	4 3/8	4.95	
6	C6T8	4.8	8	7.5	3/4	6 1/8	2 3/8	5 1/8	4.95	

## INTERCOM GROUP

Designed for effective pickup and reproduction of speech in intercom replacement and original equipment. Supplied with DP-Antico 5 magnets.

Nom. Size, Inches	Jensen Number	Mag. Wt., Oz.	Voice Coil			Dimensions, Inches				Net Each
			Imp., Ohms	Power Watts	Dia., In.	H. x W.	Depth	Baffle Opening		
2 x 6	P2X6V45	1.47	45	4.0	5/8	2 1/4 x 6 1/2	2 3/8	1 3/4 x 5 3/4	\$3.45	
3	P3V45	1.47	45	4.0	5/8	3	1 7/8	2 3/8	2.85	
3 x 5	P3X5X45	.68	45	4.0	5/8	3 1/8 x 5 1/8	2	2 3/8 x 4 1/8	2.64	
3 1/2	P3 1/2V45	1.47	45	4.5	5/8	3 1/2	2	2 3/8	2.85	
4	P4W45	1	45	4.5	5/8	4 1/2	2 3/8	3 1/2	2.91	
5	P5W45	1	45	5.0	5/8	4 1/2	2 3/8	4	3.06	
8	P8U45	1.73*	45	9.0	1	7 1/8	3	6 3/4	4.50	
8	P8T45	2.5†	45	10.0	1	7 1/8	3 3/4	6 3/4	5.10	

## COMMUNICATION AND AIRCRAFT GROUP

Feature special response characteristics for maximum speech intelligibility in high noise conditions. Widely used in amateur, CB and aircraft equipment. No. PC5V45 is excellent for speaker/microphone use. Aircraft types referred to particular makes are for cabin music and announce systems. Where specification number is shown, unit is original equipment item. No. CA6T3 has special voice response widely used in private aircraft. DP-Antico 5 magnet unless otherwise noted.

### COMMUNICATION TYPES

Size	Jensen No.	Mag. Wt., Oz.	Imp., Ohms	Power Watts	Dia., In.	H. x W.	Depth	Baffle Opening	Net Each
3 x 5	PC3X5V3	1.47	3.2	5.0	5/8	3 1/4 x 5 1/4	2	2 3/8 x 4 3/8	\$ 3.27
3 1/2	PC3 1/2V3	1.47	3.2	5.0	5/8	3 1/2	2 1/8	3 3/8	3.00
4	PC4V3	1.47	3.2	5.0	5/8	4 1/8	2 1/8	3 3/8	3.00
5	PC5V3	1.47	3.2	5.0	5/8	4 1/8	2 3/8	4	3.12
6	PC6V45	1.47	45	5.0	5/8	4 1/8	2 3/8	4	3.15
6	CA6T3	4.8*	3.2	7.5	3/4	6 1/4	2 3/8	5 1/4	4.95
8	CC8R3	10.0*	3.2	12.5	1	7 1/8	3	6 3/4	6.75
8	AP-10 (ST-590)	1.47	3.2	5.0	5/8	6 3/4 x 5	5 1/8	6 3/4	17.97
8	AP-10 (ST-591)	1.47	45	5.0	5/8	6 3/4 x 5	5 1/8	6 3/4	17.97

### AIRCRAFT TYPES

Size	Jensen No.	Mag. Wt., Oz.	Imp., Ohms	Power Watts	Dia., In.	H. x W.	Depth	Baffle Opening	Net Each
4	AJ6 (V414-12)*	.68	12	4.5	5/8	4 3/8	1 1/4	3 1/2	\$ 3.48
5	PA5T45	3.16	45	6.0	3/4	4 3/8	2 3/8	4	4.80
8	BJ10 (V1321-2)‡	1.73	12	9.0	1	7 1/8	2 3/8	6 3/4	8.10
8	C8R (C7430)‡	10.0*	12.0	1	7 1/8	3	3	6 3/4	17.25

\*Performance equivalent to EIA 2.15 oz. †Program power. Peak power is twice program rating. ‡Performance equivalent to EIA 3.16 oz. §For Douglas aircraft. ¶For Boeing aircraft. \*\*Transformer. ††SYNTOX-6@ ceramic magnet. ‡‡For Viscount or Douglas aircraft. ‡‡‡For Lockheed aircraft.

## CONCERT-FIDELITY SPEAKER GROUP

Advanced design, hi-fi quality speakers for full range music reproduction. Dual cone and true coaxial types for single-speaker systems offer low resonance and good bass response; coaxial types have special tweeters with integral crossover. Woofer, tweeter and midrange units provide for multi-speaker systems with 2-way and 3-way crossovers. Crossovers incorporate high frequency control, knob and esutechon; mount in single hole (3/4" drill) with bushing lengths for up to 3/4" panel. Binding post terminals. Impedance, 8 ohms.

Type	Nom. Size, In.	Jensen No.	Frequency Range, cps	Power, Watts	Dimensions, Inches				Net Each
					H. x W.	D.	Baffle Opening		
Full Range, Dual Cone	8	DC-80	40-14,000	11	8 3/8	3	6 3/4	7	\$11.97
	12	DC-120	25-13,000	13	12 3/8	6 3/4	10 1/2	13.77	
3-element Coaxials*	8	KF-80	30-15,000	12	8 3/8	3	6 3/4	7	16.95
	12	KD-120	20-15,000	14	12 3/8	6 3/4	10 1/2	13.95	
High Compliance	8	W-80	30-2,000	15	8 3/8	4 3/8	7	11.55	
Woofer	12	W-120	20-2,000	18	12 3/8	6 3/4	10 1/2	13.35	
	15	W-150	20-2,000	20	15 3/8	7 3/4	13 1/4	19.95	
Midrange	8	M-81	600-4,000	25	8 3/8	4 3/8	7	8.88	
Cone Tweeter	3 1/2	TW-350	2,000-15,000	15	3 1/2	2 1/8	3 3/8	3.57	
Compression Horn Tweeters	3	TH-100	1,000-16,000	25	4x10 1/2	11 1/2	3x9 1/2	11.97	
	3	TH-200	2,000-16,000	25	3x7 1/4	6 3/8	2x6 1/4	10.68	
2-way Crossover*	3	XN-100	1000†	15	1 3/8 x 2 3/8	3 3/4	3 3/4	9.30	
	3	XN-200	2000†	15	1 3/8 x 2 3/8	3 3/4	3 3/4	9.30	
3-way Cross.*	3	XN-640	600/4000†	15	1 3/8 x 2 3/8	3 3/4	3 3/4	11.97	

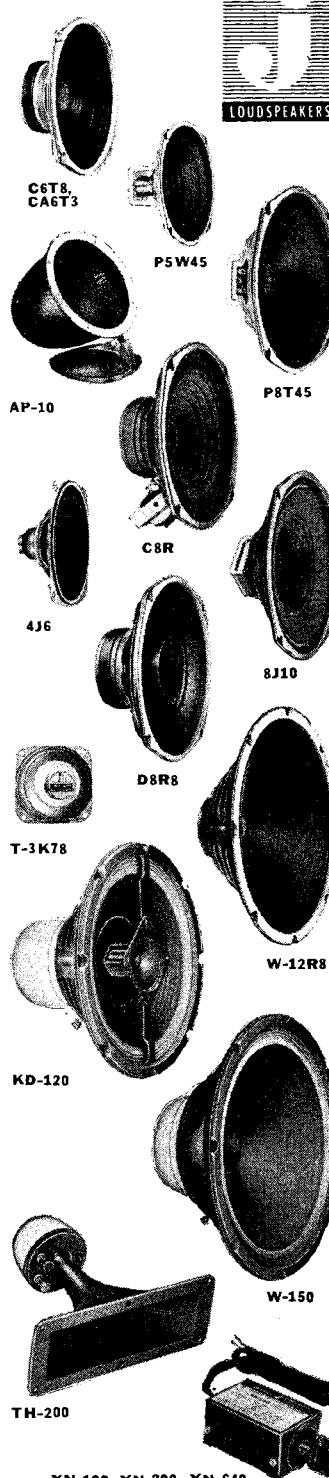
\*With HF control. †Program power; peak power is twice program rating. ‡Crossover points. §Closed-back.

## HI-FI REPLACEMENT SPEAKER GROUP

Multi-application hi-fi replacements used in many makes of hi-fi equipment. Imp. 8 ohms.

Type	Nom. Size, In.	Jensen No.	Frequency Range, cps	Mag. Wt., Oz.	Power, Watts	Dimensions, Inches				Net Each
						H. x W.	D.	Baffle Opening		
Full Range, Dual Cone	8	D-8R8	50-14,000	10*	12	7 1/8	3	6 3/4	\$ 8.79	
	12	D-12R8	40-13,000	10*	14	12 3/8	3	10 1/2	10.95	
Woofer	8	W-8R8	45-2,000	10*	20	7 1/8	3	6 3/4	8.19	
	12	W-12R8	35-2,000	10*	25	12 3/8	4 1/2	10 1/2	10.65	
	15	W-15R8	30-2,000	27*	30	15 3/8	6	13 1/4	33.75	
Midrange, Closed-back	8	M-8U8	600-4,000	1.73‡	25	7 1/8	3	6 3/4	4.59	
	8	M-8R8	600-4,000	10*	30	7 1/8	3	6 3/4	8.40	
Direct Radiator Tweeters	3	T-3K78	2,000-15,000	.68	15	3	1 3/8	2 3/8	2.97	
	3 1/2	T-3K78	2,000-15,000	.68	15	3 1/2	1 3/8	3 3/8	3.15	
	3 1/2	T-35W8	2,000-15,000	1.00	15	3 1/2	2 1/8	3 3/8	3.30	
	3 1/2	T-35W8	2,000-15,000	1.47	15	3 1/2	2 1/8	3 3/8	3.57	
Compression Horn Tweeters	3	T-107	2,000-16,000	1.47	25	3 x 7 1/4	6 3/8	2 x 6 1/4	9.90	
	3	T-109	1,000-16,000	1.00	25	4 x 10 1/2	11 1/2	3 x 9 1/2	11.10	

\*SYNTOX-6@ ceramic magnet; all others DP-Antico 5. †Program power; peak power is twice program rating. ‡Performance equivalent to EIA 2.15 oz.



FOR PROFESSIONAL SERIES HORNS, DRIVERS AND ACCESSORIES . . . SEE JENSEN CATALOG 1070  
 FOR HIGH FIDELITY UNITARY LOUDSPEAKERS AND SYSTEMS . . . SEE JENSEN CATALOG 165



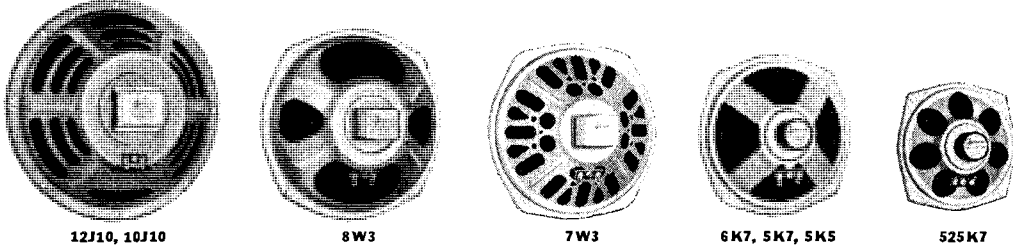


# VIKING AND WEATHER MASTER<sup>®</sup> SERIES REPLACEMENT SPEAKERS

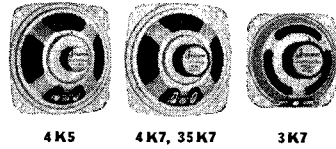
## JENSEN VIKING SERIES REPLACEMENT SPEAKERS

Dependable, economical service replacement speakers used by countless manufacturers in original equipment such as home and auto radios, and even jet aircraft. Employ DP-Alnico 5 magnets, precision wound voice coils and heavily plated metal parts.

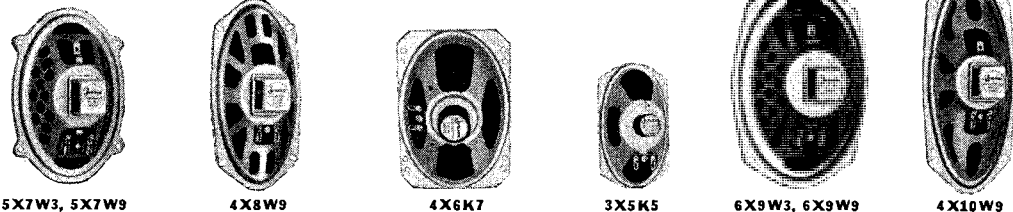
### CIRCULAR RADIATOR GROUP



Nom. Size, Inches	Jensen No.	Mag. Wt., Oz.	Voice Coil			Dimensions, Inches				Net Each
			Imp., Ohms	Power Watts	Dia., In.	H. x W.	Depth	Baffle Opening		
3	3K7	.68	3.2	3.5	3/8	3	1 1/2	2 3/8	\$2.09	
3 1/2	35K7	.68	3.2	4.0	3/8	3 1/2	1 3/8	3 3/8	2.09	
4	4K5	.65	3.2	4.0	3/8	4 1/8	1 3/8	3 1/2	1.95	
4	4K7	.68	3.2	4.5	3/8	4 1/8	1 3/8	3 1/2	1.95	
5	5K5	.55	3.2	5.0	3/8	4 11/16	1 1/8	4	1.79	
5	5K7	.68	3.2	5.5	3/8	4 11/16	1 1/8	4	2.12	
5 1/2	525K7	.68	3.2	5.5	3/8	6 1/16	2 3/8	4 1/4	2.39	
6	6K7	.68	3.2	6.0	3/8	6 1/16	2 3/8	5 1/4	2.39	
7	7W3	1.00	3.2	7.0	3/8	7	3	6 3/8	3.60	
8	8W3	1.00	3.2	8.0	3/8	7 11/16	3 1/4	6 3/8	3.60	
10	10J10	1.73	3.2	10.0	1	10 1/8	4	8 3/8	4.95	
12	12J10	1.73	3.2	11.0	1	12 1/8	4 3/8	10 1/2	5.78	



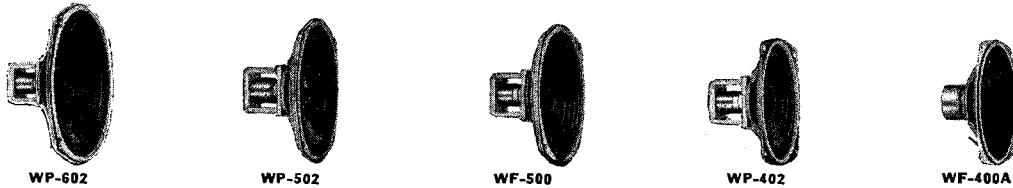
### OVAL RADIATOR GROUP



Nominal Size, Inches	Jensen No.	Magnet Weight, Ounces	Voice Coil			Dimensions, Inches			Net Each
			Imp., Ohms	Power Watts	Dia., Inches	H. x W.	Depth	Baffle Opening	
3 x 5	3X5K5	.55	3.2	4.0	3/8	3 1/8 x 5 1/8	1 3/8	2 1/2 x 4 1/8	\$2.26
4 x 6	4X6K7	.68	3.2	4.5	3/8	4 1/8 x 6 1/8	1 3/8	3 1/8 x 5 1/8	2.64
4 x 8	4X8W9*	1.00	8-10	6.0	3/8	4 x 8	2 3/8	3 3/8 x 7 1/8	3.30
4 x 10	4X10W9*	1.00	8-10	6.0	3/8	4 3/4 x 10 1/8	2 3/8	3 3/8 x 9 3/8	3.68
5 x 7	5X7W3*	1.00	3.2	6.0	3/8	5 x 7 1/4	2 1/8	4 1/4 x 6 1/4	3.94
5 x 7	5X7W9*	1.00	8-10	6.0	3/8	5 x 7 1/4	2 15/16	4 1/4 x 6 1/4	3.94
5 x 7	5X7V3	1.47	3.2	6.0	3/8	5 x 7 1/4	2 27/32	4 1/4 x 6 1/4	3.94
5 x 7	5X7V9	1.47	8-10	6.0	3/8	5 x 7 1/4	2 27/32	4 1/4 x 6 1/4	3.94
6 x 9	6X9W3*	1.00	3.2	7.5	3/8	6 3/8 x 9 1/8	3 3/8	5 1/4 x 8 3/8	4.77
6 x 9	6X9W9*	1.00	8-10	7.5	3/8	6 3/8 x 9 1/8	3 3/8	5 1/4 x 8 3/8	4.77
6 x 9	6X9V3	1.47	3.2	7.5	3/8	6 3/8 x 9 1/8	3 1/2	5 3/8 x 8 3/8	5.22
6 x 9	6X9V9	1.47	8-10	7.5	3/8	6 3/8 x 9 1/8	3 1/2	5 3/8 x 8 3/8	5.22

\*With combination pin-jack and solder-lug terminals; wide use as auto replacement.

### WEATHER MASTER<sup>®</sup> SERIES OUTDOOR SPEAKERS



Long service in outdoor conditions such as drive-in theatre use. Types with prefix WF- have special moisture proof and anti-fungus impregnated fiber cones. Other types employ Mylar\* laminated fiber cones. DP-Alnico 5 magnets; fungus-proof spiders; non-swelling gaskets. Adhesives are unaffected by heat. \*Registered DuPont trademark.

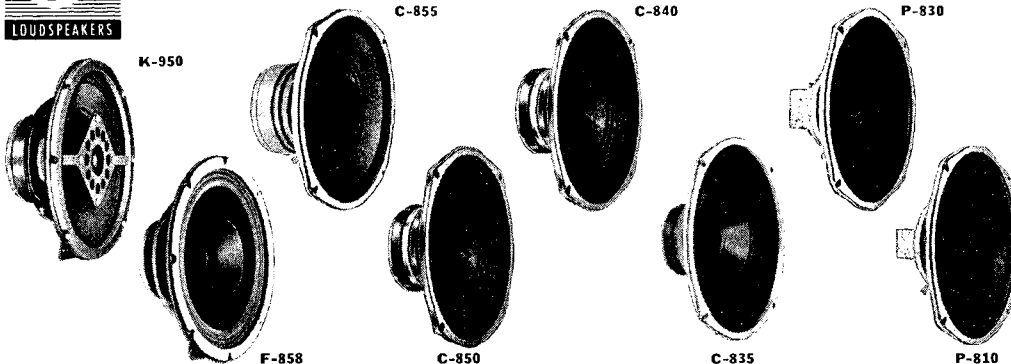
Nominal Size, Inches	Jensen No.	Magnet Weight, Ounces	Voice Coil			Dimensions, Inches			Net Each
			Imp., Ohms	Power Watts	Diameter, Inches	H. x W.	Depth	Baffle Opening	
4	WF-400A	.68	3.2	4.0	3/8	4 3/8	1 3/4	3 3/8	\$2.17
4	WP-402	1.00	3.2	4.5	3/8	4 3/8	2 3/4	3 3/8	2.42
5	WF-500	1.00	3.2	5.0	3/8	4 11/16	2 3/8	4	2.48
5	WP-502	1.47	3.2	5.5	3/8	4 11/16	2 3/8	4	2.70
6	WP-602	1.47	3.2	6.0	3/8	6 1/8	2 3/8	5 1/4	3.03

**FOR PROFESSIONAL SERIES HORNS, DRIVERS AND ACCESSORIES . . . SEE JENSEN CATALOG 1070**  
**FOR HIGH FIDELITY UNITARY LOUDSPEAKERS AND SYSTEMS . . . SEE JENSEN CATALOG 165**



# Professional Series Speakers

**8" SPEAKERS FOR DISTRIBUTED SOUND**  
**VALUE ENGINEERED FOR LOWEST INSTALLED COST**



This new line of Jensen 8-inch Professional Series loudspeakers is specially designed to meet the exacting rigorous demands of commercial sound service. The 8-inch size is ideal for the majority of all distributed sound systems giving more than adequate low frequency range with a minimum of enclosure and mounting complications. A complete line of speakers value engineered for lowest installed cost with such features as the handy 10-pack, preattached transformers, exclusive solderless connectors, weather and corrosion resistant designs . . . and many more. A wide selection of models to meet every need—from the lowest cost highly competitive application to the most sophisticated, highest quality system.

Four conventional type speakers with varying sensitivity and power rating (magnetic energy) with the typical 90° coverage angle. Two models have dual cone radiating system with 95° coverage angle and unusual high frequency range. Another basic model is an 8" coaxial with 110° coverage angle and unusual frequency range and smoothness for the finest quality and intelligibility. This 110° coverage angle provides approximately twice the coverage area, so fewer are required for a given installation. Still another model is the unique Jensen FLEXAIR\* with dual-cone radiator; super-low resonance for those small acoustic enclosures and back boxes; big-speaker lows the remarkable h-f range to match.

## PREATTACHED TRANSFORMERS

The eight basic models mentioned above are all available with preattached 25-volt or 70.7-volt "constant voltage" transformers, Models 25CV4 or 70CV4. Factory attachment insures lower cost to the end user.

## AVAILABLE IN HANDY 10-PACK

All of these speakers are available at added savings and convenience bulk-packed ten per carton (with or without transformers). These handy 10-pack cartons have individual sleeves for each speaker thus giving speaker protection of odd lots until actual installation.

## KWIKON\* INSTANT CONNECTORS

Simply twist bare ends of two 12" input leads supplied for each speaker to incoming signal cable leads, insulate with wire-nut or tape. Slide sleeve clips onto input terminal lugs of speaker or preattached transformer as speaker assembly is raised into place. KWIKON\* instant connectors also provide simple fast power tap readjustment on transformer. \*T.M.

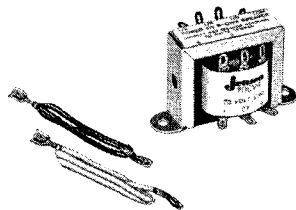


Model	Type	Power Rating <sup>1</sup>	Sensitivity <sup>2</sup>	Magnet <sup>3</sup> Wt., Oz.	Freq. Range, CPS	Nom. V.C. Dia.	Max. Depth	W/O Transformer			Transformer Preattached		
								List	Net Ea. Boxed in 10-Pack	Net Each in 10-Pack	List	Net Ea. Single	Net Each in 10-Pack
K-950	Coaxial <sup>1</sup>	16	85.5 db	10.0	30-14,000	1"	3 3/4"	\$24.50	\$14.70	\$13.23	\$29.25	\$17.55	\$15.80
F-858	FLEXAIR	12.0	85.5 db	10.0	30-18,000	1"	3"	20.50	12.30	11.07	25.25	15.15	13.63
C-855	Dual Cone	12	85.0 db	10.0	30-18,000	1"	3 1/8"	13.50	8.10	7.29	18.25	10.95	9.86
C-850	Conventional	12	85.5 db	10.0	30-13,000	1"	3"	12.95	7.77	6.99	17.70	10.62	9.56
C-840	Conventional	11	84.5 db	6.0	30-13,000	1"	2 1/2"	10.95	6.57	5.91	15.70	9.42	8.48
C-835	Dual-Cone	10.0	84.0 db	4.8	35-18,000	1"	2 1/2"	10.00	6.00	5.40	14.75	8.85	7.97
P-830	Conventional	10	84.0 db	2.5	40-13,000	1"	3 1/4"	7.25	4.35	3.91	12.00	7.20	6.48
P-810	Conventional	9	82.0 db	1.47	60-13,000	3/4"	3 1/4"	5.80	3.48	3.13	10.55	6.33	5.70

<sup>1</sup>V.C. and magnet information pertain to L-F unit only. <sup>2</sup>Maximum speech and music level as indicated on standard VU meter (peak power is substantially higher). <sup>3</sup>Axial free field sound pressure level at a distance of 10 ft. for an input of 1.0 watt 800-1,250 cps warble frequency band (re .000204 dynes/cm<sup>2</sup>). <sup>4</sup>All magnets are Jensen Syntox-6® ceramic except P-810 and P-830 with DP-Alnico-5.

## "CONSTANT VOLTAGE" TRANSFORMERS

Specially designed for use with the popular "constant voltage" distribution systems. Primary (input) windings are center-tapped for balanced-to-ground input circuits or for special circuit needs. Tapped secondary windings provide adjustment of power to the 8-ohm speaker in 3 db steps from 1/2 watt to 4 watts. Nominal core size 5/8" x 5/8". Two 1/8" dia. mounting holes on 2 3/4" centers. Available separately or preattached to these special 8-inch speakers.



Model	Line	Packing	List	Net	Net Ea. 50-Pack
25CV4	25-volt	Single	\$4.75	\$2.85	-----
25CV4B	25-volt	50-Pack	4.75	2.85	\$2.57
70CV4	70-volt	Single	4.75	2.85	-----
70CV4B	70-volt	50-Pack	4.75	2.85	2.57

**FOR PROFESSIONAL SERIES HORNS, DRIVERS AND ACCESSORIES . . . SEE JENSEN CATALOG 1070**  
**FOR HIGH FIDELITY UNITARY LOUDSPEAKERS AND SYSTEMS . . . SEE JENSEN CATALOG 165**



# Professional Series Speakers

## JENSEN CALSTAR\* COLUMN SPEAKERS

**CALSTAR** Controlled-Angle Lobe-Suppressed Twin-Array Reproducers are the result of an exhaustive study of directional sound radiation by Jensen engineers. In a CALSTAR column, an array of small woofers, covering the lower frequency range, is combined with a shorter array of tweeters covering the high frequency range (where the polar sharpening would otherwise become severe). Next, the signal distribution to each element is "tailored" so that the effective array length decreases as the frequency increases. The final result is a column design in which the vertical coverage angle is unusually constant for all frequencies and therefore exceptionally uniform sound quality and high speech intelligibility are achieved throughout the audience area. The exact signal distribution at each frequency provided by the pattern shaping networks has also been chosen to suppress unwanted side lobes.

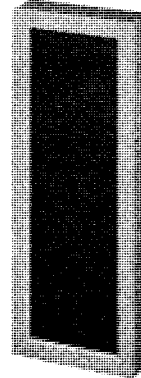
\*T.M.

### MODEL 55

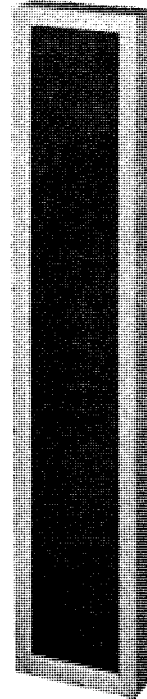
10-Element Twin-Array 60°, 30-Watt, 8-ohm Column Speaker.  
List \$133.00. Net Each. **\$79<sup>80</sup>**

### MODEL 1010

20-Element Twin-Array 30°, 60-Watt, 8-ohm Column Speaker.  
List \$233.00. Net Ea. **\$139<sup>80</sup>**



MODEL 55



MODEL 1010

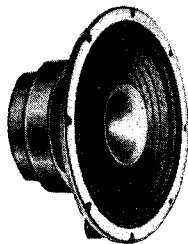
### TECHNICAL SPECIFICATIONS

MODEL 55	MODEL 1010
8 ohms.....	8 ohms.....
30 watts.....	60 watts.....
100-10,000 cps.....	100-10,000 cps.....
60° total (±30°).....	30° total (±15°).....
120° total (±60°).....	120° total (±60°).....
20 db.....	20 db.....
2000 cps.....	2000 cps.....
11½" W., 3¾" D., 30" H.....	11½" W., 3¾" D., 56¾" H.....

### Sensitivity Table<sup>1</sup>

Model 55			Input Power, Watts	Model 1010		
25'	50'	100'		25'	50'	100'
90.0	84.0	78.0	5	94.5	88.5	82.5
92.0	86.0	80.0	7.5	96.5	90.5	84.5
93.0	87.0	81.0	10	97.5	91.5	85.5
95.0	89.0	83.0	15	99.5	93.5	87.5
96.0	90.0	84.0	20	100.5	94.5	88.5
98.0	92.0	86.0	30	102.5	96.5	90.5
—	—	—	60	105.5	99.5	93.5

1. Maximum speech and music level as indicated by VU meter. (Peak power is substantially higher.)
2. Maximum level outside main lobe relative to main lobe intensity.
3. Axial free field sound pressure level at listed distance (db above .000204 dynes/sq. cm.) in 800-1250 cps warble frequency band.



### H-970 COAXIAL

with **Compression-Driver Horn-Tweeter.**

Here at long last is a genuine coaxial loudspeaker in 8-inch size with compression-driver horn-tweeter. Tweeter horn passes through the woofer core terminating in a circular horn inside and concentric with the woofer diaphragm. This design thus yields a circular (symmetrical) radiation pattern at all frequencies ideal for higher-power high-ceiling distributed sound. Excellent speech intelligibility with high quality reproduction for industrial areas, heavy-duty portable, and central speaker system use.

List Price \$45.00. Net Each. **\$27<sup>00</sup>**

### TECHNICAL SPECIFICATIONS

Input Impedance..... 8 ohms  
Power Rating..... 20 watts  
Response Range..... 30-15,000 cps  
Angular Coverage..... 115°  
Resonant Frequency..... 60 cps  
Crossover Frequency..... 2000 cps  
Woofer Magnet<sup>1</sup>..... 16.0 oz.  
Sensitivity<sup>2</sup>..... 87.0 db  
Dimensions..... 8½" OD x 4¾" D.  
1. SYNTOX-6\* (Ceramic)  
2. Axial sound pressure level at a distance of 10 ft. for an 800-1250 cps warble band signal input of 1.0 watt.

**FOR PROFESSIONAL SERIES HORNS, DRIVERS AND ACCESSORIES . . . SEE JENSEN CATALOG 1070**

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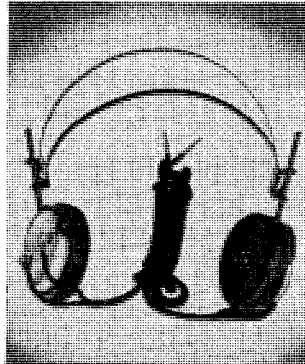
# HEADPHONES By C. F. CANNON CO.



## THE "CHIEF" Cannon-Ball Bakelite Headset

A high quality headset of durable molded black plastic. Attractive in appearance, it is a sensitive and practical phone for every headset use. Inside terminals. Diameter of diaphragm is  $2\frac{1}{8}$ ". Double coils, two in each receiver. Alnico permanent magnets. Supplied with vinyl plastic covered headband with permanent adjustment and no removable parts. Cotton covered cord,  $4\frac{1}{2}$  ft. long.

CC-2—2000 ohms D.C.	.....	List \$4.15	Net \$2.49
CC-3—3000 ohms D.C.	.....	List 4.40	Net 2.64
CC-5—5000 ohms D.C.	.....	List 5.75	Net 3.45
CC-11—11 ohms D.C.	.....	List 4.15	Net 2.49



## BRANDES "SUPERIOR" Matched Tone Headset

A rugged headset, millions of which are in use all over the world. Large size diaphragms of  $2\frac{1}{8}$ " diameter assure efficient performance. Outside terminals, with polished aluminum cases and bakelite caps. Double coils, two in each receiver. Chrome steel magnets. Steel headband with permanent adjustment.  $4\frac{1}{2}$  ft. cotton covered cord.

BS-2—2000 ohms D.C. List \$4.30 Net \$2.58

## BRANDES "ADMIRAL" Matched Tone Headset

The Brandes "Admiral" is of the same general construction as the Brandes Superior, but has terminals on the inside.

BA-2—2000 ohms D.C.	List \$4.30	Net \$2.58
BA-3—3000 ohms D.C.	List 4.80	Net 2.88
BA-5—5000 ohms D.C.	List 6.00	Net 3.60



## CANNON-BALL ALNICO MAGNETIC No. 25

A New Headset of Unusual Quality, Efficiency and Durability, powered by Alnico V magnets.

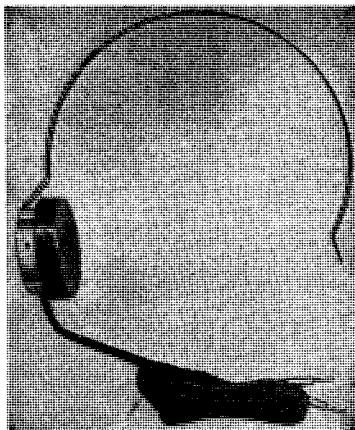
The headband is covered by attractive black extruded vinylite and provides utmost wearing comfort. Limits turn of phone to prevent twisting of cord. Cap and case of molded plastic. Large size diaphragm  $2\frac{1}{8}$ ". Equipped with sanitary moisture-resistant plastic cord with riveted crotch piece.

AM-25-2	.....	List \$6.50	Net \$3.90
AM-25-3	.....	List 7.00	Net 4.20
AM-25-5	.....	List 8.50	Net 5.10

## ALNICO MAGNETIC No. 15

A new, small size, extra sensitive double headset, light in weight. Diameter of diaphragm  $1\frac{1}{8}$ ". Molded cap and case. Steel adjustable headband.  $4\frac{1}{2}$  ft. cord.

AM-15-2	.....	List \$3.65	Net \$2.19
AM-15-3	.....	List 3.90	Net 2.34



## CANNON-BALL "ALNICO" Single Headphone

Equal in clarity and volume to most double headsets, efficient and attractive. Permits listening while being addressed by others. Concealed terminals. Diaphragm  $1\frac{1}{8}$ ". Bakelite case and caps. Alnico magnet, double coils.  $4\frac{1}{2}$  ft. cord. Spring steel headband permanently attached.

AM-15-1—1000 ohms D.C.	.....	List \$2.00	Net \$1.20
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## THE "MASTER"

### Cannon-Ball Headset

Used extensively in hospitals and other institutions as well as for general purposes, and is especially recommended for institutions. Inside terminals Aluminum cases with black bakelite caps. Spring steel adjustable headband with no removable parts. Diaphragm  $2\frac{1}{8}$ " diameter. Double coils. Chrome steel magnets.  $4\frac{1}{2}$  ft. cotton-covered cord.

MC-2—2000 ohms D.C.	.....	List \$4.30	Net \$2.58
MC-3—3000 ohms D.C.	.....	List 4.65	Net 2.79
MC-5—5000 ohms D.C.	.....	List 5.75	Net 3.45

## CANNON-BALL "EMPIRE"

### Lightweight Headset

A low-priced light-weight headset with large magnet and double coils. Reproduces with clarity and good volume. Diameter of diaphragm is  $1\frac{1}{8}$ ". Polished aluminum cases with bakelite caps. Steel adjustable headband.  $4\frac{1}{2}$  ft. cord. Inside terminal connections.

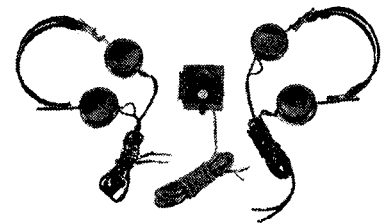
EC-2—2000 ohms D.C.	.....	List \$3.80	Net \$2.28
EC-3—3000 ohms D.C.	.....	List 4.05	Net 2.43

## THE "DIXIE"

### Cannon-Ball Headset

The "Dixie" is of the same general construction as the "Master" headset except that the terminals are on the outside. Bakelite case Alnico magnets.

CD-2—2000 ohms D.C.	.....	List \$3.90	Net \$2.34
CD-3—3000 ohms D.C.	.....	List 4.15	Net 2.49



## CANNON-BALL HEARING AID FOR TELEVISION

Provides private listening without disturbing others. Excellent for persons hard of hearing. Can be attached to any television set and permits listening to phones alone, speaker alone, or both together.

### FOR TELEVISION

Kit complete with 15 foot cord, phone volume control and two sets of phones

.....	List \$16.50	Net \$9.90
With one headset ..	List 12.50	Net 7.50

## MOLDED RUBBER CUSHIONS



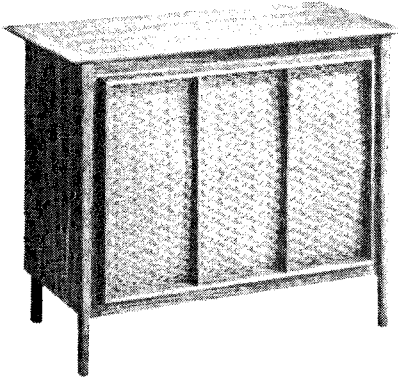
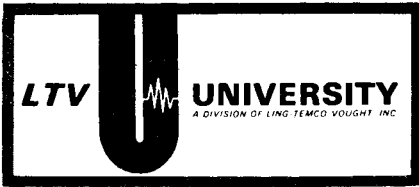
Fit standard size headsets. Molded-in air chamber provides maximum wearing comfort.

per pair	.....	List \$1.00	Net \$ .60
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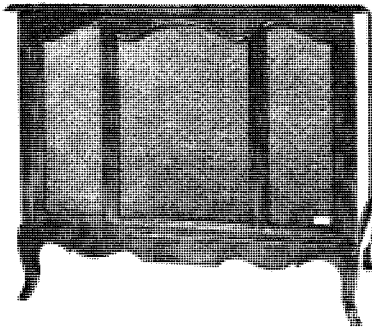
Phones can be supplied with any resistance required or with variations to meet special requirements.

Sanitary plastic covered cords available for institutional use. Write for special quotation.

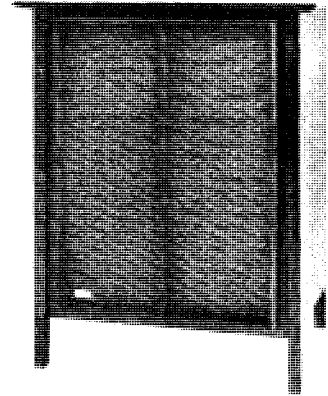
# High Fidelity Speaker Systems



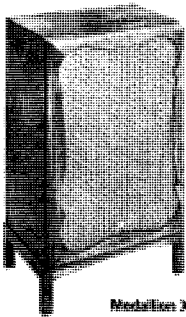
**CLASSIC MARK II.** For the ultimate in uncolored sound reproduction, University has combined a high-compliance 15" woofer, a high-compliance 8" mid-range and the exclusive Sphericon Super Tweeter in the Classic Mark II system. The Classic Mark II is the logical choice for discriminating music lovers.



**CLASSIC FRENCH PROVINCIAL.** The latest in the famous University Classic line, the Classic French Provincial combines an improved version of the Classic Mark II speakers in the very distinguished appearance of a French provincial style enclosure.

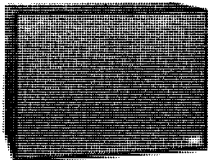


**CLASSIC DUAL XII.** Dual 12" high-compliance bass and mid-range speakers combined with the exclusive Sphericon Super Tweeter give the Classic Dual XII a brilliance of sound as yet unmatched in the Hi-Fi speaker industry.



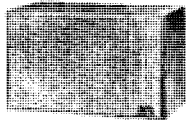
Medallion XII

**MEDALLION XII.** Phenomenal music reproduction from such a compact three speaker system is obtained by combining a 12" high-compliance woofer, 8" mid-range and the Sphericon Super Tweeter in the University Medallion XII system.



Medallion Monitor

**MEDALLION MONITOR.** For persons who want a bookshelf type speaker system but do not want to sacrifice sound for size, the Medallion Monitor is the logical choice. The speaker system used in the Medallion XII has been improved and placed in a new enclosure with fixed grille.



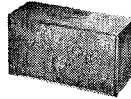
Senior II

**SENIOR II.** One of the all time favorites in compact speaker systems, the Senior II gives music reproduction of a clarity and quality approaching that of much larger systems.



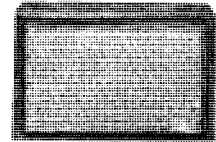
Companion II

**COMPANION II.** Where space is at a premium and the budget must be considered, the Companion II assures you of satisfying musical enjoyment at a reasonable cost.

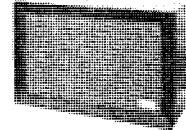


Companionette

**COMPANIONETTE.** The perfect choice for the college student or apartment dweller, the Companionette gives a sound hitherto unattainable in a system of its size.



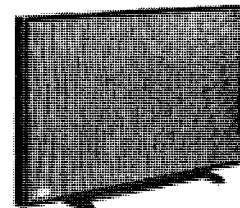
**MINI-FLEX.** The world's smallest compact speaker system yet one that produces bass response which will surprise even the most critical listener. The University Mini-Flex is a development as yet unmatched by other manufacturers.



**MINI-FLEX II.** The newest development in miniature speaker systems, the University Mini-Flex II is the latest version of the famous Mini-Flex system. Combining a specially engineered woofer-mid-range speaker and separate tweeter, this system gives a truly fantastic sound.



**SYL-O-ETTE.** University's offering for the decorator is the Syl-o-ette system. This thin-line system is available with three different decorator grilles to match any decor.



**TRI-PLANAR.** You will wonder where the sound comes from in University's Tri-Planar system. Only 1 3/4" deep, this system gives a richness to bass only thought obtainable with large standing enclosures many times its size.

## SPECIFICATIONS

Model	Frequency Response (cps)	Power Capacity (IPM*)	Impedance (ohms)	Dimensions (LxWxD in Inches)	Price
Classic Mark II	20-40,000	60 Watts	4-8	35x28 3/4x17 1/2	\$295.00
Classic French Prov.	20-40,000	60 Watts	4-8	35x28 3/4x17 1/2	325.00
Classic Dual XII	25-40,000	50 Watts	4-8	31 1/2x23 3/4x15 1/2	229.50
Medallion XII	28-22,000	40 Watts	8-16	17x24x11 1/4	134.95**
Medallion Monitor	28-22,000	40 Watts	8-16	17x24x11 1/4	129.00
Senior II	30-22,000	30 Watts	8	25x15 5/8x12 5/8	89.50
Companion II	35-18,000	30 Watts	8	24x13 1/2x11 1/2	69.50
Companionette	40-17,000	20 Watts	8	21 3/4x11 1/2x8 5/8	69.50
Mini-Flex	35-20,000	20 Watts	8	15x9-7/16x5-3/16	69.50
Mini-Flex II	45-18,000	20 Watts	8	15x9 1/2x6	49.50
Syl-o-ette	40-20,000	30 Watts	8	20x23x4	95.95
Tri-Planar	45-17,000	20 Watts	4-8	23x15x1 3/4	79.95

\*Integrated Program Material \*\*Less grille and base



# High Fidelity Component Speakers

## SERIES 200 Wide-Range High Compliance Models

Model	Frequency Response (cps)	Power Capacity (Watts/PM*)	Impedance (Ohms) *	Dimensions (Dia.-Depth)	Shipping Wt. (Pounds)	Price
315-C***	25-20,000	50	8-16	15¼"x12"	34½	\$156.00
312***	28-40,000	35	8-16	13"x6¾"	10¼	73.00
6201***	28-18,500	35	8-16	13"x6¾"	9½	57.75
Diffusicone 12	25-15,000	35	8-16	13"x6¾"	8¾	39.75
308***	30-17,000	35	8-16	9¾"x6¼"	5	42.00
Diffusicone 8	30-15,000	35	8-16	9¾"x6¼"	4¾	28.00

## Mustang Thin-Line Speakers

Model	Frequency Response (cps)	Power Capacity (Watts/PM*)	Impedance (Ohms) *	Dimensions (Dia.-Depth)	Shipping Wt. (Pounds)	Price
M-8	70-10,000	30	8-16	8¼"x2½"		19.00
M-8D	70-12,000	30	8-16	8¼"x2½"		19.50
M-12	35-10,000	30	8-16	12¾"x3¾"		20.50
M-12D	35-14,000	30	8-16	12¾"x3¾"		21.00
M-12T***	35-40,000	30	8-16	12¾"x3¾"		32.00

\*May be used with amplifiers with output impedance of 8 or 16 ohms.

\*\*Integrated Program Material.

\*\*\*Equipped with separate tweeter; Models 312 and M-12T have Sphericon Super Tweeter; Model 315-C has brilliance and presence controls; Models 312 and 6201 are equipped with brilliance controls.

## WOOFERS, MID-RANGE and TWEETERS

### Dual Voice Coil Woofers High Compliance Models

Model	Frequency Response (cps)	Power Capacity (Watts/PM*)	Impedance (Ohms)**	Dimensions (Dia.-Depth)	Shipping Wt. (Pounds)	Price
C-15HC	15-800	60	4-20**	15"x8¼"	24¾	\$89.50
C-12HC	20-3,000	50	4-20**	13"x6¾"	9	49.50
C-8HC	20-3,000	30	4-20**	9¾"x4¼"	7¼	39.95

### High Efficiency Models

Model	Frequency Response (cps)	Power Capacity (Watts/PM*)	Impedance (Ohms)**	Dimensions (Dia.-Depth)	Shipping Wt. (Pounds)	Price
C-15W	25-1,500	60	4-20**	15¾"x10½"	26¾	85.00
C-12SW†	30-6,000	30	8-16	13"x6¾"	7¼	39.50
C-8W	50-5,000	25	8-16	8¼"x6¾"	3	15.00

\*Integrated Program Material.

\*\*Impedance Range Depending on Strapping of Voice Coils.

†Equipped with Built-in Crossover Network for 5000, 2500, and 700 cps Crossover

### Mid-Range Speakers, Horns and Drivers

Model	Frequency Response (cps)	Power Capacity (Watts/PM*)	Impedance (Ohms)	Dimensions (Dia. x Depth)	Shipping Wt. (Pounds)	Price
C-8M Cone Speaker	500-5,000	50	8	8¼" Dia. x 4" Depth	3	\$16.95
T-30 Driver*	500-18,000	50	8	3½" Dia. x 3¾" Depth	2¼	30.00
T-50 Driver*	500-20,000	50	8	4¼" Dia. x 4¾" Depth	5¼	49.50
H-600 Horn	600 cps cutoff			7¾" L. x 8¾" W. x 4¾" D.	1¾	19.00
Cobreflex Horn	350 cps cutoff			10¼" L. x 18½" W. x 9¼" D.	2¼	24.15

\*For use with Cobreflex and H-600 horns.

### Tweeters

Model	Frequency Response (cps)	Power Capacity (Watts/PM*)	Impedance (Ohms)	Dimensions (L. x W. x D.)	Shipping Wt. (Pounds)	Price
T-202 Sphericon	3,000-40,000	30	4-16	4¾" x 2¾"	2½	\$24.95
T-203E & W††	3,000-40,000	30	4-16	6¾" L. x 5¼" W. x 2¾" D.	2¾	24.95
HF-206	3,500-22,000	30	8	6" L. x 3¾" W. x 6¾" D.	3½	32.00
4401	2,000-15,000	25	8	6" L. x 2¾" W. x 6¾" D.	2¼	18.00
UXT-5	4,500-17,500	25	8	4¼" L. x 2½" W. x 4" D.	2¼	21.00

††Models T-203 E & W equipped with case for use outside of enclosure; available in ebony and walnut. Both equipped with built-in crossover network and brilliance control. For use with amplifiers having 4-8-16 ohms outputs.

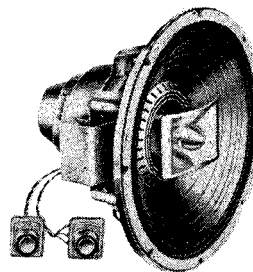
### Crossover Networks and Attenuators

Model	Crossover Frequencies (cps)	Impedance (Ohms)	Dimensions (L. x W. x D.)	Shipping Wt. (Pounds)	Price
N-1*	1250, 2500, 5000, 10000	4-8-16	3¾"x3¼"x3"	2	\$14.00
N-2A	350, 700	4-8-16	3¾"x3¼"x3"	2½	18.00
N-2B	1250, 2500, 5000	4-8-16	3¾"x3¼"x3"	2½	14.00
N-3*	350, 700, 5000	8	7"x5"x3"	5¼	32.00
SK-1	150 cps Network for use in single woofer stereo system.				5.95
AP-8	L pad for presence and brilliance controls.				3.95

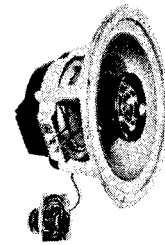
\*Model N-1 equipped with built-in brilliance control. N-3 equipped with built-in brilliance and presence controls.

## Wide-Range High Compliance Models

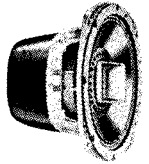
University Series 200 component speakers represent the ultimate in quality and engineering knowhow in the industry. Their high power-handling capacity and ruggedness of construction using modern die-cast baskets and molded seamless cones assures long-life adherence to original performance standards. These speakers are designed for use in any pre-finished or custom built enclosure and may be mounted from either the front or rear of the baffle panel. Where baffle mounting space is at a premium and high quality music reproduction is desired, Series 200 University component speakers are the logical choice for the discriminating music lover or audiophile.



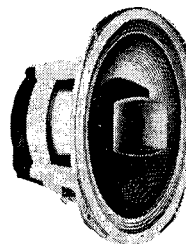
MODEL 315-C  
Super 15" 3-Way Diffaxial Speaker



MODEL 312  
12" 3-Way Diffaxial Speaker



MODEL 308  
8" 3-Way Diffaxial Speaker



MODEL 6201  
12" 2-Way Diffaxial Speaker



MODEL DIFFUSICONE-8  
8" Full Range  
Diffaxial Speaker

## University MUSTANG Series Thin-Line High Fidelity Component Speakers

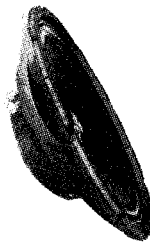
The newest addition to University's line of component speakers—the Mustang Series. These completely new speakers represent the latest engineering development in the industry. As in our Series 200 models, the Mustangs are constructed using strong die-cast baskets and molded seamless cones to assure long life and adherence to original performance. Mustangs are ideal for in-wall mounting for background music systems and home high fidelity installations. For quality sound at an economical price where space is at a premium, choose a Mustang.



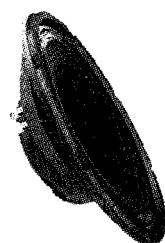
MUSTANG Model M-8  
8" Diffaxial Speaker



MUSTANG Model M-8D  
8" 2-Way Diffaxial Speaker



MUSTANG Model M-12  
12" Diffaxial Speaker



MUSTANG Model M-12D  
12" 2-Way Diffaxial Speaker



MUSTANG Model M-12T  
12" 3-Way Diffaxial Speaker



# PUBLIC ADDRESS AND HIGH FIDELITY



## drivers

**MODEL ID-20 (20 watts)** For speech and music systems requiring moderate sound power output, and where performance with economy is a primary consideration. Designed to deliver maximum output, the ID-20 utilizes its efficiency to the best advantage, producing a substantial "punch" with clear, penetrating sound.

**MODEL ID-30 (30 watts)** Redesigned version of the world famous MA-25—ideal for installations requiring single medium power units or multiple driver/horn arrangements. The ID-30, with its unusually wide upper midrange response (up to 7500 cycles), produces musical balance and noise penetration far in excess of higher-cost competitive models. Completely weatherproof with tropicalized 2" voice coil and breakdown-proof linen base diaphragm. A top value!

**MODEL ID-40 (40 watts)** Latest, maximized version of the famous, earlier Model SA-HF, often referred to as the "workhorse" of the sound industry, and widely used by high fidelity manufacturers and audio hobbyists as well. Extended high frequency response and excellent efficiency assure an essentially uniform response characteristic for pleasing, natural reproduction of speech and music, while delivering that extra "punch" needed to cut through heavy noise. Tropicalized and weatherproofed, the ID-40 can be relied upon to give continuous top-flight performance under adverse weather conditions.

**MODEL ID-40T (40 watts)** Offers the same power capacity, efficiency and frequency response as the ID-40, and incorporates a built-in line-matching transformer. The transformer terminal plate is inside the rugged, die cast aluminum housing; entrance is made through an exclusive watertight dural gland nut, assuring positive weatherproofing after connections have been made. Terminals are labeled in impedances and in wattage consumed on "constant voltage" lines. Transformer impedances: 45/122/250/500/1000/2000 ohms. 70 V. line power taps: 40/20/10/5/2.5 watts.

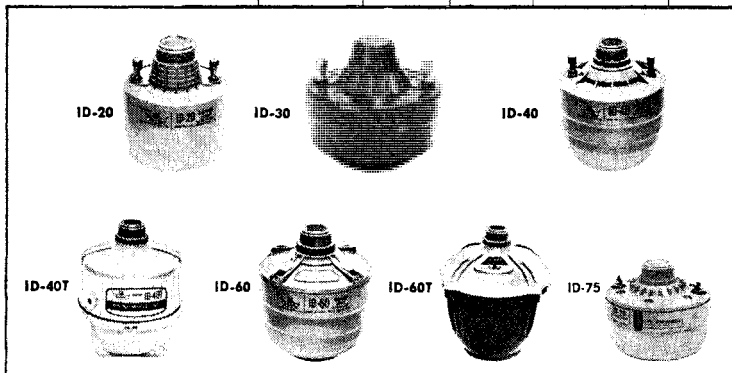
**ID-60 (60 Watts)** The premium compression driver in the world famous University line. Ideally suited to applications requiring the greatest power handling capacity, maximum efficiency, widest frequency response and rugged construction that will withstand a lifetime of hard use. Use of rugged outer case assures utmost durability even when abused or in hazardous environment. Water tight voice coil terminals are located in the base of the housing. Without question, the ID-60 is the finest wide range, high power driver ever offered.

**MODEL ID 60T (60 watts)** Similar to the ID-60, but with high-impact plastic outer case, the ID-60T includes a husky built-in line matching transformer, with its terminals immediately available at the base of the driver housing. Ideal for rental work requiring repeated set-up and dismantling of equipment, and for semi-permanent systems where changes in the number or location of speakers are likely to affect line impedance requirements. Transformer impedances: 16/80/165/250/500/1000/2000 ohms, 70 volt line power taps: 60/30/20/10/5/2.5 watts.

**ID-75 (75 Watts)** The University Model ID-75 is the newest offering in high power drivers in the P. A. industry. This 75 watt model is designed for use in either high-power electronic siren or public address applications. A large super power W shaped Alnico V8 magnet, exclusive with University, virtually eliminates reluctance losses normally present in other designs. This W shaped magnet gives the lowest leakage and maximum gap flux density resulting in peak electro-mechanical efficiency. The ID-75 is, without a doubt, the finest high power driver made for electronic siren and special purpose high-power P. A. applications.

### SPECIFICATIONS

DRIVER MODEL	FREQUENCY RESPONSE	POWER RATING	VOICE COIL IMPEDANCE	DIMENSIONS (Overall)	SHIP. WT.
ID-20	120-6500 cps	20 watts	16 ohms	3 1/2" dia. 3 3/4" d.	2 1/2 lbs.
ID-30	85-7500 cps	30 watts	16 ohms	4 1/2" dia. 3 3/4" d.	3 lbs.
ID-40	80-12000 cps	40 watts	16 ohms	4 1/2" dia. 4 7/8" d.	4 1/4 lbs.
ID-40T	80-12000 cps	40 watts	16 ohms	5" dia. 6 1/4" d.	5 1/4 lbs.
ID-60	70-12000 cps	60 watts	16 ohms	4-11/16" dia. 5" d.	4 1/4 lbs.
ID-60T	70-12000 cps	60 watts	16 ohms	6 3/4" dia. 6 3/4" d.	6 1/2 lbs.
ID-75	150-7000 cps	75 watts	16 ohms	4 1/4" dia. 3 3/4" d.	4 1/2 lbs.



## trumpets

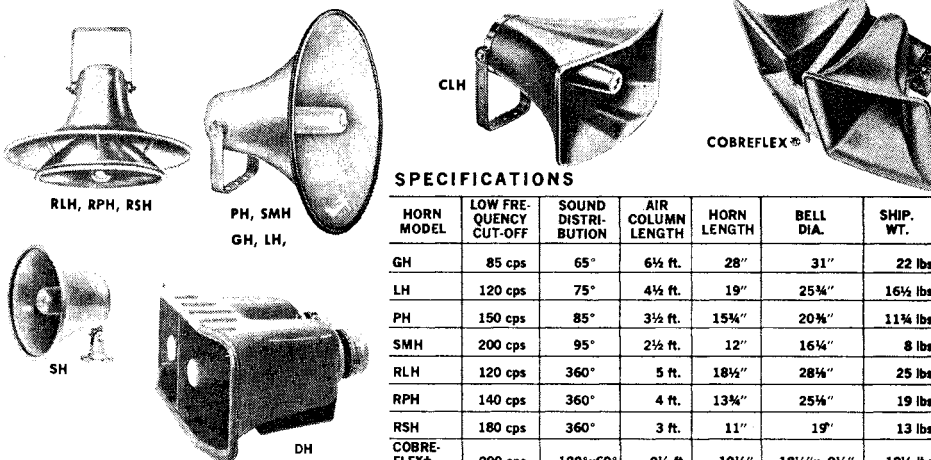
**DIRECTIONAL MODELS GH, LH, PH, SMH** For maximum penetration of distance and noise. Reflex construction assures maximum conversion efficiency, full weather protection. Baked finish.

**RADIAL MODELS RLH, RPH, RSH** For uniform 360° overhead sound distribution from a single projector. Fewer speakers needed to cover high-ceiling factories, hangars, church interiors, etc. Baked finish.

**WIDE ANGLE COBREXLEX†** Outstanding feature is pair of folded exponential horns having twin air columns in a single assembly. "Dual Exponential Flare" design results in very smooth radiation pattern and high efficiency. Rugged construction. Use singly or in clusters. Baked finish.

**WIDE ANGLE MODEL CLH†** Longest air column length and wide-angle bell designed for maximum low frequency response. Omni-directional mounting bracket permits speaker to be rotated horizontally and vertically for optimum projection . . . tune out reverberation, dead spots. Perfect for multi-speaker-cluster arrays. Can be "stacked" in any configuration. Fiberglass shell.

**MODEL L30-1 CLH** Horn Stacking Kit for clamping bell rims together in any desired configuration. Each kit clamps two horns. Shpg. wt., 6 oz.



### SPECIFICATIONS

HORN MODEL	LOW FREQUENCY CUT-OFF	SOUND DISTRIBUTION	AIR COLUMN LENGTH	HORN LENGTH	BELL DIA.	SHIP. WT.
GH	85 cps	65°	6 1/2 ft.	28"	31"	22 lbs.
LH	120 cps	75°	4 1/2 ft.	19"	25 1/4"	16 1/2 lbs.
PH	150 cps	85°	3 1/2 ft.	15 1/4"	20 3/4"	11 1/4 lbs.
SMH	200 cps	95°	2 1/2 ft.	12"	16 1/4"	8 lbs.
RLH	120 cps	360°	5 ft.	18 1/2"	28 1/4"	25 lbs.
RPH	140 cps	360°	4 ft.	13 3/4"	25 1/4"	19 lbs.
RSH	180 cps	360°	3 ft.	11"	19"	13 lbs.
COBRE-FLEX†	200 cps	120°x60°	2 1/2 ft.	10 1/4"	18 1/4" x 9 1/4"	10 1/4 lbs.
CLH†	120 cps	120°x60°	4 1/2 ft.	20"	21 1/4" x 11 1/4"	13 3/4 lbs.
SH	350 cps	90°	1 1/2 ft.	7"	8"	2 1/2 lbs.
DH	180 cps	40°x60°	3 1/2 ft.	13 3/4"	20 3/4" x 9 1/4"	10 lbs.

**SPECIFICATION NOTE:** Low frequency limit based on capability of driver unit. If horn cut-off is higher than rated low frequency limit of driver, horn will be determining factor. †Patented.

## accessories



**MODEL CTR TRANSFORMER/JUNCTION HOUSING** Die cast aluminum. Weatherproof. Houses models 5433, 5434, or other transformers up to 2 1/2" x 2 1/4" x 2 1/4". Adjustable slotted adapter mounts transformers with centers 1 1/2" to 2 1/2". Junction box for speaker lines. Bar strap for mounting to "U" brackets. Screws to wall. Also holds University paging speakers. Shpg. wt., 1 1/2 lbs.

**MODEL PB-1 TRANSFORMER HOUSING** Weatherproof. For MIL-A, CMIL-A, IB-A and CIB-A paging speakers. Use Model 5434 transformer, or other type with 2" mounting center and 1-15/16" h. x 1 1/2" w. maximum dimensions. Shpg. wt., 1/2 lb.

**MODEL 5433 TRANSFORMER** 30 watt capacity. Use with ID-20, ID-30 or to feed a number of smaller paging speakers. Primary impedance: 45/165/200/250/300/1000/2000 ohms. Secondary impedance: 4/8/16 ohms. 70 v. line power taps: 30/25/20/10/5/2.5 watts.

Dimensions: 1-15/16" x 2-5/16" x 1 1/2". Mtg. hole centers: 2 1/4". Shpg. wt. 1 lb.

**MODEL 5434 TRANSFORMER** 15 watt capacity. Primary impedance: 45/325/500/1000/2000/4000/8000 ohms. Secondary impedance: 4/8/16 ohms. 70 v. line power taps: 15/10/5/2.5/1.25/.65 watts. Dimensions: 1 1/2" x 1-15/16" x 1 1/2". Mtg. hole centers: 2". Fits CTR and PB-1. Shpg. wt., 1/2 lb.

**2YC CONNECTOR** Allows use of two driver units on a single radial, directional, or wide-angle trumpet. Shpg. wt., 1 lb.

**RTA ADAPTER** Fits University trumpets to Western Electric and RCA drivers having 1-7/16-16 threads. Shpg. wt., 1/2 lb.

**WEA ADAPTER** Fits University drivers to Western Electric and RCA trumpets having 1-7/16-16 threads. Shpg. wt., 1/2 lb.

**SPA ADAPTER** Replaces standard triangular base used on all University CR and MM-2 paging speakers for mounting to 1/2" IPS threaded pipe. Shpg. wt., 1/2 lb.

**MODEL ST Transformer/Junction Box Adapter.** Fits MM-2, ES-50. Weatherproofed. For bulkhead, wall, ceiling mounting. Houses transformers up to 2 1/4" x 2 1/4" x 2 1/4", with 2" and 2 3/8" mounting centers. Use as terminal or junction box. Shpg. wt., 1 lb.

**MODEL SB Bulkhead Mounting Adapter.** Fits MM-2, ES-50. 3 mounting holes 120° apart on 5-13/16" mounting circle diameter. For flush-fit mounting onto bulkhead, wall, ceiling. Shpg. wt., 1 lb.

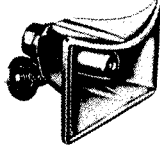


# Public Address Loudspeakers

**paging / talk-back**



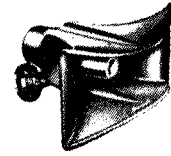
**MIL-A** New version of the MIL, with higher power capacity (7.5 watts continuous duty) and improved lower frequency. High conversion efficiency for perfect operation in low power systems. OLB\*.



**CMIL-A** Similar to CIB-A, but for use in lower power operations where excessive sound would be wasted. Offers high efficiency, maximum intelligibility. OLB\*.

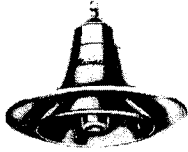


**IB-A** New version of world's most widely used medium power speaker. 25 watts continuous duty power capacity. Lower frequency response improved to 250 cps. High efficiency, special rising frequency characteristic. OLB\*.

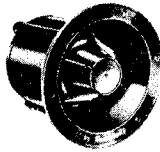


**CIB-A** Exclusive University wide-angle horn for uniform sound pattern with optimum vertical dispersion. Ideal for wide area coverage where ambient noise level not excessive. Design minimizes feedback problems. OLB\*.

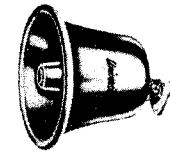
\*Exclusive patented swivel mounting OMNI-LOK BRACKET; also fastens to 1/2" pipe without additional fixture.



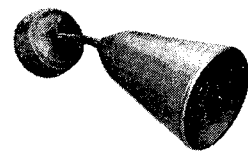
**IBR-A** Small radial speaker with built-in driver. Economical solution where total number of speakers must be kept to a minimum but where wide coverage is required.



**MIS** Compact reflex speaker designed for flange or flush mounting in cabinets, walls, etc. Ideal replacement for less efficient cone speakers. Tropicalized and weatherproof. High-impact plastic housing.



**CR** Big power in a small package. Built-in driver with heavy duty 2" voice coil. High intelligibility in noisy areas. Frequency response ideal for music reproduction.



**LIL-8** In appearance, a handsome, functional lamp—in performance, a truly superior paging speaker. Compact, yet offers high power handling capacity, wide frequency range and high conversion efficiency for improved results with low power systems.

**multi-duty**



**2WP** Bi-directional paging projector covers two opposite areas effectively, efficiently with one driver. (Takes any University driver except ID-60T.) Supplied less driver.



**ES-50** Versatile, high power speaker, especially developed for electronic siren applications. Rated full 50 watts for typical siren signal above 400 cps. As general-purpose speaker, full power rating applies over entire 250-10,000 cps range of integrated program material.



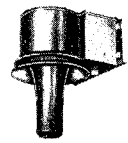
**MM-2** Power capacity and frequency response ideal for clear, noise-cutting reception. Screws permit removal from front to expose diaphragm for cleaning. Serrated swivel mounting bracket.



**MM-2F** Flush mounting version of MM-2. Performance and specifications identical to MM-2. These speakers are the ruggedest in the P.A. field. Completely weather-proof. Performance unaffected even after being completely drenched (as on boats).



**MM-2TC** Complete speaker, using cast aluminum bell and weatherproof housing with space for a line matching transformer and/or volume control which can be mounted right into position. For bulkhead, wall or ceiling mounting, the MM-2TC-T comes with multi-impedance transformer and pad attenuator built in.



**MSR** All die-cast reflexed air column speaker with radial deflector for 360° horizontal dispersion. Hermetically sealed driver easily removed. Provisions for line matching transformer and volume control. Wall/ceiling bulkhead mounting. MSR-T comes with multi-impedance transformer and pad attenuator built in.

## specifications

MODEL	FREQUENCY RESPONSE	POWER RATING	IMPEDANCE (specify when ordering)	DISPER-SION	*SOUND PRESSURE LEVEL	†SENSITIVITY AS MICROPHONE	DIMENSIONS	SHIPPING WEIGHT
IB-A	250-13,000 cps	25 watts	4, 8, 45 ohms	90°	123 db	-26 DBM	10 1/4" dia. 9" deep	4 lbs.
CIB-A	250-13,000 cps	25 watts	4, 8, 45 ohms	120° x 60°	123 db	-22 DBM	7 3/8" hi. 14" wide 12" deep	5 1/2 lbs.
MIL-A	350-13,000 cps	7.5 watts	4, 8, 45 ohms	120°	115 db	-23 DBM	7 1/8" dia. 6 7/8" deep	3 1/4 lbs.
CMIL-A	350-13,000 cps	7.5 watts	4, 8, 45 ohms	120° x 60°	115 db	-20 DBM	6 1/4" hi. 9 1/2" wide 8 1/2" deep	4 lbs.
MIS	500-13,000 cps	5 watts	4, 8, 45 ohms	150°	111 db	-22 DBM	5 1/2" o.d. 4 1/8" deep 6 holes on 4 7/8" mtg. dia.	2 1/2 lbs.
CR	250-8000 cps	20 watts	16 ohms	90°	119 db	-22 DBM	11 1/2" dia. 11 1/2" deep	8 3/4 lbs.
IBR-A	300-10,000 cps	25 watts	4, 8, 45 ohms	360°	108 db	-32 DBM	13" dia. 10 1/4" deep	5 1/4 lbs.
2WP	350 cps horn cut-off	Depends upon driver used	Depends upon driver used	120° each horn	Depends upon driver used	Depends upon driver used	8 1/2" dia. each bell 20 1/2" long	4 lbs.
MM-2	350-10,000 cps	25 watts	16 ohms	150°	117 db		6" o.d. 5" deep	5 1/4 lbs.
ES-50	250-10,000 cps	50 watts**	16 ohms	120°	123 db		6 13/16" o.d. 6 7/8" deep	5 1/2 lbs.
MM-2F	350-10,000 cps	25 watts	16 ohms	150°	117 db		7 1/4" o.d. 3 3/4" deep	5 1/4 lbs.
MM-2TC	350-10,000 cps	25 watts	16 ohms	120°	117 db		10" high 6 1/8" w. 4 3/8" deep	MM-2TC—8 1/2 lbs. MM-2TC-T—9 3/4 lbs.
MSR	250-10,000 cps	25 watts	16 ohms	360°	114 db		10 3/4" hi. 7 3/4" w. 8 1/4" deep	MSR—10 1/4 lbs. MSR-T—11 1/4 lbs.
LIL-8	300-10,000 cps	15 watts	8 ohms	110°	119 db	-27 DBM	15 1/2" long 6 7/8" dia.	4 1/2 lbs.

\*Sound pressure readings taken at 4 ft. with "Full Range" power input. Reduce by 6 db each time distance is doubled. Reduce by 3 db each time power input is halved; increase by 3 db when power input is doubled.

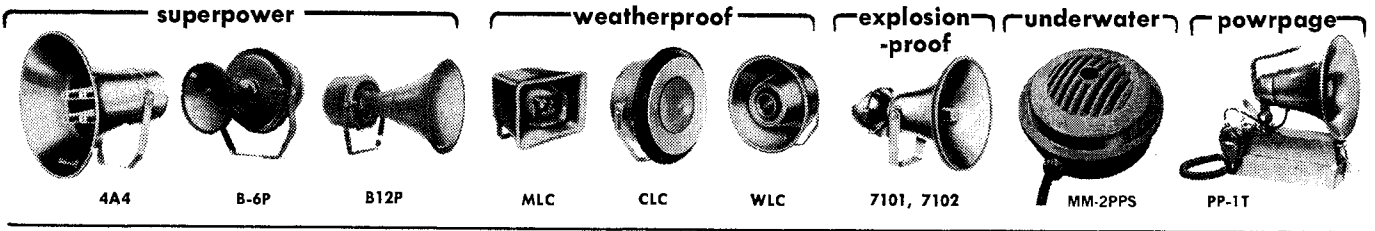
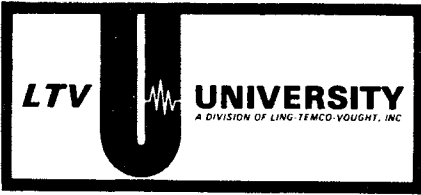
†DBM re 10 dynes/cm<sup>2</sup>.

Note: MIS and all MM speakers are patented.

\*\*See ES-50 description above.

**HIGH 'A' . . . HIGH AUDIBILITY . . . exclusive with UNIVERSITY LOUDSPEAKERS**

# Special Purpose Loudspeakers



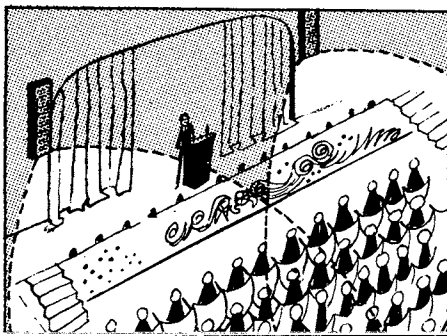
## specifications

MODEL	FREQUENCY RESPONSE	POWER RATING	DISPERSION	IMPEDANCE	DIMENSIONS		SHIPPING WEIGHT
					DIAMETER (overall)	DEPTH (overall)	
MLC	150-15,000 cps	15 watts	120°	8 ohms	12 3/4" x 9 1/8"	10 5/8"	10 lbs.
CLC	55-14,000 cps	30 watts	120°	8 ohms	22 3/4"	12 1/16"	23 lbs.
WLC	50-15,000 cps	30 watts	90°	8 ohms	33 1/2"	20"	68 lbs.
7101 and 7102†	200-10,000 cps	30 watts	95°	16 ohms	15 3/4"	19"	23 3/4 lbs.
4A4 Used With 4 Drivers of Types	ID-30	120- 7,500 cps	80°	4, 16, 64	30 3/4"	28 7/8"	46 lbs. less drivers
	ID-40	120-12,000 cps		4, 16, 64			
	ID-40T	120-12,000 cps		wide variation			
	ID-60	120-12,000 cps		4, 16, 64			
B-6P Used With 6 Drivers of Types	ID-30	200- 7,500 cps	100°	2.7, 10.7, 24, 96 ohms	12 1/2"	21 3/8"	55 lbs. less drivers
	ID-40	200-12,000 cps					
	ID-60	200-12,000 cps					
B-12P Used With 12 Drivers of Types	ID-30	100- 7,500 cps	80°	1.3, 5.3, 12, 21.3, 48, 192 ohms	31 1/2"	47"	60 lbs. less drivers
	ID-40	100-12,000 cps					
	ID-60	100-12,000 cps					

\*\*POWRPAGES, as well as all other University P.A. Loudspeakers, are approved for Civil Defense matching funds.

†Transformer impedances, 7101 and 7102: 45/165/200/250/500/1000/2000 ohms. 70 V. line power taps, 7101 and 7102: 30/25/20/10/5/2.5 watts.

## UNILINE® Sound Columns



Wide horizontal dispersion—the UNILINE, delivering sound in depth over a large area.

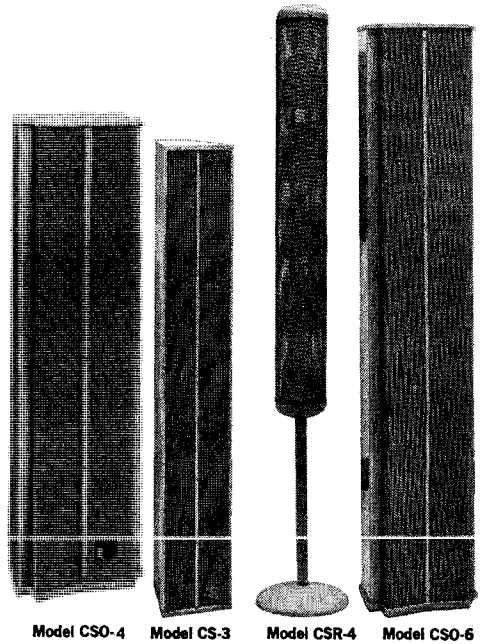


Conventional speaker contour.



UNILINE column contour.

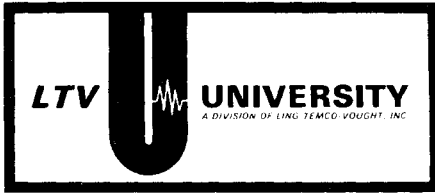
Constant loudness contours shown for a UNILINE column versus a conventional speaker, illustrating the situation that exists at representative midrange frequencies, where most of the "punch" of the sound is concentrated. With UNILINE, loudness is the same for a listener located anywhere in the auditorium.



### SPECIFICATIONS

	CSO-6* Full Range Music and Speech	CS-4 Full Range Music and Speech	CSO-4* Full Range Music and Speech	CS-3 Music and Speech	CSR-4* Full Range Music and Speech
speakers	6 extended range 8"	4 extended range 8"	4 extended range 8"	8 special multi-design	4 extended range 6"
frequency range	55-17,000 cps	70-17,000 cps	70-17,000 cps	150-10,000 cps	65-20,000 cps
power capacity	120 watts IPM**	80 watts IPM**	80 watts IPM**	25 watts IPM**	60 watts IPM**
impedance	16 ohms	8 ohms	8 ohms	16 ohms	8 ohms
vertical angle	16°	22°	18°	22°	18°
horizontal angle	120°	120°	120°	120°	360°
dimensions	60 1/4" x 11 7/8" x 7 3/4"	40 3/4" x 11" x 9-1/16"	41 3/4" x 7 3/4" x 11 1/8"	48" x 7 1/2" x 8 3/4"	52" x 7"
shipping wt. lbs.	61	46	46	33	30

\*Completely weatherproof \*\*Integrated program material.

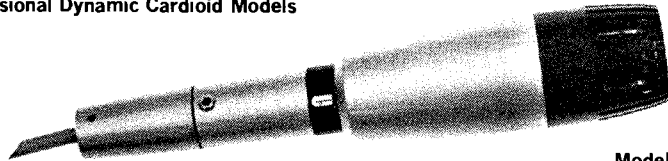


# UNIVERSITY Dynamic Microphones

## Broadcasting, Recording, Communications and General Purpose Models

UNIVERSITY'S new series of dynamic microphones embraces every possible need in the audio field. Widely acclaimed in the industry, each UNIVERSITY microphone is designed and engineered to maintain the same exacting quality standards for which UNIVERSITY is famous the world over. Each and every UNIVERSITY microphone, from the economically priced Model 2000 to the top of the line Model 1050, is covered by UNIVERSITY'S exclusive 5 YEAR warranty to assure reliable trouble free operation for many years. To own the finest—choose UNIVERSITY!

### Professional Dynamic Cardioid Models



Model 1000

#### Model 1000

The University Model 1000 is the ideal microphone for many broadcast and recording applications. For such applications as location broadcasts in radio and television and use in main-studio interview type programs, the Model 1000 will give superior results. Broad frequency response, from 30 to 16,000 cps, shock mounted cartridge and noise rejecting characteristics. Model 1000 is for high quality live recording. Impedance is selectable between 50, 200, and 20,000 ohms. Output level for 50 and 200 ohms—54db/1mw/10 dynes/cm<sup>2</sup>, for 20,000 ohms is 17mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions 1 3/4" by 8 3/4". Shipping Wt. 3 3/4 lbs. Supplied complete with an 18 ft. 2 conductor shielded broadcast type cable and stand adaptor. Price \$81.00

#### Model 1040

Same as above but equipped with on-off switch and Cannon Connector. Dimensions—1 3/4" dia., 10 1/2" length. Shipping Wt. 4 lbs. Supplied with 18 ft. shielded broadcast type 2 conductor cable and slide-on stand adaptor. Price \$87.00

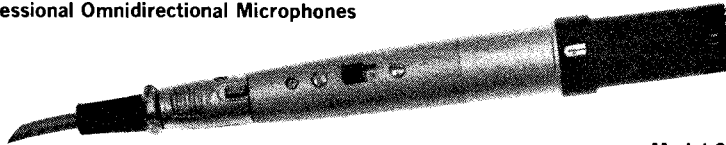
#### Model 1050

Same as above except equipped with microphone-stand adaptor and on-off switch. Accepts the Cannon Model XLR-3-11C plug. Supplied with 18 ft. 2 conductor shielded broadcast type cable. Dimensions—1 3/4" dia., 10 3/8" length. Shipping Wt. 4 lbs. Price \$87.00

#### Model 1100

The University Model 1100 has highly directional characteristics. It is designed to pick up sound from a limited area. Impedance selection 50, 200 or 20,000 ohms. Frequency response 30-16,000 cps. Output level for 50 and 200 ohms is—54db/10mw/10 dynes/cm<sup>2</sup>; for 20,000 ohms is 17mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions—1 1/2" dia., 7 3/4" length. Supplied with an 18 ft. 2 conductor shielded broadcast type cable and slide-on microphone stand adaptor. Shipping Wt. 3 3/4 lbs. Price \$74.40

### Professional Omnidirectional Microphones



Model 2140

#### Model 2140

The University Model 2140 is ideal for high quality general soundcasting applications in churches, night clubs, schools and industrial and commercial public address installations. Frequency response 30-20,000 cps. Impedance selection 50, 200 or 20,000 ohms. Output level for 50 and 200 ohms is—55db/10 dynes/cm<sup>2</sup>, for 20,000 ohms is 16mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions—1 1/2" dia., 9" length. Equipped with on-off switch integral in microphone case, accepts Cannon Model XLR-3-11C plug. Supplied with 18 ft. 2 conductor shielded broadcast type cable slide-on stand adaptor. Shipping Wt. 3 3/4 lbs. Price \$45.36

#### Model 2150

Same as above except equipped with microphone-stand adaptor and on-off switch. Dimensions—1 1/2" dia., 9 3/8" length. Shipping Wt. 3 3/4 lbs. Price \$46.74

#### Model 2200

The University Model 2200 fulfills all the critical requirements of a professional broadcast microphone and soundcasting applications in churches, night clubs, schools, and industrial and commercial public address installations. Frequency response 30-20,000 cps. Impedance selection 50, 200, or 20,000 ohms. Output level for 50 and 200 ohms is—55db/1mw/10 dynes/cm<sup>2</sup>, for 20,000 ohms is 16 mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Supplied with an 18 ft. 2 conductor shielded broadcast type cable. Dimensions—1 1/2" dia., 10 3/4" length. Shipping Wt. 3 3/4 lbs. Price \$43.74

## Communications Microphones

### Model 9000

The University Model 9000 is ideal for mobile communications and mobile public address systems. Equipped with a 14' coiled, 6' extended, 3-conductor cable, "push-to-talk" switch and panel mounting bracket. Frequency response 95-9500 cps. Impedance 25,000 ohms. Output level—55db/1.0 volt/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions—4" H. x 2 1/4" W. x 1 3/4" D. Net weight—10 oz. Price \$24.75

#### Model 2240

Same as above except equipped with on-off switch integral in microphone case accepts the Cannon Model XLR-3-11C plug. Dimensions—1 1/2" dia., 11 1/2" length. Shipping Wt. 3 3/4 lbs. Price \$49.80

#### Model 2250

Same as above except equipped with microphone-stand adaptor. Dimensions—1 1/2" dia., 11 3/4" length. Shipping Wt. 3 3/4 lbs. Price \$51.18

#### Model 4040

The University Model 4040 fulfills critical requirements of a professional broadcast microphone. Ideal for churches, night clubs, schools and location broadcasting of AM, FM and television. Frequency response—50-20,000 cps. Impedance selection 50, 200, or 20,000 ohms. Output level for 50 and 200 ohms is—55db/1mw/10 dynes/cm<sup>2</sup>, for 20,000 ohms is 16mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions—1 1/2" dia., 7 1/2" length. Equipped with on-off switch, accepts the Cannon Model XLR-3-11C plug. Supplied with an 18 ft. 2-conductor shielded broadcast type cable and slide-on stand adaptor. Shipping Wt. 2 3/4 lbs. Price \$63.64

#### Model 4050

Same as above except equipped with microphone-stand adaptor. Dimensions—1 1/2" dia., 7 3/4" length. Shipping Wt. 2 3/4 lbs. Price \$65.48

### Model 2040

The University Model 2040 is ideal for applications in churches, schools and industrial and commercial public address installations—improving home tape recordings and ham broadcasting rigs. Equipped with an 18 ft. 2-conductor shielded flexible cable and slide-on stand adaptor and on-off switch. Frequency response 50-20,000 ohms. Impedance selection 50 or 20,000 ohms. Output level: 50 ohms is—50db/1mw/10 dynes/cm<sup>2</sup>, 20,000 ohms is 28mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions—1 1/2" dia., 5 3/8" length. Shipping Wt. 2 3/4 lbs. Price \$30.60

## Professional Lavalier Microphones

### Model 2100

The University Model 2100 may be used as a lavalier, hand-held or desk-stand mounted. Frequency response—30-20,000 cps. Impedance selection 50, 200 or 20,000 ohms. Output level: for 50 and 200 ohms is—55db/1mw/10 dynes/cm<sup>2</sup>, for 20,000 ohms is 16mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions—1 1/4" dia., 7 3/4" length. Supplied with neck-cord, clip and 18 ft. 2-conductor shielded broadcast type cable. Shipping Wt. 3 3/4 lbs. Price \$39.30

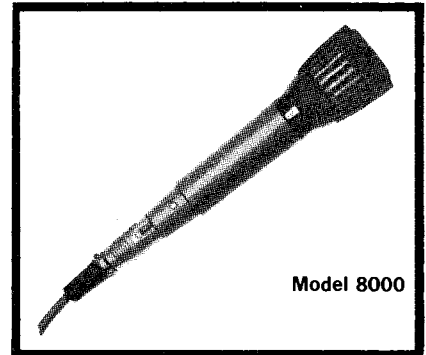
### Model 4080

The Model 4080 is an ultra-compact lavalier microphone. Ideal for churches, night clubs, schools, location broadcasting of AM, FM and television. Frequency response 60-20,000 cps. Impedance selection 50 or 200 ohms. Output level: 50 to 200 ohms is—55db/1mw/10 dynes/cm<sup>2</sup>. Hum reference—120db/001 gauss. Dimensions—1 3/4" dia., 3 3/8" length. Supplied with neck-cord, clip and 25 ft. flexible plastic cable. Shipping Wt. 2 3/4 lbs. Price \$52.96

### Model 4000

The Model 4000 is a premium quality microphone, may be used as a lavalier or hand-held or desk stand mounted. Ideal for applications such as churches, night-clubs, schools and location broadcasting of AM, FM and television. Frequency response—50-20,000 cps. Impedance selection 50, 200 or 20,000 ohms. Output level: 50 and 200 ohms is—55db/1mw/10 dynes/cm<sup>2</sup>, 20,000 ohms is 16mv/10 dynes/cm<sup>2</sup>. Dimensions—1 3/4" dia., 5 3/8" length. Supplied with neck-cord, clip and 18 ft. flexible plastic broadcast type cable. Shipping Wt. 2 3/4 lbs. Price \$54.96

## University Public Address and Home Recording Microphones



Model 8000

### Model 8000, Cardioid Dynamic Microphone

The University Model 8000 has highly directional characteristics. Its cardioid dynamic cartridge is shock mounted ideal for announcing booths at stadiums, arenas and fieldhouses, church sound systems, industrial and commercial public address installations, home tape recordings and upgrading ham and citizens band broadcasting rigs. The Model 8000 is equipped with a 15 ft., 3-conductor shielded broadcast type cable, accepts the Cannon Model XLR-4-11C plug. Slide-on stand adaptor is supplied. Frequency response 70-15,000 cps. Impedance selection 50 and 20,000 ohms. Output level: 50 ohms is—60db/1mw/10 microbar, 20,000 ohms is 8.5mv/10 microbar. Dimensions—1 3/4" dia., 6 3/8" length. Shipping Wt. 1 1/4 lbs. Price \$29.95

### Model 2000

#### Omnidirectional Dynamic Microphone

The University Model 2000 is ideal for general soundcasting applications and improving home tape recordings and upgrading ham broadcasting rigs. Supplied with a 15 ft. 3-conductor shielded flexible cable and slide-on stand adaptor. Frequency response 50-14,000 cps. Impedance selection 50 or 20,000 ohms. Output level: 50 ohms is—50db/1mw/10 dynes/cm<sup>2</sup>, 20,000 ohms is 28mv/10 dynes/cm<sup>2</sup>. Hum reference—120db/00 gauss. Dimensions—1 1/4" dia., 6" length. Shipping Wt. 2 3/4 lbs. Price \$23.11

## University Microphone Accessories

MODEL DS-10. Microphone desk stand. Desk stand for us with any microphone with standard 5/8-27 NPSM thread. May be used with any University microphone and stand adaptor. Dimensions—4 1/2" H. x 7 7/8" W. x 4 3/4" D. Shipping Wt. 3 1/2 lbs. Price \$6.9

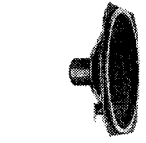
MODEL SA-10. Slide on stand adaptor. Dimensions—2 7/8" L x 2" W. x 1/2" D. Shipping Wt. 1/4 lb. Price \$3.4

NOTE: All University Microphones are factory assembled for light impedance except the 1000 and 1100 series which are connected for low impedance. All models are finished in Acrylic silver-gray and non-reflecting black except the Model 4080 which is antique bronze

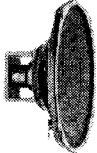
# AKTRON REPLACEMENT SPEAKERS

- ALUMINUM VOICE COILS
- ALNICO 5 MAGNETS
- SPECIALLY TREATED BLUE CONES
- BLUE LUMINESCENT BAKED ENAMEL FINISH

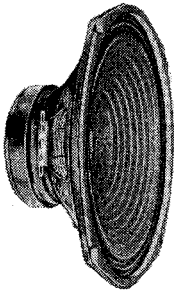
Size and Shape	Part No.	Magnet Weight Ounces	VOICE COIL		Power in Watts	Suggested Dealer Prices
			Dia. Inches	Impedance (Ohms)		
2 1/4" Round	23A8	.53 cup	9/16	8	1	\$2.16
2 3/4" Round	28A8	.53 cup	9/16	8	2	1.95
3" Square	3A3	.53 cup	9/16	3.2	2	1.62
3" Square	3C3	1.00	9/16	3.2	3	1.83
3 1/2" Square	35A3	.53 cup	9/16	3.2	2	1.62
3 1/2" Square	35C3	1.00	9/16	3.2	3	1.83
4" Square	4A3	.53 cup	9/16	3.2	2	1.47
4" Square	4B3	.68	9/16	3.2	2	1.74
4" Square	4C3	1.00	9/16	3.2	3	1.82
4" Square	4D3	1.47	9/16	3.2	3	2.10
5" Pin Cushion	5A3	.53 cup	9/16	3.2	2	1.59
5" Pin Cushion	5B3	.68	9/16	3.2	2	1.77
5" Pin Cushion	5C3	1.00	9/16	3.2	3	1.89
5" Pin Cushion	5D3	1.47	9/16	3.2	3	2.13
5" Round	R5A3	.53 cup	9/16	3.2	2	1.59
5" Round	R5B3	.68	9/16	3.2	2	1.77
5" Round	R5D3	1.47	9/16	3.2	3	2.13
5 1/4" Pin Cushion	53B3	.68	9/16	3.2	2	1.89
5 1/4" Pin Cushion	53C3	1.00	9/16	3.2	3	1.98
6" Pin Cushion	6B3	.68	9/16	3.2	3	2.01
6" Pin Cushion	6C3C	1.00 cup	3/4	3.2	5	2.10
6" Pin Cushion	6D3	1.47	9/16	3.2	5	2.40
6" Pin Cushion	6E3C	2.18 cup	1	3.2	7	2.73
6" Pin Cushion	6E8C	2.18 cup	1	8	7	2.73
8" Pin Cushion	8C3C	1.00 cup	3/4	3.2	4	2.82
8" Pin Cushion	8D3	1.47	9/16	3.2	5	3.12
8" Pin Cushion	8E3C	2.18 cup	1	3.2	6	3.57
8" Pin Cushion	8F3	3.16	3/4	3.2	8	3.96
8" Pin Cushion	8H3	6.80	1	3.2	12	5.58
8" Pin Cushion	8E8	2.15	3/4	8	6	3.57
8" Pin Cushion	8E8C	2.18 cup	1	8	7	3.57
8" Round Flat	8E8CF	2.18 cup	1	8	7	3.57
8" Round	8E8S	2.15	3/4	8	6	4.05
8" Round Flat	8EU8F	*3.00	3/4	8	6	4.28
8" Pin Cushion	8F8	3.16	3/4	8	8	3.96
8" Pin Cushion	8G8	4.64	1	8	10	5.19
8" Pin Cushion	8GU8	*6.00	1	8	10	5.89
8" Pin Cushion	8H8	6.80	1	8	12	5.58
8" Pin Cushion	8HU8	*10.00	1	8	12	6.29
8" Round	8K8	10.10	1-1/4	8	20	8.21
10" Round	10F3	3.16	3/4	3.2	8	5.01
10" Round	10H3	6.80	1	3.2	12	7.05
10" Round	10F8	3.16	3/4	8	8	5.01
10" Round	10H8	6.80	1	8	12	7.05
12" Round	12E3C	2.18 cup	1	3.2	7	5.28
12" Round	12F3	3.16	3/4	3.2	8	5.73
12" Round	12H3	6.80	1	3.2	12	7.75
12" Round	12E8C	2.18 cup	1	8	7	5.28
12" Round	12F8	3.16	3/4	8	8	5.73
12" Round	12H8	6.80	1	8	12	7.75
12" Round	12HU8	*10.00	1	8	12	8.45
12" Round	12K8	10.10	1-1/4	8	20	10.18
15" Round	15H8	6.80	1	8	14	10.95
3" x 5"	135A3	.53 cup	9/16	3.2	2	1.77
3" x 5"	135C3	1.00	9/16	3.2	3	1.98
2 1/2" x 10"	210D3	1.47	9/16	3.2	5	3.69
4" x 6"	46A3	.53 cup	9/16	3.2	2	1.83
4" x 6"	46B3	.68	9/16	3.2	3	2.01
4" x 6"	46C3	1.00	9/16	3.2	4	2.13
4" x 8"	48E3C	2.18 cup	1	3.2	5	3.27
4" x 10"	410E3C	2.18 cup	1	3.2	6	3.45
5" x 7"	57A3	.53 cup	9/16	3.2	2	2.01
5" x 7"	57C3C	1.00 cup	3/4	3.2	5	2.46
5" x 7" Flat	57C3CF	1.00 cup	3/4	3.2	5	2.46
5" x 7"	57D3	1.47	9/16	3.2	5	2.76
5" x 7"	57E3C	2.18 cup	1	3.2	7	3.03
5" x 7"	57F3X	3.16	1	3.2	8	3.90
5" x 7"	†F57C8C	1.00 cup	3/4	8	5	2.91
6" x 9"	69A3	.53 cup	9/16	3.2	2	2.29
6" x 9"	69C3C	1.00 cup	3/4	3.2	5	2.76
6" x 9"	69D3	1.47	9/16	3.2	5	3.03
6" x 9"	69E3C	2.18 cup	1	3.2	7	3.45
6" x 9" Flat	69E3CF	2.18 cup	1	3.2	7	3.45
6" x 9"	69H3	6.80	1	3.2	10	5.76
6" x 9"	69C8C	1.00 cup	3/4	8	5	2.76
6" x 9"	69E8C	2.18 cup	1	8	7	3.45
6" x 9"	†F69E8C	2.18 cup	1	8	7	3.99



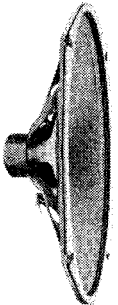
4" SQUARE CUP HOUSING



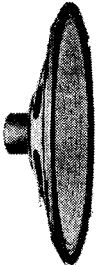
5" PIN CUSHION



8" CERAMIC MAGNET



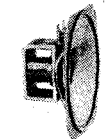
4" x 10" OVAL CUP HOUSING



6" x 9" FLAT CUP HOUSING



6" x 9" MULTI-IMPEDANCE



4" WEATHERPROOF

NOTE—Transformer Mounting Boss on all 4", 5" Round, 8" and 12" Speakers.

EIA WARRANTY APPLIES TO ALL OAKTRON SPEAKERS.

\*Ceramic Magnet — All others Alnico 5 †Has two mounting holes Grindling dust screen.

## MULTI-IMPEDANCE SPEAKERS 10-20-40 OHM

Oaktron's new "three in one" multi-impedance series

- Specially developed heavy voice coil winding for maximum power handling.
- Dual solderless terminal strip arrangement for simplified hook up.
- Complete wiring diagram accompanies each speaker.

6" Pin Cushion	6EMC	2.18 cup	1	10-20-40	6	\$3.15
4" x 10"	410EMC	2.18 cup	1	10-20-40	6	3.90
5" x 7"	57EMC	2.18 cup	1	10-20-40	7	3.48
6" x 9" Flat	69EMCF	2.18 cup	1	10-20-40	7	3.90

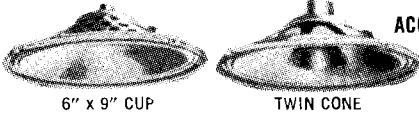
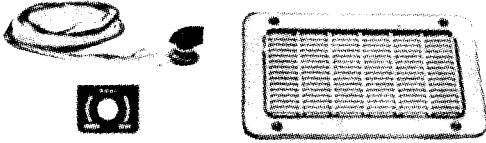
## WEATHERPROOF SPEAKERS

Specially Impregnated Cones, Gaskets and Dust Caps

3 1/2" Square	35D8M	1.47	9/16	8	3	\$2.37
4" Square	4D8M	1.47	9/16	8	3	2.37
5" Round	R5D8M	1.47	9/16	8	3	2.40
8" Pin Cushion	8F8M	3.16	3/4	8	8	4.14
6" x 9" Flat	69E3CFM	2.18 cup	1	3.2	6	3.63

## REAR SEAT SPEAKER KITS and Accessories

Featuring Oaktron's High Energy cup housing speakers. Solderless hookup — No special tools required for installation.



6" x 9" CUP

TWIN CONE

### ACCESSORIES

Fader Control with Presoldered wire and hardware	\$1.53
Switch Control with Presoldered wire and hardware	1.26
Chrome Grill with hardware	1.35
Grey Grill with hardware	1.08

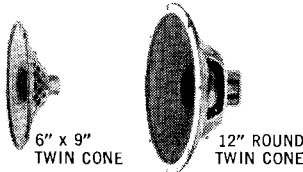
NOTE—Kits can be supplied with other Oaktron speakers. Please request quotation from factory.

Model	Speaker	Grille	Control	Magnet Size	Sugg. Dealer Price
RK57	5 x 7	Gray	3 Pos. Switch	1.0 oz. cup	\$4.75
RK57C	5 x 7	Chrome	3 Pos. Switch	1.0 oz. cup	5.06
RK57F	5 x 7	Gray	Fader	1.0 oz. cup	5.06
RK57CF	5 x 7	Chrome	Fader	1.0 oz. cup	5.37
AK69	6 x 9	Gray	3 Pos. Switch	.53 oz. cup	4.76
AK69C	6 x 9	Chrome	3 Pos. Switch	.53 oz. cup	5.06
AK69F	6 x 9	Gray	Fader	.53 oz. cup	5.06
AK69CF	6 x 9	Chrome	Fader	.53 oz. cup	5.37
RK69	6 x 9	Gray	3 Pos. Switch	1.0 oz. cup	5.40
RK69C	6 x 9	Chrome	3 Pos. Switch	1.0 oz. cup	5.60
RK69F	6 x 9	Gray	Fader	1.0 oz. cup	5.60
RK69CF	6 x 9	Chrome	Fader	1.0 oz. cup	5.90
WK69	6 x 9	Gray	3 Pos. Switch	2.18 oz. cup	6.12
WK69C	6 x 9	Chrome	3 Pos. Switch	2.18 oz. cup	6.39
WK69F	6 x 9	Gray	Fader	2.18 oz. cup	6.39
WK69CF	6 x 9	Chrome	Fader	2.18 oz. cup	6.65

Sugg. DLR Price

## TWIN CONE SPEAKERS

Matched dual cones for true high fidelity sound reproduction.



6" x 9" TWIN CONE

12" ROUND TWIN CONE

Size and Shape	Part Number	Magnet Weight Ounces	VOICE COIL		Power in Watts	Sugg. Dealer Price
			Dia. Inches	Impedance (Ohms)		
8" Pin Cushion	8E8WC	2.18 cup	1	8	6	\$3.84
8" Pin Cushion	8F8W	3.16	3/4	8	8	4.26
8" Pin Cushion	8H8W	6.80	1	8	12	5.89
8" Pin Cushion	8HU8W	10.00	1	8	12	6.59
12" Round	12F8WX	3.16	1	8	10	6.54
12" Round	12H8W	6.80	1	8	12	8.19
5" x 7"	57E8W	2.15	9/16	8	6	3.30
6" x 9"	69E8WC	2.18 cup	1	8	6	3.72
6" x 9"	69EU8W	*3.00	3/4	8	6	4.35
6" x 9"	69H8W	6.80	1	8	10	6.21

## INTERCOM SPEAKERS

Size and Shape	Part No.	Magnet Weight Ounces	VOICE COIL		Power in Watts	Sugg. Dealer Price
			Dia. Inches	Impedance (Ohms)		
3 1/2" Square	35A45	.53 cup	9/16	45	2	\$1.77
4" Square	4A45	.53 cup	9/16	45	2	1.77
4" Square	4D45	1.47	9/16	45	3	2.28
5" Pin Cushion	5D45	1.47	9/16	45	3	2.31
8" Pin Cushion	8F45	3.16	3/4	45	8	4.15

## TWEETER SPEAKERS

These speakers are true compression type, using totally enclosed baskets and molded curvilinear cones for maximum high frequency radiation, 8 ohm aluminum voice coils and Alnico 5 magnets—Blue luminescent enamel finish.

Size and Shape	Part Number	Impedance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Sugg. Dealer Price
3" Square	3C8T	8 Ohms	1.00 oz.	9/16"	4	3000-16,000	\$1.95
3 1/2" Square	35D8T		1.47 oz.	9/16"	5	3000-16,000	2.25
4" Square	4D8T		1.47 oz.	9/16"	5	3000-15,000	2.25
5" Round	5D8T		1.47 oz.	9/16"	5	2000-15,000	2.31
4" x 6"	46D8T		1.48 oz.	9/16"	6	2000-17,000	2.43

## SYSTEMS

Matched Trio for Multi-Speaker Application

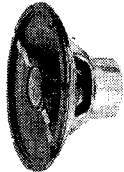
Size in Inches	Part Number	Impedance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Sugg. Dealer Price
12 6x9 4x6 Harness with Crossover	ST-124	8 Ohms	12" Woofer 6.80 oz. 6"x9" Mid Range 3.16 oz. 4"x6" Tweeter 1.47 oz.	1" 3/4" 9/16"	12	35-15,000	\$16.50

## HIGH FIDELITY SPEAKERS

ALL OAKTRON HI-FIDELITY SPEAKERS ARE ENCLOSED IN A PLASTIC COVERING AND INDIVIDUALLY BOXED TO INSURE MAXIMUM PROTECTION.

### COAXIAL SPEAKERS

Oaktron's coaxial type speakers are superbly engineered to produce a flat response over a wide range of frequencies. These speakers are finished in a glossy royal blue luminescent enamel and feature a unique cross over network, solid basket compression type tweeters, specially treated aluminum voice coils and Alnico 5 magnets. These features combined with Oaktron's superior workmanship offers the finest in coaxial speakers.



12" COAXIAL

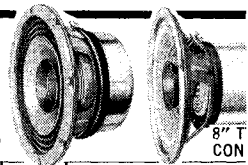
Size in Inches	Part Number	Impedance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Sugg. Dealer Price
8	CA-8	8 Ohms	8" Woofer 3.16 oz. 3" Tweeter .53 oz.	3/4" 9/16"	8	60-14,000	\$7.70
8	CA8-HD	8 Ohms	8" Woofer 6.80 oz. 3" Tweeter .53 oz.	1" 9/16"	12	50-14,000	9.10
12	CA-12	8 Ohms	12" Woofer 6.80 oz. 3" Tweeter 1.00 oz.	1" 9/16"	12	35-14,000	11.70
12	†CA12HD	8 Ohms	12" Woofer 10.10 oz. 3 1/2" Tweeter 1.00 oz.	1 1/4" 3/8"	20	25-14,000	15.25
15	CA-15	8 Ohms	15" Woofer 6.80 oz. 5" Tweeter 1.00 oz.	1" 9/16"	14	30-13,000	15.60
6x9	CA-69	8 Ohms	6"x9" Woofer 2.15 oz. 3" Tweeter .53 oz.	3/4" 9/16"	6	70-14,000	6.54
6x9	CA-69-HD	8 Ohms	6"x9" Woofer 6.80 oz. 3" Tweeter .53 oz.	1" 9/16"	10	60-14,000	9.10

†Chrome Finished Dust Cover.

## CLASSIC SERIES

Twin cone speakers:

- Perfectly matched dual cones
- Smooth Response
- Heavy magnets • Large voice coils



Size in Inches	Part Number	Impedance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Sugg. Dealer Price
6	†FEGW Free Edge Cone	8	*6.00 oz.	1"	12	40-15,000	7.75
8	†F8KW Free Edge	Ohms	10.10 oz.	1 1/4"	20	30-14,000	\$11.80
12	†12K8W	Ohms	10.10 oz.	1 1/4"	20	25-13,000	13.90

†Chrome Finished Dust Cover.

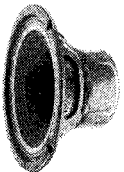
\*Ceramic Magnet

## FREE EDGE CONE SUSPENSION

SAME GENERAL APPEARANCE AS COAXIAL SPEAKERS

Excellent woofer characteristics combined with a perfectly matched twin cone to complete a truly exceptional full range high fidelity speaker.

8" FREE EDGE TWIN CONE



Size in Inches	Part Number	Impedance	Magnet Weight	V.C. Dia.	Power Watts	Frequency Response	Sugg. Dealer Price
6x9	FE69WC Twin Cone	8 Ohms	2.18 oz.	1"	8	40-15,000	\$6.85
8	FE-8	8 Ohms	6.80 oz.	1"	12	35- 6,500	7.95
8	FE-8W Twin Cone	8 Ohms	6.80 oz.	1"	12	40-16,000	8.70



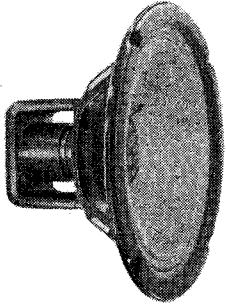


# AKTRON ARCHITECTURAL SOUND SPEAKERS LINE TRANSFORMERS

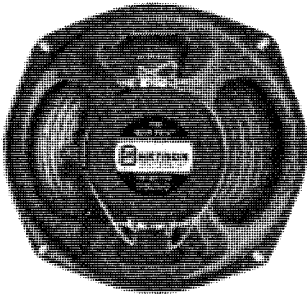
## ARCHITECTURAL SOUND SPEAKERS

- Aluminum Voice Coils
- Attractive Blue Luminescent Finish

Oaktron Architectural Sound speakers are designed specifically for commercial sound applications. Through the use of specially treated aluminum voice coils and carefully selected component parts, these speakers have proven their exceptional durability even under the most adverse conditions. These important features combined with Oaktron's superior workmanship and rigid quality control procedures assure the finest in commercial sound speakers.



OA51  
8" ROUND



OA56U  
8" PIN CUSHION  
DOUBLE TRANSFORMER  
EMBOSS

Size and Shape	Part No.	Magnet Weight Ounces	Voice Dia. Inches	Coil Impedance Ohms	Power In Watts	Std. Bulk Pack	Wt. Case	Net Price
6" Pin Cushion	OA21	2.18 cup	1	8	7	24	20	\$2.73
8" Round	OA40	2.15	3/4	8	6	24	20	3.57
8" Round-Flat	OA41U	*3.00	3/4	8	6	24	30	4.28
8" Pin Cushion	OA43	3.16	3/4	8	8	24	36	3.96
8" Pin Cushion	OA45	4.64	1	8	10	24	56	5.19
8" Pin Cushion	OA46U	*6.00	1	8	10	24	48	5.89
8" Pin Cushion	OA48	6.80	1	8	12	24	58	5.58
8" Pin Cushion	OA49U	*10.00	1	8	12	24	59	6.29
8" Round	OA51	10.10	1 1/4	8	20	16	55	8.21
8" Pin Cushion	±OA53	3.16	3/4	8	8	24	36	4.26
8" Pin Cushion	±OA54U	*10.00	1	8	12	24	59	6.59
8" Pin Cushion	†OA56U	*6.00	1	8	10	24	48	6.79
12" Round	OA68	6.80	1	8	12	8	32	7.75
12" Round	OA69U	*10.00	1	8	12	8	33	8.45
12" Round	OA71	10.10	1 1/4	8	20	8	40	10.18

\* Ceramic magnet—all others Alnico 5.

† Dual 8 ohm voice coil.

± Twin cone speakers.

## LINE TRANSFORMERS

CONSTANT VOLTAGE LINE TRANSFORMERS for impedance matching to 70.7 volt of 25 volt lines. This system provides simplified matching of speakers to an amplifier even though the individual speaker is required to produce different amounts of power. Oaktron transformers possess maximum efficiency and response characteristics through the use of new materials and the most advanced design parameters.

### CONSTANT VOLTAGE: UNIVERSAL IMPEDANCE—MATCHING TYPES—INDIVIDUALLY BOXED

Transformers can be mounted at Factory

Part Number	Primary Impedance/Power	Secondary Impedance (Ohms)	Nominal Watts	Core Size	DIMENSIONS			Mtg. Centers	Shpg. Wt., Lbs.	Net Price
					Height	Width	Depth			
<b>70.7 CONSTANT VOLTAGE LINE</b>										
T-71	2/1/.5	8/4	..	3/8 x 3/8	1/4	1 1/2	1/4	1 3/4	1/2	\$1.53
T-72	5/2.5/1.25 .62/.31	8/4	..	1/2 x 5/8	1 3/8	1 3/4	1 5/8	2	3/4	2.07
<b>25 VOLT CONSTANT VOLTAGE LINE</b>										
T-25	2/1/.5	8/4	..	3/8 x 3/8	1/4	1 1/2	1/4	1 3/4	1/2	1.53
T-26	5/2.5/1.25 .62/.31	8/4	..	1/2 x 5/8	1 3/8	1 3/4	1 5/8	2	3/4	2.07
<b>UNIVERSAL IMPEDANCE</b>										
T-501	500/1000 1500/2000	8/4	4	1/2 x 1/2	1 1/8	1 1/8	1/4	2	1/2	1.80
T-502	500/1000 1500/2000	8/4	8	3/8 x 5/8	1 3/8	1 3/8	1 3/8	2 3/8	3/4	2.35

All Oaktron Speakers Have Aluminum Voice Coils

Transformer Mounting Facilities on All Architectural Sound Speakers

Double Transformer Emboss on All 8" Pin Cushion Models

EIA Warranty Applies to All Oaktron Speakers

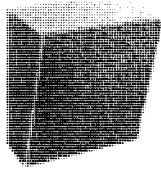
### THE BLUE PRINT TO BETTER SOUND

**OAKTRON INDUSTRIES, INC., MONROE, WISCONSIN**

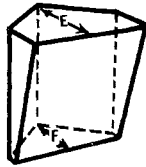
**SECTION 1320**

Oaktron's **DELUXE** and **CUSTOM** Baffles are smartly designed to complement any decor. Rugged one half inch cabinet hardwood construction assures longer service even under the most severe conditions.

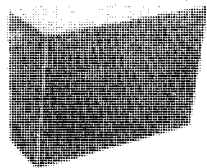
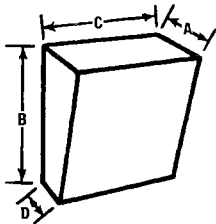
Beautifully finished in a natural blonde or walnut these baffles represent the ultimate in appearance and sound reproduction. Speaker and baffle mounting hardware included.



DELUXE WALL BAFFLE



DELUXE "KORNER" BAFFLE



CUSTOM WALL BAFFLE

**DELUXE WALL BAFFLES**

4"×5"	WB4-5-B	Blonde	Cabinet Hardwood	4½"	6¼"	6½"	2½"	\$3.25
4"×5"	WB4-5-W	Walnut	Cabinet Hardwood	4½"	6¼"	6½"	2½"	3.25
6"	WB6-B	Blonde	Cabinet Hardwood	4⅝"	8"	9⅝"	2⅝"	4.10
6"	WB6-W	Walnut	Cabinet Hardwood	4⅝"	8"	9⅝"	2⅝"	4.10
8"	WB8-B	Blonde	Cabinet Hardwood	6¼"	10⅝"	9½"	3½"	4.45
8"	WB8-W	Walnut	Cabinet Hardwood	6¼"	10⅝"	9½"	3½"	4.45
12"	WB12-B	Blonde	Cabinet Hardwood	9⅝"	14⅝"	13¾"	5⅝"	5.80
12"	WB12-W	Walnut	Cabinet Hardwood	9⅝"	14⅝"	13¾"	5⅝"	5.80

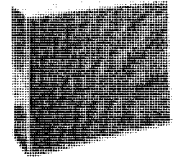
**DELUXE "KORNER" BAFFLES**

Speaker Size	Model	Furniture Finish	Material	DIMENSIONS						Sugg. Dealer Price
				A	B	C	D	E	F	
8"	KB8-B	Blonde	Cabinet Hardwood	4"	10⅝"	9½"	1"	8¼"	5⅝"	\$7.40
8"	KB8-W	Walnut	Cabinet Hardwood	4"	10⅝"	9½"	1"	8¼"	5⅝"	7.40
12"	KB12-B	Blonde	Cabinet Hardwood	5⅝"	14"	13½"	1¾"	11¾"	8⅝"	10.15
12"	KB12-W	Walnut	Cabinet Hardwood	5⅝"	14"	13½"	1¾"	11¾"	8⅝"	10.15

**CUSTOM WALL BAFFLES**

8"	CWB8-B	Blonde	Cabinet Hardwood	6"	9⅝"	12"	4¼"	\$5.35
8"	CWB8-W	Walnut	Cabinet Hardwood	6"	9⅝"	12"	4¼"	5.35
12"	CWB12-W	Blonde	Cabinet Hardwood	9"	14"	16"	5¼"	7.40
12"	CWB12-W	Walnut	Cabinet Hardwood	9"	14"	16"	5¼"	7.40

**SLIMLINE WALL BAFFLES**

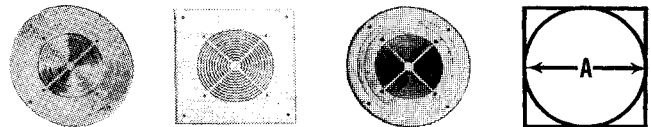


8"	SWB8-B	Blonde	Cabinet Hardwood	3⅞"	10½"	12½"	3⅞"	\$5.20
8"	SWB8-W	Walnut	Cabinet Hardwood	3⅞"	10½"	12½"	3⅞"	\$5.20

**REDUCER RINGS**

Model	Speaker Size	Material	Sugg. Dealer Price
R12/8	Reduces 12" to 8"	Tempered Presdwood	\$1.25
R12/10	Reduces 12" to 10"	Tempered Presdwood	1.25

**CEILING BAFFLES**



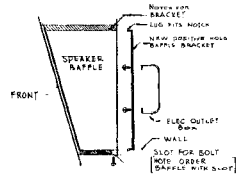
Oaktron's Ceiling Baffles possess qualities and design achieved only after years of engineering in this field. The extremely high efficiency and wide sound dispersion of these units result in superior acoustical sound reproduction. One piece construction eliminates vibration and rattle. Mount directly to the ceiling or to the convenient plaster ring. Available in satin or pebble aluminum and white baked enamel steel. Speaker mounting hardware included.

Speaker Size	Model	Finish	Shape	Material	Dimension A	Sugg. Dealer Price
8"	CR8-S	Satin	Round	Aluminum	12¾"	\$3.30
8"	CR8-W	White	Round	Steel	12¾"	3.10
8"	CS8-S	Satin	Square	Aluminum	12⅞"	3.30
8"	CS8-W	White	Square	Steel	12⅞"	3.10
8"	CR8-P	Pebble	Round	Aluminum	12¾"	3.20

**PLASTER RING**

8"	PR8	Grey	—	Steel	—	\$1.90
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**NEW, POSITIVE HOLD, BAFFLE BRACKET**



Mount Baffle to Standard Electrical Outlet Box

Part No.	Material	Finish	Sugg. Dealer Price
B-8	⅜" Steel	Aluminum Painted	\$ .60

For use with Oaktron Deluxe 8" baffles only.

Note — Baffles can be supplied with speaker and transformer installed at a total cost of the units supplied plus 60¢ for installation.

**OAKTRON INDUSTRIES, INC., MONROE, WISCONSIN**

# QUAM *Quality Line* SPEAKERS

These speakers are engineered and manufactured solely for replacement, public address, high fidelity and outdoor applications. EIA standard dimensions. Fully dust-proofed. Baked gold enamel finish. EIA service guarantee. Only Quam speakers have the U shaped coil pot construction which provides an unbroken flux path of sufficient cross section to carry the full energy of the magnetic field.

ANY QUAM SPEAKER CAN BE SUPPLIED WITH VOICE COIL IMPEDANCES OTHER THAN THOSE LISTED FOR AN ADDITIONAL \$.60

## REPLACEMENT SPEAKERS Voice coil impedance 3.2 ohms $\pm$ 10%

MODEL No.	SIZE	FIGURE	MAGNET WEIGHT OR FIELD	POWER HANDLING WATTS	DEPTH	SHIP WT., LBS.	DEALER NET
22A06Z8**	2 1/4"	J	.45 oz. Alnico V	.25	1	1/4	\$ 2.85
22A06Z100**	2 1/4"	J	.45 oz. Alnico V	.25	1	1/4	3.15
25A05	2 1/2"	I	.55 oz. Alnico V	1.5	1-1/8	1/4	1.89
25A07	2 1/2"	A	.65 oz. Alnico V	1.5	1-1/4	1/4	2.40
26A07	2"x6"	L	.65 oz. Alnico V	2	1-19/32	1/2	2.58
27A06Z12**	2 3/4"	J	.55 oz. Alnico V	.25	1	1/4	2.82
30A05	3"	I	.55 oz. Alnico V	2	1-3/8	1/2	1.89
3A05*	3 1/2"	I	.55 oz. Alnico V	2	1-13/32	1/4	1.89
3A07*	3 1/2"	A	.65 oz. Alnico V	2.5	1-33/64	1/2	2.40
35A05*	3"x5"	L	.55 oz. Alnico V	2	1-21/32	1/2	2.52
4A05*	4"	I	.55 oz. Alnico V	2.5	1-1/2	1/4	1.77
4A07*	4"	A	.65 oz. Alnico V	3	1-23/32	1/2	2.58
4A1	4"	A	1.0 oz. Alnico V	3	2-3/16	3/4	2.76
4A15	4"	A	1.47 oz. Alnico V	3	2-3/16	3/4	3.03
46A07*	4"x6"	E	.65 oz. Alnico V	3.5	1-15/16	3/4	2.85
46A1	4"x6"	E	1.0 oz. Alnico V	3.5	2-1/4	1	3.06
46A15	4"x6"	E	1.47 oz. Alnico V	3.5	2-1/4	1	3.30
48A2*	4"x8"	K	1.4 oz. Alnico V	4.5	2-3/16	1	4.77
410A2*	4" x 10"	M	1.4 oz. Alnico V	6	2-11/16	1 1/4	5.37
5A05*	5"	I	.55 oz. Alnico V	3	1-11/16	1/2	2.10
5A07*	5"	C	.65 oz. Alnico V	3.5	1-7/8	3/4	2.70
5A1	5"	C	1.0 oz. Alnico V	3.5	2-5/16	1	2.91
5A15	5"	C	1.47 oz. Alnico V	3.5	2-5/16	1	3.15
52A1	5 1/4"	C	1.0 oz. Alnico V	4	2-25/64	1	2.97
52A21	5 1/4"	C	2.15 oz. Alnico V	4	2-21/32	1-1/4	3.63
52C10#	5 1/4"	N	10.0 oz. Ceramic	10	2-1/4	2-1/8	5.97
57A1	5"x7"	D	1.0 oz. Alnico V	5	2-11/16	1	3.30
57A15	5"x7"	D	1.47 oz. Alnico V	5	2-11/16	1	3.66
57A21	5"x7"	D	2.15 oz. Alnico V	5	2-61/64	1-1/4	4.05
58A15Z8	5"x8"	F	1.47 oz. Alnico V	5	2-3/4	1-1/4	4.26
6A1	6 1/2"	C	1.0 oz. Alnico V	5	2-5/8	1	3.18
6A15	6 1/2"	C	1.47 oz. Alnico V	5	2-5/8	1	3.45
6A21	6 1/2"	C	2.15 oz. Alnico V	5	2-7/8	1-1/4	3.87
6A31	6 1/2"	C	3.16 oz. Alnico V	6	3-11/64	1-3/4	4.56
69A1*	6"x9"	D	1.2 oz. Alnico V	6	2-3/4	1-1/4	3.60
69A15*	6"x9"	D	1.2 oz. Alnico V	6	2-1/8	1	5.10
69A2*	6"x9"	D	1.4 oz. Alnico V	8	2-15/16	1-1/2	4.50
69A3	6"x9"	D	3.2 oz. Alnico V	10	3-5/16	2	5.52
610A1Z8	6"x10"	F	1.2 oz. Alnico V	8	2-13/16	1-3/4	5.10
7A21*	7"	C	1.4 oz. Alnico V	6	2-31/32	1	4.35
8A1	8"	C	1 oz. Alnico V	6	3-1/2	1	3.57
8A21	8"	C	2.15 oz. Alnico V	7	3-13/32	1-1/2	4.65
8A31	8"	C	3.16 oz. Alnico V	9	3-21/32	2	5.40
10A31	10"	B	3.16 oz. Alnico V	9	4-1/2	2-3/4	6.90
10A4A	10"	B	4.64 oz. Alnico V	10	4-1/2	3-3/4	7.77
10A6A	10"	B	6.8 oz. Alnico V	12	4-5/8	3-1/2	8.70
12A31	12"	B	3.16 oz. Alnico V	10	4-19/32	3-3/4	7.17
12A4A	12"	B	4.64 oz. Alnico V	12	5-1/8	3-3/4	8.55
12A6A	12"	B	6.8 oz. Alnico V	14	5-1/4	4-1/2	9.57

\* Very shallow unit.  
# Ceramic magnet. • Dual cone.

\*\* Impedance of 22A06Z8 is 8 ohms, 22A06Z100 is 100 ohms, 27A06Z12 is 12 ohms.  
† 20 ohms, center tapped

# QUAM *Quality Line* SPEAKERS

## OUTDOOR SPEAKERS

These long-life speakers have the improved Humi-Gard Cone which utilizes a Mylar plastic film to provide maximum resistance to moisture and dirt and sand abrasion, yet does not interfere with response characteristics. Air gap surfaces cadmium plated and enameled. Quantity quotations on request.

Voice coil impedance 3.2 ohms ± 10%

All Quam speakers are available weather-proofed for an additional 70c list. When ordering weather-proofed speakers use part numbers appearing in this catalog and add suffix "OT" to part number. (Humi-Gard Cone available only on 3 1/2", 4" 5", and 6 1/2" speakers.)

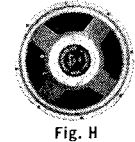


Fig. H



Fig. I

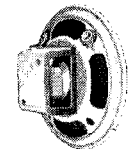


Fig. J



Fig. K

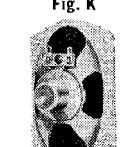


Fig. L

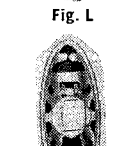


Fig. M

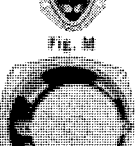


Fig. N

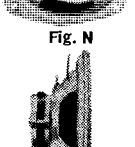


Fig. O

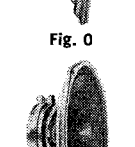


Fig. P

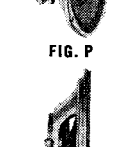


Fig. Q

MODEL No.	SIZE	FIGURE	MAGNET WEIGHT OR FIELD	POWER HANDLING WATTS	DEPTH	SHIP. WT., LBS.	DEALER NET
3A07 OT*	3 1/2"	A	.65 oz. Alnico V	2.5	1-33/64	1/2	2.40
4A05 OT	4"	I	.55 oz. Alnico V	2 1/2	1-1/2	1/4	1.95
5A05 OT	5"	I	.55 oz. Alnico V	3	1-11/16	1/2	2.28

## PUBLIC ADDRESS SPEAKERS

Voice coil impedance 8 ohms ± 10%

MODEL No.	SIZE	FIGURE	MAGNET WEIGHT OR FIELD	POWER HANDLING WATTS	DEPTH	SHIP. WT., LBS.	DEALER NET
8A1PA	8"	C	1 oz. Alnico V	8	3-1/2	1-1/4	\$3.57
★8A21PA	8"	C	2.15 oz. Alnico V	10	3-9/16	2	4.92
★8A31PA	8"	C	3.16 oz. Alnico V	10	3-9/16	2	5.70
8A4PA	8"	B	4.64 oz. Alnico V	12	3-3/4	2-3/4	6.60
8A6PA	8"	B	6.8 oz. Alnico V	12	3-7/8	3-1/4	7.80
8C6PA	8"	O	6.0 oz. Ceramic	12	3	2-1/2	6.00
8C10PA	8"	O	10.0 oz. Ceramic	12	3-1/8	3	7.17
10A31PA	10"	B	3.16 oz. Alnico V	12	4-13/32	2-3/4	6.90
10A4PA	10"	B	4.64 oz. Alnico V	14	4-1/2	3-1/4	7.77
10A6PA	10"	B	6.8 oz. Alnico V	14	4-5/8	3-1/2	8.70
10C12PA	10"	O	12 oz. Ceramic	20	3-3/4	3-3/4	10.80
12A31PA	12"	B	3.16 oz. Alnico V	12	5	3-1/4	7.17
12A4PA	12"	B	4.64 oz. Alnico V	15	5-1/8	3-3/4	8.55
12A6PA	12"	B	6.8 oz. Alnico V	15	5-1/4	4	9.57
12C12PA	12"	O	12 oz. Ceramic	25	4-1/2	4-1/2	11.97
12C10PA	12"	O	10.0 oz. Ceramic	15	4-3/8	4	9.57

## BACKGROUND MUSIC SPEAKERS

Voice coil impedance 8 ohms

MODEL NUMBER	SIZE	FIGURE	FREQUENCY RESPONSE (CPS)	MAGNET WEIGHT	POWER HANDLING WATTS	DEPTH	SHPG. WEIGHT POUNDS	DEALER NET
8C6PAX#*	8"	P	50-20000	6.0 oz.	12	3"	2	6.57
8C10PAX#	8"	P	50-20000	10.0 oz.	15	3-1/8"	2-1/2	7.77
8C6PAS#	8"	Q	50-6000	6.0 oz.	10	2-1/8"	2-1/4	6.00
12C6PAX#*	12"	Q	40-12000	6.0 oz.	15	3-1/2"	2-3/4	8.97
12C10PAX#*	12"	P	50-15000	10.0 oz.	15	4-3/8"	4	10.17

## INTERCOM SPEAKERS

Voice coil impedance 45 ohms ± 10%

MODEL No.	SIZE	FIGURE	MAGNET WEIGHT	POWER HANDLING WATTS	DEPTH	SHIP. WT., LBS.	DEALER NET
3A07Z45*	3 1/2"	A	.65 oz. Alnico V	2.5	1-33/64	1/2	2.55
4A07Z45*	4"	A	.65 oz. Alnico V	3.0	1-23/32	1/2	2.73
4A1Z45	4"	A	1.0 oz. Alnico V	3.0	2-3/16	3/4	2.91
5A1Z45	5"	C	1.0 oz. Alnico V	3.5	2-5/16	1	3.06

## HIGH FIDELITY SPEAKERS

MODEL No.	SIZE	FIGURE	SPEAKER TYPE	FREQUENCY RESPONSE CPS	Pwr Hndlg Watts	V.C. Impedance	Shippg. Wt. Lbs.	DEALER NET
15C12CO	15"	G	Coaxial, 2000cps. Xover	25-18,000	25	8	8-1/2	31.50
12A6CO	12"	G	Coaxial, 2000cps. Xover	50-15,000	14	8	6-1/2	20.70
8A4CO	8"	G	Coaxial, 2000cps. Xover	50-15,000	10	8	2-3/4	13.77
12C12X	12"	H	Extended range dual cone	30-16,000	18	8	5-1/4	15.60
10C12X	10"	H	Extended range dual cone	40-15,000	15	8	4-1/2	14.40
8C12X	8"	H	Extended range	50-14,000	15	8	3-3/4	12.00
69C6X	6" x 9"	D	Extended Range dual cone	50-15,000	12	8	2-1/2	8.37
6A21X	6 1/2"	C	Extended Range dual cone	75-15,000	5	8	1-1/2	5.37
15C12L	15"	H	Low frequency woofer	20-4,000	15	8	7-1/2	21.00
12C12L	12"	H	Low frequency woofer	30-3,000	15	8	5-1/4	15.60
5A15T	5"	A	High frequency tweeter	2,000-15,000	10	14	1	3.40
3A15T	3 1/2"	B	High frequency tweeter	2,000-15,000	10	14	3/4	3.45
CO2-50			Crossover Unit for use with 5A15T&3A15T				1/2	1.20

## REAR SEAT AUTO SPEAKER KITS

These kits contain everything required for the installation of the speaker. They include a dash-mounting fader control, cable, flocked screen grill, baffle plate, all necessary hardware and complete installation instructions.

\*Chrome plated grill.

▲Sponge rubber baffle plate gasket

MODEL NUMBER	SIZE	FIELD OR MAGNET WEIGHT	POWER HANDLING WATTS	VOICE-COIL IMPEDANCE (OHMS)	SHPG. WEIGHT POUNDS	DEALER NET
AS-1	6-1/2"	1.47 oz.	5	3.2	2	5.97
AS-1Z10	6-1/2"	1.47 oz.	5	10	2	5.97
AS-2▲	6" x 9"	2.15 oz.	9	3.2	3-1/2	8.37
AS-2Z10▲	6" x 9"	2.15 oz.	9	10	3-1/2	8.37
AS-2C†▲	6" x 9"	2.15 oz.	9	3.2	3-1/2	9.06
AS-3	5" x 7"	1.47 oz.	5	3.2	2-1/4	7.17
AS-4	6" x 9"	1.2 oz.	6	3.2	1-3/4	4.5C
AS-4Z10	6" x 9"	1.2 oz.	6	10	1-3/4	4.5C

## AUTOMOTIVE SPEAKERS

MODEL NUMBER	SIZE	FIGURE	MAGNET WEIGHT	POWER HANDLING WATTS	DEPTH	VOICE-COIL IMPEDANCE OHMS	SHIPPING WEIGHT POUNDS	DEALER NET
410A2Z10	4" x 10"	M	1.4 oz.	6	2-11/16"	8-12	1 1/4	5.6;
410A2Z20CT*	4" x 10"	M	1.4 oz.	6	2-11/16"	18-22	1 1/4	5.9;
410A2Z40CT*	4" x 10"	M	1.4 oz.	6	2-11/16"	35-45	1 1/4	5.9;
46A1Z10	4" x 6"	E	1.0 oz.	3.5	2-1/4	8-12	1	3.2;
48A2Z20CT*	4" x 8"	K	1.4 oz.	4.5	2-3/16"	18-22	1	5.3;
57A1Z10	5" x 7"	D	1.0 oz.	5	2-11/16"	8-12	1	3.5;
57A1Z20CT*	5" x 7"	D	1.0 oz.	5	2-11/16"	18-22	1	3.9;
57A1Z40	5" x 7"	D	1.0 oz.	5	2-11/16"	35-45	1	3.5;
6A21Z10	6-1/2"	C	2.15 oz.	5	2-7/8"	8-12	1 1/4	4.1;
69A2Z10	6" x 9"	D	1.4 oz.	8	2-15/16"	8-12	1 1/2	4.7;
69A2Z20CT*	6" x 9"	D	1.4 oz.	8	2-15/16"	18-22	1 1/2	5.0;
69A2Z40CT*	6" x 9"	D	1.4 oz.	8	2-15/16"	35-45	1 1/2	5.0;

**OXFORD TRANSDUCER CORPORATION**  
*Subsidiary of OXFORD ELECTRIC CORPORATION*

*Quality Speakers  
 for Every  
 Application*

**A OP SPECIALIST SERIES**

Models OP-6 and OP-8 represent the most advanced weatherproof paging and talkback speakers. They incorporate new design innovations with new materials to provide the highest efficiency with the lowest distortion factors of any competitive units available.

**B OH-10 WEATHERPROOF DUAL SPEAKER SOUND SYSTEM**

A high efficiency co-axial speaker that reproduces music and voice with the fidelity of an expensive indoor high-fidelity speaker system yet, the OH-10 is rugged and completely weatherproof. Components are housed in die-cast aluminum inclosure which is designed to compliment every setting from the shopping center to the patio.

**C PUBLIC ADDRESS SPEAKERS**

Oxford public address speakers are designed for higher output, with less power input. This maximum conversion efficiency in power and coverage permits a reduction in the number of speakers usually required in an installation. And, lower rated power amplifiers may be used with a substantial savings in cost.

**D INTER-COM SPEAKERS**

Oxford high efficiency Inter-com speakers are designed to give round, full and clear reproduction in the voice frequency range and at the same time suppress unwanted background noises. Even whispers will be reproduced with great clarity in areas with high background noise levels . . . shouts are reproduced without distortion.

**E ALL WEATHER SPEAKERS**

Oxford offers a complete line of All Weather speakers specifically designed for maximum operating performance regardless of weather conditions. They feature exclusive Oxford HYDRO-PRUF cones for full environmental protection. Special moisture protected voice coils prevent humidity damage. Extra heavy cadmium plating, inside and out, resists corrosion.

**F CERAMIC SPEAKERS**

Featuring shallow construction, these speakers are ideal for in-wall, stereo wing, picture frame, and other installations where space is at a premium. In addition to the standard models, Oxford also offers ceramic units with exclusive Oxford Hidden Magnet design. The magnet is mounted between the basket and the cone, permitting use of the dual cone for extended range while retaining the thin silhouette.

**G EXACT REPLACEMENT AUTOMOTIVE RADIO SPEAKERS**

A complete line is available, including exact replacement speakers, universal speakers, special units for custom automobiles, and speakers specifically designed for transistorized automobile radios.

**H REPLACEMENT SPEAKERS**

Oxford manufactures the most complete line of standard replacement speakers available for original equipment, including, phonographs, tape recorders, radios and television sets. The speaker sizes range from 2" through 15", in dimensions to insure a perfect installation.

**I HIGH FIDELITY SPEAKERS**

The Oxford line offers a full range of woofers, tweeters, extended range and co-axial speakers. They are all designed to reproduce the entire audio spectrum with true high fidelity so necessary for fine stereo reproduction. For the price conscious hi-fi equipment buyer, Oxford offers the most outstanding value.

**J SPECIAL PURPOSE SPEAKERS**

As a "full line" loudspeaker manufacturer, Oxford also produces speakers for many "special purposes." The most popular of these is a series designed for use with electric musical instruments, such as guitars and electronic organs. It is only with a speaker designed for this particular application that the full quality of the instrument and performance can be appreciated.

Manufacturers, Write for Quotes on OEM Quantities.

**OXFORD TRANSDUCER CORPORATION**  
*Subsidiary of OXFORD ELECTRIC CORPORATION*

Chicago 47, Illinois



# Broadcast Quality MICROPHONES

## POLYDIRECTIONAL RIBBON MICROPHONE—77DX

The standard quality microphone of the broadcast industry, the RCA Type 77-DX, is available in two models; one with a low-gloss finish for TV, the other a satin chrome and gray enamel finish for AM and FM. The 77-DX offers a choice of unidirectional, bidirectional, or nondirectional pickup patterns which are easily changed by a selector switch. Three frequency response variations on the basic pickup patterns may also be obtained, thus a total of nine different directional characteristics may be utilized. The 50 to 15,000 cycle frequency response of the 77-DX makes it suitable for every high fidelity broadcasting and recording application. The low-hum pickup level (-128 dbm) makes the 77-DX useful in high-hum areas. Output impedance is factory connected for 250 ohms; however, it may be easily reconnected for a 30 to 150 ohm output impedance. The effective output levels are -50 dbm in the bidirectional pattern, -53 dbm and -56 dbm in the unidirectional and non-directional patterns (EIA ratings, -144 db, -147 db and -150 db respectively).

This microphone mounts on a standard 1/2-inch pipe thread which can be adapted to 3/8-inch-27 thread. The 77-DX is supplied with a protective cloth zippered bag, and 30 feet of three conductor shielded cable, less plug. Overall dimensions are 1 1/2 inches long, 3 3/4 inches wide and 2 1/4 inches deep.

77-DX Satin Chrome Finish (MA-2311) ..... \$206.00\*  
77-DX Low Luster Gray Finish (MA-2312) ..... \$197.00\*

## BI-DIRECTIONAL RIBBON MICROPHONE—BK-11A

All the advantages of the famous 44-BX microphone have been combined with the latest developments in ribbon microphone design to produce the new BK-11A general purpose microphone. In the studio or at indoor remotes, whether a simple interview program or full orchestra pickup, the bidirectional characteristics and excellent frequency response (30 to 15,000 cycles) make the BK-11A an extremely useful production tool. The BK-11A has an effective output level of -56 dbm @ 1000 cycles (EIA rating, -147 db). The output can be connected for 30, 150, and 250 ohm operation. A three position switch permits selection of desired frequency ranges for voice and music.

The BK-11A has been designed for use with the inexpensive MA-2306 desk stand, and it can also be used with any standard 1/2-inch pipe thread desk or floor stand. Thirty feet of three conductor cable is supplied without a connector.

BK-11A (MA-2316) ..... \$131.25\*

## UNIAXIAL RIBBON MICROPHONE—BK-5B

The BK-5B is a high-quality ribbon instrument designed especially for use in high noise areas, as well as being suitable for general studio purposes. The BK-5B makes an excellent control room microphone when mounted on an adjustable microphone arm. Maximum sensitivity of the BK-5B is in the major mechanical axis, and this produces an extremely directional cardioid pattern. Frequency response from 50 to 15,000 cycles permits using the BK-5B for all types of high fidelity voice and music pickups. The effective output level is -56 dbm (EIA ratings, -150 db). The output is connected for 250 ohms, but may easily be changed to 30 or 150 ohms. The low-luster amber gray finish makes it ideal for TV.

It is supplied with thirty feet of three conductor cable, less connector. A wind-screen is available for outdoor use. The BK-5B is supported by a fork mounting which has a 3/8-inch straight pipe thread.

BK-5B (MA-2314) ..... \$146.50\*

## DIRECT PRESSURE LAVALIER MICROPHONE—BK-6B

The BK-6B is a lightweight microphone with excellent speech balance, ideal for remotes, interviews, and other applications where an inconspicuous microphone is needed. The 2.3 ounce unit is 2 1/8 by 1 1/8 inches, and its effective output level is -67 dbm (EIA ratings, -158 db). Wide range frequency response (80-12,000 cps) permits using the microphone for all speech applications. The 250 ohm output impedance may be changed to 30 or 150 ohms by a simple change of cable connections. Hum pickup is very low (-112 dbm).

The small size and lanyard mounting make the BK-6B extremely versatile. Thirty feet of three conductor cable is supplied, less connector.

BK-6B with lanyard and fastener (MA-2315).....\$86.00\*

## BI-DIRECTIONAL RIBBON MICROPHONE SK-46B

The SK-46B is designed for high quality indoor use. It has excellent frequency response and bidirectional pickup characteristics. Output impedance is 200 ohms, but it may be reconnected to produce a 15,000 ohm output. Effective output level is -58 dbm at 250 ohms (EIA rating, -150 db) or -60 dbm at 15,000 ohms. Dependable performance as well as attractive styling make the SK-46B an ideal choice for applications requiring an economical high quality microphone. The SK-46B has a 3/8-inch-27 mounting thread and is supplied with 25 feet of two conductor cable (less connector).

SK-46B (MA-2319) ..... \$49.00\*

## NON-DIRECTIONAL PRESSURE MICROPHONE—BK-1A

Ideal for outdoor use or wherever constant handling is required the BK-1A offers smooth response for both voice and music. The BK-1A is also an excellent unit for sports, panel shows, interviews, and remotes. The pressure actuated microphone provides uniform response from 60 to 10,000 cycles. The swivel mounting of the BK-1A can be used to control directional characteristics. The vertical position is nondirectional the horizontal position is semidirectional. The output impedance is 250 ohms, but 30 and 150 ohm connections are included. Effective output level of the BK-1A is -52 dbm (EIA ratings, -148 db) while hum pickup is below -102 dbm.

The BK-1A may be mounted on any type stand having 1/2-inch pipe thread and is perfect for use with the MA-2306 desk stand. Thirty feet of three conductor cable is supplied, less connector.

BK-1A (MA-2313) ..... \$73.50\*

## NON-DIRECTIONAL PRESSURE MICROPHONE—SK-45B

Ideal for talk-back, cue, and public address use, the rugged lightweight SK-45B microphone offers good voice reproduction. This dynamic microphone is essentially nondirectional with a -56 db output level (EIA rating, -147 db) when connected for a 150 to 200 ohm balanced output, and -58 db when specially connected for a 15,000 ohm output. Response from 70 to 12,000 cycles makes it excellent for announcer work. Mounting with any 3/8-inch-27 fixture thread permits the use of low cost stands. Finish is low gloss gray, and the SK-45B is supplied with 25 feet of cable less connector.

SK-45B (MA-2318) ..... \$45.00\*

## NON-DIRECTIONAL PRESSURE MICROPHONE—SK-39A

Cue and talk-back applications are perfect for this inexpensive dynamic microphone. The SK-39A is rugged and relatively insensitive to mechanical shock and wind. Its plastic diaphragm makes it impervious to moisture and rain. Output level is -55dbm (EIA rating, -150 db). The SK-39A may be used with amplifiers having a 250 ohm input. The amber gray unit may be mounted on any 3/8 inch-27 fixture thread. The 15-ounce microphone is supplied with 25 feet of two conductor cable (less connector).

SK-39A (MA-2317) ..... \$23.40\*

## STANDS AND ACCESSORIES

Windscreen—MA-2325—For use with BK-5B

microphone ..... \$16.50

Boom Mount—MA-2324—Special shock mounting which isolates BK-5B microphone from vibration ..... \$36.50\*

Holder—MA-2307—3/8"-27 female thread. For use with BK-6B microphone. .... \$ 3.35\*

Adaptor—MA-2308—3/8"-27 female fitting—1/2" male pipe thread. Use to adapt a 3/8"-27 microphone to a 1/2" pipe thread stand. .... \$ .50\*

Adaptor—MA-2309—1/2" female pipe thread, 3/8"-27 male fitting. Use to adapt a 1/2" microphone to a 3/8"-27 stand. .... \$ .90\*

Desk Stand—MA-2306—1/2" pipe fit—male 4 3/8" dia. 1 3/8" h. Dull gray finish. For use with BK-1A and BK-11A microphones. .... \$ 7.75\*

Desk Stand—MA-2305—1/2" pipe fit—male 4 3/8" wide 6 3/8" long, 3/4" high or 1 1/4" (incl. Stem). Crinkle and chrome finish, 4 lbs. For use with 77-DX and BK-5B Microphones, (MA-2311, 2312, 2314) ..... \$16.75\*

Desk Stand—MA-2301—3/8"-27 male thread, 7" to 11" chrome tube, 8" dia. Crinkle base. About 2 1/2 lbs. .... \$ 5.20\*

Banquet Stand—MA-2302—3/8"-27 male thread, 13" to 25" chrome tube, 8" dia. Crinkle base. About 6 lbs. .... \$ 5.85\*

Floor Stand—MA-2303—3/8"-27 male thread, 7/8" dia 35" to 65" chrome tube. 12" dia. Crinkle base. \$ 9.00\*

Floor Stand (Deluxe)—MA-2304—3/8"-27 male thread 1 3/8" dia. 37" to 66" chrome tube. Triangular 17" dia Crinkle base ..... \$16.50\*

\*User Price (Optional)



SHURE

# FAMOUS UNIDYNE MICROPHONES

## UNIDYNE III SERIES

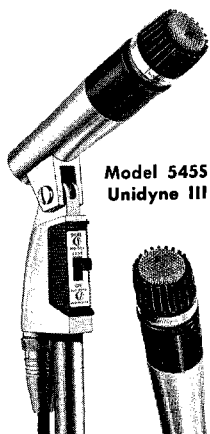
### THE ONLY CARDIOID MICROPHONES FEATURING PICKUP PATTERN SYMMETRICAL ABOUT AXIS AND UNIFORM AT ALL FREQUENCIES



Model "545" Unidyne III\*

The world's finest moderately priced dynamic cardioid microphone for public-address system use. The Unidyne III approaches the theoretical ideal of the cardioid pickup pattern. This means completely uniform pickup about the axis at all frequencies — in all planes. Remarkably faithful reproduction of the human voice makes the Unidyne III a superior choice for public-address applications. Low frequency characteristics of the Unidyne III eliminate boominess, and make it a favorite for pickup of drums and bass instruments. Striking black and satin chrome finish in compact modern design makes the Unidyne III a stylish addition to any platform. Model 545 is suitable for handheld and/or stand use with Model A25 Swivel Adapter included. Model 545S is mounted on lifetime swivel and includes on-off switch. Model 544 is furnished with cable attached and is designed for gooseneck mountings. 544-G6 includes 6" gooseneck; 544-G12 includes 12" gooseneck; 544-G18 includes 18" gooseneck.

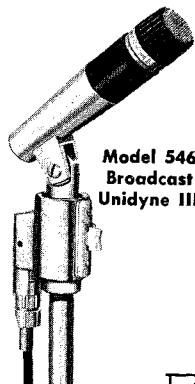
TYPE: Dynamic. FREQUENCY RESPONSE: 50-15,000 cps. POLAR PATTERN: Cardioid (Uniform with frequency, symmetrical about axis). MAGNETIC CIRCUIT: uses Alnico V magnet. CASE: Die cast zinc and "Armo-Dur". FINISH: Satin chrome and black. CABLE CONNECTOR: Equivalent to Amphenol MC4M plug. CABLE: 18 ft., 3 conductor shielded. STAND THREAD: 5/8" — 27 thread. DIMENSIONS: Length — 5 1/16", Diam. — 1 1/64". NET WEIGHT: 6/10 lb., Shipping Weight 2 7/8 lbs. FURNISHED ACCESSORIES: A25 type swivel adapter. OPTIONAL ACCESSORIES: A86A cable type transformer, S33B desk stands.



Model 545S Unidyne III\*



Model 544 Gooseneck Unidyne III\*



Model 546 Broadcast Unidyne III\*

IMPEDANCE TABLE	OUTPUT LEVEL
L-50-250 ohms	-57 db (0 db = 1 milliwatt per 10 microbars) .141 millivolts/microbar
H-High	-55 db (0 db = 1 volt per microbar); 1.760 millivolts/microbar

MODEL	LIST PRICE
545	\$ 85.00
545S	\$ 89.95
544	\$ 80.00
544-G6	\$ 83.00
544-G12	\$ 83.75
544-G18	\$ 85.00

### BROADCAST UNIDYNE III

MODEL 546. Ultra compact, unidirectional, distinctive design, weights only 1 lb.! Recommended for critical broadcast and theater-stage sound system operation and highest quality public address and recording applications. Truly uniform cardioid pick-up pattern, symmetrical about axis. Special live-rubber vibration-isolating shock mount. Improved self-adjusting lifetime swivel permits tilting of head 180°. Cannon XL-3-11 connector. 20 ft. 2-conductor shielded broadcast type cable. Head only 1 1/4" diam., 5 1/4" long. 50-15,000 cps frequency response.

IMPEDANCE TABLE	OUTPUT LEVEL	MODEL	LIST PRICE
L — 50 Ohms	-55 db (0 db = 1 milliwatt per 10 microbars); .079 millivolts/microbar	546	\$135.00
H — 150 Ohms	-55 db (0 db = 1 milliwatt per 10 microbars); .176 millivolts/microbar		

### UNIDYNE II SERIES

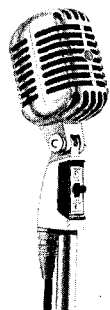
Famed Throughout the World for Ruggedness and Reliability

The Unidynes are the largest selling microphones throughout the world — used consistently by famed celebrities for those important events where the faithfulness of sound reproduction is critical. A sturdy construction provides immunity of the moving-coil system to abnormal atmospheric conditions and severe mechanical shock. Model 555 is highly recommended for fine quality public address, theater-stage sound systems, recording and remote broadcasting, and low-gain tape recording. It is also the field-proved standard for fixed station use in the police, fire, transportation, forestry and commercial services. Smooth frequency response from 50 to 15,000 cps. Furnished with an 18-foot cable and plug assembly. Model 555SW is same as Model 555 except it has On-Off switch.

Model 556S is specially constructed and tested to meet the requirements of the broadcast and television studio, and is held within close tolerances in frequency response and directivity. It is a moving-coil type microphone with a frequency range of 40 to 15,000 cps, production uniformity guaranteed to plus or minus 2 1/2 db. As a further precaution against mechanical vibration pickup, the 556S is provided with an additional isolation unit, of live rubber construction in combination with the stand connector and a built-in high quality cable connector. Furnished with a 20-foot, high quality, shielded, 2-conductor cable with Cannon plug attached. Both the 555 and the 556S feature the patented "Uniphase" network system. All units include multi-impedance switch for High, Medium or Low Impedance.

IMPEDANCE TABLE	OUTPUT LEVEL
L-35-50 ohms	-54 db (0 db = 1 milliwatt per 10 microbars); .063 millivolts/microbar
M-150-250 ohms	-55 db (0 db = 1 milliwatt per 10 microbars); .125 millivolts/microbar
H-High	-57 db (0 db = 1 volt per microbar); 1.410 millivolts/microbar

MODEL	LIST PRICE
556S	\$135.00
555	\$ 83.00
555SW	\$ 85.00



Model "555" Unidyne



Model "556S" Broadcast

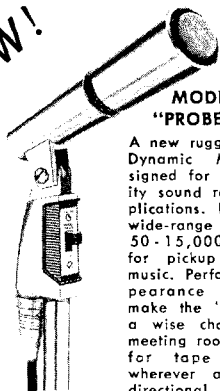
All Shure Dynamic, Controlled Magnetic, and Ceramic Microphones are eligible for FCDA purchases.

Available in Gold finish for \$10 additional (List Price)

**SHURE**

# P. A. SYSTEM MICROPHONES

**NEW!**



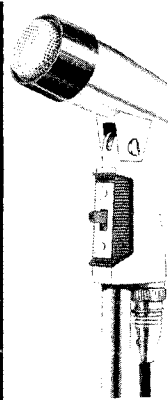
**MODEL 550S—  
"PROBE-DYNAMIC"**

A new rugged, high quality Dynamic Microphone designed for use in top-quality sound reinforcement applications. Features smooth, wide-range response from 50-15,000 cps. Excellent for pickup of voice and music. Performance and appearance characteristics make the "Probe-Dynamic" a wise choice for use in meeting rooms, auditoriums, for tape recording or wherever a quality omnidirectional microphone is required, and moderate cost is an important consideration. Dual impedance. Comes complete with on-off switch, swivel and 18 ft. 2-conductor cable. Model 550S in satin chrome finish. Model 550S(Gold) in gold finish. Available in matched pairs for stereo recording. (Matched to  $\pm 1$  db in level and  $1\frac{1}{2}$  db in frequency response.)

List Price: Model 550S \$69.00  
Model 550S (Gold) \$79.00

Type: Dynamic  
Frequency Response: 50 to 15,000 cps  
Output: 57.5 db  
0 db = 1 volt/microbar; 1.18 millivolts/microbar  
Impedance: Dual: Choice of 50 to 250 ohms and High  
Diaphragm: Shure Duracoustic  
Case: Model 550S Satin finished chrome case, stainless steel mesh grille  
Model 550S (Gold) Gold finished case and grille

Dimensions: (not including swivel)  $1\frac{1}{2}$ " diameter,  $6\frac{1}{2}$ " long  
Net Weight: (less cable) 15 oz.



**SONODYNE II**

**MODEL 540S.** A compact, modernistic microphone with high output dynamic element at moderate cost. The "Sonodyne II" features adjustable frequency response which allows the user to tailor the microphone to the application—One of the most versatile microphones on the market! High output Dynamic element! Omni-Directional pick-up pattern. Frequency response: 60 to 10,000 cps with provisions for alternate response for voice intelligibility in paging and communications systems. Reliable on-off switch. Model 540 also available without switch. Improved positive action lifetime swivel permits tilting head 150°. 15 ft. 2-conductor shielded cable, equivalent to Amphenol MC3M connector.

IMPEDANCE TABLE	OUTPUT LEVEL
L—50-250 Ohm	-56.5 db (0 db = 1 Milliwatt per microbar); .141 millivolts/microbar
H—High	-55 db (0 db = 1 volt per microbar); 1.76 millivolts/microbar

LIST PRICE	Model 540S (with switch)	\$49.95
	Model 540 (without switch)	\$47.95



**SONODYNE**

**MODEL 51.** The "Sonodyne" is ideal for all general purposes, including public address, wire and tape recording, and similar applications. Ideal high-quality, moderately-priced replacement for the conventional microphone supplied with tape recorders. The wide range frequency response is 60 to 10,000 cps. This rugged microphone is one of the pressure type, with conventional semi-directional characteristics, and it may be used for close-talking without undue low frequency emphasis. Multi-impedance—for low, medium and high impedance. Has built-in receptacle and a 15-foot, two-conductor shielded cable with microphone plug attached. Satin chrome finish. Model 51S is same as Model 51 except it has on-off switch.

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 Ohms	-52.0 db (0 db = 1 Milliwatt per 10 microbars); .089 millivolts/microbar
M—150-250 Ohms	-52.5 db (0 db = 1 Milliwatt per 10 microbars); .238 millivolts/microbar
H—High	-49.5 db (0 db = 1 volt per microbar); 2.510 millivolts/microbar

LIST PRICE	51	\$49.50
	51S	\$51.50

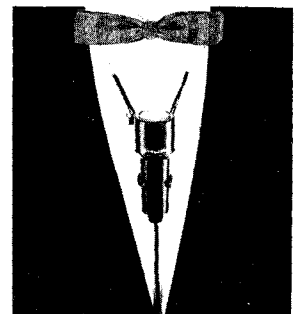
## MODEL 560 DYNAMIC LAVALIER

Model 560 Dual Impedance, Dynamic Microphone with "tailored" response specifically designed for lavalier use. A truly excellent general purpose lavalier microphone at a very practical price. Compact and lightweight. Modern black satin all-metal case with stainless steel grille meets virtually every lavalier application, with quick change from High to Low impedance by simply moving pin jacks. New design clip-grip lavalier assembly holds microphone securely to wearer. Lightweight 18 foot attached cable permits maximum freedom of movement.

**SPECIFICATIONS—FREQUENCY RESPONSE:** Specially adapted to give optimum performance for lavalier use. **DIAPHRAGM:** Shure Duracoustic. **CABLE:** Non-detachable 18 ft., two-conductor shielded. **CASE:** Non-reflecting, black satin finished all-metal case with stainless steel grille. **DIMENSIONS:**  $3\frac{3}{8}$ " long by  $1\frac{1}{8}$ " diameter. **NET WEIGHT:** 5 ounces; packaged weight: 13 ounces.

IMPEDANCE TABLE	OUTPUT LEVEL
150-250 Ohms	-55.5 db (0 db = 1 Milliwatt per 10 microbars); .149 millivolt/microbar
High	-56.5 db (0 db = 1 volt per microbar); 1.33 millivolt/microbar

MODEL	LIST PRICE
560	\$42.50



560 Lavalier

## MODEL 777 "SLIM-X"

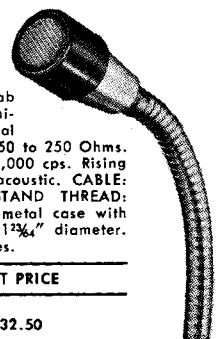
The "777" Slim-X Microphones are rugged little microphones weighing only 6 ounces. They use a "Metal Seal" crystal for long operating life under adverse conditions of heat and humidity. Designed for good-quality voice reproduction, their versatility and "hand-ability" make them ideal for use by lecturers, announcers, instructors, and Hams; for audience participation shows; carnivals; and for use with home recorders. Smooth response from 60 to 10,000 cps. Output: -62db (0 db = 1 volt per microbar).



MODEL	TYPE	LIST PRICE
777	Includes Lavalier card, molded stand adapter	\$25.00
777S	Same as 777 with on-off switch	\$27.00

## MODEL 561 DYNAMIC GOOSENECK

Compact, high quality, tamper-proof dynamic microphone with attached cable and standard  $\frac{3}{8}$ "-27 thread for direct mounting on flexible gooseneck or fixed pipe. Extremely rugged, dynamic cartridge (Model R50) easily replaced in field. Excellent voice response for language lab systems, paging applications, base-station communications and talk-back and cueing from professional control-room installations. Low impedance. Matches 50 to 250 Ohms. **SPECIFICATIONS—FREQUENCY RESPONSE:** 40 to 10,000 cps. Rising characteristic to 4500 cps. **DIAPHRAGM:** Shure Duracoustic. **CABLE:** Non-detachable 4 ft., two-conductor shielded. **STAND THREAD:**  $\frac{3}{8}$ "-27. **CASE:** Black and chrome satin finished all-metal case with stainless steel grille. **DIMENSIONS:**  $2\frac{3}{4}$ " long by  $1\frac{3}{4}$ " diameter. **NET WEIGHT:** 5 ounces; packaged weight: 9 ounces.

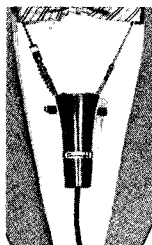
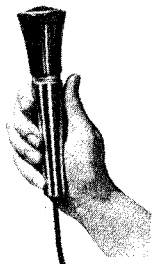
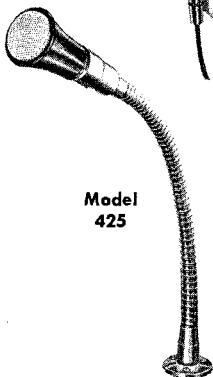


OUTPUT LEVEL	LIST PRICE
-56.0 db (0 db = 1 Milliwatt per 10 microbars); 1.41 millivolts/microbar	\$32.50

SHURE

## PUBLIC ADDRESS MICROPHONES

## THE COMMANDO SERIES

Model  
415Model  
420Model  
430Model  
425

The Commando Series represents a significant achievement in providing quality performance at nominal cost — incorporating Shure's rugged, patented Controlled Magnetic cartridge in a dramatic-looking versatile series of microphones. Suitable for indoor or outdoor use, these microphones feature high output, smooth response, extreme ruggedness and ability to withstand severe moisture and temperature conditions. Model 420 is specially designed for lavalier use and it, as well as the Model 430, features adjustment for high or low impedance by simple pin-jack changing method. Model 430 includes an "On-Off" switch as well as detachable cable. Both Models 415 and 430 are furnished with Shure Model A25 Swivel Stand Adapter for Stand-mounted use. Model 425 is specially designed for gooseneck mounting but can also be utilized as stand-mounted units with A25B Swivel Adapter. Models with gooseneck attached are numbered 425-G plus number to indicate length of gooseneck in inches.

## SPECIFICATIONS FOR "COMMANDO" MODELS 415, 420, 425 and 430

LIST PRICE: Model 415 - \$27.50; Model 420 - \$30.00; Model 425 - \$30.00; Model 430 - \$38.50; Model 425-G6 - \$33.00; Model 425-G12 - \$33.75; Model 425-G18 - \$35.00

TYPE: Controlled Magnetic

FREQUENCY RESPONSE: 60 to 10,000 cps

IMPEDANCE: Model 415 — High. Model 420-425-430 — Equipped with readily changeable pin-jacks (no soldering required) furnishing a choice of two impedances: H—High and L—150 to 250

OUTPUT LEVEL: High — 52 db (0 db = 1 volt per microbar); 2.510 millivolts/microbar. Low — 52 db (0 db = 1 milliwatt per 10 microbars); .225 millivolts/microbar

POLAR PATTERN: Omnidirectional

CASE: Model 415 — Impact-resistant polystyrene and die-case zinc. Model 420 — Impact-resistant polystyrene. Model 425 — Impact-resistant polystyrene and brass. Model 430 — Impact-resistant polystyrene and die-cast zinc.

FINISH: Model 415 — Non-reflecting gray and safin chrome. Model 420 — Non-reflecting gray. Model 425-430 — Non-reflecting gray and safin chrome.

CABLE: Model 415 — 7 ft. non-detachable single-conductor shielded. Model 420 — 20 ft. non-detachable two-conductor shielded. Model 425 — 7 ft. non-detachable two-conductor shielded. Model 430 — 15 ft. two-conductor shielded with Amphenol MC2M connector for attaching to microphone.

SWITCH: Models 415-420-425 — None. Model 430 — Press-to-talk switch — normally closed.

DIMENSIONS: Model 415 — Length 6 $\frac{1}{8}$ ". Diameter of head 1 $\frac{1}{4}$ ". Diameter of handle 1 $\frac{1}{8}$ ". Model 420 — Length 3 $\frac{1}{8}$ ". Diameter 1 $\frac{1}{4}$ ". Model 425 — Length 3 $\frac{1}{8}$ ". Diameter 1 $\frac{1}{4}$ ". Model 430 — Length 6 $\frac{3}{4}$ ". Diameter of head 1 $\frac{1}{4}$ ". Diameter of handle 1 $\frac{1}{8}$ ".

NET WEIGHT: Model 415 —  $\frac{1}{2}$  lb. Models 420-425 —  $\frac{1}{4}$  lb. Model 430 —  $\frac{3}{8}$  lb. (Less cable)

PACKAGED WEIGHT: Model 415 — 1 $\frac{1}{8}$  lbs. Models 420-425 —  $\frac{3}{4}$  lb. Model 430 — 2 $\frac{1}{8}$  lbs.

FURNISHED ACCESSORIES: Model 415 — Model A25B Swivel Adapter. Models 420 — Lavalier Cord and clip assembly. Readily detachable for use of microphone as a hand-held type. Model 430 — Switch locking plate for keeping switch in "On" position, Model A25B Swivel Adapter.

OPTIONAL ACCESSORIES: Model 415 — Model S38B or S33B Desk Stand. A34L Lavalier Assembly. Models 420-425 — Model A86A Cable Type Transformer. Model 430 — Model A86A Cable Type Transformer and Model S38B or S33B Desk Stand. A34L Lavalier Assembly.

U. S. Patent 2,454,425

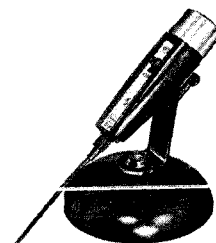
## LOW COST, WIDE-RANGE "VERSADYNE" AND "VERSAPLEX" MICROPHONES

Smooth response makes these units a "best-buy" for general public address, home recording and call-system use where both performance and economy are important. High-performance dynamic cartridge is unaffected by temperature and humidity variations. Choice of high or low impedance dynamic or high impedance ceramic models each complete with switch plus stand adapter and lavalier cord. Small size and light weight, this unit is equally adaptable to hand-held, stand-mounted or lavalier use. Model 575S and 275S feature high impedance and high output, for applications where only a moderate length of cable is required. The low impedance, Model 575SB is designed for use in installations where long cable lengths are required, or for use with transistor amplifiers requiring a medium or low impedance microphone.

## SPECIFICATIONS

LIST PRICE	MODEL 575S "VERSADYNE"	MODEL 575SB "VERSADYNE"	MODEL 275S "VERSAPLEX"
	\$24.00	\$21.00	\$15.00
TYPE	DYNAMIC		CERAMIC
FREQUENCY RESPONSE	40 to 15,000 cps		40 to 12,000 cps
OUTPUT LEVEL	-59 db (0 db = 1 volt per microbar); 1.110 millivolts/microbar	-62 db (0 db = 1 Milliwatt per 10 microbars); .071 millivolts/microbar	-59.5 db (0 db = 1 volt per microbar); 1.050 millivolts/microbar
POLAR PATTERN	OMNIDIRECTIONAL		
IMPEDANCE	High: 100,000 Ohms or Higher	150-250 Ohms	High: 1 to 5 Megohms Recommended
FINISH	Black high-impact plastic body with satin anodized cap and stainless steel grille		
DIMENSIONS	4 $\frac{1}{4}$ " long x 1 $\frac{1}{4}$ " diam.		

Surprising Quality  
for these Low Prices.



Models  
275S - 575S

Patent Pending

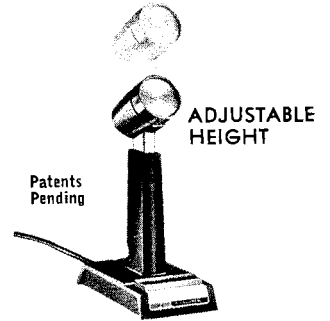
# SHURE **DISPATCHING.. GENERAL PURPOSE MICROPHONES**

## MODEL 450 "DISPATCHER" MICROPHONE \* Made of Rugged "ARMO-DUR"—Won't Crack—Peel—Rust—Dent.

New modern design fits every decor for paging use. Integrated case design, made of gray "Armo-Dur", features telescoping height adjustment for maximum convenience. Rugged Controlled Magnetic element with impedance switch for low or high impedance. Push-to-talk switch bar with optional features provide every desired switching option.

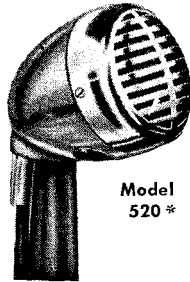
**SPECIFICATIONS**—ELEMENT TYPE: Controlled Magnetic. FREQUENCY RESPONSE: 100 to 9000 cps. CASE: Two-tone Gray "Armo-Dur". CABLE: 7 ft., four-conductor (two-conductor shielded). SWITCH: Push-to-talk switch button with optional locking feature to operate independent microphone and relay circuits. Relay portion of switch is normally open. Microphone portion of switch is normally open or normally closed as required. DIMENSIONS: 4" wide, 5 $\frac{1}{16}$ " deep, 10 $\frac{3}{16}$ " high (adjustable). NET WEIGHT: 1 $\frac{1}{2}$  lbs.

MODEL	IMPEDANCE	OUTPUT LEVEL	LIST PRICE
450	50-250	-54 db (0 db = 1 Milliwatt per 10 microbars); 2.380 millivolts/microbar	\$49.50
	High	-52.5 db (0 db = 1 volt per microbar); .281 millivolts/microbar	



## THE "GREEN BULLET"

Designed to provide quality music and speech reproduction at moderate cost. Rugged! Practically immune to the effects of high temperatures and humidity. Features: high output, good response, high impedance without the need of a transformer. Modern metallic green finish with plated grille. Frequency response is 100 to 7000 cps. Furnished with 7 ft. single-conductor shielded cable. High impedance. Use with Shure Model S34B or S36A Desk Stands.



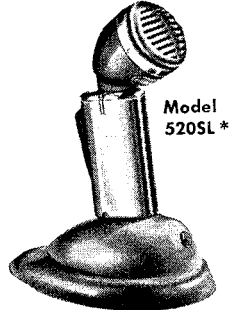
MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
520	-52.5 db (0 db = 1 volt per microbar); 2.38 millivolts/microbar	High	\$22.50
520B	-51 db (0 db = 1 milliwatt per 10 microbars); .281 millivolts/microbar	150-250 Ohms	\$22.50

## MODEL 520SL "DISPATCHER"

Model 520SL recommended for mobile and fixed station use, also for public address, recording call systems, radio telephone and amateur use.

Model 520SL equipped with grip-to-talk switch DPST — normally closed-normally open, and 7 ft. 2-conductor shielded cable, equivalent to Amphenol MC3M plug.

Model 520SLB has grip-to-talk switch DPST — normally closed-normally open, and 7 ft. 4-conductor (2 conductors shielded) cable, equivalent to Amphenol MC4M plug.



MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
520SL	-52.5 db (0 db = 1 volt per microbar); 2.38 millivolts/microbar	High	\$45.00
520SLB	-51.0 db (0 db = 1 milliwatt per 10 microbars); .281 millivolts/microbar	150-250 Ohms	\$49.25

## NEW CERAMIC NOISE-CANCELLING AND LOW COST PALM MICROPHONES FOR CB, AMATEUR, MOBILE

New, Model 202 effectively reduces Background Noise for use in Mobile Ham and CB rigs. All models are . . .



Loaded with features — yet priced unusually low. "Shaped" voice response is patterned after professional mobile and SSB amateur response curves . . . assures maximum intelligibility. Professional design and construction. Long-life slide-switch, guaranteed full year. Virtually indestructible "Armo-Dur" wonder plastic case; Shock-, shatter-, corrosion-, rust-, and weather-proof. Coiled-cord won't kink. "Lifetime" hang-up bracket. Choice of ceramic (model 201) or controlled magnetic (model 401A and 401B) elements. (401B recommended for parallel balanced line operation where long cable lengths are required.)

U. S. Patent D194.749

### SPECIFICATIONS

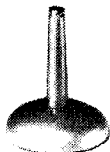
	Model 202	Model 201	Model 401A*	Model 401B*
LIST PRICE	\$20.00	\$18.00	\$22.00	\$22.00
TYPE	CERAMIC		CONTROLLED MAGNETIC	
FREQUENCY RESPONSE	200 to 4,000 cps free from undesirable peaks.			
OUTPUT LEVEL	-55.5 db (0 db = 1 volt per microbar); 1.680 millivolts/microbar	-49 db (0 db = 1 volt per microbar); 3.500 millivolts per microbar	-48 db (0 db = 1 milliwatt per 10 microbars); .390 millivolts/microbar	
IMPEDANCE	High—Recommended load impedance; 1 to 5 megohms	High—Recommended load impedance; 100,000 ohms or more	Low—Recommended load impedance; 150-250 ohms	
POLAR PATTERN	Special Noise Cancelling	OMNIDIRECTIONAL		
DIMENSIONS	4" High x 2 $\frac{1}{4}$ " Wide x 1 $\frac{1}{2}$ " Deep			

\* U. S. Patent 2,454,425

## MICROPHONE STANDS

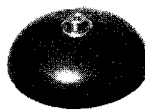
### S34B TAKE-APART STAND

**MODEL S34B.** Handy low-cost gray stand for desk or hand use. One twist of wood handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base. Suitable for use with Models 510, 520, 707A and 710. **NET WEIGHT:**  $\frac{5}{8}$  lb. Packaged weight,  $\frac{7}{8}$  lb. **LIST PRICE \$4.50**



### S38 ROUND STAND

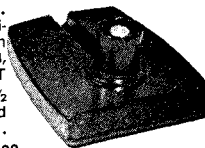
This stand is a heavy die-cast base. Metal screw machine stud connects microphone adapter to stand base. **NET WEIGHT:**  $\frac{5}{8}$  lb., Packaged weight, 1 lb. **MODEL S38.** (Bronze) for use with 245, 777 Series microphones. **MODEL S38B.** (Black) for use with Models 275S, 275SK, 415, 430, 575S, 575SB. **LIST PRICE \$4.50.**



### S33 MODERN DESK STAND

**MODEL S33.** Baked bronze finish. For use with Models 300, 333, 525, and 535. **NET WEIGHT:** 2 $\frac{1}{2}$  lbs., Packaged weight, 3 lbs. **LIST PRICE: \$15.00**

**MODEL S33B.** Same as S 33 — in black finish. For use with Models 330, 530, 544, 545, 546, 556S, 576, 578, 415, and 430. **LIST PRICE: \$15.00.**



**S36A "TEARDROP" DESK STAND MODEL S36A.** Streamlined gray desk mount fits all Shure connector-type microphones including 51, 51S, 55S, 55SW, 315, 315S, 540S, 545S, and 737A. Accommodates A25 type Swivel Adapter. **NET WEIGHT:** 1 lb., packaged weight, 1 $\frac{3}{8}$  lbs. **LIST PRICE: \$6.50.**

\* U. S. Patent 2,454,425

SHURE

## COMMUNICATIONS MICROPHONES

More Shure Mobile and Fixed Station Microphones are used in Professional Installations than all other makes combined!

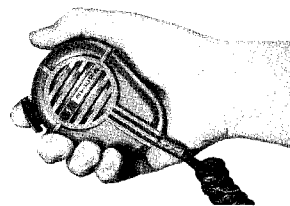
## THE "404" WITH HIGH IMPACT "ARMO-DUR" CASE

MODEL	OUTPUT LEVEL	IMPEDANCE	CABLE LENGTH TYPE DESCRIPTION	SWITCH MIC. CIRC.	RELAY CIRC.	LIST PRICE
404B	-50 db (0 db = 1 milliwatt per 10 microbars); .293 millivolts/microbar	150-250 Ohms	5½ ft. Coiled cord, Copper, 4 conductor (2 shielded)	CLOSED*	OPEN	\$33.00
404C	-50.5 db (0 db = 1 volt per microbar); 2.930 millivolts/microbar	High	5½ ft. Coiled cord, Copper, 3 conductor (1 shielded)	CLOSED*	OPEN	\$33.00
405T***	-1 db loaded with 500 ohms (0 db = 1 milliwatt per 100 microbars)	100-500 Ohms	5 ft. extended 4 conductor stranded coiled cord	—	OPEN	\$48.50

\*Provision for simple change to normally open.

\*\*\*Transistorized for direct replacement of carbon microphones.

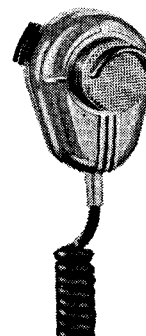
The Shure Controlled Magnetic "404" is recommended for those applications where a rugged hand-held microphone is needed. It is ideal for outdoor public address (sports arenas, athletic fields, carnivals, etc.) and for mobile communications. The "404" is designed for high speech intelligibility. Easy to use, fits snugly in the palm of the hand. Leaf-type switches control the mic. circuit and an external relay or switching circuit. Omni-directional. Freq. response 200 to 8000 cps. Only 3¼" high, 2½" wide, 1¼" deep. Includes mounting bracket. U. S. Patent 2,454,425



a new breakthrough in microphone design . . .

## SHURE MODEL 488 NOISE-CANCELLING MICROPHONE!

Outperforms and obsoletes all others . . . confirmed by laboratory and field comparison tests! Provides highly intelligible speech communication in mobile and fixed-station use where high volume background noise is found, such as airplanes, helicopters, motorcycles, trucks, fire engines, power boats, sporting events, drop forges, press-rooms, engine-rooms, factories. The 488 incorporates the patented Shure Controlled Reluctance cartridge into a distance discriminate microphone that effectively cancels background noise to permit transmission under conditions that would be impossible with any other microphone. Correct placement of microphone for close-talk use is assured by convenient rubber lip-guard. Rugged, impact-resistant "Armo-Dur" case is lightweight, easier to handle in extremes of temperature. Four versions of the 488 are available: 488A — high impedance; 488B — low impedance; and 488C and 488T — transistorized for direct replacement of carbon microphones (488T FAA Certified for Aircraft applications). All models equipped with coiled-cord and long-life heavy-duty push-to-talk switches. Field-testing these blade-type switches confirms their operating life rating to be in excess of one million cycles.



## SPECIFICATIONS

MODEL	488A High Impedance	488B Low Impedance	488C Transistorized	488T Transistorized Aircraft
List Price	\$57.50	\$57.50	\$62.50	\$72.50
Noise Discrimination	Far Superior to Standard Communication Microphones			
Frequency Response	(SPECIALLY TAILORED FOR BEST INTELLIGIBILITY) 200 to 4000 Cycles Per Second			
Type	Controlled Reluctance			
Output Level (0 db = 1 volt per 100 microbar field)	.125 volts (-18 db)	.014 volts (-37 db)	0.45 volts (-7 db) using 6 volts and 500 ohm load	0.71 volts (-3 db) using 12 volts and 500 ohm load
Impedance	High: Recommended Load 100,000 ohms or more	150-250 ohms	Recommended Load 500 ohms	Recommended AC Load 100 to 800 ohms
Cable	Three-Conductor (One-conductor shielded) cadmium copper coiled cord (5½' extended)	Four-Conductor (Two-conductor shielded) cadmium copper coiled cord (5½' extended)	Four-Conductor cadmium copper coiled cord (5½' extended)	Three-Conductor Tinsel coiled cord (5½' extended) with PJ 068 — plug attached
Switch Mic. Circuit Relay Circuit	Normally closed* Normally open	Normally open** Normally open	Normally open Normally open	Normally open Normally open
Case	GRAY HIGH IMPACT "ARMO-DUR" WITH PERFORATED STEEL GRILLE AND RUBBER LIP-GUARD			
Dimensions	3¼" high x 2½" wide x 2½" deep			
Weight	¾ lb.			
Accessories	MOUNTING BRACKET FOR PERMANENT PLACEMENT			

\*Provision for simple change to normally open

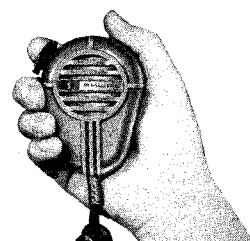
\*\*Provision for simple change to normally closed

U. S. Patent 2,454,425

## MODEL 100 SERIES CARBON MICROPHONES

Now featuring "Armo-Dur" high impact, corrosion-proof units. Used around the world for police, taxi, bus, truck and commercial applications—more than all other makes combined! Adopted as standard microphones for professional two-way radio communications equipment. The "100 Series" microphones are provided with a bracket for permanent placement in portable or mobile equipment. They fit naturally and comfortably in the palm of the hand. They are light, compact and rugged units—with a reputation for long-life performance under "rough and tumble" operating conditions.

**SPECIFICATIONS**—TYPE: Carbon. FREQUENCY RESPONSE: 300 to 4,000 cps. (Tailored voice response). OUTPUT LEVEL: 5 db below 1 volt for 100 microbar speech signal. IMPEDANCE: Recommended load—50 to 100 ohms. POLAR PATTERN: Omnidirectional. CASE: High-Impact "Armo-Dur". FINISH: Gray. CABLE: Cadmium copper coiled cord with trimmed and tinned leads. SWITCH: Model 104A—DPST normally open switch to control microphone and relay. Model 104B—SPST normally open relay switch (no microphone switch). DIMENSIONS: 3¼" high, 2½" wide, 1¼" deep. NET WEIGHT: ¾ lb. PACKAGED WEIGHT: 1 lb.



MODEL	LIST PRICE
104A	\$30.00
104B	\$30.00

SHURE

## MICROPHONE ACCESSORIES

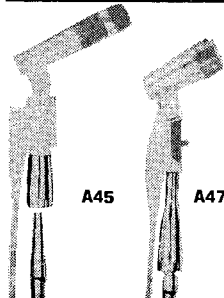


## MODEL S39A VIBRATION-ISOLATION STAND

Ideal for use on table, desk, in the footlight area of a stage, for remote broadcasting (particularly for sporting events, conference tables, panels, and for all applications where vibration is a problem. The S39A provides maximum isolation from extreme mechanical vibration by its capacity to absorb mechanical shock as a sponge absorbs water. The Model S39A Stand is designed for all Shure microphones and Swivel Adapter assemblies. An extension adapter is furnished to increase the height of certain microphones for cable connector clearance. Made of durable black crackle finish plastic with heavy duty foam rubber isolation.

NET WEIGHT: 2½ lbs., Packaged Weight, 2½ lbs.

LIST PRICE: \$25.00.



### QUICK DISCONNECT MICROPHONE ISOLATION UNITS

Designed for use with microphones normally mounted on desk or floor stands but which must be periodically removed from stand for hand-held or carry-around use. In addition, because of a molded rubber insert, the adapters effectively isolate the microphones from mechanical vibration, shocks and noises carried to the microphone through the desk or floor stand. Quick disconnect operation is instant, easy, and silent. Made of aluminum and anodized for beauty and long wear despite frequent handling. Model A45 is designed for microphones incorporating an isolation assembly such as the Shure Models 556, 330 and 546. Model A47 is designed for microphones with connectors such as Shure Models 55S, 51, 545S, 540S, 737A or nearly all microphones with a standard ¾"-27 thread.

	A45	A47
LIST PRICE	\$12.00	\$12.00
DIMENSIONS	3½" high x 1¼" diam. assembled	5½" high x 1¼" diam. assembled
WEIGHT ADDED TO HAND HELD MICROPHONE	2.3 oz.	3.6 oz.
NET WEIGHT	3.3 oz.	4.6 oz.

### NEW CABLE TYPE TRANSFORMER



Model A95A is a high-quality, cable-type transformer which makes it possible to connect a low impedance microphone (35-50 ohm and 150-250 ohm) to a high impedance amplifier. It is housed in a compact, sturdy and magnetically-shielded case, 2½" long x ¾" diameter. Use of this transformer solves the problem of excessive high frequency loss and objectionable hum when long lengths of microphone cable are necessary. Model A95A may also be used in specialized applications requiring high impedance to low impedance circuit connections. Attractive gray and black case furnished with Cannon XL-3-11 input and Amphenol MC1F output plugs installed. Frequency response: 20 to 20,000 cps, plus or minus 1 db.

List Price: \$17.50

### COILED CORD SETS

Tinsel Coiled Cord with trimmed and tinned leads and Amphenol MC4M connector attached (3 conductor shielded) for use with General Electric EM10A and 505K microphones. Model: C10C	List Price \$12.00
Tinsel Coiled Cord with Amphenol MC4M plug for use with General Electric EM10A-2 and Shure 405K and 405 KB Microphones. Model: C11C	List Price \$12.00
Standard Coiled Cord with trimmed and tinned leads for use with Shure 404C, 488A microphones. Model: C12C	List Price \$9.75
Standard Coiled Cord with trimmed and tinned leads for use with Shure 404B, 488B microphones. Model: C14C	List Price \$10.00
Standard Copper Coiled Cord with trimmed and tinned leads. Used in "CB" and "100" Series Microphones. Model: C15C	List Price \$6.25
Tinsel Coiled Cord with Amphenol MC4M Connector for use with General Electric equipment. Model: C16C	List Price \$9.50
Tinsel Coiled Cord with spade lugs for use in Motorola equipment. Model: C17C	List Price \$7.75
Standard Coiled Cord with Amphenol MC4M Connector for use with Motorola equipment. Model: C18C	List Price \$9.50
Tinsel Coiled Cord with Amphenol MC4M Connector for use with Motorola equipment. Model: C19C	List Price \$9.50
Tinsel Coiled Cord For use with Shure 201, 401A. Model: C20C	List Price \$7.00
Tinsel Coiled Cord For use with Shure 401B. Model: C21C	List Price \$7.75
Tinsel Coiled Cord with PJ-068 connector for use with Shure 488T. Model: C22C	List Price \$15.00
Tinsel Coiled Cord For use with Shure 275 SK. Model: C23C	List Price \$6.00

### MICROPHONE REPLACEMENT CARTRIDGES

#### CARBON REPLACEMENT CARTRIDGE—MODEL R10

Rugged microphone cartridge replacement for "CB", "100", and "120" Series Carbon Microphones. Includes mounting hardware, installation instructions. Model R10

List Price \$8.50

Model 99A149 replacement cartridge for microphone models: CB20, CB21, CB50 and 115. Model 99A149

List Price \$8.50

#### CRYSTAL CARTRIDGE — MODEL R7

Available as a replacement for the cartridges in the Shure Crystal Microphones of the 707A and 708A Series, and other microphones of similar design. High output—48 db below 1 volt per microbar. Supplied with rubber mounting rings and installation instructions.

Model R7

List Price \$8.25

#### DYNAMIC — MODEL R50

Replacement cartridge for Shure Dynamic Microphones. Models: 540 (Series II), 540S (Series II), 560, 561, 575S and 575SB.

Model R50

List Price \$15.00

#### SLIM-X MICROPHONE CARTRIDGE

The Model 99A186 replacement cartridge assembly for the 777 Series Slim-X Microphones. Crystal element metal-sealed for long life under adverse conditions of heat and humidity. Requires only one solder connection. Model 99A186

List Price \$10.00

#### CONTROLLED MAGNETIC CARTRIDGE — MODEL R5 \*

Direct replacement for cartridges used in the following Shure microphone models: 510C, 510MD, 510S, 520, 520SL, 505C, 505K, 404C, 405C and 405K. Also ideal for replacement of crystal cartridges in Shure cases of the Model 707A and 708A Series, where heat and humidity are a problem. Supplied with rubber mounting ring.

Model R5

List Price \$11.00

#### LOW IMPEDANCE CARTRIDGE — MODEL R5B \*

Model R5B is the replacement cartridge for cartridges used in microphone models 505B, 505T, 404B, 405B, 405T, 510SLB, 520SLB, and 520B. Model R5B is physically identical to Model R5; but low impedance (150 to 250 ohms). Can be used in any R5 applications which require a low impedance cartridge.

Model R5B

List Price \$11.00

#### MODEL R4M FOR SHURE "COMMANDOS" \*

The Model R4M controlled magnetic cartridge assembly is the direct replacement cartridge for use in the models 430, 425, 420 and 415 Shure "Commando" microphones.

Model R4M

List Price \$15.00

#### MODEL R5T CONVERSION KIT \*

Includes a controlled magnetic cartridge and transistor amplifier to convert carbon microphones into improved controlled magnetic transistorized microphones. Conversion takes only minutes with a screwdriver, long-nose pliers, soldering iron.

**SPECIFICATIONS:** Controlled magnetic with transistor amplifier. 200 to 4,000 cps, semi-directional. Output Level: 1 db loaded with 500 ohms (0 db — 1 millivolt per 100 microbars). List Price: \$25.00.

**NOTE:** For complete Shure Microphone Cartridge replacement information, write for AL188, Microphone Cartridge Replacement Guide.

### "GRIP-TO-TALK SLIDE-TO-LOCK" SWITCH

Heavy-Duty Switch withstands the most severe field requirements of paging and dispatching systems. Ideal for Police, Taxi Cab, Railroad, Airport, Bus, Truck, and all emergency communications work. Can be used with Shure connector-type crystal, dynamic and carbon microphones of any impedance. Fits handily on Shure 536A Desk Stand, Rich satin chrome finish.



Model: A88A

List Price: \$12.50

Model A88A

### ON-OFF PRESS-TO-TALK SWITCHES



Model A83B. Rotary-type "On-Off" switch. Quickly attached to any cable-conductor type Shure microphone. (Amphenol MC3 type only)

Model: A83B

List Price: \$11.00

Model A84B. Momentary Press-to-Talk "On-Off" switch.

Model: A84B

List Price: \$11.00

Model A85C. Momentary Press-to-Talk Relay-Type Switch.

Model: A85C

List Price: \$11.50



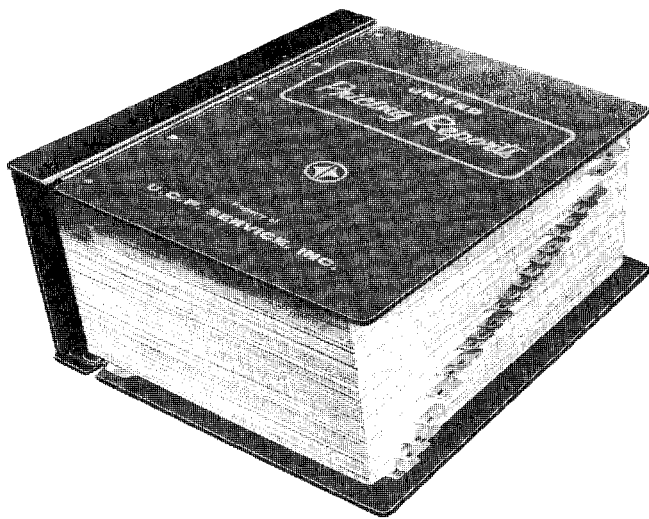
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**SONOTONE**  
 audio products

# Ceramike Microphones

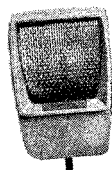


Fig. A



Fig. B

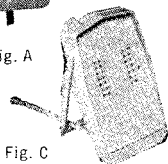


Fig. C

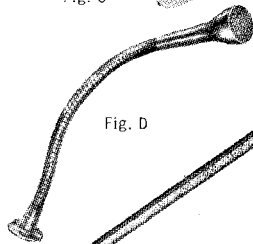


Fig. D



Fig. E

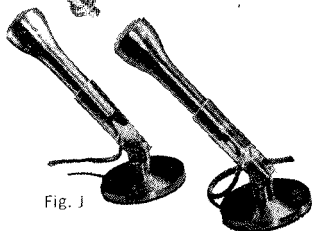


Fig. F

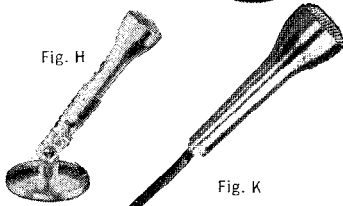


Fig. G

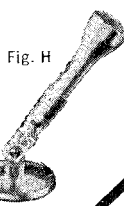


Fig. H

Fig. K

**SONOTONE CERAMIKE 'CM-3050'.** Low-impedance CB mike. "Push-to-talk" button, shatterproof case, lightweight. Complete with coiled 4-conductor shielded cable. Fig. A. net \$9.00.

**SONOTONE CERAMIKE 'CM-3050M'.** Same as 'CM-3050' with magnetic dashboard mount. Fig. B. Net \$10.50.

**SONOTONE CERAMIKE 'CM-1018'**—Low impedance microphone for tape recording and communication applications. Fig. K. Stand not included. Net \$11.10.

Response: ..... 50 to 10,000 cps  
 Sensitivity: ..... -56 db  
 Recommended impedance: ..... 250K (usable to 33K)  
 Damping grid: ..... Lanced, louvered metal grid

**SONOTONE CERAMIKE 'CM-1050WR'**—Wide-range, low-impedance microphone. Ideal for voice and music applications. Fig. K. Stand not included. Net \$11.10.

Response: ..... 50 to 10,000 cps  
 Sensitivity: ..... -58 db  
 Recommended impedance: ..... 250K (usable to 33K)  
 Damping grid: ..... Lanced, louvered metal grid

**SONOTONE CERAMIKE 'CM-1050SR'**—Speech-range, low-impedance microphone, designed for speech applications, such as tape recording and communications. Looks like Fig. K. Net \$11.10.

**SONOTONE CERAMIC 'CMT-1050WR'** — (Matched Twins) — Designed for music and speech taping in stereo. Each mike is matched to within  $\pm 2$  db. Fig. K. Stands not included. Specs are the same as 'CM-1050WR.' Net \$22.50.

**SONOTONE CERAMIKE 'CMC-1050WR'** (Combination Stand and Mike)—Attractive microphone with matching stand. Use for taping PA systems and learning labs. Low-impedance, wide-range mike. Looks like Fig. K. Specs are the same as Model "CM-1050WR." Net \$14.10.

**SONOTONE CERAMIKE 'CM-10A39'**—Ruggedized for classroom and other hard-usage applications. Has new bend relief sleeve and slim cable. Ideal mike for learning labs. Specs are the same as 'CM-10A.' Shown here with optional stand "CMSL-10." Sleeve made of rugged plastic. Fig. K. Net \$11.10.

Response: ..... 50 to over 11,000 cps  
 Sensitivity: ..... -56 db  $\pm 2$  db  
 Transducer: ..... Ceramic element  
 Damping grid: ..... Lanced, louvered metal grid

**SONOTONE CERAMIKE 'CM-30'.** Perfect for mobile units. Intelligibility unsurpassed. Sensitivity curve favors voice frequency range. Ruggedly built to take the punishment of mobile use. Lightweight, shatterproof plastic case. Convenient "push-to-talk" button and dashboard mounting bracket. Spring-spiraled 4-conductor shielded cable, net \$8.40.

**SONOTONE CERAMIKE 'CM-30M'.** With new magnetic dashboard mount—no holes to drill, no brackets to attach, net \$9.90.

Response: ..... 60 to 7,000 cps  
 Sensitivity: ..... -49 db  $\pm 2$  db  
 Case: ..... Shatterproof plastic

**SONOTONE CERAMIKES 'CM-40' & 'CM-41'**—Low price ceramic mikes in high impact plastic case. Unique swing type stand sits upright for table use. Model CM-41 has push-to-talk switch. Fig. C CM-40, net \$5.94; CM-41, net \$7.54.

Both CM-40 & 41  
 Response: ..... 40 to 8,000 cps  
 Sensitivity: ..... -50 db

**SONOTONE CERAMIKE 'CM-17A'.** Omnidirectional high impedance model provides natural sound reproduction and long-term trouble-free service in audio-visual labs, language labs, PA system. 13" flexible gooseneck keeps hands free for writing and taking messages. Excellent for all speech needs. 6' shielded cable, net \$14.70. Fig. D.

Response: ..... 50 to over 11,000 cps  
 Sensitivity: ..... -56 db  $\pm 2$  db  
 Transducer: ..... Ceramic element  
 Damping Grid: ..... Lanced, louvered metal grid

Models utilizing the CM-17A element available in a variety of mountings as follows:

**SONOTONE CERAMIKE 'CM-17B'**—13" boom mike. Fixed boom mounted with 350° swivel. 7' mike cable, net \$17.10. Fig. F

**SONOTONE CERAMIKE 'CM-17C'**—6" fleximike. Flexible gooseneck with fixed base mount. 7' mike cable, net \$13.50.

**SONOTONE CERAMIKE 'CM-17D'**—6" boom mike. Solid boom with fixed base mount. 7' mike cable, net \$13.50.

**SONOTONE CERAMIKE 'CM-17E'**—3" boom mike. Solid boom with fixed base mount. 7' mike cable, net \$12.30.

**SONOTONE CERAMIKE 'CM-17F'**—solid boom with 350° mount and flange. Top mounting base plate similar to Fig. F. Net \$17.10.

**SONOTONE CERAMIKE 'CM-18A'**—13" fleximike. Low impedance omnidirectional microphone with push-to-talk button to keep audio control at the user's fingertips. Ideal for transistorized system, net \$20.70.

**SONOTONE CERAMIKE 'CM-18'**—13" fleximike with same electrical characteristics as the CM-18A except that it has no push-to-talk switch, net \$19.50.

Response: ..... 200 to 8,000 cps  
 Sensitivity: ..... -63 db  $\pm 2$  db  
 Damping grid: ..... Lanced, louvered metal grid

**SONOTONE CERAMIKE 'CM-T10A'** (Matched Twin)—Ideal for taping the new FM stereo broadcast "off-the-air" and other stereo taping applications. Every CM-T10A set is electronically matched at the factory to a tolerance of  $\pm 2$  db to eliminate the risk of distortion. 7' shielded cable and phone plug. Per pair, net \$21.30. See Fig. J

Response: ..... 50 to over 11,000 cps  
 Sensitivity: ..... -56 db  $\pm 2$  db  
 Damping grid: ..... Lanced, louvered metal grid

**MATCHING TABLE STAND CMS-10** available with  $\frac{1}{8}$ " No. 27 thread for floor stand mounting, net \$3.00.

**SONOTONE CERAMIKE 'CM-10A'**—Natural, clean reproduction over the full audible range. Ideal for tape recording, also excellent for home movie, PA systems and conference pickups. 7' shielded cable with phone plug, net \$10.50. See Fig. K

Response: ..... 50 to over 11,000 cps  
 Sensitivity: ..... -56 db  $\pm 2$  db  
 Transducer: ..... Ceramic element  
 Damping grid: ..... Lanced, louvered metal grid

**SONOTONE CERAMIKES 'CMC-10A'**—Combination package consisting of CM-10A mike and CMS-10 table stand; Net \$13.50. See Fig. H.

**SONOTONE CERAMIKE 'CM-12A'**—For PA systems in long lead installations. Low impedance with push-to-talk buttons, net \$17.70. See Fig. K

Response: ..... 200 to 8,000 cps  
 Sensitivity: ..... -63.5 db  $\pm 2$  db  
 Transducer: ..... Ceramic element  
 Damping grid: ..... Lanced, louvered metal grid

## SONOTONE SONO/COM HEADSETS

**SHM-1000—HEADSET** (crystal phone) with hi-impedance ceramic microphone (noise cancelling). Freq. resp. (headset) 80 to 10,000 cps, (mike) 50 to 10,000 cps. Sensitivity: (mike) —53 db. Net \$40.75.

**SHM-1100—HEADSET** (crystal phone) with low-impedance (600 ohms) magnetic microphone (noise cancelling). Freq. resp. (headset) 80 to 10,000 cps, (mike) 100 to 8500 cps. Sensitivity: (mike) —58 db. Net \$46.75.

**SHM-1200—HEADSET** (ceramic phone) with ceramic boom microphone (noise cancelling). Freq. resp. (headset) 80 to 10,000 cps, (mike) 50 to 10,000 cps. Sensitivity: (mike) —53 db. Net \$40.75.

**SHM-1300—HEADSET** (ceramic phone) with low impedance (600 ohms) magnetic microphone (noise cancelling). Freq. resp. (headset) 80 to 10,000 cps, (mike) 100 to 10,000 cps (useful response). Sensitivity: (mike) —58 db. Net \$46.75.

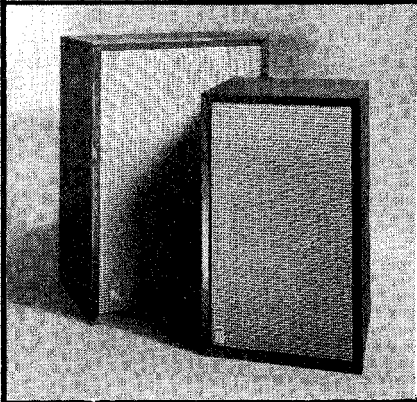
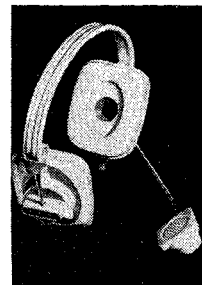
**SH-2000—HEADSET** only (crystal).

Freq. resp. 80 to 10,000 cps. Net \$26.25.

**SH-2100—HEADSET ONLY** (ceramic phone) available in four decorator colors. Freq. resp. 80 to 10,000 cps. Net \$26.25.

**SB-3000—HI-Z CERAMIC MICROPHONE** (noise cancelling) Freq. resp. 50 to 10,000 cps. Sensitivity: —53 db. Net \$14.50.

**SB-310—LOW-Z MAGNETIC MICROPHONE** (noise cancelling). Freq. resp. 100 to 10,000 cps (useful response). Sensitivity: —58 db (open circuit). Net. \$20.50.



## SONOTONE SPEAKER SYSTEMS

ATTRACTIVE OILED WALNUT HAND-FINISHED CABINETS COMPLETE WITH QUALITY SPEAKERS

THE BEVERLY HILLS Model 'SE-880' enclosure with double 8-inch speakers, net \$54.75.

ELECTRICAL—Response: 45 to 20,000 cps; Power Rating: 40 watts average programming, 80 watts peak; Impedance: 8 to 16 ohms.

PHYSICAL—Speakers: (2) 8-inch coaxial cone speakers; Size: 11" x 24" x 17½"; Weight: 36 pounds.

THE SCARSDALE Model 'SE-80' enclosure with single 8-inch speaker, net \$39.75.

ELECTRICAL—Response: 45 to 20,000 cps; Power Rating: 20 watts average programming, 40 watts peak; Impedance: 8 ohms.

PHYSICAL—Speaker: Single 8-inch coaxial cone speaker; Size: 11½" x 12½" x 20½"; Weight: 27 pounds.

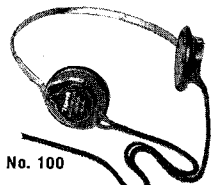
# TRIMM INC. LIBERTYVILLE • ILLINOIS

## HEADSETS



### "L" HEADSET (Nos. 50, 56)

High quality headset. Designed for use in educational training, broadcast work and communication systems. Response of up to 9,000 cps. Prolonged exposure to excessive heat and humidity will not affect performance. All types have bakelite shell and cap. No. 50 has black rubber covered double headband and nylon waterproof tinsel conductor 'Y' cord with No. 501 plug. No. 56 has vinyl covered adjustable double headband and over-the-head molded neoprene cord with No. 501 plug.



### FEATHERWEIGHT (Nos. 100, 104, 106, 107)

World famous TRIMM Featherweight headsets are recommended for amateur radio use, language training, electronic testing apparatus, etc. Weight is less than 5 ozs. All types have black bakelite shell and cap and mercerized cotton waterproof tinsel conductor 'Y' cord. No. 100 and 106 have nickel plated headband and cord with pin tips. No. 104 and 107 have black fabric covered double headband and cord with pin tips.



### COMMERCIAL (Nos. 151, 152, 155-159)

One of the most rugged TRIMM headsets. Developed for marine and aircraft radio service, amateur radio, and language training. Weighs less than 5 ozs. All types have a black bakelite shell and cap and mercerized cotton waterproof tinsel conductor cord. No. 151 has nickel plated headband and over-the-head cord with pin tips. No. 152 has black fabric covered double headband and over-the-head cord with pin tips. No. 155 has black vinyl covered double headband and 'Y' cord with No. 501 plug. No. 156 and 157 have black rubber covered double headband and 'Y' cord with No. 501 plug. No. 158 and 159 have black rubber covered double headband and 'Y' cord with pin tips.



### ACME (Nos. 24, 25, 27)

A superior low cost headset. Recommended for crystal sets, Geiger counters, toys and radio systems where low cost is important. All types have black bakelite shell and cap. No. 24 has black vinyl covered double headband and cotton tinsel conductor 'Y' cord with pin tips; No. 25 has black enameled headband and cotton tinsel conductor 'Y' cord with pin tips. No. 27 has black enameled single headband and plastic covered stranded wire single cord with pin tips.



#### SINGLE EARPHONES

List		List	
No. 27-03—3.2 ohm	2.05	No. 27-1K—1K ohm D.C.	2.20
No. 27-9-03—3.2 ohm w/plug	2.90	No. 27-2K—2K ohm D.C.	2.35

### DEPENDABLE (Nos. 70, 71, 72)

Recommended for code teaching, electronic organs and low cost language labs. All types have black bakelite shell and cap, black vinyl covered headband and mercerized cotton tinsel conductor cord; (No. 71 has plastic covered stranded wire cord). No. 70 as shown has double headband and 'Y' cord with pin tips; No. 72 has single headband and single cord with pin tips.



#### SINGLE EARPHONES

List		List	
No. 72-03—3.2 ohm	3.50	No. 72-1K—1K ohm D.C.	3.60
No. 72-2K—2K ohm D.C.	3.75		

### REX (Nos. 30, 32)

Lowest cost TRIMM bi-polar type headset. Recommended for crystal sets, code training and widely used on institutional radio systems. Weighs only 6 ozs. All types have black bakelite shell and cap and black vinyl covered headband. No. 30 has double headband and cotton tinsel conductor 'Y' cord with pin tips; No. 32 has single headband and plastic covered stranded wire single cord with pin tips.

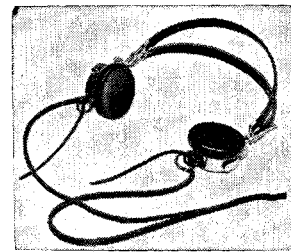


#### SINGLE EARPHONES

List		List	
32-9-03 3.2 ohm w/plug	3.35	32-03 3.2 ohm	2.50
32-1K 1K ohm d.c.	2.60		

### ARMY-NAVY (Nos. 28, 29)

Built for severe use. Has black bakelite cap and brass shell with satin chrome finish, black rubber covered double headband with thumbscrew locking device for yoke adjustment and nylon waterproof tinsel conductor 'Y' cord with pin tips. No. 28-9 and 29-9 are supplied with No. 501 plug.



#### STANDARD TYPES

Type	Price	Type	Price
28 (W) 600 ohm	20.00	29 (K) 20M ohm	20.00

#### STANDARD TYPES w/plug

Type	Price	Type	Price
28-9 (W) 600 ohm	21.65	29-9 (K) 20M ohm	21.65

## STANDARD DUAL HEADSETS — PART NUMBERS AND LIST PRICES

IMPEDANCE*	ACME		REX		DEPENDABLE		FEATHERWEIGHT		COMMERCIAL		"L"	
	Part #	Price	Part #	Price	Part #	Price	Part #	Price	Part #	Price	Part #	Price
3.2Ω	24-03	3.90	30-03	4.50	70-03	5.10	100-03	11.00	151-03	12.10	—	—
	25-03	3.45	—	—	—	—	104-03	11.00	152-03	12.10	—	—
3.2Ω w/plug	24-9-03	4.75	30-9-03	5.35	70-9-03	5.90	100-9-03	12.80	151-9-03	13.90	—	—
	—	—	—	—	—	—	104-9-03	12.80	152-9-03	13.90	—	—
	—	—	—	—	—	—	—	—	155-03	13.00	—	—
8Ω w/plug	—	—	—	—	—	—	—	—	—	—	50-08	23.00
	—	—	—	—	—	—	—	—	—	—	56-08	27.65
600Ω	—	—	—	—	70-06	5.20	100-06	11.00	151-06	12.10	—	—
	—	—	—	—	—	—	104-06	11.00	152-06	12.10	—	—
	—	—	—	—	—	—	—	—	158	13.50	—	—
600Ω w/plug	—	—	—	—	—	—	100-9-06	12.80	151-9-06	13.90	50-06	23.00
	—	—	—	—	—	—	104-9-06	12.80	152-9-06	13.90	56-06	27.65
	—	—	—	—	—	—	—	—	155-06	13.00	—	—
	—	—	—	—	—	—	—	—	156	15.00	—	—
1500Ω	24-15	3.95	—	—	70-15	5.30	100-15	11.00	—	—	—	—
	—	—	—	—	—	—	104-15	11.00	—	—	—	—
2KΩ D.C.	24-2K	4.05	30-2K	4.70	70-2K	5.40	100-2K	11.00	151-2K	12.10	—	—
	25-2K	3.60	—	—	71-2K	6.40	104-2K	11.00	152-2K	12.10	—	—
2KΩ D.C. w/plug	24-9-2K	4.90	30-9-2K	5.55	70-9-2K	6.20	100-9-2K	12.80	151-9-2K	13.90	—	—
	—	—	—	—	—	—	104-9-2K	12.80	152-9-2K	13.90	—	—
	—	—	—	—	—	—	—	—	155-2K	13.00	—	—
2MΩ w/plug	—	—	—	—	—	—	—	—	—	—	50-2M	23.00
	—	—	—	—	—	—	—	—	—	—	56-2M	27.65
3KΩ D.C.	—	—	30-3K	5.00	70-3K	5.70	—	—	—	—	—	—
4KΩ D.C.	24-4K	4.35	—	—	70-4K	6.00	100-4K	11.00	—	—	—	—
	25-4K	3.90	—	—	—	—	104-4K	11.00	—	—	—	—
4KΩ D.C. w/plug	—	—	—	—	70-9-4K	6.80	100-9-4K	12.80	—	—	—	—
	—	—	—	—	—	—	104-9-4K	12.80	—	—	—	—
5MΩ w/plug	—	—	—	—	—	—	—	—	—	—	50-5M	23.00
	—	—	—	—	—	—	—	—	—	—	56-5M	27.65
12MΩ w/plug	—	—	—	—	—	—	—	—	—	—	50-12M	24.00
	—	—	—	—	—	—	—	—	—	—	56-12M	28.65
17MΩ	—	—	—	—	—	—	—	—	159	13.50	—	—
17MΩ w/plug	—	—	—	—	—	—	—	—	157	15.00	—	—
24MΩ	—	—	—	—	—	—	106	11.00	—	—	—	—
	—	—	—	—	—	—	107	11.00	—	—	—	—
24MΩ w/plug	—	—	—	—	—	—	106-9	12.80	—	—	—	—
	—	—	—	—	—	—	107-9	12.80	—	—	—	—

Impedance at 1000 c.p.s. unless shown as D.C. resistance

NOTE: In above listings -9 in code indicates "with plug." For plug descriptions see other TRIMM listings in Section 2100.

# TRIMM INC. LIBERTYVILLE • ILLINOIS

## HEADSETS AND ACCESSORIES

### STEREO HEADSETS

Stereo headsets are available in four models, construction details of which are described on the previous page. They range from inexpensive units in the Acme line to top quality, extended frequency range "L" models. For the best high fidelity performance, usually associated with stereo, the "L" is recommended. "50 Series" has nylon "Y" cord. "56 Series" has nylon over-the-head cord.

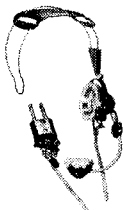
	List
<b>ACME</b>	
24-14-03—3.2 ohm w/513 3-circuit plug	\$6.20
<b>DEPENDABLE</b>	
70-14-03—3.2 ohm w/513 3-circuit plug	7.00
70-14-2K—2K ohm w/513 3-circuit plug	7.90
<b>FEATHERWEIGHT</b>	
104-14-03—3.2 ohm w/513 3-circuit plug	13.60
104-14-2K—2K ohm w/513 3-circuit plug	13.60
<b>"L"</b>	
50-14-08—8 ohm w/516 3-circuit plug	27.00
50-14-16—16 ohm w/516 3-circuit plug	27.00
50-14-6M—6M ohm w/516 3-circuit plug	28.00
56-14-08—8 ohm w/516 3-circuit plug	31.65
56-14-16—16 ohm w/516 3-circuit plug	31.65
56-14-6M—6M ohm w/516 3-circuit plug	32.65

### STEREO CONTROL BOX

Designed for headsets described above. Contains 3-circuit jack to mate 513 or 516 plugs and two controls of value suitable for volume adjustment on both channels when using low impedance headsets. Construction similar to other types described on this page.

464-1C—Brown Hammertone	\$9.40
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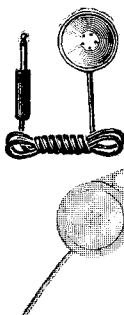
### TELEPHONE OPERATOR'S HEADSET



A high quality transmitter/receiver unit commonly used in switchboard applications. Lightweight construction and complete adjustability assures wearing comfort and proper transmitter placement.

**RECEIVER**—Impedance 275 ohms at 1000 c.p.s.  
**TRANSMITTER**—Carbon type, impedance 25 ohms  
 Frequency range 300-5000 c.p.s.  
**PLUG**—Standard twin 2-circuit Trimm type 505.  
 No. 252AW List \$77.75

### PILLOW-PHONE



Intended for under-the-pillow or other very local loudspeaker applications such as in hospitals, night listening in the home, etc. Sealed, waterproof ultra thin disc shaped magnetic unit 2" dia. and less than 3/16" thick, edges rounded, and by comparison making other types appear very bulky. Has stainless steel face, pearl grey plastic shell and cord terminal cover. Replaceable 5 ft. grey vinyl tinsel cord with color matched plug attached "85" series uses TRIMM No. 514 type plug, (1/4" dia. sleeve), "86" series uses TRIMM No. 536 type plug (3/4" dia. sleeve).

As an extra accessory, (part No. 85-20, illustrated at left, attached to unit), a grey neoprene snap on ring, and used particularly in hospitals for hanging unit on bedside hook is available. This fits either series.

STANDARD TYPES					
		List			List
85-03	3.2 ohm	\$11.00	86-03	3.2 ohm	\$11.00
85-2M	2M ohm	11.00	86-2M	2M ohm	11.00

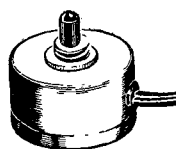
### EAR CUSHIONS

Provides the user with maximum comfort when wearing headsets and excludes disturbing noises. All prices are per pair.

- 654 Sponge rubber, Military Type MC-162. Fits TRIMM Acme, Commercial, Featherweight, "L" type and Rex. List \$1.60.
- 655 Solid rubber, Military Type MC-162A. Fits TRIMM "L" type and "S" headset. Also fits Permoflux headset and Military Type ANB-H-1 units. List \$3.00.
- 656 Sponge rubber face, solid rubber back, Military Type MX-41/AR. Fits same types as 655. List \$4.20.
- 658 Chamois donut type, Military Type NAF 48490-1. Fits same types as 655. List \$13.35.
- 658-2 Chamois donut type. Fits Clevite-Brush type "A" headset. List \$16.95.
- 660 Sponge rubber. Fits TRIMM Army-Navy, "B", Dependable and discontinued Professional type. Also fits Clevite-Brush type "A" and "BA" headsets. List \$2.50.



### STOP-IT COMMERCIAL TRIMMER



Permits user to turn off audio signal of TV or radio set without getting up from chair, giving listener freedom to choke off unwanted commercials. Other uses that suggest themselves are to suppress loudspeaker when phone rings, etc.

No. 639—"STOP-IT" (Illustrated at left) consists of housing containing switch to which is attached 20 ft. cord ready to install in accordance with instructions with each unit List \$3.40

See other TRIMM Listings in Section 2100

### GROUP HEARING AID COMPONENTS

#### Single Earphones

There are two basic types of earphones for group hearing aid use, the lorgnette handle type for churches and mortuaries, and the headband type for theatres and auditoriums. The Featherweight and "L" models are available for this application. All have 6 ft. mercerized cotton waterproof tinsel conductor cord. Nos. 110, 114, 115 and 51 are headband types. Nos. 120, 124 and 52 are lorgnette handle types. Those listed with plugs employ type 512 flat plug (exception: No. 115, recommended for hard of hearing, has type 511 plug.)



Fig. B



Fig. A

#### FEATHERWEIGHT—PART NOS. AND LIST PRICES

Impedance	110	114	115	120	124
3.2 ohm	110-03			120-03	
	7.60			10.00	
3.2 ohm w/plug		114-03	115-03		124-03
		8.50	8.50		10.90
300 ohm	110-3			120-3	
	7.60			10.00	
300 ohm w/plug		114-3			124-3
		8.50			10.90
1K ohm D.C.	110-1K			120-1K	
	7.60			10.00	
1K ohm D.C. w/plug		114-1K			124-1K
		8.50			10.90
2K ohm D.C.	110-2K			120-2K	
	7.60			10.00	
2K ohm D.C. w/plug		114-2K			124-2K
		8.50			10.90

#### "L"—PART NOS. AND LIST PRICES

Impedance	51	52
8 ohm	51-08	52-08
w/plug	11.00	13.00
300 ohm	51-3	52-3
w/plug	11.00	13.00
1K ohm D.C.	51-1K	52-1K
w/plug	11.50	13.50

### VOLUME CONTROL OUTLET BOXES

All boxes measure 3 3/4" x 2 1/4" x 1 1/4". All edges and corners are rounded. Available in Brown or Gray Hammertone or Glossy Ivory Enamel finish. Type 460, 461 and 462 contain one 2-circuit open type jack and control of specified resistance. These are the most commonly used boxes in group hearing aid installations. Dual control boxes 467, 468 and 469 each contain two jacks and controls as above, operated independently. Other types available, listed below.



#### VOLUME CONTROL OUTLET BOXES

CONTROL RESISTANCE	BROWN HAMMERTONE		GLOSSY IVORY		GRAY HAMMERTONE	
	Part No.	List	Part No.	List	Part No.	List
1K	460-1K	5.50	461-1K	5.50	462-1K	5.50
10K	460-10K	5.50	461-10K	5.50	462-10K	5.50
25K	460-25K	6.20				
50K	460-50K	6.20				
100K	460-100K	6.20	461-100K	5.50		
500K	460-500K	6.20				

#### DUAL CONTROL OUTLET BOXES

1K	467-1K	9.40	468-1K	9.40	469-1K	9.40
10K	467-10K	9.40	468-10K	9.40	469-10K	9.40
25K	467-25K	11.25	468-25K	11.25	469-25K	11.25

#### DUAL JACK OUTLET BOXES

Less Control —Jacks only	477	3.85	478	3.85		
Less Control —w/load res.	480	4.80	481	4.80	482	4.80

#### SINGLE JACK OUTLET BOXES

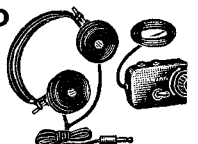
Less Control	484	3.30	485	3.30	486	3.30
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#### AUDIO JUNCTION BOXES

Less Control	490	4.50	491	4.50	492	4.50
4 Jacks only						

### HEADSET KITS FOR TV AND RADIO

Kits described provide simple means of attaching headset or extension speaker to TV or radio sets. Consists of one of several types of headsets, including plug, and a small control-outlet box with attached 15 ft. cord. Box has remote on-off switch for loudspeaker and volume control for headset. Two jacks provided for multiple listening.



CONTROL BOX, only	List
No. 631	\$7
<b>KITS, including control box and headset or earphone, with plug.</b>	
No. 632 —With No. 24-9-03 double Acme Headset	11
No. 632-1 —With No. 27-9-03 single Acme Earphone	11
No. 632-2 —With two double Acme headsets No. 24-9-03 and 631 box	16
No. 633 —With No. 70-9-03 double Dependable Headset	13
No. 634 —With No. 104-9-03 double Featherweight Headset	15
No. 635 —With No. 115-03 single Featherweight earphone	18
No. 637 —With No. 85-03 Pillow-Phone	18



# MICROPHONES BY TURNER

## BROADCAST MICROPHONES

**TURNER 400 SERIES MICROPHONES.** High quality broadcast type microphones featuring adjustable impedance and response. Wide response pressure operated moving coil dynamic, essentially non-directional. Recommended for motion picture studio, TV, broadcast and high fidelity recording applications. Positive grip cam lock allows instant insertion or removal of microphone without disconnecting.

**MODEL 401**—Screwdriver, impedance and response adjustment. Response from 40 cps to 20,000 cps. Output level: —60 db. at high impedance. Cable is three conductor shielded plastic jacketed 20 ft. long. Slate blue, non-reflecting finish. Net price .....\$75.00

**MODEL 510**—Broadcast cardioid dynamic with 40-15,000 c.p.s. frequency response. Combination 50 to 200 ohms impedance selected at the free end of the cable. Professional slate blue finish. 20 ft. cable supplied. Connector is cannon XLR-4-11C. Cardioid discrimination is typically 25 db over the entire range. Furnished complete with stand adaptor and matching shock-mounted desk stand. Net price.....\$90.00

**MODEL 404**—Same as Model 403, except with 11ne shorting switch. Net price .....\$51.00

**MODEL 58**—A dynamic lavalier microphone that's a natural for any application requiring freedom and mobility—panel shows, interview, sportscasting, etc. Only 4" long. Weight, 3½ oz. Choice of either high or 150 ohms impedance selected at the free end of the cable. Response from 60 to 13,000 cps at high impedance. Output level: —60 db. Net price .....\$34.20

**MODEL 58A**—Same as Model 58, but is combination 50 or 200 ohm selected at free end of cable. Net price .....\$34.20

**MODEL 220**—A high-quality dynamic lavalier microphone designed for am., fm., and TV broadcast use. Combination output impedance of 50 or 200 ohms selected at the terminal end of the cable. Response from 60 to 20,000 cps. Output level: —90 db. at 50 ohm. Cable is 25 ft. attached rubber covered, three conductor shielded. Net price .....\$75.00

## PUBLIC ADDRESS AND GENERAL PURPOSE MICROPHONES

**MODEL 330**—Dynamic type. Excellent for paging, communications, announcing, P.A. use, ham radio. Satin chrome finish, 90 degree swivel coupler, supplied with 20' cable. Response: 100-9000 cps. Output level: —54 db. Impedance: 50, 200 ohms or high. Net price.....\$21.00

**MODEL 44D**—NEW! Compact modern design coupled with variable low end bass response makes the 44D an excellent microphone for paging and communications systems. Omni-directional pick-up pattern. Very sturdy. Combination cyclacal and die cast zinc alloy case. Use indoors or outside—anywhere. Response: 85-15,000 cps—adjustable to 60-15,000 cps. Output level: —56.5 db. Complete with removable 12' cable and on-off switch. Specify Hi or 150 ohm when ordering. Net Price.....\$27.00

**MODEL 44X**—Same as Model 44D except with high output crystal interior for extra gain and sensitivity. Response: 60-10,000 cps. Output level: —53 db. Net price.....\$21.00

**MODEL 44C**—Same as Model 44D except with Turner's famous Ceramic interior. Response: 60-10,000 cps. Output level: —58 db. Net price.....\$21.00

**MODEL 204D**—A dynamic microphone designed to give top performance under hard use conditions. Response: 60-13,000 cps. Output level: —53 db. High impedance. Comes with lavalier, desk stand, and stand adapter. Net price.....\$24.30

**MODEL 304C**—Provides four-in-one versatility to perform as a P.A. or intercom microphone. Accessories, desk stand, lavalier clip and string, and stand adapter. Response: 60-10,000 cps. Output level: —60 db. Net price.....\$9.90

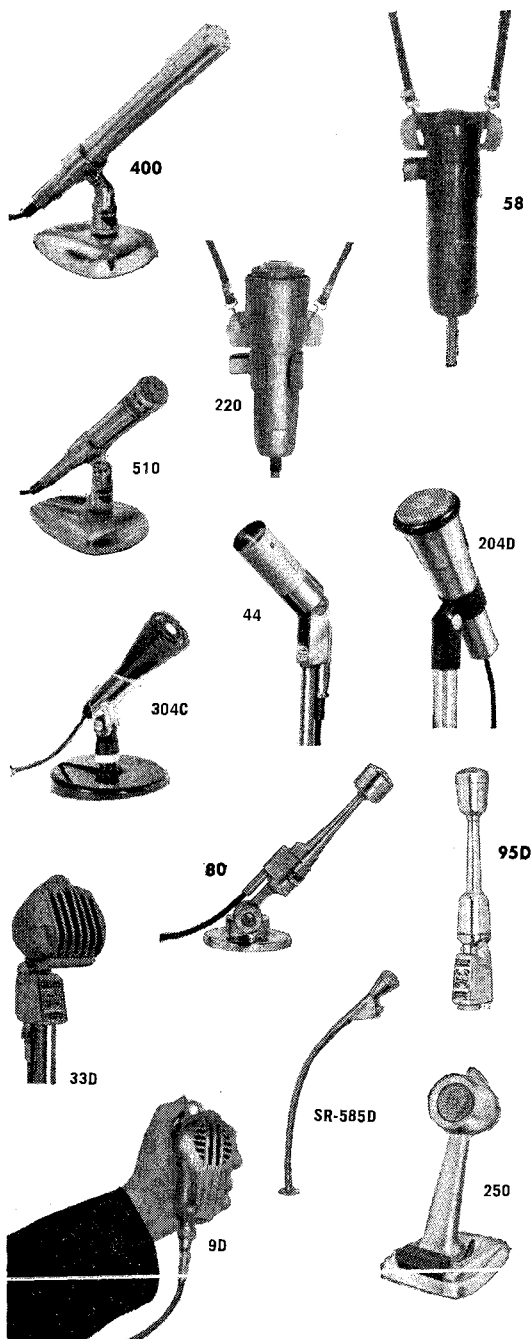
**MODEL 80**—A crystal microphone ideal for home recording, paging or amateur use. Small and graceful with satin chrome finish. 7" cable supplied. Response: 80-7000 cps. Output level: —54 db. High impedance. Net price.....\$9.57 Matching C-4 stand. Net price.....\$3.90

**MODEL 95D**—A dynamic P.A. microphone for use in churches, schools, night-clubs, and high quality recording applications. Available with on-off switch. Complete with 20' cable. Response: 100-10,000 cps. Output level: —58 db. Choice of 50, 200 or high ohms. Net price.....\$22.50

**MODEL P9D**—This handy dynamic hand-held or stand microphone is well suited for paging, P.A., amateur and mobile use. Extremely rugged, heavy case, push-to-talk switch. High or 200 ohms (specify when ordering). 7' cable supplied. Amphenol MC1M (MC2M on 200 ohms) connector in microphone. Output level: —52 db. Dimensions: 2½" x 5" in length x 1¾" in depth. Shipping weight: 2 lbs. Net price.....\$19.50

**MODEL 250**—A dynamic microphone ideal for dispatch, paging, P.A., control tower and amateur use. Wired to operate both relay and mike circuits at a touch. Features on-off push-to-talk and lock switch. Also features Turner's "lift-switch". Response from 60 to 10,000 cps. Output level: —52 db. Complete with single unit satin chrome case and 20 ft. three conductor (one shielded) cable. Net price.....\$33.00

**MODEL 251**—The Model 251 is the industrial and commercial sound contractors favorite in the 250 family. Rugged—one piece die cast case (no other accessories needed), gleaming satin chrome finish—three-way switching and 150 ohm impedance all add up to the paging microphone of the commercial sound industry. Why fuss with grip-to-talk devices when it's so easy to touch the 251's front bar or just simply pick it up. Convenient lock on-off switch, too. Airports, clubs, high schools, reception desks, dining rooms, are all favorite installations of 251 convenience. Comes wired for relay operation, too, with 20' four conductor (two shielded) cable. Response: 70-10,000 cps. Output level: —52 db. Size is 7¾" high x 5½" in depth. Shipping weight: 4 lbs. Net price.....\$33.00



**MODEL SR-5850**—Fixed mounted dynamic microphone with push-to-talk switch. Designed for fixed mounted applications, this microphone is ideal for grocery call stations, switchboards, paging, dispatches, etc. The switch is line-shortening and is designed to actuate a relay. The switch is a six-terminal slide switch which allows the user to wire anything from DPDT to SPST. The microphone is in a die cast satin chrome housing on a 16" flexarm with a 3 hole mounting flange attached. Impedance is 150 ohms. The cable extends 4' from the base of the mounting flange and is 4 conductor (two shielded). Response from 70 to 12,000 cps. Output level: —58 db. Overall length: 22". Shipping weight: 3 lbs. Net price.....\$26.10

# MICROPHONES BY TURNER



## NEW... Model 500 Cardioid Dynamic

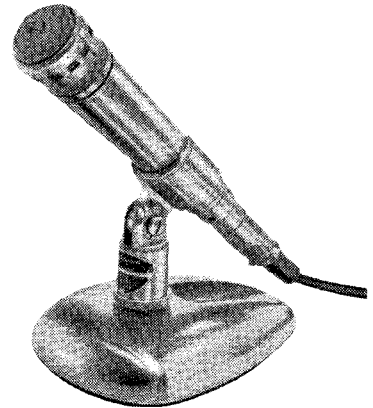
- ... Smooth, uniform response from 40 to 15,000 cps.
- ... Minimal popping and breath noise at close range.
- ... New Dynaflex diaphragm for maximum uniformity.
- ... Excellent sensitivity (—55 db. 150 ohm —79 db.)
- ... Rugged, yet graceful slender design.

An outstanding new cardioid microphone with unexcelled uniformity. From original conception to drawing board to testing laboratory, the guiding principle in the development of the Model 500 Cardioid has been uniformity. The result is a low-cost cardioid microphone with a smooth, uniform response curve. All model 500's are truly interchangeable in any system, with no testing necessary for possible variations in frequency response or front-to-back ratio.

### SPECIFICATIONS

TYPE: Cardioid dynamic  
 RESPONSE: 40-15,000 cps.  
 OUTPUT: High —55 db. (below 1.0 v/microbar) 150 ohms —79 db.  
 IMPEDANCE: High or 150 ohms  
 POLAR PATTERN: Cardioid (Symmetrical about axis)  
 MAGNETIC CIRCUIT: Alnico 5 magnet with Armco magnetic iron  
 CASE: Die cast zinc alloy

CABLE CONNECTOR: Cannon 4 pin XLR-4-11C  
 CABLE: Detachable 20 ft., three conductor (shielded) black rubber jacketed.  
 DIMENSIONS: Length 6 $\frac{1}{16}$ " — diameter 1 $\frac{1}{32}$ "  
 WEIGHT: 12 oz. (less cable)  
 SHIPPING WEIGHT: 3 lbs.  
 STANDARD ACCESSORIES: Model C-7 desk stand . . . List price . . . \$9.50



MODEL 500 ..... Net Price \$50.40  
 MODEL S-500 (with on-off switch) Net Price \$52.50

## COMMUNICATIONS AND CITIZENS BAND MICROPHONES

### MOBILE

**MODEL 350C**—Most used as original equipment. This low-cost ceramic microphone with on-off switch is familiar to most mobile radio operators. More 350C microphones are used as original equipment on citizens band and marine transceivers than any other microphone. New extra-tough cyclac case for years of service. Rugged ceramic interior allows you to use the 350C in any climate. Complete with hanger button and standard dash bracket for easy mounting. Equipped with 11" retracted, five-foot extended, rubber-jacketed, coiled cord. Ideal for citizens band, amateur use, mobile rigs and paging. Wired for relay operation. Response: 80-7000 cps. Output level: —54 db. Complete installation instructions included. Shipping weight: 1 lb. Net price.....\$7.50

**MODEL 355C**—New style inexpensive mobile microphone with grip-to-talk handy switch. The easiest, most convenient switch function on today's market. More comfortable to hold—more comfortable to use. The 355C features an output level of —50 db. It's extra hot for a high gain signal. Response: 80-7000 cps. Complete installation instructions enclosed. Shipping weight: 1 lb. Net price.....\$7.50

**MODEL 358**—Dynamic mobile microphone, 600 ohm impedance, designed for use with transistorized CB transceivers. Standard 355 type case and versatile switch, and three conductor (one shielded) coiled cord. Output level: —66 db. (—50 db. re. hi impedance). Response: 300-6000 cps. Shipping weight: 1 lb. Net price.....\$15.00

**MODEL 333**—New top quality mobile microphone with tinsel shielded coiled cord; noise canceling effect; limited voice frequency response of 300-3000 c.p.s. output level —54 db rugged cyclac case with handy push to talk switch. Net price.....\$12.90

**MODEL SR90**—The Model SR90 is available in two popular versions—the "D" (pressure operated dynamic) and the "R" for carbon. Both feature the 90's slender die cast zinc alloy case with the Turner exclusive front hanger button. Both come in satin chrome finish. Dynamic models are available in two impedances, hi or 200 ohms. Relays switching is standard. Three conductor (one shielded) 11" retracted, 5' extended coiled cord on hi impedance models and 4 conductor (two shielded) on 200 ohm units. Output level: —52 db. at hi impedance. Response: 200-10,000 cps.

**Model SR90R** is equipped with a very high quality telephone type carbon interior to give you maximum voltage output and high intelligibility as well. Same general appearance and features as Model SR90D. Output level: —40 db. Response: 200-4000 cps. Choose the Model SR90R wherever maximum output with a minimum of distortion is specified... taxicabs, police, etc. Shipping weight: 2 lbs. Model SR-90D. Net price.....\$25.50  
 Model SR90R. Net price.....\$15.90

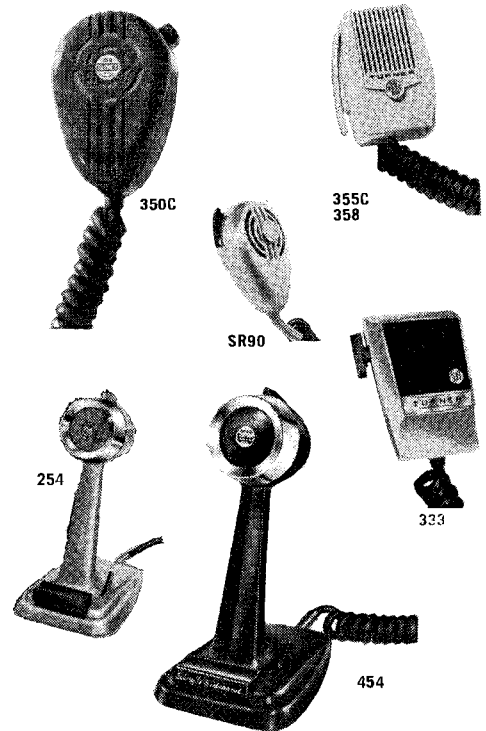
### BASE STATION

**MODEL 254X**—The most popular base station microphone in use today. The number one favorite of CB's. Excellent for inexpensive P.A. systems as well. It features push-to-talk front touch bar or locking on-off lever switch. Comes wired for relay operation. Deluxe light grey hammertone finish. Extra high output. Output level: —48 db. for more clear signal strength. Response: 100-8000 cps. Cable is 7' three conductor (shielded). Size is 7 $\frac{3}{4}$ " in height x 5 $\frac{1}{2}$ " in depth. Shipping weight: 3 lbs. Net price.....\$14.10

**MODEL 254C**—Same as 254X except with famous 21C ceramic interior. Output level: —54 db. Net price.....\$14.10

**MODEL J-254X**—A special model for electronic switching. The "J" model has an extra set of contacts which will allow you to wire into any CB rig manufacturer that has a high impedance input. Output level: —48 db. Response: 80-7000 cps. Net price.....\$15.90

**MODEL J-254C**—Same as Model J-254X except with Ceramic interior. Output level: —54 db. Net price.....\$15.90



**MODEL 254R**—A CB base station microphone with carbon element for Kaar, Bendix Pacific, RCA marine sets, Dumont and many others. Impedance: 40 ohms nominal DC resistance. Output level: —38 db. Cable is 7', 4 conductor (unshielded). Operates by touch bar on-off switch and lever lock-on-off switch. Net price.....\$15.42

**MODEL 254D**—New 600 ohm base station model. Dynamic interior for smooth response of 300-6000 cps. Output level: —66 db. (—50 db. — RE Hi impedance). Comes with 7' cable terminated in 91-MPM5L plug. Net price.....\$21.90

**MODEL 454X**—NEW! A new base station model with limited frequency response. Designed for the voice range, it's extra hot. Output level: —48 db. Response: 300-3000 cps. SSB. Attractive telephone black finish. Your choice of VOX or PTT switch operation. Comes complete with 3 conductor (one shielded coiled cord). Net price.....\$15.90

**MODEL 454C**—Same as Model 454X except has Ceramic interior. Output level: —52 db. Net price.....\$15.90

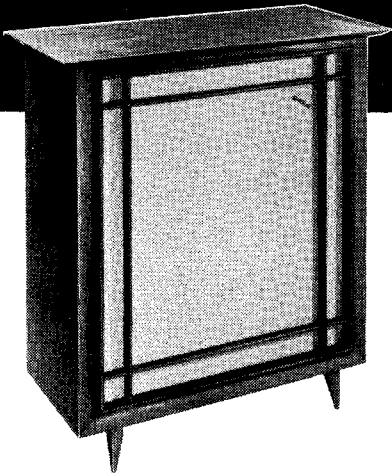
### CUSTOM INTERIORS

Turner has complete facilities for designing and manufacturing all kinds of special application microphone interiors, soft speakers for dictating machines, anything you need. Write for full information on this service.



# Wharfedale

## ACHROMATIC SPEAKER SYSTEMS

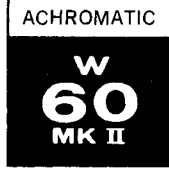
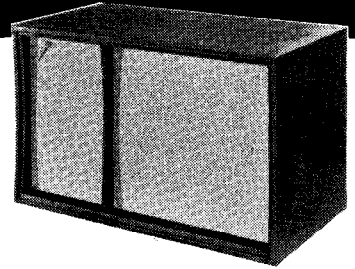


### SIX-WAY SPEAKER SYSTEM

6 speakers — 2 bass, 2 mid-range, 2 treble  
... superbly matched and integrated with a magnificent sand-filled enclosure.

■ Impedance: 8 ohms ■ Power Requirements: 12 watts or more  
■ Crossover: 500 and 6000 cps (LC Network) ■ Dimensions: 32¼" H x 30¾" W x 14¼" D (when used vertically) ■ Shipping Weight: 130 pounds (including 7 pounds of dry sand) ■ Finishes: Oiled or Polished Walnut \$272.50; Utility (Utility model is styled without decorative center molding or extended top) \$256.50.

Shown on B67 Base



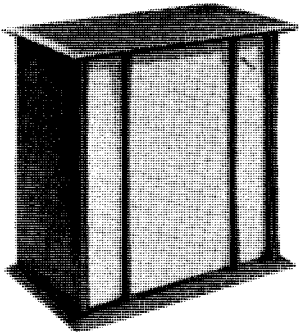
### FULL RANGE TWO-SPEAKER SYSTEM IN EXCLUSIVE SAND-FILLED ENCLOSURE

The W60 MK II is the new version of the original Achromatic speaker system. This has remained the most popular model in the Wharfedale line, establishing a new standard for compact speaker systems... a tribute not only to its engineering, but to fine furniture detailing and finishes. The W60 has been chosen consistently on the basis of comparative listening tests.

This full range, two way system is built around an outstanding 12½" low frequency driver, and a superlatively smooth 5" tweeter. From every standpoint, it is to be regarded as suitable for the finest installations.

■ Impedance: 8 ohms ■ Power Requirements: 5 watts or more  
■ Crossover: 1500 cps (LC Network) ■ Dimensions: 14¼" H x 13" D x 24" W (when used horizontally) 14¼" W x 13" D x 24" H (when used vertically) ■ Shipping Weight: 50 pounds (including 6½ pounds of dry sand) ■ Finishes: Oiled or Polished Walnut \$122.50; Utility (Utility model is styled with plain flat molding) \$106.50.

The W90 MK II is the ultimate in Achromatic speaker systems. This system has successfully restored the characteristic sound of the great Wharfedale systems used by G. A. Briggs in his concert demonstrations. The W90 is a new format in speaker systems... neither compact, nor large... yet highly versatile. The W90 has an attractive bouclé grille fabric and a useful table top, making the cabinet outstandingly handsome... a fine addition to any living room.



### FULL RANGE THREE-SPEAKER SYSTEM IN EXCLUSIVE SAND-FILLED ENCLOSURE

fabric, table top and base; making it an exceptionally versatile and attractive addition to any room decor.

■ Impedance: 8 ohms ■ Power Requirements: 6 watts or more  
■ Crossover: 1500 and 6000 cps (LC Network) ■ Dimensions: 23⅞" H x 24" W x 14½" D (when used vertically) ■ Shipping Weight: 65 pounds (including 6½ pounds of dry sand) ■ Oiled or Polished Walnut \$172.50; Utility (Utility model is styled without curved molding or decorative center molding, or extended top and base) \$153.50.

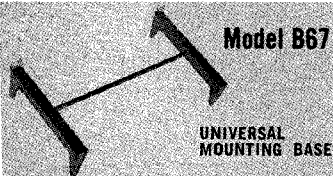
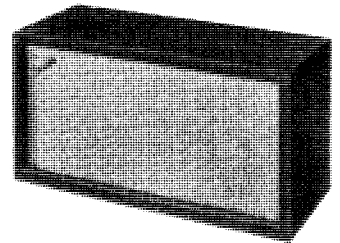
The W70 MK II is a fine musical instrument providing excellent bass response; clear transparent highs, without stridency; and in addition, the fullness which comes from a superb mid-range. In extremely handsome and versatile three-way speaker system, it is capable of standing by itself, vertically or horizontally. Speaker complement of the W70 MK II includes a 12½" low frequency driver, 10¼" mid-range; and the exceptionally smooth cone type Wharfedale Super 3 tweeter. The W70 MK II reflects the restyling of the new line, with new grille



### FULL RANGE TWO-SPEAKER SYSTEM IN EXCLUSIVE SAND-FILLED ENCLOSURE

The W40 MK II Wharfedale Achromatic system is not only an outstanding speaker system, but an exceptional value. The 10" low frequency driver is a newly developed speaker, with extremely high flux density and high compliance, paired with the same outstanding 5" tweeter used in the larger W60 system. Bass response is excellent; highs exhibit the traditional pleasing impression of a much larger system. The W40 MK II is ultra-compact, exceptionally versatile, and best suited to music systems or rooms where space must be carefully utilized.

■ Impedance: 8 ohms ■ Power Requirements: 5 watts or more  
■ Crossover: 1500 cps ■ Dimensions: 12½" H x 23½" W x 10¼" D (when used horizontally) 12½" W x 23½" H x 10¼" (when used vertically) ■ Shipping Weight: 37 pounds (including 5½ pounds of dry sand) ■ Finishes: Oiled or Polished Walnut \$83.50; and Utility (Utility model is styled with plain flat molding) \$72.50.



Universal mounting base for the W60, W70 or W90 speaker systems. Oiled or Polished Walnut true wood veneers \$10.50; also in sanded Birch hardwood \$9.50.

**COMPONENT LOUDSPEAKERS**

- SUPER 8 RS, DD Full Range 8" \$26.50
- SUPER 12 RS, DD Full Range 12" \$89.50
- SUPER 10 RS, DD Full Range 10" \$47.50
- W12, RS Woofer \$52.50
- W15, RS Woofer \$89.50
- SUPER 3 Tweeter \$26.50
- Crossover Networks 3-Way \$32.50 2-Way \$16.50

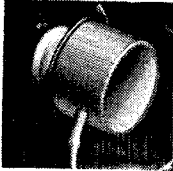
WHARFEDALE DIV. BRITISH INDUSTRIES CORP. PORT WASHINGTON, N. Y.



# HI-FI ACCESSORIES

AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.  
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

## TAPE ACCESSORIES



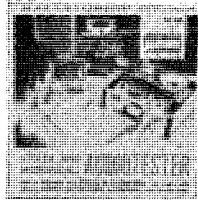
### TELEPHONE PICK-UP

Records both sides of a telephone conversation — suction cup attaches to any phone. Plugs into tape recorder.

- CAT. NO. 30-150  
(plug not included).....List: \$5.95  
CAT. NO. 30-152  
(with standard phone plug)...List: \$6.95

## AUDIOTESTER TAPE

For checking performance of stereo and mono tape machines and associated equipment. Tests include head alignment, resonance, frequency response, NAB equalization, intermodulation, flutter, metronome balance, and distortion. 7.5 ips tape comes with detailed instruction.

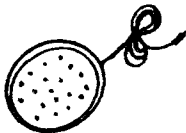


- CAT. NO. 30-206 (Standard tolerance) .....List: \$6.50  
CAT. NO. 30-208 (Precise tolerance) .....List: \$8.25  
CAT. NO. 30-210 (4 track test tape).....List: \$6.50

## PILLOW SPEAKER

Personal Instrument for Private Listening. For use with transistor radios or across voice coil leads of any speaker. Electro-magnetic element for maximum sensitivity and widest possible tone range. For private listening, without disturbing others. Comes with cord and miniature phone plug to fit transistor radios.

- CAT. NO. 30-160.....List: \$4.95



## MISCELLANEOUS HI FI ACCESSORIES

### PROFESSIONAL HEADPHONES

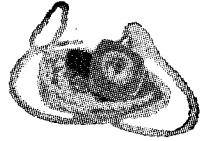
High quality instruments for stereo and monophonic play. Frequency range 50-15,000 cps. Moving coil elements contain dual 16 ohm voice coils and lightweight plastic diaphragms. Supplied with connecting cable and plugs. Impedance: 16/16 ohms (stereo) or 8 ohms (mono).

- CAT. NO. 30-158.....List \$49.00



## MINIATURE EARPHONE

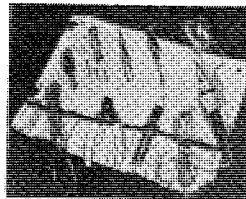
For private listening to radios, TV, and hi-fi. Electro-dynamic type with frequency range 50-4000 cps. Lightweight metal clip holds phone to either ear.



- CAT. NO. 30-154 (15 ohm).....List: \$2.95  
CAT. NO. 30-156 (2000 ohm)..List: \$2.95

## ENGINEER'S HI-FI SERVICE TOOL KIT

Special tools for the audiophile or professional for repair, installation and adjustment of hi-fi and music equipment. Heavy duty plastic pouch contains miniature-tip soldering iron; precision tweezer; neolite circuit tester; phono & recorder oil; set of jeweler's screwdrivers; Phillips screwdriver; miniature screw holding screwdriver ("Minihold"); wire stripper and cutter, and a package of solder.

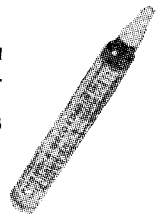


- CAT. NO. 30-244  
List: \$16.50

## PHONO AND RECORDER OIL

Specially compounded non-gumming oil in handy plastic drop-by-drop applicator. Contains rust inhibitor.

- CAT. NO. 30-250 .....List: \$.65



## FM INDOOR ANTENNA

Folded Dipole for local or strong signal locations. Comes ready to install with 6' lead wire and spade lugs.

- CAT. NO. 30-270 .....List: \$2.10

## VIBRATION PADS

Resilient pads made of foam plastic and sponge rubber. Laminations reduce rumble, minimize feedback, and protect cabinets. Four available sizes to fit wide variety of units.

CAT. NO.	SIZE	LIST
30-162	6"x12"	\$0.90
30-164	9"x12"	1.25
30-166	12"x12"	1.60
30-168	13"x16"	2.25

## HI FI DECALS

Jumbo assortment of attractive labels. Includes identification tabs for controls, cabinets, chassis parts and remote control devices.

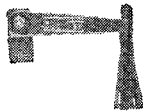
- CAT. NO. 30-314 .....List: \$1.85



# HI-FI ACCESSORIES

AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.  
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

## PHONO ACCESSORIES



### RECORD BRUSH

Camel hair brush clips on tone arm; sweeps grooves while record is playing. Adjustable swivel permits use with any record player.

CAT. NO. 30-000 ..... List: \$7.75

### ATOMIC STAT-ELIM

Anti-static dust eliminator drains static charge by ionizing air surface of record. Contains mildly radio-active element; lightweight holder attaches to tone arm.

CAT. NO. 30-002 ..... List: \$3.95



### STYLUS BRUSH

Automatically cleans stylus each time tone arm is moved from rest position. Self-adhesive bottom attaches to turntable; adjustable to any height.

CAT. NO. 30-004 ..... List: \$1.40



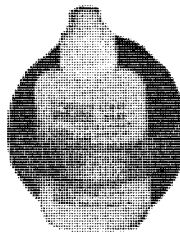
### Record Spray

#### STATI-KLEER

Cleans, Destaticizes and Lubricates in One Easy Operation

New Audiotex Stati-Kleer, with Miracle Silicone. The finest record cleaning spray available. Just spray on and wipe off. Cleans and lubricates all plastic records. One application eliminates harmful dirt and dust in record grooves for hours and hours.

CAT. NO. 30-007 ..... List: \$1.65



### RECOR-DE-STAT

Squeeze bottle of anti-static detergent with velvet pad applicator. Long velvet fibers reach bottom of record grooves. Anti-static detergent cleans records; leaves dust-repelling film.

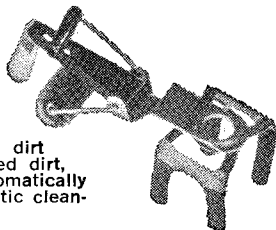
CAT. NO. 30-010 ..... List: \$2.00

### DUST BUG

Four-in-One Record Cleaner & Static Eliminator

Applies cleaning fluid, brushes dirt from grooves, picks up loosened dirt, eliminates static charge automatically while record is playing. Anti-static cleaning fluid included.

CAT. NO. 30-012 (player model) ..... List: \$9.60  
CAT. NO. 30-016 (fluid refill) ..... List: \$2.00  
CAT. NO. 30-018 (plush pad replacement) ..... List: \$1.40



### 45-RPM RECORD ADAPTOR

Plastic adaptor slips over standard spindle to play any 45 RPM disc.

CAT. NO. 30-034 ..... List: \$2.25

### DISK-O-KLEEN

Silicone treated record cleaning cloth eliminates static charge. Specially woven velvet material has extra length nap to reach bottom of grooves.

CAT. NO. 30-022 ..... List: \$1.40

### KLEEN-O-RECORD

Triple action cloth, Anti-Static Record Cleaning Cloth, silicone impregnated, which cleans, lubricates and de-staticizes records. Long lasting.

CAT. NO. 30-024 ..... List: \$7.75

### RECORD SAVERS

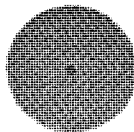
Heavy-duty polyethylene envelopes protect records when not in use.

CAT. NO. 30-062 ..... List: \$5.55  
SIZE  
For 12" records, Pkg. of 5

### 45-RPM RECORD INSERTS

Plastic snap-in inserts adapt large hole 7" records for play on 3 speed changers. Spring-like construction holds insert firmly in place.

CAT. NO. 30-030 (Pkg. of 6) ..... List: \$3.30



### TURNTABLE RECORD CUSHIONS

Thick plastic sponge cushions eliminate record slip, reduce magnetic pull, prolong record life.

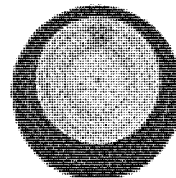
CAT. NO. 30-040 (10") ..... List: \$1.25

CAT. NO. 30-042 (12") ..... List: \$1.40

### TURNTABLE RUBBER MAT KIT

Heavy rubber mat fits any 12" turntable. Has tapered ridges 7", 10", and 12" in diameter. Supports any size record by its blank outside rim, keeping grooves from touching. Strobe disc and 45 RPM adaptor included.

CAT. NO. 30-044 ..... List: 5.25



### PHONO COVERS

Heavy duty embossed vinyl covers for turntables and changers.

CAT. NO. SIZE & USE LIST PRICE

30-052 17 1/2" x 16 1/2" x 8 1/2" For many phono & transcription players such as: Gray, Rek-O-Kut, Metzner ..... 3.75

30-054 2 1/2" x 16" x 8 1/2" For many phono & transcription players such as: Gray, Rek-O-Kut, Metzner ..... 4.05

### STONE ARM LIFT

Provides precise control of tone arm. Made of spring metal, plastic coated; attaches to tone arm.

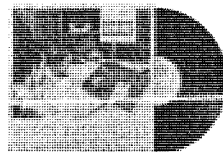
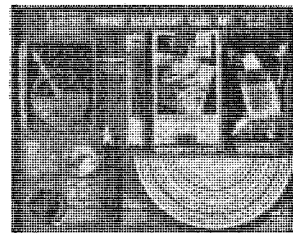
CAT. NO. 30-066 ..... List: \$5.50



### PHONO ACCESSORY KIT

Complete phono and record care kit contains record brush, recor-de-stat, 12" record savers, tone arm lift, stylus microscope, stylus weight gauge, strobe disc, and phono and recorder oil.

CAT. NO. 30-098 List: \$9.95



### AUDIOTESTER TEST RECORD

12" plastic LP has stereo tests on Side 1; mono on Side 2. Side 1: metronome balance, pickup alignment, channel separation, frequency response, RIAA equalization, turntable rumble. Side 2: stylus wear, frequency response, RIAA equalization, IM distortion, turntable rumble, tone arm resonance.

CAT. NO. 30-200 ..... List: \$4.98

### STYLUS MICROSCOPE

Optical instrument for checking stylus wear. Has adjustable focus and magnifying power of 50. Complete with pen-type pocket clip.

CAT. NO. 30-218 ..... List: \$2.50

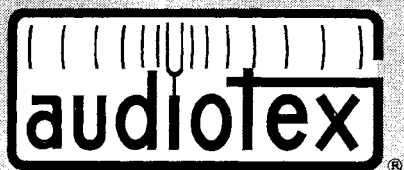


### PHONO LEVEL

Bubble-type gauge for precise measurement of phonograph level. Accurate to better than 1°.

CAT. NO. 30-224 ..... List: \$2.50

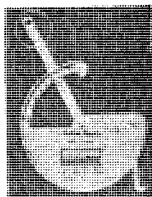




# HI-FI ACCESSORIES

AUDIOTEX MFG. CO., DIV. of G-C TEXTRON, INC.  
ROCKFORD, ILL. • LOS ANGELES 18, CALIFORNIA

## PHONO ACCESSORIES (Continued)



### STYLUS WEIGHT GAUGE

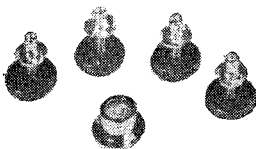
Measures force needed to lift tone arm from record. Calibrated in bands with an expanded scale at low force. Accurately gauges correct stylus pressure.

CAT. NO. 30-220 ..... List: \$2.80

### DECI-GRAM STYLUS PRESSURE GAUGE

Precisely calibrated, 1 to 10 gram pressure gauge measures stylus pressure within 1/2 gram. The sturdy DECI-GRAM is built to close tolerances to give you years of accurate service. Use it often... your records will last longer, sound better.

CAT. NO. 30-222 ..... List: \$1.65



### PHONO LEVEL KIT

Includes bubble-type phono level and four adjustable feet for balancing of any phonograph or turntable.

CAT. NO. 30-226 ..... List: \$3.25

### STROBE DISC

New design shows not only correct speed but also  $\pm 2\%$  and  $\pm 4\%$  deviations.

CAT. NO. 30-228 (Cardboard) ..... List: \$ .55

CAT. NO. 30-230 (Plastic) ..... List: \$1.65

## TAPE ACCESSORIES



### TAPE SPLICER — EZE SPLICE MODEL

For fixing broken tape and editing. Provides easy-to-repair mitre cut.

CAT. NO. 30-100 ..... List: \$2.75



### TAPE SPLICER—PROFESSIONAL MODEL

Easy to use, precise cutter/splicer with pair of curved cutting blades. Leaves tape edges free of adhesive. For use with any 1/4" tape.

CAT. NO. 30-104.....List: \$9.97

### SPLICING TAPE

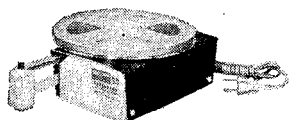
For use with any tape splicer. Special cold setting, non-flowing adhesive on Mylar\* base. 100' spool, 1/2" width. Enough for 200 splices. \*TM of Dupont

CAT. NO. 30-110 ..... List: \$ .50

### TAPERASER

Removes all traces of signal and noise from audio tapes and 16 or 35 mm magnetic sound film. Powerful erase action (to -52 db) lowers residual noise level below that of some virgin tape. Erases tape on reels up to 10 1/2" in diam. Complete operation takes only 30 seconds.

CAT. NO. 30-114 ..... List: \$33.00

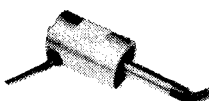


## LANGUAGE LAB ACCESSORY AND SERVICE KIT

Have all your professional Audiotex service aids and accessories in one compact container. Includes tape and record labels, splicing tape, tape threading leader, Hi-Fi service tool kit, tape strobe, head cleaner, head lubricant, Kleen-tape, head demagnetizer, and a professional model tape splicer.

CAT. NO. 30-099.....List: \$54.95

## HEAD-DEMAG TAPE HEAD DEMAGNETIZER



Safely removes all trace of magnetism from recording heads. Curved, flat tip is plastic-covered — can't scratch or damage. Reaches most heads with cover left on; on-off switch eliminates unplugging when device is not in use.

CAT. NO. 30-112.....List: \$12.10



### TAPE END CLIPS

Stops straying tape ends. Reusable plastic clip, works with any reel.

CAT. NO. 30-116 (Pkg. of 18) ..... List: \$ .60

## REEL-NEAT TAPE CLIPS

Works on full or partially full reels. Keep tape neatly wound for convenience in storage. Snap-on clips, fit any reel, full or partially empty. Made of non-magnetic stainless steel. Fits snugly on wheel—does not interfere with placing reel back into storage carton. Package of 5.

CAT. NO. 30-130 ..... List: \$1.25/Pkg.

## TAPE AND RECORD LABELS

36 pressure-sensitive 1/2" x 2" labels provide handy index to the music library. Space for title, date, and number.

CAT. NO. 30-118 ..... List: \$5.55

## TAPE CUEING LABELS



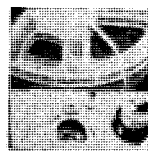
Color coded, pressure-sensitive numbered tabs for marking selections anywhere on a tape. Package contains five sheets, six tabs to a sheet, and includes identification labels for the reel or box.

CAT. NO. 30-120 ..... List: \$1.65

## TAPE THREADING LEADER

For easy threading of tape on reel. 24" Mylar leaders with pressure sensitive adhesive. A small foam rubber ball at one end drops into hub of take-up reel. On fast rewind, the ball releases without damaging tape.

CAT. NO. 30-122 (Pkg. of 10)..... List: \$1.40



## TAPE HEAD CLEANER AND LUBRICANT

For cleaning and lubricating tape heads. Remove harmful dirt and grease. Lubricant contains silicone. Stops tape squeel, reduces friction. Tapes last longer, give better fidelity.

CAT. NO. 30-124-1  
2 oz. Cleaner .....List: \$1.00

CAT. NO. 30-124-2  
2 oz. Lubricant .....List: \$1.00



## KLEEN-TAPE

30' of specially impregnated cloth tape on 3" reel for cleaning tape heads. "Plays" through any standard tape recorder in less than 2 minutes.

CAT. NO. 30-126.....List: \$3.50

Pat. No. 3008852

**It's so easy to order  
from this catalog...**

When ordering products shown in this book  
or writing for additional information, please  
be sure to specify:

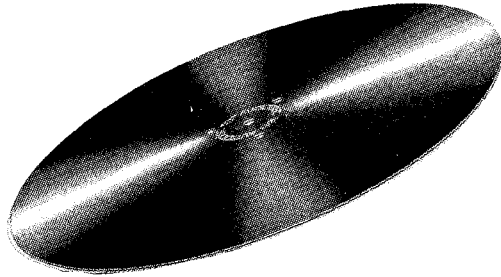
- 1. Manufacturer's Catalog Numbers  
and Page Numbers.**
- 2. The Year and Edition of This  
MASTER.**

This will avoid confusion and expedite delivery.

**Thank you!**



# audiodiscs®



## For truly fine recording and reproduction

For more than 25 years, Audiodiscs have consistently maintained their position of eminent leadership in every field of instantaneous disc recording.

A superior lacquer coating, applied to the mirror-smooth aluminum base by a patented process, gives these outstanding advantages: maximum uniformity of coating, permanent resistance to humidity, longer stylus life, freedom from audible background scratch, long playback life, brilliant frequency response, and freedom from deterioration with age.

DESCRIPTION	Size Inches	List Price	Carton Contains	
<b>RED LABEL AUDIODISCS</b> Standard throughout the recording profession, these discs exceed the most exacting requirements for top quality and dependability. The finest discs obtainable. Aluminum base, double-sided. Embossed labels.	7*	\$1.54	25	
	8	1.21	25	
	10	1.71	25	
	12	2.81	25	
	16	5.06	25	
<b>SINGLE FACE RED LABEL</b> For professional use where only one side is to be recorded. Both sides coated; the recordable side identified with embossed label. Exactly the same fine qualities as Standard Red Label, but bringing real economy to single-face applications.	12	2.20	25	
	16	4.07	25	
<b>YELLOW LABEL AUDIODISCS</b> The popular choice for all general purpose recording which requires high, uniform quality. Aluminum base, double-sided. Designed primarily for applications where the super quality Red Label AUDIODISCS are not required. Paper labels.	7*	1.31	25	
	8	1.02	25	
	10	1.36	25	
	12	2.20	25	
	16	4.07	25	
<b>REFERENCE LABEL AUDIODISCS</b> Provide maximum economy for test cuts, filing and reference recordings, auditions and equipment adjustments, which do not demand complete surface perfection. Aluminum base. Paper labels.	10	1.16	25	
	12	1.71	25	
	16	3.05	25	
<b>BLUE LABEL AUDIODISCS</b> These discs offer the very best in recording quality at a low price for schools, homes, amateur and demonstration work. Made of the same materials as professional type AUDIODISCS — but on a thinner aluminum base. Paper labels.	6½	.60	50	
	8	.84	50	
	10	1.20	50	
<b>MASTER AUDIODISCS</b> Where copies of recordings (pressings) are to be made by the electroplating process, these discs are the outstanding choice. Their excellence and consistent quality are well known to all record processors. Fine results with either silvering or gold sputtering. Aluminum base. Center pin and one drive pin hole. Also available with center hole only.	<b>Double Sided</b>	10	2.75	25
		12	3.52	25
		13¼	4.86	25
		16	6.55	25
		17¼	7.65	25
	<b>Single Face</b>	10	2.20	25
		12	2.75	25
		13¼	3.54	25
		14	{ 3.65 3.78■	25
		16	5.17	25
	17¼	5.61	25	

\*Standard 45 rpm disc with 1½" diameter center hole. Also available with conventional center hole. To specify, indicate "Small Center Hole" on orders.

■West of the Rockies. All Prices Subject to Change Without Notice.

# audiopoints®

*microscopically matched  
recording and playback  
styli*

The complete line of Audiopoints covers the full range of recording and playback needs — for professional as well as general use. Audiopoints are made by skilled Craftsmen, and conveniently packaged in cards, boxes or envelopes.

## RECORDING AUDIPOINTS



**SAPPHIRE No. 14** — long recognized as the finest recording stylus made. Short or long dural shank, 87° included angle.  
List Price \$8.25

**SAPPHIRE No. 20** — especially designed for professional microgroove recording. Short or long dural shank.  
List Price \$8.25

**SAPPHIRE No. 202** — a high-quality professional stylus. Short or long brass shank.  
List Price \$6.60

**STELLITE No. 34** — a favorite with many professional and non-professional users. Short or long shank. 87° included angle.  
List Price \$2.50

## PLAYBACK AUDIPOINTS



**SAPPHIRE No. 113** — meets the requirements of the most critical professional recordists. Straight dural shank.  
List Price \$4.50

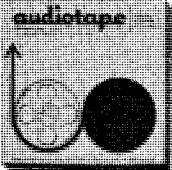
**SAPPHIRE No. 123** — for professional use with microgroove recordings.  
List Price \$2.00

**"RED CIRCLE" SAPPHIRE No. 103** — for professional use with instantaneous recordings or vinyl transcriptions. Straight dural shank.  
List Price \$2.00

**"RED CIRCLE" SAPPHIRE No. 303** — same as No. 103, except with bent dural shank. Ideal for phonograph records.  
List Price \$2.00



# THE COMPLETE LINE OF PROFESSIONAL QUALITY audiotape TRADE MARK

Description	Type No.	Length	Reel	List Price	
 <p><b>STANDARD RECORDING on plastic base</b></p> <p>Meets the most exacting requirements of the professional, educational and home recordist at minimum cost. Known the world over for its matchless performance and consistent uniform quality. <b>Series 51, in the red box.</b></p>	151	150 ft.	3" Plastic Reel	\$0.70	
	151MB	150 ft.	3" Plastic Reel in Mailing Box	0.70	
	351	300 ft.	4" Plastic Reel	1.35	
	651	600 ft.	5" Plastic "C-Slot" Reel	2.25	
	851	850 ft.	5¾" Plastic Reel	2.95	
	1251	1200 ft.	7" Plastic "C-Slot" Reel	3.50	
	2551H	2500 ft.	NARTB Hub	7.85	
	2551R	2500 ft.	10½" Aluminum Reel	10.80	
	‡2551FS	2500 ft.	10½" Fiberglass Reel	10.80	
	5051H	5000 ft.	NARTB Hub	14.40	
5051R	5000 ft.	14" Aluminum Reel	21.35		
<p><b>audiotape</b></p> <p><b>LONGER RECORDING on 1 mil Mylar*</b></p> <p>50% more recording time per reel. The strong, super-durable polyester film base assures trouble-free operation even under severe conditions of heat and humidity. <b>Series 61, in the orange box.</b></p>	261	225 ft.	3" Plastic in Self-Mailer Pkg.	1.00	
	961	900 ft.	5" Plastic "C-Slot" Reel	3.60	
	1261	1200 ft.	5¾" Plastic Reel	4.15	
	1861	1800 ft.	7" Plastic "C-Slot" Reel	6.20	
	3661H	3600 ft.	NARTB Hub	11.40	
	3661R	3600 ft.	10½" Aluminum Reel	14.35	
	‡3661FS	3600 ft.	10½" Fiberglass Reel	14.35	
	7261H	7200 ft.	NARTB Hub	24.00	
	7261R	7200 ft.	14" Aluminum Reel	30.00	
	<p><b>audiotape</b></p> <p><b>LONGER RECORDING on 1 mil plastic</b></p> <p>50% more recording and playback time on low-cost 1-mil cellulose acetate base, affording maximum economy for applications where high strength is not required. <b>Series 41, in the blue box.</b></p>	941	900 ft.	5" Plastic "C-Slot" Reel	3.50
1241		1200 ft.	5¾" Plastic Reel	3.75	
1841		1800 ft.	7" Plastic "C-Slot" Reel	5.50	
3641H		3600 ft.	NARTB Hub	9.85	
3641R		3600 ft.	10½" Aluminum Reel	12.80	
‡3641FS		3600 ft.	10½" Fiberglass Reel	12.80	
7241H		7200 ft.	NARTB Hub	18.40	
7241R		7200 ft.	14" Aluminum Reel	25.35	
<p><b>audiotape</b></p> <p><b>DOUBLE RECORDING on ½ mil Mylar*</b></p> <p>Twice as much recording time per reel as standard plastic-base tape. Suitable for extended-play applications where tape tension is not excessive. <b>Series 31, in the tan box.</b></p>		331	300 ft.	3" Plastic Reel	1.37
		1231	1200 ft.	5" Plastic "C-Slot" Reel	3.50
	1831	1800 ft.	5¾" Plastic Reel	5.00	
	2431	2400 ft.	7" Plastic "C-Slot" Reel	6.50	
	<p><b>audiotape</b></p> <p><b>DOUBLE RECORDING on "Tempered" Mylar*</b></p> <p>Twice as much recording time per reel as standard plastic-base tape, and is twice as strong as other double-length tapes. Will not stretch or break on any tape recorder — will not dry out or embrittle with age. <b>Series 31T, in the maroon box.</b></p>	331T	300 ft.	3" Plastic in Self-Mailer Pkg.	1.60
631T		600 ft.	3¼" Plastic in Self-Mailer Pkg.	2.95	
1231T		1200 ft.	5" Plastic "C-Slot" Reel	5.45	
1831T		1800 ft.	5¾" Plastic Reel	6.75	
2431T		2400 ft.	7" Plastic "C-Slot" Reel	9.50	
4831T-R		4800 ft.	10½" Aluminum Reel	22.00	
‡4831T-FS		4800 ft.	10½" Fiberglass Reel	22.00	
<p><b>audiotape</b></p> <p><b>STANDARD RECORDING on 1½ mil Mylar*</b></p> <p>A premium-quality professional tape that provides the utmost in mechanical strength and immunity to temperature and humidity. Will not dry out or embrittle with age. <b>Series 71, in the green box.</b></p>	671	600 ft.	5" Plastic "C-Slot" Reel	2.65	
	1271	1200 ft.	7" Plastic "C-Slot" Reel	4.25	
	2571H	2500 ft.	NARTB Hub	8.30	
	2571R	2500 ft.	10½" Aluminum Reel	11.20	
	‡2571FS	2500 ft.	10½" Fiberglass Reel	11.20	
	5071H	5000 ft.	NARTB Hub	16.65	
	5071R	5000 ft.	14" Aluminum Reel	24.50	
<p><b>audiotape</b></p> <p><b>MASTER RECORDING on Plastic Base</b></p> <p>The finest, professional-quality recording tape. Base material 1½-mil acetate. Maximum fidelity, uniformity, frequency response and freedom from noise and distortion. ... Plus low print-through. <b>Series 51M, in red and gold box.</b></p>	651-M	600 ft.	5" Plastic "C-Slot" Reel	2.75	
	1251-M	1200 ft.	7" Plastic "C-Slot" Reel	4.30	
	2551H-M	2500 ft.	NARTB Hub	9.25	
	2551R-M	2500 ft.	10½" Aluminum Reel	12.20	
	‡2551FS-M	2500 ft.	10½" Fiberglass Reel	12.20	
	5051H-M	5000 ft.	NARTB Hub	16.95	
	5051R-M	5000 ft.	14" Aluminum Reel	23.90	
<p><b>audiotape</b></p> <p><b>MASTER RECORDING on 1½ mil Mylar*</b></p> <p>Super-durable tape that meets highest standards of performance. Withstands extreme temperature and is virtually immune to humidity. ... Plus low print-through. <b>Series 71M, in the green and gold box.</b></p>	671-M	600 ft.	5" Plastic "C-Slot" Reel	3.20	
	1271-M	1200 ft.	7" Plastic "C-Slot" Reel	5.10	
	2571H-M	2500 ft.	NARTB Hub	10.00	
	2571R-M	2500 ft.	10½" Aluminum Reel	13.50	
	‡2571FS-M	2500 ft.	10½" Fiberglass Reel	13.50	

†COLORED PLASTIC REELS. Audiotape on 5" and 7" reels can be supplied on colored reels at no increase in price. To designate color (Red, Yellow, Green or Blue) add "RR" and "YR", and "GR" or "BR" to Type No. E.g. — Type 1251YR covers 1200 feet of plastic-base tape on Yellow Reel.

‡"FS" in Type No. indicates Fiberglass reel with solid hub and ⅛" center hole.

\*"Mylar" is the registered DuPont trade mark for its polyester film.

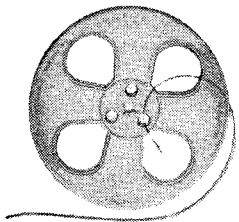
**SECTION 1340**

Description	Type No.	Length	Reel	List Price
<b>audiotape</b> <b>TRIPLE RECORDING</b> <b>on "Tempered" Mylar*</b> Three times as much recording time per reel as standard-plastic-base tape, plus the same extra strength as other "Tempered" Mylar Audiotapes. Series 33T, in the olive box.	633T	600'	3¼" Plastic in Self-Mailer Pkg.	\$2.95
	1833T	1800'	5" Plastic "C-Slot" Reel	6.95
	3633T	3600'	7" Plastic "C-Slot" Reel	11.95

**OTHER AUDIOTAPE ITEMS**

"tape-a-letter" The mailable correspondence tape	Type No.	Length	Reel	List Price
"Tape-a-letter" tapes give tape correspondents top quality Audiotape in impact-resistant plastic re-usable self-mailers. Available in 4 Audiotape types — Standard, Longer, Double and Triple Recording with 150' to 600' on a reel.	Standard Recording 1015-0101-0425	150'	3" Plastic in "Self-Mailer"	\$0.70
	Longer Recording 1034-0102-0425	225'	3" Plastic in "Self-Mailer"	1.00
	Double Recording 1042-0103-0425	300'	3" Plastic in "Self-Mailer"	1.60
	Triple Recording 1042-3106-0420	600'	3¼" Plastic in "Self-Mailer"	2.95

Item	Type No.	Reel	List Price		
<b>EMPTY AUDIOTAPE REELS IN INDIVIDUAL BOXES</b> All Audiotape reels, the complete range of sizes and types, are available, individually packaged in standard Audio boxes. Five and seven-inch reels feature the popular C-slot design for fast, easy threading. In addition to the standard clear plastic, C-Slot reels are available in four attractive jewel-tone colors, at no extra cost.	3PB	3" Plastic Reel in Box	\$0.25		
	3PMB	3" Plastic Reel in Mailing Box	0.25		
	3.25PB	3¼" Plastic Reel in Mailing Box	0.40		
	4PB	4" Plastic Reel in Box	0.45		
	5PB	5" Plastic C-Slot Reel in Box	0.60		
	5.75PB	5¾" Plastic Reel in Box	0.75		
	7PB	7" Plastic C-Slot Reel in Box	0.75		
	10RB	10½" Aluminum Reel in Box	4.00		
	10FS	10½" Fiberglass Reel in Box	4.00		
	10H	NARTB Metal Hub	0.70		
	10S	Pr. 10½" Alum. Flanges (NAB) w. screws	3.40		
	14RB	14" Aluminum Reel in Box	7.40		
	Colored Plastic Reels	5PBR	Red Yellow Green Blue	5" Plastic C-Slot Reel in Box	0.60
		5PBY			
5PBG					
5PBB					
7PBR		Red Yellow Green Blue	7" Plastic C-Slot Reel in Box	0.75	
7PBY					
7PBG					
7PBB					



\* "Mylar" is the registered DuPont trade mark for its polyester film.

**Audiotape Accessories**

Items	Type No.	List Price	Items	Type No.	List Price
<b>EMPTY AUDIOTAPE BOXES</b> Standard, durably - constructed, Audiotape boxes are available in all the popular sizes for filing and storing tapes.	3B	\$0.15	<b>AUDIO HEAD CLEANER</b> Especially formulated for use on magnetic recording heads. Contains silicone solvent for sharper sound.	2HC	\$1.00
	3MB	0.15			
	3.25B	0.15	<b>AUDIO ADHESIVE REEL LABELS</b> Provide positive identification of your tapes, right on the reel. Simply press to apply, pull to remove.	30AL	0.20
	4B	0.20			
	5B	0.20			
	7B	0.20			
	10B	0.75			
	14B	1.00			
<b>AUDIOTAPE CORRUGATED MAILING BOXES</b> Strong, re-usable containers	5M	0.15	<b>AUDIO HEAD DEMAGNETIZER</b> Removes all permanent magnetism from recording and reproducing heads in a matter of seconds.	400	10.00
	7M	0.20			
	10M	0.30			
<b>AUDIO SELF-TIMING LEADER TAPE</b> A strong, durable leader tape of white Mylar* material with spaced markings to permit accurate timing of leader intervals.	3L	0.55	<b>AUDIO HEAD ALIGNING TAPE</b> Pre-recorded at 2,000, 10,000 and 15,000 cps (15"/sec) with precisely correct head alignment. Individually boxed, with instructions. Base material, 1½-mil Mylar.*	200	10.00
<b>AUDIO SPLICING TAPE</b> Unusually durable pressure-sensitive tape that provides a solid, noise-free splice. White thermosetting adhesive holds firmly and instantly, will not ooze to cause sticky splices. On superior-strength Mylar.*	ST-0.25-66	0.57	<b>"HOW TO MAKE GOOD TAPE RECORDINGS" — NEW STEREO EDITION</b> Complete handbook of tape recording. Over 160 pages of interesting information of practical value to every recordist. Liberally illustrated.	15P	1.50
	ST-0.50-100	0.65			
	ST-50-66	1.75			
	ST-75-66	2.50			

Type EP AUDIOTAPE, extra precision magnetic recording tape for telemetering, electronic computers and other specialized applications, is also available. Ask for bulletin on EP AUDIOTAPE. AUDIOFILM on 35mm, 17½mm and 16mm base, is also available. Ask for information.

# BURGESS MAGNETIC RECORDING TAPE

by the makers of BURGESS BATTERIES

40 years of successful developments in acoustics, coatings and coating processes, and solid state physics have enabled Burgess engineers to produce a superlative magnetic tape characterized by these quality features . . .



- SUPERB FREQUENCY RESPONSES
- LOW NOISE LEVEL • HIGH SENSITIVITY
- UNIFORM, TROUBLE-FREE PERFORMANCES ASSURED BY BURGESS QUALITY CONTROL

BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION	
111-1.5	150'	3"	\$.42	\$.70	<b>SERIES NO. 111</b> 1.5 mil 1/4" <b>ALL-PURPOSE PLASTIC</b>	
111-2.5	250'	3 1/4"	.75	1.25		
111-3	300'	4"	.81	1.35		
**111-6	600'	5"	1.35	2.25		
111-8.5	850'	5 3/4"	1.71	2.85		
**111-12	1200'	7"	2.10	3.50		
111-24R	2400'	10 1/2" M	6.54	10.90		
111-24H	2400'	10 1/2"	5.10	8.50		
111-24RPS	2400'	10 1/2"	6.15	10.90		
111-25HPB	2500'	10 1/2"	4.41	7.35		
111-48R	4800'	14"	13.26	22.10	1.5 mil cellulose acetate for all general recording needs. Recognized throughout the recording industry as perfect for flawless recordings at minimum cost. The popular standard series tape.	
111-48H	4800'	14"	10.20	17.00		
111-50HPB	5000'	14"	8.91	14.85		
1/2-111-24R	2400'	10 1/2"	12.30	19.40		<b>SERIES NO. 111</b>
1/2-111-24H	2400'	10 1/2"	10.75	16.96		1.5 mil 1/2"

BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
190-2.25	225'	3"	.54	.90	<b>SERIES NO. 190</b> 1.0 mil 1/4" <b>EXTRA-PLAY PLASTIC</b>
190-9	900'	5"	2.10	3.50	
190-12	1200'	5 3/4"	2.55	4.25	
190-15	1500'	7"	2.70	4.50	
190-18	1800'	7"	3.30	5.50	
190-36R	3600'	10 1/2" M	7.71	12.85	
190-36H	3600'	10 1/2"	6.00	10.00	
190-37.5HPB	3750'	10 1/2"	5.97	9.95	
190-72R	7200'	14"	15.60	26.00	
190-72H	7200'	14"	12.00	20.00	
190-75HPB	7500'	14"	11.97	19.95	

1/2-190-36R	3600'	10 1/2"	15.44	25.74	<b>SERIES NO. 190</b> 1.0 mil 1/2"
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BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
102-6	600'	5"	1.59	2.65	<b>SERIES NO. 102</b> 1.5 mil 1/4" <b>ALL-PURPOSE MYLAR*</b>
102-8.5	850'	5 3/4"	2.55	4.25	
102-12	1200'	7"	2.55	4.25	
102-24R	2400'	10 1/2" M	6.72	11.20	
102-24H	2400'	10 1/2"	5.28	8.80	
102-24RPS	2400'	10 1/2"	6.73	11.20	
102-25HPB	2500'	10 1/2"	4.98	8.30	
102-48R	4800'	14"	14.70	24.50	
102-48H	4800'	14"	11.10	18.50	
102-50HPB	5000'	14"	9.98	16.65	

1/2-102-24R	2400'	10 1/2"	13.45	22.42	<b>SERIES NO. 102</b> 1.5 mil 1/2"
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\*Price each in quantities of 12 or more reels.  
† After "R" designates tape on NAB Reel with 3" center hole, letter "H" designates tape on metal hub.

BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
150-2.25	225'	3"	\$.60	\$1.00	<b>SERIES NO. 150</b> 1.0 mil 1/4" <b>EXTRA-PLAY POLYESTER MYLAR*</b>
150-3.75	375'	3 1/4"	1.05	1.75	
150-9	900'	5"	2.16	3.60	
150-12	1200'	5 3/4"	2.79	4.65	
150-15	1500'	7"	3.10	5.15	
150-18	1800'	7"	3.72	6.20	
150-36R	3600'	10 1/2" M	8.64	14.40	
150-36H	3600'	10 1/2"	7.20	12.00	
150-36RPS	3600'	10 1/2"	8.64	14.40	
150-37.5HPB	3750'	10 1/2"	7.20	12.00	
150-72R	7200'	14"	18.00	30.00	1.0 mil polyester mylar* for trouble-free operation in all weather. Performs brilliantly, unaffected by heat or humidity, 50% more recording time per reel.
150-72H	7200'	14"	14.40	24.00	
150-75HPB	7500'	14"	14.40	24.00	

1/2-150-36R	3600'	10 1/2"	17.28	28.80	<b>SERIES NO. 150</b> 1.0 mil 1/2"
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BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
200-3	300'	3"	.96	1.60	<b>SERIES NO. 200 &amp; 290</b> .5 mil 1/4" <b>DOUBLE LENGTH TENSILIZED POLYESTER MYLAR*</b>
200-6	600'	4"	1.83	3.05	
200-12	1200'	5"	3.27	5.45	
200-17	1700'	5 3/4"	4.24	7.05	
200-24	2400'	7"	5.70	9.50	
200-48R	4800'	10 1/2"	13.20	22.00	
200-48H	4800'	10 1/2"	11.70	19.50	
200-48RPS	4800'	10 1/2"	13.20	22.00	
290-6	600'	3 1/4"	1.50	2.50	
290-36	3600'	7"	7.17	11.95	

BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
131-12	1200'	7"	2.64	4.40	<b>SERIES NO. 131</b> 1.5 mil 1/4" <b>LOW PRINT THROUGH PROFESSIONAL QUALITY PLASTIC</b>
131-24R	2400'	10 1/2"	7.44	12.40	
131-24H	2400'	10 1/2"	6.00	10.00	
131-48R	4800'	14"	15.60	26.00	
131-48H	4800'	14"	12.00	20.00	

1/2-131-24R	2400'	10 1/2"	15.00	25.00	<b>SERIES NO. 131</b> 1.5 mil 1/2"
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BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
138-12	1200'	7"	3.06	5.10	<b>SERIES NO. 138</b> 1.5 mil 1/4" <b>LOW PRINT THROUGH PROFESSIONAL QUALITY ALL-PURPOSE MYLAR*</b>
138-24R	2400'	10 1/2"	8.10	13.50	
138-24H	2400'	10 1/2"	6.66	11.10	
138-48R	4800'	14"	20.40	34.00	
138-48H	4800'	14"	16.80	28.00	

1/2-138-24R	2400'	10 1/2"	17.28	28.80	<b>SERIES NO. 138</b> 1.5 mil 1/2"
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BURGESS NUMBER	TAPE LENGTH	REEL SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
175-6	600'	5"	1.44	2.40	<b>SERIES NO. 175</b> 1.5 mil 1/4" <b>ALL-PURPOSE POLYVINYL CHLORIDE</b>
175-12	1200'	7"	2.25	3.75	

More tear resistant than acetate. For heavy duty recording applications.

\*HPB" designates tape on plastic hub, bulk packaged. "RPS" designates plastic reel with 3/8" EIA center hole.

## ACCESSORIES

BURGESS NUMBER	SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
T-15 White	150'L 1/4"W (White tape)	\$.66	\$1.10	Mylar* Leader Tape
T-15 Red	150'L 1/4"W (Red tape)	.66	1.10	
T-15 Blue	150'L 1/4"W (Blue tape)	.66	1.10	
T-15 Green	150'L 1/4"W (Green tape)	.66	1.10	
T-15 Yellow	150'L 1/4"W (Yellow tape)	.66	1.10	
T-15M	150'L 1/4"W	.66	1.10	Metalized Mylar* Leader Tape
S-5	150"L 1/2"W	.28	.39	Splicing Tape
B-3	Clear Plastic 3" Reel	.15	.25	Empty Reel, Boxed
B-3 1/4	Clear Plastic 3 1/4" Reel	.27	.45	Empty Reel, Boxed
B-4	Clear Plastic 4" Reel	.33	.55	Empty Reel, Boxed
B-5	Clear Plastic 5" Reel	.39	.65	Empty Reel, Boxed
B-5 3/4	Clear Plastic 5 3/4" Reel	.45	.75	Empty Reel, Boxed
B-7	Clear Plastic 7" Reel	.45	.75	Empty Reel, Boxed
B-10.5RPS	Clear Plastic 10 1/2" Reel with EIA hub	2.70	4.50	Empty Reel, Boxed
B-14M	Metal 14" Reel	5.22	8.70	Empty Reel, Boxed

BURGESS NUMBER	SIZE	†SUGG. DEALER PRICE	LIST PRICE	DESCRIPTION
B-3	For 3" Reel	\$.09	\$.15	Empty Box
B3 1/4	For 3 1/4" Reel	.09	.15	Empty Box
B-4	For 4" Reel	.12	.20	Empty Box
B-5	For 5" Reel	.12	.20	Empty Box
B-5 3/4	For 5 3/4" Reel	.12	.20	Empty Box
B-7	For 7" Reel	.12	.20	Empty Box
B-10 1/2	For 10 1/2" Reel	.45	.75	Empty Box
B-14	For 14" Reel	.60	1.00	Empty Box
MB-4	For 4" Reel & Box	.09	.15	Corrugated Mailing Carton
MB-5	For 5" Reel & Box	.09	.15	Corrugated Mailing Carton
MB-7	For 7" Reel & Box	.12	.20	Corrugated Mailing Carton

† Price each in quantities of 12 or more accessories.  
\*\* Also available in colored reels Red, Blue, Green, Yellow or Violet.  
\* Trade Mark of DuPont

# Garrard

WORLD'S FINEST  
AUTOMATIC TURNTABLES

The all-new GARRARD LAB 80 is an **Automatic Transcription Turntable** which insures the professional reproduction of LP records (33 $\frac{1}{3}$  and 45 rpm only), without compromise, through a galaxy of advancements developed by the GARRARD LABORATORIES.

- Dynamically balanced tone arm is built of Afrormosia, the least resonant of all woods; held in precision alignment by an aluminum stabilizer along its entire length
- Built-in stylus pressure adjustment has calibrated audible/visible scale . . . "clicks" on  $\frac{1}{4}$  gram settings
- Needle pivots set into ball bearings eliminate even minimal friction
- Lightweight, low-mass shell is compatible for all cartridges, including new low-mass professional models. Incorporates slide-in-and-lock feature with safe finger lift
- Exclusive patented bias compensator accurately cancels out tone arm skating force . . . adjustable to match stylus pressure setting
- Integral cueing device for manual operation provides feather-touch control
- Finger-tip tab controls on coordinated single panel
- All new automatic spindle incorporates exclusive GARRARD pusher principle for safest positive action
- Exclusive mag-



**LAB  
80  
\$99.50**

netic trip mechanism is ultra-sensitive . . . trips reliably, virtually zero force . . . uses revolutionary Dupont Delrin® plastic for low coefficient of friction

- Extra-heavy 12 inch cast turntable, statically and dynamically balanced
- New LAB 80 GARRARD LABORATORY SERIES motor is completely isolated with revolutionary suspension of rubber anti-vibration mounting assembly.



**Type  
A70  
\$84.50**

An all new Garrard automatic turntable, the A70 was inspired by the renowned TYPE A. The A70 incorporates new and meaningful features—exclusively GARRARD

- New dynamically-balanced, counterweight-adjusted tone arm
- New ball bearing pivots, low center of gravity
- New adjustable bias compensator—prevents skating
- New audible/visible "click" settings on built-in stylus pressure gauge
- New lightweight slide-in-and-lock shell accepts all cartridges including professional high-compliance types
- New ultra-sensitive Dupont Delrin® trip mechanism
- Exclusive full size, ultra balanced, cast "sandwich" turntable
- Double-shielded laboratory series 4-pole shaded motor
- GARRARD's exclusive pusher platform for gentlest automatic record handling.



**AT60  
\$59.50**

The GARRARD AT60 is a wholly-improved version of the widely-popular AT6 with a dramatic difference in performance. Many meaningful new features have been incorporated, truly making it a leader in its field

- New dynamically-balanced, non-magnetic, heavy, cast turntable
- New tubular overarm
- New automatic bias compensator
- Counterweighted, adjustable, dynamically-balanced tone arm
- New ball bearing pivots
- Built-in stylus pressure adjustment and gauge
- New featherweight plug-in-and-lock shell compatible with all cartridges
- New unitized control panel
- New super-sensitive Dupont Delrin® trip mechanism
- Automatic intermix
- Double-shielded laboratory series 4-pole motor.



**Model  
50  
\$44.50**

The GARRARD M50 is a compact automatic turntable with superior and advanced features never before available in a unit of such modest price

- New counterweighted cast aluminum tone arm
- New featherweight plug-in-and-lock shell accommodates all cartridges
- New unitized control panel
- New super-sensitive Dupont Delrin® trip mechanism
- New oversized turntable
- Simple convenient stylus pressure adjustment
- Compact and slim design fits "any" cabinet

ACCESSORIES : Bases, Mounting Boards, Carrying Cases, Dust Covers, "45" Spindles, Stylus Pressure Gauge

GARRARD DIV. BRITISH INDUSTRIES CORP.

PORT WASHINGTON, N. Y.





# Eastman Kodak Sound Recording Tapes

INTERNATIONAL RESISTANCE COMPANY



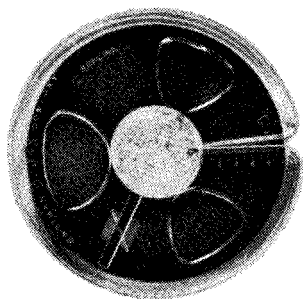
**EASTMAN KODAK MEANS QUALITY.** The only professional quality tapes available at popular tape prices. Two great types . . . Professional Low Print-Through and Professional High Output. Both are lifetime coded to identify the brand and provide convenient indexing.

**CONSISTENT UNIFORMITY** due to Eastman Kodak's exclusive emulsion process, consistent high quality is maintained from batch to batch and from reel to reel.

**NO STRETCH.** New DUROL® base material is the Eastman Kodak's cellulose triacetate that is smooth, tough and durable. Breaks are clean . . . splices are made quickly, easily with minimum program loss.

**NEW BINDER MATERIAL.** Coatings of "R-type" binder give a smoother, tougher recording surface that reduces tape noise and distortion. It is extremely abrasion resistant, preventing oxide build-up at the recording head.

**THREAD EASY REEL** loads fast and easy. Rugged one-piece construction has indexing scale, built-in splicing jig and handy writing surface for titling or identification.



DESCRIPTION	KODAK TYPE NO.	EASTMAN TYPE NO.	LENGTH	REEL
1/2 MIL PLASTIC — STANDARD PLAY Type A303 Professional Low Print-Through. Features vastly superior low print-through with absolutely no sacrifice in output characteristics. Ideal for mastering and general-purpose recording. DUROL base material. 1/4" wide.	31A1	A303-1.5	150'	3" plastic reel in mailing box
	31A6	A303-6.25	625'	5" plastic "Thread Easy"
	31A12	A303-12.5	1250'	7" plastic "Thread Easy"
	31AMH25	A303-MH25	2500'	Metal NAB hub
	31AHF25	A303-HF-25	2500'	10 1/2" metal NAB hub and flange
	31APHB25	A303-PHB25	2500'	Plastic NAB hub (unboxed)
	31APH25	A303-PH25	2500'	Plastic NAB hub
	31APHB50	A303-PHB50	5000'	Plastic NAB hub (unboxed)
1/2 MIL PLASTIC — HIGH OUTPUT Type A304 Professional High Output. High output, low noise characteristics with remarkable low print through. Permits the adjustment of record equalization to improve signal-to-noise ratio. Smooth, homogeneous oxide layer suppresses tape noise and intermodulation distortion. DUROL base material. 1/4" wide.	34A12	A304-12.5	1250'	7" plastic "Thread Easy"
	34AMH25	A304-MH25	2500'	Metal NAB hub
	34AHF25	A304-HF25	2500'	10 1/2" metal NAB hub and flange
	34APHB25	A304-PHB25	2500'	Plastic NAB hub (unboxed)
	34APH25	A304-PH25	2500'	Plastic NAB hub
	34APHB50	A304-PHB50	5000'	Plastic NAB hub (unboxed)
1 MIL PLASTIC — EXTRA PLAY Longer play with DUROL strength and good low print-through without sacrifice of excellent general-purpose features. 1/4" wide.	21A9	A203-9	900'	5" plastic "Thread Easy"
	21A18	A203-18	1800'	7" plastic "Thread Easy"
1 MIL POLYESTER — EXTRA PLAY "TENSILIZED" Polyester base for strength—new "R-Type" binder for outstanding sound recordings. 1/4" wide.	21P9	P203-9	900'	5" plastic "Thread Easy"
	21P18	P203-18	1800'	7" plastic "Thread Easy"
1 MIL POLYESTER — DOUBLE PLAY "TENSILIZED" Extra thin and treated for extra strength. Longer length for more playing time. 1/4" wide.	11P4	P103-4	400'	3" plastic reel in mailing box
	11P12	P103-12.5	1250'	5" plastic "Thread Easy"
	11P25	P103-25	2500'	7" plastic "Thread Easy"
1 MIL POLYESTER — TRIPLE PLAY "TENSILIZED" New ultra-thin tape with 3 times standard playing time with no loss in frequency response.	12P6	P105-6	600'	3 1/4" plastic reel in mailing box
	12P18	P105-18	1800'	5" plastic "Thread Easy"
	12P36	P105-36	3600'	7" plastic "Thread Easy"



INTERNATIONAL RESISTANCE COMPANY

Distributor Division

Philadelphia, Pa. 19108



# AUDIO COMPONENTS CARTRIDGES



	Cat. No.	Stylus Radius (Inches)	Appli- cation	Repl't Stylus	Resistance	Freq. Resp. (Cy/Sec)	Output	Each‡ Price
	VR-1000-5 VR-1000-7	.0005 Diamond .0005 Diamond	Stereo Stereo	DR-5D DR-7D	1100 ohms per channel nominal	20-20,000 ±3 db	1 mv per cm/sec min	\$29.95 24.95
	VR-225 VR-227	.0007 Diamond .0007 Diamond	Stereo Stereo	VR-221 VR-222	386 ohms per channel nominal	20-17,000 20-20,000	3.8 cm/sec 5 mv @	17.95 16.95
	4G-052 4G-053 4G-061 4G-063 4G-050 4G-040 4G-041 4GS-01D 4GS-02D 4GD-01D-02D 4GD-01D-02S 4GS-01S 4GS-02S 4GD-01S-02S	.001 Diam and .003 Saph* .001 Diam and .003 Diam .001 Diamond .003 Diamond .001 Saph* and .003 Saph* .003 Sapphire* .001 Sapphire* .001 Diamond .0025 Diamond .001 Diam and .0025 Diam .001 Diam and .0025 Saph* .001 Sapphire* .0025 Sapphire* .001 Saph* and .0025 Saph*	Mono Mono Mono Mono Mono Mono Mono Mono Mono Mono Mono Mono Mono	4G-01D 4G-02D 4G-03D 4G-01S 4G-02S 4G-03S	600 ohms nominal	20-20,000	10 mv at 5.5 cm/sec @ 1,000 cycles	16.95 19.95 13.95 13.95 12.95 9.95 9.95 13.95 13.95 16.95 19.95 16.95 9.95 9.95 12.95
	C100A C200	.0007 Diam and .003 Saph* .0007 Diam and .003 Saph*	Stereo Stereo	TA-1 TA-1	..... .....	20-12,000 20-17,000	450 mv 300 mv	15.90 15.90

## STYLI

	Cat. No.	Stylus Radius (Inches)	Application	Price Each‡
<b>VR-1000 STEREO STYLI</b>				
	DR-7D DR-5D	.0007 Diamond .0005 Diamond	Stereo Stereo	\$ 9.95 11.95
<b>VR-22 STEREO STYLI</b>				
	VR-221 VR-222 VR-223	.0005 Diamond .0007 Diamond .0007 Sapphire*	Stereo Stereo Stereo	\$7.95 6.95 2.99
<b>"STEREO CLASSIC" "GOLDEN CLASSIC" STYLI</b>				
	ST-5D ST-7D ST-7S	.0005 Diamond .0007 Diamond .0007 Sapphire*	Stereo Stereo Stereo	\$7.95 6.95 2.99
<b>VR-11 STYLI</b>				
	4G-01D 4G-C2D 4G-03D 4G-01S 4G-02S 4G-03S	.001 Diamond .0025 Diamond .003 Diamond .001 Sapphire* .0025 Sapphire* .003 Sapphire*	Monaural Monaural Monaural Monaural Monaural Monaural	\$5.95 5.95 5.95 2.29 2.29 2.29

	Cat. No.	Stylus Radius (Inches)	Application	Price Each‡
<b>RPX STYLI</b>				
	RPJ-010A RPJ-012A RPJ-013A RPJ-007A RPJ-011A	.001 Saph* and .003 Saph* .001 Diam and .003 Diam .001 Diam and .003 Saph* .001 Saph* and .0025 Saph* .001 Diam and .0025 Diam	Monaural Monaural Monaural Monaural Monaural	4.95 11.95 6.95 4.95 11.95
	RPJ-01D RPJ-02D RPJ-03D RPJ-01S RPJ-02S RPJ-03S	.001 Diamond .0025 Diamond .003 Diamond .001 Sapphire* .0025 Sapphire* .003 Sapphire*	Monaural Monaural Monaural Monaural Monaural Monaural	\$5.95 5.95 5.95 2.29 2.29 2.29
	RPJ-004 RPJ-002 RPJ-003 RPJ-005 RPJ-006 RPJ-001	.001 Diamond .0025 Diamond .003 Diamond .001 Sapphire* .0025 Sapphire* .003 Sapphire*	Monaural Monaural Monaural Monaural Monaural Monaural	\$5.95 5.95 5.95 2.29 2.29 2.29
<b>TA-1</b>				
	TA-1	.0007 Diamond .003 Saph*	Stereo	\$9.95

## ACCESSORIES

	Cat. No.	Description	Output Impedance	Frequency Response	Price Each‡
	UPX-003C	Self-powered Phone Preamp 3 5/8"W, 3 3/8"H, 3 3/8"H	At 30 cycles 120,000 ohms At 15,000 cycles	.....	\$14.95
	MA-2G	Self-powered FM Stereo Adapter 2 1/4"W, 10"L, 3"H	1700 ohms 12,000 ohms	50 to 15,000 Cy/Sec ±3db	39.95

	Cat. No.	Description	Application	Price Each
	RX109 RX209	45-rpm Adapter (Long) 45-rpm Adapter (Short)	Use with G-E and VM Record Changers	\$3.50 2.50

\* All sapphires are synthetic. ‡ Manufacturer's suggested retail price.





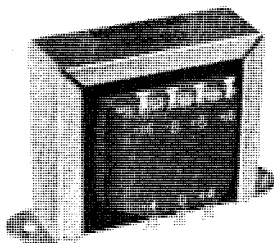
# MICROTRAN

PRECISION

# HI-FI

ACCESSORIES

## stereo 3rd channel — output matching transformers model HM-90

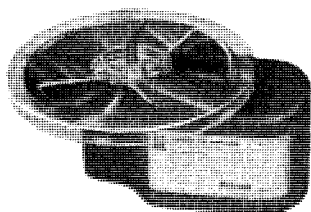


This precision transformer has been designed for the Audiophile who wishes to convert his Monaural System to Stereo or who wishes to modify or enlarge his Stereo system.

- Permits "hole-in-the-middle" fill in with 3rd Channel Speaker.
- Two HM-90 permits construction of Single cabinet, Single location, stereo system.
- Permits addition of any combination of Monaural or Stereo speakers, regardless of ratings.
- Permits these changes to be made and still maintain matched impedances, required polarities, and desired power levels.
- Power: 30 watts: Peak Power 100 watts.

- Frequency Response (Power): 40 to 20,000 cycles.
- Impedance Range: +16, +8, +4, 0, -4, -8, -16 ohms (Minus sign refers to reversed polarity.)
- Insertion Loss: Less than 1 db. in most hookups. When used on +4Ω and in -4Ω and in -4Ω out Taps, 3 db.
- Simple Connections: Easy to follow instructions show connections to be made to numbered solder lugs for each type of stereo system.
- Finish: Vacuum Varnish impregnation.
- Size: 3¼" x 2½" x 2¾" hi; 3¼" Mtg. ctrs.
- Weight: 2 lbs.
- Model HM-90—USER NET: \$6.33

## Magnetic Tape Eraser — Model HD-11M Epoxy Molded



A heavy duty bulk tape demagnetizer that develops a high intensity magnetic field. Erases recorded signals and noise from magnetic tape without rewinding. Saves unnecessary wear on heads and tape. Noise level reduced below level of standard erase heads. Restores tape up to ½" to like new condition or better.

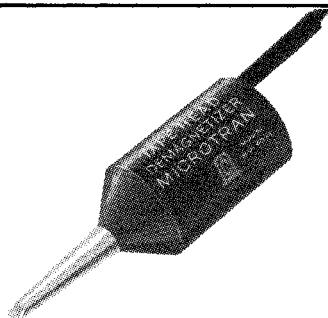
- Spindle mounting of reel permits rapid thorough coverage without missed spots.
- Reel Size Range: 5" x 7" x 10½".
- Spindle removable for use with other reel sizes.

- Accessory: Adapter hub for use with N.A.B. 10½" reels. (Model HD-11-AD... User Net \$2.30)
- Universal Use: May also be used for Demagnetizing record Playback-Erase Heads, watches and other metal objects.
- Rating: 117 Volts AC, 5 Amps.
- Finish: Case Epoxy — High impact.
- Size 7" L x 3½" W x 3¼" H.
- Weight: 9 lbs.
- Model HD-11M—USER NET: \$18.95

A MUST FOR STEREO RECORDING

Most stereo recorders do not provide facilities for pre-erasing both tracks

## Tape Head Demagnetizer — Model HD-40M (For Tape Recording Heads)

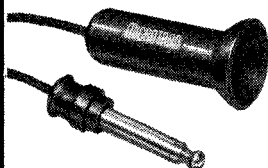


Permanent magnetizing of recording heads during normal use of tape recorders is a common occurrence. Magnetized heads cause high noise level and harmonic distortion.

The HD-40M Head Demagnetizer, when properly used, removes any residual permanent magnetism from the heads. It consists of a heavy duty alternating current electromagnet with an extended pole piece designed for easy access to the recording heads of most tape recorders. When energized, contact of the demagnetizer pole piece with the pole tip of the recording head causes the head to be saturated by an alternating magnetic field. Gradual removal of the head from this saturating field neutralized any residual permanent (DC) magnetism in the recording head.

- Removes permanent magnetism
- Reduces noise level
- Reduces harmonic distortion
- Improves signal to noise ratio
- Insures high frequency response
- Reduces hum of tape head
- Special finish on pole piece prevents marring recording head surfaces
- Rating 117 volts AC, 1 AMP.
- FINISH: High impact molded epoxy
- SIZE: 4" Long x 1¼" Diameter
- WEIGHT: 7 ozs.
- Model HD-40M—USER NET: \$6.15

## telephone pick-up coil — model HP-61



For transcribing telephone conversations with recorder or making messages audible on amplifier. May also be used as probe for locating sources of hum.

- Equalized Level: Local and distant conversations recorded with more constant signal level than base mounted units.

- Suction Cup: Mounting on telephone receiver.
- Universal Model: One unit suitable for all types of telephones.
- Plug-in Use: Supplied with 68" shielded cable, terminated with standard phone plug for mike input of recorder or amplifier.
- Finish: Optical Black.
- Compact: Size only ⅝" diameter x 2" long.
- Weight: 1½ ounces.
- Model HP-61—USER NET: \$4.77

## hum-bucking telephone pick-up coil — model HP-70

For transcribing telephone conversations, this coil is designed for use with high impedance input tape recorders, amplifiers and dictating machines. This deluxe unit has been designed with symmetrical hum cancelling pick-up coils. Ruggedly constructed of high impact plastic.

- Eliminates high stray hum pick-up usually encountered with conventional pick-up coils.
- Color: Grey.
- Size: 2½" L x 7/8" W x 5/8" H.
- Model HP-70—USER NET: \$6.95

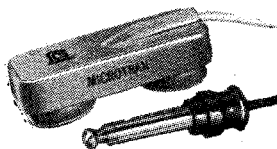


- Mounting: Double Suction Cup
- Cable Length: 5 Feet.
- Termination: Tinned Leads
- Shipping Weight: 2 ozs.



# MICROTRAN company inc.

Valley Stream, New York

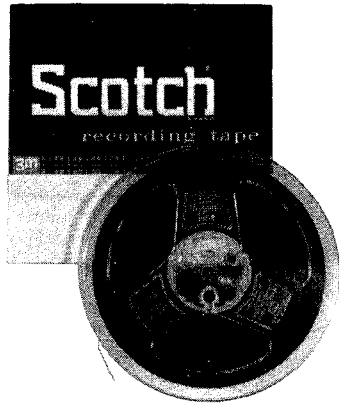


As above with Molded Phone Plug Termination.

- Shipping Weight: 3 ozs.
- Model HP-71 USER NET: \$7.50.

Also see EEM pages for additional items and list of franchised distributors.

# Scotch® Brand Recording Tape



**No. 51 Conductive Sensing Tape:** For recorders with electronic sensing controls. Sticks tight, stays clean. On dispenser cart. List Price—7/32" x 150' \$1.89.

**No. 12 End-of-Reel Tape Clips:** One clip packed free in each box. Prevents tape spilling. 10 clips per package—\$.35.

**Empty Reels and Boxes:** Empty 3", 4", 5" and 7" plastic reel plus boxes, are a must for editing and extra take-up reel need. List Price—3" \$.25 to 7" \$.75.

**No. 102 All Purpose, Extra Strength:** For all general recording—especially suited for irreplaceable recordings or long term storage. On super-tough, weather balanced 1½ mil polyester backing.

**No. 111 All Purpose:** For all general recording. International standard of the recording industry—provides flawless sound reproduction at low cost. 1½ mil plastic backing.

**No. 120 High Output:** Over 100% more output, greater dynamic range and freedom from distortion on signal peaks. 1½ mil plastic backing.

**No. 131 Low-Print:** Reduces print-through (signal transfer from layer to layer) to a point below the noise level of most professional machines. Has excellent recording characteristics and allows long time storage. 1½ mil plastic backing.

**No. 138 Low Print, Extra Strength:** Same recording qualities as No. 131 on strong 1½ mil polyester backing.

**No. 150 Extra Length, Extra Strength:** 50% more playing time—withstanding temperature and humidity extremes. High potency oxide on 1 mil polyester backing.

**No. 175 Heavy Duty Tenzar®:** This new, longer-wearing tape shrugs off hard use, rough handling . . . lasts 15 times longer than ordinary tapes. Made with a wear-resistant high potency oxide coating of the type proved exceedingly durable in heavy duty tapes for high speed computers. Available on red, blue, green, yellow or clear reels.

**No. 190 Extra Length:** 50% more tape—as much recording time as 1½ reels of standard tape. High potency oxide offers complete purity of sound. 1 mil plastic backing.

**No. 200 Double Length, Double Strength:** As much playing time as two reels of standard tape—enough to record an entire opera, concert or conference. High potency oxide on tensilized polyester backing.

**Nos. 201, 202, and 203 LOW NOISE:** Low Noise tapes are new products engineered primarily for professional use. Their unique qualities make them especially useful for the mastering and sub-mastering of pre-recorded tapes and records. Available in 1½ mil plastic (No. 201) and polyester backings (No. 202), as well as 1 mil polyester (No. 203).

**No. 282 Sandwich:** With exclusive micro-thin protective plastic shield over oxide coating. Eliminates oxide rub-off, wears up to 30 times longer, drastically reduces machine maintenance and provides superb sound fidelity. Strong, weatherproof 1½ mil polyester backing.

**No. 290 Triple Length:** The tape that gives maximum playing time for each reel size. Especially suitable for continuous recording of lengthy conferences, meetings, conventions. ½ mil tensilized polyester backing.

**No. 8000 Quick-Load Cartridge:** These compact cartridges slip into place in seconds and are ready to play. Completely self-contained. No threading. No loose ends. For use in home, education and industry. Available in 320' or 560' of high potency No. 150 tape in transparent or opaque cases.

**"Living Letters" Tapes (in Plastic Containers):** Three tape lengths available for a variety of uses, providing up to maximum recording time on a 3" reel. Plastic container provides excellent re-useable mailer or dust-free storage unit.

## ACCESSORIES

**Empty Self Threading Reel in a Plastic Collar:** A tape reel that threads itself. Holds tape firmly, but gently, when you start recorder. Threads up automatically—accommodates all tape thicknesses or leader tape. Reel comes complete with a snap-tight plastic collar that seals reel edges against dust, makes reel self-storing without a box. List Price—7" reel \$1.50.

**No. 24 Colored Leader & Timing Tapes:** Used to identify ends of tape and selections within a roll. Yellow and White in handy dispenser packages. List Price—¼" x 100'—\$.90.

**No. 41 Splicing Tape:** A self-sticking tape expressly made for neat noiseless splices. On metal dispensers. List Price—½" x 150' \$.39.

CATALOG NO.	LENGTH	REEL	LIST PRICE
102-¼-600	600'	5"	\$ 2.6
102-¼-1200	1200'	7"	4.2
102-¼-2500H	2500'	HUB	8.5
102-¼-2500R	2500'	10½"	11.3
111-¼-150	150'	3"	.7
111-¼-300	300'	4"	1.3
111-¼-600	600'	5"	2.2
111-¼-1200	1200'	7"	3.5
111-¼-2500H	2500'	HUB	7.8
111-¼-2500R	2500'	10½"	10.8
120-¼-300	300'	4"	1.3
120-¼-600	600'	5"	2.2
120-¼-1200	1200'	7"	3.5
120-¼-2500H	2500'	HUB	7.8
120-¼-2500R	2500'	10½"	10.8
131-¼-1200	1200'	7"	4.4
131-¼-2500H	2500'	HUB	9.2
131-¼-2500R	2500'	10½"	12.2
138-¼-1200	1200'	7"	5.1
138-¼-2500H	2500'	HUB	11.1
138-¼-2500R	2500'	10½"	13.9
150-¼-900	900'	5"	3.6
150-¼-1800	1800'	7"	6.2
150-¼-3600H	3600'	HUB	11.4
150-¼-3600R	3600'	10½"	14.3
175-¼-600	600'	5"	2.4
175-¼-1200	1200'	7"	3.7
190-¼-900	900'	5"	3.5
190-¼-1800	1800'	7"	5.5
190-¼-3600H	3600'	HUB	9.8
190-¼-3600R	3600'	10½"	12.8
200-¼-600	600'	4"	3.0
200-¼-1200	1200'	5"	5.4
200-¼-2400	2400'	7"	9.1
200-¼-4800RPS	4800'	10½"	22.0
201-¼-1200	1200'	7"	4.4
201-¼-2500-RO	2500'	10½"	12.1
202-¼-1200	1200'	7"	5.1
202-¼-2500-RO	2500'	10½"	13.1
203-¼-1800	1800'	7"	7.1
203-¼-3600-RO	3600'	10½"	17.1
282-¼-600	600'	5"	3.1
282-¼-1200	1200'	7"	4.1
290-¼-1800	1800'	5"	6.1
290-¼-3600	3600'	7"	11.1
8000-¼-320 C	320'		4.1
8000-¼-560 C	560'		4.1
8000-¼-560 C	560'		4.1
111-¼-150-LL	150'	3"	.1
200-¼-300-LL	300'	3"	1.1
290-¼-600-LL	600'	3"	2.1

Magnetic Products Division **3M** COMP

"SCOTCH", "TENZAR" AND THE PLAID DESIGN ARE REGISTERED TRADEMARKS MINNESOTA MINING AND MANUFACTURING COMPANY, ST. PAUL, MINNESOTA 55

# Norelco® 'CONTINENTAL' Tape Recorders

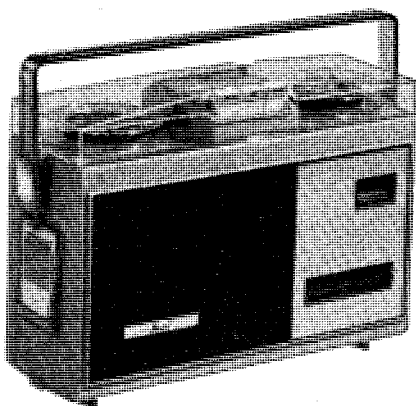
Whether you are a music lover, a recordist or a high fidelity enthusiast, we are confident you will find one of the justly famous Norelco 'Continental' family of professional quality tape recorders ideally suited to your specific recording requirements.

## The CONTINENTAL '101' MODEL EL 3586

### 100% Transistorized, Battery-Operated Portable Tape Recorder

It's here—Exactly the portable you've been waiting for, for candid, on-the-shoulder, split-second recordings of any sound, any voice, anywhere, every time.

Nothing approaches this recent addition to the Norelco family of tape recorders when it comes to on-the-fly, extra-fidelity recordings of interviews, inventories, lectures, theatrical and musical performances, parties, nature walks, ball games and singing gondoliers. Enclosed in a handsome high-impact polystyrene case, and with its full complement of 6 low cost, (20 hr. recording life) "D" cell batteries, the Continental "101" weighs a mere 7 lbs. Provides up to 2 hours of recording and playback time on a single reel.

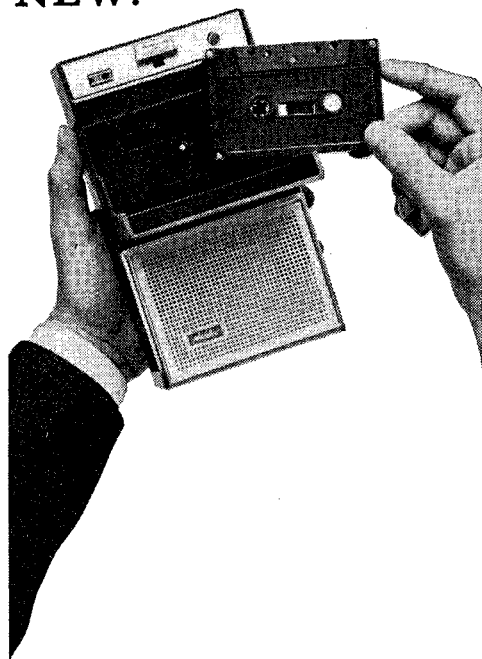


**OTHER FEATURES AND SPECIFICATIONS:** Instantaneous operation, minimum battery drain, small size, superior circuitry—thanks to 100% transistorized construction; **Compatibility**—tapes are fully interchangeable with any constant-speed, 1 7/8 ips, 2-track recorder; **Simple operation**—3 self-locking push-buttons handle all recording and play-back functions; **Self-contained**—with dynamic microphone and Norelco 4" speaker; **Combined indicator**—for modulation level and battery life; **Combined volume control**—for recording and playback; **Bass-treble control**—for setting tone level you want. **Storage space**—for microphone; **Input**—for mike/radio/phonograph; **Output**—for external amplifier; **Tape speed**—1 7/8" ips, constant-speed, capstan-drive; **Frequency response**—80-8000 cps; **Signal-to-noise ratio**—better than -40 db; **Size**—11" x 3 3/4" x 8".

## The CARRY-CORDER™ '150'

### Cartridge Tape Recorder Pocket-Size! Cordless! Revolutionary!

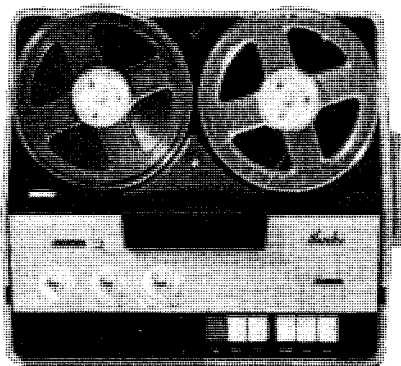
**NEW!**



The only moderately priced, miniaturized tape recorder in the world today that gives you professional quality, plus: the convenience of instantaneous snap-in, long-play tape cartridges... The simplicity of one master control switch for virtually all operations... The fatigue-proof portability of a 35 MM candid camera... The multiple advantages of a portable tape recorder and a portable phonograph rolled into one... **AND, SOUND QUALITY THAT IS NOTHING SHORT OF MIRACULOUS!**

**SPECIFICATIONS AND FEATURES:** Weight—3 lbs. (including batteries); Size—7 3/4" x 4 1/2" x 2 1/4"; **Cartridge Playing Time**—One hour (1/2 hour per side); **Tape Speed**—1 7/8 ips (constant speed motor, capstan drive); **Fast Forward or Rewind**—70 seconds; **Controls**—One (1) 4-position switch for Start/Stop/Fast-Forward/Fast-Rewind; One (1) Recording Safety Interlock Button; One (1) Recording Volume Dial; One (1) Playback Volume Dial; One (1) remote-control Start/Stop switch (can be used as an integral part of the microphone, or completely independently); **Power Source**—Five (5) ordinary "C" cell flashlight batteries; **Battery Life**—Approximately 20 hours. **Indicators**—One (1) Combined Battery Condition and Recording Level Meter; One (1) Expedited-Time Tape Scale; **Input**—One (1) for Microphone, Record Player, Radio, or Second Tape Recorder; **Output**—One (1) to Headphones, Amplifier-Speaker set-up, or Second Tape Recorder; **Frequency Response**—120-6000 cps, ±3 db; **Signal-to-Noise Ratio**—better than -45 db; **Microphone**—omni-directional, moving-coil dynamic, with remote-control start/stop switch; **Carrying Case**—Fitted black vinyl with shoulder strap and microphone pouch (Carry-Corder remains in case while in use); **Tape Cartridges**—set of four (4) included with recorder, (3 un-recorded and 1 pre-recorded demonstration tape); **Patch Cord**—(for hook-up to external sound reproduction and recording sources).

## The CONTINENTAL '201' MODEL EL 3528 (Available early '65)



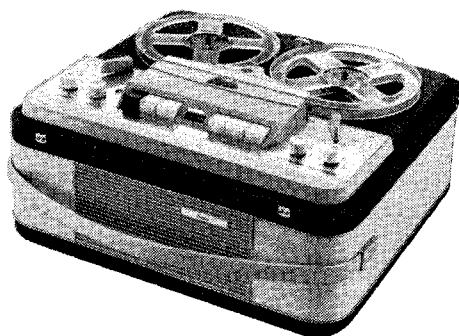
with Dual Preamps for 4-Track Stereo  
Playback through Radio, Phono or TV Set

Completely self-contained, two-speed,  
4-track Mono Record/Playback

The discerning listener can now enjoy a top-quality recorder, newly designed with every built-in feature for home recording and playback, yet stripped of unnecessary features, functions and accessories so that the cost may be kept low.

**SPECIFICATIONS AND FEATURES:** Tape Speeds— $7\frac{1}{2}$ ,  $3\frac{3}{4}$  ips; Frequency Response—60-15,000 cps; Wow and Flutter—less than 0.15% rms; Special Facilities—Mixing; Pause Button; Fast Forward and Rewind—under two minutes for 1,200 ft. of tape; Audio Facilities—self-contained recording/playback through radio, phonograph or TV set, loudspeaker (also usable as portable P. A. system); Input Sensitivity—0.25 Mv microphone, 130 Mv radio-phono; Output—to external power amplifier, for external speaker, headphones and stereo line; Microphone—moving-coil dynamic; Bias & Erase Frequency—approximately 50 Kc; Signal-to-Noise Ratio—better than -40 db; Weight—18 lbs.; Size— $15\frac{3}{4}$ " x  $13\frac{3}{4}$ " x  $6\frac{3}{4}$ ".

## The CONTINENTAL '301' MODEL EL 3549



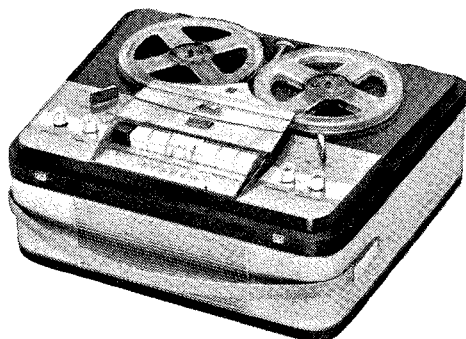
with Dual Preamps for 4-Track Stereo  
Playback with Radio, Phono or TV Set

Completely self-contained, 4-Speed  
4-Track Mono Record/Playback

100% transistorized to provide years of carefree, trouble-free performance with no tubes to replace and no warm-up time required ever! Four speeds includes the new super-slow  $\frac{1}{8}$  ips giving up to 32 hours recording and playback on a single 7" reel of tape! Dual preamps permit stereo playback with radio, phono or TV set as well as with external hi-fi stereo system.

**SPECIFICATIONS:** Four Speeds— $7\frac{1}{2}$ ,  $3\frac{3}{4}$ ,  $1\frac{7}{8}$  and super-slow  $\frac{1}{8}$  ips, providing up to 32 hours recording time on a single 7" reel; Four-Track Stereo Playback with any external amplifier and speaker, through self-contained dual preamps. Four-Track Mono Record and Playback. Frequency Response—at  $7\frac{1}{2}$  ips, 50-18,000 cps; Signal-to-Noise Ratio—better than -48 db; Wow and Flutter—at  $7\frac{1}{2}$  ips, 0.14%; Transistor Complement—OC58 or AC107 (3), OC75 (1), 2N2429 (2), OC44 (2), OC74 (1), OC26 (1), OC79 (1); Voltage—117 volts; Frequency—60 cps; Power Dissipation—55 watts; Weight—29 lbs.; Fast Wind and Rewind—less than 180 seconds for 1800 feet—7" reel; Size— $16\frac{1}{2}$ " x  $15\frac{1}{2}$ " x  $8\frac{1}{4}$ ".

## The CONTINENTAL '401' MODEL EL 3534



100% Transistorized, 4-Speed  
4-Track Stereo/Mono Record and Playback

◆ fully self-contained with dynamic stereo microphone, two speakers (one in the removable cover for perfect stereo separation), dual hi-fi preamps, and dual recording and playback amplifiers ◆ fully compatible with conventional pre-recorded magnetic tapes ◆ self-contained phono/P.A. system ◆ mixing facilities ◆ interlocking pause button ◆ can also play through external hi-fi amplifier ◆ multipley facilities ◆ new 4th tape speed of  $\frac{1}{8}$  ips provides 32 hours of recording on a single 7" reel.

**SPECIFICATIONS:** Four Speeds— $7\frac{1}{2}$ ,  $3\frac{3}{4}$ ,  $1\frac{7}{8}$  and  $\frac{1}{8}$  ips; Tracks—stereo 2 (dual); mono-phonoc 4; Heads—Stacked; Frequency Response—at  $7\frac{1}{2}$  ips, 50-18,000 cps; at  $3\frac{3}{4}$  ips, 60-14,000 cps; at  $1\frac{7}{8}$  ips, 50-10,000 cps; at  $\frac{1}{8}$  ips, 60-4500 cps; Signal-to-Noise Ratio—better than -48 db; Wow and Flutter—less than 0.14% at  $7\frac{1}{2}$  ips; Modulation Indicator—Meter; Program Indicator—Built-in, 4-digit adjustable; Pause Button—Instantaneous with locking device; Fast Forward and Reverse—Less than 2 minutes for 1200 ft. of tape; Automatic Stop—At ends of tape (with metalized strips); Inputs—(1) for stereo microphone; (2) for stereo phono or tuners; (1) for foot pedal, with facilities for a footswitch control for pause function; Outputs—(2) for extension speakers, (1—two channel) for external amplifiers, (1) for stereo headphones; Microphone—Stereophonic (dual elements); Transistor Complement—AC-107 (4), OC75 (6), OC74 (2), OC44 (2), 2N1314 (2), OC79 (1); Power Consumption—65 watts; Size— $18\frac{1}{4}$ " x  $15$ " x  $10$ "; Weight—38 lbs.

### NORELCO 'CONTINENTAL' ACCESSORIES (available wherever Norelco 'Continental' tape recorders are sold)

DESCRIPTION	MODEL No.	FOR USE WITH	DESCRIPTION	MODEL No.	FOR USE WITH
Deluxe Carrying Case	DL 86	101	Telephone Pickup Coil	TP 86	101, 150
Texon Carrying Case	CC 86	101	Monitoring Headset	EL3775/21	301
AC Adapter	BE 86, BE 50	101, 150	Foot Control	EL3984/15	201, 301, 401
Remote Mike Switch	RS 86	101	Telephone Pickup Coil	TP34/49	301, 401
Foot Pedal	FP 86	101, 150	Stereo Headset	EL3775/37	401
Listening Headset	HP86EL3775/85	101, 150	Mike Adapter	2A1048	401
Close Talking Mike	CTM 86	101, 150	Slide Synchronizer	EL3769/54	ALL MAKES

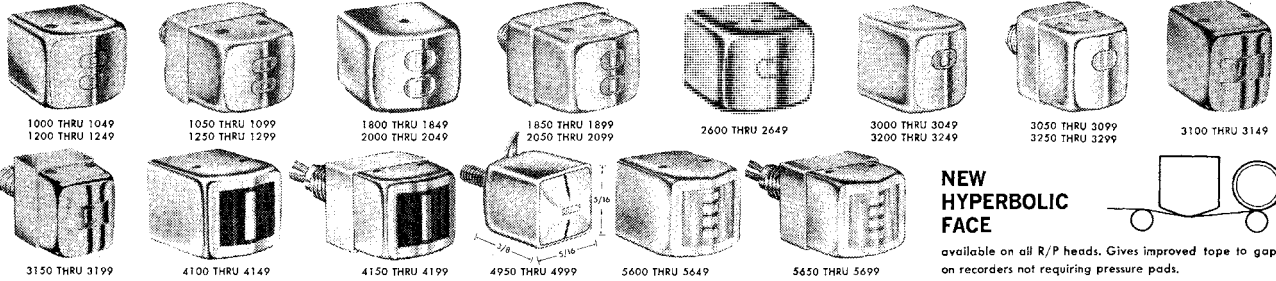
For complete technical data and detailed descriptions of Norelco 'Continental' Tape Recorders, write:  
NORTH AMERICAN PHILIPS COMPANY, INC., High Fidelity Products Division, New York, N. Y. 1001

# Northronics



## THE COMPLETE SOURCE FOR REPLACEMENT TAPE HEADS

### Record/Play and Record Only Heads



**NEW HYPERBOLIC FACE**

available on all R/P heads. Gives improved tape to gap contact on recorders not requiring pressure pads.



NORTRONICS MODEL NO.		HEAD DESCRIPTION	HEAD FUNCTION	APPLI-CATION (see notes)	1 KC INDUC-TANCE (milli-henrys)	1 KC IMPED-ANCE (ohms)	MAXIMUM BIAS FREQUENCY (Kilocycles)	DC RESIST-ANCE (ohms)	NET EACH (No Mount)	
NO MOUNT	REAR MOUNT									
1000	1050	STANDARD 4-TRACK STEREO Hyperbolic Metal Face Laminated Cores	Record/Play	1	800	5000	80	700	\$21.00	
1001	1051		Record/Play	2	400	2500	100	390	21.00	
1002	1052		Record/Play	5	100	650	140	90	21.00	
1200	1250		PREMIUM 4-TRACK STEREO Hyperbolic Metal Face Laminated Cores	Record/Play	1	800	5000	80	700	\$26.20
1201	1251			Record/Play	2	400	2500	100	390	26.20
1202	1252	Record/Play		5	100	650	140	90	26.20	
1203	1253	Record Only		6	50	320	250	90	26.20	
1205	1255	Record Only		3	200	1300	120	390	26.20	
1207	1257	Record/Play	4	200	1300	120	200	26.20		
1800	1850	STANDARD 2-TRACK STEREO Hyperbolic Metal Face Laminated Cores	Record/Play	1	800	5000	60	720	\$23.30	
1801	1851		Record/Play	2	400	2500	100	410	23.30	
1802	1852		Record/Play	5	100	650	100	130	23.30	
2000	2050		PREMIUM 2-TRACK STEREO Hyperbolic Metal Face Laminated Cores	Record/Play	1	800	5000	60	720	\$30.30
2001	2051			Record/Play	2	400	2500	100	410	30.30
2002	2052	Record/Play		5	100	650	100	130	30.30	
2003	2053	Record Only		6	50	320	200	130	30.30	
2600	---	PREMIUM 2-TRACK MONO Hyperbolic Metal Face Laminated Cores		Record/Play	1	800	5000	60	400	\$15.90
2601	---		Record/Play	2	400	2500	100	165	15.90	
2602	---		Record/Play	5	100	650	100	70	15.90	
2603	---		Record Only	6	50	320	200	70	15.90	
3000	3050		STANDARD 2-TRACK MONO Hyperbolic Metal Face Laminated Cores	Record/Play	1	800	5000	60	400	\$8.40
3001	3051	Record/Play		2	400	2500	100	165	8.40	
3002	3052	Record/Play		5	100	650	100	70	8.40	
3100	3150	2-TRACK MONO-CENTER TRACK Cylindrical Metal Face Solid Cores		Record/Play	1	1000	6300	60	625	\$8.40
3101	3151			Record/Play	2	400	2500	80	350	8.40
3200	3250		PREMIUM 2-TRACK MONO Hyperbolic Metal Face Laminated Cores	Record/Play	1	800	5000	60	400	\$15.90
3201	3251			Record/Play	2	400	2500	100	165	15.90
3202	3252			Record/Play	5	100	650	100	70	15.90
3203	3253	Record Only		6	50	320	200	70	15.90	
4100	4150	PREMIUM FULL-TRACK Hyperbolic Face Laminated Cores		Record/Play	2	250	1500	60	200	\$34.70
4101	4151		Record Only	6	70	400	100	125	34.70	
---	4950		MINIATURE	Record/Play	5	40	250	150	125	\$14.00*
5601	5651		PREMIUM 4-CHANNEL Hyperbolic Metal Face Laminated Cores	Record Only	6	50	320	220	150	\$99.00
5602	5652			Record/Play	5	90	600	220	100	99.00
5603	5653	Record/Play		2	370	2200	80	690	99.00	

Note: Add \$1.50 for Rear Mount except on 4950. Add \$6.00 for Rear Mount on 5650 Series. \*(Rear Mount)

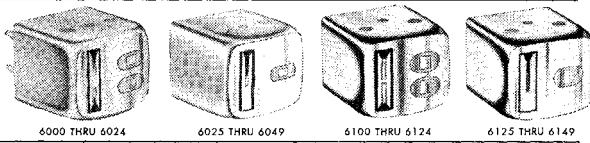
### APPLICATION NOTES

1. High-impedance general-purpose Record/Play or Play Only head for vacuum-tube circuits.
2. Medium-impedance Record/Play head for vacuum-tube or transistor circuits.
3. Medium-impedance Record Only head for vacuum-tube circuits.
4. Medium-low-impedance Record/Play head for transistor circuits.
5. Low-impedance Record/Play head for transistor circuits.
6. Low-impedance Record Only head for vacuum-tube or transistor circuits.

### ADDITIONAL MOUNTING STYLES

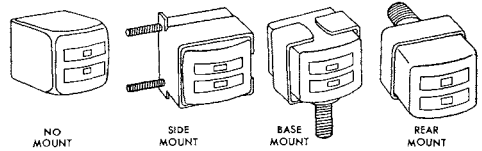
NO MOUNT	SIDE MOUNTS	BASE MOUNTS	NET EACH
ALL ERASE HEADS	QUIK-KIT 18	QUIK-KIT 19	\$1.00
3000 THRU 3049 3100 THRU 3149 3200 THRU 3249	QUIK-KIT 20	QUIK-KIT 21	\$1.00
ALL OTHER RECORD/PLAY, RECORD ONLY, AND PLAY ONLY HEADS	QUIK-KIT 38	QUIK-KIT 66	\$1.00

### "Combo" Heads

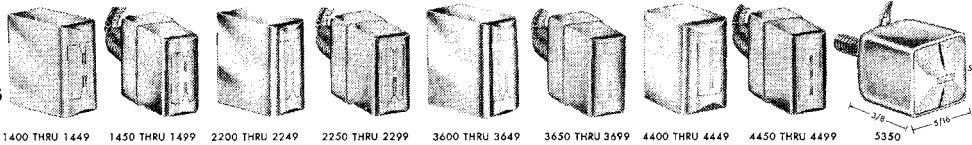


NORTRONICS MODEL NO. (NO MOUNT)	HEAD DESCRIPTION	HEAD FUNCTION	EQUIVALENT HEAD SPECIFICATION REFERENCE	NET EACH
6000	4-TRACK STEREO Metal Face "COMBO"	Erase, Record/Play	Record/Play = 1201 Erase = 1400	\$33.00
6001		Erase, Record Only	Record Only = 1203 Erase = 1400	33.00
6002		Erase, Record/Play	Record/Play = 1201 Erase = 1401	33.00
6003		Erase, Record/Play	Record/Play = 1000 Erase = 1402	33.00
6025	4-TRACK MONO Metal Face "COMBO" Center Track	Erase, Record/Play	Record/Play = 1000 Erase = 1402	\$18.00
6100	2-TRACK STEREO Metal Face "COMBO"	Erase, Record/Play	Record/Play = 2001 Erase = 2201	\$36.00
6125	2-TRACK MONO Metal Face "COMBO" Center Track	Erase, Record/Play	Record/Play = 2601 Erase = 3601	\$21.00

### Examples of Mounting Styles Available



### Erase Heads



### MINIATURE

#4950 and 5350 for use with magnetic drums and discs, film stripes and miniature recorders. 3/16" x 3/16" x 3/16" with all-metal face.

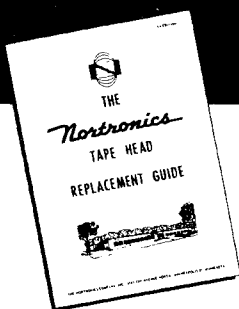
NORTRONICS MODEL NO.		HEAD DESCRIPTION	1 KC INDUC-TANCE (milli-henrys)	60 KC IMPEDANCE (ohms)	OPERATING ERASE CURRENT* (milliamps)	DC RESISTANCE (ohms)	60 KC OPERATING VOLTAGE (volts)	NET EACH (No Mount)
NO MOUNT	REAR MOUNT							
1400	1450	4-TRACK STEREO ERASE Metal Face	80	30,000	3-5	270	50-150	\$12.00
1401	1451		10	2,800	10-15	40	28-48	12.00
1402	1452		.13	40	80-140	2	3-5	12.00
2200	2250	2-TRACK STEREO ERASE Metal Face	80	25,000	4.5-7.0	205	100-150	\$12.00
2201	2251		8	2,000	16-24	35	32-48	12.00
2202	2252		.20	50	100-150	2	5-8	12.00
3600	3650	2-TRACK MONO ERASE Metal Face	80	25,000	4.5-7.0	205	100-150	\$ 8.00
3601	3651		8	2,000	16-24	35	32-48	8.00
3602	3652		.20	90	100-150	2	5-8	8.00
4400	4450	FULL-TRACK MONO ERASE Metal Face	40	12,000	10-15	88	100-150	\$14.00
4401	4451		3.6	1,000	32-48	25	32-48	14.00
---	5350		MINIATURE	5	1,200	28-42	38	32-48

60 db erasure of saturated tape. Voltages shown are RMS.

NOTE: Add \$1.50 for Rear Mount except on 5350. †(Rear Mount)

All specifications subject to change without notice.

# OPEN UP NEW SALES AND SERVICE BUSINESS WITH NORTRONICS TAPE HEAD REPLACEMENT PROGRAM!

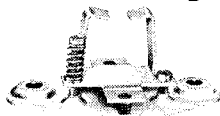


With Nortronic Tape Head Replacement Guide—WHICH SPECIFIES REPLACEMENT FOR 440 TAPE RECORDERS BY MANUFACTURER AND MODEL NUMBER—it's easy for you to satisfy customer requests for tape head replacements and accessories.

SEND FOR YOUR FREE COPY OF THIS EXCLUSIVE GUIDE... GET FULL DETAILS ON HOW YOU CAN PARTICIPATE IN THIS MONEY-MAKING PROGRAM!

See your local Nortronics Representative or write: Thor Johnson, Distributor Sales Manager

## ■ Tape Recording Accessories



**QUIK-KIT 74 Adjustable Head Mounting Assembly.** Unique design permits alignment of head for height, face and azimuth. Two TG-7 Guide Posts can be added if desired; if space does not permit, tabs for guide posts can be snapped off. Base has hole for mounting on recorder. For all Nortronics no mount Record, Play or Record/Play heads except 3000 thru 3299 Series and miniature heads. Base size (with tabs): 1 1/8" W, 1 7/32" L. Without tabs: 1 1/8" W, 1 7/32" L. . . . . Net Each **\$2.25**

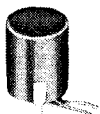
**QUIK-KIT 77 Adjustable Head Mounting Assembly.** Identical to Quik-Kit 74 (including dimensions) but for no mount heads in 3000 thru 3299 Series. Net Each **\$2.25**

**QUIK-KIT 78 Adjustable Head Mounting Assembly.** Identical to Quik-Kit 74 (including dimensions) but for no mount erase heads. . . . . Net Each **\$2.25**



**AT-100 AZIMUTH AND AMPLIFIER ALIGNMENT TAPE**  
A 7.5 I.P.S. full-track master professional tape. It contains frequencies from 40 to 10,000 cycles for checking azimuth and equalization. Full instructions are on the tape. . . . . Net Each **\$4.95**

TAPE RECORDER ACCESSORIES		
NORTRONICS NUMBER	DESCRIPTION	NET EACH
L-5	L-bracket for side-mount heads.	.50
L-6	As above but with narrow base.	.70
TG-7	Tape Guide Post. Vertically adjustable with tapped mounting hole in base. Chrome-Plated brass for long life.	1.00
TG-8	Tape Guide Plate. For side-mount heads and L-5 or L-6 bracket; gives additional guiding.	.50



**BIAS OSCILLATOR TRANSFORMERS**  
**T60T2**—For transistor circuits. Features Ferroxcube E-core for high Q, maximum efficiency and distortion-free waveform. Supplies 40-120 volts at 60-100 kc. With instructions. . . . . Net Each **\$4.50**

**T60F**—Oscillator for 12AU7 tube circuits. Supplies 40-120 volts at 60-100 kc. to Nortronics Erase and Record heads. With instructions. . . . . Net Each **\$4.50**

## NORTRONICS CONVERSION KITS FOR WEBCOR

**W-6**—Converts older 2800, 2900 and 2000 Series (except 2020 Series) to 4-track stereo Play, retaining all existing monophonic Record and Play functions. Convenient, head-shifting assembly, fully assembled. . . . . Net Each **\$36.00**

**W-2**—Converts older 210, 2020, 2100, 2600 and 2700 Series to 4-track stereo Play. . . . . Net Each **\$27.00**

## FOR WOLLENSAK-REVERE

**WR-30**—Converts all monophonic Wollensak and Revere tape recorders to full-track Record/Play, fully assembled. . . . . Net Each **\$57.00**

**WR-35**—Retains monophonic Record/Play capabilities—converts 2-track stereo to 4-track stereo Play, fully assembled. . . . . Net Each **\$25.50**

**WR-40**—Complete assembly converts monophonic machines to monophonic Record/4-track stereo Play, fully assembled. . . . . Net Each **\$32.50**

**WR-60**—Positive shifter provides four-channel monophonic Record/Play, 2 and 4-track stereo Erase/Record (with second channel record pre-amp). Complete assembly, fully assembled. . . . . Net Each **\$49.50**

## CONVERSION KITS (CONTINUED)

### FOR PENTRON

**P-6**—Retains monophonic Record/Play capabilities—converts monophonic to 4-track stereo Play. . . . . Net Each **\$29.70**

**P-7**—4-track stereo Erase conversion kit replaces monophonic Erase. . . . . Net Each **\$15.00**

### FOR VM

**V-6**—Retains monophonic Record/Play capabilities—converts monophonic to 4-track stereo Play. . . . . Net Each **\$25.50**

**V-7**—4-track stereo Erase conversion kit to replace monophonic Erase. . . . . Net Each **\$14.50**

**RPE-20**—Direct replacement monophonic Record/Play and Erase kit for Wollensak-Revere. Complete assembly mounted on a special plate, wired and ready to install. . . . . Net Each **\$15.60**

## ■ New Cartridge Mount for Broadcasting and Background Music Cartridge Players



Designed for Fidelipac or Viking Cartridges, this new head bracket assembly eliminates the need for rear mount heads! Provides complete "Micrometer" type alignment. Heads are replaced by quick-release screw clamp. Supplied less heads.

**QUIK-KIT 110** used with all 1000, 1200, 1800, 2000, 2600 and 4100 Series heads. . . . . Net Each **\$11.10**  
Order Model 2002 head for Gates M6211 and M6213.

**QUIK-KIT 111** used with all 3000, 3100 and 3200 Series heads. . . . . Net Each **\$11.10**  
Order Model 3201 head for ATC, Collins, Macarta, RCA, Spotmaster, Sparta, Tapecaster and Gates M5944.

## ■ Direct Replacement Using Rear-Mount Heads

**Model 3251**—Premium 2-track monophonic R/P head used for direct replacement on the following machines: ATC, Collins, Macarta, RCA, Spotmaster, Sparta, Tapecaster, Gates M5944; and as a replacement head for Robins-M/M 3FM20. . . . . Net Each **\$17.40**

**Model 2052**—Premium 2-track stereo R/P head used for direct replacement on Gates M6211 and M6213. . . . . Net Each **\$31.80**

## ■ Cross-Reference for Robins-Michigan/Magnetics and Shure Bros. Tape Heads

NORTRONICS MODEL NO.	QUIK-KIT NO.	DESCRIPTION	NET EACH* (Not Including QK)
		<b>ROBINS-M/M Type</b>	
1851	—	3F20-101	\$24.80
1801	66	3F20-105	23.30
3251	—	3FM20-104, 3FM20-108	17.40
3001	20	3L20	8.40
1800	38	5B20LS, 7B17, 10B20LS	23.30
1000	38	5Q17, 5Q17-105	21.00
1000	103	5Q117, 5Q117-105	21.00
3000	20	7L17, 7L17-108, 10L17-104	8.40
3601	18	5S1, 5S1-103, 7EM12A	8.00
2201	18	5SS1	12.00
1401	18	9QE3	12.00
3600	18	40EM12	8.00
6002	38	5AV17	33.00
		<b>ROBINS-SHURE Type</b>	
RPE-23	—	5TRB	\$15.60
		<b>SHURE BROTHERS Type</b>	
RPE-23	—	815, TR5, TR5B, TR5B-J, TR5D, TR5H	\$15.60
RPE-24	—	815H, TR5C, TR5K, TR5L, TR5Z-1, TR5Z-2J	15.60
3101	20	817, TR16A, TR16-J, TR21C-J	8.40

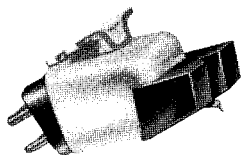
\*Quik-Kit numbers, when shown, indicate additional required mounting hardware. Order separately, using ADDITIONAL MOUNTING STYLES TABLE on opposite page.



# Pickering

FOR THOSE WHO CAN **HEAR** THE DIFFERENCE

THE WORLD'S LARGEST AND MOST EXPERIENCED MANUFACTURER OF MAGNETIC PICKUPS



the new  
**V-15**  
MICRO-MAGNETIC\*  
"engineered application"  
SERIES

Whether it's record changer, automatic turntable, or professional type manual turntable APPLICATION, PICKERING has ENGINEERED the RIGHT V-15 pickup for each. All four of these pickups are radically different from any other cartridge. Super-lightweight—only 5 grams! Perfect for low mass tone arm systems. Complete with PICKERING'S Exclusive "floating stylus" and patented replaceable V-GUARD stylus assembly\*\* that protects your record and your diamond as it plays.

**V-15 AC-1**

**FOR RECORD CHANGERS** where high output and heavier tracking forces are required—3 to 7 grams.

**V-15 AT-1**

**FOR AUTOMATIC TURNTABLES** that operate with lighter tracking forces and in systems that require higher output. 1 to 5 grams tracking force.

**V-15 AM-1**

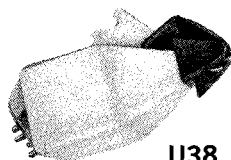
**FOR MANUAL TURNTABLES** and High quality systems where low mass, high compliance and very light tracking forces are demanded, ¾ to 3 gram tracking force.

**V-15 AME-1**

**ELLIPTICAL STYLUS** pickup for manual and late model automatic turntables will give distortion-free performance thru its unequalled tracking ability. ¾ to 3 grams tracking force.

SEE CHART BELOW FOR TECHNICAL SPECIFICATIONS

PICKERING'S FAMOUS  
"FLOATING STYLUS"  
STEREO CARTRIDGES



U38

**U38 SERIES STEREO CARTRIDGE** designed expressly for automatic turntables, featuring high output and a rugged stylus assembly Tracking forces in two models for today's light tracking and tripping automatics.

**U38/AT**

**FOR STANDARD OPERATION** 2 to 5 gram tracking force.

**U38/ATG**

**FOR FEATHERWEIGHT OPERATION** 1 to 3 gram tracking force.

SEE CHART BELOW FOR TECHNICAL SPECIFICATIONS

**380 SERIES**

**380 SERIES STEREO CARTRIDGE** a very high output magnetic pickup designed for use in record changers and manual turntables. Mu-Metal shielding permits use where hum problems demand a very high signal-to-noise ratio. Equipped with replaceable V-GUARD stylus assembly.

**380C FOR RECORD CHANGERS** 4 to 7 grams tracking force.

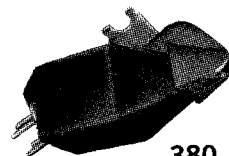
**380A FOR MANUAL TURNTABLES** 2 to 5 grams tracking force.

SEE CHART BELOW FOR TECHNICAL SPECIFICATIONS

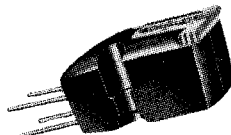
**MARK II**

**MK 11 STEREO CARTRIDGE** a low cost, high quality magnetic cartridge for the budget-minded audiophile. Built to the exacting quality control standards that have made PICKERING world famous, Convenient T-GUARD stylus assembly permits simple replacement.

**MK 11C FOR RECORD CHANGERS** 4 to 7 grams tracking force.



380



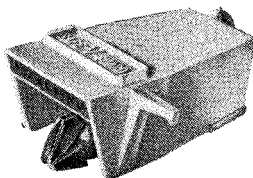
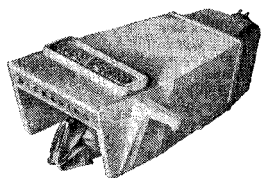
MARK II

SPECIFICATIONS

	V-15 AME-1	V-15 AM-1	V-15 AT-1	V-15 AC-1	U38/AT	U38/ATG	380A	380C	MK II C
Frequency Response	20 to 20,000 CPS	20 to 20,000 CPS	20 to 20,000 CPS	20 to 20,000 CPS	20 to 20,000 CPS	20 to 20,000 CPS	20 to 17,000 CPS	20 to 17,000 CPS	20 to 15,000 CPS
Nominal Output See Note 1	5.5 mv	5.5 mv	7.5 mv	8.0 mv	11.0 mv	11.0 mv	11.5 mv	18.0 mv	7.5 mv
Channel Separation	35 db	35 db	35 db	35 db	35 db	35 db	35 db	35 db	20 to 25 db
Tracking Force See Note 2	¾ to 3 grams	¾ to 3 grams	1 to 5 grams	3 to 7 grams	2 to 5 grams	1 to 3 grams	2 to 5 grams	4 to 7 grams	4 to 7 grams

Note 1: Output with reference to 5.5 cm/sec standard record velocity

Note 2: Recommended by manufacturer for optimum performance



**PLUG-IN HEADS FOR GARRARD**

Premounted and prewired U38 cartridges in a shell of exclusive PICKERING design. Simply plug-in and your Garrard is ready to play.

**STANDARD OPERATION**

**GA/38AT** For Garrard Type A  
2 to 5 grams tracking force

**G6/38AT** For Garrard Model AT6  
2 to 5 grams tracking force

**FEATHERWEIGHT OPERATION**

**GA/38ATG** For Garrard Type A  
1 to 3 grams tracking force

**G6/38ATG** For Garrard Model AT6  
1 to 3 grams tracking force

# Pickering

EXCLUSIVE "FLOATING STYLI" FOR PICKERING CARTRIDGES

## REPLACEMENT STYLUS CHART

V-GUARD FOR V-15 SERIES		MODEL	APPLICATION	RADIUS	COLOR
		D1507AC	STEREO-MONO 3 TO 7 GRAMS	.7 mil	Red
		D-1507AT	STEREO-MONO 1 TO 5 GRAMS	.7 mil	Black
		D1507AM	STEREO-MONO ¾ TO 3 GRAMS	.7 mil	Gold
		D1507AME	STEREO-MONO ¾ TO 3 GRAMS	.7 mil	Brown
		D1510	MONO 1 TO 5 GRAMS	1.0 mil	White
		D1527	78 RPM 3 TO 7 GRAMS	2.7 mil	Blue
V-GUARD FOR U38 AND 380 SERIES		D3807ATG	STEREO-MONO 1 TO 3 GRAMS	.7 mil	Gold
		D3807AT	STEREO-MONO 2 TO 5 GRAMS	.7 mil	Black
		D3807A	STEREO-MONO 2 TO 5 GRAMS	.7 mil	Yellow
		D3807C	STEREO-MONO 4 TO 7 GRAMS	.7 mil	Red
		D3810A	STEREO-MONO 2 TO 5 GRAMS	1.0 mil	Gray
		D3810C	MONO 4 TO 7 GRAMS	1.0 mil	White
		D3827C	78 RPM 4 TO 7 GRAMS	2.7 mil	Blue
T-GUARD FOR MK 11 AND STEREO 90 SERIES		D3707A	STEREO-MONO 3 TO 5 GRAMS	.7 mil	Yellow
		D3707C	STEREO-MONO 4 TO 7 GRAMS	.7 mil	Red
		D3710A	MONO 3 TO 5 GRAMS	1.0 mil	Gray
		D3710C	MONO 4 TO 7 GRAMS	1.0 mil	White
		D3727C	78 RPM 4 TO 7 GRAMS	2.7 mil	Blue
		D9007C	STEREO-MONO 4 TO 7 GRAMS	.7 mil	Black
T-GUARD FOR 350 AND 370 SERIES		D3510	MONO 2 TO 6 GRAMS	1.0 mil	Red
		D3505	MONO 2 TO 6 GRAMS	0.5 mil	Green
		D3527	MONO 2 TO 6 GRAMS	2.7 mil	Yellow

PICKERING &amp; CO., INC., PLAINVIEW, LONG ISLAND, N.Y.

\*MICRO-Magnetic is a Trademark of Pickering &amp; Co.

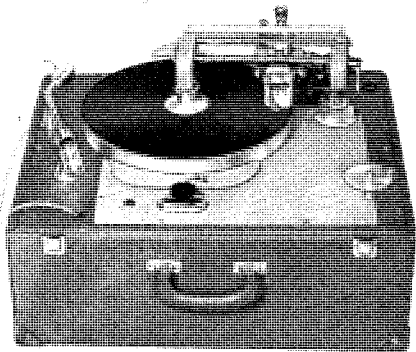
\*\*U.S. Patent #2,917,590

\*Only PICKERING &amp; CO., INC. manufactures the genuine V-GUARD and T-GUARD stylus assemblies used in the Stereo Fluxvalve which is covered under the following patents: U.S. #2,917,590; Great Britain #783,372; Canada #605,673; Japa #261,203; and other patents are pending throughout the world.

Printed in U.S.A.

Export: Ad Auriema, 85 Broad St., New York  
Canada: C. W. Pointon Ltd., 66 Racine Road, Rexdale, Ontario, Canada

# KOSS REK-O-KUT PROFESSIONAL DISC-CUTTING EQUIPMENT



**\$750.00\***  
net complete

## NEW IMPERIAL II RECORD CUTTER AND PLAYBACK UNIT

**MOTOR:** Custom built Hysteresis Synchronous motor fitted with lamitex drive pulley. Suspended in shock mounts to prevent transmission of motor vibration.

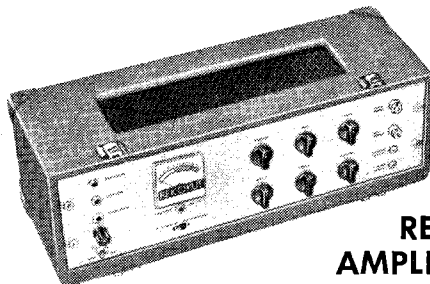
**RECORDING AREA:** Records from 6" up to 13 1/4" masters.

**SPEEDS:** Simple, finger-tip speed control. Records at both 33 1/3 and 45 R.P.M. Includes Idler and Adapter for 78 R.P.M. recordings.

**OVERHEAD RECORDING LATHE:** Model M-12S Lathe. **HAND CRANK** for run-in and run-off spiral grooves. **PROVISION FOR INTERCHANGING LEADSCREWS** for Standard and Microgroove. Equipped with standard 120 line leadscrew. **LIFTOMATIC SAFETY CAM** prevents double cutting and stylus damage. Automatically raises cutter as center of disc is approached. **CALIBRATED SCALE FOR TIMING.**

**RECORDING HEAD:** Model RH-5 response from 30-13,000 cycles.

**PLAYBACK ARM:** Rek-O-Kut Tonearm for records up to 13 1/4" with dual-sapphire magnetic cartridge.



## RECORDING AMPLIFIER UNIT

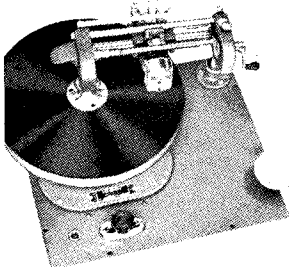
### R8B AMPLIFIER SPECIFICATIONS

**OUTPUT:** 20 watts.  
**RESPONSE:** ±2db from 20 to 20,000 cps at full output.  
**HARMONIC DISTORTION:** .3% @ 1,000 cps at full output.  
**INTERMODULATION DISTORTION:** .8% at full output.  
**HUM LEVEL:** (below rated output) Tape—60db; Mike—64db; Phone—61db.  
**4 INPUTS:** Microphone, tape and phono-mixing, plus tuner (high level).  
**CONTROLS:** Phono, microphone and tape level, master volume, bass ±22db @ 50 cps, treble (±20db @ 15 kc), playback-recording switch, power switch.  
**RECORDING LEVEL INDICATION:** Damped volume unit type meter with special calibrated scale.  
**OUTPUTS:** Speaker and cutter (16, 8 and 4 ohms). Monitor (for use with high impedance headphones, pre-amp (2,000 ohms).  
**TUBES:** 2—6973; 1—6AN8.  
**TRANSISTORS:** 3—2N408; 5—2N406.  
**RECTIFIERS:** 1N2071 Silicon.  
**PREAMPLIFIER SECTIONS:** Completely transistorized.  
**POWER REQUIREMENTS:** 115 watts, 117 VAC, 50-60 cps.  
**VINYL COVERED CARRYING CASES** with storage lid and handle.

**Size:** Height: 7" Weight: R8B Amplifier: 25 lbs.  
Depth: 10" Recorder: 45 lbs.  
Length: 20 1/2"

**PRICES: IMPERIAL II COMPLETE** .....net \$750.00\*  
Disc Recorder, less amplifier .....net \$530.00\*  
**MODEL DR** .....net \$50.00\*  
Case for Model DR Disc Recorder .....net \$50.00\*  
**MODEL C-DR** .....net \$250.00\*  
Recording Amplifier .....net \$250.00\*  
**MODEL R8B** (can be rack mounted) .....net \$250.00\*  
Case for R8B Amplifier .....net \$25.00\*  
**MODEL C-B** .....net \$25.00\*  
**ACCESSORIES AVAILABLE:**  
Portable dual speaker set  
**MODEL SPK-44** .....net \$79.95\*  
Also available are headphones and microphones.

## MODEL TR-43H 2 SPEED (33-45)



**12" RECORDING TURNTABLE**  
With Accessory Idler for 78 rpm Speed

**NET PRICE: \$175.00\***

(Less Lathe & Cutter)

Design and construction of the Model TR-43H is similar to the Rek-O-Kut 16" professional recording tables. The Model M-12S Overhead Recording mechanism is mounted to the chassis in a few moments.

**CHASSIS:** Cast ribbed aluminum drilled to accommodate the M-12S Lathe.

**ISOLATION:** Neoprene compound for maximum traction.

**DRIVE:** Shafts and bearings are self-oiling. Require infrequent lubrication.

**FEEDS:** Instantaneous speed shift engages either 45 or 33 1/3 rpm idlers.

**FINISH:** Gray wrinkle.

**DIMENSIONS:** Front to back 16 1/2"; width 16"; height above motor board 13 1/2"; depth below motor board 5".

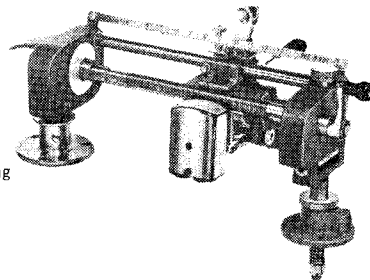
**WEIGHT:** 20 lbs.

## MODEL M-12S 12" OVERHEAD LATHE

This professional lathe is designed to very exacting specifications and features the following:

- Interchangeable Leadscrews.
- Hand-crank for run-in and run-off Spiral Grooves.
- Timing Scale.
- Accommodate Standard Cutting Heads.
- Depth of Cut Adjustment.

**LIFT-O-MATIC:** Automatically lifts cutter from disc as it approaches end of lead-screw  
Designed for instantaneous replacement of the M-12. Supplied with 120-line leadscrew



**MODEL M-12S**  
less cutter  
**NET PRICE**..... \$160.00\*

### LEADSCREWS FOR OVERHEAD LATHES

Lines/inch	Model M-5S	Net Price	Lines/inch	Model M-12S	Net Price	Lines/inch	Model M-12	Net Price
120	MS-120	\$39.95	120	M12S-120	\$35.95	120	M12-120	\$19.95
210	MS-210	49.95	210	M12S-210	44.95	210	---	---
216	---	---	216	---	---	216	M12-216	29.95
240	MS-240	49.95	240	M12S-240	44.95	240	M12-240	29.95
270	MS-270	49.95	270	M12S-270	44.95	270	---	---

Leadscrews of 210 lines/inch or more = microgroove.

## MODEL RH-5 CUTTER . . . \$125.00 net

For use with Rek-O-Kut overhead lathes. Designed for vertical mounting—can be fitted to standard lathe brackets other than Rek-O-Kut.

### SPECIFICATIONS

**IMPEDANCE:** 8-15-500 ohms. **Sensitivity:** Approximately 1.8 watts at 1000 cycles or 6.3 cm/sec peak recorded velocity **Frequency Response:** ±2 db from 1000

The policy of Rek-O-Kut Co., Inc., is one of continual improvement in design and manufacture. Hence, we reserve the right to change specifications and design without notice.

to over 13,000 cycles. From 1000 down to 30 cycles. Built-in attenuation per R.I.A.A. curve within 2 db. **Distortion:** 1.2% at 1000 cps. **Mounting:** Universal mounting for most lathes. 1 1/4" between mounting holes of cutter. **Stylus:** Short shank steel or sapphire 3/8" overall stylus length. (Stylus not supplied.)

\*All prices slightly higher West of Rockies.

Export: Morhan Exporting Corp., 458 B'way, N.Y.C. Canada: Atlas Radio, 50 Wingold Ave., Toronto 19

KOSS

REK-O-KUT

## TURNTABLES, TONEARMS and STEREOPHONES

**MODEL R-34 TWO SPEED TURNTABLE**

A complete turntable, tonearm (Model S-340) and base unit. This unit uses an isolation suspension system, totally eliminating acoustic feedback, reducing vertical rumble to a negative factor.

**SPECIFICATIONS**

**Speeds:** 33 $\frac{1}{3}$  rpm and 45 rpm  
**Noise Level:** -60 db below average recorded level (@ 7 cm/sec @ 1000 cps).  
**Wow and Flutter:** .08% RMS  
**Motor:** hysteresis synchronous with lifetime lubrication.  
**Rekohane Belt:** molded to Rek-O-Kut specifications.  
**Turntable:** one-piece cast aluminum, 12", professional quality, dynamically balanced, weighted rim.  
**Finish:** grey deck plate, aluminum tonearm, oil-walnut base  
**Instant Speed Selector:** changes speed from 33 $\frac{1}{3}$  rpm to 45 rpm  
**Dimensions:** (with Rek-O-Kut tonearm) 15" wide x 14 $\frac{1}{2}$ " deep x 5 $\frac{1}{2}$ " high  
**Net Price: \$89.95**

**MODEL B-12H/B-12GH 3-SPEED TURNTABLE**

Ideal for broadcasting studios, professional musicians and record collectors.

**SPECIFICATIONS**

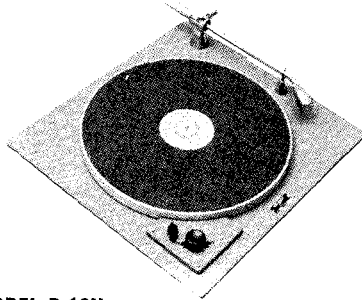
**Speeds:** 33 $\frac{1}{3}$  rpm, 45 rpm, 78 rpm  
**Noise Level:** -59 db below average recording level (B-12GH: -57 db)  
**Wow and Flutter:** 0.085% RMS. (B-12GH: 0.09% RMS.)  
**Motor:** B-12H: custom-built computer type heavy-duty hysteresis synchronous motor. B-12GH: high efficiency hysteresis synchronous motor, lifetime lubrication.  
**45 rpm Hub:** removable  
**Pilot Light:** neon light acts as "on/off" indicator.  
**Finish:** grey and two-tone aluminum  
**Deck Dimensions:** 14" x 15-22/32"  
**Minimum Dimensions:** (for cabinet installation) B-12H: 17 $\frac{3}{4}$ " wide x 16" deep x 3" above deck x 6 $\frac{1}{4}$ " below deck. B-12GH: same as B-12H, but 4 $\frac{3}{4}$ " below deck  
**Net Price: B-12H \$165.00 B-12GH \$109.95**

**MODEL PRO-4 STEREOPHONES**

Engineered to meet the most rigid requirements. Shatter-proof and shock-proof. Adjustable, spring steel headband and fluid filled ear cushions designed to fit head contour, thus forming a more efficient seal for almost complete attenuation of ambient noise. High quality drivers mounted in acoustically designed enclosures provide unusually smooth frequency response. Removable cushions can be cleaned with soap and water.

**SPECIFICATIONS**

**Frequency Response:** 30-20,000 cps.  
**Impedance:** 50 ohms. Can be used with systems having 4, 8 or 16 ohm output taps. Use 4 ohm tap if available. 600 ohms can be obtained on special order. Specify Model No. PRO-600.  
**Maximum Input:** designed to function with amplifiers capable of delivering up to 60 watts per channel. Distortion: less than 1% at maximum output of 120 db S. P. L. Weight: 19 ounces. Shipping Weight: 2 pounds.  
**Net Price \$45.00**

**MODEL B-16H****3-SPEED 16" PRECISION TURNTABLE**

**SPEEDS:** 33 $\frac{1}{3}$ , 45 and 78 rpm.  
**SPEED SELECTION:** Mastermatic, self-locking, instantaneous shift. Engages either idler without stopping turntable or removing disc.  
**STARTING:** From standing start to operating speed —  
 at 78 rpm .....  $\frac{3}{4}$  turn  
 at 33 $\frac{1}{3}$  and 45 rpm .....  $\frac{1}{4}$  turn  
**MOTOR:** Self-lubricating, CUSTOM-BUILT HYSTERESIS SYNCHRONOUS.  
**NOISE LEVEL:** -50 db below average recording level.  
**45 RPM HUB:** Built-in—retractable—requires no external adapter.  
**CHASSIS DECK:** Radial-ribbed aluminum casting. Designed for flush mounting in rectangular cut-out.  
**PRE-DRILLED:** for ready mounting of Rek-O-Kut Turntable Arm Model S-260.  
**DIMENSIONS:** 18 $\frac{3}{4}$ " x 20". Fits existing consoles and cabinets with slight modification.  
**CLEARANCE REQUIRED:** Above Deck—1 $\frac{1}{2}$ ". Below Deck—6 $\frac{1}{2}$ ".  
**FINISH:** ..... Wrinkle gray.  
**SHIPPING WEIGHT:** ..... 34 pounds  
**Net Price: \$275.00**

**NOTE:** All Rek-O-Kut Turntables are supplied for 110-120 volt, 60 cycle AC operation. Available in other voltages and frequencies at additional cost.

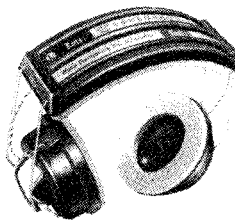
**MODEL CVS-12 VARIABLE-SPEED TURNTABLE**

The CVS-12 permits continuous speed variation from 25 rpm to 100 rpm without resetting or stopping the record. It can therefore be used with 33 $\frac{1}{3}$ , 45 and 78 rpm records, and permits them to be slowed down to  $\frac{1}{2}$  normal tempo or speeded up to as much as 300%  
**Shipping Weight: 15 lbs. Price: \$99.95**

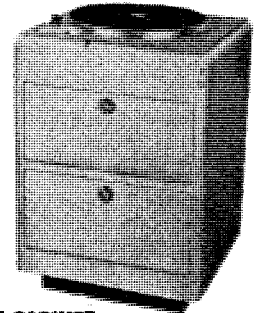
**NOTE:** This turntable operates at either 50 or 60 cycles. At 50 cycles speed can be varied from 20 rpm to 85 rpm.

**P-VC Portable Phono Net Price: \$149.95**  
**RT-VM Portable Phono & PA System. Net Price: \$349.95**

**SPK-44 Portable Dual Speaker Set. Net Price: \$79.95**

**MODEL SP-3X STEREOPHONES**

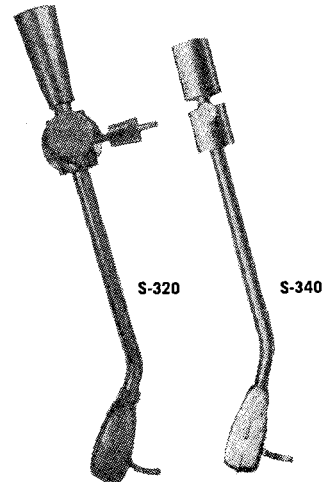
The new standard of quality. Will reproduce any sound the human ear can hear. Extremely sensitive  $\frac{3}{4}$ " sound reproducers mounted in each earpiece catch the hidden sounds of your recordings. Soft sponge foam ear and head cushions provide lightweight comfort for extended periods of listening.  
**Frequency Response:** 10-15,000 cps.  
**Impedance:** 4-16 ohms. Comes complete with T-2 Adapter Plate that connects to any system that will play speakers.  
**Net Price \$24.95**

**CONSOLE CABINET**

For B-16H & other Rek-O-Kut turntables  
 Designed to accommodate the B-16H Turntable without the use of either screws or bolts. Floats on felt. Has 2 storage compartments and piano-hinged doors with flush ring-latches. Includes built-in electrical outlet and adjustable leveling domes. Metallic grey finish. Dimensions 33" high x 22" wide x 20 $\frac{1}{2}$ " deep.

**Model C-7B Shipping weight: 65 lbs. Net Price: \$150.00**

**Model C-7BT**  
 Identical to C-7B but with the addition of a  $\frac{3}{4}$ " motor board to accommodate various Rek-O-Kut turntables. Shipping weight: 70 lbs. **Net Price: \$165.00**

**MODEL S-320 PROFESSIONAL TONEARM**

Meets and exceeds the critical requirements of the ultra-high compliance cartridges. Tracks at 1 gram or less. Construction: tubular aluminum. Die-cast cartridge shell.

**Tracking Error:** under 1"  
**Horizontal Movement:** maximum freedom achieved by bearing made of inner and outer races and two rows of hardened steel balls into which shaft of arm fits.

**Vertical Movement:** friction-free movement is achieved by suspending arm in gimbal using a cross-shaft at each end of which are five 1mm chrome-steel balls.

**Cartridge Shell:** accepts all standard stereophonic or monophonic cartridges. Plugs into arm. Secured by twist-lock. Open front permits visible location of stylus in grooves. 4-wire construction, factory installed lugs.

**Static Balance:** acoustically isolated counterweight.  
**Dynamic Balance:** exclusive Omni-Balance provides perfect dynamic (lateral) balance with any cartridge.

**Resonance:** below audibility—varies from 9-12 cycles depending on cartridge

**Vertical Height Adjustment:** permits setting tonearm parallel to record surface

**Standard Plugs:** Standard phono plugs connect directly to each stereo channel. Cables are color-coded. Spade lug for separate ground connection to chassis of pre-amplifier. 100% shielding for lowest possible hum level.

**Net Price: \$34.95** includes Omni-Balance

**MODEL S-260 TONEARM (Not Illustrated)**

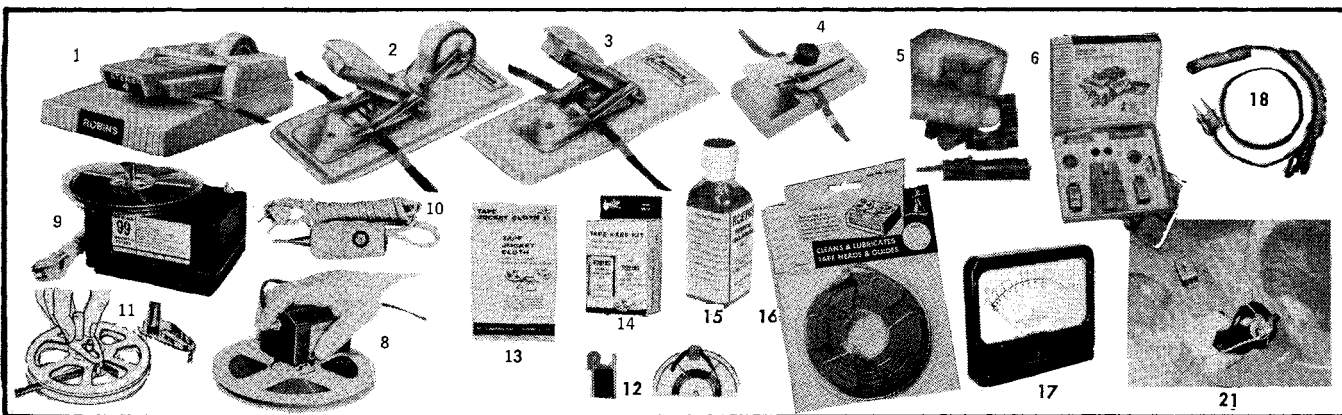
16" Tonearm less Omni-Balance **Net Price: \$36.95**

**MODEL S-340 TONEARM**

A modified version of the S-320 tonearm. Tracks at less than one gram. Resonance factor is below 12 cycles. Removable cartridge shell handles any standard cartridge.  
**Net Price: \$24.95**

Sales Office: Milwaukee, Wis

# ROBINS® TAPE SPLICERS AND ACCESSORIES



**GIBSON GIRL® "STEREO 4" TAPE SPLICERS** for precision splicing of 4 track tapes without loss of program material on the outside tracks. They work equally well on single and 2 track tapes. All units have blade centering adjustment for lifetime accuracy, and replaceable cartridge.

- DELUXE STEREO 4 TAPE SPLICER** features "See-thru" windows indicating "OUT" and "TRIM" positions for easy operation. Tape guide and fingers secure tape during splicing. Easy threading integral tape dispenser with roll of 1/2" x 100" splicing tape. Safety lock protects blades when not in use. #TS-80 ..... List **\$12.75**
- STANDARD STEREO 4 TAPE SPLICER** with most features of TS-8D except for position index windows. Made of metal and plastic. Has integral tape dispenser with roll of 3/8" x 100" tape. #TS-4S ..... List **9.50**
- JUNIOR STEREO 4 TAPE SPLICER.** Same as TS-4S without tape dispenser and splicing tape. #TS-4J ..... List **7.25**

**REPLACEMENT CUTTER KITS FOR ROBINS STEREO 4 SPLICERS.** Each kit contains replacement cutter cartridge and 2 cutter pads. #RK-2 for TS-4A series splicers. #RK-3 for TS-4S and TS-4J. #RK-8 for TS-8D #RP-2 cutter pads for TS-4A series and TS-4S. #RP-8 cutter pads for TS-8D ..... List ea. **1.50**

- GIBSON GIRL® INDUSTRIAL TAPE SPLICERS.** For computer, TV, industrial and special purpose tapes. Rugged construction, mounted on heavy cast base with precision features that have made them the accepted standard of professional users. Precise blade centering adjustment. Long life, replaceable blades. #TS-250 for 1/4" tapes List **85.00** #TS-1000 for 1" tapes List **85.00** #TS-500 for 1/2" tapes List **85.00** #RB-1 Replacement blades for above. 12 to pkg. .... List **3.35** Custom built splicers for special tapes, punch tapes, edge punch cards, and applications available — send for quotation.
- GIBSON GIRL® "SEMI-PRO".** Compact, low cost splicer has tape alignment guide with adhesive back, hand held cutter, and blade cover. Plastic. #SP-4 ..... List **2.50**

**GIBSON GIRL® "HOBBYIST" SPLICER.** Adhesive backed plastic tape guide fastens to recorder and unique, curved, cutting blades. (Not illus.) #H-4 ..... List **1.25**

- GIBSON GIRL® STEREO 4 ACCESSORY KITS** — Everything you need for better tape recording and editing. **DELUXE KIT** contains: Deluxe Stereo 4 tape splicer, splicing tape, tape threader, reel holders, head and guide lubricant, head cleaner, tape cleaning cloth, tape clips, reel labels and tape editing guide book. #TK-8DLX ..... List **16.75**

**STANDARD KIT** contains: Standard Stereo 4 tape splicer, splicing tape, tape threader, reel holders, head cleaner, tape cleaning cloth, tape clips, reel labels, tape editing book. (Not illus.) #TK-4STD ..... List **13.50**

**JUNIOR KIT** contains same accessories as above with Junior Splicer. (Not illus.) #TK-4JR ..... List **11.25**

**GIBSON GIRL® TAPE KARE KIT** contains: H-4 Hobbyist splicer, 1/2" splicing tape, tape cleaning cloth, tape clips, and tape editing guide book. (Not illus.) #TK-4H ..... List **3.70**

**ROBINS SPLICING TAPE.** Special formula, Mylar, tackiness, thickness, strength and cold flow carefully controlled. (Not illus.) #ST-234 1/4" x 100" ..... List **.40** #ST-500 1/2" x 100" ..... List **.50** #ST-375 3/8" x 100" ..... List **.45** #ST-750 3/4" x 100" ..... List **.75**

**LEADER TAPE** — 1 1/2 mil White Mylar. 100 ft. x 1/4" wide on 2 1/2" reel. Splice Leader Tape at beginning and end of tapes to stop loss of tape due to threading and use. Ideal for indexing between recorded sections of a reel. (Not illus.) #LT-100 ..... List **1.00**

**MAGNETIC BULK ERASER** — Completely erases recorded and unwanted signals in seconds. Reduces background noise levels from 3 to 6 db below normal erase head level. For reels up to 10 1/2" dia. x 1/2" wide. 110 v., 60 cycle A.C.; U.L. Listed #ME-99 ..... List **43.50**

**LOW CDST BULK ERASER** — Reduces background noise levels of tape from 2-4 db below normal erase head level. For reels up to 7" x 1/4" wide. 110 v., 60 cycle A.C., Non U.L. (Not illus.) #ME-77 ..... List **24.50**

**HANDY ERASER**—Hand held Magnetic Bulk Tape Eraser. Erases recorded and unwanted signals. Reduces background noise levels of tape below normal erase head level. Weight 2 lbs. 4 amps, 110-120 v. 60 cy. A.C. #ME-55 ..... List **16.66**

**HEAD DEMAGNETIZER** — U.L. Listed. Removes signal damaging residual magnetism from tape head — for optimum signal to noise ratio. Easy to use. 110 volts, 60 cycle A.C. #HD-6 ..... List **10.00**

**LOW CDST HEAD DEMAGNETIZER** — Non U.L. 110 v. 60 cycle A.C. (Not illus.) #HD-3 ..... List **6.00**

**11. TAPE THREADER** — Eliminates awkward fumbling. Place tape against reel, slip threader on, turn crank — tape is treaded. #TT-1 ..... List **1.00**

**12. TAPE HOLDING CLIPS.** Keep tape from unwinding. Pkg. of 12. #TC-12 ..... List **.40**

**13. TAPE "JOCKEY CLOTH"** cleans and lubricates tape with Silicone. Washable and reuseable. #JCT-2 ..... List **1.00**

**14. TAPE KARE KIT** contains head cleaner and tape jockey cloth. #TK-2 ..... List **2.00**

**15. HEAD CLEANER** removes grime and accumulated oxides from heads. #HC-2 ..... 2 oz. bottle ..... List **1.00**

**15. RECORDING HEAD AND GUIDE LUBRICANT.** Silicon base liquid provides friction-free tape path, reducing head and tape wear. #RC-2-22 ..... 2 oz. bottle ..... List **1.00**

**15. TAPE AND PHONO DRIVE OIL.** For rotating and moving parts. Inhibits rust and oxidation. #RC-2-33 ..... 2 oz. bottle ..... List **.75**

**15. NON-SLIP FOR TAPE AND PHONO DRIVES.** Helps stop slippage of idler wheels, pulley belts, and cords. Fast drying and penetrating, dries to tack-free yet non-slip surface. #RC-2-56 ..... 2 oz. bottle ..... List **1.00**

**16. TAPE CLEAN.** 5" reel of chemically treated cloth tape. Cleans and lubricates tape heads when played through recorder. Deposits layer of Silicone for friction-free performance. #HC-5 ..... List **2.75**

**17. "VU-METER"** — Size 4 1/2". 0-100% mod.; —20 to 3 db. Dual impedance output. Sensitivity, 200 micro amps; shunts for 1.2 or 12 v. "zero" VU. Mounts in 2 3/4" dia. hole. Requires 1 1/2" depth. Eliminates "guess work" of level control. #VU-100 ..... List **32.00**

**18. TAPE STROBE AND LIGHT KIT.** Check tape speed, accuracy, flutter and wow operating at 15, 7 1/2 and 3 3/4 ips speeds. Kit has strobe tape and neon light. With instructions. #TK-5 ..... List **2.00**

**REPLACEMENT TAPE RECORDER PRESSURE PADS.** Complete assortment of pre-cut felt pads for most recorders. Worn pads cause wow, flutter, loss of highs and tape squeal. Pkg. of 50 felt pads. (Not illus.) #PP-1 ..... List **1.00**

**REEL HOLDERS.** Reduces reel wobbling. A must for verticle decks. (Not illus.) #RH-2 ..... (Pair) ..... List **.85**

**21. TELE-TAPE TELEPHONE PICK-UP COIL AND TRANSISTORIZED BEEPER.** Makes it easy to comply with most regulations. Transistorized battery operated generator injects 1 KC "Beep" into phone lines and recorder at 15 second intervals. Has ON-OFF switch and 6 ft. cable to phone and 6 ft. cable to recorder. Easy-On spring fastens pick-up to phone. Uses standard 22 1/2 volt battery. #TRB-3 (battery not included) ..... List **30.00**

**TELE-TAPE TELEPHONE PICK-UP COIL** fastens to phone with Easy-On mechanical spring. Has 6 ft. shielded cable. (Not illus.) #TRP-1 ..... List **6.00**

**CLEAN-TIPS.** For cleaning tape heads and 1001 other uses. Finest surgical cotton (non-sterile) wound on 6" long sticks. (Not illus.) #Q-100 ..... Package of 100 ..... List **.75**

**TAPE KARE HEAD CLEANER AND LUBE KIT.** Contains 2 oz. bottles of head cleaner and head and guide lubricant. (Not illus.) #TK-6 ..... List **2.00**

**REPLACEMENT REELS** (Not illus.) #TR-20 2" reel, gray plastic, with mailing box ..... List **.25**

#TR-25 2 1/2" reel, gray plastic, with mailing box ..... List **.25**

#TR-30 3" Virgin Styrene reel, with mailing box ..... List **.25**

#TR-32 3 1/4" reel, gray plastic ..... List **.35**

#TR-50 5" Virgin Styrene reel, with white box ..... List **.60**

#TR-70 7" Virgin Styrene reel, with white box ..... List **.75**

#TR-105N 1/4" tape, 10 1/2" grey fiberglass reel for std. spindle ..... List **3.00**

#TR-105R 1/4" tape, 10 1/2" grey fiberglass reel for 3" NAB hub ..... List **3.00**

**TAPE STORAGE CANS.** Reduces tape "ageing". Ribs on cans nest for stacking (Not illus.) #TC-7 for 7" reel ..... List **.85** #TC-5 for 5" reel ..... List **.60**

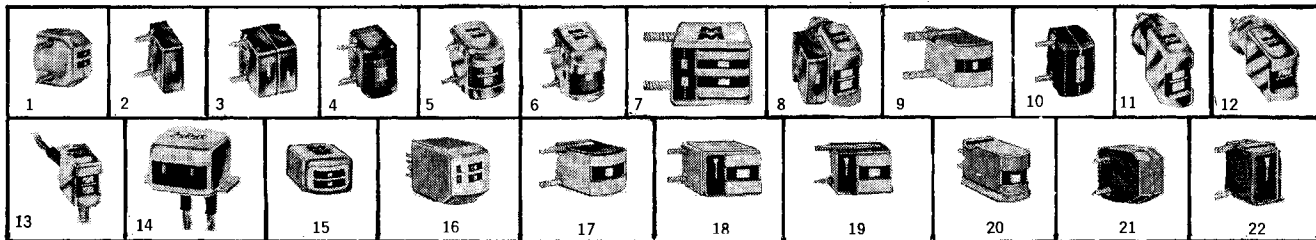
**REEL LABELS.** Self stick adhesive. Write on or type titles, etc. (Not illus.) #SL-30 ..... (Package of 30 labels) ..... List **.45**

**TAPE KARE CHEMICAL KIT** — Contains 2 oz. bottles of head cleaner, head and guide lubricant, Non-Slip for tape and phono drives, and tape and phono drive oil. With 50 clean tips. (Not illus.) #TK-7 ..... List **3.75**

**TAPE RECORDER MAINTENANCE KIT FOR LANGUAGE LABS, AUDIOL VISUAL DEPTS. AND BROADCAST STUDIOS.** A complete tape accessory kit for everyday maintenance and operating needs. Contains: ME-99 Bulk Eraser — completely erases entire reels of tape in seconds, U.L. listed; HD-6 Head Demagnetizer removes signal damaging residual magnetism from tape head, U.L. listed; TS-8D Deluxe Stereo 4 Tape Splicer; TC-12 Tape Holding Clips; SL-30 Reel Labels for efficient indexing; JCT-2 Tape Cleaning Cloth; 6 rolls of ST-500 1/2" Splicing Tape; TT-1 Tape Threader; TK-5 Strobe and Light Kit; and TK-6 Head and Guide Cleaning and Lube Kit. (Not illus.) #AVK-1 ..... List **\$78.00**

# ROBINS® M/M EXACT REPLACEMENT AND STEREO CONVERSION TAPE HEADS

Write For Latest Replacement & Conversion Data Book ..... 35



**SPECIFICATIONS — R/P HEADS**

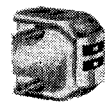
PART NO.	TYPE	TAPE SPEED (IPS)	IMPED. (1KC)	REC. LEVEL (BELOW SAT.) (DB)	AUDIO CURRENT (MA) A	BIAS CURRENT (MA)	BIAS FREQ. (KC)	PLAY LEVEL (1KC) (MV)	PLAY LEVEL (10KC) BEL. 1KC LEVEL	INDUCT. (NOM.) (H)	FIG. NO.	LIST PRICE
2FM20-500	1/2 TRACK MONO R/P & ERASE*	7.5	1650	-12	—	—	—	2.15	-10	—	8	\$20.00
3F20-101	1/2 TRACK STEREO R/P	7.5	2000	-12	.043	1.0	62	1.8	-13	.3	11	29.00
3F20-105	1/2 TRACK STEREO R/P	7.5	2000	-12	.043	1.0	62	1.8	-13	.3	13	29.00
3FM20-104	1/2 TRACK MONO R/P	7.5	2000	-12	.043	1.0	62	1.8	-13	.3	12	13.00
3FM20-108	1/2 TRACK MONO R/P	7.5	2000	-12	.043	1.0	62	1.8	-13	.3	12	13.00
3FM20-502	1/2 TRACK MONO R/P & ERASE*	7.5	2000	-12	—	—	—	2.7	-13	.3	8	35.00
3L20-101	1/2 TRACK MONO R/P	7.5	2460	-12	.03	1.25	50	1.64	-13	.35	6	10.00
5AV17	1/4 TRACK STEREO R/P & ERASE*	3.75	3600	-12	.020	0.25	80	1.8	-12	.5	7	32.00
N 5P17	1/4 TRACK STEREO R/P	3.75	3500	-12	.018	.2	65	1.8	-12	.5	15	22.50
5Q17	1/4 TRACK STEREO R/P	7.5	3340	-12	.020	.3	80	2.4	-6.0	.5	1	16.00
5Q17-105	1/4 TRACK STEREO R/P	IDENTICAL TO 5Q17 (ABOVE) EXCEPT MOUNTING LUGS ON 5Q17-105 ARE ON OPPOSITE SIDE										21.50
5TRB	COMP. 1/2 TRACK MONO R/P & ERASE*	7.5	1450	+12	.05	1.5	50	—	+3	—	14	17.00
N 6AV17-203	1/4 TRACK STEREO R/P & ERASE*	7.5	4100	+12	.022	.30	65	2.5	-3	—	16	24.00
7B17	1/2 TRACK STEREO R/P	7.5	5150	-12	.032	.7	80	3.5	-8	.75	5	15.00
7H17	1/2 TRACK MONO R/P	7.5	5150	-12	.042	.8	80	3.0	-8.0	0.75	9	10.00
N 7H40	1/2 TRACK MONO R/P	7.5	5150	-12	.022	.3	50	6.0	-10	.7	17	8.50
N 7HV17-102	1/2 TRACK MONO R/P & ERASE*	3.75	5150	-12	.022	.4	60	3.2	-14	.75	18	13.00
N 7HV40-101	1/2 TRACK MONO R/P & ERASE*	7.5	5150	-12	.022	.3	50	6.0	-10	.7	19	13.00
7L17	1/2 TRACK MONO R/P	7.5	5150	-12	.023	1.0	80	2.15	-11	.75	6	10.00
7L17-108	1/2 TRACK MONO R/P	SAME AS 7L17 EXCEPT MOUNTS FROM OPPOSITE SIDE										10.00
N 10H25	1/2 TRACK MONO R/P	7.5	7000	-12	.022	.6	60	3.0	-10	1.0	20	10.00
10L17-104	1/2 TRACK MONO R/P	7.5	7030	-12	.020	1.0	80	2.6	-12	1.0	6	10.00

NOTE: All series L (single track), B (two track) and Q (four track) are electrically and mechanically interchangeable for easy stereo conversion.  
 \*Erase and record specs in separate charts.  
 9QE3 erase head is a 1/4 track replacement for 5S1 and 5SS1 heads.  
 N—New part.

ERASE HEADS		TAPE SPEED (IPS)	IMPED. @ ERASE FREQ. (K)	ERASE CUR. (MA)	ERASURE (DB) (200 CY. SAT.)	iINDUCT. (NOM.) (MH)	FIG. NO.	LIST PRICE	
2FM20-500	1/2 TRACK MONO	7.5	1,750	62	17	—55	5.0	8	
3FM20-502	1/2 TRACK MONO	7.5	1,750	62	17	—55	5.0	8	
5AV17	1/4 TRACK STEREO	3.75	2,800	80	15	—60	11.0	7	
5S1	1/2 TRACK MONO	7.5	1,750	62	17	—55	5.0	2	
5SS1	1/2 TRACK STEREO	7.5	1,750	62	17	—55	5.0	3	
5S1-103	1/2 TRACK MONO	IDENTICAL TO 5S1 EXCEPT MOUNTS FROM OPPOSITE SIDE							7.00
5TRB	1/2 TRACK MONO	7.5	780	25	27	—50	—	14	
N 6AV17-203	1/4 TRACK STEREO	7.5	82	65	95	—50	2.5	16	
7EM12A	1/2 TRACK MONO	7.5	2,200	80	30	—50	5.4	4	
N 7HV17-102	1/2 TRACK MONO	7.5	2,400	60	19	—55	18.0	18	
N 7HV40-101	1/2 TRACK MONO	7.5	2,000	50	19	—55	18.0	19	
9QE3	1/4 TRACK STEREO	7.5	2,500	75	12.5	—60	9.0	10	
40EM12A	1/2 TRACK MONO	7.5	10,000	52	10	—50	40.0	4	
N 40EQ3-101	1/4 TRACK STEREO	7.5	8,000	60	10	—60	40.0	21	
N 50HE6-201	1/2 TRACK MONO	7.5	6,000	60	12.5	—55	50.0	22	

**ROBINS M/M STEREO HEAD CONVERSION KITS**

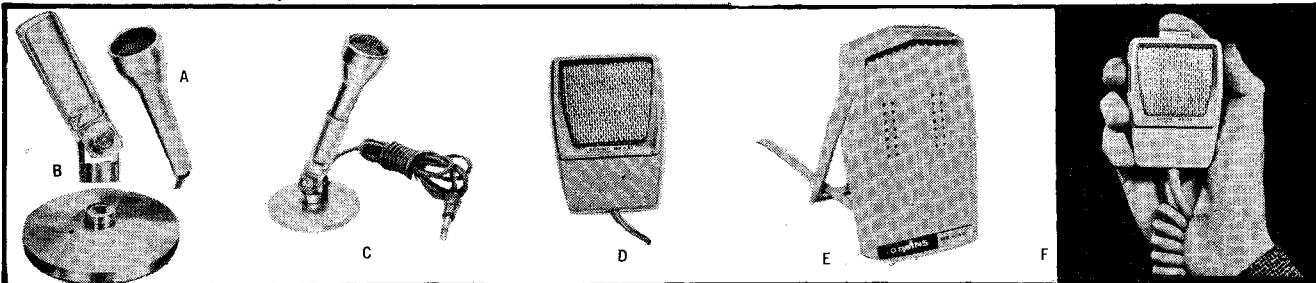
Converts 90% of all U.S. made two track Stereo recorders to 4 track with only a screwdriver or pliers. For Mono units too, but additional amplifier is required. Kit contains: 4 track R/P head, head alignment tape, hardware and instructions.  
 #5K17 (5Q17 head) List 18.00  
 #5K17U (5Q17-105 head) 23.50



A COMPLETE KIT containing assortment of 14 most popular Heads. Ideal for labs and service organizations. Includes FREE 9" x 10" x 6" cabinet and replacement data. Total 23 heads.  
 #DD-6-6 List 303.00



## ROBINS® CERAMIC MICROPHONES FOR TAPE RECORDERS, CITIZEN BAND— COMMUNICATIONS, ETC.



**A—HIGH IMPEDANCE OMNIDIRECTIONAL CERAMIC MICROPHONE** for tape recorders, etc. 50 to 11,000 cycles per second. Sensitivity —56 db ±2 db. Solid metal housing with Satin Chrome finish and Gold Toned wire grill. High sensitivity is assured by new ceramic transducer element. Element is encased in a Neoprene cushion for protection against physical shock. Complete with 7 ft. shielded cable with phone plug.  
 #MK-10A ..... List 17.50

**B—MICROPHONE SWIVEL STAND.** Tip resistant, padded, metal base with Satin Chrome finish and removable microphone swivel socket. Socket has 3/8" No. 27 threads to fit all standard floor stands. For use with #MK-10A microphone or similar types.  
 #MKS-10 ..... List 7.50

**C—HIGH IMPEDANCE OMNIDIRECTIONAL MICROPHONE AND SWIVEL STAND.** #MK-10A microphone and #MKS swivel stand.  
 #MKC-10 ..... List 24.50

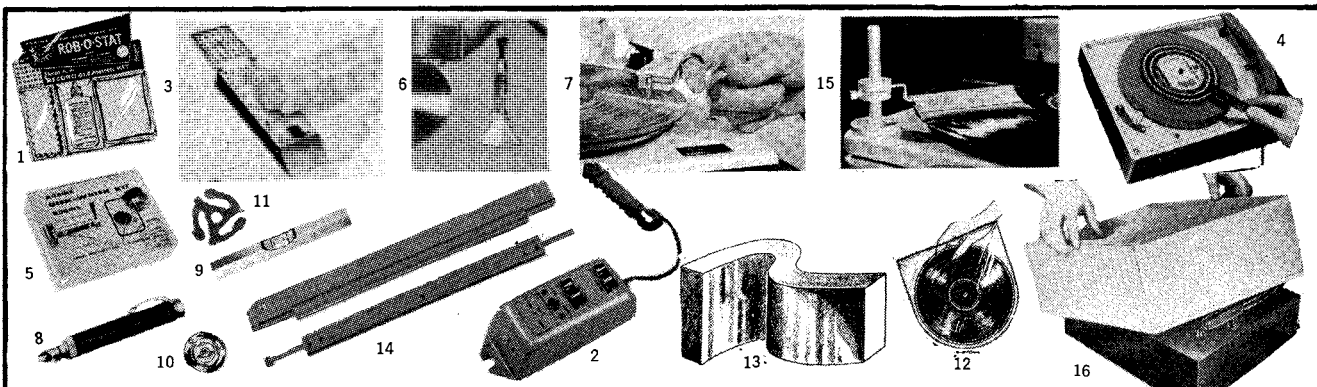
**D—HIGH IMPEDANCE CERAMIC MICROPHONE FOR TAPE RECORDERS, ETC.** Frequency response 80 to 9,500 cps—53 db. Ceramic transducer element encased and cushioned in Neoprene to withstand physical shock. High impact plastic housing. Complete with 6 ft. shielded cable with phone plug.  
 #MK-32 ..... List 15.50

**E—HIGH IMPEDANCE CERAMIC MICROPHONE WITH SWING OUT STAND FOR TAPE RECORDERS, ETC.** Frequency response 40 to 8,000 cps. Sensitivity —50 db. Ceramic transducer element encased and cushioned in Neoprene to withstand physical shock. High impact plastic housing with Ivory finish. Built-in swing-out stand for use on flat surface or suspended. Complete with 5 ft. shielded cable.  
 #MK-4D ..... List 10.50

**F—CERAMIC MICROPHONE FOR CITIZENS BAND—COMMUNICATIONS, ETC.** Designed for continuous service. Withstands high temperature and high humidity. Will operate even if immersed in water. Frequency response: 60 to 7,000 cycles per second —49 db. Excellent transmission assured in noisy locations as frequency response is limited to the voice range. High sensitivity is assured by transducer element encased in a Neoprene cushion to withstand moisture and physical shock. Mike has push-to-talk switch, high impact shatter-proof housing, strong strain relief to protect internal connections of the mike, 6 ft. of multiple conductor shielded coil cable with tinned ends and dashboard mounting bracket for easy installation in autos, boats, etc.  
 #MK-30 ..... List 17.50



# ROBINS® PHONO AND RECORD ACCESSORIES



1. **ROB-O-STAT RECORD CLEANING KIT.** Contains super-soft velvet and foam applicator mitt, 1½ oz. plastic bottle of Anti-Static cleaner and lubricant and polyfoam pad for cleaning velvet mitt.  
#ESK-6 .....List \$2.00

2. **HI-FI STOP-O-MATIC.** Automatically turns off amplifier and changer when last record has played. Allows you to fall asleep to your favorite music without "burning-up" equipment. Has switch control permitting use of amplifier without changer.  
#HFS-1 ..... For European Changers .....List 10.00  
#HFS-2 ..... For U.S. made Changers .....List 10.00

3. **NEW IMPROVED STYLUS GAUGE** — A sturdy, accurately calibrated gauge measures stylus pressure from ½ gram to 8 grams.  
#SG-2 .....List 1.25

4. **STROBE AND LIGHT KIT.** Checks proper speed of turntable, changer or phono. Contains strobe disc and neon lamp. Place strobe disc on turntable, set changer to desired speed and hold lamp over disk. For 110 v. 60 cycle A.C.  
#ESK-5 .....List 2.00

5. **DISK-WHISK KIT** — Cleans records automatically. Clips on to tone arm. Loosens and removes dust and dirt from record grooves and deposits Anti-Static fluid containing Silicone to clean and lubricate records. Includes bottle of Anti-Static fluid with applicator.  
#ESK-7 .....List 4.00

**RENEWAL KIT FOR ESK-7.** Contains Anti-Static fluid and 2 mohair Cylinders. (Not illus.)  
#ESK-8 .....List 2.00

6. **KLEENEEDLE BRUSH** — Automatic changer brush. Removes "dust-blob" each time arm passes over brush. Adjustable height. Pressure sensitive base pad for mounting.  
#NB-1 .....List 1.55

7. **COMBINATION TONE ARM LIFT AND RECORD BRUSH.** Clips on to tone arm providing convenient finger lift. Floating action nylon brush removes dust from record grooves.  
#RBL-1 .....List 1.00

**CLIP-ON RECORD BRUSH.** Clips on to tone arm and sweeps dust from records automatically. (Not illus.)  
#RB-75 .....List .65

**HOBBYIST RECORD KARE KIT.** Contains stylus pressure gauge, and turntable level. (Not illus.)  
#ESK-1A .....List 2.50

**PROFESSIONAL KARE KIT.** Contains stylus pressure gauge, stylus microscope, and turntable level. (Not illus.)  
#ESK-2A .....List 3.25

**DELUXE SOUND ENGINEERED RECORD KARE KIT.** Contains stylus pressure gauge, stylus microscope, turntable level, record cleaning cloth, KleeNeedle brush, record brush, and tone arm lift. (Not illus.)  
#ESK-3A .....List 5.75

**SOUND ENGINEERED TURNTABLE LEVELING KIT** contains four adjustable rubber feet to mount under turntable base, and circular 4-way spirit level. Level mounts on top deck of turntable. (Not illus.)  
#ESK-4 .....List 3.90

**POLYESTER PHONO CUSHIONS.** Foam mat cushions record drop. Reduces slippage. (Not illus.)  
#PC-12 11¾" dia. ....List 1.25 #PC-10 9¾" dia. ....List 1.00

**RIM REST PHONO CUSHION.** Has graduated ridges for 7", 10", and 12" records. Records rest on rims only. Delicate sound grooves never touch rim rest. Fits all turntables. Made of Supple Polyethylene. 12" dia. (not illus.)  
#PC-33 .....List 2.75

**PHONO STROBE DISC** — Tests phono or turntable for correct speed. Disc is placed on turntable under neon or fluorescent light. (Not illus.)  
#SD-4 ..... Tests 16, 33⅓, 45, and 75 RPM speeds .....List .50  
#SD-1 ..... Same as above, except tests 3 speeds .....List .35

8. **STYLUS MICROSCOPE** — Inspects stylus tip, to detect signs of wear, chips, etc. Precision ground lenses for clear magnification, knurled focusing adjustment, convenient slot secures needle; and pen type pocket clip. 3¾" long, ½" dia. Imported.  
#MX-1 .....List 2.75

**HOBBYIST STYLUS MICROSCOPE** — Direct reading with precision plastic lens. (Not illus.)  
#MX-40 .....List 1.25

9. **TURNTABLE LEVEL** — Place on turntable for accurate leveling. Insures correct tracking; minimizes stylus and record groove wear.  
#TL-1 .....List 1.35

15. **CLEAN SWEEP.** Large Camel's Hair Brush supported on a machine Aluminum support, sweeps entire tracking surface of records with each revolution. Helps protect record and stylus from dust damage. Pressure sensitive base pad mounts securely to any phono equipment.  
#RB-88 .....List 5.95

10. **ROUND TURNTABLE LEVEL** — A must for Stereo output balance.  
#TL-2R .....List 2.50

**CLIP-ON TONE-ARM-LIFT.** A convenient finger grip for manipulating tone arm. Minimizes scratching of records due to fumbling. (Not illus.)  
#TA-1 .....List .35

11. **RECORD SPIDERS.** Low cost, hi-impact plastic '45 adaptors.  
#RA-45 ..... Package of 5 .....List .25

**CONICAL '45 SPINDLE ADAPTOR** — Plastic, for easy loading of '45's. (Not illus.)  
#SA-45 .....List .25

**METAL 45 RPM RECORD ADAPTOR.** Sturdy, nickel plated metal for easy snap-in insertion. Pkg. of 5. (Not illus.)  
#RA-45M .....List .30

12. **ROUND-BOTTOM PROTECTIVE PLASTIC DIS-CLOSURES.** For 12" records. Prevents scratching, seals out dust and moisture. (Pkg. of 15).  
#E-15 .....List 1.00

**SQUARE COVERS** — For 12" records or standard 12" record jackets. (Pkg. of 15). (Not illus.)  
#EJ-15 .....List 1.00

**"JOCKEY-CLOTH" FOR RECORDS.** Contains Silicone. Cleans and lubricates. Reduces record wear. Washable. (Not illus.)  
#JC-1 .....List .75

**PHONO DRIVE OIL.** Highly refined lubricant formulated for moving and rotating parts. Inhibits rust and oxidation. 2 oz. bottle. (Not illus.)  
#RC-2-33 .....List .75

**NON-SLIP FOR PHONO DRIVES.** Helps stop slippage of drive parts. Fast drying, stable and penetrating, dries to tack-free, non-slip surface. 2 oz. bottle. (Not illus.)  
#RC-2-56 .....List 1.00

13. **FIBERGLASS ACOUSTIC INSULATION.** For lining speaker cabinets, record changers, tape decks, etc. 36" x 36" x 1" thick. Damps "boom" and distortion causing standing waves inside speaker enclosures.  
#AM-90 .....List 2.50

**ISOLATION PAD FOR RECORD CHANGER BASE.** Absorbs vibration, minimizes acoustic feedback, reduces excessive noise and rumble. Use for recorders and TV chassis, etc. (Not illus.)  
#IP-16 .....List 2.00

14. **ALUMINUM COMPONENT SLIDES.** Easy to install drawer slides for record changers or other equipment. Load capacity — 30 lbs. Length — 13". Maximum extension — 14". Has precision ball bearing and special silencer spring to reduce vibration. Slides smoothly. With screws.  
#CS-1311 .....List 5.00

16. **CHANGER COVERS** — Soft plastic covers. **TURNTABLE COVERS**  
#CC-1 13" x 13½" x 8" ..List 1.95 #CC-3 22" x 16½" x 9" ..List 2.50  
#CC-2 12½" x 15" x 8" ..List 1.95 #CC-4 17¼" x 17½" x 9" ..List 2.50  
#CC-5 17" x 15" x 18¾" ..List 1.95 #CC-678 12" x 15½" x 5" ..List 4.95

**45 RPM SPINDLE FOR RECORD CHANGERS** (Not illus.)  
Precision made, all metal spindle fits easily without twisting and jamming. Fits most changers with straight spindles, including: V-M, Glaser-Steers, Columbia, G-E, Motorola, Philco, R.C.A., Westinghouse, Sylvania, Zenith and many others. #SA-55 .....List \$4.50

**ROBINS BOOKS.** (Not illus.)  
#TE-24 "TAPE EDITING AND SPLICING GUIDE BOOK" by N. M. Haynes. 24 pages. Illustrated .....List .40

#TE-48 "TELEVISION TAPE RECORDING" by George B. Goodall. 48 pages. Illustrated .....List 1.00

#TE-96 "WHAT YOU SHOULD KNOW ABOUT YOUR TAPE RECORDER" A complete guide book to care, use, and operation of tape recorders. 96 pages, illustrated. Trouble shooting guide and glossary of recording terms included .....List 1.00

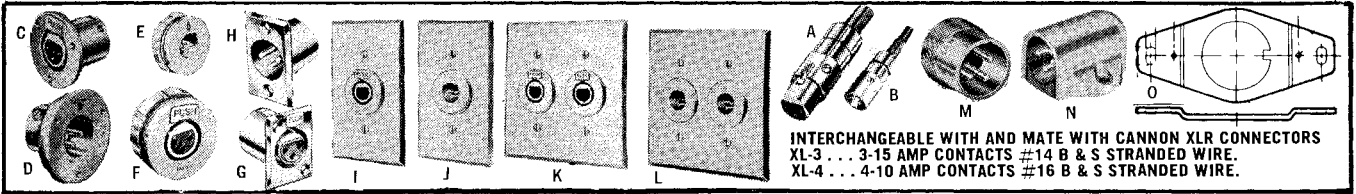
#TE-127 "TAPE RECORDING THE SOUNDS OF YOUR LIFE." 128 pages. Illustrated. All about recording techniques. How to capture the sounds that surround you. How to make creative sound your hobby. ....List 1.35

#TE-129 "HOW TO GET THE MOST OUT OF YOUR TAPE RECORDER." 128 pages. Illustrated. Practical uses for your recorder. Using a portable recorder, taping shortwave, adding sound to 8mm films and slides. All about sound effects.  
.....List 1.35

# ROBINS<sup>®</sup> INDUSTRIES CORP., FLUSHING, N. Y., 11356

IS THE EXCLUSIVE SUPPLIER IN THE U.S.A. FOR

## XL<sup>★</sup> AUDIO AND ELECTRONIC CONNECTORS



INTERCHANGEABLE WITH AND MATE WITH CANNON XLR CONNECTORS  
 XL-3... 3-15 AMP CONTACTS #14 B & S STRANDED WIRE.  
 XL-4... 4-10 AMP CONTACTS #16 B & S STRANDED WIRE.

**STRAIGHT CORD PLUG.** Cable relief spring entry. Zinc alloy shell, Phenolic insulator. Satin Nickel finish.

**FIG. A SOCKET CONTACTS**  
 #XL-3-11★ 3 CONTACTS LIST \$1.90 #XL-4-11★ 4 CONTACTS LIST \$2.50  
 #XL-3-11 3 contacts #XL-4-11 4 contacts

**FIG. B PIN CONTACTS**  
 #XL-3-12★ 3 CONTACTS LIST \$1.90 #XL-4-12★ 4 CONTACTS LIST \$2.50  
 #XL-3-12 3 contacts #XL-4-12 4 contacts

**RECEPTACLE.** Wall mount. Has mounting holes. Zinc alloy shell. Phenolic insulator. Satin Nickel finish.

**FIG. C SOCKET CONTACTS—LATCH LOCK**  
 #XL-3-13★ 3 CONTACTS LIST \$1.90 #XL-4-13★ 4 CONTACTS LIST \$2.50  
 #XL-3-13 3 contacts #XL-4-13 4 contacts

**FIG. D PIN CONTACTS**  
 #XL-3-14★ 3 CONTACTS LIST \$1.50 #XL-4-14★ 4 CONTACTS LIST \$2.10  
 #XL-3-14 3 contacts #XL-4-14 4 contacts

**RECEPTACLE.** Panel mount. The mounting nut accommodates 1/8" panel. Reversing the nut permits mounting on panel up to 3/16" thick. Zinc alloy shell. Satin Nickel finish.

**FIG. E SOCKET CONTACTS—LATCH LOCK**  
 #XL-3-13N★ 3 CONTACTS LIST \$2.25 #XL-3-13N 3 contacts

**FIG. F PIN CONTACTS**  
 #XL-3-14N★ 3 CONTACTS LIST \$2.25 #XL-4-14N★ 4 CONTACTS LIST \$2.90  
 #XL-3-14N 3 contacts #XL-4-14N 4 contacts

**RECEPTACLE.** Wall mount. Compact rectangular flange saves mounting space. Zinc alloy shell. Satin Nickel finish.

**FIG. G SOCKET CONTACTS—LATCH LOCK**  
 #XL-3-31★ 3 CONTACTS LIST \$2.25 #XL-4-31★ 4 CONTACTS LIST \$3.10  
 #XL-3-31 3 contacts #XL-4-31 4 contacts

**FIG. H PIN CONTACTS**  
 #XL-3-32★ 3 CONTACTS LIST \$1.75 #XL-4-32★ 4 CONTACTS LIST \$2.10  
 #XL-3-32 3 contacts #XL-4-32 4 contacts

MANUFACTURED BY CANNON PLUGS (AUSTRALIA) PTY. LTD. "CANNON" IS A TRADEMARK REGISTERED IN THE U.S. PATENT OFFICE AND IN OTHER COUNTRIES BY CANNON ELECTRIC COMPANY.

**SINGLE GANG RECEPTACLE.** Wall mount. Consists of XL-3-13N Socket Receptacle and mounting bracket XL-MB-1 assembled to wall plate.

**FIG. I SOCKET CONTACTS**  
 #XL-3-35★ 3 CONTACTS LIST \$5.00 #XL-3-35 3 contacts

**SINGLE GANG RECEPTACLE.** Wall mount. Consists of XL(-)-14N Pin Receptacle and mounting bracket XL-MB-1 assembled to wall plate.

**FIG. J PIN CONTACTS**  
 #XL-3-36★ 3 CONTACTS LIST \$5.00 #XL-4-36★ 4 CONTACTS LIST \$6.40  
 #XL-3-36 3 contacts #XL-4-36 4 contacts

**TWO GANG RECEPTACLE.** Wall mount. Consists of 2 XL-3-13N Socket Receptacles and 2 mounting brackets XL-MB-1 assembled to double wall plate.

**FIG. K SOCKET CONTACTS**  
 #XL-3-35-2G★ 3 CONTACTS LIST \$11.00 #XL-3-35-2G 3 contacts

**TWO GANG RECEPTACLE.** Wall mount. Consist of 2 XL(-)-14N and 2 mounting brackets XL-MB-1 assembled to double wall plate.

**FIG. L PIN CONTACTS**  
 #XL-3-36-2G★ 3 CONTACTS LIST \$11.00 #XL-4-36-2G★ 4 CONTACTS LIST \$12.00  
 #XL-3-36-2G 3 contacts #XL-4-36-2G 4 contacts

**RECEPTACLE.** Microphone or 90° mounting receptacle. Two mounting holes. Removable insert for soldering, inspection, etc. Zinc alloy shell. Satin Nickel finish

**FIG. N PIN CONTACTS**  
 #XL-3-42★ 3 CONTACTS LIST \$2.20 #XL-4-42★ 4 CONTACTS LIST \$2.65  
 #XL-3-42 3 CONTACTS #XL-4-42 4 CONTACTS

**ADAPTOR RECEPTACLE.** Mounts directly in or on to microphone and other units or surfaces where they can be adequately supported. Threads to mate into unit of equipment. Satin Nickel finish.

**FIG. M PIN CONTACTS**  
 #XL-3-50T★ 3 CONTACTS LIST \$2.80 #XL-3-50T 3 contacts

**MOUNTING BRACKET.** XL(-)-13N and XL(-)-14N Receptacles can be installed in the floor or at other convenient locations using this bracket for mounting receptacles in a Russel and Stoll Box No. 2503 and other boxes.

**FIG. O #XL-MB-1★ LIST \$1.00 #XL-MB-1**

★ALL XL PLUGS ARE SUPPLIED EITHER IN BULK PACKED FOR O.E.M. AND INDUSTRIAL USE (AVAILABLE THROUGH INDUSTRIAL DISTRIBUTORS) OR INDIVIDUALLY PACKAGED FOR REPLACEMENT USE (AVAILABLE FROM GENERAL LINE DISTRIBUTORS. ORDER XL(-)★ (STAR SUFFIX) FOR INDIVIDUAL PACKAGE FOR REPLACEMENT USE.

# ROBINS<sup>®</sup> AUDIO CONNECTORS, CONTROLS AND SWITCHES

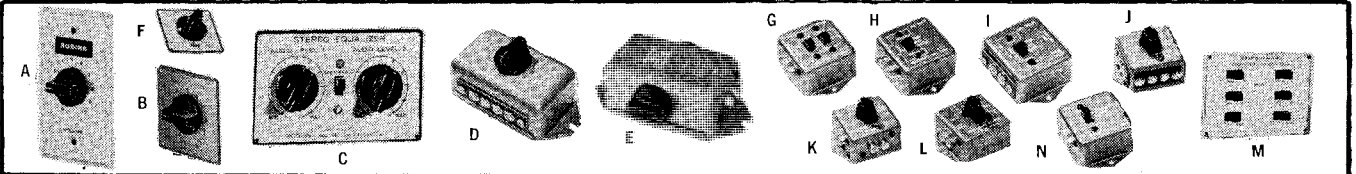


Fig	Cat. No.	Impedance	Type of Mount'g	List	Fig.	Cat. No.	Impedance	Type of Mount'g	List
A	VC-SW	8 ohms	Wall Plate	6.00	B	VC-5P	16 ohms	Panel Mount	5.50
A	VC-6W	16 ohms	Wall Plate	6.00	D	VC-5S	8 ohms	Surface Mount	7.00
B	VC-5P	8 ohms	Panel Mount	5.50	D	VC-6S	16 ohms	Surface Mount	7.00

**STEREO SPEAKER EQUALIZER WITH PHASING SWITCH.** L-Pad controls adjust Stereo Speakers for equal output. Can control 2 Mono speakers.  
 C VC-7 8 ohms Wall or Panel 12.50  
 C VC-8 16 ohms Wall or Panel 12.50

**DUAL VOLUME CONTROL ADAPTOR.** For two channel, high impedance Stereo circuits. Has 2 Phono jack inputs, 2 phono plug outputs. Separate volume controls.  
 E VC-9 Surface Mount 7.50

**SPEAKER FADER CONTROL.** Adjusts volume of Hi-Fi, radio, TV and remote speakers. Can be used to control volume of individual speaker.  
 F VC-10P Panel Mount 2.50  
 A VC-10W Wall Mount 3.00

**MULTI-SPEAKER SELECTOR SWITCH WITH 7 POSITIONS.** Select any or all speakers, up to 3. Constant impedance at all switch positions.  
 A SW-1W Wall Mount 5.50  
 D SW-1S Surface Mount 6.00

**STEREO-MONO SELECTOR WITH CHANNEL REVERSING.** Switch from Mono to Stereo. Has 2 phono jack inputs and outputs. Dual channel feed through for Stereo Outputs have STEREO/MONO Switch.  
 G SW-2 Surface Mount with Reverse 3.50  
 H SW-3 Surface Mount without Reverse 3.00

**SPEAKER PHASE CONTROL.** For multiple or Stereo speaker installations. Provides proper phasing of speakers. With instructions and hardware.  
 I SW-4S Surface Mount 2.50  
 SW-4P Panel Mount (Not Illus.) 1.75

**STEREO SPEAKER SELECTOR SWITCH.** 3 position switch gives variety of Stereo speaker selections. 2 remote pair of Stereo speakers can be connected to a Stereo amplifier and either or both "cut-in" at will. Complete with screw terminals, hardware and instructions.  
 J SW-5 Surface Mount 6.25

**STEREO INPUT SELECTOR SWITCH.** Connect both channels of any one of 3 Stereo sources to one pair of outputs. Has 3 phono jack inputs, 1 output.  
 K SW-6 Surface Mount 6.25

**STEREO SPEAKER SELECTOR SWITCH.** Has 1 pair phono jack inputs and 3 pairs outputs. Select any of 3 pairs of Stereo speakers.  
 K SW-7 Surface Mount 6.25

**MONAURAL SPEAKER SELECTOR.** Select either or both of 2 remote speakers or remote speaker and Hi-Fi set.  
 F SW-8 Surface Mount 2.50

**MONAURAL MULTI-SPEAKER SELECTOR.** Hook up 5 remote speakers to one input. Select any one of 5 remote speakers. Has one input and 5 output phono jacks.  
 L SW-9 Surface Mount 5.50

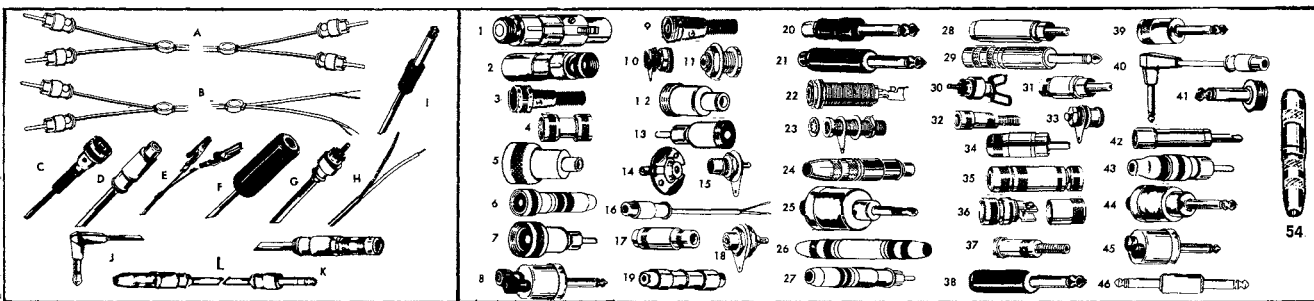
**MONAURAL MULTIPLE SELECTOR CONTROL.** Select one of 5 input circuits to one output. Inputs are for AM, FM, Phono, Tape, and Aux. Phono jack output and input connections.  
 L SW-10 Surface Mount 5.00

**6 SPEAKER SELECTOR.** For multi speaker Mono or Stereo Systems. Hook up up to 6 remote speakers; 6 mono or 3 pairs of Stereo speakers. With On-Off switches.  
 M SW-11 Panel Mount 3.50

**12 SPEAKER SELECTOR.** Connections for up to 6 pairs of speakers. Mono or Stereo. 6 On-Off Switches.  
 M SW-12 Panel Mount 4.25

**PHONO-TUNER ADAPTOR.** Old sound equipment having only one input can be brought up to date using this adaptor. Unit has 2 phono jack inputs for use with phonos, tuners, etc. With selector switch for either input, phono jack for connecting amplifier.  
 N SW-13 Surface Mount 2.50

# ROBINS® PATCH CORDS AND ADAPTORS



### STEREO CABLE ASSEMBLIES

Fig.	Cat. No.	Length	List	Fig.	Cat. No.	Length	List
A	SMM-36	36"	3.25	B	SMS-36	36"	2.90
A	SMM-72	72"	3.75	B	SMS-72	72"	3.25
A	SMM-120	120"	4.50	B	SMS-120	120"	3.75

L—SJT-300 Stereo extension cable. Phono plug (3 cond.) to extension jack (3 cond.). 25 ft. shielded cable. For Stereo headphones and other Stereo adaptations.....List 10.00

### MOLDED CABLE ASSEMBLIES

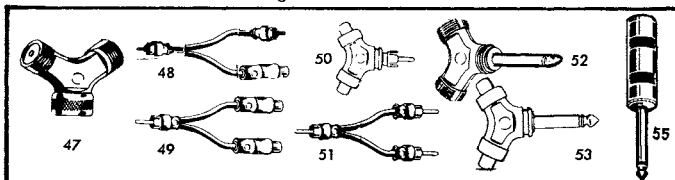
Cat. No.	Adaptor at One End Fig.	Adaptor at Other End Fig.	Length in Inches	List	Cat. No.	Adaptor at One End Fig.	Adaptor at Other End Fig.	Length in Inches	List
BS-120	C	H	120"	2.25	MS-72	G	H	72"	1.15
FF-72	D	D	72"	1.95	MS-120	G	H	120"	1.65
MC-120	G	E	120"	2.25	MT-72	G	I	72"	2.20
MF-18	G	D	18"	1.25	MT-120	G	I	120"	2.75
MF-36	G	D	36"	1.35	TC-72	I	E	72"	1.90
MF-72	G	D	72"	1.75	TC-120	I	E	120"	2.40
MF-120	G	D	120"	2.00	TF-72	I	D	72"	2.20
MJ-72	G	F	72"	2.50	TJ-120	I	F	120"	3.50
MM-18	G	G	18"	1.05	TS-72	I	H	72"	1.75
MM-36	G	G	36"	1.20	TS-120	I	H	120"	2.25
MM-72	G	G	72"	1.50	TT-72	I	I	72"	2.40
MM-120	G	G	120"	2.00	TT-120	I	I	120"	2.70
MS-18	G	H	18"	.80	XJ-180	J	K	180"	5.00
MS-36	G	H	36"	.95	XM-120	I	G	120"	4.00

### ADAPTORS

FIG.	CAT. NO.	DESCRIPTION	LIST
1.	#AC-1	2-Cond., has input connector (#D-2), output connector, with unsoldered internal wire permitting connection to terminal.	3.05
2.	#AC-2	Female Mic. Connect. to input Connect.	3.05
3.	#B-1	Microphone Connector, female	.60
4.	#BB-1	Misc. Connect., double female, for connecting 2 cables with male connectors.	1.00
5.	#BF-1	Phono Jack input to female Mic. Connect. output Outside dia. main body — 1/2".	1.25
6.	#BJ-1	2-Cond. Phone Jack input to female Mic. output. Removable coupler ring converts connector to male type. Body O.D. 1/2".	1.75
7.	#BP-1	Phono plug — female microphone connector.	1.00
8.	#BPJT-1	Binding Post, dual purpose, Banana Jack input to Phone plug output.	2.60
9.	#D-1	Microphone Connector, male.	.45
10.	#D-2	Mic. Panel Connect. Mounts in .385" hole.	.40
11.	#D-3	Panel Connector, male, single contact.	.45
12.	#DF-1	Phono Jack input to male Mic. Connect. output	1.25
13.	#DP-1	Phono Plug — male Mic. Connector.	1.00
14.	#F-1	Phono Jack. Pkg. of 3.	.45
15.	#F-2	Phono Jack — back of panel mount. 2-Cond.	.50
16.	#F-3	2-Cond., long handle, phono jack to 3" shld'd. cable. Converts screw or solder type terminals to std. Phono Jack. Mates with #M-2 adaptor.	.80
17.	#F-4	Phono Extension Jack, removable handle, shld'd. cable clamp.	.60
18.	#F-5	RF Phono Jack for front of panel mount.	.60
19.	#FF-1	Phono Plug to Phono Plug.	1.00
20.	#FT-1	Phono Plug Output — Phono Jack input.	1.25
21.	#FTR-1	Phone Adapt., female Phono Jack end of handle. Has internal resistor circuit for connection between crystal phono pickup or radio or TV set and input of tape recorder. May be used as adaptor with magnetic phono by opening plug and twisting leads of resistor together.	1.95
22.	#J-1	Phone Jack w/long bushing. Mounts in panels up to 1 1/4" thick. Mates with "Littell plugs". Ideal for Mic. Connect. 2-Cond.	1.30
54.	#J2	1/4" 2 Cond. Extension Phone Jack with Solder Terminals. Completely Shielded	2.15
22.	#J-3	Same as J-1, except 3-cond.	1.50
23.	#JA-1	Phono Jack Adapt. Mounts in panels up to 1 1/4" thick.	.95
24.	#JF-1	2-Cond. Phone Jack input to Phono Jack output.	1.45

### FIG. CAT. NO. DESCRIPTION LIST

25.	#JG-1	Jack input, std. 1/4" 2-cond. to special plug for mate with jack in American Geloso Recorder. Permits use of U.S. made Microphone and plugs with recorder.	2.35
26.	#JJ-1	Coupler, 2-cond. Phone Jack ea. end. Connects 2 cables having phone plug terminations.	2.25
26.	#JJ-3	Same as JJ-1, except 3-cond.	2.75
27.	#JM-1	2-cond. phone jack input to phono plug output.	1.45
28.	#JM-2	Compact Adapt., phono jack input to phono plug output, connects Ceramic Phono Cartridge to audio amplifier which was designed for magnetic cartridge.	2.95
29.	#JR-1	Std. 2-cond. Phone Plug to 2-cond. short extension Jack. Use with late models Revere and Wollensak recorders.	2.00
30.	#M-1	Phono Plug. Pkg. of 4.	.50
31.	#M-2	Phono Plug, 2-cond. w/long screw on handle. Cable clamp.	.60
32.	#MB-1	Miniature Mic. Connect. Use w/single cond. shld'd. cable. Straight Connect., single contact, female coupling ring.	.60
33.	#PC-1	Panel Connect., single contact, male.	.45
34.	#RF-1	RF Plug, 2-cond. long screw on handle. Cable clamp.	.80
35.	#SC-1	Straight Connect. w/2-screw terminals. Single contact, female, 2-piece handle w/built-in cable clamp. Connects cable with stripped ends without solder.	2.25
36.	#SC-2	Straight Connect., same as SC-1, short handle no cable clamp.	1.65
37.	#SC-3	Straight Connect., single contact, male.	.50
38.	#T-1	Phone Plug.	.80
39.	#T-1S	"Silent Phone Plug", 2-cond. w/1" lgth. shld'd. Phenolic handle. Features circuit closing device when plug is removed. Ideal for use with musical instruments.	1.75
55.	#T3	1/4" Phone Plug, 3 cond. with Solder Terminals. Shielded Metal Handle.	2.05
40.	#TAF-1	Phone Plug, right angle, 2-cond. w/long handle molded to 2" shld'd. cable. Adapts phone jack to phono plugs.	1.75
41.	#TD-1	Mic. input, male to Phone Plug output.	.60
42.	#TJF-1	Std. Phono plug to "Tini-plug" (3/8") output.	1.40
43.	#TJM-1	2-cond. "Tini-jack" input to phono plug output.	1.45
44.	#TJS-1	"Silent Plug" Adapt. w/2-cond. Jack input to 2-cond. plug output. Circuit closes when plug is removed.	2.95
45.	#TJT-1	Tip Jack input to Phone Plug output.	2.35
46.	#TTS-2	Coupler, 2-cond. phone plugs connect 2 assemblies having extension jack terminations.	2.00
<b>"Y" ADAPTORS — Phono Jack and Plug type, Microphone Connectors.</b>			
47.	#YBDD-1	Light weight die cast, connects 2 cables (with std. mic. connectors) in parallel to one single connector.	1.65
48.	#YFMM-1	1 Phono Plug connect. in parallel to 1 Phono Jack and 1 Phono Plug. Shielded Cable, 4" length.	2.00
49.	#YFFF-1	Phono Plug connect. to 2 phono jacks. 4" shld'd. cable	2.00
50.	#YFFF-2	2 Phono Jacks connect. in parallel to std. Phono Plug.	2.00
51.	#YMMM-1	3 Phono Plugs connect. together. 4" Shld'd. cable.	2.00
52.	#YTDD-1	2 male Mic. Connect's. connected in parallel to std. 2-cond. Phone Plug.	1.90
53.	#YTFF-1	2 Phono Jacks connect. in parallel to std. 2-cond. Phone Plug.	1.90



FM INDOOR ANTENNA — FOLDED DIPOLE. Eliminates need for outdoor antenna in most locations. Easily concealed under rug or back of cabinet.  
#FMA-1 2.00

**SONOTONE**  
 audio products

# Replacement Cartridges

**NEW! SONO-FLEX™ NEEDLE**

Flick it—bend it—knock it—it springs back, ready to play. Gripped in a resilient butyl rubber mount, needle shank can be flexed in a 360° orbit without damage. What's more, Sono-Flex provides higher compliance, wider and flatter frequency response, lower IM distortion, and longer needle and record life. Standard in the Sonotone models 9TAF, 16TAF, 916TAF and Velocitone Mark IV, 21T, 21TR and 22T and 23T. Available as replacement needles for Sonotone Models 9T, 9TA, 9TAV, 16T, 16TA and 916TA.

N-9916-FS 0.7-mil sapphire, net \$1.65  
 N-9916-FS77 dual 0.7-mil sapphire, net \$1.65  
 N-9916-FSD 0.7-mil diamond, 3-mil sapphire, net \$2.25  
 N-9916-FD77 dual 0.7-mil diamond, net \$2.85



**'VELOCITONE MARK IV' HIGH COMPLIANCE CERAMIC STEREO/MONO.** Ideal for use with professional tonearms and changers. HIGH COMPLIANCE, increased tracking ability add longer record life. Provided with matched equalizers (no tools required) to feed directly into the "magnetic" phono input of any stereo preamp. Universal terminal plug for fast, easy replacement. "Sono-Flex" Needle. **SPECIFICATIONS (with equalizers):** Response: 20 to 20,000 cps, ±2 db to 17,000 cps; Output voltage: 7; Compliance: 15 x 10-6 cm/dyne; Channel separation: 30 db; Tracking force: 1.5-3 grams for professional arms; 3-4 grams for changers. 9TAFHC-SDV diamond/sapphire, net \$12.15. 9TAFHC-D77V dual diamond, net \$14.55.

**HIGH COMPLIANCE CERAMIC STEREO/MONO MODEL '9TAFHC.'** Features low stylus mass and HIGH COMPLIANCE for flawless, hum-free reproduction of stereo and mono records. New universal tonearm terminal plug for fast, easy replacement. "Sono-Flex" Needle.



**MODEL 9TAF.** Features new Sono/Flex needle. Ceramic stereo/mono cartridge with low stylus mass and high compliance for flawless, hum-free reproduction of stereo and mono records. New universal tonearm terminal plug.

**SPECIFICATIONS:** Response: 20 to 20,000 cps ±2 db; Output voltage: .35 volt; Compliance: 6; Channel separation: 30 db; Tracking force: 2-4 grams for professional arms; 3-5 grams for changers; 9TAF-S dual sapphire, net \$5.31; 9TAF-S77 dual sapphire, net \$5.31; 9TAF-SD sapphire/diamond, net \$6.96; 9TAF-D77 dual diamond, net \$7.56.

**'9TAFHC' SPECIFICATIONS:** Response: 20 to 20,000 cps (±½ db 20 to 6,000 cps; ±2 db 20 to 17,000 cps); Output voltage: .20 volt; Compliance: 15 x 10-6 cm/dyne; Channel separation: 30 db; Tracking force: 1.5-3 grams for professional arms; 3-4 grams for changers. 9TAFHC-S dual sapphire, net \$5.55; 9TAFHC-SDV diamond/sapphire, net \$7.26; 9TAFHC-D77V dual diamond, net \$7.86.



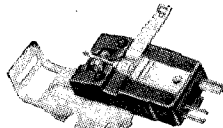
**MODEL '21TR' STEREO CERAMIC.** New safety-type, retractable mounting bracket. Extra protection buttons to protect the record and needle assembly. High output voltage. "Sono-Flex" Needle. Also available, the '21T' with standard snap-in mounting bracket.

'21TR' Equipped with retractable mounting bracket. Response: Entire audio hearing range; Output voltage: 0.60 volt; Compliance: 5.5 x 10-6 cm/dyne; Channel separation: 21 db; Tracking force: 4-7 grams. 21TR-S dual sapphire, net \$4.17; 21TR-S dual sapphire, net \$3.90; 21TR-S77 dual sapphire, net \$3.90; 21TR-SD diamond/sapphire, net \$5.82; 21TR-SD diamond/sapphire, net \$5.55.



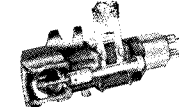
**MODEL '22T' HIGH COMPLIANCE STEREO CERAMIC.** New standard mounting bracket permits easy installation and servicing. Once installed, it snaps in and out of mounted bracket. Fits standard tonearms and is designed for many cross-reference replacements. "Sono-Flex" Needle.

'22T' Equipped with snap-in mounting bracket. Response: Entire audio hearing range; Output voltage: 0.30 volt; Compliance: 10.0 x 10-6 cm/dyne; Channel separation: 24 db; Tracking force: 2-4 grams. 22T-S dual sapphire, net \$4.17; 22T-S77 dual sapphire, net \$4.17; 22T-SD diamond/sapphire, net \$5.82.



**MODEL '23T' HIGH COMPLIANCE STEREO CERAMIC.** High compliance, high output voltage, standard snap-in mounting bracket and protective "bottoming" buttons to protect the needle and record.

'23T' Equipped with snap-in mounting bracket. Response: Entire audio hearing range; Output voltage: 0.40 volt; Compliance: 10 x 10-6 cm/dyne; Channel separation: 26 db; Tracking force: 2-4 grams. 23T-S dual sapphire, net \$4.59; 23T-S77 dual sapphire, net \$4.59; 23T-SD diamond/sapphire, net \$6.24.



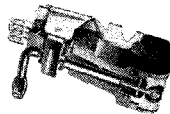
**MODEL 916TAF.** Features new Sono-Flex needle. Lo-cost stereo cartridge employing some of the basic design features of the audiophile-accepted Velocitone Mark IV. New universal tonearm terminal plug makes for fast, easy replacement.

**SPECIFICATIONS:** Response: 20 to 15,000 cps ±3 db; Output voltage: 0.42 volt; Compliance: 4.0 x 10-6 cm/dyne; Channel separation: 28 db; Tracking force: 3-5 grams for professional arms; 4-6 grams for changers. 916TAF-S dual sapphire, net \$4.59; 916TAF-S77 dual sapphire, net \$4.59; 916TAF-SD sapphire/diamond, net \$6.24.



**MODELS 16TAF AND 18TA CERAMIC STEREO/MONO.** Remarkable quality.

**SPECIFICATIONS:** Response: 20 to 10,000 cps flat (±2 db with smooth rolloff to 20,000 cps); Output 0.65 V (16TAF); 1.0 V (18TA); Channel separation: 22 db; Tracking force: 5-7 grams. 16TAF-S dual sapphire, net \$3.90; 16TAF-S77 dual sapphire, net \$3.90; 16TAF-SD diamond/sapphire, net \$5.50; 18TA-S dual sapphire, net \$3.60; 18TA-S77 dual sapphire, net \$3.60; 18TA-SD sapphire/diamond, net \$5.25.



**MODEL '8TA' CERAMIC STEREO/MONO TURNOVER.** More than 30 leading manufacturers protect the quality of their hi-fi stereo phonographs with this cartridge.

**SPECIFICATIONS:** Response: 20 to 20,000 cps (±2.5 db, 20 to 15,000 cps); Output voltage: 0.3 volt; Compliance: 3.0 x 10-6 cm/dyne; Channel separation: 20 db; Tracking force: 4.6 grams for changers; 3-5 grams for professional arms. 8TA-S dual sapphire, net \$5.25; 8TA-S77 dual sapphire, net \$5.25; 8TA-SD diamond/sapphire, net \$6.90.



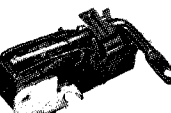
**MODEL '10T2' CERAMIC STEREO/MONO.** Excellent for those converting to stereo or replacing old stereo cartridges. Easy conversion with package which includes "fuse-clip" mounting bracket and "jack-in" terminal plug with electrical contacts.

**SPECIFICATIONS:** Response: 20 to 15,000 cycles ±2.5 db; Output voltage: 0.5 volt; Compliance: 1.5 x 10-6 cm/dyne; Channel separation: 18 db; Tracking force: 5-7 grams. 10T2-S dual sapphire, net \$4.17; 10T2-S77 dual sapphire, net \$4.17; 10T2-SD diamond/sapphire, net \$5.82; 10T2-SD77 diamond/sapphire, net \$5.82.



**MODEL '2TA' CERAMIC MONO.** Plays stereo records. An improved version of the famous Sonotone "2T series." New needle assembly, plus increased compliance and lower tracking force, make it ideal for both stereo and mono records.

**SPECIFICATIONS:** Response: 20 to 20,000 cycles (flat to 12,000); Output voltage: 1.0 volts; Compliance: 2.0 x 10-6 cm/dyne; Tracking force: 6 grams. 2TA-S dual sapphire, net \$2.69; 2TA-LB-S dual sapphire, net \$3.69; 2TA-SD diamond/sapphire, net \$5.34; 2TA-LB-SD diamond/sapphire, net \$5.34.



**MODEL '3T' CERAMIC MONO.** Original equipment in many top quality phonographs. Available with or without brackets.

**SPECIFICATIONS:** Response: 20 to 20,000 cps (flat to 15,000); Output voltage: 0.5 volt; Compliance: 2.0 x 10-6 (minimum); Tracking force: 4-6 grams. \*3T-LB-S & 3T-S dual sapphire, net \$4.65; \*3T-LB-SD & 3T-SD diamond/sapphire, net \$6.30.

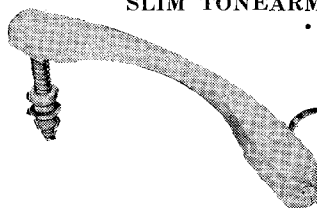


**MODEL '1P' CERAMIC MONO.** Single needle ceramic. Selected by leading high fidelity phonograph manufacturers to protect quality of their products.

**SPECIFICATIONS:** Response: 20 to 20,000 cps (flat to 12,000); Output voltage: 1.0 volt; Compliance: 1.0 x 10-6 cm/dyne; Tracking force: 8-10 grams. \*1P-LB-1S & 1P-1S sapphire, net \$2.91; \*1P-LB-2S & 1P-2S sapphire, net \$2.91; \*1P-LB-3S & 1P-3S sapphire, net \$2.91; \*1P-LB-1D & 1P-1D diamond, net \$4.56; \*1P-LB-3D & 1P-3D diamond, net \$4.56.

**NEW MONO & STEREO CRYSTAL CARTRIDGES**


**MODEL '12T.'** Budget-priced stereo crystal cartridge. Improves the quality of stereo phonographs at low cost. Two versions—the "12THR" (high voltage output) and the "12TLA" (low voltage output). **SPECIFICATIONS (Model 12THR):** Response: 20 to 15,000 cps (±2 db to 10,000 cps); Output voltage: 2.5 volts; Compliance: 1.4 x 10-6 cm/dyne in all directions of stylus motion; Channel separation: 20 db; Tracking force: 9 to 11 grams. 12THR-S dual sapphire, net \$3.51; 12THR-S77 dual sapphire, net \$3.51.


**SLIM TONEARM COMPLETE WITH CRYSTAL CARTRIDGE**

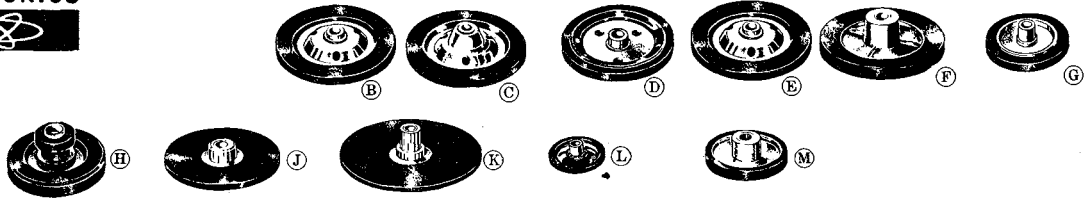
- Prewired ready for use
- Shielded cable
- Spring mounting post
- Packaged with installation hardware

**STEREO AND MONO**

**STEREO** T20T1-S Complete with '20T1' stereo crystal cartridge. Net \$2.70.  
 T20T2-S Complete with '20T2' stereo crystal cartridge. Net \$2.70.  
**MONO** T14T-S Complete with '14T' mono crystal cartridge. Net \$2.10.



# PHONO DRIVES



(B) IDLER WHEEL—2 1/8" O.D. With bushing. Used on GE, Motorola, Philco, Webcor. Similar to Item No. 1440 but has .160" tire thickness. Cat. No. 1437 Net \$1.27  
 (C) IDLER WHEEL—2 1/8" O.D. With bushing. Used on Columbia, GE, Motorola, Webcor. Cat. No. 1438 Net \$1.38

(D) IDLER WHEEL—2" O.D. With bushing. For use on Webcor. Model 1134, 1136, 1151, 1121-1. Cat. No. 1439 Net \$1.27

(F) IDLER WHEEL—2 1/8" O.D. Used on most Webcor tape recorders. Net \$2.00  
 (G) IDLER WHEEL—1 1/2" O.D. With bushing. For use with Philco & Webcor. Cat. No. 1443 Net \$ .80

(K) IDLER WHEEL—2 1/2" O.D. For use with all Collaro record changers in the 54 and 530 Series. Cat. No. 1449 Net \$2.00

(E) IDLER WHEEL—2 1/8" O.D. Comes with bushing. Similar to Item No. 1437 but has .140" tire thickness at the outer edge. Use on Webcor Model 1135 record changer. Cat. No. 1440 Net \$1.75

(H) MOLDED IDLER WHEEL — RCA 45 RPM. For use with RCA Series RP168 & RP190. Cat. No. 1447 Net \$ .92

(L) IDLER WHEEL—1" O.D. For use with Crescent. in Models of 550 Series. Cat. No. 1450 Net \$1.10

(M) IDLER WHEEL—1 3/8" O.D. For use with VM Models 920 and 990, and Silvertone record changers. Cat. No. 1452 Net \$ .85

## RECORDER DRIVE BELTS ROUND BLACK RUBBER DRIVES



Precision ground to exacting tolerances for positive, non-slipping drive action. Will eliminate "wow" and "rumble".

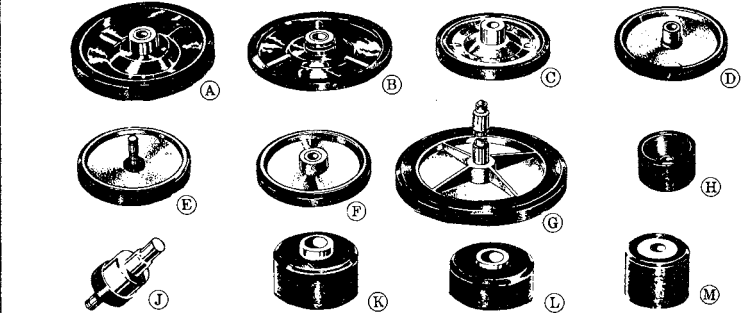
Cat. No.	Insd. Circum.	Thickness	Used On	Dealer Net
1410-06	6.2"	.139"	Model VM-700, 701, 710, 711, 714 Tape Recorders	\$ .45
1410-07	7.4"	.139"	RCA SRT 301, 401, 402, 403, Wilcox-Gay 3A10, 3A11	.52
1410-08	8.6"	.139"	Pentron, Crestwood & other tape recorders	.46
1410-10	10.6"	.139"	Crescent and other tape recorders	.58
1410-12	12.0"	.093"	Ampro and most Revere recorders	.58
1410-14	14.5"	.139"	Most Revere Recorders	1.07
1410-15	15.3"	.139"	Webcor Tape Recorders	1.07
1410-18	18.1"	.139"	Ampro Tape Recorders	1.42
1410-20	20.4"	.139"	Ampro Tape Recorders	1.75
1410-21	21.1"	.139"	Ampro, Gen. Ind., Webcor & other Tape Recorders	1.75
1410-50	10.75"	.085"	Webcor & Revere	.67
1410-51	11.3"	.063"	Viking Tape Recorders	1.17
1410-52	5.8"	.139"	Replaces Belts on Webcor	.95
1410-53	4.3"	.139"	11 x 1736 pkg.	.52
1474	6.5"	.210"	Revere Tape Recorders	.62
	9.8"	.139"	Crestwood Tape Recorders	

Made of a tough, durable, specially treated fabric, to give years of service. Gives smooth, silent, non-slip action.

Cat. No.	Inside Width	Inside Circum.	Used On	Net
1409-02	3/16"	17"	Pentron Tape Recorders	2.20
1409-03	3/16"	12 1/4"	Pentron, Crescent & other Tape Recorders	2.20
1409-04	3/16"	12 1/2"	VM 700, 701, 710, 711, 714 Tape Recorders	2.25
1409-05	3/16"	17"	Webcor Tape Recorders	2.08



CAPSTAN PRESSURE ROLLER—1" O.D. For use on many Pentron tape recorders. Cat. No. 1488 Net \$1.47



(A) IDLER WHEEL—2 1/2" O.D. With bushing. Use on Gen. Ind., Seeburg, and other record players. Cat. No. 1430 Net \$1.27

(B) IDLER WHEEL—2 1/2" O.D. Used on Webcor Model 110 record players. Replaces Manufacturer's Part No. 45P1530. Cat. No. 1431 Net \$1.50

(C) IDLER WHEEL—2" D.D. Use on Admiral, Columbia, Crescent, GE, Motorola, Philco, RCA, Seeburg, Silvertone and VM. Cat. No. 1432 Bushing I.D.—.215 Net \$ .73  
 1487 Bushing I.D.—.183 Used on older Silvertone, etc. Net \$1.03

(D) IDLER WHEEL—2" O.D. With bushing. Use on VM and GE. Cat. No. 1433 Net \$ .88

(E) IDLER WHEEL—2" O.D. With Shaft. Use on Admiral, Crescent, Motorola, Philco, RCA, Seeburg, Silvertone and VM. Cat. No. 1434 Net \$ .88

(F) IDLER WHEEL—2" O.D. With bushing. Use

on Milwaukee Stamping, Philco, Zenith and Westinghouse. Cat. No. 1435 Net \$1.00

(G) DRIVE WHEEL—3" O.D. For use on Zenith Cobramatic Changers. Replaces Manufacturer's Part Nos. S-16922 and S-21754, which are Cat. No. 1473 Net \$3.75 inter-changeable.

(H) DRIVE WHEEL—1" O.D. For use on Crescent changers of the 550 series. Cat. No. 1451 Net \$1.35

(J) 3-STEP DRIVE SLEEVE Used on Webcor Model 135, 136 and other late record changers. Cat. No. 1469 Net \$1.17

(K) PRESSURE ROLLER—7/8" O.D. For use with certain Webcor tape recorders. Cat. No. 1455 Net \$1.63

(L) PRESSURE ROLLER—7/8" O.D. For use on certain Webcor tape recorders, 220 series and 2614, 2615. Cat. No. 1482 Net \$1.33

(M) PRESSURE ROLLER—3/4" O.D. For use with VM Model 700, 701, 710, 711, 714 tape recorders. Cat. No. 1458 Net \$1.20



PRESSURE ROLLER—3/4" O.D. For certain RCA & Wilcox-Gay tape recorders. Cat. No. 1457 Net \$1.75



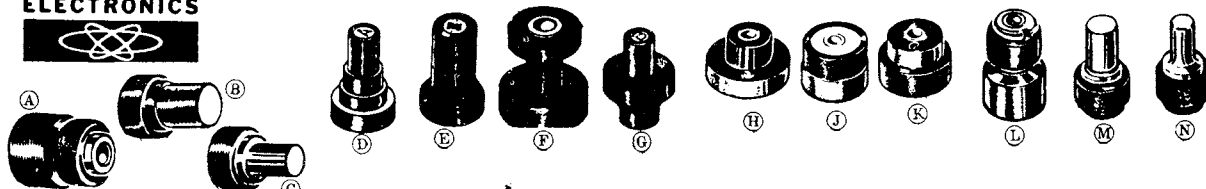
TAKE-UP DRIVER For use with VM tape recorder Model 700. Cat. No. 1484 Net \$3.92



SEND FOR FREE CATALOG  
of the complete  
UP-TO-DATE PHONO DRIVE LINE



# PHONO DRIVES



- (A) Cat. No. 1460 78 RPM Net \$ .95  
1470 78 RPM Net 1.07
- (B) Cat. No. 1461 45 RPM Net \$ .95  
1471 45 RPM Net .92
- (C) Cat. No. 1462 33 1/3 RPM Net \$ .75  
1472 33 1/3 RPM Net .92

1460, 1461 and 1462 are a Turret Drive group that is used on Crescent, GE, Motorola, RCA, VM and other record changers. The 1470 series is used on RCA, VM and other record changers.

**NOTE:** Drives No. 1460, 1461 and 1462 are the same as No. 1470, 1471 and 1472 except that the 1460 series is approximately 1/4" larger in rubber diameter than the 1470 series. If model number of changes or manufacturer's part number is not known, use 1460 series. For most purposes, these two series are interchangeable.

(D) 33 1/3 RPM PULLEY—1/2" O.D. Used on RCA, R.P.-205/190 series motors replaces Mfg.'s Part No. 102941. Cat. No. 1495-01 Net \$ .95

(E) 45 RPM PULLEY—1/2" O.D. Used on RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102942. Cat. No. 1495-02 Net \$ .95

(F) 78 RPM PULLEY—1/2" O.D. Used on RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102943. Cat. No. 1495-03 Net \$ .95

(G) 16 RPM PULLEY—3/8" O.D. Used on RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102944. Cat. No. 1495-04 Net \$ .95

(H) Cat. No. 1463 78 RPM Net \$1.83 Standard Pack: 3

(J) Cat. No. 1464 45 RPM Net \$1.83 Standard Pack: 3

(K) Cat. No. 1465 33 1/3 RPM Standard Pack: 3 Net \$1.83

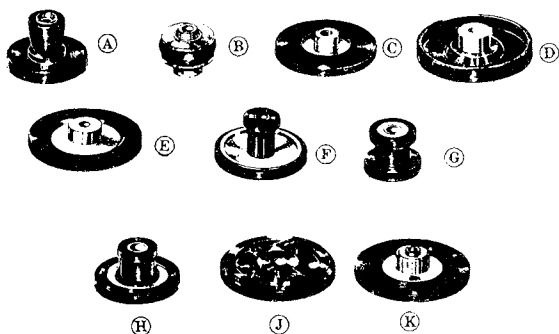
Above 3 items are turret drives for GE and Webcor record changers.

(L) Cat. No. 1466 78 RPM Net \$1.13

(M) Cat. No. 1467 45 RPM Net \$1.13

(N) Cat. No. 1468 33 1/3 RPM Net \$1.13

For use on Crescent, Motorola, VM, RCA and other record changers.



(A) IDLER WHEEL—1 1/32" O.D. This is a molded rubber wheel for use on RCA Series RP-199 record changers. Cat. No. 1454 Net \$1.58

(B) IDLER WHEEL—1" O.D. For use with all Zenith Cobra-Matic record changers. Cat. No. 1459 Net \$2.40

(C) CAPSTAN IDLER—1 3/4" O.D. For use with VM tape recorders in the 700 series. Cat. No. 1485 Net \$1.10

(D) IDLER WHEEL—2" O.D. Used on certain Eicor Tape Recorders and Silvertone Record Changers. Cat. No. 1475 Net \$1.77

(E) IDLER WHEEL—2" O.D. For use with certain Pentron Tape Recorders. Cat. No. 1483 Net \$1.33

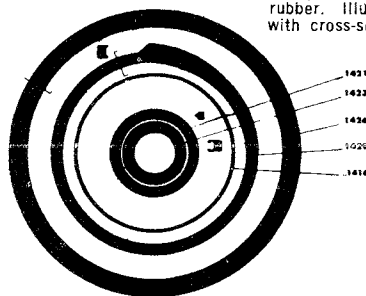
(F) IDLER PULLEY—1 5/8" O.D. This is a molded rubber wheel for use on VM Record Changers in 1200 series. Also used on other types. Cat. No. 1453 Net \$2.08

(G) IDLER PULLEY—1 3/4" O.D. A molder rubber wheel for use with VM Record Changers in the 1200 series having 4-pole motors. Cat. No. 1456 Net \$2.17

(H) IDLER PULLEY—1 5/8" O.D. This is a molded rubber wheel for use on certain VM record changers. Cat. No. 1486 Net \$2.17

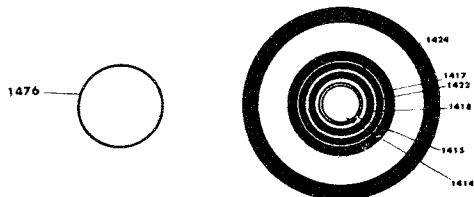
(J) INTER WHEEL—2" O.D. For use with Garrard Model RC-80 Record Changers. Cat. No. 1444 Net \$2.20

(K) INTER WHEEL—2" O.D. Has a ball-bearing hub cap. For use with Garrard T & TA record players. Cat. No. 1445 Net \$2.20



**BELTS & CAM TIRES** — Special Shapes. These belts and tires are made of highest quality abrasion-resistant neoprene rubber. Illustrations are actual size with cross-sections shown on tires.

**INDEX FINGER CUSHION**  
Used on Webcor 100, 121, 1124 series. Also on Webcor 110 and 114 series. Cat. No. 1419 Net \$ .23 pr.



WALSCO TIRES & BELTS

Cat. No.	I.D.	Wall Thickness	Length	Used on	Net
1414	5/8"	1/32"	1/4"	Admiral, GE, VM	\$.20 per pair
1415	3/4"	1/32"	1/4"	Garrard, GE, Philco	.20 per pair
1416	2 3/4"	1/16"	3/16"	Zenith	.22 each
1417	1 1/2"	3/32"	3/16"	Admiral, Garrard	.18 each
1418	7/8"	1/8"	3/4"	Genl. Ind., Wilcox-Gray	.15 each
1424	2 7/8"	1/4"	1/4"	Admiral, Crescent, RCA	.40 each
1476	1 3/4"	1/32"	1/4"	Admiral	.22 per pair

**RUBBER BUMPERS** — Used on VM Record Changers. Cat. No. 1411 Net \$ .30 pr.



**WALSCO RECORD ARM SLEEVE** — For Garrard. Protects record arm and reduces vibration. Resilient, long-lasting neoprene rubber. (2 required). Cat. No. 1412 Net \$ .20 pr.



**WALSCO VELOCITY TRIP** — For Webcor, precision-molded to manufacturers specifications. Cat. No. 1413 Net \$ .22 pr.



**WALSCO CARRIES THE MOST COMPREHENSIVE LINE OF EXACT REPLACEMENT PHONO DRIVES IN THE INDUSTRY. ADDITIONS ARE BEING CONSTANTLY MAINTAINED. FOR THE VERY LATEST LISTS, PLEASE WRITE WALSCO ELECTRONICS, ROCKFORD, ILLINOIS**

**WALSCO PHONO HARDWARE KIT** — Kit contains over 60 parts, including phono jacks and plugs, assorted screws, spacers and springs, in transparent plastic box. Cat. No. 1497 Net \$1.82



**A-M**

# Akro-Mils Parts Cabinets

**DESIGN YOUR OWN PARTS WAREHOUSE.** Akro-Mils' totally new concept in small item storage for the 60's enable you to design your own small parts warehouse . . . exactly to YOUR storage needs! These space saving, time saving cabinets with the built-in look reduce your storage costs and promote greater labor, inventory and production efficiency.

Completely versatile, these compact modular cabinets can be used individually on any flat surface . . . or stacked in any desired combination of cabinets. They can be hung from a wall or integrated into any standard shelving set-up. You can save the cost of shelving by stacking.

Securely welded of steel, cabinets are constructed to last a lifetime of daily use. Baked-on gray finish won't chip or rub off.

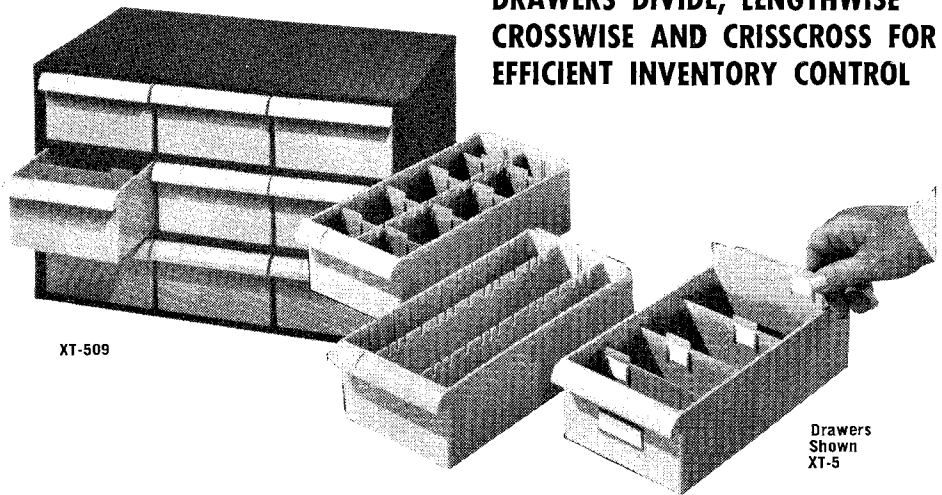
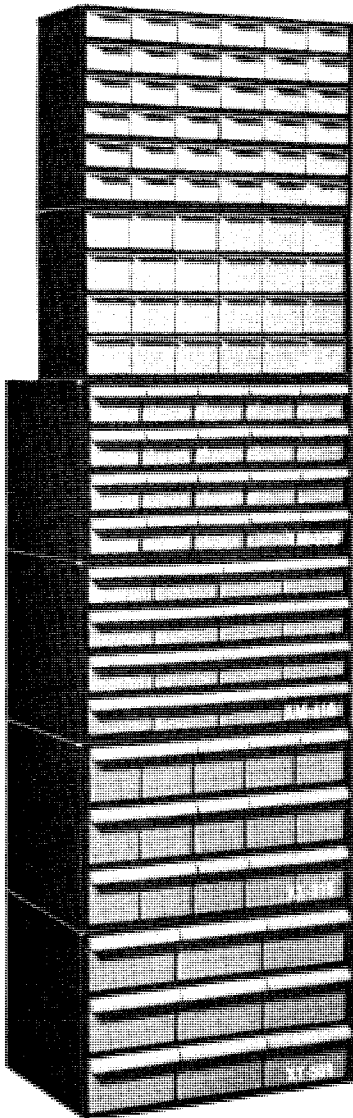
Drawers are available in two different materials. The see-thru, ordinary strength molded drawers give you instant visual inventory control. The hi-impact molded drawer is the strongest drawer made, is virtually indestructible, actually surpasses any other material in strength and durability . . . is not transparent

and is finished in permanent, granite gray color.

All drawers have an ingenious system of vertical, horizontal and criss cross dividers making an infinite variety of compartments available. Rust and corrosion proof, open and close smoothly, operate quietly, dent proof, safety feature . . . no sharp edges to cause cuts or scratches, non-toxic, non conductive, resistant to most chemicals including acids, easy to clean one-piece seamless construction, 60% lighter than steel yet drawers cannot twist or spring out of shape.

Dividers have lock-tight dovetail design (except XJD-1, JD-1, XM-3 and M-3 drawers) to prevent drawer sides from spreading, easily moved to new position if desired. Dividers can be placed lengthwise, cross-wise or criss-crossed to provide any size or shape of compartment. Dividers fit into grooves to prevent creepage of parts into adjacent compartment.

Both drawer materials come in the same six sizes and the six different cabinets fit both style drawers. Cabinets are made to contain 9, 15, 16, 20, 24 and 36 drawers, see table below.



**DRAWERS DIVIDE, LENGTHWISE  
CROSSWISE AND CRISSCROSS FOR  
EFFICIENT INVENTORY CONTROL**

CABINETS WITH HI-IMPACT SUPER STRONG DRAWERS	SUPER STRONG DRAWER NUMBER	CABINET SIZE All 17 $\frac{7}{8}$ " Wide		DRAWER SIZE— INCHES			NUMBER OF DRAWERS INCLUDED	SHIPPING WEIGHT POUNDS	NET * COST COMPLETE
		Deep	High	High	Wide	Long			
XJ-36	XJD-1	6"	11 $\frac{1}{8}$ "	1 $\frac{7}{16}$	2 $\frac{3}{4}$	5 $\frac{7}{8}$	36	13	\$12.48
XG-24	XG-1	6"	9 $\frac{7}{8}$ "	2	2 $\frac{3}{4}$	5 $\frac{3}{4}$	24	11	\$12.48
XM-320	XM-3	11"	10 $\frac{1}{4}$ "	2	3	11	20	16 $\frac{1}{2}$	\$19.98
XM-416	XM-4	11"	10 $\frac{1}{4}$ "	2	4	11	16	16 $\frac{3}{4}$	\$17.98
XT-315	XT-3	11"	10 $\frac{5}{8}$ "	3 $\frac{3}{32}$	3 $\frac{1}{8}$	11	15	17	\$17.98
XT-509	XT-5	11"	10 $\frac{5}{8}$ "	3 $\frac{1}{32}$	5 $\frac{1}{4}$	11	9	15 $\frac{3}{4}$	\$17.98

**STRONGEST DRAWER MADE  
VIRTUALLY INDESTRUCTIBLE**

\*Industrial user net prices  
F.O.B. shipping point.  
All local or state taxes  
additional.

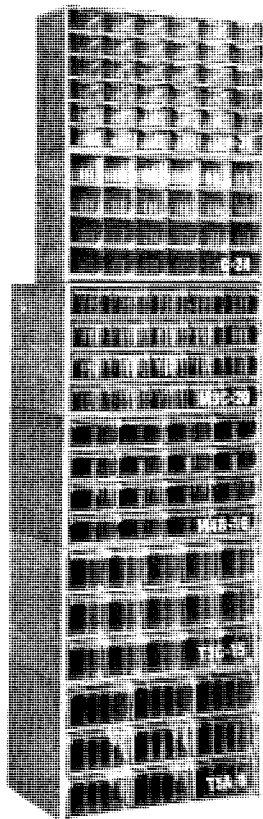
## EXTRAORDINARY GUARANTEE!

"X" SERIES HI-IMPACT Drawers are Guaranteed for 5 years against any breakage. We invite you to make the "DROP" test on these unique drawers—drop it . . . FULLY LOADED on any surface—steel, concrete or wood. If the drawer shatters, return to us with a signed note on your company letterhead and we will send you a replacement drawer . . . free.

**COMPLETELY FLEXIBLE . . . Six different  
cabinets—six different drawer sizes.  
Can be stacked in any combination.**

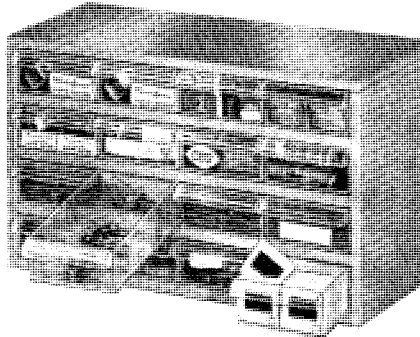


# Akro-Mils Parts Cabinets



## VISUAL INVENTORY CONTROL DRAWERS

- JD-1**  
COMPACT  
DRAWERS  
1-7/16" h. x  
2 3/4" w. x  
5 7/8" l.
- G-1**  
DEEP  
COMPACT  
DRAWERS  
2" h. x 2 3/4" w.  
x 5 3/4" l.
- M-3**  
LONG  
DRAWERS  
2" h. x 3" w.  
x 11" l.
- M-4**  
LONG WIDE  
DRAWERS  
2" h. x 4" w.  
x 11" l.
- T-3**  
LONG DEEP  
DRAWERS  
3-1/32" h. x  
3 3/8" w. x 11" l.
- T-5**  
LONG WIDE  
DEEP  
DRAWERS  
3-1/32" h. x  
5 1/4" w. x 11" l.



To fill your requirements where stock must be readily accessible and easy to locate, these see-through, sturdy molded drawers will also give you instant visual inventory control. Strong and sturdy, these drawers provide instant selection—no searching or lost motion. A glance tells you how much you have and what you need. Tedious, time-consuming records and counting are virtually eliminated.

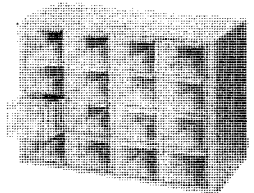
## HANDY BIN STEEL CABINETS

Find things fast—store small things better

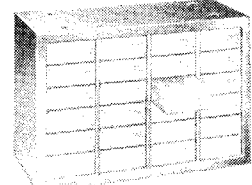
These two cabinets can be used separately or stacked depending on your individual requirements. Instant visual control of all stock is at your disposal at all times.

What a relief! No more time wasted searching for small items in your shop, office or lab. Keep small things handy . . . orderly . . . and at your fingertips in an A-M SEE THRU Drawer Cabinet.

**24F**  
Deep Compact  
Drawers:  
2" x 2 3/4" x  
5 3/4"



**101 USES.** Perfect for resistors, capacitors, controls . . . electric hardware . . . Unconditional guarantee . . . you must be delighted or your money back.



**24HB**  
Compact  
Drawers  
1 1/4" x 2 3/4" x  
5 3/4"

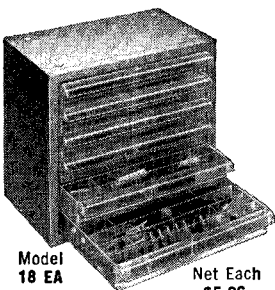
All Models Modular Add & Stack

No other cabinets made have all these desirable features.

- "See Thru" spillproof plastic drawers. Super strength to store heaviest metal parts.
- "Fit Tight" plastic dividers to adjust compartment sizes to your needs.
- Rigid, welded steel cabinets with enamel finish that won't chip or rub off.
- Modular—stacks neatly, stand or hangs on the wall.
- Slots for drawer front index labels. Press-on labels supplied with each drawer.

**24F**—9" x 13" x 6" with 16 DEEP COMPACT drawers . . . . . \$5.63  
**24HB**—9" x 13" x 6" with 24 COMPACT drawers . . . . . \$5.63

CABINETS WITH SEE-THRU TRANSPARENT DRAWERS	VISUAL SEE-THRU DRAWER NUMBER	CABINET SIZE All 17 7/8" Wide		DRAWER SIZE—INCHES			NUMBER OF DRAWERS INCLUDED	SHIPPING WEIGHT POUNDS	NET COST COMPLETE
		Deep	High	High	Wide	Long			
<b>J-36</b>	JD-1	6"	11 1/8"	1 1/16"	2 3/4"	5 7/8"	36	13	\$12.48
<b>G-24</b>	G-1	6"	9 7/8"	2"	2 3/4"	5 3/4"	24	11	\$12.48
<b>M3C-20</b>	M-3	11"	10 1/4"	2"	3"	11"	20	16 1/2	\$19.98
<b>M4B-16</b>	M-4	11"	10 1/4"	2"	4"	11"	16	16 3/4	\$17.98
<b>T3C-15</b>	T-3	11"	10 5/8"	3 1/32"	3 1/8"	11"	15	17	\$17.98
<b>T5A-9</b>	T-5	11"	10 5/8"	3 1/32"	5 1/4"	11"	9	15 3/4	\$17.98



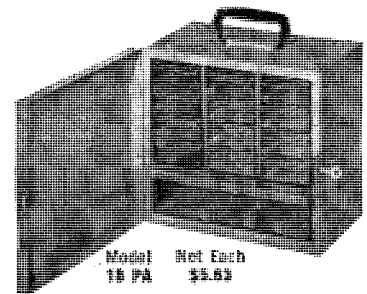
## 6 MINIATURE PARTS DRAWERS

Six "roll-out" compartments per drawer—easiest access to tiniest of items. Comes with 9 dividers per drawer, plus labels. Cabinet 9" H. x 10" W. x 6" D. Wgt. 5 1/4 lbs.

Model **18 EA**  
Net Each \$5.06

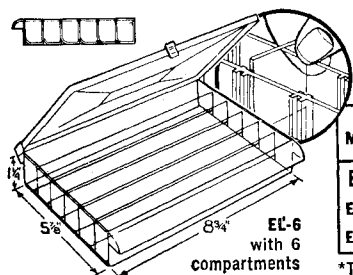
## 13-DRAWER PORTABLE LOCKING CABINET

12 compact plastic drawers, 1 1/4" x 2 3/4" x 5 3/4". 1 jumbo drawer 2 1/2" x 8 3/4" x 5 3/4". Steel case has hinged door with lock clasp. Contents can't spill. Cabinet 9" H. x 10" W. x 6 1/2" D. Wgt. 5 3/4 lbs.

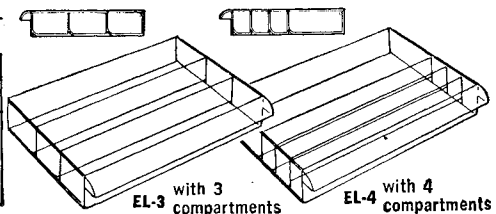


Model **18 PA**  
Net Each \$5.63

## 101 USES FOR THESE FULLY ADJUSTABLE COMPARTMENTED PLASTIC BOXES



Curved "roll-out" type compartments—finger-tip can roll small items out with ease.



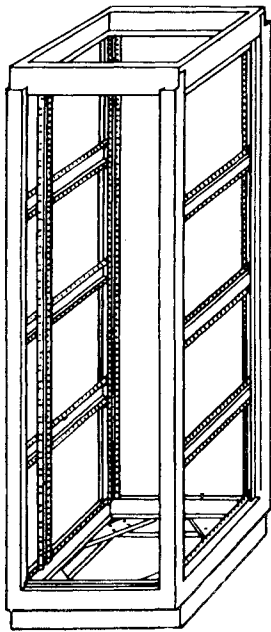
Model	Compartments	Dividers	Compartment Size Inches	Wt. Doz.	Price Doz.
<b>EL-6</b>	6	9	8-3/4 x 1-1/4 x 15/16	7 lbs.	\$9.00
<b>EL-3</b>	3	9	8-3/4 x 1-1/4 x 1-7/8	7 lbs.	\$9.00
<b>EL-4</b>	4	7	*	7 lbs.	9.00

\*THREE 8-3/4 x 1-1/4 x 15/16—ONE 8-3/4 x 1-1/4 x 2-7/8

All prices are net for industrial users. Prices F.O.B. shipping point. Local or State taxes, if applicable, are additional.



# Series "60" Racks



A Upright Rack

Scientifically designed to meet all requirements for human needs as well as component physical specifications; the most practical cabinet rack developed for either a single piece of equipment or a large instrumentation system. Very economical to the user, units are shipped fully assembled and ready for immediate use.

Basic frame welded in a solid unit composed of 14-gauge cold-rolled steel channels. Sides have "U" braces with perforated channels for fastening vertical adjustable mounting rails. Rails also support other types of equipment such as brackets, shelves, slides, etc. Eliminates need of drilling holes in the rack. Sides and rear door made of 16 gauge steel. Door may be mounted to open left or right. Vertical channel, 6" wide, welded to door to prevent vibration or whip. Two pairs of panel mounting rails are supplied; fully adjustable. Panels may be mounted in front and rear at the same time. Front rails drilled and tapped 10-32 W.E. spacing. Rear rails are drilled according to universal spacing.

All Series Sixty enclosures may be quickly combined with each other to create units of any desired width as shown in the Add-A-Rack series. In addition, such accessories as desk tops, turrets, drawers, slides, sloping panel supports and front door are easily installed.

Standard finishes are smooth baked enamel over a primer. For two-tone gray, specify by adding suffix **SG**. For two-tone blue, add suffix **SB** to order number. Standard Bud relay rack panels are available for the Series Sixty racks in light gray and light blue; when ordering, add suffix **SG** for gray; **SB** for blue.

## UPRIGHT CABINET RACKS (FIG. A)

Completely assembled with sides, rear door and top. Standard units have plain sides and door; solid top. For greater ventilation, order units with louvered sides and/or rear door; both, with solid top. Width, 24 1/4", all units. Inside depth 20 1/2" clear on units with 22" outside depth; 23 3/4", all others. Top opening 18 1/2" w. x 17" d. on units with 22" outside depth; 18 1/2" w. x 20 1/2" d., all others. **Specify Color When Ordering:** Add suffix **SG** to number for gray; suffix **SB** for blue.

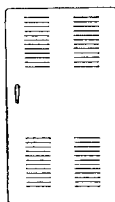
With Plain Sides and Door							Louvered Sides, Plain Door								
Bud No. 60-	Net Each, Lots of			Height	Out-side Depth	Panel Space	Wt., Lbs.	Bud No. 60-	Net Each, Lots of						
	1-9	10-14	15-19						1-9	10-14	15-19				
2300	\$106.30	\$ 95.67	\$ 85.05	29 3/8"	22"	21"	118	2600	\$112.00	\$100.80	\$ 89.60	2600	\$140.00	\$126.00	\$112.00
2301	131.45	118.30	105.15	40 1/2"	22"	31 1/2"	156	2601	140.00	126.00	112.00	2602	156.50	140.85	125.20
2302	146.05	131.45	116.85	50 3/8"	22"	42"	173	2602	156.50	140.85	125.20	2603	179.00	161.10	143.20
2303	166.25	149.60	133.00	61 1/8"	22"	52 1/2"	197	2603	179.00	161.10	143.20	2604	194.75	175.28	155.80
2304	180.25	162.20	144.20	69 3/8"	22"	61 1/4"	220	2604	194.75	175.28	155.80	2605	216.50	194.85	173.20
2305	200.00	180.00	160.00	78 3/8"	22"	70"	235	2605	216.50	194.85	173.20	2606	235.15	211.64	188.12
2306	218.65	196.80	174.90	87 3/8"	22"	78 3/4"	265	2606	235.15	211.64	188.12	2607	251.00	226.12	200.00
2307	125.50	112.95	100.40	29 3/8"	25 1/2"	21"	156	2607	251.00	226.12	200.00	2608	267.00	240.24	212.88
2308	151.20	136.10	120.95	40 1/2"	25 1/2"	31 1/2"	176	2608	267.00	240.24	212.88	2609	283.00	253.10	222.20
2309	168.00	151.20	134.40	50 3/8"	25 1/2"	42"	185	2609	283.00	253.10	222.20	2610	299.00	266.10	235.20
2310	186.50	167.85	149.20	61 1/8"	25 1/2"	52 1/2"	211	2610	299.00	266.10	235.20	2611	315.00	278.50	245.00
2311	207.30	186.55	165.85	69 3/8"	25 1/2"	61 1/4"	240	2611	315.00	278.50	245.00	2612	331.00	291.70	255.80
2312	230.30	207.25	184.25	78 3/8"	25 1/2"	70"	256	2612	331.00	291.70	255.80	2613	347.00	305.70	269.80
2313	251.35	226.20	201.10	87 3/8"	25 1/2"	78 3/4"	267	2613	347.00	305.70	269.80				

With Louvered Sides and Door							Plain Sides, Louvered Door								
Bud No. 60-	Net Each, Lots of			Height	Out-side Depth	Panel Space	Wt., Lbs.	Bud No. 60-	Net Each, Lots of						
	1-9	10-14	15-19						1-9	10-14	15-19				
2700	\$110.20	\$ 99.18	\$ 88.16	29 3/8"	22"	21"	118	2800	\$108.50	\$ 97.65	\$ 86.80	2800	\$134.30	\$120.87	\$107.44
2701	137.00	123.30	109.60	40 1/2"	22"	31 1/2"	156	2801	134.30	120.87	107.44	2802	149.20	134.28	119.36
2702	153.40	138.06	122.72	50 3/8"	22"	42"	173	2802	149.20	134.28	119.36	2803	169.70	152.73	135.76
2703	175.30	157.77	140.24	61 1/8"	22"	52 1/2"	197	2803	169.70	152.73	135.76	2804	184.10	165.69	147.28
2704	190.80	171.72	152.64	69 3/8"	22"	61 1/4"	220	2804	184.10	165.69	147.28	2805	204.30	183.87	163.44
2705	212.00	190.80	169.60	78 3/8"	22"	70"	235	2805	204.30	183.87	163.44	2806	223.40	201.06	178.72
2706	230.20	207.18	184.16	87 3/8"	22"	78 3/4"	265	2806	223.40	201.06	178.72	2807	242.50	217.25	192.00
2707	129.90	116.91	103.92	29 3/8"	25 1/2"	21"	156	2807	242.50	217.25	192.00	2808	261.60	234.24	206.88
2708	156.90	141.21	125.52	40 1/2"	25 1/2"	31 1/2"	176	2808	261.60	234.24	206.88	2809	280.70	250.35	220.00
2709	174.70	157.23	139.76	50 3/8"	25 1/2"	42"	185	2809	280.70	250.35	220.00	2810	299.80	266.10	235.20
2710	194.30	174.87	155.44	61 1/8"	25 1/2"	52 1/2"	211	2810	299.80	266.10	235.20	2811	318.90	283.17	249.44
2711	215.90	194.31	172.72	69 3/8"	25 1/2"	61 1/4"	240	2811	318.90	283.17	249.44	2812	338.00	300.10	264.80
2712	239.80	215.82	191.84	78 3/8"	25 1/2"	70"	256	2812	338.00	300.10	264.80	2813	357.10	315.19	279.28
2713	261.30	235.17	209.04	87 3/8"	25 1/2"	78 3/4"	267	2813	357.10	315.19	279.28				



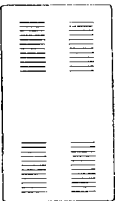
B Plain Door



C Louvered Door



D Plain Side



E Louvered Side

## ACCESSORY PERFORATED TOP

Bud No.	Width	Depth	Fits Upright Rack	Wt., Lbs.	Net Each, Lots of
					1-24 25-49 50-99
60-2370	21 13/16"	17"	With overall depth of 22"	6	\$5.65 \$5.10 \$4.50
60-2371	21 13/16"	20 1/2"	With overall depth of 25 1/2"	7	6.00 5.40 4.80

## ACCESSORY DOORS

Doors are interchangeable; may be used for front or rear of rack; mount to open either left or right.

Plain Type (Fig. B)							Louvered Type (Fig. C)								
Bud No.	Net Each, Lots of			Ht.	Width	Fits Rack With Panel Space of	Wt., Lbs.	Bud No.	Net Each, Lots of						
	1-9	10-14	15-19						1-9	10-14	15-19				
60-2340	\$16.05	\$14.45	\$12.85	21 3/8"	18 1/2"	21"	8	60-2540	\$18.35	\$16.52	\$14.68	60-2541	\$22.70	\$20.43	\$18.16
60-2341	19.80	17.80	15.85	31 1/2"	18 1/2"	31 1/2"	11 1/2	60-2542	25.20	22.68	20.16	60-2543	27.95	25.16	22.36
60-2342	21.90	19.70	17.50	42 1/8"	18 1/2"	42"	15 1/2	60-2544	31.05	27.95	24.84	60-2545	34.50	31.05	27.60
60-2343	24.30	21.85	19.45	52 1/2"	18 1/2"	52 1/2"	19	60-2546	37.70	33.93	30.16				
60-2344	27.05	24.35	21.65	61 1/8"	18 1/2"	61 1/4"	22 1/2								
60-2345	30.05	27.05	24.05	70 3/8"	18 1/2"	70"	25 1/2								
60-2346	32.80	29.50	26.25	79 3/8"	18 1/2"	78 3/4"	29								

## ACCESSORY SIDES

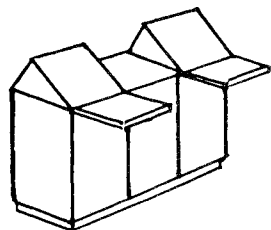
Plain Type (Fig. D)							Louvered Type (Fig. E)								
Bud No.	Net Each Pair, Lots			Ht.	Width	Fits Rack With Panel Space of	Wt., Lbs.	Bud No.	Net Each Pair, Lots						
	1-9	10-14	15-19						1-14	15-24	25-34				
60-2560	\$24.10	\$21.70	\$19.30	26 5/8"	22"	21"	12 1/2	60-2580	\$28.10	\$25.30	\$22.50	60-2581	\$37.20	\$33.50	\$29.75
60-2561	31.50	28.35	25.20	37 3/8"	22"	31 1/2"	17 1/2	60-2582	44.20	39.80	35.35	60-2583	51.95	46.75	41.55
60-2562	36.65	33.00	29.30	47 5/8"	22"	42"	21	60-2584	57.40	51.65	45.90	60-2585	63.60	57.25	50.90
60-2563	42.70	38.45	34.15	58 1/2"	22"	52 1/2"	26 1/4	60-2586	70.75	63.70	56.60	60-2587	77.40	70.25	62.75
60-2564	46.70	42.05	37.35	67 3/4"	22"	61 1/4"	30	60-2588	83.50	75.25	66.50	60-2589	91.35	82.50	73.15
60-2565	51.45	46.30	41.15	75 5/8"	22"	70"	34	60-2590	104.20	94.50	84.80	60-2591	112.10	101.40	90.70
60-2566	59.00	53.10	47.20	84 3/8"	22"	78 3/4"	38	60-2592	118.10	106.50	94.90	60-2593	126.10	113.50	100.90
60-2567	67.00	60.15	53.30	93 3/8"	25 1/2"	87 3/4"	42								
60-2568	75.00	67.15	59.30	102 3/8"	25 1/2"	96 3/4"	46								
60-2569	83.00	74.15	65.30	111 3/8"	25 1/2"	105 3/4"	50								
60-2570	91.00	81.15	71.30	120 3/8"	25 1/2"	114 3/4"	54								
60-2571	99.00	88.15	77.30	129 3/8"	25 1/2"	123 3/4"	58								
60-2572	107.00	95.15	83.30	138 3/8"	25 1/2"	132 3/4"	62								
60-2573	115.00	102.15	89.30	147 3/8"	25 1/2"	141 3/4"	66								

## SERIES SIXTY DESK TOP (FIG. F)

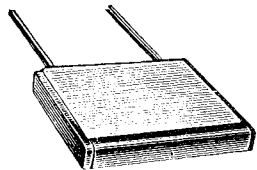
May be used in connection with any Series Sixty enclosure. Furnished completely assembled with wood-grained Formica surface. Fastens to panel mounting rails by two pre-drilled channels. Will support in excess of 200 lbs. Surface 24 1/2" wide, 19 1/2" deep, 3 1/8" high. Available in two colors. **Specify Color:** Add suffix **SG** for gray; **SB** for blue.

Bud No.	Fits Series Sixty	Support Channel	Wt., Lbs.	Ea., 1-14	Ea., 15-24	Ea., 25-34
60-2360	With 22" depth	21 1/2" long	22	\$36.05	\$32.45	\$28.85
60-2362	With 25 1/2" depth	24 3/4" long	23	36.75	33.08	29.40

• New product.



Typical Assembly



F Desk Top



# Series "60" Cabinets

## INCLINED PANEL CABINET RACKS (FIG. G)

Completely assembled with sides, rear door and solid top. Available in four combinations of plain or louvered sides and rear door. Size, 50 $\frac{3}{4}$ " h. x 24 $\frac{1}{4}$ " w. x 22" d., outside; 20 $\frac{1}{4}$ " d., clear inside. Weight, 165 lbs. **Specify Color When Ordering:** Add suffix **SG** to number for gray; suffix **SB**, for blue.

With Plain Sides and Door				Incline Panel Hgt.	Vert. Panel Hgt.	Top Opening W. x D.	Louvered Sides and Plain Door			
Bud No. 60-	Net Each, Lots of						Bud No. 60-	Net Each, Lots of		
	1-9	10-14	15-19			1-9	10-14	15-19		
2330	\$165.25	\$148.70	\$132.20	10 $\frac{1}{2}$ "	29 $\frac{3}{4}$ "	18 $\frac{1}{2}$ " x 11 $\frac{3}{4}$ "	2630	\$147.20	\$132.48	\$117.76
2331	175.15	157.65	140.10	15 $\frac{3}{4}$ "	24 $\frac{1}{2}$ "	18 $\frac{1}{2}$ " x 10"	2631	184.20	165.78	147.36
2332	175.15	157.65	140.10	17 $\frac{1}{2}$ "	22 $\frac{3}{4}$ "	18 $\frac{1}{2}$ " x 9 $\frac{3}{8}$ "	2632	184.20	165.78	147.36
With Louvered Sides and Door				Incline Panel Hgt.	Vert. Panel Hgt.	Top Opening W. x D.	Plain Sides, Louvered Door			
Bud No. 60-	Net Each, Lots of						Bud No. 60-	Net Each, Lots of		
2730	\$170.90	\$153.81	\$136.72	10 $\frac{1}{2}$ "	29 $\frac{3}{4}$ "	18 $\frac{1}{2}$ " x 11 $\frac{3}{4}$ "	2830	\$168.50	\$151.65	\$134.80
2731	181.00	162.90	144.80	15 $\frac{3}{4}$ "	24 $\frac{1}{2}$ "	18 $\frac{1}{2}$ " x 10"	2831	178.40	160.56	142.72
2732	181.00	162.90	144.80	17 $\frac{1}{2}$ "	22 $\frac{3}{4}$ "	18 $\frac{1}{2}$ " x 9 $\frac{3}{8}$ "	2832	178.40	160.56	142.72

## ACCESSORY FRONT DOORS

Plain Type (Fig. J)					Height	Width	Fits Rack Top Open. Size, In.	Wt., Lbs.	Louvered Type (Fig. K)			
Bud No.	Net Each, Lots of			Bud No.					Net Each, Lots of			
	1-9	10-14	15-19						1-9	10-14	15-19	
60-2350	\$19.85	\$17.85	\$15.90	30 $\frac{3}{4}$ "	18 $\frac{15}{16}$ "	18 $\frac{1}{2}$ x 11 $\frac{3}{4}$	11	60-2550	\$22.80	\$20.52	\$18.24	
60-2351	18.55	16.70	14.85	25 $\frac{15}{16}$ "	18 $\frac{15}{16}$ "	18 $\frac{1}{2}$ x 10"	9 $\frac{1}{2}$	60-2551	21.30	19.17	17.04	
60-2352	18.00	16.20	14.40	23 $\frac{3}{8}$ "	18 $\frac{15}{16}$ "	18 $\frac{1}{2}$ x 9 $\frac{3}{8}$	9	60-2552	20.70	18.63	16.56	

## ACCESSORY REAR DOORS

60-2342	\$21.90	\$19.70	\$17.50	42 $\frac{1}{4}$ "	18 $\frac{15}{16}$ "	All sizes	15 $\frac{1}{2}$	60-2542	\$25.20	\$22.68	\$20.16
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## ACCESSORY SIDES

Specify "L" for left side or "R" for right side, determined when facing front of rack.

60-2574*	\$38.45	\$34.60	\$30.75	47 $\frac{5}{8}$ "	22"	18 $\frac{1}{2}$ x 11 $\frac{3}{4}$	11	60-2594*	\$44.20	\$39.80	\$35.35
60-2575*	39.55	35.60	31.65	47 $\frac{5}{8}$ "	22"	18 $\frac{1}{2}$ x 10"	9 $\frac{1}{2}$	60-2595†	45.50	40.95	36.40
60-2576*	39.55	35.60	31.65	47 $\frac{5}{8}$ "	22"	18 $\frac{1}{2}$ x 9 $\frac{3}{8}$	9	60-2596†	45.50	40.95	36.40

\*Fig. H. †Fig. I.

## ACCESSORY PERFORATED TOPS

Bud No.	Width	Depth	Fits Rack Top Size, In.	Wt., Lbs.	Net Each, Lots of		
					1-24	25-49	50-99
60-2372	21 $\frac{15}{16}$ "	11 $\frac{1}{8}$ "	18 $\frac{1}{2}$ x 11 $\frac{3}{4}$	4	\$4.40	\$3.95	\$3.50
60-2373	21 $\frac{15}{16}$ "	10"	18 $\frac{1}{2}$ x 10"	3	4.25	3.85	3.40
60-2374	21 $\frac{15}{16}$ "	9 $\frac{1}{8}$ "	18 $\frac{1}{2}$ x 9 $\frac{3}{8}$	3	4.20	3.80	3.35

## ADD-A-RACK SERIES

Each assembly consists of frame, top, bottom, rear door and cowlings; used as an add-on unit to join any of the Series Sixty enclosures into a bank of two or more. One standard rack plus several Add-A-Racks make any desired number of racks combined for optimum width. Colors same as above racks.

Plain Sides					Louvered Sides					Wt., Lbs.
Bud No. 60-	For Add-on to Rack No. 60-	Net Each, Lots of			Bud No. 60-	For Add-on to Rack No. 60-	Net Each, Lots of			
		1-9	10-14	15-19			1-9	10-14	15-19	
2500	2300, 2600	\$ 86.10	\$ 77.50	\$ 68.90	2900	2700, 2800	\$ 88.40	\$ 79.56	\$ 70.72	92
2501	2301, 2601	104.75	94.30	83.80	2901	2701, 2801	107.65	96.89	86.12	113
2502	2302, 2602	114.70	103.25	91.75	2902	2702, 2802	118.00	106.20	94.40	115
2503	2303, 2603	125.30	112.75	100.25	2903	2703, 2803	128.95	116.06	103.16	145
2504	2304, 2604	140.00	126.00	112.00	2904	2704, 2804	144.00	129.60	115.20	148
2505	2305, 2605	156.00	140.40	124.80	2905	2705, 2805	160.45	144.41	128.36	152
2506	2306, 2606	167.35	150.60	133.90	2906	2706, 2806	172.25	155.03	137.80	158
2507	2307, 2607	100.00	90.00	80.00	2907	2707, 2807	102.30	92.07	81.84	120
2508	2308, 2608	117.25	105.55	93.80	2908	2708, 2808	120.15	108.14	96.12	132
2509	2309, 2609	128.00	115.20	102.40	2909	2709, 2809	131.30	118.17	105.04	138
2510	2310, 2610	139.60	125.65	111.70	2910	2710, 2810	143.25	128.93	114.60	142
2511	2311, 2611	156.10	140.50	124.90	2911	2711, 2811	160.10	144.09	128.08	164
2512	2312, 2612	174.00	156.60	139.20	2912	2712, 2812	178.45	160.61	142.76	168
2513	2313, 2613	192.50	173.25	154.00	2913	2713, 2813	197.40	177.66	157.92	172
2530	2330, 2630	132.90	119.60	106.30	2930	2730, 2830	136.20	122.58	108.96	119
2531	2331, 2631	142.10	127.90	113.70	2931	2731, 2831	145.40	130.86	116.32	119
2532	2332, 2632	142.10	127.90	113.70	2932	2732, 2832	145.40	130.86	116.32	125

## SERIES SIXTY TURRETS (FIG. L)

Made of 16 gauge steel; designed so that any one of three sides may be attached to a Series Sixty upright rack or any horizontal surface. Accommodate standard 19" panels. All mounting rails have universal spacing. Sides easily removed when a series of interconnecting turrets are desired. **Specify Color When Ordering:** Add suffix **SG** for dark gray; **SB** for dark blue. For panels, order standard Bud panels with suffix **SG** for light gray; **SB** for light blue.

Bud No.	Width	Depth	Height	Panel Space			Wt., Lbs.	Net Each, Lots of		
				Sloping	Bottom	Rear		1-14	15-24	25-34
60-2364	22 $\frac{1}{16}$ "	17 $\frac{7}{8}$ "	12 $\frac{5}{8}$ "	17 $\frac{1}{2}$ "	14"	8 $\frac{3}{4}$ "	17	\$39.05	\$35.15	\$31.25
60-2365	22 $\frac{1}{16}$ "	14 $\frac{3}{8}$ "	10 $\frac{3}{8}$ "	12 $\frac{1}{4}$ "	10 $\frac{1}{2}$ "	7"	14	32.55	29.30	26.05
60-2366	22 $\frac{1}{16}$ "	20 $\frac{13}{16}$ "	14 $\frac{3}{8}$ "	21"	17 $\frac{1}{2}$ "	10 $\frac{1}{2}$ "	20	41.00	36.90	32.80

## SERIES SIXTY DRAWER (FIG. M)

Fits into any Series Sixty cabinet rack. Slides easily on nylon rollers. Capable of supporting heavy loads. Drawer extends to full depth while stops prevent drawer from falling out. Slides are easily attached to panel supporting rails. Silver anodized handles. Shipped completely assembled. **Specify Color When Ordering:** Add suffix **SG** to stock number for gray; **SB** for blue.

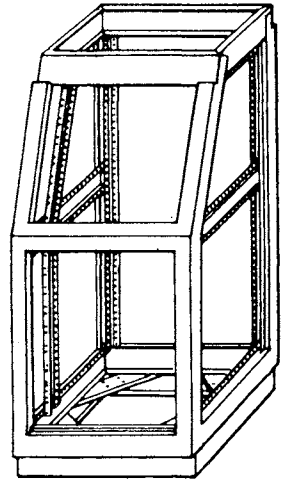
Bud No.	Size (Inside), Inches	Weight, Lbs.	Net Each, Lots of		
			1-14	15-24	25-34
60-2368	16 $\frac{3}{8}$ x 6 $\frac{3}{4}$ x 19 $\frac{1}{4}$	28	\$32.05	\$28.85	\$25.65

## SERIES SIXTY SLIDING DESK TOP AND DESK TOP DRAWER

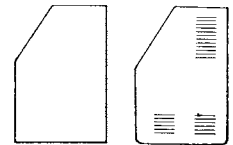
Fit standard Series Sixty racks. Smooth Formica\* writing surface resists damage. Fits flush with front of unit when not in use. **No. 60-2361 Desk Top:** Usable area 11" x 16 $\frac{1}{2}$ ". Occupies 1 $\frac{1}{4}$ " h. panel space. Tested to support 75 lbs. distributed weight. Ball-bearing slide mechanism mounts directly in Series Sixty racks; brackets supplied to fit other Bud cabinets. Size, 16 $\frac{1}{2}$ " w. x 15 $\frac{1}{2}$ " d. x 1 $\frac{1}{4}$ " h. with 19" wide front panel. **No. 60-2363 Desk Top Drawer:** Hinged desk top on drawer to hold small tools, parts, etc. Ingenious latch on front panel both locks and releases drawer or top as desired. Mounts to U-brackets in cabinet; slides on nylon rollers; hardware supplied. Front panel, 19" w. x 3 $\frac{1}{2}$ " h. Inside size, 16 $\frac{3}{8}$ " x 3 $\frac{1}{4}$ " x 15".

Bud No.	Fig.	Specify Color by Suffix:	Wt., Lbs.	Net Each, Lots of		
				1-14	15-24	25-34
60-2361	N	B, black wrinkle; G, gray wrinkle; HG, gray hammertone; SB, smooth blue; SG, smooth gray	8	\$16.65	\$14.99	\$13.32
60-2363	O	SB, smooth blue; or SG, smooth gray	19	55.00	49.50	44.00

\*New product. \*Synthane Corp. trademark.

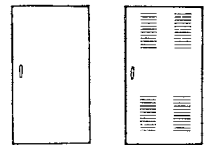


G Inclined Panel Rack



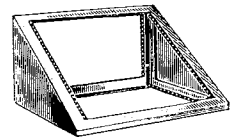
H Side Panels

I Louvered Type

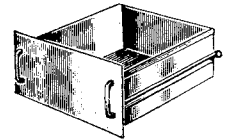


J Doors

K Louvered Type



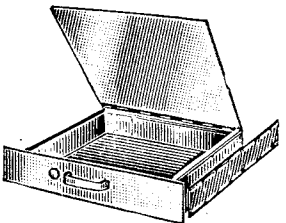
L Turret



M Drawer



N Sliding Desk Top

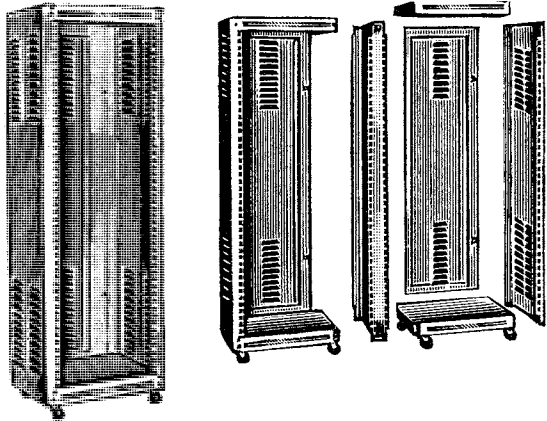


O Desk Top Drawer



# Cabinet Racks, Accessories

## DELUXE RELAY RACKS WITH ADD-A-RACK



High quality relay racks made of 16-gauge steel with 1/4" panel supports. Panel mounting supports are recessed so that no panel edges will be exposed. Both back and sides are fully louvered for best ventilation. Snap catches are positioned on the door. Rounded corners and red-lined chrome trim give streamlined appearance. Base constructed with four special supports so that casters may be applied directly to base for mobility. All standard panels will fit these racks: 22" wide for 19" panels; 27" wide for 24" panels.

**Super Deluxe Series Relay Racks** are equipped with adjustable panel mounting supports permitting forward and backward adjustment of panels for more efficient use of space. Adjustable points are at 1" intervals for 9" to 15" clearance behind panels. Super Deluxe Racks are fitted with both front and rear doors, the rear to cover any equipment behind the panel while making it easily accessible. The front door, not louvered, conceals controls on the front panel.

**Add-A-Rack Series**—Where relay racks are to be joined in series. Provides additional strength and improved appearance. Includes door, top, bottom and coupling unit, all that is needed to make a double relay rack out of a single Deluxe series.

**All Racks Listed** are shipped knocked-down with all necessary hardware and assembly instructions. Casters optional. When ordering specify finish. Add suffix "HG" for gray hammertone; suffix "G" for gray wrinkle; and suffix "B" for black wrinkle.

### SUPER DELUXE TWO-DOOR RACKS WITH 19" WIDE PANEL SPACE

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-9	10-14	15-19
CR-2174	42 1/16"	36 3/4"	102	\$ 64.13	\$ 57.72	\$51.30
CR-2171	47 5/16"	42"	104	72.65	65.39	58.12
CR-2172	66 3/16"	61 1/4"	138	93.77	84.39	75.02
CR-2175	75 5/16"	70"	150	96.00	86.40	76.80
CR-2173	82 5/16"	77"	163	112.56	101.30	90.05

### WITH 24" WIDE PANEL SPACE

CR-2494	42 1/16"	36 3/4"	119	\$ 83.00	\$ 74.70	\$66.40
CR-2491	47 5/16"	42"	122	93.00	83.70	74.40
CR-2492	66 3/16"	61 1/4"	160	121.00	108.90	96.80
CR-2495	75 5/16"	70"	175	123.00	110.70	98.40
CR-2493	82 5/16"	77"	190	145.00	130.50	116.00

### ADD-A-RACK ASSEMBLIES

Includes door, top, bottom and coupling unit for add-on use with racks indicated.

Bud No.	For Use With Rack No.	Wt., Lbs.	Net Each, Lots of		
			1-9	10-14	15-19
AR-1275*	RR-1271	61	\$ 34.90	\$31.41	\$27.92
AR-1276*	RR-1272	81	43.75	39.37	35.00
AR-1277*	RR-1273	94	51.25	46.12	41.00
AR-1778	CR-1774	70	44.34	39.91	35.47
AR-1775	CR-1771	74	49.01	44.11	39.21
AR-1776	CR-1772	100	60.96	54.86	48.77
AR-1779	CR-1780	107	62.00	55.80	49.60
AR-1777	CR-1773	113	74.90	67.41	59.92
AR-4274	CR-2474	82	55.00	49.50	44.00
AR-4271	CR-2471	87	62.00	55.80	49.60
AR-4272	CR-2472	117	77.75	69.98	62.21
AR-4275	CR-2475	125	79.25	71.33	63.41
AR-4273	CR-2473	132	93.25	83.93	74.61
AR-2278*	CR-2074	102	60.15	54.13	48.12
AR-2275*	CR-2071	86	68.06	61.25	54.65
AR-2276*	CR-2072	110	85.17	76.65	68.14
AR-2279*	CR-2075	120	87.00	78.30	69.60
AR-2277*	CR-2073	130	103.75	93.38	83.00
AR-3278	CR-2484	100	78.00	70.20	62.40
AR-3275	CR-2481	119	87.00	78.30	69.60
AR-3276	CR-2482	129	109.00	98.10	87.20
AR-3279	CR-2485	140	111.00	99.90	88.80
AR-3277	CR-2483	152	131.00	117.90	104.80

\*Gray hammertone standard; for black or gray wrinkle add 10% to price.

### DOOR HANDLES, CATCH SETS

No. 9347: Fits flush with cabinet door; exposed parts chrome plated. Nos. 9196 and 9223: Lever-type handles are chrome plated with corrosion-resistant steel spindle and cam; fit Super Deluxe racks.

Bud No.	Description	Net Each, Lots of		
		1-49	50-99	100-149
9196	Non-locking handle	\$2.66	\$2.39	\$2.13
9223	9196 with lock and key	5.00	4.50	4.00
9347	Flush-mount catch set	.98	.88	.78

### TRUCK CASTERS

Use with all Bud relay racks and other floor mounted units. Ball bearing wheels are hard tread composition. RC-7756 is for heavy duty applications. RC-7758 is for extra heavy duty use (Series 60 Racks).

Bud No.	Height	Weight (Set of 4)	Net Each, Lots of		
			1-49	50-99	100-149
RC-7756	2 3/8"	1 1/4 lbs.	\$0.90	\$0.81	\$0.72
RC-7757	2"	1 lb.	.40	.36	.32
RC-7758	3 1/4"	6 lbs.	2.17	1.95	1.74

• New product.

### DELUXE RELAY RACKS

#### 17 1/8" Overall Depth

#### WITH 19" WIDE PANEL SPACE

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-9	10-14	15-19
CR-1774	42 1/16"	36 3/4"	82	\$45.17	\$40.65	\$36.14
CR-1771	47 5/16"	42"	92	51.10	45.99	40.88
CR-1772	66 3/16"	61 1/4"	115	63.96	57.56	51.17
CR-1780	75 5/16"	70"	125	65.00	59.50	52.00
CR-1773	82 5/16"	77"	135	76.57	68.91	61.26

#### WITH 24" WIDE PANEL SPACE

CR-2474	42 1/16"	36 3/4"	96	\$57.50	\$51.75	\$46.00
CR-2471	47 5/16"	42"	108	65.00	58.50	52.00
CR-2472	66 3/16"	61 1/4"	135	81.50	73.35	65.20
CR-2475	75 5/16"	70"	146	83.00	74.70	66.40
CR-2473	82 5/16"	77"	158	97.60	87.84	78.08

### EXTRA DEEP DELUXE RACKS

Same as above, except 22" deep instead of 17 1/8" deep. Gray hammertone finish standard; for black or gray wrinkle add 10% to price.

#### WITH 19" WIDE PANEL SPACE

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-9	10-14	15-19
CR-2074	42 1/16"	36 3/4"	98	\$ 63.10	\$56.79	\$50.48
CR-2071	47 5/16"	42"	102	71.40	64.26	57.12
CR-2072	66 3/16"	61 1/4"	137	89.35	80.42	71.48
CR-2075	75 5/16"	70"	148	90.80	81.72	72.66
CR-2073	82 5/16"	77"	159	106.13	95.52	84.90

#### WITH 24" WIDE PANEL SPACE

CR-2484	42 1/16"	36 3/4"	115	\$ 81.00	\$ 72.90	\$64.80
CR-2481	47 5/16"	42"	119	91.00	81.90	72.80
CR-2482	66 3/16"	61 1/4"	160	114.00	102.60	91.20
CR-2485	75 5/16"	70"	173	116.00	104.40	92.80
CR-2483	82 5/16"	77"	186	136.00	122.40	108.80

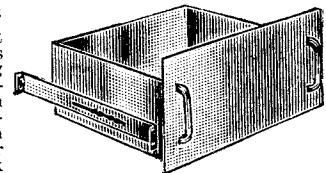
### SPACE SAVER RELAY RACKS

Same as Deluxe Series, except only 10" deep (9" inside, clear) to save space but retain panel height and width. Suited for use with Bud panel mounting chassis as well as standard 19" relay rack panels; lend themselves to Add-A-Rack assembly. Gray hammertone finish standard; for black or gray wrinkle add 10% to price.

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-9	10-14	15-19
RR-1271	47 5/16"	42"	70	\$36.60	\$32.95	\$29.28
RR-1272	66 3/16"	61 1/4"	91	45.85	41.26	36.68
RR-1273	75 5/16"	70"	100	53.75	48.37	43.00

### NEW DRAWER WITH ADJUSTABLE SLIDES

Fits any cabinet or cabinet rack with 19" panel space. Slide bracket adjustable 16 1/8" to 22 1/8" to fit any cabinet with depth 17" to 23". Fastens by bracket to panel mounting rail in front and rear of cabinet. Nylon rollers for smooth movement. Hardware supplied. Specify color when ordering: Add suffix HG for gray hammertone; B for black wrinkle; or G for gray wrinkle.



Bud No.	Inside Size, Inches	Wt., Lbs.	Net Each, Lots of		
			1-14	15-24	25-34
D-1721	16 1/2 x 6 3/8 x 16 1/4	19 1/2	\$40.80	\$36.72	\$32.64



# Relay Racks and Panels

## STANDARD RELAY RACK PANELS



Choice of steel or aluminum relay rack panels,  $\frac{3}{8}$ " or  $\frac{1}{2}$ " thick, in both 19" and 24" widths. Specify color when ordering, use letter suffix: **B** for black wrinkle; **G** for gray wrinkle; **HG** for gray hammertone; **SB** for smooth blue; **SG** for smooth gray. Aluminum panels 5005 H-36 alloy.

### STANDARD 19" WIDE PANELS

Ht., In.	$\frac{3}{8}$ " STEEL				$\frac{1}{2}$ " ALUMINUM			
	Bud No. PS-	Net Each.	Lots of		Bud No. PA-	Net Each.	Lots of	
		1-49	50-99	100-149		1-49	50-99	100-149
1 $\frac{3}{4}$	1250	\$0.84	\$0.76	\$0.67	1101	\$1.09	\$0.98	\$0.87
3 $\frac{1}{2}$	1251	1.00	.90	.80	1102	1.42	1.28	1.14
5 $\frac{1}{4}$	1252	1.25	1.13	1.00	1103	1.92	1.73	1.54
7	1253	1.42	1.28	1.14	1104	2.42	2.18	1.94
8 $\frac{3}{4}$	1254	1.75	1.58	1.40	1105	2.84	2.56	2.27
10 $\frac{1}{2}$	1255	2.09	1.88	1.67	1106	3.59	3.23	2.87
12 $\frac{1}{4}$	1256	2.42	2.18	1.94	1107	4.09	3.68	3.27
14	1257	2.84	2.56	2.27	1108	4.76	4.28	3.81
15 $\frac{3}{4}$	1258	3.09	2.78	2.47	1109	5.34	4.81	4.27
17 $\frac{1}{2}$	1259	3.51	3.16	2.81	1110	5.85	5.27	4.68
19 $\frac{1}{4}$	1260	3.84	3.46	3.07	1111	6.43	5.79	5.14
21	1261	4.26	3.83	3.41	1112	7.01	6.31	5.61

### STANDARD 24" WIDE PANELS

Ht., In.	STANDARD 19" WIDE PANELS				STANDARD 24" WIDE PANELS			
	Bud No. PA-	Net Each.	Lots of		Bud No. PA-	Net Each.	Lots of	
		1-49	50-99	100-149		1-49	50-99	100-149
1 $\frac{3}{4}$	3420	\$1.25	\$1.13	\$1.00	2401	\$1.70	\$1.53	\$1.36
3 $\frac{1}{2}$	3421	1.45	1.31	1.17	2402	2.20	1.98	1.76
5 $\frac{1}{4}$	3422	1.80	1.62	1.44	2403	3.00	2.70	2.40
7	3423	2.05	1.85	1.65	2404	3.75	3.38	3.01
8 $\frac{3}{4}$	3424	2.55	2.30	2.05	2405	4.40	3.96	3.52
10 $\frac{1}{2}$	3425	3.05	2.75	2.45	2406	5.60	5.04	4.48
12 $\frac{1}{4}$	3426	3.60	3.24	2.88	2407	6.35	5.72	5.09
14	3427	4.15	3.74	3.33	2408	7.40	6.66	5.92
15 $\frac{3}{4}$	3428	4.70	4.23	3.76	2409	8.30	7.47	6.64
17 $\frac{1}{2}$	3429	5.20	4.68	4.16	2410	9.10	8.19	7.28
19 $\frac{1}{4}$	3430	5.75	5.18	4.60	2411	10.00	9.00	8.00
21	3431	6.35	5.72	5.09	2412	11.00	9.90	8.80

### STANDARD $\frac{3}{8}$ " THICK ALUMINUM PANELS

Ht., In.	Standard 19" Wide Panels				Standard 24" Wide Panels			
	Bud No. PA-	Net Each.	Lots of		Bud No. PA-	Net Each.	Lots of	
		1-49	50-99	100-149		1-49	50-99	100-149
1 $\frac{3}{4}$	3101	\$1.74	\$1.57	\$1.39	2431	\$3.10	\$2.79	\$2.48
3 $\frac{1}{2}$	3102	2.27	2.04	1.82	2432	4.00	3.60	3.20
5 $\frac{1}{4}$	3103	3.07	2.76	2.46	2433	5.50	4.95	4.40
7	3104	3.87	3.48	3.10	2434	6.80	6.12	5.44
8 $\frac{3}{4}$	3105	4.54	4.09	3.63	2435	8.00	7.20	6.40
10 $\frac{1}{2}$	3106	5.74	5.17	4.59	2436	10.15	9.04	8.12
12 $\frac{1}{4}$	3107	6.54	5.89	5.23	2437	11.50	10.35	9.20
14	3108	7.62	6.86	6.10	2438	13.50	12.15	10.80
15 $\frac{3}{4}$	3109	8.54	7.69	6.83	2439	15.05	13.55	12.05
17 $\frac{1}{2}$	3110	9.36	8.42	7.49	2440	16.50	14.85	13.20
19 $\frac{1}{4}$	3111	10.29	9.26	8.23	2441	18.20	16.38	14.56
21	3112	11.22	10.10	8.98	2442	20.00	18.00	16.00

### SURFACE SHIELD PANELS

Bright aluminum alloy 5005 H-36 panels have blemish-free mill finish. Covered on both sides with sturdy, pressure-sensitive, white paper; protects against damage and useful for marking for drilling, positioning, etc. Standard notched sizes.

### STANDARD 19" WIDE PANELS

Ht., In.	$\frac{1}{8}$ " ALUMINUM				$\frac{3}{16}$ " ALUMINUM			
	Bud SFA-	Net Each.	Lots of		Bud SFA-	Net Each.	Lots of	
		1-49	50-99	100-149		1-49	50-99	100-149
1 $\frac{3}{4}$	1831	\$0.97	\$0.87	\$0.78	3161	\$1.79	\$1.61	\$1.43
3 $\frac{1}{2}$	1832	1.34	1.21	1.07	3162	2.36	2.12	1.89
5 $\frac{1}{4}$	1833	1.80	1.62	1.44	3163	3.17	2.85	2.54
7	1834	2.21	1.99	1.77	3164	3.91	3.52	3.13
8 $\frac{3}{4}$	1835	2.66	2.39	2.13	3165	4.68	4.21	3.74
10 $\frac{1}{2}$	1836	3.34	3.01	2.67	3166	5.90	5.31	4.72
12 $\frac{1}{4}$	1837	3.85	3.47	3.08	3167	6.80	6.12	5.44
14	1838	4.45	4.01	3.56	3168	7.85	7.06	6.28
15 $\frac{3}{4}$	1839	4.97	4.47	3.98	3169	8.76	7.88	7.01
17 $\frac{1}{2}$	1840	5.47	4.92	4.38	3170	9.67	8.70	7.74
19 $\frac{1}{4}$	1841	5.99	5.39	4.79	3171	10.57	9.51	8.46
21	1842	6.50	5.85	5.20	3172	11.48	10.33	9.18

### STANDARD 24" WIDE PANELS

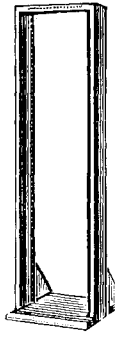
Ht., In.	STANDARD 19" WIDE PANELS				STANDARD 24" WIDE PANELS			
	Bud No. PS-	Net Each.	Lots of		Bud No. PS-	Net Each.	Lots of	
		1-49	50-99	100-149		1-49	50-99	100-149
1 $\frac{3}{4}$	2451	\$1.90	\$1.71	\$1.52	3401	\$3.55	\$3.20	\$2.85
3 $\frac{1}{2}$	2452	2.50	2.25	2.00	3402	4.70	4.23	3.76
5 $\frac{1}{4}$	2453	3.30	2.97	2.64	3403	6.30	5.67	5.04
7	2454	4.20	3.78	3.36	3404	7.75	6.98	6.21
8 $\frac{3}{4}$	2455	4.90	4.41	3.92	3405	9.30	8.37	7.44
10 $\frac{1}{2}$	2456	6.20	5.53	4.96	3406	11.70	10.53	9.36
12 $\frac{1}{4}$	2457	7.00	6.30	5.60	3407	13.50	12.15	10.80
14	2458	8.20	7.38	6.56	3408	15.60	14.04	12.48
15 $\frac{3}{4}$	2459	9.20	8.28	7.36	3409	17.40	15.66	13.92
17 $\frac{1}{2}$	2460	10.00	9.00	8.00	3410	19.20	17.28	15.36
19 $\frac{1}{4}$	2461	11.00	9.90	8.80	3411	21.00	18.90	16.80
21	2462	12.00	10.80	9.60	3412	22.80	20.52	18.24

### RACK SHELVES

Heavy gauge steel shelves with 1" flange for rigidity and strength. Mount on chassis supporting angles in rack to hold power supplies, modulators, etc. Width 19". Black enamel finish.

Bud No.	Depth, Inches	Weight, Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
CB-1976	15"	6 $\frac{1}{2}$	\$3.47	\$3.12	\$2.78
CB-1977	12"	5 $\frac{1}{2}$	2.64	2.38	2.11

## NEW DELUXE TELEPHONE-TYPE RELAY RACKS



Sturdy open rack with extra strength and greater capacity. Upright U-member is utilize-welded with ventilation provided at top. Two panel-mounting rails, at front and rear, tapped 10-32 with W.E. spacing. Made of 12 ga. steel throughout. Chassis-type base drilled for RC-7756 casters. Triangular brackets hold uprights to base; holes provided on both sides for bolting racks together in "Add-A-Rack" manner. Add suffix **HG** for gray hammertone finish; **B** for black wrinkle; or **G** for gray wrinkle. Nos. RR-1367-RR-1369 have 20 $\frac{1}{2}$ " base width and take 19" wide panels. Nos. RR-2467-RR-2469 have 25 $\frac{1}{2}$ " base width and take 24" wide panels.

Bud No.	Height, Overall	Panel Space	Net Each, Lots of		
			1-9	10-14	15-19
RR-1367	64 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	\$35.50	\$31.95	\$28.40
RR-1368	73 $\frac{3}{8}$ "	70"	36.25	32.63	29.01
RR-1369	80 $\frac{3}{8}$ "	77"	43.00	38.70	34.40
RR-2467	64 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	45.00	40.50	36.00
RR-2468	73 $\frac{3}{8}$ "	70"	46.00	41.40	36.80
RR-2469	80 $\frac{3}{8}$ "	77"	54.50	49.05	43.60

## TELEPHONE-TYPE RELAY RACKS

Standard Models: 3" channels and crossbars of  $\frac{1}{4}$ " steel. Base has chassis type bottom with side angles. Base drilled for RC-7756 casters. Black wrinkle (suffix "B") or gray hammertone (suffix "HG").

Heavy Duty Models RR-1265 and RR-1465: Two 3 $\frac{1}{2}$ " x 5" x  $\frac{1}{4}$ ", 20 $\frac{3}{4}$ " long angles form base. Steel channels are 3" x 1 $\frac{3}{8}$ ", 72 $\frac{1}{4}$ " long. Cross bars are  $\frac{1}{8}$ " x 2 $\frac{3}{8}$ " angles. Panel holes tapped 12-24 with W.E. space. Black wrinkle finish only. Usually bolted to floor.

### FOR 19" WIDE PANELS

Bud No.	Height, Overall	Panel Space	Net Each, Lots of		
			1-9	10-14	15-19
RR-1263	35 $\frac{3}{4}$ "	31 $\frac{1}{2}$ "	\$21.71	\$19.53	\$17.37
RR-1363	40 $\frac{5}{8}$ "	36 $\frac{3}{8}$ "	21.96	19.76	17.57
RR-1264	70 $\frac{3}{8}$ "	66 $\frac{1}{2}$ "	24.80	22.32	19.84
RR-1364	75 $\frac{5}{8}$ "	71 $\frac{3}{4}$ "	25.13	22.62	20.10
RR-1366	81 $\frac{1}{4}$ "	77"	29.98	26.98	23.98
RR-1265	72 $\frac{1}{4}$ "	66 $\frac{1}{2}$ "	54.78	49.30	43.82

### FOR 24" WIDE PANELS

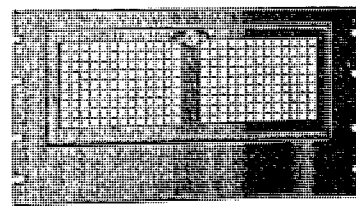
Bud No.	Height, Overall	Panel Space	Net Each, Lots of		
			1-9	10-14	15-19
RR-1463	35 $\frac{3}{4}$ "	31 $\frac{1}{2}$ "	\$26.00	\$25.20	\$22.40
RR-2463	40 $\frac{5}{8}$ "	36 $\frac{3}{8}$ "	29.00	26.10	23.20
RR-1464	70 $\frac{3}{8}$ "	66 $\frac{1}{2}$ "	32.00	28.80	25.60
RR-2464	75 $\frac{5}{8}$ "	71 $\frac{3}{4}$ "	33.00	29.70	26.40
RR-2466	81 $\frac{1}{4}$ "	77"	39.00	35.10	31.20
RR-1465	72 $\frac{1}{4}$ "	66 $\frac{1}{2}$ "	71.00	63.90	56.80

## TABLE-MOUNT TELEPHONE RACK

Sturdy rack with chassis type base mounts heavy components on table where enclosures are not required. Panel mount rails recessed for flush mount of 19" panels. Shipped knocked down. Specify black wrinkle (suffix "B") or gray hammertone ("HG").

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-14	15-24	25-34
RR-1248	24"	21"	15	\$ 9.10	\$ 8.19	\$7.28
RR-1249	31"	28"	18	11.19	10.07	8.95

## VENTILATED DOOR RACK PANELS



Generous perforated area in door provides adequate ventilation for adjacent units. Also features a newly designed plunger-type latch for positive locking and easy opening. Distance from hinged side of opening to bottom, 3 $\frac{1}{2}$ ", from lock side of opening to top, 1". Available in black or gray wrinkle finish or gray hammertone finish (specify when ordering).  $\frac{1}{8}$ " steel, 19" long.

Bud No.	Height, Overall	Door Size, Inches	Wt., Lbs.	Net Each, Lots of		
				1-49	50-99	100-14

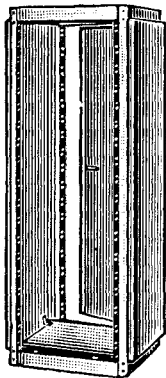




# Racks, Cabinets, Blowers

## PRESTIGE BALL CORNER RACKS

Attractive, practical housing for permanent or mobile instrumentation. Standard Prestige relay rack consists of framework, top, bottom, two ball cornered sides, and a ball corner door. Sides attach to frame by means of a tongue-and-slot arrangement at bottom and two screws at top. Sides easily removable for access. Drilled and tapped panel mounting rails on all four vertical members of frame. Doors mount from either left or right side. Slotted base takes ball-cornered side panels on any of the four sides. Door and side clearance permits covering of equipment without damage to knobs or controls. Provision made for recessed casters. Extra doors available for placing on any of the sides. Knockout holes provided for attaching two or more units together. Bottom will support 500 lbs., panel rails 200 lbs. suspended vertically between rails. Units take Bud SD-1717 sliding drawer assembly or CD-2210 console drawer. Shipped knocked-down, with necessary assembly hardware. **Gray hammertone finish only. Now furnished with adjustable panel mounting rails.**



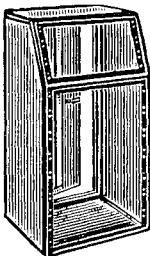
Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-9	10-14	15-19
CR-2280	69 <sup>1</sup> / <sub>16</sub> "	61 <sup>1</sup> / <sub>4</sub> "	179	\$108.35	\$ 97.51	\$ 86.68
CR-2281	71 <sup>13</sup> / <sub>16</sub> "	66 <sup>1</sup> / <sub>2</sub> "	186	115.55	103.99	92.44
CR-2282	82 <sup>5</sup> / <sub>16</sub> "	77"	213	129.75	116.77	103.80
DR-2290	Door for CR-2280			28	13.50	12.15
DR-2291	Door for CR-2281			33	14.40	12.96
DR-2292	Door for CR-2282			39	16.20	14.58

## PRESTIGE ADD-A-RACKS

Where relay racks are to be joined in series the Add-A-Rack assembly is lower in cost yet provides additional strength and improved appearance. Consists of top, bottom, rear door and framework. Made of 16 gauge steel. Extra ball corner doors will fit adjustable panel mounting rails which are recessed so that panel will be flush with face of rack. Add-A-Racks may be added at any time as needed. Gray hammertone finish.

Bud No.	Used to Add-A-Rack to	Net Each, Lots of		
		1-9	10-14	15-19
CR-2284	CR-2280	\$ 85.29	\$76.76	\$68.23
CR-2286	CR-2281	92.15	82.94	73.72
CR-2287	CR-2282	103.47	93.12	82.78

## IMPERIAL INCLINED PANEL CONSOLE

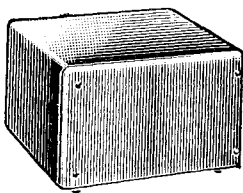


Smart looking all-aluminum Imperial console built for strength while keeping weight factor in mind. Complete assembly includes framework, top, bottom, two sides, and reinforced door with concealed hinges and flush mounted latch. Extrusions and joints are ball-cornered aluminum castings. Inclined panel set at 22<sup>1</sup>/<sub>2</sub>° angle for comfortable viewing. Cast brass, heavy duty hinges specifically designed to enable components, blowers, etc., to be mounted on rear door. Framework for top, inclined panel area and front are extrusions, drilled and tapped to accept standard rack panels. Casters may be attached to bottom. Standard Bud aluminum panels may be used to enclose the front and inclined panel spaces. Gray hammertone finish only.

Bud No.	Overall, Inches W. x D. x H.	Vertical Panel Size, Inches	Weight, Lbs.	Net Each, Lots of		
				1-9	10-14	15-19
BI-1828	20 <sup>13</sup> / <sub>16</sub> " x 18 <sup>5</sup> / <sub>16</sub> " x 40 <sup>11</sup> / <sub>16</sub> "	19 <sup>1</sup> / <sub>16</sub> " x 28 <sup>1</sup> / <sub>16</sub> "	41			
BI-2228	20 <sup>15</sup> / <sub>16</sub> " x 22 <sup>1</sup> / <sub>2</sub> " x 40 <sup>11</sup> / <sub>16</sub> "	19 <sup>1</sup> / <sub>16</sub> " x 28 <sup>1</sup> / <sub>16</sub> "	47			
BI-2419	20 <sup>15</sup> / <sub>16</sub> " x 19 <sup>17</sup> / <sub>16</sub> " x 43 <sup>1</sup> / <sub>16</sub> "	19 <sup>1</sup> / <sub>16</sub> " x 24 <sup>1</sup> / <sub>16</sub> "	43			
BI-2421	20 <sup>15</sup> / <sub>16</sub> " x 21 <sup>5</sup> / <sub>16</sub> " x 43 <sup>1</sup> / <sub>16</sub> "	19 <sup>1</sup> / <sub>16</sub> " x 24 <sup>1</sup> / <sub>16</sub> "	46			
Bud No.	Net Each, Lots of					
	1-9	10-14	15-19			
BI-1828	\$155.00	\$139.50	\$124.00			
BI-2228	170.00	153.00	136.00			
BI-2419	190.00	171.00	152.00			
BI-2421	200.00	180.00	160.00			

## CONTOUR UTILITY CABINETS

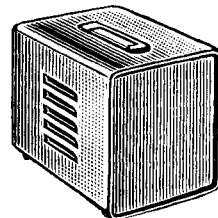
Attractively designed utility housing with rounded contour corners. Planged panels also have rounded corners to preserve the symmetry of design. Constructed of 20 gauge steel. Both front and rear panels are removable; the front panel is solid while the rear panel is louvered for proper ventilation. Four rubber feet, attached to base, prevent scratching surface the unit is placed on. Body is smooth, dark gray enamel; panel is smooth light gray enamel.



Bud No.	Overall Size, Inches			Net Each, Lots of		
	H.	W.	D.	1-24	25-49	50 & Over
CU-463	4 <sup>1</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	\$ 5.50	\$4.95	\$4.40
CU-465	4 <sup>1</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>8</sub>	6.35	5.72	5.08
CU-585	5 <sup>1</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>8</sub>	8.35	7.52	6.68
CU-587	5 <sup>1</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	9.10	8.19	7.28
CU-7125	7 <sup>1</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>8</sub>	9.70	8.73	7.76
CU-7127	7 <sup>1</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	10.35	9.32	8.28

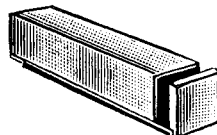
## PORTACAB

Attractive, versatile cabinets desirable as housings for instrumentation requiring highly stylized appearance. Custom, quality look achieved in standard production models. Made entirely of aluminum to minimize weight. Flexible recessed handle permits easy portability as well as vertical stacking. Well louvered for adequate ventilation. Louvers point inward, permitting side-to-side placement of cabinets without space loss. Aluminum front panel recessed <sup>1</sup>/<sub>2</sub>". Welded back has opening. Perimeter of panel follows contour of body. Has four detachable rubber feet. Gray hammertone finish only.



Bud No.	Size, Inches W. x D. x H.	Wt., Lbs.	Bud Chassis	Net Each, Lots of		
				1-24	25-49	50-99
WA-1540	6 <sup>1</sup> / <sub>2</sub> " x 8" x 8"	2 <sup>1</sup> / <sub>2</sub>	AC-402	\$ 9.20	\$ 8.28	\$ 7.36
WA-1541	8 <sup>1</sup> / <sub>2</sub> " x 12" x 9"	3	AC-407	12.00	10.80	9.60
WA-1542	10 <sup>1</sup> / <sub>2</sub> " x 8" x 8"	3 <sup>1</sup> / <sub>2</sub>	AC-406	10.65	9.59	8.52
WA-1543	11 <sup>1</sup> / <sub>2</sub> " x 18" x 11"	6 <sup>1</sup> / <sub>2</sub>	AC-416	13.50	12.15	10.80
WA-1544	14 <sup>1</sup> / <sub>2</sub> " x 18" x 12"	7 <sup>3</sup> / <sub>4</sub>	AC-420	15.50	13.95	12.40

## MINISLIDE

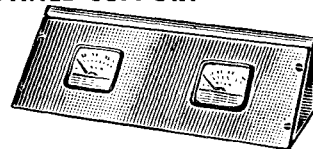


Ideal for housing components or assemblies where easy access to internally mounted parts is important. Can be mounted in a number of positions in a rack or cabinet. Accessibility achieved by removing sliding cover. Design of Minislide Box provides adequate shielding and protection from dust. Sturdily made of .050 aluminum. 4 self-tapping fastening screws included. Choice of gray hammertone (GH) or natural aluminum (NA).

Bud No.	Finish	Size, Inches W. x D. x H.	Wt., Lbs.	Net Each, Lots of		
				1-49	50-99	100-149
MS-2150	(GH)	3 <sup>1</sup> / <sub>4</sub> " x 13" x 2 <sup>3</sup> / <sub>4</sub> "	1	\$3.75	\$3.38	\$3.00
MS-2151	(GH)	5 <sup>1</sup> / <sub>4</sub> " x 13" x 2 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub>	4.30	3.87	3.44
MS-2152	(GH)	3 <sup>1</sup> / <sub>4</sub> " x 17" x 2 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub>	4.15	3.74	3.32
MS-3050	(NA)	3 <sup>1</sup> / <sub>4</sub> " x 13" x 2 <sup>3</sup> / <sub>4</sub> "	1	2.85	2.57	2.28
MS-3051	(NA)	5 <sup>1</sup> / <sub>4</sub> " x 13" x 2 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub>	3.50	3.15	2.80
MS-3052	(NA)	3 <sup>1</sup> / <sub>4</sub> " x 17" x 2 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub>	3.35	3.02	2.68

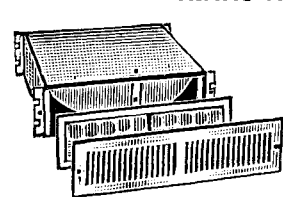
## DUAL-VIEW PANEL SUPPORT

Designed for installation on a rack where an oblique view of instrument panel is desired. Engineered so that the entire assembly occupies no more space than size of supported panel. Panel support cover can be removed for easy servicing or installation of instruments. Made of heavy gauge steel with attractive contoured edges. Comes knocked-down with necessary assembly hardware, but without panels. Bud panels to fit these supports are PS-1253 (steel), and PA-1104 (aluminum) for Model IP-1120; PS-1255 (steel), and PA-1106 (aluminum) for IP-1121. Furnished in black wrinkle (add suffix "B"), gray hammertone (add suffix "HG"), gray wrinkle (add suffix "G"), smooth gray (suffix "SG"), or smooth blue (suffix "SB").



<b>Bud No. IP-1120</b> —Requires 19" x 7" panel space. Wt., 3 <sup>1</sup> / <sub>2</sub> lbs. Net Each, Lots of 1-14. . . . . \$4.15
Lots of 15-24, Each. . . . . \$3.74
Lots of 25-34, Each. . . . . \$3.32
<b>Bud No. IP-1121</b> —Requires 19" x 10 <sup>1</sup> / <sub>2</sub> " panel space. Wt., 6 <sup>1</sup> / <sub>2</sub> lbs. Net Each, Lots of 1-14. . . . . \$5.80
Lots of 15-24, Each. . . . . \$5.22
Lots of 25-34, Each. . . . . \$4.64

## TRANS-AIRE BLOWER



Ideal for use where excessive heat is generated by equipment in an enclosed rack, cabinet or console. Brings in fresh air or exhausts heated air, enabling use as an exhaust or intake blower, depending upon mounting position. Unit will operate in any position—vertical or horizontal. May be mounted to rails of standard cabinet or rack. Use of Bud Chassis Supporting Angles SA-1349, SA-1350 or CE-2219 is recommended when blower

is mounted in rack or cabinet. Motor is rubber mounted to reduce vibration. Operating noise factor reduced to minimum. Thermal overload protection to prevent overheating. Automatic reset. Oil impregnated, fiberglass disposable filter can be changed without removing unit from cabinet. Three sizes provide air displacement from 100 c.f.m. to 750 c.f.m. at 0° static pressure. Complete with filter, chrome-plated grille and 18" three-wire cord. All dimensional and technical data in table below. **Weight:** B-23 17<sup>1</sup>/<sub>4</sub> lbs., B-25 33 lbs.; B-27 35<sup>1</sup>/<sub>2</sub> lbs.; replacement filter 1 lb.

## BLOWERS

Bud No.	Panel Space	Depth	Air c.f.m.		Mot. hp	Net Each, Lots of		
			High	Low		1-9	10-14	15 Up
B-23	3 <sup>1</sup> / <sub>2</sub> " x 19"	12"	200	100	1/20	\$47.10	\$42.39	\$37.68
B-25	5 <sup>1</sup> / <sub>2</sub> " x 19"	14 <sup>1</sup> / <sub>2</sub> "	500	250	1/6	53.35	48.02	42.68
B-27	7" x 19"	14 <sup>1</sup> / <sub>2</sub> "	750	350	1/4	61.35	55.22	49.08

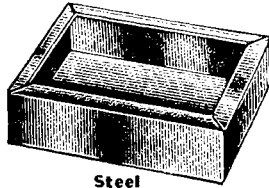
## FILTERS FOR ABOVE BLOWERS

Bud No.	Unit	Net Each, Lots of		
		1-24	25-49	50-99
BF-24	Filter for use with B-23	\$1.35	\$1.22	\$1.08
BF-26	Filter for use with B-25	1.50	1.35	1.20
BF-28	Filter for use with B-27	1.65	1.49	1.32

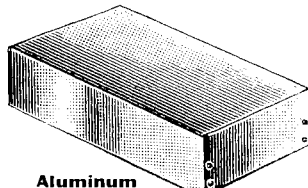


# Chassis, Dial Lock

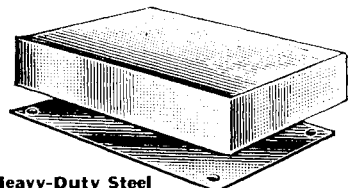
## STEEL AND ALUMINUM CHASSIS BASES, PLATES



Steel



Aluminum



Heavy-Duty Steel

Each chassis is made from a single sheet of metal. All corners are reinforced and spot welded. Aluminum bases are welded on Government approved welders as used for aircraft parts; natural finish aluminum alloy 5005 H-14. All four sides are folded at the bottom for added rigidity and strength.

### STEEL CHASSIS BASES

Made of 20 gauge steel except as otherwise specified.

Size, Inches D. x W. x H.	Zinc Plated Finish			Black Wrinkle Finish		
	Bud CB-	Net Each,	Lots of	Bud CB-	Net Each,	Lots of
	1-24	25-49	50-99	1-24	25-49	50-99
5 1/2 x 5 1/2 x 1	101*	\$1.47	\$1.32	\$1.18		
5 x 7 x 2	629*	1.30	1.17	1.04	628*	\$1.07 \$0.96 \$0.86
4 1/2 x 8 x 1 1/2	102*	1.60	1.44	1.28		
5 x 9 x 1 1/2	103*	1.40	1.26	1.12		
5 x 9 1/2 x 2 1/2	645*	1.67	1.50	1.34	644*	1.37 1.23 1.10
5 x 9 1/2 x 1 1/2	776*	1.69	1.52	1.35	788*	1.20 1.08 .96
5 x 10 x 3	605*	1.84	1.66	1.47	604*	1.27 1.14 1.02
5 x 13 x 3	105	2.30	2.07	1.84		
6 x 8 x 2 1/2	104	1.57	1.41	1.26		
6 x 14 x 3	756	2.05	1.85	1.64	755	1.75 1.58 1.40
7 x 7 x 2	1191	1.50	1.35	1.20	789	1.20 1.08 .96
7 x 9 x 2	1192	1.59	1.43	1.27	790	1.40 1.26 1.12
7 x 11 x 2	1193	1.67	1.50	1.34	791	1.45 1.31 1.16
7 x 12 x 3	793	2.05	1.85	1.64	792	1.57 1.41 1.26
7 x 13 x 2	1194	1.92	1.73	1.54	646	1.54 1.39 1.23
7 x 13 x 3	1198	2.17	1.95	1.74	647	1.77 1.59 1.42
7 x 15 x 3	1189	2.40	2.16	1.92	649	2.00 1.80 1.60
8 1/2 x 15 x 3	666	2.71	2.44	2.17	665	2.24 2.02 1.79
4 x 17 x 3	1066	2.14	1.93	1.71	1068	1.80 1.62 1.44
7 x 17 x 2 1/2	1199	2.37	2.13	1.90	648	1.99 1.79 1.59
7 x 17 x 3	758	2.59	2.33	2.07	757	2.15 1.94 1.72
8 x 10 x 2 1/2	702	2.02	1.82	1.62	701	1.72 1.55 1.38
8 x 12 x 2 1/2	704	2.24	2.02	1.79	703	1.75 1.58 1.40
8 x 12 x 3	760	2.34	2.11	1.87	759	1.85 1.67 1.48
8 x 17 x 2	774	2.34	2.11	1.87	650	1.70 1.53 1.36
8 x 17 x 3	775	2.62	2.39	2.10	651†	2.05 1.85 1.64
10 x 12 x 3	1195	2.25	2.03	1.80	652	1.89 1.70 1.51
12 x 12 x 3	106	3.34	3.01	2.67		
10 x 14 x 3	779	2.44	2.20	1.95	653	2.04 1.84 1.63
10 x 17 x 2	799	2.39	2.15	1.91	654†	2.00 1.80 1.60
10 x 17 x 3	637	2.84	2.57	2.27	636†	2.00 1.80 1.60
10 x 17 x 3	1196†	3.05	2.75	2.44	655††	2.54 2.29 2.03
10 x 23 x 3	1197†	3.42	3.08	2.74	656†	2.86 2.57 2.29
11 x 17 x 2	770†	2.81	2.53	2.25	657††	2.35 2.12 1.88
11 x 17 x 3	771†	3.49	3.14	2.79	658††	2.77 2.49 2.22
12 x 17 x 2	661†	3.09	2.78	2.47	663††	2.44 2.20 1.95
12 x 17 x 3	662†	3.67	3.30	2.94	664††	2.91 2.62 2.33
13 x 17 x 2	772†	3.72	3.35	2.98	659††	2.91 2.62 2.33
13 x 17 x 3	773†	4.07	3.66	3.26	660††	3.41 3.07 2.73
10 x 17 x 4	641†	3.51	3.16	2.81	640††	2.92 2.63 2.34
13 x 17 x 4	643†	4.68	4.21	3.74	642††	3.92 3.53 3.14
10 x 17 x 5	624†	5.34	4.81	4.27	623†	4.51 4.06 3.61
13 x 17 x 5	626†	5.93	5.34	4.74	625†	4.93 4.44 3.94

\*22 gauge. †Punched to accommodate chassis mounting brackets. ††18 gauge.

### STEEL CHASSIS BOTTOM PLATES

Protect wiring and keep out dust from chassis bottom. Four embossed feet. Two finishes to match chassis finish.

Fits Chassis Size, In. W. x L.	Zinc Plated Finish			Black Wrinkle Finish		
	Bud BP-	Net Each,	Lots of	Bud BP-	Net Each,	Lots of
	1-49	50-99	100-149	1-49	50-99	100-149
5 x 7	706	\$0.69	\$0.62	\$0.55	705	\$0.57 \$0.51 \$0.46
5 x 9 1/2	667	.75	.68	.60	680	.62 .56 .50
5 x 10	538	.73	.66	.58	536	.67 .60 .54
7 x 7	668	.97	.87	.78	681	.92 .83 .74
7 x 9	669	.99	.89	.79	682	.94 .85 .75
7 x 11	670	1.07	.96	.86	683	.95 .86 .76
7 x 12	539	1.12	1.01	.90	537	.99 .89 .79
7 x 13	671	1.20	1.08	.96	684	1.02 .92 .82
5 x 13 1/2	672	1.00	.90	.80	685	.84 .76 .67
4 x 17	1067	1.07	.96	.86	1069	.84 .76 .67
7 x 17	673	1.37	1.23	1.10	686	.90 .81 .72
8 x 10	708	1.05	.94	.84	707	.92 .83 .74
8 x 12	710	1.34	1.21	1.07	709	1.06 .95 .85
8 x 17	674	1.54	1.39	1.23	687	.95 .86 .76
10 x 12	675	1.57	1.41	1.26	688	.95 .86 .76
10 x 14	514	1.33	1.20	1.06	517	1.25 1.13 1.00
10 x 17	676	1.60	1.44	1.28	689	1.20 1.08 .96
11 x 17	677	1.60	1.44	1.28	690	1.20 1.08 .96
12 x 17	678	1.87	1.68	1.50	691	1.27 1.14 1.02
13 x 17	679	2.24	2.02	1.79	692	1.47 1.32 1.18

### HEAVY DUTY CHASSIS

Complete with 20 ga. bottom plate for uses requiring extra strength to hold heavy weights. Made of 16 ga. steel; 17" wide.

Size, In. D. x H.	Zinc Plated Finish			Black Wrinkle Finish		
	Bud CB-	Net Each,	Lots of	Bud CB-	Net Each,	Lots of
	1-24	25-49	50-99	1-24	25-49	50-99
8 x 3	1765	\$4.76	\$4.28	\$3.81	1758	\$4.26 \$3.83 \$3.41
11 x 3	1767	4.84	4.36	3.87	1760	4.34 3.91 3.47
13 x 2	1768	5.34	4.81	4.27	1761	4.84 4.36 3.87
13 x 3	1769	5.43	4.89	4.34	1762	4.93 4.44 3.94
13 x 4	1770	5.85	5.27	4.68	1763	5.26 4.73 4.21

### ALUMINUM CHASSIS BASES

Bud No.	Size, Inches D. x W. x H.	Ga.	Wt., Lbs.	Net Each, Lots of		
				1-24	25-49	50-99
AC-430	4 x 6 x 3	18	1 1/2	\$1.34	\$1.21	\$1.07
AC-431	4 x 6 x 2	18	1 1/2	1.10	.99	.88
AC-432	4 x 17 x 3	16	1 1/4	2.33	2.10	1.86
AC-402	5 x 7 x 2	18	1 1/2	1.17	1.05	.94
AC-429	5 x 7 x 3	18	1 1/2	1.42	1.28	1.14
AC-403	5 x 9 1/2 x 2	18	1 1/2	1.24	1.12	.99
AC-401	5 x 9 1/2 x 2 1/2	18	1 1/2	1.47	1.32	1.18
AC-421	5 x 9 1/2 x 3	18	1 1/2	1.60	1.44	1.28
AC-404	5 x 10 x 3	18	1 1/2	1.63	1.47	1.30
AC-422	5 x 13 x 3	16	1 1/4	1.84	1.66	1.47
AC-433	6 x 17 x 3	18	1 1/4	2.67	2.40	2.14
AC-405	7 x 7 x 2	18	1 1/2	1.35	1.22	1.08
AC-406	7 x 9 x 2	18	1 1/2	1.46	1.31	1.17
AC-407	7 x 11 x 2	18	1 1/2	1.58	1.42	1.26
AC-408	7 x 12 x 3	18	1 1/2	2.00	1.80	1.60
AC-409	7 x 13 x 2	18	1 1/2	1.67	1.50	1.34
AC-411	7 x 15 x 3	16	1 1/2	2.67	2.40	2.14
AC-423	7 x 17 x 3	16	1 1/2	2.75	2.48	2.20
AC-424	8 x 12 x 3	16	1 1/2	2.45	2.18	1.94
AC-425	8 x 17 x 2	16	1 1/2	2.51	2.26	2.01
AC-412†	8 x 17 x 3	16	1 1/2	2.84	2.56	2.27
AC-413	10 x 12 x 3	16	1 1/2	2.67	2.40	2.14
AC-414	10 x 14 x 3	16	1 1/2	2.84	2.56	2.27
AC-415†	10 x 17 x 2	16	1 1/4	2.68	2.41	2.14
AC-416†	10 x 17 x 3	16	2	3.17	2.85	2.54
AC-426†	11 x 17 x 2	14	2 1/4	3.42	3.08	2.74
AC-417†	11 x 17 x 3	14	2 1/4	3.97	3.57	3.18
AC-418†	12 x 17 x 3	14	2 1/2	4.03	3.67	3.26
AC-419†	13 x 17 x 2	14	2 1/2	3.51	3.16	2.81
AC-420†	13 x 17 x 3	14	2 1/2	4.26	3.83	3.41
AC-427†	10 x 17 x 4	14	3 1/2	4.51	4.06	3.61
AC-428†	13 x 17 x 4	14	3 1/2	5.76	4.73	4.21

†Punched to accommodate chassis mounting brackets.

### ALUMINUM CHASSIS BOTTOM PLATES

Bud No.	Fits Chassis W. x L., In.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
BPA-1589	5 x 7	3/8	\$0.74	\$0.67	\$0.59
BPA-1590	5 x 9 1/2	3/4	.75	.68	.60
BPA-1591	5 x 10	3/4	.75	.68	.60
BPA-1592	7 x 7	3/8	.77	.69	.62
BPA-1593	7 x 9	3/8	.80	.72	.64
BPA-1594	7 x 11	3/8	.90	.81	.72
BPA-1595	7 x 12	3/8	.97	.87	.78
BPA-1596	7 x 13	3/8	1.14	1.03	.91
BPA-1597	10 x 17	3/4	1.52	1.37	1.22
BPA-1598	13 x 17	3/4	2.07	1.86	1.66

### CHASSIS DECKS

Use in carrying cases, cabinets, etc.; deck is folded 1 1/2" over at front and 1/2" on sides. Black enamel finish only.

Bud No.	Size, In. W. x D.	Fits Cabinet Number	Net Each, Lots of		
			1-24	25-49	50-99
CB-522	4 1/2 x 5 1/2	CU-1098	68c	61c	54c
CB-523	4 1/2 x 4 1/2	CU-1099	65c	59c	52c
CB-525	5 1/2 x 5 1/2	CU-1124, CU-1096	78c	70c	62c

### CHASSIS SUPPORTING ANGLES

Distribute weight to sides of the rack to relieve the panel. Angles are 3" x 1 1/2" x 1/4" steel. Black enamel finish. No. CE-2219 designed for attachment to rails of Console Pedestal or Prestige Relay Racks. Slotted for infinite vertical adjustment; extend to full cabinet depth: 21" x 3" x 2 1/2".

Bud No.	Length, Inches	Weight, Lbs.	Net Per Pair, Lots of		
			1-24	25-49	50-99
SA-1349	14 1/2	4	\$2.25	\$2.03	\$1.80
SA-1350	12	3	2.17	1.95	1.74
CE-2219	21	7 1/2	3.00	2.70	2.40

### DIAL LOCK

The only simple-to-operate, efficient and inexpensive, positive dial lock on the market. Dual purpose design functions as both dial lock and position indicator. Completely eliminates problems of dial slippage and accidental movement. Nickel-plated brass construction.

Bud No. DL-1947 Dial Lock—Net Each..... **17c**

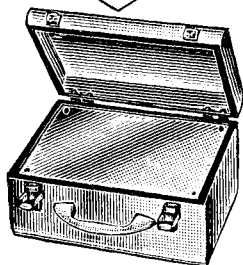
• New product.

**WRITE FOR INFORMATION AND PRICES ON BUD CONSOLE AND TABLE ASSEMBLIES.**



# Cases, Racks, Chassis

## •NEW TRANSICASES

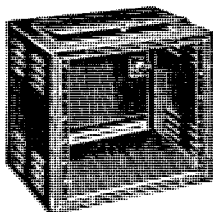


Handsome, portable instrument case with unlimited applications. Contour design fabricated of .040" aluminum with flush-fitting aluminum panel. Foam-rubber lined lid protects instruments in case; mounted on two slide-off, bright nickel-plated hinges with toggle catches. Rubber feet at both base and back; metal plugs supplied to fill holes if rubber feet are not used. Bright nickel-plated handle. **Specify Color:** Add suffix **SB** for smooth blue; **SG**, for smooth gray enamel.

Bud No.	Inside Panel Size, Inches	Clear Internal Space		Internal Aperture	Overall Size, Inches W. x D. x H.	Wt., Lbs.	Net Each, Lots of		
		Below Panel	Above Panel				1-14	15-24	25-34
TC-300	8 <sup>15</sup> / <sub>16</sub> x 5 <sup>15</sup> / <sub>16</sub>	4 <sup>13</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	8" x 5 <sup>31</sup> / <sub>32</sub> "	10 <sup>1</sup> / <sub>16</sub> x 7 x 6	3 <sup>3</sup> / <sub>4</sub>	\$24.95	\$22.46	\$19.96
TC-301	10 <sup>3</sup> / <sub>4</sub> x 7 <sup>1</sup> / <sub>4</sub>	4 <sup>13</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	9 <sup>1</sup> / <sub>16</sub> x 7 <sup>9</sup> / <sub>32</sub> "	11 <sup>1</sup> / <sub>2</sub> x 8 <sup>1</sup> / <sub>4</sub> x 6	4 <sup>1</sup> / <sub>2</sub>	25.50	22.95	20.40
TC-302	11 <sup>3</sup> / <sub>4</sub> x 7 <sup>15</sup> / <sub>16</sub>	5 <sup>23</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	10 <sup>15</sup> / <sub>16</sub> x 7 <sup>31</sup> / <sub>32</sub> "	13 x 9 x 7 <sup>1</sup> / <sub>2</sub>	6	26.00	23.40	20.80
TC-303	15 <sup>3</sup> / <sub>8</sub> x 7 <sup>15</sup> / <sub>16</sub>	5 <sup>23</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	14 <sup>1</sup> / <sub>16</sub> x 7 <sup>31</sup> / <sub>32</sub> "	16 <sup>1</sup> / <sub>2</sub> x 9 x 7 <sup>1</sup> / <sub>2</sub>	8	26.50	23.85	21.20
TC-304	19 x 7	7 <sup>11</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	18 <sup>1</sup> / <sub>16</sub> x 7 <sup>1</sup> / <sub>2</sub> "	20 <sup>3</sup> / <sub>8</sub> x 8 x 9	10	27.90	25.11	22.32

## DELUXE CABINET RACKS

Rounded corners, red-lined chrome trim. There is a recessed, hinged door on the top with a snap catch. These racks are made of heavy gauge steel and are of sturdy construction. The five large sizes have a hinged rear door, while the small sizes have a welded panel in the rear. Adequate ventilation is assured by means of louvered sides and a 2<sup>1</sup>/<sub>2</sub>" opening in the bottom of the back extends the entire width. "NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM.



In black wrinkle (add suffix "B" to number when ordering), gray wrinkle (suffix "G"), and hammertone gray (suffix "HG"). **Size:** 14<sup>3</sup>/<sub>4</sub>" x 22" w. Fits 19" panels. **Aluminum panel cover supplied.**

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-14	15-24	25-34
CR-1726	8 <sup>25</sup> / <sub>32</sub> "	7"	24	\$15.28	\$13.75	\$12.22
CR-1741	10 <sup>9</sup> / <sub>16</sub> "	8 <sup>3</sup> / <sub>4</sub> "	28	16.70	15.03	13.36
CR-1740	12 <sup>5</sup> / <sub>16</sub> "	10 <sup>1</sup> / <sub>2</sub> "	31	19.12	17.21	15.30
CR-1742	14 <sup>1</sup> / <sub>16</sub> "	12 <sup>1</sup> / <sub>2</sub> "	32	20.12	18.11	16.10
CR-1739	15 <sup>15</sup> / <sub>16</sub> "	14"	35	21.96	19.76	17.57
CR-1743*	19 <sup>5</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>2</sub> "	40	26.22	23.60	20.98
CR-1727*	22 <sup>15</sup> / <sub>16</sub> "	21"	43	28.06	25.25	22.45
CR-1744*	28 <sup>1</sup> / <sub>16</sub> "	26 <sup>1</sup> / <sub>2</sub> "	51	30.14	27.13	24.11
CR-1728*	33 <sup>5</sup> / <sub>16</sub> "	31 <sup>1</sup> / <sub>2</sub> "	58	31.98	28.78	25.58
CR-1745*	36 <sup>15</sup> / <sub>16</sub> "	35"	63	33.65	30.29	26.92

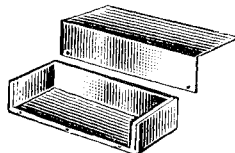
\*These sizes have both top and rear doors.

## HEAVY-DUTY CABINET RACKS

Similar to above units with Add-A-Cab feature (similar to Add-A-Rack) for continuously expanding systems. Panel mounting rails are integral part of the sides. Removable rear door. Louvered sides and 2<sup>1</sup>/<sub>2</sub>" x 17<sup>1</sup>/<sub>2</sub>" opening in the bottom of the back assure adequate ventilation. Made of 16 ga. steel. Gray hammertone finish; black or gray wrinkle at 10% additional charge. **Size:** 17<sup>3</sup>/<sub>4</sub>" d. x 22" w.

CR-1736	24 <sup>1</sup> / <sub>2</sub> "	19 <sup>1</sup> / <sub>4</sub> "	50	\$26.65	\$23.98	\$21.32
CR-1737	31 <sup>1</sup> / <sub>2</sub> "	26 <sup>1</sup> / <sub>4</sub> "	57	28.75	25.87	23.00
CR-1738	40 <sup>1</sup> / <sub>4</sub> "	35"	70	34.15	30.73	27.32
ACR-1936	Add-A-Cab for CR-1736		42	25.40	22.86	20.32
ACR-1937	Add-A-Cab for CR-1737		52	27.40	24.66	21.92
ACR-1938	Add-A-Cab for CR-1738		57	32.55	29.29	26.04

## •NEW CONVERTA-BOX

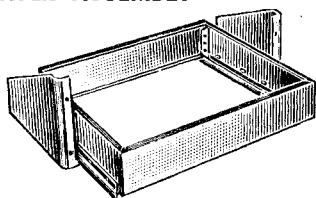


Versatile enclosure combines welded base and two-sided cover. Components or controls are easily mounted to any surface of the unit. All contents easily accessible. Cover and base are fastened by self-tapping screws. Rigid 20 ga. cadmium-plated steel.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
CU-341	1 <sup>1</sup> / <sub>2</sub> x 4 x 3	1 <sup>1</sup> / <sub>2</sub>	\$1.90	\$1.71	\$1.52
CU-452	2 x 5 x 4	1 <sup>1</sup> / <sub>2</sub>	2.00	1.80	1.60
CU-482	2 x 8 x 4	1 <sup>1</sup> / <sub>2</sub>	2.09	1.88	1.67
CU-592	2 <sup>1</sup> / <sub>2</sub> x 9 <sup>1</sup> / <sub>2</sub> x 5	1 <sup>3</sup> / <sub>4</sub>	2.25	2.03	1.80
CU-622	2 <sup>1</sup> / <sub>2</sub> x 12 x 6	2 <sup>3</sup> / <sub>4</sub>	2.50	2.25	2.00
CU-712	2 <sup>1</sup> / <sub>2</sub> x 15 x 7	3 <sup>1</sup> / <sub>2</sub>	3.34	3.01	2.67

## SLIDING DRAWER ASSEMBLY

Ideal for use as a record player mounting base, typewriter base, apparatus and instrument base, writing desk, etc. Installs quickly and simply in any standard rack. Can't fall out or tilt. Provides a completely safe mounting base for anything put on it. Ball bearing suspension for easy sliding. Chassis formed from one-piece 14 gauge aluminum; electro-

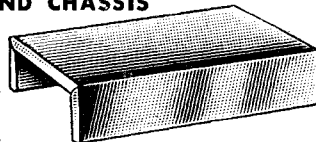


welded. Support brackets formed from one-piece 1/8" aluminum. Slide rail fastens securely to chassis, slides in and out easily on channelled ball bearings. Stop screw on slide rail prevents drawer from falling out of channel. Support brackets and channel finished in natural aluminum; chassis, slide and plate finished in light gray hammertone. Will support up to 50 lbs. **Chassis Size:** 16<sup>1</sup>/<sub>4</sub>" x 14" x 3", with 1/2" flange top and bottom. \*Fastens to top or bottom.

Bud No.	Description	Wt., Lbs.	Net Each, Lots of		
			1-14	15-24	25-34
SD-1717	Sliding drawer	5	\$11.43	\$10.29	\$9.14
TP-1718	Drawer plate*	1 <sup>1</sup> / <sub>2</sub>	2.56	2.30	2.05

## OPEN-END CHASSIS

Primarily intended to be used with the various sizes and styles of Bud metal cabinets, these chassis are ideal for any type of small built-up unit such as a record amplifier, code oscillator, etc. U-shaped construction is used with ends folded over 1/4" for additional strength. This unit is natural finish aluminum alloy 5005 H-14.



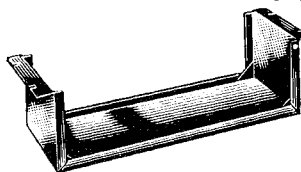
Bud No.	Size, Inches D. x W. x H.	Fits Cabinet Number	Net Each, Lots of		
			1-24	25-49	50-99
CB-38	7 x 6 x 2	C-1584	\$1.00	\$0.90	\$0.80
CB-30	5 x 7 x 1 <sup>1</sup> / <sub>2</sub>		.97	.87	.78
CB-41	7 x 7 x 1 <sup>1</sup> / <sub>2</sub>	C-973	1.24	1.12	.99
CB-39	7 x 8 x 2	C-1585	1.17	1.05	.94
CB-996	5 <sup>1</sup> / <sub>2</sub> x 9 x 1 <sup>1</sup> / <sub>2</sub>	C-993	1.09	.98	.87
CB-976	7 <sup>1</sup> / <sub>2</sub> x 9 x 1 <sup>1</sup> / <sub>2</sub>	C-999, CD-1481	1.40	1.26	1.12
CB-40	7 x 10 x 2	C-1586	1.37	1.23	1.10
CB-997	7 x 11 x 1 <sup>1</sup> / <sub>2</sub>	C-994, CD-1482	1.30	1.17	1.04
CB-998	7 x 13 x 1 <sup>1</sup> / <sub>2</sub>	C-995, CD-1483	1.59	1.43	1.27

## MINIATURE ALUMINUM CHASSIS

Small versions of above with 1/4" flange on bottom for bottom plate or fastening. Ideal for limited space uses. Natural finish.

CB-1623	2 <sup>3</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>4</sub> x 1 <sup>1</sup> / <sub>4</sub>		\$0.38	\$0.34	\$0.30
CB-1624	1 <sup>3</sup> / <sub>4</sub> x 3 <sup>3</sup> / <sub>8</sub> x 1	CU-883	.42	.38	.34
CB-1625	3 <sup>3</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub> x 2	C-1788	.48	.43	.38
CB-1626	2 <sup>3</sup> / <sub>4</sub> x 4 <sup>3</sup> / <sub>8</sub> x 1	CU-728	.45	.41	.36
CB-1627	3 <sup>3</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>2</sub>	CU-729	.45	.41	.36
CB-1628	3" x 6 <sup>3</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>4</sub>	C-1788	.53	.48	.42
CB-1629	5 <sup>3</sup> / <sub>4</sub> x 4 <sup>3</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>2</sub>	CU-1098	.57	.51	.46
CB-1617	4 x 3 <sup>3</sup> / <sub>8</sub> x 1	C-1606, C-1610	.41	.37	.33
CB-1618	4 x 4 <sup>3</sup> / <sub>8</sub> x 1	C-1607, C-1611	.50	.45	.40
CB-1619	4 x 5 <sup>3</sup> / <sub>8</sub> x 1	C-1608, C-1612	.53	.48	.42
CB-1620	4 x 6 <sup>3</sup> / <sub>8</sub> x 1	C-1609, C-1613	.55	.50	.44

## PANEL CHASSIS



Panel mounting chassis for vertical installation where depth is limited or front service is desired. Made of .062" aluminum alloy 5005 H-14 in natural finish. Front flange has standard notching. Fits standard 19" panel space.

Bud No.	Height, Inches	Weight, Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
CB-1370	1 <sup>3</sup> / <sub>4</sub>	3/4	\$2.30	\$2.07	\$1.84
CB-1371	3 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	2.59	2.33	2.07
CB-1372	5 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	3.84	3.56	3.27
CB-1373	7	2	3.26	2.93	2.61
CB-1374	8 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	3.76	3.38	3.01
CB-1375	10 <sup>1</sup> / <sub>2</sub>	2 <sup>3</sup> / <sub>4</sub>	4.43	3.99	3.54
CB-1376	12 <sup>1</sup> / <sub>4</sub>	3	4.84	4.36	3.87
CB-1377	14	3 <sup>3</sup> / <sub>4</sub>	5.34	4.81	4.27

## CHASSIS MOUNTING BRACKETS

Mounts chassis to panels, essential when panel supports entire chassis weight. Heavy gauge steel 6<sup>1</sup>/<sub>2</sub>" high, cut away at bottom to mount flush to panel. Black enamel finish.

Bud No.	Depth, In.	Net Per Pair, Lots of		
		1-49	50-99	100-149
MB-458	8	\$1.09	\$0.98	\$0.87
MB-448	10	1.35	1.22	1.08
MB-459	11	1.50	1.35	1.20
MB-449	12	1.75	1.58	1.40
MB-460	13	1.69	1.52	1.35
MB-450*	10	1.97	1.77	1.58
MB-451*	13	2.09	1.88	1.67

\*8<sup>1</sup>/<sub>2</sub>" high for chassis height of 4".

## TRIANGULAR MOUNTING BRACKETS

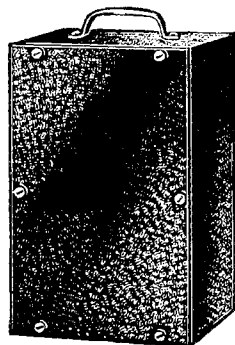
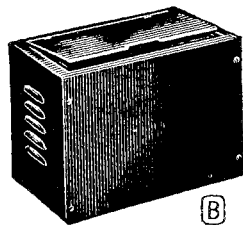
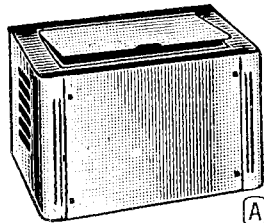
Ideal for rigid support of shelves to take heavy loads. Heavy gauge steel with 3/8" flange. Black enamel finish only.

Bud No.	Height, In.	Depth, In.	Wt., Lbs.	Net Per Pair, Lots of		
				1-9	10-14	15-19
MB-1266	5	5	1	\$1.00	\$0.90	\$0.80
MB-1267	7	7	1	1.17	1.05	.94
MB-1268	9	9	1 <sup>1</sup> / <sub>2</sub>	1.42	1.28	1.14

• New product.



# Cabinets and Cases



**STREAMLINED CABINETS (FIG. A)**

Ideal for housing devices not requiring excessive depth. Recessed, hinged cover with convenient finger lift for access. Panels fit flush with embossed, rounded corner fronts. Recommended for use with Bud Open End Chassis. Back opening 3 1/2" h. provides for cables or rear controls; louvered sides provide ample ventilation. Size: 8 1/4" d. x 8" h., overall. Specify black wrinkle (suffix "B"), gray wrinkle (suffix "G") or gray hammertone (suffix "HG") finish.

Bud No.	Width, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-24	25-49	50-99
CD-1480	10 1/2"	8" x 8"	5 1/2	\$ 5.90	\$ 5.31	\$ 4.72
CD-1481	12 1/2"	8" x 10"	6	6.01	5.41	4.81
CD-1482	14 1/2"	8" x 12"	6 1/2	6.31	5.68	5.05
CD-1483	16 1/2"	8" x 14"	7	6.71	6.09	5.42
CD-1484	18 1/2"	8" x 16"	7 1/2	7.36	6.62	5.89
CD-1485*	20 1/2"	12" x 18"	15	14.95	13.45	11.96

\*Depth is 12"; has 1/2" vertical chrome strip at corners.

**INSTRUMENT AND RECEIVER CABINETS (FIG. B)**

Economy version of the Streamlined Cabinet series. Recessed, hinged cover provides access to contents. Front panel is attached with self-tapping screws. Louvers provide ample ventilation. Bud Open End Chassis are suited for use with these units. Black wrinkle finish only.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
C-973	7 x 8 x 8	5	\$4.18	\$3.76	\$3.34
C-993	7 x 10 x 8	5 1/2	4.84	4.36	3.87
C-994	7 x 12 x 8	5 3/4	5.01	4.51	4.01
C-995	7 x 14 x 8	6	5.26	4.73	4.21
C-1190	8 x 16 x 8	7	7.60	6.84	6.08
C-975	9 x 15 x 11	8	9.19	8.27	7.35
C-999	12 x 18 x 12	15	9.92	8.93	7.94

**CARRYING CASES (FIG. C)**

A versatile cabinet that accepts a variety of equipment. Removable front and back panels; handle may be attached to top. Available in sturdy steel or lightweight aluminum to suit your requirements.

**STEEL CASES**

Specify black wrinkle (suffix "B") or gray hammertone (suffix "HG") finish when ordering.

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
CC-1095	5 x 6 x 9	3 1/2	\$3.01	\$2.71	\$2.41
CC-1091	5 x 9 x 6	3 3/4	3.01	2.71	2.41
CC-1096	6 x 7 x 12	4	4.18	3.76	3.34
CC-1092	6 x 12 x 7	4	4.18	3.76	3.34
CC-1097	7 x 7 3/4 x 15	5	4.68	4.21	3.74
CC-1100	8 x 10 x 10	5	4.84	4.36	3.87
CC-1093	7 x 15 x 9	5	5.85	5.27	4.68

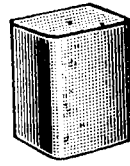
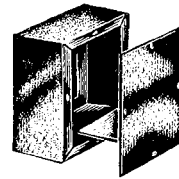
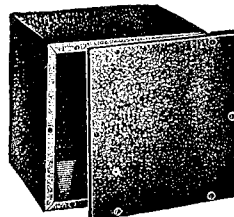
**NATURAL FINISH ALUMINUM CASES\***

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
ACC-2095	5 x 6 x 9	1 1/2	\$3.09	\$2.78	\$2.47
ACC-2091	5 x 9 x 6	1 1/2	3.09	2.78	2.47
ACC-2096	6 x 7 x 12	1 1/2	4.50	4.05	3.60
ACC-2092	6 x 12 x 7	1 1/2	4.50	4.05	3.60

**GRAY HAMMERTONE ALUMINUM CASES\***

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
ACC-2095HG	5 x 6 x 9	1 1/2	\$3.51	\$3.16	\$2.81
ACC-2091HG	5 x 9 x 6	1 1/2	3.51	3.16	2.81
ACC-2096HG	6 x 7 x 12	1 1/2	5.09	4.58	4.07
ACC-2092HG	6 x 12 x 7	1 1/2	5.09	4.58	4.07

\*Aluminum alloy 5005 H-14.



**METAL UTILITY CABINETS (FIG. D)**

Highly useful housing for all types of electronic equipment such as mixers, monitors, frequency meters, etc. Both front and back panels are removable for easy accessibility.

**STEEL CABINETS**

Specify black wrinkle (suffix "B") or gray hammertone (suffix "HG") finish.

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
CU-883	2 x 4 x 4	3/4	\$1.09	\$0.98	\$0.87
CU-728	3 x 5 x 4	1	1.22	1.10	0.98
CU-729	4 x 5 x 6	1 1/4	1.38	1.24	1.10
CU-1095	6 x 6 x 6	2 1/2	2.09	1.88	1.67
CU-1099	5 x 6 x 9	3	2.34	2.01	1.87
CU-879	7 x 8 x 10	5	3.34	2.96	2.67
CU-1124	6 x 7 x 12	4	3.29	2.96	2.63
CU-880	8 x 10 x 10	5 1/2	4.01	3.61	3.24
CU-881	8 x 11 x 12	6	4.34	3.91	3.47
CU-882	7 x 9 x 15	7 1/2	4.51	4.06	3.61

**NATURAL FINISH ALUMINUM CABINETS\***

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
AU-1083	2 x 4 x 4	3/4	\$1.29	\$1.16	\$1.03
AU-1028	3 x 5 x 4	1	1.37	1.23	1.10
AU-1029	4 x 5 x 6	1 1/4	1.50	1.35	1.20
AU-1039	6 x 6 x 6	2 1/2	2.17	1.95	1.74
AU-1040	5 x 6 x 9	3	2.51	2.26	2.01

**GRAY HAMMERTONE ALUMINUM CABINETS\***

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
AU-1083HG	2 x 4 x 4	3/4	\$1.50	\$1.35	\$1.20
AU-1028HG	3 x 5 x 4	1	1.67	1.50	1.34
AU-1029HG	4 x 5 x 6	1 1/4	1.84	1.66	1.47
AU-1039HG	6 x 6 x 6	2 1/2	2.42	2.18	1.94
AU-1040HG	5 x 6 x 9	3	2.84	2.56	2.27

\*Aluminum alloy 5005 H-14.

**MINIATURE UTILITY CABINETS (FIG. E)**

Ideal housing for construction of electronic devices using miniature tubes and transistorized circuitry. Front panel has a built-in chassis. Both front and rear panels are removable; fastened by self-tapping screws. Black wrinkle enamel finish.

Bud No.	Size, In. H. x W. x D.	Chassis W. x D., In.	Net Each, Lots of		
			1-49	50-99	100-149
C-1793	4 1/2 x 4 x 2	3 1/4 x 1 7/8*	\$1.34	\$1.21	\$1.07
C-1794	4 x 5 x 3	4 1/4 x 2 3/8*	1.48	1.33	1.18
C-1795	5 x 4 x 3	4 1/2 x 2 3/8*	1.62	1.46	1.30
C-1796	6 x 5 x 4	4 1/2 x 3 3/8*	1.70	1.53	1.36
C-1797	5 x 6 x 4	5 1/2 x 3 3/8*	1.92	1.73	1.54
C-1798	6 x 6 x 6	4 7/8 x 5 3/8*	2.17	1.95	1.74

\*1" high. 1 1/4" high. 1 1/8" high.

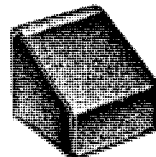
**STREAMLINED MULTI-PURPOSE CABINETS (FIG. F)**

Attractive cabinet with curved corners; uses chassis No. CB-1625. Back is entirely open for ventilation. Finished in light gray wrinkle only.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
C-1787	4 1/2 x 5 1/2 x 3 1/2	1	\$1.70	\$1.53	\$1.36
C-1788	6 1/2 x 5 1/2 x 3 1/2	1 1/2	1.75	1.58	1.40

**UNIVERSAL SLOPING PANEL CABINETS**

Fully enclosed and shielded housing with one-piece detachable back and sides fastened to body with four self-tapping screws. Components may be mounted on back, bottom, sides or front. Will accommodate Bud Miniature Aluminum Chassis. Size: 4" d. x 4 1/4" h. Gray hammertone finish only.



**ALUMINUM MODELS**

Aluminum alloy 5005 H-14.

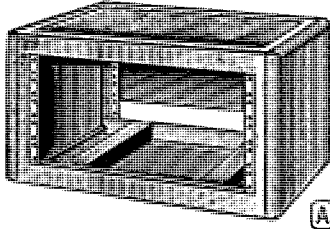
Bud No.	Uses Chassis	Width	Wt., Lbs.	Net Each, Lots of		
				1-49	50-99	100-149
AC-1610	CB-1617	4"	1 1/2	\$1.68	\$1.51	\$1.34
AC-1611	CB-1618	5"	1 1/2	1.75	1.57	1.40
AC-1612	CB-1619	6"	1 3/4	1.90	1.71	1.52
AC-1613	CB-1620	7"	1 3/4	2.10	1.89	1.68

**STEEL MODELS**

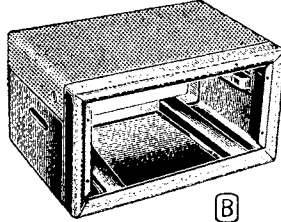
Bud No.	Uses Chassis	Width	Wt., Lbs.	Net Each, Lots of		
				1-49	50-99	100-149
C-1606	CB-1617	4"	3/4	\$1.45	\$1.30	\$1.16
C-1607	CB-1618	5"	3/4	1.55	1.39	1.24
C-1608	CB-1619	6"	1 1/8	1.65	1.48	1.32
C-1609	CB-1620	7"	1 1/8	1.90	1.71	1.52



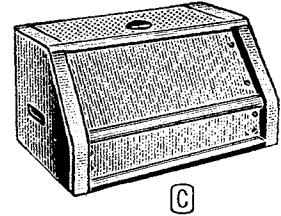
# Equipment Cabinets



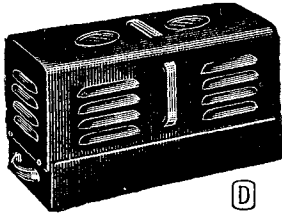
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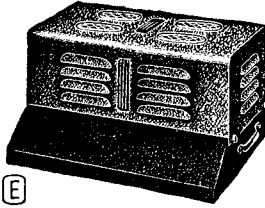
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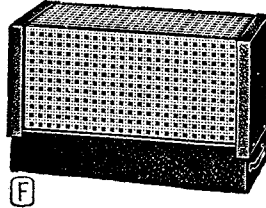
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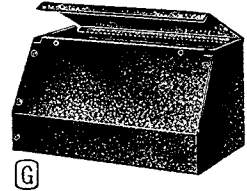
D



E



F



G

## PRESTIGE VERSA-CABINETS (FIG. A)

Sturdy framework with ball cornered sides, perforated back, solid bottom plate and two supporting channels. Front, back, top and bottom are removable for easy access; also accept 19" panels for full closure; top panel may be perforated. An opening, 13 1/4" x 19", across the bottom of the back is supplied for controls, knobs, leads, etc.; may be covered with PS-1250 or PA-1101 panels if desired. Sides, attached by holding flanges and nut, may be removed to join one or more cabinets together, using holes supplied in frame; units may also be stacked similarly. Handles may be attached to sides if desired. Comes complete with 4 rubber mounting feet. Top may be closed, using PS-1256HG or PA-1107HG solid panels, PS-616HG or PS-815HG door panels, or PC-1710 perforated panel. Size: 23 3/8" w. x 15 5/8" d. overall. Gray hammertone finish only. Weight, 28 to 35 lbs.

### VERSA-CABINETS

Bud No.	Height, Overall	Panel Space	Rear Panel	Net Each, Lots of		
				1-14	15-24	25-34
PC-1700	8 3/4"	5 1/4"	3 1/2"	\$27.25	\$24.52	\$21.80
PC-1701	10 1/2"	7"	5 1/4"	28.92	26.03	23.14
PC-1702	12 1/4"	8 3/4"	7"	30.75	27.67	24.60
PC-1703	14"	10 1/2"	8 3/4"	33.50	30.15	26.80
PC-1704	15 3/4"	12 1/4"	10 1/2"	35.25	31.72	28.20

### PERFORATED STEEL TOP PLATE

Bud No.	Size, In.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
PC-1710	12 1/4 x 19	2 1/2	\$2.70	\$2.43	\$2.16

## STANDARD PRESTIGE CABINETS (FIG. B)

Hinged solid or perforated cover with smooth grommet finger holes for easy lifting. Cabinet supplied with two supporting rails, laterally movable to fit any chassis width. Two safety shielded handle slots supplied. Made of 16 gauge steel. Takes standard 19" panels. Complete with embossed feet. Size: 21 1/2" w. x 14 3/4" d. overall. Gray hammertone finish only.

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of		
				1-14	15-24	25-34
C-1440	9 1/2"	7"	26	\$28.22	\$25.40	\$22.58
C-1441	11 1/4"	8 3/4"	27	30.06	27.05	24.05
C-1442	13"	10 1/2"	29	32.82	29.54	26.26
C-1550*	9 1/2"	7"	26	30.56	27.50	24.45
C-1551*	11 1/4"	8 3/4"	27	32.73	29.46	26.18
C-1552*	13"	10 1/2"	29	35.57	32.01	28.46

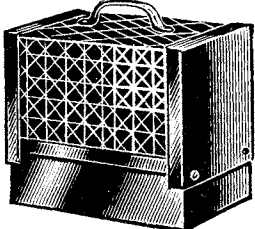
\*With perforated cover; others solid.

## PRESTIGE SLOPING PANEL CABINETS (FIG. C)

Ventilated top opens completely. Removable panel trim bar permits installation or removal of panels with chassis attached. Top panel is swept back for easy viewing. Takes standard 19" panels. Shielded lifting handles. Rear opening 2 1/2" x 18" for controls, etc.; panel recess 1 1/4"; bottom panel 3 1/2" high. Size: 22" w. x 9" top depth. Gray hammertone finish only. Weight, 26, 28 and 31 lbs.

Bud No.	Size, In. H. x D.	Slope Height	Net Each, Lots of		
			1-14	15-24	25-34
C-1555	11 3/4 x 14 3/8	7"	\$36.00	\$32.40	\$28.80
C-1556	13 3/4 x 15 3/8	8 3/4"	38.65	34.78	30.92
C-1557	14 3/4 x 16 3/8	10 3/4"	41.45	37.30	33.16

## MINIATURE AMPLIFIER FOUNDATION



With the increased use of miniature tubes, smaller cabinets can be used when designing a compact amplifier. This amplifier foundation was designed expressly for this purpose. The chassis is 5" x 7" x 2". Height, 6". The cover is made of perforated metal. A streamlined handle makes this cabinet portable. Black wrinkle only. Net Wt., 1 1/2 lbs.

Bud No.	Net Each, Lots of		
	1-24	25-49	50-99
CA-1754	\$4.00	\$3.60	\$3.20

## STREAMLINED FOUNDATIONS (FIG. D)

Attractive unit houses amplifiers and similar apparatus. Standard chassis with removable top cover with chrome trim. Sides and ends louvered. Handles attached to chassis. Overall height, 9"; chassis 2 3/4" high. Specify black wrinkle (suffix "B"), or gray wrinkle (suffix "G").

Bud No.	Size, In. W. x D.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
CA-1750	10 1/4 x 5	4 3/4	\$6.76	\$6.08	\$5.41
CA-1751	12 1/4 x 7	5	8.02	7.22	6.42
CA-1752	17 1/4 x 7	8	8.52	7.67	6.82
CA-1753	17 1/4 x 10	9	9.27	8.34	7.42

## SLOPING PANEL FOUNDATIONS (FIG. E)

Removable top cover mounted on 3 1/2" sloping front chassis. Cover is gray wrinkle with chrome trim; chassis is black wrinkle. Overall height, 9 1/2".

Bud No.	Chassis W. x D.	Top Depth	Wt., Lbs.	Net Each, Lots of		
				1-24	25-49	50-99
CA-1980	10" x 8"	5"	5	\$ 8.68	\$ 7.81	\$6.94
CA-1981	12" x 10"	7"	6	9.35	8.42	7.48
CA-1982	17" x 10"	7"	8	10.69	9.62	8.55
CA-1983	17" x 13"	10"	10	11.19	10.07	8.95

## STANDARD FOUNDATIONS (FIG. F)

Standard chassis with perforated cover for maximum ventilation. Handles are attached to chassis. Chassis 2 1/2" h., except CA-1128, 3" h. Overall height, 8 5/8", except CA-1128, 8 13/16". Black wrinkle finish only.

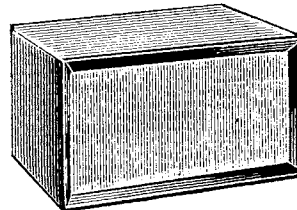
Bud No.	Size, Inches W. x D.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
CA-699	9 3/4 x 5 1/2	3	\$5.61	\$5.05	\$4.49
CA-1125	13 3/4 x 5 1/2	4 3/4	6.43	5.79	5.14
CA-1126	17 1/4 x 7 1/2	6	7.26	6.53	5.81
CA-1128	12 1/2 x 10 1/2	7	7.52	6.77	6.02

## SLOPING PANEL CABINETS (FIG. G)

Hinged top for easy access; front panel also removable. Specify black wrinkle (suffix "B") or gray hammertone (suffix "HG").

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
C-1584	6 1/2 x 7 1/4 x 7 1/4	2 1/2	\$3.30	\$2.97	\$2.64
C-1587	8 x 8 1/2 x 8	2 3/4	4.51	4.06	3.61
C-1585	6 1/2 x 9 1/4 x 7 1/4	3	3.75	3.38	3.00
C-1588	8 x 10 1/4 x 8	3 3/4	5.01	4.51	4.01
C-1586	6 1/2 x 11 1/4 x 7 1/4	3 1/2	4.34	3.91	3.47
C-1894	8 x 14 1/4 x 8	4	5.34	4.81	4.27
C-1892	8 x 13 1/4 x 8 1/2	5 1/4	5.95	5.36	4.76
C-1896	9 x 18 1/4 x 8 1/2	7	7.68	6.91	6.14
C-1893	10 x 18 1/4 x 10 1/2	8 1/2	7.85	7.07	6.28

## SHADOW CABINET



Extremely versatile housing with both front and rear panels and bottom panel removable for installation or servicing purposes. Front panel is recessed one inch to prevent accidental movement of knobs, etc., attached to it. Front edge of body is beveled. The two-piece body is of 18 gauge steel and the panels are of 16 gauge steel. Finish is light gray hammertone. Four rubber feet, attached to the bottom, eliminate marring of surfaces on which it may be placed.

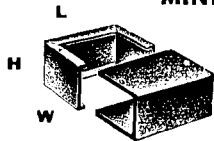
Bud No.	Overall Size, Inches			Uses Bud Chassis No.	Net Each, Lots of		
	Width	Height	Depth		1-24	25-49	50 Over
SB-2140	14 1/4	8	10	AC-424,CB-704	\$6.50	\$5.85	\$5.20
SB-2141	13 1/4	7 1/2	9	AC-407,CB-1193	5.00	4.50	4.00
SB-2142	17	9 1/2	11 1/2	AC-411,CB-666	8.85	7.97	7.08
SB-2143	15 1/2	6	9	AC-409,CB-1194	4.85	4.37	3.88





# Boxes, Baffles, Cases

## MINIBOXES, HANDY BOXES



Design of this box permits installation of more components than would be possible in the conventionally designed boxes the same size. Two-piece construction. **Either snap-lock or screw type.** The flange type construction assures adequate shielding. Made from heavy .040 ga. aluminum. Available in natural aluminum finish and gray hammertone finish.

### GRAY HAMMERTONE MINIBOXES

Bud No.	Size, Inches L. x H. x W.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
CU-2100A	2 3/4 x 2 1/8 x 1 3/8	1/4	\$0.74	\$0.67	\$0.59
CU-2101A	3 3/4 x 2 1/8 x 1 3/8	1/4	.76	.68	.61
CU-2102A	4 x 2 1/8 x 1 3/8	1/4	.80	.72	.64
CU-2103A	4 x 2 1/4 x 2 1/4	1/4	.90	.81	.72
CU-2104A	5 x 2 1/4 x 2 1/4	1/4	.95	.86	.76
CU-2105A	5 x 4 x 2 1/4	1/4	1.20	1.08	.96
CU-2106A	5 3/4 x 3 x 2 1/8	1/4	1.02	.92	.82
CU-2107A	6 x 5 x 4	3/4	1.50	1.35	1.20
CU-2108A*	7 x 5 x 3	3/4	1.65	1.49	1.32
CU-2109A*	8 x 6 x 3 1/2	1	2.10	1.89	1.68
CU-2110A*	10 x 6 x 3 1/2	1 1/4	2.35	2.12	1.88
CU-2111A*	12 x 7 x 4	1 1/2	3.20	2.88	2.56
CU-2112A*	17 x 5 x 4	2 1/4	3.20	2.88	2.56
CU-2113A*	10 x 2 x 1 1/8	1/4	1.20	1.08	.99
CU-2114A*	12 x 2 1/2 x 2 1/4	1/4	1.55	1.40	1.24
CU-2115A	4 x 2 x 2 1/4	1/4	.92	.83	.74
CU-2116A	4 1/4 x 2 1/4 x 1 1/2	1/4	.92	.83	.74
CU-2117A	3 3/4 x 2 1/4 x 1 1/2	1/4	.78	.70	.62

\*.050" aluminum.

### NATURAL FINISH MINIBOXES

Bud No.	Size, Inches L. x H. x W.	Wt., Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
CU-3000A	2 3/4 x 2 1/8 x 1 3/8	1/4	\$0.59	\$0.53	\$0.47
CU-3001A	3 3/4 x 2 1/8 x 1 3/8	1/4	.61	.55	.49
CU-3002A	4 x 2 1/8 x 1 3/8	1/4	.64	.58	.51
CU-3003A	4 x 2 1/4 x 2 1/4	1/4	.72	.65	.58
CU-3004A	5 x 2 1/4 x 2 1/4	1/4	.76	.68	.61
CU-3005A	5 x 4 x 2 1/4	1/4	.96	.86	.77
CU-3006A	5 3/4 x 3 x 2 1/8	1/4	.96	.86	.77
CU-3007A	6 x 5 x 4	3/4	1.32	1.19	1.06
CU-3008A	7 x 5 x 3	3/4	1.68	1.51	1.34
CU-3009A	8 x 6 x 3 1/2	1	1.88	1.69	1.50
CU-3010A	10 x 6 x 3 1/2	1 1/4	2.56	2.30	2.05
CU-3011A	12 x 7 x 4	1 1/2	2.56	2.30	2.05
CU-3012A	17 x 5 x 4	2 1/4	2.56	2.30	2.05
CU-3013A	10 x 2 x 1 1/8	1/4	.96	.86	.77
CU-3014A	12 x 2 1/2 x 2 1/4	1/4	1.24	1.12	.99
CU-3015A	4 x 2 x 2 1/4	1/4	.74	.67	.59
CU-3016A	4 1/4 x 2 1/4 x 1 1/2	1/4	.74	.67	.59
CU-3017A	3 3/4 x 2 1/4 x 1 1/2	1/4	.62	.56	.50

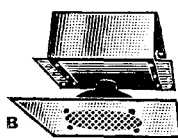
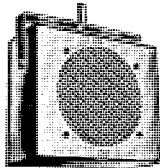
### HANDY BOXES

Similar to Miniboxes in design and construction, except made of 22 gauge steel. Black wrinkle finish only. Screw type only.

HB-1621	4 1/4 x 2 1/4 x 1 1/2	1/2	\$1.15	\$1.04	\$0.92
HB-1622	4 x 2 x 2 1/4	1/2	1.17	1.05	.94

### SILVER SONANCE BAFFLES

**Universal Enclosures**  
Bud Adjustable Mount-Bracket (shown in Fig. A and listed below) permits adjustment to any angle in a horizontal position. Hole in bracket passes 1/2" conduit, permitting any of the speaker housings to be suspended from the ceiling. Bi-lateral feature permits sound to come from both front and back. Made of heavy gauge steel. Sound-deadening compound eliminates metallic resonance. All screws and nuts furnished for mounting speaker. No holes to drill. Light gray hammertone finish, except CS-2270, 71, 72 and 73, primer finish only.



### BAFFLES (FIG. A)

Bud No.	For Spkr. Dia., In.	Size, Inches H. x W. x D.	Net Each, Lots of		
			1-24	25-49	50-99
CS-2240	4, 5	7 1/4 x 6 3/4 x 3 1/2	5.42	4.43	3.94
CS-2241	5, 5 1/2, 6	8 1/4 x 7 1/2 x 4	5.33	4.80	4.26
CS-2242	6, 8	10 3/4 x 9 1/2 x 5 1/2	8.58	7.72	6.86
CS-2243	10, 12	15 1/2 x 13 1/2 x 7 1/2	11.67	10.50	9.34
CS-2270	4, 5	7 1/4 x 6 3/4 x 3 1/2	4.58	4.12	3.66
CS-2271	5, 5 1/2, 6	8 1/4 x 7 1/2 x 4	4.84	4.36	3.87
CS-2272	6, 8	10 3/4 x 9 1/2 x 5 1/2	8.16	7.34	6.53
CS-2273	10, 12	15 1/2 x 13 1/2 x 7 1/2	11.15	10.04	8.92

### MOUNTING BRACKETS

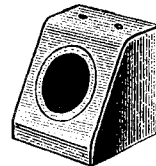
Bud No.	For Baffle	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
AB-2250	CS-2240	3/4	\$1.14	\$1.03	\$0.91
AB-2251	CS-2241	1	1.14	1.03	.91
AB-2252	CS-2242	1 1/4	1.41	1.27	1.13
AB-2253	CS-2243	2 3/4	1.65	1.49	1.32

**RECESSED CEILING, WALL ENCLOSURES (FIG. B)**  
Suitable for an 8" speaker. Adjustable brackets make the housing ideal for old and new installations. Treated with sound deadening compound. Grille plate is a 14" square for use with acoustical tile ceiling. Depth, 4 1/4". Housing dimensions, 10" x 10" x 4".

Bud No.	Description	Wt., Lbs.	Net Each, Lots of		
			1-24	25-49	50-99
CS-2244	Gray housing with grille	8 1/4	\$10.00	\$9.00	\$8.00
CS-2274	Primer housing with grille	8 1/4	9.69	8.72	7.75
CS-2245	Gray grille plate only	4	2.20	1.98	1.76
CS-2275	Primer grille plate only	4	2.00	1.80	1.60

## UNIVERSAL METER CASES

Center hole punched for 2" meters, plus easily removed knock-out ring to provide fit for 3" meters. Single piece detachable back and slides fastened to case with self-tapping screws for easy installation and servicing. Two 3/8" knock-out holes in top provide for installation of feed-through insulators, switches, volume controls, etc. Gray hammertone finish only. Size: 4 1/4" h. x 4" w. x 4" d.



Bud No.	Construction	Weight, Lbs.	Net Each, Lots of		
			1-49	50-99	100-149
CM-1935	Steel	1	\$1.22	\$1.10	\$0.98
CMA-1936	Aluminum	3/4	1.47	1.32	1.18

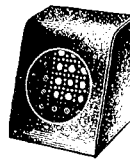
## NEW WIDE UNIVERSAL METER CASE

Same as above, except extra wide to permit installation of small components along with a meter or accommodate a 4" meter. Made of 5005 H-14 aluminum. Size: 4 1/4" h. x 6" w. x 4" d.

CMA-1930	Aluminum	3/4	\$2.40	\$2.16	\$1.92
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## MINIATURE SPEAKER CASES

Safe, convenient steel housing for 2" and 3" speakers. Black wrinkle finish only.



Bud No.	For Speaker	Net Each, Lots of		
		1-24	25-49	50-99
CS-1685	2"	\$1.58	\$1.42	\$1.26
CS-1686	3"	1.58	1.42	1.26

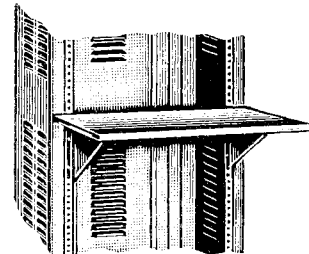
## WALL TYPE SPEAKER CASES

Steel speaker cases for table or wall use; similar in appearance to Miniature cases, above. Keyway holes are provided for wall mounting; embossed feet for table use. Unaffected by weather; will not warp or split. Brown wrinkle enamel finish only.

Bud No.	For Speaker	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of		
				1-24	25-49	50-99
CS-1948	4"	7 1/2 x 6 1/2 x 4 1/4	1 3/4	\$2.67	\$2.49	\$2.14
CS-1939	5"	7 1/2 x 6 1/2 x 4 1/4	1 3/4	2.75	2.48	2.20
CS-1940	6"	9 1/2 x 8 x 5 1/8	3	3.26	2.93	2.61
CS-1941	8"	11 1/2 x 9 1/2 x 7	4	4.01	3.61	3.21
CS-1942	10"	13 1/2 x 11 1/2 x 8 1/2	4 1/2	5.01	4.51	4.01
CS-1943	12"	15 1/2 x 13 1/2 x 9 1/2	6	6.10	5.49	4.88

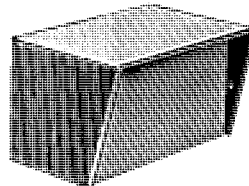
## SHELF ASSEMBLY

Immediately adds extra utility to a standard rack at very little cost. Useful as a desk, work space, etc. Gray or black wrinkle finish or gray hammertone finish will match all standard Bud rack finishes. Can't fall off or tilt; will support any reasonable weight. Shelf portion supported by two brackets, punched to fit standard panel mounting strips. No panel support needed but can be attached over panel if desired. Slides welded to bottom of shelf; mounting brackets slip into slides and fasten with two screws. All necessary hardware furnished. Formed of 16 gauge steel; 1/2" flange on all four sides; overall height, 7 1/8". Brackets are 7" high. Specify finish.



Bud No.	Size, Inches D. x W.	Weight, Lbs.	Net Each, Lots of		
			1-14	15-24	25-34
SA-1719	16 x 22	14	\$10.40	\$9.36	\$8.32
SA-1720	20 x 22	15	10.55	9.50	8.44

## COWL-TYPE MINIBOX



The cowl-type minibox has a projecting cover to reduce glare on the panel from overhead lighting. It also provides protection for controls and dials. Cover has two box braces to which bottom is attached with sheet metal screws. When assembled, this type of construction results in a sturdy, rigid housing. Constructed of .040" aluminum and available in natural or light hammertone gray finish.

Bud No.	Overall Size, Inches			Net Each, Lots of		
	H.	W.	D.	1-49	50-99	100 & Over
SC-2130*	6	10	7	\$5.95	\$5.36	\$4.76
SC-2131*	7	12	8	6.50	5.85	5.20
SC-2132*	3	8	5	3.45	3.11	2.76
SC-2133*	5	5	5	3.60	3.24	2.88
SC-3030†	6	10	7	4.30	3.87	3.44
SC-3031†	7	12	8	4.70	4.23	3.76
SC-3032†	3	8	5	2.45	2.21	1.96
SC-3033†	5	5	5	2.60	2.34	2.08

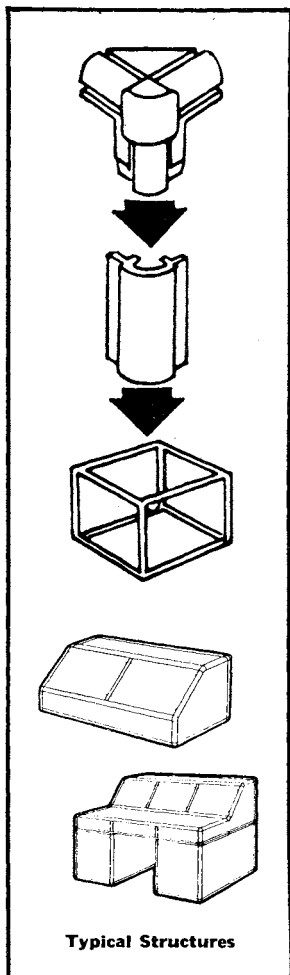
\*Painted light gray hammertone. †Natural aluminum finish.  
● New product.





# Imlok "Prototyper" Cabinets

System of metal cabinet construction, ideal for research and prototype work, permits quick assembly of cases, cabinets and racks using the simplest of tools. Complex structures may be built to your design using a variety of corner castings and extrusions held rigidly with friction clips or screws. Panels may be cut to size from sheet aluminum or steel, fitted grooves or screw fastened. No grinding or welding needed.



Typical Structures

### SPECIAL CONNECTORS, ACCESSORIES

**No. BI-1003**—T-junction connector permits making "T" with 2 lengths of extrusions; also used for picture frame effect. Fits 90° external extrusions.

**No. BI-1005**—90° table-top or foot connector used in place of radiused corner; has well to hold glass or wood table-top. Used also as foot or as wall mount. One leg fits 90° external extrusion; other two fit BI-2009.

**No. BI-1008**—Stacking plate for use with BI-1005 to permit stacking.

**No. BI-1009**—90° spacer bar cruciform connector.

**No. BI-4001**—Package of 50 friction clips; for assembly without use of screws.

**No. BI-4302**—Concealed brass hinge fits 90° extrusions; 3 mounting holes take 6-32 or 10-32 screws.

**No. BI-4601**—Chrome plated ventilation ring for dress-up. Used in addition to slots and louvers. Clips (supplied) into 2 3/8" hole. Has stainless steel gauze.

### EXTERNAL CORNER CONNECTORS

Bud No.	Description	Net Each, Lots of		
		1-14	15-24	25 Up
BI-1001	90° basic corner connector for rectangular cabinets. Use with BI-2004, BI-2014, BI-2024, BI-2034, BI-2044, BI-2054 or BI-2064 extrusions.	\$0.96	\$0.86	\$0.77
BI-1016	67 1/2° corner connector holds vertical wall and horizontal wall to a third rising at 67 1/2° to the horizontal. One leg fits BI-2041 extrusion; other two fit any 90° external extrusion.	1.35	1.22	1.08
BI-1024	60° corner connector similar to BI-1016. One leg fits BI-2081; other legs fit any 90° external extrusion.	1.35	1.22	1.08
BI-1002	45° corner connector similar to BI-1016. One leg fits BI-2005, BI-2015, or BI-2025; other two legs fit any 90° external extrusion.	.96	.86	.77
BI-1020	30° corner connector similar to BI-1016. One leg fits BI-2061; other two legs fit any 90° external extrusion.	1.35	1.22	1.08
BI-1012	22 1/2° corner connector similar to BI-1016. One leg fits BI-2021; other two legs fit any 90° external extrusion.	1.35	1.22	1.08

### EXTERNAL STANDARD EXTRUSIONS

Bud No.	Description	Net Each, Lots of		
		1-9	10-14	15 Up
BI-2004	12 ft. long, 90° external extrusion most used; has panel retaining groove on each flange for 0.050" panels. Ideal for small to medium sized structures with unbraced spaces up to 2 ft. long.	\$ 7.44	\$ 6.70	\$ 5.95
BI-2004-3	3 ft. length BI-2004	2.18	1.96	1.74
BI-2004-6	6 ft. length BI-2004	4.13	3.72	3.30
BI-2004-9	9 ft. length BI-2004	5.93	5.34	4.74
BI-2064	12 ft. long, 90° extrusion with panel retaining flange to take 20 gauge panels.	8.27	7.44	6.62
BI-2064-3	3 ft. length BI-2064	2.40	2.16	1.92
BI-2064-6	6 ft. length BI-2064	4.58	4.10	3.64
BI-2064-9	9 ft. length BI-2064	6.53	5.88	5.22
BI-2041	12 ft. long, 67 1/2° extrusion; companion to BI-1016 for unbraced spans up to 3 ft. long.	11.37	10.23	9.10
BI-2041-3	3 ft. length BI-2041	3.30	2.97	2.64
BI-2041-6	6 ft. length BI-2041	6.30	5.67	5.04
BI-2041-9	9 ft. length BI-2041	9.00	8.10	7.20
BI-2081	12 ft. long, 60° extrusion; companion to BI-1024 connector. For unbraced spans up to 3 ft. long.	11.37	10.23	9.10
BI-2081-3	3 ft. length BI-2081	3.30	2.97	2.64
BI-2081-6	6 ft. length BI-2081	6.30	5.67	5.04
BI-2081-9	9 ft. length BI-2081	9.00	8.10	7.20
BI-2005	12 ft. long, 45° extrusion used with BI-1002 connector; for spans up to 2 ft. long.	8.00	7.20	6.40
BI-2005-3	3 ft. length BI-2005	2.33	2.10	1.86
BI-2005-6	6 ft. length BI-2005	4.43	3.99	3.54
BI-2005-9	9 ft. length BI-2005	6.30	5.67	5.04
BI-2061	12 ft. long, 30° extrusion used with BI-1020 connector.	11.37	10.23	9.10
BI-2061-3	3 ft. length BI-2061	3.30	2.97	2.64
BI-2061-6	6 ft. length BI-2061	6.30	5.67	5.04
BI-2061-9	9 ft. length BI-2061	9.00	8.10	7.20
BI-2021	12 ft. long, 22 1/2° extrusion used with BI-1012 connector.	11.37	10.23	9.10
BI-2021-3	3 ft. length BI-2021	3.30	2.97	2.64
BI-2021-6	6 ft. length BI-2021	6.30	5.67	5.04
BI-2021-9	9 ft. length BI-2021	9.00	8.10	7.20
BI-2014	12 ft. long, 90° strengthened extrusion similar to BI-2004 but stronger for use in unbraced spans up to 3 ft. long.	8.27	7.44	6.62
BI-2014-3	3 ft. length BI-2014	2.40	2.16	1.92
BI-2014-6	6 ft. length BI-2014	4.58	4.12	3.66
BI-2014-9	9 ft. length BI-2014	6.53	5.89	5.22
BI-2015	12 ft. long, 45° external strengthened extrusion used in place of BI-2005 in unbraced spans up to 3 ft. long.	9.65	8.69	7.72
BI-2015-3	3 ft. length BI-2015	2.78	2.50	2.22
BI-2015-6	6 ft. length BI-2015	5.33	4.80	4.26
BI-2015-9	9 ft. length BI-2015	7.65	6.89	6.12
BI-2054	12 ft. long, 90° strengthened extrusion with two 1 1/4" extended flanges to take standard 3/8"; retaining groove at root of flanges.	12.78	11.50	10.22
BI-2054-3	3 ft. length BI-2054	3.69	3.31	2.94
BI-2054-6	6 ft. length BI-2054	7.05	6.35	5.64
BI-2054-9	9 ft. length BI-2054	10.13	9.12	8.10
BI-2024	12 ft. long, 90° strengthened extrusion with one flange extended 3/8" to fit 1/2" panel; other has normal panel-retaining groove.	10.25	9.23	8.20
BI-2024-3	3 ft. length BI-2024	3.00	2.70	2.40
BI-2024-6	6 ft. length BI-2024	5.70	5.13	4.56
BI-2024-9	9 ft. length BI-2024	8.10	7.29	6.48
BI-2025	12 ft. long, 45° strengthened extrusion with one 3/8" extended flange for 1/2" panel and one normal panel-retaining groove flange.	10.83	9.75	8.66
BI-2025-3	3 ft. length BI-2025	3.15	2.84	2.52
BI-2025-6	6 ft. length BI-2025	6.00	5.40	4.80
BI-2025-9	9 ft. length BI-2025	8.55	7.70	6.84
BI-2034	12 ft. long, 90° heavy-duty extrusion, takes loadings for spans over 3 ft. long. Additional returns reinforce strength. Flanges are both 3/8" deep.	16.79	15.11	13.43
BI-2034-3	3 ft. length BI-2034	4.88	4.39	3.90
BI-2034-6	6 ft. length BI-2034	9.30	8.37	7.44
BI-2034-9	9 ft. length BI-2034	13.28	11.95	10.62
BI-2044	12 ft. long, 90° reinforcing angle screws to return flanges of BI-2034 for extra rigid, boxed in section. Use with heavy-duty BI-1011 spacer bar and BI-2018 and BI-2028 extrusions to build almost any size structure.	6.66	5.99	5.33
BI-2044-3	3 ft. length BI-2044	2.45	2.21	1.96
BI-2044-6	6 ft. length BI-2044	3.68	3.31	2.94
BI-2044-9	9 ft. length BI-2044	5.25	4.73	4.20

Bud No.	Net Each, Lots of		
	1-14	15-24	25 Up
BI-1003	\$0.96	\$0.86	\$0.77
BI-1005	1.26	1.13	1.01
BI-1008	.63	.57	.50
BI-1009	1.76	1.58	1.41
BI-4001	1.26	1.13	1.01
BI-4302	1.76	1.58	1.41
BI-4601	2.87	2.58	2.30



# Imlok "Prototyper" Cabinets

## INTERNAL EXTRUSIONS

Bud No.	Description	Net Each, Lots of		
		1-9	10-14	15 Up
<b>BI-2032</b>	12 ft. long, 90° internal extrusion to fit BI-1028; has two panel retaining grooves; for unbraced spans up to 3 ft. long.	\$12.81	\$11.53	\$10.25
<b>BI-2032-3</b>	3 ft. length BI-2032	3.75	3.38	3.00
<b>BI-2032-6</b>	6 ft. length BI-2032	7.05	6.35	5.64
<b>BI-2032-9</b>	9 ft. length BI-2032	10.15	9.14	8.12
<b>BI-2051</b>	12 ft. long, 67½° internal extrusion to fit BI-1017 connector. For use in unbraced spans up to 3 ft.	11.37	10.23	9.10
<b>BI-2051-3</b>	3 ft. length BI-2051	3.30	2.97	2.64
<b>BI-2051-6</b>	6 ft. length BI-2051	6.30	5.67	5.04
<b>BI-2051-9</b>	9 ft. length BI-2051	9.00	8.10	7.20
<b>BI-2091</b>	12 ft. long, 60° internal extrusion; fits BI-1025 connector.	11.37	10.23	9.10
<b>BI-2091-3</b>	3 ft. length BI-2091	3.30	2.97	2.64
<b>BI-2091-6</b>	6 ft. length BI-2091	6.30	5.67	5.04
<b>BI-2091-9</b>	9 ft. length BI-2091	9.00	8.10	7.20
<b>BI-2006</b>	12 ft. long, 45° internal extrusion has two ¼" flanges, one with panel-retaining groove. For flat-topped, sloping front cabinets.	11.66	10.49	9.33
<b>BI-2006-3</b>	3 ft. length BI-2006	3.38	3.04	2.70
<b>BI-2006-6</b>	6 ft. length BI-2006	6.45	5.81	5.16
<b>BI-2006-9</b>	9 ft. length BI-2006	9.23	8.31	7.38
<b>BI-2071</b>	12 ft. long, 30° internal extrusion; fits BI-1021 connector.	11.37	10.23	9.10
<b>BI-2071-3</b>	3 ft. length BI-2071	3.30	2.97	2.64
<b>BI-2071-6</b>	6 ft. length BI-2071	6.30	5.67	5.04
<b>BI-2071-9</b>	9 ft. length BI-2071	9.00	8.10	7.20
<b>BI-2031</b>	12 ft. long, 22½° internal extrusion; fits BI-1013 connector.	11.37	10.23	9.10
<b>BI-2031-3</b>	3 ft. length BI-2031	3.30	2.97	2.64
<b>BI-2031-6</b>	6 ft. length BI-2031	6.30	5.67	5.04
<b>BI-2031-9</b>	9 ft. length BI-2031	9.00	8.10	7.20

## SPACER BAR AND TABLE-TOP EXTRUSIONS

<b>BI-2008</b>	12 ft. long, spacer bar extrusion used to subdivide panels or act as cross-bracing members.	\$20.33	\$18.30	\$16.26
<b>BI-2008-3</b>	3 ft. length BI-2008	5.85	5.27	4.68
<b>BI-2008-6</b>	6 ft. length BI-2008	11.18	10.06	8.94
<b>BI-2008-9</b>	9 ft. length BI-2008	16.13	14.52	12.90
<b>BI-2009</b>	12 ft. long, table-top extrusion for use at base of cabinet, as vertical member where double radius between cabinets is undesirable. Has flange with normal retaining groove; other is 1" deep to support table or bench top.	10.25	9.23	8.20
<b>BI-2009-3</b>	3 ft. length BI-2009	3.00	2.70	2.40
<b>BI-2009-6</b>	6 ft. length BI-2009	5.70	5.13	4.56
<b>BI-2009-9</b>	9 ft. length BI-2009	8.10	7.29	6.48

## EXTERNAL SPACER BAR CONNECTORS

Bud No.	Description	Net Each, Lots of		
		1-14	15-24	25 Up
<b>BI-1011</b>	This connector specially designed for use with 90° external heavy duty extrusion BI-2034. One leg fits this extrusion as well as all other 90° external extrusions. The other two legs fit BI-2008.	\$1.35	\$1.22	\$1.08
<b>BI-1018</b>	67½° external spacer bar connector; brace or sub-divide walls where BI-1016 is used at corners. One leg fits BI-2041; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1026</b>	60° version of BI-1018. One leg fits BI-2081; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1007</b>	45° version of BI-1018. One leg fits BI-2005, BI-2015 or BI-2025; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1022</b>	30° version of BI-1018. One leg fits BI-2061 extrusion; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1014</b>	22½° version of BI-1018. One leg fits BI-2021; other two fit any spacer bar extrusion.	1.35	1.22	1.08

## INTERNAL CORNER CONNECTORS

<b>BI-1028</b>	90° internal connector gives an included angle of 90° for L-shaped structures. One leg fits BI-2032 extrusion; other two fit any 90° external extrusion, (BI-2004, BI-2014, BI-2024, BI-2034, BI-2054).	\$1.35	\$1.22	\$1.08
<b>BI-1017</b>	67½° internal connector used where two walls are to meet to include a 67½° angle. One leg fits BI-2051 extrusion; other two fit any 90° external extrusion.	1.35	1.22	1.08
<b>BI-1025</b>	60° version of BI-1017. One leg fits BI-2091; other two fit any 90° external extrusion.	1.35	1.22	1.08
<b>BI-1006</b>	45° version of BI-1017. One leg fits BI-2006; other two fit any 90° external extrusion. Helps make flat top, sloping front structure.	1.26	1.13	1.01
<b>BI-1021</b>	30° version of BI-1017. One leg fits BI-2071; other two fit any 90° external extrusion.	1.35	1.22	1.08
<b>BI-1013</b>	22½° version of BI-1017. One leg fits BI-2031; other two fit any 90° external extrusion.	1.35	1.22	1.08

## INTERNAL SPACER BAR CONNECTORS

<b>BI-1029</b>	90° internal spacer connector permits bracing or sub-division of spans of BI-2032. One leg fits BI-2032 internal extrusion; other two fit BI-2008 spacer bar extrusion.	\$1.35	\$1.22	\$1.08
<b>BI-1019</b>	67½° internal spacer bar connector is companion to BI-1017 for sub-dividing or cross-bracing. One leg fits BI-2051; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1027</b>	60° version of BI-1019 above; companion for BI-1025. One leg fits BI-2091; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1010</b>	45° version of BI-1019; companion for BI-1006. One leg fits BI-2006; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1023</b>	30° version of BI-1019; companion to BI-1021. One leg fits BI-2071; other two fit any spacer bar extrusion.	1.35	1.22	1.08
<b>BI-1015</b>	22½° version of BI-1019; companion to BI-1013. One leg fits BI-2031; other two fit any spacer bar extrusion.	1.35	1.22	1.08

## CUTTING JIGS

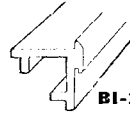
Bud No.	Description	Net Each, Lots of		
		1-4	5-9	10 Up
<b>BI-3003</b>	90° cutting jig permits easy mitering of any 90° external extrusion. Makes assembly quick, easy.	\$15.80	\$14.22	\$12.64
<b>BI-3002</b>	45° cutting jig for mitering any 45° external extrusion.	15.80	14.22	12.64



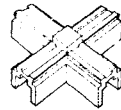
BI-1001



BI-1003



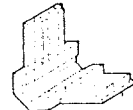
BI-2009



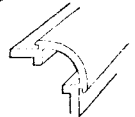
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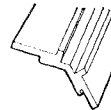
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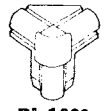
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BI-2004



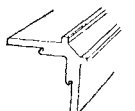
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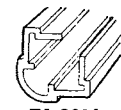
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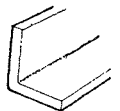
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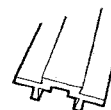
BI-2032



BI-2034



BI-2044



BI-2008



BI-3003

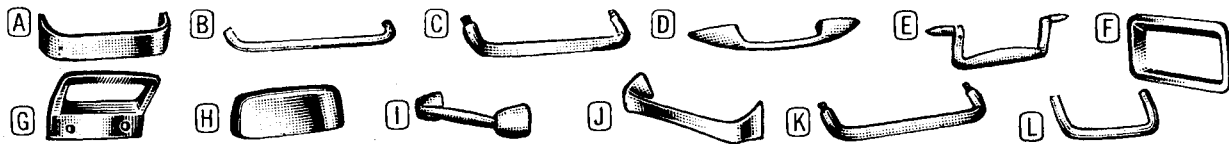


BI-4601



# Cabinet Hardware

## BUD HANDLES



Fabricated from steel, brass or cast aluminum. Durable finish provides long wear and attractive appearance. Skin packed in pairs or bulk packed (priced singly) with all necessary mounting

hardware. Designed for rugged applications, they have unlimited use in electronic, electrical and other fields.

Bud No.	Fig.	Description	Net Per Pair, Lots of			Bulk Pack*: Net Each, Lots of		
			1-49	50-99	100-149	50-99	100-199	200-499
H-9100	A	1" x 1/2" chrome-plated solid brass; 4" x 1/2" mtg. ctrs.; 1" hand clearance; four 1/2" x 6-32 threaded screws	\$3.96	\$3.56	\$3.17	\$1.86	\$1.67	\$1.49
H-9101	A	Same, but 8" x 1/2" mtg. centers	6.15	5.54	4.92	2.90	2.61	2.33
H-9102	A	Same, but has 6" mtg. centers; 1" hand clearance; two 1/2" x 6-32 threaded screws	3.15	2.84	2.52	1.60	1.44	1.28
H-9103	A	Same, but has 6" mtg. centers; 1" hand clearance; two 1/2" x 6-32 threaded screws	3.60	3.24	2.88	1.70	1.53	1.36
H-9110	B	3/4" steel rod angular formed, chrome-plated; 6" mtg. ctrs.; 1 1/2" hand clearance; two 1/2" x 10-32 screws	2.79	2.51	2.23	1.06	.95	.85
H-9111	B	3/4" steel rod, chrome plated, 4" mtg. ctrs.; 1" hand clearance; two 1/2" x 10-32 threaded screws	1.50	1.35	1.20	.58	.52	.46
H-9112	B	6" mtg. center version of H-9111	1.89	1.70	1.51	.72	.65	.58
H-9113	B	8" mtg. center version of H-9111	2.10	1.89	1.68	.82	.74	.66
H-9114	B	1 1/2" steel rod, chrome-plated; 8" mtg. centers; 1 1/2" hand clearance; two 1/2" x 10-32 thd. screws	3.51	3.16	2.81	1.32	1.19	1.06
H-9115	C	3/4" steel rod, chrome-plated; 4" mtg. ctrs.; 1 1/2" hand clearance; two 1/2" x 10-32 thd. nuts	2.40	2.16	1.92	.96	.86	.77
H-9116	C	Same, but has 6" mtg. centers	3.00	2.70	2.40	1.14	1.03	.91
H-9120	D	Silver-anodized die-cast aluminum; 4 3/8" inside, 5 3/8" outside mtg. centers; 1" hand clearance; four 1/2" x 6-32 threaded screws	3.51	3.16	2.81	1.60	1.44	1.28
H-9121	D	Same, except chrome plated alloy	4.95	4.46	3.96	2.34	2.11	1.87
H-9123	D	Similar to H-9120 but 4 1/2" mtg. centers; 1" hand clearance; two 1/2" x 10-32 thd. screws	2.61	2.35	2.09	1.14	1.03	.91
H-9122	E	Silver-anodized die-cast aluminum; hinged on 1/4" steel pins with 2 hinge blocks; 6 1/2" inside, 7 3/4" outside mtg. centers; 1 1/2" hand clearance; four 3/8" x 10-32 threaded screws	5.94	5.35	4.95	2.82	2.54	2.26
H-9130	F	Silver-anodized die-cast aluminum; 3" mtg. centers; two 3/8" x 10-32 thd. screws; size 4 1/2" x 3"	5.25	4.73	4.20	2.50	2.25	2.00
H-9131	G	Silver-anodized die-cast aluminum; size, 4" x 2 3/8"; 2 1/4" mtg. centers; two 3/4" x 1/4"-28 thd. raised, counter-sunk screws and nuts	3.90	3.51	3.12	1.78	1.60	1.42
H-9140	H	Silver-anodized die-cast aluminum; 3 3/4" mtg. centers; 3/2" hand clearance; two 1/2" x 10-32 threaded screws	2.34	2.11	1.87	1.08	.97	.86
H-9150	I	Silver-anodized die-cast aluminum; 4" x 3/8" mtg. centers; 1 1/2" hand clearance; four 1/2" x 10-32 threaded screws	3.15	2.84	2.52	1.42	1.28	1.14
H-9151	J	Silver-anodized die-cast aluminum; 5 1/2" x 3/8" mtg. centers; 1 3/4" hand clearance; four 1/2" x 10-32 threaded screws	5.10	4.59	4.08	2.34	2.11	1.87
H-9152	J	Similar to above except 3 3/8" mtg. centers; 1 3/8" hand clearance; two 1/2" x 10-32 threaded screws	4.14	3.73	3.31	1.95	1.76	1.56
H-9160	K	Chrome-plated 3/8" steel rod; 3 1/2" mtg. centers; 1 1/2" hand clearance; two 1/4"-28 hex nuts	2.70	2.43	2.16	1.02	.92	.82
H-9161	K	Same, but with 5 1/4" mounting centers	3.15	2.84	2.52	1.20	1.08	.96
H-9162	K	Same, but with 7 1/4" mounting centers	3.24	2.92	2.60	1.24	1.12	.99
H-9163	K	Same, but with 8 3/4" mounting centers	3.51	3.16	2.81	1.32	1.19	1.06
H-9164	K	Same, but with 10 1/4" mounting centers	3.96	3.56	3.17	1.35	1.22	1.08
H-9165	K	Same, but with 12 1/4" mounting centers	4.35	3.92	3.48	1.50	1.35	1.20
H-9166	L	Chrome-plated 1/4" brass rod; 1 3/8" mtg. centers; 1" hand clearance; two 1/2" x 6-32 thd. screws	1.20	1.08	.96	.54	.49	.43
H-9168	L	Same, but 3" mtg. centers; two 1/4" x 6-32 thd. screws	1.35	1.22	1.08	.58	.52	.46

\*Number shown is for skin packed pairs. For bulk packed handles (priced singly), add suffix B to number (example: H-9100B).

## CHASSIS SLIDES

### "SC" SERIES

**Inside SC-4312**  
Precision built slides for smooth operation, long life under repeated movement conditions. Use with full 17" chassis in std. 19" panel rack or cabinet. Drilled for either panel rail bracket or direct slide rail mounting. Brackets and hardware supplied. "Quick detach" models permit change of instrumentation at point of use with infinitesimal delay in exchange.  
**"SC" Series:** For commercial uses where top quality and performance is required, but MIL specs are not. Load ratings conservative with plus factor of at least 2:1 under normal conditions.  
**"SI" Series:** Adhere to MIL specifications for industrial or military requirements. Channels 7075T6 aluminum extrusions per QQ-A-277; parts of 302 stainless steel per MIL-S-5059A; bearings are 440 stainless steel per QQ-S-763. Aluminum-parts anodized per MIL-A-8625A; stainless steel parts passivated per MIL-S-5002. Lubricant is hi-low temp. grease per MIL-G-3278. Load rating extra conservative with plus factor of at least 3:1 under normal conditions.

Bud No.	Description	Load Cap. Per Pair	Net Each, Lots of		
			1-14	15-24	25-34
SC-4312	Full ball-bearing slide 12" long; 12" travel; height, 2"; inner members do not disconnect or tilt; aluminum extrusions of 2014T6 per QQ-A-261; precision broached for flawless operation	150 lbs.	\$27.15	\$24.45	\$21.70
SC-4316	Same, but 16" long; 16" travel	110 lbs.	29.10	26.20	23.30
SC-4320	Same, but 20" long; 20" travel	95 lbs.	31.80	28.60	25.45
SC-4412	Same, but outer track ball bearing, inner track dry lubricated friction type; quick detach facility; locks in extended position; height 2"; 12" long; 12" travel	150 lbs.	39.30	35.35	31.45
SC-4416	Same as SC-4412, but 16" long; 16" travel	110 lbs.	42.15	37.95	33.70
SC-4420	Same as SC-4412, but 20" long; 20" travel	95 lbs.	44.10	39.70	35.30
SC-4512	Quick detach, tilting slide with lock in extended position. Permits 90° tilt of chassis below horizontal position in 45° increments; height, 3 1/2"; 12" long; 12" travel	275 lbs.	56.25	50.65	45.00
SC-4516	Same, but 16" long; 16" travel	215 lbs.	60.90	54.80	48.70
SC-4520	Same, but 20" long; 20" travel	180 lbs.	64.65	58.20	51.70
<b>"SI" SERIES</b>					
SI-4212	Ball-bearing; 12" long; 12" travel; 3 1/2" high	275 lbs.	\$41.25	\$37.15	\$33.00
SI-4216	Same, but 16" long; 16" travel	225 lbs.	45.00	40.50	36.00
SI-4220	Same, but 20" long; 20" travel	180 lbs.	48.75	43.90	39.00
SI-4012	Same as SI-4212 except outer track ball bearing; inner, dry-lubricated friction type; quick disconnect; extended lock position	275 lbs.	48.75	43.90	39.00
SI-4016	Same, but 16" long; 16" travel	225 lbs.	53.40	48.15	42.80
SI-4020	Same, but 20" long; 20" travel	180 lbs.	59.10	53.20	47.30
SI-4112	Similar to SI-4012, but with tilting action 90° above and below horizontal in 45° increments	275 lbs.	64.65	58.20	51.70
SI-4116	Same, but 16" long; 16" travel	225 lbs.	69.30	62.35	55.45
SI-4120	Same, but 20" long; 20" travel	180 lbs.	72.15	64.95	57.70

531X-63A

# CABINET ASSEMBLIES AND AMATEUR ACCESSORIES



## BUD CONSOLE ASSEMBLIES

Variety of panels, sides, doors, pedestal, table tops and drawer permit easy assembly of a variety of console units, custom made to individual requirements. Typical basic unit would consist of one pedestal, an end pedestal, three or more panels, a door, a table top and a foot rest as illustrated. Many variations of this basic design may be made, and additions or changes in design can be accomplished at any time. Because the system is sold in parts, it offers the user the highest versatility in designing or expanding units as needed.

### BASIC PEDESTAL

Consists of top, bottom and four panel-mounting channels drilled and tapped to accept standard 1 1/2" panels on each of four sides. Bottom is slotted so that sides or doors may be installed on any side. Three knock-out holes provided on each of two sides for use in assembling pedestals in series. Channels will support 200 lbs. suspended between them; bottom will support 500 lbs. Bottoms have recessed mounting brackets for hidden caster attachment. Shipped knocked-down, with necessary hardware. **Size:** 22" w. x 22" d. x 29 1/4" h.

### END PEDESTAL

May be used as a housing or as a support. Panel mounting rails are drilled and tapped for mounting panels on each of two sides. Accepts full size solid or louvered panels, ball-cornered doors or sides. Base has hidden caster mounting supports. When used, No. CT-2206 table top is required; eliminates the need for a second CP-2200 pedestal. **Size:** 22" w. x 5" d. x 29 1/4" h. inside.

### PANELS

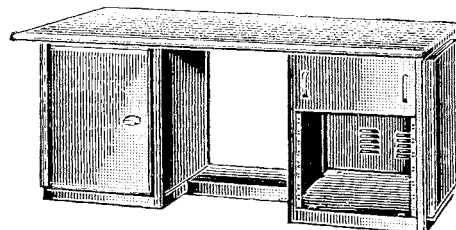
Full-sized panels may be used to enclose the openings on any side of either of above pedestals. Available either solid or louvered. Louvered panels can be positioned with louvers pointing down or up, inside or outside the pedestal. **Size:** 24 1/2" h. x 19" w.

### BALL-CORNERED SIDE

Can be used to enclose any side of either of above pedestals for an enhanced appearance. Attach by tongue and slot arrangement at the bottom; and, two screws at the top. Quickly removable from exterior of pedestal for service or inspection. Provide sufficient clearance for installation over knobs and dials. **Size:** 25 1/4" h. x 20 3/8" w. x 1 1/8" d.

### BALL-CORNERED DOOR

Unique hinge and locking arrangement designed so that door may open from right or left side. Attaches to any side of either pedestal with sufficient clearance for knobs, and dials. **Size:** 25 1/4" h. x 20 3/8" w. x 1 1/8" d.



### TABLE TOPS

Made of 16 ga. steel and available in three lengths. Adjustable from front to back in three positions to allow overhang as desired. Attach to the pedestals by means of brackets welded to underside of top. **Size:** 30" w. x 1 1/8" thick.

### FOOT REST

Joins two pedestals or one pedestal and one end pedestal, depending on the size top used. Adjustable in two positions, front to back. **Size:** 22" l. x 10" w. x 2 3/8" thick.

### CONSOLE DRAWER

Fits into pedestal in any position from top to bottom. Slides easily on nylon rollers. Capable of supporting heavy loads. Drawer extends to full depth of pedestal. Easily removable slides fasten to mounting channels in pedestal; stops prevent drawer from falling out. **Size:** 16 3/4" w. x 19 1/2" d. x 6 1/8" h., inside.

### PARTS ORDERING INFORMATION

Bud No.*	Description	Wt. Lbs.	Net Each, Lots of		
			1-14	15-24	25-34
CP-2200	Basic pedestal	36	\$36.00	\$32.40	\$28.80
CP-2202	End pedestal	19	18.95	17.05	15.16
CP-2215	Plain panel	9	5.26	4.73	4.21
CP-2216	Louvered panel	9	6.00	5.40	4.80
CK-2217	Ball-cornered side	13	8.95	8.06	7.16
CD-2220	Ball-cornered door	13	10.95	9.85	8.76
CT-2205	Table top, 25" long	18	22.00	19.80	17.60
CT-2206	Table top, 52" long	35	26.00	23.40	20.80
CT-2207	Table top, 69" long	45	32.10	28.89	25.68
CF-2201	Foot rest	7	3.85	3.46	3.08
CD-2210	Console drawer	24	32.00	28.80	25.60

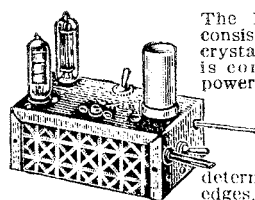
\*Specify Color: Add suffix **GH** for gray hammertone; add **BH** for brown hammertone.

## BUD AMATEUR ACCESSORIES

### BUD SELF-POWERED

#### FREQUENCY CALIBRATOR

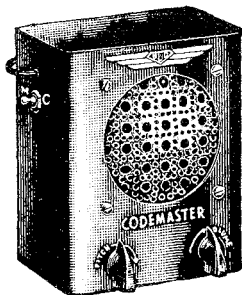
##### MODEL FCC-90B



The Bud FCC-90B consists of a 100 kc crystal oscillator that is completely self-powered. It will give 100 kc check points on all bands, enabling the operator to determine exact band edges. An excellent device for checking transmitter frequencies accurately. No extra wiring is required. Plug into any 110 v. receptacle, connect pick-up lead to the antenna binding post and unit is ready. ON-OFF and STAND-BY switch included. Weight, 1 1/2 lbs.

**Bud No. FCC-90B—** \$20.48  
Net Each.....

The Bud Codemaster is a real money-saver. No longer do you have to consider your code practice oscillator useless after you have learned the code. A flip of the switch and you have a good CW monitor. This is a really versatile instrument. It has a 4" built-in PM dynamic speaker and will operate up to twenty earphones. A volume control and pitch control permit adjustments to suit individual requirements. Any number of



aluminum case. Complete installation instructions are included. Shipping Weight, 1 lb.  
**Bud No. HF-600—Net Each.....** \$4.95

### BUD CODE PRACTICE OSCILLATORS AND MONITORS

#### MODEL CPO-128B

Keys can be connected in parallel to the oscillator for group practice. This unit will operate on 110 volts AC or DC. An external speaker may be plugged in without the use of an output transformer. All controls are placed on the front of the unit and all jacks are in the rear. **Size:** 6 1/2" high, 5 1/2" wide and 3 1/2" deep. Wt., 3 1/2 lbs.  
**Bud No. CPO-128B—Net Each.....** \$19.13

#### MODEL CPO-130A

Similar to Model CPO-128B except speaker not included. Monitor feature is present and a jack is provided for output. Twenty pairs of phones and keys may be operated at one time. Operates PM speaker. **Size:** 5 1/2" x 4 1/2" x 3 1/2". Weight, 3 1/4 lbs. Gray hammertone finish.  
**Bud No. CPO-130A—Net Each.....** \$16.50

#### MODEL CPO-155T

Available in carphone model only. Small, lightweight, operates entirely on transistors. Power supplied by penlight cells. **Size:** 1 1/2" x 2 1/4" x 4 1/4". Finished in light gray hammertone.  
**Bud No. CPO-155T—Net Each.....** \$5.88

### BUD GIMIX GX-79

Bud GX-79 Gimix, a multi-purpose unit requiring no power supply. Calibrated for use on 10, 15, 20, 40, and 80 meter bands. No additional coils are needed, as the one coil supplied does the work on all bands. It can be used as wave-meter, monitor, field strength indicator, carrier shift indicator, and a sensitive neutralizing instrument. Shipping Weight, 1 lb.  
**Bud No. GX-79—Net Each.....** \$9.48

### WIRELESS PHONO OSCILLATOR

Converts any standard record player to wireless operation. Record reproduction may then go to a radio receiver without use of wires. Installation instructions provided. Wired and tested; with tubes. Operates on 115 v. AC or DC. Frequency range, 1100-2150 kc. Gray hammertone finish. Weight, 1 lb.  
**Bud No. WO-6A—Net Each.....** \$12.05

### MODEL HF-600 HIGH PASS FILTER

Designed to have a cut-off frequency at 42 mc, rejecting signals from 0-42 mc. No attenuation above 42 mc; picture strength and quality are not affected. **Size:** 3 1/2" x 2 1/2" x 1 1/8", in an attractive

### LOW PASS FILTER LF-601



**ADJUSTABLE  
HANDLES 1 KW  
LOW LOSS**

Can reduce or eliminate harmonics when installed at the transmitter. Has minimum attenuation of 85 db on all frequencies above 54 mc and a minimum of 93 db above 70 mc. Maximum rejection adjustable from 60 to 90 mc. This tunable feature provides 2 slots at least 100 db down on any 2 TV channels. Cut-off frequency is 42 mc. The unit will handle a full kilowatt modulated on a reasonably flat line. Insertion loss is less than 1 db. Since the design of the filter provides an adjustable feature, the unit can be used on either a 52 or a 72 ohm coax. All capacitors used are variable. **Size:** 12" x 2 1/4" x 2 1/2". Shipping Weight, 2 1/2 lbs.  
**Bud No. LF-601—Net Each.....** \$17.25



# SPECIAL FABRICATION SERVICE

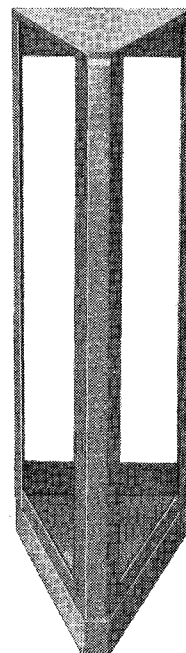
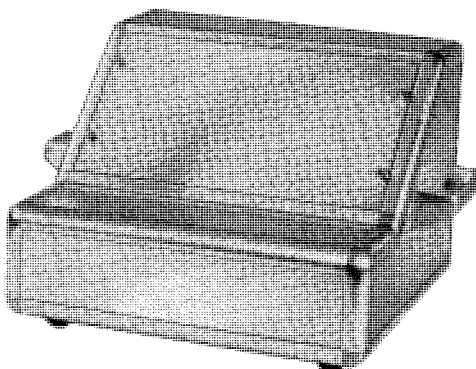
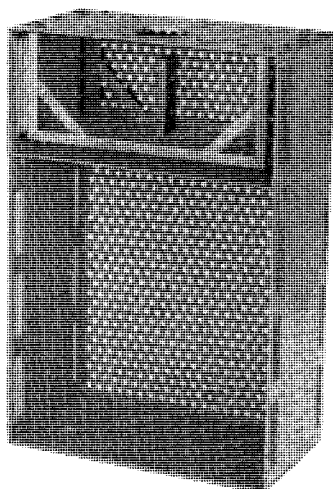
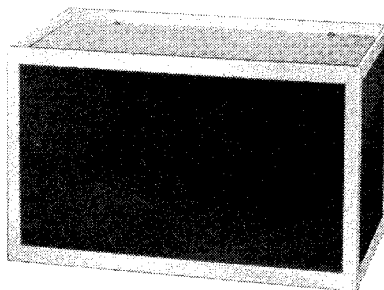
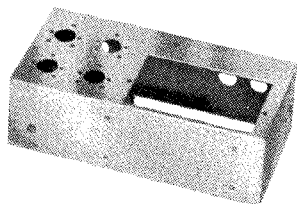
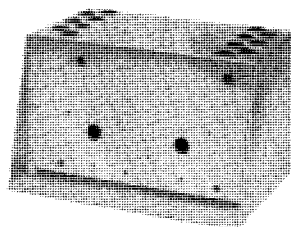
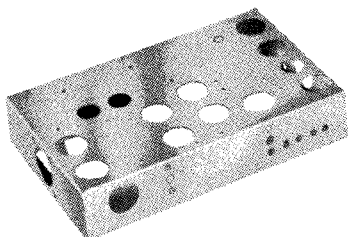
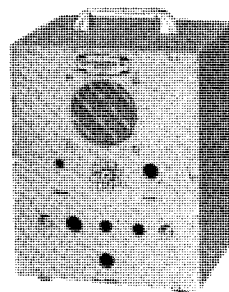
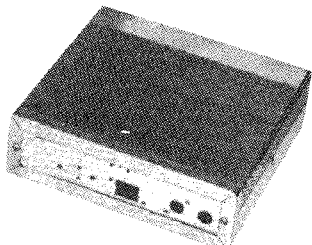
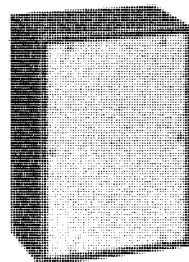
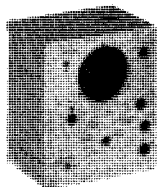
Consult your local Authorized Bud Distributor about your special enclosure problems. In reality, he is an extension of the factory's engineering department and can recommend the proper design and size for your equipment. His advice will save you time and money.

These are the services we perform:

1. Modification of our standard products.
2. Specially punched panels, chassis and boxes.
3. Standard construction employing steel or aluminum.
4. Special construction employing the Imlok system of aluminum extrusions, castings and sheets.
5. Original designs based upon your circuitry requirements.

Bud can supply you with a pilot model or a production run. Our more than 35 years of experience in the electronic industry assures you that we can readily understand your problems and solve them economically. 112,000 sq. ft. of completely integrated plant facilities — from engineering, tooling and fabrication to painting, assembly and packaging insure quick delivery. Almost every type of industry, branches of the armed forces, the Space Agency and the Nuclear Energy Commission use Bud products.

Whenever a special sheet metal enclosure is required, call in your local Authorized Bud Distributor. He is anxious to cooperate with you.





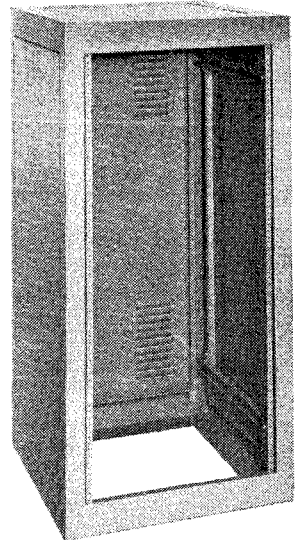
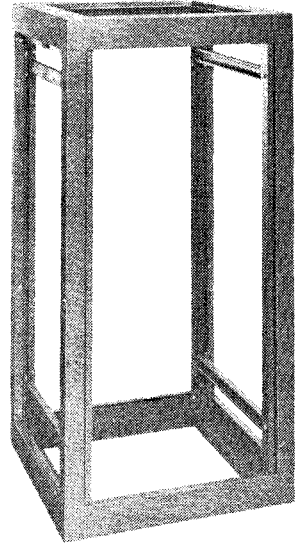
# CALIFORNIA CHASSIS CO.

Lynwood, Calif.



## ALL-STEEL WELDED CABINET

This flexible AWC cabinet is available as a complete package or as separate components to satisfy individual requirements. Doors and sides are interchangeable. Doors have chrome handles — spring loaded hinge pins provide rapid removal and servicing without tools. Panel mounting angles are tapped 10-32 with universal spacing for all standard panels. Louvers on doors and sides available. Standard finish — gray hammer-tone; other finishes optional.

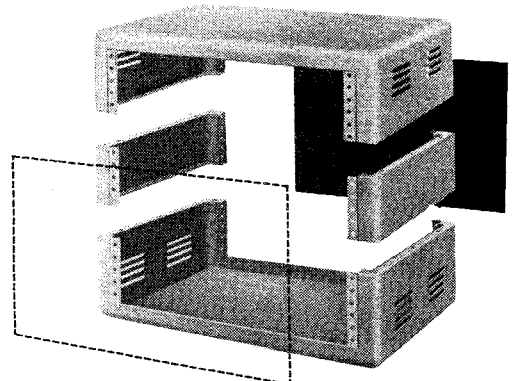


AWC-42	Assembly consisting of 42 inch panel space frame, two sides, one door, top, one pair panel mounting angles and all necessary hardware.....	\$125.00
AWC-61	Same as above except 61 1/4 inch panel space frame.....	153.00
AWC-70	Same as above except 70 inch panel space frame.....	166.00
AWC-77	Same as above except 77 inch panel space frame.....	192.00
AWCF-42	Basic frame only — 42 inch panel space.....	60.40
AWCF-61	Basic frame only — 61 1/4 inch panel space.....	75.40
AWCF-70	Basic frame only — 70 inch panel space.....	80.40
AWCF-77	Basic frame only — 77 inch panel space.....	95.40
AWCS-42	Side panel — 42 inches high.....each	14.75
AWCS-61	Side panel — 61 1/4 inches high.....each	17.75
AWCS-70	Side panel — 70 inches high.....each	19.75
AWCS-77	Side panel — 77 inches high.....each	22.75
AWCD-42	Door — 42 inches high.....	17.95
AWCD-61	Door — 61 1/4 inches high.....	20.95
AWCD-70	Door — 70 inches high.....	23.95
AWCD-77	Door — 77 inches high.....	26.95
AWCT-42	Top.....	7.05
AWCT-61	Top.....	7.05
AWCT-70	Top.....	7.05
AWCT-77	Top.....	7.05
AWCP-42	Panel mounting angles — 42 inches long.....pair	10.10
AWCP-61	Panel mounting angles — 61 1/4 inches long.....pair	14.10
AWCP-70	Panel mounting angles — 70 inches long.....pair	15.10
AWCP-77	Panel mounting angles — 77 inches long.....	17.10
AWCZ-42	Vertical supports for chassis brackets.....set of four	14.30
AWCZ-61	Vertical supports for chassis brackets.....set of four	16.25
AWCZ-70	Vertical supports for chassis brackets.....set of four	17.30
AWCZ-77	Vertical supports for chassis brackets.....set of four	19.35



## MULTI-PURPOSE EXPANDABLE CABINET

The MPX enclosure combines clean design and attractive finish with utility, strength and versatility. Inserts permit vertical expansion of cabinet. Standard finish — gray hammer-tone; other finishes optional.



MPX CABINET — Consists of top, bottom, rear panel 5 1/4" high and assembly hardware. Basic cabinet provides 7" of panel space front and back.....\$29.75

MPXF-10 1 3/4" FILLER — each filler group listed consists of two sides, rear panel same height as sides and hardware..... 9.22

MPXF-11	3 1/2" FILLER.....	\$10.35	MPXF-18	15 3/4" FILLER.....	\$17.35
MPXF-12	5 1/4" FILLER.....	11.50	MPXF-19	17 1/2" FILLER.....	18.50
MPXF-13	7" FILLER.....	12.50	MPXF-20	19 1/4" FILLER.....	19.50
MPXF-14	8 3/4" FILLER.....	13.60	MPXF-21	21" FILLER.....	20.60
MPXF-15	10 1/2" FILLER.....	14.69	MPXF-22	24 1/2" FILLER.....	21.80
MPXF-16	12 1/4" FILLER.....	15.80	MPXF-23	26 1/4" FILLER.....	22.95
MPXF-17	14" FILLER.....	16.95	MPXF-24	28" FILLER.....	24.10

MPX Cabinet without inserts	Width 21 1/8 in.	Height 11 1/4 in.	Depth 18 1/2 in.
Front panel opening	19 1/8 in.	7 in.	—
Back panel opening	19 1/8 in.	7 in.	—
Inserts (in increments of 1 1/4 to 26 1/4 in.)	—	1 3/4 to 26 1/4 in.	18 1/2 in. (side)

Recommended total panel height with inserts: 35 inches. This cabinet accepts standard relay rack panels and is drilled for universal panel mountings. 16 gauge cold rolled steel construction.



# CALIFORNIA Chassis COMPANY

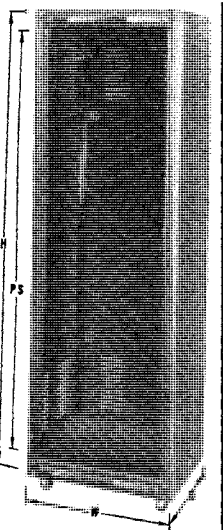
## CABINET RACKS

These racks are made entirely of 16 gauge steel except for the heavy steel panel supports. They have universal spacing, the holes being tapped for 10/32" screws. Panels fit into a recess so that the edges do not show. Mounting plate on bottom of rack permits casters to be fastened directly to base for easy mobility. Casters are not included in price of rack but may be ordered separately. No. TC-10.

All standard 19" panels RETMA, Western Electric or Amateur will fit these racks. Double rows of louvres side and rear give ample ventilation.

Finish is black wrinkle, gray wrinkle or silver hammertone. Black will be furnished unless specified otherwise.

NO. CAT.	PANEL SPACE	HEIGHT	WIDTH	DEPTH	INSIDE CLEAR.	WT. LBS.	SHIP. PRICE
CR-36	36¾	42	22	17	15½	90	52.00
CR-42	42	47¼	22	17	15½	96	58.60
CR-61	61¼	66½	22	17	15½	120	74.00
CR-77	77	82¼	22	17	15½	145	88.00
CRD-36	36¾	42	22	24	22½	99	66.86
CRD-42	42	47¼	22	24	22½	105	79.17
CRD-61	61¼	66½	22	24	22½	133	94.81
CRD-77	77	82¼	22	24	22½	160	113.97

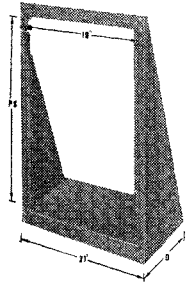


## DOOR SERIES

This open rack is made of 16 gauge steel. It is useful where the larger, heavier floor model is not necessary.

Mounting holes are on universal centers tapped 10/32".

Panel Overall Cat. No.	Space	Height	Width	Depth	Ship. Wt.	Net Price
DOR-21	21 x 19	25	21	12	18	9.66
DOR-28	28 x 19	32	21	12	19	11.92



## DESK CABINET RACKS

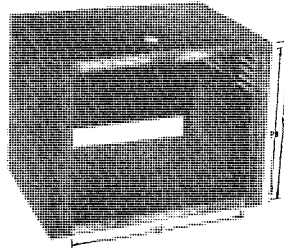
This solid welded, rounded front, deluxe desk cabinet has a professional look as well as being a sturdy utility unit. Embossed feet are on all sizes to reduce marring.

Cabinets have universal punching, accommodating W. E.; RETMA; or Amateur notched panels. Unit is made from 16 ga. steel, has niga 2" opening on bottom rear for ventilation in addition to side louvers.

The five smaller models have solid welded backs. The five larger models have a removable hinged rear door.

All models clear 14½" inside depth — Outside width is 21½". Black wrinkle is standard. If gray wrinkle or gray hammertone is desired please specify. No additional charge.

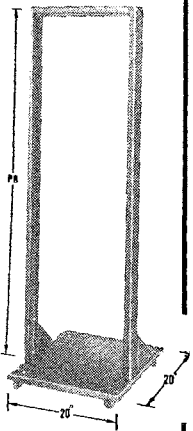
CATALOG NO.	PANEL SPACE	HEIGHT	SHPG. WT.	NET PRICE
DCR-7	7	8½	25	18.00
DCR-8	8¾	10½	27	18.37
DCR-10	10½	12½	29	21.00
DCR-12	12½	14½	31	22.06
DCR-14	14	15½	33	24.05
DCR-17	17½	19½	37	28.78
DCR-21	21	22½	39	30.80
DCR-26	26¼	28½	47	33.00
DCR-31	31½	33½	51	35.05
DCR-35	35	36½	58	37.00



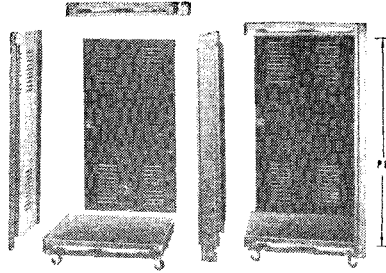
## OR SERIES

These open racks are constructed so the uppermost panel mounts at the top of the ½" steel upright. There is no loss of space at the top. Rack uprights are punched with universal spacing and tapped 10/32". Two brackets of ½" steel bind the uprights and a chassis like base into one solid unit.

CATALOG NO.	PANEL SPACE	OVERALL HEIGHT	SHPG. WT.	NET PRICE
R-31	31½	32¾	27	22.76
R-36	36¾	38	28	22.97
R-42	42	43¼	30	24.63
R-61	61¼	62½	37	25.45
R-66	66½	67¾	39	25.96
R-71	71¾	73	41	26.88
R-77	77	78¼	42	31.28



## MULTI RACK SERIES

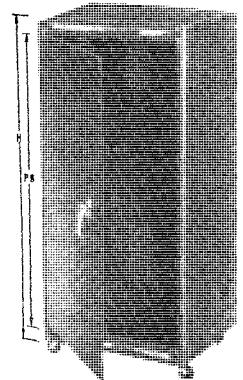


With this unit and a standard rack of the same size one can make a multiple rack or a series of connected racks. Each unit consists of a door, top, bottom, and a multi-rack connecting unit. This must have the same panel space as the unit it is to be used with. All hardware except casters is furnished. Colors are black wrinkle, gray wrinkle or gray hammertone.

CATALOG NO.	PANEL SPACE	FITS RACK	SHPG. WT.	NET PRICE
MR-36	36¾	CR-36	75	52.00
MR-42	42	CR-42	80	58.60
MR-61	61¼	CR-61	100	74.00
MR-77	77	CR-77	118	88.00

## FRONT DOOR RACKS

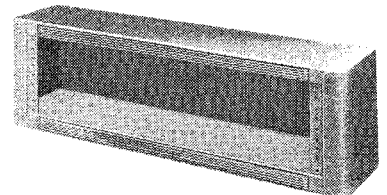
This deluxe rack series has, in addition to the rear door, a front door which completely encloses the panels. Rack strips may be moved towards the rear of the rack to allow space for meters, switches, etc. Rack strips are punched with universal spacing, and tapped 10/32". Casters, TC-10, fit to base of rack, but are not included in price. Finish is black wrinkle (B), Gray wrinkle (G), or gray hammertone (GH). Black wrinkle shipped if no color is specified.



CATALOG NO.	HEIGHT	PANEL SPACE	SHPG. WT.	NET PRICE
FDR-36	42	36¾	102	74.50
FDR-42	47¼	42	118	83.50
FDR-61	66½	61¼	152	108.50
FDR-77	82¼	77	185	138.00

## MINIATURE CABINET RACKS

The MCR combines stylized function and compactness for desk-top use. Available in three sizes. Accepts standard relay rack panels and "PC" chassis units. Attractive gray hammertone with chrome trim; other finishes optional.



MCR-12 CABINET	— Panel space 19" x 5¼"	.....	\$14.27
MCR-13 CABINET	— Panel space 19" x 7"	.....	14.57
MCR-14 CABINET	— Panel space 19" x 8¾"	.....	14.87

All above items available in gray hammertone finish. Other finishes available on special order. Contact factory for special finish prices.

All MCR units have embossed feet to protect desk tops.

TYPE	WIDTH	PANEL SPACE	DEPTH	HEIGHT	WT.
MCR-12	21½"	19 x 5¼"	6½"	7½"	11½ lb.
MCR-13	21½"	19 x 7"	6½"	8"	12½ lb.
MCR-14	21½"	19 x 8¾"	6½"	10½"	13½ lb.

## LOW TEMPERATURE CABINETS

This cabinet made of perforated metal with 3/32 holes on 3/16 centers, solves most thermal problems. It is a real space saver, the chassis being almost the size of the cabinet.

Chassis is .063 aluminum and bolts to the rear panel which is welded to the perforated screen. Rear steel panel has rectangular hole in it to allow access to connectors in chassis. Front panel has no screws but is held on by control knobs mounted in chassis.

Chassis and front are one piece when unit is complete and can be easily removed yet cabinet chassis and front panel are solidly held together.

Catalog Number	H	Cabinet Size W	D	Front Panel	Chassis Size	Hole in Rear Panel	Net Price
LTC-463	4½	7¾ x 9¾	9¾	4½ x 7¼	6½ x 8 15/16 x 11½	7/8 x 4	10.00
LTC-464	4½	9½ x 7¾	7¾	4½ x 9¾	8½ x 6 15/16 x 11½	7/8 x 5	10.00
LTC-469	5½	16 x 8¾	11¾	5½ x 8¾	8 7/16 x 10 15/16 x 2	1½ x 5	11.64
LTC-470	5½	16 x 11¾	8 11/16	5½ x 11¾	10 15/16 x 8 7/8 x 2	1½ x 6	11.64

CALIFORNIA CHASSIS CO. — Lynwood, California

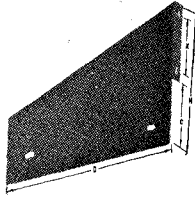
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# CALIFORNIA Chassis COMPANY

### CHASSIS MOUNTING BRACKETS

To assure the proper support for a chassis a sturdy mounting bracket is used. Flange is  $\frac{5}{8}$ " inside dimension. Elongated hole  $\frac{3}{8}$ " x  $\frac{1}{2}$ " is centered in flange. "X" shows the distance between flange holes. Finished in Zinc plated "C" or Wrinkle "W" may be had at additional cost of 15%.



Black Enamel	Height	x	Depth	Clearance	Wt.	Net Price
E-58B	6 1/2	2 1/2	8	3 1/4	1 1/4	1.38
E-57B	6 1/2	2 1/2	9	3 1/4	1 1/2	1.50
E-48B	6 1/2	2 1/2	10	3 1/4	1 3/4	1.56
E-59B	6 1/2	2 1/2	11	3 1/4	1 3/4	1.63
E-49B	6 1/2	2 1/2	12	3 1/4	1 3/4	1.75
E-60B	6 1/2	2 1/2	13	3 1/4	2	1.78
E-50B	8 1/2	3 1/2	10	4 1/4	2 1/2	1.96
E-51B	8 1/2	3 1/2	13	4 1/4	3	2.09
E-52B	12	7	15	4 1/4	4 1/2	3.09
E-53B	14	8	17	5 1/4	5 3/4	3.55

### TRIANGULAR MOUNTING BRACKETS

Cat. No.	Height	Dimensions	Net Price
MB-55	1/2	5x5	1.02
MB-77	1 1/2	7x7	1.19
MB-99	1 3/4	9x9	1.41

Steel — Black Enamel Only

### CHASSIS SUPPORT ANGLES

These angles when bolted to the sides of a cabinet will support a heavy chassis unit. They are made of  $\frac{1}{8}$ " thick steel and are finished in black enamel only.

Cat. No.	Length	Width	Shpg. Lbs.	Price Net
CA-12	12	3	3	2.14
CA-14	14 1/2	3	4	2.24

### METER SHIELD

This shield is made of spun aluminum. It will fit over the meter and effectively stops most interference. Furnished with no holes and in natural finish only.

Catalog Number	L	I.D.	O.D.	Meter Size	Net Price
MSA-2	2-3/16	2-1/32	2 7/8	2	1.75
MSA-3	2	2-25/32	3 3/4	3	1.75

### RELAY RACK PANELS

Regular panels are made from  $\frac{1}{8}$ " steel or aluminum material. Aluminum is 1100 H 14. Notching is either Western Electric (WE) or Amateur (A). Finish Black or Gray Wrinkle or Silver Gray Hammertone. Aluminum is standard and will be sent unless steel is specified. Panels in any material will be furnished 24" wide instead of 19" wide at twice the cost.

### Notching

Western Electric	Amateur	Height	Width	Wt. Alum.	Wt. Steel	Net Price
PW-10	PA-10	1 3/4	19	1/2	1 1/4	1.19
PW-11	PA-11	3 1/2	19	3/4	2 1/4	1.79
PW-12	PA-12	5 1/4	19	1 1/4	4	2.26
PW-13	PA-13	7	19	1 1/2	4 3/4	3.08
PW-14	PA-14	8 3/4	19	2	6	3.91
PW-15	PA-15	10 1/2	19	2 1/2	6 3/4	4.73
PW-16	PA-16	12 1/4	19	3	8 3/4	5.00
PW-17	PA-17	14	19	3 1/2	9 3/4	5.64
PW-18	PA-18	15 3/4	19	4	10 3/4	6.45
PW-19	PA-19	17 1/2	19	4 1/2	12	7.30
PW-20	PA-20	19 1/4	19	5	13	8.15
PW-21	PA-21	21	19	5 1/2	15 3/4	8.75
PW-22	PA-22	24 1/2	19	6	18 1/2	10.30
PW-23		26 1/4	19	7	20 1/4	11.30

### HARD ALUMINUM PANELS

Cat. No.	Height	Width	Wt.	Net Price
PWHA-10	1 3/4	19	1/2	1.63
PWHA-11	3 1/2	19	3/4	2.22
PWHA-12	5 1/4	19	1 1/4	2.80
PWHA-13	7	19	1 1/2	3.48
PWHA-14	8 3/4	19	2 1/2	4.08
PWHA-15	10 1/2	19	2 1/2	4.93
PWHA-16	12 1/4	19	3	5.78
PWHA-17	14	19	3 1/2	6.63
PWHA-18	15 3/4	19	4	7.22
PWHA-19	17 1/2	19	4 1/2	7.82
PWHA-20	19 1/4	19	5	8.42
PWHA-21	21	19	5 1/2	9.60
PWHA-22	24 1/2	19	6	11.70
PWHA-23	26 1/4	19	7	11.90

These  $\frac{1}{8}$ " panels are recommended for high quality work. They are 2024T3 aluminum. Notching is Western Electric, but Amateur on request at no added cost. We also carry a complete line of  $\frac{3}{16}$ " or .188 panels. These are all 2024T3.

**METER PANELS**  
All panels are 5 1/4" x 19" x 1/8" steel or aluminum, black or grey wrinkle — designed to handle either 2" or 3" meters. All units Western Electric notch.

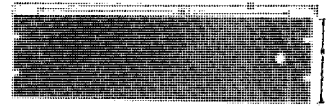
Cat. No.	Wt.	No. Holes	Dia.	Net Price
1PA-32	1	3	2 3/4	2.69
1PA-52	1 1/4	5	2 3/4	3.13
1PA-33	1 1/8	3	2 1/2	2.69
1PA-53	1	5	2 1/2	3.13

Cat. No.	Wt.	No. Holes	Dia.	Net Price
1PS-32	3	3	2 3/4	1.94
1PS-52	2 3/4	5	2 3/4	2.55
1PS-33	3 1/2	3	2 1/2	1.94
1PS-53	3	5	2 1/2	2.55

Small holes are for 2" meters, larger holes are for 3" meters.

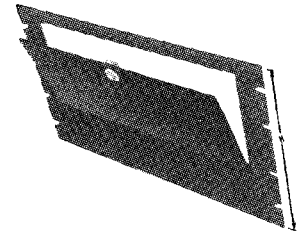
### SIDE HINGED PANELS

Cat. No.	Height	Wt.	Net Price
SH-12	5 1/4	4 1/4	3.66
SH-13	7	5 1/2	3.94
SH-14	8 3/4	6 3/4	4.23
SH-15	10 1/2	7 1/4	4.56
SH-16	12 1/4	8 3/4	4.91



### FRONT HINGED DOOR PANEL

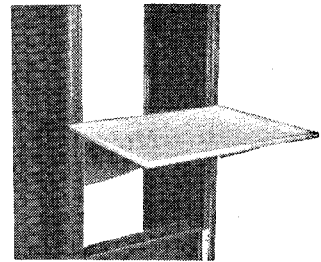
This door gives access to the chassis top. It is free moving and has a substantial catch. Made of  $\frac{1}{8}$ " steel. Please specify finish.



Cat. No.	Height	Door	Net Price
FH-430	10 1/2	6 x 15 3/8	6.07
FH-432	12 1/4	7 1/2 x 15 3/8	7.48

### EXTERIOR RACK SHELVES

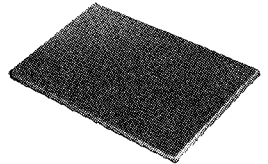
The exterior shelf replaces a panel when a shelf is needed. Unit is composed of a 16 gauge steel shelf with seam welded front corners and two supporting  $\frac{1}{8}$ " steel brackets. All hardware included.



Cat. No.	Shelf Size	Wt.	Net Price
ER-416	16x22	12	11.66
ER-420	20x22	15	11.83

### INTERIOR RACK SHELVES

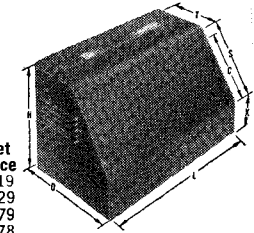
These 16 gauge steel shelves may be supported in the rack by chassis support angles CA-12 or CA-14. They are used to form a strong shelf for modulator units, power supplies etc. Finish black enamel.



Cat. No.	Size	Shpg. Wt.	Price Net
RS-512	12x19	5 1/2	2.64
RS-515	15x19	6 1/2	3.47

### SLOPING FRONT CABINETS

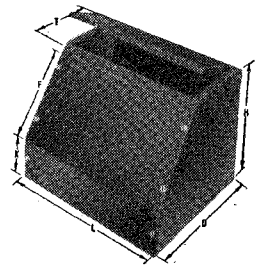
These deluxe all purpose steel cabinets are designed for wide use in the electronic field. Front and top corners are rounded, sides have stainless steel ventilators. Embossed feet to prevent scratching. Gray wrinkle finish.



Catalog No.	D	H	L	T	X	S	Use This Chassis C	Net Price
SFC-42	8	8	8	4 1/4	2 3/4	6	5 1/4 C-104	5.19
SFC-44	8	8	10	4 1/4	2 3/4	6	5 1/4 C-105	7.29
SFC-46	8	8	14	4 1/4	2 3/4	6	5 1/4 C-114	8.79
SFC-48	12	12	18	6	3 3/8	10 3/8	9 1/2 C-110	11.78

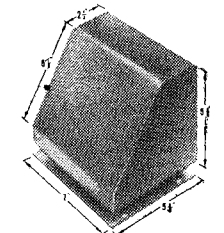
### HINGED TOP SLOPING CABINET

This cabinet provides for a complete opening of top and front. Bottom has embossed feet. Rear has opening for connectors. Black wrinkle or Gray hammertone finishes.



### ENCLOSED METER CABINET

Enclosed Meter Cabinet bottom is open. Bottom plate with embossed feet and four sheet metal screws included. Gray wrinkle unless other color specified. Available in black wrinkle, silver gray hammertone at no additional cost. Steel or Aluminum.



Catalog No. EMC-2

CALIFORNIA CHASSIS CO. — Lynwood, California

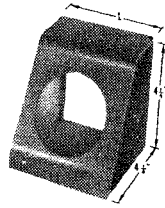
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# CALIFORNIA Chassis COMPANY

## METER CABINETS

Meter Size	Aluminum Cat. No.	Net Price	Wt. Lbs.	Net Price
2"	MC-2	1.43	1 1/2	1.12
3"	MC-3	1.43	1 1/2	1.12
No Holes	MC-4	1.43	1 1/2	1.12
2"	MC-6*	1.43	1 1/2	1.12
3"	MC-7*	1.43	1 1/2	1.12
No Holes	MC-8	2.06	3/4	1.87
3"	HAC-MC-7*	2.06	3/4	1.87

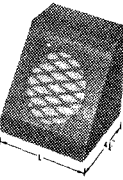
\* Indicates it has two 1/2" holes on 3/4" centers at top of cabinet for insulators. 2" meter hole is 2 3/8". 3" meter hole is 2 1/2".



## MINIATURE SPEAKER CABINETS

These small meter cabinets are like the MC series except the meter hole is covered by an expanded metal shield. Furnished in steel only. Black wrinkle standard.

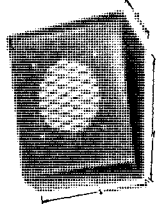
Catalog No.	Length	Meter Size	Wt. Lbs.	Net Price
MS-261	4"	2"	3/4	1.77
MS-262	4"	3"	3/4	1.77



## WALL SPEAKER CASES

These all metal cases have keyslotted holes on the rear for easy mounting. They are also provided with embossed feet on one side. Finish is gray hammertone for ease of cleaning.

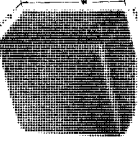
Catalog No.	Speaker Size	Hole Size	H	L	D	Wt.	Net Price
WS-304	4	3 1/2	7 1/2	6 1/2	4 1/4	1 3/4	3.52
WS-305	5	4	1/2 7	6 1/2	4 1/4	1 3/4	3.71
WS-306	6	4 3/4	9 1/2	8	5 5/8	3	4.19
WS-308	8	6 1/2	11 1/2	9 1/2	7	4	5.15
WS-310	10	8 1/2	13 1/2	11 1/2	8 1/4	5	6.47
WS-312	12	10 1/2	15 1/2	13 1/2	9 3/4	6	8.12



## STREAMLINED MINIATURE CABINETS

This miniature steel cabinet has a radiused face. The base has four embossed feet. There rear is open except for a 1/4" flange down two sides. This gives rigidity as well as a place to attach a back cover. Gray wrinkle standard.

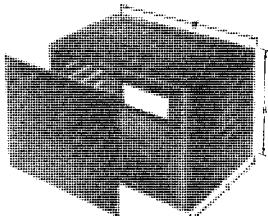
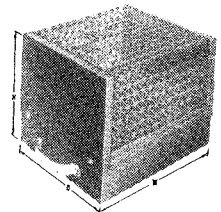
Catalog No.	H	W	D	Wt. #	Net Price
SM-271	4 1/2	5 1/2	3 1/2	1	1.90
SM-272	6 1/2	5 1/2	3 1/2	1 1/2	1.96



## DELUXE AMPLIFIER FOUNDATION

This foundation is used where the chassis must be covered and appearance is important. Material is steel, finish is black wrinkle. Gray hammertone at no extra cost. Use suffix B or GH.

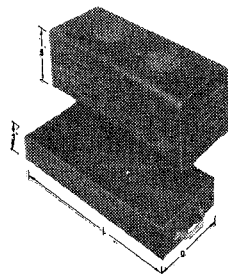
Cat. No.	Length	Depth	Wt.	Net Price
DA-420	10	5	4 1/2	6.82
DA-421	12	7	5	8.04
DA-422	17	7	8	8.50
DA-423	17	10	9	9.25



## STREAMLINED INSTRUMENT CABINET

Miniature aluminum chassis MA series are usually used with this cabinet. Black wrinkle is standard.

Catalog No.	Panel Space	Height	Width	Depth	Wt.	Net Price
SC-31	8x8	8	10 1/2	8 1/4	5 3/4	4.37
SC-32	8x10	8	12 1/2	8 1/4	6	5.42
SC-33	8x12	8	14 1/2	8 1/4	6 1/2	5.88
SC-34	8x14	8	16 1/2	8 1/4	7	6.17
SC-35	8x16	8	18 1/2	8 1/4	7 3/4	6.77
SC-36	12x18	12	20 1/2	12	15	12.17



## AMPLIFIER FOUNDATIONS

These consist of a chassis and perforated metal cover. They have ample ventilation. Handles are included in each package Black wrinkle standard.

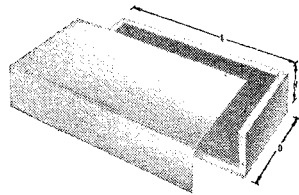
Catalog No.	Height	Width	Depth	Chassis Height	Shpg. Wt.	Pr
AF-240*	6	7 3/8	5 1/8	2	2	4
AF-241	8 5/8	9 5/8	5 1/8	2 1/2	3	5
AF-242	8 3/8	13 5/8	5 1/8	2 1/2	4 3/8	6
AF-243	8 3/8	17 1/8	7 1/8	2 1/2	6	7
AF-244	8 1/8	17 1/8	10 3/8	3	8	10

\* Has one handle only — at top.

## UTILITY BOX — REMOVABLE COVER

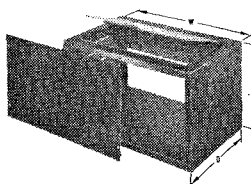
This model allows complete accessibility to the interior of the unit. All work may be completed before cover is installed.

Cat. No.	D	L	H	Net Price
HA-10	3x4	x1 1/2	1.50	
HA-11	4x5	x2	1.96	
HA-12	4x8	x2	2.14	
HA-13	5x9 1/2	x2 1/2	2.15	
HA-14	6x12	x2 1/2	3.23	
HA-15	7x15	x2 1/2	3.82	



## INSTRUMENT CABINETS

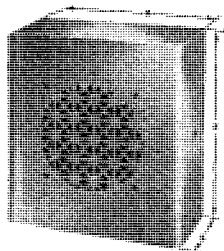
This cabinet has a hinged access door on top and removable front cover. The elimination of the rounded corners gives more inside room. The rear has a 3 1/2" opening for ventilation plus louvers at each end. The open end chassis, E.C. series, is usually used with these cabinets. Black wrinkle only.



Cat. No.	H	W	D	Ship. Wt.	Net Price
HTC-342	7	8	8	5	4.15
HTC-343	7	10	8	5 1/2	5.36
HTC-344	7	12	8	5 3/4	5.65
HTC-345	7	14	8	6	6.05
HTC-346	8	16	8	7	8.35
HTC-347	9	15	11	8	8.53
HTC-348	12	18	12	14 1/2	12.22

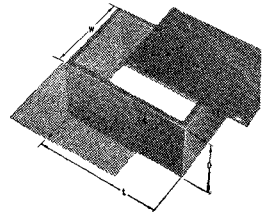
**UNIVERSAL SPEAKER HOUSING**—This versatile unit can be screwed to the wall or mounted directly to an outlet box. If greater adjustability is desired a yoke or "U" shaped speaker bracket, one of the USHB series, can be used. Speaker openings face front and back for bi-lateral sound projection. This makes them very adaptable for use in halls or auditoriums. Being of steel they do not weather and are easy to clean. Interior is coated with a sound deadening material. Finish is silver gray hammertone.

Cat. No.	Speak. Size	H	L	D	Wt.	Price Net
USH-534	4 or 5	7 1/4	6 3/4	3 1/2	2 1/2	5.51
USH-535	5 or 6	8 1/4	7 1/2	4	2 3/4	5.98
USH-536	6 or 8	10 1/16	9 1/2	5	4 1/2	9.62
USH-540	10 or 12	15	13 1/2	7 3/8	9	13.09



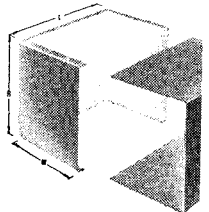
## METAL UTILITY CABINETS

Catalog No.	Wt. Stl.	D	W	L	Wt. Alm.	Painted Alum.
CAB-1	3/4	2"	4"	4"	3/8	1.68
CAB-2	1	3"	5"	6"	3/2	1.87
CAB-3	1 1/2	4"	5"	6"	3/4	2.14
CAB-4	2 1/2	6"	6"	6"	1	2.56
CAB-5	3 1/4	5"	6"	9"	1 1/4	3.47
CAB-6	4 3/4	7"	8"	10"	2	5.10
CAB-7	5	6"	7"	12"	2	4.93
CAB-8	6	8"	10"	10"	2 1/2	7.15
CAB-9	7	8"	11"	12"	2 3/4	8.58
CAB-10	7	9"	15"	2 3/4	8.75	



## MINIATURE CABINETS

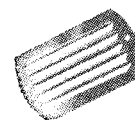
Aluminum Gray Hammertone Cat. No.	Net Price	Etched Aluminum Cat. No.	Net Price	L	H	W
M-51	.83	M-81	.61	2 3/4	x2 1/8	x1 3/8
M-52	.95	M-82	.85	2 3/4	x2 1/8	x2 3/4
M-53	.88	M-83	.61	3 3/4	x2 1/8	x1 1/8
M-54	1.04	M-84	.66	3 3/4	x2 1/8	x1 3/8
M-55	.92	M-85	.65	4	x2 1/8	x1 3/8
M-56	1.00	M-86	.83	4	x2 1/4	x2 1/4
M-57	1.16	M-87	.83	4	x2	x2 3/4
M-58	1.17	M-88	.87	4 1/4	x2 1/4	x1 1/2
M-59	1.21	M-89	.90	5	x2 1/4	x2 1/4
M-60	1.41	M-90	1.34	5	x4	x3
M-61	1.38	M-91	1.26	5 1/4	x3	x2 1/8
M-62	1.85	M-92	1.28	6	x5	x4
M-63	1.89	M-93	1.34	7	x5	x3
M-64	2.28	M-94	2.02	8	x6	x3 1/2
M-65	1.53	M-95	1.34	10	x2	x1 5/8
M-66	3.66	M-96	3.23	10	x6	x3 1/2
M-67	2.04	M-97	1.53	12	x2 1/2	x2 1/4
M-68	3.56	M-98	2.89	12	x7	x4
M-69	4.08	M-99	3.40	17	x5	x4



## CHROME VENTILATING LOUV

These are made of stainless with a high polish finish. The our sloping face cabinets but be adopted to any unit. The behind a 2x4 3/8 rectangular and mount on 4-27/32 centers. pair with screws.

Catalog No. TRM-40 .78



# LMB<sup>®</sup> Box Chassis

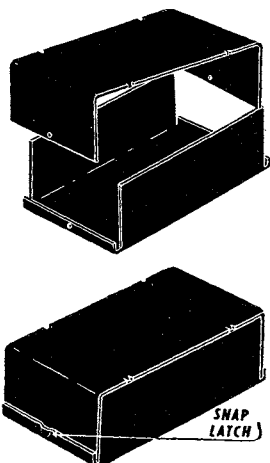
## The Engineered Precision Line with Interlocking and Flangelocking Construction

Here is the answer to box chassis needs, for the laboratory, manufacturer, experimenter, or builder. The following L. M. B. Boxes are available from stock in either interlocking (screw fastened) or snap latch. All screw fastenings are drilled and tapped. Self tapping screws are not used. Available colors include natural aluminum, gray or brown hammertone, and black crackle. When ordering specify style and color.

Aluminum used in all LMB products is aircraft quality specifications type 3003-H 14.

All prices quoted are dealer net. Manufacturers Special Discounts on Application.

### Interlocking



### INTERLOCKING (SCREW-FASTENED OR SNAP LATCH)

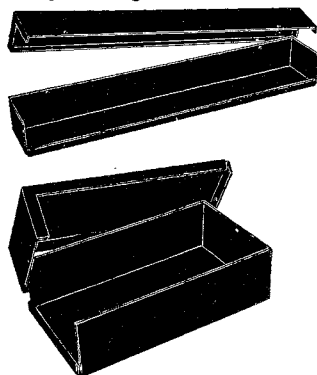
Model	Size	Price	Model	Size	Price
M00	2 1/4" x 1 1/2" x 1 3/8"	.57	138	6 1/4" x 3 1/2" x 2 1/8"	1.32
00Z	2 5/8" x 2 1/8" x 1 3/4"	.64	139	5 1/2" x 3" x 1 1/4"	1.01
000	3 1/4" x 2 1/8" x 1 3/8"	.68	140PL	3" x 4" x 5"	1.29
00	4" x 2 1/8" x 1 3/8"	.71	140	3" x 4" x 5"	1.61
100	2 3/4" x 2 1/8" x 2 3/8"	.89	141PL	6" x 4" x 3"	1.44
101	4 1/4" x 2 1/4" x 1 1/4"	.87	141	6" x 4" x 3"	1.72
102	4" x 2" x 2 3/4"	1.02	142PL	6" x 4" x 5"	1.68
107	4" x 2 1/4" x 2 1/4"	.96	142	6" x 4" x 5"	2.11
108	5" x 2 1/4" x 2 1/4"	1.03	143	4" x 4" x 2"	1.33
135	3 3/4" x 3" x 2 1/8"	.97	144	10" x 4" x 2 1/2"	2.19
136	5 1/4" x 3" x 2 1/8"	1.08	145	7" x 5" x 3"	2.11
650	6 1/2" x 2 1/8" x 1 3/8"	1.05	146	8" x 6" x 4 1/2"	2.99
137	8" x 3" x 2 3/4"	1.61	15	12" x 2" x 1 3/4"	1.61
850	8 1/2" x 2 1/8" x 1 3/8"	1.35			

### SIDELOCK and ENDLOCK CONSTRUCTION

L. M. B. aluminum Box chassis with sidelock and endlock construction are dust proof, semi-water, and rain proof. Sturdy construction and 100% shielded. The following models are available in plain aluminum, or finished in black, gray, or brown. Endlock or sidelock construction:

Model	Size	Price	Model	Size	Price
221	2 3/4" x 3 1/8" x 1 3/8"	1.13	654	6" x 5" x 4"	2.51
321	3 1/4" x 2 1/8" x 1 3/8"	1.13	666	6" x 6" x 6"	3.39
421	4" x 2 1/8" x 1 3/8"	1.13	686	6" x 8" x 6"	4.27
422	4" x 2 1/4" x 2 1/4"	1.29	695	6" x 9" x 5"	3.84
424	4" x 2" x 4"	1.98	753	7" x 5" x 3"	2.60
435	4" x 3" x 5"	2.19	754	7" x 5" x 4"	2.76
444	4" x 4" x 4"	1.89	863	8" x 6" x 3 1/2"	2.86
531	5 1/4" x 3" x 1 1/2"	1.29	865	8" x 6" x 5"	3.57
532	5 1/4" x 3" x 2 1/8"	1.47	1063	10" x 6" x 3 1/2"	3.57
534	5 3/8" x 3" x 4"	2.06	1085	10" x 8" x 5"	4.42
543	5" x 4" x 3"	1.87	1221	12" x 2" x 1 3/4"	1.87
546	5" x 4" x 6"	2.74	1274	12" x 7" x 4"	4.65
645	6" x 4" x 5"	2.60	1754	17" x 5" x 4"	5.27

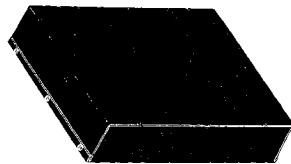
### Flangelocking



### Endlock



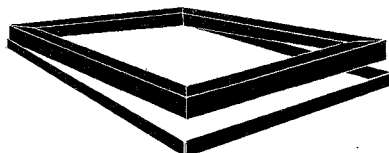
SLIDE COVER



SHIELDED CHASSIS

### PRINTED CIRCUIT CHASSIS

Printed circuit chassis are made with a shallow base with a cap cover on the bottom so that it can be removed to work on the assembly without removing the printed circuit from the chassis. All printed circuit chassis are of plain aluminum.



### SLIDE COVER (or dust cover) BOXES

No.	L	W	H	Ea.	No.	L	W	H	Ea.
16—Natural Aluminum	13"	3 1/8"	2 3/8"	\$1.85	18—Natural Aluminum	13"	5 1/4"	2 3/8"	3.50
16—Gray, Black, Brown	13"	3 1/8"	2 3/8"	2.52	18—Gray, Black, Brown	13"	5 1/4"	2 3/8"	4.30
17—Natural Aluminum	13"	4 1/8"	2 3/8"	3.18	19—Natural Aluminum	17"	3 1/8"	2 3/8"	3.35
17—Gray, Black, Brown	13"	4 1/8"	2 3/8"	3.95	19—Gray, Black, Brown	17"	3 1/8"	2 3/8"	4.15

Designed by BROADCAST ENGINEERS

### SHIELDED CHASSIS

No.	L	W	H	Ea.	No.	L	W	H	Ea.
No. 20 Plain	7 1/2"	7"	2"	\$1.67	No. 21 Anodized	13"	10"	3"	\$5.81
No. 20 Anodized	7 1/2"	7"	2"	2.06	No. 22 Plain	17"	10"	3"	5.13
No. 21 Plain	13"	10"	3"	4.34	No. 22 Anodized	17"	10"	3"	6.67

### STANDARD SIZES

Model No.	L	W	D	Mounting Lip	Price
PC 325	3	2	1/2	3/16"	ea. .70
PC 635	6	3	1/2	3/16"	ea. .80
PC 645	6	4	1/2	1/8"	ea. .91
PC 855	8	5	1/2	1/8"	ea. 1.04
PC 10875	10	8	3/4	1/2"	ea. 1.52
PC 12975	12	9	3/4	5/8"	ea. 1.76

Model No.	Size	Mounting Lip	Model No.	Size	Mounting Lip
D 7131	7 x 13 x 1	1/2"	D 541	5 x 4 x 1	1/2"

for use in building with the Danco model No. 14 printed amplifier circuit...ea. 1.17

for use in building with the Danco model No. 21, 31, 41 printed preamplifier circuit...ea. \$ .63

WRITE FOR COMPLETE CATALOG

PRICES SUBJECT TO CHANGE

**L M B • LOS ANGELES, CALIF.**

SECTION 1400

L M B® Box Chassis (Continued)

	Each	DEALER NET		Each	DEALER NET		
		Plain	Gray, Black, Brown		Plain	Gray, Black, Brown	
T-F 770	2 3/4 x 2 1/8 x 1 1/8	.62	\$.81	T-F 780	5 1/4 x 3 x 2 1/8	.82	\$1.12
T-F 771	2 3/4 x 2 1/8 x 2 3/4	.68	.95	T-F 781	6 x 5 x 4	1.47	1.83
T-F 772	3 1/4 x 2 1/8 x 1 1/8	.62	.84	T-F 782	7 x 5 x 3	1.40	1.86
T-F 773	3 1/2 x 2 1/8 x 1 1/8	.62	.84	T-F 783	8 x 6 x 3 1/2	1.72	2.25
T-F 774	4 x 2 1/8 x 1 1/8	.62	.95	T-F 784	10 x 6 x 3 1/2	2.02	2.54
T-F 775	4 x 2 1/4 x 2 1/4	.75	.97	T-F 785	10 x 2 x 1 1/8	1.15	1.57
T-F 776	4 x 2 x 2 3/4	.75	1.00	T-F 786	12 x 2 1/2 x 2 1/4	1.37	1.67
T-F 777	4 1/4 x 2 1/4 x 1 1/2	.72	1.00	T-F 787	12 x 7 x 4	2.71	3.43
T-F 778	5 x 2 1/4 x 2 1/4	.78	1.03	T-F 788	17 x 5 x 4	2.92	3.44
T-F 779	5 x 4 x 3	.94	1.32				

	Each	PRICES		Each	PRICES		
		Plain	Gray, Black, Brown		Plain	Gray, Black, Brown	
J-870	2 3/4 x 2 1/8 x 1 1/8	.62	\$.81	J-880	5 1/4 x 3 x 2 1/8	\$.82	\$1.12
J-871	2 3/4 x 2 1/8 x 2 3/4	.68	.95	J-881	6 x 5 x 4	1.47	1.83
J-872	3 1/4 x 2 1/8 x 1 1/8	.62	.84	J-882	7 x 5 x 3	1.40	1.86
J-873	3 1/2 x 2 1/8 x 1 1/8	.62	.84	J-883	8 x 6 x 3 1/2	1.72	2.25
J-874	4 x 2 1/8 x 1 1/8	.62	.95	J-884	10 x 6 x 3 1/2	2.02	2.54
J-875	4 x 2 1/4 x 2 1/4	.75	.97	J-885	10 x 2 x 1 1/8	1.15	1.57
J-876	4 x 2 x 2 3/4	.75	1.00	J-886	12 x 2 1/2 x 2 1/4	1.37	1.67
J-877	4 1/4 x 2 1/4 x 1 1/2	.72	1.00	J-887	12 x 7 x 4	2.71	3.43
J-878	5 x 2 1/4 x 2 1/4	.78	1.03	J-888	17 x 5 x 4	2.92	3.44
J-879	5 x 4 x 3	.94	1.32				

	ALUM. GAUGE	Each	PRICES		ALUM. GAUGE	Each	PRICES				
			Plain	Gray, Black, or Brown			Plain	Gray, Black, or Brown			
U-C 970	4x	4x2	.040	\$1.57	\$1.82	U-C 976	10x	8x7	.051	\$4.63	\$5.35
U-C 971	5x	4x3	.040	1.69	1.98	U-C 977	12x	7x6	.051	4.46	5.30
U-C 972	6x	5x4	.040	2.18	2.52	U-C 978	10x	10x8	.051	5.90	6.85
U-C 973	6x	6x6	.040	2.55	3.02	U-C 979	12x	11x8	.051	7.06	8.02
U-C 974	7x	5x3	.040	2.98	3.48	U-C 980	15x	9x7	.051	7.15	8.11
U-C 975	9x	6x5	.051	3.38	3.89						

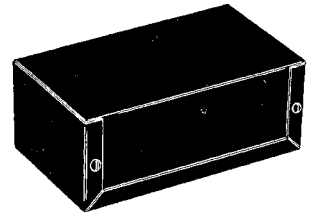
SIZES				SIZES				SIZES			
No.	L	W	H	No.	L	W	H	No.	L	W	H
M-01	1 1/8"	x 1"	x 1 1/2"	* 09	2 5/8"	x 1"	x 3/8"	016	2"	x 1 3/4"	x 3/4"
02	1"	x 7/8"	x 1 1/2"	010	1 3/4"	x 1 1/4"	x 7/8"	017	2"	x 1 3/4"	x 1"
*04	1 1/4"	x 1 1/2"	x 7/8"	011	2"	x 1 1/4"	x 3/4"	018	2"	x 2"	x 1 1/4"
*06	1 1/2"	x 1 1/8"	x 1 1/2"	*012	2"	x 1 1/4"	x 1"	*019	2 1/2"	x 1 3/4"	x 1 1/8"
07	1 3/4"	x 1"	x 3/4"	*013	1 3/4"	x 1 1/4"	x 1"	*020	1 1/2"	x 1 1/2"	x 1"
*08	2 1/4"	x 1"	x 3/4"	014	1 1/2"	x 1 1/2"	x 3/4"	*021	2 1/2"	x 1 3/4"	x 3/4"
				*015	2"	x 1 3/4"	x 1 1/2"	022	3 1/8"	x 1 3/4"	x 1 1/2"

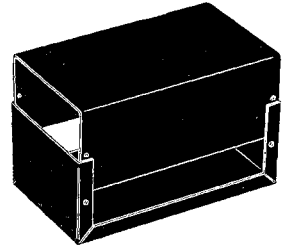
	PRICES		PRICES		Plain
	Plain	Plated	Without Mounting Ears 100 to 999 ea.	Plated	
With Mounting Ears in Lots of 100 to 999 ea.	.49	.65	.41	.57	Covers for LMB Miniature Boxes 100 to 999 ea. .15

\* Without Mounting Ears

TITE-FIT BOX CHASSIS



JEFFY BOX CHASSIS

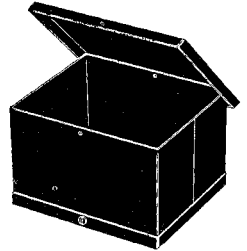


NO SCREWS

Just push together to close and the Cotches snap into place—just a slight pressure of the fingers to open.

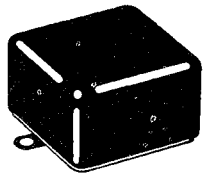
UTILITY BOXES

Give approximately 25% more usable space for building.



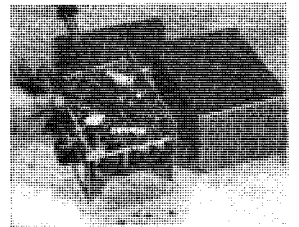
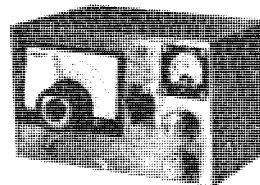
MINIATURE BOX CHASSIS

Precision made in steel only, cadmium plated. Made with or without mounting ears. Covers solder in when used in assembly.



UTILITY ENCLOSURES

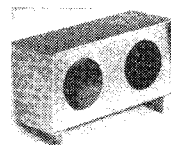
No.	L	W	H	Plain	Gray
W-1A	7"	x 5"	x 4 1/2" with built in chassis	\$3.97	\$4.84
W-1B	10"	x 4"	x 3 1/2" with built in chassis	3.97	4.84
W-1C	8 1/2"	x 6 1/8"	x 5" with built in chassis	4.43	5.33
W-1D	18"	x 9"	x 11" will accommodate an 11" x 17" 2", 3" or 4" chassis	9.75	13.13



"AL-CAB" CABINETS for meter cases or any application where outstanding appearance is needed

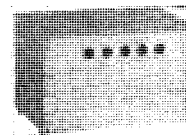
No.	L	W	H	Plain	Gray
W-2AP	3 1/2"	x 4"	x 3" with holes	\$1.88	\$2.18
W-2A	3 1/2"	x 4"	x 3 1/2" without holes	1.98	2.28
W-2B	3"	x 7"	x 3 1/2" with and without holes	2.25	2.67
W-2C	2 3/8"	x 7"	x 3 1/2" without holes	2.93	3.36
W-2E	4 1/2"	x 4 1/2"	x 3 1/2" without holes	2.30	2.60

Holes in W-2AP, 2B are 2 1/4", 2 1/8". For 4" Meter holes and knock-out, add 10% to above prices.



W.M. "AL-CAB" Deluxe Series All with Built-in Chassis

No.	L	W	H	Plain	Gray
W-2F	7 1/2"	x 5"	x 4 1/2"	\$4.40	\$5.18
W-2G	13"	x 10"	x 5 3/4"	9.36	11.06
W-2H	7"	x 11"	x 6"	7.38	8.63
W-2J	8"	x 11 1/2"	x 7 1/2"	8.10	9.35

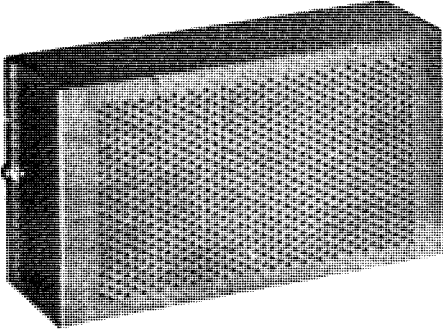


WRITE FOR COMPLETE CATALOG PRICES SUBJECT TO CHANGE

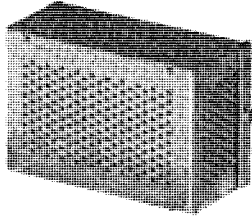


SECTION 1400

LMB® (Continued)



LMB PERFORATED BOX CHASSIS



LMB Perforated Boxes are adaptable wherever heat dissipation is required as they are spaced in perforations that are set by laboratory research to give utmost heat dissipation and also give utmost shielding. They are die perforated on three sides and top of the box.

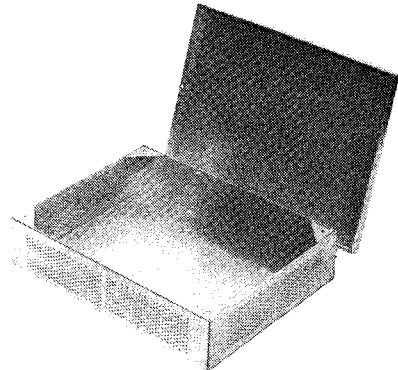
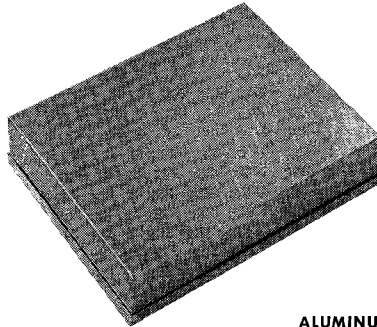
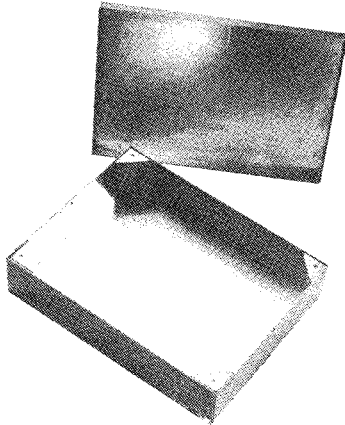
NO.	FINISH	SIZE	NET EA.	NO.	FINISH	SIZE	NET EA.
002	Plain or Gray	2 <sup>3</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>4</sub>	\$.83	138	Plain or Gray	6 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>8</sub>	\$1.82
000	" "	3 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>8</sub> x 1 <sup>5</sup> / <sub>8</sub>	.95	139	" "	5 <sup>1</sup> / <sub>2</sub> x 3 x 1 <sup>1</sup> / <sub>4</sub>	1.36
00	" "	4 x 2 <sup>1</sup> / <sub>8</sub> x 1 <sup>5</sup> / <sub>8</sub>	1.02	140	" "	3 x 4 x 5	1.75
100	" "	2 <sup>3</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>8</sub> x 2 <sup>5</sup> / <sub>8</sub>	1.20	141	" "	6 x 4 x 3	1.88
101	" "	4 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>4</sub> x 1 <sup>1</sup> / <sub>4</sub>	1.12	142	" "	6 x 4 x 5	2.18
102	" "	4 x 2 x 2 <sup>3</sup> / <sub>4</sub>	1.41	143	" "	4 x 4 x 2	1.40
107	" "	4 x 2 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>4</sub>	1.09	144	" "	10 x 4 x 2 <sup>1</sup> / <sub>2</sub>	2.19
108	" "	5 x 2 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>4</sub>	1.50	650	" "	6 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>8</sub> x 1 <sup>5</sup> / <sub>8</sub>	1.41
135	" "	3 <sup>3</sup> / <sub>4</sub> x 3 x 2 <sup>1</sup> / <sub>8</sub>	1.36	850	" "	8 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>8</sub> x 1 <sup>5</sup> / <sub>8</sub>	1.59
136	" "	5 <sup>1</sup> / <sub>4</sub> x 3 x 2 <sup>1</sup> / <sub>8</sub>	1.50	15	" "	12 x 2 x 1 <sup>3</sup> / <sub>4</sub>	1.79
137	" "	8 x 3 x 2 <sup>3</sup> / <sub>4</sub>	2.14				

LMB PRESENTS SOMETHING NEW IN CHASSIS —

THE CHASSIS WITH THE CAP COVER AS ORIGINATED BY LMB

Built with the new original LMB popular cap cover construction. This construction enables the builder to use either the top or the bottom of the chassis for construction. The Chassis can also be mounted on its side and construction can be on both top and bottom at the same time. Sturdily built from Aircraft quality aluminum, Type 3003, H-14, the same material as is used in the construction of all LMB precision box chassis. Special technique in welding the corners makes for a stronger chassis than the orthodox type. Cap construction allows for using all the space inside the chassis without being hindered by the mounting flange, which takes from 10% to 20% of the mounting space out of the average chassis.

The P Series are perforated on all four sides and are ideal where heat dissipation is a factor. LMB chassis — the better chassis, with the year's ahead advanced construction for your better project application. An advanced quality product competitively priced.



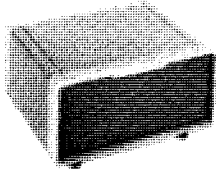
ALUMINUM

WITHOUT COVER				WITH CAP COVER			PERFORATED		
NO.	SIZE L W H	GAUGE	NET	NO.	L W H	NET	NO.	L W H	NET
572	5x 7x2	18	\$1.17	572C	5x 7x2	\$1.75	572P	5x 7x2	\$2.05
573	5x 7x3	18	1.42	573C	5x 7x3	1.95	573P	5x 7x3	2.25
5952	5x9 <sup>1</sup> / <sub>2</sub> x2	18	1.25	5952C	5x9 <sup>1</sup> / <sub>2</sub> x2	1.85	5952P	5x9 <sup>1</sup> / <sub>2</sub> x2	2.15
5103	5x10x3	18	1.65	5103C	5x10x3	2.25	5103P	5x10x3	2.55
5133	5x13x3	18	1.85	5133C	5x13x3	2.50	5133P	5x13x3	2.80
6173	6x17x3	18	2.67	6173C	6x17x3	3.40	6173P	6x17x3	3.70
772	7x 7x2	18	1.35	772C	7x 7x2	1.90	772P	7x 7x2	2.20
792	7x 9x2	18	1.46	792C	7x 9x2	1.95	792P	7x 9x2	2.25
7112	7x11x2	18	1.58	7112C	7x11x2	2.30	7112P	7x11x2	2.60
7123	7x12x3	18	2.03	7123C	7x12x3	2.75	7123P	7x12x3	3.05
7153	7x15x3	18	2.67	7153C	7x15x3	3.60	7153P	7x15x3	3.90
7173	7x17x3	18	2.75	7173C	7x17x3	3.70	7173P	7x17x3	4.00
8123	8x12x3	18	2.42	8123C	8x12x3	3.23	8123P	8x12x3	3.53
8172	8x17x2	18	2.52	8172C	8x17x2	3.50	8172P	8x17x2	3.80
8173	8x17x3	16	2.95	8173C	8x17x3	4.50	8173P	8x17x3	4.80
10123	10x12x3	18	2.70	10123C	10x12x3	3.60	10123P	10x12x3	4.30
10143	10x14x3	18	2.95	10143C	10x14x3	4.30	10143P	10x14x3	4.70
10172	10x17x2	16	2.85	10172C	10x17x2	4.37	10172P	10x17x2	4.77
10173	10x17x3	16	3.40	10173C	10x17x3	5.18	10173P	10x17x3	5.98
10174	10x17x4	16	4.85	10174C	10x17x4	6.37	10174P	10x17x4	7.17
11173	11x17x3	14	4.20	11173C	11x17x3	6.60	11173P	11x17x3	7.10
12172	12x17x2	14	4.50	12172C	11x17x2	6.60	12172P	12x17x2	7.20
12173	12x17x3	14	4.60	12173C	12x17x3	6.90	12173P	12x17x3	7.50
13172	13x17x2	14	4.50	13172C	13x17x2	6.60	13172P	13x17x2	7.30
13173	13x17x3	14	4.80	13173C	13x17x3	6.90	13173P	13x17x3	7.50
13174	13x17x4	14	5.95	13174C	13x17x4	7.95	13174P	13x17x4	8.55

WRITE FOR COMPLETE CATALOG

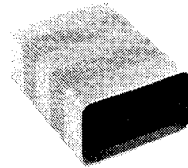
# QUALITY CABINETS by LMB

Original designs in cabinets for the electronic industry, for quality products. Use an original by LMB to dress up your product.



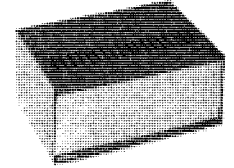
Perforated, removable top, 3 tone, body gray, trim ivory, recessed front panel blue gray.

	Net Ea. Plain	Net Ea. Gray
CO-1 14 1/2" x 13" x 16 1/2" ..	\$17.95	\$19.95
CO-2 12" x 10" x 6 1/2" .....	15.75	17.95



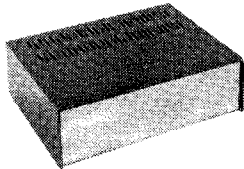
Perforated 3 sides, built in chassis, recessed front panel. Color, body gray, panel dark gray.

	Net Ea. Plain	Net Ea. Gray
CO-3 7 1/4" x 5 1/2" x 3 1/8" .....	\$5.05	\$5.85



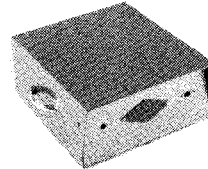
Slotted ventilation, front panel recessed, simulated gold or silver, beveled. Colors - gray Bronze Hammettone, Black Crackle, Plain.

	Net Ea. Plain	Net Ea. Colors
CB-1 8" x 10" x 4 1/2" .....	\$5.99	\$7.11
CB-2 6" x 8" x 4 1/2" .....	5.18	6.21



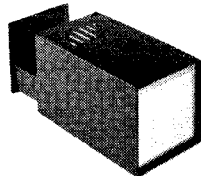
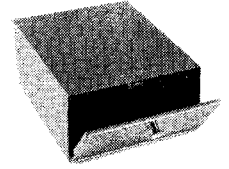
Slot ventilation, recessed panel, Vinyl covered, color Brown (simulated wood), panel either silver or gold simulated. Panel beveled. With chassis.

	Net Ea. Brown
V-1 16" x 12" x 4 1/2" .....	\$18.00
V-2 9" x 12" x 4 1/2" .....	15.98
V-3 7" x 11" x 4 1/2" .....	14.74



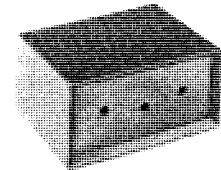
Hooded front, hinged door in rear, front panel removable by removing three screws. Chrome carrying handle. Colors blue, gray, bronze hammer tone, black crackle, plain. Steel or aluminum.

	Net Ea. Plain	Net Ea. Colors
HA-1 (ALUM.) 11 1/2" x 10" x 5" .....	\$11.78	\$12.5
HS-1 (Steel) 11 1/2" x 10 1/2" x 5 .....	8.84	10.9



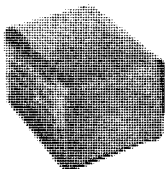
Slot ventilated, built in chassis, recessed panel, simulated gold or silver. Chassis attached to back plate and is removable. Colors - gray bronze hammettone, black crackle, plain.

	Net Ea. Plain	Net Ea. Colors
SQ-1 8 1/2" x 4 1/2" x 4 1/2" .....	\$5.07	\$6.53



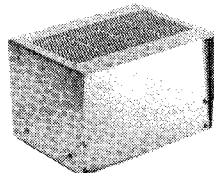
Double cabinet, inside cabinet fully shielded. Double recessed panel. Colors, Gray, Bronze Hammettone, Black crackle, Plain.

	Net Ea. Plain	Net Ea. Colors
CM-1 6" x 8" x 3 7/8" .....	\$4.50	\$5.7



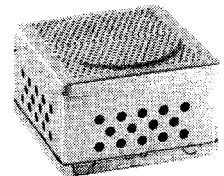
Aluminum with chassis contoured, hooded front recessed panel, slotted ventilation on bottom, louvres on side. Colors Gold, Gray, bronze hammettone, black crackle, plain.

	Net Ea. Plain	Net Ea. Colors
B-1 10" x 8" x 6" .....	\$11.15	\$12.83
B-2 9" x 6" x 5" .....	10.02	11.48



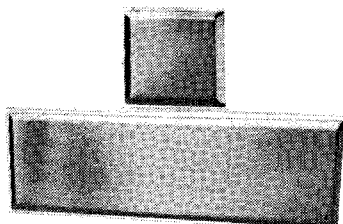
Hooded Front, built in chassis, perforated top & Back, colors Plain, Gray & Bronze Hammettone, Black Crackle.

	Net Ea. Plain	Net Ea. Colors
WR-1 10" x 6 7/8" x 6 1/4" .....	\$7.50	\$8.93



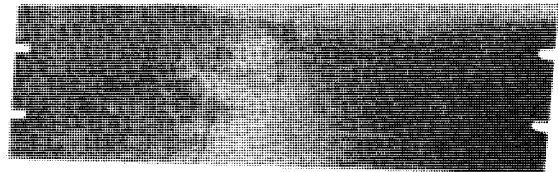
Speaker Case Perforated. With Mounting Clamps. Colors - Gray Hammettone, Telephone Black.

	Net Ea. Color
SP-1 3 1/2" x 3 1/2" x 2 1/8" .....	ea \$3.



Front panel beveled, for equipment decorative panel. Simulated gold or silver.

	Net Ea.
F-1 panel 4 1/2" x 4 1/2" .....	\$.80
F-2 panel 14" x 4 1/2" .....	2.00
F-3 panel 16" x 4 1/2" .....	2.25



### HARD ALUMINUM PANELS

These 1/8" panels are recommended for high quality work Made from 2024T3 aluminum. West Electric Notching. Finish Black or Gray wrinkle or Silver Hammettone.

No.	Height	Width	Net Ea.	No.	Height	Width	Net Ea.
A-1	1 3/4"	19"	\$1.63	A-8	14"	19"	\$ 6
A-2	3 1/2"	19"	2.06	A-9	15 3/4"	19"	6
A-3	5 1/4"	19"	2.72	A-10	17 1/2"	19"	7
A-4	7"	19"	3.32	A-11	19 1/4"	19"	8
A-5	8 3/4"	19"	3.93	A-12	21"	19"	8
A-6	10 1/2"	19"	4.59	A-13	24 1/2"	19"	10
A-7	12 1/4"	19"	5.25	A-14	26 1/4"	19"	11

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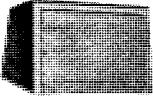
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HERMANN, MISSOURI

**CONSOLES FOR INDUSTRY...SCHOOLS...AIRPORTS...BROADCASTING  
RECORDING...TESTING APPARATUS...FOR 19" RACK PANELS**

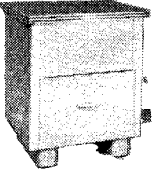


**RB-100 SINGLE PEDESTAL UNIT**

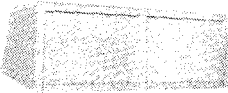
This unit is designed for economy in the smaller broadcast station, school lab, etc.; a low cost unit with a wide range of uses. This unit is equipped with a sliding drawer (PD-1050-16) built into the cabinet. A blank panel (PM-1610) is provided above or below the drawer for equipment. The top has office gray linoleum touched off by attractive metal trim.

NOTE: Drawers furnished with panel mtg. screws showing unless requested as pictured.

Net Price **\$148.50**



RB-100

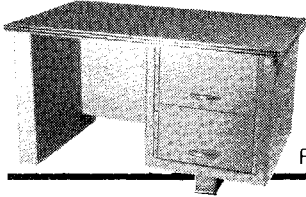


**RB-101 DOUBLE PEDESTAL UNIT**

This console is designed for The Dual Turret RBT-101, equivalent to a 30 classroom unit. This unit is equipped with a sliding drawer (PD-1050-16) built in the upper or lower section of the cabinet. A blank panel (PM-1610) is provided in the remaining space. This console has a hard linoleum top trimmed with metal molding.

See Note above.

Net Price **\$189.71**



RB-101

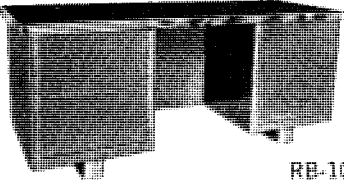


**RB-102 TRIPLE PEDESTAL UNIT**

This unit is the ultimate in console design. It is able to handle equipment for a 60 classroom unit. Plenty of space is provided on this large top for work area. A sliding drawer (PD-1050-16) with sufficient room for a 16" Transcription turntable is provided in this unit. Three blank 10½" (PM-1610) panel are provided in the remaining space. The top is an attractive office gray set off by metal trim.

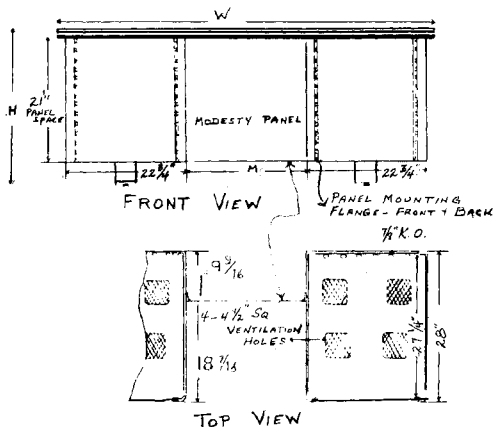
See Note above.

Net Price **\$330.00**



RB-102

**ARCHITECTS AND ENGINEERS SPECIFICATIONS**



MATERIAL: 18 ga. CRS

CONSTRUCTION:

1. Spot weld throughout. 2. Tops are spot welded and fastened with sheet metal screws. 3. Corners, brazed for added strength and finish appearance. 4. Modesty panels in the two larger models are removable via sheet metal screws. 5. Each pedestal has 21" panel space both front and rear recessed 1/4". Rear panel furnished with (4) 4 1/2" screened ventilating holes same as bottom of each pedestal. 6. Panel mounting holes are punched on standard Western Electric spacing. 10-24 ov head screws, Tinnerman clips and finish washers furnished. 7. Six 7/8" wire knockouts are provided toward rear of bottom of each pedestal. These knockouts accommodate 1/2" conduit or pipe. 8. Top is covered with gray matching linoleum and trimmed with a special aluminum trim. Trim provides 2 spaces for plastic feature strips.

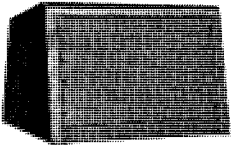
FINISH: Iron phosphate dipped and finished with Silver Gray Hammer tone Bake On Enamel. Other colors available.

Catalog No.	H	D	W	M	Inside Pedestal Depth	Ship. Wt.
RB-100	29"	30"	26"		27 1/4"	125
RB-101	29"	30"	53"	23 1/4"	27 1/4"	190
RB-102	29"	30"	70"	21 1/2"	27 1/4"	250

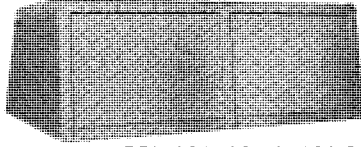


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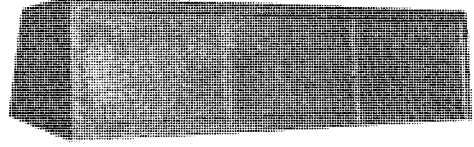
## TURRETS FOR USE WITH "RB" SERIES — 19" PANELS



RBT-100 -100-1 -100-2



RBT-101 -101-1 -101-2



RBT-102 -102-1 -102-2

Turret console combinations are attractive instruments that accentuate any control room, office, etc., with their modern design.

Turrets featured in three different series and three sizes within each series offer a multiple of combinations that can be used in conjunction with our RB series of consoles. These combinations are readily adaptable to specialized applications in control equipment, testing facilities, sound systems, control units in language laboratories and many other applications in industry and entertainment services.

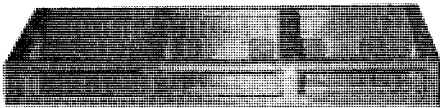
The standard turret which has 12 $\frac{1}{4}$ " panel space is especially designed for use on the consoles (RB-100, RB-101, RB-102) and on equipment tables (RB-80-1, RB-80-3, RB-90-1, RB-90-3), although it has a wide variety of other uses.

**MATERIAL:** 18 ga. CRS. **CONSTRUCTION:** 1. Spot weld throughout. 2. Corners brazed for added strength and finish appearance. 3. Removable rear panel for easy access to cabinet components. 4. Five  $\frac{7}{8}$ " knockouts provided in rear of each panel space. These knockouts accommodate  $\frac{1}{2}$ " conduit or pipe. 5. Two 6 $\frac{1}{8}$ " channel irons formed from 18 ga. CRS comprise the bottom of each turret. This type construction adds rigidity. 6. Front panel space has 10° slope. Rear of turrets has 10 $\frac{1}{2}$ ° slope. 7. Panel mounting holes are punched on standard Western Electric spacing. 8. 10/24 oval head screws, Tinnerman clips and finishing washers are furnished. 9. Panel spacing is recessed  $\frac{1}{4}$ ". **FINISH:** Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.

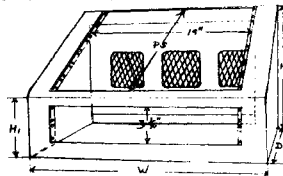
For front height add 2" to H dimension.

Cat. No.	W	H	WT	WB	PS	No. of Units	Shipping Weight	Net Price
RBT-100	21 $\frac{3}{4}$	15 $\frac{1}{2}$	13 $\frac{1}{2}$	18	12 $\frac{1}{4}$	1	40 lbs.	\$46.68
RBT-101	42	15 $\frac{1}{2}$	13 $\frac{1}{2}$	18	12 $\frac{1}{4}$	2	65 lbs.	63.54
RBT-102	62 $\frac{1}{4}$	15 $\frac{1}{2}$	13 $\frac{1}{2}$	18	12 $\frac{1}{4}$	3	110 lbs.	82.25
RBT-100-1	21 $\frac{3}{4}$	17 $\frac{1}{4}$	12 $\frac{3}{4}$	18	14	1	50 lbs.	48.74
RBT-101-1	42	17 $\frac{1}{4}$	12 $\frac{3}{4}$	18	14	2	80 lbs.	66.04
RBT-100-2	21 $\frac{3}{4}$	13 $\frac{3}{4}$	11 $\frac{5}{8}$	15 $\frac{7}{8}$	10 $\frac{1}{2}$	1	35 lbs.	46.20
RBT-102-1	62 $\frac{1}{4}$	17 $\frac{1}{4}$	12 $\frac{3}{4}$	18	14	3	130 lbs.	85.97
RBT-101-2	42	13 $\frac{3}{4}$	11 $\frac{5}{8}$	15 $\frac{7}{8}$	10 $\frac{1}{2}$	2	60 lbs.	62.87
RBT-102-2	62 $\frac{1}{4}$	13 $\frac{3}{4}$	11 $\frac{5}{8}$	15 $\frac{7}{8}$	10 $\frac{1}{2}$	3	105 lbs.	79.37

## INSTRUCTORS TURRETS FOR USE WITH "RB" SERIES — 19" PANELS



The T-103-1, 103-2, 103-3 series of turrets are especially designed for the language lab control unit ensemble. The low slope affords easy vision of the classroom as well as the equipment installed therein. These turrets are the result of considerable study in the field of audio education and are designed with the instructor, as well as maintenance personnel, in mind. Other applications of this turret are feasible where low slope aids vision of dials, meters and switch panel from a standing position. Takes panels:—ARP-123; RP-123; PM-163 or PA-163—lower space. Upper space:—ARP-1217; RP-1217; PM-1617 or PA-1617. Panels not furnished—order separately.



CRS comprise the bottom of each turret. This construction adds rigidity. 6. Front panel, 3 $\frac{1}{2}$ " x 19", is made especially for our SP-1635 switch panel. 7. 17 $\frac{1}{2}$ " panel space in all bays provides ample space for most installations. 8. Panel mounting holes are punched on standard Western Electric spacing. 9. 10/24 oval head screws, Tinnerman clips and finishing washers are furnished. 10. Panel spacing is recessed  $\frac{3}{16}$ " to flush mount panel. **FINISH:** Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.

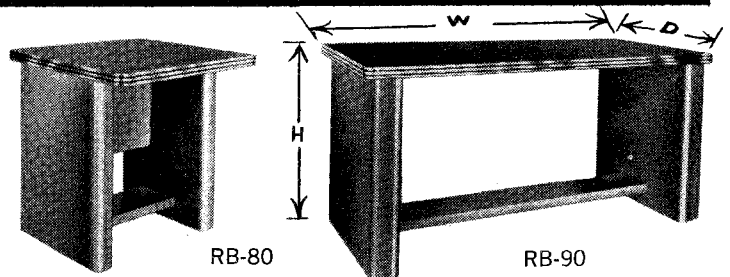
### \* SPECIFICATIONS

**MATERIAL:** 18 ga. CRS. **CONSTRUCTION:** 1. Spot weld throughout. 2. Corners brazed for added strength and finished appearance. 3. Removable rear panel for easy access to cabinet components. 4. Five  $\frac{7}{8}$ " knockouts provided in rear of each panel space. These knockouts accommodate  $\frac{1}{2}$ " conduit or pipe. 5. Two 6 $\frac{1}{8}$ " channel irons formed from 18 ga. CRS comprise the bottom of each turret. This construction adds rigidity. 6. Front panel, 3 $\frac{1}{2}$ " x 19", is made especially for our SP-1635 switch panel. 7. 17 $\frac{1}{2}$ " panel space in all bays provides ample space for most installations. 8. Panel mounting holes are punched on standard Western Electric spacing. 9. 10/24 oval head screws, Tinnerman clips and finishing washers are furnished. 10. Panel spacing is recessed  $\frac{3}{16}$ " to flush mount panel. **FINISH:** Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.

Cat. No.	W	H1	H2	D	PS	Shipping Weight	Net Price
T-103-1	22	6 $\frac{3}{8}$	10	18 $\frac{1}{2}$	17 $\frac{1}{2}$	40 lbs.	\$37.50
T-103-2	42 $\frac{3}{4}$	6 $\frac{3}{8}$	10	18 $\frac{1}{2}$	17 $\frac{1}{2}$	65 lbs.	67.50
T-103-3	63 $\frac{3}{8}$	6 $\frac{3}{8}$	10	18 $\frac{1}{2}$	17 $\frac{1}{2}$	95 lbs.	99.00

## EQUIPMENT TABLES FOR SMALL OR LARGE DESK EQUIPMENT

Equipment tables are exclusively in the line. They are very handy when small equipment is being used. Models 80-1 — 80-3 have an overhanging top and plenty of knee room and are used for the smaller equipment. Models 90-1—90-3 are for larger table mounting equipment and have larger tops for more working area. Top is attractive linoleum with bright metal trim. Finish is modern silver gray hammertone.

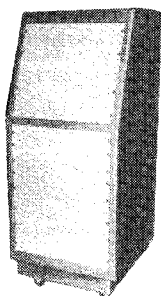


Cat. No.	Width-in.	Height-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
RB-80-1	26	29	26	75	\$62.91
RB-80-2	36	29	26	95	68.11
RB-80-3	46 $\frac{1}{2}$	29	26	120	71.62
RB-90-1	53	29	30	120	84.94
RB-90-2	60	29	30	130	87.12
RB-90-3	70	29	30	150	89.27



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**CABINET CONSOLES**



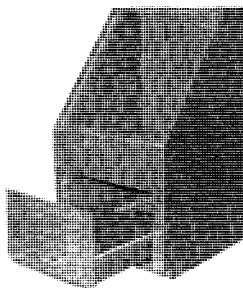
CR-1001

This is a combination console and rack cabinet for applications requiring a minimum of horizontal space.

The upper panel space is large enough to mount a 17" television screen for testing equipment.

Lower panel area has sufficient space for control equipment.

Net Price \$150.00



CR-1005

This console rack fits in well where height might be a problem yet offers a sufficient amount of panel space for most applications.

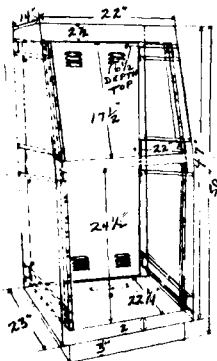
The base area contains a space for mounting a record player or an automatic turntable drawer. The control panel area has a 38° slope for good visibility.

Rear of console rack has a removable louvered panel for easy servicing of the unit.

Net Price \$112.50

CR-1001

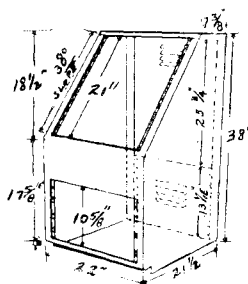
**MATERIAL:** 16 ga. CRS except panel mounting angles and these are made of 13 ga. CRS. **CONSTRUCTION:** 1. Spot welded and brazed throughout. 2. Upper and lower panel mounting angles drilled and tapped to 10-32 thread. 3. Ball corners brazed for added strength and finish appearance. 4. Rear panel removable, attached with Tinnerman clips and screws. 5. 1 3/4" x 6" rectangle slot punched out of bottom and 1 1/2" dia. hole in rear bottom for wiring inlet. 6. All reinforced channel iron on sides (3 ea. side) formed from 18 ga. CRS. 7. Channel support panel mounting angles and are fastened with 1/4 x 20 binding head screws. 8. Upper panel space is on a 20° slope. 9. Two sets of four louvers each provided in top and bottom of rear panel. 10. Sides, front and back, and top, are formed with 5/8" radius. 11. Sides and top have a 1/4" flange turned in for added strength and smooth corners. 12. Four gussets—one on each corner, drilled for mounting 2 1/2" rubber casters. 13. Casters are guaranteed to hold up 100 lbs. of weight each; total load capacity per console is 400 lbs. 14. Cabinet weight—105 lbs. 15. Shipping weight—140 lbs. Shipped assembled. **FINISH:** Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.



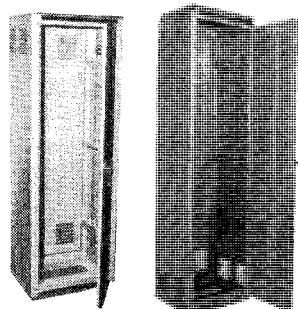
**ARCHITECTS AND ENGINEERS SPECIFICATIONS**

CR-1005

**MATERIAL:** 16 ga. CRS. **CONSTRUCTION:** 1. Spot welded and brazed throughout. 2. Upper and lower panel mounting holes are punched to standard 1 1/4" x 1/2" spacing. 3. 10-24 Tinnerman clips, 10-24 oval head screws and finishing washers furnished. 4. Rear panel removable; attached with sheet metal screws. 5. Upper panel space has a 38° slope. 6. All corners are square—not rounded. 7. Cabinet strength is accomplished via formed parts eliminating channels for supporting members. 8. Louvers in fixed lower rear panel are reversed and faced up to help dissipate heat. 9. Shipping weight—110 lbs. **FINISH:** Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.



**TRANSMITTER RACKS**



STR Standard DTR Deluxe

Transmitter racks are made to accommodate 19", 24" and 30" rack panels. All models are furnished with front and rear doors.

Rear door opening provides easy access for equipment maintenance and installation. Front door furnishes full covering for dials, knobs, etc., mounted on panels. Front door is provided with a locking handle and rear door with a flush mounted lock and handle. This gives added protection where it is necessary to lock all components.

Slotted channels (3 per side) permit panel mounting angles to be recessed to full cabinet depth by simply tightening screws that hold each angle in place.

	Catalog No.	Net Price *		Catalog No.	Net Price *
Standard For 19" Panels	STR-3675	\$105.62	DeLuxe For 19" Panels	DTR-3675	\$117.56
	STR-4200	107.89		DTR-4200	119.83
	STR-6125	114.28		DTR-6125	126.23
	STR-7000	119.26		DTR-7000	127.71
For 24" Panels	STR-7700	121.72	For 24" Panels	DTR-7700	142.15
	STR-7024	158.98		DTR-7024	176.72
For 30" Panels	STR-7724	179.85	For 30" Panels	DTR-7724	200.44
	STR-7030	182.90		DTR-7030	209.39
	STR-7730	186.82		DTR-7730	214.50

\*Assembled Price.

**ARCHITECTS AND ENGINEERS SPECIFICATIONS**

**MATERIAL:** 16 ga. CRS. Panel mounting angles 16 ga. CRS. Punch for Tinnerman Clips.

**CONSTRUCTION:**

- Louvers are provided in sides and rear door—four sets of six louvers each.
  - Assembled with 1/4-20 bolts and nuts.
  - Rear doors swing on rigid slip joint hinges. Front doors mounted on continuous hinges.
  - All models furnished with stainless steel feature strip (colored) trim.
  - Shipped knocked down unless otherwise requested.
- FINISH:** Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.

Size	Catalog No.	Width-in.	Height-in.	Depth-in.	Panel Space-in.	Ship. Wt. Lbs.	Net Price
Standard for 19" Panels	STR-3675	23	42	18 1/2	36 3/4	130	\$105.62
	STR-4200	23	47 1/4	18 1/2	42	140	107.89
	STR-6125	23	66 1/2	18 1/2	61 1/4	150	114.28
	STR-7000	23	75 1/4	18 1/2	70	155	119.26
For 24" Panels	STR-7700	23	82 1/4	18 1/2	77	160	121.72
	STR-7024	27 7/8	75 1/4	24	70	230	158.98
For 30" Panels	STR-7724	27 7/8	82 1/4	24	77	245	179.85
	STR-7030	33 3/8	75 1/4	24	70	250	182.90
	STR-7730	33 3/8	82 1/4	24	77	265	186.82
DeLuxe for 19" Panels	DTR-3675	23	43 3/8	18 1/2	36 3/4	135	117.56
	DTR-4200	23	49 1/8	18 1/2	42	145	119.83
	DTR-6125	23	68 3/8	18 1/2	61 1/4	155	126.23
	DTR-7000	23	77 1/8	18 1/2	70	160	127.71
For 24" Panels	DTR-7700	23	84 1/8	18 1/2	77	160	142.15
	DTR-7024	27 7/8	77 1/8	24	70	235	176.72
For 30" Panels	DTR-7724	27 7/8	48 3/8	24	77	250	200.44
	DTR-7030	33 3/8	77 1/8	24	70	255	209.39
	DTR-7730	33 3/8	84 1/8	24	77	270	214.50

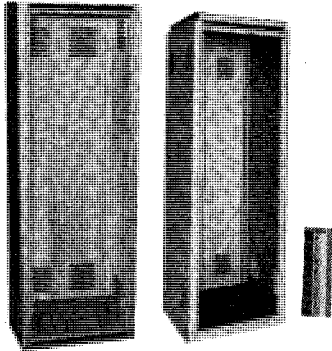




SECTION 1400

**METAL WORKS INCORPORATED**  
STANDARD & CUSTOM DESIGNS  
HERMANN, MISSOURI

**CABINET RELAY RACKS FOR STANDARD 19" RACK PANELS**



SCR standard      DCR deluxe

Cabinet Relay Racks are rigidly constructed of 16 ga. steel. These racks are completely bolted together.

Panel mounting space is recessed 1/4" to give a more modernistic and pleasing appearance. The rear doors swing on rigid slip joint hinges which permit it to be easily removed. The standard type rack has square front vertical corners. The rounded type rack has rounded front vertical corners. The deluxe type rack has a dome top with rounded front vertical corners.

Front door with 1 1/4" depth furnished on request.

**ARCHITECTS AND ENGINEERS SPECIFICATIONS**

Standard	Net Price *	Round Corner	Net Price *	DeLuxe	Net Price *
SCR-3675	\$46.37	RCR-3675	\$46.37	DCR-3675	\$54.70
SCR-4200	49.87	RCR-4200	49.87	DCR-4200	63.36
SCR-6125	61.88	RCR-6125	61.88	DCR-6125	67.65
SCR-7000	66.52	RCR-7000	66.52	DCR-7000	69.46
SCR-7700	69.30	RCR-7700	69.30	DCR-7700	81.29

\*Assembled Price

MATERIAL: 16 ga. CRS.

**CONSTRUCTION:**

1. Panel mounting angles are punched to standard 1 1/4" x 1/2" spacings and are formed as part of the cabinet side.
  2. Panel mounting offset is 1/4" deep (See Inset).
  3. 10-24 Tinnerman clips, oval head screws and finishing washers furnished for panel space.
  4. Louvers are provided in sides and rear door—Four sets of six louvers each.
  5. Assembled with 1/4-20 pan head bolts and nuts.
  6. Rear doors swing on rigid slip joint hinges permitting easy removal.
  7. All models furnished with stainless steel feature strip (colored) trim, top and bottom.
  8. All models shipped knocked down unless assembled is requested.
- FINISH: Iron phosphate dipped and finished with Silver Gray Hammer-tone Bake On Enamel. Other colors available.

Model	Catalog No.	Height-in.	Width-in.	Depth-in.	Panel Space-in.	Ship. Wt. Lbs.	Net Price *
Standard	SCR-3675	41 1/8	22 3/8	18 1/2	36 3/4	100	\$46.37
	SCR-4200	46 3/8	22 3/8	18 1/2	42	110	49.87
	SCR-6125	65 5/8	22 3/8	18 1/2	61 1/4	130	61.88
	SCR-7000	74 3/8	22 3/8	18 1/2	70	140	66.52
	SCR-7700	81 3/8	22 3/8	18 1/2	77	150	69.30
Round Corner	RCR-3675	41 1/8	22 3/8	18 1/2	36 3/4	100	46.37
	RCR-4200	46 3/8	22 3/8	18 1/2	42	110	49.87
	RCR-6125	65 5/8	22 3/8	18 1/2	61 1/4	130	61.88
	RCR-7000	74 3/8	22 3/8	18 1/2	70	140	66.52
	RCR-7700	81 3/8	22 3/8	18 1/2	77	150	69.30
DeLuxe	DCR-3675	43	22 3/8	18 1/2	36 3/4	105	54.70
	DCR-4200	48 1/4	22 3/8	18 1/2	42	115	63.36
	DCR-6125	67 1/2	22 3/8	18 1/2	61 1/4	135	67.65
	DCR-7000	76 1/4	22 3/8	18 1/2	70	145	69.46
	DCR-7700	83 1/4	22 3/8	18 1/2	77	155	81.29

**AMPLIFIER CABINETS RACKS AND CONSOLES**

**For Recessed Application—TB Series**

The recessed type amplifier enclosure has a grille cover. The door is equipped with a lock and piano hinge. The grille has an opening in the top part to permit hot air to escape. The back enclosure is designed to reflect the hot air toward the front of the cabinet so that it may escape. Adequate knockouts are placed in back for all wiring purposes. All TB's are furnished complete with TBG-1000 grille.

**Surface Mounted—STB Series**

Same size and panel space as TB listed above. Made for those applications where surface mounting is required. STB Panel Vtg. Angles furnished on request.

**Heavy Duty—HTB Series**

This cabinet offers adequate panel mounting space for most applications where the above listed TB's are too small. The rack portion of the cabinet is completely removable and mounted on 4 nylon ball bearing slides. The rack will support a maximum of 200 lbs. of weight. Maintenance convenience is offered in that the rack can be pulled forward to afford easy access to all components. Sturdy construction features of this cabinet are incorporated to give you quality in an economical unit. Doors are furnished with flush mounted locks.

**TB and STB**

MATERIAL: 16 ga. CRS body  
11 ga. CRS grille

**CONSTRUCTION:**

- .. All spot weld and braze construction.
  - 1. Panel mounting angles are supported in slotted bracket, adjustable 9 1/2" front to rear, affording ample clearance for dials, tuning knobs, switches, etc., on TB only.
  - 2. 10 1/2" of maximum panel space.
  - 3. Panel mounting angles are punched for use with Tinnerman clips.
- FINISH: Iron phosphate dipped and finished with Silver Gray Hammer-tone Bake On Enamel. Other colors available.

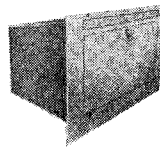
**HTB**

MATERIAL: 16 ga. CRS cabinet  
3/8" thick angle iron with 11 ga. bracing on rack.

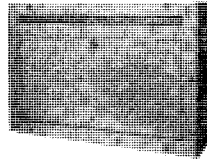
**CONSTRUCTION:**

- .. Spot weld and electric arc construction on cabinet. Electric arc weld on removable rack.
  - .. Panel mounting angles drilled and tapped for 10/24 thread.
  - .. Nylon ball bearing slides used on rack.
  - .. Complete panel mounting rack is removable.
  - .. Front door made to provide adequate clearance space for dials, knobs, etc.
- FINISH: Iron phosphate dipped and finished with Silver Gray Hammer-tone Bake On Enamel. Other colors available.

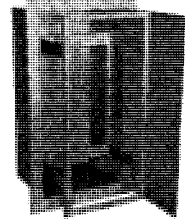
TB Series



STB Series



HTB Series



Catalog No.	Model	Height	Width	Depth	Ship. Wt.	Net Price
TBG-1000	Grille	16"	23"		13 lbs.	\$15.51
TB -1200	Encl.	13"	20"	12"	35 lbs.	25.30
TB -1500	Encl.	13"	20"	15"	38 lbs.	27.70
TB -1800	Encl.	13"	20"	18"	41 lbs.	28.74

Catalog No.	Inside			Outside			Net Price
	H	W	D	H	W	D	
STB-1200	14"	21"	11 1/8"	16"	23"	12"	\$29.25
STB-1500	14"	21"	14 1/8"	16"	23"	15"	32.42
STB-1800	14"	21"	17 1/8"	16"	23"	18"	34.20

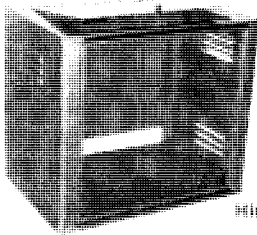
Catalog No.	Height	Cabinet Only Width	Depth	Height	Removable Rack		P.S.	Ship. Wt.	Net Price
					Width	Depth			
HTB-1575	17 3/4"	21 1/8"	18"	18 3/8"	20 3/8"	16"	15 3/4"	85	\$ 66.47
HTB-2800	30"	21 3/8"	18"	30 3/8"	20 3/8"	16"	28"	125	85.93
HTB-4200	45 1/4"	21 3/8"	18"	44 5/8"	20 3/8"	16"	42"	175	107.13
HTB-6152	61 1/4"	21 3/8"	18"	63 7/8"	20 3/8"	16"	61 1/4"	225	135.96

Door frame is 27 1/4" wide or 27 3/4" wider each side than cabinet width. Add 6" to cabinet height for overall height of door frame.



**SECTION 1400**  
**METAL WORKS INCORPORATED**  
 STANDARD & CUSTOM DESIGNS  
 HERMANN, MISSOURI

**DELUXE DESK CABINET RACKS FOR STANDARD 19" RACK PANELS — 15" DEEP**



Hinged Door Back Type

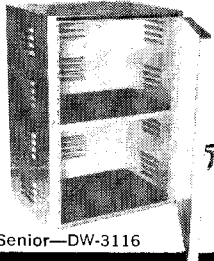
**DC SERIES** These cabinets are completely welded together to save on assembly time and costs. Panel mounting angles are punched to standard 1 1/4"-1/2" spacings. Enough 10-24 speed clips and machine screws are furnished to permit mounting several rack panels. To give a more pleasing appearance, the mounting angles are constructed to permit recessing of rack panels. All models have a recessed door on top for easy access to equipment. The six largest sizes have a door in back which permits access from the back. All models have a bright chrome strip on top and bottom of front. Phono drawer PD-1050-14 can be mounted in these cabinets except DC-875.

**ARCHITECTS AND ENGINEERS SPECIFICATIONS — MATERIAL:** 16 ga. CRS. CONSTRUCTION: 1. Completely welded together for rigidity. 2. Rounded front corners. 3. Panel fastened with Tinnerman clips. 4. 10-24 screws, Tinnerman clips and finish washers furnished. 5. 3/8" recessed panel mounting flanges. FINISH: Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.

Catalog No.	Width-in.	Height-in.	Depth-in.	Panel Space-in.	Ship. Wt. Lbs.	Net Price
DC-875*	22 3/4	10 7/8	15	8 3/4	26	\$16.75
DC-1050*	22 3/4	12 3/8	15	10 1/2	28	18.48
DC-1225*	22 3/4	14 3/8	15	12 1/4	30	21.28
DC-1400*	22 3/4	16 1/8	15	14	35	22.44
DC-1750	22 3/4	19 3/8	15	17 1/2	38	25.74
DC-2100	22 3/4	23 1/8	15	21	42	27.59
DC-2450	22 3/4	26 3/8	15	24 1/2	46	27.97
DC-2625	22 3/4	28 3/8	15	26 1/4	48	28.38
DC-3150	22 3/4	33 3/8	15	31 1/2	52	29.53
DC-3500	22 3/4	37 1/8	15	35	56	31.35

(\* ) Solid back type.

**DELUXE WALL MOUNTING AMPLIFIER CABINET SENIOR MODEL ... JUNIOR MODEL**



Senior—DW-3116

Here is a sturdy cabinet designed for housing the new style amplifiers. Completely welded construction with facilities for wall mounting. DW3116 comes complete with cabinet shelf and door with locking handle. Tamper proof inside hinges. Deep enough for the new larger amplifiers and wide enough for amplifiers using plugs on the side. Plenty of ventilation from louvers on sides and back.

**MATERIAL:** 16 ga. CRS

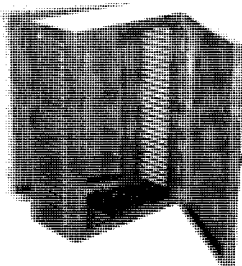
**CONSTRUCTION:**

1. Completely welded together for rigidity.
2. Panels fastened with Tinnerman clips.
3. 10-24 screws, Tinnerman clips and finish washers furnished.

**FINISH:** Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.

Catalog No.	Height	Depth	Width	PS	Ship. Wt.	Net Price
Senior DW-3116	31"	16"	21"	28"	75 lbs.	\$67.50
Junior DW-1616	16 1/8"	16"	21"	14"	50 lbs.	44.25

**SECTIONAL WALL MOUNTING CABINET 193 SERIES**



This series of cabinets is designed for maximum installation convenience. Swing out feature of cabinets permit less handling of components on the job or in the shop. Dowel pins and heavy hinge assure you of durability and a greater amount of weight acceptance of components. Camloc studs interlock two sections with a flush lock mounted on front door in sizes A & B and a locking handle in sizes C & D to complete a totally enclosed locking unit. The cabinets are available in four vertical panel sizes. If a phono drawer is required, order PD-1050-14. If a shelf is needed order CS-1207. Additional bracing is provided for rack mounting weight in excess of 250 lbs. Indicate this by prefix WT i.e. (WT 193) and letter size of cabinet. See specifications below.

**ARCHITECTS AND ENGINEERS SPECIFICATIONS**

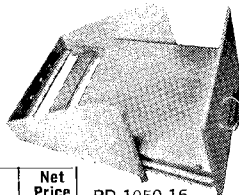
**MATERIAL:** 16 ga. CRS, 11 ga. reinforced angle for wall mounting. CONSTRUCTION: 1. Each section shall be spot welded and brazed at corners for sturdiness. 2. Panel mounting holes shall be tapped for 10-32 threads. 3. Bottom and sides of middle section shall be louvered to maximum heat dissipation. 4. Dowel pins shall be provided to prevent sagging. 5. Each section shall be hinged with heavy continuous steel hinge. 6. Extra bracing shall be provided when weight of components exceeds 250 lbs. 7. All louvers shall be 6" in length. FINISH: Iron phosphate dipped and finished with Silver Gray Hammertone Bake On Enamel. Other colors available.

Model No.	Dimensions						G-ps	D-E-F	Ship. Weight	Net Price
	A	B	C	D	E	F				
193A	20 5/8	18 1/8	19 1/8	4 1/2	11	1 3/4	15 3/4	17 1/4	50#	\$74.27
193B	20 5/8	31	19 1/8	4 1/2	11	1 3/4	28	17 1/4	75#	78.26
193C	20 5/8	45	19 1/8	4 1/2	11	1 3/4	42	17 1/4	125#	95.73
193D	20 5/8	64 3/8	19 1/8	4 1/2	11	1 3/4	61 1/4	17 1/4	175#	105.86

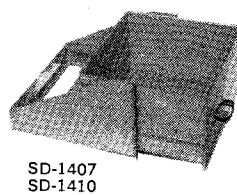
**PANEL MOUNTING PHONO & STORAGE DRAWERS FOR 19" RACKS**

**325 SLIDE**  
 With Ball Bearing Drawer Slides

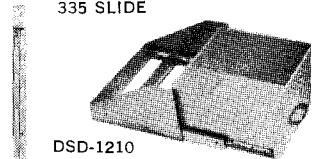
All drawers illustrated are made of 16 ga. steel. Phono drawer chassis has a 3/8" flange to accommodate a plywood or masonite base for a record changer. Base is included with drawer.



PD-1050-16  
 PD-1050-14



SD-1407  
 SD-1410



DSD-1210  
 DSD-1207

Catalog No.	PS	Chassis Size	Shp. Wt.	Net Price
PD-1050-14-E	10 1/2"	15 1/4"W x 14"D x 3 1/4"H	16 lbs.	\$33.75
PD-1050-16-E	10 1/2"	15 1/4"W x 16"D x 3 1/4"H	18 lbs.	33.75
PD-1050-14	10 1/2"	16 3/8"W x 14"D x 3 1/4"H	16 lbs.	21.75
PD-1050-16	10 1/2"	16 3/8"W x 16"D x 3 1/4"H	18 lbs.	21.75

Storage Drawers				
Catalog No.	PS	Storage Area	Shp. Wt.	Net Price
SD-1407	7"	16 1/4"W x 14"L x 6 3/4"D	16 lbs.	23.25
SD-1410	10 1/2"	16 1/4"W x 14"L x 9 3/4"D	18 lbs.	24.75
SD-1607	7"	16 1/4"W x 16"L x 6 3/4"D	20 lbs.	23.25
SD-1610	10 1/2"	16 1/4"W x 16"L x 9 3/4"D	22 lbs.	24.75
DSD-1207	7"	15 1/8"W x 16"L x 6 1/4"D	20 lbs.	32.25
DSD-1210	10 1/2"	15 1/8"W x 16"L x 9 3/4"D	22 lbs.	33.75

Finished in Silver Gray Hammertone with an attractive chrome drawer pull.

**PD-1050-16 or 14 Phono Drawer.** The phono drawer is obtainable in two sizes, 14 3/4" o/a depth and 16 3/4" o/a depth. The 14 3/4" o/a depth will fit all cabinets while the 16 3/4" o/a depth can be used in all cabinets except DC & 193 cabinets. Mounted on slides with nylon rim ball bearing rollers, this drawer pushes in and out with ease. Extends a full 12" from front of cabinet. If full extension slide is desired add suffix "E" to these part numbers. Weight load—75 lbs.

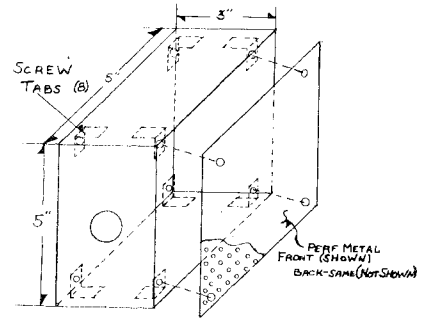
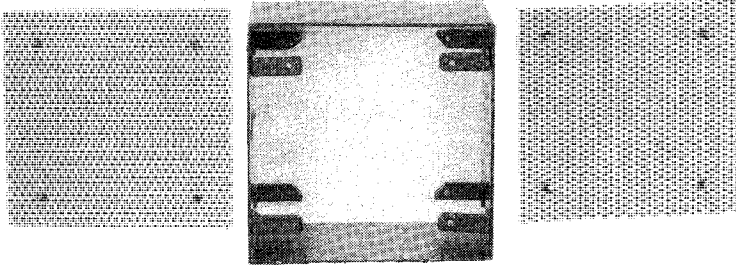
**SD-1407 or SD-1410 — 14 3/4" o/a depth in 7" or 10 1/2" height SD-1607 or SD-1610 — 16 3/4" o/a depth in 7" or 10 1/2" height** Standard Storage Drawers come in 4 sizes to accommodate extra tape reels, tools, and what have you. Same slides as illustrated in our PD-1050 shown above. Use SD-1410 or 1407 in any cabinets. Use SD-1610 or 1607 in all cabinets except DC & 193 cabinets.

**DSD-1210 or 1207 Delux Storage Drawer.** The ultimate in storage drawer capacity and convenience. These drawers feature a full extension slide permitting the drawer to be pulled out 15" from cabinet. Smooth operation is provided by ball bearing rollers. Install drawer removal and positive stopping, positive closing are additional features offered. Weight load—150 lbs.



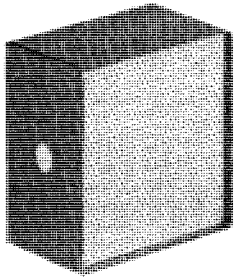
**METAL WORKS INCORPORATED**  
STANDARD & CUSTOM DESIGNS  
HERMANN, MISSOURI

## INTERCOM SPEAKER BOX — ISB 45



### NET PRICE

Quantity 1-9	\$3.71
Quantity 10-50	3.00



Speaker boxes, ideal for use in buildings where inter-communication between departments or locations is desired and where station expense is to be held to a minimum.

These boxes will accept 4" or 5" speakers, perforated metal front and back permitting voice reception from most directions. Painted in Dark Gray Hammer-X with perforated metal in white enamel giving a beautiful two-tone combination.

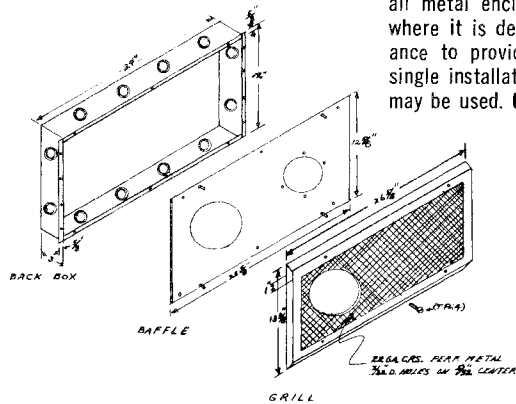
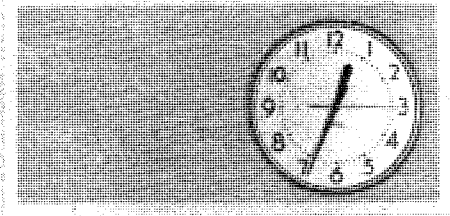
### SPECIFICATIONS

**Material:** 16 ga CRS and 20 ga perforated metal

#### CONSTRUCTION:

- (1) Box size shall be 5"W x 5"H x 3"D.
- (2) Box shall be of a continuous wrap, spotwelded.
- (3) Perforated metal shall be removable by tapping screws front and back.
- (4) Hole size of perforated metal shall be .093 on .156 staggered centers, or 47% open area.
- (5) Weight per box 1½ lbs.

## SPEAKER CLOCK HOUSING — SPCL-400



The combination Speaker-Clock Housing is an all metal enclosure designed for installations where it is desirable for economy and appearance to provide a speaker and a clock in a single installation. Either 8", 9", or 10" clocks may be used. **Clocks are not furnished.**

### SPECIFICATIONS

#### Back Box (SCB-1)

**Material:** 16 ga steel

#### Construction:

1. Shall be of 3 pieces spotweld construction. Two ends and a wrap.
2. Shall be acoustically treated to prevent sound resonance.
3. Size: Shall be 24"L x 12"W x 3"D outside dimensions.
4. Shall have 3 in 1 knockouts. K.O. size: 1¾", 1½", and 7/8", for conduit sizes 1", ¾", and ½".
5. Back box to wall studs: Shall have eight ½" holes.

**Finish:** Outside shall be baked on Oxide Primer. Interior shall have sound deadener undercoating.

### SPECIFICATIONS

#### SCS-2 Baffle (Sub plate)

**Material:** 18 ga CRS

#### Construction:

1. Mounting: Grille shall be mounted to baffle by 8/32 internally threaded rivets permanently attached to baffle. Baffle to Back box: six 10-24 Tinnerman clips and machine screws.
2. Shall have two holes: 1 for 8" speaker and 1 for clock (specify clock hole size).
3. Size shall be 12½"W x 25½"L.

**Finish:** Shall be Black Semi-gloss bake on enamel.

### SPECIFICATIONS

#### SCG-3 Grille

**Material:** 18 ga CRS frame with 22 ga perforated metal .093 holes on 3/16" centers, staggered.

#### Construction:

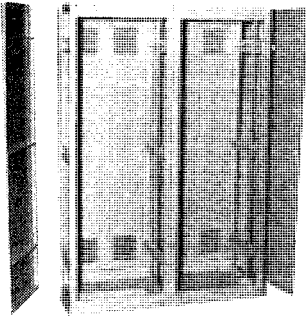
1. Shall be welded to 18 ga CRS frame.
2. Shall have a clock hole corresponding to baffle clock hole.
3. Shall have mounting brackets welded in place to hang clock.
4. Size shall be 13½" x 26½".

**Finish:** Shall be glossy white bake on enamel.



**METAL WORKS INCORPORATED**  
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**DUPLI-RACK**

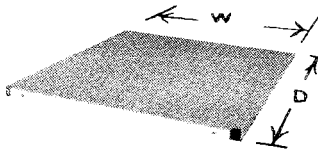


Dupli-rack features a maximum of cabinet space in a minimum of floor space at a savings in cost. To increase the size of an installation, simply remove the detachable side panels, bolt the units together through holes provided, forming a sturdy unit, and slip the detachable side panels on each side. This becomes an attractive installation where the addition of units will always remain the same in color tone and freshness of appearance. Each unit is of weld construction, forming a sturdy and rigid piece of equipment. Basic unit consists of frame and rear door.

**SPECIFICATIONS MATERIAL:** 16 ga. CRS. Panel mounting angles 11 ga. CRS. **CONSTRUCTION:** (1) Braze and spotweld assembly. (2) Detachable side panels are formed and supported and fastened by brackets. (3) Louvers provided in rear door. (4) Panel mounting angles drilled and tapped to 10-24 thread on standard 1/4" x 1/2" spacing. (5) Locking handle furnished on front door with flush mounted lock and separate handle on rear door.

Rack with Rear Door					Detachable Side Panels		Front Door		
	Overall Ht.	Panel Space	Ship. Wt. Lbs.	Net Price	Ship. Wt. Lbs. (Per Pair)	Net Price	Ship. Wt. Lbs.	Net Price	
DR-3675	42 7/8"	36 3/4"	100	\$ 71.12	DSP-36	20	FDR-36	10	\$15.39
DR-4200	48 1/8"	42"	104	72.63	DSP-42	24	FDR-42	12	17.49
DR-6125	67 3/8"	61 1/4"	120	77.88	DSP-61	32	FDR-61	18	22.35
DR-7000	76 1/8"	70"	129	83.88	DSP-70	36	FDR-70	20	24.87
DR-7700	83 1/8"	77"	133	104.13	DSP-77	40	FDR-77	22	28.11

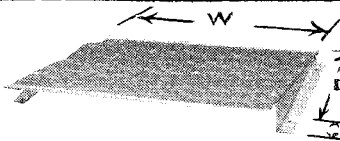
**CABINET RACK SHELF FOR CABINET RACKS, DESK RACKS AND CONSOLES**



Constructed of one piece of No. 16 gauge sheet steel. Formed 1" high. Shelf has holes in side and front and back for mounting to cabinet or rack. Finished in brilliant silver gray hammetone unless otherwise specified.

Catalog No.	For:	Width-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
CS-1201	RB Models	22 3/8"	26 1/16"	14	\$4.09
CS-1202	DC Models	22 3/8"	11 1/2"	9	3.05
CS-1203	SCR Models	22 3/8"	14 3/8"	10	3.27
CS-1204	RCR and DCR Models	22 1/8"	14 3/8"	10	3.27
CS-1205	HTB Models	20 3/8"	16"	10	3.27
CS-1206	DR Models	22 3/8"	16"	10	3.27
CS-1207	193 Models	20 3/8"	10 3/8"	7	2.97
CS-1208	STR Models	19 3/8"	14 3/8"	9	3.27

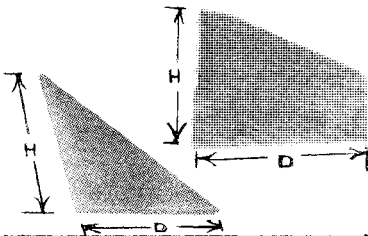
**TURRET SHELF FOR "RBT" TURRETS**



The Turret Shelf is designed for extremely heavy equipment in the turret. It is made of No. 16 gauge steel and is designed to be movable both forward and backward, and up and down. This model fits all turrets. Special sizes available upon request. Finished in standard gray hammetone.

Catalog No.	Height-in.	Width-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
TS-1000	1 3/4"	17"	10 1/2"	8	\$6.82

**CHASSIS MOUNTING BRACKETS TRIANGULAR AND STANDARD TYPE**

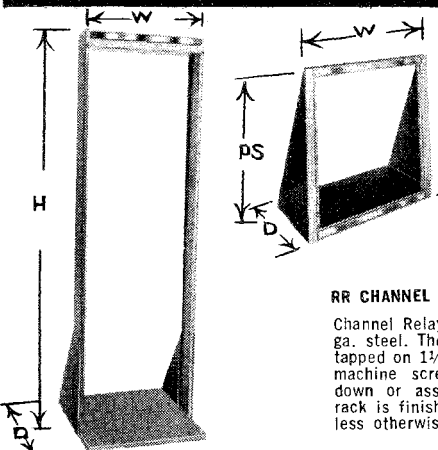


These brackets are made of No. 16 gauge sheet steel. The standard brackets are notched for 3" and 4" high chassis and will fit any of our standard or heavy duty chassis. The triangular brackets can be used where greater strength is required. All brackets are sold in pairs only and are finished in gray hammetone.

(\*) Standard type notched for 3" chassis.  
(\*\*) Standard type notched for 4" chassis.

Catalog No.	Height-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
MB-155	5	5	2	\$ .83
MB-177	7	7	3	.96
MB-199	9	9	5	1.16
CB-308*	7	8	3	.83
CB-311*	7	11	4	1.18
CB-313*	7	13	4	1.39
CB-413**	8 3/4"	13	5	1.49
CB-417**	8 3/4"	17	7	1.78

**RELAY RACKS CHANNEL AND TABLE TYPE**



**TR DESK TYPE**  
These Table Racks are constructed of heavy No. 16 gauge steel and are completely welded together for strength. Mounting holes are drilled to standard 1/4" - 1/2" spacings. All panel mounting hardware is supplied. Each rack is finished in silver gray hammetone and is trimmed with bright chrome molding.

**RR CHANNEL TYPE**

Channel Relay Racks are constructed of No. 11 ga. steel. The vertical channels are drilled and tapped on 1/4" - 1/2" spacing and for No. 10-24 machine screws. Racks are shipped knocked down or assembled. Hardware included. Each rack is finished in silver gray hammetone unless otherwise specified.

Catalog No.	Width-in.	Height-in.	Depth-in.	Panel Space-in.	Ship. Wt. Lbs.	Net Price
TR-121	22	24	12	21	17	\$6.95
TR-128	22	31	12	28	20	8.58

Catalog No.	Width-in.	Height-in.	Depth-in.	Panel Space-in.	Ship. Wt. Lbs.	Net Price
RR-156	19 3/8"	61 3/8"	20	56	70	\$29.50
RR-163	19 3/8"	68 3/8"	20	63	80	30.47
RR-170	19 3/8"	75 3/8"	20	70	90	31.31
RR-177	19 3/8"	82 3/8"	20	77	100	31.51
RR-184	19 3/8"	89 3/8"	20	84	110	33.00



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**DESK PANEL TO FIT 19" RACKS**



The Desk Panel is constructed of No. 16 gauge steel and is entirely spotwelded together for strength. The front corners of the top are rounded to give a pleasing appearance. This model is finished in the standard silver gray hammertone lacquer.

Catalog No.	Panel Size-in.	Top Size-in.	Ship. Wt.	Net Price
DT-1050	19" x 10½"	17¾" Wide x 16" Deep	15 Lbs.	\$14.02

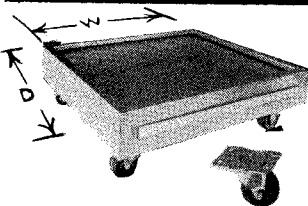
**AMPLIFIER FOUNDATIONS STREAMLINED TYPE**



A modern cover with rounded corners and bright chrome trim. Constructed of cold rolled steel and finished in gray hammertone.

Catalog No.	Width-in.	Height-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
SAF-919	12	9	7	10	\$6.19
SAF-925	17	9	7	11	5.28
SAF-928	17	9	10	13	6.60

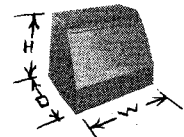
**ROLLER TRUCKS FOR CABINET AND TRANSMITTER RACKS**



Made entirely from No. 16 gauge steel with reinforced corners for the 2½" dia. rollers. Trucks are completely assembled. They are finished in gray hammertone. Casters—2½" dia. ball bearing type, 400 lb. cap. Shipping wt. 2¼ lbs.

Catalog Number	For:	Inside Dimensions		Shipping Wt. Lbs.	Net Price
		Width-in.	Depth-in.		
RT-500	"DC" Models	23	15¼	19	\$22.56
RT-501	"RR" Models	20½	19½	20	22.77
RT-502	"SCR", "RCR", "DCR" (19" Panels)	23	19	21	22.97
RT-503	"STR", "DTR"	23½	19	24	23.10
RT-504	"DTR" and "STR" (24" Panels)	27½	24¼	28	24.21
RT-505	"DTR" and "STR" (30" Panels)	33½	24¼	30	25.03

**UTILITY CABINETS SLOPING FRONT, REMOVABLE PANEL TYPE**



This Cabinet is constructed of No. 18 gauge steel. It has a rounded top corner and a removable front panel. Back of cabinet is provided with louvers and has an opening for leads. Finished in gray hammertone.

Catalog No.	Height-in.	Width-in.	Depth-in.	Use Chassis No.	Ship. Wt. Lbs.	Net Price
SFC-500	8	8	8	SC-104	6	\$6.52
SFC-501	8	10	8	SC-105	7	6.72
SFC-502	8	14	8	SC-109	8	6.93
SFC-503	9	18	8	SC-112	10	7.34
SFC-504	12	18	12	SC-116	14	8.17

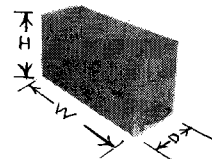
**MINIATURE UTILITY CABINET**



This Miniature Utility Cabinet is made of No. 22 gauge steel. The back is removable and also ventilated. It has a clean modern appearance and is finished in gray hammertone.

Catalog No.	Width-in.	Height-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
UC-100	4¾	4½	4¼	1	\$1.07
UC-101	5¾	4½	4¼	1½	1.22
UC-102	6¾	4½	4¼	2	1.40
UC-103	7¾	4½	4¼	2½	1.65

**AMPLIFIER FOUNDATIONS PERFORATED COVER TYPE**

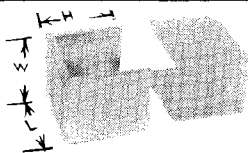


Similar to the streamlined type except that this cover is made of perforated metal for better ventilation. Finished in gray hammertone.

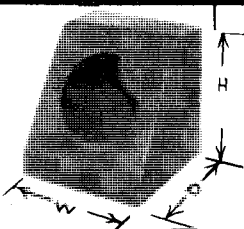
Catalog No.	Width-in.	Height-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
AF-915	10	9	5	8	\$4.04
AF-920	14	9	6	9	4.87
AF-924	17	9	7	10	6.85
AF-922	12	9	10	10	5.78
AF-927	17	9	10	11	7.75

**MINIATURE (2 PIECE) ALUMINUM CASES**

These Handy Two Piece Cases are made of No. 16 gauge aluminum. The design of this case permits installation of a variety of components. Natural aluminum or gray hammertone finish is available. Shipping weight of all cases is 1 lb.



**METER CASES FOR 2" OR 3" METERS**



These Meter Cases are available to accommodate 2" or 3" Meters. They are made of No. 22 gauge steel. A rounded top corner and a sloping front gives this model a modernistic appearance. Finished in silver gray hammertone.

atalog No.	For:	Width-in.	Height-in.	Depth-in.	Ship. Wt. Lbs.	Net Price
MC-200	2" Meter	4¾	4½	4¼	1	\$1.07
MC-300	3" Meter	4¾	4½	4¼	1	1.07

Catalog No.	Length-in.	Width-in.	Height-in.	Net Price
MA-1000	2¾	2½	1½	\$ .60
MA-1001	3¼	2½	1½	.61
MA-1002	4	2	2¾	.83
MA-1003	4	2½	1½	.63
MA-1004	4	2¼	2¼	.83
MA-1005	4¼	2¼	1½	.86
MA-1006	5	2¼	2¼	.87
MA-1007	5	4	3	.96
MA-1008	5¼	3	2½	.96
MA-1009	6	5	4	1.20
MA-1010	7	5	3	1.32
MA-1011	8	6	3½	2.03
MA-1012	10	2	1½	1.16
MA-1013	10	6	3½	2.15
MA-1014	12	2½	2¼	1.24
MA-1015	12	7	4	2.77
MA-1016	17	5	4	3.30



**METAL WORKS INCORPORATED**  
STANDARD & CUSTOM DESIGNS  
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**CHASSIS Standard Steel and Aluminum Blank Chassis**

These Standard Chassis are constructed of one piece of metal. They have reinforced corners. The bottoms are flanged on two sides to give maximum strength with maximum room.



Steel chassis are made of No. 18 gauge sheet steel and are finished in gray hammertone.

Aluminum chassis are constructed of No. 18 gauge (.040) sheet aluminum and is available in natural aluminum or gray hammertone.

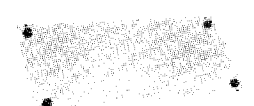
Steel			Size			Aluminum		
Catalog No.	Ship. Wt. Lbs.	Depth-in.	Width-in.	Height-in.	Net Price	Catalog No.	Ship. Wt. Lbs.	Net Price
SC-100	2	5 1/2	9 1/2	1 1/2	\$ .83	AC-100	1	\$1.12
SC-101	2	5	7	2	.89	AC-101	1	.99
SC-102	3	5	10	1	1.09	AC-102	1	1.36
SC-103	4	6	14	2	1.32	AC-103	2	2.15
SC-104	2	7	7	3	.98	AC-104	1	1.12
SC-105	2	7	9	2	1.09	AC-105	1	1.19
SC-106	3	7	11	2	1.16	AC-106	1	1.32
SC-107	3	7	11	3	1.25	AC-107	1	1.40
SC-108	3	7	12	3	1.31	AC-108	1	1.57
SC-109	3	7	13	2	1.31	AC-109	1	1.44
SC-110	4	7	15	3	1.49	AC-110	2	2.35
SC-111	3	4	17	3	1.31	AC-111	1	2.08
SC-112	4	7	17	3	1.58	AC-112	1	2.48
SC-113	4	10	12	3	1.55	AC-113	2	2.31
SC-114	5	10	14	3	1.65	AC-114	3	2.84
SC-115	5	10	17	2	1.72	AC-115	3	2.72
SC-116	5	10	17	3	1.74	AC-116	3	2.98
SC-117	5	10	17	4	2.08	AC-117	3	3.63
SC-118	5	12	17	2	1.82	AC-118	3	3.27
SC-119	5	12	17	3	2.15	AC-119	3	3.89
SC-120	6	12	17	4	2.35	AC-120	3	4.24
SC-121	1	4	6	2	.93	AC-121	1/2	1.10
SC-122	1	4	6	3	1.01	AC-122	1/2	1.25
SC-123	1 1/4	5	7	3	1.07	AC-123	3/4	1.25
SC-124	1 1/4	5	9 1/2	2	1.19	AC-124	1/2	1.14
SC-125	1 1/2	5	9 1/2	3	1.28	AC-125	3/4	1.46
SC-126	1 3/4	5	13	3	1.41	AC-126	3/4	1.64
SC-127	1 1/2	6	17	3	1.62	AC-127	1 1/4	2.54
SC-128	1 3/4	8	12	3	1.58	AC-128	1 1/2	2.07
SC-129	2 1/2	8	17	2	1.50	AC-129*	1 1/2	2.31
SC-130	3	8	17	3	1.80	AC-130*	1 3/4	2.69
SC-131	4	11	17	2	2.09	AC-131*	2 1/4	3.29
SC-132	4	11	17	3	2.45	AC-132*	2 3/4	3.95
SC-133	5	13	17	2	2.57	AC-133*	2 1/2	3.30
SC-134	5	13	17	3	3.00	AC-134*	2 3/4	4.13
SC-135	7	13	17	4	3.45	AC-135*	3 3/4	4.58

**HEAVY DUTY STEEL CHASSIS**

Heavy duty chassis are similar to standard steel chassis except that this model is constructed of No. 16 gauge material. Bottom plates are included with this chassis. Heavy duty chassis are available in gray hammertone.

Catalog No.	Depth-in.	Width-in.	Height-in.	Ship. Wt. Lbs.	Net Price
HC- 82	8	17	2	8	\$2.89
HC- 83	8	17	3	9	3.14
HC-112	11	17	2	10	3.30
HC-113	11	17	3	11	3.55
HC-132	13	17	2	12	3.80
HC-133	13	17	3	13	3.96
HC-134	13	17	4	14	4.46
HC-174	17	17	4	17	5.94

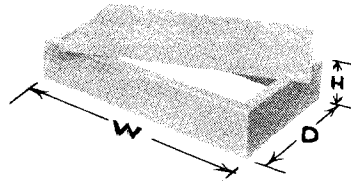
**BOTTOM PLATES Steel and Aluminum**



Steel		Aluminum		Dimensions-Ship. Wt.	
Cat. No.	Net Price	Cat. No.	Net Price	in.	Lbs.
BP-401	\$.55	ABP-401	\$1.19	4 x 7	2
BP-402	.40	ABP-402	.78	5 x 7	1
BP-403	.41	ABP-403	.76	5 x 10	1
BP-404	.40	ABP-404	.79	5 1/2 x 9 1/2	1
BP-405	.58	ABP-405	.71	6 x 14	1
BP-406	.43	ABP-406	.78	7 x 7	1
BP-407	.45	ABP-407	.83	7 x 9	1
BP-408	.58	ABP-408	.89	7 x 11	1
BP-409	.71	ABP-409	.96	7 x 12	2
BP-410	.66	ABP-410	1.14	7 x 13	2
BP-411	.68	ABP-411	1.19	7 x 15	2
BP-412	.70	ABP-412	1.22	7 x 17	2
BP-413	.71	ABP-413	1.47	8 x 17	2
BP-414	.71	ABP-414	1.34	10 x 12	2
BP-415	.73	ABP-415	1.22	10 x 14	2
BP-416	.94	ABP-416	1.55	10 x 17	2
BP-417	.96	ABP-417	1.95	11 x 17	3
BP-418	1.12	ABP-418	2.08	13 x 17	3
BP-419	1.64	ABP-419	2.15	17 x 17	4

Bottom plates are made to match standard steel and aluminum chassis. They are made of No. 18 gauge steel and aluminum. Finished in natural aluminum, black enamel, or gray hammertone, and furnished with four dimple glides.

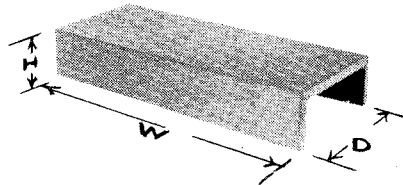
**REMOVABLE TOP TYPE CHASSIS**



Made of No. 18 gauge sheet steel. Top and bottom edges of chassis are flanged in on four sides. Top plate, which is included with chassis, is removable. Finished in black enamel or gray hammertone.

Chassis Catalog No.	Depth-in.	Width-in.	Height-in.	Ship. Wt. Lbs.	Net Price
RTC-103	10	17	3	8	\$3.43
RTC-104	10	17	4	10	3.80
RTC-133	13	17	3	11	3.58
RTC-134	13	17	4	12	4.37
Replacement Tops					
TRC-1710	10	17		2	1.32
TRC-1713	13	17		3	1.58

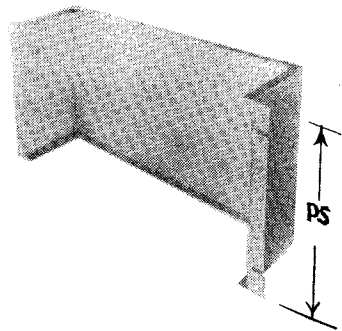
**CHASSIS - STEEL and ALUMINUM Open End Type**



Made of No. 18 gauge steel or aluminum with reinforced corners. Finished in natural aluminum, black enamel, or gray hammertone.

Steel		Aluminum					
Cat. No.	Net Price	Cat. No.	Net Price	Depth-in.	Width-in.	Height-in.	Ship. Wt. Lbs.
OC-101	\$.65	AOC-101	\$2.01	5	7	2	1
OC-102	.74	AOC-102	2.05	5	10	3	1
OC-103	.83	AOC-103	2.06	6	14	3	1
OC-104	.99	AOC-104	2.03	7	7	2	1
OC-105	1.00	AOC-105	2.05	7	9	2	1
OC-106	1.07	AOC-106	2.06	7	11	2	1
OC-109	1.24	AOC-109	2.08	7	13	2	1
OC-112	1.29	AOC-112	2.10	7	17	3	2
OC-113	1.44	AOC-113	2.15	10	12	3	2
OC-114	1.55	AOC-114	2.18	10	14	3	2
OC-116	1.65	AOC-116	2.21	10	17	3	3

**PANEL MOUNTING TYPE CHASSIS**



Made of heavy gauge aluminum. Flanges are notched for standard 1 1/4"-1/2" rack mounting. All chassis are 5/4" deep. Corners are reinforced for strength. Natural aluminum finish.

Catalog No.	Panel Space-in.	Ship. Wt. Lbs.	Net Price
RMC-161	1 3/4"	1	\$2.08
RMC-163	3 1/2"	2	2.48
RMC-165	5 1/4"	2	2.63
RMC-167	7"	2	3.13
RMC-168	8 3/4"	3	3.43
RMC-1610	10 1/2"	3	3.88
RMC-1612	12 1/4"	3	3.98
RMC-1614	14"	4	4.62





SECTION 1400

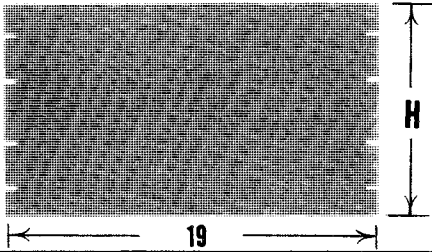
**METAL WORKS INCORPORATED**  
STANDARD & CUSTOM DESIGNS  
HERMANN, MISSOURI

**19" RACK PANELS**

Steel panels finished in Silver Gray Hammertone unless otherwise specified.

**1/8" Aluminum and Steel Blank Panels**

Aluminum Furnished Unpainted — Painted on Request, So States on Order.

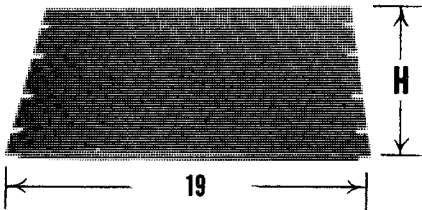


Aluminum				Steel*		
Catalog No.	Ship. Wt. Lbs.	Height-in.	Net Price	Catalog No.	Ship. Wt. Lbs.	Net Price
ARP- 121	.4	1 3/4	\$.83	RP- 121	2	\$.70
ARP- 123	.8	3 1/2	1.16	RP- 123	5	.79
ARP- 125	1.2	5 1/4	1.65	RP- 125	7	.99
ARP- 127	1.6	7	1.98	RP- 127	8	1.15
ARP- 128	2.0	8 3/4	2.31	RP- 128	9	1.42
ARP-1210	2.5	10 1/2	2.94	RP-1210	10	1.65
ARP-1212	2.8	12 1/4	3.47	RP-1212	12	1.98
ARP-1214	3.3	14	4.16	RP-1214	13	2.26
ARP-1215	3.6	15 3/4	4.33	RP-1215	14	2.57
ARP-1217	4.1	17 1/2	4.95	RP-1217	15	2.81
ARP-1219	4.5	19 1/4	5.28	RP-1219	16	3.12
ARP-1221	4.9	21	5.80	RP-1221	16	3.45

\*Steel Price on Request.

**Formed 1/8" Thick Aluminum and Steel Blank Panels**

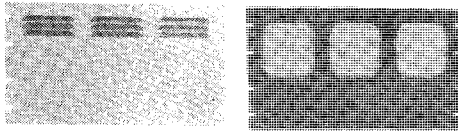
Aluminum Furnished Unpainted — Painted on Request, So States on Order.



Aluminum				Steel*		
Catalog No.	Ship. Wt. Lbs.	Height-in.	Net Price	Catalog No.	Ship. Wt. Lbs.	Net Price
PA- 161	1/2	1 3/4	\$.99	PM- 161	1	\$.79
PA- 163	1	3 1/2	1.29	PM- 163	2 1/2	.89
PA- 165	1 1/4	5 1/4	1.65	PM- 165	3 1/2	1.12
PA- 167	1 1/2	7	2.11	PM- 167	4	1.24
PA- 168	1 1/2	8 3/4	2.56	PM- 168	4 1/2	1.49
PA-1610	1 3/4	10 1/2	3.17	PM-1610	5	1.75
PA-1612	2	12 1/4	3.63	PM-1612	6	2.06
PA-1614	2 1/4	14	4.16	PM-1614	6 1/2	2.48
PA-1615	2 1/2	15 3/4	4.59	PM-1615	7	2.77
PA-1617	2 1/2	17 1/2	5.15	PM-1617	7 1/2	3.12
PA-1619	2 3/4	19 1/4	5.61	PM-1619	8	3.40
PA-1621	3	21	6.07	PM-1621	8	3.80

\*Steel Price on Request.

**Formed 1/8" Thick Steel Ventilated Panels**  
Louvre Type



Grille Type *				Louvre Type			
Catalog No.	Height-in.	Shp. Wt. Lbs.	Net Price	Catalog No.	Height-in.	Shp. Wt. Lbs.	Net Price
VP- 205	5 1/4 panel	3 1/2	\$2.76	LP- 105	5 1/4 panel	3 1/2	\$2.76
VP- 207	7 panel	4	3.01	LP- 107	7 panel	4	3.04
VP- 208	8 3/4 panel	4 1/2	3.30	LP- 108	8 3/4 panel	4 1/2	3.30
VP-2010	10 1/2 panel	5	3.63	LP-1010	10 1/2 panel	5	3.63
VP-2012	12 1/4 panel	6	4.09	LP-1012	12 1/4 panel	6	4.08

\*Grille Price on Request.

**Formed 1/8" Thick Steel Ventilated Panels**

Round Hole SRP

Square Hole SRP-1



Round Hole	Speaker	Height-in.	Square Hole	Ship. Wt. Lbs.	Net Price
SRP- 68	6"	8 3/4" panel	SRP 68-1	4 1/2	\$2.57
SRP- 810	8"	10 1/2" panel	SRP 810-1	5	3.30
SRP-1012	10"	12 1/4" panel	SRP1012-1	6	3.88
SRP-1214	12"	14" panel	SRP1214-1	6 1/2	4.54

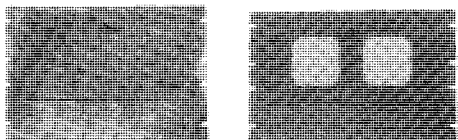
**Formed 1/8" Thick Steel Meter Panels 5 1/4" High**



Catalog No.	Size and Style	Ship. Wt. Lbs.	Net Price
MP-23	For 2" meter with 3 holes	3 1/2	\$1.32
MP-25	For 2" meter with 5 holes	3 1/2	1.90
MP-33	For 3" meter with 3 holes	3 1/2	1.32
MP-35	For 3" meter with 5 holes	3 1/2	1.90

Standard Type

Grille Type



**1/8" Thick Steel Door Panels**

Panels have flush doors, with piano hinge and are equipped with spring catch and chrome knob — All doors are located 1" from top, to allow space for chassis at bottom.

Standard Door Panel	Net Price	Height-in.	Shp. Wt. Lbs.	Grille Panel	Net Price	Door Opening
DP- 875	\$4.79	8 3/4" Panel	5	GDP- 875	\$5.69	4 1/2" x 15 3/8"
DP-1050	5.12	10 1/2" Panel	5 1/2	GDP-1050	6.14	6" x 15 3/8"
DP-1225	5.45	12 1/4" Panel	6	GDP-1225	6.77	7 1/2" x 15 3/8"

**Switch Panels**

Furnished with 16 slots 1" apart unless otherwise specified.



Catalog No.	Height-in.	Ship. Wt. Lbs.	Net Price
SP-1635	3 1/2	2	\$2.97

Slots 3/8" W x 1 1/8" L

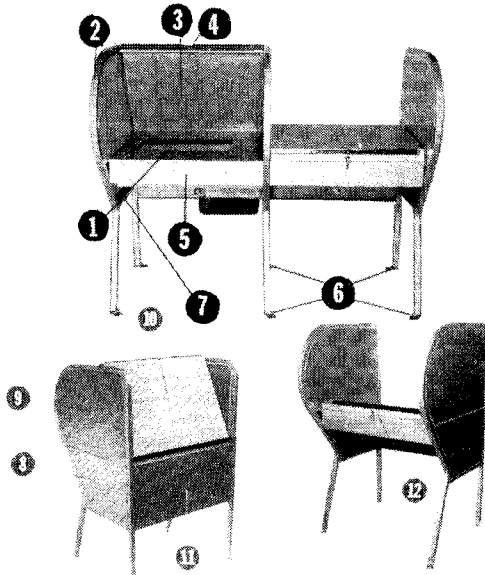
Screw Holes 1 1/8" Centers

ALL ABOVE PANELS ARE AVAILABLE 30" AND 24" WIDE



**METAL WORKS INCORPORATED**  
STANDARD & CUSTOM DESIGNS  
HERMANN, MISSOURI

**ALL METAL LANGUAGE LABORATORY FURNITURE**



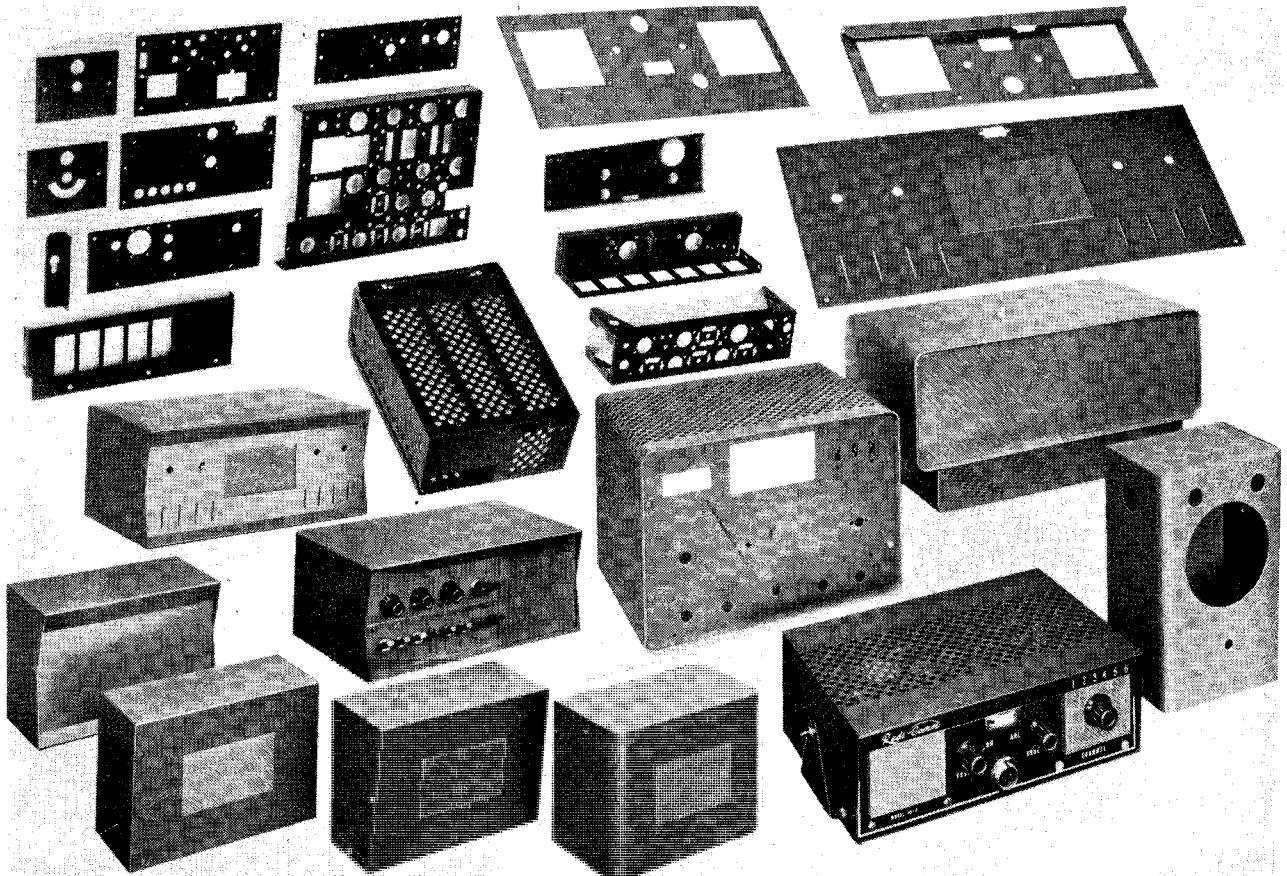
METAL WORKS new design in Student Booths brings you "tomorrow's booth" today! Featured below are three views of the 500 Series. These booths are designed to minimize noise entering the booth and prevent the students' response from adding to the general noise level. Designed to meet today's needs in an ever expanding educational program, they can be added to as funds permit, or as the language program expands, by simply bolting on additional units, consisting of only 1 leg and deck. They are adaptable to flush mount any tape recorder. Design is simple, yet unique in that the curved one piece leg conformation does away with sharp corners. No part of the booths protrude into the aisle leaving all aisle space clear for passage. 'K' leg permits easier entry and discharge from booth.

**WHY METAL BOOTHS ARE BEST FOR SCHOOL USE**

Metal Booths provide an important safety feature, insuring that all accessible surfaces are at ground potential. Metal Booths also provide better head dissipation permitting equipment to run cooler, and are less resonant than wood or plywood. An installation providing less mechanical hum from deck. Complete information about Metal Works all metal language laboratory furniture furnished on request.

**CUSTOM METAL-WORK TO CUSTOMER SPECIFICATION:  
IF YOU CAN DRAW IT—WE CAN MAKE IT! QUOTATIONS ON REQUEST!**

- A few illustrations of metalware parts featuring a multitude of hole patterns, designs and shapes available through MWI Wales Stripping fabrication.
- Many manufacturers have us punch standard chassis, MA cases, panels, etc., as fast economical solutions for some of their requirements.
- Wide choice of materials such as aluminum, cold roll steel, special plated steel sheet, etc., made up to your specifications.



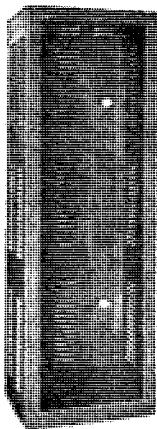


**CABINETS  
CHASSIS**

**CASES  
PANELS**

MIDDLETOWN IN CONNECTICUT

**DE LUXE RELAY RACKS**

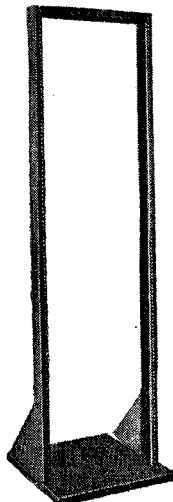


Middletown De Luxe Relay Racks are made of 16-gauge steel with 1/8" panel supports which are recessed so that edges of panels set flush. Standard 19" panels fit these racks. (See next page.) Adequate ventilation is provided by louvers in the two sides, the door and in the top at front and back. Door is hung on sturdy hinges and has snap catches. Racks come with rigid, built-in caster supports. (Casters not included in price of rack.) Furnished in either black or grey wrinkle finish. Shipped knocked down with all necessary hardware. Rack shelves and supporting angles to fit these Relay Racks are available. Information and prices on request.

Cat. No. (Black Wrinkle)	Overall Size			Panel Size Dealer		
	H	W	D	H	W	Cost
DRR 4236	42 1/2	22	17 1/4	36 3/4	19	\$45.00
DRR 4742	47 1/2	22	17 1/4	42	19	51.00
DRR 6661	66 1/2	22	17 1/4	61 1/4	19	63.50
DRR 8277	82 1/2	22	17 1/4	77	19	76.00

Note: When ordering grey wrinkle, add prefix "G" to catalog number. Dimensions in inches.

**OPEN-TYPE CHANNEL  
RELAY RACKS**

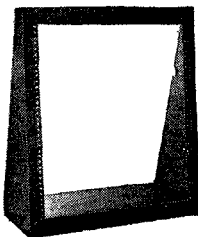


Sturdy construction with rigid supporting members and side angle braces make these racks perfectly suited to all heavy-duty assignments. Made of 1/8" steel channels, 3" deep. Held together with angle cross pieces of the same material. Chassis type base. Drilled and tapped to accommodate conventional 19" panels. (See next page.) Black wrinkle finish. Shipped knocked down with necessary hardware.

Cat. No.	Overall Size			Panel Size Dealer		
	H	W	D	H	W	Cost
OCR 35	35 1/2	21	22	31 1/2	19	\$21.60
OCR 70	70 1/2	21	22	66 1/2	19	24.60

Dimensions in inches

**OPEN-TYPE TABLE  
RELAY RACKS**



For table mounting of power transmitters, P. A. systems and other radio and electronic apparatus. Rack is ruggedly constructed with strong base to accommodate heavy components. Drilled and tapped for conventional 19" wide panels which set in recess so that no edges are exposed. (See next page.) Shipped knocked down with necessary hardware. Black wrinkle finish.

Catalog Number	Overall Size			Panel Space Dealer		
	H	W	D	H	W	Cost
TRR 24	24	21	12	21	19	\$ 8.30
TRR 31	31	21	12	28	19	10.40

**CASTERS**



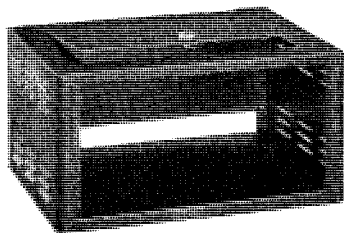
Catalog Number	Dealers Cost
CA 234	.99 ea.

**CHASSIS SUPPORTING  
BRACKETS**



Catalog Number	Size	Dealer Cost
CSB 12	12 x 3 x 3	\$1.98
CSB 14	14 1/2 x 3 x 3	2.08

**D. C. DELUXE CABINET RACKS — USE 19" RACK PANELS**

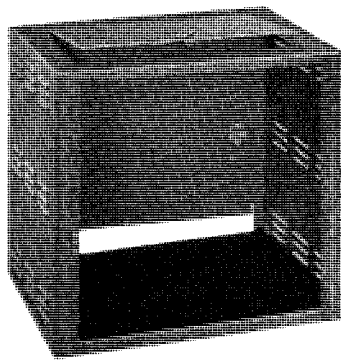


Middletown D. C. Cabinets conform to the conventional design of streamlined cabinets used by builders of amateur and commercial equipment.

**Features**

- \* Constructed of 16 gauge steel, electrically welded.
- \* Adequate ventilation is provided by sufficient louvers in sides, and ventilation in back.
- \* Front vertical posts rounded.
- \* Flush panel mounting (recessed).
- \* Drilled and tapped for 10/32" screws on universal centers.
- \* Flush door in top fitted with flush snap-lock and piano hinges.
- \* Black Wrinkle finish. \*Grey Wrinkle if desired.\*

Standard 19" panels fit these cabinets. For panel sizes, see listing next page.



CATALOG NUMBER (Black Wrinkle)	OVERALL SIZE			PANEL SPACE		TYPE OF UNIT	Dealer Cost
	H	W	D	H	W		
*DC 108	10 1/2	21 1/2	15	8 3/4	19	Single	\$13.80
*DC 1210	12 1/4	21 1/2	15	10 1/2	19	Single	15.60
*DC 1412	14	21 1/2	15	12 1/4	19	Single	16.80
*DC 1514	15 3/4	21 1/2	15	14	19	Single	18.60
**DC 1917	19 1/4	21 1/2	15	17 1/2	19	Double	22.20
**DC 2119	21	21 1/2	15	19 1/4	19	Double	23.40
**DC 2321	22 3/4	21 1/2	15	21	19	Double	24.00
**DC 2826	28	21 1/2	15	26 1/4	19	Triple	25.80
**DC 3635	36 3/4	21 1/2	15	35	19	Quad.	28.20

\*Door in Top only.  
\*\*Door in Top & Rear.

Note: When ordering grey wrinkle, add prefix "G" to catalog number. Dimensions in inches.



# CABINETS CHASSIS

# CASES PANELS

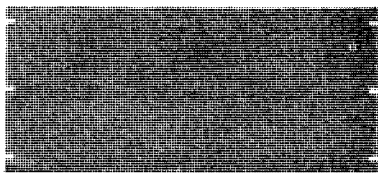
MIDDLETOWN IN CONNECTICUT

## RACK PANELS — 19" LONG (Steel and Aluminum)

Middletown Rack Panels are offered in either 1/4" steel or 1/8" aluminum. They are 19" wide and are slotted for conventional W. E. mounting. Twelve standard sizes. Furnished in black or grey wrinkle finish.

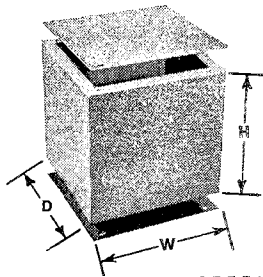
Note: When ordering grey wrinkle, add prefix "G" to catalog number.

\*Available on special order. Aluminum panels 3/16" thick available at 60% increase in cost above 1/8" al. panels.



Cat. No. Steel (Blk Wrinkle)	Dealer Cost	Height	Cat. No. Aluminum (Black Wrinkle)	Dealer Cost
R.P. 1	\$ .85	1 3/4"	A.R.P. 1	\$ 1.10
R.P. 3	1.02	3 1/2"	A.R.P. 3	1.44
R.P. 5	1.23	5 1/4"	A.R.P. 5	1.94
R.P. 7	1.43	7"	A.R.P. 7	2.45
R.P. 8	1.76	8 3/4"	A.R.P. 8	2.86
R.P. 10	2.10	10 1/2"	A.R.P. 10	3.60
R.P. 12	2.45	12 1/4"	A.R.P. 12	4.05
R.P. 14	2.87	14"	A.R.P. 14	4.75
R.P. 15	3.11	15 3/4"	A.R.P. 15	5.32
R.P. 17	3.52	17 1/2"	A.R.P. 17	5.87
R.P. 19	3.70	19 1/4"	A.R.P. 19	6.37
R.P. 21	4.20	21"	A.R.P. 21	6.89
R.P. 26*	5.40	26 1/4"	A.R.P. 26*	9.18
R.P. 35*	7.50	35"	A.R.P. 35	11.94

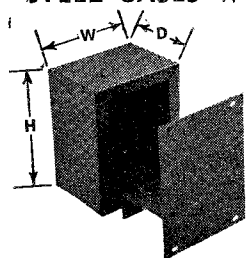
## STEEL AND ALUMINUM CASES



These cases are similar to our standard steel utility cans except they have flat tops and bottoms which are held in place with self tapping screws and are removable. These cases are of sturdy construction and have spot welded corners. Case has flanges on all edges. Steel cases furnished in black wrinkle. Aluminum cases are natural.

STEEL				ALUMINUM	
Catalog Number	W	Size D	H	Dealer Cost	Dealer Cost
SC 442	4"	4"	2"	\$ .96	AC 442 \$1.26
SC 453	4"	5"	3"	1.08	AC 453 1.38
SC 465	4"	6"	5"	1.36	AC 465 1.60
SC 564	5"	6"	4"	1.64	AC 564 1.60
SC 666	6"	6"	6"	1.98	AC 666 1.85
SC 1276	12"	7"	6"	2.89	AC 596 2.50
SC 1287	12"	7 3/4"	6 1/2"	3.32	AC 1276 3.75
SC 1576	15"	7 3/4"	6 1/2"	3.49	
SC 1597	15"	9"	7"	3.95	

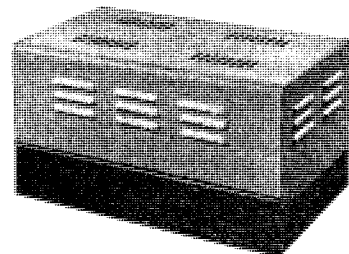
## STEEL CASES WITH BUILT IN CHASSIS



Catalog Number	H	W	D	Chassis Size	Dealer Cost
SCWC 442	4	4	2	1 x 27/8 x 17/8	\$1.26
453	4	5	3	1 x 37/8 x 27/8	1.46
543	5	4	3	1 1/4 x 27/8 x 27/8	1.46
654	6	5	4	1 3/4 x 37/8 x 37/8	1.70
645	5	6	4	1 1/4 x 47/8 x 37/8	1.70
666	6	6	6	1 3/4 x 47/8 x 57/8	1.92

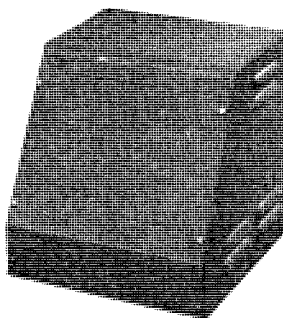
## AMPLIFIER FOUNDATIONS—DeLuxe Models

This unit is designed to meet the most critical requirements. It has rounded corners, special Middletown designed louvers on all 4 sides and elongated holes on top to give maximum ventilation. Chassis are finished in Black wrinkle. Covers are finished in Grey wrinkle. Chassis are drilled for bottom plates which are listed separately. Covers all have a depth of 6"



Cat. No.	Size	Dealer Cost
A.F.-5109	5 x 10 x 9"	\$4.20
A.F.-6149	6 x 14 x 9"	4.85
A.F.-7179	7 x 17 x 9"	5.62
A.F.-10129	10 x 12 x 9"	5.62
A.F.-10179	10 x 17 x 9"	6.38
A.F.-13179	13 x 17 x 9"	7.68

## SLOPING FRONT PANEL CABINETS

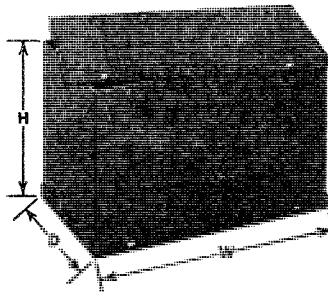


Sloping front panel cabinets have a wide application in the electronic field since they are adaptable for various uses. They are constructed of heavy gauge steel electrically spot-welded. Top corner is removable, front panel is removable, and louvers on sides provide ventilation.

Back panel is ventilated on top and an opening is provided on the bottom so that connections can be made directly to the rear of the chassis. Finished in Grey wrinkle

Cat. No.	H.W.D.	Chassis Size	Dealer Cost
S.F.-888	8 x 8 x 8"	7 x 7 x 2"	\$4.48
S.F.-8108	8 x 10 x 8"	7 x 9 x 2"	4.97
S.F.-8128	8 x 12 x 8"	7 x 11 x 2"	5.26
S.F.-8148	8 x 14 x 8"	7 x 13 x 2"	5.32
S.F.-121812	12 x 18 x 12"	10 x 17 x 3"	9.42

## STEEL UTILITY CANS



These Utility Cans are ruggedly constructed from sheet steel with spot welded reinforced corners. Tops and bottoms are removable and are flanged on all four sides. Held in place with self-tapping screws.

Cat. No.	D	W	H	Weight	Dealer Cost
U.C. 565	5 1/2"	6 x 5 1/2"		3 lbs.	\$2.16
U.C. 596	5"	9 x 6"		5 lbs.	2.51
U.C. 8107	8"	10 x 7"		6 lbs.	3.12
U.C. 81010	8"	10 x 10"		7 lbs.	3.72
U.C. 11128	11"	12 x 8"		9 lbs.	4.58



# CABINETS CHASSIS

# CASES PANELS

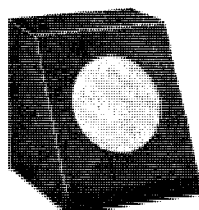
MIDDLETOWN IN CONNECTICUT

## METER PANELS



Middletown Meter Panels are made 5/4" high and are made to the same specifications as our Rack Panels—are available to fit 3" meters.

Cat. No.	Holes	Hole Size	Dealer Cost
R.P.M. 33	3	2 3/16"	\$1.65
R.P.M. 35	5	2 3/16"	2.23

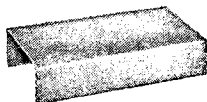


## METER CASES

These cases have sloping front panel with rounded top corner which blends with streamline equipment. They are sturdily constructed from sheet steel with welded joints.

Cat. No.	Meter	Hole Size	H.W.D.	Dealer Cost
M.C. 13	Single 3"	2 3/16"	4 1/2 x 4 x 4	\$1.32
M.C. 33	3-3" Meters	2 3/16"	4 1/2 x 11 1/4 x 4	3.24

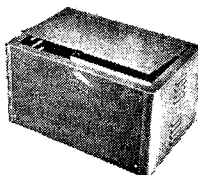
## ALUMINUM MIDGET CHASSIS



These small, open-end aluminum chassis are ideal for miniature tube assemblies and all applications where space is limited. Made of prime sheet aluminum with 1/4" flange on bottom for fastening down, or attaching bottom plate. Finish is natural aluminum.

Cat. No.	Size	Dealer Cost	Cat. No.	Size	Dealer Cost
AMC D	W H		AMC D	W H	
221	2 5/8 2 3/4 1 1/4	\$ .36	541	5 3/4 4 7/8 1 1/2	\$ .57
131	1 3/4 3 1/8 1	.39	431	4 4 3 1/8 1	.42
342	3 1/4 4 1/2 2	.42	441	4 4 4 1/8 1	.48
241	2 3/4 4 1/8 1	.42	451	4 5 3/8 1	.51
341	3 3/4 4 1/8 1 1/2	.42	461	4 6 3/8 1	.57
361	3 6 3/8 1 1/4	.51			

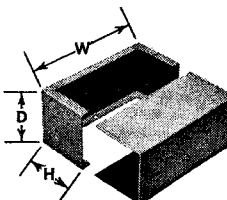
## ROUNDED CORNER CABINETS



These are deluxe streamlined cabinets with front vertical corners rounded. Flush panel door, hung on full-length piano hinge, provided in top for convenient access. Ventilating louvres on sides. Opening at bottom of rear panel permits easy accessibility for leads, cables, etc. Front panel held in position with self-tapping screws. Grey wrinkle finish. Sturdily built of sheet steel.

Catalog No.	H	Size W	D	Panel Space H	W	Chassis Size D	W	H	Dealer Cost
RC 8108	8	10	8	8	8	7	7	2	\$4.47
RC 8128	8	12	8	8	10	7	9	2	4.91
RC 8168	8	16	8	8	14	7	13	2	6.27
RC 91711	9	17	11	9	15	10	14	3	9.35
RC 122012	12	20	12	12	18	10	17	3	11.59

Chassis are not included unless ordered. See chassis listings. Dimensions in Inches.



## MULTI-MOUNTS

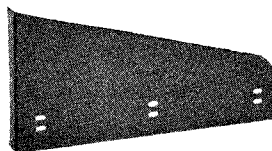
These are all-purpose boxes with an unlimited field of application in radio and electronics. Made from prime sheet aluminum. Two-piece telescoping construction, each half forming three sides. Finish is natural aluminum or grey hammer-tone.

Natural Aluminum				Grey Hammertone			
Catalog Number	Dealer Cost	H	SIZE W D	Catalog Number	Dealer Cost	H	SIZE W D
MM 122	\$.69	1 5/8	2 3/4 2 1/8	GHMM 122	\$.78	1 5/8	2 3/4 2 1/8
MM 132	.69	1 5/8	3 1/4 2 1/8	GHMM 132	.78	1 5/8	3 1/4 2 1/8
MM 142	.74	1 5/8	4 2 1/8	GHMM 142	.81	1 5/8	4 2 1/8
MM 242	.95	2 1/4	4 2 1/4	GHMM 242	1.05	2 1/4	4 2 1/4
MM 252	.98	2 1/4	5 2 1/4	GHMM 252	1.08	2 1/4	5 2 1/4
MM 354	1.15	3	5 4	GHMM 354	1.26	3	5 4
MM 253	1.12	2 1/8	5 1/4 3	GHMM 253	1.20	2 1/8	5 1/4 3
MM 465	1.40	4	6 5	GHMM 465	1.50	4	6 5
MM 375	1.56	3	7 5	GHMM 375	1.88	3	7 5
MM 386	2.30	3 1/2	8 6	GHMM 386	2.52	3 1/2	8 6
MM 3106	2.90	3 1/2	10 6	GHMM 3106	3.14	3 1/2	10 6
MM 4127	3.21	4	12 7	GHMM 4127	3.60	4	12 7
MM 4175	3.80	4	17 5	GHMM 4175	4.23	4	17 5
MM 1102	1.15	1 5/8	10 2	GHMM 1102	1.37	1 5/8	10 2
MM 2122	1.55	2 1/4	12 2 1/2	GHMM 2122	1.65	2 1/4	12 2 1/2
MM 2420	.93	2 3/4	4 2	GHMM 2420	1.02	2 3/4	4 2
MM 1420	.95	1 1/2	4 1/4 2 1/4	GHMM 1420	1.05	1 1/2	4 1/4 2 1/4

## CHASSIS BRACKETS

### Mounting

These brackets are for chassis listed on next page. Front end of the bracket is seven inches high. Finished in black wrinkle.



Catalog Number	Size	Shipping Weight	Dealer Cost
C.B. 8	For 8" Base	2 lbs.	\$ .96
C.B. 11	For 11" Base	3 lbs.	1.35
C.B. 13	For 13" Base	3 lbs.	1.62

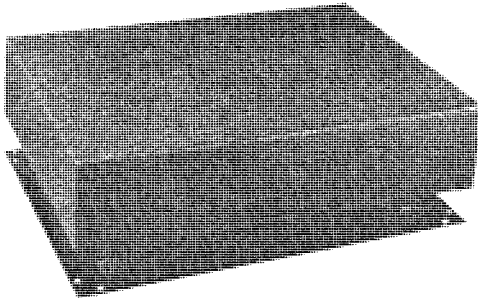


**CABINETS  
CHASSIS**

**CASES  
PANELS**

MIDDLETOWN IN CONNECTICUT

**CHASSIS AND  
BOTTOM PLATES**



Middletown **STANDARD** Steel Chassis are made from one piece of steel, spot welded at all four corners. 22-, 20- and 16-gauge steel is used as indicated in the table. Bottom edges are folded over on four sides for additional rigidity. Black wrinkle finish.

Middletown **ALUMINUM** Chassis are made from one piece of prime sheet aluminum, 16- and 18-gauge aluminum is used as indicated in the table. The design and construction of these chassis are identical with Middletown blank steel chassis. Natural aluminum finish.

Middletown **BOTTOM PLATES** are drilled and have pressed bumpers at corners. Material is 20-gauge steel. Gauge of aluminum bottom plates match gauge of chassis. Natural finish.

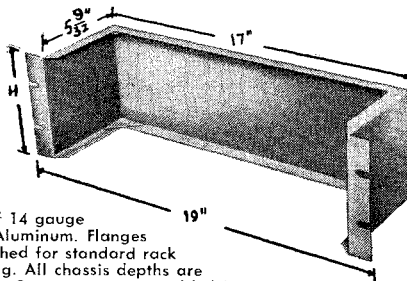
**CHASSIS — STEEL AND ALUMINUM**

Cat. No.	STEEL GAUGE	ALUMINUM Cat. No.	GAUGE	SIZE			DEALER COST	
				D	W	H	Steel	Alum.
*BS 442	22	ABC 442	18	4	4	2	.94	1.10
BS 462	22	ABC 462	18	4	6	2	1.05	1.30
BS 463	20	ABC 463	18	4	6	3	1.07	1.35
BS 4173	20	ABC 4173	16	4	17	3	1.65	2.38
BS 572	22	ABC 572	18	5	7	2	1.05	1.35
BS 573	22	ABC 573	18	5	7	3	1.11	1.41
BS 591	22	ABC 591	18	5 1/2	9 1/2	1 1/2	1.10	1.41
BS 592	22	ABC 592	18	5	9 1/2	2	1.15	1.45
BS 5103	22	ABC 5103	18	5	10	3	1.25	1.62
BS 5133	20	ABC 5133	18	5	13	3	1.59	1.82
BS 6143	20	ABC 6143	16	6	14	3	1.68	2.55
BS 6173	20	ABC 6173	16	6	17	3	1.80	2.75
BS 772	22	ABC 772	18	7	7	2	1.10	1.35
BS 792	22	ABC 792	18	7	9	2	1.33	1.48
BS 7112	20	ABC 7112	18	7	11	2	1.37	1.59
BS 7123	20	ABC 7123	18	7	12	3	1.52	1.94
BS 7132	20	ABC 7132	18	7	13	2	1.48	1.68
BS 7153	20	ABC 7153	16	7	15	3	1.76	2.90
BS 7173	20	ABC 7173	16	7	17	3	1.97	2.88
BS 8123	20	ABC 8123	16	8	12	3	1.82	2.33
BS 8172	20	ABC 8172	16	8	17	2	1.79	2.65
BS 8173	20	ABC 8173	16	8	17	3	1.97	2.95
BS 10123	20	ABC 10123	16	10	12	3	1.89	2.70
BS 10143	20	ABC 10143	16	10	14	3	1.98	3.21
BS 10172	20	ABC 10172	16	10	17	2	1.98	3.15
BS 10173	20	ABC 10173	16	10	17	3	2.05	3.49
BS 10174	20	ABC 10174	16	10	17	4	2.40	4.25
BS 11172	16	ABC 11172	16	11	17	2	2.60	3.52
BS 11173	16	ABC 11173	16	11	17	3	2.85	4.23
BS 12172	20	ABC 12172	16	12	17	2	2.13	3.79
BS 12173	20	ABC 12173	16	12	17	3	2.45	4.42
BS 12174	20	ABC 12174	16	12	17	4	2.58	4.88
BS 13172	16	ABC 13172	16	13	17	2	3.00	3.94
BS 13173	16	ABC 13173	16	13	17	3	3.45	4.62
BS 13174	16	ABC 13174	16	13	17	4	3.85	5.37

Steel Chassis available in zinc plate at additional cost  
\*No flange on 4 x 4 x 2 Chassis

**PANEL CHASSIS**

TO FIT 19" STANDARD RACKS



Made of 14 gauge (.064) Aluminum. Flanges are notched for standard rack mounting. All chassis depths are 5-9/32". Gussets are spot welded in each corner for greater strength. Natural finish.

	Height	Ship. Wt. Lbs.	Dealer Cost
PCV1	1 3/4"	3/4	\$2.50
PCV3	3 1/2"	1 3/4	2.80
PCV5	5 1/4"	1 1/2	3.05
PCV7	7"	2	3.45
PCV8	8 3/4"	2 1/4	4.10
PCV10	10 1/2"	2 3/4	4.45
PCV12	12 1/4"	3	4.90
PCV14	14"	3 1/4	5.30

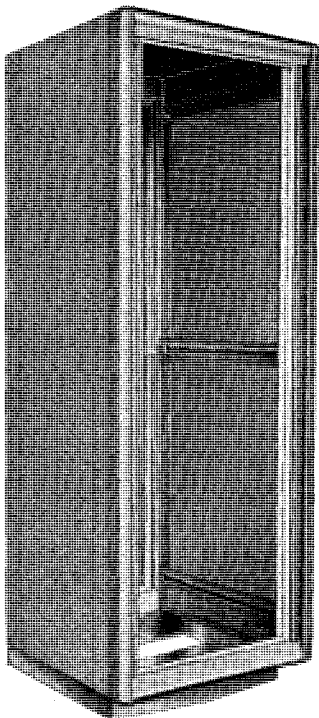
**STEEL AND ALUMINUM BOTTOM PLATES**

CATALOG NUMBER	STEEL SIZE	CATALOG NUMBER ALUMINUM	DEALER COST	
			Steel	Alum.
BP 46	4 x 6	ABP 46	\$.40	\$.88
BP 417	4 x 17	ABP 417	.60	1.35
BP 57	5 x 7	ABP 57	.42	.82
BP 59B	5 x 9 1/2	ABP 59B	.42	.82
BP 59	5 1/2 x 9 1/2	ABP 59	.42	.84
BP 510	5 x 10	ABP 510	.48	.88
BP 513	5 x 13	ABP 513	.70	1.00
BP 614	6 x 14	ABP 614	.66	1.34
BP 617	6 x 17	ABP 617	.74	1.38
BP 77	7 x 7	ABP 77	.48	.88
BP 79	7 x 9	ABP 79	.51	.92
BP 711	7 x 11	ABP 711	.60	.98
BP 712	7 x 12	ABP 712	.60	1.06
BP 713	7 x 13	ABP 713	.66	1.20
BP 715	7 x 15	ABP 715	.72	1.24
BP 717	7 x 17	ABP 717	.78	1.30
BP 812	8 x 12	ABP 812	.80	1.20
BP 817	8 x 17	ABP 817	.81	1.40
BP 1012	10 x 12	ABP 1012	.81	1.40
BP 1014	10 x 14	ABP 1014	.84	1.54
BP 1017	10 x 17	ABP 1017	1.02	1.62
BP 1117	11 x 17	ABP 1117	1.05	2.00
BP 1217	12 x 17	ABP 1217	1.11	2.20
BP 1317	13 x 17	ABP 1317	1.20	2.30

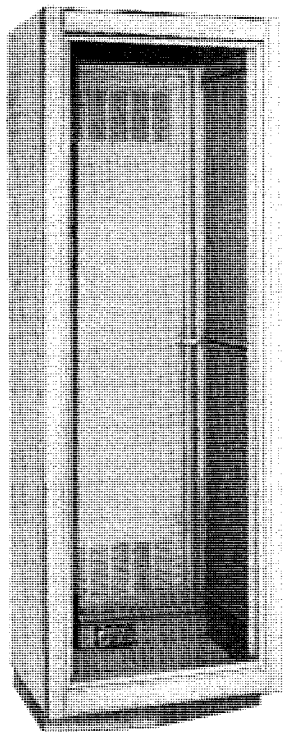
Steel Bottom Plates available in zinc plate at additional cost



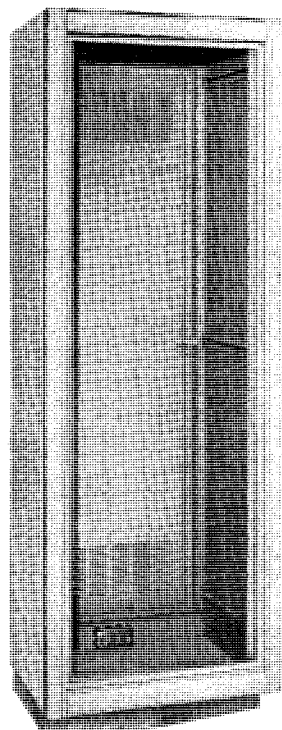
## SUPERIOR CHARACTERISTICS OF

**PAR-METAL Modular Cabinet Racks**

**SERIES "PL" RACKS**  
With Rear Door Only  
equipped with detachable  
side panels.  
(Recessed base is optional)



**SERIES "PX" RACKS**  
With Rear Door Only  
(Recessed base is optional)



**SERIES "PR" RACKS**  
With Rear Door Only  
equipped with detachable  
side panels.  
(Recessed base is optional)

Every Par-Metal Modular Cabinet Rack is securely welded into an integral unit, except where needed for purposes of adjustment or accessibility. No metal screws, clips, or similar devices are used. Every care has been taken to facilitate your assembly problems with a minimum of parts, an efficient utilization of space, and rapid accessibility to interior components.

Although smartly styled, there has been no sacrifice in rugged construction. The same sturdy frame is used in our "PL" & "PR" series providing a solid foundation for maximum loading under severe conditions. Series "PL" may be combined with our console units listed on Par-Metal Pages 9 thru 13 to solve your equipment housing problems.

**DESIGN:** All sizes listed may be obtained with conventional solid side walls, or with open side walls and detachable side panels. Slide shields for use between racks are also available.

**DIMENSIONS:** Racks are available for 19", 24", or 30" wide panels. Cabinet heights are 48 $\frac{1}{2}$ ", 67 $\frac{3}{8}$ ", 77 $\frac{1}{8}$ " and 83 $\frac{1}{8}$ "; depths available are 18" or 24".

**MODULAR GROUPS:** All models may be joined into modular groups; cabinets of the same height, in varying panel widths, with and without front doors, may be intermixed; Series "PL" racks may be combined with our console units.

**MID-RAIL MOUNTING OF PANELS:** The panel mounting angles or "strips" are fully adjustable on all racks, and may be positioned at any location from front to back. Additional panel mounting angles may be easily inserted where needed for mounting terminal boards, etc.

**VERTICAL SIDE SUPPORTS:** These supports provide a simple method for supporting chassis and other equipment in the racks. The means of attaching such brackets is fully adjustable so that chassis may be accurately lined up with the front panels. No drilling or other fabrication is required. The chassis may then be installed or removed with a minimum of effort. The vertical side supports also facilitate the installation of special sliding devices.

**ADJUSTABLE FLOOR LEVELERS** are supplied with all racks as standard.

**SLIDING SHELVES AND DRAWERS:** These are constructed for mounting on the front of the racks the same as regular panels.

**SLOPING INSTRUMENT PANELS and EXTENSION DESK TABLES** for single and modular assemblies are available for all modular racks.

**ANGULAR SECTION FRAMES** are available as standard units for all Modular Cabinet Racks listed on Par-Metal Pages 4 to 6, with a choice of 30° or 45° angles.

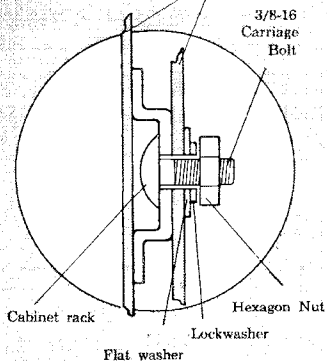
**MODIFICATIONS:** Without departing from the basic design of our racks, it is possible to modify them to meet your special requirements. Standard ventilated tops are available. They may also be modified with our standard dies for making openings, louvers, circular holes, etc., in sides, tops, bottoms and doors of racks.

**FACILITIES** for special ventilation problems and other custom requirements are available. A few examples in common use are shown on Par-Metal Page 3.

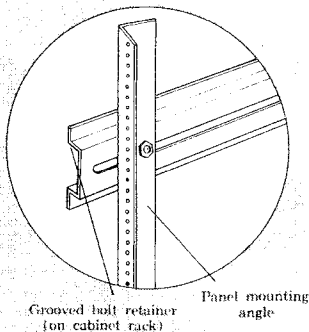
All of our products incorporate the same exacting standards of quality and uniformity which we have maintained for over three decades. If you have a specific problem, do not hesitate to consult us. **Personalized and interested engineering assistance is always available.**

**BOLT RETAINER RAILS**

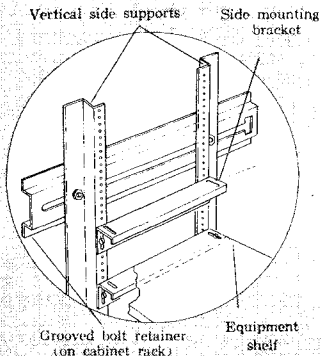
"VS Support or Panel mtg. angle



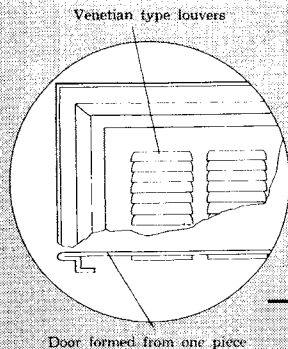
**PANEL MOUNTING ANGLES**



**VERTICAL SIDE SUPPORTS**



**DOORS**



**DETAILS OF CONSTRUCTION AND ASSEMBLY**

**RACK CONSTRUCTION:**

The frame shown is used on series "FL", "FR", "PL", and "PR" racks. The top and bottom is made from 7/64" steel. The four uprights are also 7/64" steel, and have multiple-formed angle bends to insure rigidity. Series "PX" and "FX" racks are similar, except that the solid side walls are made from 1/16" steel. The entire assembly is securely welded to form an integral unit.

**• BOLT RETAINER RAILS:**

To these are bolted the panel mounting angles and vertical side supports, which may be located at any position from front to back. These rails are made from 3/8" steel, and are rigidly welded in place. Angles and supports are securely fastened to rails with 3/8" diam. steel bolts, lock washers, and hexagon nuts.

**• PANEL MOUNTING ANGLES:**

They are made from 1 1/2" x 1 1/2" x 3/8" thick structural steel. All holes are die punched to provide accurate spacings with close tolerances; holes are tapped 12/24 thread on 5/8"-5/8"-1/2" universal spacings for standard rack panels. Additional angles may be purchased for mounting terminal blocks or other devices.

**• VERTICAL SIDE SUPPORTS:**

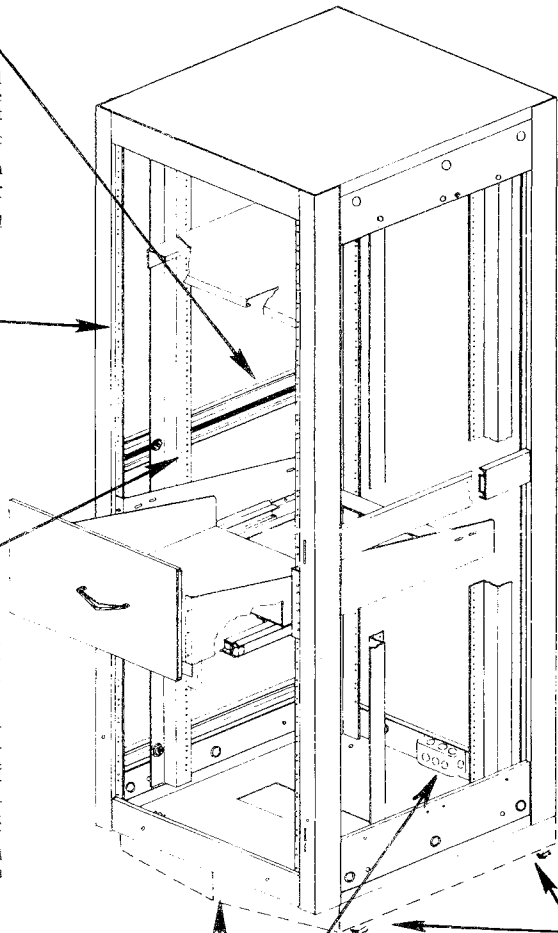
These supports are fastened to the same bolt retainer rails used for securing the panel mounting angles. Holes are 5/8"-5/8"-1/2" universal spacings tapped 10/32 thread, to provide maximum adjustment for side mounting brackets and equipment shelves. They may also be used for attaching slides or other custom made brackets. The supports are made from 3/4" thick steel, locked in place with 3/8" diameter screws, lock washers and hexagon nuts, to afford maximum support.

**• SIDE MOUNTING BRACKETS:**

These may be used separately or with shelves as shown. Slotted holes on the brackets provide any vertical adjustment required.

**DOORS:**

For sake of clarity, doors are not shown on the frame drawing. They are stamped from one piece of 1/16" steel, and "dutch-formed" on all sides providing smooth double-thick edges. Adequate ventilation is obtained from full ventilating (venetian-type) louvers. Lock type handles are supplied on racks with both front and rear doors. Non-locking handles are used on racks with rear doors only; locking type handles are optional.



**• OUTLETS:**

"Knockout holes" are available on cabinet side for connecting cables; a duplex outlet, outlet box and plate are mounted on cabinet under rear door.

**• RECESSED SUB-BASES:**

They are available for all modular type racks as an optional accessory.

**• FLOOR LEVELERS:**

Four are supplied with all modular type racks.

**PAR-METAL**  
PRODUCTS CORP.



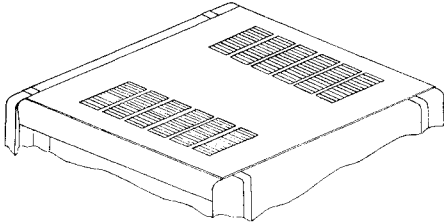
Long Island City 3, N. Y.

# MODIFICATIONS OF MODULAR CABINET RACKS

## CABINET TOPS

Without departing from the basic design of our Modular Cabinet Racks (see Par-Metal Pages 4 to 6), it is possible for us to modify them to meet your special requirements. Below are several modifications, which we have adopted as standard. We have available many standard dies for making openings, louvers, circular holes, etc., in the sides, tops, and bottoms of racks.

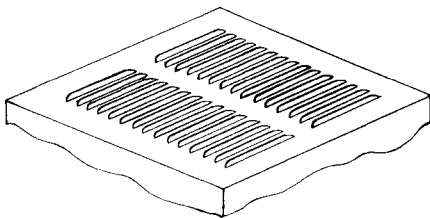
FOR SERIES "PL" AND "FL" CABINET RACKS ONLY



With "venetian" type louvers in top similar to those used on standard rack doors. In ordering, specify the rack catalog number, "WITH TOP MODIFICATION TC". Additional cost per rack is as follows:

Rack Size	Net Price
22" wide, 18" deep .....	\$2.00
22" wide, 24" deep .....	2.00
27" wide, 24" deep .....	2.50
33" wide, 24" deep .....	3.00

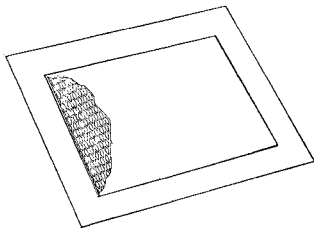
FOR SERIES "PR", "FR", "PX", AND "FX" RACKS



With 7" wide pressed louvers in top from front to back as illustrated above. When ordering, add to rack catalog number "WITH TOP MODIFICATION TB". Additional cost per rack is as follows:

Rack Size	Louvers	Net Price
22" wide, 18" deep .....	2 rows	\$3.00
22" wide, 24" deep .....	2 rows	3.50
27" wide, 24" deep .....	2 rows	4.00
33" wide, 24" deep .....	3 rows	5.10

FOR SERIES "PL", "FL", "PR", "FR", "PX" AND "FX" RACKS

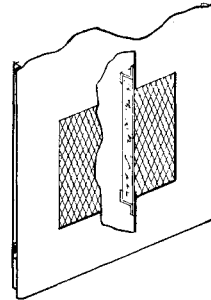


With rectangular opening in top as shown above. The opening is covered with flat expanded steel mesh, .055" thick, having diamond shaped openings  $\frac{5}{16}$ " x  $\frac{7}{8}$ "; mesh is spot-welded underneath. When ordering, add to rack catalog number, "WITH TOP MODIFICATION TA". Additional cost per rack is as follows:

Rack Size	Opening Size	Net Price
22" wide, 18" deep .....	16" x 12"	\$5.25
22" wide, 24" deep .....	16" x 18"	5.75
27" wide, 24" deep .....	21" x 18"	6.50
33" wide, 24" deep .....	27" x 18"	8.00

## DOOR MODIFICATIONS

FOR DOORS ON ALL MODULAR CABINET RACKS

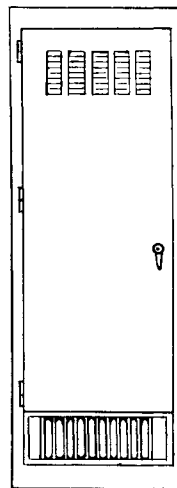


Above is illustrated a grilled opening and interior frame for a removable air filter, which is installed in the lower section of the door. The same provision can be made at the top of the door, if so specified. The filter sizes below are standard; other sizes are available if required. When ordering, specify the rack catalog number "WITH MODIFICATION FD DOOR". (Prices include filters).

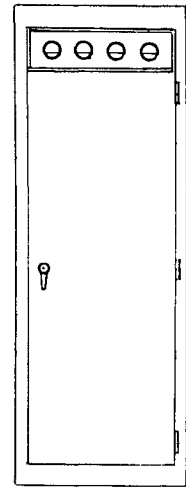
Rack Size	Filter Size	Net Price
22" wide, 18" deep .....	10" x 10" x 1"	\$ 7.50
22" wide, 24" deep .....	10" x 10" x 1"	7.50
27" wide, 24" deep .....	10" x 10" x 1"	7.50
*33" wide, 24" deep .....	10" x 10" x 1"	15.00

\*On each door—cabinet has double doors

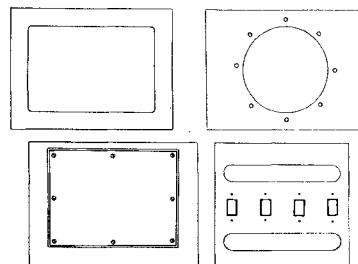
## MODIFIED LENGTH, HINGING, LOUVRES, ETC.



There are several modifications on our standard racks which can be made without additional cost as follows: 1. Doors hinged on left side. 2. Louvers at top only. 3. Louvers at bottom only. 4. Louvers omitted entirely. The drawings illustrate doors of modified length which can be made to your specifications for use with cooling units, meter panels, etc. at a nominal increase in cost.



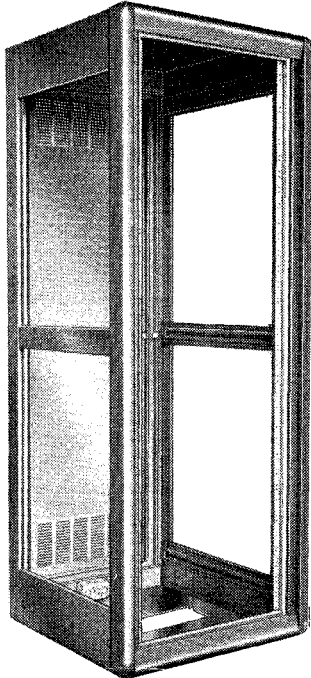
## SPECIAL OPENINGS, HOLES, ETC.



The drawing above indicates some of the stock tools which we have available. Such tools can be used for square or rectangular openings of almost any size. We also have tool equipment to punch or nibble holes up to 14" diameter. These openings or holes can be located in cabinet sides, tops, bottoms or doors within the limits of such equipment.

# PAR-METAL Modular Cabinet Racks

**SERIES "PL" & "FL" RACKS WITH OPEN SIDE WALLS**  
**FOR 19" - 24" - 30" WIDE PANELS — 18" & 24" DEEP WITH DETACHABLE SIDE PANELS**



**SERIES "PL" RACKS**  
 With Rear Door Only  
 (Recessed base is optional)

Series "PL" and "FL" racks are attractively styled with built-in custom quality. Ball corners are not used merely as a sales feature, but are attractively blended into a functional modular design. The rack frames have the same rugged construction featured in all Par-Metal Modular Racks.

Serious consideration has been given to the problem of stability, as well as maximum flexibility for modular assembly. Removable side panels make the interior readily accessible for assembly, inspection, and adjustment.

**SPECIFICATIONS:** Constructional details of rack frame and material specifications are on Par-Metal Page 2.

**ACCESSORIES:** All accessories listed on Par-Metal Pages 7 and 8 may be used with these racks. **ROLLER TRUCKS** are listed on Par-Metal Page 17. **RACK PANELS** are listed on Par-Metal Pages 18 and 19.

**STANDARD EQUIPMENT:** All racks are equipped as shown, with door(s), one pair of panel mounting angles, and all necessary hardware. Recessed sub-bases are not included, but listed as an optional accessory.

**Before Ordering Please Read Instructions Below:**

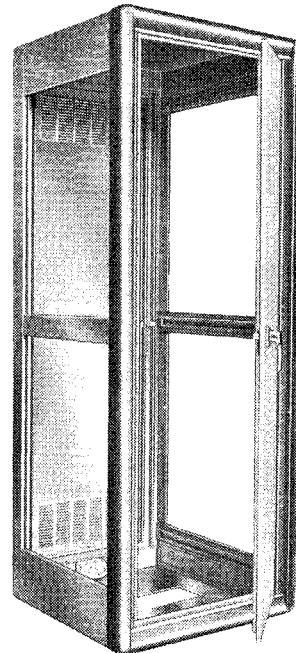
Specify racks by catalog number; also detachable side panels. (Catalog number of side panels is for one pair.) If racks are set up in rows, please specify number in each row, so we can supply proper front joining vertical trims used between adjoining racks.

**FINISHES: Your Choice of the Following:**

Specify finish "LH" for light grey hammertone enamel. Specify finish "DH" for dark grey hammertone enamel. Specify finish "LD" for light grey hammertone cabinets with dark grey hammertone trim on front of assembly. Specify finish "GM" for dark grey metallic enamel. Specify finish "BG" for blue grey wrinkle enamel. Specify finish "PC" for primer coat only.

Locking type handles are standard on series "FL" racks. They may be obtained on series "PL" racks at \$1.00 extra. Plain doors without louvers may be substituted for louvered doors (and vice-versa) without additional charge. Other useful modifications to doors and racks are illustrated on PAR-METAL Page 3.

Complete engineering type detailed drawings of these cabinet racks are available in our Catalog 63. Write directly to home office for personalized and interested engineering assistance.



**SERIES "FL" RACKS**  
 With Front and Rear Doors  
 (Recessed base is optional)

**RECESSED RACK SUB-BASES:** These heavy duty bases will fit under any of the racks listed below. They are rigidly made from 7/64" thick steel with the 4 holes in the top matching those in the racks, and with 4 adjustable floor levers at bottom. Where roller trucks are mounted under racks, recessed bases are not recommended or required. Complete listing of recessed bases for all cabinet racks and prices are given in chart below.

TYPE "PL" SERIES RACKS — WITH REAR DOORS ONLY										DETACHABLE SIDE PANELS			RECESSED BASES (Optional)		
Catalog No.	Overall Dimensions			Panel Space	Clear Inside Depth	**Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	Catalog No. (Per Pr.)	Shipping Wt. Lbs. (Per Pr.)	Net Price (Per Pr.)	Cat. No.	Shipping Wt. Lbs.	Net Price
	Height	Width	Depth												
<b>FOR 19" WIDE PANELS — 18" DEEP RACKS</b>															
PL-4818-A	48 1/8"	22"	18"	42" x 19"	16 5/8"	17 3/4"	19 1/8"	110	\$ 92.00	RL-418	40	\$40.00	RB-2217	18	\$15.00
PL-6718-A	67 3/8"	22"	18"	61 1/4" x 19"	16 5/8"	17 3/4"	19 1/8"	150	105.00	RL-618	55	48.90	RB-2217	18	15.00
PL-7718-A	76 1/8"	22"	18"	70" x 19"	16 5/8"	17 3/4"	19 1/8"	160	116.75	RL-718	60	52.20	RB-2217	18	15.00
PL-8418-A	83 3/8"	22"	18"	77" x 19"	16 5/8"	17 3/4"	19 1/8"	180	128.50	RL-818	65	55.80	RB-2217	18	15.00
<b>FOR 19" WIDE PANELS — 24" DEEP RACKS</b>															
PL-4824-A	48 1/8"	22"	24"	42" x 19"	22 5/8"	17 3/4"	19 1/8"	125	110.50	RL-424	50	47.20	RB-2223	22	16.00
PL-6724-A	67 3/8"	22"	24"	61 1/4" x 19"	22 5/8"	17 3/4"	19 1/8"	165	126.00	RL-624	60	55.80	RB-2223	22	16.00
PL-7724-A	83 3/8"	22"	24"	70" x 19"	22 5/8"	17 3/4"	19 1/8"	175	137.75	RL-724	65	59.40	RB-2223	22	16.00
PL-8424-A	76 1/8"	22"	24"	77" x 19"	22 5/8"	17 3/4"	19 1/8"	190	152.75	RL-824	70	62.60	RB-2223	22	16.00
<b>FOR 24" WIDE PANELS — 24" DEEP RACKS</b>															
PL-4827-A	48 1/8"	27"	24"	42" x 24"	22 5/8"	22 3/4"	24 1/8"	150	139.75	RL-424	50	47.20	RB-2723	25	17.50
PL-6727-A	67 3/8"	27"	24"	61 1/4" x 24"	22 5/8"	22 3/4"	24 1/8"	185	158.75	RL-624	60	55.80	RB-2723	25	17.50
PL-7727-A	76 1/8"	27"	24"	70" x 24"	22 5/8"	22 3/4"	24 1/8"	200	170.50	RL-724	65	59.40	RB-2723	25	17.50
PL-8427-A	83 3/8"	27"	24"	77" x 24"	22 5/8"	22 3/4"	24 1/8"	215	187.75	RL-824	70	62.60	RB-2723	25	17.50
<b>FOR 30" WIDE PANELS — 24" DEEP RACKS</b>															
PL-6733-A	67 3/8"	33"	24"	61 1/4" x 30"	22 5/8"	28 3/4"	30 1/8"	245	189.50	RL-624	60	55.80	RB-3323	28	18.75
PL-7733-A	76 1/8"	33"	24"	70" x 30"	22 5/8"	28 3/4"	30 1/8"	270	205.50	RL-724	65	59.40	RB-3323	28	18.75
PL-8433-A	83 3/8"	33"	24"	77" x 30"	22 5/8"	28 3/4"	30 1/8"	285	224.25	RL-824	70	62.60	RB-3323	28	18.75
<b>TYPE "FL" SERIES RACKS — WITH FRONT AND REAR DOORS</b>															
Catalog No.	Overall Dimensions			Panel Space	Clear Inside Depth	**Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	Catalog No. (Per Pr.)	Shipping Wt. Lbs. (Per Pr.)	Net Price (Per Pr.)	Cat. No.	Shipping Wt. Lbs.	Net Price
	Height	Width	Depth												
<b>FOR 19" WIDE PANELS — 18" DEEP RACKS</b>															
FL-4818-A	48 1/8"	22"	18"	42" x 19"	16 1/4"	17 3/4"	19 1/8"	125	\$109.25	RL-418	40	\$40.00	RB-2217	18	\$15.00
FL-6718-A	67 3/8"	22"	18"	61 1/4" x 19"	16 1/4"	17 3/4"	19 1/8"	170	128.00	RL-618	55	48.90	RB-2217	18	15.00
FL-7718-A	76 1/8"	22"	18"	70" x 19"	16 1/4"	17 3/4"	19 1/8"	180	145.25	RL-718	60	52.20	RB-2217	18	15.00
FL-8418-A	83 3/8"	22"	18"	77" x 19"	16 1/4"	17 3/4"	19 1/8"	200	157.00	RL-818	65	55.80	RB-2217	18	15.00
<b>FOR 19" WIDE PANELS — 24" DEEP RACKS</b>															
FL-4824-A	48 1/8"	22"	24"	42" x 19"	22 1/4"	17 3/4"	19 1/8"	145	130.75	RL-424	50	47.20	RB-2223	22	16.00
FL-6724-A	67 3/8"	22"	24"	61 1/4" x 19"	22 1/4"	17 3/4"	19 1/8"	190	149.00	RL-624	60	55.80	RB-2223	22	16.00
FL-7724-A	76 1/8"	22"	24"	70" x 19"	22 1/4"	17 3/4"	19 1/8"	205	166.75	RL-724	65	59.40	RB-2223	22	16.00
FL-8424-A	83 3/8"	22"	24"	77" x 19"	22 1/4"	17 3/4"	19 1/8"	215	181.25	RL-824	70	62.60	RB-2223	22	16.00
<b>FOR 24" WIDE PANELS — 24" DEEP RACKS</b>															
FL-4827-A	48 1/8"	27"	24"	42" x 24"	22 1/4"	22 3/4"	24 1/8"	170	160.00	RL-424	50	47.20	RB-2723	25	17.50
FL-6727-A	67 3/8"	27"	24"	61 1/4" x 24"	22 1/4"	22 3/4"	24 1/8"	220	188.00	RL-624	60	55.80	RB-2723	25	17.50
FL-7727-A	76 1/8"	27"	24"	70" x 24"	22 1/4"	22 3/4"	24 1/8"	240	199.00	RL-724	65	59.40	RB-2723	25	17.50
FL-8427-A	83 3/8"	27"	24"	77" x 24"	22 1/4"	22 3/4"	24 1/8"	245	223.00	RL-824	70	62.60	RB-2723	25	17.50
<b>FOR 30" WIDE PANELS — 24" DEEP RACKS</b>															
FL-6733-A	67 3/8"	33"	24"	61 1/4" x 30"	22 1/4"	28 3/4"	30 1/8"	280	231.50	RL-624	60	55.80	RB-3323	28	18.75
FL-7733-A	76 1/8"	33"	24"	70" x 30"	22 1/4"	28 3/4"	30 1/8"	310	252.75	RL-724	65	59.40	RB-3323	28	18.75
FL-8433-A	83 3/8"	33"	24"	77" x 30"	22 1/4"	28 3/4"	30 1/8"	325	274.00	RL-824	70	62.60	RB-3323	28	18.75

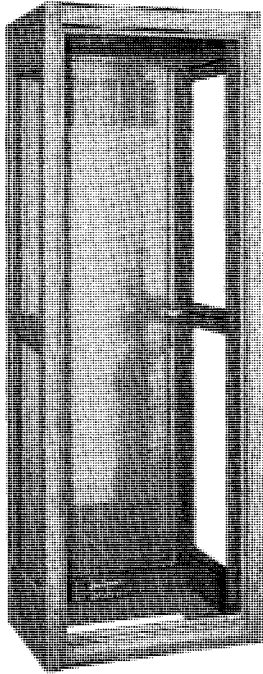
\* Clearance between front and rear doors.

\*\* Indicates clearance for chassis between panel mounting strips

## PAR-METAL PRODUCTS CORP. • Long Island City 3, N. Y.

# PAR-METAL Modular Cabinet Racks

## SERIES "PR" & "FR" RACKS WITH OPEN SIDE WALLS FOR 19" - 24" - 30" WIDE PANELS — 18" & 24" DEEP WITH DETACHABLE SIDE PANELS



**SERIES "PR" RACKS**  
With Rear Doors Only  
(Recessed base is optional)

Series "PR" and "FR" racks use the same sturdy cabinet frames as the "PL" and "FL" racks listed on PAR-METAL Page 4. New horizontal mouldings and vertical corner trims on the front of racks, with new compact side panels, creates a distinctive appearance in keeping with the current trend in cabinet styling. In effect, a frame is provided which can be finished in a contrasting color at your option.

**SPECIFICATIONS:** Constructional details of rack frame and material specifications are on Par-Metal Page 2.

**ACCESSORIES:** All accessories listed on Par-Metal Pages 7 and 8 may be used with these racks. **ROLLER TRUCKS** are listed on Par-Metal Page 17. **RACK PANELS** are listed on Par-Metal Pages 18 and 19.

**STANDARD EQUIPMENT:** All racks are equipped as shown, with door(s), one pair of panel mounting angles, and all necessary hardware. Recessed sub-bases are not included, but listed as an optional accessory.

**CORNER TRIMS:** Where racks are assembled in groups or rows, please specify number of racks in each row so that proper joining trims can be supplied.

**Before Ordering Please Read Instructions Below:**

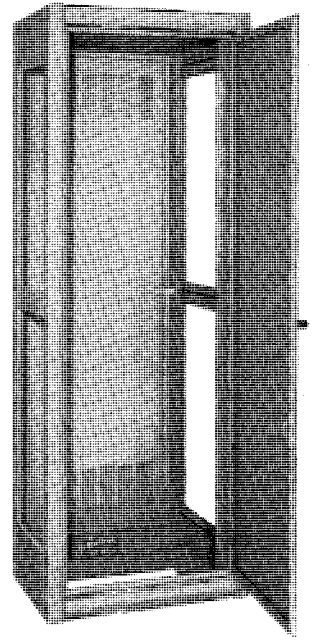
Specify racks by catalog number; also detachable side panels. (Catalog number of side panels is for one pair.) If racks are set up in rows, please specify number in each row, so we can supply proper front joining vertical trims used between adjoining racks.

**FINISHES: Your Choice of the Following:**

Specify finish "LH" for light grey hammertone enamel. Specify finish "DH" for dark grey hammertone enamel. Specify finish "LD" for light grey hammertone cabinets with dark grey hammertone trim on front of assembly. Specify finish "GM" for dark grey metallic enamel. Specify finish "BG" for blue grey wrinkle enamel. Specify finish "PC" for primer coat only.

Locking type handles are standard on series "FR" racks. They may be obtained on series "PR" racks at \$1.00 extra. Plain doors without louvers may be substituted for louvered doors (and vice-versa) without additional charge. Other useful modifications to doors and racks are illustrated on PAR-METAL Page 3.

Additional engineering information such as completely detailed drawings of these cabinet racks are given in our Catalog 63. Write directly to home office for assistance.



**SERIES "FR" RACKS**  
With Front and Rear Doors  
(Recessed base is optional)

**RECESSED RACK SUB-BASES:** These heavy duty bases will fit under any of the racks listed below. They are rigidly made from 7/64" thick steel with the 4 holes in the top matching those in the racks, and with 4 adjustable floor levelers at bottom. Where roller trucks are mounted under racks, recessed bases are not recommended or required. Complete listing of recessed bases for all cabinet racks and prices are given in chart below.

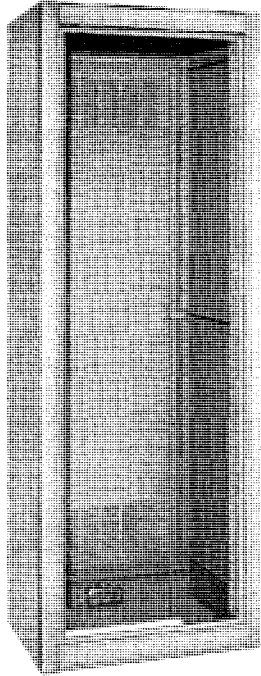
TYPE "PR" SERIES RACKS — WITH REAR DOORS ONLY										DETACHABLE SIDE PANELS			RECESSED BASES (Optional)		
Catalog No.	Overall Height	Dimensions Width	Depth	Panel Space	Clear Inside Depth	**Clear Inside Width (Front)	Inside Width (Rear)	Shipping Wt. Lbs.	Price Net	Catalog No. (Per Pr.)	Shipping (Per Pr.)	Net Price (Per Pr.)	Cat. No.	Shipping Wt. Lbs.	Net Price
<b>FOR 19" WIDE PANELS — 18" DEEP RACKS</b>															
PR-4818-B	48 1/8"	22"	18"	42" x 19"	16 5/8"	17 3/4"	19 1/8"	110	\$ 80.60	RS-418-B	40	\$34.50	RB-2217	18	\$15.00
PR-6718-B	67 3/8"	22"	18"	61 1/4" x 19"	16 3/8"	17 3/4"	19 1/8"	150	92.20	RS-618-B	55	41.40	RB-2217	18	15.00
PR-7718-B	76 1/8"	22"	18"	70" x 19"	16 9/8"	17 3/4"	19 1/8"	160	103.80	RS-718-B	60	44.70	RB-2217	18	15.00
PR-8418-B	83 3/8"	22"	18"	77" x 19"	16 9/8"	17 3/4"	19 1/8"	180	115.20	RS-818-B	65	48.30	RB-2217	18	15.00
<b>FOR 19" WIDE PANELS — 24" DEEP RACKS</b>															
PR-4824-B	48 1/8"	22"	24"	42" x 19"	22 5/8"	17 3/4"	19 1/8"	125	97.70	RS-424-B	50	41.70	RB-2223	22	16.00
PR-6724-B	67 3/8"	22"	24"	61 1/4" x 19"	22 5/8"	17 3/4"	19 1/8"	165	112.00	RS-624-B	60	48.30	RB-2223	22	16.00
PR-7724-B	76 1/8"	22"	24"	70" x 19"	22 5/8"	17 3/4"	19 1/8"	175	123.50	RS-724-B	65	51.90	RB-2223	22	16.00
PR-8424-B	83 3/8"	22"	24"	77" x 19"	22 5/8"	17 3/4"	19 1/8"	190	138.30	RS-824-B	70	55.10	RB-2223	22	16.00
<b>FOR 24" WIDE PANELS — 24" DEEP RACKS</b>															
PR-4827-B	48 1/8"	27"	24"	42" x 24"	22 5/8"	22 3/4"	24 1/8"	150	126.20	RS-424-B	50	41.70	RB-2723	25	17.50
PR-6727-B	67 3/8"	27"	24"	61 1/4" x 24"	22 5/8"	22 3/4"	24 1/8"	185	143.80	RS-624-B	60	48.30	RB-2723	25	17.50
PR-7727-B	76 1/8"	27"	24"	70" x 24"	22 5/8"	22 3/4"	24 1/8"	200	155.30	RS-724-B	65	51.90	RB-2723	25	17.50
PR-8427-B	83 3/8"	27"	24"	77" x 24"	22 5/8"	22 3/4"	24 1/8"	215	172.30	RS-824-B	70	55.10	RB-2723	25	17.50
<b>FOR 30" WIDE PANELS — 24" DEEP RACKS</b>															
PR-6733-B	67 3/8"	33"	24"	61 1/4" x 30"	22 3/8"	28 3/4"	30 1/8"	245	173.20	RS-624-B	60	48.30	RB-3323	28	18.75
PR-7733-B	76 1/8"	33"	24"	70" x 30"	22 3/8"	28 3/4"	30 1/8"	270	189.00	RS-724-B	65	51.90	RB-3323	28	18.75
PR-8433-B	83 3/8"	33"	24"	77" x 30"	22 3/8"	28 3/4"	30 1/8"	285	207.40	RS-824-B	70	55.10	RB-3323	28	18.75
TYPE "FR" SERIES RACKS — WITH FRONT AND REAR DOORS										DETACHABLE SIDE PANELS			RECESSED BASES (Optional)		
Catalog No.	Overall Height	Dimensions Width	Depth	Panel Space	*Clear Inside Depth	**Clear Inside Width (Front)	Inside Width (Rear)	Shipping Wt. Lbs.	Price Net	Catalog No. (Per Pr.)	Shipping (Per Pr.)	Net Price (Per Pr.)	Cat. No.	Shipping Wt. Lbs.	Net Price
<b>FOR 19" WIDE PANELS — 18" DEEP RACKS</b>															
FR-4818-B	48 1/8"	22"	18"	42" x 19"	16 1/4"	17 3/4"	19 1/8"	125	\$ 97.70	RS-418-B	40	\$34.50	RB-2217	18	\$15.00
FR-6718-B	67 3/8"	22"	18"	61 1/4" x 19"	16 1/4"	17 3/4"	19 1/8"	170	115.20	RS-618-B	55	41.40	RB-2217	18	15.00
FR-7718-B	76 1/8"	22"	18"	70" x 19"	16 1/4"	17 3/4"	19 1/8"	180	132.20	RS-718-B	60	44.70	RB-2217	18	15.00
FR-8418-B	83 3/8"	22"	18"	77" x 19"	16 1/4"	17 3/4"	19 1/8"	200	143.80	RS-818-B	65	48.30	RB-2217	18	15.00
<b>FOR 19" WIDE PANELS — 24" DEEP RACKS</b>															
FR-4824-B	48 1/8"	22"	24"	42" x 19"	22 1/4"	17 3/4"	19 1/8"	145	118.00	RS-424-B	50	41.70	RB-2223	22	16.00
FR-6724-B	67 3/8"	22"	24"	61 1/4" x 19"	22 1/4"	17 3/4"	19 1/8"	190	134.90	RS-624-B	60	48.30	RB-2223	22	16.00
FR-7724-B	76 1/8"	22"	24"	70" x 19"	22 1/4"	17 3/4"	19 1/8"	205	152.50	RS-724-B	65	51.90	RB-2223	22	16.00
FR-8424-B	83 3/8"	22"	24"	77" x 19"	22 1/4"	17 3/4"	19 1/8"	215	166.80	RS-824-B	70	55.10	RB-2223	22	16.00
<b>FOR 24" WIDE PANELS — 24" DEEP RACKS</b>															
FR-4827-B	48 1/8"	27"	24"	42" x 24"	22 1/4"	22 3/4"	24 1/8"	170	146.50	RS-424-B	50	41.70	RB-2723	25	17.50
FR-6727-B	67 3/8"	27"	24"	61 1/4" x 24"	22 1/4"	22 3/4"	24 1/8"	220	172.90	RS-624-B	60	48.30	RB-2723	25	17.50
FR-7727-B	76 1/8"	27"	24"	70" x 24"	22 1/4"	22 3/4"	24 1/8"	240	183.80	RS-724-B	65	51.90	RB-2723	25	17.50
FR-8427-B	83 3/8"	27"	24"	77" x 24"	22 1/4"	22 3/4"	24 1/8"	245	207.40	RS-824-B	70	55.10	RB-2723	25	17.50
<b>FOR 30" WIDE PANELS — 24" DEEP RACKS</b>															
FR-6733-B	67 3/8"	33"	24"	61 1/4" x 30"	22 1/4"	28 3/4"	30 1/8"	280	215.20	RS-624-B	60	48.30	RB-3323	28	18.75
FR-7733-B	76 1/8"	33"	24"	70" x 30"	22 1/4"	28 3/4"	30 1/8"	310	236.20	RS-724-B	65	51.90	RB-3323	28	18.75
FR-8433-B	83 3/8"	33"	24"	77" x 30"	22 1/4"	28 3/4"	30 1/8"	325	257.20	RS-824-B	70	55.10	RB-3323	28	18.75

\* Clearance between front and rear doors.

\*\* Indicates clearance for chassis between panel mounting strips.

# PAR-METAL Modular Cabinet Racks

## SERIES "PX" & "FX" RACKS WITH SOLID SIDE WALLS FOR 19" - 24" - 30" WIDE PANELS — 18" & 24" DEEP



**SERIES "PX" RACKS**  
With Rear Door Only  
(Recessed base is optional)

Series "PX" and "FX" racks are similar to our "PR" racks listed on PAR-METAL Page 5 except that they are constructed with **SOLID SIDE WALLS** as shown. Where open side racks are not required, the cost of detachable side panels is eliminated.

These racks feature the same horizontal mouldings and corner trims used on our "PR" series, resulting in a trim, compact appearance. The new styling, in effect, provides an attractive frame around the front of the rack where contrasting color finishes are used.

**SPECIFICATIONS:** Constructional details of rack frame and material specifications are listed on Par-Metal Page 2.

**ACCESSORIES:** All accessories listed on Par-Metal Pages 7 and 8 may be used with these racks. **ROLLER TRUCKS** are listed on Par-Metal Page 17. **RACK PANELS** are listed on Par-Metal Pages 18 and 19

**STANDARD EQUIPMENT:** All racks are equipped as shown, with door(s), one pair of panel mounting angles, and all necessary hardware. Recessed sub-bases are not included, but listed as an optional accessory.

**CORNER TRIMS:** Where racks are assembled in groups or rows, please specify number of racks in each row so that proper joining trims can be supplied.

**Before Ordering Please Read Instructions Below:**

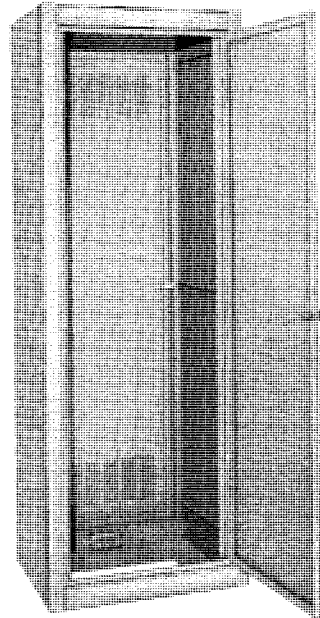
Specify racks by catalog number. If racks are set up in rows, please specify number in each row, so we can supply proper front joining vertical trims used between adjoining racks.

**FINISHES: Your Choice of the Following:**

Specify finish "LH" for light grey hammertone enamel. Specify finish "DH" for dark grey hammertone enamel. Specify finish "LD" for light grey hammertone cabinets with dark grey hammertone trim on front of assembly. Specify finish "GM" for dark grey metallic enamel. Specify finish "BG" for blue grey wrinkle enamel. Specify finish "PC" for primer coat only.

Locking type handles are standard on series "FX" racks. They may be obtained on series "PX" racks at \$1.00 extra. Plain doors without louvers may be substituted for louvered doors (and vice-versa) without additional charge. Other useful modifications to doors and racks are illustrated on Par-Metal Page 3.

Complete engineering type detailed drawings of these cabinet racks are available in our Catalog 63. Write directly to home office for personalized and interested engineering assistance.



**SERIES "FX" RACKS**  
With Front and Rear Doors  
(Recessed base is optional)

**RECESSED RACK SUB-BASES:** These heavy duty bases will fit under any of the racks listed below. They are rigidly made from 7/64" thick steel with the 4 holes in the top matching those in the racks, and with 4 adjustable floor levelers at bottom. Where roller trucks are mounted under racks recessed bases are not recommended or required. Complete listing of recessed bases for all cabinet racks and prices are given in chart below.

TYPE "PX" SERIES RACKS — WITH REAR DOORS ONLY										RECESSED BASES (Optional)		
Catalog No.	Overall Dimensions		Depth	Panel Space	Clear Inside Depth	*Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	Catalog No.	Shipping Wt. Lbs.	Net Price
	Height	Width										
<b>FOR 19" WIDE PANELS — 18" DEEP RACKS</b>												
PX-3718-B	42 <sup>7</sup> / <sub>8</sub> "	22"	18"	36 <sup>3</sup> / <sub>4</sub> " x 19"	16 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	105	\$ 69.00	RB-2217	18	\$15.00
PX-4818-B	48 <sup>1</sup> / <sub>8</sub> "	22"	18"	42" x 19"	16 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	120	80.60	RB-2217	18	15.00
PX-6718-B	67 <sup>3</sup> / <sub>8</sub> "	22"	18"	61 <sup>1</sup> / <sub>4</sub> " x 19"	16 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	155	92.20	RB-2217	18	15.00
PX-7718-B	76 <sup>1</sup> / <sub>8</sub> "	22"	18"	70" x 19"	16 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	170	103.80	RB-2217	18	15.00
PX-8418-B	83 <sup>1</sup> / <sub>8</sub> "	22"	18"	77" x 19"	16 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	185	115.20	RB-2217	18	15.00
<b>FOR 19" WIDE PANELS — 24" DEEP RACKS</b>												
PX-4824-B	48 <sup>1</sup> / <sub>8</sub> "	22"	24"	42" x 19"	22 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	140	97.70	RB-2223	22	16.00
PX-6724-B	67 <sup>3</sup> / <sub>8</sub> "	22"	24"	61 <sup>1</sup> / <sub>4</sub> " x 19"	22 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	180	112.00	RB-2223	22	16.00
PX-7724-B	76 <sup>1</sup> / <sub>8</sub> "	22"	24"	70" x 19"	22 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	195	123.50	RB-2223	22	16.00
PX-8424-B	83 <sup>1</sup> / <sub>8</sub> "	22"	24"	77" x 19"	22 <sup>5</sup> / <sub>8</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	210	138.30	RB-2223	22	16.00
<b>FOR 24" WIDE PANELS — 24" DEEP RACKS</b>												
PX-4827-B	48 <sup>1</sup> / <sub>8</sub> "	27"	24"	42" x 24"	22 <sup>5</sup> / <sub>8</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	155	126.20	RB-2723	25	17.50
PX-6727-B	67 <sup>3</sup> / <sub>8</sub> "	27"	24"	61 <sup>1</sup> / <sub>4</sub> " x 24"	22 <sup>5</sup> / <sub>8</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	200	143.80	RB-2723	25	17.50
PX-7727-B	76 <sup>1</sup> / <sub>8</sub> "	27"	24"	70" x 24"	22 <sup>5</sup> / <sub>8</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	225	155.30	RB-2723	25	17.50
PX-8427-B	83 <sup>1</sup> / <sub>8</sub> "	27"	24"	77" x 24"	22 <sup>5</sup> / <sub>8</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	240	172.30	RB-2723	25	17.50
<b>FOR 30" WIDE PANELS — 24" DEEP RACKS</b>												
PX-6733-B	67 <sup>3</sup> / <sub>8</sub> "	33"	24"	61 <sup>1</sup> / <sub>4</sub> " x 30"	22 <sup>5</sup> / <sub>8</sub> "	28 <sup>3</sup> / <sub>4</sub> "	30 <sup>1</sup> / <sub>8</sub> "	260	173.20	RB-3323	28	18.75
PX-7733-B	76 <sup>1</sup> / <sub>8</sub> "	33"	24"	70" x 30"	22 <sup>5</sup> / <sub>8</sub> "	28 <sup>3</sup> / <sub>4</sub> "	30 <sup>1</sup> / <sub>8</sub> "	280	189.00	RB-3323	28	18.75
PX-8433-B	83 <sup>1</sup> / <sub>8</sub> "	33"	24"	77" x 30"	22 <sup>5</sup> / <sub>8</sub> "	28 <sup>3</sup> / <sub>4</sub> "	30 <sup>1</sup> / <sub>8</sub> "	300	207.40	RB-3323	28	18.75
TYPE "FX" SERIES RACKS — WITH FRONT AND REAR DOORS										RECESSED BASES (Optional)		
Catalog No.	Overall Dimensions		Depth	Panel Space	*Clear Inside Depth	**Clear Inside Width (Front)	Clear Inside Width (Rear)	Shipping Wt. Lbs.	Net Price	Catalog No.	Shipping Wt. Lbs.	Net Price
	Height	Width										
<b>FOR 19" WIDE PANELS — 18" DEEP RACKS</b>												
FX-4818-B	48 <sup>1</sup> / <sub>8</sub> "	22"	18"	42" x 19"	16 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	135	\$ 97.70	RB-2217	18	\$15.00
FX-6718-B	67 <sup>3</sup> / <sub>8</sub> "	22"	18"	61 <sup>1</sup> / <sub>4</sub> " x 19"	16 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	175	115.20	RB-2217	18	15.00
FX-7718-B	76 <sup>1</sup> / <sub>8</sub> "	22"	18"	70" x 19"	16 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	190	132.20	RB-2217	18	15.00
FX-8418-B	83 <sup>1</sup> / <sub>8</sub> "	22"	18"	77" x 19"	16 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	205	143.80	RB-2217	18	15.00
<b>FOR 19" WIDE PANELS — 24" DEEP RACKS</b>												
FX-4824-B	48 <sup>1</sup> / <sub>8</sub> "	22"	24"	42" x 19"	22 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	160	118.00	RB-2223	22	16.00
FX-6724-B	67 <sup>3</sup> / <sub>8</sub> "	22"	24"	61 <sup>1</sup> / <sub>4</sub> " x 19"	22 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	205	134.90	RB-2223	22	16.00
FX-7724-B	76 <sup>1</sup> / <sub>8</sub> "	22"	24"	70" x 19"	22 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	225	152.50	RB-2223	22	16.00
FX-8424-B	83 <sup>1</sup> / <sub>8</sub> "	22"	24"	77" x 19"	22 <sup>1</sup> / <sub>4</sub> "	17 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>8</sub> "	235	166.80	RB-2223	22	16.00
<b>FOR 24" WIDE PANELS — 24" DEEP RACKS</b>												
FX-4827-B	48 <sup>1</sup> / <sub>8</sub> "	27"	24"	42" x 24"	22 <sup>1</sup> / <sub>4</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	175	146.50	RB-2723	25	17.50
FX-6727-B	67 <sup>3</sup> / <sub>8</sub> "	27"	24"	61 <sup>1</sup> / <sub>4</sub> " x 24"	22 <sup>1</sup> / <sub>4</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	235	172.90	RB-2723	25	17.50
FX-7727-B	76 <sup>1</sup> / <sub>8</sub> "	27"	24"	70" x 24"	22 <sup>1</sup> / <sub>4</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	265	183.80	RB-2723	25	17.50
FX-8427-B	83 <sup>1</sup> / <sub>8</sub> "	27"	24"	77" x 24"	22 <sup>1</sup> / <sub>4</sub> "	22 <sup>3</sup> / <sub>4</sub> "	24 <sup>1</sup> / <sub>8</sub> "	270	207.40	RB-2723	25	17.50
<b>FOR 30" WIDE PANELS — 24" DEEP RACKS</b>												
FX-6733-B	67 <sup>3</sup> / <sub>8</sub> "	33"	24"	61 <sup>1</sup> / <sub>4</sub> " x 30"	22 <sup>1</sup> / <sub>4</sub> "	28 <sup>3</sup> / <sub>4</sub> "	30 <sup>1</sup> / <sub>8</sub> "	295	215.20	RB-3323	28	18.75
FX-7733-B	76 <sup>1</sup> / <sub>8</sub> "	33"	24"	70" x 30"	22 <sup>1</sup> / <sub>4</sub> "	28 <sup>3</sup> / <sub>4</sub> "	30 <sup>1</sup> / <sub>8</sub> "	320	236.20	RB-3323	28	18.75
FX-8433-B	83 <sup>1</sup> / <sub>8</sub> "	33"	24"	77" x 30"	22 <sup>1</sup> / <sub>4</sub> "	28 <sup>3</sup> / <sub>4</sub> "	30 <sup>1</sup> / <sub>8</sub> "	345	257.20	RB-3323	28	18.75

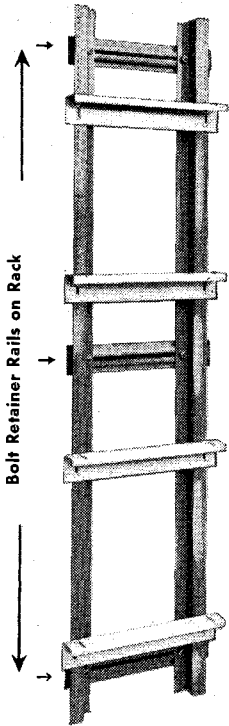
\* Clearance between front and rear doors.

\*\* Indicates clearance for chassis between panel mounting strip



# PAR-METAL CABINET RACK ACCESSORIES

## VERTICAL SIDE SUPPORTS



These vertical side supports are supplied in sets of four uprights to fit all Modular racks listed on PAR-METAL Pages 4 thru 6. (Cut shows side mounting brackets in place which are sold separately — see listing below).

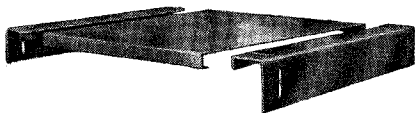
Supports are fastened to bolt retainer rails which hold panel mounting angles in place, and are adjustably mounted from front to back of rack. Holes are drilled and **tapped vertically** to provide adequate vertical adjustment for mounting brackets, shelves, and various sliding devices.

The clearance between supports (from right to left) when installed in racks for 19" wide panels is 17 3/4"; clearance when installed in racks for 24" wide panels is 22 3/4"; clearance when installed in racks for 30" wide panels is 28 3/4". All supports are 2 5/8" wide and 1 1/2" deep.

Supports are made from 7/64" thick steel, finished in aluminum enamel. Each set is supplied with 3/8" dia. bolts, lock washers, and nuts for rack mounting.

Cat. No.	Height	To Fit Modular Cabinet Racks	Sh. Lbs.	Net Price Set of 4
VS-36	40 3/32"	PX-3718-B	22	\$15.00
VS-42	46 3/32"	Series 4818, 4824, 4827	25	16.50
VS-61	65 1/32"	Series 6718, 6724, 6727, 6733	35	21.75
VS-70	74 3/32"	Series 7718, 7724, 7727, 7733	39	25.50
VS-77	81 3/32"	Series 8418, 8424, 8427, 8433	45	28.35

## SIDE MOUNTING BRACKETS



Brackets BR-118 and Shelf SS-1918

These brackets will fit on Vertical Side Supports shown above. They are sold in pairs, and slotted to provide vertical adjustment at any height required. Brackets are 2" wide and 1-13/16" high. The vertical face of the bracket is also slotted to match holes in equipment shelves listed below. Where desirable, the horizontal face of the bracket may be bolted to the vertical side supports. They are made from 1/8" steel, zinc plated finish. Necessary bolts are supplied.

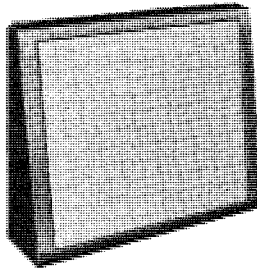
Cat. No.	Length	To Fit Racks	Shpg. Wt.	Net Price
BR-118	14"	All 18" deep racks	4 lbs.	\$3.30 per pair
BR-124	20"	All 24" deep racks	6 lbs.	4.45 per pair

## EQUIPMENT SHELVES

These shelves will assemble with the side mounting brackets listed above, to make a complete shelf between Vertical Side Supports. Made from 1/16" steel, zinc plated. Necessary bolts for assembly are included. All shelves are 3/8" high.

Cat. No.	Width	Depth	To Fit Racks	Net Price
SS-1918	17 5/8"	14 1/4"	19" panels-18" deep	\$3.50
SS-1924	17 5/8"	20 1/4"	19" panels-24" deep	4.20
SS-2724	22 5/8"	20 1/4"	24" panels-24" deep	4.95
SS-3324	28 5/8"	20 1/4"	30" panels-24" deep	7.20

## SLOPING RACK MOUNTING PANELS



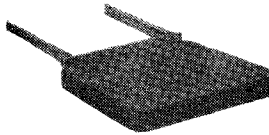
These panels are intended for installation on relay racks, and are installed the same as other standard rack panels. The front slopes at an angle of 20°, and it may be used with the slope upward or downward.

Front and back have removable panels. They are designed for single unit or modular group assemblies.

Constructed from 1/16" sheet steel; panels are included in prices listed below. Available in all finishes—please specify when ordering. All panels are 7 5/8" deep.

Cat. No.	Panel Space Required on Rack	Sloping Panel Size	Rear Panel Size	Net Price
SP-1719	17 1/2" x 19"	15 3/4" x 19"	14" x 19"	\$42.00
SP-1724	17 1/2" x 24"	15 3/4" x 24"	14" x 24"	50.00
SP-1730	17 1/2" x 30"	15 3/4" x 30"	14" x 30"	65.00

## RACK TYPE EXTENSION TABLES



These tables are mounted to the front of cabinet racks. They are made from 3/4" plywood to which is bonded 1/16" thick formica of a dark grey pattern on both top and apron, which is 2 1/2" high.

The apron is substantially reinforced for fastening to horizontal channel type supports. The channels are made from 7/64" thick steel, and are bolted to vertical side supports which are securely mounted on the inside wall of the rack. The tables may be adjusted at any height from the floor. This assembly provides a very rigid structure, with a smooth writing space across the entire top. There are no metal parts exposed, and no painted metal surfaces to deteriorate with constant usage.

The tables may be installed on any of the modular cabinet racks (without front doors) listed on PAR-METAL Pages 4 thru 6. They are also available for modular rows of four or more racks.

ALL OF THESE TABLE ASSEMBLIES REQUIRE ONLY 3 1/2" OF PANEL SPACE (height).

Cat. No.	Table Size	Type	Rack Panel Width	Net Price
RX-119	21 1/4" x 20"	Single	19"	\$ 33.60
RX-219	42 1/8" x 20"	Double	19"	62.40
RX-319	64 1/4" x 20"	Triple	19"	83.20
RX-419	86 3/8" x 20"	Quadruple	19"	113.20
RX-124	26 1/4" x 20"	Single	24"	38.40
RX-224	52 1/8" x 20"	Double	24"	76.00
RX-324	79 1/4" x 20"	Triple	24"	102.40
RX-130	32 1/4" x 20"	Single	30"	44.00
RX-230	64 1/8" x 20"	Double	30"	80.00

## PANEL MOUNTING ANGLES

These panel mounting angles (or strips) are the same as used in all Modular type racks (see PAR-METAL Pages 4 thru 6). They are supplied with necessary bolts to fit into the bolt retainer rails which hold the pair of panel mounting angles regularly supplied with each rack (see PAR-METAL Page 2 for further description).

It is often desirable to use an additional pair of panel mounting angles for mounting chassis, terminal strips, etc. They may be adjusted to any depth within the rack from front to back.

Angle No.	Length	To Fit Modular Cabinet Racks	Net Price Per Pair
PA-36	40-27/32"	PX-3718	\$ 9.50
PA-42	46-3/32"	PL, FL, PX, FX, PR, FR-4818, 4824, 4827	11.50
PA-61	65-11/32"	PL, FL, PX, FX, PR, FR-6718, 6724, 6727, 6733	15.90
PA-70	74-3/32"	PL, FL, PX, FX, PR, FR-7718, 7724, 7727, 7733	18.10
PA-77	81-3/32"	PL, FL, PX, FX, PR, FR-8418, 8424, 8427, 8433	19.80

## RECESSED RACK SUB-BASES

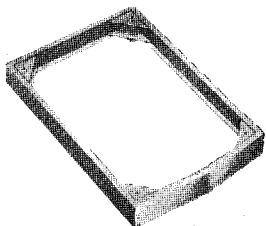
These heavy duty bases will fit under any of the Par-Metal Modular Cabinet Racks shown on Par-Metal Pages 4 through 6.

They are rigidly made from 7/64" thick steel with the 4 holes in the top matching those in the racks, and with 4 adjustable floor levers at the bottom.

They will be finished in the same enamel as the racks for which they are ordered. Where roller trucks are mounted under the racks, recessed bases are not recommended or required.

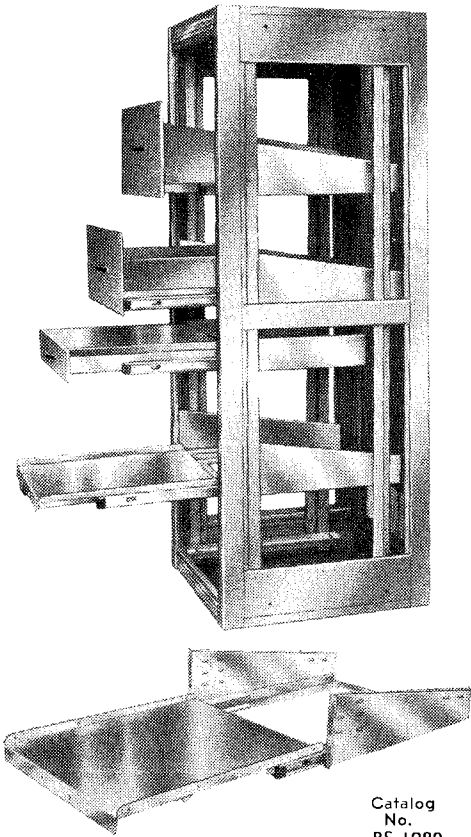
To Fit Modular Cabinet Racks

Cat. No.	Width	Depth	Net Price
RB-2217	22"	18"	\$15.00
RB-2223	22"	24"	16.00
RB-2723	27"	24"	17.50
RB-3323	33"	24"	18.75



# PAR-METAL RACK TYPE SLIDE ASSEMBLIES

## GENERAL DESCRIPTION



These slide assemblies will save considerable layout and assembly time as an alternate method of attaching individual slides directly to the interior of a rack. All models are screw mounted to the front panel mounting angles of relay racks, the same as regular panels. Additional holes are provided in the side brackets of the shelf assembly for mounting to our standard vertical side supports. Either method will provide a rigid support; both may be used together where desirable.

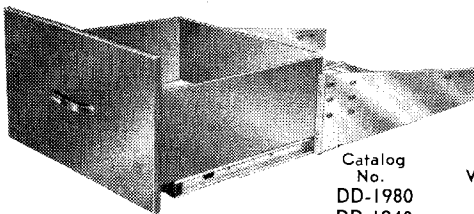
The basic slide assemblies for use in 19" wide panel racks will accommodate chassis up to 17" wide. All of the "usable space" noted below may be fully extended from the front of the rack; load capacities are based on the shelf in this position. All units are ruggedly constructed to withstand constant usage. The frames and brackets are made from  $\frac{3}{4}$ " thick steel. All parts are securely welded or fastened with stainless steel rivets.

### BASIC SLIDE ASSEMBLIES

The basic slide assembly illustrated is sold as a complete unit, ready for installation in all 18" or 24" deep racks. Panels may be attached to chassis by using standard brackets or any other convenient method. The panel and chassis assembly is then bolted directly to the slide pan. Formed panels with a minimum height of 7" are recommended. Four models are listed to fit racks using panels either 19" or 24" wide. The BS-1940 and BS-2419 are identical in size, but have different load capacities. All load capacities are conservatively rated to carry the full load with the sliding shelf completely extended. All parts are zinc plated.

Catalog No.	Usable Space Width	Usable Space Depth	Panel Width	Rack Depth	Bracket Height	Shelf Height	Load Capacity	Net Price	Shipping Weight
BS-1980	17 $\frac{1}{8}$ "	14"	19"	18" and 24"	6 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	50 lbs.	\$19.25	24 lbs.
BS-1940	17 $\frac{1}{8}$ "	20"	19"	24"	6 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	36 lbs.	25.50	32 lbs.
BS-2419	17 $\frac{1}{8}$ "	20"	19"	24"	6 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	60 lbs.	30.75	32 lbs.
BS-2424	22 $\frac{1}{8}$ "	20"	24"	24"	6 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	55 lbs.	33.00	35 lbs.

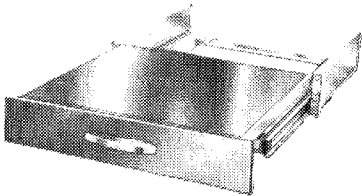
Special brackets are available for mounting rack panels, as listed on Par-Metal page 21.



### STORAGE DRAWER ASSEMBLIES

These drawers are suitable for stationery, instruments, parts, etc. The drawers are mounted on the basic slide assemblies described above. They are available either 7" or 10 $\frac{1}{2}$ " high to match standard rack panels of the same height. Three models are listed for racks with 19" wide panels and one for 24" wide panel racks.

Catalog No.	Usable Space Width	Usable Space Length	Depth	Panel Height	Panel Width	Rack Depth	Load Capacity	Net Price	Shipping Weight
DD-1980	17"	14"	5"	7"	19"	18" and 24"	40 lbs.	\$26.50	33 lbs.
DD-1940	17"	20"	5"	7"	19"	24"	25 lbs.	35.00	42 lbs.
DD-2419	17"	20"	8"	10 $\frac{1}{2}$ "	19"	24"	45 lbs.	41.90	50 lbs.
DD-2424	22"	20"	8"	10 $\frac{1}{2}$ "	24"	24"	45 lbs.	46.75	50 lbs.



### DESK SHELF ASSEMBLIES

This assembly effectively provides a retractable writing desk, or may be used for supporting test instruments or other devices. When not in use, it saves valuable air space. The writing surface is charcoal grey micarta. The front requires only 3 $\frac{1}{2}$ " of panel space, and is provided with a drawer pull. It is made for racks using panel either 19" or 24" wide. No. SK-1970 and SK-2419 are identical except for load capacity.

Catalog No.	Shelf Size Width	Shelf Size Depth	Writing Surface	Pulls Out	Panel Width	Rack Depth	Load Capacity	Net Price	Shipping Weight
SK-1970	17"	17"	Micarta	16 $\frac{3}{8}$ "	19"	18" and 24"	36 lbs.	\$36.00	32 lbs.
SK-2419	17"	17"	Micarta	16 $\frac{3}{8}$ "	19"	18" and 24"	60 lbs.	41.50	32 lbs.
SK-2424	22"	17"	Micarta	16 $\frac{3}{8}$ "	24"	24"	60 lbs.	48.75	35 lbs.

**IMPORTANT:** When ordering, please specify paint finish on front panels or drawer fronts of series "DD" or "SK" assemblies. Standard finishes are grey hammertone, black wrinkle, blue grey wrinkle, primer coat only. Other finishes available.

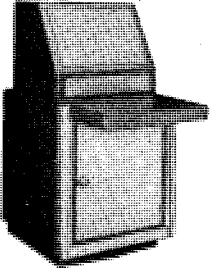
**PAR-METAL PRODUCTS CORP.**

• Long Island City 3, N. Y.

# PAR-METAL MODULAR CONSOLE ASSEMBLIES

## GENERAL DESCRIPTION

### SINGLE UNIT ASSEMBLY

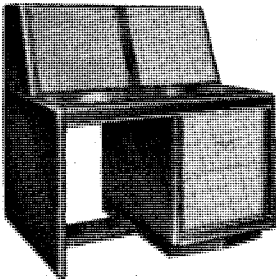


This illustration shows one of our three basic single unit assemblies. Other single unit assemblies are shown on the next page.

The combination of a control cabinet mounted on table, desk or similar support usually called a console has been in general use in the electronics industry many years.

While it is obvious that no particular fixed design can serve every requirement, we have devised a group of standard units, the combination of which is readily adaptable for specialized applications in control equipment, testing facilities, sound distribution systems and industrial purposes. These models have been functionally designed and smartly styled to keep pace with current trends. New modular units have been added, all of which may be grouped or expanded to meet your specific needs.

### DOUBLE UNIT ASSEMBLY



In this double unit assembly, the pedestal rack can also be fitted on the left side.

The versatile pedestal racks are the keystone to the entire assembly. They are constructed for heavy duty use, having all the essential features of our type "PL" cabinet racks listed on PAR-METAL Page 5. This would include panel mounting angles which are adjustable from front to back, and provision for installing chassis mounting brackets and shelves where needed. They offer an efficient utilization of space, complete accessibility for servicing, and are solidly built to withstand heavy strains whether in a laboratory or a moving vehicle.

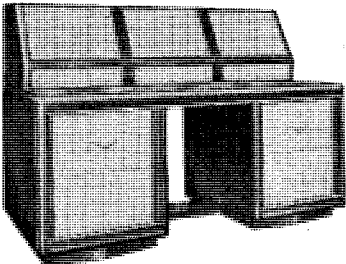
Two models of pedestal frames are available, which are identical except for the depth (front to back). PD-224 frame (24 $\frac{1}{4}$ " deep) unit may also be used without an extension desk table.

There are four models of desk panel cabinets suitable for mounting on the pedestal frame top to make a complete console. Single or multiple unit consoles may be combined with our Series "PL" racks.

The PD-234 frame (34 $\frac{1}{4}$ " deep) forms a complete desk structure without the use of extension shelves. When one of our desk panel cabinets is mounted on top, additional space is available in front as a desk writing surface. The 34 $\frac{1}{4}$ " depth also provides additional interior space.

Unit assemblies are not limited to triple units, and may be extended to modular groups of five or more. If you have a specific problem, do not hesitate to consult us.

### TRIPLE UNIT ASSEMBLY



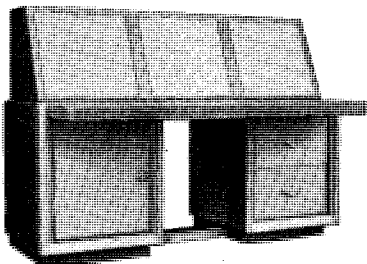
Various triple unit assemblies are available as shown on this and the following page.

The side panels are readily detachable from the outside. No drilling or fitting is necessary for the assembly of pedestals, cabinets, brackets, shelves or drawers. All panel mounting holes are tapped for screws—no metal screws or clips are used.

**STANDARD FINISH** — is a combination of light and dark grey hammertone enamel on pedestal frames. All panels are supplied in light grey hammertone enamel.

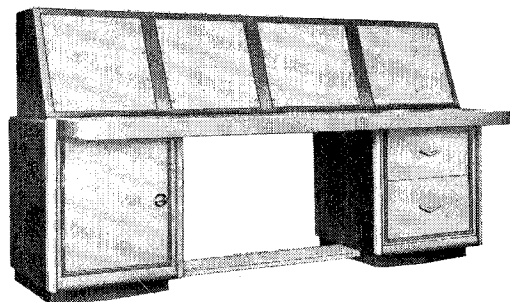
**OPTIONAL FINISHES:** Specify Finish "LH" for all items in light grey hammertone enamel. Specify Finish "DH" for all items in dark grey hammertone enamel. Specify Finish "GM" for all items in dark grey metallic enamel. Specify Finish "BG" for all items in blue grey wrinkle enamel. Specify Finish "PC" for all items in primer coat only.

### ALTERNATE TRIPLE UNIT ASSEMBLY



The above unit consists of: two No. PD-224 pedestal frames, two No. EP-24 exterior side panels, two No. KP-24 interior side panels, one No. HS-103 high slope cabinet, one No. CD-24 center desk section and one CT-319 extension table, (door drawers, or rack panels for front and back are optional).

### TYPICAL QUAD UNIT ASSEMBLY



The above unit consists of: two No. PD-224 pedestal frames, two No. EP-24 exterior side panels, two No. KP-24 interior side panels, one No. HS-104 high slope cabinet, one No. CD-24-2 center desk section and one CT-419 extension table, (door drawers, or rack panels for front and back are optional).

# PAR-METAL MODULAR CONSOLE ASSEMBLIES

The group charts below list all necessary and alternate components for single, double, and triple unit assemblies, and also provides a check list to determine your exact requirements. There are four models of desk panel cabinets specially designed to fit on the top of the assemblies detailed below. For simplicity, they have been omitted; for a complete description see Par-Metal Page 13. All of the 19" wide panels listed on Par-Metal Pages 18 and 19 may be mounted on these assemblies. Refer to Par-Metal Page 8 for sliding drawers shown in the illustrations on Page 9. Other component parts suitable for use with these assemblies are shown on Par-Metal Pages 11 and 12.

## FOR SINGLE UNIT ASSEMBLIES

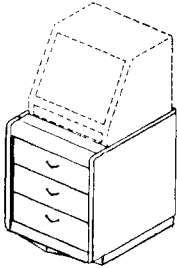


FIGURE "A" AS ABOVE  
FIGURE "B" (LESS TOP CABINET)

### PARTS REQUIRED

Pedestal Frame .....	11	1	PD-224	PD-224
Exterior Side Panel .....	11	2	EP-24	EP-24
Extension Desk Table .....	12	1	*	WT-241
Formica Table Top .....	12	1	*	NT-241

\*Table top not required.

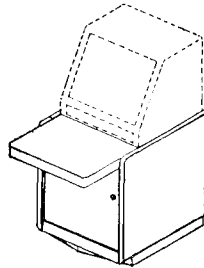


FIGURE "C" AS ABOVE  
FIGURE "D" (LESS TOP CABINET)

Par-Metal Page No.	Quant.	Fig. "A"	Fig. "B"	Fig. "C"	Fig. "D"	Fig. "E"	Fig. "F"
11	1	PD-224	PD-224	PD-224	PD-224	PD-234	PD-234
11	2	EP-24	EP-24	EP-24	EP-24	EP-34	EP-34
12	1	*	WT-241	CT-119	CT-119	HT-341	WT-341

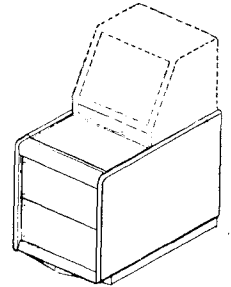


FIGURE "E" AS ABOVE  
FIGURE "F" (LESS TOP CABINET)

## FOR DOUBLE UNIT ASSEMBLIES

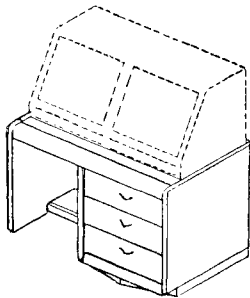


FIGURE "G" AS ABOVE  
FIGURE "H" (LESS TOP CABINET)

### PARTS REQUIRED

Pedestal Frame .....	11	1	PD-224	PD-224
End Pedestal Assembly .....	11	1	DU-24	DU-24
Exterior Side Panel .....	11	1	EP-24	EP-24
Interior Side Panel .....	11	1	KP-24	KP-24
Extension Desk Table .....	12	1	*	WT-242
Formica Table Top .....	12	1	*	NT-242

\*Table top not required

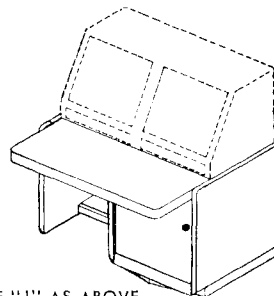


FIGURE "J" AS ABOVE  
FIGURE "K" (LESS TOP CABINET)

Par-Metal Page No.	Quant.	Fig. "G"	Fig. "H"	Fig. "J"	Fig. "K"	Fig. "L"	Fig. "M"
11	1	PD-224	PD-224	PD-224	PD-224	PD-234	PD-234
11	1	DU-24	DU-24	DU-24	DU-24	DU-34	DU-34
11	1	EP-24	EP-24	EP-24	EP-24	EP-34	EP-34
11	1	KP-24	KP-24	KP-24	KP-24	KP-34	KP-34
12	1	*	WT-242	CT-219	CT-219	HT-342	WT-342

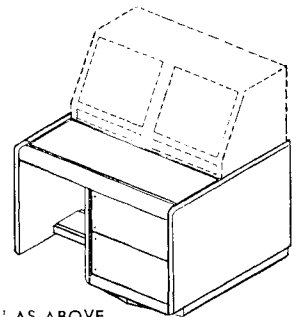


FIGURE "L" AS ABOVE  
FIGURE "M" (LESS TOP CABINET)

## FOR TRIPLE UNIT ASSEMBLIES

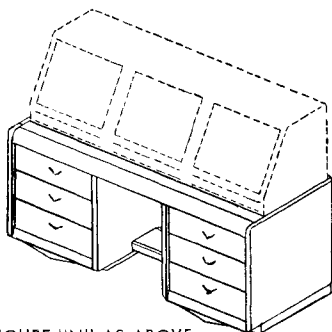


FIGURE "N" AS ABOVE  
FIGURE "O" (LESS TOP CABINET)

### PARTS REQUIRED

Pedestal Frames .....	11	2	PD-224	PD-224
Center Desk Section .....	11	1	CD-24	CD-24
Exterior Side Panels .....	11	2	EP-24	EP-24
Interior Side Panels .....	11	2	KP-24	KP-24
Extension Desk Table .....	12	1	*	WT-243
Formica Table Top .....	12	1	*	NT-243

\*Table top not required

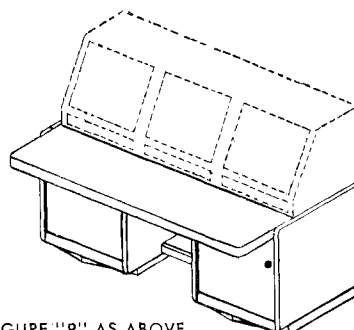


FIGURE "P" AS ABOVE  
FIGURE "R" (LESS TOP CABINET)

Par-Metal Page No.	Quant.	Fig. "N"	Fig. "O"	Fig. "P"	Fig. "R"	Fig. "S"	Fig. "T"
11	2	PD-224	PD-224	PD-224	PD-224	PD-234	PD-234
11	1	CD-24	CD-24	CD-24	CD-24	CD-34	CD-34
11	2	EP-24	EP-24	EP-24	EP-24	EP-34	EP-34
11	2	KP-24	KP-24	KP-24	KP-24	KP-34	KP-34
12	1	*	WT-243	CT-319	CT-319	HT-343	WT-343

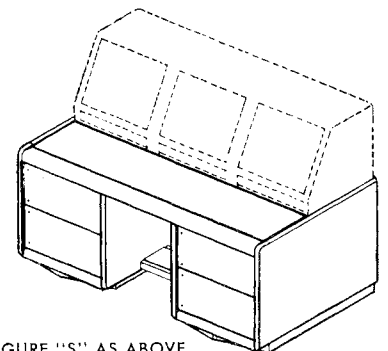
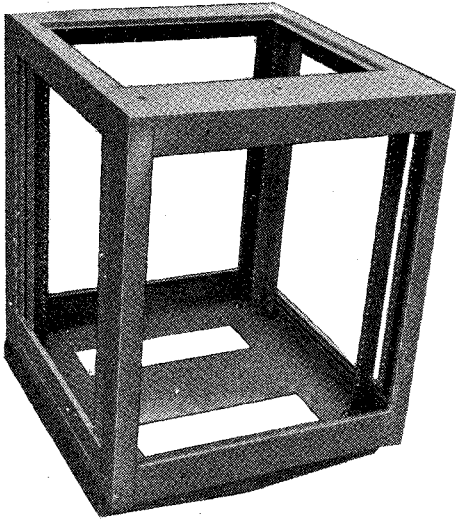


FIGURE "S" AS ABOVE  
FIGURE "T" (LESS TOP CABINET)

# PAR-METAL MODULAR CONSOLE ASSEMBLIES



Cat. No. PD-224

The various units required to make up complete assemblies are listed on Par-Metal Pages 11, 12, and 13. The component check lists on Par-Metal Page 10 enables you to easily select the parts required. Pedestal frames may be obtained as standard units with heavy duty casters at a nominal additional cost. See listing and description on Par-Metal Page 12.

## CATALOG NO. PD-224 (24 1/4" deep)

Overall Dimensions (with side panels, front and rear trim)  
30" high, 24 1/2" wide, 25 3/8" deep.

Overall dimensions (less side panels, front and rear trim)  
29" high, 22" wide, 24 1/4" deep.

Height of pedestal rack (less step base): 26 1/2"

Panel Mounting Space: Front and Back: 21" high x 19" wide.

Clear opening at front and back: 19 1/8"

Clear opening between panel mounting angles: 17 3/4"

\*Clear opening at left and right: 17 5/8" wide, 21" high

Clear inside depth (front to back): 23 1/8"

\*Suitable for standard rack panel 19" wide, 21" high (if needed).

**NET PRICE \$80.00**

## RACK PEDESTAL FRAMES

The rack pedestal is the principal component used in all single and multiple unit assemblies. It combines the essential features of our type "PL" racks listed on Par-Metal Page 4 and is attractively styled for any environment.

The bottom and step base are formed from 7/8" steel; all other parts are made from 1/16" steel. They are substantially welded together to insure the extra strength and stability needed for heavy duty installation, wherever located. They are capable of carrying heavy transformers, large power supplies, motors, compressors, and similar apparatus.

Panel space at front and back is 21" x 19". Panel mounting angles (or "strips") may be located at any position from front to back, and have tapped holes for mounting standard rack panels, sliding shelves, phono drawers, or storage drawers. Two pairs are supplied — one pair for front mounting and another pair for rear mounting. Additional tapped holes are available at the sides for mounting chassis supports and shelves.

**STANDARD FINISH** — is a combination of light and dark grey hammertone enamel on pedestal frames.

**OPTIONAL FINISHES:** Specify Finish "LH" for light grey hammertone enamel. Specify Finish "DH" for dark grey hammertone enamel. Specify Finish "GM" for dark grey metallic enamel. Specify Finish "BG" for blue grey wrinkle enamel. Specify Finish "PC" for primer coat only.

## CATALOG NO. PD-234 (34 1/4" deep)

Overall Dimensions (with side panels, front and rear trim)  
30" high, 24 1/2" wide, 35 3/8" deep.

Overall Dimensions (less side panels, front and rear trim)  
29" high, 22" wide, 34 1/4" deep.

Height of pedestal rack (less step base): 26 1/2"

Panel Mounting Space: Front and Back: 21" high x 19" wide.

Clear opening at front and back: 19 3/8"

Clear opening between panel mounting angles: 17 3/4"

\*Clear opening at left and right side: 22 5/8" wide, 21" high.

Clear inside depth (front to back): 33 1/8"

\*Suitable for standard rack panel 24" wide, 21" high (if needed).

**NET PRICE \$95.00**

## CENTER DESK SECTION (For Triple and Quad Unit Assemblies)

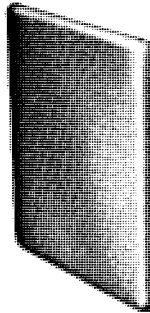


The center desk section shown is attached between two rack pedestals to make up a triple or quad unit assembly. Consists of table top support and floor brace illustrated on Par-Metal Page 10. Formica table top not included in price of sections. Sections finished to match color of pedestal frames, unless otherwise ordered.

Cat. No.	For Assembly with	Front to Back	Length	Net Price
CD-24	PD-224	25 3/8"	22"	\$16.80
CD-242	PD-224	25 3/8"	44"	33.60
CD-34	PD-234	35 3/8"	22"	19.80
CD-342	PD-234	35 3/8"	44"	39.60

## DETACHABLE SIDE PANELS

All panels are made from 1/16" sheet steel. All corners are securely welded and ground smooth. Each panel has cowl fasteners at top and bottom, so that they may be quickly removed to provide complete access to interior of pedestals. Prices include front horizontal mouldings on pedestal frames. Panels are finished to match color of pedestal frames, unless otherwise ordered.



Cat. No.	Description	To fit		Net Price
		Pedestal	For use on	
EP-24	Exterior side panel	PD-224	All assemblies	\$20.00
KP-24	Interior side panel	PD-224	" "	17.50
EP-34	Exterior side panel	PD-234	" "	25.00
KP-34	Interior side panel	PD-234	" "	20.00

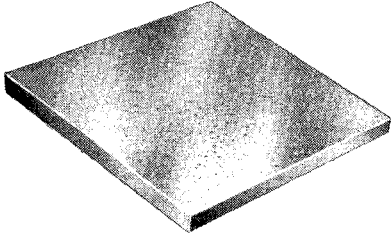
## END PEDESTAL (For Double and Triple Unit Assemblies)

End pedestals are designed to make up various assemblies as shown on Par-Metal Pages 9 and 10. They may be installed on either the right or left hand side of pedestal frame. Formica top not included in prices below. Will be finished to match pedestal frame unless otherwise ordered. All end pedestals are 30" high.

Cat. No.	For Assembly With	Length	Front to Back	Net Price
DU-24	Pedestal PD-224	23 1/4"	25 3/8"	\$38.50
DU-242	Pedestal PD-224	45 1/4"	25 3/8"	55.30
DU-34	Pedestal PD-234	23 1/4"	35 3/8"	45.00
DU-342	Pedestal PD-234	45 1/4"	35 3/8"	64.80

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# PAR-METAL MODULAR CONSOLE ASSEMBLIES



## FORMICA BONDED TABLE TOPS

These table tops are made from 3/4" thick plywood to which is bonded 1/16" thick patterned grey formica. There are no metal spacers between units, providing a clear unobstructed writing surface across the entire top. The table top required for any particular assembly may be easily identified from the check list of component groups on Par-Metal Page 10. The listings below are a cross reference and also include prices.

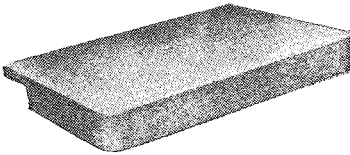
### For Use on No. PD-224 Pedestal Frames (24 1/4" deep)

Catalog No.	Assembly	Refer to: Figure	Par-Metal Page No.	Net Price
WT-241	Single Unit Assembly	"B"	10	\$15.00
NT-241	Single Unit Assembly	"D"	10	12.00
WT-242	Double Unit Assembly	"H"	10	24.00
NT-242	Double Unit Assembly	"K"	10	24.00
WT-243	Triple Unit Assembly	"O"	10	42.00
NT-243	Triple Unit Assembly	"R"	10	32.00
WT-244	Quad Unit Assembly	—	10	56.00
NT-244	Quad Unit Assembly	—	9	40.00

### For Use on No. PD-234 Pedestal Frames (34 1/4" deep)

Catalog No.	Assembly	Refer to: Figure	Par-Metal Page No.	Net Price
HT-341	Single Unit Assembly	"E"	10	\$11.20
WT-341	Single Unit Assembly	"F"	10	23.40
HT-342	Double Unit Assembly	"L"	10	18.20
WT-342	Double Unit Assembly	"M"	10	46.00
HT-343	Triple Unit Assembly	"S"	10	24.00
WT-343	Triple Unit Assembly	"T"	10	62.00
HT-344	Quad Unit Assembly	—	9	34.00
WT-344	Quad Unit Assembly	—	9	72.00

## EXTENSION DESK TABLES



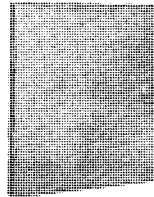
These extension tables are used in console assemblies illustrated on Par-Metal Pages 9 and 10. They are made from 3/4" thick plywood, to which is bonded 1/16" thick grey formica.

The formica covers both the top and apron of the table which is 2-1/2" deep. The apron is substantially reinforced for fastening to horizontal channel supports. The assembly provides a rugged structure with a smooth writing space across the entire top.

There are no metal parts exposed, and no metal surfaces to deteriorate with constant usage. As these tables are mounted above the front panels on the pedestal frame, the full front panel space of 21" may be used.

Cat. No.	For Use on Assemblies	Overall Size	Net Price
CT-119	Single Unit	16" x 22" x 2 1/2"	\$24.00
CT-219	Double Unit	16" x 44" x 2 1/2"	40.00
CT-319	Triple Unit	16" x 66" x 2 1/2"	56.00
CT-419	Quad Unit	16" x 88" x 2 1/2"	70.00

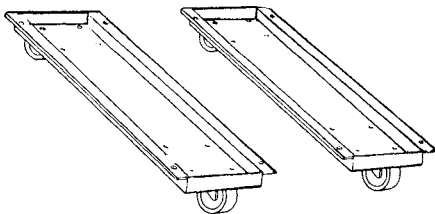
## PEDESTAL FRAME DOORS



These doors are made to enclose the front or back of pedestal frames. They are "double wall" type with smooth surfaces inside and outside. A push button spring catch provides easy operation with a minimum projection from the front of the door.

They are made in two heights: 21" high to completely enclose the front opening of the pedestal, with a 10 1/2" high door, which may be inserted above or below a sliding drawer or rack panel. They can be supplied to match finish of console assembly, or any finish listed on Par-Metal Page 9.

Cat. No.	For assembly with Pedestal	Size	Net Price
DR-1019	No. PD-224 or 234	10 1/2" x 19"	\$13.50
DR-2119	No. PD-224 or 234	21 "x19"	16.50



## PEDESTAL CASTER ASSEMBLIES

These assemblies are made specifically for use on our No. PD-224 and No. PD-234 pedestal frames listed on Par-Metal Page 11. They replace the regular recessed sub-bases, and are used where mobility is required. The caster plates are made from 7/64" thick steel for heavy-duty usage. Casters are equipped with 3" diameter composition wheels, capable of supporting loads of 225 lbs. per wheel.

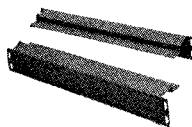
Where pedestal frames with caster assemblies are required, they will be supplied at an additional cost of \$4.00 per frame. Simply specify on your pedestal frame order "with casters." They may be obtained separately as listed in chart at the left for replacement of recess sub-bases on pedestal frames now in use.

Cat. No.	For use on	*Net Price
CA-24	Pedestal Frame No. PD-224	\$15.00
CA-34	Pedestal Frame No. PD-234	15.00

\*Price is for a pair, for installation on one pedestal frame.

## MOUNTING BRACKETS

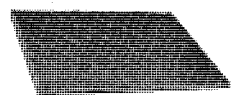
These brackets may be mounted on each side of the pedestal. They are slotted to match the Tapped holes in the sides of the pedestal and may be adjusted to any height.



Cat. No.	To Fit Pedestal	Overall Size	Net Price Per Pair
CB-24	PD-224	2 1/2" x 2 3/32" x 1 8 1/16"	\$4.20
CB-34	PD-234	2 1/2" x 2 3/32" x 2 8 1/16"	5.80

## SHELVES

These shelves are drilled for assembly with Mounting Brackets CB-24 and CB-34. Both shelves are 17 1/2" wide and 5/8" high.



Cat. No.	To Fit Brackets	For Pedestal	Depth	Net Price
SS-24	CB-24	PD-224	22 3/4"	\$4.60
SS-34	CB-34	PD-234	32 3/4"	6.40



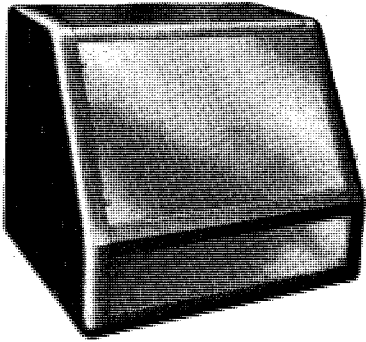
# PAR-METAL MODULAR CONSOLE ASSEMBLIES

## DESK PANEL CABINETS

The desk control cabinets shown below are ideal for use in the laboratory, for test equipment and other industrial applications. Each cabinet section is made from  $\frac{1}{8}$ " sheet steel, rigidly welded together—ready for use without a multiplicity of clips, studs, nuts and other fastening devices.

**STANDARD FINISH:** All panels are supplied in light grey hammertone enamel with frame in dark grey hammertone enamel. For complete list of optional finishes at the same price, please refer to Par-Metal Page 9.

Cabinets are regularly supplied with full hinged ventilated doors at the back (except Series LS-101, etc.). Tapped holes are also provided for mounting standard 19" wide panels; panels (blank or ventilated) up to  $15\frac{3}{4}$ " high are optional at the same price.

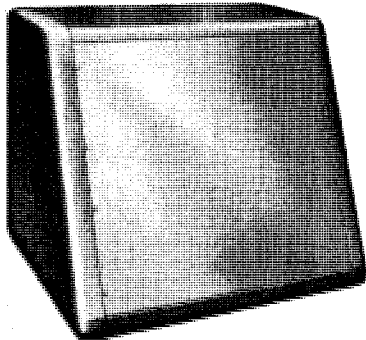


"CX" SERIES

### DUAL PANEL DESK CONTROL CABINETS

On Series "CX" cabinets, the upper panel is  $12\frac{1}{4}$ " high, and is sloped at an angle of  $30^\circ$ ; the lower vertical panel is  $3\frac{1}{2}$ " high. A hinged removable door is mounted on the back, with the hinges at the bottom for easy access to the interior. The door is louvered for efficient ventilation, and held closed with a push-button type spring catch. In double, triple and quad unit cabinets individual doors are used on each unit. The bottom of the cabinet has a removable panel size  $15\frac{3}{4}$ " x 19" for each unit. All panels supplied are the formed type 19" wide (see Par-Metal Page 19). Standard aluminum or steel rack panels,  $\frac{1}{8}$ " thick, may be substituted for formed steel panels without additional cost.

Catalog No.	Description	Height	Width	Depth (at bottom)	Depth (at top)	Net Price
CX-101	Single Unit	$18\frac{7}{8}$ "	22"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	\$ 70.00
CX-102	Double Unit	$18\frac{7}{8}$ "	44"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	115.00
CX-103	Triple Unit	$18\frac{7}{8}$ "	66"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	160.00
CX-104	Quad Unit	$18\frac{7}{8}$ "	88"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	200.00



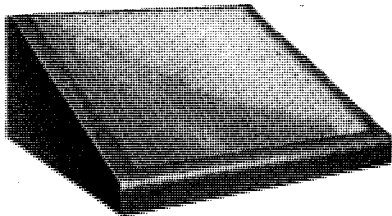
"HS" SERIES

### HIGH SLOPE PANEL DESK CABINETS

On Series "HS" cabinets, the front panel size is  $17\frac{1}{2}$ " x 19", and is sloped at an angle of  $23^\circ$ . A hinged removable door is mounted on the back, with the hinges at the bottom for easy access to the interior. The door is adequately louvered, and held closed with a push-button type spring catch. In double, triple and quad units, individual doors are used on each unit.

The bottom of the cabinet has a removable panel size  $15\frac{3}{4}$ " x 19" for each unit. All panels supplied are the formed type 19" wide (see Par-Metal Page 19). Standard aluminum or steel rack panels,  $\frac{1}{8}$ " thick, may be substituted for formed steel panels without additional cost.

Catalog No.	Description	Height	Width	Depth (at bottom)	Depth (at top)	Net Price
HS-101	Single Unit	$18\frac{7}{8}$ "	22"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	\$ 66.50
HS-102	Double Unit	$18\frac{7}{8}$ "	44"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	110.00
HS-103	Triple Unit	$18\frac{7}{8}$ "	66"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	150.00
HS-104	Quad Unit	$18\frac{7}{8}$ "	88"	$18\frac{7}{8}$ "	$11\frac{5}{8}$ "	190.00

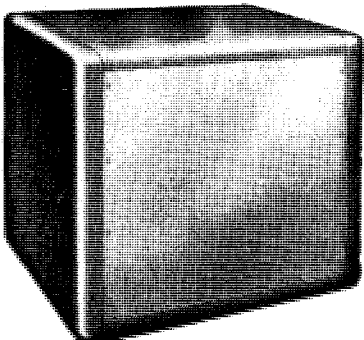


"LS" SERIES

### LOW SLOPE PANEL DESK CABINETS

On Series "LS" cabinets, the front panel is  $17\frac{1}{2}$ " x 19", and slopes upward at an angle of  $23^\circ$ . The bottom has a removable panel size,  $15\frac{3}{4}$ " x 19". Standard aluminum or steel rack panels,  $\frac{1}{8}$ " thick, may be substituted for the formed steel panels regularly supplied at no additional cost.

Catalog No.	Description	Height	Width	Depth	Net Price
LS-101	Single Unit	$9\frac{1}{8}$ "	22"	$18\frac{7}{8}$ "	\$ 40.00
LS-102	Double Unit	$9\frac{1}{8}$ "	44"	$18\frac{7}{8}$ "	70.00
LS-103	Triple Unit	$9\frac{1}{8}$ "	66"	$18\frac{7}{8}$ "	100.00
LS-104	Quad Unit	$9\frac{1}{8}$ "	88"	$18\frac{7}{8}$ "	130.00



"VF" SERIES

### VERTICAL DESK PANEL CABINETS

On Series "VF" cabinets, the vertical front panel, the top panel, and the bottom panel are removable. All have the same size,  $15\frac{3}{4}$ " x 19". A hinged removable door is mounted on the back, adequately ventilated with hinges at the bottom for easy access to the interior. The door is held closed with a push-button spring catch; in double, triple and quad units, individual doors are used on each unit.

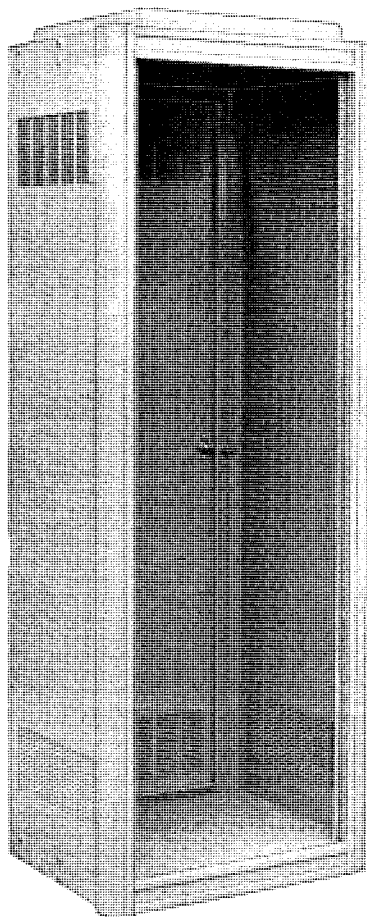
All panels supplied are the formed type 19" wide (see Par-Metal Page 19). Standard aluminum or steel panels,  $\frac{1}{8}$ " thick, may be substituted for formed steel panels without additional cost.

Catalog No.	Description	Height	Width	Depth	Net Price
VF-101	Single Unit	$18\frac{7}{8}$ "	22"	$18\frac{7}{8}$ "	\$ 55.00
VF-102	Double Unit	$18\frac{7}{8}$ "	44"	$18\frac{7}{8}$ "	100.00
VF-103	Triple Unit	$18\frac{7}{8}$ "	66"	$18\frac{7}{8}$ "	145.00
VF-104	Quad Unit	$18\frac{7}{8}$ "	88"	$18\frac{7}{8}$ "	185.00

Complete dimensional information on Desk Panel Cabinet Racks including explanatory drawing of side section is available in our Catalog 63. Kindly write directly to home office for personalized and interested engineering assistance.

# PAR-METAL TYPE "A" RELAY RACKS

## DELUXE TYPE—FOR 19" WIDE PANELS



"ER" SERIES  
WITH REAR DOOR ONLY

**CABINET:** The entire cabinet is made from 1/16" sheet steel. The sides are adequately ventilated with "venetian" type louvers similar to our modular cabinet racks. The vertical corner trims and formed mouldings at top and bottom are designed to effect a distinctive frame around the front of the rack. Racks are shipped "knocked down" for easy assembly.

**CORNER TRIMS:** All front vertical corner and joining trims are narrow type (do not overlap panels) to permit installation of sliding shelves, drawers, tables, etc.

**PANEL MOUNTING:** Angle irons are 7/64" thick steel, holes are accurately drilled and tapped 10-32 thread for all types of panels.

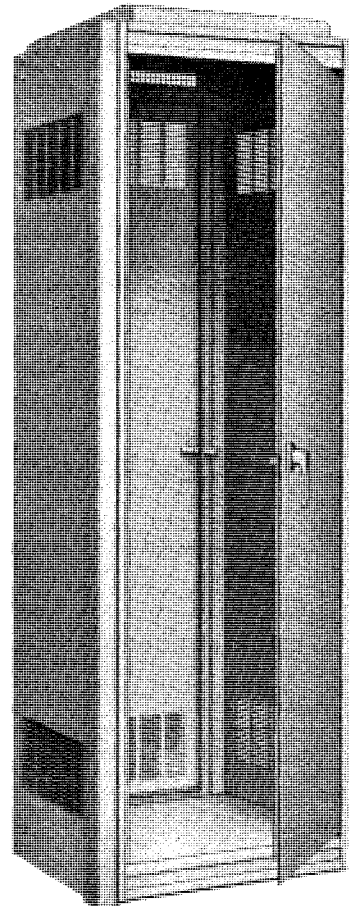
**HARDWARE:** Doors are the same as our universal racks. "Series ER-225A" racks are equipped with "automobile" type non-locking handles on rear doors. On "Series FD-225A" racks, similar handles with key locks are used on both front and rear doors. Hinges are the "slip-joint" type so that doors may be easily removed.

**FINISH:** Blue grey wrinkle finish is standard. Black wrinkle enamel or grey hammertone enamel is also available without extra charge if so specified on your order.

**ROLLER TRUCK:** Use either No. RT-412 or HD-412 for all racks listed on this page; roller trucks are listed on Par-Metal Page 17.

**PANELS:** Panels 19" wide to fit these racks are listed on Par-Metal Pages 18 and 19.

**SHELVES:** For Series ER-223-A Racks use shelf No. ER-2212 listed on Par-Metal Page 21. To install shelves in Series FD-225A, it is recommended that Vertical Side Supports, Brackets and Shelves listed on Par-Metal Page 7 be used.



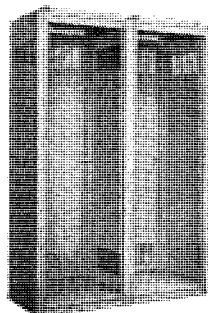
"FD" SERIES  
WITH FRONT AND  
REAR DOOR

Catalog No.	Doors	Overall Dimensions	Panel Space	Clear Inside Width (Front)	Clear Inside Width (Rear)	Clear Inside Depth	Shipping Wt. Lbs.	Net Price
ER-223-A	Rear only	43 $\frac{1}{4}$ x22x18"	36 $\frac{3}{4}$ x19"	*17 $\frac{5}{8}$ "	19"	16 $\frac{3}{4}$ "	90	\$ 52.2
ER-225-A	Rear only	67 $\frac{3}{4}$ x22x18"	61 $\frac{1}{4}$ x19"	*17 $\frac{5}{8}$ "	19"	16 $\frac{3}{4}$ "	120	64.3
ER-227-A	Rear only	83 $\frac{1}{2}$ x22x18"	77 x19"	*17 $\frac{5}{8}$ "	19"	16 $\frac{3}{4}$ "	140	77.7
FD-223-A	Front & Rear	43 $\frac{1}{4}$ x22x18"	36 $\frac{3}{4}$ x19"	19 $\frac{1}{8}$ "	19"	*16"	110	66.9
FD-225-A	Front & Rear	67 $\frac{3}{4}$ x22x18"	61 $\frac{1}{4}$ x19"	19 $\frac{1}{8}$ "	19"	*16"	150	83.1
FD-227-A	Front & Rear	83 $\frac{1}{2}$ x22x18"	77 x19"	19 $\frac{1}{8}$ "	19"	*16"	175	103.9

\*clearance between front and rear doors.

\*\*between panel mounting angles.

## MULTI-RACK CABINET ASSEMBLIES



MULTI-RACK ASSEMBLY

**MULTI-RACK ASSEMBLIES:** Both Series "ER" and "FD" racks may be set up in rows as shown. The use of "venetian type" louvers provides a flat exterior surface on the sides of the racks; separate side plates with welded screw studs inserted at top and bottom of adjacent sides simplifies the assembly — no screw drivers or wrenches are needed. Vertical joining trims overlap the joint between racks on the sketch.

**SERIES "FD" RACKS:** This series with front and rear doors has adjustable panel mounting angles, which may be located at any distance from front or rear of rack. VERTICAL SIDE SUPPORTS listed on Par-Metal Page 7 will fit into these racks.

**PAR-METAL PRODUCTS CORP.**

• Long Island City 3, N. Y.

# PAR-METAL TYPE "A" RELAY RACKS

## ROUNDED CORNER TYPE—FOR 19" WIDE PANELS

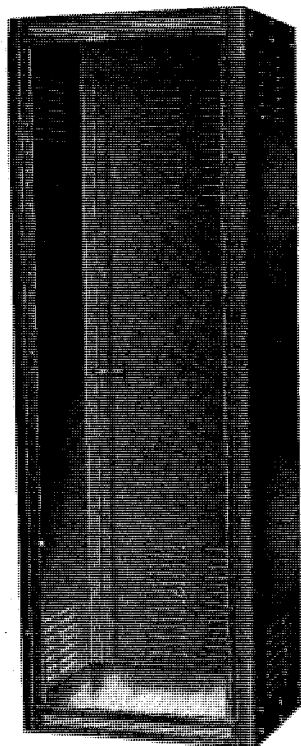
THESE RACKS ARE SIMILAR in construction to our Series ER-225A Racks. They provide a combination of standard functional design and superior construction at a modest price. The vertical front corners are nicely rounded, and the top and bottom are trimmed with chrome finished mouldings. The panels fit into a recess, so that the edges are not exposed.

**CABINET:** Entire cabinet is constructed of 1/16" thick cold-rolled steel. These racks are shipped "knocked-down" with necessary bolts for easy assembly. Screws for mounting panels are supplied.

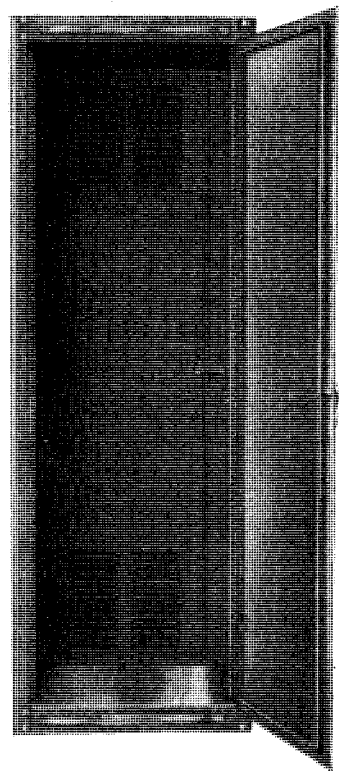
**PANEL MOUNTING:** Angle irons are 7/64" thick steel, holes are accurately drilled and tapped 10-32 thread for all types of panels.

**HARDWARE:** Doors are of same design as our universal racks. "SERIES ER-215A" racks are equipped with "automobile" type non-locking handles on rear doors. On "SERIES FD-215A" racks, similar handles with key locks are used on both front and rear doors. Hinges are the "slip-joint" type so that doors may be easily removed.

**FRONT DOOR RACKS:** On Series FD-215A racks, the front panel mounting angles are recessed 2" deep to allow clearance for dials, etc. The clear inside depth behind the panel is 15".



"ER" SERIES  
WITH REAR DOOR ONLY



"FD" SERIES  
WITH FRONT AND REAR DOOR

### S P E C I F I C A T I O N S

Catalog No.	Doors	Overall Dimensions	Panel Space	Clear Inside Depth	Clear Inside Width (Rear)	Clear Inside Width (Front)	Shipping Wt. Lbs.	Net Price
ER-213-A	Rear only	42 x22x18"	36 $\frac{3}{4}$ x19"	16 $\frac{3}{4}$ "	19"	**17 $\frac{5}{8}$ "	85	\$37.20
ER-215-A	Rear only	66 $\frac{1}{2}$ x22x18"	61 $\frac{1}{4}$ x19"	16 $\frac{3}{4}$ "	19"	**17 $\frac{5}{8}$ "	110	54.90
ER-217-A	Rear only	82 $\frac{1}{4}$ x22x18"	77 x19"	16 $\frac{3}{4}$ "	19"	**17 $\frac{5}{8}$ "	130	66.30
FD-215-A	Front & Rear	66 $\frac{1}{2}$ x22x18"	61 $\frac{1}{4}$ x19"	*15"	19"	19 $\frac{1}{8}$ "	130	73.92
FD-217-A	Front & Rear	82 $\frac{1}{4}$ x22x18"	77 x19"	*15"	19"	19 $\frac{1}{8}$ "	155	89.10

\*clearance behind panel.

\*\*between panel mounting angles.

**FINISH:** Blue grey wrinkle finish is standard. Black wrinkle enamel or grey hammertone enamel is also available without extra charge if so specified on your order.

**PANELS:** Panels 19" wide to fit these racks are listed on Par-Metal Pages 18 and 19.

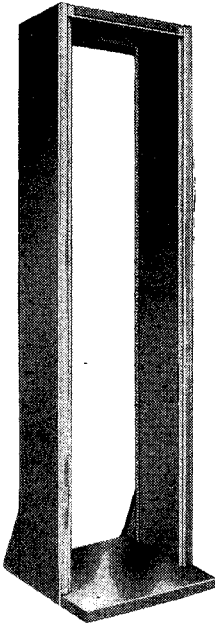
**ROLLER TRUCK:** No. RT-412 will fit all racks listed on this page. Roller trucks are listed on Par-Metal Page 17.

**SHELVES:** For series ER-215A racks, use shelf No. ER-2212. For series FD-215A racks, use shelf No. R-2225. Both shelves are listed on Par-Metal Page 21.

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# PAR-METAL CHANNEL RELAY RACKS

## DELUXE TYPE RACKS for 19" and 24" wide panels



No. RR-197

These DeLuxe Channel Type Relay Racks are made from 7/64" thick steel, and extend the utility and applicability of the standard channel relay rack.

The panel space is 77" x 19", to match a standard height used on enclosed cabinet racks. The upright channels have been modified to an 8" overall depth, which when combined with a formed recess for the panels, greatly increases the rigidity of the rack. The edges of the panels are not exposed.

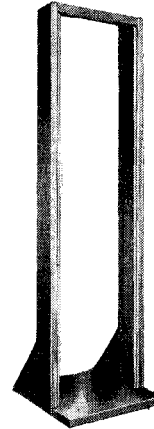
The rack is drilled and tapped for 10/32 screws at both front and back, permitting the optional use of either panels, or dish type chassis mounted to the racks at both front and back. The full panel space of 77" x 19" is available on the back, the same as the front.

Clear distance between panel mounting flanges (from front to back) is 6-3/4". It is practicable to use this 6" depth as an enclosure for dish type chassis listed on Par-Metal Page 21.

When such chassis are mounted at the back, the addition of standard or hinged type panels (see Par-Metal 19) will make a rack enclosure with a clear depth of 6-3/4".

The top cross-brace is provided with a grille for ventilation where needed. Two holes are located on each side for bolting racks together in rows; there are no projecting screw heads on the sides. Top brace and vertical channel members are securely welded together. Base and rear braces are shipped knocked down, with all necessary bolts for assembly. Panel mounting screws are also supplied.

**FINISH:** Standard finish is black ripple enamel. Blue grey wrinkle or grey hammertone is also available without extra charge if so specified on your order.



No. RX-195

## STANDARD TYPE RACKS for 19" wide panels

Racks are sturdily constructed from 7/64" pressed steel, and are braced at the back as illustrated. They have been improved by a formed recess for the panels; edges of panels are no longer exposed, and rigidity of the rack has been greatly increased. Two vertical members and top crossbrace are securely WELDED TOGETHER.

Panel mounting holes are accurately drilled for standard rack panels, tapped for 10-32 machine screws at the front only. An ample supply of panel mounting screws are supplied.

Upright channels are 3" deep with flange: 1 1/8" wide. Clearance between uprights is 17 3/4" Base is 20 7/8" deep and extends both front and rear, and is 21" wide for either unit.

**FINISH:** Standard finish is black wrinkle. For blue grey wrinkle or grey hammertone enamel add 10%.

CAT. NO.	OVERALL HEIGHT	PANEL HEIGHT	SHP. LBS.	NET PRICE
RX-195	74 7/16"	71 3/4"	55	\$25.5
RX-193	39 7/16"	36 3/4"	45	21.0

Catalog Number	Overall Dimensions			Panel Space	Clearance between Uprights	Clear Depth in Channel	Shipping Weight	Net Price
	Height	Width	Depth					
RR-194	64-5/8"	21-1/8"	26"	61-1/4"x19"	17-7/8"	6-3/4" inside	88 lbs.	\$38.50
RR-196	73-3/8"	21-1/8"	26"	70" x19"	17-7/8"	6-3/4" inside	95 lbs.	41.00
RR-197	80-3/8"	21-1/8"	26"	77" x19"	17-7/8"	6-3/4" inside	102 lbs.	43.50
RR-1922	64-5/8"	26-1/8"	26"	61-1/4"x24"	22-7/8"	6-3/4" inside	100 lbs.	49.00
RR-1923	73-7/8"	26-1/8"	26"	70" x24"	22-7/8"	6-3/4" inside	105 lbs.	52.50
RR-1924	80-3/8"	26-1/8"	26"	77" x24"	22-7/8"	6-3/4" inside	112 lbs.	55.00

## DESK PANEL CABINET RACKS For Standard 19" Rack Panels

In keeping with our other De Luxe racks, the vertical front corners are rounded and the top and bottom are trimmed with chrome finished mouldings. Panels fit into a recess, so that the edges are not exposed. Panel mounting holes are accurately drilled on universal centers, for standard rack panels. Holes are tapped for 10/32 machine screws.

They may be used with any chassis up to 13" x 17" in size. All cabinets are rigidly constructed of 1/16" thick cold rolled sheet steel, with all joints electrically welded. Louvres provide ample ventilation through sides and back. Piano type hinges are used on the top doors, which are provided with chrome plated handles. Panel mounting screws and washers are furnished.

**FINISH:** BLACK RIPPLE ENAMEL is standard. Blue grey wrinkle or grey hammertone is also available without extra charge if so specified on your order.

**PANELS:** Rack panels to fit these racks are listed on Par-Metal Pages 18 and 19.

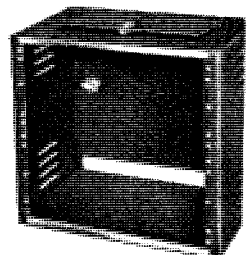
(With door in top only) (not illustrated)

Catalog No.	Cabinet Size	Available Panel Space	Shp. Lbs.	Net Price
DL-128	10 1/2" x 21 1/2" x 15" deep	8 3/4" x 19"	28	\$16.20
DL-1210	12 1/4" x 21 1/2" x 15" deep	10 1/2" x 19"	29	17.70
DL-1225	14" x 21 1/2" x 15" deep	12 1/4" x 19"	30	19.20
DL-1413	15 3/4" x 21 1/2" x 15" deep	14" x 19"	32	21.00

**RACK SHELF:** Rack shelf No. R-2128 listed on Par Met Page 21 is designed to fit these racks.

(With door in top and door on rear panel)

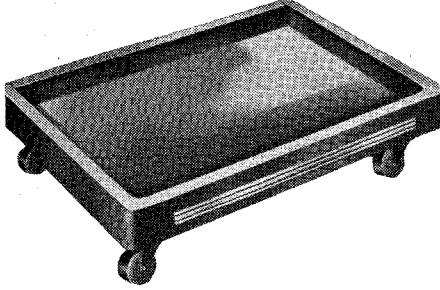
Catalog No.	Cabinet Size	Available Panel Space	Shp. Lbs.	Net Price
DL-1713	19 1/4" x 21 1/2" x 15" deep	17 1/2" x 19"	38	\$22.
DL-2613	28" x 21 1/2" x 15" deep	26 3/4" x 19"	48	26.
DL-3513	36 3/4" x 21 1/2" x 15" deep	35" x 19"	58	29.



No. DL-1713

# PAR-METAL — ROLLER TRUCKS

## STANDARD ROLLER TRUCKS FOR RACKS

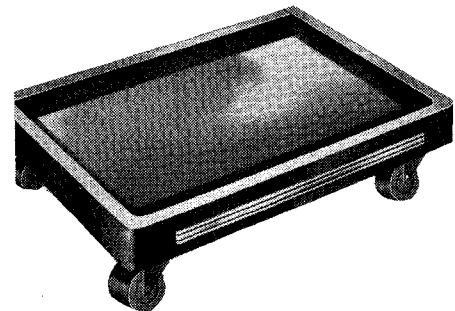


These trucks are especially designed for use on our Cabinet racks, and have rounded corners at the front with a chrome finished moulding. Overall size is about 2" wider than the racks for better distribution of weight.

Casters are ball-bearing swivel type with 2" rubber composition wheels. **FINISH: BLUE GREY RIPPLE** is standard. Also available in Grey Hammertone at an additional cost of 10%. Shipping weight on all sizes is 22 lbs.

Catalog No.	Will Fit Rack No.	Par-Metal Rack Page No.	Net Price
RT-410	DL-1713, 2613, 3513	17	\$10.68
RT-412	ER-213, ER, FD-215, 217-A	15	12.87
	ER-223, ER-225, ER-227-A	14	
	FD-223, 225, 227-A	15	
	PX, FX-3718, 4818, 6718	6	
	PX, FX-7718, 8418	6	
RT-420	PX, FX-4824, 6724, 7724, 8424	6	17.64

## HEAVY DUTY ROLLER TRUCKS



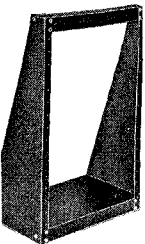
Heavy duty roller trucks are similar in size and design to the standard units, except that they have reinforced bottoms, and are equipped with heavy-duty swivel type casters, and 3" diam. wheels.

Recommended for use on all 24" deep racks, and on other racks where necessary. 3" casters have a load capacity of 225 lbs. per wheel. **FINISH: BLUE GREY RIPPLE** is standard; Black Ripple is optional without extra charge. Also available in Grey Hammertone or primer coat only at an additional cost of 10%. Shipping weight is 35 lbs.

Catalog No.	Will Fit Rack No.	Par-Metal Rack Page No.	Net Price
HD-412	ER-223, ER-225, ER-227-A	15	\$22.00
	FD-223, FD-225, FD-227-A	15	
	PX, FX-3718, 4818, 6718	6	
	PX, FX-7718, 8418	6	
HD-420	PX, FX-4824, 6724	6	25.40
	PX, FX-7724, 8424	6	
*HD-425	PL, FL, PR, FR-4818, 6718	4, 5	25.60
	PL, FL, PR, FR-7718, 8418	4, 5	
*HD-426	PL, FL, PR, FR-4824, 6724,	4, 5	28.30
	PL, FL, PR, FR-7724, 8424	4, 5	
HD-427	PX, FX-4827, 6727,	6	28.60
	PX, FX-7727, 8427	6	
*HD-432	PL, FL, PR, FR-4827, 6727	4, 5	31.10
	PL, FL, PR, FR-7727, 8427	4, 5	
HD-434	PX, FX-6733, 7733, 8433	6	35.50
*HD-438	PL, FL, PR, FR-6733, 7733	4, 5	38.60
	PL, FL, PR, FR-8433	4, 5	

\*For racks with detachable side panels attached to racks.

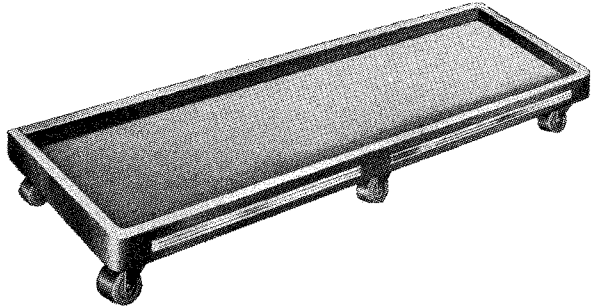
## TABLE TYPE RACKS



THESE RACKS are intended for table mounting and are useful where a regular floor type heavy duty rack is not required. The base is constructed of one piece, similar to a chassis. Mounting holes are accurately drilled on universal centers, tapped for 10/32 screws. They are finished in black ripple enamel and shipped "knocked down" with all necessary screws.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
TR-2520	24x21x12"	21x19"	17	\$8.70
TR-3220	31x21x12"	28x19"	20	9.90

## HEAVY DUTY DOUBLE WIDTH ROLLER TRUCKS



It is often necessary to mount groups of 2 of our enclosed racks on roller trucks. The truck illustrated above is used for that purpose. They are similar to our heavy duty trucks except that they have been reinforced with heavier steel because of their greater length.

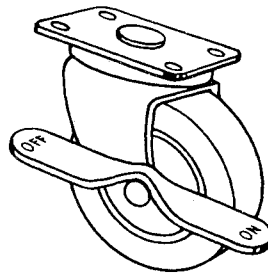
They are supplied with 6 heavy-duty swivel type casters with 3" diameter wheels. These casters have a load capacity of 225 lbs. per wheel.

**FINISH: BLUE GREY RIPPLE** is standard; Black Ripple is optional without extra charge. Also available in Grey Hammertone or primer coat only at an additional cost of 10%.

Catalog No.	Will Fit Rack No.	Par-Metal Rack Page No.	Net Price
HD-412-2	ER-223, ER-225, ER-227-A	15	\$44.00
	FD-223, FD-225, FD-227-A	15	
	PX, FX-3718, 4818, 6718	6	
	PX, FX-7718, 8418	6	
HD-420-2	PX, FX-4824, 6724	6	50.80
	PX, FX-7724, 8424	6	
*HD-425-2	PL, FL, PR, FR-4818, 6718	4, 5	51.20
	PL, FL, PR, FR-7718, 8418	4, 5	
*HD-426-2	PL, FL, PR, FR-4824, 6724	4, 5	56.60
	PL, FL, PR, FR-7724, 8424	4, 5	
HD-427-2	PX, FX-4827, 6727	6	57.20
	PX, FX-7727, 8427	6	
*HD-432-2	PL, FL, PR, FR-4827, 6727	4, 5	62.20
	PL, FL, PR, FR-7727, 8427	4, 5	
HD-434-2	PX, FX-6733, 7733, 8433	6	71.00
*HD-438-2	PL, FL, PR, FR-6733, 7733	4, 5	77.20
	PL, FL, PR, FR-8433	4, 5	

\*For racks with detachable side panels attached to racks.

## BRAKE TYPE CASTERS



During the past few years, the use of brakes on roller trucks has become desirable both as a utility and safety measure. This is particularly true where racks have been loaded to capacity with heavy equipment.

We now have available foot brake type casters as illustrated for use on all heavy duty roller trucks. Brake type casters are supplied to replace the two front casters of single roller trucks and to replace the three front casters of double roller trucks. Additional cost per roller truck is as follows:

For single units (HD-412, etc.).....	\$ 8.50
For double units (HD-412-2, etc.).....	12.75

WE CAN SUPPLY ON A "SEMI-CUSTOM" BASIS pressed steel roller trucks for our cabinet racks up to 36" wide and 88" long. They can be equipped with 4" dia. wheel casters and necessary foot brakes. The extra width is used in front of the rack assembly to provide stability where extension shelves and other accessories are mounted on the front of the racks. Drawings and prices available upon request.

# PAR-METAL RACK PANELS 19"-24"-30" WIDE

All panels on this page are uniformly slotted to fit modular cabinet racks and all type "A" racks. They will also fit any other rack equipment having multiple  $1\frac{1}{4}$ "- $1\frac{1}{2}$ " spacings or what is commonly termed as W.E. spacing.

In addition to finishes listed below, Primer Coat is optional at the same prices as Grey Hammer-tone. Other finishes listed on Par-Metal Page 4 are also available.

## STANDARD STEEL BLANK PANELS $\frac{1}{8}$ " STEEL



Standard flat panels made from  $\frac{1}{8}$ " thick steel, either 19", 24", or 30" wide.

### 19" WIDE PANELS — $\frac{1}{8}$ " STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammer-tone Cat. No.	Net Price
6600	G-6600	\$ .81	1 $\frac{3}{4}$ "	H-6600	\$ .87
6601	G-6601	1.02	3 $\frac{1}{2}$ "	H-6601	1.11
6602	G-6602	1.29	5 $\frac{1}{4}$ "	H-6602	1.41
6603	G-6603	1.56	7"	H-6603	1.71
6604	G-6604	1.86	8 $\frac{3}{4}$ "	H-6604	2.04
6605	G-6605	2.10	10 $\frac{1}{2}$ "	H-6605	2.31
6606	G-6606	2.49	12 $\frac{1}{4}$ "	H-6606	2.73
6607	G-6607	2.89	14"	H-6607	3.18
6608	G-6608	3.24	15 $\frac{3}{4}$ "	H-6608	3.54
6609	G-6609	3.60	17 $\frac{1}{2}$ "	H-6609	3.96
6610	G-6610	3.98	19 $\frac{1}{4}$ "	H-6610	4.38
6611	G-6611	4.29	21"	H-6611	4.71

### 24" WIDE PANELS — $\frac{1}{8}$ " STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammer-tone Cat. No.	Net Price
6201	G-6201	\$1.38	3 $\frac{1}{2}$ "	H-6201	\$1.52
6202	G-6202	1.77	5 $\frac{1}{4}$ "	H-6202	1.95
6203	G-6203	2.16	7"	H-6203	2.38
6204	G-6204	2.76	8 $\frac{3}{4}$ "	H-6204	3.04
6205	G-6205	3.15	10 $\frac{1}{2}$ "	H-6205	3.47
6206	G-6206	3.57	12 $\frac{1}{4}$ "	H-6206	3.93
6207	G-6207	4.35	14"	H-6207	4.79
6208	G-6208	4.95	15 $\frac{3}{4}$ "	H-6208	5.45
6209	G-6209	5.40	17 $\frac{1}{2}$ "	H-6209	5.94
6210	G-6210	6.09	19 $\frac{1}{4}$ "	H-6210	6.70
6211	G-6211	6.60	21"	H-6211	7.26

### 30" WIDE PANELS — $\frac{1}{8}$ " STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammer-tone Cat. No.	Net Price
6301	G-6301	\$2.10	3 $\frac{1}{2}$ "	H-6301	\$2.31
6302	G-6302	2.55	5 $\frac{1}{4}$ "	H-6302	2.81
6303	G-6303	3.00	7"	H-6303	3.30
6304	G-6304	3.60	8 $\frac{3}{4}$ "	H-6304	3.96
6305	G-6305	3.99	10 $\frac{1}{2}$ "	H-6305	4.39
6306	G-6306	4.71	12 $\frac{1}{4}$ "	H-6306	5.18
6307	G-6307	5.37	14"	H-6307	5.91
6308	G-6308	6.00	15 $\frac{3}{4}$ "	H-6308	6.60
6309	G-6309	6.72	17 $\frac{1}{2}$ "	H-6309	7.39
6310	G-6310	7.44	19 $\frac{1}{4}$ "	H-6310	8.18
6311	G-6311	8.16	21"	H-6311	8.98

## STANDARD ALUMINUM BLANK PANELS

These aluminum panels are made from No. 3003-H14 aluminum alloy. Panels 24" or 30" wide, made from  $\frac{3}{16}$ " aluminum, are available on order.

### 19" WIDE PANELS — $\frac{1}{8}$ " ALUMINUM

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammer-tone Cat. No.	Net Price
6675	G-6675	\$ .96	1 $\frac{3}{4}$ "	H-6675	\$1.05
6676	G-6676	1.35	3 $\frac{1}{2}$ "	H-6676	1.47
6677	G-6677	1.86	5 $\frac{1}{4}$ "	H-6677	2.04
6678	G-6678	2.37	7"	H-6678	2.61
6679	G-6679	2.88	8 $\frac{3}{4}$ "	H-6679	3.15
6680	G-6680	3.42	10 $\frac{1}{2}$ "	H-6680	3.75
6681	G-6681	3.89	12 $\frac{1}{4}$ "	H-6681	4.26
6682	G-6682	4.56	14"	H-6682	5.01
6683	G-6683	5.13	15 $\frac{3}{4}$ "	H-6683	5.64
6684	G-6684	5.60	17 $\frac{1}{2}$ "	H-6684	6.15
6685	G-6685	6.27	19 $\frac{1}{4}$ "	H-6685	6.90
6686	G-6686	6.87	21"	H-6686	7.56

### 24" WIDE PANELS — $\frac{1}{8}$ " ALUMINUM

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammer-tone Cat. No.	Net Price
6275	G-6275	\$1.80	1 $\frac{3}{4}$ "	H-6275	\$1.98
6276	G-6276	2.28	3 $\frac{1}{2}$ "	H-6276	2.51
6277	G-6277	3.00	5 $\frac{1}{4}$ "	H-6277	3.30
6278	G-6278	3.81	7"	H-6278	4.19
6279	G-6279	4.74	8 $\frac{3}{4}$ "	H-6279	5.21
6280	G-6280	5.73	10 $\frac{1}{2}$ "	H-6280	6.30
6281	G-6281	6.66	12 $\frac{1}{4}$ "	H-6281	7.33
6282	G-6282	7.62	14"	H-6282	8.38
6283	G-6283	8.58	15 $\frac{3}{4}$ "	H-6283	9.44
6284	G-6284	9.54	17 $\frac{1}{2}$ "	H-6284	10.49
6285	G-6285	10.47	19 $\frac{1}{4}$ "	H-6285	11.52
6286	G-6286	11.40	21"	H-6286	12.54

### 30" WIDE PANELS — $\frac{1}{8}$ " ALUMINUM

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammer-tone Cat. No.	Net Price
6376	G-6376	\$2.73	3 $\frac{1}{2}$ "	H-6376	\$3.00
6377	G-6377	3.96	5 $\frac{1}{4}$ "	H-6377	4.36
6378	G-6378	5.19	7"	H-6378	5.71
6379	G-6379	6.42	8 $\frac{3}{4}$ "	H-6379	7.06
6380	G-6380	7.65	10 $\frac{1}{2}$ "	H-6380	8.42
6381	G-6381	8.88	12 $\frac{1}{4}$ "	H-6381	9.77
6382	G-6382	10.11	14"	H-6382	11.12
6383	G-6383	11.34	15 $\frac{3}{4}$ "	H-6383	12.47
6384	G-6384	12.57	17 $\frac{1}{2}$ "	H-6384	13.83
6385	G-6385	13.80	19 $\frac{1}{4}$ "	H-6385	15.18
6386	G-6386	15.00	21"	H-6386	16.50

### 19" WIDE PANELS — $\frac{3}{16}$ " ALUMINUM

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammer-tone Cat. No.	Net Price
6675-3	G-6675-3	\$1.65	1 $\frac{3}{4}$ "	H-6675-3	\$1.74
6676-3	G-6676-3	2.28	3 $\frac{1}{2}$ "	H-6676-3	2.40
6677-3	G-6677-3	3.36	5 $\frac{1}{4}$ "	H-6677-3	3.54
6678-3	G-6678-3	4.14	7"	H-6678-3	4.38
6679-3	G-6679-3	5.16	8 $\frac{3}{4}$ "	H-6679-3	5.43
6680-3	G-6680-3	6.18	10 $\frac{1}{2}$ "	H-6680-3	6.51
6681-3	G-6681-3	7.20	12 $\frac{1}{4}$ "	H-6681-3	7.59
6682-3	G-6682-3	8.22	14"	H-6682-3	8.64
6683-3	G-6683-3	9.30	15 $\frac{3}{4}$ "	H-6683-3	9.78
6684-3	G-6684-3	10.35	17 $\frac{1}{2}$ "	H-6684-3	10.89
6685-3	G-6685-3	11.40	19 $\frac{1}{4}$ "	H-6685-3	12.00
6686-3	G-6686-3	12.60	21"	H-6686-3	13.26

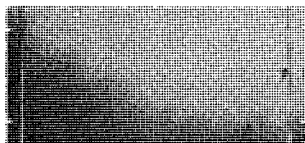


# PAR-METAL RACK PANELS 19" & 24" WIDE

In addition to finishes listed below, Primer Coat is optional at the same prices as Grey Hammertone. Other finishes listed on Par-Metal Page 4 are also available.

## SIDE HINGED BLANK PANELS

### 1/8" STEEL 19" WIDE

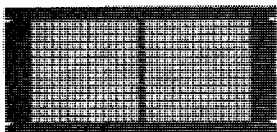


These door panels are made from 1/8" steel, hinged at the sides with a cowl type fastener to hold the door closed.

May be mounted on racks with hinges on right or left side. Clear opening (width) is 15 3/4".

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone	
				Cat. No.	Net Price
HP-350	GP-350	\$3.15	3 1/2"	HA-350	\$3.37
HP-525	GP-525	3.27	5 1/4"	HA-525	3.60
HP-700	GP-700	3.57	7"	HA-700	3.93
HP-875	GP-875	3.84	8 3/4"	HA-875	4.22
HP-1050	GP-1050	4.14	10 1/2"	HA-1050	4.56
HP-1225	GP-1225	4.41	12 3/4"	HA-1225	4.85
HP-1400	GP-1400	4.77	14"	HA-1400	5.25
HP-1750	GP-1750	6.90	17 1/2"	HA-1750	7.59
HP-2100	GP-2100	7.50	21"	HA-2100	8.25

## GRILLE PANELS 19" WIDE — 1/8" STEEL



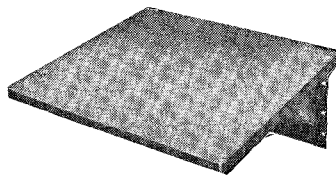
This modern type ventilating grille panel is stamped into the panel itself; it is not a pieced assembly.

Black Wrinkle Cat. No.	Grey Wrinkle Cat. No.	Net Price	Panel Size	Grille Size	Grey Hammertone	
					Cat. No.	Net Price
P-661	G-661	\$2.94	5 1/4"	3 3/8 x 14 3/8"	H-661	\$3.23
P-662	G-662	3.24	7"	4 7/8 x 14 3/8"	H-662	3.56
P-663	G-663	3.87	8 3/4"	6 7/8 x 14 3/8"	H-663	4.26
P-664	G-664	3.54	8 3/4"	*3 7/8 x 14 3/8"	H-664	3.89
P-665	G-665	4.29	10 1/2"	8 3/8 x 14 3/8"	H-665	4.72
P-666	G-666	4.02	10 1/2"	*5 7/8 x 14 3/8"	H-666	4.42
P-667	G-667	4.35	12 1/4"	*7 3/8 x 14 3/8"	H-667	4.79

\* Allows 3 1/2" space at bottom for chassis mounting.

## STANDARD DESK PANELS

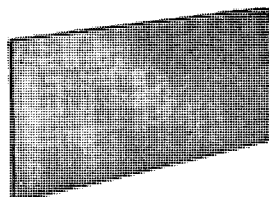
These standard tables are rigidly made of 1/8" thick furniture steel. The rounded front corners are of seamless construction and the flanges of the shelf are folded in to provide smooth edges underneath.



They are securely mounted to regular 1/8" steel panels, size 10 1/2" x 19". They may be obtained in two sizes and finishes as listed below. The tables are 22" wide to give full working space across the front of the racks when mounted in place. Shipping weight is 25 lbs.

Cat. No.	Width	Depth	Finish	Net Price
BT-2216	22"	16"	Black enamel	\$15.45
GT-2216	22"	16"	Blue Grey enamel	15.45
HT-2216	22"	16"	Grey Hammertone	17.00
BT-2220	22"	20"	Black enamel	16.95
GT-2220	22"	20"	Blue Grey enamel	16.95
HT-2220	22"	20"	Grey Hammertone	18.65

## FORMED BLANK PANELS



These panels are made from 1/8" thick steel, with formed edges to make an overall thickness of 3/8". They are made 19" and 24" wide, with mounting holes on standard centers to fit relay racks.

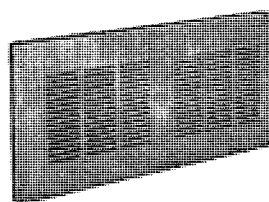
### 19" WIDE FORMED PANELS — 1/16" STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone	
Cat. No.	Cat. No.			Cat. No.	Net Price
P-600	G-600	\$1.29	1 3/4"	H-600	\$1.42
P-601	G-601	1.38	3 1/2"	H-601	1.52
P-602	G-602	1.56	5 1/4"	H-602	1.72
P-603	G-603	1.83	7"	H-603	2.01
P-604	G-604	2.19	8 3/4"	H-604	2.39
P-605	G-605	2.46	10 1/2"	H-605	2.71
P-606	G-606	2.88	12 3/4"	H-606	3.17
P-607	G-607	3.24	14"	H-607	3.56
P-608	G-608	3.72	15 3/4"	H-608	4.09
P-609	G-609	4.11	17 1/2"	H-609	4.52
P-610	G-610	4.53	19 1/4"	H-610	4.98
P-611	G-611	4.95	21"	H-611	5.45

### 24" WIDE FORMED PANELS — 1/16" STEEL

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone	
Cat. No.	Cat. No.			Cat. No.	Net Price
P-641	G-641	\$1.95	3 1/2"	H-641	\$2.15
P-642	G-642	2.37	5 1/4"	H-642	2.61
P-643	G-643	2.85	7"	H-643	3.14
P-644	G-644	3.42	8 3/4"	H-644	3.76
P-645	G-645	3.78	10 1/2"	H-645	4.16
P-646	G-646	4.14	12 1/4"	H-646	4.55
P-647	G-647	4.62	14"	H-647	5.08
P-648	G-648	5.22	15 3/4"	H-648	5.74
P-649	G-649	5.82	17 1/2"	H-649	6.40
P-650	G-650	6.45	19 1/4"	H-650	7.10
P-651	G-651	7.02	21"	H-651	7.72

### 19" WIDE FORMED PANELS — 1/16" STEEL VENTILATED TYPE



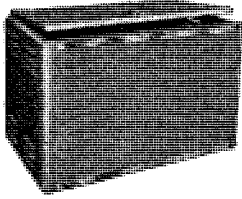
These are standard formed panels with louvre type ventilation as shown above.

Same panels can be supplied in 24" width if required.

Black Wrinkle Cat. No.	Blue Grey Wrinkle Cat. No.	Net Price	Panel Height	Grey Hammertone	
Cat. No.	Cat. No.			Cat. No.	Net Price
PV-603	GV-603	\$3.45	7"	HV-603	\$3.80
PV-604	GV-604	3.90	8 3/4"	HV-604	4.29
PV-605	GV-605	4.29	10 1/2"	HV-605	4.72
PV-606	GV-606	4.86	12 3/4"	HV-606	5.35
PV-608	GV-608	5.70	15 3/4"	HV-608	6.27
PV-611	GV-611	7.56	21"	HV-611	8.32

# PAR-METAL — DESK CABINETS — AMPLIFIER CHASSIS

## DELUXE TYPE CABINETS



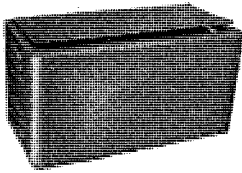
These cabinets make attractive housings for commercial and amateur use. The formed type door, with modern handle, is hinged at the back for full access to the interior.

Chrome finished mouldings are mounted on the front at top and bottom. Cabinet has ventilating louvres on each

side, and full width opening at back for leads, etc. Standard finish is blue grey ripple enamel. Prices do not include chassis which are listed on PAR METAL Page 21.

Catalog No.	Overall Dimensions	Panel Size	For Chassis	Shp. Wt. Lbs.	Net Price
CA-300	9x12 $\frac{1}{8}$ x 8"	8 $\frac{1}{2}$ x10"	7x 9x2"	6	\$ 7.95
CA-301	9x16 $\frac{1}{8}$ x 8"	8 $\frac{1}{2}$ x14"	7x13x2"	7	9.00
CA-302	10x17 $\frac{1}{8}$ x11"	9 $\frac{1}{2}$ x15"	10x14x3"	8	12.15
CA-303	10x20 $\frac{1}{8}$ x 9"	9 $\frac{1}{2}$ x18"	8x17x3"	11	12.15
CA-304	13x20 $\frac{1}{8}$ x12"	12 $\frac{1}{2}$ x18"	10x17x3"	15	13.65

## ROUNDED CORNER TYPE CABINETS

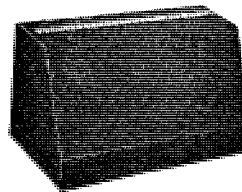


Standard type cabinets are similar in design to those listed above. They have flat type doors, hinged at back to permit full access to the interior. The vertical front corners are rounded; ventilating louvres are stamped in both sides, and full width opening is provided at the back for leads. Standard finish is blue grey ripple enamel. Prices do not include chassis, which are listed on PAR METAL Page 21.

Standard type cabinets are similar in design to those listed above. They have flat type doors, hinged at back to permit full access to the interior. The vertical front corners are rounded; ventilating louvres are stamped in both sides, and full width opening is provided at the back for leads. Standard finish is blue grey ripple enamel. Prices do not include chassis, which are listed on PAR METAL Page 21.

Catalog No.	Overall Dimensions	Panel Size	For Chassis	Shp. Wt. Lbs.	Net Price
CA-200	8 $\frac{1}{2}$ x10 $\frac{1}{8}$ x 8"	8 $\frac{1}{2}$ x 8"	7x 7x2"	6	\$ 5.85
CA-201	8 $\frac{1}{2}$ x12 $\frac{1}{8}$ x 8"	8 $\frac{1}{2}$ x10"	7x 9x2"	7	6.30
CA-202	8 $\frac{1}{2}$ x16 $\frac{1}{8}$ x 8"	8 $\frac{1}{2}$ x14"	7x13x2"	8	7.65
CA-203	9 $\frac{1}{2}$ x17 $\frac{1}{8}$ x11"	9 $\frac{1}{2}$ x15"	10x14x3"	11	10.05
CA-204	12 $\frac{1}{2}$ x20 $\frac{1}{8}$ x12"	12 $\frac{1}{2}$ x18"	10x17x3"	15	11.85

## SLOPING FRONT CABINETS



May be readily adapted as instrument cases for use in studios, laboratories, etc.

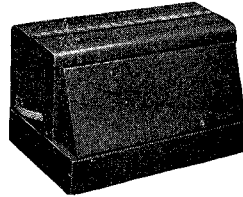
- Top corner is rounded and trimmed with a chrome moulding, and with the blue grey ripple finish makes a very attractive case.

- A chassis may be mounted to a front panel and removed as a unit.

- Rear of case is ventilated, with an opening for connections.
- Prices do not include chassis, which are listed on PAR METAL Page 21.

Catalog No.	Overall Dimensions	For Chassis	Shp. Wt. Lbs.	Net Price
SF-500	8x 8x 8"	7x 7x2"	6	\$ 5.70
SF-501	8x10x 8"	7x 9x2"	7	6.30
SF-502	8x14x 8"	7x13x2"	8	6.75
SF-503	9x18x 8"	7x17x3"	10	8.40
SF-504	12x18x12"	10x17x3"	14	10.20

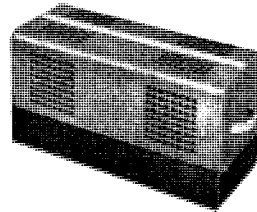
## AMPLIFIER FOUNDATION CHASSIS SLOPING FRONT TYPE



These amplifier foundations are useful where a sloping panel is desirable for mounting meters, etc. This panel is removeable and protrudes 3" from the face of the screen cover. All parts are finished in blue grey ripple enamel, trimmed with a chrome finished moulding and handles at each end. Chassis are supplied WITH bottom plates.

Cat. No.	Chassis Size	Screen Cover	Shp. Wt. Lbs.	Net Price
F-10120	10x12x3"	6 $\frac{1}{2}$ " high	11	\$ 9.15
F-10170	10x17x3"	6 $\frac{1}{2}$ " high	13	10.80
F-13170	13x17x3"	6 $\frac{1}{2}$ " high	15	11.85

## ROUNDED CORNER TYPE



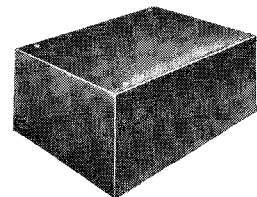
Rounded corners effectively streamline the screen covers of these chassis. Ventilation is obtained through rectangular screen openings. The moulding and handles, finished in chrome with red striping, gives the units a distinctive, modern design.

The screen cover is finished in blue grey ripple enamel to contrast with the black chassis. Chassis are drilled

for bottom plates, which are listed on PAR METAL Page 21

Cat. No.	Chassis Size	Depth of Cover	Shp. Wt. Lbs.	Net Price
DF-510	5x10x3"	6"	7	\$5.10
DF-615	6x14x3"	6"	8	5.67
DF-717	7x17x3"	6"	9	6.57
DF-1012	10x12x3"	6"	9	6.57
DF-1017	10x17x3"	6"	10	7.35
DF-1317	13x17x3"	6"	12	8.76

## STEEL UTILITY CASES



These cases have flat tops and bottom which are removable.

Made from 20 gauge sheet steel, with flanged edges and spot-welded corner. Finished in black ripple enamel.

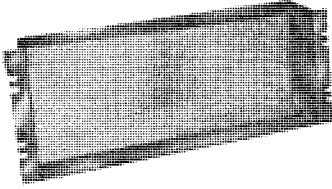
Cat. No.	Overall Size	Shp. Wt. Lbs.	Net Price	Cat. No.	Overall Size	Shp. Wt. Lbs.	Net Price
MC-442	4x 4x 2"	1	\$1.11	MC-666	6x 6x 6"	3	\$2.
MC-453	4x 5x 3"	2	1.32	MC-8101	8x10x10"	7	3.
MC-596	5x 9x 6"	4	2.52	MC-8107	8x10x 7"	6	3.
MC-654	6x 5x 4"	3	1.47	MC-1128	11x12x 8"	9	4.

# PAR-METAL BLANK CHASSIS BASES

## VERTICAL RACK MOUNTING CHASSIS

### TO FIT 19" STANDARD RACKS

These chassis are fabricated from  $\frac{1}{8}$ " thick aluminum with etched finish, or  $\frac{1}{8}$ " thick steel, zinc plated. Overall length including mounting flanges is  $18\frac{3}{4}$ ". They are designed to mount under 19" wide formed panels listed on PAR METAL Page 19. The  $4\frac{15}{16}$ " height is for use with  $5\frac{1}{4}$ " high panels,  $6\frac{11}{16}$ " for 7" high panels, etc.



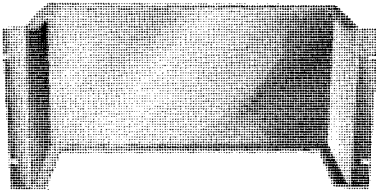
Additional slots are provided in chassis side flanges to clear panel attachment screws. Although chassis are  $18\frac{3}{4}$ " overall width, they will fit on any relay rack.

ALUMINUM Cat. No.	Net Price	Chassis Dimensions	STEEL Cat. No.	Net Price
AC-402	\$3.98	4-15/16"x17"x3"	SC-402	\$3.06
AC-403	4.54	6-11/16"x17"x3"	SC-403	3.45
AC-404	5.10	8-7/16"x17"x3"	SC-404	3.84
AC-405	5.64	10-3/16"x17"x3"	SC-405	4.23
AC-406	6.30	11-15/16"x17"x3"	SC-406	4.59

## VERTICAL RACK MOUNTING CHASSIS

### TO FIT 19" STANDARD RACKS

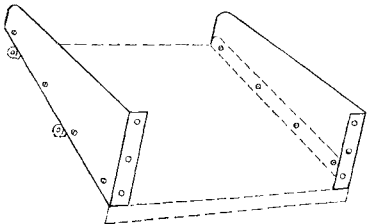
These chassis are suitable for installation in all cabinet relay racks. They may also be used on Deluxe channel racks listed on PAR-METAL Page 16. Material used is  $\frac{1}{16}$ " aluminum, with corners welded for added rigidity. Etched finish on inside and outside. All chassis are  $5\frac{1}{4}$ " deep; overall width is 19"; chassis width inside is  $16\frac{3}{8}$ ".



Catalog No.	Height	Shipping Wt. Lbs.	Net Price
AC-430	$1\frac{3}{4}$ "	2	\$2.70
AC-431	$3\frac{1}{2}$ "	3	3.09
AC-432	$5\frac{1}{4}$ "	3	3.51
AC-433	7"	4	3.90
AC-434	$8\frac{3}{4}$ "	5	4.29
AC-435	$10\frac{1}{2}$ "	5	4.80
AC-436	$12\frac{1}{4}$ "	6	5.46
AC-437	14"	7	5.97

## PANEL MOUNTING BRACKETS FOR BASIC SLIDE ASSEMBLIES

These brackets are useful for attaching rack panels to the sliding shelves of our series "BS" basic slide assemblies listed on Par-Metal page 11. Special short screws and nuts are supplied for mounting brackets which assures free movement of the shelf after assembly.



Brackets are made from  $\frac{1}{8}$ " steel, zinc plated. Brackets are  $6\frac{1}{2}$ " high at front, and  $3\frac{1}{2}$ " at back. Front flange is  $\frac{1}{8}$ " wide. Made in two lengths, for 14" and 20" deep shelf assemblies. Price listed below is for one pair of brackets, with mounting screws and nuts.

Cat. No.	Length	To Fit Assembly	Net Price
BR-14	$14\frac{1}{4}$ "	BS-1980	\$2.55 pair
BR-20	$20\frac{1}{4}$ "	BS-1940, 2419, 2424	3.45 pair

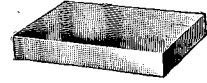
## SHELVES FOR CABINET RACKS

These shelves are designed to fit into the various type "A" enclosed racks listed in this catalog. They are constructed to be mounted inside the rack, with side bolt mounting. All shelves are 1" high, and finished in black ripple enamel. Shipping weight of all shelves is 10 lbs.



Catalog No.	Will Fit Rack No.	Par-Metal Rack Page No.	Shelf Size	Net Price
ER-2112	ER-213, ER-215, ER-217	13	$13\frac{1}{2}$ "x $21\frac{15}{16}$ "	\$3.60
R-2225	FD-215, FD-217	13	$12\frac{1}{2}$ "x $21\frac{15}{16}$ "	3.60
ER-2212	ER-223, ER-225, ER-227-A	12	$15\frac{1}{2}$ "x $21\frac{15}{16}$ "	3.60
R-2128	DL-1713, 2613, 3513	14	$12\frac{1}{2}$ "x $21\frac{3}{16}$ "	2.94

## CHASSIS



Stamped from one piece of cold rolled steel zinc-plated, and have four solid sides with welded corners. Bottom edges are flanged in on four sides to provide additional reinforcement, and they are drilled for bottom plates. The chassis are made from #20 gauge steel, except those marked (\*) which are stamped from  $\frac{1}{16}$ " steel for heavy-duty use.

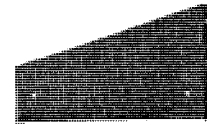
Cat. No. Zinc Plated	Size	Shp. Wt. Lbs.	Net Price
C-4508	5 x 10 x 3"	3	\$1.38
C-4510	7 x 7 x 2"	2	1.08
C-4511	7 x 9 x 2"	2	1.29
C-4513	7 x 13 x 2"	3	1.56
C-4515	7 x 17 x 3"	4	1.98
C-4532	8 x 17 x 3"	5	1.98
C-4524	10 x 14 x 3"	5	2.01
C-4526	10 x 17 x 3"	7	2.22
C-4533*	11 x 17 x 2"	7	2.91
C-4534*	11 x 17 x 3"	9	3.18
C-4535*	13 x 17 x 2"	8	3.12
C-4536*	13 x 17 x 3"	9	3.51
C-4537*	13 x 17 x 4"	10	3.87
C-4540*	17 x 17 x 4"	13	4.65

## BOTTOM PLATES

These bottom plates have holes to match the standard type chassis listed above, and also have pressed bumpers at the four corners.

Cat. No. Zinc Plated	Size	Shp. Wt. Lbs.	Net Price
CP-4508	5 x 10"	1	\$ .48
CP-4510	7 x 7"	1	.57
CP-4511	7 x 9"	1	.66
CP-4513	7 x 13"	2	.75
CP-4515	7 x 17"	2	.87
CP-4531	8 x 17"	2	.90
CP-4524	10 x 14"	2	.90
CP-4528	10 x 17"	2	1.08
CP-4533	11 x 17"	2	1.05
CP-4535	13 x 17"	3	1.26
CP-4540	17 x 17"	4	1.71

## CHASSIS MOUNTING BRACKETS



These brackets are made for assembly with our standard or heavy duty type chassis listed directly above. Panels must be at least 7" high.

**FINISH:** Black enamel only. They are made from 1/16" thick steel. Cat. Nos. SB-78 thru SB-713 Chassis Mounting Brackets are to be used with the stipulated size base only. Cat. No. SB-717 is used for 17" Bases and larger sizes.

Cat. No.	Base Dimension	Shp. Wt. Lbs.	Net Price
SB-78	For 8"	2	\$1.05
SB-710	For 10"	2	1.23
SB-711	For 11"	2	1.32
SB-713	For 13"	3	1.50
SB-717	For 17"	4	2.31

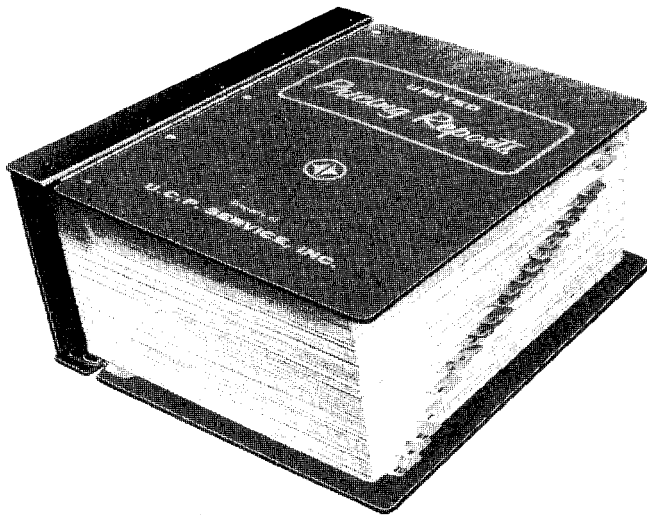
# PRICES

All prices listed in The MASTER are subject to change without notice — they should not be considered final.

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## DELIVERY

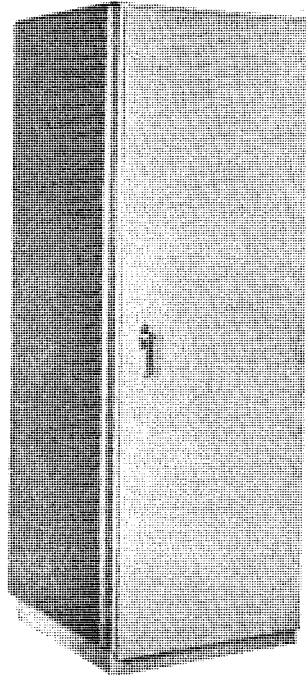
Delivery is often dependent on availability of raw materials. Check with your distributor for delivery information at the time you place your order.

# PREMIER-ORAK MODULAR VERTICAL FRAMES

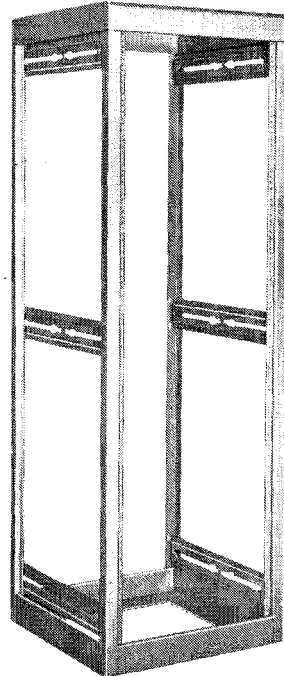


22" and 25½" DEEP  
for 19" and 24" PANELS

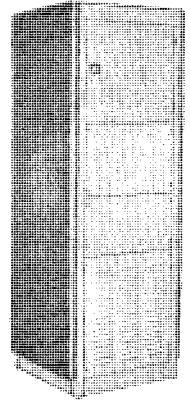
- Designed for MULTIPLE INSTALLATIONS.
- TOPS OF FRONT AND REAR ARE ROUNDED.
- Frames accommodate Ball Cornered End Panels (CEP Series)
- Frame Made of No. 14 gauge steel.
- Supplied with two pair of No. 12 gauge steel Panel Mounting Angles. Both legs of the angle are tapped 10-32 on E.I.A. spacings (¾"-¾"-½") to accommodate Front Panels & Chassis Support Angles (CSA series).
- Panel mounting angles are held in place at three points by ¾" carriage bolts and are adjustable to any desired position by means of channel slides.
- Three combination 1¾" and 1½" diameter knockouts furnished on both sides of top and bottom to provide access for cabling between racks. Frame completely welded throughout.



Above unit consists of Frame FA Series), 2 End Panels (CEP Series) and Door (DF Series).



FA FRAME



Above unit consists of Frame (FA Series), 2 End Panels (CEP Series), Flush Door (CD Series), Louvred Panel (FPL Series) and Formed Panels (FP Series)

Top of frame is solid. Round hole and 5 mounting holes on top of frame to accommodate Exhaust (EF Series) and Intake (IF Series) Fans, available at additional cost.

Knockouts supplied on sides of uprights for use in ganging frames. A rectangular cutout is provided in bottom for leads, etc.

Rectangular knockouts provided on front and rear of uprights of frame to accommodate hinge and handle brackets, so that door can be mounted either left or right hand. Doors can be mounted to front or rear of frame.

Holes punched in bottom to accommodate CA-4 (2"), CA-5 (3") and CA-6 (double 2") casters.

Finished in Gray Hammertone.

FRAMES — 22" WIDE								
22" DEEP			25½" DEEP			22" DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price	
FA-42-22	50	\$78.00	48½"	42 x 19"	FA-42-255	58	\$81.96	
FA-52-22	65	84.60	59½"	52½ x 19"	FA-52-255	75	88.80	
FA-61-22	80	95.85	67½"	61¼ x 19"	FA-61-255	92	105.60	
FA-70-22	100	112.44	76½"	70 x 19"	FA-70-255	115	123.60	
FA-77-22	110	115.59	83½"	77 x 19"	FA-77-255	127	127.20	

FRAMES — 27" WIDE								
22" DEEP			25½" DEEP			25½" DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price	
FA-2761-22	90	105.00	67½"	61¼ x 24"	FA-2761-255	98	114.60	
FA-2770-22	110	123.60	76½"	70 x 24"	FA-2770-255	123	135.60	
FA-2777-22	120	126.00	83½"	77 x 24"	FA-2777-255	135	138.00	

MODIFICATIONS AVAILABLE FOR CUSTOMIZED REQUIREMENTS FOR FA FRAMES

- Louvres, cutouts or holes in top.
- Solid bottom — no cut-out. Base can be supplied inverted.
- Omission of rectangular KO's on uprights.
- Opening in top with ½" recess for mounting a panel.
- Provisions for eye bolts in top.
- Provisions for mounting special size casters.
- Provision for rubber gasketing and filters.
- Panel mounting angles can be supplied copper plated .0005".
- Special finishes available.

## ORDERING GUIDE

FRAME	Use END PANEL (Page 11)	Use DOOR (Page 11)	Use CHASSIS SUPPORT ANGLE (Page 7)	Use SHELF (Page 7)	Use CHASSIS SLIDES (Pages 25, 26, 27)
Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Length
FA-42-22	CEP-42-22	DF-42	CSA-22	S-22-22	20"
FA-52-22	CEP-52-22	DF-52	CSA-22	S-22-22	20"
FA-61-22	CEP-61-22	DF-61	CSA-22	S-22-22	20"
FA-70-22	CEP-70-22	DF-70	CSA-22	S-22-22	20"
FA-77-22	CEP-77-22	DF-77	CSA-22	S-22-22	20"
FA-42-255	CEP-42-255	DF-42	CSA-255	S-22-255	24"
FA-52-255	CEP-52-255	DF-52	CSA-255	S-22-255	24"
FA-61-255	CEP-61-255	DF-61	CSA-255	S-22-255	24"
FA-70-255	CEP-70-255	DF-70	CSA-255	S-22-255	24"
FA-77-255	CEP-77-255	DF-77	CSA-255	S-22-255	24"
FA-2761-22	CEP-61-22	DF-2761	CSA-22	S-27-22	20"
FA-2770-22	CEP-70-22	DF-2770	CSA-22	S-27-22	20"
FA-2777-22	CEP-77-22	DF-2777	CSA-22	S-27-22	20"
FA-2761-255	CEP-61-255	DF-2761	CSA-255	S-27-255	24"
FA-2770-255	CEP-70-255	DF-2770	CSA-255	S-27-255	24"
FA-2777-255	CEP-77-255	DF-2777	CSA-255	S-27-255	24"

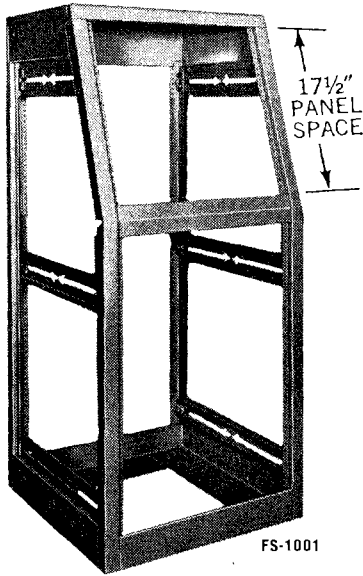
### INDUSTRIAL DISCOUNT SCHEDULE

Applies to any PREMIER products listed in this catalog.

If total order at net price is:	DISCOUNT
Up to \$199.99	Net Price
\$200 to \$399.99	Net Less 10%
\$400 to \$549.99	Net Less 15%
\$550 to \$699.99	Net Less 20%
\$700 to \$999.99	Net Less 25%
\$1,000 to \$2,499.99	Net Less 30%
\$2,500 OR MORE	Net Less 33½%

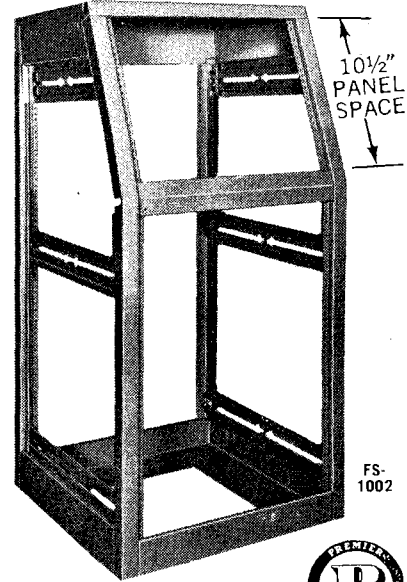
ALL PRICES F.O.B. BRONX, N. Y. 10474

# PREM-O-RAK<sup>®</sup> MODULAR CONSOLE SYSTEM



FS-1001

## 10 1/2" and 17 1/2" SLOPED FRONT CONSOLE FRAMES FOR 19" and 24" PANELS



FS-1002

- TOPS OF FRONT AND REAR ARE ROUNDED
- Frames accommodate Ball Cornered End Panels (CEP Series)
- Designed for Multiple Installations
- Made of No. 14 Gauge (.0747) Steel
- Sloped Front Is 19° from Vertical
- Frame Completely Welded Throughout
- All Panel Mounting Angles are made of No. 12 Gauge Steel and Tapped on both legs 10/32 on E.I.A. Spacings (5/8-5/8-1/2). Front and Rear Vertical Angles Are Adjustable to Any Desired Position.
- Panels Fit into 1/2" Recess.
- Combination 1 3/8" and 1 1/8" Diameter Knockouts on Top and Bottom to Provide Access for Cabling Between Racks.
- Holes Punched in Bottom to Accommodate CA-4 (2"), CA-5 (3") and CA-6 (double 2") casters.
- A Rectangular Cutout Is Provided in Bottom for Leads, etc.
- Front Cross Piece Removable.
- Rectangular Knockouts on Rear Uprights to Accommodate Hinge and Handle Latch Brackets so that Door can be Mounted Either Left or Right.
- Finished in Gray Hammettone.

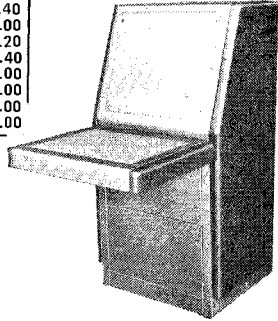
### MODIFICATIONS AVAILABLE FOR CUSTOMIZED REQUIREMENTS FOR FS AND/OR CPF SERIES

- \* Vertical Panel Mounting Angles can be supplied Copper Plated .0005".
- \* Top of CPF Frame can be modified to accept a one-piece Multiple-width Formica Panel when used with work-top (WTO Series) and/or other pedestal frames.
- \* Louvers, holes or cut-outs in top of FS frame.
- \* Opening in top of FS with 1/2" recess for mounting a panel.

Cat. No.	Width	Hgt.	Depth	Sloped Front Panel Space	Front Vertical Space	Rear Vertical Space	Ship. Wt. Lbs.	Net Price
FS-1001	22"	50"	22"	17 1/2 x 19"	26 1/4 x 19"	42 x 19"	66	\$80.40
FS-1002	22"	47"	22"	10 1/2 x 19"	29 3/4 x 19"	42 x 19"	64	78.00
FS-1003	27"	50"	22"	17 1/2 x 24"	26 1/4 x 24"	42 x 24"	76	88.20
FS-1004	27"	47"	22"	10 1/2 x 24"	29 3/4 x 24"	42 x 24"	74	86.40
FS-1001-255	22"	50"	25 1/2"	17 1/2 x 19"	26 1/4 x 19"	42 x 19"	75	83.00
FS-1002-255	22"	47"	25 1/2"	10 1/2 x 19"	29 3/4 x 19"	42 x 19"	73	81.00
FS-1003-255	27"	50"	25 1/2"	17 1/2 x 24"	26 1/4 x 24"	42 x 19"	85	92.00
FS-1004-255	27"	47"	25 1/2"	10 1/2 x 24"	29 3/4 x 24"	42 x 19"	83	90.00

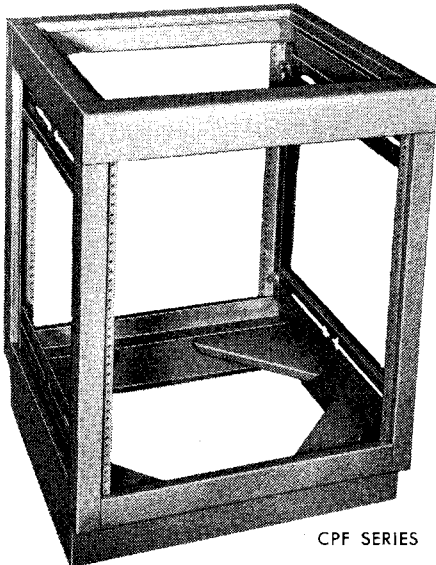
### ORDERING GUIDE

FRAME Cat. No.	USE END PANEL (Page 11) Cat. No.	USE REAR DDDR (Page 11) Cat. No.	USE SHELF (Page 5) (Pgs. 25, 26, 27) Cat. No.	USE CHASSIS SLIDES Length
FS-1001	CEP-1201 (LH and/or RH)	DF-42	SH-101	20"
FS-1002	CEP-1202 (LH and/or RH)	DF-42	SH-101	20"
FS-1003	CEP-1201 (LH and/or RH)	DF-2742	SH-102	20"
FS-1004	CEP-1202 (LH and/or RH)	DF-2742	SH-102	20"
FS-1001-255	CEP-1201-255 (LH and/or RH)	DF-42	SH-104	24"
FS-1002-255	CEP-1202-255 (LH and/or RH)	DF-42	SH-104	24"
FS-1003-255	CEP-1201-255 (LH and/or RH)	DF-2742	SH-105	24"
FS-1004-255	CEP-1202-255 (LH and/or RH)	DF-2742	SH-105	24"



Above unit consists of Fran (FS Series), 2 End Panel (CEP-1201 Series), Writing Work Shelf (WW Series) at 2 End Panels (CEP Series) f shelf.

# PREM-O-RAK<sup>®</sup>



CPF SERIES

## CONSOLE PEDESTAL FRAMES

- TOPS OF FRONT AND REAR ARE ROUNDED.
- Frames accommodate Ball Cornered End Panel (CEP Series).
- Units are designed for multiple installation.
- Adjustable panel mounting angles front and rear are tapped on both legs for 10/32 machine screws on E.I.A. spacings (5/8-5/8-1/2).
- Panels fit into 1/2" recess.
- Two rectangular knockouts supplied on one top cross member to accommodate channels Writing Work Shelf.
- Brackets welded in base and punched to accommodate CA-5 (3") casters and supplied w adapter to accommodate CA-4 (2") casters.
- Frame made of No. 16 gauge steel; panel mounting angles of 12 gauge steel.
- Finished in Gray Hammettone.

Cat. No.	Width	Depth	Height with Casters	Height without Casters	Front & Rear Panel Space	Top Panel Space	Shpg. Wt. Lbs.	Net Price
CPF-101	22"	22"	30"	29 1/2"	21 x 19"	17 1/2 x 19"	45	\$56.
CPF-102	22"	22"	37"	36 1/2"	28 x 19"	17 1/2 x 19"	48	64.
CPF-103	27"	22"	30"	29 1/2"	21 x 24"	17 1/2 x 24"	50	63.
CPF-104	27"	22"	37"	36 1/2"	28 x 24"	17 1/2 x 24"	53	72.
CPF-101-34	22"	22"	34 1/4"	30"	21 x 19"	29 3/4 x 19"	54	78.
CPF-101-255	22"	25 1/2"	30"	29 1/2"	21 x 19"	21 x 19"	53	65.
CPF-102-255	22"	25 1/2"	37"	36 1/2"	28 x 19"	21 x 19"	55	78.
CPF-103-255	27"	25 1/2"	30"	29 1/2"	21 x 24"	21 x 24"	58	68.
CPF-104-255	27"	25 1/2"	37"	36 1/2"	28 x 24"	21 x 24"	59	83.

### ORDERING GUIDE

FRAME Cat. No.	USE END PANEL (Page 11) Cat. No.	USE DDDR (Page 3) Cat. No.	USE SHELF (Page 5) Cat. No.	USE CHASSIS SLID Length
CPF-101	CEP-401	CD-21	SH-101	20"
CPF-102	CEP-402	CD-28	SH-101	20"
CPF-103	CEP-401	CD-2124	SH-102	20"
CPF-104	CEP-402	CD-2824	SH-102	20"
CPF-101-34	CEP-401-34	CD-21	SH-103	—
CPF-101-255	CEP-401-255	CD-21	SH-104	24"
CPF-102-255	CEP-402-255	CD-28	SH-104	24"
CPF-103-255	CEP-401-255	CD-2124	SH-105	24"
CPF-104-255	CEP-402-255	CD-2824	SH-105	24"

SEE PGS. 23, 24, 25, 26 & 27 FOR HANDLES, SLIDES, BLOWERS & FANS

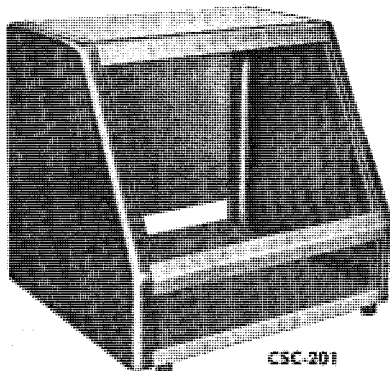
PREMIER PAGE 2

ALL PRICES F.O.B. BRONX, N. Y. 104



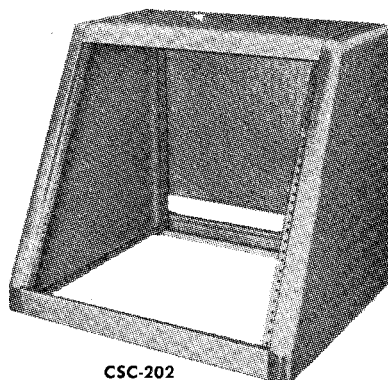
# PREM-O-RAK MODULAR CONSOLE SYSTEM

## CONSOLE SLOPING CABINETS



CSC-201

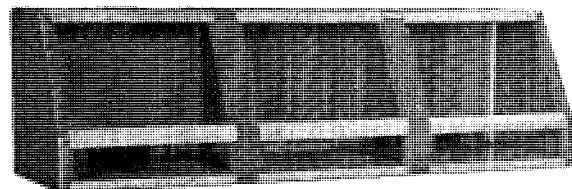
- BOTH FRONT AND REAR HAVE ATTRACTIVE BALL CORNERS.
- Shipped knocked down with necessary hardware for easy assembly.
- All screws for assembling console are not visible from the outside.
- Both front and rear are tapped for 10/32 machine screws on E.I.A. spacings (5/8-5/8-1/2).
- Interlocking removable rear panel made of perforated metal and held in place by four captive screws.
- Made of No. 16 gauge steel.
- Rear panel has 1 3/4" opening on bottom for leads, etc.
- Panels fit into 1/2" recess.
- May be used individually or in multiples.
- Handsomely finished in Two Tone Hammetone—  
Top, cross-piece and base are Gray Hammetone.  
Rear and side panels are Brown Hammetone.



CSC-202



Cat. No.	Width	Height	Depth	Sloped Panel Space	Front Vertical Panel Space	Rear Panel Space	Slope from Vertical	Bottom Panel Space	Ship. Wt. Lbs.	Net Price
CSC-201	21 3/4"	18 1/8"	18"	12 1/4" x 19"	3 1/2" x 9"	15 3/4" x 19"	30°		35	\$55.00
CSC-202	21 3/4"	18 7/8"	18 7/8"	17 1/2" x 19"		15 3/4" x 19"	25°	15 3/4" x 19"	40	\$60.00



One Triple CSC-201 consists of one CSC-201 and two CMS-301

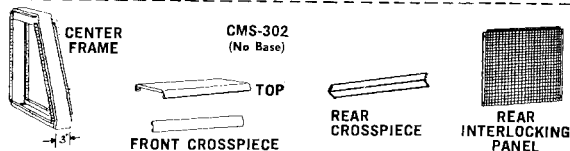
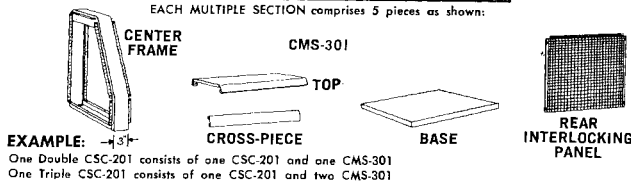
### DESIGNED FOR MULTIPLE INSTALLATION

The PREM-O-RAK CONSOLE CABINETS can be joined together to make multiple units by means of a center frame section which is bolted to the top, cross-piece and base. When ordering multiple units specify number of units, such as Double, Triple, etc.

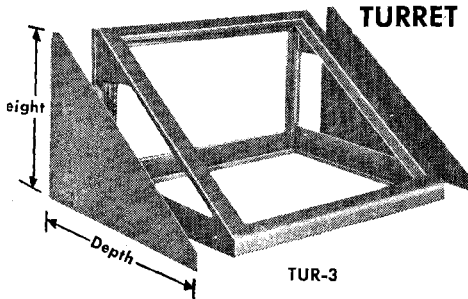
### MULTIPLE SECTION for SLOPING CABINET

Catalog No.	Shipping Wt. Lbs.	Net Price
CMS-301	26	\$36.00
CMS-302	28	\$40.00

EACH MULTIPLE SECTION comprises 5 pieces as shown:

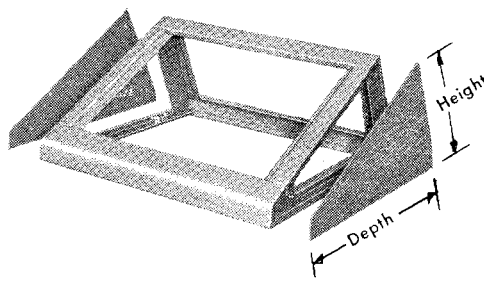


## TURRET WITH FLAT SIDE PANELS



TUR-3

- Made of No. 16 gauge steel.
- All panel openings tapped for 10/32 machine screws on E.I.A. spacings (5/8-5/8-1/2).
- Panels fit into 1/2" recess.
- Flat side panels are assembled at factory before shipping.
- Frame finished in Gray Hammetone. Side panels finished in Brown Hammetone.



TUR-1

Cat. No.	Width	Height	Depth	Sloped Front Panel Space	Rear Panel Space	Bottom Panel Space	Ship. Wt. lbs.	Net Price
TUR-1	22"	9 3/4"	21"	14" x 19"	7" x 19"	17 1/2" x 19"	25	\$40.00
TUR-3	22"	12 1/4"	17 1/2"	17 1/2" x 19"	8 3/4" x 19"	14" x 19"	20	34.80

## FLUSH DOORS — 1/2" DEEP

For Prem-O-Rak Console Frames CPF, FS, FA, MSF, POR and CSC Series.

- Made of 16 gauge steel • Finished in Gray Hammetone.
- Doors can be mounted either left or right hand by rotating door 180°.
- Hinge brackets are punched to accommodate panel mounting angles on cabinets.
- Furnished with attractive round chrome plated handle and snap catch.

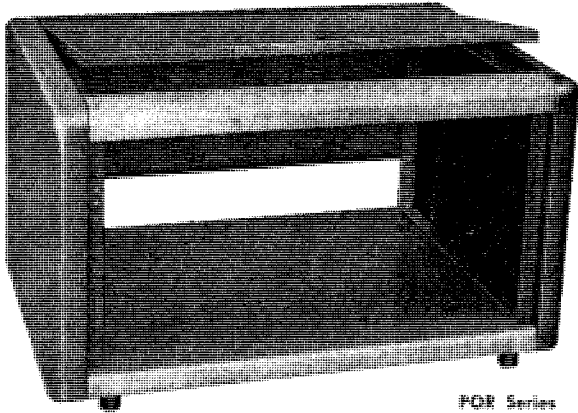
Cat. No.	Height	Width	Shpg. Wt. Lbs.	Net Price
CD-17	17 1/2"	19"	7	\$11.90
CD-21	21"	19"	8	12.85
CD-26	26 1/4"	19"	9	14.40
CD-28	28"	19"	10	15.10
CD-29	29 3/4"	19"	11	15.75
CD-42	42"	19"	16	25.65
CD-1724	17 1/2"	24"	8	14.30
CD-2124	21"	24"	9	15.40
CD-2824	28"	24"	12	18.15
CD-2924	29 3/4"	24"	13	18.90
CD-4224	42"	24"	17	31.50

ALL PRICES F.O.B. BRONX, N. Y. 10474

PREMIER PAGE 3

# PREM-O-RAK®

# DESK CABINET RACKS



POR Series

**BOTH FRONT AND REAR OF TOP HAVE ATTRACTIVE BALL CORNERS.**

**THE ARISTOCRAT OF DESK CABINET RACKS**

Available in 24 different sizes—  
from 3½" to 35" panel spaces



Both 15½" and 18" deep for standard 19" panels

**Modifications Available For Customized Requirements**

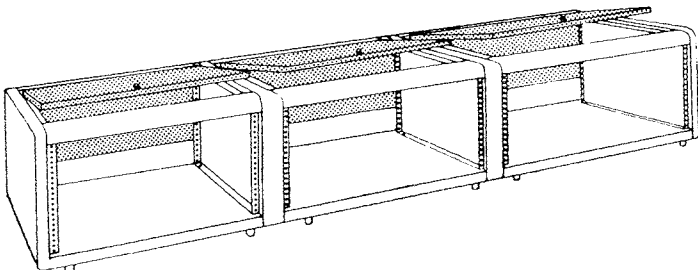
- Solid top panel
- Solid rear panel
- Full rear panels-solid or perforated
- Drop handles (HW-5) welded to sides
- Recessed handles on sides
- Unit can be supplied completely welded
- Special finishes
- Holes and cutouts in sides and base.

- All screws for assembling PREM-O-RAK are not visible from the outside.
- Both front and rear verticals are tapped for 10/32 machine screws on E.I.A. spacings (⅜-⅝-½") so that panels may be mounted on both front and rear if desired.
- Interlocking removable top made of perforated metal and held in place by only one captive screw.
- Interlocking removable rear panel made of perforated metal and held in place by two captive screws.
- Rigidly constructed of #16 gauge steel.

- Rear Panel has 3½" opening on bottom for leads, etc., except on POR-3, 318, 5, 518.
- Panels fit into ½" recess.
- Base supplied with four rubber feet.
- Components may be mounted on base before assembly of rack into a complete unit.
- **HANDSOMELY FINISHED IN TWO-TONE HAMMERTONE.**

Top cross braces and base are Gray Hammertone. Top & rear panel & side panels are Brown Hammertone. Also avail. all Gray Hammertone. Specify when ordering

15¼" DEEP				ALL CABINETS ARE 21¾" WIDE		18" DEEP			
Catalog No.	Shp. Wt. Lbs.	Use Slide Length	Net Price	Overall Height	Panel Space	Catalog No.	Shp. Wt. Lbs.	Use Slide Length	Net Price
POR-3	18	14"	\$25.10	57/8"	3½"	POR-318	20	16"	\$26.40
POR-5	20	14"	26.40	75/8"	5¼"	POR-518	22	16"	29.10
POR-7	22	14"	27.75	93/8"	7"	POR-718	24	16"	30.70
POR-8	24	14"	29.10	111/8"	8¾"	POR-818	26	16"	32.25
POR-10	26	14"	33.30	127/8"	10½"	POR-1018	29	16"	36.75
POR-12	28	14"	36.05	145/8"	12¼"	POR-1218	31	16"	40.00
POR-14	32	14"	40.20	163/8"	14"	POR-1418	35	16"	44.35
POR-17	40	14"	47.85	197/8"	17½"	POR-1718	44	16"	52.70
POR-21	44	14"	52.00	233/8"	21"	POR-2118	48	16"	57.55
POR-26	45	14"	56.15	283/8"	26¼"	POR-2618	49	16"	61.85
POR-31	50	14"	58.90	337/8"	31½"	POR-3118	55	16"	65.65
POR-35	55	14"	62.40	373/8"	35"	POR-3518	60	16"	68.80



Above unit is one Triple POR-8 which consists of one POR-8 two MOR-8

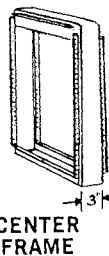
## MULTIPLE SECTION FOR PREM-O-RAK DESK CABINETS

PREM-O-RAK DESK CABINETS can be joined together to ma multiple units by means of a center frame section which is bolt to the top cross pieces and base. When ordering multiple un specify number of units, such as Double, Triple, etc.

EXAMPLE: One Double POR-1218 consists of one POR-1218 a one MOR-1218.  
One Triple POR-8 consists of one POR-8 and t MOR-8.

EACH MULTIPLE SECTION (MOR Series) comprises 6 pieces as shown.

15¼" DEEP					18" DEEP		
Cat. No.	Shp. Wt. Lbs.	Net Price	Overall Height	Panel Space	Cat. No.	Shp. Wt Lbs.	Net Price
MOR-3	16	\$17.60	57/8"	3½"	MOR-318	18	\$18.50
MOR-5	17	18.50	75/8"	5¼"	MOR-518	19	20.40
MOR-7	18	19.40	93/8"	7"	MOR-718	20	21.60
MOR-8	19	20.40	111/8"	8¾"	MOR-818	21	22.70
MOR-10	20	23.40	127/8"	10½"	MOR-1018	23	25.85
MOR-12	21	25.30	145/8"	12¼"	MOR-1218	24	27.80
MOR-14	23	28.20	163/8"	14"	MOR-1418	26	31.10
MOR-17	31	33.55	197/8"	17½"	MOR-1718	34	37.00
MOR-21	33	36.45	233/8"	21"	MOR-2118	37	40.30
MOR-26	34	39.40	283/8"	26¼"	MOR-2618	38	43.35
MOR-31	36	41.25	337/8"	31½"	MOR-3118	40	46.00
MOR-35	40	43.70	373/8"	35"	MOR-3518	44	48.20



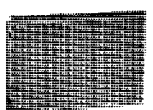
CENTER FRAME



2 CROSS-PIECES



BASE



REAR INTERLOCKIN PANEL

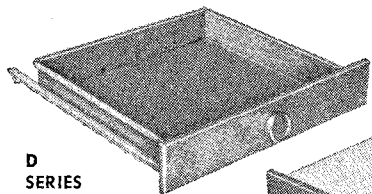
ALL PRICES F.O.B. BRONX, N. Y. 10474

SEE PAGES 23, 24, 25, 26 & 27 FOR HANDLES, SLIDES, BLOWERS and FANS

PREMIER PAGE 4

# PREM-O-RAK®

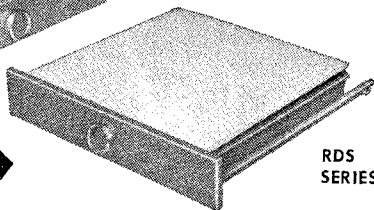
# MODULAR CONSOLE SYSTEM



SLIDING DRAWERS



D SERIES



RDS SERIES

SLIDING SHELVES ▶

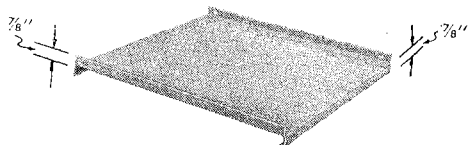
- Made of No. 16 gauge steel.
- Mounted on suspension slides, which sustain 46 lbs.
- Drawer extends 16" from front of cabinet.
- Supplied with brackets for mounting to tapped holes of panel mounting angles.
- Furnished with attractive, round chrome-plated handle.
- Shipped knocked down with all necessary hardware for easy assembly.
- Will fit CPF, FS, MSF & FA SERIES.
- Finished in Gray Hammertone.
- Sliding shelves supplied with Gray linen weave Formica (2-C-1) on top surface.

**SLIDING DRAWERS**

Cat. No.	Panel Size	Drawer Size			Shpg. Wt. Lbs.	Net Price
		W	D	H		
FOR 19" WIDE PANEL SPACE						
D-1916	10 3/8" x 18 7/8"	16 1/8"	16"	6"	23	\$18.90
D-2016	6 7/8" x 18 7/8"	16 1/8"	16"	6"	22	18.15
D-2316	3 3/8" x 18 7/8"	16 1/8"	16"	2 1/8"	16	17.10
FOR 24" WIDE PANEL SPACE						
D-2116	10 3/8" x 23 7/8"	21 1/8"	16"	6"	25	22.70
D-2216	6 7/8" x 23 7/8"	21 1/8"	16"	6"	24	21.75
D-2416	3 3/8" x 23 7/8"	21 1/8"	16"	2 1/8"	17	18.90

**SLIDING SHELVES**

Cat. No.	Panel Size	Shelf Size	Shpg. Wt. Lbs.	Net Price
FOR 19" WIDE PANEL SPACE				
RDS-319-22	3 3/8" x 18 7/8"	16 3/8" x 15 1/2"	20	\$34.65
FOR 24" WIDE PANEL SPACE				
RDS-324-22	3 3/8" x 23 7/8"	21 3/8" x 15 1/2"	22	44.10



SHELF FOR FRAMES CPF, FA, MSF & FS SERIES

- Made of No. 16 Ga. Steel.
- Finished in Gray Hammertone.
- Mounts to 10-32 tapped holes on side leg of Panel Mounting Angles.

Cat. No.	Depth	Width	For use with	Net Price
SH-101	20 1/2"	19 15/16"	CPF-101, CPF-102 FS-1001, FS-1002 22" (Deep) x 22" (Wide) FA	\$ 9.45
SH-102	20 1/2"	24 15/16"	CPF-103, CPF-104 FS-1003, FS-1004 22" (Deep) x 27" (Wide) FA	10.72
SH-103	32 3/4"	19 15/16"	CPF-101-34	12.60
SH-104	24"	19 15/16"	CPF-101-255 & 102-255 FS-1001-255 & 102-255	11.00
SH-105	24"	24 15/16"	CPF-103-255 & 104-255 FS-1003-255 & 1004-255	12.00

## FORMICA WRITING PANELS

19" and 24" WIDE — 1/2" THICK

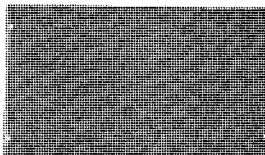
Gray Linen Weave Pattern Formica 2-C-1 bonded to plywood as top surface; Unfinished Formica bonded to bottom surface.

19" WIDE			
Cat. No.	Panel Space	Fits into	Net Price
FWP-1019	10 1/2" x 19"	WW-15-22 & WW-15-255	\$6.60
FWP-1419	14" x 19"	WW-18-22 & WW-18-255	8.40
FWP-1719	17 1/2" x 19"	WW-22-22 & WW-22-255, WTO-22-22 & Top Panel Space of CPF-101 and CPF-102	10.20
FWP-2919	29 3/4" x 19"	CPF-101-34, WTO-22-34	24.00
24" WIDE			
Cat. No.	Panel Space	Fits into	Net Price
FWP-1024	10 1/2" x 24"	WW-2715-22, WW-2715-255	\$7.20
FWP-1424	14" x 24"	WW-2718-22, WW-2718-255	9.00
FWP-1724	17 1/2" x 24"	WW-2722-22, WW-2722-255, WTO-27-22 & Top Panel Space of CPF-103 & CPF-104	10.80

**MODIFICATIONS AVAILABLE**

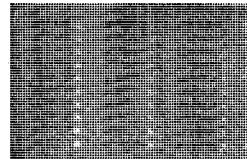
- One piece Multiple Widths
- Other standard Formica colors or Patterns

## FORMED PANELS — 19" and 24" WIDE



FP Series

BLANK



FPL Series

LOUVRED

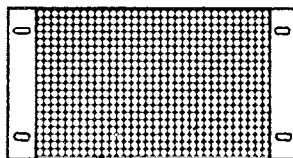
- Made of one piece of No. 16 gauge steel, with edges formed for overall depth of 1/2".
- Each panel has only 2 mounting holes on each side.
- Finished in Gray Hammertone.

**BLANK**

19" WIDE				24" WIDE			
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Shpg. Wt. Lbs.	Net Price	Height
FP-119	1 1/2	\$1.21	13 3/4"	FP-124	2	\$1.40	13 3/4"
FP-319	2	1.25	31 1/2"	FP-324	3	1.52	31 1/2"
FP-519	2 1/2	1.45	51 1/4"	FP-524	3 1/2	1.72	51 1/4"
FP-719	3	1.65	7"	FP-724	4	2.00	7"
FP-819	4	2.02	8 3/4"	FP-824	5	2.45	8 3/4"
FP-1019	5	2.50	10 1/2"	FP-1024	6	3.00	10 1/2"
FP-1219	6	2.90	12 1/4"	FP-1224	7	3.45	12 1/4"
FP-1419	6 1/2	3.25	14"	FP-1424	7 1/2	3.90	14"
FP-1519	7	3.75	15 3/4"	FP-1524	8	4.50	15 3/4"
FP-1719	7 1/2	4.15	17 1/2"	FP-1724	8 1/2	4.95	17 1/2"
FP-1919	8	4.52	19 1/4"	FP-1924	9	5.42	19 1/4"
FP-2119	9	4.95	21"	FP-2124	10	5.95	21"
FP-2219	10	5.50	22 3/4"	FP-2224	11	6.60	22 3/4"
FP-2619	11	6.12	26 1/4"	FP-2624	12	7.35	26 1/4"
FP-2819	12	6.60	28"	FP-2824	13	7.95	28"
FP-4219	18	11.00	42"	FP-4224	20	13.20	42"

**LOUVRED**

19" WIDE				24" WIDE			
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Shpg. Wt. Lbs.	Net Price	Height
FPL-719	3	\$3.48	7"	FPL-724	4	\$4.16	7"
FPL-819	4	3.90	8 3/4"	FPL-824	5	4.70	8 3/4"
FPL-1019	5	4.30	10 1/2"	FPL-1024	6	5.15	10 1/2"
FPL-1219	6	4.85	12 1/4"	FPL-1224	7	5.82	12 1/4"
FPL-1419	6 1/2	5.22	14"	FPL-1424	7 1/2	6.30	14"
FPL-1719	7 1/2	6.12	17 1/2"	FPL-1724	8 1/2	7.35	17 1/2"
FPL-2119	9	7.60	21"	FPL-2124	10	9.12	21"
FPL-2219	10	8.25	22 3/4"	FPL-2224	11	9.35	22 3/4"
FPL-2619	11	8.52	26 1/4"	FPL-2624	12	10.25	26 1/4"
FPL-2819	12	9.05	28"	FPL-2824	13	10.85	28"
FPL-4219	18	15.40	42"	FPL-4224	20	18.70	42"



PPF Series

## PERFORATED

- Made of No. 20 gauge steel with 1/16" diameter holes on 3/8" staggered centers.
- Edges formed on 4 sides.
- Overall depth 1/2".
- Each panel has 2 mounting holes on each side.
- Finished in Gray Hammertone.

19" WIDE				24" WIDE			
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Shpg. Wt. Lbs.	Net Price	Height
PPF-319	1 3/4	\$2.75	31 1/2"	PPF-324	2 3/4	\$3.50	31 1/2"
PPF-519	2 1/4	3.00	51 1/4"	PPF-524	3 1/4	3.90	51 1/4"
PPF-719	2 3/4	3.75	7"	PPF-724	3 3/4	5.00	7"
PPF-819	3 3/4	4.25	8 3/4"	PPF-824	4 3/4	5.75	8 3/4"
PPF-1019	4 3/4	5.00	10 1/2"	PPF-1024	5 3/4	6.25	10 1/2"
PPF-1219	5 3/4	5.60	12 1/4"	PPF-1224	6 3/4	7.40	12 1/4"
PPF-1419	6 1/4	6.20	14"	PPF-1424	7 1/4	8.00	14"
PPF-1519	6 3/4	6.80	15 3/4"	PPF-1524	7 3/4	8.90	15 3/4"
PPF-1719	7 1/4	7.25	17 1/2"	PPF-1724	8 1/4	9.50	17 1/2"
PPF-1919	7 3/4	7.95	19 1/4"	PPF-1924	8 3/4	10.50	19 1/4"
PPF-2119	8 3/4	8.50	21"	PPF-2124	9 3/4	11.25	21"
PPF-2619	10 3/4	10.00	26 1/4"	PPF-2624	11 3/4	13.00	26 1/4"
PPF-2819	11 3/4	11.00	28"	PPF-2824	12 3/4	14.25	28"

ALL PRICES F.O.B. BRONX, N. Y. 10474

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# PREM-O-RAK<sup>®</sup> MODULAR CONSOLE SYSTEM

## WRITING WORK SHELVES

- Made Of No. 16 Gauge Steel
- Tops Of Front And Rear Are Rounded
- Shipped Knocked Down • Finished In Gray Hammertone
- Supplied With Channels And Brackets For Mounting To Inside of Frames

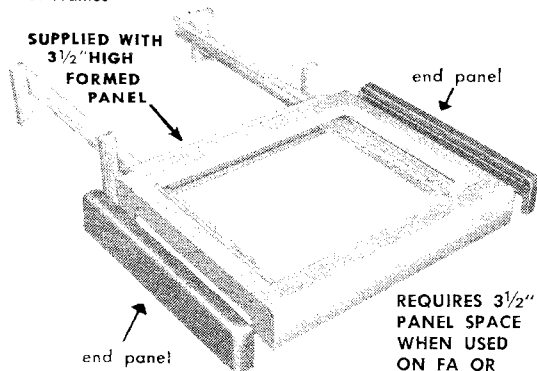


DESIGNED FOR SINGLE OR MULTIPLE INSTALLATION

**22" WIDE — 3" HIGH**

To Fit 22" DEEP FRAMES

To Fit 25 1/2" DEEP FRAMES



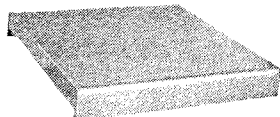
**NOTE:**  
Top of shelf can be modified to accept one piece multiple width Formica panel when used in multiple installations.

### END PANELS FOR WRITING WORK SHELF

- Ball cornered • Attaches to Writing Work Shelf by means of 2 captive screws • Made of one piece of No. 18 gauge steel
- Finished in Brown Hammertone

Cat. No.	Lbs.	Used With	Net Price
CEP-15	1 1/2	WW-15-22, 15-255; 2715-22, 2715-255	\$3.75
CEP-18	2	WW-18-22, 18-255; 2718-22, 2718-255	4.00
CEP-22	2 1/2	WW-22-22, 22-255; 2722-22, 2722-255	4.25

## WORK TOPS FOR MULTIPLE ASSEMBLY — 3" HIGH



CWT Series  
Solid Type



WTO Series  
Open Type

- Tops of front and rear are rounded.
- Designed for mounting between two Pedestal Frames or when used with End Pedestal (PE Series).
- USE SHORT END PANELS (CSS Series) FOR THIS INSTALLATION.
- Made of No. 16 gauge steel.
- Finished in Gray Hammertone.

**NOTE:**  
Top of WTO series can be modified to accept one piece multiple width Formica panel when used with pedestal frame CPF series.

### WORK TOPS

#### Solid Type

Cat. No.	Width	Depth	Shp. Wt. Lbs.	Net Price
CWT-601	22"	22"	14	\$14.00
CWT-603	27"	22"	18	16.50
CWT-601-34	22"	34 1/4"	20	20.80

#### Open Type

Cat. No.	Width	Depth	Panel Space	Shpg. Wt. Lbs.	Net Price
WTO-22-22	22"	22"	17 1/2 x 19"	9 1/2	\$28.35
WTO-27-22	27"	22"	17 1/2 x 24"	11	34.02
WTO-22-34	22"	34 1/4"	29 3/4 x 19"	12	44.10

ALL PRICES F.O.B. BRONX, N. Y. 10474

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**22" WIDE — 3" HIGH**

Cat. No.	Shpg. Wt. Lbs.	Net Price	Top Panel Space	Depth	Cat. No.	Shpg. Wt. Lbs.	Net Price
WW-15-22	11	\$37.80	10 1/2" x 19"	15"	WW-15-255	12	\$38.60
WW-18-22	12	39.70	14" x 19"	18 1/2"	WW-18-255	13	40.50
WW-22-22	13	41.58	17 1/2" x 19"	22"	WW-22-255	14	42.38

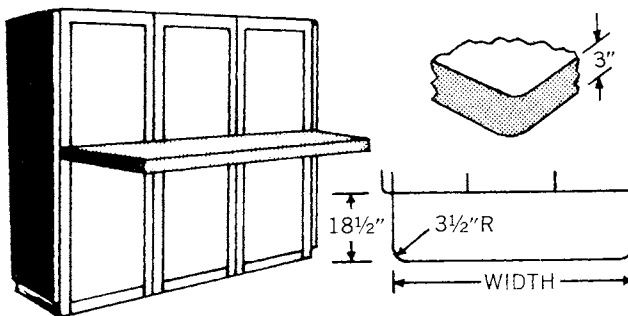
### 27" WIDE

Cat. No.	Shpg. Wt. Lbs.	Net Price	Top Panel Space	Depth	Cat. No.	Shpg. Wt. Lbs.	Net Price
WW-2715-22	14	43.40	10 1/2" x 24"	15"	WW-2715-255	15	44.26
WW-2718-22	15	44.74	14" x 24"	18 1/2"	WW-2718-255	16	45.52
WW-2722-22	16	46.00	17 1/2" x 24"	22"	WW-2722-255	17	46.80

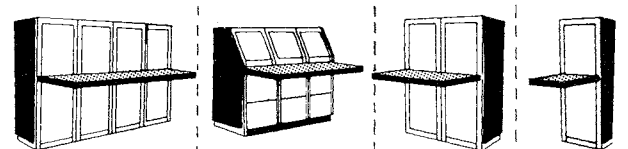
## ONE PIECE FORMICA WORK WRITING SHELVES

For 22" Wide FA and FS FRAMES

- Gray linen weave Formica (2-C-1) bonded to 3/4" plywood
- Other Standard Formica Colors or Patterns Available.
- 3" self edged Formica skirt on 3 sides
- Supplied with 3 1/2 x 19" formed panel, channels and bracket.



TO FIT 22" DEEP FRAMES				TO FIT 25 1/2" DEEP FRAMES	
Cat. No.	Net Price	Depth	Width	Cat. No.	Net Price
<b>For 1 Vertical Frame (FA or PRXA Series) or 1 Sloped Front Frame (FS Series)</b>					
OFT-2218-22	\$75.00	18 1/2"	22"	OFT-2218-255	\$76.00
<b>For 2 Vertical Frames (FA or PRXA Series) or 2 Sloped Front Frames (FS Series) Side By Side</b>					
OFT-4418-22	95.00	18 1/2"	44"	OFT-4418-255	96.00
<b>For 3 Vertical Frames (FA or PRXA Series) or 3 Sloped Front Frames (FS Series) Side By Side</b>					
OFT-6618-22	115.00	18 1/2"	66"	OFT-6618-255	117.00
<b>For 4 Vertical Frames (FA or PRXA Series) or 4 Sloped Front Frames (FS Series) Side By Side</b>					
OFT-8818-22	140.00	18 1/2"	88"	OFT-8818-255	142.00



**NOTE:**  
ONE PIECE Formica shelves available for us with semi-circular arrangements when used with Wedge Frames.

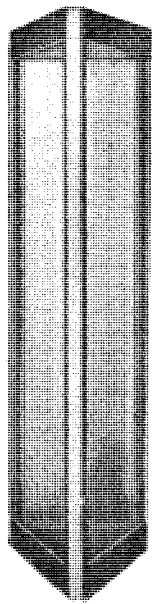
# PREM-Ö-RAK® MODULAR CONSOLE SYSTEM

## 30° and 45° WEDGE FRAMES

- Designed for use in Semi-Circular Arrangements when bolted to Pedestal Frames (CPF Series) or Transmitter Rack Frames (FA Series)

NOTE: One piece Formica Shelf available for semi-circular arrangements.

- Constructed of 16 gauge steel
- Completely welded throughout
- Supplied with formed panel on rear
- End panels (CEP Series) can be mounted to the side of wedge frames if desired
- Finished in Gray Hammertone

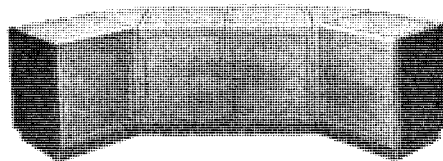


### 30° WEDGE RACK FRAMES

Cat. No.	Height	Width	For Use With	Net Price
WED-30-42-22	48 5/8"	22"	FA-42-22	\$122.10
WED-30-52-22	59 1/8"	22"	FA-52-22	132.00
WED-30-61-22	67 7/8"	22"	FA-61-22	138.60
WED-30-70-22	76 5/8"	22"	FA-70-22	148.50
WED-30-77-22	83 3/8"	22"	FA-77-22	155.10
WED-30-42-255	48 5/8"	25 1/2"	FA-42-255	146.50
WED-30-52-255	59 1/8"	25 1/2"	FA-52-255	154.44
WED-30-61-255	67 7/8"	25 1/2"	FA-61-255	156.40
WED-30-70-255	76 5/8"	25 1/2"	FA-70-255	171.60
WED-30-77-255	83 3/8"	25 1/2"	FA-77-255	178.20

### 45° WEDGE RACK FRAMES

Cat. No.	Height	Width	For Use With	Net Price
WED-45-42-22	48 5/8"	22"	FA-42-22	\$125.40
WED-45-52-22	59 1/8"	22"	FA-52-22	135.30
WED-45-61-22	67 7/8"	22"	FA-61-22	141.90
WED-45-70-22	76 5/8"	22"	FA-70-22	151.80
WED-45-77-22	83 3/8"	22"	FA-77-22	158.40
WED-45-42-255	48 5/8"	25 1/2"	FA-42-255	149.82
WED-45-52-255	59 1/8"	25 1/2"	FA-52-255	157.30
WED-45-61-255	67 7/8"	25 1/2"	FA-61-255	161.70
WED-45-70-255	76 5/8"	25 1/2"	FA-70-255	174.90
WED-45-77-255	83 3/8"	25 1/2"	FA-77-255	181.50



### 30° Wedge Pedestal Frames

Catalog No.	Height	Width	For Use With	Net Price
WED-30-101	29 1/2"	22"	CPF-101 & 103	\$102.30
WED-30-102	36 1/2"	22"	CPF-102 & 104	108.90

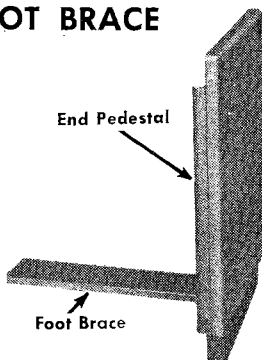
### 45° Wedge Pedestal Frames

Catalog No.	Height	Width	For Use With	Net Price
WED-45-101	29 1/2"	22"	CPF-101 & 103	\$105.00
WED-45-102	36 1/2"	22"	CPF-102 & 104	112.20

## END PEDESTAL and FOOT BRACE

### FOR DOUBLE UNIT ASSEMBLY

- Made of No. 18 gauge steel
- Ball cornered
- End Pedestal mounts to Work Top CWT Series or WTO Series. Foot Brace mounts to Pedestal Frame CPF Series and End Pedestal PE-901
- Foot Brace can be mounted between two Pedestal Frames (CPF Series).
- Finished in Brown Hammertone

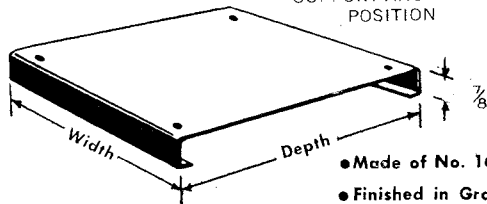
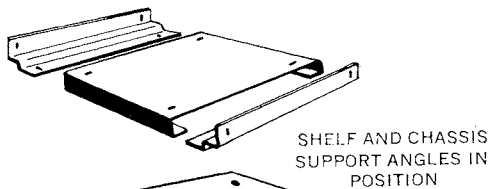


### END PEDESTAL

Cat. No.	Depth	Height	Shpg. Wt. Lbs.	Net Price
PE-901	22"	29 1/2"	25	\$31.50
PE-901-34	34 1/4"	29 1/2"	30	47.25

### FOOT BRACE

Cat. No.	Shpg. Wt. Lbs.	Used With	Net Price
FB-801	3	22" Wide Work Tops	\$8.92
FB-802	3 1/2	27" Wide Work Tops	9.64



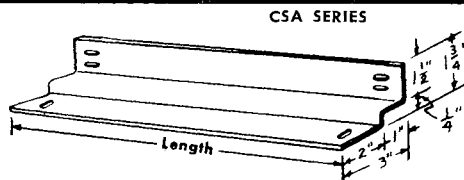
### SHELVES

- Made of No. 16 Gauge Steel
- Finished in Gray Hammertone

S SERIES

## CHASSIS SUPPORT ANGLES

- Made of No. 12 ga. steel
- Accommodates Shelf (S Series)
- Finished in Gray Hammertone
- Mounts to tapped holes on side legs of Panel Mounting Angles of FA & PRXA series.



Cat. No.	Length	To Fit Frames	Net Price Pair
CSA-18	16 1/8"	18" deep PRXA	\$4.50
CSA-22	20 1/8"	22" deep FA	5.00
CSA-24	22 1/8"	24" deep PRXA	5.25
CSA-255	23 3/8"	25 1/2" deep FA	5.50

## PANEL MOUNTING ANGLES—1 1/4" x 1 1/4"

Made of #12 Ga. (.104) thick steel punched and tapped 10-32 on E.I.A. spacings (5/8-5/8-1/2) on both legs. Finished in Grey Hammertone.

PANEL MOUNTING ANGLES			TO FIT RACKS	
Cat. No.	Height	Net Price Pr.		
PMA-212-12	21"	7.60	CPF-101 and 103	
PMA-282-12	28"	10.00	CPF-102 and 104	
PMA-362-12	36 3/4"	11.00	PRXA, RMA, & FD-36 series	
PMA-422-12	42"	13.20	FA, PRXA, FS, RMA & FD—42 series	
PMA-522-12	52 1/2"	15.20	FA and PRXA—52 series	
PMA-612-12	61 1/4"	16.50	FA, PRXA, RMA & FD—61 series	
PMA-702-12	70"	18.50	FA, PRXA, RMA & FD—70 series	
PMA-722-12	77"	20.00	FA, PRXA, RMA & FD—77 series	

# PREM-O-RAK® MODULAR SQUARE FRAMES



## 22" and 25½" DEEP for 19" PANELS

- Designed for MULTIPLE INSTALLATIONS.
- New Square Instrument System of Metal Cabinetry.
- The newest concept in high styling and economy
- The new square look "framed" with Satin Brushed Aluminum Trim (Optional).
- Frame Made of No. 14 gauge steel.
- Supplied with two pair of No. 12 gauge steel Panel Mounting Angles. Both legs of the angle are tapped 10-32 on E.I.A. spacings (5/8-5/8-1/2) to accommodate front panels & Chassis Support Angles (CSA series).
- Panel mounting angles are held in place at three points by 3/8" carriage bolts and are adjustable to any desired position by means of channel slides.
- Frame completely welded throughout.
- Knockouts supplied on sides of uprights for use in ganging frames.
- A rectangular cutout is provided in bottom for leads, etc.
- Three combination 13/8" and 11/8" diameter knockouts furnished on both sides of top and bottom to provide access for cabling between racks.

- Rectangular knockouts provided on front and rear of uprights of frame to accommodate hinge and handle brackets, so that door can be mounted either left or right hand. Doors can be mounted to front or rear of frame.
- Holes punched in bottom to accommodate CA-4 (2") and CA-5 (3") casters.
- Finished in Light Gray Metallic Enamel.



### MODIFICATIONS AVAILABLE for customized requirements

- Solid bottom — no cut-out.
- Base can be supplied inverted.
- Rectangular knock-outs on uprights may be omitted.
- Provision for eye bolts on top.
- Provision for mounting special size casters.
- Provision for rubber gaskets and filters.
- Panel mounting angles may be copper plated .0005.
- Special finishes available.

### ALUMINUM TRIM

Neatly designed Aluminum Vertical Trim for a shadow box effect, attaches to the front edge of End Panels. When ordering End Panels, add suffix "T" to catalog number, so that panel may be prepared for trim. Example — 2 MSP-61-22-T. Horizontal Trim attaches to top of frame front. When ordering Frames, add suffix "T" to catalog number so that Frame may be prepared for trim.

NOTE: Horizontal trim should not be ordered if using Front Door. MDF Series

FRAMES	22" DEEP				Front & Rear Vertical Panel Space	25½" DEEP			
	Cat. No.	Top Panel Space	Shp. Wt. Lbs.	Net Price		Cat. No.	Top Panel Space	Shp. Wt. Lbs.	Net Price
22" WIDE	MSF-42-22	17½x19"	50	\$78.00	42x19" 52½x19" 61¼x19" 70x19" 77x19"	MSF-42-255	21x19"	55	\$81.96
	MSF-52-22	17½x19"	65	84.60		MSF-52-255	21x19"	75	88.80
	MSF-61-22	17½x19"	80	95.85		MSF-61-255	21x19"	90	105.60
	MSF-70-22	17½x19"	100	112.44		MSF-70-255	21x19"	110	123.60
	MSF-77-22	17½x19"	110	115.59		MSF-77-255	21x19"	125	127.20

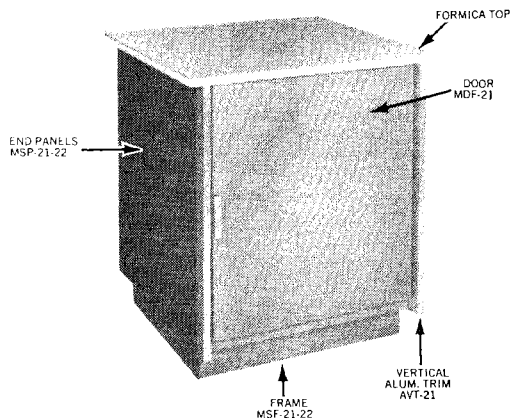
ALSO AVAILABLE FOR 24" PANELS.

ORDERING GUIDE	Frame	Use	Use	Use	Use	
	Cat. No.	End Panel	End Panel	Door	Louvred Door*	Use Shelf (Page 5)
	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
	MSF-21-22	MSP-21-22	MSP-21-22LV	MDF-21	MDF-21LV	SM-101
	MSF-28-22	MSP-28-22	MSP-28-22LV	MDF-28	MDF-28LV	SM-101
	MSF-21-255	MSP-21-255	MSP-21-255LV	MDF-21-255	MDF-21-255LV	SH-105
	MSF-28-255	MSP-28-255	MSP-28-255LV	MDF-28-255	MDF-28-255LV	SH-105

For Aluminum Trim see Page 9.

\* When ordering Louvred Doors, specify left or right hand hinging.

# PREM-O-RAK® MODULAR SQUARE PEDESTAL FRAMES



- Adjustable panel mounting angles, front and rear, are tapped for 10/32 machine screws on E.I.A. spacings. (5/8-5/8-1/2").
- Panels fit into 1/2" recess.
- Frame and Door finished in Light Grey Metallic Enamel; End Panels in Dark Grey Metallic Enamel.
- Brackets welded in base and punched to accommodate CA-5 (3") casters and supplied with adapter to accommodate CA-4 (2") casters.
- Frame made of No. 16 gauge steel; panel mounting angles of 12 gauge steel.

### FRAME

Cat. No.	Width	Depth	Hgt. with Casters	Hgt. without Casters	Front & Rear Panel Space	Top Panel Shpg. Space	Shpg. Wt. Lbs.	Net Price
MSF-21-22	22"	22"	30"	29½"	21x19"	17½x19"	45	\$57.00
MSF-28-22	22"	22"	37"	36½"	28x19"	17½x19"	50	66.00
MSF-21-255	22"	25½"	30"	29½"	21x19"	21x19"	50	60.00
MSF-28-255	22"	25½"	37"	36½"	28x19"	21x19"	55	69.00

### ACCESSORIES AVAILABLE

Formica Tops for single or multiple units.

### MODIFICATIONS AVAILABLE

Frames made on special order in any panel space. For example — 35", 36¾", 43¾", 48", 78¾".

	Blank	Louvred	Height	Width	Net Price
END PANELS ¾" WIDE	MSP-21-22	MSP-21-22LV	26"	22"	\$13.50
	MSP-28-22	MSP-28-22LV	33"	22"	15.50
	MSP-21-255	MSP-21-255LV	26"	25½"	15.50
	MSP-28-255	MSP-28-255LV	33"	25½"	17.50
DOORS ¾" WIDE	MDF-21	MDF-21LV	24½"	21½"	19.50
	MDF-28	MDF-28LV	31½"	21½"	22.00



# PREM-O-RAK®

# PANELS, DOORS and TRIM for MODULAR SQUARE FRAMES



## END PANELS 13/16" DEEP

- Made of one piece of No. 16 gauge steel.
- End panels attach to frame by means of a bracket on bottom and held securely by two captive screws on top.
- Panels supplied blank or louvred.
- Finished in Dark Grey Metallic Enamel.

## DOORS — 21 1/2" WIDE — 13/16" DEEP

- Made of No. 16 gauge steel.
- Doors can be mounted either left or right hand by rotating door 180°.
- Doors hung on slip jointed hinges and furnished with handsome door pull.
- Finished in Light Grey Metallic Enamel.

BLANK Cat. No.	LOUVRED Cat. No.	Shpg. Wt. Lbs.	Height	Net Price
MDF-42	MDF-42LV	20	45 5/16"	\$26.40
MDF-52	MDF-52LV	25	56 1/16"	29.40
MDF-61	MDF-61LV	30	64 13/16"	36.60
MDF-70	MDF-70LV	35	73 3/16"	36.00
MDF-77	MDF-77LV	40	80 3/16"	38.40

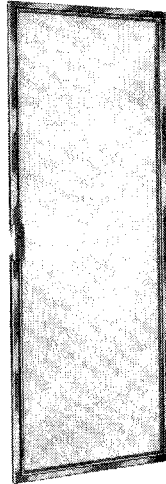
22" WIDE				Height	25 1/2" WIDE			
Blank Cat. No.	Louvred Cat. No.	Shp. Wt. Lbs.	Net Price		Blank Cat. No.	Louvred Cat. No.	Shp. Wt. Lbs.	Net Price
MSP-42-22	MSP-42-22LV	22	\$18.90	45 1/4"	MSP-42-255	MSP-42-255LV	27	\$22.05
MSP-52-22	MSP-52-22LV	26	22.70	55 3/4"	MSP-52-255	MSP-52-255LV	32	25.85
MSP-61-22	MSP-61-22LV	30	25.20	64 1/2"	MSP-61-255	MSP-61-255LV	34	27.75
MSP-70-22	MSP-70-22LV	32	27.10	73 1/4"	MSP-70-255	MSP-70-255LV	38	30.25
MSP-77-22	MSP-77-22LV	34	29.30	80 1/4"	MSP-77-255	MSP-77-255LV	40	32.20

## ALUMINUM PLEXIGLASS DOOR

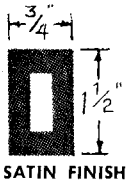
Satin finish aluminum with 1/4" thick Plexiglass. Aluminum handle and magnetic catch assembled to frame at factory.

Cat. No.	To Fit Frame No.	Net Price
MPD-42	MSF-42-22 & 42-255	\$ 99.00
MPD-52	MSF-52-22 & 52-255	109.00
MPD-61	MSF-61-22 & 61-255	119.00
MPD-70	MSF-70-22 & 70-255	129.00
MPD-77	MSF-77-22 & 77-255	139.00

Doors available in other heights when used with Aluminum Blower Grille (AG Series) when standard doors listed above do not fit.



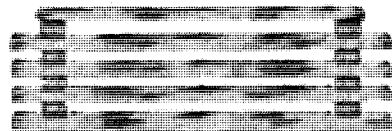
## ALUMINUM TRIM



Neatly designed Aluminum Vertical Trim for a shadow box effect, attaches to the front edge of End Panels. When ordering End Panels, add suffix "T" to catalog number, so that panel may be prepared for trim. Example — 2 MSP-61-22-T. Horizontal Trim attaches to top of frame front. When ordering Frames, add suffix "T" to catalog number so that frame may be prepared for trim. NOTE: Horizontal trim should not be ordered if using Front Door, MDF Series

VERTICAL TRIM			HORIZONTAL TRIM		
Cat. No.	To Fit	Net Price	Cat. No.	To Fit	Net Price
AVT-21	MSP-21-22T, 21-255T	\$10.80	AHT-19	Single 22" Wide Frame	\$8.80
AVT-28	MSP-28-22T, 28-255T	13.60	AHT-24	Single 27" Wide Frame	10.80
AVT-42	MSP-42-22T, 42-255T	19.20	AHT-38	Two 22" Wide Frames Side by side	17.60
AVT-52	MSP-52-22T, 52-255T	23.20	AHT-48	Two 27" Wide Frames side by side	21.60
AVT-61	MSP-61-22T, 61-255T	26.80			
AVT-70	MSP-70-22T, 70-255T	30.40			
AVT-77	MSP-77-22T, 77-255T	33.20			

## ALUMINUM BLOWER GRILLE



Snaps into position — easily removable. Aluminum extrusions assembled to steel frame. Satin finish Aluminum.

Cat. No.	Height	Width	Net Price
AG-519	5 1/4"	19"	\$30.00
AG-719	7"	19"	33.00
AG-819	8 3/4"	19"	36.00
AG-1019	10 1/2"	19"	39.00

## ORDERING GUIDE For Aluminum Trim, See Listings Above

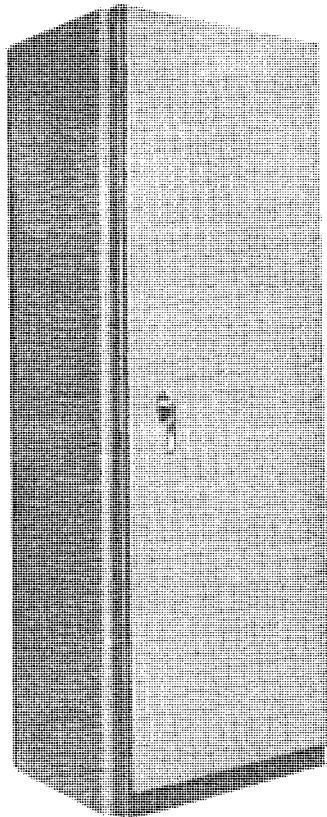
Frame Cat. No.	Use End Panel Cat. No.	Use Louvred End Panel Cat. No.	Use Door Cat. No.	Use Louvred Door* Cat. No.	Use Chassis Support Angle (Page 7) Cat. No.	Use Shelf (Page 7) Cat. No.	
MSF-42-22	MSP-42-22	MSP-42-22LV	MDF-42	MDF-42LV	CSA-22	S-22-22	
MSF-52-22	MSP-52-22	MSP-52-22LV	MDF-52	MDF-52LV	CSA-22	S-22-22	
MSF-61-22	MSP-61-22	MSP-61-22LV	MDF-61	MDF-61LV	CSA-22	S-22-22	
MSF-70-22	MSP-70-22	MSP-70-22LV	MDF-70	MDF-70LV	CSA-22	S-22-22	
MSF-77-22	MSP-77-22	MSP-77-22LV	MDF-77	MDF-77LV	CSA-22	S-22-22	
MSF-42-255	MSP-42-255	MSP-42-255LV	MDF-42	MDF-42LV	CSA-255	S-22-255	
MSF-52-255	MSP-52-255	MSP-52-255LV	MDF-52	MDF-52LV	CSA-255	S-22-255	
MSF-61-255	MSP-61-255	MSP-61-255LV	MDF-61	MDF-61LV	CSA-255	S-22-255	
MSF-70-255	MSP-70-255	MSP-70-255LV	MDF-70	MDF-70LV	CSA-255	S-22-255	
MSF-77-255	MSP-77-255	MSP-77-255LV	MDF-77	MDF-77LV	CSA-255	S-22-255	

\* When ordering Louvered Doors, specify left or right hand hinging.

# PREMIER MODULAR Square Cornered FRAMES



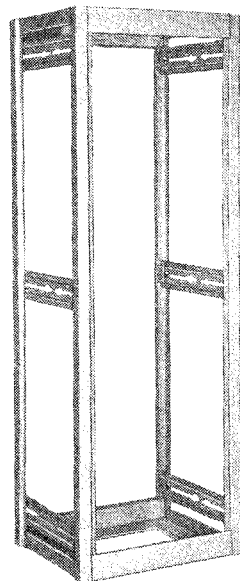
**18" and 24" DEEP For 19", 24" and 30" PANELS**



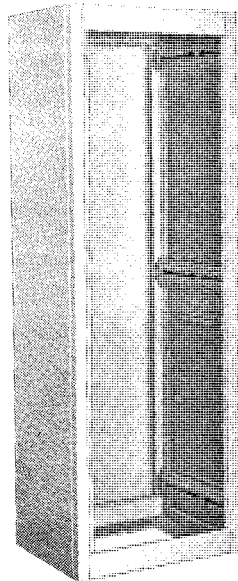
Above unit consists of Frame (PRXA Series), Rounded Side Panels (SP Series) and Door (DF Series)

- DESIGNED FOR MULTIPLE INSTALLATIONS
- TOPS of FRONT and REAR are SQUARE
- FRAMES ACCOMMODATE FLUSH SIDE PANELS (FL Series) or ROUNDED SIDE PANELS (SP Series)

- Frame made of No. 14 gauge steel.
- Supplied with two pair of No. 12 gauge steel Panel Mounting Angles. Both legs of the angle are tapped 10-32 on E.I.A. spacings (5/8-5/8-1/2) to accommodate Front Panels & Chassis Support Angles (CSA series).
- Panel mounting angles are held in place at three points by 3/8" carriage bolts and are adjustable to any desired position by means of channel slides.
- Frame completely welded throughout.
- Top of frame is solid. Round hole and 5 mounting holes on top of frame to accommodate Exhaust (EF Series) and Intake (IF Series) Fans, available at additional cost.
- Knockouts supplied on sides of uprights for use in ganging frames.
- A rectangular cutout is provided in bottom for leads, etc.
- Rectangular knockouts provided on front and rear of uprights of frame to accommodate hinge and handle brackets, so that door can be mounted either left or right hand. Doors can be mounted to front or rear of frame.
- Holes punched in bottom to accommodate CA-4 (2"), CA-5 (3") and CA-6 (double 2") casters.
- Finished in Gray Hammertone.



PRXA FRAME



Above unit consists of Frame (PRXA Series), Flush Side Panels (FL Series) and Door (DF Series)

## FRAMES

18" DEEP			22" WIDE		24" DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price
PRXA-36	40	\$42.50	42 7/8"	36 3/4" x 19"	PRXA-36-24	50	\$62.50
PRXA-42	48	46.80	48 1/8"	42 x 19"	PRXA-42-24	58	70.80
PRXA-52	60	57.60	58 5/8"	52 1/2 x 19"	PRXA-52-24	72	78.00
PRXA-61	70	71.70	67 3/8"	61 1/4 x 19"	PRXA-61-24	85	99.54
PRXA-70	88	86.76	76 1/8"	70 x 19"	PRXA-70-24	108	118.56
PRXA-77	100	88.56	83 1/8"	77 x 19"	PRXA-77-24	120	126.00

18" DEEP			27" WIDE		24" DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price
PRXA-2761	100	80.58	67 3/8"	61 1/4 x 24"	PRXA-2761-24	134	112.38
PRXA-2770	104	95.58	76 1/8"	70 x 24"	PRXA-2770-24	140	123.00
PRXA-2777	116	100.20	83 1/8"	77 x 24"	PRXA-2777-24	156	128.76

18" DEEP			33" WIDE		24" DEEP		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Panel Space	Cat. No.	Shpg. Wt. Lbs.	Net Price
PRXA-3361	122	85.56	67 3/8"	61 1/4 x 30"	PRXA-3361-24	162	118.80
PRXA-3370	126	109.14	76 1/8"	70 x 30"	PRXA-3370-24	169	140.64
PRXA-3377	142	110.76	83 1/8"	77 x 30"	PRXA-3377-24	190	143.52

## ORDERING GUIDE

**Modifications Available**  
For Customized Requirements

**FOR PRXA FRAMES**

- Louvres, cutouts or holes in top.
- Solid bottom — no cut-out.
- Base can be supplied inverted.
- Omission of rectangular KO's on uprights.
- Opening in top with 1/2" recess for mounting a panel.
- Provisions for eye bolts in top.
- Provisions for mounting special size casters.
- Provision for rubber gasketing and filters.
- Panel mounting angles can be supplied copper plated .0005".
- Special finishes available.

FRAME Cat. No.	ROUNDED SIDE PANEL (Page 11) Cat. No.	FLUSH SIDE PANEL (Page 11) Cat. No.	Use DOOR (Page 11) Cat. No.	Use CHASSIS SUPPORT ANGLE (Page 7)	Use SHELF (Page 7)	Use CHASSIS SLIDES (Pages 25, 26, 27)
PRXA-36	SP-36	FL-36	DF-36	CSA-18	S-2218	16"
PRXA-42	SP-42	FL-42	DF-42	CSA-18	S-2218	16"
PRXA-52	SP-52	FL-52	DF-52	CSA-18	S-2218	16"
PRXA-61	SP-61	FL-61	DF-61	CSA-18	S-2218	16"
PRXA-70	SP-70	FL-70	DF-70	CSA-18	S-2218	16"
PRXA-77	SP-77	FL-77	DF-77	CSA-18	S-2218	16"
PRXA-36-24	SP-36-24	FL-36-24	DF-36	CSA-24	S-2224	22"
PRXA-42-24	SP-42-24	FL-42-24	DF-42	CSA-24	S-2224	22"
PRXA-52-24	SP-52-24	FL-52-24	DF-52	CSA-24	S-2224	22"
PRXA-61-24	SP-61-24	FL-61-24	DF-61	CSA-24	S-2224	22"
PRXA-70-24	SP-70-24	FL-70-24	DF-70	CSA-24	S-2224	22"
PRXA-77-24	SP-77-24	FL-77-24	DF-77	CSA-24	S-2224	22"
PRXA-2761	SP-61	FL-61	DF-2761	CSA-18	S-2718	16"
PRXA-2770	SP-70	FL-70	DF-2770	CSA-18	S-2718	16"
PRXA-2777	SP-77	FL-77	DF-2777	CSA-18	S-2718	16"
PRXA-2761-24	SP-61-24	FL-61-24	DF-2761	CSA-24	S-2724	22"
PRXA-2770-24	SP-70-24	FL-70-24	DF-2770	CSA-24	S-2724	22"
PRXA-2777-24	SP-77-24	FL-77-24	DF-2777	CSA-24	S-2724	22"
PRXA-3361	SP-61	FL-61	DF-3361	CSA-18	S-3318	16"
PRXA-3370	SP-70	FL-70	DF-3370	CSA-18	S-3318	16"
PRXA-3377	SP-77	FL-77	DF-3377	CSA-18	S-3318	16"
PRXA-3361-24	SP-61-24	FL-61-24	DF-3361	CSA-24	S-3324	22"
PRXA-3370-24	SP-70-24	FL-70-24	DF-3370	CSA-24	S-3324	22"
PRXA-3377-24	SP-77-24	FL-77-24	DF-3377	CSA-24	S-3324	22"

ALL PRICES F.O.B. BRONX, N. Y. 10474 PREMIER PAGE 10 SEE PGS. 23, 24, 25, 26 & 27 FOR HANDLES, SLIDES, BLOWERS & FAN

# PREMIER

# PANELS AND DOORS

**ROUNDED SIDE PANELS FOR PRXA FRAMES**  
 Made of No. 16 Gauge Steel Finished in Gray Hammertone  
**1 1/2" DEEP**

15" WIDE FOR 18" DEEP FRAMES				
Cat. No.	Size	Shpg. Wt. Lbs.	Net Price	
SP-36	42 3/4 x 15 x 1 1/2"	19	\$16.50	
SP-42	48 x 15 x 1 1/2"	20	17.40	
SP-52	58 1/2 x 15 x 1 1/2"	21	19.54	
SP-61	67 1/4 x 15 x 1 1/2"	23	22.62	
SP-70	76 x 15 x 1 1/2"	26	24.32	
SP-77	83 x 15 x 1 1/2"	28	26.15	

21" WIDE FOR 24" DEEP FRAMES				
Cat. No.	Size	Shpg. Wt. Lbs.	Net Price	
SP-36-24	42 3/4 x 21 x 1 1/2"	21	\$21.50	
SP-42-24	48 x 21 x 1 1/2"	22	22.44	
SP-52-24	58 1/2 x 21 x 1 1/2"	25	24.58	
SP-61-24	67 1/4 x 21 x 1 1/2"	28	27.12	
SP-70-24	76 x 21 x 1 1/2"	31	29.18	
SP-77-24	83 x 21 x 1 1/2"	34	31.50	

**END PANELS — 1-11/32" DEEP FOR FA FRAMES**



- Made of one piece of 16 gauge steel.
- BALL CORNERED.
- End panels attach to frame by means of a bracket on bottom and held securely by two captive screws on top.
- Panels supplied blank. Louvres furnished at no additional charge.
- Finished in Brown Hammertone.

22" WIDE				25 1/2" WIDE		
Cat. No.	Shpg. Wt. Lbs.	Net Price	Hgt.	Cat. No.	Shpg. Wt. Lbs.	Net Price
CEP-42-22	23	\$18.90	45 1/4"	CEP-42-255	28	\$22.05
CEP-52-22	27	22.70	55 3/4"	CEP-52-255	32	25.85
CEP-61-22	30	25.20	64 1/2"	CEP-61-255	35	27.75
CEP-70-22	33	27.10	73 1/4"	CEP-70-255	38	30.25
CEP-77-22	35	29.30	80 1/4"	CEP-77-255	40	32.20

**DOORS FOR FS, FA and PRXA FRAMES**  
**13/16" DEEP**

- Made of No. 16 gauge steel
- Doors can be mounted either left or right hand by rotating door 180°
- Doors supplied blank. Louvres furnished at no additional charge
- Doors hung on slip jointed hinges and equipped with locking handle and 2 keys
- Door mounted to frame by 3 removable hinge brackets, permitting the door to be mounted either left or right hand. Handle latch bracket also supplied
- Finished in Gray Hammertone.
- Specify hinged-side when doors are furnished louvred.

21 1/2" WIDE				26 1/2" WIDE			
Cat. No.	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Shpg. Wt. Lbs.	Net Price	Height
DF-36	17	\$25.00	40 3/4"	DF-2736	23	\$30.00	42 3/4"
DF-42	20	26.40	45 1/8"	DF-2742	26	32.40	47 1/2"
DF-52	25	29.40	56 1/4"	DF-2752	31	35.40	58 1/2"
DF-61	28	33.60	64 3/8"	DF-2761	34	39.60	66 1/2"
DF-70	31	36.00	73 1/8"	DF-2770	38	43.50	75 1/2"
DF-77	34	38.40	80 1/8"	DF-2777	41	45.00	82 1/2"

**32 1/2" WIDE (DOUBLE DOORS with 3 Point Locking Device)**

Cat. No.	Shpg. Wt. Lbs.	Height	Net Price	Cat. No.	Shpg. Wt. Lbs.	Height	Net Price	Cat. No.	Shpg. Wt. Lbs.	Height	Net Price
DF-3361	40	64 3/8"	\$45.00	DF-3370	45	73 3/8"	\$50.50	DF-3377	48	80 3/8"	\$54.00

**FLUSH SIDE PANELS FOR PRXA FRAMES — 1/2" DEEP**

15" WIDE for 18" DEEP FRAMES					21" WIDE for 24" DEEP FRAMES				
Cat. No.	To Fit Frame No.	Shpg. Wt. Lbs.	Net Price Each	Height	Cat. No.	To Fit Frame No.	Shpg. Wt. Lbs.	Net Price Each	Height
FL-36	PRXA-36	18	\$14.75	42 3/4"	FL-36-24	PRXA-36-24	20	\$19.75	42 3/4"
FL-42	PRXA-42	19	15.66	48"	FL-42-24	PRXA-42-24	21	20.46	48"
FL-52	PRXA-52	21	17.72	58 1/2"	FL-52-24	PRXA-52-24	24	22.50	58 1/2"
FL-61	PRXA-61, 2761, 3361	22	20.64	67 1/4"	FL-61-24	PRXA-61-24, 2761-24, 3361-24	27	24.90	67 1/4"
FL-70	PRXA-70, 2770, 3370	25	22.26	76"	FL-70-24	PRXA-70-24, 2770-24, 3370-24	30	26.88	76"
FL-77	PRXA-77, 2777, 3377	27	24.00	83"	FL-77-24	PRXA-77-24, 2777-24, 3377-24	33	29.00	83"

- Fits into side recess of frame.
- Made of one piece of No. 16 gauge steel.
- Clips on to horizontal side section of frame. Finished in Gray Hammertone.

**END PANELS FOR SLOPED FRONT CONSOLE FRAME — 1-11/32" DEEP**

22" WIDE					25 1/2" WIDE				
End Panels	Used for Frame	Shpg. Wt. Lbs.	Net Price		End Panels	Used for Frame	Shpg. Wt. Lbs.	Net Price	
CEP-1201 LH	Left side FS-1001 & 1003	20	\$22.62		CEP-1201-255 LH	Left side FS-1001-255 & 1003-255	22	\$22.75	
CEP-1201 RH	Right side FS-1001 & 1003	20	22.62		CEP-1201-255 RH	Right side FS-1001-255 & 1003-255	22	22.75	
CEP-1202 LH	Left side FS-1002 & 1004	18	18.90		CEP-1202-255 LH	Left side FS-1002-255 & 1004-255	20	19.50	
CEP-1202 RH	Right side FS-1002 & 1004	18	18.90		CEP-1202-255 RH	Right side FS-1002-255 & 1004-255	20	19.50	

- Ball Cornered.
- Made of 1 Pc. No. 18 Gauge Steel.
- End Panels Attached to Frame by Means of a Bracket on Bottom & Held Securely by 2 Captive Screws on Top.
- Supplied Blank; Louvres Furnished at No Additional Charge.
- Finished in Brown Hammertone.

**END PANELS FOR PEDESTAL FRAMES**

- Made of one piece of No. 18 gauge steel.
- Finished in Brown Hammertone. Also available in Gray Hammertone. Please specify.
- For easy installation and access, the end panels attach to pedestal frame CPF Series by means of 2 brackets on bottom and held securely with 2 captive screws on top.

**END PANEL 1-11/32" DEEP**

Cat. No.	Width*	Height	For use with	Shpg. Wt. Lbs.	Net Price
CEP-401	22"	26"	CPF-101 & 103	17	\$15.75
CEP-402	22"	33"	CPF-102 & 104	20	18.90
CEP-401-34	34 1/4"	26"	CPF-101-34	22	20.80
CEP-401-255	25 1/2"	26"	CPF-101-255 & 103-255	21	17.50
CEP-402-255	25 1/2"	33"	CPF-102-255 & 104-255	24	19.00

**SHORT END PANEL — 1-11/32" DEEP**

Used only when work top is mounted between 2 pedestal frames.

Cat. No.	Width*	Height	For use with	Shpg. Wt. Lbs.	Net Price
CSS-701	22"	23"	CPF-101 & 103	15	\$10.00
CSS-701-34	34 1/4"	23"	CPF-101-34	18	13.20
CSS-701-255	25 1/2"	23"	CPF-101-255 & 103-255	17	12.00

# PREM-O-CUBE

# HEAVY DUTY CUBICLES



## FOR STANDARD 19, 24 and 30" WIDE PANELS

- Frame made of No. 12 gauge steel and supplied with 10-32 tapped holes on EIA spacings (5/8"-3/8"-1/2") on both legs of all vertical uprights.
- Top of frame supplied with knock-out in each corner to accommodate eye bolts for lifting.
- Top and side panels and doors made of No. 14 gauge steel and supplied with a return flange on all sides for easy gasketing.
- Doors and/or side panels can be mounted to any openings of frame.
- Finished in Green Kromotex. Also available in Grey Hammertone or Grey Kromotex. Specify when ordering.

### FRAMES 23" WIDE for 19" PANELS

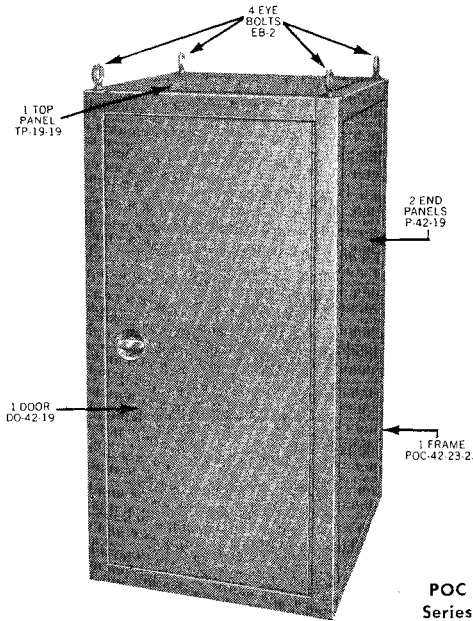
Overall Height	Panel Height	23" Deep Cat. No.	Net Price	28" Deep Cat. No.	Net Price	34" Deep Cat. No.	Net Price
40 3/4"	36 3/4"	POC-36-23-23	\$ 87.00	POC-36-23-28	\$ 92.00	POC-36-23-34	\$ 98.00
46"	42"	POC-42-23-23	92.00	POC-42-23-28	97.00	POC-42-23-34	103.00
65 1/4"	61 1/4"	POC-61-23-23	112.00	POC-61-23-28	117.00	POC-61-23-34	123.00
74"	70"	POC-70-23-23	120.00	POC-70-23-28	125.00	POC-70-23-34	131.00
81"	77"	POC-77-23-23	127.00	POC-77-23-28	132.00	POC-77-23-34	138.00
84 1/2"	80 1/2"	POC-80-23-23	131.00	POC-80-23-28	136.00	POC-80-23-34	142.00

### FRAMES 28" WIDE for 24" PANELS

Overall Height	Panel Height	28" Deep Cat. No.	Net Price	34" Deep Cat. No.	Net Price
40 3/4"	36 3/4"	POC-36-28-28	97.00	POC-36-28-34	103.00
46"	42"	POC-42-28-28	102.00	POC-42-28-34	108.00
65 1/4"	61 1/4"	POC-61-28-28	122.00	POC-61-28-34	128.00
74"	70"	POC-70-28-28	130.00	POC-70-28-34	136.00
81"	77"	POC-77-28-28	137.00	POC-77-28-34	143.00
84 1/2"	80 1/2"	POC-80-28-28	141.00	POC-80-28-34	147.00

### FRAMES 34" WIDE for 30" PANELS

Overall Height	Panel Height	34" Deep Cat. No.	Net Price
40 3/4"	36 3/4"	POC-36-34-34	109.00
46"	42"	POC-42-34-34	114.00
65 1/4"	61 1/4"	POC-61-34-34	134.00
74"	70"	POC-70-34-34	142.00
81"	77"	POC-77-34-34	149.00
84 1/2"	80 1/2"	POC-80-34-34	153.00



POC Series

## PANELS AND DOORS FOR PREM-O-CUBE FOR 19" WIDE

### HEAVY DUTY CUBICLES

#### END PANELS

Blank and Louvred — 3/4" DEEP. Made of No. 14 gauge steel with return bend for easy gasketing.

BLANK Cat. No.	Net Price	Height	LOUVRED Cat. No.	Net Price
P-36-19	\$22.40	36 3/4"	PL-36-19	\$30.40
P-42-19	24.40	42"	PL-42-19	32.40
P-61-19	32.40	61 1/4"	PL-61-19	40.40
P-70-19	35.60	70"	PL-70-19	43.60
P-77-19	38.40	77"	PL-77-19	46.40
P-80-19	40.00	80 1/2"	PL-80-19	48.00

#### FOR 24" WIDE

P-36-24	24.00	36 3/4"	PL-36-24	32.00
P-42-24	26.00	42"	PL-42-24	34.00
P-61-24	34.00	61 1/4"	PL-61-24	42.00
P-70-24	37.20	70"	PL-70-24	45.20
P-77-24	40.00	77"	PL-77-24	48.00
P-80-24	41.60	80 1/2"	PL-80-24	49.80

#### FOR 30" WIDE

P-36-30	26.80	36 3/4"	PL-36-30	34.80
P-42-30	28.80	42"	PL-42-30	36.80
P-61-30	36.80	61 1/4"	PL-61-30	44.80
P-70-30	40.00	70"	PL-70-30	48.00
P-77-30	42.80	77"	PL-77-30	50.80
P-80-30	44.40	80 1/2"	PL-80-30	52.40

#### FOR 19" WIDE

Blank	Net Price	Height	Width	Louvred	Net Price
DO-36-19	\$38.08	36 3/4"	19"	DOL-36-19	\$46.08
DO-36-24	40.80	36 3/4"	24"	DOL-36-24	48.80
DO-36-30	45.56	36 3/4"	30"	DOL-36-30	53.56
DO-42-19	41.48	42"	19"	DOL-42-19	49.48
DO-42-24	44.20	42"	24"	DOL-42-24	52.20
DO-42-30	48.96	42"	30"	DOL-42-30	56.96
DO-61-19	55.08	61 1/4"	19"	DOL-61-19	63.08
DO-61-24	57.80	61 1/4"	24"	DOL-61-24	65.80
DO-61-30	62.56	61 1/4"	30"	DOL-61-30	70.56
DO-70-19	60.52	70"	19"	DOL-70-19	68.52
DO-70-24	63.24	70"	24"	DOL-70-24	71.24
DO-70-30	68.00	70"	30"	DOL-70-30	76.00
DO-77-19	65.28	77"	19"	DOL-77-19	73.28
DO-77-24	68.00	77"	24"	DOL-77-24	76.00
DO-77-30	72.76	77"	30"	DOL-77-30	80.76
DO-80-19	68.00	80 1/2"	19"	DOL-80-19	76.00
DO-80-24	70.72	80 1/2"	24"	DOL-80-24	78.72
DO-80-30	75.48	80 1/2"	30"	DOL-80-30	83.48

#### DOORS

##### Blank and Louvred

- Made of No. 14 gauge steel
- Continuous hinge flush fitting
- Supplied with 3 point latching device and round flush handle

## ACCESSORIES FOR PREM-O-CUBE HEAVY DUTY CUBICLES

### TOP & BOTTOM PANELS

Size	Blank Cat. No.	Net Price	Louvred Cat. No.	Net Price
19x19"	TP-19-19	\$15.20	TPL-19-19	\$20.20
19x24"	TP-19-24	17.20	TPL-19-24	22.20
19x30"	TP-19-30	19.60	TPL-19-30	24.60
24x24"	TP-24-24	19.20	TPL-24-24	24.20
24x30"	TP-24-30	21.60	TPL-24-30	26.60
30x30"	TP-30-30	24.00	TPL-30-30	29.00

### PANEL MOUNTING ANGLES

12 gauge steel; tapped 10-32 on E.I.A. spacings

Length	Cat. No.	Net Price
36 3/4"	PMA 362-12	\$11.00
42"	PMA 422-12	13.20
61 1/4"	PMA 612-12	16.50
70"	PMA 702-12	18.50
77"	PMA 772-12	20.00
80 1/2"	PMA 802-12	21.00

### HORIZONTAL CROSS PIECES

Fits Frame Depth	Cat. No.	Net Price
23"	HCP-23	\$2.50
28"	HCP-28	3.00
34"	HCP-34	3.50

### ROLLER TRUCKS

with 4" Diameter Rockite Casters

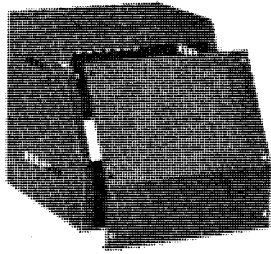
Size	Cat. No.	Net Price
23x23"	CRT 19-19	\$50.00
23x28"	CRT 19-24	52.00
23x34"	CRT 19-30	54.40
28x28"	CRT 24-24	54.00
28x34"	CRT 24-30	56.40
34x34"	CRT 30-30	58.80

### EYE BOLTS

2" Dia. — Cat. No. EB-2

Net Price — \$6.00 for 4

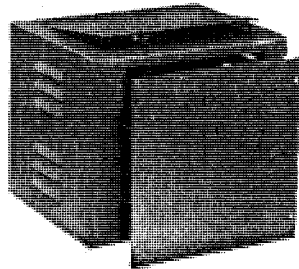
# PREMIER Standard PRECISION BUILT METAL HOUSINGS



**SLOPING FRONT**

Cabinet has rounded top corners and a removable front panel. Back of cabinet is perforated and has opening for leads. Constructed of #20 gauge steel. Finished in Blue-Gray Wrinkle.

Catalog No.	H.	W.	D.	Use Chassis No.	Ship. Lbs.	Net Price
SFC-500	8 x	8 1/8 x	8"	CH-403	6	\$4.90
SFC-501	8 x	10 1/8 x	8"	CH-404	7	5.45
SFC-502	8 x	14 1/8 x	8"	CH-406	8	5.84
SFC-503	9 x	18 1/8 x	8"	CH-409	10	8.38
SFC-504	12 x	18 1/8 x	12"	CH-415	14	10.70



**HINGED TOP ROUNDED CORNER TYPE**

Cabinet has front vertical rounded corners and a removable front panel. Back of cabinet is louvred and has opening for leads. Constructed of #20 gauge steel. Finished in Blue-Gray Wrinkle.

Catalog No.	H.	W.	D.	Panel Size	Use Chassis No.	Ship. Lbs.	Net Price
HTC-200	8x10 3/8	8"	8"	8x8"	CH-403	6	\$5.05
HTC-201	8x12 3/8	8"	8x10"	8x10"	CH-404	6 1/2	5.45
HTC-202	8x16 3/8	8"	8x14"	8x14"	CH-406	11	7.10
HTC-203	9x17 3/8	11"	9x15"	9x15"	CH-413	6 1/2	10.96
HTC-204	12x20 3/8	12"	12x18"	12x18"	CH-415	13 1/2	12.96
HTC-205	8x14 3/8	8"	8x12"	8x12"	CH-405	7 1/4	6.28

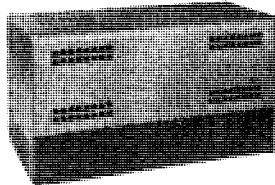
**INDUSTRIAL**

**DISCOUNT SCHEDULE**

Applies to any PREMIER products listed in this catalog.

If total order at net prices is:	DISCOUNT
Up to \$199.99	Net Price
\$200 to \$399.99	Net Less 10%
\$400 to \$549.99	Net Less 15%
\$550 to \$699.99	Net Less 20%
\$700 to \$999.99	Net Less 25%
\$1,000 to \$2,499.99	Net Less 30%
\$2,500 OR MORE	Net Less 33 1/3%

**AMPLIFIER FOUNDATIONS**



**STANDARD TYPE**

**STANDARD TYPE**

TOP COVER has perforations, rounded corners and is 6" high. Finishd in Blue-Gray Wrinkle.

CHASSIS constructed of one piece with corners spot-welded. Finished in Black Wrinkle.

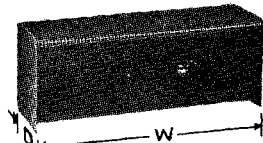
Cat. No.	Chassis Size	Ship. Wt. Lbs.	Net Price
AF-510	5" x 10" x 3"	5	\$5.05
AF-615	6" x 14" x 3"	7	5.85
AF-1017	10" x 17" x 3"	11	7.85
AF-1317	13" x 17" x 3"	13	8.43

**PERFORATED TYPE COVERS**

TOP COVER made of perforated steel and has rounded corners with solid ends. 6" high except PC-57\*. Finished in Blue-Gray Wrinkle. Supplied without chassis.

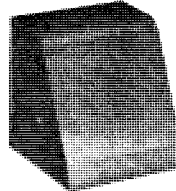
Cat. No.	W.	D.	Use Chassis No.	Ship. Lbs.	Net Price
*PC-57	7"	5"	ACH or CH-426	1	\$3.40
PC-510	10"	5"	ACH or CH-401	1 3/4	3.45
PC-615	14"	6"	ACH or CH-402	2 3/8	4.00
PC-717	17"	7"	ACH or CH-409	3	4.40
PC-1012	12"	10"	ACH or CH-412	3	4.50
PC-1017	17"	10"	ACH or CH-415	3 1/4	5.45

\* 4" high.



**PERFORATED TYPE COVERS**

**STEEL and ALUMINUM Sloping Panel Cabinets**



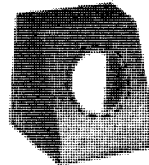
**ROUND TOP CORNERS WITH SLOPING FRONT**

No. 20 gauge Steel—Black Wrinkle Finish. No. 18 gauge (.040) Aluminum—Natural Aluminum finish.

Steel Cat. No.	W.	D.	H.	Ship. Wt. Lbs.	Net Price	Alum. Cat. No.	Net Price
SPC-1200	4 3/8	4 1/8	4 3/8	3/4	\$1.20	ASPC-1200	1.51
SPC-1201	5 3/8	4 1/8	4 3/8	1	1.36	ASPC-1201	1.71
SPC-1202	6 3/8	4 1/8	4 3/8	1	1.54	ASPC-1202	1.94
SPC-1203	7 3/8	4 1/8	4 3/8	1 1/2	1.86	ASPC-1203	2.33

**2 in 1 STEEL & ALUMINUM METER CASES**

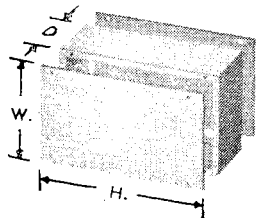
Center Hole for 2" meter (2-3/16" dia.) increases to 3" (2-13/16" dia.) meter hole by simply removing a knock-out. Size: 4 3/8 x 4 3/8 x 4 3/8". Supplied with two 1/2" dia. knockouts. #20 gauge steel—Black Wrinkle Finish, #18 gauge (.040) Aluminum — Natural Aluminum Finish.



**ALUMINUM STEEL**

Cat. No.	Sh. Wt.	Net Price
ASPC-23	3/4	\$1.66
SPC-23	3/4	1.40

**UTILITY CASES**



**ALUMINUM**

Constructed of #16 ga. (.051) aluminum with 1/2" flanged edges, spot welded corners and two removable flat covers. Natural Aluminum finish or Gray Hammertone.

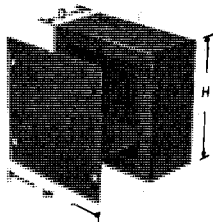
Natural Aluminum Cat. No.	Net Price	Size H. W. D.	Ship. Wt. Lbs.	Gray Hammertone Cat. No.	Net Price
AC-442	\$1.40	4 4 2"	1/2	PAC-442	\$1.55
AC-453	1.54	4 5 3"	3/4	PAC-453	1.78
AC-564	1.82	5 6 4"	1	PAC-564	2.25
AC-596	3.00	5 9 6"	1 1/2	PAC-596	3.40
AC-666	2.10	6 6 6"	1 1/2	PAC-666	2.35
AC-1276	4.10	12 7 6"	2 1/4	PAC-1276	4.55
AC-1597	5.65	15 9 7"	3 1/2	PAC-1597	6.25
AC-695	3.00	6 9 5"	1 1/2	PAC-695	3.40

**STEEL**

Constructed of #20 ga. sheet steel with 1/2" flanged edges, spot welded corners, and two removable flat covers. Finished in Black Wrinkle.

Catalog No.	H.	W.	D.	Ship. Wt. Lbs.	Net Price
C-442	4"	4"	2"	7/8	\$1.05
C-453	4"	5"	3"	1 1/4	1.25
C-564	5"	6"	4"	1 3/4	1.45
C-596	5"	9"	6"	3	2.25
C-666	6"	6"	6"	2 1/4	2.00
C-695	6"	9"	5"	3	2.25
C-754	7"	5"	4"	2	1.60
C-8101	10"	10"	8"	6	3.75
C-1276	12"	7"	6"	4 1/2	3.15

**STEEL UTILITY CASES WITH CHASSIS ATTACHED**

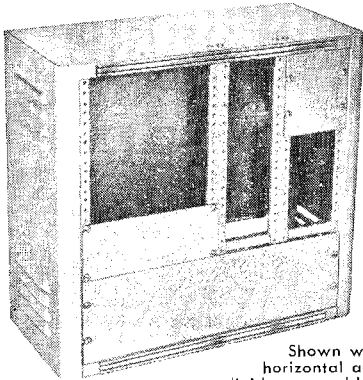


Made of #20 gauge steel with a chassis spot welded to front panel. Front and rear panels are removable. Finished in black wrinkle.

Catalog No.	Height	Width	Depth	Chassis Size	Ship. Wt. Lbs.	Net Price
CA-1400	4"	4"	2"	1 x 2 7/8 x 1 7/8"	1	\$1.35
CA-1401	4"	5"	3"	1 x 3 7/8 x 2 7/8"	1 1/4	1.60
CA-1402	5"	4"	3"	1 1/4 x 2 7/8 x 2 7/8"	1 1/4	1.60
CA-1403	6"	5"	4"	1 3/4 x 3 7/8 x 3 7/8"	2	2.00
CA-1404	5"	6"	4"	1 1/4 x 4 7/8 x 3 7/8"	2	2.00
CA-1405	6"	6"	6"	1 3/4 x 4 7/8 x 5 7/8"	3	2.10

ALL PRICES F.O.B. BRONX, N. Y. 10474

# PREMIER Standard PRECISION BUILT METAL HOUSINGS



MDK Series

Shown with panels, horizontal and vertical dividers assembled.

## MODU-RAK<sup>®</sup>



### 12" DEEP MINIATURE DESK RACKS

for modular construction of test equipment

FOR STANDARD 19" RACK PANELS

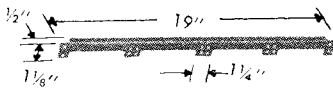
- Front vertical corners are rounded and the top and bottom are trimmed with red striped chrome moulding.
- Rigidly constructed of No. 16 gauge cold rolled sheet steel.
- Panels fit into a recess so that the edges are not exposed.

21 3/4" WIDE x 12" DEEP					
	Catalog No.	Overall Height	Available Panel-Space	Ship. Wt. Lbs.	Net Price
WITH REMOVABLE REAR PANEL	MDK-50	7"	5 1/4 x 19"	16	\$11.25
	MDK-70	8 3/4"	7 x 19"	20	11.65
	MDK-80	10 1/2"	8 3/4 x 19"	21	12.35
	MDK-100	12 1/4"	10 1/2 x 19"	23	14.20
	MDK-120	14"	12 1/4 x 19"	25	15.50
MDK-140	15 3/4"	14 x 19"	29	17.50	
WITH REAR DOOR	MDK-170	19 1/4"	17 1/2 x 19"	36	21.25
	MDK-210	22 3/4"	21 x 19"	39	23.15
	MDK-260	28"	26 1/4 x 19"	40	25.35
	MDK-280	29 3/4"	28 x 19"	41	27.35

- Panel mounting holes are tapped for 10-32 machine screws on E.I.A. Spacings (5/8-5/8-1/2")
- 6 knock-out holes are provided on top and bottom of MDK-70 through MDK 280 series to accommodate angle brackets (Cat. No. AB-2).
- Rear doors have snap catches.
- Bolts are not visible from the outside and these units have the same appearance as the welded models.
- FINISHED IN GRAY HAMMERTONE
- SHIPPED KNOCKED-DOWN WITH ALL NECESSARY HARDWARE FOR EASY ASSEMBLY

### ACCESSORIES FOR SUBDIVIDING MODU-RAK INTO MODULAR UNITS

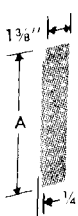
#### HORIZONTAL DIVIDERS



- Holes punched to accommodate vertical dividers (DV Series) which subdivides MODU-RAK into 9 1/2" and 4 3/4" widths.
- Made of No. 16 gauge steel.
- Finished in gray hammertone.

Catalog No.	Dimensions	Net Price
DH-19	19" x 1 1/8"	\$3.42
DH-95	9 1/2" x 1 1/8"	2.80

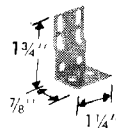
#### VERTICAL DIVIDERS



- Two rows of 10-32 tapped holes punched on E.I.A. Spacings.
- Made of No. 16 gauge steel.
- Finished in gray Hammertone.

Cat. No.	"A" Available Panel Mtg. Space	Net Price
DV-5	5 1/4"	\$0.95
DV-7	7"	1.30
DV-8	8 3/4"	1.60
DV-10	10 1/2"	1.95
DV-12	12 1/4"	2.05
DV-14	14"	2.25
DV-17	17 1/2"	2.95
DV-21	21"	3.60
DV-26	26 1/4"	4.45
DV-28	28"	4.70

#### ANGLE BRACKETS



- Punched to accommodate vertical dividers.
- Made of No. 16 gauge steel.
- Finished in gray hammertone.

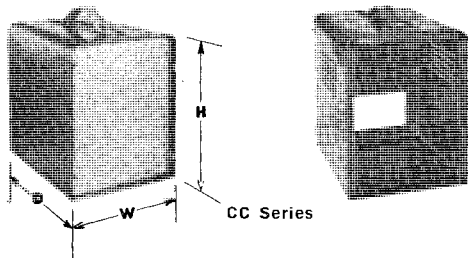
Cat. No.	Net Price	sold in pairs only
AB-2	\$1.09 pr.	



## COMPACT CABINETS

With ROUNDED CORNERS ON BOTH FRONT AND REAR OF TOP

"Customized" Design for Instrumentation



CC Series

#### FEATURES

- DISTINCTIVE NEW STYLING • COMPLETE VERSATILITY
- ECONOMICAL • SIX SIZES
- STURDY STEEL BODY

#### MODIFICATIONS AVAILABLE

- Louvres on sides
- Holes and cutouts in body and panel
- Special sizes
- Special finishes

#### SPECIFICATIONS

- Body made of 20 gauge steel • Front Panel made of .064 aluminum • Recessed Handle supplied on top • Perforated Sides for ventilation • Base supplied with four rubber feet • Panel fits into 1/2" recess • Two-inch opening in rear for leads • Finished in two tone Metallic Grey Enamel; Body — dark grey metallic; Front panel — light grey metallic • Supplied with necessary screws for assembly • Welded construction

Cat. No.	Depth	Width	Height	Use Chassis	Wt. in Lbs.	Net Price
CC-2000	8"	6 1/8"	8"	ACH 426 5 x 7 x 2	4	\$8.35
CC-2001	8"	8 1/8"	8"	ACH 403 7 x 7 x 2	5	9.10
CC-2002	8"	10 1/8"	8"	ACH 404 7 x 9 x 2	6	9.75
CC-2003	12"	8 1/8"	9"	ACH 405 7x11x2	7	10.60
CC-2004	18"	11 1/8"	11"	ACH 415 10x17x3	10	12.70
CC-2005	18"	14 1/8"	12"	ACH 423 13x17x3	11	14.50

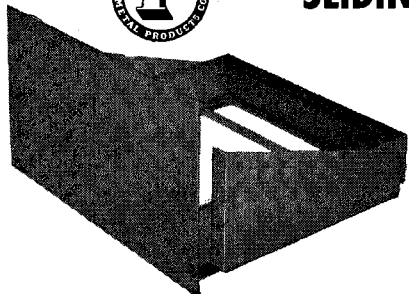
ALL PRICES F.O.B. BRONX, N. Y. 10474



# PREMIER RACK ACCESSORIES



## SLIDING DRAWERS TO FIT STANDARD 19" RACKS 15" AND 18" DEEP



Panel made of #12 gauge steel; chassis of #16 steel and has a 1" flange on top and bottom to accommodate plywood for the record changer. The chassis is mounted on ball-bearing suspension slides which can sustain 40 lbs. Drawer extends 11" from front of cabinet. Entire unit mounts on angle brackets which can be bolted on to the cabinet. Supplied knocked down with all necessary bolts for easy assembly. Locks in place by means of 2 latches. Finished in Black or Blue-Gray wrinkle, and Gray or Brown Hammertone.

**SPECIFY COLOR WHEN ORDERING.**

Catalog No.	Will Fit Rack No.	Panel Size	Chassis Size W. D. H.	Ship. Wt. Lbs.	Net Price
RD-10	R, RS, DCR-18, SDR-18, RMA & FD Models	10 <sup>3</sup> / <sub>8</sub> " x 18 <sup>3</sup> / <sub>8</sub> "	17" x 16" x 3"	15	\$17.25
RD-12		12 <sup>1</sup> / <sub>8</sub> " x 18 <sup>3</sup> / <sub>8</sub> "	17" x 16" x 4"	18	19.15
RD-10-14	DCR, SDR, DRK, RMA & FD	10 <sup>3</sup> / <sub>8</sub> " x 18 <sup>3</sup> / <sub>8</sub> "	17" x 14" x 3"	14 <sup>1</sup> / <sub>2</sub>	17.10
RD-12-14		R, RS, DCR-18, SDR-18 Models	12 <sup>1</sup> / <sub>8</sub> " x 18 <sup>3</sup> / <sub>8</sub> "	17" x 14" x 4"	17

## FRONT DOORS TO FIT STANDARD 19" DESK RACK CABINETS AND ENCLOSED RACKS

Constructed from one piece of #16 gauge steel. Two concealed piano hinges are provided with holes, punched to accommodate E.I.A. spacings and are made to fit on top of the panels. Supplied with cylinder lock and cam bracket to hold door in position. All necessary bolts furnished for easy assembly. All doors are 20<sup>1</sup>/<sub>2</sub>" wide x 1<sup>1</sup>/<sub>4</sub>" deep. Finished in Black or Blue Gray Wrinkle, Gray or Brown Hammertone.

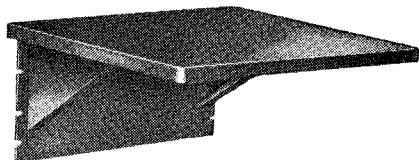
**SPECIFY COLOR WHEN ORDERING.**



FD-300-306  
MODELS

Cat. No.	Will Fit Rack No.	Height	Ship. Wt. Lbs.	Net Price
FD-300	DCR, DRK, SDR, 18260	26 <sup>1</sup> / <sub>4</sub> "	10	\$14.66
FD-301	DCR, DRK, SDR, 18310	31 <sup>1</sup> / <sub>2</sub> "	11	17.04
FD-302	DCR, DRK, SDR, 18350	35"	12	19.00
FD-303	DCR, DRK, SDR, 18120	12 <sup>1</sup> / <sub>4</sub> "	6	11.05
FD-304	DCR, DRK, SDR, 18140	14"	7	12.00
FD-305	DCR, DRK, SDR, 18170	17 <sup>1</sup> / <sub>2</sub> "	8	13.04
FD-306	DCR, DRK, SDR, 18210	21"	9	14.04

## DESK PANELS



- Made of No. 16 gauge steel and bolted to a standard steel panel 10<sup>1</sup>/<sub>2</sub>" x 19".
- Front corners are rounded.
- Finished in BLACK or Blue-Gray Enamel Gray or Brown Hammertone.
- SHIPPED KNOCKED DOWN WITH ALL NECESSARY HARDWARE FOR EASY ASSEMBLY.

Cat. No.	Width	Depth	Ship. Wt. Lbs.	Net Price
DP-1016	22"	16"	20	\$17.90
DP-1020	22"	20"	22	18.30

## RACK SHELVES

Made of one piece of #16 Ga. Cold Rolled Steel, 1" high. Holes are punched on sides for mounting to rack. Finished in Black or Blue-Gray Wrinkle, Gray or Brown Hammertone.

**SPECIFY COLOR WHEN ORDERING.**



Cat. No.	Will Fit Rack No.	Shelf Size	Shp. Wt. Lbs.	Net Price
RS-1106	All 15 <sup>1</sup> / <sub>4</sub> " SDR and DCR Racks	12x21 <sup>3</sup> / <sub>8</sub> "	7	\$3.10
RS-1107	R, RS, DR, 18" deep RMA Racks	15x21 <sup>3</sup> / <sub>8</sub> "	7	3.85
RS-1108	18" deep FD Racks	13x21 <sup>3</sup> / <sub>8</sub> "	7	3.50
RS-1110	For 27" wide - 24" deep Racks (RMA-27 and FD-27 Series)	22x26 <sup>3</sup> / <sub>8</sub> "	8	7.26
RS-1111	MDK Series - 21 <sup>3</sup> / <sub>4</sub> " wide	10x21 <sup>3</sup> / <sub>8</sub> "	6	3.00
RS-1112	For 22" wide - 24" deep Racks (RMA, FD Series)	22x21 <sup>3</sup> / <sub>8</sub> "	7	6.20
RS-1113	18" deep DCR & SDR Racks	16x21 <sup>3</sup> / <sub>8</sub> "	7	3.95

Made of #12 gauge steel. Finished in black enamel. Sold in pairs only.

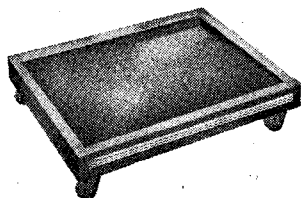
## CHASSIS SUPPORTS

Cat. No.	Size	Ship. Wt. Lbs.	Net Price
CS-12	12 x 3 x 3"	4	\$2.15
CS-14	14 <sup>1</sup> / <sub>2</sub> x 3 x 3"	5 <sup>1</sup> / <sub>4</sub>	2.35

## ROLLER TRUCKS FOR RACKS

Made from 1 piece of No. 16 ga. Cold Rolled Steel. Supplied with either 2" or 3" diameter casters and bolts for easy assembly. Finished in Black or Blue-Gray Wrinkle, Gray or Brown Hammertone with a red striped chrome molding.

**SPECIFY COLOR WHEN ORDERING.**



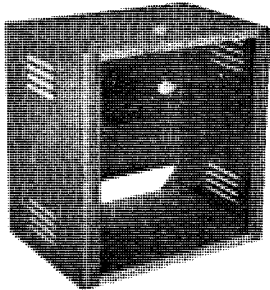
With 2" Dia Casters Cat. No.	Ship. Wt. lbs.	Net Price	Will Fit Rack No.	Inside Dimensions	With 3" Dia. Casters Cat. No.	Ship. Wt. lbs.	Net Price
RT-1100	22	\$10.45	All 15 <sup>1</sup> / <sub>4</sub> " Racks	15 <sup>3</sup> / <sub>4</sub> x 22 <sup>1</sup> / <sub>4</sub> "	RT-1100-3	24	\$15.70
RT-1101	22	13.20	R, RS, DR, 18" deep FXR, RMA, FD, DCR and SDR Racks	18 <sup>3</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> "	RT-1101-3	24	18.45
RT-1103	23	16.38	24" deep FD and RMA Racks	22 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> "	RT-1103-3	25	21.65
RT-1110	25	24.50	RMA-27 and FD-27 Series	27 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> "	RT-1110-3	27	30.00
RT-1111	30	31.50	RMA-7030	33 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> "	RT-1111-3	32	36.75

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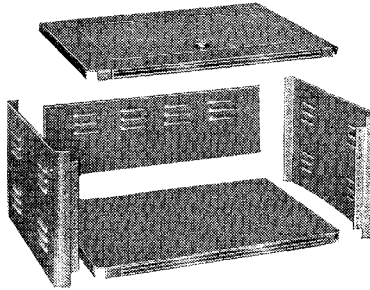
PREMIER PAGE 15

# PREMIER DESK CABINET RACKS

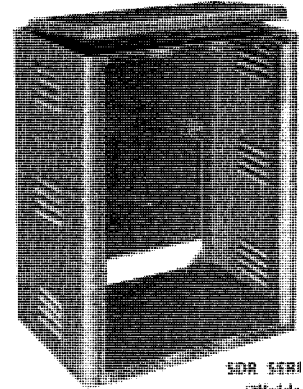
IN WELDED AND KNOCKED DOWN MODELS —  
BOTH 15 1/4" AND 18" DEEP



DCR SERIES (A)  
(Welded)



DRK SERIES (B)  
(Knocked Down)



SDR SERIES (C)  
(Welded)

**MODIFICATIONS AVAILABLE FOR CUSTOMIZED REQUIREMENTS**

- Omission of Chrome mouldings and moulding holes.
- Weld Drop Handles (HW-5) on sides.
- Perforated top door.
- Omission of louvres on sides and/or rear door.
- Solid top — no door.
- Cut outs or holes on sides, top, rear and base.
- Special finishes.

- Front vertical corners are rounded and the top and bottom are trimmed with red striped chrome finished moulding.
- Rigidly constructed of No. 16 Ga. cold rolled sheet steel.
- Panels fit into a 1/4" recess so that the edges are not exposed.
- Round hole and 5 mounting holes on top of frame to accommodate Exhaust (EF Series) and Intake (IF Series) Fans, available at additional cost.
- Panel mounting holes are tapped for 10-32 machine screws on E.I.A. Spacings (5/8-5/8-1/2).
- Piano type hinges are used on the top doors, which are provided with snap catches.
- Top door on Model SDR open to 90° and have a rounded front corner.
- DRK is identical to DCR except shipped knocked down with all necessary bolts for easy assembly. On these models the bolts are not visible from the outside and have the same appearance as the welded models.
- Gussets welded at bottom of rear on Models 170-350 for additional strength.
- Cabinets finished in either Black or Blue, Gray Wrinkle, Gray or Brown Hammertone.
- Specify color when ordering.

**WALL MOUNTING BRACKETS**



FOR MOUNTING  
DESK CABINET  
RACKS ON WALL  
— REMOVE REAR  
DOOR AND USE  
WALL MOUNT-  
ING BRACKETS.

Catalog No. WB-19  
Net Price \$3.14

Sold in sets only.  
Finished in Gray.  
Shipping Weight 2 1/2 lbs.

**21 3/4" WIDE x 15 1/4" DEEP**

	Catalog No. (A)	Net Price	Catalog No. (C)	Net Price	Catalog No. (B)	Net Price	Overall Height	Panel Space	Ship. Wt. Lbs.	Use Slide Length*
WITH DOOR ON TOP ONLY	DCR-70	\$13.90	SDR-70	\$19.00	DRK-70	\$13.15	8 3/4"	7"	22	14"
	DCR-80	14.60	SDR-80	19.75	DRK-80	13.90	10 1/2"	8 3/4"	24	14"
	DCR-100	16.45	SDR-100	21.55	DRK-100	15.75	12 1/4"	10 1/2"	26	14"
	DCR-120	17.80	SDR-120	22.85	DRK-120	17.95	14"	12 1/4"	28	14"
	DCR-140	19.75	SDR-140	24.85	DRK-140	19.00	15 3/4"	14"	32	14"
WITH DOOR ON TOP AND REAR	DCR-170	23.40	SDR-170	28.45	DRK-170	22.65	19 1/4"	17 1/2"	40	14"
	DCR-190	24.50	SDR-190	29.65	DRK-190	23.75	21"	19 1/4"	42	14"
	DCR-210	25.40	SDR-210	30.75	DRK-210	24.70	22 3/4"	21"	44	14"
	DCR-260	27.40	SDR-260	32.55	DRK-260	27.40	28"	26 1/4"	45	14"
	DCR-310	28.85	SDR-310	34.00	DRK-310	28.15	33 1/4"	31 1/2"	50	14"
	DCR-350	30.30	SDR-350	35.40	DRK-350	29.60	36 3/4"	35"	55	14"

**21 3/4" WIDE x 18" DEEP**

	Catalog No. (A)	Net Price	Catalog No. (C)	Net Price	Overall Height	Panel Space	Ship. Wt. Lbs.	Use Slide Length*
WITH DOOR ON TOP ONLY	DCR-1880	\$17.55	SDR-1880	\$22.70	10 1/2"	8 3/4"	26	16"
	DCR-18100	19.75	SDR-18100	24.85	12 1/4"	10 1/2"	29	16"
	DCR-18120	21.30	SDR-18120	26.40	14"	12 1/4"	31	16"
	DCR-18140	23.66	SDR-18140	28.80	15 3/4"	14"	35	16"
WITH DOOR ON TOP AND REAR	DCR-18170	28.05	SDR-18170	33.20	19 1/4"	17 1/2"	44	16"
	DCR-18190	29.40	SDR-18190	34.50	21"	19 1/4"	46	16"
	DCR-18210	30.45	SDR-18210	35.60	22 3/4"	21"	48	16"
	DCR-18260	32.86	SDR-18260	38.00	28"	26 1/4"	49	16"
	DCR-18310	34.65	SDR-18310	39.70	33 1/4"	31 1/2"	55	16"
	DCR-18350	36.40	SDR-18350	41.50	36 3/4"	35"	60	16"

**SPECIFY COLOR WHEN ORDERING**

\*Use Slide Adapter Kit (Cat. No. SAK-35) for rear mounting. (See Page 26)

ALL PRICES F.O.B. BRONX, N. Y. 10474

# PREMIER ENCLOSED RELAY RACKS



## FOR STANDARD 19" RACK PANELS

- Rigidly constructed of #16 gauge cold rolled sheet steel.
- The panel mounting angles are of #12 gauge steel and are tapped for 10-32 machine screws on E.I.A. spacings ( $\frac{5}{8}$ - $\frac{1}{2}$ ).
- Panels fit into a  $\frac{3}{16}$ " recess so that the edges are not exposed.
- Racks are shipped knocked down with all necessary bolts for easy assembly.
- Rear doors are hung on sturdy slip-jointed hinges, and closed by a chrome handle. Locking handle with two keys available at additional cost.
- Holes punched in bottom to accommodate CA-4 and CA-5 casters.

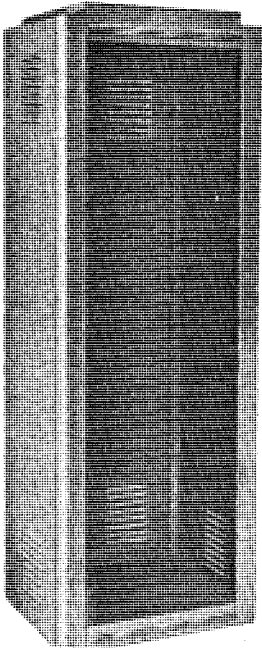
- Round hole and 5 mounting holes on top of cabinets to accommodate Exhaust (EF Series) and Intake (IF Series) Fans, available at additional cost.
- STANDARD TYPE have square front vertical corners.
- DELUXE TYPE — The removable vertical corner moldings are rounded and cover the mounting screws.
- DELUXE TYPE — Top and bottom are trimmed with red stripped chrome finished moulding.
- FRONT DOOR TYPE has front vertical rounded corners and is supplied with locking chrome handle and two keys for front door.
- Cabinets finished in either Black or Blue Gray Wrinkle, Gray or Brown Hammertone.
- SPECIFY COLOR WHEN ORDERING.

**DELUXE TYPE**

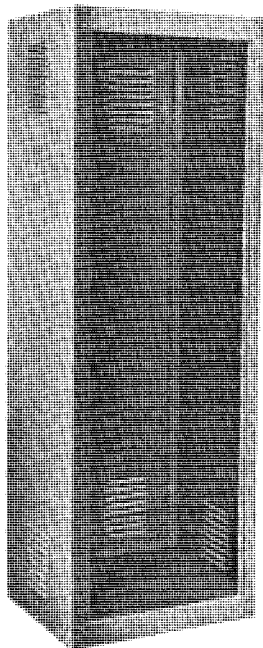
**STANDARD TYPE**

**ROUNDED TYPE**

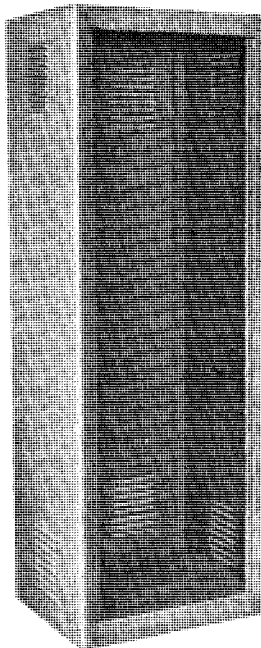
**FRONT DOOR TYPE**



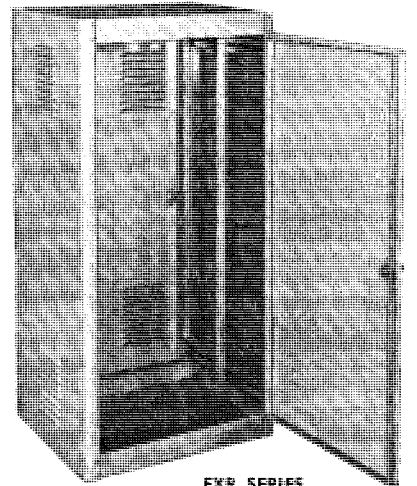
DR SERIES



RS SERIES



R SERIES



FXR SERIES

Supplied with adjustable Panel Mounting Angles

**SPECIFY COLOR WHEN ORDERING**

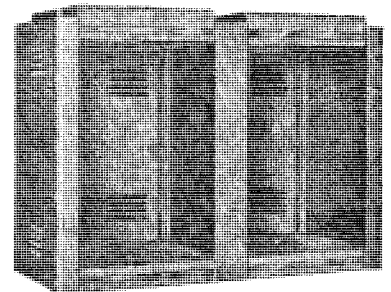
Racks are 22" wide x 18" deep

	Cat. No.	Overall Height	Panel Space	Use Slide Length*	Ship. Wt.—Lbs.	Net Price
<b>DELUXE</b>	DR-3619	43 $\frac{1}{8}$ "	36 $\frac{3}{4}$ "	16"	85	\$56.70
	DR-6119	67 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	16"	135	69.30
	DR-7719	83 $\frac{3}{8}$ "	77"	16"	160	83.90
<b>STANDARD</b>	RS-3619	41 $\frac{7}{8}$ "	36 $\frac{3}{4}$ "	16"	80	41.70
	RS-6119	66 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	16"	120	62.10
	RS-7719	82 $\frac{1}{8}$ "	77"	16"	140	74.55
<b>ROUNDED</b>	R-3619	41 $\frac{7}{8}$ "	36 $\frac{3}{4}$ "	16"	80	41.70
	R-4219	47 $\frac{1}{8}$ "	42"	16"	90	47.75
	R-6119	66 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	16"	120	62.10
<b>FRONT DOOR</b>	R-7719	82 $\frac{1}{8}$ "	77"	16"	140	74.55
	FXR-3619	41 $\frac{7}{8}$ "	36 $\frac{3}{4}$ "	16"	93	61.60
	FXR-4219	47 $\frac{1}{8}$ "	42"	16"	105	70.65
	FXR-6119	66 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	16"	140	88.84
	FXR-7719	82 $\frac{1}{8}$ "	77"	16"	164	104.50

	Cat. No.	Overall Height	Panel Space	Use Slide Length*	Used With	Net Price
<b>MULTIPLE RACK SECTIONS</b>	DMR-3619	43 $\frac{1}{8}$ "	36 $\frac{3}{4}$ "	16"	DR-3619	\$56.96
	DMR-6119	67 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	16"	DR-6119	68.02
	DMR-7719	83 $\frac{3}{8}$ "	77"	16"	DR-7719	81.18
	MR-3619	41 $\frac{7}{8}$ "	36 $\frac{3}{4}$ "	16"	R&RS-3619	39.40
	MR-4219	47 $\frac{1}{8}$ "	42"	16"	R&RS-4219	45.45
	MR-6119	66 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	16"	R&RS-6119	57.60
	MR-7719	82 $\frac{1}{8}$ "	77"	16"	R&RS-7719	69.95
	MXR-3619	41 $\frac{7}{8}$ "	36 $\frac{3}{4}$ "	16"	FXR-3619	59.40
	MXR-4219	47 $\frac{1}{8}$ "	42"	16"	FXR-4219	68.45
	MXR-6119	66 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	16"	FXR-6119	86.65
	MXR-7719	82 $\frac{1}{8}$ "	77"	16"	FXR-7719	102.50

**MULTIPLE RACK UNITS**

These racks can be joined together to make multiple units by means of a solid center partition which is bolted to the top and bottom. Each multiple section comprises a top, bottom, rear door and center partition. On MXR Models, front door is also supplied. When ordering multiple units, specify number of units, such as double, triple, quad, etc.



ABOVE UNIT IS ONE DOUBLE DR3619

Example:

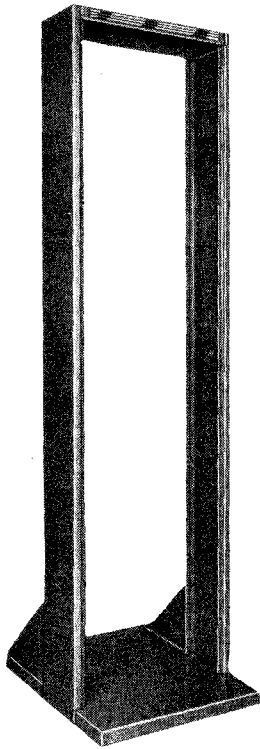
- One Double DR-3619 consists of one DR-3619 and one DMR-3619.
- One Triple RS-3619 consists of one RS-3619 and two MR-3619.
- One Quad R-3619 consists of one R-3619 and three MR-3619.

\*Use Slide Adapter Kit (Cat. No. SAK-35) for rear mounting. (See Page 26)

ALL PRICES F.O.B. BRONX, N. Y. 10474

PREMIER PAGE 17 SEE PAGES 23, 24, 25, 26 & 27 FOR HANDLES, SLIDES, BLOWERS and FANS

# PREMIER DELUXE CHANNEL TYPE UTILITY RACKS



- Made of No. 12 gauge (.104) steel Tapped 10-32 on EIA spacings ( $\frac{5}{8}$ — $\frac{5}{8}$ — $\frac{1}{2}$ ) both front and rear.
- Uprights  $8\frac{3}{8}$ " deep.
- Panels Fit into  $\frac{1}{2}$ " Recess. Either flat or Formed Panels may be used.
- Standard finish—grey hammertone. Also available in blue-grey wrinkle or black wrinkle.
- Top ventilated by means of grille.
- Racks can be bolted side by side.
- There are no screw heads projecting.

- Vertical members and top cross piece are welded together.
- The base and rear supports are shipped knocked down.
- Holes punched in base to accommodate CA-5 (3") casters.



## MODIFICATIONS AVAILABLE For RR Utility Racks

- Provisions for mounting special size casters.
- Other Heights Available.
- Special Finishes Available.

### FOR 19" WIDE PANELS

### FOR 24" WIDE PANELS

Cat. No.	Width	Panel Space	Shpg. Wt. Lbs.	Net Price	Height	Cat. No.	Width	Panel Space	Shpg. Wt. Lbs.	Net Price
RR-2164	21 $\frac{1}{16}$ "	61 $\frac{1}{4}$ x19"	85	\$38.00	64 $\frac{1}{2}$ "	RR-2664	26 $\frac{3}{16}$ "	61 $\frac{1}{4}$ x24"	100	\$49.00
RR-2173	21 $\frac{1}{16}$ "	70x19"	90	41.00	73 $\frac{1}{4}$ "	RR-2673	26 $\frac{3}{16}$ "	70x24"	105	52.00
RR-2180	21 $\frac{1}{16}$ "	77x19"	95	45.00	80 $\frac{1}{4}$ "	RR-2680	26 $\frac{3}{16}$ "	77x24"	105	56.00

RR-2100 Series

SEE PAGES 23, 24, 25, 26 &amp; 27 FOR HANDLES, SLIDES, BLOWERS and FANS

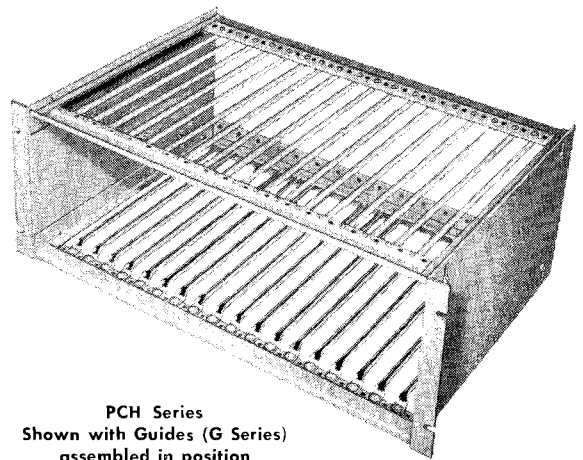
# PREMIER PRINTED CIRCUIT CARD HOLDER

## TO FIT STANDARD 19" and 24" WIDE RACKS FOR 5 $\frac{1}{4}$ " — 7" — 8 $\frac{3}{4}$ " HEIGHTS

- To accommodate Printed Circuit Cards from 4 $\frac{1}{2}$ " to 14 $\frac{1}{2}$ " deep.
- 19" wide holder accommodates up to 32 cards; 24" wide holder — up to 42 cards. • Spacing of guide holes on .200 centers.
- Unit shipped unassembled and supplied with all necessary hardware.
- Guides are easily positioned by using push rivets.
- Entire unit made of No. 16 gauge cold rolled steel. Guides are cadmium plated and colored Iridite.
- Frame finished in Grey Hammertone.
- Guides (G series) sold in pairs and ordered as a separate item.
- Connector panels are supplied on rear for mounting of connectors. Made of  $\frac{1}{8}$ " aluminum. Holes tapped 4-40.

### MODIFICATIONS AVAILABLE

- Special sizes • Different guide spacings
- Vinyl coated guides for insulation



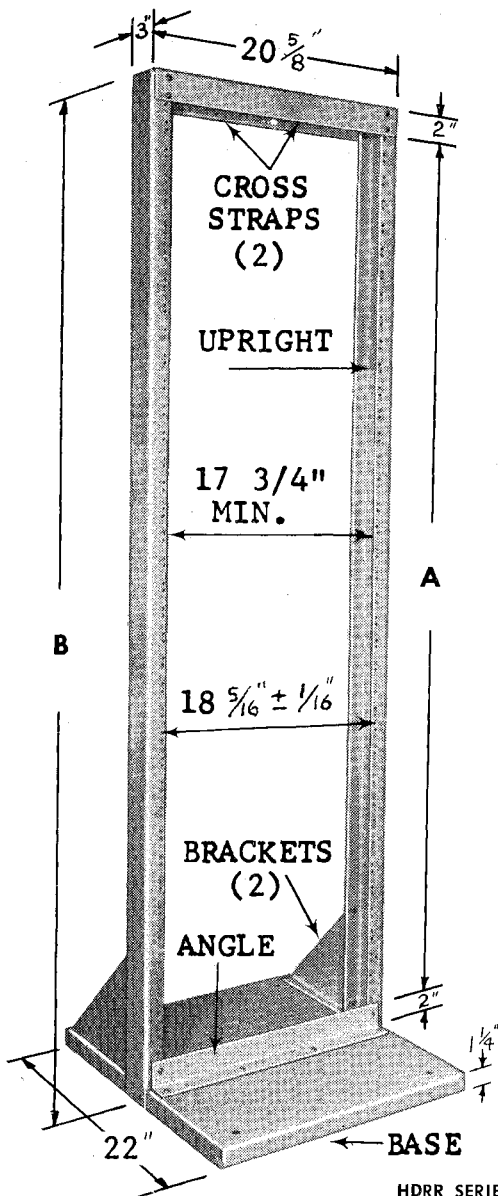
PCH Series  
Shown with Guides (G Series)  
assembled in position

### FOR 19" WIDE PANEL SPACE

### FOR 24" WIDE PANEL SPACE

FRAME			FRAME				
Cat. No.	Net Price	Depth	Use Guide No.	Net Price Pair	Cat. No.	Net Price	
<b>5<math>\frac{1}{4}</math>" HIGH</b>	PCH-519-6	\$12.00	6 $\frac{1}{4}$ "	G-6	.27	PCH-524-6	\$14.50
	PCH-519-8	12.00	8 $\frac{1}{4}$ "	G-8	.34	PCH-524-8	15.50
	PCH-519-10	14.00	10"	G-10	.40	PCH-524-10	16.50
	PCH-519-12	15.00	12"	G-12	.47	PCH-524-12	17.50
	PCH-519-14	16.00	14"	G-14	.53	PCH-524-14	18.50
	PCH-519-16	17.00	16"	G-16	.59	PCH-524-16	19.50
<b>7" HIGH</b>	PCH-719-6	13.00	6 $\frac{1}{4}$ "	G-6	.27	PCH-724-6	15.50
	PCH-719-8	14.00	8 $\frac{1}{4}$ "	G-8	.34	PCH-724-8	16.50
	PCH-719-10	15.00	10"	G-10	.40	PCH-724-10	17.50
	PCH-719-12	16.00	12"	G-12	.47	PCH-724-12	18.50
	PCH-719-14	17.00	14"	G-14	.53	PCH-724-14	19.00
	PCH-719-16	18.00	16"	G-16	.59	PCH-724-16	20.50
<b>8<math>\frac{3}{4}</math>" HIGH</b>	PCH-819-6	14.00	6 $\frac{1}{4}$ "	G-6	.27	PCH-824-6	16.50
	PCH-819-8	15.00	8 $\frac{1}{4}$ "	G-8	.34	PCH-824-8	17.50
	PCH-819-10	16.00	10"	G-10	.40	PCH-824-10	18.50
	PCH-819-12	17.00	12"	G-12	.47	PCH-824-12	19.50
	PCH-819-14	18.00	14"	G-14	.53	PCH-824-14	20.50
	PCH-819-16	19.00	16"	G-16	.59	PCH-824-16	21.50

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**PREMIER****RELAY RACKS**

HDRR SERIES

## HEAVY DUTY RELAY RACK

### MEETS MIL-STD-189

- Uprights and top cross straps made of  $\frac{3}{16}$ " sheet steel.
- Base and Brackets made of No. 12 gauge sheet steel.
- Base angle made of 2 x 2 x  $\frac{3}{16}$ " steel.
- Panel mounting holes are tapped 10-32 on E.I.A. spacings ( $1\frac{1}{4}$ - $\frac{1}{2}$ ").
- Finished in Zinc Chromate Primer (MIL SPEC. 6889A).
- Shipped knocked down and assembled with  $\frac{1}{4}$ -20 x  $\frac{3}{4}$ " long hex head cap screws and nuts.

Catalog No.	Panel Space (A)	Frame Height (B)	Net Price
HDRR-6619	66 $\frac{21}{32}$ "	71 $\frac{29}{32}$ "	\$67.00
HDRR-7319	73 $\frac{21}{32}$ "	78 $\frac{29}{32}$ "	73.00
HDRR-7719	77 $\frac{5}{32}$ "	82 $\frac{13}{32}$ "	77.00

ALSO AVAILABLE IN HEIGHTS UP TO 10 FT.

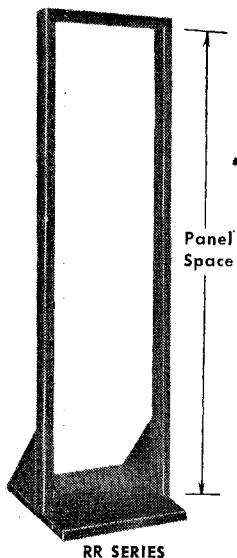
PRICES UPON REQUEST

SEE PGS. 23, 24, 25, 26 & 27 FOR HANDLES, SLIDES, BLOWERS & FANS

### CHANNEL RELAY RACKS

- Rigidly constructed of #12 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Vertical members and top crossbrace are welded together.
- Panel mounting holes are tapped for 10/32 machine screws on E.I.A. spacings ( $\frac{3}{8}$ - $\frac{5}{8}$ - $\frac{1}{2}$ ").
- Racks are shipped knocked down with all necessary bolts for easy assembly.
- Base punched to accommodate CA-4 (2") and CA-5 (3") casters.

Cat. No.	H.	W.	D.	Panel Space	Shp. Wt. Lbs.	Net Price
RR-800	39 $\frac{1}{4}$ "	20"	18 $\frac{3}{8}$ "	36 $\frac{3}{4}$ " x 19"	40	\$21.20
RR-801	74 $\frac{1}{4}$ "	20"	20 $\frac{7}{8}$ "	71 $\frac{3}{4}$ " x 19"	55	25.20
RR-802	79 $\frac{1}{2}$ "	20"	20 $\frac{7}{8}$ "	77" x 19"	60	29.20

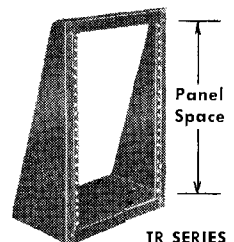


RR SERIES

PREMIER PAGE 19

NOTE: Available in Gray Hammertone at no additional cost. Add "GH" to catalog number when ordering.

### TABLE TYPE RELAY RACKS



TR SERIES

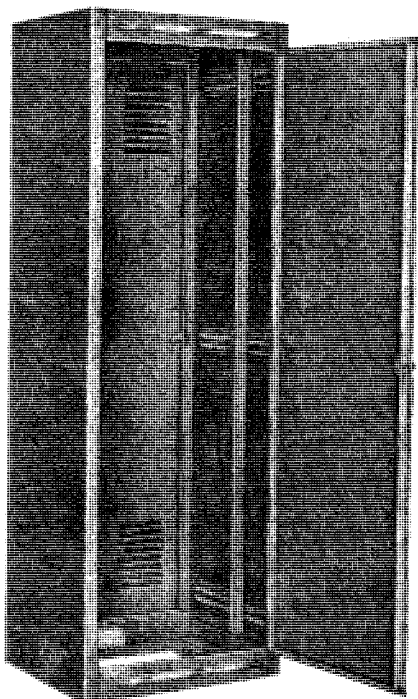
- Rigidly constructed of #16 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Base constructed of one piece, similar to a chassis.
- Panel mounting holes are tapped for 10/32 machine screws on E.I.A. spacings ( $\frac{3}{8}$ - $\frac{5}{8}$ - $\frac{1}{2}$ ").
- Racks are shipped knocked down with all necessary bolts for easy assembly.

Cat. No.	H.	W.	D.	Panel Space	Shp. Wt. Lbs.	Net Price
TR-2119	25"	21"	12"	21 x 19"	17	\$ 8.82
TR-2819	32"	21"	12"	28 x 19"	20	11.04

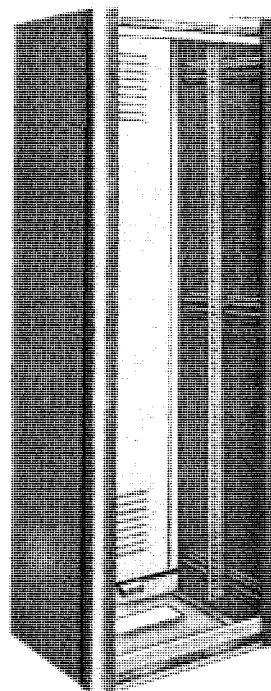
ALL PRICES F.O.B. BRONX, N. Y. 10474

# PREMIER HEAVY DUTY RACKS

FOR 19", 24" AND 30" RACK PANELS — 18" AND 24" DEEP



FD SERIES



RMA SERIES

- Rigidly constructed of #16 gauge steel with a #12 gauge steel bottom and welded throughout.
- Panel mounting angles are  $\frac{3}{16}$ " thick and are tapped 10-32 on E.I.A. spacings ( $\frac{5}{8}$ - $\frac{5}{8}$ - $\frac{1}{2}$ ).
- Rear doors are hung on sturdy slip-jointed hinges and closed by a chrome handle. Locking handle with 2 keys available at additional cost.
- Round hole and 5 mounting holes on top of frame to accommodate Exhaust (EF Series) and Intake (IF Series) Fans, available at additional cost.
- A rectangular cut-out is made in the bottom for leads, etc.
- RMA-7030 Rack supplied with double rear doors and with a 3-point locking device.
- FD Series are furnished with locking handle and 2 keys on Front Door.
- **All racks are supplied without louvres on sides unless specified.**
- Vertical rounded corner "J" type moldings are supplied with RMA series.
- When joining RMA racks for multiple installation, specify amount of center "U" type moldings (supplied at no additional cost). EXAMPLE: Three RMA-3619 requires two "J" and two "U" moldings.
- Tops and bottoms are trimmed with red striped chrome moulding.
- Panel mounting angles are adjustable to any distance from the front by means of channel slides.
- A Duplex Receptacle and Outlet Box are furnished in the Back Under the Door.
- Racks finished in either Black or Blue-Gray wrinkle, Gray or Brown Hammertone.

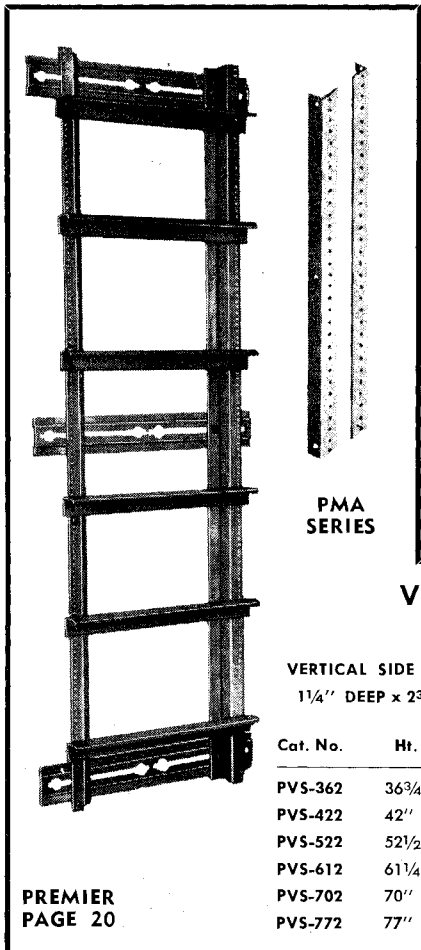
**SPECIFY COLOR WHEN ORDERING**

18" DEEP RACKS					H & W			Panel Space	Use Slide*	18" DEEP RACKS WITH FRONT DOORS				
Cat. No.	Shpg. Wt.	Lbs.	Net Price							Cat. No.	Shpg. Wt.	Lbs.	Net Price	
RMA-3619	100		\$ 66.15	42 $\frac{7}{8}$ x22"	36 $\frac{3}{4}$ x19"	16"	16"			FD-3619	115		\$102.39	
RMA-4219	130		78.00	48 $\frac{1}{8}$ x22"	42 x19"	16"	16"			FD-4219	120		108.00	
RMA-6119	150		86.01	67 $\frac{3}{8}$ x22"	61 $\frac{1}{4}$ x19"	16"	16"			FD-6119	175		115.77	
RMA-7618	170		105.84	76 $\frac{1}{8}$ x22"	70 x19"	16"	16"			FD-7019	200		132.30	
RMA-7719	190		109.20	83 $\frac{1}{8}$ x22"	77 x19"	16"	16"			FD-7719	220		142.34	

24" DEEP RACKS					H & W			Panel Space	Use Slide*	24" DEEP RACKS WITH FRONT DOORS				
Cat. No.	Shpg. Wt.	Lbs.	Net Price							Cat. No.	Shpg. Wt.	Lbs.	Net Price	
RMA-3619-24	110		\$ 84.00	42 $\frac{7}{8}$ x22"	36 $\frac{3}{4}$ x19"	22"	22"			FD-3619-24	125		\$105.00	
RMA-4219-24	130		93.05	48 $\frac{1}{8}$ x22"	42 x19"	22"	22"			FD-4219-24	150		111.00	
RMA-6119-24	175		122.40	67 $\frac{3}{8}$ x22"	61 $\frac{1}{4}$ x19"	22"	22"			FD-6119-24	200		152.16	
RMA-7618-24	200		132.30	76 $\frac{1}{8}$ x22"	70 x19"	22"	22"			FD-7019-24	255		158.76	
RMA-7719-24	225		148.86	83 $\frac{1}{8}$ x22"	77 x19"	22"	22"			FD-7719-24	270		181.89	
RMA-2742	170		120.78	48 $\frac{1}{8}$ x27"	42 x24"	22"	22"			FD-2742	180		140.19	
RMA-2761	210		137.58	67 $\frac{3}{8}$ x27"	61 $\frac{1}{4}$ x24"	22"	22"			FD-2761	230		165.39	
RMA-2770	240		148.59	76 $\frac{1}{8}$ x27"	70 x24"	22"	22"			FD-2770	260		176.22	
RMA-2777	270		165.39	83 $\frac{1}{8}$ x27"	77 x24"	22"	22"			FD-2777	290		198.45	
RMA-7030	240		191.85	76 $\frac{1}{8}$ x33"	70 x30"	22"	22"							

\* Use Slide Adapter Kit (Cat. No. SAK-35 for rear mounting. (See page 26)



PMA SERIES

**VERTICAL SIDE SUPPORTS and PANEL MOUNTING ANGLES**  
To Fit Premier Heavy Duty Racks — Finished in Gray Hammertone.

VERTICAL SIDE SUPPORTS		
1 $\frac{1}{4}$ " DEEP x 2 $\frac{3}{8}$ " WIDE		
Cat. No.	Ht.	Net Price
PVS-362	36 $\frac{3}{4}$ "	\$15.00
PVS-422	42"	16.50
PVS-522	52 $\frac{1}{2}$ "	19.15
PVS-612	61 $\frac{1}{4}$ "	20.85
PVS-702	70"	25.40
PVS-772	77"	27.45

PANEL MOUNTING ANGLES		
1 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ "		
Cat. No.	Ht.	Net Price
PMA-362	36 $\frac{3}{4}$ "	\$11.00
PMA-422	42"	13.20
PMA-522	52 $\frac{1}{2}$ "	15.20
PMA-612	61 $\frac{1}{4}$ "	16.50
PMA-702	70"	18.50
PMA-772	77"	20.00

**SHELVES**

Cat. No.	Depth	Width	To Fit Racks	Net Price
S-1819	14 $\frac{1}{4}$ "	17 $\frac{1}{2}$ "	19" 18"	\$3.50
S-1824	14 $\frac{1}{2}$ "	22 $\frac{1}{2}$ "	24" 18"	4.00
S-1830	14 $\frac{1}{4}$ "	28 $\frac{1}{2}$ "	30" 18"	4.50
S-2419	20 $\frac{1}{4}$ "	17 $\frac{1}{2}$ "	19" 22", 24", 25 $\frac{1}{2}$ "	3.10
S-2424	20 $\frac{1}{4}$ "	22 $\frac{1}{2}$ "	24" 22", 24", 25 $\frac{1}{2}$ "	5.00
S-2430	20 $\frac{1}{4}$ "	28 $\frac{1}{2}$ "	30" 24"	6.00

**SIDE MOUNTING BRACKETS**

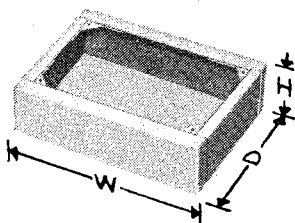
Cat. No.	Length	To Fit Racks	Net Price
SMB-18	14"	All 18" deep FD & RMA Racks	\$3.30
SMB-24	20"	All 24" deep FD & RMA Racks	4.30

SEE PAGES 23, 24, 25, 26 & 27 FOR HANDLES SLIDES, BLOWERS and FANS

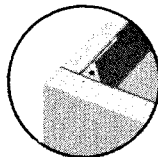


# PREMIER STEEL and ALUMINUM CHASSIS

## STEEL and ALUMINUM BLANK



### EXCLUSIVE PREMIER FEATURE!



View of Chassis Showing Gusset Spot-Welded in Corner.

Chassis are of one piece construction with gussets spot-welded to the bottom flanges for additional strength. Corners have rounded effect and single inside thickness for mounting components. Bottom edges are flanged in on four sides and punched for bottom plates.

Steel chassis are made of No. 20 gauge cold rolled steel, except those marked \* which are of No. 16 gauge. Steel chassis are finished in either Black Wrinkle or Zinc Plated. Zinc plated furnished if finish is not specified.

Aluminum chassis are made of No. 18 gauge (.040) aluminum, except those marked \* which are of No. 14 gauge (.064). Natural Aluminum Finish.

ALUMINUM			STEEL		
Cat. No.	Ship. Wt. Lbs.	Net Price	Cat. No.	Ship. Wt. Lbs.	Net Price
ACH-400	1/2	\$1.33	CH-400	1	\$1.10
ACH-401	3/4	1.52	CH-401	1 1/2	1.55
ACH-402	1	2.57	CH-402	2 1/2	1.80
ACH-403	1/2	1.33	CH-403	1 1/4	1.30
ACH-404	1/2	1.39	CH-404	1 1/2	1.55
ACH-405	3/4	1.52	CH-405	1 3/8	1.60
ACH-406	3/4	1.64	CH-406	2	1.70
ACH-407	1	2.89	CH-407	2 3/4	2.00
ACH-408	1	2.36	CH-408	2 1/4	1.80
ACH-409	1 1/2	2.85	CH-409	3 1/8	2.20
ACH-410	1 1/8	2.89	CH-410	2 3/4	2.00
ACH-411	1 1/2	3.00	CH-411	5 1/4	2.20
ACH-412	1 1/4	2.68	CH-412	2 3/4	2.15
ACH-413	1 1/4	3.40	CH-413	3 1/4	2.25
ACH-414	1 1/4	3.26	CH-414	3 1/4	2.30
ACH-415*	1 7/8	3.65	CH-415*	6	2.60
ACH-416*	2	4.20	CH-416*	7 1/2	2.90
ACH-417*	1 3/4	3.48	CH-417*	5 1/4	3.15
ACH-418*	2	4.27	CH-418*	6 1/4	3.45
ACH-419*	1 7/8	3.81	CH-419*	5	2.40
ACH-420*	2 1/8	4.51	CH-420*	7	2.90
ACH-421*	2 1/8	4.98	CH-421*	8 1/2	3.15
ACH-422*	1 7/8	4.02	CH-422*	6	3.45
ACH-423*	2 1/8	4.79	CH-423*	7	4.00
ACH-424*	2 1/2	5.48	CH-424*	10	4.55
ACH-425	7/8	1.64	CH-425	2 1/4	1.70
ACH-426	1/4	1.29	CH-426	1	1.25
ACH-427	1 1/4	2.91	CH-427	3	2.30
ACH-428	1/4	1.50	CH-428	1 1/4	1.30
ACH-429	3/4	1.80	CH-429	2	1.90
ACH-430	1	2.19	CH-430	2 1/2	2.00
ACH-431	1/4	1.29	CH-431	1	1.25
ACH-432	1/4	1.33	CH-432	1	1.25
ACH-433	7/8	1.83	CH-433	2 1/2	1.75
ACH-434	1	2.70	CH-434	4	2.15
ACH-435*	2 1/2	5.37	CH-435*	10	3.30
ACH-436	1/4	1.09	CH-436	3/4	1.25
ACH-437	3/8	1.13	CH-437	1	1.30
ACH-438*	3	10.79	CH-438*	13	6.50
ACH-441	1	1.68	CH-439*	8 1/2	3.50
			CH-440*	11	5.15
			CH-441	2 1/2	1.70

\*Made of No. 14 gauge (.064) aluminum.

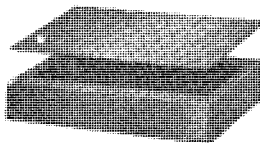
ALL PRICES F.O.B. BRONX, N. Y. 10474

PREMIER PAGE 21

### REMOVABLE TOP

Made of #16 Ga. Cold Rolled Steel. Top and Bottom edges flanged in on four sides. Top plate is removable. Finished in either Black Wrinkle or Zinc Plated. Zinc plated furnished if finish is not specified.

Cat. No.	Size	Ship. Wt. Lbs.	Net Price
RCH-415	10 x 17 x 3	5	\$4.82
RCH-416	10 x 17 x 4	5	5.35
RCH-423	13 x 17 x 3	9	5.05
RCH-424	13 x 17 x 4	10	6.25



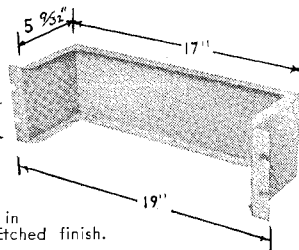
### REPLACEMENT TOPS

Cat. No.	Size	Ship. Wt. Lbs.	Net Price
RTC-415	10 x 17	2	\$1.90
RTC-423	13 x 17	3	2.30

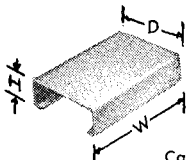
### ALUMINUM VERTICAL PANEL

TO FIT 19" STANDARD RACKS

Made of 14 gauge (.064) Aluminum. Flanges are notched for standard rack mounting. All chassis depths are 5-9/32". Gussets are spot welded in each corner for greater strength. Etched finish.



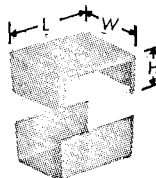
Catalog No.	Height	Ship. Wt. Lbs.	Net Price
ACH-1200	1 3/4"	3/4	\$2.55
ACH-1201	3 1/2"	1 3/4	2.79
ACH-1202	5 1/4"	1 1/2	3.04
ACH-1203	7"	2	3.51
ACH-1204	8 3/4"	2 1/4	4.14
ACH-1205	10 1/2"	2 3/4	4.44
ACH-1206	12 1/4"	3	4.95
ACH-1207	14"	3 1/4	5.35



### ALUMINUM OPEN END

Made of 18 ga. (.040) Aluminum.

Catalog No.	Depth	Width	Height	Ship. Wt. Lbs.	Net Price
ACH-1350	2 5/8"	2 3/8"	1 1/4"	1/4	\$.40
ACH-1351	1 3/4"	3 1/8"	1"	1/4	.44
ACH-1352	3 1/4"	4 1/2"	2"	1/4	.46
ACH-1353	2 3/4"	4 1/8"	1"	1/4	.46
ACH-1354	3 3/4"	4 7/8"	1 1/2"	1/4	.46
ACH-1355	3"	6 1/8"	1 1/4"	1/4	.55
ACH-1356	5 3/4"	4 7/8"	1 1/2"	1/4	.58
ACH-1357	4"	3 1/8"	1"	1/2	.46
ACH-1358	4"	4 1/8"	1"	1/2	.50
ACH-1359	4"	5 1/8"	1"	1/2	.54
ACH-1360	4"	6 1/8"	1"	1/2	.58



### ALUMINUM MINIATURE UTILITY CASES

A two piece case made of #16 Ga. (.051) aluminum. Natural Aluminum Finish or Gray Hammertone.

Natural Aluminum Cat. No.	Net Price	L.	W.	H.	Ship Wt. Lbs.	Gray Hammertone Cat. No.	Net Price
AMC-1000*	\$.70	2 3/4"	2 1/8"	1 5/8"	1/4	PMC-1000*	\$.79
AMC-1001*	.70	3 1/4"	2 1/8"	1 5/8"	1/4	PMC-1001*	.79
AMC-1002*	.73	4"	2 1/8"	1 5/8"	1/4	PMC-1002*	.83
AMC-1003	.96	4"	2 1/4"	2 1/4"	3/8	PMC-1003	1.06
AMC-1004	.99	5"	2 1/4"	2 1/4"	1/2	PMC-1004	1.09
AMC-1005	1.17	5"	4"	3"	1/2	PMC-1005	1.23
AMC-1006	1.09	5 1/4"	3"	2 1/8"	1	PMC-1006	1.19
AMC-1007	1.39	6"	5"	4"	3/4	PMC-1007	1.53
AMC-1008	1.56	7"	5"	3"	1 1/8	PMC-1008	1.69
AMC-1009	2.31	8"	6"	3 1/2"	1 1/2	PMC-1009	2.45
AMC-1010	2.88	10"	6"	3 1/2"	1 3/4	PMC-1010	3.04
AMC-1011	3.24	12"	7"	4"	2	PMC-1011	3.57
AMC-1012	3.84	17"	5"	4"	1 1/2	PMC-1012	4.20
AMC-1013	1.17	10"	2"	1 5/8"	1/4	PMC-1013	1.23
AMC-1014	1.53	12"	2 1/2"	2 1/4"	1/4	PMC-1014	1.65
AMC-1015	.93	4"	2"	2 3/4"	3/8	PMC-1015	1.20
AMC-1016	.96	4 1/4"	2 1/4"	1 1/2"	1/4	PMC-1016	1.06

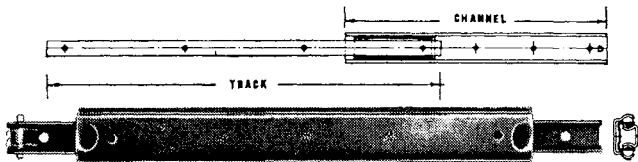
\*18 Gauge (.040)

FOR BOTTOM PLATES AND CHASSIS MOUNTING BRACKETS SEE PAGE 22

# PREMIER HARDWARE

Cat. No.	Item	Net Price
HW-1	NON-LOCKING HANDLE Chrome plated	\$2.40
HW-3	LOCKING HANDLE with 2 keys — Chrome plated	5.10
HW-5	DROP HANDLE Finished in Black, Gray and Blue Wrinkle; Gray and Brown Hammertone	.75
HW-6	CYLINDER LOCK with 2 keys — Nickel plated	4.20
HW-7	BLACK NYLON HANDLE with 2 screws	.51
HW-13	TRUSS HEAD MACHINE SCREWS 10/32 x 3/4" Nickel plated	2.00 per 100*

\*Minimum Quantity



**"A" SERIES** Patent No. 2,542,247

- May be mounted on side or underneath.
- Ball bearing spacer and patented silencer spring eliminates slide noise and vibration.
- All members made of 16 gauge cold rolled steel.
- Black oxidized finish.

Catalog No.	Slide Travel	Channel Length	Track Length	Load Cap.	Net Price Per Pair
A-50-13	9"	11"	13"	50	\$2.80
A-40-15	11"	11"	15"	40	2.90
A-30-165	12 1/2"	11"	16 1/2"	30	3.00
A-30-185	14 1/2"	11"	18 1/2"	30	3.20

## PREMIER ECONOMY SLIDES



**"330" SERIES**

- Side mounted.
- Each slide rolls on 2 concealed and dust-free nylon wheels.
- No metal-to-metal contact—noiseless operation.
- Drawer is tilted up for quick removal.
- Made of 16 gauge cold rolled steel and zinc plated.

Catalog No.	Slide Travel	Track Length	Channel Length	Load Cap.	Net Price Per Pair
330-62-12	7 7/8"	12"	12"	62	\$3.25
330-58-14	9 7/8"	14	14	58	3.40
330-54-16	11 7/8"	16	16	54	3.50
330-50-18	13 7/8"	18	18	50	3.70
330-46-20	15 7/8"	20	20	46	3.80

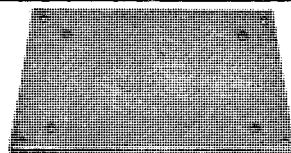


### SPRAY CAN LACQUER Available in 3 Colors

Cat. No.	To Match
SGL-101	Premier Blue-Gray Wrinkle
GHL-102	Premier Gray Hammertone
BHL-103	Premier Brown Hammertone

NET PRICE: \$1.95 EACH 12 oz. CAN

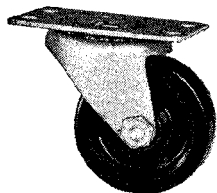
### ALUMINUM AND STEEL BOTTOM PLATES



The bottom plates have holes to match the chassis and have 4 pressed dimples. Steel plates made of No. 20 gauge steel, finished in either Black Wrinkle or Zinc Plated. Aluminum plates made of No. 18 gauge (.040). Natural aluminum finish.

ALUMINUM			STEEL		
Cat. No.	Net Price	Size	Cat. No.	Ship. Wt. Lbs.	Net Price
ABP-400	\$0.87	5 1/2" x 9 1/2"	BP-400	1	\$0.50
ABP-401	.87	5" x 10"	BP-401	1	.55
ABP-402	1.32	6" x 14"	BP-402	1	.75
ABP-403	.90	7" x 7"	BP-403	1	.55
ABP-404	.96	7" x 9"	BP-404	1	.60
ABP-405	1.06	7" x 11"	BP-405	1	.80
ABP-406	1.32	7" x 13"	BP-406	2	.80
ABP-407	1.32	7" x 15"	BP-407	2	.90
ABP-408	1.32	4" x 17"	BP-408	2	.85
ABP-409	1.36	7" x 17"	BP-409	2	.95
ABP-410	1.53	8" x 17"	BP-410	2	.95
ABP-412	1.50	10" x 12"	BP-412	2	.95
ABP-413	1.37	10" x 14"	BP-413	2	1.00
ABP-414	1.72	10" x 17"	BP-414	2	1.25
ABP-418	2.16	11" x 17"	BP-418	3	1.30
ABP-419	2.28	12" x 17"	BP-419	3	1.35
ABP-422	2.41	13" x 17"	BP-422	3	1.45
ABP-423	.87	5" x 7"	BP-423	1	.50
ABP-424	.99	5" x 13"	BP-424	1	.80
ABP-425	1.32	8" x 12"	BP-425	2	1.15
ABP-426	.87	4" x 6"	BP-426	1	.50
ABP-427	1.14	7" x 12"	BP-427	2	1.00
ABP-428	1.36	6" x 17"	BP-428	2	.95
ABP-429	2.55	10" x 23"	BP-429	2	2.00
ABP-430	.87	4" x 8"	BP-430	1	.50
ABP-431	2.57	17" x 17"	BP-431	4	2.10
ABP-432	2.41	8 1/2" x 15"	BP-432	1 1/2	1.45
ABP-433	1.14	8" x 10"	BP-433	1	1.00

### 2" - 3" - 4" DIA. CASTERS



Made of non-marking composition wheel with Ball Bearing Swivel Plate. Packed one set of 4 in box with screws for assembly.

Cat. No.	Kind of Wheel	Wheel Size	Overall Height	Cap. per caster—lbs.	Net Price Set of 4
CA-4	Plaskite	2" dia. x 1 3/8"	2 7/8"	80	\$4.25
CA-5	Rockite	3" dia. x 1 1/4"	3 3/8"	225	10.00
CA-6	Soft	Double			
CA-7*	Rubber	2" dia. x 1 3/8"	2 3/8"	125	12.00
CA-7*	Rockite	3" dia. x 1 1/4"	3 3/8"	225	22.00
CA-8**	Rockite	4" dia. x 1 3/8"	5 1/4"	450	44.00

\*Foot operated friction brake for positive locking wheel.  
\*\*With roller bearing wheel.

### CHASSIS MOUNTING BRACKETS

- Constructed of No. 16 gauge steel.
- Finished in Black enamel.
- Sold in pairs only.

#### STANDARD TYPE



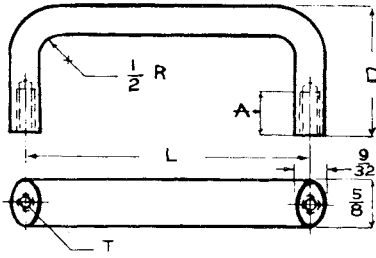
Cat. No.	H.	D.	Ship. Wt. Lbs.	Net Price
(CB-78)	6 1/2"	8"	1 1/2	\$1.06
(CB-710)	6 1/2"	10"	1 3/4	1.42
(CB-711)	6 1/2"	11"	2	1.55
(CB-712)	6 1/2"	12"	2 1/8	1.66
(CB-713)	6 1/2"	13"	2 1/4	1.80
(CB-717)	6 1/2"	17"	3	2.80
(CB-810)	8 1/2"	10"	2 3/8	2.10
(CB-813)	8 1/2"	13"	3	2.22



#### TRIANGULAR TYPE

Cat. No.	Height	Depth	Ship. Wt. lbs.	Net Price
TCB-55	5"	5"	1	\$1.04
TCB-77	7"	7"	1	1.18
TCB-99	9"	9"	1 1/2	1.44

# PREMIER HANDLES for INSTRUMENTS and EQUIPMENT



## HW-16 SERIES

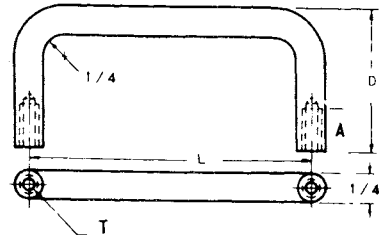
MATERIAL: Aluminum per QQ-A-325-A.  
FINISH: Black Anodize per MIL-A-8625 Type II. Also available in Semi/Frost per MIL-A-8625 Type II. Specify by adding letter S to part number. Example: HW-16A1-S.

Cat. No.	L	D	A	T	Net Price
HW-16A1	3	1 3/32	3/32	10-24	\$1.26
HW-16A4	4 1/16	1 1/2	1/2	10-24	1.28
HW-16A6	6 1/16	1 3/4	1/2	10-24	1.84
HW-16A7	9	1 3/4	1/2	10-24	2.07

## HW-17 SERIES

MATERIAL: Brass per QQ-B-626 Comp 22 1/2 Hard.  
FINISH: Nickel Plate and Polish per MIL-QQ-N-290 Type VI. Also available in black oxide finish per MIL-F-495A. Specify by adding letter B to part number. Example: HW-17B1-8.

Cat. No.	L	D	A	T	Net Price
HW-17B1	3	1 3/32	3/32	10-32	\$1.55
HW-17B4	4 1/16	1 1/2	1/2	10-32	1.75
HW-17B6	6 1/16	1 3/4	1/2	10-32	2.06
HW-17B7	9	1 3/4	1/2	10-32	2.41



## HW-19 SERIES

MATERIAL: Brass per QQ-B-626 Comp 22 1/2 Hard.  
FINISH: Nickel Plate and Polish per MIL-QQ-N-290 Type VI. Also available in black oxide finish per MIL-F-495A. Specify by adding letter B to part number. Example: HW-19B1-B.

Cat. No.	L	D	A	T	Net Price
HW-19B1	2	1 1/2	3/16	8-32	\$1.10
HW-19B2	3	1 1/2	3/16	8-32	1.10
HW-19B3	4	1 1/2	3/16	8-32	1.18
HW-19B4	6	1 1/2	3/16	8-32	1.28

## HW-20 SERIES

MATERIAL: Aluminum per QQ-A-325A.  
FINISH: Black Anodize per MIL-A-8625 Type II. (Also available in Semi/Frost per MIL-A-8625 Type II. Specify by adding letter S to part number. Example: HW-20A1-S.

Cat. No.	L	D	A	T	Net Price
HW-20A1	2	1 1/2	3/16	8-32	\$.76
HW-20A2	3	1 1/2	3/16	8-32	.76
HW-20A3	4	1 1/2	3/16	8-32	.83
HW-20A4	6	1 1/2	3/16	8-32	1.00

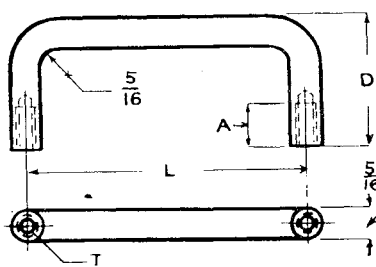
## NEW!

### PREMIER Heavy Duty MULTIPLE OUTLET BOXES

FOR RACK CABINETS and WORK BENCHES

- Completely wired — ready to plug in
- Reset circuit breaker
- Steel case finished in Gray Hammertone
- Available in 3 lengths

SEND FOR DETAILS



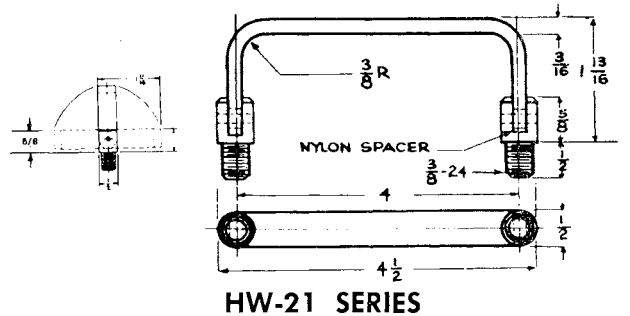
## HW-18 SERIES

MATERIAL: Brass per QQ-B-626 Comp 22 1/2 Hard.

FINISH: Nickel Plate and Polish per MIL-QQ-N-290 Type VI. Also available in black oxide finish per MIL-F-495A. Specify by adding letter B to part number. Example: HW-18B3-B.

Cat. No.	L	D	A	T	Net Price
HW-18B3	3	1 1/16	3/16	8-32	\$.95
HW-18B13	4 1/16	1 1/2	3/16	10-32	1.05
HW-18B14	6	1 1/2	3/16	10-32	1.05
HW-18B16	6 1/16	1 3/4	3/16	10-32	1.10

PREMIER PAGE 23



## HW-21 SERIES

### HW-21A

MATERIAL: Baw-Aluminum MIL Spec QQ-A-274. Ferrules MIL Spec QQ-A-325A.

FINISH: Nickel Plate and Polish per MIL-QQ-N-290 Type VI.

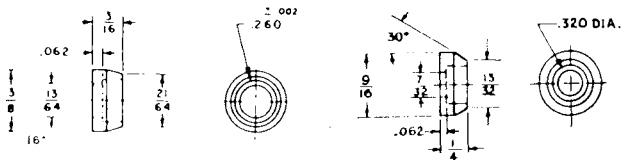
### HW-22B

MATERIAL: Bow-Brass MIL Spec QQ-B-626 Comp 22 1/2 Hard. Ferrules MIL Spec QQ-B-626 Comp 22 1/2 Hard.

FINISH: Semi-Frost Per MIL-A-8625 Type II.

NOTE: Handle and Ferrules are furnished with nylon spacer and roll-pin 1/8 dia. to hold bow in any given position. Swings 180° to either plane.

Cat.No.	Material	Net Price
HW-21A	Aluminum	\$2.19
HW-22B	Brass	2.76



## FERRULES FOR ABOVE HANDLES

FOR 1/4" DIAMETER HANDLES  
HW-23AF (ALUMINUM) Made of Aluminum per QQ-A-325A, anodized black per MIL-A-8625 Type II. Net Price .10

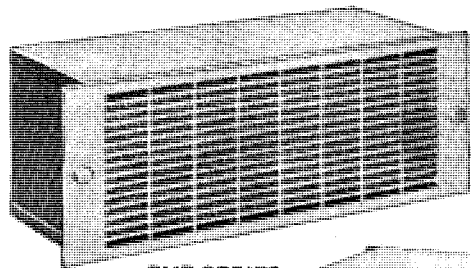
FOR 5/16" DIAMETER HANDLES  
HW-25BF (BRASS) Made of Brass per QQ-B-626 comp. 22 1/2 hard, nickel plated and polished per MIL-QQ-N-290 Type VI.

HW-24BF (BRASS) Made of Brass per QQ-B-626 comp. 22 1/2 hard, nickel plated and polished per MIL-QQ-N-290 Type VI. Net Price .12

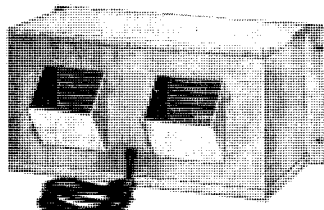
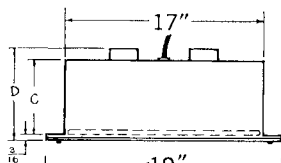
Net Price .12

# PREM-O-KOOL

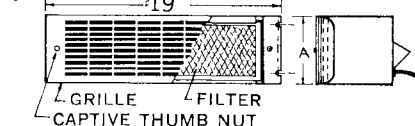
MAXIMUM COOLING with  
MINIMUM SPACE!



PMB SERIES



REAR VIEW



Units available to fit  
Standard 24" wide  
panel space. Prices  
upon request.



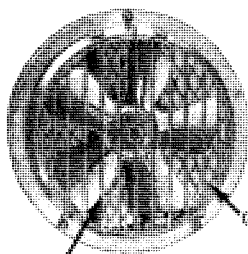
TO FIT  
STANDARD  
19" WIDE  
PANEL  
SPACE

## PANEL MOUNTED BLOWERS

- Permanently lubricated motors with lubricant temperature range from -29°C to +148°C.
  - Permanent type washable filter—easily removable from front.
  - Low noise level with minimum of vibration.
  - Standard E.I.A. notching.
  - Grille supplied with 2 captive thumb nuts.
  - Units furnished with 3/6" lead with molded male plug.
  - Performance data prepared by impartial, independent testing laboratory.
  - Motors are 115 Volt 50/60 cycle, single phase AC.
  - Housing and grille made of cold rolled steel and finished in gray hammer-tone.
- GRILLE FINISHED TO MATCH COLOR OF PREMIER CABINETS OR FRAMES AT NO ADDITIONAL COST.

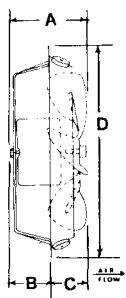
CATALOG NO.	PMB-5-150	PMB-7-285	PMB-8-410*	PMB-10-750
CFM at 0" S.P.	150	285	410	750
PANEL HEIGHT (A)	5 1/4"	7"	8 3/4"	10 1/2"
FILTER	16 5/8" x 4 7/8" x 1/2"	16 5/8" x 6 3/4" x 1/2"	16 5/8" x 8 3/8" x 1/2"	16 5/8" x 10 1/8" x 1/2"
DEPTH OF ENCLOSURE ONLY (C)	6 1/4"	8 1/2"	9 3/4"	11 1/2"
OVERALL DEPTH including outlets and front grille (D)	7"	10 1/4"	11 1/4"	13 3/8"
MOTOR				
RPM	3000	1500	1500	1500
WATTS	120	78	125	255
VOLTS	115	115	115	115
CYCLES	50/60	50/60	50/60	50/60
AMPS	1.5	1.1	1.3	2.2
TYPE	Ball Bearing shaded pole	Ball bearing permanent split capacitor	Ball bearing permanent split capacitor	Ball bearing permanent split capacitor
SHIPPING WT. LBS.	14	24	26	35
NET PRICE	\$125.00	\$150.00	\$175.00	\$220.00

\*Supplied with grille on rear outlets.



GUARD

EF Series



## PREM-O-KOOL

### EXHAUST and INTAKE FANS

PREM-O-KOOL fans are available for exhausting air from cabinets (EF Series) and for drawing air into cabinets (IF Series).

- Motors are 115 volts 50/60 cycle single phase AC.
- Minimum space required.
- Supplied with 18" lead.
- Fan and motor assembly shock mounted for minimum noise and vibration.
- Permanently lubricated ball bearing, shaded pole motors with low temperature rise.
- Easily interchangeable accessories for flexibility of mounting in cabinets.

### EXHAUST FANS

Cat. No.	CFM	Motor Watts	RPM	Fan Blade Dia.	A	B	C	D	Hole Dia. Required	Net Price
EF-165	165	20	1650	6 1/2"	2 7/8"	1 5/8"	1 1/4"	8 1/2"	7 3/8"	\$50.00
EF-220	220	25	1550	6 1/2"	3 1/4"	1 5/8"	1 5/8"	8 1/2"	7 3/8"	45.00
EF-300	300	65	3000	6 1/2"	4 1/8"	2 5/8"	1 1/2"	8 1/2"	7 3/8"	45.00
EF-400	400	46	1460	8"	3 5/8"	1 7/8"	1 3/4"	10 1/2"	9 1/4"	54.00
EF-550	550	90	1600	9"	4 3/8"	2 1/8"	2 1/4"	11 1/2"	10 3/8"	57.00
EF-750	750	105	1560	10"	4 3/8"	2 1/8"	2 1/4"	12 1/2"	11 1/8"	60.00

- Cut-out and mounting holes for fans can be provided on any Premier rack or cabinet at slight additional cost.
- Patent No. 3,019,965.  
Other Patents Pending.

### ACCESSORIES FOR EXHAUST FANS

#### GUARDS

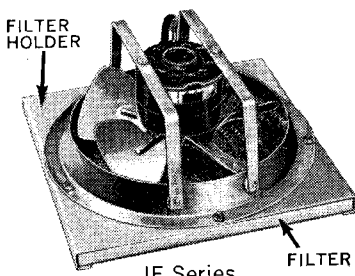
Cat. No.	Used with Fan	Dia.	Depth	Net Price
GU-6	EF165, 220, 300	6 3/4"	1 7/8"	\$2.40
GU-8	EF400	8 1/4"	2 3/8"	2.40
GU-9	EF550	9 1/4"	2 3/8"	3.00
GU-10	EF750	10 1/4"	2 3/8"	3.60

#### GRILLES

Cat. No.	Used with Fan	Dia.	Net Price
GR-6	EF165, 220, 300	8 1/2"	\$2.40
GR-8	EF400	10 1/2"	2.40
GR-9	EF550	11 1/2"	3.00
GR-10	EF750	12 1/2"	3.60

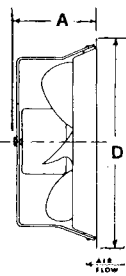
#### SLEEVES

Cat. No.	Used with Fan	Dia.	Depth	Net Price
SL-6	EF165, 220, 300	8 1/2"	1 3/4"	\$3.60
SL-8	EF400	10 1/2"	2	3.60
SL-9	EF550	11 1/2"	2 3/8"	4.20
SL-10	EF750	12 1/2"	2 3/8"	4.80



IF Series

FILTER



### INTAKE FANS

Cat. No.	CFM	Motor Watts	RPM	Fan Blade Dia.	Dimensions A	D	Hole Diam. Required	Net Price
IF-160	160	20	1650	6 1/2"	2 7/8"	8 1/2"	7 3/8"	\$50.00
IF-180	180	25	1550	6 1/2"	3 1/4"	8 1/2"	7 3/8"	45.00
IF-300	300	65	3000	6 1/2"	4 1/8"	8 1/2"	7 3/8"	45.00
IF-360	360	46	1460	8"	3 3/4"	10 1/2"	9 1/4"	54.00
IF-540	540	90	1600	9"	4 3/8"	11 1/2"	10 3/8"	57.00
IF-740	740	105	1560	10"	4 3/8"	12 1/2"	11 1/8"	60.00

### PREMIER CABINETS AND RACKS

FA, PRXA, RMA, R, RS, DR, DCR, DRK, SDR, POR and FXR models may be supplied with one round and 5 mounting holes to accommodate Exhaust and Intake Fans, at additional cost.

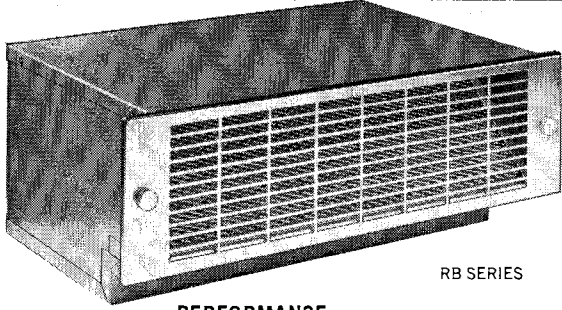


### ACCESSORIES FOR INTAKE FANS

FILTERS				FILTER HOLDERS				
Permanent washable type, 1/2" thick								
Cat. No.	Used with Fan	Size	Net Price	Cat. No.	Used with Fan	Size	Depth	Net Price
FL-6	IF 160, 180, 300	8 3/8" Sq.	\$2.40	FH-6	IF 160, 180, 300	8 3/8" Sq.	3/8"	\$4.80
FL-8	IF 360	10 3/8" Sq.	2.40	FH-8	IF 360	10 3/8" Sq.	3/8"	4.80
FL-9	IF 540	11 3/8" Sq.	3.00	FH-9	IF 540	11 3/8" Sq.	3/8"	6.00
FL-10	IF 740	12 3/8" Sq.	3.00	FH-10	IF 740	12 3/8" Sq.	3/8"	7.20

# PREM-O-KOOL™

# RECESSED BLOWERS



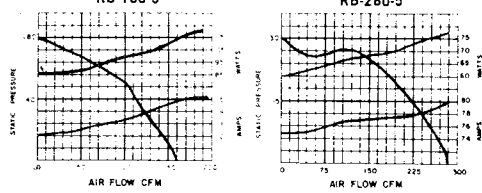
RB SERIES

**FOR  
INSTALLATION  
IN THE OPEN  
BASE AREA OF  
ELECTRONIC  
RACKS**

For maximum air delivery with minimum panel height. Built to the same general specifications as above Panel Mounted Blowers (PMB Series).

Cat. No.	RB-150-3	RB-280-5
CFM at 0" S.P.	150	280
PANEL HEIGHT	3½"	5¼"
FILTER	16¾x5¼x½"	16¾x6¾x½"
DEPTH of ENCLOSURE ONLY	8½"	10½"
OVERALL DEPTH including outlets and front grille	9⅞"	12⅞"
MOTOR		
RPM	3000	1500
WATTS	120	78
VOLTS	115	115
CYCLES	50/60	50/50
AMPS	1.5	.8
TYPE	Shaded pole, permanent lubrication, ball bearing	Permanent split capacitor, permanent lubrication, ball bearing
SHIP. WT. Lbs.	15	24
NET PRICE	\$125.00	\$140.00

**PERFORMANCE**



# PREMIER

# BALL BEARING ACTION CABLE RETRACTOR

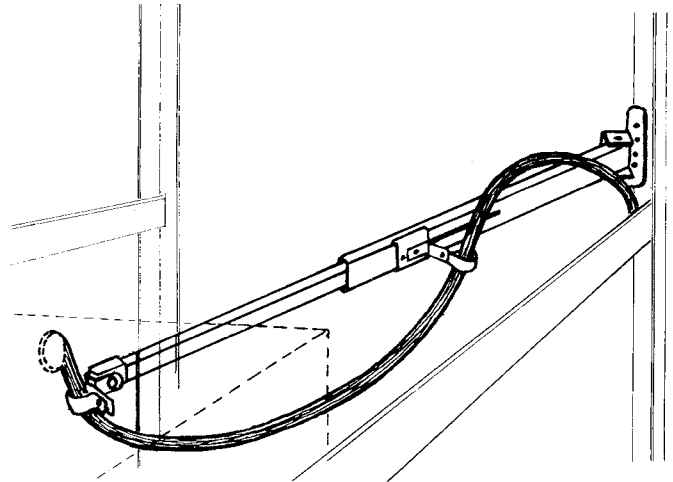
**FOR CONTROL OF POWER SUPPLY CABLES**

- Smooth gliding, stress-free motion
- Heavy duty construction
- Quick, simple installation
- Spring tension keeps cable "jam-proof"

The PREMIER CABLE RETRACTOR is designed for easy and fast installation in both new and existing equipment. It is attached to rear of cabinet and controls power supply cables most efficiently. As the chassis is extended, the retractor pivots and the inner ball bearing actuated member glides out as necessary.

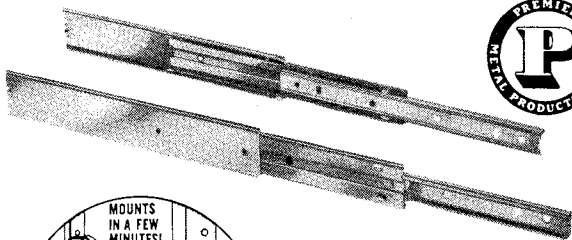
CATALOG NO. PCR-3-16

Net Price \$15.85



# PREM-O-RAK®

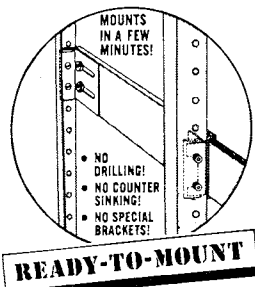
# FULL EXTENSION HEAVY DUTY CHASSIS SLIDES



- Exclusive "QUICK DISCONNECT" allows for immediate removal of chassis
- Glides smoothly on Nylon rollers
- Slide mounts standard 17" wide chassis
- Extends fully, yet keeps chassis perfectly straight
- Supplied with all necessary hardware
- Positive mechanical stop prevents possibility of chassis extending too far.

Cat. No.	Slide Length	Slide Travel	Will fit Racks	Net Price
SNR-100-14	14"	14"	15¼" deep POR (DCR, SDR, DRK, SDRK)*	\$11.27
SNR-100-16	16"	16"	18" deep PRXA, POR (R, RS, RMA, FD, DCR, SDR)*	11.45
SNR-100-20	20"	20"	FS, 22" deep CPF & FA	11.82
SNR-100-22	22"	22"	24" deep PRXA (RMA, FD)*	12.03
SNR-100-24	24"	24"	25½" deep FA & FS	12.33

\*Slide Adapter Kit (Cat. No. SAK-35) required for rear mounting on all models in parenthesis. (See page 26).



**READY-TO-MOUNT**

**FULL EXTENSION**

Slide moves the chassis fully, placing components within easy reach.

**½" SIDE SPACE**

Takes the minimum side space required by any slide.

**NO DEFLECTION**

Slide extends the chassis fully, yet keeps chassis perfectly straight without any deflection.

**100 LB. LOADS**

Slide operates smoothly and efficiently, even when carrying loads up to 100 lbs./pair.

# PREM-O-RAK®

## Standard CHASSIS SLIDES

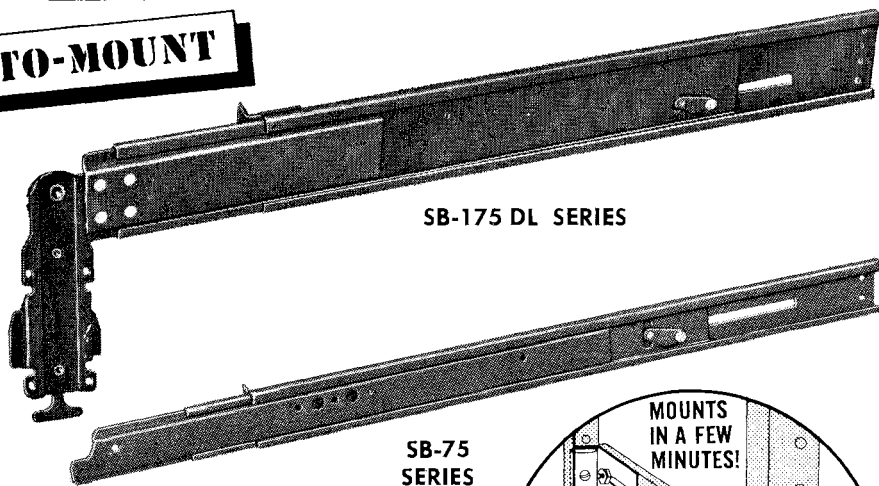


**READY-TO-MOUNT**

### SOLID BEARING SLIDES

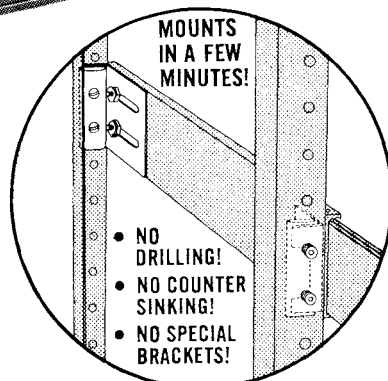
CARRY 75 lb. and 175 lb. LOADS

- **TILT and NON-TILT MODELS.**
- EXCLUSIVE "QUICK DISCONNECT" allows for immediate removal of chassis.
- SB-75 Series carry 75 lbs. fully extended. SB-175 Series carry 175 lbs. fully extended.
- Made of high strength cold rolled steel.
- Withstands 100 hours salt spray.
- Slide mounts standard 17" wide chassis.
- 3 telescoping members allow full accessibility for instant servicing.
- SB-75 Series—386 horizontal side space adjustable  $\pm \frac{1}{32}$ .
- SB-175 Series—398 horizontal side space adjustable  $\pm \frac{1}{32}$ .
- Finish: Electro zinc plated, chromate treated and completely coated with Molybdenum Disulphide lubricant.
- SB-175-DL Series have detent locks which allow chassis to be tilted either up or down and locked at 90° for easy servicing.

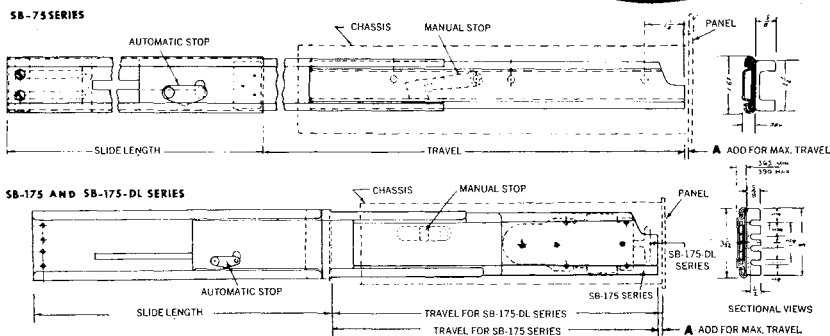


SB-175 DL SERIES

SB-75 SERIES



- ★ MOUNTS TO TAPPED HOLES OF FRONT AND REAR PANEL MOUNTING ANGLES
- ★ SIMPLE ADJUSTABILITY OF CHASSIS SLIDE ASSEMBLY FROM OUTSIDE OF FRAME



#### SLIDE ADAPTER KIT

Required for rear mounting on RM, RMA, FD, RS, R, DCR, DRK, SDR and SDRK models.

- Mounts to inside rear flange by drilling 4 holes.
- Made of No. 12 gauge steel and tapped 10-32 on E.I.A. spacings ( $\frac{9}{8}$ - $\frac{1}{2}$ ).
- Finished in Gray Hammer-tone.

Kit includes 2 brackets, four 10-32 screws and keps.

Cat. No. SAK-35 **\$3.00 Net Price**

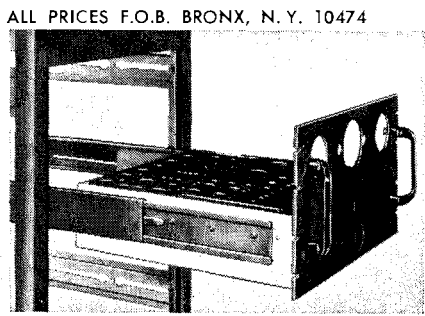
#### SLIDE TILTING KIT

For tilting one pair of slides. Consists of 4 special screws, lock washers and nuts.

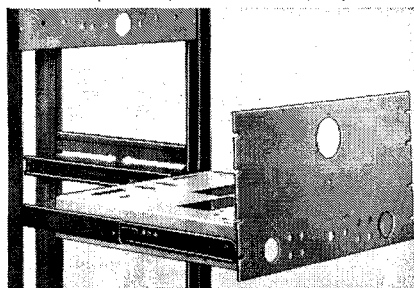
STK-75 (For SB-75 series) ..... **\$1.50 Net Price**  
 STK-175 (For SB-175 series)..... **1.75 Net Price**

Catalog No.	Load Rating lbs.	Slide Length	Travel Length	(A) Add for Max. Travel	Will Fit Racks	Net Price per-Pair
SB-75-14	75	14"	14½"	1"	15¼" deep POR (DCR, SDR, DRK)*	\$17.50
SB-75-16	75	16	14½"	3	18" deep PRXA, POR (R, RS, RMA, FD, DCR, SDR)*	17.50
SB-75-20	75	20	18½"	3	FS, 22" deep CPF, MSF & FA	17.50
SB-75-22	75	22	22½"	1	24" deep PRXA (RMA, FD)*	18.75
SB-75-24	75	24	22½"	3	25½" deep FA, MSF & FS	19.75
SB-175-14	175	14"	14½"	1"	15¼" deep POR (DCR, SDR, DRK)*	\$37.25
SB-175-16	175	16	18½"	1	18" deep PRXA, POR (R, RS, RMA, FD, DCR, SDR)*	37.25
SB-175-20	175	20	22½"	1	FS, 22" deep CPF, MSF & FA	37.25
SB-175-22	175	22	24	1	24" deep PRXA (RMA, FD)*	39.50
SB-175-24	175	24	26½"	1	25½" deep FA, MSF & FS	40.25
SB-75-DL-14	75	14"	15"	—	15¼" deep POR (DCR, SDR, DRK)*	\$40.00
SB-75-DL-16	75	16	17	—	18" deep PRXA, POR (R, RS, RMA, FD, DCR, SDR)*	\$40.00
SB-75-DL-20	75	20	21	—	FS, 22" deep CPF, MSF & FA	40.00
SB-75-DL-22	75	22	23	—	24" deep PRXA (RMA, FD)*	42.50
SB-75-DL-24	75	24	25	—	25½" deep FA, MSF & FS	44.00
SB-175-DL-14	175	14"	14½"	—	15¼" deep POR (DCR, SDR, DRK)*	\$59.00
SB-175-DL-16	175	16	18½"	—	18" deep PRXA, POR (R, RS, RMA, FD, DCR, SDR)*	59.00
SB-175-DL-20	175	20	22½"	—	FS, 22" deep CPF, MSF & FA	59.00
SB-175-DL-22	175	22	26¼"	—	24" deep PRXA (RMA, FD)*	61.50
SB-175-DL-24	175	24	26¼"	—	25½" deep FA, MSF & FS	63.50

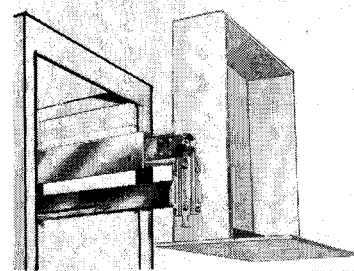
\*Slide Adapter Kit (Cat. No. SAK-35) required for rear mounting on all models in parenthesis.



SB-175 Series



SB-75 Series



SB-175-DL Series



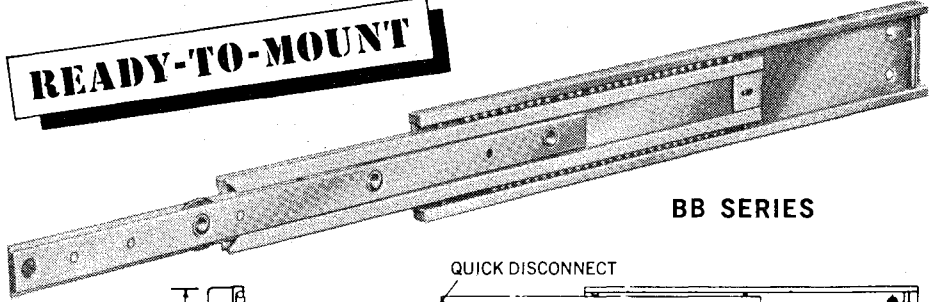
**PREM-O-RAK®**

**Standard CHASSIS SLIDES**



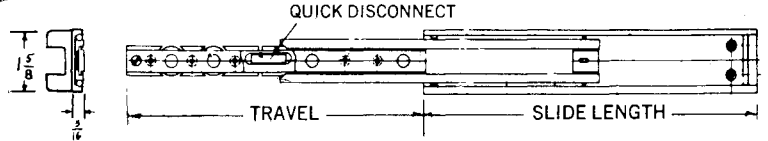
**READY-TO-MOUNT**

**100 lb. BALL BEARING SLIDES**



**BB SERIES**

- EXCLUSIVE "QUICK DISCONNECT" allows for immediate removal of chassis.
- Carries load of 100 lbs. when fully extended.
- Glides smoothly on stainless steel ball bearings.
- $\frac{5}{16}$ " horizontal side space adjustable  $\pm \frac{1}{16}$ .
- $1\frac{1}{2}$ " vertical side space.
- 3 telescoping anodized aluminum members.
- Allows full accessibility for instantaneous servicing.
- Slide mounts standard 17" wide chassis.
- Slide locks in open position.
- Supplied with all necessary hardware for immediate installation.



Catalog No.	Load Rating Lbs.	Slide Length	Travel Length	Will Fit Racks	Net Price per Pair
BB-100-14	100	14"	13"	15 $\frac{1}{4}$ " deep POR (DCR, SDR, DRK)*	\$63.25
BB-100-16	100	16	15	18" deep PRXA, POR (R, RS, RMA, FD, DCR, SDR*)	63.25
BB-100-20	100	20	19	FS, 22" deep CPF, MSF & FA	68.50
BB-100-22	100	22	21	24" deep PRXA (RMA, FD)*	69.75
BB-100-24	100	24	23	25 $\frac{1}{2}$ " deep FA, MSF & FS	71.50

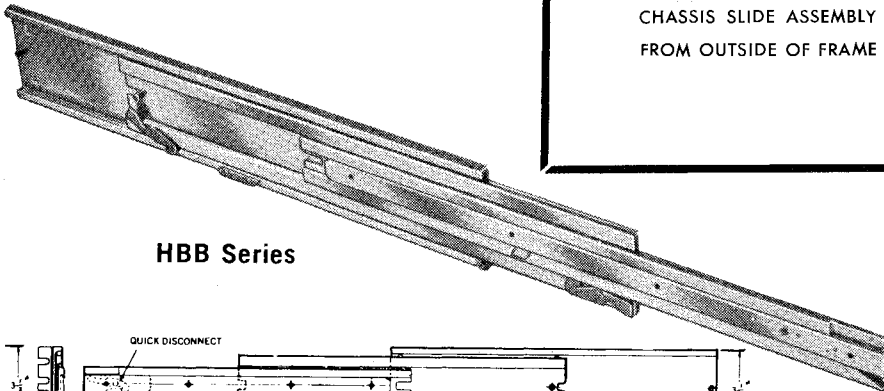
\*Slide Adapter Kit (Cat. No. SAK-35) required for rear mounting on all models in parenthesis (See page 27).

★ MOUNTS TO TAPPED HOLES OF FRONT AND REAR PANEL MOUNTING ANGLES

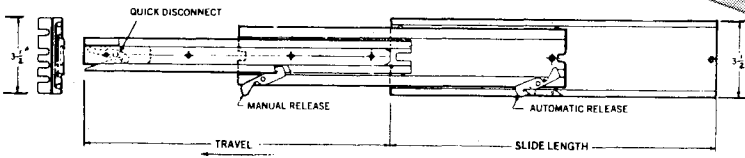
★ SIMPLE ADJUSTABILITY OF CHASSIS SLIDE ASSEMBLY FROM OUTSIDE OF FRAME

**MOUNTS IN A FEW MINUTES!**

- NO DRILLING!
- NO COUNTER SINKING!
- NO SPECIAL BRACKETS!



**HBB Series**



Catalog No.	Load Rating Lbs.	Slide Length	Travel Length	Will Fit Racks	Net Price per Pair
HBB-200-14	200	14"	13"	15 $\frac{1}{4}$ " deep POR (DCR, SDR, DRK)*	\$81.50
HBB-200-16	200	16	15	18" deep PRXA, POR (R, RS, RMA, FD, DCR, SDR)*	81.50
HBB-200-20	200	20	19	FS, 22" deep CPF & FA	88.75
HBB-200-22	200	22	21	FS, 22" deep CPF, MSF & FA (FD)*	92.00
HBB-200-24	200	24	23	25 $\frac{1}{2}$ " deep FA, MSF & FS	94.00

\*Slide Adapter Kit (Cat. No. SAK-35) required for rear mounting on all models in parenthesis (See page 26)

**200 lb. HEAVY BALL BEARING SLIDES**

- EXCLUSIVE "QUICK DISCONNECT" allows for immediate removal of chassis.
- Chassis may be removed from side by depressing quick release lever.
- Slide locks in open position.
- $\frac{1}{2}$ " horizontal side space adjustable  $\pm \frac{3}{32}$ .
- Carries loads of 200 lbs. when fully extended.
- $3\frac{1}{2}$ " vertical side space.
- 4 telescoping anodized aluminum members.
- Allows full accessibility for instantaneous servicing.
- Glides smoothly on stainless steel ball bearings.
- Slide mounts standard 17" wide chassis.
- Supplied with all necessary hardware for immediate installation.

PREMIER PAGE 27

ALL PRICES F.O.B. BRONX, N. Y. 10474

# PREMIER STEEL & ALUMINUM RACK PANELS

## BLANK RACK PANELS

9 1/2" - 19" - 24" - 30" WIDTHS

## REVERSIBLE

### MATERIAL

Steel.....#12 Ga. (.104) Cold Rolled  
 Aluminum.....1/8" thick — 5005-H36 Alloy  
 Aluminum.....3/16" thick — 6061-T6 Alloy

### FINISH

19" wide painted panels are finished in 2 types of Reversible colors.

#### Reversible Wrinkle

One side is Black Wrinkle — the other side is Blue-Gray Wrinkle

— or —

#### Reversible Hammertone

One side is Gray Hammertone — the other side is Brown Hammertone

9 1/2", 24" and 30" wide panels are finished on both sides in either Black or Blue-Gray Wrinkle, Gray or Brown Hammertone.

### MASKED ALUMINUM PANELS

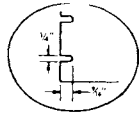
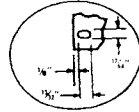
Made of bright natural aluminum covered on both sides with special self-adhesive paper. Drilling or milling can be done on paper in place, affording complete damage protection. Paper is removed simply by peeling.

### NOTCHING

All panels are notched according to E.I.A. Standards and will fit any rack having multiple 5/8 - 5/8 - 1/2 or 1 1/4 - 1/2 spacings.

All panels have open slots except the 1 3/4" & 3 1/2" high, which have closed slots for rigidity.

**\*NOTE: All panels are cut 1/32" less than nominal height.**



### 19" WIDE

## ALUMINUM

Made of 1/8" Thick Aluminum

9 1/2" Wide

Cat. No.	Ship. Wt.	*Nominal Height	Net Price
ARP-195	1/4	1 3/4"	\$0.95
ARP-395	1/2	3 1/2"	1.25
ARP-595	3/4	5 1/4"	1.85
ARP-795	1	7"	2.25
ARP-895	1 1/4	8 3/4"	2.65
ARP-1095	1 1/2	10 1/2"	3.30
ARP-1295	1 3/4	12 1/4"	4.85
ARP-1495	2	14"	4.40

### Modifications Available

- Panels can be notched to meet MIL-Std-189.
- 1/8" thick Aluminum Panels available in 6061T6 alloy.
- 19" wide panels can be finished in same color on both sides.
- Special Finishes.
- Special Heights.

*Nominal Masked Aluminum — 1/8" Thick				Painted Aluminum — 1/8" Thick			Painted Aluminum — 3/16" Thick			Painted Steel — No. 12 Gauge		
Height	Cat. No.	Shipping Wt. Lbs.	Net Price	Cat. No.	Shipping Wt. Lbs.	Net Price	Cat. No.	Shipping Wt. Lbs.	Net Price	Cat. No.	Shipping Wt. Lbs.	Net Price
1 3/4"	MAP-119	1/2	\$ 1.06	ARP-119	1/2	\$ 1.12	ARP-119-36	3/4	\$ 1.80	RP-119	1	\$ .85
3 1/2"	MAP-319	1	1.45	ARP-319	1	1.50	ARP-319-36	1 1/2	2.35	RP-319	2	1.00
5 1/4"	MAP-519	1 1/2	1.95	ARP-519	1 1/2	2.05	ARP-519-36	2 1/2	3.30	RP-519	3	1.20
7"	MAP-719	2	2.35	ARP-719	2	2.46	ARP-719-36	3	4.00	RP-719	4	1.40
8 3/4"	MAP-819	2 1/2	2.85	ARP-819	2 1/2	2.95	ARP-819-36	3 3/4	4.75	RP-819	5 1/4	1.70
10 1/2"	MAP-1019	3	3.55	ARP-1019	3	3.75	ARP-1019-36	4 1/2	6.00	RP-1019	6 1/4	2.05
12 1/4"	MAP-1219	3 1/2	4.15	ARP-1219	3 1/2	4.15	ARP-1219-36	5	6.95	RP-1219	7 1/4	2.45
14"	MAP-1419	4	4.75	ARP-1419	4	5.00	ARP-1419-36	6	8.00	RP-1419	8 1/4	2.82
15 3/4"	MAP-1519	4	5.30	ARP-1519	4	5.50	ARP-1519-36	6	8.90	RP-1519	9	3.16
17 1/2"	MAP-1719	4 3/4	5.85	ARP-1719	4 3/4	6.10	ARP-1719-36	7	9.80	RP-1719	10 1/2	3.50
19 1/2"	MAP-1919	5	6.40	ARP-1919	5	6.70	ARP-1919-36	7 1/2	10.75	RP-1919	12	3.85
21"	MAP-2119	6	6.95	ARP-2119	6	7.50	ARP-2119-36	9	11.65	RP-2119	12 1/2	4.25
26 1/2"	MAP-2619	7 1/2	9.00	ARP-2619	7 1/2	10.20	ARP-2619-36	11 1/2	15.00	RP-2619	15 1/2	6.00
31 1/2"	MAP-3119	8 1/2	10.50	ARP-3119	8 1/2	13.70	ARP-3119-36	13 1/2	17.60	RP-3119	19	7.70
35"	MAP-3519	10	12.50	ARP-3519	10	14.85	ARP-3519-36	15	20.50	RP-3519	22	9.00

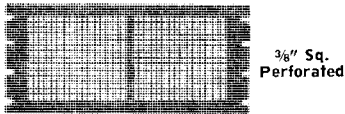
### 24" WIDE

### 30" WIDE

Aluminum — 1/8" Thick				Steel — No. 12 Gauge			Aluminum — 1/8" Thick				Steel — No. 12 Gauge		
Cat. No.	Ship. Wt. Lbs.	Net Price	*Nominal Height	Cat. No.	Ship. Wt. Lbs.	Net Price	Cat. No.	Ship. Wt. Lbs.	Net Price	*Nominal Height	Cat. No.	Ship. Wt. Lbs.	Net Price
ARP-324	1 1/4	\$2.30	3 1/2"	RP-324	2 1/4	\$1.50	ARP-330	1 1/2	\$3.05	3 1/2"	RP-330	3	\$1.95
ARP-524	2	3.40	5 1/4"	RP-524	3 1/2	1.85	ARP-530	2 1/4	4.55	5 1/4"	RP-530	4 1/2	2.45
ARP-724	2 1/2	4.10	7"	RP-724	4 1/2	2.10	ARP-730	3	5.50	7"	RP-730	6	2.80
ARP-824	3	4.90	8 3/4"	RP-824	6	2.60	ARP-830	3 3/4	6.50	8 3/4"	RP-830	8	3.40
ARP-1024	3 1/2	6.15	10 1/2"	RP-1024	7	3.10	ARP-1030	4 1/2	8.20	10 1/2"	RP-1030	9 1/4	3.45
ARP-1224	4	7.20	12 1/4"	RP-1224	8	3.66	ARP-1230	5	9.55	12 1/4"	RP-1230	10 1/4	4.05
ARP-1424	4 1/2	8.25	14"	RP-1424	9	4.20	ARP-1430	6	10.95	14"	RP-1430	12	5.60
ARP-1524	5	9.15	15 3/4"	RP-1524	10	4.75	ARP-1530	6 1/2	12.25	15 3/4"	RP-1530	13 1/2	6.35
ARP-1724	5 1/2	10.10	17 1/2"	RP-1724	11	5.25	ARP-1730	7	13.50	17 1/2"	RP-1730	15	6.95
ARP-1924	6	11.05	19 1/4"	RP-1924	12	5.80	ARP-1930	7 1/2	14.75	19 1/4"	RP-1930	18	7.66
ARP-2124	6 1/2	12.05	21"	RP-2124	13	6.40	ARP-2130	9	16.05	21"	RP-2130	19	8.50

**PANELS — 19" WIDE FINISHED IN EITHER BLACK OR BLUE GRAY WRINKLE, GRAY OR BROWN HAMMERTONE**  
 Made of No. 12 Gauge Steel

IF COLOR IS NOT SPECIFIED, BLACK WRINKLE IS FURNISHED.



### GRILLE PANELS

Cat. No.	Grill Size	*Nominal Height	Ship. Wt. Lbs.	Net Price
GRP-601	37/8" x 133/8"	5 1/4"	2	\$3.40
GRP-602	37/8" x 133/8"	7"	2	3.64
GRP-603	57/8" x 133/8"	8 3/4"	2 1/2	4.40
GRP-604	*37/8" x 133/8"	8 3/4"	2 1/2	4.05
GRP-605	*77/8" x 133/8"	10 1/2"	2 1/2	4.82
GRP-606	*57/8" x 133/8"	10 1/2"	2 1/2	4.40
GRP-607	*77/8" x 133/8"	12 1/4"	3	5.00

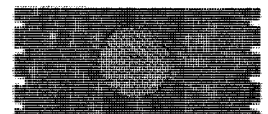
\* Allows 3/2" space at bottom for chassis mounting.



### SIDE HINGED DOOR PANELS

Can be used for left or right hand opening. Supplied with a quick turn fastener. Full height piano hinge welded to panel.

Cat. No.	Height	Net Price
SHP-319	3 1/2"	\$3.30
SHP-519	5 1/4"	3.44
SHP-719	7"	3.76
SHP-819	8 3/4"	4.04
SHP-1019	10 1/2"	4.36
SHP-1219	12 1/4"	4.66
SHP-1419	14"	5.05
SHP-2119	21"	8.00



### SPEAKER PANELS

A piece of perforated metal is spot-welded behind the opening.

Cat. No.	Height	Spkr. Size	Hole Size	Ship. Wt. Lbs.	Net Price
SRP-819	8 3/4"	6"	4 9/8"	6	\$3.2
SRP-1019	10 1/2"	8"	6 1/2"	8	4.0
SRP-1219	12 1/4"	10"	8 1/2"	9	4.8
SRP-1419	14"	12"	11"	10	5.5

ALL PRICES F.O.B. BRONX, N. Y. 10474

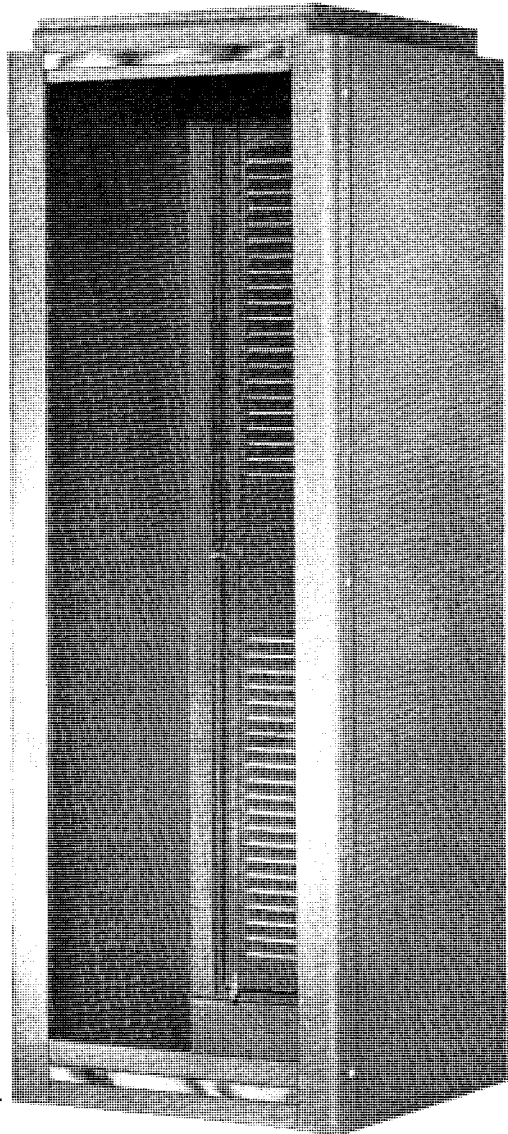


# ALL-WELDED DELUXE CABINET RACKS

## DELUXE "D" SERIES AN ALL-WELDED UNIT FOR 19" RACK PANELS

### SPECIFICATIONS:

- A. Rack is constructed throughout from 16 gauge high-quality steel and is completely welded together.
- B. Panel mounting angles constructed of  $1\frac{1}{2}$  x  $1\frac{1}{2}$  x  $\frac{1}{8}$ " angle iron.
- C. Mounting holes are tapped 10/32 thread.
- D. Mounting holes are at  $1\frac{1}{4}$ "- $\frac{1}{2}$ " spacings. (WESTERN ELECTRIC SPACING.)
- E. Double row of louvres in rear door provide ventilation.
- F. Door is hung on loose-pin hinges; it may be easily removed.
- G. Door is securely locked by means of an "automotive" type highly-polished handle and linkage rods.
- H. Highly polished metal trim is on front of rack at top and bottom.
- I. Panel mounting screws are concealed by detachable corner vertical trim (see Item "L").
- J. Finished in black or grey wrinkle enamel and silver grey hammertone.
- K. When it is desired to "gang" two or more of these cabinets together, order connecting trim, using the prefix "AD" plus the last two numbers of the catalog number of the cabinet.
- L. Narrow vertical trim, allowing for removal of 19" panels, without removing vertical trim, is available, upon request, at no additional charge.



### RACKS — 18½" DEEP

Catalog Number	Overall Dimensions	Panel Space	Clear Inside Width (Front)	Clear Inside width (Rear)	Clear Inside Depth	Approx. Shipping Weight
D 1869	69 $\frac{3}{8}$ x 23 $\frac{3}{8}$ x 18½	61¼ x 19	17 $\frac{7}{8}$	19 $\frac{3}{8}$	16¾	155 lbs.
D 1878	78 $\frac{3}{8}$ x 23 $\frac{3}{8}$ x 18½	70 x 19	17 $\frac{7}{8}$	19 $\frac{3}{8}$	16¾	167 lbs.
D 1885	85 $\frac{3}{8}$ x 23 $\frac{3}{8}$ x 18½	77 x 19	17 $\frac{7}{8}$	19 $\frac{3}{8}$	16¾	180 lbs.

### RACKS — 24" DEEP

D 2469	69 $\frac{3}{8}$ x 23 $\frac{3}{8}$ x 24	61¼ x 19	17 $\frac{7}{8}$	19 $\frac{3}{8}$	22¼	176 lbs.
D 2478	78 $\frac{3}{8}$ x 23 $\frac{3}{8}$ x 24	70 x 19	17 $\frac{7}{8}$	19 $\frac{3}{8}$	22¼	192 lbs.
D 2485	85 $\frac{3}{8}$ x 23 $\frac{3}{8}$ x 24	77 x 19	17 $\frac{7}{8}$	19 $\frac{3}{8}$	22¼	205 lbs.

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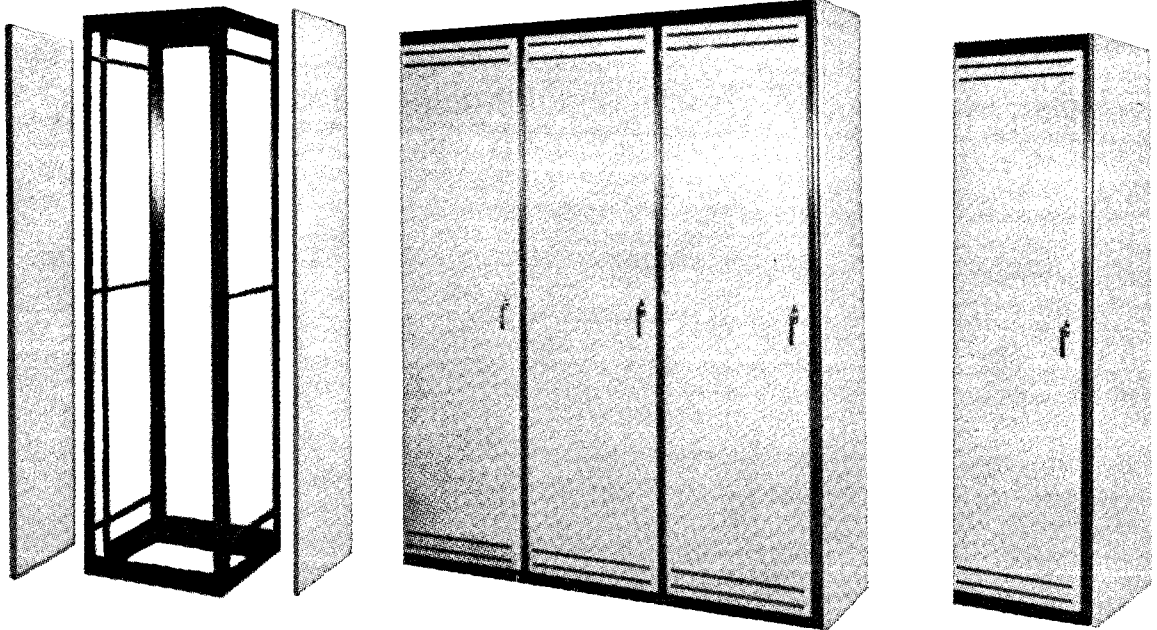
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# MULTIPLE RACK INSTALLATIONS

ALL-WELDED FRAME—FOR 19" MODELS  
REMOVABLE SIDES—ADJUSTABLE MOUNTING ANGLES

## 18" DEEP AND 24" DEEP



### SPECIFICATIONS:

- A. Sides are removable for MULTIPLE RACK installations of two or more units.
- B. This series consists of one frame and rear door, or one frame, rear and front door.
- C. Removable sides sold separately, in pairs only.
- D. Fabricated of high-quality, heavy gauge steel and electrically welded together.
- E. Panel mounting angles are  $\frac{3}{8}$ " structural steel with mounting holes tapped 10-32 thread on  $1\frac{1}{4}$ "- $\frac{1}{2}$ " spacing.
- F. Panel mounting angles are adjustable from front to back.
- G. Highly-polished trim on doors.
- H. "Automotive" type, highly-polished handles on doors.
- I. Door can be mounted left or right hand.
- J. Bottom has cut-out for cables, leads, etc.
- K. Louvres in doors, sides and cabinet top can be added at no additional cost.
- L. A rectangular or round opening can be put into cabinet top at no additional cost.
- M. Available in primer coat, two-tone grey enamel (frame in dark grey; doors and ends in silver-grey hammertone), black or grey wrinkle.
- N. Heavy-duty Caster #RC7773 may be used with this series.

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### 18" DEEP RACK

REAR DOOR ONLY				FRONT AND REAR DOOR			
Cat. No.	Height	Panel Space	Approx. Shp. Wt.	Cat. No.	Height	Panel Space	Approx. Shp. Wt.
RW861	67 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	123	FW618	67 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	143
RW870	76 $\frac{1}{8}$ "	70"	129	FW708	76 $\frac{1}{8}$ "	70"	152
RW877	83 $\frac{1}{8}$ "	77"	143	FW778	83 $\frac{1}{8}$ "	77"	168

### 18" DEEP REMOVABLE SIDES

Catalog No.	Approx. Shp. Wt. Pairs
RS 1861	45 lbs.
RS 1870	50 lbs.
RS 1877	55 lbs.

### 24" DEEP RACK

REAR DOOR ONLY				FRONT AND REAR DOOR			
Cat. No.	Height	Panel Space	Approx. Shp. Wt.	Cat. No.	Height	Panel Space	Approx. Shp. Wt.
RW461	67 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	144	FW614	67 $\frac{3}{8}$ "	61 $\frac{1}{4}$ "	169
RW470	76 $\frac{1}{8}$ "	70"	153	FW704	76 $\frac{1}{8}$ "	70"	183
RW477	83 $\frac{1}{8}$ "	77"	169	FW774	83 $\frac{1}{8}$ "	77"	202

### 24" DEEP REMOVABLE SIDES

Catalog No.	Approx. Shp. Wt. Pairs
RS 2461	56 lbs.
RS 2470	64 lbs.
RS 2477	70 lbs.

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# ALL-WELDED CABINET RACKS

## DELUXE SERIES "G" AND "DF" — STANDARD SERIES "SL" AND "S"

### DESCRIPTION:

- A. 16 ga. high quality steel.
- B. Welded together.
- C. Panel mounting angles  $\frac{1}{8}$ " steel.
- D. Western Electric spacing.
- E. Tapped 10/32.
- F. Louvres rear door.
- G. Rear door hung on loose-pin hinges.
- H. Rear door has flush-type latch.
- I. Highly-polished trim at front, top and bottom.

- J. Front corners rounded.
- K. Available grey or black wrinkle and silver grey hammertone.
- L. "SL" and "S" series have detachable vertical trim.
- M. "G" and "DF" series panel mounting angles adjustable front to back.
- N. "DF" series has front door with automotive type handle and three point catch.
- O. "SL" series has louvres at sides.
- P. Narrow vertical trim can be ordered for "SL" and "S" series.

### SPECIFICATIONS:

Cat. No.	Overall Dim.	Panel Space	Approx. Ship. Wt. Lbs.
G 6119	67 $\frac{3}{8}$ " x 22" x 18"	61 $\frac{1}{4}$ " x 19"	165
G 7019	76 $\frac{1}{8}$ " x 22" x 18"	70" x 19"	185
G 7719	83 $\frac{1}{8}$ " x 22" x 18"	77" x 19"	195
DF 1961	67 $\frac{3}{8}$ " x 22" x 18"	61 $\frac{1}{4}$ " x 19"	185
DF 1970	76 $\frac{1}{8}$ " x 22" x 18"	70" x 19"	200
DF 1977	83 $\frac{1}{8}$ " x 22" x 18"	77" x 19"	210
SL 1842	42 $\frac{7}{8}$ " x 21 $\frac{1}{8}$ " x 18"	36 $\frac{3}{4}$ " x 19"	107
SL 1867	67 $\frac{3}{8}$ " x 21 $\frac{1}{8}$ " x 18"	61 $\frac{1}{4}$ " x 19"	145
SL 1883	83 $\frac{1}{8}$ " x 21 $\frac{1}{8}$ " x 18"	77" x 19"	177

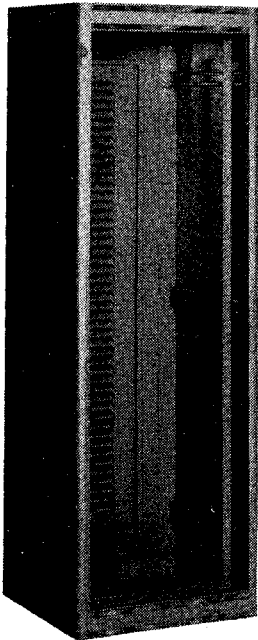
### STANDARD "S" SERIES

FOR 19" RACK PANELS

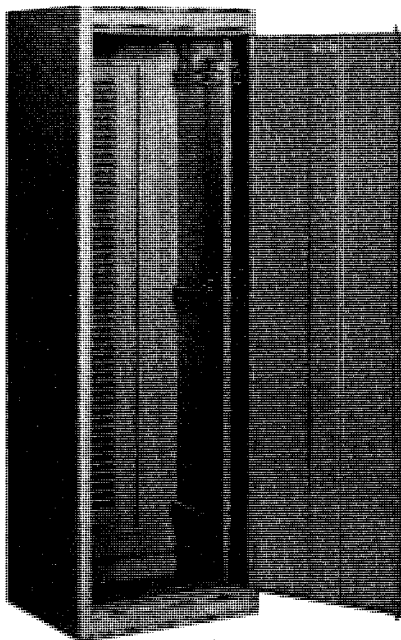
#### SPECIFICATIONS:

- A. ALL SPECIFICATIONS AND DIMENSIONS OF "SL" SERIES APPLY, EXCEPT FOR FOLLOWING:
  - (1) LOUVRES AT SIDE ARE OMITTED to facilitate use of racks in rows or "gangs."
  - (2) When it is desirable to set up these cabinets in rows or "gangs," we can supply a connecting trim for a small additional charge. Order connecting trim, using prefix "AS" plus the last two numbers of the catalog number of the cabinet.
  - (3) Catalog Numbers are prefaced with "S" instead of "SL."

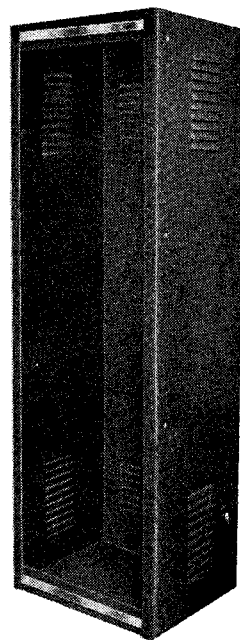
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"G" SERIES  
ADJUSTABLE MOUNTING ANGLE



"DF" SERIES  
ADJUSTABLE MOUNTING ANGLE



"SL" SERIES  
DETACHABLE VERTICAL TRIM  
AT FRONT CORNERS

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# CABINET RACKS - RELAY RACKS EXPAND-A-RACKS

## MODEL "W" AND BANNER "B" SERIES

### DESCRIPTION: "W" SERIES

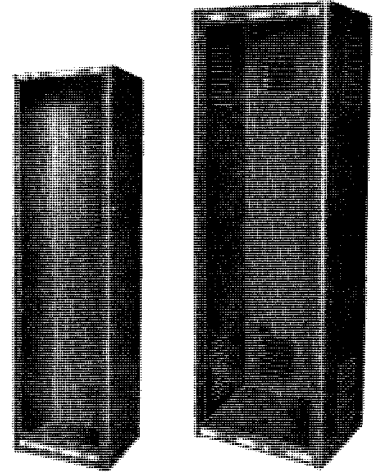
- A. 16 gauge high-quality steel.
- B. Front corners are rounded.
- C. Panel mounting angles 1/8" steel.
- D. Mounting holes tapped 10/32 thread.
- E. Mounting holes are UNIVERSAL CENTERS.
- F. Louvres in rear door and sides.
- G. Door hung on loose pin hinges.
- H. Door closed by two flush-type latches.
- I. Highly-polished trim on front.
- J. RACK IS SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for assembly.
- K. Finished in black or grey wrinkle and silver grey hammertone.
- L. There are four brackets spot welded to the bottom of the cabinet. Our casters (catalog No. RC100) can be attached to these brackets. This offers instant mobility, if required.

### DESCRIPTION: "B" SERIES

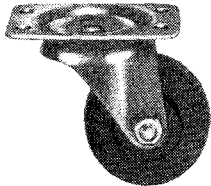
- A. 16 gauge high-quality steel and is welded together.
- B. Panel mounting angles 1 1/2x1 1/2x1/8" angle iron.
- C. Mounting holes are 10/32 thread. (WESTERN ELECTRIC SPACING.)
- D. Louvres in rear doors.
- E. Rear corners re-inforced.
- F. Door hung on loose pin hinges.
- G. Door closed by two flush-type latches.
- H. Highly-polished trim on front.
- I. Panel mounting screws concealed by vertical trim.
- K. Finished in black or grey wrinkle enamel and silver grey hammertone.
- L. When it is desirable to set up racks in rows or "gangs," order connecting trim, using the prefix "AB" plus the last two numbers of the catalog number of the cabinet.

### SPECIFICATIONS:

Catalog Number	Overall Dimensions	Panel Space	Clear Inside Width (Front)	Clear Inside Width (Rear)	Clear Inside Depth	Approx. Shipping Weight
W 1036	42 x22x17 1/4	36 3/4x19	17 7/8	17 1/4	15 7/8	88 lbs.
W 1042	47 1/4x22x17 1/4	42 x19	17 7/8	17 1/4	15 7/8	95 lbs.
W 1061	66 1/2x22x17 1/4	61 1/4x19	17 7/8	17 1/4	15 7/8	122 lbs.
W 1077	82 1/4x22x17 1/4	77 x19	17 7/8	17 1/4	15 7/8	148 lbs.
B 1876	76 1/8x21 1/8x18	70 x19	17 7/8	17 1/4	16 1/2	178 lbs.



"B" SERIES



### CASTERS

#### DESCRIPTION:

- A. Can be used with our "W" series and Expand-A-Rack series.
- B. Load capacity of a set of four is 520 lbs.
- C. The swivel bearing wheels are made of a hard fibrous compound.

CATALOG NO. RC-100 APPROX. SHIP. WT. EACH 8 oz.



"W" SERIES

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## EXPAND-A-RACK SERIES

### DESCRIPTION:

- A. When it is necessary to join two or more racks together, WYCO METAL PRODUCTS offers the "EXPAND-A-RACK" series.
- B. Figure "A" shows two Expand-A-Racks joined together.
- C. Figure "B" illustrates the method of expanding your present rack space. In place of purchasing an additional rack, a unit, consisting of the following items, would be bought: (a) the door; (b) the top; (c) the bottom; (d) an Expand-A-Rack joining unit. The right or left side of your existing relay cabinet rack is dis-assembled and replaced with an Expand-A-Rack joining unit. Following this step, the top and bottom are assembled. The cabinet side removed from the original rack is then fastened onto the second rack. Upon hanging the additional door, two complete racks are now joined together.
- D. Wyco's Expand-A-Rack series may be purchased by one of two methods. One method consists of buying one complete rack (the "W" series) plus one Expand-A-Rack unit. If you already have one of our basic "W" series cabinets, then order an Expand-A-Rack unit.
- E. Supports are electronically welded to the bottom to receive our casters (#RC-100).
- F. There is an ample amount of compound knockouts in the Expand-A-Rack joining unit center partition. This allows cables and leads to be taken from one cabinet to the other.
- G. Available in Grey or Black Wrinkle and Silver Grey Hammertone.

### SPECIFICATIONS:

Cat. No.	Used to Expand-A-Rack With	Approx. Ship Wt. Lbs.
E-400	W-1036	74
E-401	W-1042	78
E-402	W-1061	99
E-403	W-1077	126

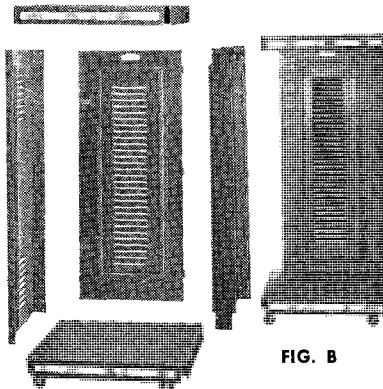


FIG. B

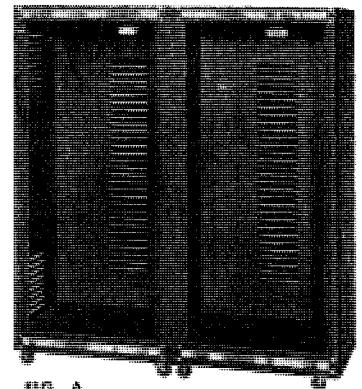


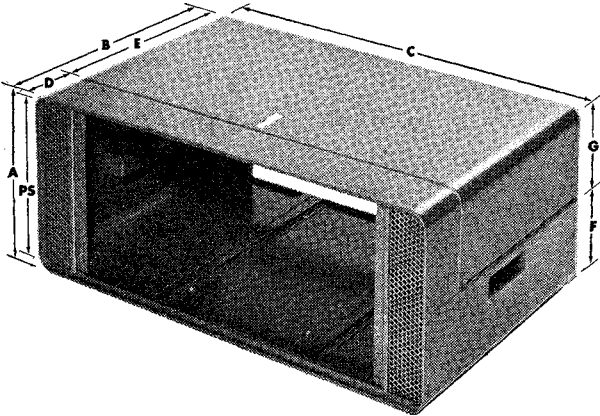
FIG. A

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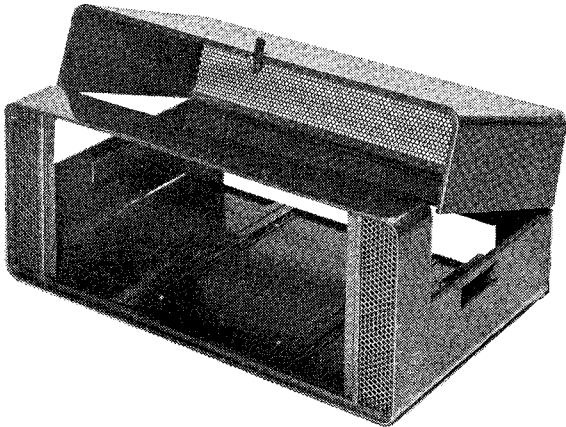




# THE "SUPREME LINE" CABINET SERIES AND PORTABLE SCOPE DOLLY



FRONT VIEW



FRONT VIEW — TOP DOOR OPEN

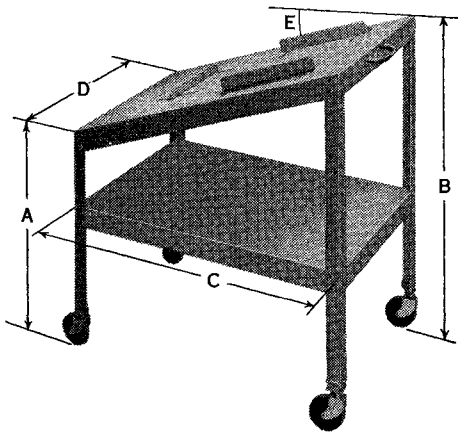
## DESCRIPTION :

- A. Fabricated of 16 ga. steel.
- B. Mounting holes tapped 10-32.
- C. Mounting holes: Universal spacing.
- D. Ventilated by perforated metal front and back and rear opening.
- E. Top door has continuous piano hinge.
- F. Top door has flush-type latch.
- G. Embossed feet with rubber bumpers at bottom.
- H. Adjustable Hat-section type rails, furnished to support chassis, have holes for bolting to cabinet bottom and chassis.
- I. Recessed carrying handles are in sides of cabinet.
- J. Finished in dark grey hammertone.
- K. Utilization of our standard aluminum or steel panels in silver grey hammertone finish with this series creates an attractive contrast.

## SPECIFICATIONS

CAT #	PANEL SPACE	A	B	C	D	E	F	G	H	I	Approx. Ship. Wt. Lbs.
SL 7760	7x19	7 <sup>3</sup> / <sub>4</sub>	15	24	3	12	3 <sup>7</sup> / <sub>8</sub>	3 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>8</sub>	3 <sup>7</sup> / <sub>8</sub>	25
SL 7761	8 <sup>3</sup> / <sub>4</sub> x19	9 <sup>1</sup> / <sub>2</sub>	15	24	3	12	4 <sup>3</sup> / <sub>4</sub>	4 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>4</sub>	23
SL 7762	10 <sup>1</sup> / <sub>2</sub> x19	11 <sup>1</sup> / <sub>4</sub>	15	24	3	12	5 <sup>5</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>8</sub>	27
SL 7763	12 <sup>1</sup> / <sub>4</sub> x19	13	15	24	3	12	6 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	29
SL 7764	14x19	14 <sup>3</sup> / <sub>4</sub>	15	24	3	12	7 <sup>3</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>8</sub>	31

➤ CONTACT AUTHORIZED DISTRIBUTOR FOR QUANTITY DISCOUNTS ◀



PORTABLE SCOPE DOLLY

## DESCRIPTION

- A. Shelves fabricated of high-quality steel.
- B. Legs fabricated of structural steel for strength.
- C. Highly - polished functional handle included.
- D. By adjusting brackets on the top shelf, almost any popular type of laboratory scope may be carried.
- E. Full - swivel 3" rubber casters included.
- F. Painted in smooth silver-grey hammertone.
- G. Shipped knocked-down with all necessary hardware for easy assembly.

CAT. #	Type	"A"	"B"	"C"	"D"	"E"	Approx. Ship. Wt.
SD 7783	sloping	21 <sup>3</sup> / <sub>4</sub> "	32 <sup>1</sup> / <sub>2</sub> "	28"	19"	20"	30±

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# SLIDES — SLIDE ASSEMBLIES

## SLIDING DRAWERS

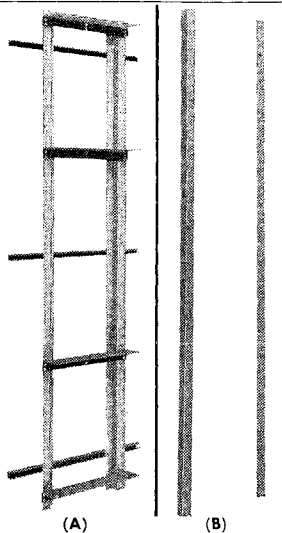
### VERTICAL SLIDE SUPPORTS — EXTRA MOUNTING ANGLES

### HEAVY DUTY CASTERS

#### (A) VERTICAL SIDE SUPPORTS

Description: (A) Bolts to Unistrut members in following series cabinets: RW/FW/G/DF. (B) 12 ga. steel; painted hammetone. (C) 10-32 holes; Universal spacing. (D) Supports shelves, mounting brackets and slide units. (E) Support brackets not included; order separately. (F) Mounting hardware included.

Cat. #	Panel Space	Ship Wt.
ZA-7757	61 1/4"	30
ZA-7758	70"	34
ZA-7759	77"	38

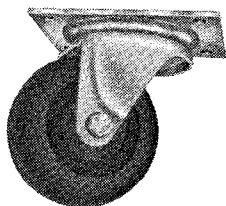


#### (B) EXTRA MOUNTING ANGLES

Description: (A) Order when additional pair mounting angles required for following cabinet series: RW/FW/DF/G. (B) 12 ga. steel; painted grey hammetone. (C) 10-32 holes; WE spacing.

Cat. #	Panel Space	Ship Wt.
MA-7774	61 1/4"	22
MA-7775	70"	26
MA-7776	77"	30

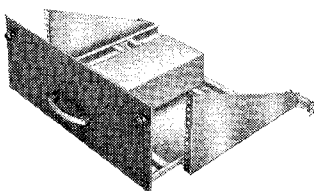
#### HEAVY DUTY CASTER



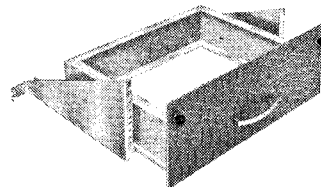
Description: (A) Capacity: 200# per caster. (B) 4" x 1 3/8" full-swivel wheel. (C) All rubber cushion tread, hard fibrous center. (D) Used on RW/FW cabinet series. Catalog #RC-7773

#### PHOTOGRAPHS A, B, C, D, ARE EXAMPLES OF SLIDE ASSEMBLIES FOR 19" RACKS

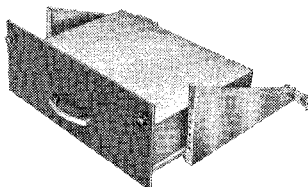
#### (A) Example: Slide Assembly Using Chassis LESS Than 17" Width



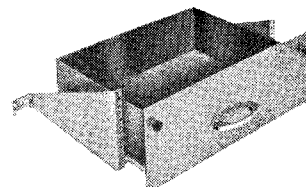
#### (B) Example: Slide Assembly Using Chassis Frame



#### (C) Example: Slide Assembly Using 17" Wide Chassis

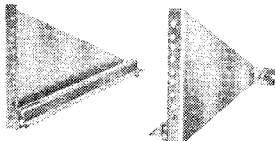


#### (D) Example: Slide Assembly Using Drawer



#### ORDER COMBINATION OF PARTS, DESCRIBED BELOW, TO BUILD ASSEMBLIES, AS REQUIRED, FOR 19" RACK MOUNTING

#### SLIDES FOR 17" WIDE CHASSIS



Catalog #BS-7777

Description: (A) Supports 17" wide chassis. (B) Supports 75 lbs. in extended position. (C) Travels on roller bearings. (D) 14" deep in closed position. (E) Extends 10" to front when pulled out. (F) Attaches to rear side of mounting angle. (G) Fabricated of heavy-gauge, plated steel.

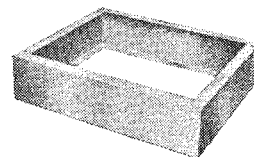
#### SUPPORTS FOR CHASSIS LESS THAN 17" WIDE



Catalog #BS-7778

Description: (A) Used with BS-7777 to support any chassis less than 17" wide. (B) Heavy-gauge, plated steel. (C) Includes hardware for attaching to basic slides.

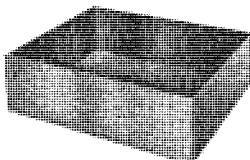
#### CHASSIS FRAMES



Catalog #BS-7779

Description: (A) Size 17" x 14" x 3" x 1" flange. (B) 1" flange supports plywood for record changer. (C) Heavy-gauge, plated steel. (D) Includes hardware for attaching to basic slides.

#### DRAWER



Catalog #BS-7780

Description: (A) Size: 17" wide x 14" deep x 5" high. (B) Heavy-gauge steel. (C) Painted black enamel. (D) Includes hardware for attaching to basic slides.

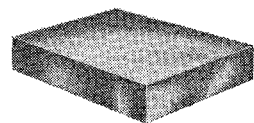
#### FRONT SLIDE PANEL



Cat. # Size  
BS-7781 7"x19"  
BS-7782 10 1/2"x19"

Description: (A) Used as front panel; attaches to slide assembly. (B) 12 gauge steel. (C) Handle and quick-turn latches included. (D) Colors: Grey and Black wrinkle or grey hammetone.

#### STANDARD CHASSIS



Description: (A) Standard aluminum or steel chassis may be used with our slide unit. (B) See list of sizes described in this catalog.

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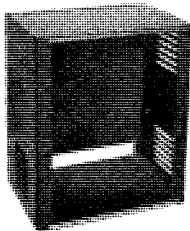


# CABINET RACKS - RELAY RACKS CHASSIS - CASES

## MODEL "C" SERIES

### DESCRIPTION:

- A. Constructed of heavy gauge high-quality steel and is completely welded together.
- B. Front vertical corners rounded.
- C. Mounting holes tapped 10/32 thread.
- D. Mounting holes spaced on UNIVERSAL CENTERS.
- E. Louvres in side provide ample ventilation.
- F. Highly-polished trim at top and bottom of front.
- G. Top door has piano hinge and flush-type latch.
- H. Finished in black or grey wrinkle and silver grey hammertone.
- I. Embossed feet on bottom minimize marring of table tops.



## SPECIFICATIONS:

(DOOR IN TOP ONLY)

Catalog Number	Dimensions	Panel Space	Approx. Shipping Weight
C719	8 $\frac{3}{4}$ x22x15 Deep	7 x19	25 lbs.
C819	10 $\frac{1}{2}$ x22x15 Deep	8 $\frac{3}{4}$ x19	27 lbs.
C1019	12 $\frac{1}{4}$ x22x15 Deep	10 $\frac{1}{2}$ x19	28 lbs.
C1219	14 x22x15 Deep	12 $\frac{1}{4}$ x19	30 lbs.
C1419	15 $\frac{3}{4}$ x22x15 Deep	14 x19	32 lbs.

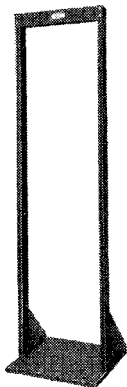
(DOOR IN TOP AND REAR)

Catalog Number	Dimensions	Panel Space	Approx. Shipping Weight
C1719	19 $\frac{1}{4}$ x22x15 Deep	17 $\frac{1}{2}$ x19	36 lbs.
C2119	22 $\frac{3}{4}$ x22x15 Deep	21 x19	40 lbs.
C2619	28 x22x15 Deep	26 $\frac{1}{4}$ x19	43 lbs.
C3119	33 $\frac{1}{4}$ x22x15 Deep	31 $\frac{1}{2}$ x19	47 lbs.
C3519	36 $\frac{3}{4}$ x22x15 Deep	35 x19	50 lbs.

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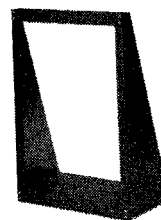
## "RC" SERIES

- A. Rack constructed of 1/8" high-quality steel.
- B. Mounting holes are tapped 10/32 thread.
- C. Mounting holes are spaced on UNIVERSAL CENTERS.
- D. Base is 20" x 20".
- E. Finished in black wrinkle only.
- F. SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for assembly.



## "RT" SERIES

- A. Rack constructed of heavy gauge high-quality steel.
- B. Mounting holes are tapped 10/32 thread.
- C. Mounting holes are spaced on UNIVERSAL CENTERS.
- D. Finished in black wrinkle only.
- E. SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for assembly.



## SPECIFICATIONS:

Catalog Number	Panel Space	Approx. Shipping Weight	Catalog Number	Panel Space	Height	Width	Depth	Approx. Shipping Weight
RC36	36 $\frac{3}{4}$ x19	28 lbs.	RT21	21x19	25"	21"	12"	16 lbs.
RC71	71 $\frac{3}{4}$ x19	41 lbs.	RT28	28x19	32"	21"	12"	18 lbs.

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## OPEN END CHASSIS

### DESCRIPTION:

Fig. A

- A. Can be utilized on all types of small built-up units such as record amplifier, code oscillator, etc.
- B. Electro-Zinc plated.

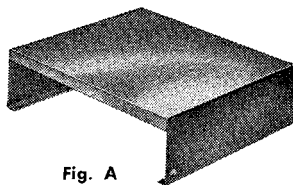


Fig. A

## MINIATURE ALUMINUM CHASSIS

### DESCRIPTION:

Fig. B

- A. Ideal for miniature tube applications, sub-assemblies, small receivers, narrow band FM adaptors.
- B. Has 1/4" flanges on bottom.
- C. Etched aluminum finish.

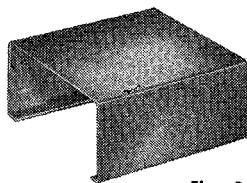


Fig. B

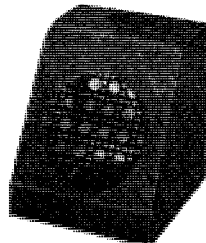
Catalog Number	Depth	Width	Height	Approx. Shipping Wt.-Lbs.
E-570	7"	6"	2"	1
E-571	5"	7"	1 $\frac{1}{2}$ "	3/4
E-572	7"	7"	1 $\frac{1}{2}$ "	3/4
E-573	7"	8"	2"	1
E-574	5 $\frac{1}{2}$ "	9"	1 $\frac{1}{2}$ "	3/4
E-575	7 $\frac{1}{2}$ "	9"	1 $\frac{1}{2}$ "	1
E-576	7"	10"	2"	1 $\frac{1}{4}$
E-577	7"	11"	1 $\frac{1}{2}$ "	1 $\frac{1}{4}$
E-578	7"	13"	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$
E-579	10 $\frac{3}{4}$ "	14"	2"	2 $\frac{1}{2}$
E-580	7 $\frac{3}{4}$ "	15"	2"	2

Catalog Number	Depth	Width	Height	Approx. Shipping Wt.-Lbs.
MA-700	2 $\frac{5}{8}$ "	2 $\frac{3}{4}$ "	1/4"	1/4
MA-701	1 $\frac{3}{4}$ "	3 $\frac{1}{8}$ "	"	1/4
MA-702	3 $\frac{1}{4}$ "	4 $\frac{1}{2}$ "	2"	1/4
MA-703	2 $\frac{3}{4}$ "	4 $\frac{1}{8}$ "	1/2"	1/4
MA-704	3 $\frac{3}{4}$ "	4 $\frac{1}{8}$ "	1"	1/4
MA-705	3"	6 $\frac{1}{8}$ "	1 $\frac{1}{4}$ "	1/4
MA-706	5 $\frac{3}{4}$ "	4 $\frac{7}{8}$ "	1 $\frac{1}{2}$ "	1/4
MA-707	4"	3 $\frac{1}{8}$ "	1"	1/2
MA-708	4"	4 $\frac{1}{8}$ "	1"	1/2
MA-709	4"	5 $\frac{1}{8}$ "	1"	1/2
MA-710	4"	6 $\frac{1}{8}$ "	1"	1/2

## MINIATURE SPEAKER CASE

### DESCRIPTION:

- A. Houses midjet 2" or 3" speaker.
- B. Silver Grey Hammertone Finish.



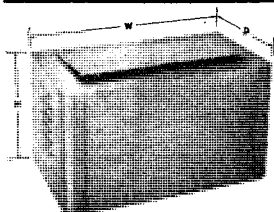
## SPECIFICATIONS:

Catalog Number	Hole Diameter	Fits Speaker Size	Approx. Ship. Wt. Lbs.
MS-80	2 $\frac{1}{4}$ "	2"	3/4
MS-81	2 $\frac{3}{16}$ "	3"	3/4

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# RECEIVER CABINETS - SLOPING PANEL/TOP OPENING - MULTI-USE CABINETS - CHASSIS DECK

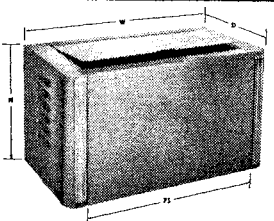


## MODEL "CS" RECEIVER CABINET (Description)

(A.) Front vertical corners are rounded. (B.) Has recessed, hinged, top door. (C.) Top door opened by finger lift. (D.) Removable front panel, included, is attached with self-tapping screws. (E.) Louvers in side provide ventilation. (F.) Silver grey hammertone only.

Cat. #	H	W	D	Panel Size	Approx. Ship. Wt. Lbs.
CS 7727	8"	10 1/2"	8 1/4"	8" x 8"	6 1/4
CS 7728	8"	12 1/2"	8 1/4"	8" x 10"	6 1/2
CS 7729	8"	14 1/2"	8 1/4"	8" x 12"	7
CS 7730	8"	16 1/2"	8 1/4"	8" x 14"	7 1/2
CS 7731	8"	18 1/2"	8 1/4"	8" x 16"	8 1/4
CS 7732	12"	20 5/8"	12"	12" x 18"	15 1/2

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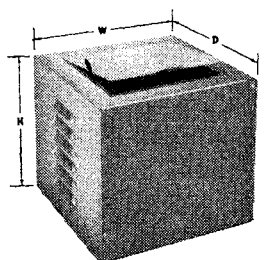


## MODEL "DC" RECEIVER CABINET (Description)

(A.) Description of Model "DC" Receiver Cabinet is same as Model "CS" Cabinet except for following: There are two vertical, highly-polished trim strips on face of cabinet.

Cat. #	H	W	D	Panel Size	Approx. Ship. Wt. Lbs.
DC 7733	8"	10 1/2"	8 1/4"	8" x 8"	6 1/4
DC 7734	8"	12 1/2"	8 1/4"	8" x 10"	6 1/2
DC 7735	8"	14 1/2"	8 1/4"	8" x 12"	7
DC 7736	8"	16 1/2"	8 1/4"	8" x 14"	7 1/2
DC 7737	8"	18 1/2"	8 1/4"	8" x 16"	8 1/4
DC 7738	12"	20 5/8"	12"	12" x 18"	15 1/2

➔ CONTACT AUTHORIZED DISTRIBUTOR FOR QUANTITY DISCOUNTS ◀



## MODEL "CR" RECEIVER CABINET (Description)

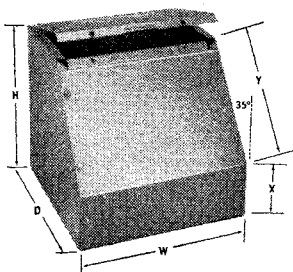
(A.) Front vertical corners are square. (B.) Top door is recessed and hinged. (C.) Top door has finger lift. (D.) Removable front panel, included, is attached with self-tapping screws. (E.) Ventilation is supplied by louvers. (F.) Finished in silver grey hammertone only.

Cat. #	H	W	D	Approx. Ship. Wt. Lbs.
CR 7720	7"	8"	8"	5 1/2
CR 7721	7"	10"	8"	6
CR 7722	7"	12"	8"	6 1/4
CR 7723	7"	14"	8"	6 1/2
CR 7724	8"	16"	8"	7 1/2
CR 7725	9"	15"	11"	8 1/2
CR 7726	12"	18"	12"	15 1/2

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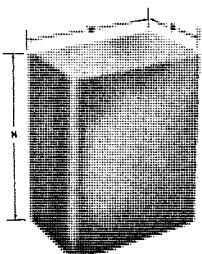
## SLOPING PANEL/TOP OPENING CABINET (Description)

(A.) Sloping front panel, included, is attached with self-tapping screws. (B.) Hinged, top door has finger lift. (C.) Opening at back for leads and ventilation. (D.) Silver grey hammertone only



Cat. #	H	W	D	X	Y	Approx. Ship. Wt. Lbs.
SC 7739	6 1/2"	7 1/8"	7 3/8"	2 1/4"	5 1/8"	3
SC 7740	8"	8 3/8"	8"	2 1/4"	6 3/8"	3 1/4
SC 7741	6 1/2"	9 1/8"	7 3/8"	2 1/4"	5 1/8"	3 1/2
SC 7742	8"	10 3/8"	8"	2 1/4"	6 7/8"	3 3/4
SC 7743	6 1/2"	11 1/8"	7 3/8"	2 1/4"	5 1/8"	4
SC 7744	8"	14 3/8"	8"	2 1/4"	6 7/8"	4 1/2
SC 7745	8"	13 3/8"	8 1/2"	2 3/4"	6 3/8"	4 3/4
SC 7746	9"	18 3/8"	8 1/8"	2 1/4"	6 15/8"	7 1/2
SC 7747	10"	18 3/8"	10 1/2"	3 1/4"	8 1/8"	8 3/4

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## MULTI-USE CABINET (Description)

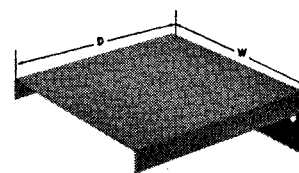
(A.) Ventilated by open back. (B.) Streamlined by rounded corners. (C.) Silver grey hammertone only.

Cat. #	H	W	D	Approx. Ship. Wt. Lbs.
MC 7748	4 1/2"	5 1/2"	3 1/2"	1 1/4
MC 7749	6 1/2"	5 1/2"	3 1/2"	1 3/4

## CHASSIS DECK (Description)

(A.) Can be used for interstage shielding. (B.) Made of steel. (C.) Painted black enamel.

Cat. #	W	D	Approx. Ship. Wt. Lbs.
CD 7754	4 3/4"	5 1/2"	1
CD 7755	4 3/4"	4 1/2"	1
CD 7756	5 3/4"	5 1/2"	1 1/2



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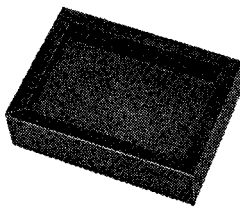
# CHASSIS

Cad Plated Cat. No.	STEEL				Approx. Ship. Wt.-Lbs.	
	Depth	Width	Ht.	Ga.		
CP-1300	5"	7"	2"		22	1
CP-1301	5"	9 1/2"	2 1/2"		22	1 1/4
CP-1302	5"	9 1/2"	1 1/2"		22	1
CP-1303	5"	10"	3"		22	1 1/4
CP-1304	6"	14"	3"		20	1 3/4
CP-1305	7"	7"	2"		22	1 1/2
CP-1306	7"	9"	2"		22	1 1/2
CP-1307	7"	11"	2"		20	1 1/2
CP-1308	7"	12"	3"		20	1 3/4
CP-1309	7"	13"	2"		20	2
CP-1310	5"	13 1/2"	2 1/2"		20	1 3/4
CP-1311	7"	15"	3"		20	2
CP-1312	8 1/2"	15"	3"		20	2 1/2
CP-1313	4"	17"	3"		20	2 1/4
CP-1314	7"	17"	2 1/2"		20	2 1/2
CP-1315	7"	17"	3"		20	1 3/4
CP-1316	8"	10"	2 1/2"		20	2
CP-1317	8"	12"	2 1/2"		20	2 1/2
CP-1318	8"	12"	3"		20	1 3/4
CP-1319	8"	17"	2"		20	2 1/2
CP-1320	8"	17"	3"		20	3 1/4
CP-1321	10"	12"	3"		20	3
CP-1322	10"	14"	3"		20	4
*CP-1323	10"	17"	2"		20	3 1/4
*CP-1324	10"	17"	3"		20	4
*CP-1325	10"	17"	3"		18	5
CP-1326	10"	23"	3"		18	5 1/2
*CP-1327	11"	17"	2"		18	4 1/2
*CP-1328	11"	17"	3"		18	4 1/2
*CP-1329	12"	17"	2"		18	4 1/2
*CP-1330	12"	17"	3"		18	5 1/4
*CP-1331	13"	17"	2"		18	5
*CP-1332	13"	17"	3"		18	5 1/2
*CP-1333	10"	17"	4"		18	6 1/2
*CP-1334	13"	17"	4"		18	7 1/2
CP-1335	10"	17"	5"		18	7 1/2
CP-1336	13"	17"	5"		18	8

## STEEL CHASSIS

### DESCRIPTION:

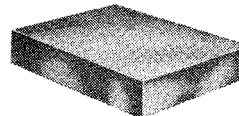
- A. Fabricated from one piece of steel.
- B. All corners electronically spot welded.
- C. Flanges on bottom formed and punched to allow bottom plate to be attached if desired.
- D. Finished in Cad. Plate.
- E. Asterisk indicates holes punched to receive chassis mounting brackets.



## ALUMINUM CHASSIS

### DESCRIPTION:

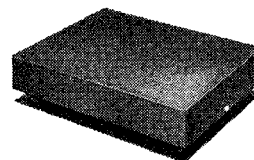
- A. Fabricated from one piece of aluminum, 3003-H14.
- B. All corners are electronically spot welded.
- C. Flanges on bottom formed and punched to allow bottom plate to be attached, if desired.
- D. Etched aluminum finish, MIL-C-5541.
- E. Gauges indicated are aluminum gauges.



## HEAVY DUTY AND PANEL CHASSIS

### DESCRIPTION:

- A. Made of cold Rolled steel.
- B. Bottom plate included at no additional charge.
- C. Available in Cad. Plate.



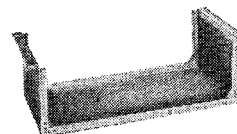
Cat. No.	ALUMINUM				Approx. Shipping Wt.-Lbs.
	Depth	Width	Ht.	Gauge	
CA-2001	4"	6"	3"	18	1/2
CA-2002	4"	6"	2"	18	1/2
CA-2003	4"	17"	3"	16	1 1/4
CA-2004	5"	7"	2"	18	1/2
CA-2005	5"	7"	3"	16	3/4
CA-2006	5"	9 1/2"	2"	18	1/2
CA-2007	5"	9 1/2"	3"	18	3/4
CA-2008	5"	10"	3"	18	3/4
CA-2009	5"	13"	3"	18	3/4
CA-2010	6"	17"	3"	16	1 1/4
CA-2011	7"	7"	2"	18	1/2
CA-2012	7"	9"	2"	18	1/2
CA-2013	7"	11"	2"	18	3/4
CA-2014	7"	12"	3"	18	1
CA-2015	7"	13"	2"	18	3/4
CA-2016	7"	15"	3"	16	1 1/2
CA-2017	7"	17"	3"	16	1 3/4
CA-2018	8"	12"	3"	16	1 1/2
CA-2019	8"	17"	2"	16	1 1/2
CA-2020	8"	17"	3"	16	1 3/4
CA-2021	10"	12"	3"	16	1 1/2
CA-2022	10"	14"	3"	16	1 3/4
CA-2023	10"	17"	2"	16	1 1/4
CA-2024	10"	17"	3"	16	2
CA-2025	11"	17"	2"	14	2 1/4
CA-2026	11"	17"	3"	14	2 3/4
CA-2027	12"	17"	3"	14	2 3/4
CA-2028	13"	17"	2"	14	2 1/2
CA-2029	13"	17"	3"	14	2 3/4
CA-2030	10"	17"	4"	14	3 1/2
CA-2031	13"	17"	4"	14	3 3/4

Cad. Plated Cat No.	Steel Gauge	Depth	Width	Height	Approx. Shipping Wt. - Lbs.
C-627	20	8"	17"	2"	6
C-628	20	8"	17"	3"	7 1/2
C-629	18	11"	17"	2"	8 1/2
C-630	18	11"	17"	3"	9
C-631	18	13"	17"	2"	9 1/2
C-632	18	13"	17"	3"	10
C-633	18	13"	17"	4"	11

## PANEL CHASSIS ALUMINUM OR STEEL

### DESCRIPTION:

- A. .062 aluminum (3003-H14).
- B. Aluminum etched finish.
- C. Flange notched for mounting to rack mounting angles.



Alum. Cat. #	W.	H.	D.	Alum. Wt.
PC-505	19"	13 1/4	5 3/32	3/4
PC-506	19"	3 1/2	5 3/32	1 1/4
PC-507	19"	5 1/4	5 3/32	1 1/2
PC-508	19"	7	5 3/32	2
PC-509	19"	8 3/4	5 3/32	2 1/4
PC-510	19"	10 1/2	5 3/32	2 3/4
PC-511	19"	12 1/4	5 3/32	3
PC-512	19"	14	5 3/32	3 1/4

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# Wyco Metal Products

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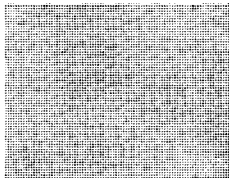
# ROLLER TRUCKS - BOTTOM PLATES - SHELVES SUPPORTING ANGLES - MOUNTING BRACKETS

## CHASSIS BOTTOM PLATES

### STEEL AND ALUMINUM

**DESCRIPTION:**

- A. Protects component parts and wiring from dust.
- B. Four embossed feet protect table top or other surfaces from being marred.
- C. Catalog number R6023 to R6045 are Cad plated steel.
- D. Catalog numbers R6046 to R6055 are Aluminum etched finish.

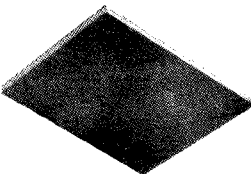


Cad. Plated Cat. No.	Aluminum Etched Cat. No.	W.	L.	Steel Ship Wt.	Alum. Ship Wt.
R-6023	R-6046	5"	7"	1/2	1/8
R-6024	R-6047	5"	9 1/2"	3/4	1/4
R-6025	R-6048	5"	10"	3/4	1/4
R-6026	R-6049	7"	7"	1	1/3
R-6027	R-6050	7"	9"	1	1/3
R-6028	R-6051	7"	11"	1	1/3
R-6029	R-6052	7"	12"	1 1/4	1/2
R-6030	R-6053	7"	13"	1 1/4	1/2
R-6031		5"	13 1/2"	1	
R-6032		7"	15"	1 1/4	
R-6033		8 1/2"	15"	1 1/2	
R-6034		4"	17"	1 1/2	
R-6035		6"	17"	1 1/2	
R-6036		8"	10"	1 1/4	
R-6037		8"	12"	1 1/2	
R-6038		8"	17"	1 3/4	
R-6039		10"	12"	1 1/2	
R-6040		10"	14"	1 1/2	
R-6041	R-6054	10"	17"	1 3/4	3/4
R-6042		11"	17"	1 1/2	
R-6043		12"	17"	2	
R-6044	R-6055	13"	17"	2 1/2	3/4
R-6045		10"	23"	2 1/4	

## RACK SHELVES

**DESCRIPTION:**

- A. Used to mount heavy power supplies, modulator units, etc.
- B. Supported by chassis supporting angles which are described on this page.
- C. Made of heavy gauge steel.
- D. Finished in black enamel only.



Cat. No.	Size	Wt. Lbs.
S195	19"x15"	6 1/2
S196	19"x12"	5 1/2
S197	17 5/8"x14 1/4"	5
S198	17 5/8"x20 1/4"	5 1/2

## ROLLER TRUCKS



**SPECIFICATIONS:**

- A. Roller Truck constructed from heavy gauge high-quality steel.
- B. Casters have 2" rubber wheels and are ball-bearing swivel type.
- C. Finished in grey only.

## CHASSIS SUPPORTING ANGLES

**DESCRIPTION:**

- A. Used when heavy weights are encountered in chassis construction.
- B. Distributes weight on sides of rack to relieve panel.
- C. Made of 1/8" steel.
- D. Finished in black enamel only.
- E. Sold in pairs only.

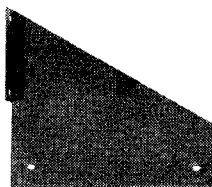


Cat. No.	Length	Wt. Lbs.
A143	14 1/2"	4
A144	12"	3
A145	20"	7

## CHASSIS MOUNTING BRACKETS

**DESCRIPTION:**

- A. Used to insure proper support of chassis.
- B. Made of heavy gauge steel.
- C. Cut away at bottom to provide clearance so that chassis can mount flush against panel.
- D. Finished in black enamel only.
- E. Cat. # CB-565 and CB-566 designed for 4" chassis height.
- F. Sold in pairs only.

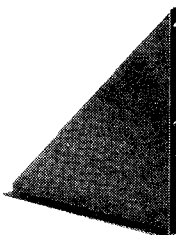


Cat. No.	H.	D.	Wt. Lbs.
CB-560	6 1/2"	8"	1 1/4
CB-561	6 1/2"	10"	1 3/4
CB-562	6 1/2"	11"	2
CB-563	6 1/2"	12"	2
CB-564	6 1/2"	13"	2 1/2
CB-565	8 1/2"	10"	2 1/4
CB-566	8 1/2"	13"	3

## TRIANGULAR MOUNTING BRACKETS

**DESCRIPTION:**

- A. When large weights are involved in panel and chassis assemblies, triangular mounting brackets are used as supports.
- B. Fabricated of heavy gauge steel; finished in Black enamel only.
- C. Sold only in pairs.



Cat. No.	Size	Approx. Shipping Wt. - Lbs.
TB-410	5"x5"	1
TB-411	7"x7"	1
TB-412	9"x9"	1 1/2

Catalog No.	Constr. for Rack Series	Description of Rack	Inside Clearance	Approx. Ship. Weight
T 18	SL	Page #4	21 1/2x18 1/2	16 lbs.
	S	Page #4		
	B	Page #5		
T 19	D (18 1/2" Deep)	Page #2	23 7/8x18 3/4	18 lbs.
	W	Page #5		
T 24	D (24" Deep)	Page #2	23 7/8x24 1/4	22 lbs.

➤ CONTACT AUTHORIZED DISTRIBUTOR FOR QUANTITY DISCOUNTS ◀

# Wyco Metal Products

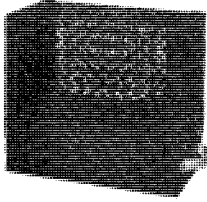
• NORTH HOLLYWOOD, CALIFORNIA





# AMPLIFIER FOUNDATIONS - RACK PANELS SLOPING PANEL SUPPORTS - CABINETS

## AMPLIFIER FOUNDATIONS

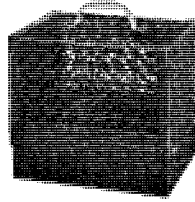


**DESCRIPTION:**

- A. Consists of standard chassis and perforated metal cover.
- B. Includes handles.
- C. Available in Black Wrinkle only.

Cat. No.	Height	Width	Depth	Height Chassis	Approx. Shipping Wt. - Lbs.
AF-680	8 <sup>3</sup> / <sub>16</sub> "	9 <sup>5</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>2</sub> "	3
AF-681	8 <sup>3</sup> / <sub>16</sub> "	13 <sup>5</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>2</sub> "	4 <sup>3</sup> / <sub>4</sub>
AF-682	8 <sup>3</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>2</sub> "	6
AF-683	8 <sup>3</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> "	10 <sup>1</sup> / <sub>8</sub> "	3"	8
AF-684	8 <sup>3</sup> / <sub>16</sub> "	12 <sup>1</sup> / <sub>8</sub> "	10 <sup>1</sup> / <sub>8</sub> "	3"	7

## MINIATURE AMPLIFIER FOUNDATION



**DESCRIPTION:**

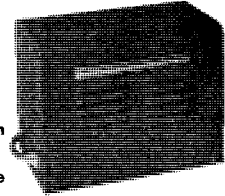
- A. Chassis size 5" x 7" x 2".
- B. Perforated metal cover.
- C. Includes handle.
- D. Black Wrinkle finish only.

Catalog No.	Approx. Shipping Weight - Lbs.
MA-1000	2

## STREAMLINED AMPLIFIER FOUNDATIONS

**DESCRIPTION:**

- A. Consists of standard chassis and streamlined removable top cover.
- B. Includes attractive stainless steel trim and handles.
- C. Available in Silver Grey Hammertone only.

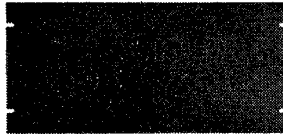


Catalog No.	Width	Depth	Approx. Shipping Wt. - Lbs.
SA-670	10 <sup>1</sup> / <sub>16</sub> "	5"	4 <sup>3</sup> / <sub>4</sub>
SA-671	12 <sup>1</sup> / <sub>16</sub> "	7"	5
SA-672	17 <sup>1</sup> / <sub>16</sub> "	7"	8
SA-673	17 <sup>1</sup> / <sub>16</sub> "	10"	9

## STANDARD RELAY RACK PANELS

**DESCRIPTION:**

- A. 11 ga. STEEL or 1/8" ALUMINUM.
- B. 19" wide.
- C. Western Electric notching.
- D. Available in black or grey wrinkle, silver grey hammertone and unpainted finish.



**STEEL**

Cat. No.	Height	Wt. Lbs.	Cat. No.	Height	Wt. Lbs.
SP-210	1 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>4</sub>	SP-216	12 <sup>1</sup> / <sub>4</sub> "	8 <sup>1</sup> / <sub>4</sub>
SP-211	3 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>4</sub>	SP-217	14"	9 <sup>1</sup> / <sub>2</sub>
SP-212	5 <sup>1</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>4</sub>	SP-218	15 <sup>3</sup> / <sub>4</sub> "	10 <sup>3</sup> / <sub>4</sub>
SP-213	7"	4 <sup>1</sup> / <sub>2</sub>	SP-219	17 <sup>1</sup> / <sub>2</sub> "	11 <sup>3</sup> / <sub>4</sub>
SP-214	8 <sup>3</sup> / <sub>4</sub> "	6	SP-220	19 <sup>1</sup> / <sub>4</sub> "	13
SP-215	10 <sup>1</sup> / <sub>2</sub> "	7	SP-221	21"	14 <sup>1</sup> / <sub>4</sub>

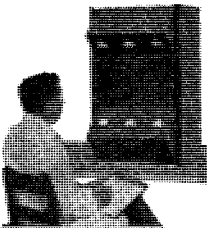
**ALUMINUM**

Cat. No.	Height	Wt. Lbs.	Cat. No.	Height	Wt. Lbs.
AP-320	1 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>4</sub>	AP-326	12 <sup>1</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>4</sub>
AP-321	3 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>4</sub>	AP-327	14"	3
AP-322	5 <sup>1</sup> / <sub>4</sub> "	1	AP-328	15 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>2</sub>
AP-323	7"	1 <sup>3</sup> / <sub>4</sub>	AP-329	17 <sup>1</sup> / <sub>2</sub> "	4
AP-324	8 <sup>3</sup> / <sub>4</sub> "	2	AP-330	19 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>4</sub>
AP-325	10 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>2</sub>	AP-331	21"	5

## SLOPING PANEL SUPPORT

In answer to many requests from engineers within the industry, WYCO METAL PRODUCTS presents the all-new SLOPING PANEL SUPPORT. The SLOPING PANEL SUPPORT allows for mounting of the standard 19" panel in sloping position. This enables the engineer or equipment user to more easily view the rack mounted instrument panel. From this illustration, it is easy to see that the SLOPING PANEL SUPPORT offers a variety of positions in which a standard 19" panel may be supported in sloping position. The SLOPING PANEL SUPPORT is fabricated of heavy gauge steel and is finished in Grey only.

Supports Panel Size Requires Panel Space

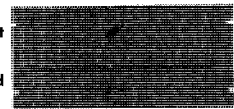


Prefix "G" Cat. No.	Supports Panel Size	Requires Panel Space	Prefix "G" Ship. Wt.
G-350	5 <sup>1</sup> / <sub>4</sub> " x 19"	7"	2
G-531	7" x 19"	10 <sup>1</sup> / <sub>2</sub> "	4
G-532	8 <sup>3</sup> / <sub>4</sub> " x 19"	12 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>2</sub>
G-353	10 <sup>1</sup> / <sub>2</sub> " x 19"	15 <sup>3</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>2</sub>
G-354	12 <sup>1</sup> / <sub>4</sub> " x 19"	17 <sup>1</sup> / <sub>2</sub> "	7
G-355	14" x 19"	21"	9

## METAL DOOR RACK PANELS

**DESCRIPTION:**

- A. Used when accessibility to component parts on chassis is necessary.
- B. Made of 1/8" steel.
- C. Available in black or grey wrinkle and silver grey hammertone.
- D. 19" wide.

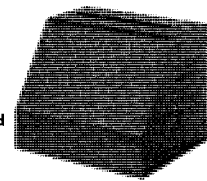


Cat. No.	Height	Door Opening	Wt. Lbs.
RP-310	10 <sup>1</sup> / <sub>2</sub> "	15 <sup>3</sup> / <sub>8</sub> " x 57 <sup>5</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>4</sub>
RP-311	12 <sup>1</sup> / <sub>4</sub> "	15 <sup>3</sup> / <sub>8</sub> " x 75 <sup>5</sup> / <sub>8</sub> "	8 <sup>1</sup> / <sub>4</sub>

## SLOPING FRONT CABINET

**DESCRIPTION:**

- A. Top corner rounded.
- B. Attractive high-polish moulding at top.
- C. Front panel is removable.
- D. Chassis may be mounted to front panel and removed as unit.
- E. Louvers at both sides; vented at rear.
- F. Available in silver grey hammertone only.



Cat. No.	Height	Width	Depth
K810	8"	8"	8"
K811	8"	10"	8"
K812	8"	14"	8"
K813	12"	18"	12"

NOTE: If desired, an attractive handle can be used with above "K" series cabinet. Holes to mount moulding are spaced for handle, also. Catalog # for handle is HK70.

➤ CONTACT AUTHORIZED DISTRIBUTOR FOR QUANTITY DISCOUNTS ◀

# Wyco Metal Products

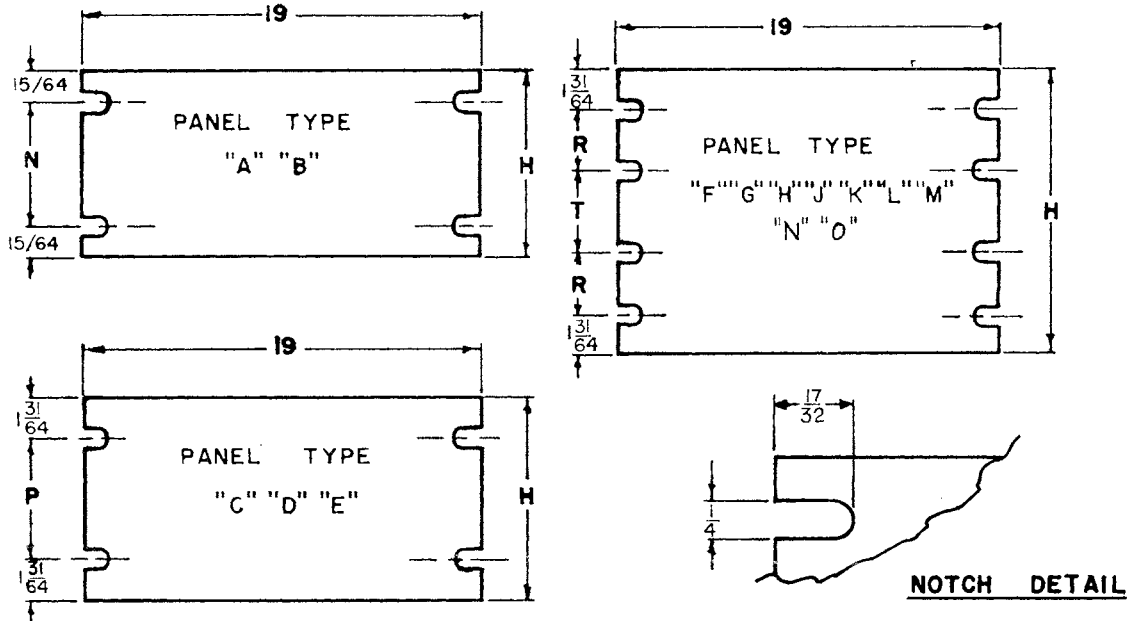
• NORTH HOLLYWOOD, CALIFORNIA



# 2024-T3 HARD ALUMINUM PANELS

1/8" (.125) AND 3/16" (.188) THICK

## RELAY RACK PANEL NOTCHING



NOTE: (A) For 3-1/16" Thick Panels, Add (-316). EXAMPLE: HAP-175-316  
(B) 24" Wide Panels are available. Add (-24). EXAMPLE: HAP-175-24

Panel Type	Catalog No. 1/8" Thick	H	N	P	R	T
"A"	HAP-175	1-23/32	1 1/4			
"B"	HAP-350	3-15/32	3			
"C"	HAP-525	5-7/32		2 1/4		
"D"	HAP-700	6-31/32		4		
"E"	HAP-875	8-23/32		5 3/4		
"F"	HAP-1050	10-15/32			2 1/4	3
"G"	HAP-1225	12-7/32			3 1/2	2 1/4

Panel Type	Catalog No. 1/8" Thick	H	N	P	R	T
"H"	HAP-1400	13-31/32			4	3
"J"	HAP-1575	15-23/32			4	4 3/4
"K"	HAP-1750	17-15/32			4	6 1/2
"L"	HAP-1925	19-7/32			5 1/4	5 3/4
"M"	HAP-2100	20-31/32			5 3/4	6 1/2
"N"	HAP-2450	24-15/32			7	7 1/2
"O"	HAP-2625	26-7/32			7	9 1/4

**➤ CONTACT AUTHORIZED DISTRIBUTOR FOR QUANTITY DISCOUNTS ◀**

Catalog No.	Catalog No.	Catalog No.	Catalog No.
HAP-175	HAP-700-316	HAP-1400	HAP-1925-316
HAP-175-316	HAP-875	HAP-1400-316	HAP-2100
HAP-350	HAP-875-316	HAP-1575	HAP-2100-316
HAP-350-316	HAP-1050	HAP-1575-316	HAP-2450
HAP-525	HAP-1050-316	HAP-1750	HAP-2450-316
HAP-525-316	HAP-1225	HAP-1750-316	HAP-2625
HAP-700	HAP-1225-316	HAP-1925	HAP-2625-316

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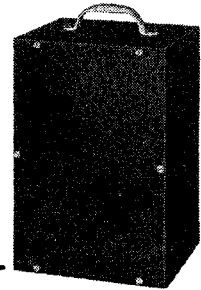
# BOXES-CASES-CABINETS-DESK PANELS

## CARRYING CASE

Steel Cat. No.	Alum. Cat. No.	Depth	Width	Height	Steel Approx. Ship. Wt.	Alum. Approx. Ship. Wt.
D-850	DA-857	5"	6"	9"	3 1/4	1 1/8
D-851	DA-858	5"	9"	6"	3 1/4	1 1/8
D-852	DA-859	6"	7"	12"	4	1 1/3
D-853	DA-860	6"	12"	7"	4	1 1/3
D-854	—	7"	7 3/4"	15"	5	—
D-855	—	8"	10"	10"	5	—
D-856	—	7"	15"	9"	5	—

### DESCRIPTION:

- A. Front and rear panels are removable.
- B. Includes handle.
- C. Prefix "D" designates steel finished in Grey Hammertone.
- D. Prefix "DA" designates aluminum etched finish (.051 alum.).

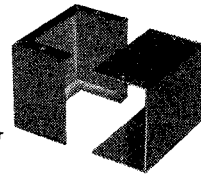


Silver Grey Cat. No.	Etched Cat. No.	Length	Width	Height	Approx. Shipping Wt.-Lbs.
E-900	E-918	2 3/4"	2 1/8"	1 5/8"	1/4
E-901	E-919	3 1/4"	2 1/8"	1 5/8"	1/4
E-902	E-920	4"	2 1/8"	1 5/8"	1/4
E-903	E-921	4"	2 1/4"	2 1/4"	1/4
E-904	E-922	5"	2 1/4"	2 1/4"	1/4
E-905	E-923	5"	4"	3"	1/2
E-906	E-924	5 1/4"	3"	2 1/8"	1/4
E-907	E-925	6"	5"	4"	3/4
E-908	E-926	7"	5"	3"	3/4
E-909	E-927	8"	6"	3 1/2"	1
E-910	E-928	10"	6"	3 1/2"	1 1/4
E-911	E-929	12"	7"	4"	1 3/4
E-912	E-930	17"	5"	4"	2 1/4
E-913	E-931	10"	2"	1 5/8"	1/2
E-914	E-932	12"	2 1/2"	2 1/4"	3/4
E-915	E-933	4"	2"	2 3/4"	1/4
E-916	E-934	4 1/4"	2 1/4"	1 1/2"	1/4
E-917	E-935	3 1/4"	2 1/8"	1 1/8"	1/4

## MINITBOXES

### DESCRIPTION:

- A. Fabricated of aluminum (.051).
- B. Design assures necessary shielding.
- C. Available in etched finish or Silver Grey Hammertone.



## EASY BOXES (SAME DESIGN AS MINITBOX)

### DESCRIPTION:

- A. Design allows a number of small components to be easily wired or serviced.
- B. Fabricated of 22 gauge steel.
- C. Black Wrinkle finish only.

Catalog No.	Height	Width	Depth	Approx. Shipping Wt.-Lbs.
H-105	2 1/4"	4 1/4"	1 1/2"	1/2
H-106	2"	4"	2 3/4"	1/2

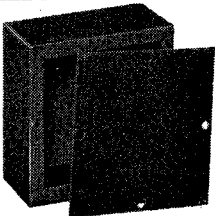
## DESK PANELS



### DESCRIPTION:

- A. Table is constructed of heavy gauge high-quality steel and measures 21" x 16".
- B. Panel, constructed of 1/8" steel, is 10 1/2" x 19".
- C. Front corners of table are rounded.
- D. SHIPPED "KNOCKED-DOWN"; all necessary bolts supplied for easy assembly.
- E. Finished in black or grey enamel and silver grey hammertone.

Catalog No.	Width	Depth	Approx. Shipping Weight
DP 16	21"	16"	14 lbs.



## METAL UTILITY CABINETS

### DESCRIPTION:

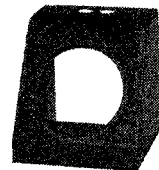
- A. Cabinet has two removable covers.
- B. Prefix MU designates steel finished in Silver Grey Hammertone only.
- C. Prefix LU designates aluminum in an etched finish (.051 Alum.).
- D. Used for amplifiers, monitors, input stages, meters, trancivers, etc.

Steel Cat. No.	Alum. Cat. No.	Depth	Width	Ht.	Steel Approx. Ship. Wt. Lbs.	Alum. Approx. Ship. Wt. Lbs.
MU-750	LU-760	2"	4"	4"	3/4	1/4
MU-751	LU-761	3"	5"	4"	1	1/4
MU-752	LU-762	4"	5"	6"	1 1/4	1/2
MU-753	LU-763	6"	6"	6"	2 1/2	3/4
MU-754	LU-764	5"	6"	9"	3	1
MU-755	—	7"	8"	10"	5	—
MU-756	—	6"	7"	12"	4	—
MU-757	—	8"	10"	10"	5 1/2	—
MU-758	—	8"	11"	12"	6	—
MU-759	—	7"	9"	15"	7 1/2	—

## METER CASES

### DESCRIPTION:

- A. Sloping front with top corner rounded.
- B. Prefix "MC" designates steel Grey Hammertone finish.
- C. Prefix "AC" designates aluminum etched finish.



Catalog No.	Hole Diameter	Approx. Ship. Wt. - Lbs.
MC-73	2 1/4"	1
MC-74	2 3/8"	1
AC-86	2 1/4"	1 1/3
AC-87	2 3/8"	1 1/3

## MINIATURE UTILITY CABINETS



### DESCRIPTION:

- A. Front and rear panels are removable.
- B. Chassis attached to front panel.
- C. Fabricated in steel; Silver Grey Hammertone only.

Cat. No.	Ht.	Width	Depth	Chassis Size	Approx. Shipping Wt.-Lbs.
A-780	4"	4"	2"	1" x 3 1/8" x 1 7/8"	3/4
A-781	4"	5"	3"	1" x 4 1/8" x 2 7/8"	1
A-782	5"	4"	3"	1 1/4" x 3 1/8" x 2 7/8"	1
A-783	6"	5"	4"	1 3/4" x 4 1/8" x 3 7/8"	1 3/4
A-784	5"	6"	4"	1 1/4" x 5 1/8" x 3 7/8"	1 3/4
A-785	6"	6"	6"	1 3/4" x 4 7/8" x 5 7/8"	2 3/4

➤ CONTACT AUTHORIZED DISTRIBUTOR FOR QUANTITY DISCOUNTS ◀

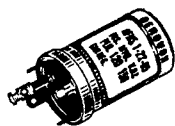
# Wyco Metal Products

• NORTH HOLLYWOOD, CALIFORNIA



## CAPACITORS

## ELECTROLYTICS



**TYPE AFH (85°C) TWIST PRONG  
ELECTROLYTIC CAPACITOR**  
SINGLES • DUALS • TRIPLES • QUADS

The outstanding line of twist-prong mounting electrolytic capacitors with all the latest refinements — 85°C operation — high purity aluminum foil construction through out — improved moisture resistant seal. Types AFHS-PWHS are specially constructed for high ripple current circuits. PWH and PWHS are constructed for printed wiring board applications.

These units operate over a wide temperature range with a minimum change in capacitance.

While designed for filter audio bypass applications in Radio-TV and Amplifier equipment as exact replacements, many values are rapidly gaining acceptance in industrial applications.

They are manufactured to meet all requirements of EIA specification number RS-154. Capacity tolerances of this specification are listed below.

## ELECTROLYTIC CAPACITY TOLERANCES

0-50 Volts	—	—10 +250%
51-350 Volts	—	—10 +100%
351 Volts & Up	—	—10 +50%

Aerovox Corporation is currently working on a size reduction program. Many sizes shown in the following listing reflect latest design figures. However Aerovox reserves the right to furnish previous catalog sizes until present stocks are depleted.

The AFH capacitors listed here include only those ratings which might find usage in industrial applications. A complete line of 1152 ratings may be found in the latest Aerovox Catalog, IDC 563, and may be requested from Aerovox Corporation, Distributor Division, or through your nearest authorized Aerovox Industrial Distributor.

## SINGLES

Catalog Number	Capacity	Voltage	Dia. x Length	*Net
AFH 1-00-50	2000	6	1-3/8 x 2	\$1.83
AFH 1-01-25	225	15	3/4 x 2	1.05
AFH 1-02	1000	15	1 x 1 1/2	1.53
AFH 1-03	2000	15	1-3/8 x 2	2.07
AFH 1-04	3000	15	1-3/8 x 2	2.55
AFH 1-06	40	25	3/4 x 2	.81
AFH 1-08	500	25	1 x 2	1.53
AFH 1-10	1000	25	1-3/8 x 2	2.13
AFH 1-11	100	50	3/4 x 2	.99
AFH 1-12	150	50	3/4 x 2	1.08
AFH 1-13	500	50	1-3/8 x 2	1.59
AFH 1-13-05	500	50	1 x 3	1.59
AFH 1-14	1000	50	1-3/8 x 3 1/2	2.25
AFH 1-14-50	1500	50	1-3/8 x 3	2.64
AFH 1-16	30	150	1 x 2	.93
AFH 1-18	50	150	1 x 2	.99
AFHS 1-20	80	150	1 x 2	1.11
AFH 1-21	100	150	1 x 2	1.20
AFHS 1-22	120	150	1 x 2	1.23
AFHS 1-22-05	120	150	1-3/8 x 2	1.29
AFHS 1-23	140	150	1 x 1 3/4	1.26
AFH 1-24	150	150	1 x 2 1/2	1.29
AFH 1-24-01	150	150	1-3/8 x 2	1.29
AFHS 1-24-25	200	150	1-3/8 x 2	1.47
AFHS 1-24-75	300	150	1-3/8 x 2 1/2	1.68
PWH 1-25-75	160	200	1-3/8 x 3	1.74
AFH 1-29	40	250	1 x 2	1.08
AFH 1-31-25	100	250	1 x 3	1.62
AFH 1-31-75	150	250	1-3/8 x 2	1.86
AFHS 1-31-85	200	250	1-3/8 x 2	2.19
AFH 1-35	80	300	1 x 1 3/4	1.53
AFH 1-36	100	300	1 x 2 1/2	1.74
AFH 1-37	125	300	1-3/8 x 2	2.10
AFHS 1-37-25	150	300	1-3/8 x 2	2.10
AFH 1-37-35	250	300	1-3/8 x 4	3.33
AFH 1-39	30	350	1 x 1 1/2	1.14
AFH 1-40	40	350	1 x 1 1/2	1.20
AFH 1-41	50	350	1 x 2	1.26
AFH 1-42	80	350	1-3/8 x 2	1.71
AFHS 1-43	125	350	1-3/8 x 2	2.19
AFH 1-43-20	150	350	1-3/8 x 2	2.37
AFH 1-45	20	400	1 x 2	1.29
AFH 1-48	10	450	1 x 1 1/2	.93
AFH 1-49	15	450	1 x 1 1/2	1.26
AFH 1-50	20	450	1 x 1 1/2	1.08
AFH 1-51	30	450	1 x 1 1/2	1.17
AFH 1-52	40	450	1 x 1 3/4	1.23
AFH 1-53	50	450	1 x 2 1/2	1.41

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-249

## SINGLES (Continued)

Catalog Number	Capacity	Voltage	Dia. x Length	*Net
AFH 1-54	60	450	1-3/8 x 2 1/2	1.62
AFH 1-55	80	450	1-3/8 x 2 1/2	1.83
AFH 1-55-20	100	450	1-3/8 x 2 1/2	2.07
AFH 1-55-25	125	450	1-3/8 x 3	2.37
AFH 1-56-10	40	475	1-3/8 x 2	1.50
AFH 1-58	10	500	1 x 2	.96
AFH 1-59	20	500	1 x 2	1.11
AFH 1-60	30	500	1 x 2	1.23
AFH 1-61	40	500	1 x 2 1/2	1.50
AFH 1-62	80	500	1-3/8 x 2 1/2	2.16
AFH 1-63	90	500	1-3/8 x 3 1/2	2.34

## DUALS

AFH 2-08	20-20	150	1 x 1 1/2	1.02
AFH 2-11	30-30	150	1 x 1 1/2	1.11
AFH 2-12	40-20	150	1 x 1 1/2	1.08
AFH 2-13	40-30	150	1 x 1 1/2	1.11
AFH 2-14	40-40	150	1 x 1 1/2	1.14
AFH 2-15	50-30	150	1 x 1 1/2	1.20
AFH 2-16	50-50	150	1 x 1 1/2	1.29
AFH 2-17	60-60	150	1 x 1 1/2	1.41
PWH 2-17-50	70-30	150	1 x 1 1/2	1.32
AFH 2-18	75-75	150	1 x 1 3/4	1.56
AFH 2-19-25	80-50	150	1 x 1 1/2	1.44
AFH 2-20	80-80	150	1-3/8 x 2	1.59
AFH 2-20-50	125-100	150	1-3/8 x 2	2.10
AFH 2-20-61	150-100	150	1-3/8 x 2	2.01
AFHS 2-21	200-5	150	1-3/8 x 2	1.62
AFH 2-22	200-125	150	1-3/8 x 3	2.25
AFH 2-22-50	200-150	150	1-3/8 x 3	2.25
AFH 2-23	200-200	150	1-3/8 x 3	2.40
AFH 2-24	60-60	200	1-3/8 x 2	1.53
AFHS 2-24-20	100-100	200	1-3/8 x 3	2.10
AFHS 2-24-75	200-5	200	1-3/8 x 2 1/2	1.83
AFH 2-26	20-20	250	1 x 1 1/2	1.14
AFH 2-29	40-40	250	1 x 1 1/2	1.50
AFHS 2-30	150-150	250	1-3/8 x 4	3.09
AFHS 2-30-75	200-200	250	1-3/8 x 4	3.66
AFH 2-34	80-80	300	1-3/8 x 3	2.43
AFH 2-35	120-20	300	1-3/8 x 3	2.40
AFH 2-36	15-15	350	1 x 2	1.35
AFH 2-39	30-30	350	1 x 2 1/2	1.74
AFH 2-40	50-30	350	1-3/8 x 2	1.89
AFH 2-40-40	60-30	350	1-3/8 x 2	1.89
AFH 2-40-80	80 40	350	1-3/8 x 2 1/2	2.37
AFH 2-41	80-80	350	1-3/8 x 3 1/2	2.82
AFH 2-41-10	90-40	350	1-3/8 x 2 1/2	2.58
AFH 2-41-40	100-60	350	1-3/8 x 3 1/2	2.88



## CAPACITORS

## ELECTROLYTICS - (Continued)

## DUALS (Continued)

Catalog Number	Capacity	Voltage	Dia. x Length	*Net
AFHS 2-41-50	100-100	350	1-3/8 x 3	3.69
AFHS 2-41-80	160-10	350	1-3/8 x 3	2.58
AFH 2-45-10	80-20	400	1-3/8 x 2	2.73
AFH 2-45-40	80-60	400	1-3/8 x 4	2.91
AFH 2-45-60	120-40	400	1-3/8 x 4	3.15
AFH 2-46	5-5	450	1 x 2	1.05
AFH 2-47	10-10	450	1 x 2	1.14
AFH 2-49	15-15	450	1 x 2 1/2	1.35
AFH 2-50	20-10	450	1 x 1 3/4	1.35
AFH 2-51	20-20	450	1 x 2 1/2	1.53
AFH 2-52	30-10	450	1 x 3	1.50
AFH 2-54	30-30	450	1-3/8 x 2	1.83
AFH 2-55	40-10	450	1 x 2	1.59
AFH 2-56	40-20	450	1-3/8 x 2	1.80
AFH 2-57	40-40	450	1-3/8 x 2 1/2	2.07
AFH 2-59	50-50	450	1-3/8 x 2 1/2	2.31
AFH 2-60	60-20	450	1-3/8 x 3	2.13
AFH 2-61	60-40	450	1-3/8 x 3	2.37
AFH 2-61-50	60-60	450	1-3/8 x 3	3.36
AFH 2-62	80-10	450	1-3/8 x 2	2.16
AFH 2-63	80-20	450	1-3/8 x 2 1/4	2.34
AFH 2-64	80-40	450	1-3/8 x 2 1/4	2.61
AFH 2-64-25	100-40	450	1-3/8 x 3 1/2	2.91
AFH 2-64-50	15-15	475	1 x 2 1/2	1.41
AFH 2-66	40-10	475	1-3/8 x 2	1.86
AFH 2-66-60	80-50	475	1-3/8 x 3	3.12
AFH 2-67	10-10	500	1 x 1 3/4	1.23
AFH 2-69	20-20	500	1-3/8 x 2	1.71
AFH 2-71	30-10	500	1-3/8 x 2	1.71
AFH 2-71-01	30-10	500	1 x 3	1.56
AFH 2-71-75	30-30	500	1-3/8 x 2	1.95
AFH 2-72	40-40	500	1-3/8 x 2 1/2	2.64
AFH 2-73	60-40	500	1-3/8 x 3 1/2	2.76
AFH 2-86-70	100/30	400/50	1-3/8 x 2 1/2	2.34
AFH 2-86-72	80/80	400/200	1-3/8 x 2 1/2	2.37
AFH 2-94-30	30/200	450/150	1-3/8 x 3	2.10

## TRIPLES (Continued)

Catalog Number	Capacity	Voltage	Dia. x Length	*Net
AFH 3-34	15-15-15	450	1 x 3	1.86
AFH 3-35	20-10-10	450	1 x 2	1.77
AFH 3-36	20-20-20	450	1-3/8 x 2	2.16
AFH 3-37	30-20-20	450	1-3/8 x 2	2.31
AFH 3-39	30-30-30	450	1-3/8 x 2	2.61
AFH 3-41	40-10-10	450	1-3/8 x 2	2.01
AFH 3-42	40-30-20	450	1-3/8 x 2	2.58
AFH 3-43	40-40-10	450	1-3/8 x 2	2.52
AFH 3-43-50	40-40-20	450	1-3/8 x 2 1/2	2.67
AFH 3-44	40-40-40	450	1-3/8 x 3	2.94
AFH 3-44-50	50-40-30	450	1-3/8 x 4	2.94
AFH 3-45	60-20-20	450	1-3/8 x 3 1/2	2.76
AFH 3-45-10	60-30-10	450	1-3/8 x 3	2.70
AFH 3-45-25	60-40-20	450	1-3/8 x 3	3.00
AFH 3-45-35	80-10-10	450	1-3/8 x 2 1/2	2.58
AFH 3-46	80-40-20	450	1-3/8 x 3	3.24
AFH 3-49-10	30-30-20	475	1-3/8 x 2	2.85
AFH 3-50-07	40-30-10	475	1-3/8 x 3	2.70
AFH 3-50-10	40-30-30	475	1-3/8 x 3	3.09
AFH 3-51	10-10-10	500	1 x 3	1.62
AFH 3-52	30-20-20	500	1-3/8 x 2 1/4	2.52
AFH 3-53	40-10-10	500	1-3/8 x 2	2.34
AFH 3-54	40-40-10	500	1-3/8 x 2 1/2	3.03
AFH 3-72	40-20/20	150/25	1 x 1 1/2	1.38
AFH 3-77	50-30/20	150/25	1 x 1 1/2	1.50
AFH 3-79	50-50/20	150/25	1 x 3	1.59
AFH 3-82	80-40/20	150/25	1 x 2 1/2	1.68
AFH 3-82-40	80-40/300	150/25	1-3/8 x 2 1/2	2.22
AFH 3-84-75	80-10/20	200/50	1 x 1 3/4	1.68
AFH 3-120	20-20/20	400/25	1 x 3	1.71
AFH 3-124	10-10/10	450/25	1 x 1 1/2	1.41
AFH 3-125	10-10/20	450/25	1 x 1 1/2	1.44
AFH 3-132	40-20/20	450/25	1-3/8 x 2	2.10
AFH 3-187-05	20/100/140	450/400/300	1-3/8 x 4	4.17

## TRIPLES

AFH 3-05	20-20-20	150	1 x 2	1.38
AFH 3-06	30-30-10	150	1 x 2	2.10
AFH 3-07	40-20-10	150	1 x 2	1.41
AFH 3-08	40-20-20	150	1 x 2	1.44
AFH 3-09	40-30-20	150	1 x 2	1.50
AFH 3-10	40-40-40	150	1 x 2	1.56
AFH 3-11-20	50-40-10	150	1 x 1 1/2	1.53
AFH 3-11-50	50-50-50	150	1 x 1 3/4	1.80
AFH 3-12	60-40-20	150	1 x 2	1.65
AFH 3-12-10	70-15-15	150	1 x 2	1.62
AFH 3-12-20	70-40-40	150	1 x 1 3/4	1.77
AFH 3-13	80-40-20	150	1 x 2 1/2	1.74
AFH 3-13-08	100-30-10	150	1 x 2	1.83
AFH 3-13-15	120-80-40	150	1-3/8 x 2	2.28
AFH 3-13-30	120-120-40	150	1-3/8 x 2	2.43
AFH 3-13-50	200-100-60	150	1-3/8 x 2	2.73
AFH 3-13-75	200-150-150	200	1-3/8 x 4	4.50
AFH 3-17-10	20-20-20	250	1 x 2 1/2	1.56
AFH 3-20	40-20-20	250	1 x 3	1.74
AFH 3-21	80-80-60	250	1-3/8 x 3	2.94
AFH 3-22	10-10-10	300	1 x 2	1.44
AFH 3-25	60-20-10	300	1-3/8 x 2	2.07
AFH 3-25-50	80-40-40	300	1-3/8 x 2 1/2	2.85
AFH 3-26	120-50-40	300	1-3/8 x 4	3.39
AFH 3-28-30	30-20-10	350	1 x 2 1/2	1.95
AFH 3-29	60-40-20	350	1-3/8 x 2	2.55
AFH 3-29-25	60-50-50	350	1-3/8 x 2 1/4	2.94
AFH 3-29-50	80-60-60	350	1-3/8 x 3 1/2	3.33
AFH 3-29-75	90-40-20	350	1-3/8 x 3	3.15
AFH 3-30	10-10-10	400	1 x 1 1/2	1.44
AFH 3-30-75	90-10-5	400	1-3/8 x 3	2.64
AFH 3-31	10-10-10	450	1 x 2	1.56

## QUADS

AFH 4-01	40-40-40-30	150	1-3/8 x 2	2.01
AFH 4-01-40	100-80-60-40	150	1-3/8 x 3	2.79
AFHS 4-01-55	200-200-60-30	175	1-3/8 x 3 1/2	3.33
AFH 4-01-80	40-20-10-10	300	1-3/8 x 2	2.37
AFH 4-02	40-40-20-10	300	1-3/8 x 2 1/2	2.73
AFH 4-02-10	40-40-30-20	300	1-3/8 x 3	2.91
AFH 4-02-30	60-40-10-10	300	1-3/8 x 2 1/2	2.73
AFH 4-02-90	200-20-20-20	300	1-3/8 x 3 1/2	3.69
AFH 4-04	40-20-20-10	350	1-3/8 x 2	2.61
AFH 4-04-50	40-40-40-40	350	1-3/8 x 2 1/4	3.60
AFH 4-05-55	80-60-40-20	350	1-3/8 x 3 1/2	3.84
AFH 4-06-40	50-40-30-20	400	1-3/8 x 4	3.30
AFH 4-07	80-20-10-10	400	1-3/8 x 3 1/2	3.03
AFH 4-10	10-10-10-10	450	1-3/8 x 2	2.01
AFH 4-14	20-20-20-20	450	1-3/8 x 2 1/2	2.82
AFH 4-15-30	30-30-20-20	450	1-3/8 x 3	4.23
AFH 4-16	35-35-10-5	450	1-3/8 x 2	2.79
AFH 4-17	40-10-10-10	450	1-3/8 x 2	2.49
AFH 4-18-10	40-35-10-10	450	1-3/8 x 2	2.88
AFH 4-18-30	40-40-20-20	450	1-3/8 x 3	3.33
AFH 4-18-40	40-40-30-30	450	1-3/8 x 3	3.63
AFH 4-18-45	40-40-40-40	450	1-3/8 x 3 1/2	3.87
AFH 4-18-50	60-20-20-20	450	1-3/8 x 3	3.39
AFH 4-18-60	60-30-10-2	450	1-3/8 x 3	3.06
AFH 4-18-80	80-10-10-10	450	1-3/8 x 3	3.03
AFH 4-19-10	20-20-10-10	475	1-3/8 x 2 1/2	2.61
AFH 4-19-20	20-20-20-20	475	1-3/8 x 2 1/2	3.12
AFH 4-19-50	40-20-10-10	475	1-3/8 x 2 1/2	3.06
AFH 4-20	10-10-10-10	500	1-3/8 x 2	2.10
AFH 4-20-50	40-40-8-8	500	1-3/8 x 4	3.42
AFH 4-46	60-40-20/50	300/25	1-3/8 x 3	2.79
AFH 4-58-75	80-40/40-20	400/350	1-3/8 x 4	3.87
AFH 4-59	10-10-10/20	450/25	1-3/8 x 2	1.89

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-249





## CAPACITORS

**ELECTROLYTICS—(Continued)**  
**TYPE CRE ULTRA-MINIATURE 85°C**  
**ALUMINUM CASED ELECTROLYTICS**


Ultra-miniature, tubular, aluminum cased electrolytics with tinned copper leads. Furnished with insulating sleeves of heat shrinkable mylar tubing which adds only  $\frac{1}{32}$ " to can diameter and  $\frac{1}{16}$ " to length.

Ideal for use in bypass, filter, and coupling applications in low-voltage, compact, miniaturized equipments such as personal radios, hearing aids, microphones, wire receivers, etc.

Elimination of variable or high resistance connections, freedom from corrosion and extremely low leakage characteristics have been attained through the use of a combination of all-welded construction, high purity ingredients and extreme care in manufacture and test procedures.

Temperature Range:  $-30^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
 Capacitance Tolerance:  $-10\%$ ,  $+100\%$   
 Nominal lead length:  $1\frac{1}{2}$ "

Packaging: Packaged in new, patented, straight-lead, 5-pack container. Keeps leads straight. Holds five units. The 5-pack is adaptable to packaging in bulk or in single inside cartons. For full technical information request Bulletin NPJ-124

## STOCK LISTING

Mfd.	Size	Catalog Number *	Net **Price	Mfd.	Size	Catalog Number *	Net **Price	Mfd.	Size	Catalog Number *	Net **Price
<b>3 VDCW</b>				<b>12 VDCW</b>				<b>25 VDCW (Cont.)</b>			
1	B	CRE200A	\$.75	1	B	CRE400A	\$.84	15	D	CRE609A	\$.87
2	B	CRE201A	.75	2	B	CRE401A	.84	20	E	CRE611A	.90
3	B	CRE202A	.75	3	B	CRE402A	.84	25	E	CRE612A	.93
4	B	CRE203A	.75	4	B	CRE403A	.84	30	E	CRE613A	.96
5	B	CRE204A	.75	5	B	CRE404A	.84	35	F	CRE614A	.99
6	B	CRE205A	.75	6	B	CRE405A	.84	40	F	CRE615A	1.02
8	B	CRE206A	.75	8	B	CRE406A	.84	50	G	CRE617A	1.08
10	B	CRE207A	.75	10	B	CRE407A	.84	60	G	CRE618A	1.08
15	B	CRE209A	.75	12	B	CRE408A	.84	75	H	CRE620A	1.17
20	B	CRE211A	.75	15	C	CRE409A	.84	100	J	CRE623A	1.26
25	B	CRE212A	.75	20	C	CRE411A	.84	125	J	CRE626A	1.26
30	C	CRE213A	.75	25	C	CRE412A	.84	<b>50 VDCW</b>			
35	C	CRE214A	.75	30	D	CRE413A	.87	1	B	CRE750A	.84
40	C	CRE215A	.75	35	D	CRE414A	.87	2	B	CRE751A	.84
50	C	CRE217A	.75	40	E	CRE415A	.93	3	C	CRE752A	.84
60	D	CRE218A	.84	50	E	CRE417A	.93	4	C	CRE753A	.84
75	D	CRE220A	.84	60	E	CRE418A	.93	5	C	CRE754A	.87
100	D	CRE223A	.84	75	F	CRE420A	.99	6	D	CRE755A	.87
125	E	CRE226A	.87	100	F	CRE423A	1.05	8	D	CRE756A	.90
150	E	CRE228A	.87	125	G	CRE426A	1.08	10	D	CRE757A	.90
175	F	CRE230A	.90	150	H	CRE428A	1.14	15	E	CRE759A	.90
200	F	CRE231A	.90	175	H	CRE430A	1.17	20	F	CRE761A	.90
225	G	CRE232A	.96	200	H	CRE431A	1.23	25	G	CRE762A	.93
250	G	CRE233A	.96	225	J	CRE432A	1.32	30	G	CRE763A	.96
300	G	CRE235A	.99	250	J	CRE433A	1.32	35	H	CRE764A	1.02
350	H	CRE237A	1.02	<b>15 VDCW</b>				40	H	CRE765A	1.05
400	H	CRE239A	1.02	1	B	CRE450A	.84	50	J	CRE767A	1.11
450	J	CRE241A	1.05	2	B	CRE451A	.84	<b>100 VDCW</b>			
500	J	CRE243A	1.05	3	B	CRE452A	.84	1	D	CRE900A	.84
<b>6 VDCW</b>				4	B	CRE453A	.84	2	D	CRE901A	.84
1	B	CRE300A	.81	5	B	CRE454A	.84	3	D	CRE902A	.84
2	B	CRE301A	.81	6	B	CRE455A	.84	4	E	CRE903A	.84
3	B	CRE302A	.81	8	B	CRE456A	.84	5	E	CRE904A	.90
4	B	CRE303A	.81	10	B	CRE457A	.84	6	E	CRE905A	.90
5	B	CRE304A	.81	15	C	CRE459A	.87	8	F	CRE906A	.93
6	B	CRE305A	.81	20	C	CRE461A	.87	10	G	CRE907A	.93
8	B	CRE306A	.81	25	D	CRE462A	.87	12	G	CRE908A	.93
10	B	CRE307A	.81	30	D	CRE463A	.90	15	H	CRE909A	.93
15	B	CRE309A	.81	35	E	CRE464A	.93	20	J	CRE911A	.96
20	C	CRE311A	.81	40	E	CRE465A	.96	25	J	CRE912A	.96
25	C	CRE312A	.81	50	E	CRE467A	.96	<b>150 VDCW</b>			
30	C	CRE313A	.84	60	F	CRE468A	1.02	1	D	CRE950A	.84
35	C	CRE314A	.84	75	F	CRE470A	1.02	2	E	CRE951A	.87
40	D	CRE315A	.84	100	G	CRE473A	1.08	3	E	CRE952A	.87
50	D	CRE317A	.84	125	H	CRE476A	1.17	4	E	CRE953A	.87
60	D	CRE318A	.84	150	H	CRE478A	1.17	5	E	CRE954A	.93
75	E	CRE320A	.87	175	J	CRE480A	1.26	6	F	CRE955A	.93
100	E	CRE323A	.90	200	J	CRE481A	1.26	8	G	CRE956A	.96
125	F	CRE326A	.93	<b>25 VDCW</b>				10	H	CRE957A	.96
150	G	CRE328A	.93	1	B	CRE600A	.84	15	H	CRE959A	.96
175	H	CRE330A	.96	2	B	CRE601A	.84	20	J	CRE961A	.96
200	H	CRE331A	.96	3	B	CRE602A	.84	<b>SIZE CHART</b>			
225	H	CRE332A	.99	4	B	CRE603A	.84	B	$\frac{1}{4} \times \frac{1}{2}$	F	$\frac{3}{8} \times \frac{13}{16}$
250	H	CRE333A	1.02	5	B	CRE604A	.84	C	$\frac{1}{4} \times \frac{11}{16}$	G	$\frac{3}{8} \times \frac{15}{16}$
300	J	CRE335A	1.08	6	C	CRE605A	.84	D	$\frac{5}{16} \times \frac{11}{16}$	H	$\frac{3}{8} \times \frac{1}{4}$
350	J	CRE337A	1.08	8	C	CRE606A	.87	E	$\frac{3}{8} \times \frac{11}{16}$	J	$\frac{3}{8} \times \frac{1}{2}$
				10	C	CRE607A	.87				

\*When ordering units without insulating sleeve delete suffix letter 'A' from Catalog No.

\*\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-249, 250-499.





# CAPACITORS

## ELECTROLYTICS — (Continued)

### TYPE PTT TUBULAR PLASTIC-CASED ELECTROLYTICS



Small in size big in performance, designed especially for wide applications in transistorized circuitry and cramped electronic assemblies, here is a truly MINIATURE electrolytic tubular that will handle full sized loads.

Aerovox Type PTT units feature "Polycap" cases that are the next best thing to metal cans for maximum protection against humidity. Advanced construction techniques assure long capacitor life. Units are rated for operation at temperatures from -30°C to +65°C.

This type was formerly designated as PTT-PWE.

For full technical information request Bulletin NPJ-111.

3 VDCW			
Cap.	PTT #	Size	Net Price*
1	PTT 1	A	.42
2	PTT 2	A	.42
3	PTT 3	A	.42
5	PTT 4	A	.42
8	PTT 5	A	.42
10	PTT 6	A	.42
15	PTT 7	A	.42
20	PTT 8	B	.42
25	PTT 9	B	.42
30	PTT 10	B	.42
40	PTT 11	B	.42
50	PTT 12	C	.42
100	PTT 13	H	.45
200	PTT 14	K	.45
250	PTT 15	K	.48
300	PTT 16	L	.54
500	PTT 17	O	.75

6 VDCW			
Cap.	PTT #	Size	Net Price*
1	PTT 18	A	.42
2	PTT 19	A	.42
3	PTT 20	A	.42
5	PTT 21	A	.42
8	PTT 22	A	.42
10	PTT 23	A	.42
15	PTT 24	B	.42
20	PTT 25	B	.42
25	PTT 26	B	.42
30	PTT 27	C	.42
40	PTT 28	C	.45
50	PTT 29	E	.45
100	PTT 30	G	.45
200	PTT 31	K	.48
250	PTT 32	M	.60
300	PTT 33	N	.75

10 VDCW			
Cap.	PTT #	Size	Net Price*
1	PTT 34	A	.42
2	PTT 35	A	.42
3	PTT 36	A	.42
5	PTT 37	A	.42
8	PTT 38	A	.42
10	PTT 39	A	.42
15	PTT 40	B	.42
20	PTT 41	B	.42
25	PTT 42	E	.45
30	PTT 43	E	.45
40	PTT 44	E	.45
50	PTT 45	F	.45
100	PTT 46	J	.45
200	PTT 47	L	.75

12 VDCW			
Cap.	PTT #	Size	Net Price*
1	PTT 48	A	.42
2	PTT 49	A	.42
3	PTT 50	A	.42
5	PTT 51	A	.42
8	PTT 52	A	.42
10	PTT 53	B	.42
15	PTT 54	B	.42
20	PTT 55	E	.45
25	PTT 56	E	.45
30	PTT 57	E	.45

12VDCW (Continued)			
Cap.	PTT #	Size	Net Price*
40	PTT 58	H	.45
50	PTT 59	H	.45
100	PTT 60	K	.60

15 VDCW			
Cap.	PTT #	Size	Net Price*
1	PTT 61	A	.42
2	PTT 62	A	.42
3	PTT 63	A	.42
5	PTT 64	A	.42
8	PTT 65	B	.42
10	PTT 66	B	.42
15	PTT 67	B	.42
20	PTT 68	E	.45
25	PTT 69	E	.45
30	PTT 70	E	.45
40	PTT 71	H	.45
50	PTT 72	H	.45
100	PTT 73	K	.60

25 VDCW			
Cap.	PTT #	Size	Net Price*
1	PTT 74	A	.42
2	PTT 75	A	.42
3	PTT 76	A	.42
5	PTT 77	B	.42
8	PTT 78	B	.42
10	PTT 79	E	.42
15	PTT 80	E	.45
20	PTT 81	H	.45
25	PTT 82	H	.45
30	PTT 83	H	.45
40	PTT 84	J	.45
50	PTT 85	K	.45
100	PTT 86	N	.66

50 VDCW			
Cap.	PTT #	Size	Net Price*
1	PTT 87	A	.42
2	PTT 88	A	.42
3	PTT 89	B	.42
5	PTT 90	C	.42
8	PTT 91	E	.45
10	PTT 92	H	.45
15	PTT 93	H	.45
20	PTT 94	I	.45
25	PTT 95	K	.48
30	PTT 96	K	.60
40	PTT 97	M	.75
50	PTT 98	N	.75

SIZE CHART	
A	1/4 x 5/8
B	1/4 x 3/4
C	1/4 x 7/8
E	5/16 x 3/4
F	5/16 x 7/8
G	5/16 x 1
H	3/8 x 3/4
J	3/8 x 7/8
K	3/8 x 1
L	3/8 x 1-1/8
M	3/8 x 1 1/4
N	3/8 x 1 3/8
O	3/8 x 1 1/2

### TYPE B C D UPRIGHT MOUNTING PLASTIC CASED ELECTROLYTICS



"Polycap" case, epoxy end filled electrolytic capacitors. Upright mounting for replacement in printed wiring, transistorized personal radios and car radios.

Small size and type of mounting make these units ideal for use in any printed wiring circuit.

Plastic case and epoxy end seal offer good moisture barrier which protects against drying out or leakage of electrolyte.

High purity foil insures long life and low leakage.

Minimum 1" lead length assists in threading connections into printed wiring boards even in tightest spaces.

Positive lead is identified by a + (plus) mark on case.

For full technical information request Bulletin NPJ-108.

Cap. Mfds.	BCD No.	Size	Net Price*
3 VDCW			
1	3001	A	.87
2	3002	A	.87
3	3003	A	.87
4	3004	A	.87
5	3005	A	.87
6	3006	A	.87
8	3008	A	.87
10	3010	A	.87
15	3015	A	.87
20	3020	A	.87
25	3025	A	.87
35	3035	A	.90
50	3050	A	.93
75	3075	A	1.02
100	3100	B	1.05
150	3150	C	1.05
200	3200	C	1.08
250	3250	D	1.17
300	3300	D	1.20
500-50	3X50050	P	1.38

100-100	4X100100	D	1.17
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5 VNP			
Cap. Mfds.	BCD No.	Size	Net Price*
5	5005	B	1.08

Cap. Mfds.	BCD No.	Size	Net Price*
6VDCW			
1	6001	A	.87
2	6002	A	.87
3	6003	A	.87
4	6004	A	.87
5	6005	A	.87
6	6006	A	.87
8	6008	A	.87
10	6010	A	.87
15	6015	A	.87
20	6020	A	.87
25	6025	A	.90
35	6035	A	.93
50	6050	A	1.02
75	6075	B	1.05
100	6100	C	1.14
150	6150	D	1.17
200	6200	D	1.17
100-30	6X10030	E	.87

Cap. Mfds.	BCD No.	Size	Net Price*
10 VNP			
5	10005	G	1.11

Cap. Mfds.	BCD No.	Size	Net Price*
10 VDCW			
10	10010	A	1.08
25	10025	A	1.17
50	10050	B	1.05
80	10080	C	1.11
100	10100	C	1.17
190	10190	E	1.20
50-30	10X5030	D	.87
50-50	10X5050	D	.90
80-50	10X8050	D	.96
80-80	10X8080	D	1.02

Cap. Mfds.	BCD No.	Size	Net Price*
12 VDCW			
1	12001	A	.87
2	12002	A	.87
3	12003	A	.87
4	12004	A	.87
5	12005	A	.90
6	12006	A	.90
8	12008	A	.90
10	12010	A	.90
15	12015	A	.93
20	12020	A	.93
25	12025	A	.93

Cap. Mfds.	BCD No.	Size	Net Price*
12 VDCW (Cont.)			
35	12035	A	.93
50	12050	B	.99
75	12075	C	1.05
100	12100	D	1.14
150	12150	E	1.17
250	12250	K	1.26
500	12500	F	1.32

Cap. Mfds.	BCD No.	Size	Net Price*
15 VDCW			
1	15001	A	.87
2	15002	A	.87
3	15003	A	.87
4	15004	A	.87
5	15005	A	.90
6	15006	A	.90
8	15008	A	.90
10	15010	A	.90
15	15015	A	.93
20	15020	A	.93
25	15025	A	.93
35	15035	B	.93
50	15050	C	.99
75	15075	D	1.08
100	15100	D	1.17
100-100	*15X100100	N	1.26
300-100	15X300100	M	1.32

100	18100	H	1.17
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Cap. Mfds.	BCD No.	Size	Net Price*
20 VDCW			
200	20200	J	1.26
100-100	*20X100100	R	1.26

Cap. Mfds.	BCD No.	Size	Net Price*
25 VDCW			
1	25001	A	.90
2	25002	A	.90
3	25003	A	.93
4	25004	A	.99
5	25005	A	.99
6	25006	A	.99
8	25008	A	.99
10	25010	B	.99
15	25015	B	.99
20	25020	B	.99
25	25025	B	.99
35	25035	C	1.05
50	25050	D	1.05
75	25075	D	1.17

50 VDCW			
Cap. Mfds.	BCD No.	Size	Net Price*
1	50001	A	.90
2	50002	A	.90
3	50003	A	.93
4	50004	A	.99
5	50005	A	.99
6	50006	A	.99
8	50008	A	.99
10	50010	B	.99
15	50015	C	.99
20	50020	C	.99
25	50025	D	.99

\* Common Positive

SIZE CODE	
A-3/8 x 5/8	M-9/16 x 1 1/2
B-3/8 x 3/4	N-5/8 x 1 1/4
C-7/16 x 3/4	P-5/8 x 1 1/2
D-1/2 x 3/4	R-5/8 x 1 7/8
E-1/2 x 7/8	
F-5/8 x 1-3/8	
G-1/2 x 1-1/8	
H-5/8 x 3/4	
J-5/8 x 1-1/8	
K-1/2 x 1 1/4	

LEAD SPACING	
Diameter	Spacing
3/8	.187
7/16	.250
1/2	.312

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-249





# CAPACITORS

## ELECTROLYTICS - (Continued)

### TYPE QE 61 — QE 71



Type QE capacitors are aluminum electrolytics designed for applications requiring high reliability and long life. Typical applications are in computer equipment, power supplies, telephone networks, industrial electronic equipment and high grade commercial and laboratory test instruments.

These units are manufactured with special high purity materials and processed under controlled conditions of cleanliness with the most modern equipment available. The aluminum container is hermetically sealed and furnished with low screw inserts with a pressure type safety vent provided in the cover.

Operating temperatures for QE61 is  $-20^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ . For the QE71 it is  $-20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ . Standard capacity tolerance 2.5 Volts to 150 Volts is  $-10\%$   $+100\%$ . For 151 Volts to 450 Volts  $-10\%$   $+50\%$ . QE61 will be furnished with heat shrinkable mylar tubing which adds only .010 to the diameter and .020 to the length of the can size as shown.

For complete engineering details including ripple currents, dissipation factor, etc., request our latest bulletin NPJ-125.

### AVAILABLE CAN SIZES AND DESIGNATION

Can Size	Designation	Can Size	Designation	Can Size	Designation	Can Size	Designation	Can Size	Designation
1 3/8 x 1 3/8	A1	1 3/4 x 2 1/8	B1	2 x 3 1/8	C1	2 1/2 x 3 1/8	D1	3 x 4 1/8	E1
1 3/8 x 2 1/8	A2	1 3/4 x 3 1/8	B2	2 x 4 1/8	C2	2 1/2 x 4 1/8	D2	3 x 4 1/8	E2
1 3/8 x 3 1/8	A3	1 3/4 x 4 1/8	B3	2 x 4 1/8	C3	2 1/2 x 4 1/8	D3	3 x 5 1/8	E3
1 3/8 x 4 1/8	A4	1 3/4 x 4 1/8	B4	2 x 5 1/8	C4	2 1/2 x 5 1/8	D4	3 x 5 1/8	E4
1 3/8 x 4 1/8	A5	1 3/4 x 5 1/8	B5	2 x 5 1/8	C5	2 1/2 x 5 1/8	D5		

### MAXIMUM RATINGS IN MFD. FOR QE61

Can Size	3 VDCW 5 VDC Surge	5 VDCW 8 VDC Surge	10 VDCW 15 VDC Surge	15 VDCW 20 VDC Surge	20 VDCW 30 VDC Surge	25 VDCW 40 VDC Surge	35 VDCW 50 VDC Surge	40 VDCW 60 VDC Surge	50 VDCW 75 VDC Surge	60 VDCW 85 VDC Surge	75 VDCW 100 VDC Surge	100 VDCW 135 VDC Surge	150 VDCW 190 VDC Surge	200 VDCW 250 VDC Surge	250 VDCW 300 VDC Surge	300 VDCW 350 VDC Surge	350 VDCW 400 VDC Surge	400 VDCW 475 VDC Surge	450 VDCW 525 VDC Surge
A1	3600	2800	1800	1500	1200	950	650	600	470	430	240	160	130	100	80	65	45	30	25
A2	7300	5600	3600	3100	2400	1900	1350	1200	940	870	480	330	260	200	155	125	95	65	45
A3	14000	11000	7300	6100	4900	3800	2700	2400	1850	1700	950	650	520	400	310	250	185	125	95
A4	22000	16000	11000	9200	7400	5800	4100	3650	2830	2600	1450	1000	785	600	460	385	280	190	140
A5	25000	19000	12000	10000	8600	6800	4800	4250	3300	2700	1650	1170	900	700	540	450	330	225	165
B1	13000	9000	6500	5400	4300	3400	2400	2100	1650	1300	890	600	480	370	280	235	165	115	85
B2	26000	19900	13000	10000	8700	6800	4800	4300	3300	2700	1750	1200	950	740	570	470	330	230	170
B3	39000	29000	19000	16000	13000	10000	7300	6400	5000	4100	2600	1800	1400	1100	850	700	490	345	250
B4	45000	34000	22000	19000	15000	12000	8500	7500	5800	4800	3100	2100	1650	1300	1000	830	575	400	300
B5	52000	39000	26000	21000	17000	13000	9700	8600	6600	5500	3500	2450	1900	1450	1150	940	660	460	345
C1	33000	25000	16000	14000	11000	8900	6300	5600	4300	3600	2300	1600	1200	960	750	600	435	290	225
C2	50000	38000	25000	21000	17000	13000	9500	8300	6500	5400	3400	2400	1800	1450	1100	920	655	445	340
C3	59000	45000	29000	24000	19000	15000	11000	9700	7600	6300	4000	2800	2200	1600	1300	1050	760	520	395
C4	67000	51000	34000	28000	22000	17000	12000	11200	8700	7200	4600	3200	2400	1900	1500	1200	870	590	450
C5	76000	58000	38000	31000	25000	20000	14000	12600	9700	8100	5200	3600	2800	2100	1650	1350	990	665	510
D1	57000	43000	28000	23000	19000	14000	10000	9300	7200	6000	3800	2600	2050	1600	1250	975	740	500	375
D2	85000	65000	42000	35000	28000	22000	15000	14000	10900	9100	5800	4000	3100	2400	1850	1500	1100	745	570
D3	99000	75000	49000	39000	33000	26000	18000	16300	12700	10600	6800	4600	3600	2800	2150	1800			
D4	112000	86000	56000	46000	37000	29000	21000	18600	14400	12000	7600	5200	4100	3100	2475	2000			
D5	126000	96000	63000	52000	42000	33000	23000	20900	16200	13500	8600	5900	4600	3500	2700	2250			
E1	127000	97000	63000	52000	42000	33000	23000	21000	16300	13600	8700	6000	4700	3600	2800	2300	1650	1100	850
E2	148000	113000	74000	61000	49000	39000	27000	24400	19000	15900	10100	7000	5400	4200	3200	2700			
E3	166000	127000	83000	69000	55000	44000	31000	27500	21400	17800	11300	7800	6100	4700	3600	3000			
E4	194000	143000	94000	78000	62000	49000	35000	30900	24000	20000	12800	8800	6900	5300	4100	3400			

### STOCK LISTING FOR QE61

Cat. No.	Size Capacity	Net Price*	Cat. No.	Size Capacity	Net Price*	Cat. No.	Size Capacity	Net Price*	Cat. No.	Size Capacity	Net Price
10 VDCW			25 VDCW Cont.			75 VDCW			200 VDCW Cont.		
61QE2048M	A1 1800	\$2.97	61QE2134M	C4 17000	\$10.20	61QE2243M	A3 950	\$ 4.05	61QE2325M	D1 1600	\$ 9.7
61QE2049M	A2 3600	3.45	61QE2136M	D2 22000	11.52	61QE2247M	C1 2300	5.43			
61QE2051M	A3 7300	4.71	61QE2140M	E1 33000	13.56	61QE2256M	D2 5800	10.41	250 VDCW		
61QE2052M	A4 11000	5.61	35 VDCW			100 VDCW			61QE2340M	A4 460	3.9
61QE2058M	C2 25000	8.79	61QE2164M	E1 23000	13.50	61QE2268M	A4 1000	4.62	61QE2343M	C1 750	5.4
15 VDCW			61QE2165M	E2 27000	14.10	61QE2271M	C1 1600	5.22	61QE2346M	C2 1100	9.0
61QE2072M	A1 1500	2.97	40 VDCW			61QE2274M	C2 2400	6.30	300 VDCW		
61QE2073M	A2 3100	3.54	61QE2171M	A3 2400	4.86	61QE2278M	C4 3200	8.64	61QE2363M	A3 250	3.7
61QE2075M	A3 6100	4.38	61QE2175M	C1 5600	7.05	61QE2280M	D2 4000	10.26	350 VDCW		
61QE2076M	A4 9200	5.61	61QE2178M	C2 8300	9.27	150 VDCW			61QE2387M	A3 185	3.4
61QE2079M	C1 14000	7.41	61QE2184M	D2 14000	13.50	61QE2291M	A3 520	3.30	61QE2400M	D2 1100	11.7
61QE2083M	C2 21000	8.94	61QE2185M	D3 16300	13.80	61QE2292M	A4 785	4.05	450 VDCW		
61QE2086M	C4 28000	11.16	50 VDCW			61QE2295M	C1 1200	5.55	61QE2430M	C2 340	5.
61QE2088M	D2 35000	12.00	61QE2192M	A1 470	2.97	61QE2298M	C2 1800	6.72	61QE2436M	D2 570	7.
25 VDCW			61QE2193M	A2 940	3.75	61QE2304M	D2 3100	9.06	61QE2437M	E1 850	10.
61QE2120M	A1 950	2.97	61QE2195M	A3 1850	4.23	61QE2308M	E1 4700	13.17			
61QE2121M	A2 1900	3.60	61QE2199M	C1 4300	7.20	61QE2309M	E2 5400	14.10			
61QE2123M	A3 3800	4.62	61QE2202M	C2 6500	8.19	200 VDCW					
61QE2124M	A4 5800	5.70	61QE2206M	C4 8700	10.20	61QE2315M	A3 400	3.27			
61QE2127M	C1 8900	6.72	61QE2208M	D2 10900	12.90	61QE2319M	C1 960	6.20			
61QE2131M	C2 13000	9.60				61QE2323M	C2 1450	9.00			

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99



# CAPACITORS

## ADDITIONAL STYLES

For complete information on any Types shown on this page request Catalog or Brochure from Aerovox Corporation, Distributor Division, or your nearest authorized Aerovox Industrial Distributor.



### Type SRE "Bantam" Metal Tubular Electrolytics

Although smaller than the PRS the SRE handles full size loads at operating temperature range of 0°C to 85°C at rated voltage. Sealed in aluminum cans and furnished with a cardboard insulating sleeve. Negative grounded to can. If required without tube specify type SREN.

33 Stock Values - 8 Voltages



### TYPE G Insulated Screw-Mounting Capacitors

Hermetically-sealed aluminum can unit, threaded cover size 7/8-16 with hex nut and washer for convenient mounting on chassis. Washer can be used to insulate can from chassis. Terminals molded in cover. Cathode connection thru terminal in cover. These units are the commercial equivalent of case style CE41 and 42 of specification MIL C62A.

7 Stock Values - 3 Voltages



### TYPE FF Photo-Flash Capacitors

Selective choice of highest purity materials makes these units ideal for rugged photoflash application calling for lowest leakage requirements. Type FF-1 furnished in molded black plastic container, type FF-2 in aluminum can with black glazed tubing; both units furnished with screw lug terminals. Highly resistant to moisture and oil. Surge voltages and time duty cycles as listed in EIA specification No. RS-154.

2 Stock Values

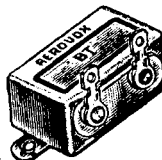


### TYPE E Hermetically-Sealed, Aluminum, Round Metal-Cased Capacitors

Can be mounted with terminals upright or inverted by use of a ring-type clamp provided with unit. Can is floating, thus having two terminals on single-section capacitors, three on duals, and four on triples.

These units are the commercial equivalent of case style CE31, 2 and 3 of MIL Specification C62A.

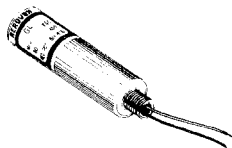
16 Stock Values - 10 Voltages



### TYPE BT Drawn-Case "Bathtub" Electrolytic Capacitors

Hermetically-sealed units designed for rigid mounting in minimum space. Of sturdy construction, these high-quality units are commercial equivalent to the case style CE63 of MIL Specification C62A.

21 Stock Values - 6 Voltages



### TYPE GL

These ever-popular inverted-mounting, aluminum can units, are furnished with the same high purity materials as the more expensive type E and G. Two separate color-coded leads 4" long for each section. Inverted chassis mounting can be made, using palmnut and threaded neck. Threaded neck size 5/8-18.

24 Stock Values - 6 Voltages

## PAPER CAPACITORS

### TYPE P84CM DURAMIC® Ceramic-Cased Tubular Capacitors

New ceramic (dense stearite) encased paper tubular for performance above that of conventional paper tubulars. New thermosetting end-seals for exceptional humidity protection—250 hour humidity test as per REC-118. Firmly imbedded terminals will not work loose or pull out. Operating temps are -55°C to +85°C. Meets all requirements of EIA Spec. REC-118, hi-temp range, class M.

34 Stock Values - 5 Voltages



### TYPE P88N Duranite Blue Molded Tubular Capacitors

Toughest capacitors ever offered for radio-electronic equipment. DURANITE capacitors. Design, impregnant, processing, and casing insure glove-fitting contact and seal throughout. DURANITE provides a permanent, non-varying, rock-hard casing, does not dry out, does not develop cracks or fissures. Pig-tail leads firmly imbedded, won't pull out, won't work loose. Moisture-proof; operate from sub-zero to over 212°F. Exposure to temperatures of 250°F. will not impair life or performance, no deterioration on the shelf. A white band around one end of the capacitor identifies the outside foil.

### Type VBC Vibrator Buffer Capacitors



These units are heavy-duty, Hyvol M impregnated, vibrator buffer capacitors in ceramic tubes, specifically designed for severe-service auto-radio applications.

### AUTOPASS® Vertical Mounting Plastic-Cased Paper Capacitors



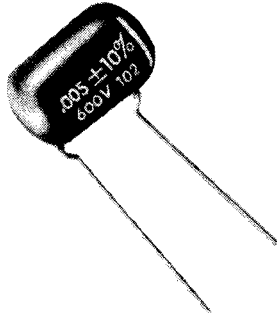
Aerovox Autopass capacitors were specifically designed and developed for use in conjunction with printed-wiring assemblies where it is highly desirable to mount capacitors at right angles to the mounting surface thereby conserving valuable space.



# CAPACITORS

## PAPER CAPACITORS

### DIPPED BI-ELECTRIC® 10% TYPE DBE MYLAR\*-PAPER BY-PASS TUBULARS



Now the "better by-pass" Bi-Electric® is presented in a dipped radial lead style. Better characteristics with all the advantages of a combination dielectric. Combines the best features of Mylar\* and high quality kraft tissue with a solid impregnant resulting in a unit that affords excellent protection against moisture, mechanical damage and damage from soldering iron contact.

The solid thermo setting impregnant will not crack, soften or flow assuring very stable units.

Standard capacitance tolerance is ±10%

Other features of this capacitor include 125°C maximum operating temperature, low power factor, high insulation resistance. All units are furnished with crimped style leads.

Cat. No.	Size	Net Price**	Cat. No.	Size	Net Price**	Cat. No.	Size	Net Price**	Cat. No.	Size	Net Price**
<b>200 VDCW</b>											
DBE2S22	.370 x .855	.15	DBE4S68	.440 x 1.180	.24	DBE6D3	.370 x .690	.15	DBE6S22	.470 x .870	.18
DBE2S47	.450 x .855	.18	DBE4P1	.520 x 1.180	.24	DBE6D33	.370 x .690	.15	DBE6S27	.415 x 1.150	.21
DBE2P1	.470 x 1.180	.21	DBE4P15	.560 x 1.300	.30	DBE6D39	.370 x .690	.15	DBE6S3	.430 x 1.150	.21
DBE2P15	.540 x 1.180	.24	DBE4P22	.620 x 1.560	.36	DBE6D47	.400 x .690	.15	DBE6S33	.430 x 1.150	.21
DBE2P22	.590 x 1.300	.27				DBE6D5	.415 x .690	.15	DBE6S39	.470 x 1.150	.21
DBE2P47	.730 x 1.600	.36				DBE6D56	.415 x .690	.15	DBE6S47	.490 x 1.150	.21
<b>400 VDCW</b>											
DBE4S1	.390 x .690	.15	DBE6D1	.340 x .690	.15	DBE6D68	.430 x .690	.18	DBE6S56	.520 x 1.180	.24
DBE4S15	.430 x .690	.15	DBE6D12	.340 x .690	.15	DBE6D75	.370 x .870	.18	DBE6S68	.540 x 1.300	.27
DBE4S22	.400 x .855	.18	DBE6D15	.340 x .690	.15	DBE6D82	.370 x .870	.18	DBE6S75	.570 x 1.300	.27
DBE4S33	.440 x .855	.18	DBE6D18	.340 x .690	.15	DBE6S1	.390 x .870	.18	DBE6S82	.590 x 1.300	.27
DBE4S47	.415 x 1.150	.21	DBE6D2	.340 x .690	.15	DBE6S12	.400 x .870	.18	DBE6P1	.640 x 1.300	.27
			DBE6D22	.340 x .690	.15	DBE6S15	.415 x .870	.18	DBE6P15	.650 x 1.560	.33
			DBE6D27	.370 x .690	.15	DBE6S18	.470 x .870	.18	DBE6P22	.750 x 1.560	.42

\*\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499, 500-999.

®\*Dupont Registered Trade Mark

## BI-ELECTRIC® MYLAR\* PAPER BYPASS TUBULARS

### Radial Lead Mounting



Two famous dielectrics . . . quality kraft tissue and Mylar\* film . . . are combined with Aerolene impregnant and exclusive "Polycap"® plastic case to bring you a truly superior bypass capacitor. The advanced construction techniques presented in "Bi-Electric" capacitors offer distinct advantages over other radial lead types. "Polycap"® case provides a solid uniform coating from end-to-end. Controlled end-fills provide sealed protection, and leads cannot crack end-fill or pull-out when leads are extended for axial mounting. Standard capacitance tolerance is ±10%. Operating temperature range is -30°C to +100°C.

For full technical information request bulletin NPJ-118 Rev.

\* DuPont Trademark

Cap. Mfd.	Cat. #	Size	Net Price*	Cap. Mfd.	Cat. #	Size	Net Price*	Cap. Mfd.	Cat. #	Size	Net Price*	Cap. Mfd.	Cat. #	Size	Net Price*
<b>200 VDCW</b>															
.01	BE2S1	11/32 x 11/16	\$.15	.04	BE4S4	15/32 x 1-1/8	\$.21	.0056	BE6D56	13/32 x 27/32	\$.15	.15	BE6P15	11/16 x 1-9/16	\$.33
.015	BE2S15	3/8 x 11/16	.15	.047	BE4S47	15/32 x 1-1/8	.21	.006	BE6D6	13/32 x 27/32	.15	.2	BE6P2	3/4 x 1-9/16	.36
.02	BE2S2	7/16 x 27/32	.15	.05	BE4S5	15/32 x 1-1/8	.21	.0068	BE6D68	13/32 x 27/32	.18	.22	BE6P22	3/4 x 1-9/16	.36
.022	BE2S22	7/16 x 27/32	.15	.068	BE4S68	1/2 x 1-1/8	.24	.007	BE6D7	13/32 x 27/32	.18	<b>1000 VDCW</b>			
.047	BE2S47	7/16 x 27/32	.18	.1	BE4P1	9/16 x 1-5/32	.24	.0075	BE6D75	13/32 x 27/32	.18	.001	BE10D1	11/32 x 11/16	.11
.05	BE2S5	15/32 x 1-1/8	.18	.15	BE4P15	5/8 x 1-5/16	.30	.008	BE6D8	13/32 x 27/32	.18	.0012	BE10D12	11/32 x 11/16	.11
.1	BE2P1	17/32 x 1-5/32	.21	.2	BE4P2	11/16 x 1-9/16	.33	.0082	BE6D82	13/32 x 27/32	.18	.0015	BE10D15	11/32 x 11/16	.11
.15	BE2P15	9/16 x 1-5/32	.24	.22	BE4P22	11/16 x 1-9/16	.36	.01	BE6S1	13/32 x 27/32	.18	.0018	BE10D18	11/32 x 11/16	.11
.2	BE2P2	5/8 x 1-5/16	.27	.25	BE4P25	11/16 x 1-9/16	.36	.015	BE6S15	15/32 x 13/16	.18	.002	BE10D2	3/8 x 11/16	.11
.22	BE2P22	5/8 x 1-5/16	.27	.33	BE4P33	3/4 x 1-9/16	.42	.018	BE6S18	17/32 x 7/8	.18	.0022	BE10D22	3/8 x 11/16	.11
.25	BE2P25	11/16 x 1-9/16	.27	<b>600 VDCW</b>				.02	BE6S2	17/32 x 7/8	.18	.0033	BE10D33	13/32 x 27/32	.11
.33	BE2P33	11/16 x 1-9/16	.30	.001	BE6D1	11/32 x 11/16	.15	.022	BE6S22	17/32 x 7/8	.18	.0039	BE10D39	3/8 x 53/64	.2
.47	BE2P47	3/4 x 1-9/16	.36	.0012	BE6D12	11/32 x 11/16	.15	.025	BE6S25	15/32 x 1-5/32	.21	.0047	BE10D47	13/32 x 27/32	.2
.5	BE2P5	3/4 x 1-9/16	.36	.0015	BE6D15	11/32 x 11/16	.15	.027	BE6S27	15/32 x 1-5/32	.21	.0068	BE10D68	15/32 x 13/16	.2
<b>400 VDCW</b>															
.01	BE4S1	3/8 x 11/16	.15	.0018	BE6D18	11/32 x 11/16	.15	.03	BE6S3	15/32 x 1-5/32	.21	.01	BE10S1	17/32 x 7/8	.2
.015	BE4S15	7/16 x 27/32	.15	.002	BE6D2	11/32 x 11/16	.15	.033	BE6S33	15/32 x 1-5/32	.21	.018	BE10S18	15/32 x 1-5/32	.2
.02	BE4S2	7/16 x 27/32	.18	.0022	BE6D22	11/32 x 11/16	.15	.039	BE6S39	15/32 x 1-5/32	.21	.025	BE10S25	17/32 x 1-5/32	.2
.022	BE4S22	7/16 x 27/32	.18	.0025	BE6D25	3/8 x 11/16	.15	.04	BE6S4	17/32 x 1-5/32	.21	.027	BE10S27	17/32 x 1-5/32	.2
.025	BE4S25	7/16 x 27/32	.18	.0027	BE6D27	3/8 x 11/16	.15	.047	BE6S47	17/32 x 1-5/32	.24	.033	BE10S33	5/8 x 1-5/16	.2
.03	BE4S3	7/16 x 27/32	.18	.003	BE6D3	3/8 x 11/16	.15	.05	BE6S5	17/32 x 1-5/32	.24	.039	BE10S39	5/8 x 1-5/16	.2
.033	BE4S33	7/16 x 27/32	.18	.0033	BE6D33	3/8 x 11/16	.15	.056	BE6S56	17/32 x 1-5/32	.24	.047	BE10S47	5/8 x 1-5/16	.2
				.0039	BE6D39	3/8 x 11/16	.15	.06	BE6S6	5/8 x 1-5/16	.24	.056	BE10S56	11/16 x 1-9/16	.2
				.004	BE6D4	13/32 x 11/16	.15	.068	BE6S68	5/8 x 1-5/16	.27	.068	BE10S68	11/16 x 1-9/16	.2
				.0047	BE6D47	13/32 x 11/16	.15	.075	BE6S75	5/8 x 1-5/16	.27	.075	BE10S75	11/16 x 1-9/16	.2
				.005	BE6D5	13/32 x 21/32	.15	.1	BE6P1	5/8 x 1-5/16	.27	.1	BE10P1	3/4 x 1-9/16	.2
												.15	BE10P15	15/16 x 1	.2

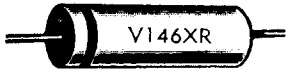
\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-249



## CAPACITORS

## PAPER CAPACITORS (cont.)

## TYPE V146XR AEROFILM® "WRAP AND FILL" MYLAR CAPACITORS



**Leads:** solder-coated "copper-weld" wire, 2" minimum length. Over .375 diameter #20AWG (.032) .375 and smaller #22AWG (.025).

**Tolerance:** Standard  $\pm 10\%$ . Available in closer tolerances on special order.

For Full technical information request bulletin NPJ-121

Miniature, mylar, tubular capacitor sections, extended foil construction, wrapped with a synthetic film and end-sealed with a plastic resin.

These units offer high insulation resistance, high operating temperature, low power factor and outstanding resistance to moisture.

Ideal for use in miniaturized circuits where size and weight are important factors.

**Operating Temperature Range:** Capable of operation in a temperature range of  $-65^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  at full voltage rating and to  $125^{\circ}\text{C}$  with voltage derating as follows:

DC Rated Voltage at $85^{\circ}\text{C}$	Maximum DC Working Voltage at $125^{\circ}\text{C}$
150	100
200	125
400	200
600	300

## STOCK LISTING

Capacity In Mfd.	150 VDC		Cat. No.	Net Price*	200 VDC		Cat. No.	Net Price*	400 VDC		Cat. No.	Net Price*	600 VDC		Cat. No.	Net Price*
	D	L			D	L			D	L			D	L		
.001	See Note 1				.156 x 1/2		V146XR-16	.21	156 x 5/8		V146XR-37	.21	156 x 3/4		V146XR-58	.24
.0015	See Note 1				.156 x 1/2		V146XR-17	.21	.156 x 5/8		V146XR-38	.21	.171 x 3/4		V146XR-59	.24
.0022	See Note 1				.156 x 1/2		V146XR-18	.21	.156 x 5/8		V146XR-39	.21	.187 x 3/4		V146XR-60	.24
.0033	See Note 1				.156 x 1/2		V146XR-19	.21	.156 x 5/8		V146XR-40	.24	.203 x 3/4		V146XR-61	.24
.0047	See Note 1				.156 x 1/2		V146XR-20	.21	.187 x 5/8		V146XR-41	.24	.234 x 3/4		V146XR-62	.27
.0068	See Note 1				.156 x 1/2		V146XR-21	.21	.218 x 5/8		V146XR-42	.24	.265 x 3/4		V146XR-63	.27
.01	.156 x 1/2		V146XR-1	.21	.171 x 1/2		V146XR-22	.21	.250 x 5/8		V146XR-43	.27	.312 x 3/4		V146XR-64	.30
.015	.187 x 1/2		V146XR-2	.21	.203 x 1/2		V146XR-23	.21	.296 x 5/8		V146XR-44	.27	.312 x 7/8		V146XR-65	.30
.022	.203 x 5/8		V146XR-3	.24	.250 x 5/8		V146XR-24	.24	.312 x 3/4		V146XR-45	.27	.375 x 7/8		V146XR-66	.30
.033	.218 x 5/8		V146XR-4	.24	.250 x 3/4		V146XR-25	.24	.312 x 7/8		V146XR-46	.27	.406 x 1		V146XR-67	.30
.047	.234 x 3/4		V146XR-5	.27	.296 x 3/4		V146XR-26	.27	.343 x 7/8		V146XR-47	.30	.453 x 1		V146XR-68	.33
.068	.265 x 3/4		V146XR-6	.27	.343 x 3/4		V146XR-27	.27	.375 x 1		V146XR-48	.33	.531 x 1		V146XR-69	.36
.1	.281 x 7/8		V146XR-7	.36	.375 x 7/8		V146XR-28	.36	.421 x 1		V146XR-49	.33	.562 x 1-3/8		V146XR-70	.42
.15	.328 x 7/8		V146XR-8	.36	.453 x 7/8		V146XR-29	.36	.468 x 1-1/4		V146XR-50	.36	.671 x 1-3/8		V146XR-71	.45
.22	.385 x 1		V146XR-9	.39	.438 x 1-1/8		V146XR-30	.39	.546 x 1-3/8		V146XR-51	.42	.718 x 1-5/8		V146XR-72	.51
.33	.375 x 1-1/8		V146XR-10	.45	.484 x 1-1/8		V146XR-31	.45	.593 x 1-5/8		V146XR-52	.66	.765 x 2		V146XR-73	.90
.47	.468 x 1-1/4		V146XR-11	.51	.546 x 1-1/4		V146XR-32	.51	.671 x 1-5/8		V146XR-53	.78	.859 x 2		V146XR-74	1.14
.68	.562 x 1-1/4		V146XR-12	.57	.609 x 1-5/8		V146XR-33	.57	.796 x 1-3/4		V146XR-54	.96	1.016 x 2		V146XR-75	1.53
1.0	.593 x 1-1/2		V146XR-13	.87	.671 x 1-3/4		V146XR-34	.87	.812 x 2		V146XR-55	1.20	1.125 x 2-1/2		V146XR-76	2.55
1.5	.718 x 1-3/4		V146XR-14	1.23	.828 x 1-3/4		V146XR-35	1.23	.921 x 2-1/4		V146XR-56	1.56	1.234 x 3		V146XR-77	3.48
2.0	.812 x 1-3/4		V146XR-15	1.50	.875 x 1-7/8		V146XR-36	1.50	1.093 x 2-1/4		V146XR-57	2.04	1.421 x 3		V146XR-78	4.38

Note 1: These capacity values are only made at 200 VDC or higher.

The 200 VDC unit may be used for lower voltage requirements since sizes are as small as or smaller than competitive 100 VDC units.

® Registered Trademark

\*Request O.E.M. prices in the following quantities: 25-49, 50-99, 100-499

## TYPE V161

## AEROFILM® (MYLAR\*) CAPACITORS

V161 Aerofilm Tubular Capacitors are high quality units in Polycap® cases. These units have exceptionally high insulation resistance and low dielectric absorption and power factor. They are extremely stable having a relatively small capacitance change with temperature variations over a range of 0 to  $85^{\circ}\text{C}$ .

Their excellent resistance to humidity and moisture are due to the use of Aerofilm (Aerovox's trade name for Mylar\* polyester film), finest quality casing material, and an epoxy end fill which will not flow, soften or melt at any operating temperature. Standard tolerance is  $\pm 20\%$  but also available in  $\pm 5\%$  and  $\pm 10\%$ .

This type was formerly designated as V84C-V161.

Cap. Mfd.	Size	Net Price*	Cap. Mfd.	Size	Net Price*	Cap. Mfd.	Size	Net Price*
.0047	200 VDCW 9/32 x 15/16	\$.15	.0047	9/32 x 15/16	\$.15	.003	9/32 x 15/16	\$.15
.0068	9/32 x 15/16	.15	.0068	9/32 x 15/16	.15	.0033	9/32 x 15/16	.15
.01	9/32 x 15/16	.15	.01	5/16 x 1	.15	.004	5/16 x 1	.15
.015	9/32 x 15/16	.15	.015	5/16 x 1	.15	.0047	5/16 x 1	.15
.022	5/16 x 1	.15	.02	5/16 x 1-1/16	.15	.005	5/16 x 1	.15
.033	5/16 x 1	.15	.022	11/32 x 1-1/16	.15	.0068	5/16 x 1	.18
.047	5/16 x 1-1/16	.15	.03	3/8 x 1-1/16	.18	.01	11/32 x 1-1/16	.18
.05	5/16 x 1-1/16	.15	.033	3/8 x 1-1/16	.18	.015	3/8 x 1-3/16	.18
.068	11/32 x 1-1/16	.18	.047	3/8 x 1 1/4	.18	.02	3/8 x 1-3/16	.18
.1	3/8 x 1 1/4	.21	.05	3/8 x 1 1/4	.18	.022	13/32 x 1-3/16	.18
.15	13/32 x 1 1/4	.24	.068	7/16 x 1 1/4	.21	.03	7/16 x 1-3/16	.21
.22	1/2 x 1 1/4	.24	.1	1/2 x 1 1/4	.21	.033	7/16 x 1-3/16	.21
.25	1/2 x 1 1/4	.27	.15	9/16 x 1 1/2	.36	.04	1/2 x 1 1/4	.24
.33	1/2 x 1 1/2	.33	.22	9/16 x 1 1/2	.39	.047	1/2 x 1 1/4	.24
.47	9/16 x 1 1/2	.39	.25	9/16 x 1 3/4	.39	.05	1/2 x 1 1/4	.24
.68	19/32 x 1 3/4	.51	.33	5/8 x 1 3/4	.51	.068	1/2 x 1 1/2	.27
1.0	13/16 x 1-7/8	.57	.47	11/16 x 2	.66	.075	1/2 x 1 1/2	.27
			.5	11/16 x 2	.69	.1	9/16 x 1 1/2	.30
			.68	25/32 x 2	.87	.15	5/8 x 1-5/8	.39
			1.0	7/8 x 2-1/8	1.05	.2	23/32 x 1-5/8	.48
.0015	9/32 x 15/16	.15				.22	3/4 x 1-5/8	.51
.0022	9/32 x 15/16	.15				.25	3/4 x 1 3/4	.54
.0033	9/32 x 15/16	.15				.33	13/16 x 1-7/8	.78
			.001	9/32 x 15/16	.15	.47	7/8 x 2-1/8	.84
			.002	9/32 x 15/16	.15	.5	7/8 x 2-1/8	.87
			.0022	9/32 x 15/16	.15			

\*Dupont trademark

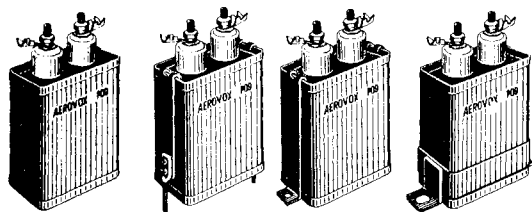
\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-249



# CAPACITORS

## INDUSTRIAL SECTION — STANDARD TYPES

### TYPE P09



P09 P09MSB P09MS P09MB

### PAPER CAPACITORS

Immersion-proof units in sturdy, rectangular metal cans. High-voltage screw-type pillar terminals fitted with soldering lugs. Use of HYVOL M or J allows exceptionally compact size for capacity, working voltage and safety factor. Intended for heavy-duty, continuous service in transmitters, amplifiers, etc. Operating temperature —55 to +85°C.

Standard tolerance +20 —10%. Other tolerance on request.

Type MB bracket is supplied unless otherwise specified except on units with base sizes 3 3/4" x 3 3/4" and 3 3/4" x 4 1/4" where Type MS bracket is supplied. MSB bracket is available for all sizes on request.

Cap.	Size	Net Price*	Cap.	Size	Net Price*	Cap.	Size	Net Price*	Cap.	Size	Net Price*			
<b>600V</b>														
.5	1-1/16 x 1-13/16 x 2 1/4	\$2.41	10.0	1 3/4 x 3 3/4 x 4 3/4	\$7.94	4.0	2 1/4 x 3 3/4 x 3-7/8	\$ 7.90	.25	2 1/4 x 3 3/4 x 2 3/4	\$ 7.85			
1.0	1-1/16 x 1-13/16 x 2 1/4	2.57	12.0	2 1/4 x 3 3/4 x 3-7/8	8.71	5.0	2 1/4 x 3 3/4 x 4 1/4	8.99	.5	2 1/4 x 3 3/4 x 3-7/8	9.04			
2.0	1-1/16 x 1-13/16 x 2-7/8	3.12	15.0	2 1/2 x 3 3/4 x 4 3/4	10.47	6.0	3-3/16 x 3 3/4 x 4 1/2	10.09	1.0	2 1/4 x 3 3/4 x 5-1/8	11.34			
3.0	1-1/16 x 1-13/16 x 3-7/8	3.69	<b>1500V</b>											
4.0	1-3/16 x 2 1/2 x 3 1/2	4.25	.5	1-1/16 x 1-13/16 x 2-7/8	3.12	8.0	3-3/16 x 3 3/4 x 4 3/4	11.77	2.0	3 3/4 x 4-9/16 x 5-1/8	12.55			
5.0	1-1/16 x 1-13/16 x 4 3/4	4.63	1.0	1-1/16 x 1-13/16 x 3-7/8	3.34	10.0	3 3/4 x 4-9/16 x 4 3/4	13.77	4.0	3 3/4 x 4-9/16 x 8 1/2	24.60			
6.0	1-3/16 x 2 1/2 x 4 3/4	5.00	2.0	1-3/16 x 2 1/2 x 4 1/4	4.27	12.0	3 3/4 x 4-9/16 x 5 1/2	16.01	<b>5000V</b>					
8.0	1 1/4 x 3 3/4 x 3-7/8	6.16	3.0	1-3/16 x 2 1/2 x 4 3/4	5.24	15.0	3 3/4 x 4-9/16 x 6 1/2	19.36	.1	2 1/4 x 3 3/4 x 2 3/4	7.44			
10.0	1 1/4 x 3 3/4 x 4 1/4	6.63	4.0	1 1/4 x 3 3/4 x 4 3/4	6.21	<b>2500V</b>						.25	2 1/4 x 3 3/4 x 3-7/8	8.22
12.0	1 1/2 x 3 3/4 x 4 3/4	7.47	5.0	1 3/4 x 3 3/4 x 4 3/4	7.07	.5	1-3/16 x 2 1/2 x 3 1/2	5.43	.5	2 1/4 x 3 3/4 x 4 1/2	9.81			
15.0	1 3/4 x 3 3/4 x 4 3/4	8.70	6.0	1 3/4 x 3 3/4 x 4 3/4	7.94	1.0	1 3/4 x 3 3/4 x 3 3/4	6.45	1.0	3 3/4 x 4-9/16 x 4-3/8	13.55			
<b>1000V</b>												2.0	3 3/4 x 4-9/16 x 6	20.50
.1	1-1/16 x 1-13/16 x 1-5/8	2.15	8.0	2 1/2 x 3 3/4 x 4 3/4	9.92	4.0	3 3/4 x 4-9/16 x 4	12.73	<b>6000V</b>					
.25	1-1/16 x 1-13/16 x 2 1/4	2.50	10.0	3-3/16 x 3 3/4 x 4 3/4	11.44	10.0	3 3/4 x 4-9/16 x 6-3/8	24.51	.1	2 1/4 x 3 3/4 x 3-3/8	10.76			
.5	1-1/16 x 1-13/16 x 2 1/4	2.56	12.0	3-3/16 x 3 3/4 x 4 3/4	13.17	<b>3000V</b>						.25	2 1/4 x 3 3/4 x 3-3/8	13.16
1.0	1-1/16 x 1-13/16 x 2 1/4	2.79	15.0	3 3/4 x 4-9/16 x 4 3/4	15.79	.1	1-3/16 x 2 1/2 x 2	6.95	1.0	3 3/4 x 4-9/16 x 7 1/2	19.49			
2.0	1-1/16 x 1-13/16 x 3-7/8	3.53	<b>2000V</b>											
3.0	1-3/16 x 2 1/2 x 3 1/2	4.16	.1	1-1/16 x 1-13/16 x 2-1/8	3.63	.25	1-3/16 x 2 1/2 x 2 1/2	7.39	<b>7500V</b>					
4.0	1-3/16 x 2 1/2 x 4 1/4	4.79	.5	1-1/16 x 1-13/16 x 2-1/8	3.81	.5	1-3/16 x 2 1/2 x 3-7/8	8.09	.1	2 1/4 x 3 3/4 x 3-7/8	13.45			
5.0	1 1/4 x 3 3/4 x 3-7/8	5.34	1.0	1-1/16 x 1-13/16 x 2-7/8	4.06	1.0	2 1/4 x 3 3/4 x 3-7/8	9.56	.25	3 3/4 x 4-9/16 x 3-7/8	14.17			
6.0	1 1/4 x 3 3/4 x 4 1/4	5.89	2.0	1-3/16 x 2 1/2 x 3 1/2	4.58	2.0	3-3/16 x 3 3/4 x 4-1/8	12.45	.5	3 3/4 x 4-9/16 x 5-1/8	15.99			
8.0	1 1/4 x 3 3/4 x 4 3/4	6.91	3.0	1 1/4 x 3 3/4 x 4 1/4	5.70	4.0	3 3/4 x 4-9/16 x 4 3/4	17.62	<b>4000V</b>					
												.1	2 1/4 x 3 3/4 x 2 3/4	7.23

\*Request O.E.M. Prices in the following quantities: 10-24, 25-49, 50-99

### TYPE P10



Cylindrical hermetically sealed can with screw-base folded cover for vertical mounting. These units are Hyvol M or J impregnated and filled for long life and safe operation at temperatures from —55 to +85°C.

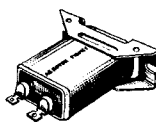
Standard units have two terminals, case floating.

Standard tolerance +20% —10%. Other tolerances available on request.

Capacity	600 V D C W Size	Net Price*	1000 V D C W Size	Net Price*	1500 V D C W Size	Net Price*
.5					1 1/2 x 2-3/8	\$3.77
1.0			1 1/2 x 2-7/8	3.82	1 1/2 x 3-7/8	4.12
2.0	1 1/2 x 2-7/8	3.57	1 1/2 x 4 1/2	4.53		
4.0	1 1/2 x 4 1/2	4.82				

\*Request O.E.M. Prices in the following quantities: 10-99

### TYPE P16 and P16-CT



Small corrosion and immersion-proof unit for severe atmospheric and climatic conditions. P16-CT is standard; P16 is available in 400 and 600 volts. Operating temperature —55 to +85°C. Dual units have two terminals, case grounded. Standard tolerance +20 —10%. CP091S and CP091F brackets available for P16. Base Size 1 3/8 x 1 1/4. Impregnated with either Hyvol M or Hyvol J.

SINGLE CAPACITY	400 V D C W		600 V D C W		1000 V D C W		600 V D C W		
	HEIGHT		HEIGHT		HEIGHT		HEIGHT		
	P16, P16-CT	Net Price*	P16, P16-CT	Net Price*	P16-CT	Net Price*	P16, P16-CT	Net Price*	
.05			1-1/16	\$1.76	1-3/8	\$1.83	2 x .05	1-3/8	\$2.06
.1	1-1/16	\$1.80	1-3/8	1.85	1-3/8	1.89	2 x .1	1-5/8	2.13
.25	1-3/8	1.87	1-5/8	1.91	2	1.94	2 x .25	2	2.30
.5	1-5/8	1.91	2	1.96	2 3/4	2.13	2 x .5	2 3/4	2.64
1.0	2	2.16	2 3/4	2.20					

\*Request O.E.M. Prices in the following quantities: 10-24, 25-49, 50-99, 100-499

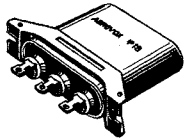




# CAPACITORS

## INDUSTRIAL SECTION—STANDARD TYPES (Continued)

### TYPE P18-CB

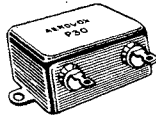


Similar to P16 in construction and electrical characteristics. Because of the difference in the base size type P18-CB can be supplied with three terminals. Dual units are case floating, triples are case grounded. The size difference also makes these units suitable for use in assemblies where P16's do not fit. Operating temperature range -55 to +85° C. Standard tolerance +20 - 10%. Impregnated with either Hyvol M or Hyvol J.

Capacity	400 VDCW P18-CB		600 VDCW P18-CB		1000 VDCW P18-CB		Capacity	400 VDCW P18-CB		600 VDCW P18-CB		1000 VDCW P18-CB		Capacity	400 VDCW P18-CB		600 VDCW P18-CB		1000 VDCW P18-CB		
	Height	Net* Price	Height	Net* Price	Height	Net* Price		Height	Net* Price	Height	Net* Price	Height	Net* Price		Height	Net* Price	Height	Net* Price	Height	Net* Price	
.01					1-1/16	2.02	2 x .01						1-1/16	2.46	3 x .01					1-1/16	2.94
.02					1-1/16	2.06	2 x .02						1-1/16	2.49	3 x .02					1-1/16	3.05
.05	1	2.02	1-1/16	2.07	1-1/16	2.11	2 x .05	1	2.47	1-1/16	2.52	1-1/2	2.58	3 x .05	1-1/8	2.97	1-1/2	3.04	1-1/2	3.09	
.1	1	2.09	1-1/16	2.14	1-1/2	2.18	2 x .1	1-1/4	2.54	1-1/2	2.59	2	2.68	3 x .1	1-5/8	3.04	1-1/2	3.11	1-1/2	3.21	
.25	1-1/4	2.17	1-1/2	2.21	2	2.25	2 x .25	1-1/2	2.72	2	2.78	2-3/4	2.85	3 x .25	2	3.27	2-3/4	3.33			
.5	1-1/2	2.24	2	2.29	2-1/2	2.44	2 x .5	2-1/4	2.98	2-3/4	3.05										
1.0	2	2.48	2-3/4	2.53																	

BASE SIZE 1-3/4 x 9/16

### TYPE P30 Bathtub Case

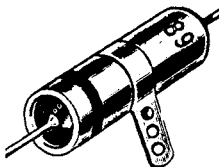


High-quality bypass capacitors furnished in drawn metal bathtub cases, hermetically sealed. These units are Hyvol M or J impregnated for operation at temperatures from -55 to +85° C. They are especially recommended for applications where high reliability and superior performance are required. Typical applications for these rugged units would include marine, aircraft and tropical climates. Standard tolerance +20% -10%.

\*Also available with top terminals, size 2 x 1 3/4 x 7/8, Type P30JT.

Capacity	400 VDCW P30		600 VDCW P30		1000 VDCW P30		Capacity	400 VDCW P30		600 VDCW P30		1000 VDCW P30	
	Size	Net* Price	Size	Net* Price	Size	Net* Price		Size	Net* Price	Size	Net* Price	Size	Net* Price
.05	1 3/4 x 1 x 3/4	1.65	1 3/4 x 1 x 3/4	1.73	1 3/4 x 1 x 3/4	1.80	2 x .05	1 3/4 x 1 x 3/4	2.29	1 3/4 x 1 x 3/4	2.37	1 3/4 x 1 x 3/4	2.47
.1	1 3/4 x 1 x 3/4	1.72	1 3/4 x 1 x 3/4	1.78	1 3/4 x 1 x 3/4	1.89	2 x .1	1 3/4 x 1 x 3/4	2.37	1 3/4 x 1 x 3/4	2.44	1 3/4 x 1 x 7/8	2.51
.25	1 3/4 x 1 x 3/4	1.82	1 3/4 x 1 x 13/16	1.85	1 3/4 x 1 x 7/8	1.93	2 x .25	1 3/4 x 1 x 15/16	2.42	1 3/4 x 1 x 1	2.51	2 x 1 3/4 x 7/8	2.76
.5	1 3/4 x 1 x 7/8	1.97	1 3/4 x 1 x 1	1.98	2 x 1 3/4 x 7/8	2.06	2 x .5	2 x 1 3/4 x 7/8	2.77	2 x 1 3/4 x 7/8	2.82	2 x 2 x 1-3/16	3.57
.75	2-1/16 x 1 1/4 x 7/8	2.13	2-1/16 x 1 1/4 x 7/8*	2.14	2 x 1 3/4 x 7/8	2.44	2 x 1.0	2 x 2 x 1-1/8	3.42	2 x 2 x 1-3/16	3.44		
1.0	2 x 1 3/4 x 7/8	2.29	2 x 1 3/4 x 1	2.30	2 x 2 x 1-1/8	2.82	3 x .05	1 3/4 x 1 x 3/4	2.66	1 3/4 x 1 x 13/16	2.71	1 3/4 x 1 x 13/16	3.81
2.0	2 x 2 x 1-1/8	2.97	2 x 2 x 1-3/16	3.06			3 x .1	1 3/4 x 1 x 13/16	2.75	1 3/4 x 1 x 15/16	2.78	2 x 1 3/4 x 7/8	3.09
							3 x .25	2 x 1 3/4 x 7/8	3.01	2 x 1 3/4 x 7/8	3.09	2 x 2 x 1-1/8	3.85
							3 x .5	2 x 2 x 1	3.71	2 x 2 x 1-3/16	3.81		

### TYPE P89M



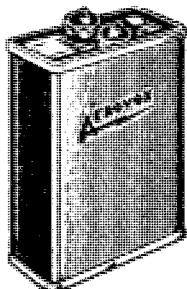
Immersion-proof, oil-impregnated, oil filled units in hermetically sealed metal tubes. Ideal for coupling and bypass functions in transmitters, high-voltage applications and for use in test equipment. Case is insulated, not connected to the capacitor section. Standard units are supplied with cardboard insulating sleeve and radial mounting bracket (Type P89M). All sizes shown are can sizes. For size over insulating sleeve add 1/4" to diameter and 3/8" to length. Standard tolerance +20%. Available in the following style variations:

- P89M —with cardboard insulating sleeve, radial mtg. bracket.
- P89MA —with cardboard insulating sleeve and tangential mounting bracket.
- P89MAP —with plastic insulating sleeve and tangential mtg. bracket.
- P89MAY —without insulating sleeve but with tangential mounting bracket.
- P89MP —with plastic insulating sleeve, radial mtg. bracket.
- P89MX —without mounting bracket but with cardboard insulating sleeve.
- P89MXP —without mounting bracket but with plastic insulating sleeve.
- P89MXY —without insulating sleeve or mtg. bracket.
- P89MY —without insulating sleeve but with radial mounting bracket.

Voltage	Capacity	Can Size	Net** Price	Voltage	Capacity	Can Size	Net** Price	Voltage	Capacity	Can Size	Net** Price
2000V	.001	3/4 x 1-5/8	1.93	2500V	.005	3/4 x 1-5/8	2.13	3000V	.03	1 x 2-1/4	2.21
2000V	.005	3/4 x 1-5/8	1.97	2500V	.01	3/4 x 1-3/4	2.15	3000V	.05	1 x 2-1/2	2.27
2000V	.01	3/4 x 1-5/8	1.99	2500V	.02	3/4 x 2	2.18	3000V	.1	1-3/8 x 2-3/4	2.42
2000V	.015	3/4 x 1-3/4	2.00	2500V	.03	3/4 x 2-1/4	2.21	4000V	.05	1-3/8 x 3-1/4	4.10
2000V	.02	3/4 x 1-7/8	2.02	2500V	.05	7/8 x 2-1/2	2.27	4000V	.1	1-3/8 x 4-3/4	4.40
2000V	.03	3/4 x 1-7/8	2.05	2500V	.1	1 x 3	2.42	6000V	.005	1 x 2-1/2	4.15
2000V	.04	3/4 x 2-1/4	2.08	3000V	.005	7/8 x 1-5/8	2.13	6000V	.01	1 x 3-1/4	4.19
2000V	.05	7/8 x 2-1/4	2.12	3000V	.01	7/8 x 1-3/4	2.15	6000V	.05	1-3/8 x 5	4.43
2000V	.1	1 x 2-1/2	2.25	3000V	.02	7/8 x 2	2.18				

\*\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499

### TYPE PX—Energy Storage Capacitors



For high-speed flash photography, flash signaling equipment, pulsing and other energy storage uses

VDC Peak	Nominal Cap.	Mfd.	Type No.
1500	20	22.5 Watt Seconds	PX10D1
2000	28	50.0 Watt Seconds	PX14D3
2500	24	75.0 Watt Seconds	PX14D2
3000	16		PX18D1
2500	30	100.0 Watt Seconds	PX15D1
4000	12.5		PX20D1

Size: Depth x Width x Height

PX10D1	2-1/2" x 3-3/4" x 4-5/8"
PX15D1	4-9/16" x 3-3/4" x 6-1/2"
ALL OTHERS	4-9/16" x 3-3/4" x 4-5/8"

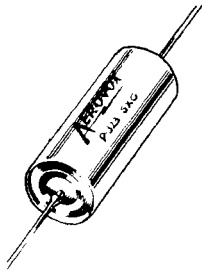
\*\*Request O.E.M. Prices in the following quantities: 10-24, 25-49, 50-99, 100-499



# CAPACITORS

## INDUSTRIAL SECTION — STANDARD TYPES (Continued)

### PAPER SUB-MINIATURES



Tubular, metal-cased capacitors, hermetically sealed with glass terminal end seals. Miniaturized, conventional, foil-paper construction. Especially developed to meet high temperature and minimum space requirements of present day electronic equipment. Designed for rugged long life operation, these units are preferred for most of those applications where reliability is a factor. Impregnated with Hyvol "S" a special, high-temperature-operating, stable, liquid impregnant for operation at elevated temperature. These units are capable of withstanding a voltage breakdown test of twice rated voltage between terminals or between terminals and case, for a one-minute period. Ambient temperature shall be plus 25°C. plus or minus 10° C. during this test. Power factor will be less than 1% when measured or referred to a frequency of 1000 cycles per second at 25°C. Type P323S and P323SX are rigily processed to assure operation over the temperature range of -65°C. to +125°C. The capacitor sections on types P323S utilize an inserted tab construction to obtain minimum size. Type P323SX utilizes extended foil construction for those applications where operation is required at very low AC voltages.

For equivalent types rated -65°C. to +100°C. in the same case size as shown order as P123S, SX, etc. and request prices. These subminiature units are widely used in many applications because of their high reliability and varied case styles. To order any of these style variations add the suffix letter shown to the basic designation listed.

Suffix	STYLE VARIATIONS		Suffix	STYLE VARIATIONS	
	Description	Can size change		Description	Can size change
† S-SX	As listed	As listed	GV	One end grounded with side vertical bracket	Deduct 1/16" from length
† G	One end grounded	Deduct 1/16" from length	V	Both ends insulated with side vertical bracket	As listed
† GP	Grounded with plastic insulating sleeve	Add 1/16" to diameter	GB	One end grounded with soldered tangential bracket	Deduct 1/16" from length
† P	Both ends insulated with plastic sleeve	Add 1/16" to diameter and length	B	Both ends insulated with soldered tangential bracket	As listed
GT	One end grounded with threaded neck mounting	Deduct 1/16" from length	GL	One end grounded with tab terminals	Deduct 1/16" from length
T	Both ends insulated with threaded neck mounting	As listed	L	Both ends insulated with tab terminals	As listed
GE	One end grounded with axial threaded stud	Deduct 1/16" from length	R	Both ends insulated with two radial threaded studs	As listed
GR	One end grounded with two radial threaded studs	Deduct 1/16" from length			

†These style variations are available from stock. All others listed above are available on special order.

Cap.	P323S	Price*	P323SX	Price*	Cap.	P323S	Price*	P323SX	Price*	Cap.	P323S	Price*	P323SX	Price*	Cap.	P323S	Price*	P323SX	Price*				
<b>100 VOLTS</b>					<b>200 VOLTS (Cont.)</b>					<b>400 VOLTS (Cont.)</b>					<b>600 VOLTS (Cont.)</b>								
.001	.175 x 3/4	1.47	.175 x 3/4	1.50	.068	.312 x 7/8	1.58	.400 x 7/8	1.70	.01	.235 x 3/4	1.55	.312 x 7/8	1.70	.1	.562 x 1-1/8	1.90	.562 x 1-3/8	1.98				
.0015	.175 x 3/4	1.47	.175 x 3/4	1.50	.082	.400 x 7/8	1.62	.400 x 1-1/8	1.72	.012	.312 x 7/8	1.58	.312 x 7/8	1.70	.12	.562 x 1-3/8	1.98	.562 x 1-5/8	2.10				
.0022	.175 x 3/4	1.49	.175 x 3/4	1.50	.1	.400 x 7/8	1.62	.400 x 1-1/8	1.72	.015	.312 x 7/8	1.58	.312 x 7/8	1.70	.15	.562 x 1-3/8	1.98	.562 x 1-5/8	2.10				
.0033	.175 x 3/4	1.49	.175 x 3/4	1.50	.12	.400 x 1-1/8	1.65	.400 x 1-3/8	1.78	.018	.312 x 7/8	1.60	.400 x 7/8	1.75	.18	.562 x 1-7/8	2.14	.670 x 1-5/8	2.38				
.0047	.175 x 3/4	1.49	.175 x 3/4	1.50	.15	.400 x 1-1/8	1.65	.400 x 1-3/8	1.78	.022	.312 x 7/8	1.60	.400 x 7/8	1.75	.22	.562 x 1-7/8	2.14	.670 x 1-5/8	2.38				
.0068	.175 x 3/4	1.49	.195 x 3/4	1.50	.18	.400 x 1-3/8	1.80	.562 x 1-1/8	1.90	.027	.312 x 7/8	1.60	.400 x 7/8	1.75	.27	.670 x 1-7/8	2.38	.750 x 2-1/8	2.64				
.01	.175 x 3/4	1.50	.235 x 3/4	1.50	.22	.400 x 1-3/8	1.80	.562 x 1-1/8	1.90	.033	.312 x 7/8	1.60	.400 x 7/8	1.75	.33	.670 x 1-7/8	2.38	.750 x 2-1/8	2.64				
.015	.175 x 3/4	1.50	.235 x 3/4	1.50	.27	.562 x 1-1/8	1.94	.562 x 1-3/8	2.02	.039	.400 x 7/8	1.67	.400 x 1-1/8	1.78	.39	.750 x 2-1/8	2.67	.750 x 2-3/8	2.7				
.022	.195 x 3/4	1.50	.312 x 7/8	1.55	.33	.562 x 1-1/8	1.94	.562 x 1-3/8	2.02	.047	.400 x 7/8	1.67	.400 x 1-1/8	1.78	.47	.750 x 2-1/8	2.67	.750 x 2-3/8	2.7				
.027	.235 x 3/4	1.50	.312 x 7/8	1.58	.39	.562 x 1-3/8	2.06	.562 x 1-5/8	2.10	.056	.400 x 1-1/8	1.70	.400 x 1-3/8	1.78	.56	1.000 x 1-7/8	3.33	1.000 x 2-1/8	3.6				
.033	.235 x 3/4	1.50	.312 x 7/8	1.58	.47	.562 x 1-3/8	2.06	.562 x 1-5/8	2.10	.068	.400 x 1-1/8	1.70	.400 x 1-3/8	1.78	.68	1.000 x 1-7/8	3.33	1.000 x 2-1/8	3.6				
.047	.312 x 7/8	1.50	.312 x 7/8	1.62	.56	.562 x 1-7/8	2.18	.670 x 1-5/8	2.38	.082	.400 x 1-3/8	1.75	.562 x 1-1/8	1.90	.82	1.000 x 2-3/8	3.45	1.000 x 2-5/8	3.7				
.068	.312 x 7/8	1.55	.400 x 7/8	1.62	.68	.562 x 1-7/8	2.18	.670 x 1-5/8	2.38	.1	.400 x 1-3/8	1.75	.562 x 1-1/8	1.90	1.00	1.000 x 2-3/8	3.45	1.000 x 2-5/8	3.7				
.082	.312 x 7/8	1.58	.400 x 7/8	1.67	.82	.670 x 1-7/8	2.61	.750 x 2-1/8	2.67	.12	.562 x 1-1/8	1.90	.562 x 1-3/8	1.98									
.1	.312 x 7/8	1.58	.400 x 7/8	1.67	1.00	.670 x 1-7/8	2.61	.750 x 2-1/8	2.67	.15	.562 x 1-1/8	1.90	.562 x 1-3/8	1.98									
.12	.400 x 7/8	1.67	.400 x 1-1/8	1.67						.18	.562 x 1-3/8	2.02	.562 x 1-5/8	2.10									
.15	.400 x 7/8	1.67	.400 x 1-1/8	1.67						.22	.562 x 1-3/8	2.02	.562 x 1-5/8	2.10									
.18	.400 x 1-1/8	1.67	.400 x 1-3/8	1.78						.27	.562 x 1-7/8	2.06	.670 x 1-5/8	2.30	.001	.400 x 7/8	1.73	.400 x 7/8	1.8				
.22	.400 x 1-1/8	1.67	.400 x 1-3/8	1.78						.33	.562 x 1-7/8	2.06	.670 x 1-5/8	2.30	.0012	.400 x 7/8	1.73	.400 x 7/8	1.8				
.27	.400 x 1-3/8	1.90	.562 x 1-1/8	1.98	.0015	.235 x 3/4	1.47	.235 x 3/4	1.55	.39	.670 x 1-7/8	2.46	.750 x 2-1/8	2.66	.0015	.400 x 7/8	1.73	.400 x 7/8	1.8				
.33	.400 x 1-3/8	1.90	.562 x 1-1/8	1.98	.0022	.235 x 3/4	1.49	.235 x 3/4	1.55	.47	.670 x 1-7/8	2.46	.750 x 2-1/8	2.66	.0022	.400 x 7/8	1.73	.400 x 7/8	1.8				
.39	.562 x 1-1/8	2.02	.562 x 1-3/8	2.06	.0033	.235 x 3/4	1.49	.235 x 3/4	1.55	.56	.750 x 2-1/8	3.27	.750 x 2-3/8	3.51	.0027	.400 x 7/8	1.78	.400 x 7/8	1.8				
.47	.562 x 1-1/8	2.02	.562 x 1-3/8	2.06	.0047	.235 x 3/4	1.49	.235 x 3/4	1.55	.68	.750 x 2-1/8	3.27	.750 x 2-3/8	3.51	.0033	.400 x 1-3/8	1.78	.400 x 7/8	1.8				
.56	.562 x 1-3/8	2.10	.562 x 1-5/8	2.21	.0068	.235 x 3/4	1.50	.312 x 7/8	1.62	.82	1.000 x 1-7/8	3.38	1.000 x 2-3/8	3.64	.0039	.400 x 7/8	1.78	.400 x 7/8	1.8				
.68	.562 x 1-3/8	2.10	.562 x 1-5/8	2.21	.01	.235 x 3/4	1.50	.312 x 7/8	1.67	1.00	1.000 x 1-7/8	3.38	1.000 x 2-3/8	3.64	.0047	.400 x 7/8	1.78	.400 x 7/8	1.8				
.82	.562 x 1-7/8	2.14	.670 x 1-5/8	2.38	.015	.235 x 3/4	1.52	.312 x 7/8	1.68						.0056	.400 x 7/8	1.78	.400 x 7/8	1.8				
1.00	.562 x 1-7/8	2.14	.670 x 1-5/8	2.38	.022	.312 x 7/8	1.58	.312 x 7/8	1.70						.0068	.400 x 7/8	1.78	.400 x 7/8	1.8				
					.033	.312 x 7/8	1.58	.400 x 7/8	1.72						.0082	.400 x 7/8	1.82	.400 x 7/8	1.8				
					.047	.312 x 7/8	1.62	.400 x 7/8	1.72														
					.068	.400 x 7/8	1.67	.400 x 1-1/8	1.72														
					.1	.400 x 1-1/8	1.67	.400 x 1-3/8	1.75	.001	.235 x 3/4	1.50	.235 x 3/4	1.58	.01	.400 x 7/8	1.82	.400 x 7/8	1.8				
					.15	.400 x 1-3/8	1.75	.562 x 1-1/8	1.90	.0012	.235 x 3/4	1.50	.235 x 3/4	1.58	.012	.400 x 7/8	1.86	.400 x 1-1/8	2				
					.22	.562 x 1-1/8	1.86	.562 x 1-3/8	2.02	.0015	.235 x 3/4	1.50	.235 x 3/4	1.58	.015	.400 x 7/8	1.86	.400 x 1-1/8	2				
					.33	.562 x 1-3/8	2.02	.562 x 1-5/8	2.14	.0018	.235 x 3/4	1.50	.235 x 3/4	1.58	.018	.400 x 1-1/8	1.86	.400 x 1-3/8	2				
					.47	.562 x 1-7/8	2.46	.750 x 1-5/8	2.56	.0022	.235 x 3/4	1.55	.312 x 7/8	1.62	.022	.400 x 1-1/8	1.86	.400 x 1-3/8	2				
					.68	.670 x 1-7/8	2.61	.750 x 2-1/8	2.66	.0027	.235 x 3/4	1.55	.312 x 7/8	1.62	.027	.400 x 1-3/8	1.94	.562 x 1-1/8	2				
					1.00	.750 x 2-1/8	3.37	1.000 x 2-1/8	3.39	.0033	.235 x 3/4	1.55	.312 x 7/8	1.62	.033	.400 x 1-3/8	1.94	.562 x 1-1/8	2				
										.0039	.235 x 3/4	1.55	.312 x 7/8	1.66	.039	.562 x 1-1/8	1.95	.562 x 1-3/8	2				
										.0047	.235 x 3/4	1.55	.312 x 7/8	1.68	.047	.562 x 1-1/8	1.95	.562 x 1-3/8	2				
										.0056	.235 x 3/4	1.55	.312 x 7/8	1.70	.056	.562 x 1-3/8	2.05	.562 x 1-5/8	2				
										.0068	.235 x 3/4	1.55	.312 x 7/8	1.70	.068	.562 x 1-3/8	2.05	.562 x 1-5/8	2				
										.0082	.312 x 7/8	1.58	.312 x 7/8	1.72	.082	.562 x 1-5/8	2.19	.670 x 1-5/8	2				
										.01	.312 x 7/8	1.58	.312 x 7/8	1.72	.1	.562 x 1-5/8	2.19	.670 x 1-5/8	2				
										.012	.312 x 7/8	1.62	.400 x 7/8	1.75	.12	.670 x 1-5/8	2.28	.670 x 1-7/8	2				
										.015	.312 x 7/8	1.62	.400 x 7/8	1.75	.15	.670 x 1-5/8	2.28	.670 x 1-7/8	2				
										.018	.312 x 7/8	1.62	.400 x 7/8	1.76	.18	.750 x 2-1/8	2.47	.750 x 2-1/8	2				
										.022	.312 x 7/8	1.62	.400 x 7/8	1.78	.22	.750 x 2-1/8	2.47	.750 x 2-1/8	2				
										.027	.400 x 7/8	1.68	.400 x 1-1/8	1.76	.27	.750 x 2-5/8	2.74	1.000 x 2-1/8	3				
										.033	.400 x 7/8	1.68	.400 x 1-1/8	1.76	.33	.750 x 2-5/8	2.74	1.000 x 2-1/8	3				
										.039	.400 x 1-1/8	1.70	.400 x 1-3/8	1.82	.39	1.000 x 2-1/8	3.08	1.000 x 2-3/8	3				
										.047	.400 x 1-1/8	1.70	.400 x 1-3/8	1.82	.47	1.000 x 2-1/8	3.08	1.000 x 2-3/8	3				
										.056	.400 x 1-3/8	1.78	.562 x 1-1/8	1.94									
										.068	.400 x 1-3/8	1.78	.562 x 1-1/8	1.94									
										.082	.562 x 1-1/8	1.90	.562 x 1-3/8	1.98									

\*Request O.E.M. Prices in the following quantities: 10-24, 25-49, 50-99, 100-499



## CAPACITORS

**INDUSTRIAL SECTION — STANDARD TYPES (Continued)**  
**METALLIZED-PAPER CAPACITORS**
**TYPE P8292ZN PLASTIC-CASED,  
METALLIZED-PAPER TUBULARS**


Featuring an exclusive "polycap" plastic-case construction, these capacitors offer outstanding resistance to humidity and improved insulation resistance. The high temperature impregnant permits operation over the temperature range of  $-30^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  at working voltage. Distinctive black cases are completely free of any wax coating to facilitate handling problems in automatic insertion and assembly equipment. Standard tolerance on these units is  $\pm 20\%$ . Available in closer tolerances upon request at an additional charge. Mechanical Tolerances— $\pm \frac{1}{16}$ " on length and diameter.

For full technical information request Bulletin NPJ-113.

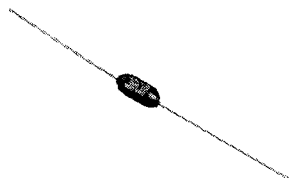
200 VDCW			
Cap. Mfd.	D x L	Catalog Number	Net* Price
.01	1/4 x 19/32	P8292ZN6	\$.44
.02	1/4 x 21/32	P8292ZN7	.44
.03	5/16 x 23/32	P8292ZN8	.45
.05	5/16 x 23/32	P8292ZN9	.45
.1	3/8 x 23/32	P8292ZN10	.47
.25	1/2 x 23/32	P8292ZN11	.68
.5	7/16 x 1-5/32	P8292ZN12	.80
1.0	9/16 x 1-5/32	P8292ZN13	1.07
2.0	5/8 x 1-21/32	P8292ZN14	1.46
400 VDCW			
Cap. Mfd.	D x L	Catalog Number	Net* Price
.01	5/16 x 23/32	P8292ZN15	.44
.02	3/8 x 23/32	P8292ZN16	.45
.03	3/8 x 23/32	P8292ZN17	.45
.05	7/16 x 23/32	P8292ZN18	.47
.1	7/16 x 1-5/32	P8292ZN19	.51
.25	9/16 x 1-5/32	P8292ZN20	.74
.5	5/8 x 1-15/32	P8292ZN21	.95
1.0	11/16 x 1-31/32	P8292ZN22	1.32
2.0	7/8 x 2-3/8	P8292ZN23	1.86
600 VDCW			
Cap. Mfd.	D x L	Catalog Number	Net* Price
.01	3/8 x 23/32	P8292ZN24	.45
.02	3/8 x 23/32	P8292ZN25	.47
.03	7/16 x 23/32	P8292ZN26	.50
.05	1/2 x 23/32	P8292ZN27	.53
.1	7/16 x 1-5/32	P8292ZN28	.59
.25	5/8 x 1-5/32	P8292ZN29	.92
.5	11/16 x 1-19/32	P8292ZN30	1.15
1.0	13/16 x 2	P8292ZN31	1.43
2.0	1 x 2-3/8	P8292ZN32	2.03

**TYPE P83Z  
Microminiatures**


Ultra-small, new metallized paper dielectric capacitor particularly applicable in the electronic field to replace the low capacity paper units now being used. Hyvol K impregnated in humidity resistant molded thermo-plastic cases. Standard Tolerance  $\pm 25\%$ .

Cap. Mfd.	Voltage	Case Size (Inches) Dia. x Lgth.	Net* Price
.004	200 VDC	3/16 x 7/16	\$.21
.005	200 VDC	3/16 x 7/16	.21
.01	200 VDC	3/16 x 7/16	.21
.02	200 VDC	1/4 x 9/16	.27
.04	200 VDC	1/4 x 9/16	.27
.002	400 VDC	3/16 x 7/16	.21
.003	400 VDC	1/4 x 9/16	.27
.008	400 VDC	1/4 x 9/16	.27
.01	400 VDC	1/4 x 9/16	.27
.0005	600 VDC	3/16 x 7/16	.21
.0008	600 VDC	3/16 x 7/16	.21
.001	600 VDC	3/16 x 7/16	.21
.002	600 VDC	1/4 x 9/16	.27
.0022	600 VDC	1/4 x 9/16	.27
.0047	600 VDC	1/4 x 9/16	.27
.005	600 VDC	1/4 x 9/16	.27

Operating temperature range  $-15^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  without derating.

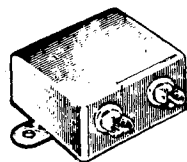
**TYPE P95ZN**
**Micro-Miniature  
Dipped Metallized  
Paper Capacitors**


Aerovox Type P95ZN capacitors employ an entirely new internal construction concept and utilize a dipped resinous housing to produce remarkably small sizes. The dielectric is a distinct departure from conventional foil paper and previous metallized paper construction. This new and improved metallized dielectric provides both the dielectric and the electrodes. Since capacitance is predetermined mechanically in the initial processing, the human element is eliminated for capacitance control. In addition, the P95ZN offers unusually strong lead connections as the result of an exclusive Aerovox manufacturing process. Leads are hot tin-coated phosphor bronze.

These Aerovox micro-miniature capacitors are especially suited for applications where low capacity units are now being used.

Cat. No.	Capacity	Net Price*	Size	Cat. No.	Capacity	Net Price*	Size
200 VDCW				600 VDCW			
P95ZN1	.004	.40	.217 x .473	P95ZN12	.00005	.40	.217 x .473
P95ZN2	.005	.40	.217 x .473	P95ZN13	.0001	.40	.217 x .473
P95ZN3	.01	.40	.217 x .473	P95ZN14	.0002	.40	.217 x .473
P95ZN4	.02	.50	.217 x .610	P95ZN15	.00025	.40	.217 x .473
P95ZN5	.03	.50	.256 x .610	P95ZN16	.0003	.40	.217 x .473
P95ZN6	.04	.50	.256 x .610	P95ZN17	.0005	.40	.217 x .473
P95ZN7	.05	.50	.256 x .610	P95ZN18	.001	.40	.217 x .473
400 VDCW				P95ZN19	.002	.50	.256 x .610
P95ZN8	.002	.40	.217 x .473	P95ZN20	.003	.50	.256 x .610
P95ZN9	.003	.40	.217 x .473	P95ZN21	.004	.50	.256 x .610
P95ZN10	.005	.50	.217 x .610	P95ZN22	.005	.50	.256 x .610
P95ZN11	.01	.50	.256 x .610				

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499.

**TYPE P30ZN High Temperature  
Bathtub Case**


AEROVOX type P30ZN Aerolene impregnated metallized-paper capacitors housed in "bathtub" metal cases hermetically sealed. Operating temperature range  $-65^{\circ}\text{C}$ . to  $+125^{\circ}\text{C}$ . at full rating. Standard Tolerance  $\pm 20\%$ .

Capacity	150 V	Net* Price	200 V	Net* Price	400 V	Net* Price	600 V	Net* Price
.1			1-3/4 x 1 x 3/4	2.15	1-3/4 x 1 x 3/4	2.30	1-3/4 x 1 x 3/4	2.37
.25			1-3/4 x 1 x 3/4	2.39	1-3/4 x 1 x 3/4	2.42	1-3/4 x 1 x 3/4	2.46
.5			1-3/4 x 1 x 3/4	2.44	1-3/4 x 1 x 3/4	2.58	1-3/4 x 1 x 3/4	2.60
1.0			1-3/4 x 1 x 3/4	2.86	1-3/4 x 1 x 7/8	2.96	1-3/4 x 1 1/4 x 7/8	3.26
2.0			1-3/4 x 1 x 3/4	3.53	2 x 1-3/4 x 13/16	3.74	2 x 2 x 7/8	3.85
3.0	1-3/4 x 1 x 3/4	3.29			2 x 1-3/4 x 15/16	4.21	2 x 2 x 1-1/8	5.45
4.0	1-3/4 x 1 x 3/4	3.95			2 x 2 x 1	4.97	2 x 2 x 1-1/4	6.53
5.0	1-3/4 x 1 x 3/4	4.39			2 x 2 x 1-1/4	5.99		
6.0	1-3/4 x 1 1/4 x 7/8	4.57						
8.0	2 x 1-3/4 x 3/4	5.29						
10.0	2 x 1-3/4 x 3/4	6.09						
12.0	2 x 2 x 7/8	6.82						
15.0	2 x 2 x 1	8.25						

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499



# CAPACITORS

## INDUSTRIAL SECTION—STANDARD TYPES (Continued) METALLIZED-PAPER

Metallized paper tubulars hermetically sealed in metal tubes with glass end seals soldered for positive moisture seal. Designed to meet critical operating temperatures and the need for increased reliability in the electronic field. The P123ZN—Aerolene impregnated—is manufactured to meet operating temperature range of -55C to +100C at full voltage rating and +125C with voltage derating to 75%. P123ZNG is case grounded. P123ZN is case insulated. Standard tolerance .01 mfd. and lower  $\pm 25\%$ , .012 mfd. and up  $\pm 20\%$ . Also available in  $\pm 10\%$  and  $\pm 5\%$  on special order. Units rated at 50 Volts are stocked at  $\pm 10\%$ . These units are equivalent to characteristic M of MIL-C-18312. Suffix P denotes plastic tube; B denotes mtg. bracket (not available with plastic tube); T denotes threaded neck terminal.



### Types P123ZN, P123ZNG Metal-Cased Capacitors

#### MIL CONVERSION CHART

Type		Voltage	Capacity		Tolerance
CH04A1M	P123ZN	G 50V	First two figures are significant figures		K $\pm 10\%$
CH04A3M	P123ZNG	C 200V	—third figure represents number of zeros to follow		M $\pm 20\%$
CH05A1M	P123ZNP	E 400V			
CH05A3M	P123ZNGP	F 600V			

EXAMPLE			
CH04A1M (P123ZN)	E (400V)	223 (.022)	K ( $\pm 10\%$ )

Capacity	P123ZN	Net Price*	P123ZNP	Net Price*	P123ZNG	Net Price*	P123ZNGP	Net Price*	Capacity	P123ZN	Net Price*	P123ZNP	Net Price*	P123ZNG	Net Price*	P123ZNGP	Net Price*
<b>50 Volts</b>																	
.047	.195 x 13/16	2.11	.257 x 7/8	2.19	.195 x 3/4	1.31	.257 x 13/16	1.39	.012	.235 x 13/16	1.42	.297 x 7/8	1.45	.235 x 3/4	1.07	.297 x 13/16	1.10
.068	.195 x 13/16	2.13	.257 x 7/8	2.21	.195 x 3/4	1.33	.257 x 13/16	1.41	.015	.235 x 13/16	1.42	.297 x 7/8	1.45	.235 x 3/4	1.07	.297 x 13/16	1.10
.1	.195 x 15/16	2.15	.257 x 1	2.23	.195 x 7/8	1.35	.257 x 15/16	1.43	.018	.235 x 13/16	1.42	.297 x 7/8	1.45	.235 x 3/4	1.07	.297 x 13/16	1.10
.15	.235 x 15/16	2.18	.297 x 1	2.26	.235 x 7/8	1.38	.297 x 15/16	1.46	.02	.235 x 13/16	1.42	.297 x 7/8	1.45	.235 x 3/4	1.07	.297 x 13/16	1.10
.22	.312 x 13/16	2.22	.374 x 7/8	2.30	.312 x 3/4	1.42	.374 x 13/16	1.50	.022	.235 x 13/16	1.43	.297 x 7/8	1.46	.235 x 3/4	1.08	.297 x 13/16	1.11
.33	.312 x 1-1/8	2.27	.374 x 1-3/16	2.35	.312 x 1-1/16	1.47	.374 x 1-1/8	1.55	.027	.312 x 13/16	1.43	.374 x 7/8	1.46	.312 x 3/4	1.08	.374 x 13/16	1.11
.47	.312 x 1-3/16	2.34	.374 x 1-1/4	2.42	.312 x 1-1/8	1.54	.374 x 1-3/16	1.62	.033	.312 x 13/16	1.43	.374 x 7/8	1.46	.312 x 3/4	1.08	.374 x 13/16	1.11
.68	.400 x 1-1/8	2.54	.462 x 1-3/16	2.62	.400 x 1-1/16	1.73	.462 x 1-1/8	1.81	.039	.312 x 1-1/8	1.43	.374 x 1-3/16	1.46	.312 x 1-1/16	1.08	.374 x 1-1/8	1.11
1.0	.400 x 1-5/16	2.75	.462 x 1-3/8	2.83	.400 x 1-1/4	1.95	.462 x 1-5/16	2.03	.04	.312 x 1-1/8	1.43	.374 x 1-3/16	1.46	.312 x 1-1/16	1.08	.374 x 1-1/8	1.11
1.5	.500 x 1-1/8	3.08	.562 x 1-3/16	3.16	.500 x 1-1/16	2.28	.562 x 1-1/8	2.36	.047	.312 x 1-1/8	1.43	.374 x 1-3/16	1.46	.312 x 1-1/16	1.08	.374 x 1-1/8	1.11
2.0	.562 x 1-5/16	3.41	.624 x 1-3/8	3.49	.562 x 1-1/4	2.61	.624 x 1-5/16	2.69	.05	.312 x 1-1/8	1.43	.374 x 1-3/16	1.46	.312 x 1-1/16	1.08	.374 x 1-1/8	1.11
3.0	.562 x 1-7/16	3.86	.624 x 1-1/2	3.94	.562 x 1-3/8	3.06	.624 x 1-7/16	3.14	.056	.312 x 1-1/8	1.50	.374 x 1-3/16	1.53	.312 x 1-1/16	1.15	.374 x 1-1/8	1.18
4.0	.670 x 1-7/16	4.31	.732 x 1-1/2	4.39	.670 x 1-3/8	3.51	.732 x 1-7/16	3.59	.068	.312 x 1-1/8	1.53	.374 x 1-3/16	1.56	.312 x 1-1/16	1.18	.374 x 1-1/8	1.21
<b>200 Volts</b>																	
.0005	.175 x 1/2	1.36	.237 x 9/16	1.39	.175 x 7/16	1.01	.237 x 1/2	1.04	.1	.400 x 1-1/8	1.54	.462 x 1-3/16	1.57	.400 x 1-1/16	1.19	.462 x 1-1/8	1.22
.001	.175 x 1/2	1.36	.237 x 9/16	1.39	.175 x 7/16	1.01	.237 x 1/2	1.04	.12	.500 x 1-1/8	1.60	.562 x 1-3/16	1.64	.500 x 1-1/16	1.25	.562 x 1-1/8	1.28
.002	.175 x 1/2	1.36	.237 x 9/16	1.39	.175 x 7/16	1.01	.237 x 1/2	1.04	.15	.500 x 1-1/8	1.63	.562 x 1-3/16	1.67	.500 x 1-1/16	1.28	.562 x 1-1/8	1.31
.003	.175 x 1/2	1.36	.237 x 9/16	1.39	.175 x 7/16	1.01	.237 x 1/2	1.04	.18	.500 x 1-1/8	1.64	.562 x 1-3/16	1.68	.500 x 1-1/16	1.29	.562 x 1-1/8	1.32
.005	.175 x 1/2	1.36	.237 x 9/16	1.39	.175 x 7/16	1.01	.237 x 1/2	1.04	.2	.500 x 1-1/8	1.64	.562 x 1-3/16	1.68	.500 x 1-1/16	1.29	.562 x 1-1/8	1.32
.01	.175 x 1/2	1.36	.237 x 9/16	1.39	.175 x 7/16	1.01	.237 x 1/2	1.04	.22	.500 x 1-1/8	1.64	.562 x 1-3/16	1.68	.500 x 1-1/16	1.29	.562 x 1-1/8	1.32
.012	.195 x 5/8	1.36	.257 x 11/16	1.39	.195 x 9/16	1.01	.257 x 5/8	1.04	.25	.500 x 1-1/8	1.81	.562 x 1-3/16	1.85	.500 x 1-1/16	1.46	.562 x 1-1/8	1.49
.015	.195 x 5/8	1.36	.257 x 11/16	1.39	.195 x 9/16	1.01	.257 x 5/8	1.04	.27	.562 x 1-1/8	1.81	.624 x 1-3/16	1.85	.562 x 1-1/16	1.46	.624 x 1-1/8	1.49
.018	.195 x 5/8	1.36	.257 x 11/16	1.39	.195 x 9/16	1.01	.257 x 5/8	1.04	.33	.562 x 1-3/8	1.81	.624 x 1-7/16	1.85	.562 x 1-5/16	1.46	.624 x 1-3/8	1.49
.02	.195 x 5/8	1.36	.257 x 11/16	1.39	.195 x 9/16	1.01	.257 x 5/8	1.04	.39	.562 x 1-5/8	1.90	.624 x 1-11/16	1.94	.562 x 1-9/16	1.55	.624 x 1-5/8	1.58
.022	.195 x 5/8	1.36	.257 x 11/16	1.39	.195 x 9/16	1.01	.257 x 5/8	1.04	.47	.562 x 1-5/8	1.94	.624 x 1-11/16	1.98	.562 x 1-9/16	1.59	.624 x 1-5/8	1.62
.027	.235 x 5/8	1.37	.297 x 11/16	1.40	.235 x 9/16	1.02	.297 x 5/8	1.05	.5	.562 x 1-5/8	2.14	.624 x 1-11/16	2.18	.562 x 1-9/16	1.79	.624 x 1-5/8	1.82
.033	.235 x 5/8	1.38	.297 x 11/16	1.41	.235 x 9/16	1.03	.297 x 5/8	1.06	.56	.670 x 1-5/8	2.14	.732 x 1-11/16	2.18	.670 x 1-9/16	1.82	.732 x 1-5/8	1.85
.039	.235 x 11/16	1.40	.297 x 3/4	1.43	.235 x 5/8	1.05	.297 x 11/16	1.08	.68	.670 x 1-5/8	2.17	.732 x 1-11/16	2.21	.670 x 1-9/16	1.82	.732 x 1-5/8	1.85
.04	.235 x 3/4	1.42	.297 x 13/16	1.45	.235 x 5/8	1.07	.297 x 11/16	1.10	.82	.670 x 1-7/8	2.30	.732 x 1-15/16	2.34	.670 x 1-9/16	1.95	.732 x 1-7/8	1.98
.047	.235 x 3/4	1.42	.297 x 13/16	1.45	.235 x 5/8	1.07	.297 x 11/16	1.10	1.0	.670 x 2-1/8	2.31	.732 x 2-3/16	2.35	.670 x 2-1/16	1.96	.732 x 2-1/8	2.0
.05	.235 x 3/4	1.42	.297 x 13/16	1.45	.235 x 5/8	1.07	.297 x 11/16	1.10	1.5	.750 x 2-3/8	3.00	.812 x 2-7/16	3.06	.750 x 2-5/16	2.65	.812 x 2-3/8	2.7
.056	.235 x 13/16	1.43	.297 x 7/8	1.46	.235 x 3/4	1.08	.297 x 13/16	1.11	2.0	1.000 x 1-7/8	3.51	1.062 x 1-15/16	3.57	1.000 x 1-13/16	3.16	1.062 x 1-7/8	3.2
.068	.312 x 13/16	1.45	.374 x 7/8	1.48	.312 x 3/4	1.10	.374 x 13/16	1.13	<b>600 Volts</b>								
.082	.312 x 13/16	1.46	.374 x 7/8	1.49	.312 x 3/4	1.11	.374 x 13/16	1.14	.0005	.235 x 1/2	1.40	.297 x 9/16	1.43	.235 x 7/16	1.05	.297 x 1/2	1.08
.1	.312 x 13/16	1.48	.374 x 7/8	1.51	.312 x 3/4	1.13	.374 x 13/16	1.16	.001	.235 x 5/8	1.40	.297 x 11/16	1.43	.235 x 9/16	1.05	.297 x 5/8	1.08
.12	.312 x 1-1/8	1.49	.374 x 3/16	1.52	.312 x 1-1/16	1.14	.374 x 1-1/8	1.17	.002	.235 x 5/8	1.40	.297 x 11/16	1.43	.235 x 9/16	1.05	.297 x 5/8	1.08
.15	.312 x 1-1/8	1.49	.374 x 1-3/16	1.52	.312 x 1-1/16	1.14	.374 x 1-1/8	1.17	.003	.235 x 5/8	1.43	.297 x 11/16	1.46	.235 x 9/16	1.08	.297 x 5/8	1.11
.18	.312 x 1-1/8	1.50	.374 x 1-3/16	1.53	.312 x 1-1/16	1.15	.374 x 1-1/8	1.18	.005	.235 x 5/8	1.45	.297 x 11/16	1.48	.235 x 9/16	1.10	.297 x 5/8	1.13
.2	.312 x 1-1/8	1.50	.374 x 1-3/16	1.53	.312 x 1-1/16	1.15	.374 x 1-1/8	1.18	.001	.235 x 13/16	1.45	.297 x 7/8	1.48	.235 x 3/4	1.10	.297 x 13/16	1.13
.22	.312 x 1-1/8	1.50	.374 x 1-3/16	1.53	.312 x 1-1/16	1.15	.374 x 1-1/8	1.18	.012	.312 x 13/16	1.46	.374 x 7/8	1.49	.312 x 3/4	1.11	.374 x 13/16	1.14
.25	.312 x 1-1/8	1.62	.374 x 1-3/16	1.65	.312 x 1-1/16	1.27	.374 x 1-1/8	1.30	.015	.312 x 13/16	1.46	.374 x 7/8	1.49	.312 x 3/4	1.11	.374 x 13/16	1.14
.27	.400 x 1-1/8	1.62	.462 x 1-3/16	1.65	.400 x 1-1/16	1.27	.462 x 1-1/8	1.30	.018	.312 x 13/16	1.46	.374 x 7/8	1.49	.312 x 3/4	1.11	.374 x 13/16	1.14
.33	.400 x 1-1/8	1.62	.462 x 1-3/16	1.65	.400 x 1-1/16	1.27	.462 x 1-1/8	1.30	.02	.312 x 13/16	1.46	.374 x 7/8	1.49	.312 x 3/4	1.11	.374 x 13/16	1.14
.39	.400 x 1-1/8	1.70	.462 x 1-3/16	1.73	.400 x 1-1/16	1.35	.462 x 1-1/8	1.38	.022	.312 x 13/16	1.48	.374 x 7/8	1.51	.312 x 3/4	1.13	.374 x 13/16	1.16
.47	.400 x 1-1/8	1.71	.462 x 1-3/16	1.74	.400 x 1-1/16	1.36	.462 x 1-1/8	1.39	.027	.400 x 13/16	1.48	.462 x 7/8	1.51	.400 x 3/4	1.13	.462 x 13/16	1.16
.5	.400 x 1-1/8	1.73	.462 x 1-3/16	1.76	.400 x 1-1/16	1.38	.462 x 1-1/8	1.41	.033	.400 x 13/16	1.49	.462 x 7/8	1.52	.400 x 3/4	1.14	.462 x 13/16	1.17
.56	.500 x 1-1/8	1.73	.562 x 1-3/16	1.77	.500 x 1-1/16	1.38	.562 x 1-1/8	1.41	.039	.400 x 13/16	1.49	.462 x 7/8	1.52	.400 x 3/4	1.14	.462 x 13/16	1.17
.68	.500 x 1-1/8	1.78	.562 x 1-3/16	1.82	.500 x 1-1/16	1.43	.562 x 1-1/8	1.47	.04	.400 x 13/16	1.50	.462 x 7/8	1.53	.400 x 3/4	1.15	.462 x 13/16	1.18
.82	.562 x 1-1/8	1.90	.624 x 1-3/16	1.94	.562 x 1-1/16	1.55	.624 x 1-1/8	1.59	.047	.400 x 13/16	1.50	.462 x 7/8	1.53	.400 x 3/4	1.15	.462 x 13/16	1.18
1.0	.562 x 1-1/8	1.92	.624 x 1-3/16	1.96	.562 x 1-1/1												



CAPACITORS

INDUSTRIAL SECTION — STANDARD TYPES (cont.)  
METALLIZED PAPER

TYPE P323ZN

125°C, No Derating

Metal-Cased, Metallized-Paper Tubulars Similar to CH04 and CH05 —

MIL-C-18312

Characteristic N

Refer to previous page for MIL conversion chart.

Miniature, hermetically-sealed in metal cases with glass terminal end-seal, Type P323ZN units are designed for operation at temperatures from -55°C to +125°C WITHOUT



DERATING for voltage. They will meet all the requirements for minimum size, light weight and high temperature in present day electronic equipments. Designed for long life, rugged duty and high reliability operation in critical military and premium priced commercial electronic assemblies. Standard tolerance is ±20%. Closer tolerance available on special order.

200 VDCW

Capacity Mfd.	P323ZN Case Floating		P323ZNP Case Floating Plastic Insulating Sleeve		P323ZNG Case Grounded		P323ZNGP Case Grounded Plastic Insulating Sleeve	
	Size	Net Price*	Size	Net Price*	Size	Net Price*	Size	Net Price*
.01	.175 x 1/2	1.51	.237 x 5/8	1.59	.175 x 7/16	1.16	.237 x 1/2	1.24
.012	.195 x 5/8	1.51	.257 x 11/16	1.59	.195 x 9/16	1.16	.257 x 5/8	1.24
.015	.195 x 5/8	1.51	.257 x 11/16	1.59	.195 x 9/16	1.16	.257 x 5/8	1.24
.018	.235 x 5/8	1.51	.297 x 11/16	1.59	.235 x 9/16	1.16	.297 x 5/8	1.24
.022	.235 x 5/8	1.51	.297 x 11/16	1.59	.235 x 9/16	1.16	.297 x 5/8	1.24
.027	.235 x 5/8	1.51	.297 x 11/16	1.59	.235 x 9/16	1.16	.297 x 5/8	1.24
.033	.235 x 3/4	1.53	.297 x 13/16	1.61	.235 x 11/16	1.18	.297 x 3/4	1.26
.039	.235 x 13/16	1.53	.297 x 7/8	1.61	.235 x 3/4	1.18	.297 x 13/16	1.26
.047	.235 x 13/16	1.57	.297 x 7/8	1.65	.235 x 3/4	1.22	.297 x 13/16	1.30
.056	.235 x 13/16	1.57	.297 x 7/8	1.65	.235 x 3/4	1.22	.297 x 13/16	1.30
.068	.312 x 13/16	1.61	.374 x 7/8	1.69	.312 x 3/4	1.26	.374 x 13/16	1.34
.082	.312 x 13/16	1.61	.374 x 7/8	1.69	.312 x 3/4	1.26	.374 x 13/16	1.34
.1	.312 x 13/16	1.63	.374 x 7/8	1.71	.312 x 3/4	1.28	.374 x 13/16	1.36
.12	.312 x 1-1/8	1.63	.374 x 1-3/16	1.71	.312 x 1-1/16	1.28	.374 x 1-1/8	1.36
.15	.312 x 1-1/8	1.67	.374 x 1-3/16	1.75	.312 x 1-1/16	1.32	.374 x 1-1/8	1.40
.18	.400 x 7/8	1.67	.462 x 15/16	1.75	.400 x 13/16	1.32	.462 x 7/8	1.40
.22	.400 x 7/8	1.67	.462 x 15/16	1.75	.400 x 13/16	1.32	.462 x 7/8	1.40
.27	.400 x 1-1/8	1.67	.462 x 1-3/16	1.75	.400 x 1-1/16	1.32	.462 x 1-1/8	1.40
.33	.400 x 1-1/8	1.82	.462 x 1-3/16	1.90	.400 x 1-1/16	1.47	.462 x 1-1/8	1.55
.39	.400 x 1-1/8	1.82	.462 x 1-3/16	1.90	.400 x 1-1/16	1.47	.462 x 1-1/8	1.55
.47	.500 x 1-1/8	1.93	.562 x 1-3/16	2.01	.500 x 1-1/16	1.58	.562 x 1-1/8	1.66
.56	.500 x 1-1/8	1.93	.562 x 1-3/16	2.01	.500 x 1-1/16	1.58	.562 x 1-1/8	1.66
.68	.500 x 1-1/8	2.00	.562 x 1-3/16	2.08	.500 x 1-1/16	1.65	.562 x 1-1/8	1.73
.82	.562 x 1-1/8	2.00	.624 x 1-3/16	2.08	.562 x 1-1/16	1.65	.624 x 1-1/8	1.73
.9	.562 x 1-1/8	2.15	.624 x 1-3/16	2.23	.562 x 1-1/16	1.80	.624 x 1-1/8	1.88
.5	.562 x 1-5/8	3.22	.624 x 1-11/16	3.30	.562 x 1-9/16	2.87	.624 x 1-5/8	2.95
.0	.670 x 1-5/8	3.90	.732 x 1-11/16	3.98	.670 x 1-9/16	3.55	.732 x 1-5/8	3.63
.0	.670 x 1-7/8	4.26	.732 x 1-15/16	4.34	.670 x 1-13/16	3.91	.732 x 1-7/8	3.99
.0	.750 x 1-7/8	5.09	.812 x 1-15/16	5.17	.750 x 1-13/16	4.73	.812 x 1-7/8	4.81
.0	1.000 x 1-7/8	5.61	1.062 x 1-15/16	5.69	1.000 x 1-13/16	5.26	1.062 x 1-7/8	5.34
0	1.000 x 1-7/8	6.03	1.062 x 1-15/16	6.11	1.000 x 1-13/16	5.68	1.062 x 1-7/8	5.76
0	1.000 x 1-7/8	6.23	1.062 x 1-15/16	6.31	1.000 x 1-13/16	5.87	1.062 x 1-7/8	5.95
0	1.000 x 2-3/8	7.97	1.062 x 2-7/16	8.05	1.000 x 2-5/16	7.62	1.062 x 2-3/8	7.70
0	1.000 x 2-5/8	8.87	1.062 x 2-11/16	8.95	1.000 x 2-9/16	8.52	1.062 x 2-5/8	8.60

\*Request O.E.M. Prices in the following quantities: 25-99, 100-499

400 VDCW

Capacity Mfd.	P323ZN Case Floating		P323ZNP Case Floating Plastic Insulating Sleeve		P323ZNG Case Grounded		P323ZNGP Case Grounded Plastic Insulating Sleeve	
	Size	Net Price*	Size	Net Price*	Size	Net Price*	Size	Net Price*
.001	.235 x 3/4	1.56	.297 x 13/16	1.64	.235 x 11/16	1.21	.297 x 3/4	1.29
.0022	.235 x 3/4	1.56	.297 x 13/16	1.64	.235 x 11/16	1.21	.297 x 3/4	1.29
.0047	.235 x 3/4	1.56	.297 x 13/16	1.64	.235 x 11/16	1.21	.297 x 3/4	1.29
.01	.235 x 3/4	1.56	.297 x 13/16	1.64	.235 x 11/16	1.21	.297 x 3/4	1.29
.012	.235 x 13/16	1.56	.297 x 7/8	1.64	.235 x 3/4	1.21	.297 x 13/16	1.29
.015	.235 x 13/16	1.56	.297 x 7/8	1.64	.235 x 3/4	1.21	.297 x 13/16	1.29
.018	.312 x 13/16	1.60	.374 x 7/8	1.68	.312 x 3/4	1.25	.374 x 13/16	1.33
.022	.312 x 13/16	1.61	.374 x 7/8	1.69	.312 x 3/4	1.26	.374 x 13/16	1.34
.027	.312 x 13/16	1.61	.374 x 7/8	1.69	.312 x 3/4	1.26	.374 x 13/16	1.34
.033	.312 x 13/16	1.61	.374 x 7/8	1.69	.312 x 3/4	1.26	.374 x 13/16	1.34
.039	.312 x 1-1/8	1.61	.374 x 1-3/16	1.69	.312 x 1-1/16	1.26	.374 x 1-1/8	1.34
.047	.312 x 1-1/8	1.61	.374 x 1-3/16	1.69	.312 x 1-1/16	1.26	.374 x 1-1/8	1.34
.056	.312 x 1-1/8	1.64	.374 x 1-3/16	1.72	.312 x 1-1/16	1.29	.374 x 1-1/8	1.37
.068	.400 x 1-1/8	1.69	.462 x 1-3/16	1.77	.400 x 1-1/16	1.34	.462 x 1-1/8	1.42
.082	.400 x 1-1/8	1.70	.462 x 1-3/16	1.78	.400 x 1-1/16	1.35	.462 x 1-1/8	1.43
.1	.400 x 1-1/8	1.74	.462 x 1-3/16	1.82	.400 x 1-1/16	1.39	.462 x 1-1/8	1.47
.12	.500 x 1-1/8	1.79	.562 x 1-3/16	1.87	.500 x 1-1/16	1.44	.562 x 1-1/8	1.52
.15	.500 x 1-1/8	1.84	.562 x 1-3/16	1.92	.500 x 1-1/16	1.49	.562 x 1-1/8	1.57
.18	.500 x 1-1/8	1.88	.562 x 1-3/16	1.96	.500 x 1-1/16	1.53	.562 x 1-1/8	1.61
.22	.562 x 1-1/8	1.91	.624 x 1-3/16	1.99	.562 x 1-1/16	1.56	.624 x 1-1/8	1.64
.27	.562 x 1-1/8	1.97	.624 x 1-3/16	2.05	.562 x 1-1/16	1.62	.624 x 1-1/8	1.70
.33	.562 x 1-3/8	2.11	.624 x 1-7/16	2.19	.562 x 1-5/16	1.76	.624 x 1-3/8	1.84
.39	.562 x 1-5/8	2.19	.624 x 1-11/16	2.27	.562 x 1-9/16	1.84	.624 x 1-5/8	1.92
.47	.562 x 1-5/8	2.34	.624 x 1-11/16	2.42	.562 x 1-9/16	1.99	.624 x 1-5/8	2.07
.56	.670 x 1-5/8	2.49	.732 x 1-11/16	2.57	.670 x 1-9/16	2.14	.732 x 1-5/8	2.22
.68	.670 x 1-7/8	2.68	.732 x 1-15/16	2.76	.670 x 1-13/16	2.33	.732 x 1-7/8	2.41
.82	.750 x 1-7/8	2.85	.812 x 1-15/16	2.93	.750 x 1-13/16	2.50	.812 x 1-7/8	2.58
1.0	.750 x 1-7/8	2.94	.812 x 1-15/16	3.02	.750 x 1-13/16	2.59	.812 x 1-7/8	2.67
1.5	1.000 x 1-7/8	3.90	1.062 x 1-15/16	3.98	1.000 x 1-13/16	3.55	1.062 x 1-7/8	3.63
2.0	1.000 x 1-7/8	4.86	1.062 x 1-15/16	4.94	1.000 x 1-13/16	4.51	1.062 x 1-7/8	4.59

600 VDCW

Capacity Mfd.	P323ZN Case Floating		P323ZNP Case Floating Plastic Insulating Sleeve		P323ZNG Case Grounded		P323ZNGP Case Grounded Plastic Insulating Sleeve	
	Size	Net Price*	Size	Net Price*	Size	Net Price*	Size	Net Price*
.001	.235 x 3/4	1.62	.297 x 13/16	1.70	.235 x 11/16	1.27	.297 x 3/4	1.35
.0022	.235 x 3/4	1.62	.297 x 13/16	1.70	.235 x 11/16	1.27	.297 x 3/4	1.35
.0047	.235 x 3/4	1.62	.297 x 13/16	1.70	.235 x 11/16	1.27	.297 x 3/4	1.35
.01	.235 x 3/4	1.62	.297 x 13/16	1.70	.235 x 11/16	1.27	.297 x 3/4	1.35
.012	.312 x 13/16	1.62	.374 x 7/8	1.70	.312 x 3/4	1.27	.374 x 13/16	1.35
.015	.312 x 13/16	1.63	.374 x 7/8	1.71	.312 x 3/4	1.28	.374 x 13/16	1.36
.018	.312 x 13/16	1.63	.374 x 7/8	1.71	.312 x 3/4	1.28	.374 x 13/16	1.36
.022	.312 x 13/16	1.64	.374 x 7/8	1.72	.312 x 3/4	1.29	.374 x 13/16	1.37
.027	.312 x 1-1/8	1.64	.374 x 1-3/16	1.72	.312 x 1-1/16	1.29	.374 x 1-1/8	1.37
.033	.312 x 1-1/8	1.64	.374 x 1-3/16	1.72	.312 x 1-1/16	1.29	.374 x 1-1/8	1.37
.039	.400 x 1-1/8	1.64	.462 x 1-3/16	1.72	.400 x 1-1/16	1.29	.462 x 1-1/8	1.37
.047	.400 x 1-1/8	1.66	.462 x 1-3/16	1.74	.400 x 1-1/16	1.31	.462 x 1-1/8	1.39
.056	.400 x 1-1/8	1.70	.462 x 1-3/16	1.78	.400 x 1-1/16	1.35	.462 x 1-1/8	1.43
.068	.400 x 1-1/8	1.77	.462 x 1-3/16	1.85	.400 x 1-1/16	1.42	.462 x 1-1/8	1.50
.082	.500 x 1-1/8	1.79	.562 x 1-3/16	1.87	.500 x 1-1/16	1.43	.562 x 1-1/8	1.51
.1	.500 x 1-1/8	1.79	.562 x 1-3/16	1.87	.500 x 1-1/16	1.43	.562 x 1-1/8	1.51
.12	.500 x 1-1/8	1.90	.562 x 1-3/16	1.98	.500 x 1-1/16	1.55	.562 x 1-1/8	1.63
.15	.500 x 1-1/8	2.00	.562 x 1-3/16	2.08	.500 x 1-1/16	1.65	.562 x 1-1/8	1.73
.18	.562 x 1-1/8	2.09	.624 x 1-3/16	2.17	.562 x 1-1/16	1.74	.624 x 1-1/8	1.82
.22	.562 x 1-3/8	2.16	.624 x 1-7/16	2.24	.562 x 1-5/16	1.81	.624 x 1-3/8	1.89
.27	.562 x 1-5/8	2.34	.624 x 1-11/16	2.42	.562 x 1-9/16	1.99	.624 x 1-5/8	2.07
.33	.562 x 1-5/8	2.46	.624 x 1-11/16	2.54	.562 x 1-9/16	2.11	.624 x 1-5/8	2.19
.39	.670 x 1-5/8	2.57	.732 x 1-11/16	2.65	.670 x 1-9/16	2.22	.732 x 1-5/8	2.30
.47	.670 x 1-5/8	2.68	.732 x 1-11/16	2.76	.670 x 1-9/16	2.33	.732 x 1-5/8	2.41
.56	.670 x 1-7/8	2.79	.732 x 1-15/16	2.87	.670 x 1-13/16	2.44	.732 x 1-7/8	2.52
.68	.670 x 1-7/8	2.94	.732 x 1-15/16	3.02	.670 x 1-13/16	2.59	.732 x 1-7/8	2.67
.82	1.000 x 1-7/8	3.35	1.062 x					

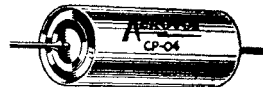
SECTION 1500



CAPACITORS



INDUSTRIAL SECTION — MIL TYPES  
MIL-C-25C



TYPE CPO4 and CPO5 — Characteristics K Vibration Grades 1 and 3

Hermetically sealed tubular capacitors with glass terminal seal and axial wire leads. CP04 and CP05 are inserted tab construction; CP08 and CP09 are extended foil construction. Standard tolerance is  $\pm 10\%$  (K). Specify Vibration Grade when ordering.

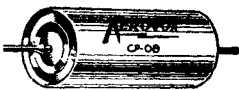
CAPACITY	VOLTAGE	CP04, CHAR. K				CP05, CHAR. K			
		P3235		P3235G		P3235P		P3235GP	
		NO TUBE		NO TUBE		NO TUBE		PLASTIC TUBE	
		Case Floating	Case Grounded	Case Floating	Case Grounded	Case Floating	Case Grounded	Case Floating	Case Grounded
			Net Price*		Net Price*		Net Price*		Net Price*
.027	100V	CP04A1KB273K	.78	CP04A3KB273K	.66	CP05A1KB273K	.84	CP05A3KB273K	.72
.033	100V	CP04A1KB333K	.78	CP04A3KB333K	.66	CP05A1KB333K	.84	CP05A3KB333K	.72
.082	100V	CP04A1KB823K	1.08	CP04A3KB823K	.87	CP05A1KB823K	1.14	CP05A3KB823K	.93
.1	100V	CP04A1KB104K	1.08	CP04A3KB104K	.87	CP05A1KB104K	1.14	CP05A3KB104K	.93
.12	100V	CP04A1KB124K	1.14	CP04A3KB124K	.93	CP05A1KB124K	1.20	CP05A3KB124K	.99
.15	100V	CP04A1KB154K	1.17	CP04A3KB154K	.93	CP05A1KB154K	1.23	CP05A3KB154K	.99
.18	100V	CP04A1KB184K	1.23	CP04A3KB184K	1.02	CP05A1KB184K	1.29	CP05A3KB184K	1.08
.22	100V	CP04A1KB224K	1.29	CP04A3KB224K	1.08	CP05A1KB224K	1.35	CP05A3KB224K	1.14
.27	100V	CP04A1KB274K	1.35	CP04A3KB274K	1.14	CP05A1KB274K	1.41	CP05A3KB274K	1.20
.33	100V	CP04A1KB334K	1.44	CP04A3KB334K	1.23	CP05A1KB334K	1.50	CP05A3KB334K	1.29
.39	100V	CP04A1KB394K	1.50	CP04A3KB394K	1.29	CP05A1KB394K	1.59	CP05A3KB394K	1.38
.47	100V	CP04A1KB474K	1.56	CP04A3KB474K	1.35	CP05A1KB474K	1.65	CP05A3KB474K	1.44
.56	100V	CP04A1KB564K	1.59	CP04A3KB564K	1.38	CP05A1KB564K	1.68	CP05A3KB564K	1.47
.68	100V	CP04A1KB684K	1.65	CP04A3KB684K	1.44	CP05A1KB684K	1.74	CP05A3KB684K	1.53
.82	100V	CP04A1KB824K	1.71	CP04A3KB824K	1.50	CP05A1KB824K	1.80	CP05A3KB824K	1.59
1.0	100V	CP04A1KB105K	1.77	CP04A3KB105K	1.56	CP05A1KB105K	1.86	CP05A3KB105K	1.65
.012	200V	CP04A1KC123K	.78	CP04A3KC123K	.66	CP05A1KC123K	.84	CP05A3KC123K	.72
.015	200V	CP04A1KC153K	.78	CP04A3KC153K	.66	CP05A1KC153K	.84	CP05A3KC153K	.72
.018	200V	CP04A1KC183K	.78	CP04A3KC183K	.66	CP05A1KC183K	.84	CP05A3KC183K	.72
.022	200V	CP04A1KC223K	.84	CP04A3KC223K	.72	CP05A1KC223K	.90	CP05A3KC223K	.78
.039	200V	CP04A1KC393K	.84	CP04A3KC393K	.72	CP05A1KC393K	.90	CP05A3KC393K	.78
.047	200V	CP04A1KC473K	.84	CP04A3KC473K	.72	CP05A1KC473K	.90	CP05A3KC473K	.78
.056	200V	CP04A1KC563K	.87	CP04A3KC563K	.75	CP05A1KC563K	.93	CP05A3KC563K	.81
.068	200V	CP04A1KC683K	.93	CP04A3KC683K	.81	CP05A1KC683K	.99	CP05A3KC683K	.87
.082	200V	CP04A1KC823K	.96	CP04A3KC823K	.84	CP05A1KC823K	1.02	CP05A3KC823K	.90
.1	200V	CP04A1KC104K	1.02	CP04A3KC104K	.84	CP05A1KC104K	1.08	CP05A3KC104K	.90
.12	200V	CP04A1KC124K	1.08	CP04A3KC124K	.90	CP05A1KC124K	1.14	CP05A3KC124K	.96
.15	200V	CP04A1KC154K	1.11	CP04A3KC154K	.93	CP05A1KC154K	1.17	CP05A3KC154K	.99
.18	200V	CP04A1KC184K	1.14	CP04A3KC184K	.96	CP05A1KC184K	1.20	CP05A3KC184K	1.02
.22	200V	CP04A1KC224K	1.17	CP04A3KC224K	.96	CP05A1KC224K	1.23	CP05A3KC224K	1.02
.27	200V	CP04A1KC274K	1.29	CP04A3KC274K	1.08	CP05A1KC274K	1.38	CP05A3KC274K	1.17
.33	200V	CP04A1KC334K	1.38	CP04A3KC334K	1.17	CP05A1KC334K	1.47	CP05A3KC334K	1.26
.39	200V	CP04A1KC394K	1.44	CP04A3KC394K	1.23	CP05A1KC394K	1.53	CP05A3KC394K	1.32
.47	200V	CP04A1KC474K	1.50	CP04A3KC474K	1.29	CP05A1KC474K	1.59	CP05A3KC474K	1.38
.56	200V	CP04A1KC564K	1.56	CP04A3KC564K	1.35	CP05A1KC564K	1.65	CP05A3KC564K	1.44
.68	200V	CP04A1KC684K	1.65	CP04A3KC684K	1.44	CP05A1KC684K	1.74	CP05A3KC684K	1.53
.82	200V	CP04A1KC824K	1.77	CP04A3KC824K	1.56	CP05A1KC824K	1.86	CP05A3KC824K	1.65
1.0	200V	CP04A1KC105K	1.86	CP04A3KC105K	1.65	CP05A1KC105K	1.95	CP05A3KC105K	1.74
.0082	400V	CP04A1KE822K	.87	CP04A3KE822K	.75	CP05A1KE822K	.93	CP05A3KE822K	.81
.01	400V	CP04A1KE103K	.87	CP04A3KE103K	.75	CP05A1KE103K	.93	CP05A3KE103K	.81
.027	400V	CP04A1KE273K	.93	CP04A3KE273K	.81	CP05A1KE273K	.99	CP05A3KE273K	.87
.033	400V	CP04A1KE333K	.93	CP04A3KE333K	.81	CP05A1KE333K	.99	CP05A3KE333K	.87
.039	400V	CP04A1KE393K	.96	CP04A3KE393K	.84	CP05A1KE393K	1.02	CP05A3KE393K	.90
.047	400V	CP04A1KE473K	1.02	CP04A3KE473K	.84	CP05A1KE473K	1.08	CP05A3KE473K	.90
.056	400V	CP04A1KE563K	1.08	CP04A3KE563K	.90	CP05A1KE563K	1.14	CP05A3KE563K	.90
.068	400V	CP04A1KE683K	1.11	CP04A3KE683K	.90	CP05A1KE683K	1.17	CP05A3KE683K	.90
.082	400V	CP04A1KE823K	1.17	CP04A3KE823K	.96	CP05A1KE823K	1.23	CP05A3KE823K	1.00
.1	400V	CP04A1KE104K	1.26	CP04A3KE104K	1.05	CP05A1KE104K	1.32	CP05A3KE104K	1.11
.12	400V	CP04A1KE124K	1.35	CP04A3KE124K	1.14	CP05A1KE124K	1.44	CP05A3KE124K	1.22
.15	400V	CP04A1KE154K	1.44	CP04A3KE154K	1.23	CP05A1KE154K	1.53	CP05A3KE154K	1.33
.18	400V	CP04A1KE184K	1.50	CP04A3KE184K	1.29	CP05A1KE184K	1.59	CP05A3KE184K	1.38
.22	400V	CP04A1KE224K	1.56	CP04A3KE224K	1.35	CP05A1KE224K	1.65	CP05A3KE224K	1.44
.27	400V	CP04A1KE274K	1.65	CP04A3KE274K	1.44	CP05A1KE274K	1.74	CP05A3KE274K	1.50
.33	400V	CP04A1KE334K	1.71	CP04A3KE334K	1.50	CP05A1KE334K	1.80	CP05A3KE334K	1.55
.39	400V	CP04A1KE394K	1.98	CP04A3KE394K	1.77	CP05A1KE394K	2.07	CP05A3KE394K	1.80
.47	400V	CP04A1KE474K	1.98	CP04A3KE474K	1.77	CP05A1KE474K	2.07	CP05A3KE474K	1.80
.56	400V	CP04A1KE564K	2.13	CP04A3KE564K	1.86	CP05A1KE564K	2.22	CP05A3KE564K	1.90
.68	400V	CP04A1KE684K	2.13	CP04A3KE684K	1.86	CP05A1KE684K	2.22	CP05A3KE684K	1.90
.82	400V	CP04A1KE824K	2.58	CP04A3KE824K	2.31	CP05A1KE824K	2.67	CP05A3KE824K	2.20
1.0	400V	CP04A1KE105K	2.58	CP04A3KE105K	2.31	CP05A1KE105K	2.67	CP05A3KE105K	2.20
.001	600V	CP04A1KF102K	.75	CP04A3KF102K	.63	CP05A1KF102K	.81	CP05A3KF102K	.66
.0012	600V	CP04A1KF122K	.75	CP04A3KF122K	.63	CP05A1KF122K	.81	CP05A3KF122K	.66
.0015	600V	CP04A1KF152K	.75	CP04A3KF152K	.63	CP05A1KF152K	.81	CP05A3KF152K	.66
.0018	600V	CP04A1KF182K	.75	CP04A3KF182K	.63	CP05A1KF182K	.81	CP05A3KF182K	.66
.0022	600V	CP04A1KF222K	.75	CP04A3KF222K	.63	CP05A1KF222K	.81	CP05A3KF222K	.66
.0027	600V	CP04A1KF272K	.78	CP04A3KF272K	.66	CP05A1KF272K	.84	CP05A3KF272K	.70
.0033	600V	CP04A1KF332K	.78	CP04A3KF332K	.66	CP05A1KF332K	.84	CP05A3KF332K	.70
.0039	600V	CP04A1KF392K	.78	CP04A3KF392K	.66	CP05A1KF392K	.84	CP05A3KF392K	.70
.0047	600V	CP04A1KF472K	.78	CP04A3KF472K	.66	CP05A1KF472K	.84	CP05A3KF472K	.70
.0056	600V	CP04A1KF562K	.84	CP04A3KF562K	.72	CP05A1KF562K	.90	CP05A3KF562K	.75
.0068	600V	CP04A1KF682K	.96	CP04A3KF682K	.84	CP05A1KF682K	1.02	CP05A3KF682K	.85
.0082	600V	CP04A1KF822K	.99	CP04A3KF822K	.87	CP05A1KF822K	1.05	CP05A3KF822K	.85
.01	600V	CP04A1KF103K	.99	CP04A3KF103K	.87	CP05A1KF103K	1.05	CP05A3KF103K	.85
.012	600V	CP04A1KF123K	1.05	CP04A3KF123K	.93	CP05A1KF123K	1.11	CP05A3KF123K	.85
.015	600V	CP04A1KF153K	1.08	CP04A3KF153K	.96	CP05A1KF153K	1.14	CP05A3KF153K	.85
.018	600V	CP04A1KF183K	1.08	CP04A3KF183K	.96	CP05A1KF183K	1.14	CP05A3KF183K	.85
.022	600V	CP04A1KF223K	1.08	CP04A3KF223K	.96	CP05A1KF223K	1.14	CP05A3KF223K	.85
.027	600V	CP04A1KF273K	1.11	CP04A3KF273K	.99	CP05A1KF273K	1.17	CP05A3KF273K	.85
.033	600V	CP04A1KF333K	1.11	CP04A3KF333K	.99	CP05A1KF333K	1.17	CP05A3KF333K	.85
.039	600V	CP04A1KF393K	1.11	CP04A3KF393K	.99	CP05A1KF393K	1.17	CP05A3KF393K	.85
.047	600V	CP04A1KF473K	1.11	CP04A3KF473K	.99	CP05A1KF473K	1.17	CP05A3KF473K	.85

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-249



# CAPACITORS

CAPACITY	VOLTAGE	CP04, CHAR. K				CP05, CHAR. K			
		P323S		P323SG		P323SP		P323SGP	
		NO TUBE		NO TUBE		PLASTIC TUBE		PLASTIC TUBE	
		Case Floating	Net Price*	Case Grounded	Net Price*	Case Floating	Net Price*	Case Grounded	Net Price*
.056	600V	CP04A1KF563K-	1.14	CP04A3KF563K-	1.02	CP05A1KF563K-	1.20	CP05A3KF563K-	1.08
.068	600V	CP04A1KF683K-	1.14	CP04A3KF683K-	1.02	CP05A1KF683K-	1.20	CP05A3KF683K-	1.08
.082	600V	CP04A1KF823K-	1.20	CP04A3KF823K-	1.05	CP05A1KF823K-	1.29	CP05A3KF823K-	1.14
.1	600V	CP04A1KF104K-	1.26	CP04A3KF104K-	1.05	CP05A1KF104K-	1.35	CP05A3KF104K-	1.14
.12	600V	CP04A1KF124K-	1.35	CP04A3KF124K-	1.14	CP05A1KF124K-	1.44	CP05A3KF124K-	1.23
.15	600V	CP04A1KF154K-	1.44	CP04A3KF154K-	1.23	CP05A1KF154K-	1.53	CP05A3KF154K-	1.32
.18	600V	CP04A1KF184K-	1.47	CP04A3KF184K-	1.26	CP05A1KF184K-	1.56	CP05A3KF184K-	1.35
.22	600V	CP04A1KF224K-	1.53	CP04A3KF224K-	1.32	CP05A1KF224K-	1.62	CP05A3KF224K-	1.41
.27	600V	CP04A1KF274K-	1.59	CP04A3KF274K-	1.38	CP05A1KF274K-	1.68	CP05A3KF274K-	1.47
.33	600V	CP04A1KF334K-	1.62	CP04A3KF334K-	1.41	CP05A1KF334K-	1.71	CP05A3KF334K-	1.50
.39	600V	CP04A1KF394K-	1.74	CP04A3KF394K-	1.53	CP05A1KF394K-	1.83	CP05A3KF394K-	1.62
.47	600V	CP04A1KF474K-	1.86	CP04A3KF474K-	1.65	CP05A1KF474K-	1.95	CP05A3KF474K-	1.74
.56	600V	CP04A1KF564K-	2.37	CP04A3KF564K-	2.16	CP05A1KF564K-	2.46	CP05A3KF564K-	2.25
.68	600V	CP04A1KF684K-	2.37	CP04A3KF684K-	2.16	CP05A1KF684K-	2.46	CP05A3KF684K-	2.25
.015	1000V	CP04A1KG153K-	1.11	CP04A3KG153K-	.90	CP05A1KG153K-	1.17	CP05A3KG153K-	.96
.018	1000V	CP04A1KG183K-	1.11	CP04A3KG183K-	.90	CP05A1KG183K-	1.17	CP05A3KG183K-	.96
.022	1000V	CP04A1KG223K-	1.11	CP04A3KG223K-	.90	CP05A1KG223K-	1.17	CP05A3KG223K-	.96
.027	1000V	CP04A1KG273K-	1.17	CP04A3KG273K-	.96	CP05A1KG273K-	1.23	CP05A3KG273K-	1.02
.033	1000V	CP04A1KG333K-	1.17	CP04A3KG333K-	.96	CP05A1KG333K-	1.23	CP05A3KG333K-	1.02
.039	1000V	CP04A1KG393K-	1.17	CP04A3KG393K-	.96	CP05A1KG393K-	1.26	CP05A3KG393K-	1.05
.047	1000V	CP04A1KG473K-	1.17	CP04A3KG473K-	.96	CP05A1KG473K-	1.26	CP05A3KG473K-	1.05
.056	1000V	CP04A1KG563K-	1.23	CP04A3KG563K-	1.02	CP05A1KG563K-	1.32	CP05A3KG563K-	1.11
.068	1000V	CP04A1KG683K-	1.26	CP04A3KG683K-	1.05	CP05A1KG683K-	1.35	CP05A3KG683K-	1.14
.082	1000V	CP04A1KG823K-	1.32	CP04A3KG823K-	1.11	CP05A1KG823K-	1.41	CP05A3KG823K-	1.20
.1	1000V	CP04A1KG104K-	1.35	CP04A3KG104K-	1.14	CP05A1KG104K-	1.44	CP05A3KG104K-	1.23
.12	1000V	CP04A1KG124K-	1.41	CP04A3KG124K-	1.20	CP05A1KG124K-	1.50	CP05A3KG124K-	1.29
.15	1000V	CP04A1KG154K-	1.41	CP04A3KG154K-	1.20	CP05A1KG154K-	1.50	CP05A3KG154K-	1.29
.18	1000V	CP04A1KG184K-	1.50	CP04A3KG184K-	1.23	CP05A1KG184K-	1.59	CP05A3KG184K-	1.32
.22	1000V	CP04A1KG224K-	1.65	CP04A3KG224K-	1.38	CP05A1KG224K-	1.74	CP05A3KG224K-	1.47
.27	1000V	CP04A1KG274K-	2.04	CP04A3KG274K-	1.77	CP05A1KG274K-	2.13	CP05A3KG274K-	1.86
.33	1000V	CP04A1KG334K-	2.16	CP04A3KG334K-	1.89	CP05A1KG334K-	2.25	CP05A3KG334K-	1.98
.39	1000V	CP04A1KG394K-	2.37	CP04A3KG394K-	2.10	CP05A1KG394K-	2.46	CP05A3KG394K-	2.19
.47	1000V	CP04A1KG474K-	2.37	CP04A3KG474K-	2.10	CP05A1KG474K-	2.46	CP05A3KG474K-	2.19



## INDUSTRIAL SECTION — MIL TYPES MIL-C-25C



### TYPES CPO8 and CPO9—Characteristics K Vibration Grades 1 and 3

hermetically sealed tubular capacitors with glass terminal seal and axial wire leads. CP04 and CP05 are inserted tab construction; CP08 and CP09 are extended oil construction. Standard tolerance is  $\pm 10\%$  (K). Specify Vibration Grade when ordering.

CAPACITY	VOLTAGE	CP08, CHAR. K				CP09, CHAR. K			
		P323SX		P323SXG		P323SXP		P323SXGP	
		NO TUBE		NO TUBE		PLASTIC TUBE		PLASTIC TUBE	
		Case Floating	Net Price*	Case Grounded	Net Price*	Case Floating	Net Price*	Case Grounded	Net Price*
.082	100V	CP08A1KB822K-	.75	CP08A3KB822K-	.63	CP09A1KB822K-	.81	CP09A3KB822K-	.69
.01	100V	CP08A1KB103K-	.75	CP08A3KB103K-	.63	CP09A1KB103K-	.81	CP09A3KB103K-	.69
.012	100V	CP08A1KB123K-	.75	CP08A3KB123K-	.63	CP09A1KB123K-	.81	CP09A3KB123K-	.69
.015	100V	CP08A1KB153K-	.75	CP08A3KB153K-	.63	CP09A1KB153K-	.81	CP09A3KB153K-	.69
.039	100V	CP08A1KB393K-	.84	CP08A3KB393K-	.72	CP09A1KB393K-	.90	CP09A3KB393K-	.78
.047	100V	CP08A1KB473K-	.90	CP08A3KB473K-	.78	CP09A1KB473K-	.96	CP09A3KB473K-	.84
.082	100V	CP08A1KB823K-	.99	CP08A3KB823K-	.90	CP09A1KB823K-	1.05	CP09A3KB823K-	.96
.1	100V	CP08A1KB104K-	1.05	CP08A3KB104K-	.90	CP09A1KB104K-	1.11	CP09A3KB104K-	.96
.12	100V	CP08A1KB124K-	1.08	CP08A3KB124K-	.90	CP09A1KB124K-	1.14	CP09A3KB124K-	.96
.15	100V	CP08A1KB154K-	1.11	CP08A3KB154K-	.90	CP09A1KB154K-	1.17	CP09A3KB154K-	.96
.18	100V	CP08A1KB184K-	1.20	CP08A3KB184K-	.99	CP09A1KB184K-	1.26	CP09A3KB184K-	1.05
.22	100V	CP08A1KB224K-	1.26	CP08A3KB224K-	1.02	CP09A1KB224K-	1.32	CP09A3KB224K-	1.08
.27	100V	CP08A1KB274K-	1.32	CP08A3KB274K-	1.11	CP09A1KB274K-	1.41	CP09A3KB274K-	1.20
.33	100V	CP08A1KB334K-	1.38	CP08A3KB334K-	1.17	CP09A1KB334K-	1.47	CP09A3KB334K-	1.26
.39	100V	CP08A1KB394K-	1.44	CP08A3KB394K-	1.23	CP09A1KB394K-	1.53	CP09A3KB394K-	1.32
.47	100V	CP08A1KB474K-	1.47	CP08A3KB474K-	1.26	CP09A1KB474K-	1.56	CP09A3KB474K-	1.35
.56	100V	CP08A1KB564K-	1.56	CP08A3KB564K-	1.35	CP09A1KB564K-	1.65	CP09A3KB564K-	1.44
.68	100V	CP08A1KB684K-	1.62	CP08A3KB684K-	1.41	CP09A1KB684K-	1.71	CP09A3KB684K-	1.50
.82	100V	CP08A1KB824K-	1.71	CP08A3KB824K-	1.50	CP09A1KB824K-	1.80	CP09A3KB824K-	1.59
1.0	100V	CP08A1KB105K-	1.86	CP08A3KB105K-	1.65	CP09A1KB105K-	1.95	CP09A3KB105K-	1.74
.0039	200V	CP08A1KC392K-	.72	CP08A3KC392K-	.60	CP09A1KC392K-	.78	CP09A3KC392K-	.66
.0047	200V	CP08A1KC472K-	.72	CP08A3KC472K-	.60	CP09A1KC472K-	.78	CP09A3KC472K-	.66
.0056	200V	CP08A1KC562K-	.72	CP08A3KC562K-	.60	CP09A1KC562K-	.78	CP09A3KC562K-	.66
.0068	200V	CP08A1KC682K-	.72	CP08A3KC682K-	.60	CP09A1KC682K-	.78	CP09A3KC682K-	.66
.018	200V	CP08A1KC183K-	.84	CP08A3KC183K-	.72	CP09A1KC183K-	.90	CP09A3KC183K-	.78
.022	200V	CP08A1KC223K-	.84	CP08A3KC223K-	.72	CP09A1KC223K-	.90	CP09A3KC223K-	.78
.027	200V	CP08A1KC273K-	.87	CP08A3KC273K-	.75	CP09A1KC273K-	.93	CP09A3KC273K-	.81
.033	200V	CP08A1KC333K-	.87	CP08A3KC333K-	.75	CP09A1KC333K-	.93	CP09A3KC333K-	.81
.039	200V	CP08A1KC393K-	.96	CP08A3KC393K-	.81	CP09A1KC393K-	1.02	CP09A3KC393K-	.87
.047	200V	CP08A1KC473K-	.96	CP08A3KC473K-	.81	CP09A1KC473K-	1.02	CP09A3KC473K-	.87
.056	200V	CP08A1KC563K-	1.02	CP08A3KC563K-	.84	CP09A1KC563K-	1.08	CP09A3KC563K-	.90
.068	200V	CP08A1KC683K-	1.08	CP08A3KC683K-	.87	CP09A1KC683K-	1.14	CP09A3KC683K-	.93
.082	200V	CP08A1KC823K-	1.17	CP08A3KC823K-	.96	CP09A1KC823K-	1.23	CP09A3KC823K-	1.02
.1	200V	CP08A1KC104K-	1.17	CP08A3KC104K-	.96	CP09A1KC104K-	1.23	CP09A3KC104K-	1.02
.12	200V	CP08A1KC124K-	1.23	CP08A3KC124K-	1.02	CP09A1KC124K-	1.29	CP09A3KC124K-	1.08
.15	200V	CP08A1KC154K-	1.23	CP08A3KC154K-	1.02	CP09A1KC154K-	1.29	CP09A3KC154K-	1.08
.18	200V	CP08A1KC184K-	1.29	CP08A3KC184K-	1.08	CP09A1KC184K-	1.38	CP09A3KC184K-	1.17
.22	200V	CP08A1KC224K-	1.29	CP08A3KC224K-	1.08	CP09A1KC224K-	1.38	CP09A3KC224K-	1.17
.27	200V	CP08A1KC274K-	1.35	CP08A3KC274K-	1.14	CP09A1KC274K-	1.44	CP09A3KC274K-	1.23

Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499





# CAPACITORS

CAPACITY	VOLTAGE	CP08, CHAR. K				CP09, CHAR. K			
		P3235X		P3235XG		P3235XP		P3235XGP	
		Case Floating	NO TUBE Net Price*	Case Grounded	Net Price*	Case Floating	PLASTIC TUBE Net Price*	Case Grounded	Net Price*
.33	200V	CP08A1KC334K-	1.35	CP08A3K C334K-	1.14	CP09A1KC334K-	1.44	CP09A3K C334K-	1.23
.39	200V	CP08A1KC394K-	1.41	CP08A3K C394K-	1.20	CP09A1KC394K-	1.50	CP09A3K C394K-	1.29
.47	200V	CP08A1KC474K-	1.41	CP08A3K C474K-	1.20	CP09A1KC474K-	1.50	CP09A3K C474K-	1.29
.56	200V	CP08A1KC564K-	1.56	CP08A3K C564K-	1.35	CP09A1KC564K-	1.65	CP09A3K C564K-	1.44
.68	200V	CP08A1KC684K-	1.68	CP08A3K C684K-	1.47	CP09A1KC684K-	1.77	CP09A3K C684K-	1.56
.82	200V	CP08A1KC824K-	1.86	CP08A3K C824K-	1.59	CP09A1KC824K-	1.95	CP09A3K C824K-	1.68
1.0	200V	CP08A1KC105K-	1.92	CP08A3K C105K-	1.65	CP09A1KC105K-	2.01	CP09A3K C105K-	1.74
.0027	400V	CP08A1KE272K-	.75	CP08A3KE272K-	.63	CP09A1KE272K-	.81	CP09A3KE272K-	.69
.0033	400V	CP08A1KE332K-	.75	CP08A3KE332K-	.63	CP09A1KE332K-	.81	CP09A3KE332K-	.69
.012	400V	CP08A1KE123K-	.81	CP08A3KE123K-	.69	CP09A1KE123K-	.87	CP09A3KE123K-	.75
.015	400V	CP08A1KE153K-	.84	CP08A3KE153K-	.72	CP09A1KE153K-	.90	CP09A3KE153K-	.78
.027	400V	CP08A1KE273K-	.96	CP08A3KE273K-	.78	CP09A1KE273K-	1.02	CP09A3KE273K-	.84
.033	400V	CP08A1KE333K-	1.08	CP08A3KE333K-	.87	CP09A1KE333K-	1.14	CP09A3KE333K-	.93
.039	400V	CP08A1KE393K-	1.08	CP08A3KE393K-	.87	CP09A1KE393K-	1.14	CP09A3KE393K-	.93
.047	400V	CP08A1KE473K-	1.11	CP08A3KE473K-	.90	CP09A1KE473K-	1.17	CP09A3KE473K-	.96
.056	400V	CP08A1KE563K-	1.11	CP08A3KE563K-	.90	CP09A1KE563K-	1.17	CP09A3KE563K-	.96
.068	400V	CP08A1KE683K-	1.11	CP08A3KE683K-	.90	CP09A1KE683K-	1.17	CP09A3KE683K-	.96
.082	400V	CP08A1KE823K-	1.17	CP08A3KE823K-	.96	CP09A1KE823K-	1.26	CP09A3KE823K-	1.05
.1	400V	CP08A1KE104K-	1.20	CP08A3KE104K-	.99	CP09A1KE104K-	1.29	CP09A3KE104K-	1.08
.12	400V	CP08A1KE124K-	1.26	CP08A3KE124K-	1.05	CP09A1KE124K-	1.35	CP09A3KE124K-	1.14
.15	400V	CP08A1KE154K-	1.32	CP08A3KE154K-	1.11	CP09A1KE154K-	1.41	CP09A3KE154K-	1.20
.18	400V	CP08A1KE184K-	1.47	CP08A3KE184K-	1.26	CP09A1KE184K-	1.56	CP09A3KE184K-	1.35
.22	400V	CP08A1KE224K-	1.59	CP08A3KE224K-	1.38	CP09A1KE224K-	1.68	CP09A3KE224K-	1.47
.27	400V	CP08A1KE274K-	1.71	CP08A3KE274K-	1.50	CP09A1KE274K-	1.80	CP09A3KE274K-	1.59
.33	400V	CP08A1KE334K-	1.83	CP08A3KE334K-	1.62	CP09A1KE334K-	1.92	CP09A3KE334K-	1.71
.39	400V	CP08A1KE394K-	1.89	CP08A3KE394K-	1.65	CP09A1KE394K-	1.98	CP09A3KE394K-	1.74
.47	400V	CP08A1KE474K-	1.95	CP08A3KE474K-	1.68	CP09A1KE474K-	2.04	CP09A3KE474K-	1.77
.001	600V	CP08A1KF102K-	.75	CP08A3KF102K-	.63	CP09A1KF102K-	.81	CP09A3KF102K-	.69
.0012	600V	CP08A1KF122K-	.75	CP08A3KF122K-	.63	CP09A1KF122K-	.81	CP09A3KF122K-	.69
.0015	600V	CP08A1KF152K-	.75	CP08A3KF152K-	.63	CP09A1KF152K-	.81	CP09A3KF152K-	.69
.0018	600V	CP08A1KF182K-	.75	CP08A3KF182K-	.63	CP09A1KF182K-	.81	CP09A3KF182K-	.69
.0022	600V	CP08A1KF222K-	.78	CP08A3KF222K-	.66	CP09A1KF222K-	.84	CP09A3KF222K-	.72
.0027	600V	CP08A1KF272K-	.78	CP08A3KF272K-	.66	CP09A1KF272K-	.84	CP09A3KF272K-	.72
.0033	600V	CP08A1KF332K-	.78	CP08A3KF332K-	.66	CP09A1KF332K-	.84	CP09A3KF332K-	.72
.0039	600V	CP08A1KF392K-	.81	CP08A3KF392K-	.69	CP09A1KF392K-	.87	CP09A3KF392K-	.75
.0047	600V	CP08A1KF472K-	.81	CP08A3KF472K-	.69	CP09A1KF472K-	.87	CP09A3KF472K-	.75
.0056	600V	CP08A1KF562K-	.87	CP08A3KF562K-	.75	CP09A1KF562K-	.93	CP09A3KF562K-	.81
.0068	600V	CP08A1KF682K-	.87	CP08A3KF682K-	.75	CP09A1KF682K-	.93	CP09A3KF682K-	.81
.0082	600V	CP08A1KF822K-	.87	CP08A3KF822K-	.75	CP09A1KF822K-	.93	CP09A3KF822K-	.81
.01	600V	CP08A1KF103K-	.87	CP08A3KF103K-	.75	CP09A1KF103K-	.93	CP09A3KF103K-	.81
.012	600V	CP08A1KF123K-	.93	CP08A3KF123K-	.78	CP09A1KF123K-	.99	CP09A3KF123K-	.84
.015	600V	CP08A1KF153K-	.93	CP08A3KF153K-	.78	CP09A1KF153K-	.99	CP09A3KF153K-	.84
.018	600V	CP08A1KF183K-	.99	CP08A3KF183K-	.81	CP09A1KF183K-	1.05	CP09A3KF183K-	.87
.022	600V	CP08A1KF223K-	.99	CP08A3KF223K-	.81	CP09A1KF223K-	1.05	CP09A3KF223K-	.87
.027	600V	CP08A1KF273K-	1.02	CP08A3KF273K-	.84	CP09A1KF273K-	1.08	CP09A3KF273K-	.91
.033	600V	CP08A1KF333K-	1.08	CP08A3KF333K-	.87	CP09A1KF333K-	1.14	CP09A3KF333K-	.93
.039	600V	CP08A1KF393K-	1.14	CP08A3KF393K-	.93	CP09A1KF393K-	1.20	CP09A3KF393K-	.99
.047	600V	CP08A1KF473K-	1.14	CP08A3KF473K-	.93	CP09A1KF473K-	1.20	CP09A3KF473K-	.99
.056	600V	CP08A1KF563K-	1.20	CP08A3KF563K-	.99	CP09A1KF563K-	1.29	CP09A3KF563K-	1.0
.068	600V	CP08A1KF683K-	1.23	CP08A3KF683K-	1.02	CP09A1KF683K-	1.32	CP09A3KF683K-	1.1
.082	600V	CP08A1KF823K-	1.26	CP08A3KF823K-	1.05	CP09A1KF823K-	1.35	CP09A3KF823K-	1.1
.1	600V	CP08A1KF104K-	1.26	CP08A3KF104K-	1.05	CP09A1KF104K-	1.35	CP09A3KF104K-	1.1
.12	600V	CP08A1KF124K-	1.29	CP08A3KF124K-	1.08	CP09A1KF124K-	1.38	CP09A3KF124K-	1.1
.15	600V	CP08A1KF154K-	1.29	CP08A3KF154K-	1.08	CP09A1KF154K-	1.38	CP09A3KF154K-	1.1
.18	600V	CP08A1KF184K-	1.47	CP08A3KF184K-	1.20	CP09A1KF184K-	1.56	CP09A3KF184K-	1.2
.22	600V	CP08A1KF224K-	1.59	CP08A3KF224K-	1.32	CP09A1KF224K-	1.68	CP09A3KF224K-	1.4
.27	600V	CP08A1KF274K-	1.77	CP08A3KF274K-	1.50	CP09A1KF274K-	1.86	CP09A3KF274K-	1.5
.33	600V	CP08A1KF334K-	1.89	CP08A3KF334K-	1.62	CP09A1KF334K-	1.98	CP09A3KF334K-	1.7
.39	600V	CP08A1KF394K-	1.89	CP08A3KF394K-	1.62	CP09A1KF394K-	1.98	CP09A3KF394K-	1.7
.47	600V	CP08A1KF474K-	1.95	CP08A3KF474K-	1.68	CP09A1KF474K-	2.04	CP09A3KF474K-	1.7
.001	1000V	CP08A1KG102K-	.93	CP08A3KG102K-	.72	CP09A1KG102K-	.99	CP09A3KG102K-	.81
.0012	1000V	CP08A1KG122K-	.93	CP08A3KG122K-	.72	CP09A1KG122K-	.99	CP09A3KG122K-	.81
.0015	1000V	CP08A1KG152K-	.93	CP08A3KG152K-	.72	CP09A1KG152K-	.99	CP09A3KG152K-	.81
.0018	1000V	CP08A1KG182K-	.93	CP08A3KG182K-	.72	CP09A1KG182K-	.99	CP09A3KG182K-	.81
.0022	1000V	CP08A1KG222K-	.93	CP08A3KG222K-	.72	CP09A1KG222K-	.99	CP09A3KG222K-	.81
.0027	1000V	CP08A1KG272K-	.96	CP08A3KG272K-	.75	CP09A1KG272K-	1.02	CP09A3KG272K-	.84
.0033	1000V	CP08A1KG332K-	.96	CP08A3KG332K-	.75	CP09A1KG332K-	1.02	CP09A3KG332K-	.84
.0039	1000V	CP08A1KG392K-	1.02	CP08A3KG392K-	.81	CP09A1KG392K-	1.08	CP09A3KG392K-	.87
.0047	1000V	CP08A1KG472K-	1.02	CP08A3KG472K-	.81	CP09A1KG472K-	1.08	CP09A3KG472K-	.87
.0056	1000V	CP08A1KG562K-	1.05	CP08A3KG562K-	.84	CP09A1KG562K-	1.11	CP09A3KG562K-	.87
.0068	1000V	CP08A1KG682K-	1.05	CP08A3KG682K-	.84	CP09A1KG682K-	1.11	CP09A3KG682K-	.87
.0082	1000V	CP08A1KG822K-	1.05	CP08A3KG822K-	.84	CP09A1KG822K-	1.11	CP09A3KG822K-	.87
.01	1000V	CP08A1KG103K-	1.05	CP08A3KG103K-	.84	CP09A1KG103K-	1.11	CP09A3KG103K-	.87
.012	1000V	CP08A1KG123K-	1.05	CP08A3KG123K-	.84	CP09A1KG123K-	1.11	CP09A3KG123K-	.87
.015	1000V	CP08A1KG153K-	1.05	CP08A3KG153K-	.84	CP09A1KG153K-	1.11	CP09A3KG153K-	.87
.018	1000V	CP08A1KG183K-	1.05	CP08A3KG183K-	.84	CP09A1KG183K-	1.11	CP09A3KG183K-	.87
.022	1000V	CP08A1KG223K-	1.05	CP08A3KG223K-	.84	CP09A1KG223K-	1.11	CP09A3KG223K-	.87
.027	1000V	CP08A1KG273K-	1.11	CP08A3KG273K-	.90	CP09A1KG273K-	1.20	CP09A3KG273K-	.91
.033	1000V	CP08A1KG333K-	1.17	CP08A3KG333K-	.96	CP09A1KG333K-	1.26	CP09A3KG333K-	.96
.039	1000V	CP08A1KG393K-	1.23	CP08A3KG393K-	1.02	CP09A1KG393K-	1.32	CP09A3KG393K-	1.0
.047	1000V	CP08A1KG473K-	1.29	CP08A3KG473K-	1.08	CP09A1KG473K-	1.38	CP09A3KG473K-	1.0
.056	1000V	CP08A1KG563K-	1.35	CP08A3KG563K-	1.14	CP09A1KG563K-	1.44	CP09A3KG563K-	1.1
.068	1000V	CP08A1KG683K-	1.38	CP08A3KG683K-	1.17	CP09A1KG683K-	1.47	CP09A3KG683K-	1.1
.082	1000V	CP08A1KG823K-	1.44	CP08A3KG823K-	1.23	CP09A1KG823K-	1.53	CP09A3KG823K-	1.1
.1	1000V	CP08A1KG104K-	1.47	CP08A3KG104K-	1.26	CP09A1KG104K-	1.56	CP09A3KG104K-	1.1
.12	1000V	CP08A1KG124K-	1.56	CP08A3KG124K-	1.35	CP09A1KG124K-	1.65	CP09A3KG124K-	1.1
.15	1000V	CP08A1KG154K-	1.65	CP08A3KG154K-	1.44	CP09A1KG154K-	1.74	CP09A3KG154K-	1.1
.18	1000V	CP08A1KG184K-	1.74	CP08A3KG184K-	1.50	CP09A1KG184K-	1.83	CP09A3KG184K-	1.1
.22	1000V	CP08A1KG224K-	1.83	CP08A3KG224K-	1.56	CP09A1KG224K-	1.92	CP09A3KG224K-	1.1
.27	1000V	CP08A1KG274K-	1.95	CP08A3KG274K-	1.68	CP09A1KG274K-	2.04	CP09A3KG274K-	1.1
.33	1000V	CP08A1KG334K-	2.10	CP08A3KG334K-	1.83	CP09A1KG334K-	2.19	CP09A3KG334K-	1.2
.39	1000V	CP08A1KG394K-	2.28	CP08A3KG394K-	2.01	CP09A1KG394K-	2.37	CP09A3KG394K-	1.2
.47	1000V	CP08A1KG474K-	2.43	CP08A3KG474K-	2.16	CP09A1KG474K-	2.52	CP09A3KG474K-	1.2

\*Request O. E. M. Prices in the following quantities: 25-49, 50-99, 100-499



# CAPACITORS

## INDUSTRIAL SECTION — MIL TYPES MIL-C-25C

### TYPES CP53, CP54, CP55



Hyvol J or H oil impregnated and filled, drawn-metal cased capacitors, immersion proof and hermetically sealed. This unusually compact "bathtub" type capacitor is the most popular of the small units for severe operating conditions. Available with terminals on side (CP53), top (CP54), or bottom (CP55). The standard tolerance on single section units is  $\pm 10\%$  (K), on multiple section units  $+20 -10\%$  (V).

P30				P30-T				P30-B				P30				P30-T				P30-B			
CAP.	VOLT.	SIDE TERM.	Net Price*	TOP TERM.	Net Price*	BOTTOM TERM.	Net Price*	CAP.	VOLT.	SIDE TERM.	Net Price*	TOP TERM.	Net Price*	BOTTOM TERM.	Net Price*	CAP.	VOLT.	SIDE TERM.	Net Price*	TOP TERM.	Net Price*	BOTTOM TERM.	Net Price*
2.0	100V	CP53B1EB205K	\$2.64					3X.1	600V	CP53B5EF104V	2.87	CP54B5EF104V	\$2.87	CP55B5EF104V	\$2.87	3X.25	600V	CP53B5EF254V	3.17	CP54B5EF254V	3.17	CP55B5EF254V	3.17
4.0	100V	CP53B1EB405K	3.26					3X.5	600V	CP53B5EF504V	3.88					3X.5	600V	CP53B5EF504V	3.88				
1.0	200V	CP53B1EC105K	2.27					.05	1000V	CP53B1EG503K	1.84					.1	1000V	CP53B1EG104K	1.95				
2.0	200V	CP53B1EC205K	2.90					.25	1000V	CP53B1EG254K	2.02					.5	1000V	CP53B1EG504K	2.16				
.5	400V	CP53B1KE504K	2.02	CP54B1KE504K	\$2.02			1.0	1000V	CP53B1EG105K	2.10					2X.05	1000V	CP53B4EG503V	2.53				
3X.5	400V	CP53B5EE504V	3.82					2X.1	1000V	CP53B4EG104V	2.53					2X.25	1000V	CP53B4EG254V	2.83				
.25	600V	CP53B1EF254K	1.91	CP54B1EF254K	1.91	CP55B1EF254K	1.91	2X.5	1000V	CP53B4EG504V	3.71					3X.05	1000V	CP53B5EG503V	2.94				
.5	600V	CP53B1EF504K	2.06	CP54B1EF504K	2.06	CP55B1EF504K	2.06	3X.1	1000V	CP53B5EG104V	3.21					3X.25	1000V	CP53B5EG254V	3.92				
1.0	600V	CP53B1EF105K	2.41	CP54B1EF105K	2.41	CP55B1EF105K	2.41																
2.0	600V	CP53B1EF205K	3.22	CP54B1EF205K	3.22	CP55B1EF205K	3.22																
2X.05	600V	CP53B4EF503V	2.47	CP54B4EF503V	2.47	CP55B4EF503V	2.47																
2X.1	600V	CP53B4EF104V	2.51	CP54B4EF104V	2.51	CP55B4EF104V	2.51																
2X.25	600V	CP53B4EF254V	2.59	CP54B4EF254V	2.59	CP55B4EF254V	2.59																
2X.5	600V	CP53B4EF504V	2.95	CP54B4EF504V	2.95	CP55B4EF504V	2.95																
2X1.0	600V	CP53B4EF105V	3.49	CP54B4EF105V	3.49	CP55B4EF105V	3.49																

CHARACTERISTIC F			
CAP.	VOLT.	SIDE TERM.	Net Price*
8.0	100V	CP53B1FB805K	\$4.86
10.0	100V	CP53B1FB106K	6.05



### MIL-C-25C

#### CP63, CP65 — Characteristics E & K

Compact, Hyvol M or J oil impregnated and filled, rectangular units. Immersion proof and hermetically sealed. Dual section has case grounded. Channel brackets attached. Standard tolerance on single section units,  $\pm 10\%$  (K), on multiple section units  $+20 -10\%$  (V).

P16-CT				P16-CB			
CAP.	VOLT.	TOP TERM.	Net Price*	BOTTOM TERM.	Net Price*		
.1	400V	CP63B1KE104K	\$1.90	CP65B1KE104K	\$1.90		
.25	400V	CP63B1KE254K	1.94				
1.0	400V	CP63B1EE105K	2.21				
.05	600V	CP63B1EF503K	1.83	CP65B1EF503K	1.83		
.25	600V	CP63B1EF254K	2.00	CP65B1EF254K	2.00		
.5	600V	CP63B1EF504K	2.07	CP65B1EF504K	2.07		
1.0	600V	CP63B1EF105K	2.31	CP65B1EF105K	2.31		
2X.1	600V	CP63B6EF104V	2.51	CP65B6EF104V	2.51		
2X.25	600V	CP63B6EF254V	2.66	CP65B6EF254V	2.66		
2X.5	600V	CP63B6EF504V	2.81	CP65B6EF504V	2.81		
.01	1000V	CP63B1EG103K	1.87	CP65B1EG103K	1.87		
.02	1000V	CP63B1EG203K	1.87	CP65B1EG203K	1.87		
.05	1000V	CP63B1EG503K	1.90	CP65B1EG503K	1.90		
.1	1000V	CP63B1EG104K	1.98				
.25	1000V	CP63B1EG254K	1.99				
.5	1000V	CP63B1EG504K	2.20				

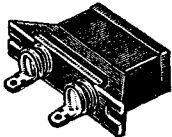


### MIL-C-25C

#### CP91 — Characteristics E & K

Former issues of MIL-C-25 listed variations of this item as CP61 and CP90. CP91 base size  $1\frac{1}{2} \times \frac{3}{8}$ . Brackets must be ordered separately. Specify CP091F (footed) or CP091S (spade).

P16			
CAP.	VOLT.	NO. BRACKETS	Net Price*
.1	400V	CP91B1KE104K	\$1.82
.25	400V	CP91B1KE254K	1.87
1.0	400V	CP91B1EE105K	2.13
.05	600V	CP91B1EF503K	1.75
.25	600V	CP91B1EF254K	1.92
.5	600V	CP91B1EF504K	1.99
1.0	600V	CP91B1EF105K	2.23
2X.05	600V	CP91B6EF503V	2.36
2X.1	600V	CP91B6EF104V	2.44
2X.25	600V	CP91B6EF254V	2.58
2X.5	600V	CP91B6EF504V	2.73
.01	1000V	CP91B1EG103K	1.79
.02	1000V	CP91B1EG203K	1.79
.05	1000V	CP91B1EG503K	1.82
.1	1000V	CP91B1EG104K	1.91
.25	1000V	CP91B1EG254K	1.92
.5	1000V	CP91B1EG504K	2.12



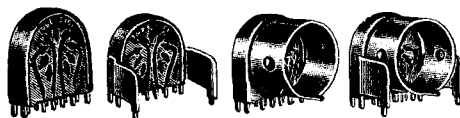
### MIL-C-25C

#### TYPES CP67, CP69 — Characteristics E

Hyvol M or J oil impregnated and filled unit, rectangular cased. Similar to CP91 except additional length in base size of  $1\frac{1}{2} \times \frac{3}{8}$ , permits 2 or 3 sections, case floating. Single units also can be used for special applications where type CP91 does not fit. Both CP67 and CP69 supplied with channel brackets attached. Standard tolerance on single section units  $\pm 10\%$  (K), on multiple section units  $+20 -10\%$  (V).

P18-CT				P18-CB				P18-CB			
CAP.	VOLT.	TOP TERM.	Net Price*	BOTTOM TERM.	Net Price*	CAP.	VOLT.	BOTTOM TERM.	Net Price*		
.05	600V	CP67B1EF503K	\$2.13	CP69B1EF503K	\$2.13	.1	1000V	CP69B1EG104K	\$2.27		
.1	600V	CP67B1EF104K	2.23	CP69B1EF104K	2.23	.25	1000V	CP69B1EG254K	2.36		
.25	600V	CP67B1EF254K	2.30	CP69B1EF254K	2.30	.5	1000V	CP69B1EG504K	2.53		
.5	600V	CP67B1EF504K	2.40	CP69B1EF504K	2.40	2X.01	1000V	CP69B4EG103V	2.54		
1.0	600V	CP67B1EF105K	2.63	CP69B1EF105K	2.63	2X.1	1000V	CP69B4EG203V	2.61		
2X.05	600V	CP67B4EF503V	2.64	CP69B4EF503V	2.64	2X.05	1000V	CP69B4EG503V	2.69		
2X.1	600V	CP67B4EF104V	2.69	CP69B4EF104V	2.69	2X.25	1000V	CP69B4EG104V	2.78		
2X.5	600V	CP67B4EF254V	2.90	CP69B4EF254V	2.90	3X.01	1000V	CP69B5EG254V	3.12		
3X.05	600V	CP67B5EF503V	3.25	CP69B5EF503V	3.25	3X.02	1000V	CP69B5EG303V	3.15		
3X.1	600V	CP67B5EF104V	3.24	CP69B5EF104V	3.24	3X.05	1000V	CP69B5EG503V	3.25		
3X.25	600V	CP67B5EF254V	3.52	CP69B5EF254V	3.52	3X.1	1000V	CP69B5EG104V	3.37		
.01	1000V	CP67B1EG103K	2.14	CP69B1EG103K	2.14						
.02	1000V	CP67B1EG203K	2.16	CP69B1EG203K	2.16						
.05	1000V	CP67B1EG503K	2.20	CP69B1EG503K	2.20						

### RIGHT ANGLE TUBE SOCKETS



Type A — for general purpose applications.  
 Type AX — for special applications (military and commercial) where extra strength and rigidity are required.  
 Type B — same as Type A except tube shield shell added.  
 Type BX — same as Type AX except tube shield shell added.  
 RA 7 — 7 pin right angle tube socket. RA 9 — 9 pin right angle tube socket

Available in 7-pin and 9-pin types in four styles, these sockets are designed to meet existing MIL Specifications. Active contacts are silver plated and non-fatiguing contact pressure provides proper insertion and withdrawal pressure with a minimum of contact resistance. Ideal for hand or mechanical insertion into printed-wiring boards using simple in-line punched round holes. Templates are furnished with each socket. Long terminals permit use of sockets on wide range of board thickness.

Cat. No.	Net Price**
RA7A	\$.83
RA7AX	.85
RA7B	.90
RA7BX	1.08
RA9A	.99
RA9AX	1.01
RA9B	1.06
RA9BX	1.24

\*Request O.E.M. Prices in the following quantities: 10-24, 25-49, 50-99, 100-499  
 \*\*Request O.E.M. Prices in the following quantities: 25-99, 100-499



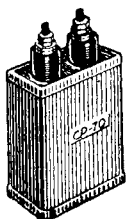
## CAPACITORS

## INDUSTRIAL SECTION — MIL TYPES

## TYPE CP70

## MIL-C-25C

## Characteristics E and F • Porcelain and Riveted Terminals



Hvyol M or J oil impregnated and filled, large, rectangular, metal-cased capacitor for heavy-duty, continuous-service applications such as power supplied for transmitters, amplifiers, etc. immersion proof and hermetically sealed. Available with either high-voltage screw-type porcelain-pillar terminals or the space-saving riveted terminal. Pillar terminals have soldering lugs.

Standard tolerance  $\pm 10\%$  (K). MIL-C-25C mounting brackets are also available for all units.

Units meet Vibration Grade 1 of MIL-C-25C—Designated by addition of numeral 1 to part number.

Capacity	Voltage	CHAR. E P09 Porc. Term	Case Size and Bkt. Desig.	Net Price*	CHAR. F P09 Porc. Term	Case Size and Bkt. Desig.	Net Price*	CHAR. E P09-R Rivet Term	Case Size and Bkt. Desig.	Net Price*	CHAR. F P09-R Rivet Term	Case Size and Bkt. Desig.	Net Price*
1.0	600V	CP70E1EF105K	A2	3.62				CP70B1EF105K	A2	3.06			
2.0	600V	CP70E1EF205K	A4	4.29	CP70E1FF205K	A3	4.09	CP70B1EF205K	A4	3.96	CP70B1FF205K	A3	3.77
4.0	600V	CP70E1EF405K	B4	5.68	CP70E1FF405K	B3	5.58	CP70B1EF405K	B4	5.52	CP70B1FF405K	B3	5.26
6.0	600V	CP70E1EF605K	C2	6.86	CP70E1FF605K	B6	6.55	CP70B1EF605K	C2	6.54	CP70B1FF605K	B6	6.23
8.0	600V	CP70E1EF805K	C3	8.43	CP70E1FF805K	C2	8.07	CP70B1EF805K	C3	7.89	CP70B1FF805K	C2	7.75
10.0	600V	CP70E1EF106K	D3	9.11	CP70E1FF106K	C4	8.69	CP70B1EF106K	D3	8.78	CP70B1FF106K	C4	8.37
.1	1000V	CP70E1EG104K	A1	2.70									
.25	1000V	CP70E1EG254K	A2	3.06									
.5	1000V	CP70E1EG504K	A2	3.24									
1.0	1000V	CP70E1EG105K	A3	4.14	CP70E1FG105K	A2	3.84	CP70B1EG105K	A3	3.68			
2.0	1000V	CP70E1EG205K	A6	5.41	CP70E1FG205K	A5	4.87	CP70B1EG205K	A6	4.73	CP70B1FG205K	A5	4.51
4.0	1000V	CP70E1EG405K	C2	6.84	CP70E1FG405K	B6	6.56	CP70B1EG405K	C2	6.38	CP70B1FG405K	B6	6.22
6.0	1000V	CP70E1EG605K	D3	8.46	CP70E1FG605K	C4	8.09	CP70B1EG605K	D3	8.13	CP70B1FG605K	C4	7.75
8.0	1000V	CP70E1EG805K	D5	9.05				CP70B1EG805K	D5	8.93	CP70B1FG805K	D2	9.15
10.0	1000V	CP70E1EG106K	E5	10.99	CP70E1FG106K	D5	10.91	CP70B1EG106K	E5	10.82	CP70B1FG106K	D5	10.08
12.0	1000V	CP70E1EG126K	E6	11.89				CP70B1EG126K	E6	11.75	CP70B1FG126K	E4	11.69
15.0	1000V	CP70E1EG156K	G2	13.15	CP70E1FG156K	F1	13.09	CP70B1EG156K	G2	13.01	CP70B1FG156K	F1	12.95
.5	1500V	CP70E1EH504K	A3	3.95				CP70B1EH504K	A3	3.46			
1.0	1500V	CP70E1EH105K	A6	4.64	CP70E1FH105K	A5	4.37	CP70B1EH105K	A6	4.23			
2.0	1500V	CP70E1EH205K	B6	6.54	CP70E1FH205K	B5	5.57	CP70B1EH205K	B6	5.51	CP70B1FH205K	B5	5.25
4.0	1500V	CP70E1EH405K	D4	8.77	CP70E1FH405K	C4	8.14	CP70B1EH405K	D4	8.20	CP70B1FH405K	C4	7.82
6.0	1500V	CP70E1EH605K	E5	10.66	CP70E1FH605K	D5	10.40	CP70B1EH605K	E5	10.53	CP70B1FH605K	D5	10.09
8.0	1500V	CP70E1EH805K	F2	13.66	CP70E1FH805K	F1	12.99	CP70B1EH805K	F2	12.92	CP70B1FH805K	F1	12.66
10.0	1500V	CP70E1EH106K	G4	15.64	CP70E1FH106K	G2	15.06	CP70B1EH106K	G4	13.79	CP70B1FH106K	G2	14.66
12.0	1500V	CP70E1EH126K	J3	17.01	CP70E1FH126K	G2	16.97	CP70B1EH126K	J3	16.89	CP70B1FH126K	G2	16.84
15.0	1500V	CP70E1EH156K	J6	18.74	CP70E1FH156K	J3	18.68	CP70B1EH156K	J6	18.61	CP70B1FH156K	J3	18.56
.25	2000V	CP70E1EJ254K	B1	4.47									
.5	2000V	CP70E1EJ504K	B2	4.64									
1.0	2000V	CP70E1EJ105K	B6	5.67	CP70E1FJ105K	B3	5.62						
2.0	2000V	CP70E1EJ205K	C4	6.71	CP70E1FJ205K	C3	6.65						
4.0	2000V	CP70E1EJ405K	E6	9.45	CP70E1FJ405K	E3	9.40						
6.0	2000V				CP70E1FJ605K	G1	12.24						
10.0	2000V				CP70E1FJ106K	J3	17.64						
12.0	2000V				CP70E1FJ126K	J5	20.50						
15.0	2000V				CP70E1FJ156K	J7	22.04						
.1	2500V	CP70E1EK104K	B1	6.50									
.5	2500V	CP70E1EK504K	B4	6.99	CP70E1FK504K	B3	6.93						
1.0	2500V	CP70E1EK105K	D2	7.97	CP70E1FK105K	D1	7.90						
2.0	2500V	CP70E1EK205K	E5	12.88	CP70E1FK205K	D5	12.82						
4.0	2500V	CP70E1EK405K	J2	17.96									
10.0	2500V	CP70E1EK106K	J10	40.72									
.1	3000V	CP70E1EL104K	B2	8.30									
.25	3000V	CP70E1EL254K	B3	8.79									
.5	3000V	CP70E1EL504K	B6	9.76									
1.0	3000V	CP70E1EL105K	E4	12.06									
2.0	3000V	CP70E1EL205K	G2	15.01	CP70E1FL205K	G1	11.45						
4.0	3000V	CP70E1EL405K	J7	22.05	CP70E1FL405K	J3	21.99						
.1	4000V	CP70E1EM104K	E1	10.99									
.25	4000V				CP70E1FM254K	E1	11.08						
.5	4000V				CP70E1FM504K	E3	12.15						
1.0	4000V				CP70E1FM105K	E6	15.27						
2.0	4000V				CP70E1FM205K	J4	21.56						
4.0	4000V	CP70E1EM405K	J11	39.44	CP70E1FM405K	J10	35.62						
.1	5000V	CP70E1EN104K	E1	11.41									
.25	5000V	CP70E1EN254K	E3	12.72									
.5	5000V	CP70E1EN504K	E6	15.44	CP70E1FN504K	E4	13.38						
1.0	5000V				CP70E1FN105K	J2	17.95						
2.0	5000V				CP70E1FN205K	J6	28.86						
.1	6000V	CP70D1EP104K	E3	13.68	CP70D1FP104K	E2	12.65						
.25	6000V	CP70D1EP254K	E5	16.50	CP70D1FP254K	E4	14.22						
.5	6000V	CP70D1EP504K	J3	20.58									
1.0	6000V	CP70D1EP105K	J11	32.46	CP70D1FP105K	J9	29.51						
.1	7500V				CP70D1FR104K	E3	13.46						
.25	7500V				CP70D1FR254K	J1	16.80						
.5	7500V				CP70D1FR504K	J4	23.69						

A1	1 1/8 x 1 1/4 x 1 3/8	E2	3/4 x 2 1/4 x 3 3/8
A2	1 1/8 x 1 1/4 x 2 1/4	E3	3/4 x 2 1/4 x 3 3/8
A3	1 1/8 x 1 1/4 x 2 7/8	E4	3/4 x 2 1/4 x 4 1/2
A4	1 1/8 x 1 1/4 x 3 1/4	E5	3/4 x 2 1/4 x 4 3/4
A5	1 1/8 x 1 1/4 x 3 7/8	E6	3/4 x 2 1/4 x 5 1/8
A6	1 1/8 x 1 1/4 x 4 3/4	F1	3/4 x 2 1/2 x 4 3/4
B1	2 1/2 x 1 3/4 x 2 1/2	F2	3/4 x 2 1/2 x 5 3/4
B2	2 1/2 x 1 3/4 x 2 7/8	G1	3/4 x 3 3/8 x 4 1/2
B3	2 1/2 x 1 3/4 x 3 1/2	G2	3/4 x 3 3/8 x 4 3/4
B4	2 1/2 x 1 3/4 x 3 7/8	G4	3/4 x 3 3/8 x 5 1/2
B5	2 1/2 x 1 3/4 x 4 1/4	J1	4 3/8 x 3 3/4 x 3 3/8
B6	2 1/2 x 1 3/4 x 4 3/4	J2	4 3/8 x 3 3/4 x 4 3/8
C2	3 3/4 x 1 1/4 x 3 7/8	J3	4 3/8 x 3 3/4 x 4 3/4
C3	3 3/4 x 1 1/4 x 4 1/4	J4	4 3/8 x 3 3/4 x 5 1/8
C4	3 3/4 x 1 1/4 x 4 3/4	J5	4 3/8 x 3 3/4 x 5 1/2
D1	3 3/4 x 1 3/4 x 3 1/4	J6	4 3/8 x 3 3/4 x 6
D2	3 3/4 x 1 3/4 x 3 7/8	J7	4 3/8 x 3 3/4 x 6 1/2
D3	3 3/4 x 1 3/4 x 4	J9	4 3/8 x 3 3/4 x 7 1/2
D4	3 3/4 x 1 3/4 x 4 1/4	J10	4 3/8 x 3 3/4 x 8 1/2
D5	3 3/4 x 1 3/4 x 4 3/4	J11	4 3/8 x 3 3/4 x 9 3/8
E1	3 3/4 x 2 1/4 x 2 3/4		

If MIL brackets are required with units, specify CP07S (spade) or CP07F (footed) and add the bracket designation listed beside the unit.

Example: CP70E1EF504K with CP07SA2 brackets.

\*Request O.E.M. Prices in the following quantities: 10-24, 25-49, 50-99

## TYPE CP41 — Characteristics E and F

Cylindrical, hermetically sealed can with screwbase molded cover for vertical mounting. Operating temperature range  $-55 + 85^{\circ}\text{C}$ . Solder lug, nonremovable terminals MIL designation B). Supplied with mounting nut and lockwasher. Standard tolerance  $\pm 10\%$  (K).

Units meet Vibration Grade 1 of MIL-C-25C Designated by addition of numeral 1 to part number.



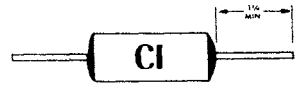
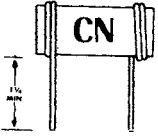
Capacity	Voltage	Char. E P10M	Net Price*	Char. F P10M	Net Price*
2.0	600V	CP41B1EF205K	4.82	CP41B1FF205K	4.82
4.0	600V	CP41B1EF405K	5.67	CP41B1FF405K	5.67
1.0	1000V	CP41B1EG105K	5.27	CP41B1FG105K	5.27
2.0	1000V	CP41B1EG205K	5.27	CP41B1FG205K	5.57
.5	1500V			CP41B1FH504K	4.62
1.0	1500V			CP41B1FH105K	6.42

\*Request O.E.M. Prices in the following quantities: 10-99



# CAPACITORS

## INDUSTRIAL CERAMIC CAPACITORS (cont.) Temperature Compensating Tubulars



Popular values in accordance with the latest revisions of specification MIL-C-20 and EIA specification RS-198. Uninsulated units are furnished color coded, packaged in bulk. Insulated units—stamped with part number. Voltage rating 500 VDCW.

UNINSULATED TYPE CN			INSULATED TYPE CI		UNINSULATED TYPE CN			INSULATED TYPE CI	
Cap.	MIL No.	Net Price*	MIL No.	Net Price*	Cap.	MIL No.	Net Price*	MIL No.	Net Price*
	<b>NPO</b>					<b>N750</b>			
.3	CC20CK0R3C	.33	CC21CK0R3C	.33	.5	CC20UK0R5C	.33		
.5	CC20CK0R5C	.33	CC21CK0R5C	.33	.75	CC20UKR75C	.33	CC21UKR75C	.33
.68	CC20CKR68C	.33	CC21CKR68C	.33	1.0	CC20UK010C	.33	CC21UK010C	.33
.75	CC20CKR75C	.33	CC21CKR75C	.33	1.5	CC20UK1R5C	.33	CC21UK1R5C	.33
1.0	CC20CK010C	.33	CC21CK010C	.33	2.0	CC20UK020C	.33	CC21UK020C	.33
1.2	CC20CK1R2C	.33	CC21CK1R2C	.33	5.0	CC20UJ050C	.33	CC21UJ050C	.33
1.5	CC20CK1R5C	.33	CC21CK1R5C	.33	10.0	CC20UJ100C	.33	CC21UJ100C	.33
2.0	CC20CK020C	.33	CC21CK020C	.33	12.0	CC20UJ120G	.33	CC20UJ120G	.33
2.2	CC20CK2R2C	.33	CC21CK2R2C	.33	15.0	CC20UJ150G	.33	CC21UJ150G	.33
3.0	CC20CJ030C	.33	CC21CJ030C	.33	18.0	CC20UJ180G	.33	CC21UJ180G	.33
4.0	CC20CH040C	.33	CC21CH040C	.33	20.0	CC20UJ200G	.33	CC21UJ200G	.33
5.0	CC20CH050C	.33	CC21CH050C	.33	22.0	CC20UJ220G	.33	CC21UJ220G	.33
6.0	CC20CH060C	.33	CC21CH060C	.33	24.0	CC20UJ240G	.33	CC21UJ240G	.33
6.2	CC20CH6R2C	.33	CC21CH6R2C	.33	27.0	CC20UJ270G	.33	CC21UJ270G	.33
7.0	CC20CH070C	.33	CC21CH070C	.33	30.0	CC20UJ300G	.33	CC21UJ300G	.33
8.0	CC20CH080C	.33	CC21CH080C	.33	33.0	CC20UJ330G	.33	CC21UJ330G	.33
9.0	CC20CH090C	.33	CC21CH090C	.33	36.0	CC20UJ360J	.33	CC21UJ360J	.33
10.0	CC20CH100C	.33	CC21CH100C	.33	39.0	CC20UJ390J	.33	CC21UJ390J	.33
12.0	CC20CH120G	.33	CC21CH120G	.33	43.0	CC20UJ430J	.33	CC21UJ430J	.33
15.0	CC20CH150G	.33	CC21CH150G	.33	47.0	CC20UJ470J	.33	CC21UJ470J	.33
18.0	CC20CH180G	.33	CC21CH180G	.33	51.0	CC20UJ510J	.33	CC21UJ510J	.33
20.0	CC20CH200G	.33	CC21CH200G	.33	56.0	CC20UJ560J	.33	CC21UJ560J	.33
22.0	CC20CH220G	.33	CC21CH220G	.33	62.0	CC20UJ620J	.33	CC21UJ620J	.33
24	CC25CH240G	.33	CC26CH240G	.33	68.0	CC25UJ680J	.33	CC26UJ680J	.33
27	CC25CH270G	.33	CC26CH270G	.33	75.0	CC25UJ750J	.33	CC26UJ750J	.33
30	CC25CH300G	.33	CC26CH300G	.33	82.0	CC25UJ820J	.33	CC26UJ820J	.33
33	CC25CH330G	.33	CC26CH330G	.33	91.0	CC25UJ910J	.33	CC26UJ910J	.33
36	CC25CH360J	.33	CC26CH360J	.33	100.0	CC25UJ101G	.33	CC26UJ101J	.33
39	CC25CH390J	.33	CC26CH390J	.33	110	CC25UJ111G	.33	CC26UJ111J	.33
43	CC25CH430J	.33	CC36CH430J	.33	120	CC25UJ121G	.33	CC26UJ121J	.33
47	CC25CH470J	.33	CC36CH470J	.33	130	CC25UJ131G	.33	CC36UJ131J	.33
51	CC25CH510J	.33	CC36CH510J	.33	150	CC25UJ151G	.33	CC36UJ151J	.33
56	CC32CG560J	.33	CC36CG560J	.33	160	CC32UJ161G	.33	CC36UJ161J	.33
62	CC32CG620J	.33	CC36CG620J	.33	180	CC32UJ181G	.33	CC36UJ181J	.66
68	CC32CG680J	.33	CC36CG680J	.33	200	CC32UJ201G	.33	CC36UJ201J	.66
75	CC32CG750J	.33	CC36CG750J	.33	220	CC32UJ221G	.33	CC36UJ221J	.66
82	CC32CG820J	.33	CC36CG820J	.33	240	CC32UJ241G	.33	CC36UJ241J	.66
91	CC32CG910J	.33	CC36CG910J	.33	270	CC35UJ271F	.99	CC36UJ271J	.66
100	CC32CG101G	.33	CC36CG101J	.33	300	CC35UJ301F	.99	CC36UJ301J	.66
110	CC32CG111G	.33	CC36CG111J	.66	330	CC35UJ331F	.99	CC36UJ331F	.66
120	CC35CG121G	.50	CC36CG121J	.66	360	CC35UJ361F	.99	CC36UJ361J	.66
130	CC35CG131G	.50	CC36CG131J	.66	390	CC45UJ391F	.99		
150	CC35CG151G	.50	CC36CG151J	.66	430	CC45UJ431F	.99		
160	CC45CG161G	.66			470	CC45UJ471F	.99		
180	CC45CG181G	.66							
200	CC45CG201G	.66							
220	CC45CG221G	.66							
240	CC45CG241G	.66							
270	CC45CG271F	.99							
300	CC45CG301F	.99							

Type Designation	Max. Size	TOLERANCE	
MIL		Letter	Tolerance
CC20	.200 x .400	C	± .25 mmf.
CC21	.200 x .562		
CC25	.250 x .655	F	± 1%
CC26	.250 x .812		
CC32	.250 x .860	G	± 2%
CC35	.255 x 1.090		
CC36	.340 x 1.328	J	± 5%
CC45	.340 x 1.890		

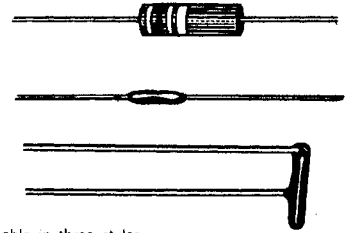
\*Request O.E.M. Prices in the following quantities: 25-99, 100-249, 250-499, 500-999



# CAPACITORS

## CERAFIL®

**INDUSTRIAL CERAMIC CAPACITORS**  
**ULTRAMINIATURE CAPACITORS**  
**DIPPED-RADIAL & AXIAL LEADS**  
**MOLDED-AXIAL LEADS**



Cerafil® capacitors are the smallest ceramic capacitors available anywhere. These remarkably ultra-miniature units are designed primarily for air-borne and space-borne equipments, having critical space and weight parameters. They are also designed for transistorized circuit applications in hearing aids and other critical requirements where space and weight are at an absolute premium. The unique design and construction features of Cerafil® capacitors make it possible to obtain extremely high capacities per unit volume. These tiny capacitors are the ideal answer to many problems created by the growing trend towards miniaturization of electronic assemblies and equipments.

When tested using Cerafil® ratings, these units will meet or surpass the requirements of MIL-C-11015C.

All 29 stock values are available in three styles.

1. C80V dipped axial leads (Also referred to as C80A or C80T)
2. Dipped radial lead units (Also referred to as C80R)
3. Completely new molded MC80V

The new molded unit features a rugged epoxy encapsulation which provides an even greater degree of reliability to the already missile proven Cerafil®. Increased mechanical strength and the uniform dimensions make the molded Cerafil® ideal for automated assembly operation.

For full technical information request Bulletins NPJ-119 REV. and NPJ-120 REV.

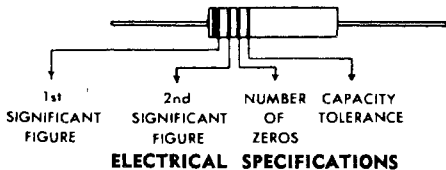
Capacity	†Dimensions		Dipped Axial Leads		Dipped Radial Leads		Mil-C-11015C	+ .003 Dimensions -.005		Molded Axial Leads			
	Diameter	Length	Part No.	Net Price*	Part No.	Net Price*	Part No.	Diameter	Length	± 20% Part No.	Net Price*	± 10% Part No.	Net Price*
.00001	.090	.320	C80V100AM	.52	C80V100RM	.57	AXCK12AX100M	.087	.315	MC80V100AM	.47	MC80V100AK	.59
.000022	.090	.320	C80V220AM	.52	C80V220RM	.57	AXCK12AX220M	.087	.315	MC80V220AM	.47	MC80V220AK	.59
.000033	.090	.320	C80V330AM	.52	C80V330RM	.57	AXCK12AX330M	.087	.315	MC80V330AM	.47	MC80V330AK	.59
.000047	.090	.320	C80V470AM	.52	C80V470RM	.57	AXCK12AX470M	.087	.315	MC80V470AM	.47	MC80V470AK	.59
.000056	.090	.320	C80V560AM	.52	C80V560RM	.57		.087	.315	MC80V560AM	.47	MC80V560AK	.59
.000068	.090	.320	C80V680AM	.52	C80V680RM	.57		.087	.315	MC80V680AM	.47	MC80V680AK	.59
.000082	.090	.320	C80V820AM	.52	C80V820RM	.57		.087	.315	MC80V820AM	.47	MC80V820AK	.59
.0001	.090	.320	C80V101AM	.52	C80V101RM	.57	AXCK12A X101M	.087	.315	MC80V101AM	.47	MC80V101AK	.59
.00022	.090	.320	C80V221AM	.52	C80V221RM	.57	AXCK12AX221M	.087	.315	MC80V221AM	.47	MC80V221AK	.59
.00033	.090	.320	C80V331AM	.52	C80V331RM	.57	AXCK12AX331M	.087	.315	MC80V331AM	.47	MC80V331AK	.59
.00047	.090	.320	C80V471AM	.52	C80V471RM	.57	AXCK12AX471M	.087	.315	MC80V471AM	.47	MC80V471AK	.59
.00056	.090	.320	C80V561AM	.52	C80V561RM	.57		.087	.315	MC80V561AM	.47	MC80V561AK	.59
.00068	.090	.320	C80V681AM	.52	C80V681RM	.57		.087	.315	MC80V681AM	.47	MC80V681AK	.59
.00082	.090	.320	C80V821AM	.52	C80V821RM	.57		.087	.315	MC80V821AM	.47	MC80V821AK	.59
.001	.090	.320	C80V102AM	.46	C80V102RM	.51	AXCK12AX102M	.087	.315	MC80V102AM	.41	MC80V102AK	.51
.002	.120	.500	C80V202AM	.76	C80V202RM	.84		.117	.495	MC80V202AM	.68	MC80V202AK	.85
.0022	.120	.500	C80V222AM	.76	C80V222RM	.84	AXCK13AX222M	.117	.495	MC80V222AM	.68	MC80V222AK	.85
.0033	.120	.500	C80V332AM	.76	C80V332RM	.84	AXCK13AX332M	.117	.495	MC80V332AM	.68	MC80V332AK	.85
.0047	.120	.500	C80V472AM	.76	C80V472RM	.84	AXCK13AX472M	.117	.495	MC80V472AM	.68	MC80V472AK	.85
.005	.120	.500	C80V502AM	.76	C80V502RM	.84		.117	.495	MC80V502AM	.68	MC80V502AK	.85
.0068	.180	.500	C80V682AM	1.00	C80V682RM	1.19		.157	.495	MC80V682AM	.90	MC80V682AK	1.13
.01	.180	.500	C80V103AM	1.00	C80V103RM	1.19	AXCK14AX103M	.157	.495	MC80V103AM	.90	MC80V103AK	1.13
.02	.200	.500	C80V203AM	1.83	C80V203RM	2.03		.197	.495	MC80V203AM	1.65	MC80V203AK	2.06
.022	.200	.500	C80V223AM	3.05	C80V223RM	3.38	AXCK15AX223M	.197	.495	MC80V223AM	2.75	MC80V223AK	3.44
.033	.240	.650	C80V333AM	3.05	C80V333RM	3.38		.237	.645	MC80V333AM	2.75	MC80V333AK	3.44
.047	.240	.650	C80V473AM	3.05	C80V473RM	3.38	AXCK16AX473M	.237	.645	MC80V473AM	2.75	MC80V473AK	3.44
.05	.240	.650	C80V503AM	3.05	C80V503RM	3.38		.237	.645	MC80V503AM	2.75	MC80V503AK	3.44
.068	.310	.750	C80V683AM	5.48	C80V683RM	6.08		.277	.745	MC80V683AM	4.93	MC80V683AK	6.16
.1	.310	.750	C80V104AM	5.48	C80V104RM	6.08	AXCK17AX104M	.277	.745	MC80V104AM	4.93	MC80V104AK	6.16

†Overall length may exceed dimensions shown by as much as 1/16" due to deposit of insulating material on leads.

### MARKING

The following color code system is used to denote capacity in micromicrofarads and tolerance.

Read from left to right starting with the largest band.



### ELECTRICAL SPECIFICATIONS

1. VOLTAGE — 100 VDCW; 300 VDC
2. CAPACITY TOLERANCE — ±10% (K), ±20% (M) as listed above.
3. INSULATION RESISTANCE — 100 mfd.—megohms or 10,000 megohms whichever is smaller.
4. TEMPERATURE COEFFICIENT — (—55°C to +85°C.)  
No voltage +10% to —15%.  
100 volts applied — +10% to —35%.
5. POWER FACTOR — 2.5% maximum.
6. OPERATING TEMPERATURE  
—55°C to 85°C at 100 volts  
—55°C to 125°C at 50 volts

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499

CAPACITANCE		TOLERANCE	
±20%		Black	
±10%		Brown	
CAPACITANCE			
0	Black	5	Green
1	Brown	6	Blue
2	Red	7	Violet
3	Orange	8	Gray
4	Yellow	9	White

### MECHANICAL SPECIFICATIONS

1. All dimensions in inches.
2. LEADS — Tinned Copper  
C80V—Below .01 mfd.—#26 gauge.  
.01 and above—#22 gauge.  
MC80V—.005 and below—#26 gauge.  
.0051 and above—#22 gauge.
3. LEAD LENGTHS — C80V—1 1/2" Min.  
MC80V—1 1/2" Min.
4. MARKING — Color code. No code for temperature coefficient; no code for lead designation since it is obvious.

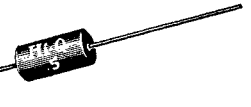


# CAPACITORS

## INDUSTRIAL CERAMIC CAPACITORS (cont.)



### HIGH CAPACITY, HIGH RELIABILITY, ROLLED CERAMIC CAPACITORS



Cerol® capacitors are rolled ceramic capacitors in the high capacitance range of paper and plastic film dielectrics but in much smaller physical sizes and with superior electrical characteristics. Designed for general applications in bypass-coupling, filtering and blocking circuits. Excellent electrical characteristics for critical applications in decoupling and pulse circuits where low series resistance at high frequencies together with miniature sizes are required. Low series resistance makes them ideal for use in all computer circuits. Operating tempera-

ture range at rated voltage —55°C to 85°C and at 50% rated voltage —55°C to 125°C. Capacitance tolerance is ±20%. Will meet or surpass all the requirements of MIL-C-11015B.

Cerol capacitors are available in three types; type CR89, CR90 and CR91 rated at 50V, 100V and 200V respectively at 85°C and derated by 50% at 125°C.

Units are stamped with the rated voltage for identification of type.

For full technical information request Bulletin NPJ-112 (Rev.)

Value	TYPE CR89 — 50 VDCW				TYPE CR90 — 100 VDCW				TYPE CR91 — 200 VDCW				
	Stock Items	D Max In.	L Max In.	Net Price*	Stock Items	D Max In.	L Max In.	Net Price*	Stock Items	D Max In.	L Max In.	Net Price*	
.1 MFD	CR89W104AM	.140	.400	3.65	CR90V104AM	.210	.690	4.05	CR91W104AM	.290	.495	4.86	Brown, Black, Yellow & Black Red Green, Yellow & Black Green, Black, Yellow & Black Brown, Black, Green, Black Red, Black, Green, Black
.25 MFD	CR89W254AM	.210	.495	4.86	CR90V254AM	.260	.690	5.40	CR91W254AM	.350	.690	6.48	
.5 MFD	CR89W504AM	.260	.495	7.90	CR90V504AM	.350	.690	8.77	CR91W504AM	.440	.690	10.54	
1.0 MFD	CR89W105AM	.260	.690	12.15	CR90V105AM	.480	.690	13.50	CR91W105AM	.470	1.000	16.20	
2.0 MFD	CR89W205AM	.350	.690	18.23	CR90V205AM	.400	1.440	20.25	CR91W205AM	.520	1.440	24.30	

### SPECIFICATIONS

Axial gold plated dumet leads are standard. Tinned copper leads also available on special order. All values — #22 gauge except CR89W104AM has 26 gauge leads. For non-standard values, use dimensions of next higher standard value and order special.

Power Factor — 2% Maximum  
Insulation Resistance = 100 Meg. — Mfd. minimum  
Series Resistance < .20 ohms at 8 to 10 mc.  
Test Voltage = 3 times Rated Voltage  
Other requirements per MIL-C-11015C

T. C.	TYPE	TYPES
—55° to +125°C	CR90	CR89 & CR91
0 Voltage	+15%, —25%	+10%, —30%
@ Rated Voltage	+15%, —35%	+10%, —40%

\*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499

## MILITARY CERAMIC DISCS



### MIL-C-11015B DISC CERAMICS

These general purpose capacitors are made in accordance with the requirements of the Military Specifications.

Rated at 500 VDCW. Units identified by letter A as 5th digit are made to operate from —55°C to +85°C.

Those with letter B as fifth digit operate from —55°C to +125°C. Tolerances as noted.

CAP.	TOL.	MIL NO.	Net Price*	CAP.	TOL.	MIL NO.	Net Price*
2.2 mmf	10%	CK60BV2R2K	.202	220 mmf	10%	CK61BX221K	.172
3.3	10%	CK60BV3R3K	.202	220	20%	CK61BX221M	.158
4.7	10%	CK60BV4R7K	.202	330	10%	CK61BX331K	.172
6.8	10%	CK60BV6R8K	.202	330	20%	CK61BX331M	.158
10	10%	CK60BV100K	.202	470	10%	CK61BX471K	.172
15	10%	CK60BV150K	.202	470	20%	CK61BX471M	.158
22	10%	CK60BV220K	.202	680	10%	CK61BX681K	.172
33	10%	CK60BX330K	.172	680	20%	CK61BX681M	.158
33	20%	CK60BX330M	.158	2200	20%	CK61AW222M	.142
47	10%	CK60BX470K	.172	820	10%	CK62BX821K	.172
47	20%	CK60BX470M	.158	820	20%	CK62BX821M	.158
68	10%	CK60BX680K	.172	1000	10%	CK62BX102K	.172
68	20%	CK60BX680M	.158	1000	20%	CK62BX102M	.158
100	10%	CK60BX101K	.172	1500	10%	CK62BX152K	.176
100	20%	CK60BX101M	.158	1500	20%	CK62BX152M	.162
150	10%	CK60BX151K	.172	2200	10%	CK62AX222K	.154
150	20%	CK60BX151M	.158	2200	20%	CK62AX222M	.142
220	10%	CK60AX222K	.154	3300	20%	CK62AW332M	.142
220	20%	CK60AX222M	.142	4700	20%	CK62AW472M	.144
330	10%	CK60AX331K	.154	6800	20%	CK62AW682M	.144
330	20%	CK60AX331M	.142	8200	20%	CK62AW822M	.144
470	10%	CK60AX471K	.154	2200	10%	CK63BX222K	.176
470	20%	CK60AX471M	.142	2200	20%	CK63BX222M	.162
680	20%	CK60AW681M	.142	3300	10%	CK63BX332K	.176
820	20%	CK60AW821M	.142	3300	20%	CK63BX332M	.162
1000	20%	CK60AW102M	.142	10000	20%	CK63AW103M	.166
1500	20%	CK60AW152M	.142				

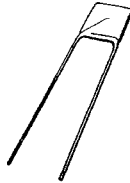
Request O.E.M. Prices in the following quantities: 50-99, 100-499, 500-999



# CAPACITORS

## INDUSTRIAL CERAMIC CAPACITORS (cont.)

### SUBMINIATURE THIN PLATE CAPACITORS TYPES TPNPO, TP25 & TP89



Subminiature rectangular ceramic capacitors with a difference. Slim design allows close assembly, small size-maximum circuit density. Ideal for transistorized circuit and micro-module applications.

- Close temperature coefficients
- Operation to 125°C
- Closer standard tolerances
- Radial or axial lead
- Gold plate Dumet leads

For complete technical data request bulletin NPJ-122.

#### TYPICAL PROPERTIES

	TYPE TPNPO	TYPE TP25	TYPE TP89
Voltage, VDCW (at 85° C, Derated 50% (at 125° C)	50	50	50
Power Factor, Maximum @ 1 KC.	.1%	.6%	2%
Temperature Coefficient with 0 Voltage, —55°C to +125°C.	0±30PPM/°C	+5%, —8%	+10%, —30%
Temperature Coefficient with rated Voltage applied, —55°C to +125°C.	0±30PPM/°C	+5%, —10%	+10%, —40%
Capacity Tolerance	±5%	±10%	±20%

#### TYPICAL CAPACITY RANGE—MMF

MAXIMUM SIZE (L x W x t)	TYPE TPNPO	TYPE TP25	TYPE TP89
.100 x .100 x .060"	5 - 20	25 - 140	360 - 1300
.150 x .150 x .060"	21 - 50	141 - 350	1301 - 3300
.200 x .200 x .060"	51 - 100	351 - 700	3301 - 6600
.250 x .250 x .060"	101 - 160	701 - 1200	6601 - 10500
.300 x .300 x .060"	161 - 220	1201 - 1500	10501 - 14500
.350 x .350 x .060"	221 - 305	1501 - 2100	14501 - 20000

Spacing between radial leads is .100" on the .100" and .150" case sizes; .200" on all other case sizes.

#### STOCK VALUES\*

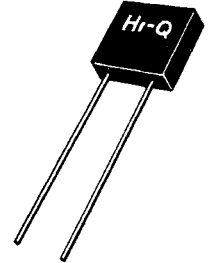
Capacitance in MMFD.	CAT. NO. TPNPO	*Net Price	CAT. NO. TP25	*Net Price	CAT. NO. TP89	*Net Price
4.7	TPNPO-4R7*J	.68				
6.8	TPNPO-6R8*J	.68				
10.0	TPNPO-100*J	.68				
15.0	TPNPO-150*J	.68				
22.0	TPNPO-220*J	.68				
33.0	TPNPO-330*J	.68	TP25-330*K	.60		
47.0	TPNPO-470*J	.68	TP25-470*K	.60		
68.0	TPNPO-680*J	.68	TP25-680*K	.60		
100	TPNPO-101*J	.68	TP25-101*K	.60		
150	TPNPO-151*J	.82	TP25-151*K	.60		
220	TPNPO-221*J	.82	TP25-221*K	.60		
330			TP25-331*K	.60		
470			TP25-471*K	.60	TP89-471*M	.48
680			TP25-681*K	.60	TP89-681*M	.48
1000			TP25-102*K	.72	TP89-102*M	.48
1500			TP25-152*K	.72	TP89-152*M	.48
2200			TP25-222*K	1.45	TP89-222*M	.48
3300					TP89-332*M	.48
4700					TP89-472*M	.48
6800					TP89-682*M	.58
10,000					TP89-103*M	.58
15,000					TP89-153*M	1.16
20,000					TP89-203*M	1.16

\*Insert "A" for axial leads or "R" for radial leads  
 †Intermediate values and closer tolerances available on special order  
 \*Request O.E.M. Prices in the following quantities: 50-99, 100-499

### TYPE MC52-MC62 MIL TYPE CK05-CK06

Test and compare these new reliable types.

- Will meet MIL-C-11015/18/19
- Will operate without derating at 200VDC from —55°C to +150°C
- Life tested at 400 VDC, 150°C
- Manufactured in complete new automated facility
- Molded (not shell encased)
- Ceralam Process



DIMENSIONS  
 CK05—.195 x .195 x .095  
 CK06—.295 x .295 x .095

These units are marked with capacity, voltage and tolerance.

For complete technical data request bulletin NPJ-123

Cap. MMF.	Commercial Designation	MIL-C-11015C Designation			
		± 10%	*Net Price	± 20%	*Net Price
10	MC52CW100*	CK05CW100K	1.11	CK05CW100M	.75
12	MC52CW120*	CK05CW120K	1.11		
15	MC52CW150*	CK05CW150K	1.11	CK05CW150M	.75
18	MC52CW180*	CK05CW180K	1.11		
22	MC52CW220*	CK05CW220K	1.11	CK05CW220M	.75
27	MC52CW270*	CK05CW270K	1.11		
33	MC52CW330*	CK05CW330K	1.11	CK05CW330M	.75
39	MC52CW390*	CK05CW390K	1.11		
47	MC52CW470*	CK05CW470K	1.11	CK05CW470M	.75
56	MC52CW560*	CK05CW560K	1.11		
68	MC52CW680*	CK05CW680K	1.11	CK05CW680M	.75
82	MC52CW820*	CK05CW820K	1.11		
100	MC52CW101*	CK05CW101K	1.11	CK05CW101M	.75
120	MC52CW121*	CK05CW121K	.75		
150	MC52CW151*	CK05CW151K	.75	CK05CW151M	.63
180	MC52CW181*	CK05CW181K	.75		
220	MC52CW221*	CK05CW221K	.75	CK05CW221M	.63
270	MC52CW271*	CK05CW271K	.75		
330	MC52CW331*	CK05CW331K	.75	CK05CW331M	.63
390	MC52CW391*	CK05CW391K	.75		
470	MC52CW471*	CK05CW471K	.75	CK05CW471M	.63
560	MC52CW561*	CK05CW561K	.75		
680	MC52CW681*	CK05CW681K	.75	CK05CW681M	.63
820	MC52CW821*	CK05CW821K	.75		
1000	MC52CW102*	CK05CW102K	.75	CK05CW102M	.63
1200	MC62CW122*	CK06CW122K	1.05		
1500	MC62CW152*	CK06CW152K	1.05	CK06CW152M	.89
1800	MC62CW182*	CK06CW182K	1.05		
2200	MC62CW222*	CK06CW222K	1.05	CK06CW222M	.89
2700	MC62CW272*	CK06CW272K	1.05		
3300	MC62CW332*	CK06CW332K	1.05	CK06CW332M	.89
3900	MC62CW392*	CK06CW392K	1.05		
4700	MC62CW472*	CK06CW472K	1.05	CK06CW472M	.89
5600	MC62CW562*	CK06CW562K	1.95		
6800	MC62CW682*	CK06CW682K	1.95	CK06CW682M	1.75
8200	MC62CW822*	CK06CW822K	1.95		
10000	MC62CW103*	CK06CW103K	1.95	CK06CW103M	1.75

For price of Commercial Units deduct 5¢ from Military Prices.  
 \*Add K for ± 10% tolerance or M for ± 20% tolerance  
 \*Request O.E.M. Prices in the following quantities: 50-99, 100-249, 250-499, 500-999

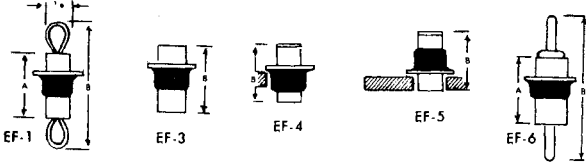




# CAPACITORS

## INDUSTRIAL CERAMIC CAPACITORS (cont.)

### Eyelet Feed-Thru Capacitors



Hi-Q Feed-Thru Capacitors Eyelet Type are the ultimate in miniaturization because of unique design. This design is such that the capacitors can be soldered directly to a chassis and provide excellent bypass performance where space is critical. The low inductance characteristics brought about through the construction of the capacitors make the eyelet type ideal for high frequency bypass.

\*Net Price .33

Style	Capacity in mmf						D.C. Working Voltage	Size	
	50	100	200	500	1000	1500		A	B
EF-1	50	100	200	500	1000	1500	500	.375	.750
EF-3	50	100	200	500	1000	1500	500	—	.375
EF-4	50	100	200	500	—	—	250	—	.250
EF-5	50	100	200	500	1000	—	250	—	.250
EF-6	50	100	200	500	1000	1500	500	.375	.875

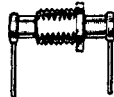
Tolerance  $\pm 20\%$  up to and including 500 mmfd. GMV above 500 mmfd.

\*Request O.E.M. prices in the following quantities: 25-99, 100-249, 250-499, 500-999.

### Feed-Thru Capacitors



FEED-THRU TYPE CFC



FEED-THRU TYPE CF

Hi-Q Feed-Thru Capacitors provide means to transmit thru shields or ground potentials and simultaneously by-pass unwanted frequencies. A good mechanical connection is provided by the silver-plated bushing. These are excellent dependable units even under severe mechanical vibrations as in aircraft, missiles and automotive requirements. All units are flash tested at 1250 volts D.C.

\*\*Net Price .99

Type	Cap. Mmfd.	Thread	Type	Cap. Mmfd.	Thread
CFC-1	500 mmfd.	12-28	CF-2	1800 mmfd.	$\frac{3}{16}$ -24
	1000 mmfd.	12-28		2300 mmfd.	$\frac{3}{16}$ -24
	1500 mmfd.	12-28		3000 mmfd.	$\frac{3}{16}$ -24
CF-1	1500 mmfd.	$\frac{1}{4}$ -28	CF-3	4000 mmfd.	$\frac{3}{16}$ -24
			CF-4	7000 mmfd.	$\frac{3}{16}$ -24

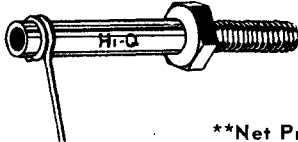
Tolerance  $\pm 20\%$

### Stand-Off Capacitors

TYPE MCS



TYPE CS



Hi-Q stand-off capacitors have a screw fixture for mounting to the chassis or common ground. All units are coated with a high temperature enamel, stamped with capacity and supplied with mounting nut, if desired.

The MCS is a quick mounting type which permits high speed mechanical installation. The ceramic tube is enclosed in a cadmium-plated metal case with a specially developed end seal for protection against humidity and temperature changes. All units are flash tested at 1250 volts D.C. The power factor is under 3% and the insulation resistance is above 7500 megohms.

\*\*Net Price .99

500 VDCW

Type	Capacity Mmfd.	Type	Capacity Mmfd.
CS-1A	50	CS-4	7500
CS-1A	100	CIS-1	50
CS-1B	500	CIS-1	100
CS-1B	1000	CIS-1	500
CS-1B	1500	CIS-1	1000
CS-2	3000	CIS-2	1500
CS-3	4000	MCS	1500

Radial leads only

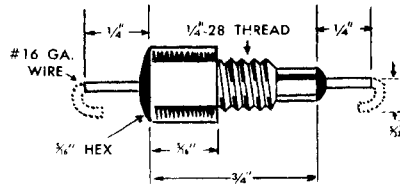
Tolerance  $\pm 10\%$  up to and including 500 mmf.  $\pm 20\%$  above 500 mmf.

\*\*Request O.E.M. Prices in the following quantities: 25-99, 100-249, 250-499, 500-999

### Heavy Duty Feed-Thru Capacitors

Type BLF-ICC

These heavy-duty Feed-Thru capacitors are the same as listed in specification MIL-C-11015. Units through 100 mmf. are rated at 1000 VDCW, values above 100 mmf. are rated at 500 VDCW. Capacity tolerance is  $\pm 10\%$  except on the 1000 mmf. and 1500 mmf. which have capacity tolerance of  $\pm 20\%$ .



BLF

FRACTIONAL TOLERANCES  $\pm \frac{1}{2}$

Capacity	Part Number	**Net Price
10	AXCK70AX100K	1.32
33	AXCK70AX330K	1.32
47	AXCK70AX470K	1.32
68	AXCK70AX680K	1.32
100	AXCK70AX101K	1.32
470	AXCK70AX471K	1.32
680	AXCK70AX681K	1.32
1000	AXCK70AW102M	1.32
1500	AXCK70AW152M	1.32

### Disk Stand-Off Capacitors

Type DS-C



DS-C

These units are very popular in industrial applications having a critical space requirement but requiring a stand-off capacitor. These stock units are furnished with captive lock washers, are rated at 950 VDCW. Capacity tolerance GMV. Both units are furnished with threaded portion  $\frac{3}{16}$ " long, #6-32 thread.

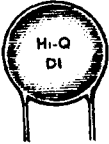
Capacity	**Net Price
470	.90
1000	.90



# CAPACITORS

## INDUSTRIAL CERAMIC CAPACITORS

### General Purpose Bypass Coupling Disks Type IDI



These industrial ceramic disks capacitors offer small physical sizes with high capacity. Mainly used for by-pass coupling or filter applications these units contain maximum protection against humidity, voltage breakdown, vibration. Rated for 500 VDCW these units are flash tested at 1500 VDC. Units will be marked with capacity and tolerance except those units which have a CK number listed. Such units are equivalent to those listed in MIL-C-11015 and will be marked with the number shown in the listing.

\*NET PRICE .15

Cap. mmf	Size	Tolerance	Cap. mmf	Size	Tolerance	Mil Equivalent MIL-C-11015A
2.2	DI-1	± 5 mmf.	470	DI-1	+100-20%	CK60Y471Z
3.3	DI-1	± 5 mmf.	500	DI-1	± 10%	
4.7	DI-1	± 5 mmf.	510	DI-1	± 10%	
5.0	DI-1	± 10%	560	DI-1	± 10%	
6.0	DI-1	± 10%	600	DI-2	± 10%	
6.5	DI-1	± 10%	680	DI-2	± 10%	
7.5	DI-1	± 10%	680	DI-1	+100-20%	CK60Y681Z
8.0	DI-1	± 10%	750	DI-2	± 10%	
8.2	DI-1	± 10%	800	DI-2	± 10%	
10	DI-1	± 10%	820	DI-2	± 10%	
12	DI-1	± 10%	820	DI-1	+100-20%	CK60Y821Z
15	DI-1	± 10%	910	DI-2	± 10%	
18	DI-1	± 10%	1000	DI-2	± 10%	
20	DI-1	± 10%	1000	DI-2	+100-20%	CK61Y102Z
22	DI-1	± 10%	1200	DI-3	± 10%	
24	DI-1	± 10%	1300	DI-3	± 10%	
25	DI-1	± 10%	1500	DI-3	± 10%	
27	DI-1	± 10%	1500	DI-3	+100-20%	CK61Y152Z
30	DI-1	± 10%	1600	DI-4	± 10%	
33	DI-1	± 10%	1800	DI-4	± 10%	
39	DI-1	± 10%	2000	DI-4	± 10%	
47	DI-1	± 10%	2200	DI-4	± 20%	
50	DI-1	± 10%	2200	DI-4	+100-20%	CK62Y222Z
51	DI-1	± 10%	2500	DI-4	± 20%	
56	DI-1	± 10%	2700	DI-4	± 20%	
68	DI-1	± 10%	3000	DI-4	± 20%	
75	DI-1	± 10%	3300	DI-4	± 20%	
82	DI-1	± 10%	3300	DI-4	+100-20%	CK62Y332Z
91	DI-1	± 10%	3900	DI-2	GMV	
100	DI-1	± 10%	4000	DI-2	GMV	
120	DI-1	± 10%	4300	DI-2	GMV	
130	DI-1	± 10%	4700	DI-4	± 20%	
150	DI-1	± 10%	4700	DI-4	+100-20%	CK62Y472Z
180	DI-1	± 10%	5000	DI-3	GMV	
200	DI-1	± 10%	5600	DI-3	GMV	
220	DI-1	± 10%	6800	DI-3	GMV	
240	DI-1	± 10%	7500	DI-4	GMV	
250	DI-1	± 10%	8200	DI-4	GMV	
270	DI-1	± 10%	10000	DI-5	± 20%	
300	DI-1	± 10%	10000	DI-5	+100-20%	CK63Y103Z
330	DI-1	± 10%				
350	DI-1	± 10%				
360	DI-1	± 10%				
390	DI-1	± 10%				
400	DI-1	± 10%				
470	DI-1	± 10%				

### Type TTD Transistor Disks

These square miniature disks are ideally suited for all applications where size is a factor such as transistorized radios and industrial applications having critical space requirements.

Units are rated at 100 VDCW ± 20% standard tolerance.

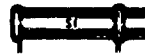


Capacity	Length & Width	Thickness	Net Price*
.005	.280	.125	.24
.01	.340	.125	.24
.02	.430	.125	.30
.025	.465	.125	.30
.03	.465	.125	.30
.05	.535	.125	.36
.1	.700	.125	.54

### GENERAL PURPOSE TUBULARS

The items listed below fall into two type categories. The type SI or "Dog Bone" Durez coated tubular, and the CI which is an insulated tubular made in a ceramic tube.

\*NET PRICE .17  
500 VDCW



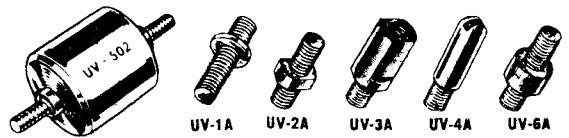
Cap. Mmfd.	Size	Cap. Mmfd.	Size	Cap. Mmfd.	Size
5	SI-1 CI-1	120	SI-1 CI-1	1800	SI-2 CI-2
10	SI-1 CI-1	150	SI-1 CI-1	2000	SI-2 CI-2
12	SI-1 CI-1	180	SI-1 CI-1	2200	SI-7 CI-3
15	SI-1 CI-1	200	SI-1 CI-1	2400	SI-7 CI-3
18	SI-1 CI-1	220	SI-1 CI-1	2500	SI-7 CI-3
20	SI-1 CI-1	240	SI-1 CI-1	2700	SI-7 CI-3
22	SI-1 CI-1	250	SI-1 CI-1	3000	SI-19 CI-3
24	SI-1 CI-1	270	SI-1 CI-1	3300	SI-19 CI-3
25	SI-1 CI-1	300	SI-1 CI-1	4000	SI-19 CI-3
27	SI-1 CI-1	330	SI-1 CI-1	4700	SI-3 CI-3
30	SI-1 CI-1	360	SI-1 CI-1	5000	SI-3 CI-3
33	SI-1 CI-1	390	SI-1 CI-1	5100	SI-3 CI-3
39	SI-1 CI-1	470	SI-1 CI-1	5600	SI-3 CI-3
47	SI-1 CI-1	500	SI-1 CI-1	6000	SI-3 CI-3
50	SI-1 CI-1	510	SI-1 CI-1	6800	SI-4
51	SI-1 CI-1	560	SI-1 CI-1	7500	SI-4
56	SI-1 CI-1	680	SI-1 CI-1	10,000	SI-5
68	SI-1 CI-1	750	SI-1 CI-1	15,000	SI-6
75	SI-1 CI-1	820	SI-1 CI-2	17,500	SI-6
82	SI-1 CI-1	910	SI-1 CI-2	20,000	SI-5 GMV
91	SI-1 CI-1	1000	SI-1 CI-2	25,000	SI-5 GMV
100	SI-1 CI-1	1200	SI-2 CI-2	30,000	SI-6 GMV
110	SI-1 CI-1	1500	SI-2 CI-2	33,000	SI-6 GMV

Standard Tolerance ± 20%

### HIGH VOLTAGE "CARTWHEELS"

Hi-Q high voltage "cartwheels" are thoroughly tested units capable of assuring dependable service while withstanding high voltages. This new universal type (UV) offers interchangeable terminals in 5 styles for use in filter and by-pass applications in TV high voltage power supplies.

#### Terminal Hardware



STOCK ITEMS

STOCK ITEMS—  
TERMINAL HARDWARE

Type	Voltage	Cap. Mmfd.	Net Price*	Type	Net Price*	Type	Net Price*
UV-501	10,000 VDCW	500 mmf.	.84	UV-1A	.06	UV-4A	.06
UV-502	20,000 VDCW	500 mmf.	1.11	UV-2A	.06	UV-6A	.06
UV-503	30,000 VDCW	500 mmf.	2.70	UV-3A	.06		

\*Request O.E.M. Prices in the following quantities: 50-up

### TUBULAR and DISK CAPACITOR SIZES

Designation	Size	Designation	Size
SI-1	.234 x .437	CI-1	.250 x .562
SI-2	.234 x .687	CI-2	.250 x .812
SI-3	.312 x 1.250	CI-3	.340 x 1.320
SI-4	.375 x 1.093	DI-0	3/4
SI-5	.375 x 1.600	DI-1	3/8
SI-6	.375 x 1.968	DI-2	3/8
SI-7	.275 x .875	DI-3	1/4
SI-13	.234 x .468	DI-4	1/32
SI-19	.312 x .937	DI-5	1/16
SI-22	.280 x .750	DI-6	3/4
SI-27	.275 x .500	DI-7	2/32



\*Request O.E.M. Prices in the following quantities: 25-99, 100-249, 250-499, 500-999

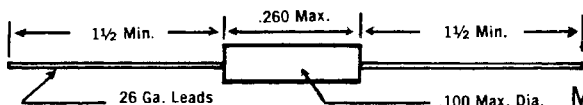




# CAPACITORS

## MC-70 CERAMIC CAPACITOR

10 µf to 20,000 µf available in a uniform molded case



Another new development from one of the world's leading pioneers in the design and manufacture of ceramic capacitors, the

MC-70 is ideally suited for automatic insertion in printed circuits. And it's sized right for Cordwood packaging compatibility. Check the specifications for yourself . . .

CAPACITY RANGES IN µf	MINIMUM CAPACITY TOLERANCE	MAXIMUM POWER FACTOR	RATED VOLTAGE AT 125°C	*CAPACITY CHANGE FROM -55°C TO +125°C		*TEMPERATURE COEFFICIENT LETTER FOR PART # DESIGNATION
				*WITH ZERO VOLTAGE APPLIED	*WITH RATED VOLTAGE APPLIED	
10-35	± 5%	.1%	100VDC	± 1%	± 1%	A
36-65	± 5%	.1%	100VDC	± 6%	± 6%	B
66-300	± 10%	.6%	100VDC	+5% - 8%	+5% - 10%	C
301-600	± 10%	2%	100VDC	+5% - 15%	+5% - 17%	D
601-2000	± 10%	2.5%	100VDC	+10% - 15%	+10% - 25%	E
2001-5000	± 10%	2.5%	100VDC	+10% - 20%	+10% - 30%	F
5001-10,000	± 20%	2.5%	100VDC	+10% - 30%	+10% - 40%	G
10,000-20,000	± 20%	2.5%	50VDC	+10% - 30%	+10% - 40%	G

\*TEMPERATURE COEFFICIENTS AVAILABLE ONLY AS LISTED

TYPICAL PART NUMBER CODE EXAMPLE FOR 10,000 µf†

MC	70	G	103	A	M
MOLDED CERAMIC	STYLE	TEMPERATURE COEFFICIENT (see last column above)	CAPACITY µf First Two Figures Significant Third Figure Indicates Number of Zeros	AXIAL LEADS	CAPACITY TOLERANCE J = ± 5% X = +50% K = ± 10% -20% M = ± 20% Z = GMV

### † STOCK LISTING

Cap.	Part No.	Net Price*	Cap.	Part No.	Net Price*
10	MC70A100AK	\$.64	680	MC70E681AK	\$.64
15	MC70A150AK	\$.64	820	MC70E821AK	\$.64
22	MC70A220AK	\$.64	1000	MC70E102AK	\$.64
33	MC70A330AK	\$.64	1500	MC70E152AK	1.46
47	MC70B470AK	\$.64	2200	MC70F222AK	3.38
56	MC70B560AK	\$.64	3300	MC70F332AK	3.38
68	MC70C680AK	\$.64	4700	MC70F472AK	3.38
82	MC70C820AK	\$.64	5600	MC70G562AM	3.09
100	MC70C101AK	\$.64	6800	MC70G682AM	3.09
150	MC70C151AK	\$.64	8200	MC70G822AM	3.09
220	MC70C221AK	\$.64	10000	MC70G103AM	3.09
330	MC70D331AK	\$.64	15000	MC70G153AM*	5.28
470	MC70D471AK	\$.64	20000	MC70G203AM*	5.28
560	MC70D561AK	\$.64	†100 VDCW *50 VDCW		

For full technical information request bulletin NPJ-129 Gold plated domet leads are standard. \*Request O.E.M. Prices in the following quantities: 25-49, 50-99, 100-499

### Hi-Q PLATE ASSEMBLIES

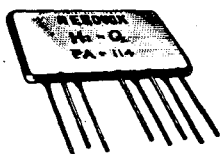
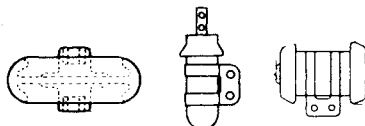


Plate assemblies are combinations of resistor-capacitor networks in one rugged miniature unit. Manufactured with high dielectric base plates and covered with a Durez moisture-proof coating and impregnated with low-loss microcrystalline wax. Simplifies assembly and gives dependable service. Widely used in radio and TV applications. 207 Stock items available. Request Catalog.

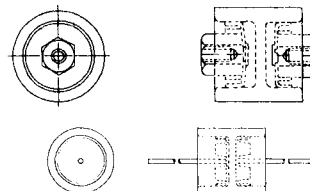
### HP POWER & TRANSMITTING CERAMIC CAPACITORS

Exclusive with Aerovox these Power and Transmitting Capacitors are gaining increasing popularity as a replacement for higher priced Transmitting Mica Capacitors. Units may be operated to 1050C without derating and may be safely stored at temperatures of -80°C to +185°C. The dielectric used retains its properties to the degree that the inductance at the connections are major limitations in the determination of series resonance frequencies. The effective frequency limit in many cases depends on the method of mounting. Mainly used for By-Pass and Blocking applications these units are finding an increasing usage by manufacturers of transmitters and other allied equipment.



### AEROCUP - POWER & TRANSMITTING TYPE AC0-AC8

Smaller version of the HPA - HPC etc. These Transmitting Ceramics find many applications due to standard mounting variations including Wire or Screw Terminals and Female inserts. Available in a wide range of capacities, tolerances, voltages and temperature coefficients. For full engineering details request Catalog from Aerovox Corporation, Distributor Division, or nearest authorized Aerovox Industrial Distributor.





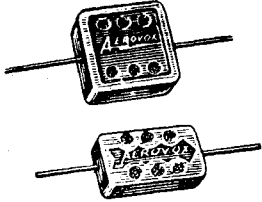
# CAPACITORS

## M I C A S

MIL Types CM15, CM20, CM30, CM35

AEROVOX Types 1459, 1468, 1469, 1467, 1464

Compact, precision-made mica dielectric capacitors made in accordance with specification MIL-C-5B. Units are furnished color coded and tested to meet all MIL requirements for "N" temperature rating and all vibration grades of this specification. Types 1467 and 1468 are stacked mica and foil units molded in yellow bakelite. Types 1459, 1464 and 1469 are silvered mica molded in red bakelite. TYPE 1459 MINATURE MICA IS THE LATEST EDITION TO THIS MOLDED MICA LINE.



Type CM-15 (500 VDCW)

Type CM-20 (500 VDCW)

Type CM-30 (500 VDCW)

1459			1468LS			1469			1467LS			1464		
Cap. Mnf.	Type Designation	Net Price*	Cap. Mnf.	Type Designation	Net Price**	Cap. Mnf.	Type Designation	Net Price*	Cap. Mnf.	Type Designation	Net Price**	Cap. Mnf.	Type Designation	Net Price*
1	CM-15C-010	.18	1	CM-20B-010	.18	5	CM-20C-050	.18	470	CM-30B-471	.18	470	CM-30D-471	.33
2	CM-15C-020	.18	5	CM-20B-050	.18	10	CM-20C-100	.18	500	CM-30B-501	.18	510	CM-30D-511	.33
3	CM-15C-030	.18	10	CM-20B-100	.18	12	CM-20C-120	.18	510	CM-30B-511	.18	560	CM-30D-561	.36
5	CM-15C-050	.18	12	CM-20B-120	.18	15	CM-20C-150	.18	560	CM-30B-561	.18	620	CM-30D-621	.36
10	CM-15C-100	.18	15	CM-20B-150	.18	18	CM-20C-180	.18	620	CM-30B-621	.18	680	CM-30D-681	.39
12	CM-15C-120	.18	18	CM-20B-180	.18	20	CM-20C-200	.18	680	CM-30B-681	.18	750	CM-30D-751	.39
15	CM-15C-150	.18	20	CM-20B-200	.18	22	CM-20C-220	.18	750	CM-30B-751	.18	800	CM-30D-801	.42
18	CM-15C-180	.18	22	CM-20B-220	.18	24	CM-20C-240	.18	820	CM-30B-821	.18	820	CM-30D-821	.42
20	CM-15C-200	.18	24	CM-20B-240	.18	25	CM-20C-250	.18	910	CM-30B-911	.18	900	CM-30D-901	.42
22	CM-15C-220	.18	25	CM-20B-250	.18	27	CM-20C-270	.18	1000	CM-30B-102	.21	910	CM-30D-911	.42
24	CM-15E-240	.18	27	CM-20B-270	.18	30	CM-20C-300	.18	1100	CM-30B-112	.21	1000	CM-30D-102	.45
27	CM-15E-270	.18	30	CM-20B-300	.18	33	CM-20C-330	.18	1200	CM-30B-122	.21	1100	CM-30D-112	.45
30	CM-15E-300	.18	33	CM-20B-330	.12	36	CM-20C-360	.18	1300	CM-30B-132	.21	1200	CM-30D-122	.45
33	CM-15E-330	.18	36	CM-20B-360	.12	39	CM-20C-390	.18	1500	CM-30B-152	.24	1300	CM-30D-132	.48
36	CM-15E-360	.18	39	CM-20B-390	.12	40	CM-20C-400	.18	1600	CM-30B-162	.24	1500	CM-30D-152	.51
39	CM-15E-390	.18	40	CM-20B-400	.12	43	CM-20C-430	.18	1800	CM-30B-182	.27	1600	CM-30D-162	.51
43	CM-15E-430	.18	43	CM-20B-430	.12	47	CM-20C-470	.18	2000	CM-30B-202	.27	1800	CM-30D-182	.54
47	CM-15E-470	.18	47	CM-20B-470	.12	50	CM-20C-500	.18	2200	CM-30B-222	.27	2000	CM-30D-202	.60
50	CM-15E-500	.18	50	CM-20B-500	.12	51	CM-20C-510	.18	2400	CM-30B-242	.30	2200	CM-30D-222	.66
51	CM-15E-510	.18	51	CM-20B-510	.12	56	CM-20C-560	.18	2500	CM-30B-252	.30	2400	CM-30D-242	.72
56	CM-15E-560	.18	56	CM-20B-560	.12	62	CM-20C-620	.18	2700	CM-30B-272	.30	2500	CM-30D-252	.72
62	CM-15E-620	.18	62	CM-20B-620	.12	68	CM-20C-680	.18	3000	CM-30B-302	.36	2700	CM-30D-272	.78
68	CM-15E-680	.18	68	CM-20B-680	.12	70	CM-20C-700	.18	3300	CM-30B-332	.36	3000	CM-30D-302	.84
75	CM-15E-750	.18	75	CM-20B-750	.12	75	CM-20C-750	.18	3600	CM-30B-362	.36	3300	CM-30D-332	.90
82	CM-15E-820	.18	82	CM-20B-820	.12	82	CM-20C-820	.18	3900	CM-30B-392	.39	3600	CM-30D-362	.96
91	CM-15E-910	.18	91	CM-20B-910	.12	91	CM-20C-910	.18	4000	CM-30B-402	.39	3900	CM-30D-392	1.02
100	CM-15E-101	.18	100	CM-20B-101	.12	100	CM-20C-101	.18	4300	CM-30B-432	.39	4000	CM-30D-402	1.02
110	CM-15E-111	.21	110	CM-20B-111	.12	110	CM-20C-111	.21	4700	CM-30B-472	.39	4300	CM-30D-432	1.08
120	CM-15E-121	.21	120	CM-20B-121	.12	120	CM-20C-121	.21	5000	CM-30B-502	.42	4700	CM-30D-472	1.14
130	CM-15E-131	.21	130	CM-20B-131	.15	130	CM-20C-131	.21	5100	CM-30B-512	.42	5000	CM-30D-502	1.20
150	CM-15E-151	.21	150	CM-20B-151	.15	150	CM-20C-151	.21	5600	CM-30B-562	.42	5100	CM-30D-512	1.20
160	CM-15E-161	.24	160	CM-20B-161	.15	160	CM-20C-161	.21	6000	CM-30B-602	.54	5600	CM-30D-562	1.26
180	CM-15E-181	.24	180	CM-20B-181	.15	180	CM-20C-181	.21	6200	CM-30B-622	.54	6200	CM-30D-622	1.32
200	CM-15E-201	.24	200	CM-20B-201	.15	200	CM-20D-201	.21	6800	CM-30B-682	.54	6800	CM-30D-682	1.32
220	CM-15E-221	.27	220	CM-20B-221	.15	220	CM-20D-221	.21	7000	CM-30B-702	.54	7500	CM-30D-752	1.44
240	CM-15E-241	.27	240	CM-20B-241	.18	240	CM-20D-241	.24	7500	CM-30B-752	.60	8200	CM-30D-822	1.44
250	CM-15E-251	.27	250	CM-20B-251	.18	250	CM-20D-251	.24	8000	CM-30B-802	.60	9100	CM-30D-912	1.44
270	CM-15E-271	.30	270	CM-20B-271	.18	270	CM-20D-271	.27	8200	CM-30B-822	.60			
300	CM-15E-301	.30	300	CM-20B-301	.18	300	CM-20D-301	.27	9000	CM-30B-902	.66			
330	CM-15E-331	.33	330	CM-20B-331	.18	330	CM-20D-331	.27	9100	CM-30B-912	.66			
360	CM-15E-361	.36	350	CM-20B-351	.18	350	CM-20D-351	.30	10000	CM-30B-103	.72			
390	CM-15E-391	.39	360	CM-20B-361	.18	360	CM-20D-361	.30						
430*	CM-15E-431	.42	390	CM-20B-391	.18	390	CM-20D-391	.30						
470*	CM-15E-471	.45	400	CM-20B-401	.18	400	CM-20D-401	.30						
500*	CM-15E-501	.48	430	CM-20B-431	.18	430	CM-20D-431	.30						
510*	CM-15E-511	.48	470	CM-20B-471	.18	470	CM-20D-471	.33						
			500	CM-20B-501	.18	500	CM-20D-501	.33						
			510	CM-20B-511	.18	510	CM-20D-511	.33						
			560	CM-20B-561	.21	560	CM-20D-561	.33						
			600	CM-20B-601	.21	620	CM-20D-621	.36						
			620	CM-20B-621	.21	680	CM-20D-681	.36						
			680	CM-20B-681	.21	750	CM-20D-751	.39						
			750	CM-20B-751	.21	820	CM-20D-821	.42						
			900	CM-20B-801	.24	910	CM-20D-911	.42						
			820	CM-20B-821	.24	1000	CM-20D-102	.45						
			900	CM-20B-901	.27									
			910	CM-20B-911	.27									
			1000	CM-20B-102	.27									

### Type CM-35 (500 VDCW)

1467LS			1464		
Cap. Mnf.	Type Designation	Net Price**	Cap. Mnf.	Type Designation	Net Price*
3600	CM-35B-362	.36	3600	CM-35D-362	.96
3900	CM-35B-392	.39	3900	CM-35D-392	1.02
4000	CM-35B-402	.39	4000	CM-35D-402	1.02
4300	CM-35B-432	.39	4300	CM-35D-432	1.08
4700	CM-35B-472	.39	4700	CM-35D-472	1.14
5000	CM-35B-502	.42	5000	CM-35D-502	1.20
5100	CM-35B-512	.42	5100	CM-35D-512	1.20
5600	CM-35B-562	.42	5600	CM-35D-562	1.26
6200	CM-35B-622	.54	6000	CM-35D-602	1.32
6800*	CM-35B-682	.57	6200	CM-35D-622	1.32
7000*	CM-35B-702	.57	6800*	CM-35D-682	1.32
7500*	CM-35B-752	.60	7000*	CM-35D-702	1.32
8000*	CM-35B-802	.69	7500*	CM-35D-752	1.44
8200*	CM-35B-822	.69	8000*	CM-35D-802	1.50
9100*	CM-35B-912	.69	8200*	CM-35D-822	1.56
10000*	CM-35B-103	.84	9100*	CM-35D-912	1.68
12000*	CM-35B-123	.96	10000*	CM-35D-103	1.86
13000*	CM-35B-133	1.02			
14000*	CM-35B-143	1.08			
15000*	CM-35B-153	1.20			

**NOTES**

In mica and foil construction the standard tolerance is +20%. Also available in ±10% and ±5%. Closest available tolerance up to and including 10 mmf. is ±1 mmf.; above 10 mmf. ±2% or ±2 mmf., whichever is greater. In silver mica the standard tolerance is ±5%. Also available in ±2% and ±1%. Closest available tolerance up to 10 mmf. is ±½ mmf.; 10 mmf. and up ±1% or ±1 mmf., whichever is greater.

Nominal Size All CM30 Units — ¼" x ¼" x ⅜"  
 Nominal Size All CM35 Units — ⅜" x ⅜" x ⅝"  
 Nominal Size All CM20 Units — ¼" x ¼" x ⅜"  
 Nominal Size All CM15 Units — ½" x ⅜" x ⅜"

\*Capacities are 300 WV. Type Designation 1467XLS and 1464X.

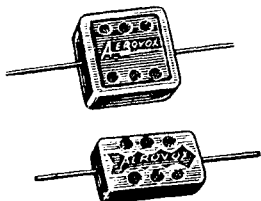
\*Request O.E.M. Prices in the following quantities: 25-99, 100-999, 500-999, 1000 and up

\*\*Request O.E.M. Prices in the following quantities: 50-99, 100 and up



# CAPACITORS

## RECEIVING MICA CAPACITORS — (Continued)



Type 1469HV and 1464HV

Designed especially for television, low power transmitters and power amplifier applications, these capacitors feature the highest voltages ever before available in these case sizes. They are furnished in silvered mica molded in red Bakelite. Standard Tolerance is plus and minus 5% and they are tested to meet EIA standards. Units are marked with capacity and working voltage and are tested at double the rated voltage to insure long life.

Type 1469-HV

Type 1464-HV

Type 1469-HV				Type 1464-HV			
1000 VDCW	1500 VDCW	2000 VDCW	3000 VDCW	1000 VDCW	1500 VDCW	2000 VDCW	3000 VDCW
VDCT	VDCT	VDCT	VDCT	VDCT	VDCT	VDCT	VDCT
Cap. Mmfd.	**Net Price	Cap. Mmfd.	**Net Price	Cap. Mmfd.	**Net Price	Cap. Mmfd.	**Net Price
5	.27	5	.30			430	.90
10	.27	10	.30			470	.90
12	.27	12	.30			500	.90
15	.27	15	.30			510	.90
18	.27	18	.30			560	.90
20	.27	20	.30			620	.90
22	.27	22	.30			680	.90
24	.27	24	.30	680	.72	750	.90
25	.27	25	.30	820	.72	820	1.02
27	.27	27	.30	910	.72	910	1.08
30	.27	30	.30	1000	.72	1000	1.08
33	.27	33	.30	1100	.72	1100	1.14
36	.27	36	.30	1200	.78	1200	1.32
39	.27	39	.30	1300	.78	1300	1.38
43	.27	43	.30	1500	.90	1500	1.56
47	.27	47	.33	1600	.96	1600	1.56
50	.27	50	.33	1800	.96	1800	1.74
51	.27	51	.33	2000	1.02	2000	1.92
56	.27	56	.33	2200	1.14	2200	2.04
62	.27	62	.33	2400	1.26	2400	2.16
68	.27	68	.33	2500	1.26		
75	.27	75	.33	2700	1.26		
82	.27	82	.33	3000	1.38		
91	.30	91	.36	3300	1.44		
100	.30	100	.36	3600	1.62		
110	.30	110	.36	3900	1.68		
120	.30	120	.36	4000	1.68		
130	.30	130	.36	4300	1.80		
150	.30	150	.42	4700	1.98		
160	.33	160	.42	5000	2.04		
180	.33	180	.42	5100	2.04		
200	.33	200	.48				
220	.36	220	.48				
240	.36	240	.48				
250	.39	250	.60				
270	.39	270	.60				
300	.42	300	.66				
330	.42	330	.66				
350	.42	350	.69				
360	.42	360	.69				
390	.42	390	.69				
400	.42	400	.69				
430	.45						
470	.45						
500	.45						
510	.45						
560	.48						
620	.51						

\*\*Request D.E.M. Prices in the following quantities: 25-99, 100-499, 500-999, 1000 and up



## DIPPED, SILVERED MICA CAPACITORS TYPES ADM-15, ADM-19, ADM-20 and ADM-30

Aerovox plastic-coated dipped-mica units exceed many of the advantages of molded mica units, and at the same time are smaller than conventional units. Meeting all the applicable MIL-C-5B Test Standards for molded mica capacitors, these unique dipped-mica units offer the following features:

- High operating temperatures —55° to +125°C
- Excellent long-life characteristics
- Improved temperature coefficient range
- Radial leads for automatic insertion and plug-in assemblies
- Ideal for printed-wiring assemblies
- Unsurpassed performance and stability characteristics
- Smaller physical size.

Humidity Resistance: these capacitors shall have an insulation resistance of not less than 2,000 megohms after being subjected to the Humidity Resistance Test as outlined in MIL-C-5B. Minimum Insulation Resistance: 25,000 megohms at 25°C; 1000 megohms at 125°C.

Capacitors will be marked with capacity and tolerance. In addition voltage rating will be marked on all units other than 500 volts rating.

For full technical information request Bulletin NPJ-104.

### CHARACTERISTICS

ADM-15—From 5 to 20 mmf. Characteristic "C", from 22 to 150 mmf. Characteristic "E", from 160 mmf. and up Characteristic "F".  
ADM-19—All capacities listed "F" Characteristic.  
ADM-20—All capacities listed "F" Characteristic.  
ADM-30—All capacities listed "F" Characteristic.

### Standard Tolerance ±5%

Minimum tolerance for capacitances up to and including 10 mmf. is ± 1/2 mmf., for all other capacitances ± 1% or 1 mmf. whichever is greater.

Sizes	L	W	T
ADM-15	1/32	3/16	1/32 max.
ADM-19	1/16	1/8	1/32 max.
ADM-20	1/8	1/4	1/32 max.
ADM-30	1/16	1/8	1/16 max.

Cap. Mmfd.	Type Designation	Net Price**
5	ADM-15-050	\$.17
10	ADM-15-100	.17
12	ADM-15-120	.17
15	ADM-15-150	.17
18	ADM-15-180	.17
20	ADM-15-200	.17
22	ADM-15-220	.17
24	ADM-15-240	.17
27	ADM-15-270	.17
30	ADM-15-300	.17
36	ADM-15-360	.17
39	ADM-15-390	.17
43	ADM-15-430	.17
47	ADM-15-470	.17
50	ADM-15-500	.17
51	ADM-15-510	.17
56	ADM-15-560	.17
62	ADM-15-620	.17
68	ADM-15-680	.17
75	ADM-15-750	.17
82	ADM-15-820	.17
91	ADM-15-910	.17
100	ADM-15-101	.17
110	ADM-15-111	.20
120	ADM-15-121	.20
130	ADM-15-131	.20
150	ADM-15-151	.20
160	ADM-15-161	.23
180	ADM-15-181	.23
200	ADM-15-201	.23
220	ADM-15-221	.26
240	ADM-15-241	.26
250	ADM-15-251	.26
270	ADM-15-271	.30
300	ADM-15-301	.30
330	ADM-15-331	.33
360	ADM-15-361	.33
390	ADM-15-391	.36
430	*ADM-15-431	.36
470	*ADM-15-471	.36
500	*ADM-15-501	.36
510	*ADM-15-511	.36
560		
620		
680		
750		
820		
910		
1000		
1100		
1200		
1300		
1500		
1600		
1800		
2000		
2200		
2400		
2500		
2700		
3000		
3300		
3600		
3900		
4300		
4700		
5000		
5100		
5600		
6200		
6800		
7500		
8200		
9100		
10000		
12000		
13000		
15000		

Type Designation	Net Price**
ADM-19-101	.17
ADM-19-111	.20
ADM-19-121	.20
ADM-19-131	.20
ADM-19-151	.20
ADM-19-161	.20
ADM-19-181	.20
ADM-19-201	.20
ADM-19-221	.20
ADM-19-241	.23
ADM-19-251	.23
ADM-19-271	.26
ADM-19-301	.26
ADM-19-331	.26
ADM-19-361	.30
ADM-19-391	.30
ADM-19-431	.30
ADM-19-471	.33
ADM-19-501	.33
ADM-19-511	.33
ADM-19-561	.37
ADM-19-621	.37
ADM-19-681	.40
ADM-19-751	.40
ADM-19-821	.40
ADM-19-911	.43
ADM-19-102	.46
ADM-19-112	.46
ADM-19-122	.50
ADM-19-132	.53
ADM-19-152	.56
ADM-19-162	.59
ADM-19-182	.66
ADM-19-202	.73
ADM-19-222	.79
*ADM-19-242	.86
*ADM-19-252	.89
*ADM-19-272	.92
*ADM-19-302	.99

Type Designation	Net Price**
ADM-20-681	\$.33
ADM-20-751	.33
ADM-20-821	.33
ADM-20-911	.37
ADM-20-102	.40
ADM-20-112	.40
ADM-20-122	.43
ADM-20-132	.46
ADM-20-152	.50
ADM-20-162	.53
ADM-20-182	.59
ADM-20-202	.63
ADM-20-222	.69
ADM-20-242	.73
ADM-20-252	.73
ADM-20-272	.79
ADM-20-302	.86
ADM-20-332	.92
ADM-20-362	.99
ADM-20-392	1.06
*ADM-20-432	1.12
*ADM-20-472	1.19
*ADM-20-502	1.25
*ADM-20-512	1.29

Type Designation	Net Price**
ADM-30-432	\$1.06
ADM-30-472	1.12
ADM-30-502	1.16
ADM-30-512	1.16
ADM-30-562	1.19
ADM-30-622	1.25
ADM-30-682	1.39
ADM-30-752	1.52
ADM-30-822	1.65
ADM-30-912	1.78
ADM-30-103	1.98
*ADM-30-123	2.31
*ADM-30-133	2.48
*ADM-30-153	2.81

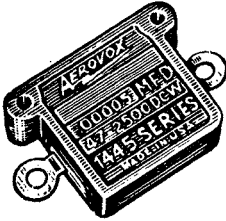
\*All items asterisked are rated at 300 VDCW.



# CAPACITORS

## TRANSMITTING MICA CAPACITORS

### TYPES 1445, 1446 and 1447



Designed with insulated mounting holes 1 1/4" apart independent of soldering lugs. Used to shunt meter windings.  
 Size: 1 1/8" x 1 3/8" x 1 1/2"  
 Standard Tolerance ±10%  
 ±5% and ±2% tolerance are available on special order. Meter Mounting Bracket E available. Specify when ordering. These units are equivalent to case styles CM45 and CM50 of specification MIL-C5B.

TYPE 1445	TYPE 1446	TYPE 1447
600 VDCW	1200 VDCW	2500 VDCW
1000 VDCT	2500 VDCT	5000 VDCT

Cap. Mfd.	Net* Price	Cap. Mfd.	Net** Price	Cap. Mfd.	Net* Price
.00005	.40	.00005	.48	.00005	.60
.0001	.40	.0001	.48	.000075	.60
.00015	.40	.00015	.48	.0001	.60
.0002	.40	.0002	.48	.00015	.60
.00025	.40	.00025	.48	.0002	.60
.0003	.40	.0003	.48	.00025	.60
.00035	.40	.00035	.48	.0003	.60
.0004	.40	.0004	.48	.00035	.60
.0005	.40	.0005	.48	.0004	.60
.001	.40	.001	.48	.0005	.66
.0015	.46	.0015	.58	.001	.90
.002	.48	.002	.66	.0015	1.14
.0025	.52	.0025	.72	.002*	1.42
.003	.54	.003	.82	.0025*	1.66
.004	.60	.004*	.96	.003*	1.90
.005	.66	.005*	1.14	.004*	2.40
.006	.76	.006*	1.30	.005*	2.88
.008	.84	.008*	1.62		
.01	1.00	.01*	2.40		
.015*	1.30	.015*	2.74		
.02*	1.62				
.025*	1.92				
.03*	2.26				
.04*	2.88				

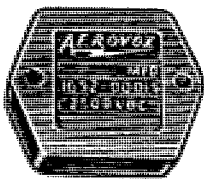
\*Thickness 7/16"

\*Request O.E.M. Prices in the following quantities: 100-499

### OTHER TRANSMITTING MICA CAPACITOR TYPES

### TYPES 1650L, 1651L, 1652L, 1653L and 1654L

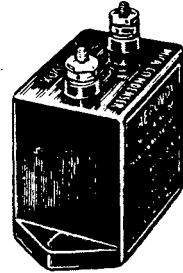
Heaviest-duty molded in bakelite mica capacitors of the AEROVOX line. Threaded mounting holes for roundhead screw terminals or plain holes available. Add suffix "A" for plain holes.



- 24 Stock Values at 600 WVDC
- 21 Stock Values at 1200 WVDC
- 20 Stock Values at 2500 WVDC
- 15 Stock Values at 3750 WVDC
- 11 Stock Values at 5000 WVDC

### TYPES 1991 thru 1996 Porcelain-Cased Capacitors

Ideal for high-frequency application. Glazed porcelain case, high temperature wax sealed. Heavy duty power terminals. Minimum power loss due to dielectric absorption. No heating at full load.  
 Size: 4" overall by 3" high; 2 1/2" between mounting holes.  
 Standard Tolerance ±10%



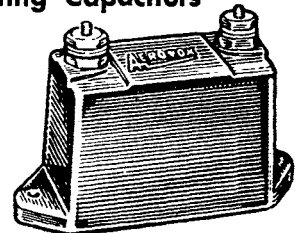
Cap. Mfd.	DC Voltage Rating	Type	Maximum Current Capacity - Amperes				Net Price
			15 mc	7.5 mc	3750 kc	1875 kc	
.00005	12,500	1996	3	2.5	1.5	1	8.75
.0001	12,500	1996	5	4	3	2	8.75
.00025	12,500	1996	7	8	6	4	8.75
.0005	12,500	1996	8	9	8	7	8.75
	7,000	1994	7	8	6	4	7.00
.001	12,500	1996	9	10	11	12	10.50
	7,000	1994	8	9	10	8	7.88
	3,500	1992	8	9	8	5	7.88
.0015	12,500	1996	9	10	11	12	12.25
	7,000	1994	9	9	10	8	8.75
	5,000	1993	8	9	9	7	7.88
	3,500	1992	8	9	8	5	7.88
	2,000	1991	7	8	8	5	7.00
.002	12,500	1996	9	12	13	15	14.00
	10,000	1995	9	10	11	12	12.25
	7,000	1994	9	9	10	10	9.63
	5,000	1993	8	9	9	8	8.75
	3,500	1992	8	8	9	7	7.88
	2,000	1991	7	8	8	6	7.00
.003	12,500	1996	9	12	13	15	17.50
	10,000	1995	9	11	12	13	15.75
	7,000	1994	9	10	10	10	10.50
	5,000	1993	8	9	9	9	9.63
	3,500	1992	8	9	9	8	8.75
	2,000	1991	7	8	8	7	7.88
.005	10,000	1995	10	13	14	15	17.50
	7,000	1994	9	11	12	11	15.75
	5,000	1993	9	11	12	10	10.50
	3,500	1992	9	10	11	9	9.63
	2,000	1991	8	9	10	8	8.75
.01	7,000	1994	10	13	15	15	21.00
	5,000	1993	10	13	15	15	15.75
	3,500	1992	10	13	14	14	14.00
	2,000	1991	10	13	14	14	10.50
.02	3,500	1992	10	14	16	17	15.75
	2,000	1991	10	13	15	15	12.25
.05	3,500	1992	10	14	17	18	17.50
	2,000	1991	10	14	16	17	14.00
.1	2,000	1991	10	14	17	18	17.50

### TYPES 1550L, 1570L and 1590L Potted Transmitting Capacitors

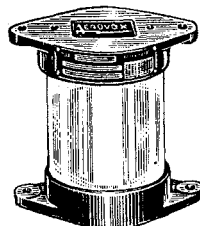
TYPE 1550L (Similar to CM70)

TYPE 1570L (Similar to CM65)

TYPE 1590L



### TYPES 1940, 1950, 1960, 1970 and 1980 Stack-Mounting Transmitting Capacitors



TYPE 1940

TYPE 1950 (Similar to CM75)

TYPE 1960 (Similar to CM80)

TYPE 1970 (Similar to CM85)

TYPE 1980 (Similar to CM90)

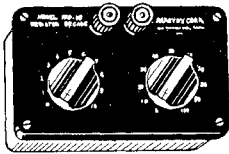




# CAPACITORS

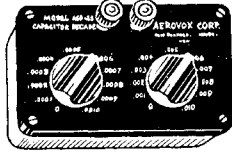
## AEROVOX DECADE BOXES

### RESISTANCE



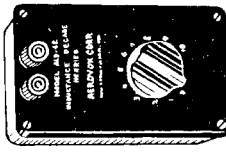
ARD

### CAPACITANCE

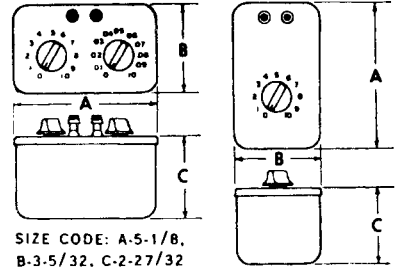


ACD

### INDUCTANCE



ALD



SIZE CODE: A-5-1/8,  
B-3-5/32, C-2-27/32

Laboratory quality Standards in capacitance, resistance and inductance at a price far below that of equivalent quality Standards. Available in ten units: three resistance decades, three capacitance decades and four inductance decades. Housed in a seamless, drawn steel case coated with gray enamel. Panels are black with the markings engraved in white.

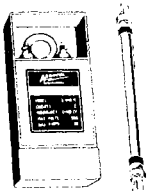
For full technical information request Bulletin NPJ-109.

All ratings are maximum and no guarantee can be enforced if ratings are exceeded in any way. Overload can change accuracy or cause actual burn-outs. Multiple dial units have the highest value multipliers on the left-hand side so that readings are in order exactly as they should be read.

PART NO.	TYPE	DIELECTRIC	DIALS	RANGE	STEPS	ACCURACY ±		RATING		Net PRICE
						1st Dial	2nd Dial	1st Dial	2nd Dial	
<b>RESISTANCE</b>										
ARD-15	R	Wire-Wound	2	0 to 110 ohms	1.0 ohm	5%	3%	1.0 Amp	.5 Amp	15.15
ARD-23	R	Wire-Wound	2	0 to 11 K	100 ohm	3%	3%	100 Ma.	50 Ma.	15.15
ARD-31	R	Carbon Deposited	2	0 to 1.1 meg.	10 K ohms	1%	1%	5 Ma.	2 Ma.	15.15
<b>CAPACITANCE</b>										
ACD-13	C	Mica	2	0 to .011 mfd.	.0001 mfd.	3%	3%	600 VDC 220 VAC	600 VDC 220 VAC	14.50
ACD-23	C	Oil Paper	2	0 to 1.1 mfd.	.01 mfd.	3%	3%	600 VDC 220 VAC	600 VDC 220 VAC	16.50
ACD-33	C	Oil-Paper	1	0 to 10.0 mfd.	1.0 mfd.	3%	—	600 VDC 220 VAC	—	27.25
<b>INDUCTANCE</b>										
ALD-12	L	Toroidal	1	0 to 10 mh.	1.0 mh.	2%	—	250 MaDC	—	29.90
ALD-22	L	Toroidal	1	0 to 100 mh.	10.0 mh.	2%	—	79 MaDC	—	29.90
ALD-32	L	Toroidal	1	0 to 1.0 hy.	100.0 mh.	2%	—	25 MaDC	—	29.90
ALD-42	L	Toroidal	1	0 to 10.0 hy.	1.0 hy.	2%	—	8 MaDC	—	32.90

## FILTERS

### SCREEN ROOM FILTERS



Screen room filters comply with rigid specifications set up by the designers of the most advanced type screen rooms. All have attenuation equal to or exceeding that of the screen room. Easy mounting arrangements plus high attenuation assure you of the finest equipment specially designed for screen room use. These filters are hermetically sealed and terminals at both ends are shielded using knock-outs for 3/4" and 1" conduit.

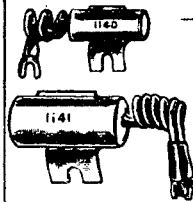
1 1/4" diameter mounting hole on all cases is countersunk to permit flush mounting of the filter on the screen room.

For full technical information request Bulletin NPJ-127.

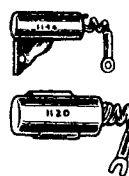
Part No.	Curr. (Amps.)	Cir-cuits	CPS	Attenuation vs. Frequency	Size L x W x D	Net Price
*S-1076-1	50	1	0-60	100 db from 14 kc to 1000 mc	20" x 3-5/8" x 3-5/8"	95.00
*S-1076-2	50	2	0-60	100 db from 14 kc to 1000 mc	20" x 7-3/16" x 3-5/8"	190.00
*S-1076-3	50	3	0-60	100 db from 14 kc to 1000 mc	20-1/8" x 10-7/8" x 3-11/16"	285.00
S-1142-1	30	1	0-400	100 db from 150 kc to 1000 mc	10-1/8" x 2-7/8" x 2-7/16"	36.50
S-1142-2	30	2	0-400	100 db from 150 kc to 1000 mc	10-1/8" x 4-3/4" x 2-7/16"	48.50
S-1142-3	30	3	0-400	100 db from 150 kc to 1000 mc	10-1/8" x 7" x 2-7/16"	62.50
S-1302-1	100	1	0-60	150 db from 200 kc to 1000 mc	14" x 4-3/8" x 4-3/8"	70.00
*S-1303-1	60	1	0-1000	100 db from 100 kc to 1000 mc	20" x 3-5/8" x 3-5/8"	100.00
S-1304-1	80	1	0-60	100 db from 14 kc to 1000 mc	22" x 4-3/8" x 4-3/8"	105.00
S-1305-1	100	1	0-1000	100 db from 100 kc to 1000 mc	22" x 4-3/8" x 4-3/8"	120.00
S-1361-1	100	1	0-60	100 db from 14 kc to 1000 mc	22" x 4-3/8" x 4-3/8"	130.00
S-1432-1	100	1	0-60	100 db from 100 kc to 1000 mc	22" x 4-3/8" x 4-3/8"	95.00
S-1455-1	100	1	0-60	100 db from 150 kc to 1000 mc	22" x 4-3/8" x 4-3/8"	90.00
					Overall L.	Overall D.
S-1468-A	50	1	0-1000	60 db/1000 mc to 10000 mc	10-3/4"	7/8" 70.00
S-1468-B	100	1	0-1000	60 db/1000 mc to 10000 mc	10-3/4"	7/8" 80.00

\*250 VAC/DC. All others 500VAC/DC.

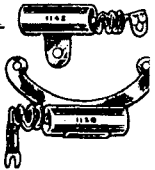
## AUTO-RADIO CAPACITORS



Type	Net Price	Cap. Mfd.
SINGLE ELEMENT		
Car Generators		
Type 1120	.54	1.0
Type 1140	.39	0.5
DUAL ELEMENT		
Type 1141	.90	0.5-0.5
Ford Auto Radios		
Type 1144	.48	0.5
For 1936 Models		
Type 1150	.60	0.5



Type	Net Price	Cap. Mfd.
Oil Gage Filter Condenser		
Type 1142-0	.54	0.25



For complete Catalog listing and Engineering information on RF Noise Suppressors and Interference Filters request Catalog from Aerovox Corporation, Distributor Division, or your nearest authorized Aerovox Industrial Distributor.

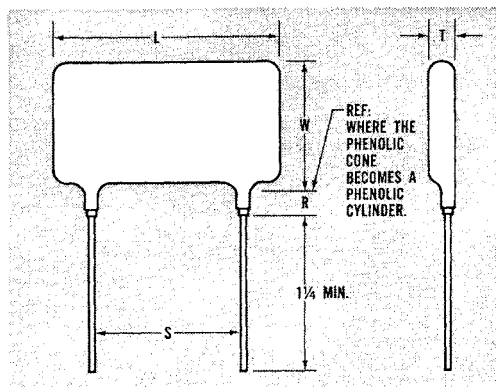
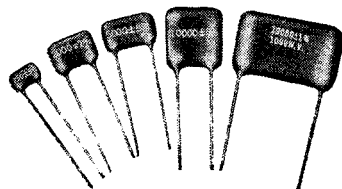


**ARCO**  
electronics inc.

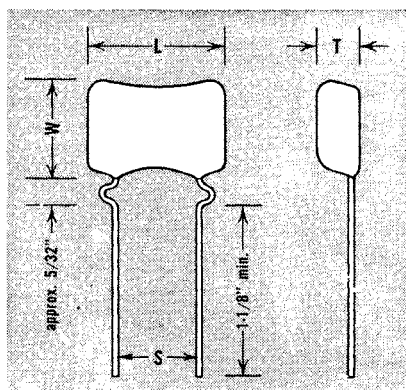
GREAT NECK, NEW YORK  
Branches: Los Angeles 35, Dallas 7

**ELMENCO**  
**CAPACITORS**

**DUR-MICA**  
**CASE SIZES**



	DM10	DM-15	DM-16	DM-19	DM-20	DM-30	DM-42	DM-43
<b>S</b>	9/64	15/64	1/2	11/32	7/16	7/16	1-1/16	1-11/16
<b>± 1/32</b>								
<b>"R" max.</b>	1/8	1/8	9/64	9/64	9/64	11/64	11/64	11/64
<b>LEAD WIRE GAGE</b>	#26	#22	#22	#20	#20	#18	#18	#18



**Crimped Leads**

In addition to the straight lead design, DM capacitors are also available with crimped leads for printed circuit application. The crimp provides a positive stop when capacitors are mounted. This prevents interference of resin coat on the leads with dip-solder operation, provides greater mounting uniformity, and elevates the components slightly above the surface of the board. The crimp lead design is not a regularly stocked item, but it is available to special order at a small fixed handling charge.

Lead wire gage for crimped lead units is the same as for straight lead capacitors with the exception of DM15 and DM16. Crimped lead gage of DM15 and DM16 is #20.

**Maximum Dimensions**

The following is a tabulation of maximum dimensions of the various DM case sizes. They have been specified to anticipate variations in coat thickness and minor protrusions on the surface. As a result, average dimensions of a given lot may be appreciably smaller than those listed.

It is to be noted that the leads are not centered in the thickness dimension as can be seen on the end view dimensional drawing. Construction of Elmenco Dur-Mica capacitors provides for leads to project from one surface of the mica stack, causing them in turn to extend from one edge of the capacitor. Regardless of case size and overall thickness, leads will always be within 1/16 to 3/32 from one of the capacitor surfaces.

Not all dimensions of every capacitance value are listed below. It has been found that size varies almost linearly with capacitance value. As a result, dimensions of values between those specified below should be determined by interpolation.

**CASE SIZES — DUR-MICA SERIES**

CASE SIZE	Cap. mmf.	Volt. VDCW	L max.	W max.	T max.
DM10	10	500	.360	.330	.190
	50	500	.370	.340	.190
	100	500	.370	.350	.200
	150	500	.380	.360	.210
	250	500	.390	.380	.220
	300	300	.390	.380	.220
	390	100	.390	.380	.220
DM15 (CM05)	10	500	.450	.360	.170
	100	500	.460	.360	.180
	200	500	.460	.380	.190
	300	500	.470	.390	.210
	500	500	.490	.420	.240
		560	300	.470	.390
	680	300	.470	.390	.210
	820	300	.470	.400	.230
	1000	100	.490	.420	.240
DM16	430	500	.730	.390	.210
	600	500	.740	.400	.220
	720	500	.740	.410	.230
		720	300	.730	.380
	900	300	.740	.390	.220
	1300	300	.740	.390	.230
DM19 (CM06)	100	500	.640	.500	.190
	500	500	.650	.510	.200
	1000	500	.650	.520	.220
	2000	500	.670	.530	.240
	3000	500	.680	.550	.280
	5000	500	.710	.590	.360
	6200	300	.690	.570	.330
	8200	100	.700	.580	.350
DM20	680	500	.750	.510	.200
	1000	500	.750	.510	.200
	2000	500	.760	.520	.220
	3900	500	.780	.560	.300
	5600	500	.790	.570	.330
	6800	300	.790	.560	.320
	7500	100	.780	.560	.300
	10000	100	.790	.570	.340
DM30 (CM07)	4300	500	.780	.860	.270
	6800	500	.780	.870	.300
	10000	500	.800	.890	.340
	15000	500	.810	.900	.390
	20000	500	.830	.920	.450
		20000	300	.810	.890
	25000	300	.820	.910	.420
	30000	300	.830	.920	.460
	36000	100	.830	.920	.450
DM42 (CM08)	20000	500	1.420	.870	.300
	30000	500	1.440	.890	.350
	50000	500	1.480	.920	.460
	62000	300	1.470	.920	.450
	82000	100	1.480	.920	.460
DM43	50000	500	2.060	.900	.380
	68000	500	2.070	.910	.440
		75000	300	2.060	.900
	100000	300	2.070	.910	.440
	130000	100	2.090	.930	.490

**TYPE SCDM SINGLE COAT**

SCDM	Cap. mmf.	Volt. VDCW	L max.	W max.	T max.
SCDM10	10	500	.310	.230	.120
	100	500	.320	.230	.130
	180	500	.330	.240	.150
	250	500	.340	.250	.160
	300	300	.340	.250	.160
	390	100	.340	.250	.160
SCDM15	10	500	.430	.280	.140
	100	500	.430	.280	.150
	270	500	.440	.300	.160
	510	500	.450	.310	.190
	560	300	.450	.310	.160
	820	300	.450	.310	.170
	1000	100	.450	.310	.170



# ELMENCO CAPACITORS

TYPES  
DM-15, DM-16  
DM-19, DM-20

## DUR-MICA

### TYPE DM-10 500VDCW

(SCDM 10 values and prices the same)

Cap. Mmf.	Type Designation	±10% "K"	±5% "J"	Tolerance ±2% "G"	±1% "F"
1	DM-10-010†	\$0.18			
2	DM-10-020†	.18			
3	DM-10-030†	.18			
5	DM-10-050	.18			
10	DM-10-100	.18	\$0.20		
12	DM-10-120	.21	.23		
15	DM-10-150	.21	.23		
18	DM-10-180	.21	.23		
20	DM-10-200	.21	.23		
22	DM-10-220	.21	.23		
24	DM-10-240	.21	.23		
27	DM-10-270	.21	.23	\$0.28	
30	DM-10-300	.21	.23	.28	
33	DM-10-330	.21	.23	.28	
36	DM-10-360	.21	.23	.28	
39	DM-10-390	.21	.23	.28	
43	DM-10-430	.21	.23	.28	
47	DM-10-470	.24	.26	.31	
50	DM-10-500	.24	.26	.31	\$0.38
51	DM-10-510	.24	.26	.31	.38
56	DM-10-560	.24	.26	.31	.38
62	DM-10-620	.24	.26	.31	.38
68	DM-10-680	.24	.26	.31	.38
75	DM-10-750	.24	.26	.31	.38
82	DM-10-820	.24	.26	.31	.38
91	DM-10-910	.24	.26	.31	.38
100	DM-10-101	.24	.26	.31	.38
110	DM-10-111	.24	.26	.31	.38
120	DM-10-121	.27	.30	.35	.43
130	DM-10-131	.27	.30	.35	.43
150	DM-10-151	.30	.33	.37	.48
160	DM-10-161	.33	.37	.43	.53
180	DM-10-181	.36	.40	.47	.58
200	DM-10-201	.36	.40	.47	.58
220	DM-10-221	.39	.43	.51	.62
240	DM-10-241	.42	.46	.55	.67
250	DM-10-251	.42	.46	.55	.67
270*	DM-10-271	.42	.46	.55	.67
300*	DM-10-301	.45	.50	.59	.72
330**	DM-10-331	.45	.50	.59	.72
360**	DM-10-361	.48	.53	.62	.77
390**	DM-10-391	.51	.56	.67	.82

### TYPE DM-15 500VDCW

(CM05 and SCDM15 values and prices the same)

Cap. Mmf.	Type Designation	±10% "K"	±5% "J"	Tolerance ±2% "G"	±1% "F"
1	DM-15-010†	\$0.15			
2	DM-15-020†	.15			
3	DM-15-030†	.15			
5	DM-15-050†	.15			
10	DM-15-100	.15	\$0.17		
12	DM-15-120	.15	.17		
15	DM-15-150	.15	.17		
18	DM-15-180	.15	.17		
20	DM-15-200	.15	.17		
22	DM-15-220	.15	.17		
24	DM-15-240	.15	.17		
27	DM-15-270	.15	.17	\$0.20	
30	DM-15-300	.15	.17	.20	
33	DM-15-330	.15	.17	.20	
36	DM-15-360	.15	.17	.20	
39	DM-15-390	.15	.17	.20	
43	DM-15-430	.15	.17	.20	
47	DM-15-470	.15	.17	.20	
50	DM-15-500	.15	.17	.20	\$0.24
51	DM-15-510	.15	.17	.20	.24
56	DM-15-560	.15	.17	.20	.24
62	DM-15-620	.15	.17	.20	.24
68	DM-15-680	.15	.17	.20	.24
75	DM-15-820	.15	.17	.20	.24
82	DM-15-820	.15	.17	.20	.24
91	DM-15-910	.15	.17	.20	.24
100	DM-15-101	.15	.17	.20	.24
110	DM-15-111	.18	.20	.23	.29
120	DM-15-121	.18	.20	.23	.29
130	DM-15-131	.18	.20	.23	.29
150	DM-15-151	.18	.20	.23	.29
160	DM-15-161	.21	.23	.28	.34
180	DM-15-181	.21	.23	.28	.34
200	DM-15-201	.21	.23	.28	.34
220	DM-15-221	.24	.26	.31	.38
240	DM-15-241	.24	.26	.31	.38
250	DM-15-251	.24	.26	.31	.38
270	DM-15-271	.27	.30	.35	.43
300	DM-15-301	.27	.30	.35	.43
330	DM-15-331	.30	.33	.39	.48
360	DM-15-361	.30	.33	.39	.48
390	DM-15-391	.33	.37	.43	.53
430	DM-15-431	.33	.37	.43	.53
470	DM-15-471	.36	.40	.47	.58
500	DM-15-501	.36	.40	.47	.58
510	DM-15-511	.36	.40	.47	.58
560*	DM-15-561	.39	.43	.51	.62
620*	DM-15-621	.42	.46	.55	.67
680*	DM-15-681	.45	.50	.59	.72
750*	DM-15-751	.48	.53	.62	.77
820*	DM-15-821	.51	.56	.67	.82
910**	DM-15-911	.57	.63	.74	.86
1000**	DM-15-102	.60	.66	.78	.96

NOTE

Characteristics on above are as follows:  
DM-15 "C" Characteristic from 1 to 20 Mmf.  
DM-15 "E" Characteristic from 22 to 82 Mmf.  
DM-15 "F" Characteristic from 91 and up.  
†Minimum Tolerance ±0.5 Mmf

### TYPE DM-19 500VDCW

(CM06 values and prices the same)

Cap. Mmf.	Type Designation	±10% "K"	±5% "J"	Tolerance ±2% "G"	±1% "F"
100	DM-19-101	\$0.15	\$0.17	\$0.18	\$0.23
110	DM-19-111	.18	.20	.18	.27
120	DM-19-121	.18	.20	.18	.27
130	DM-19-131	.18	.20	.18	.27
150	DM-19-151	.18	.20	.18	.27
160	DM-19-161	.18	.20	.18	.27
180	DM-19-181	.18	.20	.18	.27
200	DM-19-201	.18	.20	.18	.27
220	DM-19-221	.18	.20	.18	.27
240	DM-19-241	.21	.23	.25	.32
250	DM-19-251	.21	.23	.25	.32
270	DM-19-271	.24	.26	.29	.36
300	DM-19-301	.24	.26	.29	.36
330	DM-19-331	.24	.26	.29	.36
360	DM-19-361	.27	.30	.32	.41
390	DM-19-391	.27	.30	.32	.41
430	DM-19-431	.27	.30	.32	.41
470	DM-19-471	.30	.33	.36	.45
500	DM-19-501	.30	.33	.36	.45
510	DM-19-511	.30	.33	.36	.45
560	DM-19-561	.33	.37	.40	.50
620	DM-19-621	.33	.37	.40	.50
680	DM-19-681	.36	.40	.43	.54
750	DM-19-751	.36	.40	.43	.54
820	DM-19-821	.36	.40	.43	.54
910	DM-19-911	.39	.43	.47	.59
1000	DM-19-102	.42	.46	.50	.63
1100	DM-19-112	.42	.46	.50	.63
1200	DM-19-122	.45	.50	.54	.68
1300	DM-19-132	.48	.53	.58	.72
1500	DM-19-152	.51	.56	.61	.77
1600	DM-19-162	.54	.59	.65	.81
1800	DM-19-182	.60	.66	.72	.90
2000	DM-19-202	.66	.73	.79	.99
2200	DM-19-222	.72	.79	.86	1.08
2400	DM-19-242	.78	.86	.94	1.17
2500	DM-19-252	.81	.89	.97	1.23
2700	DM-19-272	.84	.92	1.01	1.26
3000	DM-19-302	.90	.99	1.08	1.35
3300	DM-19-332	.96	1.06	1.15	1.44
3600	DM-19-362	1.02	1.12	1.22	1.53
3900	DM-19-392	1.08	1.19	1.30	1.62
4300	DM-19-432	1.14	1.25	1.37	1.71
4700	DM-19-472	1.20	1.32	1.44	1.80
5000	DM-19-502	1.26	1.39	1.51	1.89
5100	DM-19-512	1.26	1.39	1.51	1.89
5600*	DM-19-562	1.32	1.45	1.58	1.98
6200**	DM-19-622	1.38	1.52	1.66	2.07
6800**	DM-19-682	1.38	1.52	1.66	2.07
7500**	DM-19-752	1.44	1.58	1.73	2.16
8200**	DM-19-822	1.50	1.65	1.80	2.25

### TYPE DM-20 500VDCW

Cap. Mmf.	Type Designation	±10% "K"	±5% "J"	Tolerance ±2% "G"	±1% "F"
680	DM-20-681	\$0.30	\$0.33	\$0.36	\$0.45
750	DM-20-751	.30	.33	.36	.45
820	DM-20-821	.30	.33	.36	.45
910	DM-20-911	.33	.37	.40	.50
1000	DM-20-102	.36	.40	.43	.54
1100	DM-20-112	.36	.40	.43	.54
1200	DM-20-122	.39	.43	.47	.59
1300	DM-20-132	.42	.46	.50	.63
1500	DM-20-152	.45	.50	.54	.68
1600	DM-20-162	.48	.53	.58	.72
1800	DM-20-182	.54	.59	.65	.81
2000	DM-20-202	.57	.63	.68	.86
2200	DM-20-222	.63	.70	.76	.95
2400	DM-20-242	.66	.73	.79	.99
2500	DM-20-252	.66	.73	.79	.99
2700	DM-20-272	.72	.79	.86	1.08
3000	DM-20-302	.78	.86	.94	1.17
3300	DM-20-332	.84	.92	1.01	1.26
3600	DM-20-362	.90	.99	1.08	1.35
3900	DM-20-392	.96	1.06	1.15	1.44
4300	DM-20-432	1.02	1.12	1.22	1.53
4700	DM-20-472	1.08	1.19	1.30	1.62
5000	DM-20-502	1.14	1.25	1.37	1.71
5100	DM-20-512	1.17	1.29	1.40	1.76
5600	DM-20-562	1.20	1.32	1.44	1.80
6200*	DM-20-622	1.20	1.32	1.44	1.80
6800*	DM-20-682	1.26	1.39	1.51	1.89
7500**	DM-20-752	1.32	1.45	1.58	1.98
8200**	DM-20-822	1.44	1.58	1.73	2.16
9100**	DM-20-912	1.62	1.78	1.94	2.43
10000**	DM-20-103	1.80	1.98	2.16	2.70

Notes: Higher DM-20 values are available on special order as follows:

up to 10,000 mmf. at 500VDCW  
up to 12,000 mmf. at 300VDCW  
up to 18,000 mmf. at 100VDCW  
Characteristics of DM-19 and DM-20 are as follows:  
C characteristics 1 to 160 mmf.  
E characteristic 180 to 510 mmf.  
F characteristic 560 and up.  
For ±1/2% double the list price of the 5% units.

Lower values less than above listing use DM-15 prices.

All capacities marked with \* are 300VDCW.  
All capacities marked with \*\* are 100VDCW.

SCDM15 capacitors are units which have been given a single protective resin coat rather than the full series of dips to which standard units are subjected. There is a marked difference in size of these thin-coated capacitors, but there is a sacrifice in moisture resistance as a result. SCDM15 units are therefore recommended for applications requiring extreme miniaturization such as military and transistor filter, networks, and delay lines. However, for long term high reliability of operation, the capacitors should receive additional environmental protection such as encapsulation, circuit potting, or hermetic sealing.



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**ELMENCO**  
**CAPACITORS**

**TYPES**  
**DM-30, DM-40, DM-42**  
**DM-43, SCDM-15**

**TYPE DM-30 500VDCW DUR-MICA**

**TYPE HRDM**

(CM07 values and prices the same)

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)			
		± 10% "K"	± 5% "J"	± 2% "G"	± 1% "F"
4300	DM-30-432	\$0.96	\$1.06	\$1.15	\$1.25
4700	DM-30-472	1.02	1.12	1.22	1.33
5000	DM-30-502	1.05	1.16	1.26	1.37
5100	DM-30-512	1.05	1.16	1.26	1.37
5600	DM-30-562	1.08	1.19	1.30	1.40
6200	DM-30-622	1.14	1.25	1.37	1.48
6800	DM-30-682	1.26	1.39	1.51	1.64
7500	DM-30-752	1.38	1.52	1.66	1.79
8200	DM-30-822	1.50	1.65	1.80	1.95
9100	DM-30-912	1.62	1.78	1.94	2.11
10000	DM-30-103	1.80	1.98	2.16	2.34
12000	DM-30-123	2.10	2.41	2.52	2.73
13000	DM-30-133	2.25	2.48	2.70	2.93
15000	DM-30-153	2.55	2.81	3.06	3.32
16000	DM-30-163	2.70	2.97	3.24	3.51
18000	DM-30-183	3.00	3.30	3.60	3.90
20000	DM-30-203	3.30	3.63	3.96	4.29
22000*	DM-30-223	3.42	3.76	4.10	4.45
24000*	DM-30-243	3.69	4.06	4.43	4.80
25000*	DM-30-253	3.84	4.22	4.61	4.99
27000*	DM-30-273	4.11	4.52	4.93	5.35
30000**	DM-30-303	4.50	4.95	5.40	5.85
33000**	DM-30-333	4.95	5.45	5.94	6.44
36000**	DM-30-363	5.40	5.94	6.48	7.02

**TYPE DM-42**

(CM08 values and prices the same)

CAP. MMF.	TYPE DESIGNATION	Net Price Tolerance (1-24)			
		± 5% "J"	± 2% "G"	± 1% "F"	± 0.5% "E"
10000	DM-42-103	\$ 3.30	\$ 3.80	\$ 4.30	\$ 4.80
12000	DM-42-123	3.95	4.55	5.15	5.75
13000	DM-42-133	4.20	4.85	5.45	6.05
15000	DM-42-153	4.80	5.50	6.25	6.95
16000	DM-42-163	5.10	5.85	6.65	7.35
18000	DM-42-183	5.70	6.55	7.40	8.15
20000	DM-42-203	6.25	7.20	8.10	9.00
22000	DM-42-223	6.90	7.95	9.00	9.95
24000	DM-42-243	7.50	8.60	9.75	10.80
25000	DM-42-253	7.80	9.00	10.10	11.20
27000	DM-42-273	8.40	9.65	10.90	11.70
30000	DM-42-303	9.30	10.70	12.10	13.20
33000	DM-42-333	10.20	11.70	13.30	14.70
36000	DM-42-363	11.10	12.80	14.40	16.00
39000	DM-42-393	12.00	13.80	15.60	17.30
43000	DM-42-433	13.00	15.00	17.00	18.80
47000	DM-42-473	14.00	16.10	18.20	20.30
50000	DM-42-503	14.70	16.90	19.10	21.40
51000*	DM-42-513	15.00	17.30	19.50	21.80
56000*	DM-42-563	14.20	16.30	18.50	20.70
62000*	DM-42-623	15.60	18.00	20.30	22.60
68000**	DM-42-683	17.00	19.60	22.10	24.50
75000**	DM-42-753	18.70	21.50	24.30	26.80
82000**	DM-42-823	20.50	23.60	26.60	29.20

**TYPE DM-43 500 VDCW**

47000	DM-43-473	
50000	DM-43-503	
51000	DM-43-513	
56000	DM-43-563	
62000	DM-43-623	
68000	DM-43-683	
75000*	DM-43-753	
82000*	DM-43-823	
91000*	DM-43-913	
100000*	DM-43-104	
110000**	DM-43-114	
120000**	DM-43-124	
130000**	DM-43-134	

**PRICING ON REQUEST**

All capacities marked with \* are 300WV. \*\* are 100 WV.

**HIGH-RELIABILITY DUR-MICA**

Type HRDM

Missile, Computer, and other applications wherein entire system performance depends on reliable operation of thousands of components has prompted development of a High Reliability line of ELMENCO Dur-Mica dipped silvered mica capacitors. Selected DM units are subjected to a special "debugging" process to eliminate potential early failures. This process is particularly effective when the capacitors are to be subjected to operation near their maximum rated temperature. The HRDM capacitors are exposed to double rated voltage for 48 hours at 125°C.

Capacitance Values (mmf.) Net Price Tolerance (1-24)

DM10	DM15	± 10%	± 5%	± 2%	± 1%
1-10	1-100	\$ .30	\$ .32	\$ .35	\$ .39
12-43	110-150	.33	.35	.39	.44
47-110	160-200	.38	.39	.43	.49
120-130	220-250	.39	.42	.47	.53
	270-300	.42	.45	.51	.59
150	330-36	.45	.48	.54	.63
160	390-430	.48	.52	.59	.68
180-200	470-510	.51	.56	.63	.74
220	560	.56	.60	.68	.80
240-270	620	.61	.64	.72	.86
300-330	680	.62	.68	.77	.92
360	750	.66	.71	.81	.96
390	820	.69	.75	.86	1.02
	910	.75	.81	.94	1.06
	1000	.80	.95	.98	1.11
DM19	DM20				
100		.30	.32	.33	.38
110-220		.33	.35	.37	.42
240-250		.36	.39	.41	.47
270-330		.39	.42	.44	.51
360-430		.42	.45	.48	.56
470-510	680-820	.45	.48	.51	.60
560-620	910	.48	.52	.55	.65
680-820	1000-1100	.51	.56	.59	.70
910	1200	.54	.59	.62	.75
1000-1100	1300	.57	.62	.66	.79
1200	1500	.60	.65	.70	.84
1300	1600	.63	.68	.74	.88
1500		.70	.76	.81	.98
1600	1800	.70	.76	.81	.93
	2000	.73	.79	.84	1.02
1800		.76	.82	.88	1.09
		.79	.86	.92	1.12
2000	2200	.82	.89	.96	1.16
	2400-2500	.88	.96	1.03	1.25
2200	2700	.90	.98	1.06	1.29
	3000	.95	1.02	1.11	1.35
2400		.97	1.05	1.14	1.38
2500		1.00	1.09	1.17	1.43
2700	3300	1.04	1.13	1.22	1.49
3000	3600	1.10	1.20	1.29	1.58
3300	3900	1.17	1.27	1.37	1.68
3600	4300	1.23	1.34	1.45	1.78
3900	4700	1.30	1.41	1.53	1.88
4300	5000-5100	1.37	1.49	1.61	1.98
4700	5600-6200	1.48	1.55	1.69	2.08
5000-5100	6800	1.50	1.62	1.77	2.18
5600	7500	1.56	1.70	1.86	2.29
6200-6800		1.63	1.77	1.94	2.39
7500	8200	1.69	1.85	2.03	2.50
8200		1.76	1.92	2.11	2.61
	9100	1.85	2.04	2.21	2.85
	1000	2.07	2.25	2.45	3.04
DM30					
4300		1.13	1.23	1.33	1.43
4700		1.19	1.30	1.41	1.51
5000-5100		1.23	1.34	1.44	1.55
5600		1.26	1.37	1.48	1.59
6200		1.32	1.44	1.56	1.68
6800		1.53	1.58	1.71	1.82
7500		1.57	1.71	1.86	2.00
8200		1.69	1.85	2.01	2.16
9100		1.81	1.98	2.16	2.33
10000		2.00	2.19	2.38	2.57
12000		2.39	2.62	2.85	3.08
13000		2.55	2.81	3.05	3.29
15000		2.97	3.16	3.43	3.71
16000		3.03	3.33	3.63	3.92
18000		3.36	.69	4.01	4.34
20000		3.68	4.04	4.39	4.74
22000		3.80	4.17	4.53	4.90
24000		4.09	4.48	4.87	5.27
25000		4.25	4.66	5.07	5.48
27000		4.53	4.98	5.42	5.86
30000		4.88	5.37	5.84	6.32
33000		5.36	5.90	6.42	6.94
36000		5.83	6.41	6.98	7.55

NOTE: Voltage ratings of items listed correspond to those indicated for the standard line DM capacitors in equivalent values and cases sizes indicated on previous pages.

There is a set-up charge of \$3.00 per item when the quantity of the item is less than 100. This charge is added to the unit prices indicated above.



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**ELMENCO**  
**CAPACITORS**

**TYPES**  
**VDM-20, VDM-30**  
**VDM-42, VDM-43**  
**HVDM-42, HVDM-43**

**HIGH VOLTAGE DUR-MICA**

A new line of ELMENCO Silvered Hi-Voltage Dur-Mica capacitors is now available to complement the similar values in the molded configuration. These high voltage capacitors afford the same facility of use in low power applications by providing reliable operation in a small case size. Elmenco Dur-Mica capacitors may be substituted for similarly rated molded units normally supplied in the larger CM45, CM50, CM55, and CM60 case sizes. The Dur-Mica design provides advantage of higher tempera-

ture operation (125° C. max.); radial leads for printed circuit application; higher capacitance in a given case size; and improved reliability. The dipped units, being solidly impregnated with corona resistant material, do not have the voids which make molded types susceptible to corona. As a result, the dipped capacitors can be supplied with voltage rating as high as 5000VDCW.

All Elmenco Dur-Mica capacitors are silvered mica construction. They conform to electrical and environmental specifications set forth in MIL-C-5 specifications.

**VDM-20 HI-VOLTAGE**

TOLERANCE ± 5%

Net Price (1-24)

CAP. MMF.	TYPE DESIGNATION	VDC		
		2000T 1000W	3000T 1500W	5000T 2500W
5	VDM-20-050K			.18
10	VDM-20-100J	USE 2500V	USE 2500V	.18
12	VDM-20-120J			.18
15	VDM-20-150J			.18
18	VDM-20-180J			.21
20	VDM-20-200J			.18
22	VDM-20-220J			.21
24	VDM-20-240J			.21
27	VDM-20-270J	USE 1500V		.21
30	VDM-20-300J			.18
33	VDM-20-330J			.18
36	VDM-20-360J			.21
39	VDM-20-390J			.18
43	VDM-20-430J			.21
47	VDM-20-470J			.24
50	VDM-20-500J			.27
51	VDM-20-510J			.27
56	VDM-20-560J			.27
62	VDM-20-620J			.30
68	VDM-20-680J			.30
75	VDM-20-750J			.30
82	VDM-20-820J			.33
91	VDM-20-910J			.36
100	VDM-20-110J			.36
110	VDM-20-111J			.39
120	VDM-20-121J			.39
130	VDM-20-131J			.42
150	VDM-20-151J			.45
160	VDM-20-161J			.48
180	VDM-20-181J			.51
200	VDM-20-201J			.57
220	VDM-20-221J			.60
240	VDM-20-241J			.63
250	VDM-20-251J			.66
270	VDM-20-271J			.72
300	VDM-20-301J			.78
330	VDM-20-331J			.84
360	VDM-20-361J			.90
390	VDM-20-391J			.90
430	VDM-20-431J			.90
470	VDM-20-471J			.90
500	VDM-20-501J			.90
510	VDM-20-511J			.90
560	VDM-20-561J			.90
620	VDM-20-621J			.90
680	VDM-20-681J			.90
750	VDM-20-751J			.90
820	VDM-20-821J			.90
910	VDM-20-911J			.90
1000	VDM-20-102J			.90
1100	VDM-20-112J			.96
1200	VDM-20-122J			1.02
1300	VDM-20-132J			1.08
1500	VDM-20-152J			1.08
1600	VDM-20-162J			1.08
1800	VDM-20-182J			1.08
2000	VDM-20-202J			1.08
2200	VDM-20-222J			1.08
2400	VDM-20-242J			1.08
2700	VDM-20-272J			1.08
3000	VDM-20-302J			1.08

**VDM-30 HI-VOLTAGE**

TOLERANCE ± 5%

Net Price (1-24)

CAP. MMF.	TYPE DESIGNATION	VDC		
		2000T 1000W	3000T 1500W	5000T 2500W
390	VDM-30-391J			.72
430	VDM-30-431J			.78
470	VDM-30-471J			.84
500	VDM-30-501J			.90
510	VDM-30-511J			.90
560	VDM-30-561J			.96
620	VDM-30-621J			1.02
680	VDM-30-681J			1.08
750	VDM-30-751J			1.14
820	VDM-30-821J			1.20
910	VDM-30-911J			1.29
1000	VDM-30-102J			1.38
1100	VDM-30-112J			1.50
1200	VDM-30-122J			1.65
1300	VDM-30-132J			1.80
1500	VDM-30-152J			2.10
1600	VDM-30-162J			2.25
1800	VDM-30-182J			2.58
2000	VDM-30-202J			2.94
2200	VDM-30-222J			3.30
2400	VDM-30-242J			3.66
2700	VDM-30-272J			4.20
3000	VDM-30-302J			2.16
3300	VDM-30-332J	1.20		2.34
3600	VDM-30-362J	1.32		2.52
3900	VDM-30-392J	1.38		2.70
4300	VDM-30-432J	1.50		2.88
4700	VDM-30-472J	1.62		3.06
5000	VDM-30-502J	1.80		3.24
5100	VDM-30-512J	1.80		3.30
5600	VDM-30-562J	1.86		3.60
6200	VDM-30-622J	2.10		3.90
6800	VDM-30-682J	2.34		4.20
7500	VDM-30-752J	2.64		
8200	VDM-30-822J	3.00		
9100	VDM-30-912J	3.36		
10000	VDM-30-103J	3.72		
3000	VDM-42-302J			
3300	VDM-42-332J			
3600	VDM-42-362J			
3900	VDM-42-392J			
4300	VDM-42-432J			
4700	VDM-42-472J			
5000	VDM-42-502J			
5100	VDM-42-512J			
5600	VDM-42-562J			
6200	VDM-42-622J			
6800	VDM-42-682J			
7500	VDM-42-752J			
8200	VDM-42-822J			
9100	VDM-42-912J			
10000	VDM-42-103J			
12000	VDM-42-123J			
13000	VDM-42-133J			
15000	VDM-42-153J			
16000	VDM-42-163J			
18000	VDM-42-183J			
20000	VDM-42-203J			
22000	VDM-42-223J			
24000	VDM-42-243J			
25000	VDM-42-253J			
27000	VDM-42-273J			
30000	VDM-42-303J			

**VDM-43 HI-VOLTAGE**

TOLERANCE ± 5%

Net Price (1-24)

CAP. MMF.	TYPE DESIGNATION	VDC		
		2000T 1000W	3000T 1500W	5000T 2500W
12000	VDM-43-123J			
13000	VDM-43-133J			
15000	VDM-43-153J			
20000	VDM-43-203J			
22000	VDM-43-223J			
24000	VDM-43-243J			
25000	VDM-43-253J			
27000	VDM-43-273J			
30000	VDM-43-303J			
33000	VDM-43-333J			
36000	VDM-43-363J			
39000	VDM-43-393J			
43000	VDM-43-433J			
47000	VDM-43-473J			

**SPECIAL HVDM-42 & HVDM-43**

5000WV UNITS  
CAP. TYPE 10000 VOLTS DC TEST 5000 VOLTS DC WKG.

MMF.	DESIGNATION	VDC	TEST	WKG.
5	HVDM-42-050K			
10	HVDM-42-100J			
12	HVDM-42-120J			
15	HVDM-42-150J			
18	HVDM-42-180J			
20	HVDM-42-200J			
22	HVDM-42-220J			
24	HVDM-42-240J			
27	HVDM-42-270J			
30	HVDM-42-300J			
33	HVDM-42-330J			
36	HVDM-42-360J			
39	HVDM-42-390J			
43	HVDM-42-430J			
47	HVDM-42-470J			
50	HVDM-42-500J			
51	HVDM-42-510J			
56	HVDM-42-560J			
62	HVDM-42-620J			
68	HVDM-42-680J			
75	HVDM-42-750J			
82	HVDM-42-820J			
91	HVDM-42-910J			
100	HVDM-42-101J			
110	HVDM-42-111J			
120	HVDM-42-121J			
130	HVDM-42-131J			
150	HVDM-42-151J			
160	HVDM-42-161J			
180	HVDM-42-181J			
200	HVDM-42-201J			
220	HVDM-42-221J			
240	HVDM-42-241J			
250	HVDM-42-251J			
270	HVDM-42-271J			
300	HVDM-42-301J			
330	HVDM-42-331J			
360	HVDM-42-361J			
390	HVDM-42-391J			
430	HVDM-42-431J			
470	HVDM-42-471J			
500	HVDM-42-501J			
510	HVDM-42-511J			
560	HVDM-42-561J			
620	HVDM-42-621J			
680	HVDM-43-681J			
750	HVDM-43-751J			
820	HVDM-43-821J			
910	HVDM-43-911J			

NOTE: All above units can be supplied in characteristic "C", "D", "E", "F" at above net prices.

Above prices are for Standard 5% Tolerance. Add 15% for 2% Tolerance; Add 25% for 1% Tolerance; Add 100% for 1/2% Tolerance. Minimum Tolerance ± 0.5 mmf.

PLEASE SPECIFY WORKING VOLTAGE RATING WHEN ORDERING

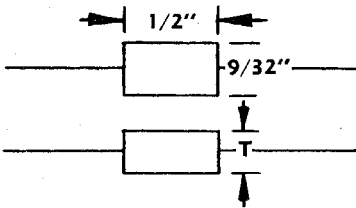


# ELMENCO CAPACITORS

TYPES  
CM-15  
CM-19, CM-20

## MOLDED SILVERED MICA

### TYPE CM-15



T—from 1-300 mmf. 3/16"  
T—from 301-510 mmf. 7/32"

500 VDCW

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)		
		5% "J"	2% "G"	1% "F"
1	CM-15-C-010†	\$0.18		
2	CM-15-C-020†	.18		
3	CM-15-C-030†	.18		
5	CM-15-C-050†	.18		
10	CM-15-C-100	.18		
12	CM-15-C-120	.18		
15	CM-15-C-150	.18		
18	CM-15-C-180	.18		
20	CM-15-C-200	.18		
22	CM-15-C-220	.18		
24	CM-15-E-240	.18		
27	CM-15-E-270	.18	\$0.22	
30	CM-15-E-300	.18	.22	
33	CM-15-E-330	.18	.22	
36	CM-15-E-360	.18	.22	
39	CM-15-E-390	.18	.22	
43	CM-15-E-430	.18	.22	
47	CM-15-E-470	.18	.22	
50	CM-15-E-500	.18	.22	\$0.26
51	CM-15-E-510	.18	.22	.26
56	CM-15-E-560	.18	.22	.26
62	CM-15-E-620	.18	.22	.26
68	CM-15-E-680	.18	.22	.26
75	CM-15-E-750	.18	.22	.26
82	CM-15-E-820	.18	.22	.26
91	CM-15-E-910	.18	.22	.26
100	CM-15-E-101	.18	.22	.26
110	CM-15-E-111	.21	.25	.30
120	CM-15-E-121	.21	.25	.30
130	CM-15-E-131	.21	.25	.30
150	CM-15-E-151	.21	.25	.30
160	CM-15-E-161	.24	.29	.34
180	CM-15-E-181	.24	.29	.34
200	CM-15-E-201	.24	.29	.34
220	CM-15-E-221	.27	.32	.39
240	CM-15-E-241	.27	.32	.39
250	CM-15-E-251	.27	.32	.39
270	CM-15-E-271	.30	.36	.43
300	CM-15-E-301	.30	.36	.43
330	CM-15-E-331	.33	.40	.47
360	CM-15-E-361	.36	.43	.52
390	CM-15-E-391	.39	.47	.56
430	CM-15-E-431	.42	.50	.61
470	CM-15-E-471	.45	.54	.65
500	CM-15-E-501	.48	.58	.69
510	CM-15-E-511	.48	.58	.69
560**	CM-15-E-561	.48	.58	.69
620**	CM-15-E-621	.51	.61	.73
680**	CM-15-E-681	.54	.65	.78
750**	CM-15-E-751	.57	.68	.82
820**	CM-15-E-821	.60	.72	.86

NOTES—\*\*100 VDCW.

†Closest Tolerance ±0.5 mmf.

SPECIFICATIONS NOTES:

±1/2% tolerance available above 100 mmf. at double ±5% list price.

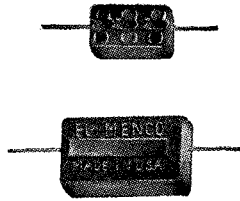
CM15, available "F" characteristic above 30 mmf.

CM19, 20 available "E" characteristic above 110 mmf.

CM19, 20 available "F" characteristic above 200 mmf.

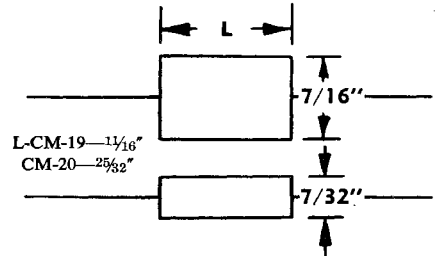
All CM30, 35, and 42 values listed are available in "F" characteristic.

### CM-15



### CM-19

### TYPE CM-19 & 20



500 VDCW

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)		
		Net ±5% "J"	Price ±2% "G"	Tolerance ±1% "F"
5	CM-20C-050	\$0.18		
10	CM-20C-100	.18		
12	CM-20C-120	.18		
15	CM-20C-150	.18		
18	CM-20C-180	.18		
20	CM-20C-200	.18		
22	CM-20C-220	.18		
24	CM-20C-240	.18		
27	CM-20C-270	.18	\$0.20	
30	CM-20C-300	.18	.20	
33	CM-20C-330	.18	.20	
36	CM-20C-360	.18	.20	
39	CM-20C-390	.18	.20	
43	CM-20C-430	.18	.20	
47	CM-20C-470	.18	.20	
50	CM-20C-500	.18	.20	\$0.25
51	CM-20C-510	.18	.20	.25
56	CM-20C-560	.18	.20	.25
62	CM-20C-620	.18	.20	.25
68	CM-20C-680	.18	.20	.25
75	CM-20C-750	.18	.20	.25
82	CM-20C-820	.18	.20	.25
91	CM-20C-910	.18	.20	.25
100	CM-20C-101	.18	.20	.25
110	CM-20C-111	.21	.23	.29
120	CM-20C-121	.21	.23	.29
130	CM-20C-131	.21	.23	.29
150	CM-20C-151	.21	.23	.29
160	CM-20C-161	.21	.23	.29
180	CM-20C-181	.21	.23	.29
200	CM-20D-201	.21	.23	.29
220	CM-20D-221	.21	.23	.29
240	CM-20D-241	.24	.26	.34
250	CM-20D-251	.24	.26	.34
270	CM-20D-271	.27	.30	.38
300	CM-20D-301	.27	.30	.38
330	CM-20D-331	.27	.30	.38
360	CM-20D-361	.30	.33	.42
390	CM-20D-391	.30	.33	.42
430	CM-20D-431	.30	.33	.42
470	CM-20D-471	.33	.37	.46
500	CM-20D-501	.33	.37	.46
510	CM-20D-511	.33	.37	.46
560	CM-20D-561	.33	.37	.46
620	CM-20D-621	.36	.40	.50
680	CM-20D-681	.36	.40	.50
750	CM-20D-751	.39	.43	.55
820	CM-20D-821	.42	.46	.59
910	CM-20D-911	.42	.46	.59
1000	CM-20E-102	.45	.50	.63
1100	CM-20E-112	.45	.50	.63
1200	CM-20E-122	.48	.53	.67
1300	CM-20E-132	.48	.53	.67
1500	CM-20E-152	.51	.56	.71
1600	CM-20E-162	.54	.59	.76
1800	CM-20E-182	.60	.66	.84
2000	CM-20E-202	.66	.73	.92
2200	CM-20E-222	.72	.79	1.01
2400	CM-20E-242	.75	.83	1.05
2500	CM-20E-252	.78	.86	1.09
2700	CM-20E-272	.84	.92	1.18
3000	CM-20E-302	.90	.99	1.26
3300	CM-20E-332	.96	1.06	1.34
3600*	CM-20E-362	1.02	1.12	1.43
3900*	CM-20E-392	1.08	1.19	1.51
4300*	CM-20E-432	1.14	1.25	1.60
4700*	CM-20E-472	1.20	1.32	1.68
5000*	CM-20E-502	1.26	1.39	1.76
5100*	CM-20E-512	1.26	1.39	1.76

NOTE—\*300 VDCW.

CM19 case size is available in values up to 2700 mmf. In values above 1000 mmf add 10% to the prices indicated.

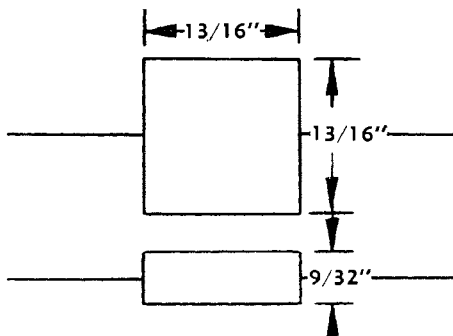


# ELMENCO CAPACITORS

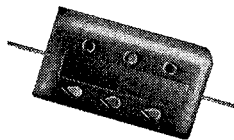
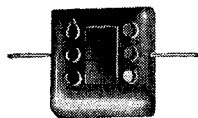
TYPES  
CM-19, CM-20, CM-30  
CM-35, CM-42

## MOLDED SILVERED MICA

TYPE CM-30

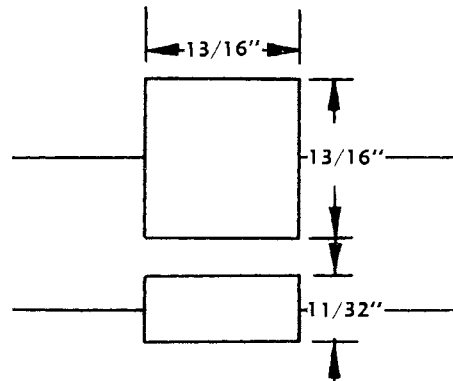


CM-30



CM-42

TYPE CM-35



500 VDCW

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)		
		"J" ±5%	"G" ±2%	"F" ±1%
510	CM-30-E-511	\$0.33	\$0.37	\$0.40
560	CM-30-E-561	.36	.40	.43
620	CM-30-E-621	.36	.40	.43
680	CM-30-E-681	.39	.43	.47
750	CM-30-E-751	.39	.43	.47
820	CM-30-E-821	.42	.46	.50
910	CM-30-E-911	.42	.46	.50
1000	CM-30-E-102	.45	.50	.54
1100	CM-30-E-112	.45	.50	.54
1200	CM-30-E-122	.45	.50	.54
1300	CM-30-E-132	.48	.53	.58
1500	CM-30-E-152	.51	.56	.61
1600	CM-30-E-162	.51	.56	.61
1800	CM-30-E-182	.54	.59	.65
2000	CM-30-E-202	.60	.66	.72
2200	CM-30-E-222	.66	.73	.79
2400	CM-30-E-242	.72	.79	.86
2500	CM-30-E-252	.72	.79	.86
2700	CM-30-E-272	.78	.86	.94
3000	CM-30-E-302	.84	.92	1.01
3300	CM-30-E-332	.90	.99	1.08
3600	CM-30-E-362	.96	1.06	1.15
3900	CM-30-E-392	1.02	1.12	1.22
4300	CM-30-E-432	1.08	1.19	1.30
4700	CM-30-E-472	1.14	1.25	1.37
5000	CM-30-E-502	1.20	1.32	1.44
5100	CM-30-E-512	1.20	1.32	1.44
5600	CM-30-E-562	1.26	1.39	1.51
6200	CM-30-E-622	1.32	1.45	1.58

NOTE:—All above "SILVERED MICA" units can be supplied in "F" Characteristic at no extra cost. For ±½% Tolerance double the 5% List prices.

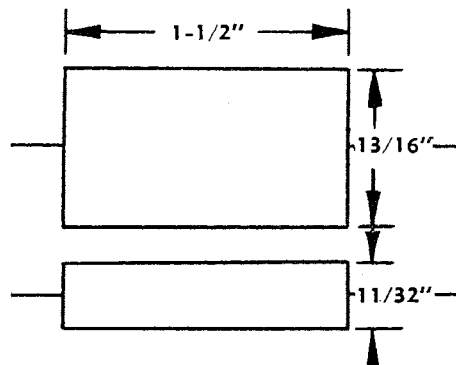
All Type CM-42 units can be supplied in "F" characteristic at no extra cost. For ±½% Tolerance double the 1% list price.

All CM30, 35, and 42 values listed are available in "F" characteristic.

500 VDCW

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)		
		"J" ±5%	"G" ±2%	"F" ±1%
6800*	CM-35-E-682	1.32	1.45	1.58
7500*	CM-35-E-752	1.44	1.58	1.73
8200*	CM-35-E-822	1.56	1.72	1.87
9100*	CM-35-E-912	1.68	1.85	2.02
10000*	CM-35-E-103	1.86	2.05	2.23
12000*	CM-35-E-123	2.16	2.38	2.59
15000*	CM-35-E-153	2.58	2.84	3.10
6800	VCM-35-E-682	1.44	1.58	1.73
7500	VCM-35-E-752	1.56	1.72	1.87
8200	VCM-35-E-822	1.68	1.85	2.02
9100	VCM-35-E-912	1.86	2.05	2.23
10000	VCM-35-E-103	2.04	2.24	2.45

TYPE CM-42



500 VDCW

12000	CM-42-E-123	2.82	3.25	3.53
13000	CM-42-E-133	3.06	3.52	3.83
15000	CM-42-E-153	3.48	4.00	4.35
16000	CM-42-E-163	3.72	4.28	4.65
18000	CM-42-E-183	4.14	4.76	5.18
20000	CM-42-E-203	4.56	5.24	5.70
22000	CM-42-E-223	4.98	5.73	6.23
24000	CM-42-E-243	5.40	6.21	6.75
25000	CM-42-E-253	5.64	6.49	7.05
27000*	CM-42-E-273	5.40	6.21	6.75
30000*	CM-42-E-303	5.64	6.49	7.05
33000*	CM-42-E-333	6.12	7.04	7.66
36000*	CM-42-E-363	6.84	7.87	8.55
39000*	CM-42-E-393	7.56	8.69	9.45

All capacities marked with \* are 300WV.





**ARCO**  
electronics inc.

GREAT NECK, NEW YORK  
Branches: Los Angeles 35, Dallas 7

# ARCO CAPACITORS

**HIGH TEMPERATURE  
MOLDED  
SILVERED MICA**

The standard Elmenco molded mica capacitor is designed for use at a maximum of 85°C., the former industry and military standard prior to issuance of MIL-C-5B. Now, in some applications, these components are expected to operate without derating and with the same order of reliability at 150°C. The latter requirement is particularly difficult to cope with and obviously requires vast improvement over the standard design.

A specially designed Elmenco molded mica capacitor, designated Type HTCM, has been developed which will afford complete satisfaction at the higher levels of temperature stress. The resulting units have been carefully evaluated in millions of unit-hours of life and environmental testing to verify their performance excellence.

In order to retain proper characteristics at 150°C., the following steps are taken:

1. Every mica film is screened for high temperature characteristics. This is done 100%, not on a sampling basis.
2. A special high temperature molding resin is employed to preserve the strength and electrical characteristic of the mica at 150°C. This molding material was also selected for the lower molding pressure required. This reduced stress greatly enhances the reliability of the mica films.
3. A solid high temperature impregnant is used instead of wax for greater stability and retention of the

moisture resistance characteristic. Wax will have a tendency to melt out at high temperature, causing possible change in capacitance value, loss of moisture seal, and possible fouling of adjacent circuitry. The HTCM capacitors will remain physically and electrically stable at 150°C.

With these design innovations, vast improvement is obtained in operating reliability at elevated temperature. The expected failure rate is reduced to a small fraction of what might otherwise be expected to standard design capacitors.

### THESE HTCM CAPACITORS MEET MIL-C-5B TEMPERATURE RANGES "O" AND "P"

The Elmenco high temperature molded mica capacitor is designated simply by adding prefix letters "HT" to the standard part number. For example, a 100 mmf.  $\pm 5\%$  CM15, standard part number CM15E101J, would be called an HTCM15E101J for high temperature operation.

The HTCM capacitors may be recognized by their gray-brown color as compared with the red molding resin of the standard 85°C. capacitors.

To conserve catalog space, part numbers for each individual HTCM capacitors are not listed as they are for the standard units. Capacitance values are shown for each case size with corresponding list price indicated for each tolerance. Voltage ratings are the same as for standard CM capacitors.

#### LIST PRICE

Cap. mmf.	$\pm 5\%$	$\pm 2\%$	$\pm 1\%$
<b>HCTM15</b>			
1-75	.65	.75	.82
82-150	.70	.81	.88
160-200	.75	.87	.95
220	.80	.92	1.01
240	.80	.92	1.01
250	.80	.92	1.01
270	.85	.98	1.07
300	.85	.98	1.07
330	.90	1.04	1.13
360	.95	1.10	1.20
390	.95	1.10	1.20
430	1.00	1.16	1.26
470	1.05	1.21	1.32
500	1.05	1.21	1.32
510	1.05	1.21	1.32
<b>HCTM19, HCTM20</b>			
5-100	.65	.75	.82
110-220	.70	.81	.88
110-220	.80	.92	1.01
390-430	.90	1.04	1.13
470-510	.95	1.10	1.20
560	1.00	1.16	1.26
620	1.00	1.16	1.26
680	1.05	1.21	1.32
750	1.05	1.21	1.32
820	1.10	1.27	1.39
910	1.10	1.27	1.39
1000	1.15	1.33	1.45
1100	1.15	1.33	1.45
1200	1.25	1.44	1.57
1300	1.25	1.44	1.57

#### LIST PRICE

Cap. mmf.	$\pm 5\%$	$\pm 2\%$	$\pm 1\%$
1500	1.40	1.61	1.76
1600	1.40	1.61	1.76
1800	1.50	1.73	1.88
2000	1.50	1.85	2.01
2200	1.70	1.96	2.13
2400	1.80	2.07	2.26
2500	1.85	2.13	2.32
2700	1.95	2.25	2.45
3000	2.15	2.48	2.70
3300	2.25	2.59	2.82
*3600	2.25	2.59	2.82
*3900	2.35	2.71	2.95
*4300	2.45	2.82	3.07
*4700	2.55	2.94	3.20
*5000	2.65	3.05	3.32
*5100	2.65	3.05	3.32
<b>HCTM30, HCTM35</b>			
3600	2.35	2.71	2.95
3900	2.45	2.82	3.07
4300	2.55	2.94	3.20
4700	2.65	3.05	3.32
5000	2.80	3.22	3.51
5100	2.80	3.22	3.51
5600	3.20	3.68	4.01
6200	3.45	3.97	4.32
*6800	3.05	3.51	3.82
*7500	3.20	3.68	4.01
*8200	3.45	3.97	4.32
*9100	3.70	4.26	4.63
*100000	4.00	4.60	5.01
<b>*300VDCW</b>			

Add 10% to indicated prices for HCTM19 in values above 1000 mmf. to a maximum of 2400 mmf.

HERE is a \$5.00 PER ITEM SET-UP CHARGE FOR NON-STANDARD CAPACITANCE VALUES IN QUANTITIES LESS THAN 100 OF A SIZE. ALL ALUES LISTED ON PRIOR PAGES FOR THE STANDARD SILVERED MOLDED MICA ARE CONSIDERED STANDARD STOCK VALUES FOR WHICH THERE IS NO SET-UP CHARGE.

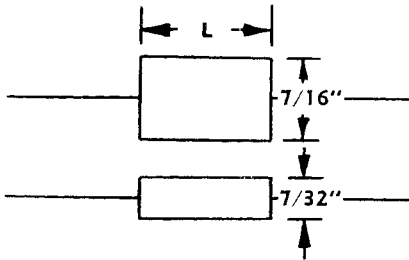


# ELMENCO CAPACITORS

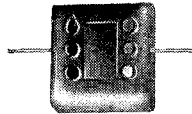
TYPES  
CM-19, CM-20  
CM-30, CM-35

## MOLDED FOIL MICA

### TYPE CM-19 & 20



L--CM-19--11/16"; CM-20--25/32"



CM-30

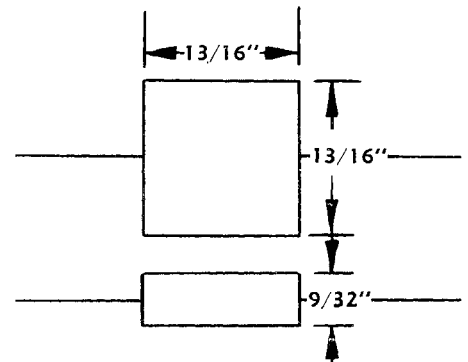
### 500 VDCW

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)		
		"M" ±20%	"K" ±10%	"J" ±5%
5	CM-20B-050	\$0.18	\$0.20	
10	CM-20B-100	.18	.20	\$0.23
12	CM-20B-120	.18	.20	.23
15	CM-20B-150	.18	.20	.23
18	CM-20B-180	.18	.20	.23
20	CM-20B-200	.18	.20	.23
22	CM-20B-220	.18	.20	.23
24	CM-20B-240	.18	.20	.23
27	CM-20B-270	.18	.20	.23
30	CM-20B-300	.18	.20	.23
33	CM-20B-330	.12	.13	.15
36	CM-20B-360	.12	.13	.15
39	CM-20B-390	.12	.13	.15
43	CM-20B-430	.12	.13	.15
47	CM-20B-470	.12	.13	.15
50	CM-20B-500	.12	.13	.15
51	CM-20B-510	.12	.13	.15
56	CM-20B-560	.12	.13	.15
62	CM-20B-620	.12	.13	.15
68	CM-20B-680	.12	.13	.15
75	CM-20B-750	.12	.13	.15
82	CM-20B-820	.12	.13	.15
91	CM-20B-910	.12	.13	.15
100	CM-20B-101	.12	.13	.15
110	CM-20B-111	.12	.13	.15
120	CM-20B-121	.12	.13	.15
130	CM-20B-131	.15	.17	.19
150	CM-20B-151	.15	.17	.19
160	CM-20B-161	.15	.17	.19
180	CM-20B-181	.15	.17	.19
200	CM-20B-201	.15	.17	.19
220	CM-20B-221	.15	.17	.19
240	CM-20B-241	.18	.20	.23
250	CM-20B-251	.18	.20	.23
270	CM-20B-271	.18	.20	.23
300	CM-20B-301	.18	.20	.23
330	CM-20B-331	.18	.20	.23
360	CM-20B-361	.18	.20	.23
390	CM-20B-391	.18	.20	.23
430	CM-20B-431	.18	.20	.23
470	CM-20B-471	.18	.20	.23
500	CM-20B-501	.18	.20	.23
510	CM-20B-511	.18	.20	.23
560	CM-20B-561	.21	.23	.26
620	CM-20B-621	.21	.23	.26
680	CM-20B-681	.21	.23	.26
750	CM-20B-751	.21	.23	.26
820	CM-20B-821	.24	.26	.30
910	CM-20B-911	.27	.30	.34
1000	CM-20B-102	.27	.30	.34
1100	CM-20B-112	.30	.33	.38
1200	CM-20B-122	.30	.33	.38
1300	CM-20B-132	.30	.33	.38
1500	CM-20B-152	.36	.40	.45
1600	CM-20B-162	.36	.40	.45
1800	CM-20B-182	.42	.46	.53
2000	CM-20B-202	.45	.50	.56
2200	CM-20B-222	.48	.53	.60
2400	CM-20B-242	.51	.56	.64
2500	CM-20B-252	.54	.59	.68

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)		
		"M" ±20%	"K" ±10%	"J" ±5%
2700	CM-20B-272	\$0.57	\$0.63	\$0.71
3000	CM-20B-302	.60	.66	.75
3300	CM-20B-332	.63	.70	.79
3600*	CM-20B-362	.60	.66	.75
3900*	CM-20B-392	.63	.70	.79
4300*	CM-20B-432	.66	.73	.83
4700*	CM-20B-472	.72	.79	.90
5000*	CM-20B-502	.75	.83	.94
5100*	CM-20B-512	.75	.83	.94

Capacities from 5 mmf. to 2700 mmf. can be supplied in CM-19 cases.

### TYPE CM-30



T--CM-30--9/32"; CM-35--11/32"

### 500 VDCW

Cap. Mmf.	Type Designation	Net Price Tolerance (1-24)		
		"M" ±20%	"K" ±10%	"J" ±5%
510	CM-30-B-511	\$0.18	\$0.22	\$0.23
560	CM-30-B-561	.18	.22	.23
620	CM-30-B-621	.18	.22	.23
680	CM-30-B-681	.18	.22	.23
750	CM-30-B-751	.18	.22	.23
820	CM-30-B-821	.18	.22	.23
910	CM-30-B-911	.18	.22	.23
1000	CM-30-B-102	.21	.23	.26
1100	CM-30-B-112	.21	.23	.26
1200	CM-30-B-122	.21	.23	.26
1300	CM-30-B-132	.21	.23	.26
1500	CM-30-B-152	.24	.26	.30
1600	CM-30-B-162	.24	.26	.30
1800	CM-30-B-182	.27	.30	.34
2000	CM-30-B-202	.27	.30	.34
2200	CM-30-B-222	.27	.30	.34
2400	CM-30-B-242	.30	.33	.38
2500	CM-30-B-252	.30	.33	.38
2700	CM-30-B-272	.30	.33	.38
3000	CM-30-B-302	.36	.40	.45
3300	CM-30-B-332	.36	.40	.45
3600	CM-30-B-362	.36	.40	.45
3900	CM-30-B-392	.39	.45	.51
4300	CM-30-B-432	.39	.45	.51
4700	CM-30-B-472	.39	.45	.51
5000	CM-30-B-502	.42	.49	.55
5100	CM-30-B-512	.42	.49	.55
5600	CM-30-B-562	.42	.49	.55
6200	CM-30-B-622	.54	.62	.70

### TYPE CM-35

6800*	CM-35-B-682	\$0.57	\$0.63	\$0.71
7500*	CM-35-B-752	.60	.66	.75
8200*	CM-35-B-822	.69	.76	.86
9100*	CM-35-B-912	.69	.76	.86
10000*	CM-35-B-103	.84	.92	1.05
12000*	CM-35-B-123	.96	1.06	1.20
15000*	CM-35-B-153	1.20	1.32	1.50
6800	VCM-35-B-682	.63	.70	.79
7500	VCM-35-B-752	.69	.76	.86
8200	VCM-35-B-822	.78	.86	.97
9100	VCM-35-B-912	.78	.86	.97
10000	VCM-35-B-103	.93	1.03	1.16

All capacities marked with \* are 300WV.

CM19 case size is available in values up to 2700 MMF. In values above 1000 MMF add 10% to the prices indicated.



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# ELMENCO CAPACITORS

Type  
**VCM-20**  
**VCM-35**  
**VCM-42**

Demand for smaller units in higher voltages designed to meet the requirements for TELEVISION, POWER AMPLIFIERS, LOW POWER TRANSMITTERS, and various INDUSTRIAL USES has increased. EL-MENCO designed and produced units listed below are especially adaptable to compact circuits where space is an important factor. Their acceptance has been overwhelming by the various manufacturers of TELEVISION RECEIVERS.

In many cases, these units will do the work of capacitors molded in CM-45, CM-50, and CM-55 cases without breaking down. NO SPECIAL MOUNTINGS ARE NECESSARY; just wire right into the circuit.

The capacitors are molded in low-loss Phenolic Resin in CM-20, CM-35, CM-42 cases and tested at double the branded voltage. They are tested for dielectric strength, insulation resistance, temperature coefficient capacitance drift, susceptibility to humidity, and length of life, according to RMA Standards. All units are wax-dipped for protection against salt water immersion.

Net Prices (1-24)

## VCM-20 HI-VOLTAGE MOLDED SILVERED MICA

CAP. MMF.	TYPE DESIGNATION	2000VDC T 1000VDC W		3000VDC T 1500VDC W		5000VDC T 2500VDC W	
		±20% (M)	±5% (J)	±20% (M)	±5% (J)	±20% (M)	±5% (J)
5	VCM-20-050					.15	.18
10	VCM-20-100					.15	.18
12	VCM-20-120					.15	.18
15	VCM-20-150					.15	.18
18	VCM-20-180			.15	.18	.18	.21
20	VCM-20-200			.15	.18	.18	.21
22	VCM-20-220			.15	.18	.18	.21
24	VCM-20-240			.15	.18	.18	.21
27	VCM-20-270			.15	.18	.18	.21
30	VCM-20-300			.15	.18	.18	.21
33	VCM-20-330			.15	.18	.21	.24
36	VCM-20-360			.15	.18	.21	.24
39	VCM-20-390			.15	.18	.21	.24
43	VCM-20-430	.15	.18	.18	.21	.21	.24
47	VCM-20-470	.15	.18	.18	.21	.24	.27
50	VCM-20-500	.15	.18	.18	.21	.24	.27
51	VCM-20-510	.15	.18	.18	.21	.24	.27
56	VCM-20-560	.15	.18	.18	.21	.24	.27
62	VCM-20-620	.15	.18	.18	.21	.27	.30
68	VCM-20-680	.15	.18	.18	.21	.27	.30
75	VCM-20-750	.15	.18	.18	.21	.27	.30
82	VCM-20-820	.15	.18	.21	.24	.30	.33
91	VCM-20-910	.15	.18	.21	.24	.30	.36
100	VCM-20-101	.18	.21	.21	.24	.30	.36
110	VCM-20-111	.18	.21	.21	.24	.33	.39
120	VCM-20-121	.18	.21	.21	.24	.33	.39
130	VCM-20-131	.18	.21	.24	.27	.36	.42
150	VCM-20-151	.18	.21	.24	.27	.39	.45
160	VCM-20-161	.18	.21	.24	.27	.42	.48
180	VCM-20-181	.18	.21	.27	.30	.42	.51
200	VCM-20-201	.21	.24	.27	.30	.48	.57
220	VCM-20-221	.21	.24	.30	.33	.51	.60
240	VCM-20-241	.21	.24	.30	.33		
250	VCM-20-251	.21	.24	.30	.36		
270	VCM-20-271	.21	.24	.30	.36		
300	VCM-20-301	.21	.24	.30	.36		
330	VCM-20-331	.21	.24	.33	.39		
360	VCM-20-361	.21	.24	.33	.39		
390	VCM-20-391	.24	.27	.36	.42		
430	VCM-20-431	.24	.27	.39	.48		
470	VCM-20-471	.24	.27	.39	.48		
500	VCM-20-501	.27	.30	.42	.51		
510	VCM-20-511	.27	.30	.42	.51		
560	VCM-20-561	.27	.30	.45	.54		
620	VCM-20-621	.30	.33				
680	VCM-20-681	.30	.36				
750	VCM-20-751	.30	.36				
820	VCM-20-821	.33	.39				
910	VCM-20-911	.36	.42				
000	VCM-20-102	.36	.42				
100	VCM-20-112	.39	.45				
200	VCM-20-122	.42	.48				
300	VCM-20-132	.45	.51				

Net Prices (1-24)

## VCM-35 & 42 HI-VOLTAGE MOLDED SILVERED MICA

CAP. MMF.	TYPE DESIGNATION	2000VDC T 1000VDC W		3000VDC T 1500VDC W		5000VDC T 2500VDC W	
		±5%	±5%	±5%	±5%	±5%	±5%
240	VCM-35-241						.54
250	VCM-35-251						.54
270	VCM-35-271						.54
300	VCM-35-301						.66
330	VCM-35-331						.66
360	VCM-35-361						.66
390	VCM-35-391						.72
430	VCM-35-431						.78
470	VCM-35-471						.84
500	VCM-35-501						.90
510	VCM-35-511						.90
560	VCM-35-561						.96
620	VCM-35-621						1.02
680	VCM-35-681						1.08
750	VCM-35-751						1.14
820	VCM-35-821						.69
910	VCM-35-911						.75
1000	VCM-35-102						.81
1100	VCM-35-112						.90
1200	VCM-35-122						.99
1300	VCM-35-132						1.08
1500	VCM-35-152						1.20
1600	VCM-35-162						1.32
1800	VCM-35-182						1.44
2000	VCM-35-202						1.56
2200	VCM-35-222						1.68
2400	VCM-35-242						1.80
2700	VCM-35-272						1.98
3000	VCM-35-302						2.16
3300	VCM-35-332						2.34
3600	VCM-35-362						1.32
3900	VCM-35-392						1.38
4300	VCM-35-432						1.50
4700	VCM-35-472						1.62
5000	VCM-35-502						1.80
5100	VCM-35-512						1.80
5600	VCM-35-562						1.86
6200	VCM-42-622						1.92
6800	VCM-42-682						2.10
7500	VCM-42-752						2.22
8200	VCM-42-822						2.40
9100	VCM-42-912						2.70
10000	VCM-42-103						2.88
12000	VCM-42-123						3.16
13000	VCM-42-133						3.60
15000	VCM-42-153						4.20
16000	VCM-42-163						4.50

**PLEASE SPECIFY  
WORKING VOLTAGE RATING  
WHEN ORDERING**

**NOTES:**

**VCM-20:** For ±10% tolerance, add 10% to ±20% price.  
For ± 2% tolerance, add 25% to ± 5% price.  
For ± 1% tolerance, add 50% to ± 5% price.

**VCM-35 and VCM-42:** For ± 2% tolerance, add 25% to ± 5% price.  
For ± 1% tolerance, add 50% to ± 5% price.



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# ELMENCO CAPACITORS

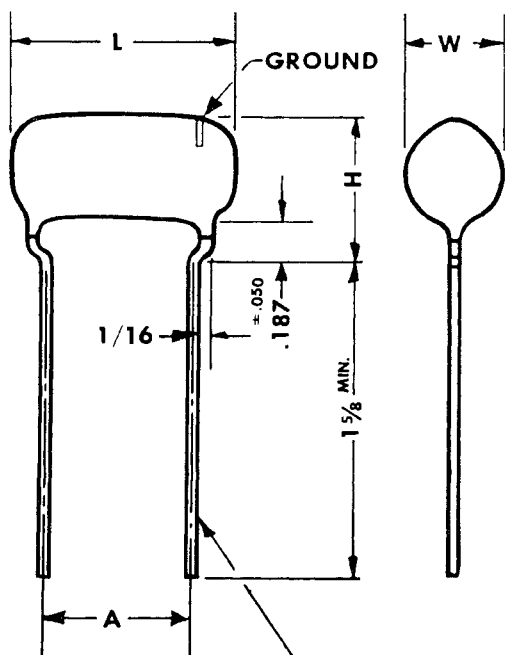
**TYPE  
MPD**

## DIPPED MYLAR\*—PAPER (Elmenco type MPD)

The new Elmenco Type MPD (ARCO dp) capacitors are dip-coated tubular Mylar\*-paper dielectric capacitors. They represent a double breakthrough in capacitor design by combining missile and computer quality with commercial radio-TV cost. The "dp" series is designed for near universal use from TV by-pass to critical industrial applications requiring stringent electrical and environmental characteristics. New high levels of ruggedness, stability, and reliability have been achieved, yet these new Elmenco capacitors are miniaturized for transistor circuitry.

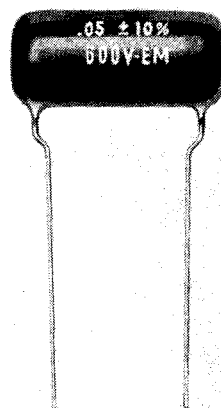
Elmenco Type MPD capacitors are non-inductively wound and vacuum dipped to obtain solid impregnation and a rugged, moisture-proof coat. New fabricating techniques realize the full potential of the dielectric materials utilizing most of the low-cost procedures of the exclusive Elmenco dip-coat process. The result is a product of electrical excellence with high reliability in operation at 125°C. without derating. The specifications listed on this and following pages well-illustrate the inherent quality of these capacitors.

NOTE: The 100VDCW rated dp units are pure mylar\* dielectric capacitors.



#20 (.032) TINNED ANNEALED  
COPPERWELD WIRE

CASE SIZE	1	2	3	4	5	6
DIM. "A" ± 1/32	1/4	3/16	1/2	27/32	13/32	127/32



ACTUAL  
SIZE

## SPECIFICATIONS

Tolerance ± 10%.

VOLTAGE RATINGS:	100VDCW, 200VDCW, 400VDCW, 600VDCW, 1600VDCW, (1000VDCW upon request).
INSULATION RESISTANCE:	@ 25°C.: 5000 megohm-microfarads or 100,000 megohms minimum, whichever is the lesser. @ 125°C.: 70 megohm-microfarads or 1400 megohms minimum, whichever is the lesser.
POWER FACTOR:	1.0% maximum at 1kc.
TEMPERATURE RANGE:	-55°C. to +125°C. with no voltage derating.
CAPACITANCE CHANGE VS. TEMPERATURE:	From 25°C. to -55° (-9.0% max.) From 25°C. to +125°C. (+12.0% max.)

LONG TERM OPERATING STABILITY AT FULL RATED VOLTAGE AND RATED TEMPERATURE EXTREMES IS ± 2% MAXIMUM.

### Part Numbers:

The part numbers indicated in the table of values on page 385 are constructed as follows:

6	DP	-	2	-	103
Voltage Rating (in 100's of volts DCW)	Type Designation		Case Size		Cap. Value (2 sig. figs. & dec. mult.)

The above example calls for a .01 mfd. capacitor with a 600VDCW voltage rating. Case dimensions are shown in the table of values listing on page 376.

\* Reg. Du Pont Trademark



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# ELMENCO CAPACITORS

TYPE  
MPD

## DIPPED MYLAR\*—PAPER (Elmenco type MPD)

### 100VDCW

Cap Mfd.	Part No.	L	W	H	Net Price (1-24)
.005	1DP-1-502	11/16	5/16	1/2	\$0.18
.006	1DP-1-602	11/16	5/16	1/2	.18
.0068	1DP-1-682	11/16	5/16	1/2	.18
.0075	1DP-1-752	11/16	5/16	1/2	.18
.01	1DP-1-103	11/16	5/16	1/2	.18
.015	1DP-1-153	23/32	11/32	17/32	.18
.02	1DP-1-203	23/32	11/32	19/32	.18
.022	1DP-1-223	23/32	11/32	19/32	.18
.025	1DP-1-253	23/32	11/32	19/32	.18
.03	1DP-1-303	23/32	3/8	5/8	.18
.033	1DP-1-333	23/32	3/8	5/8	.18
.04	1DP-1-403	23/32	3/8	5/8	.18
.047	1DP-2-473	7/8	11/32	19/32	.21
.05	1DP-2-503	7/8	11/32	19/32	.21
.056	1DP-2-563	7/8	3/8	5/8	.21
.068	1DP-2-683	7/8	13/32	5/8	.21
.075	1DP-2-753	7/8	13/32	5/8	.21
.1	1DP-2-104	29/32	7/16	11/16	.21
.15	1DP-3-154	1-1/4	7/16	11/16	.24
.2	1DP-3-204	1-9/32	1/2	23/32	.27
.22	1DP-3-224	1-9/32	1/2	23/32	.27
.25	1DP-3-254	1-9/32	17/32	3/4	.30
.33	1DP-4-334	1-3/8	9/16	13/16	.36
.47	1DP-4-474	1-3/8	21/32	29/32	.45
.5	1DP-4-504	1-3/8	21/32	29/32	.45
.68	1DP-5-684	1-9/16	11/16	15/16	.66
1.0	1DP-5-105	1-9/16	3/4	1	.96

### 200VDCW

Cap Mfd.	Part No.	L	W	H	Net Price (1-24)
.1	2DP-3-104	1-7/32	1/2	23/32	\$0.21
.15	2DP-3-154	1-1/4	9/16	25/32	.24
.2	2DP-4-204	1-11/32	5/8	7/8	.27
.22	2DP-4-224	1-11/32	5/8	7/8	.27
.25	2DP-4-254	1-11/32	21/32	7/8	.30
.33	2DP-5-334	1-9/16	21/32	7/8	.36
.47	2DP-5-474	1-9/16	3/4	1	.45
.5	2DP-5-504	1-9/16	25/32	1	.45

### 400VDCW

Cap. Mfd.	Part No.	L	W	H	Net Price (1-24)
.01	4DP-1-103	23/32	3/8	5/8	\$0.15
.015	4DP-1-153	23/32	7/16	21/32	.15
.02	4DP-2-203	7/8	13/32	5/8	.15
.022	4DP-2-223	7/8	13/32	5/8	.18
.025	4DP-2-253	7/8	7/16	21/32	.18
.03	4DP-2-303	7/8	15/32	21/32	.18
.033	4DP-2-333	7/8	15/32	21/32	.18
.04	4DP-3-403	1-3/16	7/16	21/32	.18
.047	4DP-3-473	1-3/16	7/16	21/32	.21
.05	4DP-3-503	1-3/16	7/16	21/32	.21
.056	4DP-3-563	1-3/16	15/32	11/16	.21
.068	4DP-3-683	1-3/16	1/2	23/32	.24
.075	4DP-3-753	1-1/4	17/32	3/4	.24
.1	4DP-3-104	1-1/4	19/32	27/32	.24
.15	4DP-4-154	1-11/32	5/8	7/8	.27
.2	4DP-5-204	1-9/16	5/8	7/8	.33
.22	4DP-5-224	1-9/16	21/32	7/8	.33
.25	4DP-5-254	1-9/16	11/16	15/16	.36
.27	4DP-5-274	1-9/16	11/16	15/16	.36
.33	4DP-5-334	1-9/16	3/4	15/16	.54
.47	4DP-6-474	2-3/8	13/16	1-1/16	.78
.5	4DP-6-504	2-3/8	13/16	1-1/16	.78

### 600VDCW

Cap. Mfd.	Part No.	L	W	H	Net Price (1-24)
.001	6DP-1-102	11/16	11/32	17/32	\$0.15
.0012	6DP-1-122	11/16	11/32	17/32	.15
.0015	6DP-1-152	11/16	11/32	17/32	.15
.002	6DP-1-202	11/16	11/32	17/32	.15
.0022	6DP-1-222	11/16	11/32	17/32	.15
.0025	6DP-1-252	11/16	11/32	17/32	.15
.0027	6DP-1-272	11/16	11/32	17/32	.15
.003	6DP-1-302	11/16	11/32	17/32	.15
.0033	6DP-1-332	11/16	11/32	17/32	.15
.0039	6DP-1-392	11/16	11/32	9/16	.15
.004	6DP-1-402	11/16	11/32	9/16	.15
.0047	6DP-1-472	23/32	3/8	19/32	.15
.005	6DP-1-562	23/32	3/8	19/32	.15
.0056	6DP-1-562	23/32	3/8	19/32	.15
.006	6DP-1-602	23/32	3/8	5/8	.15
.0068	6DP-1-682	23/32	13/32	21/32	.18
.0075	6DP-2-752	7/8	11/32	9/16	.18
.008	6DP-2-802	7/8	11/32	9/16	.18
.0082	6DP-2-822	7/8	11/32	9/16	.18
.01	6DP-2-103	7/8	3/8	19/32	.18
.012	6DP-2-123	7/8	3/8	19/32	.18
.015	6DP-2-153	7/8	13/32	5/8	.18
.018	6DP-2-183	7/8	5/8	7/8	.18
.02	6DP-2-203	7/8	7/16	21/32	.18
.022	6DP-2-223	7/8	15/32	21/32	.18
.025	6DP-2-253	7/8	1/2	11/16	.21
.027	6DP-3-273	1-3/16	7/16	21/32	.21
.03	6DP-3-303	1-3/16	7/16	21/32	.21
.033	6DP-3-333	1-3/16	7/16	21/32	.21
.039	6DP-3-393	1-3/16	15/32	11/16	.21
.04	6DP-3-403	1-3/16	15/32	11/16	.21
.047	6DP-3-473	1-3/16	1/2	23/32	.24
.05	6DP-3-503	1-3/16	1/2	23/32	.24
.056	6DP-3-563	1-3/16	17/32	3/4	.24
.06	6DP-3-603	1-3/16	17/32	3/4	.27
.068	6DP-4-683	1-11/32	17/32	13/16	.27
.075	6DP-4-753	1-11/32	17/32	13/16	.27
.082	6DP-4-823	1-11/32	9/16	27/32	.27
.1	6DP-4-104	1-11/32	5/8	7/8	.27
.15	6DP-5-154	1-9/16	21/32	7/8	.36
.2	6DP-5-204	1-9/16	23/32	15/16	.42
.22	6DP-5-224	1-9/16	25/32	1	.42
.25	6DP-5-254	1-9/16	13/16	1-1/6	.45
.33	6DP-6-334	2-3/8	3/4	1	.63
.47	6DP-6-474	2-3/8	7/8	1-1/8	.90
.5	6DP-6-504	2-3/8	7/8	1-1/8	.90

### 1600VDCW

Cap. Mfd.	Part No.	L	W	H	Net Price (1-24)
.001	16DP-2-102	7/8	11/32	9/16	\$0.24
.0015	16DP-2-152	7/8	11/32	9/16	.24
.0018	16DP-2-182	7/8	3/8	19/32	.24
.002	16DP-2-202	7/8	3/8	19/32	.24
.0022	16DP-2-222	7/8	3/8	19/32	.24
.0025	16DP-2-252	7/8	13/32	5/8	.27
.003	16DP-2-302	7/8	7/16	21/32	.27
.0033	16DP-2-332	7/8	7/16	21/32	.27
.004	16DP-2-402	7/8	15/32	21/32	.27
.0047	16DP-2-472	7/8	1/2	23/32	.27
.005	16DP-2-502	7/8	17/32	3/4	.27
.006	16DP-3-602	1-3/16	7/16	21/32	.30
.007	16DP-3-702	1-3/16	15/32	11/16	.30
.0075	16DP-3-752	1-3/16	1/2	23/32	.30
.008	16DP-3-802	1-3/16	17/32	3/4	.30
.01	16DP-3-103	1-3/16	17/32	3/4	.30
.015	16DP-4-153	1-11/32	9/16	27/32	.33
.018	16DP-4-183	1-11/32	7/16	21/32	.36
.02	16DP-4-203	1-11/32	21/32	7/8	.36
.022	16DP-4-223	1-9/16	5/8	7/8	.42
.025	16DP-5-253	1-9/16	21/32	7/8	.42
.03	16DP-5-303	1-9/16	11/16	15/16	.42
.033	16DP-5-333	1-9/16	23/32	15/16	.42
.04	16DP-5-403	1-9/16	3/4	1	.45
.047	16DP-5-473	1-9/16	13/16	1-1/16	.48
.05	16DP-5-503	1-9/16	13/16	1-1/16	.48

\*Reg. Du Pont Trademark



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GREAT NECK, NEW YORK  
Branches: Los Angeles 35, Dallas 7

**ARCO**  
CAPACITORS

TYPES  
CCD, 3CCD  
6CCD, CCS

**CERAMIC DISC**

**MINIATURE  
GENERAL PURPOSE**

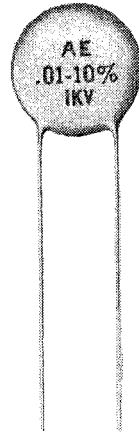
ARCO Type CCD ceramic disc capacitors have improved ceramic bodies which impart longer life and greater stability to any application. The standard CCD line has a  $\pm 10\%$  tolerance and 1000VDCW rating, making possible a single ceramic disc stock for universal use. Whether a broad coupling or by-pass application, or a critical close tolerance use, ARCO CCD units fill the bill with dependability and economy. The 'space-saving' size of ARCO discs is another feature designed to offer greater service convenience with complete safety of operation. In addition to the 1000VDCW line, higher voltage ratings are available in Type CCD units. 3000VDCW (Type 3CCD) and 6000VDCW (Type 6CCD) disc ceramics are supplied in tolerance of  $\pm 20\%$ .

**TYPE CCD**

$\pm 10\%$  Tolerance — 1000 VDCW

Cap. mmf.	Part Number	Net Price	Cap. mmf.	Part Number	Net Price (1-24)
5	CCD-050	\$0.15	390	CCD-391	\$0.15
10	CCD-100	0.15	400	CCD-401	0.15
12	CCD-120	0.15	470	CCD-471	0.15
15	CCD-150	0.15	500	CCD-501	0.15
18	CCD-180	0.15	560	CCD-561	0.15
20	CCD-200	0.15	680	CCD-681	0.15
22	CCD-220	0.15	750	CCD-751	0.15
25	CCD-250	0.15	800	CCD-801	0.15
27	CCD-270	0.15	820	CCD-821	0.15
30	CCD-300	0.15	1000	CCD-102	0.15
33	CCD-330	0.15	1200	CCD-122	0.15
39	CCD-390	0.15	1500	CCD-152	0.15
47	CCD-470	0.15	2000	CCD-202	0.15
50	CCD-500	0.15	2200	CCD-222	0.15
56	CCD-560	0.15	2500	CCD-252	0.15
68	CCD-680	0.15	2700	CCD-272	0.15
75	CCD-750	0.15	3000	CCD-302	0.15
82	CCD-820	0.15	3300	CCD-332	0.15
91	CCD-910	0.15	3900	CCD-392	0.15
100	CCD-101	0.15	4700	CCD-472	0.15
120	CCD-121	0.15	5000	CCD-502	0.18
150	CCD-151	0.15	5600	CCD-562	0.18
180	CCD-181	0.15	6800	CCD-682	0.18
200	CCD-201	0.15	8200	CCD-822	0.18
220	CCD-221	0.15	10000	CCD-103	0.18
250	CCD-251	0.15	*15000	CCD-153	0.18
270	CCD-271	0.15	*20000	CCD-203	0.18
300	CCD-301	0.15	†30000	CCD-303	0.30
300	CCD-301	0.15	†40000	CCD-403	0.36
330	CCD-331	0.15	†50000	CCD-503	0.42

\* $\pm 20\%$  tolerance  
†500VDCW, +80, -20% tolerance  
‡500VDCW,  $\pm 20\%$  tolerance



**TYPE 3CCD**

High Voltage —  $\pm 20\%$  Tolerance  
3000 VDCW

Cap. mmf.	Part Number	Net Price	Cap. mmf.	Part Number	Net Price (1-24)
4.7	3CCD-4R7	\$0.24	150	3CCD-151	\$0.24
6.8	3CCD-6R8	0.24	180	3CCD-181	0.24
10	3CCD-100	0.24	220	3CCD-221	0.24
15	3CCD-150	0.24	270	3CCD-271	0.24
22	3CCD-220	0.24	330	3CCD-331	0.24
27	3CCD-270	0.24	390	3CCD-391	0.24
33	3CCD-330	0.24	470	3CCD-471	0.24
39	3CCD-390	0.24	560	3CCD-561	0.24
47	3CCD-470	0.24	680	3CCD-681	0.24
56	3CCD-560	0.24	820	3CCD-821	0.24
68	3CCD-680	0.24	1000	3CCD-102	0.24
82	3CCD-820	0.24	2000	3CCD-202	0.24
100	3CCD-101	0.24	5000	3CCD-502	0.24
120	3CCD-121	0.24			

**TYPE 6CCD**

High Voltage —  $\pm 20\%$  Tolerance  
6000 VDCW

Cap. mmf.	Part Number	Net Price	Cap. mmf.	Part Number	Net Price (1-24)
4.7	6CCD-4R7	\$0.36	100	6CCD-101	\$0.36
6.8	6CCD-6R8	0.36	120	6CCD-121	0.42
10	6CCD-100	0.36	150	6CCD-151	0.36
15	6CCD-150	0.36	220	6CCD-221	0.36
22	6CCD-220	0.36	330	6CCD-331	0.36
27	6CCD-270	0.36	470	6CCD-471	0.36
33	6CCD-330	0.36	560	6CCD-561	0.42
47	6CCD-470	0.36	680	6CCD-681	0.42
56	6CCD-560	0.36	820	6CCD-821	0.42
68	6CCD-680	0.36	1000	6CCD-102	0.42
82	6CCD-820	0.36	2000	6CCD-202	0.42

**TEMPERATURE STABLE**

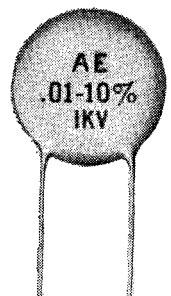
This new ARCO ceramic capacitor maintains excellent capacitance stability with wide temperature variation. The graph illustrates typical percentage variation of capacity value with temperature. The operating temperature range has been extended to  $-55^{\circ}\text{C}$ . to  $+125^{\circ}\text{C}$ . without derating of the 1000VDCW specification. Standard tolerance is  $\pm 10\%$ . The combined small size, low cost, and high stability represents another significant advance in the quality line ARCO capacitors. All units are marked "TS" for identification.

**TYPE CCS**

$\pm 10\%$  Tolerance — 1000 VDCW

Cap. mmf.	Part Number	Net Price	Cap. mmf.	Part Number	Net Price (1-24)
150	CCS-151	\$0.18	820	CCS-821	\$0.24
180	CCS-181	0.18	1000	CCS-102	0.21
200	CCS-201	0.18	1200	CCS-122	0.21
220	CCS-221	0.18	1500	CCS-152	0.21
250	CCS-251	0.18	1800	CCS-182	0.21
270	CCS-271	0.18	2000	CCS-202	0.21
300	CCS-301	0.18	2200	CCS-222	0.21
330	CCS-331	0.18	2500	CCS-252	0.24
390	CCS-391	0.18	2700	CCS-272	0.24
470	CCS-471	0.18	3000	CCS-302	0.24
500	CCS-501	0.18	3300	CCS-332	0.24
560	CCS-561	0.18	3900	CCS-392	0.24
620	CCS-621	0.18	4700	CCS-472	0.24
680	CCS-681	0.18			
750	CCS-751	0.18			

**LOOK FOR THE "AE" brand  
on all ARCO disc ceramic  
capacitors**





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**ARCO**  
**CAPACITORS**

TYPE CCTO, CCTN  
NPO - TYPE CCTO  
N750 - TYPE CCTN  
VARIABLE CERAMIC  
TRIMMER - FEED  
THRU CERAMICS

# TEMPERATURE COMPENSATING

## TYPE CCTO

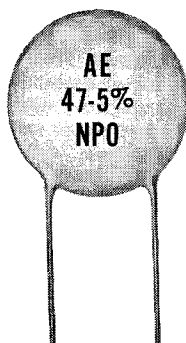
ARCO Type CCTO ceramic disc capacitors are zero temperature coefficient units specifically suited for high stability, high Q application. In addition to extreme temperature stability, Type CCTO capacitors have very high insulation resistance and low aging rate. These special characteristics are added to the high 1000VDCW rating and close tolerance of the entire ARCO ceramic line to provide a superior capacitor for the special purpose intended. Type CCTO capacitors are identified by "NPO" printed on each unit.

### NPO-TYPE CCTO

±5% TOLERANCE  
1000 VDCW

Cap. mmf.	Part Number	Net Price (1-24)
*2.2	CCTO-2R2	\$0.30
*3.3	CCTO-3R3	0.30
*4.7	CCTO-4R7	0.30
5.0	CCTO-050	0.30
6.8	CCTO-6R8	0.30
10	CCTO-100	0.30
12	CCTO-120	0.30
15	CCTO-150	0.30
18	CCTO-180	0.30
20	CCTO-200	0.30
22	CCTO-220	0.30
24	CCTO-240	0.30
27	CCTO-270	0.30
30	CCTO-300	0.30
33	CCTO-330	0.30
36	CCTO-360	0.30
39	CCTO-390	0.30
47	CCTO-470	0.30
51	CCTO-510	0.33
56	CCTO-560	0.33
68	CCTO-680	0.33
75	CCTO-750	0.33
82	CCTO-820	0.33
100	CCTO-101	0.33
120	CCTO-121	0.33
150	CCTO-151	0.33

\* ±.5 mmf. tolerance



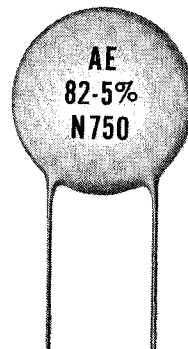
## TYPE CCTN

Another member of the ARCO temperature compensating disc ceramic line is the Type CCTN unit which has a negative temperature coefficient of -750 ppm/°C. (N750). These units are used to counterbalance shifts in other circuit components with change in temperature. The result is a more stable circuit essential to many frequency control applications. Improved ceramic bodies in the temperature compensating line provide greater long term stability in addition to accurate temperature compensation. Type CCTN capacitors are identified by "N750" imprinted on each unit except the smallest size. On the small units the E.I.A. temperature coefficient designation "U2" is imprinted.

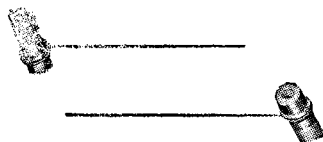
### N750-TYPE CCTN

±5% TOLERANCE  
1000 VDCW

Cap. mmf.	Part Number	Net Price (1-24)
5	CCTN-050	\$0.30
10	CCTN-100	0.30
15	CCTN-150	0.30
22	CCTN-220	0.30
27	CCTN-270	0.30
33	CCTN-330	0.30
39	CCTN-390	0.30
47	CCTN-470	0.30
56	CCTN-560	0.30
62	CCTN-620	0.30
68	CCTN-680	0.30
75	CCTN-750	0.30
82	CCTN-820	0.30
100	CCTN-101	0.30
120	CCTN-121	0.30
150	CCTN-151	0.30
200	CCTN-201	0.30
220	CCTN-221	0.30
270	CCTN-271	0.30
300	CCTN-301	0.30
330	CCTN-331	0.30
390	CCTN-391	0.30
470	CCTN-471	0.30



## VARIABLE CERAMIC TRIMMER



Adjustable ceramic trimmer capacitor for high frequency applications. Silvered Steatite tubes 5/8" in length provide capacity ranges listed below upon insertion of 6-32 screw.

PART No.	CAP. RANGE	NET PRICE
	MMF.	1-24
CV-1	0.5 - 3	\$0.21
CV-2	1 - 4	.21
CV-3	2 - 6	.21

## FEED THRU CERAMICS

Compact rugged ceramic feed through capacitors are designed for high frequency coupling with a minimum of inductive reactance through elimination of wire leads. These units are three dot RMA coded and rated at 500VDCW.



PART No.	CAP. (MMF)	NET PRICE
	(Guar. Min. Val.)	1-24
CCF-501	500	\$0.24
CCF-102	1000	.24
CCF-152	1500	.24
CCF-202	2000	.24





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**ELMENCO**  
CAPACITORS

TYPES  
46, 40, PC46  
42

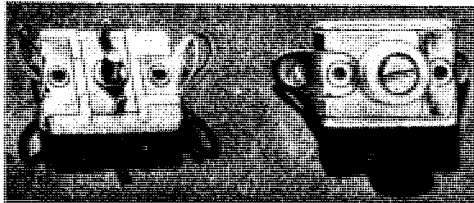
# TRIMMERS

El-Menco Trimming Condensers are treated for resistance to humidity and for permanence of capacity setting.

The base is made of the lowest dielectric loss ceramic material available and the mica is clear India Ruby.

The soldering lugs may be bent in any position without affecting capacity setting due to the rigid construction of adjusting plates.

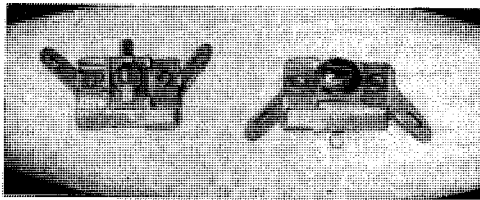
Trimmers shown here are standard sizes and capacities. Voltage 350 VDCT - 175 VDCW.



TYPE 46 STANDARD TRIMMER 3/4" x 5/8"

## TYPE 46—STANDARD TRIMMER

TYPE 46W		GUARANTEED RANGE		NET PRICE (1-24)
NUMBER PART	PLATES NUMBER OF	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	
460	1 1/4 Pl.	15	1.5	\$0.30
461	1 3/4 Pl.	30	2.7	.30
462	2 Pl.	80	5	.30
463	3 Pl.	180	9	.33
464	4 Pl.	280	25	.39
465	5 Pl.	380	50	.42
466	6 Pl.	480	80	.48
467	7 Pl.	580	110	.54
468	8 Pl.	680	140	.57
469	9 Pl.	780	170	.63
4610	10 Pl.	900	190	.72
4611	11 Pl.	1000	210	.78
4612	12 Pl.	1100	240	.84
4613	13 Pl.	1200	300	.93
4614	14 Pl.	1300	340	1.02
4615	15 Pl.	1400	390	1.11

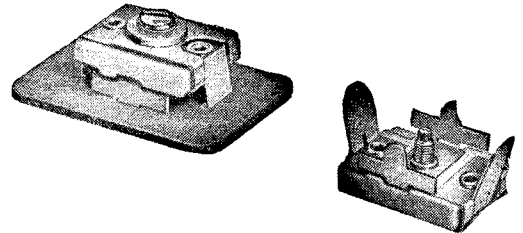


TYPE 40 MINIATURE TRIMMER 3/8" x 9/16"

## TYPE 40—MINIATURE TRIMMER

TYPE 40		GUARANTEED RANGE		NET PRICE (1-24)
NUMBER PART	PLATES NUMBER OF	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	
400	1 1/2 Pl.	7	0.9	\$0.30
402	2 Pl.	20	1.5	.30
403	3 Pl.	85	8	.36
404	4 Pl.	60	8	.39

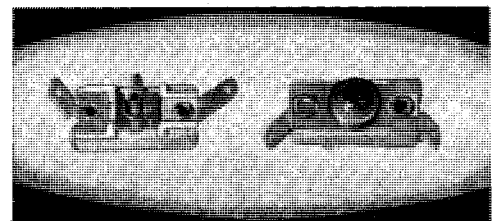
## TYPE PC PRINTED CIRCUIT TRIMMERS



The Elmenco trimmer capacitors, Types 40, 42, and 46, have been adapted for printed circuit techniques through alteration of terminals and mounting configuration. The holes in the terminal lugs are removed since necessity for hook-up is eliminated. The resulting solid terminals have greatly increased spring action, allowing the trimmer to be "snapped in" the printed circuit board and firmly held until soldered. The mounting lug portion of the trimmer has also been modified to facilitate positioning and support of the unit. Drawings of the trimmers and mounting layout are available upon request at no charge.

This printed circuit style is identified by the prefix letters "PC" preceding the regular part number. All listed values are available in the PC style.

For net price add \$0.03 to the net price of the standard trimmer.



TYPE 42 MIDGET TRIMMER 3/8" x 3/4"

## TYPE 42—MIDGET TRIMMER

TYPE 42		GUARANTEED RANGE		NET PRICE (1-24)
NUMBER PART	PLATES NUMBER OF	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	
420	1 1/8 Pl.	12	1	\$0.3
421	1 3/4 Pl.	25	2	.3
422	2 Pl.	25	4	.3
423	3 Pl.	100	7	.3
424	4 Pl.	150	14	.3
425	5 Pl.	200	24	.4
426	6 Pl.	250	37	.4
427	7 Pl.	300	55	.5
428	8 Pl.	250	70	.5
429	9 Pl.	400	90	.6
4210	10 Pl.	450	110	.7
4211	11 Pl.	500	130	.8
4212	12 Pl.	550	150	.8
4213	13 Pl.	600	170	.9
4214	14 Pl.	650	190	1.0
4215	15 Pl.	700	210	1.1

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# ELMENCO CAPACITORS

## TYPES 30, 30M

### Single and Dual PADDERS

EL-MENCO PADDING CONDENSERS have been acclaimed by engineers as the finest development in adjustable mica condensers.

The construction is such as to completely enclose and protect the delicate edges of the mica films, made of the finest quality clear India ruby mica.

The phosphor bronze adjusting plates assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.

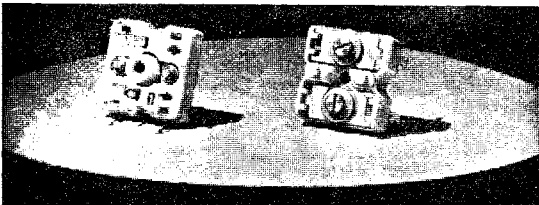


TYPE 30 AND TYPE 30-M PADDER 7/8" x 15/16"

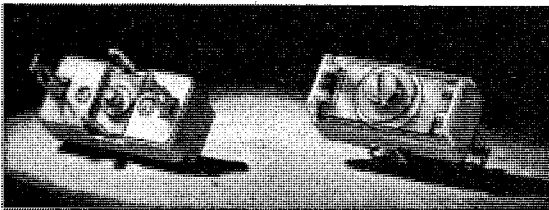
#### TYPE 30 500 Volts DC Flash-Test — 250 WVDC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE		NET PRICE (1-24)
		At 1 1/2 Inch Pounds Cap. Will Be More Than MMF.	At 2 1/2 Turns Open Cap. Will Be Less Than MMF.	
302	2 Pl.	180	15	\$0.54
303	3 Pl.	340	65	.57
304	4 Pl.	550	100	.63
305	5 Pl.	760	190	.69
306	6 Pl.	970	275	.72
307	7 Pl.	1180	350	.78
308	8 Pl.	1390	450	.84
309	9 Pl.	1600	550	.87
310	10 Pl.	1890	650	.93
311	11 Pl.	2110	780	.99
312	12 Pl.	2330	880	1.05
313	13 Pl.	2605	1150	1.14
314	14 Pl.	2830	1800	1.20
315	15 Pl.	3055	1400	1.26

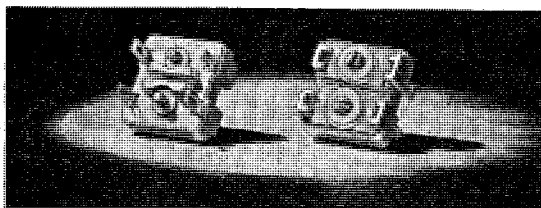
Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 1 1/2 to 1 3/4 Mil Mica films.



TYPE 50 DUAL PADDER 175VDCW  
(will fit any size shield having dimensions exceeding 1-1/16" x 1-1/16")



TYPE 58 PADDER 1" x 15/32" 175VDCW



TYPE 60 DUAL PADDER 175VDCW  
(will fit any size shield having dimensions exceeding 3/4" x 3/4")

#### TYPE 30-M 1000 Volts DC Flash-Test — 500 Working Volts DC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE		NET PRICE (1-24)
		At 1 3/4 Inch Pounds Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	
302-M	2 Pl.	120	15	\$0.54
303-M	8 Pl.	320	65	.60
304-M	4 Pl.	500	100	.66
305-M	5 Pl.	690	180	.72
306-M	6 Pl.	880	265	.78
307-M	7 Pl.	1070	340	.84
308-M	8 Pl.	1260	425	.90
309-M	9 Pl.	1415	525	.96
310-M	10 Pl.	1600	615	1.02
311-M	11 Pl.	1785	730	1.08
312-M	12 Pl.	1970	800	1.14
313-M	13 Pl.	2155	1000	1.20
314-M	14 Pl.	2340	1100	1.29
315-M	15 Pl.	2525	1200	1.35

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 2 to 2 1/4 Mil Mica.

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE		NET PRICE (1-24)
		At Tight Cap. Will Be More Than MMF.	At 2 Turns Open Cap. Will Be Less Than MMF.	
502	2 Pl.	80	7.5	\$0.60
503	3 Pl.	160	19	.69
504	4 Pl.	240	50	.78

TYPE 50 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding 1 1/8" x 1 1/8".

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE		NET PRICE (1-24)
		At Tight Cap. Will Be More Than MMF.	At 2 Turns Open Cap. Will Be Less Than MMF.	
582	2 Pl.	80	7.5	\$0.39
583	3 Pl.	160	19	.42
584	4 Pl.	240	50	.45

TYPE 58 Padder is a single variable trimmer section provided with a two-pronged staple mounting for attachment to bracket or chassis. Base is made of lowest loss steatite and the mica is India Ruby.

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE		NET PRICE (1-24)
		At Tight Cap. Will Be More Than MMF.	At 2 Turns Open Cap. Will Be Less Than MMF.	
602	2 Pl.	55	7	\$0.54
603	3 Pl.	100	15	.63
604	4 Pl.	160	35	.72
605	5 Pl.	220	60	.81

TYPE 60 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding 3/4" x 3/4".

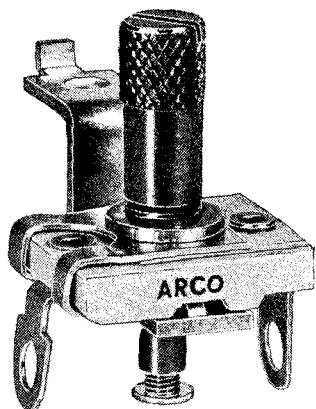


**ARCO**  
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GREAT NECK, NEW YORK  
Branches: Los Angeles 35, Dallas 7

**ELMENCO**  
**CAPACITORS**

**TYPES**  
**S46, L30**

## VARIABLE COMPRESSION MICA CAPACITORS



### TYPE S46

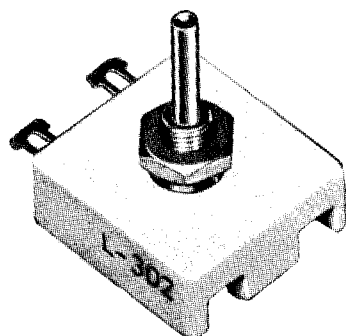
Net Price:  
Add 27¢ to the  
Net price of  
trimmer alone

A complete Type 46 trimmer assembly with mounting bracket and adjusting shaft for ease of tuning. Can be supplied as pictured from stock or with construction variations to order.

To specify precede trimmer part number with the letter "S".

For example:

Type 460 trimmer will be ordered as S-460.



### TYPE - L30

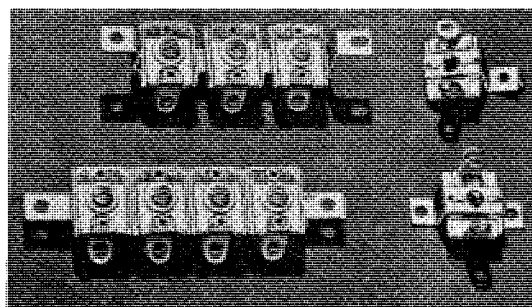
Net Price:  
Add .06¢ to the  
Net price of  
padder alone

The Type 30 or Type 30M padder can now be obtained with a special adjusting screw which has been lengthened to accommodate a tuning knob. To obtain a padder with the special screw, precede the regular padder part number with the letter "L". For example, a 302 padder with the special screw would be specified as "L-302".

NOTE: Knobs may also be obtained if desired at a cost of 30¢ each net.

The two new assemblies shown at left have been developed due to increasing demands for miniaturized tuning devices. However, certain precautions must be taken in design so that these variable mica capacitors are not used in circuits for which they are not adapted. These assemblies are highly stable for components of their design, but they do not match the stability of the air dielectric tuners. Short term drift of the mica trimmers and padders after tuning is negligible. Long term drift at one setting due to changes in atmospheric conditions and physical motion should be well within  $\pm 2\%$ .

It should also be remembered that variable compression type mica capacitors do not have linear variation with adjustment. Rate of change of capacity decreases per turn as the screw is withdrawn. For example, a 306 padder will reduce to half the nominal maximum value within one opening turn. Those with a greater number of plates require further screw disengagement for a similar percentage reduction in capacity value. On the other hand, a 302 padder will reach one-half the nominal maximum in less than one-half turn open. Type 46 trimmers operate in much the same way. Detailed information on specific sizes is available upon request.



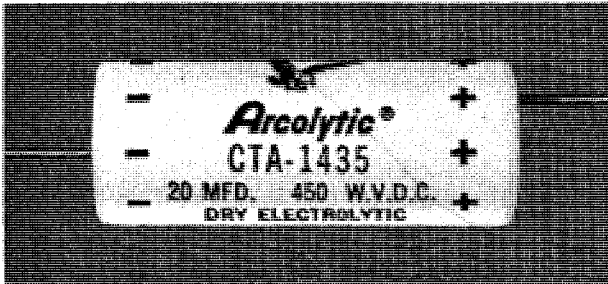
Mounting brackets as illustrated above can be supplied for all types of trimmers in flat "Z" (single mounting hole with or without non-rotational stop), and "U" (dual mounting hole) configurations.

	Net Price (1-24)
Bracket for mounting 1 Trimmer .....	\$0.09
Bracket for mounting 2 Trimmers.....	.11
Bracket for mounting 3 Trimmers.....	.13
Bracket for mounting 4 Trimmers.....	.14
Bracket for mounting 5 Trimmers.....	.16
Bracket for mounting 6 Trimmers.....	.18



# Arcolytic

## TUBULAR ELECTROLYTIC CAPACITORS



### ARCOLYTIC TUBULARS

- Made with 99.99% high purity aluminum foil.
- Higher reliability because of practically no impurities in the foil.
- Maximum operating temperature: 85°C. (Type CTW: 75°C.)
- Perfect replacement electrolytic for all types entertainment units.
- Extended shelf and operating life at both normal and elevated temperatures.
- Built and tested to meet EIA specification RS-154.

**Type CTA** Single and multiple section tubular electrolytics in drawn aluminum cans with cardboard sleeves. Single section units have bare wire leads with negative grounded to can. Multiple units have a common negative grounded to can, and all leads have vari-colored insulated wire for ease of identification.

**Type CTW** Same as type CTA except that these are multiple section electrolytics in wax-filled cardboard tubes.

### SINGLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTA-1050	50	6	1/2 x 1 1/4	.57
CTA-1055	100	6	1/2 x 1 1/4	.72
CTA-1060	250	6	5/8 x 1 3/4	.81
CTA-1065	500	6	3/4 x 1 3/4	.93
CTA-1070	1000	6	3/4 x 2 1/4	1.14
CTA-1075	1500	6	1 x 2 1/4	1.26
CTA-1080	2000	6	1 x 2 3/4	1.38
CTA-1085	100	15	5/8 x 1 1/4	.75
CTA-1090	250	15	5/8 x 1 3/4	.93
CTA-1095	500	15	3/4 x 2 1/4	1.05
CTA-1100	1000	15	7/8 x 2 1/4	1.38
CTA-1105	2	25	1/2 x 1 1/4	.54
CTA-1110	5	25	1/2 x 1 1/4	.60
CTA-1115	10	25	1/2 x 1 1/4	.66
CTA-1125	50	25	1/2 x 1 1/4	.60
CTA-1120	25	25	5/8 x 1 1/4	.66
CTA-1130	100	25	5/8 x 1 3/4	.81
CTA-1135	250	25	3/4 x 2 1/4	1.02
CTA-1140	500	25	1 x 2 1/4	1.38
CTA-1145	1	50	1/2 x 1 1/4	.54
CTA-1150	2	50	1/2 x 1 1/4	.54
CTA-1155	5	50	1/2 x 1 1/4	.60
CTA-1160	10	50	1/2 x 1 1/4	.66
CTA-1165	20	50	3/8 x 1 1/4	.60
CTA-1170	25	50	3/8 x 1 1/4	.63
CTA-1175	50	50	5/8 x 1 3/4	.72
CTA-1180	100	50	3/4 x 1 3/4	.84
CTA-1185	150	50	3/4 x 1 3/4	.93
CTA-1190	250	50	7/8 x 1 3/4	1.05
CTA-1195	500	50	1 x 2 1/4	1.44
CTA-1200	4	150	1/2 x 1 1/4	.60
CTA-1205	5	150	1/2 x 1 1/4	.66
CTA-1210	8	150	5/8 x 1 1/4	.63
CTA-1215	10	150	5/8 x 1 1/4	.63
CTA-1220	12	150	5/8 x 1 1/4	.66
CTA-1225	16	150	5/8 x 1 3/4	.69
CTA-1230	20	150	5/8 x 1 3/4	.72
CTA-1235	25	150	5/8 x 1 3/4	.75
CTA-1240	30	150	3/4 x 1 3/4	.78
CTA-1245	40	150	3/4 x 1 3/4	.81

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTA-1250	50	150	7/8 x 1 3/4	.84
CTA-1255	60	150	7/8 x 1 3/4	.90
CTA-1260	80	150	3/4 x 2 1/4	.96
CTA-1265	100	150	1 x 2 1/4	1.05
CTA-1270	150	150	1 1/4 x 2 1/4	1.14
CTW-1275	200	150	1 1/4 x 2 3/4	1.32
CTW-1280	250	150	1 1/4 x 3 1/4	1.53
CTW-1285	300	150	1 1/4 x 3 3/4	1.53
CTW-1290	150	200	1 x 3 3/4	1.53
CTW-1295	200	200	1 1/4 x 3 3/4	1.74
CTA-1300	4	250	5/8 x 1 1/4	.60
CTA-1305	8	250	5/8 x 1 1/4	.69
CTA-1310	10	250	5/8 x 1 3/4	.72
CTA-1315	12	250	5/8 x 1 3/4	.75
CTA-1320	16	250	5/8 x 1 3/4	.78
CTA-1325	20	250	3/4 x 1 3/4	.81
CTA-1330	30	250	3/4 x 2 1/4	.87
CTA-1335	40	250	3/4 x 2 1/4	.93
CTA-1340	50	250	3/4 x 2 1/4	1.02
CTA-1345	60	250	7/8 x 2 1/4	1.08
CTA-1350	100	250	1 x 2 3/4	1.47
CTW-1355	140	300	1 x 3 3/4	1.89
CTA-1357	200	300	1 1/4 x 4 1/4	2.22
CTA-1360	4	350	5/8 x 1 1/4	.63
CTA-1365	8	350	5/8 x 1 3/4	.72
CTA-1370	10	350	5/8 x 1 3/4	.75
CTA-1375	12	350	3/4 x 1 3/4	.78
CTA-1380	16	350	3/4 x 1 3/4	.84
CTA-1385	20	350	7/8 x 1 3/4	.87
CTA-1390	30	350	7/8 x 2 1/4	.99
CTA-1395	40	350	1 x 2 1/4	1.05
CTA-1398	60	350	1 x 2 3/4	1.17
CTA-1400	1	450	1/2 x 1 1/4	.66
CTA-1405	2	450	1/2 x 1 1/4	.66
CTA-1410	4	450	5/8 x 1 1/4	.69
CTA-1415	8	450	5/8 x 1 3/4	.75
CTA-1420	10	450	3/4 x 1 3/4	.78
CTA-1425	12	450	3/4 x 1 3/4	.81
CTA-1430	16	450	7/8 x 1 3/4	.84
CTA-1435	20	450	7/8 x 2 1/4	.93
CTA-1440	30	450	1 x 2 1/4	1.02
CTA-1445	40	450	1 x 2 3/4	1.08
CTA-1450	50	450	1 x 3 1/4	1.26
CTA-1455	60	450	1 x 3 3/4	1.41
CTA-1460	80	450	1 x 3 3/4	1.68
CTA-1465	100	450	1 1/4 x 3 3/4	1.92
CTA-1470	8	500	3/4 x 1 3/4	.78
CTA-1475	10	500	7/8 x 1 3/4	.81
CTA-1480	16	500	7/8 x 2 1/4	.90
CTA-1485	20	500	1 x 2 1/4	.96
CTA-1490	30	500	1 x 2 3/4	1.05
CTA-1500	8	600	1 x 2 3/4	1.71
CTA-1505	10	600	1 x 2 3/4	1.77
CTA-1510	16	600	1 x 3 3/4	2.07
CTA-1515	20	600	1 x 3 3/4	2.05
CTA-1520	8	700	1 x 2 3/4	2.13
CTA-1525	10	700	1 x 2 3/4	2.07
CTA-1530	16	700	1 x 3 3/4	2.13

### DOUBLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTA-2030	10-10	50-50	5/8 x 1 3/4	.84
CTA-2035	8-8	150-150	5/8 x 1 3/4	.90
CTA-2040	16-16	150-150	3/4 x 1 3/4	1.08
CTA-2045	20-12	150-150	3/4 x 1 3/4	.96
CTA-2050	20-20	150-150	3/4 x 1 3/4	.98
CTA-2055	30-20	150-150	7/8 x 1 3/4	1.02
CTA-2060	30-30	150-150	7/8 x 1 3/4	1.08
CTA-2065	40-20	150-150	7/8 x 1 3/4	1.05
CTA-2070	40-30	150-150	7/8 x 2 1/4	1.08
CTA-2075	40-40	150-150	7/8 x 2 1/4	1.11
CTA-2080	50-30	150-150	7/8 x 2 1/4	1.17
CTA-2085	50-50	150-150	7/8 x 2 1/4	1.26
CTA-2090	80-30	150-150	1 x 2 1/4	1.32
CTA-2100	80-40	150-150	1 x 2 3/4	1.32
CTA-2105	80-50	150-150	1 x 2 3/4	1.41
CTW-2110	100-100	150-150	1 x 3 3/4	1.92
CTW-2115	250-50	150-150	1 1/4 x 3 3/4	2.22
CTW-2120	200-5	150-150	1 x 3 3/4	1.59
CTW-2125	250-200	150-150	1 1/4 x 4 3/4	2.52
CTA-2130	20-20	250-250	7/8 x 2 1/4	1.11
CTA-2135	40-10	250-250	7/8 x 2 1/4	1.23
CTA-2140	80-10	250-250	1 x 3 1/4	1.53
CTW-2145	120-80	250-250	1 1/4 x 3 3/4	2.40
CTW-2150	140-5	350-350	1 1/4 x 4 1/4	2.49
CTW-2155	80-100	450-50	1 1/4 x 4 1/4	2.22

NET (For quantities of 25 or more, please contact your local Arco-Elmecon Industrial Distributor)



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**Arcolytic**

**TUBULAR  
ELECTROLYTIC  
CAPACITORS**

## DOUBLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTA-2160	8-8	450-450	7/8 x 2 1/4	1.02
CTA-2165	10-10	450-450	1 x 2 1/4	1.11
CTA-2170	16-8	450-450	1 x 2 1/4	1.20
CTA-2175	20-20	450-450	1 x 2 3/4	1.50
CTA-2180	30-30	450-450	1 x 3 1/4	1.80
CTA-2185	40-40	450-450	1 x 3 3/4	2.04
CTA-2190	50-30	450-450	1 x 3 3/4	2.04

## TRIPLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTA-3050	20-20-20	150-150-150	7/8 x 1 3/4	1.50
CTA-3055	30-30-30	150-150-150	7/8 x 2 1/4	1.56
CTA-3060	40-30-20	150-150-150	7/8 x 2 1/4	1.56
CTA-3063	40-40-20	150-150-150	1 x 2 1/4	1.41
CTA-3065	40-40-40	150-150-150	1 x 2 1/4	1.68
CTA-3070	50-30-20	150-150-150	1 x 2 1/4	1.62
CTA-3075	80-40-20	150-150-150	1 x 2 3/4	1.74
CTW-3078	150-150-150	150-150-150	1 3/8 x 4 1/4	2.91
CTW-3080	250-200-10	150-150-150	1 1/4 x 4 1/4	2.76
CTA-3085	60-40-250	150-150-15	1 x 3 3/4	1.56
CTA-3090	80-30-300	150-150-15	1 x 3 3/4	1.74
CTA-3095	20-20-20	150-150-25	7/8 x 1 3/4	1.47
CTA-3100	40-20-20	150-150-25	1 x 1 3/4	1.53
CTA-3105	40-30-20	150-150-25	7/8 x 2 1/4	1.56
CTA-3110	40-40-20	150-150-25	1 x 2 1/4	1.59
CTA-3115	40-40-100	150-150-25	1 x 2 1/4	1.68
CTA-3120	50-30-20	150-150-25	1 x 2 1/4	1.59
CTA-3125	50-30-100	150-150-25	1 x 2 1/4	1.68
CTA-3130	50-30-250	150-150-25	1 x 3	1.86
CTA-3135	50-50-20	150-150-25	1 x 2 1/4	1.65
CTA-3140	80-20-100	150-150-25	1 x 2 3/4	1.68
CTA-3145	80-40-20	150-150-25	1 x 2 3/4	1.68
CTW-3150	250-120-50	150-150-25	1 3/8 x 4	2.61
CTW-3153	120-40-100	300-250-50	1 3/8 x 4 1/4	2.97
CTW-3155	60-60-60	300-300-300	1 3/8 x 3 1/2	2.82
CTW-3160	80-40-100	300-300-50	1 3/8 x 3 1/2	2.55
CTW-3165	100-60-100	300-300-50	1 3/8 x 4 1/4	2.97
CTW-3168	120-40-10	300-300-250	1 3/8 x 3 1/2	2.91
CTW-3170	60-60-4	350-350-350	1 3/8 x 3 1/4	2.31
CTW-3175	140-5-200	350-350-200	1 1/2 x 4 3/4	4.02

## TRIPLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTW-3178	10-20-100	400-150-150	1 1/4 x 4 3/4	2.46
CTW-3180	5-80-40	450-400-400	1 3/4 x 4 1/4	2.73
CTA-3185	20-20-20	450-450-25	1 1/4 x 3	1.86
CTA-3190	40-40-20	450-450-25	1 x 3 3/4	2.28

## QUADRUPLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTW-4050	40-20-20-100	150-150-150-25	1 x 3 1/4	1.86
CTW-4055	150-100-20-100	300-300-300-50	1 1/2 x 4 3/4	4.17
CTW-4060	120-40-40-10	300-300-300-250	1 1/4 x 4 3/4	3.72
CTW-4065	140-5-200-100	350-300-200-150	1 1/2 x 4 3/4	4.92
CTW-4070	140-5-200-30	350-300-200-200	1 1/2 x 4 3/4	4.59
CTW-4075	80-60-40-20	350-350-300-150	1 1/4 x 4 3/4	3.54
CTW-4085	80-10-40-100	400-400-300-50	1 3/4 x 4 1/4	3.27
CTW-4090	10-80-40-100	450-300-250-50	1 3/8 x 4 1/4	2.88
CTW-4095	20-120-40-100	450-300-250-50	1 1/4 x 4 3/4	3.69
CTW-4100	10-80-40-40	450-300-300-250	1 3/8 x 4 1/4	2.97
CTW-4105	20-20-20-10	450-450-450-450	1 3/8 x 3 3/4	2.55
CTW-4110	40-20-20-10	450-450-450-450	1 1/2 x 4 1/4	2.82
CTW-4115	40-40-20-20	450-450-450-450	1 1/2 x 4 1/4	3.27

## FIVE LEADS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTW-5050	40-20-20-20-50	300-300-300-300-75	1 3/8 x 4 1/4	3.03

## PRINTED CIRCUIT

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
APC-2100	50-30	150-150	1 x 2 1/2	1.56
APC-2105	50-50	150-150	1 x 2 1/2	1.62
APC-2110	80-30	150-150	1 x 3	1.65
APC-2115	100-50	150-150	1 x 3 1/2	1.77

## ANTENNA ROTOR CAPACITOR

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CRA-1000	70	50 VAC	7/8 x 3	.75
CRA-1050	120	50 VAC	1 x 2 3/4	.99
CRA-1200	210-240	50 VAC	1 x 3 3/4	1.62
CRA-1220	210-290	50 VAC	1 x 3 3/4	1.50

## PRINTED CIRCUIT TWIST MOUNTS

## SINGLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTP-1250	140	150	1 x 2 1/2	1.29
CTP-1350	375	165	1 3/8 x 3 1/2	1.80
CTP-1450	160	200	1 3/8 x 3	1.74
CTP-1550	50	350	1 x 2	1.26
CTP-1650	20	450	1 x 2	1.08

## DUAL UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTP-2150	250-250	16-16	1 x 2	1.65
CTP-2275	500-100	16-16	1 x 2	1.86
CTP-2350	800-250	16-16	1 x 2 1/2	2.01
CTP-2360	500-200	18-18	1 x 2	2.01
CTP-2475	50-30	150-150	1 x 2	1.20
CTP-2550	80-30	150-150	1 x 2	1.35
CTP-2625	80-40	150-150	1 x 3	1.38
CTP-2700	200-5	150-150	1 3/8 x 2 1/2	1.62
CTP-2775	2-20	300-25	1 x 2	.87
CTP-2850	10-10	300-50	1 x 2	.96
CTP-2875	150-100	300-150	1 3/8 x 4	2.70
CTP-2890	10-10	300-300	1 3/8 x 2	1.05

## TRIPLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTP-3130	250-250-50	16-16-16	1 x 2	1.95
CTP-3160	500-250-50	16-16-16	1 x 2	2.10
CTP-3190	500-250-250	16-16-16	1 x 2	2.46
CTP-3220	70-30-100	150-150-10	1 x 2	1.68
CTP-3250	40-30-250	150-150-10	1 x 2 1/2	1.86

## PRINTED CIRCUIT TWIST MOUNTS

## TRIPLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTP-3280	80-60-250	150-150-10	1 x 2 1/2	2.04
CTP-3310	80-60-400	150-150-10	1 x 3	2.16
CTP-3340	90-40-400	150-150-10	1 x 3	2.16
CTP-3370	40-20-20	150-150-25	1 x 2 1/2	1.38
CTP-3400	80-20-20	150-150-25	1 x 2	1.62
CTP-3430	70-30-20	150-150-25	1 x 2 1/2	1.62
CTP-3460	30-30-30	150-150-150	1 x 2	1.59
CTP-3490	40-40-20	150-150-150	1 x 2 1/2	1.59
CTP-3510	40-40-30	150-150-150	1 x 2 1/2	1.6
CTP-3540	50-30-20	150-150-150	1 x 2	1.5
CTP-3570	50-40-30	150-150-150	1 x 2 1/2	1.6
CTP-3600	60-60-40	150-150-150	1 3/8 x 2	1.8
CTP-3630	70-15-15	150-150-150	1 x 2	1.6
CTP-3660	80-60-10	150-150-150	1 x 3	1.7
CTP-3670	100-80-40	175-175-175	1 x 3	2.4
CTP-3690	10-10-20	300-50-25	1 x 2	1.4
CTP-3720	150-60-200	300-200-150	1 3/8 x 4	3.1
CTP-3750	60-10-25	300-300-25	1 3/8 x 2	1.8
CTP-3780	150-100-30	300-300-300	1 3/8 x 4	3.1
CTP-3810	125-5-100	350-150-10	1 3/8 x 3 1/2	2.1
CTP-3830	40-30-20	400-350-300	1 3/8 x 2 1/2	2.1

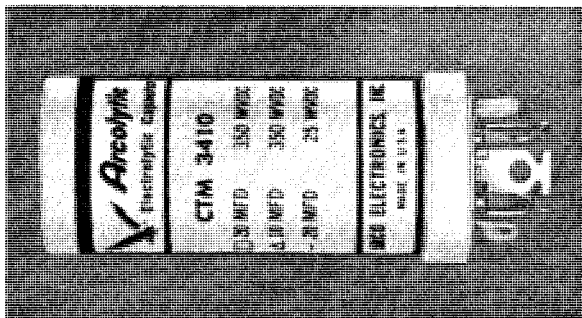
## QUADRUPLE UNITS

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTP-4100	290-30-10-100	150-150-150-10	1 3/8 x 3 1/2	2.1
CTP-4200	50-40-10-50	150-150-150-25	1 3/8 x 2	1.1
CTP-4300	100-40-10-50	150-150-150-25	1 3/8 x 2	2.1
CTP-4400	60-60-40-10	150-150-150-150	1 3/8 x 2	2.1
CTP-4500	100-60-60-40	350-350-200-75	1 3/8 x 4	3.1
CTP-4600	40-20-10-100	350-350-350-50	1 3/8 x 2 1/2	2.1
CTP-4700	40-30-20-20	400-350-350-350	1 3/8 x 2 1/2	2.1

NET (For quantities of 25 or more, please contact your local Arco-Elmenco Industrial Distributor)



**TWIST MOUNT  
ELECTROLYTIC  
CAPACITORS**



**ARCOLYTIC TWIST MOUNTS**

- Made with 99.99% pure aluminum foil.
- Hermetically sealed in aluminum cans.
- Designed for high temperature operation: 85°C.
- Made to withstand high surge voltages and high ripple currents.
- Greater shelf and operating life because only premium grade ingredients are used.
- Built and tested to meet EIA specification RS-154.
- Complete with phenolic and metal mounting plates.

**SINGLE UNITS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
†CTM-1050	.5 @ 15.75 KC	3 N.P.	1 x 2	1.59
CTM-1059	1 OHM @ 60 CPS	3 N.P.	1 3/8 x 2 1/2	2.40
†CTM-1068	10 OHM @ 30 CPS	3 N.P.	1 3/8 x 2	1.65
CTM-1077	1000	6	1 3/8 x 2	1.44
*CTM-1086	2000	6	1 3/8 x 2	1.83
CTM-1095	1000	10	1 x 2 1/2	1.92
CTM-1104	3000	10	1 3/8 x 3	2.19
*CTM-1113	225	15	3/4 x 2	1.05
*CTM-1122	1000	15	1 x 2 1/2	1.53
CTM-1131	1500	15	1 x 3	2.07
*CTM-1140	2000	15	1 3/8 x 2	2.07
*CTM-1149	3000	15	1 3/8 x 3	2.55
CTM-1158	4000	15	1 3/8 x 3 1/2	2.25
CTM-1167	25	25	3/4 x 2	.93
CTM-1176	40	25	3/4 x 2	.81
†CTM-1185	50	25	1 x 2	1.02
CTM-1194	100	25	3/4 x 2	1.20
*CTM-1203	500	25	1 x 2	1.53
*CTM-1212	1000	25	1 3/8 x 2	2.13
CTM-1221	4	50	3/4 x 2	.93
CTM-1230	25	50	3/4 x 2	.78
*CTM-1239	100	50	3/4 x 2	.99
*CTM-1248	150	50	3/4 x 2 1/2	1.08
*CTM-1257	250	50	1 x 2 1/2	1.20
*CTM-1266	500	50	1 3/8 x 2 1/2	1.59
*CTM-1275	1000	50	1 3/8 x 3 1/2	2.25
*CTM-1284	1500	50	1 3/8 x 4	2.64
CTM-1293	10	150	1 x 2	.99
CTM-1302	20	150	1 x 2	1.08
CTM-1311	25	150	1 x 2	1.14
*CTM-1320	30	150	1 x 2	.93
CTM-1329	40	150	1 x 2	1.20
*CTM-1338	50	150	1 x 2	.99
CTM-1347	60	150	1 x 2	1.32
*CTM-1356	80	150	1 x 2 1/2	1.11
CTM-1365	80	150	1 3/8 x 2	1.38
*CTM-1374	100	150	1 x 2 1/2	1.20
CTM-1383	110	150	1 x 3	1.62
*CTM-1392	120	150	1 x 2 1/2	1.29
CTM-1400T	120 / 150 with Insulated Black Sleeve		1 3/8 x 2	1.41
*CTM-1401	120	150	1 3/8 x 2 1/2	1.29
*CTM-1410	140	150	1 x 3	1.29
*CTM-141C	150	150	1 x 3	1.29
*CTM-1428	150	150	1 3/8 x 3	1.29
CTM-1436	200	150	1 x 3	1.86
*CTM-1437	200	150	1 3/8 x 3 1/2	1.47
*CTM-1446	300	150	1 3/8 x 3 1/2	1.68

\*Preferred Type †Discontinued NET (For quantities of 25 or more, please contact your local Arco-Emenco Industrial Distributor)

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
*CTM-1455	375	165	1 3/8 x 3 1/2	2.79
CTM-1464	40	200	1 x 2	1.29
*CTM-1472	125	200	1 x 3	1.74
CTM-1471T	120	200 with Insulated Black Sleeve	1 3/8 x 2	1.68
*CTM-1473	125	200	1 3/8 x 2 1/2	1.68
CTM-1481	160	200	1 x 3 1/2	1.98
*CTM-1482	160	200	1 3/8 x 3	1.89
CTM-1491	500	200	1 3/8 x 4	3.96
*CTM-1500	15	250	1 x 2	1.17
CTM-1509	20	250	1 x 2	.96
CTM-1518	30	250	1 x 2	1.29
*CTM-1527	40	250	1 x 2	1.08
CTM-1536	50	250	1 x 2 1/2	1.47
CTM-1545	60	250	1 x 3	1.23
CTM-1554	80	250	1 x 3 1/2	1.62
*CTM-1563	100	250	1 x 3	1.62
*CTM-1572	150	250	1 3/8 x 2 1/2	1.86
*CTM-1574	160	250	1 3/8 x 2 1/2	1.89
*CTM-1581	200	250	1 3/8 x 3 1/2	2.19
CTM-1590	15	300	1 x 2	1.20
CTM-1599	30	300	1 x 2	1.32
CTM-1608	50	300	1 x 2 1/2	1.53
CTM-1617	60	300	1 x 3	1.26
*CTM-1626	80	300	1 x 3 1/2	1.53
*CTM-1635	100	300	1 x 4	1.74
*CTM-1644	125	300	1 3/8 x 3 1/2	2.10
*CTM-1653	150	300	1 3/8 x 3 1/2	2.10
*CTM-1662	250	300	1 3/8 x 4	2.10
CTM-1651	10	350	1 x 2	1.14
CTM-1660	15	350	1 x 2	1.23
CTM-1669	20	350	1 x 2	1.32
*CTM-1678	30	350	1 x 2	1.14
*CTM-1687	40	350	1 x 2	1.20
*CTM-1696	50	350	1 x 2	1.26
*CTM-1705	60	350	1 x 3	1.32
*CTM-1714	80	350	1 3/8 x 2	1.71
*CTM-1723	125	350	1 3/8 x 3 1/2	2.37
CTM-1732	140	350	1 3/8 x 4	2.97
*CTM-1741	150	350	1 3/8 x 4	2.37
CTM-1750	320	350	1 3/8 x 4	4.05
CTM-1759	10	400	1 x 2	1.14
CTM-1768	20	400	1 x 2	1.32
CTM-1777	40	400	1 3/8 x 2	1.82
CTM-1786	50	400	1 3/8 x 2 1/2	1.65
CTM-1795	80	400	1 3/8 x 3	2.22
CTM-1804	100	400	1 3/8 x 3	2.55
*CTM-1813	4	450	1 x 2	.84
*CTM-1822	10	450	1 x 2	.93
*CTM-1831	15	450	1 x 2	1.02
*CTM-1840	20	450	1 x 2	1.08
CTM-1849	25	450	1 x 2 1/2	1.14
*CTM-1858	30	450	1 x 2 1/2	1.17
*CTM-1867	40	450	1 x 3	1.23
*CTM-1876	50	450	1 x 3	1.41
*CTM-1885	60	450	1 3/8 x 2 1/2	1.56
*CTM-1894	80	450	1 3/8 x 2 1/2	1.83
*CTM-1903	100	450	1 3/8 x 3	2.07
*CTM-1912	125	450	1 3/8 x 4	2.31
CTM-1921	20	475	1 x 2 1/2	1.38
CTM-1930	30	475	1 x 3	1.50
*CTM-1939	40	475	1 3/8 x 2	1.50
CTM-1948	90	475	1 3/8 x 3 1/2	2.64
*CTM-1957	10	500	1 x 2	1.02
*CTM-1966	20	500	1 x 2 1/2	1.11
*CTM-1975	30	500	1 x 3	1.20
*CTM-1984	40	500	1 x 3 1/2	1.50
*CTM-1993	80	500	1 3/8 x 3	2.16
CTM-1995	90	500	1 3/8 x 3 1/2	2.10
CTM-1997	15	525	1 3/8 x 3	1.11

**DUAL UNITS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTM-2050	(.5 OHM @ 15.75 K	2.5 OHM) @ 60 CPS	1 3/8 x 2	2.70
†CTM-2054	1000-500	6 N.P. - 6 N.P.	1 3/8 x 2	2.94
*CTM-2058	250-1000	10-6	1 3/8 x 2	1.71
†CTM-2062	200-40	10-10	1 x 2	1.20
*CTM-2066	1000-1000	15-15	1 x 3 1/2	2.64
*CTM-2070	1000-1000	15-15	1 3/8 x 2 1/2	2.64
CTM-2074	250-250	16-16	1 x 2	2.07
*CTM-2079	500-200	16-16	1 x 2	1.62
*CTM-2080	1000-50	16-16	1 x 2 1/2	2.34
*CTM-2078	500-100	16-16	1 x 2	1.50
CTM-2082	20-20	25-25	1 x 2	1.08
CTM-2086	40-40	25-25	1 x 2	1.20
*CTM-2090	100-70	25-25	1 x 2	1.08
*CTM-2094	150-50	25-25	1 x 2	1.44
*CTM-2098	500-500	25-25	1 3/8 x 2	2.64
*CTM-2101	1000-500	25-25	1 3/8 x 2	3.30
*CTM-2106	50-50	50-50	1 x 2	1.02
*CTM-2110	100-25	50-50	1 x 2	1.14
*CTM-2114	100-100	50-50	1 x 2	1.26
*CTM-2118	50-500	150-5	1 x 3	1.47
CTM-2122	40-20	150-25	1 x 2	1.29
CTM-2126	40-150	150-25	1 x 2	1.52



**ARCO**  
electronics inc.

**Arcolytic**

**TWIST MOUNT  
ELECTROLYTIC  
CAPACITORS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)	Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTM-2130	50-150	150-25	1 x 2 1/2	1.65	CTM-2490	60-20	350-300	1 3/8 x 2 1/2	2.13
*CTM-2134	150-100	150-25	1 3/8 x 2 1/2	1.62	*CTM-2494	15-15	350-350	1 x 2	1.35
CTM-2138	40-20	150-50	1 x 2	1.53	CTM-2498	20-20	350-350	1 x 3	1.74
*CTM-2142	150-50	150-50	1 x 3	1.68	*CTM-2502	30-20	350-350	1 x 3 1/2	1.95
CTM-2146	150-100	150-50	1 3/8 x 2 1/2	1.95	*CTM-2506	30-30	350-350	1 x 3	1.74
CTM-2150	20-10	150-150	1 x 2	1.20	*CTM-2510	50-30	350-350	1 3/8 x 2 1/2	1.89
*CTM-2154	20-20	150-150	1 x 2	1.02	*CTM-2514	60-30	350-350	1 3/8 x 3	1.89
CTM-2158	30-15	150-150	1 x 2	1.32	CTM-2518	80-4	350-350	1 3/8 x 2 1/2	2.40
CTM-2162	30-20	150-150	1 x 2	1.32	*CTM-2522	80-20	350-350	1 3/8 x 3	2.10
*CTM-2166	30-30	150-150	1 x 2	1.11	*CTM-2526	80-40	350-350	1 3/8 x 3	2.46
*CTM-2170	40-20	150-150	1 x 2	1.11	*CTM-2530	80-80	350-350	1 3/8 x 4	2.82
*CTM-2174	40-30	150-150	1 x 2	1.11	*CTM-2534	90-40	350-350	1 3/8 x 3	2.58
*CTM-2178	40-40	150-150	1 x 2 1/2	1.14	CTM-2538	100-40	350-350	1 3/8 x 3	3.45
*CTM-2182	50-30	150-150	1 x 2 1/2	1.20	*CTM-2542	100-60	350-350	1 3/8 x 3 1/2	2.88
*CTM-2186	50-50	150-150	1 x 2 1/2	1.29	*CTM-2546	100-100	350-350	1 3/8 x 4	3.69
*CTM-2190	60-20	150-150	1 x 2	1.23	*CTM-2550	160-10	350-350	1 3/8 x 3	2.58
*CTM-2194	60-60	150-150	1 x 3 1/2	1.41	CTM-2554	50-50	385-385	1 3/8 x 3	2.73
*CTM-2198	70-30	150-150	1 x 2 1/2	1.32	*CTM-2558	35-100	400-50	1 x 3	1.56
*CTM-2202	75-75	150-150	1 x 3	1.56	CTM-2562	40-100	400-50	1 3/8 x 2	2.04
*CTM-2206	80-40	150-150	1 3/8 x 2 1/2	1.38	*CTM-2566	100-30	400-50	1 3/8 x 3	2.34
*CTM-2210	80-50	150-150	1 x 2 1/2	1.44	*CTM-2570	80-80	460-200	1 3/8 x 3 1/2	2.37
*CTM-2214	80-60	150-150	1 x 3	1.50	CTM-2574	60-80	400-250	1 3/8 x 3	2.94
*CTM-2218	80-80	150-150	1 3/8 x 2	1.59	CTM-2578	4-140	400-300	1 3/8 x 3	2.16
*CTM-2222	100-30	150-150	1 x 2 1/2	1.68	CTM-2582	100-80	400-350	1 3/8 x 4	4.08
CTM-2226	100-100	150-150	1 3/8 x 2 1/2	2.43	CTM-2586	15-15	400-400	1 x 2 1/2	1.68
*CTM-2230	125-100	150-150	1 3/8 x 2 1/2	2.01	CTM-2590	30-10	400-400	1 x 3	1.77
*CTM-2234	150-80	150-150	1 3/8 x 2 1/2	1.83	CTM-2594	60-60	400-400	1 3/8 x 4	3.30
CTM-2238	150-150	150-150	1 3/8 x 3	2.64	CTM-2598	75-75	400-400	1 3/8 x 4	3.63
*CTM-2242	200-5	150-150	1 3/8 x 2 1/2	1.62	CTM-2602	80-10	400-400	1 3/8 x 3 1/2	2.55
*CTM-2246	200-125	150-150	1 3/8 x 3 1/2	2.25	CTM-2606	80-20	400-400	1 3/8 x 3	2.73
*CTM-2250	200-150	150-150	1 3/8 x 4	2.25	CTM-2610	80-40	400-400	1 3/8 x 4	3.09
*CTM-2254	200-200	150-150	1 3/8 x 4	2.40	*CTM-2614	80-60	400-400	1 3/8 x 3	2.82
*CTM-2258	60-125	200-25	1 x 3	1.44	*CTM-2618	120-40	400-400	1 3/8 x 4	3.15
CTM-2262	30-10	200-50	1 x 2	1.38	*CTM-2622	10-20	450-25	1 x 2	1.02
CTM-2266	100-100	200-50	1 3/8 x 2 1/2	2.13	CTM-2626	10-50	450-25	1 x 2 1/2	1.29
CTM-2270	40-40	200-200	1 x 3	1.74	CTM-2630	20-20	450-25	1 x 2	1.50
*CTM-2274	60-60	200-200	1 x 3	2.04	CTM-2634	20-100	450-25	1 x 2 1/2	1.65
*CTM-2278	60-60	200-200	1 3/8 x 2	2.04	CTM-2638	40-20	450-25	1 x 3	1.83
*CTM-2282	100-100	200-200	1 3/8 x 3	2.10	CTM-2642	80-10	450-25	1 3/8 x 3	2.55
*CTM-2286	200-5	200-200	1 3/8 x 2 1/2	1.83	CTM-2646	80-20	450-25	1 3/8 x 3	2.55
CTM-2290	40-350	250-15	1 3/8 x 2	2.07	CTM-2650	10-100	450-50	1 x 2 1/2	1.53
CTM-2294	40-25	250-25	1 x 2 1/2	1.50	CTM-2654	30-25	450-50	1 x 2 1/2	1.74
CTM-2298	50-100	250-50	1 3/8 x 2	1.95	CTM-2658	40-50	450-50	1 x 3 1/2	2.25
CTM-2302	80-100	250-50	1 3/8 x 2 1/2	2.13	*CTM-2662	40-100	450-50	1 x 3 1/2	1.68
*CTM-2306	100-150	250-50	1 3/8 x 3	2.19	*CTM-2666	50-100	450-50	1 3/8 x 2 1/2	1.80
CTM-2310	40-25	250-150	1 x 2 1/2	2.07	*CTM-2668	80-50	450-50	1 3/8 x 3	2.10
CTM-2314	10-10	250-250	1 x 2	1.29	*CTM-2670	80-100	450-50	1 3/8 x 3	2.22
*CTM-2318	20-20	250-250	1 x 2	1.14	CTM-2674	10-50	450-100	1 3/8 x 2	1.53
CTM-2322	30-30	250-250	1 x 2 1/2	1.65	CTM-2678	20-100	450-100	1 3/8 x 2	2.11
CTM-2326	40-20	250-250	1 x 3	1.65	CTM-2682	30-40	450-150	1 3/8 x 2	2.11
*CTM-2330	40-40	250-250	1 x 2	1.50	*CTM-2686	30-200	450-150	1 3/8 x 3	2.10
CTM-2334	150-40	250-250	1 3/8 x 3	2.88	CTM-2690	40-150	450-150	1 3/8 x 3	2.51
*CTM-2338	150-150	250-250	1 3/8 x 4	3.09	CTM-2694	80-50	450-150	1 3/8 x 3	2.81
*CTM-2342	200-200	250-250	1 3/8 x 4	3.63	CTM-2698	80-60	450-150	1 3/8 x 3 1/2	3.11
*CTM-2346	35-500	300-6	1 x 2 1/2	2.13	CTM-2702	80-40	450-200	1 3/8 x 3	2.81
CTM-2350	20-20	300-25	1 x 2	1.38	*CTM-2706	20-50	450-250	1 x 3	1.6
CTM-2354	20-100	300-25	1 x 2 1/2	2.04	CTM-2710	20-150	450-250	1 3/8 x 3	2.8
*CTM-2358	10-40	300-50	1 x 2	1.02	*CTM-2714	40-10	450-300	1 x 3	1.5
CTM-2362	80-100	300-50	1 3/8 x 3	2.37	CTM-2718	10-100	450-350	1 3/8 x 3 1/2	3.0
CTM-2366	60-200	300-150	1 3/8 x 3	2.79	CTM-2722	20-80	450-350	1 3/8 x 2 1/2	2.7
CTM-2370	80-100	300-150	1 3/8 x 2 1/2	2.73	CTM-2726	25-15	450-350	1 x 3	1.9
CTM-2374	60-10	300-200	1 x 3 1/2	1.89	*CTM-2730	40-10	450-350	1 3/8 x 2	1.5
*CTM-2378	100-100	300-200	1 x 4	2.58	CTM-2734	40-20	450-350	1 3/8 x 2 1/2	2.1
CTM-2382	20-60	300-250	1 x 3 1/2	2.07	CTM-2738	40-40	450-350	1 3/8 x 3	2.4
CTM-2386	10-10	300-300	1 x 2	1.32	CTM-2740	80-2	450-350	1 3/8 x 3	2.5
CTM-2390	15-15	300-300	1 x 2	1.44	CTM-2742	30-20	450-400	1 x 3	2.1
*CTM-2394	40-30	300-300	1 x 3	1.59	*CTM-2746	5-5	450-450	1 x 2	1.0
CTM-2398	40-40	300-300	1 3/8 x 2 1/2	2.25	*CTM-2750	10-10	450-450	1 x 2	1.1
CTM-2402	50-50	300-300	1 3/8 x 2 1/2	2.52	CTM-2754	15-10	450-450	1 x 2 1/2	1.1
CTM-2406	60-20	300-300	1 3/8 x 2 1/2	2.10	*CTM-2758	15-15	450-450	1 x 2 1/2	1.1
CTM-2410	60-60	300-300	1 3/8 x 2 1/2	2.55	*CTM-2762	20-10	450-450	1 x 2 1/2	1.1
CTM-2414	75-75	300-300	1 3/8 x 3	2.85	*CTM-2766	20-20	450-450	1 x 3	1.1
CTM-2418	80-40	300-300	1 3/8 x 2 1/2	2.67	*CTM-2770	30-10	450-450	1 x 3	1.70
CTM-2422	80-60	300-300	1 3/8 x 3 1/2	2.79	CTM-2774	30-10	450-450	1 3/8 x 2	1.1
*CTM-2426	80-80	300-300	1 3/8 x 3	2.43	CTM-2778	30-15	450-450	1 3/8 x 2	1.1
*CTM-2430	120-20	300-300	1 3/8 x 3 1/2	2.40	*CTM-2782	30-30	450-450	1 3/8 x 2 1/2	1.1
*CTM-2434	120-40	300-300	1 3/8 x 3 1/2	2.61	CTM-2786	40-5	450-450	1 x 3	1.1
CTM-2438	150-100	300-300	1 3/8 x 3 1/2	4.05	CTM-2790	40-15	450-450	1 3/8 x 2 1/2	2.1
*CTM-2442	200-80	300-300	1 3/8 x 4	3.15	*CTM-2794	40-20	450-450	1 3/8 x 2 1/2	2.1
CTM-2446	20-20	350-25	1 x 2	1.44	*CTM-2798	40-40	450-450	1 3/8 x 3	2.1
CTM-2450	40-20	350-25	1 x 2 1/2	1.77	CTM-2802	50-40	450-450	1 3/8 x 3	2.1
CTM-2454	80-100	350-50	1 3/8 x 3	3.39	*CTM-2806	50-50	450-450	1 3/8 x 3	2.1
CTM-2458	20-100	350-75	1 x 2 1/2	1.68	*CTM-2810	60-20	450-450	1 3/8 x 3	2.2
CTM-2462	5-75	350-150	1 x 2 1/2	1.59	*CTM-2814	60-40	450-450	1 3/8 x 3 1/2	2.2
CTM-2466	40-10	350-200	1 3/8 x 2	1.83	*CTM-2818	60-60	450-450	1 3/8 x 3 1/2	2.2
CTM-2470	20-30	350-250	1 x 3	1.74	*CTM-2822	80-10	450-450	1 3/8 x 3	2.2
CTM-2474	40-10	350-250	1 x 3	1.83	*CTM-2826	80-20	450-450	1 3/8 x 3	2.2
CTM-2478	60-80	350-250	1 3/8 x 3 1/2	2.58	*CTM-2830	80-30	450-450	1 3/8 x 4	2.2
CTM-2482	20-10	350-300	1 x 2	1.53	*CTM-2834	80-40	450-450	1 3/8 x 3 1/2	3
CTM-2486	30-30	350-300	1 x 3 1/2	1.98	*CTM-2838	80-80	450-450	1 3/8 x 4 1/2	3
					*CTM-2842	100-40	450-450	1 3/8 x 4	2

\*Preferred Type  
†Discontinued

NET (For quantities of 25 or more, please contact your local Arco-Elmenco Industrial Distributor)



SECTION 1500



**ARCO**  
electronics inc.

**Arco**  
lytic

**TWIST MOUNT  
ELECTROLYTIC  
CAPACITORS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)	Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTM-2846	10-20	475-25	1 x 2	1.29	CTM-3130	120-60-20	150-150-25	1 3/8 x 2 1/2	3.03
*CTM-2850	30-100	475-50	1 3/8 x 3 1/2	1.65	†CTM-3132	300-80-200	150-150-50	1 3/8 x 4	2.97
CTM-2854	75-50	475-50	1 3/8 x 3	2.73	CTM-3134	10-10-10	150-150-150	1 x 2	1.86
CTM-2858	40-80	475-200	1 3/8 x 2 1/2	2.73	*CTM-3136	20-20-20	150-150-150	1 x 2	1.38
CTM-2862	80-80	475-250	1 3/8 x 4	2.79	*CTM-3138	30-30-10	150-150-150	1 x 2	1.71
CTM-2866	20-100	475-300	1 3/8 x 3 1/2	2.97	*CTM-3140	40-20-10	150-150-150	1 x 2	1.41
*CTM-2870	20-100	475-400	1 3/8 x 4	2.70	*CTM-3142	40-20-20	150-150-150	1 x 2	1.44
CTM-2874	40-40	475-400	1 3/8 x 3	2.82	*CTM-3144	40-30-20	150-150-150	1 x 2	1.50
*CTM-2878	15-15	475-475	1 x 2 1/2	1.41	*CTM-3146	40-40-40	150-150-150	1 x 3 1/2	1.56
CTM-2882	30-10	475-475	1 x 3	1.56	†CTM-3148	50-20-20	150-150-150	1 x 2 1/2	2.31
*CTM-2886	40-10	475-475	1 3/8 x 2 1/2	1.86	*CTM-3150	50-40-10	150-150-150	1 x 2 1/2	1.53
CTM-2890	40-40	475-475	1 3/8 x 4	3.24	CTM-3152	50-50-10	150-150-150	1 3/8 x 2	2.43
CTM-2894	60-40	475-475	1 3/8 x 4	3.42	*CTM-3154	50-50-50	150-150-150	1 x 3	1.80
CTM-2898	80-40	475-475	1 3/8 x 4	3.78	CTM-3156	50-50-50	150-150-150	1 3/8 x 3	2.70
*CTM-2902	80-50	475-475	1 3/8 x 4	3.12	*CTM-3158	60-40-20	150-150-150	1 x 3	1.65
CTM-2906	80-50	500-50	1 3/8 x 3 1/2	2.85	CTM-3160	60-40-30	150-150-150	1 3/8 x 2	2.52
CTM-2910	60-80	500-150	1 3/8 x 3	2.82	CTM-3162	60-50-50	150-150-150	1 3/8 x 2	2.79
CTM-2914	40-50	500-200	1 3/8 x 3	2.52	*CTM-3164	70-15-15	150-150-150	1 x 2 1/2	1.62
CTM-2918	15-20	500-300	1 x 2 1/2	1.74	*CTM-3166	70-40-40	150-150-150	1 x 3	2.43
CTM-2922	20-100	500-300	1 3/8 x 3	2.94	CTM-3168	80-20-20	150-150-150	1 x 3 1/2	2.52
CTM-2926	40-40	500-400	1 3/8 x 3	2.82	*CTM-3170	80-30-10	150-150-150	1 x 3	1.65
CTM-2930	4-4	500-500	1 x 2 1/2	1.29	*CTM-3172	80-40-20	150-150-150	1 x 3	1.74
CTM-2934	10-10	500-500	1 x 2	1.17	CTM-3174	80-50-50	150-150-150	1 x 3	2.94
*CTM-2938	20-20	500-500	1 3/8 x 2 1/2	1.71	CTM-3176	80-80-80	150-150-150	1 3/8 x 3	3.39
CTM-2942	30-10	500-500	1 3/8 x 3	1.56	*CTM-3178	100-30-10	150-150-150	1 x 3	1.83
*CTM-2946	30-30	500-500	1 3/8 x 3	1.95	*CTM-3180	120-80-40	150-150-150	1 3/8 x 3 1/2	2.28
CTM-2950	40-25	500-500	1 3/8 x 3	2.73	*CTM-3182	120-120-40	150-150-150	1 3/8 x 3	2.43
*CTM-2954	40-40	500-500	1 3/8 x 3	2.58	CTM-3184	150-50-25	150-150-150	1 3/8 x 3	3.24
*CTM-2958	60-40	500-500	1 3/8 x 3 1/2	2.76	*CTM-3186	200-100-60	150-150-150	1 3/8 x 3 1/2	2.73
					†CTM-3188	200-140-60	150-150-150	1 3/8 x 4	4.02
					*CTM-3190	200-150-150	150-150-150	1 3/8 x 4	4.50
					*CTM-3192	300-100-80	150-150-150	1 3/8 x 4	4.65
					CTM-3194	80-40-50	200-100-50	1 3/8 x 2 1/2	2.76
					CTM-3196	40-40-20	200-150-25	1 x 3	2.34
					*CTM-3198	60-200-140	200-150-150	1 3/8 x 4	2.88
					CTM-3200	20-20-20	250-200-25	1 x 2	2.07
					CTM-3202	30-20-20	200-200-25	1 x 2	2.31
					CTM-3204	30-20-40	200-200-25	1 x 2	2.31
					*CTM-3206	60-5-20	200-200-50	1 x 2 1/2	1.50
					*CTM-3208	60-5-100	200-200-50	1 x 2 1/2	1.74
					*CTM-3209	60-5-200	200-200-50	1 x 2 1/2	1.92
					*CTM-3210	80-10-20	200-200-50	1 x 3	1.68
					CTM-3212	80-40-100	200-200-50	1 3/8 x 3	3.15
					CTM-3214	90-90-20	200-200-50	1 3/8 x 3	3.42
					CTM-3216	100-10-40	200-200-50	1 3/8 x 2	2.85
					*CTM-3218	30-20-40	200-200-150	1 x 2 1/2	1.62
					CTM-3220	20-20-20	200-200-200	1 x 2 1/2	2.25
					CTM-3222	30-20-20	200-200-200	1 x 2 1/2	2.43
					CTM-3224	40-40-20	200-200-200	1 x 2 1/2	2.73
					CTM-3226	50-30-30	200-200-200	1 3/8 x 2	2.85
					*CTM-3228	250-200-10	200-200-200	1 3/8 x 4	4.02
					CTM-3230	40-40-20	250-150-25	1 3/8 x 2	2.43
					*CTM-3232	80-40-50	250-150-50	1 3/8 x 2 1/2	1.41
					CTM-3234	15-20-20	250-150-150	1 x 2	2.16
					*CTM-3236	60-40-20	250-200-25	1 3/8 x 2	1.98
					*CTM-3238	15-15-20	250-250-25	1 x 2	1.41
					CTM-3240	20-15-20	250-250-25	1 x 2 1/2	2.13
					*CTM-3242	30-30-20	250-250-25	1 x 3	1.68
					CTM-3244	60-60-25	250-250-25	1 x 3 1/2	3.42
					CTM-3246	70-70-20	250-250-50	1 3/8 x 3	3.51
					*CTM-3248	90-90-20	250-250-50	1 3/8 x 3	2.76
					CTM-3250	40-20-10	250-250-150	1 3/8 x 2	2.49
					CTM-3252	40-40-10	250-250-200	1 3/8 x 2	2.67
					CTM-3254	80-80-60	250-250-200	1 3/8 x 3 1/2	4.05
					CTM-3256	15-15-10	250-250-250	1 x 2	2.22
					CTM-3258	20-20-10	250-250-250	1 x 2	2.25
					*CTM-3260	20-20-20	250-250-250	1 x 2	1.56
					CTM-3262	30-15-10	250-250-250	1 x 2 1/2	2.43
					CTM-3264	30-15-15	250-250-250	1 x 2	2.49
					CTM-3266	30-20-10	250-250-250	1 x 2	2.43
					†CTM-3268	40-20-10	250-250-250	1 x 2 1/2	2.58
					*CTM-3270	40-20-20	250-250-250	1 x 3 1/2	1.74
					*CTM-3272	80-10-10	250-250-250	1 x 3	1.92
					*CTM-3274	80-80-60	250-250-250	1 3/8 x 3	2.94
					*CTM-3276	10-500-500	300-15-15	1 3/8 x 2 1/2	3.51
					CTM-3278	20-10-10	300-75-25	1 3/8 x 3	2.13
					*CTM-3280	100-60-20	300-150-25	1 3/8 x 3	2.52
					CTM-3282	140-200-100	300-150-50	1 3/8 x 4	5.16
					*CTM-3284	20-150-80	300-150-150	1 3/8 x 3	2.37
					*CTM-3286	60-200-30	300-150-150	1 3/8 x 4	3.90
					CTM-3288	100-150-30	300-150-150	1 3/8 x 4	4.47
					*CTM-3290	100-200-30	300-150-150	1 3/8 x 4	3.12
					*CTM-3292	100-200-60	300-150-150	1 3/8 x 4	3.00
					CTM-3294	20-80-10	300-250-200	1 3/8 x 2 1/2	3.12
					CTM-3296	16-20-20	300-250-250	1 x 3	2.34
					CTM-3298	40-80-40	300-250-250	1 3/8 x 3	3.78
					†CTM-3300	60-30-30	300-250-250	1 3/8 x 2 1/2	3.39
					*CTM-3302	100-60-20	300-250-250	1 3/8 x 4	2.94
					*CTM-3304	200-60-20	300-250-250	1 3/8 x 4	3.30
					CTM-3306	20-20-20	300-300-25	1 x 2 1/2	2.49
					CTM-3308	40-15-20	300-300-25	1 x 3	2.67

\*referred Type †Discontinued NET (For quantities of 25 or more, please contact your local Arco-Eimenco Industrial Distributor)



**ARCO**  
electronics inc.

**Arcolytic**

**TWIST MOUNT  
ELECTROLYTIC  
CAPACITORS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)	Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTM-3310	40-20-20	300-300-25	1 3/8 x 2	2.79	*CTM-3490	90-40-20	350-350-350	1 3/8 x 4	3.15
CTM-3312	140-10-100	300-300-25	1 3/8 x 3 1/2	4.02	CTM-3492	100-20-20	350-350-350	1 3/8 x 4	3.09
*CTM-3313	20-20-50	300-300-50	1 x 2 1/2	1.80	CTM-3494	100-40-10	350-350-350	1 3/8 x 4	3.15
CTM-3314	30-30-25	300-300-50	1 x 3	2.61	CTM-3496	100-100-10	350-350-350	1 3/8 x 4	4.08
*CTM-3316	100-10-60	300-300-50	1 3/8 x 2 1/2	2.43	CTM-3497	100-100-40	350-350-350	1 3/8 x 4 1/2	4.50
CTM-3318	125-20-20	300-300-50	1 3/8 x 3	4.02	CTM-3498	120-40-40	350-350-350	1 3/8 x 4	5.58
CTM-3320	125-20-100	300-300-50	1 3/8 x 3	4.41	*CTM-3500	140-140-20	350-350-350	1 3/8 x 4	4.59
*CTM-3322	125-60-40	300-300-50	1 3/8 x 4	3.12	CTM-3502	20-50-50	400-10-10	1 x 2	2.13
*CTM-3324	140-100-60	300-300-50	1 3/8 x 4	3.63	*CTM-3504	40-200-60	400-200-200	1 3/8 x 4	3.33
*CTM-3326	140-100-100	300-300-50	1 3/8 x 4	5.04	CTM-3506	10-50-40	400-300-25	1 x 2	1.98
*CTM-3328	200-20-10	300-300-100	1 3/8 x 4	2.94	CTM-3508	60-40-20	400-300-25	1 3/8 x 3 1/2	3.78
CTM-3330	40-40-20	300-300-150	1 3/8 x 2	3.24	CTM-3510	80-20-10	400-300-300	1 3/8 x 3 1/2	3.84
CTM-3332	140-10-200	300-300-150	1 3/8 x 4	3.30	CTM-3512	10-50-30	400-350-25	1 x 3 1/2	2.79
†CTM-3334	10-10-15	300-300-250	1 x 2	2.22	CTM-3514	100-10-200	400-350-25	1 3/8 x 3	2.94
*CTM-3336	10-10-10	300-300-300	1 x 2	1.44	CTM-3516	80-20-100	400-350-50	1 3/8 x 3 1/2	4.05
*CTM-3338	60-20-10	300-300-300	1 3/8 x 2	2.07	CTM-3518	100-10-20	400-350-50	1 3/8 x 3 1/2	4.05
CTM-3340	80-20-10	300-300-300	1 3/8 x 2 1/2	3.42	CTM-3520	20-15-10	400-350-350	1 x 3	2.67
*CTM-3342	80-40-40	300-300-300	1 3/8 x 2 1/2	3.15	CTM-3522	10-20-20	400-350-350	1 x 3	2.40
CTM-3344	100-40-20	300-300-300	1 3/8 x 3 1/2	3.30	CTM-3524	15-45-40	400-400-25	1 x 3	2.52
*CTM-3346	120-50-40	300-300-300	1 3/8 x 4	3.51	*CTM-3526	20-20-20	400-400-25	1 x 3	1.71
*CTM-3348	150-100-10	300-300-300	1 3/8 x 4	3.81	CTM-3528	30-10-20	400-400-25	1 x 3	2.55
†CTM-3350	160-60-20	300-300-300	1 3/8 x 4	4.92	CTM-3530	20-10-40	400-400-50	1 x 3	2.40
CTM-3352	200-140-20	300-300-300	1 3/8 x 4	6.36	CTM-3532	30-10-150	400-400-50	1 3/8 x 2 1/2	3.06
†CTM-3354	30-25-100	350-25-6	1 x 2 1/2	1.68	CTM-3534	80-40-100	400-400-50	1 3/8 x 4	4.50
CTM-3356	5-100-40	350-25-25	1 x 2	2.13	*CTM-3536	80-40-150	400-400-50	1 3/8 x 4	3.15
CTM-3358	40-100-25	350-50-25	1 3/8 x 2	2.88	*CTM-3538	100-10-20	400-400-50	1 3/8 x 3 1/2	2.70
CTM-3360	10-50-100	350-100-75	1 x 3	2.58	CTM-3540	20-20-20	400-400-100	1 x 3	2.67
*CTM-3362	20-50-100	350-100-75	1 x 3	1.86	CTM-3542	20-10-10	400-400-350	1 x 3	2.43
CTM-3364	10-10-250	350-150-15	1 x 2 1/2	2.49	CTM-3544	20-10-40	400-400-350	1 x 3	3.06
*CTM-3366	10-50-160	350-150-50	1 x 3 1/2	1.71	*CTM-3546	20-20-10	400-400-350	1 x 3	1.80
CTM-3367	40-200-100	350-150-150	1 3/8 x 3 1/2	3.00	*CTM-3548	60-30-20	400-400-350	1 3/8 x 3	2.73
CTM-3368	60-200-30	350-150-150	1 3/8 x 4	3.00	*CTM-3550	80-20-10	400-400-350	1 3/8 x 3	2.58
*CTM-3370	40-80-500	350-200-25	1 3/8 x 3 1/2	4.56	*CTM-3552	100-10-80	400-400-350	1 3/8 x 4	3.66
CTM-3372	125-5-100	350-200-75	1 3/8 x 3 1/2	3.18	*CTM-3554	10-10-10	400-400-400	1 x 2 1/2	1.44
CTM-3374	50-10-500	350-250-5	1 3/8 x 2 1/2	3.33	CTM-3556	40-10-10	400-400-400	1 x 3	1.89
CTM-3376	50-10-1000	350-250-5	1 3/8 x 2 1/2	3.66	*CTM-3558	90-10-5	400-400-400	1 3/8 x 3	2.64
CTM-3378	20-30-20	350-250-25	1 x 3	2.52	CTM-3560	150-30-20	400-400-400	1 3/8 x 4	4.95
CTM-3380	30-20-100	350-250-50	1 x 3	2.94	CTM-3562	10-20-10	450-25-25	1 x 2	1.95
CTM-3382	100-40-5	350-250-50	1 3/8 x 2 1/2	2.91	CTM-3564	30-20-20	450-25-25	1 x 3	2.49
CTM-3384	30-20-10	350-250-250	1 x 3 1/2	2.70	†CTM-3566	30-100-25	450-25-25	1 3/8 x 2	2.67
CTM-3386	10-80-25	350-300-25	1 3/8 x 3	3.06	CTM-3568	10-100-20	450-50-25	1 x 3	2.31
*CTM-3388	30-30-20	350-300-25	1 x 3	1.89	CTM-3570	80-100-20	350-50-50	1 3/8 x 3	3.84
†CTM-3390	30-50-20	350-300-25	1 3/8 x 2 1/2	3.24	CTM-3572	10-50-100	450-150-25	1 x 3	2.49
CTM-3392	10-40-5	350-300-150	1 x 2 1/2	2.58	*CTM-3574	40-40-130	450-150-50	1 3/8 x 3	2.22
†CTM-3394	20-40-10	350-300-150	1 x 3 1/2	2.85	CTM-3576	40-50-100	450-150-50	1 3/8 x 2 1/2	3.30
CTM-3396	40-20-10	350-300-200	1 3/8 x 2	2.97	*CTM-3578	10-50-100	450-150-75	1 x 3	1.95
CTM-3398	100-40-40	350-300-250	1 3/8 x 3 1/2	2.91	CTM-3580	20-50-100	450-150-75	1 3/8 x 2	3.06
CTM-3400	10-10-1400	350-350-3	1 3/8 x 3	2.94	*CTM-3582	40-90-50	450-150-150	1 3/8 x 3	2.40
*CTM-3402	15-10-20	350-350-25	1 x 2 1/2	1.50	CTM-3584	20-90-50	450-200-50	1 3/8 x 2	3.06
CTM-3404	15-15-20	350-350-25	1 x 2 1/2	2.43	*CTM-3586	10-100-200	450-200-25	1 x 3 1/2	2.16
CTM-3406	20-5-30	350-350-25	1 x 2	2.22	*CTM-3588	10-100-100	450-200-50	1 x 3 1/2	2.16
*CTM-3408	20-5-100	350-350-25	1 x 3	1.56	*CTM-3590	20-60-100	450-250-25	1 3/8 x 2 1/2	2.15
*CTM-3410	20-10-20	350-350-25	1 x 2 1/2	1.53	CTM-3592	10-60-60	450-250-250	1 3/8 x 4	3.66
*CTM-3412	20-20-20	350-350-25	1 x 2 1/2	1.74	*CTM-3594	10-80-80	450-250-250	1 3/8 x 4	2.45
CTM-3414	30-10-20	350-350-25	1 x 2 1/2	2.76	CTM-3596	20-40-10	450-250-250	1 3/8 x 2	2.85
*CTM-3416	30-20-20	350-350-25	1 x 2 1/2	1.86	CTM-3598	20-60-40	450-250-250	1 3/8 x 3	3.5
CTM-3418	30-20-40	350-350-25	1 x 3	2.85	*CTM-3600	80-40-40	450-250-250	1 3/8 x 4	2.8
*CTM-3420	30-30-20	350-350-25	1 3/8 x 2	2.04	*CTM-3602	10-40-10	450-300-150	1 3/8 x 2	1.8
CTM-3422	40-5-30	350-350-25	1 3/8 x 2	2.61	CTM-3604	30-10-10	450-300-150	1 3/8 x 2	2.6
CTM-3424	40-40-50	350-350-25	1 3/8 x 2 1/2	3.39	*CTM-3606	5-80-40	450-300-300	1 3/8 x 3	2.4
CTM-3426	60-10-25	350-350-25	1 3/8 x 2 1/2	2.70	CTM-3608	10-100-20	450-300-300	1 3/8 x 3	2.9
CTM-3428	90-40-50	350-350-25	1 3/8 x 3 1/2	4.41	CTM-3610	20-15-10	450-300-300	1 3/8 x 3	2.5
CTM-3430	100-20-20	350-350-25	1 3/8 x 3 1/2	4.26	CTM-3612	10-10-20	450-350-25	1 x 2 1/2	2.0
*CTM-3432	200-10-50	350-350-50	1 3/8 x 4	3.15	CTM-3614	10-10-50	450-350-25	1 x 3	2.1
CTM-3434	10-5-30	350-350-50	1 x 2	1.98	*CTM-3616	30-15-40	450-350-25	1 3/8 x 2	1.9
CTM-3436	10-5-150	350-350-50	1 x 3	2.43	*CTM-3618	30-40-50	450-350-25	1 x 4	2.2
*CTM-3438	20-5-150	350-350-50	1 x 3	1.77	CTM-3620	30-80-100	450-350-50	1 3/8 x 3 1/2	4.0
*CTM-3440	20-10-100	350-350-50	1 3/8 x 2 1/2	1.74	*CTM-3622	80-50-100	450-360-200	1 3/8 x 4	3.5
CTM-3442	70-40-50	350-350-50	1 3/8 x 3 1/2	3.90	CTM-3624	15-20-20	450-350-250	1 3/8 x 2	2.6
CTM-3444	80-10-40	350-350-50	1 3/8 x 3	3.42	CTM-3626	50-10-160	450-350-250	1 3/8 x 4	3.7
CTM-3446	80-10-100	350-350-50	1 3/8 x 3	3.69	CTM-3628	20-15-10	450-350-300	1 x 3	2.7
CTM-3448	100-20-50	350-350-50	1 3/8 x 3	4.17	CTM-3630	40-50-50	450-350-300	1 3/8 x 4	4.1
CTM-3450	80-40-400	350-350-50	1 3/8 x 4	3.89	CTM-3632	20-15-15	450-350-350	1 x 3	2.5
*CTM-3452	150-4-30	350-350-50	1 3/8 x 3 1/2	2.35	*CTM-3634	20-40-10	450-350-350	1 3/8 x 2 1/2	2.1
CTM-3453	150-5-100	350-350-50	1 3/8 x 3 1/2	3.06	*CTM-3636	20-80-10	450-350-350	1 3/8 x 3	2.5
CTM-3454	30-20-100	350-350-75	1 3/8 x 2 1/2	3.60	*CTM-3638	40-80-40	450-350-350	1 3/8 x 3 1/2	3.2
†CTM-3456	40-20-10	350-350-100	1 3/8 x 2	2.58	CTM-3638	50-80-10	450-350-350	1 3/8 x 3 1/2	4.4
*CTM-3458	30-20-100	350-350-150	1 3/8 x 2 1/2	2.40	CTM-3640	60-20-20	450-350-350	1 3/8 x 3 1/2	3.1
CTM-3460	40-20-10	350-350-150	1 x 3	2.88	CTM-3642	60-40-20	450-350-350	1 3/8 x 3 1/2	4.1
CTM-3462	40-40-100	350-350-200	1 3/8 x 4	4.32	CTM-3644	10-30-150	450-400-5	1 x 3	2.1
*CTM-3464	80-40-100	350-350-200	1 3/8 x 4	3.27	CTM-3646	30-50-40	450-400-25	1 3/8 x 3	3.1
*CTM-3466	100-60-20	350-350-200	1 3/8 x 4	3.20	*CTM-3648	60-80-20	450-400-250	1 3/8 x 4	3.1
*CTM-3468	20-10-5	350-350-250	1 x 2 1/2	1.53	CTM-3650	10-30-30	450-400-300	1 3/8 x 2 1/2	3.1
CTM-3470	30-10-20	350-350-250	1 x 3	2.76	CTM-3652	10-30-40	450-400-300	1 3/8 x 2 1/2	3.1
CTM-3472	20-20-10								



**ARCO**  
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**TWIST MOUNT  
ELECTROLYTIC  
CAPACITORS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
*CTM-3670	30-30-20	450-450-25	1 3/8 x 2 1/2	2.13
*CTM-3672	30-30-125	450-450-25	1 3/8 x 3	2.37
*CTM-3674	40-20-20	450-450-25	1 3/8 x 2 1/2	2.10
*CTM-3676	40-40-20	450-450-25	1 3/8 x 3	2.34
*CTM-3678	40-40-40	450-450-25	1 3/8 x 3	2.37
*CTM-3680	80-10-125	450-450-25	1 3/8 x 3 1/2	2.67
*CTM-3682	80-40-100	450-450-25	1 3/8 x 4	3.03
*CTM-3684	10-10-40	450-450-50	1 x 2 1/2	1.50
*CTM-3686	20-10-50	450-450-50	1 x 3	1.71
CTM-3688	20-20-100	450-450-50	1 3/8 x 2 1/2	3.15
*CTM-3690	30-10-150	450-450-50	1 3/8 x 2 1/2	2.10
*CTM-3692	30-15-150	450-450-50	1 3/8 x 3	2.22
CTM-3694	30-30-40	450-450-50	1 3/8 x 3	3.30
*CTM-3696	35-25-150	450-450-50	1 3/8 x 3	2.37
CTM-3698	40-10-40	450-450-50	1 3/8 x 2 1/2	2.99
*CTM-3700	40-10-100	450-450-50	1 3/8 x 3	2.58
CTM-3702	40-30-25	450-450-50	1 3/8 x 2 1/2	3.39
*CTM-3704	40-40-100	450-450-50	1 3/8 x 3 1/2	2.58
*CTM-3706	60-40-75	450-450-50	1 3/8 x 4	2.79
*CTM-3708	80-20-100	450-450-50	1 3/8 x 4	2.88
CTM-3710	80-50-50	450-450-50	1 3/8 x 4	4.68
CTM-3712	30-30-125	450-450-75	1 3/8 x 3	4.05
†CTM-3714	10-10-50	450-450-100	1 3/8 x 2	2.40
CTM-3716	30-20-30	450-450-150	1 3/8 x 2 1/2	3.15
*CTM-3718	40-40-40	450-450-150	1 3/8 x 3 1/2	2.49
*CTM-3720	40-10-80	450-450-200	1 3/8 x 3	2.34
*CTM-3722	40-10-100	450-450-200	1 3/8 x 3 1/2	2.49
*CTM-3724	40-40-60	450-450-200	1 3/8 x 3 1/2	2.67
*CTM-3726	40-40-100	450-450-200	1 3/8 x 4	2.97
CTM-3728	15-10-120	450-450-300	1 3/8 x 3 1/2	4.23
CTM-3730	15-15-10	450-450-300	1 x 3 1/2	2.58
†CTM-3732	15-5-15	450-450-350	1 x 3	2.58
CTM-3734	20-20-60	450-450-350	1 3/8 x 3 1/2	4.56
CTM-3736	40-10-10	450-450-350	1 3/8 x 3	2.97
CTM-3738	40-40-60	450-450-350	1 3/8 x 4	4.11
*CTM-3740	40-40-80	450-450-350	1 3/8 x 4	3.33
*CTM-3742	50-5-50	450-450-350	1 3/8 x 3 1/2	2.55
†CTM-3744	60-20-40	450-450-350	1 3/8 x 4	3.44
CTM-3745	80-80-10	450-450-400	1 3/8 x 4 1/2	4.32
*CTM-3746	10-10-10	450-450-450	1 x 3	1.56
CTM-3748	15-15-10	450-450-450	1 x 3 1/2	2.67
*CTM-3750	15-15-15	450-450-450	1 x 3	1.86
*CTM-3752	20-10-10	450-450-450	1 x 3	1.74
*CTM-3754	20-20-20	450-450-450	1 3/8 x 2 1/2	2.19
*CTM-3756	30-10-10	450-450-450	1 3/8 x 2	1.86
*CTM-3758	30-20-20	450-450-450	1 3/8 x 3	2.31
CTM-3760	30-30-10	450-450-450	1 3/8 x 3	3.39
*CTM-3762	30-30-30	450-450-450	1 3/8 x 3 1/2	2.61
*CTM-3764	40-10-10	450-450-450	1 3/8 x 3	2.01
*CTM-3766	40-30-20	450-450-450	1 3/8 x 3	2.58
*CTM-3768	40-40-10	450-450-450	1 3/8 x 2 1/2	2.49
*CTM-3770	40-40-20	450-450-450	1 3/8 x 3	2.57
*CTM-3772	40-40-40	450-450-450	1 3/8 x 3 1/2	2.94
CTM-3774	50-30-30	450-450-450	1 3/8 x 3 1/2	4.29
*CTM-3776	50-40-30	450-450-450	1 3/8 x 3 1/2	2.94
CTM-3778	60-10-10	450-450-450	1 3/8 x 3	3.51
*CTM-3780	60-20-20	450-450-450	1 3/8 x 3	2.76
*CTM-3782	60-30-10	450-450-450	1 3/8 x 3	2.70
*CTM-3784	60-40-20	450-450-450	1 3/8 x 3 1/2	3.00
CTM-3786	80-40-10	450-450-450	1 3/8 x 4	4.56
*CTM-3788	80-40-20	450-450-450	1 3/8 x 4	3.24
*CTM-3790	20-50-20	475-50-25	1 x 3	1.65
*CTM-3792	80-80-50	475-150-50	1 3/8 x 4	2.91
CTM-3794	10-100-40	475-200-50	1 3/8 x 2 1/2	3.03
CTM-3796	40-40-100	475-250-50	1 3/8 x 3	3.87
CTM-3798	40-40-100	475-250-100	1 3/8 x 3	3.69
CTM-3800	40-40-10	475-250-250	1 3/8 x 3 1/2	3.00
CTM-3802	20-20-40	475-300-25	1 3/8 x 2	2.79
CTM-3804	40-40-100	475-300-50	1 3/8 x 3 1/2	4.05
*CTM-3806	40-80-10	475-300-300	1 3/8 x 3 1/2	2.91
CTM-3808	10-100-25	475-350-25	1 3/8 x 3	2.73
*CTM-3810	10-4-100	475-350-50	1 x 2 1/2	1.89
*CTM-3812	20-10-5	475-350-150	1 x 2 1/2	1.68
*CTM-3814	10-4-40	475-350-250	1 3/8 x 2	1.65
CTM-3816	20-20-10	475-350-350	1 x 3	2.88
CTM-3818	40-40-25	475-400-50	1 3/8 x 3	3.87
CTM-3820	10-45-100	475-450-50	1 3/8 x 3	3.30
CTM-3822	40-40-20	475-450-50	1 3/8 x 3	3.96
*CTM-3824	10-40-100	475-450-200	1 3/8 x 3	2.52
CTM-3826	40-20-20	475-450-450	1 3/8 x 3	4.05
*CTM-3828	40-80-10	475-450-450	1 3/8 x 4	4.30
CTM-3830	40-40-500	475-475-10	1 3/8 x 3 1/2	4.92
CTM-3832	10-10-5	475-475-25	1 x 2 1/2	2.22
CTM-3834	10-10-100	475-475-25	1 x 3	2.40
CTM-3836	20-10-20	475-475-25	1 x 3	2.61
CTM-3838	10-10-150	475-475-50	1 x 3	2.70
CTM-3840	20-10-20	475-475-50	1 x 3	2.67
CTM-3842	20-10-100	475-475-50	1 3/8 x 2	1.95
CTM-3844	25-10-20	475-475-50	1 x 3	2.67
CTM-3846	20-10-100	475-475-400	1 3/8 x 4	3.15
CTM-3848	20-20-60	475-475-400	1 3/8 x 3 1/2	4.32

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
*CTM-3850	20-20-60	475-475-450	1 3/8 x 4	2.91
CTM-3852	10-10-10	475-475-475	1 x 3	2.43
CTM-3854	30-30-10	475-475-475	1 3/8 x 3	3.60
*CTM-3856	30-30-20	475-475-475	1 3/8 x 3	2.67
CTM-3858	40-10-10	475-475-475	1 3/8 x 3	3.48
*CTM-3860	40-20-20	475-475-475	1 3/8 x 3	2.85
*CTM-3862	40-30-10	475-475-475	1 3/8 x 3	2.20
*CTM-3864	40-30-30	475-475-475	1 3/8 x 4	3.09
CTM-3866	40-35-10	475-475-475	1 3/8 x 3	4.11
CTM-3868	10-80-10	500-150-150	1 x 3 1/2	2.58
CTM-3870	10-100-40	500-200-50	1 3/8 x 2 1/2	3.03
CTM-3872	40-40-100	500-250-50	1 3/8 x 3	3.87
CTM-3874	20-20-40	500-300-25	1 3/8 x 2	2.79
CTM-3876	20-40-100	500-300-25	1 3/8 x 2 1/2	3.24
CTM-3878	5-100-200	500-300-150	1 3/8 x 4	4.65
CTM-3880	40-40-25	500-400-50	1 3/8 x 3	3.87
CTM-3882	20-40-100	500-450-25	1 3/8 x 3	3.42
CTM-3884	80-20-100	500-450-50	1 3/8 x 4	4.59
CTM-3886	10-40-40	500-450-450	1 3/8 x 3 1/2	3.75
CTM-3888	30-20-20	500-500-25	1 3/8 x 2 1/2	3.21
CTM-3890	10-10-100	500-500-50	1 x 3 1/2	2.58
*CTM-3892	20-10-100	500-500-50	1 x 4	1.98
CTM-3894	30-10-20	500-500-50	1 3/8 x 2 1/2	2.79
*CTM-3896	40-40-100	500-500-200	1 3/8 x 4	3.48
CTM-3898	10-10-5	500-500-350	1 x 2 1/2	2.25
*CTM-3900	20-20-60	500-500-400	1 3/8 x 3 1/2	2.88
*CTM-3902	10-10-10	500-500-500	1 x 3	1.02
CTM-3904	30-20-20	500-500-500	1 3/8 x 3	2.52
*CTM-3906	40-10-10	500-500-500	1 3/8 x 3	2.34
*CTM-3908	40-40-10	500-500-500	1 3/8 x 3 1/2	3.03

**QUADRUPLE UNITS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
*CTM-4010	750-600-350-4	16-16-16-11.5RMS	1 3/8 x 2	3.12
*CTM-4011	750-750-350-4	16-16-16-11.5RMS	1 3/8 x 2	3.30
CTM-4020	40-40-40-40	25-25-25-25	1 3/8 x 2	2.49
CTM-4022	5-5-25-100	75-75-25-15	1 3/8 x 2	2.40
*CTM-4025	50-20-150-30	150-150-15-15	1 3/8 x 2	1.89
CTM-4028	40-40-50-200	150-150-25-10	1 3/8 x 2	2.85
*CTM-4031	20-20-160-40	150-150-25-25	1 3/8 x 2	1.92
CTM-4034	40-40-100-100	150-150-25-25	1 3/8 x 2	3.03
CTM-4037	40-40-200-100	150-150-25-25	1 3/8 x 2	3.21
*CTM-4040	50-40-160-40	150-150-25-25	1 3/8 x 2	2.13
CTM-4043	80-20-160-40	150-150-25-25	1 3/8 x 2	3.33
CTM-4047	80-30-100-40	150-150-25-25	1 3/8 x 2	3.12
CTM-4050	40-40-100-100	150-150-50-50	1 3/8 x 2	3.33
CTM-4052	30-20-20-200	150-150-150-10	1 3/8 x 2	2.79
*CTM-4055	40-40-20-200	150-150-150-10	1 3/8 x 2	1.92
CTM-4058	50-30-25-200	150-150-150-10	1 3/8 x 2	3.03
*CTM-4061	60-40-20-200	150-150-150-10	1 3/8 x 2	2.07
CTM-4064	80-80-10-200	150-150-150-10	1 3/8 x 2 1/2	3.51
*CTM-4067	200-30-10-100	150-150-150-10	1 3/8 x 3 1/2	2.46
*CTM-4070	290-30-10-100	150-150-150-10	1 3/8 x 3 1/2	2.70
CTM-4073	60-20-20-1000	150-150-150-15	1 3/8 x 2 1/2	4.20
CTM-4076	20-20-20-20	150-150-150-25	1 3/8 x 2	2.61
CTM-4079	30-20-20-100	150-150-150-25	1 3/8 x 2	2.85
*CTM-4082	30-30-30-40	150-150-150-25	1 3/8 x 2	1.86
*CTM-4085	40-20-20-20	150-150-150-25	1 3/8 x 2	1.77
CTM-4088	40-30-20-100	150-150-150-25	1 3/8 x 2	2.88
*CTM-4092	40-40-30-20	150-150-150-25	1 3/8 x 2	1.86
CTM-4095	40-40-30-120	150-150-150-25	1 3/8 x 2	3.15
*CTM-4098	40-40-40-20	150-150-150-25	1 3/8 x 2	1.89
†CTM-4101	40-40-40-100	150-150-150-25	1 3/8 x 2	3.03
*CTM-4104	40-40-40-160	150-150-150-25	1 3/8 x 2	2.13
*CTM-4107	50-20-20-200	150-150-150-25	1 3/8 x 2	2.10
*CTM-4110	50-30-30-100	150-150-150-25	1 3/8 x 2	2.04
*CTM-4113	50-50-50-20	150-150-150-25	1 3/8 x 2	2.13
CTM-4116	50-50-50-100	150-150-150-25	1 3/8 x 2	3.39
CTM-4118	60-30-10-60	150-150-150-25	1 3/8 x 2	2.76
CTM-4120	60-40-20-20	150-150-150-25	1 3/8 x 2	2.97
CTM-4122	60-60-10-60	150-150-150-25	1 3/8 x 2	3.15
CTM-4124	70-40-40-25	150-150-150-25	1 3/8 x 2 1/2	3.12
CTM-4126	80-40-30-100	150-150-150-25	1 3/8 x 2 1/2	3.33
*CTM-4128	80-40-40-20	150-150-150-25	1 3/8 x 2	2.13
*CTM-4130	80-40-40-40	150-150-150-25	1 3/8 x 2 1/2	2.16
*CTM-4132	80-40-40-100	150-150-150-25	1 3/8 x 2 1/2	2.25
CTM-4134	80-50-50-25	150-150-150-25	1 3/8 x 2 1/2	3.42
CTM-4136	80-60-40-100	150-150-150-25	1 3/8 x 2 1/2	3.57
*CTM-4138	100-90-60-200	150-150-150-25	1 3/8 x 3	2.97
CTM-414				



**ARCO**  
electronics inc.

**Arcolytic**

**TWIST MOUNT  
ELECTROLYTIC  
CAPACITORS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)	Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
CTM-4167	60-20-5-50	200-200-200-50	1 3/8 x 3	3.15	*CTM-4393	40-40-40-150	350-350-350-50	1 3/8 x 4	3.39
CTM-4170	40-40-50-80	250-250-150-150	1 3/8 x 2 1/2	3.69	CTM-4395	50-40-20-100	350-350-350-50	1 3/8 x 3	4.65
*CTM-4173	100-40-10-100	250-250-250-50	1 3/8 x 3 1/2	3.09	CTM-4398	50-40-40-160	350-350-350-50	1 3/8 x 4	5.19
CTM-4176	80-60-40-20	250-250-250-150	1 3/8 x 4	4.59	CTM-4400	60-25-25-100	350-350-350-50	1 3/8 x 3 1/2	4.65
CTM-4178	40-40-20-20	250-250-250-250	1 3/8 x 2 1/2	3.60	*CTM-4403	60-30-30-150	350-350-350-50	1 3/8 x 3	3.30
CTM-4180	100-40-80-20	300-50-25-25	1 3/8 x 3	4.11	*CTM-4405	70-40-10-50	350-350-350-50	1 3/8 x 3	3.15
*CTM-4183	20-150-150-100	300-150-150-30	1 3/8 x 4	3.18	*CTM-4408	100-10-10-20	350-350-350-50	1 3/8 x 3 1/2	3.09
*CTM-4185	10-200-140-30	300-150-150-150	1 3/8 x 3 1/2	3.06	*CTM-4410	100-20-10-20	350-350-350-50	1 3/8 x 3 1/2	3.24
*CTM-4188	10-200-200-30	300-150-150-150	1 3/8 x 4	3.21	*CTM-4413	100-40-30-50	350-350-350-50	1 3/8 x 4	3.93
*CTM-4190	100-60-10-20	300-200-150-50	1 3/8 x 3 1/2	2.91	CTM-4415	140-20-10-100	350-350-350-50	1 3/8 x 4	5.55
CTM-4193	120-20-20-100	300-250-25-30	1 3/8 x 3 1/2	4.77	*CTM-4418	90-30-5-100	350-350-350-75	1 3/8 x 3 1/2	3.69
*CTM-4195	200-20-100-20	300-250-50-25	1 3/8 x 4	3.48	CTM-4420	80-60-40-20	350-350-350-150	1 3/8 x 4	5.49
CTM-4198	40-40-40-40	300-250-250-25	1 3/8 x 2 1/2	3.96	CTM-4424	20-10-5-60	350-350-350-200	1 3/8 x 2 1/2	3.30
CTM-4200	80-5-60-20	300-300-150-25	1 3/8 x 3	2.61	*CTM-4428	30-10-5-100	350-350-350-200	1 3/8 x 2 1/2	2.73
CTM-4203	100-40-125-50	300-300-150-50	1 3/8 x 4	5.58	CTM-4432	30-20-5-100	350-350-350-200	1 3/8 x 3	2.82
*CTM-4205	140-10-10-100	300-300-150-50	1 3/8 x 3 1/2	3.03	CTM-4439	80-40-10-100	350-350-350-200	1 3/8 x 3 1/2	4.47
*CTM-4208	100-10-200-30	300-300-150-150	1 3/8 x 4	3.54	CTM-4443	130-20-10-40	350-350-350-300	1 3/8 x 4	5.88
*CTM-4210	140-10-200-30	300-300-150-150	1 3/8 x 4	3.75	CTM-4446	35-30-20-10	350-350-350-350	1 3/8 x 3	4.17
*CTM-4213	140-10-200-60	300-300-150-150	1 3/8 x 4 1/2	3.84	*CTM-4449	40-20-20-10	350-350-350-350	1 3/8 x 2 1/2	2.61
*CTM-4215	150-20-10-250	300-300-250-50	1 3/8 x 4	3.63	CTM-4453	40-25-25-10	350-350-350-350	1 3/8 x 2 1/2	3.57
CTM-4218	10-10-10-20	300-300-300-25	1 3/8 x 2	2.67	*CTM-4456	40-40-40-40	350-350-350-350	1 3/8 x 4	3.60
CTM-4220	40-30-20-50	300-300-300-25	1 3/8 x 2 1/2	3.75	*CTM-4459	80-60-40-20	350-350-350-350	1 3/8 x 4	3.84
*CTM-4223	60-40-20-50	300-300-300-25	1 3/8 x 3 1/2	2.82	*CTM-4461	90-40-30-30	350-350-350-350	1 3/8 x 4	4.08
CTM-4225	30-30-15-30	300-300-300-50	1 3/8 x 3	3.78	CTM-4464	100-20-10-5	350-350-350-350	1 3/8 x 3 1/2	4.77
CTM-4228	60-30-10-60	300-300-300-50	1 3/8 x 2 1/2	3.78	*CTM-4467	100-40-10-10	350-350-350-350	1 3/8 x 3 1/2	3.60
*CTM-4230	150-30-30-150	300-300-300-50	1 3/8 x 4	3.66	*CTM-4469	100-40-25-25	350-350-350-350	1 3/8 x 4	3.93
*CTM-4233	40-40-40-20	300-300-300-150	1 3/8 x 3	2.94	CTM-4471	50-20-100-25	400-200-150-25	1 3/8 x 2 1/2	4.20
*CTM-4235	120-40-40-10	300-300-300-250	1 3/8 x 4	3.78	CTM-4473	20-20-10-40	400-250-250-25	1 3/8 x 2 1/2	3.03
*CTM-4238	40-20-10-10	300-300-300-300	1 3/8 x 2	2.37	*CTM-4475	40-120-10-150	400-250-250-50	1 3/8 x 4	3.54
*CTM-4240	40-40-20-10	300-300-300-300	1 3/8 x 3 1/2	2.73	CTM-4477	10-100-10-100	400-300-75-25	1 3/8 x 2 1/2	4.23
*CTM-4243	40-40-30-20	300-300-300-300	1 3/8 x 3	2.91	CTM-4479	30-40-50-200	400-300-250-150	1 3/8 x 4	5.40
*CTM-4245	60-40-10-10	300-300-300-300	1 3/8 x 2 1/2	2.73	CTM-4481	20-30-20-20	400-300-300-25	1 3/8 x 2 1/2	3.42
*CTM-4248	100-40-20-20	300-300-300-300	1 3/8 x 4	5.22	CTM-4483	80-40-20-10	400-300-300-300	1 3/8 x 4	5.01
CTM-4250	100-50-10-5	300-300-300-300	1 3/8 x 4	4.65	CTM-4485	20-40-100-10	400-350-50-50	1 3/8 x 3	3.78
*CTM-4253	140-100-20-20	300-300-300-300	1 3/8 x 4 1/2	4.26	CTM-4486	40-100-5-100	400-350-150-50	1 3/8 x 4	3.66
*CTM-4255	150-100-10-10	300-300-300-300	1 3/8 x 4	3.99	*CTM-4487	20-10-10-20	400-350-200-25	1 3/8 x 2	1.92
CTM-4258	150-150-30-30	300-300-300-300	1 3/8 x 4 1/2	4.62	*CTM-4489	40-80-100-25	400-350-200-50	1 3/8 x 3 1/2	3.57
*CTM-4260	200-20-20-20	300-300-300-300	1 3/8 x 4	3.75	CTM-4491	40-10-80-10	400-350-250-250	1 3/8 x 4	4.20
CTM-4263	20-150-80-20	350-150-150-25	1 3/8 x 3	4.11	CTM-4493	80-40-20-20	400-350-300-300	1 3/8 x 3 1/2	3.84
CTM-4265	60-60-30-160	350-150-150-25	1 3/8 x 3	4.11	CTM-4495	10-50-30-30	400-350-350-25	1 3/8 x 3	3.96
CTM-4268	40-50-20-80	350-150-150-50	1 3/8 x 3	3.66	†CTM-4497	35-25-25-20	400-350-350-25	1 3/8 x 2 1/2	4.11
CTM-4270	20-60-160-40	350-200-25-25	1 3/8 x 2	3.60	*CTM-4499	80-40-10-10	400-350-350-25	1 3/8 x 4	4.77
CTM-4273	15-80-40-200	350-200-200-25	1 3/8 x 3	4.05	*CTM-4501	20-50-40-80	400-350-350-50	1 3/8 x 3	3.00
CTM-4275	20-100-100-10	350-200-200-100	1 3/8 x 4	4.50	†CTM-4503	30-60-20-100	400-350-350-50	1 3/8 x 4	4.56
CTM-4278	20-100-100-20	350-200-200-200	1 3/8 x 4	4.65	*CTM-4505	40-80-10-100	400-350-350-200	1 3/8 x 4	3.72
†CTM-4280	20-40-10-250	350-300-150-50	1 3/8 x 3	4.14	CTM-4507	40-100-20-10	400-350-350-350	1 3/8 x 4	3.96
CTM-4283	140-10-10-100	350-300-150-50	1 3/8 x 4	3.45	CTM-4509	10-10-25-25	400-400-25-25	1 3/8 x 2	2.52
*CTM-4285	20-150-10-250	350-300-150-50	1 3/8 x 4	3.66	CTM-4511	20-5-20-20	400-400-25-25	1 3/8 x 2	2.76
CTM-4288	40-40-20-20	350-300-300-25	1 3/8 x 3 1/2	4.05	CTM-4513	20-20-40-10	400-400-25-25	1 3/8 x 2 1/2	4.56
*CTM-4290	160-30-30-20	350-300-300-50	1 3/8 x 4	3.48	CTM-4515	50-25-100-20	400-400-50-25	1 3/8 x 3	4.20
*CTM-4293	30-30-50-100	350-300-300-75	1 3/8 x 3	3.15	*CTM-4517	50-40-100-100	400-400-50-25	1 3/8 x 4	3.06
CTM-4295	40-80-10-10	350-300-300-300	1 3/8 x 3	3.21	CTM-4519	80-40-100-20	400-400-50-25	1 3/8 x 4	5.01
*CTM-4298	140-100-20-20	350-300-300-300	1 3/8 x 4 1/2	4.62	*CTM-4521	100-10-30-20	400-400-50-50	1 3/8 x 3 1/2	3.00
*CTM-4300	160-30-10-4	350-300-300-300	1 3/8 x 3 1/2	3.63	CTM-4523	20-10-10-25	400-400-100-25	1 3/8 x 2	2.76
*CTM-4303	160-60-10-4	350-300-300-300	1 3/8 x 4	3.78	*CTM-4525	20-20-100-100	400-400-100-100	1 3/8 x 3	3.11
*CTM-4305	40-10-100-25	350-350-25-25	1 3/8 x 2	2.25	*CTM-4527	20-10-20-25	400-400-200-25	1 3/8 x 2	1.91
*CTM-4308	60-4-100-40	350-350-25-25	1 3/8 x 2 1/2	2.28	CTM-4529	10-10-40-10	400-400-200-50	1 3/8 x 2	2.88
CTM-4310	100-4-50-50	350-350-50-25	1 3/8 x 3 1/2	4.50	CTM-4530	80-40-100-100	400-400-200-50	1 3/8 x 4	3.9
CTM-4313	200-10-4-20	350-350-50-25	1 3/8 x 4	5.22	CTM-4531	40-30-80-10	400-400-200-200	1 3/8 x 3 1/2	4.4
CTM-4315	60-5-50-20	350-350-50-50	1 3/8 x 2 1/2	2.19	CTM-4533	80-10-80-100	400-400-250-50	1 3/8 x 4	3.4
CTM-4318	100-20-50-30	350-350-50-50	1 3/8 x 3 1/2	4.89	CTM-4535	40-10-80-10	400-400-250-250	1 3/8 x 3 1/2	4.2
*CTM-4320	60-20-80-100	350-350-150-50	1 3/8 x 4	2.94	CTM-4537	5-5-50-80	400-400-300-250	1 3/8 x 3	4.2
CTM-4323	60-10-100-100	350-350-150-10	1 3/8 x 4	3.60	*CTM-4539	50-20-20-25	400-400-350-25	1 3/8 x 3	2.6
*CTM-4325	100-60-100-100	350-350-150-10	1 3/8 x 4 1/2	4.08	†CTM-4541	60-40-40-10	400-400-350-50	1 3/8 x 3 1/2	5.1
CTM-4328	15-15-150-150	350-350-150-150	1 3/8 x 3 1/2	4.17	*CTM-4543	100-10-20-20	400-400-350-50	1 3/8 x 4	4.9
CTM-4330	40-20-10-20	350-350-200-25	1 3/8 x 2	3.51	CTM-4544	20-20-20-20	400-400-400-25	1 3/8 x 2 1/2	3.4
CTM-4333	40-20-100-10	350-350-200-50	1 3/8 x 3	4.29	CTM-4545	60-30-30-150	400-400-400-25	1 3/8 x 4	5.2
CTM-4335	80-20-20-100	350-350-200-50	1 3/8 x 3 1/2	4.50	*CTM-4547	80-40-10-20	400-400-400-25	1 3/8 x 4	3.1
CTM-4338	80-20-20-200	350-350-200-50	1 3/8 x 3 1/2	4.86	*CTM-4549	80-40-30-40	400-400-400-25	1 3/8 x 4	3.5
*CTM-4340	60-40-60-20	350-350-200-150	1 3/8 x 3 1/2	3.03	CTM-4551	90-40-10-40	400-400-400-25	1 3/8 x 4	5.2
CTM-4343	80-60-60-10	350-350-200-150	1 3/8 x 4	5.04	CTM-4553	40-40-40-150	400-400-400-50	1 3/8 x 4	5.1
CTM-4344	100-60-10-100	350-350-200-150	1 3/8 x 4 1/2	3.90	*CTM-4555	90-20-10-50	400-400-400-50	1 3/8 x 4	3.2
CTM-4345	50-30-8-20	350-350-250-200	1 3/8 x 2 1/2	4.05	CTM-4557	80-20-10-100	400-400-400-50	1 3/8 x 4	4.7
CTM-4348	15-15-15-15	350-350-300-25	1 3/8 x 2	3.12	*CTM-4558	80-40-10-100	400-400-400-200	1 3/8 x 4	3.7
CTM-4350	35-35-10-20	350-350-300-25	1 3/8 x 2 1/2	3.75	*CTM-4559	80-40-30-4	400-400-400-350	1 3/8 x 4	3.5
CTM-4353	100-80-10-20								



**TWIST MOUNT  
ELECTROLYTIC  
CAPACITORS**

Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)	Catalog No.	Capacity MFD.	WVDC	Diam. x Length	Net Price (1-24)
*CTM-4609	10-100-20-20	450-300-300-200	1 3/8 x 3	3.03	*CTM-4824	35-35-10-5	450-450-450-450	1 3/8 x 3 1/2	2.76
CTM-4612	10-100-20-20	450-300-300-300	1 3/8 x 3	4.74	*CTM-4826	40-10-10-10	450-450-450-450	1 3/8 x 3	2.46
CTM-4615	10-40-80-10	450-350-200-200	1 3/8 x 3 1/2	4.23	CTM-4828	40-20-20-10	450-450-450-450	1 3/8 x 3	4.32
*CTM-4618	10-40-100-100	450-350-250-50	1 3/8 x 3	3.33	*CTM-4830	40-35-10-10	450-450-450-450	1 3/8 x 3	2.88
CTM-4621	40-30-15-50	450-350-300-50	1 3/8 x 3	3.93	*CTM-4832	40-40-4-4	450-450-450-450	1 3/8 x 3 1/2	2.79
CTM-4624	10-140-20-10	450-350-300-300	1 3/8 x 4	5.37	*CTM-4834	40-40-20-20	450-450-450-450	1 3/8 x 4	3.33
*CTM-4625	10-140-100-20	450-350-300-300	1 3/8 x 4	4.50	*CTM-4836	40-40-30-30	450-450-450-450	1 3/8 x 4	3.63
CTM-4627	10-100-10-20	450-350-350-25	1 3/8 x 3	4.68	*CTM-4838	40-40-40-40	450-450-450-450	1 3/8 x 4	3.87
*CTM-4630	10-60-40-25	450-350-350-25	1 3/8 x 4	2.76	*CTM-4840	60-20-20-20	450-450-450-450	1 3/8 x 4	3.39
CTM-4633	20-15-15-20	450-350-350-25	1 3/8 x 2 1/2	3.42	*CTM-4842	60-30-10-2	450-450-450-450	1 3/8 x 3	3.06
*CTM-4636	20-80-50-100	450-350-350-50	1 3/8 x 4	3.60	CTM-4844	70-10-10-5	450-450-450-450	1 3/8 x 3	4.29
CTM-4639	30-40-40-10	450-350-350-200	1 3/8 x 3 1/2	4.65	*CTM-4846	80-10-10-10	450-450-450-450	1 3/8 x 4	3.03
CTM-4642	80-10-30-40	450-400-300-150	1 3/8 x 4	4.74	*CTM-4848	40-40-50-80	475-250-150-50	1 3/8 x 3 1/2	3.00
CTM-4645	80-10-40-30	450-400-300-300	1 3/8 x 4	5.48	*CTM-4850	20-40-100-80	475-300-50-25	1 3/8 x 3	2.67
CTM-4648	5-60-50-20	450-400-350-25	1 3/8 x 3 1/2	4.56	*CTM-4852	10-100-10-100	475-300-300-25	1 3/8 x 3 1/2	2.94
CTM-4651	10-40-30-40	450-400-400-25	1 3/8 x 3	3.96	*CTM-4854	20-80-20-10	475-300-300-300	1 3/8 x 3 1/2	3.00
CTM-4654	80-40-10-150	450-400-400-50	1 3/8 x 4	5.40	*CTM-4856	20-140-20-10	475-300-300-300	1 3/8 x 4	3.60
CTM-4657	10-40-40-100	450-400-400-50	1 3/8 x 3 1/2	4.38	CTM-4858	10-20-100-25	475-350-25-25	1 3/8 x 2	2.07
CTM-4660	60-40-20-20	450-400-400-100	1 3/8 x 4	5.22	CTM-4860	10-40-80-100	475-350-200-100	1 3/8 x 3 1/2	4.32
CTM-4664	10-10-20-20	450-450-25-25	1 3/8 x 2	2.67	*CTM-4862	20-40-80-100	475-350-200-100	1 3/8 x 4	3.27
CTM-4666	20-10-100-50	450-450-25-25	1 3/8 x 2	3.21	*CTM-4864	10-40-80-100	475-350-300-100	1 3/8 x 4	3.33
*CTM-4669	20-15-20-20	450-450-25-25	1 3/8 x 2	2.07	*CTM-4866	10-30-5-80	475-350-350-50	1 3/8 x 2 1/2	3.33
*CTM-4672	30-30-125-125	450-450-25-25	1 3/8 x 3	2.91	*CTM-4868	10-140-4-100	475-350-350-50	1 3/8 x 4	3.51
CTM-4675	30-10-150-30	450-450-50-50	1 3/8 x 3	3.69	*CTM-4870	10-130-20-10	475-350-350-350	1 3/8 x 4	3.50
CTM-4678	20-20-60-100	450-450-150-25	1 3/8 x 2 1/2	3.84	CTM-4872	20-60-40-10	475-350-350-350	1 3/8 x 3 1/2	4.68
*CTM-4681	40-40-125-125	450-450-150-25	1 3/8 x 4	3.42	*CTM-4874	30-130-10-10	475-350-350-350	1 3/8 x 4	3.84
CTM-4682	50-20-4-40	450-450-150-25	1 3/8 x 2	2.70	*CTM-4876	10-40-100-10	475-400-50-25	1 3/8 x 2 1/2	2.43
*CTM-4684	10-10-60-100	450-450-200-50	1 3/8 x 3	2.31	*CTM-4878	10-40-4-100	475-400-350-50	1 3/8 x 2 1/2	2.43
*CTM-4687	35-25-20-100	450-450-200-50	1 3/8 x 3	4.79	*CTM-4880	10-80-40-100	475-400-400-50	1 3/8 x 4	3.48
CTM-4690	40-40-100-60	450-450-200-200	1 3/8 x 4	3.63	*CTM-4882	5-70-25-5	475-400-400-400	1 3/8 x 3 1/2	3.03
CTM-4691	80-50-20-50	450-450-250-50	1 3/8 x 4	3.57	CTM-4884	10-10-80-50	475-450-200-60	1 3/8 x 3	3.48
CTM-4692	80-50-100-250	450-450-250-50	1 3/8 x 4	4.44	CTM-4886	25-20-20-100	475-450-300-50	1 3/8 x 3	4.14
CTM-4692.4	30-20-160-40	450-450-250-150	1 3/8 x 3	3.39	CTM-4888	25-20-40-100	475-450-300-50	1 3/8 x 3 1/2	4.47
CTM-4693	10-10-10-50	450-450-300-25	1 3/8 x 2	2.85	*CTM-4890	10-60-30-125	475-450-400-50	1 3/8 x 4	3.33
CTM-4696	40-40-10-50	450-450-300-50	1 3/8 x 3 1/2	4.23	*CTM-4892	10-50-30-30	475-450-450-25	1 3/8 x 3	2.85
CTM-4699	20-20-30-30	450-450-300-300	1 3/8 x 3 1/2	4.05	*CTM-4894	10-40-10-100	475-450-450-50	1 3/8 x 2 1/2	2.58
CTM-4702	20-5-50-20	450-450-350-25	1 3/8 x 2 1/2	4.11	CTM-4895	80-4-4-4	475-450-450-450	1 3/8 x 3	3.12
CTM-4705	20-20-30-30	450-450-350-350	1 3/8 x 3	4.56	*CTM-4896	15-15-80-40	475-475-300-50	1 3/8 x 3	2.88
CTM-4708	40-10-35-10	450-450-350-350	1 3/8 x 3 1/2	4.14	CTM-4898	50-30-20-20	475-475-300-300	1 3/8 x 4	5.13
CTM-4710	40-20-80-10	450-450-350-350	1 3/8 x 4	5.22	*CTM-4900	40-10-4-40	475-475-350-300	1 3/8 x 3	2.97
*CTM-4712	40-40-30-30	450-450-350-350	1 3/8 x 4	3.54	CTM-4902	40-10-40-10	475-475-350-350	1 3/8 x 3	3.30
*CTM-4714	10-10-10-20	450-450-450-25	1 3/8 x 2	1.89	*CTM-4904	20-10-20-100	475-475-450-25	1 3/8 x 2 1/2	2.52
CTM-4716	10-10-10-100	450-450-450-25	1 3/8 x 2	2.94	CTM-4906	10-5-80-40	475-475-450-50	1 3/8 x 3 1/2	4.41
CTM-4718	15-10-10-20	450-450-450-25	1 3/8 x 2	2.97	CTM-4907	80-80-4-4	475-475-450-450	1 3/8 x 4	4.50
CTM-4720	20-10-10-100	450-450-450-25	1 3/8 x 2	3.33	CTM-4908	30-30-10-20	475-475-475-25	1 3/8 x 3	4.11
*CTM-4722	20-20-20-20	450-450-450-25	1 3/8 x 2 1/2	2.49	CTM-4910	40-20-10-10	475-475-475-25	1 3/8 x 3	4.38
CTM-4724	30-15-15-40	450-450-450-25	1 3/8 x 2 1/2	3.75	CTM-4912	80-30-10-20	475-475-475-25	1 3/8 x 4	5.19
CTM-4726	30-20-20-20	450-450-450-25	1 3/8 x 3	3.96	*CTM-4914	20-20-10-10	475-475-475-300	1 3/8 x 2 1/2	2.58
CTM-4728	30-30-10-20	450-450-450-25	1 3/8 x 3	3.93	*CTM-4916	50-30-10-20	475-475-475-300	1 3/8 x 3 1/2	3.36
*CTM-4730	30-30-10-125	450-450-450-25	1 3/8 x 3	2.82	CTM-4918	10-10-10-10	475-475-475-475	1 3/8 x 2	3.15
CTM-4732	30-30-20-20	450-450-450-25	1 3/8 x 3	4.20	*CTM-4920	20-20-10-10	475-475-475-475	1 3/8 x 2 1/2	2.61
CTM-4734	40-10-10-250	450-450-450-25	1 3/8 x 3	4.23	*CTM-4922	20-20-20-20	475-475-475-475	1 3/8 x 3	3.06
CTM-4736	40-15-10-25	450-450-450-25	1 3/8 x 3	3.69	CTM-4924	40-10-10-10	475-475-475-475	1 3/8 x 3	4.20
CTM-4738	40-20-10-20	450-450-450-25	1 3/8 x 3	3.84	CTM-4926	40-20-10-10	475-475-475-475	1 3/8 x 3	3.06
*CTM-4740	40-20-20-20	450-450-450-25	1 3/8 x 3	2.76	CTM-4928	10-10-4-20	500-300-300-25	1 3/8 x 2	1.74
*CTM-4742	40-20-20-40	450-450-450-25	1 3/8 x 3	2.79	CTM-4930	10-100-30-100	500-300-300-25	1 3/8 x 3 1/2	4.68
*CTM-4744	40-30-20-20	450-450-450-25	1 3/8 x 3 1/2	2.70	CTM-4932	5-100-10-200	500-300-300-150	1 3/8 x 4	5.28
*CTM-4746	40-40-10-20	450-450-450-25	1 3/8 x 3 1/2	2.82	CTM-4934	20-80-20-10	500-300-300-300	1 3/8 x 3 1/2	4.50
*CTM-4748	40-40-20-20	450-450-450-25	1 3/8 x 3 1/2	3.00	*CTM-4936	30-10-150-30	500-450-50-50	1 3/8 x 3	2.52
*CTM-4750	40-40-40-40	450-450-450-25	1 3/8 x 3	3.30	*CTM-4938	10-10-10-10	500-500-500-500	1 3/8 x 2	2.10
CTM-4752	50-40-5-20	450-450-450-25	1 3/8 x 3	4.32	*CTM-4940	40-40-8-8	500-500-500-500	1 3/8 x 4	3.42
*CTM-4754	60-40-40-10	450-450-450-25	1 3/8 x 4	3.60	<b>INSULATING TUBES FOR TWIST MOUNT CAPACITORS</b>				
*CTM-4756	60-50-5-20	450-450-450-25	1 3/8 x 4	3.21	Cat. No.	CTM Dimensions			Net Price
*CTM-4758	80-40-40-40	450-450-450-25	1 3/8 x 4	3.87	TMT-1	1 x 2		.06	
CTM-4759	80-50-10-20	450-450-450-25	1 3/8 x 4	3.57	TMT-2	1 x 2 1/2		.06	
CTM-4760	10-10-10-150	450-450-450-25	1 3/8 x 2 1/2	3.3	TMT-3	1 x 3		.06	
*CTM-4762	20-20-20-100	450-450-450-25	1 3/8 x 2 1/2	2.73	TMT-4	1 x 3 1/2		.06	
*CTM-4764	30-30-15-30	450-450-450-25	1 3/8 x 3	2.73	TMT-5	1 x 4		.06	
CTM-4766	30-30-15-100	450-450-450-25	1 3/8 x 3 1/2	4.41	TMT-6	1 3/8 x 2		.06	
*CTM-4768	40-20-10-100	450-450-450-25	1 3/8 x 3 1/2	2.76	TMT-7	1 3/8 x 2 1/2		.06	
*CTM-4770	40-40-10-25	450-450-450-25	1 3/8 x 3	2.82	TMT-8	1 3/8 x 3		.06	
*CTM-4772	40-40-10-50	450-450-450-25	1 3/8 x 4	2.88	TMT-9	1 3/8 x 3 1/2		.06	
*CTM-4774	60-40-10-25	450-450-450-25	1 3/8 x 4	3.15	TMT-10	1 3/8 x 4		.06	
*CTM-4776	40-40-10-100	450-450-450-100	1 3/8 x 3 1/2	3.39	<b>BAKELITE MOUNTING PLATES FOR CTM CAPACITORS</b>				
CTM-4778	10-10-10-10	450-450-450-150	1 3/8 x 2	2.85	BMP-1	1		.06	
*CTM-4780	60-10-10-20	450-450-450-150	1 3/8 x 3	2.73	BMP-2	1 3/8		.06	
CTM-4782	35-35-10-10	450-450-450-200	1 3/8 x 3 1/2	4.14	<b>METAL MOUNTING PLATES FOR CTM CAPACITORS</b>				
CTM-4785	40-10-10-100	450-450-450-200	1 3/8 x 4	4.41	MMP-1	1		.06	
CTM-4788	40-40-30-10	450-450-450-200	1 3/8 x 4	4.83	MMP-2	1 3/8		.06	
CTM-4790	30-10-10-10	450-450-450-250	1 3/8 x 2 1/2	3.48					
CTM-4792	40-10-10-40	450-450-450-250	1 3/8 x 3 1/2	4.02					
*CTM-4794	40-20-10-100	450-450-450-250	1 3/8 x 4	3.51					



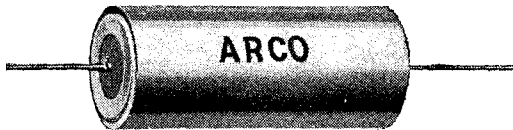
**ARCO**  
electronics inc.

GREAT NECK, NEW YORK  
Branches: Los Angeles 35, Dallas 7

# PLASTIC FILM CAPACITORS

**TYPES  
PT, PJ**

Type PT capacitors are polystyrene dielectric enclosed in non-ferrous metallic tubes with compression glass end seals. The principle features of this type are high stability, high insulation resistance, low dielectric absorption, and low dissipation factor. Their principle uses include precision filter and tuned circuits, analog computer circuits, pulse networks, servo systems, reference capacitors, and high Q applications.



**SPECIFICATIONS:**

DISSIPATION FACTOR: .01% max. at 25°C.  
.02% max. at 85°C.  
INSULATION RESISTANCE: 10<sup>5</sup> megohm-microfarads min. for 100VDCW and 200VDCW units; 10<sup>6</sup> megohm-microfarads for 400VDCW and higher ratings (at 25°C.)  
TEMPERATURE RANGE: —55°C. to +85°C.  
TEMPERATURE COEFFICIENT: —120 ± 15 ppm/°C. This specification may be tightened if required for specific values.  
DIELECTRIC ABSORPTION: .05% max. at 25°C.  
STABILITY: ±0.1% maximum capacitance drift long term under maximum operating conditions.  
TOLERANCES: standard tolerance ±5%. Also available, ±10% ±3% ±2% ±1% ±½ ±¼%.

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>1000 VDCW</b>			
*10PT-102J	.001	7/8 x .312	6.34
10PT-152J	.0015	7/8 x .312	6.34
*10PT-202J	.002	7/8 x .312	3.17
10PT-222J	.0022	7/8 x .312	3.19
10PT-272J	.0027	7/8 x .312	3.21
*10PT-332J	.0033	7/8 x .312	3.24
10PT-392J	.0039	7/8 x .312	3.27
*10PT-472J	.0047	7/8 x .312	3.31
10PT-502J	.005	7/8 x .312	3.34
10PT-682J	.0068	1 x .312	3.40
10PT-822J	.0082	1 x .400	3.44
10PT-103J	.01	1 x .400	3.50
10PT-153J	.015	1 1/8 x .400	3.68
10PT-203J	.02	1 1/8 x .500	3.85
10PT-223J	.022	1 1/8 x .500	3.92
10PT-273J	.027	1 1/8 x .500	4.10
10PT-333J	.033	1 1/8 x .500	4.27
10PT-393J	.039	1 1/8 x .562	4.41
10PT-473J	.047	1 1/8 x .562	4.62
10PT-503J	.05	1 1/8 x .670	4.69
10PT-683J	.068	1 1/8 x .750	5.64
10PT-823J	.082	1 1/8 x 1.00	6.23
10PT-104J	.1	1 1/8 x 1.00	6.97

**TYPE PT**

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>100 VDCW</b>			
*1PT-102J	.001	7/8 x .312	6.34
1PT-202J	.002	7/8 x .312	3.17
1PT-222J	.0022	7/8 x .312	3.17
1PT-272J	.0027	7/8 x .312	3.17
*1PT-332J	.0033	7/8 x .312	3.17
1PT-392J	.0039	7/8 x .312	3.17
*1PT-472J	.0047	7/8 x .312	3.17
*1PT-502J	.005	7/8 x .312	3.17
*1PT-682J	.0068	7/8 x .312	3.17
1PT-822J	.0082	7/8 x .312	3.17
*1PT-103J	.01	7/8 x .312	3.17
1PT-123J	.012	7/8 x .312	3.19
*1PT-153J	.015	7/8 x .312	3.20
*1PT-203J	.02	7/8 x .312	3.22
*1PT-223J	.022	7/8 x .312	3.24
1PT-273J	.027	1 x .312	3.27
*1PT-333J	.033	1 x .312	3.30
1PT-393J	.039	1 x .400	3.34
*1PT-473J	.047	1 x .400	3.38
*1PT-503J	.05	1 x .400	3.40
*1PT-683J	.068	1 x .400	3.57
1PT-823J	.082	1 1/8 x .400	3.71
*1PT-104J	.1	1 1/8 x .500	3.89
*1PT-124J	.12	1 1/8 x .500	4.10
*1PT-154J	.15	1 1/8 x .500	4.38
*1PT-204J	.2	1 1/8 x .500	4.90
*1PT-224J	.22	1 1/8 x .500	5.04
*1PT-274J	.27	1 1/8 x .562	5.43
*1PT-334J	.33	1 1/8 x .562	5.85
1PT-394J	.39	1 1/8 x .562	6.30
*1PT-474J	.47	1 1/8 x .670	6.86
*1PT-504J	.5	1 1/8 x .670	7.18
<b>200 VDCW</b>			
*2PT-102J	.001	7/8 x .312	6.34
*2PT-202J	.002	7/8 x .312	3.17
2PT-222J	.0022	7/8 x .312	3.17
2PT-272J	.0027	7/8 x .312	3.17
*2PT-332J	.0033	7/8 x .312	3.17
2PT-392J	.0039	7/8 x .312	3.17
*2PT-472J	.0047	7/8 x .312	3.17
*2PT-502J	.005	7/8 x .312	3.17
*2PT-682J	.0068	7/8 x .312	3.17
2PT-822J	.0082	7/8 x .312	3.17
*2PT-103J	.01	7/8 x .312	3.17
2PT-123J	.012	1 x .312	3.20
2PT-153J	.015	1 x .312	3.24
2PT-203J	.02	1 x .400	3.31
2PT-223J	.022	1 x .400	3.32
2PT-273J	.027	1 x .400	3.35
2PT-333J	.033	1 1/8 x .400	3.40
2PT-393J	.039	1 1/8 x .400	3.44
2PT-473J	.047	1 1/8 x .400	3.50
2PT-503J	.05	1 1/8 x .500	3.60
2PT-683J	.068	1 1/8 x .500	3.99
2PT-823J	.082	1 1/8 x .500	4.31
2PT-104J	.1	1 1/8 x .500	4.66
2PT-124J	.12	1 1/8 x .562	4.97
2PT-154J	.15	1 1/8 x .562	5.43
2PT-204J	.2	1 1/8 x .562	6.16
2PT-224J	.22	1 1/8 x .670	6.44
2PT-274J	.27	1 1/8 x .670	7.11
2PT-334J	.33	1 1/8 x .750	7.88
2PT-394J	.39	1 1/8 x 1.00	8.65
2PT-474J	.47	1 1/8 x 1.00	9.70
2PT-504J	.5	1 1/8 x 1.00	10.22

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>400 VDCW</b>			
*4PT-102J	.001	7/8 x .312	6.34
*4PT-202J	.002	7/8 x .312	3.17
4PT-222J	.0022	7/8 x .312	3.17
4PT-272J	.0027	7/8 x .312	3.11
*4PT-332J	.0033	7/8 x .312	3.17
4PT-392J	.0039	7/8 x .312	3.17
*4PT-472J	.0047	7/8 x .312	3.17
*4PT-502J	.005	7/8 x .312	3.17
*4PT-682J	.0068	7/8 x .312	3.22
4PT-822J	.0082	7/8 x .312	3.26
*4PT-103J	.01	1 x .312	3.31
*4PT-153J	.015	1 x .400	3.39
*4PT-203J	.02	1 x .400	3.48
*4PT-223J	.022	1 x .400	3.50
4PT-273J	.027	1 1/8 x .400	3.57
*4PT-333J	.033	1 1/8 x .400	3.68
4PT-393J	.039	1 1/8 x .500	3.75
*4PT-473J	.047	1 1/8 x .500	3.89
*4PT-503J	.05	1 1/8 x .500	3.96
*4PT-683J	.068	1 1/8 x .500	4.34
4PT-823J	.082	1 1/8 x .562	4.65
*4PT-104J	.1	1 1/8 x .562	5.04
4PT-124J	.12	1 1/8 x .562	5.46
*4PT-154J	.15	1 1/8 x .670	6.06
*4PT-204J	.2	1 1/8 x .750	7.07
*4PT-224J	.22	1 1/8 x .750	7.42
4PT-274J	.27	1 1/8 x 1.00	8.30
*4PT-334J	.33	1 1/8 x 1.00	9.38
4PT-394J	.39	1 1/8 x 1.00	10.43
<b>600 VDCW</b>			
*6PT-102J	.001	7/8 x .312	6.34
*6PT-202J	.002	7/8 x .312	3.17
6PT-222J	.0022	7/8 x .312	3.17
6PT-272J	.0027	7/8 x .312	3.17
*6PT-332J	.0033	7/8 x .312	3.19
6PT-392J	.0039	7/8 x .312	3.22
*6PT-472J	.0047	7/8 x .312	3.27
*6PT-502J	.005	7/8 x .312	3.28
*6PT-682J	.0068	7/8 x .312	3.33
6PT-822J	.0082	1 x .312	3.37
*6PT-103J	.01	1 x .400	3.41
*6PT-153J	.015	1 x .400	3.54
*6PT-203J	.02	1 1/8 x .400	3.68
*6PT-223J	.022	1 1/8 x .400	3.75
6PT-273J	.027	1 1/8 x .500	3.89
6PT-333J	.033	1 1/8 x .500	4.06
6PT-393J	.039	1 1/8 x .500	4.17
6PT-473J	.047	1 1/8 x .562	4.31
*6PT-503J	.05	1 1/8 x .562	4.38
6PT-683J	.068	1 1/8 x .562	5.22
6PT-823J	.082	1 1/8 x .670	5.60
*6PT-104J	.1	1 1/8 x .750	6.09
6PT-124J	.12	1 1/8 x .750	6.65
6PT-154J	.15	1 1/8 x 1.00	7.49
*6PT-204J	.2	1 1/8 x 1.00	8.58
6PT-224J	.22	1 1/8 x 1.00	10.19

NOTE: Non-standard capacitance values between those listed are also available at no additional cost.  
\* The starred items are stock items available for immediate delivery.  
NOTE: The suffix letter "J" refers to the standard tolerance of ±5%. This letter is changed for different tolerances.

Type PJ capacitors are polystyrene dielectric enclosed in silicone treated fused polystyrene jackets. The same superior quality of the Type PT hermetically sealed units is preserved in Type PJ units while effecting a marked saving in both size and price. Extensive evaluation has confirmed the excellent moisture resistance of this design as well as extreme ruggedness. The Type PJ will meet MIL tests for vibration, shock, moisture resistance and immersion as well as providing the excellent electrical characteristics specified.



**SPECIFICATIONS:**

DISSIPATION FACTOR: .01% max. at 25°C.  
.02% max. at 85°C.  
INSULATION RESISTANCE: 10<sup>5</sup> megohm-microfarads at 25°C.  
TEMPERATURE RANGE: —55°C. to +85°C.  
TEMPERATURE COEFFICIENT: —120 ± 15 ppm/°C.  
DIELECTRIC ABSORPTION: .05% max. at 25°C.  
STABILITY: ±0.1% maximum capacitance drift long term under maximum operating conditions.  
TOLERANCES: standard tolerance ±5%. ±10% ±3% ±2% ±1% ±½% also available.

**TYPE PJ**

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>100 VDCW</b>			
*1PJ-102J	.001	1 1/8 x 1/2	2.98
*1PJ-202J	.002	1 1/8 x 1/2	1.49
1PJ-222J	.0022	1 1/8 x 1/2	1.49
1PJ-272J	.0027	1 1/8 x 1/2	1.49
*1PJ-332J	.0033	1 1/8 x 1/2	1.49
1PJ-392J	.0039	1 1/8 x 1/2	1.49
*1PJ-472J	.0047	1 1/8 x 1/2	1.49
*1PJ-502J	.005	1 1/8 x 1/2	1.49
*1PJ-682J	.0068	1 1/8 x 1/2	1.49
1PJ-822J	.0082	1 1/8 x 1/2	1.49
*1PJ-103J	.01	1 1/8 x 1/2	1.49
1PJ-123J	.012	1 1/8 x 1/2	1.51
*1PJ-153J	.015	1 1/8 x 1/2	1.51
*1PJ-203J	.02	1 1/8 x 1/2	1.53
*1PJ-223J	.022	1 1/8 x 1/2	1.54
1PJ-273J	.027	1 1/8 x 1/2	1.56
*1PJ-333J	.033	1 1/8 x 1/2	1.60
1PJ-393J	.039	1 1/8 x 1/2	1.63
*1PJ-473J	.047	1 1/8 x 1/2	1.67
*1PJ-503J	.05	1 1/8 x 1/2	1.69
*1PJ-683J	.068	1 1/8 x 1/2	1.83
1PJ-823J	.082	1 x 3/8	1.94
*1PJ-104J	.1	1 x 3/8	2.09
*1PJ-124J	.12	1 x 3/8	2.28
*1PJ-154J	.15	1 1/4 x 1/2	2.54
*1PJ-204J	.2	1 1/4 x 1/2	2.99
*1PJ-224J	.22	1 1/4 x 1/2	3.12
1PJ-274J	.27	1 1/4 x 1/2	3.43
*1PJ-334J	.33	1 1/4 x 1/2	3.82
1PJ-394J	.39	1 1/4 x 1/2	4.2C
*1PJ-474J	.47	1 1/4 x 1/2	4.69
*1PJ-504J	.5	1 1/4 x 1/2	4.97


**ARCO**  
 electronics inc.

 GREAT NECK, NEW YORK  
 Branches: Los Angeles 35, Dallas 7

# PLASTIC FILM CAPACITORS

## TYPES PJ, MT

### TYPE PJ

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>200 VDCW</b>			
*2PJ-102J	.001	$\frac{1}{16} \times \frac{3}{32}$	2.98
*2PJ-202J	.002	$\frac{1}{16} \times \frac{3}{32}$	1.49
2PJ-222J	.0022	$\frac{1}{16} \times \frac{3}{32}$	1.49
2PJ-272J	.0027	$\frac{1}{16} \times \frac{3}{32}$	1.49
*2PJ-332J	.0033	$\frac{1}{16} \times \frac{3}{32}$	1.49
2PJ-392J	.0039	$\frac{1}{16} \times \frac{3}{32}$	1.49
2PJ-472J	.0047	$\frac{1}{16} \times \frac{3}{32}$	1.49
*2PJ-502J	.005	$\frac{1}{16} \times \frac{3}{32}$	1.49
*2PJ-682J	.0068	$\frac{1}{16} \times \frac{3}{32}$	1.49
2PJ-822J	.0082	$\frac{1}{16} \times \frac{3}{32}$	1.49
*2PJ-103J	.01	$\frac{1}{16} \times \frac{3}{16}$	1.49
2PJ-123J	.012	$\frac{1}{8} \times \frac{3}{16}$	1.54
2PJ-153J	.015	$\frac{1}{8} \times \frac{3}{16}$	1.54
2PJ-203J	.02	$\frac{1}{8} \times \frac{3}{16}$	1.60
2PJ-223J	.022	$\frac{1}{8} \times \frac{3}{16}$	1.61
2PJ-273J	.027	$\frac{3}{8} \times \frac{3}{16}$	1.65
2PJ-333J	.033	$1 \times \frac{3}{16}$	1.68
2PJ-393J	.039	$1 \times \frac{3}{16}$	1.72
2PJ-473J	.047	$1 \times \frac{3}{16}$	1.77
2PJ-503J	.05	$1 \times \frac{3}{16}$	1.88
2PJ-683J	.068	$1\frac{1}{4} \times \frac{3}{16}$	2.21
2PJ-823J	.082	$1\frac{1}{4} \times \frac{1}{2}$	2.52
2PJ-104J	.1	$1\frac{1}{4} \times \frac{1}{2}$	2.78
2PJ-124J	.12	$1\frac{1}{4} \times \frac{1}{2}$	3.05
2PJ-154J	.15	$1\frac{1}{4} \times \frac{3}{4}$	3.44
2PJ-204J	.2	$1\frac{1}{2} \times \frac{3}{4}$	4.09
2PJ-224J	.22	$1\frac{1}{2} \times \frac{3}{4}$	4.34
2PJ-274J	.27	$1\frac{1}{2} \times \frac{3}{4}$	4.90
2PJ-334J	.33	$1\frac{1}{2} \times \frac{3}{4}$	5.56
<b>400 VDCW</b>			
*4PJ-102J	.001	$\frac{1}{16} \times \frac{3}{32}$	2.98
*4PJ-202J	.002	$\frac{1}{16} \times \frac{3}{32}$	1.49
4PJ-222J	.0022	$\frac{1}{16} \times \frac{3}{32}$	1.49
4PJ-272J	.0027	$\frac{1}{16} \times \frac{3}{32}$	1.49
*4PJ-332J	.0033	$\frac{1}{16} \times \frac{3}{32}$	1.49
4PJ-392J	.0039	$\frac{1}{16} \times \frac{3}{32}$	1.49
*4PJ-472J	.0047	$\frac{1}{16} \times \frac{3}{32}$	1.49
*4PJ-502J	.005	$\frac{1}{16} \times \frac{3}{32}$	1.49
*4PJ-682J	.0068	$\frac{1}{16} \times \frac{3}{16}$	1.53
4PJ-822J	.0082	$\frac{1}{16} \times \frac{3}{16}$	1.56
*4PJ-103J	.01	$\frac{7}{8} \times \frac{3}{16}$	1.60
*4PJ-153J	.015	$\frac{7}{8} \times \frac{1}{32}$	1.68
*4PJ-203J	.02	$\frac{7}{8} \times \frac{3}{8}$	1.75
*4PJ-223J	.022	$\frac{7}{8} \times \frac{3}{8}$	1.77
4PJ-273J	.027	$1 \times \frac{3}{8}$	1.84
*4PJ-333J	.033	$1 \times \frac{1}{32}$	1.92
4PJ-393J	.039	$1 \times \frac{3}{16}$	2.00
*4PJ-473J	.047	$1\frac{1}{4} \times \frac{3}{16}$	2.10
*4PJ-503J	.05	$1\frac{1}{4} \times \frac{3}{16}$	2.16
4PJ-683J	.068	$1\frac{1}{4} \times \frac{1}{2}$	2.49
4PJ-823J	.082	$1\frac{1}{4} \times \frac{3}{8}$	2.77
*4PJ-104J	.1	$1\frac{1}{2} \times \frac{1}{32}$	3.12
4PJ-124J	.12	$1\frac{1}{2} \times \frac{3}{16}$	3.47
*4PJ-154J	.15	$1\frac{1}{2} \times \frac{5}{8}$	3.99
*4PJ-204J	.2	$1\frac{1}{2} \times \frac{1}{16}$	4.90
4PJ-224J	.22	$1\frac{3}{4} \times \frac{1}{16}$	5.18
4PJ-274J	.27	$1\frac{3}{4} \times \frac{3}{4}$	5.95
<b>600 VDCW</b>			
*6PJ-102J	.001	$\frac{1}{16} \times \frac{3}{32}$	2.98
*6PJ-202J	.002	$\frac{1}{16} \times \frac{3}{32}$	1.49
6PJ-222J	.0022	$\frac{1}{16} \times \frac{3}{32}$	1.49
6PJ-272J	.0027	$\frac{1}{16} \times \frac{3}{32}$	1.49
*6PJ-332J	.0033	$\frac{1}{16} \times \frac{3}{32}$	1.50
6PJ-392J	.0039	$\frac{1}{16} \times \frac{3}{32}$	1.53
6PJ-472J	.0047	$\frac{1}{16} \times \frac{3}{16}$	1.56
*6PJ-502J	.005	$\frac{1}{16} \times \frac{3}{16}$	1.59
6PJ-682J	.0068	$\frac{1}{8} \times \frac{3}{16}$	1.62
6PJ-822J	.0082	$\frac{3}{8} \times \frac{3}{16}$	1.66
*6PJ-103J	.01	$\frac{7}{8} \times \frac{1}{32}$	1.70
6PJ-153J	.015	$\frac{7}{8} \times \frac{3}{8}$	1.81
*6PJ-203J	.02	$\frac{7}{8} \times \frac{3}{8}$	1.92
6PJ-223J	.022	$1 \times \frac{1}{32}$	1.97
6PJ-273J	.027	$1 \times \frac{3}{16}$	2.11
6PJ-333J	.033	$1\frac{1}{4} \times \frac{3}{16}$	2.25
6PJ-393J	.039	$1\frac{1}{4} \times \frac{1}{2}$	2.35
6PJ-473J	.047	$1\frac{1}{4} \times \frac{3}{8}$	2.48
*6PJ-503J	.05	$1\frac{1}{4} \times \frac{3}{8}$	2.55
6PJ-683J	.068	$1\frac{1}{2} \times \frac{3}{8}$	3.26
6PJ-823J	.082	$1\frac{1}{2} \times \frac{5}{8}$	3.57
*6PJ-104J	.1	$1\frac{3}{4} \times \frac{1}{16}$	4.03
6PJ-124J	.12	$1\frac{3}{4} \times \frac{3}{4}$	4.52

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>1000 VDCW</b>			
*10PJ-102J	.001	$\frac{1}{16} \times \frac{3}{32}$	2.98
10PJ-152J	.0015	$\frac{1}{16} \times \frac{3}{32}$	2.98
*10PJ-202J	.002	$\frac{1}{16} \times \frac{3}{32}$	1.49
*10PJ-222J	.0022	$\frac{1}{16} \times \frac{3}{32}$	1.50
10PJ-272J	.0027	$\frac{1}{16} \times \frac{3}{32}$	1.52
*10PJ-332J	.0033	$\frac{1}{16} \times \frac{3}{16}$	1.55
10PJ-392J	.0039	$\frac{1}{16} \times \frac{3}{16}$	1.58
*10PJ-472J	.0047	$\frac{1}{16} \times \frac{3}{16}$	1.61
*10PJ-502J	.005	$\frac{1}{16} \times \frac{3}{16}$	1.63
10PJ-682J	.0068	$\frac{7}{8} \times \frac{3}{16}$	1.68
10PJ-822J	.0082	$\frac{7}{8} \times \frac{1}{32}$	1.72
10PJ-103J	.01	$\frac{7}{8} \times \frac{3}{8}$	1.78
10PJ-153J	.015	$1 \times \frac{3}{8}$	1.93
10PJ-203J	.02	$1 \times \frac{3}{16}$	2.08
10PJ-223J	.022	$1\frac{1}{4} \times \frac{1}{32}$	2.14
10PJ-273J	.027	$1\frac{1}{4} \times \frac{3}{16}$	2.30
10PJ-333J	.033	$1\frac{1}{4} \times \frac{1}{2}$	2.45
10PJ-393J	.039	$1\frac{1}{4} \times \frac{3}{8}$	2.57
10PJ-473J	.047	$1\frac{1}{2} \times \frac{3}{16}$	2.74
10PJ-503J	.05	$1\frac{1}{2} \times \frac{3}{8}$	2.82
10PJ-683J	.068	$1\frac{3}{4} \times \frac{3}{4}$	3.64

### HERMETICALLY SEALED MYLAR\* DIELECTRIC TYPE MT

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>200 VDCW</b>			
2MT-102J	.001	$1 \times .235$	7.00
2MT-202J	.002	$1 \times .235$	7.00
2MT-222J	.0022	$1 \times .235$	7.00
2MT-272J	.0027	$1 \times .235$	4.66
2MT-332J	.0033	$1 \times .235$	4.66
2MT-392J	.0039	$1 \times .235$	4.66
2MT-472J	.0047	$1 \times .235$	4.66
2MT-502J	.005	$1 \times .235$	4.66
2MT-822J	.0082	$1 \times .235$	3.50
2MT-682J	.0068	$1 \times .235$	3.50
2MT-103J	.01	$1 \times .235$	3.50
2MT-123J	.012	$1 \times .235$	3.50
2MT-153J	.015	$1 \times .235$	3.50
2MT-183J	.018	$1 \times .235$	3.50
2MT-223J	.022	$1 \times .235$	3.50
2MT-273J	.027	$1 \times .235$	3.57
2MT-333J	.033	$1 \times .312$	3.57
2MT-393J	.039	$1 \times .312$	3.64
2MT-473J	.047	$1 \times .312$	3.64
2MT-563J	.056	$1 \times .312$	3.64
2MT-683J	.068	$1 \times .312$	3.71
2MT-823J	.082	$1 \times .312$	3.71
2MT-104J	.1	$1 \times .400$	3.78
2MT-124J	.12	$1 \times .400$	3.85
2MT-154J	.15	$1 \times .400$	3.92
2MT-184J	.18	$1\frac{1}{8} \times .500$	3.99
2MT-224J	.22	$1\frac{1}{8} \times .500$	4.10
2MT-274J	.27	$1\frac{1}{8} \times .562$	4.20
2MT-334J	.33	$1\frac{1}{8} \times .562$	4.31
2MT-394J	.39	$1\frac{1}{8} \times .500$	4.41
2MT-474J	.47	$1\frac{1}{8} \times .500$	4.59
2MT-564J	.56	$1\frac{1}{8} \times .562$	4.69
2MT-684J	.68	$1\frac{1}{8} \times .670$	4.80
2MT-824J	.82	$1\frac{1}{8} \times .670$	4.90
2MT-105J	1.0	$1\frac{1}{8} \times .670$	5.04
2MT-125J	1.2	$1\frac{1}{8} \times .750$	5.32
2MT-155J	1.5	$1\frac{1}{8} \times .750$	5.67
2MT-185J	1.8	$1\frac{1}{8} \times 1.000$	6.09
2MT-225J	2.2	$1\frac{1}{8} \times 1.000$	6.93

\*DuPont Trademark

Part No.	Capacitance Value	Size L. x D.	1 to 9 Qty. Net Price
<b>400 VDCW</b>			
4MT-102J	.001	$1 \times .235$	7.00
4MT-202J	.002	$1 \times .235$	7.00
4MT-222J	.0022	$1 \times .235$	7.00
4MT-272J	.0027	$1 \times .235$	4.66
4MT-332J	.0033	$1 \times .235$	4.66
4MT-392J	.0039	$1 \times .235$	4.66
4MT-472J	.0047	$1 \times .235$	4.66
4MT-502J	.005	$1 \times .235$	3.85
4MT-682J	.0068	$1 \times .235$	3.85
4MT-822J	.0082	$1 \times .235$	3.85
4MT-103J	.01	$1 \times .235$	3.85
4MT-123J	.012	$1 \times .235$	3.89
4MT-153J	.015	$1 \times .312$	3.89
4MT-183J	.018	$1 \times .312$	3.92
4MT-223J	.022	$1 \times .312$	3.96
4MT-273J	.027	$1 \times .312$	3.99
4MT-333J	.033	$1 \times .312$	4.03
4MT-393J	.039	$1 \times .400$	4.06
4MT-473J	.047	$1 \times .400$	4.10
4MT-563J	.056	$1 \times .400$	4.13
4MT-683J	.068	$1\frac{1}{8} \times .500$	4.17
4MT-823J	.082	$1\frac{1}{8} \times .500$	4.20
4MT-104J	.1	$1\frac{1}{8} \times .562$	4.27
4MT-124J	.12	$1\frac{1}{8} \times .562$	4.34
4MT-154J	.15	$1\frac{1}{8} \times .500$	4.41
4MT-184J	.18	$1\frac{1}{8} \times .562$	4.48
4MT-224J	.22	$1\frac{1}{8} \times .562$	4.62
4MT-274J	.27	$1\frac{1}{8} \times .670$	4.73
4MT-334J	.33	$1\frac{1}{8} \times .670$	4.83
4MT-394J	.39	$1\frac{1}{8} \times .670$	4.97
4MT-474J	.47	$1\frac{1}{8} \times .670$	5.14
4MT-564J	.56	$1\frac{1}{8} \times .750$	5.39
4MT-684J	.68	$1\frac{1}{8} \times 1.000$	5.39
4MT-824J	.82	$1\frac{1}{8} \times 1.000$	5.53
4MT-105J	1.0	$1\frac{1}{8} \times 1.000$	5.67
<b>600 VDCW</b>			
6MT-102J	.001	$1 \times .312$	7.00
6MT-202J	.002	$1 \times .312$	7.00
6MT-222J	.0022	$1 \times .312$	7.00
6MT-272J	.0027	$1 \times .312$	4.66
6MT-332J	.0033	$1 \times .312$	4.66
6MT-392J	.0039	$1 \times .312$	4.66
6MT-472J	.0047	$1 \times .312$	4.66
6MT-502J	.005	$1 \times .312$	4.31
6MT-682J	.0068	$1 \times .312$	4.31
6MT-822J	.0082	$1 \times .312$	4.31
6MT-103J	.01	$$	





**ARCO**  
electronics inc.

GREAT NECK, NEW YORK  
Branches: Los Angeles 35, Dallas 7

**ELMENCO**  
CAPACITORS

CM-15, CM-20, CM-30  
Mica Capacitor Kits

**ARCO CM-15 MINIATURE MICA CAPACITOR KIT #1**

FOR EXPERIMENTAL WORK

**DON'T GET CAUGHT SHORT!**

**ALWAYS HAVE THE CORRECT CAPACITY ON HAND!**

This Handy Kit consists of 46 most commonly used Capacitors . . . per MIL-C-5 specifications . . . five of each capacity as listed on page 367 packed in individual tuc boxes, of 5 each properly identified for permanent use.

The complete set of capacitors amounts to \$89.50 at list prices. You get the entire set for only \$75.00.

COMPARE THE COST!



THESE MINIATURES FIT INTO THE SMALLEST AREA CAPACITOR SIZE (9/32" x 1/2" x 3/16")

**SPECIAL KIT LIST PRICE \$75.00 ONLY**

**THESE KITS CONTAIN FIVE EACH OF THE FOLLOWING ELMENCO MICA CAPACITORS (500 V D C W)**

CM20 Cap. mmf.	CM20 Cap. mmf.	CM20 Cap. mmf.	CM20 Cap. mmf.	CM30 Cap. mmf.	CM30 Cap. mmf.
5	39	120	390	1100	3600
10	43	130	430	1200	3900
12	47	150	470	1300	4300
15	51	160	510	1500	4700
18	56	180	560	1600	5100
20	62	200	620	1800	5600
22	68	220	680	2000	6200
24	75	240	750	2200	CM35
27	82	270	820	2400	6800*
30	91	300	910	2700	7500*
33	100	330	1000	3000	8200*
36	110	360	360	3300	9100*
*300VDCW				PER MIL-C-5 SPECIFICATIONS	
				10000*	



**MIL-C-5 ARCO SILVERED MICA KIT #3**

**SPECIAL KIT LIST PRICE \$260**

Purchased individually the total list price value of the capacitors contained in this kit would be . . . **\$291**

This kit contains the complete range of ELMENCO silvered molded mica capacitors from 5 mmf. to 10,000 mmf. manufactured in accordance with MIL-C-5 specifications. All units are of letters "C", "D" or "E" characteristics as specified and letter "J" (5%) tolerance and are MIL color coded.

**SPECIAL KIT LIST PRICE**

**\$140**

Purchased individually the total list price value of the capacitors contained in this kit would be . . . **\$158.40**



**MIL-C-5 ARCO REG. FOIL MICA KIT #2**

This kit contains the complete range of ELMENCO regular foil molded mica capacitors from 5 mmf. to 10,000 mmf. manufactured in accordance with MIL-C-5 specifications. All units are of the letter "B" characteristics and letter "K" (10%) tolerance and are MIL color coded.



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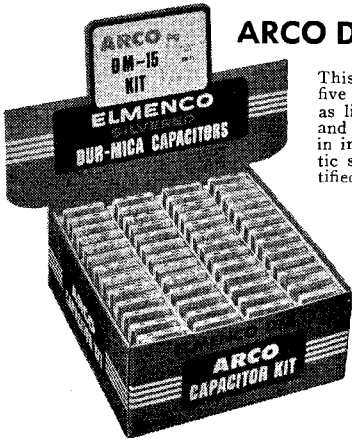
**ELMENCO**  
**CAPACITORS**

**DM-15 KIT #10 & 11**  
**DM-15**  
**STOCK PACKAGE**

**FOR: ENGINEERING LABS • GOVERNMENTAL AGENCIES • EXPERIMENTAL LABS**  
**SCHOOLS, ETC.**

**DUR-MICA** the silvered mica capacitor coated with a specially developed plastic coating for extra durability... provides maximum protection at environmental extremes of moisture and temperature.

**ARCO DM-15 KIT #10**



This handy kit consists of five of each DM-15 capacity as listed. All are 500 VDCW and  $\pm 5\%$  tolerance... packed in individual transparent plastic snap boxes, properly identified for ease of handling.

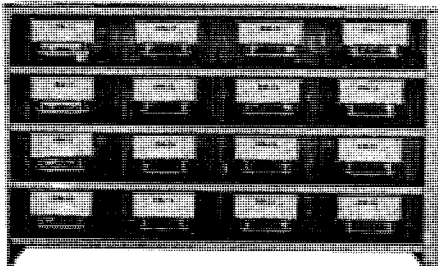
**SPECIAL KIT LIST PRICE \$95.00**

Purchased individually the total list price value of the capacitors contained in this kit would be — **\$103.31**

CAP. MMF.	TYPE DESIGNATION	CAP. MMF.	TYPE DESIGNATION
1	DM-15-010†	91	DM-15-910
2	DM-15-020†	100	DM-15-101
3	DM-15-030†	110	DM-15-111
5	DM-15-050†	120	DM-15-121
10	DM-15-100	130	DM-15-131
12	DM-15-120	150	DM-15-151
15	DM-15-150	160	DM-15-161
18	DM-15-180	180	DM-15-181
20	DM-15-200	200	DM-15-201
22	DM-15-220	220	DM-15-221
24	DM-15-240	240	DM-15-241
27	DM-15-270	250	DM-15-251
30	DM-15-300	270	DM-15-271
33	DM-15-330	300	DM-15-301
36	DM-15-360	330	DM-15-331
39	DM-15-390	360	DM-15-361
43	DM-15-430	390	DM-15-391
47	DM-15-470	430*	DM-15-431
50	DM-15-500	470*	DM-15-471
51	DM-15-510	500*	DM-15-501
56	DM-15-560	510*	DM-15-511
62	DM-15-620	560*	DM-15-561
68	DM-15-680	620*	DM-15-621
75	DM-15-750	680*	DM-15-681
82	DM-15-820	750*	DM-15-751
		820*	DM-15-821

\* All capacitors marked with \* are 300WV.  
† Minimum tolerance  $\pm 0.5$  mmf.

**ARCO MINIATURE DM-15 CAPACITOR STOCK PACKAGE**



**SPECIAL LIST PRICE**

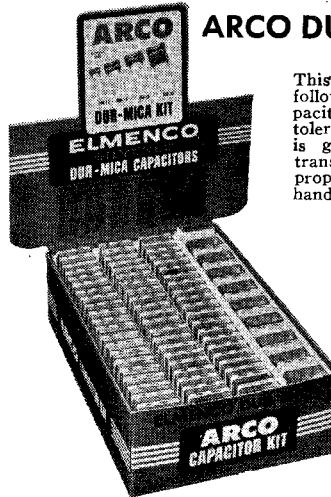
**\$596**

distinctive Steel Cabinet With Plastic Pull-Out Drawers Supplied FREE With DM-15 Package.

Purchased individually the total list price value of the capacitors contained in this package would be — **\$715**

complete stock of DM-15 capacitors (fifty-one items) totaling 10 capacitors; fifty each of the most used values and 25 each of the others. Capacity range is 1-820 mmf., tolerance  $\pm 5\%$  or .5 mmf., whichever is greater.

**ARCO DUR-MICA KIT #11**



This Kit contains five each of the following listed DUR-MICA capacitors, all 500 VDCW and  $\pm 5\%$  tolerance; or  $\pm 0.5$  mmf., whichever is greater. Packed in individual transparent plastic snap boxes, properly identified for ease of handling.

**SPECIAL KIT LIST PRICE \$250.00**

Purchased individually the total list price value of the capacitors contained in this kit would be —

**\$286.35**

CAP. MMF.	TYPE DESIGNATION	CAP. MMF.	TYPE DESIGNATION
2	DM15-020M	360	DM19-361J
5	DM15-050K	390	DM19-391J
10	DM15-100J	430	DM19-431J
12	DM15-120J	470	DM19-471J
15	DM15-150J	510	DM19-511J
18	DM15-180J	560	DM19-561J
20	DM15-200J	620	DM19-621J
22	DM15-220J	680	DM20-681J
24	DM15-240J	750	DM20-751J
27	DM15-270J	820	DM20-821J
30	DM15-300J	910	DM20-911J
33	DM15-330J	1000	DM20-102J
36	DM15-360J	1100	DM20-112J
39	DM15-390J	1200	DM20-122J
43	DM15-430J	1300	DM20-132J
47	DM15-470J	1500	DM20-152J
51	DM15-510J	1600	DM20-162J
56	DM15-560J	1800	DM20-182J
62	DM15-620J	2000	DM20-202J
68	DM15-680J	2200	DM20-222J
75	DM15-750J	2400	DM20-242J
82	DM15-820J	2700	DM20-272J
91	DM15-910J	3000	DM20-302J
100	DM15-101J	3300	DM20-332J
110	DM15-111J	3600	DM20-362J
120	DM15-121J	3900	DM20-392J
130	DM15-131J	4300	DM20-432J
150	DM15-151J	4700	DM30-472J
160	DM19-161J	5100	DM30-512J
180	DM19-181J	5600	DM30-562J
200	DM19-201J	6200	DM30-622J
220	DM19-221J	6800	DM30-682J
240	DM19-241J	7500	DM30-752J
270	DM19-271J	8200	DM30-822J
300	DM19-301J	9100	DM30-912J
330	DM19-331J	10000	DM30-103J

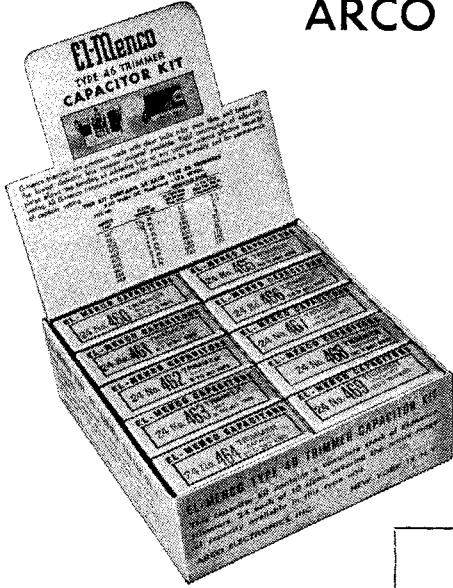


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**ELMENCO**  
**CAPACITORS**

**TYPES**  
**46 TRIMMER**  
**30 & 30M PADDER**  
**KITS**

**ARCO TYPE 46 TRIMMER KIT #5**



**This Kit Contains 24 of Each Trimmer Listed Below**

TYPE 46W PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE	
		At Tight Cap. Will Be More Than MMF.	At A Turns Open Cap. Will Be Less Than MMF.
460	1 1/4 Pl.	15	1.5
461	1 3/4 Pl.	30	2.7
462	2 Pl.	80	5
463	3 Pl.	180	9
464	4 Pl.	280	25
465	5 Pl.	380	50
466	6 Pl.	480	80
467	7 Pl.	580	110
468	8 Pl.	680	140
469	9 Pl.	780	170

The total list price for all units included in the kit is \$170.40

Yet you may have this complete kit for only

**SPECIAL KIT LIST PRICE**  
**\$15000**

A complete stock of trimmers and padders is provided in these compact, easily handled, and readily accessible kits. Always have a full line of El-Menco trimmers and padders available for immediate use.

**ARCO TYPE 30 PADDER KIT #6**

**This Kit Contains 12 Each of Padders Listed Below**

The total list price for all units included in the kit is \$244.20

Yet you may have this complete kit for only

**SPECIAL KIT LIST PRICE**  
**\$21000**



**ARCO TYPE 30M PADDER KIT #6M**

**This Kit Contains 12 Each of Padders Listed Below**

The total list price for all units included in the kit is \$261.60

Yet you may have this complete kit for only

**SPECIAL KIT LIST PRICE**  
**\$22500**

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE	
		At 1 1/2 Inch Pounds Cap. Will Be More Than MMF.	At 2 3/4 Turns Open Cap. Will Be Less Than MMF.
302	2 Pl.	130	15
303	3 Pl.	340	65
304	4 Pl.	550	100
305	5 Pl.	760	190
306	6 Pl.	970	275
307	7 Pl.	1180	350
308	8 Pl.	1390	450
309	9 Pl.	1600	550
310	10 Pl.	1890	650
311	11 Pl.	2110	780
312	12 Pl.	2330	880
313	13 Pl.	2605	1150
314	14 Pl.	2830	1300
315	15 Pl.	3055	1400

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE	
		At 1 1/2 Inch Pounds Cap. Will Be More Than MMF.	At 2 3/4 Turn Open Cap. Will Less Than MMF.
302-M	2 Pl.	120	15
303-M	3 Pl.	320	65
304-M	4 Pl.	500	100
305-M	5 Pl.	690	180
306-M	6 Pl.	880	265
307-M	7 Pl.	1070	340
308-M	8 Pl.	1260	425
309-M	9 Pl.	1415	525
310-M	10 Pl.	1600	615
311-M	11 Pl.	1785	730
312-M	12 Pl.	1970	800
313-M	13 Pl.	2155	1000
314-M	14 Pl.	2340	1100
315-M	15 Pl.	2525	1200

# ASTRON

DIVISION RENWELL INDUSTRIES, INC.

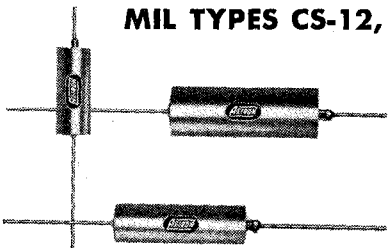
EAST NEWARK, NEW JERSEY

## Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

### MIL TYPES CS-12, CS-13



#### TEMPERATURE RANGE:

-80°C to +125°C

With Voltage Derating

#### NOTES TO STANDARD RATINGS:

- Standard ratings and tolerances are as shown on the table. Non-standard ratings and tolerances are available on request.
- For insulating sleeve add M for Mylar\* or R for rigid after the TES designation. Example (1) TESM-47-35 for 0.47 mfd 35 volt  $\pm 20\%$  tolerance capacitor with Mylar\* sleeve. (2) TESR-1M-35-10 for 1 mfd  $\pm 10\%$  35 volt capacitor with rigid sleeve.

## ASTRON TYPE TES SOLID ELECTROLYTE TANTALUM CAPACITORS

The Astron Type TES solid electrolyte tantalum capacitors are sub-miniature metal cased, hermetically sealed, containing only solid materials. The tantalum oxide dielectric endows these capacitors with long shelf life and flat characteristics even at extremes of rated temperatures.

ASTRON TES CAPACITORS ARE RUGGED, RELIABLE UNITS FOR USE IN THE FOLLOWING APPLICATIONS: TRANSISTORIZED EQUIPMENT, COMPUTERS, AIR CRAFT AND MISSILES, NETWORKS AND GENERAL POWER SUPPLIES, PORTABLE EQUIPMENT, AND HEARING AIDS.

CASE CODE	CASE DIMENSIONS — INCHES						WIRE SIZE		
	Mil-C-26655 and Astron Size Designations	UNINSULATED D ( $\pm .010$ ) x L ( $\pm .031$ )		*MYLAR INSULATING SLEEVE D ( $\pm .015$ ) x L ( $\pm .031$ )		RIGID INSULATING SLEEVE D ( $\pm .016$ ) x L ( $\pm .010$ )		WIRE LEAD GAUGE	WIRE LEAD DIA.
A	.125	.250	.135	.286	.157	.375	24	.020	
B	.175	.438	.185	.474	.204	.562	24	.020	
C	.279	.650	.289	.686	.312	.790	22	.025	
D	.341	.750	.351	.786	.375	.890	22	.025	

#### 6 VDC WORKING, 8 VD SURGE at 85°C

CAP. MFD.	MAX. Rs $\ddagger$ (ohms)	Case	20% Tolerance	10% Tolerance	MIL Number
.1	798	A	TES-1-6	TES-1-6-10	
.12	664	A		TES-12-6-10	
.15	533	A	TES-15-6	TES-15-6-10	
.18	443	A		TES-18-6-10	
.22	363	A	TES-22-6	TES-22-6-10	
.27	297	A		TES-27-6-10	
.33	242	A	TES-33-6	TES-33-6-10	
.39	205	A		TES-39-6-10	
.47	170	A	TES-47-6	TES-47-6-10	
.56	142	A		TES-56-6-10	
.68	118	A	TES-68-6	TES-68-6-10	
.82	97.3	A		TES-82-6-10	
1.	79.8	A	TES-1M-6	TES-1M-6-10	
1.2	66.4	A		TES-1.2M-6-10	
1.5	53.3	A	TES-1.5M-6	TES-1.5M-6-10	
1.8	44.3	A		TES-1.8M-6-10	
2.2	36.3	A	TES-2.2M-6	TES-2.2M-6-10	
2.7	29.7	A		TES-2.7M-6-10	
3.3	24.2	A	TES-3.3M-6	TES-3.3M-6-10	
3.9	20.5	A		TES-3.9M-6-10	
4.7	17.0	A	TES-4.7M-6	TES-4.7M-6-10	
5.6	14.2	A		TES-5.6M-6-10	CS12AB5R6
6.8	11.8	A	TES-6.8M-6	TES-6.8M-6-10	CS12AB6R8
8.2	9.7	B		TES-8.2M-6-10	
10.	8.0	B	TES-10M-6	TES-10M-6-10	
12.	6.6	B		TES-12M-6-10	
15.	5.3	B	TES-15M-6	TES-15M-6-10	
18.	4.4	B		TES-18M-6-10	
22.	3.6	B	TES-22M-6	TES-22M-6-10	
27.	3.0	B		TES-27M-6-10	
33.	2.4	B	TES-33M-6	TES-33M-6-10	
39.	2.1	B		TES-39M-6-10	
47.	1.7	B	TES-47M-6	TES-47M-6-10	CS12AB470
56.	1.4	B		TES-56M-6-10	CS12AB560
60.	1.3	B	TES-60M-6		
68.	1.2	C	TES-68M-6	TES-68M-6-10	
82.	.97	C		TES-82M-6-10	
100.	.80	C	TES-100M-6	TES-100M-6-10	
120.	.66	C		TES-120M-6-10	
150.	.53	D	TES-150M-6	TES-150M-6-10	CS12AB151
180.	.44	D	TES-180M-6	TES-180M-6-10	CS12AB181
220.	.36	D	TES-220M-6	TES-220M-6-10	
270.	.30	D		TES-270M-6-10	CS12AB271
330.	.24	D	TES-330M-6	TES-330M-6-10	CS12AB331

#### 10 VDC WORKING, 13 VDC SURGE at 85°C

CAP. MFD.	MAX. Rs $\ddagger$ (ohms)	Case	20% Tolerance	10% Tolerance	MIL Number
.1	798	A	TES-1-10	TES-1-10-10	
.12	664	A		TES-12-10-10	
.15	533	A	TES-15-10	TES-15-10-10	
.18	443	A		TES-18-10-10	
.22	363	A	TES-22-10	TES-22-10-10	
.27	297	A		TES-27-10-10	
.33	242	A	TES-33-10	TES-33-10-10	
.39	205	A		TES-39-10-10	
.47	170	A	TES-47-10	TES-47-10-10	
.56	142	A		TES-56-10-10	
.68	118	A	TES-68-10	TES-68-10-10	
.82	97.3	A		TES-82-10-10	
1.	79.8	A	TES-1M-10	TES-1M-10-10	
1.2	66.4	A		TES-1.2M-10-10	
1.5	53.3	A	TES-1.5M-10	TES-1.5M-10-10	
1.8	44.3	A		TES-1.8M-10-10	
2.2	36.3	A	TES-2.2M-10	TES-2.2M-10-10	
2.7	29.7	A		TES-2.7M-10-10	
3.3	24.2	A	TES-3.3M-10	TES-3.3M-10-10	
3.9	20.5	A		TES-3.9M-10-10	CS12AC3R9
4.7	17.0	A	TES-4.7M-10	TES-4.7M-10-10	CS12AC4R7
5.6	14.2	B		TES-5.6M-10-10	
6.8	11.8	B	TES-6.8M-10	TES-6.8M-10-10	
8.2	9.7	B		TES-8.2M-10-10	
10.	8.0	B	TES-10M-10	TES-10M-10-10	
12.	6.6	B		TES-12M-10-10	
15.	5.3	B	TES-15M-10	TES-15M-10-10	
18.	4.4	B		TES-18M-10-10	
22.	3.6	B	TES-22M-10	TES-22M-10-10	
27.	3.0	B		TES-27M-10-10	CS12AC270
33.	2.4	B	TES-33M-10	TES-33M-10-10	CS12AC330
39.	2.1	B		TES-39M-10-10	CS12AC390
40.	2.0	B	TES-40M-10		
47.	1.7	C	TES-47M-10	TES-47M-10-10	
56.	1.4	C		TES-56M-10-10	
68.	1.2	C	TES-68M-10	TES-68M-10-10	
82.	.97	C		TES-82M-10-10	CS12AC820
100.	.80	C	TES-100M-10	TES-100M-10-10	CS12AC101
120.	.66	C	TES-120M-10	TES-120M-10-10	CS12AC121
150.	.53	D	TES-150M-10	TES-150M-10-10	
180.	.44	D		TES-180M-10-10	CS12AC181
220.	.36	D	TES-220M-10	TES-220M-10-10	CS12AC221

\* specify  $\pm 5\%$ , replace -10 in Astron Catalog number with -5  
 $\ddagger$  is equivalent series resistance at 6% dissipation factor  
 Trade Mark

Also available in "B" temperature characteristic. Example: CS12BB5R6

**ASTRON**

DIVISION RENWELL INDUSTRIES, INC.

EAST NEWARK, NEW JERSEY

Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

**ASTRON TYPE TES****MIL TYPES CS-12, CS-13****SOLID  
ELECTROLYTE  
TANTALUM  
CAPACITORS****TEMPERATURE RANGE  
-80°C to +125°C**

With Voltage Derating

**15 VDC WORKING  
20 VDC SURGE at 85°C**

Cap. Mfd.	Max. Rs	C A S	CATALOG NUMBER†	MIL Number
±(ohms)	E	20% Tolerance	10% Tolerance	
.1	798	A	TES-1-15	TES-1-15-10
.12	664	A	TES-12-15-10	TES-12-15-10
.15	533	A	TES-15-15	TES-15-15-10
.18	443	A	TES-18-15-10	TES-18-15-10
.22	363	A	TES-22-15	TES-22-15-10
.27	297	A	TES-27-15-10	TES-27-15-10
.33	242	A	TES-33-15	TES-33-15-10
.39	205	A	TES-39-15-10	TES-39-15-10
.47	170	A	TES-47-15	TES-47-15-10
.56	142	A	TES-56-15-10	TES-56-15-10
.68	118	A	TES-68-15	TES-68-15-10
.82	97.3	A	TES-82-15-10	TES-82-15-10
1.	79.8	A	TES-1M-15	TES-1M-15-10
1.2	66.4	A	TES-1.2M-15-10	TES-1.2M-15-10
1.5	53.3	A	TES-1.5M-15	TES-1.5M-15-10
1.8	44.3	A	TES-1.8M-15-10	TES-1.8M-15-10
2.2	36.3	A	TES-2.2M-15	TES-2.2M-15-10
2.7	29.7	A	TES-2.7M-15-10	CS12AD2R7
3.3	24.2	A	TES-3.3M-15	TES-3.3M-15-10 CS12AD3R3
3.9	20.5	B	TES-3.9M-15-10	TES-3.9M-15-10
4.7	17.0	B	TES-4.7M-15	TES-4.7M-15-10
5.6	14.2	B	TES-5.6M-15-10	TES-5.6M-15-10
6.8	11.8	B	TES-6.8M-15	TES-6.8M-15-10
8.2	9.7	B	TES-8.2M-15-10	TES-8.2M-15-10
10.	8.0	B	TES-10M-15	TES-10M-15-10
12.	6.6	B	TES-12M-15-10	TES-12M-15-10
15.	5.3	B	TES-15M-15	TES-15M-15-10
18.	4.4	B	TES-18M-15-10	CS12AD180
22.	3.6	B	TES-22M-15	TES-22M-15-10 CS12AD220
27.	3.0	C	TES-27M-15-10	TES-27M-15-10
33.	2.4	C	TES-33M-15	TES-33M-15-10
39.	2.1	C	TES-39M-15-10	TES-39M-15-10
47.	1.7	C	TES-47M-15	TES-47M-15-10
56.	1.4	C	TES-56M-15-10	CS12AD560
68.	1.2	C	TES-68M-15	TES-68M-15-10 CS12AD680
82.	.97	D	TES-82M-15-10	TES-82M-15-10
100.	.80	D	TES-100M-15	TES-100M-15-10
120.	.66	D	TES-120M-15-10	CS12AD121
150.	.53	D	TES-150M-15	TES-150M-15-10 CS12AD151

**20 VDC WORKING  
26 VDC SURGE at 85°C**

Cap. Mfd.	Max. Rs	C A S	CATALOG NUMBER†	MIL Number
±(ohms)	E	20% Tolerance	10% Tolerance	
.0022	36,300	A	TES-0022-20	TES-0022-20-10
.0027	29,700	A	TES-0027-20-10	TES-0027-20-10
.0033	24,200	A	TES-0033-20	TES-0033-20-10
.0039	20,500	A	TES-0039-20-10	TES-0039-20-10
.0047	17,000	A	TES-0047-20	TES-0047-20-10
.0056	14,200	A	TES-0056-20-10	TES-0056-20-10
.0068	11,800	A	TES-0068-20	TES-0068-20-10
.0082	9,730	A	TES-0082-20-10	TES-0082-20-10
.01	7,980	A	TES-01-20	TES-01-20-10
.012	6,640	A	TES-012-20-10	TES-012-20-10
.015	5,330	A	TES-015-20	TES-015-20-10
.018	4,430	A	TES-018-20-10	TES-018-20-10
.022	3,630	A	TES-022-20	TES-022-20-10
.027	2,970	A	TES-027-20-10	TES-027-20-10
.033	2,420	A	TES-033-20	TES-033-20-10
.039	2,050	A	TES-039-20-10	TES-039-20-10
.047	1,700	A	TES-047-20	TES-047-20-10
.056	1,420	A	TES-056-20-10	TES-056-20-10
.068	1,180	A	TES-068-20	TES-068-20-10
.082	973	A	TES-082-20-10	TES-082-20-10
.1	798	A	TES-1-20	TES-1-20-10
.12	664	A	TES-12-20-10	TES-12-20-10
.15	533	A	TES-15-20	TES-15-20-10
.18	443	A	TES-18-20-10	TES-18-20-10
.22	363	A	TES-22-20	TES-22-20-10
.27	297	A	TES-27-20-10	TES-27-20-10
.33	242	A	TES-33-20	TES-33-20-10
.39	205	A	TES-39-20-10	TES-39-20-10
.47	170	A	TES-47-20	TES-47-20-10
.56	142	A	TES-56-20-10	TES-56-20-10
.68	118	A	TES-68-20	TES-68-20-10
.82	97.3	A	TES-82-20-10	TES-82-20-10
1.	79.8	A	TES-1M-20	TES-1M-20-10
1.2	66.4	A	TES-1.2M-20-10	CS12AE1R2
1.5	53.3	A	TES-1.5M-20	TES-1.5M-20-10 CS12AE1R5
1.8	44.3	A	TES-1.8M-20-10	CS12AE1R8
2.2	36.3	A	TES-2.2M-20	TES-2.2M-20-10 CS12AE2R2
2.7	29.7	B	TES-2.7M-20-10	TES-2.7M-20-10
3.3	24.2	B	TES-3.3M-20	TES-3.3M-20-10
3.9	20.5	B	TES-3.9M-20-10	TES-3.9M-20-10
4.7	17.0	B	TES-4.7M-20	TES-4.7M-20-10
5.6	14.2	B	TES-5.6M-20-10	TES-5.6M-20-10
6.8	11.8	B	TES-6.8M-20	TES-6.8M-20-10
8.2	9.7	B	TES-8.2M-20-10	CS12AE8R2
10.	8.0	B	TES-10M-20	TES-10M-20-10 CS12AE100
12.	6.6	B	TES-12M-20-10	CS12AE120
15.	5.3	B	TES-15M-20	TES-15M-20-10 CS12AE150
18.	4.4	C	TES-18M-20-10	TES-18M-20-10
22.	3.6	C	TES-22M-20	TES-22M-20-10
27.	3.0	C	TES-27M-20-10	CS12AE270
33.	2.4	C	TES-33M-20	TES-33M-20-10 CS12AE330
39.	2.1	C	TES-39M-20-10	CS12AE390
47.	1.7	C	TES-47M-20	TES-47M-20-10 CS12AE470
56.	1.4	D	TES-56M-20-10	CS12AE560
68.	1.2	D	TES-68M-20	TES-68M-20-10 CS12AE680
82.	.97	D	TES-82M-20-10	CS12AE820
100.	.80	D	TES-100M-20	TES-100M-20-10 CS12AE101

**35 VDC WORKING  
46 VDC SURGE at 85°C**

Cap. Mfd.	Max. Rs	C A S	CATALOG NUMBER†	MIL Number
±(ohms)	E	20% Tolerance	10% Tolerance	
.0022	36,300	A	TES-0022-35	TES-0022-35-10
.0027	29,700	A	TES-0027-35-10	TES-0027-35-10
.0033	24,200	A	TES-0033-35	TES-0033-35-10
.0039	20,500	A	TES-0039-35-10	TES-0039-35-10
.0047	17,000	A	TES-0047-35	TES-0047-35-10
.0056	14,200	A	TES-0056-35-10	TES-0056-35-10
.0068	11,800	A	TES-0068-35	TES-0068-35-10
.0082	9,730	A	TES-0082-35-10	TES-0082-35-10
.01	7,980	A	TES-01-35	TES-01-35-10
.012	6,640	A	TES-012-35-10	TES-012-35-10
.015	5,330	A	TES-015-35	TES-015-35-10
.018	4,430	A	TES-018-35-10	TES-018-35-10
.022	3,630	A	TES-022-35	TES-022-35-10
.027	2,970	A	TES-027-35-10	TES-027-35-10
.033	2,420	A	TES-033-35	TES-033-35-10
.039	2,050	A	TES-039-35-10	TES-039-35-10
.047	1,700	A	TES-047-35	TES-047-35-10
.056	1,420	A	TES-056-35-10	TES-056-35-10
.068	1,180	A	TES-068-35	TES-068-35-10
.082	973	A	TES-082-35-10	TES-082-35-10
.1	798	A	TES-1-35	TES-1-35-10
.12	664	A	TES-12-35-10	TES-12-35-10
.15	533	A	TES-15-35	TES-15-35-10
.18	443	A	TES-18-35-10	TES-18-35-10
.22	363	A	TES-22-35	TES-22-35-10
.27	297	A	TES-27-35-10	TES-27-35-10
.33	242	A	TES-33-35	TES-33-35-10 CS12AFR3
.39	205	A	TES-39-35-10	CS12AFR3
.47	170	A	TES-47-35	TES-47-35-10 CS12AFR4
.56	142	A	TES-56-35-10	CS12AFR5
.68	118	A	TES-68-35	TES-68-35-10 CS12AFR6
.82	97.3	A	TES-82-35-10	CS12AFR8
1.	79.8	A	TES-1M-35	TES-1M-35-10 CS12AF01
1.2	66.4	B	TES-1.2M-35-10	CS12AF1R
1.5	53.3	B	TES-1.5M-35	TES-1.5M-35-10 CS12AF1R
1.8	44.3	B	TES-1.8M-35-10	CS12AF1R
2.2	36.3	B	TES-2.2M-35	TES-2.2M-35-10 CS12AF2R
2.7	29.7	B	TES-2.7M-35-10	CS12AF2R
3.3	24.2	B	TES-3.3M-35	TES-3.3M-35-10 CS12AF3R
3.9	20.5	B	TES-3.9M-35-10	CS12AF3R
4.7	17.0	B	TES-4.7M-35	TES-4.7M-35-10 CS12AR4R
5.6	14.2	B	TES-5.6M-35-10	CS12AF5R
6.8	11.8	B	TES-6.8M-35	TES-6.8M-35-10 CS12AF6R
8.2	9.7	C	TES-8.2M-35-10	CS12AF8R
10.	8.0	C	TES-10M-35	TES-10M-35-10 CS12AF1C
12.	6.6	C	TES-12M-35-10	CS12AF12
15.	5.3	C	TES-15M-35	TES-15M-35-10 CS12AF15
18.	4.4	C	TES-18M-35-10	CS12AF18
22.	3.6	C	TES-22M-35	TES-22M-35-10 CS12AF22
27.	3.0	D	TES-27M-35-10	CS12AF27
33.	2.4	D	TES-33M-35	TES-33M-35-10 CS12AF35
39.	2.1	D	TES-39M-35-10	CS12AF39
47.	1.7	D	TES-47M-35	TES-47M-35-10 CS12AF47

† To Specify  $\pm 5\%$ , replace -10 in Astron Catalog number with -5.

‡ Rs is equivalent series resistance at 6% dissipation factor.

\* Trade Mark

Also available in "B" temperature characteristic. Example: CS12BD2R7.

# ASTRON

DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

## Capacitors



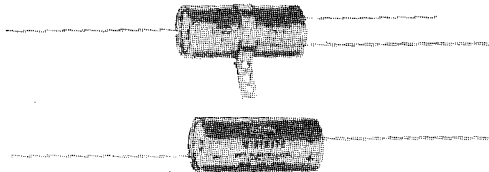
SPECIALISTS IN CAPACITOR MINIATURIZATION

ASTRON MINIMITE®  
**TYPE MM**

### Miniature Metal-Cased Tubular ELECTROLYTIC CAPACITORS

Temperature Range  
-30°C to +85°C

ASTRON "SM"\* Safety Margin Construction



- Hermetically sealed aluminum-cased tubulars. Small and light. Ideal for under-chassis mounting in compact, tight assemblies.
- Designed to withstand high surge voltages and high ripple currents. Stable capacitance characteristics. Long service life.
- Exceptionally low leakage. Terminal tab connections provide permanent low-resistance contact for life of the unit.
- Outer insulating tube. Duals have centered mounting strap, and 3 leads insulated (common negative).

**SINGLE MINIMITE (2 Leads)**

Cat. No.	Cap. Mf.	WVDC	†Dia. x L.	Net Price
MM-50-3	50	3	1/2 x 1 1/8	.57
MM-500-3	500	3	5/8 x 1 1/8	.93
MM-50-6	50	6	1/2 x 1 1/8	.57
MM-100-6	100	6	1/2 x 1 1/8	.72
MM-500-6	500	6	5/8 x 1 3/8	.93
MM-1000-6	1000	6	3/4 x 1 5/8	1.14
MM-100-10	100	10	1/2 x 1 1/8	.75
MM-100-15	100	15	1/2 x 1 1/8	.75
MM-250-15	250	15	5/8 x 1 3/8	.75
MM-500-15	500	15	5/8 x 1 5/8	1.05
MM-1000-15	1000	15	7/8 x 1 5/8	1.38
MM-10-25	10	25	1/2 x 1 1/8	.60
MM-25-25	25	25	1/2 x 1 1/8	.60
MM-50-25	50	25	1/2 x 1 1/8	.66
MM-100-25	100	25	5/8 x 1 1/8	.81
MM-250-25	250	25	3/4 x 1 5/8	1.02
MM-500-25	500	25	7/8 x 1 5/8	1.44
MM-2-50	2	50	1/2 x 1 1/8	.54
MM-4-50	4	50	1/2 x 1 1/8	.57
MM-10-50	10	50	1/2 x 1 1/8	.60
MM-25-50	25	50	1/2 x 1 1/8	.60
MM-50-50	50	50	5/8 x 1 1/8	.72
MM-100-50	100	50	5/8 x 1 5/8	.84
MM-4-150	4	150	1/2 x 1 1/8	.60
MM-8-150	8	150	1/2 x 1 1/8	.63
MM-10-150	10	150	5/8 x 1 1/8	.69
MM-16-150	16	150	5/8 x 1 1/8	.69
MM-20-150	20	150	5/8 x 1 3/8	.72
MM-30-150	30	150	5/8 x 1 5/8	.78
MM-40-150	40	150	3/4 x 1 3/8	.81
MM-50-150	50	150	3/4 x 1 5/8	.84
MM-80-150	80	150	7/8 x 1 5/8	.96
MM-100-150	100	150	7/8 x 1 3/4	1.05
MM-150-150	150	150	1 x 2 1/8	1.14
MM-200-150	200	150	1 x 3	1.23
MM-8-250	8	250	5/8 x 1 1/8	.69
MM-16-250	16	250	5/8 x 1 3/8	.78
MM-20-250	20	250	3/4 x 1 3/8	.81

**(Cont.) SINGLE MINIMITE (2 Leads)**

Cat. No.	Cap. Mf.	WVDC	†Dia. x L.	Net Price
MM-40-250	40	250	7/8 x 1 5/8	.93
MM-8-350	8	350	5/8 x 1 3/8	.72
MM-10-350	10	350	5/8 x 1 5/8	.75
MM-20-350	20	350	3/4 x 1 5/8	.87
MM-4-450	4	450	5/8 x 1 1/8	.69
MM-8-450	8	450	5/8 x 1 3/8	.75
MM-10-450	10	450	3/4 x 1 3/8	.78
MM-12-450	12	450	3/4 x 1 5/8	.81
MM-16-450	16	450	7/8 x 1 5/8	.84
MM-20-450	20	450	7/8 x 1 3/8	.93
MM-30-450	30	450	1 x 1 5/8	1.02
MM-40-450	40	450	1 x 2 1/8	1.08
MM-50-450	50	450	1 x 2 3/8	1.23
MM-60-450	60	450	1 x 3	1.38
MM-80-450	80	450	1 1/8 x 3	1.68
MM-8-500	8	500	3/4 x 1 5/8	.78
MM-16-500	16	500	7/8 x 2 1/8	.90
MM-20-500	20	500	7/8 x 2 3/8	.96

**‡DUAL MINIMITE (3 Leads, Common Negative)**

Cat. No.	Cap. Mf.	WVDC	†Dia. x L.	Net Price
MM-2x20-150	20+20	150	3/4 x 1 3/8	.93
MM-2x30-150	30+30	150	7/8 x 1 5/8	1.08
MM-2x40-150	40+40	150	7/8 x 1 5/8	1.11
MM-5030-150	50+30	150	7/8 x 1 5/8	1.17
MM-2x50-150	50+50	150	7/8 x 2 1/8	1.06
MM-8040-150	80+40	150	7/8 x 2 1/8	1.32
MM-2x8-450	8+8	450	7/8 x 1 5/8	1.02
MM-2x10-450	10+10	450	7/8 x 1 3/4	1.11
MM-168-450	16+8	450	1 x 1 5/8	1.17
MM-2x16-450	16+16	450	1 x 2 1/8	1.35
MM-2x20-450	20+20	450	1 x 2 3/8	1.50
MM-2x40-450	40+40	450	1 1/8 x 3	2.04

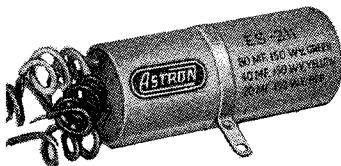
†Dimensions are for metal tubes. Add 1/8" to diameter and 1/8" to length for dimensions over cardboard insulating tubes.  
‡Supplied with radial mounting strap.  
\*TRADE MARK

ASTRON  
**TYPE ES**

Temperature Range  
-30°C to +85°C

- Introducing the smallest sizes available in standard cardboard-cased Electrolytic ratings

**REAL  
SPACE SAVERS**



### Cardboard-Cased ELECTROLYTICS

#### IN NEW Miniaturized SIZES

- Dual and triple-section units. Can be used in place of costlier metal-can types of equal rating in television, radio, radio-phonos and other equipment. 85°C operation.
- Sections wrapped in plastic film. Lasting protection from moisture, humidity, severest climatic conditions. High-melting-point wax fill.
- Centered radial mounting strap. Plastic insulated wire leads, 6" long. Color coding on tubes.
- Overall wax coating for added protection against moisture and humidity.

**DUAL UNITS (Common Negative)**

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
ESD-9901	10+10/50	5/8 x 1 1/2	.84
ESD-9902	18+ 8/150	5/8 x 1 1/2	.87
ESD-9510	20+20/150	3/4 x 1 1/2	.99
ESD-9903	30+20/150	3/4 x 1 3/4	1.02
ESD-9666	30+30/150	3/4 x 1 3/4	1.08
ESD-9904	40+20/150	3/4 x 1 3/4	1.05
ESD-9905	40+40/150	3/4 x 2	1.11
ESD-8935	50+30/150	3/4 x 2	1.17
ESD-9511	50+50/150	7/8 x 2	1.26
ESD-9906	80+40/150	7/8 x 2	1.35

**TRIPLE UNITS (Common Negative)**

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EST-9862	20+20+20/150	3/4 x 2	1.32
EST-9907	40+20+20/150	7/8 x 2	1.35
EST-9512	40+30+20/150	7/8 x 2	1.41
EST-9851	40+40+20/150	7/8 x 2	1.41
EST-9816	40+40+40/150	7/8 x 2	1.47
EST-9521	60+40+20/150	7/8 x 2	1.44
EST-9528	80+40+20/150	1 x 2	1.50
EST-9908	40+10/150+20/25	3/4 x 2	1.17
EST-9795	40+30/150+20/25	7/8 x 2	1.38
EST-9909	40+40/150+40/25	7/8 x 2	1.44
EST-9910	50+30/150+100/25	7/8 x 2	1.50
EST-9911	50+30/150+200/10	7/8 x 2	1.53

# ASTRON

DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

## Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

### ASTRON TYPE EY

TEMPERATURE RANGE  
- 30°C to + 85°C

## TWIST-PRONG ELECTROLYTICS

"SM"\* Safety Margin Construction



- Widest choice of singles, and dual, triple and quadruple capacitance voltage combinations in smallest practical aluminum can sizes.
- Ideal for replacement in television, radio and other high quality electronic equipment where high ripple and high surge voltages are encountered.
- Hermetically sealed. Designed for 85°C. operation.
- Quick, easy, firm mounting through chassis slots or slotted plates for insulated or grounded connection. Mounting prong ring serves as common negative terminal.
- Terminal coding clearly stamped on container.
- Individually packaged for the service trade, including metal and phenolic mounting plates.

#### SINGLE UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYS-90	2000/6	1 3/8 x 2	1.53
EYS-100	1000/15	1 x 3	1.53
EYS-105	2000/15	1 3/8 x 3	2.07
EYS-108	3000/15	1 3/8 x 3	2.09
EYS-115	100/25	1 x 2	.96
EYS-120	500/25	1 x 3	1.53
EYS-125	1000/25	1 3/8 x 3	2.13
EYS-130	500/50	1 3/8 x 2 1/2	1.59
EYS-131	1000/50	1 3/8 x 3	2.25
EYS-133	1500/50	1 3/8 x 4	2.25
EYS-135	50/150	1 x 2	.99
EYS-140	80/150	1 x 2	1.11
EYS-145	100/150	1 x 2	1.20
EYS-150	120/150	1 x 2 1/2	1.26
EYS-151	120/150	1 3/8 x 2	1.26
EYS-155	140/150	1 x 3	1.29
EYS-160	150/150	1 x 3	1.29
EYS-161	200/150	1 3/8 x 2 1/2	1.47
EYS-162	300/150	1 3/8 x 3	1.68
EYS-165	15/250	1 x 2	.93
EYS-170	30/250	1 x 2	1.02
EYS-175	40/250	1 x 2	1.08
EYS-180	60/250	1 x 2 1/2	1.23
EYS-185	80/250	1 x 3	1.29
EYS-186	100/250	1 x 2 1/2	1.61
EYS-190	150/250	1 3/8 x 2 1/2	1.86
EYS-1901	200/250	1 3/8 x 3	2.38
EYS-1902	80/300	1 x 3	1.53
EYS-191	100/300	1 3/8 x 2 1/2	1.73
EYS-193	150/300	1 3/8 x 3	2.10
EYS-195	30/350	1 x 2	1.14
EYS-200	40/350	1 x 2 1/2	1.20
EYS-205	50/350	1 x 3	1.26
EYS-215	80/350	1 3/8 x 2 1/2	1.71
EYS-220	125/350	1 3/8 x 3	2.19
EYS-222	150/350	1 3/8 x 3 1/2	2.37
EYS-225	80/400	1 3/8 x 2 1/2	1.77
EYS-230	10/450	1 x 2	.93
EYS-235	20/450	1 x 2	1.05
EYS-240	30/450	1 x 2 1/2	1.17
EYS-245	40/450	1 x 3	1.23
EYS-246	50/450	1 x 3 1/2	1.41
EYS-247	60/450	1 3/8 x 2 1/2	1.55
EYS-250	80/450	1 3/8 x 3	1.83
EYS-251	100/450	1 3/8 x 3	2.07
EYS-253	125/450	1 3/8 x 4	2.55
EYS-255	30/475	1 x 3	1.20
EYS-260	40/475	1 3/8 x 2	1.50
EYS-266	10/500	1 x 2	.95
EYS-267	20/500	1 x 2 1/2	1.11
EYS-268	30/500	1 x 3	1.20

\*Trade Mark

#### SINGLE UNITS (Cont.)

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYS-269	40/500	1 x 3 1/2	1.50
EYS-270	80/500	1 3/8 x 3 1/2	1.91
EYS-271	90/500	1 3/8 x 3 1/2	.96

#### DUAL UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYD-500	1000-1000/15	1 3/8 x 3	2.64
EYD-505	150-50/25	1 x 2	1.05
EYD-506	50-50/50	1 x 2	1.02
EYD-507	100-25/50	1 x 2	1.11
EYD-508	20-20/150	1 x 2	1.02
EYD-510	30-30/150	1 x 2	1.05
EYD-511	40-20/150	1 x 2	1.08
EYD-512	40-30/150	1 x 2	1.12
EYD-513	40-40/150	1 x 2	1.14
EYD-514	50-30/150	1 x 2	1.20
EYD-515	50-50/150	1 x 2 1/2	1.17
EYD-5151	60-60/150	1 x 2 1/2	1.42
EYD-5152	75-75/150	1 x 3	1.56
EYD-5153	80-40/150	1 x 2 1/2	1.38
EYD-5154	80-80/150	1 3/8 x 2	1.60
EYD-516	125-100/150	1 3/8 x 2 1/2	2.10
EYD-517	200-5/150	1 3/8 x 2 1/2	1.65
EYD-520	200-200/150	1 3/8 x 3 1/2	2.40
EYD-525	20-20/250	1 x 2	1.14
EYD-530	40-40/250	1 x 2 1/2	1.50
EYD-532	150-150/250	1 3/8 x 4	3.10
EYD-533	200-200/250	1 3/8 x 4 1/2	3.66
EYD-540	80-80/300	1 3/8 x 3 1/2	2.43
EYD-545	120-20/300	1 3/8 x 3	2.28
EYD-547	120-40/300	1 3/8 x 3 1/2	2.61
EYD-550	15-15/350	1 x 2	1.35
EYD-555	20-20/350	1 x 2 1/2	1.41
EYD-556	30-30/350	1 x 3	1.74
EYD-557	50-30/350	1 3/8 x 2 1/2	1.90
EYD-558	80-20/350	1 3/8 x 2 1/2	2.10
EYD-559	80-40/350	1 3/8 x 3	2.38
EYD-560	80-80/350	1 3/8 x 3 1/2	2.82
EYD-5601	90-40/350	1 3/8 x 3	2.58
EYD-561	100-100/350	1 3/8 x 4	3.70
EYD-562	160-10/350	1 3/8 x 3 1/2	2.58
EYD-563	40-10/400	1 3/8 x 2 1/2	1.50
EYD-5631	80-60/400	1 3/8 x 3 1/2	2.92
EYD-564	5-5/450	1 x 2	.96
EYD-565	10-10/450	1 x 2	1.14
EYD-575	20-20/450	1 x 3	1.53
EYD-576	30-10/450	1 x 3	1.50
EYD-580	30-30/450	1 3/8 x 2 1/2	1.83
EYD-581	40-20/450	1 3/8 x 2 1/2	1.80
EYD-585	40-40/450	1 3/8 x 3	2.07
EYD-586	50-50/450	1 3/8 x 3	2.32
EYD-587	60-20/450	1 3/8 x 3	2.14
EYD-588	60-40/450	1 3/8 x 3	2.37

#### DUAL UNITS (Cont.)

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYD-590	80-10/450	1 3/8 x 3	2.16
EYD-592	80-20/450	1 3/8 x 3	2.34
EYD-600	80-40/450	1 3/8 x 4	2.61
EYD-601	100-40/450	1 3/8 x 4	2.92
EYD-602	15-15/475	1 x 2 1/2	1.42
EYD-603	30-10/475	1 3/8 x 2	1.56
EYD-604	40-10/475	1 3/8 x 2 1/2	1.86
EYD-605	40-40/475	1 3/8 x 3 1/2	2.51
EYD-6051	80-50/475	1 3/8 x 4	3.11
EYD-606	10-10/500	1 x 2 1/2	1.11
EYD-610	20-20/500	1 3/8 x 2 1/2	1.71
EYD-611	30-10/500	1 3/8 x 2 1/2	1.51
EYD-615	40-40/500	1 3/8 x 4	2.61
EYD-616	60-40/500	1 3/8 x 3 1/2	2.71
EYD-617	100/400 30/50	1 3/8 x 2 1/2	1.80
EYD-620	250/10 1000/6	1 3/8 x 2	1.71
EYD-621	50/150 500/5	1 x 2 1/2	1.41
EYD-622	150/150 100/25	1 3/8 x 2 1/2	1.61
EYD-623	100/250 150/50	1 3/8 x 3	2.11
EYD-624	35/300 500/6	1 x 2 1/2	1.61
EYD-625	20/350 30/250	1 x 2 1/2	1.31
EYD-630	60/350 80/250	1 3/8 x 3	2.01
EYD-633	80/350 100/50	1 3/8 x 3	2.31
EYD-6331	35/400 100/50	1 x 3	1.51
EYD-634	10/450 20/25	1 x 2	1.01
EYD-635	20/450 20/25	1 x 2 1/2	1.21
EYD-640	20/450 100/100	1 3/8 x 2 1/2	1.51
EYD-644	20/450 50/250	1 x 3	1.61
EYD-645	20/450 80/350	1 3/8 x 3	2.71
EYD-650	30/450 40/150	1 3/8 x 2	1.71
EYD-651	30/450 200/150	1 3/8 x 3	2.11
EYD-655	40/450 20/25	1 x 3 1/2	1.41
EYD-660	40/450 10/350	1 3/8 x 2 1/2	1.11
EYD-661	50/450 100/50	1 3/8 x 2 1/2	1.11
EYD-665	80/450 50/50	1 3/8 x 3	2.71
EYD-666	80/450 100/50	1 3/8 x 3 1/2	2.21
EYD-670	20/475 100/300	1 3/8 x 3 1/2	2.71
EYD-671	20/475 100/400	1 3/8 x 4	2.71
EYD-675	40/500 50/200	1 3/8 x 3 1/2	2.71

#### TRIPLE UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYT-999	20-20-20/25	1 x 2	1.11
EYT-1000	40-40-40/25	1 x 2	1.11
EYT-1001	20-20-20/150	1 x 2	1.11
EYT-1005	40-20-20/150	1 x 2	1.11
EYT-1007	40-30-20/150	1 x 2	1.11
EYT-1010	40-40-40/150	1 x 2 1/2	1.11
EYT-1012	50-40-10/150	1 x 2 1/2	1.11
EYT-1015	50-50-50/150	1 x 3	1.11
EYT-1017	70-15-15/150	1 x 2 1/2	1.11
EYT-1018	80-40-20/150	1 x 3	1.11
EYT-1019	120-80-40/150	1 3/8 x 2 1/2	2.11
EYT-10191	120-120-40/150	1 3/8 x 3	2.11
EYT-10192	200-100-60/150	1 3/8 x 3 1/2	2.11
EYT-10193	200-150-150/150	1 3/8 x 4	4.11
EYT-10194	20-20-20/250	1 x 2	1.11
EYT-1020	40-20-10/250	1 x 2 1/2	1.11
EYT-1021	40-20-20/250	1 x 2 1/2	1.11
EYT-1022	80-80-60/250	1 3/8 x 3 1/2	2.11
EYT-1023	60-20-10/300	1 3/8 x 2	1.11
EYT-1024	80-40-40/300	1 3/8 x 3	2.11
EYT-10241	120-50-40/300	1 3/8 x 4	3.11
EYT-10242	20-20-10/350	1 x 2 1/2	1.11
EYT-10243	30-20-10/350	1 x 3	1.11
EYT-1025	60-40-20/350	1 3/8 x 3	2.11
EYT-1026	60-50-50/350	1 3/8 x 3 1/2	2.11
EYT-10261	80-60-60/350	1 3/8 x 4	3.11
EYT-10262	90-40-20/350	1 3/8 x 3 1/2	2.11



**ASTRON**

DIVISION RENWELL INDUSTRIES, INC.

EAST NEWARK, NEW JERSEY

Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

## ASTRON TYPE EY Twist-Prong Electrolytics (Con't.)

## TRIPLE UNITS (Cont.)

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYT-10263	100-100-10/350	1 $\frac{3}{8}$ x4	3.30
EYT-1027	40-40-20/400	1 $\frac{3}{8}$ x3	2.25
EYT-1028	30-50-4/400	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.31
EYT-1029	80-20-10/400	1 $\frac{3}{8}$ x3	2.58
EYT-10291	90-10-5/400	1 $\frac{3}{8}$ x3	2.64
EYT-1030	10-10-10/450	1 x3	1.56
EYT-10301	15-15-15/450	1 x3	1.86
EYT-1035	20-10-10/450	1 x3	1.77
EYT-1040	20-20-20/450	1 $\frac{3}{8}$ x3	2.16
EYT-1041	30-20-20/450	1 $\frac{3}{8}$ x3	2.31
EYT-1045	30-30-30/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.61
EYT-1046	40-10-10/450	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.16
EYT-1047	40-30-20/450	1 $\frac{3}{8}$ x3	2.58
EYT-1050	40-40-10/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.49
EYT-1051	40-40-20/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.68
EYT-1055	40-40-40/450	1 $\frac{3}{8}$ x4	2.94
EYT-1056	50-40-30/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.94
EYT-1057	60-20-20/450	1 $\frac{3}{8}$ x4 $\frac{1}{2}$	2.76
EYT-1058	60-40-20/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.00
EYT-1060	60-30-10/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.70
EYT-1065	80-40-20/450	1 $\frac{3}{8}$ x4 $\frac{1}{2}$	3.24
EYT-1070	10-10-10/475	1 x3	1.62
EYT-1075	30-30-20/475	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.64
EYT-1078	40-10-10/475	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.34
EYT-10781	40-30-10/475	1 $\frac{3}{8}$ x3	2.70
EYT-1079	40-30-30/475	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.10
EYT-1080	10-10-10/500	1 x3 $\frac{1}{2}$	1.62
EYT-1081	30-20-20/500	1 $\frac{3}{8}$ x3	2.52
EYT-1082	40-10-10/500	1 $\frac{3}{8}$ x3	2.34
EYT-1083	40-40-10/500	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.04
EYT-1085	40-20/150 20/25	1 x2	1.38
EYT-1087	40-20/150 100/25	1 x2 $\frac{1}{2}$	1.50
EYT-1088	40-20/150 200/25	1 x2 $\frac{1}{2}$	1.62
EYT-10882	40-40/150 20/25	1 x2	1.44
EYT-10883	40-40/150 250/25	1 x3	1.89
EYT-10884	50-30/150 20/25	1 x2	1.50
EYT-1089	50-30/150 30/25	1 x2	1.56
EYT-10891	50-30/150 100/25	1 x2 $\frac{1}{2}$	1.62
EYT-1090	50-50/150 20/25	1 x2 $\frac{1}{2}$	1.62
EYT-10901	80-30/150 300/10	1 $\frac{3}{8}$ x2	1.89
EYT-10902	80-40/150 20/25	1 x2 $\frac{1}{2}$	1.68
EYT-1091	80-40/150 300/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.22
EYT-1093	100-80/150 200/10	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.16
EYT-1095	120-60/150 20/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	1.98
EYT-1097	30-20/200 40/25	1 x2	1.68
EYT-10971	30-20/200 40/150	1 x2 $\frac{1}{2}$	1.62
EYT-1098	60-5/200 20/50	1 x2 $\frac{1}{2}$	1.50
EYT-1100	100-10/200 40/50	1 $\frac{3}{8}$ x2	1.86
EYT-1101	15-15/250 20/25	1 x2	1.41
EYT-1102	30-30/250 20/25	1 x2 $\frac{1}{2}$	1.68
EYT-1105	40-20/250 10/150	1 x2 $\frac{1}{2}$	1.65
EYT-1110	70-70/250 20/50	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.34
EYT-1112	90-90/250 20/50	1 $\frac{3}{8}$ x3	2.76
EYT-1113	10-10/300 10/15	1 x2	1.41
EYT-1115	10-10/300 15/250	1 x2	1.47
EYT-1117	100-10/300 60/50	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.43
EYT-11191	200-20/300 10/100	1 $\frac{3}{8}$ x4	2.94
EYT-1120	10-5/350 150/50	1 x3	1.62
EYT-1121	15-10/350 20/25	1 x2	1.50
EYT-1122	20-5/350 100/25	1 x2 $\frac{1}{2}$	1.56
EYT-1123	20-5/350 150/50	1 x3	1.78
EYT-1124	20-10/350 20/25	1 x2	1.53
EYT-1125	15-15/350 20/25	1 x2 $\frac{1}{2}$	1.50
EYT-11251	20-10/350 5/250	1 x2	1.53
EYT-1126	20-20/350 20/25	1 x2 $\frac{1}{2}$	1.68
EYT-1130	30-20/350 20/25	1 x3	1.86
EYT-1131	30-20/350 100/150	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.40
EYT-1135	30-30/350 20/25	1 $\frac{3}{8}$ x2	2.04
EYT-1140	30-30/350 50/50	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.10
EYT-1145	40-20/350 10/100	1 $\frac{3}{8}$ x2	1.68
EYT-1150	40-40/350 50/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.22

## TRIPLE UNITS (Cont.)

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYT-1151	20-20/400 10/350	1 x3	1.80
EYT-1153	40-10/400 200/50	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.22
EYT-11531	60-30/400 20/350	1 $\frac{3}{8}$ x3	2.74
EYT-11532	80-40/400 150/50	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.10
EYT-11533	100-10/400 20/50	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.70
EYT-1154	100-10/400 80/350	1 $\frac{3}{8}$ x4	3.66
EYT-1155	10-10/450 20/25	1 x2 $\frac{1}{2}$	1.44
EYT-1160	10-10/450 40/50	1 x2 $\frac{1}{2}$	1.65
EYT-1162	15-15/450 40/25	1 x2 $\frac{1}{2}$	1.65
EYT-1163	20-10/450 20/25	1 x2 $\frac{1}{2}$	1.62
EYT-1165	20-10/450 50/50	1 x3	1.71
EYT-1170	20-20/450 20/25	1 x3 $\frac{1}{2}$	1.86
EYT-1175	20-20/450 60/350	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.40
EYT-1177	30-10/450 150/50	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	1.50
EYT-1180	30-30/450 20/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.10
EYT-1185	30-30/450 40/50	1 $\frac{3}{8}$ x3	2.19
EYT-1186	30-30/450 125/25	1 $\frac{3}{8}$ x3	2.38
EYT-1188	40-10/450 100/50	1 $\frac{3}{8}$ x3	2.58
EYT-1190	40-10/450 80/200	1 $\frac{3}{8}$ x3	2.34
EYT-1195	40-10/450 100/200	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.46
EYT-1200	40-10/450 10/350	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	1.98
EYT-1201	40-20/450 20/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.10
EYT-1205	40-20/450 25/50	1 $\frac{3}{8}$ x3	2.04
EYT-1210	40-40/450 20/25	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.37
EYT-1215	40-40/450 40/25	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.40
EYT-1217	40-40/450 100/50	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.58
EYT-1220	40-40/450 40/150	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.49
EYT-1221	40-40/450 60/200	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.68
EYT-1225	40-40/450 100/200	1 $\frac{3}{8}$ x4	2.97
EYT-12251	40-40/450 80/350	1 $\frac{3}{8}$ x4	3.34
EYT-12252	60-40/450 75/50	1 $\frac{3}{8}$ x4 $\frac{1}{2}$	2.76
EYT-12253	80-10/450 125/25	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.64
EYT-1226	80-20/450 100/50	1 $\frac{3}{8}$ x4	2.88
EYT-1240	80-40/450 100/25	1 $\frac{3}{8}$ x4 $\frac{1}{2}$	3.06
EYT-1241	20-10/475 100/400	1 $\frac{3}{8}$ x4	3.16
EYT-1245	20-20/475 60/400	1 $\frac{3}{8}$ x4	2.88
EYT-1250	10-10/500 4/350	1 x3	1.50
EYT-1251	20-10/500 100/50	1 x3 $\frac{1}{2}$	1.98
EYT-1255	10-10/500 100/50	1 x3 $\frac{1}{2}$	1.71
EYT-1260	30-10/500 20/50	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	1.86
EYT-1261	40-40/500 100/200	1 $\frac{3}{8}$ x4	3.52
EYT-1262	60/200 200-140/150	1 $\frac{3}{8}$ x4	2.88
EYT-1263	10/300 500-500/15	1 $\frac{3}{8}$ x2	2.34
EYT-1264	20/300 150-80/150	1 $\frac{3}{8}$ x3	2.37
EYT-1265	40/300 80/40/250	1 $\frac{3}{8}$ x3	2.61
EYT-1266	100/300 200-60/150	1 $\frac{3}{8}$ x4	3.34
EYT-12661	200/300 60-20/250	1 $\frac{3}{8}$ x4 $\frac{1}{2}$	3.48
EYT-1267	60/400 20-20/350	1 $\frac{3}{8}$ x3	2.55
EYT-1270	80/400 20-10/300	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.55
EYT-12701	5/450 80-40/300	1 $\frac{3}{8}$ x3	2.49
EYT-1273	10/450 20-10/25	1 x2	1.29
EYT-12731	10/450 80-80/250	1 $\frac{3}{8}$ x3	2.52
EYT-1275	20/450 40-10/250	1 $\frac{3}{8}$ x2	1.89
EYT-1276	20/450 40-10/350	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.10
EYT-1277	20/450 80-10/350	1 $\frac{3}{8}$ x3	2.55
EYT-1280	30/450 100-25/25	1 $\frac{3}{8}$ x2	1.80
EYT-1281	40/450 90-50/150	1 $\frac{3}{8}$ x3	2.37
EYT-1282	80/450 40-40/250	1 $\frac{3}{8}$ x4	2.98
EYT-1290	40/450 90-50/150	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.40
EYT-1291	40/475 80-10/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.30
EYT-1292	80/250 40/150 50/50	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	1.41
EYT-1295	20/350 30/250 20/25	1 x2 $\frac{1}{2}$	1.68
EYT-1300	100/300 60/150 20/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	1.71
EYT-1301	20/350 50/100 100/75	1 x3	1.86
EYT-1310	10/350 50/150 100/50	1 x3	1.71
EYT-1313	20/350 10/300 20/25	1 x2 $\frac{1}{2}$	1.50
EYT-1315	20/350 40/300 10/150	1 x3	1.89
EYT-1320	30/350 30/300 20/25	1 x3	1.89
EYT-1321	125/350 5/200 100/75	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.18
EYT-1325	40/350 20/300 10/200	1 $\frac{3}{8}$ x2	1.98
EYT-1327	60/400 40/300 20/25	1 $\frac{3}{8}$ x3	2.52

## TRIPLE UNITS (Cont.)

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYT-1328	10/450 50/150 100/75	1 x3	1.96
EYT-1329	10/450 40/300 10/150	1 $\frac{3}{8}$ x2	1.86
EYT-1330	10/450 30/400 30/300	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.01
EYT-1335	20/450 60/250 100/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.19
EYT-1340	20/450 80/350 100/50	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.70
EYT-1341	30/450 15/350 40/25	1 $\frac{3}{8}$ x2	1.44
EYT-1342	30/450 40/350 50/25	1 x4	2.22
EYT-1345	40/450 40/150 130/50	1 $\frac{3}{8}$ x3	2.19
EYT-13451	10/475 4/350 40/250	1 $\frac{3}{8}$ x2	1.80
EYT-1346	10/475 40/450 100/200	1 $\frac{3}{8}$ x3	2.52
EYT-1350	10/475 100/200 40/50	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.01
EYT-1351	20/475 50/50 20/25	1 x3	1.65
EYT-1352	80/475 80/150 50/50	1 $\frac{3}{8}$ x4	2.92
EYT-1360	20/500 20/300 40/25	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	1.86
EYT-1365	40/500 40/250 100/50	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.25

## QUADRUPLER UNITS

Cat. No.	Cap. Mf./WVDC	Dia. x Length	Net Price
EYQ-1998	100-80-60-40/150	1 $\frac{3}{8}$ x3	2.79
EYQ-1999	40-20-10-10/300	1 $\frac{3}{8}$ x2	2.37
EYQ-2000	40-40-20-10/300	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.73
EYQ-20004	40-40-30-20/300	1 $\frac{3}{8}$ x3	2.91
EYQ-20005	60-40-10-10/300	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.73
EYQ-2002	200-20-20-20/300	1 $\frac{3}{8}$ x4 $\frac{1}{2}$	3.70
EYQ-2003	80-40-20-10/350	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.12
EYQ-2004	40-40-40-40/350	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.60
EYQ-2005	30-30-20-20/400	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.91
EYQ-2007	50-40-30-20/400	1 $\frac{3}{8}$ x4	3.39
EYQ-2010	80-10-10-10/400	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.82
EYQ-2011	80-25-10-10/400	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.03
EYQ-2012	5-5-5-5/450	1 $\frac{3}{8}$ x2	1.80
EYQ-2020	20-10-10-10/450	1 $\frac{3}{8}$ x2 $\frac{1}{2}$	2.22
EYQ-2025	20-20-20-20/450	1 $\frac{3}{8}$ x3	2.82
EYQ-2027	20-60-20-20/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	3.39
EYQ-2030	30-15-15-15/450	1 $\frac{3}{8}$ x3	2.67
EYQ-2035	30-30-15-10/450	1 $\frac{3}{8}$ x3 $\frac{1}{2}$	2.82

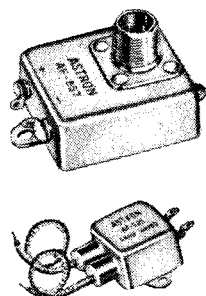
**ASTRON**DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY**Capacitors**

SPECIALISTS IN CAPACITOR MINIATURIZATION

**ASTRON TYPE EY Twist-Prong Electrolytics (Con't.)**

QUADRUPLE UNITS (Cont.)				QUADRUPLE UNITS (Cont.)					
CAT. NO.	CAP. MF/WVDC	DIA. x LENGTH	NET PRICE	CAT. NO.	CAP. MF/WVDC	DIA. x LENGTH	NET PRICE		
EYQ-2074	40-40-10/300	20/15	1 3/8 x 2 1/2	2.55	EYQ-22034	40-40/450	125/150		
EYQ-2075	40-40-40/300	20/150	1 3/8 x 2 1/2	2.94			125/25	1 3/8 x 4	3.42
EYQ-2076	60-40-20/300	50/25	1 3/8 x 2 1/2	2.82	EYQ-2205	10- 5/475	80/450	1 3/8 x 4	2.97
EYQ-20761	120-40-40/300	10/250	1 3/8 x 4	3.70			40/50		
EYQ-20762	150-20-10/300	250/50	1 3/8 x 4	3.64	EYQ-2210	15-15/475	80/300	1 3/8 x 3 1/2	2.88
EYQ-2077	150-40-10/300	100/50	1 3/8 x 4	3.54			40/50		
EYQ-20771	20-10- 5/350	20/25	1 3/8 x 2	1.86	EYQ-2211	20-10/475	20/450	1 3/8 x 2 1/2	2.52
EYQ-20772	30-10- 5/350	200/25	1 3/8 x 2	2.28			100/25		
EYQ-20773	30-10- 5/350	100/200	1 3/8 x 2 1/2	2.64	EYQ-2212	40-10/475	4/350	1 3/8 x 3	2.97
EYQ-20774	30-20- 5/350	100/200	1 3/8 x 3	2.82			40/300		
EYQ-2080	40-20-20/350	25/25	1 3/8 x 2 1/2	2.55	EYQ-2213	20/400	50-40/350	1 3/8 x 3	3.00
EYQ-2081	40-40-30/350	10/25	1 3/8 x 3	2.97			80/50		
EYQ-2085	40-40-40/350	40/25	1 3/8 x 3	3.12	EYQ-2215	10/450	120-40/300	1 3/8 x 4	3.15
EYQ-2090	40-40-40/350	150/50	1 3/8 x 3 1/2	3.42			25/25		
EYQ-2091	90-30- 5/350	100/75	1 3/8 x 3 1/2	3.70	EYQ-2220	10/450	60-40/350	1 3/8 x 3 1/2	2.76
EYQ-2092	100-10-10/350	20/50	1 3/8 x 3	3.09			25/25		
EYQ-2094	100-40-30/350	50/50	1 3/8 x 4	3.94	EYQ-2222	10/450	100-10/350	1 3/8 x 3 1/2	3.15
EYQ-20941	100-80-10/350	20/50	1 3/8 x 4	3.96			20/25		
EYQ-2095	20-20-20/400	20/25	1 3/8 x 2 1/2	2.31	EYQ-2225	20/450	80-20/200	1 3/8 x 3	2.49
EYQ-2096	80-40-10/400	20/25	1 3/8 x 3 1/2	3.18			50/50		
EYQ-20961	80-40-10/400	100/200	1 3/8 x 4	3.78	EYQ-2227	25/450	100-10/300	1 3/8 x 3	3.15
EYQ-20962	80-40-30/400	40/25	1 3/8 x 4	3.58			50/50		
EYQ-2097	80-60-15/400	60/50	1 3/8 x 4	3.75	EYQ-22271	40/450	40-40/300	1 3/8 x 3	2.94
EYQ-2110	10-10-10/450	10/150	1 3/8 x 2	1.89			20/150		
EYQ-2115	20-10-10/450	100/25	1 3/8 x 2 1/2	2.22	EYQ-22272	60/450	80-40/250	1 3/8 x 4	3.39
EYQ-2120	20-20-20/450	20/25	1 3/8 x 2 1/2	2.49			20/150		
EYQ-2125	20-20-20/450	100/50	1 3/8 x 3	2.73	EYQ-2228	10/475	140-40/350	1 3/8 x 4	3.18
EYQ-2126	30-30-10/450	125/25	1 3/8 x 3	2.70			100/50		
EYQ-2130	30-30-15/450	30/50	1 3/8 x 3	2.49	EYQ-2229	10/475	40-10/450	1 3/8 x 3	2.58
EYQ-2135	30-30-20/450	20/25	1 3/8 x 3 1/2	2.79			100/50		
EYQ-2140	40-10-10/450	250/25	1 3/8 x 3 1/2	2.55	EYQ-2230	25/500	80-10/350	1 3/8 x 4 1/2	2.70
EYQ-2145	40-10-10/450	10/350	1 3/8 x 3	2.34			10/50		
EYQ-2146	40-10-10/450	40/350	1 3/8 x 3	2.86	EYQ-2235	100/300	40/50	1 3/8 x 3	2.70
EYQ-2150	40-15-10/450	20/25	1 3/8 x 3	2.46			80-20/25		
EYQ-2151	40-20-10/450	100/50	1 3/8 x 3 1/2	2.76	EYQ-2236	80/450	10/400	1 3/8 x 4	3.48
EYQ-2152	40-20-10/450	100/250	1 3/8 x 4	2.52			40-30/300		
EYQ-2153	40-20-20/450	20/25	1 3/8 x 3 1/2	2.76	EYQ-2237	30/500	10/450	1 3/8 x 3	2.52
EYQ-2155	40-20-20/450	40/25	1 3/8 x 3 1/2	2.79			150-30/50	1 3/8 x 4 1/2	3.06
EYQ-2160	40-30-10/450	20/25	1 3/8 x 3	2.76	EYQ-2238	10/300	200-140-30/150	1 3/8 x 4 1/2	3.21
EYQ-2162	40-40-10/450	50/50	1 3/8 x 3 1/2	2.88	EYQ-22381	10/300	200-200-30/150	1 3/8 x 4	3.84
EYQ-2163	40-40-10/450	100/100	1 3/8 x 4	3.21	EYQ-22391	160/350	60-10-4/300	1 3/8 x 4	3.84
EYQ-2164	40-40-20/450	20/25	1 3/8 x 3 1/2	3.00	EYQ-22392	30/475	130-10-10/350	1 3/8 x 4	3.84
EYQ-21641	40-40-40/450	40/25	1 3/8 x 3 1/2	3.30	EYQ-22393	20/300	150-150/150	1 3/8 x 3 1/2	3.18
EYQ-2165	40-40-40/450	25/50	1 3/8 x 4	2.82			100/30		
EYQ-2170	60-10-10/450	20/150	1 3/8 x 3 1/2	2.76	EYQ-2240	120/300	20/250	1 3/8 x 3 1/2	3.03
EYQ-2171	60-40-10/450	25/50	1 3/8 x 3 1/2	3.15			100/50		
EYQ-2172	60-40-40/450	10/25	1 3/8 x 4	3.60	EYQ-2245	200/300	20/250	1 3/8 x 4 1/2	3.27
EYQ-2173	60-50- 5/450	20/25	1 3/8 x 3 1/2	3.21			100/50		
EYQ-2175	20-20-10/475	10/300	1 3/8 x 3	2.58	EYQ-2246	20/350	150/300	1 3/8 x 4	3.66
EYQ-2180	40-20-10/475	10/25	1 3/8 x 3 1/2	2.91			10/250		
EYQ-2181	20-20/150	160-40/25	1 3/8 x 2	1.92	EYQ-2250	10/450	10/300	1 3/8 x 2 1/2	2.28
EYQ-2182	50-20/150	150-30/15	1 3/8 x 2	1.92			60/200		
EYQ-2183	100-10/300	200-30/150	1 3/8 x 4 1/2	3.54	EYQ-2255	20/450	20/400	1 3/8 x 3	2.28
EYQ-2184	60- 4/350	100-40/25	1 3/8 x 2 1/2	2.28			20/350		
EYQ-2185	40-10/400	80-10/250	1 3/8 x 3 1/2	2.82	EYQ-2260	80/450	10/400	1 3/8 x 4 1/2	3.15
EYQ-2190	10-10/450	20-20/25	1 3/8 x 2	1.77			30/300		
EYQ-2195	20-20/450	20-20/25	1 3/8 x 2	2.16	EYQ-2261	10/475	40/350	1 3/8 x 4	3.34
EYQ-2197	40-10/450	35-10/350	1 3/8 x 4	3.30			80/300		
EYQ-2198	40-40/450	100-60/200	1 3/8 x 4	3.64	EYQ-2262	10/475	100/100	1 3/8 x 2 1/2	2.44
EYQ-2200	40-40/450	30-30/350	1 3/8 x 4 1/2	3.54			4/350	1 3/8 x 2	1.86
EYQ-2202	60-10/300	10/25	1 3/8 x 2	2.18	EYQ-2263	20/300	20-8-4/250		
		10/25			EYQ-2265	10/475	10/450		
EYQ-22021	80- 5/300	60/150	1 3/8 x 2 1/2	2.58			80/200	1 3/8 x 3	2.31
		20/25			EYQ-2270	10/475	60/450	1 3/8 x 4	3.27
EYQ-2203	60-40/350	60/200	1 3/8 x 3 1/2	3.00			30/400		
		20/150			EYQ-2275	20/475	125/50	1 3/8 x 3	2.70
EYQ-22031	10-10/450	60/200	1 3/8 x 3	2.31			100/50		
		100/50			EYQ-2276	20/475	40/350	1 3/8 x 4	3.27
EYQ-22032	20-20/450	60/150	1 3/8 x 2 1/2	2.55			80/200		
		100/25			EYQ-2280	25/475	100/100	1 3/8 x 3 1/2	2.97
EYQ-22033	35-25/450	20/200	1 3/8 x 3	2.79			40/300		
		100/50			EYQ-2281	40/475	40/250	1 3/8 x 3 1/2	3.00
						50/150	80/50		

\*Trade Mark

**RF INTERFERENCE FILTERS  
& FEED-THRU CAPACITORS**

Completely equipped RFI laboratory and experienced engineering staff for RFI test and analysis. Efficient and economical solution to meet the most exacting military requirements. As specialists in miniaturization, Astron qualifies as a major supplier of RFI filters to aircraft, electronic and electrical industries. Types FT and FTZT (Mil types CZ23 and CZ24) feed-thru capacitors conform completely to MIL-C-11693 and are available for use in RF interference problems for both AC and DC applications.

**ASTRON** also manufactures the following military electrolytics to MIL C - 62B:

CE31	CE42	CE61
CE32	CE51	CE62
CE33	CE52	CE63
CE41	CE53	CE64

# ASTRON

DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

## Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

## SUBMINIATURE PAPER CAPACITORS

### Glass-to-Metal Sealed Tubulars

#### For Commercial and Military Applications



- Amazingly small sizes, compact and light-weight units.
- Highly dependable operation at temperatures up to 125°C. without voltage derating.
- Exceptional capacitance stability over entire temperature range of -65°C to +125°C.
- High insulation resistance, low power factor, unusually low resonance loss. High test voltage indicates extra margin of safety in operation.
- Built to exceed stringent requirements of Specification MIL-C-25.
- Positive hermetic closure of the metal cases is assured by glass-to-metal solder seal terminals.
- Tubulars supplied in a variety of construction and mounting styles to meet your specific needs: extended foil or inserted tab; capacitor section grounded to case or insulated from case; plastic outer sleeve; with soldered-on tangential or L-type bracket; screw neck mounting style; or stud-base mounting style.

**TEMPERATURE RANGE**  
- 65°C to + 125°C

#### ASTRON CROSS-REFERENCE TABLE TO MIL-C-25

ASTRON TYPE	MIL TYPE	DESCRIPTION	
<b>TQF</b>	<b>CPO4</b>	Uninsulated Body	<b>INSERTED TAB CONSTRUCTION</b> Capacitors with inserted tab construction are ideal for minimum size consideration. They are the smallest paper-foil capacitors available, the most compact units for operation over a wide temperature range to 125°C. without derating and can be used in AC as well as DC applications. Where smallest possible capacitor sizes are required, coupled with maximum capacitance stability and high insulation resistance over a wide temperature range, inserted tab construction is best suited for the application.
<b>TQFP</b>	<b>CPO5</b>	Insulated Body	
<b>AQF</b>	<b>CPO8</b>	Uninsulated Body	<b>EXTENDED FOIL CONSTRUCTION</b> Capacitors with extended foil construction are ideal where long life, excellent capacitance-temperature stability, high insulation resistance and small size, coupled with outstanding electrical characteristics over a wide temperature range, are required. They can be used in AC as well as DC applications. The extended foil non-inductive construction offers the lowest possible resonant losses in both low and high voltage applications.
<b>AQFP</b>	<b>CPO9</b>	Insulated Body	

#### EXPLANATION or DESIGNATIONS and CATALOG NUMBERING SYSTEM

##### ASTRON CATALOG NUMBER

TQ FP 2 33 10 A T

CAPACITOR TYPE

Internal Construction:

T = Inserted Tab Construction  
A = Extended Foil Construction

Case Style

Q = Metal Tubular, glass seals

GENERAL CONSTRUCTION

Circuit: F = Floating, Circuit 1 2 leads  
G = Grounded, Circuit 2 1 leads  
— = Grounded, Circuit 3 2 leads  
P = Plastic sleeve  
C = Threaded Neck with flats  
S = Threaded Neck less flats  
W = Radial Mounting Stud  
V = Axial Mounting Stud

VOLTAGE RATINGS

Expressed in hundreds of volts

CAPACITANCE

Expressed in Micro-Microfarads x 100. Over .99 mfd, add M to Capacitance.

CAPACITANCE TOLERANCE

±20% = omitted, ±10% = 10, ±5% = 5, ±2% = 2

BRACKET STYLE

A = Tangential type bracket  
B = Vertical Mounting bracket  
Y = Radial bracket

JG TERMINAL

Available on all AQ + TQ Type Capacitors.  
Add suffix "T" to complete Type designation.

##### MILITARY TYPE NUMBER

PER MIL-C-25 = CP 09 A I K C 33 4 K 3

CAPACITOR TYPE

Paper Capacitor  
Per MIL-C-25

STYLE

04 — Inserted Tab  
05 — Inserted Tab with Insulating Sleeve  
08 — Extended Foil  
09 — Extended Foil with Insulating Sleeve  
10 — Inserted Tab with Tangential Bracket  
11 — Inserted Tab with Threaded Neck  
12 — Extended Foil with Tangential Bracket  
13 — Extended Foil with Threaded Neck

TERMINAL TYPE

A = Axial Wire Leads

CIRCUIT

1 = Insulated from Case — 2 Leads  
3 = Grounded to Case — 2 Leads

TEMPERATURE CHARACTERISTIC

K = -55°C to +125°C  
E = -55°C to +85°C

VOLTAGE RATING

B = 100 VDC F = 600 VDC  
C = 200 VDC G = 1000 VDC  
E = 400 VDC

CAPACITANCE IN pf

DECIMAL MULTIPLIER (Number in Zeros)

CAPACITANCE TOLERANCE

J = ±5% K = ±10% M = ±20%

VIBRATION GRADE

1 = 10-55 C.P.S. 3 = 10-2000 C.P.S.



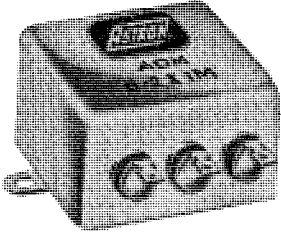
**ASTRON**DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

## Bathtub PAPER Capacitors

**ASTRON TYPE  
ADM**MIL TYPES  
**CP53 thru CP55**  
of MIL C-25CTEMP. RANGE  
-55°C to +85°C

- Non-inductively wound. Mineral oil impregnated and filled. Hermetically sealed.
- Operating temperature range -55°C. to +85°C.
- Built to comply with strict requirements of MIL-C-25C. Silicone rubber compression seal lug terminals. Completely immersion-proof.
- Single units have two terminals; duals have three terminals (one common); triple units have three terminals (case common).
- Standard position of Type ADM terminals is on side (MIL-C-25C Style CP53). Available also with terminals on top (ASTRON Type ADMT or MIL Style CP54) and bottom terminals. (ASTRON Type ADMB or MIL Style CP55).
- Cap. Tolerance: ±20% (M).
- Cap. Tolerance: ±10% (K).

Military Number	Astron Type	L. x W. x H.
<b>100 VOLTS DC WORKING</b>		
CP53B1EB105M	ADM-1-1M	1 <sup>1</sup> / <sub>16</sub> x 1 x 7/8
CP53B1EB205M	ADM-1-2M	2 x 1 <sup>3</sup> / <sub>4</sub> x 7/8
CP53B1EB405M	ADM-1-4M	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>
<b>200 VOLTS DC WORKING</b>		
CP53B1EC504M	ADM-2-5	1 <sup>1</sup> / <sub>16</sub> x 1 x 7/8
CP53B1EC105M	ADM-2-1M	2 x 1 <sup>3</sup> / <sub>4</sub> x 7/8
CP53B1EC205M	ADM-2-2M	2 x 2 x 1
<b>400 VOLTS DC WORKING</b>		
CP53B1EE504M	ADM-4-5	1 <sup>1</sup> / <sub>16</sub> x 1 x 7/8
CP53B1EE105M	ADM-4-1M	2 x 1 <sup>3</sup> / <sub>4</sub> x 7/8
CP53B5EE504M	ADM-4-3x5	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>
<b>600 VOLTS DC WORKING</b>		
CP53B1EF503M	ADM-6-05	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B1EF104M	ADM-6-1	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B1EF254M	ADM-6-25	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B1EF504M	ADM-6-5	1 <sup>1</sup> / <sub>16</sub> x 1 x 1
CP53B1EF105M	ADM-6-1M	2 x 1 <sup>3</sup> / <sub>4</sub> x 1
CP53B1EF205M	ADM-6-2M	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>
CP53B4EF503M	ADM-6-2x05	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B4EF254M	ADM-6-2x25	1 <sup>1</sup> / <sub>16</sub> x 1 x 1
CP53B4EF504M	ADM-6-2x5	2 x 1 <sup>3</sup> / <sub>4</sub> x 1
CP53B4EF105M	ADM-6-2x1M	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>
CP53B5EF503M	ADM-6-3x05	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B5EF104M	ADM-6-3x1	1 <sup>1</sup> / <sub>16</sub> x 1 x 7/8
CP53B5EF254M	ADM-6-3x25	2 x 1 <sup>3</sup> / <sub>4</sub> x 7/8
CP53B5EF504M	ADM-6-3x5	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>
<b>1000 VOLTS DC WORKING</b>		
CP53B1EG503M	ADM-10-05	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B1EG104M	ADM-10-1	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B1EG254M	ADM-10-25	1 <sup>1</sup> / <sub>16</sub> x 1 x 7/8
CP53B1EG504M	ADM-10-5	2 x 1 <sup>3</sup> / <sub>4</sub> x 7/8
CP53B1EG105M	ADM-10-1M	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>
CP53B4EG503M	ADM-10-2x05	1 <sup>1</sup> / <sub>16</sub> x 1 x 7/8
CP53B4EG104M	ADM-10-2x1	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B4EG254M	ADM-10-2x25	2 x 1 <sup>3</sup> / <sub>4</sub> x 7/8
CP53B4EG504M	ADM-10-2x5	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>
CP53B5EG503M	ADM-10-3x05	1 <sup>1</sup> / <sub>16</sub> x 1 x 3/4
CP53B5EG104M	ADM-10-3x1	2 x 1 <sup>3</sup> / <sub>4</sub> x 7/8
CP53B5EG254M	ADM-10-3x25	2 x 2 x 1 <sup>1</sup> / <sub>8</sub>

\*Trade Mark

ASTRON TYPE **ARMF**  
OIL-FILLED METAL TUBULARS

TEMP. RANGE -55° to +85°C



## MIL TYPES CP25 thru CP29 of MIL C-25C

- Non-inductively wound. Mineral oil impregnated and filled. Hermetically sealed.
- Excellent capacitance stability and low power factor over entire temperature range -55°C. to +85°C.
- Units listed are internally insulated from case. Also available with capacitor section grounded to case (Type ARMG) and in accordance with all Specifications MIL-C-25C styles CP25-26-27-28-29.
- Wire leads 1<sup>1</sup>/<sub>2</sub>" long. Standard capacitance tolerance ±20%.

## CAPACITOR SECTION INSULATED FROM CASE: CIRCUIT 1

ARMF (MIL Style CP-25): Sizes as shown.

MIL Style CP-26 ARMFP: Basic ARMF with plastic outer sleeve (P) for insulated body. Add 3/16" to length and 3/16" to diameter.

MIL Style CP-27 ARMF-Y: Basic ARMF with riveted radial mounting strap "Y" on uninsulated body. Case sizes as listed.

MIL Style CP-28 ARMFP-Y: Basic ARMF with plastic outer sleeve (P) and riveted radial mounting strap "Y". Add 3/16" to length, 3/16" to diameter.

MIL Style CP-29 ARMF-A: Basic ARMF with tangential soldered-on mounting bracket "A". Case sizes as listed.

## CAPACITOR SECTION GROUNDED TO CASE: CIRCUIT 3

MIL Style CP-25 ARMG: Deduct 1/8" from length of ARMF sizes listed. Uninsulated body.

MIL Style CP-26 ARMGP: Basic ARMG with plastic outer sleeve (P) for insulated body. Add 3/16" to length and diameter of ARMF sizes listed.

MIL Style CP-27 ARMG-Y: Basic ARMG with riveted radial mounting strap "Y" on uninsulated body. Deduct 1/8" from length of ARMF sizes listed.

MIL Style CP-28 ARMGP-Y: Basic ARMG with plastic outer sleeve (P) and riveted radial mounting strap "Y". Add 3/16" to diameter and length of ARMF sizes listed.

MIL Style CP-29 ARMG-A: Basic ARMG with tangential soldered-on mounting bracket "A". Deduct 1/8" from length of ARMF sizes listed.

Military Number	Astron Type	Cap. Mf.	Dia. x Length
<b>200 VOLTS DC WORKING</b>			
CP25A1EC104M	ARMF-2-1	.1	5/8 x 15/8
CP25A1EC254M	ARMF-2-25	.25	3/4 x 2 1/8
CP25A1EC504M	ARMF-2-5	.5	1 x 2 1/8
<b>600 VOLTS DC WORKING</b>			
CP25A1EF302M	ARMF-6-003	.003	3/16 x 1 1/8
CP25A1EF602M	ARMF-6-006	.006	3/16 x 1 1/8
CP25A1EF103M	ARMF-6-01	.01	3/16 x 1 1/8
CP25A1EF203M	ARMF-6-02	.02	3/16 x 1 5/8
CP25A1EF503M	ARMF-6-05	.05	5/8 x 1 1/2
CP25A1EF104M	ARMF-6-1	.1	5/8 x 1 7/8
CP25A1EF254M	ARMF-6-25	.25	1 x 2 1/8
CP25A1EF504M	ARMF-6-5	.5	1 x 2 5/8
<b>1000 VOLTS DC WORKING</b>			
CP25A1EG302M	ARMF-10-003	.003	5/8 x 1 1/8
CP25A1EG602M	ARMF-10-006	.006	5/8 x 1 1/8
CP25A1EG103M	ARMF-10-01	.01	5/8 x 1 1/8
CP25A1EG203M	ARMF-10-02	.02	5/8 x 1 1/2
CP25A1EG503M	ARMF-10-05	.05	3/4 x 1 5/8
CP25A1EG104M	ARMF-10-1	.1	1 x 1 7/8
CP25A1EG254M	ARMF-10-25	.25	1 x 2 5/8
<b>1500 VOLTS DC WORKING</b>			
CP25A1EH302M	ARMF-15-003	.003	1 x 1 1/4
CP25A1EH602M	ARMF-15-006	.006	1 x 1 1/4
CP25A1EH103M	ARMF-15-01	.01	1 x 1 1/4
CP25A1EH203M	ARMF-15-02	.02	1 x 1 5/8
CP25A1EH503M	ARMF-15-05	.05	1 x 1 7/8
CP25A1EH104M	ARMF-15-1	.1	1 x 2 1/8

# ASTRON

DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

## Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

### ASTRON METALITE® HY-MET TYPE MVL

FEATURING 50 VDC RATINGS



#### PLASTIC CASED TUBULAR METALLIZED PAPER CAPACITORS

ASTRON Type MVL are axial lead, tubular type metallized paper capacitors contained in plastic tubes with an epoxy end fill to provide maximum moisture resistance. They are free of the usual wax coating and therefore are ideal for potting in plastic resins. The capacitor sections are impregnated in a solid thermosetting plastic which allows operation at temperatures up to 100°C.

Type MVL Capacitors replace ASTRON discontinued types ML and MLL Metallized Paper Tubulars.

TEMPERATURE RANGE -30°C to +100°C

Catalog Number	Cap. Mfd.	Diameter (Inches) D	Length (Inches) L	Catalog Number	Cap. Mfd.	Diameter (Inches) D	Length (Inches) L
<b>50 VOLTS</b>				<b>400 VOLTS</b>			
MVL-5-1	.1	3/32	1 1/16	MVL-4-01	.01	1/4	2 3/32
MVL-5-22	.22	3/32	1	MVL-4-02	.02	3/16	2 3/32
MVL-5-33	.33	3/16	1	MVL-4-03	.03	3/16	2 3/32
MVL-5-47	.47	3/8	1	MVL-4-05	.05	3/8	2 3/32
MVL-5-1M	1.0	3/8	1	MVL-4-1	.1	3/16	1 3/32
MVL-5-2M	2.0	3/16	1 1/8	MVL-4-25	.25	1/2	1 3/32
MVL-5-4M	4.0	1 1/16	1 3/16	MVL-4-5	.5	5/8	1 1/32
MVL-5-6M	6.0	1 1/16	1 7/8	MVL-4-1M	1.0	1 1/16	1 3/32
MVL-5-8M	8.0	1 3/16	1 7/8	MVL-4-2M	2.0	7/8	2 3/8
<b>200 VOLTS</b>				<b>600 VOLTS</b>			
MVL-2-01	.01	1/4	1 3/32	MVL-6-01	.01	1/4	2 3/32
MVL-2-02	.02	1/4	2 3/32	MVL-6-02	.02	3/16	2 3/32
MVL-2-03	.03	1/4	2 3/32	MVL-6-03	.03	3/8	2 3/32
MVL-2-05	.05	1/4	2 3/32	MVL-6-05	.05	3/8	2 3/32
MVL-2-1	.1	3/16	2 3/32	MVL-6-1	.1	3/16	1 3/32
MVL-2-25	.25	3/16	2 3/32	MVL-6-25	.25	5/8	1 3/32
MVL-2-5	.5	3/16	1 3/32	MVL-6-5	.5	1 1/16	1 1/32
MVL-2-1M	1.0	3/8	1 3/32	MVL-6-1M	1.0	1 1/16	2
MVL-2-2M	2.0	5/8	2 1 3/32	MVL-6-2M	2.0	1	2 3/8
MVL-2-3M	3.0	3/4	1 2 3/32				

NOTE: (1) Wire Size: Up to and including 1 1/16" - #22awg. Above 1 1/16" - #20 awg.  
(2) Standard capacity tolerance is ±20%. Special tolerances of ±10% or ±5% are available upon request. Specify by adding tolerance numerals to the part number. Example: MVL-2-1M-10.

### ASTRON METALITE®

### TYPE MQCF



- Smallest paper capacitor type available for the given ratings.
- Mineral wax impregnated and filled.
- Tinned, non-ferrous metal cases. Hermetically sealed.

Non-inductively wound. Capacitor section insulated from case with glass-to-metal terminal at each end. Available also with section grounded to case, glass-to-metal seal terminal at one end (TYPE MQC).

TEMPERATURE RANGE -65°C to +85°C

Cat. No.	Cap. Mfd.	Dia. x Lgth.	Cat. No.	Cap. Mfd.	Dia. x Lgth.
<b>150 VOLTS DC WORKING</b>			<b>600 VOLTS DC WORKING</b>		
MQCF-1.5-4M	4.0	1 x 1 1/16	MQCF-4-05	.05	.312 x 1 1/8
MQCF-1.5-6M	6.0	1 x 1 1/16	MQCF-4-1	.1	.400 x 1 1/8
MQCF-1.5-8M	8.0	1 x 2 3/16	MQCF-3-15	.15	.562 x 1 1/8
<b>200 VOLTS DC WORKING</b>			MQCF-4-2	.2	.562 x 1 1/8
MQCF-2-01	.01	.235 x 1 3/16	MQCF-4-25	.25	.562 x 1 1/8
MQCF-2-02	.02	.235 x 1 3/16	MQCF-4-33	.33	.562 x 1 1/8
MQCF-2-033	.033	.235 x 1 3/16	MQCF-4-5	.5	.562 x 1 1/8
MQCF-2-04	.04	.235 x 1 3/16	MQCF-4-68	.68	.670 x 1 1/8
MQCF-2-05	.05	.235 x 1 3/16	MQCF-4-1M	1.0	.670 x 2 1/16
MQCF-2-1	.1	.312 x 1 3/16	MQCF-4-1.5M	1.5	1 x 2 1/16
MQCF-2-15	.15	.400 x 1 3/16	MQCF-4-2M	2.0	1 x 2 1/16
MQCF-2-2	.2	.400 x 1 3/16	MQCF-4-4M	4.0	1 1/8 x 2 3/16
MQCF-2-25	.25	.400 x 1 3/16	<b>600 VOLTS DC WORKING</b>		
MQCF-2-33	.33	.400 x 1 3/8	MQCF-6-01	.01	.235 x 1 3/16
MQCF-2-5	.5	.400 x 1 3/8	MQCF-6-015	.015	.312 x 1 3/16
MQCF-2-68	.68	.562 x 1 3/16	MQCF-6-02	.02	.312 x 1 3/16
MQCF-2-1M	1.0	.562 x 1 3/16	MQCF-6-03	.03	.312 x 1 3/16
MQCF-2-1.5M	1.5	.562 x 1 3/16	MQCF-6-04	.04	.312 x 1 3/8
MQCF-2-2M	2.0	.562 x 1 3/16	MQCF-6-05	.05	.312 x 1 3/8
<b>400 VOLTS DC WORKING</b>			MQCF-6-1	.1	.400 x 1 3/8
MQCF-4-01	.01	.235 x 1 3/16	MQCF-6-15	.15	.562 x 1 3/8
MQCF-4-02	.02	.235 x 1 3/16	MQCF-6-22	.22	.562 x 1 3/8
MQCF-4-03	.03	.312 x 1 3/16	MQCF-6-25	.25	.562 x 1 3/8
MQCF-4-04	.04	.312 x 1 3/8	MQCF-6-33	.33	.670 x 1 3/8
			MQCF-6-5	.5	.670 x 1 3/8
			MQCF-6-68	.68	.670 x 2 3/16
			MQCF-6-1M	1.0	.750 x 2 3/16
			MQCF-6-2M	2.0	1 x 2 3/16

STANDARD CAPACITANCE TOLERANCE: ±20%.

### ASTRON METALITE® HY-MET

### TYPE MQLF



#### SUBMINIATURE TUBULAR METALLIZED PAPER CAPACITORS

With Voltage Derating

- Smallest paper capacitors available for the given ratings.
- Solid thermosetting impregnant.
- Tinned, non-ferrous metal cases. Hermetically sealed.

Non-inductively wound. Capacitor section insulated from case with glass-to-metal terminal at each end. Available also with section grounded to case, glass-to-metal seal terminal at one end (TYPE MQL).

TEMPERATURE RANGE -55°C to +125°C

150 VOLTS DC WORKING				400 VOLTS DC WORKING			
Cat. No.	Cap. Mfd.	Dia. x Length		Cat. No.	Cap. Mfd.	Dia. x Length	
MQLF-1.5-4M	4.0	1 x 1	13/16	MQLF-4-068	.068	.400 x 1 1/8	
MQLF-1.5-6M	6.0	1 x 1	13/16	MQLF-4-1	.1	.400 x 1 1/8	
MQLF-1.5-8M	8.0	1 x 2	5/16	MQLF-4-22	.22	.500 x 1 1/8	
<b>200 VOLTS DC WORKING</b>				MQLF-4-25	.25	.500 x 1 1/8	
MQLF-2-01	.01	.235 x	13/16	MQLF-4-33	.33	.562 x 1 5/16	
MQLF-2-022	.022	.235 x	13/16	MQLF-4-47	.47	.562 x 1 13/16	
MQLF-2-033	.033	.235 x	13/16	MQLF-4-5	.5	.562 x 1 13/16	
MQLF-2-047	.047	.235 x	13/16	MQLF-4-68	.68	.670 x 1 13/16	
MQLF-2-05	.05	.235 x	13/16	MQLF-4-1M	1.0	.670 x 2 5/16	
MQLF-2-068	.068	.312 x	13/16	MQLF-4-2M	2.0	1 x 2 5/16	
MQLF-2-1	.1	.312 x	13/16	<b>600 VOLTS DC WORKING</b>			
MQLF-2-15	.15	.312 x	1 1/8	MQLF-6-01	.01	.235 x	13/16
MQLF-2-22	.22	.312 x	1 1/8	MQLF-6-022	.022	.312 x	13/16
MQLF-2-25	.25	.312 x	1 1/8	MQLF-6-033	.033	.400 x	13/16
MQLF-2-33	.33	.400 x	1 1/8	MQLF-6-047	.047	.400 x	13/16
MQLF-2-47	.47	.400 x	1 1/8	MQLF-6-05	.05	.400 x	13/16
MQLF-2-5	.5	.400 x	1 1/8	MQLF-6-068	.068	.400 x	1 1/8
MQLF-2-68	.68	.500 x	1 1/8	MQLF-6-1	.1	.400 x	1 1/8
MQLF-2-1M	1.0	.562 x	1 1/8	MQLF-6-15	.15	.500 x	1 1/8
MQLF-2-2M	2.0	.562 x	1 13/16	MQLF-6-22	.22	.562 x	1 5/16
<b>400 VOLTS DC WORKING</b>				MQLF-6-25	.25	.562 x	1 5/16
MQLF-4-01	.01	.235 x	13/16	MQLF-6-33	.33	.562 x	1 13/16
MQLF-4-022	.022	.235 x	13/16	MQLF-6-47	.47	.670 x	1 13/16
MQLF-4-033	.033	.312 x	13/16	MQLF-6-5	.5	.670 x	1 13/16
MQLF-4-047	.047	.312 x	1 1/8	MQLF-6-68	.68	.670 x	2 5/16
MQLF-4-05	.05	.312 x	1 1/8	MQLF-6-1M	1.0	.750 x	2 5/16
				MQLF-6-2M	2.0	1 x	2 5/16

STANDARD CAPACITANCE TOLERANCE: ±20%. Other tolerances are available.

# ASTRON

DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

## Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

**"TRANSISTORIZED" SUBMINIATURE  
METALLIZED PAPER CAPACITORS 50 WVDC**

### ASTRON TYPE MQZF

TEMPERATURE RANGE  
-55°C to +125°C



**NOTE:**

- Standard MQZF is supplied in "floating" construction.
- Grounded construction is available upon request. Specify Type MQZ. Subtract  $\frac{1}{16}$ " from length for sizes listed.
- For plastic insulating outer sleeve (P) specify MQZFP or MQZP.  
(A) For floating type add  $\frac{1}{16}$ " to diameter and length of sizes listed.  
(B) For grounded units add  $\frac{1}{16}$ " to diameter to sizes listed.
- Standard tolerance of Type MQZF is  $\pm 20\%$ ; special tolerances of  $\pm 10\%$  and  $\pm 5\%$  available upon request. Specify by adding tolerance numerals to part number. Example: MQZF-5-1M-10.

Catalog Number	WVDC	Cap. Mfd.	Dia. $\pm \frac{1}{64}$ " (Inches) D	Length $\pm \frac{1}{32}$ " (Inches) L
MQZ-F .5-047	50	.047	.195	$\frac{1}{16}$
MQZ-F .5-068	50	.068	.195	$\frac{1}{16}$
MQZ-F .5-1	50	.1	.235	$\frac{1}{16}$
MQZ-F .5-15	50	.15	.235	$\frac{1}{16}$
MQZ-F .5-22	50	.22	.235	1
MQZ-F .5-33	50	.33	.312	1
MQZ-F .5-47	50	.47	.312	1
MQZ-F .5-68	50	.68	.400	1
MQZ-F .5-1M	50	1.0	.400	1
MQZ-F .5-1.5M	50	1.5	.500	$1\frac{1}{8}$
MQZ-F .5-2M	50	2.0	.562	$1\frac{1}{8}$
MQZ-F .5-4M	50	4.0	.670	$1\frac{1}{2}$
MQZ-F .5-6M	50	6.0	.670	$1\frac{1}{2}$
MQZ-F .5-8M	50	8.0	.750	$1\frac{3}{4}$

## Metal-Cased Tubulars

### ASTRON METALITE® TYPE MRF



- Type MRF supplied with capacitor section insulated from case. Also available with section grounded to case (Type MRG).
- Lead length  $1\frac{1}{4}$ " minimum.
- Standard capacitance tolerance:  $\pm 20\%$ .

TEMPERATURE RANGE  
-65°C to +85°C

Cat. No.	Cap. Mfd.	Dia. x Length	Cat. No.	Cap. Mfd.	Dia. x Length
<b>150 VOLTS DC WORKING</b>			<b>400 VOLTS DC WORKING (CONT.)</b>		
MRF-1.5-4M	4.0	1 x $1\frac{1}{8}$	MRF-4-25	.25	.670 x $1\frac{3}{8}$
MRF-1.5-6M	6.0	1 x $1\frac{1}{8}$	MRF-4-5	.5	.670 x $1\frac{3}{8}$
MRF-1.5-8M	8.0	1 x $1\frac{1}{8}$	MRF-4-1M	1.0	$\frac{3}{4}$ x $2\frac{1}{8}$
MRF-1.5-10M	10.0	1 x $1\frac{1}{8}$	MRF-4-2M	2.0	1 x $2\frac{1}{8}$
			MRF-4-3M	3.0	$1\frac{1}{2}$ x $2\frac{1}{8}$
			MRF-4-4M	4.0	$1\frac{1}{4}$ x $2\frac{1}{8}$
<b>200 VOLTS DC WORKING</b>			<b>600 VOLTS DC WORKING</b>		
MRF-2-05	.05	$\frac{3}{8}$ x $\frac{7}{8}$	MRF-6-01	.01	$\frac{3}{8}$ x $\frac{7}{8}$
MRF-2-1	.1	$\frac{1}{2}$ x $\frac{7}{8}$	MRF-6-02	.02	$\frac{3}{8}$ x $\frac{7}{8}$
MRF-2-25	.25	$\frac{1}{2}$ x $\frac{7}{8}$	MRF-6-03	.03	$\frac{3}{8}$ x $\frac{7}{8}$
MRF-2-5	.5	$\frac{1}{2}$ x $1\frac{1}{8}$	MRF-6-05	.05	$\frac{1}{2}$ x $1\frac{1}{8}$
MRF-2-1M	1.0	.670 x $1\frac{1}{8}$	MRF-6-1	.1	$\frac{1}{2}$ x $1\frac{1}{8}$
MRF-2-2M	2.0	.670 x $1\frac{1}{8}$	MRF-6-2	.2	.670 x $1\frac{1}{8}$
			MRF-6-25	.25	.670 x $1\frac{1}{8}$
			MRF-6-5	.5	.670 x $1\frac{1}{8}$
<b>400 VOLTS DC WORKING</b>			<b>MRF-6-1M</b>		
MRF-4-03	.03	$\frac{3}{8}$ x $\frac{7}{8}$	MRF-6-1M	1.0	$\frac{3}{4}$ x $2\frac{1}{8}$
MRF-4-05	.05	$\frac{1}{2}$ x $\frac{7}{8}$	MRF-6-2M	2.0	$1\frac{1}{8}$ x $2\frac{1}{8}$
MRF-4-1	.1	$\frac{1}{2}$ x $1\frac{1}{8}$	MRF-6-3M	3.0	$1\frac{1}{4}$ x $2\frac{1}{8}$

Standard capacitance tolerance:  $\pm 20\%$  Other tolerances are available.

**VARIATIONS AVAILABLE  
CAPACITOR SECTION INSULATED FROM CASE CIRCUIT 1  
TYPE AND DESCRIPTION**

- UNINSULATED BODY** — Basic type as listed.  
Sizes shown in listings: MRF-Y — with radial (Y) bracket.  
MRF-A — with tangential (A) soldered-on bracket.
- INSULATED BODY** — Basic type, with plastic sleeve (P).  
Add  $3/16$ " to length and  $1/16$ " to dia. MRF-P-Y — with plastic sleeve (P) and radial (Y) bracket.

**CAPACITOR SECTION GROUNDED TO CASE CIRCUIT 3  
TYPE AND DESCRIPTION**

- UNINSULATED BODY** — Basic grounded section unit.  
deduct  $3/32$ " from length shown in listings: MRF-G-Y — with radial (Y) bracket.  
MRF-G-A — with tangential (A) soldered-on bracket.
- INSULATED BODY** — Basic grounded section type with plastic sleeve (P).  
Add  $3/32$ " to length and  $1/16$ " to dia. MRF-G-P-Y — with plastic sleeve (P) and radial (Y) bracket.  
shown in listings

### ASTRON METALITE® TYPE RQLF

TEMPERATURE RANGE  
-55°C to +125°C



ASTRON TYPE RQLF combines in a miniature hermetically sealed case, the outstanding attributes of reliability at high temperatures up to +125°C without derating—with significant savings of space. They find their main applications in military reliability equipment and in critical industrial circuits.

Type RQLF Mylar\* metallized capacitors are available in various military case and mounting styles.

WVDC	Catalog Number	Cap. Mfd.	Dia. x Length in inches
	RQLF2-01	.010	.235 x $\frac{3}{8}$
	RQLF2-012	.012	.235 x $\frac{3}{8}$
	RQLF2-015	.015	.235 x $\frac{3}{8}$
	RQLF2-018	.018	.235 x $\frac{3}{8}$
	RQLF2-022	.022	.235 x $\frac{3}{8}$
	RQLF2-027	.027	.235 x $\frac{3}{8}$
	RQLF2-033	.033	.235 x $\frac{3}{8}$
	RQLF2-039	.039	.312 x $\frac{7}{8}$
	RQLF2-047	.047	.312 x $\frac{7}{8}$
	RQLF2-056	.056	.312 x $\frac{7}{8}$
	RQLF2-068	.068	.312 x $\frac{7}{8}$
	RQLF2-082	.082	.312 x $\frac{7}{8}$
	RQLF2-1	.1	.312 x $\frac{7}{8}$
	RQLF2-12	.12	.312 x $1\frac{1}{8}$
	RQLF2-15	.15	.312 x $1\frac{1}{8}$
	RQLF2-18	.18	.400 x $\frac{7}{8}$
	RQLF2-22	.22	.400 x $\frac{7}{8}$
	RQLF2-27	.27	.400 x $1\frac{1}{8}$
	RQLF2-33	.33	.400 x $1\frac{1}{8}$
	RQLF2-39	.39	.500 x $1\frac{1}{8}$
	RQLF2-47	.47	.500 x $1\frac{1}{8}$
	RQLF2-56	.56	.500 x $1\frac{1}{8}$
	RQLF2-68	.68	.500 x $1\frac{1}{8}$

## MYLAR\* Metallized Capacitors

WVDC	Cat. No.	Cap. Mfd.	D. x L.	WVDC	Cat. No.	Cap. Mfd.	D. x L.
	RQLF2-82	.82	.562 x $1\frac{1}{4}$		RQLF6-01	.010	.312 x $\frac{7}{8}$
	RQLF2-1M	1.0	.562 x $1\frac{1}{4}$		RQLF6-012	.012	.312 x $\frac{7}{8}$
	RQLF2-1.5M	1.5	.562 x $1\frac{1}{4}$		RQLF6-015	.015	.312 x $\frac{7}{8}$
	RQLF2-2M	2.0	.670 x $1\frac{1}{8}$		RQLF6-018	.018	.312 x $1\frac{1}{8}$
	RQLF2-3M	3.0	.670 x $1\frac{1}{8}$		RQLF6-022	.022	.312 x $1\frac{1}{8}$
	RQLF2-4M	4.0	.750 x $1\frac{1}{8}$		RQLF6-027	.027	.312 x $1\frac{1}{8}$
	RQLF2-5M	5.0	1.00 x $1\frac{1}{8}$		RQLF6-033	.033	.312 x $1\frac{1}{8}$
	RQLF2-6M	6.0	1.00 x $1\frac{1}{8}$		RQLF6-039	.039	.400 x $1\frac{1}{8}$
	RQLF2-8M	8.0	1.00 x $1\frac{1}{8}$		RQLF6-047	.047	.400 x $1\frac{1}{8}$
	RQLF2-10M	10.0	1.00 x $2\frac{1}{8}$		RQLF6-056	.056	.400 x $1\frac{1}{8}$
	RQLF2-12M	12.0	1.00 x $2\frac{1}{8}$		RQLF6-068	.068	.400 x $1\frac{1}{8}$
					RQLF6-082	.082	.500 x $1\frac{1}{8}$
	RQLF4-01	.010	.312 x $\frac{7}{8}$		RQLF6-1	.1	.500 x $1\frac{1}{8}$
	RQLF4-012	.012	.312 x $\frac{7}{8}$		RQLF6-12	.12	.562 x $1\frac{1}{8}$
	RQLF4-015	.015	.312 x $\frac{7}{8}$		RQLF6-15	.15	.562 x $1\frac{1}{8}$
	RQLF4-018	.018	.312 x $\frac{7}{8}$		RQLF6-18	.18	.562 x $1\frac{1}{8}$
	RQLF4-022	.022	.312 x $\frac{7}{8}$		RQLF6-22	.22	.562 x $1\frac{1}{8}$
	RQLF4-027	.027	.312 x $1\frac{1}{8}$		RQLF6-27	.27	.562 x $1\frac{1}{8}$
	RQLF4-033	.033	.312 x $1\frac{1}{8}$		RQLF6-33	.33	.562 x $1\frac{1}{8}$
	RQLF4-039	.039	.400 x $1\frac{1}{8}$		RQLF6-39	.39	.670 x $1\frac{1}{8}$
	RQLF4-047	.047	.400 x $1\frac{1}{8}$		RQLF6-47	.47	.670 x $1\frac{1}{8}$
	RQLF4-056	.056	.400 x $1\frac{1}{8}$		RQLF6-56	.56	.670 x $1\frac{1}{8}$
	RQLF4-068	.068	.400 x $1\frac{1}{8}$		RQLF6-68	.68	.670 x $1\frac{1}{8}$
	RQLF4-082	.082	.500 x $1\frac{1}{8}$		RQLF6-82	.82	1.00 x $1\frac{1}{8}$
	RQLF4-1	.1	.500 x $1\frac{1}{8}$		RQLF6-1M	1.0	1.00 x $1\frac{1}{8}$
	RQLF4-12	.12	.500 x $1\frac{1}{8}$		RQLF6-1.5M	1.5	1.00 x $2\frac{1}{8}$
	RQLF4-15	.15	.500 x $1\frac{1}{8}$		RQLF6-2M	2.0	1.00 x $2\frac{1}{8}$
	RQLF4-18	.18	.562 x $1\frac{1}{8}$		RQLF6-2.5M	2.5	1.00 x $2\frac{1}{8}$
	RQLF4-22	.22	.562 x $1\frac{1}{8}$				
	RQLF4-27	.27	.562 x $1\frac{1}{8}$				
	RQLF4-33	.33	.562 x $1\frac{1}{8}$				
	RQLF4-39	.39	.670 x $1\frac{1}{8}$				
	RQLF4-47	.47	.670 x $1\frac{1}{8}$				
	RQLF4-56	.56	.670 x $1\frac{1}{8}$				
	RQLF4-68	.68	.670 x $1\frac{1}{8}$				
	RQLF4-82	.82	.750 x $1\frac{1}{8}$				
	RQLF4-1M	1.0	.750 x $1\frac{1}{8}$				
	RQLF4-1.5M	1.5	1.00 x $1\frac{1}{8}$				
	RQLF4-2M	2.0	1.00 x $1\frac{1}{8}$				
	RQLF4-3M	3.0	1.00 x $2\frac{1}{8}$				

\*Reg. DuPont Trade Mark



# ASTRON

DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

## Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

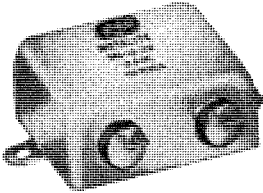
### ASTRON METALITE® TYPES MD and MDL

### MIL TYPES CH53, CH54, CH55 of MIL C-18312

#### TYPE MD AND MDL

- Units meet MIL tests for moisture resistance, thermal cycle immersion and vibration.
- Single units have two terminals; dual units have three terminals, one terminal common negative.
- Up to 75% reduction in sizes over conventional paper—foil capacitors with higher capacitance ratings than ever offered before in same size.
- Standard capacitance tolerance plus or minus 20%. OTHER TOLERANCES ARE AVAILABLE.

#### TYPE MD



OPERATING TEMPERATURE RANGE  
-65°C to +85°C

- Standard position of terminals on side. Also available with terminals on top (Type MDT) or bottom (Type MDB).
- Hermetically sealed. Silicone rubber compression seal lug terminals.

#### TYPE MDL



OPERATING TEMPERATURE RANGE  
-65°C to +125°C

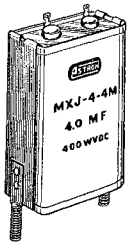
- Standard position of terminals is on side. Can be supplied with top terminals (Type MDLT) or bottom terminals (Type MDLB).
- Hermetically sealed. Lug type glass to metal sealed terminals.

### BATHTUB METALLIZED PAPER CAPACITORS

WVDC	Cat. No.	Cap. Mf.	L	x	W	x	H	Mfg. Ctr.
150	MD or MDL-1.5-3M	3.0	1 3/4	1	7/8	2 1/8	2 1/8	2 1/8
	MD or MDL-1.5-4M	4.0	1 3/4	1	7/8	2 1/8	2 1/8	2 1/8
	MD or MDL-1.5-5M	5.0	1 3/4	1	7/8	2 1/8	2 1/8	2 1/8
	MD or MDL-1.5-6M	6.0	1 3/4	1 1/4	7/8	2 1/8	2 1/8	2 1/8
	MD or MDL-1.5-8M	8.0	2	1 3/4	3/4	2 3/8	2 3/8	2 3/8
	MD or MDL-1.5-10M	10.0	2	1 3/4	3/4	2 3/8	2 3/8	2 3/8
	MD or MDL-1.5-12M	12.0	2	2	7/8	2 3/8	2 3/8	2 3/8
	MD or MDL-1.5-15M	15.0	2	2	1	2 3/8	2 3/8	2 3/8
	MD or MDL-1.5-16M	16.0	2	2	1 1/8	2 3/8	2 3/8	2 3/8
	MD or MDL-1.5-18M	18.0	2	2	1 1/4	2 3/8	2 3/8	2 3/8
	MD or MDL-1.5-20M	20.0	2	2	1 1/2	2 3/8	2 3/8	2 3/8
	MD 1.5-2x4M	4.0-4.0	2	1 3/4	3/4	2 3/8	2 3/8	2 3/8
MD 1.5-2x6M	6.0-6.0	2	2	7/8	2 3/8	2 3/8	2 3/8	
200	MD or MDL-2-1	.1	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-2-25	.25	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-2-5	.5	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-2-1M	1.0	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-2-2M	2.0	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD 2-2x1M	1.0-1.0	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
MD 2-2x2M	2.0-2.0	1 3/4	1	7/8	2 1/8	2 1/8	2 1/8	
400	MD or MDL-4-1	.1	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-4-25	.25	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-4-5	.5	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-4-1M	1.0	1 3/4	1	7/8	2 1/8	2 1/8	2 1/8
	MD or MDL-4-2M	2.0	2	1 3/4	1 1/8	2 3/8	2 3/8	2 3/8
	MD or MDL-4-3M	3.0	2	1 3/4	1 1/8	2 3/8	2 3/8	2 3/8
	MD or MDL-4-4M	4.0	2	2	1	2 3/8	2 3/8	2 3/8
	MD or MDL-4-5M	5.0	2	2	1 1/4	2 3/8	2 3/8	2 3/8
	MD or MDL-4-6M	6.0	2	2	1 1/2	2 3/8	2 3/8	2 3/8
	MD 4-2x5	.5-.5	1 3/4	1	7/8	2 1/8	2 1/8	2 1/8
MD 4-2x1M	1.0-1.0	2	1 3/4	7/8	2 3/8	2 3/8	2 3/8	
MD 4-2x2M	2.0-2.0	2	2	1 1/8	2 3/8	2 3/8	2 3/8	
600	MD or MDL-6-1	.1	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-6-25	.25	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-6-5	.5	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD or MDL-6-1M	1.0	1 3/4	1 1/4	7/8	2 1/8	2 1/8	2 1/8
	MD or MDL-6-2M	2.0	2	2	7/8	2 3/8	2 3/8	2 3/8
	MD or MDL-6-3M	3.0	2	2	1 1/8	2 3/8	2 3/8	2 3/8
	MD or MDL-6-4M	4.0	2	2	1 3/8	2 3/8	2 3/8	2 3/8
	MD 6-2x25	.25-.25	1 3/4	1	3/4	2 1/8	2 1/8	2 1/8
	MD 6-2x5	.5-.5	1 3/4	1 1/4	7/8	2 1/8	2 1/8	2 1/8
	MD 6-2x1M	1.0-1.0	2	2	1	2 3/8	2 3/8	2 3/8

### ASTRON HY-MET\* METALITE® TYPES MXJ and MXLJ

### MIL TYPES CH 70 of MIL C-18312



#### Type MXJ

OPERATING TEMPERATURE RANGE  
-60°C to +85°C

#### Type MXLJ

OPERATING TEMPERATURE RANGE  
-65°C to +125°C



#### TYPE MXJ & MXLJ

- Higher capacitance than ever before achieved in MIL Style CP70 cases, due to use of metallized paper sections.
- MXJ — Hermetically sealed. Silicone rubber compression seal lug terminals. Units meet MIL tests for moisture resistance, thermal cycle immersion and vibration.
- MXJ and MXLJ — Spade bolt "J" brackets supplied with each unit for convenient, rigid mounting.
- MXJ and MXLJ — Standard capacitance tolerance: 20%.
- MXLJ — Hermetically sealed. Glass-to-metal sealed lug terminals.

\* Trade Mark

### RECTANGULAR CASED METALLIZED PAPER CAPACITORS IN TERNEPLATE CASES STYLE CP70

Cat. No.	Cap. Mf.	L	x	W	x	H	Mfg. Ctr.
<b>100 VOLTS DC WORKING</b>							
MXJ or MXLJ-1-100M	100.0	3 3/4		2 3/4		4 1/8	4
<b>150 VOLTS DC WORKING</b>							
MXJ or MXLJ-1.5-4M	4.0	1 3/4	1			1 5/8	2
MXJ or MXLJ-1.5-10M	10.0	1 3/4	1			2 5/8	2
MXJ or MXLJ-1.5-12M	12.0	1 3/4	1			2 7/8	2
MXJ or MXLJ-1.5-15M	15.0	1 3/4	1			3 3/8	2
MXJ or MXLJ-1.5-20	20.0	1 3/4	1			4 3/8	2
MXJ or MXLJ-1.5-25M	25.0	2 1/2	1			3	2 3/4
MXJ or MXLJ-1.5-30M	30.0	2 1/2	1 3/8			3 7/8	2 3/4
MXJ or MXLJ-1.5-50M	50.0	2 1/2	1 3/8			4 3/4	2 3/4
<b>400 VOLTS DC WORKING</b>							
MXJ or MXLJ-4-2M	2.0	1 3/4	1			2 1/8	2
MXJ or MXLJ-4-4M	4.0	1 3/4	1			2 7/8	2
MXJ or MXLJ-4-6M	6.0	1 3/4	1			3 7/8	2
MXJ or MXLJ-4-8m	8.0	1 3/4	1			4 3/4	2
MXJ or MXLJ-4-10M	10.0	2 1/2	1 3/8			3 7/8	2 3/4
MXJ or MXLJ-4-20M	20.0	2 1/2	1 3/8			4 3/4	2 3/4
MXJ or MXLJ-4-30M	30.0	3 3/4	1 1/4			4 3/4	4
<b>600 VOLTS DC WORKING</b>							
MXJ or MXLJ-6-1M	1.0	1 3/4	1			1 5/8	2
MXJ or MXLJ-6-2M	2.0	1 3/4	1			2 3/8	2
MXJ or MXLJ-6-4M	4.0	1 3/4	1			3 7/8	2
MXJ or MXLJ-6-6M	6.0	1 3/4	1			4 3/4	2
MXJ or MXLJ-6-8M	8.0	2 1/2	1 3/8			3 7/8	2 3/4
MXJ or MXLJ-6-10M	10.0	2 1/2	1 3/8			4 3/4	2 3/4
MXJ or MXLJ-6-15M	15.0	3 3/4	1 1/4			4 3/4	4
MXJ or MXLJ-6-20M	20.0	3 3/4	1 1/4			4 1/4	4

# ASTRON

DIVISION RENWELL INDUSTRIES, INC.  
EAST NEWARK, NEW JERSEY

## Capacitors



SPECIALISTS IN CAPACITOR MINIATURIZATION

### ASTRON TYPE XPR



#### ROUND MINIATURE MYLAR\* DIELECTRIC CAPACITORS

TEMPERATURE RANGE  
- 55°C to + 125°C

With Voltage Derating

ASTRON Type XPR Tubular Capacitors use Mylar\* Polyester film as a dielectric. Units are encased in a Mylar\* Polyester tape wrap and ends sealed with a plastic thermosetting resin. This affords an excellent protection against moisture. Type XPR Capacitors are extremely small in size with high insulation resistance and exceptional capacitance stability.

\* Reg. Dupont Trade Mark

200 WVDC			
Cat. No.	Cap. MFD	Dia.	x Length
XPR-2-001	.001	.156	1/2
XPR-2-0015	.0015	.156	1/2
XPR-2-0022	.0022	.156	1/2
XPR-2-0033	.0033	.160	1/2
XPR-2-0047	.0047	.170	1/2
XPR-2-0068	.0068	.200	1/2
XPR-2-01	.01	.230	1/2
XPR-2-015	.015	.290	1/2
XPR-2-022	.022	.275	1/2
XPR-2-033	.033	.270	3/8
XPR-2-047	.047	.320	3/4
XPR-2-068	.068	.350	3/4
XPR-2-1	.1	.410	7/8
XPR-2-15	.15	.500	7/8
XPR-2-22	.22	.500	1 1/8
XPR-2-33	.33	.550	1 1/8
XPR-2-47	.47	.600	1 1/4
XPR-2-68	.68	.650	1 3/8
XPR-2-1M	1.0	.750	1 3/4
XPR-2-1.5M	1.5	.900	1 3/4
XPR-2-2M	2.0	.980	1 7/8
XPR-2-3M	3.0	1.07	2 1/4
400 WVDC			
Cat. No.	Cap. MFD	Dia.	x Length
XPR-4-001	.001	.156	5/8
XPR-4-0015	.0015	.156	5/8
XPR-4-0022	.0022	.156	5/8
XPR-4-0033	.0033	.190	5/8
XPR-4-0047	.0047	.200	5/8
XPR-4-0068	.0068	.250	5/8
XPR-4-01	.01	.300	5/8
XPR-4-015	.015	.360	5/8
XPR-4-022	.022	.320	3/4
XPR-4-033	.033	.350	7/8
XPR-4-047	.047	.400	7/8
XPR-4-068	.068	.390	1
XPR-4-1	.1	.465	1
XPR-4-15	.15	.515	1 1/4
XPR-4-22	.22	.565	1 3/8
XPR-4-33	.33	.600	1 5/8
XPR-4-47	.47	.700	1 5/8
XPR-4-68	.68	.790	1 3/4
XPR-4-1M	1.0	.875	2
XPR-4-1.5M	1.5	.975	2 1/4
XPR-4-2M	2.0	1.250	2 1/4
600 WVDC			
Cat. No.	Cap. MFD	Dia.	x Length
XPR-6-001	.001	.170	3/4
XPR-6-0015	.0015	.170	3/4
XPR-6-0022	.0022	.187	3/4
XPR-6-0033	.0033	.203	3/4
XPR-6-0047	.0047	.234	3/4
XPR-6-0068	.0068	.265	3/4
XPR-6-01	.01	.290	3/4
XPR-6-015	.015	.312	7/8
XPR-6-022	.022	.187	3/4
XPR-6-033	.033	.350	1
XPR-6-047	.047	.415	1
XPR-6-068	.068	.500	1
XPR-6-1	.1	.520	1 3/8
XPR-6-15	.15	.625	1 3/8
XPR-6-22	.22	.660	1 5/8
XPR-6-33	.33	.687	2
XPR-6-47	.47	.855	2
XPR-6-68	.68	.970	2
XPR-6-1M	1.0	1.165	2 1/2
XPR-6-1.5M	1.5	1.275	3
XPR-6-2M	2.0	1.460	3

### ASTRON TYPE XPF



#### FLAT MINIATURE MYLAR\* DIELECTRIC CAPACITORS

TEMPERATURE RANGE  
- 55°C to + 125°C

With Voltage Derating

ASTRON Type XPF Capacitors use Mylar\* Polyester film as a dielectric. This series of non-metallic cased units employ an outer Mylar\* Polyester tape wrap and ends sealed with a plastic thermosetting resin. This affords an excellent protection against moisture. Ideally suited for use in applications requiring minimum size, high insulation resistance and exceptional capacitance stability.

\* Reg. Dupont Trade Mark

200 WVDC					
Cat. No.	Cap. MFD	T	W	L	
XPF-2-01	.01	1/8	1/4	3/4	
XPF-2-015	.015	3/32	3/8	3/4	
XPF-2-022	.022	3/16	3/8	3/4	
XPF-2-033	.033	1/2	1 1/2	3/4	
XPF-2-047	.047	1/4	3/8	3/4	
XPF-2-068	.068	3/32	3/8	7/8	
XPF-2-082	.082	1/4	1 3/2	7/8	
XPF-2-1	.1	1/4	1 1/4	7/8	
XPF-2-15	.15	3/32	1 3/2	1	
XPF-2-22	.22	3/32	1 5/2	1 1/4	
XPF-2-33	.33	3/8	1 7/2	1 1/4	
XPF-2-47	.47	1 3/2	1 3/2	1 3/8	
XPF-2-68	.68	7/4	1 3/2	1 5/8	
XPF-2-82	.82	1 5/2	5/8	1 5/8	
XPF-2-1M	1.0	1 5/2	5/8	1 7/8	

### METALLIZED MYLAR® CAPACITORS



#### ASTRON METALITE® TYPE RLR

ASTRON TYPE RLR metallized Mylar\* capacitors provide reliable operation even under adverse conditions in spite of their smaller size and lower cost.

Type RLR is an uncased unit, with a tough, protective Mylar\* wrap and epoxy end seal... ideal for potted assembly, military and commercial applications.

TEMPERATURE RANGE  
- 55°C to + 125°C

200 WVDC			
Cat. No.	Cap. MFD	Dia.	x Length
RLR 2-01	.01	.155	5/8
RLR 2-012	.012	.165	5/8
RLR 2-015	.015	.180	5/8
RLR 2-018	.018	.190	5/8
RLR 2-022	.022	.205	5/8
RLR 2-027	.027	.220	5/8
RLR 2-047	.047	.200	3/4
RLR 2-068	.068	.220	3/4
RLR 2-1	.1	.255	3/4
RLR 2-15	.15	.227	1 1/8
RLR 2-22	.22	.262	1 1/8
RLR 2-33	.33	.305	1 1/8
RLR 2-47	.47	.355	1 1/8
RLR 2-56	.56	.380	1 1/8
RLR 2-68	.68	.415	1 1/8
RLR 2-1M	1.0	.490	1 1/8
RLR 2-1.5M	1.5	.470	1 5/8
RLR 2-2M	2.0	.535	1 5/8
RLR 2-3M	3.0	.595	1 7/8
RLR 2-6M	6.0	.825	1 7/8

Cap. Tolerance ±20%

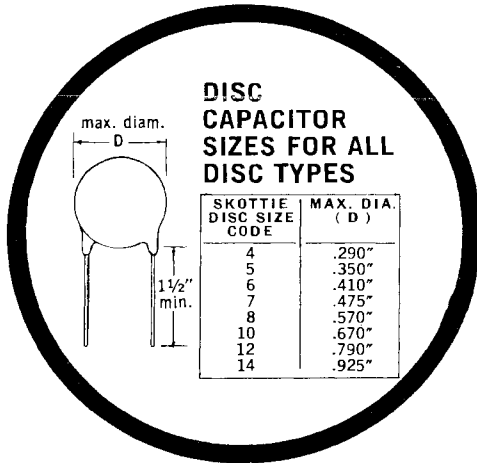
\* Reg. DuPont Trade Mark



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CAPACITORS**



**DISC  
CAPACITOR  
SIZES FOR ALL  
DISC TYPES**

SKOTTIE DISC SIZE CODE	MAX. DIA. (D)
4	.290"
5	.350"
6	.410"
7	.475"
8	.570"
10	.670"
12	.790"
14	.925"

**SPECIFICATIONS**

**WORKING VOLTAGE:** 600 W.V.D.C.  
**TEST VOLTAGE (Flash):** 1500 W.V.D.C.  
**POWER FACTOR:** 1.5% Maximum at 1 kc (initial).  
**CAPACITANCE:** Measured at 25°C, an RMS voltage between 0.5 and 5.0 and a frequency of 1 kc.  
**INITIAL INSULATION RESISTANCE:** Over 10,000 megohms.  
**INSULATION:** Phenolic vacuum-impregnated.  
**LEADS:** No. 22 (.026" dia.) or No. 20 gauge (.032" dia.) tinned copper.  
**MARKING:** Manufacturer's identification, capacitance and tolerance.  
**CAPACITANCE TOLERANCES:**  
K = ±10% M = ±20% X = +80% -20%  
Y = GMV (+100% -0%) Z = +100% -20%

**SKOTTIE STYLE TXD-  
HIGH K GENERAL PURPOSE  
DISC CAPACITORS**

SKOTTIE STYLE TXD all purpose disc ceramics provide the highest available capacitance at 25°C in the smallest possible size. These capacitors exhibit less capacitance change with temperature than the limits specified in the EIA RS-198 specification for Z5U ceramics. This specification allows a maximum capacitance change of +22% and -56% along a temperature range of +10°C to +85°C.

**CAPACITANCE (pf) VS. SIZE**

SKOTTIE STYLE and SIZE CODE	CAPACITANCE RANGE (pf)
TXD-4	1000 to 2000
TXD-5	2000 to 3000
TXD-6	3000 to 5000
TXD-8	5000 to 10,000
TXD-10	10,000 to 20,000
TXD-12	20,000 to 30,000

Specify desired Capacitance.

**ORDERING INFORMATION**

Example: Style \*Size \*Capacitance \*Tolerance  
TXD - 8 - 502 - M

\*SIZE: As shown above.  
\*CAPACITANCE (mmf): The capacitance is indicated by a three digit number. The first two numbers are significant; the third specifies the number of zeros to follow.  
\*TOLERANCE:  
The letter (K) designates ±10%.  
The letter (M) designates ±20%.  
The letter (X) designates +80% -20%.  
The letter (Y) designates GMV (+100% -0%).  
The letter (Z) designates +100% -20%.

**SKOTTIE STYLE TYD- MINIATURE LOW VOLTAGE  
50-100 V.D.C. DISC CAPACITORS**

SKOTTIE STYLE TYD all purpose ceramics provide the highest available capacitance at 25°C in the smallest possible size. These capacitors exhibit capacity change with temperature as specified in the EIA RS-198 specification for Z5V. This specification allows a max. cap. change of +22% to -82% for a temperature range of +10°C to +85°C.

**CAPACITANCES VS. SIZE**

SKOTTIE STYLE and SIZE CODE	STANDARD VALUES OTHERS AVAILABLE
TYD-4	.001, .002, .003, .005 MF
TYD-6	.01 MF
TYD-7	.02 MF, .03 MF
TYD-10	.04 MF, .05 MF, .01 MF
TYD-14	*.05 MF, *.1 MF

Specify desired Capacitance.  
\*Rated at 500 Volt D.C.

**ORDERING INFORMATION**

EXAMPLE: Style \*Size \*Capacitance \*Tolerance  
TYD - 8 - 502 - M

\*SIZE: As shown in table.  
\*CAPACITANCE (pf): The capacitance is indicated by a three digit number. The first two numbers are significant; the third specifies the number of zeros to follow.  
\*TOLERANCE:  
The letter (K) designates ±10%.  
The letter (M) designates ±20%.  
The letter (X) designates +80% -20%.  
The letter (Y) designates GMV (+100% -0%)  
The letter (Z) designates +100% -20%.

**SPECIFICATIONS:  
TYD & TSD**

**WORKING VOLTAGE:** 600 W.V.D.C.  
**TEST VOLTAGE (FLASH):** 1500 W.V.D.C.  
**POWER FACTOR:** 1.5% Maximum at 1 kc (initial).  
**CAPACITANCE:** Measured at 25°C, an RMS voltage between 0.5 and 5.0 and a frequency of 1 kc.  
**INITIAL INSULATION RESISTANCE:** Over 10,000 megohms.  
**INSULATION:** Phenolic vacuum-wax impregnated.  
**LEADS:** No. 22 (.026" diameter) or No. 20 gauge (.032" dia.) tinned copper.  
**MARKING:** Manufacturer's identification, capacitance and tolerance.  
**CAPACITANCE TOLERANCES:**  
K = ±10%  
M = ±20%  
Y = GMV (+100% -0%)  
X = +80% -20%  
Z = +100% -20%

**SKOTTIE STYLE TSD- TEMPERATURE "STABLE"  
DISC CAPACITORS**

SKOTTIE STYLE TSD Stable Capacitance Ceramics afford the best available linearity of capacitance with temperature range. These units are notable for extremely low aging rate and excellent dielectric strength. The standard 1000 V.D.C. working voltage rating is ultra conservative. Meet Y5D characteristics in specifications RS-198.

**MAX. CAPACITANCES (pf) VS. SIZE**

SKOTTIE STYLE and SIZE CODE	CAPACITANCE RANGE (pf)
TSD-4	600
TSD-5	900
TSD-6	1500
TSD-8	2400
TSD-10	3600
TSD-12	6500

Specify desired Capacitance.

**ORDERING INFORMATION**

EXAMPLE: Style \*Size \*\*Capacitance \*\*\*Tolerance  
TSD - 5 - 101 - J

\*SIZE: As shown in table.  
\*\*CAPACITANCE (mmf): The capacitance is indicated by a three digit number. The first two numbers are significant; the third digit specifies the number of zeros to follow.  
\*\*\*TOLERANCE:  
The letter (M) designates ±20%.  
The letter (K) designates ±10%.  
The letter (J) designates ±5%.



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## SKOTTIE STYLE TCD- TEMPERATURE COMPENSATING DISC CAPACITORS

### SPECIFICATIONS

**WORKING VOLTAGE:** 600 V.D.C. (Higher voltages available).

**TEST VOLTAGE (Flash):** 1500 V.D.C. "Q": Over 1000 at 1 megacycle, for capacitances over 30 pf.

**INITIAL LEAKAGE RESISTANCE:** Over 10,000 megohms.

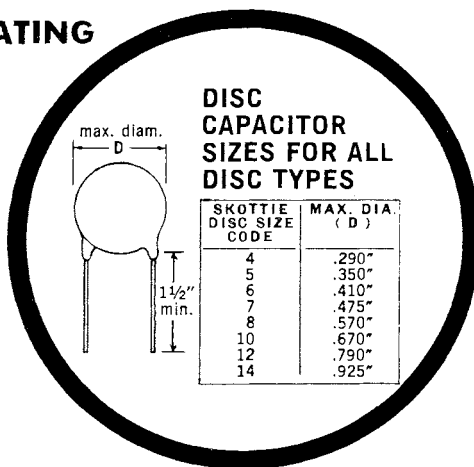
**CAPACITANCE TOLERANCE:** At 25°C: ±5% ±10% ±20%. Special tolerances available.

**INSULATION:** Phenolic vacuum wax impregnated.

**LEADS:** No. 22 (.026" diameter) or No. 20 gauge (.032") tinned copper.

**MARKING:** Capacitance, tolerance, and temperature coefficient.

SKOTTIE temperature compensating disc ceramic capacitors have a characteristically high "Q", high dielectric strength, excellent insulation resistance, low frequency coefficient of capacitance and very low aging rates. They are manufactured in the various disc styles established, MIL-C-11015, and E.I.A. RS-198 specification.



### ORDERING INFORMATION

**EXAMPLE:**  
Style \*Size \*Capacitance \*Tolerance \*Temp. Coef.  
TCD - 4 - 100 - K - NPO

\*SIZE: Size as shown in table.

\*TEMP. COEF.: Temperature coefficients as listed above or EIA characteristic.

\*CAPACITANCE: The capacitance is indicated by a three digit number. The first two numbers are significant; the third digit specifies the number of zeros to follow.

\*TOLERANCE: The letter (M) designates ±20%. The letter (K) designates ±10%. The letter (J) designates ±5% or ±.5 pf for 10 pf or less.

### MAXIMUM CAPACITANCES (pf) VS. SIZE

Skottie Style: Max. Dia.	TCD-4 .290"	TCD-5 .350"	TCD-6 .410"	TCD-8 .570"	TCD-10 .670"	TCD-12 .790"
TEMP. COEFF.	Min. & Max.	Max.	Max.	Max.	Max.	Max.
P100	1 to 6 pf	— pf	9 pf	28 pf	— pf	— pf
NPO	1 to 15	22	34	56	105	135
N030	1 to 16	23	35	56	106	140
N*80	3 to 17	24	36	70	113	150
N150	3 to 18	33	40	85	123	190
N220	3 to 23	38	52	90	130	226
N330	3 to 25	40	56	100	148	248
N470	3 to 30	44	60	124	205	276
N750	3 to 45	65	90	164	300	356
N1500	20 to 65	120	150	300	375	550
N2200	20 to 100	125	180	370	600	850
N3300	20 to 175	250	275	710	1000	1300
N4700	30 to 275	325	350	1300	1500	2200
N5600	40 to 350	375	390	1500	2400	3500

## SKOTTIE STYLE TFD- "FREQUENCY STABLE" DISC CAPACITORS

STYLE TFD FREQUENCY Stable Capacitance Ceramics exceed the standard specified in the EIA RS-198 specification for Z5F temperature characteristics. This specification allows a maximum capacitance change of ±7.5% for a temperature range of +10°C to +85°C. These capacitors exhibit excellent capacitance stability with voltage and frequency and afford relatively high capacitance vs. size.

### MAX. CAPACITANCES (pf) VS. SIZE

SKOTTIE STYLE and SIZE CODE	MAX. CAPACITANCE RANGE (pf)
TFD-4	1000
TFD-5	1500
TFD-6	2000
TFD-8	4000
TFD-10	5000
TFD-12	10,000

Specify desired Capacitance.

### ORDERING INFORMATION

**EXAMPLE:** Style \*Size \*Capacitance \*Tolerance  
TFD - 8 - 272 - M

\*SIZE: As shown in table.

\*CAPACITANCE (pf): The capacitance is indicated by a three digit number. The first two numbers are significant; the third specifies the number of zeros to follow.

\*TOLERANCE: The letter (K) designates ±10%. The letter (M) designates ±20%. The letter (X) designates +80% -20%. The letter (Y) designates GMV (+100% -0%). The letter (Z) designates +100% -20%.

## SPECIFICATIONS: TFD & TED

**WORKING VOLTAGE:**  
600 W.V.D.C.

**TEST VOLTAGE (Flash):**  
1500 W.V.D.C.

**POWER FACTOR:**  
1.5% Maximum at 1 kc (initial).

**CAPACITANCE:** Measured at 25°C, an RMS voltage between 0.5 and 5.0 and a frequency of 1 kc.

**INITIAL INSULATION RESISTANCE:** Over 10,000 megohms.

**INSULATION:** Phenolic vacuum-wax impregnated.

**LEADS:** No. 22 (.026" dia.) or No. 20 gauge (.032" dia.) tinned copper.

**MARKING:** Manufacturer's identification, capacitance and tolerance.

**CAPACITANCE TOLERANCES:**

- K = ±10%
- M = ±20%
- X = +80% -20%
- Y = GMV (+100% -0%)
- Z = +100% -20%

## SKOTTIE STYLE TED- "SEMI-STABLE" DISC CAPACITORS

SKOTTIE STYLE TED Semi-stable Capacitance Ceramics exceed the standard specified in the EIA RS-198 specification for X5S temperature characteristics. This specification allows a maximum capacitance change of ±22% for a temperature range of -55°C to +85°C. These capacitors exhibit excellent capacitance stability with voltage and frequency and afford relatively high capacitance vs. size.

### MAX. CAPACITANCES (pf) VS. SIZE

SKOTTIE STYLE and SIZE CODE	MAX. CAPACITANCE RANGE (pf)
TED-4	1000
TED-5	1500
TED-6	2000
TED-8	4000
TED-10	5000
TED-12	10,000

Specify desired Capacitance.

### ORDERING INFORMATION

**EXAMPLE:** Style \*Size \*Capacitance \*Tolerance  
TED - 8 - 272 - M

\*SIZE: As shown in table.

\*CAPACITANCE (pf): The capacitance is indicated by a three digit number. The first two numbers are significant; the third specifies the number of zeros to follow.

\*TOLERANCE: The letter (K) designates ±10%. The letter (M) designates ±20%. The letter (X) designates +80% -20%. The letter (Y) designates GMV (+100% -0%). The letter (Z) designates +100% -20%.

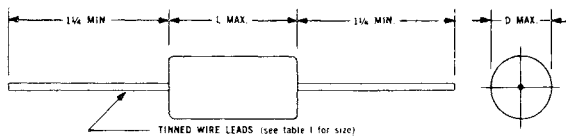
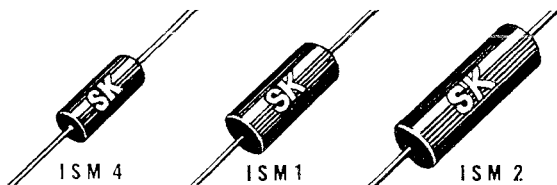


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Quality DISC & TUBULAR  
**CERAMIC CAPACITORS**

SKOTTIE STYLE **ISM MOLDED** TUBULAR CERAMIC CAPACITORS



SKOTTIE STYLE	ISM-4	ISM-1	ISM-2
EIA STYLE		CC21	CC26
D MAX. DIAM.	.180	.250	.250
L MAX. LENGTH	.450	.562	.812
WIRE LEAD SIZE	#22 (.025) AWG	#20 (.032) AWG	#20 (.032) AWG

**IDEAL FOR COMPUTERS, COMMUNICATION AND TEST EQUIPMENT, INSTRUMENTS, ETC.**

- The latest development using encapsulating materials and advanced manufacturing techniques to insure "proven" high reliability and uniformity for mechanized and automatic assembly under severe conditions.

- Utilizing a single ceramic dielectric element with 'fired on' electrodes and soldered connections, the Skottie ISM is extremely stable, eliminating any capacitor changing due solely to shifts of mechanical structure.

- Completely encased in pressure molded epoxy casing, binding all parts intimately, including leads.

- Meets MIL-Standard-202; MIL-C-20; MIL-C-11105; EIA Standards RS165 and EIA Standards 198.

- Ideal for automatic insertion into printed wiring boards, cord wood packages and other special miniature assemblies.

- Supplied on tape rolls with lead or body taping in loose, magazine or any other type packing.

**TYPE ISM**  
 TEMPERATURE COMPENSATING TUBULAR CERAMIC CAPACITORS — Class I

TEMPERATURE COEFFICIENTS			MAXIMUM CAPACITANCE (pf) VS. SIZE STYLE AND SIZE CODE		
PPM/°C	TOLERANCE PPM	E.I.A. TEMP. CHAR.	ISM 4 200 VDCW	ISM 1 (EIA Type) CC 21 500 VDCW	ISM 2 (EIA Type) CC 26 500 VDCW
P 120	±30	M7G	12pf	12pf	23pf
P 030	±30	B6G	14pf	15pf	25pf
NPO	±30	COG	25pf	25pf	47pf
N 030	±30	B1G	26pf	25pf	68pf
N 080	±30	U1G	29pf	29pf	45pf
N 150	±30	P2G	33pf	35pf	60pf
N 220	±30	R2G	36pf	38pf	66pf
N 330	±60	S2H	40pf	43pf	73pf
N 470	±60	T2H	45pf	46pf	88pf
N 750	±120	U2J	67pf	70pf	120pf
N 1400	±250	P3K	82pf	100pf	120pf
N 2200	±400	R3A	131pf	165pf	180pf
N 3300	±650	S3B	213pf	300pf	330pf
N 4200	±850	G3C	327pf	560pf	600pf
N 4700	±900	T3D	425pf	850pf	930pf
N 5600	±1000	H3M	573pf	1000pf	1100pf

**ORDERING INFORMATION**

EXAMPLE: \*Style ISM \*Size 4 \*Capacitance 250 \*Tolerance K \*Temp. Coeff. NPO

\*STYLE: ISM — Molded Epoxy Tubular

\*SIZE: Sizes as shown in Table 1.

\*TEMP. COEF.: Temperature coefficient as listed above.

\*CAPACITANCE: The capacitance is indicated by a three digit number. The first two numbers are significant; the third digit specifies the number of zeroes to follow.

\*TOLERANCE: The letter (M) designates ±20%. The letter (K) designates ±10%. The letter (J) designates ±5%.

**TYPE ISM** HIGH K TUBULAR CERAMIC CAPACITORS — Class II

TEMPERATURE CHARACTERISTICS			MAXIMUM CAPACITANCE (pf) VS. SIZE STYLE AND SIZE CODE		
TEMP. RANGE FOR CHARACTERISTIC DETERMINATION	CAPACITANCE CHANGE WITH TEMPERATURE	E.I.A. TEMP. CHARACTERISTIC	ISM 4 200 VDCW	ISM 1 (EIA Type) CC 21 500 VDCW	ISM 2 (EIA Type) CC 26 500 VDCW
-10°C to +85°C	+22% -56%	Z5U	3500pf	3000pf	3300pf
-55°C to +85°C	±22%	X5S	1500pf	2000pf	2200pf
-30°C to +85°C	±3.3%	Y5D	1000pf	750pf	850pf
-10°C to +85°C	±7½%	Z5F	1400pf	1200pf	1350pf
-10°C to +85°C	+22% -82%	Z5V	5600pf	5000pf	6700pf
-55°C to +85°C	±7½%	X5F	1400pf	215pf	250pf
-55°C to +85°C	±10%	X5P	1400pf	575pf	750pf

**ORDERING INFORMATION**

EXAMPLE: \*Style ISM \*Size 4 \*Capacitance 352 \*Tolerance K \*EIA Char. Z5U

\*STYLE: ISM — Molded Epoxy Tubular

\*SIZE: Sizes as shown in Table 1.

\*EIA CHARACTERISTIC: As listed above.

\*CAPACITANCE: The capacitance is indicated by a three digit number. The first two numbers are significant; the third digit specifies the number of zeroes to follow.

\*TOLERANCE: The letter (M) designates ±20%. The letter (K) designates ±10%. The letter (J) designates ±5%.

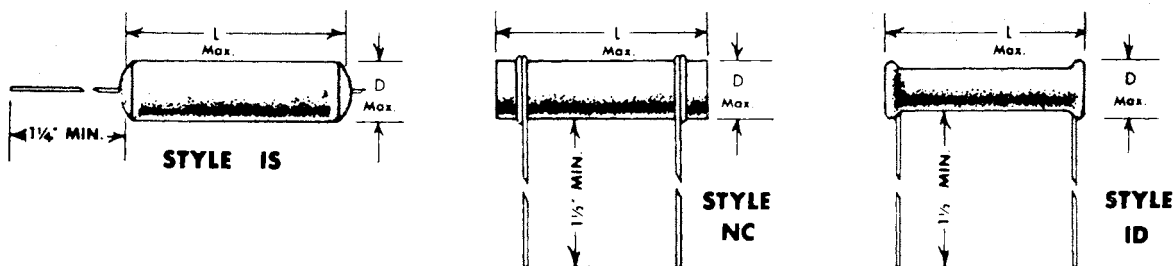


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## SKOTTIE TUBULAR CERAMIC CAPACITORS



### TUBULAR SIZE CHART

SKOTTIE STYLE & SIZE CODE	STEATITE CASE INSULATED TUBULAR — TYPE IS			LACQUER COATED UNINSULATED TUBULARS — TYPE NC						DUREZ INSULATED TUBULARS — TYPE ID							
	1	2	3	1	2	27	7	19	3	5	1	2	27	7	19	3	5
MAX. LENGTH (L)	.562	.812	1.320	.400	.655	.470	.825	.860	1.090	1.875	.468	.750	.540	.875	.937	1.250	.375
MAX. DIAM. (D)	.250	.250	.340	.200	.200	.240	.250	.250	.255	.340	.250	.250	.290	.312	.312	.312	.200
MIL-C-20 STYLE	CC21	CC26	CC36	CC20	CC25	CC30	CC32	—	CC35	CC45	CC22	CC27	CC31	CC33	—	CC37	CC47

## SKOTTIE STYLE IS, NC, ID Hi-K TUBULAR CAPACITORS

SKOTTIE Hi-K Tubular Ceramic Capacitors are general purpose high dielectric constant ceramic capacitors that conform to MIL-C-20, MIL-C-11015 and the EIA RS-198 specification for Z5U ceramics. This specification allows a maximum capacitance change of  $\pm 3.3\%$  of room temperature capacitance from  $-30^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with a maximum capacitance of 1800 pf to the high dielectric constant bodies with a maximum capacitance of 10,000 pf in the same case.

TEMPERATURE CHARACTERISTIC			MINIMUM-MAXIMUM CAPACITANCE (pf) for SKOTTIE HI-K TUBULARS	
MAXIMUM CAPACITANCE CHANGE	TEMP. RANGE FOR MAXIMUM CAPACITANCE CHANGE	E.I.A. SYMBOL FOR TEMP. CHAR.	Size Code (1)	Size Code (2)
$\pm 3.3\%$	$-30 + 85^{\circ}\text{C}$	Y5D	750	1800
$\pm 7.5\%$	$-55 + 85^{\circ}\text{C}$	X5F	215	650
$\pm 10\%$	$-55 + 85^{\circ}\text{C}$	X5P	575	1500
$\pm 22\%$	$-55 + 85^{\circ}\text{C}$	X5S	2000	3500
$\pm 7.5\%$	$+10 + 85^{\circ}\text{C}$	Z5F	1200	2500
$+22\%$	$+10 + 85^{\circ}\text{C}$	Z5U	3000	7500
$-56\%$				
$+22\%$	$+10 + 85^{\circ}\text{C}$	Z5V	5000	10,000
$-82\%$				

NOTE: Specifications Same as for Styles TFD and TED.

### ORDERING INFORMATION

EXAMPLE	*Style ID	*Size 27	*EIA Char. Z5U	*Capacitance 50	*Tolerance K
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\*STYLE: ID — Insulated Durez tubular  
NC — Non-Insulated tubular IS — Insulated Steatite tubular

\*SIZE: Sizes as shown above.

\*EIA CHARACTERISTIC: As listed above.

\*CAPACITANCE: The capacitance is indicated by a three digit number. The first two numbers are significant; the third digit specifies the number of zeroes to follow.

\*TOLERANCE: The letter (M) designates  $\pm 20\%$ .  
The letter (K) designates  $\pm 10\%$ .  
The letter (J) designates  $\pm 5\%$ .

## SKOTTIE STYLE IS, NC, ID

### TEMPERATURE COMPENSATING TUBULAR CAPACITORS

SKOTTIE Temperature Compensating Tubular ceramic capacitors are available in the widest ranges of temperature coefficients having any predetermined value from P120 to a negative coefficient of N5600. (See chart).

SKOTTIE Tubulars are available in three different styles in accordance with MIL-C-20, MIL-C-11015 and the EIA RS-198 specification. They are capable of operating over a temperature range with proper derating from  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

MAXIMUM CAPACITANCES (mmfd) VS. SIZE						
SIZE CODE: (1)	(13)	(2)	(27)	(7)	(19)	(3)
TEMPERATURE COEFFICIENT						
P120	.3 to 12 pf	— pf	15 pf	— pf	40 pf	— pf
NPO	.3 to 25	33	45	50	100	120
N030	.3 to 25	34	46	52	103	125
N080	.3 to 29	39	48	59	120	140
N150	.3 to 32	44	56	68	137	160
N220	.3 to 36	48	65	74	150	175
N330	.3 to 39	54	80	81	169	192
N470	.3 to 46	64	90	110	205	230
N750	.3 to 65	90	120	150	290	320
N1400	1 to 100	140	225	300	465	500
N2200	1 to 165	—	265	—	—	—
N3300	1 to 300	—	380	—	—	—
N4700	1 to 560	—	825	—	—	—
N5600	1 to 850	—	1200	—	—	—

NOTE: Specifications Same as for Style TCD.

### ORDERING INFORMATION

EXAMPLE:	*Style ID	*Size 27	*Capacitance 500	*Tolerance K	*Temp. Coef. NPO
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\*STYLE: ID — Insulated Durez tubular  
NC — Non-Insulated tubular IS — Insulated Steatite tubular

\*SIZE: Sizes as shown above.

\*TEMP. COEF.: Temperature coefficient as listed above.

\*CAPACITANCE: The capacitance is indicated by a three digit number. The first two numbers are significant; the third digit specifies the number of zeroes to follow.

\*TOLERANCE: The letter (M) designates  $\pm 20\%$ .  
The letter (K) designates  $\pm 10\%$ .  
The letter (J) designates  $\pm 5\%$ .



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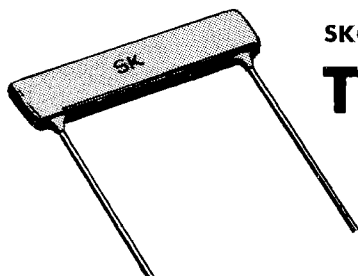


Quality DISC & TUBULAR  
**CERAMIC CAPACITORS**

**RECTANGULAR PLATE & SQUARE CERAMIC CAPACITORS**

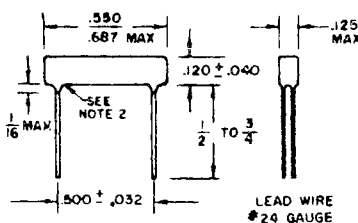
- Specifically developed for use in printed wiring assemblies for minimum use of space.
- Made to utilize latest development in ceramic dielectrics, covering the complete range of temperature characteristics from plus 100 parts per million to high "K" material including all negative temperature coefficients.
- TP Capacitors designed for using a fixed distance between leads for minimum all-over heights, no higher than transistors or other equivalent components.

- SPD Capacitors designed to utilize a square plate, increasing overall capacitance by approx. 25% within same overall geometry.
- For both types, all dielectrics are available; sealed against moisture and effects of atmospheric conditions by a porous phenolic case, impregnated in microcrystalline wax.
- MEET ALL PERFORMANCE AND ENVIRONMENTAL REQUIREMENTS OF MIL-C-11015.



**SKOTTIE STYLE TP-1 RECTANGULAR PLATE TYPE General Purpose**

- Stable bodies available for a variety of temperature coefficients.
- Working Voltage 100 VDC.
- Test Voltage (Flash 300 VDC)
- Initial leakage resistance — over 10,000 megohms.
- Temperature range -55°C to +85°C (EIA characteristics Z5, Y5, X5).
- Insulation: Phenolic, Wax impregnated.
- Leads: No. 24 AWG tinned copper.
- Minimum marking: Capacitance, Tolerance, and Temperature coefficient or EIA characteristics.
- Insulating coating does not extend more than 1/16" along lead wires, measured from a tangent to the coating surfaces drawn perpendicular to the lead wire.
- Capacitance tolerance: M ±20% K ±10% J ±5% — Special Tolerances Available.

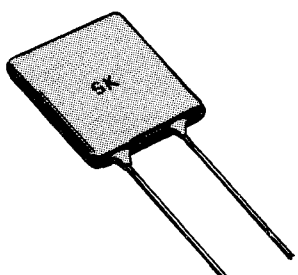


SKOTTIE TYPE DESIGNATION	DC WORKING VOLTAGE	TC OR K FACTOR	CAPACITANCE CHANGE VS. TEMP	CAP. pF	CAP. TOL.
TP-1-220-J	100	N220	± 1.5%	22	J, K
TP-1-330-J	100	N330	± 2.0%	33	J, K
TP-1-470-J	100	N470	± 3.0%	47	J, K
TP-1-600-J	100	N750	± 5.0%	68	J, K
TP-1-101-J	100	N1500	±10.0%	100	J, K
TP-1-151-J	100	N1500	±10.0%	150	J, K
TP-1-221-K	100	K300	± 6.0%	220	K
TP-1-271-K	100	K300	± 6.0%	270	K
TP-1-331-K	100	K300	± 6.0%	330	K
TP-1-421-K	100	K825	±10.0%	420	K
TP-1-471-K	100	K825	±10.0%	470	K
TP-1-681-K	100	K825	±10.0%	680	K
TP-1-801-K	100	K1200	± 3.3%	800	K
TP-1-102-K	100	K1200	± 3.3%	1000	K
TP-1-122-K	100	K1200	± 3.3%	1200	K
TP-1-152-K	100	K1200	± 3.3%	1500	K
TP-1-202-K	100	K1200	± 3.3%	2000	K
TP-1-272-K	100	K1200	± 3.3%	2700	K
TP-1-472-M	100	K1900	±22.0%	4700	M
TP-1-682-M	100	K1900	±22.0%	6800	M

**SKOTTIE STYLE SPD SQUARE PLATE TYPE GENERAL PURPOSE**

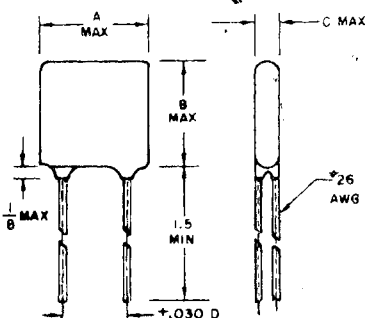
- Stable bodies available for a variety of temperature coefficients.
- Working Voltage 200 VDC.
- Test Voltage (Flash 600 VDC).
- Initial leakage resistance — over 10,000 megohms.
- Temperature range -55°C to +85°C (EIA characteristics Z5, Y5, X5).
- Insulation: Phenolic, Wax impregnated.

- Leads: Radial No. 26 AWG tinned copper or No. 24 AWG.
- Minimum marking Capacitance, Tolerance, and Temperature coefficient or EIA characteristics.
- Insulating coating does not extend more than 1/16" along lead wires, measured from a tangent to the coating surfaces drawn perpendicular to the lead wire.
- Capacitance tolerance: M ±20% K ±10% J ±5%.
- Special Tolerances Available.



Style	DIMENSIONS			
	A-Dim.	B-Dim.	C-Dim.	D-Dim.
SPD-150	.150	.150	.100	.100
SPD-200	.200	.200	.100	.100
SPD-300	.300	.300	.100	.200
SPD-400	.400	.400	.100	.200
SPD-550	.550	.550	.150	.375
SPD-600	.600	.575	.150	.375

Capacitance Tolerance ±5% ±10% ±20% +80 -20%



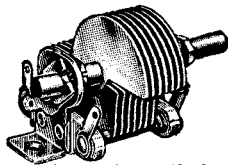
T.C.	Max. Capacitance pF (SPD)					
	SKOTTIE STYLES	SPD 150	SPD 200	SPD 300	SPD 400	SPD 550
P100	10pF	11pF	25pF	48pF	76pF	90pF
NPO	6	19	42	80	127	155
N030	12	23	51	96	150	185
N080	15	28	61	115	180	220
N150	17	32	69	130	210	250
N220	19	35	76	144	230	270
N330	21	39	85	160	255	310
N470	25	46	100	190	300	370
N750	35	64	138	260	410	510
N1500	42	78	170	320	510	620
N2200	62	125	270	510	810	980
N3300	100	180	400	760	1200	1480
N4700	250	460	1000	1900	3000	3700
N5600	370	700	1500	2800	4500	5500
Z5D, X5F	500	920	2000	3800	6000	7000
Z5F	700	1300	2800	5400	8600	10,500
Z5R, X5R	820	1500	3000	6000	10,000	12,000
Z5T	1600	3100	6800	12,500	20,000	24,000
Z5U, X5V	2500	4500	10,000	19,000	30,000	37,000
Z5V, X5V	3000	6000	13,000	25,000	40,000	49,000





# Variable Condensers

## MIDGET CONDENSERS DOUBLE BEARING



Small, sturdy, high mechanical and electrical efficiency. Alsmag insulation. Rotor and stator plates are cadmium-plated brass and are electro soldered to their respective rods. Both front and rear bearings. Furnished in either mid-line (straight line wave length), or semi-circular (straight line capacity) plates.

Small, sturdy, high mechanical and electrical efficiency. Alsmag insulation. Rotor and stator plates are cadmium-plated brass and are electro soldered to their respective rods. Both front and rear bearings. Furnished in either mid-line (straight line wave length), or semi-circular (straight line capacity) plates.

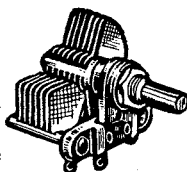
### SEMI-CIRCULAR TYPE

Bud No.	Cap., $\mu\text{f}$		Air Gap	Net Each
	Max.	Min.		
MC-1850	15	3	.024"	\$1.82
MC-1852	33	4	.024"	1.88
MC-1853	50	5	.024"	2.48
MC-1855	100	7	.024"	2.70
MC-1856	140	7	.024"	2.78
MC-1858	190	9	.024"	3.00
MC-1859	235	10	.024"	3.45
MC-1860	300	12	.024"	3.75
MC-1861	15	4	.060"	2.40
MC-1862	35	5	.060"	2.48
MC-1865	100	12	.060"	3.24

### MID-LINE TYPE

Bud No.	Cap., $\mu\text{f}$		Air Gap	Net Each
	Max.	Min.		
MC-900	25	4	.024"	\$2.29
MC-902	35	5	.024"	2.31
MC-903	50	6	.024"	2.43
MC-904	75	7	.024"	2.54
MC-905	100	7	.024"	2.76
MC-906	140	7	.024"	3.00
MC-909	250	11	.024"	3.36
MC-910	300	13	.024"	3.66

## SINGLE BEARING MIDGET CONDENSERS

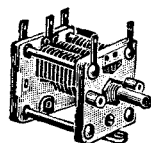


Construction is identical to the Midget condensers described. These condensers have a front bearing only.

### SEMI-CIRCULAR TYPE

Bud No.	Cap., $\mu\text{f}$		Air Gap	Net Each
	Max.	Min.		
MC-1870	15	3	.024"	\$1.80
MC-1872	33	4	.024"	1.88
MC-1873	50	5	.024"	1.95
MC-1875	100	7	.024"	2.10
MC-1876	140	8	.024"	2.40
MC-1881	50	7	.060"	2.40

## "CE" MIDGET CONDENSERS SINGLE SECT'N DOUBLE BEARING



contact for noise-free tuning. All metal cadmium plated. Either panel or base mounting.

To meet UHF and laboratory equipment use. Brass rotor and stator stacks electro soldered. End plates of Alsmag Insulate mounting bushings and angles from rotor and stator assembly. Special wiper

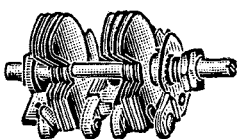
Bud No.	Cap., $\mu\text{f}$ .		Air Gap	Over. Lg.	Net Ea.
	Max.	Min.			
CE-2001	35	6	.030"	2 <sup>23</sup> / <sub>32</sub> "	\$3.00
CE-2002	50	7	.030"	2 <sup>27</sup> / <sub>32</sub> "	3.42
CE-2004	100	9	.030"	3 <sup>11</sup> / <sub>32</sub> "	4.05
CE-2005	150	10	.030"	3 <sup>13</sup> / <sub>32</sub> "	4.13
CE-2006	200	11	.030"	4 <sup>1</sup> / <sub>32</sub> "	4.80
CE-2007	250	12	.030"	4 <sup>3</sup> / <sub>32</sub> "	5.40
CE-2008	300	15	.030"	5 <sup>5</sup> / <sub>32</sub> "	5.48
CE-2015	100	13	.060"	4 <sup>7</sup> / <sub>32</sub> "	4.65

### "CE" TYPE DUAL MIDGETS

Similar to "CE", but double bearing. Feature rotor wiping contact at assembly center for maximum high frequency efficiency. Opposed rotor construction.

Bud No.	Cap., $\mu\text{f}$	Air Gap	Over. Lg.	Net Ea.
CE-2033	50	7	.030"	3 <sup>15</sup> / <sub>32</sub> " \$4.50
CE-2035	100	9	.030"	4 <sup>25</sup> / <sub>32</sub> " 5.36
CE-2036	150	10	.030"	5 <sup>7</sup> / <sub>32</sub> " 6.45

## DOUBLE GANG MIDGET CONDENSERS



Designed for chassis and panel mounting. Construction identical with other midgets.

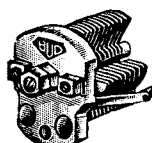
### MID-LINE PLATE TYPE (STRAIGHT LINE WAVE LENGTH)

Bud No.	Cap. Per Sec. $\mu\text{f}$		Air Gap	Over. Lg.	Net Ea.
	Max.	Min.			
MC-911A	100	6	.024"	4 <sup>3</sup> / <sub>16</sub> "	\$4.46
MC-912A	140	7	.024"	4 <sup>7</sup> / <sub>16</sub> "	4.83

### SEMI-CIRCULAR PLATE TYPE (STRAIGHT LINE CAPACITY)

MC-1882A	100	7	.024"	4 <sup>3</sup> / <sub>16</sub> "	\$4.35
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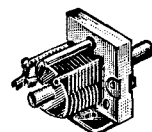
## TINY-MITE PADDERS



Maintain constant capacity under all temperature and humidity conditions. For IF applications, fixed tuned circuits for exciters, ganged condenser air trimmers, and plug-in coil padding. Rotor and stator are cadmium-plated brass plates. .015" thick. Fit inside standard 1<sup>1</sup>/<sub>2</sub>" diameter coil forms. Insulation is Steatite. May be adjusted in capacity by either a screwdriver or a 1/4" hex. wrench.

Bud No.	Cap., $\mu\text{f}$		Air Gap	Net Each
	Max.	Min.		
LC-2076	15	2	.017"	\$1.65
LC-2077	25	2.5	.017"	1.73
LC-2078	35	3	.017"	1.80
LC-2079	50	3.9	.017"	1.95
LC-2080	75	4.5	.017"	2.10
LC-2081	100	5.5	.017"	2.25
LC-2082	140	6.5	.017"	2.40

## TINY-MITE SINGLE SECTION TUNING CONDENSERS

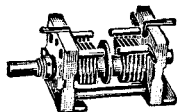


Designed for applications where space or weight are limiting factors and for tuning of UHF circuits. Rigid construction, close fitting bearing, positive rotor contact and Steatite insulation. Brass parts are cadmium plated.

Bud No.	Cap., $\mu\text{f}$		Air Gap	Net Each
	Max.	Min.		
LC-1640	8	2.5	.017"	\$1.71
LC-1641	15	3	.017"	1.82
LC-1642	25	4	.017"	1.95
LC-1643	35	5	.017"	1.95
LC-1644	50	6	.017"	2.10
LC-1645	75	7	.017"	2.33
LC-1646	100	9	.017"	2.40
LC-1650	25	5.5	.037"	2.01

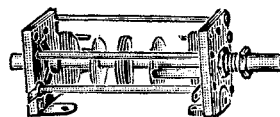
## TINY-MITE DUAL CONDENSERS

Construction similar to the regular Tiny-Mite Tuning Condensers. End pieces held firmly with three tie-rods. Separate round plate soldered on rotor rod to shield two stator sections. Large surface front and rear bearings for smooth rotation.



Bud No.	Cap. per Sec. $\mu\text{f}$		Air Gap	Over. Lgth.	Net Each
	Max.	Min.			
LC-1659	8	2.5	.017"	2 <sup>17</sup> / <sub>32</sub> "	\$2.90
LC-1660	15	3	.017"	2 <sup>21</sup> / <sub>32</sub> "	3.30
LC-1661	25	4	.017"	2 <sup>15</sup> / <sub>16</sub> "	3.93
LC-1662	50	6	.017"	3 <sup>3</sup> / <sub>32</sub> "	4.35
LC-1663	100	9	.017"	4 <sup>27</sup> / <sub>32</sub> "	5.33
LC-1664	10	4	.037"	3 <sup>1</sup> / <sub>16</sub> "	3.51
LC-1665	15	5	.037"	3 <sup>17</sup> / <sub>32</sub> "	4.26

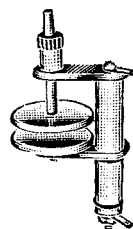
## THREE-GANG TINY-MITE



Bud No.	Cap. Per Sec. $\mu\text{f}$		Plates Per Section	Net Each
	Max.	Min.		
LC-1845	11	5	5	\$5.25
LC-1846	17	5	7	5.85
LC-1847	25	6	9	6.23

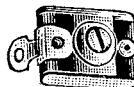
## FEED-THRU NEUTRALIZING CONDENSERS

Particularly suited for circuits using tubes with grid lead terminated in the base. Single hole mounting, feed-thru design. Aluminum plates rounded at edge to cut down losses. After tuning, movable plate may be locked with knurled nut. Wt., 1/4 lb.



Bud No.	Cap., $\mu\text{f}$		Net Ea.
	Max.	Min.	
NC-852	6	.5	\$2.40
NC-853	11	1	3.36

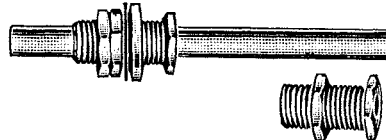
## MIDGET TRIMMER CONDENSERS



Primarily intended for antenna coupling, interstage coupling and tracking applications. Ceramic base.

Bud No.	Cap., $\mu\text{f}$		Wt., Lb.	Net Each
	Max.	Min.		
MT-833	36	3	1/4	\$0.15
MT-828	420	94	1/4	.30

## PANEL BEARING ASSEMBLIES



Consists of a regular 1/4" shaft bearing with 6" and 3" lengths of 1/4" brass rod inserted and held by washers to prevent the shaft from shifting. Facilitate the panel control of condensers, potentiometers, etc., which must be mounted away from the panel. Bearing fits in 1/8" hole on panels to 3/8" thick.

Bud No.	Overall Lgth., In.	Depth Behind Panel	Wt. Lbs.	Net Each
PB-530	6"	4 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	\$0.66
PB-531	3"	1 <sup>3</sup> / <sub>4</sub> "	3/4"	.54
PB-532	Bearing only			1/4" .18

\*Pkg. of 15; others, pkg. of 10.

## INSULATED FLEXIBLE COUPLINGS

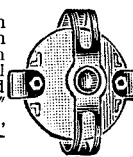
Tandem operation of two or more units is readily accomplished through the use of these couplers. Direct shaft alignment is not essential, and all couplers are made to fit 1/4" shafts.



Bud. No.	Diam. In.	Hgt. In.	Insulation	Net Each
FC-795	1 <sup>1</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>16</sub>	Ceramic	\$0.78
FC-845	1 <sup>1</sup> / <sub>16</sub>	3/8	Bakelite	.60
FC-855	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>16</sub>	Bakelite	.54

## HIGH VOLTAGE FLEXIBLE COUPLING

Special spring construction permits wide gap between shaft connections, freedom from back-lash and unusual flexibility. Springs attached to glazed steatite discs 1/2" dia. x 3/16" th. Overall dia., 1<sup>1</sup>/<sub>16</sub>". Accommodates standard 1/4" shaft.



Bud No. FC-614—Net Each..... \$1.20

Centralab.

# Ceramic Capacitors

## DD, ID CERAMIC DISC HI-KAPS®

Ideal for bypass coupling or filter service where high capacity is required and control stability is secondary. Operate for long periods of time under extreme moisture, temperature and vibration. DD Types: Rated 1000 WVDC except: DD-103, DD-153, DD-203, DD-303, DD-403 and DD-503, which are 600 WVDC. ID Types: Rated 500 WVDC. Tolerance: ±10% unless otherwise noted.

Cap. $\mu$ f	CRL No.	Di.	Cap. $\mu$ f	CRL No.	Di.	Cap. $\mu$ f	CRL No.	Di.	Cap. $\mu$ f	CRL No.	Di.
3.3*	3R3	3/8	58	680	680	500	501	501	3000†	302	003
5	5R0	5/8	75	750	750	511	511	511	3300†	332	003
6	6R0	6/8	82	820	820	560	561	561	3900†	392	003
6.8	6R8	6/8	91	910	910	600	601	601	4000†	402	004
7.5	7R5	7/8	100	101	101	680	681	681	4300†	432	004
8	8R0	8/8	120	121	121	750	751	751	4700†	472	004
10	10R0	10/8	130	131	131	800†	801	0008	4700†	4726	004†
12	12R0	12/8	150	151	151	820	821	821	5000†	502	005
15	15R0	15/8	180	181	181	910	911	911	5600†	562	005
18	18R0	18/8	200	201	201	1000	102	102	5600†	562	005
20	20R0	20/8	220	221	221	1000†	1026	001	6800†	682	006
22	22R0	22/8	240	241	241	1200	122	122	7500†	752	006
24	24R0	24/8	250	251	251	1200†	1226	0012	8200†	822	006
25	25R0	25/8	270	271	271	1300	132	132	10,000†	103	007
27	27R0	27/8	300	301	301	1500	152	152	10,000†	1032	007
30	30R0	30/8	330	331	331	1500†	1526	0015	10,000†	1032	007
33	33R0	33/8	350	351	351	1600	162	162	15,000†	153	015
39	39R0	39/8	360	361	361	1800	182	182	20,000†	203	020
47	47R0	47/8	400	401	401	2000†	202	002	20,000†	203	02
50	50R0	50/8	400	401	401	2200†	222	0022	30,000†	303	03
51	51R0	51/8	470	471	471	2500†	252	0025	40,000†	403	04
56	56R0	56/8	470†	471	0047†	2700†	272	0027	50,000†	503	05

Tolerances: \*±0.5  $\mu$ f, †GMV, ‡±20%, §±80, -20%, ¶±% dia.

## DD, ID INDUSTRIAL NET PRICES

Values, $\mu$ f	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
DD Types					
3.3 thru 8, 200	15c	11.9c	10c	7.5c	5.6c
10,000 thru 20,000	24c	19c	16c	12c	9c
30,000 thru 50,000	45c	35.6c	30c	22.5c	16.9c
ID Types					
3.3 thru 10,000	15c	11.9c	10c	7.5c	5.6c
15,000 and ID-02	18c	14.3c	12c	9c	6.8c
ID-203, -03, -.04, -.05	36c	28.5c	24c	18c	13.5c

## MIL-C-11015B GENERAL PURPOSE CERAMIC DISC HI-KAPS® (500 WVDC)

Cap. $\mu$ f (PF)	CRL No. & MIL-C-11015B Designation	Cap. $\mu$ f (PF)	CRL No. & MIL-C-11015B Designation	Cap. $\mu$ f (PF)	CRL No. & MIL-C-11015B Designation
2.2*	CK60BV2R2K	220*	CK60AX221K	820*	CK62BX821M
3.3*	CK60BV3R3K	220†	CK60AX221M	1000*	CK62BX102K
4.7*	CK60BV4R7K	330*	CK60AX331K	1000†	CK62BX102M
6.8*	CK60BV6R8K	330†	CK60AX331M	1500*	CK62BX152K
10*	CK60BV10K	330**	CK61BX331K	1500†	CK62BX152M
15*	CK60BV15K	330†	CK61BX331M	2000*	CK62BX202K
22*	CK60BV22K	470*	CK60AX471K	2200†	CK62AX222M
33*	CK60BV33K	470†	CK60AX471M	2200*	CK63BX222K
33†	CK60BV330M	470*	CK61BX471K	2200†	CK63BX222M
47*	CK60BX470K	470†	CK61BX471M	3300*	CK63BX332K
47†	CK60BX470M	360*	CK61BX681K	3300†	CK63BX332M
150*	CK60BX151K	680*	CK61BX681M		
150†	CK60BX151M	820*	CK62BX821K		

Tolerances: \*±10%; †±20%.

## MIL-C-11015B INDUSTRIAL NET PRICES

Values, $\mu$ f	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
2.2 thru 680	21c	16.6c	14c	10.5c	7.9c
820 thru 1500	27c	21.4c	18c	13.5c	10c
2200 (-AX-), 3300	27c	21.4c	18c	13.5c	10c
2200 (-BX-), 3300	30c	23.7c	20c	15c	11.3c

## TYPES CE TEMPERATURE STABLE AND CF SEMI-STABLE DISC HI-KAPS®

Offer exceptional stability through an extended temperature range; for applications requiring low capacity change between -55°C and +85°C temperatures. Rated 500 WVDC. Life test, 1000 hours at 1000 v. DC at +85°C. Leakage resistance, 10,000 megs. min. initial; 1000 megs. after humidity. Phenolic insulation vacuum impregnated with high temperature wax. Power factor, 2% max. at 1 kc. Leads #22 tinned copper, 1/2" lg. minimum. Tolerance, ±10%. Only 150\* thick. Dia.: 150-560  $\mu$ f, 720\* 680-1800  $\mu$ f, 385\* 2000-3900  $\mu$ f, 590\* 4700-6200  $\mu$ f, 690\* 8200 and 10K  $\mu$ f, .920\*.

Temperature Stable "K"				Temp. Semi-Stable "K"			
Cap. $\mu$ f	No. CE	Cap. $\mu$ f	No. CE	Cap. $\mu$ f	No. CF	Cap. $\mu$ f	No. CF
150	151	500	501	800	801	1200	122
220	221	560	561	1000	102	1500	152
330	331	680	681			1800	182
470	471	750	751			2000	202

SEE NEXT COLUMN

## 3000-6000 VOLT HI-VO-DISC® CAPACITORS

All these units are highly efficient for bypass-coupling in high frequency circuits under conditions of extreme humidity or temperature. Special phenolic insulation with triole, high temperature wax impregnation. Maintain high capacity and performance at 85°C. Tolerance: ±20%.

### INDUSTRIAL NET PRICES

#### TYPE DD30 (3000 WVDC)

Values, $\mu$ f	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
4.7 thru 120	\$0.24	\$0.19	\$0.16	\$0.12	\$0.09
150	.24	.19	.16	.12	.09
180 thru 270	.24	.19	.16	.12	.09
300 thru 470	.24	.19	.16	.12	.09
500 and 560	.24	.19	.16	.12	.09
680 thru 820	.24	.19	.16	.12	.09
1000 thru 5000	.30	.237	.20	.15	.113

#### TYPE DD60 (6000 WVDC)

Values, $\mu$ f	1-24	25-99	100-249	250-499	500-999
4.7 thru 820	\$0.36	\$0.285	\$0.24	\$0.18	\$0.135
1000 thru 2200	.60	.475	.40	.30	.225

Capacity, $\mu$ f	3000 Volt, DC Working		6000 Volt, DC Working	
	CRL No.	Dia.	CRL No.	Dia.
4.7	DD30-4R7	1/2"	DD60-4R7	3/8"
10	DD30-100	1/2"	DD60-100	3/8"
15	DD30-150	1/2"	DD60-150	3/8"
22	DD30-220	1/2"		
25	DD30-250	1/2"		
30	DD30-300	1/2"	DD60-300	3/8"
33	DD30-330	1/2"	DD60-330	3/8"
39	DD30-390	1/2"	DD60-390	3/8"
47	DD30-470	1/2"	DD60-470	3/8"
50	DD30-500	1/2"	DD60-500	3/8"

SEE NEXT COLUMN

## CE, CF INDUSTRIAL NET PRICES

Values, $\mu$ f	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
150 thru 1800	18c	14.3c	12c	9c	6.8c
2000 thru 6200	21c	16c	14c	10.5c	7.9c
8200 and 10K	24c	19c	16c	12c	9c

## TYPE DD2 DUO-KAPS®

Single disc, dual capacity. Double Durez insulation. Rated 600 v. DC, working; 1200 v. DC, test. Tolerance: GMV. Dia. A—.39"; B—.594"; C—.719"

Cap. $\mu$ f	CRL No.	Dia.	Net Each, Lots of				
			1-24	25-99	100-249	250-499	500-999
2 x .001	DD2-102	A	\$0.24	\$0.19	\$0.16	\$0.12	\$0.09
2 x .0015	DD2-152	B	.24	.19	.16	.12	.09
2 x .005	DD2-502*	C	.36	.285	.24	.18	.135

Tolerance: —20, —80%.

## TYPE DD3 SHIELDED DUO-KAPS®

Three leads—two capacitors in the space formerly needed for one. Shielded to minimize stray capacities between discs. Rated 600 v. DC, working; 1200 v. DC, test. Tolerance: GMV. Dia.: A—.391"; B—.593"; C—.719"

2 x .001	DD3-102	A	\$0.30	\$0.238	\$0.20	\$0.15	\$0.113
2 x .0015	DD3-152	A	.30	.238	.20	.15	.113
2 x .002	DD3-202	B	.30	.238	.20	.15	.113
2 x .005	DD3-502	B	.30	.238	.20	.15	.113
2 x .01	DD3-103	C	.30	.238	.20	.15	.113

## D6 TUBULAR BC HI-KAPS®

Rated 600 v. DC working; 1200 v., test. Tropicalized. Operating temp.: -55° to +85°C. Tolerance: ±0.5  $\mu$ f D6-030; ±10%, 5  $\mu$ f thru 680  $\mu$ f, ±20%, 750  $\mu$ f thru 2200  $\mu$ f; GMV, 2500  $\mu$ f and up.

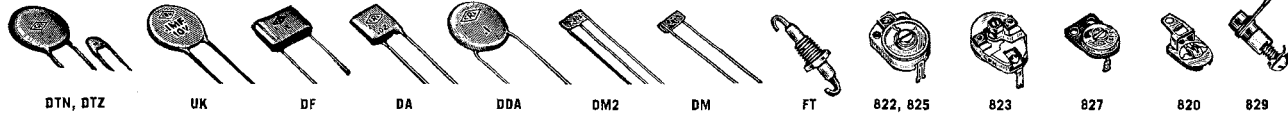
Cap. $\mu$ f	CRL No.	Size *	Cap. $\mu$ f	CRL No.	Size *	Cap. $\mu$ f	CRL No.	Size *
3	D6-030	A	100	D6-101	A	820	D6-821	A
5	D6-050	A	120	D6-121	A	1000	D6-1021	A
10	D6-100	A	150	D6-151	A	1200	D6-122	A
12	D6-120	A	180	D6-181	A	1500	D6-152	A
15	D6-150	A	200	D6-201	A	1800	D6-182	A
20	D6-200	A	250	D6-221	A	2000	D6-202	B
22	D6-220	A	250	D6-251	A	2300	D6-222	B
25	D6-250	A	270	D6-271	A	2500	D6-252	B
27	D6-270	A	300	D6-301	A	2700	D6-272	B
33	D6-330	A	330	D6-331	A	3000	D6-302	B
39	D6-390	A	360	D6-391	A	3300	D6-332	B
40	D6-400	A	400	D6-401	A	4000	D6-402	B
47	D6-470	A	470	D6-471	A	4700	D6-472	C
50	D6-500	A	500	D6-501	A	5000	D6-502	C
56	D6-560	A	600	D6-561	B	5600	D6-562	C
68	D6-680	A	660	D6-601	B	10000	D6-103	D
75	D6-750	A	680	D6-681	B			
82	D6-820	A	750	D6-751	A			

\*Size: A—.260" x .460", B—.260" x .790", C—.280" x .900", D—.330" x 1.21"

## D6 INDUSTRIAL NET PRICES

Values, $\mu$ f	Net Each, Lots of				
	1-				

Special Capacitors



LOW VOLTAGE CAPACITORS

Miniature ceramic capacitors designed to meet the demands for high capacity, low voltage applications in transistor circuits. Double durez insulation with high vacuum wax impregnation to withstand extreme temperature, humidity and vibration. Where size permits, capacitors are stamped with capacity and voltage.

TYPE UK ULTRA-KAPS\* (3 WVDC)

Cap., $\mu$ f	CRL No.	Tol.	Max. Dia.	Net Each, Lots of				
				1-24	25-99	100-249	250-499	500-999
.005	UK-502	GMV	.120"	75c	59.4c	50c	37.5c	28.1c
.01	UK-103	GMV	.120"	75c	59.4c	50c	37.5c	28.1c
.02	UK-203	GMV	.120"	75c	59.4c	50c	37.5c	28.1c
.1	UK-104	GMV	.220"	54c	42.8c	36c	27c	20.3c
.22	UK-224	GMV	.290"	54c	42.8c	36c	27c	20.3c
.47	UK-474	GMV	.408"	33c	26.2c	22c	16.5c	12.4c
1.0	UK-105	GMV	.590"	54c	42.8c	36c	27c	20.3c
2.2	UK-225	GMV	.840"	54c	42.8c	36c	27c	20.3c

TYPE UK10 ULTRA-KAPS\* (10 WVDC)

Cap., $\mu$ f	CRL No.	Tol.	Max. Dia.	Net Each, Lots of				
				1-24	25-99	100-249	250-499	500-999
.05	UK10-503	+80 -20%	.290"	33c	26.2c	22c	16.5c	12.4c
.1	UK10-104	+80 -20%	.408"	33c	26.2c	22c	16.5c	12.4c
.2	UK10-204	+80 -20%	.590"	33c	26.2c	22c	16.5c	12.4c
.47	UK10-474	+80 -20%	.840"	54c	42.8c	36c	27c	20.3c

TYPE UK20 ULTRA-KAPS\* (20 WVDC)

Cap., $\mu$ f	CRL No.	Tol.	Max. Dia.	Net Each, Lots of				
				1-24	25-99	100-249	250-499	500-999
.05	UK20-503	+80 -20%	.408"	33c	26.2c	22c	16.5c	12.4c
.1	UK20-104	+80 -20%	.590"	33c	26.2c	22c	16.5c	12.4c
.2	UK20-204	+80 -20%	.840"	33c	26.2c	22c	16.5c	12.4c

\*Trademark.

TYPE DA PLATE CAPACITOR (30 WVDC)

Cap., $\mu$ f	CRL No.	Tolerance	Size In.	Net Each, Lots of				
				1-24	25-99	100-249	250-499	500-999
.02	DA-203	+100 -20%	1/2 x 1/2	\$0.36	\$0.285	\$0.24	\$0.18	\$0.135
.05	DA-503	+100 -20%	1/2 x 1/2	.81	.641	.54	.405	.304
.1	DA-104	+100 -20%	1/2 x 1/2	1.35	1.070	.90	.675	.506

TYPE CK DISC CAPACITORS (50 WVDC)

Cap., $\mu$ f	CRL No.	Tolerance	Max. Dia.	Net Each, Lots of				
				1-24	25-99	100-249	250-499	500-999
.005	CK-502	+80 -20%	.385"	21c	16.6c	14c	10.5c	7.9c
.01	CK-103	+80 -20%	.385"	21c	16.6c	14c	10.5c	7.9c
.02	CK-203	+80 -20%	.590"	21c	16.6c	14c	10.5c	7.9c
.025	CK-253	+80 -20%	.590"	21c	16.6c	14c	10.5c	7.9c
.03	CK-303	+80 -20%	.590"	21c	16.6c	14c	10.5c	7.9c
.05	CK-503	+80 -20%	.690"	21c	16.6c	14c	10.5c	7.9c
.1	CK-104	+80 -20%	.719"	80c	47.5c	40c	30c	22.5c

TYPE DDA DISC CAPACITORS (75 WVDC)

Cap., $\mu$ f	CRL No.	Tolerance	Max. Dia.	Net Each, Lots of				
				1-24	25-99	100-249	250-499	500-999
.05	DDA-503	+80 -30%	.690"	30c	23.8c	20c	15c	11.3c
.1	DDA-104	+80 -30%	.719"	80c	47.5c	40c	30c	22.5c

TYPE DDM DISC CAPACITORS (150 WVDC)

Cap., $\mu$ f	CRL No.	Tolerance	Max. Dia.	Net Each, Lots of				
				1-24	25-99	100-249	250-499	500-999
.005	DDM-502	+60 -40%	.385"	30c	23.8c	20c	15c	11.3c
.01	DDM-103	+60 -40%	.385"	30c	23.8c	20c	15c	11.3c
.02	DDM-203	+60 -40%	.406"	54c	42.8c	36c	27c	20.3c
2x.01	DDM2-103	+60 -40%	.390"	54c	42.8c	36c	27c	20.3c

TYPE DM FLAT-PLATE MIN-KAPS®

150 VDCV, 300 v. DC test. Size: 1/2" x 1/2" x 1/4". Tolerance: +50%, -20%, except (\*) +80%, -20%.

Cap., $\mu$ f	CRL No.	Net Each, Lots of				
		1-24	25-99	100-249	250-499	500-999
.0001	DM-101	\$0.30	\$0.238	\$0.20	\$0.15	\$0.113
.0002	DM-201	.30	.238	.20	.15	.113
.0003	DM-301	.30	.238	.20	.15	.113
.0005	DM-501	.30	.238	.20	.15	.113
.001	DM-102	.30	.238	.20	.15	.113
.002*	DM-202	.30	.238	.20	.15	.113
.003*	DM-302	.30	.238	.20	.15	.113
.005*	DM-502	.30	.238	.20	.15	.113
.01*	DM-103	.60	.475	.40	.30	.225
2 x .005*	DM2-502	.60	.475	.40	.30	.225

TYPE DF FLAT-PLATE HI-KAPS®

A dependable 600 volt ceramic capacitor recommended for general replacement applications where their unusual thickness makes them useful. Types listed below are 1 1/2" l. x 1 1/4" h. 600 v. DC, working; 1200 v. DC, test. Tolerance: GMV except DF-104, +80, -20%.

Cap., $\mu$ f	CRL No.	Thick-ness	Net Each, Lots of				
			1-24	25-99	100-249	250-499	500-999
.05	DF-503	1/8"	\$0.75	\$0.594	\$0.50	\$0.375	\$0.281
.1	DF-104	3/16"	1.05	.831	.70	.525	.394

FT AND MFT FEED-THRU HI-KAPS®

Rated 500 v. DC, working; 1000 v. DC, test. Type FT: Hooked end terminals; mounting nut supplied. Type MFT: 1/2" (max.) flange eyelet inserts in .160" hole; solders direct to chassis.

Type FT Hi-Kaps®			Type MFT Hi-Kaps®		
$\mu$ f	No.	Tolerance	$\mu$ f	No.	Tolerance
500	FT-500	±20%	50	MFT-50	±10%
1000	FT-1000	±20%	100	MFT-100	±10%
1500	FT-1500	-20, +50%	500	MFT-500	±20%
1800	FT-1800	-20, +50%	1000	MFT-1000	GMV
2300	FT-2300	-20, +50%			

FT, MFT INDUSTRIAL NET PRICES

All Values, CRL Type	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
FT	\$0.75	\$0.594	\$0.50	\$0.375	\$0.281
MFT	.30	.238	.20	.15	.113

CERAMIC TRIMMER CAPACITORS

Highly stable, small lightweight design. Power factor less than 0.2% at 1 mc. All units rated 500 v. DC, working; 1,000 v. DC, test. Suffix Z: indicates zero temperature coefficient. Suffix N: Indicates negative coefficient. Shpg. Wt., 3 oz. max.

CRL Type 820—High dielectric ceramic base impervious to moisture. Flat rotor and stator. Mounting holes take No. 4 machine screws; 3/8" x 3/32".

CRL Type 822—Steatite body; silver rotor and stator plates; 1/4" x 2 1/2". Mtg. holes take No. 4 screw.

CRL Type 823—Ceramic molded phenolic body has high stability under vibration. Insulation resistance 10,000 megs. minimum. Size: 1/2" x 3/4".

CRL Types 829-3, -4, -6, -7, -10—Tiny, tubular, high voltage types for TV or FM. Ceramic bodies .215" dia. Full capacity in 180° rotation.

Range, $\mu$ f	CRL No.	Range, $\mu$ f	CRL No.	Range, $\mu$ f	CRL No.	Range, $\mu$ f	CRL No.
1.0-3.5	820D	2.0-7.5	822-CZ	5-12	823-EZ	2.5-7	827A
2.5-6.0	820A	2.5-13.0	822-FZ	6-25	823-BZ	3.5-12	827B
5.0-20	820B	3.0-12	822-FZ	10-50	823-BZ	6.0-30	827C
7.0-35	820C	4.5-25	822-AZ	12-62	823-AZ	7.0-35	827D
35-55	820E*	2.0-6.0	822-ON	5-15	823-FN	.5-3	829-3
55-75	820F*	4.0-30	822-EN	8-25	823-EN	1-4	829-4
70-90	820G*	4.5-25	822-CN	8-50	823-DN	1-6	829-6
1.5-3	822-DZ	7.0-45	822-BN	10-100	823-BN	1-7.5	829-7
1.5-7	822-EZ	8.0-50	822-AN	20-125	823-AN	1.5-10	829-10

\*Less brackets

CRL TYPE 825 (MIL-C81A) TRIMMER CAPACITORS

Ceramic design meets MIL-C-81A specifications. Strong, low loss steatite base with pure silver fired on top surface to form stator plate. Rated 500 WVDC; 1500 v. DC test. Power Factor, less than 0.2% at 1 mc. Drift ±0.75% or ±0.5  $\mu$ f, whichever is greater. Insulation resistance, 10,000 megs. initial; 1000 megs. after humidity. Silver-plated brass terminals bent at 90° angle from plane of stator, 1/4" lg. Mtg. holes clear #4 machine screws. Body, 2 3/8" lg. x 1/4" W. Shipping Weight, 2 oz.

Zero Temp. Coefficient			N650 Temp. Coefficient		
Cap., $\mu$ f	CRL No.	MIL Spec.	Cap., $\mu$ f	CRL No.	MIL Spec.
1.5-7	825-EZ	CV11A070	2.0-6	825-DN	CV11D060
3.0-12	825-FZ	CV11A120	4.0-30	825-EN	CV11D300
4.5-25	825-AZ	CV11A250	7.0-45	825-BN	CV11D450

TRIMMER INDUSTRIAL NET PRICES

All Values, CRL Series	Net Each, Lots of			
	1-9	10-24	25-99	100-249
820	\$0.78	\$0.65	\$0.618	\$0.52
822	1.14	.95	.90	.76
823	3.60	3.00	2.85	2.40
825	1.05	.875	.83	.70
827	.75	.625	.594	.50

All Values, CRL Series	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
829-3, 829-4	\$0.30	\$0.238	\$0.20	\$0.15	\$0.113
829-6	.30	.238	.20	.15	.113
829-7, 829-10	.30	.238	.20	.15	.113

NOTE: Items requiring certified test data and government source inspection are special. Prices and information supplied upon request.

TEMPERATURE COMPENSATING DISC HI-KAPS®

Very popular unit that replaces mica types in all applications. High stability and small size, using TC ceramic dielectric material. Type DTZ is NPO or zero TC disc type. Type DTN is an N750TC type. Thickness: 1/32" and 1/16". Tolerance: ±5%.

TYPE DTN (N750)

Cap., $\mu$ f	CRL No.	Dia., In.	Cap., $\mu$ f	CRL No.	CRL No.	Dia., In.	Cap., $\mu$ f	Dia., In.
5	DTN-5*	1/4	25	DTN-25	1/4	100	DTN-100	3/8
10	DTN-10*	1/4	33	DTN-33	1/4	150	DTN-150	1/2
15	DTN-15	1/4	47	DTN-47	1/4	200	DTN-200	5/8
20	DTN-20	1/4	68	DTN-68	3/8	220	DTN-220	3/4
22	DTN-22	1/4	75	DTN-75	3/8	330	DTN-330	3/4

TYPE DTZ (NPO)

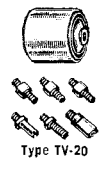
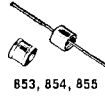
Cap., $\mu$ f	CRL No.	Dia., In.	Cap., $\mu$ f	CRL No.	CRL No.	Dia., In.	Cap., $\mu$ f	Dia., In.
1.5	DTZ-1R5*	1/4	22	DTZ-22	3/8	100	DTZ-100	3/8
2.2	DTZ-2R2*	1/4	25	DTZ-25	3/8	120	DTZ-120	3/8
3.3	DTZ-3R3*	1/4	33	DTZ-33	3/8	150	DTZ-150	3/8
4.7	DTZ-4R7*	1/4	47	DTZ-47	3/8	180	DTZ-180	3/8
6.8	DTZ-6R8*	1/4	50	DTZ-50	3/8	200	DTZ-200	3/8
10	DTZ-10	1/4	68	DTZ-68	3/8	220	DTZ-220	3/8
15	DTZ-15	1/4	75	DTZ-75	3/8	270	DTZ-270	3/8
20								

Centralab®

# Special Capacitors

## TEMPERATURE COMPENSATING TUBULARS

Limit frequency drift in RF circuits where temperature variations are prevalent. Ceramic body construction changes capacities as the temperature varies; complies with IAN-C-20A specifications. Rated 1,200 volts DC, test; 600 volts DC, working. Extremely compact. Weight, 2 oz. Type TCZ; NPO or zero units, superior to mica for all uses. Show zero capacitance changeover temperature range -20 C to +85°C. Left end coded black. Type TCN: N750 units show negative capacity of -750 parts per million per degree C rise in temperature. Left end coded violet. Size: A—.400" x .200", B—.690" x .200", C—.860" x .225", D—1.165" x .285", E—1.625" x .285"



Cap. $\mu\mu\text{f}$	Type TCN Units			Type TCZ Units		
	CRL Number	Size	Tol. $\pm$	CRL Number	Size	Tol. $\pm$
0.5				TCZ-R5	A	.25 $\mu\mu\text{f}$
0.58				TCZ-R68	A	.25 $\mu\mu\text{f}$
1.0				TCZ-1	A	.25 $\mu\mu\text{f}$
1.5				TCZ-1R5	A	.25 $\mu\mu\text{f}$
2.2				TCZ-2R2	A	.25 $\mu\mu\text{f}$
3.3	TCN-3R3	A	5 $\mu\mu\text{f}$	TCZ-3R3	A	.25 $\mu\mu\text{f}$
4.7				TCZ-4R7	A	.5 $\mu\mu\text{f}$
5.0	TCN-5	A	5 $\mu\mu\text{f}$			
6.8				TCZ-6R8	A	.5 $\mu\mu\text{f}$
10	TCN-10	A	5 $\mu\mu\text{f}$	TCZ-10	A	.5 $\mu\mu\text{f}$
12	TCN-12	A	2%	TCZ-12	A	2%
15	TCN-15	A	2%	TCZ-15	A	2%
18	TCN-18	A	2%	TCZ-18	A	2%
20	TCN-20	A	2%	TCZ-20	A	2%
22	TCN-22	A	2%	TCZ-22	A	2%
24	TCN-24	A	2%	TCZ-24	A	2%
25	TCN-25	A	2%	TCZ-25	A	2%
27	TCN-27	A	2%	TCZ-27	A	2%
30	TCN-30	A	2%	TCZ-30	A	2%
33	TCN-33	A	2%	TCZ-33	A	2%
36	TCN-36	A	2%	TCZ-36	A	2%
39	TCN-39	A	2%	TCZ-39	A	2%
43	TCN-43	A	2%	TCZ-43	B	2%
47	TCN-47	A	2%	TCZ-47	B	2%
50	TCN-50	A	2%	TCZ-50	B	2%
51	TCN-51	A	2%	TCZ-51	B	2%
56	TCN-56	A	2%	TCZ-56	B	2%
62	TCN-62	A	2%	TCZ-62	B	2%
68	TCN-68	A	2%	TCZ-68	B	2%
75	TCN-75	A	2%	TCZ-75	B	2%
82	TCN-82	A	2%	TCZ-82	B	2%
91	TCN-91	A	2%	TCZ-91	C	2%
100	TCN-100	A	2%	TCZ-100	C	2%
110	TCN-110	B	5%	TCZ-110	D	5%
120	TCN-120	B	5%	TCZ-120	D	5%
130	TCN-130	B	5%	TCZ-130	D	5%
150	TCN-150	B	5%	TCZ-150	D	5%
160	TCN-160	B	5%	TCZ-160	D	5%
180	TCN-180	B	5%	TCZ-180	D	5%
200	TCN-200	B	5%	TCZ-200	D	5%
220	TCN-220	C	5%	TCZ-220	D	5%
240	TCN-240	C	5%	TCZ-240	E	5%
270	TCN-270	C	5%	TCZ-270	E	5%
300	TCN-300	D	5%	TCZ-300	E	5%
330	TCN-330	D	5%			
360	TCN-360	D	5%			
390	TCN-390	D	5%			
430	TCN-430	D	5%			
470	TCN-470	D	5%			
510	TCN-510	D	5%			
560	TCN-560	E	5%			
620	TCN-620	E	5%			
680	TCN-680	E	5%			
750	TCN-750	E	5%			

### INDUSTRIAL NET PRICES TYPE TCN (N750 UNITS)

Values, $\mu\mu\text{f}$	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
3.3 and 5.0	\$0.30	\$0.238	\$0.20	\$0.15	\$0.113
10	.30	.238	.20	.15	.113
12 and 15	.30	.238	.20	.15	.113
18	.30	.238	.20	.15	.113
20	.30	.238	.20	.15	.113
22 thru 62	.30	.238	.20	.15	.113
68 thru 100	.30	.238	.20	.15	.113
110 thru 270	.30	.238	.20	.15	.113
300 thru 510	.45	.356	.30	.225	.169
560 thru 750	.60	.475	.40	.30	.225

### TYPE TCZ (NPO UNITS)

Values, $\mu\mu\text{f}$	Net Each, Lots of				
	1-24	25-99	100-249	250-499	500-999
0.5 thru 3.3	\$0.30	\$0.238	\$0.20	\$0.15	\$0.113
4.7	.30	.238	.20	.15	.113
6.8	.30	.238	.20	.15	.113
10	.30	.238	.20	.15	.113
12 and 15	.30	.238	.20	.15	.113
18	.30	.238	.20	.15	.113
20	.30	.238	.20	.15	.113
22 and 24	.30	.238	.20	.15	.113
25 thru 56	.30	.238	.20	.15	.113
62 thru 100	.30	.238	.20	.15	.113
110 thru 220	.45	.356	.30	.225	.169
240 thru 300	.60	.475	.40	.30	.225

### TYPE TCA AND TCL TUBULAR HI-KAPS®

Intermediate stock values. This group changes negatively capacity-wise with temperature increases. Type TCA: Changes 330 parts per million per degree C. Type TCL: Changes minus 1500 parts per million per degree C. Size: .400" x .200", except TCA-100, .690" x .200".

Cap. $\mu\mu\text{f}$	CRL Number	Tol. $\pm$	Net Each, Lots of				
			1-24	25-99	100-249	250-499	500-999
10	TCA-10	5 $\mu\mu\text{f}$	\$0.30	\$0.238	\$0.20	\$0.15	\$0.113
15	TCA-15	2%	.30	.238	.20	.15	.113
22	TCA-22	2%	.30	.238	.20	.15	.113
33	TCA-33	2%	.30	.238	.20	.15	.113
47	TCA-47	2%	.30	.238	.20	.15	.113
68	TCA-68	2%	.30	.238	.20	.15	.113
100	TCA-100	2%	.30	.238	.20	.15	.113
100	TCL-10	5 $\mu\mu\text{f}$	.30	.238	.20	.15	.113
15	TCL-15	2%	.30	.238	.20	.15	.113
22	TCL-22	2%	.30	.238	.20	.15	.113
33	TCL-33	2%	.30	.238	.20	.15	.113
47	TCL-47	2%	.30	.238	.20	.15	.113
68	TCL-68	2%	.30	.238	.20	.15	.113
100	TCL-100	2%	.30	.238	.20	.15	.113

## TRANSMITTING CAPACITORS

Designed for high voltage, high frequency circuits requiring very low power factor and stable retrace characteristics. Double cup design for long leakage paths and rugged construction.

### TYPE 850 AND 858-5 AND 7.5 KV

Stud type has  $\frac{1}{2}$ " long hex studs 6-32 thread. Lug type  $\frac{1}{4}$ " long solder lugs with tapped 6-32 threaded hole. Size:  $\frac{1}{8}$ " dia. x  $\frac{3}{8}$ ". Tolerance:  $\pm 10\%$  850 type;  $\pm 20\%$  858 type.

Cap. $\mu\mu\text{f}$	CRL No.				KV DCW	Temp. Coeff.	RF Load at 30 MC+
	Stud Type	Lug Type					
25	850S-25Z	850SL-25Z			7.5	NPO	7 amps
50	850S-50Z	850SL-50Z			7.5	NPO	10 amps
75	850S-75N	850SL-50N			7.5	N750	8.8 amps
100	850S-100N	850SL-75N			7.5	N750	10 amps
150	850S-150	850SL-100N			5	N750	9.8 amps
1K	858S-500				5	Hi-K	
	858S-1000				5	Hi-K	

### TYPE 853, 854, 855-5 KV

Lead type has  $1\frac{1}{2}$ " axial leads. Tap type has axial screw terminals tapped 2-56. Size: 853,  $\frac{1}{2}$ " dia. x  $\frac{3}{8}$ ", 854,  $\frac{3}{8}$ " dia. x  $\frac{3}{8}$ ", 855,  $\frac{1}{2}$ " dia. x  $\frac{1}{2}$ ". A Series Add  $\frac{1}{8}$ " to dia. and  $\frac{1}{4}$ " to length. Tolerance:  $\pm 10\%$ .

Cap. $\mu\mu\text{f}$	CRL No.		KV DCW	Temp. Coeff.	RF Load at 30 MC+
	Lead Type	Tap Type			
3	855-3Z	855A-3Z	5	NPO	1.8 amps
5	855-5Z	855A-5Z	5	NPO	1.8 amps
10	854-10Z	854A-10Z	5	NPO	1.8 amps
10	855-10N	855A-10N	5	N750	3.2 amps
20	853-20Z	853A-20Z	5	N750	2.8 amps
20	854-20N	854A-20N	5	N750	3.2 amps
40	853-40N	853A-40N	5	N750	5.6 amps

### TYPE 857-7.5 AND 15 KV

Axial screw terminals at both ends;  $\frac{1}{2}$ " deep, 10-32 NF-2 thread. Size:  $1\frac{1}{2}$ " dia. x  $1\frac{1}{4}$ ". Tolerance:  $\pm 10\%$ .

Cap. $\mu\mu\text{f}$	CRL No.	Temp. Coeff.	RF Load at 30 MC+	KV DCW
50	857-50Z	NPO	12 amps	15
100	857-100N	N750	14.4 amps	15
200	857-200N	N750	18.2 amps	7.5

### TYPE 859-15 AND 20 KV

Terminals  $\frac{1}{8}$ " deep both ends, tapped 10-32. Size: 2" dia. x  $2\frac{1}{8}$ " overall. Tolerance:  $\pm 10\%$ .

Cap. $\mu\mu\text{f}$	CRL No.	Temp. Coeff.	RF Load at 30 MC+	KV DCW
100	859S-100Z	NPO	30 amps	20
250	859S-250N	N750	30 amps	20
500	859S-500N	N3300	30 amps	15

\*RF Load Rating based on 30°C rise in temperature.

### TRANSMITTING CAPACITOR INDUSTRIAL NET PRICES

All Values, CRL Type	Net Each, Lots of			
	1-9	10-24	25-99	100-249
850	\$2.70	\$2.43	\$2.14	\$1.92
853, 854, or 855	1.80	1.62	1.43	1.28
857 with suffix N	7.20	6.48	5.70	5.13
857 with suffix Z	8.40	7.56	6.65	5.99
858	2.70	2.43	2.14	1.92

All Values, CRL Type	Net Each, Lots of			
	1-4	5-9	10-99	100-249
859	\$54.00	\$48.60	\$45.00	\$40.50

## TERMINAL HI-VO-KAPS®

### ATTACHABLE TERMINAL TYPE

Type TV-20—20,000 v. DC working ceramic capacitors; 35,000 v. DC test. Capacity 500  $\mu\mu\text{f}$ . Terminals will not pull out or break off. Five different type terminals available as listed below.

### ATTACHABLE TERMINALS

CRL No.	Type	Thread	CRL No.	Type	Thread
TX-1	Slotted Rod		TX-4	Short Male	8-32
TX-2	Female Tap	6-32	TX-5	Long Male	8-32
TX-3	Male Thread	6-32			

### FIXED TERMINAL HI-VO-KAPS®

Type TV1-503, TV8-503—Similar to TV-20, with fixed terminals. Rated 30 kv working, 45 kv test. TV1-503: 2-rod type. TV8-503: Two 8-32 male terminals.

### HI-VO-KAPS® INDUSTRIAL NET PRICES

CRL Number	Net Each, Lots of			
	1-24	25-99	100-249	250-999
TV-20	\$1.11			\$0.878
TX Terminals	.06			.048
TV1-503	1.98			1.588
TV8-503	1.98			1.588

## TYPE DD16 HI-KAP® BUFFERS

Compact, easy to install. Long life, low cost. Able to withstand high heat, moisture, and vibration. Size:  $\frac{3}{8}$ " dia.,  $\frac{1}{4}$ " thick. Tolerance: GMV. Rated 1600 WVDC.

Cap. $\mu\text{f}$	CRL Number	Max. Dia.	Net Each, Lots of				
			1-24	25-99	100-249	250-499	500-999
.003	DD16-30Z	.400"	\$0.27	\$0.20	\$0.18	\$0.14	\$0.10
.004	DD16-40Z	.27	.20	.20	.18	.14	.10
.005	DD16-50Z	.27	.20	.20	.18	.14	.10
.006	DD16-60Z	.27	.20	.20	.18	.14	.10
.007	DD16-70Z	.27	.20	.20	.18	.14	.10
.0075	DD16-75Z	.27	.20	.20	.18	.14	.10
.008	DD16-80Z	.27	.20	.20	.18	.14	.10
.01	DD16-103	.27	.20	.20	.18	.14	.10
.015	DD16-153*	.48	.38	.32	.24	.18	.18

\* $\frac{1}{2}$ " thick; tolerance, -20, +80%.

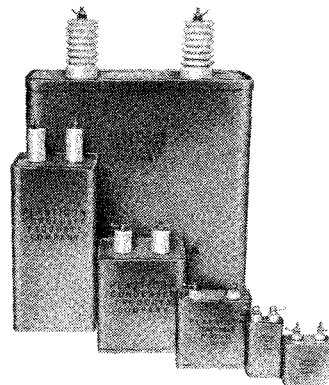
## TYPE CI AC LINE DISC HI-KAPS® (1000 WVDC)

UL Approved per Underwriters Laboratories' Examination Service #E32296, dated 12-6-60. Suitable for continuous operation at 220 v. AC, rms, 60 cycles. Recommended for AC by-pass application or where a steady or intermittent higher voltage may occur.



# PLASTICON DC RECTANGULARS

Mineral oil impregnated and filled. Hermetically sealed. Can be operated in any position, continuously at 10% over rated voltage up to +40° C. Tolerance 10%. Ambient temperature range -40° C. to 105° C. Insulators: Two ceramic type bushings for standard temperature range. Two soldered-in metallized ceramic insulators for extended temperature range. All DC rectangulars have 8-32 screw and hex nut terminals with removable hot-tinned solder lugs. Case: Rectangular base, lead coated steel with heavy finish of grey organic lacquer.



Mfr's. No.	Cap. Mfd.	Volts DC	Dimensions - Inches			Term. Height	Dist. Bet. Ter.	Net 1-9 Pcs.
			Height	Width	Depth			
AOC6C1	1.0	600	2 1/8	1 3/4	1	5/8	1 1/8	\$ 4.00
AOC6C2	2.0	600	2 3/4	1 3/4	1	5/8	1 1/8	5.00
AOC6C4	4.0	600	3 1/2	2 1/2	1 1/8	5/8	1 1/8	6.00
AOC6C8	8.0	600	4	3 3/4	1 1/4	5/8	1 1/8	8.35
AOC6C10	10.0	600	4	3 3/4	1 1/4	5/8	2	10.00
AOC1M1	1.0	1000	2 3/8	1 3/4	1	5/8	1 1/8	4.20
AOC1M2	2.0	1000	3	2 1/2	1 1/8	5/8	1 1/8	5.35
AOC1M4	4.0	1000	4 5/8	2 1/2	1 1/8	5/8	1 1/8	6.50
AOC1M8	8.0	1000	4 5/8	3 3/4	1 3/4	5/8	2	9.50
AOC1M10	10.0	1000	4 5/8	3 3/4	2 1/4	5/8	2	11.95
AOC2M05	0.5	2000	2 3/4	1 3/4	1	5/8	1 1/8	4.74
AOC2M1	1.0	2000	4 1/2	1 3/4	1	5/8	1 1/8	5.29
AOC2M2	2.0	2000	3 1/4	3 3/4	1 1/4	5/8	2	6.56
AOC2M4	4.0	2000	4 1/4	3 3/4	2 1/4	5/8	2	9.06
AOC3M1	1.0	3000	4	2 1/2	1 1/8	1 1/8	1 1/8	6.34
AOC3M2	2.0	3000	4 5/8	3 3/4	1 1/4	1 1/8	2	8.61
AOC3M4	4.0	3000	4 5/8	3 3/4	2 1/4	1	2	13.00
AOC4M1	1.0	4000	4	3 3/4	1 1/4	1 1/4	2	7.56
AOC4M2	2.0	4000	4	3 3/4	1 3/8	1 1/4	2	11.50
AOC4M4	4.0	4000	4	3 3/4	4 1/8	1 1/8	2	20.30
AOC5M1	1.0	5000	4	3 3/4	1 3/8	2 1/4	2	9.89
AOC5M2	2.0	5000	3 1/2	3 3/4	4 1/8	1 1/8	2	14.64
AOC10M1	1.0	10000	4 5/8	3 3/4	4 1/8	2 1/4	2	27.94

## PLASTICON TEFLON CAPACITORS

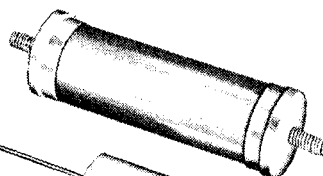
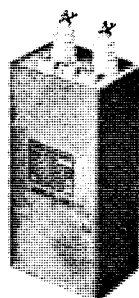
**POWER FACTOR** ..... @ 25°C ..... .05%  
 @ 165°C ..... .07%

**TEMPERATURE COEFFICIENT** .... -70°C to 165°C .... -200 ppm/°C.

**INSULATION RESISTANCE** ..... @25°C ..... 500,000 meg x mfd.  
 But need not exceed ..... 10,000,000 megohms  
 @ 165°C ..... 7,000 meg. x mfd.  
 But need not exceed ..... 50,000 megohms

**DIELECTRIC ABSORPTION** ..... @25°C ..... .02%

TAC  
CP-70  
Type  
Can



TACM  
Metal Tubular

TAG  
Glass  
Encased

**VOLTAGE RANGE** ..... 200 to 1,000 vdc.  
**CAPACITANCE RANGE** ..... TAG, TACM — .001 to 1.0 mfd  
 TAC — 1 mfd and above.



# Condenser Products Company

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

See Sect. 4000 for Plasticon Power Supplies



# "Glassmike" Plasticon Capacitors



Type LSG

Type ASG

Type ASG are Plasticon A dielectric-silicone fluid impregnated capacitor elements in hermetically sealed glass tubes. Standard range -60°C to +85°C, extended range -60°C to +125°C with proper derating. The smallest and lightest high voltage capacitors made. Type ASG are ideal for DC and low frequency AC applications.

LSG type capacitors have Plasticon L film-silicone fluid impregnant. Designed to compete with mica capacitors, the LSG capacitors are more applicable for Radio Frequency. Special beneficial features include greater safety factor, lower RF loss, more conveniently mounted, utilizes less chassis space, impervious to moisture, and smaller in overall volume.

All 19/32 diameter Glassmikes are supplied with pigtail leads

Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions Dia. & Length	Net 1-9 Pes.	Part No.	Size	Cap	Volts D.C.	Net 1-9 Pes.
ASG502-1M	.005	1000	19/32x1 3/16	\$ 1.86	LSG303-1M	13/16x1 1/2	.03	3000	\$ 3.58
ASG103-1M	.01	1000	19/32x1 3/16	1.86	LSG403-1M	29/32x1 1/2	.01	1000	3.98
ASG203-1M	.02	1000	19/32x1 3/16	1.86	LSG503-1M	1 1/4x1 1/2	.05	1000	4.19
ASG503-1M	.05	1000	3/4x1 3/4	1.92	LSG603-1M	1 1/4x1 1/2	.06	1000	4.25
ASG104-1M	.1	1000	3/4x2 1/4	2.06	LSG753-1M	1 1/4x1 1/2	.075	1000	4.27
ASG254-1M	.25	1000	29/32x2 3/4	2.25	LSG104-1M	1 1/4x2	0.1	1000	4.66
ASG504-1M	.5	1000	1 1/4x2 3/4	2.49	LSG154-1M	1 3/8x2	0.15	1000	5.55
ASG102-3M	.001	3000	19/32x1 3/16	2.12	LSG204-1M	1 3/8x2 1/2	0.2	1000	6.31
ASG202-3M	.002	3000	19/32x1 3/16	2.15	LSG254-1M	1 3/8x2 1/2	0.25	1000	6.43
ASG502-3M	.005	3000	19/32x1 3/16	2.24	LSG304-1M	1 3/8x3	0.3	1000	6.84
ASG103-3M	.01	3000	19/32x1 9/16	2.40	LSG404-1M	1 3/8x3 1/2	0.4	1000	7.38
ASG203-3M	.02	3000	3/4x1 3/4	2.55	LSG504-1M	29/32x1 1/2	.0075	2500	3.54
ASG503-3M	.05	3000	29/32x2 1/4	2.64	LSG103-25C	1 1/4x1	.01	2500	3.78
ASG104-3M	.1	3000	29/32x2 1/4	3.10	LSG203-25C	1 1/4x1 1/2	.02	2500	4.07
ASG254-3M	.25	3000	1 3/8x2	3.69	LSG253-25C	1 1/4x1 1/2	.025	2500	4.13
ASG102-5M	.001	5000	19/32x1 3/16	3.18	LSG303-25C	1 1/4x1 1/2	.03	2500	4.18
ASG202-5M	.002	5000	19/32x1 3/16	3.20	LSG403-25C	1 1/4x2	.04	2500	4.72
ASG502-5M	.005	5000	19/32x1 3/4	3.21	LSG503-25C	1 3/8x2	.05	2500	5.00
ASG103-5M	.01	5000	3/4x1 3/4	3.45	LSG603-25C	1 3/8x2	.06	2500	5.12
ASG203-5M	.02	5000	3/4x2 1/4	3.54	LSG753-25C	1 3/8x2	.075	2500	6.08
ASG503-5M	.05	5000	29/32x2 1/4	3.97	LSG104-25C	1 3/8x2 1/2	0.1	2500	6.61
ASG104-5M	.1	5000	1 3/8x2 3/4	4.71	LSG154-25C	1 3/8x3 1/2	0.15	2500	7.43
ASG501-8M	.0005	8000	19/32x1 9/16	3.57	LSG202-35C	29/32x1	.004	3500	4.07
ASG102-8M	.001	8000	19/32x1 9/16	3.60	LSG502-35C	1 1/4x1	.005	3500	4.31
ASG202-8M	.002	8000	19/32x1 9/16	3.63	LSG602-35C	1 1/4x1	.006	3500	4.37
ASG502-8M	.005	8000	3/4x1 3/4	3.93	LSG752-35C	1 1/4x1 1/2	.0075	3500	4.54
ASG103-8M	.01	8000	3/4x2 1/4	4.02	LSG103-35C	1 1/4x1	.01	3500	4.72
ASG203-8M	.02	8000	29/32x2 3/4	4.74	LSG203-35C	1 1/4x1 1/2	.02	3500	4.96
ASG503-8M	.05	8000	1 3/8x2 3/4	6.18	LSG253-35C	1 1/4x1 1/2	.025	3500	5.02
ASG501-10M	.0005	10,000	19/32x1 3/4	4.11	LSG303-35C	1 3/8x2	.03	3500	6.20
ASG102-10M	.001	10,000	19/32x1 3/4	4.14	LSG403-35C	1 3/8x2	.04	3500	6.31
ASG202-10M	.002	10,000	19/32x1 3/4	4.20	LSG503-35C	1 3/8x2 1/2	.05	3500	6.79
ASG502-10M	.005	10,000	13/16x1 3/4	4.50	LSG603-35C	1 3/8x3	.06	3500	7.08
ASG103-10M	.01	10,000	29/32x2 3/4	5.04	LSG753-35C	1 3/8x3 1/2	.075	3500	7.38
ASG203-10M	.02	10,000	1 1/4x2 3/4	5.55	LSG104-35C	1 3/8x4	0.1	3500	7.97
ASG303-10M	.03	10,000	1 3/8x2 3/4	6.93	LSG252-5M	13/16x2	.0025	5000	5.58
ASG603-10M	.06	10,000	1 3/8x4 1/2	8.55	LSG302-5M	13/16x2	.003	5000	5.64
ASG501-15M	.0005	15,000	19/32x2 3/4	6.00	LSG402-5M	1 1/4x2	.004	5000	6.02
ASG102-15M	.001	15,000	3/4x2 1/4	6.15	LSG502-5M	1 1/4x2	.005	5000	6.08
ASG202-15M	.002	15,000	3/4x2 1/4	6.15	LSG602-5M	1 1/4x2	.006	5000	6.14
ASG502-15M	.005	15,000	1 1/4x2 3/4	7.56	LSG752-5M	1 1/4x2	.0075	5000	6.67
ASG103-15M	.01	15,000	1 1/4x3 3/4	7.62	LSG103-5M	1 3/8x2	.01	5000	6.73
ASG203-15M	.02	15,000	1 3/8x4 1/2	10.56	LSG203-5M	1 3/8x3	.02	5000	7.32
ASG501-20M	.0005	20,000	19/32x3 1/2	7.80	LSG253-5M	1 3/8x3	.025	5000	8.08
ASG102-20M	.001	20,000	3/4x3 1/2	8.40	LSG303-5M	1 3/8x4	.03	5000	8.79
ASG202-20M	.002	20,000	13/16x3 1/2	8.94	LSG403-5M	1 3/8x4 1/2	.04	5000	9.74
ASG502-20M	.005	20,000	1 1/4x3 1/2	10.68	LSG503-5M	1 3/8x6	.05	5000	10.62
ASG103-20M	.01	20,000	1 3/8x4 1/2	10.92	LSG603-5M	1 3/8x6	.06	5000	12.10
ASG501-30M	.0005	30,000	19/32x4 9/16	10.02	LSG753-5M	1 3/8x8	.075	5000	12.68
ASG102-30M	.001	30,000	3/4x5	10.92	LSG104-5M	1 3/8x8	0.1	5000	13.86
ASG202-30M	.002	30,000	1 3/8x4 1/4	12.48	LSG751-7M	3/4x2	.00075	7000	5.19
ASG502-30M	.005	30,000	1 3/8x5	14.76	LSG102-7M	3/4x2	.001	7000	5.25
ASG501-40M	.0005	40,000	3/4x6 1/2	11.10	LSG202-7M	29/32x2	.002	7000	5.84
ASG102-40M	.001	40,000	13/16x6 1/2	12.75	LSG252-7M	1 1/4x2	.0025	7000	6.14
ASG202-40M	.002	40,000	1 1/4x6 1/2	14.70	LSG302-7M	1 1/4x2	.003	7000	6.20
ASG501-50M	.0005	50,000	3/4x8 1/4	12.15	LSG402-7M	1 3/8x2	.004	7000	7.08
ASG102-50M	.001	50,000	13/16x8 1/4	13.20	LSG502-7M	1 3/8x2	.005	7000	8.26
ASG202-50M	.002	50,000	1 1/4x8 1/4	15.75	LSG602-7M	1 3/8x2	.006	7000	8.32
ASG502-50M	.005	50,000	1 3/8x10 1/4	20.40	LSG752-7M	1 3/8x4	.0075	7000	9.91
ASG501-60M	.0005	60,000	3/4x11	14.80	LSG103-7M	1 3/8x4	.01	7000	9.97
ASG102-60M	.001	60,000	29/32x11	15.75	LSG203-7M	1 3/8x4	.02	7000	10.76
					LSG253-7M	1 3/8x6	.025	7000	11.21
					LSG303-7M	1 3/8x6	.03	7000	11.26
					LSG403-7M	1 3/8x8	.04	7000	12.03
					LSG503-7M	1 3/8x8	.05	7000	12.09
					LSG102-10M	29/32x3	.001	10 KV	7.02
					LSG202-10M	1 1/4x3	.002	10 KV	7.84
					LSG252-10M	1 3/8x3	.0025	10 KV	8.90
					LSG302-10M	1 3/8x3	.003	10 KV	8.96
					LSG402-10M	1 3/8x3	.004	10 KV	10.32
					LSG502-10M	1 1/4x6	.005	10 KV	11.80
					LSG602-10M	1 1/4x6	.006	10 KV	12.39
					LSG752-10M	1 3/8x6	.0075	10 KV	12.98
					LSG103-10M	1 3/8x6	.01	10 KV	13.57
					LSG203-10M	1 3/8x9	.02	10 KV	15.16
					LSG253-10M	1 3/8x9	.025	10 KV	15.75
					LSG101-14M	19/32x4	.0001	14 KV	6.96
					LSG201-14M	3/4x4	.0002	14 KV	7.20
					LSG251-14M	3/4x4	.00025	14 KV	7.25





OTHER VALUES READILY AVAILABLE

See Sect. 4000 for Plasticon Power Supplies

# CORNING FIXED GLASS CAPACITORS

For coupling, decoupling, filtering, timing, switching or computer circuits, CORNING® Capacitors provide ultra-stable electrical performance. This stability is inherent in their fused glass and aluminum foil capacitive elements. These inorganic materials and continuous process and quality monitoring are responsible for the well known CORNING CYFR capacitor made for the Minuteman. Many of the basic advantages of the CYFR have found their way into the standard CYFM, TYO and LO-CAP

units. The properties of these capacitors are entirely those of the closely controlled dielectric, and can't be changed by assembly methods or subsequent treatment. At 1 Kc and 25°C, dissipation factor is less than 0.001; at any given temperature, TC will not deviate from the curve by more than 5 ppm. Corning manufactures highly stable fixed glass capacitors to meet your demanding circuit requirements. Their performance and economic advantages will add value to your equipment.

	TYPE AND MIL SPEC	MODEL	CAPACITANCE RANGE (pf)	VOLTAGE	NOMINAL DIMENSIONS Size in Inches	WEIGHT IN GRAMS
<b>CYFM</b>	Fusion-sealed environment-proof performance at cost savings. Monolithic construction provides outstanding electrical performance. MIL-C-11272. 	CYFM10	0.5 to 200 220 to 300	500 300	1/32 x 1/64 x 3/64	0.25 - 0.50
		CYFM15	220 to 510 560 to 1200	500 300	1/32 x 1/64 x 3/64	0.75 - 1.25
		CYFM20	560 to 3500 3600 to 5100	500 300	4/64 x 2/64 x 3/64	2.50 - 4.00
		CYFM30	3600 to 6200 6800 to 10000	500 300	4/64 x 3/4 x 3/64	5.00 - 7.00
<b>CYFR</b>	High reliability. Homogeneous, controlled production process yields capacitor reliability "second to none." Exceed requirements of Mil-C-11272. 	CYFR10	0.5 to 150 160 to 240	500 300	1/32 x 1/64 x 3/64	0.25 - 0.50
		CYFR15	160 to 510 560 to 1200	500 300	1/32 x 1/64 x 3/64	0.75 - 1.25
		CYFR20	560 to 3300 3600 to 5100	500 300	4/64 x 2/64 x 3/64	2.50 - 4.00
		CYFR30	3600 to 6200 6200 to 10000	500 300	4/64 x 3/4 x 3/64	5.00 - 7.00
<b>TYO</b>	New printed circuit capacitor provides glass stability in a uniformly symmetric case. Eliminates shorting. Lead spacing: TYO-6—0.2", TYO-7—0.2", TYO-8—0.4", 	TYO-6	1 to 560	300	.300 x .200 x .115	.3 - .4
		TYO-7	561 to 1000	300	.300 x .300 x .115	.4 - .5
		TYO-8	1001 to 2700	300	.500 x .300 x .115	.7 - .8
<b>LO-CAP</b>	New. Simple, low cost, rugged glass dielectric capacitor designed especially for high frequency applications requiring very low capacitances without sacrificing stability. Conforms to Mil-C-11272. 	LoC1	.10 to 10.0	500	.380 x .200 x .090	.2 to .25

## STANDARD CAPACITOR VALUES, CYFM, CYFR, TYO

CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.
0.5†	0R5C	7.5	7R5C	33	330J	130	131J	560	561J	2400	242J
1.0	1R0C	8.2	8R2C	36	360J	150	151J	620	621J	2700	272J
1.5	1R5C	9.1	9R1C	39	390J	160	161J	680	681J	3000	302J
2.2	2R2C	10	100C	43	430J	180	181J	750	751J	3300	332J
2.7	2R7C	11	110C	47	470J	200	201J	820	821J	3600	362J
3.0	3R0C	12	120J*	51	510J	220	221J	910	911J	3900	392J
3.3	3R3C	13	130J	56	560J	240	241J	1000	102J	4300	432J
3.6	3R6C	15	150J	62	620J	270	271J	1100	112J	4700	472J
3.9	3R9C	16	160J	68	680J	300	301J	1200	122J	5100	512J
4.3	4R3C	18	180J	75	750J	330	331J	1300	132J	5600	562J
4.7	4R7C	20	200J	82	820J	360	361J	1500	152J	6200	622J
5.1	5R1C	22	220J	91	910J	390	391J	1600	162J	6800	682J
5.6	5R6C	24	240J	100	101J	430	431J	1800	182J	7500	752J
6.2	6R2C	27	270J	110	111J	470	471J	2000	202J	8200	822J
6.8	6R8C	30	300J	120	121J	510	511J	2200	222J	9100	912J
										10000	103J

\*Standard Tolerances As Shown: C = ±25 pf J = ±5%  
 \*Other Tolerances Available On Request: D = ±50 pf F = ±1% G = ±2% K = ±10% M = ±20% (TYO only)  
 †0.5 pf does not apply to TYO capacitors

## STANDARD CAPACITOR VALUES — LO-CAP

CAP. (pf)	MIL EQUIV.	STD. TOL.	CAP. (pf)	MIL EQUIV.	STD. TOL.	CAP. (pf)	MIL EQUIV.	STD. TOL.	CAP. (pf)	MIL EQUIV.	STD. TOL.
R10	.10	KM*	R43	.43	KJ	1R3	1.3	KJ	4.3	4R3	KJ
R12	.12	K	R47	.47	KJM	1R5	1.5	KJM	4.7	4R7	KJM
R15	.15	KM	R51	.51	KJ	1R6	1.6	KJ	5.1	5R1	KJ
R18	.18	K	R56	.56	KJ	1R8	1.8	KJ	5.6	5R6	KJ
R20	.20	KJ	R62	.62	KJ	2R0	2.0	KJ	6.2	6R2	KJ
R22	.22	KJM	R68	.68	KJM	2R2	2.2	KJM	6.8	6R8	KJM
R24	.24	KJ	R75	.75	KJ	2R4	2.4	KJ	7.5	7R5	KJ
R27	.27	KJ	R82	.82	KJ	2R7	2.7	KJ	8.2	8R2	KJ
R30	.30	KJ	R91	.91	KJ	3R0	3.0	KJ	9.1	9R1	KJ
R33	.33	KJM	1R0	1.0	KJM	3R3	3.3	KJM	10.0	100	KJM
R36	.36	KJ	1R1	1.1	KJ	3R6	3.6	KJ			
R39	.39	KJ	1R2	1.2	KJ	3R9	3.9	KJ			

\*Std. Tolerances: K = ±10% M = ±20% J = ±5% On Request

See our complete line of glass/tin oxide film resistors in Section 4700. For more technical data or for fast delivery on top-reliability CORNING fixed capacitors, call your CORNING distributor, or contact us directly.

**CORNING**  
**ELECTRONICS**  
 A DIVISION OF CORNING GLASS WORKS  
 RALEIGH, N.C.



# REPLACEMENT COMPONENT SELECTOR

The capacitors listed on the following pages and the other Cornell-Dubilier products listed in this edition of the Radio-Master are intended for replacement applications in electronic equipment. Their primary use is by the professional electronic service technician and the industrial electronic maintenance technician.

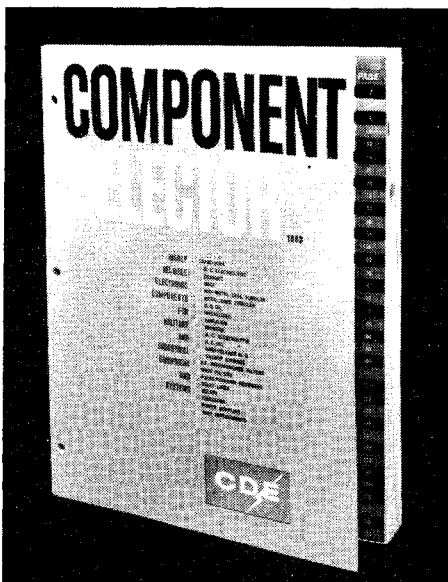
The items listed have been selected by Cornell-Dubilier from the thousands of types produced by CDE for original equipment manufacturers. CDE's over 50 years experience as a leader in electronic components assures you of a balanced replacement component line — broad enough to meet your needs and selective enough to be immediately available.

All of the products catalogued are stocked in depth by a world-wide network of CDE Authorized Distribu-

tors. These CDE Authorized Distributors are carefully selected for their knowledge of electronic requirements and their ability to properly serve this market. The CDE Distributor is dedicated to serving you with name-brand products, stocked in depth to meet your needs.

The local stocks of the CDE Distributor are backed by substantial inventories maintained at CDE's modern Redistribution Center located a few minutes from Chicago's O'Hare International Airport. Further support of the Distributor in serving you is assured by six modern CDE plants with over 1,000,00 square feet of manufacturing area and over 3,000 employees dedicated to producing the highest quality components to protect your reputation and profits.

## COMPONENTS FOR MILITARY AND INDUSTRIAL EQUIPMENT AND SYSTEMS



Information is also readily available on the extensive Cornell-Dubilier electronic component line designed for use in military and industrial equipment and systems. The 144 page Cornell Dubilier COMPONENT SELECTOR contains detailed information on the complete CDE line.

In addition to the complete listing of ratings, specifications, and dimensions of CDE capacitors, RFI filters, wave filters, delay lines, pulse forming networks, electro-magnetic relays, vibrators, power supplies and instruments, the CDE COMPONENT SELECTOR contains over 25 pages of reference material. The CDE Capacitor Application Chart, RFI Filter Guideline Application Chart, and eight other capacitor selection charts included simplify selection and application of components.

Copies of the CDE COMPONENT SELECTOR are available from your local CDE AUTHORIZED INDUSTRIAL DISTRIBUTOR or from your local CDE field engineering office.

# Tips for Added Value



## STANDARD RATINGS

In selecting ratings of the "Preferred Replacement" capacitor line, Cornell-Dubilier has adhered to accepted industry standards whenever possible. This standardization does not limit the technician or result in field problems.

In the case of by-pass and coupling capacitors, ratings listed follow EIA standards for "Preferred Values." Standard decade values and associated tolerances are reproduced in the table at the right.

It will be noted from the table that ratings in frequent use prior to the adoption of the standard are not included. For example, .05 mfd. at  $\pm 10\%$  tolerance is not a standard value—standards are .047 and .056. Considering the overlapping tolerance bands of these ratings, selection of the next higher or lower standard rating should give perfectly satisfactory service in the application.

The use of standard ratings results in benefits through lower prices and greater availability of stock through your CDE General Line Distributor.

$\pm 20\%$ Tolerance	$\pm 10\%$ Tolerance	$\pm 5\%$ Tolerance
1.0	1.0	1.0
		1.1
	1.2	1.2
		1.3
1.5	1.5	1.5
		1.6
	1.8	1.8
		2.0
2.2	2.2	2.2
		2.4
	2.7	2.7
		3.0
3.3	3.3	3.3
		3.6
	3.9	3.9
		4.3
4.7	4.7	4.7
		5.1
	5.6	5.6
		6.2
6.8	6.8	6.8
		7.5
	8.2	8.2
		9.1

## PARENT CASE SIZES

CDE's careful selection of listed values to incorporate only "Parent Case Sizes" results in obtaining a higher quality unit without sacrifice of size or low cost. The "Parent Case Size" means that for a given capacitance rating, one or more voltage ratings have the same case size and price. In this case, the higher voltage unit is regarded as the "Parent Case Size."

In using the "Preferred Replacement" capacitor listings, always check the next higher voltage if the capacitance rating required is not listed at the specific voltage desired. For example, in the case of by-pass and coupling capacitors, if the rating is not listed under 200 volts, check the 400 and 600 volt listings. Selection of the higher voltage unit may be made in the knowledge that it has the same case size as the lower voltage unit and that no price penalty is being paid.

In addition, selection of the higher voltage unit provides an added measure of safety in the replacement through the higher dielectric strength.

In the case of electrolytic capacitors, listings are also based on "Parent Case Sizes." If the capacitance required is not listed at the voltage desired, always check the next higher voltages until the capacitance is listed. Use of the higher voltage unit again does not result in a price or size disadvantage. The higher voltage unit will perform better in the application since it will have a lower leakage current than the lower rated unit.

The use of "Parent Case Sizes" is another advantage offered by Cornell-Dubilier in its "Preferred Replacement" capacitor line.

## WIDE APPLICATION RANGES

With the publication of this "REPLACEMENT COMPONENT SELECTOR," CDE introduces a completely new line of wide application range Twist-Prong electrolytic capacitors listed in Class 201.40 & 201.42. These wide application range Twist-Prongs provide a proper replacement for any electrolytic marked with a capacitance within the range on the wide application label and provided the voltage does not exceed the voltage on the wide application range label. The line is broad enough to cover replacement requirements but selective enough to be stocked **complete** by all CDE General Line Distributors—a proper replacement instantly available.

The wide application range Twist-Prong line takes into consideration the broad tolerances inherent in electrolytic manufacture and widely recognized throughout the industry. The standard tolerance table for electrolytics is shown at the right. By designing a completely new Twist-Prong line utilizing the latest materials and processes and recognizing the broad overlapping tolerance bands, CDE offers a Twist-Prong electrolytic line unsurpassed in quality or availability.

## EIA RS-154-B REVISED SPECIFICATION

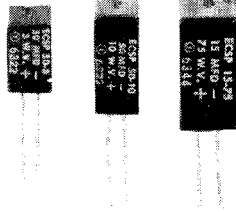
RATED DC WORKING VOLTAGE	CAPACITANCE TOLERANCE
From 3 to 50 volts, incl.	-10% to +150%
From 51 to 350 volts, incl.	-10% to +100%
351 volts and above	-10% to +50%

Recommended replacements for all replacement Twist-Prongs in current use are detailed in the 96 page Cornell-Dubilier Twist-Prong Replacement Guide. Your Cornell-Dubilier General Line Distributor will be happy to give you a copy today.



# D. C. Aluminum Electrolytics

Type	Class
ECSP	201 - 11



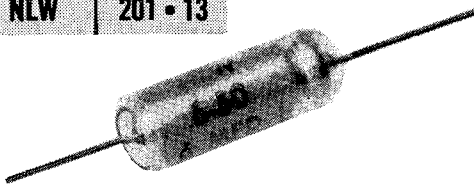
## RECTANGULAR PRINTED CIRCUIT ELECTROLYTIC

The rectangular form factor and miniature size of the type ECSP electrolytic make it the ideal replacement for printed circuit applications. The unit is encapsulated in a pre-formed phenolic case effecting a true hermetic seal. Operating temperature range is from -20C to +65C. Lead spacing of  $\frac{3}{8}$ " square case is .125" and for  $\frac{1}{2}$ " square case, is .185". Standard tolerance is -10% to +150% through 50 VDCW and to +100% for 75 VDCW.

Cap. Mfd.	Type	Size (Inches) W x D x H	List Price	Net Price
<b>3V DCW</b>				
50	ECSP 50-3	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	\$1.15	\$.69
100	ECSP 100-3	$\frac{3}{8} \times \frac{3}{8} \times \frac{7}{8}$	1.15	.69
250	ECSP 250-3	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.25	.75
<b>10V DCW</b>				
35	ECSP 35-10	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
50	ECSP 50-10	$\frac{3}{8} \times \frac{3}{8} \times \frac{7}{8}$	1.15	.69
150	ECSP 150-10	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.20	.72
<b>15V DCW</b>				
5	ECSP 5-15	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.10	.66
10	ECSP 10-15	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.10	.66
25	ECSP 25-15	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
30	ECSP 30-15	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
35	ECSP 35-15	$\frac{3}{8} \times \frac{3}{8} \times \frac{7}{8}$	1.15	.69
50	ECSP 50-15	$\frac{3}{8} \times \frac{3}{8} \times \frac{7}{8}$	1.15	.69
100	ECSP 100-15	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.20	.72
125	ECSP 125-15	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.20	.72

Cap. Mfd.	Type	Size (Inches) W x D x H	List Price	Net Price
<b>25V DCW</b>				
10	ECSP 10-25	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	\$1.15	\$.69
15	ECSP 15-25	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
25	ECSP 25-25	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
75	ECSP 75-25	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.20	.72
<b>50V DCW</b>				
10	ECSP 10-50	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
15	ECSP 15-50	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
20	ECSP 20-50	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.15	.69
30	ECSP 30-50	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.15	.69
50	ECSP 50-50	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.20	.72
<b>75V DCW</b>				
3	ECSP 3-75	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.10	.66
5	ECSP 5-75	$\frac{3}{8} \times \frac{3}{8} \times \frac{5}{8}$	1.15	.69
15	ECSP 15-75	$\frac{1}{2} \times \frac{1}{2} \times 1$	1.15	.69

Type	Class
NLW	201 - 13



## SUB-MINIATURE METAL CASED ELECTROLYTIC

The  $\frac{3}{16}$ " diameter case is the smallest case size available in subminiature electrolytics. The subminiature type NLW is of all welded construction, hermetically sealed in an aluminum case, and provided with plastic insulating sleeve. Operating temperature range is -40C to +85C. Tolerance is -10% to +150% through 50 VDCW and to +100% through 150 VDCW. Dimensions listed are for uninsulated units; for insulated dimensions, add  $\frac{1}{16}$ " to diameter and  $\frac{1}{8}$ " length.

Cap. Mfd.	Type	Size (Inches—D x L)	List Price	Net Price
<b>3V DCW</b>				
10	NLW 10-3	$\frac{3}{16} \times \frac{1}{2}$	\$1.25	\$.75
25	NLW 25-3	$\frac{1}{4} \times \frac{1}{2}$	1.25	.75
35	NLW 35-3	$\frac{1}{4} \times \frac{5}{8}$	1.25	.75
40	NLW 40-3	$\frac{1}{4} \times \frac{5}{8}$	1.25	.75
50	NLW 50-3	$\frac{1}{4} \times \frac{3}{4}$	1.25	.75
75	NLW 75-3	$\frac{5}{16} \times \frac{3}{4}$	1.40	.84
100	NLW 100-3	$\frac{3}{8} \times \frac{5}{8}$	1.40	.84
125	NLW 125-3	$\frac{3}{8} \times \frac{5}{8}$	1.40	.84
150	NLW 150-3	$\frac{3}{8} \times \frac{3}{4}$	1.45	.87
175	NLW 175-3	$\frac{3}{8} \times \frac{3}{4}$	1.50	.90
200	NLW 200-3	$\frac{3}{8} \times \frac{7}{8}$	1.50	.90
250	NLW 250-3	$\frac{3}{8} \times 1$	1.60	.96
300	NLW 300-3	$\frac{3}{8} \times 1$	1.65	.99
350	NLW 350-3	$\frac{3}{8} \times 1$	1.65	.99
400	NLW 400-3	$\frac{3}{8} \times 1\frac{1}{4}$	1.70	1.02
450	NLW 450-3	$\frac{3}{8} \times 1\frac{1}{2}$	1.75	1.05
<b>6V DCW</b>				
1	NLW 1-6	$\frac{3}{16} \times \frac{1}{2}$	1.25	.75
10	NLW 10-6	$\frac{3}{16} \times \frac{1}{2}$	1.35	.81
15	NLW 15-6	$\frac{1}{4} \times \frac{1}{2}$	1.35	.81
20	NLW 20-6	$\frac{1}{4} \times \frac{1}{2}$	1.35	.81
30	NLW 30-6	$\frac{1}{4} \times \frac{3}{8}$	1.40	.84

Cap. Mfd.	Type	Size (Inches—D x L)	List Price	Net Price
<b>6V DCW (cont'd)</b>				
35	NLW 35-6	$\frac{5}{16} \times \frac{5}{8}$	\$1.40	\$.84
40	NLW 40-6	$\frac{5}{16} \times \frac{5}{8}$	1.40	.84
50	NLW 50-6	$\frac{5}{16} \times \frac{5}{8}$	1.40	.84
125	NLW 125-6	$\frac{3}{8} \times \frac{3}{4}$	1.50	.90
150	NLW 150-6	$\frac{3}{8} \times \frac{7}{8}$	1.55	.93
175	NLW 175-6	$\frac{3}{8} \times 1$	1.55	.93
250	NLW 250-6	$\frac{3}{8} \times 1\frac{1}{4}$	1.70	1.02
300	NLW 300-6	$\frac{3}{8} \times 1\frac{1}{2}$	1.80	1.08
<b>10V DCW</b>				
8	NLW 8-10	$\frac{3}{16} \times \frac{1}{2}$	1.35	.81
25	NLW 25-10	$\frac{1}{4} \times \frac{5}{8}$	1.45	.87
40	NLW 40-10	$\frac{5}{16} \times \frac{3}{4}$	1.45	.87
50	NLW 50-10	$\frac{5}{16} \times \frac{3}{4}$	1.55	.93
75	NLW 75-10	$\frac{3}{8} \times \frac{5}{8}$	1.65	.99
125	NLW 125-10	$\frac{3}{8} \times \frac{7}{8}$	1.85	1.11
150	NLW 150-10	$\frac{3}{8} \times 1$	1.90	1.14
225	NLW 225-10	$\frac{3}{8} \times 1\frac{1}{4}$	2.10	1.26
<b>12V DCW</b>				
15	NLW 15-12	$\frac{1}{4} \times \frac{1}{2}$	1.40	.84
35	NLW 35-12	$\frac{5}{16} \times \frac{5}{8}$	1.45	.87
100	NLW 100-12	$\frac{3}{8} \times \frac{3}{4}$	1.75	1.05
200	NLW 200-12	$\frac{3}{8} \times 1\frac{1}{4}$	2.05	1.23
250	NLW 250-12	$\frac{3}{8} \times 1\frac{1}{2}$	2.20	1.32

# D. C. Aluminum Electrolytics

## SUB-MINIATURE ELECTROLYTICS (Continued)

Class	Type
201-13	NLW

Cap. Mfd.	Type	Size (Inches—D x L)	List Price	Net Price
<b>15V DCW</b>				
3	NLW 3-15	$\frac{3}{16} \times \frac{1}{2}$	\$1.25	\$ .75
4	NLW 4-15	$\frac{3}{16} \times \frac{1}{2}$	1.30	.78
5	NLW 5-15	$\frac{3}{16} \times \frac{1}{2}$	1.40	.84
6	NLW 6-15	$\frac{3}{16} \times \frac{1}{2}$	1.40	.84
10	NLW 10-15	$\frac{1}{4} \times \frac{1}{2}$	1.40	.84
15	NLW 15-15	$\frac{1}{4} \times \frac{5}{8}$	1.45	.87
20	NLW 20-15	$\frac{1}{4} \times \frac{5}{8}$	1.45	.87
25	NLW 25-15	$\frac{3}{16} \times \frac{5}{8}$	1.45	.87
30	NLW 30-15	$\frac{3}{16} \times \frac{5}{8}$	1.50	.90
35	NLW 35-15	$\frac{3}{8} \times \frac{5}{8}$	1.55	.93
40	NLW 40-15	$\frac{3}{8} \times \frac{5}{8}$	1.55	.93
50	NLW 50-15	$\frac{3}{8} \times \frac{5}{8}$	1.60	.96
75	NLW 75-15	$\frac{3}{8} \times \frac{3}{4}$	1.70	1.02
100	NLW 100-15	$\frac{3}{8} \times \frac{3}{4}$	1.80	1.08
125	NLW 125-15	$\frac{3}{8} \times 1$	1.85	1.11
150	NLW 150-15	$\frac{3}{8} \times 1\frac{1}{4}$	1.95	1.17
175	NLW 175-15	$\frac{3}{8} \times 1\frac{1}{4}$	2.00	1.20
200	NLW 200-15	$\frac{3}{8} \times 1\frac{1}{2}$	2.10	1.26
<b>25V DCW</b>				
3	NLW 3-25	$\frac{3}{16} \times \frac{1}{2}$	1.30	.78
6	NLW 6-25	$\frac{1}{4} \times \frac{1}{2}$	1.40	.84
8	NLW 8-25	$\frac{1}{4} \times \frac{1}{2}$	1.45	.87
10	NLW 10-25	$\frac{1}{4} \times \frac{5}{8}$	1.45	.87
15	NLW 15-25	$\frac{5}{16} \times \frac{5}{8}$	1.45	.87
20	NLW 20-25	$\frac{3}{8} \times \frac{5}{8}$	1.50	.90
25	NLW 25-25	$\frac{3}{8} \times \frac{5}{8}$	1.55	.93
30	NLW 30-25	$\frac{3}{8} \times \frac{5}{8}$	1.60	.96
35	NLW 35-25	$\frac{3}{8} \times \frac{3}{4}$	1.60	.96
40	NLW 40-25	$\frac{3}{8} \times \frac{3}{4}$	1.70	1.02
50	NLW 50-25	$\frac{3}{8} \times \frac{7}{8}$	1.80	1.08
75	NLW 75-25	$\frac{3}{8} \times 1\frac{1}{4}$	1.95	1.17
100	NLW 100-25	$\frac{3}{8} \times 1\frac{1}{2}$	2.10	1.26
<b>50V DCW</b>				
1	NLW 1-50	$\frac{3}{16} \times \frac{1}{2}$	1.30	.78
2	NLW 2-50	$\frac{3}{16} \times \frac{1}{2}$	1.35	.81

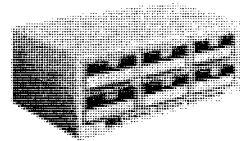
Cap. Mfd.	Type	Size (Inches—D x L)	List Price	Net Price
<b>50V DCW (cont'd)</b>				
3	NLW 3-50	$\frac{1}{4} \times \frac{1}{2}$	\$1.35	\$ .81
4	NLW 4-50	$\frac{1}{4} \times \frac{1}{2}$	1.35	.81
5	NLW 5-50	$\frac{1}{4} \times \frac{1}{2}$	1.45	.87
6	NLW 6-50	$\frac{1}{4} \times \frac{5}{8}$	1.45	.87
8	NLW 8-50	$\frac{5}{16} \times \frac{1}{2}$	1.50	.90
10	NLW 10-50	$\frac{5}{16} \times \frac{5}{8}$	1.50	.90
15	NLW 15-50	$\frac{3}{8} \times \frac{5}{8}$	1.50	.90
20	NLW 20-50	$\frac{3}{8} \times \frac{5}{8}$	1.50	.90
25	NLW 25-50	$\frac{3}{8} \times \frac{3}{4}$	1.55	.93
30	NLW 30-50	$\frac{3}{8} \times \frac{3}{4}$	1.60	.96
35	NLW 35-50	$\frac{3}{8} \times \frac{7}{8}$	1.70	1.02
40	NLW 40-50	$\frac{3}{8} \times 1$	1.75	1.05
50	NLW 50-50	$\frac{3}{8} \times 1\frac{1}{4}$	1.85	1.11
75	NLW 75-50	$\frac{3}{8} \times 1\frac{1}{2}$	2.00	1.20
<b>100V DCW</b>				
2	NLW 2-100	$\frac{1}{4} \times \frac{5}{8}$	1.40	.84
3	NLW 3-100	$\frac{5}{16} \times \frac{5}{8}$	1.40	.84
6	NLW 6-100	$\frac{3}{8} \times \frac{5}{8}$	1.50	.90
8	NLW 8-100	$\frac{3}{8} \times \frac{3}{4}$	1.55	.93
10	NLW 10-100	$\frac{3}{8} \times \frac{7}{8}$	1.55	.93
15	NLW 15-100	$\frac{3}{8} \times 1\frac{1}{4}$	1.55	.93
20	NLW 20-100	$\frac{3}{8} \times 1\frac{1}{2}$	1.60	.96
<b>150V DCW</b>				
1	NLW 1-150	$\frac{1}{4} \times \frac{1}{2}$	1.40	.84
2	NLW 2-150	$\frac{5}{16} \times \frac{5}{8}$	1.45	.87
3	NLW 3-150	$\frac{3}{8} \times \frac{5}{8}$	1.45	.87
4	NLW 4-150	$\frac{3}{8} \times \frac{5}{8}$	1.45	.87
5	NLW 5-150	$\frac{3}{8} \times \frac{5}{8}$	1.55	.93
6	NLW 6-150	$\frac{3}{8} \times \frac{3}{4}$	1.55	.93
8	NLW 8-150	$\frac{3}{8} \times \frac{7}{8}$	1.60	.96
10	NLW 10-150	$\frac{3}{8} \times 1$	1.60	.96
12	NLW 12-150	$\frac{3}{8} \times 1\frac{1}{4}$	1.60	.96
15	NLW 15-150	$\frac{3}{8} \times 1\frac{1}{4}$	1.60	.96
18	NLW 18-150	$\frac{3}{8} \times 1\frac{1}{2}$	1.60	.96

## MINIATURE ELECTROLYTIC ASSORTMENT

CDE's miniature electrolytic capacitor assortment contains the most popular values of the type NLW and ECSP. Units are packaged in a stackable six drawer plastic cabinet matching other CDE capacitor assortments. The assortment contains *two each* of 25 volt NLW's rated 10mfd. and 25mfd. and *one each* NLW rated 1 mfd., 50 v.; 4mfd., 50 v.; 8mfd., 10v.; 20 mfd., 50v; 40mfd., 15v.; 50 mfd., 25v.; 75mfd., 15v., and 100mfd., 15v. Also included are *one each* ECSP rated 5 mfd., 15v.; 10mfd., 50v.; and 150mfd., 10v.

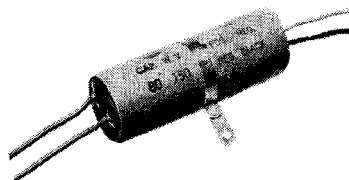
LIST PRICE \$21.85 NET PRICE \$13.11 (Cabinet Free)

Type  
NLW, ECSP



## CARDBOARD TUBULAR, DUAL SECTION

Cap. Mfd.	Type	Size (Inches—D x L)	List Price	Net Price
20-20	EDL2215SS	$\frac{1}{16} \times 2\frac{5}{8}$	\$1.65	\$ .99
30-30	EDL3315SS	$1 \times 2\frac{5}{8}$	1.80	1.08
40-20	EDL4215SS	$1 \times 2\frac{5}{8}$	1.75	1.05
40-40	EDL4415SS	$1\frac{1}{8} \times 2\frac{7}{8}$	1.85	1.11
50-30	EDL5315SS	$1\frac{1}{8} \times 2\frac{7}{8}$	1.95	1.17
50-50	EDL5515SS	$1\frac{1}{8} \times 3\frac{1}{8}$	2.10	1.26
80-40	EDL8415SS	$1\frac{3}{8} \times 3\frac{3}{8}$	2.25	1.35



Class  
201-21

Type  
EDL

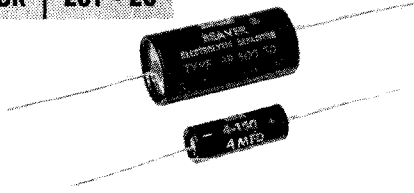
The type EDL is a dual separate section unit encased in an impregnated cardboard tube with wax end seals. Section terminations are brought out to color coded flexible leads. The unit is supplied with mounting strap. Ratings and polarity of the sections are clearly marked on the unit. Working voltage is 150 volts DC and the unit may be operated to 65C.



# D. C. Aluminum Electrolytics

## SINGLE SECTION, TUBULAR ELECTROLYTICS

Type	Class
BR, BBR	201 • 26



These famous BLUE-BEAVER® tubular electrolytics are ideally suited for use in a wide variety of electronic equipment. Both types BR and BBR are hermetically sealed in aluminum cases with cardboard insulating sleeves. Negative is grounded to can. Cathodes of all units up to and including 150 volts are etched. Rubber-bakelite hermetic seal is used on all units and, over 3/8" diameter, the seal is provided with a rubber safety vent. Maximum operating temperature is 85C below 500VDCW and 65C, 500VDCW and above. For tolerance see page 2

Cap. Mfd.	Type	Size* (Inches—D x L)	List Price	Net Price
<b>3V DCW</b>				
25	BBR 25-3	3/8 x 1 1/16	.85	.51
50	BBR 50-3	3/8 x 1 1/16	.95	.57
<b>6V DCW</b>				
5	BBR 5-6	3/8 x 1 1/16	.80	.48
25	BBR 25-6	3/8 x 1 1/16	.85	.51
50	BBR 50-6	3/8 x 1 1/16	.95	.57
100	BR 100-6	1/2 x 1 1/16	1.20	.72
250	BR 250-6	1/2 x 1 1/16	1.35	.81
500	BR 500-6	1/2 x 1 1/16	1.55	.93
1000	BR 1000-6	5/8 x 1 1/16	1.90	1.14
2000	BR 2000-6	3/4 x 2	2.30	1.38
3000	BR 3000-6	7/8 x 2	2.85	1.71
4000	BR 4000-6	1 x 2 3/16	3.25	1.95
<b>12V DCW</b>				
100	BR 100-12	1/2 x 1 1/16	1.20	.72
250	BR 250-12	1/2 x 1 1/16	1.45	.87
500	BR 500-12	1/2 x 1 1/16	1.70	1.02
1000	BR 1000-12	5/8 x 1 1/16	2.25	1.35
2000	BR 2000	3/4 x 2	2.65	1.59
<b>15V DCW</b>				
100	BR 100-15	1/2 x 1 1/16	1.25	.75
250	BR 250-15	1/2 x 1 1/16	1.55	.93
500	BR 500-15	1/2 x 1 1/16	1.75	1.05
1000	BR 1000-15	5/8 x 1 1/16	2.30	1.38
2000	BR 2000-15	3/4 x 2	3.20	1.92
3000	BR 3000-15	7/8 x 2 3/16	3.95	2.37
4000	BR 4000-15	7/8 x 2 3/4	4.85	2.91
5000	BR 5000-15	1 x 3	5.25	3.15
<b>25V DCW</b>				
10	BBR 10-25	3/8 x 1 1/16	1.00	.60
20	BBR 20-25	3/8 x 1 1/16	1.00	.60
25	BBR 25-25	3/8 x 1 1/16	1.00	.60
50	BR 50-25	1/2 x 1 1/16	1.10	.66
100	BR 100-25	1/2 x 1 1/16	1.35	.81
250	BR 250-25	1/2 x 1 1/16	1.70	1.02
500	BR 500-25	5/8 x 1 1/16	2.30	1.38
1000	BR 1000-25	3/4 x 2	3.95	2.37
2000	BR 2000-25	7/8 x 2 1/2	4.85	2.91
<b>50V DCW</b>				
1	BBR 1-50	3/8 x 1 1/16	.90	.54
2	BBR 2-50	3/8 x 1 1/16	.90	.54
4	BBR 4-50	3/8 x 1 1/16	1.00	.60
5	BBR 5-50	3/8 x 1 1/16	1.00	.60
10	BBR 10-50	3/8 x 1 1/16	1.00	.60
25	BBR 25-50	1/2 x 1 1/16	1.05	.63
50	BR 50-50	1/2 x 1 1/16	1.20	.72
100	BR 100-50	1/2 x 1 1/16	1.40	.84
150	BR 150-50	5/8 x 1 1/16	1.55	.93
250	BR 250-50	3/4 x 1 1/16	1.75	1.05
500	BR 500-50	7/8 x 1 1/16	2.40	1.44
1000	BR 1000-50	1 x 2 1/16	4.20	2.52
<b>90V DCW</b>				
10	BBR 10-90	1/2 x 1 1/16	1.10	.66
16	BBR 16-90	1/2 x 1 1/16	1.10	.66
<b>150V DCW</b>				
4	BBR 4-150	3/8 x 1 1/16	1.00	.60
8	BBR 8-150	1/2 x 1 1/16	1.05	.63
10	BBR 10-150	1/2 x 1 1/16	1.05	.63
12	BBR 12-150	1/2 x 1 1/16	1.10	.66
16	BBR 16-150	1/2 x 1 1/16	1.15	.69
20	BBR 20-150	1/2 x 1 1/16	1.20	.72

Cap. Mfd.	Type	Size* (Inches—D x L)	List Price	Net Price
<b>150V DCW (cont'd)</b>				
25	BR 25-150	3/4 x 1 1/16	1.25	.75
30	BR 30-150	3/4 x 1 1/16	1.30	.78
40	BR 40-150	3/4 x 1 1/16	1.35	.81
50	BR 50-150	3/4 x 1 1/16	1.40	.84
60	BR 60-150	7/8 x 1 1/16	1.50	.90
80	BR 80-150	7/8 x 1 1/16	1.60	.96
100	BR 100-150	7/8 x 2	1.75	1.05
150	BR 150-150	1 x 2 3/16	1.90	1.14
200	BR 200-150	1 x 3	2.20	1.32
250	BR 250-150	1 x 3 3/16	2.55	1.53
300	BR 300-150	1 x 3 3/16	2.95	1.77
<b>250V DCW</b>				
4	BBR 4-250	1/2 x 1 1/16	1.00	.60
8	BBR 8-250	1/2 x 1 1/16	1.15	.69
12	BBR 12-250	1/2 x 1 1/16	1.25	.75
16	BR 16-250	3/4 x 1 1/16	1.30	.78
20	BR 20-250	3/4 x 1 1/16	1.35	.81
30	BR 30-250	3/4 x 1 1/16	1.45	.87
40	BR 40-250	3/4 x 2	1.55	.93
50	BR 50-250	7/8 x 1 1/16	1.70	1.02
60	BR 60-250	1 x 1 1/16	1.80	1.08
100	BR 100-250	1 x 2 3/16	2.45	1.47
150	BR 150-250	1 1/8 x 3	3.15	1.89
200	BR 200-250	1 3/8 x 3 1/8	3.50	2.10
<b>350V DCW</b>				
4	BR 4-350	5/8 x 1 1/16	1.05	.63
8	BR 8-350	5/8 x 1 1/16	1.20	.72
12	BR 12-350	3/4 x 1 1/16	1.30	.78
16	BR 16-350	3/4 x 1 1/16	1.40	.84
20	BR 20-350	3/4 x 1 1/16	1.45	.87
30	BR 30-350	3/4 x 2	1.65	.99
40	BR 40-350	7/8 x 2	1.75	1.05
50	BR 50-350	1 x 2	1.85	1.11
60	BR 60-350	1 x 2	1.95	1.17
80	BR 80-350	1 x 3	2.10	1.26
100	BR 100-350	1 x 3	2.55	1.53
150	BR 150-350	1 3/8 x 3	3.95	2.37
200	BR 200-350	1 3/8 x 4 1/8	4.50	2.70
<b>450V DCW</b>				
1	BR 1-450	5/8 x 1 1/16	1.10	.66
2	BR 2-450	5/8 x 1 1/16	1.10	.66
4	BR 4-450	5/8 x 1 1/16	1.15	.69
8	BR 8-450	3/4 x 1 1/16	1.25	.75
10	BR 10-450	3/4 x 1 1/16	1.30	.78
12	BR 12-450	3/4 x 1 1/16	1.35	.81
16	BR 16-450	3/4 x 1 1/16	1.40	.84
20	BR 20-450	7/8 x 1 1/16	1.55	.93
30	BR 30-450	1 x 2	1.70	1.02
40	BR 40-450	1 x 2 3/16	1.80	1.08
50	BR 50-450	1 x 2 1/16	2.10	1.26
60	BR 60-450	1 x 3	2.35	1.41
80	BR 80-450	1 x 3 3/16	2.80	1.68
100	BR 100-450	1 x 3 3/16	3.20	1.92
150	BR 150-450	1 3/8 x 3 3/8	4.75	2.85
200	BR 200-450	1 3/8 x 4 1/8	5.00	3.00
<b>500V DCW</b>				
4	BR 4-500	5/8 x 1 1/16	1.20	.72
8	BR 8-500	3/4 x 1 1/16	1.30	.78
12	BR 12-500	3/4 x 1 1/16	1.40	.84
16	BR 16-500	7/8 x 1 1/16	1.50	.90
20	BR 20-500	7/8 x 2	1.60	.96
30	BR 30-500	1 x 2	1.75	1.05

\*For Overall BBR Size add 1/16" to Diam. and 1/2" to Length. For Overall BR Size add 1/16" to Diam. and 1/2" to Length. (Continued on next page)

# D. C. Aluminum Electrolytics

## SINGLE SECTION TUBULARS (Continued)

Type	Class
BR, BBR	201 • 26

Cap. Mfd.	Type	Size (Inches—D x L)	List Price	Net Price
<b>600V DCW</b>				
4	BR 4-600	1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	\$2.25	\$1.35
8	BR 8-600	1 <sup>3</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>16</sub>	2.30	1.38
10	BR 10-600	1 <sup>5</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>16</sub>	2.45	1.47
12	BR 12-600	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>16</sub>	2.75	1.65
16	BR 16-600	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>16</sub>	3.15	1.89
20	BR 20-600	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>1</sup> / <sub>16</sub>	3.50	2.10

Cap. Mfd.	Type	Size (Inches—D x L)	List Price	Net Price
<b>700V DCW</b>				
8	BR 8-700	1 <sup>5</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>16</sub>	\$2.45	\$1.47
10	BR 10-700	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>16</sub>	2.55	1.53
12	BR 12-700	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>1</sup> / <sub>16</sub>	2.85	1.71
16	BR 16-700	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>5</sup> / <sub>16</sub>	3.15	1.89

For Overall BR Size add 1/16" to Diam. and 3/16" to Length.

## NON-POLARIZED TUBULARS

Type	Class
BRNP	201 • 26

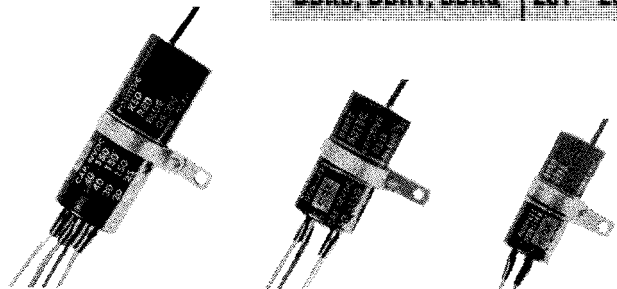
Cap. Mfd.	Volts (VNP)	Type	Size (In.—D x L)	List Price	Net Price
1000	3	BRNP 1000-3	1 <sup>5</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>16</sub>	\$2.15	\$1.29
500	10	BRNP 500-10	1 <sup>3</sup> / <sub>16</sub> x 1 <sup>9</sup> / <sub>16</sub>	2.00	1.20
20	30	BRNP 20-30	1 <sup>1</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>4</sub>	1.25	.75
4	50	BRNP 4-50	1 <sup>1</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>4</sub>	1.25	.75
5	400	BRNP 5-400	1 <sup>3</sup> / <sub>16</sub> x 1 <sup>9</sup> / <sub>16</sub>	1.40	.84
20	400	BRNP 20-400	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	1.90	1.14
10	400	BRNP 10-400	1 <sup>3</sup> / <sub>16</sub> x 1 <sup>9</sup> / <sub>16</sub>	1.55	.93

The type BRNP is a true non-polarized electrolytic suitable for use when no DC polarizing voltage is present. Processing and construction are essentially the same as that employed in AC motor starting capacitors to insure true non-polarized operation. Units are physically similar to the type BR—axial lead, hermetically sealed in aluminum cases with cardboard insulating sleeves. BRNP units are designed for use in cross-over networks and in boot-strap filtering applications.

## MULTIPLE SECTION TUBULARS

Type	Class
BBRD, BBRT, BBRQ	201 • 26

These multiple section units feature construction similar to the type BBR. The aluminum case is cardboard insulated and equipped with combination vent and hermetic seal. Seven inch flexible leads are vinyl insulated. Mounting strap is standard. Maximum operating temperature is 85C; tolerance per EIA standards (see page 2). Dimensions are uninsulated; add 1/16" o diameter and 3/16" to length for over-all size.



## 3BRD - DUAL SECTIONS

Cap. Mfd.	Volts DCW	Type	Size (In.—D x L)	List Price	Net Price
20-20	25	BBRD 2202	3/4 x 1 1/16	\$1.40	\$.84
10-10	50	BBRD 115	3/4 x 1 1/16	1.40	.84
20-10	150	BBRD 2115	3/4 x 1 1/16	1.55	.93
20-20	150	BBRD 2215	3/4 x 1 1/16	1.65	.99
30-20	150	BBRD 3215	7/8 x 1 1/16	1.70	1.02
30-30	150	BBRD 3315	7/8 x 1 1/16	1.80	1.08
40-20	150	BBRD 4215	1 x 1 1/16	1.75	1.05
40-30	150	BBRD 4315	7/8 x 2	1.80	1.08
40-40	150	BBRD 4415	7/8 x 2	1.85	1.11
50-30	150	BBRD 5315	7/8 x 2	1.95	1.17
50-50	150	BBRD 5515	1 x 2	2.10	1.26
80-40	150	BBRD 8415	1 x 2 3/16	2.25	1.35
80-50	150	BBRD 8515	1 x 2 1/2	2.30	1.38
100-50	150	BBRD 0183.7	1 x 3	3.00	1.80
100-100	150	BBRD 101015	1 x 3	3.20	1.92
200-5	200	BBRD 0196	1 x 4 1/16	3.50	2.10
8-8	250	BBRD 8025	3/4 x 1 1/16	1.60	.96
16-8	250	BBRD 16825	3/4 x 2	1.70	1.02
16-16	250	BBRD 16D25	7/8 x 2	1.80	1.08

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
20-20	250	BBRD 2225	1 x 1 1/16	\$1.85	\$1.11
30-30	250	BBRD 3325	1 x 2 3/16	2.25	1.35
75-20	250	BBRD 7V225	1 x 3	2.60	1.56
80-10	250	BBRD 0242	1 x 3	2.55	1.53
120-80	250	BBRD 0246	1 3/8 x 3 3/16	4.00	2.40
150-100	300	BBRD 0286	1 3/8 x 4 3/16	5.25	3.15
140-5	350	BBRD 0334	1 1/8 x 4 3/16	4.15	2.49
8-8	450	BBRD 8D45	7/8 x 1 1/16	1.70	1.02
10-10	450	BBRD 1145	7/8 x 2	1.95	1.17
16-8	450	BBRD 16845	1 x 2 3/16	2.00	1.20
16-16	450	BBRD 16D45	1 x 2 1/2	2.25	1.35
20-20	450	BBRD 2245	1 x 3	2.50	1.50
30-30	450	BBRD 3345	1 1/2 x 3 3/16	3.00	1.80
40-40	450	BBRD 4445	1 x 4 1/16	3.40	2.04
60,125	200,50	BBRD 0576	1 x 3	3.25	1.95
20,100	450,25	BBRD 0646	1 x 2 1/2	2.20	1.32
40,50	450,50	BBRD 0652	1 x 3 3/16	3.00	1.80
80,100	450,50	BBRD 0722	1 3/8 x 3 3/16	3.75	2.25
30,50	450,200	BBRD 0707	1 1/8 x 2 1/2	2.85	1.71

Type	Class
<b>BBRD, BBRT, BBRQ</b>	<b>201 • 26</b>

**MULTIPLE SECTION TUBULARS**

**BBRT - TRIPLE SECTION**

Cap. Mfd.	Volts DCW	Type	Size (In. - DxL)	List Price	Net Price
20-20-20	150	BBRT 22215	7/8 x 1 1/16	\$2.20	\$1.32
30-25-20	150	BBRT 32V215	7/8 x 2	2.25	2.35
30-30-30	150	BBRT 33315	1 x 2	2.35	1.41
40-20-20	150	BBRT 42215	1 x 1 1/16	2.25	1.35
40-30-20	150	BBRT 43215	1 x 2	2.35	1.41
40-40-20	150	BBRT 44215	1 x 2	2.35	1.41
40-40-40	150	BBRT 44415	1 x 2 3/16	2.45	1.47
50-30-20	150	BBRT 53215	1 x 2	2.45	1.47
80-40-20	150	BBRT 84215	1 x 3	2.75	1.65
150-150-150	150	BBRT 0126.5	1 3/8 x 4 3/16	4.75	2.85
250-200-10	150	BBRT 0129	1 3/8 x 4 3/16	5.65	3.39
75-40-10	250	BBRT 7V4125	1 1/8 x 3	3.45	2.07
40-40-40	300	BBRT 0185	1 1/8 x 3	4.60	2.76
120-40-10	300	BBRT 0196	1 3/8 x 3 3/16	4.85	2.91
60-60-5	350	BBRT 0235	1 3/8 x 3 3/16	4.25	2.55
10-10-10	450	BBRT 11145	1 x 2 1/2	2.45	1.47
16-16-16	450	BBRT 16T45	1 1/8 x 3	3.10	1.86
40-40,250	150,10	BBRT 4415X25	1 x 2 3/16	2.60	1.56
50-30,200	150,10	BBRT 5315X20	1 x 2 3/16	2.55	1.53
50-30,20	150,25	BBRT 5315C	1 x 1 1/16	2.35	1.41

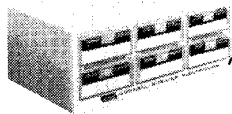
Cap. Mfd.	Volts DCW	Type	Size (In. - DxL)	List Price	Net Price
50-50,20	150,25	BBRT 5515C	1 x 2 3/16	\$2.50	\$1.50
80-40,20	150,25	BBRT 8415C	1 x 2 1/2	2.65	1.55
30-20,100	150,25	BBRT 3215C10	1 x 2	2.35	1.41
20-20,20	150,25	BBRT 2215C	7/8 x 1 1/16	2.05	1.25
30-30,20	150,25	BBRT 3315C	7/8 x 2	2.20	1.32
40-20,20	150,25	BBRT 4215C	1 x 1 1/16	2.15	1.25
40-30,20	150,25	BBRT 4315C	1 x 1 1/16	2.20	1.32
40-40,20	150,25	BBRT 4415C	1 x 1 1/16	2.25	1.35
50-30,100	150,25	BBRT 5315C10	1 x 2 3/16	2.45	1.47
50-30,250	150,25	BBRT 5315C25	1 x 3	3.10	1.86
80-20,100	150,25	BBRT 8215C10	1 x 2 1/2	2.75	1.65
20-20,20	250,25	BBRT 2225C	1 x 2	2.25	1.35
40-20,20	250,25	BBRT 4225C	1 x 2 3/16	2.55	1.53
40-40,20	250,25	BBRT 4425C	1 x 2 1/16	2.90	1.72
80-10,100	300-50	BBRT 0733	1 3/8 x 3 3/16	4.05	2.45
140-5,200	350,200	BBRT 0878	1 1/2 x 4 3/16	6.70	4.05
20-20,20	450,25	BBRT 2245C	1 x 3	2.90	1.72
10-10,100	450,50	BBRT 0925	1 x 3	3.30	1.90
5,80-40	450,400	BBRT 1238	1 3/8 x 3 3/16	4.55	2.75
30,50,100	450,150,25	BBRT 1411	1 1/8 x 3	3.70	2.25

**BBRQ - QUADRUPLE SECTION**

Cap. Mfd.	Volts DCW	Type	Size (In. - DxL)	List Price	Net Price
10-10-10-10	450	BBRQ 111145	1 x 3	\$3.20	\$1.92
20-20-20-20	450	BBRQ 222245	1 1/8 x 4 1/16	4.50	2.70
20-20-20-10	450	BBRQ 0125	1 3/8 x 3 3/16	4.25	2.55
40-20-20-10	450	BBRQ 0170.5	1 3/8 x 3 3/16	4.70	2.82
40-40-20-20	450	BBRQ 0174	1 3/8 x 4 3/16	5.45	3.27
30-30-20,20	150,25	BBRQ 33215C	1 x 2	2.90	1.74
40-20-20,20	150,25	BBRQ 42215C	1 x 2	2.85	1.71
40-40-30,20	150,25	BBRQ 44315C	1 x 2 1/2	3.00	1.80
50-30-20,20	150,25	BBRQ 53215C	1 x 2 1/2	3.05	1.83
50-50-50,20	150,25	BBRQ 55515C	1 x 3	3.45	2.07
140-5,200-30	300,150	BBRQ 0789.4	1 1/2 x 4 3/16	5.15	3.09

Cap. Mfd.	Volts DCW	Type	Size (In. - DxL)	List Price	Net Price
120-40-40,10	300,250	BBRQ 0385	1 3/8 x 3 3/16	\$6.20	\$3.72
20-20-20,20	450,25	BBRQ 22245C	1 1/8 x 3 3/16	4.05	2.43
10-10-10,150	450,50	BBRQ 0500	1 1/8 x 3	4.60	2.76
10,20-20-10	450,350	BBRQ 0695.3	1 1/8 x 3	3.50	2.10
80-60,40,20	350,300,150	BBRQ 0789.5	1 3/8 x 3 3/16	5.90	3.54
140,5,200-30	350,300,200	BBRQ 0925	1 1/2 x 4 3/16	7.65	4.59
80-10,40,100	400,300,50	BBRQ 0805	1 3/8 x 3 3/16	5.45	3.27
10,80,40-40	450,300,250	BBRQ 0926.5	1 3/8 x 3 3/16	4.95	2.97
10,80,40,100	450,300,250,50	BBRQ 0954	1 3/8 x 3 3/16	4.80	2.88
20,120,40,100	450,300,250,50	BBRQ 0954.5	1 3/8 x 4 3/16	6.15	3.69

Type	Class
<b>BR</b>	<b>201 • 26</b>

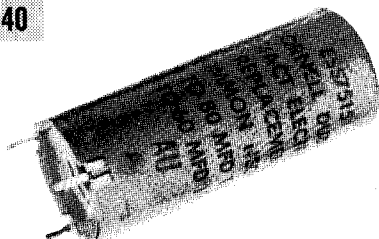


**TUBULAR ELECTROLYTIC ASSORTMENT**

The type BR tubular electrolytic capacitor assortment contains 13 of the most commonly used tubulars in entertainment equipment repair. Units included are types BBR, BR, BBRD and ESS rated (mfd./volts): 10/50; 25/50; 50/50; 100/50; two 10/450; 20/450; two 40/450; 80/450; dual 50-30/150; dual 80-50/150 and one ESS wide range printed circuit replacement.

**LIST PRICE \$21.45 NET PRICE \$12.87 (Cabinet Free)**

Type	Class
<b>ESS</b>	<b>201 • 40</b>



**WIDE-RANGE ELECTROLYTIC**

The type ESS wide range printed circuit electrolytic is an exact replacement for eight original standard electrolytics used principally in home receivers. It is a replacement for units rated at 150 volts: 50-30 mfd.; 70-30 mfd.; 75-30 mfd.; 60-40 mfd.; 80-4 mfd.; 50-50 mfd.; 70-50 mfd.; and 80-50 mfd. In addition, the ESS is a good replacement for many single and dual units within the ratings indicated. Order type ESS-7515, 1" diameter x 2 1/2" length.

**LIST PRICE \$2.00 NET PRICE \$1.20**





# D. C. Aluminum Electrolytics

## PRINTED CIRCUIT WIDE-APPLICATION-RANGE TWIST-PRONGS™

Class	Type
201 - 40	APC, BPC, CPC, DPC

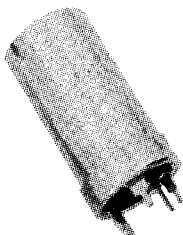
This line of wide-application range printed circuit Twist-Prong electrolytics is a completely new CDE product. Dimensions and mountings have been selected to fill the vast majority of replacement requirements. The rating selection also fits most replacement applications. Ratings are based on a wide application range. This recognizes the wide tolerances inherent in electrolytic manufacture and widely recognized as standard throughout the electronics industry (see page 2 for further details). The wide tolerances permitted by electrolytic applications make possible a wide application range unit.

CDE guarantees that the wide application range unit is a proper electrical replacement for any unit marked with a capacitance within that on the wide-range label provided the service voltage is within that on the wide-range label.

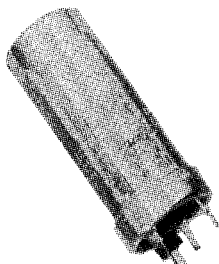
Recommended replacements for all Twist-Prongs in current applications are contained in the new 96 page CDE Twist-Prong Replacement Guide. Your CDE General Line Distributor will be happy to give you a copy.

Cap. Mfd.	Volts DCW	Type	Size (In. - DxL)	List Price	Net Price
<b>SINGLES</b>					
80-150	10-150	APC 010	1 x 3	\$1.85	\$1.11
80-160	10-200	APC 020	1 3/8 x 2 1/2	2.35	1.41
15-20	10-450	APC 030	1 x 2	1.65	.99
<b>DUALS</b>					
250-500	10-20	BPC 005	1 x 2	2.40	1.44
50-100	10-20				
500-1000	10-16	BPC 010	1 x 2 1/2	3.25	1.95
500-1000	6-10				
400-800	10-20	BPC 015	1 x 2 1/2	3.00	1.80
100-250	10-20				
300-700	10-25	BPC 020	1 x 2	2.55	1.53
150-300	10-25				
100-250	10-25	BPC 030	1 x 2	2.25	1.35
100-250	10-25				
30-50	10-150	BPC 040	1 x 2	1.90	1.14
20-30	10-150				
100-200	10-200	BPC 045	1 3/8 x 2 1/2	2.85	1.71
4-8	10-200				
8-10	10-300	BPC 050	1 3/8 x 2	2.00	1.20
8-10	10-300				
<b>TRIPLES</b>					
100-250	10-16	CPC 005	1 x 2	2.50	1.50
100-250	10-16				
20-50	10-16				
250-500	10-16	CPC 010	1 x 2 1/2	2.95	1.77
100-250	10-16				
100-250	10-16				
20-40	10-150	CPC 015	1 x 2	2.20	1.32
10-20	10-150				
10-20	10-25				
30-50	10-150	CPC 020	1 x 2	2.45	1.47
20-40	10-150				
15-30	10-150				
30-60	10-150	CPC 025	1 3/8 x 2	2.95	1.77
30-60	10-150				
20-40	10-150				
40-70	10-150	CPC 030	1 x 2	2.45	1.47
20-30	10-150				
50-100	6-10				

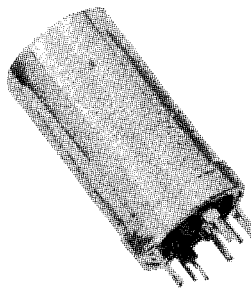
Cap. Mfd.	Volts DCW	Type	Size (In. - DxL)	List Price	Net Price
<b>TRIPLES (Cont'd)</b>					
40-70	10-150	CPC 035	1 x 2	\$2.35	\$1.41
15-30	10-150				
10-20	10-150				
40-80	10-150	CPC 040	1 x 3	2.70	1.62
30-60	10-150				
100-250	6-10				
50-90	10-150	CPC 045	1 x 3	2.85	1.71
20-40	10-150				
200-400	6-15				
7-10	10-300	CPC 047	1 x 2	2.15	1.29
7-10	10-150				
7-10	10-150				
100-150	10-300	CPC 048	1 3/8 x 4	5.10	3.06
40-60	10-200				
100-200	10-150				
100-150	10-300	CPC 050	1 3/8 x 4	5.20	3.12
80-100	10-300				
20-30	10-300				
30-40	10-400	CPC 060	1 3/8 x 2 1/2	3.50	2.10
20-30	10-350				
15-20	10-300				
<b>QUADRUPLES</b>					
30-60	10-150	DPC 020	1 3/8 x 2	3.30	1.98
30-60	10-150				
20-40	10-150				
8-10	10-150				
20-40	10-150	DPC 040	1 3/8 x 2 1/2	3.15	1.89
10-20	10-150				
8-10	10-150				
50-100	10-50				
30-40	10-400	DPC 060	1 3/8 x 2 1/2	4.20	2.52
20-30	10-350				
15-20	10-350				
15-20	10-350				



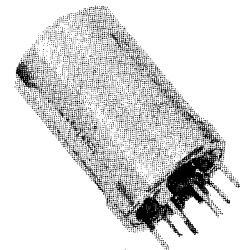
Type APC



Type BPC



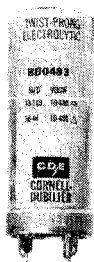
Type CPC



Type DPC

Type AA-, BB-, CC-, DD-	Class 201 • 42
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## WIDE-APPLICATION-RANGE TWIST-PRONG™ ELECTROLYTICS



The CDE wide application range Twist-Prong is further described on page 2 of this Selector. The unit is guaranteed to be a proper electrical replacement for any Twist-Prong marked with a capacity and voltage within that on the wide application range label. The wide application range unit permits replacement of any current Twist-Prong direct from the stock of your local CDE General Line Distributor. No waiting or alternates are needed when you use the CDE wide application range units.

Complete recommended replacements for all current Twist-Prongs in replacement usage are contained in the new 96 page CDE Twist-Prong Replacement Guide. Ask your CDE General Line Distributor for your copy today.

## AA SINGLES

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
500-1000	10-16	AA 0060	1 x 1½	\$2.10	\$1.26
1000-2000	10-16	AA 0070	1¾ x 2	3.20	1.92
1500-3000	10-16	AA 0080	1¾ x 2	4.00	2.40
250-500	10-25	AA 0120	1 x 1½	1.95	1.17
500-1000	10-25	AA 0130	1¾ x 2	2.90	1.74
250-500	10-50	AA 0160	1¾ x 2	2.40	1.44
750-1500	10-50	AA 0174	1¾ x 3	4.10	2.46
30-50	10-150	AA 0200	1 x 1½	1.50	.90
60-100	10-150	AA 0241	1 x 1½	1.65	.99
100-150	10-150	AA 0252	1¾ x 2	2.15	1.29
100-150	10-150	AA 0261	1 x 2	1.85	1.11
200-300	10-150	AA 0263	1¾ x 2	2.65	1.59
120-200	10-150	AA 0264	1 x 3	2.05	1.23
80-125	10-250	AA 0267	1 x 3	2.15	1.29
100-150	10-250	AA 0315	1¾ x 2½	2.60	1.56

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
60-100	10-300	AA 0340	1¾ x 2½	\$2.50	\$1.50
60-100	10-300	AA 0350	1 x 2½	2.15	1.29
120-200	10-300	AA 0357	1¾ x 2½	3.35	2.01
30-50	10-350	AA 0390	1 x 2	1.85	1.11
60-80	10-350	AA 0401	1¾ x 2	2.45	1.47
100-150	10-350	AA 0415	1¾ x 2½	3.25	1.95
250-300	10-350	AA 0417	1¾ x 4	4.95	2.97
35-50	10-450	AA 0490	1 x 2½	2.10	1.26
60-80	10-450	AA 0510	1¾ x 2½	2.90	1.74
70-100	10-450	AA 0512	1¾ x 3	3.30	1.98
100-125	10-450	AA 0514	1¾ x 3½	3.70	2.22
7-10	10-500	AA 0520	1 x 1½	1.50	.90
15-20	10-500	AA 0530	1 x 2	1.75	1.05
30-40	10-500	AA 0550	1 x 2½	2.20	1.32
60-80	10-500	AA 0560	1¾ x 3	3.45	2.07

## BB- DUALS

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
250-500	10-16	BB 0015	1 x 2	\$2.15	\$1.29
100-200	10-16				
500-1000	10-16	BB 0040	1¾ x 2	3.55	2.13
500-1000	10-16				
250-500	10-20	BB 0045	1 x 2	2.40	1.44
60-100	10-20				
60-100	10-50	BB 0085	1 x 1½	1.90	1.14
60-100	10-50				
20-40	10-150	BB 0141	1 x 1½	1.85	1.11
20-40	10-150				
30-50	10-150	BB 0150	1 x 1½	1.85	1.11
15-30	10-150				
50-80	10-150	BB 0171	1 x 2	2.15	1.29
50-80	10-150				
50-80	10-150	BB 0181	1 x 1¾	2.00	1.20
20-40	10-150				
100-200	10-150	BB 0189	1¾ x 2½	3.45	2.07
100-200	10-150				
40-60	10-200	BB 0190	1¾ x 2	3.55	2.13
40-60	10-200				
100-200	10-200	BB 0196	1¾ x 2	3.00	1.80
4-8	10-200				
30-40	10-250	BB 0241	1 x 1¾	2.10	1.26
30-40	10-250				
50-80	10-250	BB 0243	1¾ x 2½	2.80	1.68
30-40	10-250				
120-200	10-250	BB 0252	1¾ x 4½	4.85	2.91
120-200	10-250				
50-80	10-300	BB 0270	1¾ x 2½	3.40	2.04
50-80	10-300				
120-200	10-300	BB 0286	1¾ x 3½	4.55	2.73
50-80	10-300				

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
15-20	10-350	BB 0300	1 x 2	\$2.00	\$1.20
15-20	10-350				
20-30	10-350	BB 0310	1 x 2½	2.30	1.38
20-30	10-350				
50-80	10-350	BB 0326	1¾ x 2½	3.30	1.98
30-40	10-350				
70-100	10-350	BB 0332	1¾ x 3½	4.90	2.94
70-100	10-350				
100-160	10-350	BB 0334	1¾ x 3	3.90	2.34
7-10	10-350				
60-80	10-400	BB 0356	1¾ x 3½	4.45	2.67
60-80	10-400				
15-20	10-450	BB 0390	1 x 2½	2.10	1.26
7-10	10-450				
15-20	10-450	BB 0400	1 x 2½	2.30	1.38
15-20	10-450				
20-30	10-450	BB 0410	1 x 3	2.30	1.38
7-10	10-450				
20-30	10-450	BB 0430	1¾ x 2	2.95	1.77
20-30	10-450				
30-40	10-450	BB 0440	1¾ x 2	2.95	1.77
15-20	10-450				
30-50	10-450	BB 0455	1¾ x 3	3.70	2.22
30-50	10-450				
60-80	10-450	BB 0470	1¾ x 3	3.50	2.10
7-10	10-450				
60-80	10-450	BB 0473	1¾ x 2½	3.65	2.19
15-20	10-450				
60-80	10-450	BB 0480	1¾ x 3½	4.05	2.43
30-40	10-450				
70-100	10-450	BB 0483	1¾ x 3½	4.40	2.64
30-40	10-450				

(Continued on next page)

# D. C. Aluminum Electrolytics

## WIDE-APPLICATION-RANGE TWIST-PRONG™ ELECTROLYTICS (Continued)

Class	Type
201 • 42	AA, BB, CC, DD

### BB- DUALS (Continued)

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
60-80 30-50	10-475 10-475	BB 0489	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	\$4.60	\$2.76
60-80 60-80	10-475 10-475	BB 0489.5	1 $\frac{3}{8}$ x 4	5.20	3.12
7-10 7-10	10-500 10-500	BB 0490	1 x 2	1.95	1.17
15-20 15-20	10-500 10-500	BB 0500	1 $\frac{3}{8}$ x 2	2.85	1.71
30-40 30-40	10-500 10-500	BB 0530	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	3.80	2.28

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
50-60 30-40	10-500 10-500	BB 0540	1 $\frac{3}{8}$ x 3 $\frac{5}{8}$	\$4.35	\$2.61
100-150 60-100	10-300 10-150	BB 0608	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	3.75	2.25
70-100 15-30	10-400 10-50	BB 0626	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	3.50	2.10
60-80 50-100	10-450 10-50	BB 0722	1 $\frac{3}{8}$ x 3	3.50	2.10

### CC- TRIPLES

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
400-850 200-400 2	10-16 10-16 11.5 RMS	CC 0002	1 x 2	\$3.25	\$1.95
500-1000 250-500 4	10-16 10-16 11.5 RMS	CC 0004	1 $\frac{3}{8}$ x 2	3.45	2.07
500-1000 250-500 4	10-16 10-16 11.5 RMS	CC 0006	1 x 2 $\frac{1}{2}$	3.50	2.10
200-400 50-100 50-100	10-16 10-16 10-16	CC 0008*	1 x 2	2.55	1.53
20-40 20-40 20-40	10-150 10-150 10-150	CC 0090	1 x 1 $\frac{3}{4}$	2.45	1.47
30-50 30-50 30-50	10-150 10-150 10-150	CC 0105	1 x 2	2.55	1.53
40-60 20-40 10-20	10-150 10-150 10-150	CC 0110	1 x 1 $\frac{1}{2}$	2.45	1.47
50-80 20-40 10-20	10-150 10-150 10-150	CC 0120	1 x 2	2.50	1.50
120-200 60-100 40-60	10-150 10-150 10-150	CC 0127	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	3.80	2.28
120-200 100-150 100-150	10-150 10-150 10-150	CC 0128	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	4.50	2.70
200-250 120-200 7-10	10-200 10-200 10-200	CC 0129.5	1 $\frac{3}{8}$ x 4	4.80	2.88
15-20 15-20 15-20	10-250 10-250 10-250	CC 0132	1 x 1 $\frac{3}{4}$	2.35	1.41
30-40 15-20 15-20	10-250 10-250 10-250	CC 0160	1 x 2	2.55	1.53
90-120 35-50 30-40	10-300 10-300 10-300	CC 0200	1 $\frac{3}{8}$ x 3	4.45	2.67
7-10 7-10 7-10	10-350 10-350 10-350	CC 0210	1 x 1 $\frac{3}{4}$	2.30	1.38
20-30 15-20 7-10	10-350 10-350 10-350	CC 0225	1 x 2 $\frac{1}{2}$	2.65	1.59
40-60 30-40 15-20	10-350 10-350 10-350	CC 0230	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	3.80	2.28

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
50-80 40-60 40-60	10-350 10-350 10-350	CC 0236	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	\$4.85	\$2.91
60-90 30-40 15-20	10-350 10-350 10-350	CC 0237	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	4.20	2.52
60-100 60-100 7-10	10-350 10-350 10-350	CC 0238	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	5.00	3.00
100-140 100-140 15-20	10-350 10-350 10-350	CC 0238.5	1 $\frac{3}{8}$ x 4	6.10	3.66
10-15 10-15 10-15	10-450 10-450 10-450	CC 0254	1 x 2 $\frac{1}{2}$	2.80	1.68
15-20 7-10 7-10	10-450 10-450 10-450	CC 0260	1 x 3	2.70	1.62
30-40 7-10 7-10	10-450 10-450 10-450	CC 0320	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	3.35	2.01
30-40 20-30 15-20	10-450 10-450 10-450	CC 0330	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	4.05	2.43
30-40 30-40 15-20	10-450 10-450 10-450	CC 0344	1 $\frac{3}{8}$ x 3	4.20	2.52
30-40 30-40 30-40	10-450 10-450 10-450	CC 0350	1 $\frac{3}{8}$ x 3	4.60	2.76
35-50 30-40 20-30	10-450 10-450 10-450	CC 0355	1 $\frac{3}{8}$ x 3	4.60	2.76
40-60 15-20 15-20	10-450 10-450 10-450	CC 0360	1 $\frac{3}{8}$ x 3	4.20	2.52
40-60 30-40 15-20	10-450 10-450 10-450	CC 0365	1 $\frac{3}{8}$ x 3	4.60	2.76
50-80 30-40 15-20	10-450 10-450 10-450	CC 0370	1 $\frac{3}{8}$ x 3	4.95	2.97
30-40 20-30 20-30	10-475 10-475 10-475	CC 0374	1 $\frac{3}{8}$ x 3 $\frac{5}{8}$	4.60	2.76
7-10 7-10 7-10	10-500 10-500 10-500	CC 0380	1 x 3	2.70	1.62
20-30 15-20 15-20	10-500 10-500 10-500	CC 0390	1 $\frac{3}{8}$ x 3	4.15	2.43

See next page for additional 10-16 volt items.

(Continued on next page)

## WIDE-APPLICATION-RANGE TWIST-PRONG™ ELECTROLYTICS (Continued)

Type	Class
AA-, BB-, CC-, DD-	201 • 42

## CC- TRIPLES (Continued)

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
30-40 30-40 7-10	10-500 10-500 10-500	CC 0410	1 3/8 x 2 1/2	\$4.60	\$2.76
30-40 30-40 15-20	10-150 10-150 10-25	CC 0551	1 x 1 1/2	2.25	1.35
30-40 30-40 150-250	10-150 10-150 10-25	CC 0555	1 x 3	2.65	1.59
50-80 40-60 150-250	10-150 10-150 10-25	CC 0558	1 x 2 1/2	2.90	1.74
30-50 20-30 10-20	10-150 10-150 10-25	CC 0560	1 x 2	2.25	1.35
50-80 30-40 10-20	10-150 10-150 10-25	CC 0610	1 x 2 1/2	2.50	1.50
40-60 4-8 10-20	10-200 10-200 10-50	CC 0636	1 x 2 1/2	2.35	1.41
100-140 7-10 120-200	10-300 10-300 10-150	CC 0734	1 3/8 x 3 1/2	4.70	2.82
100-140 50-100 30-60	10-300 10-300 10-50	CC 0734.3	1 3/8 x 3 1/2	4.90	2.94
15-20 15-20 10-20	10-350 10-350 10-25	CC 0800	1 x 2	2.45	1.47
20-30 15-20 15-20	10-350 10-350 10-25	CC 0830	1 x 2 1/2	2.60	1.56
60-100 40-60 15-20	10-350 10-350 10-250	CC 0875	1 3/8 x 3	4.50	2.70
60-100 7-10 15-20	10-400 10-400 10-50	CC 0894	1 3/8 x 2 1/2	4.20	2.52

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
60-100 7-10 50-80	10-400 10-400 10-350	CC 0896	1 3/8 x 3 1/2	\$5.20	\$3.12
7-10 7-10 10-20	10-450 10-450 10-25	CC 0910	1 x 2	2.30	1.38
15-20 7-10 10-20	10-450 10-450 10-25	CC 0960	1 x 2	2.55	1.53
15-20 15-20 10-20	10-450 10-450 10-25	CC 0990	1 x 2	2.70	1.62
30-40 30-40 10-20	10-450 10-450 10-25	CC 1070	1 3/8 x 2 1/2	3.90	2.34
30-40 30-40 60-100	10-450 10-450 10-50	CC 1090	1 3/8 x 3	4.05	2.43
30-40 30-40 50-80	10-450 10-450 10-350	CC 1103	1 3/8 x 4 1/8	4.90	2.94
50-80 15-20 60-100	10-450 10-450 10-50	CC 1108	1 3/8 x 3 1/2	4.45	2.67
30-40 30-40 60-100	10-500 10-500 10-200	CC 1180	1 3/8 x 4 1/8	5.10	3.06
40-60 120-200 80-140	10-200 10-150 10-150	CC 1202	1 3/8 x 4	4.20	2.52
60-100 120-200 40-60	10-300 10-150 10-150	CC 1208	1 3/8 x 4 1/8	4.50	2.70
40-60 120-200 20-30	10-350 10-150 10-150	CC 1226	1 3/8 x 3	4.05	2.43
250-500 250-500 50-100	10-16 10-16 10-16	CC 0012	1 x 2	3.25	1.95

## DD- QUADRUPLE

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
400-750 400-750 150-300 4	10-16 10-16 10-16 11.5 RMS	DD 0005	1 3/8 x 2	\$4.60	\$2.76
120-200 120-200 40-60 20-30	10-175 10-175 10-175 10-175	DD 0015	1 3/8 x 4 1/8	5.30	3.18
30-40 30-40 15-20 7-10	10-300 10-300 10-300 10-300	DD 0020	1 3/8 x 2	3.75	2.25
30-40 30-40 20-30 15-20	10-300 10-300 10-300 10-300	DD 0022	1 3/8 x 2 1/2	4.00	2.40
100-150 60-100 7-10 4-8	10-300 10-300 10-300 10-300	DD 0025	1 3/8 x 4	5.45	3.27

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
30-40 15-20 15-20 7-10	10-350 10-350 10-350 10-350	DD 0032	1 3/8 x 2	\$3.75	\$2.25
60-80 40-60 30-40 15-20	10-350 10-350 10-350 10-350	DD 0042	1 3/8 x 4 1/8	5.35	3.21
60-100 30-40 7-10 7-10	10-350 10-350 10-350 10-350	DD 0044	1 3/8 x 3	4.75	2.81
60-80 15-20 7-10 7-10	10-400 10-400 10-400 10-400	DD 0060	1 3/8 x 3 5/8	4.75	2.81
60-80 30-40 20-30 4-8	10-400 10-400 10-400 10-400	DD 0065	1 3/8 x 4 1/8	5.40	3.2

(Continued on next page)

# D. C. Aluminum Electrolytics

## WIDE-APPLICATION-RANGE TWIST-PRONG™ ELECTROLYTICS (Continued)

Type AA, BB, CC, DD-	Class 201 • 42
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### DD- QUADRUPLES (Continued)

Cap. Mfd.	Volts DCW	Type	Size (In.—D x L)	List Price	Net Price
25-35 25-35 7-10 4-8	10-450 10-450 10-450 10-450	DD 0150	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	\$4.25	\$2.55
30-40 30-40 15-20 15-20	10-450 10-450 10-450 10-450	DD 0174	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	5.10	3.06
30-40 30-40 30-40 30-40	10-450 10-450 10-450 10-450	DD 0177	1 $\frac{3}{8}$ x 4	5.90	3.54
40-60 30-40 20-30 15-20	10-450 10-450 10-450 10-450	DD 0178.8	1 $\frac{3}{8}$ x 4	5.65	3.39
60-80 7-10 7-10 7-10	10-450 10-450 10-450 10-450	DD 0179	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	4.85	2.91
15-20 15-20 7-10 7-10	10-475 10-475 10-475 10-475	DD 0179.3	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	4.05	2.43
15-20 15-20 15-20 15-20	10-475 10-475 10-475 10-475	DD 0179.5	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	4.45	2.67
7-10 7-10 7-10 7-10	10-500 10-500 10-500 10-500	DD 0180	1 $\frac{3}{8}$ x 2	3.50	2.10
40-60 30-40 15-20 120-200	10-150 10-150 10-150 6-10	DD 0300	1 $\frac{3}{8}$ x 2	3.30	1.98
60-80 30-40 30-40 30-40	10-150 10-150 10-150 10-25	DD 0325	1 $\frac{3}{8}$ x 2	3.40	2.04
60-80 30-40 30-40 60-100	10-150 10-150 10-150 10-25	DD 0330	1 $\frac{3}{8}$ x 2	3.45	2.07
120-200 120-200 60-100 7-10	10-150 10-150 10-150 10-75	DD 0338	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	4.95	2.97
20-30 15-20 4-8 60-100	10-350 10-350 10-350 10-200	DD 0418	1 $\frac{3}{8}$ x 3	4.00	2.40
30-40 30-40 30-40 30-40	10-350 10-350 10-350 10-25	DD 0460	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	4.20	2.52
40-70 30-40 7-10 30-50	10-350 10-350 10-350 10-50	DD 0471	1 $\frac{3}{8}$ x 3	4.35	2.61
60-90 20-30 4-8 60-100	10-350 10-350 10-350 10-75	DD 0473	1 $\frac{3}{8}$ x 3	4.50	2.70

Cap. Mfd.	Volts DCW	Type	Size (In.—D x L)	List Price	Net Price
60-100 7-10 7-10 15-20	10-350 10-350 10-350 10-50	DD 0473.3	1 $\frac{3}{8}$ x 3	\$4.25	\$2.55
60-100 40-80 7-10 15-20	10-350 10-350 10-350 10-50	DD 0473.5	1 $\frac{3}{8}$ x 3	5.20	3.12
60-80 30-40 7-10 15-20	10-400 10-400 10-400 10-25	DD 0477	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	5.00	3.00
60-80 30-40 7-10 60-100	10-400 10-400 10-400 10-200	DD 0477.5	1 $\frac{3}{8}$ x 4	5.60	3.36
60-80 30-40 20-30 30-40	10-400 10-400 10-400 10-25	DD 0478	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	5.35	3.21
7-10 7-10 7-10 15-20	10-450 10-450 10-450 10-25	DD 0480	1 $\frac{3}{8}$ x 2	3.15	1.89
15-20 15-20 15-20 15-20	10-450 10-450 10-450 10-25	DD 0520	1 $\frac{3}{8}$ x 2	3.80	2.28
15-20 15-20 15-20 60-100	10-450 10-450 10-450 10-50	DD 0530	1 $\frac{3}{8}$ x 3	4.05	2.43
30-40 15-20 15-20 15-20	10-450 10-450 10-450 10-25	DD 0624	1 $\frac{3}{8}$ x 3	4.25	2.55
30-40 20-30 7-10 15-20	10-450 10-450 10-450 10-25	DD 0640	1 $\frac{3}{8}$ x 3	4.25	2.55
30-40 30-40 7-10 20-30	10-450 10-450 10-450 10-50	DD 0650	1 $\frac{3}{8}$ x 3 $\frac{5}{8}$	4.50	2.70
30-40 30-40 7-10 60-100	10-450 10-450 10-450 10-100	DD 0660	1 $\frac{3}{8}$ x 3 $\frac{5}{8}$	4.80	2.88
7-10 120-200 100-140 20-30	10-300 10-150 10-150 10-150	DD 0694	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	4.40	2.64
100-160 40-60 7-10 4-5	10-350 10-300 10-300 10-300	DD 0695	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	5.55	3.33
7-10 60-100 15-20 15-20	10-450 10-300 10-300 10-300	DD 0695.5	1 $\frac{3}{8}$ x 3	4.35	2.61
20-30 80-130 7-10 7-10	10-475 10-350 10-350 10-350	DD 0697	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	5.35	3.21

(Continued on next page)

Type	Class
AA, BB, CC, DD-	201 • 42

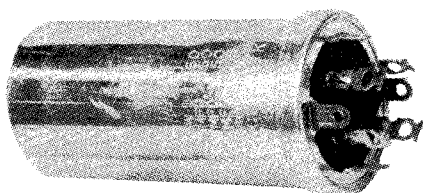
## WIDE-RANGE-APPLICATION TWIST-PRONG™ ELECTROLYTICS (Continued)

## DD- QUADRUPLES (Continued)

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
15-20 60-80 15-20 7-10	10-500 10-300 10-300 10-300	DD 9698	1 $\frac{3}{8}$ x 3 $\frac{3}{8}$	4.40	\$2.64
30-40 50-80 7-10 60-100	10-400 10-350 10-350 10-200	DD 0731.2	1 $\frac{3}{8}$ x 4	5.20	3.12
7-10 60-80 30-40 50-100	10-475 10-400 10-400 10-50	DD 0783.5	1 $\frac{3}{8}$ x 4	5.25	3.15
7-10 60-100 7-10 60-100	10-500 10-300 10-300 10-25	DD 0785	1 $\frac{3}{8}$ x 3 $\frac{3}{8}$	4.25	2.55
40-60 60-100 40-60 30-40	10-350 10-350 10-200 10-75	DD 0789.4	1 $\frac{3}{8}$ x 4	5.30	3.18
60-100 7-10 15-20 15-20	10-400 10-400 10-350 10-50	DD 0805	1 $\frac{3}{8}$ x 3	4.85	2.91
20-30 15-20 100-160 20-40	10-450 10-450 10-250 10-150	DD 0818	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	5.10	3.06

Cap. Mfd.	Volts DCW	Type	Size (Inches—D x L)	List Price	Net Price
60-80 30-50 15-20 20-50	10-450 10-450 10-250 10-50	DD 0825.5	1 $\frac{3}{8}$ x 4	\$5.55	\$3.33
60-100 7-10 120-200 20-30	10-300 10-300 10-150 10-150	DD 0866	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	4.80	2.88
60-100 7-10 20-30 15-20	10-400 10-400 10-50 10-50	DD 0875	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	4.65	2.79
20-30 7-10 100-150 20-30	10-500 10-450 10-50 10-50	DD 0928	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	4.00	2.40
60-100 40-60 7-10 15-20	10-300 10-200 10-150 10-50	DD 0929	1 $\frac{3}{8}$ x 3	4.15	2.49
7-10 30-40 4-6 60-100	10-475 10-400 10-350 10-50	DD 0966	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	3.80	2.28
15-20 30-40 60-100 40-80	10-475 10-300 10-50 10-25	DD 0990	1 $\frac{3}{8}$ x 3	3.85	2.31

Type	Class
AO, BO, CO, DO	201 • 43

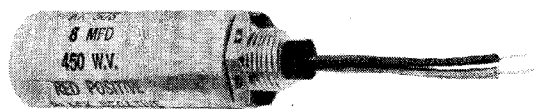


## SPECIFIC VALUE TWIST-PRONG

The types AO, BO, CO and DO specific value Twist-Prong electrolytics have been superseded by the wide application range electrolytics listed previously.

For some time CDE Authorized Distributors may have stocks of these specific value Twist-Prongs. Complete information on the specific value unit is contained in the 56 page CDE Replacement Component Selector and the 96 page CDE Twist-Prong Replacement Guide available from your CD distributor.

Type	Class
KR	201.46



## THREADED NECK ELECTROLYTI

The type KR electrolytic is designed for top of chassis mounting through a single hole with a nut and lock-washer supplied with the unit. Available in single and dual section units, the KR is supplied with 8" long color coded flexible leads. Mounting hole is  $\frac{5}{8}$ " for 1" diameter units and  $\frac{3}{4}$ " for larger diameter units. Tolerance conforms to EIA standards (see page 2). Operating temperature range is from  $-20^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ .

## SINGLE SECTION

Cap. Mfd.	Volts DCW	Type	Size (Inches-DxL)	List Price	Net Price
8	450	KR 508	1 x 2 $\frac{1}{2}$	\$2.20	\$1.32
20	450	KR 520	1 $\frac{3}{8}$ x 2 $\frac{1}{2}$	2.75	1.65
40	450	KR 540	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	3.15	1.89
4	600	KR 604C	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	2.95	1.77
8	600	KR 608C	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	3.15	1.89
16	600	KR 616C	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	3.75	2.25

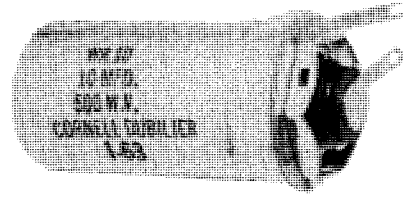
## DUAL AND TRIPLE SEPARATE SECTION UNITS

Cap. Mfd.	Volts DCW	Type	Size (Inches-DxL)	List Price	Net Price
8-8	450	KR 588A	1 $\frac{3}{8}$ x 3	3.75	2.25
8-8-8	450	KR 5888A	1 $\frac{3}{8}$ x 4 $\frac{1}{2}$	6.25	2.75

# D. C. Aluminum Electrolytics

## REPLACEMENT FOR WET ELECTROLYTICS

The popular type WR is a wide application range replacement unit designed to replace the majority of the obsolete wet electrolytic types used in prior years. Dimensions and mountings have been selected to permit ready replacement of most wet electrolytics. Units are designed for top of chassis mounting through a single 3/4" diameter hole with nut and mounting washer included with the unit. Riveted solder terminal lugs are supplied. Units are rated 500 VDCW with a maximum operating temperature of +65C.

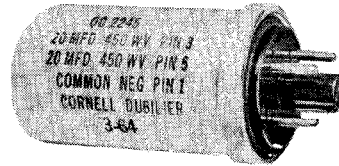


Class	Type
201 • 47	WR

Cap. Mfd.	Replacement for	Type	Size (Inches DxL)	List Price	Net Price
10	4 to 12 mfd.	WR 10	1 3/8 x 2 1/2	\$2.30	\$1.38
20	16 to 20 mfd.	WR 20	1 3/8 x 2 3/2	2.70	1.62
30	20 to 30 mfd.	WR 30	1 3/8 x 3 1/4	2.95	1.77
40	30 to 40 mfd.	WR 40	1 3/8 x 3 3/4	3.15	1.89

## PLUG-IN ELECTROLYTICS

The type QC is designed for applications such as juke boxes and communication receivers where quick capacitor changes are necessary. Units are equipped with a 4 pin plug to fit a medium, octal base socket. Duals and triples are common negative. Quads are can negative with grounding strap supplied for cathode connection. Tolerance is per EIA standards (see page 2). Operating temperature range is to +85C for units rated 450 VDCW and below and +65C for units rated 500 VDCW.



Class	Type
201 • 51	QC

### SINGLES

Cap. Mfd.	Volts DCW	Type	Size (Inches-DxL)	List Price	Net Price
10	450	QC 1045	1 3/2 x 2 1/2	\$4.05	\$2.43
20	450	QC 2045	1 3/2 x 2 1/2	4.30	2.58
40	450	QC 4045	1 3/8 x 2 1/2	4.80	2.88
80	450	QC 8045	1 3/8 x 3 1/2	5.55	3.33
40	500	QC 4050	1 3/8 x 2 1/2	5.00	3.00

### DUALS

20-20	150	QC 2215	1 3/2 x 2 1/2	4.30	2.58
40-40	150	QC 4415	1 3/2 x 2 1/2	4.40	2.64
50-50	150	QC 5515	1 3/2 x 2 1/2	4.65	2.79
80-80	150	QC 8815	1 3/8 x 2 1/2	5.15	3.09
10-10	450	QC 1145	1 3/2 x 2 1/2	4.50	2.70
20-20	450	QC 2245	1 3/8 x 2 1/2	5.05	3.03
30-30	450	QC 3345	1 3/8 x 3	5.55	3.33
40-40	450	QC 4445	1 3/8 x 3 1/2	5.90	3.54
20-20	500	QC 2250	1 3/8 x 2 1/2	5.30	3.18

### TRIPLES

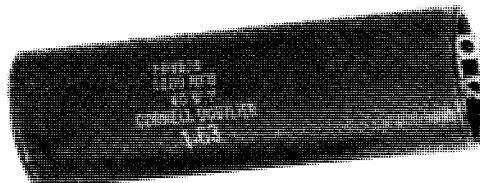
Cap. Mfd.	Volts DCW	Type	Size (Inches DxL)	List Price	Net Price
20-20-20	150	QC 22215	1 3/2 x 2 1/2	\$4.85	\$2.91
40-40-40	150	QC 44415	1 3/8 x 2 1/2	5.10	3.06
10-10-10	450	QC 11145	1 3/2 x 2 1/2	5.10	3.06
20-20-20	450	QC 22245	1 3/8 x 3	6.10	3.66
40-20/20	450/25	QC 4245C	1 3/8 x 3	6.00	3.60
10-10-10	500	QC 11150	1 3/8 x 2 1/2	5.30	3.18

### QUADRUPLES

Cap. Mfd.	Volts DCW	Type	Size (Inches DxL)	List Price	Net Price
10-10-10/20	450/25	QC 11145C	1 3/8 x 2 1/2	5.65	3.39
30-30-10/20	450/50	QC 33145C	1 3/8 x 4 1/4	6.85	4.11

## HIGH CAPACITY, LOW VOLTAGE ELECTROLYTICS

The type FB is a high capacitance, low voltage unit intended for replacement applications in sound projectors and other low voltage circuits. Units are cardboard insulated with hermetic seal and solder type terminal lugs. Tolerance is per EIA standards (see page 2). The FB may be operated to +85C. For over-1 size, add 1/16" to diameter and 3/8" to length.



Class	Type
201 • 70	FB

(Continued on next page)





# D. C. Aluminum Electrolytics

## HIGH CAPACITY, LOW VOLTAGE ELECTROLYTICS

(Continued from previous page)

Type **FB** | Class **201 • 70**

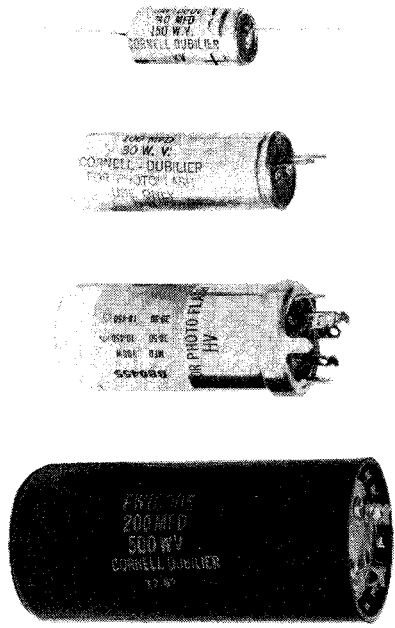
Cap. Mfd.	Volts DCW	Type	Size (Inches DxL)	List Price	Net Price
500	10	FB 1005	1 3/8 x 2 3/8	\$3.10	<b>\$1.86</b>
1000	10	FB 1010	1 3/8 x 2 3/8	3.55	<b>2.13</b>
1500	10	FB 1015	1 3/8 x 2 3/8	3.75	<b>2.25</b>
2000	10	FB 1020	1 3/8 x 2 5/8	3.95	<b>2.37</b>
3000	10	FB 1030	1 3/8 x 3 1/8	4.35	<b>2.61</b>
4000	10	FB 1040	1 3/8 x 4 1/8	4.75	<b>2.85</b>
5000	10	FB 1050	1 1/2 x 4 1/8	5.15	<b>3.09</b>
6000	10	FB 1060	1 3/4 x 4 1/8	7.50	<b>4.50</b>
500	12	FB 1205	1 3/8 x 2 3/8	3.20	<b>1.92</b>
1000	12	FB 1210	1 3/8 x 2 3/8	3.75	<b>2.25</b>
1500	12	FB 1215	1 3/8 x 2 5/8	3.95	<b>2.37</b>
2000	12	FB 1220	1 3/8 x 3 1/8	4.15	<b>2.49</b>
2500	12	FB 1225	1 3/8 x 3 1/8	4.85	<b>2.91</b>
3000	12	FB 1230	1 3/8 x 4 1/8	5.05	<b>3.03</b>
4000	12	FB 1240	1 1/2 x 4 1/8	5.25	<b>3.15</b>
6000	12	FB 1260	2 x 4 1/8	9.35	<b>5.61</b>
500	15	FB 1505	1 3/8 x 2 3/8	3.25	<b>1.95</b>
1000	15	FB 1510	1 3/8 x 2 3/8	3.80	<b>2.28</b>
1500	15	FB 1515	1 3/8 x 2 5/8	4.00	<b>2.40</b>
2000	15	FB 1520	1 3/8 x 3 1/8	4.70	<b>2.82</b>
3000	15	FB 1530	1 3/8 x 4 1/8	5.15	<b>3.09</b>
4000	15	FB 1540	1 1/2 x 4 1/8	8.10	<b>4.86</b>
6000	15	FB 1560	2 x 4 1/8	10.00	<b>6.00</b>
500	18	FB 1805	1 3/8 x 2 3/8	3.00	<b>1.80</b>
1000	18	FB 1810	1 3/8 x 2 3/8	3.90	<b>2.34</b>
2000	18	FB 1820	1 3/8 x 3 1/8	4.90	<b>2.94</b>
4000	18	FB 1840	1 1/2 x 4 1/8	8.45	<b>5.07</b>
500	20	FB 2005	1 3/8 x 2 3/8	3.40	<b>2.04</b>
1000	20	FB 2010	1 3/8 x 3 1/8	4.10	<b>2.46</b>

Cap. Mfd.	Volts DCW	Type	Size (Inches DxL)	List Price	Net Price
2000	20	FB 2020	1 3/8 x 4 3/8	\$5.20	<b>\$3.12</b>
4000	20	FB 2040	2 x 4 3/8	8.75	<b>5.25</b>
500	25	FB 2505	1 3/8 x 2 3/8	3.55	<b>2.13</b>
1000	25	FB 2510	1 3/8 x 3 1/8	4.80	<b>2.88</b>
2000	25	FB 2520	1 3/8 x 4 1/8	5.75	<b>3.45</b>
3000	25	FB 2530	1 3/4 x 4 1/8	8.00	<b>4.80</b>
4000	25	FB 2540	2 x 4 1/8	9.50	<b>5.70</b>
5000	25	FB 2550	2 1/2 x 4 1/8	11.00	<b>6.60</b>
500	30	FB 3005	1 3/8 x 3 1/8	3.60	<b>2.16</b>
1000	30	FB 3010	1 3/8 x 4 1/8	4.90	<b>2.94</b>
2000	30	FB 3020	1 3/4 x 4 1/8	7.40	<b>4.44</b>
3000	30	FB 3030	2 x 4 1/8	8.95	<b>5.37</b>
4000	30	FB 3040	2 1/2 x 4 1/8	10.50	<b>6.30</b>
500	35	FB 3505	1 3/8 x 3 1/8	3.70	<b>2.22</b>
1000	35	FB 3510	1 3/8 x 4 1/8	5.00	<b>3.00</b>
2000	35	FB 3520	1 3/4 x 4 1/8	8.00	<b>4.80</b>
3000	35	FB 3530	2 x 4 1/8	9.50	<b>5.70</b>
4000	35	FB 3540	2 1/2 x 4 1/8	11.00	<b>6.60</b>
500	40	FB 4005	1 3/8 x 3 1/8	3.80	<b>2.28</b>
1000	40	FB 4010	1 3/8 x 4 1/8	6.50	<b>3.90</b>
2000	40	FB 4020	1 3/4 x 4 1/8	9.00	<b>5.40</b>
3000	40	FB 4030	2 x 4 1/8	10.50	<b>6.30</b>
4000	40	FB 4040	2 1/2 x 4 1/8	11.50	<b>6.90</b>
500	50	FB 5005	1 3/8 x 3 1/8	3.90	<b>2.34</b>
1000	50	FB 5010	1 3/8 x 4 1/8	7.00	<b>4.20</b>
2000	50	FB 5020	1 3/4 x 4 1/8	9.10	<b>5.46</b>
3000	50	FB 5030	2 x 4 1/8	11.50	<b>6.90</b>
4000	50	FB 5040	2 1/2 x 4 1/8	12.50	<b>7.50</b>

Misc. TYPES | Class **201 • 00**

## PHOTOFLASH ELECTROLYTIC

These photoflash replacement capacitors have been selected to fill most replacement needs. Energy storage capabilities and characteristics of units listed are ideal for photoflash applications.



Cap. Mfd.	Volts DCW	Type	Size (Inches DxL)	Watt Seconds	List Price	Net Price
100	450	XBO 455■	1 3/8 x 3	10	\$3.85	<b>\$2.31</b>
200	450	FB 10063*	2 1/8 x 4 1/2	20	6.85	<b>4.11</b>
200	500	FW 10005‡	2 1/8 x 4 3/8	25	10.50	<b>6.30</b>
300	450	FW 10007‡	2 1/8 x 4 3/8	30	10.50	<b>6.30</b>
300	450	FWS 10005†	2 1/8 x 4 3/8	30	11.50	<b>6.90</b>
400	450	FA 1Q300*	2 1/8 x 4 1/2	40	17.95	<b>10.77</b>
525	450	FWSN 10001†	2 1/8 x 4 3/8	53	22.60	<b>13.56</b>
40	150	BRE 10001■	3/4 x 1 1/8	—	1.35	<b>.81</b>
100	30	BRH 10077■	1 x 2 11/16	—	3.35	<b>2.01</b>
125	25	BRH 10062■	5/8 x 1 13/16	—	1.35	<b>.81</b>
150	50	BRH 10067■	3/4 x 1 11/16	—	1.35	<b>.81</b>
250	25	BR 250-25S	1 1/8 x 1 7/8	—	1.70	<b>1.02</b>

\* Aluminum can with cardboard sleeve.

■ Aluminum can — no sleeve.

† Bakelite Case — Screw Terminals.

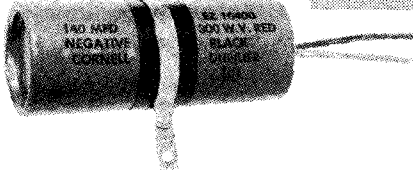
‡ Bakelite Case — Solder Lug Terminals.

# D. C. Aluminum Electrolytics

## SINGLE-ENDED CARDBOARD CASE

The type EZ is a popular replacement in radio and phonograph applications. The low cost, commercial grade EZ is encased in a wax impregnated cardboard case with high temperature wax end fills. Five inch color coded flexible leads are supplied with coding and polarity clearly marked on the units. Operating temperature range is -20C to +65C with operation for short periods to +85C. Tolerance is -10% to +100%. Unit is supplied with mounting strap.

<b>Class</b> 201 • 22	<b>Type</b> EZ
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Cap. Mfd.	Volts DCW	Type	Size (Inches—DxL)	List Price	Net Price
140	300	EZ10400	1 3/8 x 3 1/16	\$2.05	\$1.23
200	200	EZ10408	1 3/8 x 3 1/16	2.15	1.29

## ANTENNA ROTOR CAPACITOR

The type ETZ is an intermittent AC voltage rated electrolytic ideally suited for replacement in all types of antenna rotors. The unit is supplied in an impregnated cardboard case with wax end fills. Unit has mounting strap and color coded flexible leads. The ETZ is wide range marked to permit coverage of all rotor capacitor replacement requirements.

<b>Class</b> 201 • 22	<b>Type</b> ETZ
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Cap. Mfd.	Volts AC	Type	Size (Inches—DxL)	List Price	Net Price
100-130	50	ETZ 10001	1 x 2 7/8	\$1.80	\$1.08
66-92	50	ETZ 10002-1	7/8 x 2 3/4	1.20	.72
130-140	50	ETZ 10004-1	1 x 2 7/8	2.05	1.23
75-91	50	ETZ 10247	7/8 x 2 3/4	1.95	1.17

## CAPACITOR MOUNTING HARDWARE

Cornell-Dubilier Electronics has available a variety of mounting hardware recommended for capacitors subjected to conditions of moderate or acute vibration. The tubular straps, C-clamps, three and four footed mounting rings, clips, mounting plates and adapters for TWIST-PRONG® capacitors are designed to

hold the capacitor securely in position, positively eliminating any chance of capacitor wobble or damaging strain on capacitor terminals or body. CDE mounting hardware is cadmium-plated to resist corrosion. Non-conductive insulating sleeves of 5-ply Kraft are also listed.

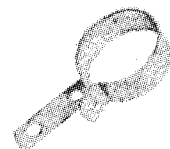
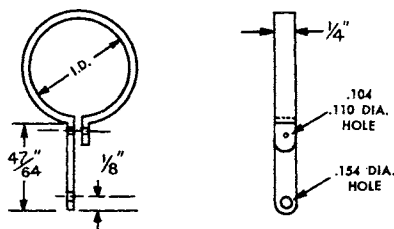
<b>Class</b> 200 • 90	<b>Misc.</b> TYPES
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Part No.	Strap I.D.* (inches)	List Price	Net Price
16279	1/16	\$.15	\$.09
16280	1/2	.15	.09
17203	1/16	.15	.09
17516	5/8	.15	.09
16285	1 1/16	.15	.09
17517	3/4	.15	.09
28207	1 3/16	.15	.09
27886	7/8	.20	.12
20440	1 5/16	.20	.12
27950	1	.20	.12
21187	1 1/16	.20	.12
21068-1	1 1/8	.20	.12
28401	1 3/16	.20	.12
19033-1	1 1/4	.20	.12
17673-1	1 3/8	.20	.12
17606	1 1/2	.20	.12

\*or tubular with same O.D.

## TUBULAR STRAPS

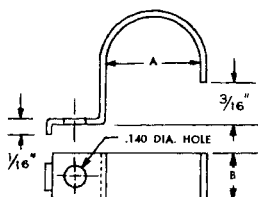
Tubular straps are narrow bands of tinned steel .020" in thickness designed to hold capacitors securely in place under severe vibration. They are available for tubular capacitors ranging from 1/16" to 1 1/2" O.D. as listed.



Misc. Class  
TYPES 200 • 90

**RECOMMENDED MOUNTING HARDWARE (Continued)**

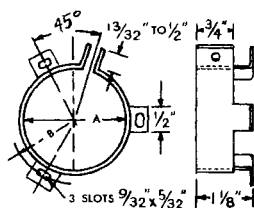
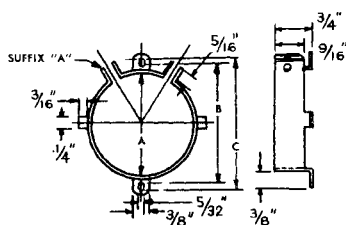
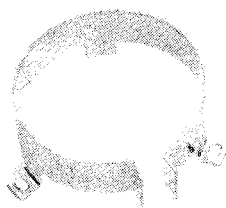
**"C" CLAMPS**



For conditions of moderate vibration "C" Clamps are adequate for tubular capacitors less than 1" in diameter. "C" Clamps are cold-rolled steel .020"-.030" thick, finished with cadmium plate to resist corrosion. Standard catalog items range from 5/8" to 1".

Part No.	Dimensions (Inches)		List Price	Net Price
	A	B		
17920	5/8 - 3/4	1/2	\$.20	<b>\$.12</b>
17921	7/8 - 1	1/2	.20	<b>.12</b>

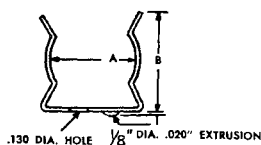
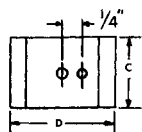
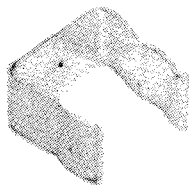
**MOUNTING RINGS**



For capacitors of large O.D. three-footed or four-footed mounting rings are offered. Four-footed styles are fabricated of .035" cold-rolled steel and fit capacitor diameters of 1" to 1 3/4". Three-footed styles are .032" cold-rolled steel for capacitor diameters 2" to 3". Mounting holes are elongated to allow minor adjustments in capacitor positioning. Both styles are cadmium plated to resist corrosion.

Part No.	Dimensions (Inches)			List Price	Net Price
	A	B	C		
<b>FOUR-FOOTED</b>					
17842A	1	1 3/8	1 1/2	\$.25	<b>\$.15</b>
19213	1 1/8	1 1/32	1 2/32	.30	<b>.18</b>
18573	1 1/4	1 5/8	1 3/4	.30	<b>.18</b>
17843	1 3/8	1 1/16	1 7/8	.30	<b>.18</b>
17843A	1 3/8	1 1/16	1 7/8	.30	<b>.18</b>
17844	1 1/2	1 7/8	2	.30	<b>.18</b>
17844A	1 1/2	1 7/8	2	.30	<b>.18</b>
55274A	1 3/4	2 1/8	2 1/4	.40	<b>.24</b>
<b>THREE-FOOTED</b>					
34775-2	2	1 1/4	—	.30	<b>.18</b>
34775	2 1/2	1 1/2	—	.35	<b>.21</b>
34775-3	3	1 3/4	—	.65	<b>.39</b>

**MOUNTING CLIPS**



Mounting clips of cold-rolled steel finished in cadmium plate to resist corrosion are available for tubular capacitors that may be subjected to conditions of acute vibration. Standard catalog items include sizes for capacitor diameters ranging from 3/4" to 1 3/8". Spring-steel clips are listed on the following page.

For Case Size	Part No.	Dimensions (Inches)				List Price	Net Price
		A	B	C	D		
3/4	21368-1	1 1/16	2 3/32	1/2	2 3/32	\$.20	<b>\$.1</b>
1	21368-2	2 3/32	1 3/4	1 3/32	1 1/16	.20	<b>.1</b>
1 3/8	21368-3	1 1/32	1 1/2	7/8	1 1/16	.30	<b>.1</b>

(Continued on next page)

# Capacitor Hardware

## RECOMMENDED MOUNTING HARDWARE (Continued)

Class 200 • 90	Misc. TYPES
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Universal mounting clips of .018"-.023" spring steel, cadmium-plated to resist corrosion are also available for tubular capacitors which may encounter conditions of severe vibration. Spring steel mounting clips are available in four styles as illustrated at right, depending on tubular capacitor O.D. These mounting clips will receive tubulars with O.D.'s ranging from 3/8" to 1 3/16".

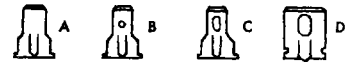
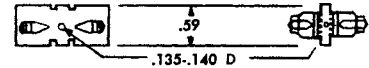


**UNIVERSAL CLIPS**

For Case Size (In.)	Style	Part No.	List Price	Net Price
3/8 — 1/6	A	30010-1	\$.20	\$.12
1/2 — 5/16	B	30010-2	.20	.12
5/8 — 1 1/16	C	30010-3	.20	.12
3/4 — 1 3/16	C	30010-4	.25	.15
7/8 — 1 5/16	C	30010-5	.25	.15
1 — 1 7/16	C	30010-6	.25	.15
1 3/8 — 1 7/8	D	30010-7	.25	.15



CAPACITOR DIAMETER

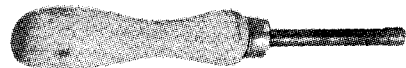
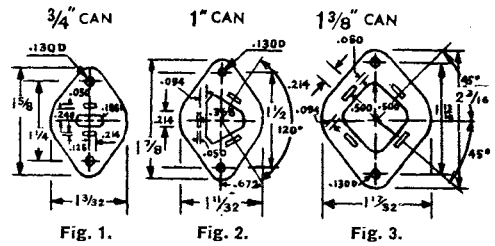
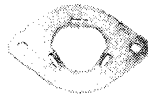


SPRING STEEL STYLES

Standard mounting plates are available in three styles as illustrated for TWIST-PRONG® capacitors with O.D. ranging from 3/4" to 1 3/8". Plates are offered in either 1/16" thick phenolic or .025" cold-rolled steel (Commercial Grade), cadmium-plated to resist corrosion.

**MOUNTING PLATE & WRENCH**

For Case Size (Inches)	Figure No.	Material	Part No.	List Price	Net Price
3/4	1	Metal	19890	\$.15	\$.09
3/4	1	Phenolic	19891	.15	.09
1	2	Metal	19883	.15	.09
1	2	Phenolic	19884	.15	.09
1 3/8	3	Metal	19887	.15	.09
1 3/8	3	Phenolic	19888	.15	.09
**	**	Metal	30035	.15	.09
**	**	Phenolic	30036	.15	.09



Part No.	List Price	Net Price
22272	\$2.48	\$1.49

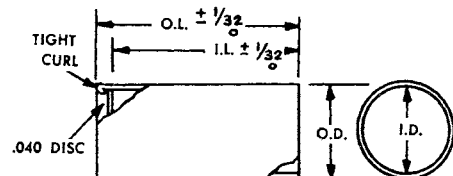
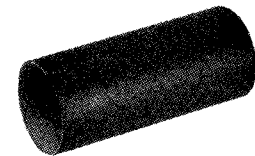
\* For mounting a 1" dia. can over a 1 3/8" dia. hole.

TWIST-PRONG® mounting wrench is available for securely locking TWIST-PRONG capacitors in position.

**INSULATING SLEEVES**

Insulating sleeves of 5-ply Kraft, Insulating Grade, non-conductive and wax impregnated are available for case sizes ranging from 3/4" x 2" to 1 3/8" x 5". Finish is black electrical Kraft. Larger sizes are available on request.

For Case Size (Inches—DxL)	Part No.	Sleeve Dimensions (Inches)				List Price	Net Price
		O.L.	I.L.	O.D.	I.D.		
3/4 x 2	28521-1	2 1/4	2 1/16	.930	.868	\$.15	\$.09
1 x 2	28521-4	2 1/4	2 1/16	1.188	1.128	.15	.09
1 x 2 1/2	28521-5	2 3/4	2 1/16	1.188	1.128	.15	.09
1 x 3	28521-6	3 1/4	3 1/16	1.188	1.128	.15	.09
1 x 3 1/2	28521-10	3 25/32	3 1/16	1.188	1.128	.15	.09
1 x 4	*61005-9	4 3/8	4	1.155	1.095	.15	.09
1 x 4 1/8	28521-22	4 1/4	4 1/16	1.188	1.128	.15	.09
1 3/8 x 2	28521-7	2 1/4	2 1/16	1.540	1.475	.15	.09
1 3/8 x 2 1/2	28521-23	2 3/4	2 1/16	1.540	1.475	.15	.09
1 3/8 x 3	28521-9	3 1/4	3 1/16	1.540	1.475	.15	.09
1 3/8 x 3 1/2	28521-11	3 3/4	3 1/16	1.540	1.475	.15	.09
1 3/8 x 4	28521-21	4 1/4	4 1/16	1.540	1.475	.15	.09
1 3/8 x 4 1/8	28521-15	4 3/8	4 1/16	1.540	1.475	.15	.09
1 3/8 x 4 1/2	*61005-21	4 3/8	4 1/8	1.520	1.455	.15	.09
1 3/8 x 5	28521-17	5 1/4	5 1/16	1.540	1.475	.15	.09



Recommended units for use with all wide application range Twist-Prongs. Stock two diameters cut to desired length to fit all can heights.

# Ceramic Capacitors

Type <b>HCC</b>	Class <b>202 • 05</b>
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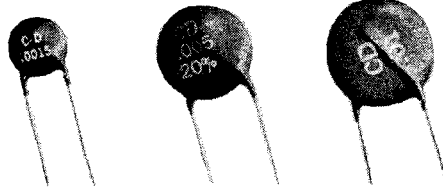
The 3 volt HCC is designed for replacement in transistor circuitry. Tolerance is GMV. Temp. range is to 85C.

Type <b>H</b>	Class <b>202 • 11</b>
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The 50V DCW type H is a miniature disc. Tolerance is -0%, +100% except as noted. Temp. range is +10C to +85C.

Type <b>BYA</b>	Class <b>202-14</b>
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## 1000V GENERAL PURPOSE DISC

The 1000 volt type BYA is the most popular ceramic disc. The high-K unit is guaranteed minimum value (GMV). Temperature range is -55 to +85C.

Cap. pf.	Type	Size (Inches Max.)		List Price	Net Price
		Dia.	Thick		
470	BYA10T47	.290	.156	\$.25	<b>\$.15</b>
500	BYA10T5	.290	.156	.25	<b>.15</b>
680	BYA10T68	.290	.156	.25	<b>.15</b>
820	BYA10T82	.290	.156	.25	<b>.15</b>
1000	BYA10D1	.290	.156	.25	<b>.15</b>
†1000	BYA10D1M	.290	.156	.25	<b>.15</b>
1500	BYA10D15	.290	.156	.25	<b>.15</b>
2000	BYA10D2	.390	.156	.25	<b>.15</b>
2200	BYA10D22	.390	.156	.25	<b>.15</b>
2500	BYA10D25	.437	.156	.25	<b>.15</b>
2700	BYA10D27	.437	.156	.25	<b>.15</b>
3000	BYA10D3	.437	.156	.25	<b>.15</b>

† Tolerance ±20%  
\* Rated at 600 VDCW

## 3V HIGH CAPACITANCE GENERAL PURPOSE DISC

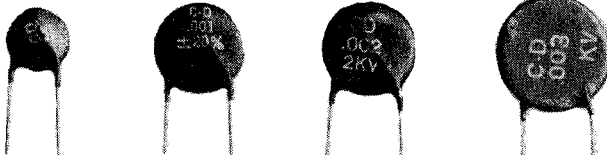
Cap. Mfd.	Volts DCW	Type	Size (Inches)		List Price	Net Price
			Dia.	Thick		
.22	3	HCC3224P	.290	.156	\$.55	<b>\$.33</b>
.47	3	HCC3474P	.437	.156	.55	<b>.33</b>
1.0	3	HCC3105P	.593	.156	.75	<b>.45</b>
2.2	3	HCC3225P	.840	.156	.90	<b>.54</b>

## 50V MINIATURE GENERAL PURPOSE DISC

Cap. Mfd.	Type	Size (Max. Inches)		List Price	Net Price
		Dia.	Thick		
.005	H1	.350	1/8	\$.45	<b>\$.27</b>
.01	H2	.350	1/8	.65	<b>.39</b>
.02	H3	.500	1/8	.65	<b>.39</b>
.025	H4	.500	1/8	.65	<b>.39</b>
*.05	H5	.625	1/8	.70	<b>.42</b>
*.10	H6	.625	3/16	.90	<b>.54</b>

\* Tolerance +80%, -20%

Type <b>HV</b>	Class <b>202 • 32</b>
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HVA      HVB      HVC      HVE

## HIGH VOLTAGE GENERAL PURPOSE DISC

The type HVE is designed for buffer applications and other units for general purpose high voltage applications. Tolerance is GMV except 200 to 10 pf, ±20%. Temp. range is -55C to +85C.

(Continued on next page)

# Ceramic Capacitors

## (Continued) HIGH VOLTAGE GENERAL PURPOSE DISC

Class 202 • 32	Type HV
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### HVA, HVB, HVC

Cap. pf.	Volts DCW	Type	Size (Inches) Max.		List Price	Net Price
			Dia.	Thick		
220	1600	HVB16T22	.390	.218	\$.35	\$.21
390	1600	HVB16T39	.390	.218	.35	.21
1000	1600	HVB16D1	.593	.218	.35	.21
3300	1600	HVC16D33	.593	.218	.35	.21
4700	1600	HVC16D47	.750	.218	.35	.21
15	2000	HVA20Q15	.390	.218	.35	.21
68	2000	HVB20Q68	.593	.218	.35	.21
470	2000	HVB20T47	.593	.218	.35	.21
1000	2000	HVB20D1	.750	.218	.50	.30
2000	2000	HVC20D2	.593	.218	.35	.21
5000	2000	HVC20D5	.750	.218	.50	.30

### HVE BUFFER TYPES

Cap. pf.	Type	Size (Inches) Max.		List Price	Net Price
		Dia.	Thick		
3000	HVE16D3	.750	.218	\$.35	\$.21
4000	HVE16D4	.750	.218	.35	.21
5000	HVE16D5	.750	.218	.35	.21
6000	HVE16D6	.840	.218	.35	.21
7000	HVE16D7	.840	.218	.35	.21
7500	HVE16D75	.840	.218	.35	.21
8000	HVE16D8	.840	.218	.35	.21
10000	HVE16S1	.840	.218	.35	.21
†15000	HVE16S15	.840	.250	.60	.36

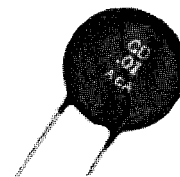
† Tolerance +80%, -20%

## AC LINE BY PASS GENERAL PURPOSE DISC

Cap. pf.	Type	Dia. (Max.)	List Price	Net Price
1000	ACA14D1	.390	\$.35	\$.21
2000	ACA14D2	.593	.40	.24
5000	ACA14D5	.685	.45	.27
10,000	ACA14S1	.875	.50	.30

Class 202 • 36	Type ACA
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These AC line by-pass units are rated 250 VAC rms, 60 cps. Maximum disc thickness is .218". Tolerance is GMV. Operating temperature range is -55C to +85C.



## HIGH VOLTAGE GENERAL PURPOSE SLUG

### Type 105TM200T5

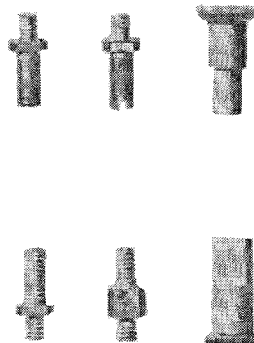
00 pf.; 20,000 VDCW; 30,000 DC flash test. Overall height less terminals is 1.068"; diameter is .950". Tolerance is -20%, +50%. Unit is packed with a selection of terminals to meet all TV replacement assembly requirements.

List Price \$2.50; Net Price \$1.50

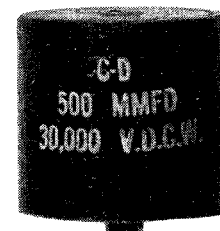
### Type 105TM300T5

500 pf.; 30,000 VDCW; 40,000 VDC flash test. Overall height less terminals is 1.381". Diameter is 1.375". Tolerance is -20%, +50%. Unit is packed with a selection of terminals to meet all TV replacement assembly requirements.

List Price \$4.00; Net Price \$2.40



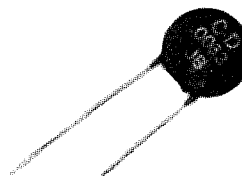
Class 202 • 56	Type 105TM
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## TEMPERATURE STABLE DISC CERAMIC

one type JB close tolerance, temperature stable disc is rated 100 VDCW. Capacitance tolerance is ±10%. Capacitance

change with temperature will not exceed ±10% over the range -55C to +125C.



Class 202 • 61	Type JB
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Cap. pf.	Type	Size (Inches) Max.		List Price	Net Price
		Dia.	Thick		
220	JB6T22	.290	.156	\$.25	\$.15
330	JB6T33	.290	.156	.25	.15
470	JB6T47	.290	.156	.25	.15
500	JB6T5	.290	.156	.25	.15

Cap. pf.	Type	Size (Inches) Max.		List Price	Net Price
		Dia.	Thick		
560	JB6T56	.390	.156	\$.25	\$.15
680	JB6T68	.390	.156	.25	.15
800	JB6T8	.390	.156	.25	.15
1000	JB6D1	.437	.156	.25	.15

(Continued on next page)



# Ceramic Capacitors

Type	Class
<b>JB</b>	<b>202 • 61</b>

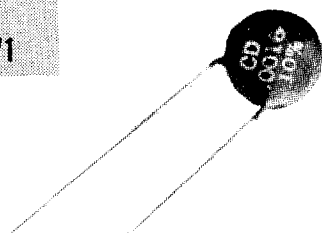
## TEMPERATURE STABLE DISC (Continued)

Cap. pf.	Type	Size (Inches) Max.		List Price	Net Price
		Dia.	Thick		
1200	JB6D12	.437	.156	\$.25	<b>\$.15</b>
1800	JB6D18	.593	.156	.25	<b>.15</b>
2000	JB6D2	.593	.156	.25	<b>.15</b>
2200	JB6D22	.593	.156	.25	<b>.15</b>

Cap. pf.	Type	Size (Inches) Max.		List Price	Net Price
		Dia.	Thick		
3300	JB6D33	.660	.156	\$.25	<b>\$.15</b>
3900	JB6D39	.750	.156	.30	<b>.18</b>
4700	JB6D47	.840	.156	.30	<b>.18</b>
5000	JB6D5	.840	.156	.30	<b>.18</b>

Type	Class
<b>LA</b>	<b>202 • 71</b>

## STABLE CLOSE TOLERANCE DISC



The type LA is rated 1000V DCW. Maximum disc thickness is .156". Except as noted, tolerance is  $\pm 10\%$  thru 390 pf. and  $\pm 20\%$ , 400 pf. and above. Suffix indicates characteristic.

SL is within range P100 to N750; S3, N900 to N4700 and C4, stability of  $\pm 15\%$  over the rated temp. range of  $-55\text{C}$  to  $+85\text{C}$ .

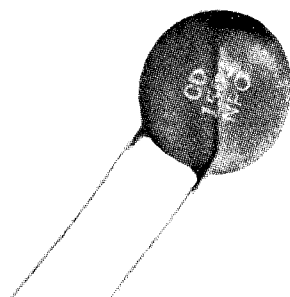
Cap. pf.	Type	Max. Dia. (Inches)	List Price	Net Price
†3.3	LA10V33-SL	.290	\$.25	<b>\$.15</b>
†5.0	LA10V5-SL	.290	.25	<b>.15</b>
†6.8	LA10V68-SL	.290	.25	<b>.15</b>
7.0	LA10V7-SL	.290	.25	<b>.15</b>
8.0	LA10V8-SL	.290	.25	<b>.15</b>
10	LA10Q1-SL	.290	.25	<b>.15</b>
12	LA10Q12-SL	.290	.25	<b>.15</b>
15	LA10Q15-SL	.290	.25	<b>.15</b>
18	LA10Q18-SL	.290	.25	<b>.15</b>
20	LA10Q2-SL	.290	.25	<b>.15</b>
22	LA10Q22-SL	.290	.25	<b>.15</b>
25	LA10Q25-SL	.290	.25	<b>.15</b>
27	LA10Q27-SL	.290	.25	<b>.15</b>
30	LA10Q3-SL	.290	.25	<b>.15</b>
33	LA10Q33-SL	.290	.25	<b>.15</b>
39	LA10Q39-S3	.290	.25	<b>.15</b>
47	LA10Q47-S3	.290	.25	<b>.15</b>
50	LA10Q5-S3	.290	.25	<b>.15</b>
56	LA10Q56-S3	.290	.25	<b>.15</b>
68	LA10Q68-S3	.290	.25	<b>.15</b>
75	LA10Q75-S3	.290	.25	<b>.15</b>
82	LA10Q82-S3	.290	.25	<b>.15</b>
91	LA10Q91-S3	.290	.25	<b>.15</b>
100	LA10T1-S3	.290	.25	<b>.15</b>
120	LA10T12-S3	.290	.25	<b>.15</b>
130	LA10T13-S3	.290	.25	<b>.15</b>
150	LA10T15-S3	.290	.25	<b>.15</b>
180	LA10T18-S3	.290	.25	<b>.15</b>
200	LA10T2-S3	.290	.25	<b>.15</b>
220	LA10T22-S3	.290	.25	<b>.15</b>
250	LA10T25-C4	.290	.25	<b>.15</b>

Cap. pf.	Type	Max. Dia. (Inches)	List Price	Net Price
270	LA10T27-C4	.290	\$.25	<b>\$.15</b>
300	LA10T3-C4	.290	.25	<b>.15</b>
330	LA10T33-C4	.290	.25	<b>.15</b>
350	LA10T35-C4	.290	.25	<b>.15</b>
360	LA10T36-C4	.290	.25	<b>.15</b>
390	LA10T39-C4	.290	.25	<b>.15</b>
400	LA10T4-C4	.290	.25	<b>.15</b>
470	LA10T47-C4	.290	.25	<b>.15</b>
500	LA10T5-C4	.290	.25	<b>.15</b>
560	LA10T56-C4	.390	.25	<b>.15</b>
600	LA10T6-C4	.390	.25	<b>.15</b>
680	LA10T68-C4	.390	.25	<b>.15</b>
750	LA10T75-C4	.390	.25	<b>.15</b>
800	LA10T8-C4	.390	.25	<b>.15</b>
820	LA10T82-C4	.390	.25	<b>.15</b>
1000	LA10D1-C4	.437	.25	<b>.15</b>
1200	LA10D12-C4	.437	.25	<b>.15</b>
1500	LA10D15-C4	.593	.25	<b>.15</b>
1600	LA10D16-C4	.593	.25	<b>.15</b>
1800	LA10D18-C4	.593	.25	<b>.15</b>
2000	LA10D2-C4	.593	.25	<b>.15</b>
2200	LA10D22-C4	.593	.25	<b>.15</b>
2500	LA10D25-C4	.660	.25	<b>.15</b>
2700	LA10D27-C4	.660	.25	<b>.15</b>
3000	LA10D3-C4	.660	.25	<b>.15</b>
3300	LA10D33-C4	.660	.25	<b>.15</b>
3900	LA10D39-C4	.750	.25	<b>.15</b>
4000	LA10D4-C4	.750	.25	<b>.15</b>
4300	LA10D43-C4	.840	.25	<b>.15</b>
4700	LA10D47-C4	.840	.25	<b>.15</b>
5000	LA10D5-C4	.840	.25	<b>.15</b>

† Tolerance  $\pm 5$  pf

Type	Class
<b>C</b>	<b>202 • 73</b>

## TEMPERATURE COMPENSATING DISC



The type C temperature compensating disc is designed to provide a linear capacitance change with temperature. Two basic types are available. The NPO characteristic has a nominal zero capacitance change with temperature. The N750 has a normal negative capacitance change of 750 parts per million per degree C. Units are rated 1000V DCW with an operating temperature range of  $-55\text{C}$  to  $+85\text{C}$ . Except as noted, tolerance is  $\pm 5\%$ .

(Continued on next page)



# Ceramic & Mica Capacitors



(Continued) TEMPERATURE COMPENSATING DISC

Class 202 + 73	Type C
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## CHARACTERISTIC NPO

Cap. pf.	Type	Size (Inches) Maximum		List Price	Net Price
		Dia.	Thick.		
11.5	C10V15C	.290	.156	\$.50	\$.30
12.2	C10V22C	.290	.156	.50	.30
13.3	C10V33C	.290	.156	.50	.30
14.7	C10V47C	.290	.156	.50	.30
6.8	C10V68C	.290	.156	.50	.30
10	C10Q1C	.290	.156	.50	.30
15	C10Q15C	.290	.156	.50	.30
20	C10Q2C	.390	.156	.50	.30
22	C10Q22C	.390	.156	.50	.30
25	C10Q25C	.437	.156	.50	.30

† Tolerance  $\pm 5$  pf

Cap. pf.	Type	Size (Inches) Maximum		List Price	Net Price
		Dia.	Thick.		
33	C10Q33C	.437	.156	\$.50	\$.30
39	C10Q39C	.593	.156	.50	.30
47	C10Q47C	.593	.156	.50	.30
50	C10Q5C	.593	.156	.50	.30
68	C10Q68C	.593	.156	.50	.30
75	C10Q75C	.660	.156	.50	.30
100	C10T1C	.660	.156	.50	.30
120	C10T12C	.750	.156	.75	.45
150	C10T15C	.840	.156	.75	.45

## CHARACTERISTIC N750

Cap. pf.	Type	Size (Inches) Maximum		List Price	Net Price
		Dia.	Thick.		
5.0	C10V5U	.290	.156	\$.50	\$.30
6.8	C10V68U	.290	.156	.50	.30
10	C10Q1U	.290	.156	.50	.30
15	C10Q15U	.290	.156	.50	.30
20	C10Q2U	.290	.156	.50	.30
22	C10Q22U	.290	.156	.50	.30
25	C10Q25U	.290	.156	.50	.30
33	C10Q33U	.290	.156	.50	.30
39	C10Q39U	.390	.156	.50	.30
47	C10Q47U	.390	.156	.50	.30
50	C10Q5U	.390	.156	.50	.30
68	C10Q68U	.390	.156	.50	.30

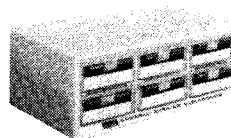
Cap. pf.	Type	Size (Inches) Maximum		List Price	Net Price
		Dia.	Thick.		
75	C10Q75U	.437	.156	\$.50	\$.30
100	C10T1U	.593	.156	.75	.45
130	C10T13U	.593	.156	.75	.45
150	C10T15U	.593	.156	.75	.45
180	C10T18U	.660	.156	.75	.45
200	C10T2U	.660	.156	.75	.45
220	C10T22U	.660	.156	.75	.45
270	C10T27U	.750	.156	.75	.45
300	C10T3U	.840	.156	.75	.45
330	C10T33U	.840	.156	.75	.45
370	C10T37U	.840	.156	.75	.45

## CERAMIC CAPACITOR ASSORTMENT

CDE's ceramic capacitor assortment contains 95 pieces of the most popular ceramics encountered in replacement applications. It includes 15 type H low-voltage discs; 45 type LA stable close tolerance discs; and 35 type BYA general purpose discs. Type H includes 5 of each rated .01, .05, and .1 mfd. Type LA includes 5-390 pf. and 10 each 50, 100, 470 and 1000 pf. Type BYA contains 5-2500 pf. and 10 each 1000, 5000 and 0000 pf. units. All of the units are attractively packaged in a six drawer plastic cabinet included without charge.

IST PRICE \$31.50

NET PRICE \$18.90 (Cabinet Free)



## CERAMICS

## DIPPED MICA CAPACITORS

Types CD10 through CD42 dipped silvered mica dielectric capacitors provide a wide selection of ratings, tolerances, and sizes to meet replacement requirements. Except as noted, units are rated 500V DCW, 1000V DC Test. Maximum dimensions of units and tolerances are included in the listings. Letter after type indicates temperature characteristic in PPM/degrees C. C is -200 to +200; D is -100 to +100; E is -20 to +100 and F is 0 to +70. Capacitance drift of characteristics C, D, E and F is  $\pm 5\%$ ;  $\pm 3\%$ ;  $\pm (1\% + .1 \text{ pf.})$ ; and  $\pm (.05\% + .1 \text{ pf.})$  respectively. Operating temperature range of all units is  $-55\text{C} + 125\text{C}$ .

Class 203 + 01	Type CD
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CD10



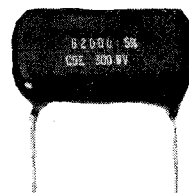
CD15



CD19



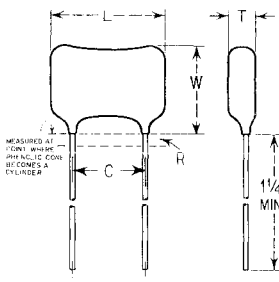
CD30



CD42

(Continued on next page)

Type **CD** Class **203 • 01**



**DIPPED MICA CAPACITORS (Continued)**

**MAXIMUM CASE SIZE**  
Detailed dimensions for each rating in listing

Type	Dimensions (Inches)			
	L	W	T	C
CD 10	.390	.380	.220	3/64
CD 15	.490	.420	.240	15/64
CD 19	.700	.580	.350	11/32
CD 30	.840	.920	.470	7/16
CD 42	1.50	.940	.500	1 1/16

**TYPE CD10**

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
2	±20%	CD10C020M	.360 x .330 x .190	\$.30	<b>\$.18</b>
5	±10%	CD10C050K	.360 x .330 x .190	.30	<b>.18</b>
10	± 5%	CD10C100J	.360 x .330 x .190	.35	<b>.21</b>
12	± 5%	CD10C120J	.360 x .330 x .190	.40	<b>.24</b>
15	± 5%	CD10C150J	.360 x .330 x .190	.40	<b>.24</b>
18	± 5%	CD10C180J	.360 x .330 x .190	.40	<b>.24</b>
20	± 5%	CD10C200J	.360 x .330 x .190	.40	<b>.24</b>
22	± 5%	CD10C220J	.360 x .330 x .190	.40	<b>.24</b>
24	± 5%	CD10E240J	.360 x .330 x .190	.40	<b>.24</b>
27	± 5%	CD10E270J	.370 x .330 x .190	.40	<b>.24</b>
30	± 5%	CD10E300J	.370 x .340 x .190	.40	<b>.24</b>
33	± 5%	CD10E330J	.370 x .340 x .190	.40	<b>.24</b>
36	± 5%	CD10E360J	.370 x .340 x .190	.40	<b>.24</b>
39	± 5%	CD10E390J	.370 x .340 x .190	.40	<b>.24</b>
43	± 5%	CD10E430J	.370 x .340 x .190	.40	<b>.24</b>
47	± 5%	CD10E470J	.370 x .340 x .190	.45	<b>.27</b>
51	± 5%	CD10F510J	.370 x .340 x .190	.45	<b>.27</b>
56	± 5%	CD10F560J	.370 x .340 x .190	.45	<b>.27</b>
62	± 5%	CD10F620J	.370 x .340 x .190	.45	<b>.27</b>

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
68	± 5%	CD10F680J	.370 x .340 x .190	\$.45	<b>\$.27</b>
75	± 5%	CD10F750J	.370 x .340 x .200	.45	<b>.27</b>
82	± 5%	CD10F820J	.370 x .350 x .200	.45	<b>.27</b>
91	± 5%	CD10F910J	.370 x .350 x .200	.45	<b>.27</b>
100	± 5%	CD10F101J	.370 x .350 x .200	.45	<b>.27</b>
110	± 5%	CD10F111J	.380 x .350 x .200	.45	<b>.27</b>
120	± 5%	CD10F120J	.380 x .350 x .200	.50	<b>.30</b>
130	± 5%	CD10F131J	.380 x .360 x .200	.50	<b>.30</b>
150	± 5%	CD10F151J	.380 x .360 x .210	.55	<b>.33</b>
160	± 5%	CD10F161J	.380 x .360 x .210	.60	<b>.36</b>
180	± 5%	CD10F181J	.390 x .370 x .210	.65	<b>.39</b>
200	± 5%	CD10F201J	.390 x .370 x .220	.65	<b>.39</b>
220	± 5%	CD10E221J	.390 x .370 x .220	.70	<b>.42</b>
240	± 5%	CD10F241J	.390 x .380 x .220	.75	<b>.45</b>
270	± 5%	CD10F271J†	.390 x .380 x .220†	.75	<b>.45</b>
300	± 5%	CD10F301J†	.390 x .380 x .220†	.80	<b>.48</b>
330	± 5%	CD10F331J*	.390 x .370 x .220*	.80	<b>.48</b>
360	± 5%	CD10F361J*	.390 x .380 x .220*	.85	<b>.51</b>
390	± 5%	CD10F391J*	.390 x .380 x .220*	1.35	<b>.81</b>

† 300 volts DCW \* 100 volts DCW

**TYPE CD15**

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
2	±20%	CD15C020M	.450 x .360 x .170	\$.25	<b>\$.15</b>
5	±10%	CD15C050K	.450 x .360 x .170	.25	<b>.15</b>
6	±10%	CD15C060K	.450 x .360 x .170	.25	<b>.15</b>
7	±10%	CD15C070K	.450 x .360 x .170	.25	<b>.15</b>
8	±10%	CD15C080K	.450 x .360 x .170	.25	<b>.15</b>
10	±10%	CD15C100K	.450 x .360 x .170	.25	<b>.15</b>
12	±10%	CD15C120K	.450 x .360 x .170	.25	<b>.15</b>
18	±10%	CD15C180K	.450 x .360 x .170	.25	<b>.15</b>
20	± 5%	CD15E200J	.450 x .360 x .170	.30	<b>.18</b>
22	±10%	CD15E220K	.450 x .360 x .170	.25	<b>.15</b>
22	± 5%	CD15E220J	.450 x .360 x .170	.30	<b>.18</b>
24	± 5%	CD15E240J	.450 x .360 x .170	.30	<b>.18</b>
27	±10%	CD15E270K	.450 x .360 x .170	.25	<b>.15</b>
27	± 5%	CD15E270J	.450 x .360 x .170	.30	<b>.18</b>
27	± 2%	CD15E270G	.450 x .360 x .170	.35	<b>.21</b>
30	± 5%	CD15E300J	.450 x .360 x .170	.30	<b>.18</b>
30	± 2%	CD15E300G	.450 x .360 x .170	.35	<b>.21</b>
33	±10%	CD15E330K	.450 x .360 x .170	.25	<b>.15</b>
33	± 5%	CD15E330J	.450 x .360 x .170	.30	<b>.18</b>
33	± 2%	CD15E330G	.450 x .360 x .170	.35	<b>.21</b>
36	± 5%	CD15E360J	.450 x .360 x .170	.30	<b>.18</b>
36	± 2%	CD15E360G	.450 x .360 x .170	.35	<b>.21</b>
39	±10%	CD15E390K	.450 x .360 x .170	.25	<b>.15</b>
39	± 5%	CD15E390J	.450 x .360 x .170	.30	<b>.18</b>
39	± 2%	CD15E390G	.450 x .360 x .170	.35	<b>.21</b>
43	± 5%	CD15E430J	.450 x .360 x .170	.30	<b>.18</b>
43	± 2%	CD15E430G	.450 x .360 x .170	.35	<b>.21</b>
47	±10%	CD15E470K	.450 x .360 x .170	.25	<b>.15</b>
47	± 5%	CD15E470J	.450 x .360 x .170	.30	<b>.18</b>
47	± 2%	CD15E470G	.450 x .360 x .170	.35	<b>.21</b>
51	± 5%	CD15F510J	.450 x .360 x .170	.30	<b>.18</b>

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
51	± 2%	CD15F510G	.450 x .360 x .170	\$.35	<b>\$.21</b>
56	±10%	CD15F560K	.450 x .360 x .170	.25	<b>.15</b>
56	± 5%	CD15F560J	.450 x .360 x .170	.30	<b>.18</b>
56	± 2%	CD15F560G	.450 x .360 x .170	.35	<b>.21</b>
62	± 5%	CD15F620J	.450 x .360 x .170	.30	<b>.18</b>
62	± 2%	CD15F620G	.450 x .360 x .170	.35	<b>.21</b>
68	±10%	CD15F680K	.450 x .360 x .180	.25	<b>.15</b>
68	± 5%	CD15F680J	.450 x .360 x .180	.30	<b>.18</b>
68	± 2%	CD15F680G	.450 x .360 x .180	.35	<b>.21</b>
75	± 5%	CD15F750J	.450 x .360 x .180	.30	<b>.18</b>
75	± 2%	CD15F750G	.450 x .360 x .180	.35	<b>.21</b>
82	±10%	CD15F820K	.450 x .360 x .180	.25	<b>.15</b>
82	± 5%	CD15F820J	.450 x .360 x .180	.30	<b>.18</b>
82	± 2%	CD15F820G	.450 x .360 x .180	.35	<b>.21</b>
91	± 5%	CD15F910J	.460 x .360 x .180	.30	<b>.18</b>
91	± 2%	CD15F910G	.460 x .360 x .180	.35	<b>.21</b>
100	±10%	CD15F101K	.460 x .360 x .180	.25	<b>.15</b>
100	± 5%	CD15F101J	.460 x .360 x .180	.30	<b>.18</b>
100	± 2%	CD15F101G	.460 x .360 x .180	.35	<b>.21</b>
110	± 5%	CD15F111J	.460 x .370 x .180	.35	<b>.21</b>
110	± 2%	CD15F111G	.460 x .370 x .180	.40	<b>.24</b>
120	±10%	CD15F121K	.460 x .370 x .180	.30	<b>.18</b>
120	± 5%	CD15F121J	.460 x .370 x .180	.35	<b>.21</b>
120	± 2%	CD15F121G	.460 x .370 x .180	.40	<b>.24</b>
130	± 5%	CD15F131J	.460 x .370 x .180	.35	<b>.21</b>
130	± 2%	CD15F131G	.460 x .370 x .180	.40	<b>.24</b>
150	±10%	CD15F151K	.460 x .370 x .190	.30	<b>.18</b>
150	± 5%	CD15F151J	.460 x .370 x .190	.35	<b>.21</b>
150	± 2%	CD15F151G	.460 x .370 x .190	.40	<b>.24</b>
160	± 5%	CD15F161J	.460 x .370 x .190	.40	<b>.24</b>
160	± 2%	CD15F161G	.460 x .370 x .190	.45	<b>.27</b>

(Continued on next page)

# Mica Capacitors

(Continued) **DIPPED MICA DIELECTRIC CAPACITOR**

Class	Type
203 - 01	CD

## TYPE CD15 (Continued)

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
180	± 10%	CD15F181K	.460 x .370 x .190	\$.35	\$.21
180	± 5%	CD15F181J	.460 x .370 x .190	.40	.24
180	± 2%	CD15F181G	.460 x .370 x .190	.45	.27
200	± 5%	CD15F201J	.460 x .380 x .190	.40	.24
200	± 2%	CD15F201G	.460 x .380 x .190	.45	.27
220	± 10%	CD15F221K	.460 x .380 x .200	.40	.24
220	± 5%	CD15F221J	.460 x .380 x .200	.45	.27
220	± 2%	CD15F221G	.460 x .380 x .200	.50	.30
240	± 5%	CD15F241J	.460 x .380 x .200	.45	.27
240	± 2%	CD15F241G	.460 x .380 x .200	.50	.30
270	± 10%	CD15F271K	.470 x .390 x .210	.45	.27
270	± 5%	CD15F271J	.470 x .390 x .210	.50	.30

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
270	± 2%	CD15F271G	.470 x .390 x .210	\$.55	\$.33
300	± 5%	CD15F301J	.470 x .390 x .210	.50	.30
300	± 2%	CD15F301G	.470 x .390 x .210	.55	.33
330	± 10%	CD15F331K	.470 x .390 x .210	.50	.30
330	± 5%	CD15F331J	.470 x .390 x .210	.55	.33
330	± 2%	CD15F331G	.470 x .390 x .210	.65	.39
360	± 5%	CD15F361J	.470 x .400 x .220	.55	.33
360	± 2%	CD15F361G	.470 x .400 x .220	.65	.39
390	± 10%	CD15F391K	.470 x .400 x .220	.55	.33
390	± 5%	CD15F391J	.470 x .400 x .220	.60	.36
390	± 2%	CD15F391G	.470 x .400 x .220	.70	.42

## TYPE CD19

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
430	± 5%	CD19E431J	.640 x .510 x .200	\$.50	\$.30
430	± 2%	CD19E431G	.640 x .510 x .200	.55	.33
470	± 10%	CD19E471K	.640 x .510 x .200	.50	.30
470	± 5%	CD19E471J	.640 x .510 x .200	.55	.33
470	± 2%	CD19E471G	.640 x .510 x .200	.60	.36
510	± 5%	CD19E511J	.650 x .510 x .200	.55	.33
510	± 2%	CD19E511G	.650 x .510 x .200	.60	.36
560	± 10%	CD19E561K	.650 x .510 x .200	.55	.33
560	± 5%	CD19E561J	.650 x .510 x .200	.60	.36
560	± 2%	CD19E561G	.650 x .510 x .200	.65	.39
620	± 5%	CD19E621J	.650 x .510 x .200	.60	.36
620	± 2%	CD19E621G	.650 x .510 x .200	.65	.39
680	± 10%	CD19E681K	.650 x .510 x .210	.60	.36
680	± 5%	CD19E681J	.650 x .510 x .210	.65	.39
680	± 2%	CD19E681G	.650 x .510 x .210	.70	.42
750	± 5%	CD19E751J	.650 x .510 x .210	.65	.39
750	± 2%	CD19E751G	.650 x .510 x .210	.70	.42
820	± 10%	CD19E821K	.650 x .510 x .210	.60	.36
820	± 5%	CD19E821J	.650 x .510 x .210	.65	.39
820	± 2%	CD19E821G	.650 x .510 x .210	.70	.42
910	± 5%	CD19E911J	.650 x .510 x .210	.70	.42
910	± 2%	CD19E911G	.650 x .510 x .210	.75	.45
1000	± 10%	CD19F102K	.650 x .520 x .220	.70	.42
1000	± 5%	CD19F102J	.650 x .520 x .220	.75	.45
1000	± 2%	CD19F102G	.650 x .520 x .220	.80	.48
1100	± 5%	CD19F112J	.650 x .520 x .220	.75	.45
1100	± 2%	CD19F112G	.650 x .520 x .220	.80	.48
1200	± 5%	CD19F122J	.650 x .520 x .220	.80	.48
1200	± 2%	CD19F122G	.660 x .520 x .220	.90	.54

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
1300	± 5%	CD19F132J	.660 x .520 x .220	\$.85	\$.51
1300	± 2%	CD19F132G	.660 x .520 x .220	.95	.57
1500	± 5%	CD19F152J	.660 x .520 x .230	.90	.54
1500	± 2%	CD19F152G	.660 x .520 x .230	1.00	.60
1600	± 5%	CD19F162J	.660 x .530 x .230	.95	.57
1600	± 2%	CD19F162G	.660 x .530 x .230	1.05	.63
1800	± 5%	CD19F182J	.670 x .530 x .240	1.10	.66
1800	± 2%	CD19F182G	.670 x .530 x .240	1.20	.72
2000	± 5%	CD19F202J	.670 x .530 x .240	1.20	.72
2000	± 2%	CD19F202G	.670 x .530 x .240	1.30	.78
2200	± 5%	CD19F222J	.670 x .530 x .250	1.30	.78
2200	± 2%	CD19F222G	.670 x .530 x .250	1.40	.84
2400	± 5%	CD19F242J	.670 x .540 x .260	1.40	.84
2400	± 2%	CD19F242G	.670 x .540 x .260	1.55	.93
2700	± 5%	CD19F272J	.680 x .540 x .270	1.50	.90
2700	± 2%	CD19F272G	.680 x .540 x .270	1.65	.99
3000	± 5%	CD19F302J	.680 x .550 x .280	1.65	.99
3000	± 2%	CD19F302G	.680 x .550 x .280	1.80	1.08
3300	± 5%	CD19F332J	.680 x .550 x .290	1.75	1.05
3300	± 2%	CD19F332G	.680 x .550 x .290	1.90	1.14
3600	± 5%	CD19F362J	.680 x .560 x .300	1.85	1.11
3600	± 2%	CD19F362G	.680 x .560 x .300	2.00	1.20
3900	± 5%	CD19F392J	.690 x .560 x .310	1.95	1.17
3900	± 2%	CD19F392G	.690 x .560 x .310	2.15	1.29
4300	± 5%	CD19F432J	.690 x .570 x .330	2.05	1.23
4300	± 2%	CD19F432G	.690 x .570 x .330	2.25	1.35
4700	± 5%	CD19F472J	.700 x .580 x .350	2.20	1.32
4700	± 2%	CD19F472G	.700 x .580 x .350	2.40	1.44

## TYPE CD30

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
5100	± 5%	CD30F512J	.780 x .860 x .280	\$.90	\$.54
5100	± 2%	CD30F512G	.780 x .860 x .280	2.10	1.26
5600	± 5%	CD30F562J	.780 x .870 x .290	1.95	1.17
5600	± 2%	CD30F562G	.780 x .870 x .290	2.15	1.29
6200	± 5%	CD30F622J	.780 x .870 x .290	2.05	1.23
6200	± 2%	CD30F622G	.780 x .870 x .290	2.25	1.35
6800	± 5%	CD30F682J	.780 x .870 x .300	2.30	1.38
6800	± 2%	CD30F682G	.780 x .870 x .300	2.50	1.50
7500	± 5%	CD30F752J	.790 x .880 x .310	2.50	1.50
7500	± 2%	CD30F752G	.790 x .880 x .310	2.75	1.65
8200	± 5%	CD30F822J	.790 x .880 x .320	2.75	1.65
8200	± 2%	CD30F822G	.790 x .880 x .320	3.00	1.80
9100	± 5%	CD30F912J	.790 x .880 x .330	2.95	1.77
9100	± 2%	CD30F912G	.790 x .880 x .330	3.20	1.92
10,000	± 5%	CD30F103J	.800 x .890 x .340	3.30	1.98

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
10,000	± 2%	CD30F103G	.800 x .890 x .340	\$.360	\$.216
11,000	± 5%	CD30F113J	.800 x .890 x .350	3.60	2.16
11,000	± 2%	CD30F113G	.800 x .890 x .350	3.90	2.34
12,000	± 5%	CD30F123J	.800 x .890 x .360	3.85	2.31
12,000	± 2%	CD30F123G	.800 x .890 x .360	4.20	2.52
13,000	± 5%	CD30F133J	.810 x .890 x .370	4.10	2.46
13,000	± 2%	CD30F133G	.810 x .890 x .370	4.50	2.70
15,000	± 5%	CD30F153J	.810 x .900 x .390	4.65	2.79
15,000	± 2%	CD30F153G	.810 x .900 x .390	5.10	3.06
16,000	± 5%	CD30F163J	.820 x .900 x .410	4.95	2.97
16,000	± 2%	CD30F163G	.820 x .900 x .410	5.40	3.24
18,000	± 5%	CD30F183J	.820 x .910 x .430	5.50	3.30
18,000	± 2%	CD30F183G	.820 x .910 x .430	6.00	3.60
20,000	± 5%	CD30F203J	.830 x .920 x .450	6.05	3.63
20,000	± 2%	CD30F203G	.830 x .920 x .450	6.60	3.96

(Continued on next page)



# Mica Capacitors

Type	Class
CD	203 • 01

## DIPPED MICA CAPACITORS (Continued)

### CD-42

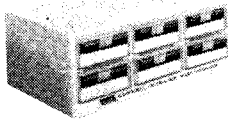
Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
22,000	±5%	CD42F223J	1.420 x .880 x .310	\$6.90	<b>\$4.14</b>
22,000	±2%	CD42F223G	1.420 x .880 x .310	6.90	<b>4.14</b>
24,000	±5%	CD42F243J	1.430 x .880 x .320	7.50	<b>4.50</b>
24,000	±2%	CD42F243G	1.430 x .880 x .320	8.60	<b>5.16</b>
27,000	±5%	CD42F273J	1.430 x .880 x .330	8.40	<b>5.04</b>
27,000	±2%	CD42F273G	1.430 x .880 x .330	9.65	<b>5.79</b>
30,000	±5%	CD42F303J	1.440 x .890 x .350	9.30	<b>5.58</b>
30,000	±2%	CD42F303G	1.440 x .890 x .350	10.70	<b>6.42</b>
33,000	±5%	CD42F333J	1.440 x .890 x .360	10.20	<b>6.12</b>
33,000	±2%	CD42F333G	1.440 x .890 x .360	11.70	<b>7.02</b>
36,000	±5%	CD42F363J	1.450 x .900 x .380	11.10	<b>6.66</b>
36,000	±2%	CD42F363G	1.450 x .900 x .380	12.75	<b>7.65</b>

Cap. pf.	Cap. Tol.	Type	Size (Inches) L x W x T	List Price	Net Price
39,000	±5%	CD42F393J	1.450 x .900 x .400	\$12.00	<b>\$7.20</b>
39,000	±2%	CD42F393G	1.450 x .900 x .400	13.80	<b>8.28</b>
43,000	±5%	CD42F433J	1.460 x .910 x .420	13.00	<b>7.80</b>
43,000	±2%	CD42F433G	1.460 x .910 x .420	14.95	<b>8.97</b>
47,000	±5%	CD42F473J	1.470 x .910 x .450	14.00	<b>8.40</b>
47,000	±2%	CD42F473G	1.470 x .910 x .450	16.10	<b>9.66</b>
51,000	±5%	CD42F513J	1.480 x .920 x .470	15.00	<b>9.00</b>
51,000	±2%	CD42F513G	1.480 x .920 x .470	17.25	<b>10.35</b>
56,000	±5%	CD42F563J*	1.460 x .910 x .420	14.20	<b>8.52</b>
56,000	±2%	CD42F563G*	1.460 x .910 x .420	16.30	<b>9.78</b>
62,000	±5%	CD42F623J*	1.470 x .920 x .450	15.60	<b>9.36</b>
62,000	±2%	CD42F623G*	1.470 x .920 x .450	17.90	<b>10.74</b>

\* 300 V DCW

Type	Class
CD	203 • 01

## DIPPED MICA CAPACITOR ASSORTMENT



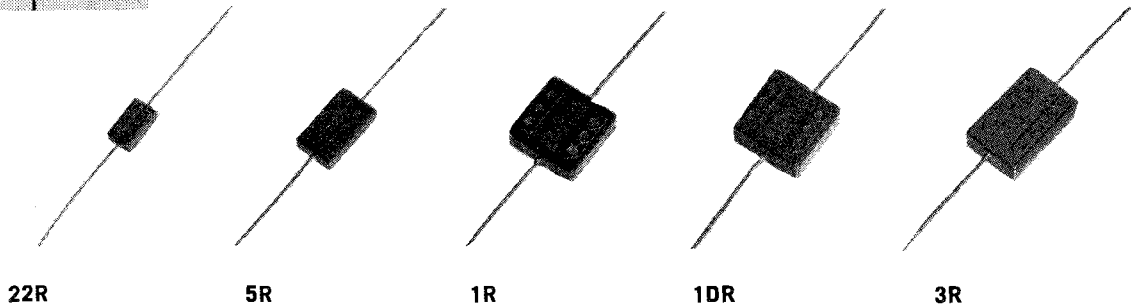
The dipped mica capacitor assortment contains 60 pieces... five each of 12 ratings most frequently used in color TV and other critical circuitry. The small case size of the dipped units insures a fit in the most crowded component assemblies. All tolerances are ±10%. The capacitor assortment contains five each of units rated 10 pf.; 33 pf.; 47 pf.; 100 pf.; 120 p.f.; 150 pf.; 180 pf.; 200 pf.; 220 pf.; 270 pf.; 300 pf.; and 390 pf. All units are 500 VDCW with an operating temperature range of -55C to +125C.

LIST PRICE \$23.75

NET PRICE \$14.25 (Cabinet Free)

Type	Class
22R, 5R, 1R, 1DR, 3R	203 • 23

## MOLDED MICA CAPACITORS



Five types of molded, silvered-mica dielectric capacitors provide a wide choice of ratings and form factors to fill replacement needs. Units are rated 500 VDCW and 1000 VDC test. Operating temperature range is -55C to +85C. Tolerances

of individual stock units are listed in the tabulation. The CDI molded unit makes an ideal mica capacitor replacement when the small size and radial lead construction of the dipped unit is not required.

### 22R

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
2	±20	22R5V2M	\$.30	<b>\$.18</b>
5	±10	22R5V5K	.30	<b>.18</b>
10	±10	22R5Q1K	.30	<b>.18</b>
12	±10	22R5Q12K	.30	<b>.18</b>
15	±10	22R5Q15K	.30	<b>.18</b>

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
18	±10	22R5Q18K	\$.30	<b>\$.18</b>
20	±5	22R5Q2J	.30	<b>.18</b>
22	±10	22R5Q22K	.30	<b>.18</b>
22	±5	22R5Q22J	.30	<b>.18</b>
24	±5	22R5Q24J	.30	<b>.18</b>

L <sup>3</sup>/<sub>16</sub> W <sup>1</sup>/<sub>16</sub> T <sup>3</sup>/<sub>16</sub>

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
27	±10	22R5Q27K	\$.30	<b>\$.18</b>
27	±5	22R5Q27J	.30	<b>.18</b>
30	±5	22R5Q3J	.30	<b>.18</b>
33	±10	22R5Q33K	.30	<b>.18</b>
33	±5	22R5Q33J	.30	<b>.18</b>

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# Mica Capacitors

(Continued) MOLDED MICA CAPACITORS

Class 203 - 23 Type 22R, 5R, 1R, 1DR, 3R

## 22R (Continued)

L  $\frac{3}{64}$  W  $\frac{1}{64}$  T  $\frac{3}{16}$

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
36	±5	22R5Q36J	\$.30	\$.18
39	±10	22R5Q39K	.30	.18
39	±5	22R5Q39J	.30	.18
43	±5	22R5Q43J	.30	.18
47	±10	22R5Q47K	.30	.18
47	±5	22R5Q47J	.30	.18
51	±5	22R5Q51J	.30	.18
51	±2	22R5Q51G	.35	.21
56	±10	22R5Q56K	.30	.18
56	±5	22R5Q56J	.30	.18
56	±2	22R5Q56G	.35	.21
62	±5	22R5Q62J	.30	.18
62	±2	22R5Q62G	.35	.21
68	±10	22R5Q68K	.30	.18
68	±5	22R5Q68J	.30	.18
68	±2	22R5Q68G	.35	.21
75	±5	22R5Q75J	.30	.18
75	±2	22R5Q75G	.35	.21
82	±10	22R5Q82K	.30	.18
82	±5	22R5Q82J	.30	.18
82	±2	22R5Q82G	.35	.21
91	±5	22R5Q91J	.30	.18
91	±2	22R5Q91G	.35	.21

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
100	±10	22R5T1K	\$.30	\$.18
100	±5	22R5T1J	.30	.18
100	±2	22R5T1G	.35	.21
110	±5	22R5T11J	.35	.21
110	±2	22R5T11G	.40	.24
120	±10	22R5T12K	.35	.21
120	±5	22R5T12J	.35	.21
120	±2	22R5T12G	.40	.24
130	±5	22R5T13J	.35	.21
130	±2	22R5T13G	.40	.24
150	±10	22R5T15K	.35	.21
150	±5	22R5T15J	.35	.21
150	±2	22R5T15G	.40	.24
160	±5	22R5T16J	.40	.24
160	±2	22R5T16G	.50	.30
180	±10	22R5T18K	.40	.24
180	±5	22R5T18J	.40	.24
180	±2	22R5T18G	.50	.30
200	±5	22R5T2J	.40	.24
200	±2	22R5T16G	.50	.30
220	±10	22R5T22K	.45	.27
220	±5	22R5T22J	.45	.27
220	±2	22R5T22G	.55	.33

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
240	±5	22R5T24J	\$.45	\$.27
240	±2	22R5T24G	.55	.33
270	±10	22R5T27K	.50	.30
270	±5	22R5T27J	.50	.30
270	±2	22R5T27G	.60	.36
300	±5	22R5T3J	.50	.30
300	±2	22R5T3G	.60	.36
330	±10	22R5T33K	.55	.33
330	±5	22R5T33J	.55	.33
330	±2	22R5T33G	.65	.39
360	±5	22R5T36J	.60	.36
360	±2	22R5T36G	.70	.42
390	±10	22R5T39K	.65	.39
390	±5	22R5T39J	.65	.39
390	±2	22R5T39G	.80	.48
430	±5	22R5T43J	.70	.42
430	±2	22R5T43G	.85	.51
470	±10	22R5T47K	.75	.45
470	±5	22R5T47J	.75	.45
470	±2	22R5T47G	.90	.54
510	±5	22R5T51J	.80	.48
510	±2	22R5T51G	.95	.57

## 5R

L  $\frac{4}{64}$  W  $\frac{1}{16}$  T  $\frac{3}{16}$

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
560	±10	5R5T56K	\$.55	\$.33
560	±5	5R5T56J	.55	.33
560	±2	5R5T56G	.60	.36
620	±5	5R5T62J	.60	.36
620	±2	5R5T62G	.65	.39
680	±10	5R5T68K	.60	.36

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
680	±5	5R5T68J	\$.60	\$.36
680	±2	5R5T68G	.65	.39
750	±5	5R5T75J	.65	.39
750	±2	5R5T75G	.70	.42
820	±10	5R5T82K	.70	.42
820	±5	5R5T82J	.70	.42

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
820	±2	5R5T82G	\$.75	\$.45
910	±5	5R5T91J	.70	.42
910	±2	5R5T91G	.75	.45
1000	±10	5RD1K	.75	.45
1000	±5	5R5D1J	.75	.45
1000	±2	5R5D1G	.85	.51

## 1R

L  $\frac{5}{64}$  W  $\frac{1}{16}$  T  $\frac{3}{16}$

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
560	±5	1R5T56J	\$.60	\$.36
560	±2	1R5T56G	.65	.39
620	±5	1R5T62J	.60	.36
620	±2	1R5T62G	.65	.39
680	±5	1R5T68J	.65	.39
680	±2	1R5T68G	.70	.42
750	±5	1R5T75J	.65	.39
750	±2	1R5T75G	.70	.42
820	±5	1R5T82J	.70	.42
820	±2	1R5T82G	.75	.45
910	±5	1R5T91J	.70	.42
910	±2	1R5T91G	.75	.45
1000	±5	1R5D1J	.75	.45

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
1000	±2	1R5D1G	\$.85	\$.51
1100	±5	1R5D11J	.75	.45
1100	±2	1R5D11G	.85	.51
1200	±5	1R5D12J	.75	.45
1200	±2	1R5D12G	.85	.51
1300	±5	1R5D13J	.80	.48
1300	±2	1R5D13G	.90	.54
1500	±5	1R5D15J	.85	.51
1500	±2	1R5D15G	.95	.57
1600	±5	1R5D16J	.85	.51
1600	±2	1R5D16G	.95	.57
1800	±5	1R5D18J	.90	.54
1800	±2	1R5D18G	1.00	.60

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
2000	±5	1R5D2J	\$1.00	\$.60
2000	±2	1R5D2G	1.10	.66
2200	±5	1R5D22J	1.10	.66
2200	±2	1R5D22G	1.20	.72
2400	±5	1R5D24J	1.20	.72
2400	±2	1R5D24G	1.30	.78
2700	±5	1R5D27J	1.30	.78
2700	±2	1R5D27G	1.45	.87
3000	±5	1R5D3J	1.40	.84
3000	±2	1R5D3G	1.55	.93
3300	±5	1R5D33J	1.50	.90
3300	±2	1R5D33G	1.65	.99

## DR

L  $\frac{5}{64}$  W  $\frac{5}{64}$  T  $\frac{3}{16}$

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
3600	±5	1DR5D36J	\$1.60	\$.96
3600	±2	1DR5D36G	1.75	1.05
3900	±5	1DR5D39J	1.70	1.02
3900	±2	1DR5D39G	1.85	1.11
4300	±5	1DR5D43J	1.80	1.08
4300	±2	1DR5D43G	2.00	1.20
4700	±5	1DR5D47J	1.90	1.14
4700	±2	1DR5D47G	2.10	1.26

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
5100	±5	1DR5D51J	\$2.00	\$1.20
5100	±2	1DR5D51G	2.20	1.32
5600	±5	1DR5D56J	2.10	1.26
5600	±2	1DR5D56G	2.30	1.38
6200	±5	1DR5D62J	2.20	1.32
6200	±2	1DR5D62G	2.40	1.44
6800	±5	1DR5D68J	2.20	1.32
6800	±2	1DR5D68G	2.40	1.44

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
7500	±5	1DR5D75J	\$2.40	\$1.44
7500	±2	1DR5D75G	2.65	1.59
8200	±5	1DR5D82J	2.60	1.56
8200	±2	1DR5D82G	2.80	1.68
9100	±5	1DR5D91J	2.80	1.68
9100	±2	1DR5D91G	3.05	1.83
10000	±5	1DR5S1J	3.05	1.83
10000	±2	1DR5S1G	3.45	2.07

Type	Class
22R, 5R, 1R, 1DR, 3R	203 • 23

## MOLDED MICA CAPACITORS (Continued)

## 3R

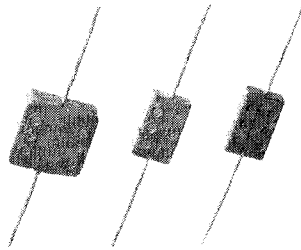
Cap. pf.	Cap. Tol.	Type	List Price	Net Price
6800	±5	3R5D68J	\$2.90	\$1.74
6800	±2	3R5D68G	3.35	2.01

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
7500	±5	3R5D75J	\$3.05	\$1.83
7500	±2	3R5D75G	3.50	2.10

L  $\frac{33}{64}$  W  $\frac{1}{64}$  T  $\frac{3}{16}$ 

Cap. pf.	Cap. Tol.	Type	List Price	Net Price
8200	±5	3R5D82J	\$3.30	\$1.98
8200	±2	3R5D82G	3.80	2.28

Type	Class
5RP, 1DRP	203 • 24



## HIGH VOLTAGE MOLDED MICA

These high voltage molded, silvered mica dielectric capacitors are the ideal replacement where high voltage spikes or pulses are encountered and stable, low loss operation is required. The type 5RP10 is rated 1000 VDCW and 2000 VDC Test. Type 5RP20 and 1DRP20 are rated 2000 VDCW and 4000 VDC Test. Tolerance is ±5%. Operating temperature range is -55C to +85C.

## 5RP10

1DRP20 5RP20 5RP10

Cap. pf.	Type	List Price	Net Price
10	5RP10Q1J	\$.30	\$.18
12	5RP10Q12J	.30	.18
15	5RP10Q15J	.30	.18
18	5RP10Q18J	.30	.18
20	5RP10Q2J	.30	.18
22	5RP10Q22J	.30	.18
24	5RP10Q24J	.30	.18
27	5RP10Q27J	.30	.18
30	5RP10Q3J	.30	.18
33	5RP10Q33J	.30	.18
36	5RP10Q36J	.30	.18
39	5RP10Q39J	.30	.18
43	5RP10Q43J	.30	.18
47	5RP10Q47J	.30	.18
51	5RP10Q51J	.30	.18
56	5RP10Q56J	.30	.18

Cap. pf.	Type	List Price	Net Price
62	5RP10Q62J	\$.30	\$.18
68	5RP10Q68J	.30	.18
75	5RP10Q75J	.30	.18
82	5RP10Q82J	.30	.18
91	5RP10Q91J	.30	.18
100	5RP10T1J	.35	.21
110	5RP10T11J	.35	.21
120	5RP10T12J	.35	.21
130	5RP10T13J	.35	.21
150	5RP10T15J	.35	.21
160	5RP10T16J	.35	.21
180	5RP10T18J	.35	.21
200	5RP10T2J	.40	.24
220	5RP10T22J	.40	.24
240	5RP10T24J	.40	.24
270	5RP10T27J	.40	.24

L  $\frac{4}{64}$  W  $\frac{1}{6}$  T  $\frac{3}{16}$ 

Cap. pf.	Type	List Price	Net Price
300	5RP10T3J	\$.40	\$.24
330	5RP10T33J	.40	.24
360	5RP10T36J	.40	.24
390	5RP10T39J	.45	.27
430	5RP10T43J	.45	.27
470	5RP10T47J	.45	.27
510	5RP10T51J	.50	.30
560	5RP10T56J	.50	.30
620	5RP10T62J	.55	.33
680	5RP10T68J	.60	.36
750	5RP10T75J	.60	.36
820	5RP10T82J	.65	.39
910	5RP10T91J	.70	.42
1000	5RP10D1J	.70	.42
1100	5RP10D11J	.75	.45
1200	5RP10D12J	.80	.48

## 5RP20

Cap. pf.	Type	List Price	Net Price
10	5RP20Q1J	\$.30	\$.18
12	5RP20Q12J	.30	.18
15	5RP20Q15J	.30	.18
18	5RP20Q18J	.30	.18
20	5RP20Q2J	.30	.18
22	5RP20Q22J	.30	.18
27	5RP20Q27J	.35	.21
30	5RP20Q3J	.35	.21
33	5RP20Q33J	.35	.21
36	5RP20Q36J	.35	.21
39	5RP20Q39J	.35	.21
43	5RP20Q43J	.35	.21

Cap. pf.	Type	List Price	Net Price
47	5RP20Q47J	\$.35	\$.21
51	5RP20Q51J	.40	.24
56	5RP20Q56J	.40	.24
62	5RP20Q62J	.40	.24
68	5RP20Q68J	.40	.24
75	5RP20Q75J	.40	.24
82	5RP20Q82J	.45	.27
91	5RP20Q91J	.45	.27
100	5RP20T1J	.45	.27
110	5RP20T11J	.50	.30
120	5RP20T12J	.50	.30

L  $\frac{4}{64}$  W  $\frac{1}{6}$  T  $\frac{3}{16}$ 

Cap. pf.	Type	List Price	Net Price
130	5RP20T13J	\$.55	\$.33
150	5RP20T15J	.55	.33
180	5RP20T18J	.65	.39
200	5RP20T2J	.65	.39
220	5RP20T22J	.65	.39
240	5RP20T24J	.70	.42
270	5RP20T27J	.75	.45
300	5RP20T3J	.80	.48
330	5RP20T33J	.90	.54
360	5RP20T36J	.95	.57
390	5RP20T39J	1.00	.60

## 10RP20

Cap. pf.	Type	List Price	Net Price
430	1DRP20T43J	\$.90	\$.54
510	1DRP20T51J	.95	.57
560	1DRP20T56J	1.05	.63
620	1DRP20T62J	1.15	.69
680	1DRP20T68J	1.25	.75

Cap. pf.	Type	List Price	Net Price
750	1DRP20T75J	\$1.30	\$.78
820	1DRP20T82J	1.40	.84
910	1DRP20T91J	1.60	.96
1000	1DRP20D1J	1.65	.99

L  $\frac{5}{64}$  W  $\frac{5}{64}$  T  $\frac{5}{16}$ 

Cap. pf.	Type	List Price	Net Price
1200	1DRP20D12J	\$1.95	\$1.17
1500	1DRP20D15J	2.40	1.44
1800	1DRP20D18J	2.85	1.71
2000	1DRP20D2J	3.10	1.86

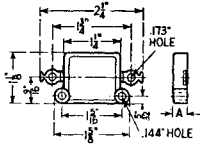
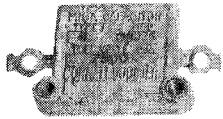
# Mica Capacitors

## LOW-POWER MOLDED MICA

Class	Type
203 • 40-42	4, 9

### Type 4

The type 4 low power molded mica capacitor is provided with solder lugs and separate mounting holes. Standard tolerance is  $\pm 10\%$ . Frequently used in meter by-passing.

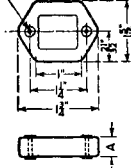


Type 4

### Type 9

The type 9 low power molded mica capacitor is provided with tapped terminal holes which also serve as a means of mounting the unit. Standard tolerance is  $\pm 10\%$ .

TYPE 9-6-32 THD. TAPPED HOLES  
TYPE 9A-1/4" DIA. HOLES



Type 9

### TYPE 4 Depth (dim. A) 1/32" except units indicated \* 1/16" deep.

Cap. Mfd.	Type	List Price	Net Price
<b>1200 V D.C. Test — 600 V D.C. Working</b>			
.00005	4-14050	\$1.20	\$ .72
.0001	4-13010	1.20	.72
.0002	4-13020	1.20	.72
.00025	4-13025	1.20	.72
.0003	4-13030	1.20	.72
.0004	4-13040	1.20	.72
.0005	4-13050	1.20	.72
.001	4-12010	1.20	.72
.0015	4-12015	1.20	.72
.002	4-12020	1.30	.78
.0025	4-12025	1.30	.78
.003	4-12030	1.45	.87
.004	4-12040	1.50	.90
.005	4-12050	1.55	.93
.006	4-12060	1.80	1.08
.007	4-12070	1.85	1.11
.008	4-12080	1.90	1.14
.01	4-11010	2.15	1.29
.015	4-11015*	2.65	1.59
.02	4-11020*	3.05	1.83

Cap. Mfd.	Type	List Price	Net Price
<b>1200 V D.C. Test — 600 V D.C. Working</b>			
.025	4-11025*	\$3.60	\$2.16
.03	4-11030*	4.45	2.67
<b>2500 V D.C. Test — 1200 V D.C. Working</b>			
.00005	4-24050	\$1.60	\$ .96
.0001	4-23010	1.60	.96
.0002	4-23020	1.60	.96
.00025	4-23025	1.60	.96
.0003	4-23030	1.60	.96
.0005	4-23050	1.60	.96
.001	4-22010	1.80	1.08
.0015	4-22015	2.30	1.38
.002	4-22020	2.40	1.44
.0025	4-22025	2.80	1.68
.003	4-22030	3.05	1.83
.004	4-22040*	3.05	1.83
.005	4-22050*	3.30	1.98
.006	4-22060*	3.30	1.98

Cap. Mfd.	Type	List Price	Net Price
<b>2500 V D.C. Test — 1200 V D.C. Working</b>			
.008	4-22080*	\$3.85	\$2.31
.01	4-21010*	5.10	3.06
<b>5000 V D.C. Test — 2500 V D.C. Working</b>			
.00005	4-54050	\$1.90	\$1.14
.0001	4-53010	1.90	1.14
.0002	4-53020	1.90	1.14
.00025	4-53025	2.20	1.32
.0003	4-53030	2.25	1.35
.0005	4-53050	2.50	1.50
.001	4-52010	2.80	1.68
.0015	4-52015	3.55	2.13
.002	4-52020*	4.15	2.49
.0025	4-52025*	4.50	2.70
.003	4-52030*	4.90	2.94
.004	4-52040*	5.65	3.39
.005	4-52050*	6.40	3.84

### TYPE 9 Depth (dim. A) 1/16" except units indicated \* 1/64" deep.

Cap. Mfd.	Type	List Price	Net Price
<b>1200 V D.C. Test — 600 V D.C. Working</b>			
.00005	9-14050	\$1.45	\$ .87
.0001	9-13010	1.45	.87
.00025	9-13025	1.45	.87
.0005	9-13050	1.45	.87
.001	9-12010	1.45	.87
.002	9-12020	1.65	.99
.0025	9-12025	1.70	1.02
.003	9-12030	1.85	1.11
.004	9-12040	2.00	1.20
.005	9-12050	2.10	1.26
.006	9-12060	2.20	1.32
.008	9-12080	2.45	1.47
.01	9-11010	2.80	1.68
.015	9-11015	3.05	1.83
.02	9-11020	3.55	2.13
.025	9-11025	4.35	2.61
.03	9-11030	4.55	2.73
.04	9-11040*	5.85	3.51
.05	9-11050*	7.10	4.26
.06	9-11060*	8.05	4.83

Cap. Mfd.	Type	List Price	Net Price
<b>2500 V D.C. Test — 1200 V D.C. Working</b>			
.00005	9-24050	\$1.60	\$ .96
.0001	9-23010	1.60	.96
.00025	9-23025	1.60	.96
.0005	9-23050	1.60	.96
.001	9-22010	1.90	1.14
.002	9-22020	2.50	1.50
.0025	9-22025	2.80	1.68
.003	9-22030	2.95	1.77
.004	9-22040	3.10	1.86
.005	9-22050	3.30	1.98
.006	9-22060	3.45	2.07
.008	9-22080	4.10	2.46
.01	9-21010	4.70	2.82
.015	9-21015*	5.80	3.48
.02	9-21020*	7.05	4.23
.025	9-21025*	7.90	4.74
.03	9-21030*	8.10	4.86

Cap. Mfd.	Type	List Price	Net Price
<b>5000 V D.C. Test — 2500 V D.C. Working</b>			
.00005	9-54050	\$1.90	\$1.14
.0001	9-53010	1.90	1.14
.00025	9-53025	2.15	1.29
.0005	9-53050	2.55	1.53
.001	9-52010	2.90	1.74
.002	9-52020	4.25	2.55
.0025	9-52025	4.60	2.76
.003	9-52030	5.10	3.06
.004	9-52040	5.65	3.39
.005	9-52050*	6.20	3.72
.006	9-52060*	6.35	3.81
.008	9-52080*	6.85	4.11
.01	9-51010*	7.30	4.38
.015	9-51015*	8.05	4.83





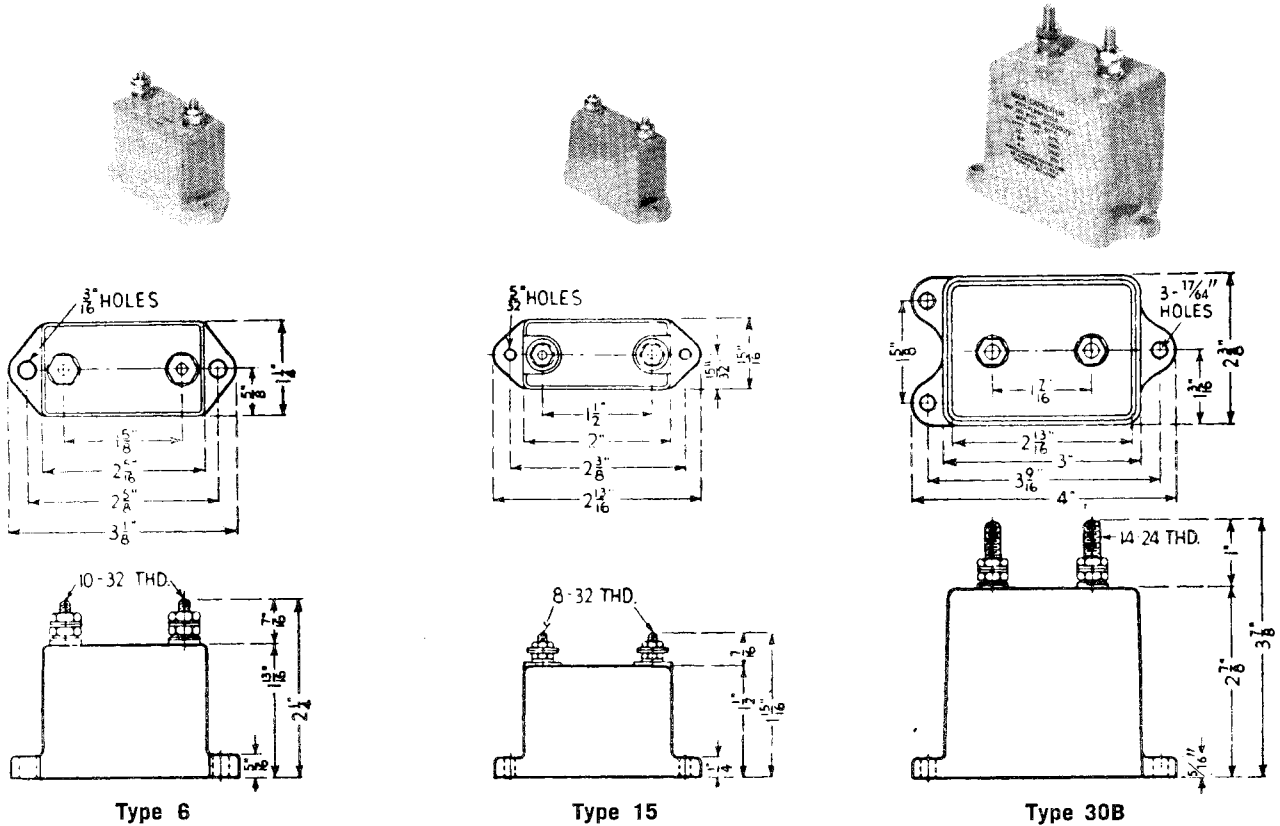
# Mica Capacitors

Type	Class
6, 15, 30B	203 • 50

## MEDIUM POWER PLASTIC CASED MICA

These medium power plastic cased mica capacitors are frequently used as replacements in airborne and portable electronic equipment because of their small size and weight and their relatively high RF power handling capabilities. Units are encapsulated in low loss plastic cases. Voltages and operating

currents at various RF frequencies are given in the tabulation. Tolerance is  $\pm 5\%$ . Current ratings are based on 30C ambient. For higher temperatures, use the following percentages of currents shown — to 50C, 95%; up to 60C, 85%; up to 70C, 70%. Maximum operating temperature is 70C.



### TYPE 6

Cap. Mfd.	Test Volt Effective	Type	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc	1000 kc	300 kc	100 kc		
.00005	5,000	390-6	1.5	.8	.2	.7	\$17.30	<b>\$10.38</b>
.0000625	5,000	362-6	1.8	.85	.3	.075	17.30	<b>10.38</b>
.0001	5,000	321-6	2.4	1.2	.47	.1	17.30	<b>10.38</b>
.00015	5,000	395-6	3.7	1.8	.68	.24	17.30	<b>10.38</b>
.0002	5,000	307-6	3.6	2.0	.82	.33	17.30	<b>10.38</b>
.00025	5,000	364-6	5.0	2.5	1.0	.45	17.30	<b>10.38</b>
.0003	5,000	294A-6	3.9	2.7	1.1	.51	17.30	<b>10.38</b>
.0004	5,000	283-6	4.3	2.7	1.3	.62	17.30	<b>10.38</b>
.0005	5,000	272-6	4.7	3.3	1.7	.8	17.30	<b>10.38</b>
.0006	5,000	266-6	5.1	3.6	1.8	.8	17.30	<b>10.38</b>
.00075	5,000	654-6	5.6	3.9	2.2	.91	17.30	<b>10.38</b>
.0008	5,000	599-6	6.0	4.0	2.3	1.0	17.30	<b>10.38</b>
.001	5,000	246-6	6.2	4.3	2.4	1.2	17.30	<b>10.38</b>
.0015	5,000	234-6	6.8	5.1	3.3	1.5	17.30	<b>10.38</b>
.002	3,000	215-6	6.0	3.0	1.5	.8	17.30	<b>10.38</b>
.002	6,000	217-6	9.0	6.2	4.0	2.0	17.30	<b>10.38</b>
.0025	5,000	473-6	9.0	6.2	4.3	2.0	17.30	<b>10.38</b>
.003	3,000	197-6	8.2	6.8	4.7	2.2	17.30	<b>10.38</b>

Cap. Mfd.	Test Volt Effective	Type	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc	1000 kc	300 kc	100 kc		
.004	3,000	184-6	9.1	7.5	5.6	2.7	\$17.30	<b>\$10.38</b>
.005	2,000	173-6	8.0	5.0	3.0	1.5	17.30	<b>10.38</b>
.005	3,000	474-6	9.1	8.2	6.2	3.0	17.30	<b>10.38</b>
.0075	2,000	565-6	10.0	9.1	6.8	3.9	17.30	<b>10.38</b>
.008	2,000	476-6	11.0	9.0	7.0	3.0	17.30	<b>10.38</b>
.008	3,000	162-6	10.0	10.0	7.5	3.9	17.30	<b>10.38</b>
.01	2,000	151-6	11.0	11.0	8.2	4.3	17.30	<b>10.38</b>
.015	1,500	140-6	12.0	10.0	7.0	4.0	17.30	<b>10.38</b>
.015	2,000	784-6	12.0	12.0	10.0	5.1	17.30	<b>10.38</b>
.02	2,000	131-6	13.0	13.0	11.0	6.2	17.30	<b>10.38</b>
.03	2,000	479-6	14.0	20.0	15.0	7.0	17.30	<b>10.38</b>
.04	1,500	480-6	15.0	16.0	13.0	7.5	17.30	<b>10.38</b>
.05	1,500	118-6	15.0	16.0	15.0	7.5	17.30	<b>10.38</b>
.1	500	111-6	15.0	18.0	15.0	8.2	19.20	<b>11.52</b>
.1	1,000	406-6	18.0	20.0	15.0	8.0	24.20	<b>14.52</b>
.1 x .1	250	110-6	20.0	20.0	15.0	10.0	24.20	<b>14.52</b>
.2	250	105-6	18.0	20.0	16.0	12.0	25.25	<b>15.15</b>
.25	250	885-6	18.0	20.0	16.0	12.0	27.90	<b>16.74</b>

(Continued on next page)



# Mica & Tubular Capacitors

## (Continued) MEDIUM POWER PLASTIC CASED MICA

Class	Type
203 - 50	6, 15, 30B

### TYPE 15

Cap. Mfd.	Test Volt Effective	Type	Max. Oper. Cur. in Amps				List Price	Net Price
			3000 kc	1000 kc	300 kc	100 kc		
.00005	3,000	639-15	1.3	.6	.18	.06	\$12.60	\$ 7.56
.0001	3,000	583A-15	1.8	.75	.33	.1	12.60	7.56
.00015	3,000	657-15	2.2	1.0	.47	.18	12.60	7.56
.0002	3,000	582A-15	2.4	1.2	.62	.24	12.60	7.56
.00025	3,000	805-15	3.0	2.0	.8	.3	12.60	7.56
.0003	3,000	640A-15	3.0	1.5	.75	.36	12.60	7.56
.0004	3,000	641-15	4.0	2.0	.9	.45	12.60	7.56
.0005	3,000	642-15	4.0	2.0	1.1	.55	12.60	7.56
.0006	3,000	643-15	4.5	2.4	1.2	.6	12.60	7.56
.0008	3,000	727-15	4.5	2.7	1.5	.7	12.60	7.56
.001	3,000	581B-15	4.7	3.0	1.6	.75	12.60	7.56

Cap. Mfd.	Test Volt Effective	Type	Max. Oper. Cur. in Amps				List Price	Net Price
			3000 kc	1000 kc	300 kc	100 kc		
.0015	3,000	679-15	5.6	3.9	2.0	.91	\$12.60	\$ 7.56
.002	3,000	726-15	6.2	4.3	2.4	1.1	12.60	7.56
.003	3,000	645-15	7.5	5.0	3.0	1.5	12.60	7.56
.004	3,000	699-15	8.2	6.2	3.5	1.6	12.60	7.56
.005	3,000	725-15	8.5	6.8	4.0	2.0	12.60	7.56
.006	2,000	580-15	9.1	7.5	4.5	2.2	12.60	7.56
.008	1,500	724-15	10.0	8.2	5.0	2.3	12.60	7.56
.01	1,000	677-15	10.0	9.1	5.1	2.4	12.60	7.56
.02	1,000	723-15	11.0	11.0	7.5	3.6	14.30	8.58
.05	500	722-15	11.0	11.0	9.1	5.0	14.30	8.58
.1	250	721-15	11.0	11.0	9.1	5.6	15.10	9.06

### TYPE 30B

Cap. Mfd.	Test Volt Effective	Type	Max. Oper. Cur. in Amps				List Price	Net Price
			3000 kc	1000 kc	300 kc	100 kc		
.0001	4,000	533-30B	(20 Amps. at 60 mc.)		(3 Amps. at 4 mc.)		\$23.50	\$14.10
.0005	8,000	959-30B	8.5	6	3	1	35.25	21.15
.001	8,000	960-30B	10	8.5	4.5	1.5	32.85	19.71
.002	8,000	960-30B	11	11	7.5	2.5	38.00	22.80
.003	8,000	759-30B	12	14	10	5	40.85	24.51
.004	8,000	757-30B	12	14	10	6	41.35	24.81
.005	8,000	758-30B	13	15	11	7	48.60	29.16
.006	6,000	756-30B	15	15	11	7	48.60	29.16

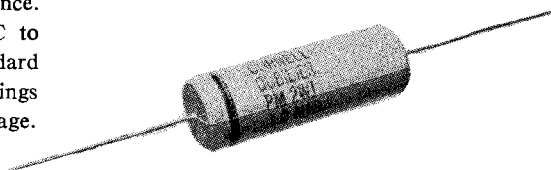
Cap. Mfd.	Test Volt Effective	Type	Max. Oper. Cur. in Amps				List Price	Net Price
			3000 kc	1000 kc	300 kc	100 kc		
.01	6,000	962-30B	16	20	15	8	\$58.35	\$35.01
.01	8,000	915-30B	17	21	15	9	68.35	41.01
.02	5,000	963-30B	18	22	18	12	68.25	41.01
.03	4,000	741-30B	18	23	20	13	81.65	48.99
.1	2,000	113-30B	18	25	22	12	53.35	32.01
.2	600	603-30B	18	28	23	15	39.25	23.55
.25	600	750-30B	18	28	23	15	44.60	26.76
.3	600	933-30B	18	28	23	15	48.10	28.86
1.0	600	898-30B	18	28	23	15	108.35	65.01

## MOLDED MYLAR\* TUBULAR

Class	Type
204 - 13	PM

The type PM utilizes an all MYLAR\* dielectric; has axial leads; and is molded in a low loss material which exhibits excellent moisture and humidity resistance. The case is wax-free and leakproof. Operating temperature range is -55C to 125C. Above 85C derate voltage by 10% at 100C and by 50% at 125C. Standard tolerance is ±10%. Listings are based on Parent Case Sizes and standard ratings (see page 2); check higher voltages if rating required is not shown at desired voltage.

\*MYLAR is a DuPont™.



Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>200V DCW</b>				
.022	PM 2S22	3/8 x 1 1/4	.25	.15
.047	PM 2S47	3/8 x 1 1/4	.25	.15
.05	PM 2S5	3/8 x 1 1/4	.25	.15
.1	PM 2P1	7/16 x 1 1/4	.35	.21
.15	PM 2P15	1/2 x 1 1/2	.35	.21
.22	PM 2P22	1/2 x 1 1/2	.40	.24
.25	PM 2P25	5/16 x 1 1/8	.40	.24
.47	PM 2P47	5/8 x 1 7/8	.60	.36
.50	PM 2P5	5/8 x 1 7/8	.60	.36
1.00	PM 2W1	3/4 x 2 1/4	1.05	.63

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>400V DCW</b>				
.01	PM 4S1	5/16 x 1	.25	.15
.012	PM 4S12	3/8 x 1 1/4	.25	.15
.015	PM 4S15	3/8 x 1 1/4	.25	.15
.018	PM 4S18	3/8 x 1 1/4	.30	.18
.022	PM 4S22	3/8 x 1 1/4	.30	.18
.025	PM 4S25	3/8 x 1 1/4	.30	.18

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>400V DCW (Continued)</b>				
.027	PM 4S27	3/8 x 1 1/4	.30	.18
.033	PM 4S33	7/16 x 1 1/4	.30	.18
.039	PM 4S39	7/16 x 1 1/4	.30	.18
.047	PM 4S47	7/16 x 1 1/4	.30	.18
.05	PM 4S5	7/16 x 1 1/4	.30	.18
.056	PM 4S56	1/2 x 1 1/2	.30	.18
.068	PM 4S68	1/2 x 1 1/2	.35	.21
.082	PM 4S82	1/2 x 1 1/2	.35	.21
.1	PM 4P1	1/2 x 1 1/2	.35	.21
.12	PM 4P12	1/2 x 1 1/2	.40	.24
.15	PM 4P15	5/16 x 1 1/8	.40	.24
.18	PM 4P18	5/16 x 1 1/8	.40	.24
.22	PM 4P22	5/8 x 1 7/8	.45	.27
.25	PM 4P25	5/8 x 1 7/8	.50	.30
.27	PM 4P27	5/8 x 1 7/8	.55	.33
.33	PM 4P33	11/16 x 1 13/16	.60	.36
.39	PM 4P39	11/16 x 1 13/16	.65	.39
.47	PM 4P47	3/4 x 2 1/4	.75	.45

(Continued on next page)



# Paper & Film Tubulars

## MOLDED MYLAR\* TUBULAR (Continued)

Type <b>PM</b>	Class <b>204 • 13</b>
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Cap. Mfd.	Type	Size (Inches) D x L	List Price	Net Price
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**400V DCW (Continued)**

.5	PM4P5	3/4 x 2 1/4	\$ .75	<b>\$.45</b>
.56	PM4P56	3/4 x 2 1/4	.80	<b>.48</b>
.68	PM4P68	1 x 2 1/8	.90	<b>.54</b>
.82	PM4P82	1 x 2 1/8	1.00	<b>.60</b>
1.00	PM4W1	1 x 2 1/8	1.25	<b>.75</b>

**600V DCW**

.001	PM6D1	5/16 x 1	.25	<b>.15</b>
.0012	PM6D12	5/16 x 1	.25	<b>.15</b>
.0015	PM6D15	5/16 x 1	.25	<b>.15</b>
.0018	PM6D18	5/16 x 1	.25	<b>.15</b>
.0022	PM6D22	5/16 x 1	.25	<b>.15</b>
.0025	PM6D25	5/16 x 1	.25	<b>.15</b>
.0027	PM6D27	5/16 x 1	.25	<b>.15</b>
.0033	PM6D33	5/16 x 1	.25	<b>.15</b>
.0039	PM6D39	5/16 x 1	.25	<b>.15</b>
.0047	PM6D47	5/16 x 1	.25	<b>.15</b>
.005	PM6D5	5/16 x 1	.25	<b>.15</b>
.0056	PM6D56	5/16 x 1	.25	<b>.15</b>
.0068	PM6D68	5/16 x 1	.30	<b>.18</b>
.0082	PM6D82	3/8 x 1 1/4	.30	<b>.18</b>
.01	PM6S1	3/8 x 1 1/4	.30	<b>.18</b>

Cap. Mfd.	Type	Size (Inches) D x L	List Price	Net Price
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**600V DCW (Continued)**

.012	PM6S12	3/8 x 1 1/4	\$ .30	<b>\$.18</b>
.015	PM6S15	3/8 x 1 1/4	.30	<b>.18</b>
.018	PM6S18	3/8 x 1 1/4	.30	<b>.18</b>
.022	PM6S22	7/16 x 1 1/4	.30	<b>.18</b>
.025	PM6S25	7/16 x 1 1/4	.30	<b>.18</b>
.027	PM6S27	7/16 x 1 1/4	.30	<b>.18</b>
.033	PM6S33	7/16 x 1 1/4	.35	<b>.21</b>
.039	PM6S39	7/16 x 1 1/4	.35	<b>.21</b>
.047	PM6S47	1/2 x 1 1/2	.40	<b>.24</b>
.05	PM6S5	1/2 x 1 1/2	.40	<b>.24</b>
.056	PM6S56	1/2 x 1 1/2	.40	<b>.24</b>
.068	PM6S68	1/2 x 1 1/2	.45	<b>.27</b>
.082	PM6S82	1/2 x 1 1/2	.45	<b>.27</b>
.1	PM6P1	5/16 x 1 1/8	.45	<b>.27</b>
.12	PM6P12	5/16 x 1 1/8	.45	<b>.27</b>
.15	PM6P15	5/8 x 1 7/8	.50	<b>.30</b>
.18	PM6P18	5/8 x 1 7/8	.60	<b>.36</b>
.22	PM6P22	5/8 x 1 7/8	.70	<b>.42</b>
.25	PM6P25	11/16 x 1 3/8	.75	<b>.45</b>
.27	PM6P27	11/16 x 1 3/8	.80	<b>.48</b>
.33	PM6P33	3/4 x 2 1/4	.90	<b>.54</b>
.39	PM6P39	3/4 x 2 1/4	1.00	<b>.60</b>
.47	PM6P47	3/4 x 2 1/4	1.25	<b>.75</b>
.5	PM6P5	3/4 x 2 1/4	1.25	<b>.75</b>
.56	PM6P56	1 x 2 1/8	1.30	<b>.78</b>

Type <b>PM</b>	Class <b>204 • 13</b>
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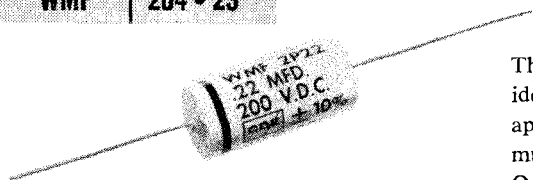
## MOLDED MYLAR\* CAPACITOR ASSORTMENT

The PM molded MYLAR (DuPont™) tubular assortment contains 95 pieces of the most popular by-pass and coupling capacitor ratings. All Mylar dielectric and molded construction add up to the highest quality unit available. Units are axial lead — 600 VDCW and ±10% tolerance. Assortment includes 10 each units rated: .001 mfd; .0022 mfd; .0047 mfd; .01 mfd; .022 mfd; .047 mfd; and .1 mfd. Also five each .0033 mfd; .0068 mfd; .027 mfd; .033 mfd; and .22 mfd.

LIST PRICE \$31.50

NET PRICE **\$18.90** (Cabinet Free)

Type <b>WMF</b>	Class <b>204 • 23</b>
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## WRAPPED MYLAR\* TUBULAR

The type WMF axial lead, all MYLAR (DuPont™) tubular capacitor is an ideal replacement for any tubular where space is limited and requirements of the application are demanding. The WMF is a MYLAR-wrapped unit insuring minimum size and maximum moisture and humidity resistance. Tolerance is ±10%. Operating temperature range is -55C to +125C. For temperature above 85C, derate voltage 10% at 100C, and 50% at 125C.

Cap. Mfd.	Type	Size (Inches) D x L	List Price	Net Price
<b>100V DCW</b>				
.001	WMF1D1	.156 x 1/2	\$ .35	<b>\$.21</b>
.0015	WMF1D15	.156 x 1/2	.35	<b>.21</b>
.0022	WMF1D22	.156 x 1/2	.35	<b>.21</b>
.0033	WMF1D33	.156 x 1/2	.35	<b>.21</b>
.0047	WMF1D47	.156 x 1/2	.35	<b>.21</b>

Cap. Mfd.	Type	Size (Inches) D x L	List Price	Net Price
<b>100V DCW (Continued)</b>				
.0068	WMF1D68	.175 x 1/2	\$ .35	<b>\$.21</b>
.01	WMF1S1	.200 x 1/2	.35	<b>.21</b>
.015	WMF1S15	.235 x 1/2	.35	<b>.21</b>
.022	WMF1S22	.275 x 3/8	.40	<b>.24</b>
.033	WMF1S33	.300 x 3/8	.40	<b>.24</b>

(Continued on next page)

## Paper &amp; Film Tubulars



## (Continued) WRAPPED MYLAR\* TUBULAR

Class	Type
204-23	WMF

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>100V DCW (Continued)</b>				
.047	WMF1S47	.265 x 3/4	\$.45	<b>\$.27</b>
.068	WMF1S68	.280 x 3/4	.45	<b>.27</b>
.1	WMF1P1	.290 x 7/8	.60	<b>.36</b>
.15	WMF1P15	.335 x 7/8	.60	<b>.36</b>
.22	WMF1P22	.385 x 1	.65	<b>.39</b>
.33	WMF1P33	.415 x 1 1/8	.75	<b>.45</b>
.47	WMF1P47	.475 x 1 1/4	.85	<b>.51</b>
.68	WMF1P68	.570 x 1 1/4	.95	<b>.57</b>
1.0	WMF1W1	.625 x 1 1/2	1.45	<b>.87</b>
1.25	WMF1W1P25	.690 x 1 1/2	1.75	<b>1.05</b>
1.5	WMF1W1P5	.770 x 1 3/4	2.05	<b>1.23</b>
2.0	WMF1W2	.955 x 1 3/4	2.50	<b>1.50</b>
<b>200V DCW</b>				
.001	WMF2D1	.156 x 1/2	.35	<b>.21</b>
.0015	WMF2D15	.156 x 1/2	.35	<b>.21</b>
.0022	WMF2D22	.156 x 1/2	.35	<b>.21</b>
.0033	WMF2D33	.160 x 1/2	.35	<b>.21</b>
.0047	WMF2D47	.170 x 1/2	.35	<b>.21</b>
.0068	WMF2D68	.200 x 1/2	.35	<b>.21</b>
.01	WMF2S1	.230 x 1/2	.35	<b>.21</b>
.015	WMF2S15	.290 x 1/2	.35	<b>.21</b>
.022	WMF2S22	.275 x 5/8	.40	<b>.24</b>
.033	WMF2S33	.270 x 3/4	.40	<b>.24</b>
.047	WMF2S47	.320 x 3/4	.45	<b>.27</b>
.068	WMF2S68	.350 x 3/4	.45	<b>.27</b>
.1	WMF2P1	.410 x 7/8	.60	<b>.36</b>
.15	WMF2P15	.500 x 7/8	.60	<b>.36</b>
.22	WMF2P22	.500 x 1 1/8	.65	<b>.39</b>
.33	WMF2P33	.550 x 1 1/8	.75	<b>.45</b>
.47	WMF2P47	.600 x 1 1/4	.85	<b>.51</b>
.68	WMF2P68	.650 x 1 5/8	.95	<b>.57</b>
1.0	WMF2W1	.750 x 1 3/4	1.45	<b>.87</b>
1.25	WMF2W1P25	.825 x 1 3/4	1.75	<b>1.05</b>
1.5	WMF2W1P5	.900 x 1 3/4	2.05	<b>1.23</b>
2.0	WMF2W2	.980 x 1 7/8	2.50	<b>1.50</b>
<b>400V DCW</b>				
.001	WMF4D1	.156 x 5/8	.35	<b>.21</b>
.0015	WMF4D15	.156 x 5/8	.35	<b>.21</b>
.0022	WMF4D22	.156 x 5/8	.35	<b>.21</b>
.0033	WMF4D33	.190 x 5/8	.40	<b>.24</b>

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>400V DCW (Continued)</b>				
.0047	WMF4D47	.200 x 5/8	\$.40	<b>\$.24</b>
.0068	WMF4D68	.250 x 5/8	.40	<b>.24</b>
.01	WMF4S1	.300 x 5/8	.45	<b>.27</b>
.015	WMF4S15	.360 x 5/8	.45	<b>.27</b>
.022	WMF4S22	.320 x 3/4	.45	<b>.27</b>
.033	WMF4S33	.350 x 7/8	.45	<b>.27</b>
.047	WMF4S47	.400 x 7/8	.50	<b>.30</b>
.068	WMF4S68	.390 x 1	.55	<b>.33</b>
.1	WMF4P1	.465 x 1	.55	<b>.33</b>
.15	WMF4P15	.515 x 1 1/4	.60	<b>.36</b>
.22	WMF4P22	.565 x 1 3/8	.70	<b>.42</b>
.33	WMF4P33	.600 x 1 5/8	1.10	<b>.66</b>
.47	WMF4P47	.700 x 1 5/8	1.30	<b>.78</b>
.68	WMF4P68	.790 x 1 3/4	1.60	<b>.96</b>
1.0	WMF4W1	.875 x 2	2.00	<b>1.20</b>
1.25	WMF4W1P25	.950 x 2	2.30	<b>1.38</b>
1.5	WMF4W1P5	.975 x 2 1/4	2.60	<b>1.56</b>
2.0	WMF4W2	1.250 x 2 1/4	3.40	<b>2.04</b>
<b>600V DCW</b>				
.001	WMF6D1	.170 x 3/4	.40	<b>.24</b>
.0015	WMF6D15	.170 x 3/4	.40	<b>.24</b>
.0022	WMF6D22	.187 x 3/4	.40	<b>.24</b>
.0033	WMF6D33	.203 x 3/4	.40	<b>.24</b>
.0047	WMF6D47	.234 x 3/4	.45	<b>.27</b>
.0068	WMF6D68	.265 x 3/4	.45	<b>.27</b>
.01	WMF6S1	.290 x 3/4	.50	<b>.30</b>
.015	WMF6S15	.312 x 7/8	.50	<b>.30</b>
.022	WMF6S22	.325 x 7/8	.50	<b>.30</b>
.033	WMF6S33	.350 x 1	.50	<b>.30</b>
.047	WMF6S47	.415 x 1	.55	<b>.33</b>
.068	WMF6S68	.500 x 1	.60	<b>.36</b>
.1	WMF6P1	.520 x 1 3/8	.70	<b>.42</b>
.15	WMF6P15	.625 x 1 3/8	.75	<b>.45</b>
.22	WMF6P22	.660 x 1 5/8	.85	<b>.51</b>
.33	WMF6P33	.687 x 2	1.50	<b>.90</b>
.47	WMF6P47	.855 x 2	1.90	<b>1.14</b>
.68	WMF6P68	.970 x 2	2.55	<b>1.53</b>
1.0	WMF6W1	1.165 x 2 1/2	4.25	<b>2.55</b>
1.25	WMF6W1P25	1.340 x 2 1/2	4.80	<b>2.88</b>
1.5	WMF6W1P5	1.275 x 3	5.80	<b>3.48</b>
2.0	WMF6W2	1.460 x 3	7.30	<b>4.38</b>

## WRAPPED MYLAR\* CAPACITOR ASSORTMENTS

Class	Type
204-23	WMF

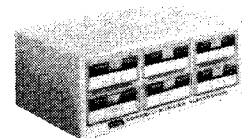
## 100V ASSORTMENT

The 100 volt WMF assortment contains 5 each of the 11 most popular values of film-wrapped tubular capacitors. The film-wrapped unit insures minimum size compatible with demanding requirements. Units featured in the assortment include 5 each of WMF's rated .001 mfd; .0022 mfd; .0047 mfd; .01 mfd; .015 mfd; .022 mfd; .033 mfd; .047 mfd; .1 mfd; .22 mfd; and .47 mfd. All units are rated 100 VDCW. List Price \$22.50 Net Price **\$15.30** (Cabinet Free)

## 600V ASSORTMENT

The 600 volt WMF assortment also contains 55 pieces of the most popular replacement units. The units are an ultra-compact capacitor with a tough film wrap and non-porous end seals. The assortment contains 5 each of 600 VDCW WMF's rated .001 mfd; .0022 mfd; .0047 mfd; .01 mfd; .015 mfd; .022 mfd; .047 mfd; .1 mfd; .22 mfd; .33 mfd; and .47 mfd.

List Price \$41.25 Net Price **\$24.75** (Cabinet Free)



Type	Class
<b>PKM</b>	<b>204 - 33</b>



## MOLDED PAPER-MYLAR\* TUBULAR

The type PKM is a molded tubular capacitor of the highest quality. It features a high dielectric strength Kraft paper coupled with a MYLAR (DuPont™) dielectric for the highest dielectric strength possible. The axial lead unit is molded in a high impact resistant case which is also highly moisture and humidity resistant. Ratings listed below are based on EIA Standard Ratings and on Parent Case Sizes (see page 2). Check the higher voltages if the rating listed is not available in the voltage desired. Also check the nearest standard rating. Tolerance is  $\pm 10\%$  and operating temperature range to 125C without derating.

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>400V DCW</b>				
.0039	PKM4D39	$\frac{5}{16} \times 1$	\$.30	\$.17
.0047	PKM4D47	$\frac{5}{16} \times 1$	.30	.17
.0056	PKM4D56	$\frac{5}{16} \times 1$	.30	.17
.0068	PKM4D68	$\frac{5}{16} \times 1$	.30	.17
.0082	PKM4D82	$\frac{5}{16} \times 1$	.30	.17
.01	PKM4S1	$\frac{5}{16} \times 1$	.25	.15
.012	PKM4S12	$\frac{5}{16} \times 1$	.25	.15
.015	PKM4S15	$\frac{3}{8} \times 1\frac{1}{4}$	.25	.15
.018	PKM4S18	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.022	PKM4S22	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.027	PKM4S27	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.033	PKM4S33	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.039	PKM4S39	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.047	PKM4S47	$\frac{7}{16} \times 1\frac{1}{4}$	.30	.18
.056	PKM4S56	$\frac{7}{16} \times 1\frac{1}{4}$	.30	.18
.068	PKM4S68	$\frac{7}{16} \times 1\frac{1}{4}$	.35	.21
.082	PKM4S82	$\frac{1}{2} \times 1\frac{1}{2}$	.35	.21
.1	PKM4P1	$\frac{1}{2} \times 1\frac{1}{2}$	.35	.21
.12	PKM4P12	$\frac{1}{2} \times 1\frac{1}{2}$	.40	.24
.15	PKM4P15	$\frac{1}{2} \times 1\frac{1}{2}$	.40	.24
.18	PKM4P18	$\frac{9}{16} \times 1\frac{1}{8}$	.40	.24
.22	PKM4P22	$\frac{5}{8} \times 1\frac{7}{8}$	.45	.27
.27	PKM4P27	$\frac{5}{8} \times 1\frac{7}{8}$	.55	.33
.33	PKM4P33	$1\frac{1}{16} \times 1\frac{1}{8}$	.60	.36
.39	PKM4P39	$1\frac{1}{16} \times 1\frac{1}{8}$	.65	.39
.47	PKM4P47	$1\frac{1}{16} \times 1\frac{1}{8}$	.75	.45
.56	PKM4P56	$\frac{3}{4} \times 2\frac{1}{4}$	.80	.48
.68	PKM4P68	$\frac{3}{4} \times 2\frac{1}{4}$	.90	.54
.82	PKM4P82	$1 \times 2\frac{1}{2}$	1.00	.60
1.0	PKM4W1	$1 \times 2\frac{1}{8}$	1.25	.75

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>600V DCW</b>				
.001	PKM6D1	$\frac{5}{16} \times 1$	.25	.15
.0012	PKM6D12	$\frac{5}{16} \times 1$	.25	.15
.0015	PKM6D15	$\frac{5}{16} \times 1$	.25	.15
.0018	PKM6D18	$\frac{5}{16} \times 1$	.25	.15
.0022	PKM6D22	$\frac{5}{16} \times 1$	.25	.15
.0027	PKM6D27	$\frac{5}{16} \times 1$	.25	.15
.0033	PKM6D33	$\frac{5}{16} \times 1$	.25	.15
.0039	PKM6D39	$\frac{3}{8} \times 1\frac{1}{4}$	.25	.15
.0047	PKM6D47	$\frac{3}{8} \times 1\frac{1}{4}$	.25	.15
.0056	PKM6D56	$\frac{3}{8} \times 1\frac{1}{4}$	.25	.15
.0068	PKM6D68	$\frac{3}{8} \times 1\frac{1}{4}$	.25	.15
.0082	PKM6D82	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.01	PKM6S1	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.012	PKM6S12	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.015	PKM6S15	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>600V DCW (Continued)</b>				
.018	PKM6S18	$\frac{3}{8} \times 1\frac{1}{4}$	\$.30	\$.18
.022	PKM6S22	$\frac{3}{8} \times 1\frac{1}{4}$	.30	.18
.027	PKM6S27	$\frac{7}{16} \times 1\frac{1}{4}$	.30	.18
.033	PKM6S33	$\frac{7}{16} \times 1\frac{1}{4}$	.35	.21
.039	PKM6S39	$\frac{1}{2} \times 1\frac{1}{2}$	.35	.21
.047	PKM6S47	$\frac{1}{2} \times 1\frac{1}{2}$	.40	.24
.056	PKM6S56	$\frac{1}{2} \times 1\frac{1}{2}$	.40	.24
.068	PKM6S68	$\frac{1}{2} \times 1\frac{1}{2}$	.45	.27
.082	PKM6S82	$\frac{7}{16} \times 1\frac{1}{8}$	.45	.27
.1	PKM6P1	$\frac{9}{16} \times 1\frac{1}{8}$	.45	.27
.12	PKM6P12	$\frac{3}{8} \times 1\frac{7}{8}$	.45	.27
.15	PKM6P15	$\frac{5}{8} \times 1\frac{7}{8}$	.50	.30
.18	PKM6P18	$1\frac{1}{16} \times 1\frac{1}{8}$	.60	.36
.22	PKM6P22	$1\frac{1}{16} \times 1\frac{1}{8}$	.70	.42
.27	PKM6P27	$1\frac{1}{16} \times 1\frac{1}{8}$	.80	.48
.33	PKM6P33	$\frac{3}{4} \times 2\frac{1}{4}$	.90	.54
.39	PKM6P39	$\frac{3}{4} \times 2\frac{1}{4}$	1.00	.60
.47	PKM6P47	$1 \times 2\frac{1}{8}$	1.25	.75
.56	PKM6P56	$1 \times 2\frac{1}{8}$	1.30	.78
.68	PKM6P68	$1 \times 2\frac{1}{8}$	1.45	.86

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>1000V DCW</b>				
.001	PKM10D1	$\frac{5}{16} \times 1$	.50	.30
.005	PKM10D5	$\frac{3}{8} \times 1\frac{1}{4}$	.50	.30
.0068	PKM10D68	$\frac{7}{16} \times 1\frac{1}{4}$	.50	.30
.01	PKM10S1	$\frac{7}{16} \times 1\frac{1}{4}$	.50	.30
.015	PKM10S15	$\frac{1}{2} \times 1\frac{1}{2}$	.50	.30
.022	PKM10S22	$\frac{1}{2} \times 1\frac{1}{2}$	.50	.30
.033	PKM10S33	$\frac{1}{2} \times 1\frac{1}{2}$	.50	.30
.047	PKM10S47	$\frac{9}{16} \times 1\frac{1}{8}$	.60	.36
.05	PKM10S5	$\frac{9}{16} \times 1\frac{1}{8}$	.60	.36
.068	PKM10S68	$\frac{5}{8} \times 1\frac{7}{8}$	.70	.42
.1	PKM10P1	$1\frac{1}{16} \times 1\frac{1}{8}$	.75	.45

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>1600V DCW</b>				
.001	PKM16D1	$\frac{3}{8} \times 1\frac{1}{4}$	.65	.39
.0015	PKM16D15	$\frac{3}{8} \times 1\frac{1}{4}$	.65	.39
.0022	PKM16D22	$\frac{3}{8} \times 1\frac{1}{4}$	.65	.39
.0033	PKM16D33	$\frac{3}{8} \times 1\frac{1}{4}$	.65	.39
.0047	PKM16D47	$\frac{3}{8} \times 1\frac{1}{4}$	.65	.39
.005	PKM16D5	$\frac{3}{8} \times 1\frac{1}{4}$	.65	.39
.0068	PKM16D68	$\frac{7}{16} \times 1\frac{1}{4}$	.65	.39
.0082	PKM16D82	$\frac{7}{16} \times 1\frac{1}{4}$	.65	.39
.01	PKM16S1	$\frac{1}{2} \times 1\frac{1}{2}$	.70	.42
.015	PKM16S15	$\frac{1}{2} \times 1\frac{1}{2}$	.70	.42
.022	PKM16S22	$\frac{5}{8} \times 1\frac{7}{8}$	.70	.42
.033	PKM16S33	$\frac{5}{8} \times 1\frac{7}{8}$	.70	.42
.047	PKM16S47	$\frac{9}{8} \times 1\frac{7}{8}$	.90	.54
.05	PKM16S5	$\frac{9}{8} \times 1\frac{7}{8}$	.90	.54

\* DuPont™ TM

# Paper & Film Tubulars



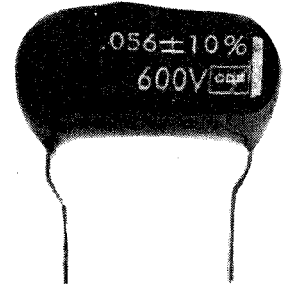
## DIPPED PAPER-MYLAR\* TUBULAR CAPACITORS

The radial lead DPMS capacitor is also suitable for point to point assembly when desired. The multiple dipped unit has a dielectric of high strength Kraft paper and MYLAR (DuPont™). Ratings listed are based on Standard Ratings and on Parent Case Sizes (see page 2). Always check the nearest standard rating and next highest voltage ratings to obtain maximum value. Tolerance is  $\pm 10\%$  and maximum temp., 125C at full rated voltage.

### LEAD SPACING

Case Length	Lead Spacing	Case Length	Lead Spacing
.690	.250	1.180	.719
.855	.438	1.300	.844
.870	.438	1.560	1.094
1.150	.719	1.600	1.094
1.160	.719		

Class	Type
204 • 37	DPMS



Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>200V DCW</b>				
.022	DPMS 2S22	.350 x .855	\$.25	\$.15
.047	DPMS 2S47	.450 x .855	.30	.18
.10	DPMS 2P1	.470 x 1.180	.35	.21
.15	DPMS 2P15	.540 x 1.180	.40	.24
.22	DPMS 2P22	.590 x 1.300	.45	.27
.47	DPMS 2P47	.730 x 1.600	.60	.36
<b>400V DCW</b>				
.01	DPMS 4S1	.390 x .690	.25	.15
.015	DPMS 4S15	.430 x .690	.25	.15
.02	DPMS 4S2	.390 x .855	.30	.18
.022	DPMS 4S22	.400 x .855	.30	.18
.033	DPMS 4S33	.440 x .855	.30	.18
.047	DPMS 4S47	.415 x 1.150	.35	.21
.05	DPMS 4S5	.415 x 1.150	.35	.21
.068	DPMS 4S68	.440 x 1.180	.40	.24
.1	DPMS 4P1	.520 x 1.180	.40	.24
.15	DPMS 4P15	.560 x 1.300	.50	.30
.22	DPMS 4P22	.620 x 1.560	.60	.36
.25	DPMS 4P25	.650 x 1.560	.60	.36
<b>600V DCW</b>				
.001	DPMS 6D1	.340 x .690	.25	.15
.0012	DPMS 6D12	.340 x .690	.25	.15
.0015	DPMS 6D15	.340 x .690	.25	.15
.002	DPMS 6D2	.340 x .690	.25	.15
.0022	DPMS 6D22	.340 x .690	.25	.15
.0025	DPMS 6D25	.350 x .690	.25	.15
.0027	DPMS 6D27	.370 x .690	.25	.15
.0033	DPMS 6D33	.370 x .690	.25	.15
.0039	DPMS 6D39	.370 x .690	.25	.15
.0047	DPMS 6D47	.400 x .690	.25	.15
.005	DPMS 6D5	.400 x .690	.25	.15
.0056	DPMS 6D56	.415 x .690	.25	.15
.0068	DPMS 6D68	.430 x .690	.30	.18
.0075	DPMS 6D75	.370 x .870	.30	.18
.0082	DPMS 6D82	.370 x .870	.30	.18

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
<b>600V DCW (Continued)</b>				
.01	DPMS 6S1	.390 x .870	\$.30	\$.18
.012	DPMS 6S12	.400 x .870	.30	.18
.015	DPMS 6S15	.415 x .870	.30	.18
.02	DPMS 6S2	.445 x .870	.30	.18
.022	DPMS 6S22	.470 x .870	.30	.18
.025	DPMS 6S25	.400 x 1.150	.35	.21
.027	DPMS 6S27	.415 x 1.150	.35	.21
.03	DPMS 6S3	.415 x 1.150	.35	.21
.033	DPMS 6S33	.430 x 1.150	.35	.21
.039	DPMS 6S39	.470 x 1.150	.35	.21
.047	DPMS 6S47	.490 x 1.150	.35	.21
.05	DPMS 6S5	.490 x 1.150	.40	.24
.056	DPMS 6S56	.520 x 1.180	.40	.24
.068	DPMS 6S68	.540 x 1.300	.45	.27
.075	DPMS 6S75	.570 x 1.300	.45	.27
.082	DPMS 6S82	.590 x 1.300	.45	.27
.1	DPMS 6P1	.640 x 1.300	.45	.27
.15	DPMS 6P15	.650 x 1.560	.55	.33
.22	DPMS 6P22	.750 x 1.560	.70	.42
.25	DPMS 6P25	.830 x 1.560	.70	.42
<b>1600V DCW</b>				
.001	DPMS 16D1	.350 x .870	.35	.21
.0015	DPMS 16D15	.375 x .870	.35	.21
.0018	DPMS 16D18	.400 x .870	.35	.21
.0022	DPMS 16D22	.420 x .870	.35	.21
.0033	DPMS 16D33	.480 x .870	.40	.24
.0047	DPMS 16D47	.540 x .870	.40	.24
.0068	DPMS 16D68	.460 x 1.180	.45	.27
.0075	DPMS 16D75	.495 x 1.180	.45	.27
.01	DPMS 16S1	.525 x 1.180	.50	.30
.015	DPMS 16S15	.560 x 1.300	.55	.33
.022	DPMS 16S22	.585 x 1.600	.70	.42
.033	DPMS 16S33	.695 x 1.600	.80	.48
.04	DPMS 16S4	.735 x 1.600	.80	.48

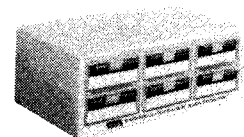
## DIPPED PAPER-MYLAR\* ASSORTMENT

The DPMS capacitor assortment contains 95 of the most popular paper-MYLAR (DuPont™) units currently used in color TV and other demanding applications. All units are rated 600 VDCW with a tolerance of  $\pm 10\%$  and a maximum temperature of 125C at full rated voltage. The assortment includes 10 each of DPMS units rated .001 mfd; .0022 mfd; .0047 mfd; .01 mfd; .022 mfd; .047 mfd; and .1 mfd. It also includes 5 each of DPMS units rated .0033 mfd; .0068 mfd; .027 mfd; .033 mfd; and .22 mfd.

List Price \$31.25

Net Price \$18.75 (Cabinet Free)

Class	Type
204 • 37	DPMS



\* DuPont TM

# Metallized & AC Capacitors

Type	Class
MPY	207 • 04



The type MPY is a high quality metallized paper dielectric capacitor enclosed in CDE's Tri-Clad case... cardboard backed with film and aluminum foil. The case insures maximum moisture and humidity resistance and the construction, minimum size. The MPY is an ideal replacement for metal or non-metal case tubular metallized capacitors. The wax free, non-leaking capacitor has a maximum operating temperature of 125C without derating. Standard tolerance is  $\pm 20\%$ .

## METALLIZED PAPER CAPACITORS

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
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### 200V DCW

.022	MPY2S22	1/4 x 5/8	\$.75	<b>\$.45</b>
.033	MPY2S33	1/4 x 5/8	.75	<b>.45</b>
.047	MPY2S47	1/4 x 5/8	.75	<b>.45</b>
.068	MPY2S68	5/16 x 5/8	.80	<b>.48</b>
.1	MPY2P1	3/8 x 5/8	.85	<b>.51</b>
.15	MPY2P15	3/8 x 5/8	.95	<b>.57</b>
.22	MPY2P22	15/32 x 5/8	1.05	<b>.63</b>
.33	MPY2P33	3/8 x 1 1/8	1.15	<b>.69</b>
.47	MPY2P47	7/16 x 1 1/8	1.25	<b>.75</b>
.68	MPY2P68	15/32 x 1 1/8	1.50	<b>.90</b>
1.0	MPY2W1	2/16 x 1 1/8	1.80	<b>1.08</b>
1.5	MPY2W1P5	9/16 x 1 1/8	2.10	<b>1.26</b>
2.0	MPY2W2	5/8 x 1 1/8	2.45	<b>1.47</b>

### 400V DCW

.015	MPY4S15	1/4 x 5/8	.75	<b>.45</b>
.022	MPY4S22	5/16 x 5/8	.75	<b>.45</b>
.033	MPY4S33	3/8 x 5/8	.75	<b>.45</b>
.047	MPY4S47	7/16 x 5/8	.80	<b>.48</b>
.068	MPY4S68	15/32 x 5/8	.85	<b>.51</b>
.1	MPY4P1	3/8 x 1 1/8	.95	<b>.57</b>
.15	MPY4P15	7/16 x 1 1/8	1.05	<b>.63</b>
.22	MPY4P22	1/2 x 1 1/8	1.20	<b>.72</b>
.33	MPY4P33	5/8 x 1 1/8	1.40	<b>.84</b>

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
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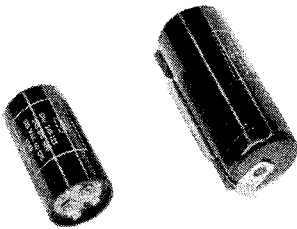
### 400V DCW (Continued)

.47	MPY4P47	5/8 x 1 1/8	\$1.60	<b>\$.96</b>
.68	MPY4P68	5/8 x 1 1/8	1.90	<b>1.14</b>
1.0	MPY4W1	1 1/16 x 1 1/8	2.20	<b>1.32</b>
1.5	MPY4W1P5	23/32 x 2 3/8	2.55	<b>1.53</b>
2.0	MPY4W2	1 1/8 x 2 3/8	2.90	<b>1.74</b>

### 600V DCW

.01	MPY6S1	1/4 x 5/8	.75	<b>.45</b>
.015	MPY6S15	5/16 x 5/8	.80	<b>.48</b>
.022	MPY6S22	3/8 x 5/8	.80	<b>.48</b>
.033	MPY6S33	3/8 x 5/8	.85	<b>.51</b>
.047	MPY6S47	15/32 x 5/8	.90	<b>.54</b>
.068	MPY6S68	3/8 x 1 1/8	.95	<b>.57</b>
.1	MPY6P1	3/8 x 1 1/8	1.00	<b>.60</b>
.15	MPY6P15	15/32 x 1 1/8	1.25	<b>.75</b>
.22	MPY6P22	7/16 x 1 1/8	1.35	<b>.81</b>
.33	MPY6P33	5/8 x 1 1/8	1.75	<b>1.05</b>
.47	MPY6P47	5/8 x 1 1/8	1.90	<b>1.14</b>
.68	MPY6P68	5/8 x 1 1/8	2.10	<b>1.26</b>
1.0	MPY6W1	23/32 x 1 1/8	2.40	<b>1.44</b>
1.5	MPY6W1P5	1 1/16 x 2 3/8	3.00	<b>1.80</b>
2.0	MPY6W2	23/32 x 2 3/8	3.50	<b>2.10</b>

Type	Class
ETW	209 • 01



## AC ELECTROLYTIC (MOTOR START) CAPACITORS

Although not designed for electronic applications, these units have been included at the request of many service technicians who also service major appliances and air conditioners. The type ETW is widely used in original equipment and as replacements in motor starting applications. The AC voltage rating is an intermittent rating based on a duty cycle not exceeding twenty 3 second periods per hour. Maximum operating temperature at the recommended duty cycle is 65C. Operation to 85C is permissible at reduced duty cycle or voltage. The ETW is a plastic cased unit with 3 way terminals. End caps and brackets are available as accessories.

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
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### 110V 50-60 cps.

72-88	ETW 72-110	1 1/16 x 2 3/4	\$2.30	<b>\$1.38</b>
88-106	ETW 88-110	1 1/16 x 2 3/4	2.60	<b>1.56</b>
107-129	ETW107-110	1 1/16 x 2 3/4	2.85	<b>1.72</b>
130-156	ETW130-110	1 1/16 x 2 3/4	2.95	<b>1.78</b>
145-162	ETW145-110	1 1/16 x 2 3/4	3.20	<b>1.92</b>
161-193	ETW161-110	1 1/16 x 3 3/8	3.25	<b>1.96</b>
189-227	ETW189-110	1 1/16 x 3 3/8	3.75	<b>2.26</b>
243-270	ETW243-110	1 1/16 x 3 3/8	4.70	<b>2.82</b>
270-324	ETW270-110	1 1/16 x 3 3/8	4.75	<b>2.86</b>
324-360	ETW324-110	1 1/16 x 3 3/8	5.40	<b>3.24</b>

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
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### 110V 50-60 cps. (Continued)

340-408	ETW340-110	1 1/16 x 3 3/8	\$5.55	<b>\$3.34</b>
400-480	ETW400-110	1 1/16 x 3 3/8	6.05	<b>3.64</b>
460-540	ETW460-110	1 1/16 x 4 3/8	7.60	<b>4.56</b>

### 125V 50-60 cps.

72-88	ETW 72-125	1 1/16 x 2 3/4	2.60	<b>1.56</b>
88-106	ETW 88-125	1 1/16 x 2 3/4	2.75	<b>1.66</b>
124-138	ETW124-125	1 1/16 x 2 3/4	3.25	<b>1.96</b>
145-162	ETW145-125	1 1/16 x 2 3/4	3.65	<b>2.20</b>
189-227	ETW189-125	1 1/16 x 3 3/8	4.30	<b>2.58</b>

(Continued on next page)



# AC Capacitors

## (Continued) AC ELECTROLYTIC (MOTOR START)

Class	Type
209 • 01	ETW

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
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### 125V 50-60 cps. (Continued)

243-270	ETW243-125	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	\$5.20	\$3.12
270-324	ETW270-125	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	5.40	3.24
340-408	ETW340-125	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	6.50	3.90
378-420	ETW378-125	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	6.75	4.06
400-480	ETW400-125	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	6.85	4.12
540-600	ETW540-125	1 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	8.15	4.90
590-700	ETW590-125	1 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	8.55	5.13

### 220V 50-60 cps.

25-30	ETW 25-220	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	4.60	2.76
43-53	ETW 43-220	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	5.55	3.33
64-77	ETW 64-220	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	6.75	4.05
88-108	ETW 88-220	1 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	7.65	4.59

Cap. Mfd.	Type	Size (Inches D x L)	List Price	Net Price
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### 220V 50-60 cps. (Continued)

108-130	ETW108-220	1 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	\$7.75	\$4.65
130-156	ETW130-220	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	8.55	5.13
145-175	ETW145-220	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	10.00	6.00
161-193	ETW161-220	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	10.90	6.54
189-227	ETW189-220	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	12.75	7.63

### 330V 50-60 cps.

25-30	ETW 25-330	1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	5.10	3.06
72-88	ETW 72-330	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	8.15	4.89
88-108	ETW 88-330	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	10.25	6.15
108-130	ETW108-330	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	12.50	7.50
124-149	ETW124-330	2 <sup>1</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>8</sub>	13.90	8.34

## ACCESSORIES

### ETW END CAPS

Part No.	Case Dia. (Inches)	List Price	Net Price
30066	1 <sup>1</sup> / <sub>16</sub>	\$.10	\$.06
34618-3	1 <sup>1</sup> / <sub>16</sub>	.15	.09
34618-2	2 <sup>1</sup> / <sub>16</sub>	.17	.10
34618-4	2 <sup>1</sup> / <sub>16</sub>	.37	.22

### MOUNTING BRACKETS FOR ETW WITH END CAPS

Part No.	Length (Inches)	List Price	Net Price
34946-2	2 <sup>3</sup> / <sub>4</sub>	\$.20	\$.12
34946	3 <sup>3</sup> / <sub>8</sub>	.25	.15
34946-1	4 <sup>3</sup> / <sub>8</sub>	.25	.15

## AC OIL (MOTOR RUN) CAPACITORS

Class	Type
209 • 50	KB, KK, KN, KT, KV

These AC capacitors for motor run applications are also widely used in appliances and air conditioners. They are included for those service technicians also servicing these items. Units are oval construction except KNL is rectangular. Units feature

double blade, quick connect terminals and cup insulators. Maximum operating temperatures is 70C. Wrap-around mounting brackets and terminal boots are available as accessories.

Cap. Mfd.	Type	Size (Inches L x W x Ht.)	List Price	Net Price
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### 236 VOLTS A.C.

2.0	KKA23P205Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	\$5.20	\$2.40
3.0	KKA23P305Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	5.35	2.50
4.0	KKA23P405Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	6.00	2.61
5.0	KKA23P505Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	7.00	2.90
6.0	KKA23P605Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>4</sub>	8.00	3.52
7.5	KKA23P755Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 3 <sup>1</sup> / <sub>8</sub>	10.00	4.70
10.0	KVL23P106Q	2 <sup>3</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>4</sub>	13.00	5.70
15.0	KVL23P156Q	2 <sup>3</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>8</sub>	14.70	6.62
20.0	KTL23P206Q	2 <sup>2</sup> / <sub>32</sub> x 1 <sup>2</sup> / <sub>32</sub> x 4 <sup>1</sup> / <sub>4</sub>	21.40	9.11
25.0	KTL23P256Q	2 <sup>2</sup> / <sub>32</sub> x 1 <sup>2</sup> / <sub>32</sub> x 5 <sup>1</sup> / <sub>4</sub>	25.75	11.29
30.0	KTL23P306Q	2 <sup>2</sup> / <sub>32</sub> x 1 <sup>2</sup> / <sub>32</sub> x 6 <sup>1</sup> / <sub>4</sub>	27.40	13.04
35.0	KBL23P356Q	3 <sup>1</sup> / <sub>32</sub> x 1 <sup>1</sup> / <sub>32</sub> x 5 <sup>3</sup> / <sub>4</sub>	36.50	13.62

### 370 VOLTS A.C.

2.0	KKA37P205Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	5.45	2.50
3.0	KKA37P305Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	5.55	2.53
4.0	KKA37P405Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	6.40	2.68
5.0	KKL37P505Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>4</sub>	8.60	3.20
6.0	KKL37P605Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	9.70	3.82
7.5	KKL37P755Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>4</sub>	12.75	4.70
7.5	KVL37P755Q	2 <sup>3</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>2</sub>	12.75	4.70
10.0	KTL37P106Q	2 <sup>2</sup> / <sub>32</sub> x 1 <sup>2</sup> / <sub>32</sub> x 3 <sup>1</sup> / <sub>2</sub>	13.70	6.13
15.0	KTL37P156Q	2 <sup>2</sup> / <sub>32</sub> x 1 <sup>2</sup> / <sub>32</sub> x 4 <sup>3</sup> / <sub>4</sub>	14.70	7.01

\* Rectangular construction. All others oval construction.

Cap. Mfd.	Type	Size (Inches L x W x Ht.)	List Price	Net Price
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### 370 VOLTS A.C. (Continued)

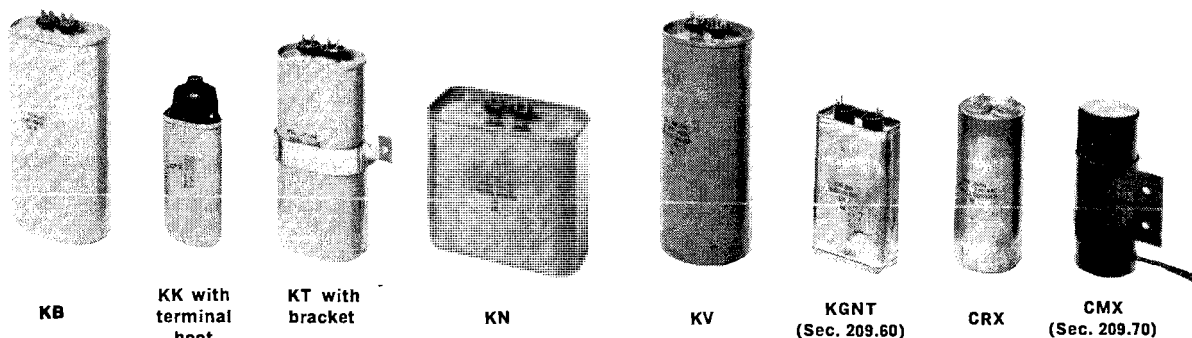
20.0	KTL37P206Q	2 <sup>2</sup> / <sub>32</sub> x 1 <sup>2</sup> / <sub>32</sub> x 5 <sup>3</sup> / <sub>4</sub>	\$21.70	\$10.02
25.0	KBL37P256Q	3 <sup>1</sup> / <sub>32</sub> x 1 <sup>1</sup> / <sub>32</sub> x 5 <sup>3</sup> / <sub>4</sub>	26.50	12.23
30.0	KBL37P306Q	3 <sup>1</sup> / <sub>32</sub> x 1 <sup>1</sup> / <sub>32</sub> x 6 <sup>3</sup> / <sub>4</sub>	29.40	13.98
40.0	*KNL37P406Q	4 <sup>1</sup> / <sub>16</sub> x 2 <sup>7</sup> / <sub>8</sub> x 5 <sup>3</sup> / <sub>4</sub>	47.60	21.62
50.0	*KNL37P506Q	4 <sup>1</sup> / <sub>16</sub> x 2 <sup>7</sup> / <sub>8</sub> x 6 <sup>1</sup> / <sub>4</sub>	55.75	28.04

### 440 VOLTS A.C.

2.0	KKA44P205Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	7.10	3.34
3.0	KKA44P305Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	7.50	3.53
4.0	KKA44P405Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 3 <sup>1</sup> / <sub>8</sub>	10.25	3.71
5.0	KKA44P505Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>8</sub>	10.10	3.86
10.0	KTL44P106Q	2 <sup>2</sup> / <sub>32</sub> x 1 <sup>2</sup> / <sub>32</sub> x 4 <sup>1</sup> / <sub>4</sub>	14.40	6.99
20.0	KBL44P206Q	3 <sup>1</sup> / <sub>32</sub> x 1 <sup>1</sup> / <sub>32</sub> x 6 <sup>1</sup> / <sub>4</sub>	24.35	11.74
30.0	*KNL44P306Q	4 <sup>1</sup> / <sub>16</sub> x 2 <sup>7</sup> / <sub>8</sub> x 5 <sup>3</sup> / <sub>4</sub>	42.05	17.34

### 660 VOLTS A.C.

1.0	KKA66P105Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>16</sub>	6.40	3.05
2.0	KKA66P205Q	2 <sup>3</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>16</sub> x 3 <sup>3</sup> / <sub>4</sub>	9.05	3.38
3.0	KVA66P305Q	2 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>2</sub>	10.75	3.67
5.0	KVA66P505Q	2 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>4</sub> x 4	15.00	5.54
8.0	KVL66P805Q	2 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>4</sub> x 6 <sup>1</sup> / <sub>2</sub>	22.10	9.10
10.0	KVL66P106Q	2 <sup>1</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>4</sub> x 7 <sup>3</sup> / <sub>4</sub>	25.90	10.79
15.0	*KNL66P156Q	4 <sup>1</sup> / <sub>8</sub> x 2 <sup>7</sup> / <sub>8</sub> x 5 <sup>3</sup> / <sub>4</sub>	38.10	16.90



**ACCESSORIES 209 • 50**

**AC OIL CAPACITOR ACCESSORIES**

Description	For Capacitor Types	CDE Part No.	List Price	Net Price
Wrap-Around Mounting Bracket	KK	30393-5	\$ .10	<b>\$.06</b>
	KT	30393-9	.10	<b>.06</b>
	KB	30393-10	.15	<b>.09</b>
	KV	30393-4	.15	<b>.09</b>
	KN	30393-11	.20	<b>.12</b>
Terminal Boot	A11	30397	.13	<b>.08</b>

**Type KGNT Class 209 • 60**

**RECTANGULAR AC OIL (MOTOR RUN) CAPACITORS**

The type KGNT motor run capacitor is commonly used in major appliances and air conditioners. The unit is of rectangular design with painted finish. Three prong terminals and cup type insulators are provided. Maximum operating temperature of the

unit is 70C. All capacitance ratings of the KGNT are rated 330/370 volts AC, 60 cycles. The KGNT is illustrated along with other AC motor run capacitors at the top of this page.

Cap. Mfd.	Volts AC	Type	Size (Inches) L x W x H	List Price	Net Price
1	330/370	KGNT 3010	1 1/16 x 1 3/16 x 2	\$3.83	<b>\$2.30</b>
2	330/370	KGNT 3020	1 1/16 x 1 3/16 x 2 3/4	4.17	<b>2.50</b>
3	330/370	KGNT 3030	1 1/16 x 1 3/16 x 3 7/8	4.22	<b>2.53</b>
4	330/370	KGNT 3040	1 3/16 x 2 1/2 x 2 7/8	4.50	<b>2.70</b>
5	330/370	KGNT 3050	1 3/16 x 2 1/2 x 3 1/2	5.33	<b>3.20</b>

Cap. Mfd.	Volts AC	Type	Size (Inches) L x W x H	List Price	Net Price
6	330/370	KGNT 3060	1 3/16 x 2 1/2 x 4 1/8	\$6.37	<b>\$3.82</b>
8	330/370	KGNT 3080	1 1/4 x 3 3/4 x 3 3/4	8.63	<b>5.18</b>
10	330/370	KGNT 3100	1 1/4 x 3 3/4 x 3 7/8	10.22	<b>6.13</b>
12	330/370	KGNT 3120	1 1/4 x 3 3/4 x 4 3/4	10.95	<b>6.57</b>

**Type CRX Class 209 • 70**

**ROUND AC OIL (MOTOR RUN) CAPACITORS**

The type CRX and CMX are 330/370 volts AC, 70C, motor run capacitors supplied in a round configuration. The CRX is unfinished steel with solder type terminal lugs. The CMX is a modification of the CRX. It is supplied painted black, with

end cap, flexible leads and wrap-around mounting bracket. To order CMX, change type number to CMX and add CMX price addition shown in table to CRX price.

Cap. Mfd.	Volts AC	Type	Size		List Price	Net Price
			Dia.	Height		
2	330/370	CRX 3020	1 3/8	3 3/8	\$4.17	<b>\$2.50</b>
3	330/370	CRX 3030	1 3/8	4 1/2	4.22	<b>2.53</b>
4	330/370	CRX 3040	1 3/4	3 3/8	4.47	<b>2.68</b>
5	330/370	CRX 3050	1 3/4	3 7/8	5.33	<b>3.20</b>

Cap. Mfd.	Volts AC	Type	Size		List Price	Net Price
			Dia.	Height		
6	330/370	CRX 3060	1 3/4	4 1/2	\$6.37	<b>\$3.82</b>
6.6	330/370	CRX 3066	2	3 7/8	6.92	<b>4.15</b>
8	330/370	CRX 3080	2	4 1/2	7.83	<b>4.70</b>
10	330/370	CRX 3100	2 1/2	4 1/2	10.22	<b>6.13</b>

**PRICE ADDITIONS TO CRX PRICE TO CONVERT TO CMX**

Case Diameter (Inches)	1 3/8	1 3/4	2	2 1/2
List Price	\$1.30	\$1.35	\$1.45	\$1.55
Net Price	<b>.78</b>	<b>.81</b>	<b>.87</b>	<b>.93</b>

# Radio Interference Filters

## VEHICULAR FILTERS

Class  
220 • 00

The most frequent Radio Interference problem encountered by the service technician is the improvement in signal to noise ratio in mobile applications of Citizen's Band, commercial, and amateur high frequency communications equipment. The vehicular filters listed will solve the problems encountered provided good grounding and bonding practices are followed and use made of suppressors.

The prime source of noise from a gasoline engine is ignition noise from the high tension spark system. Use of special ignition wire, spark plug and distributor suppressors, resistor plugs, or combinations of these as recommended by the engine manufacturer will reduce this noise to reasonable value. After this step, other noises will probably be apparent.

A frequently overlooked source of a sharp "popping" noise is the low tension side of the ignition coil. After bonding the coil bracket to the engine, a CDE coaxial feedthrough capacitor should be installed in the lead between the battery and coil. The capacitor bracket should be bonded to the coil bracket. The feedthrough will completely isolate the coil from its wire as far as noise is concerned. The generator is probably the second most frequent cause of noise — in this case a grinding whine. To reduce this noise, a CDE coaxial feedthrough capacitor should replace the normal capacitor in the lead to the armature terminal on the voltage regulator. In addition, the noise can be reduced by shielding the lead to the regulator field terminal. In many cases, there may be buzzing caused by the action of the regulator. This may be reduced by enclosing the regulator in a metal case, bringing the shielded lead through with coaxial fittings and installing two feedthrough capacitors on the low voltage leads from the regulator.

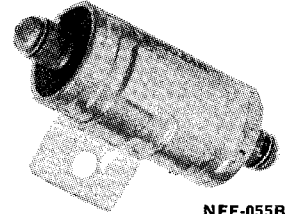
Other popping or clicking noises from various accessories can be reduced by installing CDE by-pass capacitors directly on the offending devices.



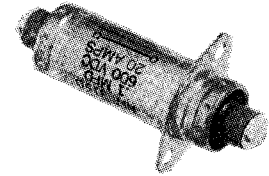
Feed-Through Circuit



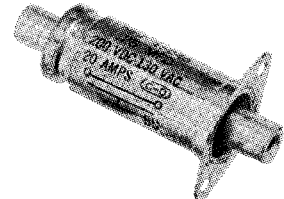
By-Pass Circuit



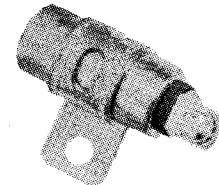
NFF-055B-1



NFF-315D

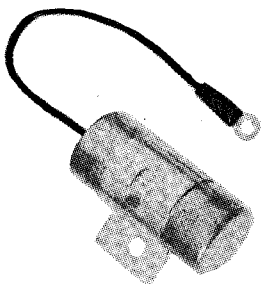


NFT-1F246

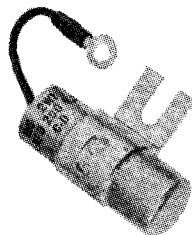


MC-8D98

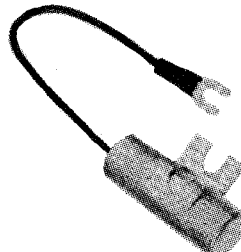
CDE Type	Voltage	Capacitance	Amperes	List Price	Net Price
<b>FEED-THROUGH TYPES</b>					
NFF-055B-1	50v DC	.5 mfd.	40	\$3.50	<b>\$2.10</b>
NFF-315D	600v DC	.1 mfd.	20	2.95	<b>1.77</b>
NFT-1F246	115v AC 200v DC	.25 mfd.	20	4.50	<b>2.70</b>
<b>BY-PASS TYPES</b>					
MC-8D98	100v DC	.1 mfd.	—	2.40	<b>1.44</b>
IC-2P5C	200v DC	.5 mfd.	—	.90	<b>.54</b>
INH-2P5-7	200v DC	.5 mfd.	—	1.10	<b>.66</b>
INS-2W1	200v DC	1.0 mfd.	—	2.10	<b>1.26</b>
ICH-2W1	200v DC	1.0 mfd.	—	2.10	<b>1.26</b>



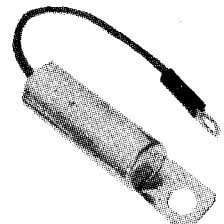
IC-2P5C



INS-2W1



INH-2P5-7

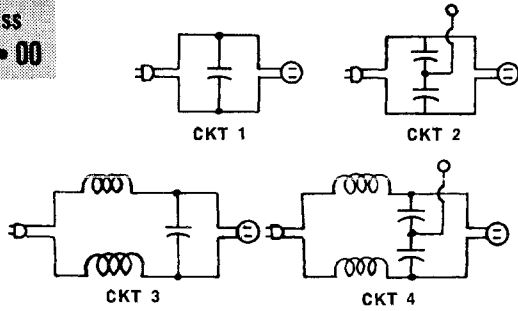


ICH-2W1

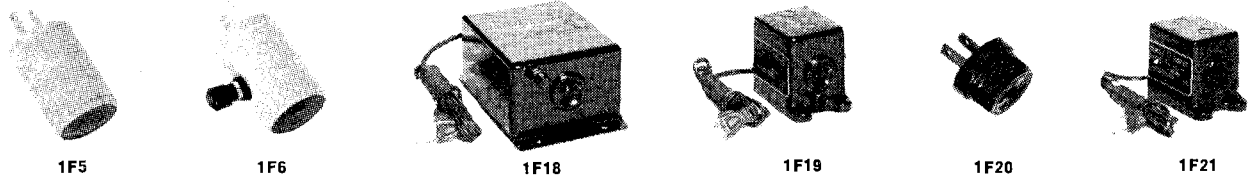
# Radio Interference Filters

Class  
220 • 00

## RESIDENTIAL RADIO INTERFERENCE FILTERS



These QUIETONE® Radio Interference filters are designed for residential and light commercial applications on appliances and office machines. Noise from small portable electrical appliances can usually be reduced through use of a circuit 1 filter such as the IF-20, IF-4, or IF-5. The circuit 2 filter, IF-6, will provide slightly more reduction. The IF-21, circuit 3, will provide additional attenuation. The greatest attenuation will be achieved through the use of circuit 4 filters — IF-18 and 19.



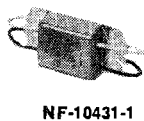
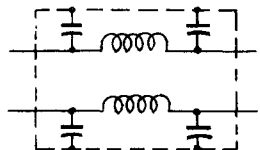
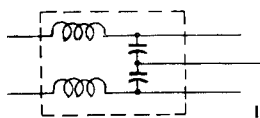
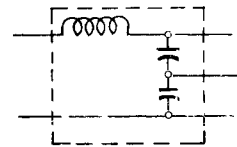
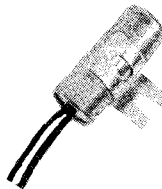
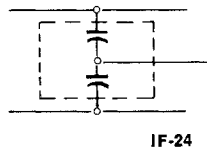
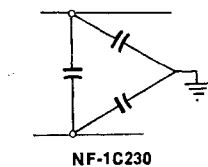
CDE Type	Circuit Diagram	Voltage	Cap. Mfd.	Current	Description	List Price	Net Price
IF-4	1	110 AC/DC	.1	5	Plastic cylindrical filter with plug and receptacle	\$1.50	\$ .90
IF-5	1	110 AC/DC	.1	5	Plastic cylindrical filter with plug and receptacle	1.50	.90
IF-6	2	110 AC/DC	2 x .1	5	Plastic cylindrical filter with plug, receptacle and side ground terminal	2.35	1.41
IF-18	4	115 AC/DC	2 x .25	5	Rectangular plastic cased filter with line cord and plug, receptacle and ground terminal.	11.00	6.60
IF-19	4	115 AC/DC	2 x .1	5	Smaller rectangular plastic cased filter with line cord and plug, receptacle and ground terminal.	9.25	5.55
IF-20	1	110 AC/DC	.06	5	Small cylindrical plastic cased filter with plug and receptacle.	1.00	.60
IF-21	3	110 AC/DC	.5	1.6	Rectangular plastic cased filter with line cord and receptacle.	5.20	3.12

Class  
220 • 00

## INDUSTRIAL RADIO INTERFERENCE FILTERS

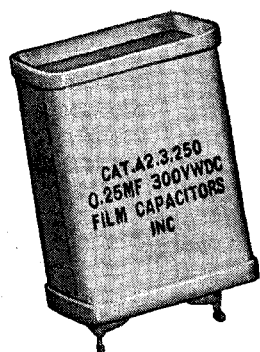
The metal cased IF-7A is designed for the reduction of severe interference. The NF-1C230 is designed for installation in vacuum cleaners, floor polishers, etc. Other filters listed are UL

listed for fluorescent fixtures but are frequently applied to other equipment. The vehicular filter listed on the previous page also find wide industrial applications.



CDE Type	Voltage	Cap. (Mfd.)	Current	Description	List Price	Net Price
IF-7A	110-220 AC/DC	2 x .5	5	Rectangular filter housed in cutout box for BX connection	\$16.50	\$9.90
IF-24	110 AC/DC	2 x .1	—	Cylindrical metal cased with flexible leads and bracket	1.50	.90
IF-54	110-220 AC/DC	2 x .25	2	Rectangular metal cased filter with flexible leads	3.00	1.80
NF-10431	280 AC/DC	2 x .02 each line	3.5	Fluorescent light filter rectangular metal case with flexible leads	5.05	3.30
NF-10431-1	280 AC/DC	2 x .02 each line	3.5	Same as NF10431, but with mounting for direct replacement of GE Catalog 89G365	6.25	3.75
NF-1C230	125 AC/DC	.09 line to line 2 x .005 line to grd.	—	Cardboard cased filter	1.25	.75

# FILM CAPACITORS, INC.



## F-C-I POLYSTYRENE CAPACITORS

F-C-I polystyrene capacitors are ideally suited for use in all types of computers, precision filters, integrating circuits, servo systems, timing circuits and laboratory standards.

F-C-I polystyrene capacitors are furnished as standard units in hermetically sealed metal shells, in bathtub cases and in style CP70 metal cases. Special capacitors are available in various configurations to meet application needs. Multi-section blocks are made to order to any tolerance specified. Where space is at a premium Mylar wrapped units can be made. Tolerances to .1% available.

### METAL SHELL POLYSTYRENE CAPACITORS

Part Number	Volts DC	Cap. MFD.	Case Size—Ins.	
			L	D
A4-1-10	100	.01	1	.235
A4-1-22	100	.022	1	.312
A4-1-33	100	.033	1	.312
A4-1-47	100	.047	1	.400
A4-1-68	100	.068	1	.400
A4-1-100	100	.10	1 3/8	.400
A4-1-220	100	.22	1 3/8	.562
A4-1-330	100	.33	1 3/8	.670
A4-1-470	100	.47	1 3/8	.670
A4-2-10	200	.01	1	.312
A4-2-22	200	.022	1	.400
A4-2-33	200	.033	1	.400
A4-2-47	200	.047	1 3/8	.400
A4-2-68	200	.068	1 3/8	.400
A4-2-100	200	.10	1 3/8	.562
A4-2-220	200	.22	1 3/8	.562
A4-2-330	200	.33	1 3/8	.750
A4-2-470	200	.47	1 3/8	1.00
A4-4-10	400	.01	1	.312
A4-4-22	400	.022	1	.400
A4-4-33	400	.033	1 3/8	.400
A4-4-47	400	.047	1 3/8	.400
A4-4-68	400	.068	1 3/8	.562
A4-4-100	400	.10	1 3/8	.562
A4-4-220	400	.22	1 3/8	.750
A4-4-330	400	.33	1 3/8	.750
A4-4-470	400	.47	1 3/8	1.00
A4-6-10	600	.01	1	.400
A4-6-22	600	.022	1 3/8	.562
A4-6-33	600	.033	1 3/8	.562
A4-6-47	600	.047	1 3/8	.670
A4-6-68	600	.068	1 3/8	.562
A4-6-100	600	.10	1 3/8	.670
A4-6-220	600	.22	1 3/8	.750
A4-6-330	600	.33	2 3/4	1.00
A4-6-470	600	.47	2 3/4	1.00

### STYLE CP70 CASED POLYSTYRENE CAPACITORS

Part Number	Volts DC	Cap. MFD.	Case Size—Ins.		
			L	W	H
A2-1-500	100	0.5	1 3/4	1	1 3/4
A2-1-1000	100	1.0	1 3/4	1	2 1/4
A2-1-2000	100	2.0	2 1/2	1 3/8	2 1/4
A2-1-4000	100	4.0	3 3/4	1 1/4	2 1/4
A2-1-6000	100	6.0	3 3/4	1 3/4	2 1/2
A2-1-8000	100	8.0	3 3/4	2 1/4	2 1/2
A2-1-10M	100	10.0	3 3/4	2 1/4	3
A2-1-20M	100	20.0	3 3/4	3 3/8	3 1/2
A2-2-250	200	0.25	1 3/4	1	2 1/4
A2-2-500	200	0.5	1 3/4	1	2 1/4
A2-2-1000	200	1.0	1 3/4	1	3
A2-2-2000	200	2.0	2 1/2	1 3/8	3
A2-2-4000	200	4.0	3 3/4	1 1/4	3 1/2
A2-2-6000	200	6.0	3 3/4	1 3/4	3 1/2
A2-2-8000	200	8.0	3 3/4	2 1/4	3 1/2
A2-2-10M	200	10.0	3 3/4	3 3/8	3 1/2
A2-2-20M	200	20.0	4 3/8	3 3/4	4
A2-4-250	400	0.25	1 3/4	1	2 1/4
A2-4-500	400	0.5	1 3/4	1	2 1/2
A2-4-1000	400	1.0	2 1/2	1 3/8	2 1/4
A2-4-2000	400	2.0	3 3/4	1 1/4	3
A2-4-4000	400	4.0	3 3/4	1 3/4	3 1/2
A2-4-6000	400	6.0	3 3/4	3 3/8	3
A2-4-8000	400	8.0	3 3/4	3 3/8	5 1/8
A2-4-10M	400	10.0	4 3/8	3 3/4	3 1/2
A2-6-250	600	0.25	1 3/4	1	2 1/4
A2-6-500	600	0.5	1 3/4	1	3 1/2
A2-6-1000	600	1.0	2 1/2	1 3/8	3 1/2
A2-6-2000	600	2.0	3 3/4	1 3/4	3
A2-6-4000	600	4.0	3 3/4	3 3/8	4
A2-6-5000	600	5.0	4 3/8	3 3/4	3 1/2

### BATHTUB CASED POLYSTYRENE CAPACITORS

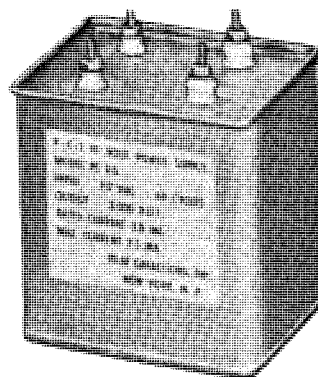
Part Number	Volts DC	Cap. MFD.	Case Size—Ins.		
			L	W	H
A3-1-50	100	.05	1 1/8	1	1/2
A3-1-100	100	.10	1 1/8	1	1/2
A3-1-250	100	.25	1 1/8	1	1
A3-1-500	100	.50	1 3/4	1	3/4
A3-1-1000	100	1.0	1 3/4	1	1
A3-2-50	200	.05	1 3/4	1	3/4
A3-2-100	200	.10	1 3/4	1	3/4
A3-2-250	200	.25	2	1 3/4	7/8
A3-2-500	200	.50	2	1 3/4	7/8
A3-2-1000	200	1.0	2	2	1 1/4
A3-4-10	400	.01	1 3/4	1	3/4
A3-4-20	400	.02	1 3/4	1	3/4
A3-4-50	400	.05	1 3/4	1	3/4
A3-4-100	400	.10	1 3/4	1	3/4
A3-4-250	400	.25	2	1 3/4	7/8
A3-4-500	400	.50	2	1 3/4	7/8
A3-4-1000	400	1.0	2	2	1 1/4
A3-6-10	600	.01	1 3/4	1	3/4
A3-6-20	600	.02	1 3/4	1	3/4
A3-6-50	600	.05	1 3/4	1	3/4
A3-6-100	600	.10	1 3/4	1	1
A3-6-250	600	.25	2	1 3/4	7/8
A3-6-500	600	.50	2	2	1 1/4

"WRAP AND FILL POLYSTYRENE CAPACITORS ALSO AVAILABLE"

## SOLID STATE HIGH VOLTAGE PACKAGED POWER SUPPLIES

Completely enclosed and hermetically sealed power supplies operating on 115 volt, 60 or 400 cycle, AC input. Output ranges from 2,000 vdc to 50,000 vdc. Standard sizes as follows: Non-standard supplies available upon request.

PART No.	OUTPUT VOLTAGE	RATED CURRENT OUTPUT	MAX. CURRENT OUTPUT
PS—2S	2 KVDC	5 MA	7.5 MA
PS—5S	5 KVDC	5 MA	7.5 MA
PS—10S	10 KVDC	1 MA	1.75 MA
PS—15S	15 KVDC	1 MA	1.75 MA
PS—20S	20 KVDC	1 MA	1.75 MA
PS—30S	30 KVDC	1 MA	1.75 MA
PS—50S	50 KVDC	1 MA	1.75 MA

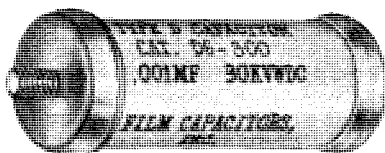


# FILM CAPACITORS, INC.

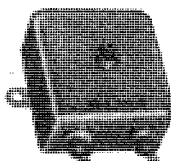
## F-C-I HIGH VOLTAGE CAPACITORS

F-C-I Type D6 high voltage capacitors are designed to assure reliable operation where space is at a premium. These capacitors utilize a combination of polyester film and high quality capacitor tissue. The impregnation in a highly purified mineral oil provides for extremely high insulation resistance and low power factor. The hermetic housing, which may be steatite or pyrex glass, allows for operation under extreme humidity.

All capacitors are constructed with extended foil windings, and all internal wiring is kept to a minimum. This eliminates most of the series inductance and produces a very high ringing frequency, an extremely desirable condition for energy storage and pulsing capacitors. D6 for 85°C; D6H for 125°C operation.



Cat. No.	Cap. Mfd.	Working Volts DC	Dimensions	
			L	Dia.
D6-10-10	.01	1000	1 $\frac{3}{16}$ x	1 $\frac{1}{32}$
D6-10-20	.02	1000	1 $\frac{1}{16}$ x	1 $\frac{1}{32}$
D6-10-50	.05	1000	1 $\frac{1}{16}$ x	1 $\frac{1}{32}$
D6-10-100	.10	1000	2 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-10-250	.25	1000	2 $\frac{3}{8}$ x	$\frac{7}{8}$
D6-10-500	.50	1000	2 $\frac{3}{8}$ x	1
D6-20-2	.002	2000	1 $\frac{3}{16}$ x	1 $\frac{1}{32}$
D6-20-5	.005	2000	1 $\frac{3}{16}$ x	1 $\frac{1}{32}$
D6-20-10	.01	2000	1 $\frac{3}{16}$ x	1 $\frac{1}{32}$
D6-20-20	.02	2000	1 $\frac{1}{16}$ x	1 $\frac{1}{32}$
D6-20-50	.05	2000	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-20-100	.10	2000	2 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-20-250	.25	2000	2 $\frac{3}{8}$ x	1
D6-20-500	.50	2000	2 $\frac{3}{8}$ x	1 $\frac{1}{4}$
D6-30-2	.002	3000	1 $\frac{3}{16}$ x	1 $\frac{1}{32}$
D6-30-5	.005	3000	1 $\frac{3}{16}$ x	1 $\frac{1}{32}$
D6-30-10	.01	3000	1 $\frac{1}{16}$ x	1 $\frac{1}{32}$
D6-30-20	.02	3000	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-30-50	.05	3000	2 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-30-100	.10	3000	2 $\frac{3}{8}$ x	$\frac{7}{8}$
D6-30-250	.25	3000	2 $\frac{3}{8}$ x	1 $\frac{1}{4}$
D6-30-500	.50	3000	2 $\frac{3}{4}$ x	1 $\frac{1}{2}$
D6-50-5	.005	5 KV	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-50-10	.01	5 KV	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-50-20	.02	5 KV	2 $\frac{3}{8}$ x	$\frac{3}{4}$
D6-50-50	.05	5 KV	2 $\frac{3}{8}$ x	$\frac{7}{8}$
D6-50-100	.10	5 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{4}$
D6-50-250	.25	5 KV	3 x	1 $\frac{1}{2}$
D6-75-1	.001	7 $\frac{1}{2}$ KV	1 $\frac{1}{16}$ x	1 $\frac{1}{32}$
D6-75-2	.002	7 $\frac{1}{2}$ KV	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-75-5	.005	7 $\frac{1}{2}$ KV	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-75-10	.01	7 $\frac{1}{2}$ KV	2 $\frac{3}{8}$ x	$\frac{3}{4}$
D6-75-20	.02	7 $\frac{1}{2}$ KV	2 $\frac{3}{8}$ x	$\frac{7}{8}$
D6-75-50	.05	7 $\frac{1}{2}$ KV	2 $\frac{3}{8}$ x	1 $\frac{1}{4}$
D6-75-100	.10	7 $\frac{1}{2}$ KV	2 $\frac{3}{8}$ x	1 $\frac{1}{2}$
D6-100-1	.001	10 KV	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-100-2	.002	10 KV	1 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-100-5	.005	10 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-100-10	.01	10 KV	2 $\frac{3}{8}$ x	$\frac{7}{8}$
D6-100-20	.02	10 KV	2 $\frac{3}{8}$ x	1
D6-100-50	.05	10 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{2}$
D6-100-60	.06	10 KV	3 x	1 $\frac{1}{2}$
D6-100-100	.10	10 KV	4 $\frac{5}{8}$ x	1 $\frac{1}{2}$
D6-150-1	.001	15 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-150-2	.002	15 KV	2 $\frac{3}{8}$ x	$\frac{3}{4}$
D6-150-5	.005	15 KV	2 $\frac{3}{8}$ x	$\frac{7}{8}$
D6-150-10	.01	15 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{4}$
D6-150-20	.02	15 KV	4 $\frac{5}{8}$ x	1 $\frac{1}{4}$
D6-150-50	.05	15 KV	4 $\frac{5}{8}$ x	1 $\frac{1}{2}$
D6-200-05	.0005	20 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-200-1	.001	20 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{16}$
D6-200-2	.002	20 KV	2 $\frac{3}{8}$ x	$\frac{3}{4}$
D6-200-5	.005	20 KV	2 $\frac{3}{8}$ x	1
D6-200-10	.01	20 KV	2 $\frac{3}{8}$ x	1 $\frac{1}{2}$
D6-200-20	.02	20 KV	4 $\frac{5}{8}$ x	1 $\frac{1}{2}$
D6-300-02	.0002	30 KV	4 $\frac{5}{8}$ x	1 $\frac{1}{32}$
D6-300-05	.0005	30 KV	4 $\frac{5}{8}$ x	1 $\frac{1}{32}$
D6-300-1	.001	30 KV	5 x	$\frac{3}{4}$
D6-300-2	.002	30 KV	5 x	$\frac{3}{4}$
D6-300-5	.005	30 KV	4 $\frac{5}{8}$ x	1 $\frac{1}{4}$
D6-300-10	.01	30 KV	6 $\frac{5}{8}$ x	1 $\frac{1}{2}$
D6-400-01	.0001	40 KV	5 $\frac{3}{4}$ x	1 $\frac{1}{16}$
D6-400-02	.0002	40 KV	5 $\frac{3}{4}$ x	1 $\frac{1}{16}$
D6-400-05	.0005	40 KV	5 $\frac{3}{4}$ x	1 $\frac{1}{16}$
D6-400-1	.001	40 KV	6 $\frac{1}{2}$ x	$\frac{3}{4}$
D6-400-2	.002	40 KV	6 $\frac{1}{2}$ x	1
D6-400-5	.005	40 KV	6 $\frac{1}{2}$ x	1 $\frac{1}{2}$
D6-400-6	.006	40 KV	8 x	1 $\frac{1}{2}$
D6-500-01	.0001	50 KV	8 $\frac{1}{4}$ x	1 $\frac{1}{16}$
D6-500-02	.0002	50 KV	8 $\frac{1}{4}$ x	1 $\frac{1}{16}$
D6-500-05	.0005	50 KV	8 $\frac{1}{4}$ x	1 $\frac{1}{16}$
D6-500-1	.001	50 KV	8 $\frac{1}{4}$ x	$\frac{3}{4}$
D6-500-2	.002	50 KV	8 $\frac{1}{4}$ x	1 $\frac{1}{8}$
D6-500-5	.005	50 KV	10 $\frac{3}{4}$ x	1 $\frac{1}{4}$
D6-500-6	.006	50 KV	10 $\frac{3}{4}$ x	1 $\frac{3}{8}$
D6-600-01	.0001	60 KV	10 x	$\frac{3}{4}$
D6-600-02	.0002	60 KV	10 x	$\frac{3}{4}$
D6-600-05	.0005	60 KV	10 x	$\frac{3}{4}$
D6-600-1	.001	60 KV	10 x	$\frac{7}{8}$
D6-600-2	.002	60 KV	10 x	1
D6-600-5	.005	60 KV	11 $\frac{1}{2}$ x	1 $\frac{1}{2}$



## ADJUSTABLE, SEALED POLYSTYRENE CAPACITORS

F-C-I adjustable capacitors are designed for use in ultra-precise circuits where a large capacitance of an extremely close tolerance is required, and yet cannot be predicted in advance due to second order effects in the circuitry. In order to attain the exact value of capacitance needed in such circuits, F-C-I has designed a series of polystyrene capacitors whose capacitance value may be adjusted over a range of plus or minus 1 $\frac{1}{2}$ % of nominal value. (Plus or minus 2% for values of 0.1 Mf or lower can be attained.) The windings are completely non-inductive, thus minimizing power factor and soakage.

100 V.D.C.			200 V.D.C.			400 V.D.C.		
Cat. No.	Cap. Mfd.	Case Size	Cat. No.	Cap. Mfd.	Case Size	Cat. No.	Cap. Mfd.	Case Size
A3V-1-1M	1.0	2 x 2 x 1	A3V-2-1M	1.0	2 x 2 x 1 $\frac{1}{8}$	A3V-4-470	.47	2 x 2 x 1 $\frac{1}{4}$
A3V-1-680	.68	2 x 1 $\frac{3}{4}$ x $\frac{7}{8}$	A3V-2-680	.68	2 x 2 x 1	A3V-4-330	.33	2 x 1 $\frac{3}{4}$ x 1
A3V-1-470	.47	1 $\frac{3}{4}$ x 1 $\frac{1}{4}$ x 1	A3V-2-470	.47	2 x 1 $\frac{3}{4}$ x 1	A3V-4-220	.22	2 x 1 $\frac{3}{4}$ x $\frac{7}{8}$
A3V-1-330	.33	1 $\frac{3}{4}$ x 1 $\frac{1}{4}$ x $\frac{7}{8}$	A3V-2-330	.33	2 x 1 $\frac{3}{4}$ x $\frac{7}{8}$	A3V-4-100	.1	1 $\frac{3}{4}$ x 1 $\frac{1}{4}$ x 1
A3V-1-220	.22	1 $\frac{3}{4}$ x 1 x $\frac{3}{4}$	A3V-2-220	.22	1 $\frac{3}{4}$ x 1 $\frac{1}{4}$ x 1	A3V-4-47	.047	1 $\frac{3}{4}$ x 1 x $\frac{3}{4}$
A3V-1-100	.1	1 $\frac{3}{4}$ x 1 x $\frac{3}{4}$	A3V-2-100	.1	1 $\frac{3}{4}$ x 1 x $\frac{3}{4}$	A3V-4-33	.033	1 $\frac{3}{4}$ x 1 x $\frac{3}{4}$
						A3V-4-10	.01	1 $\frac{1}{8}$ x 1 x 1 $\frac{1}{2}$

# FILM CAPACITORS, INC.

## HERMETICALLY SEALED TYPE D MYLAR\* CAPACITORS

● Tolerance to 1% ● Hermetically Sealed ● High Insulation Resistance ● Operation up to 125°C

F-C-I type D capacitors employ Mylar\* Film as the dielectric which offers advantages not obtainable with standard materials. Type D capacitors are ideal where space saving and extremely high insulation is required. Other electrical characteristics are low dielectric absorption, good retrace and stability. Designed

to operate in the temperature range of -55°C to 85°C type D capacitors can be used where optimum performance is required. Type D capacitors may be operated up to 125°C with a 50% derating.

\*Trade Mark for Dupont Polyester Film

### STYLE CP 70 CASED MYLAR CAPACITORS

Part No.	Cap.	L	W	H
<b>100V</b>				
D2-1-2M	2.0	1 3/4	1	1 5/8
D2-1-4M	4.0	1 3/4	1	2 1/4
D2-1-5M	5.0	1 3/4	1	2 3/4
D2-1-6M	6.0	1 3/4	1	2 3/4
D2-1-8M	8.0	1 3/4	1	3 1/4
D2-1-10M	10.0	2 1/2	1 3/4	2 7/8
D2-1-12M	12.0	2 1/2	1 3/4	3 1/2
D2-1-15M	15.0	2 1/2	1 3/4	4
D2-1-20M	20.0	3 3/4	1 3/4	2 1/2
D2-1-25M	25.0	3 3/4	1 3/4	3 1/4
D2-1-30M	30.0	3 3/4	1 3/4	3 1/2
D2-1-40M	40.0	3 3/4	1 3/4	4
D2-1-50M	50.0	3 3/4	2 1/4	4
D2-1-100M	100.0	3 3/4	3 3/4	4 3/4

Part No.	Cap.	L	W	H
<b>200V</b>				
D2-2-1M	1.0	1 3/4	1	1 5/8
D2-2-2M	2.0	1 3/4	1	1 5/8
D2-2-4M	4.0	1 3/4	1	2 7/8
D2-2-5M	5.0	1 3/4	1	3 1/4
D2-2-6M	6.0	1 3/4	1	4
D2-2-8M	8.0	2 1/2	1 3/4	2 7/8
D2-2-10M	10.0	2 1/2	1 3/4	3 1/2
D2-2-12M	12.0	2 1/2	1 3/4	4
D2-2-15M	15.0	3 3/4	1 1/4	3 1/2
D2-2-20M	20.0	3 3/4	1 3/4	3 1/4
D2-2-25M	25.0	3 3/4	1 3/4	4
D2-2-30M	30.0	3 3/4	1 3/4	4 1/2
D2-2-40M	40.0	3 3/4	2 1/4	4
D2-2-50M	50.0	3 3/4	3 3/4	3 1/2

Part No.	Cap.	L	W	H
<b>400V</b>				
D2-4-500	0.5	1 3/4	1	1 5/8
D2-4-1M	1.0	1 3/4	1	2 1/4
D2-4-2M	2.0	1 3/4	1	2 7/8
D2-4-4M	4.0	2 1/2	1 3/4	3 1/2
D2-4-5M	5.0	2 1/2	1 3/4	4
D2-4-6M	6.0	3 3/4	1 1/4	3 1/2
D2-4-8M	8.0	3 3/4	1 1/4	4
D2-4-10M	10.0	3 3/4	1 3/4	3 1/2
D2-4-12M	12.0	3 3/4	1 3/4	4
D2-4-15M	15.0	3 3/4	2 1/4	4
D2-4-20M	20.0	3 3/4	3 3/4	4
D2-4-25M	25.0	4 3/4	3 3/4	3 1/2
D2-4-30M	30.0	4 3/4	3 3/4	4
D2-4-40M	40.0	4 3/4	3 3/4	4 1/2
D2-4-50M	50.0	4 3/4	3 3/4	5 1/8

MOUNTING BRACKETS AVAILABLE

### STYLE CP 70 CASED MYLAR CAPACITORS—Continued

Part No.	Cap.	L	W	H
<b>600V</b>				
D2-6-500	0.5	1 3/4	1	1 5/8
D2-6-1M	1.0	1 3/4	1	2 3/4
D2-6-2M	2.0	1 3/4	1	4
D2-6-4M	4.0	2 1/2	1 3/4	4
D2-6-5M	5.0	3 3/4	1 1/4	3 1/2
D2-6-6M	6.0	3 3/4	1 1/4	4
D2-6-8M	8.0	3 3/4	1 3/4	4
D2-6-10M	10.0	3 3/4	1 3/4	4 1/2
D2-6-20M	20.0	4 3/4	3 3/4	4 1/2
D2-6-25M	25.0	4 3/4	3 3/4	4 1/2

### BATHTUB CASED MYLAR CAPACITORS

Part No.	Cap.	L	W	H
<b>100V</b>				
D3-1-500	0.5	1 1/8	1	1 3/8
D3-1-1M	1.0	1 1/8	1	1 3/8
D3-1-2M	2.0	1 3/4	1	1 3/8
D3-1-4M	4.0	2	1 3/4	7/8
D3-1-6M	6.0	2	1 3/4	7/8
D3-1-8M	8.0	2	2	1 1/8
D3-1-10M	10.0	2	2	1 1/4
D3-1-12M	12.0	2	2	1 1/2

Part No.	Cap.	L	W	H
<b>200V</b>				
D3-2-500	0.5	1 1/8	1	1 3/8
D3-2-1M	1.0	1 3/4	1	3/4
D3-2-2M	2.0	1 3/4	1 1/4	1
D3-2-4M	4.0	2	1 3/4	7/8
D3-2-5M	5.0	2	2	1
D3-2-6M	6.0	2	2	1 1/8
D3-2-8M	8.0	2	2	1 1/2

Part No.	Cap.	L	W	H
<b>400V</b>				
D3-4-250	0.25	1 1/8	1	1 3/8
D3-4-500	0.5	1 3/4	1	3/4
D3-4-1M	1.0	1 3/4	1 1/4	1
D3-4-2M	2.0	2	2	7/8
D3-4-4M	4.0	2	2	1 1/8
D3-4-5M	5.0	2	2	1 1/2

Part No.	Cap.	L	W	H
<b>600V</b>				
D3-6-100	0.1	1 1/8	1	1 3/8
D3-6-250	0.25	1 3/4	1	3/4
D3-6-500	0.5	1 3/4	1	1
D3-6-1M	1.0	2	1 3/4	7/8
D3-6-2M	2.0	2	2	1 1/8

### METAL SHELL MYLAR CAPACITORS

Part No.	Cap.	L	D
<b>200V</b>			
D4-2-10	.01	7/8	.235
D4-2-15	.015	7/8	.235
D4-2-22	.022	7/8	.235
D4-2-33	.033	1	.235
D4-2-47	.047	1	.235
D4-2-68	.068	1	.312
D4-2-100	.10	1	.312
D4-2-150	.15	1	.400
D4-2-220	.22	1 3/8	.400
D4-2-330	.33	1 3/8	.400
D4-2-470	.47	1 3/8	.500
D4-2-680	.68	1 3/8	.562
D4-2-820	.82	1 3/8	.670
D4-2-2000	2.00	1 7/8	.750

Part No.	Cap.	L	D
<b>400V</b>			
D4-4-10	.01	7/8	.235
D4-4-15	.015	7/8	.235
D4-4-22	.022	1	.312
D4-4-33	.033	1	.312
D4-4-47	.047	1	.400
D4-4-68	.068	1	.400
D4-4-100	.10	1 3/8	.400
D4-4-150	.15	1 3/8	.500
D4-4-220	.22	1 3/8	.562
D4-4-330	.33	1 3/8	.670
D4-4-470	.47	1 7/8	.670
D4-4-680	.68	1 7/8	.750
D4-4-820	.82	2 3/8	.750
D4-4-1000	1.00	2 3/8	1.00

Part No.	Cap.	L	D
<b>600V</b>			
D4-6-10	.01	1	.235
D4-6-15	.015	1	.312
D4-6-22	.022	1	.400
D4-6-33	.033	1	.400
D4-6-47	.047	1 3/8	.400
D4-6-68	.068	1 3/8	.400
D4-6-100	.10	1 3/8	.500
D4-6-150	.15	1 3/8	.670
D4-6-220	.22	1 7/8	.670
D4-6-330	.33	1 7/8	.750
D4-6-470	.47	1 7/8	1.00
D4-6-680	.68	2 3/8	1.00
D4-6-820	.82	2 3/8	1.00

Less 1/8 in length for Type D4G, one side grounded

"WRAP AND FILL MYLAR CAPACITORS ALSO AVAILABLE"

## TYPE KM-7 HIGH VOLTAGE BAKELITE CASED CAPACITORS

F-C-I Type KM-7 capacitors are designed for high voltage applications where space is at a premium. Capacitors are housed in cylindrical electrical grade Bakelite cases and are filled with a purified mineral oil. The dielectric employed is a combination of polyester film and the finest grade capacitor tissue. Easy mounting is accomplished with the 1/4-20 x 7/8 bolts. Corona is held to minimum because of the elimination of all metal. These capacitors are

ideal for use in high voltage power supplies, test equipment, X-Ray equipment, energy storage, etc. Suitable for operation up to 85°C.

All capacitors are constructed with extended foil windings, and all internal wiring is kept to a minimum. This eliminates most of the series inductance and produces a very high ringing frequency, an extremely desirable condition for energy storage and pulsing capacitors.

Cat. No.	Cap. Mfd.	Dimensions	
		L	D
<b>40 KVDC</b>			
KM-7-400-10	.01	9 5/8 x 1 1/2	
KM-7-400-20	.02	9 5/8 x 2	
KM-7-400-50	.05	11 3/4 x 2	
KM-7-400-100	.10	17 1/2 x 3	
<b>50 KVDC</b>			
KM-7-500-10	.01	11 3/4 x 1 1/2	
KM-7-500-20	.02	11 3/4 x 2	
KM-7-500-50	.05	17 1/2 x 2 1/2	
KM-7-500-100	.10	20 3/4 x 2 1/2	
<b>60 KVDC</b>			
KM-7-600-10	.01	14 3/8 x 2	
KM-7-600-20	.02	14 3/8 x 2 1/2	
KM-7-600-50	.05	22 1/4 x 2 1/2	
KM-7-600-100	.10	27 1/4 x 3	

Cat. No.	Cap. Mfd.	Dimensions	
		L	D
<b>80 KVDC</b>			
KM-7-800-1	.001	12 1/2 x 1 1/2	
KM-7-800-2	.002	12 1/2 x 1 3/2	
KM-7-800-5	.005	12 1/2 x 2	
KM-7-800-10	.01	17 1/2 x 2	
KM-7-800-20	.02	17 1/2 x 2 1/2	
KM-7-800-50	.05	27 1/4 x 3	
<b>100 KVDC</b>			
KM-7-1000-05	.0005	18 x 1 1/2	
KM-7-1000-1	.001	18 x 1 1/2	
KM-7-1000-2	.002	18 x 2	
KM-7-1000-5	.005	19 5/8 x 2	
KM-7-1000-10	.01	19 5/8 x 3	
KM-7-1000-20	.02	23 3/4 x 3	

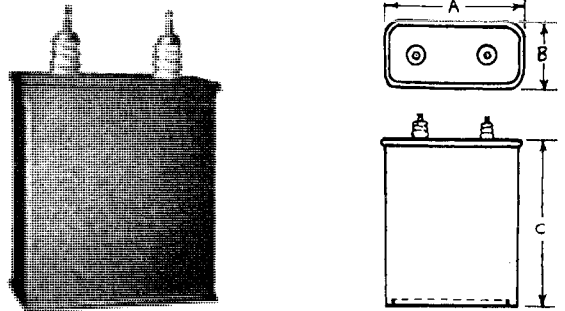
Cat. No.	Cap. Mfd.	Dimensions	
		L	D
<b>120 KVDC</b>			
KM-7-1200-05	.0005	19 1/4 x 1 1/2	
KM-7-1200-1	.001	19 1/4 x 2	
KM-7-1200-2	.002	19 1/4 x 2	
KM-7-1200-5	.005	22 1/4 x 2	
KM-7-1200-10	.01	27 1/4 x 2 1/2	
KM-7-1200-20	.02	28 1/4 x 3	
<b>150 KVDC</b>			
KM-7-1500-05	.0005	23 3/4 x 1 1/2	
KM-7-1500-1	.001	23 3/4 x 2	
KM-7-1500-2	.002	23 3/4 x 2	
KM-7-1500-5	.005	27 1/2 x 2 1/2	
KM-7-1500-10	.01	35 x 2 1/2	
KM-7-1500-20	.02	35 x 3	



# FILM CAPACITORS, INC.

## HIGH VOLTAGE TYPE KM-2 CAPACITORS—85 C OPERATION WITH SOLDER-SEAL CERAMIC BUSHINGS

F-C-I type KM-2 capacitors have been designed specifically to meet the need for smaller, more reliable capacitors that will withstand the severe operating conditions encountered in military and industrial electronic equipment. The dielectric employed is a combination of synthetic Polyester film and the finest grade capacitor tissue. Capacitor cases are of CP70 rectangular construction. Units will meet the requirements of proposed specification MIL-C-19978. Terminals are of the solder seal ceramic type with screw bolt terminations for easy connections and true hermetic sealing. Capacity tolerance is plus or minus 10% with an insulation resistance of 20,000 megohm microfarads. Specify type KMH-2 for operating temperatures up to 125°C. Case sizes for the KMH-2 and engineering data for both series are available upon request. CP07 mounting brackets are available for all sizes.



Cat. No.	$\mu\text{f}$	A	B	C
<b>400 W. V. D. C.</b>				
KM-2-4-500	0.5	1 $\frac{3}{16}$	1 $\frac{1}{16}$	1 $\frac{5}{8}$
KM-2-4-1M	1.0	1 $\frac{3}{16}$	1 $\frac{1}{16}$	1 $\frac{5}{8}$
KM-2-4-2M	2.0	1 $\frac{3}{16}$	1 $\frac{1}{16}$	2 $\frac{1}{4}$
KM-2-4-4M	4.0	2 $\frac{1}{2}$	1 $\frac{3}{16}$	2 $\frac{7}{8}$
KM-2-4-6M	6.0	2 $\frac{1}{2}$	1 $\frac{3}{16}$	4 $\frac{3}{4}$
KM-2-4-8M	8.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	4 $\frac{1}{4}$
KM-2-4-10M	10.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	4 $\frac{3}{4}$
KM-2-4-12M	12.0	3 $\frac{3}{4}$	1 $\frac{3}{4}$	3 $\frac{3}{8}$
KM-2-4-15M	15.0	3 $\frac{3}{4}$	1 $\frac{3}{4}$	4 $\frac{3}{4}$
<b>600 W. V. D. C.</b>				
KM-2-6-500	0.5	1 $\frac{3}{16}$	1 $\frac{1}{16}$	1 $\frac{5}{8}$
KM-2-6-1M	1.0	1 $\frac{3}{16}$	1 $\frac{1}{16}$	2 $\frac{1}{4}$
KM-2-6-2M	2.0	1 $\frac{3}{16}$	1 $\frac{1}{16}$	2 $\frac{7}{8}$
KM-2-6-4M	4.0	2 $\frac{1}{2}$	1 $\frac{3}{16}$	3 $\frac{1}{2}$
KM-2-6-6M	6.0	2 $\frac{1}{2}$	1 $\frac{3}{16}$	4 $\frac{3}{4}$
KM-2-6-8M	8.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{7}{8}$
KM-2-6-10M	10.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	4 $\frac{3}{4}$
KM-2-6-12M	12.0	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{8}$
KM-2-6-15M	15.0	3 $\frac{3}{4}$	2 $\frac{1}{4}$	4 $\frac{3}{4}$
<b>1000 W. V. D. C.</b>				
KM-2-10-500	0.5	1 $\frac{3}{16}$	1 $\frac{1}{16}$	1 $\frac{5}{8}$
KM-2-10-1M	1.0	1 $\frac{3}{16}$	1 $\frac{1}{16}$	2 $\frac{1}{4}$
KM-2-10-2M	2.0	1 $\frac{3}{16}$	1 $\frac{1}{16}$	3 $\frac{7}{8}$
KM-2-10-4M	4.0	2 $\frac{1}{2}$	1 $\frac{3}{16}$	4 $\frac{3}{4}$
KM-2-10-6M	6.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	4 $\frac{3}{4}$
KM-2-10-8M	8.0	3 $\frac{3}{4}$	1 $\frac{3}{4}$	3 $\frac{7}{8}$
KM-2-10-10M	10.0	3 $\frac{3}{4}$	1 $\frac{3}{4}$	4 $\frac{3}{4}$
KM-2-10-12M	12.0	3 $\frac{3}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{2}$
KM-2-10-15M	15.0	3 $\frac{3}{4}$	2 $\frac{1}{2}$	4 $\frac{3}{4}$
<b>1500 W. V. D. C.</b>				
KM-2-15-100	0.1	1 $\frac{3}{16}$	1 $\frac{1}{16}$	1 $\frac{5}{8}$
KM-2-15-250	0.25	1 $\frac{3}{16}$	1 $\frac{1}{16}$	1 $\frac{5}{8}$
KM-2-15-500	0.5	1 $\frac{3}{16}$	1 $\frac{1}{16}$	2 $\frac{1}{4}$
KM-2-15-1M	1.0	1 $\frac{3}{16}$	1 $\frac{1}{16}$	3 $\frac{7}{8}$
KM-2-15-2M	2.0	2 $\frac{1}{2}$	1 $\frac{3}{16}$	4 $\frac{3}{4}$
KM-2-15-4M	4.0	3 $\frac{3}{4}$	1 $\frac{3}{4}$	4 $\frac{3}{4}$
KM-2-15-6M	6.0	3 $\frac{3}{4}$	3 $\frac{1}{16}$	4 $\frac{1}{2}$
KM-2-15-8M	8.0	4 $\frac{1}{16}$	3 $\frac{1}{16}$	4 $\frac{3}{8}$
KM-2-15-10M	10.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	5 $\frac{1}{8}$
KM-2-15-12M	12.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	6
KM-2-15-15M	15.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	8 $\frac{1}{2}$
<b>2000 W. V. D. C.</b>				
KM-2-20-2M	2.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	4 $\frac{3}{4}$
KM-2-20-4M	4.0	3 $\frac{3}{4}$	2 $\frac{1}{2}$	4 $\frac{3}{4}$
KM-2-20-6M	6.0	3 $\frac{3}{4}$	3 $\frac{1}{16}$	5 $\frac{1}{8}$
KM-2-20-8M	8.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	4 $\frac{3}{8}$
KM-2-20-10M	10.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	5 $\frac{1}{2}$
KM-2-20-12M	12.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	6
KM-2-20-15M	15.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	9 $\frac{5}{8}$

Cat. No.	$\mu\text{f}$	A	B	C
<b>2500 W. V. D. C.</b>				
KM-2-25-2M	2.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	4 $\frac{3}{4}$
KM-2-25-4M	4.0	3 $\frac{3}{4}$	2 $\frac{1}{4}$	5 $\frac{1}{8}$
KM-2-25-6M	6.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	4 $\frac{3}{8}$
KM-2-25-8M	8.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	5 $\frac{1}{2}$
KM-2-25-10M	10.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	6 $\frac{1}{2}$
KM-2-25-12M	12.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	9 $\frac{5}{8}$
<b>3000 W. V. D. C.</b>				
KM-2-30-1M	1.0	3 $\frac{3}{4}$	1 $\frac{3}{4}$	3 $\frac{1}{4}$
KM-2-30-2M	2.0	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{7}{8}$
KM-2-30-4M	4.0	3 $\frac{3}{4}$	3 $\frac{1}{16}$	5 $\frac{1}{8}$
KM-2-30-6M	6.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	5 $\frac{1}{2}$
<b>4000 W. V. D. C.</b>				
KM-2-40-1M	1.0	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{4}$
KM-2-40-2M	2.0	3 $\frac{3}{4}$	2 $\frac{1}{4}$	5 $\frac{1}{8}$
KM-2-40-4M	4.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	5 $\frac{1}{2}$
<b>5000 W. V. D. C.</b>				
KM-2-50-100	0.1	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-50-250	0.25	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-50-500	0.5	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-50-1M	1.0	3 $\frac{3}{4}$	1 $\frac{3}{4}$	3 $\frac{1}{4}$
KM-2-50-2M	2.0	3 $\frac{3}{4}$	2 $\frac{1}{2}$	5 $\frac{1}{2}$
<b>6000 W. V. D. C.</b>				
KM-2-60-100	0.1	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-60-250	0.25	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-60-500	0.5	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-60-1M	1.0	3 $\frac{3}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{2}$
KM-2-60-2M	2.0	3 $\frac{3}{4}$	3 $\frac{1}{16}$	5 $\frac{1}{2}$
<b>7500 W. V. D. C.</b>				
KM-2-75-100	0.1	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-75-250	0.25	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-75-500	0.5	3 $\frac{3}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{2}$
KM-2-75-1M	1.0	3 $\frac{3}{4}$	3 $\frac{1}{16}$	5 $\frac{1}{2}$
KM-2-75-2M	2.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	8 $\frac{1}{2}$
<b>10,000 W. V. D. C.</b>				
KM-2-100-100	0.1	3 $\frac{3}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-100-250	0.25	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-100-500	0.5	3 $\frac{3}{4}$	2 $\frac{1}{2}$	5 $\frac{1}{2}$
KM-2-100-1M	1.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	6
<b>12,500 W. V. D. C.</b>				
KM-2-125-100	0.1	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$
KM-2-125-250	0.25	3 $\frac{3}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{2}$
KM-2-125-500	0.5	4 $\frac{1}{16}$	3 $\frac{3}{4}$	5 $\frac{1}{2}$
KM-2-125-1M	1.0	4 $\frac{1}{16}$	3 $\frac{3}{4}$	8 $\frac{1}{2}$

SEND FOR COMPLETE LISTING



# SERVICE-DESIGNED CAPACITORS

## HOW TO SELECT THE RIGHT REPLACEMENT

It is easy to select the right G-E replacement for any aluminum electrolytic capacitor used in the past ten years.

**IF YOU KNOW RATING ONLY:** Refer to correct type of capacitor and locate the G-E capacitor with desired characteristics. For example if you need single-section tubular with capacitance of 55 mfd at 450 V, refer to QT TUBULAR ELECTROLYTICS, Single-Section. Look for the capacitance range in which 55 mfd falls (QT1-17: 40-60 mfd; QT1-18: 50-60 mfd; QT1-19: 50-60 mfd). The rating in bold-face type (60 mfd in the above rating) is the absolute or maximum rating. Check voltage required. Since QT1-19 is the only one rated for 450V, it is the correct replacement.

If rating needed were 55 mfd at 250 volts you could correctly use either QT1-18 (up to 350V) or QT1-19 (up to 450V), since G-E capacitors will work properly at any voltage up to their maximum rating. You would then choose between QT1-18

and QT1-19 on the basis of the size (1/4" difference in length) or price and probably choose QT1-18.

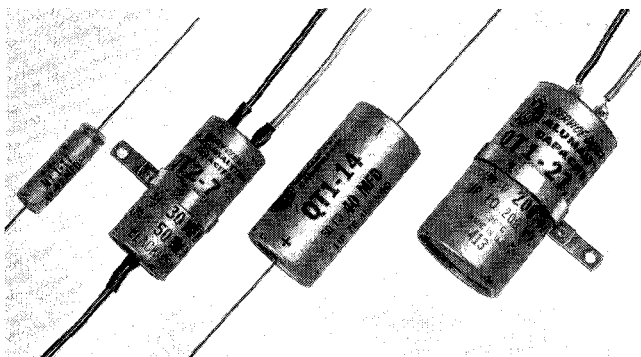
**TO SELECT MULTI-SECTION UNITS** (either tubular or can-type,) follow this same process for each section. Here's a quick way to do it:

1. List values of original capacitor sections in ascending order of value.
2. Match values with their voltage ratings.
3. Find G-E units that most closely match capacitance values starting from the lowest value. Use next higher value if first unit value does not match exactly.
4. Be sure that G-E voltage ratings equal or exceed original voltage ratings. Proper replacement will usually fall within two or three catalog numbers of the first unit checked.

### EXPLANATION OF RATINGS

Cat. No.	Capacitance, Mfd	Voltage
<b>SINGLE-SECTION</b> QT1-19 (Single-section tubular)	<b>50-60</b> (a 60 mfd unit that can be used at any capacitance between 50 and 60 mfd; 50, 55 or 60 mfd)	(a 450V unit that can be used for any voltage up to and including 450V: 450, 350, 250, 175, 150 or 50 volts)
<b>MULTI-SECTION</b> XC4-16 (Quad-section can)	<b>8-8-50-50</b> <b>10-10-60-100</b> (The two 10 mfd units can be used at any capacitance between 8 and 10 mfd; the 60 mfd between 50 and 60; the 100 mfd between 50 and 100)	<b>450-450-200-50</b> (the two 450V units can be used for any voltage up to and including 450V; the 200V and the 50V units can also be used for any voltage up to and including 200V and 50V respectively)

## QT TUBULAR ELECTROLYTICS



- Designed for 85°C operation in voltages to 600 WVDC.
- Long shelf and operating life.
- Superior capacitance, resistance and leakage current characteristics.
- Hermetically sealed in aluminum cans— with insulating sleeve.
- Insulated leads on multiple section units.

### SINGLE-SECTION TUBULARS

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
QT1-1	<b>2</b>	Up to 450V	1/2 x 1 3/8	\$1.15
QT1-2	<b>3.4</b>	Up to 300V	1/2 x 1 3/8	1.25
QT1-2.1	<b>3.4</b>	Up to 450V	3/8 x 1 3/8	1.15
QT1-3	<b>3.5</b>	Up to 150V	1/2 x 1 3/8	1.00
QT1-4	<b>5-8</b>	Up to 450V	5/8 x 1 3/8	1.25
QT1-5	<b>8-10</b>	Up to 150V	1/2 x 1 3/8	1.05
QT1-6	<b>8-10</b>	Up to 450V	3/4 x 1 3/8	1.30
QT1-7	<b>8-10</b>	Up to 600V	1 x 2 1/16	2.25
QT1-8	<b>12-16</b>	Up to 450V	7/8 x 1 3/8	1.40
QT1-8.1	<b>12-20</b>	Up to 150V	2 1/4 x 1 1/16	1.20
QT1-9	<b>16-20</b>	Up to 350V	7/8 x 1 3/8	1.45
QT1-10	<b>15-20</b>	Up to 475V	7/8 x 1 3/8	1.60
QT1-11	<b>16-25</b>	Up to 50V	3/16 x 1 5/8	1.05
QT1-12	<b>25-30</b>	Up to 450V	1 x 1 3/16	1.70
QT1-13	<b>30-40</b>	Up to 150V	3/4 x 1 3/8	1.35
QT1-14	<b>30-40</b>	Up to 450V	1 x 2 1/8	1.80
QT1-15	<b>25-50</b>	Up to 50V	5/8 x 1 3/8	1.20
QT1-16	<b>40-50</b>	Up to 450V	1 x 2 3/8	2.10
QT1-17	<b>40-60</b>	Up to 150V	7/8 x 1 3/8	1.50
QT1-18	<b>50-60</b>	Up to 350V	1 x 2 3/8	1.95
QT1-19	<b>50-60</b>	Up to 450V	1 x 2 3/8	2.35
QT1-20	<b>60-80</b>	Up to 150V	1 x 1 3/8	1.60
QT1-21	<b>60-80</b>	Up to 450V	1 x 3 1/8	2.80
QT1-22	<b>50-100</b>	Up to 15V	3/16 x 1 3/8	1.25
QT1-23	<b>50-100</b>	Up to 50V	3/4 x 1 3/8	1.40
QT1-24	<b>80-100</b>	Up to 450V	1 1/4 x 2 3/16	3.20
QT1-24.1†	<b>75-140</b>	Up to 300V	1 1/4 x 2 3/8	3.15
QT1-25	<b>100-150</b>	Up to 150V	1 x 2 1/8	1.90

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
QT1-26	<b>100-150</b>	Up to 300V	1 1/4 x 2 3/8	\$3.15
QT1-27	<b>150-200</b>	Up to 200V	1 1/4 x 2 3/8	2.90
QT1-27.1†	<b>110-200</b>	Up to 200V	1 1/4 x 2 3/8	2.90
QT1-28	<b>150-250</b>	Up to 25V	3/4 x 1 5/8	1.70
QT1-29	<b>200-300</b>	Up to 150V	1 x 3 3/8	2.55
QT1-30	<b>250-500</b>	Up to 15V	3/4 x 1 3/16	1.75
QT1-31	<b>250-500</b>	Up to 50V	1 x 2 3/8	2.40
QT1-32	<b>500-1000</b>	Up to 15V	1 x 1 3/16	2.30
QT1-33	<b>1500-2000</b>	Up to 15V	1 x 2 1/16	3.20

\* Add 1/16" to diameter and 1/8" to length to all for insulating sleeve.

† Single ended with 5" insulated leads and mounting bracket.

### DUAL-SECTION TUBULARS§

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
QT2-1	<b>4-150-5-200</b>	150-150	1 x 2 7/8	\$2.65
QT2-1.2	<b>3-100-5-200</b>	250-250	1 3/8 x 2 3/8	4.40
QT2-2	<b>5-5-8-8</b>	450-450	7/8 x 1 7/8	1.70
QT2-3	<b>8-8-10-10</b>	450-450	7/8 x 1 7/8	1.85

\* Add 1/16" to diameter and 1/8" to length to allow for insulating sleeve.  
§ All designs have mounting bracket and insulated leads.

SECTION 1500

QT TUBULAR ELECTROLYTICS (cont'd)

Dual-Section Tubulars (cont'd)

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
QT2-3.1	7-14-10-20	450-450	7/8 x 1 1/16	\$2.25
QT2-4	8-30-10-40	350-350	7/8 x 2 3/8	2.35
QT2-5	16-16-20-20	150-150	7/8 x 1 3/8	1.65
QT2-6	16-16-20-20	450-450	7/8 x 2 3/8	2.50
QT2-6.1†	14-14-20-20	450-450	1 x 3 1/2	3.70
QT2-6.2	10-75-20-150	150-150	1 x 2 3/16	3.05
QT2-7	20-40-30-50	150-150	7/8 x 1 7/8	1.95
QT2-8	30-30-40-40	450-450	1 x 3 3/8	3.40
QT2-9	40-40-50-50	150-150	7/8 x 1 7/8	2.10
QT2-10	40-60-50-80	150-150	7/8 x 2 5/8	2.35
QT2-10.1	40-70-80-125	250-250	1 x 3 3/16	4.30
QT2-10.2	50-75-100-125	300-350	1 3/8 x 2 1/16	6.40
QT2-11‡	60-60-120-120	150-150	1 1/4 x 3 3/4	3.45

TRIPLE-SECTION TUBULARS

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
QT3-0.1	2-30-30 4-60-60	350-350-350	1 x 3 3/16	\$5.20
QT3-0.2	3-70-100 5-150-200	350-350-200	1 3/8 x 3 1/16	6.70
QT3-1	8-8-8- 10-10-10	450-450-450	1 x 1 5/8	2.80
QT3-1.1	7-7-75 10-10-150	450-450-150	1 x 1 1/16	3.85
QT3-1.2	5-100-125 10-200-250	150-150-150	1 3/8 x 2 1/16	4.50
QT3-2	16-16-16 20-20-20	450-450-450	1 x 2 7/8	3.80
QT3-2.1	10-10-10 20-20-20	150-150-150	1 x 1 1/16	2.80
QT3-3	16-25-30 20-30-40	150-150-150	1 x 1 7/8	2.65
QT3-4	16-25-50 20-30-60	150-150-150	1 x 2 3/8	2.60
QT3-5	16-30-30 20-40-40	150-150-150	1 x 1 7/8	2.70
QT3-5.1	10-30-30 20-40-40	350-450-450	1 x 3 1/16	5.40
QT3-6	16-30-60 20-40-80	150-150-150	1 x 2 3/8	2.90
QT3-7	16-40-40 20-50-50	150-150-150	1 x 2 3/8	2.70
QT3-7.1	25-40-50 50-80-100	150-150-150	1 x 2 1/16	3.60
QT3-8	30-30-30 50-50-50	150-150-150	1 x 2 3/8	3.15
QT3-9	25-30-125 50-60-250	150-150-25	1 x 2 3/16	3.65
QT3-10	25-60-125 50-120-250	25-150-150	1 3/8 x 2 3/16	4.35
QT3-11	30-50-60 60-100-120	300-300-300	1 3/8 x 2 3/16	6.50
QT3-12	35-50-70 70-75-100	25-400-400	1 3/8 x 3 3/16	6.40
QT3-13	75-75-75 150-150-150	150-150-150	1 3/8 x 2 1/16	5.05

\* Add 1/16" to diameter and 1/8" to length to allow for insulating sleeve.  
 † All designs have mounting bracket and insulated leads.  
 ‡ Replacement for antenna rotator capacitors.

QUAD-SECTION TUBULARS

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
QT4-1	4-20-100-150 5-30-140-200	300-200-350-200	1 3/8 x 3 3/8	\$6.85
QT4-1.1	7-15-15-15 10-20-20-20	450-450-450-450	1 3/8 x 1 1/16	5.25
QT4-2	8-30-30-60 10-40-40-80	450-250-250-300	1 3/8 x 2 5/8	4.95
QT4-2.1	7-20-40-50 10-40-80-100	450-300-400-300	1 3/8 x 3 3/16	6.90
QT4-3	16-16-30-30 20-20-40-40	450-450-450-450	1 3/8 x 3 1/8	5.45
QT4-4	16-20-30-40 20-30-40-50	25-150-150-150	1 3/8 x 2	5.50
QT4-5	15-50-50-50 20-100-100-100	400-200-50-300	1 3/8 x 3 1/16	6.80
QT4-6	15-20-50-100 20-40-100-200	150-150-150-150	1 3/8 x 2 1/16	4.85

NONPOLARIZED TUBULARS

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
NPQT-1	3-5	30	1/2 x 1 3/8	\$1.50
NPQT-2	4-5	350	3/4 x 1 5/8	1.70
NPQT-3	8-10	400	1 x 1 5/8	2.00
NPQT-4	15-20	350	1 x 1 5/8	2.50
NPQT-5	15-20	30	5/8 x 1 5/8	1.55
NPQT-5.1†	66.5-90	50	7/8 x 2 7/8	1.50
NPQT-5.2†	100-120	50	1 x 2 7/8	2.00
NPQT-6	250-500	10	1 3/8 x 1 5/8	2.00
NPQT-7	500-1000	3	1 3/8 x 1 5/8	2.10

MT1 MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS IN ALUMINUM CASES

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
MT1-1	1-2	50	3/16 x 1/2	\$1.35
MT1-2	1-2	150	3/16 x 5/8	1.45
MT1-3	3-5	50	1/4 x 1/2	1.45
MT1-4	3-5	150	3/8 x 5/8	1.55
MT1-5	6-10	25	1/4 x 5/8	1.45
MT1-6	6-10	50	3/16 x 5/8	1.50
MT1-7	6-10	100	3/8 x 7/8	1.55
MT1-8	6-10	150	3/8 x 1	1.60
MT1-9	12-20	100	3/8 x 1 1/2	1.60
MT1-10	15-25	15	3/16 x 5/8	1.45
MT1-11	15-25	25	3/8 x 5/8	1.55
MT1-12	15-25	50	3/8 x 3/4	1.60
MT1-13	20-35	6	3/16 x 5/8	1.40
MT1-14	20-25	50	3/8 x 7/8	1.70
MT1-15	25-50	6	3/16 x 3/4	1.40
MT1-16	25-50	15	3/8 x 5/8	1.60
MT1-17	25-50	50	3/8 x 1 1/4	1.85
MT1-18	50-100	6	3/8 x 3/4	1.50
MT1-19	50-100	15	3/8 x 7/8	1.80
MT1-20	50-100	25	3/8 x 1 1/2	1.80
MT1-21	75-150	6	3/8 x 7/8	1.55
MT1-22	100-200	3	3/8 x 7/8	1.50
MT1-23	100-200	15	3/8 x 1 1/2	2.10
MT1-24	150-300	6	3/8 x 1	1.80
MT1-25	125-250	12	3/8 x 1 1/2	2.10
MT1-26	250-500	3	3/8 x 1 1/2	1.75

For explanation of ratings, see first page of G-E capacitors

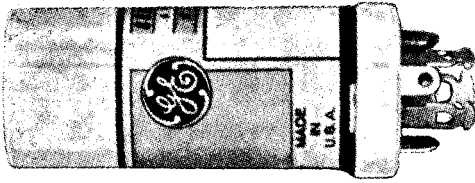
All prices are subject to change without notice.





# SERVICE-DESIGNED CAPACITORS

## XC TWIST-PRONG ELECTROLYTICS



- Designed for 85°C operation.
- Withstand high surge voltages.
- Ideal for high Ripple Selenium Rectifier Circuits.
- Furnished complete with Phenolic Mounting Plate.

### SINGLE-SECTION CANS

Cat. No.	Capacitance, Mfd	Voltage	Size	List Price
XC1-1	7-10	Up to 500V	1 x 2	\$1.70
XC1-2	15-20	Up to 500V	1 x 2	1.85
XC1-3	30-40	Up to 500V	1 x 2½	2.50
XC1-4	25-50	Up to 150V	1 x 2	1.65
XC1-5	30-50	Up to 350V	1 x 2	2.10
XC1-6	35-50	Up to 450V	1 x 2½	2.35
XC1-7	50-80	Up to 350V	1½ x 2	2.85
XC1-8	60-80	Up to 450V	1½ x 2½	3.05
XC1-9	60-80	Up to 500V	1½ x 2½	3.35
XC1-10	60-100	Up to 150V	1 x 2	2.00
XC1-11	60-100	Up to 300V	1 x 3	2.90
XC1-12	60-100	Up to 300V	1½ x 2	2.90
XC1-13	70-100	Up to 450V	1½ x 2½	3.45
XC1-14	70-125	Up to 200V	1 x 3	2.50
XC1-15	100-125	Up to 450V	1½ x 3	3.85
XC1-16	80-140	Up to 150V	1 x 2½	2.15
XC1-16.1*	80-150	Up to 150V	1 x 2½	2.20
XC1-17	100-150	Up to 150V	1½ x 2	2.15
XC1-18	100-150	Up to 350V	1½ x 3½	3.60
XC1-19	100-160	Up to 250V	1½ x 2½	3.40
XC1-20	120-200	Up to 150V	1 x 3	2.70
XC1-21	120-200	Up to 300V	1½ x 2½	4.05
XC1-22	200-300	Up to 150V	1½ x 2½	2.80
XC1-23	250-300	Up to 350V	1½ x 4	5.55
XC1-24	250-500	Up to 25V	1 x 2	2.40
XC1-25	250-500	Up to 50V	1½ x 2	2.65
XC1-26	500-1000	Up to 16V	1 x 2	2.55
XC1-27	750-1500	Up to 50V	1½ x 3	4.40
XC1-28	1000-2000	Up to 16V	1½ x 2	3.45
XC1-29	1500-3000	Up to 16V	1½ x 2½	4.25

\*Can insulated

### DUAL-SECTION CANS

Cat. No.	Capacitance, Mfd	Voltage	Size	List Price
XC2-1	3-60 4-80	350V-450V	1 x 3½	\$3.40
XC2-2	4-4 5-5	450V-450V	1 x 2	1.90
XC2-3	4-15 5-20	350V-350V	1 x 2	2.05
XC2-4	4-120 5-200	200V-200V	1½ x 2½	2.80
XC2-5	8-8 10-10	500V-500V	1 x 2	2.00
XC2-6	8-16 10-20	350V-475V	1 x 2½	2.35
XC2-7	5-20 10-30	50V-200V	1 x 2	2.00
XC2-8	8-25 10-30	500V-500V	1 x 3	2.60
XC2-9	8-30 10-40	300V-300V	1 x 2	2.50
XC2-10	8-30 10-40	450V-450V	1 x 2	2.75

Cat. No.	Capacitance, Mfd	Voltage	Size	List Price
XC2-11	8-40 10-50	300V-350V	1½ x 2	\$2.90
XC2-12	8-100 10-160	350V-350V	1½ x 3	4.30
XC2-13	15-15 20-20	250V-250V	1 x 2	1.90
XC2-14	15-15 20-20	450V-450V	1 x 2½	2.55
XC2-15	15-15 20-20	500V-500V	1½ x 2	2.85
XC2-16	15-30 20-40	350V-350V	1 x 2½	2.75
XC2-17	15-30 20-40	450V-450V	1½ x 2	3.25
XC2-18	15-60 20-80	350V-350V	1½ x 2½	3.50
XC2-18.1	15-40 20-80	450V-350V	1 x 3	3.25
XC2-19	15-60 20-80	450V-450V	1½ x 2½	3.90
XC2-20	15-75 20-100	475V-400V	1½ x 3	4.50
XC2-21	20-30 20-50	150V-150V	1 x 2	2.00
XC2-22	20-40 30-60	350V-350V	1½ x 2	3.15
XC2-23	20-75 30-100	50V-400V	1½ x 2½	3.90
XC2-24	30-30 40-40	250V-250V	1 x 2½	2.50
XC2-25	30-30 40-40	450V-450V	1½ x 2½	3.45
XC2-26	30-35 40-45	500V-500V	1½ x 2½	4.40
XC2-27	30-60 40-80	350V-350V	1½ x 2½	4.10
XC2-28	30-75 40-100	450V-450V	1½ x 3½	4.85
XC2-28.1	30-50 40-100	450V-50V	1 x 2½	2.80
XC2-29	30-30 50-50	150V-150V	1 x 2	2.15
XC2-30	30-60 50-80	150V-150V	1 x 2½	2.40
XC2-31	30-60 50-80	475V-475V	1½ x 3½	5.20
XC2-32	30-100 50-150	50V-150V	1 x 3	2.50
XC2-32.1	25-250 50-500	150V-5V	1 x 2	2.45
XC2-33	40-40 60-60	450V-450V	1½ x 3	4.50
XC2-34	60-60 80-80	200V-400V	1½ x 2½	3.95
XC2-35	60-60 80-80	450V-450V	1½ x 3½	5.40
XC2-36	60-75 80-100	450V-50V	1½ x 3	3.75
XC2-37	50-50 100-100	50V-50V	1 x 2	2.10
XC2-38	75-75 100-100	200V-300V	1½ x 3	3.45
XC2-39	75-75 100-100	400V-400V	1½ x 4	5.75
XC2-40	75-100 100-150	150V-150V	1 x 3½	3.10
XC2-41	75-100 100-150	150V-150V	1½ x 2	3.25
XC2-42	75-90 100-120	400V-400V	1½ x 4	6.20
XC2-43	100-120 200-200	250V-250V	1½ x 4	5.50
XC2-43.1	300-100 800-250	16V-16V	1 x 2	2.75
XC2-44	500-500 1000-1000	16V-16V	1 x 3½	3.80
XC2-45	500-500 1000-1000	30V-30V	1½ x 2½	5.35

SECTION 1500

**XC TWIST-PRONG ELECTROLYTICS (cont'd)**

**TRIPLE-SECTION CANS**

Cat. No.	Capacitance, Mfd	Voltage	Size	List Price
XC3-1	4-18-15 5-10-20	350-400-400	1 x 2	\$2.55
XC3-2	4-15-30 5-20-40	350-475-400	1 x 3	3.70
XC3-3	4-15-50 5-6-20-40	350-350-400	1 x 3½	3.70
XC3-4	4-30-100 5-40-250	350-350-350	1½ x 3½	5.05
XC3-5	4-40-75 5-50-100	450-350-350	1½ x 3	4.55
XC3-5.1	3-30-100 5-60-200	200-200-50	1 x 2½	2.90
XC3-6	4-50-75 5-100-125	200-75-350	1½ x 3	4.80
XC3-6.1	2-250-500 5-500-1000	32-16-16	1 x 2½	4.10
XC3-7	8-8-8 10-10-10	450-450-450	1 x 2	2.60
XC3-8	8-8-30 10-10-40	400-400-400	1 x 3	3.35
XC3-9	8-8-60 10-10-80	450-450-450	1½ x 2½	4.80
XC3-10	8-15-10 10-20-20	350-350-25	1 x 2	2.55
XC3-11	8-15-20 10-20-30	475-475-350	1 x 3	3.40
XC3-12	8-15-60 10-20-80	350-450-350	1½ x 2½	4.25
XC3-13	8-15-75 10-20-100	450-350-350	1½ x 2½	4.55
XC3-13.1	7-15-50 10-20-100	450-450-50	1 x 2½	2.95
XC3-14	8-20-75 10-30-100	150-150-150	1 x 2½	2.85
XC3-15	8-30-30 10-40-40	500-500-500	1½ x 2½	5.05
XC3-16	8-30-75 10-40-100	400-400-350	1½ x 3	5.05
XC3-17	8-35-75 10-45-100	450-450-200	1½ x 2½	4.15
XC3-17.1	7-40-75 10-50-100	500-475-450	1½ x 3	5.45
XC3-18	8-60-75 10-80-100	400-350-400	1½ x 3½	5.55
XC3-19	8-75-110 10-100-150	450-300-300	1½ x 3½	5.75
XC3-20	8-150-200 10-200-250	450-300-200	1½ x 4	6.85
XC3-21	12-12-15 15-15-20	450-450-450	1 x 3	3.25
XC3-22	12-12-20 15-15-40	450-450-25	1 x 2½	2.75
XC3-22.1	10-20-75 15-30-150	500-500-50	1½ x 2½	3.70
XC3-23	15-15-15 20-20-20	350-350-350	1 x 2½	2.90
XC3-23.1	15-15-10 20-20-20	450-450-25	1 x 2	2.95
XC3-24	15-15-15 20-20-20	450-450-450	1½ x 2	3.60
XC3-25	15-10-20 20-20-30	350-25-350	1 x 2½	2.95
XC3-26	15-15-30 20-20-40	450-450-450	1½ x 2½	4.40
XC3-27	15-15-75 20-20-100	450-450-350	1½ x 3	4.95
XC3-28	15-20-30 20-30-40	150-150-150	1 x 2	2.60
XC3-28.1	10-15-20 20-30-40	350-350-350	1 x 3	3.00
XC3-29	15-30-30 20-40-40	450-450-450	1½ x 2½	4.45
XC3-30	15-30-50 20-40-60	450-450-450	1½ x 3	5.00
XC3-31	15-30-60 20-40-80	150-150-150	1 x 2½	2.90

Cat. No.	Capacitance, Mfd	Voltage	Size	List Price
XC3-32	15-30-60 20-40-80	450-450-450	1½ x 3	\$5.40
XC3-33	15-30-60 20-40-90	350-350-350	1½ x 3	4.85
XC3-34	15-60-75 20-80-100	450-450-350	1½ x 3½	5.85
XC3-35	15-75-90 20-100-240	450-400-300	1½ x 4	6.70
XC3-35.1	10-75-75 20-140-140	350-350-350	1½ x 4	6.00
XC3-36	20-20-30 30-30-40	475-475-475	1½ x 3	5.15
XC3-36.1	20-40-75 30-60-100	500-450-450	1½ x 3½	6.00
XC3-37	20-15-150 30-60-200	400-350-150	1½ x 3	5.00
XC3-38	30-30-30 40-40-40	150-150-150	1 x 2½	2.60
XC3-39	30-30-20 40-40-40	450-450-25	1½ x 2½	3.95
XC3-40	30-30-30 40-40-40	450-450-450	1½ x 3	4.90
XC3-41	30-60-80 40-80-125	450-400-350	1½ x 4	6.30
XC3-41.1	20-20-100 40-40-250	150-150-25	1 x 2½	3.15
XC3-41.2	30-40-50 40-60-100	500-500-350	1½ x 3½	6.10
XC3-42	30-60-300 40-80-500	400-400-50	1½ x 3½	5.80
XC3-43	30-70-70 40-120-120	150-150-150	1½ x 2½	4.05
XC3-44	30-30-30 50-50-50	150-150-150	1 x 2½	3.05
XC3-45	40-40-50 60-60-80	350-350-350	1½ x 3½	5.55
XC3-45.1	30-40-50 60-80-100	175-175-175	1 x 3	3.60
XC3-45.2	30-50-100 60-100-200	100-350-350	1½ x 4	6.25
XC3-46	40-80-125 60-140-200	200-150-150	1½ x 3	4.40
XC3-47	60-125-175 80-200-300	150-150-150	1½ x 3½	5.00
XC3-47.1	30-75-250 100-200-700	16-16-16	1 x 1¾	3.35
XC3-48	50-250-250 100-500-500	16-16-16	1 x 2	3.35
XC3-48.1	80-80-150 250-250-500	16-16-16	1 x 1¾	3.35

**Quad-Section Cans on Next Page**

**ACCESSORIES**

Cat. No.	Description	List Price
W53	Mounting wafer (phenolic) for 1 inch can	\$0.10
WL4	Mounting wafer (phenolic) for 1½ inch can	.10
WM3	Mounting wafer (metal) for 1 inch can	.10
WM4	Mounting wafer (metal) for 1½ inch can	.10
PMA1	*Printed board mounting adapter kit	.45
1T9	†Insulating sleeves for 1 x 4 inch can	.10
1T14	†Insulating sleeves for 1½ x 4 inch can	.10

\* Half-moon terminal ends must be removed from capacitors before installing printed-circuit adapters.

† Can be easily cut to fit 2, 2½, 3 and 3½-inch cans.

**For explanation of ratings, see first page of G-E capacitors**

*All prices are subject to change without notice.*





# SERVICE-DESIGNED CAPACITORS

## XC TWIST-PRONG ELECTROLYTICS (cont'd)

### QUAD-SECTION CANS

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
XC4-1	3-8-8-8-10 4-10-10-20	300-500-300-25	2	\$3.35
XC4-2	3-8-30-100 5-10-40-160	350-475-400-350	4	6.30
XC4-3	3-8-40-100 5-10-60-160	300-300-300-350	3½	6.20
XC4-4	3-8-75-100 4-10-100-160	350-475-300-350	4	6.70
XC4-4.1	2-100-250-250 4-350-750-750	32-16-16-16	2	4.80
XC4-5	4-4-4-4 5-5-5-5	450-450-450-450	2	3.00
XC4-6	4-4-20-60 5-5-25-70	450-450-450-450	2½	5.10
XC4-7	4-8-8-60 5-10-10-70	450-450-450-450	2½	5.00
XC4-8	4-8-30-30 5-10-35-40	450-475-450-475	2½	5.00
XC4-9	4-15-40-50 5-20-50-60	450-350-350-400	3	5.15
XC4-10	4-25-30-60 5-30-40-80	400-400-400-400	3½	5.85
XC4-11	4-30-75-80 5-40-100-110	350-350-75-350	3	5.50
XC4-12	8-8-8-8 10-10-10-10	450-450-450-450	2	3.35
XC4-13	8-8-15-30 10-10-20-40	475-475-475-475	2½	4.85
XC4-14	8-8-15-90 10-10-20-130	475-350-350-350	3	5.60
XC4-15	8-8-30-30 10-10-35-40	450-450-450-450	2½	4.80
XC4-16	8-8-50-50 10-10-60-100	450-450-200-50	2	3.85
XC4-17	8-8-75-100 10-10-100-150	475-400-300-300	3½	6.20
XC4-18	8-15-15-100 10-20-20-140	475-300-300-300	2½	5.05
XC4-19	8-10-20-75 10-20-30-100	400-50-50-400	2½	5.10
XC4-20	8-15-30-30 10-20-40-40	350-350-350-350	2½	4.40
XC4-21	8-15-30-30 10-20-40-40	450-25-450-450	2½	4.70
XC4-22	8-15-30-50 10-20-40-60	350-475-350-350	2½	4.95
XC4-23	8-15-30-90 10-20-40-125	475-450-450-300	3	5.80
XC4-24	8-15-30-90 10-20-40-130	350-350-475-350	3½	6.35
XC4-25	8-15-30-90 10-20-50-120	350-350-50-350	3	5.10
XC4-26	8-10-30-90 10-20-50-120	475-400-50-400	3	5.90
XC4-27	8-10-50-75 10-20-60-100	150-50-200-300	2½	4.55
XC4-28	8-15-60-75 10-20-80-100	300-50-350-350	3½	5.35
XC4-29	8-15-75-100 10-20-100-140	450-300-300-350	4	6.60
XC4-30	8-15-100-100 10-20-140-150	450-300-350-300	4	6.70
XC4-31	8-15-100-150 10-20-150-250	250-350-300-50	3	5.55
XC4-32	8-15-30-50 10-25-40-60	450-25-350-350	2½	4.60
XC4-33	8-15-30-50 10-25-40-100	350-25-350-25	2	3.75
XC4-34	8-25-30-60 10-30-40-80	450-450-450-475	3½	6.65

\* All Dia. are 1⅞".

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
XC4-35	8-25-30-60 10-30-40-80	450-300-400-400	3	\$5.75
XC4-36	8-25-25-75 10-30-50-150	475-500-50-50	2½	4.45
XC4-37	8-25-75-150 10-30-100-200	300-300-300-300	4	6.80
XC4-38	8-25-100-150 10-30-140-200	300-150-300-150	3½	5.70
XC4-39	8-25-150-150 10-30-200-200	300-150-200-150	3½	5.50
XC4-40	8-30-30-60 10-40-40-80	250-300-300-300	3	4.85
XC4-41	8-30-25-75 10-40-50-100	350-350-50-350	3	5.15
XC4-42	8-30-60-75 10-40-80-100	475-400-400-400	4	6.95
XC4-43	8-30-90-110 10-40-120-150	250-400-250-50	3	5.20
XC4-44	8-50-50-60 10-60-60-80	150-200-350-350	3	5.40
XC4-44.1	5-30-50-50 10-60-100-100	200-350-350-150	3	4.90
XC4-45	12-12-12-30 15-15-15-40	450-350-450-350	2½	4.00
XC4-46	12-15-10-10 15-20-20-20	450-450-25-25	2	3.45
XC4-47	12-30-30-20 15-40-40-40	450-450-450-50	3	5.20
XC4-48	15-15-15-10 20-20-20-20	450-450-450-25	2	4.15
XC4-49	15-15-15-10 20-20-20-20	450-450-450-450	2½	4.55
XC4-50	15-15-15-15 20-20-20-20	475-475-475-475	2½	4.85
XC4-51	15-15-15-50 20-20-20-60	450-450-450-450	3	5.50
XC4-52	15-15-15-75 20-20-20-100	450-450-450-300	3	5.30
XC4-53	15-15-15-150 20-20-20-200	300-300-300-300	3½	5.95
XC4-54	15-15-30-20 20-20-40-40	450-450-450-25	2½	4.65
XC4-55	15-15-30-30 20-20-40-40	450-450-450-450	3	5.55
XC4-56	15-15-30-75 20-20-40-100	350-350-350-400	3½	6.00
XC4-57	15-15-60-150 20-20-80-200	350-300-350-150	3½	5.50
XC4-58	15-15-75-75 20-20-100-100	400-400-350-100	3½	5.50
XC4-59	15-15-75-100 20-20-100-140	300-300-300-350	4	5.00
XC4-60	15-20-30-75 20-25-35-100	200-450-450-50	2½	4.65
XC4-61	15-20-30-30 20-25-35-100	450-50-450-450	2½	5.05
XC4-62	10-25-30-30 20-30-40-40	25-350-350-350	2½	4.20
XC4-63	15-25-30-25 20-30-40-50	300-300-300-25	2	4.00
XC4-64	15-25-25-150 20-30-50-200	350-400-50-350	4	6.75
XC4-65	15-30-50-50 20-40-60-60	150-350-350-200	3	4.80
XC4-66	15-30-50-60 20-40-60-80	400-300-450-350	3½	6.15
XC4-67	15-30-50-65 20-40-60-90	350-350-350-350	3½	5.90
XC4-68	15-30-50-150 20-40-60-200	150-150-150-10	2	3.60
XC4-69	15-50-60-50 20-60-80-100	350-350-150-50	2½	4.65

SECTION 1500

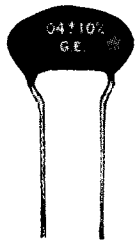
XC TWIST-PRONG ELECTROLYTICS (cont'd)

Quad-Section Cans (cont'd)

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
XC4-70	15-75-75-170 20-100-100-240	350-150-150-150	3 1/2	\$5.95
XC4-70.1	15-60-50-80 20-100-100-150	450-350-50-350	4	6.75
XC4-71	15-30-60-75 25-40-80-100	50-400-350-200	3 1/2	5.55
XC4-72	25-25-30-30 30-30-40-40	450-350-450-350	3	5.35
XC4-73	25-25-30-30 30-30-150-150	450-450-300-300	4	6.95
XC4-74	25-30-20-60 30-40-40-80	400-400-25-400	3 1/2	5.90
XC4-75	25-30-25-100 30-40-50-140	350-350-50-350	3 1/2	5.90
XC4-76	25-30-40-150 30-40-50-200	400-300-250-150	3	5.45
XC4-77	25-45-150-150 30-60-200-100	175-175-175-175	3 1/2	6.15

Cat. No.	Capacitance, Mfd	Voltage	Size*	List Price
XC4-78	30-30-30-30 40-40-40-40	150-150-150-150	2	\$3.60
XC4-79	30-30-30-20 40-40-40-40	450-450-450-25	3	5.50
XC4-80	30-30-30-30 40-40-40-40	450-450-450-450	3 1/2	6.25
XC4-81	30-30-20-60 40-40-40-80	150-150-25-150	2	3.65
XC4-82	30-30-20-60 40-40-40-80	450-450-25-450	3 1/2	6.45
XC4-83	30-30-50-100 40-40-60-150	350-350-350-75	3	5.25
XC4-84	30-50-50-75 40-60-60-100	400-400-300-400	4	6.85
XC4-85	50-60-75-50 60-80-100-100	400-350-200-50	3 1/2	5.90

\* All Dia. are 1 3/8".



MPC SIDE-LEAD TUBULARS

- ±10% capacitance tolerance
- 85° OPERATION: for 125°C derate working voltage by 25%
- Dual DIELECTRIC (Mylar-Paper) solidly impregnated with rock-type casing with high humidity resistance.

Cat. No.	Capacitance, Mfd.	Size	List Price
<b>200 W.V.D.C.</b>			
MPC-2S2	.02	.350 x .855	\$0.25
MPC-2S47	.047	.450 x .855	.30
MPC-2S5	.05	.450 x .855	.30
MPC-2P1	.1	.470 x 1.180	.35
MPC-2P15	.15	.540 x 1.180	.40
MPC-2P25	.25	.620 x 1.300	.45
MPC-2P47	.47	.730 x 1.600	.60
MPC-2P5	.5	.730 x 1.600	.60
<b>400 W.V.D.C.</b>			
MPC-4S1	.01	.390 x .690	.25
MPC-4S15	.015	.430 x .690	.25
MPC-4S2	.02	.390 x .855	.30
MPC-4S22	.022	.400 x .855	.30
MPC-4S33	.033	.440 x .855	.30
MPC-4S47	.047	.415 x 1.150	.35
MPC-4S5	.05	.415 x 1.150	.35
MPC-4S68	.068	.440 x 1.180	.35
MPC-4P1	.10	.520 x 1.180	.40
MPC-4P15	.15	.560 x 1.300	.50
MPC-4P22	.22	.620 x 1.560	.60
MPC-4P25	.25	.650 x 1.560	.60
MPC-4P47	.47	.850 x 1.600	.70
MPC-4P5	.50	.850 x 1.600	.75
<b>600 W.V.D.C.</b>			
MPC-6D1	.001	.340 x .690	.25
MPC-6D15	.0015	.340 x .690	.25
MPC-6D2	.002	.340 x .690	.25
MPC-6D22	.0022	.340 x .690	.25
MPC-6D25	.0025	.350 x .690	.25
MPC-6D27	.0027	.370 x .690	.25
MPC-6D3	.003	.370 x .690	.25
MPC-6D33	.0033	.370 x .690	.25
MPC-6D39	.0039	.370 x .690	.25
MPC-6D4	.004	.400 x .690	.25
MPC-6D47	.0047	.400 x .690	.25
MPC-6D5	.005	.415 x .690	.25
MPC-6D56	.0056	.415 x .690	.25
MPC-6D6	.006	.430 x .690	.25
MPC-6D68	.0068	.370 x .870	.25
MPC-6D75	.0075	.370 x .870	.30
MPC-6D8	.008	.390 x .870	.30
MPC-6S1	.01	.400 x .870	.30
MPC-6S12	.012	.415 x .870	.30
MPC-6S15	.015	.445 x .870	.30
MPC-6S2	.02	.470 x .870	.30
MPC-6S22	.022	.400 x 1.150	.30
MPC-6S25	.025	.415 x 1.150	.35
MPC-6S27	.027	.370 x .690	.35

PAPER MYLAR<sup>‡</sup> CAPACITORS

Cat. No.	Capacitance, Mfd.	Size	List Price
<b>600 W.V.D.C. (CONTD.)</b>			
MPC-6S3	.03	.415 x 1.150	\$0.35
MPC-6S33	.033	.430 x 1.150	.35
MPC-6S39	.039	.470 x 1.150	.35
MPC-6S4	.04	.470 x 1.150	.35
MPC-6S47	.047	.490 x 1.150	.40
MPC-6S5	.05	.490 x 1.150	.40
MPC-6S56	.056	.520 x 1.100	.40
MPC-6S6	.06	.520 x 1.180	.45
MPC-6S68	.068	.540 x 1.300	.45
MPC-6S75	.075	.570 x 1.300	.45
MPC-6S82	.082	.590 x 1.300	.45
MPC-6P1	.10	.640 x 1.300	.45
MPC-6P15	.15	.650 x 1.560	.65
MPC-6P2	.20	.730 x 1.560	.65
MPC-6P22	.22	.750 x 1.560	.65
<b>1600 W.V.D.C.</b>			
MPC-16D1	.001	.350 x .870	.35
MPC-16D15	.0015	.375 x .870	.35
MPC-16D18	.0018	.400 x .870	.35
MPC-16D2	.002	.405 x .870	.35
MPC-16D22	.0022	.420 x .870	.35
MPC-16D3	.003	.475 x .870	.40
MPC-16D33	.0033	.480 x .870	.40
MPC-16D4	.004	.520 x .870	.40
MPC-16D47	.0047	.540 x .870	.40
MPC-16D5	.005	.565 x .870	.45
MPC-16D6	.006	.460 x 1.180	.45
MPC-16D7	.007	.485 x 1.180	.45
MPC-16D75	.0075	.495 x 1.180	.45
MPC-16D8	.008	.510 x 1.180	.50
MPC-16S1	.01	.525 x 1.180	.50
MPC-16S15	.015	.560 x 1.300	.50
MPC-16S2	.02	.570 x 1.600	.60
MPC-16S3	.03	.665 x 1.600	.70
MPC-16S33	.033	.695 x 1.600	.80
MPC-16S47	.047	.785 x 1.600	.85
MPC-16S5	.05	.815 x 1.600	.85
<b>200 W.V.D.C.</b>			
MAL-2S2	.02	3/8 x 1 1/4	\$0.25
MAL-2S47	.047	3/8 x 1 1/4	.25
MAL-2S5	.05	3/8 x 1 1/4	.25
MAL-2P1	.10	7/16 x 1 1/4	.35
MAL-2P15	.15	1/2 x 1 1/2	.35
MAL-2P25	.25	5/16 x 1 1/2	.45
MAL-2P47	.47	3/8 x 1 7/8	.60
MAL-2P5	.50	3/8 x 1 7/8	.60



MAL AXIAL-LEAD TUBULARS

- ±10% capacitance tolerance
- 85°C operation
- Dual DIELECTRIC (Mylar-Paper) encased in solid thermosetting compound which will not crack, soften or flow at maximum temperature.

Cat. No.	Capacitance, Mfd.	Size	List Price
<b>400 W.V.D.C.</b>			
MAL-4S1	.01	5/16 x 1	\$0.25
MAL-4S15	.015	3/8 x 1 1/4	.25
MAL-4S2	.02	3/8 x 1 1/4	.25
MAL-4S22	.022	3/8 x 1 1/4	.30
MAL-4S33	.033	7/16 x 1 1/4	.30
MAL-4S47	.047	7/16 x 1 1/4	.30
MAL-4S5	.05	7/16 x 1 1/4	.30
MAL-4S68	.068	1/2 x 1 1/2	.35
MAL-4P1	.10	1/2 x 1 1/2	.35
MAL-4P15	.15	5/16 x 1 1/2	.40
MAL-4P22	.22	3/8 x 1 7/8	.45
MAL-4P25	.25	3/8 x 1 7/8	.50
MAL-4P47	.47	3/4 x 2 1/4	.75
MAL-4P50	.50	3/4 x 2 1/4	.80
<b>600 W.V.D.C.</b>			
MAL-6D1	.001	3/16 x 1	.25
MAL-6D15	.0015	2/16 x 1	.25
MAL-6D2	.002	2/16 x 1	.25
MAL-6D22	.0022	2/16 x 1	.25
MAL-6D3	.003	3/16 x 1	.25
MAL-6D33	.0033	3/16 x 1	.25
MAL-6D4	.004	3/16 x 1	.25
MAL-6D47	.0047	3/16 x 1	.25
MAL-6D5	.005	3/16 x 1	.25
MAL-6D6	.006	3/16 x 1	.25
MAL-6D68	.0068	3/16 x 1	.30
MAL-6S1	.01	3/8 x 1 1/4	.30
MAL-6S15	.015	3/8 x 1 1/4	.30
MAL-6S2	.02	3/8 x 1 1/4	.30
MAL-6S22	.022	3/8 x 1 1/4	.35
MAL-6S3	.03	3/8 x 1 1/4	.35
MAL-6S33	.033	7/16 x 1 1/4	.35
MAL-6S4	.04	7/16 x 1 1/4	.35
MAL-6S47	.047	1/2 x 1 1/2	.40
MAL-6S5	.05	1/2 x 1 1/2	.40
MAL-6S6	.06	1/2 x 1 1/2	.40
MAL-6S68	.068	1/2 x 1 1/2	.45
MAL-6P1	.10	7/16 x 1 1/2	.45
MAL-6P15	.15	3/8 x 1 7/8	.55
MAL-6P2	.20	3/8 x 1 7/8	.65
MAL-6P22	.22	3/8 x 1 7/8	.70
MAL-6P25	.25	1/4 x 1 1/2	.75
MAL-6P33	.33	3/4 x 2 1/4	.90
MAL-6P47	.47	3/4 x 2 1/4	1.25
MAL-6P50	.50	3/4 x 2 1/4	1.25
<b>1600 W.V.D.C.</b>			
MAL-16D1	.001	3/8 x 1 1/4	.65
MAL-16D15	.0015	3/8 x 1 1/4	.65
MAL-16D22	.0022	3/8 x 1 1/4	.65
MAL-16D33	.0033	3/8 x 1 1/4	.65
MAL-16D47	.0047	3/8 x 1 1/4	.65
MAL-16D5	.005	3/8 x 1 1/4	.65
MAL-16D68	.0068	7/16 x 1 1/4	.65
MAL-16D82	.0082	7/16 x 1 1/4	.65
MAL-16S1	.01	1/2 x 1 1/2	.70
MAL-16S15	.015	1/2 x 1 1/2	.70
MAL-16S22	.022	3/8 x 1 7/8	.70
MAL-16S33	.033	5/8 x 1 7/8	.70
MAL-16S47	.047	5/8 x 1 7/8	.90
MAL-16S5	.05	5/8 x 1 7/8	.90
<b>6000 W.V.D.C.</b>			
MAL-60D5	.0005	1/2 x 1 1/2	1.35
MAL-60D1	.001	5/16 x 1 1/2	1.35
MAL-60D5	.005	1 1/16 x 1 1/2	1.35
<b>10,000 W.V.D.C.</b>			
MAL-100T5	.0005	1/2 x 1 1/2	1.50
<b>12,500 W.V.D.C.</b>			
MAL-125T5	.00025	1/2 x 1 1/2	1.70

‡ Trade-mark of DuPont Co.

For explanation of ratings, see first page of G-E capacitors  
All prices are subject to change without notice.

GENERAL ELECTRIC



# GLP ENGINEERING BULLETIN

ELECTRONICS INCORPORATED, BRISTOL, CONN.  
SOLID ELECTROLYTE SD AND MICRO-MINIATURE TANTALUM CAPACITORS

## SOLID ELECTROLYTE SD TANTALUM CAPACITORS

GLP Electronics Series SD Solid Tantalum Capacitors provide unsurpassed performance for circuits demanding reliable components. They are the result of long research and development projects aimed at producing in production quantities, reliable solid tantalum capacitors.

All Series SD capacitors are designed with a porous tantalum or wire tantalum anode formed by electrochemical means to produce an extremely stable oxide dielectric. The anode is then coated with a solid semi-conductor type of electrolyte, thus preparing it for a conductive coating that is used for the cathode. The entire assembly is then hermetically sealed in a hot-tinned brass can with a time tested glass-to-metal seal, thus giving full protection against all adverse outside environmental conditions for long term operation over a temperature range from -80°C to +125°C, and under proper conditions can be operated to temperatures approaching 150°C.

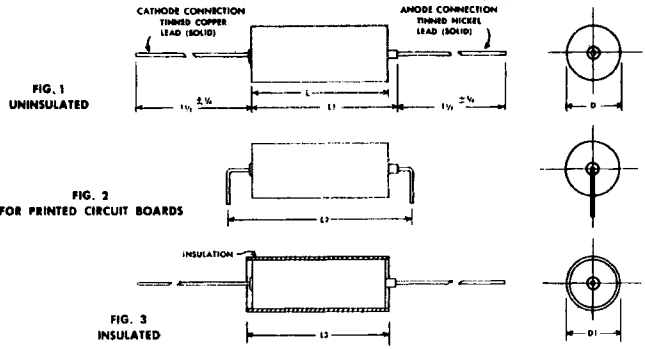
GLP Series SD Capacitors are designed to meet or exceed the requirements of style CS 12 and CS 13 of MIL C 26655A.

### AVAILABLE RATINGS

.0047UF to 330UF 6VDC to 50VDC -80°C to +125°C

µf	6 VDC		10 VDC		15 VDC		20 VDC		35 VDC		50 VDC	
	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*	Part No.*
.0047					SD 472-20A	SD 472-35A	SD 472-50A					
.0056					SD 562-20A	SD 562-35A	SD 562-50A					
.0068					SD 682-20A	SD 682-35A	SD 682-50A					
.0082					SD 822-20A	SD 822-35A	SD 822-50A					
.01					SD 103-20A	SD 103-35A	SD 103-50A					
.012					SD 123-20A	SD 123-35A	SD 123-50A					
.015					SD 153-20A	SD 153-35A	SD 153-50A					
.018					SD 183-20A	SD 183-35A	SD 183-50A					
.022					SD 223-20A	SD 223-35A	SD 223-50A					
.027					SD 273-20A	SD 273-35A	SD 273-50A					
.033					SD 333-20A	SD 333-35A	SD 333-50A					
.039					SD 393-20A	SD 393-35A	SD 393-50A					
.047					SD 473-20A	SD 473-35A	SD 473-50A					
.056					SD 563-20A	SD 563-35A	SD 563-50A					
.068					SD 683-20A	SD 683-35A	SD 683-50A					
.082					SD 823-20A	SD 823-35A	SD 823-50A					
.1					SD 104-20A	SD 104-35A	SD 104-50A					
.12					SD 124-20A	SD 124-35A	SD 124-50A					
.14					SD 144-20A	SD 144-35A	SD 144-50A					
.18					SD 184-20A	SD 184-35A	SD 184-50A					
.22	SD 224-6A	SD 224-10A	SD 224-15A	SD 224-20A	SD 224-35A	SD 224-50A						
.27	SD 274-6A	SD 274-10A	SD 274-15A	SD 274-20A	SD 274-35A	SD 274-50A						
.33	SD 334-6A	SD 334-10A	SD 334-15A	SD 334-20A	SD 334-35A	SD 334-50A						
.39	SD 394-6A	SD 394-10A	SD 394-15A	SD 394-20A	SD 394-35A	SD 394-50A						
.47	SD 474-6A	SD 474-10A	SD 474-15A	SD 474-20A	SD 474-35A	SD 474-50A						
.56	SD 564-6A	SD 564-10A	SD 564-15A	SD 564-20A	SD 564-35A	SD 564-50A						
.68	SD 684-6A	SD 684-10A	SD 684-15A	SD 684-20A	SD 684-35A	SD 684-50A						
.82	SD 824-6A	SD 824-10A	SD 824-15A	SD 824-20A	SD 824-35A	SD 824-50A						
1.0	SD 105-6A	SD 105-10A	SD 105-15A	SD 105-20A	SD 105-35A	SD 105-50A						
1.2	SD 125-6A	SD 125-10A	SD 125-15A	SD 125-20A	SD 125-35A	SD 125-50A						
1.5	SD 156-6A	SD 156-10A	SD 156-15A	SD 156-20A	SD 156-35A	SD 156-50A						
1.8	SD 185-6A	SD 185-10A	SD 185-15A	SD 185-20A	SD 185-35A	SD 185-50A						
2.2	SD 225-6A	SD 225-10A	SD 225-15A	SD 225-20A	SD 225-35A	SD 225-50A						
2.7	SD 275-6A	SD 275-10A	SD 275-15A	SD 275-20A	SD 275-35A	SD 275-50A						
3.3	SD 335-6A	SD 335-10A	SD 335-15A	SD 335-20A	SD 335-35A	SD 335-50A						
3.9	SD 395-6A	SD 395-10A	SD 395-15A	SD 395-20A	SD 395-35A	SD 395-50A						
4.7	SD 475-6A	SD 475-10A	SD 475-15A	SD 475-20A	SD 475-35A	SD 475-50A						
5.6	SD 565-6A	SD 565-10A	SD 565-15A	SD 565-20A	SD 565-35A	SD 565-50A						
6.8	SD 685-6A	SD 685-10A	SD 685-15A	SD 685-20A	SD 685-35A	SD 685-50A						
8.2	SD 825-6A	SD 825-10A	SD 825-15A	SD 825-20A	SD 825-35A	SD 825-50A						
10	SD 106-6A	SD 106-10A	SD 106-15A	SD 106-20A	SD 106-35A	SD 106-50A						
12	SD 126-6B	SD 126-10B	SD 126-15B	SD 126-20B	SD 126-35C	SD 126-50C						
15	SD 156-6B	SD 156-10B	SD 156-15B	SD 156-20B	SD 156-35C	SD 156-50C						
18	SD 186-6B	SD 186-10B	SD 186-15B	SD 186-20B	SD 186-35C	SD 186-50C						
22	SD 226-6B	SD 226-10B	SD 226-15B	SD 226-20C	SD 226-35C	SD 226-50C						
27	SD 276-6B	SD 276-10B	SD 276-15C	SD 276-20C	SD 276-35D	SD 276-50D						
33	SD 336-6B	SD 336-10B	SD 336-15C	SD 336-20C	SD 336-35D	SD 336-50D						
39	SD 396-6B	SD 396-10B	SD 396-15C	SD 396-20C	SD 396-35D	SD 396-50D						
47	SD 476-6B	SD 476-10C	SD 476-15C	SD 476-20C	SD 476-35D							
56	SD 566-6B	SD 566-10C	SD 566-15C	SD 566-20C								
60	SD 606-6B	---	---	---								
68	SD 686-6C	SD 686-10C	SD 686-15C	SD 686-20C								
82	SD 826-6C	SD 826-10C	SD 826-15C	SD 826-20C								
100	SD 107-6C	SD 107-10C	SD 107-15D	SD 107-20D								
120	SD 127-6C	SD 127-10C	SD 127-15D	SD 127-20D								
150	SD 157-6C	SD 157-10D	SD 157-15D									
180	SD 187-6C	---	---	---								
220	SD 227-6D	SD 227-10D	---	---								
330	SD 337-6D	---	---	---								

\*Part No. shall be completed by adding capacitance tolerance letter (K, M, or F) after capacitance and type of insulation (2 or 3) after case size.  
NOTE: Non-polar units available on request.



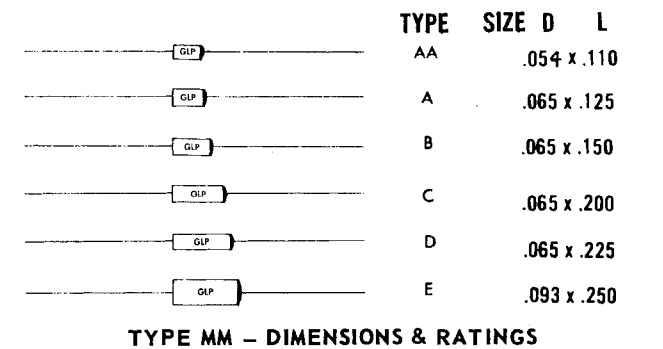
DIMENSIONS IN INCHES

CASE SIZE CODE	LEADS		BARE CASE - FIG. 1			FIG. 2		PLASTIC FILM INSULATION - FIG. 3		RIGID INSULATION - FIG. 3	
	WIRE DIA. ±0.005 -0.001	WIRE SIZE AWG	DIA. D ±0.016 -0.005	LENGTH L ±0.031	LENGTH L1 ±0.031	LENGTH L2 ±0.031	DIA. D1 ±0.010	LENGTH L3 ±0.000 -0.062	DIA. D1 ±0.015	LENGTH L3 ±0.015	
A	0.020	24	0.125	0.250	0.325	0.45	0.135	0.312	0.159	0.345	
B	0.020	24	0.175	0.438	0.515	0.62	0.183	0.500	0.207	0.562	
C	0.025	22	0.279	0.650	0.745	0.89	0.289	0.722	0.312	0.775	
D	0.025	22	0.341	0.750	0.845	1.02	0.351	0.822	0.375	0.875	

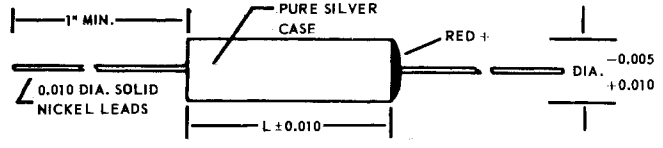
## MICRO-MINIATURE TANTALUM CAPACITATORS

GLP Type MM Solid Tantalum Capacitors are designed to provide the ultimate in micro-miniaturization. They are the first of their kind to be offered which are applicable to both the military and commercial fields. They feature wider temperature ranges, lower leakage characteristics, longer shelf life, and smaller physical sizes than most conventional miniature solid tantalum capacitors.  
Micro-Miniature Solid Tantalum Capacitors are designed to operate from -55°C to +125°C where reliability and performance are prime factors.

AVAILABLE RATINGS  
.001UF to 10UF 1VDC to 30VDC -55°C to +125°C



### TYPE MM - DIMENSIONS & RATINGS



CASE SIZES

	AA	A	B	C	D	E
Diameter (in.)	.054	.065	.065	.065	.065	.093
Length (in.)	.110	.125	.150	.200	.225	.250
Rated Voltage	MAXIMUM MICROFARADS (MIN. = 0.001 MFD)					
30	.10	.25	.50	1.0	1.5	1.5
20	.15	.3	.75	1.5	2.0	2.0
15	.25	.5	1.0	2.0	3.0	3.0
10	.20	.50	1.0	1.50	3.0	4.0
8	.30	.60	1.2	2.0	5.0	6.0
6	.50	.68	1.5	3.25	6.5	7.0
4	.70	.75	2.0	5.0	8.0	8.0
3	.90	1.0	2.5	6.50	8.75	8.75
2	1.0	1.5	3.0	8.0	10.0	10.0
1	1.125	2.0	4.0	8.75	9.5	12.0



# GENERAL INSTRUMENT CORPORATION

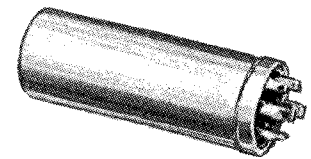
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PRICING AVAILABLE UPON REQUEST

### TYPE TM TWIST-MOUNT ELECTROLYTICS

Designed for 85° C operation. Available in single, dual, triple and quadruple capacitor units. Assembled in aluminum containers providing protection against moisture. Easy to mount, low leakage, long shelf life. Highly dependable. For use in applications where high temperatures, voltage, surges, and ripple currents are encountered; as in radio and television receivers, amplifiers and similar equipment. Packaged in new Vu-Pak especially designed for the new General Instrument Capac-O-Mat.



Stock No. TMS	Capacity	Voltage	Dia-meter	Length
1020	2000	6	1 3/8	2
1040	1000	15	1	2 1/2
1050	2000	15	1 3/8	2 1/2
1060	3000	15	1 3/8	3
1070	4000	15	1 3/8	3 1/2
1110	500	25	1	2
1120	1000	25	1 3/8	2
1150	250	50	1	2 1/2
1160	500	50	1 3/8	2
1170	1000	50	1 3/8	3 1/2
1180	1500	50	1 3/8	4
1200	30	150	1	2
1220	50	150	1	2
1230	80	150	1	2
1240	100	150	1	2
1250	120	150	1	2 1/2
1260	120	150	1 3/8	2
1270	140	150	1	3
1280	150	150	1	3
1285	150	150	1 3/8	2
1290	200	150	1 3/8	2 1/2
1300	300	150	1 3/8	3
1400	160	200	1 3/8	2 1/2
1430	20	250	1	2
1450	40	250	1	2
1480	150	250	1 3/8	2 1/2
1490	200	250	1 3/8	3 1/2
1540	80	300	1	3

Stock No. TMS	Capacity	Voltage	Dia-meter	Length
1550	100	300	1	3
1560	125	300	1 3/8	3
1570	150	300	1 3/8	3
1590	250	300	1 3/8	4
1610	30	350	1	2 1/2
1620	40	350	1	2 1/2
1630	50	350	1	3
1640	60	350	1	3
1650	80	350	1 3/8	2 1/2
1660	125	350	1 3/8	3
1720	4	450	1	2
1730	10	450	1	2
1740	15	450	1	2
1750	20	450	1	2
1760	30	450	1	2 1/2
1770	40	450	1	3
1780	50	450	1	3
1790	60	450	1 3/8	2 1/2
1800	80	450	1 3/8	3
1810	100	450	1 3/8	3
1820	125	450	1 3/8	3 1/2
1860	10	500	1	2
1870	20	500	1	2 1/2
1880	30	500	1	3
1890	40	500	1	3 1/2
1900	80	500	1 3/8	3 1/2
1910	90	500	1 3/8	3 1/2

CONTACT YOUR AUTHORIZED GI INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES



# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### TYPE TM TWIST-MOUNT ELECTROLYTICS (Con't.)

Stock No. TMD	Capacity	Voltage	Dia-meter	Length
2075	20-20	150-150	1	2
2085	30-30	150-150	1	2
2090	40-20	150-150	1	2
2095	40-30	150-150	1	2
2100	40-40	150-150	1	2
2105	50-30	150-150	1	2
2110	50-50	150-150	1	2
2120	60-60	150-150	1	2 1/2
2125	70-30	150-150	1	2 1/2
2130	75-75	150-150	1	2 1/2
2135	80-40	150-150	1	2 1/2
2140	80-50	150-150	1	2 1/2
2145	80-80	150-150	1	3
2160	125-100	150-150	1 3/8	2 1/2
2165	200-5	150-150	1 3/8	2 1/2
2170	200-125	150-150	1 3/8	3
2180	200-150	150-150	1 3/8	3 1/2
2185	200-200	150-150	1 3/8	3
2200	60-60	200-200	1	3
2205	60-60	200-200	1 3/8	2
2210	100-100	200-200	1 3/8	3
2235	20-20	250-250	1	2
2250	40-40	250-250	1	3
2255	150-150	250-250	1 3/8	4
2260	200-200	250-250	1 3/8	4
2310	40-30	300-300	1	3
2330	80-80	300-300	1 3/8	3
2350	120-20	300-300	1 3/8	3
2355	120-40	300-300	1 3/8	3
2370	15-15	350-350	1	2
2385	30-30	350-350	1	3
2395	50-30	350-350	1 3/8	2 1/2
2400	60-30	350-350	1 3/8	2 1/2
2405	80-20	350-350	1 3/8	2 1/2
2410	80-40	350-350	1 3/8	3
2415	80-80	350-350	1 3/8	3
2420	90-40	350-350	1 3/8	3
2425	100-60	350-350	1 3/8	4
2435	100-100	350-350	1 3/8	4
2440	160-10	350-350	1 3/8	3 1/2
2455	100-30	400-50	1 3/8	3
2460	80-80	400-200	1 3/8	3 1/2
2495	80-60	400-400	1 3/8	3
2500	120-40	400-400	1 3/8	4
2570	30-200	450-150	1 3/8	3
2585	40-10	450-300	1	3
2605	5-5	450-450	1	2
2610	10-10	450-450	1	2
2615	15-15	450-450	1	2 1/2
2620	20-10	450-450	1	2 1/2
2630	30-10	450-450	1	3
2640	30-30	450-450	1 3/8	2 1/2
2645	40-20	450-450	1 3/8	2 1/2
2650	40-40	450-450	1 3/8	3
2655	50-50	450-450	1 3/8	3
2660	60-20	450-450	1 3/8	3
2665	60-40	450-450	1 3/8	3
2670	60-60	450-450	1 3/8	3 1/2
2675	80-10	450-450	1 3/8	3
2680	80-20	450-450	1 3/8	3
2685	80-30	450-450	1 3/8	3 1/2
2690	80-40	450-450	1 3/8	3 1/2
2700	100-40	450-450	1 3/8	4
2710	15-15	475-475	1	2 1/2
2715	30-10	475-475	1	3
2720	40-10	475-475	1 3/8	2 1/2
2730	80-50	500-50	1 3/8	3 1/2
2755	10-10	500-500	1	2 1/2
2760	20-20	500-500	1 3/8	2 1/2
2765	30-10	500-500	1 3/8	2 1/2
2770	30-30	500-500	1 3/8	3
2780	40-40	500-500	1 3/8	3 1/2
2785	60-40	500-500	1 3/8	3 1/2

Stock No. TMT	Capacity	Voltage	Dia-Meter	Length
3057	40-20-20	150-150-25	1	2
3078	50-30-20	150-150-25	1	2
3084	50-50-20	150-150-25	1	2 1/2
3097	80-40-20	150-150-25	1	2 1/2
3100	80-40-300	150-150-25	1 3/8	2 1/2
3112	20-20-20	150-150-150	1	2
3115	30-30-10	150-150-150	1	2
3118	40-20-10	150-150-150	1	2
3121	40-20-20	150-150-150	1	2
3124	40-30-20	150-150-150	1	2

Stock No. TMT	Capacity	Voltage	Dia-meter	Length
3127	40-40-40	150-150-150	1	2 1/2
3130	50-40-10	150-150-150	1	2
3133	50-50-50	150-150-150	1	3
3136	60-40-20	150-150-150	1	2 1/2
3142	70-40-40	150-150-150	1	3
3145	80-30-10	150-150-150	1	2 1/2
3148	80-40-20	150-150-150	1	2 1/2
3154	100-30-10	150-150-150	1	2 1/2
3160	120-80-40	150-150-150	1 3/8	3
3163	120-120-40	150-150-150	1 3/8	3 1/2
3166	200-100-60	150-150-150	1 3/8	3
3169	200-150-150	150-150-150	1 3/8	3 1/2
3184	80-10-20	200-200-50	1	3
3217	20-20-10	250-250-250	1	2
3229	40-20-20	250-250-250	1	3
3232	80-10-10	250-250-250	1	3
3235	80-80-60	250-250-250	1 3/8	3 1/2
3289	10-10-15	300-300-250	1	2
3298	60-20-10	300-300-300	1 3/8	2 1/2
3304	80-40-40	300-300-300	1 3/8	2 1/2
3307	120-50-40	300-300-300	1 3/8	4
3429	30-20-10	350-350-350	1 3/8	2 1/2
3435	60-40-20	350-350-350	1	3
3438	60-50-50	350-350-350	1 3/8	3 1/2
3441	80-60-60	350-350-350	1 3/8	4
3444	90-40-20	350-350-350	1 3/8	4
3468	20-20-20	400-400-25	1	3
3498	10-10-10	400-400-400	1	2 1/2
3501	90-10-5	400-400-400	1 3/8	3
3592	10-10-10	450-450-25	1	2
3595	10-10-20	450-450-25	1	2
3622	40-20-20	450-450-25	1 3/8	2 1/2
3712	10-10-10	450-450-450	1	2 1/2
3718	15-15-15	450-450-450	1	3
3721	20-10-10	450-450-450	1	3
3724	20-20-20	450-450-450	1 3/8	2 1/2
3727	30-10-10	450-450-450	1 3/8	2
3730	30-20-20	450-450-450	1 3/8	2 1/2
3733	30-30-30	450-450-450	1 3/8	3 1/2
3736	40-10-10	450-450-450	1 3/8	3
3739	40-30-20	450-450-450	1 3/8	3
3742	40-40-10	450-450-450	1 3/8	3
3745	40-40-20	450-450-450	1 3/8	3
3748	40-40-40	450-450-450	1 3/8	3 1/2
3751	50-40-30	450-450-450	1 3/8	3 1/2
3754	60-20-20	450-450-450	1 3/8	3 1/2
3757	60-30-10	450-450-450	1 3/8	3
3760	60-40-20	450-450-450	1 3/8	3 1/2
3763	80-40-20	450-450-450	1 3/8	4
3811	30-30-20	475-475-475	1 3/8	3
3814	40-30-10	475-475-475	1 3/8	3
3817	40-30-30	500-200-50	1 3/8	2 1/2
3856	10-10-10	500-500-500	1	3
3859	30-20-20	500-500-500	1 3/8	3
3865	40-10-10	500-500-500	1 3/8	3
3868	40-40-10	500-500-500	1 3/8	4

Stock No. TMQ	Capacity	Voltage	Dia-meter	Length
4089	40-40-40-30	150-150-150-150	1 3/8	2
4092	100-80-60-40	150-150-150-150	1 3/8	3
4140	60-40-20-50	300-300-300-25	1 3/8	3 1/2
4155	40-20-10-10	300-300-300-300	1 3/8	2
4158	40-40-20-10	300-300-300-300	1 3/8	2 1/2
4161	40-40-30-20	300-300-300-300	1 3/8	3
4164	60-40-10-10	300-300-300-300	1 3/8	3 1/2
4173	200-20-20-20	300-300-300-300	1 3/8	4
4295	40-20-20-10	350-350-350-350	1 3/8	2 1/2
4298	40-40-40-40	350-350-350-350	1 3/8	4
4304	80-60-40-20	350-350-350-350	1 3/8	4
4307	90-40-30-30	350-350-350-350	1 3/8	4
4394	50-40-30-20	400-400-400-400	1 3/8	4
4397	80-25-10-10	400-400-400-400	1 3/8	3 1/2
4625	30-30-20-20	450-450-450-450	1 3/8	3 1/2
4631	35-35-10-5	450-450-450-450	1 3/8	3 1/2
4634	40-10-10-10	450-450-450-450	1 3/8	3
4640	40-35-10-10	450-450-450-450	1 3/8	3
4646	40-40-20-20	450-450-450-450	1 3/8	4
4649	40-40-30-30	450-450-450-450	1 3/8	4
4652	40-40-40-40	450-450-450-450	1 3/8	4
4655	60-20-20-20	450-450-450-450	1 3/8	3 1/2
4658	60-30-10-2	450-450-450-450	1 3/8	3
4661	80-10-10-10	450-450-450-450	1 3/8	3 1/2
4752	20-20-10-10	475-475-475-475	1 3/8	2
4755	20-20-20-20	475-475-475-475	1 3/8	3
4758	40-20-10-10	475-475-475-475	1 3/8	3
4776	10-10-10-10	500-500-500-500	1 3/8	2
4782	40-40-8-8	500-500-500-500	1 3/8	4

FOR CURRENT QUANTITY PRICES, CONTACT YOUR AUTHORIZED GI INDUSTRIAL DISTRIBUTOR



# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### TYPE BL SUBMINIATURE ELECTROLYTICS (Bulletin EL9)

Small, inexpensive and reliable, best describe this versatile new series of Subminiature Electrolytics. For compact transistorized circuits in conventional or printed board construction. New non-conductive plastic

case. End seal compound, offer true moisture resistance. Low leakage. Long shelf life. Operating temp. -20°C to +65°C.

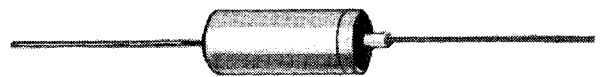


Cap. Mfd.	Part No.	Cap. Mfd.	Part No.	Cap. Mfd.	Part No.	Cap. Mfd.	Part No.	Cap. Mfd.	Part No.	Cap. Mfd.	Part No.
3 V. D-C. W.V. 4 V. Surge		6 V. D-C. W.V. 8 V. Surge		10 V. D-C. W.V. 12 V. Surge		15 V. D-C. W.V. 18 V. Surge		25 V. D-C. W.V. 30 V. Surge		50 V. D-C. W.V. 60 V. Surge	
10.	BL1111	10.	BL1220	5.	BL1130	5.	BL1141	5.	BL1261	2.	BL1270
20.	BL1211	20.	BL1223	10.	BL1231	10.	BL1241	10.	BL1460	4.	BL1370
30.	BL1213	30.	BL1321	20.	BL1330	20.	BL1440	20.	BL1561	5.	BL1470
40.	BL1310	40.	BL1420	30.	BL1430	30.	BL1540	30.	BL1760	10.	BL1670
50.	BL1410	50.	BL1520	40.	BL1530	40.	BL1541	40.	BL1860	20.	BL1870
100.	BL1610	100.	BL1720	50.	BL1531	50.	BL1640	50.	BL1861	30.	BL2070
150.	BL1710	150.	BL1820	100.	BL1731	100.	BL1940	100.	BL2160	40.	BL2170
200.	BL1910	200.	BL1921	150.	BL2030	150.	BL2040	150.	BL2260	50.	BL2171
400.	BL2011	400.	BL2121	200.	BL2030	200.	BL2140	200.	BL2360	100.	BL2371
500.	BL2111	500.	BL2221	400.	BL2230	400.	BL2230	400.	BL2461		
600.	BL2210	600.	BL2222	500.	BL2232	500.	BL2340				
1,000.	BL2310	1,000.	BL2321	600.	BL2330		BL2342				
1,500.	BL2410			1,000.	BL2430						

Case Code	Dia. ±.010	Max. Lgth.	Case Code	Dia. ±.010	Max. Lgth.
BL11	.187	1/16	BL18	.375	1/8
BL12	.250	1/16	BL19	.437	1/8
BL13	.250	1/16	BL20	.437	1/4
BL14	.312	1/16	BL21	.500	1/4
BL15	.312	1/16	BL22	.500	1/2
BL16	.375	7/8	BL23	.625	1/2
BL17	.375	1	BL24	.625	1/4

### TYPE MLV HERMETICALLY-SEALED MINIATURIZED ELECTROLYTICS (Bulletin EL5A)

Designed for -30°C to +85°C operation. Features unit hermetically sealed with specially processed rubber. Low Leakage Current. All Welded Construction. Long Shelf and Operating Life. Units supplied with plastic insulating sleeve.



FOR -40° TO +85°C EXTENDED LIFE CAPACITORS — GI TYPE MLEV (Mil Type CE 10, 11) WRITE FOR BULLETIN EL6A.

Cat. No.	Cap. in mfd.	Dia.*	Length*	Cat. No.	Cap. in mfd.	Dia.*	Length*	Cat. No.	Cap. in mfd.	Dia.*	Length*
<b>3 Volts Working D.C.</b>								<b>25 Volts Working D.C.</b>			
MLV5-3	3	3/16	1/16	MLV50-12	50	3/8	1/16	MLV5-25	5	1/4	1/16
MLV10-3	10	1/4	1/16	MLV100-12	100	3/8	1/16	MLV10-25	10	1/4	1/16
MLV15-3	15	1/4	1/16	MLV150-12	150	3/8	1/4	MLV15-25	15	3/4	1/16
MLV25-3	25	1/4	1/16	MLV200-12	200	3/8	1/4	MLV25-25	25	3/8	1/16
MLV40-3	40	1/4	1/16	<b>15 Volts Working D.C.</b>				MLV50-25	50	3/8	1/16
MLV50-3	50	1/4	1/16	MLV5-15	5	1/4	1/16	MLV100-25	100	3/8	1/2
MLV100-3	100	3/8	1/16	MLV10-15	10	1/4	1/16	<b>50 Volts Working D.C.</b>			
MLV150-3	150	3/8	1/16	MLV15-15	15	1/4	1/16	MLV2-50	2	1/4	1/16
MLV200-3	200	3/8	1/16	MLV25-15	25	3/16	1/16	MLV5-50	5	1/4	1/16
MLV250-3	250	3/8	1/16	MLV40-15	40	3/16	1/16	MLV10-50	10	3/8	1/16
MLV300-3	300	3/8	1/16	MLV50-15	50	3/8	1/16	MLV15-50	15	3/8	1/16
<b>10 Volts Working D.C.</b>				MLV100-15	100	3/8	1/16	MLV25-50	25	3/8	1/16
MLV10-10	10	1/4	1/16	MLV150-15	150	3/8	1/4	MLV50-50	50	3/8	1/2
MLV15-10	15	1/4	1/16	<b>6 Volts Working D.C.</b>				<b>100 Volts Working D.C.</b>			
MLV25-10	25	1/4	1/16	MLV2-6	2	3/16	1/16	MLV2-100	2	3/8	1/16
MLV50-10	50	3/8	1/16	MLV5-6	5	1/4	1/16	MLV5-100	5	3/8	1/16
MLV100-10	100	3/8	1/16	MLV10-6	10	1/4	1/16	MLV10-100	10	3/8	1/16
MLV200-10	200	3/8	1/4	MLV15-6	15	1/4	1/16	MLV15-100	15	3/8	1/4
<b>12 Volts Working D.C.</b>				MLV25-6	25	1/4	1/16	MLV25-100	25	3/8	1/2
MLV2-12	2	3/16	1/16	MLV30-6	30	1/4	1/16	<b>150 Volts Working D.C.</b>			
MLV5-12	5	1/4	1/16	MLV40-6	40	3/16	1/16	MLV1-150	1	3/8	1/16
MLV10-12	10	1/4	1/16	MLV50-6	50	3/16	1/16	MLV2-150	2	3/8	1/16
MLV15-12	15	1/4	1/16	MLV100-6	100	3/8	1/16	MLV5-150	5	3/8	1/16
MLV20-12	20	1/4	1/16	MLV150-6	150	3/8	1/16	MLV10-150	10	3/8	1/4
MLV25-12	25	1/4	1/16	MLV200-6	200	3/8	1/4	MLV15-150	15	3/8	1/2
MLV40-12	40	3/4	1/16								

Sizes shown are for uninsulated cans. For plastic insulating sleeving add 1/32" to diameter and 1/16" to length.



# GENERAL INSTRUMENT CORPORATION CAPACITOR DIVISION

## TYPE TD TYNEE-DRY ELECTROLYTICS

Tyne-Dry single capacitor units with 3-inch bare-wire leads. Designed for 85°C operation. Each unit sealed in metal tubular case. Supplied with insulating cardboard sleeve. Low leakage. Long shelf life. Top quality in minimum space.

Catalogue No.	Capacity in UF	Dia.*	Length*	Catalogue No.	Capacity in UF	Dia.*	Length*
<b>6 Volts DC Working</b>							
TD-50-6	50	1/2	1 1/8	TD-10-250	10	5/8	1 1/4
TD-100-6	100	1/2	1 1/8	TD-500-6	500	5/8	1 1/8
TD-250-6	250	5/8	1 5/8	TD-1000-6	1000	3/4	2
<b>15 Volts DC Working</b>							
TD-100-15	100	5/8	1 1/4	TD-1500-6	1500	3/4	2
TD-250-15	200	5/8	1 5/8	TD-2000-6	2000	1	2
TD-500-15	500	3/4	2	TD-12-250	12	5/8	1 1/4
TD-1000-15	1000	7/8	2	TD-16-250	16	5/8	1 5/8
<b>25 Volts DC Working</b>							
TD-2-25	2	3/8	1 1/8	TD-20-250	20	5/8	1 5/8
TD-4-25	4	3/8	1 1/8	TD-30-250	30	3/4	1 5/8
TD-5-25	5	3/8	1 1/8	TD-40-250	40	7/8	1 5/8
TD-10-25	10	3/8	1 1/8	TD-60-250	60	7/8	2
TD-25-25	25	1/2	1 1/8	TD-100-250	100	1 1/8	3
TD-50-25	50	5/8	1 1/4	<b>300 Volts DC Working</b>			
TD-100-25	100	5/8	1 5/8	TD-150-300	150	1	4 1/4
TD-250-25	250	7/8	2	TD-200-300	200	1	4 1/4
TD-500-25	500	7/8	2	<b>350 Volts DC Working</b>			
<b>50 Volts DC Working</b>							
FD-1-50	1	3/8	1 1/8	TD-8-350	8	5/8	1 5/8
FD-2-50	2	3/8	1 1/8	TD-12-350	12	5/8	1 5/8
FD-4-50	4	3/8	1 1/8	TD-16-350	16	3/4	1 5/8
FD-5-50	5	3/8	1 1/8	TD-20-350	20	3/4	1 5/8
FD-10-50	10	3/8	1 1/8	TD-30-350	30	7/8	2
FD-25-50	25	5/8	1 1/4	TD-40-350	40	1	2
FD-50-50	50	5/8	1 1/4	TD-60-350	60	1	2 1/2
FD-100-50	100	3/4	1 5/8	TD-80-350	80	1	2 1/2
FD-150-50	150	3/4	1 5/8	<b>400 Volts DC Working</b>			
FD-250-50	250	7/8	1 5/8	TD-200-400	200	1	3 1/2
FD-500-50	500	1	2 1/2	<b>450 Volts DC Working</b>			
<b>150 Volts DC Working</b>							
FD-4-150	4	3/8	1 1/8	TD-2-450	2	5/8	1 1/4
FD-8-150	8	5/8	1 1/4	TD-4-450	4	5/8	1 1/4
FD-10-150	10	5/8	1 1/4	TD-8-450	8	5/8	1 5/8
FD-12-150	12	5/8	1 1/4	TD-10-450	10	3/4	1 5/8
FD-16-150	16	5/8	1 1/4	TD-12-450	12	3/4	1 5/8
FD-20-150	20	5/8	1 1/4	TD-16-450	16	3/4	2
FD-30-150	30	5/8	1 5/8	TD-20-450	20	7/8	2
FD-40-150	40	3/4	1 5/8	TD-30-450	30	1	2
FD-50-150	50	3/4	1 5/8	TD-40-450	40	1	2 1/2
FD-80-150	80	7/8	1 5/8	TD-50-450	50	1	3
FD-100-150	100	7/8	2	TD-80-450	80	1	3 1/2
FD-150-150	150	1	2 1/2	TD-100-450	100	1	4
FD-200-150	200	1	3	<b>500 Volts DC Working</b>			
FD-250-150	250	1	3	TD-8-500	8	7/8	1 5/8
FD-300-150	300	1	3 3/4	TD-10-500	10	7/8	1 5/8
<b>200 Volts DC Working</b>							
TD-100-200	100	1	3	TD-12-500	12	7/8	1 5/8
TD-150-200	150	1	3 1/2	TD-20-500	20	1	2
TD-200-200	200	1	4	TD-30-500	30	1	2 1/2
TD-250-200	250	1	4	<b>600 Volts DC Working</b>			
TD-300-200	300	1	4	TD-8-600	8	7/8	2 3/4
<b>250 Volts DC Working</b>							
TD-4-250	4	1/2	1 1/8	TD-10-600	10	7/8	2 3/4
TD-8-250	8	5/8	1 1/4	TD-12-600	12	1	2 3/4
				TD-16-600	16	1	3 1/4
				TD-20-600	20	1	3 1/4
				<b>700 Volts DC Working</b>			
				TD-8-700	8	7/8	2 3/4
				TD-10-700	10	1	2 3/4
				TD-12-700	12	1	3 1/4
				TD-16-700	16	1	3 1/4

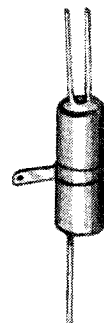
\* For sleeve add 1/16" to diameter, 3/16" to length.



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## DUAL & TRIPLE CAPACITY TYPE TDL ELECTROLYTICS

Stock Number	Catalogue Number	Cap. in UF	Size in Inches Dia.	Length	Stock Number	Catalogue Number	Cap. in UF	Size in Inches Dia.	Length
<b>150 Volts DC Working</b>					<b>Dual 250 Volts DC Working</b>				
TDL-D-1A	TDL-D10-150	10-10	3/4	1 5/8	TDL-D-17	TDL-D8-250	8-8	3/4	1 5/8
TDL-D-3	TDL-D20-150	20-20	3/4	1 5/8	TDL-D-18	TDL-D16-250	16-16	3/4	1 5/8
TDL-D-4	TDL-D30-150	30-30	3/4	2	TDL-D-19	TDL-D20-250	20-20	3/4	2
TDL-D-5	TDL-D40-150	40-20	3/4	2	TDL-D-20	TDL-D30-250	30-30	7/8	2
TDL-D-6	TDL-D40-150	40-30	3/4	2	TDL-D-21	TDL-D40-250	40-20	7/8	2
TDL-D-7	TDL-D40-150	40-40	3/4	2	TDL-D-22	TDL-D40-250	40-40	1	2
					TDL-D-23	TDL-D8010-250	80-10	1	2
<b>Dual 150 Volts DC Working</b>					<b>Dual 450 Volts DC Working</b>				
TDL-D-8	TDL-D50-150	50-30	3/4	2	TDL-D-24	TDL-D8-450	8-8	7/8	1 5/8
TDL-D-9	TDL-D50-150	50-50	7/8	2	TDL-D-25	TDL-D16-450	8-16	7/8	2
TDL-D-10	TDL-D80-150	80-30	7/8	2	TDL-D-26	TDL-D10-450	10-10	7/8	2
TDL-D-11	TDL-D80-150	80-40	1	2	TDL-D-27	TDL-D16-450	16-16	1	2
TDL-D-12	TDL-D80-150	80-50	1	2	TDL-D-28	TDL-D20-450	20-20	1	2 1/2
TDL-D-13	TDL-D80-150	80-80	1	2 1/2	TDL-D-29	TDL-D30-450	30-30	1	3
TDL-D-14	TDL-D100-150	100-50	1	3	TDL-D-30	TDL-D40-450	40-20	1	3 1/2
TDL-D-15	TDL-D100-150	100-100	1	3	TDL-D-31	TDL-D40-450	40-40	1	3 1/2
TDL-D-16	TDL-D200-150	200-50	1	3 1/2	<b>Triple Mixed Sections Diameter 1"</b>				
<b>Triple 150 Volts DC Working</b>					TDLT-10	TDL-8332	80-30-300	150-150-10	3
TDLT-1	TDL-T20-150	20-20-20	1	2	TDLT-11	TDL-222	20-20-20	150-150-20	2
TDLT-2	TDL-T30-150	30-30-30	1	2	TDLT-12	TDL-432	40-30-20	150-150-25	2
TDLT-3	TDL-403020-150	40-30-20	1	2	TDLT-13	TDL-442	40-40-20	150-150-25	2
TDLT-4	TDL-404020-150	40-40-20	1	2	TDLT-14	TDL-4412	40-40-100	150-150-25	3 1/2
TDLT-5	TDL-T40-150	40-40-40	1	2	TDLT-15	TDL-532	50-30-20	150-150-25	2
TDLT-6	TDL-503020-150	50-30-20	1	2	TDLT-16	TDL-5312	50-30-100	150-150-25	2 1/2
TDLT-7	TDL-804020-150	80-40-20	1	2	TDLT-17	TDL-5322	50-30-200	150-150-25	2 1/2
<b>Triple 250 Volts DC Working</b>					TDLT-18	TDL-8212	80-20-100	150-150-25	2 1/2
TDLT-8	TDL-754010-250	75-40-10	1	3	TDLT-19	TDL-552	50-50-20	150-150-25	2 1/2
<b>Triple 450 Volts DS Working</b>					TDLT-20	TDL-44225	40-40-20	250-250-25	2 1/2
TDLT-9	TDL-T16-450	16-16-16	1	3	TDLT-21	TDL-22245	20-20-20	450-450-25	2 1/2



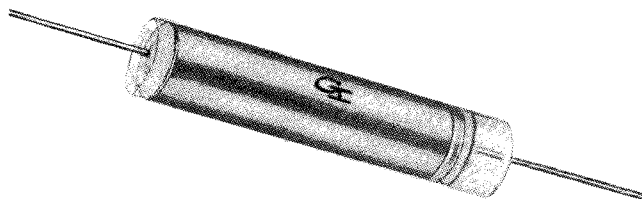
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# GENERAL INSTRUMENT CORPORATION

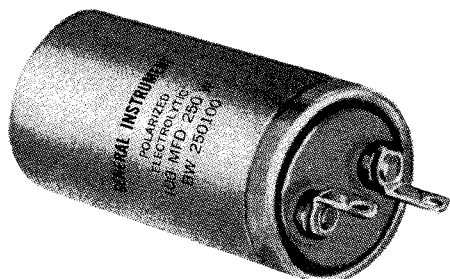
## CAPACITOR DIVISION

### POLARIZED DRY ELECTROLYTIC CAPACITORS to Mil-C-62 (latest revision)



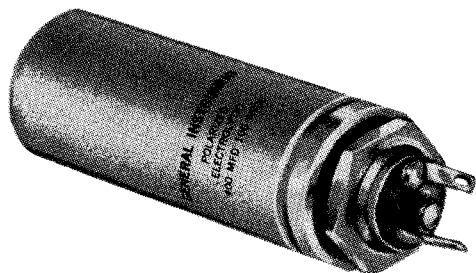
**CE 10, 11 (TYPE MLE)**  
**CE 12, 13 (TYPE TD)**

Type MLE are small, axial lead units in round aluminum containers, available in capacitances from 1 mf through 250 mf and voltages of 5 V.D.C. through 150 V.D.C. Type TD is available in capacitances up to 1600 mf and voltages from 5 V.D.C. through 450 V.D.C.



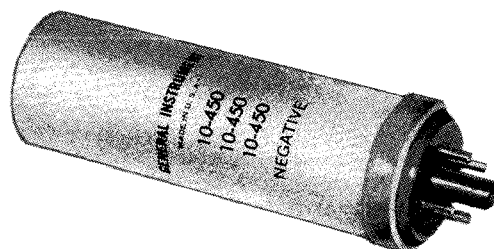
**CE 31, 32, 33 (TYPE PFB)**

Type PFB General Instrument Polarized Electrolytics are available in standard round aluminum containers with convenient solder lugs. Special gasket provides maximum seal. Mounting ring optional. Available in capacitances from 7 mf thru 2000 mf and voltages of 15 V.D.C. thru 450 V.D.C. Order CE 31 in single capacity, CE 32 for dual, and CE 33 for triple capacity units.



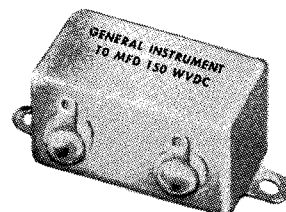
**CE 41, 42 (TYPE DI)**

Type DI Electrolytics are provided in chassis mounting aluminum cans. Have standard 7/8-16N-2A thread neck with lock nut. Solder lugs solidly anchored in special leak-proof gasket. Available as CE 41 in single and CE 42 in dual capacity units. Available in capacitances from 10 mf through 2000 mf and voltages of 15 V.D.C. through 450 V.D.C.



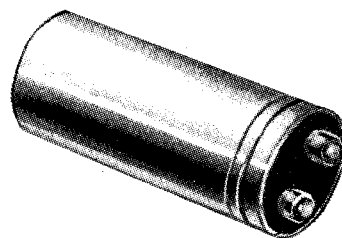
**CE 51, 52, 53 (TYPE DO)**

Type DO Electrolytics are available in plug mounting round aluminum containers. Have standard nickel-plated four-pin octal base. Maximum leakage seal provided by famous General Instrument design. Order CE 51 for Type DO's in single capacity, CE 52 for dual and CE 53 for triple capacity units. Available in capacitances from 10 mf through 2000 mf and voltages of 15 V.D.C. through 450 V.D.C.



**CE 63, 64 (TYPE DPD)**

Type DPD's are hermetically sealed in drawn, hot-finned steel bath-tub containers. Solder lug terminals are anchored to case with silicone rubber grommets. Type DPD's are single capacity units available in capacitances from 4 mf through 100 mf and voltages 15 V.D.C. through 450 V.D.C.



**CE 70, 71 (TYPE CQM)**

Type CQM (uninsulated case) and type CQMS (insulated case) are designed for high reliability and utilize highest purity foil in round aluminum cans with tapped terminal inserts or solder lugs. May be mounted with wrap around, footed brackets. Available in capacitances up to 65000 mfd and voltages thru 450 V.D.C.



# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### TYPE PQM (Bulletin EL-10)



To meet the growing demands of greater capacitance for use in the new power supplies in today's equipment, General Instrument has perfected the highly reliable aluminum electrolytic capacitor type PQM for superior operation from  $-20^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ .

Cases are of heavy gauge aluminum with leakproof seals and a new precision safety vent.

Available with tapped terminal inserts or solder lugs and with or without plastic sleeve.

Capacitance in Mfd.	Catalog Number	Dia. Length Case Size	Capacitance in Mfd.	Catalog Number	Dia. Length Case Size	Capacitance in Mfd.	Catalog Number	Dia. Length Case Size
22,000	PQM 100	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	15,000	PQM 609*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	2,000	PQM 1108	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
38,000	PQM 101	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	20,000	PQM 610*	3 x 4 $\frac{1}{8}$	2,500	PQM 1109*	3 x 4 $\frac{1}{8}$
50,000	PQM 102	2 x 4 $\frac{1}{8}$	30,000	PQM 611*	3 x 5 $\frac{1}{8}$	3,000	PQM 1110	3 x 4 $\frac{1}{8}$
70,000	PQM 103	2 x 5 $\frac{1}{8}$				4,500	PQM 1111	3 x 5 $\frac{1}{8}$
80,000	PQM 104	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	750	PQM 700*	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$			
125,000	PQM 105	3 x 4 $\frac{1}{8}$	1,500	PQM 701*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	150	PQM 1200	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$
180,000	PQM 106	3 x 5 $\frac{1}{8}$	2,500	PQM 702*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	250	PQM 1201	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
			4,000	PQM 703*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	400	PQM 1202	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
15,000	PQM 200	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	5,000	PQM 704*	2 x 4 $\frac{1}{8}$	500	PQM 1203*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
25,000	PQM 201	1 $\frac{1}{4}$ x 4 $\frac{1}{8}$	8,000	PQM 705*	2 x 5 $\frac{1}{8}$	700	PQM 1204	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
33,000	PQM 202*	2 x 4 $\frac{1}{8}$	10,000	PQM 706*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,000	PQM 1205*	2 x 4 $\frac{1}{8}$
50,000	PQM 203	2 x 5 $\frac{1}{8}$	15,000	PQM 707*	3 x 4 $\frac{1}{8}$	1,500	PQM 1206*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
50,000	PQM 204	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	20,000	PQM 708*	3 x 5 $\frac{1}{8}$	2,500	PQM 1207	3 x 4 $\frac{1}{8}$
80,000	PQM 205	3 x 4 $\frac{1}{8}$				2,800	PQM 1208	3 x 4 $\frac{1}{8}$
125,000	PQM 206*	3 x 5 $\frac{1}{8}$	450	PQM 800	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$			
			900	PQM 801	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	100	PQM 1300	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$
10,000	PQM 300*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	1,000	PQM 802*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	200	PQM 1301	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
15,000	PQM 301*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	1,500	PQM 803	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	275	PQM 1302*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
20,000	PQM 302*	2 x 4 $\frac{1}{8}$	2,400	PQM 804	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	450	PQM 1303*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
35,000	PQM 303*	2 x 5 $\frac{1}{8}$	3,000	PQM 805*	2 x 4 $\frac{1}{8}$	500	PQM 1304	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
40,000	PQM 304	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	4,500	PQM 806	2 x 5 $\frac{1}{8}$	700	PQM 1305	2 x 4 $\frac{1}{8}$
50,000	PQM 305	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	5,000	PQM 807*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,000	PQM 1306*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
60,000	PQM 306*	3 x 4 $\frac{1}{8}$	8,000	PQM 808	3 x 4 $\frac{1}{8}$	1,500	PQM 1307	3 x 4 $\frac{1}{8}$
90,000	PQM 307*	3 x 5 $\frac{1}{8}$	10,000	PQM 809*	3 x 5 $\frac{1}{8}$	2,000	PQM 1308	3 x 4 $\frac{1}{8}$
5,000	PQM 400*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	350	PQM 900	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$	75	PQM 1400	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$
6,000	PQM 401*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	700	PQM 901	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	150	PQM 1401*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
8,000	PQM 402	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	1,000	PQM 902*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	200	PQM 1402	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
10,000	PQM 403*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	1,500	PQM 903*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	350	PQM 1403*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
14,000	PQM 404*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	2,300	PQM 904	2 x 4 $\frac{1}{8}$	500	PQM 1404	2 x 5 $\frac{1}{8}$
18,000	PQM 405*	2 x 4 $\frac{1}{8}$	3,000	PQM 905*	2 x 5 $\frac{1}{8}$	850	PQM 1406	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
25,000	PQM 406*	2 x 5 $\frac{1}{8}$	4,000	PQM 906*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,000	PQM 1407*	3 x 4 $\frac{1}{8}$
33,000	PQM 407*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	5,000	PQM 907*	3 x 4 $\frac{1}{8}$	1,250	PQM 1408	3 x 4 $\frac{1}{8}$
40,000	PQM 408*	3 x 4 $\frac{1}{8}$	8,500	PQM 908	3 x 5 $\frac{1}{8}$	1,500	PQM 1409	3 x 4 $\frac{1}{8}$
45,000	PQM 409	3 x 4 $\frac{1}{8}$						
50,000	PQM 410*	3 x 4 $\frac{1}{8}$						
60,000	PQM 411	3 x 5 $\frac{1}{8}$						
3,000	PQM 500	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	250	PQM 1000	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$	50	PQM 1500	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$
5,000	PQM 501*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	500	PQM 1001*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	100	PQM 1501	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
8,000	PQM 502	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	750	PQM 1002*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	150	PQM 1502	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
10,000	PQM 503*	2 x 4 $\frac{1}{8}$	1,000	PQM 1003*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	300	PQM 1503	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
15,000	PQM 504*	2 x 5 $\frac{1}{8}$	1,250	PQM 1004*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	350	PQM 1504	2 x 4 $\frac{1}{8}$
20,000	PQM 505*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,850	PQM 1005	2 x 4 $\frac{1}{8}$	500	PQM 1505	2 x 5 $\frac{1}{8}$
25,000	PQM 506	3 x 4 $\frac{1}{8}$	2,000	PQM 1006*	2 x 4 $\frac{1}{8}$	650	PQM 1506	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
40,000	PQM 507*	3 x 5 $\frac{1}{8}$	2,500	PQM 1007*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,000	PQM 1507	3 x 4 $\frac{1}{8}$
			3,000	PQM 1008	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,200	PQM 1508	3 x 4 $\frac{1}{8}$
			4,000	PQM 1009*	3 x 4 $\frac{1}{8}$			
			5,000	PQM 1010	3 x 4 $\frac{1}{8}$			
			6,000	PQM 1011*	3 x 5 $\frac{1}{8}$			
1,500	PQM 600*	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$				50	PQM 1600	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$
2,500	PQM 601*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	200	PQM 1100	1 $\frac{3}{8}$ x 2 $\frac{1}{8}$	100	PQM 1601	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
4,000	PQM 602*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	350	PQM 1101	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	150	PQM 1602	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
5,000	PQM 603*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	500	PQM 1102*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	250	PQM 1603*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
6,000	PQM 604	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	750	PQM 1103*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	300	PQM 1604*	2 x 4 $\frac{1}{8}$
8,000	PQM 605*	2 x 4 $\frac{1}{8}$	900	PQM 1104	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	500	PQM 1605*	2 x 5 $\frac{1}{8}$
9,000	PQM 606	2 x 4 $\frac{1}{8}$	1,400	PQM 1105	2 x 4 $\frac{1}{8}$	600	PQM 1606*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
10,000	PQM 607*	2 x 5 $\frac{1}{8}$	1,500	PQM 1106*	2 x 4 $\frac{1}{8}$	800	PQM 1607*	3 x 4 $\frac{1}{8}$
13,500	PQM 608	2 x 5 $\frac{1}{8}$	2,000	PQM 1107*	2 x 5 $\frac{1}{8}$	850	PQM 1608	3 x 4 $\frac{1}{8}$
						1,000	PQM 1609	3 x 4 $\frac{1}{8}$

Designates Preferred Values normally carried in Distributor Stock.

For units with rigid vinyl sleeving, order part number PQMS and add  $\frac{1}{16}$ " to diameter and  $\frac{3}{8}$ " to length.





# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### TYPE CQM (Bulletin EL-8A)

Exacting performance of digital computers and related equipment demands components of the highest grade. Improved internal construction provides for low impedance at high frequencies, assures superior operation through the operating range at  $-20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .

Cases are of heavy gauge aluminum. A leak proof seal is obtained by rolling the top of the case into a pliable synthetic rubber gasket. Terminals are available in two styles: tapped terminal inserts, for bus bar connections and solder lug terminals for permanent connections. The capacitors are furnished with bare case, one piece vinyl sleeve, or clear rigid plastic sleeve.

Capacitance Mfd.	Catalog Number	Dia. Length	Capacitance Mfd.	Catalog Number	Dia. Length	Capacitance Mfd.	Catalog Number	Dia. Length
<b>2.5 WVDC 3V Surge</b>			<b>25 WVDC 35V Surge</b>			<b>150 WVDC 200V Surge</b>		
14,000	CQMS 100	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	2,750	CQMS 700*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	375	CQMS 1300	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
20,000	CQMS 101	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	4,200	CQMS 701*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	550	CQMS 1301*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
24,000	CQMS 102	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	4,800	CQMS 702*	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	650	CQMS 1302*	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$
33,000	CQMS 103	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	6,600	CQMS 703	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	900	CQMS 1303*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
50,000	CQMS 104	2 x 4 $\frac{1}{8}$	9,200	CQMS 704	2 x 4 $\frac{1}{8}$	1,300	CQMS 1304	2 x 4 $\frac{1}{8}$
58,000	CQMS 105	2 x 4 $\frac{3}{8}$	10,700	CQMS 705*	2 x 4 $\frac{3}{8}$	1,500	CQMS 1305	2 x 4 $\frac{3}{8}$
75,000	CQMS 106	2 x 5 $\frac{1}{8}$	15,700	CQMS 706*	2 x 5 $\frac{1}{8}$	2,100	CQMS 1306*	2 x 5 $\frac{1}{8}$
85,000	CQMS 107	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	17,000	CQMS 707	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	2,100	CQMS 1307	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
100,000	CQMS 108	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	19,300	CQMS 708	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	2,500	CQMS 1308*	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$
125,000	CQMS 109	3 x 4 $\frac{1}{8}$	25,000	CQMS 709*	3 x 4 $\frac{1}{8}$	3,200	CQMS 1309	3 x 4 $\frac{1}{8}$
145,000	CQMS 110	3 x 4 $\frac{3}{8}$	29,000	CQMS 710	3 x 4 $\frac{3}{8}$	3,800	CQMS 1310*	3 x 4 $\frac{3}{8}$
185,000	CQMS 111	3 x 5 $\frac{1}{8}$	37,000	CQMS 711*	3 x 5 $\frac{1}{8}$	4,800	CQMS 1311*	3 x 5 $\frac{1}{8}$
<b>5.0 WVDC 7V Surge</b>			<b>30 WVDC 45V Surge</b>			<b>200 WVDC 250V Surge</b>		
10,700	CQMS 200	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	1,850	CQMS 800	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	300	CQMS 1400	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
16,000	CQMS 201	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	2,750	CQMS 801	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	425	CQMS 1401	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
19,000	CQMS 202	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	3,200	CQMS 802	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	500	CQMS 1402*	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$
25,000	CQMS 203	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	4,500	CQMS 803	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	670	CQMS 1403	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
37,000	CQMS 204	2 x 4 $\frac{1}{8}$	6,500	CQMS 804	2 x 4 $\frac{1}{8}$	1,000	CQMS 1404*	2 x 4 $\frac{1}{8}$
43,000	CQMS 205	2 x 4 $\frac{3}{8}$	7,500	CQMS 805	2 x 4 $\frac{3}{8}$	1,150	CQMS 1405	2 x 4 $\frac{3}{8}$
55,000	CQMS 206	2 x 5 $\frac{1}{8}$	10,500	CQMS 806*	2 x 5 $\frac{1}{8}$	1,500	CQMS 1406	2 x 5 $\frac{1}{8}$
65,000	CQMS 207	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	11,500	CQMS 807	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,600	CQMS 1407	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
76,000	CQMS 208	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	13,300	CQMS 808	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	1,850	CQMS 1408*	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$
96,000	CQMS 211	3 x 4 $\frac{1}{8}$	16,500	CQMS 809	3 x 4 $\frac{1}{8}$	2,500	CQMS 1409*	3 x 4 $\frac{1}{8}$
110,000	CQMS 210	3 x 4 $\frac{3}{8}$	19,000	CQMS 810*	3 x 4 $\frac{3}{8}$	2,800	CQMS 1410	3 x 4 $\frac{3}{8}$
145,000	CQMS 211	3 x 5 $\frac{1}{8}$	25,000	CQMS 811*	3 x 5 $\frac{1}{8}$			
<b>7.5 WVDC 10V Surge</b>			<b>40 WVDC 55V Surge</b>			<b>250 WVDC 300V Surge</b>		
6,200	CQMS 300	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	1,500	CQMS 900*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	200	CQMS 1500	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
9,300	CQMS 301	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	2,300	CQMS 901	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	300	CQMS 1501	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
10,500	CQMS 302	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	2,700	CQMS 902	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	350	CQMS 1502	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$
15,000	CQMS 303	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	3,700	CQMS 903	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	450	CQMS 1503	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
23,000	CQMS 304	2 x 4 $\frac{1}{8}$	5,300	CQMS 904*	2 x 4 $\frac{1}{8}$	700	CQMS 1504	2 x 4 $\frac{1}{8}$
26,000	CQMS 305	2 x 4 $\frac{3}{8}$	6,200	CQMS 905	2 x 4 $\frac{3}{8}$	800	CQMS 1505	2 x 4 $\frac{3}{8}$
35,000	CQMS 306	2 x 5 $\frac{1}{8}$	8,700	CQMS 906	2 x 5 $\frac{1}{8}$	1,000	CQMS 1506*	2 x 5 $\frac{1}{8}$
39,000	CQMS 307	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	9,500	CQMS 907	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	1,200	CQMS 1507	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
45,000	CQMS 308	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	11,000	CQMS 908	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	1,400	CQMS 1508*	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$
58,000	CQMS 309	3 x 4 $\frac{1}{8}$	13,700	CQMS 909	3 x 4 $\frac{1}{8}$	1,850	CQMS 1509	3 x 4 $\frac{1}{8}$
67,000	CQMS 310	3 x 4 $\frac{3}{8}$	16,000	CQMS 910	3 x 4 $\frac{3}{8}$	2,150	CQMS 1510*	3 x 4 $\frac{3}{8}$
87,000	CQMS 311	3 x 5 $\frac{1}{8}$	21,000	CQMS 911*	3 x 5 $\frac{1}{8}$			
<b>10 WVDC 15V Surge</b>			<b>50 WVDC 75V Surge</b>			<b>300 WVDC 350V Surge</b>		
5,300	CQMS 400	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	1,050	CQMS 1000*	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	160	CQMS 1600	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
8,000	CQMS 401	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	1,650	CQMS 1001	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	250	CQMS 1601	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
9,200	CQMS 402	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	1,850	CQMS 1002*	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	290	CQMS 1602	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$
13,000	CQMS 403*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	2,600	CQMS 1003*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	350	CQMS 1603	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
18,000	CQMS 404	2 x 4 $\frac{1}{8}$	4,000	CQMS 1004*	2 x 4 $\frac{1}{8}$	400	CQMS 1604	2 x 4 $\frac{1}{8}$
20,000	CQMS 405*	2 x 4 $\frac{3}{8}$	4,400	CQMS 1005	2 x 4 $\frac{3}{8}$	475	CQMS 1605	2 x 4 $\frac{3}{8}$
25,000	CQMS 406	2 x 5 $\frac{1}{8}$	6,100	CQMS 1006*	2 x 5 $\frac{1}{8}$	575	CQMS 1606	2 x 5 $\frac{1}{8}$
33,000	CQMS 407*	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	6,700	CQMS 1007	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	675	CQMS 1607	2 x 5 $\frac{1}{8}$
38,000	CQMS 408	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	7,800	CQMS 1008*	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	800	CQMS 1608	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$
48,000	CQMS 409	3 x 4 $\frac{1}{8}$	10,000	CQMS 1009*	3 x 4 $\frac{1}{8}$	975	CQMS 1609*	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$
56,000	CQMS 410*	3 x 4 $\frac{3}{8}$	11,000	CQMS 1010	3 x 4 $\frac{3}{8}$	1,150	CQMS 1610*	3 x 4 $\frac{3}{8}$
79,000	CQMS 411*	3 x 5 $\frac{1}{8}$	16,000	CQMS 1011	3 x 5 $\frac{1}{8}$	1,500		
<b>15 WVDC 20V Surge</b>			<b>75 WVDC 100V Surge</b>			<b>350 WVDC 400V Surge</b>		
4,400	CQMS 500	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	700	CQMS 1100	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	130	CQMS 1700	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
6,600	CQMS 501*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	1,100	CQMS 1101*	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	200	CQMS 1701	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
7,700	CQMS 502	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	1,300	CQMS 1102	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	235	CQMS 1702	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$
10,700	CQMS 503*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	1,700	CQMS 1103	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	300	CQMS 1703	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
15,500	CQMS 504*	2 x 4 $\frac{1}{8}$	2,500	CQMS 1104	2 x 4 $\frac{1}{8}$	375	CQMS 1704	2 x 4 $\frac{1}{8}$
18,000	CQMS 505	2 x 4 $\frac{3}{8}$	2,900	CQMS 1105	2 x 4 $\frac{3}{8}$	475	CQMS 1705	2 x 4 $\frac{3}{8}$
25,000	CQMS 506*	2 x 5 $\frac{1}{8}$	3,750	CQMS 1106	2 x 5 $\frac{1}{8}$	550	CQMS 1706	2 x 5 $\frac{1}{8}$
28,000	CQMS 507	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	4,300	CQMS 1107	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	600	CQMS 1707	2 x 5 $\frac{1}{8}$
33,000	CQMS 508*	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	5,000	CQMS 1108*	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	800	CQMS 1708	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$
41,500	CQMS 509	3 x 4 $\frac{1}{8}$	6,500	CQMS 1109	3 x 4 $\frac{1}{8}$	925	CQMS 1709*	3 x 4 $\frac{1}{8}$
47,500	CQMS 510*	3 x 4 $\frac{3}{8}$	7,600	CQMS 1110	3 x 4 $\frac{3}{8}$	1,200	CQMS 1710	3 x 4 $\frac{3}{8}$
62,000	CQMS 511	3 x 5 $\frac{1}{8}$	9,800	CQMS 1111*	3 x 5 $\frac{1}{8}$	1,350		
<b>20 WVDC 30V Surge</b>			<b>100 WVDC 150 Surge</b>			<b>400 WVDC 475V Surge</b>		
2,900	CQMS 600	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	550	CQMS 1200	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$	100	CQMS 1800	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
4,400	CQMS 601	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	850	CQMS 1201	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	150	CQMS 1801	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
5,100	CQMS 602	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	950	CQMS 1202*	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	200	CQMS 1802	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$
7,100	CQMS 603	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	1,350	CQMS 1203*	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$	250	CQMS 1803	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
10,500	CQMS 604	2 x 4 $\frac{1}{8}$	1,800	CQMS 1204*	2 x 4 $\frac{1}{8}$	350	CQMS 1804	2 x 4 $\frac{1}{8}$
12,200	CQMS 605	2 x 4 $\frac{3}{8}$	2,100	CQMS 1205	2 x 4 $\frac{3}{8}$	400	CQMS 1805	2 x 4 $\frac{3}{8}$
17,000	CQMS 606	2 x 5 $\frac{1}{8}$	3,000	CQMS 1206*	2 x 5 $\frac{1}{8}$	525	CQMS 1806	2 x 5 $\frac{1}{8}$
19,200	CQMS 607	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	3,100	CQMS 1207	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	600	CQMS 1807	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$
22,400	CQMS 608	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	3,600	CQMS 1208	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$	700	CQMS 1808	2 $\frac{1}{2}$ x 4 $\frac{3}{8}$
27,500	CQMS 609	3 x 4 $\frac{1}{8}$	4,800	CQMS 1209*	3 x 4 $\frac{1}{8}$	900	CQMS 1809	3 x 4 $\frac{1}{8}$
32,000	CQMS 610	3 x 4 $\frac{3}{8}$	5,600	CQMS 1210	3 x 4 $\frac{3}{8}$	1,000	CQMS 1810	3 x 4 $\frac{3}{8}$
42,000	CQMS 611	3 x 5 $\frac{1}{8}$	8,000	CQMS 1211	3 x 5 $\frac{1}{8}$	90		
<b>450 WVDC 525V Surge</b>								
						90	CQMS 1900	1 $\frac{3}{8}$ x 3 $\frac{1}{8}$
						125	CQMS 1901	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$
						160	CQMS 1902	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$
						200	CQMS 1903	1 $\frac{3}{4}$ x 4 $\frac{1}{8}$
						300	CQMS 1904*	

SECTION 1500



**GENERAL INSTRUMENT CORPORATION**  
**CAPACITOR DIVISION**

**TYPE MCS (MIL TYPES CS12 & CS13)**  
**MINIATURIZED SOLID ELECTROLYTE TANTALUMS (Bulletin ET-7)**

True Subminiature Sizes  
Solid Tantalum Electrolyte  
Hermetically Sealed Metal Cases

No Electrolyte Leakage  
Tolerance  $\pm 20\%$   
Closer Tolerances on Request.

**SUPPLIED WITH PLASTIC INSULATED SLEEVE**

Type Designation	Capacity in MFD	Case Size	Type Designation	Capacity in MFD	Case Size	Type Designation	Capacity in MFD	Case Size	Type Designation	Capacity in MFD	Case Size
<b>6 VOLTS</b>			<b>20 VOLTS (Continued)</b>			<b>35 VOLTS (continued)</b>			<b>50 VDC-60 VDC (Continued)</b>		
MCS14B565*	5.6	A	MCS14E185*	1.8	A	MCS14F824*	0.82	A	MCS-G104-	.1	A
MCS14B685*	6.8	A	MCS14E225*	2.2	A	MCS14F105*	1.0	A	MCS-G124-	.12	A
MCS14B825	8.2	B	MCS14E275	2.7	B	MCS14F125*	1.2	B	MCS-G154-	.15	A
MCS14B106	10.0	B	MCS14E335	3.3	B	MCS14F155*	1.5	B	MCS-G184-	.18	A
MCS14B476*	47.0	B	MCS14E106*	10.0	B	MCS14F185*	1.8	B	MCS-G224-	.22	A
MCS14B566*	56.0	B	MCS14E126*	12.0	B	MCS14F225*	2.2	B	MCS-G274-	.27	A
MCS14B107	100.0	C	MCS14E156*	15.0	B	MCS14F275*	2.7	B	MCS-G334-	.33	A
MCS14B127	120.0	C	MCS14E336*	33.0	C	MCS14F335*	3.3	B	MCS-G394-	.39	A
MCS14B157*	150.0	C	MCS14E396*	39.0	C	MCS14F395*	3.9	B	MCS-G474-	.47	A
MCS14B187*	180.0	C	MCS14E476*	47.0	C	MCS14F475*	4.7	B	MCS-G564-	.56	A
MCS14B227	220.0	D				MCS14F565*	5.6	B	MCS-G684-	.68	A
MCS14B337*	330.0	D				MCS14F685*	6.8	B	MCS-G824-	.82	A
<b>10 VOLTS</b>			<b>35 VOLTS</b>			<b>50 VDC-60 VDC SURGE</b>					
MCS14C395*	3.9	A	MCS14F472	0.0047	A	MCS-G472-	.0047	A	MCS-G105-*	1.0	A
MCS14C475*	4.7	A	MCS14F562	0.0056	A	MCS14F106*	10.0	C	MCS-G125-*	1.2	B
MCS14C565	5.6	B	MCS14F682	0.0068	A	MCS14F126*	12.0	C	MCS-G155-*	1.5	B
MCS14C685	6.8	B	MCS14F882	0.0082	A	MCS14F156*	15.0	C	MCS-G185-*	1.8	B
MCS14C276*	27.0	B	MCS14F103	0.01	A	MCS14F186*	18.0	C	MCS-G225-*	2.2	B
MCS14C336*	33.0	B	MCS14F123	0.012	A	MCS14F226*	22.0	C	MCS-G275-*	2.7	B
MCS14C396*	39.0	B	MCS14F153	0.015	A	MCS14F276*	27.0	C	MCS-G335-*	3.3	B
MCS14C686	68.0	C	MCS14F183	0.018	A	MCS14F336*	33.0	D	MCS-G395-*	3.9	B
MCS14C107*	100.0	C	MCS14F223	0.022	A	MCS14F476*	47.0	D	MCS-G475-*	4.7	B
MCS14C227*	220.0	D	MCS14F273	0.027	A				MCS-G565-*	5.6	C
<b>15 VOLTS</b>									MCS-G685-*	6.8	C
MCS14D275*	2.7	A	MCS14F333	0.033	A				MCS-G825-*	8.2	C
MCS14D335*	3.3	A	MCS14F393	0.039	A				MCS-G106-*	10	C
MCS14D395	3.9	B	MCS14F473	0.047	A				MCS-G126-*	12	C
MCS14D475	4.7	B	MCS14F683	0.068	A				MCS-G156-*	15	C
MCS14D186*	18.0	B	MCS14F823	0.082	A				MCS-G186-*	18	C
MCS14D226*	22.0	B	MCS14F104	0.1	A				MCS-G226-*	22	D
MCS14D566*	56.0	C	MCS14F124	0.12	A						
MCS14D826	82.0	D	MCS14F154	0.15	A						
<b>20 VOLTS</b>											
MCS14E125*	1.2	A	MCS14F184	0.18	A						
MCS14E155*	1.5	A	MCS14F224	0.22	A						
			MCS14F274	0.27	A						
			MCS14F334*	0.33	A						
			MCS14F394*	0.39	A						
			MCS14F474*	0.47	A						
			MCS14F564*	0.56	A						
			MCS14F684*	0.68	A						

**Diameter Length**  
Case Size A .125 x .250  
Case Size B .175 x .438  
Case Size C .279 x .650  
Case Size D .341 x .750

GENERAL INSTRUMENT manufactures a wide range of capacity and voltages. Write for engineering bulletin for full information.

\*These values are available as MIL types CS12 (uninsulated case), and CS13 (insulated case). Refer to MIL spec. for type designation.

**TYPE TAK, TAK-H (MIL TYPES CL64 & CL65)**  
**MINIATURE SINTERED ANODE TANTALUMS (Bulletin ET-8)**

Afford maximum space economy. Conventional cylindrical cases allow for various methods of mounting. Sealing method and materials used in manufacturing this capacitor assure protection against seepage and defect due to vibration. Manufactured to meet MIL-C-3965 specification, style CL-64 and CL-65 (insulated sleeve). For full details write for Engr. Bulletin ET-8.

**TEMPERATURE OPERATING RANGES**

TAK -55°C to 85°C  
TAK-H -55°C to 125°C

STANDARD LISTING TO -15, +20% TOLERANCE

6 VOLTS			10 VOLTS			15 VOLTS			25 VOLTS			30 VOLTS			35 VOLTS			50 VOLTS			75 VOLTS			100 VOLTS				
Mfd.	Cat. No.	Case Size	Mfd.	Cat. No.	Case Size	Mfd.	Cat. No.	Case Size	Mfd.	Cat. No.	Case Size	Mfd.	Cat. No.	Case Size	Mfd.	Cat. No.	Case Size	Mfd.	Cat. No.	Case Size	Mfd.	Cat. No.	Case Size					
30	TAK-30T6B	B	20	TAK-20T10B	B	15	TAK-15T130B	B	10	TAK-10T25B	B	5	TAK-5T50B	B	2.5	TAK-2.5T100B	B	40	TAK-40T15D	D	100	TAK-100T30F	F	2.5	TAK-2.5T100B	B		
50	TAK-30T6B	B	35	TAK-35T10B	B	20	TAK-20T25B	B	22	TAK-22T25B	B	10	TAK-10T50B	B	4.7	TAK-4.7T100B	B	70	TAK-70T15E	E	150	TAK-150T30F	F	8	TAK-8T100D	D		
68	TAK-68T6B	B	47	TAK-47T10B	B	30	TAK-30T25D	D	30	TAK-30T25D	D	20	TAK-20T50D	D	8	TAK-8T100D	D	100	TAK-100T15E	E	150	TAK-150T30F	F	11	TAK-11T100E	E		
140	TAK-140T6E	E	100	TAK-100T10E	E	70	TAK-70T25E	E	70	TAK-70T25E	E	40	TAK-40T50E	E	22	TAK-22T100F	F	270	TAK-270T15F	F	150	TAK-150T30F	F	30	TAK-30T100F	F		
200	TAK-200T6E	E	150	TAK-150T10E	E	100	TAK-100T25E	E	100	TAK-100T25E	E	47	TAK-47T50E	E	30	TAK-30T100F	F	43	TAK-43T100F	F	270	TAK-270T15F	F	11	TAK-11T100E	E		
270	TAK-270T6F	F	180	TAK-180T10E	E	150	TAK-150T25F	F	150	TAK-150T25F	F	60	TAK-60T50F	F	22	TAK-22T100F	F											
330	TAK-330T6F	F	250	TAK-250T10F	F	180	TAK-180T25F	F	180	TAK-180T25F	F	82	TAK-82T50F	F	30	TAK-30T100F	F											
450	TAK-450T6F	F	320	TAK-320T10F	F							100	TAK-100T50F	F	43	TAK-43T100F	F											
560	TAK-560T6F	F	390	TAK-390T10F	F																							

**CASE SIZES**

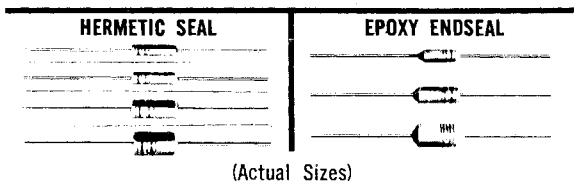
Uninsulated Case	Insulated Case		Lead
	Dia.	Length	
A. $\pm 0.010$	$\pm 0.016$	$\pm 0.031$	$\pm 0.031$
B. 0.212	0.375	0.234	0.437
C. 0.187	0.453	0.203	0.515
D. 0.212	0.468	0.234	0.531
E. 0.212	0.531	0.234	0.593
F. 0.275	0.640	0.296	0.703
G. 0.375	0.765	0.390	0.828



# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### Hi-VolTan® CAPACITORS



(Actual Sizes)

- **SMALLEST SIZE**  
(World's Smallest Hermetically Sealed Capacitor)
- **BEST STABILITY**
- **VOLTAGES TO 125 VOLTS**
- The tiny size and excellent stability of the Hi-VolTan® suggest its use in applications where size, weight, stability and reliability are prime factors.
- The unique construction with no electrolyte eliminates the major causes for instability and high dissipation factor.
- The leakage currents experienced are so low as to defy measurement. Accordingly the leakage current is expressed as insulation resistance.
- Voltage ratings up to 125 volts are available.
- Completely distortion free coupling can be accomplished into the megacycle range with Hi-VolTan®.

### STANDARD RATINGS HERMETICALLY SEALED HiVolTan® CAPACITORS

pf	25 VDC 30 VDC SURGE		50 VDC 60 VDC SURGE		75 VDC 90 VDC SURGE		100 VDC 120 VDC SURGE		125 VDC 150 VDC SURGE	
	Case Size	Part No.	Case Size	Part No.	Case Size	Part No.	Case Size	Part No.	Case Size	Part No.
400					W	HVT1_401	W	HVT1_401	W	HVT1_401
470					W	HVT1_471	W	HVT1_471	W	HVT1_471
560					W	HVT1_561	W	HVT1_561	W	HVT1_561
680					W	HVT1_681	W	HVT1_681	W	HVT1_681
800					W	HVT1_821	W	HVT1_821	W	HVT1_821
1000					W	HVT1_102	W	HVT1_102	W	HVT1_102
1200					W	HVT1_122	W	HVT1_122	W	HVT1_122
1500					W	HVT1_152	W	HVT1_152	W	HVT1_152
1800					W	HVT1_182	W	HVT1_182	W	HVT1_182
2200					W	HVT1_222	W	HVT1_222	W	HVT1_222
2700					X	HVT1_272	X	HVT1_272	X	HVT1_272
3300			X	HVT1_332	Y	HVT1_332	Y	HVT1_332		
3900			X	HVT1_392	Y	HVT1_392	Y	HVT1_392		
4700			X	HVT1_472	Y	HVT1_472	Y	HVT1_472		
5600	X	HVT1_562	Y	HVT1_562	Y	HVT1_562	Z	HVT1_562		
6800	X	HVT1_682	Y	HVT1_682	Y	HVT1_682	Z	HVT1_682		
7500	X	HVT1_752	Y	HVT1_752	Z	HVT1_752	Z	HVT1_752		
8200	X	HVT1_822	Y	HVT1_822	Z	HVT1_822	Z	HVT1_822		
10000	X	HVT1_103	Y	HVT1_103	Z	HVT1_103	Z	HVT1_103		
12000	Y	HVT1_123	Z	HVT1_123	Z	HVT1_123				
15000	Y	HVT1_153	Z	HVT1_153						
18000	Y	HVT1_183								
22000	Z	HVT1_223								
27000	Z	HVT1_273								
33000	Z	HVT1_333								

Same Ratings Available in Epoxy End Sealed HiVolTan® Capacitors.

### TYPE IMP MOLDED TUBULAR PAPER CAPACITORS

Noninductive extended-foil section molded in nonflammable thermosetting plastic. High insulation resistance. Excellent power factor. Withstands standard RETMA Humidity-resistance Test. Extremely rugged. Very long life.

Temperature Rating:  
-40°C to +100°C

Standard Tolerance:  
.0001-.001 UF: -25% to +60%  
.001-.009 UF: -20% to +40%  
.01-1.0 UF: -20% to +20%



Catalogue Number	Cap. in UF	Diameter	Length	Catalogue Number	Cap. in UF	Diameter	Length	Catalogue Number	Cap. in UF	Diameter	Length
<b>200 Volts DC Working</b>				<b>600 Volts DC Working (Continued)</b>				<b>1,600 Volts DC Working</b>			
IMP2-S2	.02	3/8	1 1/4	IMP6-D6	.006	3/8	1 1/4	IMP16-T5	.0005	3/8	1 1/4
IMP2-S47	.047	3/8	1 1/4	IMP6-D68	.0068	3/8	1 1/4	IMP16-D1	.001	3/8	1 1/4
IMP2-S5	.05	3/8	1 1/4	IMP6-D8	.008	3/8	1 1/4	IMP16-D15	.0015	3/8	1 1/4
IMP2-P1	.1	3/8	1 1/4	IMP6-S1	.01	3/8	1 1/4	IMP16-D2	.002	3/8	1 1/4
IMP2-P15	.15	1/2	1 1/2	IMP6-S15	.015	3/8	1 1/4	IMP16-D22	.0022	3/8	1 1/4
IMP2-P25	.25	3/4	1 7/8	IMP6-S2	.02	3/8	1 1/4	IMP16-D3	.003	3/8	1 1/4
IMP2-P47	.47	3/4	1 7/8	IMP6-S22	.022	3/8	1 1/4	IMP16-D33	.0033	3/8	1 1/4
IMP2-P5	.5	3/4	1 7/8	IMP6-S33	.03	3/8	1 1/4	IMP16-D4	.004	3/8	1 1/4
IMP2-1	1.	3/4	2 1/4	IMP6-S4	.033	3/2	1 1/2	IMP16-D47	.0047	3/8	1 1/4
<b>400 Volts DC Working</b>				<b>1000 Volts DC Working</b>				<b>6,000 Volts DC Working</b>			
IMP4-S1	.01	5/16	1	IMP10-T5	.0005	3/8	1	*CT60-T5	.0005	5/8	2
IMP4-S2	.02	3/8	1 1/4	IMP10-D1	.001	3/8	1	*CT60-D1	.001	5/8	2
IMP4-S22	.022	3/8	1 1/4	IMP10-D15	.0015	3/8	1	*CT60-D5	.005	1 1/8	2 1/4
IMP4-S25	.025	3/8	1 1/4	IMP10-D2	.002	3/8	1 1/4	<b>10,000 Volts DC Working</b>			
IMP4-S3	.03	3/8	1 1/4	IMP10-D22	.0022	3/8	1 1/4	*CT100-D1	.001	3/4	2 5/8
IMP4-S4	.04	3/8	1 1/4	IMP10-D3	.003	3/8	1 1/4	*CT100-T5	.0005	5/8	2
IMP4-S47	.047	3/8	1 1/4	IMP10-D4	.004	3/8	1 1/4	<b>12,500 Volts DC Working</b>			
IMP4-S5	.05	3/8	1 1/4	IMP10-D47	.0047	3/8	1 1/4	*CT125-T25	.00025	3/4	2 5/8
IMP4-S68	.068	1/2	1 1/2	IMP10-D5	.005	3/8	1 1/4	*CT125-T5	.0005	3/4	2 5/8
IMP4-P1	.1	1/2	1 1/2	IMP10-D68	.0068	3/8	1 1/4	* Supplied in ceramic-case units.			
IMP4-P15	.15	3/8	1 1/4	IMP10-D8	.008	3/8	1 1/4				
IMP4-P22	.22	3/8	1 1/4	IMP10-S1	.01	3/8	1 1/4				
IMP4-P25	.25	3/8	1 1/4	IMP10-S15	.015	3/8	1 1/4				
IMP4-P47	.47	3/4	2 1/4	IMP10-S2	.02	3/8	1 1/4				
IMP4-P5	.5	3/4	2 1/4	IMP10-S22	.022	3/8	1 1/4				
<b>600 Volts DC Working</b>				IMP10-S3	.03	3/8	1 1/4				
IMP6-T1	.0001	3/8	1	IMP10-S33	.033	3/8	1 1/4				
IMP6-T25	.00025	3/8	1	IMP10-S47	.047	3/8	1 1/4				
IMP6-T4	.0004	3/8	1	IMP10-S5	.05	3/8	1 1/4				
IMP6-T5	.0005	3/8	1	IMP10-S68	.068	3/8	1 1/4				
IMP6-D1	.001	3/8	1	IMP10-P1	.1	3/4	2 1/4				
IMP6-D15	.0015	3/8	1								
IMP6-D2	.002	3/8	1								
IMP6-D22	.0022	3/8	1								
IMP6-D3	.003	3/8	1								
IMP6-D33	.0033	3/8	1								
IMP6-D4	.004	3/8	1								
IMP6-D47	.0047	3/8	1								
IMP6-D5	.005	3/8	1								

CONIALI TOUR AUTHORIZED BY INDUSTRY PRACTITIONERS FOR CURRENT QUANTITY PRICES

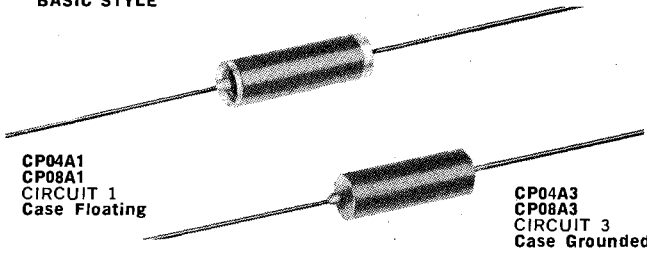


# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### SUBMINIATURE GLASSEAL PAPER CAPACITORS MIL-C-25 LATEST REVISION

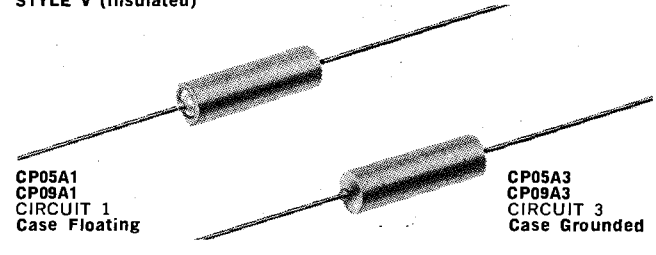
**BASIC STYLE**



CP04A1  
CP08A1  
CIRCUIT 1  
Case Floating

CP04A3  
CP08A3  
CIRCUIT 3  
Case Grounded

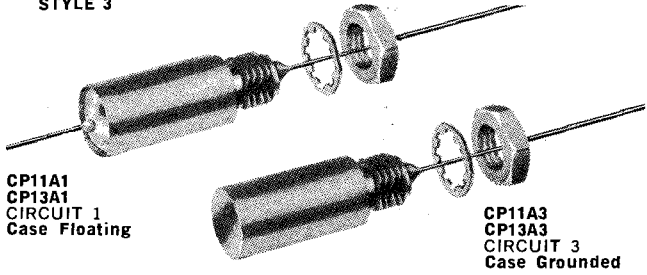
**STYLE V (Insulated)**



CP05A1  
CP09A1  
CIRCUIT 1  
Case Floating

CP05A3  
CP09A3  
CIRCUIT 3  
Case Grounded

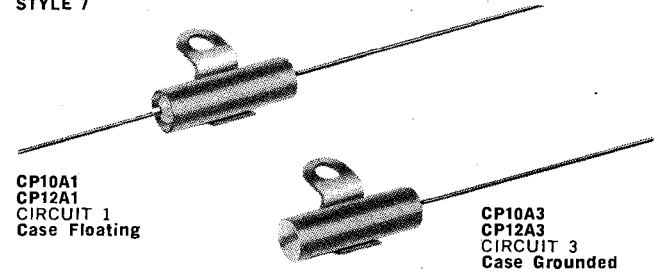
**STYLE 3**



CP11A1  
CP13A1  
CIRCUIT 1  
Case Floating

CP11A3  
CP13A3  
CIRCUIT 3  
Case Grounded

**STYLE 7**

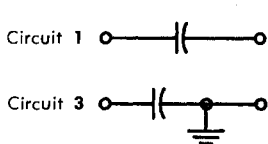


CP10A1  
CP12A1  
CIRCUIT 1  
Case Floating

CP10A3  
CP12A3  
CIRCUIT 3  
Case Grounded

**MILITARY DESIGNATION BREAKDOWN**

**CP** Style    **04** Case    **A** Terminal (Axial wire lead)    **I** Circuit    **E** Characteristic    **B** Voltage    **333** Capacitance    **K/3** Tolerance



<b>Characteristic</b>	<b>Voltage</b>	<b>Tolerance</b>	<b>Vibration Grade*</b>
E = -55°C. to + 85°C. K = -55°C. to + 125°C.	B = 100 V. C = 200 V. E = 400 V. F = 600 V. G = 1000 V.	K = ± 10% M = ± 20%	1 10-55 cps 3 10-2000 cps

**INSERTED TABS**

{ CP04 — Uninsulated  
CP05 — Insulated

Capacity	100V-	200V-	400V-	600V-	1000V-
.001				F102	
.0012				F122K/3	
.0015				F152	
.0018				F182K/3	
.0022				F222	
.0027				F272K/3	
.0033				F332	
.0039				F392K/3	
.0047				F472	
.0056				F562K/3	
.0068				F682	
.0082			E822K/3	F822K/3	
.01			E103	F103	
.012		C123K/3		F123K/3	
.015		C153		F153	G153
.018		C183K/3		F183K/3	G183K/3
.022		C223		F223	G223
.027	B273K/3		E273K/3	F273K/3	G273K/3
.033	B333		E333	F333	G333
.039		C393K/3	E393K/3	F393K/3	G393K/3
.047		C473	E473	F473	G473
.056		C563K/3	E563K/3	F563K/3	G563K/3
.068		C683	E683	F683	G683
.082	B823K/3	C823K/3	E823K/3	F823K/3	G823K/3
.1	B104	C104	E104	F104	G104
.12	B124K/3	C124K/3	E124K/3	F124K/3	G124K/3
.15	B154	C154	E154	F154	G154
.18	B184K/3	C184K/3	E184K/3	F184K/3	G184K/3
.22	B224	C224	E224	F224	G224
.27	B274K/3	C274K/3	E274K/3	F274K/3	G274K/3
.33	B334	C334	E334	F334	G334
.39	B394K/3	C394K/3	E394K/3	F394K/3	G394K/3
.47	B474	C474	E474	F474	G474
.56	B564K/3	C564K/3	E564K/3	F564K/3	G564K/3
.68	B684	C684	E684	F684	G684
.82	B824K/3	C824K/3	E824K/3		
1.0	B105	C105	E105		

**EXTENDED TABS**

{ CP08 — Uninsulated  
CP09 — Insulated

Capacity	100V-	200-	400-	600-	1000-
.001				F102	G102
.0012				F122K/3	G122K/3
.0015				F152	G152
.0018				F182K/3	G182K/3
.0022				F222	G222
.0027			E272K/3	F272K/3	G272K/3
.0033			E332	F332	G332
.0039		C392K/3		F392K/3	G392K/3
.0047		C472		F472	G472
.0056		C562K/3		F562K/3	G562K/3
.0068		C682		F682	G682
.0082	B822K/3			F822K/3	G822K/3
.04	B103			F103	G103
.012	B123K/3		E123K/3	F123K/3	G123K/3
.015	B153		E153	F153	G153
.018		C183K/3		F183K/3	G183K/3
.022		C223		F223	G223
.027		C273K/3	E273K/3	F273K/3	G273K/3
.033		C333	E333	F333	G333
.039	B393K/3	C393K/3	E393K/3	F393K/3	G393K/3
.047	B473	C473	E473	F473	G473
.056		C563K/3	E563K/3	F563K/3	G563K/3
.068		C683	E683	F683	G683
.082	B823K/3	C823K/3	E823K/3	F823K/3	G823K/3
.1	B104	C104	E104	F104	G104
.12	B124K/3	C124K/3	E124K/3	F124K/3	G124K/3
.15	B154	C154	E154	F154	G154
.18	B184K/3	C184K/3	E184K/3	F184K/3	G184K/3
.22	B224	C224	E224	F224	G224
.27	B274K/3	C274K/3	E274K/3	F274K/3	G274K/3
.33	B334	C334	E334	F334	G334
.39	B394K/3	C394K/3	E394K/3	F394K/3	G394K/3
.47	B474	C474	E474	F474	G474
.56	B564K/3	C564K/3	E564K/3	F564K/3	G564K/3
.68	B684	C684	E684	F684	G684
.82	B824K/3	C824K/3	E824K/3		
1.0	B105	C105	E105		

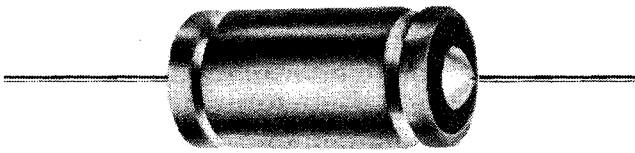
/3 designates available per MIL-C-25C, which specifies K characteristic, K tolerance, and vibration grades 1 or 3 only.



# GENERAL INSTRUMENT CORPORATION

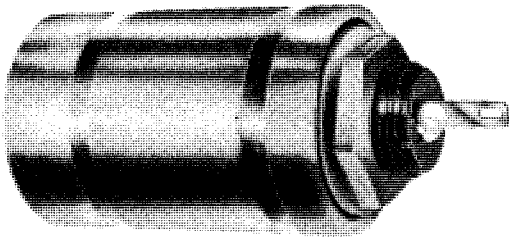
## CAPACITOR DIVISION

### HERMETICALLY SEALED CAPACITORS to Mil-C-25 (latest revision)



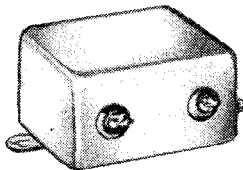
#### CP 25 to CP 29 (TYPE PTM)

Available in capacitances from .003 thru 0.1 mf and voltages of 1500 V.D.C.



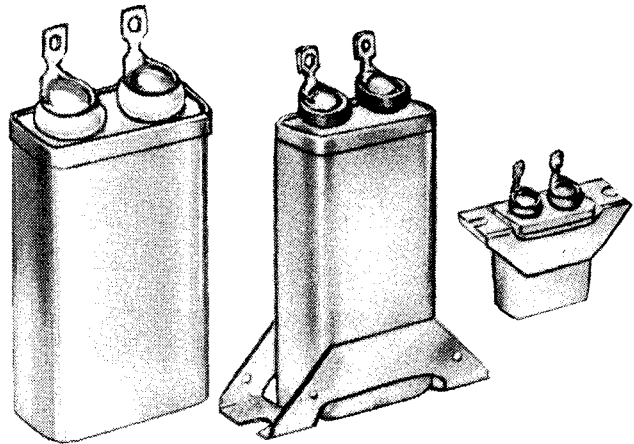
#### CP 40, CP 41 (TYPES PCM, PCIM)

Available in capacitances from .25 mf thru 4.0 mf and voltages of 600 V.D.C. thru 1500 V.D.C.



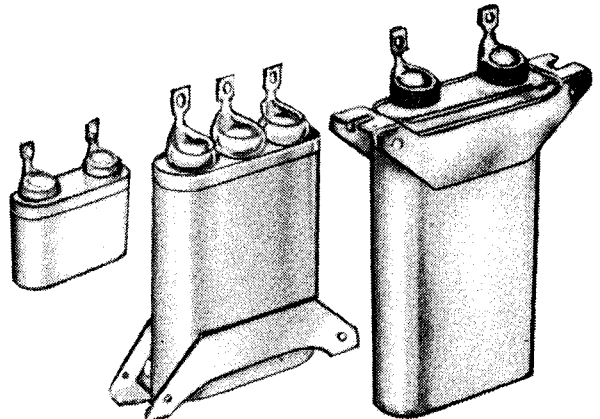
#### CP 53, 54, 55 (TYPE PDM)

Available in capacitances from .05 mf thru 10 mf and voltages of 100 V.D.C. thru 1000 V.D.C.



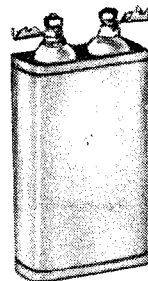
#### CP 63, 65 AND 90, 91 (TYPE PKM)

Available in capacitances from .01 mf thru 1.0 mf and voltages of 400 V.D.C. thru 1500 V.D.C.



#### CP 67, 69 (TYPE PEM)

Available in capacitances from .01 mf thru 1.0 mf and voltages of 600 V.D.C. thru 1000 V.D.C.



#### CP 70 SERIES (TYPE PLM)

Available in capacitances from mf thru 15 mf and voltages of 400 V.D.C. thru 25,000 V.D.C. (Type PJ in higher values).



# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### TYPE 155 HI-TEMP METALLIZED PAPER CAPACITORS

Assembled in a plastic tube with plastic end-seals. Self-healing.  
Low R-F impedance. Excellent P-F over wide temperature range.

Replaces M T R Product Line



Temperature Rating:  $-40^{\circ}\text{C}$ . to  $+100^{\circ}\text{C}$ .  
Standard Tolerance:  $-20\%$  to  $+30\%$ .

Catalog Number	Cap/Mfd	Size in inches Diameter	$\pm\frac{1}{4}$ " Length	Catalog Number	Cap/Mfd	Size in inches Diameter	$\pm\frac{1}{4}$ " Length
<b>200 VOLTS</b>				<b>600 VOLTS</b>			
155C103M	.01	$\frac{1}{4}$	$\frac{1}{16}$	155E254M	.25	$\frac{3}{16}$	$\frac{1}{8}$
155C203M	.02	$\frac{1}{4}$	$\frac{1}{16}$	155E504M	.5	$\frac{3}{8}$	$\frac{1}{4}$
155C303M	.03	$\frac{5}{16}$	$\frac{1}{16}$	155E105M	1.0	$\frac{3}{4}$	$\frac{1}{2}$
155C503M	.05	$\frac{5}{16}$	$\frac{1}{16}$	155E205M	2.0	$\frac{7}{8}$	$\frac{2}{3}$
155C104M	.1	$\frac{3}{8}$	$\frac{1}{16}$				
155C254M	.25	$\frac{1}{2}$	$\frac{1}{16}$	155F103M	.01	$\frac{3}{16}$	$\frac{1}{16}$
155C504M	.5	$\frac{3}{8}$	$\frac{1}{8}$	155F203M	.02	$\frac{3}{8}$	$\frac{1}{16}$
155C105M	1.0	$\frac{3}{8}$	$\frac{1}{8}$	155F303M	.03	$\frac{3}{8}$	$\frac{1}{16}$
155C205M	2.0	$\frac{5}{8}$	$\frac{1}{16}$	155F503M	.05	$\frac{1}{2}$	$\frac{1}{16}$
<b>400 VOLTS</b>				155F104M	.1	$\frac{7}{8}$	$\frac{1}{8}$
155E103M	.01	$\frac{1}{4}$	$\frac{1}{16}$	155F254M	.25	$\frac{5}{8}$	$\frac{1}{8}$
155E203M	.02	$\frac{3}{8}$	$\frac{1}{16}$	155F504M	.5	$\frac{3}{4}$	$\frac{1}{16}$
155E303M	.03	$\frac{3}{8}$	$\frac{1}{16}$	155F105M	1.0	$\frac{7}{8}$	$\frac{1}{16}$
155E503M	.05	$\frac{7}{16}$	$\frac{1}{16}$	155F205M	2.0	1	$\frac{2}{3}$
155E104M	.1	$\frac{7}{16}$	$\frac{1}{8}$				

### TYPE 227 METALLIZED-PAPER/MYLAR® GLASS-SEALED METAL TUBULARS

MADE TO MEET MIL C-18312A CHAR. N



For operation at  $+125^{\circ}\text{C}$  without derating. The finest capacitor of its type available.  
Encased in hermetic, glass-sealed metal tubes. For complete listing write for Engineering Bulletin.

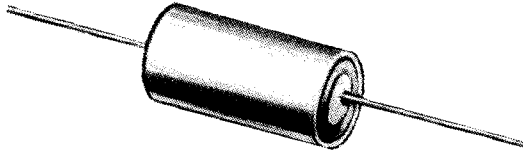
Part No.	Cap. Mfd.	Dia.	Length	Part No.	Cap. Mfd.	Dia.	Length	Part No.	Cap. Mfd.	Dia.	Length
<b>100 Volts D-C. W.V.</b>				<b>400 V. D-C. W.V.</b>				<b>600 V. D-C. W.V.</b>			
227A1V305M	3	.670	$1\frac{1}{16}$	227A1E103M	.01	.312	$\frac{7}{8}$	227A1F103M	.01	.312	$\frac{7}{8}$
227A1V405M	4	.750	$1\frac{1}{16}$	227A1E123M	.012	.312	$\frac{7}{8}$	227A1F123M	.012	.312	$\frac{7}{8}$
227A1V605M	6	1.000	$1\frac{1}{16}$	227A1E153M	.015	.312	$\frac{7}{8}$	227A1F153M	.015	.312	$\frac{7}{8}$
				227A1E183M	.018	.312	$\frac{7}{8}$	227A1F183M	.018	.312	$1\frac{1}{8}$
227A1C103M	.01	.175	$\frac{3}{4}$	227A1E223M	.022	.312	$\frac{7}{8}$	227A1F223M	.022	.312	$1\frac{1}{8}$
227A1C123M	.012	.195	$\frac{3}{4}$	227A1E273M	.027	.312	$1\frac{1}{8}$	227A1F273M	.027	.312	$1\frac{1}{8}$
227A1C153M	.015	.195	$\frac{3}{4}$	227A1E333M	.033	.312	$1\frac{1}{8}$	227A1F333M	.033	.312	$1\frac{1}{8}$
227A1C183M	.018	.235	$\frac{3}{4}$	227A1E393M	.039	.400	$1\frac{1}{8}$	227A1F393M	.039	.400	$1\frac{1}{8}$
227A1C223M	.022	.235	$\frac{3}{4}$	227A1E473M	.047	.400	$1\frac{1}{8}$	227A1F473M	.047	.400	$1\frac{1}{8}$
227A1C273M	.027	.235	$\frac{3}{4}$	227A1E563M	.056	.400	$1\frac{1}{8}$	227A1F563M	.056	.400	$1\frac{1}{8}$
227A1C333M	.033	.235	$\frac{3}{4}$	227A1E683M	.068	.400	$1\frac{1}{8}$	227A1F683M	.068	.400	$1\frac{1}{8}$
227A1C393M	.039	.312	$\frac{7}{8}$	227A1E823M	.082	.500	$1\frac{1}{8}$	227A1F823M	.082	.500	$1\frac{1}{8}$
227A1C473M	.047	.312	$\frac{7}{8}$	227A1E104M	.1	.500	$1\frac{1}{8}$	227A1F104M	.1	.500	$1\frac{1}{8}$
227A1C563M	.056	.312	$\frac{7}{8}$	227A1E124M	.12	.500	$1\frac{1}{8}$	227A1F124M	.12	.562	$1\frac{1}{8}$
227A1C683M	.068	.312	$\frac{7}{8}$	227A1E154M	.15	.500	$1\frac{1}{8}$	227A1F154M	.15	.562	$1\frac{1}{8}$
227A1C823M	.082	.312	$\frac{7}{8}$	227A1E184M	.18	.562	$1\frac{1}{8}$	227A1F184M	.18	.562	$1\frac{1}{8}$
227A1C104M	.1	.312	$\frac{7}{8}$	227A1E224M	.22	.562	$1\frac{1}{8}$	227A1F224M	.22	.562	$1\frac{1}{8}$
227A1C124M	.12	.312	$1\frac{1}{8}$	227A1E274M	.27	.562	$1\frac{1}{8}$	227A1F274M	.27	.562	$1\frac{1}{8}$
227A1C154M	.15	.312	$1\frac{1}{8}$	227A1E334M	.33	.562	$1\frac{1}{8}$	227A1F334M	.33	.562	$1\frac{1}{8}$
227A1C184M	.18	.400	$\frac{7}{8}$	227A1E394M	.39	.670	$1\frac{1}{8}$	227A1F394M	.39	.670	$1\frac{1}{8}$
227A1C224M	.22	.400	$\frac{7}{8}$	227A1E474M	.47	.670	$1\frac{1}{8}$	227A1F474M	.47	.670	$1\frac{1}{8}$
227A1C274M	.27	.400	$1\frac{1}{8}$	227A1E564M	.56	.670	$1\frac{1}{8}$	227A1F564M	.56	.670	$1\frac{1}{8}$
227A1C334M	.33	.400	$1\frac{1}{8}$	227A1E684M	.68	.670	$1\frac{1}{8}$	227A1F684M	.68	.670	$1\frac{1}{8}$
227A1C394M	.39	.500	$1\frac{1}{8}$	227A1E824M	.82	.750	$1\frac{1}{8}$	227A1F824M	.82	1.000	$1\frac{1}{8}$
227A1C474M	.47	.500	$1\frac{1}{8}$					227A1F105M	1.0	1.000	$1\frac{1}{8}$
227A1C564M	.56	.500	$1\frac{1}{8}$					227A1F155M	1.5	1.000	$1\frac{1}{8}$
227A1C684M	.68	.500	$1\frac{1}{8}$					227A1F205M	2.0	1.000	$2\frac{1}{8}$
227A1C824M	.82	.562	$1\frac{1}{8}$					227A1F255M	2.5	1.000	$2\frac{1}{8}$
227A1C105M	1.0	.562	$1\frac{1}{8}$								
227A1C155M	1.5	.562	$1\frac{1}{8}$								
227A1C205M	2.0	.670	$1\frac{1}{8}$								

NOTE: Type 227's Are Available in All Mil Styles, Mylar and Plastic Insulating Sleeves, Tolerances, and Ratings.



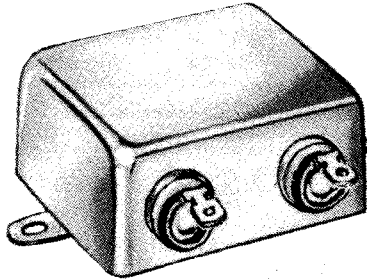
**GENERAL INSTRUMENT CORPORATION**  
**CAPACITOR DIVISION**

**METALLIZED PAPER CAPACITORS**  
**to Mil-C-18312 — latest revisions**



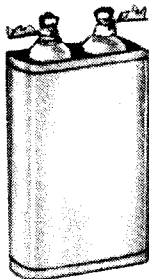
**CH04, CH05, CH10 (TYPE MPG)**

Available in capacitances from .01 mfd thru 6 mfd and voltages of 150 thru 600 V.D.C.



**CH53, CH54, CH55 (TYPE MPD)**

Available in capacitances from .1 mfd thru 12 mfd and voltages of 150 thru 600 V.D.C.



**CH70 (TYPE MPLM)**

Available in capacitances from 6 mfd thru 15 mfd and voltages from 150 thru 600 V.D.C.





# GENERAL INSTRUMENT CORPORATION CAPACITOR DIVISION

## TYPE III "GOLD STANDARD" MOLDED MYLAR\* CAPACITORS

Noninductive polyester film extended foil section, molded in a nonflammable thermosetting plastic case. Very high insulation resistance. Excellent power factor. Greatly reduced sizes. Dielectric impervious to moisture. Extremely rugged with a very long life.  
 Temperature Rating: -40°C to +100°C  
 Standard Tolerance: ± 20%



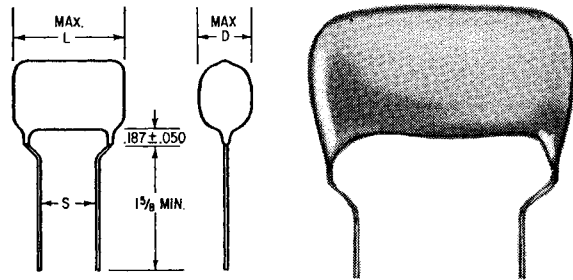
Catalog Number	Cap. in Mfd.	Size in Inches Dia. Length	Dealer Net
<b>200 Volts DC Working</b>			
111-2S2	.02	5/16 1	.15
111-2S47	.047	3/8 1 1/4	.15
111-2S5	.05	3/8 1 1/4	.15
111-2P1	.1	3/8 1 1/4	.21
111-2P15	.15	3/8 1 1/4	.21
111-2P22	.22	1/2 1 1/2	.24
111-2P25	.25	1/2 1 1/2	.27
111-2P47	.47	5/8 1 7/8	.36
111-2P5	.5	5/8 1 7/8	.36
111-2-1	1.0	3/4 2 1/4	.57
<b>400 Volts DC Working</b>			
111-4S1	.01	5/16 1	.15
111-4S15	.015	5/16 1	.15
111-4S2	.02	3/8 1 1/4	.15
111-4S22	.022	3/8 1 1/4	.18
111-4S333	.033	3/8 1 1/4	.18
111-4S47	.047	3/8 1 1/4	.18
111-4S5	.05	3/8 1 1/4	.18
111-4S68	.068	3/16 1 1/4	.21
111-4P1	.1	1/2 1 1/2	.21
111-4P15	.15	1/2 1 1/2	.24
111-4P22	.22	5/8 1 7/8	.30
111-4P25	.25	5/8 1 7/8	.33
111-4P33	.33	5/8 1 7/8	.39
111-4P47	.47	3/4 2 1/4	.48
111-4P5	.5	3/4 2 1/4	.51
111-4P68	.68	3/4 2 1/4	.69
111-6T1	.0001	5/16 1	.15

Catalog Number	Cap. in Mfd.	Size in Inches Dia. Length	Dealer Net
111-6T25	.00025	3/16 1	.15
111-6T4	.0004	3/16 1	.15
111-6T5	.0005	3/16 1	.15
111-6D1	.001	3/16 1	.15
111-6D15	.0015	3/16 1	.15
111-6D2	.002	3/16 1	.15
111-6D22	.0022	3/16 1	.15
111-6D3	.003	3/16 1	.15
111-6D33	.0033	3/16 1	.15
111-6D4	.004	3/16 1	.15
111-6D47	.0047	3/16 1	.15
111-6D5	.005	3/16 1	.15
111-6D6	.006	3/16 1	.15
111-6D68	.0068	3/16 1	.18
111-6S1	.01	3/8 1	.18
111-6S15	.015	3/8 1 1/4	.18
111-6S2	.02	3/8 1 1/4	.18
111-6S22	.022	3/8 1 1/4	.18
111-6S3	.03	3/8 1 1/4	.21
111-6S33	.033	3/8 1 1/4	.21
111-6S4	.04	3/8 1 1/4	.21
111-6S47	.047	3/8 1 1/4	.24
111-6S5	.05	3/8 1 1/4	.24
111-6S6	.06	3/8 1 1/4	.24
111-6S68	.068	1/2 1 1/2	.24
111-6P1	.1	5/8 1 7/8	.27
111-6P15	.15	5/8 1 7/8	.33
111-6P2	.2	3/4 2 1/4	.39
111-6P22	.22	3/4 2 1/4	.39
111-6P25	.25	3/4 2 1/4	.45
111-6P33	.33	3/4 2 1/4	.54

## TYPE 151 GOLD-DIP MYLAR\* CAPACITORS

A new Mylar Plastic Dipped Capacitor engineered for highest reliability and especially designed for printed board circuitry as well as conventional application. General Instrument Gold-Dip Capacitors Type 151 feature:

- ▲ New reliable Dipped Plastic Coating
- ▲ New Moisture Resistance
- ▲ -55°C to +100°C operation
- ▲ High insulation resistance
- ▲ 10% capacity tolerance



Catalog Number	Capacity in Mfds.	D	L	S	Dealer Net
<b>200 Volts DC Working</b>					
151-2P1	.1	5/16	1 1/4	33/32	.21
151-2P15	.15	5/16	1 1/4	33/32	.21
151-2P22	.22	1/2	1 1/2	33/32	.24
151-2P25	.25	1/2	1 1/2	33/32	.27
151-2P47	.47	3/8	1 3/4	1 3/32	.36
151-2P5	.5	3/8	1 3/4	1 3/32	.36
<b>400 Volts DC Working</b>					
151-4S1	.01	3/16	3/4	1/4	.15
151-4S15	.015	3/16	3/4	1/4	.15
151-4S2	.02	1/2	7/8	3/8	.15
151-4S22	.022	1/2	7/8	3/8	.18
151-2P5	.5	3/8	1 3/4	1 3/32	.36
151-4S33	.033	1/2	7/8	3/8	.18
151-4S47	.047	5/8	1 1/2	3/8	.18
151-4S5	.05	5/8	1 1/2	3/8	.18
151-4S68	.068	5/8	1 1/2	3/8	.21
151-4P1	.1	5/8	1 1/2	3/8	.21
151-4P15	.15	1/2	1 1/2	3/8	.24
151-4P22	.22	3/8	1 3/4	1 3/32	.30
151-4P25	.25	3/8	1 3/4	1 3/32	.33
<b>600 Volts DC Working</b>					
151-6D1‡	.001	3/16	3/4	1/4	.15
151-6D15‡	.0015	3/16	3/4	1/4	.15
151-6D2‡	.002	3/16	3/4	1/4	.15
151-6D22‡	.0022	3/16	3/4	1/4	.15

Catalog Number	Capacity in Mfds.	D	L	S	Dealer Net
151-6D3‡	.003	3/16	3/4	1/4	.15
151-6D33‡	.0033	3/16	3/4	1/4	.15
151-6D4‡	.004	3/16	3/4	1/4	.15
151-6D47‡	.0047	3/16	3/4	1/4	.15
151-6D5‡	.005	3/16	3/4	1/4	.15
151-6D6	.006	3/16	3/4	1/4	.18
151-6D68	.0068	3/16	3/4	1/4	.18
151-6S1	.01	1/2	7/8	3/8	.18
151-6S15	.015	1/2	7/8	3/8	.18
151-6S2	.02	1/2	7/8	3/8	.18
151-6S22	.022	1/2	7/8	3/8	.18
151-6S3	.03	3/8	1 1/4	3/8	.21
151-6S33	.033	3/8	1 1/4	3/8	.21
151-6S4	.04	3/8	1 1/4	3/8	.21
151-6S47	.047	3/8	1 1/4	3/8	.24
151-6S5	.05	3/8	1 1/4	3/8	.24
151-6S6	.06	3/8	1 1/4	3/8	.24
151-6S68	.068	1/2	1 1/2	3/8	.24
151-6P1	.1	5/8	1 1/2	3/8	.27
151-6P15	.15	5/8	1 1/2	3/8	.33
151-6P2	.2	3/4	2 1/4	3/8	.39
151-6P22	.22	3/4	2 1/4	3/8	.39
151-6P25	.25	3/4	2 1/4	3/8	.45

\* DuPont Reg.

‡ Indicates Tolerance of +20%



# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### TYPE 107 WRAPPED MYLAR® CAPACITORS

Noninductive polyester film extended foil section, assembled in Mylar wrapper case. Ends filled with thermosetting Pyroset resin. Tinned leads firmly embedded in the resin and will not pull out. Sizes are greatly reduced. Very high insulation resistance, dielectric impervious to moisture.



Temperature Range:

-55°C. to +110°C.

Standard Tolerance.

.001 to .0047 Mfd. ±30%  
.005 to 1.0 Mfd. ±20%

Catalog No.	Capacity	Diameter	Length	Catalog No.	Capacity	Diameter	Length	Catalog No.	Capacity	Diameter	Length
<b>150 VDC Working</b>				<b>200 VDC Working</b>				<b>400 VDC Working</b>			
107V103	.01	.156	½	107C683	.068	.343	¾	107E474	.47	.671	1½
107V153	.015	.187	½	107C104	.1	.375	7/8	107E684	.68	.796	1½
107V223	.022	.203	5/8	107C154	.15	.453	7/8	107E105	1.	.812	2
107V333	.033	.218	5/8	107C224	.22	.438	1½	107E155	1.5	.921	2¼
107V473	.047	.234	¾	107C334	.33	.484	1½	107E205	2.	1.093	2¼
107V683	.068	.265	¾	107C474	.47	.546	1¼	<b>600 VDC Working</b>			
107V104	.1	.281	7/8	107C684	.68	.609	1½	107F102	.001	.156	¾
107V154	.15	.328	7/8	107C105	1.	.671	1¾	107F152	.0052	.171	¾
107V224	.22	.328	1	107C155	1.5	.828	1¾	107F222	.0022	.187	¾
107V334	.33	.375	1¼	107C205	2.	.875	1½	107E332	.0033	.203	¾
107V474	.47	.468	1¼	<b>400 VDC Working</b>				107F472	.0047	.234	¾
107V684	.68	.562	1¼	107E102	.001	.156	5/8	107F682	.0068	.265	¾
107V105	1.00	.593	1½	107E152	.0015	.156	5/8	107F103	.01	.312	¾
107V155	1.5	.718	1¾	107E222	.0022	.156	5/8	107F153	.015	.312	7/8
107V205	2.00	.812	1¾	107E332	.0033	.156	5/8	107F223	.022	.375	7/8
<b>200 VDC Working</b>				107E472	.0047	.187	5/8	107F333	.033	.406	1
107C102	.001	.156	½	107E682	.0068	.218	5/8	107F473	.047	.453	1
107C152	.0015	.156	½	107E103	.01	.250	5/8	107F683	.068	.531	1
107C222	.0022	.156	½	107E153	.015	.296	5/8	107F104	.1	.562	1¼
107C332	.0033	.156	½	107E223	.022	.312	¾	107F154	.15	.671	1½
107C472	.0047	.156	½	107E333	.033	.312	7/8	107F224	.22	.718	1½
107C682	.0068	.156	½	107E473	.047	.343	7/8	107F334	.33	.756	2
107C103	.01	.171	½	107E683	.068	.375	1	107F474	.47	.859	2
107C153	.015	.203	½	107E104	.1	.421	1	107F684	.68	1.016	2
107C223	.022	.250	5/8	107E154	.15	.468	1¼	107F105	1.	1.125	2½
107C333	.033	.250	¾	107E224	.22	.546	1½	107F155	1.5	1.234	3
107C473	.047	.296	¾	107E334	.33	.593	1½	107F205	2.	1.421	3

Available ±10% tolerance (K) 107F205K 2.0 mfd. 600V ±10 ±20% tolerance (M) 107F205M 2.0 mfd. 600V ±20

### TYPE 152 MICROMINIATURE MYLAR® CAPACITORS



Encased in mylar tube with epoxy end seals.  
Will operate at full 200 V.D.C. rating at  
85°C. For 125°C operation derate 50%.  
Extremely high insulation resistance.

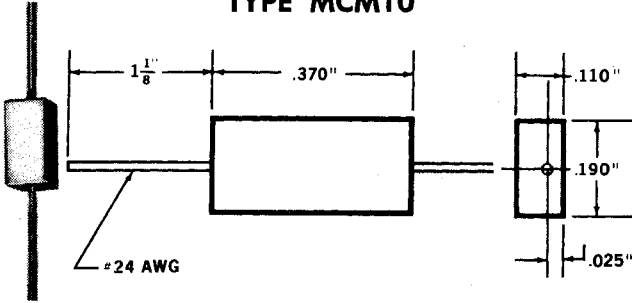
Catalog No.	Capacity	Dia. (±.015")	Length (+.063") (-.031")
152C102	.001	.081	¾
152C152	.0015	.088	¾
152C222	.0022	.095	¾
152C332	.0033	.102	¾
152C472	.0047	.109	¾
152C682	.0068	.121	¾
152C822	.0082	.128	¾
152C103	.01	.139	¾
152C153	.015	.165	¾
152C223	.022	.198	¾
152C333	.033	.237	¾
152C473	.047	.278	¾
152C563	.056	.278	½
152C683	.068	.294	½
152C823	.082	.319	½
152C104	.1	.319	5/8
152C124	.12	.342	5/8
152C154	.15	.381	5/8

Available ±20% (M), ±10% (K), ±5% (J). Specify tolerance by adding appropriate suffix.



# GENERAL INSTRUMENT CORPORATION CAPACITOR DIVISION

## TYPE MCM10

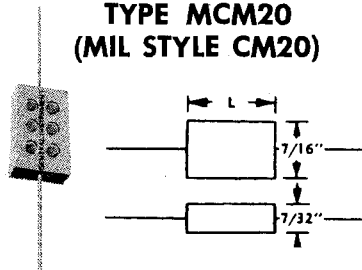


TYPE DESIGNATION	CAP. PF	Characteristics available at capacitance tolerance			
		G ±2%	J ±5%	K ±10%	M ±20%
MCM10-050	5	.....	.....	.....	B
MCM10-100	10	.....	.....	.....	B
MCM10-120	12	.....	.....	B	B
MCM10-150	15	.....	.....	B	B
MCM10-180	18	.....	.....	B	B
MCM10-200	20	.....	BC	BC	BC
MCM10-220	22	.....	BCD	BCD	BCD
MCM10-240	24	.....	BCD	BCD	BCD
MCM10-270	27	.....	BCD	BCD	BCD
MCM10-300	30	.....	BCD	BCD	BCD
MCM10-330	33	.....	BCD	BCD	BCD
MCM10-360	36	.....	BCD	BCD	BCD
MCM10-390	39	.....	BCD	BCD	BCD
MCM10-430	43	.....	BCD	BCD	BCD
MCM10-470	47	.....	BCD	BCD	BCD
MCM10-510	51	CDE	BCDE	BCDE	BCDE
MCM10-560	56	CDE	BCDE	BCDE	BCDE
MCM10-620	62	CDE	BCDE	BCDE	BCDE
MCM10-680	68	CDE	BCDE	BCDE	BCDE
MCM10-750	75	CDE	BCDE	BCDE	BCDE
MCM10-820	82	CDE	BCDE	BCDE	BCDE
MCM10-910	91	CDE	BCDE	BCDE	BCDE
MCM10-101	100	CDEF	BCDEF	BCDEF	BCDEF
MCM10-111	110	CDEF	BCDEF	BCDEF	BCDEF
MCM10-121	120	CDEF	BCDEF	BCDEF	BCDEF
MCM10-131	130	CDEF	BCDEF	BCDEF	BCDEF
MCM10-151	150	CDEF	BCDEF	BCDEF	BCDEF
MCM10-161	160	CDEF	BCDEF	BCDEF	BCDEF
MCM10-181	180	CDEF	BCDEF	BCDEF	BCDEF
MCM10-201	200	CDEF	BCDEF	BCDEF	BCDEF
MCM10-221	220	CDEF	BCDEF	BCDEF	BCDEF
MCM10-241	240	CDEF	BCDEF	BCDEF	BCDEF

## TYPE MCM15 (Continued)

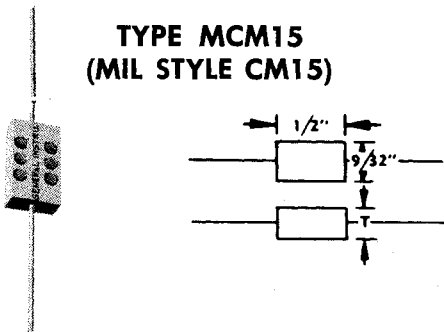
TYPE DESIGNATION	CAP. PF	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
MCM15-330	33	BCDEF	BCDEF	BCDEF
MCM15-360	36	BCDEF	BCDEF	BCDEF
MCM15-390	39	BCDEF	BCDEF	BCDEF
MCM15-430	43	BCDEF	BCDEF	BCDEF
MCM15-470	47	BCDEF	BCDEF	BCDEF
MCM15-510	51	BCDEF	BCDEF	BCDEF
MCM15-560	56	BCDEF	BCDEF	BCDEF
MCM15-620	62	BCDEF	BCDEF	BCDEF
MCM15-680	68	BCDEF	BCDEF	BCDEF
MCM15-750	75	BCDEF	BCDEF	BCDEF
MCM15-820	82	BCDEF	BCDEF	BCDEF
MCM15-910	91	BCDEF	BCDEF	BCDEF
MCM15-101	100	BCDEF	BCDEF	BCDEF
MCM15-111	110	BCDEF	BCDEF	BCDEF
MCM15-121	120	BCDEF	BCDEF	BCDEF
MCM15-131	130	BCDEF	BCDEF	BCDEF
MCM15-151	150	BCDEF	BCDEF	BCDEF
MCM15-161	160	BCDEF	BCDEF	BCDEF
MCM15-181	180	BCDEF	BCDEF	BCDEF
MCM15-201	200	BCDEF	BCDEF	BCDEF
MCM15-221	220	BCDEF	BCDEF	BCDEF
MCM15-241	240	BCDEF	BCDEF	BCDEF
MCM15-271	270	BCDEF	BCDEF	BCDEF
MCM15-301	300	BCDEF	BCDEF	BCDEF
MCM15-331	330	BCDEF	BCDEF	BCDEF
MCM15-361	360	BCDEF	BCDEF	BCDEF
MCM15-391	390	BCDEF	BCDEF	BCDEF
MCM15-431	430	BCDEF	BCDEF	BCDEF
MCM15-471	470	BCDEF	BCDEF	BCDEF
MCM15-511	510	BCDEF	BCDEF	BCDEF

## TYPE MCM20 (MIL STYLE CM20)



TYPE DESIGNATION	CAP. PF	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
MCM20-050	5	.....	B	BC
MCM20-100	10	.....	B	BC
MCM20-120	12	.....	B	BC
MCM20-150	15	.....	B	BC
MCM20-180	18	.....	B	BC
MCM20-200	20	.....	B	BC
MCM20-220	22	.....	B	BC
MCM20-240	24	.....	B	BC
MCM20-270	27	.....	B	BC
MCM20-300	30	.....	B	BC
MCM20-330	33	BCDE	BCDE	BCDE
MCM20-360	36	BCDE	BCDE	BCDE
MCM20-390	39	BCDE	BCDE	BCDE
MCM20-430	43	BCDE	BCDE	BCDE
MCM20-470	47	BCDE	BCDE	BCDE
MCM20-500	40	BCDE	BCDE	BCDE
MCM20-510	51	BCDE	BCDE	BCDEF
MCM20-560	56	BCDEF	BCDEF	BCDEF
MCM20-620	62	BCDEF	BCDEF	BCDEF
MCM20-680	68	BCDEF	BCDEF	BCDEF
MCM20-750	75	BCDEF	BCDEF	BCDEF
MCM20-820	82	BCDEF	BCDEF	BCDEF
MCM20-910	91	BCDEF	BCDEF	BCDEF
MCM20-101	100	BCDEF	BCDEF	BCDEF
MCM20-111	110	BCDEF	BCDEF	BCDEF
MCM20-121	120	BCDEF	BCDEF	BCDEF
MCM20-131	130	BCDEF	BCDEF	BCDEF

## TYPE MCM15 (MIL STYLE CM15)



TYPE DESIGNATION	CAP. PF	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
MCM15-100	10	.....	.....	B
MCM15-120	12	.....	.....	B
MCM15-150	15	.....	.....	B
MCM15-180	18	.....	.....	B
MCM15-200	20	BCDE	BCDE	BCDE
MCM15-220	22	BCDE	BCDE	BCDE
MCM15-240	24	BCDE	BCDE	BCDE
MCM15-270	27	BCDE	BCDE	BCDE
MCM15-300	30	BCDE	BCDE	BCDE

NOTE: \*1 Include applicable characteristic, (B, C, D, E, F).  
\*2 Include applicable tolerance letter, (K, J, G, F).

\*3 Include applicable code letter for operating temperature (N; 85°C; O; 125°C; P; 150°C).

\*4 Include applicable vibration grade.

All characteristics above are for GI Capacitors. MIL-C-5 Specifications fall within these characteristics.

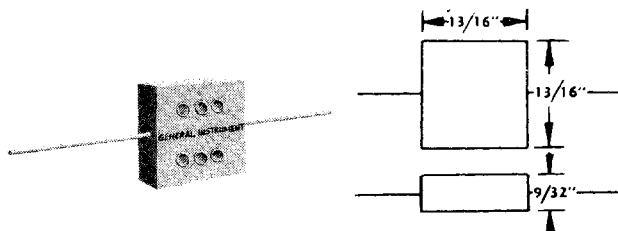


# GENERAL INSTRUMENT CORPORATION CAPACITOR DIVISION

## TYPE MCM20 (Continued)

TYPE DESIGNATION	CAP. PF	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3* 4*				
MCM20 — 151 — — —	150	BCDEF	BCDEF	BCDEF
MCM20 — 161 — — —	160	BCDEF	BCDEF	BCDEF
MCM20 — 181 — — —	180	BCDEF	BCDEF	BCDEF
MCM20 — 201 — — —	200	BCDEF	BCDEF	BCDEF
MCM20 — 221 — — —	220	BCDEF	BCDEF	BCDEF
MCM20 — 241 — — —	240	BCDEF	BCDEF	BCDEF
MCM20 — 251 — — —	250	BCDEF	BCDEF	BCDEF
MCM20 — 271 — — —	270	BCDEF	BCDEF	BCDEF
MCM29 — 301 — — —	300	BCDEF	BCDEF	BCDEF
MCM20 — 331 — — —	330	BCDEF	BCDEF	BCDEF
MCM20 — 361 — — —	360	BCDEF	BCDEF	BCDEF
MCM20 — 391 — — —	390	BCDEF	BCDEF	BCDEF
MCM20 — 431 — — —	430	BCDEF	BCDEF	BCDEF
MCM20 — 471 — — —	470	BCDEF	BCDEF	BCDEF
MCM20 — 501 — — —	500	BCDEF	BCDEF	BCDEF
MCM20 — 511 — — —	510	BCDEF	BCDEF	BCDEF
MCM20 — 561 — — —	560	BCDEF	BCDEF	BCDEF
MCM20 — 621 — — —	620	BCDEF	BCDEF	BCDEF
MCM20 — 681 — — —	680	BCDEF	BCDEF	BCDEF
MCM20 — 751 — — —	750	BCDEF	BCDEF	BCDEF
MCM20 — 821 — — —	820	BCDEF	BCDEF	BCDEF
MCM20 — 911 — — —	910	BCDEF	BCDEF	BCDEF
MCM20 — 102 — — —	1000	BCDEF	BCDEF	BCDEF
MCM20 — 112 — — —	1100	BCDEF	BCDEF	BCDEF
MCM20 — 122 — — —	1200	BCDEF	BCDEF	BCDEF
MCM20 — 132 — — —	1300	BCDEF	BCDEF	BCDEF
MCM20 — 152 — — —	1500	BCDEF	BCDEF	BCDEF
MCM20 — 162 — — —	1600	BCDEF	BCDEF	BCDEF
MCM20 — 182 — — —	1800	BCDEF	BCDEF	BCDEF
MCM20 — 202 — — —	2000	BCDEF	BCDEF	BCDEF
MCM20 — 222 — — —	2200	BCDEF	BCDEF	BCDEF
MCM20 — 242 — — —	2400	BCDEF	BCDEF	BCDEF
MCM20 — 252 — — —	2500	BCDEF	BCDEF	BCDEF
MCM20 — 272 — — —	2700	BCDEF	BCDEF	BCDEF
MCM20 — 302 — — —	3000	BCDEF	BCDEF	BCDEF
MCM20 — 332 — — —	3300	BCDEF	BCDEF	BCDEF
MCM20 — 362 — — —	3600	BCDEF	BCDEF	BCDEF
MCM20 — 392 — — —	3900	BCDEF	BCDEF	BCDEF
MCM20 — 432 — — —	4300	BCDEF	BCDEF	BCDEF
MCM20 — 472 — — —	4700	BCDEF	BCDEF	BCDEF
MCM20 — 502 — — —	5000	BCDEF	BCDEF	BCDEF
MCM20 — 512 — — —	5100	BCDEF	BCDEF	BCDEF

## TYPE MCM30 (MIL STYLE CM30)



TYPE DESIGNATION	CAP. PF	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3* 4*				
MCM30 — 561 — — —	560	BCDEF	BCDEF	BCDEF
MCM30 — 621 — — —	620	BCDEF	BCDEF	BCDEF
MCM30 — 681 — — —	680	BCDEF	BCDEF	BCDEF
MCM30 — 751 — — —	750	BCDEF	BCDEF	BCDEF
MCM30 — 821 — — —	820	BCDEF	BCDEF	BCDEF
MCM30 — 911 — — —	910	BCDEF	BCDEF	BCDEF
MCM30 — 102 — — —	1000	BCDEF	BCDEF	BCDEF
MCM30 — 112 — — —	1100	BCDEF	BCDEF	BCDEF
MCM30 — 122 — — —	1200	BCDEF	BCDEF	BCDEF
MCM30 — 132 — — —	1300	BCDEF	BCDEF	BCDEF
MCM30 — 152 — — —	1500	BCDEF	BCDEF	BCDEF
MCM30 — 162 — — —	1600	BCDEF	BCDEF	BCDEF
MCM30 — 182 — — —	1800	BCDEF	BCDEF	BCDEF
MCM30 — 202 — — —	2000	BCDEF	BCDEF	BCDEF
MCM30 — 222 — — —	2200	BCDEF	BCDEF	BCDEF
MCM30 — 242 — — —	2400	BCDEF	BCDEF	BCDEF

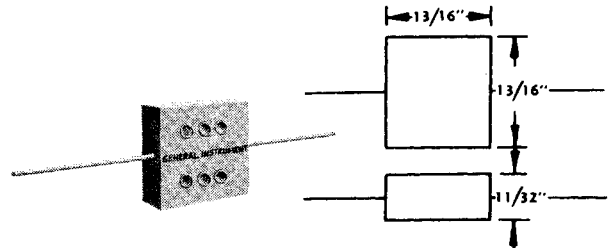
NOTE: \*1 Include applicable characteristic, (B, C, D, E, F).  
\*2 Include applicable tolerance letter, (K, J, G, F).

All characteristics above are for GI Capacitors. MIL-C-5 Specifications fall within these characteristics.

## TYPE MCM30 (Continued)

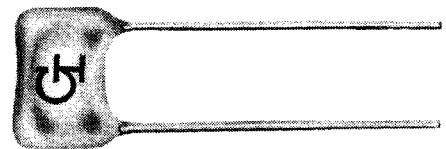
TYPE DESIGNATION	CAP. PF	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3* 4*				
MCM30 — 252 — — —	2500	BCDEF	BCDEF	BCDEF
MCM30 — 272 — — —	2700	BCDEF	BCDEF	BCDEF
MCM30 — 302 — — —	3000	BCDEF	BCDEF	BCDEF
MCM30 — 332 — — —	3300	BCDEF	BCDEF	BCDEF
MCM30 — 362 — — —	3600	BCDEF	BCDEF	BCDEF
MCM30 — 392 — — —	3900	BCDEF	BCDEF	BCDEF
MCM30 — 432 — — —	4300	BCDEF	BCDEF	BCDEF
MCM30 — 472 — — —	4700	BCDEF	BCDEF	BCDEF
MCM30 — 502 — — —	5000	BCDEF	BCDEF	BCDEF
MCM30 — 512 — — —	5100	BCDEF	BCDEF	BCDEF
MCM30 — 562 — — —	5600	BCDEF	BCDEF	BCDEF
MCM30 — 622 — — —	6200	BCDEF	BCDEF	BCDEF

## TYPE MCM35 (MIL STYLE CM35)



TYPE DESIGNATION	CAP. PF.	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3* 4*				
MCM35 — 362 — — —	3600	BCDEF	BCDEF	BCDEF
MCM35 — 392 — — —	3900	BCDEF	BCDEF	BCDEF
MCM35 — 432 — — —	4300	BCDEF	BCDEF	BCDEF
MCM35 — 472 — — —	4700	BCDEF	BCDEF	BCDEF
MCM35 — 512 — — —	5100	BCDEF	BCDEF	BCDEF
MCM35 — 562 — — —	5600	BCDEF	BCDEF	BCDEF
MCM35 — 622 — — —	6200	BCDEF	BCDEF	BCDEF
MCM35 — 682 — — —	6800	BCDEF	BCDEF	BCDEF
MCM35 — 752 — — —	7500	BCDEF	BCDEF	BCDEF
MCM35 — 822 — — —	8200	BCDEF	BCDEF	BCDEF
MCM35 — 912 — — —	9100	BCDEF	BCDEF	BCDEF
MCM35 — 103 — — —	10000	BCDEF	BCDEF	BCDEF

DIPPED SILVERED MICA CAPACITORS TO THE LATEST REVISION OF SPECIFICATION MIL-C-5.



## TYPE RDM15 (MIL STYLE CM05)

TYPE DESIGNATION	CAP. PF.	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3* 4*				
CM05 — 050K — — 3	5	....	....	C
CM05 — 060K — — 3	6	....	....	C
CM05 — 070K — — 3	7	....	....	C
CM05 — 080K — — 3	8	....	....	C
CM05 — 100K — — 3	10	....	....	C

\*3 Include applicable code letter for operating temperature (N;85°C; O;125°C; P;150°C).

\*4 Include applicable vibration grade.



# GENERAL INSTRUMENT CORPORATION CAPACITOR DIVISION

## TYPE CM05 (Continued)

TYPE DESIGNATION	CAP. PF.	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3*				
CM05 — 120 — 3	12	....	....	C
CM05 — 180 — 3	18	....	....	C
CM05 — 200 — 3	20	....	DE	....
CM05 — 220 — 3	22	....	DE	CD
CM05 — 240 — 3	24	....	DE	....
CM05 — 270 — 3	27	E	DE	CD
CM05 — 300 — 3	30	E	DE	....
CM05 — 330 — 3	33	E	DE	CD
CM05 — 360 — 3	36	E	DE	....
CM05 — 390 — 3	39	E	DE	CD
CM05 — 430 — 3	43	E	DE	....
CM05 — 470 — 3	47	E	DE	CD
CM05 — 510 — 3	51	E	DE	....
CM05 — 560 — 3	56	E	DE	CD
CM05 — 620 — 3	62	E	DE	....
CM05 — 680 — 3	68	E	DE	CD
CM05 — 750 — 3	75	E	DE	....
CM05 — 820 — 3	82	E	DE	CD
CM05 — 910 — 3	91	F	DF	....
CM05 — 101 — 3	100	F	DF	CD
CM05 — 111 — 3	110	F	DF	....
CM05 — 121 — 3	120	F	DF	CD
CM05 — 131 — 3	130	F	DF	....
CM05 — 151 — 3	150	F	DF	CD
CM05 — 161 — 3	160	F	DF	....
CM05 — 181 — 3	180	F	DF	CD
CM05 — 201 — 3	200	F	DF	....
CM05 — 221 — 3	220	F	DF	CD
CM05 — 241 — 3	240	F	DF	....
CM05 — 271 — 3	270	F	DF	CD
CM05 — 301 — 3	300	F	DF	....
CM05 — 331 — 3	330	F	DF	CD
CM05 — 361 — 3	360	F	DF	....
CM05 — 391 — 3	390	F	DF	CD

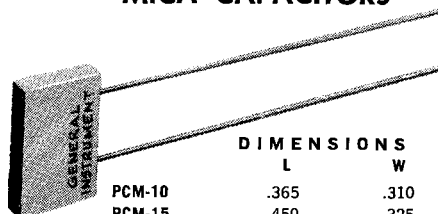
## TYPE RDM20 (MIL STYLE CM06)

TYPE DESIGNATION	CAP. PF.	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3*				
CM06 — 431 — 3	430	F	DF	....
CM06 — 471 — 3	470	F	DF	CD
CM06 — 511 — 3	510	F	DF	....
CM06 — 561 — 3	560	F	DF	CD
CM06 — 621 — 3	620	F	DF	....
CM06 — 681 — 3	680	F	DF	CD
CM06 — 751 — 3	750	F	DF	....
CM06 — 821 — 3	820	F	DF	CD
CM06 — 911 — 3	910	F	DF	....
CM06 — 102 — 3	1000	F	DF	CD
CM06 — 112 — 3	1100	F	DF	....
CM06 — 122 — 3	1200	F	DF	....
CM06 — 132 — 3	1300	F	DF	....
CM06 — 152 — 3	1500	F	DF	....
CM06 — 162 — 3	1600	F	DF	....
CM06 — 182 — 3	1800	F	DF	....
CM06 — 202 — 3	2000	F	DF	....
CM06 — 222 — 3	2200	F	DF	....
CM06 — 242 — 3	2400	F	DF	....
CM06 — 272 — 3	2700	F	DF	....
CM06 — 302 — 3	3000	F	DF	....
CM06 — 332 — 3	3300	F	DF	....
CM06 — 362 — 3	3600	F	DF	....
CM06 — 392 — 3	3900	F	DF	....
CM06 — 432 — 3	4300	F	DF	....
CM06 — 472 — 3	4700	F	DF	....

## TYPE RDM30 (MIL STYLE CM07)

TYPE DESIGNATION	CAP. PF.	Characteristics available at capacitance tolerance		
		G ±2%	J ±5%	K ±10%
1* 2* 3*				
CM07 — 512 — 3	5100	F	F	....
CM07 — 562 — 3	5600	F	F	....
CM07 — 622 — 3	6200	F	F	....
CM07 — 682 — 3	6800	F	F	....
CM07 — 752 — 3	7500	F	F	....
CM07 — 822 — 3	8200	F	F	....
CM07 — 912 — 3	9100	F	F	....
CM07 — 103 — 3	10000	F	F	....
CM07 — 113 — 3	11000	F	F	....
CM07 — 123 — 3	12000	F	F	....
CM07 — 133 — 3	13000	F	F	....
CM07 — 153 — 3	15000	F	F	....
CM07 — 163 — 3	16000	F	F	....
CM07 — 183 — 3	18000	F	F	....
CM07 — 203 — 3	20000	F	F	....

## MOLDED RADIAL LEAD SILVERED MICA CAPACITORS



	L	W	T
PCM-10	.365	.310	.121
PCM-15	.450	.325	.150
PCM-20	.615	.469	.205

## TYPE PCM10

TYPE DESIGNATION	CAP. PF.	Characteristics available at capacitance tolerance			
		G ±2%	J ±5%	K ±10%	M ±20%
1* 2* 3* 4*					
PCM10 — 050 — —	5	.....	.....	.....	BC
PCM10 — 010 — —	10	.....	.....	.....	BC
PCM10 — 120 — —	12	.....	.....	.....	BCD
PCM10 — 150 — —	15	.....	.....	.....	BCD
PCM10 — 180 — —	18	.....	.....	.....	BCD
PCM10 — 200 — —	20	.....	BCD	.....	BCD
PCM10 — 220 — —	22	.....	BCD	.....	BCD
PCM10 — 240 — —	24	.....	BCD	.....	BCD
PCM10 — 270 — —	27	.....	BCD	.....	BCD
PCM10 — 300 — —	30	.....	BCD	.....	BCD
PCM10 — 330 — —	33	.....	BCD	.....	BCD
PCM10 — 360 — —	36	.....	BCD	.....	BCD
PCM10 — 390 — —	39	.....	BCD	.....	BCD
PCM10 — 430 — —	43	.....	BCD	.....	BCD
PCM10 — 470 — —	47	.....	BCD	.....	BCD
PCM10 — 510 — —	51	CDE	BCDE	.....	BCDE
PCM10 — 560 — —	56	CDE	BCDE	.....	BCDE
PCM10 — 620 — —	62	CDE	BCDE	.....	BCDE
PCM10 — 680 — —	68	CDE	BCDE	.....	BCDE
PCM10 — 750 — —	75	CDE	BCDE	.....	BCDE
PCM10 — 820 — —	82	CDE	BCDE	.....	BCDE
PCM10 — 910 — —	91	CDE	BCDE	.....	BCDE
PCM10 — 101 — —	100	CDEF	BCDEF	.....	BCDEF
PCM10 — 111 — —	110	CDEF	BCDEF	.....	BCDEF
PCM10 — 121 — —	120	CDEF	BCDEF	.....	BCDEF
PCM10 — 131 — —	130	CDEF	BCDEF	.....	BCDEF
PCM10 — 151 — —	150	CDEF	BCDEF	.....	BCDEF
PCM10 — 161 — —	160	CDEF	BCDEF	.....	BCDEF
PCM10 — 181 — —	180	CDEF	BCDEF	.....	BCDEF
PCM10 — 201 — —	200	CDEF	BCDEF	.....	BCDEF
PCM10 — 221 — —	220	CDEF	BCDEF	.....	BCDEF
PCM10 — 241 — —	240	CDEF	BCDEF	.....	BCDEF

NOTE: \*1 Include applicable characteristic, (B, C, D, E, F).  
\*2 Include applicable tolerance letter, (K, J, G, F).

\*3 Include applicable code letter for operating temperature (N;85°C; O;125°C; P;150°C).

\*4 Include applicable vibration grade.

All characteristics above are for GI Capacitors. MIL-C-5 Specifications fall within these characteristics.



# GENERAL INSTRUMENT CORPORATION

## CAPACITOR DIVISION

### TYPE PCM15

TYPE DESIGNATION	CAPACITANCE ( $\mu\text{f}$ )	DC WORKING VOLTAGE	Characteristics available at capacitance tolerance			
			G $\pm 2\%$	J $\pm 5\%$	K $\pm 10\%$	M $\pm 20\%$
1* 2* 3* 4*						
PCM15 — 050	5	500				BC
PCM15 — 100	10	500			BC	BC
PCM15 — 120	12	500			BC	BCD
PCM15 — 150	15	500			BCD	BCD
PCM15 — 180	18	500			BCD	BCD
PCM15 — 200	20	500		BCD	BCD	BCD
PCM15 — 220	22	500		BCD	BCD	BCD
PCM15 — 240	24	500		BCD	BCD	BCD
PCM15 — 270	27	500		BCD	BCD	BCD
PCM15 — 300	30	500		BCD	BCD	BCD
PCM15 — 330	33	500		BCD	BCD	BCD
PCM15 — 360	36	500		BCD	BCD	BCD
PCM15 — 390	39	500		BCD	BCD	BCD
PCM15 — 430	43	500		BCD	BCD	BCD
PCM15 — 470	47	500		BCD	BCD	BCD
PCM15 — 510	51	500	CDE	BCDE	BCDE	BCDE
PCM15 — 560	56	500	CDE	BCDE	BCDE	BCDE
PCM15 — 620	62	500	CDE	BCDE	BCDE	BCDE
PCM15 — 680	68	500	CDE	BCDE	BCDE	BCDE
PCM15 — 750	75	500	CDE	BCDE	BCDE	BCDE
PCM15 — 820	82	500	CDE	BCDE	BCDE	BCDE
PCM15 — 910	91	500	CDE	BCDE	BCDE	BCDE
PCM15 — 101	100	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 111	110	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 121	120	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 131	130	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 151	150	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 161	160	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 181	180	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 201	200	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 221	220	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 241	240	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 271	270	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 301	300	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 331	330	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 361	360	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 391	390	500	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 431	430	300	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 471	470	300	CDEF	BCDEF	BCDEF	BCDEF
PCM15 — 511	510	300	CDEF	BCDEF	BCDEF	BCDEF

### TYPE PCM20

TYPE DESIGNATION	CAPACITANCE ( $\mu\text{f}$ )	DC WORKING VOLTAGE	Characteristics available at capacitance tolerance			
			G $\pm 2\%$	J $\pm 5\%$	K $\pm 10\%$	M $\pm 20\%$
1* 2* 3* 4*						
PCM20 — 510	51	500	CDE	BCDE	BCDE	BCDE
PCM20 — 560	56	500	CDE	BCDE	BCDE	BCDE
PCM20 — 620	62	500	CDE	BCDE	BCDE	BCDE
PCM20 — 680	68	500	CDE	BCDE	BCDE	BCDE
PCM20 — 750	75	500	CDE	BCDE	BCDE	BCDE
PCM20 — 820	82	500	CDE	BCDE	BCDE	BCDE
PCM20 — 910	91	500	CDE	BCDE	BCDE	BCDE
PCM20 — 101	100	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 111	110	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 121	120	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 131	130	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 151	150	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 161	160	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 181	180	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 201	200	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 221	220	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 241	240	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 271	270	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 301	300	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 331	330	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 361	360	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 391	390	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 431	430	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 471	470	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 511	510	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 561	560	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 621	620	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 681	680	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 751	750	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 821	820	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 911	910	500	CDEF	BCDEF	BCDEF	BCDEF
PCM20 — 102	1000	500	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 112	1100	500	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 122	1200	500	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 132	1300	500	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 152	1500	500	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 162	1600	500	CDEF	BCDEF	BCDEF	BCDE
PCM15 — 182	1800	500	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 202	2000	500	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 222	2200	300	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 242	2400	300	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 272	2700	300	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 302	3000	300	CDEF	BCDEF	BCDEF	BCDE
PCM20 — 332	3300	300	CDEF	BCDEF	BCDEF	BCDE

NOTE: \*1 Include applicable characteristic, (B, C, D, E, F).  
\*2 Include applicable tolerance letter, (K, J, G, F).

\*3 Include applicable code letter for operating temperature (N;85°C; O;125°C; P;150°C).

\*4 Include applicable vibration grade.

## ABOUT GENERAL INSTRUMENT CORPORATION

A pioneer (founded 1928) in the electronics industry, General Instrument is a broadly diversified producer of devices and equipment for industrial, military and space and entertainment end use

### FACILITIES:

18 plants and research centers in the United States and Canada (1,800,000 square feet), more than 9,000 employees.

### PRODUCTS:

● Semiconductors (transistors, diodes, rectifiers) ● microcircuits ● capacitors ● resistors ● thin film devices ● sonar and other underseas instrumentation ● industrial ultrasonic equipment ● thermic electric generators ● I.F. transformers ● piezo-electric ceramics ● hermetic glass-to-metal seals ● R-F chokes and coils ● delay lines ● magnetic components ● TV tuners ● deflection component ● automobile radio tuners ● electronic fuzes ● radar, telemetry, communications, beaconry an air traffic control equipment ● IFF equipment and systems ● navigation and control systems ● tele phone and telegraph terminals



# HAMMARLUND



## STANDARD VARIABLE CAPACITORS

### "APC" CAPACITORS

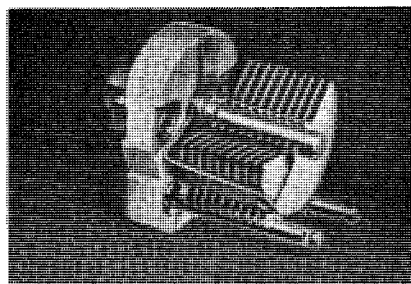
**FEATURES**—The "APC" trimmer capacitor originated by Hammarlund over twenty years ago is still widely recognized as the standard capacitor of its type. Its use is indicated in all classes of equipment where a compact, high quality air dielectric trimmer is required. It was designed to resist effects of temperature, moisture and vibration. Silicone treated steatite insulation is used to insure high leakage resistance.

**CONSTRUCTION**—Brass rotor and stator plates are soldered to brass supports. Nickel-plated phosphor bronze wiper assures positive rotor contact. All metal parts are nickel-plated. Terminals are hot-tin dipped. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding the rotor.

**SPECIFICATIONS**—Straight line capacity characteristic. Available either with hexagonal collar on slotted shaft to permit rotor adjustments to be made with wrench or screwdriver or with  $\frac{1}{2}$ " extended shaft for knob control or shaft coupling. (Type "B") "APC-C" Lock Type now also available through distributors. Air Gap is 0.015" nominal. Tested at 600 V. R.M.S., 60 cycles.

Code	Capacity		Plates	Net Price
	Max.	Min.		
APC-15	17.	2.8	5	\$1.25
APC-25	25.	3.0	7	1.35
APC-50	50.	3.9	14	1.55
APC-75	75.	4.6	20	1.70
APC-100	100.	5.5	27	1.85
APC-140	140.	6.7	37	2.15

"B" and "C" types slightly higher



### "MAPC" CAPACITORS

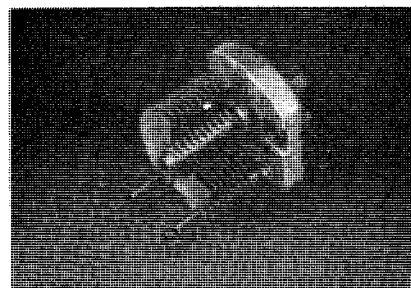
**FEATURES**—The "MAPC" capacitor is representative of Hammarlund's efforts to meet the demand for smaller dependable components. It is a scaled-down version of the popular "APC" with everything reduced except the quality and performance characteristics. For example, an "MAPC" is about half the size and weight of an "APC". Lower minimum capacities and low inductance make the "MAPC" suitable for VHF use.

**CONSTRUCTION**—The standard "APC" construction is used in this capacitor. Rotors and stators are fabricated by soldering brass plates to supporting members and nickel-plating the assemblies. Nickel-plated phosphor bronze wiper assures positive rotor contact. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding rotor.

**SPECIFICATIONS**—Straight line capacity. Available either with screwdriver or socket wrench adjustment or with  $\frac{1}{16}$ " extended shaft for knob control or shaft coupling. (Type "B") "MAPC-C" Lock Type now also available through distributors. Air Gap is 0.0135" nominal. Tested at 600 V. R.M.S., 60 cycles.

Code	Capacity		Plates	Net Price
	Max.	Min.		
MAPC-15	15.	2.3	6	\$1.01
MAPC-25	25.	2.6	10	1.10
MAPC-35	35.	2.9	14	1.10
MAPC-50	50.	3.2	19	1.19
MAPC-75	75.	3.9	29	1.28
MAPC-100	100.	4.5	38	1.44

"B" and "C" types slightly higher

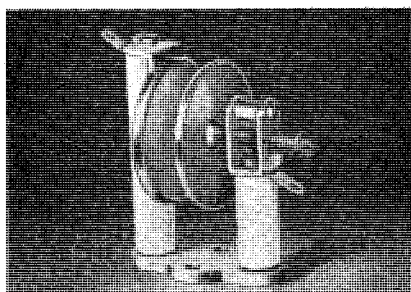


### NZ-10" CAPACITORS

**FEATURES**—The "NZ-10" is a compact transmitter neutralizing capacitor designed for easy and accurate adjustment. The rotor is attached to a fine-thread lead screw which may be adjusted with smooth and precise action by a screwdriver and locked securely by a readily accessible clamping screw. A stop prevents shorting of plates at maximum capacity. Long leakage paths to ground from both rotor and stator are provided. Glazed steatite insulators and smoothly rounded aluminum plates minimize flashover.

**SPECIFICATIONS**—Capacity is adjustable from 2.3 to 10 mmf. Peak voltage rating is 3000 V. at maximum capacity (minimum gap) position.

Net Price \$4.77

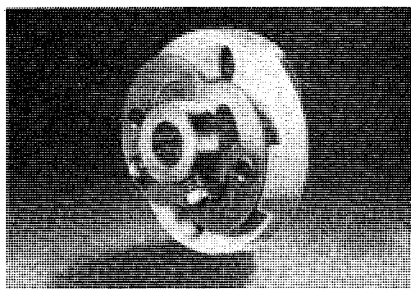


### FC" and "FNC" COUPLINGS

**FEATURES**—The "FC-46-S" is an insulated flexible coupling designed to provide for mechanical ganging of shafts even though angularly misaligned. The smallest dimensions have been incorporated consistent with the rugged construction necessary for general service. A high degree of electrical isolation is achieved through the use of silicone treated steatite insulation. Flashover voltage is approximately 5000 V. R.M.S. Brass hubs and spring wiper phosphor bronze flexible arms are nickel plated. An exclusive and important feature of this coupling is its characteristic of uniform side-thrust through 360° of rotation. This eliminates tendency to vibrate at high speeds, minimizes bearing wear and assures accurate coupling.

The "FNC-46-S" is a non-insulated coupling for use where electrical continuity between shafts is required. The flexible arms are secured securely to a nickel plated brass g instead of an insulator.

Standard Stock Types		Net Price
CODE FC-46-S	Insulated flexible coupling	\$1.10
CODE FNC-46-S	Non-insulated flexible coupling	.93



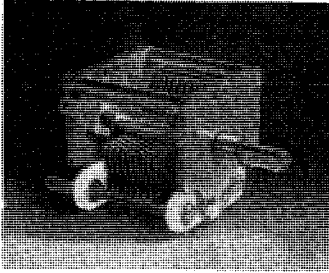




# HAMMARLUND



## STANDARD VARIABLE CAPACITORS



### "RMC" CAPACITORS

**FEATURES**—The "RMC" was designed specifically for applications requiring an "MC" type tuning capacitor with very rigid construction. Its sturdy frame consists of heavy gauge aluminum end panels held together by three aluminum tie rods. It has a brass sleeve front bearing and a single ball thrust rear bearing for smooth tuning and a high degree of resetability. The rotor contact is a forked silver plated phosphor bronze spring wiping against a wide disc on the rotor. The plate shape and other constructional features are the same as on the "MC". Tapped holes in front panel and in mounting feet, as well as additional brackets for inverted mounting permit a wide variety of assembly methods. "M" type plates and ball-bearing construction can also be made available as specials.

Code	Capacity		Plates	Net Price
	Max.	Min.		
RMC-50-S	50.	7.3	7	\$4.14
RMC-100-S	105.	9.5	14	4.40
RMC-140-S	143.5	11.0	19	4.56
RMC-325-S	327.	17.5	43	5.15

**SPECIFICATIONS**—Straight line capacity. Air gap is 0.0245" nominal. Tested at 1000 V. R.M.S., 60 cycles.

### "BFC" CAPACITORS

**FEATURES**—The "BFC" "butterfly" type capacitor has very low minimum capacity, low inductance and isolated rotor for use in VHF applications as a series capacitor with no rotor connection. For dual split-stator capacitor use, it has a low-loss positive rotor contact. Mechanical and electrical symmetry and stator terminal locations minimize circuit inductance.

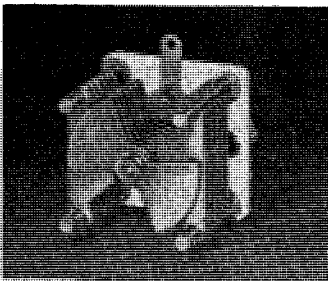
**CONSTRUCTION**—Brass rotors and stators are

soldered and nickel-plated. The contact wiper is heavily silver plated phosphor bronze. Tapped studs on the silicone treated steatite front panel permit mounting the capacitor without grounding the rotor. The sleeve type bearing is nickel-plated brass.

**SPECIFICATIONS**—Straight line capacity. 90° rotation from minimum to maximum capacity position. Air gap is 0.030" nominal. Tested at 1200 V. R.M.S., 60 cycles between rotor and each stator.

High Speed Ball-Bearing Models Also Are Available

Code	Capacity/Section		Series Capacity		Plates		Net Price
	Max.	Min.	Max.	Min.	Rotor	Ea. Stator	
BFC-12	14.5	3.4	7.6	2.2	4	3	\$1.95
BFC-25	27.3	4.8	14.1	2.9	7	6	2.25
BFC-38	40.1	6.2	20.6	3.6	10	9	2.60
BFC-50	52.4	7.6	27.1	4.3	13	12	2.75



### "VU" CAPACITORS

**FEATURES**—The "VU" is a uniquely designed UHF tuning capacitor using completely original concepts. With it, conventional "lumped constant" circuits, rather than tuned cavity techniques, can be efficiently used up to 500 megacycles. In addition to employing the capacitor sections in series to eliminate the rotor wiper, the design also utilizes Pyre balls to form precision bearings and to completely isolate the rotor. Thus, noise generated by rubbing metal-to-metal contacts and variable resistance path in the bearings have been totally eliminated. Circuit connections are made to threaded studs on each stator. This permits vacuum tube and inductor to be mounted adjacent to and on opposite sides of the capacitor to minimize circuit inductance. The symmetrical design is ideal for tuned circuits operating up to 500 megacycles.

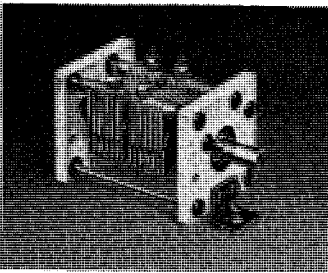
**CONSTRUCTION**—Rotors and stators are of brass with plates soldered in precisely located grooves and then silver plated to increase the "Q" of the capacitor. The insulation is silicone treated steatite. A lengthwise frame members are of brass to minimize temperature effects. Base mounting brackets are provided.

**SPECIFICATIONS**—The capacity characteristic approaches a straight line frequency curve as indicated by nominal values in table at left. Air gap is .016" nominal. Tested at 700 V. R.M.S., 60 cycles, between rotor and each stator.

Dial % Rotation	Effective Series Capacity		
	VU-20	VU-30	VU-45
0	0.	0.	0.
10	.55	.8	1.15
20	1.55	2.2	3.15
30	2.75	3.85	5.45
40	4.2	5.85	8.35
50	6.0	8.4	12.0
60	8.35	11.65	16.65
70	11.2	15.7	22.4
80	14.65	20.55	29.35
90	18.6	26.05	37.2
100	22.5	31.5	45.0

Code	Series Capacity		Plates/Section	Net Price
	Eff.	Min.		
VU-20	22.5	3.35	11	8.30
VU-30	31.5	3.5	15	8.58
VU-45	45.0	3.8	21	9.37

**SPECIAL CALIBRATED CAPACITORS**—The "VU" type capacitors can be supplied in quantity lots specially calibrated to the nominal curve with a tolerance of  $\pm 0.15$  mmf or 1%, whichever is greater.



Code	Capacity		Plates	Net Price
	Max.	Min.		
MAC-5	5.4	1.3	5	\$1.00
MAC-10	9.6	1.5	9	1.05
MAC-15	15.8	1.9	15	1.20
MAC-20	21.5	2.2	21	1.35
MAC-30	32.0	2.5	27	1.40

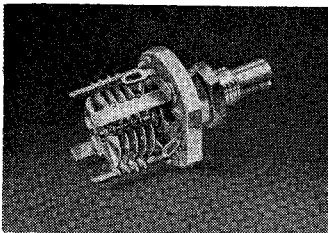
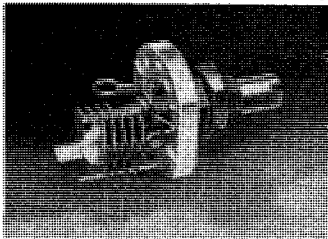
### "MAC" and "MACBF" CAPACITORS

**FEATURES**—The "MAC" provides the low minimum capacity essential for use as a trimmer in the VHF range. It was engineered and designed to produce a rugged, stable, highly reliable miniature component for today's equipment.

**CONSTRUCTION**—Its silicone treated steatite base is only  $\frac{3}{8}$ " x  $\frac{5}{8}$ ". Rotor and stator are solder assemblies and are of brass, nickel-plated. Rotor and stator terminals are positioned to permit short lead. The threaded bearing is provided with flat sides permit single hole mounting.

**SPECIFICATIONS**—Straight line capacity. Screw driver adjustment. Air gap is 0.017" nominal. Tested at 880 V. R.M.S., 60 cycles, except the MAC-30 which has an air gap of 0.0135" nominal and tested at 600 V. R.M.S., 60 cycles. "MACBF" is butterfly version of the "MAC." It is designed dual split-stator capacitor use.

Code	Capacity/Section		Plates		Net Price
	Max.	Min.	Rotor	Ea. Stator	
<b>Butterfly</b>					
MACBF-3	3.1	1.3	3	2	\$1.40
MACBF-5	5.0	1.6	5	4	1.60
MACBF-8	7.9	2.0	8	7	1.80
MACBF-11	10.8	2.4	11	10	2.00
<b>Differential</b>					
MAC-5-5	5.4	1.3	3	2	1.38
MAC-10-10	9.6	1.5	5	4	1.52
MAC-15-15	15.8	1.9	8	7	1.68
MAC-20-20	21.5	2.2	11	10	1.77





# HAMMARLUND



## STANDARD VARIABLE CAPACITORS

### "MC", "MCA" and "MCD" CAPACITORS

**FEATURES**—The "MC" is a versatile single section tuning capacitor designed to give the equipment engineer a choice of mountings, connections and capacity characteristics. The threaded brass front bearing and tapped aluminum end brackets permit panel or base mounting. "MC-S" capacitors have a straight line capacity characteristic. "MC-M" units have offset plates resulting in a "Midline" characteristic which more equally spaces frequencies. "MC-X" units are wide-spaced for high voltages. Hammarlund "MC" capacitors, except for "MCA" types, have silver plated phosphor bronze wiping contact, silicone-treated stearite insulation, soldered nickel-plated brass rotors and stators. rotor shaft supported on bearings at both front and rear of capacitor.

The "MCD" is a split-stator panel-mounted capacitor with all the "MC" features. Stators have terminals on both sides. Stators on single-spaced capacitors are separated by a shield. Wide-spaced units have no shield. Multi-section capacitors can be designed for special applications.

A rotor stop is available on "MC" capacitors on special order.

**SPECIFICATIONS**—Straight line or "Midline" capacity characteristic. Single-spaced types have 0.0245" nominal air gap and are tested at 1000 V. R.M.S., 60 cycles. Wide-spaced ("X") types have 0.0715" nominal air gap and are tested at 1750 V. R.M.S., 60 cycles.

### "HF" and "HFD" CAPACITORS

**SINGLE SECTION CAPACITOR**—The "HF" is a single section tuning capacitor employing "APC" rotor and stator design. Extra long sleeve bearing and positive contact nickel-plated phosphor bronze wiper make this unit ideally suited to high frequency applications. Silicone treated stearite insulation. Single hole or base mounting. Special spacing, capacity values, finishes and other modifications are available to manufacturers on special order.

**DOUBLE SECTION CAPACITOR**—The "HFD" dual capacitors, like the "HF" singles, incorporate advanced features providing for maximum efficiency at high frequency. Soldered brass plates are nickel-plated. Aluminum front and rear end panels are mounted on a heavy silicone treated stearite base. Front and rear bearings with wide individual silver plated phosphor bronze wipers for each section assure long life and maximum contact efficiency. Single hole panel mount or base mounting. Electrostatic shield between sections. Terminals are provided on both sides of each stator to permit mounting tube and inductor on opposite sides. Multi-section capacitors can also be made available to customer specifications.

**SPECIFICATIONS**—Straight line capacity. Single spaced types (HF and HFD) have 0.015" air gap and are tested at 600 V. R.M.S., 60 cycles. Wide spaced types (HF-X and HFD-X) have 0.045" air gap and are tested at 1400 V. R.M.S., 60 cycles.

### "HFA", "HFA DIFFERENTIAL",

### "HFA DUAL", and "HFB" CAPACITORS

**SINGLE SECTION CAPACITORS**—The "HFA" is a single section tuning capacitor similar to the "HF" except that larger plates permit wider air-gaps for the same capacitance values. Resultant higher breakdown ratings extend the use of the capacitor into the high frequency low-power transmitter field. A braided sleeve bearing permits single hole mounting and the bracket supplied may be used for base mounting. A lug type terminal mounted with the bearing provides an efficient rotor connection.

**DIFFERENTIAL TYPE CAPACITORS**—The "HFA" type units are now available as standard items in the differential type construction. The unit is mounted with an ungrounded rotor making it suitable for a wide field of application. In addition to the features of the "HFA" the design also incorporates the use of a spring bronze silver plated wiper contact on the rotor.

**DOUBLE SECTION CAPACITORS**—The "HFA" and the "HFB" are dual balanced rotor capacitors employing front and rear panels plus a single ball thrust. Both units are applicable to transmitter design. The construction features are similar to the "HFA" and the "HFA Differential" type capacitors. Additional special feature employed on the "HFB" type incorporates the use of an insulated shaft extension on the rotor to safeguard against shock hazards with the application of high voltages.

**SPECIFICATIONS**—Straight line capacity. Air gaps and test voltages are as indicated in table. However, "HFB" breakdown voltages are doubled and capacitance values approximately halved when stator connections are connected in series.

Code	Capacity		Plates/ Section	Net Price
	Max.	Min.		
MC-20-S	20.	5.5	3	\$2.27
MC-35-S	35.	6.0	5	2.31
MC-50-M	50.	6.3	7	2.46
MC-50-S	50.	6.5	7	2.48
MC-75-M	80.	7.3	11	2.57
MC-75-S	80.	8.0	11	2.55
MC-100-M	100.	7.7	14	2.72
MC-100-S	100.	8.3	14	2.69
MC-140-M	140.	9.0	19	2.88
MC-140-S	140.	10.0	19	2.85
MC-200-M	200.	10.3	27	3.27
MC-250-M	250.	12.0	34	3.41
MC-325-M	320.	13.5	43	3.90
MC-20-SX	20.	6.8	7	2.63
MC-35-MX	32.	7.8	11	2.69
MC-35-SX	32.	8.5	11	2.79
MC-50-MX	53.	10.5	19	3.02
MC-50-SX	53.	11.5	19	3.05
MC-100-SX	100.	16.5	35	3.87
MCA-20-S	17.5	3.5	3	1.70
MCA-35-S	33.0	3.9	5	1.79
MCA-50-S	47.8	4.4	7	1.91
MCA-75-S	78.0	5.2	11	2.08
MCA-100-S	99.6	5.8	14	2.16
MCA-140-S	137.5	7.0	19	2.30
MCD-50-M	50.	5.5	7	7.25
MCD-100-M	100.	6.3	14	7.74
MCD-100-S	100.	7.0	14	6.74
MCD-140-M	140.	7.8	19	8.16
MCD-35-MX	31.	6.0	11	7.44
MCD-35-SX	31.	6.8	11	6.51

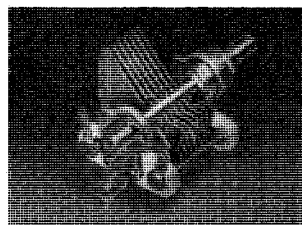
M—Midline plates    S—Straightline plates  
X—Wide-Spaced

Code	Capacity		Plates/ Section	Net Price
	Max.	Min.		
HF-15	17.5	2.8	5	\$1.14
HF-35	36.	3.2	10	1.25
HF-50	52	3.7	14	1.31
HF-100	102.	5.3	27	1.49
HF-140	142.	6.3	37	1.74
HF-15-X	15.	3.6	10	1.29
HF-30-X	30.	5.2	20	1.43
HFD-25	25.	2.9	7	4.37
HFD-50	52.	3.6	14	4.55
HFD-100	102.	5.0	27	4.98
HFD-140	142.	6.0	37	5.15
HFD-15-X	16.	3.8	11	4.55
HFD-30-X	28.5	5.0	19	4.65

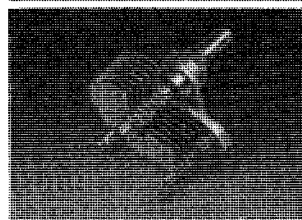
D—Split stator (Duals) X—Wide-Spaced

Code	Capacity			Plates/ Section	Net Price
	Max.	Min.	Spacing		
HFA-100-A	102	4.5	0.020	19	\$2.13
HFA-140-A	145	6.0	0.020	27	2.39
HFA-200-A	200	8.0	0.020	38	2.76
HFA-10-B	9	2.3	0.030	3	1.62
HFA-15-B	16	2.8	0.030	5	1.71
HFA-25-B	25	3.0	0.030	7	1.74
HFA-50-B	50	4.3	0.030	14	1.92
HFA-100-B†	100	7.5	0.030	27	3.05
HFA-15-E	16	4.0	0.070	9	1.85
<b>Differentials</b>					
HFA-10-10B	9	2.3	0.030	3	2.00
HFA-25-25B	25	3.0	0.030	7	2.26
HFA-50-50B	50	4.3	0.030	14	2.50
<b>HFA-Duals</b>					
HFA-25B	27	5.0	0.030	7	3.59
HFA-50B	52	6.8	0.030	14	4.04
HFA-100B	100	8.0	0.030	27	4.94
<b>HFB-Duals</b>					
HFB-50-C	50	9.0	0.050	11	7.85
HFB-100-C	105	14.0	0.050	23	9.24
HFB-35-E*	37	9.5	0.070	11	7.86
HYBD-65-E*	63	12.5	0.070	19	8.69

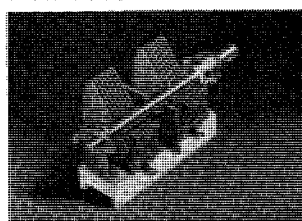
60 cycle test voltage:  
"HFA", "A" 800 V. R.M.S. "B" 1200 V. R.M.S.  
"E" 1750 V. R.M.S. "HFB", "C" 1500 V. R.M.S.  
"E\*" 3000 V. R.M.S.; plates have rounded edges.  
†Has front and rear supporting panels.



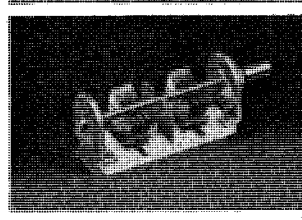
MC



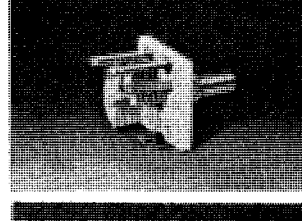
MCA



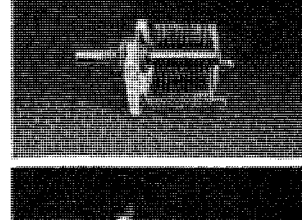
MCD



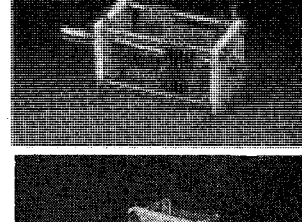
HFD



HF



HFA

HFA  
DUALHFA  
DIFFERENTIAL



# HAMMARLUND



## "CT" CAPACITORS MIL TYPES

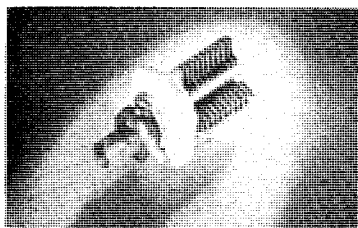
**FEATURES**—Compact, high quality air dielectric trimmer types designed to resist the effects of temperature, moisture and vibration. Silicone treated steatite insulation insures high leakage resistance.

**CONSTRUCTION**—All brass parts nickel-plated. Brass rotor and stator plates soldered to brass supports. Terminals hot-tin dipped. Tapped brass

mounting studs fastened to silicone treated steatite base eliminates grounding the rotor when mounting capacitor. CT06 types are bushing mounted for grounded rotor operation.

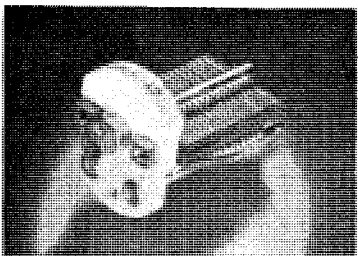
**SPECIFICATIONS**—CT types designed to meet military specification MIL-C-92.

### TYPE CT06



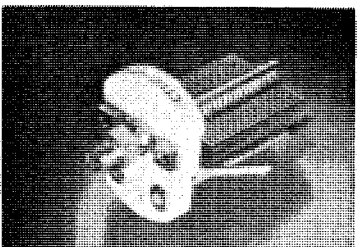
Type designation	DC working voltage volts	Capacitance		*Rotational life	†Length from mounting surface to end of stator rod
		minimum $\mu\mu\text{f}$	maximum $\mu\mu\text{f}$		
CT06E004	500	1.3	4.0	J, M	$\frac{5}{8}$
CT06E013	500	2.1	12.9	J, M	$\frac{5}{16}$
CT06E017	500	2.4	16.8	J, M	$1\frac{3}{4}$
CT06E019	500	3.0	19.0	J, M	$1\frac{1}{16}$

### TYPE CT12



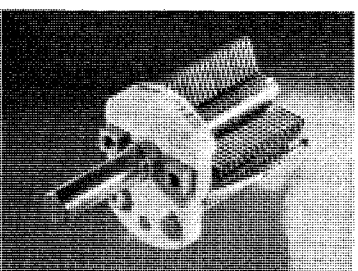
Type designation	DC working voltage volts	Capacitance		*Rotational life	†Length from mounting surface to end of stator rod
		minimum $\mu\mu\text{f}$	maximum $\mu\mu\text{f}$		
CT12E042	500	5.0	42	J, M	$1\frac{1}{16}$
CT12E075	500	6.0	75	J, M	$1\frac{1}{2}$
CT12E099	500	7.5	99	J, M	$1\frac{1}{16}$
CT12E135	500	9.0	135	J, M	$1\frac{1}{16}$
CT12E143	500	9.0	143	J, M	$1\frac{1}{32}$
CT12F010	600	3.0	10	J, M	$1\frac{1}{16}$
CT12F025	600	4.0	25	J, M	$1\frac{3}{2}$
CT12F042	600	5.0	42	J, M	$1\frac{3}{8}$
CT12F075	600	6.0	75	J, M	$1\frac{5}{8}$
CT12F099	600	7.5	99	J, M	$1\frac{29}{32}$
CT12G009	700	4.0	9	J, M	1
CT12G023	700	4.5	23	J, M	$1\frac{1}{4}$
CT12G042	700	5.5	42	J, M	$1\frac{3}{4}$
CT12G075	700	6.5	75	J, M	2

### TYPE CT13



Type designation	DC working voltage volts	Capacitance		*Rotational life	†Length from mounting surface to end of stator rod
		minimum $\mu\mu\text{f}$	maximum $\mu\mu\text{f}$		
CT13E042	500	5.0	42	J, M	$1\frac{1}{16}$
CT13E075	500	6.0	75	J, M	$1\frac{1}{2}$
CT13E099	500	7.5	99	J, M	$1\frac{1}{16}$
CT13E135	500	9.0	135	J, M	$1\frac{1}{16}$
CT13E143	500	9.0	143	J, M	$1\frac{1}{32}$
CT13F010	600	3.0	10	J, M	$1\frac{1}{16}$
CT13F025	600	4.0	25	J, M	$1\frac{3}{2}$
CT13F042	600	5.0	42	J, M	$1\frac{3}{8}$
CT13F075	600	6.0	75	J, M	$1\frac{5}{8}$
CT13F099	600	7.5	99	J, M	$1\frac{29}{32}$
CT13G009	700	4.0	9	J, M	1
CT13G023	700	4.5	23	J, M	$1\frac{1}{4}$
CT13G042	700	5.5	42	J, M	$1\frac{3}{4}$
CT13G075	700	6.5	75	J, M	2

### TYPES CT14 CT15



Type designation	DC working voltage volts	Capacitance		*Rotational life	†Length from mounting surface to end of stator rod
		minimum $\mu\mu\text{f}$	maximum $\mu\mu\text{f}$		
CT1-E042	500	5.0	42	J, M	$1\frac{1}{16}$
CT1-E075	500	6.0	75	J, M	$1\frac{1}{2}$
CT1-E090	500	7.5	99	J, M	$1\frac{1}{16}$
CT1-E135	500	9.0	135	J, M	$1\frac{1}{16}$
CT1-E143	500	9.0	143	J, M	$1\frac{1}{32}$
CT1-F010	600	3.0	10	J, M	$1\frac{1}{16}$
CT1-F025	600	4.0	25	J, M	$1\frac{3}{2}$
CT1-F042	600	5.0	42	J, M	$1\frac{3}{8}$
CT1-F075	600	6.0	75	J, M	$1\frac{5}{8}$
CT1-F099	600	7.5	99	J, M	$1\frac{29}{32}$
CT1-G009	700	4.0	9	J, M	1
CT1-G023	700	4.5	23	J, M	$1\frac{1}{4}$
CT1-G042	700	5.5	42	J, M	$1\frac{3}{4}$
CT1-G075	700	6.5	75	J, M	2

\*J=250 cycle rotational life—M=10,000 cycle rotational life

†For dimensional drawings refer to military specifications MIL-C-92

Suffix "J" or "M" to be added to type designation.

CT14 1" shaft, CT15  $1\frac{1}{2}$ " shaft

PRICES ON REQUEST

## SPECIAL VARIABLE CAPACITORS FOR ALL NEEDS

### AVAILABLE MODIFICATIONS

Hammarlund's more than 50 years experience in the development and manufacture of capacitors has resulted in an endless knowledge of techniques. Such "know-how" includes the making of special capacitors using standard techniques and/or components, or giving birth to a completely new custom product—from concept through to production.

An example of this extended knowledge is the fact that Hammarlund has manufactured over 1000 different types of APC capacitors.

These capacitors came into being as a result of the many modifications required by our customers for their specific applications. Any standard capacitor listed in this catalog can be modified to customer requirements. Such variations include end-panels, shaft diameter and lengths, bearings, special materials and finishes, special air gaps on most units, etc.

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MASTER.**

This will avoid confusion and expedite delivery.

**Thank you!**

**The**   
**RADIO-ELECTRONIC**  
**MASTER**

# RELY ON JFD THE TRIMMER PISTON CAPACITORS AMERICA KNOWS BEST!



The most reliable in the industry . . .  
 . . . the most advanced design . . .  
 . . . the largest selection (over 300 models) . . .

the finest research and development facilities . . . a sales and service organization that spans the globe—are a few of the factors why JFD is first in trimmer piston capacitors. Shown here is a short-form representation of the trimmers now available from JFD for prompt delivery. JFD 'N' series utilize Hi-Life mechanisms, greatly increasing adjustment life. 'N' series (except for quartz units) also use O483 green glass which affords much higher Q and 25% greater capacitance. 'Y' series also use Hi-Life adjustment mechanism. For complete listings write for JFD Trimmer Catalog No. C-64.

JFD also manufactures LC tuners, metallized inductors, ceramic fixed capacitors, and delay lines fully described in individual catalogs and bulletins.

Model Description	Model	No. of Models	Capacitance Range of Series			
			Min.	Max.	Min.	Max.
'N' series miniature panel mount	NVC20G-NVC24G	5				
'N' series miniature printed circuit lug and lead	NVC9G-NVC43G	5	0.8	5.5	1.0	38.0
'N' series miniature printed circuit wire lead	NVC9GW-NVC43GW	5				
Miniature panel mount	VC20G-VC24G	5				
Miniature printed circuit lug and lead	VC9G-VC43G	6				
Miniature printed circuit wire leads	VC9GW-VC43GW	6				
'Y' series miniature panel mount	VC20GY-VC24GY	5	0.8	4.5	1.0	30.0
'Y' series miniature printed circuit lug and lead	VC9GY-VC43GY	5				
'Y' series miniature printed circuit wire lead	VC9GWY-VC43WY	5				
'N' series standard panel mount	NVC25G-NVC28G	4	0.5	4.5	1.0	40.0
Standard panel mount	VC25G-VC30G	14	0.5	3.0	0.8	30.0
Standard panel mount	VC2-VC99	5	0.7	4.5	9.0	21.0
Low cost direct traverse (with standard panel mount construction)	VC54G-VC58G	5	0.8	13.0	5.0	50.0
'N' series subminiature standard panel mount	NVC74	4	0.5	8.5		
'N' series subminiature 4 wire printed circuit	NVC75	4	0.5	8.5		
Subminiature standard panel mount	VC74	4	0.5	7.0		
Subminiature 4 wire printed circuit	VC75	4	0.5	7.0		
'N' series panel mount pin trim	NPT901-NPT904	4				
'N' series lug and lead printed circuit pin trim	NPT911-NPT914	4	0.5	30.0	0.5	10.5
Panel mount pin trim	PT901-PT904	4				
Printed circuit pin trim	PT911-PT914	4	0.5	2.0	0.5	7.0
'N' series miniature panel mount quartz trimmer	NMQ101-NMQ109	4				
'N' series miniature printed circuit quartz trimmer, lug and lead	NMQ111-NMQ119	4				
'N' series miniature printed circuit quartz trimmer, wire leads	NMQ121-NMQ129	4	0.6	1.8	0.8	16.0
Miniature panel mount quartz trimmer	MQ101-MQ109	4				
Miniature printed circuit quartz trimmer, lug and lead	MQ111-MQ119	4				
Miniature printed circuit quartz trimmer, wire lead	MQ121-MQ129	4				
'N' series panel mount 'Sealcap' trimmer	NSC131-NSC139	5				
'N' series printed circuit lug and lead 'Sealcap' trimmer	NSC141-NSC149	5	0.8	5.5	1.0	38.0
'N' series printed circuit 4-wire 'Sealcap' trimmer	NSC151-NSC159	5				
Panel mount 'Sealcap' trimmer	SC131-SC139	5				
Printed circuit lug and lead 'Sealcap' trimmer	SC141-SC149	5				
Printed circuit 4-wire 'Sealcap' trimmer	SC151-SC159	5	0.8	4.5	1.0	30.0
'Y' series panel mount 'Sealcap' trimmer	SC131Y-SC139Y	5				
'Y' series printed circuit lug and lead 'Sealcap' trimmer	SC141Y-SC149Y	5				
'Y' series printed circuit 4-wire 'Sealcap' trimmer	SC151Y-SC159Y	5				
'N' series panel mount quartz 'Sealcap' trimmer	NQS171-NQS179	4	0.6	1.8	0.8	16.0
'N' series lug and lead quartz 'Sealcap' trimmer	NQS181-NQS189	4				
'N' series printed circuit 4-wire quartz 'Sealcap' trimmer	NQS191-NQS199	4	0.6	1.8	0.8	16.0
Panel mount quartz 'Sealcap' trimmer	QS171-QS179	4				
Printed circuit lug and lead quartz 'Sealcap' trimmer	QS181-QS189	4				
Printed circuit 4-wire quartz 'Sealcap' trimmer	QS191-QS199	4				
'N' series panel mount 'Max-C Sealcap' trimmer	NMC601-NMC609	5				
'N' series printed circuit lug and lead 'Max-C Sealcap' trimmer	NMC611-NMC619	5	1.0	16.0	1.0	120.0
'N' series printed circuit 4-wire 'Max-C Sealcap' trimmer	NMC621-NMC629	5				
Panel mount 'Max-C Sealcap' trimmer	MC601-MC609	5				
Printed circuit lug and lead 'Max-C Sealcap' trimmer	MC611-MC619	5				
Printed circuit 4-wire 'Max-C Sealcap' trimmer	MC621-MC629	5				
'Y' series panel mount 'Max-C Sealcap' trimmer	MC601Y-MC609Y	5				
'Y' series printed circuit lug and lead 'Max-C Sealcap' trimmer	MC611Y-MC619Y	5	1.0	14.0	1.0	90.0
'Y' series printed circuit 4-wire 'Max-C Sealcap' trimmer	MC621Y-MC629Y	5	1.0	16.0	1.0	120.0
Panel mount 'Super Max-C Sealcap' trimmer (available as NMCD)	MCD641-MCD649	5				
Extended shaft panel 'Super Max-C Sealcap' trimmer	MCD671-MCD679	5				
Printed circuit 4-wire 'Super Max-C Sealcap' trimmer (available as NMCD)	MCD661-MCD669	5				
Standard panel mount split stator trimmer glass	VC16G-VC18G	3				
			Plate to Bushing			
			0.5 - 5.0 thru	0.7 - 14.0		
			Plate to Plate			
			0.8 - 2.5 thru	1.8 - 7.5		
Standard panel mount split stator trimmer quartz	VC80A-VC83A	4				
			Plate to Bushing			
			0.4 - 1.5 thru	5.3 - 10.5		
			Plate to Plate			
			0.5 - 0.8 thru	3.5 - 5.5		
Panel mount miniature split stator trimmer	SP86G-SP88G	3				
Printed circuit lug and lead miniature split stator trimmer	SP206G-SP208G	3				
Printed circuit 4-wire miniature split stator trimmer	SP216G-SP218G	3				
'Y' series panel mount miniature split stator trimmer	SP86GY-SP88GY	3	0.8	4.2	1.0	14.0
'Y' series printed circuit lug and lead miniature split stator trimmer	SP206GY-SP208GY	3				
'Y' series printed circuit 4-wire miniature split stator trimmer	SP216GY-SP218GY	3				
Miniature panel mount split stator Sealcap trimmer	SPS226G-SPS228G	3				
Miniature printed circuit lug and lead split stator Sealcap Trimmer	SPS236G-SPS238G	3				
Miniature printed circuit 4-wire split stator Sealcap trimmer	SPS246G-SPS248G	3	0.8	2.0	2.0	7.0
Standard panel mount differential trimmer	DC401-DC409	5				
Miniature panel mount differential trimmer	DC411-DC419	5				
Printed circuit lug and lead differential trimmer	DC421-DC429	5				
Printed circuit 4-wire differential trimmer	DC431-DC439	5				
'Y' series miniature panel mount differential trimmer	DC411Y-DC419Y	5	Sec. 1	0.7	3.0	
'Y' series miniature printed circuit lug and lead differential trimmer	DC421Y-DC429Y	5	Sec. 2	2.0	3.0	2.3
'Y' series miniature printed circuit 4-wire differential trimmer	DC431Y-DC439Y	5	Sec. 1	0.8	8.0	
Standard panel mount miniature differential 'Sealcap' trimmer	DS441-DS449	5	Sec. 2	2.5	8.0	5.0
Printed circuit lug and lead miniature differential 'Sealcap' trimmer	DS451-DS459	5	Sec. 1	0.8	12.0	
Printed circuit 4-wire miniature differential 'Sealcap' trimmer	DS461-DS469	5	Sec. 2	2.5	12.0	6.8
'Y' series standard panel mount miniature differential 'Sealcap' trimmer	DS441Y-DS449Y	5	Sec. 1	0.9	16.0	
'Y' series printed circuit lug and lead miniature differential 'Sealcap' trimmer	DS451Y-DS459Y	5	Sec. 2	3.5	16.0	9.2
'Y' series printed circuit 4-wire miniature differential 'Sealcap' trimmer	DS461Y-DS469Y	5	Sec. 1	1.5	26.0	
Temperature variation compensating trimmer	TVCO5008-TVCO6005	2	Sec. 2	5.0	26.0	15.2



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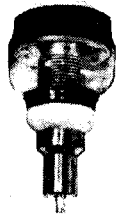
# Jennings VACUUM

## Glass Vacuum Variable Capacitors

	TYPE		CAPACITY PF	PEAK MOMENTARY RF AND 60 CYCLE VOLTAGE <sup>③</sup>	CONTINUOUS RMS AMPERES <sup>①③</sup>		NOMINAL DIMENSIONS <sup>②</sup>		
	NICKEL	COPPER		KILOVOLTS	NICKEL	COPPER	LENGTH	DIAMETER	
2 to 5 KV		UCSL	4-250	3, 5		30	4 1/8	2 1/4	
		USL	5-250, 5-500	3, 5		40	5 1/2	2 3/8	
		USLS	5-465 shorting	3, 5		40	5 3/8	2 3/8	
		USL	10-1000	3, 5		40	5	3 1/8	
		UCSL	5-750, 7-1000	3, 5		42	7 7/8	3 1/8	
		UCSL	20-2000, 50-3000	2, 3		42	8 3/8	3 3/16	
	UCSL	60-5000	2, 3		42	8 3/4	4 1/8		
7.5 to 15 KV		UCSB	5-100	7.5, 10, 15		40	4 7/8	2 3/8	
		UCSV	8-110, 125-250	7.5, 10, 15		40	5 1/4	2 7/8	
		ATCS	15-200	7.5, 10, 15		20	7	3 1/8	
		UCS	5-200, 10-300	7.5, 10, 15		42	8 3/4	2 3/8	
		UCS	10-400, 25-500	7.5, 10, 15		42	9	3 3/8	
		UCSF	5-250, 12-500	7.5, 10, 15		45	7 3/4	3 3/8	
		UCSX	25-700, 25-1000	7.5, 10, 15		45	9 7/8	3 3/4	
		UCSXF	12-1000, 15-1200	7.5, 10, 15		45	10	4 3/8	
		UCSXF	20-1500, 50-2000	7.5, 10, 12		45	10	5 1/8	
10 to 20 KV		ECS	2-8, 3-30	10, 15		20	4	1 3/8	
	T	TC	5-25	20	10.5	20	6 7/8	2 1/4	
		ATC	10-50, 15-75	20, 30		20	6 7/8	3 1/8	
	U	UC	50-250	10, 15, 20		21	60	11 1/2	5
	UX	UXC	25-500	10, 15, 20		21	60	14	5
		UXCF	10-250, 20-500	10, 15, 20		45	9 7/8	4 3/8	
		VMMC	50-1000, 100-2000	10, 15		125	15 1/2	6 1/8	
	VMMC	100-5000	7.5, 10, 15		125	19	9 1/4		
35 to 60 KV		UCSVH	8-35	25, 35		40	4 3/4	3	
		UHC	10-75, 75-150	35, 45, 55, 60		60	12	5	
		UXHC	25-150	35, 45, 55	21	60	14 3/8	5	
		UCSXH	10-200	35, 45		45	10	4 1/2	
		UCSXHF	25-450	35, 40		60	10 1/2	5 1/8	
		VMMHC	10-250, 25-450, 30-650	35, 45, 55		125	17	10	
120 KV		VMMHCW	25-250, 50-400	35, 45, 55		500	17	9 3/8	
		VMMHC	60-1000	35, 40, 45		125	19 3/8	9 1/4	
		VMMHHC	25-200	120		125	20 1/4	9 1/4	



Type UCSL  
7-1000 PF  
5 kv



Type UCSXF  
50-2000 PF  
12 kv

## Ceramic Vacuum Variable Capacitors

	TYPE		CAPACITY PF	PEAK MOMENTARY RF AND 60 CYCLE VOLTAGE <sup>③</sup>	CONTINUOUS RMS AMPERES <sup>①③</sup>		NOMINAL DIMENSIONS <sup>②</sup>	
	COPPER			KILOVOLTS	COPPER		LENGTH	DIAMETER
2 to 5 kv		CVCB	10-750	3, 5		50	5 11/16	2 3/8
		CVCA	10-1000	3, 5		50	5 3/8	3 3/8
		CVCA	10-1500	3, 5		50	5 3/8	3 3/8
		CVCA	20-2000	3, 5		50	5 7/8	3 3/8
7.5 to 20 kv		CVDA	10-100	7.5, 10, 15		45	5 1/32	2 3/8
		CVDA	20-400	7.5, 10, 15		50	6 1/8	3 3/8
		CVDA	25-1000	7.5, 10, 15		65	8	4 1/2
		CVDB	25-1500	7.5, 10, 15		75	8 3/4	5 1/2
		CVDB	50-2300	7.5, 10, 15		75	9 3/8	5 1/2
		CVEA	25-500	10, 15, 20		125	9 3/8	5 1/2
		CVEA	50-1000	10, 15, 20		135	8 13/16	7
	CVEA	100-2000	10, 15		150	10 1/32	7	
30 to 55 kv		CVFA	25-450	30, 35, 40		100	9 3/8	5 1/2
		CVFB	20-750	30, 35, 40		125	10 13/16	7
		CVFA	35-1000	30, 35, 40		125	10 13/16	7
		CVFB	100-1500	30, 35		150	13	7
		CVHA	10-250	35, 45, 55		150	9 25/32	7
		CVHA	25-450	35, 45, 55		150	10 9/32	7
	CVHA	30-650	35, 45, 55		150	10 25/32	7	



Type CVDA  
20-400 PF  
15 kv



Type CVFA  
35-1000 PF  
40 kv

① Current ratings can usually be increased by 50% with proper forced air cooling, and up to 400% with water cooling.

② Nominal dimensions are for the largest unit of each type.

③ Voltage and current limitations are dependent upon capacity and frequency. Specific voltage and current information at all frequencies is available upon request.

NOTE: A series of adjustable capacitors is available to cover the range of 8 to 1000 pf at 10 kv.

Jennings application engineers are available to discuss special application problems. If necessary we will run special tests in the Jennings Radio Frequency Testing Laboratory, where equipment is available with frequencies up to 600 mc, and power ratings up to 100 kw.

# CAPACITORS

## Glass Vacuum Fixed Capacitors

	TYPE		CAPACITY PF	PEAK MOMENTARY RF AND 60 CYCLE VOLTAGE <sup>③</sup>		CONTINUOUS RMS AMPERES <sup>①④</sup>		NOMINAL DIMENSIONS <sup>②</sup>		
	NICKEL	COPPER		KILOVOLTS		NICKEL	COPPER	LENGTH	DIAMETER	
2 to 5 KV		JSLF	250, 450	3, 5		30		1 3/4	1 7/8	
		JSLF	1500, 2000	3, 5		30		1 7/8	3 1/8	
		JSLF	5000	3, 5		100		3	4 1/8	
		JCSL	500, 750, 1000	3, 5		42		4	2 7/8	
		JCSL	1500, 2000	3, 5		42		4	2 7/8	
7.5 to 15 KV		JCSF	25, 40, 80, 120, 150	7.5, 10, 15		30		1 7/8	1 7/8	
		JCS2	25, 50, 100	7.5, 10, 15		20		3 1/8	1 7/8	
		JCS1	25, 50, 75, 100, 150	7.5, 10, 15		50		3 3/4	2 1/8	
		JCS	250, 400, 500	7.5, 10, 15		42		4	3 1/8	
		JCS	1000	7.5, 10, 12		42		4 3/8	3 3/8	
		M	MC1	500, 750, 1000	10, 15		75		4 1/8	4 1/8
			MC	500, 750, 1000	10, 15, 20	21	120		8 3/8	5
			MMC	1500, 2000	10, 15		125		9 1/4	6 1/8
			MMC1	2000	10, 15		125		5	6 1/8
			MMC	3000, 4000, 5000	10, 15		125		13	9 1/4
17 to 30 KV		Y	1, 2, 3, 4, 5	17		7		3 1/4	3/4	
		X	5, 10, 15, 20, 25	17		7		3 1/4	1 1/8	
		W	6, 12, 100	20, 25		10.5		4 5/8	2 1/4	
		VCCA	12, 25, 50, 100, 150	20, 30		60		4 1/2	2 3/8	
		VC	VCCE	6, 12, 25, 50, 75, 100, 150	20, 30, 35	14	60		6 1/2	2 3/8
		VC	VCCE	200, 250	20, 30, 35	14	60		6 1/2	2 3/8
		JMF	50, 75, 100	20, 30		40		2 3/4	2 1/8	
		JC2	25, 50, 75, 100	20, 30		42		4	3 1/4	
		MLC	500, 750, 1000	25, 30		125		9 1/4	5	
35 to 60 KV		JHC	75	50, 60		42		4	3 1/2	
		JC3	20, 50	35, 45, 55, 60		④140		8 1/4	3 1/2	
		JC4	100, 125	35, 45, 55, 60		④175		9 1/4	5	
		JC5	200	35, 45, 55, 60		④225		11 1/4	7	
		MMHC	450	35, 45, 55		125		9 1/4	6 1/8	
		MMHC	1000	35, 40, 45		150		13	9 1/4	

Type JCSF  
1500 mmfd  
15 kvType JCSL  
1500 mmfd  
5 kvType MMC  
2000 mmfd  
15 kv

## Ceramic Vacuum Fixed Capacitors

	TYPE		CAPACITY PF	PEAK MOMENTARY RF AND 60 CYCLE VOLTAGE <sup>③</sup>		CONTINUOUS RMS AMPERES <sup>①④</sup>		NOMINAL DIMENSIONS <sup>②</sup>	
		COPPER		KILOVOLTS		COPPER	LENGTH	DIAMETER	
3 to 5 KV		CFCA	1000	3, 5		45		1 7/8	3 3/8
		CFCA	2000	3, 5		50		1 7/8	3 3/8
20 to 30 KV		CFEA	150	20, 25, 30		75		3 1/16	2 3/8
		CFEA	500	10, 15, 20, 25		125		3 13/16	4 1/2
		CFEA	750	10, 15, 20, 25		125		3 13/16	4 1/2
		CFEA	1000	10, 15, 20, 25		135		3 7/16	4 1/2
35 to 60 KV		CFHA	50	45, 50, 60		60		4 1/8	2 3/8
		CFHA	450	35, 45, 55		150		5 1/16	5 1/2
		CFHA	1000	35, 45, 50		200		6 1/2	7



Type CFCA 250



Type CFHA 450

① Current ratings can usually be increased by 50% with proper forced air cooling, and up to 400% with water cooling.

② Nominal dimensions are for the largest unit of each type.

③ Voltage and current limitations are dependent upon capacity and frequency. Specific voltage and current information at all frequencies is available upon request.

④ Forced air cooling.

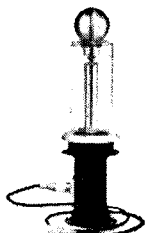
## High Voltage Measuring Equipment

**MODEL JP 325 HIGH VOLTAGE PROBE**  
VOLTAGE RATINGS: 40, 50, or 60 KV  
peak.

**VOLTAGE DIVISION RATIO:** 325 to 1 to  
termination of 3 ft. of RG-58 A U cable.

**INPUT IMPEDANCE:**  
Resistance: above  $10^{12}$  ohms.  
Capacitance: 4 mmfd.

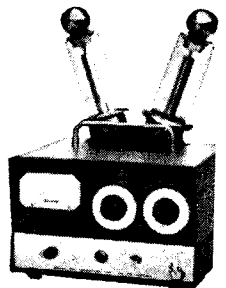
**FREQUENCY RESPONSE:** High frequency  
limited by that of measuring instru-  
ment. (Internal resonances are above  
200 mc.) Low frequency response is  
100 cps if operating into 10 megohm  
shunt resistance; 1000 cps if operating  
into 1 megohm shunt resistance.



**MODEL J-1003 HIGH VOLTAGE  
VACUUM TUBE VOLTMETER**  
for use in pulse, rf and 60 cycle  
circuits at voltages up to 100  
KV.

**VOLTAGE RANGES** (peak volts  
full scale):  
Single Ended: 2.5, 5, 10, 25,  
50 KV.  
Double Ended: 2.5, 5, 10, 25,  
50, 100 KV.  
(By using Type JCD Series ca-  
pacitor, these ranges can be  
more than doubled.)

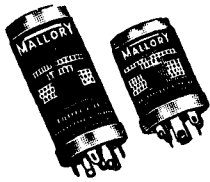
**OSCILLOSCOPE CONNECTION:**  
300 to 1 division ratio.  
**FREQUENCY RESPONSE:** 10  
cycles to 20 megacycles at full  
rated voltage and up to 50  
megacycles for lower voltages  
with low harmonic content.  
**INPUT IMPEDANCE:**  $10^{12}$  ohms  
and 4 mmfd.  
**CALIBRATION ACCURACY:** — 3%  
of full scale.  
**POWER SUPPLY:** 117 volt, 50,  
60 cy.  
**DIMENSIONS:** 16 1/4" v 11" x 9"



JENNINGS RADIO MANUFACTURING CORPORATION • SAN JOSE, CALIF.



# MALLORY CAPACITORS



## FP-WP AND PFP-PWP METAL CAN ELECTROLYTIC CAPACITORS

FP-WP capacitors are manufactured to the most rigid quality standards. They are designed for extremely long-life service at 85° C. All are designed with "etched cathodes" for hum-free operation and feature exclusive vent and seal construction. FP-WP types have standard twist-prongs, PFP-PWP fit exactly into EIA standard printed circuit boards. FPS is special mounting used in Delco auto radios.

"A" suffix indicates new reduced can size. All PFP-PWP types may be used in standard twist-prong mounting while FP-WP types may be quickly adapted to printed circuit mounting by using the FPA Adapter Kit (Net Each, 27c). All cases are at negative potential. See complete capacitor hardware listing on another page. \*SIZES are shown at end of listing.

### FP-WP AND PFP-PWP—SINGLES

Mallory No.	Cap., $\mu$ f	VV DC	*	Net Each	Mallory No.	Cap., $\mu$ f	VV DC	*	Net Each	Mallory No.	Cap., $\mu$ f	VV DC	*	Net Each	Mallory No.	Cap., $\mu$ f	VV DC	*	Net Each
WP510	.5Z/15750†	3NP	b	\$1.32	WP063	4	50	a	\$0.75	FP119A	300	150	f	\$1.68	FP141	320	350	i	\$4.95
WP540	1.0Z/60†	3NP	h	2.40	WP064A	100	50	l	.99	FP121	120	200	f	1.41	FP142	10	450	a	.93
WP505	10Z/30†	3NP	a	1.20	PWP 063.9A	100	50	o	1.04	FP122A	125	200	b	1.47	FP143A	15	450	l	1.02
PWP030A	750	6	o	1.29	WP064.2A	150	50	l	1.08	PFP122	160	200	g	1.91	FP144	20	450	b	1.06
PWP031A	2500	10	c	2.84	WP065	500	50	f	1.59	WP123A	500	200	h	2.19	PFP144	20	450	b	1.29
WP035	225	15	a	1.05	WP066A	500	50	c	1.59	FP125.5A	15	250	a	.93	FP145	30	450	c	1.17
PWP036A	400	15	o	1.16	WP066.5	1000	50	f	2.50	WP125.9A	140	250	c	1.71	FP146	40	450	l	1.23
WP039A	1000	15	l	1.53	WP067A	1250	50	g	2.90	FP128A	80	300	c	1.53	FP148	60	450	g	1.68
WP041A	2000	15	f	2.07	FP111.5	1500	50	h	2.31	FP129.1A	100	300	c	1.74	FP150	100	450	h	2.07
WP042A	3000	15	f	2.10	FP111.5A	30	150	a	.99	WP131.5	160	300	g	2.31	FP155	125	450	j	2.76
WP052	40	25	a	.81	FP111.5A	50	150	l	1.23	FP132	200	300	g	2.58	FP171A	10	500	b	.96
WP055A	100	25	a	.96	FP111.5A	100	150	b	1.23	FP135A	30	350	l	1.14	FP175	20	500	b	1.11
PWP056	400	25	b	1.32	FP111.5A	120	150	b	1.23	FP137A	50	350	b	1.26	FP175	30	500	c	1.20
WP057A	500	25	f	1.53	PFP116.8A	120	150	f	1.23	FP137.2A	60	350	f	1.32	FP176	40	500	f	1.50
WP059	1000	25	f	2.13	FP117A	140	150	b	1.44	FP138A	80	350	f	1.71	FP177	40	500	d	1.50
PWP060	1500	25	d	2.57	FP117.5	150	150	f	1.29	FP140A	125	350	g	2.37	PFP176.5	40	500	d	1.74
					FP118A	200	150	f	1.47	FP140.5A	140	350	g	2.34	FP187	90	500	h	2.10
										FP140.6A	150	350	g	2.55					

### FP-WP AND PFP-PWP—DUALS

Mallory No.	Capacity, $\mu$ f	VVDC	*	Net Each	Mallory No.	Capacity, $\mu$ f	WDVC	*	Net Each	Mallory No.	Capacity, $\mu$ f	VVDC	*	Net Each					
WP204	250-1000	10-6	f	\$1.71	PFP216.4A	200-200	150-150	g	\$2.59	WP230.2	20-200	450-250	f	\$2.73					
WP205	.5Z-2.5Z/15750†-60†	12-6	i	2.16	PFP216.45	50-100	200-150	f	1.91	FP230.3	40-10	450-300	i	1.56					
WP200	1000-1000	15-15	f	2.64	PFP216.5A	40-20	200-200	l	1.42	FP230.5	10-50	450-350	d	1.71					
PWP200.1A	1000-1000	15-15	c	2.64	FP216.6A	60-60	200-200	b	1.53	FP230.6	10-100	450-350	h	2.40					
PWP200.13	1000-1000	18-10	c	2.77	FP216.1A	200-5	200-200	f	1.65	FP235	20-80	450-350	g	2.19					
WP200.23	1500-1000	18-10	f	2.55	PFP216.1A	200-5	200-200	f	2.26	PFP217.11	2-20	450-400	b	1.43					
WP200.6	500-500	18-18	b	1.95	FP217.865	100-100	200-300	k	2.23	WP230.9A	5-5	450-450	l	1.02					
PFP200.65	500-500	18-18	l	1.83	FP216.8A	40-25	250-150	l	1.29	FP231	10-10	450-450	b	1.14					
PFP200.45	700-200	18-18	b	2.09	FP217A	20-20	250-250	l	1.14	FP231.2	20-5	450-450	b	1.46					
WP200.18	800-200	18-18	b	1.68	FP221A	40-40	250-250	m	1.50	FP231.3	20-10	450-450	b	1.32					
WP200.21A	1000-500	18-18	b	2.28	FP217.7A	150-150	250-250	g	3.09	FP234A	20-20	450-450	c	1.53					
PWP200.3A	250-250	20-20	l	1.69	FP217.7A	200-200	250-250	h	3.60	FP237	30-30	450-450	g	1.83					
WP200.5A	500-100	20-20	l	1.65	WP217.85A	35-500	300-6	m	1.68	FP238A	40-40	450-450	g	2.07					
PWP200.6	500-100	20-20	b	1.79	FP217.86A	30-20	300-50	l	1.14	FP239	50-40	450-450	h	2.19					
PFP200.7	500-100	20-20	b	1.80	FP217.8A	20-60	300-250	b	1.65	FP240†	50-50	450-450	h	2.31					
WP200.7A	500-200	20-20	l	1.80	PFP217.86	10-10	300-300	f	1.77	FP242A	60-20	450-450	g	2.10					
PWP200.4A	800-250	20-20	l	2.25	FP217.87	40-40	300-300	f	1.53	FP242.5A	60-60	450-450	j	2.70					
WP200.2A	1000-2000	25-15	g	3.87	FP217.88	50-10	300-300	f	1.53	FP245	80-10	450-450	h	2.16					
WP201.1A	40-40	25-25	l	.93	FP217.88	50-10	300-300	f	1.53	FP245.2	80-20	450-450	h	2.34					
PWP201.13	400-200	25-25	b	1.79	FP217.9A	75-75	300-300	g	2.28	FP245.3A	80-30	450-450	j	2.49					
PWP201.15	1000-1000	25-25	g	3.48	FP218A	120-20	300-300	g	2.40	FP247	100-40	450-450	i	2.91					
PWP201.3	1500-1500	25-25	h	4.52	WP219	125-60	300-300	g	2.70	FP248	100-60	450-450	i	3.51					
WP201.5	1000-1000	35-35	g	3.93	FP219.7	150-100	300-300	h	3.11	FP250	40-80	475-200	j	2.19					
WP202.1A	50-50	50-60	l	1.26	FP223A	5-75	350-150	m	1.26	FP252A	80-80	475-250	j	2.79					
WP202.5A	100-100	50-50	l	1.26	FP225A	15-15	350-350	m	1.35	FP255A	20-100	475-300	j	2.37					
WP205.6A	50-500	150-5	l	1.41	FP227A	20-20	350-350	b	1.38	FP256A	20-100	475-400	j	2.70					
WP205.8	50-1000	150-8	b	1.71	FP227.3A	30-30	350-350	c	1.74	FP258	15-15	475-475	l	1.41					
WP206A	50-150	150-25	l	1.32	FP227.35	80-20	350-350	d	2.10	FP259	30-10	475-475	c	1.56					
FP208A	20-20	150-150	l	1.02	FP227.4A	80-20	350-350	f	2.10	FP260A	40-10	475-475	g	1.86					
FP211A	30-30	150-150	l	1.11	FP227.5A	80-40	350-350	g	2.16	FP262	40-40	475-475	h	2.58					
FP210A	40-20	150-150	l	1.08	FP227.6A	80-40	350-350	h	2.82	FP263A	60-40	475-475	i	2.73					
FP212A	40-40	150-150	l	1.14	FP227.7A	80-80	350-350	h	2.82	FP264.5	80-40	475-475	i	3.03					
FP213A	50-30	150-150	l	1.29	FP228.3	100-100	350-350	j	3.69	FP266	80-40	475-475	i	3.12					
PFP213.1A	50-30	150-150	l	1.40	FP228.3	150-20	350-350	h	2.73	FP272	80-50	475-475	i	1.38					
FP214A	50-50	150-150	c	1.56	FP229.2	40-4	400-350	d	1.41	WP272	10-100	500-50	b	1.38					
PFP214.3	70-30	150-150	b	1.46	FP229.25	80-4	400-350	e	2.10	FP277	60-80	500-150	h	2.25					
FP214.5	75-75	150-150	f	1.56	FP229.3	75-75	400-400	i	2.91	FP280	40-50	500-200	g	1.98					
FP214.6A	75-75	150-150	b	1.38	FP229.4	80-60	400-400	i	2.82	FP282A	10-10	500-500	b	1.17					
FP216.2A	80-40	150-150	m	1.38	FP229.5	120-40	400-400	i	3.15	FP282.5	20-20	500-500	f	2.09					
PWP214.4A	80-40	150-150	b	1.52	WP229.52	120-120	400-400	i	4.17	FP283	30-10	500-500	f	1.56					
WP216.24	80-50	150-150	b	1.50	FP229.53	40-50	450-50	d	1.73	FP284	30-30	500-500	g	1.95					
PFP214.7A	100-50	150-150	b	1.62	FP229.55A	40-100	450-50	d	1.68	PFP284.1A	30-30	500-500	g	2.52					
FP215A	125-100	150-150	f	2.04	FP229.6	50-100	450-50	g	1.80	FP288	40-40	500-500	h	2.58					
FP216.3A	200-150	150-150	f	2.25	FP244	80-50	450-50	h	2.10	FP290	60-40	500-500	j	2.73					
FP216.4A	200-200	150-150	g	2.40	FP229.8	80-100	450-50	h	2.25										
					FP229.9A	30-200	450-150	g	2.10										
					FP230A	20-50	450-250	c	1.68										

†Recommended for photoflash applications. Can is ungrounded. †Cycles.

### FP-WP AND PFP-PWP—TRIPLES

Mallory No.	Capacity, $\mu$ f	Working Volts DC	*	Net Each	Mallory No.	Capacity, $\mu$ f	Working Volts DC	*	Net Each	Mallory No.	Capacity, $\mu$ f	Working Volts DC	*	Net Each
WP300.15A	200-200-30	10-10-10	l	\$1.35	PWP300.3A	250-250-50	16-16-16	l	\$1.87	WP301A	30-			

# MALLORY CAPACITORS

FP-WP AND PFP-PWP—TRIPLES (CONTINUED)

Mallory No.	Capacity, $\mu$ f	Working Volts DC	*	Net Each	Mallory No.	Capacity, $\mu$ f	Working Volts DC	*	Net Each	Mallory No.	Capacity, $\mu$ f	Working Volts DC	*	Net Each
FP314A	40-40-200	150-150-25	m	51.68	WP326.8A	4-100-40	350-25-25	f	51.35	FP342.7	30-40-50	450-350-25	e	\$2.22
WP308.1A	40-40-250	150-150-25	b	1.89	FP327	40-100-25	350-50-25	f	1.92	FP342.8	80-50-100	450-350-200	i	3.51
FP309A	50-30-100	150-150-25	m	1.62	WP327.2A	20-50-100	350-100-75	c	1.98	FP343.1A	15-20-20	450-350-250	f	1.77
FP311A	50-50-20	150-150-25	m	1.59	FP327.3A	60-200-30	350-150-150	g	2.82	FP343.4	20-15-15	450-350-350	d	1.95
FPF-311.12A	70-30-20	150-150-25	b	1.63	FP327.35	10-150-200	350-200-75	f	2.52	FP343.6A	20-40-10	450-350-350	f	2.10
FP311.05	80-20-200	150-150-25	b	1.76	FP327.4A	125-5-100	350-200-75	g	3.18	FP343.9	10-30-150	450-400-5	d	1.80
FP311.1A	80-40-25	150-150-25	b	1.65	FP327.5A	10-40-40	350-200-200	b	2.58	FP344.2	60-80-20	450-400-250	g	3.27
FP311.15A	80-40-300	150-150-25	f	2.22	FP327.6A	30-20-100	350-250-50	c	1.95	FP344.4	4-40-40	450-400-300	g	2.22
FP311.2A	20-20-20	150-150-150	l	1.38	FP331A	30-30-20	350-300-25	c	1.89	FP344.5	10-30-40	450-400-300	g	2.19
FPF311.3	30-25-20	150-150-150	b	1.52	FP327.8A	30-50-20	350-300-25	f	2.16	FP345.2	10-10-20	450-450-25	g	1.44
FPF-311.63A	30-50-40	150-150-150	b	1.67	FP327.89A	40-40-40	350-300-300	f	2.61	FP345.5	15-15-40	450-450-25	c	1.65
FP311.4A	40-20-20	150-150-150	l	1.44	WP327.896	160-120-30	350-300-300	i	3.99	FP345.8	20-20-20	450-450-25	c	1.83
FP311.5A	40-40-40	150-150-150	m	1.56	PWP-327.95A	20-20-1000	350-350-15	f	2.57	FP345.3	40-20-20	450-450-25	g	2.10
FPF311.51	40-60-40	150-150-150	m	1.70	FP328A	15-10-20	350-350-25	m	1.50	FP346	40-40-20	450-450-25	g	2.37
FP311.55A	50-20-20	150-150-150	m	1.53	FP329.1A	20-4-100	350-350-25	m	1.56	FP345.4	80-10-125	450-450-25	h	2.64
FPF311.62	50-30-20	150-150-150	m	1.59	FP329.5	20-20-20	350-350-25	b	1.68	FP364A	80-40-100	450-450-25	h	3.06
FP311.6A	50-40-10	150-150-150	m	1.53	FP330A	30-20-20	350-350-25	b	1.86	FP365A	10-10-40	450-450-50	b	1.47
FP311.65A	50-50-50	150-150-150	m	1.80	FP330.13A	200-10-50	350-350-25	j	3.06	FP366A	20-10-50	450-450-50	j	1.71
FPF311.53	60-60-40	150-150-150	f	2.03	FP330.15A	10-5-30	350-350-50	l	1.32	FP366.5A	30-10-150	450-450-50	g	2.10
FP326.45	60-60-60	150-150-150	f	1.79	FP330.2A	10-5-150	350-350-50	m	1.62	FP367A	35-25-100	450-450-50	g	2.37
FP311.66A	70-15-15	150-150-150	m	1.62	FP330.21A	20-5-150	350-350-50	m	1.77	FP367.5	40-30-25	450-450-50	g	2.25
FP311.8A	70-40-40	150-150-150	m	1.74	FP330.22A	80-40-400	350-350-50	h	3.39	FP368A	60-40-75	450-450-50	j	2.76
FP311.67A	80-30-10	150-150-150	m	1.65	FP330.23	100-20-50	350-350-50	h	2.91	FP368.3A	80-20-100	450-450-50	j	2.88
FP311.7	80-40-20	150-150-150	m	1.74	FP330.24A	150-4-30	350-350-50	g	2.90	FP368.5	80-50-50	450-450-50	j	3.12
FP311.71	80-40-20	150-150-150	b	1.67	FP330.25A	30-20-100	350-350-150	g	2.40	FP368.6A	30-30-125	450-450-75	g	2.70
PWP-311.75A	80-60-20	150-150-150	c	1.78	FP330.24B	70-40-50	350-350-150	g	2.64	FP368.68A	10-4-20	450-450-150	g	1.50
FP311.84	120-80-20	150-150-150	c	1.90	FP330.24C	125-20-20	350-350-150	g	2.85	FP369.1	40-40-40	450-450-150	g	2.51
FP311.85A	120-80-40	150-150-150	f	2.22	FP330.29A	30-5-100	350-350-200	h	2.25	FP370A	40-10-80	450-450-200	g	2.34
FP311.9A	120-120-40	150-150-150	f	2.43	FP330.26A	100-60-20	350-350-200	h	3.30	FP375	40-40-100	450-450-200	i	2.97
FP311.95A	150-50-50	150-150-150	f	2.22	FP330.27A	125-60-40	350-350-200	h	3.54	FP375.2A	15-10-120	450-450-300	h	2.70
FP312.5A	200-100-60	150-150-150	g	2.73	FP330.28A	100-60-100	350-350-200	j	3.36	FP375.6A	60-20-40	450-450-350	i	2.94
FP312.6A	300-100-80	150-150-150	g	2.97	FP330.3A	20-10-5	350-350-250	m	1.53	FP375.7	20-10-15	450-450-400	d	1.86
PWP315	80-100-40	160-160-160	g	1.42	FPF330.4	10-10-60	350-350-300	f	2.15	FP375.8	10-10-10	450-450-450	d	1.56
FP312.8A	60-200-140	200-150-150	g	2.85	FP330.5A	10-10-10	350-350-350	m	1.44	FP376.1	15-15-10	450-450-450	d	1.77
FP314.7	150-150-60	200-150-150	g	2.49	FPF330.6A	20-20-20	350-350-350	m	1.84	FP376.3	20-10-10	450-450-450	d	1.74
FP315.1	60-5-200	200-200-50	d	1.80	FP330.7A	30-20-10	350-350-350	c	1.95	FP376.5	20-20-20	450-450-450	d	2.16
FP318.3A	30-20-40	200-200-150	m	1.62	FPF330.8A	40-40-40	350-350-350	c	2.64	FP376.6	30-10-10	450-450-450	f	1.89
FP318.5A	20-20-20	200-200-200	m	1.50	FP330.9A	60-50-50	350-350-350	g	2.94	FP376.7	30-30-30	450-450-450	h	2.67
FP318.7A	30-20-20	200-200-200	m	1.62	FP331.2	80-20-20	350-350-350	g	2.57	FP376.8	40-40-10	450-450-450	h	2.49
FP318.7A	40-40-20	200-200-200	f	1.77	FP331.3A	80-60-60	350-350-350	g	3.33	FP376.9	40-40-20	450-450-450	h	2.67
FP318.77	60-60-40	200-200-200	f	2.16	FP331.6A	90-40-20	350-350-350	g	3.15	FP377.1	40-40-40	450-450-450	j	3.12
FP318.8A	250-200-10	200-200-200	h	4.02	WP331.7A	100-40-5	350-350-350	g	2.82	FP377.2A	50-40-30	450-450-450	j	2.94
FP319A	80-40-50	250-150-50	f	1.98	FP331.76A	100-40-40	350-350-350	g	3.15	FP377.4A	60-10-10	450-450-450	j	2.34
FP360	15-20-20	250-150-150	b	1.50	FP331.8A	100-60-40	350-350-350	g	3.39	FP377.6	60-30-10	450-450-450	j	2.70
WP319.6A	60-5-100	250-250-50	f	1.80	FP332.4A	100-100-10	350-350-350	g	4.08	FP377.7	60-40-40	450-450-450	j	3.41
FP319.5A	90-90-20	250-250-50	f	2.76	WP332.4A	140-140-20	350-350-350	g	4.16	FP378	80-40-20	450-450-450	j	3.24
WP319.7	60-5-50	250-250-200	f	2.13	FP332.5A	40-200-60	400-200-200	g	3.33	FP377.7	80-40-30	450-450-450	j	3.53
FP319.8A	20-20-20	250-250-250	m	1.56	FP332.7A	10-4-40	400-350-25	f	1.32	FP378.1	80-40-30	450-450-450	j	3.66
FP320	40-20-20	250-250-250	f	1.74	FP333	10-50-30	400-350-25	f	1.86	FP379.1A	20-50-20	475-50-25	c	1.65
FP321A	40-20-20	250-250-250	b	1.74	FP333.05	100-10-200	400-350-25	f	2.99	FP381.1A	80-80-50	475-150-50	j	2.91
FP321.5	40-40-40	250-250-250	f	1.92	FP333.1	40-4-4	400-350-150	h	1.71	FP382.1A	40-40-100	475-250-100	j	2.46
FP323A	80-80-60	250-250-250	f	2.94	FPF333.16	40-30-20	400-350-300	g	2.44	FP384	20-20-40	475-300-25	f	1.86
FP326A	100-60-20	300-150-25	f	2.52	FP333.2A	80-40-100	400-400-50	g	3.00	FP384.12	30-100-50	475-300-50	f	2.46
FP326.16A	10-20-10	300-150-150	l	1.47	FP333.3A	80-40-150	400-400-50	g	3.09	FP384.14A	5-100-200	475-300-150	j	3.09
FP326.2A	20-150-80	300-150-150	f	2.37	FP333.5	100-20-20	400-400-50	h	2.88	FP384.16	10-4-100	475-350-50	j	2.37
FP326.3A	100-200-60	300-150-150	h	3.27	FP333.5A	20-10-40	400-400-350	k	2.04	FP384.2	10-4-40	475-350-300	j	1.80
WP326.35A	20-100-100	300-200-50	d	1.95	FP333.6	20-20-10	400-400-350	d	1.80	FP384.35	20-10-5	475-350-350	f	1.71
FP326.4A	60-30-30	300-250-250	g	2.25	FP333.7	60-30-20	400-400-350	h	2.73	FP384.5	10-45-100	475-450-50	g	2.19
FP335A	100-60-20	300-250-250	g	2.94	FP333.8	80-20-10	400-400-350	h	2.58	FP384.7	40-40-25	475-450-50	g	2.64
FP336A	200-60-20	300-250-250	g	3.48	FP333.85	100-10-80	400-400-350	g	3.66	FP385A	10-40-100	475-450-200	g	2.52
FPF326.4	60-10-25	300-300-25	f	2.07	FP333.86	100-40-100	400-400-350	g	4.04	FP385.5	40-80-10	475-450-450	g	3.30
FP326.5A	150-10-25	300-300-25	f	2.37	FP333.88	50-30-4	400-400-400	g	2.31	FP386	10-10-5	475-475-25	c	1.47
FP326.5A	20-20-50	300-300-50	f	1.62	FP333.89	80-60-40	400-400-400	g	3.63	FP387.1	10-10-150	475-475-50	f	1.80
FP326.6A	100-10-60	300-300-50	h	2.43	FP333.9	90-10-5	400-400-400	h	2.64	FP388.1	25-10-20	475-475-50	d	1.77
FP326.7A	140-100-60	300-300-50	h	3.57	FP333.95	100-30-								



# CAPACITORS

FP-WP AND PFP-PWP—QUADS (CONTINUED)

Mallory No.	Capacity, $\mu$ f	WVDC	*	Net Each
FP419.4A	100-10-200-30	300-300-150-150	h	\$3.54
FP419.1A	150-20-10-250	300-300-250-50	h	3.63
FP419.2A	40-30-20-50	300-300-300-25	f	2.49
FP419.7A	60-40-20-50	300-300-300-25	f	2.73
FP419.35A	60-30-10-60	300-300-300-50	f	2.52
FP419.37A	150-30-30-150	300-300-300-50	h	3.66
PFP419.42A	20-20-20-100	300-300-300-150	f	2.41
WP419.39A	80-20-20-200	300-300-300-150	h	3.12
FP419.45A	120-40-40-10	300-300-300-250	h	3.63
FP419.53A	60-40-10-10	300-300-300-300	f	2.73
FP419.55A	150-100-10-10	300-300-300-300	g	3.96
WP419.554	150-100-30-10	300-300-300-300	j	3.69
WP419.52	150-150-30-30	300-300-300-300	l	4.17
FP419.54A	200-20-20-20	300-300-300-300	j	3.87
FP419.56A	60-60-30-160	350-150-150-25	f	2.76
FP419.58A	20-60-160-40	350-200-25-25	f	2.40
FP418.3A	15-80-40-200	350-200-200-25	f	2.70
FP419.3A	120-20-100-20	350-250-50-25	h	3.03
WP419.585A	50-60-5-100	350-250-250-50	f	2.58
FP419.59A	160-30-30-20	350-300-300-50	j	3.54
WP419.51A	40-80-10-10	350-300-300-300	g	2.72
FP419.514	140-100-20-20	350-300-300-300	n	3.88
FP419.65A	160-60-10-4	350-300-300-300	j	3.84
FP419.6	40-10-100-25	350-350-25-25	f	2.25
FP419.62A	60-4-100-40	350-350-25-25	f	2.28
FP419.61A	100-4-50-50	350-350-50-25	g	3.03
FP419.63A	200-10-4-20	350-350-50-25	f	3.36
FP419.635A	40-40-50-50	350-350-50-50	f	2.52
FP419.64A	40-20-50-25	350-350-150-25	f	2.49
FP419.649A	40-20-100-100	350-350-200-50	f	2.70
FP419.67A	100-60-60-40	350-350-200-75	j	3.93
FP419.671A	100-60-10-100	350-350-200-150	j	3.43
FP419.66A	60-40-60-20	350-350-250-150	g	3.24
FP419.68	15-15-15-15	350-350-300-25	f	2.07
FP419.8A	35-35-10-20	350-350-300-25	f	2.49
FP419.82	20-10-5-10	350-350-350-25	f	1.86
FP419.84	30-10-5-200	350-350-350-25	f	2.28
FP419.86A	40-20-5-10	350-350-350-25	f	2.28
FP419.87A	40-20-20-50	350-350-350-25	f	2.55
FP419.88A	40-30-15-30	350-350-350-25	f	2.70
FP419.8A	40-40-20-20	350-350-350-25	g	2.79
FP419.39A	100-30-10-40	350-350-350-25	g	2.94
FP419.9	15-15-15-50	350-350-350-50	f	2.25
PFP420.17A	40-20-10-100	350-350-350-50	f	2.45
FP420.15A	70-40-10-50	350-350-350-50	g	3.45
FP420.2A	50-40-10-160	350-350-350-50	h	3.09
FP420.23	100-10-10-20	350-350-350-50	h	3.09
WP420.25A	100-40-4-100	350-350-350-50	h	3.93
FP420.26A	100-40-30-50	350-350-350-50	h	3.93
FP420.273	100-100-60-100	350-350-350-50	l	4.00
FP420.276A	120-20-10-50	350-350-350-50	h	3.00
FP420.28A	140-20-10-100	350-350-350-50	h	3.63
FP420.29A	90-30-5-100	350-350-350-75	h	3.54
FP420.31A	80-10-10-20	350-350-350-150	j	2.42
FP420.32A	20-10-5-60	350-350-350-200	f	2.13
FP420.33A	40-10-5-100	350-350-350-200	f	2.64
WP420.34	40-40-40-40	350-350-350-300	h	3.00
FP420.35A	40-20-20-10	350-350-350-350	f	2.82
FP420.36A	40-40-30-20	350-350-350-350	g	2.61
FP420.38A	40-40-40-40	350-350-350-350	h	3.60
FP420.4A	80-60-40-20	350-350-350-350	j	3.84
FP420.405A	100-20-10-5	350-350-350-350	g	2.85
FP420.39A	100-40-25-25	350-350-350-350	j	4.20
FP420.41A	40-120-10-150	400-250-250-50	j	3.48
FP420.44A	40-10-50-200	400-300-250-150	j	3.60
FP420.43	80-80-100-100	400-350-25-25	i	3.78
FP420.438	10-40-20	400-350-150-25	j	2.26
FP420.45A	4-80-100-25	400-350-200-50	D	3.63
FP420.46A	80-40-20-20	400-350-300-300	j	3.48
FP420.47	20-50-40-40	400-350-350-50	h	3.00
FP420.5A	30-60-20-100	400-350-350-50	j	3.00
PFP420.52	40-30-20-20	400-350-350-350	h	2.80
FP420.51	20-20-50-50	400-400-15-15	f	2.04
FP420.53	20-20-20-20	400-400-25-25	f	1.83
FP420.54	80-50-25-25	400-400-25-25	h	3.21
FP420.56A	80-25-100-20	400-400-50-25	g	2.79
FP420.5A	80-40-100-20	400-400-50-25	j	3.36
FP420.7	100-10-30-20	400-400-50-50	h	3.06
FP420.8	20-10-10-25	400-400-100-25	f	1.86
WP420.9A	20-20-100-100	400-400-100-100	g	3.15
FP420.95	80-40-100-100	400-400-200-50	j	3.63
FP420.97	80-40-40-100	400-400-300-50	j	3.48
FP421A	5-5-50-80	400-400-300-250	j	2.79
FP421.2A	60-40-40-10	400-400-350-50	g	3.45
FP421.3A	100-10-20-20	400-400-350-50	j	3.27
FP421.4	30-30-15-20	400-400-400-25	h	2.58
FP421.6	80-40-30-40	400-400-400-25	l	3.57
FP421.8A	40-40-40-150	400-400-400-50	j	3.42
WP421.85	40-80-10-100	400-400-400-200	j	3.36
FP421.87	80-40-30-4	400-400-400-350	l	3.49
FP421.9A	50-40-30-20	400-400-400-400	j	3.39
WP422	60-40-40-40	400-400-400-400	i	3.78
FP422.1A	20-80-20-50	450-200-200-50	f	2.46
FP422.11	20-180-50-50	450-250-75-50	j	2.97
FP422.7A	60-80-40-20	450-250-250-150	l	3.39
FP422.8	25-100-10-60	450-300-300-50	h	3.18
FP413X	40-40-40-20	450-300-300-150	h	2.94
FP422.9	10-100-20-20	450-300-300-300	h	3.15
FP423.4	10-40-100-100	450-350-250-50	h	3.33
WP423.5	10-140-100-20	450-350-300-300	l	3.87
FP424.1	10-100-10-20	450-350-350-25	h	3.12
FP424.3A	20-80-50-100	450-350-350-50	j	3.60
FP425	30-40-40-10	450-350-350-200	h	3.09
FP425.6	40-100-20-10	450-350-350-350	l	3.84
FP425.1A	80-10-40-30	450-400-300-300	j	3.48

Mallory No.	Capacity, $\mu$ f	WVDC	*	Net Each
FP426	20-15-20-20	450-450-25-25	f	\$2.07
FP426.2	80-40-100-100	450-450-25-25	g	3.48
FP426.5	20-20-60-100	450-450-150-25	g	2.55
FP426.9A	40-40-125-125	450-450-150-25	j	3.42
FP427.5A	10-10-60-100	450-450-200-50	f	2.31
FP427.6A	35-25-20-100	450-450-200-50	g	2.79
FP427.65A	40-40-100-60	450-450-200-200	j	3.63
FP427.67	80-50-20-50	450-450-250-50	g	3.58
FP427.7	10-10-10-50	450-450-300-25	f	1.89
FP427.9A	20-20-20-10	450-450-350-350	g	2.49
FP428	40-10-35-10	450-450-350-350	j	2.76
FP428.4A	40-40-30-30	450-450-350-350	j	3.54
FP428.9A	15-15-10-20	450-450-450-25	f	2.10
FP432A	30-30-10-125	450-450-450-25	g	2.58
FP432A	40-10-10-250	450-450-450-25	g	2.82
FP431	40-15-10-25	450-450-450-25	g	2.46
FP430.2	40-20-20-25	450-450-450-25	h	2.76
FP436	40-20-20-40	450-450-450-25	h	2.79
FP429	40-30-10-20	450-450-450-25	h	2.70
FP429.2	40-40-30-100	450-450-450-25	h	3.21
FP430.6A	40-40-40-40	450-450-450-25	j	3.30
FP430.9	60-40-40-10	450-450-450-25	j	3.60
FP430.95A	60-50-5-20	450-450-450-25	j	3.21
FP430.97	20-20-20-20	450-450-450-50	j	2.49
FP437	20-20-20-100	450-450-450-50	j	2.73
FP431.2	40-40-10-25	450-450-450-50	g	2.82
FP431.3A	40-40-10-50	450-450-450-50	h	2.13
FP431.35	40-40-20-40	450-450-450-50	h	3.03
FP431.4A	60-40-10-25	450-450-450-50	j	3.15
FP431.7A	40-40-10-100	450-450-450-100	j	3.18
FP433	60-10-10-20	450-450-450-150	h	2.76
FP432.4A	40-40-30-10	450-450-450-200	j	3.21
FP432.8	35-35-15-25	450-450-450-250	j	2.91
FP432.9A	40-20-10-100	450-450-450-250	j	3.51
FP450.2	80-50-10-20	450-450-450-300	j	3.67
FP433.2	40-10-10-40	450-450-450-350	j	2.85
FP433.4	40-20-20-20	450-450-450-350	h	3.00
WP433.6	5-5-5-5	450-450-450-450	h	1.80
FP434	10-10-10-10	450-450-450-450	f	2.01
FP434.5	20-10-10-10	450-450-450-450	f	2.22
FP444	20-20-20-20	450-450-450-450	h	2.82
FP444.4A	30-15-15-15	450-450-450-450	h	2.67
FP444.5	30-20-20-10	450-450-450-450	h	2.76
FP444.6	30-30-15-10	450-450-450-450	h	2.82
FP444.8	30-30-20-20	450-450-450-450	h	3.12
FP444.9	30-30-30-15	450-450-450-450	l	3.18
FP444.54	40-20-20-4	450-450-450-450	h	2.79
FP444.95	40-20-20-20	450-450-450-450	h	3.06
FP445	35-35-10-5	450-450-450-450	h	2.76
FP446	40-35-10-10	450-450-450-450	h	2.88
FP447A	40-40-20-20	450-450-450-450	h	3.33
FP447.5	40-40-30-30	450-450-450-450	j	3.63
WP447.7	40-40-40-40	450-450-450-450	i	3.78
FP448A	60-20-20-20	450-450-450-450	j	3.39
FP448.5	60-30-10-2	450-450-450-450	h	3.06
FP449	70-10-10-5	450-450-450-450	h	2.85
FP450A	80-10-10-10	450-450-450-450	j	3.03
FP450.08	80-40-20-10	450-450-450-450	j	3.66
FP450.16	80-40-20-20	450-450-450-450	j	3.79
FP450.5	40-40-50-80	475-250-150-50	l	3.00
FP451A	10-100-10-100	475-300-300-25	g	2.94
FP451.3A	10-140-4-100	475-300-300-50	j	3.18
FP452	20-80-20-10	475-300-300-300	j	3.00
FP452.5	10-20-100-50	475-350-25-25	f	2.07
FP453A	20-40-80-100	475-350-200-100	h	3.27
FP453.4A	10-40-80-100	475-350-300-100	h	3.33
FP453.8A	10-30-5-80	475-350-350-50	f	2.22
FP454.4A	10-130-20-10	475-350-350-350	j	3.54
FP454.2	20-60-40-10	475-350-350-350	h	3.12
FP454.6	10-40-4-100	475-400-350-50	g	2.43
FP454.8A	10-80-40-100	475-400-400-50	g	3.48
FP455.5	25-20-20-100	475-450-300-50	j	2.73
FP456	25-20-40-100	475-450-300-50	j	2.97
FP456.5A	10-60-30-125	475-450-400-50	h	3.33
FP45				

# MALLORY CAPACITORS

## TC-TCD-TCS AND TCT TUBULAR DRY ELECTROLYTICS



Metal tubulars with insul. sleeve. TC, TCN (non-polar) are single section, 3" bare tinned leads. TCD is dual common negative with 7" insul. leads. TCS, dual separate section, solder lugs. TCT, triple common neg., 7" insul. leads. With mtg. strap, except TC below 1 1/4" dia. Rated +85° C except (\*), rated +65° C, EIA tolerances.

### TC AND TCN SINGLE SECTION

Mallory No.	Cap., µf	WV DC	Size, In. Dia. x Lg.	Net Each
TC304	200	3	1 1/4 x 1 1/4	\$.69
TC305	500	3	1 1/4 x 1 1/4	.84
TC310	1000	3	1 1/4 x 1 1/4	1.02
TC605	500	6	1 1/4 x 1 1/4	.94
TC610	1000	6	1 1/4 x 1 1/4	1.14
TC1502	200	15	1 1/4 x 2 1/4	.84
TC1505	500	15	1 1/4 x 2 1/4	1.05
TC1501	1000	15	1 1/4 x 2 1/4	1.38
TC22	10	25	7/16 x 3/4	.60
TC26	25	25	7/16 x 3/4	.60
TC29	50	25	7/16 x 3/4	.66
TC2501	100	25	1 1/4 x 1 1/4	.81
TC25015	150	25	1 1/4 x 1 1/4	.87
TC2505	500	25	1 1/4 x 2 1/4	1.38
TC31	1	50	7/16 x 3/4	.54
TC302	2	50	7/16 x 3/4	.54
TC30	5	50	7/16 x 3/4	.60
TC32	10	50	7/16 x 3/4	.66
TC36	25	50	7/16 x 3/4	.73
TC39	50	50	7/16 x 3/4	.82
TC3501	100	50	1 1/4 x 1 1/4	.74
TC50015	150	50	1 1/4 x 1 1/4	1.11
TC50025	250	50	1 1/4 x 1 1/4	1.11
TC50050	500	50	1 1/4 x 2 1/4	2.11
TC50100	1000	50	1 1/4 x 2 1/4	2.11
TC40	5	150	7/16 x 1 1/4	.66
TC41	10	150	7/16 x 1 1/4	.66
TC42	10	150	7/16 x 1 1/4	.66
TC43	12	150	7/16 x 1 1/4	.66
TC44	16	150	7/16 x 1 1/4	.66
TC45	20	150	7/16 x 1 1/4	.66
TC47	30	150	7/16 x 1 1/4	.78
TC48	40	150	7/16 x 1 1/4	.78
TC49	50	150	7/16 x 1 1/4	.78
TC492	80	150	7/16 x 1 1/4	.78
TC493	100	150	7/16 x 1 1/4	.78
TC495	150	150	7/16 x 1 1/4	.78
TC496	200	150	7/16 x 1 1/4	.78
TC499	300	150	7/16 x 1 1/4	.78
TC50X	5	250	1 1/4 x 1 1/4	.66
TC51	8	250	1 1/4 x 1 1/4	.66
TC52	10	250	1 1/4 x 1 1/4	.66
TC53	12	250	1 1/4 x 1 1/4	.66
TC54	16	250	1 1/4 x 1 1/4	.66
TC55	20	250	1 1/4 x 1 1/4	.66
TC58	40	250	1 1/4 x 1 1/4	.66
TC59	50	250	1 1/4 x 1 1/4	.66
TC1265	100	250	1 1/4 x 2 1/4	1.47
TC595	2	350	1 1/4 x 1 1/4	1.26
TC60	5	350	1 1/4 x 1 1/4	.63
TC61	8	350	1 1/4 x 1 1/4	.72
TC62	10	350	1 1/4 x 1 1/4	.75
TC63	12	350	1 1/4 x 1 1/4	.78
TC64	16	350	1 1/4 x 1 1/4	.84
TC65	20	350	1 1/4 x 1 1/4	.87
TC67	40	350	1 1/4 x 2 1/4	1.44
TC68	60	350	1 1/4 x 2 1/4	1.17
TC69	100	350	1 1/4 x 2 1/4	1.86
TC692	150	350	1 1/4 x 3 1/4	3.16
TC695	2	450	1 1/4 x 1 1/4	.66
TC697	4	450	1 1/4 x 1 1/4	.97
TC70	5	450	1 1/4 x 1 1/4	.72
TC71	8	450	1 1/4 x 1 1/4	.75
TC72	10	450	1 1/4 x 1 1/4	.78
TC73	12	450	1 1/4 x 1 1/4	.81
TC74	16	450	1 1/4 x 1 1/4	.84
TC75	20	450	1 1/4 x 1 1/4	.93
TC77	30	450	1 1/4 x 2 1/4	1.02
TC78	40	450	1 1/4 x 2 1/4	1.08
TC79	50	450	1 1/4 x 2 1/4	1.26
TC795	60	450	1 1/4 x 2 1/4	1.38
TC80	80	450	1 1/4 x 4	1.68
TC805	100	450	1 1/4 x 3	1.92
TC81*	10	500	1 1/4 x 1 1/4	.81
TC82	10	500	1 1/4 x 3	1.62
TC83*	20	500	1 1/4 x 1 1/4	.96
TC84*	30	500	1 1/4 x 2 1/4	1.05
TC90	4	600	3/4 x 2 1/4	2.30
TC92	10	600	3/4 x 2 1/4	1.77
TCN308	.521	3	1 1/4 x 2	1.32
TC420†	1.5Z	4	1 1/4 x 2 1/4	2.10
TC421†	1.5Z	6	1 1/4 x 2	1.80
TCN105	5	10	1 1/4 x 1 1/4	.69
TCN106	6	10	1 1/4 x 1 1/4	.69
TCN108	8	10	1 1/4 x 1 1/4	.69
TCN1025	25	10	7/16 x 3/4	.84
TCN412	500	10	1 1/4 x 2 1/4	1.20
TCN1550	500	15	1 1/4 x 2 1/4	1.32
TCN415	1000	15	1 1/4 x 3 1/4	1.71
TCN2516	16	25	7/16 x 1 1/4	.60
TCN425	100	25	1 1/4 x 1 1/4	1.02
TCN501	1	50	7/16 x 1 1/4	.69
TCN502	2	50	7/16 x 1 1/4	.69
TCN503	3	50	7/16 x 1 1/4	.72
TCN504	4	50	7/16 x 1 1/4	.75

†Non-polar, †15750 cps. †60 cps. †120 cps.

No.	µf	VNP	D. x L., In.	Net
TCN505	5	50	3/8 x 1 1/4	\$0.90
TCN5010	10	50	3/8 x 1 1/4	.75
TCN5099	100	50	3/8 x 1 1/4	1.29
TCN510	4	150	3/8 x 1 1/4	.75
TCN1512	12	150	3/8 x 1 1/4	1.01
TCN1540	40	150	3/8 x 1 1/4	1.30
TCN1551	50	150	3/8 x 1 1/4	1.34
TCN2550	4	200	1 1/4 x 1 1/4	1.02
TCN3520	20	350	1 1/4 x 2 1/4	1.08
TCN511	10	450	1 1/4 x 2 1/4	.99

### TCD DUAL COMMON NEGATIVE

No.	Cap., µf	WVDC	Size, In. Dia. x Lg.	Net Each
204	250-1000	10-6	1 1/4 x 2 1/4	\$1.68
16	500-100	16-16	1 1/4 x 2 1/4	.78
26	25-25	25-25	1 1/4 x 2 1/4	.84
N201†	130-130	25-25	1 1/4 x 2 1/4	2.15
40	10-10	100-100	1 1/4 x 2 1/4	1.87
43	10-30	150-150	1 1/4 x 3 1/4	1.95
45	20-20	150-150	1 1/4 x 3 1/4	2.07
508	130-20	150-150	1 1/4 x 3 1/4	1.08
47	30-30	150-150	1 1/4 x 2 1/4	1.08
485	40-20	150-150	1 1/4 x 1 1/4	1.05
475	40-30	150-150	1 1/4 x 1 1/4	1.08
48	40-40	150-150	1 1/4 x 2	1.11
497	50-30	150-150	1 1/4 x 2	1.17
49	50-50	150-150	1 1/4 x 2 1/4	1.26
50	60-20	150-150	1 1/4 x 1 1/4	1.53
498	80-40	150-150	1 1/4 x 2 1/4	1.32
498	80-50	150-150	1 1/4 x 2 1/4	1.41
2155	100-100	150-150	1 1/4 x 4	1.92
46	30-20	200-200	1 1/4 x 2	1.17
2165	30-30	200-200	1 1/4 x 2 1/4	1.32
2169	50-75	250-250	1 1/4 x 2 1/4	1.44
2174	100-150	250-50	1 1/4 x 4	2.16
2173	8-8	250-250	1 1/4 x 3 1/4	.96
52	10-10	250-250	1 1/4 x 2	.99
55	20-20	250-250	1 1/4 x 2	1.11
2274	40-40	300-300	1 1/4 x 3 1/4	1.77
58	80-40	300-300	1 1/4 x 4	2.07
62	10-10	350-350	1 1/4 x 2	1.02
65	20-20	350-350	1 1/4 x 2 1/4	1.35
2297	40-50	450-50	1 1/4 x 3 1/4	1.50
2302	30-60	450-300	1 1/4 x 3 1/4	1.92
71	8-8	450-450	1 1/4 x 2	1.02
72	10-10	450-450	1 1/4 x 2	1.11
74	15-15	450-450	1 1/4 x 3 1/4	1.32
745	20-8	450-450	1 1/4 x 2 1/4	1.26
75	20-20	450-450	1 1/4 x 3 1/4	1.50
77	30-30	450-450	1 1/4 x 4	1.89
78	40-40	450-450	1 1/4 x 4	2.04

### TCS DUAL SEPARATE SECTION

No.	Cap., µf	WV DC*	Size, In. Dia. x Lg.	Net Each
44	15-15	150	1 1/4 x 2 3/4	\$1.20
45	20-20	150	1 1/4 x 2 3/4	1.26
47	30-30	150	1 1/4 x 2 3/4	1.35
48	40-40	150	1 1/4 x 2 3/4	1.41
49	120-120	150	1 1/4 x 3 1/4	1.98
505	70-70	175	1 1/4 x 3 1/4	2.16
52	10-10	250	1 1/4 x 2 3/4	1.26
55	20-20	250	1 1/4 x 2 3/4	1.41
61	8-8	350	1 1/4 x 2 3/4	1.26
64	15-15	350	1 1/4 x 2 3/4	1.65
71	8-8	450	1 1/4 x 2 3/4	1.26
74	15-15	450	1 1/4 x 2 3/4	1.65
75	20-20	450	1 1/4 x 3 1/4	1.89

\*Each section.

### TCT TRIPLE COMMON NEGATIVE

No.	Cap., µf	Volts	Size, In. Dia. x L.	Net Each
3053	20-20-20	150-150-25	1 1/4 x 2 1/4	\$1.23
3055	30-30-20	150-150-25	1 1/4 x 2 1/4	1.32
3094	50-30-200	150-150-25	1 1/4 x 2 1/4	1.65
3109	20-10-10	150-150-150	1 1/4 x 3 1/4	1.20
3112	20-20-20	150-150-150	1 1/4 x 3 1/4	1.29
3113	30-30-30	150-150-150	1 1/4 x 2 1/4	1.41
3114	40-20-20	150-150-150	1 1/4 x 2 1/4	1.35
3105	40-30-20	150-150-150	1 1/4 x 3 1/4	1.38
3116	40-40-20	150-150-150	1 1/4 x 2 1/4	1.41
3115	40-40-40	150-150-150	1 1/4 x 2 1/4	1.47
3107	50-30-20	150-150-150	1 1/4 x 2 1/4	1.41
3110	60-30-10	150-150-150	1 1/4 x 2	2.22
3119	60-50-20	150-150-150	1 1/4 x 2 1/4	1.62
3117	80-40-20	150-150-150	1 1/4 x 2 1/4	1.65
3118	80-50-50	150-150-150	1 1/4 x 4	1.86
3120	80-80-20	150-150-150	1 1/4 x 3	2.47
3285	40-30-40	350-250-150	1 1/4 x 4	1.98
3405	30-50-100	450-150-25	1 1/4 x 4	1.92
3432	30-30-30	450-350-250	1 1/4 x 4	2.25
3764	40-20-10	450-450-150	1 1/4 x 4	2.25

### CLIPS FOR TC CAPACITORS

Mallory No.	Spring Clip for	Size, In.	Net Each
TH13	TC	3/8	3c
TH15	TC	1/2-9/16	3c
TH17	TC	5/8-11/16	3c
TH19	TC and FP	3/4-15/16	3c
TH21	TC	7/8-15/16	3c
TH23	TC and FP	1-11/16	3c
TH25	TC and FP	1 1/8-1 1/16	6c

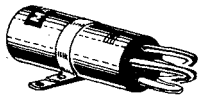
## TT TINY TUBULAR ELECTROLYTIC CAPACITORS

High purity, etched aluminum plate for low leakage current limits; high ratings and small size. Conforms to EIA standards RS-154-A. Axial leads 1 1/2" long. Temperature Range: -20° to +85° C. Tolerance: Up to 50 WVDC, -10%, +150%; above 50 WVDC, -10%, +100%.

Mallory No.	Cap., µf	WV DC	Size, In.* Dia. x Lgth.	Net Each
TT1X5	5	2	1/4 x 1 1/4	\$0.80
TT2X150	150	1	3/8 x 1 1/4	.90
TT3X10	10	3	3/8 x 1 1/4	.75
TT3X25	25	3	3/8 x 1 1/4	.75
TT3X40	40	3	3/8 x 1 1/4	.75
TT3X50	50	3	3/8 x 1 1/4	.75
TT3X110	110	3	3/8 x 1 1/4	.84
TT3X200	200	3	3/8 x 1 1/4	.96
TT3X250	250	3	3/8 x 1 1/4	.99
TT3X300	300	3	3/8 x 1 1/4	1.21
TT3X400	400	3	3/8 x 1 1/4	1.75
TT6X2	2	6	3/8 x 1 1/4	.75
TT6X3	3	6		

# MALLORY CAPACITORS

## HIGH TEMPERATURE WAX TUBULARS



Single-ended, wax-dipped cardboard sleeve for high capacity at high voltages and temperatures. 5" flexible leads. **Tolerance:** Up to 50 WVDC, -10% to +250%; 51 to 350 WVDC, -10% to +100%; over 351 WVDC, -10% to +50%. WQ240 is double-ended.

Mall. No.	Cap., $\mu$ f at WVDC	Size, In. D. x L.	Net Each
WS342	200 at 200	1 1/4 x 3 3/8	\$1.84
WS427	140 at 300	1 1/4 x 2 7/8	2.05
WS560	150 at 400	1 1/4 x 4 3/8	2.64
WS730	100 at 450	1 1/2 x 3 3/8	2.63
WD210	50-30 at 150	3/8 x 2 3/8	1.24
WD215	50-50 at 150	3/8 x 2 3/8	1.30
WD220	70-30 at 150	3/8 x 2 3/8	1.30
WD235	100-50 at 150	1 x 2 3/8	1.56
WD270	120-120 at 150	1 x 2 7/8	1.87
WD251	250-50 at 160	1 1/8 x 2 3/8	2.18
WD340	60-125 at 200-50	1 1/8 x 2 3/8	1.54
WD345	5-200 at 200-200	1 1/8 x 3 1/8	2.05
WD355	250-120 at 200-200	1 1/8 x 3 1/8	2.92
WD410	200-100 at 300-50	1 1/8 x 4 3/8	2.93
WD448	150-100 at 350-300	1 1/8 x 4 3/8	3.49
WD446	100-150 at 350-300	1 1/8 x 3 3/8	3.40
WD450	5-140 at 350-350	1 1/8 x 4 3/8	2.54
WT201	60-40-250 at 150-150-15	1 x 2 3/8	1.72
WT240	60-60-100 at 150-150-25	1 1/8 x 2 3/8	1.72
WT312	250-120-50 at 160-160-100	1 1/8 x 3 3/8	2.31
WT217	40-40-20 at 150	1 x 2 7/8	1.58
WT316	150-150-150 at 150	1 1/4 x 3 3/8	2.81
WT350	150-150-20 at 200	1 1/8 x 4 3/8	2.78
WT360	200-250-10 at 200	1 1/8 x 3 3/8	3.20
WT430	100-60-100 at 300-300-50	1 1/4 x 3 3/8	2.74
WT434	120-40-100 at 300-300-50	1 1/4 x 3 3/8	2.74
WT407	70-50-30 at 300-300-250	1 1/4 x 3 3/8	2.41
WT447	10-100-200 at 350-150-150	1 1/8 x 2 3/8	2.47
WT449	140-5-200 at 350-300-200	1 1/8 x 4 3/8	3.60
WT455	100-40-40 at 350-350-250	1 1/8 x 4 3/8	2.90
WT458	60-60-60 at 350-350-300	1 1/4 x 4 3/8	2.93
WT460	60-60-4 at 350	1 1/4 x 3 3/8	2.49
WT565	100-75-70 at 400-400-25	1 1/4 x 4 3/8	3.41
WT630	5-40-80 at 450-400-400	1 1/8 x 4 3/8	2.72
WT700	10-10-150 at 450-450-50	1 1/8 x 2 3/8	1.85
WQ209	60-40-20-200 at 150-150-150-10	1 x 2 3/8	1.93
WQ215	40-20-20-100 at 150-150-150-25	1 x 2	1.77
WQ230	40-40-20-20 at 150-150-150-25	1 1/8 x 2 3/8	1.70
WQ250	60-40-40-20 at 150-150-150-25	1 x 2 3/8	1.91
WQ240	10-10-40-200 at 150-150-150-35	1 1/8 x 2	1.74
WQ290	60-50-40-20 at 150	3/8 x 2 7/8	1.90
WQ401	140-4-50-4 at 300-300-150-150	1 1/8 x 3 1/8	2.88
WQ405	120-40-40-10 at 300-300-300-250	1 1/8 x 3 3/8	3.18
WQ511	140-5-200-100 at 350-300-200-150	1 1/8 x 4 3/8	4.27
WQ505	140-5-200-30 at 350-300-200-200	1 1/8 x 4 3/8	4.06
WQ515	40-20-20-100 at 350-300-250-50	1 1/4 x 2 3/8	2.34
WQ525	50-40-20-50 at 350-350-350-50	1 1/4 x 3 3/8	2.59
WQ520	150-100-20-100 at 350-350-350-50	1 1/8 x 4 3/8	4.33
WQ635	25-100-10-50 at 450-300-300-50	1 1/8 x 3 3/8	2.98
WQ640	10-80-40-40 at 450-300-300-300	1 1/4 x 4 3/8	2.94
WQ650	10-40-80-100 at 450-300-400-50	1 1/4 x 4 3/8	3.17
WQ775	10-20-20-40 at 450	1 1/4 x 3 3/8	3.02
WQ795	20-20-40-40 at 450	1 1/4 x 4 3/8	3.53
WV404	40-20-20-20-50 at 300-300-300-300-50	1 1/4 x 3 3/8	2.58

## PRINTED CIRCUIT HIGH TEMPERATURE WAX TUBULARS

Same as W Series, except designed for printed circuit applications.

### DUAL

Mallory No.	Cap., $\mu$ f	WV DC*	Size, In. Dia. x L.	Net Each
PWD211	50-30	150	1 x 2	\$1.26
PWD221	50-50	200	1 x 2 3/8	1.44
PWD231	75-30	150	1 x 2 3/8	1.34
PWD240	80-30	150	1 x 2 3/8	1.35
PWD252	80-50	150	1 x 2 3/8	1.42
PWD253	80-50	200	1 x 2 3/8	1.58
PWD263	100-50	150	1 x 2 3/8	1.50

### TRIPLE

Mallory No.	Cap., $\mu$ f	WV DC*	Size, In. Dia. x L.	Net Each
PWT205	30-25-20	150*	1 x 1 3/4	\$1.44
PWT225	50-30-20	150*	1 x 2	1.52
PWT245	60-20-5	150*	1 x 3	1.47
PWT260	60-80-20	150*	1 x 2 3/8	1.71
PWT275	80-40-150	150-150-50	1 x 2 3/8	1.69
PWT285	80-60-250	150-150-25	1 1/8 x 2 3/8	1.83
PWT360	60-120-20	200*	1 1/8 x 2 3/8	2.12

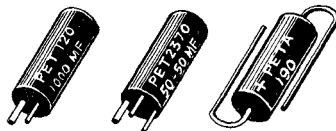
\*WVDC each section.

## ANTENNA ROTATOR

Exact replacement for capacitors used in popular antenna rotators.

Mall. No.	Cap., $\mu$ f at VAC	Size, In. Dia. x L.	Net Each
ST75	70 at 50 VAC	3/8 x 2 3/8	\$0.75
ST76	66.2 to 76 at 50 VAC	3/8 x 2 3/8	.75
ST80	75 at 65 WVDC	3/8 x 2 3/8	.90
ST100	100-120 at 50 VAC	1 x 2 3/8	1.02
ST140	210 to 240 at 50 VAC	1 x 3 3/8	1.29
ST290	210 to 290 at 50 VAC	1 x 3 3/8	1.29

## MINIATURE PHENOLIC CASE ELECTROLYTICS



Miniature electrolytics for portable radios and TV enclosed in phenolic case with epoxy end seals. PET series are single ended with 1" leads for printed circuits. PETA have 1 1/2" axial leads. **Temperature range:** -30° to +85° C. **Tolerance:** -10% to +150%.

Mallory No. PET-	Cap., $\mu$ f	WV DC	Size, In.	Net Each
118	8	3	3/8 x 3/8	\$0.82
122	15	3	3/8 x 3/8	.83
130	30	3	3/8 x 3/8	.83
140	40	3	3/8 x 3/8	.83
180	150	3	3/8 x 1 1/8	.89
1210	5	6	3/8 x 3/8	.82
1260	60	6	3/8 x 3/8	.85
1300	750	6	3/8 x 1 1/4	1.18
1340	10	10	3/8 x 3/8	.83
1400	100	10	3/8 x 3/8	.88
1500	100	12	3/8 x 1 1/8	.88
1535	6	15	3/8 x 3/8	.83
1570	20	15	3/8 x 3/8	.83
1575	50	15	3/8 x 3/8	.85
1760	10	25	3/8 x 3/8	.83
1930	2	50	3/8 x 3/8	.82
1935	4	50	3/8 x 3/8	.83
1960	25	50	3/8 x 1	.85
1980	50	50	3/8 x 1 1/8	.88
290	500-50	3-3	1 1/8 x 1 1/4	1.31
2290	100-40	6-3	1 1/8 x 1 1/4	1.14
2320	400-200	6-8	1 1/8 x 1 1/2	1.37
2312	200-20	8-8	1 1/8 x 1 1/2	1.18
2365C*	50-25	10-10	1 1/8 x 3/4	1.12
2370	50-50	10-10	1 1/8 x 3/4	1.13
3310	100-100-65	8-8-8	3/8 x 1	1.20
A120	1000	1	3/8 x 1 1/4	1.16
A190	750	3	3/8 x 1 1/4	1.06
A1675	65	16	3/8 x 1 1/8	.72
A2300	250-100	7-3	1 1/8 x 1 1/2	1.27
A2385	80-50	10-10	1 1/8 x 1 1/2	1.08
A2395	100-40	10-3	1 1/8 x 1 1/2	1.58

\*Uses common positive construction.

## INDUSTRIAL ELECTROLYTICS

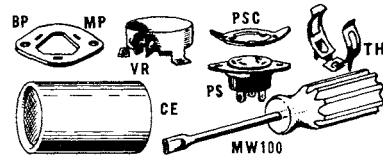
Heavy duty industrial aluminum electrolytics which also meet detail specifications of MIL-C-82. PB series plugs into standard octal tube socket. BS series are bathtub style hermetically sealed in hot-tinned steel case with two solder lugs and mounting flanges. Standard EIA tolerances apply to BS series and operating temperature is -55° C to +65° C. RS, HS, and RM series are metal cased with threaded necks and insulated stranded wires.

Mallory No.	Cap., $\mu$ f	WV DC	Size, In. Dia. x L.	Net Each
PB110	20	150	1 1/8 x 2 1/2	\$2.37
PB114	40	150	1 1/8 x 2 1/2	2.46
PB139	100	350	1 1/8 x 3 1/2	3.51
PB142	10	450	1 1/8 x 2 1/2	2.43
PB144	20	450	1 1/8 x 2 1/2	2.53
PB146	40	450	1 1/8 x 2 1/2	2.73
PB149	80	450	1 1/8 x 2 1/2	3.33
PB208	20-20	150	1 1/8 x 2 1/2	2.52
PB212	40-40	150	1 1/8 x 2 1/2	2.61
PB234	20-20	450	1 1/8 x 2 1/2	3.03
PB238	40-40	450	1 1/8 x 2 1/2	3.57
PB311.2	20-20-20	150	1 1/8 x 2 1/2	2.88
PB345.8	20-20-20	450-450-25	1 1/8 x 2 1/2	3.33
PB375.8	10-10-10	450	1 1/8 x 2 1/2	3.06
RS207	30	250	1 x 3 1/2	\$1.23
RS212	8	450	1 1/8 x 3	1.32
RS213	8	450	1 x 2 3/4	1.32
RS214	12	450	1 1/8 x 3	1.44
RS215	12	450	1 x 2 3/4	1.44
RS216	16	450	1 x 3 1/2	1.47
RS217	16	450	1 1/8 x 3	1.47
RS219	20	450	1 1/8 x 3	1.62
RS223	30	450	1 1/8 x 3	1.80
RS224	40	450	1 1/8 x 3	1.89
HS691	4	600	1 1/8 x 4	1.77
HS693	8	600	1 1/8 x 3 3/4	1.89
HS696	20	600	1 1/8 x 4 1/4	2.31
RM262	8-8	450	1 1/8 x 3	1.80
RM265	8-8-8	450	1 1/8 x 4 1/4	3.00

Mall. No.	Cap., $\mu$ f	WV DC	Size, Inches H. x W. x L.	Net Each
BS26	25	25	3/4 x 1 x 1 1/4	\$2.70
BS29	50	25	3/4 x 1 x 1 1/4	2.76
BS36	25	50	3/4 x 1 x 1 1/4	2.73
BS39	50	50	3/4 x 1 x 1 1/4	2.82
BS45	20	150	3/4 x 1 x 1 1/4	2.82
BS48	40	150	1 x 1 1/4 x 1 1/4	2.91
BS62	10	300	3/4 x 1 x 1 1/4	2.85
BS65	20	300	1 1/8 x 1 1/4 x 1 1/4	2.94
BS81*	8	500	1 x 1 1/4 x 2	3.45
BS91*	8	600	1 x 1 1/4 x 2	3.51

\*Mtg. centers 2 3/8"; all others 2 1/2".

## CAPACITOR HARDWARE



BP (Phenolic) and MP (Metal) mounting plates for FP-WP. PS plug-in sockets for FPWP. VR Clamps fit all can types. TH clips for tubular and can types. CE cardboard insulating tubes for FP etc. MW 100 is FP mounting wrench.

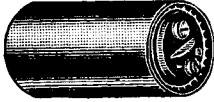
Mallory No.	Size, Inches	Net Each	Mallory No.	Size, Inches	Net Each
BP2	3/4	3c	TH13	3/8	3c
BP4	1	3c	TH15	3/8	3c
BP4A	1	3c	TH17	3/8	3c
BP6	1 1/8	3c	TH19	3/8	3c
MP2	3/4	3c	TH21	3/8	3c
MP4	1	3c	TH23	3/8	3c
MP6	1 1/8	3c	TH25	1	6c
PS4	1	42c	CE1	1 1/8 x 2	6c
PSC4	Ret'r	6c	CE2	1 x 1 1/2	6c
PS6	1 1/8	54c	CE3	1 x 2	6c
VR1	1	11c	CE4	1 x 3	6c
VR3	1 1/8	12c	CE5	1 1/8 x 2	6c
VR4	1 1/2	14c	CE6	1 1/8 x 3	6c
VR6	1 3/4	14c	CE7	1 x 2 1/2	6c
VR8	2	14c	CE8	1 x 4	9c
VR10	2 1/2	20c	CE9	1 1/8 x 2 1/2	6c
VR12	3	30c	CE10	1 1/8 x 4	9c
			CE11	1 x 3 1/2	9c
			CE12	1 1/8 x 3 1/2	9c
			CE13	1 x 1 1/4	6c
			CE14	3/4 x 1 1/2	6c

Mallory MW100 Mounting Wrench, Net each \$1.05



# MALLORY CAPACITORS

## HIGH CAPACITY DRY ELECTROLYTICS



HC and NP capacitors are furnished in heavy-duty molded phenolic cases with integral safety vent. HC types are polarized; NP types are non-polarized. Temp. Range: -20° C to +85° C. Tolerance: Type HC—0-50 WVDC, -10%, +150%; 51-350 WVDC, -10%, +100%; 351 WVDC up, -10%, +50%. Type NP—±25%, all units.

### POLARIZED TYPE HC

Mallory No.	Cap., $\mu$ F	WV DC	* Size	Net Each
HC1020A	2,000	10	1	\$ 3.36
HC1040A	4,000	10	2	4.60
HC1060A	6,000	10	8	5.20
HC1080	8,000	10	5	6.00
HC10100	10,000	10	7	7.82
HC10120	12,000	10	7	7.14
HC10150	15,000	10	7	7.67
HC1520A	2,000	15	1	3.47
HC1540A	4,000	15	3	5.37
HC1560A	6,000	15	4	5.62
HC1580	8,000	15	7	6.62
HC15100	10,000	15	7	7.14
HC2050-50	2x5,000	20	7	8.00
HC2060	6,000	20	7	6.60
HC2068A	6,000	20	5	6.11
HC20250	25,000	20	9	12.88
HC2510A	1,000	25	1	3.19
HC2520A	2,000	25	2	4.15
HC2530	3,000	25	4	4.88
HC2540A	4,000	25	4	5.58
HC2550	5,000	25	7	6.30
HC4040	4,000	40	7	7.54
HC4040A	4,000	40	5	6.98
HC4060	6,000	40	7	7.91
HC5005	500	50	2	3.60
HC5005A	500	50	1	3.33
HC5010A	1,000	50	2	4.25
HC5020A	2,000	50	4	5.06
HC5030	3,000	50	7	7.00
HC5040	4,000	50	7	7.32
HC8005	500	80	2	3.85
HC8010	1,000	80	4	5.34
HC8020	2,000	80	7	6.62
HC10005	500	100	2	4.20
HC10010	1,000	100	5	5.86
HC10015	1,500	100	7	6.44
HC15005	500	150	4	5.09
HC15010	1,000	150	7	6.89
HC15010A	1,000	150	5	6.44
HC20002	200	200	4	4.08
HC20005	500	200	7	5.97
HC20005A	500	200	4	5.53
HC25001	100	250	2	4.59
HC25002	200	250	4	4.88
HC25003	300	250	5	5.37
HC25004	400	250	7	5.64
HC35001	100	350	4	4.88
HC35002	200	350	5	5.93
HC35003	300	350	7	6.97
HC45001	100	450	4	5.97
HC45002	200	450	7	7.47
HC45003	300	450	7	8.47

### NON-POLARIZED TYPE NP

Mallory No.	Cap., $\mu$ F	WV DC	* Size	Net Each
NP0340	2,000	25	7	\$ 5.43
NP0555	500	50	5	4.38
NP1225A	200	125	2	4.04
NP1235A	300	125	4	4.87
NP1245	400	125	7	5.69
NP1255A	500	125	5	6.30
NP2514	100	250	5	5.95
NP2520	150	250	5	6.15
NP2525	200	250	7	6.34
NP3003A	15	300	1	2.87
NP3006	30	300	2	3.85
NP3008	50	300	2	5.25
NP3014A	100	300	4	6.13
NP3020	150	300	7	6.56
NP3025	200	300	7	7.00
NP4503	30	450	2	4.90
NP4505	50	450	4	6.30
NP4510	100	450	7	7.70

### \*HC AND NP CASE SIZES

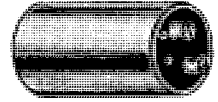
Code	Size, In. Dia. x Lg.	Use Hardware No. for Cap	Brkt.	Clamp
1	1 1/8 x 2 3/8	PL3, PLA3	HB2	VR3
2	1 1/8 x 3 3/8	PL3, PLA3	HB4	VR3
3	1 1/8 x 4 3/8	PL3, PLA3	HB8	VR3
4	1 1/8 x 5 3/8	PL6, PLA6	HB4	VR6
5	1 1/8 x 6 3/8	PL6, PLA6	HB8	VR6
6	2 1/8 x 3 3/8	PL8, PLA8	HB4	VR8
7	2 1/8 x 4 3/8	PL8, PLA8	HB8	VR8
8	1 1/2 x 4 1/8	.....	.....	VR4
9	3 x 4 1/8	.....	.....	VR12

## COMPUTER GRADE CAPACITORS

Ultra-reliable, high capacity aluminum electrolytic capacitors. Exclusive safety vent provides positive protection. Furnished with Mylar<sup>†</sup> insulating sleeve. Temp. Range: -20° C to +85° C. Tolerance: 0-150 WVDC, -10%, +75% (U); 151 WVDC up, -10, +50% (T).

†DuPont trademark.

Mallory No.	Cap., $\mu$ F	WV DC	* Size	Net Each
CG552U3A1	5,500	3	A	\$1.44
CG1052U3B1	10,500	3	B	1.58
CG143U3C1	14,000	3	C	2.05
CG1752U3H1	17,500	3	H	2.38
CG233U3K1	23,000	3	K	2.75
CG243U3J1	24,000	3	J	2.85
CG363U3D1	36,000	3	D	3.40
CG54U3E1	50,000	3	E	4.36
CG753U3F1	75,000	3	F	5.44
CG1153U3G1	115,000	3	G	6.52
CG442U5A1	4,400	5	A	1.31
CG852U5B1	8,500	5	B	1.82
CG1252U5C1	12,500	5	C	2.43
CG143U5H1	14,000	5	H	2.50
CG1852U5K1	18,500	5	K	2.74
CG24U5J1	20,000	5	J	2.86
CG2752U5D1	27,500	5	D	3.32
CG453U5E1	45,000	5	E	4.31
CG653U5F1	65,000	5	F	5.40
CG15U5G1	100,000	5	G	6.83
CG322U10A1	3,200	10	A	1.50
CG63U10B1	6,000	10	B	1.88
CG822U10C1	8,200	10	C	2.19
CG14U10H1	10,000	10	H	2.43
CG1352U10K1	13,500	10	K	2.67
CG143U10J1	14,000	10	J	2.70
CG183U10D1	18,000	10	D	3.32
CG34U10E1	30,000	10	E	5.09
CG4352U10F1	43,500	10	F	6.21
CG683U10G1	68,000	10	G	6.74
CG252U15A1	2,500	15	A	1.40
CG452U15B1	4,500	15	B	2.01
CG642U15C1	6,400	15	C	2.07
CG83U15H1	8,000	15	H	2.38
CG1052U15K1	10,500	15	K	2.62
CG113U15J1	11,000	15	J	2.67
CG143U15D1	14,000	15	D	3.47
CG233U15E1	23,000	15	E	4.87
CG343U15F1	34,000	15	F	5.39
CG533U15G1	53,000	15	G	6.64
CG152U25A1	1,500	25	A	1.36
CG282U25B1	2,800	25	B	1.71
CG382U25C1	3,800	25	C	1.96
CG452U25H1	4,500	25	H	2.13
CG63U25K1	6,000	25	K	2.50
CG652U25J1	6,500	25	J	2.62
CG852U25D1	8,500	25	D	3.01
CG1352U25E1	13,500	25	E	4.66
CG24U25F1	20,000	25	F	5.05
CG3152U25G1	31,500	25	G	6.33
CG82U50A1	800	50	A	1.40
CG152U50B1	1,500	50	B	1.77
CG23U50C1	2,000	50	C	1.82
CG252U50H1	2,500	50	H	1.94
CG332U50K1	3,300	50	K	2.51
CG352U50J1	3,500	50	J	2.47
CG452U50D1	4,500	50	D	2.67
CG732U50E1	7,300	50	E	4.14
CG14U50F1	10,000	50	F	5.17
CG1652U50G1	16,500	50	G	6.36
CG62U75A1	600	75	A	1.47
CG13U75B1	1,000	75	B	1.92
CG152U75C1	1,500	75	C	2.19
CG23U75H1	2,000	75	H	2.38
CG252U75K1	2,500	75	K	2.85
CG262U75J1	2,600	75	J	2.86
CG345U75D1	3,450	75	D	3.11
CG552U75E1	5,500	75	E	4.87
CG822U75F1	8,200	75	F	5.75
CG1252U75G1	12,500	75	G	6.89
CG42U100A1	400	100	A	1.46
CG75U100B1	750	100	B	1.82
CG13U100C1	1,000	100	C	2.11
CG132U100H1	1,300	100	H	2.30
CG165U100K1	1,650	100	K	2.38
CG172U100J1	1,700	100	J	2.42
CG225U100D1	2,250	100	D	3.15
CG362U100E1	3,600	100	E	4.64
CG532U100F1	5,300	100	F	5.32
CG832U100G1	8,300	100	G	7.01
CG275U150A1	275	150	A	1.31
CG52U150B1	500	150	B	1.84
CG72U150C1	700	150	C	2.05
CG875U150H1	875	150	H	2.20
CG112U150K1	1,100	150	K	2.36
CG115U150J1	1,150	150	J	2.42
CG155U150D1	1,550	150	D	3.13
CG252U150E1	2,500	150	E	4.56
CG362U150F1	3,600	150	F	5.41
CG562U150G1	5,600	150	G	7.01
CG181T200A1	180	200	A	1.46
CG341T200B1	340	200	B	1.74
CG451T200C1	450	200	C	1.93
CG551T200H1	550	200	H	2.09
CG751T200K1	750	200	K	2.57
CG82T200J1	800	200	J	2.65
CG13T200D1	1,000	200	D	3.48

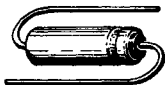


Mallory No.	Cap., $\mu$ F	WV DC	* Size	Net Each
CG1651T200E1	1,650	200	E	\$3.86
CG2451T200F1	2,450	200	F	5.25
CG382T200G1	3,800	200	G	7.26
CG141T250A1	140	250	A	1.70
CG2750T250B1	275	250	B	1.88
CG3750T250C1	375	250	C	2.01
CG451T250H1	450	250	H	2.08
CG62T250K1	600	250	K	2.23
CG6250T250J1	625	250	J	2.43
CG82T250D1	800	250	D	3.65
CG132T250E1	1,300	250	E	4.87
CG192T250F1	1,900	250	F	5.85
CG33T250G1	3,000	250	G	7.40
CG121T300A1	120	300	A	1.76
CG2250T300B1	225	300	B	2.01
CG3250T300C1	325	300	C	2.25
CG42T300H1	400	300	H	2.38
CG5250T300K1	525	300	K	2.52
CG551T300J1	550	300	J	2.55
CG72T300D1	700	300	D	3.66
CG1151T300E1	1,150	300	E	5.60
CG1651T300F1	1,650	300	F	6.45
CG262T300G1	2,600	300	G	7.57
CG12T350A1	100	350	A	1.77
CG181T350B1	180	350	B	2.38
CG251T350C1	250	350	C	2.28
CG32T350H1	300	350	H	2.43
CG42T350K1	400	350	K	2.75
CG4250T350J1	425	350	J	2.94
CG551T350D1	550	350	D	3.87
CG92T350E1	900	350	E	4.98
CG132T350F1	1,300	350	F	6.26
CG23T350G1	2,000	350	G	7.75
CG550T400A1	55	400	A	1.16
CG111T400B1	110	400	B	2.05
CG151T400C1	150	400	C	2.23
CG181T400H1	180	400	H	2.38
CG241T400K1	240	400	K	2.63
CG251T400J1	250	400	J	2.69
CG3250T400D1	325	400	D	2.92
CG531T400E1	530	400	E	3.86
CG41T450A1	40	450	A	1.12
CG81T450B1	80	450	B	1.32
CG111T450C1	110	450	C	2.19
CG141T450H1	140	450	H	2.34
CG181T450K1	180	450	K	2.57
CG191T450J1	190	450	J	2.58
CG241T450D1	240	450	D	2.81

### \*CG CASE SIZES

# MALLORY CAPACITORS

## TPG HIGH-RELIABILITY TUBULAR ELECTROLYTICS



TPG capacitors are engineered for use in circuits requiring the utmost in stability, reliability, and long-life. They feature all-welded internal construction, a positive end seal, and a special safety vent. **Temperature Range:** -40° to +85° C and standard tolerance is -10% to +50%. Case diameter is 3/8" and includes a shrink fit insulating sleeve.

Cap. $\mu$ F	WVDC	Mallory Number	Size	Net Each, Lots of:				
				1-9	10-24	25-49	50-99	100-249
120	3	TPG120T3	A	\$1.81	\$1.55	\$.91	\$.70	\$.622
180	3	TPG180T3	B	1.82	1.56	.91	.70	.625
330	3	TPG330T3	C	1.83	1.57	.92	.71	.628
385	3	TPG385T3	D	1.85	1.58	.92	.71	.634
450	3	TPG450T3	E	1.86	1.59	.93	.72	.637
80	6	TPG80T6	A	1.81	1.55	.91	.70	.622
120	6	TPG120T6	B	1.82	1.56	.91	.70	.625
220	6	TPG220T6	C	1.83	1.57	.92	.71	.628
260	6	TPG260T6	D	1.85	1.58	.92	.71	.634
300	6	TPG300T6	E	1.86	1.59	.93	.72	.637
65	10	TPG65T10	A	1.81	1.55	.91	.70	.622
100	10	TPG100T10	B	1.82	1.56	.91	.70	.625
175	10	TPG175T10	C	1.83	1.57	.92	.71	.628
210	10	TPG210T10	D	1.85	1.58	.92	.71	.634
240	10	TPG240T10	E	1.86	1.59	.93	.72	.637
45	15	TPG45T15	A	1.81	1.55	.91	.70	.622
70	15	TPG70T15	B	1.82	1.56	.91	.70	.625
125	15	TPG125T15	C	1.83	1.57	.92	.71	.628
150	15	TPG150T15	D	1.85	1.58	.92	.71	.634
175	15	TPG175T15	E	1.86	1.59	.93	.72	.637
30	25	TPG30T25	A	1.81	1.55	.91	.70	.622
45	25	TPG45T25	B	1.82	1.56	.91	.70	.625
85	25	TPG85T25	C	1.83	1.57	.92	.71	.628
100	25	TPG100T25	D	1.85	1.58	.92	.71	.634
115	25	TPG115T25	E	1.86	1.59	.93	.72	.637
25	30	TPG25T30	A	1.81	1.55	.91	.70	.622
35	30	TPG35T30	B	1.82	1.56	.91	.70	.625
65	30	TPG65T30	C	1.83	1.57	.92	.71	.628
75	30	TPG75T30	D	1.85	1.58	.92	.71	.634
90	30	TPG90T30	E	1.86	1.59	.93	.72	.637
12	50	TPG12T50	A	1.81	1.55	.91	.70	.622
18	50	TPG18T50	B	1.82	1.56	.91	.70	.625
35	50	TPG35T50	C	1.83	1.57	.92	.71	.628
40	50	TPG40T50	D	1.85	1.58	.92	.71	.634
50	50	TPG50T50	E	1.86	1.59	.93	.72	.637
10	75	TPG10T75	A	1.81	1.55	.91	.70	.622
15	75	TPG15T75	B	1.82	1.56	.91	.70	.625
25	75	TPG25T75	C	1.83	1.57	.92	.71	.628
30	75	TPG30T75	D	1.85	1.58	.92	.71	.634
40	75	TPG40T75	E	1.86	1.59	.93	.72	.637
7	100	TPG7T100	A	1.81	1.55	.91	.70	.622
10	100	TPG10T100	B	1.82	1.56	.91	.70	.625
15	100	TPG15T100	C	1.83	1.57	.92	.71	.628
20	100	TPG20T100	D	1.85	1.58	.92	.71	.634
30	100	TPG30T100	E	1.86	1.59	.93	.72	.637
1	150	TPG1T150	A	1.81	1.55	.91	.70	.622
2	150	TPG2T150	A	1.81	1.55	.91	.70	.622
3	150	TPG3T150	A	1.81	1.55	.91	.70	.622
4	150	TPG4T150	A	1.81	1.55	.91	.70	.622
5	150	TPG5T150	A	1.81	1.55	.91	.70	.622
7	150	TPG7T150	B	1.82	1.56	.91	.70	.625
10	150	TPG10T150	C	1.83	1.57	.92	.71	.628
15	150	TPG15T150	D	1.85	1.58	.92	.71	.634
20	150	TPG20T150	E	1.86	1.59	.93	.72	.637

### TPG CASE SIZES: 3/8" DIA. X

Code	A	B	C	D	E
LENGTH	1 3/16"	1 5/16"	1 7/8"	1 3/4"	1 5/8"

### PHOTOFLASH CAPACITORS

Mallory photoflash capacitors are especially engineered to meet the requirements of electronic flash circuits. All three types offer exceptionally low leakage and minimum charging resistance to provide maximum battery life.

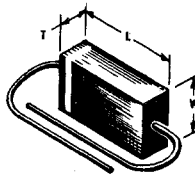
**Model HC45003**—Plastic case, 2 1/16" dia. x 4 3/8", 300  $\mu$ F at 450 v. DC. Maximum Series Resistance: 0.8 ohm. Maximum DC Leakage (at 5 minutes): 5.5 ma. May be used with VR clamps, or HB bracket and PL caps for mounting (not included). Net Each. **\$8.47**

**Model FF45052**—Plastic case, 2 1/16" dia. x 4 3/8", 525  $\mu$ F at 450 v. DC. Maximum Series Resistance: 0.35 ohm. Maximum DC Leakage (at 5 minutes): 2.0 ma. May be used with VR clamps, or HB bracket and PL cap for mounting (not included). Net Each. **\$13.50**

**Model FP240**—Metal can, 1 3/8" x 3", dual section, 50  $\mu$ F each section at 450 v. DC. May be paralleled for 100  $\mu$ F or used with switch to provide high and low outputs. Maximum Series Resistance: 4.8 ohms. Maximum DC Leakage (at 5 minutes): 1.29 ma per section. May be used with TH-25 clip and CE-6 insulating tube (not included). Uses standard FP twist-prong terminals. Net Each. **\$2.31**



## ELECTRON® METALLIZED MYLAR\* CAPACITORS



Ultra-miniature high reliability metallized Mylar capacitors in rectangular molded epoxy cases with axial leads. **Temperature Range:** -55° to +85° C (no derating), +125° C (50% voltage derating). **Tolerance:**  $\pm$ 10%. Thin film Mylar used in 100 WVDC types, standard Mylar used in 200 WVDC types.

### ELECTRON CAPACITORS

Cap. $\mu$ F	Mallory No.	Size, Inches			Net Each
		L	W	T	
<b>100 WVDC—THIN FILM</b>					
.022	2DE1223E	.42	.29	.17	\$1.68
.027	2DE1273E	.42	.29	.17	1.68
.033	2DE1333E	.42	.29	.17	1.68
.039	2DE1393E	.42	.29	.17	1.68
.047	2DE1473E	.42	.29	.17	1.68
.056	2DE1563E	.57	.29	.17	1.68
.068	2DE1683E	.57	.29	.17	1.68
.082	2DE1823E	.57	.29	.17	1.68
.10	2DE1104E	.57	.29	.17	2.04
.12	2DE1124E	.57	.29	.17	2.04
.15	2DE1154E	.55	.36	.23	2.04
.18	2DE1184E	.55	.36	.23	2.04
.22	2DE1224E	.55	.36	.23	2.04
.25	2DE1254E	.55	.36	.23	2.04
.27	2DE1274E	.55	.36	.23	2.04
.33	2DE1334E	.57	.42	.29	2.04
.39	2DE1394E	.57	.42	.29	2.04
.47	2DE1474E	.67	.42	.29	2.04
.50	2DE1504E	.67	.42	.29	2.70
.56	2DE1564E	.67	.42	.29	2.70
.68	2DE1648E	.67	.42	.29	2.70
.75	2DE1754E	.82	.42	.29	2.75
.82	2DE1824E	.82	.42	.29	2.70
1.0	2DE1105E	.82	.54	.39	3.60
1.5	2DE1155E	.82	.54	.39	3.60
2.0	2DE1205E	1.04	.54	.39	4.62
3.0	2DE1305E	1.24	.54	.39	5.94
5.0	2DE1505E	1.75	.72	.56	8.40
8.0	2DE1805E	1.75	.72	.56	11.76
10.0	2DE1106E	1.75	.72	.56	13.50

### 200 WVDC

.001	DE2102E	.42	.29	.17	\$1.74
.0012	DE2122E	.42	.29	.17	1.74
.0015	DE2152E	.42	.29	.17	1.74
.0018	DE2182E	.42	.29	.17	1.74
.0022	DE2222E	.42	.29	.17	1.74
.0027	DE2272E	.42	.29	.17	1.74
.0033	DE2332E	.42	.29	.17	1.74
.0039	DE2392E	.42	.29	.17	1.74
.0047	DE2472E	.42	.29	.17	1.74
.0056	DE2562E	.42	.29	.17	1.74
.0068	DE2682E	.42	.29	.17	1.74
.0082	DE2822E	.42	.29	.17	1.74
.01	DE2103E	.42	.29	.17	1.68
.012	DE2123E	.42	.29	.17	1.68
.015	DE2153E	.42	.29	.17	1.68
.018	DE2183E	.42	.29	.17	1.68
.022	DE2223E	.42	.29	.17	1.68
.027	DE2273E	.57	.29	.17	1.68
.033	DE2333E	.57	.29	.17	1.68
.039	DE2393E	.57	.29	.17	1.68
.047	DE2473E	.55	.36	.23	1.68
.056	DE2563E	.55	.36	.23	1.68
.068	DE2683E	.55	.36	.23	1.68
.082	DE2823E	.55	.36	.23	1.68
.10	DE2104E	.57	.42	.29	1.74
.12	DE2124E	.57	.42	.29	1.74
.15	DE2154E	.67	.42	.29	1.74
.18	DE2184E	.67	.42	.29	1.74
.22	DE2224E	.67	.42	.29	1.74
.25	DE2254E	.82	.42	.29	1.74
.27	DE2274E	.82	.42	.29	1.74
.33	DE2334E	.82	.54	.39	1.74
.39	DE2394E	.82	.54	.39	1.74
.47	DE2474E	.82	.54	.39	1.74
.50	DE2504E	.82	.54	.39	1.80
.56	DE2564E	1.04	.54	.39	1.80
.68	DE2684E	1.04	.54	.39	1.80
.75	DE2754E	1.04	.54	.39	1.80
.82	DE2824E	1.24	.54	.39	1.80
1.0	DE2105E	1.24	.54	.39	2.10
1.5	DE2155E	1.75	.72	.56	2.10
2.0	DE2205E	1.75	.72	.56	2.52
3.0	DE2305E	1.75	.72	.56	3.24

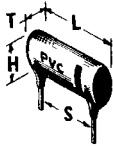
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\*ELECTRON is registered Marshall Industries Trademark



# MALLORY CAPACITORS

## PVC® DIPPED MYLAR CAPACITORS



Tough, flexible, polyvinylchloride coating provides moistureproof seal at leads with no cracking during installation. 100% Mylar dielectric. Radial leads. Tolerance: ±10%. Temperature Range: -40° C to +105° C.

Cap., µf	Mallory No.	Size, Inches				Net Each, Lots of:			
		L	H	T	S	1-24	25-49	50-99	100 up
<b>100 WVDC</b>									
.018	PVC1118	.88	.38	.25	.63	\$15	\$11	\$10	\$09
.022	PVC1122	.88	.38	.25	.63	.15	.11	.10	.09
.033	PVC1133	.88	.38	.22	.63	.15	.11	.10	.09
.04	PVC114	.88	.38	.22	.66	.15	.11	.10	.09
.047	PVC1147	1.03	.38	.22	.78	.16	.12	.10	.09
.056	PVC1156	1.03	.32	.22	.78	.16	.12	.10	.09
.068	PVC1168	1.03	.41	.25	.78	.17	.13	.11	.10
.10	PVC101	.81	.44	.31	.63	.18	.14	.12	.11
.15	PVC1015	.94	.46	.34	.75	.21	.16	.14	.12
.22	PVC1022	1.10	.50	.34	.88	.24	.18	.16	.14
.25	PVC1025	1.22	.50	.34	1.00	.25	.19	.17	.15
.27	PVC1027	1.22	.53	.38	1.00	.26	.20	.17	.15
.33	PVC1033	1.22	.56	.41	1.00	.28	.21	.19	.16
.40	PVC104	1.34	.56	.41	1.13	.30	.23	.20	.17
.47	PVC1047	1.34	.59	.44	1.13	.31	.24	.21	.18
.5	PVC105	1.34	.63	.44	1.13	.33	.25	.22	.19
.56	PVC1056	1.46	.63	.46	1.25	.34	.26	.23	.20
.68	PVC1068	1.46	.69	.50	1.25	.38	.29	.25	.22
1.0	PVC11	1.75	.72	.53	1.50	.46	.35	.31	.27
1.5	PVC11P5	1.75	.88	.63	1.50	.58	.45	.39	.34
2.0	PVC12	1.78	1.00	.78	1.50	.72	.56	.49	.43

Cap., µf	Mallory No.	Size, Inches				Net Each, Lots of:			
		L	H	T	S	1-24	25-49	50-99	100 up
<b>200 WVDC</b>									
.01	PVC211	.84	.31	.18	.63	.15	.11	.09	.08
.015	PVC2115	.88	.34	.22	.63	.15	.11	.09	.08
.02	PVC212	.88	.38	.25	.63	.16	.12	.10	.08
.022	PVC2122	.88	.44	.25	.63	.16	.12	.10	.08
.033	PVC2133	1.03	.42	.22	.78	.16	.12	.10	.09
.04	PVC214	1.03	.42	.25	.78	.16	.12	.10	.09
.047	PVC2147	1.03	.44	.28	.78	.16	.12	.10	.09
.05	PVC215	1.03	.44	.28	.78	.16	.12	.10	.09
.056	PVC2156	.94	.44	.25	.75	.17	.13	.11	.10
.068	PVC2168	.94	.46	.28	.75	.18	.14	.12	.10
.1	PVC201	1.10	.50	.34	1.00	.22	.16	.13	.10
.15	PVC2015	1.22	.53	.34	1.00	.22	.18	.14	.12
.22	PVC2022	1.22	.56	.41	1.00	.25	.21	.17	.14
.25	PVC2025	1.34	.56	.41	1.13	.25	.21	.17	.14
.33	PVC2033	1.46	.63	.44	1.25	.32	.24	.19	.16
.4	PVC204	1.46	.66	.46	1.38	.37	.27	.22	.18
.47	PVC2047	1.63	.66	.46	1.38	.37	.27	.22	.18
.5	PVC205	1.63	.69	.50	1.38	.37	.27	.22	.18
.56	PVC2056	1.75	.69	.50	1.50	.41	.32	.28	.24
.68	PVC2068	1.75	.72	.53	1.50	.45	.35	.30	.27
1.0	PVC21	1.75	.88	.63	1.50	.56	.43	.37	.33
2.0	PVC22	1.75	1.15	.94	1.50	.95	.75	.65	.57

Cap., µf	Mallory No.	Size, Inches				Net Each, Lots of:			
		L	H	T	S	1-24	25-49	50-99	100 up
<b>400 WVDC</b>									
.0022	PVC4222	.81	.31	.22	.63	.15	.11	.09	.08
.003	PVC423	.81	.31	.22	.63	.15	.11	.09	.08
.0033	PVC4233	.81	.31	.22	.63	.15	.11	.09	.08
.0047	PVC4247	.84	.34	.19	.63	.15	.11	.09	.08
.0056	PVC4256	.84	.34	.31	.63	.15	.11	.09	.08
.0068	PVC4268	.84	.34	.22	.63	.15	.11	.09	.08
.01	PVC411	.88	.38	.22	.63	.16	.11	.09	.08
.015	PVC4115	1.03	.38	.22	.66	.16	.11	.09	.08
.02	PVC412	1.03	.41	.25	.66	.16	.11	.09	.08
.04	PVC414	.94	.46	.28	.75	.19	.15	.12	.10
.047	PVC4147	.94	.46	.28	.75	.19	.15	.12	.10
.05	PVC415	.94	.46	.31	.75	.19	.15	.12	.10
.056	PVC4156	1.03	.46	.31	.88	.22	.16	.13	.11
.068	PVC4168	1.22	.46	.31	1.00	.22	.16	.13	.11
.1	PVC401	1.22	.53	.38	1.00	.22	.18	.14	.12
.15	PVC4015	1.34	.59	.41	1.13	.25	.22	.17	.14
.22	PVC4022	1.46	.66	.46	1.25	.28	.26	.21	.17
.25	PVC4025	1.63	.66	.46	1.38	.31	.27	.21	.17
.4	PVC404	1.75	.75	.56	1.50	.41	.32	.28	.24
.47	PVC4047	1.75	.78	.59	1.50	.45	.35	.31	.27
.5	PVC405	1.75	.81	.63	1.50	.47	.36	.32	.28
.56	PVC4056	2.15	.84	.66	1.50	.50	.39	.33	.29
.68	PVC4068	2.15	.94	.72	1.50	.56	.44	.38	.33

Cap., µf	Mallory No.	Size, Inches				Net Each, Lots of:			
		L	H	T	S	1-24	25-49	50-99	100 up
<b>600 WVDC</b>									
.001	PVC621	.81	.31	.19	.63	.16	.11	.09	.08
.0012	PVC6212	.81	.31	.19	.63	.16	.11	.09	.08
.0015	PVC6215	.81	.31	.19	.63	.16	.11	.09	.08
.002	PVC622	.81	.31	.19	.63	.16	.11	.09	.08
.0022	PVC6222	.81	.31	.19	.63	.16	.11	.09	.08
.0025	PVC6225	.81	.31	.19	.63	.16	.11	.09	.08
.003	PVC623	.81	.31	.19	.63	.16	.11	.09	.08
.0033	PVC6233	.81	.31	.19	.63	.16	.11	.09	.08
.0039	PVC6239	.84	.34	.19	.63	.16	.11	.09	.08
.004	PVC624	.84	.34	.19	.63	.16	.11	.09	.08
.0047	PVC6247	.84	.34	.19	.63	.16	.11	.09	.08
.005	PVC625	.84	.34	.19	.63	.16	.11	.09	.08
.0056	PVC6256	.84	.34	.22	.63	.16	.11	.09	.08
.006	PVC626	.84	.34	.22	.63	.16	.11	.09	.08
.0068	PVC6268	.88	.38	.22	.66	.19	.12	.10	.08
.0075	PVC6275	.88	.38	.22	.66	.19	.12	.10	.08
.008	PVC628	1.03	.38	.22	.78	.19	.12	.10	.08
.01	PVC611	1.03	.38	.25	.78	.19	.12	.10	.08
.012	PVC6112	1.03	.38	.25	.78	.19	.12	.10	.08
.015	PVC6115	1.03	.41	.28	.78	.19	.12	.10	.08

Cap., µf	Mallory No.	Size, Inches				Net Each, Lots of:			
		L	H	T	S	1-24	25-49	50-99	100 up
<b>600 WVDC</b>									
.02	PVC612	1.16	.41	.28	.88	\$19	\$14	\$11	\$09
.022	PVC6122	.94	.41	.28	.75	.19	.14	.11	.09
.025	PVC6125	.94	.41	.28	.75	.22	.15	.12	.10
.03	PVC613	1.10	.50	.31	.88	.22	.15	.12	.10
.033	PVC6133	1.10	.50	.31	.88	.22	.15	.12	.10
.039	PVC6139	1.32	.50	.31	1.00	.22	.15	.12	.10
.04	PVC614	1.32	.50	.31	1.00	.22	.15	.12	.10
.047	PVC6147	1.32	.50	.34	1.00	.25	.16	.13	.11
.05	PVC615	1.32	.53	.34	1.00	.25	.16	.13	.11
.056	PVC6156	1.32	.53	.38	1.00	.25	.16	.13	.11
.06	PVC616	1.32	.56	.38	1.00	.25	.19	.15	.12
.068	PVC6168	1.32	.59	.41	1.00	.28	.19	.15	.12
.1	PVC601	1.34	.63	.44	1.13	.28	.20	.16	.13
.15	PVC6015	1.63	.66	.46	1.38	.31	.24	.19	.16
.2	PVC602	1.75	.69	.50	1.50	.40	.28	.22	.18
.22	PVC6022	1.75	.72	.53	1.50	.43	.28	.22	.18
.25	PVC6025	1.75	.75	.56	1.50	.46	.28	.22	.18
.27	PVC6027	1.75	.78	.59	1.50	.46	.33	.29	.25
.33	PVC6033	1.78	.84	.66	1.50	.48	.37	.32	.28
.4	PVC604	1.78	.88	.69	1.50	.55	.43	.37	.33
.47	PVC6047	1.78	1.00	.78	1.50	.62	.48	.42	.37

## GEM® MOLDED MYLAR TUBULAR CAPACITORS



Molded tubular construction for positive humidity protection. 100% Mylar dielectric, axial leads, ±10% tolerance. Temperature Range: -55° C to +85° C (no derating), +125° C (with 50% derating).

Cap., µf	Mallory No.	Size	Net Each, Lots of:			
			1-24	25-49	50-99	100 up
<b>400 WVDC</b>						
.01	GEM411	A	\$15	\$11	\$09	\$075
.022	GEM412	B	.15	.12	.09	.078
.022	GEM4122	B	.15	.12	.10	.082
.047	GEM4147	B	.17	.14	.11	.090
.05	GEM415	B	.17	.14	.11	.091
.1	GEM401	C	.20	.16	.13	.109
.25	GEM405	D	.29	.27	.21	.178
.5	GEM4025	E	.47	.44	.36	.292
<b>600 WVDC</b>						
.001	GEM621	A	.15	.11	.09	.075
.0015	GEM6215	A	.15	.11	.09	.075
.002	GEM622	A	.15			

# MALLORY

# CERAMIC CAPACITORS



RMC Discaps® for radio, TV and industrial applications. Each Discap is custom-created for a specific purpose: By-pass, temperature compensation, high voltage, etc. Coated with Durez phenolic insulating vacuum wax for positive humidity protection. Available in handy five-pack boxes.

### MINIATURE 100 VOLT

Tolerance, +80%, -20%.

Cap. $\mu$ f	Mallory Number	Net Each	Cap. $\mu$ f	Mallory Number	Net Each
.005	TA250*	24c	.025	TA125†	24c
.01	TA110*	24c	.05	TA150†	39c
.02	TA120†	24c	.1	TA010†	57c

Dia.: \* $\frac{11}{32}$ "; † $\frac{1}{2}$ "; † $\frac{3}{8}$ ".

### TYPE SM

Rated 500 WVDC. Tol., -20%, +80% except SM210 and SM215. GMV\*.

Mallory Number	Cap. $\mu$ f	Dia., In.	Net Each
SM210	.001	$\frac{1}{8}$	12c
SM215	.0015	$\frac{1}{8}$	19c
SM250	.005	$\frac{1}{8}$	19c
SM110	.01	$\frac{1}{8}$	19c
SM120	.02	$\frac{1}{8}$	18c

### GENERAL PURPOSE

Rated 1000 WVDC except, 20K-50K values rated 500 WVDC. Tol., =0.25  $\mu$ f; 3.3 and 5.0  $\mu$ f; =5%, 6.8 and 8.0  $\mu$ f; =10%, 10-2200  $\mu$ f; =20%, 2500-50K  $\mu$ f.

Mall. No. GP-	Cap. $\mu$ f	Net Ea.	Mall. No. GP-	Cap. $\mu$ f	Net Ea.
533*	3.3	15c	336*	360	15c
550*	5.0	15c	339*	390	15c
568*	6.8	15c	340*	400	15c
580*	8.0	15c	347*	470	15c
410*	10	15c	350*	500	15c
412*	12	15c	356*	560	15c
415*	15	15c	360*	600	15c
418*	18	15c	368*	680	15c
420*	20	15c	375*	750	15c
422*	22	15c	382*	820	15c
425*	25	15c	210*	1000	15c
427*	27	15c	212*	1200	15c
430*	30	15c	215*	1500	15c
433*	33	15c	216*	1600	15c
439*	39	15c	218*	1800	15c
447*	47	15c	220*	2000	15c
450*	50	15c	222*	2200	15c
456*	56	15c	225*	2500	15c
468*	68	15c	227*	2700	15c
475*	75	15c	230*	3000	15c
482*	82	15c	233*	3300	15c
491*	91	15c	239*	3900	15c
310*	100	15c	240*	4000	15c
312*	120	15c	243*	4300	15c
313*	130	15c	247*	4700	15c
315*	150	15c	250*	5000	15c
318*	180	15c	256*	5600	15c
320*	200	15c	268*	6800	15c
322*	220	15c	275*	7500	15c
324*	240	15c	110*	10K	15c
325*	250	15c	115*	15K	15c
327*	270	15c	120*	20K	15c
330*	300	15c	130*	30K	15c
333*	330	15c	140*	40K	15c
335*	350	15c	150*	50K	15c

Dia. (max.): \*0.20"; †0.40"; †0.54"; †0.62"; †0.38"; \* $\frac{15}{32}$ "; \*0.65"; \*0.95"; †0.83".

### BY-PASS, GENERAL PURPOSE

Heavy duty, rated 1000 WVDC. Tol.; GMV\* to 10K; +80%, -20%, 15K, 20K.

Mall. No.	Cap. $\mu$ f	Net Ea.	Mall. No.	Cap. $\mu$ f	Net Ea.
B315*	150	15c	B2X220	2x2K	30c
B318*	180	15c	B222†	2200	15c
B322*	220	15c	B227†	2700	15c
B327*	270	15c	B2X230	2x3K	30c
B333*	330	15c	B233†	3300	15c
B339*	390	15c	B240†	4000	15c
B347*	470	15c	B247†	4700	18c
B350*	500	15c	B250†	5000	18c
B356*	560	15c	B2X250	2x5K	30c
B368*	680	15c	B256†	5600	18c
B382*	820	15c	B260†	6000	18c
B210*	1000	15c	B268†	6800	18c
B2X210	2x1K	30c	B282†	8200	18c
B212*	1200	15c	B110*	10K	18c
B215*	1500	15c	B2X110	2x10K	30c
B2X215	2x1.5K	30c	B115*	15K	18c
B218*	1800	15c	B120*	20K	18c
B220†	2000	15c			

Dia.: \* $\frac{9}{32}$ "; † $\frac{3}{8}$ "; † $\frac{1}{2}$ "; † $\frac{5}{8}$ "; † $\frac{3}{4}$ "; † $\frac{7}{8}$ "; † $\frac{15}{16}$ "; † $\frac{1}{2}$ "; † $\frac{3}{4}$ "; † $\frac{7}{8}$ "; † $\frac{15}{16}$ ".

\*Guaranteed Minimum Value.

### TEMPERATURE COMPENSATING

Rated 1000 WVDC. Tolerance, =5%.

Cap. $\mu$ f	"O" Temp. Comp.		N750 Negative Temp. Comp.	
	Mallory No.	Net Ea.	Mallory No.	Net Ea.
1	CNO-510*	30c		
1.5	CNO-515*	30c		
2.2	CNO-522*	30c	CN7-522*	00c
3.3	CNO-533*	30c	CN7-533*	00c
4.7	CNO-547*	30c	CN7-547*	00c
5			CN7-550*	00c
6.8			CN7-568*	00c
10	CNO-568*	30c	CN7-418*	00c
12	CNO-412*	30c	CN7-415*	00c
15	CNO-415*	30c	CN7-418*	00c
18	CNO-418*	30c	CN7-420*	00c
20	CNO-420*	30c	CN7-422*	00c
22	CNO-422*	30c		
25	CNO-425*	30c		
27	CNO-427*	30c		
33	CNO-433*	30c		
39	CNO-439*	30c		
47	CNO-447*	30c		
50	CNO-450*	30c		
56	CNO-456*	30c		
68	CNO-468*	30c		
75	CNO-475*	30c		
82	CNO-482*	30c		
100	CNO-310*	30c		
120	CNO-312*	30c		
150	CNO-315*	30c		
180	CNO-318*	30c		
200	CNO-320*	30c		
220	CNO-322*	30c		
270	CNO-327*	30c		
330	CNO-333*	30c		

Dia.: \* $\frac{1}{4}$ "; † $\frac{1}{8}$ "; † $\frac{1}{2}$ "; † $\frac{3}{8}$ "; † $\frac{3}{4}$ "; † $\frac{7}{8}$ "; † $\frac{15}{16}$ ".

### TEMPERATURE STABILIZING

Rated 1000 WVDC. Tolerance, =10%.

Mall. No. JL-	Cap. $\mu$ f	Net Ea.	Mall. No. JL-	Cap. $\mu$ f	Net Ea.
310†	100	30c	212†	1200	30c
315†	150	30c	215†	1500	30c
322†	220	30c	218†	1800	30c
333†	330	30c	220†	2000	30c
347†	470	30c	222†	2200	30c
356†	560	30c	233†	3300	30c
368†	680	30c	239†	3900	30c
375†	750	30c	247†	4700	30c
382†	820	30c	250†	5000	30c
210†	1000	30c			

Dia.: † $\frac{1}{4}$ "; † $\frac{1}{2}$ "; † $\frac{3}{4}$ "; † $\frac{7}{8}$ "; † $\frac{15}{16}$ ".

### FREQUENCY STABLE 1000 WVDC

For use in oscillators and other closely controlled circuits where it is desirable to have superior frequency and temperature stability. Tolerance, =10%.

Cap. $\mu$ f	Mallory No. JF-	Net Ea.	Cap. $\mu$ f	Mallory No. JF-	Net Ea.
150	315*	24c	1500	215*	24c
220	322*	24c	1800	218*	24c
330	333*	24c	2000	220*	24c
470	347*	24c	2200	222*	24c
500	350*	24c	3300	233*	24c
560	356*	24c	3900	239*	24c
680	368*	24c	4700	247*	24c
750	375*	24c	5000	250*	24c
820	382*	24c	6800	268*	24c
1000	210*	24c	10K	110*	24c
1200	212*	24c			

Dia.: \* $\frac{1}{4}$ "; † $\frac{1}{2}$ "; † $\frac{3}{4}$ "; † $\frac{7}{8}$ "; † $\frac{15}{16}$ ".

### AC LINE AND BUFFER

Rated 1400 WVDC. Tol., GMV\*.

Mall. No. UAC-	Cap. $\mu$ f	Net Ea.	Mall. No. UAC-	Cap. $\mu$ f	Net Ea.
210*	.001	15c	260*	.006	15c
220†	.002	15c	270†	.007	15c
222†	.0022	15c	275†	.0075	15c
230†	.003	15c	280†	.008	15c
233†	.0033	15c	110*	.01	15c
240†	.004	15c	120*	.02	15c
247†	.0047	15c	2X110†	2x.01	7c
250†	.005	15c			

Dia.: \* $\frac{3}{8}$ "; † $\frac{1}{2}$ "; † $\frac{3}{4}$ "; † $\frac{7}{8}$ ".

### FEED-THRU CAPACITORS

For TV bypass. Wire terminals as tie points. Body solders to chassis or mounted by hex nut. Silvered stearite trimmer.

Mallory Number	Cap. $\mu$ f	VV DC	Size, In.	Net Ea.
CT565*	.5 to 3	500	$\frac{1}{2}$ x $\frac{1}{2}$	30c
CT551*	1 to 4	500	$\frac{1}{2}$ x $\frac{1}{2}$	30c
CT552*	2 to 6	500	$\frac{1}{2}$ x $\frac{1}{2}$	30c
CT250A†	1000	600	$\frac{1}{2}$ x $\frac{1}{2}$	30c
CT254A†	1000	600	$\frac{1}{2}$ x $\frac{1}{2}$	30c
CT280A†	1000	600	$\frac{1}{2}$ x $\frac{1}{2}$	45c
CT282A†	1000	600	$\frac{1}{2}$ x $\frac{1}{2}$	60c

Tol.: \* $\pm$ 0.5  $\mu$ f. †GMV\*. †=20%.

### HIGH VOLTAGE

Tolerance, GMV\* (100-470  $\mu$ f, =20%).

#### 2000 AND 3000 WVDC

Cap. $\mu$ f	2000 WVDC		3000 WVDC	
	Mall. No. 2HV-	Net Ea.	Mall. No. 3HV-	Net Ea.
100	310*	15c		
120	312*	15c		
150	315*	15c		
220	322†	15c	322†	24c
270	327†	15c	327†	24c
330	333†	15c	333†	24c
470	347†	15c	347†	24c
560	356†	15c	356†	24c
680	368†	15c	368†	24c
750	375†	15c	375†	24c
820	382†	15c	382†	24c
1000	210*	15c	210*	24c
1200	212*	15c	212*	24c
1500	215*	15c	215*	24c
1800	218*	15c	218*	24c
2200	222*	15c	222*	24c
3300	233*	15c	233*	24c
3900	239*	15c	239*	24c
4700	247*	15c	247*	24c
6800	268*	15c	268*	24c
10K	110*	15c	110*	24c

#### 6000 WVDC

Mall. No. 6HV-	Cap. $\mu$ f	Net Ea.	Mall. No. 6HV-	Cap. $\mu$ f	Net Ea.
310†	100	35c	347†	470	35c
312†	120	35c	356†	560	35c
315†	150	35c	368†	680	35c
322†	220	35c	375†	750	35c
327†	270	35c	382†	820	35c
333†	330	35c	210*	1K	35c

Dia.: \* $\frac{3}{8}$ "; † $\frac{1}{2}$ "; † $\frac{3}{4}$ "; † $\frac{7}{8}$ ".

### DEFLECTION YOKE

Tolerance, =10%.

#### 2000 AND 3000 WVDC

Cap. $\mu$ f	2000 WVDC		3000 WVDC	
	Mall. No. 2DY-	Net Ea.	Mall. No. 3DY-	Net Ea.
4.7	547*	21c	547*	24c
6.8	568*	21c	568*	24c
10	410*	21c	410*	24c
12	412*	21c	412*	24c
15	415*	21c	415*	24c
22	422*	21c	422*	24c
27	427*	21c		

# MALLORY TANTALUM CAPACITORS

## TAS AND CS12/13 SOLID ELECTROLYTE TANTALUM CAPACITORS



Meet or exceed all requirements of MIL-C-26655A. Furnished in hermetically-sealed metal cases. **Temperature Range:** -80° C to +85° C; to +125° C with derating. **ORDERING INFORMATION:** **TAS TYPES** are specified by a 13-digit catalog number. Select capacity and voltage as shown in chart. **Specify Tolerance:** Where asterisk (\*) is shown, insert letter "K" for ±10% or "M" for ±20% tolerance, (i.e., TAS472K006P0A) when ordering. **Size:** Final letter in number indicates case size (A, C, F or G); see pricing table for dimensions and price. **Case:** All units shown have bare metal cases; for shrink-fit insulating sleeve, change 12th digit of number from "0" to "1" (i.e., TAS564K035P1A) when ordering. Items indicated by star (\*) are so-called "parent" sizes, representing the highest available voltage for a given case size and price. **CS12 AND CS13 TYPES** are listed by voltage and capacity. **Specify Tolerance:** Where asterisk (\*) is shown, insert "K" for ±10% or "M" for ±20% tolerance (i.e., CS12AG010K) when ordering. **Size:** As indicated in separate column (A, C, F or G); see pricing table for dimensions and price. **Case:** Specify CS12 type for bare metal case, CS13 for shrink-fit insulating sleeve. **SEE BULLETIN 4-40 FOR TECHNICAL DATA.**

### TAS AND CS12/13 INDUSTRIAL NET PRICES

Prices shown are for bare metal case types. Add 2c for types with insulating sleeve.

#### FOR 6, 10, 15, 20 AND 35 WVDC

Case Code †	Case Size, Inches Dia. x L.†	WVDC	Capacity Range, µf	For ±10% Tol. (K), Net Each					For ±20% Tol. (M), Net Each				
				1-24	25-49	50-99	100-499	500-999	1-24	25-49	50-99	100-499	500-999
A	.125 x .250	6, 10, 15, 20, 35	.0047-6.8	\$1.32	\$1.05	\$0.73	\$0.60	\$0.51	\$1.29	\$1.03	\$0.70	\$0.57	\$0.48
C	.175 x .438	6, 10, 15, 20, 35	1.2-56	1.53	1.23	.75	.62	.52	1.50	1.20	.72	.59	.49
F	.279 x .650	6, 10, 15, 20, 35	18-180 8.2-22	2.21	1.77	1.33	1.10	.92	2.18	1.74	1.30	1.07	.89
G	.341 x .750	6, 10, 15, 20, 35	56-330 27-33 35-47 68	4.48	3.53	2.32	1.89	1.58	4.45	3.50	2.29	1.86	1.55
				4.53	3.63	2.51	2.03	1.79	4.50	3.60	2.48	2.00	1.68
				4.73	3.78	2.78	2.27	1.89	4.70	3.75	2.75	2.24	1.86
									5.30	4.25	3.14	2.45	2.34

#### FOR 50 WVDC

Case Code †	Case Size, Inches Dia. x L.†	Capacity Range, µf	\$2.45	\$1.97	\$1.66	\$1.43	\$1.29	\$1.90	\$1.50	\$1.28	\$1.09	\$1.00
A	.125 x .250	50	0.47-1.0	2.60	2.08	1.75	1.50	1.37	2.00	1.60	1.35	1.05
C	.175 x .438	50	1.2-4.7	4.25	3.40	2.88	2.45	2.24	3.25	2.60	2.20	1.72
F	.279 x .650	50	5.6-18	7.95	6.35	5.35	4.58	4.18	6.10	4.90	4.15	3.22
G	.341 x .750	50	22									

### STOCK VALUES—TAS TYPES

Cap., µf	6 WVDC Mallory No.†	10 WVDC Mallory No.†	15 WVDC Mallory No.†	20 WVDC Mallory No.†	35 WVDC Mallory No.†	50 WVDC Mallory No.†
.0047	TAS472*006P0A	TAS472*010P0A	TAS472*015P0A	TAS472*020P0A	TAS472*035P0A*	
.0056	TAS562K006P0A	TAS562K010P0A	TAS562K015P0A	TAS562K020P0A	TAS562K035P0A*	
.0068	TAS682*006P0A	TAS682*010P0A	TAS682*015P0A	TAS682*020P0A	TAS682*035P0A*	
.0082	TAS822K006P0A	TAS822K010P0A	TAS822K015P0A	TAS822K020P0A	TAS822K035P0A*	
.010	TAS103*006P0A	TAS103*010P0A	TAS103*015P0A	TAS103*020P0A	TAS103*035P0A*	
.012	TAS123K006P0A	TAS123K010P0A	TAS123K015P0A	TAS123K020P0A	TAS123K035P0A*	
.015	TAS153*006P0A	TAS153*010P0A	TAS153*015P0A	TAS153*020P0A	TAS153*035P0A*	
.018	TAS183K006P0A	TAS183K010P0A	TAS183K015P0A	TAS183K020P0A	TAS183K035P0A*	
.022	TAS223*006P0A	TAS223*010P0A	TAS223*015P0A	TAS223*020P0A	TAS223*035P0A*	
.027	TAS273K006P0A	TAS273K010P0A	TAS273K015P0A	TAS273K020P0A	TAS273K035P0A*	
.033	TAS333*006P0A	TAS333*010P0A	TAS333*015P0A	TAS333*020P0A	TAS333*035P0A*	
.039	TAS393K006P0A	TAS393K010P0A	TAS393K015P0A	TAS393K020P0A	TAS393K035P0A*	
.047	TAS473*006P0A	TAS473*010P0A	TAS473*015P0A	TAS473*020P0A	TAS473*035P0A*	
.056	TAS563K006P0A	TAS563K010P0A	TAS563K015P0A	TAS563K020P0A	TAS563K035P0A*	
.068	TAS683*006P0A	TAS683*010P0A	TAS683*015P0A	TAS683*020P0A	TAS683*035P0A*	
.082	TAS823K006P0A	TAS823K010P0A	TAS823K015P0A	TAS823K020P0A	TAS823K035P0A*	
.10	TAS104*006P0A	TAS104*010P0A	TAS104*015P0A	TAS104*020P0A	TAS104*035P0A*	
.12	TAS124K006P0A	TAS124K010P0A	TAS124K015P0A	TAS124K020P0A	TAS124K035P0A*	
.15	TAS154*006P0A	TAS154*010P0A	TAS154*015P0A	TAS154*020P0A	TAS154*035P0A*	
.18	TAS184K006P0A	TAS184K010P0A	TAS184K015P0A	TAS184K020P0A	TAS184K035P0A*	
.22	TAS224*006P0A	TAS224*010P0A	TAS224*015P0A	TAS224*020P0A	TAS224*035P0A*	
.27	TAS274K006P0A	TAS274K010P0A	TAS274K015P0A	TAS274K020P0A	TAS274K035P0A*	
.33	TAS334*006P0A	TAS334*010P0A	TAS334*015P0A	TAS334*020P0A	TAS334*035P0A*	
.39	TAS394K006P0A	TAS394K010P0A	TAS394K015P0A	TAS394K020P0A	TAS394K035P0A*	
.47	TAS474*006P0A	TAS474*010P0A	TAS474*015P0A	TAS474*020P0A	TAS474*035P0A*	TAS474*050P0A
.56	TAS564K006P0A	TAS564K010P0A	TAS564K015P0A	TAS564K020P0A	TAS564K035P0A*	TAS564K050P0A
.68	TAS684*006P0A	TAS684*010P0A	TAS684*015P0A	TAS684*020P0A	TAS684*035P0A*	TAS684*050P0A
.82	TAS824K006P0A	TAS824K010P0A	TAS824K015P0A	TAS824K020P0A	TAS824K035P0A*	TAS824K050P0A
1.0	TAS105*006P0A	TAS105*010P0A	TAS105*015P0A	TAS105*020P0A	TAS105*035P0A*	TAS105*050P0A
1.2	TAS125K006P0A	TAS125K010P0A	TAS125K015P0A	TAS125K020P0A*	TAS125K035P0C*	TAS125K050P0C
1.5	TAS155*006P0A	TAS155*010P0A	TAS155*015P0A	TAS155*020P0A*	TAS155*035P0C*	TAS155*050P0C
1.8	TAS185K006P0A	TAS185K010P0A	TAS185K015P0A	TAS185K020P0A*	TAS185K035P0C*	TAS185K050P0C
2.2	TAS225*006P0A	TAS225*010P0A	TAS225*015P0A	TAS225*020P0A*	TAS225*035P0C*	TAS225*050P0C
2.7	TAS275K006P0A	TAS275K010P0A	TAS275K015P0A*	TAS275K020P0C	TAS275K035P0C*	TAS275K050P0C
3.3	TAS335*006P0A	TAS335*010P0A	TAS335*015P0A*	TAS335*020P0C	TAS335*035P0C*	TAS335*050P0C
3.9	TAS395K006P0A	TAS395K010P0A*	TAS395K015P0C	TAS395K020P0C	TAS395K035P0C*	TAS395K050P0C
4.7	TAS475*006P0A	TAS475*010P0A*	TAS475*015P0C	TAS475*020P0C	TAS475*035P0C*	TAS475*050P0C
5.6	TAS565K006P0A*	TAS565K010P0C	TAS565K015P0C	TAS565K020P0C	TAS565K035P0C*	TAS565K050P0F
6.8	TAS685*006P0A*	TAS685*010P0C	TAS685*015P0C	TAS685*020P0C	TAS685*035P0C*	TAS685*050P0F
8.2	TAS825*006P0C	TAS825K010P0C	TAS825K015P0C	TAS825K020P0C*	TAS825K035P0F*	TAS825K050P0F
10	TAS106*006P0C	TAS106*010P0C	TAS106*015P0C	TAS106*020P0C*	TAS106*035P0F*	TAS106*050P0F
12	TAS126K006P0C	TAS126K010P0C	TAS126K015P0C	TAS126K020P0C*	TAS126K035P0F*	TAS126K050P0F
15	TAS156*006P0C	TAS156*010P0C	TAS156*015P0C	TAS156*020P0C*	TAS156*035P0F*	TAS156*050P0F
18	TAS186K006P0C	TAS186K010P0C	TAS186K015P0C*	TAS186K020P0F	TAS186K035P0F*	TAS186K050P0F
22	TAS226*006P0C	TAS226*010P0C	TAS226*015P0C*	TAS226*020P0F	TAS226*035P0F*	TAS226*050P0G
27	TAS276K006P0C	TAS276K010P0C*	TAS276K015P0F	TAS276K020P0F*	TAS276K035P0G*	
33	TAS336*006P0C	TAS336*010P0C*	TAS336*015P0F	TAS336*020P0F*	TAS336*035P0G*	
39	TAS396K006P0C	TAS396K010P0C*	TAS396K015P0F	TAS396K020P0F*	TAS396K035P0G*	
47	TAS476*006P0C*	TAS476*010P0F	TAS476*015P0F	TAS476*020P0F*	TAS476*035P0G	
56	TAS566K006P0C*	TAS566K010P0F	TAS566K015P0F*	TAS566K020P0G*		
68	TAS686*006P0F	TAS686*010P0F	TAS686*015P0F*	TAS686*020P0G*		
82	TAS826K006P0F	TAS826K010P0F*	TAS826K015P0G	TAS826K020P0G*	TAS686M035P0G	
100	TAS107*006P0F	TAS107*010P0F*	TAS107*015P0G	TAS107*020P0G*		
120	TAS127K006P0F	TAS127K010P0F*	TAS127K015P0G*			
150	TAS157*006P0F*	TAS157*010P0G	TAS157*015P0G*			
180	TAS187K006P0F*	TAS187K010P0G*				
220	TAS227*006P0G	TAS227*010P0G*				
270	TAS277K006P0G*					
330	TAS337*006P0G*					

\*Available at ±10% (insert "K" to order) or ±20% (insert "M" to order). \*Parent value: Max. WVDC vs. capacity, size and price. †Last letter indicates size; see pricing table. ‡Add .010" dia. for insulating sleeve.



# TANTALUM CAPACITORS

## STOCK VALUES—CS12/13 TYPES

For bare metal case, order CS12 as listed. For insulating sleeve, specify CS13.

6 WVDC		
Cap., μf	Mallory No.	†
5.6	CS12AB5R6K	A
6.8	CS12AB6R8*	A
47	CS12AB470*	A
56	CS12AB560K	C
150	CS12AB151*	C
180	CS12AB181K	F
270	CS12AB271K	F
330	CS12AB331*	G

10 WVDC		
Cap., μf	Mallory No.	†
3.9	CS12AC3R9K	A
4.7	CS12AC4R7*	A
27	CS12AC270K	C
33	CS12AC330*	C
39	CS12AC390K	C
82	CS12AC820K	F
100	CS12AC101*	F
120	CS12AC121K	F
180	CS12AC181K	G
220	CS12AC221*	G

15 WVDC		
Cap., μf	Mallory No.	†
2.7	CS12AD2R7K	A
3.3	CS12AD3R3*	A
18	CS12AD180K	C
22	CS12AD220*	C
56	CS12AD560K	F
68	CS12AD680*	F
120	CS12AD121K	G
150	CS12AD151*	G

20 WVDC		
Cap., μf	Mallory No.	†
1.2	CS12AE1R2K	A
1.5	CS12AE1R5*	A
1.8	CS12AE1R8K	A
2.2	CS12AE2R2*	A
8.2	CS12AE8R2K	C
10	CS12AE100*	C
12	CS12AE120K	C
15	CS12AE150*	C
27	CS12AE270K	F
33	CS12AE330*	F
39	CS12AE390K	F
47	CS12AE470*	F
56	CS12AE560K	F
68	CS12AE680*	G
82	CS12AE820K	G
100	CS12AE101*	G

35 WVDC		
Cap., μf	Mallory No.	†
.33	CS12AFR33*	A
.39	CS12AFR39K	A
.47	CS12AFR47*	A
.56	CS12AFR56K	A
.68	CS12AFR68*	A
.82	CS12AFR82K	A
1.0	CS12AF010*	A
1.2	CS12AF1R2K	C
1.5	CS12AF1R5*	C
1.8	CS12AF1R8K	C
2.2	CS12AF2R2*	C
2.7	CS12AF2R7K	C
3.3	CS12AF3R3*	C
3.9	CS12AF3R9K	C
4.7	CS12AF4R7*	C
5.6	CS12AF5R6K	C
6.8	CS12AF6R8*	C
8.2	CS12AF8R2K	F
10	CS12AF100*	F
12	CS12AF120K	F
15	CS12AF150*	F
27	CS12AF270K	F
33	CS12AF330*	F
39	CS12AF390K	F
47	CS12AF470*	G

50 WVDC		
Cap., μf	Mallory No.	†
1.0	CS12AG010*	A
1.2	CS12AG1R2K	A
1.5	CS12AG1R5*	A
1.8	CS12AG1R8K	A
2.2	CS12AG2R2*	C
2.7	CS12AG2R7K	C
3.3	CS12AG3R3*	C
3.9	CS12AG3R9K	C
4.7	CS12AG4R7*	C
5.6	CS12AG5R6K	F
6.8	CS12AG6R8*	F
8.2	CS12AG8R2K	F
10	CS12AG100*	F
12	CS12AG120K	F
15	CS12AG150*	F
18	CS12AG180K	F
22	CS12AG220*	G

\*Available at ±10% (insert "K" to order) or ±20% (insert "M" to order). †Case size: See pricing table.

SEE PREVIOUS PAGE FOR PRICING, CASE SIZE AND ORDERING INFORMATION

## STOCK VALUES AND PRICING—TAS 75 WVDC AND 100 WVDC

Higher voltage ratings of TAS types on previous page. Case: Types listed have bare metal case. For shrink-fit insulating sleeve, change 12th digit "0" to "1" (i.e., TAS474K075P1A), and add 2c to prices shown.

75 WVDC ±10% TOLERANCE						
Cap., μf	Mallory No.	Net Each, Lots of				
		1-24	25-49	50-99	100-499	500-999
.47	TAS474K075P0A*	\$6.10	\$3.50	\$2.65	\$2.10	\$1.93
.56	TAS564K075P0A*	6.10	3.50	2.65	2.10	1.93
.68	TAS684K075P0A*	6.10	3.50	2.65	2.10	1.93
.82	TAS824K075P0C	6.45	3.70	2.75	2.20	2.02
1.0	TAS105K075P0C	6.45	3.70	2.75	2.20	2.02
1.2	TAS125K075P0C	6.45	3.70	2.75	2.20	2.02
1.5	TAS155K075P0C	6.45	3.70	2.75	2.20	2.02
1.8	TAS185K075P0C	6.45	3.70	2.75	2.20	2.02
2.2	TAS225K075P0C	6.45	3.70	2.75	2.20	2.02
2.7	TAS275K075P0C	6.45	3.70	2.75	2.20	2.02
3.3	TAS335K075P0C	6.45	3.70	2.75	2.20	2.02

100 WVDC ±10% TOLERANCE						
Cap., μf	Mallory No.	Net Each, Lots of				
		1-24	25-49	50-99	100-499	500-999
.47	TAS474K100P0A*	\$7.95	\$4.55	\$3.40	\$2.70	\$2.50
.56	TAS564K100P0A*	7.95	4.55	3.40	2.70	2.50
.68	TAS684K100P0C	8.40	4.80	3.60	2.85	2.63
.82	TAS824K100P0C	8.40	4.80	3.60	2.85	2.63
1.0	TAS105K100P0C	8.40	4.80	3.60	2.85	2.63
1.2	TAS125K100P0C	8.40	4.80	3.60	2.85	2.63
1.5	TAS155K100P0C	8.40	4.80	3.60	2.85	2.63
1.8	TAS185K100P0C	8.40	4.80	3.60	2.85	2.63
2.2	TAS225K100P0C	8.40	4.80	3.60	2.85	2.63
2.7	TAS275K100P0C	8.40	4.80	3.60	2.85	2.63

75 WVDC ±20% TOLERANCE						
Cap., μf	Mallory No.	Net Each, Lots of				
		1-24	25-49	50-99	100-499	500-999
.47	TAS474M075P0A*	\$4.70	\$2.70	\$2.05	\$1.60	\$1.48
.68	TAS684M075P0A*	4.70	2.70	2.05	1.60	1.48
1.0	TAS105M075P0C	4.95	2.85	2.15	1.70	1.55
1.5	TAS155M075P0C	4.95	2.85	2.15	1.70	1.55
2.2	TAS225M075P0C	4.95	2.85	2.15	1.70	1.55
3.3	TAS335M075P0C	4.95	2.85	2.15	1.70	1.55

100 WVDC ±20% TOLERANCE						
Cap., μf	Mallory No.	Net Each, Lots of				
		1-24	25-49	50-99	100-499	500-999
.47	TAS474M100P0A*	\$6.10	\$3.50	\$2.65	\$2.10	\$1.93
.68	TAS684M100P0C	6.45	3.70	2.75	2.20	2.02
1.0	TAS105M100P0C	6.45	3.70	2.75	2.20	2.02
1.5	TAS155M100P0C	6.45	3.70	2.75	2.20	2.02
2.2	TAS225M100P0C	6.45	3.70	2.75	2.20	2.02

Size: \*.125" dia. x .250" l.; all others .175" dia. x .438" l. Add .010" dia. x .036" l. for insulating sleeve.

### TNT PRICES

Case Size	Net Each, Lots of				
	1-24	25-49	50-99	100-499	500-999
A	\$1.24	\$0.99	\$0.84	\$0.714	\$0.651
B	1.46	1.17	.99	.84	.766

### TAH PRICES

Case Size	Net Each, Lots of				
	1-24	25-49	50-99	100-499	500-999
A	\$2.20	\$1.75	\$1.48	\$1.26	\$1.15
B	3.68	2.94	2.49	2.12	1.935
C	7.05	5.65	4.76	4.50	3.72

### TAP + 85° C

Cap., μf	WVDC +85° C	Mallory Catalog No.	Case Size	Net Each, Lots of				
				1-24	25-49	50-99	100-499	500-999
2	90	TAP205U090P0A	A					
3.5	75	TAP355U075P0A	A					
4	60	TAP405U060P0A	A					
5	50	TAP505U050P0A	A					
6	40	TAP605U040P0A	A					
7	35	TAP705U035P0A	A					
8	30	TAP805U030P0A	A					
10	25	TAP106U025P0A	A					
11	90	TAP116U090P0B	B					
12	20	TAP126U020P0A	A					
15	15	TAP156U015P0A	A					
15	75	TAP156U075P0B	B					
20	10	TAP206U010P0A	A					
20	60	TAP206U060P0B	B					
25	50	TAP256U050P0B	B					
30	6	TAP306U006P0A	A					
30	40	TAP306U040P0B	B					
30	90	TAP306U090P0C	C					
40	30	TAP406U030P0B	B					
40	75	TAP406U075P0C	C					
50	60	TAP506U060P0C	C					
50	50	TAP506U050P0C	C					
60	15	TAP606U015P0B	B					
100	10	TAP107U010P0B	B					
100	30	TAP107U030P0C	C					
140	6	TAP147U006P0B	B					
170	15	TAP177U015P0C	C					
250	10	TAP257U010P0C	C					
330	6	TAP337U006P0C	C					

### TNT + 85° C

Cap., μf	WVDC +85° C	Mallory Catalog No.	Case Size	Net Each, Lots of				
				1-24	25-49	50-99	100-499	500-999
2	50	TNT205U050P0A	A					
4	50	TNT405U050P0A	A					
6	35	TNT605U035P0A	A					
8	50	TNT805U050P0B	B					
12	15	TNT126U015P0A	A					
12	35	TNT126U035P0B	B					
15	30	TNT156U030P0B	B					
25	6	TNT256U006P0A	A					
25	15	TNT256U015P0B	B					
35	12	TNT356U012P0B	B					
50	3	TNT406U003P0A	A					
50	6	TNT506U006P0B	B					
80	3	TNT806U003P0B	B					

### TAH + 125° C

Cap., μf	WVDC +125° C	Mallory Catalog No.	Case Size	Net Each, Lots of				
				1-24	25-49	50-99	100-499	500-999
2	60	TAH205R060P0A	A					
3.5	50	TAH355R050P0A	A					
4	40	TAH405R040P0A	A					
5	30	TAH505R030P0A	A					
6	25	TAH605R025P0A	A					
7	23	TAH705R023P0A	A					
8	20	TAH805R020P0A	A					
10	15	TAH106R015P0A	A					
11	60	TAH116R060P0B	B					
12	13	TAH126R013P0A	A					
15	10	TAH156R010P0A	A					
15	50	TAH156R050P0B	B					
20	7	TAH206R007P0A	A					
20	40	TAH206R040P0B	B					
25	30	TAH256R030P0B	B					
30	4	TAH306R004P0A	A					
30	25	TAH306R025P0B	B					
30	60	TAH306R060P0C	C					
40	20	TAH406R020P0B	B					
40	50	TAH406R050P0C	C					
50	40	TAH506R040P0C	C					
50	30	TAH606R030P0C	C					
60	10	TAH706R010P0B	B					
70	7	TAH107R007P0B	B					
100	20	TAH107R020P0C	C					
140	4	TAH147R004P0B	B					

# MALLORY TANTALUM CAPACITORS

## TANTALUM FOIL CAPACITORS (MIL-C-3965)

Mallory tantalum foil capacitors are furnished in two temperature ranges (+85° C and +125° C) and in two types of construction (plain foil or etched foil). Both temperature ranges and both types of construction are available in either polarized or non-polarized ratings.

All Model Numbers and Prices listed are for bare metal cases. For Mylar\* insulating sleeve, add one number to MIL type (i.e., CL34+1=CL35, etc.) or change 12th digit in Mallory number from "0" to "1" (i.e., TAF505M006N1A). Add 10¢ to all prices shown.

FOR COMPLETE TECHNICAL DATA, ASK FOR BULLETIN 4-65

### PLAIN FOIL TANTALUMS +85° C

(Use CL35 instead of CL34, or change 12th digit to "1" in TAF number for Mylar sleeve)

CL34/35 AND TAF—POLARIZED			
Cap., $\mu$ F	WVDC +85° C	Mallory Catalog No.	Case Size
10	3	CL34BA100MP3	A
50	3	CL34BA500MP3	B
160	3	TAF167M003P0C	C
350	3	TAF357M003P0D	D
440	3	TAF447M003P0E	E
8	6	CL34BB080MP3	A
30	6	CL34BB300MP3	B
35	6	TAF356M006P0B	B
100	6	CL34BB101MP3	B
200	6	CL34BB201MP3	C
300	6	CL34BB301MP3	D
6	10	CL34BD060MP3	A
25	10	CL34BD250MP3	B
80	10	CL34BD800MP3	C
160	10	CL34BD161MP3	D
220	10	CL34BD221MP3	E
4.5	15	CL34BE4R5MP3	A
10	15	CL34BE100MP3	B
18	15	CL34BE180MP3	C
55	15	CL34BE550MP3	D
110	15	CL34BE111MP3	D
160	15	CL34BE161MP3	E
3	25	TAF305M025P0A	A
12	25	TAF126M025P0B	B
35	25	TAF356M025P0C	C
70	25	TAF706M025P0D	D
100	25	TAF107M025P0E	E
2.5	30	CL34BH2R5MP3	A
10	30	TAF106M030P0B	B
30	30	CL34BH300MP3	C
60	30	CL34BH600MP3	D
85	30	CL34BH850MP3	E
1.5	50	CL34BJ1R5MP3	A
6	50	CL34BJ060MP3	B
20	50	CL34BJ200MP3	C
40	50	CL34BJ400MP3	D
55	50	CL34BJ550MP3	E
1.2	60	TAF125M060P0A	A
5	60	TAF505M060P0B	B
17	60	TAF176M060P0C	C
34	60	TAF346M060P0D	D
48	60	TAF486M060P0E	E
4	75	CL34BL010MP3	A
14	75	CL34BL040MP3	B
28	75	CL34BL140MP3	C
40	75	CL34BL280MP3	D
40	75	CL34BL400MP3	E
.8	100	CL34BN0R8MP3	A
3	100	CL34BN030MP3	B
10	100	CL34BN100MP3	C
20	100	CL34BN200MP3	D
30	100	CL34BN300MP3	E
.5	150	CL34BQ0R5MP3	A
1	150	TAF105M150P0B	B
2	150	CL34BQ020MP3	C
4	150	CL34BQ040MP3	D
7	150	CL34BQ070MP3	E
8	150	CL34BQ080MP3	A
12	150	CL34BQ120MP3	B
14	150	CL34BQ140MP3	C
20	150	CL34BQ200MP3	D

### TAF—NON-POLARIZED

5	6	TAF505M006N0A	A
25	6	TAF256M006N0B	B
85	6	TAF856M006N0C	C
170	6	TAF177M006N0D	D
250	6	TAF257M006N0E	E
3	10	TAF305M010N0A	A
16	10	TAF166M010N0B	B
55	10	TAF556M010N0C	C
110	10	TAF117M010N0D	D
150	10	TAF157M010N0E	E
2.5	15	TAF255M015N0A	A
10	15	TAF106M015N0B	B
35	15	TAF356M015N0C	C
70	15	TAF706M015N0D	D
100	15	TAF107M015N0E	E
1.5	25	TAF155M025N0A	A
6	25	TAF605M025N0B	B
20	25	TAF206M025N0C	C
40	25	TAF406M025N0D	D
60	25	TAF606M025N0E	E
1.4	30	TAF145M030N0A	A
5.5	30	TAF555M030N0B	B
18	30	TAF186M030N0C	C
36	30	TAF366M030N0D	D
45	30	TAF456M030N0E	E
.8	50	TAF804M050N0A	A
3	50	TAF305M050N0B	B
10	50	TAF106M050N0C	C
20	50	TAF206M050N0D	D
30	50	TAF306M050N0E	E

### TAF (CONT'D)

Cap., $\mu$ F	+85° C WVDC	Mallory Catalog No.	Case Size
.6	60	TAF604M060N0A	A
2.5	60	TAF255M060N0B	B
8.5	60	TAF855M060N0C	C
17	60	TAF176M060N0D	D
24	60	TAF246M060N0E	E
.5	75	TAF504M075N0A	A
2	75	TAF205M075N0B	B
7	75	TAF705M075N0C	C
14	75	TAF146M075N0D	D
20	75	TAF206M075N0E	E
.4	100	TAF404M100N0A	A
1.5	100	TAF155M100N0B	B
5	100	TAF505M100N0C	C
10	100	TAF106M100N0D	D
15	100	TAF156M100N0E	E
.25	150	TAF254M150N0A	A
1	150	TAF105M150N0B	B
3.5	150	TAF355M150N0C	C
7	150	TAF705M150N0D	D
10	150	TAF106M150N0E	E

### INDUSTRIAL NET PRICES CL34 AND TAF PLAIN FOIL

Case	Net Each, Lots of					
	1-9	10-24	25-49	50-99	100-499	500-999
A	\$ 4.20	\$ 3.33	\$ 2.42	\$ 1.70	\$ 1.19	\$ 1.03
B	6.60	4.51	3.47	2.47	1.70	1.56
C	10.40	7.17	5.51	3.92	2.68	2.47
D	14.60	10.03	7.70	5.49	3.78	3.46
E	19.60	13.44	10.30	7.34	5.06	4.63

### PLAIN FOIL TANTALUMS +125° C (Use CL31 instead of CL30; or, CL33 instead of CL32 for Mylar sleeve)

CL30/31—POLARIZED			
Cap., $\mu$ F	+125° C WVDC	Mallory Catalog No.	Case Size
4.5	10	CL30CD4R5MP3	A
15	10	CL30CD180MP3	B
55	10	CL30CD550MP3	C
110	10	CL30CD111MP3	D
160	10	CL30CD161MP3	E
3	15	CL30CE030MP3	A
12	15	CL30CE120MP3	B
35	15	CL30CE350MP3	C
70	15	CL30CE700MP3	D
100	15	CL30CE101MP3	E
1.5	30	CL30CH0R5MP3	A
6	30	CL30CH060MP3	B
20	30	CL30CH200MP3	C
40	30	CL30CH400MP3	D
55	30	CL30CH550MP3	E
1	50	CL30CJ010MP3	A
4	50	CL30CJ040MP3	B
14	50	CL30CJ140MP3	C
28	50	CL30CJ280MP3	D
40	50	CL30CJ400MP3	E
.8	60	CL30CK0R8MP3	A
3	60	CL30CK030MP3	B
10	60	CL30CK100MP3	C
20	60	CL30CK200MP3	D
30	60	CL30CK300MP3	E
.25	100	CL30CN0R5MP3	A
1	100	CL30CN020MP3	B
7	100	CL30CN070MP3	C
14	100	CL30CN140MP3	D
20	100	CL30CN200MP3	E
.35	150	CL30CQ0R5MP3	A
1.5	150	CL30CQ1R5MP3	B
5	150	CL30CQ050MP3	C
10	150	CL30CQ100MP3	D
15	150	CL30CQ150MP3	E

### CL32/33—NON-POLARIZED

2.5	10	CL32CD2R5MN3	A
10	10	CL32CD100MN3	B
35	10	CL32CD350MN3	C
70	10	CL32CD700MN3	D
100	10	CL32CD101MN3	E
1.5	15	CL32CE1R5MN3	A
6	15	CL32CE060MN3	B
20	15	CL32CE200MN3	C
40	15	CL32CE400MN3	D
60	15	CL32CE600MN3	E
.8	30	CL32CH0R8MN3	A
3	30	CL32CH030MN3	B
10	30	CL32CH100MN3	C
20	30	CL32CH200MN3	D
30	30	CL32CH300MN3	E
.5	50	CL32CJ0R5MN3	A
2	50	CL32CJ020MN3	B
7	50	CL32CJ070MN3	C

### CL32/33 (CONT'D)

Cap., $\mu$ F	+125° C WVDC	Mallory Catalog No.	Case Size
14	50	CL32CJ140MN3	D
20	50	CL32CJ200MN3	E
.4	60	CL32CK0R4MN3	A
1.5	60	CL32CK1R5MN3	B
5	60	CL32CK050MN3	C
10	60	CL32CK100MN3	D
15	60	CL32CK150MN3	E
.25	100	CL32CNR25MN3	A
1	100	CL32CN010MN3	B
3.5	100	CL32CN3R5MN3	C
7	100	CL32CN070MN3	D
10	100	CL32CN100MN3	E
.15	150	CL32CQ1R5MN3	A
.75	150	CL32CQ2R5MN3	B
2.5	150	CL32CQ2R5MN3	C
5	150	CL32CQ050MN3	D
7.5	150	CL32CQ7R5MN3	E

### INDUSTRIAL NET PRICES CL30 AND CL32 PLAIN FOIL

Case	Net Each, Lots of					
	1-9	10-24	25-49	50-99	100-499	500-999
A	\$ 7.35	\$ 5.18	\$ 3.99	\$ 2.84	\$ 1.96	\$ 1.79
B	9.80	6.89	5.32	3.78	2.59	2.38
C	14.20	9.98	7.70	5.47	3.78	3.44
D	18.30	12.87	9.93	7.07	4.85	4.45
E	23.55	16.57	12.78	9.08	6.25	5.71

### ETCHED FOIL TANTALUMS +85° C (Use CL25 for Mylar sleeve)

CL24/25—POLARIZED			
Cap., $\mu$ F	+85° C WVDC	Mallory Catalog No.	Case Size
15	15	CL24BE150UP3	A
60	15	CL24BE600UP3	B
200	15	CL24BE201UP3	C
400	15	CL24BE401UP3	D
580	15	CL24BE581UP3	E
10	25	CL24BG100UP3	A
40	25	CL24BG400UP3	B
120	25	CL24BG121UP3	C
250	25	CL24BG251UP3	D
350	25	CL24BG351UP3	E
8	30	CL24BH080UP3	A
32	30	CL24BH320UP3	B
110	30	CL24BH111UP3	C
220	30	CL24BH221UP3	D
300	30	CL24BH301UP3	E
4.5	50	CL24BJ4R5UP3	A
18	50	CL24BJ180UP3	B
60	50	CL24BJ600UP3	C
100	50	CL24BJ101UP3	D
150	50	CL24BJ151UP3	E
3	75	CL24BL030UP3	A
12	75	CL24BL120UP3	B
30	75	CL24BL300UP3	C
70	75	CL24BL700UP3	D
100	75	CL24BL101UP3	E
2	100	CL24BN020UP3	A
8	100	CL24BN080UP3	B
25	100	CL24BN250UP3	C
50	100	CL24BN500UP3	D
70	100	CL24BN700UP3	E
1	150	CL24BQ010UP3	A
4	150	CL24BQ040UP3	B
13	150	CL24BQ130UP3	C
25	150	CL24BQ250UP3	D
36	150	CL24BQ360UP3	E

### INDUSTRIAL NET PRICES CL24 ETCHED FOIL

Case	Net Each, Lots of					
	1-9	10-24	25-49	50-99	100-499	500-999
A	\$ 4.20	\$ 3.33	\$ 2.42	\$ 1.71	\$ 1.19	\$ 1.03
B	7.55	4.94	3.80	2.70	1.87	1.72
C	12.60	8.65	6.65	4.73	3.27	2.98
D	20.55	14.11	10.83	7.70	5.31	4.86
E	27.35	18.76	14.44	10.26	7.10	6.47

\*DuPont trademark.

NON-POLARIZED ETCHED FOIL TYPES TBF(N) AVAILABLE ON SPECIAL ORDER

TANTALUM FOIL CONT'D NEXT PAGE

# MALLORY TANTALUM CAPACITORS

TANTALUM FOIL CAPACITORS (MIL-C-3965) (CONT'D)  
ETCHED FOIL TANTALUMS +125° C

**CL20/21—POLARIZED**

(Use CL21 for Mylar\* sleeve)

Cap., $\mu$ f	WVDC +125°C	Mallory Catalog No.*	Case Size
15	10	CL20CD150UP3	A
60	10	CL20CD600UP3	B
200	10	CL20CD201UP3	C
400	10	CL20CD401UP3	D
580	10	CL20CD581UP3	E
10	15	CL20CE100UP3	A
40	15	CL20CE400UP3	B
120	15	CL20CE121UP3	C
250	15	CL20CE251UP3	D
350	15	CL20CE351UP3	E
4.5	30	CL20CH4R5TP3	A
18	30	CL20CH180TP3	B
60	30	CL20CH600TP3	C
100	30	CL20CH101TP3	D
150	30	CL20CH151TP3	E
3	50	CL20CJ030TP3	A
12	50	CL20CJ120TP3	B
30	50	CL20CJ300TP3	C
70	50	CL20CJ700TP3	D
100	50	CL20CJ101TP3	E
2	60	CL20CK020TP3	A
8	60	CL20CK080TP3	B
25	60	CL20CK250TP3	C
50	60	CL20CK500TP3	D
70	60	CL20CK700TP3	E
1	100	CL20CN010SP3	A
4	100	CL20CN040SP3	B
13	100	CL20CN130SP3	C
25	100	CL20CN250SP3	D
36	100	CL20CN360SP3	E

**CL22/23—NON-POLARIZED**

(Use CL23 for Mylar sleeve)

Cap., $\mu$ f	WVDC +125°C	Mallory Catalog No.*	Case Size
10	10	CL22CD100UN3	A
40	10	CL22CD400UN3	B
120	10	CL22CD121UN3	C
250	10	CL22CD251UN3	D
350	10	CL22CD351UN3	E
5	15	CL22CE052UN3	A
20	15	CL22CE200UN3	B
70	15	CL22CE700UN3	C
140	15	CL22CE141UN3	D
200	15	CL22CE201UN3	E
2.5	30	CL22CH2R5TN3	A
10	30	CL22CH100TN3	B
30	30	CL22CH300TN3	C
60	30	CL22CH600TN3	D
80	30	CL22CH800TN3	E
1.5	50	CL22CJ1R5TN3	A
6	50	CL22CJ060TN3	B
15	50	CL22CJ150TN3	C
35	50	CL22CJ350TN3	D
50	50	CL22CJ500TN3	E
1	60	CL22CK010TN3	A
4	60	CL22CK040TN3	B
12	60	CL22CK120TN3	C
25	60	CL22CK250TN3	D
35	60	CL22CK350TN3	E
2	100	CL22CN020SN3	A
5	100	CL22CN050SN3	B
6	100	CL22CN060SN3	C
12	100	CL22CN120SN3	D
18	100	CL22CN180SN3	E

**INDUSTRIAL NET PRICES**

Add 10c for Mylar sleeve versions.

**CL20 AND CL22 ETCHED FOIL**

Case	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-500
A	\$ 7.35	\$ 5.18	\$ 3.99	\$ 2.84	\$1.96
B	10.50	7.36	5.70	4.05	2.79
C	16.15	11.40	8.79	6.26	4.29
D	24.55	17.29	13.30	9.45	6.55
E	31.75	22.37	17.24	12.24	8.46

**\*FOIL CASE SIZE**

Key	Size, In. (Dia. x L.)	
	Uninsulated	Insulated
A	$\frac{3}{16}$ x $1\frac{1}{16}$	$1\frac{3}{4}$ x $2\frac{3}{16}$
B	$\frac{3}{16}$ x $7\frac{7}{16}$	$1\frac{9}{16}$ x $1\frac{9}{16}$
C	$\frac{3}{16}$ x $1\frac{7}{16}$	$2\frac{5}{16}$ x $1\frac{1}{2}$
D	$\frac{3}{16}$ x $2\frac{1}{16}$	$2\frac{5}{16}$ x $2\frac{3}{16}$
E	$\frac{3}{16}$ x $2\frac{3}{16}$	$2\frac{5}{16}$ x $2\frac{1}{16}$

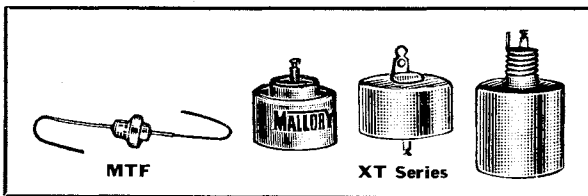
**TOLERANCES**

Tenth digit of MIL-C-3965 number (i.e., CL20CD150UP3) and 7th digit of Mallory number (i.e., TAP504M075N0A) indicates tolerance.

Key	Tolerance	Key	Tolerance
K	$\pm 10\%$	T	-15, +50%
M	$\pm 20\%$	U	-15, +75%
S	-15, +30%		

\*DuPont trademark.

**HERMETICALLY SEALED—HIGH TEMPERATURE**



**MTF -55° TO +150° C**

Axial leads, commercial equivalent to MIL-C-3965 Style CL44.

Cap. $\mu$ f	WVDC +85°C	Mallory Catalog No.	Cap. $\mu$ f	WVDC +85°C	Mallory Catalog No.
11	90	MTF116T090P0H	40	30	MTF406T030P0H
15	75	MTF156T075P0H	70	15	MTF706T015P0H
20	60	MTF206T060P0H	100	10	MTF107T010P0H
25	50	MTF256T050P0H	140	6	MTF147T006P0H
30	40	MTF306T040P0H			

Any Model listed above—Net Each, Lots of 1-24, \$6.76; 25-49, \$5.41; 50-99, \$4.56; 100-499, \$3.89.

**XTM -55° TO +175° C**

Cap. $\mu$ f	WVDC +85°C	Mallory Catalog No.*	Net Each, Lots of		
			1-24	25-49	50-99
4	340	XTM405T340P0A	\$16.20	\$15.12	\$14.04
5	255	XTM505T255P0A	12.96	12.10	11.23
8	170	XTM805T170P0A	9.90	9.24	8.56
16	90	XTM166T090P0A	6.56	6.12	5.68
25	60	XTM256T060P0A	6.56	6.12	5.68
40	35	XTM406T035P0A	6.56	6.12	5.68

\*Suffix letter A indicates MIL-C-3965/20A, style CL10. Also available in Style CL13; change suffix letter to D, add 5c to prices shown.

**XTH-XTL-XTV HIGH TEMP.—HIGH CAPACITY**

XTH, XTL, and XTV types are available in twelve case configurations. Only those cases which are normally stocked are shown here. All others are available on special order. Cases listed conform fully to MIL-C-3965B Styles CL10, 13, 14, 16, 17, and 18.

**XTH -55° TO +200° C**

Cap. $\mu$ f	WVDC +85°C	Mallory Catalog No.†	Net Each, Lots of		
			1-24	25-49	50-99
7	630	XTH705U630P0C	\$42.62	\$39.78	\$36.94
8	540	XTH805U540P0C	37.13	34.66	32.19
12	360	XTH126U360P0C	26.06	24.33	22.59
12	360	XTH126U360P0L	26.41	24.68	22.94
16	270	XTH166U270P0C	20.48	19.12	17.76
16	270	XTH166U270P0L	20.83	19.47	18.11
25	180	XTH256U180P0C	14.80	13.81	12.83
25	180	XTH256U180P0L	15.15	14.16	13.18
50	90	XTH506U090P0C	9.30	8.69	8.07
80	60	XTH806U060P0C	9.30	8.69	8.07
80	60	XTH806U060P0L	9.65	9.04	8.42
120	35	XTH127U035P0C	9.30	8.69	8.07
150	30	XTH157U030P0C	9.30	8.69	8.07
150	30	XTH157U030P0L	9.65	9.04	8.42
240	18	XTH247U018P0L	9.65	9.04	8.42

†C, MIL-C-3965/1D, CL14; L, MIL-C-3965/1D, CL16.

**XTL -55° TO +200° C**

Cap. $\mu$ f	WVDC +85°C	Mallory Catalog No.	Net Each, Lots of		
			1-24	25-49	50-99
3.5	630	XTL355U630P0C*	\$34.30	\$32.01	\$29.73
4	540	XTL405U540P0C*	29.89	27.90	25.91
5	450	XTL505U450P0C*	25.70	23.99	22.28
6	360	XTL605U360P0C*	21.16	19.75	18.34
6	360	XTL605U360P0L†	21.50	20.10	18.69
8	270	XTL805U270P0C*	16.70	15.59	14.48
12	180	XTL126U180P0C*	12.38	11.56	10.64
12	180	XTL126U180P0L†	12.73	11.91	11.09
25	90	XTL256U090P0C*	8.24	7.69	7.15
40	60	XTL406U060P0C*	8.24	7.69	7.15
40	60	XTL406U060P0L†	8.59	8.04	7.50
75	30	XTL756U030P0C*	8.24	7.69	7.15
75	30	XTL756U030P0L†	8.59	8.04	7.50
120	18	XTL127U018P0C*	8.24	7.69	7.15

\*Stock Items (MIL-C-3965/1D, Style CL14). †Stock Items (MIL-C-3965/1D, Style CL16).

**XTV -55° TO +200° C**

XTV listed by MIL-C-3965/19A Style CL17 ("C") and CL18 ("B") are stocked. Ten other case configurations available on special order.

Cap. $\mu$ f	WVDC +85°C	Mallory Catalog No.	Net Each, Lots of		
			1-24	25-49	50-99
25	450	XTV256T450P0B	\$79.55	\$74.25	\$68.95
40	270	XTV406T270P0B	49.55	46.25	42.95
60	180	XTV606T180P0B	35.00	32.67	30.34
120	90	XTV127T090P0B	19.55	18.25	16.95
190	40	XTV197T040P0B	13.55	12.65	11.75
200	60	XTV207T060P0B	19.55	18.25	16.95
220	75	XTV227T075P0B	30.05	28.05	26.05
290	40	XTV297T040P0B	19.55	18.25	16.95
350	60	XTV357T060P0B	30.05	28.05	26.05
450	75	XTV457T075P0B	43.55	40.65	37.75
500	40	XTV507T040P0B	30.05	28.05	26.05
700	60	XTV707T060P0B	43.55	40.65	37.75
750	60	XTV757T060P0B	43.55	40.65	37.75
1000	40	XTV108T040P0B	43.55	40.65	37.75
1300	30	XTV138T030P0B	43.55	40.65	37.75
25	450	XTV256T450P0C	79.55	74.25	68.95
40	270	XTV406T270P0C	49.55	46.25	42.95
60	180	XTV606T180P0C	35.00	32.67	30.34
120	90	XTV127T090P0C	19.55	18.25	16.95
200	60	XTV207T060P0C	19.55	18.25	16.95
220	75	XTV227T075P0C	30.05	28.05	26.05
290	40	XTV297T040P0C	19.55	18.25	16.95
350	60	XTV357T060P0C	30.05	28.05	26.05
450	75	XTV457T075P0C	43.55	40.65	37.75
500	40	XTV507T040P0C	30.05	28.05	26.05
650	30	XTV657T030P0C	30.05	28.05	26.05
700	60	XTV707T060P0C	43.55	40.65	37.75
750	60	XTV757T060P0C	43.55	40.65	37.75
1000	40	XTV108T040P0C	43.55	40.65	37.75
1300	30	XTV138T030P0C	43.55	40.65	37.75

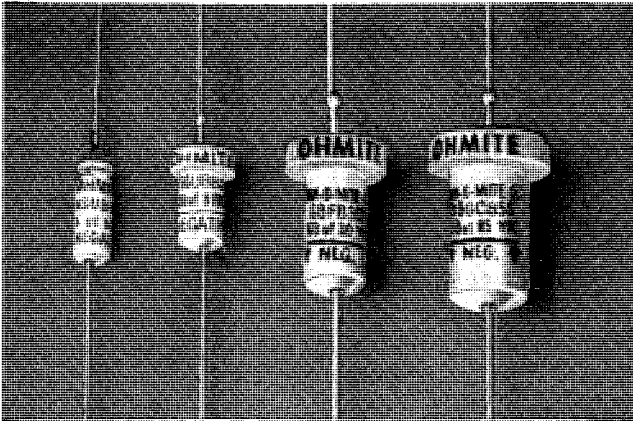


# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r.f. chokes



## TANTALUM SLUG CAPACITORS — TAN-O-MITE® SERIES TS



1 1/2" Leads Com'l Size SU, MIL Size T1  
1 1/4" Leads Com'l Size U, MIL Size T1  
1 1/8" Leads Com'l Size F, MIL Size T2  
1/2" Leads Com'l Size G, MIL Size T8

The "slug" type of tantalum capacitor utilizes a porous anode of sintered tantalum. Intended for polar applications, these capacitors offer the best characteristics of all the types described in this catalog. They exceed the vibration test of MIL-C-3965C, Grade 3.

Available from stock in two physical types—the "hat-shaped" type, 4 sizes (Y, U, F, G) and the "straight-cylindrical" type, 3 sizes (SU, SF, SG) which have the same range of capacitance and voltage as the equivalent hat-shape sizes. Hat-shape types are offered in two operating temperature ranges, -55°C to +85°C and -55°C to +125°C; the straight-cylindrical type is offered only in the

85°C range. Tolerances: See footnotes under price and stock tables. Units insulated with plastic sleeve are available at slight extra cost.

### DIMENSIONS — UNINSULATED

Com'l.	HAT SHAPE			STRAIGHT-CYL.			Leads
	MIL	Dia.	Lgth.	MIL	Dia.	Lgth.	
Y	—	1 3/64	1 1/64	—	—	—	1 1/2
U	T1	3/16	1 1/32	SU	T1	3/16	1 1/2
F	T2	1 1/32	1 1/16	SF	T2	3/32	2 1/4
G	T3	3/64	4/64	SG	T3	3/8	2 1/4

### COMMERCIAL SLUG CAPACITOR 1-24 QTY. NET PRICES

HAT-SHAPE AND STRAIGHT-CYLINDRICAL—UNINSULATED*					
Case Size		85°C Tolerance†		125°C‡	
Hat	Straight	M	K	M	K
U	SU	\$1.98	\$2.22	\$2.06	\$2.30
F	SF	3.02	3.38	3.16	3.52
G	SG	4.72	5.32	4.96	5.56
Y	—	1.78	2.00	—	—

\*For plastic insulating sleeve add 10c for case sizes U, F, G, Y; Add 5c for sizes SU, SF, SG.  
†Standard Tolerances—M = ±20%; K = ±10%. (T = -15+50%, S = -15+20%—available at same price as M tol.)  
‡Straight-cyl. not available 125°C temp. rating.

### MIL-C-3965C SLUG CAPACITORS 1-24 QTY. NET PRICES

HAT SHAPE (CL44) AND STRAIGHT-CYLINDRICAL (CL64) UNINSULATED*					
Case Size CL44*, 64*	85°C Tolerance†		125°C‡		
	M	K	M	K	
T1	\$1.98	\$2.22	\$2.06	\$2.30	
T2	3.02	3.38	3.16	3.52	
T3	4.72	5.32	4.96	5.56	

\*For plastic insulating sleeve (MIL STYLES CL45, CL65) add 10c each.  
†Standard Tolerances—M = ±20%; K = ±10%. (T = -15+50%, S = -15+20%—available at same price as M tol.)  
‡Straight-cyl. not available 125°C temp. rating.

### STOCK HAT-SHAPE & STRAIGHT-CYLINDRICAL SLUG CAPACITORS COMM'L CASES U, F, G, Y, SU, SF, SG—MIL STYLES CL44, CL45, CL64, CL65—CASES T1, T2, T3

Mfd.	D.C. Volts		Commercial		MIL-C-3965C		Mid.	D.C. Volts		Commercial		MIL-C-3965C	
	85°C	125°C	Case Size	Stock No. (Incomplete†)	Case Size	Type Designation (Incomplete*)		85°C	125°C	Case Size	Stock No. (Incomplete†)	Case Size	Type Designation (Incomplete*)
15	6		Y	15YB6			10	10	Y	10YB10			
30	6		U	30_UB6	T1	CL_BB300_P3	20	10	U	20_UB10	T1	CL_CD200_P3	
30	6	4	U	30UC4	T1	CL_CB300_P3§	20	10	7	U	20UC7	T1	CL_CD200_P3§
68‡	6		U	68_UB6	T1	CL_BB680_P3	47‡	10	U	47_UB10	T1	CL_BD470_P3	
68‡	6	4	U	68UC4	T1	CL_CB680_P3§	47‡	10	7	U	47UC7	T1	CL_CD470_P3§
140	6		F	140_FB6	T2	CL_BB141_P3	100	10	F	100_FB10	T2	CL_BD101_P3	
140	6	4	F	140FC4	T2	CL_CB141_P3§	100	10	7	F	100FC7	T2	CL_CD101_P3§
270‡	6		F	270_FB6	T2	CL_BB271_P3	180‡	10	F	180_FB10	T2	CL_BD181_P3	
270‡	6	4	F	270FC4	T2	CL_CB271_P3§	180‡	10	7	F	180FC7	T2	CL_CD181_P3§
330	6		G	330_GB6	T3	CL_BB331_P3	250	10	G	250_GB10	T3	CL_BD251_P3	
330	6	4	G	330GC4	T3	CL_CB331_P3§	250	10	7	G	250GC7	T3	CL_CD251_P3§
560‡	6		G	560_GB6	T3	CL_BB561_P3	390‡	10	G	390_GB10	T3	CL_BD391_P3	
560‡	6	4	G	560GC4	T3	CL_CB561_P3§	390‡	10	7	G	390GC7	T3	CL_CD391_P3§
12	8		Y	12YB8			6.2	15	Y	6R2YB15			
25	8		U	25_UB8	T1	CL_BC250_P3	15	15	U	15_UB15	T1	CL_BE150_P3	
25	8	5	U	25UC5	T1	CL_CC250_P3§	15	15	10	U	15UC10	T1	CL_CE150_P3§
56‡	8		U	56_UB8	T1	CL_BC560_P3	33‡	15	U	33_UB15	T1	CL_BE330_P3	
56‡	8	5	U	56UC5	T1	CL_CC560_P3§	33‡	15	10	U	33UC10	T1	CL_CE330_P3§
220‡	8		F	220_FB8	T2	CL_BC221_P3	70	15	F	70_FB15	T2	CL_BE700_P3	
220‡	8	5	F	220FC5	T2	CL_CC221_P3§	70	15	10	F	70FC10	T2	CL_CE700_P3§
430‡	8		G	430_GB8	T3	CL_BC431_P3	120‡	15	F	120_FB15	T2	CL_BE121_P3	
430‡	8	5	G	430GC5	T3	CL_CC431_P3§	120‡	15	10	F	120FC10	T2	CL_CE121_P3§

†Complete commercial stock no. as follows: If straight-cylindrical capacitor is desired, insert an "S" in the middle of the number where the underlined space is provided as in "30SUB6..." (Where a space is not provided, the capacitor is NOT available as a straight-cylindrical type.) If a hat-shape capacitor is desired, write this number without the space as in "30UB6..." Add K, or M at end of number to indicate tolerance. Add "A" after tolerance letter if insulating sleeve is desired.

\*Complete MIL type designation as follows: For hat-shape, uninsulated

type, insert "44" after "CL..."; for insulated type insert "45" instead. For straight-cylindrical shape, uninsulated, insert "64" after "CL..."; if insulated type insert "65" instead. Note: CL64, CL65 not available in 125°C ratings ("C" char.). Insert M, or K before "P" to indicate tolerance. Previous MIL tolerances S and T, can be supplied.

‡High capacitance units.  
§Not available as CL64, CL65 straight-cylindrical capacitors.  
Tolerances: T = -15+50%; S = -15+20%; M = ±20%; K = ±10%.



# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r.f. chokes



## TANTALUM SLUG AND WIRE CAPACITORS

### HAT-SHAPE CONTINUED

170	15		G	170_GB15	T3	CL_BE171_P3	39#	60		F	39_FB60	T2	CL_BK390_P3
170	15	10	G	170GC10	T3	CL_CE171_P3\$	39#	60	40	F	39FC40	T2	CL_CK390_P3\$
270#	15		G	270_GB15	T3	CL_BE271_P3	50	60		G	50_GB60	T3	CL_BK500_P3\$
270#	15	10	G	270GC10	T3	CL_CE271_P3\$	50	60	40	G	50GC40	T3	CL_CK500_P3\$
4.3	25		Y	4R3YB25			68#	60		G	68_GB60	T3	CL_BK680_P3\$
10	25		U	10_UB25	T1	CL_BG100_P3	68#	60	40	G	68GC40	T3	CL_CK680_P3\$
10	25	17	U	10UC17	T1	CL_CG100_P3\$	1.5	75		Y	1R5YB75		CL_BL3R5_P3
22#	25		U	22_UB25	T1	CL_BG220_P3	3.5	75		U	3R5_UB75	T1	CL_CL3R5_P3\$
22#	25	17	U	22UC17	T1	CL_CG220_P3\$	3.5	75	50	U	3R5UC50	T1	CL_CL6R8_P3
100#	25		F	100_FB25	T2	CL_BG101_P3	6.8#	75		U	6R8_UB75	T1	CL_CL330_P3\$
100#	25	17	F	100FC17	T2	CL_CG101_P3\$	6.8#	75	50	U	6R8UC50	T1	CL_CL400_P3
180#	25		G	180_GB25	T3	CL_BG181_P3	15	75		F	15_FB75	T2	CL_BK150_P3
180#	25	17	G	180GC17	T3	CL_CG181_P3\$	15	75	50	F	15FC50	T2	CL_BK150_P3\$
3.6	30		Y	3R6YB30			33#	75		F	33_FB75	T2	CL_BK330_P3
8	30		U	8_UB30	T1	CL_BH080_P3	33#	75	50	F	33FC50	T2	CL_CL330_P3\$
8	30	20	U	8UC20	T1	CL_CH080_P3\$	40	75		G	40_GB75	T3	CL_BK400_P3
15#	30		U	15_UB30	T1	CL_BH150_P3	40	75	50	G	40GC50	T3	CL_BK400_P3\$
15#	30	20	U	15UC20	T1	CL_CH150_P3\$	56#	75		G	56_GB75	T3	CL_BK560_P3
40	30		F	40_FB30	T2	CL_BH400_P3	56#	75	50	G	56GC50	T3	CL_BK560_P3\$
40	30	20	F	40FC20	T2	CL_CH400_P3\$	1.1	100		Y	1R1YB100		CL_BN2R5_P3
68#	30		F	68_FB30	T2	CL_BH680_P3	2.5	100		U	2R5_UB100	T1	CL_CN2R5_P3\$
68#	30	20	F	68FC20	T2	CL_CH680_P3\$	2.5	100	70	U	2R5UC70	T1	CL_CN4R7_P3
100	30		G	100_GB30	T3	CL_BH101_P3	4.7#	100		U	4R7_UB100	T1	CL_CN4R7_P3\$
100	30	20	G	100GC20	T3	CL_CH101_P3\$	4.7#	100	70	U	4R7UC70	T1	CL_CN4R7_P3\$
150#	30		G	150_GB30	T3	CL_BH151_P3	11	100		F	11_FB100	T2	CL_CN110_P3
150#	30	20	G	150GC20	T3	CL_CH151_P3\$	11	100	70	F	11FC70	T2	CL_CN110_P3\$
2.2	50		Y	2R2YB50			22#	100		F	22_FB100	T2	CL_CN220_P3
5	50		U	5_UB50	T1	CL_BJ050_P3	22#	100	70	F	22FC70	T2	CL_CN220_P3\$
5	50	33	U	5UC33	T1	CL_CJ050_P3\$	30	100		G	30_GB100	T3	CL_BK300_P3
10#	50		U	10_UB50	T1	CL_BJ100_P3	30	100	70	G	30GC70	T3	CL_BK300_P3\$
10#	50	33	U	10UC33	T1	CL_CJ100_P3\$	43#	100		G	43_GB100	T3	CL_BK430_P3
25	50		F	25_FB50	T2	CL_BJ250_P3	43#	100	70	G	43GC70	T3	CL_BK430_P3\$
25	50	33	F	25FC33	T2	CL_CJ250_P3\$	0.91	125		Y	R91YB125		CL_BP1R7_P3
47#	50		F	47_FB50	T2	CL_BJ470_P3	1.7	125		U	1R7_UB125	T1	CL_CP1R7_P3\$
47#	50	33	F	47FC33	T2	CL_CJ470_P3\$	1.7	125	85	U	1R7UC85	T1	CL_CP1R7_P3\$
60	50		G	60_GB50	T3	CL_BJ600_P3	3.6#	125		U	3R6_UB125	T1	CL_BP3R6_P3
60	50	33	G	60GC33	T3	CL_CJ600_P3\$	3.6#	125	85	U	3R6UC85	T1	CL_CP3R6_P3\$
82#	50		G	82_GB50	T3	CL_BJ820_P3	9	125		F	9_FB125	T2	CL_BP090_P3
82#	50	33	G	82GC33	T3	CL_CJ820_P3\$	9	125	85	F	9FC85	T2	CL_CP090_P3\$
1.8	60		Y	1R8YB60			22#	125		F	22_FB125		CL_BP250_P3
4	60		U	4_UB60	T1	CL_BK040_P3	22#	125	85	F	22FC85		CL_CP250_P3\$
4	60	40	U	4UC40	T1	CL_CK040_P3\$	25	125		G	25_GB125	T3	CL_BP250_P3
8.2#	60		U	8R2_UB60	T1	CL_BK8R2_P3	25	125	85	G	25GC85	T3	CL_CP250_P3\$
8.2#	60	40	U	8R2UC40	T1	CL_CK8R2_P3\$	39#	125		G	39_GB125		
20	60		F	20_FB60	T2	CL_BK200_P3	39#	125	85	G	39GC85		
20	60	40	F	20FC40	T2	CL_CK200_P3\$							

†Complete commercial stock no. as follows: If straight-cylindrical capacitor is desired, insert an "S" in the middle of the number where the underlined space is provided as in "30SUB6..." (Where a space is not provided, the capacitor is NOT available as a straight-cylindrical type.) If a hat-shape capacitor is desired, write this number without the space as in "30UB6..." Add K, or M at end of number to indicate tolerance. Add "A" after tolerance letter if insulating sleeve is desired.

\*Complete MIL type designation as follows: For hat-shape, uninsulated

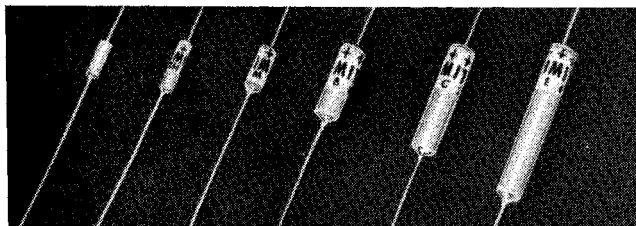
type, insert "44" after "CL..."; for insulated type insert "45" instead. For straight-cylindrical shape, uninsulated, insert "64" after "CL..."; for insulated type insert "65" instead. Note: CL64, CL65 not available in 125°C ratings ("C" char.). Insert M, or K before "P" to indicate tolerance. Previous MIL tolerances S and T, can be supplied.

‡High capacitance units.

§Not available as CL64, CL65 straight-cylindrical capacitors.

Tolerances: T = -15+50%; S = -15+20%; M = ±20%; K = ±10%.

### TANTALUM WIRE CAPACITORS — SERIES TW



Size	Dia.	Lgth.	Size	Dia.	Lgth.
TK	.060	.150	M	.100	.218
TJ	.060	.190	B	.134	.375
HK	.075	.150	C	.134	.562
HJ	.075	.190	E	.134	.812
S	.080	.234			

Smallest subminiature electrolytic capacitors available. The mode is specially processed tantalum wire sealed into a silver case. Axial leads are 2" long. Units are insulated with Mylar plastic sleeve. These polar type units are used in DC circuits where capacitance can exceed nominal circuit values (standard tolerance, -0+100%). Wide use in rearing aids and other subminiature apparatus. Operating

temperature range: -55°C to +85°C. Nine of thirteen available case sizes stocked.

Mfd.	DCWV	Stock No.*	Net 1-24	Mfd.	DCWV	Stock No.*	Net 1-24
0.1	20	R1TJ 0	\$1.65	4	3	4HJ3	\$1.65
	60	R1M80	1.65		4	4S4	1.65
0.2	20	R2TK20	1.65	20	4B20	1.78	
	150	R2E150	3.44	5	30	5C30	2.56
0.5	10	R5TK10	1.65		60	5E60	3.44
	16	R5TJ16	1.65	6	1.25	6HJ1R25	1.65
1.0	20	R5S20	1.65	8	1.25	8S1R25	1.65
	80	R5B80	2.19		4	8M4	1.65
2	4	1TK4	1.65	10	8	10B8	1.78
	8	1HK8	1.65		16	10C16	1.78
3	10	1HJ10	1.65	30	10E30	3.44	
	20	1M20	1.65	15	1.25	15M1R25	1.65
4	60	1B60	2.19		20	2	20B2
	80	1C80	2.56	25	6	25C6	1.78
5	1.25	2TK1R25	1.65	30	10	30E10	2.89
	4	2HJ4	1.65	50	2	50C2	1.78
6	8	2S8	1.65	60	4	60E4	2.89
	40	2B40	2.19	75	2	75E2	2.89

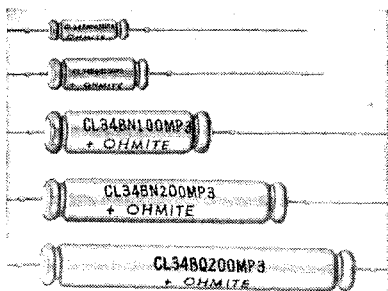
\*MIDDLE LETTERS IN STOCK NO. INDICATE PHYSICAL SIZE.

# OHMITE

resistors · rheostats · tap switches · relays  
variable transformers · tantalum capacitors  
semiconductor diodes · r.f. chokes



## TAN-O-MITE® SERIES TF TANTALUM FOIL CAPACITORS



Plain and etched tantalum foil units stocked in polar and non-polar types. The polar unit is intended for applications in which reversals of potential do not occur but will withstand reversals up to 3.75 VDC except where the voltage rating is less. Foil types offer closer tolerance, also leakage and power factor characteristics superior to wire types. The etched foil units afford higher maximum capacitances for a given case size and have somewhat lower leakage current than the plain foil units. Operating temperature range: -55°C to +85°C. Tolerances: Plain foil, ±20% (MIL code "M"). Etched foil, less than 50 volts, -15 +75% (MIL code U); 50-99 volts, -15 +50% (T); 100-150 volts, -15 +30% (S). 1½" axial leads. Designed to meet MIL-C-3965C, Styles CL24, CL25, CL26, CL27, CL34, CL35, CL36, CL37. 5 MIL case sizes. All units meet MIL vibration rating Grade 3. Units can be furnished with plastic sleeve.

### PRICES, DIMENSIONS

Com'l.	Case Size MIL Styles* CL34, CL24 CL36, CL26	Uninsulated*		Net 1-9 Qty.	
		Dia.	Lgth.	Plain Foil	Etched Foil
J	C1	3/16"	1 1/8"	\$ 4.18	\$ 4.18
K	C2	3/32"	7/8"	6.58	7.23
L	C3	3/8"	1 3/4"	10.43	12.58
N	C4	3/8"	2 1/8"	14.58	20.53
P	C5	3/8"	2 3/4"	19.58	27.33

\*For plastic insulating sleeve commercial "S" suffix or MIL Styles CL35, 37; CL25, 27—add 10c extra.

### STOCK — PLAIN FOIL UNINSULATED‡

DC Volts	Mfd.	Case	Commercial		MIL-C-3965C	
			Stock No.‡	Case	Type Designation‡	Case
-3	10	J	10J3*	C1	CL34BA100MP3	
	50	K	50K3*	C2	CL34BA500MP3	
	10	J	10J3R75N	C1	CL36BA100MN3‡	
	45	K	45K3R75N	C2	CL36BA450MN3‡	
	140	L	140L3R75N	C3	CL36BA141MN3‡	
-3.75	280	N	280N3R75N	C4	CL36BA281MN3‡	
	400	P	400P3R75N	C5	CL36BA401MN3‡	
	8	J	8J6	C1	CL34BD080MP3	
	30	K	30K6	C2	CL34BB300MP3	
	35	K	35K6	C2		
-6	100	L	100L6	C3	CL34BB101MP3	
	200	N	200N6	C4	CL34BB201MP3	
	300	P	300P6	C5	CL34BB301MP3	
	7	J	7J6N	C1	CL36BB070MN3	
	25	K	25K6N	C2	CL36BB250MN3	
-10	85	L	85L6N	C3	CL36BB850MN3	
	170	N	170N6N	C4	CL36BB171MN3	
	250	P	250P6N	C5	CL36BB251MN3	
	6	J	6J10	C1	CL34BD060MP3	
	25	K	25K10	C2	CL34BD250MP3	
-15	80	L	80L10	C3	CL34BD800MP3	
	160	N	160N10	C4	CL34BD161MP3	
	220	P	220P10	C5	CL34BD221MP3	
	4	J	4J10N	C1	CL36BD040MN3	
	16	K	16K10N	C2	CL36BD160MN3	
-20	55	L	55L10N	C3	CL36BD550MN3	
	110	N	110N10N	C4	CL36BD111MN3	
	150	P	150P10N	C5	CL36BD151MN3	
	1	J	1J75	C1	CL34BL010MP3	
	4	K	4K75	C2	CL34BL040MP3	
-25	14	L	14L75	C3	CL34BL140MP3	
	28	N	28N75	C4	CL34BL280MP3	
	40	P	40P75	C5	CL34BL400MP3	
	0.5	J	R5J75N	C1	CL36BL050MN3	
	2	K	2K75N	C2	CL36BL020MN3	
-30	7	L	7L75N	C3	CL36BL070MN3	
	14	N	14N75N	C4	CL36BL140MN3	
	20	P	20P75N	C5	CL36BL200MN3	
	0.8	J	R8J100N	C1	CL36BL080MN3	
	3	K	3K100	C2	CL34BN030MP3	
-50	10	L	10L100	C3	CL34BN100MP3	
	20	N	20N100	C4	CL34BN200MP3	
	30	P	30P100	C5	CL34BN300MP3	
	0.4	J	R4J100N	C1	CL36BN040MN3	
	1.5	K	1R5E100N	C2	CL36BN1R5MN3	
-60	5	L	5L100N	C3	CL36BN050MN3	
	10	N	10N100N	C4	CL36BN100MN3	
	15	P	15P100N	C5	CL36BN150MN3	
	0.5	J	R5J150	C1	CL34BQR5MP3	
	2	K	2K150	C2	CL34BQ020MP3	
-75	4	L	4L150	C3	CL34BQ040MP3	
	7	L	7L150	C3	CL34BQ070MP3	
	8	N	8N150	C4	CL34BQ080MP3	
	12	N	12N150	C4	CL34BQ120MP3	
	14	N	14N150	C4	CL34BQ140MP3	
-100	20	P	20P150	C5	CL34BQ200MP3	
	0.25	J	R25J150N	C1	CL36BQR25MN3	
	1	K	1K150N	C2	CL36BQ010MN3	
	3.5	L	3R5L150N	C3	CL36BQ3R5MN3	
	7	N	7N150N	C4	CL36BQ070MN3	
-150	10	P	10P150N	C5	CL36BQ100MN3	

Numbers in \* are non-polar units. Non-polar units may be used as polar units.

‡For insulating sleeve add "S" to commercial stock number; on MIL designations, change "CL24" to "CL25", "CL26" to "CL27", "CL34" to "CL35" or "CL36" to "CL37".

\*Regardless of polarity indicated, these low voltage units can be used as either polar or non-polar units.

‡MIL-C-3965C requires only 3 volt rating—Ohmite units are rated 3.75 v.

### STOCK — PLAIN FOIL (cont.) UNINSULATED‡

DC Volts	Mfd.	Case	Commercial		MIL-C-3965C	
			Stock No.‡	Case	Type Designation‡	Case
15	4.5	J	4R5J15	C1	CL34BE4R5MP3	
	10	K	10K15	C2	CL34BE100MP3	
	18	L	18K15	C2	CL34BE180MP3	
	55	L	55L15	C3	CL34BE550MP3	
	10	N	110N15	C4	CL34BE111MP3	
25	60	P	160P15	C5	CL34BE161MP3	
	2.5	J	2R5J15N	C1	CL36BE2R5MN3	
	10	L	10K15N	C2	CL36BE100MN3	
	35	L	35L15N	C3	CL36BE350MN3	
	70	N	70N15N	C4	CL36BE700MN3	
30	80	P	100P15N	C5	CL36BE101MN3	
	3	J	3J25			
	12	K	12K25			
	35	L	35L25			
	70	N	70N25			
50	80	P	100P25			
	1.5	J	1R5J25N	C1	CL36BG1R5MN3	
	6	K	6K25N	C2	CL36BG060MN3	
	20	L	20L25N	C3	CL36BG200MN3	
	40	N	40N25N	C4	CL36BG400MN3	
60	60	P	80P25N	C5	CL36BG800MN3	
	2.5	J	2R5J30	C1	CL34BH2R5MP3	
	10	L	10K30	C2	CL34BH100MP3	
	30	L	30L30	C3	CL34BH300MP3	
	60	N	60N30	C4	CL34BH600MP3	
75	85	P	85P30	C5	CL34BH850MP3	
	1.4	J	1R4J30N	C1	CL36BH1R4MN3	
	5.5	K	5R5K30N	C2	CL36BH5R5MN3	
	18	L	18L30N	C3	CL36BH180MN3	
	36	N	36N30N	C4	CL36BH360MN3	
90	45	P	45P30N	C5	CL36BH450MN3	
	1.5	J	1R5J50	C1	CL34BJ1R5MP3	
	6	K	6K50	C2	CL34BJ060MP3	
	20	L	20L50	C3	CL34BJ200MP3	
	40	N	40N50	C4	CL34BJ400MP3	
100	55	P	55P50	C5	CL34BJ550MP3	
	0.8	J	R8J50N	C1	CL36BJ0R8MN3	
	3	K	3K50N	C2	CL36BJ030MN3	
	10	L	10L50N	C3	CL36BJ100MN3	
	20	N	20N50N	C4	CL36BJ200MN3	
125	30	P	30P50N	C5	CL36BJ300MN3	
	4	J	4J60			
	15	K	15K60			
	50	L	50L60			
	88	N	88N60			
150	125	P	125P60			
	2	J	2J60N			
	7.5	K	7R5K60N			
	25	L	25L60N			
	50	N	50N60N			
175	67	P	67P60N			
	1	J	1J75	C1	CL34BL010MP3	
	4	K	4K75	C2	CL34BL040MP3	
	14	L	14L75	C3	CL34BL140MP3	
	28	N	28N75	C4	CL34BL280MP3	
200	40	P	40P75	C5	CL34BL400MP3	
	0.5	J	R5J75N	C1	CL36BL050MN3	
	2	K	2K75N	C2	CL36BL020MN3	
	7	L	7L75N	C3	CL36BL070MN3	
	14	N	14N75N	C4	CL36BL140MN3	
250	20	P	20P75N	C5	CL36BL200MN3	
	0.8	J	R8J100	C1	CL34BN0R8MP3	
	3	K	3K100	C2	CL34BN030MP3	
	10	L	10L100	C3	CL34BN100MP3	
	20	N	20N100	C4	CL34BN200MP3	
300	30	P	30P100	C5	CL34BN300MP3	
	0.4	J	R4J100N	C1	CL36BN0R4MN3	
	1.5	K	1R5E100N	C2	CL36BN1R5MN3	
	5	L	5L100N	C3	CL36BN050MN3	
	10	N	10N100N	C4	CL36BN100MN3	
350	15	P	15P100N	C5	CL36BN150MN3	
	0.5	J	R5J150	C1	CL34BQR5MP3	
	2	K	2K150	C2	CL34BQ020MP3	
	4	L	4L150	C3	CL34BQ040MP3	
	7	L	7L150	C3	CL34BQ070MP3	
400	8	N	8N150	C4	CL34BQ080MP3	
	12	N	12N150	C4	CL34BQ120MP3	
	14	N	14N150	C4	CL34BQ140MP3	
	20	P	20P150	C5	CL34BQ200MP3	
	0.25	J	R25J150N	C1	CL36BQR25MN3	
450	1	K	1K150N	C2	CL36BQ010MN3	
	3.5	L	3R5L150N	C3	CL36BQ3R5MN3	
	7	N	7N150N	C4	CL36BQ070MN3	
	10	P	10P150N	C5	CL36BQ100MN3	
	15	P	15P150N	C5	CL36BQ150MN3	

### STOCK — ETCHED FOIL UNINSULATED‡

DC Volts	Mfd.	Case	Commercial		MIL-C-3965C	
			Stock No.‡	Case	Type Designation‡	Case
15	15	J	15JE15	C1	CL24BE150UP3	
	60	K	60KE15	C2	CL24BE600UP3	
	200	L	200LE15	C3	CL24BE201UP3	
	400	N	400NE15	C4	CL24BE401UP3	
	580	P	580PE15	C5	CL24BE581UP3	
25	10	J	10JE15N	C1	CL26BE100UN3	
	40	K	40KE15N	C2	CL26BE400UN3	
	120	L	120LE15N	C3	CL26BE121UN3	
	250	N	250NE15N	C4	CL26BE251UN3	
	350	P	350PE15N	C5	CL26BE351UN3	
30	10	J	10JE25	C1	CL24BG100UP3	
	40	K	40KE25	C2	CL24BG400UP3	
	120	L	120LE25	C3	CL24BG121UP3	
	250	N	250NE25	C4	CL24BG251UP3	
	350	P	350PE25	C5	CL24BG351UP3	
50	5	J	5JE25N	C1	CL26BG050UN3	
	20	K	20KE25N	C2	CL26BG200UN3	
	70	L	70LE25N	C3	CL26BG700UN3	
	140	N	140NE25N	C4	CL26BG141UN3	
	200	P	200PE25N	C5	CL26BG201UN3	
60	8	J	8JE30	C1	CL24BH080UP3</	



# PLANET SALES CORPORATION

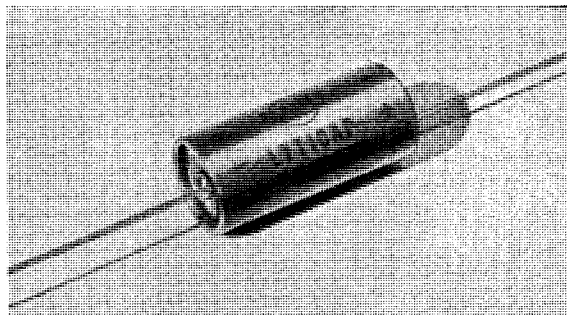
BLOOMFIELD, NEW JERSEY

## Universal Replacement Type Capacitors

### "LYTICAP"

#### Single Section Electrolytics — Type "L"

Hermetically sealed in aluminum tubes, covered with red Kraftboard insulating jackets — tinned brass leads, guaranteed for one year.

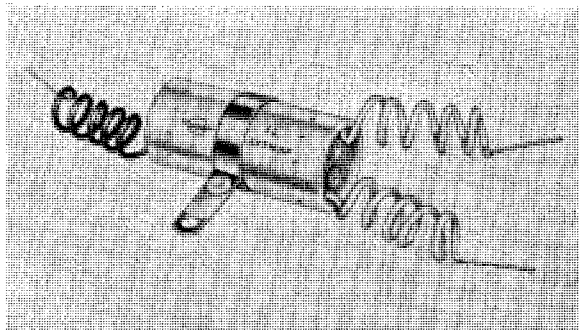


CAT. NO.	MFD.	SIZE*	LIST PRICE
<b>500 WVDC</b>			
L-5-500	5	3/4 x 1 5/8	\$1.25
L-10-500	10	7/8 x 2 1/8	1.35
L-20-500	20	1 x 2 3/8	1.60
L-30-500	30	1 x 2 1/2	1.75
<b>450 WVDC</b>			
L-1-450	1	5/8 x 1 1/8	1.10
L-2-450	2	5/8 x 1 1/8	1.10
L-4-450	4	5/8 x 1 5/8	1.15
L-8-450	8	5/8 x 1 5/8	1.25
L-10-450	10	3/4 x 1 5/8	1.30
L-12-450	12	7/8 x 1 5/8	1.35
L-16-450	16	3/4 x 2 1/8	1.40
L-20-450	20	3/4 x 2 1/8	1.55
L-30-450	30	7/8 x 2 1/8	1.70
L-40-450	40	7/8 x 2 1/8	1.80
L-50-450	50	1 1/4 x 2 1/8	2.10
L-60-450	60	1 1/4 x 2 1/8	2.40
L-80-450	80	1 x 3	2.80
L-100-450	100	1 x 3	3.20
<b>350 WVDC</b>			
L-8-350	8	5/8 x 1 5/8	1.20
L-16-350	16	7/8 x 1 5/8	1.40
L-20-350	20	7/8 x 1 5/8	1.45
L-30-350	30	7/8 x 2 1/8	1.65
L-40-350	40	1 x 2 1/8	1.75
<b>250 WVDC</b>			
L-5-250	5	5/8 x 1 5/8	1.00
L-10-250	10	5/8 x 1 5/8	1.20
L-20-250	20	3/4 x 1 5/8	1.35
L-24-250	24	3/4 x 1 5/8	1.35
L-30-250	30	3/4 x 1 5/8	1.45
L-40-250	40	7/8 x 1 3/4	1.55
<b>200 WVDC</b>			
L-150-200	150	1 x 2 1/8	2.55
L-200-200	200	1 x 2 1/8	2.90
<b>150 WVDC</b>			
L-5-150	5	1/2 x 1 1/8	\$1.00
L-8-150	8	1/2 x 1 5/8	1.05
L-10-150	10	1/2 x 1 5/8	1.05
L-16-150	16	1/2 x 1 5/8	1.15
L-20-150	20	1/2 x 1 5/8	1.20
L-30-150	30	3/4 x 1 5/8	1.30
L-40-150	40	3/4 x 1 5/8	1.35

CAT. NO.	MFD.	SIZE*	LIST PRICE
<b>150 WVDC (Cont'd)</b>			
L-50-150	50	3/4 x 1 5/8	1.40
L-60-150	60	3/4 x 1 5/8	1.50
L-80-150	80	7/8 x 1 5/8	1.60
L-100-150	100	7/8 x 2 3/8	1.75
L-150-150	150	1 x 2 1/8	1.90
L-200-150	200	1 x 2 1/8	2.20
<b>50 WVDC</b>			
L-1-50	1	1/2 x 1 1/8	.90
L-2-50	2	1/2 x 1 1/8	.90
L-3-50	3	1/2 x 1 1/8	.90
L-5-50	5	1/2 x 1 1/8	1.00
L-10-50	10	1/2 x 1 1/8	1.00
L-25-50	25	1/2 x 1 1/8	1.05
L-50-50	50	5/8 x 1 5/8	1.20
L-100-50	100	5/8 x 1 5/8	1.40
L-150-50	150	7/8 x 1 5/8	1.55
L-250-50	250	1 x 2 1/8	1.75
L-500-50	500	1 x 3	2.75
<b>25 WVDC</b>			
L-10-25	10	1/2 x 1 1/8	1.00
L-25-25	25	1/2 x 1 1/8	1.00
L-50-25	50	5/8 x 1 5/8	1.10
L-100-25	100	5/8 x 1 5/8	1.35
L-250-25	250	7/8 x 2 1/8	1.70
L-500-25	500	1 x 2 3/8	2.30
<b>15 WVDC</b>			
L-1000-15	1000	1 x 3	2.30
<b>12 WVDC</b>			
L-100-12	100	5/8 x 1 1/8	1.20
L-250-12	250	3/4 x 2 1/8	1.45
L-500-12	500	7/8 x 2 3/8	1.70
<b>6 WVDC</b>			
L-500-6	500	3/4 x 1 5/8	1.55
L-1000-6	1000	7/8 x 2 1/8	1.90
L-1500-6	1500	7/8 x 2 3/8	2.10
L-2000-6	2000	1 x 2 3/8	2.30
<b>3 WVDC</b>			
L-500-3	500	5/8 x 1 5/8	1.55
L-1000-3	1000	7/8 x 2 1/8	1.80
L-1500-3	1500	7/8 x 2 1/8	2.10
L-2000-3	2000	1 x 2 3/8	2.30

#### Dual Section Electrolytics — Type "IL"

Hermetically sealed in aluminum tubes with completely flexible leads. U/L Approved, plastic coated leads are rivetted directly to the condenser end disc, eliminating the use of rigid terminal risers, allowing capacitor to fit into smaller space and eliminating lead breakage. IL capacitors have wrap around mounting strap and are common negative, guaranteed for one year.



CAT. NO.	MFD.	SIZE*	LIST PRICE
<b>450 WVDC</b>			
IL-2x8-450	8 + 8	7/8 x 2 1/8	\$1.70
IL-2x20-450	20 + 20	1 x 2 1/8	2.50
IL-2x30-450	30 + 30	1 1/4 x 2 1/8	3.00
IL-2x40-450	40 + 40	1 3/8 x 2 1/8	3.40
IL-2x50-450	50 + 50	1 3/8 x 2 1/8	3.80

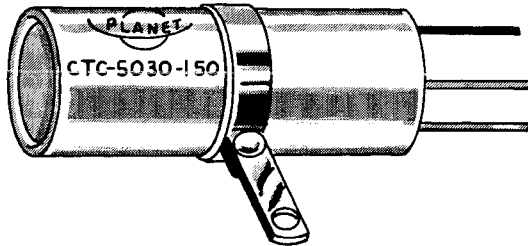
\* Dimensions are for metal tubes. Add 1/16" to diameter and 1/8" to length for over-all dimensions over cardboard insulating tube.

CAT. NO.	MFD.	SIZE*	LIST PRICE
<b>150 WVDC</b>			
IL-2x20-150	20 + 20	3/4 x 1 5/8	1.65
IL-2x30-150	30 + 30	7/8 x 1 5/8	1.80
IL-4020-150	40 + 20	7/8 x 1 5/8	1.75
IL-2x40-150	40 + 40	7/8 x 2 1/8	1.85
IL-5030-150	50 + 30	7/8 x 2 1/8	1.95
IL-2x50-150	50 + 50	1 x 2 1/8	2.10
IL-8040-150	80 + 40	1 x 2 3/8	2.25
IL-2x120-150-55	120 + 120	1 x 4 1/4	5.20

All Prices Subject to Change Without Notice.

# PLANET SALES CORPORATION

BLOOMFIELD, NEW JERSEY



## Universal Replacement Type Capacitors

### Cardboard Tube Electrolytics — Type "CT"

Constructed in strong red cardboard tubes, wax impregnated — long insulated stranded leads of U/L approved wire — high temperature wax end-fill — wrap around mounting strap. Guaranteed for one year.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
<b>DUAL UNITS — COMMON NEGATIVE</b>				
CT-2x20-150	20+20	150	3/4 x 2 1/4	\$1.65
CT-2x30-150	30+30	150	1 1/8 x 2 1/4	1.80
CT-4020-150	40+20	150	1 3/8 x 2 1/4	1.75
CT-2x40-150	40+40	150	7/8 x 2 1/4	1.85
CT-5030-150	50+30	150	7/8 x 2 1/4	1.95
CT-2x50-150	50+50	150	1 x 2 1/4	2.10
CT-8040-150	80+40	150	1 x 2 3/4	2.25
CTC-100+50-150	100+50	150	1 x 3 3/8	2.50
CT-2x100-150	100+100	150	1 3/8 x 3 3/8	3.20

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
<b>TRIPLE UNITS — COMMON NEGATIVE</b>				
CT-3x20-150	20+20+20	150	1 x 2 1/4	\$2.20
CT-30250-150	30+25+30	150	1 x 2 1/4	2.25
CT-3x30-150	30+30+30	150	1 x 2 1/4	2.35
CT-402020-150	40+20+20	150	1 x 2 1/4	2.25
CT-403020-150	40+30+20	150	1 x 2 1/4	2.35
CT-404020-150	40+40+20	150	1 x 2 1/4	2.40
CT-3x40-150	40+40+40	150	1 x 2 3/4	2.45
CT-503020-150	50+30+20	150	1 x 2 1/4	2.45
CT-804020-150	80+40+20	150	1 x 3	2.75
CT-302	30+20/20	150/25	1 x 2 1/4	2.10
CT-303	40+30/20	150/25	1 x 2 1/4	2.20
CT-304	50+50/20	150/25	1 x 2 3/4	2.50
CT-305	50+30/20	150/25	1 x 2 1/4	2.35
CTC-306	100+50/30	150/25	1 1/8 x 3 1/2	2.85
CT-307	200+100/30	150/25	1 1/4 x 3 1/4	3.75

## ROCKETTE 600 VOLT

\*Mylar-Kraft Paper capacitors, encased in plastic tubes with epoxy resin end-fill... excellent moisture resistant characteristics... high insulation resistance... small in size... 85°C operation... used by top name original equipment manufacturers.

Cat. No.	Mfd.	Size	List Price
R-001-6	.001	5/16 x 1 1/8	\$.25
R-0015-6	.0015	5/16 x 1 3/8	.25
R-002-6	.002	5/16 x 1 1/8	.25
R-0022	.0022	5/16 x 1 1/8	.25
R-0033	.0033	5/16 x 1 1/8	.25
R-004-6	.004	5/16 x 1 1/8	.25
R-0047-6	.0047	5/16 x 1 1/8	.25
R-005-6	.005	5/16 x 1 1/8	.25
R-006-6	.006	5/16 x 1 1/8	.25
R-0068-6	.0068	5/16 x 1 1/8	.25
R-01-6	.01	5/16 x 1 1/8	.30
R-015-6	.015	5/16 x 1 1/8	.30
R-02-6	.02	1 1/32 x 1 1/8	.30
R-022-6	.022	1 1/32 x 1 1/8	.30
R-03-6	.03	1 1/32 x 1 1/8	.35
R-033-6	.033	1 1/32 x 1 1/8	.35
R-04-6	.04	1 1/32 x 1 1/8	.35
R-047-6	.047	1 1/32 x 1 1/8	.40
R-05-6	.05	1 1/32 x 1 1/8	.40
R-068-6	.068	1 1/32 x 1 1/8	.45
R-1-6	.1	1/2 x 1 1/8	.45
R-15-6	.15	1/2 x 1 1/8	.50
R-2-6	.2	5/8 x 1 1/8	.55
R-22-6	.22	5/8 x 1 1/8	.55
R-25-6	.25	5/8 x 1 1/8	.55
R-33-6	.33	5/8 x 1 1/8	.65
R-47-6	.47	3/4 x 1 1/8	.80
R-5-6	.5	3/4 x 1 1/8	.80
R-68-6	.68	3/4 x 1 1/8	1.25
R-1.0-6	1.0	1 x 2 1/8	1.75

\* Dupont Polyester Film

## NON-POLARIZED ELECTROLYTICS

for Cross-over Networks — insulated leads — center mounting straps. Cardboard tube-wax end-filled.

Cat. No.	Mfd.	VAC	Size	List Price
CT-2-10NP	2	10	5/8 x 2	\$1.50
CT-4-10NP	4	10	5/8 x 2	1.50
CT-2-25NP	2	25	5/8 x 2	1.50
CT-5-25NP	5	25	5/8 x 2	1.65
CT-90-25NP	90	25	7/8 x 2 1/4	2.10
CT-25-50NP	25	50	1 x 2 1/2	1.90

## TV ROTOR CAPACITORS

Three most popular TV Antenna Rotor capacitors, cardboard tubes, wax end-filled, insulated leads out one end.

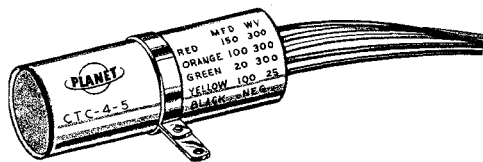
Cat. No.	Mfd.	VAC	Size	List Price
PX-4098A	66.5-92	50	7/8 x 2 7/8	\$1.25
PX-100	100-120	50	1 x 2 1/4	2.00
PX-210	210-290	50	1 x 3 3/8	2.15

All Prices Subject to Change Without Notice



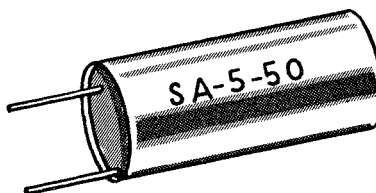
# PLANET SALES CORPORATION

BLOOMFIELD, NEW JERSEY



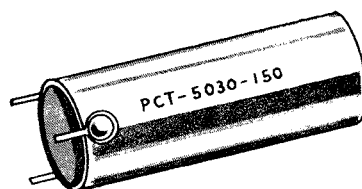
**Type "CTC"** . . . cardboard tube electrolytics especially designed for exact replacement in television sets . . . one end closed . . . long insulated leads out other end . . . sealed with high melting point wax . . . guaranteed for one year . . . individually packaged.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
CTC-1-5	300	150	1 $\frac{3}{8}$ x 3 $\frac{7}{8}$	\$2.55
CTC-1-10	150	200	1 $\frac{1}{2}$ x 3 $\frac{3}{4}$	3.95
CTC-1-15	200	200	1 $\frac{3}{8}$ x 3 $\frac{3}{8}$	2.90
CTC-1-20	140	300	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	3.15
CTC-1-25	200	300	1 $\frac{1}{2}$ x 4	3.95
CTC-2-1	10/100	100/3	$\frac{3}{4}$ x 1 $\frac{3}{4}$	1.90
CTC-2-5	200+5	150	1 x 3 $\frac{7}{8}$	2.65
CTC-2-6	200+5	200	1 $\frac{3}{8}$ x 3 $\frac{3}{8}$	3.55
CTC-2-15	250+50	150	1 $\frac{3}{8}$ x 3	3.25
CTC-2-20	80+120	200	1 $\frac{3}{8}$ x 3 $\frac{3}{8}$	3.85
CTC-2-24	200+100	300/50	1 $\frac{1}{2}$ x 4 $\frac{1}{2}$	4.30
CTC-2-25	150+100	300	1 $\frac{1}{2}$ x 5	5.35
CTC-2-30	140+5	350	1 $\frac{1}{4}$ x 3 $\frac{7}{8}$	4.15
CTC-3-1	30/1000+1000	100/15	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	3.60
CTC-3-1.5	60+40/250	150/15	1 x 2 $\frac{7}{8}$	3.25
CTC-3-2	60+60+60	300	1 $\frac{3}{8}$ x 3 $\frac{1}{2}$	4.70
CTC-3-3	250+120/50	150/25	1 $\frac{3}{8}$ x 3 $\frac{7}{8}$	4.40
CTC-3-4	250+200+10	150	1 $\frac{3}{8}$ x 3 $\frac{5}{8}$	4.60
CTC-3-5	5/80+40	450/400	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	4.55
CTC-3-7	50+30/250	150/10	1 x 2 $\frac{3}{4}$	2.75
CTC-3-22	60+60+4	350	1 $\frac{3}{8}$ x 3 $\frac{3}{8}$	3.85
CTC-4-1	40+20+20/100	150/25	1 $\frac{1}{8}$ x 3	3.05
CTC-4-5	150+100+20/100	300/25	1 $\frac{5}{8}$ x 5 $\frac{1}{4}$	7.65
CTC-4-10	120+40+40/10	300/250	1 $\frac{3}{8}$ x 4 $\frac{5}{8}$	6.20
CTC-4-11	80+40/40/10	300/250/300	1 $\frac{3}{8}$ x 3 $\frac{1}{4}$	5.15
CTC-4-15	140/5/200+30	350/300/200	1 $\frac{5}{8}$ x 4 $\frac{3}{8}$	7.65
CTC-4-20	80+60/40/20	350/300/150	1 $\frac{3}{8}$ x 4 $\frac{1}{2}$	5.90
CTC-4-21	140/5/200/100	350/300/200/150	1 $\frac{5}{8}$ x 4 $\frac{3}{8}$	8.20
CTC-4-23	40/20/20/100	350/300/250/50	1 $\frac{3}{8}$ x 2 $\frac{7}{8}$	4.50
CTC-4-24	80/40/100/10	400/300/50/400	1 $\frac{3}{8}$ x 4	5.45
CTC-4-25	10/80/40/100	450/300/250/50	1 $\frac{3}{8}$ x 4 $\frac{1}{8}$	4.80
CTC-4-26	10/80+40/100	450/400/50	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	5.25
CTC-4-30	20/120/40/100	450/300/250/50	1 $\frac{1}{2}$ x 4 $\frac{3}{8}$	6.15
CTC-4-35	10/80/40+40	450/300/250	1 $\frac{3}{8}$ x 4 $\frac{3}{8}$	4.95
CTC-4-36	10/80/40+40	450/300/350	1 $\frac{1}{2}$ x 4 $\frac{3}{8}$	5.25
CTC-4-40	40+40+20+20	450	1 $\frac{1}{2}$ x 4 $\frac{3}{8}$	5.45
CTC-5-5	40+20+20+20/50	300/75	1 $\frac{3}{8}$ x 3	5.00



**Type "SA"** . . . small single section electrolytics for printed circuit boards . . . hermetically sealed in aluminum tubes covered with red kraftboard insulating jackets . . . extra heavy tinned terminals anchored for proper spacing by a high melting point wax . . . for 85°C operation . . . individually packaged. Recommended for TV, radio and industrial applications . . . guaranteed for one year.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
<b>SINGLES</b>				
SA-8-3	8	3	$\frac{1}{8}$ x 1 $\frac{1}{8}$	\$1.05
SA-50-6	50	6	1 $\frac{1}{16}$ x 1 $\frac{3}{4}$	1.05
SA-100-6	100	6	$\frac{3}{16}$ x 1 $\frac{1}{8}$	1.30
SA-5-10	5	10	$\frac{1}{8}$ x 1 $\frac{1}{8}$	1.05
SA-25-10	25	10	$\frac{3}{16}$ x 1 $\frac{1}{8}$	1.10
SA-10-25	10	25	$\frac{3}{16}$ x 1 $\frac{1}{8}$	1.10
SA-50-25	50	25	1 $\frac{1}{16}$ x 2 $\frac{1}{8}$	1.20
SA-100-25	100	25	2 $\frac{3}{32}$ x 2	1.45
SA-1-50	1	50	$\frac{1}{16}$ x 1 $\frac{1}{8}$	1.00
SA-4-50	4	50	$\frac{1}{16}$ x 1 $\frac{1}{8}$	1.10
SA-10-50	10	50	$\frac{3}{16}$ x 1 $\frac{1}{8}$	1.10
SA-25-50	25	50	1 $\frac{9}{32}$ x 2	1.15
SA-50-50	50	50	1 $\frac{1}{16}$ x 2 $\frac{1}{8}$	1.30
SA-100-50	100	50	2 $\frac{3}{32}$ x 2	1.50



**Type "PCT"** . . . constructed in strong red cardboard tubes, wax impregnated, one end closed, printed circuit board terminals.

**Type "PCTL"** . . . has insulated lead out top providing for low voltage section.

For 65°C operation . . . recommended for table and clock radios . . . individually packaged . . . guaranteed for one year.

CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
<b>DUALS</b>				
PCT-2-5	50+30	150	1 x 2 $\frac{1}{4}$	1.95
PCT-2-10	50+50	150	1 x 2 $\frac{1}{4}$	2.10
PCT-2-15	75+30	150	1 x 3	2.20
PCT-2-17	80+60	150	1 x 3	2.40
PCT-2-20	100+50	150	1 x 3 $\frac{5}{8}$	2.50
<b>TRIPLES</b>				
PCTL-3-5	40+20/5	150/25	1 x 2 $\frac{3}{4}$	2.20
PCTL-3-10	60+20/5	150/25	1 x 3	2.40

All Prices Subject to Change Without Notice

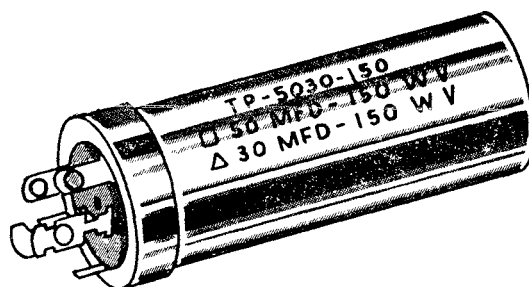
# PLANET SALES CORPORATION

BLOOMFIELD, NEW JERSEY



**Type "TP"** . . . twist-prong can electrolytics with mounting ring and solder lug terminals. The mounting ring is grounded by two spot welded connections to the negative tab . . . for 85°C operation . . . complete with metal grounding plate . . . individually packaged. Guaranteed for one year.

**Type "PTP"** . . . same as Type "TP" except made with printed circuit board terminals.



CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
<b>SINGLES</b>				
TP-1-5	2000	12	1 x 3½	\$3.25
PTP-1-10	1000	15	1 x 2½	2.55
PTP-1-15	50	150	1 x 2½	1.65
TP-1-20	80	150	1 x 2	1.85
PTP-1-25	100	150	1 x 2½	2.00
TP-1-30	120	150	1 x 3	2.15
TP-1-31	120	150	1¾ x 2½	2.15
PTP-1-35	140	150	1 x 3½	2.15
TP-1-40	150	150	1¾ x 2½	2.15
TP-1-45	150	150	1 x 3	2.15
TP-1-50	200	150	1¾ x 2½	2.45
TP-1-55	300	150	1¾ x 4	2.80
PTP-1-60	150	165	1 x 3½	2.35
PTP-1-65	375	165	1¾ x 3½	4.25
PTP-1-70	80	175	1 x 2½	1.95
TP-1-72	160	250	1¾ x 3	5.50
TP-1-75	125	350	1¾ x 3½	3.90
TP-1-80	10	450	1 x 2	1.55
TP-1-85	20	450	1 x 2	1.80
TP-1-90	40	450	1 x 3	2.05
TP-1-95	80	450	1¾ x 3	3.05
<b>DUALS</b>				
PTP-2-5	500+150	15	1 x 2	\$3.25
PTP-2-10	250+250	16	1 x 2	2.50
TP-2-13	60+20	150	1 x 2½	2.15
PTP-2-15	70+30	150	1 x 2½	2.20
TP-2-20	50+50	150	1 x 2½	2.15
PTP-2-25	50+30	150	1 x 2	2.00
TP-2-30	50+30	150	1 x 2	2.00
TP-2-35	40+40	150	1 x 2	1.90
TP-2-40	20+20	150	1 x 2	1.70
TP-2-45	100+80	200	1¾ x 2½	3.35
TP-2-50	200+5	200	1¾ x 2½	3.40
TP-2-55	30+30	250	1 x 2½	2.75
TP-2-60	200+15	250	1¾ x 2½	4.00
TP-2-65	30+10	300	1 x 3	2.40
TP-2-70	60/10	300/200	1 x 3	3.15
TP-2-75	125/100	350/10	1¾ x 3½	5.20
TP-2-80	5/100	350/50	1 x 2	1.90
PTP-2-85	10/10	350/50	1 x 2	2.00

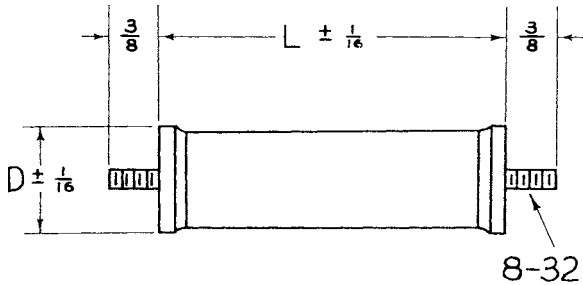
CAT. NO.	MFD.	WVDC	SIZE	LIST PRICE
TP-2-90	100/80	350/175	1¾ x 3½	\$4.60
TP-2-95	100+50	350	1¾ x 3½	5.80
TP-2-100	100+100	350	1¾ x 4	6.15
TP-2-105	140+20	350	1¾ x 4	4.30
TP-2-110	30+10	400	1 x 3	2.95
TP-2-115	10+10	450	1 x 2	1.90
TP-2-120	20+20	450	1 x 3	2.55
TP-2-125	40+40	450	1¾ x 3	3.45
<b>TRIPLES</b>				
TP-3-5	90+40/400	150/10	1 x 3½	\$5.25
PTP-3-10	70+30/10	150/25	1 x 2½	2.55
TP-3-15	40+40+40	150	1 x 2½	2.60
PTP-3-20	50+25+150	150	1¾ x 2½	3.75
TP-3-25	50+50+50	150	1 x 3	3.00
TP-3-30	40+20+20	250	1 x 3	2.90
TP-3-35	30+10/20	300/25	1 x 3	4.15
PTP-3-40	60+10/25	300/25	1¾ x 2	4.85
PTP-3-45	30/25/100	350/25/6	1 x 2½	4.65
PTP-3-50	125/5/100	350/150/10	1¾ x 3½	6.60
PTP-3-51	60/200+30	350/150	1¾ x 4	5.00
TP-3-55	20+20/20	350/25	1 x 2	2.90
TP-3-60	100+100/25	350/25	1¾ x 4	7.00
TP-3-65	80+40/100	350/50	1¾ x 4	6.50
TP-3-70	10/40+40	350/200	1 x 3	3.25
TP-3-75	80+40+40	350	1¾ x 4	7.95
TP-3-80	30+10/20	400/25	1 x 3	2.85
TP-3-82	10+10+10	450	1 x 3	2.60
TP-3-85	40+40+40	450	1¾ x 4	4.90
<b>QUADS</b>				
PTP-4-5	250+30+20/100	150/10	1¾ x 3½	\$5.30
TP-4-6	100+10/200+30	300/150	1¾ x 4	5.90
PTP-4-9	60+100/100/100	350/150/10	1¾ x 5	8.50
PTP-4-10	100+60/60/40	350/200/75	1¾ x 4½	8.50
TP-4-10.5	100+40+4/100	350/50	1¾ x 4	6.00
TP-4-12	80+40+30/40	400/25	1¾ x 4	5.95
TP-4-13	40+40/100+60	450/200	1¾ x 4	6.05
TP-4-14	40+20+20/40	450/25	1¾ x 3	4.65
TP-4-15	40+40+10/100	450/50	1¾ x 3½	5.45
TP-4-20	20+20+20+20	450	1¾ x 3	4.50
TP-4-25	30+30+30+30	450	1¾ x 4	5.65
TP-4-30	40+40+40+40	450	1¾ x 4	6.45

All Prices Subject to Change Without Notice

# HIGH VOLTAGE CAPACITORS TYPE OF

## 85°C GLASS CAP - PLASTIC FILM DC FILTER

**TYPE OF** Capacitors are housed in glass tubes with metal-to-glass soldered ferrules. Capacitor element is an improved plastic dielectric type, impregnated with a highly purified and inhibited mineral oil.



All glass containers with 'D' dimensions of 19/32 have 2-1/2 inch long 18 tinned copper pigtail leads.

PART NUMBER	CAP MFD	VOLTS DC	DIMENSIONS	
			L	D
OF20-102	.001	2000	1 3/16	19/32
OF20-202	.002	2000	1 3/16	19/32
OF20-502	.005	2000	1 3/16	19/32
OF20-103	.01	2000	1 3/16	19/32
OF20-203	.02	2000	1 9/16	19/32
OF20-503	.05	2000	1 3/4	3/4
OF20-104	0.1	2000	2 1/4	3/4
OF20-254	0.25	2000	2 3/4	29/32
OF20-504	0.5	2000	2	1 3/8
OF30-102	.001	3000	1 3/16	19/32
OF30-202	.002	3000	1 3/16	19/32
OF30-502	.005	3000	1 3/16	19/32
OF30-103	.01	3000	1 9/16	19/32
OF30-203	.02	3000	1 3/4	3/4
OF30-503	.05	3000	2 1/4	3/4
OF30-104	0.1	3000	1 3/4	1 1/8
OF30-254	0.25	3000	2	1 3/8
OF30-504	0.5	3000	2 3/4	1 5/8
OF40-102	.001	4000	1 3/16	19/32
OF40-202	.002	4000	1 3/16	19/32
OF40-502	.005	4000	1 3/16	19/32
OF40-103	.01	4000	1 3/16	3/4
OF40-203	.02	4000	1 3/4	3/4
OF40-503	.05	4000	2	13/16
OF40-104	0.1	4000	2	1 1/8
OF40-254	0.25	4000	2 1/4	1 5/8
OF40-504	0.5	4000	3 3/4	1 5/8

PART NUMBER	CAP MFD	VOLTS DC	DIMENSIONS	
			L	D
OF50-202	.002	5000	1 3/16	19/32
OF50-502	.005	5000	1 5/8	19/32
OF50-103	.01	5000	1 3/4	3/4
OF50-203	.02	5000	2 1/4	3/4
OF50-503	.05	5000	2 1/4	29/32
OF50-104	0.1	5000	2 1/4	1 3/8
OF50-254	0.25	5000	3	1 5/8
OF50-504	0.5	5000	6	1 5/8
OF80-101	.0001	8000	1 9/16	19/32
OF80-201	.0002	8000	1 9/16	19/32
OF80-501	.0005	8000	1 9/16	19/32
OF80-102	.001	8000	1 9/16	19/32
OF80-202	.002	8000	1 3/4	19/32
OF80-502	.005	8000	1 3/4	3/4
OF80-103	.01	8000	2 1/4	3/4
OF80-203	.02	8000	2 3/4	29/32
OF80-503	.05	8000	2 3/4	1 3/8
OF80-104	0.1	8000	3 5/8	1 5/8
OF80-204	0.2	8000	7	1 5/8
OF100-101	.0001	10 KV	1 5/8	19/32
OF100-201	.0002	10 KV	1 5/8	19/32
OF100-501	.0005	10 KV	1 5/8	19/32
OF100-102	.001	10 KV	1 5/8	19/32
OF100-202	.002	10 KV	1 5/8	3/4
OF100-502	.005	10 KV	1 3/4	13/16
OF100-103	.01	10 KV	2 1/4	29/32
OF100-203	.02	10 KV	2 3/4	1 1/8
OF100-503	.05	10 KV	2 3/4	1 5/8
OF100-603	.06	10 KV	3	1 5/8
OF100-104	0.1	10 KV	5	1 5/8
OF150-101	.0001	15 KV	2 1/4	19/32
OF150-201	.0002	15 KV	2 1/4	19/32
OF150-501	.0005	15 KV	2 1/4	19/32
OF150-102	.001	15 KV	2 1/4	3/4
OF150-202	.002	15 KV	2 1/4	3/4
OF150-502	.005	15 KV	2 3/4	1 1/8
OF150-103	.01	15 KV	3 3/4	1 1/8
OF150-203	.02	15 KV	4 1/4	1 3/8
OF150-503	.05	15 KV	7	1 5/8
OF150-603	.06	15 KV	8	1 5/8
OF200-101	.0001	20 KV	3 1/2	19/32
OF200-201	.0002	20 KV	3 1/2	19/32
OF200-501	.0005	20 KV	3 1/2	19/32
OF200-102	.001	20 KV	3 1/2	3/4
OF200-202	.002	20 KV	3 1/2	13/16
OF200-502	.005	20 KV	3 1/2	1 1/8
OF200-103	.01	20 KV	4 1/2	1 1/8
OF200-203	.02	20 KV	4 1/2	1 5/8
OF200-403	.04	20 KV	7 1/4	1 5/8
OF300-101	.0001	30 KV	4 9/16	19/32
OF300-201	.0002	30 KV	4 9/16	19/32
OF300-501	.0005	30 KV	4 9/16	19/32
OF300-102	.001	30 KV	5	3/4
OF300-202	.002	30 KV	5	29/32
OF300-502	.005	30 KV	5	1 3/8
OF300-103	.01	30 KV	6 1/2	1 5/8
OF300-203	.02	30 KV	9	1 5/8

The above is a partial listing. Additional capacitance and voltage values are available. Send for complete listing.

## HIGH VOLTAGE POWER PACKS COMPACT "M" SERIES 2 TO 75 KVDC

SEE SECTION 4000, PAGE 1063

# Plastic Capacitors, Inc.

CHICAGO 14, ILLINOIS  
Cable Address: PLASCAPINC, Chicago



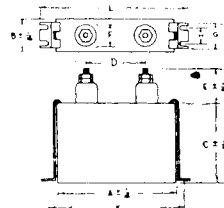


# HIGH VOLTAGE CAPACITORS TYPE LK



## MYLAR\* PAPER FILTER CAPACITORS

**TYPE LK** Capacitors are specifically designed for filter, bypass and coupling applications in the low audio frequency range. The CP70 style container and internal construction permit operation in any position. Glazed steatite bushings are used, and in the voltage ranges of 2000 and greater, steatite is the electrical insulation in the terminal assembly. The threaded stud terminal is supplied with nut, lockwasher and/or solder lug. The whole assembly is hermetically sealed.



2000 VDCW				
PART NUMBER	CAP. MFD.	A	B	C
LK20-105	1.0	1 3/4	1	3 1/4
LK20-205	2	2 1/2	1 3/16	3 1/2
LK20-205Y	2	1 3/4	1	5
LK20-405	4	2 1/2	1 3/16	5 1/2
LK20-405Y	4	3 3/4	1 1/4	3 3/4
LK20-605	6	3 3/4	1 1/4	5
LK20-605Y	6	3 3/4	1 3/4	3 3/4
LK20-805	8	3 3/4	1 1/4	6 1/4
LK20-805Y	8	3 3/4	1 3/4	4 1/2
LK20-106	10	3 3/4	1 3/4	5 1/4
LK20-106Y	10	3 3/4	2 1/4	4 1/2
LK20-126	12	3 3/4	1 3/4	6 1/4
LK20-126Y	12	3 3/4	2 1/4	5
LK20-126Z	12	3 3/4	3 3/16	4
LK20-156	15	3 3/4	2 1/4	6
LK20-156Y	15	3 3/4	3 3/16	5
LK20-156Z	15	4 9/16	3 3/4	3 3/4
LK20-206	20	3 3/4	3 3/16	6
LK20-206Y	20	4 9/16	3 3/4	4 1/4
LK20-256	25	3 3/4	3 3/16	6 3/4
LK20-306	30	4 9/16	3 3/4	5 3/4

5000 VDCW				
PART NUMBER	CAP. MFD.	A	B	C
LK50-104	.1	1 3/4	1	2 1/8
LK50-254	.25	1 3/4	1	3
LK50-504	.5	1 3/4	1	4 3/4
LK50-504Y	.5	2 1/2	1 3/16	3 1/4
LK50-105	1.0	2 1/2	1 3/16	5
LK50-105Y	1.0	3 3/4	1 1/4	3 3/4
LK50-205	2	3 3/4	1 1/4	6
LK50-205Y	2	3 3/4	1 3/4	4 1/2
LK50-205Z	2	3 3/4	2 1/4	3 3/4
LK50-405	4	3 3/4	2 1/4	4 3/4
LK50-405Y	4	3 3/4	3 3/16	4 3/4
LK50-405Z	4	4 9/16	3 3/4	3 3/4
LK50-605	6	3 3/4	3 3/16	6 1/2
LK50-605Y	6	4 9/16	3 3/4	4 3/4
LK50-805	8	4 9/16	3 3/4	6 1/4
LK50-106	10	4 9/16	3 3/4	7 1/2
LK50-126	12	4 9/16	3 3/4	9 1/2
LK50-156	15	8	4	9 1/4
LK50-206	20	8	4	11
LK50-256	25	13 1/2	4 1/8	9 1/4
LK50-306	30	13 1/2	4 1/8	9 1/4

10 KVDC				
PART NUMBER	CAP. MFD.	A	B	C
LK100-104	.1	3 3/4	1 3/4	3 1/4
LK100-254	.25	3 3/4	1 3/4	3 3/4
LK100-254Y	.25	3 3/4	2 1/4	3 1/4
LK100-504	.5	3 3/4	1 3/4	5 3/4
LK100-504Y	.5	3 3/4	2 1/4	4 1/2
LK100-504Z	.5	3 3/4	3 3/16	3 3/4
LK100-105	1.0	3 3/4	2 1/4	7 1/4
LK100-105Y	1.0	3 3/4	3 3/16	5 1/4
LK100-105Z	1.0	4 9/16	3 3/4	4 1/2
LK100-205	2	4 9/16	3 3/4	6 3/4
LK100-405	4	8	4	9 1/4
LK100-605	6	13 1/2	4 1/8	7
LK100-805	8	13 1/2	4 1/8	9 1/4
LK100-106	10	13 1/2	4 1/8	11

12.5 KVDC				
PART NUMBER	CAP. MFD.	A	B	C
LK125-503	.05	3 3/4	1 3/4	3
LK125-104	.1	3 3/4	1 3/4	3 5/8
LK125-254	.25	3 3/4	1 3/4	5 7/8
LK125-504	.5	3 3/4	3 3/16	5 5/8
LK125-504Y	.5	4 9/16	3 3/4	4 3/8
LK125-105	1.0	4 9/16	3 3/4	6 5/8
LK125-205	2	4 9/16	3 3/4	11
LK125-205Y	2	8	4	9 1/4
LK125-405	4	13 1/2	4 1/8	9 1/4
LK125-605	6	13 1/2	4 1/8	11
LK125-805	8	13 1/2	5 1/8	12 7/8
LK125-106	10	13 1/2	5 1/8	13 3/4

15 KVDC				
PART NUMBER	CAP. MFD.	A	B	C
LK150-104	.1	3 3/4	1 3/4	3 3/4
LK150-254	.25	3 3/4	1 3/4	7
LK150-254Y	.25	3 3/4	2 1/4	5
LK150-504	.5	3 3/4	3 3/16	6 1/2
LK150-504Y	.5	4 9/16	3 3/4	5
LK150-105	1.0	4 9/16	3 3/4	8 1/2
LK150-205	2	8	4	11
LK150-405	4	13 1/2	4 1/8	11

20 KVDC				
PART NUMBER	CAP. MFD.	A	B	C
LK200-104	.1	3 3/4	2 1/4	4 3/4
LK200-254	.25	3 3/4	3 3/16	6
LK200-254Y	.25	4 9/16	3 3/4	4 3/4
LK200-504	.5	4 9/16	3 3/4	7 1/2
LK200-105	1.0	8	4	9 1/4
LK200-205	2	13 1/2	4 1/8	9 1/4

25 KVDC				
PART NUMBER	CAP. MFD.	A	B	C
LK250-503	.05	3 3/4	3 3/16	4
LK250-104	.1	3 3/4	3 3/16	4 3/4
LK200-254	.25	4 9/16	3 3/4	6 1/2
LK250-504	.5	4 9/16	3 3/4	11 1/2
LK250-504Y	.5	8	4	9 1/4
LK250-105	1.0	13 1/2	4 1/8	9 1/4

30 KVDC				
PART NUMBER	CAP. MFD.	A	B	C
LK300-503	.05	3 3/4	3 3/16	5 1/2
LK300-104	.1	3 3/4	3 3/16	8 3/4
LK300-254Y	.25	4 9/16	3 3/4	8 3/4
LK300-504	.5	13 1/2	4 1/8	7
LK300-105	1.0	13 1/2	4 1/8	13 1/8

3000 VDCW				
PART NUMBER	CAP. MFD.	A	B	C
LK30-504	.5	1 3/4	1	3 1/4
LK30-105	1.0	1 3/4	1	5 1/4
LK30-105Y	1.0	2 1/2	1 3/16	3 1/2
LK30-205	2	2 1/2	1 3/16	5 1/2
LK30-205Y	2	3 3/4	1 1/4	3 3/4
LK30-405	4	3 3/4	1 1/4	6 1/4
LK30-405Y	4	3 3/4	1 3/4	4 3/4
LK30-405Z	4	3 3/4	2 1/4	4
LK30-605	6	3 3/4	1 3/4	6 1/4
LK30-605Y	6	3 3/4	2 1/4	5 1/4
LK30-605Z	6	3 3/4	3 3/16	4
LK30-805	8	3 3/4	2 1/4	5 1/2
LK30-805Y	8	3 3/4	3 3/16	5
LK30-805Z	8	4 9/16	3 3/4	3 3/4
LK30-106	10	3 3/4	3 3/16	5 3/4
LK30-106Y	10	4 9/16	3 3/4	4 1/2
LK30-126	12	3 3/4	3 3/16	6 3/4
LK30-126Y	12	4 9/16	3 3/4	5
LK30-156	15	4 9/16	3 3/4	6
LK30-206Y	20	4 9/16	3 3/4	7
LK30-256Y	25	4 9/16	3 3/4	10
LK30-306Z	30	4 9/16	3 3/4	11 1/2

6000 VDCW				
PART NUMBER	CAP. MFD.	A	B	C
LK60-104	.1	3 3/4	1 1/4	2 1/4
LK60-254	.25	3 3/4	1 1/4	2 1/2
LK60-504	.5	3 3/4	1 1/4	3 3/4
LK60-105	1.0	3 3/4	1 1/4	6 1/2
LK60-105Y	1.0	3 3/4	1 3/4	4 1/2
LK60-205	2	3 3/4	2 1/4	6 1/4
LK60-205Y	2	3 3/4	3 3/16	4 3/4
LK60-405	4	4 9/16	3 3/4	6
LK60-605	6	4 9/16	3 3/4	8 1/4
LK60-605Y	6	8	4	7
LK60-805	8	4 9/16	3 3/4	10 1/4
LK60-805Y	8	8	4	9 1/4
LK60-106	10	8	4	9 1/4
LK60-126	12	8	4	11
LK60-156	15	13 1/2	4 1/8	7
LK60-206	20	13 1/2	4 1/8	9 1/4
LK60-256	25	13 1/2	4 1/8	11
LK60-306	30	13 1/2	5 1/8	12 7/8

8000 VDCW				
PART NUMBER	CAP. MFD.	A	B	C
LK80-104Y	.1	2 1/2	1 3/16	3
LK80-104	.1	3 3/4	1 1/4	2 1/2
LK80-254Y	.25	2 1/2	1 3/16	5 1/4
LK80-254	.25	3 3/4	1 1/4	3 3/4
LK80-504	.5	3 3/4	1 1/4	5 3/4
LK80-504Y	.5	3 3/4	1 3/4	4 1/4
LK80-105	1.0	3 3/4	1 3/4	7
LK80-105Y	1.0	3 3/4	2 1/4	5 3/4
LK80-105Z	1.0	3 3/4	3 3/16	4 1/2
LK80-205	2	3 3/4	3 3/16	7
LK80-205Y	2	4 9/16	3 3/4	5 1/4
LK80-405	4	4 9/16	3 3/4	10
LK80-605	6	8	4	9 1/4
LK80-805	8	13 1/2	4 1/8	7
LK80-106	10	13 1/2	4 1/8	9 1/4
LK80-126	12	13 1/2	4 1/8	9 1/4
LK80-156	15	13 1/2	4 1/8	13 1/8
LK80-206	20	13 1/2	5 1/8	12 7/8

4000 VDCW				
PART NUMBER	CAP. MFD.	A	B	C
LK40-254	.25	1 3/4	1	2 3/4
LK40-504	.5	1 3/4	1	4
LK40-105	1.0	2 1/2	1 3/16	4
LK40-205	2	2 1/2	1 3/16	6 3/4
LK40-205Y	2	3 3/4	1 3/4	3 3/4
LK40-405	4	3 3/4	1 3/4	6
LK40-405Y	4	3 3/4	2 1/4	4 3/4
LK40-605	6	3 3/4	2 1/4	6 1/2
LK40-605Y	6	3 3/4	3 3/16	5
LK40-605Z	6	4 9/16	3 3/4	3 3/4
LK40-805	8	3 3/4	3 3/16	6
LK40-805Y	8	4 9/16	3 3/4	4 3/4
LK40-106	10	4 9/16	3 3/4	5 1/2
LK40-126	12	4 9/16	3 3/4	6 1/2
LK40-156	15	4 9/16	3 3/4	8 1/2
LK40-206Y	20	4 9/16	3 3/4	10 1/2

\* DUPONT POLYESTER FILM

The above is a partial listing. Additional capacitance and voltage values are available. Send for complete listing.

# Plastic Capacitors, Inc.

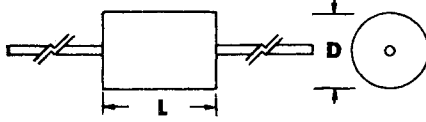
CHICAGO 14, ILLINOIS  
Cable Address: PLASCAPINC, Chicago



# LOW VOLTAGE CAPACITORS



## TYPE AZ EPOXY DIP

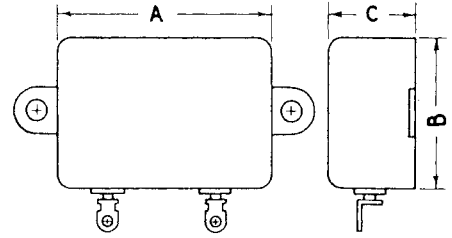


TYPE AZ Capacitors are finished with a dip finish assuring operation in severe environmental conditions. TYPE AZ Capacitors are also available in flat oval shape.

## TYPE AM METALLIZED MYLAR\*

TYPE AM Capacitors are hermetically sealed in brass containers with compression glass seals for a "floating" case add 1/16" to dimension L (See drawing in TYPE AZ column).

## TYPE AB METALLIZED MYLAR\*



TYPE AB Capacitors are housed in standard bathtub containers using compression type solder-seal glass insulators. TYPE AB provides large values of capacitance with the fine characteristics of Metallized Mylar.\*

Cap MFD	Cap Code	AZ2		AZ3	
		D Max.	L Max.	D Max.	L Max.
.01	103	.23	.38	.26	.38
.012	123	.24	.38	.23	.51
.015	153	.25	.38	.24	.51
.018	183	.23	.51	.25	.51
.022	223	.24	.51	.26	.51
.027	273	.25	.51	.28	.51
.033	333	.26	.51	.29	.51
.039	393	.27	.51	.26	.70
.047	473	.29	.51	.28	.70
.056	563	.26	.70	.29	.70
.068	683	.27	.70	.31	.70
.082	823	.29	.70	.33	.70
.1	104	.30	.70	.35	.70
.12	124	.32	.70	.37	.70
.15	154	.39	.70	.40	.70
.18	184	.39	.70	.43	.70
.22	224	.39	.70	.39	.95
.27	274	.44	.70	.42	.95
.33	334	.44	.70	.45	.95
.39	394	.47	.70	.48	.95
.47	474	.44	.95	.52	.95
.56	564	.47	.95	.55	.95
.68	684	.50	.95	.60	.95
.82	824	.50	.95	.65	.95
1.0	105	.57	.95	.64	1.13
1.5	155	.66	1.13	.75	1.13
2.0	205	.75	1.13	.85	1.13
3.0	305	.75	1.38	.84	1.63
4.0	405	.87	1.63	1.09	1.26
5.0	505	.87	1.63	1.05	1.63
8.0	805	1.09	1.63		
10.0	106	1.19	1.63		

Cap MFD	Cap Code	AZ4		AZ6	
		D Max.	L Max.	D Max.	L Max.
.001	102			.22	.38
.0022	222			.27	.38
.0033	332			.29	.38
.0047	472			.27	.51
.01	103	.23	.70	.29	.70
.012	123	.24	.70	.30	.70
.015	153	.26	.70	.28	.95
.018	183	.27	.70	.30	.95
.022	223	.28	.70	.36	.70
.027	273	.29	.70	.34	.95
.033	333	.32	.70	.36	.95
.039	393	.34	.70	.38	.95
.047	473	.37	.70	.40	.95
.056	563	.38	.70	.43	.95
.068	683	.41	.70	.47	.95
.082	823	.44	.70	.49	.95
.1	104	.37	1.13	.54	.95
.12	124	.39	1.13	.58	.95
.15	154	.42	1.13	.57	1.13
.18	184	.45	1.13	.59	1.26
.22	224	.53	1.13	.68	1.13
.27	274	.56	.95	.69	1.26
.33	334	.62	.95	.75	1.26
.39	394	.61	1.13	.71	1.63
.47	474	.67	1.13	.76	1.63
.56	564	.72	1.13	.83	1.63
.68	684	.78	1.13	.89	1.63
.82	824	.84	1.13	.97	1.63
1.0	105	.86	1.26	1.06	1.63
1.5	155	.93	1.51		
2.0	205	1.01	1.63		

### 200 VOLTS D.C.

BASIC PART NO.	CAP MFD	SIZE	
		CIRCUIT A OR D	F L
AM2-103	0.01	0.174	9/16
AM2-123	.012	.174	9/16
AM2-153	.015	.174	9/16
AM2-183	.018	.174	9/16
AM2-223	.022	.187	9/16
AM2-273	.027	.187	9/16
AM2-333	.033	.235	9/16
AM2-393	.039	.235	9/16
AM2-473	.047	.235	9/16
AM2-563	.056	.235	3/4
AM2-683	.068	.235	3/4
AM2-823	.082	.235	3/4
AM2-104	0.1	.235	3/4
AM2-124	.12	.312	3/4
AM2-154	.15	.312	3/4
AM2-184	.18	.312	3/4
AM2-224	.22	.312	3/4
AM2-274	.27	.400	3/4
AM2-334	.33	.400	3/4
AM2-394	.39	.400	3/4
AM2-474	.47	.400	1 1/16
AM2-564	.56	.400	1 1/16
AM2-684	.68	.400	1 1/16
AM2-824	.82	.562	1 1/16
AM2-105	1.0	.562	1 1/16
AM2-155	1.5	.562	1 1/4
AM2-205	2.0	.670	1 1/4
AM2-305	3.0	.670	1 1/2
AM2-405	4.0	.670	1 3/4
AM2-505	5.0	.750	1 3/4
AM2-805	8.0	1.0	1 3/4
AM2-106	10.0	1.0	2 1/4

### 300 VOLTS D.C.

AM3-393	.039	.235	3/4
AM3-473	.047	.235	3/4
AM3-563	.056	.235	3/4
AM3-683	.068	.312	3/4
AM3-823	.082	.312	3/4
AM3-104	0.10	.312	3/4
AM3-124	.12	.400	3/4
AM3-154	.15	.400	3/4
AM3-184	.18	.400	3/4
AM3-224	.22	.400	1 1/16
AM3-274	.27	.400	1 1/16
AM3-334	.33	.400	1 1/16
AM3-394	.39	.400	1 1/4
AM3-474	.47	.562	1 1/16
AM3-564	.56	.562	1 1/16
AM3-684	.68	.562	1 1/16
AM3-824	.82	.562	1 1/16
AM3-105	1.0	.562	1 1/2
AM3-155	1.5	.670	1 1/2
AM3-205	2.0	.670	1 3/4
AM3-305	3.0	1.0	1 1/4
AM3-405	4.0	1.0	1 1/2
AM3-505	5.0	1.0	2 1/4
AM3-605	6.0	1.0	2 1/4

### 200 VOLTS D.C.

PART NUMBER	CAP. MFD.	CASE SIZE		
		A	B	C
AB2-504	0.5	1 1/8	1	13/16
AB2-105	1.0	1 1/8	1	13/16
AB2-205	2.0	1 1/8	1	13/16
AB2-405	4.0	1 3/4	1	3/4
AB2-505	5.0	1 3/4	1	3/4
AB2-605	6.0	1 3/4	1 1/4	7/8
AB2-805	8.0	1 3/4	1 1/4	7/8
AB2-106	10.0	2	1 3/4	7/8
AB2-126	12.0	2	1 3/4	7/8
AB2-156	15.0	2	1 3/4	7/8
AB2-206	20.0	2	2	1 1/8
AB2-306	30.0	2	2	1 1/4

### 300 VOLTS D.C.

AB3-504	0.5	1 1/8	1	13/16
AB3-105	1.0	1 1/8	1	13/16
AB3-205	2.0	1 3/4	1	3/4
AB3-405	4.0	1 3/4	1 1/4	7/8
AB3-505	5.0	2	1 3/4	7/8
AB3-605	6.0	2	1 3/4	7/8
AB3-805	8.0	2	1 3/4	7/8
AB3-106	10.0	2	2	1 1/8
AB3-126	12.0	2	2	1 1/8
AB3-156	15.0	2	2	1 1/4

### 400 VOLTS D.C.

AB4-104	0.1	1 1/8	1	13/16
AB4-254	0.25	1 1/8	1	13/16
AB4-504	0.5	1 1/8	1	13/16
AB4-105	1.0	1 3/4	1	3/4
AB4-205	2.0	1 3/4	1 1/4	7/8
AB4-405	4.0	2	1 3/4	7/8
AB4-505	5.0	2	2	1 1/8
AB4-605	6.0	2	2	1 1/8
AB4-805	8.0	2	2	1 1/4

### 600 VOLTS D.C.

AB6-503	0.05	1 1/8	1	13/16
AB6-104	0.10	1 1/8	1	13/16
AB6-254	0.25	1 1/8	1	13/16
AB6-504	0.50	1 3/4	1 1/4	7/8
AB6-105	1.0	2	1 3/4	7/8
AB6-205	2.0	2	2	1 1/8

\* DUPONT POLYESTER FILM

The listing comprises a small portion of capacitors and voltage available. Send for complete information.

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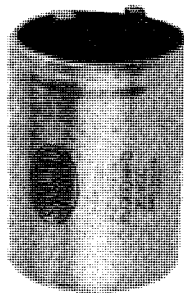


ELECTRONIC COMPONENTS

**Type 500 Computer Electrolytic**

**FOR HIGH RIPPLE AND HIGH TEMPERATURE APPLICATIONS**

The Sangamo Type 500 capacitor represents the optimum design in electrolytic capacitors for storage and filter requirements in high reliability circuits requiring 85°C operation. An exceptional anode surface gain and better production control have been achieved in perfecting the Type 500. These advanced techniques, plus the use of the best electrolytes, result in capacitors having lower ESR which may be operated at higher ripple currents and in case sizes smaller than conventional capacitors. All units are supplied with screw terminals. Mounting brackets are furnished at extra cost. **For more complete information write for Bulletin 2236.**



Type	Capacitor Diameter	Net Price
500 Mounting Bracket	1-3/8"	\$0.24
	2"	0.36
	2-1/2"	0.48
	3"	0.60

Note: 1-3/8" bracket available with 2 feet only. Other sizes are available with 2 or 3 feet. Specify accordingly.

Catalog Number	Cap. (Mfd)	Rated Volts d-c	Case Sizes*		Term. * Ctr. to Ctr.	Net Price 1-24†	Catalog Number	Cap. (Mfd)	Rated Volts d-c	Case Sizes*		Term. * Ctr. to Ctr.	Net Price 1-24†
			Diameter	Length						Diameter	Length		
500-1001-01	10,000	3	1-3/8	2-1/8	.500	\$ 3.63	500-1067-01	1,400	75	1-3/8	4-1/8	.500	\$ 5.04
500-1002-01	20,000	3	1-3/8	3-1/8	.500	6.21	500-1068-01	3,100	75	2	4-1/8	.875	7.35
500-1003-01	28,000	3	1-3/8	4-1/8	.500	7.26	500-1069-01	4,500	75	2	5-1/2	.875	9.51
500-1004-01	60,000	3	2	4-1/8	.875	11.25	500-1070-01	5,300	75	2-1/2	4-1/8	1.125	10.74
500-1005-01	87,000	3	2	5-1/2	.875	14.43	500-1071-01	8,000	75	3	4-1/8	1.250	15.39
500-1006-01	100,000	3	2-1/2	4-1/8	1.125	16.02	500-1072-01	11,200	75	3	5-1/2	1.250	19.92
500-1007-01	150,000	3	3	4-1/8	1.250	23.85							
500-1008-01	210,000	3	3	5-1/2	1.250	36.81							
500-1009-01	7,500	5	1-3/8	2-1/8	.500	4.02	500-1073-01	400	100	1-3/8	2-1/8	.500	3.51
500-1010-01	13,000	5	1-3/8	3-1/8	.500	5.73	500-1074-01	725	100	1-3/8	3-1/8	.500	4.29
500-1011-01	20,000	5	1-3/8	4-1/8	.500	6.90	500-1075-01	1,100	100	1-3/8	4-1/8	.500	5.25
500-1012-01	40,000	5	2	4-1/8	.875	9.63	500-1076-01	2,400	100	2	4-1/8	.875	8.43
500-1013-01	55,000	5	2	5-1/2	.875	11.82	500-1077-01	3,500	100	2	5-1/2	.875	11.13
500-1014-01	70,000	5	2-1/2	4-1/8	1.125	13.86	500-1078-01	4,100	100	2-1/2	4-1/8	1.125	11.46
500-1015-01	100,000	5	3	4-1/8	1.250	17.10	500-1079-01	6,200	100	3	4-1/8	1.250	14.55
500-1016-01	150,000	5	3	5-1/2	1.250	25.08	500-1080-01	9,000	100	3	5-1/2	1.250	19.26
500-1017-01	5,000	10	1-3/8	2-1/8	.500	4.23	500-1081-01	290	150	1-3/8	2-1/8	.500	3.36
500-1018-01	10,000	10	1-3/8	3-1/8	.500	5.88	500-1082-01	550	150	1-3/8	3-1/8	.500	4.56
500-1019-01	15,000	10	1-3/8	4-1/8	.500	6.60	500-1083-01	800	150	1-3/8	4-1/8	.500	5.19
500-1020-01	30,000	10	2	4-1/8	.875	12.27	500-1084-01	1,850	150	2	4-1/8	.875	8.88
500-1021-01	40,000	10	2	5-1/2	.875	13.95	500-1085-01	2,500	150	2	5-1/2	.875	11.01
500-1022-01	50,000	10	2-1/2	4-1/8	1.125	16.11	500-1086-01	3,000	150	2-1/2	4-1/8	1.125	12.00
500-1023-01	80,000	10	3	4-1/8	1.250	20.97	500-1087-01	4,600	150	3	4-1/8	1.250	15.27
500-1024-01	110,000	10	3	5-1/2	1.250	26.34	500-1088-01	6,750	150	3	5-1/2	1.250	19.98
500-1025-01	4,500	15	1-3/8	2-1/8	.500	4.71	500-1089-01	200	200	1-3/8	2-1/8	.500	3.60
500-1026-01	8,000	15	1-3/8	3-1/8	.500	5.73	500-1090-01	400	200	1-3/8	3-1/8	.500	4.53
500-1027-01	12,000	15	1-3/8	4-1/8	.500	6.72	500-1091-01	575	200	1-3/8	4-1/8	.500	5.25
500-1028-01	24,000	15	2	4-1/8	.875	12.18	500-1092-01	1,300	200	2	4-1/8	.875	8.79
500-1029-01	35,000	15	2	5-1/2	.875	13.05	500-1093-01	1,800	200	2	5-1/2	.875	9.93
500-1030-01	40,000	15	2-1/2	4-1/8	1.125	14.34	500-1094-01	2,200	200	2-1/2	4-1/8	1.125	11.28
500-1031-01	65,000	15	3	4-1/8	1.250	21.78	500-1095-01	3,250	200	3	4-1/8	1.250	14.28
500-1032-01	90,000	15	3	5-1/2	1.250	29.04	500-1096-01	4,800	200	3	5-1/2	1.250	16.77
500-1033-01	3,300	20	1-3/8	2-1/8	.500	4.08	500-1097-01	160	250	1-3/8	2-1/8	.500	4.14
500-1034-01	6,000	20	1-3/8	3-1/8	.500	5.28	500-1098-01	300	250	1-3/8	3-1/8	.500	4.65
500-1035-01	9,000	20	1-3/8	4-1/8	.500	6.24	500-1099-01	430	250	1-3/8	4-1/8	.500	4.98
500-1036-01	19,000	20	2	4-1/8	.875	11.49	500-1100-01	1,000	250	2	4-1/8	.875	11.28
500-1037-01	25,000	20	2	5-1/2	.875	12.78	500-1101-01	1,400	250	2	5-1/2	.875	12.12
500-1038-01	30,000	20	2-1/2	4-1/8	1.125	13.50	500-1102-01	1,700	250	2-1/2	4-1/8	1.125	12.81
500-1039-01	48,000	20	3	4-1/8	1.250	18.99	500-1103-01	2,500	250	3	4-1/8	1.250	18.09
500-1040-01	68,000	20	3	5-1/2	1.250	24.30							
500-1041-01	2,400	25	1-3/8	2-1/8	.500	3.30	500-1104-01	110	300	1-3/8	2-1/8	.500	4.14
500-1042-01	4,600	25	1-3/8	3-1/8	.500	5.19	500-1105-01	210	300	1-3/8	3-1/8	.500	4.74
500-1043-01	6,500	25	1-3/8	4-1/8	.500	6.36	500-1106-01	310	300	1-3/8	4-1/8	.500	5.40
500-1044-01	14,000	25	2	4-1/8	.875	11.25	500-1107-01	700	300	2	4-1/8	.875	8.82
500-1045-01	19,000	25	2	5-1/2	.875	12.09	500-1108-01	1,000	300	2	5-1/2	.875	12.90
500-1046-01	24,000	25	2-1/2	4-1/8	1.125	12.75	500-1109-01	1,200	300	2-1/2	4-1/8	1.125	15.30
500-1047-01	35,000	25	3	4-1/8	1.250	18.03	500-1110-01	1,750	300	3	4-1/8	1.250	20.88
500-1048-01	50,000	25	3	5-1/2	1.250	24.24							
500-1049-01	1,600	35	1-3/8	2-1/8	.500	3.54	500-1111-01	80	350	1-3/8	2-1/8	.500	3.93
500-1050-01	3,000	35	1-3/8	3-1/8	.500	4.68	500-1112-01	150	350	1-3/8	3-1/8	.500	4.68
500-1051-01	4,500	35	1-3/8	4-1/8	.500	5.40	500-1113-01	220	350	1-3/8	4-1/8	.500	5.28
500-1052-01	9,500	35	2	4-1/8	.875	9.24	500-1114-01	500	350	2	4-1/8	.875	8.49
500-1053-01	15,000	35	2	5-1/2	.875	12.72	500-1115-01	750	350	2	5-1/2	.875	10.77
500-1054-01	17,000	35	2-1/2	4-1/8	1.125	13.23	500-1116-01	850	350	2-1/2	4-1/8	1.125	11.73
500-1055-01	25,000	35	3	4-1/8	1.250	14.97	500-1117-01	1,250	350	3	4-1/8	1.250	19.41
500-1056-01	36,000	35	3	5-1/2	1.250	17.28							
500-1057-01	1,000	50	1-3/8	2-1/8	.500	3.72	500-1118-01	60	400	1-3/8	2-1/8	.500	4.17
500-1058-01	1,900	50	1-3/8	3-1/8	.500	4.35	500-1119-01	115	400	1-3/8	3-1/8	.500	4.89
500-1059-01	2,900	50	1-3/8	4-1/8	.500	5.82	500-1120-01	165	400	1-3/8	4-1/8	.500	5.49
500-1060-01	6,200	50	2	4-1/8	.875	9.36	500-1121-01	390	400	2	5-1/2	.875	7.14
500-1061-01	10,000	50	2	5-1/2	.875	13.17	500-1122-01	560	400	2	4-1/8	.875	9.84
500-1062-01	11,000	50	2-1/2	4-1/8	1.125	14.16	500-1123-01	650	400	2-1/2	4-1/8	1.125	10.71
500-1063-01	16,000	50	3	4-1/8	1.250	16.41	500-1124-01	975	400	3	5-1/2	1.250	16.80
500-1064-01	24,000	50	3	5-1/2	1.250	20.49							
500-1065-01	510	75	1-3/8	2-1/8	.500	4.35	500-1125-01	55	450	1-3/8	2-1/8	.500	4.65
500-1066-01	950	75	1-3/8	3-1/8	.500	4.56	500-1126-01	100	450	1-3/8	3-1/8	.500	5.19
							500-1127-01	150	450	1-3/8	4-1/8	.500	5.79
							500-1128-01	330	450	2	4-1/8	.875	7.41
							500-1129-01	500	450	2	5-1/2	.875	9.24
							500-1130-01	600	450	2-1/2	4-1/8	1.125	11.40
							500-1131-01	850	450	3	4-1/8	1.250	14.07

STANDARD STOCK ITEMS

\*All dimensions are in inches.  
† Prices for larger quantities are available on request.

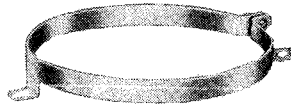
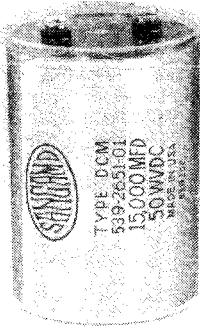
SANGAMO ELECTRIC COMPANY

# capacitors



ELECTRONIC COMPONENTS

## Type DCM Computer Grade FILTER AND ENERGY STORAGE ELECTROLYTIC CAPACITOR



Type DCM Mounting Bracket	Capacitor Diameter (Inches)	Net Price
	1-7/16	\$0.24
	1-13/16	0.33
	2-1/16	0.36
	2-9/16	0.48
	3-1/16	0.60

Note: 1-7/16" bracket available with 2 feet only. Two or 3 are available in other sizes.

The SANGAMO Type DCM is a high quality, long life, electrolytic capacitor, specially designed for use as an energy storage or filter capacitor at 65°C. The Type DCM is enclosed in an aluminum can and is normally furnished with a clear plastic insulating sleeve. Aluminum terminals, which are permanently molded into the top, include #10-32 machine screws. A pressure-sensitive footed, wrap-around mounting bracket is available at extra cost. For more complete information write for Bulletin 2231.

Catalog Number	Cap. (Mfd)	Rated Volts d-c	Case Sizes *		Term. * Ctr. to Ctr.	Net Price 1-24†	Catalog Number	Cap. (Mfd)	Rated Volts d-c	Case Sizes *		Term. * Ctr. to Ctr.	Net Price 1-24†
			Diameter	Length						Diameter	Length		
539-2619-01	33,000	5	2-1/16	4-1/2	.875	\$ 7.62	539-2553-01	450	75	1-7/16	2-1/2	.500	\$ 2.85
539-2621-01	125,000	5	3-1/16	6	1.250	16.71	539-2554-01	900	75	1-7/16	3-1/2	.500	3.78
539-2530-01	3,750	10	1-7/16	2-1/2	.500	3.36	539-2555-01	1,000	75	1-7/16	4-1/2	.500	4.02
539-2531-01	7,000	10	1-7/16	3-1/2	.500	4.20	539-2555-01	1,350	75	1-7/16	4-1/2	.500	4.29
539-2622-01	10,000	10	1-7/16	4-1/2	.500	5.10	539-2654-01	3,000	75	2-1/16	4-1/2	.875	6.27
539-2736-01	15,000	10	1-13/16	4-1/2	.750	5.73	539-2656-01	5,000	75	2-9/16	4-1/2	1.125	10.23
539-2623-01	20,000	10	2-1/16	4-1/2	.875	8.07	539-2557-01	7,750	75	3-1/16	4-1/2	1.250	12.84
539-2624-01	35,000	10	2-1/16	6	.875	10.92	539-2657-01	10,000	75	3-1/16	6	1.250	16.20
539-2625-01	40,000	10	2-9/16	4-1/2	1.125	12.12							
539-2626-01	60,000	10	3-1/16	4-1/2	1.250	15.39	539-2558-01	350	100	1-7/16	2-1/2	.500	3.00
539-2627-01	90,000	10	3-1/16	6	1.250	19.77	539-2559-01	500	100	1-7/16	3-1/2	.500	3.18
							539-2658-01	1,000	100	1-7/16	4-1/2	.500	4.41
539-2532-01	2,500	15	1-7/16	2-1/2	.500	2.94	539-2742-01	1,500	100	1-13/16	4-1/2	.750	4.86
539-2533-01	5,000	15	1-7/16	3-1/2	.500	4.17	539-2597-01	3,000	100	2-1/16	6	.875	9.42
539-2628-01	6,000	15	1-7/16	4-1/2	.500	4.23	539-2660-01	4,000	100	2-9/16	4-1/2	1.125	9.96
539-2534-01	8,000	15	1-7/16	4-1/2	.500	4.98	539-2661-01	5,000	100	3-1/16	4-1/2	1.250	10.71
539-2737-01	10,000	15	1-13/16	4-1/2	.750	5.34	539-2662-01	8,500	100	3-1/16	6	1.250	16.35
539-2738-01	14,000	15	1-13/16	4-1/2	.750	6.94							
539-2629-01	18,000	15	2-1/16	4-1/2	.875	8.49	539-2560-01	250	150	1-7/16	2-1/2	.500	2.64
539-2630-01	25,000	15	2-1/16	6	.875	10.95	539-2663-01	500	150	1-7/16	3-1/2	.500	3.84
539-2631-01	33,000	15	2-9/16	4-1/2	1.125	11.28	539-2664-01	700	150	1-7/16	4-1/2	.500	4.32
539-1246-02	35,000	15	3-1/16	4-1/2	1.250	11.34	539-2561-01	750	150	1-7/16	4-1/2	.500	4.41
539-2632-01	40,000	15	3-1/16	4-1/2	1.250	12.48	539-2743-01	1,000	150	1-13/16	4-1/2	.750	4.83
539-2598-01	45,000	15	3-1/16	4-1/2	1.250	13.77	539-2744-01	1,250	150	1-13/16	4-1/2	.750	5.22
539-2673-01	50,000	15	3-1/16	6	1.250	15.12	539-2562-01	1,450	150	1-13/16	4-1/2	.750	6.12
539-2633-01	60,000	15	3-1/16	6	1.250	17.67							
							539-2861-01	1,850	150	2-1/16	4-1/2	.875	7.71
539-2535-01	2,250	20	1-7/16	2-1/2	.500	2.97	539-2665-01	2,000	150	2-1/16	6	.875	8.37
539-2536-01	4,500	20	1-7/16	3-1/2	.500	4.32	539-2666-01	2,500	150	2-9/16	4-1/2	1.125	9.57
539-2537-01	6,500	20	1-7/16	4-1/2	.500	4.77	539-2654-01	3,000	150	2-9/16	4-1/2	1.125	10.44
539-2538-01	10,000	20	1-13/16	4-1/2	.750	5.85	539-2667-01	4,000	150	3-1/16	4-1/2	1.250	12.63
539-2539-01	14,750	20	2-1/16	4-1/2	.875	8.04	539-2565-01	4,500	150	3-1/16	4-1/2	1.250	13.29
539-2540-01	22,000	20	2-1/16	6	.875	10.56	539-2668-01	6,000	150	3-1/16	6	1.250	15.18
539-2541-01	25,000	20	2-9/16	4-1/2	1.125	11.10							
539-2542-01	35,000	20	3-1/16	4-1/2	1.250	13.50	539-2566-01	200	200	1-7/16	2-1/2	.500	3.12
539-2543-01	50,000	20	3-1/16	6	1.250	16.92	539-2669-01	500	200	1-7/16	4-1/2	.500	4.17
							539-2745-01	750	200	1-13/16	4-1/2	.750	5.37
539-2544-01	1,500	25	1-7/16	2-1/2	.500	2.79	539-2670-01	1,500	200	2-1/16	6	.875	7.65
539-2545-01	3,000	25	1-7/16	3-1/2	.500	3.69	539-2671-01	2,000	200	2-9/16	4-1/2	1.125	9.18
539-2634-01	5,000	25	1-7/16	4-1/2	.500	4.74	539-2672-01	2,500	200	3-1/16	4-1/2	1.250	10.80
539-2739-01	8,000	25	1-13/16	4-1/2	.750	6.12	539-2570-01	4,500	200	3-1/16	6	1.250	14.13
539-2635-01	10,000	25	2-1/16	4-1/2	.875	7.26							
539-2636-01	15,000	25	2-1/16	6	.875	10.20	539-2746-01	500	250	1-13/16	4-1/2	.750	4.50
539-2637-01	20,000	25	2-9/16	4-1/2	1.125	10.59	539-2575-01	1,000	250	2-1/16	4-1/2	.875	9.81
539-2638-01	25,000	25	3-1/16	4-1/2	1.250	11.22	539-2874-01	1,500	250	2-9/16	4-1/2	1.125	10.83
539-2639-01	40,000	25	3-1/16	6	1.250	17.55	539-2675-01	275	300	1-7/16	4-1/2	.500	4.50
							539-2747-01	450	300	1-13/16	4-1/2	.750	5.10
539-2640-01	1,500	35	1-7/16	3-1/2	.500	3.03	539-2676-01	1,000	300	2-9/16	4-1/2	1.125	11.22
539-2547-01	2,500	35	1-7/16	3-1/2	.500	3.60	539-2677-01	1,500	300	3-1/16	4-1/2	1.250	17.73
539-2641-01	4,000	35	1-7/16	4-1/2	.500	4.50							
539-2740-01	5,000	35	1-13/16	4-1/2	.750	5.31	539-2584-01	150	350	1-7/16	3-1/2	.500	4.08
539-2548-01	7,000	35	1-13/16	4-1/2	.750	6.69	539-2748-01	350	350	1-13/16	4-1/2	.750	5.49
539-2642-01	8,000	35	2-1/16	4-1/2	.875	6.78	539-2678-01	1,000	350	3-1/16	4-1/2	1.250	11.73
539-2549-01	9,000	35	2-1/16	4-1/2	.875	7.71	539-2590-01	50	400	1-7/16	2-1/2	.500	3.00
539-2643-01	10,000	35	2-1/16	6	.875	8.31	539-2595-01	50	450	1-7/16	2-1/2	.500	3.60
539-2550-01	13,500	35	2-1/16	6	.875	10.53	539-2682-01	100	450	1-7/16	3-1/2	.500	4.50
539-2644-01	15,000	35	2-9/16	4-1/2	1.125	11.07	539-2596-01	150	450	1-7/16	4-1/2	.500	5.04
539-2645-01	20,000	35	3-1/16	4-1/2	1.250	12.12							
539-2646-01	30,000	35	3-1/16	6	1.250	13.92	539-2749-01	250	450	1-13/16	4-1/2	.750	5.94
							539-2683-01	300	450	2-1/16	4-1/2	.875	6.33
539-2551-01	750	50	1-7/16	2-1/2	.500	2.88	539-2684-01	500	450	2-1/16	6	.875	8.04
539-1615-03	1,000	50	1-7/16	3-1/2	.500	3.24	539-2685-01	600	450	2-9/16	4-1/2	1.125	9.90
539-2552-01	1,500	50	1-7/16	3-1/2	.500	3.69	539-2686-01	800	450	3-1/16	4-1/2	1.250	11.46
539-1463-03	2,000	50	1-7/16	4-1/2	.500	3.81	539-2687-01	850	450	3-1/16	4-1/2	1.250	12.24
539-2647-01	2,500	50	1-7/16	4-1/2	.500	4.08							
539-2741-01	4,000	50	1-13/16	4-1/2	.750	5.49							
539-2648-01	5,000	50	2-1/16	4-1/2	.875	7.11							
539-2649-01	8,000	50	2-1/16	6	.875	8.79							
539-2650-01	10,000	50	2-9/16	4-1/2	1.125	11.46							
539-2651-01	15,000	50	3-1/16	4-1/2	1.250	13.65							
539-2652-01	20,000	50	3-1/16	6	1.250	16.71							

STANDARD STOCK ITEMS

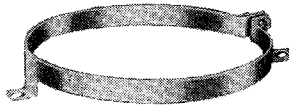
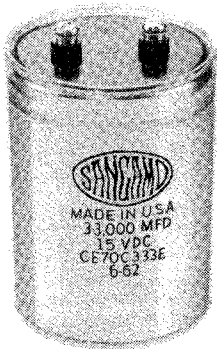
\*All dimensions are in inches.  
†Prices for larger quantities are available on request.

SANGAMO ELECTRIC COMPANY  
**capacitors**



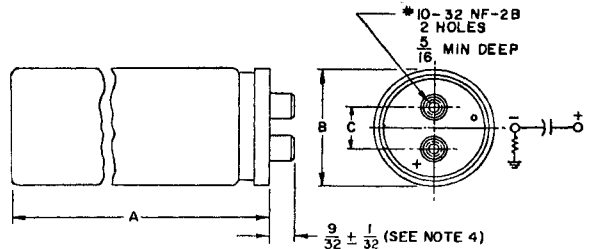
**Type CE70 and CE71 MILITARY GRADE CAPACITORS**

The Sangamo Types CE70 and CE71 are aluminum electrolytic capacitors designed and manufactured in accordance with Mil-C-62B. They are recommended for operation up to +85°C and are available in voltage ratings from 5 to 450 d-c volts. The Type CE70 is supplied with a plastic insulating sleeve. Commercial equivalents can be supplied which meet or exceed the applicable military requirements. **FOR MORE COMPLETE INFORMATION WRITE FOR BULLETIN 2236.**



Type CE70 & CE71 Mounting Bracket	Capacitor Diameter (Inches)	Net Price
	1-7/16	\$.24
	2-1/16	.36
	2-9/16	.48
	3-1/16	.60

Note: 1-7/16" bracket available with 2 feet only. Other sizes are available with 2 or 3 feet.



1. All dimensions in inches.
2. Capacitors are mounted by means of a wraparound, footed-type bracket.
3. There is an indeterminate resistance between the metal case and the negative terminal.
4. This dimension shall be measured from the base of the container.

Type Designation*	Cap. (Mfd)	Rated Volts d-c	Case Sizes*		Term. * Ctr. to Ctr.	Net Price 1-24†	Type Designation*	Cap. (Mfd)	Rated Volts d-c	Case Sizes*		Term. * Ctr. to Ctr.	Net Price 1-24†
			Diam.	Length						Diam.	Length		
CE71C103C	10,000	5	1-7/16	4-1/2	.500	\$ 4.98	ⓈCE71C501J	500	150	1-7/16	4-1/2	.500	4.41
CE71C253C	25,000	5	2-1/16	4-1/2	.875	7.62	ⓈCE71C122J	1,200	150	2-1/16	4-1/2	.875	5.94
CE71C453C	45,000	5	2-9/16	4-1/2	1.125	10.38	ⓈCE71C202J	2,000	150	2-9/16	4-1/2	1.125	9.63
CE71C653C	65,000	5	3-1/16	4-1/2	1.250	13.56	ⓈCE71C322J	3,200	150	3-1/16	4-1/2	1.250	12.63
CE71C652D	6,500	10	1-7/16	4-1/2	.500	4.68	ⓈCE71C351K	350	200	1-7/16	4-1/2	.500	4.23
CE71C163D	16,000	10	2-1/16	4-1/2	.875	6.93	ⓈCE71C901K	900	200	2-1/16	4-1/2	.875	7.56
CE71C283D	28,000	10	2-9/16	4-1/2	1.125	11.76	ⓈCE71C152K	1,500	200	2-9/16	4-1/2	1.125	8.79
CE71C403D	40,000	10	3-1/16	4-1/2	1.250	13.95	ⓈCE71C222K	2,200	200	3-1/16	4-1/2	1.250	11.22
ⓈCE71C562E	5,600	15	1-7/16	4-1/2	.500	4.83	ⓈCE71C301M	300	250	1-7/16	4-1/2	.500	4.65
ⓈCE71C132E	12,000	15	2-1/16	4-1/2	.875	6.72	ⓈCE71C701M	700	250	2-1/16	4-1/2	.875	7.41
ⓈCE71C223E	22,000	15	2-9/16	4-1/2	1.125	11.34	ⓈCE71C122M	1,200	250	2-9/16	4-1/2	1.125	11.46
ⓈCE71C333E	33,000	15	3-1/16	4-1/2	1.250	12.96	ⓈCE71C192M	1,900	250	3-1/16	4-1/2	1.250	13.26
ⓈCE71C302F	3,000	25	1-7/16	4-1/2	.500	4.26	ⓈCE71C251N	250	300	1-7/16	4-1/2	.500	5.01
ⓈCE71C702F	7,000	25	2-1/16	4-1/2	.875	6.93	ⓈCE71C551N	550	300	2-1/16	4-1/2	.875	6.18
ⓈCE71C113F	11,000	25	2-9/16	4-1/2	1.125	8.97	ⓈCE71C971N	970	300	2-9/16	4-1/2	1.125	12.03
ⓈCE71C173F	17,000	25	3-1/16	4-1/2	1.250	12.09	ⓈCE71C152N	1,500	300	3-1/16	4-1/2	1.250	20.40
ⓈCE71C142G	1,400	50	1-7/16	4-1/2	.500	4.14	CE71C201P	200	350	1-7/16	4-1/2	.500	5.13
ⓈCE71C332G	3,300	50	2-1/16	4-1/2	.875	6.12	CE71C451P	450	350	2-1/16	4-1/2	.875	7.56
ⓈCE71C562G	5,600	50	2-9/16	4-1/2	1.125	8.88	CE71C751P	750	350	2-9/16	4-1/2	1.125	10.62
ⓈCE71C902G	9,000	50	3-1/16	4-1/2	1.250	11.73	CE71C122P	1,200	350	3-1/16	4-1/2	1.250	15.30
ⓈCE71C701H	700	100	1-7/16	4-1/2	.500	4.17	CE71C151Q	150	400	1-7/16	4-1/2	.500	5.34
ⓈCE71C182H	1,800	100	2-1/16	4-1/2	.875	5.94	CE71C351Q	350	400	2-1/16	4-1/2	.875	7.08
ⓈCE71C312H	3,100	100	2-9/16	4-1/2	1.125	10.89	CE71C601Q	600	400	2-9/16	4-1/2	1.125	10.56
ⓈCE71C452H	4,500	100	3-1/16	4-1/2	1.250	11.88	ⓈCE71C101R	100	450	1-7/16	4-1/2	.500	5.19

\*All dimensions are in inches.  
\*\*For Type CE70 (CE71 without sleeve), deduct 3/8" from length, 1/16" from diameter and \$0.05 from net price  
†Prices for larger quantities are available on request.

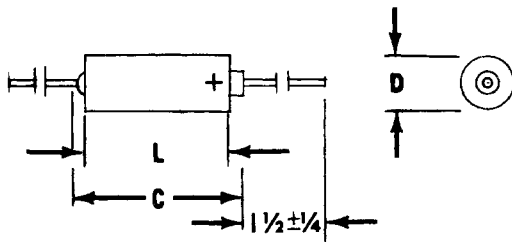
Ⓢ STANDARD STOCK ITEMS

SANGAMO ELECTRIC COMPANY

**capacitors**

ELECTRONIC COMPONENTS

## Type CS12 and CS13 SOLID TANTALUM CAPACITORS



The Sangamo Types CS12 and CS13 are solid electrolyte tantalum capacitors designed for filter, by-pass, coupling, blocking and other low voltage d-c applications found in telemetering devices, airborne systems, computers and missiles. They provide highest capacitance per cubic inch in an extremely small hermetically sealed container. All units are suitable for operation at full rated voltages over the temperature range of  $-80^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  and when properly derated will operate up to  $+125^{\circ}\text{C}$  per MIL-C-26655 specification.

**FOR MORE COMPLETE INFORMATION WRITE FOR BULLETIN 2234.**

Type Designation*	Cap. (Mfd)	Rated Volts d-c	Case Dimensions (inches)			Net Price 1-24†	Type Designation*	Cap. (Mfd)	Rated Volts d-c	Case Dimensions (inches)			Net Price 1-24†
			L	C	D					L	C	D	
Ⓢ CS13AB5R6K	5.6	6	.286	.422	.135	\$1.34	Ⓢ CS13AE470K	47.0	20	.686	.822	.289	\$2.23
Ⓢ CS13AB6R8K	6.8	6	.286	.422	.135	1.34	Ⓢ CS13AE560K	56.0	20	.786	.922	.351	4.50
Ⓢ CS13AB470K	47.0	6	.474	.610	.185	1.56	Ⓢ CS13AE680K	68.0	20	.786	.922	.351	4.50
Ⓢ CS13AB560K	56.0	6	.474	.610	.185	1.56	Ⓢ CS13AE820K	82.0	20	.786	.922	.351	4.50
Ⓢ CS13AB151K	150.0	6	.686	.822	.289	2.23	Ⓢ CS13AE101K	100.0	20	.786	.922	.351	4.50
Ⓢ CS13AB181K	180.0	6	.686	.822	.289	2.23	Ⓢ CS13AFR33K	0.33	35	.286	.422	.135	1.34
Ⓢ CS13AB271K	270.0	6	.786	.922	.351	4.50	Ⓢ CS13AFR39K	0.39	35	.286	.422	.135	1.34
Ⓢ CS13AB331K	330.0	6	.786	.922	.351	4.50	Ⓢ CS13AFR47K	0.47	35	.286	.422	.135	1.34
Ⓢ CS13AC3R9K	3.9	10	.286	.422	.135	1.34	Ⓢ CS13AFR56K	0.56	35	.286	.422	.135	1.34
Ⓢ CS13AC4R7K	4.7	10	.286	.422	.135	1.34	Ⓢ CS13AFR68K	0.68	35	.286	.422	.135	1.34
Ⓢ CS13AC270K	27.0	10	.474	.610	.185	1.56	Ⓢ CS13AFR82K	0.82	35	.286	.422	.135	1.34
Ⓢ CS13AC330K	33.0	10	.474	.610	.185	1.56	Ⓢ CS13AF101K	1.0	35	.286	.422	.135	1.34
Ⓢ CS13AC390K	39.0	10	.474	.610	.185	1.56	Ⓢ CS13AF1R2K	1.2	35	.474	.610	.185	1.56
Ⓢ CS13AC820K	82.0	10	.686	.822	.289	2.23	Ⓢ CS13AF1R5K	1.5	35	.474	.610	.185	1.56
Ⓢ CS13AC101K	100.0	10	.686	.822	.289	2.23	Ⓢ CS13AF1R8K	1.8	35	.474	.610	.185	1.56
Ⓢ CS13AC121K	120.0	10	.686	.822	.289	2.23	Ⓢ CS13AF2R2K	2.2	35	.474	.610	.185	1.56
Ⓢ CS13AC181K	180.0	10	.786	.922	.351	4.50	Ⓢ CS13AF2R7K	2.7	35	.474	.610	.185	1.56
Ⓢ CS13AC221K	220.0	10	.786	.922	.351	4.50	Ⓢ CS13AF3R3K	3.3	35	.474	.610	.185	1.56
Ⓢ CS13AD2R7K	2.7	15	.286	.422	.135	1.34	Ⓢ CS13AF3R9K	3.9	35	.474	.610	.185	1.56
Ⓢ CS13AD3R3K	3.3	15	.286	.422	.135	1.34	Ⓢ CS13AF4R7K	4.7	35	.474	.610	.185	1.56
Ⓢ CS13AD180K	18.0	15	.474	.610	.185	1.56	Ⓢ CS13AF5R6K	5.6	35	.474	.610	.185	1.56
Ⓢ CS13AD220K	22.0	15	.474	.610	.185	1.56	Ⓢ CS13AF6R8K	6.8	35	.474	.610	.185	1.56
Ⓢ CS13AD560K	56.0	15	.686	.822	.289	2.23	Ⓢ CS13AF8R2K	8.2	35	.686	.822	.289	2.57
Ⓢ CS13AD680K	68.0	15	.686	.822	.289	2.23	Ⓢ CS13AF100K	10.0	35	.686	.822	.289	2.57
Ⓢ CS13AD121K	120.0	15	.786	.922	.351	4.50	Ⓢ CS13AF120K	12.0	35	.686	.822	.289	2.57
Ⓢ CS13AD151K	150.0	15	.786	.922	.351	4.50	Ⓢ CS13AF150K	15.0	35	.686	.822	.289	2.57
Ⓢ CS13AE1R2K	1.2	20	.286	.422	.135	1.34	Ⓢ CS13AF180K	18.0	35	.686	.822	.289	2.57
Ⓢ CS13AE1R5K	1.5	20	.286	.422	.135	1.34	Ⓢ CS13AF220K	22.0	35	.686	.822	.289	2.57
Ⓢ CS13AE1R8K	1.8	20	.286	.422	.135	1.34	Ⓢ CS13AF270K	27.0	35	.786	.922	.351	4.60
Ⓢ CS13AE2R2K	2.2	20	.286	.422	.135	1.34	Ⓢ CS13AF330K	33.0	35	.786	.922	.351	4.60
Ⓢ CS13AE8R2K	8.2	20	.474	.610	.185	1.56	Ⓢ CS13AF390K	39.0	35	.786	.922	.351	4.75
Ⓢ CS13AE100K	10.0	20	.474	.610	.185	1.56	Ⓢ CS13AF470K	47.0	35	.786	.922	.351	4.75
Ⓢ CS13AE120K	12.0	20	.474	.610	.185	1.56							
Ⓢ CS13AE150K	15.0	20	.474	.610	.185	1.56							
Ⓢ CS13AE270K	27.0	20	.686	.822	.289	2.23							
Ⓢ CS13AE330K	33.0	20	.686	.822	.289	2.23							
Ⓢ CS13AE390K	39.0	20	.686	.822	.289	2.23							

\*When ordering capacitors without sleeves, change type designation to CS12 and deduct .01" from diameter, .036" from length and \$.02 from net price.

†Prices for larger quantities are available on request.

Note: Standard Tolerance is  $\pm 10\%$ .

### Ⓢ STANDARD STOCK ITEMS



SANGAMO ELECTRIC COMPANY

## capacitors



ELECTRONIC COMPONENTS

## Type DR and RR

SILVER MICA, 500 W.V.D.C.  
(MILITARY CM15)

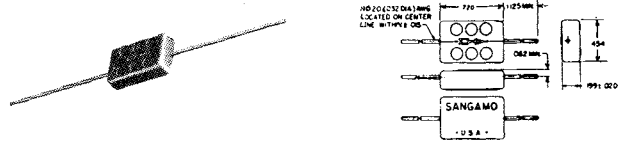
Type DR and RR capacitors are molded in red Humiditite and are normally supplied to  $\pm 5\%$  tolerance, "C" characteristic up to 20 mmf. Characteristic "E" is supplied on units above 20 mmf. unless specified otherwise. **FOR MORE COMPLETE INFORMATION WRITE FOR BULLETIN 2320.**



## TY Type KR

SILVER MICA, 500 W.V.D.C.  
(MILITARY CM20)

Type KR capacitors are molded in red Humiditite and are normally supplied to  $\pm 5\%$  tolerance "C" characteristic up to 20 mmf. Characteristic "E" is supplied on units above 20 mmf. unless specified otherwise. **FOR MORE COMPLETE INFORMATION WRITE FOR BULLETIN 2320.**



Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
DR5C010	CM15C010 †	1	\$ 0.30		
DR5C020	CM15C020 †	2	0.30		
DR5C030	CM15C030 †	3	0.30		
DR5C050	CM15C050 †	5	0.30		
DR5C100	CM15C100	10	0.30		
DR5C120	CM15C120	12	0.30		
DR5C150	CM15C150	15	0.30		
DR5C180	CM15C180	18	0.30		
DR5C200	CM15C200	20	0.30		
DR5C220	CM15C220	22	0.30		
DR5E240	CM15E240	24	0.30		
DR5E270	CM15E270	27	0.30	\$ 0.36	
DR5E300	CM15E300	30	0.30	0.36	
DR5E330	CM15E330	33	0.30	0.36	
DR5E360	CM15E360	36	0.30	0.36	
DR5E390	CM15E390	39	0.30	0.36	
DR5E430	CM15E430	43	0.30	0.36	
DR5E470	CM15E470	47	0.30	0.36	
DR5E500	CM15E500	50	0.30	0.36	\$ 0.43
DR5E510	CM15E510	51	0.30	0.36	0.43
DR5E560	CM15E560	56	0.30	0.36	0.43
DR5E620	CM15E620	62	0.30	0.36	0.43
DR5E680	CM15E680	68	0.30	0.36	0.43
DR5E750	CM15E750	75	0.30	0.36	0.43
DR5E820	CM15E820	82	0.30	0.36	0.43
DR5E910	CM15E910	91	0.30	0.36	0.43
DR5E101	CM15E101	100	0.30	0.36	0.43
DR5E111	CM15E111	110	0.35	0.42	0.50
DR5E121	CM15E121	120	0.35	0.42	0.50
DR5E131	CM15E131	130	0.35	0.42	0.50
DR5E151	CM15E151	150	0.35	0.42	0.50
DR5E161	CM15E161	160	0.40	0.48	0.57
DR5E181	CM15E181	180	0.40	0.48	0.57
DR5E201	CM15E201	200	0.40	0.48	0.57
DR5E221	CM15E221	220	0.45	0.54	0.65
DR5E241	CM15E241	240	0.45	0.54	0.65
DR5E251	CM15E251	250	0.45	0.54	0.65
DR5E271	CM15E271	270	0.50	0.60	0.72
DR5E301	CM15E301	300	0.50	0.60	0.72
DR5E331	CM15E331	330	0.55	0.66	0.79
DR5E361	CM15E361	360	0.60	0.72	0.86
DR5E391	CM15E391	390	0.65	0.78	0.94
DR5E431	CM15E431	430	0.70	0.84	1.01
DR5E471	CM15E471	470	0.75	0.90	1.08
DR5E501		500	0.80	0.96	1.15
DR5E511		510	0.80	0.96	1.15
DR5E561		560*	0.80	0.96	1.15
DR5E621		620**	0.85	1.02	1.22
DR5E681		680**	0.90	1.08	1.30
DR5E751		750**	0.95	1.14	1.37
DR5E821		820**	1.00	1.20	1.44

Minimum tolerance  $\pm 1/2$  mmf.For  $\pm 1/2\%$  tolerance (above 100 mmf, double 5% list price).

Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
KR5C050	CM20C050 †	5	\$ 0.30		
KR5C100	CM20C100	10	0.30		
KR5C120	CM20C120	12	0.30		
KR5C150	CM20C150	15	0.30		
KR5C180	CM20C180	18	0.30		
KR5C200	CM20C200	20	0.30		
KR5C220	CM20C220	22	0.30		
KR5C240	CM20C240	24	0.30		
KR5C270	CM20C270	27	0.30	\$ 0.33	
KR5C300	CM20C300	30	0.30	0.33	
KR5C330	CM20C330	33	0.30	0.33	
KR5C360	CM20C360	36	0.30	0.33	
KR5C390	CM20C390	39	0.30	0.33	
KR5C430	CM20C430	43	0.30	0.33	
KR5C470	CM20C470	47	0.30	0.33	
KR5C500	CM20C500	50	0.30	0.33	\$ 0.42
KR5C510	CM20C510	51	0.30	0.33	0.42
KR5C560	CM20C560	56	0.30	0.33	0.42
KR5C620	CM20C620	62	0.30	0.33	0.42
KR5C680	CM20C680	68	0.30	0.33	0.42
KR5C750	CM20C750	75	0.30	0.33	0.42
KR5C820	CM20C820	82	0.30	0.33	0.42
KR5C910	CM20C910	91	0.30	0.33	0.42
KR5C101	CM20C101	100	0.30	0.33	0.42
KR5C111	CM20C111	110	0.35	0.39	0.49
KR5C121	CM20C121	120	0.35	0.39	0.49
KR5C131	CM20C131	130	0.35	0.39	0.49
KR5C151	CM20C151	150	0.35	0.39	0.49
KR5C161	CM20C161	160	0.35	0.39	0.49
KR5C181	CM20C181	180	0.35	0.39	0.49
KR5D201	CM20C201	200	0.35	0.39	0.49
KR5D221	CM20C221	220	0.35	0.39	0.49
KR5D241	CM20C241	240	0.40	0.44	0.56
KR5D251	CM20C251	250	0.40	0.44	0.56
KR5D271	CM20C271	270	0.45	0.50	0.63
KR5D301	CM20C301	300	0.45	0.50	0.63
KR5D331	CM20C331	330	0.45	0.50	0.63
KR5D361	CM20C361	360	0.50	0.55	0.70
KR5D391	CM20C391	390	0.50	0.55	0.70
KR5D431	CM20C431	430	0.50	0.55	0.70
KR5D471	CM20C471	470	0.55	0.61	0.77
KR5D501	CM20C501	500	0.55	0.61	0.77
KR5D511	CM20C511	510	0.55	0.61	0.77
KR5D561	CM20C561	560	0.55	0.61	0.77
KR5D621	CM20C621	620	0.60	0.66	0.84
KR5D681	CM20C681	680	0.60	0.66	0.84
KR5D751	CM20C751	750	0.65	0.72	0.91
KR5D821	CM20C821	820	0.70	0.77	0.98
KR5D911	CM20C911	910	0.70	0.77	0.98
KR5E102	CM20C102	1000	0.75	0.83	1.05
KR5E112	CM20C112	1100	0.75	0.83	1.05
KR5E122	CM20C122	1200	0.80	0.88	1.12
KR5E132	CM20C132	1300	0.80	0.88	1.12
KR5E152	CM20C152	1500	0.85	0.94	1.19

\* Rated voltage 300 W.V.D.C.

\*\*Rated voltage 100 W.V.D.C.

# SANGAMO ELECTRIC COMPANY

# capacitors



## TYPE KR CONTINUED

Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
KR5E162	CM20C162	1600	\$ 0.85	\$0.94	\$ 1.19
KR5E182	CM20C182	1800	1.00	1.10	1.40
KR3E202	CM20C202	2000	1.10	1.21	1.54
KR3E222	CM20C222	2200	1.20	1.32	1.68
KR3E242	CM20C242	2400	1.25	1.38	1.75
KR3E252	CM20C252	2500	1.30	1.43	1.82
KR3E272	CM20C272	2700	1.40	1.54	1.96
KR3E302	CM20C302	3000*	1.50	1.65	2.10
KR1E332	CM20C332	3300**	1.60	1.75	2.24
KR1E352	CM20C352	3500**	1.75	1.92	2.45

‡ Minimum tolerance  $\pm 1/2$  mmf.

For  $\pm 1/2\%$  tolerance (above 100 mmf) double 5% list price.

\* Rated voltage 300 W.V.D.C.

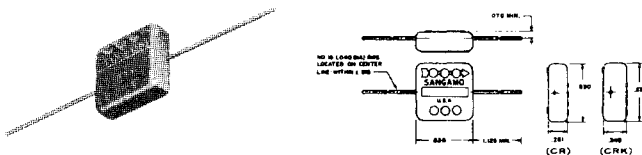
\*\* Rated voltage 100 W.V.D.C.

## Type CR

### SILVER MICA

### (MILITARY CM30)

Types CR and CRK silvered mica capacitors are molded in red Humiditte and are normally supplied to  $\pm 5\%$  capacitive tolerance and characteristic "E". Characteristics C, D and F are also available on request. When the thicker case size is required in higher capacitive values, the type designation changes to CRK (example: CRK5E362). **FOR MORE COMPLETE INFORMATION WRITE FOR BULLETIN 2320.**



Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
CR5E511	CM30E511	510	\$ 0.70	\$0.81	\$0.88
CR5E561	CM30E561	560	0.75	0.86	0.95
CR5E621	CM30E621	620	0.75	0.86	0.94
CR5E681	CM30E681	680	0.80	0.92	1.00
CR5E751	CM30E751	750	0.80	0.92	1.00
CR5E821	CM30E821	820	0.85	0.98	1.06
CR5E911	CM30E911	910	0.90	1.04	1.13
CR5E102	CM30E102	1,000	1.00	1.15	1.25
CR5E112	CM30E112	1,100	1.00	1.15	1.25
CR5E122	CM30E122	1,200	1.15	1.32	1.44
CR5E132	CM30E132	1,300	1.15	1.32	1.44
CR5E152	CM30E152	1,500	1.25	1.44	1.56
CR5E162	CM30E162	1,600	1.25	1.44	1.56
CR5E182	CM30E182	1,800	1.25	1.44	1.56
CR5E202	CM30E202	2,000	1.35	1.55	1.69
CR5E222	CM30E222	2,200	1.35	1.55	1.69
CR5E242	CM30E242	2,400	1.60	1.84	2.00
CR5E252	CM30E252	2,500	1.60	1.84	2.00
CR5E272	CM30E272	2,700	1.80	2.07	2.25
CR5E302	CM30E302	3,000	1.90	2.19	2.38
CR5E332	CM30E332	3,300	1.90	2.19	2.38
CR5E362		3,600	2.00	2.30	2.50
CR5E392		3,900	2.00	2.30	2.50
CR5E432		4,300	2.10	2.42	2.63

## TYPE CR CONTINUED

Catalog Number	Military Designation	Cap. (mmf)	5% (J)	2% (G)	1% (F)
CR5E472		4,700	2.10	2.42	2.63
CR5E502		5,000	2.15	2.47	2.69
CR5E512		5,100	2.15	2.47	2.69
CR5E562		5,600	2.25	2.59	2.81
CR5E622		6,200	2.40	2.76	3.00
CR3E682		6,800*	2.65	3.05	3.31
CR3E752		7,500*	2.80	3.22	3.50
CR3E802		8,000*	2.95	3.38	3.68
CR3E822		8,200*	3.00	3.45	3.75
CR3E902	CM30E902	9,000*	3.20	3.68	4.00
CR3E103		10,000*	3.50	4.03	4.38

\*Rated Voltage 300 W.V.D.C.

## Type CRK

### SILVER MICA

### (MILITARY CM35)

Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
CRK5E362	CM35E362	3,600	\$ 2.00	\$2.30	\$ 2.50
CRK5E392	CM35E392	3,900	2.00	2.30	2.50
CRK5E432	CM35E432	4,300	2.10	2.42	2.63
CRK5E472	CM35E472	4,700	2.10	2.42	2.63
CRK5E502	CM35E502	5,000	2.15	2.47	2.69
CRK5E512	CM35E512	5,100	2.15	2.47	2.69
CRK5E562	CM35E562	5,600	2.25	2.59	2.81
CRK5E622	CM35E622	6,200	2.40	2.76	3.00
CRK5E682	CM35E682	6,800	2.90	3.34	3.62
CRK5E752	CM35E752	7,500	3.05	3.51	3.81
CRK5E822	CM35E822	8,200	3.30	3.80	4.13
CRK5E912	CM35E912	9,100	3.50	4.03	4.38
CRK5E103	CM35E103	10,000	3.85	4.43	4.81
CRK5E123		12,000	3.90	4.49	4.88
CRK3E153		15,000*	4.80	5.52	6.00
CRK3E163		16,000*	5.10	5.87	6.38

Note: For  $\pm 1/2\%$  tolerance, double 5% list price.

\* Rated voltage 300 W.V.D.C.

## Type D15, D19, D20, D30, and D42

### DIPPED SILVER MICA CAPACITORS

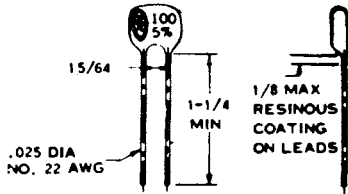
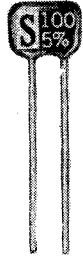
Sangamo Type D dipped Mica capacitors are available in five case sizes: D15, D19, D20, D30 and D42. With the exception of the Type D20 they correspond to the MIL-C-5B sizes CM05, CM06, CM07 and CM08 respectively. These units utilize silvered mica sections encased in several coatings of electrical grade phenolic and epoxy resins. All commercial units meet or exceed the applicable requirements of MIL-C-5 and are normally furnished to a capacitive tolerance of  $\pm 5\%$  and characteristic F. **FOR MORE COMPLETE INFORMATION WRITE FOR BULLETIN 2323.**

**SANGAMO ELECTRIC COMPANY**  
**capacitors**

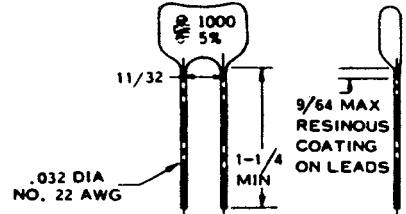
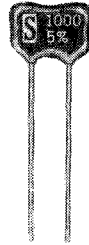


ELECTRONIC COMPONENTS

**Type D15**  
**(MILITARY CM05)**



**Type D19**  
**(MILITARY CM06)**



Catalog Number	Military Designation	CAP (mmf)	5% (J)	2% (G)	1% (F)
D155C010		1 ±	\$ 0.28		
D155C020		2 ±	0.28		
D155C030		3 ±	0.28		
D155C050	CM04C050	5 ±	0.28		
D155C060	CM05C060	6 ±	0.28		
D155C070	CM05C070	7 ±	0.28		
D155C080	CM05C080	8 ±	0.28		
D155C100	CM05C100	10	0.28		
D155C120	CM05C120	12	0.28		
D155C150		15	0.28		
D155C180	CM05C180	18	0.28		
D155E200	CM05C200	20	0.28		
D155E220	CM05-220	22	0.28		
D155E240	CM05-240	24	0.28		
D155E270	CM05-270	27	0.28	\$ 0.33	
D155E300	CM05-300	30	0.28	0.33	
D155E330	CM05-330	33	0.28	0.33	
D155E360	CM05-360	36	0.28	0.33	
D155E390	CM05-390	39	0.28	0.33	
D155E430	CM05-430	43	0.28	0.33	
D155E470	CM05-470	47	0.28	0.33	
D155E500		50	0.28	0.33	\$ 0.40
D155F510	CM05-510	51	0.28	0.33	0.40
D155F560	CM05-560	56	0.28	0.33	0.40
D155F620	CM05-620	62	0.28	0.33	0.40
D155F680	CM05-680	68	0.28	0.33	0.40
D155F750	CM05-750	75	0.28	0.33	0.40
D155F820	CM05-820	82	0.28	0.33	0.40
D155F910	CM05-910	91	0.28	0.33	0.40
D155F101	CM05-101	100	0.28	0.33	0.40
D155D111	CM05-111	110	0.33	0.39	0.48
D155F121	CM05-121	120	0.33	0.39	0.48
D155F131	CM05-131	130	0.33	0.39	0.48
D155F151	CM05-151	150	0.33	0.39	0.48
D155F161	CM05-161	160	0.39	0.46	0.56
D155F181	CM05-181	180	0.39	0.46	0.56
D155F201	CM05-201	200	0.39	0.46	0.56
D155F221	CM05-221	220	0.44	0.52	0.64
D155F241	CM05-241	240	0.44	0.52	0.64
D155F251		250	0.44	0.52	0.64
D155F271	CM05-271	270	0.50	0.59	0.72
D155F301	CM05-301	300	0.50	0.59	0.72
D155F331	CM05-331	330	0.55	0.65	0.80
D155F361	CM05-361	360	0.55	0.65	0.80
D155F391	CM05-391	390	0.61	0.72	0.88
D155F431		430	0.61	0.72	0.88
D155F471		470	0.66	0.78	0.96
D155F501		500	0.66	0.78	0.96
D155F511		510	0.66	0.78	0.96
D153F561		560*	0.72	0.85	1.04
D153F621		620*	0.77	0.91	1.12
D153F681		680*	0.83	0.98	1.20
D153F751		750*	0.88	1.04	1.28
D153F821		820*	0.94	1.11	1.36
D151F911		910**	1.05	1.24	1.43
D151F102		1,000**	1.10	1.30	1.60

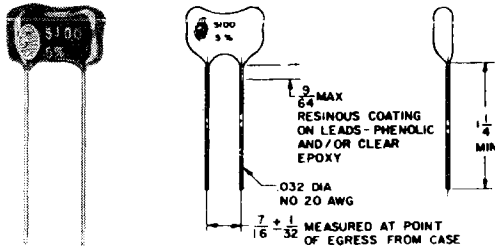
Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
D195F101		100	\$ 0.28	\$ 0.30	\$ 0.38
D195F111		110	0.33	0.36	0.45
D195F121		120	0.33	0.36	0.45
D195F131		130	0.33	0.36	0.45
D195F151		150	0.33	0.36	0.45
D195F161		160	0.33	0.36	0.45
D195F181		180	0.33	0.36	0.45
D195F201		200	0.33	0.36	0.45
D195F221		220	0.33	0.36	0.45
D195F241		240	0.39	0.42	0.53
D195F251		250	0.39	0.42	0.53
D195F271		270	0.44	0.48	0.60
D195F301		300	0.44	0.48	0.60
D195F331		330	0.44	0.48	0.60
D195F361		360	0.50	0.54	0.68
D195F391		390	0.50	0.54	0.68
D195F431	CM06-431	430	0.50	0.54	0.68
D195F471	CM06-471	470	0.55	0.60	0.75
D195F501		500	0.55	0.60	0.75
D195F511	CM06-511	510	0.55	0.60	0.75
D195F561	CM06-561	560	0.61	0.66	0.83
D195F621	CM06-621	620	0.61	0.66	0.83
D195F681	CM06-681	680	0.66	0.72	0.90
D195F751	CM06-751	750	0.66	0.72	0.90
D195F821	CM06-821	820	0.66	0.72	0.90
D195F911	CM06-911	910	0.72	0.78	0.98
D195F102	CM06-102	1,000	0.77	0.84	1.05
D195F112	CM06-112	1,100	0.77	0.84	1.05
D195F122	CM06-122	1,200	0.83	0.90	1.13
D195F132	CM06-132	1,300	0.88	0.96	1.20
D195F152	CM06-152	1,500	0.94	1.02	1.28
D195F162	CM06-162	1,600	0.99	1.08	1.35
D195F182	CM06-182	1,800	1.10	1.20	1.50
D195F202	CM06-202	2,000	1.21	1.32	1.65
D195F222	CM06-222	2,200	1.32	1.44	1.80
D195F242	CM06-242	2,400	1.43	1.56	1.95
D195F252		2,500	1.49	1.62	2.03
D195F272	CM06-272	2,700	1.54	1.68	2.10
D195F302		3,000	1.65	1.80	2.25
D195F332	CM06-332	3,300	1.76	1.92	2.40
D195F362	CM06-362	3,600	1.87	2.04	2.55
D195F392	CM06-392	3,900	1.98	2.16	2.70
D195F432	CM06-432	4,300	1.98	2.16	2.70
D195F472	CM06-472	4,700	2.09	2.28	2.85
D195F502		5,000	2.20	2.40	3.00
D195F512		5,100	2.20	2.40	3.00
D193F562		5,600*	2.31	2.52	3.15
D193F622		6,200*	2.42	2.64	3.30
D193F682		6,800*	2.53	2.76	3.45
D191F752		7,500**	2.42	2.64	3.30
D191F822		8,200**	2.75	3.00	3.75

Note: Minimum tolerance ± 1/2 mmf.  
For ± 1/2% tolerance, double 5% list price.  
\*Rated voltage 300 W.V.D.C.  
\*\* Rated voltage 100 W.V.D.C.

SANGAMO ELECTRIC COMPANY  
**capacitors**

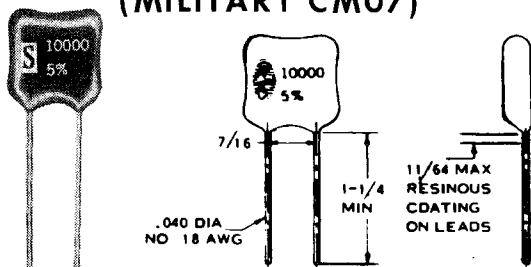


**Type D20**  
(NON MILITARY)



Catalog Number	CAP. (mmf)	5% (J)	2% (G)	1% (F)
D205F681	680	\$0.55	\$0.60	\$0.75
D205F751	750	0.55	0.60	0.75
D205F821	820	0.55	0.60	0.75
D205F911	910	0.61	0.66	0.83
D205F102	1,000	0.66	0.72	0.90
D205F112	1,100	0.66	0.72	0.90
D205F122	1,200	0.72	0.88	0.98
D205F132	1,300	0.77	0.84	1.05
D205F152	1,500	0.83	0.90	1.13
D205F162	1,600	0.88	0.96	1.20
D205F182	1,800	0.99	1.08	1.35
D205F202	2,000	1.05	1.14	1.43
D205F222	2,200	1.16	1.26	1.58
D205F242	2,400	1.21	1.32	1.65
D205F252	2,500	1.21	1.32	1.65
D205F272	2,700	1.32	1.44	1.80
D205F302	3,000	1.43	1.56	1.95
D205F332	3,300	1.54	1.68	2.10
D205F362	3,600	1.65	1.80	2.25
D205F392	3,900	1.76	1.92	2.40
D205F432	4,300	1.87	2.04	2.55
D205F472	4,700	1.78	2.16	2.70
D205F502	5,000	2.09	2.28	2.85
D205F512	5,100	2.15	2.34	2.93
D205F562	5,600	2.20	2.40	3.00
D205F622	6,200	2.20	2.40	3.00
D205F682	6,800	2.31	2.52	3.15
D205F752	7,500	2.42	2.64	3.30
D205F822	8,200	2.64	2.88	3.60
D205F912	9,100	2.97	3.24	4.05
D205F103	10,000	3.30	3.60	4.50

**Type D30**  
(MILITARY CM07)



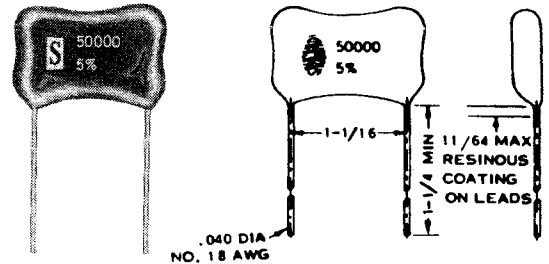
Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
D305F432		4,300	\$ 1.76	\$ 1.92	\$ 2.08
D305F472		4,700	1.87	2.04	2.21
D305F502		5,000	1.93	2.10	2.28
D305F512	CM07-512	5,100	1.93	2.10	2.28
D305F562	CM07-562	5,600	1.98	2.16	2.34
D305F622	CM07-622	6,200	2.09	2.28	2.47

**TYPE D30 CONTINUED**

Catalog Number	Military Designation	CAP (mmf)	5% (J)	2% (G)	1% (F)
D305F682	CM07-682	6,800	\$2.31	\$2.52	\$2.73
D305F752	CM07-752	7,500	2.53	2.76	2.99
D305F822	CM07-822	8,200	2.75	3.00	3.25
D305F912	CM07-912	9,100	2.97	3.24	3.51
D305F103	CM07-103	10,000	3.30	3.60	3.90
D305F113	CM07-113	11,000	3.58	3.90	4.23
D305F123	CM07-123	12,000	3.85	4.20	4.55
D305F133	CM07-133	13,000	4.13	4.50	4.88
D305F153	CM07-153	15,000	4.68	5.10	5.53
D305F163	CM07-163	16,000	4.95	5.40	5.85
D305F183	CM07-183	18,000	5.50	6.00	6.50
D305F203	CM07-203	20,000	6.05	6.60	7.15
D305F223		22,000	6.27	6.84	7.41
D303F243		24,000*	6.77	7.38	8.00
D303F253		25,000*	7.04	7.68	8.32
D303F273		27,000*	7.54	8.22	8.91
D303F303		30,000*	8.25	9.00	9.75
D301F333		33,000**	9.08	9.90	10.73
D301F363		36,000**	9.90	10.80	11.70
D301F403		40,000**	10.98	12.11	13.05

Note: For ± 1/2% tolerance, double 5% list price.  
\*Rated voltage 300 WVDC. \*\*Rated voltage 100 WVDC.

**Type D42**  
(MILITARY CM08)



Catalog Number	Military Designation	CAP. (mmf)	5% (J)	2% (G)	1% (F)
D425F103		10,000	\$3.30	\$3.80	\$4.13
D425F123		12,000	3.90	4.49	4.85
D425F133		13,000	4.20	4.83	5.25
D425F153		15,000	4.80	5.52	6.00
D425F163		16,000	5.10	5.87	6.38
D425F183		18,000	5.70	6.56	7.13
D425F203		20,000	6.30	7.25	7.88
D425F223	CM08-223	22,000	6.90	7.94	8.63
D425F243	CM08-243	24,000	7.50	8.63	9.38
D425F253		25,000	7.80	8.97	9.75
D425F273	CM08-273	27,000	\$8.40	\$9.66	10.50
D425F303	CM08-303	30,000	9.30	10.70	11.63
D425F333	CM08-333	33,000	10.20	11.73	12.75
D425F363	CM08-363	36,000	11.10	12.77	13.88
D425F393	CM08-393	39,000	12.00	13.80	15.00
D425F433	CM08-433	43,000	13.00	14.95	16.25
D425F473	CM08-473	47,000	14.01	16.10	17.50
D423F473		47,000*	11.00	12.65	13.75
D425F503		50,000	14.70	17.02	18.55
D423F503		50,000*	12.80	14.72	16.00
D425F513		51,000	15.10	17.30	18.88
D423F513	CM08-423	51,000*	13.10	15.07	16.38
D423F563	CM08-563	56,000*	14.20	16.33	17.75
D423F623	CM08-623	62,000*	15.60	17.94	19.50
D423F683		68,000**	17.00	19.55	21.25
D421F753		75,000**	18.70	21.51	23.38
D421F823		82,000**	20.40	23.46	25.50
D421F913		91,000**	22.44	25.81	28.05

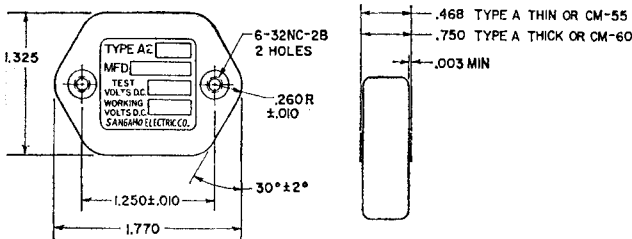
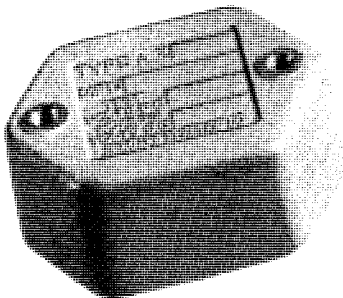
Note: For ± 1/2% tolerance, double 5% list price.  
\*Rated voltage 300 W.V.D.C.  
\*\*Rated voltage 100 W.V.D.C.

# SANGAMO ELECTRIC COMPANY capacitors



## Type A MICA CAPACITORS

The Type A mica dielectric capacitor is molded in Thermosetting Plastic case with threaded insert terminals. Unless otherwise specified, units are supplied in  $\pm 10\%$  capacitive tolerance and "B" characteristic per MIL-C-5. For more complete information write for Bulletin 2321.



Catalog Number	Military Type Designation	Cap. (Mfd)	Rated Volts d-c	Net Price 1-9*
A-1450	-----	.00005	600	\$ 0.63
A-1310	-----	.0001	600	0.63
A-1315	-----	.00015	600	0.63
A-1320	-----	.0002	600	0.63
A-1325	-----	.00025	600	0.63
A-1350	-----	.0005	600	0.63
A-1210	-----	.001	600	0.63
A-1220	-----	.002	600	0.71
A-1240	-----	.004	600	0.86
A-1250	-----	.005	600	0.917
A-1260	-----	.006	600	0.96
A-1280	-----	.008	600	1.08
A-1110	-----	.01	600	1.22
A-1115	-----	.015	600	1.32
A-1118	CM55B183K	.018	600	1.47
A-1120	CM55B203K	.02	600	1.55
A-1122	CM55B223K	.022	600	1.68
A-1125	-----	.025	600	1.89
A-1127	CM55B273K	.027	600	1.93
A-1130	CM55B303K	.03	600	1.97
A-1133	CM55B333K	.033	600	2.13
A-1140	-----	.04	600	2.54
A-1143	CM60B433K	.043	600	2.73
A-1147	CM60B473K	.047	600	2.93
A-1150	-----	.05	600	3.09
A-1160	-----	.06	600	3.51
A-1170	-----	.07	600	4.00
A-2450	-----	.00005	1200	0.675
A-2310	-----	.0001	1200	0.705
A-2315	-----	.00015	1200	0.705
A-2320	-----	.0002	1200	0.705
A-2325	-----	.00025	1200	0.705
A-2350	-----	.0005	1200	0.705
A-2210	-----	.001	1200	0.834
A-2215	-----	.0015	1200	0.938
A-2220	-----	.002	1200	1.10
A-2225	-----	.0025	1200	1.22

Catalog Number	Military Type Designation	Cap. (Mfd)	Rated Volts d-c	Net Price 1-9*
A-2240	-----	.004	1200	\$ 1.34
A-2250	-----	.005	1200	1.43
A-2256	CM55B562K	.0056	1200	1.47
A-2260	-----	.006	1200	1.50
A-2268	CM55B682K	.0068	1200	1.61
A-2280	-----	.008	1200	1.79
A-2291	CM55B912K	.0091	1200	1.90
A-2110	CM55B103K	.01	1200	2.05
A-2113	CM55B133K	.013	1200	2.32
A-2115	-----	.015	1200	2.53
A-2118	CM60B183K	.018	1200	2.86
A-2120	CM60B203K	.02	1200	3.07
A-2122	CM60B223K	.022	1200	3.25
A-2125	-----	.025	1200	3.43
A-2127	CM60B273K	.027	1200	3.47
A-2130	CM60B303K	.03	1200	3.52
A-2133	CM60B333K	.033	1200	3.57
A-5427	CM55B270K	.000027	2500	0.834
A-5443	CM55B430K	.000043	2500	0.834
A-5447	CM55B470K	.000047	2500	0.834
A-5450	-----	.000050	2500	0.834
A-5451	CM55B510K	.000051	2500	0.834
A-5456	CM55B560K	.000056	2500	0.834
A-5475	CM55B750K	.000075	2500	0.834
A-5482	CM55B820K	.000082	2500	0.834
A-5310	CM55B101K	.0001	2500	0.834
A-5315	CM55B151B	.00015	2500	0.834
A-5318	CM55B181K	.00018	2500	0.834
A-5320	CM55B201K	.0002	2500	0.834
A-5324	CM55B241K	.00024	2500	0.914
A-5330	CM55B301K	.0003	2500	0.973
A-5347	CM55B471K	.00047	2500	1.08
A-5350	-----	.0005	2500	1.11
A-5351	CM55B511K	.00051	2500	1.12
A-5368	CM55B681K	.00068	2500	1.18
A-5375	CM55B751K	.00075	2500	1.20
A-5382	CM55B821K	.00082	2500	1.22
A-5210	CM55B102K	.001	2500	1.28
A-5215	CM55B152K	.0015	2500	1.44
A-5218	CM55B182K	.0018	2500	1.62
A-5220	CM55B202K	.002	2500	1.74
A-5222	CM55B222K	.0022	2500	1.85
A-5225	-----	.0025	2500	2.01
A-5230	CM55B302K	.003	2500	2.21
A-5233	CM55B332K	.0033	2500	2.28
A-5240	-----	.004	2500	2.46
A-5247	CM60B472K	.0047	2500	2.60
A-5250	-----	.005	2500	2.70
A-5268	CM60B682K	.0068	2500	2.85
A-5280	-----	.008	2500	2.98
A-5282	CM60B822K	.0082	2500	3.00
A-5110	CM60B103K	.01	2500	3.16
A-5115	CM60B153K	.015	2500	3.51
A-5116	CM60B163K	.016	2500	3.59

\*Prices for larger quantities are available on request.

Note: Prices for closer tolerances and other characteristics are available on request.

**(S) STANDARD STOCK ITEMS**







SANGAMO ELECTRIC COMPANY

# capacitors



ELECTRONIC COMPONENTS

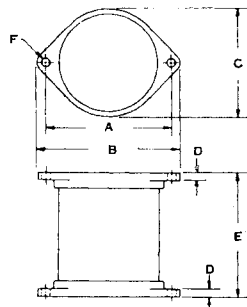
## Types G1-G2-G3-G4-G5 MICA



Type G ceramic cased capacitors are intended for service where high voltage and R.F. current ratings are required, such as in commercial transmitting or induction heating applications. All possible steps are taken in design and manufacturing operations to insure permanence of quality. Terminal plates are designed to permit any usual connecting or mounting practices. Case sizes are in accordance with Mil-C-5C specification covering type CM75, 80, 85, 90 and 95. **For more complete information write for Bulletin 2322.**

### TYPE G MICA CAPACITOR DIMENSIONS - INCHES

Type	A	B	C	D	E	F
G1	3/4	3-13/16	2-13/16	1/4	2 1/2	17/64
G2	4 1/4	5	3 1/2	1/4	3	.272
G3	5 3/4	6 1/2	5	3/8	4	.377
G4	5 3/4	6 1/2	5	3/8	5 1/4	.377
G5	B	9	6 3/4	1/2	10	13/32



TYPES G1, G2, G3, G4 and G5

Catalog Number	Military Type Designation	Cap. (Mfd)	Peak Volts d-c	Net Price 1-9*
<b>Type G1</b>				
G1-641	-----	.00001	6000	\$16.07
G1-631	CM75B101J	.0001	6000	16.07
(S) G1-63125	-----	.000125	6000	16.07
(S) G1-6315	CM75B151J	.00015	6000	16.07
(S) G1-632	CM75B201J	.0002	6000	16.07
(S) G1-6325	-----	.00025	6000	16.07
(S) G1-633	CM75B301J	.0003	6000	17.68
(S) G1-634	-----	.0004	6000	17.68
(S) G1-635	-----	.0005	6000	18.47
(S) G1-621	CM75B102J	.001	6000	18.47
(S) G1-6215	CM75B152J	.0015	6000	19.37
(S) G1-622	CM75B202J	.002	6000	19.37
(S) G1-623	CM75B302J	.003	6000	20.04
(S) G1-624	-----	.004	6000	20.04
(S) G1-625	-----	.005	6000	20.04
(S) G1-511	-----	.01	5000	20.37
(S) G1-411	CM75B103J	.01	4000	20.37
G1-312	-----	.02	3000	20.37
<b>Type G2</b>				
(S) G2-10451	CM80B510J	.000051	10,000	25.08
(S) G2-1031	CM80B101J	.0001	10,000	25.96
(S) G2-10315	CM80B151J	.00015	10,000	25.96
(S) G2-1032	CM80B201J	.0002	10,000	25.96
(S) G2-10325	-----	.00025	10,000	25.96
(S) G2-1033	CM80B301J	.0003	10,000	25.96
(S) G2-1035	-----	.0005	10,000	25.96
(S) G2-1021	CM80B102J	.001	10,000	25.96
(S) G2-10215	CM80B152J	.0015	10,000	25.96
(S) G2-1022	CM80B202J	.002	10,000	25.96
(S) G2-823	CM80B302J	.003	8,000	25.96
(S) G2-824	-----	.004	8,000	25.96
(S) G2-525	-----	.005	5,000	25.96
G2-526	-----	.006	5,000	27.38
G2-528	-----	.008	5,000	27.38
(S) G2-511	CM80B103J	.01	5,000	27.38
G2-213	CM80B303J	.03	2,000	27.38
G2-1511	CM80B104J	.01	1,500	27.38
<b>Type G3</b>				
G3-2045	-----	.00005	20,000	43.92
(S) G3-2031	CM85B101J	.0001	20,000	47.92
(S) G3-20315	CM85B151J	.00015	20,000	51.91
(S) G3-2032	CM85B201J	.0002	20,000	51.91
(S) G3-20325	-----	.00025	20,000	51.91
(S) G3-2033	CM85B301J	.0003	20,000	51.91
(S) G3-2034	-----	.0004	20,000	54.30
(S) G3-2035	-----	.0005	20,000	54.30
G3-2036	-----	.0006	20,000	54.30
G3-2038	-----	.0008	20,000	54.30
(S) G3-2021	CM85B102J	.001	20,000	55.90

Catalog Number	Military Type Designation	Cap. (Mfd)	Peak Volts d-c	Net Price 1-9*
<b>Type G3 (Continued)</b>				
(S) G3-20215	-----	.0015	20,000	56.71
(S) G3-1522	CM85B202J	.002	15,000	56.71
(S) G3-1523	-----	.003	15,000	59.90
(S) G3-1524	-----	.004	15,000	59.90
(S) G3-1025	-----	.005	10,000	59.90
(S) G3-1026	-----	.006	10,000	59.90
(S) G3-1011	-----	.01	10,000	59.90
G3-512	CM85B203J	.02	5,000	59.90
G3-313	CM85B303J	.03	3,000	59.90
G3-3143	CM85B433J	.043	3,000	59.90
G3-201	CM85B104J	.1	2,000	59.90
<b>Type G4</b>				
G4-3043	-----	.00003	30,000	69.81
(S) G4-3031	CM90B101J	.0001	30,000	87.45
(S) G4-30315	CM90B151J	.00015	30,000	87.45
(S) G4-3032	CM90B201J	.0002	30,000	89.70
G4-30325	-----	.00025	30,000	91.95
G4-3033	CM90B301J	.0003	30,000	91.95
(S) G4-3034	-----	.0004	30,000	91.95
(S) G4-3035	-----	.0005	30,000	91.95
G4-3036	-----	.0006	30,000	91.95
(S) G4-3038	-----	.0008	30,000	91.95
(S) G4-3021	CM90B102J	.001	30,000	95.25
(S) G4-25215	CM90B152J	.0015	25,000	95.25
(S) G4-2022	CM90B202J	.002	20,000	95.25
(S) G4-2023	CM90B302J	.003	20,000	95.25
(S) G4-2024	-----	.004	20,000	97.43
(S) G4-1525	-----	.005	15,000	100.51
(S) G4-1011	CM90B103J	.01	10,000	113.28
G4-514	-----	.04	5,000	113.28
G4-301	CM90B104J	.1	3,000	113.28
<b>Type G5</b>				
G5-5045	-----	.00005	50,000	175.69
G5-3531	CM95B101J	.0001	35,000	183.68
G5-35315	CM95B151J	.00015	35,000	199.65
G5-3532	CM95B201J	.0002	35,000	199.65
G5-35325	-----	.00025	35,000	199.65
G5-3535	-----	.0005	35,000	215.62
G5-3536	-----	.0006	35,000	215.62
G5-3521	CM95B102J	.001	35,000	222.28
G5-3022	CM95B202J	.002	30,000	212.96
G5-30225	-----	.0025	30,000	216.95
G5-3023	CM95B302J	.003	30,000	224.94
G5-2524	-----	.004	25,000	235.55
G5-2026	-----	.006	20,000	235.55
G5-1528	-----	.008	15,000	235.55
G5-1511	CM95B103J	.01	15,000	235.55

\*Prices for larger quantities are available on request.  
 Note: Standard capacitive tolerance is ±5%, "B" characteristic  
 Note: Prices for closer tolerance and better characteristics available on request.

(S) STANDARD STOCK ITEMS

# SANGAMO ELECTRIC COMPANY

## capacitors




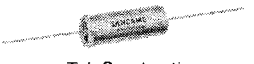


ELECTRONIC COMPONENTS

### Type S Subminiature Hermetically Sealed Metal Tubular Capacitors

Sangamo Type S capacitors are designed to meet the demands for a high quality, hermetically sealed paper tubular capacitor. They are encapsulated in brass tubular cases finished with a high tin content alloy. Hermetic sealing is accomplished by using glass-to-metal solder seal terminals. The impregnant used in these units is Ethern, an oil of high thermal stability and superior electrical characteristics over the temperature range of -55°C to +125°C. Sangamo Type S capacitors meet the case sizes and performance requirements of military specification MIL-C-25. The limited number of popular listings below are furnished with insulated sections. They are also available with grounded case if equipment requirements so dictate. The adjacent cross reference table will assist in the interpretation of Sangamo catalog nomenclatures with the various military types and case constructions.

For more complete information on other ratings, tolerances and voltages, write for Bulletin 2421.

Sangamo Type	Military Type	Description
SBA	CP04	Tab construction (without sleeve)
SBB	CP05	Tab construction (with sleeve)
SDA	CP08	Extended foil (without sleeve)
SDB	CP09	Extended foil (with sleeve)
SBC	CP10	Tab construction (with bracket)
SBE	CP11	Tab construction (with threaded mtg)
SDC	CP12	Extended foil (with bracket)
SDE	CP13	Extended foil (with threaded mtg)

Capacitance Tolerance ±10% †		 Tab Construction		 Tab Construction		 Extended Foil		 Extended Foil	
Cap. (Mfd)	Rated Volts d-c	Catalog Number	Net Price 1-9*	Catalog Number	Net Price 1-9*	Catalog Number	Net Price 1-9*	Catalog Number	Net Price 1-9*
.027	100	Ⓢ SBA1K01273K	\$1.76	Ⓢ SBB1K01273K	\$1.84	SDA1K01273K	\$1.96	SDB1K01273K	\$2.04
.033	100	Ⓢ SBA1K01333K	1.80	Ⓢ SBB1K01333K	1.84	Ⓢ SDA1K01333K	1.96	SDB1K01333K	2.04
.082	100	Ⓢ SBA1K01823K	1.92	Ⓢ SBB1K01823K	1.96	Ⓢ SDA1K01823K	2.00	Ⓢ SDB1K01823K	2.08
.1	100	Ⓢ SBA1K01104K	1.92	Ⓢ SBB1K01104K	2.00	Ⓢ SDA1K01104K	2.04	Ⓢ SDB1K01104K	2.08
.15	100	Ⓢ SBA1K01154K	1.92	Ⓢ SBB1K01154K	2.04	Ⓢ SDA1K01154K	2.04	Ⓢ SDB1K01154K	2.12
.22	100	Ⓢ SBA1K01224K	2.00	Ⓢ SBB1K01224K	2.16	Ⓢ SDA1K01224K	2.16	Ⓢ SDB1K01224K	2.20
.27	100	Ⓢ SBA1K01274K	2.04	Ⓢ SBB1K01274K	2.08	Ⓢ SDA1K01274K	2.24	Ⓢ SDB1K01274K	2.28
.33	100	Ⓢ SBA1K01334K	2.08	Ⓢ SBB1K01334K	2.16	Ⓢ SDA1K01334K	2.32	Ⓢ SDB1K01334K	2.40
.39	100	Ⓢ SBA1K01394K	2.16	Ⓢ SBB1K01394K	2.24	Ⓢ SDA1K01394K	2.36	Ⓢ SDB1K01394K	2.44
.47	100	Ⓢ SBA1K01474K	2.24	Ⓢ SBB1K01474K	2.32	Ⓢ SDA1K01474K	2.44	Ⓢ SDB1K01474K	2.52
.68	100	Ⓢ SBA1K01684K	2.36	Ⓢ SBB1K01684K	2.48	Ⓢ SDA1K01684K	2.56	Ⓢ SDB1K01684K	2.64
.82	100	Ⓢ SBA1K01824K	2.44	Ⓢ SBB1K01824K	2.52	Ⓢ SDA1K01824K	2.68	Ⓢ SDB1K01824K	2.80
1.0	100	Ⓢ SBA1K01105K	2.52	Ⓢ SBB1K01105K	2.64	Ⓢ SDA1K01105K	2.88	Ⓢ SDB1K01105K	2.96
.015	200	Ⓢ SBA1K02153K	1.84	Ⓢ SBB1K02153K	1.92	SDA1K02153K	2.00	SDB1K02153K	2.08
.022	200	Ⓢ SBA1K02223K	1.84	Ⓢ SBB1K02223K	1.92	Ⓢ SDA1K02223K	2.00	Ⓢ SDB1K02223K	2.08
.039	200	Ⓢ SBA1K02393K	1.92	Ⓢ SBB1K02393K	2.00	Ⓢ SDA1K02393K	2.04	Ⓢ SDB1K02393K	2.12
.047	200	Ⓢ SBA1K02473K	1.96	Ⓢ SBB1K02473K	2.00	Ⓢ SDA1K02473K	2.08	Ⓢ SDB1K02473K	2.12
.068	200	Ⓢ SBA1K02683K	1.96	Ⓢ SBB1K02683K	2.04	Ⓢ SDA1K02683K	2.08	Ⓢ SDB1K02683K	2.16
.1	200	Ⓢ SBA1K02104K	2.00	Ⓢ SBB1K02104K	2.08	Ⓢ SDA1K02104K	2.08	Ⓢ SDB1K02104K	2.16
.15	200	Ⓢ SBA1K02154K	2.04	Ⓢ SBB1K02154K	2.08	Ⓢ SDA1K02154K	2.20	Ⓢ SDB1K02154K	2.28
.22	200	Ⓢ SBA1K02224K	2.16	Ⓢ SBB1K02224K	2.20	Ⓢ SDA1K02224K	2.32	Ⓢ SDB1K02224K	2.40
.33	200	Ⓢ SBA1K02334K	2.28	Ⓢ SBB1K02334K	2.36	Ⓢ SDA1K02334K	2.48	Ⓢ SDB1K02334K	2.56
.39	200	Ⓢ SBA1K02394K	2.36	Ⓢ SBB1K02394K	2.44	Ⓢ SDA1K02394K	2.52	Ⓢ SDB1K02394K	2.64
.47	200	Ⓢ SBA1K02474K	2.44	Ⓢ SBB1K02474K	2.52	Ⓢ SDA1K02474K	2.64	Ⓢ SDB1K02474K	2.72
.68	200	Ⓢ SBA1K02684K	2.56	Ⓢ SBB1K02684K	2.64	Ⓢ SDA1K02684K	2.88	Ⓢ SDB1K02684K	2.96
.82	200	Ⓢ SBA1K02824K	2.56	Ⓢ SBB1K02824K	2.76	Ⓢ SDA1K02824K	2.92	Ⓢ SDB1K02824K	3.00
1.0	200	Ⓢ SBA1K02105K	2.80	Ⓢ SBB1K02105K	2.88	Ⓢ SDA1K02105K	3.00	Ⓢ SDB1K02105K	3.08
.0082	400	Ⓢ SBA1K04822K	1.88	Ⓢ SBB1K04822K	1.96	SDA1K04822K	2.04	SDB1K04822K	2.12
.01	400	Ⓢ SBA1K04103K	1.92	Ⓢ SBB1K04103K	1.96	SDA1K04103K	2.04	Ⓢ SDB1K04103K	2.12
.033	400	Ⓢ SBA1K04333K	2.00	Ⓢ SBB1K04333K	2.04	Ⓢ SDA1K04333K	2.12	Ⓢ SDB1K04333K	2.20
.047	400	Ⓢ SBA1K04473K	2.04	Ⓢ SBB1K04473K	2.12	Ⓢ SDA1K04473K	2.16	Ⓢ SDB1K04473K	2.24
.068	400	Ⓢ SBA1K04683K	2.08	Ⓢ SBB1K04683K	2.16	Ⓢ SDA1K04683K	2.24	Ⓢ SDB1K04683K	2.32
.082	400	Ⓢ SBA1K04823K	2.12	Ⓢ SBB1K04823K	2.16	Ⓢ SDA1K04823K	2.28	Ⓢ SDB1K04823K	2.36
.1	400	Ⓢ SBA1K04104K	2.16	Ⓢ SBB1K04104K	2.24	Ⓢ SDA1K04104K	2.32	Ⓢ SDB1K04104K	2.40
.15	400	Ⓢ SBA1K04154K	2.28	Ⓢ SBB1K04154K	2.36	Ⓢ SDA1K04154K	2.48	Ⓢ SDB1K04154K	2.56
.22	400	Ⓢ SBA1K04224K	2.44	Ⓢ SBB1K04224K	2.52	Ⓢ SDA1K04224K	2.60	Ⓢ SDB1K04224K	2.68
.33	400	Ⓢ SBA1K04334K	2.56	Ⓢ SBB1K04334K	2.64	Ⓢ SDA1K04334K	2.88	Ⓢ SDB1K04334K	2.96
.47	400	Ⓢ SBA1K04474K	2.80	Ⓢ SBB1K04474K	2.88	Ⓢ SDA1K04474K	3.00	Ⓢ SDB1K04474K	3.12
.68	400	Ⓢ SBA1K04684K	3.00	Ⓢ SBB1K04684K	3.08	SDA1K04684K	3.12	SDB1K04684K	3.24
.82	400	Ⓢ SBA1K04824K	3.16	Ⓢ SBB1K04824K	3.24	-----	-----	-----	-----
.0	400	Ⓢ SBA1K04105K	3.36	Ⓢ SBB1K04105K	3.48	-----	-----	-----	-----
.0015	600	Ⓢ SBA1K06152K	1.88	Ⓢ SBB1K06152K	1.92	Ⓢ SDA1K06152K	1.96	Ⓢ SDB1K06152K	2.00
.0022	600	Ⓢ SBA1K06222K	1.88	Ⓢ SBB1K06222K	1.92	Ⓢ SDA1K06222K	1.96	Ⓢ SDB1K06222K	2.04
.0047	600	Ⓢ SBA1K06472K	1.92	Ⓢ SBB1K06472K	1.96	Ⓢ SDA1K06472K	2.04	Ⓢ SDB1K06472K	2.12
.0068	600	Ⓢ SBA1K06682K	1.92	Ⓢ SBB1K06682K	2.00	Ⓢ SDA1K06682K	2.04	Ⓢ SDB1K06682K	2.12
.0082	600	Ⓢ SBA1K06822K	1.92	Ⓢ SBB1K06822K	2.04	Ⓢ SDA1K06822K	2.08	Ⓢ SDB1K06822K	2.12
.01	600	Ⓢ SBA1K06103K	1.96	Ⓢ SBB1K06103K	2.04	Ⓢ SDA1K06103K	2.08	Ⓢ SDB1K06103K	2.12
.015	600	Ⓢ SBA1K06153K	2.00	Ⓢ SBB1K06153K	2.08	Ⓢ SDA1K06153K	2.16	Ⓢ SDB1K06153K	2.20
.022	600	Ⓢ SBA1K06223K	2.00	Ⓢ SBB1K06223K	2.12	Ⓢ SDA1K06223K	2.16	Ⓢ SDB1K06223K	2.24
.033	600	Ⓢ SBA1K06333K	2.08	Ⓢ SBB1K06333K	2.16	Ⓢ SDA1K06333K	2.16	Ⓢ SDB1K06333K	2.24
.047	600	Ⓢ SBA1K06473K	2.12	Ⓢ SBB1K06473K	2.20	Ⓢ SDA1K06473K	2.28	Ⓢ SDB1K06473K	2.32
.068	600	Ⓢ SBA1K06683K	2.20	Ⓢ SBB1K06683K	2.32	Ⓢ SDA1K06683K	2.40	Ⓢ SDB1K06683K	2.48
.1	600	Ⓢ SBA1K06104K	2.32	Ⓢ SBB1K06104K	2.44	Ⓢ SDA1K06104K	2.48	Ⓢ SDB1K06104K	2.56
.15	600	Ⓢ SBA1K06154K	2.40	Ⓢ SBB1K06154K	2.52	Ⓢ SDA1K06154K	2.64	Ⓢ SDB1K06154K	2.72
.22	600	Ⓢ SBA1K06224K	2.60	Ⓢ SBB1K06224K	2.80	Ⓢ SDA1K06224K	2.92	Ⓢ SDB1K06224K	3.00
.39	600	Ⓢ SBA1K06394K	2.96	Ⓢ SBB1K06394K	3.12	Ⓢ SDA1K06394K	3.16	Ⓢ SDB1K06394K	3.24
.47	600	Ⓢ SBA1K06474K	3.04	Ⓢ SBB1K06474K	3.20	Ⓢ SDA1K06474K	3.24	Ⓢ SDB1K06474K	3.36
.68	600	Ⓢ SBA1K06684K	3.20	Ⓢ SBB1K06684K	3.52	SDA1K06684K	3.40	-----	-----
.82	600	Ⓢ SBA1K06824K	3.32	Ⓢ SBB1K06824K	3.52	-----	-----	-----	-----
.0	600	Ⓢ SBA1K06105K	3.40	Ⓢ SBB1K06105K	3.72	-----	-----	-----	-----

STANDARD STOCK ITEMS


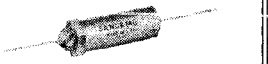


\*Prices for larger quantities are available on request.  
†For ±5% tolerance add 30% to above price.

# SANGAMO ELECTRIC COMPANY

# capacitors



## Type S CONTINUED

Capacitance Tolerance ±10% †									
Cap. (Mfd)	Rated Volts d-c	Catalog Number	Net Price 1-9*	Catalog Number	Net Price 1-9*	Catalog Number	Net Price 1-9*	Catalog Number	Net Price 1-9*
.027	100	Ⓢ SBC1K01273K	\$1.96	Ⓢ SBE1K01273K	\$2.28	-----	\$-----	-----	\$-----
.033	100	Ⓢ SBC1K01333K	1.96	Ⓢ SBE1K01333K	2.28	SDC1K01333K	2.12	Ⓢ SDE1K01333K	2.32
.082	100	Ⓢ SBC1K01823K	2.08	-----	-----	Ⓢ SDC1K01823K	2.20	Ⓢ SDE1K01823K	2.40
.1	100	Ⓢ SBC1K01104K	2.12	SBE1K01104K	2.28	Ⓢ SDC1K01104K	2.20	Ⓢ SDE1K01104K	2.40
.15	100	Ⓢ SBC1K01154K	2.12	Ⓢ SBE1K01154K	2.28	Ⓢ SDC1K01154K	2.24	Ⓢ SDE1K01154K	2.44
.22	100	Ⓢ SBC1K01224K	2.16	Ⓢ SBE1K01224K	2.36	Ⓢ SDC1K01224K	2.32	Ⓢ SDE1K01224K	2.52
.27	100	Ⓢ SBC1K01274K	2.20	Ⓢ SBE1K01274K	2.40	Ⓢ SDC1K01274K	2.40	Ⓢ SDE1K01274K	2.60
.33	100	Ⓢ SBC1K01334K	2.24	Ⓢ SBE1K01334K	2.44	Ⓢ SDC1K01334K	2.48	Ⓢ SDE1K01334K	2.68
.39	100	Ⓢ SBC1K01394K	2.32	Ⓢ SBE1K01394K	2.52	Ⓢ SDC1K01394K	2.56	Ⓢ SDE1K01394K	2.72
.47	100	Ⓢ SBC1K01474K	2.44	Ⓢ SBE1K01474K	2.60	Ⓢ SDC1K01474K	2.64	Ⓢ SDE1K01474K	2.80
.68	100	Ⓢ SBC1K01684K	2.56	Ⓢ SBE1K01684K	2.76	Ⓢ SDC1K01684K	2.76	Ⓢ SDE1K01684K	2.96
.82	100	Ⓢ SBC1K01824K	2.64	Ⓢ SBE1K01824K	2.80	Ⓢ SDC1K01824K	2.88	Ⓢ SDE1K01824K	3.08
1.0	100	Ⓢ SBC1K01105K	2.72	Ⓢ SBE1K01105K	2.92	Ⓢ SDC1K01105K	3.04	Ⓢ SDE1K01105K	3.24
.015	200	Ⓢ SBC1K02153K	2.04	Ⓢ SBE1K02153K	2.36	SDC1K02153K	2.16	SDDE1K02153K	2.31
.022	200	Ⓢ SBC1K02223K	2.04	Ⓢ SBE1K02223K	2.36	Ⓢ SDC1K02223K	2.20	Ⓢ SDE1K02223K	2.31
.039	200	Ⓢ SBC1K02393K	2.12	-----	-----	Ⓢ SDC1K02393K	2.20	Ⓢ SDE1K02393K	2.41
.047	200	Ⓢ SBC1K02473K	2.12	SBE1K02473K	2.36	Ⓢ SDC1K02473K	2.24	Ⓢ SDE1K02473K	2.41
.068	200	Ⓢ SBC1K02683K	2.16	Ⓢ SBE1K02683K	2.36	Ⓢ SDC1K02683K	2.28	Ⓢ SDE1K02683K	2.41
.1	200	Ⓢ SBC1K02104K	2.16	Ⓢ SBE1K02104K	2.36	Ⓢ SDC1K02104K	2.28	Ⓢ SDE1K02104K	2.41
.15	200	Ⓢ SBC1K02154K	2.20	Ⓢ SBE1K02154K	2.40	Ⓢ SDC1K02154K	2.40	Ⓢ SDE1K02154K	2.51
.22	200	Ⓢ SBC1K02224K	2.32	Ⓢ SBE1K02224K	2.48	Ⓢ SDC1K02224K	2.52	Ⓢ SDE1K02224K	2.71
.33	200	Ⓢ SBE1K02334K	2.44	Ⓢ SBE1K02334K	2.64	Ⓢ SDC1K02334K	2.68	Ⓢ SDE1K02334K	2.81
.39	200	Ⓢ SBC1K02394K	2.52	Ⓢ SBE1K02394K	2.72	Ⓢ SDC1K02394K	2.72	Ⓢ SDE1K02394K	2.91
.47	200	Ⓢ SBC1K02474K	2.60	Ⓢ SBE1K02474K	2.80	Ⓢ SDC1K02474K	2.80	Ⓢ SDE1K02474K	3.01
.68	200	Ⓢ SBC1K02684K	2.72	Ⓢ SBE1K02684K	2.92	Ⓢ SDC1K02684K	3.04	Ⓢ SDE1K02684K	3.21
.82	200	Ⓢ SBC1K02824K	2.84	Ⓢ SBE1K02824K	3.00	Ⓢ SDC1K02824K	3.08	Ⓢ SDE1K02824K	3.21
1.0	200	Ⓢ SBC1K02105K	2.96	Ⓢ SBE1K02105K	3.12	Ⓢ SDC1K02105K	3.16	Ⓢ SDE1K02105K	3.31
.0082	400	Ⓢ SBC1K04822K	2.08	Ⓢ SBE1K04822K	2.40	-----	-----	-----	-----
.01	400	Ⓢ SBC1K04103K	2.08	Ⓢ SBE1K04103K	2.40	SDC1K04103K	2.24	SDDE1K04103K	2.41
.033	400	Ⓢ SBC1K04333K	2.16	Ⓢ SBE1K04333K	2.40	Ⓢ SDC1K04333K	2.32	Ⓢ SDE1K04333K	2.51
.047	400	Ⓢ SBC1K04473K	2.20	Ⓢ SBE1K04473K	2.40	Ⓢ SDC1K04473K	2.32	Ⓢ SDE1K04473K	2.51
.068	400	Ⓢ SBC1K04683K	2.28	Ⓢ SBE1K04683K	2.44	Ⓢ SDC1K04683K	2.40	Ⓢ SDE1K04683K	2.61
.082	400	Ⓢ SBC1K04823K	2.28	Ⓢ SBE1K04823K	2.48	Ⓢ SDC1K04823K	2.44	Ⓢ SDE1K04823K	2.61
.1	400	Ⓢ SBC1K04104K	2.32	Ⓢ SBE1K04104K	2.52	Ⓢ SDC1K04104K	2.56	Ⓢ SDE1K04104K	2.71
.15	400	Ⓢ SBC1K04154K	2.48	Ⓢ SBE1K04154K	2.64	Ⓢ SDC1K04154K	2.68	Ⓢ SDE1K04154K	2.81
.22	400	Ⓢ SBC1K04224K	2.60	Ⓢ SBE1K04224K	2.80	Ⓢ SCC1K04224K	2.76	Ⓢ SDE1K04224K	2.91
.33	400	Ⓢ SBC1K04334K	2.72	Ⓢ SBE1K04334K	2.92	Ⓢ SDC1K04334K	3.03	Ⓢ SDE1K04334K	3.21
.47	400	Ⓢ SBC1K04474K	2.96	Ⓢ SBE1K04474K	3.16	Ⓢ SDC1K04474K	3.20	Ⓢ SDE1K04474K	3.41
.68	400	Ⓢ SBC1K04684K	3.20	Ⓢ SBE1K04684K	3.36	Ⓢ SDC1K04684K	3.32	Ⓢ SDE1K04684K	3.41
.82	400	Ⓢ SBC1K04824K	3.32	Ⓢ SBE1K04824K	3.52	-----	-----	-----	-----
1.0	400	Ⓢ SBC1K04105K	3.56	Ⓢ SBE1K04105K	3.72	-----	-----	-----	-----
.0015	600	Ⓢ SBC1K06152K	2.04	Ⓢ SBE1K06152K	2.44	Ⓢ SDC1K06152K	2.12	Ⓢ SDE1K06152K	2.31
.0022	600	Ⓢ SBC1K06222K	2.04	Ⓢ SBE1K06222K	2.44	Ⓢ SDC1K06222K	2.12	Ⓢ SDE1K06222K	2.31
.0047	600	Ⓢ SBC1K06472K	2.08	Ⓢ SBE1K06472K	2.44	Ⓢ SDC1K06472K	2.24	Ⓢ SDE1K06472K	2.31
.0068	600	Ⓢ SBC1K06682K	2.08	Ⓢ SBE1K06682K	2.44	Ⓢ SDC1K06682K	2.24	Ⓢ SDE1K06682K	2.31
.0082	600	Ⓢ SBC1K06822K	2.12	Ⓢ SBE1K06822K	2.44	Ⓢ SDC1K06822K	2.24	Ⓢ SDE1K06822K	2.31
.01	600	Ⓢ SBC1K06103K	2.12	Ⓢ SBE1K06103K	2.44	Ⓢ SDC1K06103K	2.24	Ⓢ SDE1K06103K	2.31
.015	600	Ⓢ SBC1K06153K	2.16	Ⓢ SBE1K06153K	2.44	Ⓢ SDC1K06153K	2.32	Ⓢ SDE1K06153K	2.31
.022	600	Ⓢ SBC1K06223K	2.16	Ⓢ SBE1K06223K	2.44	Ⓢ SDC1K06223K	2.36	Ⓢ SDE1K06223K	2.31
.033	600	Ⓢ SBC1K06333K	2.24	Ⓢ SBE1K06333K	2.44	Ⓢ SDC1K06333K	2.36	Ⓢ SDE1K06333K	2.31
.047	600	Ⓢ SBC1K06473K	2.28	Ⓢ SBE1K06473K	2.48	Ⓢ SDC1K06473K	2.44	Ⓢ SDE1K06473K	2.31
.068	600	Ⓢ SBC1K06683K	2.36	Ⓢ SBE1K06683K	2.56	Ⓢ SDC1K06683K	2.56	Ⓢ SDE1K06683K	2.31
.1	600	Ⓢ SBC1K06104K	2.52	Ⓢ SBE1K06104K	2.68	Ⓢ SDC1K06104K	2.68	Ⓢ SDE1K06104K	2.31
.15	600	Ⓢ SBC1K06154K	2.60	Ⓢ SBE1K06154K	2.76	Ⓢ SDC1K06154K	2.84	Ⓢ SDE1K06154K	3.31
.22	600	Ⓢ SBC1K06224K	2.76	Ⓢ SBE1K06224K	2.96	Ⓢ SDC1K06224K	3.12	Ⓢ SDE1K06224K	3.31
.39	600	Ⓢ SBC1K06394K	3.12	Ⓢ SBE1K06394K	3.32	Ⓢ SDC1K06394K	3.32	Ⓢ SDE1K06394K	3.31
.47	600	Ⓢ SBC1K06474K	3.20	Ⓢ SBE1K06474K	3.40	Ⓢ SDC1K06474K	3.44	Ⓢ SDE1K06474K	3.31
.68	600	Ⓢ SBC1K06684K	3.40	Ⓢ SBE1K06684K	3.56	Ⓢ SDC1K06684K	3.56	Ⓢ SDE1K06684K	3.31

Ⓢ STANDARD STOCK ITEMS

\*Prices for larger quantities are available on request  
†For ±5% tolerance add 30% to above price.

# SANGAMO ELECTRIC COMPANY capacitors



ELECTRONIC COMPONENTS

## Types 40-41-42-43 PAPER

Sangamo Types 40, 41, 42 and 43 paper dielectric capacitors are ideal for use in high voltage filter applications. Enclosed in aluminum containers, they mount to the chassis by means of a 3/4-16 threaded neck. In the Types 40 and 42, one connection is provided by an insulated terminal and the other is provided by the case and washer with a solder lug. In the Types 41 and 43, both terminals are completely insulated from the case. Each of the 4 types is provided with mounting nut and lockwasher. The Types 40 and 41 are impregnated with Diaclor to provide an F characteristic. Types 42 and 43 are impregnated with mineral oil to provide an E characteristic. All units are designed in accordance with electrical characteristics of MIL-C-25. **For more complete information write for Bulletin 2423.**

Types  
40  
42



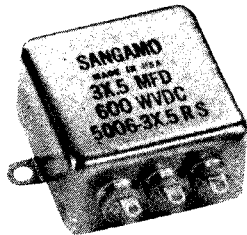
Types  
41  
43

Catalog Number	Military Type Designation	Cap. (Mfd)	Rated Volts d-c	Net Price 1-9*	Catalog Number	Military Type Designation	Cap. (Mfd)	Rated Volts d-c	Net Price 1-9*
④ 4006-1	CP40B2FF105K	1.0	600	\$3.81	④ 4106-1	CP41B1FF105K	1.0	600	3.91
④ 4206-1	CP40B2EF105K	1.0	600	3.81	④ 4306-1	CP41B1EF105K	1.0	600	3.91
④ 4006-2	CP40B2FF205K	2.0	600	3.95	④ 4106-2	CP41B1FF205K	2.0	600	4.05
④ 4206-2	CP40B2EF205K	2.0	600	3.95	④ 4306-2	CP41B1EF205K	2.0	600	4.05
④ 4006-3	-----	3.0	600	4.40	④ 4106-3	-----	3.0	600	4.50
④ 4206-3	-----	3.0	600	4.40	④ 4306-3	-----	3.0	600	4.50
④ 4006-4	CP40B2FF405K	4.0	600	5.13	④ 4106-4	CP41B1FF405K	4.0	600	5.23
④ 4206-4	CP40B2EF405K	4.0	600	5.13	④ 4306-4	CP41B1EF405K	4.0	600	5.23
④ 4010-1	CP40B2FG105K	1.0	1000	3.54	④ 4110-1	CP41B1FG105K	1.0	1000	3.64
④ 4210-1	CP40B2EG105K	1.0	1000	3.54	④ 4310-1	CP41B1EG105K	1.0	1000	3.64
④ 4010-2	CP40B2FG205K	2.0	1000	4.54	④ 4110-2	CP41B1FG205K	2.0	1000	4.64
④ 4210-2	CP40B2EG205K	2.0	1000	4.54	④ 4310-2	CP41B1EG205K	2.0	1000	4.64
4015-.25	CP40B2FH254K	.25	1500	4.18	4115-.25	CP41B1FH254K	.25	1500	4.28
4215-.25	CP40B2EH254K	.25	1500	4.18	4315-.25	CP41B1EH254K	.25	1500	4.28
4015-.5	CP40B2FH504K	.5	1500	4.49	4115-.5	CP41B1FH504K	.5	1500	4.59
4215-.5	CP40B2EH504K	.5	1500	4.49	4315-.5	CP41B1EH504K	.5	1500	4.59
4015-1.0	CP40B2FH105K	1.0	1500	4.95	4115-1.0	CP41B1FH105K	1.0	1500	5.05
4215-1.0	CP40B2EH105K	1.0	1500	4.95	4315-1.0	CP41B1EH105K	1.0	1500	5.05

④ STANDARD STOCK ITEMS

\*Prices for larger quantities are available on request.  
Note: Standard capacitive tolerance ±10%

## Type 50 PAPER



Sangamo Type 50 paper dielectric capacitors are primarily intended for bypass applications. They are non-inductively wound, supplied in fractional capacitive values and will provide efficient and continuous operation in coupling and bypass circuits. These capacitors are impregnated with mineral oil and may be operated under severe humidity conditions at temperatures between -55° and 85°C. All units are designed in accordance with electrical characteristics of MIL-C-25.

**For more complete information write for Bulletin 2423.**

Catalog Number	Military Type Designation	Cap. (Mfd)	Dimensions (inches)			Net Price 1-9*	Catalog Number	Military Type Designation	Cap. (Mfd)	Dimensions (inches)			Net Price 1-9*
			Length	Width	Height					Length	Width	Height	
100 W.V.D.C.						600 W.V.D.C.							
50V01-1RS	-----	1.0	1-13/16	1	7/8	\$2.34	50V06-.05RS	-----	.05	1-13/16	1	3/4	\$1.88
50V01-2RS	-----	2.0	2	1-3/4	1	2.83	④ 50V06-1RS	-----	.1	1-13/16	1	3/4	1.98
50V01-4RS	CP53B1EB405K1	4.0	2	2	1-1/8	3.43	④ 50V06-.25RS	CP53B1EF254K1	.25	1-13/16	1	3/4	2.03
-----	CP53B1FB405K1	4.0	2	2	1	3.43	④ 50V06-.5RS	CP53B1EF504K1	.5	1-13/16	1	1	2.17
-----	CP53B1FB106K1	10.0	2	2	1-1/8	6.11	50V06-1RS	CP53B1EF105K1	1.0	2	1-3/4	7/8	2.53
200 W.V.D.C.						1000 W.V.D.C.							
50V02-.25RS	-----	.25	1-13/16	1	3/4	1.98	④ 50V06-2RS	CP53B1EF205K1	2.0	2	2	1-1/8	3.36
50V02-.5RS	CP53B1FC504K1	.5	1-13/16	1	3/4	2.02	④ 50X06-2X.1RS	CP53B4EF104V1	2X.1	1-13/16	1	3/4	2.67
50V02-1RS	CP53B1EC105K1	1.0	2	1-3/4	7/8	2.43	④ 50V06-2X.25RS	CP53B4EF254V1	2X.25	1-13/16	1	1	2.75
50V02-2RS	CP53B1EC205K1	2.0	2	2	1	3.07	④ 50X06-2X.5RS	CP53B4EF504V1	2X.5	2	1-3/4	1	3.11
400 W.V.D.C.						1500 W.V.D.C.							
50V04-.05RS	-----	.05	1-13/16	1	3/4	1.81	④ 50X06-2X1RS	CP53B4FF504V1	2X.5	2	1-3/4	7/8	3.11
50V04-.1RS	-----	.1	1-13/16	1	3/4	1.90	④ 50X06-2X1RS	CP53B4EF105V1	2X1.0	2	2	1-1/8	3.77
50V04-.5RS	CP53B1KE104K1	.5	1-13/16	1	3/4	2.09	④ 50Y06-3X.25RS	CP53B5EF104V1	3X.1	1-13/16	1	7/8	3.05
-----	CP53B1KE105K1	1.0	2	2	3/4	2.18	④ 50Y06-3X.5RS	CP53B5EF254V1	3X.25	2	1-3/4	7/8	3.41
50V04-2RS	-----	2.0	2	2	1-1/8	3.25	④ 50Y06-3X.5RS	CP53B5EF504V1	3X.5	2	2	1-1/8	4.20
50X04-2X.1RS	-----	2X.1	1-13/16	1	3/4	2.59	1000 W.V.D.C.						
50X04-2X.25RS	-----	2X.25	2	1-3/4	7/8	3.03	④ 50V10-1RS	CP53B1EG104K1	.1	1-13/16	1	3/4	2.07
50X04-2X1RS	-----	2X1.0	2	2	1-1/8	3.77	④ 50V10-.25RS	CP53B1EG254K1	.25	1-13/16	1	7/8	2.13
50X04-3X.05RS	-----	3X.05	1-13/16	1	3/4	2.92	④ 50V10-.5RS	CP53B1EG504K1	.5	2	1-3/4	7/8	2.28
50Y04-3X.1RS	-----	3X.1	1-13/16	1	3/4	3.03	④ 50V10-1RS	CP53B1EG105K1	1.0	2	2	1-1/8	3.11
50Y04-3X.5RS	CP53B5EE504V1	3X.5	2	2	1-1/8	4.07	④ 50X10-2X.1RS	CP53B4EG104V1	2X.1	1-13/16	1	3/4	2.77
							④ 50X10-2X.25RS	CP53B4EG254V1	2X.25	2	1-3/4	7/8	3.03
							④ 50X10-2X.5RS	CP53B4EG504V1	2X.5	2	2	1-1/8	3.94
							④ 50Y10-3X.1RS	CP53B5EG104V1	3X.1	2	1-3/4	7/8	3.41
							④ 50Y10-3X.25RS	CP53B5EG254V1	3X.25	2	2	1-1/8	4.23

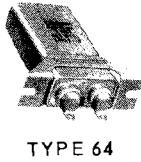
④ STANDARD STOCK ITEMS

\*Prices for larger quantities are available on request.  
Note: Standard capacitive tolerance ±10%.  
Note: Capacitors are normally supplied with side terminals unless otherwise specified.

# SANGAMO ELECTRIC COMPANY capacitors



## Types 60- 62- 64- 66- 68 PAPER

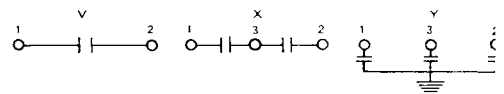


Sangamo Types 60, 62, 64, 66 and 68 are non-inductively wound paper capacitors, impregnated with mineral oil and hermetically sealed in drawn metal cans. The mineral oil assures dependable service between the temperature range of -55° to +85°C. All units are designed in accordance with the electrical characteristics of MIL-C-25 specification. Mounting brackets are supplied on units as shown.

**For more complete information write for Bulletin 2423.**

Catalog Number	Military Type Designation	Cap. (Mfd)	Dimensions (inches)			Net Price 1-9*	Catalog Number	Military Type Designation	Cap. (Mfd)	Dimensions (inches)			Net Price 1-9*
			Length	Width	Height					Length	Width	Height	
<b>400 W.V.D.C.</b>						<b>600 W.V.D.C. (Cont'd.)</b>							
60V04-.05	-----	.05	1-5/16	.625	1-1/16	\$1.81	-----	CP67B1FF105K1	1.0	2-7/16	.640	1-1/16	\$2.78
⑤ 60V04-.1	CP91B1KE104K1	.1	1-5/16	.625	1-1/16	1.91	⑤ 66X06-2X.1	CP67B1EF104V1	2X.1	2-7/16	.640	1-1/2	2.85
⑤ 60V04-.5	-----	.5	1-5/16	.625	1-5/8	2.03	⑤ 66X06-2X.25	CP67B4EF254V1	2X.25	2-7/16	.640	2	3.06
⑤ 60V04-1	CP91B1EE105K1	1.0	1-5/16	.625	2-1/2	2.29	⑤ 66X06-2X.5	CP67B4EF504V1	2X.5	2-7/16	.640	2-3/4	3.34
60X04-2X.05	CP91B6EE503V1	2X.05	1-5/16	.625	1-1/16	2.13	⑤ 66Y06-3X.1	CP67B5EF104V1	3X.1	2-7/16	.640	1-1/2	3.42
⑤ 60X04-2X.1	CP91B6EE104V1	2X.1	1-5/16	.625	1-3/8	2.22	⑤ 66Y06-3X.25	CP67B5EF254V1	3X.25	2-7/16	.640	2-3/4	3.67
60X04-2X.25	-----	2X.25	1-5/16	.625	1-3/8	2.39	⑤ 68V06-.1	CP69B1EF104K1	.1	2-7/16	.640	1-1/16	2.36
⑤ -----	CP91B6EE504V1	2X.5	1-5/16	.525	2-1/2	2.77	⑤ 68V06-.25	CP69B1EF254K1	.25	2-7/16	.640	1-1/2	2.43
62V04-.05	-----	.05	2-5/16	.766	1-1/16	1.89	⑤ 68V06-.5	CP69B1EF504K1	.5	2-7/16	.640	2	2.52
62V04-.5	-----	.5	2-5/16	.766	1-5/8	2.11	⑤ 68V06-1.0	CP69B1EF105K1	1.0	2-7/16	.640	2-3/4	2.78
-----	CP63B1KE504K1	.5	2-5/16	.766	2	1.43	⑤ 68X06-2X.1	CP69B4EF104V1	2X.1	2-7/16	.640	1-1/2	2.85
62V04-1	CP63B1EE105K1	1.0	2-5/16	.766	2-1/2	2.37	⑤ 68X06-2X.25	CP69B4EF254V1	2X.25	2-7/16	.640	2	3.06
62X04-2X.05	CP63B6EE503K1	2X.05	2-5/16	.766	1-1/16	2.21	⑤ 68X06-2X.5	CP69B4EF504V1	2X.5	2-7/16	.640	2-3/4	3.34
62X04-2X.1	CP63B6EE104K1	2X.1	2-5/16	.766	1-3/8	2.30	⑤ 68Y06-3X.1	CP69B5EF104V1	3X.1	2-7/16	.640	1-1/2	3.42
62X04-2X.25	-----	2X.25	2-5/16	.766	1-3/8	2.47	⑤ 68Y06-3X.25	CP69B5EF254V1	3X.25	2-7/16	.640	2-3/4	3.67
-----	CP63B6EE504K1	2X.5	2-5/16	.766	2-1/2	2.85	<b>1000 W.V.D.C.</b>						
64V04-.05	-----	.05	2-5/16	.766	1-1/16	1.89	60V10-.05	CP91B1EG503K1	.05	1-5/16	.625	1-3/8	1.93
64V04-.1	CP65B1KE104K1	.1	2-5/16	.766	1-1/16	1.99	60V10-.1	CP91B1EG104K1	.1	1-5/16	.625	1-3/8	2.00
64V04-.25	CP65B1KE254K1	.25	2-5/16	.766	1-3/8	2.05	60V10-.5	CP91B1EG504K1	.5	1-5/16	.625	2-3/4	2.25
64V04-.5	-----	.5	2-5/16	.766	1-5/8	2.11	60V10-1.0	-----	1.0	2-1/4	1.188	1-3/16	2.65
⑤ 64V04-1	CP65B1EE105K1	1.0	2-5/16	.766	2-1/2	2.37	60X10-2X.05	CP91B6EG503V1	2X.05	1-5/16	.625	1-3/8	2.25
64X04-2X.05	CP65B6EE503K1	2X.05	2-5/16	.766	1-1/16	2.21	60X10-2X.25	CP91B6EG254V1	2X.25	1-5/16	.625	2-3/4	2.52
64X04-2X.1	CP65B6EE104K1	2X.1	2-5/16	.766	1-3/8	2.30	62V10-.25	CP63B1EG254K1	.25	2-5/16	.766	2	2.14
64X04-2X.25	-----	2X.25	2-5/16	.766	1-3/8	2.47	62V10-.5	CP63B1EG504K1	.5	2-5/16	.766	2-3/4	2.33
-----	CP65B6EE504K1	2X.5	2-5/16	.766	2-1/2	2.85	62X10-2X.05	CP63B6EG503K1	2X.05	2-5/16	.766	1-3/8	2.33
<b>600 W.V.D.C.</b>						<b>600 W.V.D.C.</b>							
⑤ 60V06-.01	-----	.01	1-5/16	.625	1-1/16	1.81	64V10-.25	CP65B1EG254K1	.25	2-5/16	.766	2	2.14
⑤ 60V06-.05	CP91B1EF503K1	.05	1-5/16	.625	1-1/16	1.86	64V10-.5	CP65B1EG504K1	.5	2-5/16	.766	2-3/4	2.33
⑤ 60V06-.1	-----	.1	1-5/16	.625	1-3/8	1.94	64X10-2X.05	CP65B6EG503K1	2X.05	2-5/16	.766	1-3/8	2.33
⑤ 60V06-.25	CP91B1EF254K1	.25	1-5/16	.625	1-5/8	2.01	64X10-2X.25	CP65B6EG254K1	2X.25	2-5/16	.766	2-3/4	2.60
⑤ 60V06-.5	CP91B1EF504K1	.5	1-5/16	.625	2	2.08	66V10-.1	CP67B1EG104K1	.1	2-7/16	.640	1-1/2	2.35
⑤ 60V06-1.0	CP91B1EF105K1	1.0	1-5/16	.625	2-3/4	2.34	66V10-.5	CP67B1EG504K1	.5	2-7/16	.640	2-3/4	2.66
⑤ 60V06-2.0	-----	2.0	2-1/4	1.188	1-3/16	4.22	66X10-2X.1	CP67B4EG104V1	2X.1	2-7/16	.640	2	2.95
⑤ 60X06-2X.1	CP91B6EF104V1	2X.1	1-5/16	.625	1-5/8	2.26	66X10-2X.25	CP67B4EG254V1	2X.25	2-7/16	.640	2-3/4	3.13
⑤ 60X06-2X.25	CP91B6EF254V1	2X.25	1-5/16	.625	2	2.44	66Y10-3X.05	CP67B5EG503V1	3X.05	2-7/16	.640	1-1/2	3.40
⑤ 60X06-2X.5	CP91B6EF504V1	2X.5	1-5/16	.625	2-3/4	2.83	66Y10-3X.1	CP67B5EG104V1	3X.1	2-7/16	.640	2-1/2	3.51
⑤ 62V06-.25	CP63B1EF254K1	.25	2-5/16	.766	1-5/8	2.09	68V10-.1	CP69B1EG104K1	.1	2-7/16	.640	1-1/2	2.35
⑤ 62V06-.5	CP63B1EF504K1	.5	2-5/16	.766	2	2.16	68V10-.25	CP69B1EG254K1	.25	2-7/16	.640	2	2.40
⑤ 62V06-1.0	CP63B1EF105K1	1.0	2-5/16	.766	2-3/4	2.42	68X10-2X.05	CP69B4EG503V1	2X.05	2-7/16	.640	1-1/2	2.81
⑤ 64V06-.25	CP65B1EF254K1	.25	2-5/16	.766	1-5/8	2.09	68X10-2X.25	CP69B4EG254V1	2X.25	2-7/16	.640	2-3/4	3.11
⑤ 64V06-.5	CP65B1EF504K1	.5	2-5/16	.766	2	2.16	68Y10-3X.1	CP69B5EG104V1	3X.1	2-7/16	.640	2-1/2	3.51
⑤ 64V06-1.0	CP65B1EF105K1	1.0	2-5/16	.766	2-3/4	2.42	<b>*Prices on larger quantities are available on request.</b>						
⑤ 64X06-2X.1	CP65B6EF104K1	2X.1	2-5/16	.766	1-5/8	2.34	<b>Note: Standard tolerance on all single section capacitors is ±10% and +20, -10% on all multiple section capacitors.</b>						
⑤ 64X06-2X.25	CP65B6EF254K1	2X.25	2-5/16	.766	2	2.52	<b>Note: Type 60 can be furnished with spade or footed brackets.</b>						
⑤ 64X06-2X.5	CP65B6EF504K1	2X.5	2-5/16	.766	2-3/4	2.91	<b>Add \$0.20 to above prices when required.</b>						
						<b>Note: Letter V, X and Y denote electrical circuit as foll ows:</b>							

⑤ STANDARD STOCK ITEMS

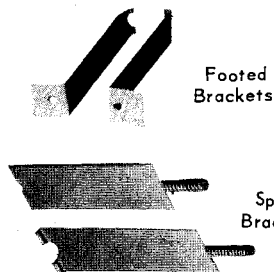
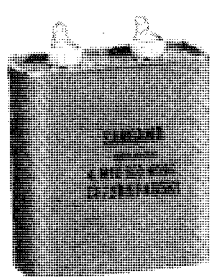


SANGAMO ELECTRIC COMPANY  
**capacitors**



ELECTRONIC COMPONENTS

**MIL Type CP72 PAPER**



Type CP72 capacitors are furnished in drawn metal cases and are designed to comply with the requirements of specification MIL-C-25. They are impregnated with various dielectric oils to guarantee the desired electrical characteristics available. Capacitors rated at 3000 volts or less are normally supplied with solder lug (B) terminals capable of accommodating a #14AWG wire. Type D and E terminals may be substituted if desired. If brackets are required, specify a choice of spade, lug or footed type.

**For more complete information write for Bulletin 2423.**

Military Type Designation	Cap. (Mfd)	Dimensions (inches)			Net Price 1-9*	Bracket Price Per Pr.
		L±1/16	W±1/16	H±1/16†		
600 WVDC						
⑤ CP72B1EF254K1	.25	1-13/16	1-1/16	1-5/8	\$ 1.90	\$0.15
⑤ CP72B1EF105K1	1.0	1-13/16	1-1/16	2-1/4	2.20	0.15
⑤ CP72B1EF405K1	4.0	1-13/16	1-1/16	3-1/4	4.00	0.16
⑤ CP72B1EF106K1	10.0	3- 3/4	1-3/4	4	6.80	0.26
1000 WVDC						
⑤ CP72B1EG504K1	.5	1-13/16	1-1/16	2-1/4	2.50	0.15
⑤ CP72B1EG205K1	2.0	1-13/16	1-1/16	2-7/8	2.74	0.16
⑤ CP72B1EG605K1	6.0	3- 3/4	1-3/4	4	5.90	0.26
⑤ CP72B1EG106K1	10.0	3- 3/4	2-1/4	4-3/4	8.10	0.27
1500 WVDC						
⑤ CP72B1EH105K1	1.0	1-13/16	1-1/16	4-3/4	3.00	0.16
⑤ CP72B1EH405K1	4.0	3- 3/4	1-3/4	4-1/4	6.15	0.26
⑤ CP72B1EH805K1	8.0	3- 3/4	2-1/2	5-3/4	10.60	0.27
⑤ CP72B1EH156K1	15.0	4- 9/16	3-3/4	6	17.00	0.54
2000 WVDC						
⑤ CP72E1EJ504K1	.5	2- 1/2	1-3/16	2-7/8	4.60	0.15
⑤ CP72E1EJ105K1	1.0	2- 1/2	1-3/16	4-3/4	5.40	0.16
⑤ CP72E1EJ605K1	6.0	3- 3/4	3-3/16	5-1/2	12.80	0.60
⑤ CP72E1EJ106K1	10.0	4- 9/16	3-3/4	6-1/2	18.80	0.57

⑤ STANDARD STOCK ITEMS

Catalog Number	Cap. (Mfd)	Dimensions (inches)			Net Price 1-9*	Bracket Price Per Pr.
		L±1/16	W±1/16	H±1/16†		
2500 WVDC						
⑤ CP72E1EK104K1	.1	2- 1/2	1-3/16	2-1/2	6.00	0.15
⑤ CP72E1EK105K1	1.0	3- 3/4	1-3/4	3-7/8	8.80	0.16
⑤ CP72E1EK205K1	2.0	3- 3/4	2-1/4	4-3/4	12.00	0.27
⑤ CP72E1EK405K1	4.0	4- 9/16	3-3/4	4-3/8	17.40	0.57
4000 WVDC						
⑤ CP72E1EM104K1	.1	3- 3/4	2-1/4	2-3/4	10.20	0.27
⑤ CP72E1EM254K1	.25	3- 3/4	2-1/4	3-7/8	11.20	0.27
⑤ CP72E1EM504K1	.5	3- 3/4	2-1/4	4-3/4	13.40	0.27
⑤ CP72E1EM105K1	1.0	3- 3/4	3-3/16	4-3/4	16.50	0.27
6000 WVDC						
⑤ CP72D1EP254K1	.25	3- 3/4	2-1/4	4-3/4	15.00	0.27
⑤ CP72D1EP504K1	.5	4- 9/16	3-3/4	4-3/4	19.20	0.54
⑤ CP72D1EP105K1	1.0	4- 9/16	3-3/4	9-5/8	36.20	0.60
⑤ CP72D1EP205K1	2.0	13- 1/2	4-1/8	7	85.00	1.50
7500 WVDC						
⑤ CP72D1ER254K1	.25	4- 9/16	3-3/4	4-3/8	20.80	0.57
⑤ CP72D1ER504K1	.5	4- 9/16	3-3/4	6	28.50	0.54
⑤ CP72D1ER105K1	1.0	8	4	9-1/4	68.00	1.10
⑤ CP72D1ER205K1	2.0	13- 1/2	4-1/8	9-1/4	125.00	1.60
12,500 WVDC						
⑤ CP72D1ET104K1	.1	8	4	5-1/2	67.00	0.60
⑤ CP72D1ET504K1	.5	13- 1/2	4-1/8	7	85.50	1.50
⑤ CP72D1ET105K1	1.0	13- 1/2	5-1/8	12-7/8	147.00	1.80
⑤ CP72D1ET205K1	2.0	13- 1/2	5-1/8	13-3/4	153.00	1.80

\*Prices for larger quantities available on request.

†Height does not include terminals.

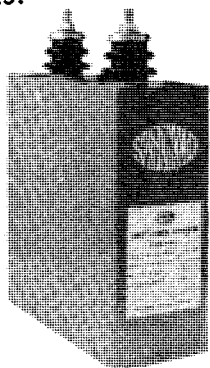
Note: Standard capacitive tolerance ±10%

Note: Currently stocked as CP70; CP72 stock added as orders dictate.

**Type HVC HIGH VOLTAGE PAPER CAPACITORS**

Songamo Type HVC High Voltage capacitors are impregnated with a halogenated hydrocarbon called Diaclor B. This oil provides the desirable electrical performance characteristics for the most severe applications. They are sealed in shock and vibration resistant drawn rectangular or cold-rolled steel cases. The absence of solder seams eliminates oil leakage and contamination from solder flux. A wide variety of capacitance ranges are available in voltage ratings up to 50,000 volts d-c. Spade, footed or wrap-around brackets are optional at extra cost, but will not be furnished unless requested. When choice of brackets is not indicated, spade type will be supplied.

For more complete information write for Bulletin 2425.



Catalog Number	Cap. (Mfd)	Rated Volts d-c	Case Dimensions (inches)			Net Price 1-9*	Bracket Price Per Pr.
			L±1/16	W±1/16	H±1/16		
702012-9401	100	600	4-9/16	3-3/4	9-1/2	\$ 35.00	\$0.55
⑤ 702012-7503	30	1000	4-9/16	3-3/4	4-3/8	18.40	0.55
702013-0708	100	1500	8	4	11	46.00	1.10
702013-3107	250	1500	13-1/2	5-1/8	12-7/8	105.00	1.80
⑤ 702012-7801	10	2000	4-9/16	3-3/4	4-3/4	14.30	0.55
702013-0207	30	2000	8	4	7	35.25	1.10
702013-3108	150	2000	13-1/2	5-1/8	12-7/8	106.00	1.80
702013-3109	100	2500	13-1/2	5-1/8	12-7/8	105.00	1.80
⑤ 702012-7403	4	3000	4-9/16	3-3/4	4-1/4	15.80	0.55
702012-9101	10	3000	4-9/16	3-3/4	8-1/2	28.60	0.55
702013-2213	50	3000	13-1/2	4-1/8	12-7/8	100.00	1.50
⑤ 702012-4203	1.0	4000	3-3/4	1-3/4	4-1/2	9.70	0.25
702013-0701	20	4000	8	4	11	37.50	1.10
702013-1901	30	4000	13-1/2	4-1/8	9-1/4	85.50	1.50
702013-3001	50	4000	13-1/2	5-1/8	11	109.00	1.80
702013-0502	10	5000	8	4	9-1/4	39.50	1.10
702013-1902	20	5000	13-1/2	4-1/8	9-1/4	81.00	1.50
702013-2201	30	5000	13-1/2	4-1/8	12-7/8	95.00	1.50
702013-3102	25	6000	13-1/2	4-1/8	9-1/4	105.00	1.80
702012-8904	1.0	10KV	4-9/16	3-3/4	7-1/2	27.00	0.55
702013-3103	10.	10KV	13-1/2	5-1/8	12-7/8	109.00	1.80
702013-2106	3.5	12.5KV	13-1/2	4-1/8	11	86.00	1.50
702013-2107	2.5	12.5KV	13-1/2	4-1/8	11	87.00	1.50
702013-2403	3.5	15KV	13-1/2	4-1/8	14-1/2	102.50	1.50
702013-3104	2.0	20KV	13-1/2	5-1/8	12-7/8	111.00	1.80
702013-3003	1.0	25KV	13-1/2	5-1/8	11	96.00	1.80
702013-3005	.75	30KV	13-1/2	5-1/8	11	105.50	1.80
702013-3006	.5	35KV	13-1/2	5-1/8	11	79.50	1.80
702013-3105	.25	50KV	13-1/2	5-1/8	12-7/8	121.00	1.80

⑤ STANDARD STOCK ITEMS

\*Prices for larger quantities available on request. Note: Standard capacitive tolerance ±10%

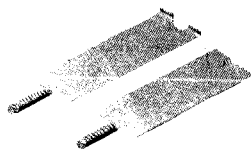
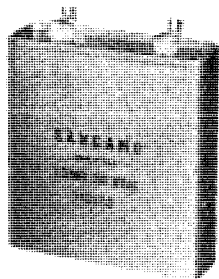
SANGAMO ELECTRIC COMPANY

## capacitors



ELECTRONIC COMPONENTS

## Type 75 MOTOR-RUN AND BALLAST CAPACITORS



SPADE BRACKET

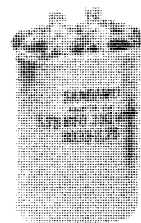
The Sangamo Type 75 paper dielectric capacitors are designed for use in motor-run, ballast and light-duty power factor correction applications. These units are impregnated with Sangamo Diaclor A — a highly refined, electrically stable, non-inflammable dielectric oil that is recommended for use in continuous A.C. duty at ambient temperatures up to +70°C. **For more complete information write for Bulletin 2424.**

Catalog Number	Cap. (Mfd)	Rated Volts A.C.	Base Dimensions		Height ±1/16	Net Price 1-9*
			L±1/16	W±1/16		
7522-1	1.0	220	1-13/16	1-1/16	1-5/8	\$ 3.80
(S) 7522-2	2.0	220	1-13/16	1-1/16	2-1/4	4.55
(S) 7522-4	4.0	220	1-13/16	1-1/16	3-1/4	5.32
(S) 7522-5	5.0	220	2-1/2	1-3/16	2-7/8	5.61
7522-7.5	7.5	220	2-1/2	1-3/16	3-7/8	7.24
(S) 7522-10	10.0	220	2-1/2	1-3/16	4-3/4	8.56
7522-12	12.0	220	3-3/4	1-1/4	3-7/8	9.79
7522-20	20.0	220	3-3/4	1-3/4	4	16.01
7522-25	25.0	220	3-3/4	2-1/4	4-1/8	20.01
7522-30	30.0	220	3-3/4	2-1/2	4-3/4	25.10
7522-35	35.0	220	3-3/4	3-3/16	4-1/2	29.00
7522-40	40.0	220	3-3/4	3-3/16	4-3/4	33.57
7522-50	50.0	220	4-9/16	3-3/4	4-1/4	38.10
7522-60	60.0	220	4-9/16	3-3/4	4-3/4	46.85
(S) 7533-2	2.0	330	1-13/16	1-1/16	2-7/8	4.65
(S) 7533-4	4.0	330	1-13/16	1-1/16	4-3/4	6.01
7533-6	6.0	330	2-1/2	1-3/16	3-7/8	7.34
(S) 7533-10	10.0	330	3-3/4	1-1/4	3-7/8	10.01
7533-12	12.0	330	3-3/4	1-3/4	3-7/8	12.00
7533-15	15.0	330	3-3/4	1-3/4	4-1/4	13.33
7533-20	20.0	330	3-3/4	2-1/4	4-1/2	15.99
7533-25	25.0	330	3-3/4	2-1/2	4-3/4	20.01
7533-30	30.0	330	3-3/4	3-3/16	4-1/2	24.16
7533-40	40.0	330	3-3/4	3-3/16	5-1/2	29.90
7533-45	45.0	330	4-9/16	3-3/4	4-1/2	33.73
7533-55	55.0	330	4-9/16	3-3/4	5-1/8	38.65

(S) STANDARD STOCK ITEMS

## Type 80 Ballast and Motor-Run Capacitors

The Sangamo Type 80 capacitors are impregnated with Sangamo Diaclor A and hermetically sealed in drawn oval metal containers. They are specifically used in fluorescent-light ballast, heating, ventilating and air conditioning motor-run applications. They are designed for use in continuous A.C. duty. **For more complete information write for Bulletin 2424.**



Catalog Number	Cap. (Mfd)	Rated Volts A.C.	Base Dimensions		Height ±1/16	Net Price 1-9*
			L±1/16	W±1/16		
8022-2	2.0	220	2-1/16	1-1/4	2-1/4	\$ 2.86
8022-3	3.0	220	2-1/16	1-1/4	2-1/4	2.99
8022-4	4.0	220	2-1/16	1-1/4	2-7/8	3.26
8022-5	5.0	220	2-1/16	1-1/4	2-7/8	3.65
8022-6	6.0	220	2-1/16	1-1/4	3-3/4	4.40
8022-7.5	7.5	220	2-13/16	2-1/8	2-17/32	6.44
8022-10	10.0	220	2-13/16	2-1/8	3-1/32	7.46
8022-20	20.0	220	2-13/16	2-1/8	5	11.77
(S) 8033-2	2.0	330	2-1/16	1-1/4	2-1/4	3.10
(S) 8033-3	3.0	330	2-1/16	1-1/4	2-7/8	3.14
(S) 8033-4	4.0	330	2-1/16	1-1/4	3-1/8	3.26
(S) 8033-5	5.0	330	2-1/16	1-1/4	3-3/4	4.19
8033-6	6.0	330	2-1/16	1-1/4	3-3/4	5.34
(S) 8033-8	8.0	330	2-13/16	2-1/8	3-3/8	7.02
(S) 8033-10	10.0	330	2-13/16	2-1/8	3-3/8	7.54
(S) 8033-15	15.0	330	2-13/16	2-1/8	4-21/32	9.13
(S) 8033-20	20.0	330	2-13/16	2-1/8	5-3/16	11.94
(S) 8033-25	25.0	330	2-13/16	2-1/8	6-7/8	13.85
(S) 8033-30	30.0	330	2-13/16	2-1/8	8	15.80

(S) STANDARD STOCK ITEMS

Catalog Number	Cap. (Mfd)	Rated Volts A.C.	Base Dimensions		Height ±1/16	Net Price 1-9*
			L±1/16	W±1/16		
(S) 7544-2	2.0	440	1-13/16	1-1/16	3-1/4	\$ 5.63
7544-3	3.0	440	1-13/16	1-1/16	4-3/4	6.55
7544-3.75	3.75	440	2-1/2	1-3/16	3-7/8	6.88
(S) 7544-4	4.0	440	2-1/2	1-3/16	3-7/8	6.88
7544-8	8.0	440	3-3/4	1-1/4	4-1/4	10.12
(S) 7544-10	10.0	440	3-3/4	2-1/4	3-3/8	11.30
7544-15	15.0	440	3-3/4	2-1/4	4-1/2	13.65
7544-20	20.0	440	3-3/4	3-3/16	4-1/8	16.51
7544-30	30.0	440	3-3/4	3-3/16	5-1/2	24.39
7544-35	35.0	440	4-9/16	3-3/4	4-1/2	26.13
7544-40	40.0	440	4-9/16	3-3/4	5-1/8	27.63
7544-50	50.0	440	4-9/16	3-3/4	6	30.50
7544-55	55.0	440	4-9/16	3-3/4	6-3/4	32.36
7566-1	1.0	660	1-13/16	1-1/16	3-7/8	4.83
7566-2	2.0	660	2-1/2	1-3/16	3-7/8	6.07
7566-8	8.0	660	3-3/4	2-1/4	3-7/8	11.30
7566-20	20.0	660	4-9/16	3-3/4	4-1/4	17.50
7566-30	30.0	660	4-9/16	3-3/4	6	21.80

\*Price for larger quantities are available on request.

Note: Standard tolerance ±10%

Note: All dimensions in inches

Note: Spade Type, footed or universal wrap-around brackets can be furnished at additional cost.

Catalog Number	Cap. (Mfd)	Rated Volts A.C.	Base Dimensions		Height ±1/16	Net Price 1-9*
			L±1/16	W±1/16		
(S) 8044-2	2.0	440	2-1/16	1-1/4	2-1/4	\$ 3.80
(S) 8044-3	3.0	440	2-1/16	1-1/4	3-1/8	4.04
(S) 8044-4	4.0	440	2-1/16	1-1/4	3-3/4	4.49
(S) 8044-5	5.0	440	2-13/16	2-1/8	2-17/32	5.61
8044-6	6.0	440	2-13/16	2-1/8	2-25/32	6.61
8044-8	8.0	440	2-13/16	2-1/8	3-25/32	7.81
(S) 8044-10	10.0	440	2-13/16	2-1/8	4-5/32	7.91
(S) 8044-15	15.0	440	2-13/16	2-1/8	6-1/4	11.01
(S) 8044-20	20.0	440	2-13/16	2-1/8	7-3/8	12.41
8066-1	1.0	660	2-1/16	1-1/4	2-1/4	3.5
8066-3	3.0	660	2-13/16	2-1/8	2-25/32	5.9
8066-5	5.0	660	2-13/16	2-1/8	4-5/32	8.2
8066-6	6.0	660	2-13/16	2-1/8	4-21/32	9.5
8066-8	8.0	660	2-13/16	2-1/8	5-3/16	10.5
8066-10	10.0	660	2-13/16	2-1/8	6-1/8	11.0

\*Prices for larger quantities are available on request.

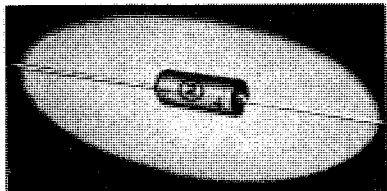
Note: Standard tolerance ±10%

Note: All dimensions in inches



# SPRAGUE CAPACITORS

## TYPE 150D SOLID-ELECTROLYTE TANTALEX® CAPACITORS



- Combine True Miniaturization with Characteristics Previously Unobtainable in Electrolytic Capacitors.
- Hermetically Sealed Metal Case.
- Solid Electrolyte Cannot Leak or Corrode, Even if Hermetic Seal is Accidentally Broken.
- Exhibit Stable Capacitance and Low Dissipation Factor over Temperature Range of —80°C to +85°C. With Appropriate Voltage Derating, May Be Operated to +125°C.
- Listed Units have Plastic Sleeves. For Bare Case, end Cat. No. in "0" instead of "2."
- For complete technical data, refer to latest issue of Engineering Bulletin 3520.
- Call your Sprague Industrial Distributor for Current Quantity Prices

Size Code	μF	Catalog Number	
		±20% Tol.	±10% Tol.
<b>6 WVDC — 8 VDC SURGE</b>			
.22	A	150D224X0006A2	150D224X9006A2
.27	A	150D274X9006A2	150D274X9006A2
.33	A	150D334X0006A2	150D334X9006A2
.39	A	150D394X9006A2	150D394X9006A2
.47	A	150D474X0006A2	150D474X9006A2
.56	A	150D564X9006A2	150D564X9006A2
.68	A	150D684X0006A2	150D684X9006A2
.82	A	150D824X9006A2	150D824X9006A2
1.0	A	150D105X0006A2	150D105X9006A2
1.2	A	150D125X9006A2	150D125X9006A2
1.5	A	150D155X0006A2	150D155X9006A2
1.8	A	150D185X9006A2	150D185X9006A2
2.2	A	150D225X0006A2	150D225X9006A2
2.7	A	150D275X9006A2	150D275X9006A2
3.3	A	150D335X0006A2	150D335X9006A2
3.9	A	150D395X9006A2	150D395X9006A2
4.7	A	150D475X0006A2	150D475X9006A2
5.6	A	150D565X9006A2	150D565X9006A2
6.8	A	150D685X0006A2	150D685X9006A2
8.2	B	150D825X9006B2	150D825X9006B2
10	B	150D106X0006B2	150D106X9006B2
12	B	150D126X9006B2	150D126X9006B2
15	B	150D156X0006B2	150D156X9006B2
18	B	150D186X9006B2	150D186X9006B2
22	B	150D226X0006B2	150D226X9006B2
27	B	150D276X9006B2	150D276X9006B2
33	B	150D336X0006B2	150D336X9006B2
39	B	150D396X9006B2	150D396X9006B2
47	B	150D476X0006B2	150D476X9006B2
56	B	150D566X9006B2	150D566X9006B2
60	B	150D606X9006B2	150D606X9006B2
68	R	150D686X0006R2	150D686X9006R2
82	R	150D826X9006R2	150D826X9006R2
100	R	150D107X0006R2	150D107X9006R2
120	R	150D127X0006R2	150D127X9006R2
150	R	150D157X0006R2	150D157X9006R2
180	R	150D187X0006S2	150D187X9006S2
220	S	150D227X0006S2	150D227X9006S2
270	S	150D277X0006S2	150D277X9006S2
330	S	150D337X0006S2	150D337X9006S2

Size Code	μF	Catalog Number	
		±20% Tol.	±10% Tol.
<b>15 WVDC — 18 VDC SURGE</b>			
.22	A	150D224X0015A2	150D224X9015A2
.27	A	150D274X9015A2	150D274X9015A2
.33	A	150D334X0015A2	150D334X9015A2
.39	A	150D394X9015A2	150D394X9015A2
.47	A	150D474X0015A2	150D474X9015A2
.56	A	150D564X9015A2	150D564X9015A2
.68	A	150D684X0015A2	150D684X9015A2
.82	A	150D824X9015A2	150D824X9015A2
1.0	A	150D105X0015A2	150D105X9015A2
1.2	A	150D125X9015A2	150D125X9015A2
1.5	A	150D155X0015A2	150D155X9015A2
1.8	A	150D185X9015A2	150D185X9015A2
2.2	A	150D225X0015A2	150D225X9015A2
2.7	A	150D275X9015A2	150D275X9015A2
3.3	A	150D335X0015A2	150D335X9015A2
3.9	B	150D395X9015B2	150D395X9015B2
4.7	B	150D475X0015B2	150D475X9015B2
5.6	B	150D565X9015B2	150D565X9015B2
6.8	B	150D685X0015B2	150D685X9015B2
8.2	B	150D825X9015B2	150D825X9015B2
10	B	150D106X0015B2	150D106X9015B2
12	B	150D126X9015B2	150D126X9015B2
15	B	150D156X0015B2	150D156X9015B2
18	B	150D186X9015B2	150D186X9015B2
22	B	150D226X0015B2	150D226X9015B2
27	R	150D276X9015R2	150D276X9015R2
33	R	150D336X0015R2	150D336X9015R2
39	R	150D396X9015R2	150D396X9015R2
47	R	150D476X0015R2	150D476X9015R2
56	R	150D566X9015R2	150D566X9015R2
68	R	150D686X0015R2	150D686X9015R2
82	S	150D826X9015S2	150D826X9015S2
100	S	150D107X0015S2	150D107X9015S2
120	S	150D127X9015S2	150D127X9015S2
150	S	150D157X0015S2	150D157X9015S2

Size Code	μF	Catalog Number	
		±20% Tol.	±10% Tol.
<b>35 WVDC — 40 VDC SURGE</b>			
.0047	A	150D472X0035A2	150D472X9035A2
.0056	A	150D562X9035A2	150D562X9035A2
.0068	A	150D682X0035A2	150D682X9035A2
.0082	A	150D822X9035A2	150D822X9035A2
.01	A	150D103X0035A2	150D103X9035A2
.012	A	150D123X9035A2	150D123X9035A2
.015	A	150D153X0035A2	150D153X9035A2
.018	A	150D183X9035A2	150D183X9035A2
.022	A	150D223X9035A2	150D223X9035A2
.027	A	150D273X9035A2	150D273X9035A2
.033	A	150D333X0035A2	150D333X9035A2
.039	A	150D393X9035A2	150D393X9035A2
.047	A	150D473X0035A2	150D473X9035A2
.056	A	150D563X9035A2	150D563X9035A2
.068	A	150D683X0035A2	150D683X9035A2
.082	A	150D823X9035A2	150D823X9035A2
.10	A	150D104X0035A2	150D104X9035A2
.12	A	150D124X9035A2	150D124X9035A2
.15	A	150D154X0035A2	150D154X9035A2
.18	A	150D184X9035A2	150D184X9035A2
.22	A	150D224X0035A2	150D224X9035A2
.27	A	150D274X9035A2	150D274X9035A2
.33	A	150D334X0035A2	150D334X9035A2
.39	A	150D394X9035A2	150D394X9035A2
.47	A	150D474X0035A2	150D474X9035A2
.56	A	150D564X9035A2	150D564X9035A2
.68	A	150D684X0035A2	150D684X9035A2
.82	A	150D824X9035A2	150D824X9035A2
1.0	A	150D105X0035A2	150D105X9035A2
1.2	B	150D125X9035B2	150D125X9035B2
1.5	B	150D155X0035B2	150D155X9035B2
1.8	B	150D185X9035B2	150D185X9035B2
2.2	B	150D225X0035B2	150D225X9035B2
2.7	B	150D275X9035B2	150D275X9035B2
3.3	B	150D335X0035B2	150D335X9035B2
3.9	B	150D395X9035B2	150D395X9035B2
4.7	B	150D475X0035B2	150D475X9035B2
5.6	B	150D565X9035B2	150D565X9035B2
6.8	B	150D685X0035B2	150D685X9035B2
8.2	R	150D825X9035R2	150D825X9035R2
10	R	150D106X0035R2	150D106X9035R2
12	R	150D126X9035R2	150D126X9035R2
15	R	150D156X0035R2	150D156X9035R2
18	R	150D186X9035R2	150D186X9035R2
22	R	150D226X0035R2	150D226X9035R2
27	S	150D276X9035S2	150D276X9035S2
33	S	150D336X0035S2	150D336X9035S2
39	S	150D396X9035S2	150D396X9035S2
47	S	150D476X0035S2	150D476X9035S2

Size Code	μF	Catalog Number	
		±20% Tol.	±10% Tol.
<b>10 WVDC — 13 VDC SURGE</b>			
.22	A	150D224X0010A2	150D224X9010A2
.27	A	150D274X9010A2	150D274X9010A2
.33	A	150D334X0010A2	150D334X9010A2
.39	A	150D394X9010A2	150D394X9010A2
.47	A	150D474X0010A2	150D474X9010A2
.56	A	150D564X9010A2	150D564X9010A2
.68	A	150D684X0010A2	150D684X9010A2
.82	A	150D824X9010A2	150D824X9010A2
1.0	A	150D105X0010A2	150D105X9010A2
1.2	A	150D125X9010A2	150D125X9010A2
1.5	A	150D155X0010A2	150D155X9010A2
1.8	A	150D185X9010A2	150D185X9010A2
2.2	A	150D225X0010A2	150D225X9010A2
2.7	A	150D275X9010A2	150D275X9010A2
3.3	A	150D335X0010A2	150D335X9010A2
3.9	A	150D395X9010A2	150D395X9010A2
4.7	A	150D475X0010A2	150D475X9010A2
5.6	B	150D565X9010B2	150D565X9010B2
6.8	B	150D685X0010B2	150D685X9010B2
8.2	B	150D825X9010B2	150D825X9010B2
10	B	150D106X0010B2	150D106X9010B2
12	B	150D126X9010B2	150D126X9010B2
15	B	150D156X0010B2	150D156X9010B2
18	B	150D186X9010B2	150D186X9010B2
22	B	150D226X0010B2	150D226X9010B2
27	B	150D276X9010B2	150D276X9010B2
33	B	150D336X0010B2	150D336X9010B2
39	B	150D396X9010B2	150D396X9010B2
47	B	150D476X0010B2	150D476X9010B2
56	R	150D566X9010R2	150D566X9010R2
68	R	150D686X0010R2	150D686X9010R2
82	R	150D826X9010R2	150D826X9010R2
100	R	150D107X0010R2	150D107X9010R2

Size Code	μF	Catalog Number	
		±20% Tol.	±10% Tol.
<b>20 WVDC — 23 VDC SURGE</b>			
.0047	A	150D472X0020A2	150D472X9020A2
.0056	A	150D562X9020A2	150D562X9020A2
.0068	A	150D682X0020A2	150D682X9020A2
.0082	A	150D822X9020A2	150D822X9020A2
.01	A	150D103X0020A2	150D103X9020A2
.012	A	150D123X9020A2	150D123X9020A2
.015	A	150D153X0020A2	150D153X9020A2
.018	A	150D183X9020A2	150D183X9020A2
.022	A	150D223X9020A2	150D223X9020A2
.027	A	150D273X9020A2	150D273X9020A2
.033	A	150D333X9020A2	150D333X9020A2
.039	A	150D393X9020A2	150D393X9020A2
.047	A	150D473X0020A2	150D473X9020A2
.056	A	150D563X9020A2	150D563X9020A2
.068	A	150D683X0020A2	150D683X9020A2
.082	A	150D823X9020A2	150D823X9020A2
.10	A	150D104X0020A2	150D104X9020A2
.12	A	150D124X9020A2	150D124X9020A2
.15	A	150D154X0020A2	150D154X9020A2
.18	A	150D184X9020A2	150D184X9020A2
.22	A	150D224X9020A2	150D224X9020A2
.27	A	150D274X9020A2	150D274X9020A2
.33	A	150D334X0020A2	150D334X9020A2
.39	A	150D394X9020A2	150D394X9020A2
.47	A	150D474X0020A2	150D474X9020A2
.56	A	150D564X9020A2	150D564X9020A2
.68	A	150D684X0020A2	150D684X9020A2
.82	A	150D824X9020A2	150D824X9020A2
1.0	A	150D105X0020A2	150D105X9020A2
1.2	A	150D125X9020A2	150D125X9020A2
1.5	A	150D155X0020A2	150D155X9020A2
1.8	A	150D185X9020A2	150D185X9020A2
2.2	A	150D225X0020A2	150D225X9020A2
2.7	B	150D275X9020B2	150D275X9020B2
3.3	B	150D335X0020B2	150D335X9020B2

Code	Dimensions	
	Bare Core	With Sleeve
A	.125" x .250"	.135" x .312"
B	.175" x .438"	.185" x .510"
R	.279" x .650"	.289" x .722"
S	.341" x .750"	.351" x .822"

# SPRAGUE CAPACITORS

## TYPE 150D SOLID-ELECTROLYTE TANTALEX® CAPACITORS (Cont.)

50 WVDC, 65 VDC SURGE				75 WVDC, 97 VDC SURGE				125 WVDC, 140 VDC SURGE			
Size	Catalog Number			Size	Catalog Number			Size	Catalog Number		
μF	Code	±20% Tol.	±10% Tol.	μF	Code	±20% Tol.	±10% Tol.	μF	Code	±20% Tol.	±10% Tol.
.0047	A	150D472X0050A2	150D472X9050A2	.0047	A	150D472X0075A2	150D472X9075A2	.0047	A	150D472X0125A2	150D472X9125A2
.0056	A	150D562X9050A2	150D562X9050A2	.0056	A	150D562X9075A2	150D562X9075A2	.0056	A	150D562X9125A2	150D562X9125A2
.0068	A	150D682X0050A2	150D682X9050A2	.0068	A	150D682X0075A2	150D682X9075A2	.0068	A	150D682X0125A2	150D682X9125A2
.0082	A	150D822X9050A2	150D822X9050A2	.0082	A	150D822X9075A2	150D822X9075A2	.0082	A	150D822X0125A2	150D822X9125A2
.01	A	150D103X0050A2	150D103X9050A2	.01	A	150D103X0075A2	150D103X9075A2	.01	A	150D103X0125A2	150D103X9125A2
.012	A	150D123X9050A2	150D123X9050A2	.012	A	150D123X9075A2	150D123X9075A2	.012	A	150D123X9125A2	150D123X9125A2
.015	A	150D153X0050A2	150D153X9050A2	.015	A	150D153X0075A2	150D153X9075A2	.015	A	150D153X0125A2	150D153X9125A2
.018	A	150D183X9050A2	150D183X9050A2	.018	A	150D183X9075A2	150D183X9075A2	.018	A	150D183X9125A2	150D183X9125A2
.022	A	150D223X0050A2	150D223X9050A2	.022	A	150D223X0075A2	150D223X9075A2	.022	A	150D223X0125A2	150D223X9125A2
.027	A	150D273X9050A2	150D273X9050A2	.027	A	150D273X9075A2	150D273X9075A2	.027	A	150D273X9125A2	150D273X9125A2
.033	A	150D333X0050A2	150D333X9050A2	.033	A	150D333X0075A2	150D333X9075A2	.033	A	150D333X0125A2	150D333X9125A2
.039	A	150D393X9050A2	150D393X9050A2	.039	A	150D393X9075A2	150D393X9075A2	.039	A	150D393X9125A2	150D393X9125A2
.047	A	150D473X0050A2	150D473X9050A2	.047	A	150D473X0075A2	150D473X9075A2	.047	A	150D473X0125A2	150D473X9125A2
.056	A	150D563X9050A2	150D563X9050A2	.056	A	150D563X9075A2	150D563X9075A2	.056	A	150D563X9125A2	150D563X9125A2
.068	A	150D683X0050A2	150D683X9050A2	.068	A	150D683X0075A2	150D683X9075A2	.068	A	150D683X0125A2	150D683X9125A2
.082	A	150D823X9050A2	150D823X9050A2	.082	A	150D823X9075A2	150D823X9075A2	.082	A	150D823X0125A2	150D823X9125A2
.1	A	150D104X0050A2	150D104X9050A2	.1	A	150D104X0075A2	150D104X9075A2	.1	A	150D104X0125A2	150D104X9125A2
.12	A	150D124X9050A2	150D124X9050A2	.12	A	150D124X0075A2	150D124X9075A2	.12	A	150D124X9125A2	150D124X9125A2
.15	A	150D154X0050A2	150D154X9050A2	.15	A	150D154X0075A2	150D154X9075A2	.15	A	150D154X0125A2	150D154X9125A2
.18	A	150D184X9050A2	150D184X9050A2	.18	A	150D184X9075A2	150D184X9075A2	.18	A	150D184X9125A2	150D184X9125A2
.22	A	150D224X0050A2	150D224X9050A2	.22	A	150D224X0075A2	150D224X9075A2	.22	A	150D224X0125A2	150D224X9125A2
.27	A	150D274X9050A2	150D274X9050A2	.27	A	150D274X9075A2	150D274X9075A2	.27	A	150D274X9125A2	150D274X9125A2
.33	A	150D334X0050A2	150D334X9050A2	.33	A	150D334X0075A2	150D334X9075A2	.33	A	150D334X0125A2	150D334X9125A2
.39	A	150D394X9050A2	150D394X9050A2	.39	A	150D394X9075A2	150D394X9075A2	.39	B	150D394X9125B2	150D394X9125B2
.47	A	150D474X0050A2	150D474X9050A2	.47	A	150D474X0075A2	150D474X9075A2	.47	B	150D474X0125B2	150D474X9125B2
.56	A	150D564X9050A2	150D564X9050A2	.56	A	150D564X9075A2	150D564X9075A2	.56	B	150D564X9125B2	150D564X9125B2
.68	A	150D684X0050A2	150D684X9050A2	.68	A	150D684X0075A2	150D684X9075A2	.68	B	150D684X0125B2	150D684X9125B2
.82	A	150D824X9050A2	150D824X9050A2	.82	B	150D824X9075B2	150D824X9075B2	.82	B	150D824X9125B2	150D824X9125B2
1.0	A	150D105X0050A2	150D105X9050A2	1.0	B	150D105X0075B2	150D105X9075B2	1.0	B	150D105X0125B2	150D105X9125B2
1.2	B	150D125X9050B2	150D125X9050B2	1.2	B	150D125X9075B2	150D125X9075B2	1.2	B	150D125X9125B2	150D125X9125B2
1.5	B	150D155X0050B2	150D155X9050B2	1.5	B	150D155X0075B2	150D155X9075B2	1.5	B	150D155X0125B2	150D155X9125B2
1.8	B	150D185X9050B2	150D185X9050B2	1.8	B	150D185X9075B2	150D185X9075B2	1.8	B	150D185X9125B2	150D185X9125B2
2.2	B	150D225X0050B2	150D225X9050B2	2.2	B	150D225X0075B2	150D225X9075B2	2.2	B	150D225X0125B2	150D225X9125B2
2.7	B	150D275X9050B2	150D275X9050B2	2.7	B	150D275X9075B2	150D275X9075B2				
3.3	B	150D335X0050B2	150D335X9050B2	3.3	B	150D335X0075B2	150D335X9075B2				
3.9	B	150D395X9050B2	150D395X9050B2	3.9	B	150D395X9075B2	150D395X9075B2				
4.7	B	150D475X0050B2	150D475X9050B2	4.7	R	150D475X0075R2	150D475X9075R2				
5.6	R	150D565X9050R2	150D565X9050R2	5.6	R	150D565X9075R2	150D565X9075R2				
6.8	R	150D685X0050R2	150D685X9050R2	6.8	R	150D685X0075R2	150D685X9075R2				
8.2	R	150D825X9050R2	150D825X9050R2	8.2	R	150D825X9075R2	150D825X9075R2				
10	R	150D106X0050R2	150D106X9050R2	10.0	R	150D106X0075R2	150D106X9075R2				
12	R	150D126X9050R2	150D126X9050R2	12.0	S	150D126X9075S2	150D126X9075S2				
15	R	150D156X0050R2	150D156X9050R2	15.0	S	150D156X0075S2	150D156X9075S2				
18	R	150D186X9050R2	150D186X9050R2								
22	S	150D226X0050S2	150D226X9050S2								

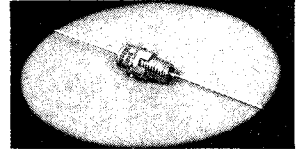
DIMENSIONS		
Code	D. x L.	
A	.125" x .250"	Call your Sprague Industrial Distributor for Current Quantity Prices
B	.175" x .438"	
R	.279" x .650"	
S	.341" x .750"	

# SPRAGUE CAPACITORS

## TYPE 180D SOLID ELECTROLYTE TANTALEX® FEED-THRU CAPACITORS

- Effectively bypasses r-f interference on low voltage d-c power circuits
- First of its kind available to designers. Positive mounting is assured with Sprague's new design.
- Large values of capacitance available in small physical size. Will carry 5 amperes d-c at 25C, 2 amperes d-c at 125C.
- Hermetically sealed in corrosion-resistant cases. Glass-to-metal solder seal terminals for maximum protection.

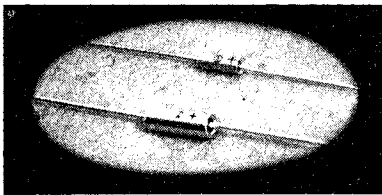
- Performance characteristics similar to Sprague Type 150D solid electrolyte Tantalex capacitors.
- Case measures .312 in. dia. x .689 in. long. Leads measure 1 1/2 inches.



μF	WVDC	Surge VDC	Cat. No.
60	6	8	180D606X0006
39	10	13	180D396X0010
22	15	20	180D226X0015
15	20	26	180D156X0020
6.8	35	46	180D685X0035
4.7	50	65	180D475X0050
3.9	75	97	180D395X0075

- For complete technical data refer to latest issue Engineering Bulletin 3525.
- Prices available upon request.

## TYPE 172D METAL-CLAD HERMETICALLY SEALED SOLID ELECTROLYTE TANTALEX® CAPACITORS



- Ultra-miniature Cordwood-size Tantalum Capacitors With Performance Characteristics Identical to Standard-size Sprague Type 150D Units.
- Superior High Frequency Performance, Lower Leakage Current Values and Dissipation Factor Limits.
- Glass-to-Metal Hermetic Seal, Solid Tinned Leads.

- Cordwood Size Allows Circuit Designer to Make Maximum Use of This Packaging Concept. Units Listed Have Plastic Insulating Sleeve. For Bare Case Units, Change Last Digit of Cat. No. to "O."

SIZE CODE		
Bare Case		Plastic Sleeve
J = .085 D x .250 L		.090 D x .250 L
L = .127 D x .375 L		.138 D x .390 L

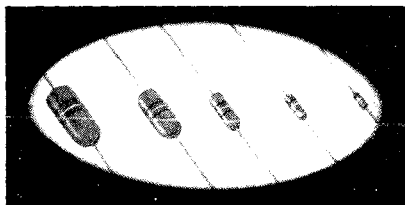
μF	Size Code	Catalog Number	
		±20% Tol.	10±% Tol.
<b>6 VOLTS D-C, 8 VDC SURGE</b>			
.22	J	224X0006J2	224X9006J2
.27	J	274X9006J2	274X9006J2
.33	J	334X0006J2	334X9006J2
.39	J	394X9006J2	394X9006J2
.47	J	474X0006J2	474X9006J2
.56	J	564X9006J2	564X9006J2
.68	J	684X0006J2	684X9006J2
.82	J	824X9006J2	824X9006J2
1.0	J	105X0006J2	105X9006J2
1.2	J	125X9006J2	125X9006J2
1.5	J	155X0006J2	155X9006J2
1.8	L	185X9006L2	185X9006L2
2.2	L	225X0006L2	225X9006L2
2.7	L	275X9006L2	275X9006L2
3.3	L	335X0006L2	335X9006L2
3.9	L	395X9006L2	395X9006L2
4.7	L	475X0006L2	475X9006L2
5.6	L	565X9006L2	565X9006L2
6.8	L	685X0006L2	685X9006L2
8.2	L	825X9006L2	825X9006L2
10	L	106X0006L2	106X9006L2
12	L	126X9006L2	126X9006L2
15	L	156X0006L2	156X9006L2
<b>10 VOLTS D-C, 13 VDC SURGE</b>			
.22	J	224X0010J2	224X9010J2
.27	J	274X9010J2	274X9010J2
.33	J	334X0010J2	334X9010J2
.39	J	394X9010J2	394X9010J2
.47	J	474X0010J2	474X9010J2
.56	J	564X9010J2	564X9010J2
.68	J	684X0010J2	684X9010J2
.82	J	824X9010J2	824X9010J2
1.0	L	105X0010L2	105X9010L2
1.2	L	125X9010L2	125X9010L2
1.5	L	155X0010L2	155X9010L2
1.8	L	185X9010L2	185X9010L2
2.2	L	225X0010L2	225X9010L2
2.7	L	275X9010L2	275X9010L2
3.3	L	335X0010L2	335X9010L2
3.9	L	395X9010L2	395X9010L2
4.7	L	475X0010L2	475X9010L2
5.6	L	565X9010L2	565X9010L2
6.8	L	685X0010L2	685X9010L2
8.2	L	825X9010L2	825X9010L2
<b>15 VOLTS D-C, 20 VDC SURGE</b>			
.22	J	224X0015J2	224X9015J2
.27	J	274X9015J2	274X9015J2
.33	J	334X0015J2	334X9015J2

μF	Size Code	Catalog Number	
		±20% Tol.	10±% Tol.
<b>20 VOLTS D-C, 26 VDC SURGE</b>			
.39	J	394X9015J2	394X9015J2
.47	J	474X0015J2	474X9015J2
.56	J	564X9015J2	564X9015J2
.68	L	684X0015L2	684X9015L2
.82	L	824X9015L2	824X9015L2
1.0	L	105X0015L2	105X9015L2
1.2	L	125X9015L2	125X9015L2
1.5	L	155X0015L2	155X9015L2
1.8	L	185X9015L2	185X9015L2
2.2	L	225X0015L2	225X9015L2
2.7	L	275X9015L2	275X9015L2
3.3	L	335X0015L2	335X9015L2
3.9	L	395X9015L2	395X9015L2
4.7	L	475X0015L2	475X9015L2
5.6	L	565X9015L2	565X9015L2
<b>35 VOLTS D-C, 46 VDC SURGE</b>			
.047	J	473X0020J2	473X9020J2
.056	J	563X9020J2	563X9020J2
.063	J	633X0020J2	633X9020J2
.082	J	823X9020J2	823X9020J2
.1	J	104X0020J2	104X9020J2
.12	J	124X9020J2	124X9020J2
.15	J	154X0020J2	154X9020J2
.18	J	184X9020J2	184X9020J2
.22	J	224X0020J2	224X9020J2
.27	J	274X9020J2	274X9020J2
.33	J	334X9020J2	334X9020J2
.39	J	394X9020J2	394X9020J2
.47	L	474X0020L2	474X9020L2
.56	L	564X9020L2	564X9020L2
.68	L	684X0020L2	684X9020L2
.82	L	824X9020L2	824X9020L2
1.0	L	105X0020L2	105X9020L2
1.2	L	125X9020L2	125X9020L2
1.5	L	155X0020L2	155X9020L2
1.8	L	185X9020L2	185X9020L2
2.2	L	225X0020L2	225X9020L2
2.7	L	275X9020L2	275X9020L2
3.3	L	335X0020L2	335X9020L2
<b>50 VOLTS D-C, 65 VDC SURGE</b>			
.047	J	473X0050J2	473X9050J2
.056	J	563X9050J2	563X9050J2
.063	J	633X0050J2	633X9050J2
.082	J	823X9050J2	823X9050J2
.1	J	104X0050J2	104X9050J2
.12	J	124X9050J2	124X9050J2
.15	J	154X0050J2	154X9050J2
.18	L	184X9050L2	184X9050L2
.22	L	224X0050L2	224X9050L2
.27	L	274X9050L2	274X9050L2
.33	L	334X0050L2	334X9050L2
.39	L	394X9050L2	394X9050L2
.47	L	474X0050L2	474X9050L2
.56	L	564X9050L2	564X9050L2
.68	L	684X0050L2	684X9050L2
.82	L	824X9050L2	824X9050L2
1.0	L	105X0050L2	105X9050L2
1.2	L	125X9050L2	125X9050L2
<b>75 VOLTS D-C, 97 VDC SURGE</b>			
.047	J	473X0075J2	473X9075J2
.056	J	563X9075J2	563X9075J2
.063	J	633X0075J2	633X9075J2
.082	J	823X9075J2	823X9075J2
.1	J	104X0075J2	104X9075J2
.12	L	124X9075L2	124X9075L2
.15	L	154X0075L2	154X9075L2
.18	L	184X9075L2	184X9075L2
.22	L	224X0075L2	224X9075L2
.27	L	274X9075L2	274X9075L2
.33	L	334X0075L2	334X9075L2
.39	L	394X9075L2	394X9075L2
.47	L	474X0075L2	474X9075L2
.56	L	564X9075L2	564X9075L2
.68	L	684X0075L2	684X9075L2
.82	L	824X9075L2	824X9075L2

FOR CURRENT QUANTITY PRICES SEE YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR

# SPRAGUE CAPACITORS

## TYPE 154D MOLDED SOLID-ELECTROLYTE TANTALEX<sup>®</sup> CAPACITORS



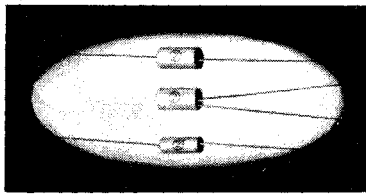
- Ultra-miniature Molded Solid Electrolyte Tantalum Capacitors in Cordwood Sized Cases. Same Performance Characteristics as Competitive Standard Metal-clad Solid Tantalum Capacitors.
- Cordwood Size Cases Permit Circuit Designer to Make Full Use of This New Packaging Concept.
- Also Suitable for Point-to-point Wiring,

Printed Wiring Boards and May be Used in Automatic Insertion Machinery.

- Rounded End of Case Identifies Positive Terminal of Capacitor.
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin No. 3530.
- Call Your Sprague Industrial Distributor for Current Prices.

$\mu$ F	Size Code	Catalog Number ±10% Tol.	$\mu$ F	Size Code	Catalog Number ±10% Tol.	$\mu$ F	Size Code	Catalog Number ±10% Tol.	$\mu$ F	Size Code	Catalog Number ±10% Tol.
<b>6 VOLTS D-C, 8 VDC SURGE</b>											
.22	J	*154D224X9006J	10	N	*154D106X9010N	.47	J	*154D474X9020J	<b>50 VOLTS D-C, 65 VDC SURGE</b>		
.27	J	154D274X9006J	12	N	154D126X9010N	.56	L	154D564X9020L	.1	J	*154D104X9050J
.33	J	*154D334X9006J	15	N	*154D156X9010N	.68	L	*154D684X9020L	.12	J	154D124X9050J
.39	J	154D394X9006J	18	N	154D186X9010N	.82	L	154D824X9020L	.15	J	*154D154X9050J
.47	J	*154D474X9006J	22	P	*154D226X9010P	1.0	L	*154D105X9020L	.18	L	154D184X9050L
.56	J	154D564X9006J	27	P	154D276X9010P	1.2	L	154D125X9020L	.22	L	*154D224X9050L
.68	J	*154D684X9006J	33	P	*154D336X9010P	1.5	L	*154D155X9020L	.27	L	154D274X9050L
.82	J	154D824X9006J	39	P	154D396X9010P	1.8	L	154D185X9020L	.33	L	*154D334X9050L
1.0	J	*154D105X9006J	47	P	*154D476X9010P	2.2	L	*154D225X9020L	.39	L	154D394X9050L
1.2	J	154D125X9006J	56	P	154D566X9010P	2.7	L	154D275X9020L	.47	L	*154D474X9050L
1.5	J	*154D155X9006J	68	P	*154D686X9010P	3.3	L	*154D335X9020L	.56	L	154D564X9050L
1.8	J	154D185X9006J	82	P	154D826X9010P	3.9	N	154D395X9020N	.68	L	*154D684X9050L
2.2	L	*154D225X9006L	100	P	*154D107X9010P	4.7	N	*154D475X9020N	.82	L	154D824X9050L
2.7	L	154D275X9006L	120	P	154D127X9010P	5.6	N	154D565X9020N	1.0	L	*154D105X9050L
3.3	L	*154D335X9006L	150	T	*154D157X9010T	6.8	N	*154D685X9020N	1.2	L	154D125X9050L
3.9	L	154D395X9006L	180	T	154D187X9010T	8.2	N	154D825X9020N	1.5	N	*154D155X9050N
4.7	L	*154D475X9006L	220	T	*154D227X9010T	10	N	*154D106X9020N	1.8	N	154D185X9050N
5.6	L	154D565X9006L	<b>15 VOLTS D-C, 20 VDC SURGE</b>			12	N	154D126X9020N	2.2	N	*154D225X9050N
6.8	L	*154D685X9006L	.22	J	*154D224X9015J	15	N	*154D156X9020N	2.7	N	154D275X9050N
8.2	L	154D825X9006L	.27	J	154D274X9015J	18	P	154D186X9020P	3.3	N	*154D335X9050N
10	L	*154D106X9006L	.33	J	*154D334X9015J	22	P	*154D226X9020P	3.9	N	154D395X9050N
12	L	154D126X9006L	.39	J	154D394X9015J	27	P	154D276X9020P	4.7	N	*154D475X9050N
15	L	*154D156X9006L	.47	J	*154D474X9015J	33	P	*154D336X9020P	5.6	P	154D565X9050P
18	N	154D186X9006N	.56	J	154D564X9015J	39	P	*154D476X9020P	6.8	P	*154D685X9050P
22	N	*154D226X9006N	.68	J	*154D684X9015J	47	P	154D566X9020T	8.2	P	154D825X9050P
27	N	154D276X9006N	.82	L	154D824X9015L	56	T	*154D686X9020T	10	P	*154D106X9050P
33	N	*154D336X9006N	1.0	L	*154D105X9015L	68	T	*154D826X9020T	12	P	154D126X9050P
39	N	154D396X9006N	1.2	L	154D125X9015L	82	T	154D826X9020T	15	P	*154D156X9050P
47	N	*154D476X9006N	1.5	L	*154D155X9015L	100	T	*154D107X9020T	18	P	154D186X9050P
56	N	154D566X9006N	1.8	L	154D185X9015L	<b>35 VOLTS D-C, 46 VDC SURGE</b>			22	T	*154D226X9050T
68	P	*154D686X9006P	2.2	L	*154D225X9015L	.1	J	*154D104X9035J	<b>75 VOLTS D-C, 97 VDC SURGE</b>		
82	P	154D826X9006P	2.7	L	154D275X9015L	.12	J	154D124X9035J	.1	J	*154D104X9075J
100	P	*154D107X9006P	3.3	L	*154D335X9015L	.15	J	*154D154X9035J	.12	L	154D124X9075L
120	P	154D127X9006P	3.9	L	154D395X9015L	.18	J	154D184X9035J	.15	L	*154D154X9075L
150	P	*154D157X9006P	4.7	L	*154D475X9015L	.22	L	*154D224X9035L	.18	L	154D184X9075L
180	P	154D187X9006P	5.6	L	154D565X9015L	.27	L	154D274X9035L	.22	L	*154D224X9075L
220	T	*154D220X9006T	6.8	N	*154D685X9015N	.33	L	*154D334X9035L	.27	L	154D274X9075L
270	T	154D227X9006T	8.2	N	154D825X9015N	.39	L	154D394X9035L	.33	L	*154D334X9075L
330	T	*154D337X9006T	10	N	*154D106X9015N	.47	L	*154D474X9035L	.39	L	154D394X9075L
360	T	154D367X9006T	12	N	154D126X9015N	.56	L	154D564X9035L	.47	L	*154D474X9075L
<b>10 VOLTS D-C, 13 VDC SURGE</b>			15	N	*154D156X9015N	.68	L	*154D684X9035L	.56	L	154D564X9075L
.22	J	*154D224X9010J	18	N	154D186X9015N	.82	L	154D824X9035L	.68	L	*154D684X9075L
.27	J	154D274X9010J	22	N	*154D226X9015N	1.0	L	*154D105X9035L	.82	L	154D824X9075L
.33	J	*154D334X9010J	27	P	154D276X9015P	1.2	L	154D125X9035L	1.0	N	*154D105X9075N
.39	J	154D394X9010J	33	P	*154D336X9015P	1.5	L	*154D155X9035L	1.2	N	154D125X9075N
.47	J	*154D474X9010J	39	P	154D396X9015P	1.8	N	154D185X9035N	1.5	N	*154D155X9075N
.56	J	154D564X9010J	47	P	*154D476X9015P	2.2	N	*154D225X9035N	1.8	N	154D185X9075N
.68	J	*154D684X9010J	56	P	154D566X9015P	2.7	N	154D275X9035N	2.2	N	*154D225X9075N
.82	J	154D824X9010J	68	P	*154D686X9015P	3.3	N	*154D335X9035N	2.7	N	154D275X9075N
1.0	J	*154D105X9010J	82	T	154D826X9015T	3.9	N	154D395X9035N	3.3	N	*154D335X9075N
1.2	L	154D125X9010L	100	T	*154D107X9015T	4.7	N	*154D475X9035N	<b>DIMENSIONS</b>		
1.5	L	*154D155X9010L	120	T	154D127X9015T	5.6	N	154D565X9035N	Code	D. x L.	<b>CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES</b>
1.8	L	154D185X9010L	150	T	*154D157X9015T	6.8	N	*154D685X9035N	J	.090" x .250"	
2.2	L	*154D225X9010L	<b>20 VOLTS D-C, 26 VDC SURGE</b>			8.2	P	154D825X9035P	L	.138" x .390"	
2.7	L	154D275X9010L	.1	J	*154D104X9020J	10	P	*154D106X9035P	N	.200" x .562"	
3.3	L	*154D335X9010L	.12	J	154D124X9020J	12	P	154D126X9035P	P	.312" x .714"	
3.9	L	154D395X9010L	.15	J	*154D154X9020J	15	P	*154D156X9035P	T	.375" x .875"	
4.7	L	*154D475X9010L	.18	J	154D184X9020J	18	P	154D186X9035P	<b>*These ratings are also available in ±20% Tolerance. To order change the 9 following the X the catalog number to 0.</b>		
5.6	L	154D565X9010L	.22	J	*154D224X9020J	22	P	*154D226X9035P			
6.8	L	*154D685X9010L	.27	J	154D274X9020J	27	T	154D276X9035T			
8.2	L	154D825X9010L	.33	J	*154D334X9020J	33	T	*154D336X9035T			
			.39	J	154D394X9020J	39	T	154D396X9035T			
						47	T	*154D476X9035T			

# SPRAGUE CAPACITORS



DIMENSIONS

Case Code	D	x	L
AA	0.080	x	0.135
AB	0.080	x	0.185
BA	0.105	x	0.265
CA	0.145	x	0.265

## TYPES 162D, 169D MINIATURE SOLID-ELECTROLYTE RED TOP\* TANTALEX<sup>®</sup> CAPACITORS IN RESIN-SEALED CASES

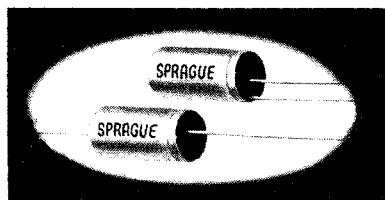
- Miniature Polarized Tantalex Capacitors in Resin-sealed Case For Use in Compactly Designed Electronic Equipment.
- Two Lead Styles—Type 162D With Axial Leads, and "Single-Ended" Type 169D, Which is Especially Suited For Printed Wiring Board Applications.
- Red End Seal Indicates Positive End on Axial Lead Units. Center Lead is Positive on "Single-Ended" Type 169D Capacitors.
- Listed Units have Plastic-Film Insulation. Bare Metal Case Units Available.
- Ratings From 2 Through 100 WVDC Available.
- Capacitance Values From 0.033  $\mu$ F to 68  $\mu$ F.
- Temperature Range of  $-55$  C to  $+85$  C.
- For Complete Technical Data, Refer to the Latest Issue of Sprague Engineering Bulletin No. 3536.
- Call Your Sprague Industrial Distributor For Prices.

$\mu$ F WVDC	Size	Case	Catalog	Catalog
			Axial-Lead	Single-Ended
47	4 CA	162D476X9004CA2	169D476X9004CA2	
1.0	10 AA	162D105X9010AA2	169D105X9010AA2	
10	10 BA	162D106X9010BA2	169D106X9010BA2	
22	10 CA	162D226X9010CA2	169D226X9010CA2	
.68	15 AA	162D684X9015AA2	169D684X9015AA2	

$\mu$ F WVDC	Size	Case	Catalog	Catalog
			Axial-Lead	Single-Ended
2.2	15 AB	162D225X9015AB2	169D225X9015AB2	
6.8	15 BA	162D685X9015BA2	169D685X9015BA2	
15	15 CA	162D156X9015CA2	169D156X9015CA2	
.47	20 AA	162D474X9020AA2	169D474X9020AA2	
1.0	20 AB	162D105X9020AB2	169D105X9020AB2	

$\mu$ F WVDC	Size	Case	Catalog	Catalog
			Axial-Lead	Single-Ended
4.7	20 BA	162D475X9020BA2	169D475X9020BA2	
.15	35 AA	162D154X9035AA2	169D154X9035AA2	
.1	50 AA	162D104X9050AA2	169D104X9050AA2	
.033	100 AA	162D333X9100AA2	169D333X9100AA2	
.068	100 AA	162D683X9100AA2	169D683X9100AA2	

## TYPES 164D, 167D SOLID-ELECTROLYTE RED TOP\* TANTALEX<sup>®</sup> CAPACITORS



DIMENSIONS

Case Code A: .135 D. x .322 L. B = .185 D. x .510 L. R = .289 D. x .722 L. S = .351 D. x .822 L.

- Economically Priced Red Top Capacitors Are For Use in Commercial Digital Computers and All Types of Industrial Electronic Equipment.
- Metal Cases With Resin End Seals Afford Greater Moisture Protection Than Organic Housings Such as Moldings or Polyester Film.
- Case Sizes are the Same as those of the "Industrial Standard" Type 150D Hermetically-Sealed Design.
- Two Lead Styles—Type 164D With Axial Leads, and "Single-Ended" Type 167D, Which is Especially Suited For Printed Wiring Board Applications.
- Red End Seal Indicates Positive End on Axial Lead Units. Center Lead is Positive on "Single-Ended" Type 167D Capacitors.
- Listed Units Have Plastic-Film Insulation. Bare Metal Case Units Available.
- Voltage Ratings From 6 Through 75 WVDC.
- Temperature Range of  $-55$  C to  $+85$  C.
- For Complete Technical Data, Refer to the Latest Issue of Sprague Engineering Bulletin No. 3537.
- Call Your Sprague Industrial Distributor For Prices.

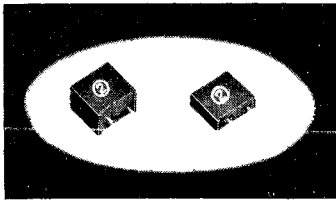
$\mu$ F	WVDC	Size	Catalog	Catalog
			Axial-Lead	Single-Ended
5.6	6 A	164D565X9006A2	167D565X9006A2	
6.8	6 A	164D685X9006A2	167D685X9006A2	
47	6 B	164D476X9006B2	167D476X9006B2	
56	6 B	164D566X9006B2	167D566X9006B2	
150	6 R	164D157X9006R2	167D157X9006R2	
180	6 R	164D187X9006R2	167D187X9006R2	
270	6 S	164D277X9006S2	167D277X9006S2	
330	6 S	164D337X9006S2	167D337X9006S2	
3.9	10 A	164D395X9010A2	167D395X9010A2	
4.7	10 A	164D475X9010A2	167D475X9010A2	
27	10 B	164D276X9010B2	167D276X9010B2	
33	10 B	164D336X9010B2	167D336X9010B2	
39	10 B	164D336X9010B2	167D336X9010B2	
82	10 R	164D826X9010R2	167D826X9010R2	
100	10 R	164D107X9010R2	167D107X9010R2	
120	10 R	164D127X9010R2	167D127X9010R2	
180	10 S	164D187X9010S2	167D187X9010S2	
220	10 S	164D227X9010S2	167D227X9010S2	
2.7	15 A	164D275X9015A2	167D275X9015A2	
3.3	15 A	164D335X9015A2	167D335X9015A2	
18	15 B	164D186X9015B2	167D186X9015B2	
22	15 B	164D226X9015B2	167D226X9015B2	
56	15 R	164D566X9015R2	167D566X9015R2	
68	15 R	164D686X9015R2	167D686X9015R2	
120	15 S	164D127X9015S2	167D127X9015S2	
150	15 S	164D157X9015S2	167D157X9015S2	
1.2	20 A	164D125X9020A2	167D125X9020A2	
1.5	20 A	164D155X9020A2	167D155X9020A2	
1.8	20 A	164D185X9020A2	167D185X9020A2	
2.2	20 A	164D225X9020A2	167D225X9020A2	
8.2	20 B	164D825X9020B2	167D825X9020B2	
10	20 B	164D106X9020B2	167D106X9020B2	
12	20 B	164D126X9020B2	167D126X9020B2	
15	20 B	164D156X9020B2	167D156X9020B2	
27	20 R	164D276X9020R2	167D276X9020R2	
33	20 R	164D336X9020R2	167D336X9020R2	
39	20 R	164D396X9020R2	167D396X9020R2	
47	20 R	164D476X9020R2	167D476X9020R2	
56	20 S	164D566X9020S2	167D566X9020S2	
68	20 S	164D686X9020S2	167D686X9020S2	
82	20 S	164D826X9020S2	167D826X9020S2	
100	20 S	164D107X9020S2	167D107X9020S2	
.0047	35 A	164D472X9035A2	167D472X9035A2	
.0068	35 A	164D682X9035A2	167D682X9035A2	

$\mu$ F	WVDC	Size	Catalog	Catalog
			Axial-Lead	Single-Ended
.01	35 A	164D103X9035A2	167D103X9035A2	
.015	35 A	164D153X9035A2	167D153X9035A2	
.022	35 A	164D223X9035A2	167D223X9035A2	
.033	35 A	164D333X9035A2	167D333X9035A2	
.047	35 A	164D473X9035A2	167D473X9035A2	
.063	35 A	164D683X9035A2	167D683X9035A2	
.1	35 A	164D104X9035A2	167D104X9035A2	
.15	35 A	164D154X9035A2	167D154X9035A2	
.22	35 A	164D224X9035A2	167D224X9035A2	
.33	35 A	164D334X9035A2	167D334X9035A2	
.47	35 A	164D474X9035A2	167D474X9035A2	
.68	35 A	164D684X9035A2	167D684X9035A2	
1.0	35 A	164D105X9035A2	167D105X9035A2	
1.2	35 B	164D125X9035B2	167D125X9035B2	
1.5	35 B	164D155X9035B2	167D155X9035B2	
1.8	35 B	164D185X9035B2	167D185X9035B2	
2.2	35 B	164D225X9035B2	167D225X9035B2	
2.7	35 B	164D275X9035B2	167D275X9035B2	
3.3	35 B	164D335X9035B2	167D335X9035B2	
3.9	35 B	164D395X9035B2	167D395X9035B2	
4.7	35 B	164D475X9035B2	167D475X9035B2	
5.6	35 B	164D565X9035B2	167D565X9035B2	
6.8	35 B	164D685X9035B2	167D685X9035B2	
8.2	35 R	164D825X9035R2	167D825X9035R2	
10	35 R	164D106X9035R2	167D106X9035R2	
12	35 R	164D126X9035R2	167D126X9035R2	
15	35 R	164D156X9035R2	167D156X9035R2	
18	35 R	164D186X9035R2	167D186X9035R2	
22	35 R	164D226X9035R2	167D226X9035R2	
27	35 S	164D276X9035S2	167D276X9035S2	
33	35 S	164D336X9035S2	167D336X9035S2	
39	35 S	164D396X9035S2	167D396X9035S2	
47	35 S	164D476X9035S2	167D476X9035S2	
.0047	50 A	164D472X9050A2	167D472X9050A2	
.0068	50 A	164D682X9050A2	167D682X9050A2	
.01	50 A	164D103X9050A2	167D103X9050A2	
.015	50 A	164D153X9050A2	167D153X9050A2	
.022	50 A	164D223X9050A2	167D223X9050A2	
.033	50 A	164D333X9050A2	167D333X9050A2	
.047	50 A	164D473X9050A2	167D473X9050A2	
.068	50 A	164D683X9050A2	167D683X9050A2	
.1	50 A	164D104X9050A2	167D104X9050A2	
.15	50 A	164D154X9050A2	167D154X9050A2	

$\mu$ F	WVDC	Size	Catalog	Catalog
			Axial-Lead	Single-Ended
.22	50 A	164D224X9050A2	167D224X9050A2	
.33	50 A	164D334X9050A2	167D334X9050A2	
.47	50 A	164D474X9050A2	167D474X9050A2	
.68	50 A	164D684X9050A2	167D684X9050A2	
1.0	50 A	164D105X9050A2	167D105X9050A2	
1.2	50 B	164D125X9050B2	167D125X9050B2	
1.5	50 B	164D155X9050B2	167D155X9050B2	
1.8	50 B	164D185X9050B2	167D185X9050B2	
2.2	50 B	164D225X9050B2	167D225X9050B2	
2.7	50 B	164D275X9050B2	167D275X9050B2	
3.3	50 B	164D335X9050B2	167D335X9050B2	
3.9	50 B	164D395X9050B2	167D395X9050B2	
4.7	50 B	164D475X9050B2	167D475X9050B2	
5.6	50 R	164D565X9050R2	167D565X9050R2	
6.8	50 R	164D685X9050R2	167D685X9050R2	
8.2	50 R	164D825X9050R2	167D825X9050R2	
10	50 R	164D106X9050R2	167D106X9050R2	
12	50 R	164D126X9050R2	167D126X9050R2	
15	50 R	164D156X9050R2	167D156X9050R2	
18	50 R	164D186X9050R2	167D186X9050R2	
22	50 S	164D226X9050S2	167D226X9050S2	
.0047	75 A	164D472X9075A2	167D472X9075A2	
.0068	75 A	164D682X9075A2	167D682X9075A2	
.01	75 A	164D103X9075A2	167D103X9075A2	
.015	75 A	164D153X9075A2	167D153X9075A2	
.022	75 A	164D223X9075A2	167D223X9075A2	
.033	75 A	164D333X9075A2	167D333X9075A2	
.047	75 A	164D473X9075A2	167D473X9075A2	
.068	75 A	164D683X9075A2	167D683X9075A2	
.1	75 A	164D104X9075A2	167D104X9075A2	
.15	75 A	164D154X9075A2	167D154X9075A2	
.22	75 A	164D224X9075A2	167D224X9075A2	
.33	75 A	164D334X9075A2	167D334X9075A2	
.47	75 A	164D474X9075A2	167D474X9075A2	
.68	75 A	164D684X9075A2	167D684X9075A2	
1.0	75 B	164D105X9075B2	167D105X9075B2	
1.2	75 B	164D125X9075B2	167D125X9075B2	
1.5	75 B	164D155X9075B2	167D155X9075B2	
1.8	75 B	164D185X9075B2	167D185X9075B2	
2.2	75 B	164D225X9075B2	167D225X9075B2	
2.7	75 B	164D275X9075B2	167D275X9075B2	
3.3	75 B	164D335X9075B2	167D335X9075B2	
3.9	75 B	164D395X9075B2	167D395X9075B2	

# SPRAGUE CAPACITORS

## TYPE 190D SOLID-ELECTROLYTE TANTALEX<sup>®</sup> CAPACITORS



- Well Suited for Automatic Insertion Because Height and Width of all Units is Uniform—Only Thickness Varies From Case to Case.
- High Density Qualifies These Capacitors for Printed Circuits and Other Applications Where Space is At a Premium.
- Stand-off Feet on Bottom of Case Allow Complete Air Circulation, Preventing Trapped Moisture.
- Encapsulated in Tough Molded Cases with Excellent Dielectric Properties.
- Exceptionally Low Impedances at High Frequencies.
- Low Dissipation Factor Permits High Ripple Currents.
- For Complete Technical Data, Refer to the Latest Issue of Sprague Engineering Bulletin No. 3531.
- Call Your Sprague Industrial Distributor for Prices.

DIMENSIONS	
Case Code	Size in Inches
	T
A	0.125
B	0.250
C	0.375
D	0.625

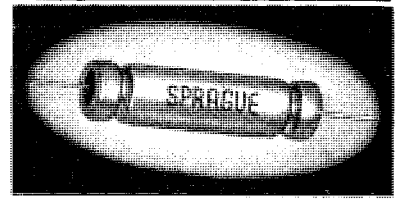
Size Catalog Number				Size Catalog Number				Size Catalog Number				Size Catalog Number			
μF	WVDC Code	10% Tol.		μF	WVDC Code	10% Tol.		μF	WVDC Code	10% Tol.		μF	WVDC Code	10% Tol.	
27	6	A	190D276X9006A	10	15	A	190D106X9015A	82	20	D	190D826X9020D	.68	50	A	190D684X9050A
33	6	A	190D336X9006A	12	15	A	190D126X9015A	100	20	D	190D107X9020D	1.0	50	A	190D105X9050A
100	6	B	190D107X9006B	39	15	B	190D396X9015A	2.7	35	A	190D275X9035A	1.2	50	A	190D125X9050A
120	6	B	190D127X9006B	47	15	B	190D476X9015A	3.3	35	A	190D335X9035A	1.5	50	A	190D155X9050A
150	6	C	190D157X9006C	68	15	C	190D686X9015C	8.2	35	B	190D825X9035B	1.8	50	A	190D185X9050A
180	6	C	190D187X9006C	120	15	D	190D127X9015D	10	35	B	190D106X9035B	2.2	50	A	190D225X9050A
270	6	D	190D277X9006D	150	15	D	190D157X9015D	12	35	B	190D126X9035B	2.7	50	B	190D275X9050B
330	6	D	190D337X9006D	3.9	20	A	190D395X9020A	15	35	B	190D156X9035B	3.3	50	B	190D335X9050B
15	10	A	190D156X9010A	4.7	20	A	190D475X9020A	18	35	C	190D186X9035C	3.9	50	B	190D395X9050B
18	10	A	190D186X9010A	5.6	20	A	190D565X9020A	22	35	C	190D226X9035C	4.7	50	B	190D475X9050B
22	10	A	190D226X9010A	6.8	20	A	190D685X9020A	27	35	C	190D276X9035C	5.6	50	B	190D565X9050B
56	10	B	190D566X9010B	18	20	B	190D186X9020B	33	35	D	190D336X9035D	6.8	50	B	190D685X9050B
68	10	B	190D686X9010B	22	20	B	190D226X9020B	39	35	D	190D396X9035D	8.2	50	B	190D825X9050B
82	10	B	190D826X9010B	27	20	B	190D276X9020B	47	35	D	190D476X9035D	10	50	B	190D106X9050B
100	10	C	190D107X9010C	33	20	B	190D336X9020B	.1	50	A	190D104X9050A	12	50	C	190D126X9050C
120	10	C	190D127X9010C	39	20	C	190D396X9020C	.15	50	A	190D154X9050A	15	50	C	190D156X9050C
180	10	D	190D187X9010D	47	20	C	190D476X9020C	.22	50	A	190D224X9050A	18	50	D	190D186X9050D
220	10	D	190D227X9010D	56	20	C	190D566X9020C	.33	50	A	190D334X9050A	22	50	D	190D226X9050D
8.2	15	A	190D825X9015A	68	20	D	190D686X9020D	.47	50	A	190D474X9050A				

## 125°C FOIL TANTALEX<sup>®</sup> CAPACITORS

- Small size, electrically stable, long life. For data, see latest Engineering Bulletin 3602.
- 120D, 122D available as MIL-C-3965 units.
- Tol., 120D, 121D, ±20%; 122D, 123D, -15, +75%.
- Listed units have plastic wrap. For bare

metal case units, end Cat. No. in "0" instead of "1".

SIZE CODE (Diam. x Length)	
E (1 <sup>3</sup> / <sub>16</sub> " x 2 <sup>3</sup> / <sub>32</sub> " ),	H (1 <sup>1</sup> / <sub>16</sub> " x 1 <sup>5</sup> / <sub>16</sub> " ),
K (2 <sup>5</sup> / <sub>16</sub> " x 1 <sup>1</sup> / <sub>32</sub> " ),	N (2 <sup>3</sup> / <sub>16</sub> " x 2 <sup>5</sup> / <sub>16</sub> " ),
Q (2 <sup>3</sup> / <sub>16</sub> " x 2 <sup>7</sup> / <sub>32</sub> " ).	



μF	Code	Catalog Number
<b>TYPE 120D POLARIZED PLAIN-FOIL</b>		
<b>10 WORKING VOLTS D-C</b>		
4.5	E	120D455X0010E1
18	H	120D186X0010H1
55	K	120D556X0010K1
110	N	120D117X0010N1
160	Q	120D167X0010Q1
<b>15 WORKING VOLTS D-C</b>		
3	E	120D305X0015E1
12	H	120D126X0015H1
35	K	120D356X0015K1
70	N	120D706X0015N1
100	Q	120D107X0015Q1
<b>30 WORKING VOLTS D-C</b>		
1.5	E	120D155X0030E1
6	H	120D605X0030H1
20	K	120D206X0030K1
40	N	120D406X0030N1
55	Q	120D556X0030Q1
<b>50 WORKING VOLTS D-C</b>		
1	E	120D105X0050E1
4	H	120D405X0050H1
14	K	120D146X0050K1
28	N	120D286X0050N1
40	Q	120D406X0050Q1
<b>85 WORKING VOLTS D-C</b>		
.8	E	120D804X0065E1
3	H	120D305X0065H1
10	K	120D106X0065K1
20	N	120D206X0065N1
30	Q	120D306X0065Q1
<b>100 WORKING VOLTS D-C</b>		
.5	E	120D504X0100E1
2	H	120D205X0100H1
7	K	120D705X0100K1
14	N	120D146X0100N1
20	Q	120D206X0100Q1

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES

μF	Code	Catalog Number
<b>150 WORKING VOLTS D-C</b>		
.35	E	120D354X0150E1
1.5	H	120D155X0150H1
5	K	120D505X0150K1
10	N	120D106X0150N1
15	Q	120D156X0150Q1
<b>200 WORKING VOLTS D-C</b>		
1.0	H	120D105X8200H1
3.0	K	120D305X8200K1
7.0	N	120D705X8200N1
10.0	Q	120D106X8200Q1
<b>250 WORKING VOLTS D-C</b>		
0.8	H	120D804X8250H1
2.5	K	120D255X8250K1
5	N	120D505X8250N1
8	Q	120D805X8250Q1
<b>300 WORKING VOLTS D-C</b>		
.15	E	120D154X8300E1
.65	H	120D654X8300H1
2	K	120D205X8300K1
4	N	120D405X8300N1
6	Q	120D605X8300Q1
<b>TYPE 121D NON-POLARIZED PLAIN-FOIL</b>		
<b>10 WORKING VOLTS N.P.</b>		
2.5	E	121D255X0010E1
10	H	121D106X0010H1
35	K	121D356X0010K1
70	N	121D706X0010N1
100	Q	121D107X0010Q1
<b>15 WORKING VOLTS N.P.</b>		
1.5	E	121D155X0015E1
6	H	121D605X0015H1
20	K	121D206X0015K1
40	N	121D406X0015N1
60	Q	121D606X0015Q1
<b>30 WORKING VOLTS N.P.</b>		
.8	E	121D804X0030E1

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES

μF	Code	Catalog Number
<b>50 WORKING VOLTS N.P.</b>		
5	H	121D305X0030H1
10	K	121D106X0030K1
20	N	121D206X0030N1
30	Q	121D306X0030Q1
<b>50 WORKING VOLTS N.P.</b>		
.5	E	121D504X0050E1
2	H	121D205X0050H1
7	K	121D705X0050K1
14	N	121D146X0050N1
20	Q	121D206X0050Q1
<b>65 WORKING VOLTS N.P.</b>		
4	E	121D404X0065E1
1.5	H	121D155X0065H1
5	K	121D505X0065K1
10	N	121D106X0065N1
15	Q	121D156X0065Q1
<b>100 WORKING VOLTS N.P.</b>		
.25	E	121D254X0100E1
1.0	H	121D105X0100H1
3.5	K	121D355X0100K1
7	N	121D705X0100N1
10	Q	121D106X0100Q1
<b>150 WORKING VOLTS N.P.</b>		
.15	E	121D154X0150E1
.75	H	121D754X0150H1
2.5	K	121D255X0150K1
5.0	N	121D505X0150N1
7.5	Q	121D755X0150Q1
<b>200 WORKING VOLTS N.P.</b>		
0.5	H	121D504X8200H1
1.5	K	121D155X8200K1
3.5	N	121D355X8200N1
5.0	Q	121D505X8200Q1
<b>250 WORKING VOLTS N.P.</b>		
.4	H	121D404X8250H1
1.2	K	121D125X8250K1
2.5	N	121D256X8250N1
4	Q	121D405X8250Q1

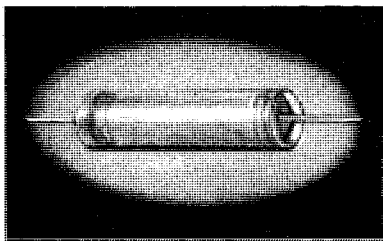
CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES

μF	Code	Catalog Number
<b>TYPE 122D POLARIZED ETCHED-FOIL</b>		
<b>10 WORKING VOLTS D-C</b>		
15	E	122D156C7010E1
60	H	122D606C7010H1
200	K	122D207C7010K1
400	N	122D407C7010N1
580	Q	122D587C7010Q1
<b>15 WORKING VOLTS D-C</b>		
10	E	122D106C7015E1
40	H	122D406C7015H1
120	K	122D257C7015K1
250	N	122D357C7015N1
350	Q	122D905C7015E1
<b>30 WORKING VOLTS D-C</b>		
4.5	E	122D455C5030E1
18	H	122D186C5030H1
60	K	122D606C5030K1
100	N	122D107C5030N1
150	Q	122D157C5030Q1
<b>50 WORKING VOLTS D-C</b>		
3	E	122D305C5050E1
12	H	122D126C5050H1
30	K	122D306C5050K1
70	N	122D706C5050N1
100	Q	122D107C5050Q1
<b>65 WORKING VOLTS D-C</b>		
2	E	122D205C3065E1
8	H	122D805C3065H1
25	K	122D256C3065K1
50	N	122D506C3065N1
70	Q	122D706C3065Q1
<b>100 WORKING VOLTS D-C</b>		
1	E	122D105C3100E1
4	H	122D405C3100H1
13	K	122D136C3100K1
25	N	122D256C3100N1
36	Q	122D366C3100Q1

μF	Code	Catalog Number
<b>TYPE 123D NON-POLARIZED ETCHED-FOIL</b>		
<b>10 WORKING VOLTS N.P.</b>		
10	E	123D106C7010E1
40	H	123D406C7010H1
120	K	123D127C7010K1
250	N	123D257C7010N1
350	Q	123D357C7010Q1
<b>15 WORKING VOLTS N.P.</b>		
5	E	123D505C7015E1
20	H	123D206C7015H1
70	K	123D706C7015K1
140	N	123D147C7015N1
200	Q	123D207C7015Q1
<b>30 WORKING VOLTS N.P.</b>		
2.5	E	123D255C5030E1
10	H	123D106C5030H1
30	K	123D306C5030K1
60	N	123D606C5030N1
80	Q	123D806C5030Q1
<b>50 WORKING VOLTS N.P.</b>		
1.5	E	123D155C5050E1
6	H	123D605C5050H1
15	K	123D156C5050K1
35	N	123D356C5050N1
50	Q	123D506C5050Q1
<b>65 WORKING VOLTS N.P.</b>		
1	E	123D105C3065E1
4	H	123D405C3065H1
12	K	123D126C3065K1
25	N	1

# SPRAGUE CAPACITORS

## 85°C FOIL TANTALEX® CAPACITORS



- For applications where small physical size, stable electrical characteristics, and long service life are important.
- Type 110D and 112D also available marked to meet MIL-C-3965. Order by complete military type designation.
- High capacitance stability even at low operating temperatures, unlike aluminum-foil electrolytics.
- Extremely low leakage current.
- Capacitance tolerance: Types 110D and 111D.  $\pm 20\%$  and  $\pm 15\%$ ; Type 112D and 113D  $+75, -15\%$ .  $+50\%$ ,  $-15\%$  and  $+30\%$ ,  $-15\%$ .
- Plastic wrap. For bare case, end Cat. No. in "0" instead of "1".
- See latest Engineering Bulletin 3601.
- Call Your Sprague Industrial Distributor for Quantity Prices

$\mu$ F	Size Code	Catalog Number
<b>TYPE 110D POLARIZED PLAIN-FOIL</b>		

3 WORKING VOLTS D-C		
10	D	110D106X0003D1
55	G	110D556X0003G1
160	J	110D167X0003J1
350	M	110D357X0003M1
440	P	110D447X0003P1

6 WORKING VOLTS D-C		
8	D	110D805X0006D1
30	G	110D306X0006G1
35	G	110D356X0006G1
100	J	110D107X0006J1
200	M	110D207X0006M1
300	P	110D307X0006P1

10 WORKING VOLTS D-C		
6	D	110D605X0010D1
25	G	110D256X0010G1
80	J	110D806X0010J1
160	M	110D167X0010M1
220	P	110D227X0010P1

15 WORKING VOLTS D-C		
4.5	D	110D455X0015D1
18	G	110D186X0015G1
55	J	110D556X0015J1
110	M	110D117X0015M1
160	P	110D167X0015P1

25 WORKING VOLTS D-C		
3	D	110D305X0025D1
12	G	110D126X0025G1
35	J	110D356X0025J1
70	M	110D706X0025M1
100	P	110D107X0025P1

30 WORKING VOLTS D-C		
2.5	D	110D255X0030D1
10	G	110D106X0030G1
30	J	110D306X0030J1
60	M	110D606X0030M1
85	P	110D856X0030P1

50 WORKING VOLTS D-C		
1.5	D	110D155X0050D1
6	G	110D605X0050G1
20	J	110D206X0050J1
40	M	110D406X0050M1
55	P	110D556X0050P1

60 WORKING VOLTS D-C		
1.2	D	110D125X0060D1
5	G	110D505X0060G1
17	J	110D176X0060J1
34	M	110D346X0060M1
48	P	110D486X0060P1

75 WORKING VOLTS D-C		
1	D	110D105X0075D1
4	G	110D405X0075G1
14	J	110D146X0075J1
28	M	110D286X0075M1
40	P	110D406X0075P1

$\mu$ F	Size Code	Catalog Number
<b>100 WORKING VOLTS D-C</b>		
.8	D	110D804X0100D1
3	G	110D305X0100G1
10	J	110D106X0100J1
20	M	110D206X0100M1
30	P	110D306X0100P1

150 WORKING VOLTS D-C		
.5	D	110D504X0150D1
1	G	110D105X0150G1
2	G	110D205X0150G1
7	J	110D705X0150J1
14	M	110D146X0150M1
20	P	110D206X0150P1

200 WORKING VOLTS D-C		
.35	D	110D354X8200D1
1.5	G	110D155X8200G1
5.0	J	110D505X8200J1
10.0	M	110D106X8200M1
15.0	P	110D156X8200P1

250 WORKING VOLTS D-C		
.3	D	110D304X8250D1
1.2	G	110D125X8250G1
4.0	J	110D405X8250J1
8.0	M	110D805X8250M1
12.0	P	110D126X8250P1

300 WORKING VOLTS D-C		
1	G	110D105X8300G1
3	J	110D305X8300J1
7	M	110D705X8300M1
10	P	110D106X8300P1

375 WORKING VOLTS D-C		
.2	D	110D204X8375D1
.8	G	110D804X8375G1
2.5	J	110D255X8375J1
5	M	110D505X8375M1
7	P	110D705X8375P1

450 WORKING VOLTS D-C		
.15	D	110D154X8450D1
.65	G	110D654X8450G1
2	J	110D205X8450J1
4	M	110D405X8450M1
6	P	110D605X8450P1

<b>TYPE 111D NON-POLARIZED PLAIN-FOIL</b>		
6 WORKING VOLTS N.P.		
5	D	111D505X0006D1
25	G	111D256X0006G1
85	J	111D856X0006J1
170	M	111D177X0006M1
250	P	111D257X0006P1

10 WORKING VOLTS N.P.		
3	D	111D305X0010D1
16	G	111D166X0010G1
55	J	111D556X0010J1
110	M	111D117X0010M1
150	P	111D157X0010P1

$\mu$ F	Size Code	Catalog Number
<b>15 WORKING VOLTS N.P.</b>		
2.5	D	111D255X0015D1
10	G	111D106X0015G1
35	J	111D356X0015J1
70	M	111D706X0015M1
100	P	111D107X0015P1

25 WORKING VOLTS N.P.		
1.5	D	111D155X0025D1
6	G	111D605X0025G1
20	J	111D206X0025J1
40	M	111D406X0025M1
60	P	111D606X0025P1

30 WORKING VOLTS N.P.		
1.4	D	111D145X0030D1
5.5	G	111D555X0030G1
18	J	111D186X0030J1
36	M	111D366X0030M1
45	P	111D456X0030P1

50 WORKING VOLTS N.P.		
.8	D	111D804X0050D1
3	G	111D305X0050G1
10	J	111D106X0050J1
20	M	111D206X0050M1
30	P	111D306X0050P1

60 WORKING VOLTS N.P.		
.6	D	111D604X0060D1
2.5	G	111D255X0060G1
8.5	J	111D855X0060J1
17	M	111D176X0060M1
24	P	111D246X0060P1

75 WORKING VOLTS N.P.		
.5	D	111D504X0075D1
2	G	111D205X0075G1
7	J	111D705X0075J1
14	M	111D146X0075M1
20	P	111D206X0075P1

100 WORKING VOLTS N.P.		
.4	D	111D404X0100D1
1.5	G	111D155X0100G1
5	J	111D505X0100J1
10	M	111D106X0100M1
15	P	111D156X0100P1

150 WORKING VOLTS N.P.		
.25	D	111D254X0150D1
1	G	111D105X0150G1
3.5	J	111D355X0150J1
7	M	111D705X0150M1
10	P	111D106X0150P1

200 WORKING VOLTS N.P.		
.15	D	111D154X8200D1
.75	G	111D754X8200G1
2.5	J	111D255X8200J1
5.0	M	111D505X8200M1
7.5	P	111D755X8200P1

250 WORKING VOLTS N.P.		
.15	D	111D154X8250D1
.6	G	111D604X8250G1

$\mu$ F	Size Code	Catalog Number
<b>300 WORKING VOLTS D-C</b>		
2.0	J	111D205X8250J1
4.0	M	111D405X8250M1
6.0	P	111D605X8250P1

300 WORKING VOLTS D-C		
.5	G	111D504X8300G1
1.5	J	111D155X8300J1
3.5	M	111D355X8300M1
5	P	111D505X8300P1

**TYPE 112D POLARIZED ETCHED-FOIL**

15 WORKING VOLTS D-C		
15	D	112D156C7015D1
60	G	112D606C7015G1
200	J	112D207C7015J1
400	M	112D407C7015M1
580	P	112D587C7015P1

25 WORKING VOLTS D-C		
10	D	112D106C7025D1
40	G	112D406C7025G1
120	J	112D127C7025J1
250	M	112D257C7025M1
350	P	112D357C7025P1

30 WORKING VOLTS D-C		
8	D	112D805C7030D1
32	G	112D326C7030G1
110	J	112D117C7030J1
220	M	112D227C7030M1
300	P	112D307C7030P1

50 WORKING VOLTS D-C		
4.5	D	112D455C5050D1
18	G	112D186C5050G1
60	J	112D606C5050J1
100	M	112D107C5050M1
150	P	112D157C5050P1

60 WORKING VOLTS D-C		
4	D	112D405C5060D1

75 WORKING VOLTS D-C		
3	D	112D305C5075D1
12	G	112D126C5075G1
30	J	112D306C5075J1
70	M	112D706C5075M1
100	P	112D107C5075P1

100 WORKING VOLTS D-C		
2	D	112D205C3100D1
8	G	112D805C3100G1
25	J	112D256C3100J1
50	M	112D506C3100M1
70	P	112D706C3100P1

150 WORKING VOLTS D-C		
1	D	112D105C3150D1
4	G	112D405C3150G1
13	J	112D136C3150J1
25	M	112D256C3150M1
36	P	112D366C3150P1

$\mu$ F	Size Code	Catalog Number
<b>200 WORKING VOLTS D-C</b>		
3	G	112D305X0200G1
9	J	112D905X0200J1
19	M	112D196X0200M1
27	P	112D276X0200P1

250 WORKING VOLTS D-C		
2	G	112D205X0250G1
6	J	112D605X0250J1
13	M	112D136X0250M1
19	P	112D196X0250P1

300 WORKING VOLTS D-C		
1.8	G	112D185X0300G1
5	J	112D505X0300J1
11	M	112D116X0300M1
15	P	112D156X0300P1

**TYPE 113D NON-POLARIZED ETCHED-FOIL**

15 WORKING VOLTS N.P.		
10	D	113D106C7015D1
40	G	113D406C7015G1
120	J	113D127C7015J1
250	M	113D257C7015M1
350	P	113D357C7015P1

25 WORKING VOLTS N.P.		
5	D	113D505C7025D1
20	G	113D206C7025G1
70	J	113D706C7025J1
140	M	113D147C7025M1
200	P	113D207C7025P1

30 WORKING VOLTS N.P.		
8	D	113D805C7030D1
32	G	113D326C7030G1
110	J	113D117C7030J1
220	M	113D227C7030M1
300	P	113D307C7030P1

50 WORKING VOLTS N.P.		
4.5	D	113D455C7050D1
18	G	113D186C7050G1
60	J	113D606C7050J1
120	M	113D127C7050M1
170	P	113D177C7050P1

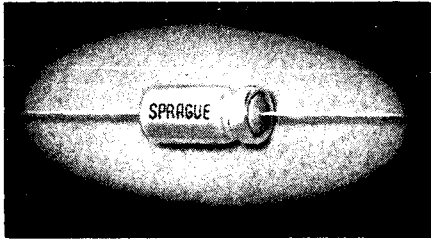
60 WORKING VOLTS N.P.		
4	D	113D405C7060D1

75 WORKING VOLTS N.P.		
3	D	1



# SPRAGUE CAPACITORS

## TYPE 130D 125 C SINTERED-ANODE TANTALEX<sup>®</sup> CAPACITORS



DIMENSIONS

Code	D	x L	Code	D	x L	Code	D	x L	Code	D	x L
C	1 <sup>3</sup> / <sub>4</sub>	x	3 <sup>3</sup> / <sub>4</sub>	F	1 <sup>9</sup> / <sub>4</sub>	x	4 <sup>3</sup> / <sub>4</sub>	T	2 <sup>3</sup> / <sub>4</sub>	x	3 <sup>3</sup> / <sub>4</sub>
			W	2 <sup>3</sup> / <sub>4</sub>	x	1 <sup>3</sup> / <sub>16</sub>					

- Reliable, Superior Quality Capacitors With no Voltage Derating for 125C Operation.
- Especially Suited for Military Electronics.
- Meets 2000 Cycle MIL Missile Vibration Requirements.
- Clean, Shoulder-Less Design Simplifies Mounting on Printed Wiring Boards.
- Voltage Ratings From 4 WVDC Through 100 WVDC.
- Capacitances from 1.7  $\mu$ F to 1200  $\mu$ F.
- For Complete Technical Data, Refer to the Latest Issue of Sprague Engineering Bulletin No. 3701.
- Listed Units Have Plastic Film Insulation. For Bare Metal Cases, Change Last Digit of Cat. No. to "O".
- Call Your Sprague Industrial Distributor for Current Quantity Prices.

### GROUP 1: $\pm 20\%$ , $-15\%$ and $\pm 10\%$ Capacitance Tolerance with plastic insulation tube

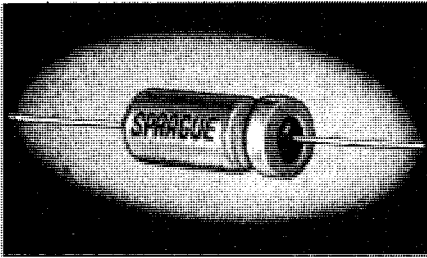
$\mu$ F	Size Code	Catalog Number $\pm 20\%$ Tol.	Catalog Number $\pm 10\%$ Tol.	$\mu$ F	Size Code	Catalog Number $\pm 20\%$ Tol.	Catalog Number $\pm 10\%$ Tol.	$\mu$ F	Size Code	Catalog Number $\pm 20\%$ Tol.	Catalog Number $\pm 10\%$ Tol.
<b>4 WORKING VOLTS D-C</b>				<b>15 WORKING VOLTS D-C</b>				<b>50 WORKING VOLTS D-C</b>			
30	C	130D306C2004C2	130D306X9004C2	10	C	130D106C2015C2	130D106X9015C2	3.5	C	130D355C2050C2	130D355X9050C2
140	F	130D147C2004F2	130D147X9004F2	50	F	130D506C2015F2	130D506X9015F2	15	F	130D156C2050F2	130D156X9050F2
330	T	130D337C2004T2	130D337X9004T2	110	T	130D117C2015T2	130D117X9015T2	40	T	130D106C2050T2	130D106X9050T2
<b>5 WORKING VOLTS D-C</b>				<b>20 WORKING VOLTS D-C</b>				<b>70 WORKING VOLTS D-C</b>			
25	C	130D256C2005C2	130D256X9005C2	8	C	130D805C2020C2	130D805X9020C2	2.5	C	130D255C2070C2	130D255X9070C2
120	F	130D127C2005F2	130D127X9005F2	40	F	130D406C2020F2	130D406X9020F2	11	F	130D116C2070F2	130D116X9070F2
290	T	130D297C2005T2	130D297X9005T2	100	T	130D107C2020T2	130D107X9020T2	30	T	130D306C2070T2	130D306X9070T2
<b>7 WORKING VOLTS D-C</b>				<b>30 WORKING VOLTS D-C</b>				<b>85 WORKING VOLTS D-C</b>			
20	C	130D206C2007C2	130D206X9007C2	5	C	130D505C2030C2	130D505X9030C2	1.7	C	130D175C2085C2	130D175X9085C2
100	F	130D107C2007F2	130D107X9007F2	25	F	130D256C2030F2	130D256X9030F2	9	F	130D905C2085F2	130D905X9085F2
250	T	130D257C2007T2	130D257X9007T2	60	T	130D606C2030T2	130D606X9030T2	18	T	130D186C2085T2	130D186X9085T2
<b>10 WORKING VOLTS D-C</b>				<b>40 WORKING VOLTS D-C</b>				<b>100 WORKING VOLTS D-C</b>			
15	C	130D156C2010C2	130D156X9010C2	4	C	130D405C2040C2	130D405X9040C2	1.7	C	130D175C2100C2	130D175X9100C2
70	F	130D706C2010F2	130D706X9010F2	20	F	130D206C2040F2	130D206X9040F2	6.8	F	130D685C2100F2	130D685X9100F2
170	T	130D177C2010T2	130D177X9010T2	50	T	130D506C2040T2	130D506X9040T2	14	T	130D146C2100T2	130D146X9100T2

### GROUP 2: $\pm 20\%$ and $\pm 10\%$ Capacitance Tolerance with plastic insulation tube

$\mu$ F	Size Code	Catalog Number $\pm 20\%$ Tol.	Catalog Number $\pm 10\%$ Tol.	$\mu$ F	Size Code	Catalog Number $\pm 20\%$ Tol.	Catalog Number $\pm 10\%$ Tol.	$\mu$ F	Size Code	Catalog Number $\pm 20\%$ Tol.	Catalog Number $\pm 10\%$ Tol.
<b>4 WORKING VOLTS D-C</b>				<b>20 WORKING VOLTS D-C</b>				<b>50 WORKING VOLTS D-C</b>			
68	C	130D686X0004C2	130D686X9004C2	15	C	130D156X0020C2	130D156X9020C2	6.8	C	130D685X0050C2	130D685X9050C2
270	F	130D277X0004F2	130D277X9004F2	68	F	130D686X0020F2	130D686X9020F2	33	F	130D336X0050F2	130D336X9050F2
560	T	130D567X0004T2	130D567X9004T2	150	T	130D157X0020T2	130D157X9020T2	56	T	130D566X0050T2	130D566X9050T2
1200	W	130D128X0004W2	130D128X9004W2	300	W	130D307X0020W2	130D307X9020W2	110	W	130D117X0050W2	130D117X9050W2
<b>5 WORKING VOLTS D-C</b>				<b>30 WORKING VOLTS D-C</b>				<b>70 WORKING VOLTS D-C</b>			
850	W	130D857X0005W2	130D857X9005W2	10	C	130D106X0030C2	130D106X9030C2	4.7	C	130D475X0070C2	130D475X9070C2
<b>7 WORKING VOLTS D-C</b>				<b>40 WORKING VOLTS D-C</b>				<b>85 WORKING VOLTS D-C</b>			
47	C	130D476X0007C2	130D476X9007C2	47	F	130D476X0030F2	130D476X9030F2	3.6	C	130D365X0085C2	130D365X9085C2
180	F	130D187X0007F2	130D187X9007F2	82	T	130D826X0030T2	130D826X9030T2	14	F	130D146X0085F2	130D146X9085F2
390	T	130D397X0007T2	130D397X9007T2	160	W	130D167X0030W2	130D167X9030W2	25	T	130D256X0085T2	130D256X9085T2
750	W	130D757X0007W2	130D757X9007W2	<b>100 WORKING VOLTS D-C</b>				<b>100 WORKING VOLTS D-C</b>			
<b>10 WORKING VOLTS D-C</b>				<b>15 WORKING VOLTS D-C</b>				<b>100 WORKING VOLTS D-C</b>			
33	C	130D336X0010C2	130D336X9010C2	22	C	130D226X0015C2	130D226X9015C2	3	C	130D305X0100C2	130D305X9100C2
120	F	130D127X0010F2	130D127X9010F2	<b>15 WORKING VOLTS D-C</b>				<b>100 WORKING VOLTS D-C</b>			
270	T	130D277X0010T2	130D277X9010T2	39	F	130D396X0040F2	130D396X9040F2	11	F	130D116X0100F2	130D116X9100F2
540	W	130D547X0010W2	130D547X9010W2	68	T	130D686X0040T2	130D686X9040T2	22	T	130D226X0100T2	130D226X9100T2

# SPRAGUE CAPACITORS

## TYPE 109D SINTERED-ANODE TANTALEX® CAPACITORS



DIMENSIONS

Code D. x L.	Code D. x L.	Code D. x L.	Code D. x L.
C 3/16 x 2/64	F 3/32 x 1/16	T 3/8 x 4/64	W 3/8 x 1/14

- Intended for Applications Where Reliable Design in Military Equipment is Required.
- Double Spun TFE-fluorocarbon Elastomer High Temp. End Seals.
- Large Values of Capacitance in Small Physical Size.
- Listed Units Have Plastic Sleeves.
- For Bare Case, End Catalog Number in "0" instead of "2".
- May Be Operated at 85°C at Rated Voltage and to 105°C With 15% Voltage Derating.
- Will Meet 2000 Cycle Missile Vibration Requirements.
- For Complete Technical Data, Refer to Latest Issue of Engineering Bulletin 3700.
- Call Your Sprague Industrial Distributor For Current Quantity Prices.

### GROUP 1: Available in Capacitance Tolerances of ±10%, +20, -15%; +75, -15%

μF	WVDC	Size Code	Catalog Number			μF	WVDC	Size Code	Catalog Number		
			±10%	+20, -15%	+75, -15%				±10%	+20, -15%	+75, -15%
27	6	C	109D276X9006C2	109D276C2006C2	109D276C7006C2	40	30	F	109D406X9030F2	109D406C2030F2	109D406C7030F2
30	6	C	109D306X9006C2	109D306C2006C2	109D306C7006C2	80	30	T	109D806X9030T2	109D806C2030T2	109D806C7030T2
120	6	F	109D127X9006F2	109D127C2006F2	109D127C7006F2	100	30	T	109D107X9030T2	109D107C2030T2	109D107C7030T2
140	6	F	109D147X9006F2	109D147C2006F2	109D147C7006F2	4.5	50	C	109D455X9050C2	109D455C2050C2	109D455C7050C2
290	6	T	109D297X9006T2	109D297C2006T2	109D297C7006T2	5	50	C	109D505X9050C2	109D505C2050C2	109D505C7050C2
330	6	T	109D337X9006T2	109D337C2006T2	109D337C7006T2	22	50	F	109D226X9050F2	109D226C2050F2	109D226C7050F2
22	8	C	109D226X9008C2	109D226C2008C2	109D226C7008C2	25	50	F	109D256X9050F2	109D256C2050F2	109D256C7050F2
25	8	C	109D256X9008C2	109D256C2008C2	109D256C7008C2	55	50	T	109D556X9050T2	109D556C2050T2	109D556C7050T2
100	8	F	109D107X9008F2	109D107C2008F2	109D107C7008F2	60	50	T	109D606X9050T2	109D606C2050T2	109D606C7050T2
120	8	F	109D127X9008F2	109D127C2008F2	109D127C7008F2	3.6	60	C	109D365X9060C2	109D365C2060C2	109D365C7060C2
260	8	T	109D276X9008T2	109D276C2008T2	109D276C7008T2	4	60	C	109D405X9060C2	109D405C2060C2	109D405C7060C2
290	8	T	109D297X9008T2	109D297C2008T2	109D297C7008T2	18	60	F	109D186X9060F2	109D186C2060F2	109D186C7060F2
18	10	C	109D186X9010C2	109D186C2010C2	109D186C7010C2	20	60	F	109D206X9060F2	109D206C2060F2	109D206C7060F2
20	10	C	109D206X9010C2	109D206C2010C2	109D206C7010C2	45	60	T	109D456X9060T2	109D456C2060T2	109D456C7060T2
85	10	F	109D856X9010F2	109D856C2010F2	109D856C7010F2	50	60	T	109D506X9060T2	109D506C2060T2	109D506C7060T2
100	10	F	109D107X9010F2	109D107C2010F2	109D107C7010F2	3	75	C	109D305X9075C2	109D305C2075C2	109D305C7075C2
220	10	T	109D227X9010T2	109D227C2010T2	109D227C7010T2	3.5	75	C	109D355X9075C2	109D355C2075C2	109D355C7075C2
250	10	T	109D257X9010T2	109D257C2010T2	109D257C7010T2	13	75	F	109D136X9075F2	109D136C2075F2	109D136C7075F2
13	15	C	109D136X9015C2	109D136C2015C2	109D136C7015C2	15	75	F	109D156X9075F2	109D156C2075F2	109D156C7075F2
15	15	C	109D156X9015C2	109D156C2015C2	109D156C7015C2	35	75	T	109D356X9075T2	109D356C2075T2	109D356C7075T2
55	15	F	109D556X9015F2	109D556C2015F2	109D556C7015F2	40	75	T	109D406X9075T2	109D406C2075T2	109D406C7075T2
70	15	F	109D706X9015F2	109D706C2015F2	109D706C7015F2	2.5	100	C	109D255X9100C2	109D255C2100C2	109D255C7100C2
150	15	T	109D157X9015T2	109D157C2015T2	109D157C7015T2	10	100	F	109D106X9100F2	109D106C2100F2	109D106C7100F2
170	15	T	109D177X9015T2	109D177C2015T2	109D177C7015T2	11	100	F	109D116X9100F2	109D116C2100F2	109D116C7100F2
9	25	C	109D905X9025C2	109D905C2025C2	109D905C7025C2	27	100	T	109D276X9100T2	109D276C2100T2	109D276C7100T2
10	25	C	109D106X9025C2	109D106C2025C2	109D106C7025C2	30	100	T	109D306X9100T2	109D306C2100T2	109D306C7100T2
45	25	F	109D456X9025F2	109D456C2025F2	109D456C7025F2	1.7	125	C	109D175X9125C2	109D175C2125C2	109D175C7125C2
50	25	F	109D506X9025F2	109D506C2025F2	109D506C7025F2	9	125	F	109D905X9125F2	109D905C2125F2	109D905C7125F2
100	25	T	109D107X9025T2	109D107C2025T2	109D107C7025T2	18	125	T	109D186X9125T2	109D186C2125T2	109D186C7125T2
110	25	T	109D117X9025T2	109D117C2025T2	109D117C7025T2	1.7	150	C	109D175X9150C2	109D175C2150C2	109D175C7150C2
7	30	C	109D705X9030C2	109D705C2030C2	109D705C7030C2	6.8	150	F	109D685X9150F2	109D685C2150F2	109D685C7150F2
8	30	C	109D805X9030C2	109D805C2030C2	109D805C7030C2	14	150	T	109D146X9150T2	109D146C2150T2	109D146C7150T2
35	30	F	109D356X9030F2	109D356C2030F2	109D356C7030F2						

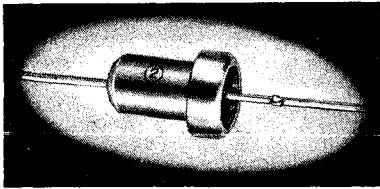
### GROUP 2. Available in Capacitance Tolerances of ±20% and ±10%

These capacitors have approximately twice the capacitance of Group 1 Capacitors of the same physical size at a given voltage rating.

μF	WVDC	Size Code	Catalog Number		μF	WVDC	Size Code	Catalog Number		μF	WVDC	Size Code	Catalog Number	
			±20% Tol.	±10% Tol.				±20% Tol.	±10% Tol.				±20% Tol.	±10% Tol.
68	6	C	109D686X0006C2	109D686X9006C2	22	25	C	109D226X0025C2	109D226X9025C2	6.8	75	C	109D685X0075C2	109D685X9075C2
270	6	F	109D277X0006F2	109D277X9006F2	100	25	F	109D107X0025F2	109D107X9025F2	33	75	F	109D336X0075F2	109D336X9075F2
560	6	T	109D567X0006T2	109D567X9006T2	180	25	T	109D187X0025T2	109D187X9025T2	56	75	T	109D566X0075T2	109D566X9075T2
1200	6	W	109D128X0006W2	109D128X9006W2	350	25	W	109D357X0025W2	109D357X9025W2	110	75	W	109D117X0075W2	109D117X9075W2
56	8	C	109D566X0008C2	109D566X9008C2	15	30	C	109D156X0030C2	109D156X9030C2	4.7	100	C	109D475X0100C2	109D475X9100C2
220	8	F	109D227X0008F2	109D227X9008F2	68	30	F	109D686X0030F2	109D686X9030F2	22	100	F	109D226X0100F2	109D226X9100F2
430	8	T	109D437X0008T2	109D437X9008T2	150	30	T	109D157X0030T2	109D157X9030T2	43	100	T	109D436X0100T2	109D436X9100T2
850	8	W	109D857X0008W2	109D857X9008W2	300	30	W	109D307X0030W2	109D307X9030W2	86	100	W	109D866X0100W2	109D866X9100W2
47	10	C	109D476X0010C2	109D476X9010C2	10	50	C	109D106X0050C2	109D106X9050C2	3.6	125	C	109D365X0125C2	109D365X9125C2
180	10	F	109D187X0010F2	109D187X9010F2	47	50	F	109D476X0050F2	109D476X9050F2	14	125	F	109D146X0125F2	109D146X9125F2
390	10	T	109D397X0010T2	109D397X9010T2	82	50	T	109D826X0050T2	109D826X9050T2	25	125	T	109D256X0125T2	109D256X9125T2
750	10	W	109D757X0010W2	109D757X9010W2	160	50	W	109D167X0050W2	109D167X9050W2	56	125	W	109D566X0125W2	109D566X9125W2
33	15	C	109D336X0015C2	109D336X9015C2	8.2	60	C	109D825X0060C2	109D825X9060C2	3	150	C	109D305X0150C2	109D305X9150C2
120	15	F	109D127X0015F2	109D127X9015F2	39	60	F	109D396X0060F2	109D396X9060F2	11	150	F	109D116X0150F2	109D116X9150F2
270	15	T	109D277X0015T2	109D277X9015T2	68	60	T	109D686X0060T2	109D686X9060T2	22	150	T	109D226X0150T2	109D226X9150T2
540	15	W	109D547X0015W2	109D547X9015W2	140	60	W	109D147X0060W2	109D147X9060W2					

# SPRAGUE CAPACITORS

## "CUP STYLE" TANTALEX® CAPACITORS



Size Code	Dimensions Dia. x Length	CALL YOUR SPRAGUE DISTRIBUTOR FOR QUANTITY PRICES ON TYPES 132D AND 133D.
U	7/32 x 15/32	
V	9/32 x 11/16	
T	3/8 x 49/64	

- -55°C to +85°C operation at full rating. 100°C operation with 15% derating.
- Stable in performance characteristics over entire temperature range.
- Large capacitance in small size.
- Extremely low leakage currents.
- 132D designed to withstand severe military vibration tests. Also available as CL44 and CL45 capacitors to meet MIL-C-3965. See MIL listings elsewhere in these pages.
- 131D for industrial electronics is similar to 132D but designed for static use in ground equipment.
- For plastic tube on units, change "0" to "4" at end of Cat. No.
- For complete technical data refer to latest issue of Engineering Bulletins 3710 and 3711.
- Call your Sprague Industrial Distributor for current prices on Type 131D Capacitors.

### INDUSTRIAL TYPE 131D

μF	Size Code	Catalog Number -15, +75% Tol.	μF	Size Code	Catalog Number -15, +75% Tol.	μF	Size Code	Catalog Number -15, +75% Tol.	μF	Size Code	Catalog Number -15, +75% Tol.
<b>6 WVDC — 7 VDC SURGE</b>			<b>15 WVDC — 18 VDC SURGE</b>			<b>50 WVDC — 60 VDC SURGE</b>			<b>100 WVDC — 115 VDC SURGE</b>		
27	U	131D276C7006U0	13	U	131D136C7015U0	4.5	U	131D455C7050U0	13	V	131D136C7075V0
30	U	131D306C7006U0	15	U	131D156C7015U0	5	U	131D505C7050U0	15	V	131D156C7075V0
120	V	131D127C7006V0	55	V	131D556C7015V0	22	V	131D226C7050V0	35	T	131D356C7075T0
140	V	131D147C7006V0	70	V	131D706C7015V0	25	V	131D256C7050V0	40	T	131D406C7075T0
290	T	131D297C7006T0	150	T	131D157C7015T0	55	T	131D556C7050T0	<b>100 WVDC — 115 VDC SURGE</b>		
320	T	131D327C7006T0	170	T	131D177C7015T0	60	T	131D606C7050T0	1.8	U	131D185C7100U0
<b>8 WVDC — 10 VDC SURGE</b>			<b>25 WVDC — 30 VDC SURGE</b>			<b>60 WVDC — 72 VDC SURGE</b>			2	U	131D205C7100U0
22	U	131D226C7008U0	9	U	131D905C7025U0	3.6	U	131D365C7060U0	10	V	131D106C7100V0
25	U	131D256C7008U0	10	U	131D106C7025U0	4	U	131D405C7060U0	11	V	131D116C7100V0
<b>10 WVDC — 12 VDC SURGE</b>			<b>30 WVDC — 36 VDC SURGE</b>			<b>75 WVDC — 87 VDC SURGE</b>			27	T	131D276C7100T0
18	U	131D186C7010U0	7	U	131D705C7030U0	3.0	U	131D305C7075U0	30	T	131D306C7100T0
20	U	131D206C7010U0	8	U	131D805C7030U0	4	U	131D405C7060U0	<b>125 WVDC — 140 VDC SURGE</b>		
85	V	131D856C7010V0	35	V	131D356C7030V0	18	V	131D186C7060V0	1.7	U	131D175C7125U0
100	V	131D107C7010V0	40	V	131D406C7030V0	20	V	131D206C7060V0	8	V	131D805C7125V0
220	T	131D227C7010T0	80	T	131D806C7030T0	45	T	131D456C7060T0	9	V	131D905C7125V0
250	T	131D257C7010T0	100	T	131D107C7030T0	50	T	131D506C7060T0	20	T	131D206C7125T0
									25	T	131D256C7125T0

### VIBRATION-PROOF TYPE 132D

μF	Size Code	Catalog Number ±10% —15, +20% Tol.	μF	Size Code	Catalog Number ±10% —15, +20% Tol.	μF	Size Code	Catalog Number ±10% —15, +20% Tol.
<b>6 WVDC — 7 VDC SURGE</b>			<b>25 WVDC — 30 VDC SURGE</b>			<b>75 WVDC — 87 VDC SURGE</b>		
30	U	132D306X9006U0 132D306C2006U0	10	U	132D106X9025U0 132D106C2025U0	3.5	U	132D355X9075U0 132D355C2075U0
140	V	132D147X9006V0 132D147C2006V0	<b>30 WVDC — 36 VDC SURGE</b>			15	V	132D156X9075V0 132D156C2075V0
320	T	132D327X9006T0 132D327C2006T0	8	U	132D805X9030U0 132D805C2030U0	40	T	132D406X9075T0 132D406C2075T0
<b>8 WVDC — 10 VDC SURGE</b>			40	V	132D406X9030V0 132D406C2030V0	<b>100 WVDC — 115 VDC SURGE</b>		
25	U	132D256X9008U0 132D256C2008U0	100	T	132D107X9030T0 132D107C2030T0	2	U	132D205X9100U0 132D205C2100U0
<b>10 WVDC — 12 VDC SURGE</b>			<b>50 WVDC — 60 VDC SURGE</b>			11	V	132D116X9100V0 132D116C2100V0
20	U	132D206X9010U0 132D206C2010U0	5	U	132D505X9050U0 132D505C2050U0	30	T	132D306X9100T0 132D306C2100T0
100	V	132D107X9010V0 132D107C2010V0	25	V	132D256X9050V0 132D256C2050V0	<b>125 WVDC — 140 VDC SURGE</b>		
250	T	132D257X9010T0 132D257C2010T0	60	T	132D606X9050T0 132D606C2050T0	1.7	U	132D175X9125U0 132D175C2125U0
<b>15 WVDC — 18 VDC SURGE</b>			<b>60 WVDC — 72 VDC SURGE</b>			9	V	132D905X9125V0 132D905C2125V0
15	U	132D156X9015U0 132D156C2015U0	4	U	132D405X9060U0 132D405C2060U0	25	T	132D256X9125T0 132D256C2125T0
70	V	132D706X9015V0 132D706C2015V0	20	V	132D206X9060V0 132D206C2060V0			
170	T	132D177X9015T0 132D177C2015T0	50	T	132D506X9060T0 132D506C2060T0			

### VIBRATION-PROOF TYPE 133D

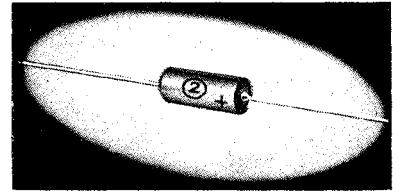
- -55°C to +125°C operation at full rating. May be up-rated 50% for operation at 85°C.
- Meet stringent requirements in military and missile applications.
- Sintered anode for unusual capacitance stability, large values of capacitance in small physical size.
- Non-tarnish finish to prevent discoloration during storage or use.
- For units with outer plastic insulating tube, substitute "4" for "0" at end of Catalog Number.
- Housed in miniature silver thimble.

μF	Size Code	Catalog Number -15, +20% Tol.	±10%	μF	Size Code	Catalog Number -15, +20% Tol.	±10%	μF	Size Code	Catalog Number -15, +20% Tol.	±10%
<b>4 WORKING VOLTS D-C</b>				<b>15 WORKING VOLTS D-C</b>				<b>50 WORKING VOLTS D-C</b>			
30	U	133D306C2004U0	133D306X9004U0	10	U	133D106C2015U0	133D106X9015U0	3.5	U	133D355C2050U0	133D355X9050U0
140	V	133D147C2004V0	133D147X9004V0	<b>20 WORKING VOLTS D-C</b>				15	V	133D156C2050V0	133D156X9050V0
320	T	133D327C2004T0	133D327X9004T0	8	U	133D805C2020U0	133D805X9020U0	40	T	133D406C2050T0	133D406X9050T0
<b>5 WORKING VOLTS D-C</b>				40	V	133D406C2020V0	133D406X9020V0	<b>70 WORKING VOLTS D-C</b>			
25	U	133D256C2005U0	133D256X9005U0	100	T	133D107C2020T0	133D107X9020T0	2	U	133D205C2070U0	133D205X9070U0
<b>7 WORKING VOLTS D-C</b>				<b>30 WORKING VOLTS D-C</b>				11	V	133D116C2070V0	133D116X9070V0
20	U	133D206C2007U0	133D206X9007U0	5	U	133D505C2030U0	133D505X9030U0	30	T	133D306C2070T0	133D306X9070T0
100	V	133D107C2007V0	133D107X9007V0	25	V	133D256C2030V0	133D256X9030V0	<b>85 WORKING VOLTS D-C</b>			
250	T	133D257C2007T0	133D257X9007T0	60	T	133D606C2030T0	133D606X9030T0	1.7	U	133D175C2085U0	133D175X9085U0
<b>10 WORKING VOLTS D-C</b>				<b>40 WORKING VOLTS D-C</b>				9	V	133D905C2085V0	133D905X9085V0
15	U	133D156C2010U0	133D156X9010U0	4	U	133D405C2040U0	133D405X9040U0	25	T	133D256C2085T0	133D256X9085T0
70	V	133D706C2010V0	133D706X9010V0	20	V	133D206C2040V0	133D206X9040V0				
170	T	133D177C2010T0	133D177X9010T0	50	T	133D506C2040T0	133D506X9040T0				

# SPRAGUE CAPACITORS

## MIL-C-26655 SOLID ELECTROLYTE TUBULAR TANTALUM CAPACITORS

- Military Version of Type 150D. Truly Miniature With Characteristics Previously Unobtainable in Electrolytics.
- Hermetically Sealed Case, CS12, Bare Tube; CS13, Insulating Sleeve
- Cannot Leak or Corrode—Solid Electrolyte Will Not Seep Even if Hermetic Seal is Accidentally Broken
- Temperature Range of -80C to +85C. May Be Operated to +125C With Appropriate Voltage Derating
- For Technical Data See Latest Issue of Bulletin 3522



μF	Size Code	MILITARY DESIGNATION		MILITARY DESIGNATION	
		±20% Tol.	±10% Tol.	±20% Tol.	±10% Tol.
----- CS12, 6 WVDC ----- CS13, 6 WVDC -----					
5.6	A	CS12AB5R6K	.....	CS13AB5R6K	.....
6.8	A	CS12AB6R8K	.....	CS13AB6R8K	.....
6.8	A	CS12AB6R8M	.....	CS13AB6R8M	.....
47	B	CS12AB470K	.....	CS13AB470K	.....
47	B	CS12AB470M	.....	CS13AB470M	.....
56	B	CS12AB560K	.....	CS13AB560K	.....
150	R	CS12AB151K	.....	CS13AB151K	.....
150	R	CS12AB151M	.....	CS13AB151M	.....
180	R	CS12AB181K	.....	CS13AB181K	.....
270	S	CS12AB271K	.....	CS13AB271K	.....
330	S	CS12AB331K	.....	CS13AB331K	.....
330	S	CS12AB331M	.....	CS13AB331M	.....

----- CS12, 10 WVDC ----- CS13, 10 WVDC -----					
3.9	A	CS12AC3R9K	.....	CS13AC3R9K	.....
4.7	A	CS12AC4R7K	.....	CS13AC4R7K	.....
4.7	A	CS12AC4R7M	.....	CS13AC4R7M	.....
27	B	CS12AC270K	.....	CS13AC270K	.....
33	B	CS12AC330K	.....	CS13AC330K	.....
33	B	CS12AC330M	.....	CS13AC330M	.....
39	B	CS12AC390K	.....	CS13AC390K	.....
82	R	CS12AC820K	.....	CS13AC820K	.....
100	R	CS12AC101K	.....	CS13AC101K	.....
100	R	CS12AC101M	.....	CS13AC101M	.....
120	R	CS12AC121K	.....	CS13AC121K	.....
180	S	CS12AC181K	.....	CS13AC181K	.....
220	S	CS12AC221K	.....	CS13AC221K	.....
220	S	CS12AC221M	.....	CS13AC221M	.....

----- CS12, 15 WVDC ----- CS13, 15 WVDC -----					
2.7	A	CS12AD2R7K	.....	CS13AD2R7K	.....
3.3	A	CS12AD3R3K	.....	CS13AD3R3K	.....
3.3	A	CS12AD3R3M	.....	CS13AD3R3M	.....
18	B	CS12AD180K	.....	CS13AD180K	.....
22	B	CS12AD220K	.....	CS13AD220K	.....
22	B	CS12AD220M	.....	CS13AD220M	.....
56	R	CS12AD560M	.....	CS13AD560K	.....
68	R	CS12AD680K	.....	CS13AD680K	.....
68	R	CS12AD680M	.....	CS13AD680M	.....
120	S	CS12AD121K	.....	CS13AD121K	.....
150	S	CS12AD151K	.....	CS13AD151K	.....
150	S	CS12AD151M	.....	CS13AD151M	.....

----- CS12, 20 WVDC ----- CS13, 20 WVDC -----					
1.2	A	CS12AE1R2K	.....	CS13AE1R2K	.....
1.5	A	CS12AE1R5K	.....	CS13AE1R5K	.....
1.5	A	CS12AE1R5M	.....	CS13AE1R5M	.....
1.8	A	CS12AE1R8K	.....	CS13AE1R8K	.....
2.2	A	CS12AE2R2K	.....	CS13AE2R2K	.....
2.2	A	CS12AE2R2M	.....	CS13AE2R2M	.....
8.2	B	CS12AE8R2K	.....	CS13AE8R2K	.....
10	B	CS12AE100K	.....	CS13AE100K	.....
10	B	CS12AE100M	.....	CS13AE100M	.....
12	B	CS12AE120K	.....	CS13AE120K	.....
15	B	CS12AE150K	.....	CS13AE150K	.....
15	B	CS12AE150M	.....	CS13AE150M	.....
27	R	CS12AE270K	.....	CS13AE270K	.....
33	R	CS12AE330K	.....	CS13AE330K	.....
33	R	CS12AE330M	.....	CS13AE330M	.....
39	R	CS12AE390K	.....	CS13AE390K	.....
47	R	CS12AE470K	.....	CS13AE470K	.....
47	R	CS12AE470M	.....	CS13AE470M	.....
56	S	CS12AE560K	.....	CS13AE560K	.....
68	S	CS12AE680K	.....	CS13AE680K	.....
68	S	CS12AE680M	.....	CS13AE680M	.....
82	S	CS12AE820K	.....	CS13AE820K	.....
100	S	CS12AE101K	.....	CS13AE101K	.....
100	S	CS12AE101M	.....	CS13AE101M	.....

μF	Size Code	MILITARY DESIGNATION		MILITARY DESIGNATION	
		±20% Tol.	±10% Tol.	±20% Tol.	±10% Tol.
----- CS12, 35 WVDC ----- CS13, 35 WVDC -----					
.33	A	CS12AFR33K	.....	CS13AFR33K	.....
.33	A	CS12AFR33M	.....	CS13AFR33M	.....
.39	A	CS12AFR39K	.....	CS13AFR39K	.....
.47	A	CS12AFR47K	.....	CS13AFR47K	.....
.47	A	CS12AFR47M	.....	CS13AFR47M	.....
.56	A	CS12AFR56K	.....	CS13AFR56K	.....
.68	A	CS12AFR68K	.....	CS13AFR68K	.....
.68	A	CS12AFR68M	.....	CS13AFR68M	.....
.82	A	CS12AFR82K	.....	CS13AFR82K	.....
1.0	A	CS12AF010M	.....	CS13AF010K	.....
1.0	A	CS12AF010M	.....	CS13AF010M	.....
1.2	B	CS12AF1R2K	.....	CS13AF1R2K	.....
1.5	B	CS12AF1R5K	.....	CS13AF1R5K	.....
1.5	B	CS12AF1R5M	.....	CS13AF1R5M	.....
1.8	B	CS12AF1R8K	.....	CS13AF1R8K	.....
2.2	B	CS12AF2R2K	.....	CS13AF2R2K	.....
2.2	B	CS12AF2R2M	.....	CS13AF2R2M	.....
2.7	B	CS12AF2R7K	.....	CS13AF2R7K	.....
3.3	B	CS12AF3R3K	.....	CS13AF3R3K	.....
3.3	B	CS12AF3R3M	.....	CS13AF3R3M	.....
3.9	B	CS12AF3R9K	.....	CS13AF3R9K	.....
4.7	B	CS12AF4R7K	.....	CS13AF4R7K	.....
4.7	B	CS12AF4R7M	.....	CS13AF4R7M	.....
5.6	B	CS12AF5R6K	.....	CS13AF5R6K	.....
6.8	B	CS12AF6R8K	.....	CS13AF6R8K	.....
6.8	B	CS12AF6R8M	.....	CS13AF6R8M	.....
8.2	R	CS12AF8R2K	.....	CS13AF8R2K	.....
10	R	CS12AF100K	.....	CS13AF100K	.....
10	R	CS12AF100M	.....	CS13AF100M	.....
12	R	CS12AF120K	.....	CS13AF120K	.....
15	R	CS12AF150K	.....	CS13AF150K	.....
15	R	CS12AF150M	.....	CS13AF150M	.....
18	R	CS12AF180K	.....	CS13AF180K	.....
22	R	CS12AF220K	.....	CS13AF220K	.....
22	R	CS12AF220M	.....	CS13AF220M	.....
27	S	CS12AF270K	.....	CS13AF270K	.....
33	S	CS12AF330K	.....	CS13AF330K	.....
33	S	CS12AF330M	.....	CS13AF330M	.....
39	S	CS12AF390K	.....	CS13AF390K	.....
47	S	CS12AF470K	.....	CS13AF470K	.....
47	S	CS12AF470M	.....	CS13AF470M	.....

----- CS12, 50 WVDC ----- CS13, 50 WVDC -----					
1.0	A	CS12AG010K	.....	CS13AG010K	.....
1.0	A	CS12AG010M	.....	CS13AG010M	.....
1.2	B	CS12AG1R2K	.....	CS13AG1R2K	.....
1.5	B	CS12AG1R5K	.....	CS13AG1R5K	.....
1.5	B	CS12AG1R5M	.....	CS13AG1R5M	.....
1.8	B	CS12AG1R8K	.....	CS13AG1R8K	.....
2.2	B	CS12AG2R2K	.....	CS13AG2R2K	.....
2.2	B	CS12AG2R2M	.....	CS13AG2R2M	.....
2.7	B	CS12AG2R7K	.....	CS13AG2R7K	.....
3.3	B	CS12AG3R3K	.....	CS13AG3R3K	.....
3.3	B	CS12AG3R3M	.....	CS13AG3R3M	.....
3.9	B	CS12AG3R9K	.....	CS13AG3R9K	.....
4.7	B	CS12AG4R7K	.....	CS13AG4R7K	.....
4.7	B	CS12AG4R7M	.....	CS13AG4R7M	.....
5.6	C	CS12AG5R6K	.....	CS13AG5R6K	.....
6.8	C	CS12AG6R8K	.....	CS13AG6R8K	.....
6.8	C	CS12AG6R8M	.....	CS13AG6R8M	.....
8.2	C	CS12AG8R2K	.....	CS13AG8R2K	.....
10	C	CS12AG100K	.....	CS13AG100K	.....
10	C	CS12AG100M	.....	CS13AG100M	.....
12	C	CS12AG120K	.....	CS13AG120K	.....
15	C	CS12AG150K	.....	CS13AG150K	.....
15	C	CS12AG150M	.....	CS13AG150M	.....
18	C	CS12AG180K	.....	CS13AG180K	.....
22	D	CS12AG220K	.....	CS13AG220K	.....
22	D	CS12AG220M	.....	CS13AG220M	.....

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

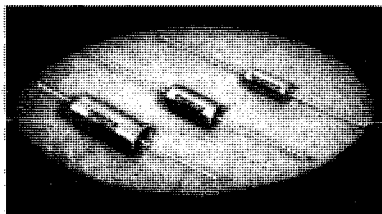
**CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES**

**SIZE CODE**

- A = .125" dia. x .250" long
- B = .175" dia. x .438" long
- R = .279" dia. x .650" long
- S = .341" dia. x .750" long

# SPRAGUE CAPACITORS

## MIL-C-3965 FOIL TANTALUM CAPACITORS TYPES CL24 & CL25



DIMENSIONS

Code	D. x L.	Code	D. x L.
D	1 3/4 x 3/4	M	2 5/8 x 2 3/16
G	1 5/8 x 1 5/16	P	2 5/8 x 2 13/16
J	2 5/8 x 1 1/2		

- For -55C to +85C Operation up to 150 Volts in Military and Industrial Electronic Equipment.
- Low Leakage Current and Stable Temperature Coefficient Makes Possible Its Use in Many Circuits Where Aluminum Foil Designs Are Undesirable.
- The Electrolyte System Used Assures Long Operating and Shelf Life, excellent Low Temperature Performance, Chemical Stability and Inertness.

cellent Low Temperature Performance, Chemical Stability and Inertness.

- Dimensions Listed Are For Bare Metal-Case. For Insulated Case Add 1/4" to Diameter and 1/8" to Length.
- MIL Version of Sprague Type 112D.
- Type CL24 Is a Bare Metal-Case Unit. If An Outer Insulating Sleeve Is Desired, Order Type CL25.
- For Quantity Prices See Your Sprague Industrial Distributor.

μF	WVDC	Size Code	Military Designation*
15	15	D	CL24BE150UP3 CL25BE150UP3
60	15	G	CL24BE600UP3 CL25BE600UP3
200	15	J	CL24BE201UP3 CL25BE201UP3
400	15	M	CL24BE401UP3 CL25BE401UP3
580	15	P	CL24BE581UP3 CL25BE581UP3
10	25	D	CL24BG100UP3 CL25BG100UP3
40	25	G	CL24BG400UP3 CL25BG400UP3
120	25	J	CL24BG121UP3 CL25BG121UP3
250	25	M	CL24BG251UP3 CL25BG251UP3
350	25	P	CL24BG351UP3 CL25BG351UP3
8	30	D	CL24BH080UP3 CL25BH080UP3
32	30	G	CL24BH320UP3 CL25BH320UP3

μF	WVDC	Size Code	Military Designation*
110	30	J	CL24BH111UP3 CL25BH111UP3
220	30	M	CL24BH221UP3 CL25BH221UP3
300	30	P	CL24BH301UP3 CL25BH301UP3
4.5	50	D	CL24BJ4R5TP3 CL25BJ4R5TP3
18	50	G	CL24BJ180TP3 CL25BJ180TP3
60	50	J	CL24BJ600TP3 CL25BJ600TP3
100	50	M	CL24BJ101TP3 CL25BJ101TP3
150	50	P	CL24BJ151TP3 CL25BJ151TP3
3	75	D	CL24BL030TP3 CL25BL030TP3
12	75	G	CL24BL120TP3 CL25BL120TP3
30	75	J	CL24BL300TP3 CL25BL300TP3

μF	WVDC	Size Code	Military Designation*
70	75	M	CL24BL700TP3 CL25BL700TP3
100	75	P	CL24BL101TP3 CL25BL101TP3
2	100	D	CL24BN020SP3 CL25BN020SP3
8	100	G	CL24BN080SP3 CL25BN080SP3
25	100	J	CL24BN250SP3 CL25BN250SP3
50	100	M	CL24BN500SP3 CL25BN500SP3
70	100	P	CL24BN700SP3 CL25BN700SP3
1	150	D	CL24BQ010SP3 CL25BQ010SP3
4	150	G	CL24BQ040SP3 CL25BQ040SP3
13	150	J	CL24BQ130SP3 CL25BQ130SP3
25	150	M	CL24BQ250SP3 CL25BQ250SP3
36	150	P	CL24BQ360SP3 CL25BQ360SP3

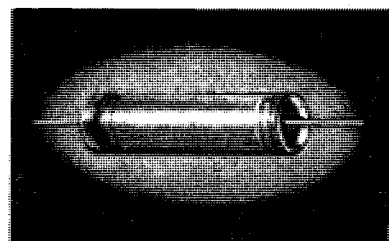
\*Note: For vibration grade 1 or 2, change last digit of military designation to 1 or 2.

## MIL-C-3965 FOIL TANTALUM CAPACITORS TYPES CL34 and CL35

- For use in military and industrial electronic equipment. Designed to operate over the temperature range of -55C to +85C up to 150 volts.
- Long operation and shelf life, excellent low temperature performance, and optimum electrical characteristics.
- For use in circuits where aluminum foil units are unsatisfactory. Low

leakage current and good temperature coefficient.

- Type CL34 is a bare metal case unit. If an outer insulating sleeve is desired, order Type CL35.
- MIL version of Sprague Type 110D.
- For quantity prices see your Sprague Industrial Distributor.



DIMENSIONS

Code	D. x L.	Code	D. x L.
D	3/16 x 1 1/16	M	3/8 x 2 1/8
G	7/32 x 7/8	P	3/8 x 2 3/4
J	3/8 x 1 1/16		

μF	WVDC	Size Code	Military Designation*
10	3	D	CL34BA100MP3 CL35BA100MP3
50	3	G	CL34BA500MP3 CL35BA500MP3
8	6	D	CL34BB080MP3 CL35BB080MP3
30	6	G	CL34BB300MP3 CL35BB300MP3
100	6	J	CL34BB101MP3 CL35BB101MP3
200	6	M	CL34BB201MP3 CL35BB201MP3
300	6	P	CL34BB301MP3 CL35BB301MP3
6	10	D	CL34BD060MP3 CL35BD060MP3
25	10	G	CL34BD250MP3 CL35BD250MP3
80	10	J	CL34BD800MP3 CL35BD800MP3
160	10	M	CL34BD161MP3 CL35BD161MP3
220	10	P	CL34BD221MP3 CL35BD221MP3
4.5	15	D	CL34BE4R5MP3 CL35BE4R5MP3
10	15	G	CL34BE100MP3 CL35BE100MP3
18	15	G	CL34BE180MP3 CL35BE180MP3
55	15	J	CL34BE550MP3 CL35BE550MP3
110	15	M	CL34BE111MP3 CL35BE111MP3
160	15	P	CL34BE161MP3 CL35BE161MP3
2.5	30	D	CL34BH2R5MP3 CL35BH2R5MP3
30	30	J	CL34BH300MP3 CL35BH300MP3

μF	WVDC	Size Code	Military Designation*
60	30	M	CL34BH300MP3 CL35BH600MP3
85	30	P	CL34BH850MP3 CL35BH850MP3
1.5	50	D	CL34BJ1R5MP3 CL35BJ1R5MP3
6	50	G	CL34BJ060MP3 CL35BJ060MP3
20	50	J	CL34BJ200MP3 CL35BJ200MP3
40	50	M	CL34BJ400MP3 CL35BJ400MP3
55	50	P	CL34BJ550MP3 CL35BJ550MP3
1	75	D	CL34BL010MP3 CL35BL010MP3
4	75	G	CL34BL040MP3 CL35BL040MP3
14	75	J	CL34BL140MP3 CL35BL140MP3
28	75	M	CL34BL280MP3 CL35BL280MP3
40	75	P	CL34BL400MP3 CL35BL400MP3
0.8	100	D	CL34BN0R8MP3 CL35BN0R8MP3
3	100	G	CL34BN030MP3 CL35BN030MP3
10	100	J	CL34BN100MP3 CL35BN100MP3
20	100	M	CL34BN200MP3 CL35BN200MP3
30	100	P	CL34BN300MP3 CL35BN300MP3
0.5	150	D	CL34BQ0R5MP3 CL35BQ0R5MP3
2	150	G	CL34BQ020MP3 CL35BQ020MP3
4	150	G	CL34BQ040MP3 CL35BQ040MP3

μF	WVDC	Size Code	Military Designation*
7	150	J	CL34BQ070MP3 CL35BQ070MP3
8	150	J	CL34BQ080MP3 CL35BQ080MP3
12	150	M	CL34BQ120MP3 CL35BQ120MP3
14	150	M	CL34BQ140MP3 CL35BQ140MP3
20	150	P	CL34BQ200MP3 CL35BQ200MP3
.35	200	D	CL34BR351LP3 CL35BR351LP3
1.5	200	G	CL34BR1R5LP3 CL35BR1R5LP3
5	200	J	CL34BR050LP3 CL35BR050LP3
10	200	M	CL34BR100LP3 CL35BR100LP3
15	200	P	CL34BR150LP3 CL35BR150LP3
.30	250	D	CL34BSR30LP3 CL35BSR30LP3
1.2	250	G	CL34BS1R2LP3 CL35BS1R2LP3
4	250	J	CL34BS040LP3 CL35BS040LP3
8	250	M	CL34BS080LP3 CL35BS080LP3
12	250	P	CL34BS120LP3 CL35BS120LP3
1	300	G	CL34BX010LP3 CL35BX010LP3
3	300	J	CL34BX030LP3 CL35BX030LP3
7	300	M	CL34BX070LP3 CL35BX070LP3
10	300	P	CL34BX100LP3 CL35BX100LP3

\*Note: For vibration grade 1 or 2, change last digit of military designation to 1 or 2.

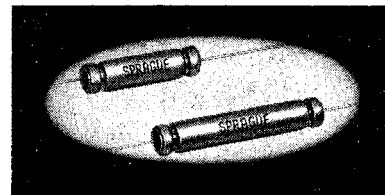
# SPRAGUE CAPACITORS

## MIL-C-3965 TUBULAR FOIL TANTALUM ELECTROLYTICS

- Meet Requirements of Military Specification MIL-C-3965
- Small Electrically Stable Foil Tantals, Long, Reliable Life
- Available in Industrial Equivalents as Types 120D, 121D, 122D, 123D
- Temperature Rating 125C

- Types Marked (\*) Have Insulating Sleeves All Others are Bare Case
- Capacitance Tolerance  $\pm 20\%$
- Call Your Sprague Industrial Distributor for Current Quantity Prices

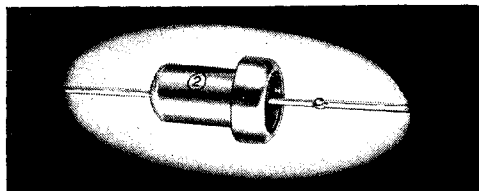
SIZE CODE (Diam x Length)			
E	$1\frac{3}{4} \times \frac{3}{4}$	N	$2\frac{3}{4} \times 2\frac{1}{4}$
H	$1\frac{9}{16} \times 1\frac{1}{32}$	Q	$2\frac{3}{4} \times 2\frac{7}{8}$
K	$2\frac{3}{4} \times 1\frac{1}{16}$		



$\mu$ F	Size Code	MIL Type	$\mu$ F	Size Code	MIL Type	$\mu$ F	Size Code	MIL Type	$\mu$ F	Size Code	MIL Type	$\mu$ F	Size Code	MIL Type
<b>TYPE CL20</b>			25	N	CL21CN250SP3	<b>50 WORKING VOLTS D-C</b>			110	N	CL31CD111MP3	<b>60 WORKING VOLTS D-C</b>		
<b>POLARIZED ETCHED FOIL</b>			36	Q	CL21CN360SP3	1.5	E	CL23CJ1R5TN3	160	Q	CL31CD161MP3	0.4	E	CL32CK0R4MN3
<b>10 WORKING VOLTS D-C</b>			<b>TYPE CL22</b>			6	H	CL23CJ060TN3	<b>15 WORKING VOLTS D-C</b>			1.5	H	CL32CK1R5MN3
15	E	CL20CD150UP3	<b>NON-POLARIZED ETCHED FOIL</b>			15	K	CL23CJ150TN3	3	E	CL31CE030MP3	5	K	CL32CK050MN3
60	H	CL20CD600UP3	<b>10 WORKING VOLTS D-C</b>			35	N	CL23CJ350TN3	12	H	CL31CE120MP3	10	N	CL32CK100MN3
200	K	CL20CD201UP3	<b>15 WORKING VOLTS D-C</b>			50	Q	CL23CJ500TN3	35	K	CL31CE350MP3	15	Q	CL32CK150MN3
400	N	CL20CD401UP3	10	E	CL22CD100UN3	<b>60 WORKING VOLTS D-C</b>			70	N	CL31CE700MP3	<b>100 WORKING VOLTS D-C</b>		
580	Q	CL20CD581UP3	40	H	CL22CD400UN3	1	E	CL23CK010TN3	100	Q	CL31CE101MP3	0.25	E	CL32CNR25MN3
<b>15 WORKING VOLTS D-C</b>			120	K	CL22CD121UN3	4	H	CL23CK040TN3	<b>30 WORKING VOLTS D-C</b>			1	H	CL32CN010MN3
10	E	CL20CE100UP3	250	N	CL22CD251UN3	12	K	CL23CK120TN3	1.5	E	CL31CH1R5MP3	3.5	K	CL32CN3R5MN3
40	H	CL20CE400UP3	350	Q	CL22CD351UN3	25	N	CL23CK250TN3	6	H	CL31CH060MP3	7	N	CL32CN070MN3
120	K	CL20CE121UP3	<b>15 WORKING VOLTS D-C</b>			35	Q	CL23CK350TN3	20	K	CL31CH200MP3	10	Q	CL32CN100MN3
250	N	CL20CE251UP3	5	E	CL22CE050UN3	<b>100 WORKING VOLTS D-C</b>			40	N	CL31CH400MP3	<b>150 WORKING VOLTS D-C</b>		
350	Q	CL20CE351UP3	20	H	CL22CE200UN3	0.5	E	CL23CN0R5SN3	55	Q	CL31CH550MP3	0.15	E	CL32CQR15MN3
<b>30 WORKING VOLTS D-C</b>			70	K	CL22CE700UN3	2	H	CL23CN020SN3	<b>50 WORKING VOLTS D-C</b>			0.75	H	CL32CQR75MN3
4.5	E	CL20CH4R5TP3	140	N	CL22CE141UN3	6	K	CL23CN060SN3	1	E	CL31CJ010MP3	2.5	K	CL32CQR25MN3
18	H	CL20CH180TP3	200	Q	CL22CE201UN3	12	N	CL23CN120SN3	4	H	CL31CJ040MP3	5	N	CL32CQ050MN3
60	K	CL20CH600TP3	<b>30 WORKING VOLTS D-C</b>			18	Q	CL23CN180SN3	28	N	CL31CJ280MP3	7.5	Q	CL32CQR75MN3
100	N	CL20CH101TP3	2.5	E	CL22CH2R5TN3	<b>TYPE CL30</b>			14	K	CL31CJ140MP3	<b>TYPE CL33*</b>		
150	Q	CL20CH151TP3	10	H	CL22CH100TN3	<b>POLARIZED PLAIN FOIL</b>			28	N	CL31CJ280MP3	<b>NON-POLARIZED PLAIN FOIL</b>		
<b>50 WORKING VOLTS D-C</b>			30	K	CL22CH300TN3	<b>10 WORKING VOLTS D-C</b>			40	Q	CL31CJ400MP3	<b>10 WORKING VOLTS D-C</b>		
2	E	CL20CJ020TP3	60	N	CL22CH600TN3	4.5	E	CL30CD4R5MP3	0.8	E	CL31CK0R8MP3	2.5	E	CL33CD2R5MN3
3	H	CL20CJ120TP3	80	Q	CL22CH800TN3	18	H	CL30CD180MP3	3	H	CL31CK030MP3	10	H	CL33CD100MN3
12	E	CL20CJ300TP3	<b>50 WORKING VOLTS D-C</b>			55	K	CL30CD550MP3	10	K	CL31CK100MP3	10	K	CL33CD3R5MN3
30	K	CL20CJ300TP3	1.5	E	CL22CJ1R5TN3	110	N	CL30CD111MP3	20	N	CL31CK200MP3	35	K	CL33CD350MN3
70	N	CL20CJ700TP3	6	H	CL22CJ060TN3	160	Q	CL30CD161MP3	30	Q	CL31CK300MP3	70	N	CL33CD700MN3
100	Q	CL20CJ101TP3	15	K	CL22CJ150TN3	<b>15 WORKING VOLTS D-C</b>			70	N	CL31CK300MP3	100	Q	CL33CD101MN3
<b>60 WORKING VOLTS D-C</b>			35	N	CL22CJ350TN3	3	E	CL30CE030MP3	<b>100 WORKING VOLTS D-C</b>			<b>15 WORKING VOLTS D-C</b>		
2	E	CL20CK020TP3	50	Q	CL22CJ500TN3	12	H	CL30CE120MP3	0.5	E	CL31CN0R5MP3	1.5	E	CL33CE1R5MN3
8	H	CL20CK080TP3	<b>60 WORKING VOLTS D-C</b>			35	N	CL30CE350TN3	2	H	CL31CN020MP3	6	H	CL33CE060MN3
25	K	CL20CK250TP3	1	E	CL22CK010TN3	70	N	CL30CE700MP3	7	K	CL31CN070MP3	20	K	CL33CE200MN3
50	N	CL20CK500TP3	4	H	CL22CK040TN3	100	Q	CL30CE101MP3	14	N	CL31CN140MP3	40	N	CL33CE400MN3
70	Q	CL20CK700TP3	12	K	CL22CK120TN3	<b>30 WORKING VOLTS D-C</b>			20	Q	CL31CN200MP3	60	Q	CL33CE600MN3
<b>100 WORKING VOLTS D-C</b>			35	Q	CL22CK350TN3	1.5	E	CL30CH1R5MP3	<b>150 WORKING VOLTS D-C</b>			<b>30 WORKING VOLTS D-C</b>		
1	E	CL20CN010SP3	<b>100 WORKING VOLTS D-C</b>			6	H	CL30CH060MP3	0.35	E	CL31CQR35MP3	0.8	E	CL33CH0R8MN3
4	H	CL20CN040SP3	0.5	E	CL22CN0R5SN3	20	K	CL30CH200MP3	1.5	H	CL31CQR15MP3	3	H	CL33CH030MN3
13	K	CL20CN130SP3	2	H	CL22CN020SN3	40	N	CL30CH400MP3	5	K	CL31CQ050MP3	10	K	CL33CH100MN3
25	N	CL20CN250SP3	6	K	CL22CN060SN3	70	N	CL30CH700MP3	10	N	CL31CQ100MP3	20	N	CL33CH200MN3
36	Q	CL20CN360SP3	12	N	CL22CN120SN3	55	Q	CL30CH550MP3	15	Q	CL31CQ150MP3	30	Q	CL33CH300MN3
<b>TYPE CL21*</b>			18	Q	CL22CN180SN3	<b>50 WORKING VOLTS D-C</b>			<b>TYPE CL32</b>			<b>50 WORKING VOLTS D-C</b>		
<b>POLARIZED ETCHED FOIL</b>			<b>TYPE CL23*</b>			<b>NON-POLARIZED ETCHED FOIL</b>			<b>NON-POLARIZED PLAIN FOIL</b>			<b>10 WORKING VOLTS D-C</b>		
<b>10 WORKING VOLTS D-C</b>			<b>10 WORKING VOLTS D-C</b>			<b>10 WORKING VOLTS D-C</b>			<b>10 WORKING VOLTS D-C</b>			<b>10 WORKING VOLTS D-C</b>		
15	E	CL21CD150UP3	10	E	CL23CD100UN3	0.8	E	CL30CK0R8MP3	2.5	E	CL32CD2R5MN3	0.5	E	CL33CJ0R5MN3
60	H	CL21CD600UP3	40	H	CL23CD400UN3	3	H	CL30CK030MP3	10	H	CL32CD100MN3	2	H	CL33CJ020MN3
200	K	CL21CD201UP3	120	K	CL23CD121UN3	10	K	CL30CK100MP3	7	K	CL32CD070MN3	7	K	CL33CJ070MN3
400	N	CL21CD401UP3	250	N	CL23CD251UN3	20	N	CL30CK200MP3	14	N	CL33CJ140MN3	14	N	CL33CJ140MN3
580	Q	CL21CD581UP3	350	Q	CL23CD351UN3	30	Q	CL30CK300MP3	20	Q	CL33CJ200MN3	20	Q	CL33CJ200MN3
<b>15 WORKING VOLTS D-C</b>			<b>15 WORKING VOLTS D-C</b>			<b>60 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>			<b>60 WORKING VOLTS D-C</b>		
10	E	CL21CE100UP3	5	E	CL23CE050UN3	0.8	E	CL30CQ0R35MP3	0.5	E	CL32CJ0R5MN3	0.4	E	CL33CK0R4MN3
40	H	CL21CE400UP3	20	H	CL23CE200UN3	1.5	H	CL30CQ1R5MP3	1.5	H	CL32CJ1R5MN3	1.5	H	CL33CK1R5MN3
120	K	CL21CE121UP3	70	K	CL23CE700UN3	3	H	CL30CQ030MP3	6	H	CL32CE060MN3	5	K	CL33CK050MN3
250	N	CL21CE251UP3	140	N	CL23CE141UN3	10	K	CL30CQ100MP3	20	K	CL32CJ200MN3	10	N	CL33CK100MN3
350	Q	CL21CE351UP3	200	Q	CL23CE201UN3	20	N	CL30CQ200MP3	70	N	CL32CD700MN3	15	Q	CL33CK150MN3
<b>30 WORKING VOLTS D-C</b>			<b>30 WORKING VOLTS D-C</b>			<b>100 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>			<b>100 WORKING VOLTS D-C</b>		
4.5	E	CL21CH4R5TP3	5	E	CL23CH2R5TN3	0.35	E	CL30CQR35MP3	0.8	E	CL32CH0R8MN3	0.25	E	CL33CNR25MN3
18	H	CL21CH180TP3	20	H	CL23CH100TN3	1.5	H	CL30CQ1R5MP3	10	H	CL32CH100MN3	1	H	CL33CN010MN3
60	K	CL21CH600TP3	70	K	CL23CH700UN3	5	K	CL30CQ050MP3	3	H	CL32CH030MN3	3.5	K	CL33CN3R5MN3
100	N	CL21CH101TP3	140	N	CL23CH141UN3	10	N	CL30CQ100MP3	10	K	CL32CH100MN3	7	N	CL33CN070MN3
150	Q	CL21CH151TP3	200	Q	CL23CH201UN3	15	Q	CL30CQ150MP3	20	N	CL32CH200MN3	10	Q	CL33CN100MN3
<b>50 WORKING VOLTS D-C</b>			<b>15 WORKING VOLTS D-C</b>			<b>50 WORKING VOLTS D-C</b>			<b>30 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>		
3	E	CL21CJ030TP3	10	E	CL23CJ010TN3	0.5	E	CL30CJ010MP3	1.5	E	CL32CJ1R5MN3	0.4	E	CL33CQR4R5MN3
12	H	CL21CJ120TP3	20	H	CL23CJ200TN3	4	H	CL30CJ040MP3	6	H	CL32CJ060MN3	1.5	H	CL33CQR1R5MN3
30	K	CL21CJ300TP3	70	K	CL23CJ700TN3	14	K	CL30CJ140MP3	20	K	CL32CJ200MN3	5	K	CL33CQR050MN3
70	N	CL21CJ700TP3	250	N	CL23CJ251UN3	28	N	CL30CJ280MP3	20	N	CL32CJ200MN3	10	N	CL33CQR100MN3
100	Q	CL21CJ101TP3	350	Q	CL23CJ351UN3	40	Q	CL30CJ400MP3	40	N	CL32CJ400MN3	15	Q	CL33CQR150MN3
<b>60 WORKING VOLTS D-C</b>			<b>30 WORKING VOLTS D-C</b>			<b>100 WORKING VOLTS D-C</b>			<b>50 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>		
2	E	CL21CK020TP3	2.5	E	CL23CH2R5TN3	0.5	E	CL30CQ0R35MP3	0.5	E	CL32CJ0R5MN3	0.15	E	CL33CQR15MN3
8	H	CL21CK080TP3	10	H	CL23CH100TN3	1.5	H	CL30CQ1R5MP3	2	H	CL32CJ020MN3	0.75	H	CL33CQR75MN3
25	K	CL21CK250TP3	30	K	CL23CH300TN3	5	K	CL30CQ050MP3	7	K	CL32CJ070MN3	2.5	K	CL33CQR25MN3
50	N	CL21CK500TP3	60	N	CL23CH600TN3	10	N	CL30CQ100MP3	14	N	CL32CJ140MN3	5	N	CL33CQR050MN3
70	Q	CL21CK700TP3	80	Q	CL23CH800TN3	15	Q	CL30CQ150MP3	20	Q	CL32CJ200MN3	7.5	Q	CL33CQR75MN3
<b>100 WORKING VOLTS D-C</b>			<b>TYPE CL31*</b>			<b>POLARIZED PLAIN FOIL</b>			<b>50 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>		
1	E	CL21CN010SP3	<b>10 WORKING VOLTS D-C</b>			<b>10 WORKING VOLTS D-C</b>			<b>50 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>		
4	H	CL21CN040SP3	<b>10 WORKING VOLTS D-C</b>			<b>10 WORKING VOLTS D-C</b>			<b>50 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>		
13	K	CL21CN130SP3	<b>10 WORKING VOLTS D-C</b>			<b>10 WORKING VOLTS D-C</b>			<b>50 WORKING VOLTS D-C</b>			<b>150 WORKING VOLTS D-C</b>		

# SPRAGUE CAPACITORS

## MIL-C-3965 'CUP-TYPE' TANTALEX<sup>®</sup> CAPACITORS TYPES CL44 and CL45



DIMENSIONS

Code	D. x L.	Code	D. x L.	Code	D. x L.
U	$\frac{7}{32} \times 1\frac{1}{32}$	V	$\frac{7}{32} \times 1\frac{1}{16}$	T	$\frac{3}{8} \times \frac{49}{64}$

- Type CL44 and CL45 Tantalex capacitors are manufactured to specification MIL-C-3965. Also available as Sprague Industrial Types 131D and 132D.
- Large capacitance values in small physical size.
- Intended for industrial, communication and ground military electronic equipment.
- Extremely low leakage currents and virtually no shelf aging.
- CL44 is a bare metal-case unit. CL45 has outer insulating sleeve.
- Capacitance tolerance: K =  $\pm 10\%$ ; M =  $+20, -20\%$ ; S =  $+30, -15\%$ ; T =  $+50, -15\%$ .
- For quantity prices call your Sprague Industrial Distributor.

### TYPES CL44, CL45 - 85C ALSO AVAILABLE IN CHARACTERISTIC C (125C)

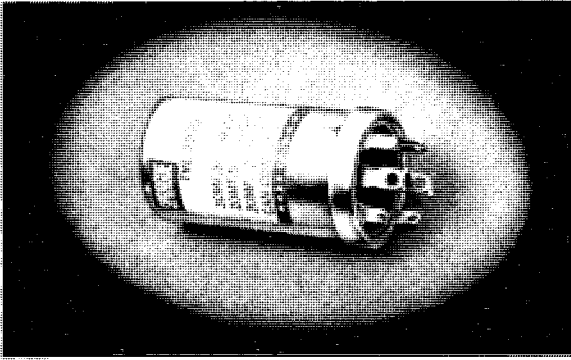
$\mu$ F	Size Code	CL44 Type Number*	CL45 Type Number*	$\mu$ F	Size Code	CL44 Type Number*	CL45 Type Number*	$\mu$ F	Size Code	CL44 Type Number*	CL45 Type Number*
<b>6 WVDC</b>				<b>25 WVDC</b>				<b>75 WVDC</b>			
30	U	CL44BB300KP3	CL45BB300KP3	10	U	CL44BG100KP3	CL45BG100KP3	50	T	CL44BK500MP3	CL45BK500MP3
30	U	CL44BB300MP3	CL45BB300MP3	10	U	CL44BG100MP3	CL45BG100MP3	50	T	CL44BK500SP3	CL45BK500SP3
30	U	CL44BB3C0SP3	CL45BB300SP3	10	U	CL44BG100SP3	CL45BG100SP3	50	T	CL44BK500TP3	CL45BK500TP3
30	U	CL44BB300TP3	CL45BB300TP3	10	U	CL44BG100TP3	CL45BG100TP3	<b>100 WVDC</b>			
140	V	CL44BB141KP3	CL45BB141KP3	<b>30 WVDC</b>				3.5	U	CL44BL3R5KP3	CL45BL3R5KP3
140	V	CL44BB141MP3	CL45BB141MP3	8	U	CL44BH0E0KP3	CL45BH080KP3	3.5	U	CL44BL3R5MP3	CL45BL3R5MP3
140	V	CL44BB141SP3	CL45BB141SP3	8	U	CL44BH080MP3	CL45BH080MP3	3.5	U	CL44BL3R5SP3	CL45BL3R5SP3
140	V	CL44BB141TP3	CL45BB141TP3	8	U	CL44BH080SP3	CL45BH080SP3	3.5	U	CL44BL3R5TP3	CL45BL3R5TP3
330	T	CL44BB331KP3	CL45BB331KP3	8	U	CL44BH080TP3	CL45BH080TP3	15	V	CL44BL150KP3	CL45BL150KP3
330	T	CL44BB331MP3	CL45BB331MP3	40	V	CL44BH400KP3	CL45BH400KP3	15	V	CL44BL150MP3	CL45BL150MP3
330	T	CL44BB331SP3	CL45BB331SP3	40	V	CL44BH400MP3	CL45BH400MP3	15	V	CL44BL150SP3	CL45BL150SP3
330	T	CL44BB331TP3	CL45BB331TP3	40	V	CL44BH400SP3	CL45BH400SP3	15	V	CL44BL150TP3	CL45BL150TP3
<b>8 WVDC</b>				<b>50 WVDC</b>				<b>125 WVDC</b>			
25	U	CL44BC250KP3	CL45BC250KP3	5	U	CL44BJ050KP3	CL45BJ050KP3	2.5	U	CL44BN2R5KP3	CL45BN2R5KP3
25	U	CL44BC250MP3	CL45BC250MP3	5	U	CL44BJ050MP3	CL45BJ050MP3	2.5	U	CL44BN2R5MP3	CL45BN2R5MP3
25	U	CL44BC250SP3	CL45BC250SP3	5	U	CL44BJ050SP3	CL45BJ050SP3	2.5	U	CL44BN2R5SP3	CL45BN2R5SP3
25	U	CL44BC250TP3	CL45BC250TP3	5	U	CL44BJ050TP3	CL45BJ050TP3	2.5	U	CL44BN2R5TP3	CL45BN2R5TP3
<b>10 WVDC</b>				<b>60 WVDC</b>				<b>15 WVDC</b>			
20	U	CL44BD200KP3	CL45BD200KP3	4	U	CL44BK040KP3	CL45BK040KP3	15	U	CL44BE150KP3	CL45BE150KP3
20	U	CL44BD200MP3	CL45BD200MP3	4	U	CL44BK040MP3	CL45BK040MP3	15	U	CL44BE150MP3	CL45BE150MP3
20	U	CL44BD200SP3	CL45BD200SP3	4	U	CL44BK040SP3	CL45BK040SP3	15	U	CL44BE150SP3	CL45BE150SP3
20	U	CL44BD200TP3	CL45BD200TP3	4	U	CL44BK040TP3	CL45BK040TP3	15	U	CL44BE150TP3	CL45BE150TP3
100	V	CL44BD101KP3	CL45BD101KP3	20	V	CL44BK200KP3	CL45BK200KP3	70	V	CL44BE700KP3	CL45BE700KP3
100	V	CL44BD101MP3	CL45BD101MP3	20	V	CL44BK200MP3	CL45BK200MP3	70	V	CL44BE700MP3	CL45BE700MP3
100	V	CL44BD101SP3	CL45BD101SP3	20	V	CL44BK200SP3	CL45BK200SP3	70	V	CL44BE700SP3	CL45BE700SP3
100	V	CL44BD101TP3	CL45BD101TP3	20	V	CL44BK200TP3	CL45BK200TP3	70	V	CL44BE700TP3	CL45BE700TP3
250	T	CL44BD251KP3	CL45BD251KP3	20	V	CL44BK250KP3	CL45BK250KP3	170	T	CL44BE171KP3	CL45BE171KP3
250	T	CL44BD251MP3	CL45BD251MP3	20	V	CL44BK250MP3	CL45BK250MP3	170	T	CL44BE171MP3	CL45BE171MP3
250	T	CL44BD251SP3	CL45BD251SP3	20	V	CL44BK250SP3	CL45BK250SP3	170	T	CL44BE171SP3	CL45BE171SP3
250	T	CL44BD251TP3	CL45BD251TP3	20	V	CL44BK250TP3	CL45BK250TP3	170	T	CL44BE171TP3	CL45BE171TP3
<b>15 WVDC</b>				<b>80 WVDC</b>				<b>25 WVDC</b>			
15	U	CL44BE150KP3	CL45BE150KP3	20	V	CL44BK300KP3	CL45BK300KP3	9	V	CL44BP090KP3	CL45BP090KP3
15	U	CL44BE150MP3	CL45BE150MP3	20	V	CL44BK300MP3	CL45BK300MP3	9	V	CL44BP090MP3	CL45BP090MP3
15	U	CL44BE150SP3	CL45BE150SP3	20	V	CL44BK300SP3	CL45BK300SP3	9	V	CL44BP090SP3	CL45BP090SP3
15	U	CL44BE150TP3	CL45BE150TP3	20	V	CL44BK300TP3	CL45BK300TP3	9	V	CL44BP090TP3	CL45BP090TP3
70	V	CL44BE700KP3	CL45BE700KP3	20	V	CL44BK400KP3	CL45BK400KP3	18	T	CL44BP180KP3	CL45BP180KP3
70	V	CL44BE700MP3	CL45BE700MP3	20	V	CL44BK400MP3	CL45BK400MP3	25	T	CL44BP250MP3	CL45BP250MP3
70	V	CL44BE700SP3	CL45BE700SP3	20	V	CL44BK400SP3	CL45BK400SP3	25	T	CL44BP250SP3	CL45BP250SP3
70	V	CL44BE700TP3	CL45BE700TP3	20	V	CL44BK400TP3	CL45BK400TP3	25	T	CL44BP250TP3	CL45BP250TP3
170	T	CL44BE171KP3	CL45BE171KP3	20	V	CL44BK500KP3	CL45BK500KP3	25	T	CL44BP250TP3	CL45BP250TP3
170	T	CL44BE171MP3	CL45BE171MP3								
170	T	CL44BE171SP3	CL45BE171SP3								
170	T	CL44BE171TP3	CL45BE171TP3								

\*For Vibration Grade 1, 2, or 3, add 1, 2, or 3 at end of Type Number.



# SPRAGUE CAPACITORS

## TVL TWIST-LOK<sup>®</sup> ELECTROLYTICS



- Hermetically Sealed in Aluminum Cans for Long Life and Dependable Performance in TV, Radio and Hi-Fi
- Designed for 85°C (185°F) Operation
- Stand Up Under Extremely High Temperatures Often Encountered in TV, Hi-Fi, and Auto Radio Cabinets
- Withstand High Surge Voltages
- Ideal for High Ripple Selenium Rectifier Circuits
- Can Be Safely Mounted "Above Ground" Using Phenolic Mounting Plate and Insulating Tube
- Easy to Mount — Unit Locks Firmly in Place with a Twist of the Tabs
- Furnished Complete with Both Phenolic and Metal Mounting Plates

The Twist-lok Capacitors listed here include only popular ratings for industrial applications. For the complete line of more than 1700 Twist-lok Capacitors, please refer to Distributor's Guide to Replacement Electrolytic Capacitors, C-1001.

$\mu$ F	WVDC	Dia. x Length	Cat. No.	Net	$\mu$ F	WVDC	Dia. x Length	Cat. No.	Net
<b>SINGLE UNITS</b>									
2000	6	1 3/8 x 2	TVL-1115	\$1.83	10	450	1 x 2	TVL-1705	\$ .93
225	15	3/4 x 2	TVL-1160	1.05	15	450	1 x 2	TVL-1709	1.02
1000	15	1 x 2 1/2	TVL-1165	1.53	20	450	1 x 2	TVL-1714	1.08
2000	15	1 3/8 x 2	TVL-1168	2.07	30	450	1 x 2 1/2	TVL-1720	1.17
3000	15	1 3/8 x 2	TVL-1170	2.55	40	450	1 x 3	TVL-1725	1.23
4000	15	1 3/8 x 3 1/2	TVL-1173	2.25	50	450	1 x 3	TVL-1728	1.41
40	25	3/4 x 2	TVL-1210	.81	60	450	1 3/8 x 2 1/2	TVL-1730	1.56
500	25	1 x 1 1/2	TVL-1220	1.53	80	450	1 3/8 x 2 1/2	TVL-1735	1.83
1000	25	1 3/8 x 2	TVL-1230	2.13	100	450	1 3/8 x 3	TVL-1750	2.07
100	50	3/4 x 2	TVL-1317	.99	125	450	1 3/8 x 4	TVL-1760	2.31
150	50	3/4 x 2 1/2	TVL-1320	1.08	40	475	1 3/8 x 2	TVL-1820	1.50
250	50	1 x 2 1/2	TVL-1324	1.20	10	500	1 x 1 1/2	TVL-1940	1.02
500	50	1 3/8 x 2	TVL-1330	1.59	20	500	1 x 2 1/2	TVL-1943	1.11
1000	50	1 3/8 x 2 1/2	TVL-1338	2.25	30	500	1 x 2 1/2	TVL-1947	1.20
1500	50	1 3/8 x 3	TVL-1341	2.64	40	500	1 x 3	TVL-1950	1.50
30	150	1 x 2	TVL-1408	.93	80	500	1 3/8 x 3	TVL-1958	2.16
50	150	1 x 1 1/2	TVL-1415	.99	90	500	1 3/8 x 3	TVL-1960	2.10
80	150	1 x 2 1/2	TVL-1420	1.11	<b>DUAL UNITS</b>				
100	150	1 x 2 1/2	TVL-1423	1.20	20-20	150-150	1 x 2	TVL-2415	1.02
120	150	1 x 2	TVL-1425	1.29	30-20	150-150	1 x 1 1/2	TVL-2422	1.11
120	150	1 3/8 x 2 1/2	TVL-1426	1.29	40-20	150-150	1 x 2	TVL-2425	1.11
140	150	1 x 2 1/2	TVL-1428	1.29	40-30	150-150	1 x 2	TVL-2427	1.11
150	150	1 x 3	TVL-1429	1.29	40-40	150-150	1 x 1 1/2	TVL-2428	1.14
150	150	1 3/8 x 3	TVL-1430	1.29	50-30	150-150	1 x 1 1/2	TVL-2432	1.20
200	150	1 3/8 x 2	TVL-1431	1.47	50-50	150-150	1 x 1 1/2	TVL-2435	1.29
300	150	1 3/8 x 2	TVL-1434	1.68	60-60	150-150	1 x 3 1/2	TVL-2438	1.41
160	200	1 3/8 x 3	TVL-1473	1.89	70-30	150-150	1 x 2	TVL-2439	1.32
20	250	1 x 2	TVL-1509	.96	75-75	150-150	1 x 3	TVL-2440	1.56
40	250	1 x 2	TVL-1519	1.08	80-40	150-150	1 3/8 x 2 1/2	TVL-2442	1.38
100	250	1 x 3	TVL-1535	1.62	80-50	150-150	1 x 2 1/2	TVL-2442.1	1.44
150	250	1 3/8 x 2 1/2	TVL-1540	1.86	80-80	150-150	1 3/8 x 2	TVL-2442.4	1.59
200	250	1 3/8 x 3 1/2	TVL-1547	2.19	125-100	150-150	1 3/8 x 2 1/2	TVL-2443.3	2.01
80	300	1 x 2 1/2	TVL-1573	1.53	150-80	150-150	1 3/8 x 2 1/2	TVL-2443.5	1.83
100	300	1 x 4	TVL-1578	1.74	200-5	150-150	1 3/8 x 2	TVL-2444	1.62
125	300	1 3/8 x 3 1/2	TVL-1580	2.10	200-125	150-150	1 3/8 x 3 1/2	TVL-2445	2.25
150	300	1 3/8 x 3 1/2	TVL-1584	2.10	200-150	150-150	1 3/8 x 4	TVL-2446	2.25
250	300	1 3/8 x 4	TVL-1590	3.33	200-200	150-150	1 3/8 x 2 1/2	TVL-2447	2.40
30	350	1 x 2	TVL-1617	1.14	60-60	200-200	1 x 3	TVL-2461	2.04
40	350	1 x 2	TVL-1621	1.20	60-60	200-200	1 3/8 x 2	TVL-2462	2.04
50	350	1 x 2	TVL-1622	1.26	100-100	200-200	1 3/8 x 3	TVL-2464	2.10
60	350	1 x 3	TVL-1624	1.32	200-5	200-200	1 3/8 x 2	TVL-2470	1.83
80	350	1 3/8 x 2	TVL-1630	1.71	20-20	250-250	1 x 1 1/2	TVL-2515	1.14
125	350	1 3/8 x 3 1/2	TVL-1638	2.37	40-40	250-250	1 x 2	TVL-2520	1.50
150	350	1 3/8 x 2 1/2	TVL-1642	2.37	150-150	250-250	1 3/8 x 4	TVL-2535	3.09
4	450	1 x 2	TVL-1702	.84	200-200	250-250	1 3/8 x 4	TVL-2538	3.63

# SPRAGUE CAPACITORS

## TVL TWIST-LOK ELECTROLYTICS, continued

$\mu$ F	WVDC	Dia. x Length	Cat. No.	Net	$\mu$ F	WVDC	Dia. x Length	Cat. No.	Net
40-30	300-300	1 x 3	TVL-2574	\$1.59	80-10-10	250-250-250	1 x 3	TVL-3543	\$1.92
80-80	300-300	1 3/8 x 3	TVL-2585	2.43	80-80-60	250-250-250	1 3/8 x 3	TVL-3545	2.94
120-20	300-300	1 3/8 x 3 1/2	TVL-2588	2.40	10-10-10	300-300-300	1 x 2	TVL-3580	1.44
120-40	300-300	1 3/8 x 3 1/2	TVL-2589	2.61	60-20-10	300-300-300	1 3/8 x 2	TVL-3581	2.07
15-15	350-350	1 x 2	TVL-2625	1.35	80-40-40	300-300-300	1 3/8 x 2 1/2	TVL-3583	2.85
30-30	350-350	1 x 2 1/2	TVL-2628	1.74	120-50-40	300-300-300	1 3/8 x 4	TVL-3585	3.51
50-30	350-350	1 3/8 x 2 1/2	TVL-2630	1.89	140-100-20	300-300-300	1 3/8 x 4 1/2	TVL-3585.5	3.72
60-30	350-350	1 3/8 x 3	TVL-2631	1.89	20-10-10	350-350-350	1 x 2	TVL-3639.6	1.62
80-20	350-350	1 3/8 x 3	TVL-2633	2.10	30-20-10	350-350-350	1 x 2 1/2	TVL-3639.8	1.95
80-40	350-350	1 3/8 x 3	TVL-2634	2.46	60-40-20	350-350-350	1 3/8 x 4	TVL-3640	2.55
80-80	350-350	1 3/8 x 4	TVL-2635	2.82	60-50-50	350-350-350	1 3/8 x 2 1/2	TVL-3641	2.94
90-40	350-350	1 3/8 x 3	TVL-2637	2.58	80-60-60	350-350-350	1 3/8 x 4	TVL-3642	3.33
100-60	350-350	1 3/8 x 3 1/2	TVL-2639	2.88	90-40-20	350-350-350	1 3/8 x 4	TVL-3645	3.15
100-100	350-350	1 3/8 x 3	TVL-2641	3.69	20-20-20	400-400-25	1 x 3	TVL-3678	1.71
160-10	350-350	1 3/8 x 3	TVL-2643	2.58	10-10-10	400-400-400	1 x 2 1/2	TVL-3690	1.44
100-30	400-50	1 3/8 x 3	TVL-2655	2.34	90-10-5	400-400-400	1 3/8 x 3	TVL-3696	2.64
80-80	400-200	1 3/8 x 3 1/2	TVL-2656	2.37	10-10-10	450-450-25	1 x 2 1/2	TVL-3729	1.44
80-60	400-400	1 3/8 x 3	TVL-2677	2.82	10-10-20	450-450-25	1 x 2	TVL-3731	1.44
120-40	400-400	1 3/8 x 4	TVL-2679	3.15	40-20-20	450-450-25	1 3/8 x 2 1/2	TVL-3743.7	2.10
30-200	450-150	1 3/8 x 3	TVL-2715	2.10	10-10-10	450-450-450	1 x 2 1/2	TVL-3776	1.56
40-10	450-300	1 x 3	TVL-2724	1.56	15-15-15	450-450-450	1 x 3	TVL-3778.2	1.86
5-5	450-450	1 x 2	TVL-2748	1.02	20-10-10	450-450-450	1 x 3	TVL-3779	1.74
10-10	450-450	1 x 2	TVL-2750	1.14	20-20-20	450-450-450	1 3/8 x 2 1/2	TVL-3780	2.16
15-15	450-450	1 x 2 1/2	TVL-2753	1.35	30-10-10	450-450-450	1 3/8 x 2	TVL-3780.5	1.89
20-10	450-450	1 x 2 1/2	TVL-2754	1.35	30-20-20	450-450-450	1 3/8 x 3	TVL-3781	2.31
30-10	450-450	1 x 3	TVL-2757	1.44	30-30-30	450-450-450	1 3/8 x 3 1/2	TVL-3782	2.61
30-30	450-450	1 3/8 x 2	TVL-2759	1.83	40-10-10	450-450-450	1 3/8 x 3	TVL-3783	2.01
40-20	450-450	1 3/8 x 2 1/2	TVL-2762	1.95	40-30-20	450-450-450	1 3/8 x 3	TVL-3784	2.58
40-40	450-450	1 3/8 x 2 1/2	TVL-2764	2.07	40-40-10	450-450-450	1 3/8 x 2 1/2	TVL-3785	2.49
50-50	450-450	1 3/8 x 3	TVL-2767	2.31	40-40-20	450-450-450	1 3/8 x 3	TVL-3786	2.67
60-20	450-450	1 3/8 x 3	TVL-2768	2.13	40-40-40	450-450-450	1 3/8 x 3	TVL-3787	2.94
60-40	450-450	1 3/8 x 3 1/2	TVL-2770	2.37	50-40-30	450-450-450	1 3/8 x 3 1/2	TVL-3788	2.94
60-60	450-450	1 3/8 x 3 1/2	TVL-2772	2.70	60-20-20	450-450-450	1 3/8 x 3	TVL-3789	2.76
80-10	450-450	1 3/8 x 3	TVL-2776	2.16	60-30-10	450-450-450	1 3/8 x 3	TVL-3790	2.70
80-20	450-450	1 3/8 x 3	TVL-2776.5	2.34	60-40-20	450-450-450	1 3/8 x 3 1/2	TVL-3791	3.00
80-30	450-450	1 3/8 x 4	TVL-2777	2.52	80-40-20	450-450-450	1 3/8 x 4	TVL-3793	3.24
80-40	450-450	1 3/8 x 3 1/2	TVL-2778	3.03	30-30-20	475-475-475	1 3/8 x 3	TVL-3840	2.67
100-40	450-450	1 3/8 x 4	TVL-2780	2.91	40-30-10	475-475-475	1 3/8 x 3	TVL-3842.6	2.70
15-15	475-475	1 x 2 1/2	TVL-2820	2.01	40-30-30	475-475-475	1 3/8 x 4	TVL-3843	3.09
30-10	475-475	1 x 3	TVL-2824	1.56	10-10-10	500-500-500	1 x 3	TVL-3952	1.62
40-10	475-475	1 3/8 x 2 1/2	TVL-2827	1.86	30-20-20	500-500-500	1 3/8 x 3	TVL-3956	2.52
80-50	475-475	1 3/8 x 4	TVL-2851	3.12	40-10-10	500-500-500	1 3/8 x 3	TVL-3962	2.34
10-10	500-500	1 x 2 1/2	TVL-2933	1.17	40-40-10	500-500-500	1 3/8 x 3 1/2	TVL-3965	3.03
20-20	500-500	1 3/8 x 2 1/2	TVL-2935	1.71					
30-10	500-500	1 3/8 x 3	TVL-2936	1.56					
30-30	500-500	1 3/8 x 2 1/2	TVL-2937	1.95					
40-40	500-500	1 3/8 x 3	TVL-2940	2.58					
60-40	500-500	1 3/8 x 3 1/2	TVL-2944	2.76					

### TRIPLE UNITS

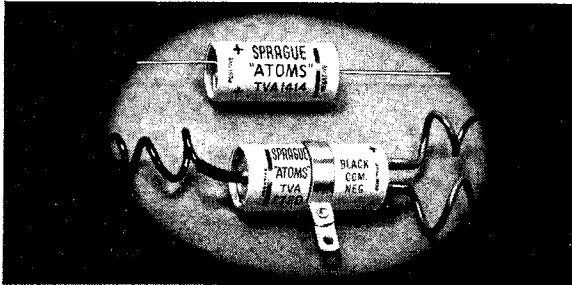
40-20-20	150-150-25	1 x 2 1/2	TVL-3422	\$1.38
50-30-20	150-150-25	1 x 2 1/2	TVL-3426.7	1.50
50-50-20	150-150-25	1 x 3	TVL-3430	1.59
80-40-20	150-150-25	1 x 2 1/2	TVL-3432	1.68
80-40-300	150-150-25	1 3/8 x 2 1/2	TVL-3432.4	2.22
20-20-20	150-150-150	1 x 1 1/2	TVL-3433	1.38
30-30-10	150-150-150	1 x 2	TVL-3435	1.71
40-20-10	150-150-150	1 x 2	TVL-3436	1.41
40-20-20	150-150-150	1 x 1 1/2	TVL-3437	1.44
40-30-20	150-150-150	1 x 2	TVL-3438	1.50
40-40-40	150-150-150	1 x 2	TVL-3440	1.56
50-40-10	150-150-150	1 x 2 1/2	TVL-3441	1.53
50-50-50	150-150-150	1 x 3	TVL-3442	1.80
60-40-20	150-150-150	1 x 3	TVL-3443	1.65
70-15-15	150-150-150	1 x 2 1/2	TVL-3443.3	1.62
70-40-40	150-150-150	1 x 3	TVL-3443.4	2.43
80-30-10	150-150-150	1 x 3	TVL-3443.8	1.65
80-40-20	150-150-150	1 x 3	TVL-3444	1.74
100-30-10	150-150-150	1 x 3	TVL-3447	1.83
120-80-40	150-150-150	1 3/8 x 3 1/2	TVL-3448	2.28
120-120-40	150-150-150	1 3/8 x 2	TVL-3448.2	2.43
200-100-60	150-150-150	1 3/8 x 3 1/2	TVL-3450	2.73
200-150-150	150-150-150	1 3/8 x 4	TVL-3452	4.56
80-10-20	200-200-50	1 x 3	TVL-3471	1.68
20-20-20	250-250-250	1 x 2	TVL-3532	1.56
40-20-20	250-250-250	1 x 3 1/2	TVL-3540	1.74

### QUADRUPLE UNITS

40-40-40-30	150-150-150-150	1 3/8 x 2	TVL-4441	\$1.98
100-80-60-40	150-150-150-150	1 3/8 x 2	TVL-4445	2.79
200-200-60-30	175-175-175-175	1 3/8 x 4	TVL-4450	3.33
60-40-20-50	300-300-300-25	1 3/8 x 3 1/2	TVL-4570	2.82
40-20-10-10	300-300-300-300	1 3/8 x 2	TVL-4578	2.37
40-40-20-10	300-300-300-300	1 3/8 x 3 1/2	TVL-4579	2.73
40-40-30-20	300-300-300-300	1 3/8 x 3	TVL-4580	2.91
60-40-10-10	300-300-300-300	1 3/8 x 2 1/2	TVL-4583	2.73
200-20-20-20	300-300-300-300	1 3/8 x 4	TVL-4590	3.75
40-20-20-10	350-350-350-350	1 3/8 x 2 1/2	TVL-4635	2.61
40-40-40-40	350-350-350-350	1 3/8 x 4	TVL-4635.3	3.60
80-60-40-20	350-350-350-350	1 3/8 x 4	TVL-4635.7	3.84
90-40-30-30	350-350-350-350	1 3/8 x 4	TVL-4635.8	4.08
50-40-30-20	400-400-400-400	1 3/8 x 4	TVL-4674	3.39
80-25-10-10	400-400-400-400	1 3/8 x 4	TVL-4680	3.15
30-30-20-20	450-450-450-450	1 3/8 x 3	TVL-4769.4	3.12
35-35-10-5	450-450-450-450	1 3/8 x 3	TVL-4771	2.76
40-10-10-10	450-450-450-450	1 3/8 x 3	TVL-4771.3	2.46
40-35-10-10	450-450-450-450	1 3/8 x 3	TVL-4771.8	2.88
40-40-20-20	450-450-450-450	1 3/8 x 3 1/2	TVL-4773	3.33
40-40-30-30	450-450-450-450	1 3/8 x 4	TVL-4774	3.63
40-40-40-40	450-450-450-450	1 3/8 x 4	TVL-4775	3.87
60-20-20-20	450-450-450-450	1 3/8 x 4	TVL-4778	3.39
60-30-10-2	450-450-450-450	1 3/8 x 3	TVL-4779	3.06
80-10-10-10	450-450-450-450	1 3/8 x 4	TVL-4783	3.03
20-20-10-10	475-475-475-475	1 3/8 x 2 1/2	TVL-4832	2.61
20-20-20-20	475-475-475-475	1 3/8 x 3	TVL-4834	3.06
40-20-10-10	475-475-475-475	1 3/8 x 3	TVL-4840	3.06
10-10-10-10	500-500-500-500	1 3/8 x 2	TVL-4940	2.10
40-40-8-8	500-500-500-500	1 3/8 x 3 1/2	TVL-4944	3.42

# SPRAGUE CAPACITORS

## ATOM<sup>®</sup> ELECTROLYTICS



- The Smallest Dependable Standard Tubular—Designed for 85°C (185°F) Operation in Voltages to 475 WVDC
- Whether For AC-DC Sets, Auto Radios, Home Radio-phono Combinations, Or TV Sets, The SPRAGUE Line Will Handle All Your Replacement Requirements—No Dual Inventory Problems
- Have Low Leakage And Long Shelf Life
- Will Withstand High Temperatures, High Ripple Currents, High Surge Voltages
- Metal Case Construction with Outer Kraftboard Insulating Case Except as Noted by † Sign

μF	WVDC	D. x L.*	Cat. No.	Net	μF	WVDC	D. x L.*	Cat. No.	Net	μF	WVDC	D. x L.*	Cat. No.	Net
<b>SINGLE UNITS</b>														
750	3	7/8 x 2 3/16	TVA-1097	\$.93	100	150	7/8 x 2 3/16	TVA-1420	\$1.05	8	500	7/8 x 1 11/16	TVA-1902	\$.78
50	6	3/8 x 1 1/4	TVA-1100	.57	150	150	1 x 2 3/16	TVA-1422	1.14	10	500	7/8 x 1 11/16	TVA-1903	.81
100	6	1/2 x 1 1/8	TVA-1101	.72	200	150	1 x 3 1/16	TVA-1423	1.32	16	500	1 1/16 x 2 3/16	TVA-1905	.90
250	6	5/8 x 1 7/16	TVA-1102	.81	250	150	1 1/4 x 4 3/8	★TVA-1424	1.41	20	500	1 x 2 3/16	TVA-1906	.96
500	6	5/8 x 2 3/16	TVA-1103	.93	300	150	1 3/8 x 3 3/8	TVA-1425	1.53	40	500	1 x 2 1/16	TVA-1908	1.35
1000	6	3/4 x 2 3/16	TVA-1104	1.14	80	175	1 x 1 7/8	TVA-1430	.99	8	600	1 x 3 1/16	TVA-1962	1.71
1500	6	13/16 x 2 11/16	TVA-1105	1.26	2	200	5/8 x 1 3/8	TVAN-1435.1	.66	10	600	1 x 3 1/16	TVA-1963	1.77
2000	6	13/16 x 2 3/16	TVA-1106	1.38	150	200	1 3/8 x 3 3/8	★TVA-1447	1.53	16	600	1 x 4 1/16	TVA-1965	2.07
100	12	9/16 x 1 3/8	TVA-1130	.72	100	200	1 x 2 3/16	TVA-1445	1.14	20	600	1 x 4 1/16	TVA-1966	2.13
250	12	5/8 x 1 11/16	TVA-1131	.87	200	200	1 3/8 x 3 3/8	★TVA-1480†	1.74	<b>DUAL UNITS (COMMON NEGATIVE—3 LEADS)</b>				
500	12	3/4 x 1 11/16	TVA-1132	1.02	4	250	7/16 x 1 3/8	TVA-1501	.60	10-10	25-25	7/8 x 1 7/16	★TVA-2210	.84
1000	12	13/16 x 2 3/16	TVA-1133	1.35	8	250	1/2 x 1 5/8	TVA-1503	.69	10-10	50-50	7/8 x 1 7/16	★TVA-2315	.84
100	15	5/8 x 1 3/8	TVA-1160	.75	10	250	9/16 x 1 11/16	TVA-1504	.72	8-8	150-150	7/8 x 1 7/16	★TVA-2415	.90
250	15	5/8 x 1 11/16	TVA-1161	.93	12	250	9/16 x 1 11/16	TVA-1505	.75	16-16	150-150	7/8 x 1 7/16	★TVA-2420	1.08
500	15	11/16 x 2 3/16	TVA-1162	1.05	16	250	5/8 x 1 11/16	TVA-1507	.78	20-12	150-150	7/8 x 1 7/16	★TVA-2425	.96
1000	15	7/8 x 2 3/16	TVA-1163	1.38	20	250	11/16 x 1 11/16	TVA-1508	.81	20-20	150-150	7/8 x 1 7/16	★TVA-2428	.99
2000	15	1 x 3 1/16	★TVA-1170	1.92	30	250	11/16 x 2 3/16	TVA-1510	.87	30-20	150-150	7/8 x 1 7/16	★TVA-2421	1.02
2	25	3/8 x 1 1/4	TVA-1201	.54	40	250	3/4 x 2 3/16	TVA-1511	.93	30-30	150-150	7/8 x 1 11/16	★TVA-2434	1.08
5	25	3/8 x 1 1/4	TVA-1203	.60	50	250	3/4 x 2 3/16	TVA-1512	1.02	40-20	150-150	7/8 x 1 11/16	★TVA-2438	1.05
10	25	3/8 x 1 1/4	TVA-1204	.60	60	250	13/16 x 2 3/16	TVA-1513	1.08	40-30	150-150	7/8 x 1 11/16	★TVA-2442	1.08
20	25	1/2 x 1 1/4	TVA-1204.5	.60	100	250	1 x 2 7/16	TVA-1522	1.47	40-40	150-150	7/8 x 1 11/16	★TVA-2445	1.11
25	25	3/8 x 1 1/4	TVA-1205	.60	140	300	1 3/8 x 3 3/8	★TVA-1575†	1.89	50-30	150-150	7/8 x 1 11/16	★TVA-2450	1.17
50	25	9/16 x 1 3/8	TVA-1206	.66	150	300	1 1/4 x 3 3/4	TVA-1576	1.95	50-50	150-150	7/8 x 2 1/16	★TVA-2453	1.26
100	25	5/16 x 1 11/16	TVA-1207	.81	200	300	1 1/4 x 4 1/2	TVA-1578	2.70	60-20	150-150	7/8 x 2 1/16	★TVA-2455	1.20
250	25	3/4 x 1 11/16	TVA-1208	1.02	4	350	1/2 x 1 5/8	TVA-1601	.63	80-30	150-150	7/8 x 2 1/16	★TVA-2460	1.32
500	25	7/8 x 2 3/16	TVA-1209	1.38	5	350	3/4 x 1 11/16	TVAN-1602	.75	80-40	150-150	7/8 x 2 1/16	★TVA-2461	1.32
1000	25	1 x 2 11/16	TVA-1211	1.98	8	350	5/8 x 1 11/16	TVA-1603	.72	80-50	150-150	7/8 x 2 1/16	★TVA-2462	1.41
20	30	5/8 x 1 1/4	TVAN-1220	.60	10	350	11/16 x 1 11/16	TVA-1604	.75	100-50	150-150	1 x 1 11/16	★TVA-2463	1.59
1	50	3/8 x 1 1/4	TVA-1300	.54	12	350	11/16 x 1 11/16	TVA-1605	.78	100-100	150-150	1 3/8 x 3 3/8	TVA-2464†	1.92
2	50	3/8 x 1 1/4	TVA-1301	.54	16	350	3/4 x 1 11/16	TVA-1607	.84	150-150	150-150	1 1/4 x 4	★TVA-2466	2.07
3	50	13/16 x 1/2	TVA-1302	.60	20	350	13/16 x 1 11/16	TVA-1608	.87	200-5	150-150	1 x 3 7/8	★TVA-2467†	1.59
4	50	5/8 x 1 1/4	★TVAN-1302.5	.60	30	350	13/16 x 2 3/16	TVA-1610	.99	200-100	150-150	1 3/8 x 5 1/8	★TVA-2470	2.16
5	50	3/8 x 1 1/4	TVA-1303	.60	40	350	7/8 x 2 7/16	TVA-1611	1.05	250-50	150-150	1 3/8 x 3 1/8	TVA-2473	1.86
10	50	3/8 x 1 1/4	TVA-1304	.60	60	350	1 x 2 7/16	TVA-1613	1.17	250-200	150-150	1 1/4 x 4	TVA-2475	2.52
15	50	3/4 x 1 1/4	TVA-1305	.60	100	350	1 x 3 7/16	TVA-1620	1.86	60-125	200-50	1 1/8 x 2 3/4	★TVA-2484	1.50
20	50	5/16 x 1 3/8	TVA-1305.5	.60	200	350	1 3/8 x 4 1/8	TVA-1624	3.12	200-5	200-200	1 x 3 11/16	★TVA-2498	2.16
25	50	7/16 x 1 3/8	TVA-1306	.63	10	400NP	1 1/16 x 2 1/16	★TVAN-1650	.90	20-20	250-250	7/8 x 1 11/16	★TVA-2515	1.11
50	50	9/16 x 1 11/16	TVA-1308	.72	20	400NP	1 x 2 3/16	TVAN-1652	.90	40-10	250-250	7/8 x 2 3/16	★TVA-2520	1.23
100	50	1 1/16 x 1 11/16	TVA-1310	.84	1	450	7/16 x 1 1/8	TVA-1700	.66	80-10	250-250	1 5/16 x 3 3/16	★TVA-2525	1.53
150	50	3/4 x 1 11/16	TVA-1311	.93	2	450	7/16 x 1 5/8	TVA-1701	.66	120-80	250-250	1 3/8 x 3 3/8	TVA-2535†	2.40
250	50	13/16 x 1 11/16	TVA-1312	1.05	4	450	9/16 x 1 11/16	TVA-1702	.69	200-100	300-50	1 1/4 x 4 1/2	★TVA-2565	2.58
500	50	1 x 1 11/16	TVA-1315	1.44	5	450	3/8 x 1 11/16	TVA-1703	.72	150-100	300-300	1 1/8 x 4 3/8	★TVA-2590	3.21
10	90	3/8 x 1 3/4	TVA-1320	.63	8	450	5/8 x 1 11/16	TVA-1704	.75	140-5	350-350	1 1/4 x 3 7/8	★TVA-2640†	2.49
1	150	3/8 x 1 1/4	TVA-1400	.57	10	450	1 1/16 x 1 11/16	TVA-1705	.78	80-100	450-50	1 3/8 x 4 3/8	TVA-2711†	2.22
4	150	3/8 x 1 1/4	TVA-1402	.60	12	450	3/4 x 1 11/16	TVA-1706	.81	8-8	450-450	7/8 x 1 11/16	★TVA-2720	1.02
5	150	3/8 x 1 1/4	TVA-1403	.60	16	450	3/4 x 2 3/16	TVA-1708	.84	10-10	450-450	7/8 x 1 11/16	★TVA-2722	1.11
8	150	3/8 x 1 3/4	TVA-1405	.63	20	450	3/4 x 2 3/16	TVA-1709	.93	16-8	450-450	7/8 x 2 3/16	★TVA-2725	1.20
10	150	3/8 x 1 3/4	TVA-1406	.63	30	450	7/8 x 2 3/16	TVA-1711	1.02	20-20	450-450	7/8 x 2 1/16	★TVA-2730	1.50
12	150	1/2 x 1 5/8	TVA-1407	.66	40	450	7/8 x 2 11/16	TVA-1712	1.08	30-30	450-450	1 x 3 3/16	★TVA-2735	1.80
16	150	9/16 x 1 11/16	TVA-1409	.69	40	450	7/8 x 2 11/16	TVA-1712	1.08	40-40	450-450	1 x 3 11/16	★TVA-2740	2.04
20	150	5/8 x 1 11/16	TVA-1410	.72	50	450	7/8 x 3 3/16	TVA-1713	1.26	50-30	450-450	1 x 3 11/16	★TVA-2743	2.04
25	150	5/8 x 1 11/16	TVA-1411	.75	60	450	1 x 3 11/16	TVA-1714	1.41	20-100	475-50	1 x 2 7/8	★TVA-2765	1.50
30	150	5/8 x 1 11/16	TVA-1412	.78	80	450	1 x 3 11/16	TVA-1716	1.68					
40	150	3/4 x 1 11/16	TVA-1413	.81	100	450	1 3/8 x 3 11/16	TVA-1718†	1.92					
50	150	13/16 x 1 11/16	TVA-1414	.84	10	475	3/4 x 1 11/16	TVA-1802	.81					
60	150	7/8 x 1 11/16	TVA-1415	.90	20	475	7/8 x 2 7/16	TVA-1804	.96					
80	150	7/8 x 1 11/16	TVA-1418	.96										

\*Add 1/16" to diameter and 1/8" to length to allow for outer insulating tube on all units except those marked (†) which are of Kraftboard construction.  
 †Mounting straps attached

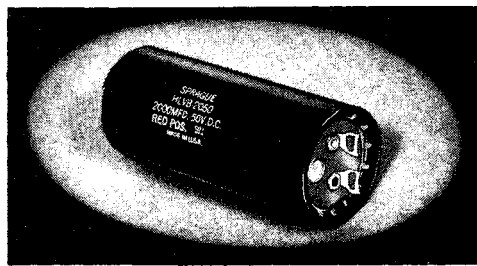
# SPRAGUE CAPACITORS

## ATOM ELECTROLYTICS, continued

μF	WVDC	Diam. x Length*	Cat. No.	Net
<b>DUAL UNITS (SEPERATE SECTIONS—4 LEADS)</b>				
20-20	150-150	1 x 2 <sup>3</sup> / <sub>8</sub>	★TU-220 †	\$1.23
40-20	150-150	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TU-420 †	1.32
16-16	250-250	1 x 2 <sup>3</sup> / <sub>8</sub>	TU-216 †	1.32
8-8	450-450	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	★TU-88 †	1.29
16-16	450-450	1 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	★TU-1616†	1.68
120-120	150-150	1 <sup>1</sup> / <sub>8</sub> x 5	TU-2120	2.07
<b>TRIPLE UNITS</b>				
40-40-250	150-150-10	1 <sup>3</sup> / <sub>8</sub> x 2 <sup>1</sup> / <sub>2</sub>	★TVA-3406	1.56
30-30-100	150-150-12	7 <sup>8</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3419	1.38
60-40-250	150-150-25	1 x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3421.5	1.86
20-20-20	150-150-25	7 <sup>8</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3415	1.47
40-20-20	150-150-25	7 <sup>8</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3422.9	1.53
40-30-20	150-150-25	7 <sup>8</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3423	1.56
40-40-20	150-150-25	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3425	1.59
40-40-100	150-150-25	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3427	1.68
50-30-20	150-150-25	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3430	1.59
50-30-100	150-150-25	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3432	1.68
50-30-200	150-150-25	1 x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3433	1.65
50-50-20	150-150-25	1 <sup>3</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3436	1.65
80-20-100	150-150-25	1 <sup>1</sup> / <sub>4</sub> x 2 <sup>3</sup> / <sub>8</sub>	TVA-3437†	1.68
80-40-20	150-150-25	1 x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3437.1	1.68
250-120-50	150-150-25	1 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	TVA-3437.6	2.61
20-20-20	150-150-150	7 <sup>8</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3440	1.50
30-25-20	150-150-150	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3442	1.35
30-30-20	150-150-150	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3443	1.38
30-30-30	150-150-150	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3444	1.56
40-20-20	150-150-150	7 <sup>8</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3446	1.35
40-30-20	150-150-150	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3448	1.56
40-40-20	150-150-150	7 <sup>8</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3450	1.41
40-40-40	150-150-150	1 x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3451	1.68
50-30-20	150-150-150	1 x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3453	1.62
80-40-20	150-150-150	1 x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3455	1.74
80-40-40	150-150-150	1 x 2 <sup>3</sup> / <sub>8</sub>	★TVA-3456	1.71

μF	WVDC	Diam. x Length*	Cat. No.	Net
80-60-20	150-150-150	1 x 3 <sup>1</sup> / <sub>2</sub>	★TVA-3457	\$1.80
250-200-10	150-150-150	1 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	★TVA-3460	2.76
80-10-100	300-250-50	1 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	★TVA-3556†	2.16
80-40-100	300-300-50	1 <sup>1</sup> / <sub>4</sub> x 3 <sup>3</sup> / <sub>8</sub>	TVA-3558	2.40
100-60-100	300-300-50	1 <sup>1</sup> / <sub>2</sub> x 3 <sup>3</sup> / <sub>8</sub>	TVA-3559	2.97
120-40-100	300-300-50	1 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub>	TVA-3560	3.06
120-40-10	300-300-250	1 <sup>1</sup> / <sub>4</sub> x 3 <sup>3</sup> / <sub>8</sub>	TVA-3563†	2.91
80-40-40	300-300-300	1 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>2</sub>	TVA-3569	2.79
140-5-200	350-350-200	1 <sup>1</sup> / <sub>2</sub> x 5 <sup>1</sup> / <sub>8</sub>	TVA-3620†	4.02
60-60-4	350-350-350	1 <sup>1</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>4</sub>	TVA-3630	2.31
10-80-60	400-250-150	1 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	TVA-3650	2.04
5-80-40	450-400-400	1 <sup>3</sup> / <sub>8</sub> x 4 <sup>1</sup> / <sub>8</sub>	★TVA-3712†	2.73
12-12-20	450-450-25	1 x 1 <sup>1</sup> / <sub>8</sub>	★TVA-3716	1.38
20-20-20	450-450-25	1 x 2 <sup>7</sup> / <sub>16</sub>	★TVA-3718	1.86
40-40-20	450-450-25	1 x 3 <sup>1</sup> / <sub>8</sub>	★TVA-3720	2.28
<b>QUADRUPLE UNITS</b>				
40-20-20-100	150-150-150-25	1 <sup>1</sup> / <sub>4</sub> x 2 <sup>3</sup> / <sub>8</sub>	TVA-4517	1.74
60-40-40-20	150-150-150-25	1 <sup>1</sup> / <sub>4</sub> x 3	TVA-4929	1.98
150-100-20-100	300-300-300-25	1 <sup>1</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>2</sub>	TVA-4580	3.72
80-40-10-40	300-300-300-250	1 <sup>1</sup> / <sub>4</sub> x 4	TVA-4582	3.09
120-40-40-10	300-300-300-250	1 <sup>3</sup> / <sub>8</sub> x 4 <sup>5</sup> / <sub>8</sub>	TVA-4584†	3.72
140-5-200-30	350-300-200-150	1 <sup>1</sup> / <sub>2</sub> x 4 <sup>7</sup> / <sub>8</sub>	TVA-4576†	3.63
140-5-200-30	350-300-200-200	1 <sup>1</sup> / <sub>2</sub> x 5 <sup>1</sup> / <sub>8</sub>	TVA-4607†	4.59
80-60-40-20	350-350-300-150	1 <sup>1</sup> / <sub>2</sub> x 4 <sup>5</sup> / <sub>8</sub>	TVA-4618†	3.54
80-10-40-100	400-400-300-50	1 <sup>3</sup> / <sub>8</sub> x 4 <sup>1</sup> / <sub>8</sub>	TVA-4659†	3.27
10-80-40-100	450-300-250-50	1 <sup>3</sup> / <sub>8</sub> x 4 <sup>1</sup> / <sub>8</sub>	TVA-4705†	2.88
20-120-40-100	450-300-250-50	1 <sup>3</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	TVA-4706†	3.69
10-80-40-40	450-300-250-250	1 <sup>3</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	TVA-4708†	2.97
10-20-20-10	450-300-300-300	1 <sup>3</sup> / <sub>8</sub> x 3 <sup>1</sup> / <sub>8</sub>	TVA-4712†	2.10
20-20-20-10	450-450-450-450	1 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	TVA-4742†	2.55
40-20-20-10	450-450-450-450	1 <sup>3</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	TVA-4748†	2.82
40-40-20-20	450-450-450-450	1 <sup>1</sup> / <sub>2</sub> x 4 <sup>1</sup> / <sub>4</sub>	TVA-4750†	3.27
<b>QUINTUPLE UNITS</b>				
40-20-20-20-50	300-300-300-300-50	1 <sup>3</sup> / <sub>8</sub> x 4	TVA-5100†	3.03

\*Add 1/16" to diameter and 1/8" to length to allow for outer insulating tube on all units except those marked (†) which are of cardboard construction.  
 ★ Mounting straps attached



## TYPE HLVB HIGH-MF ELECTROLYTICS

- Designed for low-voltage filter circuits.
- Large values of capacitance in relatively small physical size.
- Molded phenolic case for physical protection and moisture resistance. Assures long and dependable service life.
- Easily and securely mounted with hardware listed below.

μF	WVDC	Diam. x Length	Cat. No.	Net
500	6	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-56	\$1.83
1000	6	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-106	2.04
1500	6	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-156	2.16
2000	6	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-206	2.28
4000	10	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	HLVB-4010	2.85
6000	10	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-6010	4.50
10000	10	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-10010	4.95
500	12	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-512	1.92
1000	12	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-1012	2.25
1500	12	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-1512	2.37
2000	12	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-2012	2.49
500	15	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-515	1.95
1000	15	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-1015	2.28
1500	15	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-1515	2.40
2000	15	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-2015	2.82
4000	15	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-4015	4.26
6000	15	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-6015	4.83
6000	20	2 <sup>1</sup> / <sub>4</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-6020	5.19
500	25	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-525	2.28
1000	25	1 <sup>1</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub>	HLVB-1025	2.91
2000	25	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-2025	3.45
4000	25	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-4025	4.77
500	50	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	HLVB-550	2.55
1000	50	1 <sup>1</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>8</sub>	HLVB-1050	4.20
2000	50	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-2050	5.46
3000	50	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-3050	6.90

μF	WVDC	Diam. x Length	Cat. No.	Net
4000	50	2 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-4050	\$7.51
1000	150	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-10150	6.31
500	200	1 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>8</sub>	HLVB-5200	5.81

### HLVB MOUNTING HARDWARE HORIZONTAL "U" BRACKETS

Capacitor Size Dia. x Length	Cat. No.	Net
1 7/16 x 2 3/8	ABB-1	.1
1 7/8 x 3 3/8	ABB-2	.2
1 11/16 x 3 3/8		
1 13/16 x 4 3/8	ABB-3	.2
2 1/16 x 4 3/8		

### END CAPS

Cap. Diam.	Cat. No.	Net
1 7/16	ABC-2	.1
1 11/16	ABC-4	.1
2 1/16	ABC-6	.2

### VERTICAL MOUNTING CLAMPS

Cap. Diam.	Cat. No.	Net
1 11/16	CMC-28A	.1
2 1/16	CMC-32	.3

# SPRAGUE CAPACITORS

## PE OCTAL-BASE ELECTROLYTICS

- For Applications where Rapid Changing of Capacitors is Desired
- Will Fit Standard Octal-Base Tube Sockets



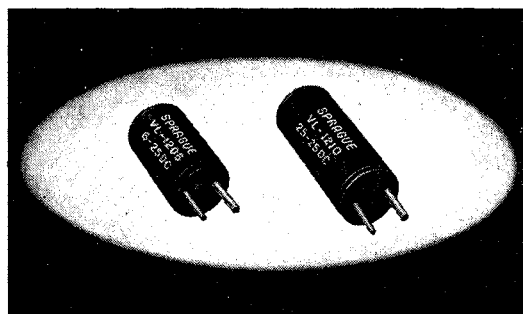
- Hermetically Sealed in Metal Cans for Long Life
- Will Stand Up Under High Temperatures, High Ripple Currents, High Surge Voltages

Terminal Code		
Sections	-	+
Single	1	5
Dual	1	3,5
Triple	1	3,5,7
Quadruple	Gnd Lug	1,3,5,7

μF	WVDC	Diam. x Lgth.	Cat. No.	Net
100	350	1 3/8 x 3	PE-1636	\$3.51
10	450	1 1/2 x 2 1/2	PE-1705	2.43
20	450	1 3/2 x 2 1/2	PE-1714	2.58
40	450	1 3/4 x 2 1/2	PE-1725	2.73
80	450	1 3/8 x 3 1/2	PE-1730	3.33
20-20	150-150	1 3/2 x 2 1/2	PE-2415	2.52
40-40	150-150	1 3/2 x 2 1/2	PE-2428	2.64
10-10	450-450	1 3/2 x 2 1/2	PE-2750	2.64
20-20	450-450	1 3/4 x 2 1/2	PE-2755	3.03
40-40	450-450	1 3/8 x 3 1/2	PE-2764	3.57
10-10-10	450-450-450	1 3/2 x 2 1/2	PE-3776	3.06
20-20-20	450-450-450	1 3/4 x 3	PE-3780	3.66
30-30-10-20	450-450-450-50	1 3/8 x 3 1/2	PE-4741	4.11

## VL VERTI-LYTIC<sup>®</sup> ELECTROLYTICS

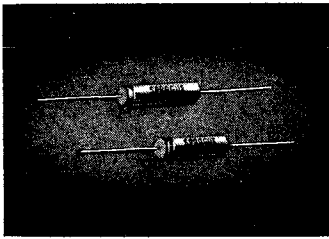
- For Replacement of Units of this Type Found on Printed Wiring Boards in Original Equipment
- Sections Housed in Sturdy, Pre-Molded Phenolic Cases
- Resin End Fill Will Not Contaminate Electrolyte — Protects Against Drying or Entrance of External Moisture
- Low Leakage Current and Long Shelf Life
- Polarity Easily Determined by Larger Diameter of Negative Lead
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3060



μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
<b>3 WVDC</b>					<b>12 WVDC</b>					<b>25 WVDC std.</b>				
1	3/8 x 3/4	VL-1031	89D100	.87	1	3/8 x 3/4	VL-1120	89D136	.87	3	3/8 x 3/4	VL-1202	89D169	.93
2	3/8 x 3/4	VL-1032	89D101	.87	2	3/8 x 3/4	VL-1121	89D137	.87	4	3/8 x 3/4	VL-1203	89D170	.99
3	3/8 x 3/4	VL-1033	89D102	.87	3	3/8 x 3/4	VL-1122	89D138	.87	5	3/8 x 3/4	VL-1204	89D171	.99
4	3/8 x 3/4	VL-1034	89D103	.87	4	3/8 x 3/4	VL-1123	89D139	.87	6	3/8 x 3/4	VL-1205	89D172	.99
5	3/8 x 3/4	VL-1035	89D104	.87	5	3/8 x 3/4	VL-1124	89D140	.90	8	3/8 x 3/4	VL-1206	89D173	.99
6	3/8 x 3/4	VL-1036	89D105	.87	6	3/8 x 3/4	VL-1125	89D141	.90	10	3/8 x 3/4	VL-1207	89D174	.99
8	3/8 x 3/4	VL-1037	89D106	.87	8	3/8 x 3/4	VL-1126	89D142	.90	15	3/8 x 3/4	VL-1208	89D175	.99
10	3/8 x 3/4	VL-1038	89D107	.87	10	3/8 x 3/4	VL-1127	89D143	.90	20	3/8 x 7/8	VL-1209	89D176	.99
15	3/8 x 3/4	VL-1039	89D108	.87	15	3/8 x 3/4	VL-1128	89D144	.93	25	3/8 x 7/8	VL-1210	89D177	.99
20	3/8 x 3/4	VL-1040	89D109	.87	20	3/8 x 3/4	VL-1129	89D145	.93	35	7/16 x 7/8	VL-1212	89D178	1.05
25	3/8 x 3/4	VL-1041	89D110	.87	25	3/8 x 3/4	VL-1130	89D146	.93	50	1/2 x 7/8	VL-1215	89D179	1.05
35	3/8 x 3/4	VL-1043	89D111	.90	35	3/8 x 3/4	VL-1132	89D147	.93	70	1/2 x 7/8	VL-1218	89D180	1.17
50	3/8 x 3/4	VL-1045	89D112	.93	50	3/8 x 7/8	VL-1134	89D148	.99	<b>50 WVDC</b>				
75	3/8 x 3/4	VL-1048	89D113	1.02	75	7/16 x 7/8	VL-1137	89D149	1.05	1	3/8 x 3/4	VL-1300	89D181	.90
100	3/8 x 3/4	VL-1051	89D114	1.05	100	1/2 x 7/8	VL-1140	89D150	1.14	2	3/8 x 3/4	VL-1301	89D182	.90
150	7/16 x 7/8	VL-1055	89D115	1.05	140	1/2 x 7/8	VL-1144	89D151	1.17	3	3/8 x 3/4	VL-1302	89D183	.93
200	7/16 x 7/8	VL-1059	89D116	1.08	<b>15 WVDC</b>					4	3/8 x 3/4	VL-1303	89D184	.99
250	1/2 x 7/8	VL-1063	89D117	1.17	1	3/8 x 3/4	VL-1160	89D152	.87	5	3/8 x 3/4	VL-1304	89D185	.99
290	1/2 x 7/8	VL-1067	89D118	1.20	2	3/8 x 3/4	VL-1161	89D153	.87	6	3/8 x 3/4	VL-1305	89D186	.99
<b>6 WVDC</b>					3	3/8 x 3/4	VL-1162	89D154	.87	8	3/8 x 3/4	VL-1306	89D187	.99
1	3/8 x 3/4	VL-1080	89D119	.87	4	3/8 x 3/4	VL-1163	89D155	.87	10	3/8 x 7/8	VL-1307	89D188	.99
2	3/8 x 3/4	VL-1081	89D120	.87	5	3/8 x 3/4	VL-1164	89D156	.90	15	7/16 x 7/8	VL-1308	89D189	.99
3	3/8 x 3/4	VL-1082	89D121	.87	6	3/8 x 3/4	VL-1165	89D157	.90	20	7/16 x 7/8	VL-1309	89D190	.99
4	3/8 x 3/4	VL-1083	89D122	.87	8	3/8 x 3/4	VL-1166	89D158	.90	25	1/2 x 7/8	VL-1310	89D191	.99
5	3/8 x 3/4	VL-1084	89D123	.87	10	3/8 x 3/4	VL-1167	89D159	.93	<b>6-6 WVDC</b>				
6	3/8 x 3/4	VL-1085	89D124	.87	15	3/8 x 3/4	VL-1168	89D160	.93	100-30	7/16 x 1 1/16	VL-2150	.....	1.26
8	3/8 x 3/4	VL-1086	89D125	.87	20	3/8 x 3/4	VL-1169	89D161	.93	<b>10-10 WVDC</b>				
10	3/8 x 3/4	VL-1087	89D126	.87	25	3/8 x 3/4	VL-1170	89D162	.93	50-50	1/2 x 7/8	VL-2250	.....	1.17
15	3/8 x 3/4	VL-1088	89D127	.87	35	3/8 x 7/8	VL-1172	89D163	.93	80-80	1/2 x 7/8	VL-2350	.....	1.32
20	3/8 x 3/4	VL-1089	89D128	.87	50	7/16 x 7/8	VL-1174	89D164	.99	<b>8-8 WVDC</b>				
25	3/8 x 3/4	VL-1090	89D129	.87	75	1/2 x 7/8	VL-1177	89D165	1.08	100-100-60	1/2 x 1 1/16	VL-3320	.....	2.07
35	3/8 x 3/4	VL-1092	89D130	.90	90	1/2 x 7/8	VL-1180	89D166	1.17	<b>10-10-3 WVDC</b>				
50	3/8 x 3/4	VL-1094	89D131	.93	<b>25 WVDC</b>					50-50-15	1/2 x 7/8	VL-3350	.....	1.80
75	3/8 x 7/8	VL-1097	89D132	1.02	1	3/8 x 3/4	VL-1200	89D167	.90					
100	7/16 x 7/8	VL-1100	89D133	1.05	2	3/8 x 3/4	VL-1201	89D168	.90					
150	1/2 x 7/8	VL-1104	89D134	1.14										
200	1/2 x 7/8	VL-1108	89D135	1.17										

# SPRAGUE CAPACITORS

## TE LITTL-LYTIC® ELECTROLYTICS



- Ultra-Small — Excellent, Dependable Replacement Units for Transistorized Equipment Presently on the Market
- Reliability at Reasonable Prices
- All-Welded Construction — No Pressure Joints to Cause "Open" or Intermittent Circuits
- No Corrosion as with Competitive Units
- Extremely Low Leakage Current, Long Shelf Life
- Withstand Temperatures Up to 85°C (185°F)
- Furnished with Clear Plastic Outer Insulating Sleeves
- Packed 5 to a Handy Rigid Kleer Pak® Plastic Box

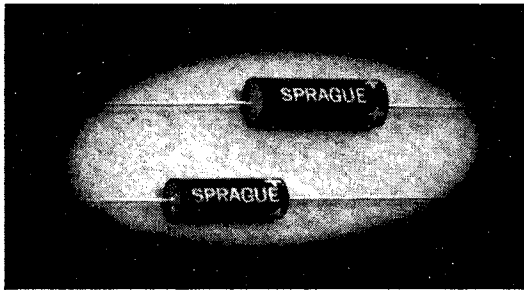
For Complete Technical Data, See Latest Sprague Engineering Bulletin 3110

μF	D. x L.*	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.*	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.*	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
<b>1 WVDC</b>					<b>10 WVDC</b>					<b>25 WVDC</b>				
5	3/16 x 1/2	TE-1010		\$.75	10	1/4 x 1/2	TE-1114		\$.81	1	3/16 x 1/2	TE-1200	30D105G025AA0	\$.75
<b>3 WVDC</b>					<b>12 WVDC</b>					<b>50 WVDC</b>				
1	3/16 x 1/2	TE-1050	30D105G003AA0	.75	1	3/16 x 1/2	TE-1120	30D105G012AA0	.75	1	3/16 x 1/2	TE-1300	30D105G050AA0	.78
2	3/16 x 1/2	TE-1051	30D205G003AA0	.75	2	3/16 x 1/2	TE-1121	30D205G012AA0	.75	2	1/4 x 1/2	TE-1301	30D205G050BA0	.81
3	3/16 x 1/2	TE-1052	30D305G003AA0	.75	3	3/16 x 1/2	TE-1122	30D305G012AA0	.75	3	3/4 x 1/2	TE-1302	30D305G050BA0	.81
4	3/16 x 1/2	TE-1052.1	30D405G003AA0	.75	4	3/16 x 1/2	TE-1123	30D405G012AA0	.75	4	1/4 x 1/16	TE-1302.1	30D405G050BB0	.81
5	3/16 x 1/2	TE-1052.2	30D505G003AA0	.75	5	3/16 x 1/2	TE-1127	30D505G012AA0	.81	5	1/4 x 1/16	TE-1303	30D505G050BB0	.87
6	3/16 x 1/2	TE-1052.3	30D605G003AA0	.75	6	1/4 x 1/2	TE-1127.1	30D605G012BA0	.81	6	3/16 x 1/16	TE-1303.1	30D605G050CB0	.87
8	3/16 x 1/2	TE-1052.5	30D805G003AA0	.75	8	1/4 x 1/2	TE-1127.3	30D805G012BA0	.81	8	3/16 x 1/16	TE-1303.3	30D805G050CB0	.90
10	3/16 x 1/2	TE-1053	30D106G003AA0	.75	10	1/4 x 1/2	TE-1128	30D106G012BA0	.81	10	3/16 x 1/16	TE-1304	30D106G050CB0	.90
15	1/4 x 1/2	TE-1053.5	30D156G003BA0	.75	15	1/4 x 1/16	TE-1129	30D156G012BB0	.84	15	3/8 x 1/16	TE-1304.2	30D156G050DB0	.90
20	1/4 x 1/2	TE-1054	30D206G003BA0	.75	20	1/4 x 1/16	TE-1130	30D206G012BB0	.84	20	3/8 x 1/16	TE-1305	30D206G050DC0	.90
25	1/4 x 1/2	TE-1055	30D256G003BA0	.75	25	1/4 x 1/16	TE-1131	30D256G012BB0	.84	25	3/8 x 1/4	TE-1306	30D356G050DF0	1.02
35	1/4 x 1/16	TE-1056	30D356G003BB0	.75	35	3/16 x 1/16	TE-1132	30D356G012CB0	.87	35	3/8 x 1/2	TE-1307	30D506G050DH0	1.11
40	1/4 x 1/16	TE-1057		.75	50	3/8 x 1/16	TE-1133	30D506G012DB0	.93	50	3/8 x 1/2			
50	1/4 x 1/16	TE-1058	30D506G003BB0	.75	75	3/8 x 1/16	TE-1134	30D756G012DC0	.99	75	3/8 x 1/4	TE-1136	30D157G012DF0	1.14
75	3/16 x 1/16	TE-1059	30D756G003CB0	.84	100	3/8 x 1/16	TE-1135	30D107G012DC0	1.05	100	3/8 x 1/4	TE-1137	30D207G012DF0	1.23
100	3/8 x 1/16	TE-1059.5	30D107G003CB0	.84	150	3/8 x 1/4	TE-1136	30D157G012DF0	1.14	200	3/8 x 1/2	TE-1138	30D257G012DH0	1.32
110	3/8 x 1/16	TE-1060		.84	200	3/8 x 1/4	TE-1137	30D207G012DF0	1.23	250	3/8 x 1/2			
150	3/8 x 1/16	TE-1061	30D157G003DB0	.87	<b>15 WVDC</b>					<b>100 WVDC</b>				
200	3/8 x 1/16	TE-1064	30D207G003DC0	.90	1	3/16 x 1/2	TE-1148	30D105G015AA0	.75	1	3/8 x 1/16	TE-1400	30D105G100CC0	.81
250	3/8 x 1/16	TE-1065	30D257G003DD0	.96	2	3/16 x 1/2	TE-1149	30D205G015AA0	.75	2	3/8 x 1/16	TE-1401	30D205G100CC0	.84
300	3/8 x 1/16	TE-1066	30D307G003DD0	.99	3	3/16 x 1/2	TE-1150	30D305G015AA0	.75	3	3/8 x 1/16	TE-1403	30D305G100CC0	.84
400	3/8 x 1/16	TE-1067	30D407G003DF0	1.02	4	3/16 x 1/2	TE-1151	30D405G015AA0	.75	4	3/8 x 1/16	TE-1403	30D405G100DD0	.84
500	3/8 x 1/16	TE-1068	30D507G003DH0	1.05	5	1/4 x 1/2	TE-1152	30D505G015BA0	.84	5	3/8 x 1/16	TE-1404	30D505G100DD0	.90
<b>6 WVDC</b>					6	1/4 x 1/2	TE-1153	30D605G015BA0	.84	6	3/8 x 1/16	TE-1405	30D605G100DD0	.90
1	3/16 x 1/2	TE-1080	30D105G006AA0	.75	8	1/4 x 1/2	TE-1154	30D805G015BA0	.84	8	3/8 x 1/16	TE-1406	30D805G100DD0	.93
2	3/16 x 1/2	TE-1081	30D205G006AA0	.75	10	1/4 x 1/2	TE-1155	30D106G015BA0	.84	10	3/8 x 1/16	TE-1407	30D106G100DD0	.93
3	3/16 x 1/2	TE-1082	30D305G006AA0	.75	15	1/4 x 1/16	TE-1156	30D156G015BB0	.87	15	3/8 x 1/4	TE-1408	30D156G100DF0	.93
4	3/16 x 1/2	TE-1083	30D405G006AA0	.75	20	1/4 x 1/16	TE-1157	30D206G015BB0	.87	20	3/8 x 1/2	TE-1409	30D206G100DH0	.96
5	3/16 x 1/2	TE-1084	30D505G006AA0	.75	25	3/16 x 1/16	TE-1157.1	30D256G015CB0	.87	<b>150 WVDC</b>				
6	3/16 x 1/2	TE-1085	30D605G006AA0	.75	30	3/16 x 1/16	TE-1158		.90	1	3/8 x 1/16	TE-1500	30D105G150CC0	.84
8	3/16 x 1/2	TE-1086	30D805G006AA0	.81	35	3/8 x 1/16	TE-1159	30D356G015DB0	.93	2	3/8 x 1/16	TE-1501	30D205G150CC0	.87
10	1/4 x 1/2	TE-1087	30D106G006BA0	.81	50	3/8 x 1/16	TE-1160	30D506G015DB0	.96	3	3/8 x 1/16	TE-1502	30D305G150CC0	.87
15	1/4 x 1/2	TE-1089	30D156G006BA0	.81	75	3/8 x 1/16	TE-1161	30D706G015DC0	1.02	4	3/8 x 1/16	TE-1503	30D405G150DD0	.87
20	1/4 x 1/16	TE-1090	30D206G006BB0	.81	100	3/8 x 1/16	TE-1162	30D107G015DD0	1.08	5	3/8 x 1/16	TE-1504	30D505G150DD0	.93
25	1/4 x 1/16	TE-1091	30D256G006BB0	.81	150	3/8 x 1/4	TE-1163	30D157G015DF0	1.17	6	3/8 x 1/4	TE-1505	30D605G150DF0	.93
30	1/4 x 1/16	TE-1092		.84	200	3/8 x 1/2	TE-1164	30D207G015DH0	1.26	8	3/8 x 1/4	TE-1506	30D805G150DF0	.96
35	1/4 x 1/16	TE-1093	30D356G006BB0	.84						10	3/8 x 1/4	TE-1507	30D106G150DF0	.96
40	1/4 x 1/16	TE-1095		.84						12	3/8 x 1/2	TE-1508	30D126G150DH0	.96
50	3/16 x 1/16	TE-1100	30D506G006CB0	.84										
60	3/16 x 1/16	TE-1101		.84										
75	3/8 x 1/16	TE-1101.5	30D756G006DB0	.87										
100	3/8 x 1/16	TE-1102	30D107G006DB0	.90										
150	3/8 x 1/16	TE-1103	30D157G006DD0	.93										
200	3/8 x 1/4	TE-1104	30D207G006DF0	.96										
250	3/8 x 1/4	TE-1105	30D257G006DF0	1.02										
300	3/8 x 1/2	TE-1106	30D307G006DH0	1.08										

\*Add 1/16" to dimensions to allow for insulating sleeve.

# SPRAGUE CAPACITORS

## TL TRANSI-LYTIC<sup>®</sup> ELECTROLYTICS



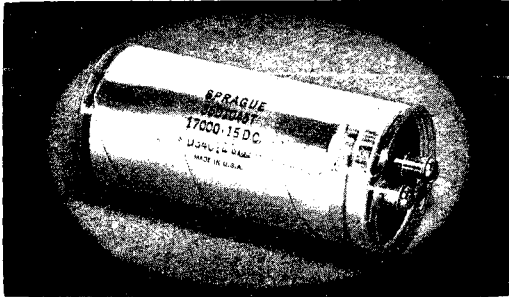
- Miniature Low-Cost Capacitors For Use in Transistorized Pocket and "Personal Portable" Radios
- Special Low-Leakage Current Construction to Meet The Requirements of Transistor Circuitry
- Sturdy Plastic Case With Thermo-setting Resin End-Seals
- Excellent Resistance to High Humidity Conditions
- Polarity Stamped on Each Unit

$\mu$ F	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net.	$\mu$ F	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net.	$\mu$ F	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net.
<b>3 WVDC</b>					<b>6 WVDC (cont.)</b>					<b>16 WVDC (cont.)</b>				
1	$\frac{3}{16} \times \frac{3}{64}$	TL-1050	31D1	\$.42	75	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1101.5	31D32	\$.45	35	$\frac{3}{16} \times \frac{5}{64}$	TL-1159	31D62	\$.45
2	$\frac{3}{16} \times \frac{3}{64}$	TL-1051	31D2	.42	100	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1102	31D33	.45	50	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1160	31D63	.45
3	$\frac{3}{16} \times \frac{3}{64}$	TL-1052	31D3	.42	150	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1103	31D34	.60	75	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1161	31D64	.48
4	$\frac{3}{16} \times \frac{3}{64}$	TL-1052.1	31D4	.42	175	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1103.5	31D35	.60	100	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1162	31D65	.48
5	$\frac{3}{16} \times \frac{3}{64}$	TL-1052.2	31D5	.42	<b>12 WVDC</b>					<b>20 WVDC</b>				
6	$\frac{3}{16} \times \frac{3}{64}$	TL-1052.3	31D6	.42	1	$\frac{3}{16} \times \frac{3}{64}$	TL-1120	31D36	\$.42	1	$\frac{3}{16} \times \frac{3}{64}$	TL-1170	31D66	\$.42
8	$\frac{3}{16} \times \frac{3}{64}$	TL-1052.5	31D7	.42	2	$\frac{3}{16} \times \frac{3}{64}$	TL-1121	31D37	.42	2	$\frac{3}{16} \times \frac{3}{64}$	TL-1171	31D67	.42
10	$\frac{3}{16} \times \frac{3}{64}$	TL-1053	31D8	.42	3	$\frac{3}{16} \times \frac{3}{64}$	TL-1122	31D38	.42	3	$\frac{3}{16} \times \frac{3}{64}$	TL-1172	31D68	.42
15	$\frac{7}{32} \times \frac{4}{64}$	TL-1053.5	31D9	.42	4	$\frac{3}{16} \times \frac{3}{64}$	TL-1123	31D39	.42	4	$\frac{7}{32} \times \frac{4}{64}$	TL-1173	31D69	.42
20	$\frac{7}{32} \times \frac{4}{64}$	TL-1054	31D10	.42	5	$\frac{3}{16} \times \frac{3}{64}$	TL-1127	31D40	.42	5	$\frac{7}{32} \times \frac{4}{64}$	TL-1174	31D70	.45
25	$\frac{1}{4} \times \frac{5}{64}$	TL-1055	31D11	.42	6	$\frac{7}{32} \times \frac{4}{64}$	TL-1127.1	31D41	.42	6	$\frac{7}{32} \times \frac{4}{64}$	TL-1175	31D71	.45
35	$\frac{1}{4} \times \frac{5}{64}$	TL-1056	31D12	.42	8	$\frac{7}{32} \times \frac{4}{64}$	TL-1127.3	31D42	.42	8	$\frac{1}{4} \times \frac{5}{64}$	TL-1176	31D72	.45
50	$\frac{1}{4} \times \frac{5}{64}$	TL-1058	31D13	.42	10	$\frac{7}{32} \times \frac{4}{64}$	TL-1128	31D43	.42	10	$\frac{1}{4} \times \frac{5}{64}$	TL-1177	31D73	.45
75	$\frac{3}{16} \times \frac{5}{64}$	TL-1059	31D14	.45	15	$\frac{1}{4} \times \frac{5}{64}$	TL-1129	31D44	.42	15	$\frac{1}{4} \times \frac{5}{64}$	TL-1178	31D74	.54
100	$\frac{5}{16} \times \frac{5}{64}$	TL-1059.5	31D15	.45	20	$\frac{1}{4} \times \frac{5}{64}$	TL-1130	31D45	.42	20	$\frac{5}{16} \times \frac{5}{64}$	TL-1179	31D75	.54
150	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1061	31D16	.54	25	$\frac{1}{4} \times \frac{5}{64}$	TL-1131	31D46	.42	25	$\frac{5}{16} \times \frac{5}{64}$	TL-1180	31D76	.54
200	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1064	31D17	.54	35	$\frac{5}{16} \times \frac{5}{64}$	TL-1132	31D47	.42	35	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1181	31D77	.54
250	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1065	31D18	.66	50	$\frac{5}{16} \times \frac{5}{64}$	TL-1133	31D48	.42	50	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1182	31D78	.54
<b>6 WVDC</b>					75	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1134	31D49	.45	75	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1183	31D79	.54
1	$\frac{3}{16} \times \frac{3}{64}$	TL-1080	31D19	\$.42	100	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1135	31D50	.45	<b>25 WVDC</b>				
2	$\frac{3}{16} \times \frac{3}{64}$	TL-1081	31D20	.42	<b>16 WVDC</b>					1	$\frac{3}{16} \times \frac{3}{64}$	TL-1200	31D80	\$.42
3	$\frac{3}{16} \times \frac{3}{64}$	TL-1082	31D21	.42	1	$\frac{3}{16} \times \frac{3}{64}$	TL-1148	31D51	\$.42	2	$\frac{3}{16} \times \frac{3}{64}$	TL-1201	31D81	.42
4	$\frac{3}{16} \times \frac{3}{64}$	TL-1083	31D22	.42	2	$\frac{3}{16} \times \frac{3}{64}$	TL-1149	31D52	.42	3	$\frac{7}{32} \times \frac{4}{64}$	TL-1201.1	31D82	.42
5	$\frac{3}{16} \times \frac{3}{64}$	TL-1084	31D23	.42	3	$\frac{3}{16} \times \frac{3}{64}$	TL-1150	31D53	.42	4	$\frac{7}{32} \times \frac{4}{64}$	TL-1201.2	31D83	.42
6	$\frac{3}{16} \times \frac{3}{64}$	TL-1085	31D24	.42	4	$\frac{3}{16} \times \frac{3}{64}$	TL-1151	31D54	.42	5	$\frac{1}{4} \times \frac{5}{64}$	TL-1202	31D84	.45
8	$\frac{3}{16} \times \frac{3}{64}$	TL-1086	31D25	.42	5	$\frac{7}{32} \times \frac{4}{64}$	TL-1152	31D55	.42	6	$\frac{1}{4} \times \frac{5}{64}$	TL-1203	31D85	.45
10	$\frac{7}{32} \times \frac{4}{64}$	TL-1087	31D26	.42	6	$\frac{7}{32} \times \frac{4}{64}$	TL-1153	31D56	.42	8	$\frac{1}{4} \times \frac{5}{64}$	TL-1203.5	31D86	.45
15	$\frac{7}{32} \times \frac{4}{64}$	TL-1089	31D27	.42	8	$\frac{7}{32} \times \frac{4}{64}$	TL-1154	31D57	.42	10	$\frac{1}{4} \times \frac{5}{64}$	TL-1204	31D87	.45
20	$\frac{1}{4} \times \frac{5}{64}$	TL-1090	31D28	.42	10	$\frac{1}{4} \times \frac{5}{64}$	TL-1155	31D58	.45	15	$\frac{5}{16} \times \frac{5}{64}$	TL-1205	31D88	.54
25	$\frac{1}{4} \times \frac{5}{64}$	TL-1091	31D29	.42	15	$\frac{1}{4} \times \frac{5}{64}$	TL-1156	31D59	.45	20	$\frac{5}{16} \times \frac{5}{64}$	TL-1206	31D89	.54
35	$\frac{1}{4} \times \frac{5}{64}$	TL-1093	31D30	.42	20	$\frac{1}{4} \times \frac{5}{64}$	TL-1157	31D60	.45	25	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1207	31D90	.54
50	$\frac{5}{16} \times \frac{5}{64}$	TL-1100	31D31	.42	25	$\frac{1}{4} \times \frac{5}{64}$	TL-1157.1	31D61	.45	35	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1208	31D91	.54
										50	$\frac{3}{8} \times 1\frac{1}{64}$	TL-1209	31D92	.54



# SPRAGUE CAPACITORS

## TYPE 36D POWERLYTIC<sup>®</sup> ALUMINUM ELECTROLYTICS



- For Maximum Capacitance in a Given Case Size.
  - Especially Suitable for Transistorized Circuitry where High Capacitance is Required.
  - Maximum Space Economy at Operating Temperatures Up To 65 C.
  - Low ESR and Leakage Currents. • Extremely Long Shelf Life.
  - Uses Most Reliable Seal Developed by Sprague for Aluminum Electrolytic Capacitors. Pressure-type Safety Vents Employing Silicone Rubber Are Used On All Cases.
  - High Screw Insert Terminal, 9/32" high. • Plastic Outer Tube.
- Superior Electrical and Life Characteristics Are Insured By Careful Raw Material Inspection, High Quality Control Standards and Close Manufacturing Supervision. For Complete Technical Data, Consult Sprague Engineering Bulletin 3431.

$\mu$ F	Size Code	WVDC	Catalog No.		$\mu$ F	Size Code	WVDC	Catalog No.	
3600	A1	10	36D1026T	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	2000	C2	75	36D1122T	
7300	A2	10	36D1027T		6200	D4	75	36D1127T	
11000	A3	10	36D1029T		1000	A3	100	36D1133T	
27000	D2	10	36D1033T		4000	D3	100	36D1139T	
2600	A1	15	36D1039T		900	A3	150	36D1146T	
5300	A2	15	36D1040T		1300	C2	150	36D1147T	
8000	A3	15	36D1042T		2000	C3	150	36D1148T	
17000	C3	15	36D1045T		3400	D3	150	36D1150T	
20000	D2	15	36D1046T		5300	E3	150	36D1151T	
30000	D3	15	36D1048T		400	A2	200	36D1154T	
35000	D4	15	36D1049T		600	A3	200	36D1156T	
1500	A1	25	36D1065T		1600	D2	200	36D1159T	
3100	A2	25	36D1066T		530	A3	250	36D1166T	
4700	A3	25	36D1068T		1100	C3	250	36D1168T	
7000	C2	25	36D1070T		240	A2	300	36D1174T	
10000	C3	25	36D1071T		190	A2	350	36D1184T	
17000	D3	25	36D1074T		1000	D3	350	36D1190T	
27000	E3	25	36D1076T		330	C3	450	36D1208T	
32000	E4	25	36D1077T		860	E3	450	36D1211T	
23000	E3	30	36D1089T						
27000	E4	30	36D1090T						
2000	A3	40	36D1094T						
4000	C2	40	36D1096T						
6000	C3	40	36D1097T						
10000	D3	40	36D1100T						
12000	D4	40	36D1101T						
750	A1	50	36D1104T						
1500	A2	50	36D1105T						
2200	A3	50	36D1107T						
3300	C2	50	36D1109T						
5000	C3	50	36D1110T						
8600	D3	50	36D1113T						

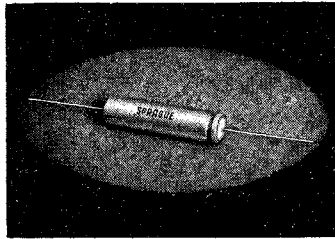
  

Size Code	Diameter	Length
A1	1 $\frac{1}{16}$	2 $\frac{1}{2}$
A2	1 $\frac{3}{16}$	3 $\frac{1}{2}$
A3	1 $\frac{7}{16}$	4 $\frac{1}{2}$
C2	2 $\frac{1}{16}$	3 $\frac{1}{2}$
C3	2 $\frac{3}{16}$	4 $\frac{1}{2}$
D2	2 $\frac{5}{16}$	3 $\frac{1}{2}$
D3	2 $\frac{7}{16}$	4 $\frac{1}{2}$
D4	2 $\frac{9}{16}$	5
E3	3 $\frac{1}{16}$	4 $\frac{1}{2}$
E4	3 $\frac{3}{16}$	5

CALL YOUR SPRAGUE DISTRIBUTOR FOR QUANTITY PRICES

# SPRAGUE CAPACITORS

## TYPE 40D Miniature Extended-Life 85°C ELECTROLYTICS



- THE MOST RELIABLE TUBULAR ALUMINUM ELECTROLYTIC MANUFACTURED
- Premium quality. Service life of 10 years in actual circuit applications under typical operating conditions
- Special design and processing techniques result in ultra low leakage currents and high stability
- All critical terminations are welded to prevent open circuits even after extended service in the millivolt range
- Operating Temperature: -40°C to +85°C
- Units listed here have thermoplastic insulating sleeves; for rigid phenolic sleeve, change end of catalog number from 4 to 3; for bare metal tubes, change end of catalog number to 0.
- Capacitance tolerance: -10, +50%
- Write for Engineering Bulletin No. 3205 to compare this outstanding capacitor with any other unit on the market.
- Prices available upon request.

μF	D. x L.	Catalog Number
<b>3 WORKING VOLTS D-C</b>		
1	3/16 x 3/4	40D105F003BB4
2	3/16 x 3/4	40D205F003BB4
3	3/16 x 3/4	40D305F003BB4
4	3/16 x 3/4	40D405F003BB4
5	3/16 x 3/4	40D505F003BB4
6	3/16 x 3/4	40D605F003BB4
8	3/16 x 3/4	40D805F003BB4
10	3/16 x 3/4	40D106F003BB4
15	3/16 x 3/4	40D156F003BB4
20	3/16 x 3/4	40D206F003BB4
25	3/16 x 3/4	40D256F003BB4
35	3/16 x 3/4	40D356F003BB4
50	3/16 x 3/4	40D506F003BB4
75	3/16 x 3/4	40D756F003BB4
100	3/16 x 7/8	40D107F003DC4
150	3/16 x 1	40D157F003DD4
200	3/16 x 1 1/16	40D207F003DF4
225	3/16 x 1 1/16	40D227F003DF4
250	3/16 x 1 1/16	40D257F003DH4
300	3/16 x 1 1/16	40D307F003DH4
<b>6 WORKING VOLTS D-C</b>		
1	3/16 x 3/4	40D105F006BB4
2	3/16 x 3/4	40D205F006BB4
3	3/16 x 3/4	40D305F006BB4
4	3/16 x 3/4	40D405F006BB4
5	3/16 x 3/4	40D505F006BB4
6	3/16 x 3/4	40D605F006BB4
8	3/16 x 3/4	40D805F006BB4
10	3/16 x 3/4	40D106F006BB4
15	3/16 x 3/4	40D156F006BB4
20	3/16 x 3/4	40D206F006CB4

μF	D. x L.	Catalog Number
25	3/8 x 3/4	40D256F006CB4
35	3/8 x 3/4	40D356F006DB4
50	3/8 x 3/4	40D506F006DB4
75	3/8 x 3/4	40D756F006DC4
100	3/8 x 1	40D107F006DD4
150	3/8 x 1 1/16	40D157F006DF4
175	3/8 x 1 1/16	40D177F006DF4
200	3/8 x 1 1/16	40D207F006DH4
250	3/8 x 1 1/16	40D257F006DH4
<b>12 WORKING VOLTS D-C</b>		
1	3/16 x 3/4	40D105F012BB4
2	3/16 x 3/4	40D205F012BB4
3	3/16 x 3/4	40D305F012BB4
4	3/16 x 3/4	40D405F012BB4
5	3/16 x 3/4	40D505F012BB4
6	3/16 x 3/4	40D605F012BB4
8	3/16 x 3/4	40D805F012BB4
10	3/16 x 3/4	40D106F012BB4
15	3/16 x 3/4	40D156F012BB4
20	3/8 x 3/4	40D206F012CB4
25	3/8 x 3/4	40D256F012CB4
35	3/8 x 3/4	40D356F012DB4
50	3/8 x 3/4	40D506F012DC4
75	3/8 x 1	40D756F012DD4
100	3/8 x 1	40D107F012DF4
150	3/8 x 1 1/16	40D157F012DF4
200	3/8 x 1 1/16	40D207F012DH4
<b>15 WORKING VOLTS D-C</b>		
1	3/16 x 3/4	40D105F015BB4
2	3/16 x 3/4	40D205F015BB4
3	3/16 x 3/4	40D305F015BB4

μF	D. x L.	Catalog Number
4	3/8 x 3/4	40D405F015BB4
5	3/8 x 3/4	40D505F015BB4
6	3/8 x 3/4	40D605F015BB4
8	3/8 x 3/4	40D805F015BB4
10	3/8 x 3/4	40D106F015BB4
15	3/8 x 3/4	40D156F015CB4
20	3/8 x 3/4	40D206F015DB4
25	3/8 x 3/4	40D256F015DB4
35	3/8 x 7/8	40D356F015DC4
50	3/8 x 7/8	40D506F015DC4
75	3/8 x 1	40D756F015DD4
100	3/8 x 1 1/16	40D107F015DF4
150	3/8 x 1 1/16	40D157F015DH4
<b>25 WORKING VOLTS D-C</b>		
1	3/16 x 3/4	40D105F025BB4
2	3/16 x 3/4	40D205F025BB4
3	3/16 x 3/4	40D305F025BB4
4	3/16 x 3/4	40D405F025BB4
5	3/16 x 3/4	40D505F025BB4
6	3/16 x 3/4	40D605F025CB4
8	3/8 x 3/4	40D805F025CB4
10	3/8 x 3/4	40D106F025DB4
15	3/8 x 3/4	40D156F025DB4
20	3/8 x 7/8	40D206F025DC4
25	3/8 x 1	40D256F025DD4
35	3/8 x 1	40D356F025DD4
50	3/8 x 1 1/16	40D506F025DF4
75	3/8 x 1 1/16	40D756F025DH4
<b>50 WORKING VOLTS D-C</b>		
1	3/16 x 3/4	40D105F050BB4
2	3/16 x 3/4	40D205F050CB4

μF	D. x L.	Catalog Number
3	3/8 x 3/4	40D305F050CB4
4	3/8 x 3/4	40D405F050DB4
5	3/8 x 3/4	40D505F050DB4
6	3/8 x 3/4	40D605F050DB4
8	3/8 x 7/8	40D805F050DC4
10	3/8 x 7/8	40D106F050DC4
15	3/8 x 1	40D156F050DD4
20	3/8 x 1 1/16	40D206F050DF4
25	3/8 x 1 1/16	40D256F050DH4
30	3/8 x 1 1/16	40D306F050DH4
<b>100 WORKING VOLTS D-C</b>		
1	3/16 x 1	40D105F100DD4
2	3/16 x 1	40D205F100DD4
3	3/16 x 1	40D305F100DD4
4	3/16 x 1	40D405F100DD4
5	3/16 x 1	40D505F100DD4
6	3/16 x 1	40D605F100DD4
8	3/16 x 1	40D805F100DD4
10	3/16 x 1 1/16	40D106F100DF4
15	3/16 x 1 1/16	40D156F100DH4
18	3/16 x 1 1/16	40D186F100DH4
<b>150 WORKING VOLTS D-C</b>		
1	3/16 x 1	40D105F150DD4
2	3/16 x 1	40D205F150DD4
3	3/16 x 1	40D305F150DD4
4	3/16 x 1	40D405F150DD4
5	3/16 x 1	40D505F150DD4
6	3/16 x 1 1/16	40D605F150DF4
8	3/16 x 1 1/16	40D805F150DF4
10	3/16 x 1 1/16	40D106F150DH4

## CAPACITOR HARDWARE

- Sprague Mounting Clamps and Straps Provide Quick, Dependable Means for Securing a Wide Variety of Capacitors and Resistors to a Mounting Surface
- All Clamps and Straps are Made from Plated Steel

### VERTICAL MOUNTING CLAMPS FOR CYLINDRICAL CAPACITORS

Cat. No.	A Dia.	B Mounting	Figure No.	Net Price
CMC-16	1	1 1/16	1	\$.25
CMC-20	1 1/4	1 1/8	1	.25
CMC-22	1 3/8	1 3/8	1	.25
CMC-24	1 1/2	1 1/8	1	.30
CMC-28	1 3/4	2 3/8	1	.30
CMC-28A	1 3/4	2 3/8	2	.30

### WRAP AROUND CLAMPS FOR RECTANGULAR CAPACITORS

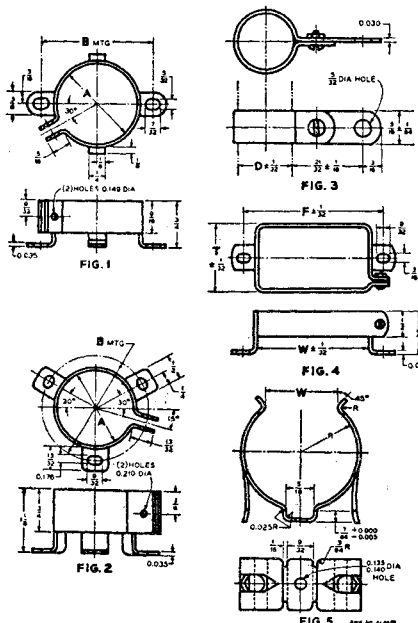
Cat. No.	T	W	F	Fig. No.	Net Price
RMC-17	1 1/16	1 1/16	2 1/4	4	\$.50
RMC-19	1 3/16	2 1/2	3	4	.50
RMC-20	1 1/4	3 3/4	4 3/8	4	.50
RMC-28	1 3/4	3 3/4	4 3/8	4	.50

### MOUNTING STRAPS FOR TUBULAR CAPACITORS

Cat. No.	Tube Dia.	Fig. No.	Net Price
TMS-4	1/4	3	\$.06
TMS-5	3/16	3	.06
TMS-6	3/8	3	.06
TMS-7	3/16	3	.06
TMS-8	1/2	3	.06
TMS-9	3/16	3	.06
TMS-10	3/8	3	.06
TMS-11	1/16	3	\$.06
TMS-12	3/4	3	.06
TMS-13	3/16	3	.06
TMS-14	7/8	3	.06
TMS-15	1 1/16	3	.06
TMS-16	1	3	.10
TMS-17	1 1/16	3	.10
TMS-18	1 1/8	3	\$.10
TMS-19	1 3/16	3	.10
TMS-20	1 1/4	3	.15
TMS-21	1 3/16	3	.15
TMS-22	1 3/8	3	.15

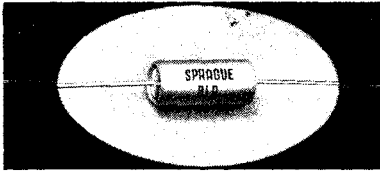
### HORIZONTAL MOUNTING CLIPS FOR CYLINDRICAL CAPACITORS

Catalog No.	Capacitor Diameter	Figure No.	Net Price
UMC-6	3/8	5	\$.06
UMC-8	1/2	5	.06
UMC-10	3/8	5	.06
UMC-12	3/4	5	.06
UMC-14	7/8	5	\$.06
UMC-16	1	5	.10
UMC-22	1 3/8	5	.15



# SPRAGUE CAPACITORS

## VITAMIN Q<sup>®</sup> SUBMINIATURE PAPER CAPACITORS



metically sealed in metal cases, they are electrically and mechanically designed to meet stringent operating requirements.

Impregnated with Vitamin Q, a substantially linear, controlled molecular weight, hydrocarbon polymer, which is exclusive with Sprague, these dependable capacitors are available for operation in two temperature ranges:  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  and  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ . Because of their Vitamin Q impregnation, these subminiature capacitors have

These capacitors are the most widely used of all paper capacitors in commercial and military electronic equipment. Her-

a higher insulation resistance and longer life than comparable units with ordinary oils.

Sprague Subminiature paper capacitors exceed the performance requirements of military specification MIL-C-25A. A limited number of the ratings shown here are listed in the military specification and should be ordered by their MIL type designation where equipment specifications so require. (See page after next.)

Listed below are the most popular insulated section (ungrounded case) capacitors. For technical data on these and other types, ratings, and tolerances, as well as on wax-impregnated units for absolute minimum size, refer to the latest issue of Engineering Bulletin 2110.

Call your Sprague Industrial Distributor for Current Quantity Prices.

### CHOICE OF INSERTED TAB OR EXTENDED FOIL CONSTRUCTION

In the past, inserted tab capacitors have not been recommended for low-voltage applications (e.g., below 10 volts) but recent improvements in design now make it possible to recommend them for operation at all voltages from 1 to rated, in nearly all applications.

From the application standpoint, the principal difference between the two construction types is that, at resonance, losses

are likely to be lower in the extended foil type. This is because the resistive component of impedance is likely to be higher at resonance in the inserted tab type of construction. Unless unusual circuit requirements make the losses at resonance a critical factor, the inserted tab construction is recommended, primarily because of the smaller size of the capacitor roll.

### TYPE 91P, INSERTED TAB CONSTRUCTION, $85^{\circ}\text{C}$ OPERATION

$\mu\text{F}$	WVDC	Size D. x L.	Capacitance Tolerance $\pm 20\%$				Capacitance Tolerance $\pm 10\%$			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Current Quantity Prices
.001	100	.175 x $\frac{3}{4}$	91P10201S2		91P10201S4		91P10291S2		91P10291S4	
	200	.235 x $\frac{3}{4}$	91P10202S2		91P10202S4		91P10292S2		91P10292S4	
	300	.235 x $\frac{3}{4}$	91P10203S2		91P10203S4		91P10293S2		91P10293S4	
	400	.235 x $\frac{3}{4}$	91P10204S2		91P10204S4		91P10294S2		91P10294S4	
	600	.235 x $\frac{3}{4}$	91P10206S2		91P10206S4		91P10296S2		91P10296S4	
.0015	100	.175 x $\frac{3}{4}$	91P15201S2		91P15201S4		91P15291S2		91P15291S4	
	200	.235 x $\frac{3}{4}$	91P15202S2		91P15202S4		91P15292S2		91P15292S4	
	300	.235 x $\frac{3}{4}$	91P15203S2		91P15203S4		91P15293S2		91P15293S4	
	400	.235 x $\frac{3}{4}$	91P15204S2		91P15204S4		91P15294S2		91P15294S4	
	600	.235 x $\frac{3}{4}$	91P15206S2	91P15206S4	91P15296S2	91P15296S4				
.0022	100	.175 x $\frac{3}{4}$	91P22201S2	91P22201S4	91P22291S2	91P22291S4				
	200	.235 x $\frac{3}{4}$	91P22202S2	91P22202S4	91P22292S2	91P22292S4				
	300	.235 x $\frac{3}{4}$	91P22203S2	91P22203S4	91P22293S2	91P22293S4				
	400	.235 x $\frac{3}{4}$	91P22204S2	91P22204S4	91P22294S2	91P22294S4				
	600	.235 x $\frac{3}{4}$	91P22206S2	91P22206S4	91P22296S2	91P22296S4				
.0033	100	.175 x $\frac{3}{4}$	91P33201S2	91P33201S4	91P33291S2	91P33291S4				
	200	.235 x $\frac{3}{4}$	91P33202S2	91P33202S4	91P33292S2	91P33292S4				
	300	.235 x $\frac{3}{4}$	91P33203S2	91P33203S4	91P33293S2	91P33293S4				
	400	.235 x $\frac{3}{4}$	91P33204S2	91P33204S4	91P33294S2	91P33294S4				
	600	.235 x $\frac{3}{4}$	91P33206S2	91P33206S4	91P33296S2	91P33296S4				
.0047	100	.175 x $\frac{3}{4}$	91P47201S2	91P47201S4	91P47291S2	91P47291S4				
	200	.235 x $\frac{3}{4}$	91P47202S2	91P47202S4	91P47292S2	91P47292S4				
	300	.235 x $\frac{3}{4}$	91P47203S2	91P47203S4	91P47293S2	91P47293S4				
	400	.235 x $\frac{3}{4}$	91P47204S2	91P47204S4	91P47294S2	91P47294S4				
	600	.235 x $\frac{3}{4}$	91P47206S2	91P47206S4	91P47296S2	91P47296S4				
.0068	100	.175 x $\frac{3}{4}$	91P68201S2	91P68201S4	91P68291S2	91P68291S4				
	200	.235 x $\frac{3}{4}$	91P68202S2	91P68202S4	91P68292S2	91P68292S4				
	300	.235 x $\frac{3}{4}$	91P68203S2	91P68203S4	91P68293S2	91P68293S4				
	400	.235 x $\frac{3}{4}$	91P68204S2	91P68204S4	91P68294S2	91P68294S4				
	600	.235 x $\frac{3}{4}$	91P68206S2	91P68206S4	91P68296S2	91P68296S4				

\*For Style 4 units add .0625" to diameter and  $\frac{1}{16}$ " to length.

# SPRAGUE CAPACITORS

## TYPE 91P, continued

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.01	100	.175 x 3/4	91P10301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10391S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.235 x 3/4	91P10302S2		91P10302S4		91P10392S2		91P10392S4	
	300	.235 x 3/4	91P10303S2		91P10303S4		91P10393S2		91P10393S4	
	400	.235 x 3/4	91P10304S2		91P10304S4		91P10394S2		91P10394S4	
	600	.312 x 7/8	91P10306S2		91P10306S4		91P10396S2		91P10396S4	
.015	100	.175 x 3/4	91P15301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P15301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P15391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P15391S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.235 x 3/4	91P15302S2		91P15302S4		91P15392S2		91P15392S4	
	300	.235 x 3/4	91P15303S2		91P15303S4		91P15393S2		91P15393S4	
	400	.312 x 7/8	91P15304S2		91P15304S4		91P15394S2		91P15394S4	
	600	.312 x 7/8	91P15306S2		91P15306S4		91P15396S2		91P15396S4	
.022	100	.195 x 3/4	91P22301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P22301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P22391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P22391S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.235 x 3/4	91P22302S2		91P22302S4		19P22392S2		91P22392S4	
	300	.312 x 7/8	91P22303S2		91P22303S4		91P22393S2		91P22393S4	
	400	.312 x 7/8	91P22304S2		91P22304S4		91P22394S2		91P22394S4	
	600	.312 x 7/8	91P22306S2		91P22306S4		91P22396S2		91P22396S4	
.033	100	.235 x 3/4	91P33301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P33301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P33391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P33391S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.312 x 7/8	91P33302S2		91P33302S4		91P33392S2		91P33392S4	
	300	.312 x 7/8	91P33303S2		91P33303S4		91P33393S2		91P33393S4	
	400	.312 x 7/8	91P33304S2		91P33304S4		91P33394S2		91P33394S4	
	600	.400 x 7/8	91P33306S2		91P33306S4		91P33396S2		91P33396S4	
.047	100	.312 x 7/8	91P47301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P47301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P47391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P47391S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.312 x 7/8	91P47302S2		91P47302S4		91P47392S2		91P47392S4	
	300	.312 x 7/8	91P47303S2		91P47303S4		91P47393S2		91P47393S4	
	400	.400 x 7/8	91P47304S2		91P47304S4		91P47394S2		91P47394S4	
	600	.400 x 1 1/8	91P47306S2		91P47306S4		91P47396S2		91P47396S4	
.068	100	.312 x 7/8	91P68301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P68301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P68391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P68391S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.312 x 7/8	91P68302S2		91P68302S4		91P68392S2		91P68392S4	
	300	.400 x 7/8	91P68303S2		91P68303S4		91P68393S2		91P68393S4	
	400	.400 x 1 1/8	91P68304S2		91P68304S4		91P68394S2		91P68394S4	
	600	.400 x 1 1/8	91P68306S2		91P68306S4		91P68396S2		91P68396S4	
.1	100	.312 x 7/8	91P10401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10491S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.400 x 7/8	91P10402S2		91P10402S4		91P10492S2		91P10492S4	
	300	.400 x 1 1/8	91P10403S2		91P10403S4		91P10493S2		91P10493S4	
	400	.400 x 1 1/8	91P10404S2		91P10404S4		91P10494S2		91P10494S4	
	600	.562 x 1 1/8	91P10406S2		91P10406S4		91P10496S2		91P10496S4	
.15	100	.400 x 7/8	91P15401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P15401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P15491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P15491S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.400 x 1 1/8	91P15402S2		91P15402S4		91P15492S2		91P15492S4	
	300	.400 x 1 1/8	91P15403S2		91P15403S4		91P15493S2		91P15493S4	
	400	.562 x 1 1/8	91P15404S2		91P15404S4		91P15494S2		91P15494S4	
	600	.562 x 1 1/8	91P15406S2		91P15406S4		91P15496S2		91P15496S4	
.22	100	.400 x 1 1/8	91P22401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P22401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P22491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P22491S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.400 x 1 1/8	91P22402S2		91P22402S4		91P22492S2		91P22492S4	
	300	.562 x 1 1/8	91P22403S2		91P22403S4		91P22493S2		91P22493S4	
	400	.562 x 1 1/8	91P22404S2		91P22404S4		91P22494S2		91P22494S4	
	600	.562 x 1 1/8	91P22406S2		91P22406S4		91P22496S2		91P22496S4	
.33	100	.400 x 1 1/8	91P33401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P33401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P33491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P33491S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.562 x 1 1/8	91P33402S2		91P33402S4		91P33492S2		91P33492S4	
	300	.562 x 1 1/8	91P33403S2		91P33403S4		91P33493S2		91P33493S4	
	400	.562 x 1 1/8	91P33404S2		91P33404S4		91P33494S2		91P33494S4	
	600	.670 x 1 7/8	91P33406S2		91P33406S4		91P33496S2		91P33496S4	
.47	100	.562 x 1 1/8	91P47401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P47401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P47491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P47491S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.562 x 1 1/8	91P47402S2		91P47402S4		91P47492S2		91P47492S4	
	300	.562 x 1 1/8	91P47403S2		91P47403S4		91P47493S2		91P47493S4	
	400	.670 x 1 7/8	91P47404S2		91P47404S4		91P47494S2		91P47494S4	
	600	.750 x 2 1/8	91P47406S2		91P47406S4		91P47496S2		91P47496S4	
.68	100	.562 x 1 1/8	91P68401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P68401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P68491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P68491S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.562 x 1 1/8	91P68402S2		91P68402S4		91P68492S2		91P68492S4	
	300	.670 x 1 7/8	91P68403S2		91P68403S4		91P68493S2		91P68493S4	
	400	.750 x 2 1/8	91P68404S2		91P68404S4		91P68494S2		91P68494S4	
	600	1.000 x 1 13/16	91P68406S2		91P68406S4		91P68496S2		91P68496S4	
1.0	100	.562 x 1 1/8	91P10501S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10501S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10591S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	91P10591S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
	200	.670 x 1 7/8	91P10502S2		91P10502S4		91P10592S2		91P10592S4	
	300	.750 x 2 1/8	91P10503S2		91P10503S4		91P10593S2		91P10593S4	
	400	1.000 x 1 13/16	91P10504S2		91P10504S4		91P10594S2		91P10594S4	

\*For Style 4 units add .0625" to diameter and 1/16" to length.

# SPRAGUE CAPACITORS

## TYPE 96P, INSERTED TAB CONSTRUCTION, 125°C OPERATION

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	100	.175 x 3/4	96P10201S2		96P10201S4		96P10291S2		96P10201S4	
	200	.235 x 3/4	96P10202S2		96P10202S4		96P10292S2		96P10202S4	
	300	.235 x 3/4	96P10203S2		96P10203S4		96P10293S2		96P10203S4	
	400	.235 x 3/4	96P10204S2		96P10204S4		96P10294S2		96P10204S4	
	600	.235 x 3/4	96P10206S2		96P10206S4		96P10296S2		96P10206S4	
.0012	600	.235 x 11/16	---		---		96P12296S2		96P12296S4	
	100	.175 x 3/4	96P15201S2		96P15201S4		96P15291S2		96P15291S4	
.0015	200	.235 x 3/4	96P15202S2		96P15202S4		96P15292S2		96P15292S4	
	300	.235 x 3/4	96P15203S2		96P15203S4		96P15293S2		96P15293S4	
	400	.235 x 3/4	96P15204S2		96P15204S4		96P15294S2		96P15294S4	
	600	.235 x 3/4	96P15206S2		96P15206S4		96P15296S2		96P15296S4	
.0018	600	.235 x 11/16	---		---		96P18296S2		96P18296S4	
	100	.175 x 3/4	96P22201S2		96P22201S4		96P22291S2		96P22201S4	
.0022	200	.235 x 3/4	96P22202S2		96P22202S4		96P22292S2		96P22202S4	
	300	.235 x 3/4	96P22203S2		96P22203S4		96P22293S2		96P22203S4	
	400	.235 x 3/4	96P22204S2		96P22204S4		96P22294S2		96P22204S4	
	600	.235 x 3/4	96P22206S2		96P22206S4		96P22296S2		96P22206S4	
.0027	600	.235 x 11/16	---		---		96P27296S2		96P27296S4	
	100	.175 x 3/4	96P33201S2		96P33201S4		96P33291S2		96P33291S4	
.0033	200	.235 x 3/4	97P33202S2		96P33202S4		96P33292S2		96P33292S4	
	300	.235 x 3/4	96P33203S2		96P33203S4		96P33293S2		96P33293S4	
	400	.235 x 3/4	96P33204S2		96P33204S4		96P33294S2		96P33294S4	
	600	.235 x 3/4	96P33206S2		96P33206S4		96P33296S2		96P33296S4	
.0039	600	.235 x 11/16	---		---		96P39296S2		96P39296S4	
	100	.175 x 3/4	96P47201S2		96P47201S4		96P47291S2		96P47291S4	
.0047	200	.235 x 3/4	96P47202S2		96P47202S4		96P47292S2		96P47292S4	
	300	.235 x 3/4	96P47203S2		96P47203S4		96P47293S2		96P47293S4	
	400	.235 x 3/4	96P47204S2		96P47204S4		96P47294S2		96P47294S4	
	600	.235 x 3/4	96P47206S2		96P47206S4		96P47296S2		96P47296S4	
.0056	600	.235 x 11/16	---		---		96P56296S2		96P56296S4	
	100	.175 x 3/4	96P68201S2		96P68201S4		96P68291S2		96P68391S4	
.0068	200	.235 x 3/4	96P68202S2		96P68202S4		96P68292S2		96P68392S4	
	300	.235 x 3/4	96P68203S2		96P68203S4		96P68293S2		96P68393S4	
	400	.235 x 3/4	96P68204S2		96P68204S4		96P68294S2		96P68394S4	
	600	.235 x 3/4	96P68206S2		96P68206S4		96P68296S2		96P68396S4	
.0082	400	.400 x 1 1/8	---		---		96P82294S2		96P82294S4	
	600	.562 x 1 1/8	---		---		96P82296S2		96P82296S4	
.01	100	.175 x 3/4	96P10301S2		96P10301S4		96P10391S2		96P10391S4	
	200	.235 x 3/4	96P10302S2		96P10302S4		96P10392S2		96P10392S4	
	300	.235 x 3/4	96P10303S2		96P10303S4		97P10393S2		96P10393S4	
	400	.235 x 3/4	96P10304S2		96P10304S4		96P10394S2		96P10394S4	
	600	.312 x 7/8	96P10306S2		96P10306S4		96P10396S2		96P10396S4	
.012	200	.235 x 11/16	---		---		96P12392S2		96P12392S4	
	600	.312 x 11/16	---		---		96P12396S2		96P12396S4	
.015	100	.175 x 3/4	96P15301S2		96P15301S4		96P15391S2		96P15391S4	
	200	.235 x 3/4	96P15302S2		96P15302S4		96P15392S2		96P15392S4	
	300	.235 x 3/4	96P15303S2		96P15303S4		96P15393S2		96P15393S4	
	400	.312 x 7/8	96P15304S2		96P15304S4		96P15394S2		96P15394S4	
	600	.312 x 7/8	96P15306S2		96P15306S4		96P15396S2		96P15396S4	
.018	1000	.400 x 1 1/8	---		---		96P153910S2		96P153910S4	
	200	.235 x 11/16	---		---		96P18392S2		96P18392S4	
.022	400	.312 x 13/16	---		---		96P18396S2		96P18396S4	
	600	.400 x 1 1/8	---		---		96P183910S2		96P183910S4	
	100	.195 x 3/4	96P22301S2		96P22301S4		96P22391S2		96P22391S4	
	200	.235 x 3/4	96P22302S2		96P22302S4		96P22392S2		96P22392S4	
.027	300	.312 x 7/8	96P22303S2		96P22303S4		96P22393S2		96P22393S4	
	400	.312 x 7/8	96P22304S2		96P22304S4		96P22394S2		96P22394S4	
	600	.312 x 7/8	96P22306S2		96P22306S4		96P22396S2		96P22396S4	
	1000	.400 x 1 1/8	---		---		96P223910S2		96P223910S4	
.033	100	.235 x 3/4	96P33301S2		96P33301S4		96P33391S2		96P33391S4	
	200	.312 x 7/8	96P33302S2		96P33302S4		96P33392S2		96P33392S4	
	300	.312 x 7/8	96P33303S2		96P33303S4		96P33393S2		96P33393S4	
	400	.312 x 7/8	96P33304S2		96P33304S4		96P33394S2		96P33394S4	
.039	600	.400 x 7/8	96P33306S2		96P33306S4		96P33396S2		96P33396S4	
	1000	.400 x 1 1/8	---		---		96P333910S2		96P333910S4	
	200	.312 x 13/16	---		---		96P39392S2		96P39392S4	
	400	.400 x 1 1/8	---		---		96P39394S2		96P39394S4	
.047	600	.400 x 1 1/8	---		---		96P39396S2		96P39396S4	
	1000	.562 x 1 1/8	---		---		96P393910S2		96P393910S4	
	100	.312 x 7/8	96P47301S2		96P47301S4		96P47391S2		96P47391S4	
	200	.312 x 7/8	96P47302S2		96P47302S4		96P47392S2		96P47392S4	
.056	300	.312 x 7/8	96P47303S2		96P47303S4		96P47393S2		96P47393S4	
	400	.400 x 7/8	96P47304S2		96P47304S4		96P47394S2		96P47394S4	
	600	.400 x 1 1/8	96P47306S2		96P47306S4		96P47396S2		96P47396S4	
	1000	.562 x 1 1/8	---		---		96P473910S2		96P473910S4	
.056	200	.312 x 13/16	---		---		96P56392S2		96P56392S4	
	400	.400 x 1 1/8	---		---		96P56394S2		96P56394S4	
	600	.400 x 1 1/8	---		---		96P56396S2		96P56396S4	
	1000	.562 x 1 1/8	---		---		96P563910S2		96P563910S4	

\*For Style 4 units add .0625" to diameter and 1/16" to length.

# SPRAGUE CAPACITORS

## TYPE 96P, continued

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.068	100	.312 x 7/8	96P68301S2		96P68301S4		96P68391S2		96P68391S4	
	200	.312 x 7/8	96P68302S2		96P68302S4		96P68392S2		96P68392S4	
	300	.400 x 7/8	96P68303S2		96P68303S4		96P68393S2		96P68393S4	
	400	.400 x 1 1/8	96P68304S2		96P68304S4		96P68394S2		96P68394S4	
	600	.400 x 1 3/8	96P68306S2		96P68306S4		96P68396S2		96P68396S4	
.082	1000	.562 x 1 1/8	---		---		96P683910S2		96P683910S4	
	100	.312 x 1 1/8	---		---		96P82391S2		96P82391S4	
	200	.400 x 1 1/8	---		---		96P82392S2		96P82392S4	
	400	.400 x 1 3/8	---		---		96P82394S2		96P82394S4	
	600	.562 x 1 1/8	---		---		96P82396S2		96P82396S4	
.1	1000	.562 x 1 3/8	---		---		96P823910S2		96P823910S4	
	100	.312 x 3/8	96P10401S2		96P10401S4		96P10491S2		96P10491S4	
	200	.400 x 3/8	96P10402S2		96P10402S4		96P10492S2		96P10492S4	
	300	.400 x 1 1/8	96P10403S2		96P10403S4		96P10493S2		96P10493S4	
	400	.400 x 1 3/8	96P10404S2		96P10404S4		96P10494S2		96P10494S4	
.12	600	.562 x 1 1/8	96P10406S2		96P10406S4		96P10496S2		96P10496S4	
	1000	.562 x 1 3/8	---		---		96P104910S2		96P104910S4	
	100	.400 x 1 1/8	---		---		96P12491S2		96P12491S4	
	200	.400 x 1 3/8	---		---		96P12492S2		96P12492S4	
	400	.562 x 1 1/8	---		---		96P12494S2		96P12494S4	
.15	600	.562 x 1 3/8	---		---		96P12496S2		96P12496S4	
	1000	.670 x 1 1/8	---		---		96P124910S2		96P124910S4	
	100	.400 x 3/8	96P15491S2		96P15401S4		96P15491S2		96P15491S4	
	200	.400 x 1 1/8	96P15492S2		96P15402S4		96P15492S2		96P15492S4	
	300	.400 x 1 3/8	96P15493S2		96P15403S4		96P15493S2		96P15493S4	
.18	400	.562 x 1 1/8	96P15494S2		96P15404S4		96P15494S2		96P15494S4	
	600	.562 x 1 3/8	96P15496S2		96P15406S4		96P15496S2		96P15496S4	
	1000	.670 x 1 3/8	---		---		96P154910S2		96P154910S4	
	100	.400 x 1 1/8	---		---		96P18491S2		96P18491S4	
	200	.400 x 1 3/8	---		---		96P18492S2		96P18492S4	
.22	400	.562 x 1 3/8	---		---		96P18494S2		96P18494S4	
	600	.562 x 1 1 1/8	---		---		96P18496S2		96P18496S4	
	1000	.750 x 2 1/8	---		---		96P184910S2		96P184910S4	
	100	.400 x 1 1/8	96P22401S2		96P22401S4		96P22491S2		96P22491S4	
	200	.400 x 1 3/8	96P22402S2		96P22402S4		96P22492S2		96P22492S4	
.27	300	.562 x 1 1/8	96P22403S2		96P22403S4		96P22493S2		96P22493S4	
	400	.562 x 1 3/8	96P22404S2		96P22404S4		96P22494S2		96P22494S4	
	600	.562 x 1 1/8	96P22406S2		96P22406S4		96P22496S2		96P22496S4	
	1000	.750 x 2 1/8	---		---		96P224910S2		96P224910S4	
	100	.400 x 1 1/8	---		---		96P27491S2		96P27491S4	
.33	200	.562 x 1 3/8	---		---		96P27492S2		96P27492S4	
	400	.562 x 1 1/8	---		---		96P27494S2		96P27494S4	
	600	.562 x 1 3/8	---		---		96P27496S2		96P27496S4	
	1000	.750 x 2 1/8	---		---		96P274910S2		96P274910S4	
	100	.400 x 1 3/8	96P33401S2		96P33401S4		96P33491S2		96P33491S4	
.39	200	.562 x 1 1/8	96P33402S2		96P33402S4		96P33492S2		96P33492S4	
	300	.562 x 1 3/8	96P33403S2		96P33403S4		96P33493S2		96P33493S4	
	400	.562 x 1 1/8	96P33404S2		96P33404S4		96P33494S2		96P33494S4	
	600	.670 x 1 1/8	96P33406S2		96P33406S4		96P33496S2		96P33496S4	
	1000	.750 x 1 3/8	---		---		96P334910S2		96P334910S4	
.47	100	.562 x 1 1/8	---		---		96P39491S2		96P39491S4	
	200	.562 x 1 3/8	---		---		96P39492S2		96P39492S4	
	400	.670 x 1 1/8	---		---		96P39494S2		96P39494S4	
	600	.750 x 2 1/8	---		---		96P39496S2		96P39496S4	
	1000	1.000 x 2 1/8	---		---		96P394910S2		96P394910S4	
.56	100	.562 x 1 1/8	96P47401S2		96P47401S4		96P47491S2		96P47491S4	
	200	.562 x 1 3/8	96P47402S2		96P47402S4		96P47492S2		96P47492S4	
	300	.562 x 1 1/8	96P47403S2		96P47403S4		96P47493S2		96P47493S4	
	400	.670 x 1 1/8	96P47404S2		96P47404S4		96P47494S2		96P47494S4	
	600	.750 x 2 1/8	96P47406S2		96P47406S4		96P47496S2		96P47496S4	
.68	1000	1.000 x 2 1/8	---		---		96P474910S2		96P474910S4	
	100	.562 x 1 3/8	---		---		96P56491S2		96P56491S4	
	200	.562 x 1 1/8	---		---		96P56492S2		96P56492S4	
	400	.750 x 2 1/8	---		---		96P56494S2		96P56494S4	
	600	1.000 x 1 1/8	---		---		96P56496S2		96P56496S4	
.82	100	.562 x 1 3/8	96P68401S2		96P68401S4		96P68491S2		96P68491S4	
	200	.562 x 1 1/8	96P68402S2		96P68402S4		96P68492S2		96P68492S4	
	300	.670 x 1 1/8	96P68403S2		96P68403S4		96P68493S2		96P68493S4	
	400	.750 x 2 1/8	96P68404S2		96P68404S4		96P68494S2		96P68494S4	
	600	1.000 x 1 1/8	96P68406S2		96P68406S4		96P68496S2		96P68496S4	
1.0	100	.562 x 1 3/8	---		---		96P82491S2		96P82491S4	
	200	.670 x 1 1/8	---		---		96P82492S2		96P82492S4	
	400	1.000 x 1 1/8	---		---		96P82494S2		96P82494S4	
	100	.562 x 1 1/8	96P10501S2		96P10501S4		96P10591S2		96P10591S4	
	200	.670 x 1 3/8	96P10502S2		96P10502S4		96P10592S2		96P10592S4	
400	.750 x 2 1/8	96P10503S2		96P10503S4		96P10593S2		96P10593S4		
	1.000 x 1 1/8	96P10504S2		96P10504S4		96P10594S2		96P10594S4		

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

For Style 4 units add .0625" to diameter and 1/16" to length.

REM-21-6330

Sizes subject to change without notice.

# SPRAGUE CAPACITORS

## TYPE 191P, EXTENDED FOIL CONSTRUCTION, 85°C OPERATION

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)		Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)	
			Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
.001	100	.175 x 3/4	191P10201S2				191P10201S4			
	200	.235 x 3/4	191P10202S2		191P10202S4		191P10292S2		191P10292S4	
	300	.235 x 3/4	191P10203S2		191P10203S4		191P10293S2		191P10293S4	
	400	.235 x 3/4	191P10204S2		191P10204S4		191P10294S2		191P10294S4	
	600	.235 x 3/4	191P10206S2		191P10206S4		191P10296S2		191P10296S4	
.0015	100	.175 x 3/4	191P15201S2		191P15201S4		191P15291S2		191P15291S4	
	200	.235 x 3/4	191P15202S2		191P15202S4		191P15292S2		191P15292S4	
	300	.235 x 3/4	191P15203S2		191P15203S4		191P15293S2		191P15293S4	
	400	.235 x 3/4	191P15204S2		191P15204S4		191P15294S2		191P15294S4	
	600	.235 x 3/4	191P15206S2		191P15206S4		191P15296S2		191P15296S4	
.0022	100	.175 x 3/4	191P22201S2		191P22201S4		191P22291S2		191P22291S4	
	200	.235 x 3/4	191P22202S2		191P22202S4		191P22292S2		191P22292S4	
	300	.235 x 3/4	191P22203S2		191P22203S4		191P22293S2		191P22293S4	
	400	.235 x 3/4	191P22204S2		191P22204S4		191P22294S2		191P22294S4	
	600	.235 x 3/4	191P22206S2		191P22206S4		191P22296S2		191P22296S4	
.0033	100	.175 x 3/4	191P33201S2		191P33201S4		191P33291S2		191P33291S4	
	200	.235 x 3/4	191P33202S2		191P33202S4		191P33292S2		191P33292S4	
	300	.235 x 3/4	191P33203S2		191P33203S4		191P33293S2		191P33293S4	
	400	.235 x 3/4	191P33204S2		191P33204S4		191P33294S2		191P33294S4	
	600	.235 x 3/4	191P33206S2		191P33206S4		191P33296S2		191P33296S4	
.0047	100	.175 x 3/4	191P47201S2		191P47201S4		191P47291S2		191P47291S4	
	200	.235 x 3/4	191P47202S2		191P47202S4		191P47292S2		191P47292S4	
	300	.235 x 3/4	191P47203S2		191P47203S4		191P47293S2		191P47293S4	
	400	.235 x 3/4	191P47204S2		191P47204S4		191P47294S2		191P47294S4	
	600	.235 x 3/4	191P47206S2		191P47206S4		191P47296S2		191P47296S4	
.0068	100	.175 x 3/4	191P68201S2		191P68201S4		191P68291S2		191P68291S4	
	200	.235 x 3/4	191P68202S2		191P68202S4		191P68292S2		191P68292S4	
	300	.235 x 3/4	191P68203S2		191P68203S4		191P68293S2		191P68293S4	
	400	.235 x 3/4	191P68204S2		191P68204S4		191P68294S2		191P68294S4	
	600	.235 x 3/4	191P68206S2		191P68206S4		191P68296S2		191P68296S4	
.01	100	.175 x 3/4	191P10301S2		191P10301S4		191P10391S2		191P10391S4	
	200	.235 x 3/4	191P10302S2		191P10302S4		191P10392S2		191P10392S4	
	300	.235 x 3/4	191P10303S2		191P10303S4		191P10393S2		191P10393S4	
	400	.235 x 3/4	191P10304S2		191P10304S4		191P10394S2		191P10394S4	
	600	.312 x 7/8	191P10306S2		191P10306S4		191P10396S2		191P10396S4	
.015	100	.175 x 3/4	191P15301S2		191P15301S4		191P15391S2		191P15391S4	
	200	.235 x 3/4	191P15302S2		191P15302S4		191P15392S2		191P15392S4	
	300	.235 x 3/4	191P15303S2		191P15303S4		191P15393S2		191P15393S4	
	400	.312 x 7/8	191P15304S2		191P15304S4		191P15394S2		191P15394S4	
	600	.312 x 7/8	191P15306S2		191P15306S4		191P15396S2		191P15396S4	
.022	100	.195 x 3/4	191P22301S2		191P22301S4		191P22391S2		191P22391S4	
	200	.235 x 3/4	191P22302S2		191P22302S4		191P22392S2		191P22392S4	
	300	.312 x 7/8	191P22303S2		191P22303S4		191P22393S2		191P22393S4	
	400	.312 x 7/8	191P22304S2		191P22304S4		191P22394S2		191P22394S4	
	600	.312 x 7/8	191P22306S2		191P22306S4		191P22396S2		191P22396S4	

\*For Style 4 units add .0625" to diameter and 1/8" to length



# SPRAGUE CAPACITORS

## TYPE 191P, continued

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)		Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.033	100	.235 x 3/4	191P33301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P33301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P33391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P33391S4	
	200	.312 x 7/8	191P33302S2		191P33302S4		191P33392S2		191P33392S4	
	300	.312 x 7/8	191P33303S2		191P33303S4		191P33393S2		191P33393S4	
	400	.312 x 7/8	191P33304S2		191P33304S4		191P33394S2		191P33394S4	
	600	.400 x 7/8	191P33306S2		191P33306S4		191P33396S2		191P33396S4	
.047	100	.312 x 7/8	191P47301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P47301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P47391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P47391S4	
	200	.312 x 7/8	191P47302S2		191P47302S4		191P47392S2		191P47392S4	
	300	.312 x 7/8	191P47303S2		191P47303S4		191P47393S2		191P47393S4	
	400	.400 x 7/8	191P47304S2		191P47304S4		191P47394S2		191P47394S4	
	600	.400 x 1 1/8	191P47306S2		191P47306S4		191P47396S2		191P47396S4	
.068	100	.312 x 7/8	191P68301S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P68301S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P68391S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P68391S4	
	200	.312 x 7/8	191P68302S2		191P68302S4		191P68392S2		191P68392S4	
	300	.400 x 7/8	191P68303S2		191P68303S4		191P68393S2		191P68393S4	
	400	.400 x 1 1/8	191P68304S2		191P68304S4		191P68394S2		191P68394S4	
	600	.400 x 1 3/8	191P68306S2		191P68306S4		191P68396S2		191P68396S4	
.1	100	.312 x 7/8	191P10401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10491S4	
	200	.400 x 3/8	191P10402S2		191P10402S4		191P10492S2		191P10492S4	
	300	.400 x 1 1/8	191P10403S2		191P10403S4		191P10493S2		191P10493S4	
	400	.400 x 1 3/8	191P10404S2		191P10404S4		191P10494S2		191P10494S4	
	600	.562 x 1 1/8	191P10406S2		191P10406S4		191P10496S2		191P10496S4	
.15	100	.400 x 7/8	191P15401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P15401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P15491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P15491S4	
	200	.400 x 1 1/8	191P15402S2		191P15402S4		191P15492S2		191P15492S4	
	300	.400 x 1 3/8	191P15403S2		191P15403S4		191P15493S2		191P15493S4	
	400	.562 x 1 1/8	191P15404S2		191P15404S4		191P15494S2		191P15494S4	
	600	.562 x 1 3/8	191P15406S2		191P15406S4		191P15496S2		191P15496S4	
.22	100	.400 x 1 1/8	191P22401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P22401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P22491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P22491S4	
	200	.400 x 1 3/8	191P22402S2		191P22402S4		191P22492S2		191P22492S4	
	300	.562 x 1 1/8	191P22403S2		191P22403S4		191P22493S2		191P22493S4	
	400	.562 x 1 3/8	191P22404S2		191P22404S4		191P22494S2		191P22494S4	
	600	.562 x 1 3/8	191P22406S2		191P22406S4		191P22496S2		191P22496S4	
.33	100	.400 x 1 3/8	191P33401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P33401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P33491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P33491S4	
	200	.562 x 1 1/8	191P33402S2		191P33402S4		191P33492S2		191P33492S4	
	300	.562 x 1 3/8	191P33403S2		191P33403S4		191P33493S2		191P33493S4	
	400	.562 x 1 3/8	191P33404S2		191P33404S4		191P33494S2		191P33494S4	
	600	.670 x 1 1/8	191P33406S2		191P33406S4		191P33496S2		191P33496S4	
.47	100	.562 x 1 1/8	191P47401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P47401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P47491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P47491S4	
	200	.562 x 1 3/8	191P47402S2		191P47402S4		191P47492S2		191P47492S4	
	300	.562 x 1 3/8	191P47403S2		191P47403S4		191P47493S2		191P47493S4	
	400	.670 x 1 1/8	191P47404S2		191P47404S4		191P47494S2		191P47494S4	
	600	.750 x 2 1/8	191P47406S2		191P47406S4		191P47496S2		191P47496S4	
.68	100	.562 x 1 3/8	191P68401S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P68401S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P68491S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P68491S4	
	200	.562 x 1 3/8	191P68402S2		191P68402S4		191P68492S2		191P68492S4	
	300	.670 x 1 1/8	191P68403S2		191P68403S4		191P68493S2		191P68493S4	
1.0	100	.562 x 1 3/8	191P10501S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10501S4	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10591S2	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	191P10591S4	
	200	.670 x 1 3/8	191P10502S2		191P10502S4		191P10592S2		191P10592S4	

For Style 4 units add .0625" to diameter and 1/8" to length

# SPRAGUE CAPACITORS

## TYPE 196P, EXTENDED FOIL CONSTRUCTION, 125°C OPERATION

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)		Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	100	.175 x 3/4	196P10201S2		196P10201S4		196P10291S2		196P10291S4	
	200	.235 x 3/4	196P10202S2		196P10202S4		196P10292S2		196P10292S4	
	300	.235 x 3/4	196P10203S2		196P10203S4		196P10293S2		196P10293S4	
	400	.235 x 3/4	196P10204S2		196P10204S4		196P10294S2		196P10294S4	
	600	.235 x 3/4	196P10206S2		196P10206S4		196P10296S2		196P10296S4	
.001	1000	.400 x 1 1/16	196P10206S2		196P10206S4		196P102910S2		196P102910S4	
	600	.235 x 11/16	196P12296S2		196P12296S4		196P12296S2		196P12296S4	
	1000	.400 x 1 1/16	196P122910S2		196P122910S4		196P122910S2		196P122910S4	
	100	.175 x 3/4	196P15201S2		196P15201S4		196P15291S2		196P15291S4	
	200	.235 x 3/4	196P15202S2		196P15202S4		196P15292S2		196P15292S4	
.0015	300	.235 x 3/4	196P15203S2		196P15203S4		196P15293S2		196P15293S4	
	400	.235 x 3/4	196P15204S2		196P15204S4		196P15294S2		196P15294S4	
	600	.235 x 3/4	196P15206S2		196P15206S4		196P15296S2		196P15296S4	
	1000	.400 x 1 1/16	196P15206S2		196P15206S4		196P152910S2		196P152910S4	
	600	.235 x 11/16	196P18296S2		196P18296S4		196P18296S2		196P18296S4	
.0018	1000	.400 x 1 1/16	196P182910S2		196P182910S4		196P182910S2		196P182910S4	
	100	.175 x 3/4	196P22201S2		196P22201S4		196P22291S2		196P22291S4	
	200	.235 x 3/4	196P22202S2		196P22202S4		196P22292S2		196P22292S4	
	300	.235 x 3/4	196P22203S2		196P22203S4		196P22293S2		196P22293S4	
	400	.235 x 3/4	196P22204S2		196P22204S4		196P22294S2		196P22294S4	
.0022	600	.235 x 3/4	196P22206S2		196P22206S4		196P22296S2		196P22296S4	
	1000	.400 x 1 1/16	196P22206S2		196P22206S4		196P222910S2		196P222910S4	
	400	.312 x 13/16	196P27294S2		196P27294S4		196P27294S2		196P27294S4	
	600	.235 x 11/16	196P27296S2		196P27296S4		196P27296S2		196P27296S4	
	1000	.400 x 1 1/16	196P272910S2		196P272910S4		196P272910S2		196P272910S4	
.0027	100	.175 x 3/4	196P33201S2		196P33201S4		196P33291S2		196P33291S4	
	200	.235 x 3/4	196P33202S2		196P33202S4		196P33292S2		196P33292S4	
	300	.235 x 3/4	196P33203S2		196P33203S4		196P33293S2		196P33293S4	
	400	.235 x 3/4	196P33204S2		196P33204S4		196P33294S2		196P33294S4	
	600	.312 x 7/8	196P33206S2		196P33206S4		196P33296S2		196P33296S4	
.0033	1000	.400 x 1 1/16	196P33206S2		196P33206S4		196P332910S2		196P332910S4	
	200	.235 x 11/16	196P39292S2		196P39292S4		196P39292S2		196P39292S4	
	600	.235 x 11/16	196P39296S2		196P39296S4		196P39296S2		196P39296S4	
	1000	.400 x 1 1/16	196P392910S2		196P392910S4		196P392910S2		196P392910S4	
	100	.175 x 3/4	196P47201S2		196P47201S4		196P47291S2		196P47291S4	
.0047	200	.235 x 3/4	196P47202S2		196P47202S4		196P47292S2		196P47292S4	
	300	.235 x 3/4	196P47203S2		196P47203S4		196P47293S2		196P47293S4	
	400	.235 x 3/4	196P47204S2		196P47204S4		196P47294S2		196P47294S4	
	600	.235 x 3/4	196P47206S2		196P47206S4		196P47296S2		196P47296S4	
	1000	.400 x 1 1/16	196P47206S2		196P47206S4		196P472910S2		196P472910S4	
.0056	200	.235 x 11/16	196P56292S2		196P56292S4		196P56292S2		196P56292S4	
	600	.235 x 11/16	196P56296S2		196P56296S4		196P56296S2		196P56296S4	
	1000	.400 x 1 1/16	196P562910S2		196P562910S4		196P562910S2		196P562910S4	
	100	.175 x 3/4	196P68201S2		196P68201S4		196P68291S2		196P68291S4	
	200	.235 x 3/4	196P68202S2		196P68202S4		196P68292S2		196P68292S4	
.0068	300	.235 x 3/4	196P68203S2		196P68203S4		196P68293S2		196P68293S4	
	400	.235 x 3/4	196P68204S2		196P68204S4		196P68294S2		196P68294S4	
	600	.235 x 3/4	196P68206S2		196P68206S4		196P68296S2		196P68296S4	
	1000	.400 x 1 1/16	196P68206S2		196P68206S4		196P682910S2		196P682910S4	
	100	.175 x 11/16	196P82291S2		196P82291S4		196P82291S2		196P82291S4	
.0082	600	.312 x 13/16	196P82296S2		196P82296S4		196P82296S2		196P82296S4	
	1000	.400 x 1 1/16	196P822910S2		196P822910S4		196P822910S2		196P822910S4	
	100	.175 x 3/4	196P10301S2		196P10301S4		196P10391S2		196P10391S4	
	200	.235 x 3/4	196P10302S2		196P10302S4		196P10392S2		196P10392S4	
	300	.235 x 3/4	196P10303S2		196P10303S4		196P10393S2		196P10393S4	
.01	400	.235 x 3/4	196P10304S2		196P10304S4		196P10394S2		196P10394S4	
	600	.312 x 7/8	196P10306S2		196P10306S4		196P10396S2		196P10396S4	
	1000	.400 x 1 1/16	196P10306S2		196P10306S4		196P103910S2		196P103910S4	
	100	.175 x 11/16	196P12391S2		196P12391S4		196P12391S2		196P12391S4	
	400	.312 x 13/16	196P12394S2		196P12394S4		196P12394S2		196P12394S4	
.012	600	.312 x 13/16	196P12396S2		196P12396S4		196P12396S2		196P12396S4	
	1000	.400 x 1 1/16	196P123910S2		196P123910S4		196P123910S2		196P123910S4	
	100	.175 x 3/4	196P15301S2		196P15301S4		196P15391S2		196P15391S4	
	200	.235 x 3/4	196P15302S2		196P15302S4		196P15392S2		196P15392S4	
	300	.235 x 3/4	196P15303S2		196P15303S4		196P15393S2		196P15393S4	
.015	400	.312 x 7/8	196P15304S2		196P15304S4		196P15394S2		196P15394S4	
	600	.312 x 7/8	196P15306S2		196P15306S4		196P15396S2		196P15396S4	
	1000	.400 x 1 1/16	196P15306S2		196P15306S4		196P153910S2		196P153910S4	
	200	.235 x 11/16	196P18392S2		196P18392S4		196P18392S2		196P18392S4	
	600	.312 x 13/16	196P18396S2		196P18396S4		196P18396S2		196P18396S4	
.018	1000	.400 x 1 1/16	196P183910S2		196P183910S4		196P183910S2		196P183910S4	
	100	.195 x 3/4	196P22301S2		196P22301S4		196P22391S2		196P22391S4	
	200	.235 x 3/4	196P22302S2		196P22302S4		196P22392S2		196P22392S4	
	300	.312 x 7/8	196P22303S2		196P22303S4		196P22393S2		196P22393S4	
	400	.312 x 7/8	196P22304S2		196P22304S4		196P22394S2		196P22394S4	
.022	600	.312 x 7/8	196P22306S2		196P22306S4		196P22396S2		196P22396S4	
	1000	.400 x 1 1/16	196P22306S2		196P22306S4		196P223910S2		196P223910S4	
	200	.312 x 13/16	196P27392S2		196P27392S4		196P27392S2		196P27392S4	
	400	.312 x 13/16	196P27394S2		196P27394S4		196P27394S2		196P27394S4	
	600	.400 x 1 1/16	196P27396S2		196P27396S4		196P27396S2		196P27396S4	
.027	1000	.400 x 1 1/16	196P273910S2		196P273910S4		196P273910S2		196P273910S4	
	100	.400 x 1 1/16	196P33301S2		196P33301S4		196P33391S2		196P33391S4	
	200	.562 x 1 1/8	196P33302S2		196P33302S4		196P33392S2		196P33392S4	
	300	.562 x 1 1/8	196P33303S2		196P33303S4		196P33393S2		196P33393S4	
	400	.562 x 1 1/8	196P33304S2		196P33304S4		196P33394S2		196P33394S4	
.033	600	.670 x 1 7/8	196P33306S2		196P33306S4		196P33396S2		196P33396S4	
	1000	.400 x 1 1/16	196P33306S2		196P33306S4		196P333910S2		196P333910S4	

\*For Style 4 units add .0625" to diameter and 1/16" to length.

# SPRAGUE CAPACITORS

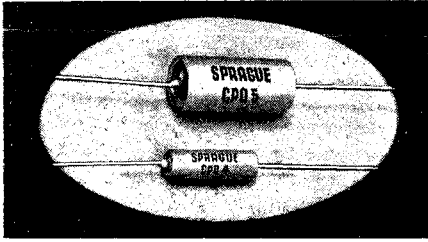
## TYPE 196P, continued

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)		Style 2 (bare metal case)		Style 4 (w/plastic sleeve*)	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.039	100	.312 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P39391S2	---	196P39391S4	
	200	.312 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	196P39392S2	---	196P39392S4		
	400	.400 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	196P39394S2	---	196P39394S4		
	600	.400 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	196P39396S2	---	196P39396S4		
	1000	.562 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	196P393910S2	---	196P393910S4		
.047	100	.312 x 7 <sup>1</sup> / <sub>16</sub>	196P47301S2	---	196P47301S4	---	196P47391S2	---	196P47391S4	
	200	.312 x 7 <sup>1</sup> / <sub>16</sub>	196P47302S2	---	196P47302S4	---	196P47392S2	---	196P47392S4	
	300	.312 x 7 <sup>1</sup> / <sub>16</sub>	196P47303S2	---	196P47303S4	---	196P47393S2	---	196P47393S4	
	400	.400 x 7 <sup>1</sup> / <sub>16</sub>	196P47304S2	---	196P47304S4	---	196P47394S2	---	196P47394S4	
	1000	.400 x 1 <sup>1</sup> / <sub>16</sub>	196P47306S2	---	196P47306S4	---	196P47396S2	---	196P47396S4	
.056	200	.312 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P56392S2	---	196P56392S4	
	400	.400 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	196P56394S2	---	196P56394S4		
	600	.400 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	196P56396S2	---	196P56396S4		
	1000	.562 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	196P563910S2	---	196P563910S4		
	.068	100	.312 x 7 <sup>1</sup> / <sub>16</sub>	196P68301S2	---	196P68301S4	---	196P68391S2	---	196P68391S4
200		.312 x 7 <sup>1</sup> / <sub>16</sub>	196P68302S2	---	196P68302S4	---	196P68392S2	---	196P68392S4	
300		.400 x 7 <sup>1</sup> / <sub>16</sub>	196P68303S2	---	196P68303S4	---	196P68393S2	---	196P68393S4	
400		.400 x 1 <sup>1</sup> / <sub>16</sub>	196P68304S2	---	196P68304S4	---	196P68394S2	---	196P68394S4	
1000		.562 x 1 <sup>1</sup> / <sub>16</sub>	196P68306S2	---	196P68306S4	---	196P68396S2	---	196P68396S4	
.082	100	.312 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P82391S2	---	196P82391S4	
	200	.400 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P82392S2	---	196P82392S4	
	400	.400 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P82394S2	---	196P82394S4	
	600	.562 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P82396S2	---	196P82396S4	
	1000	.562 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P823910S2	---	196P823910S4	
.1	100	.312 x 7 <sup>1</sup> / <sub>16</sub>	196P10401S2	---	196P10401S4	---	196P10491S2	---	196P10491S4	
	200	.400 x 7 <sup>1</sup> / <sub>16</sub>	196P10402S2	---	196P10402S4	---	196P10492S2	---	196P10492S4	
	300	.400 x 1 <sup>1</sup> / <sub>16</sub>	196P10403S2	---	196P10403S4	---	196P10493S2	---	196P10493S4	
	400	.400 x 1 <sup>1</sup> / <sub>16</sub>	196P10404S2	---	196P10404S4	---	196P10494S2	---	196P10494S4	
	1000	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P10406S2	---	196P10406S4	---	196P10496S2	---	196P10496S4	
.12	100	.400 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P12491S2	---	196P12491S4	
	200	.400 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P12492S2	---	196P12492S4	
	400	.562 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P12494S2	---	196P12494S4	
	600	.562 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P12496S2	---	196P12496S4	
	1000	.670 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P124910S2	---	196P124910S4	
.15	100	.400 x 7 <sup>1</sup> / <sub>16</sub>	196P15401S2	---	196P15401S4	---	196P15491S2	---	196P15491S4	
	200	.400 x 1 <sup>1</sup> / <sub>16</sub>	196P15402S2	---	196P15402S4	---	196P15492S2	---	196P15492S4	
	300	.400 x 1 <sup>1</sup> / <sub>16</sub>	196P15403S2	---	196P15403S4	---	196P15493S2	---	196P15493S4	
	400	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P15404S2	---	196P15404S4	---	196P15494S2	---	196P15494S4	
	1000	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P15406S2	---	196P15406S4	---	196P15496S2	---	196P15496S4	
.18	100	.400 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P18491S2	---	196P18491S4	
	200	.400 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P18492S2	---	196P18492S4	
	400	.562 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P18494S2	---	196P18494S4	
	600	.562 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P18496S2	---	196P18496S4	
	1000	.750 x 2 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P184910S2	---	196P184910S4	
.22	100	.400 x 1 <sup>1</sup> / <sub>16</sub>	196P22401S2	---	196P22401S4	---	196P22491S2	---	196P22491S4	
	200	.400 x 1 <sup>1</sup> / <sub>16</sub>	196P22402S2	---	196P22402S4	---	196P22492S2	---	196P22492S4	
	300	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P22403S2	---	196P22403S4	---	196P22493S2	---	196P22493S4	
	400	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P22404S2	---	196P22404S4	---	196P22494S2	---	196P22494S4	
	1000	.750 x 2 <sup>1</sup> / <sub>16</sub>	196P22406S2	---	196P22406S4	---	196P22496S2	---	196P22496S4	
.27	100	.400 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P27491S2	---	196P27491S4	
	200	.562 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P27492S2	---	196P27492S4	
	400	.562 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P27494S2	---	196P27494S4	
	600	.670 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P27496S2	---	196P27496S4	
	1000	.750 x 2 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P274910S2	---	196P274910S4	
.33	100	.400 x 1 <sup>3</sup> / <sub>16</sub>	196P33401S2	---	196P33401S4	---	196P33491S2	---	196P33491S4	
	200	.562 x 1 <sup>3</sup> / <sub>16</sub>	196P33402S2	---	196P33402S4	---	196P33492S2	---	196P33492S4	
	300	.562 x 1 <sup>3</sup> / <sub>16</sub>	196P33403S2	---	196P33403S4	---	196P33493S2	---	196P33493S4	
	400	.562 x 1 <sup>3</sup> / <sub>16</sub>	196P33404S2	---	196P33404S4	---	196P33494S2	---	196P33494S4	
	1000	.750 x 2 <sup>1</sup> / <sub>16</sub>	196P33406S2	---	196P33406S4	---	196P33496S2	---	196P33496S4	
.39	100	.562 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P39491S2	---	196P39491S4	
	200	.562 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P39492S2	---	196P39492S4	
	400	.670 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P39494S2	---	196P39494S4	
	600	.750 x 2 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P39496S2	---	196P39496S4	
	1000	1.000 x 2 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P394910S2	---	196P394910S4	
.47	100	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P47401S2	---	196P47401S4	---	196P47491S2	---	196P47491S4	
	200	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P47402S2	---	196P47402S4	---	196P47492S2	---	196P47492S4	
	300	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P47403S2	---	196P47403S4	---	196P47493S2	---	196P47493S4	
	400	.670 x 1 <sup>1</sup> / <sub>16</sub>	196P47404S2	---	196P47404S4	---	196P47494S2	---	196P47494S4	
	1000	1.000 x 2 <sup>1</sup> / <sub>16</sub>	196P47406S2	---	196P47406S4	---	196P47496S2	---	196P47496S4	
.56	100	.562 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P56491S2	---	196P56491S4	
	200	.670 x 1 <sup>3</sup> / <sub>16</sub>	---	---	---	---	196P56492S2	---	196P56492S4	
	.68	100	.562 x 1 <sup>3</sup> / <sub>16</sub>	196P68401S2	---	196P68401S4	---	196P68491S2	---	196P68491S4
200		.562 x 1 <sup>3</sup> / <sub>16</sub>	196P68402S2	---	196P68402S4	---	196P68492S2	---	196P68492S4	
300		.670 x 1 <sup>3</sup> / <sub>16</sub>	196P68403S2	---	196P68403S4	---	196P68493S2	---	196P68493S4	
.82	100	.670 x 1 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P82491S2	---	196P82491S4	
	200	.750 x 2 <sup>1</sup> / <sub>16</sub>	---	---	---	---	196P82492S2	---	196P82492S4	
1.0	100	.562 x 1 <sup>1</sup> / <sub>16</sub>	196P10501S2	---	196P10501S4	---	196P10591S2	---	196P10591S4	
	200	.670 x 1 <sup>1</sup> / <sub>16</sub>	196P10502S2	---	196P10502S4	---	196P10592S2	---	196P10592S4	

For Style 4 units add .0625" to diameter and 1/16" to length.

# SPRAGUE CAPACITORS

## TYPE CP04 CAPACITORS TO MIL-C-25A



- Impregnation with Vitamin Q assures capacitors exceed MIL-C-25A performance requirements.
- Available in Characteristic E (-55°C to +85°C) or Characteristic K (-55°C to +125°C).
- Inserted tab construction for applications where minimum size is necessary.
- Only popular insulated section (ungrounded case) capacitors are listed. For information on grounded case units, consult your Sprague Industrial Distributor.
- Positive hermetic closure of the metal cases assured by glass-to-metal solder-seal terminals.
- Call your Sprague Industrial Distributor for Quantity Prices.
- Type CP04 has plain metal case.

μF	WVDC	Size D. x L.	Characteristic E -55°C to +85°C				Characteristic K -55°C to +125°C			
			±20% Tol.		±10% Tol.		±20% Tol.		±10% Tol.	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	600	.235 x 3/4	CP04A1EF102M		CP04A1EF102K		CP04A1KF102M		CP04A1KF102K	
.0015	600	.235 x 3/4	CP04A1EF152M		CP04A1EF152K		CP04A1KF152M		CP04A1KF152K	
.0022	600	.235 x 3/4	CP04A1EF222M		CP04A1EF222K		CP04A1KF222M		CP04A1KF222K	
.0033	600	.235 x 3/4	CP04A1EF332M		CP04A1EF332K		CP04A1KF332M		CP04A1KF332K	
.0047	600	.235 x 3/4	CP04A1EF472M		CP04A1EF472K		CP04A1KF472M		CP04A1KF472K	
.0068	600	.235 x 3/4	CP04A1EF682M		CP04A1EF682K		CP04A1KF682M		CP04A1KF682K	
.01	400	.235 x 3/4	CP04A1EE103M		CP04A1EE103K		CP04A1KE103M		CP04A1KE103K	
	600	.312 x 7/8	CP04A1EF103M		CP04A1EF103K		CP04A1KF103M		CP04A1KF103K	
.015	200	.235 x 3/4	CP04A1EC153M		CP04A1EC153K		CP04A1KC153M		CP04A1KC153K	
	600	.312 x 7/8	CP04A1EF153M		CP04A1EF153K		CP04A1KF153M		CP04A1KF153K	
.022	200	.235 x 3/4	CP04A1EC223M		CP04A1EC223K		CP04A1KC223M		CP04A1KC223K	
	600	.312 x 7/8	CP04A1EF223M		CP04A1EF223K		CP04A1KF223M		CP04A1KF223K	
.033	100	.235 x 3/4	CP04A1EB333M		CP04A1EB333K		CP04A1KB333M		CP04A1KB333K	
	400	.312 x 7/8	CP04A1EE333M		CP04A1EE333K		CP04A1KE333M		CP04A1KE333K	
	600	.400 x 7/8	CP04A1EF333M		CP04A1EF333K		CP04A1KF333M		CP04A1KF333K	
.047	200	.312 x 7/8	CP04A1EC473M		CP04A1EC473K		CP04A1KC473M		CP04A1KC473K	
	400	.400 x 7/8	CP04A1EE473M		CP04A1EE473K		CP04A1KE473M		CP04A1KE473K	
	600	.400 x 1 1/4	CP04A1EF473M		CP04A1EF473K		CP04A1KF473M		CP04A1KF473K	
.068	200	.312 x 7/8	CP04A1EC683M		CP04A1EC683K		CP04A1KC683M		CP04A1KC683K	
	400	.400 x 1 1/4	CP04A1EE683M		CP04A1EE683K		CP04A1KE683M		CP04A1KE683K	
	600	.400 x 1 3/8	CP04A1EF683M		CP04A1EF683K		CP04A1KF683M		CP04A1KF683K	
	100	.312 x 7/8	CP04A1EB104M		CP04A1EB104K		CP04A1KB104M		CP04A1KB104K	
	200	.400 x 7/8	CP04A1EC104M		CP04A1EC104K		CP04A1KC104M		CP04A1KC104K	
	400	.400 x 1 1/4	CP04A1EE104M		CP04A1EE104K		CP04A1KE104M		CP04A1KE104K	
	600	.562 x 1 1/8	CP04A1EF104M		CP04A1EF104K		CP04A1KF104M		CP04A1KF104K	
.1	100	.400 x 7/8	CP04A1EB154M		CP04A1EB154K		CP04A1KB154M		CP04A1KB154K	
	200	.400 x 1 1/4	CP04A1EC154M		CP04A1EC154K		CP04A1KC154M		CP04A1KC154K	
	400	.562 x 1 1/4	CP04A1EE154M		CP04A1EE154K		CP04A1KE154M		CP04A1KE154K	
	600	.562 x 1 3/8	CP04A1EF154M		CP04A1EF154K		CP04A1KF154M		CP04A1KF154K	
.15	100	.400 x 1 3/8	CP04A1EB224M		CP04A1EB224K		CP04A1KB224M		CP04A1KB224K	
	200	.400 x 1 3/8	CP04A1EC224M		CP04A1EC224K		CP04A1KC224M		CP04A1KC224K	
	400	.562 x 1 3/8	CP04A1EE224M		CP04A1EE224K		CP04A1KE224M		CP04A1KE224K	
	600	.562 x 1 3/8	CP04A1EF224M		CP04A1EF224K		CP04A1KF224M		CP04A1KF224K	
.22	100	.400 x 1 3/8	CP04A1EB334M		CP04A1EB334K		CP04A1KB334M		CP04A1KB334K	
	200	.562 x 1 3/8	CP04A1EC334M		CP04A1EC334K		CP04A1KC334M		CP04A1KC334K	
	400	.562 x 1 3/8	CP04A1EE334M		CP04A1EE334K		CP04A1KE334M		CP04A1KE334K	
	600	.670 x 1 3/8	CP04A1EF334M		CP04A1EF334K		CP04A1KF334M		CP04A1KF334K	
.33	100	.562 x 1 3/8	CP04A1EB474M		CP04A1EB474K		CP04A1KB474M		CP04A1KB474K	
	200	.562 x 1 3/8	CP04A1EC474M		CP04A1EC474K		CP04A1KC474M		CP04A1KC474K	
	400	.670 x 1 3/8	CP04A1EE474M		CP04A1EE474K		CP04A1KE474M		CP04A1KE474K	
	600	.750 x 2 1/4	CP04A1EF474M		CP04A1EF474K		CP04A1KF474M		CP04A1KF474K	
.47	100	.562 x 1 3/8	CP04A1EB684M		CP04A1EB684K		CP04A1KB684M		CP04A1KB684K	
	200	.562 x 1 3/8	CP04A1EC684M		CP04A1EC684K		CP04A1KC684M		CP04A1KC684K	
	400	.750 x 2 1/4	CP04A1EE684M		CP04A1EE684K		CP04A1KE684M		CP04A1KE684K	
	600	1.0 x 1 3/8	CP04A1EF684M		CP04A1EF684K		CP04A1KF684M		CP04A1KF684K	
.68	100	.562 x 1 3/8	CP04A1EB105M		CP04A1EB105K		CP04A1KB105M		CP04A1KB105K	
	200	.670 x 1 3/8	CP04A1EC105M		CP04A1EC105K		CP04A1KC105M		CP04A1KC105K	
	400	1.0 x 1 3/8	CP04A1EF105M		CP04A1EF105K		CP04A1KF105M		CP04A1KF105K	

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# SPRAGUE CAPACITORS

## TYPE CP04 CAPACITORS TO MIL-C-25C

(±10% CAPACITANCE TOLERANCE, CHARACTERISTIC K)

μF	WVDC	D. x L.	Cat. No.*	μF	WVDC	D. x L.	Cat. No.*
.001	600	.235 x 3/4	CP04A1KF102K3	.1	100	.312 x 7/8	CP04A1KB104K3
.0012	600	.235 x 3/4	CP04A1KF122K3		200	.400 x 7/8	CP04A1KC104K3
.0015	600	.235 x 3/4	CP04A1KF152K3		400	.400 x 1 1/8	CP04A1KE104K3
.0018	600	.235 x 3/4	CP04A1KF182K3		600	.562 x 1 1/8	CP04A1KF104K3
.0022	600	.235 x 3/4	CP04A1KF222K3		1000	.562 x 1 1/8	CP04A1KG104K3
.0027	600	.235 x 3/4	CP04A1KF272K3	.12	100	.400 x 7/8	CP04A1KB124K3
.0033	600	.235 x 3/4	CP04A1KF332K3		200	.400 x 1 1/8	CP04A1KC124K3
.0039	600	.235 x 3/4	CP04A1KF392K3		400	.562 x 1 1/8	CP04A1KE124K3
.0047	600	.235 x 3/4	CP04A1KF472K3		600	.562 x 1 1/8	CP04A1KF124K3
.0056	600	.235 x 3/4	CP04A1KF562K3		1000	.670 x 1 1/8	CP04A1KG124K3
.0068	600	.235 x 3/4	CP04A1KF682K3	.15	100	.400 x 7/8	CP04A1KB154K3
.0082	400	.235 x 3/4	CP04A1KE822K3		200	.400 x 1 1/8	CP04A1KC154K3
	600	.312 x 7/8	CP04A1KF822K3		400	.562 x 1 1/8	CP04A1KE154K3
.01	400	.235 x 3/4	CP04A1KE103K3		600	.562 x 1 1/8	CP04A1KF154K3
	600	.312 x 7/8	CP04A1KF103K3		1000	.670 x 1 1/8	CP04A1KG154K3
.012	200	.235 x 3/4	CP04A1KC123K3	.18	100	.400 x 1 1/8	CP04A1KB184K3
	600	.312 x 7/8	CP04A1KF123K3		200	.400 x 1 1/8	CP04A1KC184K3
.015	200	.235 x 3/4	CP04A1KC153K3		400	.562 x 1 1/8	CP04A1KE184K3
	600	.312 x 7/8	CP04A1KF153K3		600	.562 x 1 1/8	CP04A1KF184K3
	1000	.400 x 7/8	CP04A1KG153K3		1000	.750 x 2 1/8	CP04A1KG184K3
.018	200	.235 x 3/4	CP04A1KC183K3	.22	100	.400 x 1 1/8	CP04A1KB224K3
	600	.312 x 7/8	CP04A1KF183K3		200	.400 x 1 1/8	CP04A1KC224K3
	1000	.400 x 1 1/8	CP04A1KG183K3		400	.562 x 1 1/8	CP04A1KE224K3
.022	200	.235 x 3/4	CP04A1KC223K3		600	.562 x 1 1/8	CP04A1KF224K3
	600	.312 x 7/8	CP04A1KF223K3		1000	.750 x 2 1/8	CP04A1KG224K3
	1000	.400 x 1 1/8	CP04A1KG223K3	.27	100	.400 x 1 1/8	CP04A1KB274K3
.027	100	.235 x 3/4	CP04A1KB273K3		200	.562 x 1 1/8	CP04A1KC274K3
	400	.312 x 7/8	CP04A1KE273K3		400	.562 x 1 1/8	CP04A1KE274K3
	600	.400 x 7/8	CP04A1KF273K3		600	.670 x 1 1/8	CP04A1KF274K3
	1000	.400 x 1 1/8	CP04A1KG273K3		1000	.750 x 2 1/8	CP04A1KG274K3
.033	100	.235 x 3/4	CP04A1KB333K3	.33	100	.400 x 1 1/8	CP04A1KB334K3
	400	.312 x 7/8	CP04A1KE333K3		200	.562 x 1 1/8	CP04A1KC334K3
	600	.400 x 7/8	CP04A1KF333K3		400	.562 x 1 1/8	CP04A1KE334K3
	1000	.400 x 1 1/8	CP04A1KG333K3		600	.670 x 1 1/8	CP04A1KF334K3
					1000	.750 x 2 1/8	CP04A1KG334K3
.039	200	.312 x 7/8	CP04A1KC393K3	.39	100	.562 x 1 1/8	CP04A1KB394K3
	400	.400 x 7/8	CP04A1KE393K3		200	.562 x 1 1/8	CP04A1KC394K3
	600	.400 x 7/8	CP04A1KF393K3		400	.670 x 1 1/8	CP05A1KE394K3
	1000	.562 x 1 1/8	CP04A1KG393K3		600	.750 x 2 1/8	CP04A1KF394K3
					1000	1.000 x 2 1/8	CP04A1KG394K3
.047	200	.312 x 7/8	CP04A1KC473K3	.47	100	.562 x 1 1/8	CP04A1KB474K3
	400	.400 x 7/8	CP04A1KE473K3		200	.562 x 1 1/8	CP04A1KC474K3
	600	.400 x 1 1/8	CP04A1KF473K3		400	.670 x 1 1/8	CP04A1KE474K3
	1000	.562 x 1 1/8	CP04A1KG473K3		600	.750 x 2 1/8	CP04A1KF474K3
					1000	1.000 x 2 1/8	CP04A1KG474K3
.056	200	.312 x 7/8	CP04A1KC563K3	.56	100	.562 x 1 1/8	CP04A1KB564K3
	400	.400 x 1 1/8	CP04A1KE563K3		200	.562 x 1 1/8	CP04A1KC564K3
	600	.400 x 1 1/8	CP04A1KF563K3		400	.750 x 2 1/8	CP04A1KE564K3
	1000	.562 x 1 1/8	CP04A1KG563K3		600	1.000 x 1 1/8	CP04A1KF564K3
.068	200	.312 x 7/8	CP04A1KC683K3	.68	100	.562 x 1 1/8	CP04A1KB684K3
	400	.400 x 1 1/8	CP04A1KE683K3		200	.562 x 1 1/8	CP04A1KC684K3
	600	.400 x 1 1/8	CP04A1KF683K3		400	.750 x 2 1/8	CP04A1KE684K3
	1000	.562 x 1 1/8	CP04A1KG683K3		600	1.000 x 1 1/8	CP04A1KF684K3
.082	100	.312 x 7/8	CP04A1KB823K3	.82	100	.562 x 1 1/8	CP04A1KB824K3
	200	.400 x 7/8	CP04A1KC823K3		200	.670 x 1 1/8	CP04A1KC824K3
	400	.400 x 1 1/8	CP04A1KE823K3		400	1.000 x 1 1/8	CP04A1KE824K3
	600	.562 x 1 1/8	CP04A1KF823K3				
	1000	.562 x 1 1/8	CP04A1KG823K3				
				1.0	100	.562 x 1 1/8	CP05A1KB105K3
					200	.670 x 1 1/8	CP05A1KC105K3
					400	1.000 x 1 1/8	CP04A1KE105K3

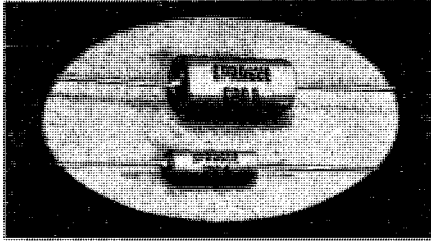
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\*For Vibration Grade 1, change last digit of cat. no. to 1

# SPRAGUE CAPACITORS

## TYPE CP05 CAPACITORS TO MIL-C-25C



- Vitamin Q impregnation assures performance above and beyond MIL-C-25C requirements.
- Inserted tab construction for applications where minimum size is necessary.
- Positive hermetic closure of the metal cases assured by glass-to-metal solder-seal terminals.
- Type CP05 has insulating sleeve.
- Capacitance Tolerance  $\pm 10\%$ . Characteristic K Temperature Range ( $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ ).
- Only popular insulated section (ungrounded case) capacitors are listed. For information on grounded case units, consult you Sprague Industrial Distributor.
- Call your Sprague Industrial Distributor for Quantity Prices.

$\mu\text{F}$	WVDC	D. x L.	Cat. No.*	$\mu\text{F}$	WVDC	D. x L.	Cat. No.*	$\mu\text{F}$	WVDC	D. x L.	Cat. No.*
.001	600	.298 x $\frac{1}{16}$	CP05A1KF102K3	600	.463 x $\frac{1}{16}$	CP05A1KF393K3		100	.463 x $\frac{1}{16}$	CP05A1KB224K3	
.0012	600	.298 x $\frac{1}{16}$	CP05A1KF122K3	1000	.625 x $\frac{1}{16}$	CP05A1KG393K3		200	.463 x $\frac{1}{16}$	CP05A1KC224K3	
.0015	600	.298 x $\frac{1}{16}$	CP05A1KF152K3		200	.375 x $\frac{1}{16}$	CP05A1KC473K3	.22	400	.625 x $\frac{1}{16}$	CP05A1KE224K3
.0018	600	.298 x $\frac{1}{16}$	CP05A1KF182K3	.047	400	.463 x $\frac{1}{16}$	CP05A1KE473K3	600	.625 x $\frac{1}{16}$	CP05A1KF224K3	
.0022	600	.298 x $\frac{1}{16}$	CP05A1KF222K3	600	.463 x $\frac{1}{16}$	CP05A1KF473K3		1000	.813 x $\frac{2}{16}$	CP05A1KG224K3	
.0027	600	.298 x $\frac{1}{16}$	CP05A1KF272K3	1000	.625 x $\frac{1}{16}$	CP05A1KG473K3		100	.463 x $\frac{1}{16}$	CP05A1KB274K3	
.0033	600	.298 x $\frac{1}{16}$	CP05A1KF332K3	200	.375 x $\frac{1}{16}$	CP05A1KC563K3		200	.625 x $\frac{1}{16}$	CP05A1KC274K3	
.0039	600	.298 x $\frac{1}{16}$	CP05A1KF392K3	.056	400	.463 x $\frac{1}{16}$	CP05A1KE563K3	.27	400	.625 x $\frac{1}{16}$	CP05A1KE274K3
.0047	600	.298 x $\frac{1}{16}$	CP05A1KF472K3	600	.463 x $\frac{1}{16}$	CP05A1KF563K3		600	.733 x $\frac{1}{16}$	CP05A1KF274K3	
.0056	600	.298 x $\frac{1}{16}$	CP05A1KF562K3	1000	.625 x $\frac{1}{16}$	CP05A1KG563K3		1000	.813 x $\frac{2}{16}$	CP05A1KG274K3	
.0068	600	.298 x $\frac{1}{16}$	CP05A1KF682K3		200	.375 x $\frac{1}{16}$	CP05A1KC683K3	100	.463 x $\frac{1}{16}$	CP05A1KB334K3	
.0082	400	.298 x $\frac{1}{16}$	CP05A1KE822K3	.068	400	.463 x $\frac{1}{16}$	CP05A1KE683K3	200	.625 x $\frac{1}{16}$	CP05A1KC334K3	
	600	.375 x $\frac{1}{16}$	CP05A1KF822K3	600	.463 x $\frac{1}{16}$	CP05A1KF685K3		400	.625 x $\frac{1}{16}$	CP05A1KE334K3	
				1000	.625 x $\frac{1}{16}$	CP05A1KG683K3		600	.733 x $\frac{1}{16}$	CP05A1KF334K3	
.01	400	.298 x $\frac{1}{16}$	CP05A1KE103K3		100	.375 x $\frac{1}{16}$	CP05A1KB823K3	100	.625 x $\frac{1}{16}$	CP05A1KB394K3	
	600	.375 x $\frac{1}{16}$	CP05A1KF103K3	200	.463 x $\frac{1}{16}$	CP05A1KC823K3		200	.625 x $\frac{1}{16}$	CP05A1KC394K3	
.012	200	.298 x $\frac{1}{16}$	CP05A1KC123K3	.082	400	.463 x $\frac{1}{16}$	CP05A1KE823K3	400	.733 x $\frac{1}{16}$	CP05A1KE394K3	
	600	.375 x $\frac{1}{16}$	CP05A1KF123K3	600	.625 x $\frac{1}{16}$	CP05A1KF823K3		600	.813 x $\frac{2}{16}$	CP05A1KF394K3	
				1000	.625 x $\frac{1}{16}$	CP05A1KG823K3		1000	1.063 x $\frac{2}{16}$	CP05A1KG394K3	
	200	.298 x $\frac{1}{16}$	CP05A1KC153K3		100	.463 x $\frac{1}{16}$	CP05A1KB104K3	100	.625 x $\frac{1}{16}$	CP05A1KB474K3	
.015	600	.375 x $\frac{1}{16}$	CP05A1KF153K3	200	.463 x $\frac{1}{16}$	CP05A1KC104K3		200	.625 x $\frac{1}{16}$	CP05A1KC474K3	
	1000	.463 x $\frac{1}{16}$	CP05A1KG153K3	400	.463 x $\frac{1}{16}$	CP05A1KE104K3		400	.733 x $\frac{1}{16}$	CP05A1KE474K3	
	200	.298 x $\frac{1}{16}$	CP05A1KC183K3	600	.625 x $\frac{1}{16}$	CP05A1KF104K3		600	.813 x $\frac{2}{16}$	CP05A1KF474K3	
.018	600	.375 x $\frac{1}{16}$	CP05A1KF183K3	1000	.625 x $\frac{1}{16}$	CP05A1KG104K3		1000	1.063 x $\frac{2}{16}$	CP05A1KG474K3	
	1000	.463 x $\frac{1}{16}$	CP05A1KG183K3		100	.463 x $\frac{1}{16}$	CP05A1KB124K3	100	.625 x $\frac{1}{16}$	CP05A1KB564K3	
	200	.298 x $\frac{1}{16}$	CP05A1KC223K3	200	.463 x $\frac{1}{16}$	CP05A1KC124K3		200	.625 x $\frac{1}{16}$	CP05A1KC564K3	
.022	600	.375 x $\frac{1}{16}$	CP05A1KF223K3	.12	400	.625 x $\frac{1}{16}$	CP05A1KE124K3	.56	400	.813 x $\frac{2}{16}$	CP05A1KE564K3
	1000	.463 x $\frac{1}{16}$	CP05A1KG223K3	600	.625 x $\frac{1}{16}$	CP05A1KF124K3		600	1.063 x $\frac{1}{16}$	CP05A1KF564K3	
	1000	.463 x $\frac{1}{16}$	CP05A1KG223K3	1000	.733 x $\frac{1}{16}$	CP05A1KG124K3					
	100	.298 x $\frac{1}{16}$	CP05A1KB273K3		100	.463 x $\frac{1}{16}$	CP05A1KB154K3	100	.625 x $\frac{1}{16}$	CP05A1KB684K3	
.027	400	.375 x $\frac{1}{16}$	CP05A1KE273K3		200	.463 x $\frac{1}{16}$	CP05A1KC154K3	.68	200	.625 x $\frac{1}{16}$	CP05A1KC684K3
	600	.463 x $\frac{1}{16}$	CP05A1KF273K3		400	.625 x $\frac{1}{16}$	CP05A1KE154K3	400	.813 x $\frac{2}{16}$	CP05A1KE684K3	
	1000	1.463 x $\frac{1}{16}$	CP05A1KG273K3	.15	600	.625 x $\frac{1}{16}$	CP05A1KF154K3	600	1.063 x $\frac{1}{16}$	CP05A1KF684K3	
	100	.298 x $\frac{1}{16}$	CP05A1KB333K3		1000	.733 x $\frac{1}{16}$	CP05A1KG154K3		100	.625 x $\frac{1}{16}$	CP05A1KB824K3
.033	400	.375 x $\frac{1}{16}$	CP05A1KE333K3		100	.463 x $\frac{1}{16}$	CP05A1KB184K3	.82	200	.733 x $\frac{1}{16}$	CP05A1KC824K3
	600	.463 x $\frac{1}{16}$	CP05A1KF333K3		200	.463 x $\frac{1}{16}$	CP05A1KC184K3	400	1.063 x $\frac{1}{16}$	CP05A1KE824K3	
	1000	1.463 x $\frac{1}{16}$	CP05A1KG333K3	.18	400	.625 x $\frac{1}{16}$	CP05A1KE184K3	100	.625 x $\frac{1}{16}$	CP05A1KB105K3	
	200	.375 x $\frac{1}{16}$	CP05A1KC393K3		600	.625 x $\frac{1}{16}$	CP05A1KF184K3	200	.733 x $\frac{1}{16}$	CP05A1KC105K3	
.039	400	.463 x $\frac{1}{16}$	CP05A1KE393K3		1000	.813 x $\frac{2}{16}$	CP05A1KG184K3	400	1.063 x $\frac{1}{16}$	CP05A1KE105K3	

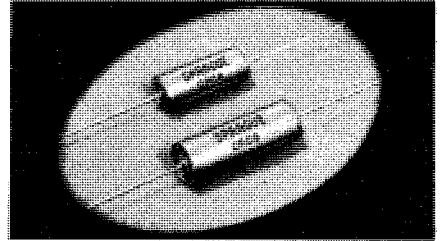
\*For Vibration Grade 1, change last digit of Catalog Number to "1."

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# SPRAGUE CAPACITORS

## TYPE CP08 CAPACITORS TO MIL-C-25C

- Vitamin Q impregnation assures performance above and beyond MIL-C-25C requirements.
- Positive hermetic closure of the metal cases with glass-to-metal solder-seal terminals.
- Capacitance Tolerance  $\pm 10\%$ . Characteristic K Temperature Range ( $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ ).
- Type CP08 has plain metal case.
- Extended foil (so-called non-inductive section) construction.
- Listed below are popular insulated section (ungrounded case) capacitors. Consult your Sprague Industrial Distributor for information on grounded case units.
- Call your Sprague Industrial Distributor for Quantity Prices.



$\mu\text{F}$	WVDC	D. x L.	Cat. No.*	$\mu\text{F}$	WVDC	D. x L.	Cat. No.*	$\mu\text{F}$	WVDC	D. x L.	Cat. No.*
.001	600	.235 x 3/4	CP08A1KF102K3	100	.235 x 3/4	CP08A1KB123K3		200	.400 x 7/8	CP08A1KC683K3	
	1000	.400 x 7/8	CP08A1KG102K3	.012	400	.312 x 7/8	CP08A1KE123K3	.068	400	.400 x 1 1/8	CP08A1KE683K3
.0012	600	.235 x 3/4	CP08A1KF122K3		600	.400 x 7/8	CP08A1KF123K3		600	.562 x 1 1/8	CP08A1KF683K3
	1000	.400 x 7/8	CP08A1KG122K3		1000	.400 x 1 1/8	CP08A1KG123K3		1000	.562 x 1 5/8	CP08A1KG683K3
.0015	600	.235 x 3/4	CP08A1KF152K3		100	.235 x 3/4	CP08A1KB153K3		100	.400 x 7/8	CP08A1KB823K3
	1000	.400 x 7/8	CP08A1KG152K3	.015	400	.312 x 7/8	CP08A1KE153K3		200	.400 x 1 1/8	CP08A1KC823K3
.0018	600	.235 x 3/4	CP08A1KF182K3		600	.400 x 7/8	CP08A1KF153K3		400	.562 x 1 1/8	CP08A1KE823K3
	1000	.400 x 7/8	CP08A1KG182K3		1000	.400 x 1 1/8	CP08A1KG153K3	.082	400	.562 x 1 3/8	CP08A1KF823K3
.0022	600	.235 x 3/4	CP08A1KF222K3		200	.312 x 7/8	CP08A1KC183K3		600	.562 x 1 3/8	CP08A1KF823K3
	1000	.400 x 7/8	CP08A1KG222K3	.018	600	.400 x 7/8	CP08A1KF183K3		1000	.670 x 1 5/8	CP08A1KG823K3
					1000	.400 x 1 3/8	CP08A1KG183K3		100	.400 x 7/8	CP08A1KB104K3
.0027	400	.235 x 3/4	CP08A1KE272K3		200	.312 x 7/8	CP08A1KC223K3	.1	400	.562 x 1 1/8	CP08A1KE104K3
	600	.312 x 7/8	CP08A1KF272K3		400	.400 x 7/8	CP08A1KF223K3		600	.562 x 1 3/8	CP08A1KF104K3
	1000	.400 x 7/8	CP08A1KG272K3	.022	600	.400 x 7/8	CP08A1KF223K3		1000	.670 x 1 5/8	CP08A1KG104K3
					1000	.400 x 1 3/8	CP08A1KG223K3		100	.400 x 1 1/8	CP08A1KB124K3
.0033	400	.235 x 3/4	CP08A1KE332K3		200	.312 x 7/8	CP08A1KC273K3	.12	200	.400 x 1 3/8	CP08A1KC124K3
	600	.312 x 7/8	CP08A1KF332K3		400	.400 x 7/8	CP08A1KE273K3		400	.562 x 1 3/8	CP08A1KE124K3
	1000	.400 x 7/8	CP08A1KG332K3	.027	600	.400 x 1 1/8	CP08A1KF273K3		600	.562 x 1 5/8	CP08A1KF124K3
					1000	.562 x 1 3/8	CP08A1KG273K3		1000	.670 x 1 7/8	CP08A1KG124K3
.0039	200	.235 x 3/4	CP08A1KC392K3		200	.312 x 7/8	CP08A1KC333K3		100	.400 x 1 1/8	CP08A1KB154K3
	600	.312 x 7/8	CP08A1KF392K3		400	.400 x 7/8	CP08A1KE333K3	.15	200	.400 x 1 3/8	CP08A1KC154K3
	1000	.400 x 7/8	CP08A1KG392K3	.033	600	.400 x 1 1/8	CP08A1KF333K3		400	.562 x 1 5/8	CP08A1KF154K3
					1000	.562 x 1 3/8	CP08A1KG333K3		600	.562 x 1 5/8	CP08A1KF154K3
.0047	200	.235 x 3/4	CP08A1KC472K3		100	.312 x 7/8	CP08A1KB393K3		1000	.670 x 1 7/8	CP08A1KG154K3
	600	.312 x 7/8	CP08A1KF472K3		200	.400 x 7/8	CP08A1KC393K3		100	.400 x 1 1/8	CP08A1KB184K3
	1000	.400 x 7/8	CP08A1KG472K3	.039	200	.312 x 7/8	CP08A1KB473K3	.18	200	.562 x 1 1/8	CP08A1KC184K3
					400	.400 x 1 1/8	CP08A1KE393K3		400	.562 x 1 3/8	CP08A1KE184K3
.0056	200	.235 x 3/4	CP08A1KC562K3		600	.400 x 1 3/8	CP08A1KF393K3		600	.562 x 1 5/8	CP08A1KF184K3
	600	.312 x 7/8	CP08A1KF562K3		1000	.562 x 1 3/8	CP08A1KG393K3		1000	.750 x 2 1/8	CP08A1KG184K3
	1000	.400 x 7/8	CP08A1KG562K3		100	.312 x 7/8	CP08A1KB473K3		100	.400 x 1 3/8	CP08A1KB224K3
					200	.400 x 7/8	CP08A1KC473K3	.22	200	.562 x 1 5/8	CP08A1KC224K3
.0068	200	.235 x 3/4	CP08A1KC682K3		400	.400 x 1 1/8	CP08A1KE473K3		400	.562 x 1 5/8	CP08A1KE224K3
	600	.312 x 7/8	CP08A1KF682K3	.047	600	.400 x 1 3/8	CP08A1KF473K3		600	.670 x 1 5/8	CP08A1KF224K3
	1000	.400 x 7/8	CP08A1KG682K3		1000	.562 x 1 3/8	CP08A1KG473K3		1000	.750 x 2 1/8	CP08A1KG224K3
					200	.400 x 7/8	CP08A1KC563K3		100	.562 x 1 5/8	CP08A1KB274K3
.0082	100	.235 x 3/4	CP08A1KB822K3		400	.400 x 1 3/8	CP08A1KE563K3	.27	200	.562 x 1 3/8	CP08A1KC274K3
	600	.312 x 7/8	CP08A1KF822K3	.056	600	.562 x 1 1/8	CP08A1KF563K3		400	.670 x 1 5/8	CP08A1KE274K3
	1000	.400 x 7/8	CP08A1KG822K3		1000	.562 x 1 3/8	CP08A1KG563K3		600	.750 x 2 1/8	CP08A1KF274K3
									1000	1.000 x 2 1/8	CP08A1KG274K3

\*For Vibration Grade 1, change last digit of Catalog Number to "1."

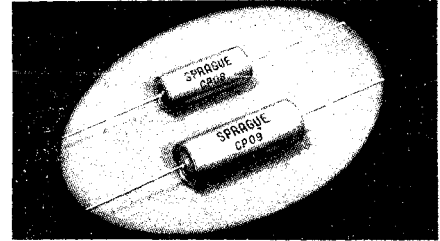
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# SPRAGUE CAPACITORS

## TYPE CP09 CAPACITORS TO MIL-C-25A

- Vitamin Q impregnation assures performance above and beyond MIL-C-25A requirements.
- Positive hermetic closure of the metal cases with glass-to-metal solder-seal terminals.
- Available in Characteristic E (-55°C to +85°C) or Characteristic K (-55°C to +125°C).
- Type CP09 has insulating sleeve.
- Extended foil, non-inductive section construction.
- Listed below are popular insulated section (ungrounded case) capacitors. Consult your Sprague Industrial Distributor for information on grounded case units.
- Call your Sprague Industrial Distributor for Quantity Prices.



μF	WVDC	Size D. x L.	Characteristic E -55°C to +85°C				Characteristic K -55°C to +125°C			
			±20% Tol.		±10% Tol.		±20% Tol.		±10% Tol.	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF102M		CP09A1EF102K		CP09A1KF102M		CP09A1KF102K	
.0015	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF152M		CP09A1EF152K		CP09A1KF152M		CP09A1KF152K	
.0022	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF222M		CP09A1EF222K		CP09A1KF222M		CP09A1KF222K	
.0033	400	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EE332M		CP09A1EE332K		CP09A1KE332M		CP09A1KE332K	
	600	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF332M		CP09A1EF332K		CP09A1KF332M		CP09A1KF332K	
.0047	200	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC472M		CP09A1EC472K		CP09A1KC472M		CP09A1KC472K	
	600	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF472M		CP09A1EF472K		CP09A1KF472M		CP09A1KF472K	
.0068	200	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC682M		CP09A1EC682K		CP09A1KC682M		CP09A1KC682K	
	600	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF682M		CP09A1EF682K		CP09A1KF682M		CP09A1KF682K	
.01	100	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB103M		CP09A1EB103K		CP09A1KB103M		CP09A1KB103K	
	600	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF103M		CP09A1EF103K		CP09A1KF103M		CP09A1KF103K	
.015	100	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB153M		CP09A1EB153K		CP09A1KB153M		CP09A1KB153K	
	400	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EE153M		CP09A1EE153K		CP09A1KE153M		CP09A1KE153K	
	600	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF153M		CP09A1EF153K		CP09A1KF153M		CP09A1KF153K	
.022	200	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC223M		CP09A1EC223K		CP09A1KC223M		CP09A1KC223K	
	600	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF223M		CP09A1EF223K		CP09A1KF223M		CP09A1KF223K	
.033	200	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC333M		CP09A1E333K		CP09A1KC333M		CP09A1KC333K	
	400	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EE333M		CP09A1EE333K		CP09A1KE333M		CP09A1KE333K	
	600	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF333M		CP09A1EF333K		CP09A1KF333M		CP09A1KF333K	
.047	100	.375 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB473M		CP09A1EB473K		CP09A1KB473M		CP09A1KB473K	
	200	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC473M		CP09A1EC473K		CP09A1KC473M		CP09A1KC473K	
	600	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF473M		CP09A1EF473K		CP09A1KF473M		CP09A1KF473K	
.068	200	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC683M		CP09A1EC683K		CP09A1KC683M		CP09A1KC683K	
	400	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EE683M		CP09A1EE683K		CP09A1KE683M		CP09A1KE683K	
	600	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF683M		CP09A1EF683K		CP09A1KF683M		CP09A1KF683K	
.1	100	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB104M		CP09A1EB104K		CP09A1KB104M		CP09A1KB104K	
	200	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC104M		CP09A1EC104K		CP09A1KC104M		CP09A1KC104K	
	400	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EE104M		CP09A1EE104K		CP09A1KE104M		CP09A1KE104K	
	600	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EF104M		CP09A1EF104K		CP09A1KF104M		CP09A1KF104K	
.15	100	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB154M		CP09A1EB154K		CP09A1KB154M		CP09A1KB154K	
	200	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC154M		CP09A1EC154K		CP09A1KC154M		CP09A1KC154K	
	400	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EE154M		CP09A1EE154K		CP09A1KE154M		CP09A1KE154K	
	600	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EF154M		CP09A1EF154K		CP09A1KF154M		CP09A1KF154K	
.22	100	.463 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB224M		CP09A1EB224K		CP09A1KB224M		CP09A1KB224K	
	200	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC224M		CP09A1EC224K		CP09A1KC224M		CP09A1KC224K	
	400	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EE224M		CP09A1EE224K		CP09A1KE224M		CP09A1KE224K	
	600	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EF224M		CP09A1EF224K		CP09A1KF224M		CP09A1KF224K	
.33	100	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB334M		CP09A1EB334K		CP09A1KB334M		CP09A1KB334K	
	200	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EC334M		CP09A1EC334K		CP09A1KC334M		CP09A1KC334K	
	600	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EE334M		CP09A1EE334K		CP09A1KE334M		CP09A1KE334K	
.47	100	.813 x 2 <sup>3</sup> / <sub>16</sub>	CP09A1EF334M		CP09A1EF334K		CP09A1KF334M		CP09A1KF334K	
	200	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1EB474M		CP09A1EB474K		CP09A1KB474M		CP09A1KB474K	
	400	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EC474M		CP09A1EC474K		CP09A1KC474M		CP09A1KC474K	
	600	.813 x 2 <sup>3</sup> / <sub>16</sub>	CP09A1EE474M		CP09A1EE474K		CP09A1KE474M		CP09A1KE474K	
.68	100	.813 x 2 <sup>3</sup> / <sub>16</sub>	CP09A1EF474M		CP09A1EF474K		CP09A1KF474M		CP09A1KF474K	
	200	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EB684M		CP09A1EB684K		CP09A1KB684M		CP09A1KB684K	
1.0	100	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EC684M		CP09A1EC684K		CP09A1KC684M		CP09A1KC684K	
	200	.813 x 2 <sup>3</sup> / <sub>16</sub>	CP09A1EE684M		CP09A1EE684K		CP09A1KE684M		CP09A1KE684K	
1.0	100	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1EB105M		CP09A1EB105K		CP09A1KB105M		CP09A1KB105K	
	200	.813 x 2 <sup>3</sup> / <sub>16</sub>	CP09A1EF105M		CP09A1EF105K		CP09A1KF105M		CP09A1KF105K	

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# SPRAGUE CAPACITORS

## TYPE CP09 CAPACITORS TO MIL-C-25C

(±10% CAPACITANCE TOLERANCE, CHARACTERISTIC K)

μF	WVDC	D. x L.	Cat. No.
.001	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF102K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG102K3
.0012	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF122K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG122K3
.0015	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF152K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG152K3
.0018	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF182K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG182K3
.0022	600	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF222K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG222K3
.0027	400	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KE272K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF272K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG272K3
.0033	400	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KE332K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF332K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG332K3
.0039	200	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KC392K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF393K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG393K3
.0047	200	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KC472K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF472K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG472K3
.0056	200	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KC562K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF562K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG562K3
.0068	200	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KC682K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF682K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG682K3
.0082	100	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KB822K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF822K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG822K3
.01	100	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KB103K3
	600	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF103K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG103K3
.012	100	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KB123K3
	400	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE123K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF123K3
.015	100	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KB153K3
	400	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE153K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF153K3
.018	100	.298 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KB183K3
	400	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE183K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF183K3
.022	200	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC223K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF223K3
	1000	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KG223K3

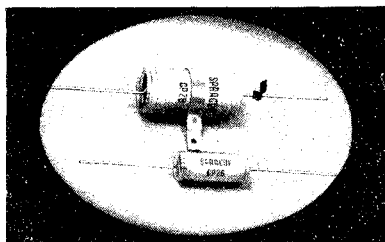
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μF	WVDC	D. x L.	Cat. No.
.027	200	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC273K3
	400	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE273K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF273K3
	1000	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KG273K3
.033	200	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC333K3
	400	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE333K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF333K3
	1000	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KG333K3
.039	100	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB393K3
	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC393K3
	400	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE393K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF393K3
.047	100	.375 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB473K3
	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC473K3
	400	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE473K3
	600	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KF473K3
.056	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC563K3
	400	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE563K3
	600	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF563K3
	1000	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KG563K3
.068	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC683K3
	400	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KE683K3
	600	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF683K3
	1000	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KG683K3
.082	100	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB823K3
	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC823K3
	400	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KE823K3
	600	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF823K3
.1	1000	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KG823K3
	100	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB104K3
	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC104K3
	400	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KE104K3
.12	600	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KF104K3
	1000	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KG104K3
	100	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB124K3
	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC124K3
.15	400	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KE124K3
	600	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KF124K3
	1000	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KG124K3
	100	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB154K3
.18	200	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KC154K3
	400	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KE154K3
	600	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KF154K3
	1000	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KG154K3
.22	100	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB184K3
	200	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KC184K3
	400	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KE184K3
	600	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KF184K3
.22	1000	.813 x 2 <sup>3</sup> / <sub>16</sub>	CP09A1KG184K3
	100	.463 x 1 <sup>5</sup> / <sub>16</sub>	CP09A1KB224K3
	200	.625 x 1 <sup>3</sup> / <sub>16</sub>	CP09A1KC224K3
	400	.625 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KE224K3
.22	600	.733 x 1 <sup>1</sup> / <sub>16</sub>	CP09A1KF224K3
	1000	.813 x 2 <sup>3</sup> / <sub>16</sub>	CP09A1KG224K3

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# SPRAGUE CAPACITORS

## MIL-C-25A CAPACITORS — TYPES CP26 and CP28



- Impregnated with specially processed mineral oil to exceed performance requirements of Specification MIL-C-25A
- Type CP26 has outer insulating sleeve — Type CP28 has insulating sleeve plus metal strap for radial mounting.
- Hermetically sealed for protection against leakage and contamination

- Meet temperature characteristic E (−55°C to +85°C operation)
- Capacitor sections are insulated from metal cases
- Call Your Sprague Distributor for Current Prices

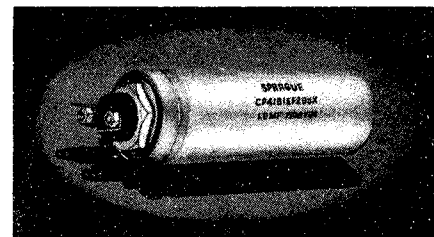
**NOTE:** Capacitors listed below have a capacitance tolerance of ±10%. For ±20% units, change last letter in catalog number from K to M.

TYPE CP26 (without Mounting Bracket)				Call Your Sprague Distributor for Current Prices	TYPE CP28 (Radial Mounting Bracket)				Call Your Sprague Distributor for Current Prices
μF	Volts	Diam. x Length	Cat. No.		μF	Volts	Diam. x Length	Cat. No.	
.006	600	1/2 x 1 1/8	CP26A1EF602K		.1	600	1 1/8 x 2 1/8	CP28A1EF104K	
.01	600	1/2 x 1 3/8	CP26A1EF103K		.25	600	1 1/8 x 2 3/8	CP28A1EF254K	
.02	600	1/2 x 1 13/16	CP26A1EF203K		.5	600	1 1/8 x 2 13/16	CP28A1EF504K	
.05	600	1 1/16 x 1 11/16	CP26A1EF503K						
.5	200	1 1/16 x 2 3/8	CP26A1EC504K						

## MIL-C-25A CAPACITORS — TYPES CP40 and CP41

- Designed and manufactured for service life and performance characteristics exceeding MIL requirements
- Type CP40 has screw and nut connection on positive terminal, can is negative — Type CP41 has two solder-lug terminals, with capacitor section insulated from metal case

- Impregnated with specially processed mineral oil for characteristic E operation — Will withstand wide temperature variations (−55°C to +85°C)
- Hermetically sealed in metal cases, with threaded screw necks for mounting purposes
- Call Your Sprague Distributor for Current Prices



**NOTE:** Capacitors listed below have a capacitance tolerance of ±10%. For ±20% units, change last letter in catalog number from K to M.

TYPE CP40 (One Terminal)				Call Your Sprague Distributor for Current Prices	TYPE CP41 (Two Terminals)				Call Your Sprague Distributor for Current Prices
μF	Volts	Diam. x Length	Cat. No.		μF	Volts	Diam. x Length	Cat. No.	
2.0	600	1 1/2 x 3 3/8	CP40C2EF205K		2.0	600	1 1/2 x 3 3/8	CP41B1EF205K	
4.0	600	1 1/2 x 5 1/4	CP40C2EF405K		4.0	600	1 1/2 x 5 1/4	CP41B1EF405K	



## MIL-C-25A CAPACITORS—TYPE CP53

- Impregnated with specially processed mineral oil to exceed performance requirements of MIL-C-25A
- Hermetically sealed, with silicone rubber compression terminals
- Rated for −55°C to +85°C operation

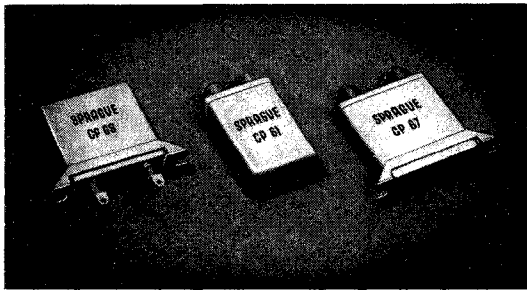
- Drawn metal cases have mounting flanges an integral part of containers
- Single and dual capacitance units have insulating sections — triple capacitance units have grounded cases
- Call Your Sprague Distributor for Current Prices

**NOTE:** Capacitors listed below have capacitance tolerances of +20%, −10% (V) or ±10% (K). For ±20% units, change last letter in catalog number from K to M or V to M.

μF	Volts	L. x W. x H.	Cat. No.	Call Your Sprague Distributor for Current Prices	μF	Volts	L. x W. x H.	Cat. No.	Call Your Sprague Distributor for Current Prices		
Single Capacitance					Dual Capacitance						
.05	600	1 1/8 x 1 x 3/4	CP53B1EF503K		.05 + .05	600	1 1/8 x 1 x 3/4	CP53B4EF503V			
.05	1000	1 1/8 x 1 x 3/4	CP53B1EG503K		.05 + .05	1000	1 1/8 x 1 x 3/4	CP53B4EG503V			
.1	600	1 1/8 x 1 x 3/4	CP53B1EF104K		.1 + .1	600	1 1/8 x 1 x 3/4	CP53B4EF104V			
.1	1000	1 1/8 x 1 x 3/4	CP53B1EG104K		.1 + .1	1000	1 1/8 x 1 x 3/4	CP53B4EG104V			
.25	600	1 1/8 x 1 x 3/4	CP53B1EF254K		.25 + .25	600	1 1/8 x 1 x 1	CP53B4EF254V			
.25	1000	1 1/8 x 1 x 3/8	CP53B1EG254K		.25 + .25	1000	2 x 1 3/4 x 7/8	CP53B4EG254V			
.5	400	1 1/8 x 1 x 7/8	CP53B1EE504K		.5 + .5	600	2 x 1 3/4 x 1	CP53B4EF504V			
.5	600	1 1/8 x 1 x 1	CP53B1EF504K		.5 + .5	1000	2 x 2 x 1 1/8	CP53B4EG504V			
.5	1000	2 x 1 3/4 x 7/8	CP53B1EG504K		1.0 + 1.0	600	2 x 2 x 1 1/8	CP53B4EF105V			
1.0	600	2 x 1 3/4 x 1	CP53B1EF105K		Triple Capacitance						
1.0	1000	2 x 2 x 1 1/8	CP53B1EG105K		.05 + .05 + .05	600	1 1/8 x 1 x 3/4	CP53B5EF503V			
2.0	100	2 x 1 3/4 x 7/8	CP53B1EB205K		.1 + .1 + .1	600	1 1/8 x 1 x 3/8	CP53B5EF104V			
2.0	200	2 x 2 x 1	CP53B1EC205K		.5 + .5 + .5	600	2 x 2 x 1 1/8	CP53B5EF504V			
2.0	600	2 x 2 x 1 1/8	CP53B1EF205K								
4.0	100	2 x 2 x 1 1/8	CP53B1EB405K								

# SPRAGUE CAPACITORS

## TYPE CP61, CP67, CP69, CP91 CAPACITORS to MIL-C-25A



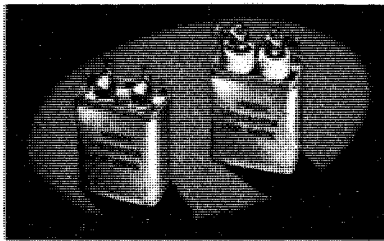
- Mineral Oil Impregnated for Minimum Capacitance Change with Temperature
- Hermetically Sealed in Drawn Metal Cases
- Have Silicone Rubber Compression Terminals for Positive Prevention Against Entrance of Moisture or Leakage of Impregnant
- Designed and Manufactured for Service Life Beyond Specification Requirements
- Units Listed are Most Popular Ratings. Complete Military Line Available from Sprague
- CP61 and CP91 require separate mounting brackets.
- CP67 and CP69 have integral channel brackets
- For quantity prices, see your Sprague Industrial Distributor.

**NOTE:** These units have capacitance tolerances of  $\pm 10\%$  (K) or  $\pm 20, -10\%$  (V). For  $\pm 20\%$  units, change the last letter in the catalog number from K to M or V to M.

$\mu F$	WVDC	CAT. NO.	SIZE	Mounting Brackets* CAT. NO.
<b>TYPE CP61</b>				
.05	600	CP61B1EF503K	$1\frac{1}{8} \times 1\frac{1}{8} \times 1\frac{1}{8}$	CP06-FA1
.1	600	CP61B1EF104K	$1\frac{1}{8} \times 1\frac{1}{8} \times 1\frac{3}{8}$	CP06-FA2
.25	600	CP61B1EF254K	$1\frac{1}{8} \times 1\frac{1}{8} \times 1\frac{3}{8}$	CP06-FA3
.5	600	CP61B1EF504K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2$	CP06-FA4
1.0	600	CP61B1EF105K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{2}$	CP06-FA5
.1 + .1	600	CP61B6EF104K	$1\frac{1}{8} \times 1\frac{1}{8} \times 1\frac{3}{8}$	CP06-FA3
.25 + .25	600	CP61B6EF254V	$1\frac{1}{8} \times 1\frac{1}{8} \times 2$	CP06-FA4
.5 + .5	600	CP61B6EF504V	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{3}{4}$	CP06-FA6
<b>TYPE CP91</b>				
.05	600	CP91B1EF503K	$1\frac{1}{8} \times \frac{3}{8} \times 1\frac{1}{8}$	CP091-FB1
.1	600	CP91B1EF104K	$1\frac{1}{8} \times \frac{3}{8} \times 1\frac{3}{8}$	CP091-FB2
.25	600	CP91B1EF254K	$1\frac{1}{8} \times \frac{3}{8} \times 1\frac{3}{8}$	CP091-FB3
.5	600	CP91B1EF504K	$1\frac{1}{8} \times \frac{3}{8} \times 2$	CP091-FB4
1.0	600	CP91B1EF105K	$1\frac{1}{8} \times \frac{3}{8} \times 2\frac{3}{4}$	CP091-FB6
.1 + .1	600	CP91B6EF104V	$1\frac{1}{8} \times \frac{3}{8} \times 1\frac{3}{8}$	CP091-FB3
.25 + .25	600	CP91B6EF254V	$1\frac{1}{8} \times \frac{3}{8} \times 2$	CP091-FB4
.5 + .5	600	CP91B6EF504V	$1\frac{1}{8} \times \frac{3}{8} \times 2\frac{3}{4}$	CP091-FB6
<b>TYPE CP67</b> Terminals opposite channel bracket				
.1	600	CP67B1EF104K	$1\frac{3}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$	Integral Channel Brackets
.25	600	CP67B1EF254K	$1\frac{3}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$	
.5	600	CP67B1EF504K	$1\frac{3}{4} \times 4\frac{1}{4} \times 2$	
1.0	600	CP67B1EF105K	$1\frac{3}{4} \times 4\frac{1}{4} \times 2\frac{3}{4}$	
<b>TYPE CP69</b> Terminals on same end as channel bracket				
.05	600	CP69B1EF503K	$1\frac{3}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$	Integral Channel Brackets
.1	600	CP69B1EF104K	$1\frac{3}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$	
.25	600	CP69B1EF254K	$1\frac{3}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$	
.5	600	CP69B1EF504K	$1\frac{3}{4} \times 4\frac{1}{4} \times 2$	
1.0	600	CP69B1EF105K	$1\frac{3}{4} \times 4\frac{1}{4} \times 2\frac{3}{4}$	

Call Your Sprague Industrial Distributor for Quantity Prices

\*Footed Brackets are listed: for spade type change F in Catalog No. to S



## TYPE CP70 CAPACITORS to MIL-C-25A

- Ruggedly Constructed for Exacting Heavy-Duty Applications
- Long Life and Reliable Service under High Ambient Temperatures
- Terminals have Ceramic Pillar Insulators (E) or Rubber Compression Seals (B)
- Impregnated with a Specially Processed Mineral Oil to Withstand Severe Operating Conditions
- Char. F Units Recommended Primarily for Ground Equipment Where no Low Temperatures are Encountered
- For Quantity Prices, See Your Sprague Industrial Distributor.

**NOTE:** These units have a capacitance tolerance of  $\pm 10\%$ . For  $\pm 20\%$  tolerance, change the last letter in the catalog number from K to M.

$\mu F$	WVDC	Char. E (E Term.)		Char. F (B Term.)		Char. E (B Term.)	
		Cat. No.	W x T x H	Cat. No.	W x T x H	Cat. No.	W x T x H
.1	1000	CP70E1EG104K	$1\frac{1}{8} \times 1\frac{1}{8} \times 1\frac{3}{8}$	CP70B1FF205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{7}{8}$	CP70B1EG504K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{4}$
.1	2000	CP70E1EJ104K	$2\frac{1}{2} \times 1\frac{3}{8} \times 2\frac{1}{2}$	CP70B1FG205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 3\frac{3}{8}$	CP70B1EF105K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{4}$
.25	1000	CP70E1EG254K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{4}$	CP70B1FF405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 3\frac{1}{2}$	CP70B1EG105K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{7}{8}$
.25	2000	CP70E1EJ254K	$2\frac{1}{2} \times 1\frac{3}{8} \times 2\frac{1}{2}$	CP70B1FG405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EF205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 3\frac{1}{4}$
.5	600	CP70E1EF504K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{4}$	CP70B1FF605K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EG205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 4\frac{3}{8}$
.5	1000	CP70E1EG504K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{4}$	CP70B1FG605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1EH205K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$
.5	1500	CP70E1EH504K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{3}{8}$	CP70B1FF805K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$	CP70B1EF405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 3\frac{3}{8}$
.5	2000	CP70E1EJ504K	$2\frac{1}{2} \times 1\frac{3}{8} \times 2\frac{3}{8}$	CP70B1FG805K	$3\frac{3}{4} \times 1\frac{3}{8} \times 3\frac{3}{8}$	CP70B1EG405K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$
.5	2500	CP70E1EK504K	$2\frac{1}{2} \times 1\frac{3}{8} \times 3\frac{3}{8}$	CP70B1FF106K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1EH405K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4\frac{1}{4}$
1.0	600	CP70E1EF105K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{4}$	CP70B1FF205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{7}{8}$	CP70B1EF605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$
1.0	1000	CP70E1EG105K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{3}{8}$	CP70B1FG205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 3\frac{3}{8}$	CP70B1EG605K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4$
1.0	1500	CP70E1EH105K	$1\frac{1}{8} \times 1\frac{1}{8} \times 4\frac{3}{8}$	CP70B1FF405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 3\frac{1}{2}$	CP70B1EH605K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$
1.0	2000	CP70E1EJ105K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1FG405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EF805K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{1}{4}$
1.0	2500	CP70E1EK105K	$3\frac{3}{4} \times 1\frac{3}{8} \times 3\frac{3}{8}$	CP70B1FF605K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EG805K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4\frac{3}{8}$
2.0	600	CP70E1EF205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 3\frac{1}{4}$	CP70B1FG605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1EH805K	$3\frac{3}{4} \times 2\frac{1}{2} \times 5\frac{3}{8}$
2.0	1000	CP70E1EG205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 4\frac{3}{8}$	CP70B1FF805K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$	CP70B1EF106K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4$
2.0	1500	CP70E1EH205K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1FG805K	$3\frac{3}{4} \times 1\frac{3}{8} \times 3\frac{3}{8}$	CP70B1EG106K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$
2.0	2000	CP70E1EJ205K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1FF106K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1EH106K	$3\frac{3}{4} \times 3\frac{3}{8} \times 5\frac{1}{2}$
2.0	2500	CP70E1EK205K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$	CP70B1FG106K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EG126K	$3\frac{3}{4} \times 2\frac{1}{4} \times 5\frac{1}{8}$
4.0	600	CP70E1EF405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 3\frac{3}{8}$	CP70B1FF205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{7}{8}$	CP70B1EF106K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4$
4.0	1000	CP70E1EG405K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$	CP70B1FG205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 3\frac{3}{8}$	CP70B1EG106K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$
4.0	1500	CP70E1EH405K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4\frac{1}{4}$	CP70B1FF405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 3\frac{1}{2}$	CP70B1EH106K	$3\frac{3}{4} \times 3\frac{3}{8} \times 5\frac{1}{2}$
4.0	2000	CP70E1EJ405K	$3\frac{3}{4} \times 2\frac{1}{4} \times 5\frac{1}{8}$	CP70B1FG405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EG126K	$3\frac{3}{4} \times 2\frac{1}{4} \times 5\frac{1}{8}$
4.0	2500	CP70E1EK405K	$4\frac{1}{4} \times 3\frac{3}{8} \times 4\frac{3}{8}$	CP70B1FF605K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EH106K	$3\frac{3}{4} \times 3\frac{3}{8} \times 5\frac{1}{2}$
6.0	600	CP70E1EF605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$	CP70B1FG605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1EF605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$
6.0	1000	CP70E1EG605K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4$	CP70B1FF805K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$	CP70B1EG605K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4$
6.0	1500	CP70E1EH605K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$	CP70B1FG805K	$3\frac{3}{4} \times 1\frac{3}{8} \times 3\frac{3}{8}$	CP70B1EH605K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$
6.0	2000	CP70E1EJ605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{1}{4}$	CP70B1FF106K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1EF805K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{1}{4}$
6.0	2500	CP70E1EK605K	$3\frac{3}{4} \times 2\frac{1}{2} \times 5\frac{3}{8}$	CP70B1FG106K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EG805K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4\frac{3}{8}$
8.0	600	CP70E1EF805K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{1}{4}$	CP70B1FF205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{7}{8}$	CP70B1EH805K	$3\frac{3}{4} \times 2\frac{1}{2} \times 5\frac{3}{8}$
8.0	1000	CP70E1EG805K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1FG205K	$1\frac{1}{8} \times 1\frac{1}{8} \times 3\frac{3}{8}$	CP70B1EF106K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4$
8.0	1500	CP70E1EH805K	$3\frac{3}{4} \times 2\frac{1}{2} \times 5\frac{3}{8}$	CP70B1FG405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EG106K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$
10.0	600	CP70E1EF106K	$3\frac{3}{4} \times 1\frac{3}{8} \times 4$	CP70B1FF405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 3\frac{1}{2}$	CP70B1EH106K	$3\frac{3}{4} \times 3\frac{3}{8} \times 5\frac{1}{2}$
10.0	1000	CP70E1EG106K	$3\frac{3}{4} \times 2\frac{1}{4} \times 4\frac{3}{8}$	CP70B1FG405K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EG126K	$3\frac{3}{4} \times 2\frac{1}{4} \times 5\frac{1}{8}$
10.0	1500	CP70E1EH106K	$3\frac{3}{4} \times 3\frac{3}{8} \times 5\frac{1}{2}$	CP70B1FF605K	$2\frac{1}{2} \times 1\frac{3}{8} \times 4\frac{3}{8}$	CP70B1EH106K	$3\frac{3}{4} \times 3\frac{3}{8} \times 5\frac{1}{2}$
12.0	1000	CP70E1EG126K	$3\frac{3}{4} \times 2\frac{1}{4} \times 5\frac{1}{8}$	CP70B1FG605K	$3\frac{3}{4} \times 1\frac{1}{4} \times 4\frac{3}{8}$	CP70B1EG126K	$3\frac{3}{4} \times 2\frac{1}{4} \times 5\frac{1}{8}$
15.0	1000	CP70E1EH156K	$3\frac{3}{4} \times 3\frac{3}{8} \times 4\frac{3}{8}$	CP70B1FF805K	$3\frac{3}{4} \times 1\frac{1}{4} \times 3\frac{3}{8}$		

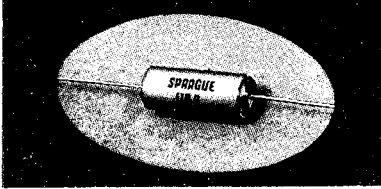
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# SPRAGUE CAPACITORS

## 118P DIFILM<sup>®</sup> METALLIZED CAPACITORS



- The Best of Their Type Possible to Produce at the Present State of the Art

- Rated for Operation at 125°C WITHOUT VOLTAGE DERATING

- Unique Dual Dielectric — a Combination of

Metallized Paper and of Polyester Film, Impregnated With Special High-Temperature Mineral Wax

- Subjected to Stringent Quality Control During Manufacture

- Higher Insulation Resistance Than Any Other Metallized Paper Capacitors—at 125°C, Minimum Product of Insulation Resistance and Capacitance is 10 Megohm-microfarads for 200 V Units or 40 Megohm-microfarads for 400 and 600 V Units

- Capacitor Sections are Effectively of Non-inductive Construction, Resulting in Capacitors Unmatched in Performance Quality by any Other Metallized Capacitors

- Hermetically Sealed, with Glass-to-metal Solder-seal Terminals

- Have Unusual Self-healing Characteristics, in the Rare Event of Capacitor Dielectric Breakdown

- May be Used at Extremely Low Voltages Where Metallized Paper Construction has Previously Been Unsatisfactory

- For Complete Performance Characteristics, see Latest Issue of Engineering Bulletin 2211

- For Units With Outer Plastic Insulating Sleeves, Change Last Digit of Cat. No. From "2" to "4"

- Capacitors Listed Below Are Ungrounded Case (Insulating Section) Units Without Outer Insulating Sleeves. For Information on Other Styles Consult Your Sprague Industrial Distributor

- Call your Sprague Industrial Distributor for Quantity Prices.

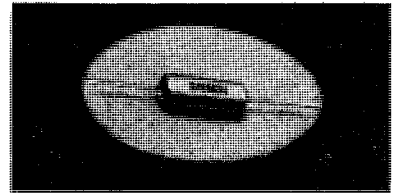
μF	D. x L.	± 20% Tol.		± 10% Tol.		μF	D. x L.	± 20% Tol.		± 10% Tol.	
		Catalog Number		Catalog Number				Catalog Number		Catalog Number	
<b>200 WVDC</b>						<b>400 WVDC</b>					
.01	.175 x 1 <sup>1</sup> / <sub>16</sub>	118P10302S2		118P10392S2		.01	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P10304S2		118P10394S2	
.012	.195 x 1 <sup>1</sup> / <sub>16</sub>			118P12392S2		.015	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P15304S2		118P15394S2	
.015	.195 x 1 <sup>1</sup> / <sub>16</sub>	118P15302S2		118P15392S2		.022	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P22304S2		118P22394S2	
.018	.235 x 1 <sup>1</sup> / <sub>16</sub>			118P18392S2		.033	.312 x 1 <sup>1</sup> / <sub>16</sub>	118P33304S2		118P33394S2	
.022	.235 x 1 <sup>1</sup> / <sub>16</sub>	118P22302S2		118P22392S2		.047	.400 x 1 <sup>1</sup> / <sub>16</sub>	118P47304S2		118P47394S2	
.027	.235 x 1 <sup>1</sup> / <sub>16</sub>			118P27392S2		.068	.400 x 1 <sup>1</sup> / <sub>16</sub>	118P68304S2		118P68394S2	
.033	.235 x 1 <sup>1</sup> / <sub>16</sub>	118P33302S2		118P33392S2		.1	.500 x 1 <sup>1</sup> / <sub>16</sub>	118P10404S2		118P10494S2	
.039	.312 x 1 <sup>3</sup> / <sub>16</sub>			118P39392S2		.15	.500 x 1 <sup>1</sup> / <sub>16</sub>	118P15404S2		118P15494S2	
.047	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P47302S2		118P47392S2		.22	.562 x 1 <sup>1</sup> / <sub>16</sub>	118P22404S2		118P22494S2	
.056	.312 x 1 <sup>3</sup> / <sub>16</sub>			118P56392S2		.33	.562 x 1 <sup>1</sup> / <sub>16</sub>	118P33404S2		118P33494S2	
.068	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P68302S2		118P68392S2		.47	.670 x 1 <sup>1</sup> / <sub>16</sub>	118P47404S2		118P47494S2	
.082	.312 x 1 <sup>3</sup> / <sub>16</sub>			118P82392S2		.68	.670 x 1 <sup>1</sup> / <sub>16</sub>	118P68404S2		118P68494S2	
.1	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P10402S2		118P10492S2		1.0	.750 x 1 <sup>1</sup> / <sub>16</sub>	118P10504S2		118P10594S2	
.12	.312 x 1 <sup>3</sup> / <sub>16</sub>			118P12492S2		1.5	1.000 x 1 <sup>1</sup> / <sub>16</sub>	118P15504S2		118P15594S2	
.15	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P15402S2		118P15492S2		2.0	1.000 x 1 <sup>1</sup> / <sub>16</sub>	118P20504S2		118P20594S2	
.18	.400 x 1 <sup>3</sup> / <sub>16</sub>			118P18492S2		3.0	1.000 x 2 <sup>1</sup> / <sub>16</sub>	118P30504S2		118P30594S2	
.22	.400 x 1 <sup>3</sup> / <sub>16</sub>	118P22402S2		118P22492S2		<b>600 WVDC</b>					
.27	.400 x 1 <sup>3</sup> / <sub>16</sub>			118P27492S2		.01	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P10306S2		118P10396S2	
.33	.400 x 1 <sup>3</sup> / <sub>16</sub>	118P33402S2		118P33492S2		.015	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P15306S2		118P15396S2	
.39	.500 x 1 <sup>3</sup> / <sub>16</sub>			118P39492S2		.022	.312 x 1 <sup>3</sup> / <sub>16</sub>	118P22306S2		118P22396S2	
.47	.500 x 1 <sup>3</sup> / <sub>16</sub>	118P47402S2		118P47492S2		.033	.312 x 1 <sup>1</sup> / <sub>16</sub>	118P33306S2		118P33396S2	
.56	.500 x 1 <sup>3</sup> / <sub>16</sub>			118P56492S2		.047	.400 x 1 <sup>1</sup> / <sub>16</sub>	118P47306S2		118P47396S2	
.68	.500 x 1 <sup>3</sup> / <sub>16</sub>	118P68402S2		118P68492S2		.068	.400 x 1 <sup>1</sup> / <sub>16</sub>	118P68306S2		118P68396S2	
.82	.562 x 1 <sup>3</sup> / <sub>16</sub>			118P82492S2		.1	.500 x 1 <sup>1</sup> / <sub>16</sub>	118P10406S2		118P10496S2	
1.0	.562 x 1 <sup>3</sup> / <sub>16</sub>	118P10502S2		118P10592S2		.15	.562 x 1 <sup>1</sup> / <sub>16</sub>	118P15406S2		118P15496S2	
1.5	.670 x 1 <sup>3</sup> / <sub>16</sub>	118P15502S2		118P15592S2		.22	.562 x 1 <sup>1</sup> / <sub>16</sub>	118P22406S2		118P22496S2	
2.0	.670 x 1 <sup>3</sup> / <sub>16</sub>	118P20502S2		118P20592S2		.33	.562 x 1 <sup>1</sup> / <sub>16</sub>	118P33406S2		118P33496S2	
3.0	.670 x 1 <sup>1</sup> / <sub>16</sub>	118P30502S2		118P30592S2		.47	.670 x 1 <sup>1</sup> / <sub>16</sub>	118P47406S2		118P47496S2	
4.0	.750 x 1 <sup>1</sup> / <sub>16</sub>	118P40502S2		118P40592S2		.68	.670 x 1 <sup>1</sup> / <sub>16</sub>	118P68406S2		118P68496S2	
5.0	1.000 x 1 <sup>1</sup> / <sub>16</sub>	118P50502S2		118P50592S2		1.0	1.000 x 1 <sup>1</sup> / <sub>16</sub>	118P10506S2		118P10596S2	
6.0	1.000 x 1 <sup>1</sup> / <sub>16</sub>	118P60502S2		118P60592S2		1.5	1.000 x 1 <sup>1</sup> / <sub>16</sub>	118P15506S2		118P15596S2	
8.0	1.000 x 1 <sup>1</sup> / <sub>16</sub>	118P80502S2		118P80592S2		2.0	1.000 x 2 <sup>1</sup> / <sub>16</sub>	118P20506S2		118P20596S2	
10.0	1.000 x 2 <sup>1</sup> / <sub>16</sub>	118P10602S2		118P10692S2		2.5	1.000 x 2 <sup>1</sup> / <sub>16</sub>	118P25506S2		118P25596S2	
12.0	1.000 x 2 <sup>1</sup> / <sub>16</sub>	118P12602S2		118P12692S2		CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES					

# SPRAGUE CAPACITORS

## 121P METALLIZED PAPER CAPACITORS

- Designed to operate at 125°C WITHOUT VOLTAGE DERATING — extremely important in military and industrial equipment where higher temperatures are encountered.
- Quality of these capacitors is surpassed only by Type 118P units described on opposite page.
- High insulation resistance — at 85°C, minimum product of insulation resistance and capacitance is 20 megohm-microfarads. At 125°C, minimum product is 1.0 megohm-microfarads.
- Hermetically sealed with glass-to-metal solder-seal terminals — capacitor cases are of corrosion

- resistant materials — similar in appearance to Type 118P.
- May be operated at low voltages, unlike many other metallized capacitors.
- For complete performance data, see latest issue of Engineering Bulletin 2210.
- Capacitors listed below are ungrounded case (insulated section) units without outer insulating sleeves. For information on other styles consult your Sprague Industrial Distributor.
- For quantity prices call your Sprague Industrial Distributor.



- For units with outer plastic insulating sleeve, change last digit in cat. no. from 2 to 4.

μF	D. x L.	±20% Tol.		±10% Tol.	
		Cat. No.		Cat. No.	
<b>150 WVDC</b>					
1.5	.562 x 1 1/8	121P15501R5S2		121P15591R5S2	
2.0	.562 x 1 1/8	121P20501R5S2		121P20591R5S2	
2.5	.562 x 1 1/8	121P25501R5S2		121P25591R5S2	
3.0	.670 x 1 1/8	121P30501R5S2		121P30591R5S2	
3.5	.670 x 1 1/8	121P35501R5S2		121P35591R5S2	
4.0	.670 x 1 1/8	121P40501R5S2		121P40591R5S2	
5.0	.670 x 1 1/8	121P50501R5S2		121P50591R5S2	
6.0	.750 x 1 1/8	121P60501R5S2		121P60591R5S2	
8.0	.750 x 2 1/8	121P80501R5S2		121P80591R5S2	
10	.750 x 2 1/8	121P10601R5S2		121P10691R5S2	
12	1.000 x 1 1/8	121P12601R5S2		121P12691R5S2	
14	1.000 x 2 1/8	121P14601R5S2		121P14691R5S2	
16	1.000 x 2 1/8	121P16601R5S2		121P16691R5S2	
18	1.000 x 2 1/8	121P18601R5S2		121P18691R5S2	

μF	D. x L.	±20% Tol.		±10% Tol.	
		Cat. No.		Cat. No.	
<b>200 WVDC</b>					
.047	.235 x 3/8	121P47302S2		121P47392S2	
.056	.312 x 3/8			121P56392S2	
.068	.312 x 3/8	121P68302S2		121P68392S2	
.082	.312 x 3/8			121P82392S2	
.1	.312 x 3/8	121P10402S2		121P10492S2	
.12	.312 x 3/8			121P12492S2	
.15	.312 x 3/8	121P15402S2		121P15492S2	
.18	.312 x 1 1/8			121P18492S2	
.22	.312 x 1 1/8	121P22402S2		121P22492S2	
.27	.400 x 1 1/8			121P27492S2	
.33	.400 x 1 1/8	121P33402S2		121P33492S2	
.39	.400 x 1 1/8			121P39492S2	
.47	.400 x 1 1/8	121P47402S2		121P47492S2	
.56	.500 x 1 1/8			121P56492S2	
.68	.500 x 1 1/8	121P68402S2		121P68492S2	
.82	.562 x 1 1/8			121P82492S2	
1.0	.562 x 1 1/8	121P10502S2		121P10592S2	
1.5	.562 x 1 1/8	121P15502S2		121P15592S2	
2.0	.562 x 1 1/8	121P20502S2		121P20592S2	
2.5	.670 x 1 1/8	121P25502S2		121P25592S2	
3.0	.670 x 1 1/8	121P30502S2		121P30592S2	
3.5	.750 x 1 1/8	121P35502S2		121P35592S2	
4.0	.750 x 1 1/8	121P40502S2		121P40592S2	
5.0	.750 x 2 1/8	121P50502S2		121P50592S2	
6.0	.750 x 2 1/8	121P60502S2		121P60592S2	
8.0	1.000 x 1 1/8	121P80502S2		121P80592S2	
10	1.000 x 2 1/8	121P10602S2		121P10692S2	
12	1.000 x 2 1/8	121P12602S2		121P12692S2	

μF	D. x L.	±20% Tol.		±10% Tol.	
		Cat. No.		Cat. No.	
<b>400 WVDC</b>					
.01	.235 x 3/8	121P10304S2		121P10394S2	
.012	.312 x 3/8			121P12394S2	
.015	.312 x 3/8	121P15304S2		121P15394S2	
.018	.312 x 3/8			121P18394S2	
.022	.312 x 3/8	121P22304S2		121P22394S2	
.027	.312 x 3/8			121P27394S2	
.033	.312 x 3/8	121P33304S2		121P33394S2	
.039	.312 x 1 1/8			121P39394S2	
.047	.312 x 1 1/8	121P47304S2		121P47394S2	
.056	.312 x 1 1/8			121P56394S2	
.068	.312 x 1 1/8	121P68304S2		121P68394S2	
.082	.400 x 1 1/8			121P82394S2	

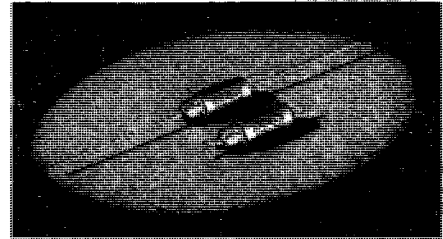
μF	D. x L.	±20% Tol.		±10% Tol.	
		Cat. No.		Cat. No.	
.1	.400 x 1 1/8	121P10404S2		121P10494S2	
.12	.400 x 1 1/8			121P12494S2	
.15	.400 x 1 1/8	121P15404S2		121P15494S2	
.18	.500 x 1 1/8			121P18494S2	
.22	.500 x 1 1/8	121P22404S2		121P22494S2	
.27	.562 x 1 1/8			121P27494S2	
.33	.562 x 1 1/8	121P33404S2		121P33494S2	
.39	.562 x 1 1/8			121P39494S2	
.47	.562 x 1 1/8	121P47404S2		121P47494S2	
.56	.670 x 1 1/8			121P56494S2	
.68	.670 x 1 1/8	121P68404S2		121P68494S2	
.82	.670 x 1 1/8			121P82494S2	
1.0	.670 x 1 1/8	121P10504S2		121P10594S2	
1.5	.750 x 2 1/8	121P15504S2		121P15594S2	
2.0	1.000 x 1 1/8	121P20504S2		121P20594S2	
2.5	1.000 x 2 1/8	121P25504S2		121P25594S2	
3.0	1.000 x 2 1/8	121P30504S2		121P30594S2	
3.5	1.000 x 2 1/8	121P35504S2		121P35594S2	

μF	D. x L.	±20% Tol.		±10% Tol.	
		Cat. No.		Cat. No.	
<b>600 WVDC</b>					
.001	.235 x 3/8	121P10206S2		121P10296S2	
.0012	.235 x 3/8			121P12296S2	
.0015	.235 x 3/8	121P15206S2		121P15296S2	
.0018	.235 x 3/8			121P18296S2	
.0022	.235 x 3/8	121P22206S2		121P22296S2	
.0027	.235 x 3/8			121P27296S2	
.0033	.235 x 3/8	121P33206S2		121P33296S2	
.0039	.235 x 3/8			121P39296S2	
.0047	.235 x 3/8	121P47206S2		121P47296S2	
.0056	.312 x 7/8			121P56296S2	
.0068	.312 x 7/8	121P68206S2		121P68296S2	
.0082	.312 x 7/8			121P82296S2	
.01	.312 x 7/8	121P10306S2		121P10396S2	
.012	.312 x 7/8			121P12396S2	
.015	.312 x 7/8	121P15306S2		121P15396S2	
.018	.312 x 1 1/8			121P18396S2	
.022	.312 x 1 1/8	121P22306S2		121P22396S2	
.027	.312 x 1 1/8			121P27396S2	
.033	.312 x 1 1/8	121P33306S2		121P33396S2	
.039	.400 x 1 1/8			121P39396S2	
.047	.400 x 1 1/8	121P47306S2		121P47396S2	
.056	.400 x 1 1/8			121P56396S2	
.068	.400 x 1 1/8	121P68306S2		121P68396S2	
.082	.500 x 1 1/8			121P82396S2	
.1	.500 x 1 1/8	121P10406S2		121P10496S2	
.12	.562 x 1 1/8			121P12496S2	
.15	.562 x 1 1/8	121P15406S2		121P15496S2	
.18	.562 x 1 1/8			121P18496S2	
.22	.562 x 1 1/8	121P22406S2		121P22496S2	
.27	.562 x 1 1/8			121P27496S2	
.33	.562 x 1 1/8	121P33406S2		121P33496S2	
.39	.670 x 1 1/8			121P39496S2	
.47	.670 x 1 1/8	121P47406S2		121P47496S2	
.56	.670 x 1 1/8			121P56496S2	
.68	.670 x 1 1/8	121P68406S2		121P68496S2	
.82	.750 x 2 1/8			121P82496S2	
1.0	.750 x 2 1/8	121P10506S2		121P10596S2	
1.5	1.000 x 2 1/8	121P15506S2		121P15596S2	
2.0	1.000 x 2 1/8	121P20506S2		121P20596S2	

# SPRAGUE CAPACITORS

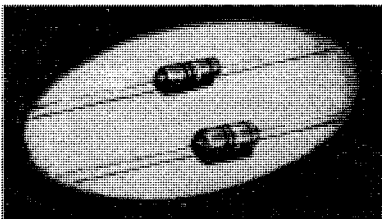
## TYPE 102P, 103P 'THRU-PASS'® CAPACITORS

- Designed for Radio Interference Reduction in Radar and Communication Equipment
- Performance Closer to That of Theoretically Ideal Capacitor than Any Other Paper Capacitor Ever Made
- Three-Terminal Feed-Thru Design — Connect in a Circuit in Same Manner as Low-Pass Filter
- Hermetically Sealed, with Glass-to-Metal Solder-Seal Terminals
- Impregnated with Vitamin Q, for High Insulation Resistance and Minimum Capacitance Change with Temperature
- Type 102P is Designed for Operation from  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ ; Type 103P for  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Capacitors listed below have wire leads. For tab terminals, which are also available, see your Sprague Industrial Distributor.
- For complete technical data, refer to latest issue of Engineering Bulletin 8015
- Prices available upon request



$\mu\text{F}$	Size Diam. x Length	Catalog Number $85^{\circ}\text{C}$	$125^{\circ}\text{C}$	$\mu\text{F}$	Size Diam. x Length	Catalog Number $85^{\circ}\text{C}$	$125^{\circ}\text{C}$
<b>100 WVDC</b>				<b>300 WVDC (Continued)</b>			
.001	.400 x $\frac{3}{4}$	102P101	103P101	.047	.400 x $1\frac{1}{8}$	102P118	103P118
.0047	.400 x $\frac{3}{4}$	102P106	103P106	.1	.400 x $1\frac{3}{8}$	102P123	103P123
.01	.400 x $\frac{3}{4}$	102P111	103P111	.22	.562 x $1\frac{3}{8}$	102P128	103P128
.047	.400 x $\frac{3}{4}$	102P116	103P116	.33	.562 x $1\frac{3}{8}$	102P133	103P133
.1	.400 x $\frac{7}{8}$	102P121	103P121	.47	.670 x $1\frac{3}{8}$	102P138	103P138
.22	.400 x $1\frac{1}{8}$	102P126	103P126	.68	.750 x $2\frac{1}{8}$	102P143	103P143
.33	.562 x $1\frac{1}{8}$	102P131	103P131	<b>400 WVDC</b>			
.47	.562 x $1\frac{3}{8}$	102P136	103P136	.001	.400 x $\frac{3}{4}$	102P104	103P104
.68	.562 x $1\frac{3}{8}$	102P141	103P141	.0047	.400 x $\frac{3}{4}$	102P109	103P109
1.0	.670 x $1\frac{3}{8}$	102P145	103P145	.01	.400 x $\frac{3}{4}$	102P114	103P114
<b>200 WVDC</b>				.047	.400 x $1\frac{3}{8}$	102P119	103P119
.001	.400 x $\frac{3}{4}$	102P102	103P102	.1	.562 x $1\frac{3}{8}$	102P124	103P124
.0047	.400 x $\frac{3}{4}$	102P107	103P107	.22	.562 x $1\frac{3}{8}$	102P129	103P129
.01	.400 x $\frac{3}{4}$	102P112	103P112	.33	.670 x $1\frac{3}{8}$	102P134	103P134
.047	.400 x $\frac{7}{8}$	102P117	103P117	.47	.750 x $2\frac{1}{8}$	102P139	103P139
.1	.400 x $1\frac{1}{8}$	102P122	103P122	.68	.750 x $2\frac{3}{8}$	102P144	103P144
.22	.562 x $1\frac{1}{8}$	102P127	103P127	<b>600 WVDC</b>			
.33	.562 x $1\frac{3}{8}$	102P132	103P132	.001	.400 x $\frac{3}{4}$	102P105	103P105
.47	.562 x $1\frac{3}{8}$	102P137	103P137	.0047	.400 x $\frac{3}{4}$	102P110	103P110
.68	.670 x $1\frac{3}{8}$	102P142	103P142	.01	.400 x $\frac{3}{4}$	102P115	103P115
1.0	.750 x $2\frac{1}{8}$	102P146	103P146	.047	.400 x $1\frac{3}{8}$	102P120	103P120
<b>300 WVDC</b>				.1	.562 x $1\frac{3}{8}$	102P125	103P125
.001	.400 x $\frac{3}{4}$	102P103	103P103	.22	.670 x $1\frac{3}{8}$	102P130	103P130
.0047	.400 x $\frac{3}{4}$	102P108	103P108	.33	.750 x $2\frac{1}{8}$	102P135	103P135
.01	.400 x $\frac{3}{4}$	102P113	103P113	.47	.750 x $2\frac{3}{8}$	102P140	103P140

## TYPE 65P PROKAR® MOLDED TUBULARS



- For Applications Requiring Small Paper Capacitors for Continuous Operation at High Temperatures
- No Voltage Derating Required for  $125^{\circ}\text{C}$  Operation
- Impregnated with an Exclusive Sprague Organic Material which Polymerizes to Form a Solid Capacitor Section
- Sections Molded in Mineral-Filled High-Temperature Plastic — All cases are  $1\frac{1}{16}$ " long
- Capacitance Tolerance of these Capacitors is  $\pm 5\%$
- For complete technical data, refer to latest issue of Engineering Bulletin 2100
- Call Your Sprague Industrial Distributor for Quantity Prices.

$\mu\text{F}$	WVDC	Diam.	Cat. No.	$\mu\text{F}$	WVDC	Diam.	Cat. No.
.01	200	.175	65P10352	.091	200	.375	65P91352
.015	200	.195	65P15352	.1	200	.375	65P10452
.02	200	.250	65P20352	.001	300	.175	65P10253
.022	200	.250	65P22352	.0015	300	.175	65P15253
.03	200	.250	65P30352	.002	300	.175	65P20253
.033	200	.250	65P33352	.0039	300	.175	65P39253
.039	200	.375	65P39352	.0047	300	.175	65P47253
.047	200	.375	65P47352	.0051	300	.175	65P51253
.051	200	.375	65P51352	.0056	300	.175	65P56253
.056	200	.375	65P56352	.0068	300	.175	65P68253
.062	200	.375	65P62352	.0082	300	.195	65P82253
.082	200	.375	65P82352	.0091	300	.195	65P91253



# SPRAGUE CAPACITORS

## TYPE 192P PACER® FILMITE® 'E' CAPACITORS

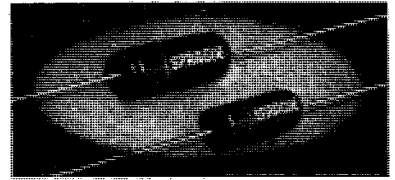
- Completely New Construction for Minimum Size. Extended Foil Film Sections Terminate in End Caps. Best Possible Non-Inductive Section. Rated for -55C to +85C.
- Controlled Dimensions—May Be Used With Automatic Insertion Equipment.
- Wound With Polyester Film Dielectric and Thin Gage Foil Under Controlled Atmospheric Conditions. Protected by Hard Durable Orange Epoxy Coating ● Also Available in Kleer-Pak® Boxes.

● For Quantity Prices Call Your Sprague Industrial Distributor ● Rated at 200 VDC ● See Latest Issue of Sprague Engineering Bulletin 2066.

$\mu$ F	D. x L.	Cat. No.	Net. (1-24)	$\mu$ F	D. x L.	Cat. No.	Net. (1-24)	$\mu$ F	D. x L.	Cat. No.	Net. (1-24)	$\mu$ F	D. x L.	Cat. No.	Net. (1-24)
.00047	.138	192P47192	\$.33	.0022	.170	192P22292	\$.27	.01	.170	192P10392	\$.30	.047	.290	192P47392	\$.39
.00056	.138	192P56192	.30	.0027	.170	192P27292	.27	.012	.204	192P12392	.30	.056	.290	192P56392	.39
.00068	.138	192P68192	.30	.0033	.170	192P33292	.27	.015	.204	192P15392	.30	.068	.290	192P68392	.42
.00082	.138	192P82192	.30	.0039	.170	192P39292	.27	.018	.204	192P18392	.30	.082	.318	192P82392	.45
.001	.138	192P10292	.27	.0047	.170	192P47292	.27	.022	.204	192P22392	.30	.1	.318	192P10492	.45
.0012	.138	192P12292	.27	.0056	.170	192P56292	.27	.027	.225	192P27392	.33	.12	.318	192P12492	.48
.0015	.138	192P15292	.27	.0068	.170	192P68292	.27	.033	.225	192P33392	.33	.15	.318	192P15492	.48
.0018	.170	192P18292	.27	.0082	.170	192P82292	.30	.039	.290	192P39392	.36	.22	.318	192P22492	.51

## TYPE 155P & 156P MOLDED METALLIZED PAPER CAPACITORS

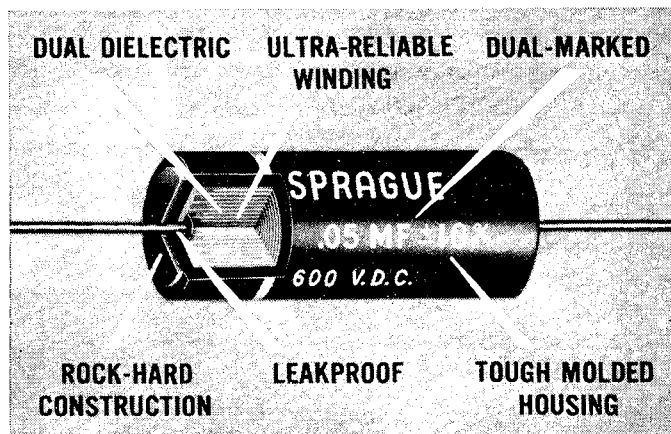
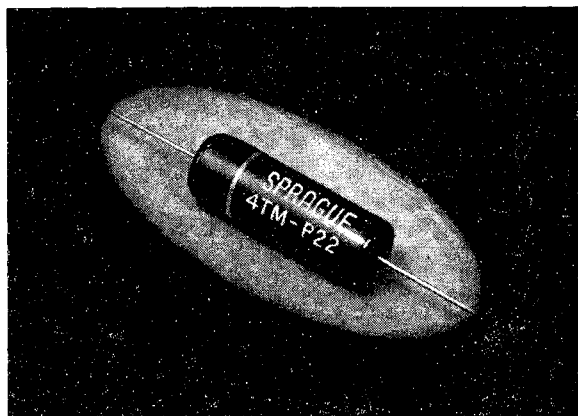
- Superior to Most Competitive Units—Withstand Twice Rated Voltage Tests Giving Extra Design Safety Factor. Stand up Under High Humidity Condition.
- Self-generated Noise Practically Non-Existent. ● Sealed With Epoxy.
- Type 155P—Molded in Case. Type 156P in Premolded Case. Available in Kleer-Pak® Boxes. Complete Technical Data in Latest Issue of Sprague Bulletin 2030.
- For Current Quantity Prices Call Your Sprague Industrial Distributor.



$\mu$ F	D. x L.	Ordering Information	Net. Ea. (1-24)	$\mu$ F	D. x L.	Ordering Information	Net. Ea. (1-24)	$\mu$ F	D. x L.	Ordering Information	Net. Ea. (1-24)			
<b>200 VOLTS D-C</b>				<b>200 VOLTS D-C (Cont.)</b>				<b>400 VOLTS D-C (Cont.)</b>						
.01	5/16	1	155P10302	\$.42	7.0	7/8	2 1/2	156P70502	\$.33	1.0	3/4	2 1/4	156P10504	\$.129
.015	5/16	1	155P15302	.42	7.5	7/8	2 1/2	156P75502	3.15	1.5	7/8	2 1/2	156P15504	1.59
.02	5/16	1	155P-.02-200	.42	8.0	1	2 1/2	156P80502	3.75	2.0	7/8	2 1/2	156P20504	1.80
.022	5/16	1	155P22302	.42	8.5	1	2 1/2	156P85502	3.90	2.5	1	2 1/2	156P25504	2.25
.03	5/16	1	155P-.03-200	.45	9.0	1	2 1/2	156P90502	4.05	<b>600 VOLTS D-C</b>				
.033	5/16	1	155P33302	.45	9.5	1	2 1/2	156P95502	4.20	.01	5/16	1	155P10306	.45
.047	5/16	1	155P47302	.45	<b>400 VOLTS D-C</b>				.015	3/8	1 1/4	155P15306	.45	
.05	5/16	1	155P-.05-200	.45	.01	5/16	1	155P10304	.42	.02	3/8	1 1/4	155P-.02-600	.45
.068	5/16	1	155P68302	.45	.015	5/16	1	155P15304	.42	.022	3/8	1 1/4	155P22306	.45
.1	5/16	1	155P10402	.45	.02	5/16	1	155P-.02-400	.42	.03	3/8	1 1/4	155P-.03-600	.48
.15	3/8	1 1/4	155P15402	.45	.022	5/16	1	155P22304	.42	.033	3/8	1 1/4	155P33306	.48
.22	3/8	1 1/4	155P22402	.45	.025	3/8	1 1/4	155P-.025-400	.42	.04	3/8	1 1/4	155P-.04-600	.51
.25	7/16	1 1/4	155P-.25-200	.66	.03	3/8	1 1/4	155P-.03-400	.42	.047	3/8	1 1/4	155P47306	.51
.33	7/16	1 1/4	155P33402	.66	.033	3/8	1 1/4	155P33304	.42	.05	7/16	1 1/4	155P-.05-600	.51
.47	7/16	1 1/4	155P47402	.66	.04	3/8	1 1/4	155P-.04-400	.42	.06	7/16	1 1/4	155P-.06-600	.51
.5	1/2	1 1/2	155P-.5-200	.78	.047	3/8	1 1/4	155P47304	.42	.068	7/16	1 1/4	155P68306	.51
.68	1/2	1 1/2	155P68402	.78	.05	3/8	1 1/4	155P-.05-400	.45	.1	1/2	1 1/2	155P10406	.57
1.0	1/2	1 1/2	155P10502	1.05	.068	3/8	1 1/4	155P68304	.45	.15	1/2	1 1/2	155P15406	.72
1.5	5/8	1 3/8	155P15502	1.20	.1	7/16	1 1/4	155P10404	.51	.2	5/8	1 3/8	155P-.2-600	.90
2.0	5/8	1 3/8	155P20502	1.41	.15	1/2	1 1/2	155P15404	.66	.22	5/8	1 3/8	155P22406	.90
2.5	3/4	2 1/4	156P25502	1.65	.2	1/2	1 1/2	155P-.2-400	.69	.25	5/8	1 3/8	155P-.25-600	.90
3.0	3/4	2 1/4	156P30502	1.80	.22	1/2	1 1/2	155P22404	.69	.33	5/8	1 3/8	155P33406	.93
3.5	3/4	2 1/4	156P35502	2.10	.25	5/8	1 3/8	155P-.25-400	.72	.47	3/4	2 1/4	156P47406	1.14
4.0	3/4	2 1/4	156P40502	2.22	.33	5/8	1 3/8	155P33404	.72	.5	3/4	2 1/4	156P-.5-600	1.14
1.5	7/8	2 1/2	156P45502	2.40	.47	5/8	1 3/8	155P47404	.90	.68	3/4	2 1/4	156P68406	1.14
5.0	7/8	2 1/2	156P50502	2.55	.5	5/8	1 3/8	155P-.5-400	.93	1.0	7/8	2 1/2	156P10506	1.38
5.5	7/8	2 1/2	156P55502	2.70	.68	3/4	2 1/4	156P68404	1.05	1.5	1	2 1/2	156P15506	1.89
6.0	7/8	2 1/2	156P60502	3.00										
6.5	7/8	2 1/2	156P65502	3.15										

# SPRAGUE CAPACITORS

## DIFILM® BLACK BEAUTY® MOLDED TUBULARS



- Developed Especially for Long Life Under High Humidity and Temperature Operating Conditions
- Dual Dielectric (film and paper) Combines Best Features of Both Polyester Film and Paper Capacitors
- Exclusive HCX® Solid Impregnant Construction Results in Rock-hard Capacitor Section
- Won't Leak or Drip

LOOK FOR THE RED MARKINGS ON THE BLACK CASE

- No Derating for 105°C Operation
- Mica-filled, Non-flammable Molded Case. Won't Crack when Dropped; Soldering won't Harm it
- Every Capacitor Marked Twice. No Twisting the Case to Read Ratings
- Also Available in Handy Sprague Kleer-Pak®
- **Capacitance Tolerance:** ±10% from .001 μF up  
Except 2TM-M1 = ±20%

For Complete Technical Data, See Latest Sprague Engineering Bulletin 2025

### The World's Best Molded Tubular at No Extra Cost!

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
<b>200 WVDC</b>					<b>400 WVDC (Cont.)</b>					<b>600 WVDC (Cont.)</b>				
.01	3/16 x 1	2TM-S10	160P10392	\$.15	.04	7/16 x 1 1/4	4TM-S40	160P47394	\$.18	.0022	3/16 x 1	6TM-D22	160P22296	\$.1
.02	3/16 x 1 1/4	2TM-S20	160P22392	.15	.047	7/16 x 1 1/4	4TM-S47	160P47394	.18	.0025	3/16 x 1	6TM-D25	160P22396	.1
.022	3/16 x 1 1/4	2TM-S22	160P22392	.15	.05	7/16 x 1 1/4	4TM-S50	160P47394	.18	.003	3/16 x 1	6TM-D30	160P22396	.1
.047	7/16 x 1 1/4	2TM-S47	160P47392	.15	.068	1/2 x 1 1/2	4TM-S68	160P68394	.21	.0033	5/16 x 1	6TM-D33	160P33296	.1
.05	7/16 x 1 1/4	2TM-S50	160P47392	.15	.1	1/2 x 1 1/2	4TM-P10	160P10494	.21	.004	3/8 x 1 1/4	6TM-D40	160P47296	.1
.1	1/2 x 1 1/2	2TM-P10	160P10492	.21	.15	3/8 x 1 7/8	4TM-P15	160P15494	.24	.0047	3/8 x 1 1/4	6TM-D47	160P47296	.1
.15	1/2 x 1 1/2	2TM-P15	160P15492	.21	.2	3/8 x 1 7/8	4TM-P20	160P15494	.27	.005	3/8 x 1 1/4	6TM-D50	160P47296	.1
.22	3/4 x 1 3/8	2TM-P22	160P22492	.24	.22	3/8 x 1 7/8	4TM-P22	160P22494	.27	.006	3/8 x 1 1/4	6TM-D60	160P47296	.1
.25	3/4 x 1 3/8	2TM-P25	160P22492	.24	.25	3/4 x 2 1/4	4TM-P25	160P47494	.30	.0068	3/8 x 1 1/4	6TM-D68	160P68296	.1
.47	3/4 x 2 1/4	2TM-P47	160P47492	.36	.47	3/4 x 2 1/4	4TM-P47	160P47494	.45	.008	3/8 x 1 1/4	6TM-D80	160P68296	.1
.5	3/4 x 2 1/4	2TM-P50	160P47492	.36	.5	3/4 x 2 1/4	4TM-P50	160P47494	.45	.01	3/8 x 1 1/4	6TM-S10	160P10396	.1
1.0	3/4 x 2 1/4	2TM-M1	160P10502	.63	1.0	1 x 2 1/2	4TM-M1	160P10594	.75	.015	3/8 x 1 1/4	6TM-S15	160P15396	.1
<b>400 WVDC</b>					<b>600 WVDC</b>									
.001	3/16 x 1	4TM-D10	160P10294	.15	.0001	3/16 x 1	6TM-T10	160P10296	.15	.022	7/16 x 1 1/4	6TM-S22	160P22396	.1
.005	3/16 x 1	4TM-D50	160P10294	.15	.00025	3/16 x 1	6TM-T25	160P10296	.15	.025	7/16 x 1 1/4	6TM-S25	160P22396	.1
.01	3/8 x 1 1/4	4TM-S10	160P10394	.15	.0004	3/16 x 1	6TM-T40	160P10296	.15	.03	7/16 x 1 1/4	6TM-S30	160P33396	.1
.015	3/8 x 1 1/4	4TM-S15	160P15394	.15	.0005	3/16 x 1	6TM-T50	160P10296	.15	.033	7/16 x 1 1/4	6TM-S33	160P33396	.1
.02	3/8 x 1 1/4	4TM-S20	160P15394	.15	.001	3/8 x 1	6TM-D10	160P10296	.15	.035	7/16 x 1 1/4	6TM-S35	160P33396	.1
.022	3/8 x 1 1/4	4TM-S22	160P22394	.18	.0015	3/8 x 1	6TM-D15	160P15296	.15	.04	1/2 x 1 1/2	6TM-S40	160P47396	.1
.025	7/16 x 1 1/4	4TM-S25	160P22394	.18	.002	3/8 x 1	6TM-D20	160P15296	.15	.047	1/2 x 1 1/2	6TM-S47	160P47396	.1
.03	7/16 x 1 1/4	4TM-S30	160P22394	.18										

# SPRAGUE CAPACITORS

## DIFILM® BLACK BEAUTY® MOLDED TUBULARS, continued

600 WVDC (Cont.)						1000 WVDC						1000 WVDC (cont.)					
μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net		μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net		
.05	1/2 x 1 1/2	6TM-S50		\$.24		.0005	5/16 x 1	10TM-T50		\$.30	.01	7/16 x 1 1/4	10TM-S10	160P103910	\$.30		
.06	1/2 x 1 1/2	6TM-S60		.24		.001	5/16 x 1	10TM-D10	160P102910	.30	.015	1/2 x 1 1/2	10TM-S15	160P153910	.30		
.068	1/2 x 1 1/2	6TM-S68	160P68396	.27		.0015	5/16 x 1	10TM-D15	160P152910	.30	.02	1/2 x 1 1/2	10TM-S20		.30		
.1	5/8 x 1 7/8	6TM-P10	160P10496	.27		.002	3/8 x 1 1/4	10TM-D20		.30	.022	1/2 x 1 1/2	10TM-S22	160P223910	.30		
.15	5/8 x 1 7/8	6TM-P15	160P15496	.30		.0022	3/8 x 1 1/4	10TM-D22	160P222910	.30	.03	5/8 x 1 7/8	10TM-S30		.30		
.2	3/4 x 2 1/4	6TM-P20		.39		.003	3/8 x 1 1/4	10TM-D30		.30	.035	5/8 x 1 7/8	10TM-S35		.30		
.22	3/4 x 2 1/4	6TM-P22	160P22496	.42		.004	3/8 x 1 1/4	10TM-D40		.30	.047	5/8 x 1 7/8	10TM-S47	160P473910	.36		
.25	3/4 x 2 1/4	6TM-P25		.45		.0047	3/8 x 1 1/4	10TM-D47	160P472910	.30	.05	5/8 x 1 7/8	10TM-S50		.36		
.47	1 x 2 1/2	6TM-P47	160P47496	.75		.005	3/8 x 1 1/4	10TM-D50		.30	.068	5/8 x 1 7/8	10TM-S68	160P683910	.42		
.5	1 x 2 1/2	6TM-P50		.75		.0068	3/8 x 1 1/4	10TM-D68	160P682910	.30	.1	3/4 x 2 1/4	10TM-P10	160P104910	.45		
1.0	1 x 2 1/2	6TM-M1		1.05							.15	3/4 x 2 1/4	10TM-P15	160P154910	.57		

### 1600 WVDC BUFFER CAPACITORS

6000 WVDC BUFFER						10,000 WVDC BUFFER						12,500 WVDC BUFFER					
μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net		μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net		
.0005	3/8 x 1 1/4	MB-75		\$.39		.004	1/2 x 1 1/2	MB-D4		\$.39	.01	5/8 x 1 7/8	MB-S1	190P103916	\$.42		
.001	3/8 x 1 1/4	MB-D1	190P102916	.39		.0047	1/2 x 1 1/2	MB-D47	190P472916	.39	.015	5/8 x 1 7/8	MB-S15	190P153916	.42		
.0015	3/8 x 1 1/4	MB-D15	190P152916	.39		.005	1/2 x 1 1/2	MB-D5		.39	.02	5/8 x 1 7/8	MB-S2		.42		
.002	3/8 x 1 1/4	MB-D2		.39		.006	1/2 x 1 1/2	MB-D6		.39	.022	5/8 x 1 7/8	MB-S22	190P223916	.42		
.0022	3/8 x 1 1/4	MB-D22	190P222916	.39		.0068	1/2 x 1 1/2	MB-D68	190P682916	.39	.03	3/4 x 2 1/4	MB-S3		.42		
.003	7/16 x 1 1/4	MB-D3		.39		.007	1/2 x 1 1/2	MB-D7		.39	.04	3/4 x 2 1/4	MB-S4		.42		
.0033	7/16 x 1 1/4	MB-D13	190P332916	.39		.0075	1/2 x 1 1/2	MB-D75		.39	.05	3/4 x 2 1/4	TR-15*		.42		

\*Waxed paper construction

## MINERAL-OIL BLACK BEAUTY® MOLDED TUBULARS

● Kraftboard Sleeve and Epoxy End-Seal Gives Added Circuit Protection ● All Paper Dielectric, Impregnated With Mineral Oil For Best High Voltage Performance ● Maximum Operating Temperature: 85°C

6000 WVDC BUFFER						10,000 WVDC BUFFER						12,500 WVDC BUFFER					
μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net		μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net		
.0005	5/16 x 1 7/8	TVM-356		\$.81		.0005	1 1/16 x 2 1/4	TVM-351		\$.90	.00025	1 1/16 x 2 1/4	12TVM-325		\$.102		
.001	5/16 x 1 7/8	TVM-216	184P102060	.81													
.005	1 1/16 x 2 1/4	TVM-256		.81													

## AUTOCON® MOLDED TUBULAR CAPACITORS

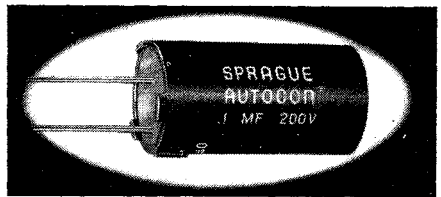
● Generous 1" Lead Lengths Make Autocons Universal Replacements For All Single Ended Original Equipment Types Used on Printed Wiring Boards

● Pre-molded Thermosetting Plastic Shell with Plastic Resin Endseal for Humidity Protection, Outside Foil Identified by Index Key

● Autocons Have High Insulation Resistance, Low Power Factor, and a Flat Temperature-Capacitance Curve

● Impregnated with HCX®, an Exclusive Solid Dielectric Material

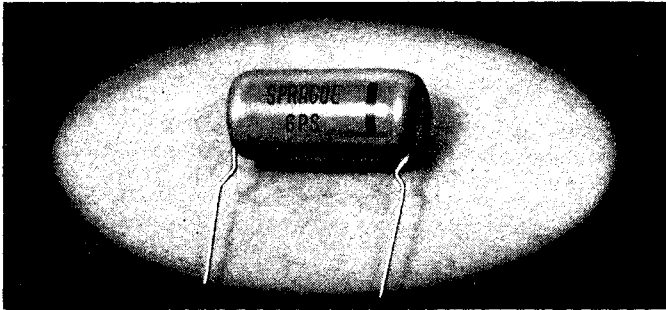
● "Standoff" Feet Prevent Dust and Moisture Traps. Also Prevent Printed Wiring Board Shorts



μF	WVDC	Diam.	Length	Cat. No.	Net	μF	WVDC	Diam.	Length	Cat. No.	Net
.001	200	3/8	1 3/8	2SE-D10	\$.18	.015	400	3/8	1 3/8	4SE-S15	\$.18
.0015	200	3/8	1 3/8	2SE-D15	.18	.022	400	7/16	1 3/8	4SE-S22	.21
.0022	200	3/8	1 3/8	2SE-D22	.18	.033	400	7/16	1 3/8	4SE-S33	.21
.0033	200	3/8	1 3/8	2SE-D33	.18	.047	400	1/2	1 1/2	4SE-S47	.21
.0047	200	3/8	1 3/8	2SE-D47	.18	.068	400	1/2	1 1/2	4SE-S68	.24
.0068	200	3/8	1 3/8	2SE-D68	.18	.1	400	3/8	1 7/8	4SE-P10	.27
.01	200	3/8	1 3/8	2SE-S10	.18	.15	400	3/8	1 7/8	4SE-P15	.30
.015	200	3/8	1 3/8	2SE-S15	.18	.22	400	3/8	1 7/8	4SE-P22	.33
.022	200	3/8	1 3/8	2SE-S22	.21	.33	400	3/4	1 7/8	4SE-P33	.39
.033	200	3/8	1 3/8	2SE-S33	.21	.001	600	3/8	1 3/8	6SE-D10	.18
.047	200	7/16	1 3/8	2SE-S47	.21	.0015	600	3/8	1 3/8	6SE-D15	.18
.068	200	7/16	1 3/8	2SE-S68	.21	.0022	600	3/8	1 3/8	6SE-D22	.18
.1	200	1/2	1 1/2	2SE-P10	.24	.0033	600	3/8	1 3/8	6SE-D33	.18
.15	200	5/8	1 7/8	2SE-P15	.27	.0047	600	3/8	1 3/8	6SE-D47	.18
.22	200	5/8	1 7/8	2SE-P22	.30	.0068	600	3/8	1 3/8	6SE-D68	.18
.33	200	3/8	1 7/8	2SE-P33	.33	.01	600	3/8	1 3/8	6SE-S10	.21
.47	200	3/8	1 7/8	2SE-P47	.39	.015	600	7/16	1 3/8	6SE-S15	.21
.001	400	3/8	1 3/8	4SE-D10	.18	.022	600	7/16	1 3/8	6SE-S22	.24
.0015	400	3/8	1 3/8	4SE-D15	.18	.033	600	1/2	1 1/2	6SE-S33	.24
.0022	400	3/8	1 3/8	4SE-D22	.18	.047	600	1/2	1 1/2	6SE-S47	.27
.0033	400	3/8	1 3/8	4SE-D33	.18	.068	600	3/8	1 3/8	6SE-S68	.30
.0047	400	3/8	1 3/8	4SE-D47	.18	.1	600	3/8	1 3/8	6SE-P10	.33
.0068	400	3/8	1 3/8	4SE-D68	.18	.15	600	3/4	1 7/8	6SE-P15	.36
.01	400	3/8	1 3/8	4SE-S10	.18						

# SPRAGUE CAPACITORS

## DIFILM® ORANGE DROP® DIPPED TUBULARS



- Especially Made for Exact, Original Replacement
- Dual Dielectric (Film-paper) Solidly Impregnated With Exclusive HCX®—Produces Rock-Hard Capacitor Section
- Outperforms Any Other Dipped Tubular Capacitor
- Crimped Wire Leads for Correct Spacing When Mounted On Printed Wiring Boards.
- Voltage Ratings From 200 VDC to 1000 VDC
- Outside Foil on All Units Identified by Black Striping
- Double Dipped in Bright Orange Epoxy Resin—Beats Heat and Humidity
- Won't Leak or Drip
- Also Available in Handy Sprague Kleer-Pak® Boxes
- Write for Engineering Bulletin No. 2004

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	N
<b>200 VOLTS D-C</b>					<b>600 VOLTS D-C (cont.)</b>				
.02	3/8 x 7/8	2PS-S20	.....	\$.15	.0039	3/8 x 1 1/16	6PS-D39	220P39296	\$. .
.022	2 3/64 x 7/8	2PS-S22	220P22392	.15	.004	3/8 x 1 1/16	6PS-D40	.....	. .
.047	2 3/64 x 7/8	2PS-S47	220P47392	.15	.0047	2 3/64 x 1 1/16	6PS-D47	220P47296	. .
.05	1 5/32 x 7/8	2PS-S50	.....	.15	.005	2 3/64 x 1 1/16	6PS-D50	.....	. .
.1	3 1/64 x 1 1/16	2PS-P10	220P10492	.21	.0056	2 3/64 x 1 1/16	6PS-D56	220P56296	. .
.15	3/16 x 1 1/16	2PS-P15	220P15492	.21	.006	1 3/32 x 1 1/16	6PS-D60	.....	. .
.2	1 1/32 x 1 1/16	2PS-P20	.....	.24	.0068	1 3/32 x 1 1/16	6PS-D68	220P68296	. .
.22	3 3/64 x 1 1/16	2PS-P22	220P22492	.24	.0075	2 3/64 x 7/8	6PS-D75	.....	. .
.25	3/8 x 1 1/16	2PS-P25	.....	.24	.008	2 3/64 x 7/8	6PS-D80	.....	. .
.33	5/8 x 1 5/8	2PS-P33	220P33492	.30	.0082	3/8 x 7/8	6PS-D82	220P82296	. .
.47	4 5/64 x 1 5/8	2PS-P47	220P47492	.36	.01	2 3/64 x 7/8	6PS-S10	220P10396	. .
.5	2 7/32 x 1 5/8	2PS-P50	.....	.36	.012	2 3/64 x 7/8	6PS-S12	220P12396	. .
<b>400 VOLTS D-C</b>					<b>1000 VOLTS D-C</b>				
.01	1 3/32 x 1 1/16	4PS-S10	220P10394	.15	.001	2 1/64 x 1 1/16	10PS-D10	220P102910	. .
.015	2 3/64 x 1 1/16	4PS-S15	220P15394	.15	.0015	1 1/32 x 1 1/16	10PS-D15	220P152910	. .
.02	1 3/32 x 7/8	4PS-S20	.....	.15	.002	3/8 x 1 1/16	10PS-D20	.....	. .
.022	2 7/64 x 7/8	4PS-S22	220P22394	.18	.0022	3/8 x 1 1/16	10PS-D22	220P222910	. .
.025	7/16 x 7/8	4PS-S25	.....	.18	.003	1 1/32 x 7/8	10PS-D30	.....	. .
.03	2 3/64 x 7/8	4PS-S30	.....	.18	.004	3/8 x 7/8	10PS-D40	.....	. .
.033	1 5/32 x 7/8	4PS-S33	220P33394	.18	.0047	1 3/32 x 7/8	10PS-D47	220P472910	. .
.04	2 7/64 x 1 1/16	4PS-S40	.....	.18	.005	1 3/32 x 7/8	10PS-D50	.....	. .
.047	2 3/64 x 1 1/16	4PS-S47	220P47394	.18					
.05	2 3/64 x 1 1/16	4PS-S50	.....	.18					
.056	3 1/64 x 1 1/16	4PS-S56	220P56394	.21					
.068	3 3/64 x 1 1/16	4PS-S68	220P68394	.21					
.075	3 3/64 x 1 1/16	4PS-S75	.....	.21					
.1	3 3/64 x 1 1/16	4PS-P10	220P10494	.21					
.15	3 3/64 x 1 1/16	4PS-P15	220P15494	.24					
.2	1 1/32 x 1 5/8	4PS-P20	.....	.27					
.22	3 3/64 x 1 5/8	4PS-P22	220P22494	.27					
.25	4 1/64 x 1 5/8	4PS-P25	.....	.30					

# SPRAGUE CAPACITORS

## BF ISO FARAD® PLASTIC FILM CAPACITORS

For Applications Where the Best in Tubulars is None Too Good

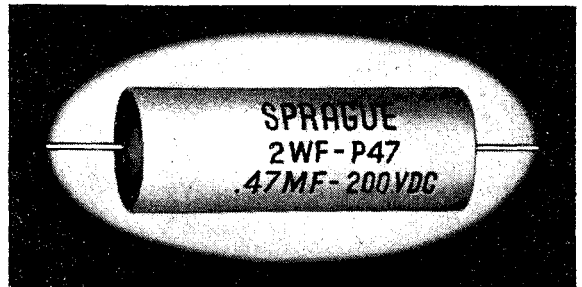


- Isofarad Quality is a Must in Color TV Synchroguide Circuits, Horizontal and Vertical Oscillators, Bridge and Parallel T Circuits and Other Tuned Circuit Applications Requiring Close Tolerance and Zero Temperature Coefficient of Capacitance
- Superior to Silvered Mica Capacitors, Yet Far Less Expensive
- Constant Capacitance—Will Not Change More Than  $\pm 0.2\%$  from Room Temperature to  $+80^\circ\text{C}$  at Maximum Rated Voltage Will Withstand Operating Temperatures to  $85^\circ\text{C}$  ( $185^\circ\text{F}$ )
- **Capacitance Tolerance:  $\pm 5\%$**
- Also Available in Handy Sprague Kleer-Pak® Boxes
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 2073

$\mu\text{F}$	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	$\mu\text{F}$	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
<b>500 WVDC</b>					<b>500 WVDC (cont.)</b>				
.001	$\frac{3}{8} \times 1$	5BF-D10	145P10255	\$.45	.022	$\frac{1}{2} \times 1\frac{1}{2}$	5BF-S22	145P22355	\$.90
.0012	$\frac{3}{8} \times 1$	5BF-D12	145P12255	.45	.027	$\frac{5}{8} \times 1\frac{1}{8}$	5BF-S27	145P27355	.90
.0015	$\frac{3}{8} \times 1$	5BF-D15	145P15255	.45	.033	$\frac{5}{8} \times 1\frac{1}{8}$	5BF-S33	145P33355	1.08
.0018	$\frac{3}{8} \times 1$	5BF-D18	145P18255	.45	.039	$\frac{5}{8} \times 1\frac{1}{8}$	5BF-S39	145P39355	1.08
.0022	$\frac{3}{8} \times 1$	5BF-D22	145P22255	.45	.047	$\frac{5}{8} \times 1\frac{1}{8}$	5BF-S47	145P47355	1.26
.0027	$\frac{3}{8} \times 1$	5BF-D27	145P27255	.45	.056	$\frac{5}{8} \times 1\frac{1}{8}$	5BF-S56	145P56355	1.26
.0033	$\frac{3}{8} \times 1$	5BF-D33	145P33255	.45	.068	$\frac{5}{8} \times 1\frac{1}{8}$	5BF-S68	145P68355	1.59
.0039	$\frac{3}{8} \times 1$	5BF-D39	145P39255	.48	.082	$\frac{3}{4} \times 1\frac{1}{4}$	5BF-S82	145P82355	2.16
.0047	$\frac{3}{8} \times 1$	5BF-D47	145P47255	.48	.1	$\frac{3}{4} \times 2\frac{1}{4}$	5BF-P10	145P10455	2.16
.0056	$\frac{3}{8} \times 1\frac{1}{4}$	5BF-D56	145P56255	.48	.12	$\frac{7}{8} \times 2\frac{1}{2}$	5BF-P12	145P12455	2.94
.0068	$\frac{3}{8} \times 1\frac{1}{4}$	5BF-D68	145P68255	.48	.15	$\frac{7}{8} \times 2\frac{1}{2}$	5BF-P15	145P15455	2.94
.0082	$\frac{7}{16} \times 1\frac{1}{4}$	5BF-D82	145P82255	.48	.18	$\frac{7}{8} \times 2\frac{1}{2}$	5BF-P18	145P18455	4.05
.01	$\frac{7}{16} \times 1\frac{1}{4}$	5BF-S10	145P10355	.54	.22	$\frac{7}{8} \times 2\frac{1}{2}$	5BF-P22	145P22455	4.05
.012	$\frac{1}{2} \times 1\frac{1}{4}$	5BF-S12	145P12355	.54	.27	$1 \times 2\frac{1}{2}$	5BF-P27	145P27455	4.95
.015	$\frac{1}{2} \times 1\frac{1}{4}$	5BF-S15	145P15355	.75	.33	$1 \times 2\frac{1}{2}$	5BF-P33	145P33455	4.95
.018	$\frac{1}{2} \times 1\frac{1}{2}$	5BF-S18	145P18355	.75					

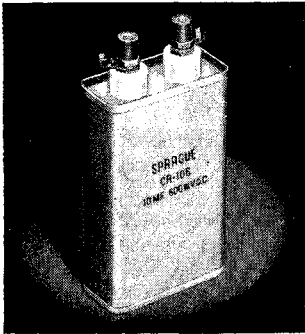
## WF YELLOW-JACKET® FILMITE® 'E' CAPACITORS

- Excellent for Use in Transistorized Circuits and Low-Voltage Electron Tube Circuits
- Extended Foil Type Sections, Wound from Selected, Ultra-Thin Polyester Film and Thin Gage Foil
- Outer Plastic Film Wrap and Resin End Seals Protect Against Moisture and Humidity
- "Smaller Than Small" — These Capacitors Will Fit Anywhere
- Rated to 200 WVDC — Capacitance Tolerance:  $\pm 10\%$
- Designed for Operation to  $85^\circ\text{C}$  ( $185^\circ\text{F}$ )
- Available in Kleer-Pak® Boxes.
- For Technical Data See Latest Issue of Sprague Bulletin 2063



$\mu\text{F}$	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net	$\mu\text{F}$	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
<b>200 WVDC</b>					<b>200 WVDC (cont.)</b>				
.01	$\frac{1}{4} \times \frac{1}{16}$	2WF-S10	148P10392	\$.57	.12	$\frac{1}{32} \times \frac{1}{16}$	2WF-P12	148P12492	\$.63
.012	$\frac{1}{4} \times \frac{1}{16}$	2WF-S12	148P12392	.57	.15	$\frac{1}{32} \times \frac{1}{16}$	2WF-P15	148P15492	.63
.015	$\frac{1}{4} \times \frac{1}{16}$	2WF-S15	148P15392	.57	.18	$\frac{1}{32} \times \frac{1}{16}$	2WF-P18	148P18492	.66
.018	$\frac{1}{4} \times \frac{1}{16}$	2WF-S18	148P18392	.57	.22	$\frac{1}{32} \times \frac{1}{16}$	2WF-P22	148P22492	.66
.022	$\frac{1}{4} \times \frac{1}{16}$	2WF-S22	148P22392	.57	.27	$\frac{1}{32} \times \frac{1}{16}$	2WF-P27	148P27492	.66
.027	$\frac{1}{4} \times \frac{1}{16}$	2WF-S27	148P27392	.57	.33	$\frac{1}{32} \times \frac{1}{16}$	2WF-P33	148P33492	.66
.033	$\frac{1}{4} \times \frac{1}{16}$	2WF-S33	148P33392	.60	.39	$\frac{3}{64} \times \frac{1}{16}$	2WF-P39	148P39492	.72
.039	$\frac{1}{4} \times \frac{1}{16}$	2WF-S39	148P39392	.60	.47	$\frac{3}{64} \times \frac{1}{16}$	2WF-P47	148P47492	.72
.047	$\frac{1}{4} \times \frac{1}{16}$	2WF-S47	148P47392	.60	.56	$\frac{3}{64} \times \frac{1}{16}$	2WF-P56	148P56492	.90
.056	$\frac{1}{4} \times \frac{1}{16}$	2WF-S56	148P56392	.60	.68	$\frac{3}{64} \times \frac{1}{16}$	2WF-P68	148P68492	.90
.068	$\frac{1}{4} \times \frac{1}{16}$	2WF-S68	148P68392	.60	.82	$\frac{1}{32} \times \frac{1}{16}$	2WF-P82	148P82492	.90
.082	$\frac{1}{4} \times \frac{1}{16}$	2WF-S82	148P82392	.60	1.0	$\frac{1}{32} \times \frac{1}{16}$	2WF-M1	148P10592	.90
.1	$\frac{1}{4} \times \frac{1}{16}$	2WF-P10	148P10492	.63					

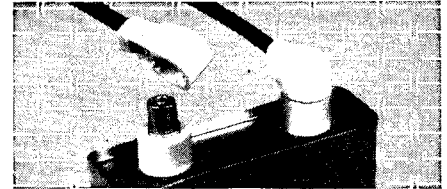
# SPRAGUE CAPACITORS



## TYPE CR RECTANGULAR OILS

- Hermetically sealed in Rugged Rectangular Metal Cans
- Oil-Impregnated and Oil-Filled
- Extremely High Insulation Resistance
- Will Withstand High Surge Voltages and High Ambient Temperatures
- Widely Used in Transmitter Power Supplies and Other High-Voltage Applications

- Furnished With Adapters (as shown below) to Fit Standard Transmitting Tube Plate Caps



μF	WVDC	T. x W. x L.	Cat. No.	Net	μF	WVDC	T. x W. x L.	Cat. No.	Net
.5	600	1 1/8 x 1 1/8 x 2 1/4	CR-056	\$2.82	3.0	2000	1 1/4 x 3 3/4 x 4 3/4	CR-32	\$ 7.9
1.0	600	1 1/8 x 1 1/8 x 2 1/4	CR-16	3.48	4.0	2000	2 1/4 x 3 3/4 x 3 3/4	CR-42	9.0
2.0	600	1 1/8 x 1 1/8 x 2 7/8	CR-26	4.29	6.0	2000	3 3/8 x 3 3/4 x 4 1/2	CR-62	12.0
3.0	600	1 1/8 x 1 1/8 x 3 1/4	CR-36	4.95	10.0	2000	4 1/8 x 3 3/4 x 4 3/4	CR-102	18.3
4.0	600	1 3/8 x 2 1/2 x 3 1/2	CR-46	5.46	.1	2500	1 3/8 x 2 1/2 x 2 1/2	CR-0125	6.0
6.0	600	1 3/8 x 2 1/2 x 4 3/4	CR-66	6.78	.5	2500	1 1/4 x 3 3/4 x 3 1/4	CR-0525	6.9
8.0	600	1 1/4 x 3 3/4 x 3 3/8	CR-86	8.10	1.0	2500	1 3/4 x 3 3/4 x 3 1/4	CR-125	7.9
10.0	600	1 1/4 x 3 3/4 x 4 3/4	CR-106	9.09	2.0	2500	1 3/4 x 3 3/4 x 4 3/4	CR-225	12.8
.1	1000	1 1/8 x 1 1/8 x 1 3/8	CR-011	2.49	4.0	2500	4 1/8 x 3 3/4 x 4 3/8	CR-425	18.0
.25	1000	1 1/8 x 1 1/8 x 2 1/4	CR-0251	2.82	.1	3000	1 3/8 x 2 1/2 x 2 1/2	CR-013	8.4
.5	1000	1 1/8 x 1 1/8 x 2 1/4	CR-051	2.97	.25	3000	1 3/8 x 2 1/2 x 2 7/8	CR-0253	8.9
1.0	1000	1 1/8 x 1 1/8 x 2 1/4	CR-11	3.81	.5	3000	1 3/8 x 2 1/2 x 4 1/4	CR-053	10.0
2.0	1000	1 1/8 x 1 1/8 x 3 3/8	CR-21	4.95	1.0	3000	2 1/4 x 3 3/4 x 3 3/8	CR-13	12.0
4.0	1000	1 3/8 x 2 1/2 x 3 5/8	CR-41	6.27	2.0	3000	3 3/8 x 3 3/4 x 4 1/2	CR-23	15.0
8.0	1000	1 1/4 x 3 3/4 x 4 3/4	CR-81	9.09	4.0	3000	4 1/8 x 3 3/4 x 4 3/4	CR-43	22.1
10.0	1000	1 3/4 x 3 3/4 x 4 3/4	CR-101	10.08	.1	4000	2 1/4 x 3 3/4 x 2 3/4	CR-014	10.8
12.0	1000	2 1/4 x 3 3/4 x 4 1/2	CR-121	10.89	.25	4000	2 1/4 x 3 3/4 x 2 3/4	CR-0254	12.0
15.0	1000	2 1/2 x 3 3/4 x 4 3/4	CR-151	12.06	.5	4000	2 1/4 x 3 3/4 x 3 3/8	CR-054	13.8
.5	1500	1 1/8 x 1 1/8 x 2 7/8	CR-0515	3.81	1.0	4000	2 1/4 x 3 3/4 x 5 1/8	CR-14	17.4
1.0	1500	1 1/8 x 1 1/8 x 3 3/8	CR-115	4.47	2.0	4000	4 1/8 x 3 3/4 x 5 1/8	CR-24	23.4
2.0	1500	1 3/8 x 2 1/2 x 4 1/4	CR-215	6.12	.2	5000	1 3/4 x 3 3/4 x 3 3/8	CR-025	12.0
4.0	1500	1 1/4 x 3 3/4 x 4 3/4	CR-415	8.43	.5	5000	2 1/4 x 3 3/4 x 4 1/2	CR-055	15.0
5.0	1500	1 1/4 x 3 3/4 x 4 3/4	CR-515	9.09	1.0	5000	4 1/8 x 3 3/4 x 4 3/8	CR-15	20.4
8.0	1500	2 1/2 x 3 3/4 x 4 3/4	CR-815	12.54	2.0	5000	4 1/8 x 3 3/4 x 6	CR-25	31.4
10.0	1500	3 3/8 x 3 3/4 x 4 3/4	CR-1015	15.03	.1	6000	2 1/4 x 3 3/4 x 3 3/8	CR-0160	16.4
.1	2000	1 3/8 x 2 1/2 x 2 1/2	CR-012	3.96	.2	6000	1 3/4 x 3 3/4 x 4 1/4	CR-0260	18.0
.25	2000	1 3/8 x 2 1/2 x 2 1/2	CR-0252	4.29	1.0	6000	4 1/8 x 3 3/4 x 7 1/2	CR-160	29.4
.5	2000	1 3/8 x 2 1/2 x 2 7/8	CR-052	4.47	.1	7500	2 1/4 x 3 3/4 x 3 3/8	CR-0175	17.4
1.0	2000	1 3/8 x 2 1/2 x 3 1/2	CR-12	5.46	.2	7500	1 3/4 x 3 3/4 x 4 3/4	CR-0275	19.4
2.0	2000	1 1/4 x 3 3/4 x 4 1/4	CR-22	6.45					

## SCREWBASE PC OILS

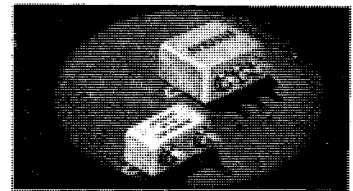


- Oil-Impregnated
- Oil-Filled
- Screwbase Can For Easy Single Hole Mounting
- Small Size — Will Fit Tight Spaces

μF	WVDC	Diam. x Lgth.	Cat. No.	Net
2	600	1 1/2 x 2 7/8	PC-26	\$3.24
3	600	1 1/2 x 3 1/2	PC-36	3.69
4	600	1 1/2 x 5 1/4	PC-46	4.26
1	1000	1 1/2 x 2 7/8	PC-11	3.00
2	1000	1 1/2 x 4 1/2	PC-21	3.78
0.5	1500	1 1/2 x 2 3/8	PC-515	3.51
1	1500	1 1/2 x 3 3/8	PC-115	3.78

## TYPE BP BATHTUB CAPACITORS

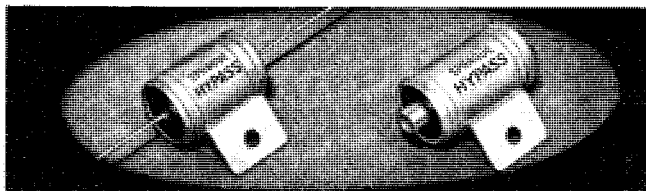
- For Applications Where Severe Operating Conditions Are Encountered
- Hermetically Sealed for Extra Protection
- Seamless Drawn Metal Can
- Oil-Filled and Oil-impregnated for Long, Dependable Service Life
- Convenient Mounting Ears are Integral Part of Metal Container



μF	L. x W. x H.	Cat. No.	Net	μF	L. x W. x H.	Cat. No.	Net
<b>400 WVDC</b>				<b>1000 WVDC</b>			
.1	1 1/8 x 1 x 3/4	BP-1	\$1.32	.1 + .1	1 1/8 x 1 x 3/4	BP-216	\$2
.25	1 1/8 x 1 x 3/4	BP-25	1.50	.25 + .25	1 1/8 x 1 x 3/8	BP-2256	2
.5	1 1/8 x 1 x 7/8	BP-50	1.59	.5 + .5	2 x 1 3/4 x 7/8	BP-2506	2
1.0	2 x 1 3/4 x 7/8	BP-10	1.89	1.0 + 1.0	2 x 2 x 1 1/8	BP-116	3
.1 + .1	1 1/8 x 1 x 3/4	BP-21	1.98	.1 + .1 + .1	1 1/8 x 1 x 3/4	BP-316	2
.25 + .25	1 1/8 x 1 x 7/8	BP-225	2.16	.25 + .25 + .25	2 x 1 3/4 x 7/8	B2-3256	2
.5 + .5	2 x 1 3/4 x 7/8	BP-250	2.49	.5 + .5 + .5	2 x 2 x 1 1/8	BP-356	3
.1 + .1 + .1	1 1/8 x 1 x 3/4	BP-31	2.40	<b>600 WVDC</b>			
.05	1 1/8 x 1 x 3/4	BP-56	1.74	.05	1 1/8 x 1 x 3/4	BP-51	1
.1	1 1/8 x 1 x 3/4	BP-16	1.77	.1	1 1/8 x 1 x 3/4	BP-11	1
.25	1 1/8 x 1 x 3/4	BP-256	1.86	.25	1 1/8 x 1 x 3/4	BP-251	1
.5	1 1/8 x 1 x 7/8	BP-506	1.98	.5	2 x 1 3/4 x 7/8	BP-501	2
1.0	2 x 1 3/4 x 7/8	BP-106	2.25	1.0	2 x 2 x 1 1/8	BP-101	2
2.0	2 x 2 x 1 1/8	BP-206	3.00	.05 + .05	1 1/8 x 1 x 3/4	BP-2051	2
.05 + .05	1 1/8 x 1 x 3/4	BP-2056	2.19	.1 + .1	1 1/8 x 1 x 3/4	BP-211	2
				.25 + .25	2 x 1 3/4 x 7/8	BP-2251	2
				.5 + .5	2 x 2 x 1 1/8	BP-2501	3
				.1 + .1 + .1	1 1/8 x 1 x 3/4	BP-311	2
				.25 + .25 + .25	2 x 2 x 1 1/8	BP-3251	3

# SPRAGUE FILTERS

## HYPASS<sup>®</sup> CAPACITORS



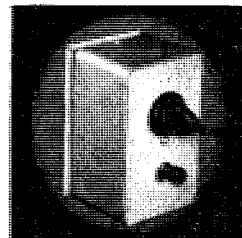
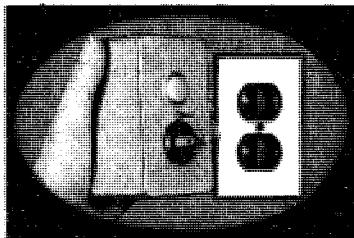
- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are Ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

μF	Amps.	WVDC	Dia. x Length	Cat. No.	Net
.5	40	50	1 x 1 1/16	*48P18	\$2.28
.5	60	50	1 x 1 1/16	48P100	3.75
.25	20	200	3/4 x 1 1/16	*48P10	1.56
.5	20	200	1 x 1 1/16	*48P14	1.89
.1	20	250(VAC)	1 1/16 x 1 1/16	*48P9	1.56
.1	20	400	1 1/16 x 1 1/16	*48P6	1.53
1	20	400	1 1/16 x 1 1/16	†80P1	1.74
002	15	600	1/4 x 1 3/8	46P12	1.29
005	15	600	1/4 x 1 3/8	46P8	1.29
01	20	600	7/16 x 1 1/4	47P6	1.41
02	20	600	7/16 x 1 1/2	47P8	1.44
1	20	600	1 1/16 x 1 1/16	*48P8	1.56
1	20	600	1 1/16 x 1 1/16	*†80P3	1.77
5	20	600	1 x 1 1/16	*48P12	1.65
5	20	600	1 x 2 1/4	*48P16	2.10
005	20	1000	7/16 x 1 1/4	47P12	1.44
01	20	1000	7/16 x 1 1/2	47P13	1.56
005	20	2500	1 x 1 1/16	47P14	1.74
01	20	2500	1 x 1 1/16	47P15	1.86
002	20	5000	1 x 1 1/16	47P16	1.92

Has female screw terminals

†Bulkhead mounting.

## TYPE F-400 MIRACLE FILTEROL<sup>®</sup>

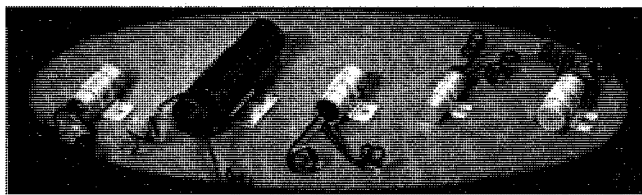


### A LINE FILTER THAT REALLY WORKS

- Effectively Suppresses Radio Interference by Filtering Power Lines of Receivers and Appliances
- Maximum Noise Eliminating Efficiency because of Practically Zero Length of Ground Lead
- Plugs into Standard Duplex Wall Outlet — Captive Screw Fastens Filterol F-400 to Outlet for Safe, Secure Mounting
- Direct Wall-Mounting Provides Neat Installation — No Unsightly Cord — Receiver or Appliance Plugs into Standard Outlet on Face of F-400
- Will Also Operate at Slightly Reduced Efficiency in Older Homes where Wiring is of Knob and Tube or 2-Conductor Non-Metallic Sheathed Cable Type by Using the External Grounding Post Provided for this Purpose
- Handsomely Finished in Tan Hammerloid Baked Enamel
- Rated at 5 Amperes, 125 Volts AC or DC

TYPE F-400 FILTEROL.....\$7.45 net

## TYPE IF FILTERS



IF-15    IF-11    IF-21    IF-S1    IF-37

**IF-15** — TRIPLE-SECTION FILTER for small motor-operated devices such as fans, drills, etc. designed to prevent shocks from discharge of filter capacitors.

**IF-11** — DUAL HIGH-CAPACITY FILTER designed for use on motors over 1 hp up to 220 volts ac-dc. Also used on high-current arcing devices.

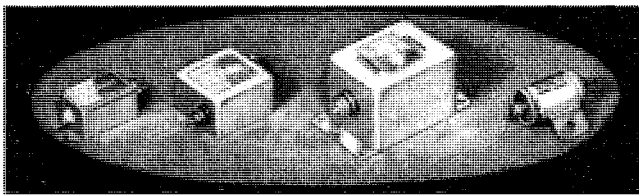
**IF-21** — COMPACT DUAL FILTER for use on fractional horsepower motors with case grounded to motor frame. Also used across line terminals of motors.

**IF-S1** — SINGLE SECTION 2-LEAD FILTER for use across make-and-break contacts, such as thermostats, circuit breakers, etc.

**IF-37** — 3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Also used on governor-type motors. *UL Approved.*

at. No.	Volts AC or DC	Dia. x Length	Net
-15	220	1 x 2 3/16	\$1.56
-11	220	1 3/8 x 5 1/4	4.68
-21	220	1 x 2 3/16	1.05
-S1	220	3/4 x 2 1/16	.69
-37	220	1 x 2"	1.35

## FILTEROL<sup>®</sup> FILTERS



FILTEROL 1    FILTEROL 2    FILTEROL 3    FILTEROL 4

**Filterol Types 1, 2, and 3** — Designed for connection in series with power supply lines to interference-producing devices... A 3-terminal network with the case as one terminal... The selected filter should have a rating higher than the continuous operating current of the offending device... A single Filterol connected to the high side of the line is usually sufficient... In severe cases a Filterol in each leg of the power line may be necessary... For three or four-wire systems, a Filterol in each wire is necessary.

**Filterol Type 4** — A new, exclusive Sprague development incorporating a Sprague HYPASS<sup>®</sup> Capacitor... Provides exceptionally high attenuation at frequencies above 5 megacycles... Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size	Net
Filterol 1	1	115	7/8 x 1 1/4 x 1 3/4	\$ 8.10
Filterol 2	10	115	1 1/8 x 2 x 2	8.88
Filterol 3	35	115	1 7/8 x 2 7/8 x 3 1/8	16.44
Filterol 4	20	115	1" dia. x 1 1/16" long	1.83

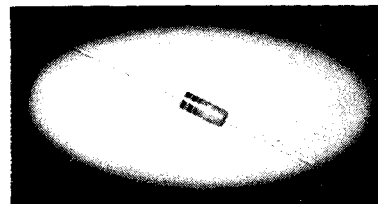


# SPRAGUE CAPACITORS

## TYPES 252C, 262C, 263C MOLDED CERAMIC CORDWOOD CAPACITORS

### TYPE 252C MOLDED CERAMITE® CORDWOOD CAPACITORS

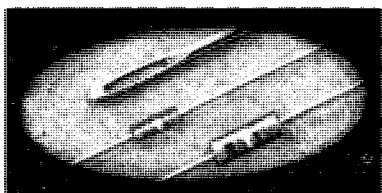
- Type 252C Capacitors Meet Basic Requirements for Modern Electronic Packaging.
- Fully Molded Construction is Rugged and Offers Excellent Humidity Protection.
- Ceramic Dielectric is Mechanically Strong and Electrically Stable.
- Cordwood Size Permits Circuit Designer to Use These Capacitors in This New Packaging Concept.
- Diameter, .094", Length, .250"
- For Complete Technical Data See Latest Issue of Sprague Engineering Bulletin 6151.



μF	WVDC	Catalog Number		
		±5% Tol.	±10% Tol.	±20% Tol.
5	100	252C0555R0X9101B	252C0555R0X0101B	
8	100	252C0558R0X9101B	252C0558R0X0101B	
10	100	252C055100X5101B	252C055100X9101B	252C055100X0101B
15	100	252C027150X5101B	252C027150X9101B	
18	100	252C027180X5101B		
22	100	252C027220X5101B	252C027220X9101B	252C027220X0101B
27	100	252C027270X5101B		
33	100	252C028330X5101B	252C028330X9101B	
39	100	252C028390X5101B		
47	100	252C028470X5101B	252C028470X9101B	252C028470X0101B

μF	WVDC	Catalog Number		
		±5% Tol.	±10% Tol.	±20% Tol.
56	100	252C028560X5101B		
68	100	252C028680X5101B	252C028680X9101B	
82	100	252C016820X5101B		
100	100	252C016101X5101B	252C016101X9101B	252C016101X0101B
120	100	252C064121X5101B		
150	100	252C064151X5101B	252C064151X9101B	
220	100			252C040221X0101B
330	100			252C040331X0101B
360	100			252C040361X0101B

Call Your Sprague Industrial Distributor For Prices



### TYPES 262C, 263C MOLDED MONOLITHIC<sup>®</sup> CORDWOOD CAPACITORS

- Cerod<sup>®</sup> Capacitors—Tiny, Molded Cylindrical Ceramics Now in Monolithic<sup>®</sup> Construction. True Miniaturization Without Compromise.
- Two Cordwood Sizes Available. Designers Can Make Full Use of This New Packaging Concept.
- Ceramic Elements Fully Molded in Thermosetting Resin—Assures Good Mechanical and Electrical Properties Plus Precise Dimensions.
- Two Ceramic Formulations Available Including a New Temperature-Stable Body.
- Call Your Sprague Industrial Distributor for Prices.
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 625C

### TYPE 262C—STANDARD RATINGS—100 VDC

μF	Catalog Number		
	±5% Tol.	±10% Tol.	±20% Tol.
<b>FORMULATION N030</b>			
6.8		262C0256R8X9101B	262C0256R8X0101B
8.2		262C0258R2X9101B	262C0258R2X0101B
10	262C025100X5101B	262C025100X9100B	262C025100X0101B
12	262C025120X5101B	262C025120X9101B	262C025120X0101B
15	262C025150X5101B	262C025150X9100B	262C025150X0101B
18	262C025180X5101B	262C025180X9101B	262C025180X0101B
22	262C025220X5101B	262C025220X9101B	262C025220X0101B
27	262C025270X5101B	262C025270X9101B	262C025270X0101B
33	262C025330X5101B	262C025330X9101B	262C025330X0101B
39	262C025390X5101B	262C025390X9101B	262C025390X0101B
47	262C025470X5101B	262C025470X9101B	262C025470X0101B
56	262C025560X5101B	262C025560X9101B	262C025560X0101B
68	262C025680X5101B	262C025680X9101B	262C025680X0101B
82	262C025820X5101B	262C025820X9101B	262C025820X0101B
100	262C025101X5101B	262C025101X9101B	262C025101X0101B

μF	Catalog Number		
	±5% Tol.	±10% Tol.	±20% Tol.
<b>FORMULATION N030 (Cont.)</b>			
120	262C025121X5101B	262C025121X9101B	262C025121X0101B
150	262C025151X5101B	262C025151X9101B	262C025151X0101B
<b>FORMULATION X5R</b>			
470	262C067471X9101B	262C067471X0101B	262C067471D810 <sup>†</sup>
680	262C067681X9101B	262C067681X0101B	262C067681D810 <sup>†</sup>
1000	262C067102X9101B	262C067102X0101B	262C067102D810 <sup>†</sup>
1500	262C067152X9101B	262C067152X0101B	262C067152D810 <sup>†</sup>
2200	262C067222X9101B	262C067222X0101B	262C067222D810 <sup>†</sup>
3300	262C067332X9101B	262C067332X0101B	262C067332D810 <sup>†</sup>
4700	262C067472X9101B	262C067472X0101B	262C067472D810 <sup>†</sup>
6800	262C067682X9101B	262C067682X0101B	262C067682D810 <sup>†</sup>
10000	262C067103X9101B	262C067103X0101B	262C067103D810 <sup>†</sup>

### TYPE 263C—STANDARD RATINGS—100 VDC

μF	Catalog Number		
	±5% Tol.	±10% Tol.	±20% Tol.
<b>FORMULATION N030</b>			
180	263C025181X5101B	263C025181X9101B	263C025181X0101B
220	263C025221X5101B	263C025221X9101B	263C025221X0101B
270	263C025271X5101B	263C025271X9101B	263C025271X0101B
330	263C025331X5101B	263C025331X9101B	263C025331X0101B
390	263C025391X5101B	263C025391X9101B	263C025391X0101B
470	263C025471X5101B	263C025471X9101B	263C025471X0101B
560	263C025561X5101B	263C025561X9101B	263C025561X0101B
680	263C025681X5101B	263C025681X9101B	263C025681X0101B

μF	Catalog Number		
	±5% Tol.	±10% Tol.	+80%, -20% Tol.
<b>FORMULATION X5R</b>			
15000	263C067153X9101B	263C067153X0101B	263C067153D810
22000	263C067223X9101B	263C067223X0101B	263C067223D810
33000	263C067333X9101B	263C067333X0101B	263C067333D810

#### DIMENSIONS

Type	Diameter	Length
262C	.090" ± .009"	.250" ± .015"
263C	.138" ± .010"	.390" ± .015"

# SPRAGUE CAPACITORS

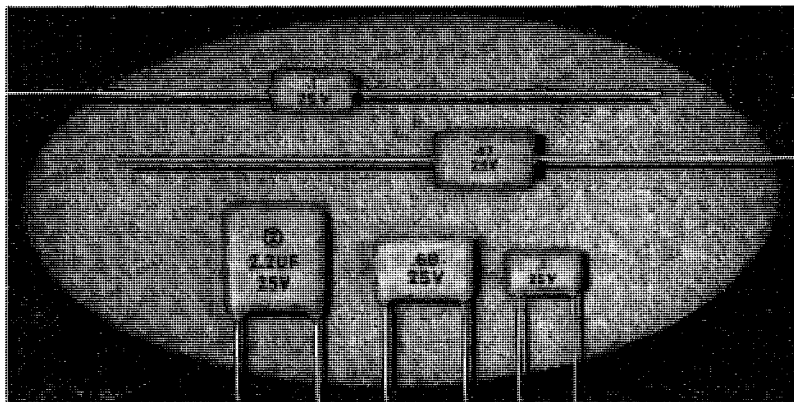
## MONOLYTHIC® LAYER-BUILT CERAMIC CAPACITORS

### Types 3C and 4C—Formulation N030

- Temperature Compensating Units, N030 Dielectric Offers Greater Capacitance Per Unit Volume and Greater Stability Than Previously Available.
- Highly Reliable, Small in Size, Axial or Radial Leads.
- Temperature Coefficient Guaranteed Less Than  $\pm .6\%$  Between  $-55C$  and  $+125C$ .

### Types 3C, 4C, 5C—Formulation C23

- High-K General Application—High Capacitances in Small Physical Size, Axial or Radial Leads.
- Well Suited for By-pass and Filtering Applications
- For Complete Technical Data, See Latest Sprague Engineering Bulletin 6212 (N030) or 6201 (C23)



### Type 3C, 4C Monolythic Ceramic Capacitors—Formulation N030—Temperature Compensating—200 V

$\mu F$	Tol.	Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES	$\mu F$	Tol.	Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES	$\mu F$	Tol.	Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES	$\mu F$	Tol.	Cat. No.	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT PRICES
TYPE 3C AXIAL LEADS				TYPE 3C AXIAL LEADS				TYPE 3C RADIAL LEADS				TYPE 4C AXIAL LEADS			
51	5%	3C5105BH1		240	2%	3C2412BH1		1200	5%	4C1225BH1		150	2%	3C1512BH3	
51	2%	3C5102BH1		270	10%	3C2719BH1		1200	2%	4C1222BH1		160	5%	3C1615BH3	
56	10%	3C5609BH1		270	5%	3C2715BH1		1300	5%	4C1325BH1		160	2%	3C1612BH3	
56	5%	3C5605BH1		270	2%	3C2712BH1		1300	2%	4C1322BH1		180	10%	3C1819BH3	
56	2%	3C5602BH1		300	5%	3C3015BH1		1500	10%	4C1529BH1		180	5%	3C1815BH3	
62	5%	3C6205BH1		300	2%	3C3012BH1		1500	5%	4C1525BH1		180	2%	3C1812BH3	
62	2%	3C6202BH1		330	10%	3C3319BH1		1500	2%	4C1522BH1		200	5%	3C2015BH3	
68	10%	3C6809BH1		330	5%	3C3315BH1		1600	5%	4C1625BH1		200	2%	3C2012BH3	
68	5%	3C6805BH1		330	2%	3C3312BH1		1600	2%	4C1622BH1		220	10%	3C2219BH3	
68	2%	3C6802BH1		360	5%	3C3615BH1		1800	10%	4C1829BH1		220	5%	3C2215BH3	
75	5%	3C7505BH1		360	2%	3C3612BH1		1800	5%	4C1825BH1		220	2%	3C2212BH3	
75	2%	3C7502BH1		390	10%	3C3919BH1		1800	2%	4C1822BH1		240	5%	3C2415BH3	
82	10%	3C8209BH1		390	5%	3C3915BH1		1800	5%	4C1825BH1		240	2%	3C2412BH3	
82	5%	3C8205BH1		390	2%	3C3912BH1		1800	2%	4C1822BH1		270	10%	3C2719BH3	
82	2%	3C8202BH1		430	5%	3C4315BH1		TYPE 3C RADIAL LEADS	270	5%		3C2715BH3			
91	5%	3C9105BH1		430	2%	3C4312BH1		51	5%	3C5105BH3		270	2%	3C2712BH3	
91	2%	3C9102BH1		470	10%	3C4719BH1		51	2%	3C5102BH3		300	5%	3C3015BH3	
100	10%	3C1019BH1		470	5%	3C4715BH1		56	10%	3C5609BH3		300	2%	3C3012BH3	
100	5%	3C1015BH1		470	2%	3C4712BH1		56	5%	3C5605BH3		330	10%	3C3319BH3	
100	2%	3C1012BH1		510	5%	3C5115BH1		56	2%	3C5602BH3		330	5%	3C3315BH3	
110	5%	3C1115BH1	510	2%	3C5112BH1	62	5%	3C6205BH3	330	2%	3C3312BH3				
110	2%	3C1112BH1	560	10%	3C5619BH1	62	2%	3C6202BH3	360	5%	3C3615BH3				
120	10%	3C1219BH1	560	5%	3C5615BH1	68	10%	3C6809BH3	360	2%	3C3612BH3				
120	5%	3C1215BH1	560	2%	3C5612BH1	68	5%	3C6805BH3	390	10%	3C3919BH3				
120	2%	3C1212BH1	620	5%	3C6215BH1	68	2%	3C6802BH3	390	5%	3C3915BH3				
130	5%	3C1315BH1	620	2%	3C6212BH1	75	5%	3C7505BH3	390	2%	3C3912BH3				
130	2%	3C1312BH1	680	10%	3C6819BH1	75	2%	3C7502BH3	430	5%	3C4315BH3				
150	10%	3C1519BH1	680	5%	3C6815BH1	82	10%	3C8209BH3	430	2%	3C4312BH3				
150	5%	3C1515BH1	680	2%	3C6812BH1	82	5%	3C8205BH3	470	10%	3C4719BH3				
150	2%	3C1512BH1	TYPE 4C AXIAL LEADS	82	2%	3C8202BH3	470	5%	3C4715BH3						
160	5%	3C1615BH1	750	5%	4C7515BH1	470	2%	3C4712BH3							
160	2%	3C1612BH1	750	2%	4C7512BH1	510	5%	3C5115BH3							
180	10%	3C1819BH1	820	10%	4C8219BH1	510	2%	3C5112BH3							
180	5%	3C1815BH1	820	5%	4C8215BH1	560	10%	3C5619BH3							
180	2%	3C1812BH1	820	2%	4C8212BH1	560	5%	3C5615BH3							
200	5%	3C2015BH1	910	5%	4C9115BH1	560	2%	3C5612BH3							
200	2%	3C2012BH1	910	2%	4C9112BH1	620	5%	3C6215BH3							
220	10%	3C2219BH1	1000	10%	4C1029BH1	620	2%	3C6212BH3							
220	5%	3C2215BH1	1000	5%	4C1025BH1	680	10%	3C6819BH3							
220	2%	3C2212BH1	1000	2%	4C1022BH1	680	5%	3C6815BH3							
240	5%	3C2415BH1	1100	5%	4C1125BH1	680	2%	3C6812BH3							
			1100	2%	4C1122BH1										
			1200	10%	4C1229BH1										
						120	10%	3C1219BH3							
						120	5%	3C1215BH3							
						120	2%	3C1212BH3							
						130	5%	3C1315BH3							
						130	2%	3C1312BH3							
						150	10%	3C1519BH3							
						150	5%	3C1515BH3							

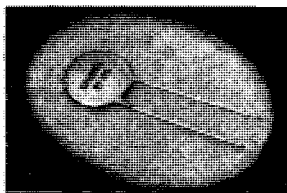
# SPRAGUE CAPACITORS

## MONOLYTHIC<sup>®</sup> CERAMIC CAPACITORS, TYPE 4C RADIAL LEADS (Cont.)

$\mu\mu\text{F}$	Tol.	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices	$\mu\mu\text{F}$	Tol.	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices	$\mu\mu\text{F}$	Tol.	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices	$\mu\mu\text{F}$	Tol.	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices
820	5%	4C8215BH3			1300	5%		4C1325BH3		2200		10%	4C2229BH3		
820	2%	4C8212BH3		1300	2%	4C1322BH3		2200	5%	4C2225BH3		3600	5%	4C3625BH3	
910	5%	4C9115BH3		1500	10%	4C1529BH3		2200	2%	4C2222BH3		3600	2%	4C3622BH3	
910	2%	4C9112BH3		1500	5%	4C1525BH3		2400	5%	4C2425BH3		3900	10%	4C3929BH3	
1000	10%	4C1029BH3		1500	2%	4C1522BH3		2400	2%	4C2422BH3		3900	5%	4C3925BH3	
1000	5%	4C1025BH3		1600	5%	4C1625BH3		2700	10%	4C2729BH3		3900	2%	4C3922BH3	
1000	2%	4C1022BH3		1600	2%	4C1622BH3		2700	5%	4C2725BH3		4300	5%	4C4325BH3	
1100	5%	4C1125BH3		1600	10%	4C1629BH3		2700	2%	4C2722BH3		4300	2%	4C4322BH3	
1100	2%	4C1122BH3		1800	5%	4C1825BH3		3000	5%	4C3025BH3		4700	10%	4C4729BH3	
1200	10%	4C1229BH3		1800	2%	4C1822BH3		3000	2%	4C3022BH3		4700	5%	4C4725BH3	
1200	5%	4C1225BH3		2000	5%	4C2025BH3		3300	10%	4C3329BH3		4700	2%	4C4722BH3	
1200	2%	4C1222BH3		2000	2%	4C2022BH3		3300	5%	4C3325BH3		5100	5%	4C5125BH3	
												5100	2%	4C5122BH3	

## TYPE 3C, 4C, 5C Monolythic Ceramic Capacitors—High-K Formulation C23 $\pm 20\%$ Cap. Tol

#F	VDC	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices	#F	VDC	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices	#F	VDC	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices	#F	VDC	Cat. No.	Call Your Sprague Industrial Distributor for Current Prices		
RADIAL LEADS																	
.01	25	3C3		.47	25	4C47		.15	50	5C51		.033	25	3C10			
.015	25	3C6		.68	25	4C50		.22	50	5C52		.047	25	3C13			
.022	25	3C9		.1	25	5C7		.33	50	5C53		.068	25	3C16			
.033	25	3C12		.15	25	5C8		.47	50	5C54		.1	25	3C19			
.047	25	3C15		.22	25	5C9		AXIAL LEADS						.15	25	4C36	
.068	25	3C18		.33	25	5C10		.01	25	3C1		.22	25	4C39			
.1	25	3C21		.47	25	5C11		.015	25	3C4		.33	25	4C42			
.15	25	4C38		.68	25	5C12		.022	25	3C7							
.22	25	4C41		1.0	25	5C13											
.33	25	4C44		1.5	25	5C14											
				2.2	25	5C15											
				.1	50	5C50											



## HYPERCON<sup>®</sup> CERAMIC DISCS

- Superior to Electrolytic Capacitors of Similar Capacitance Values because of the Very Low Power Factor of Hypercons

- Ultra-miniature Ceramic Discs Ideal for use in Transistorized Circuitry

- Designed for By-pass and Coupling Applications but Particularly Well-suited for any Low Voltage use Where High Capacitance and Low Power Factor are Important Considerations

- Tolerance:  $\pm 80-20\%$

- Call Your Sprague Industrial Distributor for Current Prices

$\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	D. x T.
3 VOLTS D-C			
.1	HY-120	54C23	$\frac{1}{4} \times \frac{3}{32}$
.22	HY-125	40C322	$\frac{3}{32} \times \frac{3}{32}$
.47	HY-130	20C201	$\frac{2}{32} \times \frac{3}{32}$
1.0	HY-135	44C69	$\frac{1}{32} \times \frac{3}{32}$
2.2	HY-150	41C171	$\frac{2}{32} \times \frac{3}{32}$

$\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	D. x T.
12 VOLTS D-C			
.047	HY-310	40C235	$\frac{9}{32} \times \frac{5}{8}$
.1	HY-320	20C202	$\frac{1}{32} \times \frac{5}{8}$
.22	HY-325	29C365	$\frac{9}{16} \times \frac{5}{8}$
.33	HY-327	33C151	$\frac{2}{32} \times \frac{5}{8}$
.47	HY-330	41C172	$\frac{2}{32} \times \frac{5}{8}$
25 VOLTS D-C			
.01	HY-520	40C387	$\frac{9}{32} \times \frac{5}{8}$
.022	HY-525	19C383	$\frac{1}{32} \times \frac{5}{8}$
.033	HY-530	20C233	$\frac{1}{32} \times \frac{5}{8}$
.047	HY-535	55C60	$\frac{1}{2} \times \frac{5}{8}$
.1	HY-550	33C158	$\frac{2}{32} \times \frac{5}{8}$

## SPECIAL APPLICATION CERA-MITE<sup>®</sup> DISC CAPACITORS

### DISC CERAMICS FOR AC APPLICATIONS

- Rated at 125 VAC
- Standard Tolerance  $\pm 20\%$
- For AC Line Bypass Application—Unlike Standard DC Rated Discs, Type 125L Meets 1500 Volt AC Flash Test—Type 125M Meets UL 10KV Discharge Test.
- Call Your Sprague Industrial Distributor for Current Prices

$\mu\text{F}$	Sprague Products Catalog No.	Sprague O.E.M. Part No.	D. x L.
.001	125L-D10	19C251	$\frac{3}{8} \times \frac{7}{32}$
.0015	125L-D15	19C252	$\frac{3}{8} \times \frac{7}{32}$
.002	125L-D20	19C253	$\frac{3}{8} \times \frac{7}{32}$
.0047	125L-D47	29C145	$\frac{9}{16} \times \frac{7}{32}$
.005	125L-D50	29C145A	$\frac{9}{16} \times \frac{7}{32}$
.01	125L-S10	36C218	$\frac{3}{4} \times \frac{7}{32}$
.02	125L-S20	36C220	$\frac{3}{4} \times \frac{1}{4}$
2 x .005	125L-2D50	29C147	$\frac{3}{8} \times \frac{1}{4}$
2 x .01	125L-2S10	36C219	$\frac{3}{4} \times \frac{1}{4}$
470 $\mu\mu\text{F}$	125M-T47	20C235	$\frac{7}{16} \times \frac{1}{4}$
.001	125M-D10	20C186	$\frac{7}{16} \times \frac{1}{4}$
.0015	125M-D15	55C45	$\frac{1}{2} \times \frac{1}{4}$
.002	125M-D20	29C304	$\frac{9}{16} \times \frac{1}{4}$
.0047	125M-D47	33C114	$\frac{1}{16} \times \frac{1}{4}$
.005	125M-D50	33C115	$\frac{1}{16} \times \frac{1}{4}$
.01	125M-S10	41C157	$\frac{7}{8} \times \frac{1}{4}$
.02	125M-S20	41C160	$\frac{7}{8} \times \frac{1}{4}$

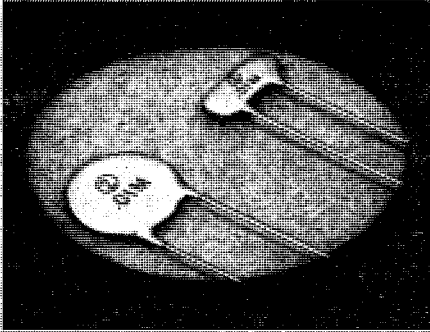
### MINIATURIZED DISC CERAMIC CAPACITORS FOR TRANSISTORIZED CIRCUITRY

- For Coupling and By-Pass Applications

$\mu\text{F}$	Volts	Type TG Standard Catalog Number	Tolerance $\pm 20\%$ Sprague Products Part Number	Sprague O.E.M. Part Number	T x D
.005	50	TG-D50	40C172A5		$\frac{1}{8} \times \frac{9}{32}$
.01	50	TG-S10	19C214A6		$\frac{1}{8} \times \frac{1}{32}$
.02	50	TG-S20	55C21A2		$\frac{1}{8} \times \frac{1}{32}$
.025	50	TG-S25	55C22A2		$\frac{1}{8} \times \frac{1}{32}$
.03	50	TG-S30	29C229A		$\frac{1}{8} \times \frac{9}{16}$
.05	50	TG-S50	55C23A1		$\frac{1}{8} \times \frac{1}{2}$
.1	50	TG-P10	33C41A3		$\frac{1}{8} \times \frac{1}{16}$
HIGH K TYPE					
.005	200	TH-D50	19C384		$\frac{5}{32} \times \frac{3}{8}$
.01	200	TH-S10	19C385		$\frac{5}{32} \times \frac{3}{8}$
.02	200	TH-S20	29C371		$\frac{5}{32} \times \frac{9}{16}$
.025	200	TH-S25	44C85		$\frac{5}{32} \times \frac{5}{8}$
.03	200	TH-S30	33C159		$\frac{5}{32} \times \frac{1}{16}$
.05	200	TH-S50	33C160		$\frac{5}{32} \times \frac{1}{16}$
.1	200	TH-P10	41C208		$\frac{5}{32} \times \frac{7}{8}$

# SPRAGUE CAPACITORS

## CERA-MITE<sup>®</sup> CERAMIC CAPACITORS



- Tiny, Tough, Dependable In Every Application
- Low Self-Inductance Of Silvered Flat-plate Design Means Very High By-pass Efficiency In All TV Circuits
- Flat-plate Construction Permits Higher Self-resonant Frequency Than Tubular Ceramic Or Molded Mica Capacitors
- Tough Moisture-proof Coating Protects Against Short-circuiting And Assures Good Performance Under Severe Conditions Of Humidity And Vibration
- Cera-mite Capacitors Easily Fit Into Tight Spaces, Even Across Subminiature Tube Sockets
- Designed For 85°C (185°F) Continuous Operation
- Call your Sprague Industrial Distributor for Current Quantity Prices
- NOTE: For a Complete Selection of Sprague PRINTED CIRCUITS, see Catalog C-616.

### GENERAL APPLICATION TYPES

- Excellent Where Temperature Coefficient Is Not Important, Such As By-pass and Coupling Applications
- Ideal For Replacing Older Types Of General Application Capacitors Such as Molded Miccas, Tubular Ceramics, etc.

$\mu\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size T. x W. x L.	$\mu\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	$\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
<b>500 WVDC (plates) <math>\pm 20\%</math> Tol.</b>				<b>1000 WVDC (discs) (cont.)</b>				<b>500 WVDC (discs) <math>\pm 20\%</math> Tol.</b>			
.470	5GAB-T47*	35C11A1	$\frac{5}{32} \times \frac{7}{32} \times \frac{1}{16}$	220	5GA-T22	40C204	$\frac{5}{16} \times \frac{5}{32}$	.025	5GA-S25	33C57A	$\frac{1}{16} \times \frac{7}{32}$
.001 $\mu\text{F}$	5GAB-D10*	35C35	$\frac{5}{32} \times \frac{7}{32} \times \frac{1}{16}$	240	5GA-T24	40C167	$\frac{5}{16} \times \frac{5}{32}$	.04	5GA-S40	33C24A	$\frac{1}{16} \times \frac{7}{32}$
.0022	5GAB-D22*	35C34	$\frac{5}{32} \times \frac{7}{32} \times \frac{1}{16}$	250	5GA-T25	40C101	$\frac{5}{16} \times \frac{5}{32}$	.05	5GA-S50	33C17A	$\frac{1}{16} \times \frac{7}{32}$
.0047	5GAB-D47*	25C166	$\frac{5}{32} \times \frac{7}{32} \times \frac{1}{16}$	270	5GA-T27	40C93	$\frac{5}{16} \times \frac{5}{32}$	.1	5GA-P10	41C92A10	$\frac{7}{8} \times \frac{7}{32}$
.01	5GAB-S10	25C167	$\frac{7}{32} \times \frac{7}{32} \times \frac{9}{16}$	300	5GA-T30	40C100	$\frac{5}{16} \times \frac{5}{32}$	<b>3000 WVDC (discs) <math>\pm 20\%</math> Tol.</b>			
.022	5GAB-S22	38C32	$\frac{5}{32} \times \frac{9}{16} \times \frac{1}{16}$	330	5GA-T33	40C207	$\frac{5}{16} \times \frac{5}{32}$	1.5 $\mu\text{F}$	30GA-V15	19C306	$\frac{3}{8} \times \frac{1}{4}$
.047	5GAB-S47	42C8A	$\frac{5}{32} \times \frac{27}{32} \times \frac{1}{8}$	350	5GA-T35	40C146	$\frac{5}{16} \times \frac{5}{32}$	3.3	30GA-V33	19C307	$\frac{3}{8} \times \frac{1}{4}$
.1	5GAB-P10	42C9A	$\frac{7}{32} \times \frac{27}{32} \times \frac{1}{8}$	360	5GA-T36	40C154	$\frac{5}{16} \times \frac{5}{32}$	4.7	30GA-V47	19C308	$\frac{3}{8} \times \frac{1}{4}$
.15	5GAB-P15	112C9	$\frac{7}{32} \times \frac{1}{16} \times \frac{1}{8}$	390	5GA-T39	40C95	$\frac{5}{16} \times \frac{5}{32}$	5.0	30GA-V50	19C309	$\frac{3}{8} \times \frac{1}{4}$
*Axial Leads				400	5GA-T40	40C104	$\frac{5}{16} \times \frac{5}{32}$	6.0	30GA-V60	19C310	$\frac{3}{8} \times \frac{1}{4}$
<b>1000 WVDC (discs) <math>\pm 20\%</math> Tol.</b>				470	5GA-T47	40C209A	$\frac{5}{16} \times \frac{5}{32}$	6.8	30GA-V68	19C311	$\frac{3}{8} \times \frac{1}{4}$
5	5GA-V50	40C32A4	$\frac{5}{16} \times \frac{5}{32}$	500	5GA-T50	40C232A	$\frac{5}{16} \times \frac{5}{32}$	7.5	30GA-V75	19C291	$\frac{3}{8} \times \frac{1}{4}$
6	5GA-V60	40C103	$\frac{5}{16} \times \frac{5}{32}$	560	5GA-T56	40C233A	$\frac{5}{16} \times \frac{5}{32}$	8.2	30GA-V82	19C290	$\frac{3}{8} \times \frac{1}{4}$
7.5	5GA-V75	40C155	$\frac{5}{16} \times \frac{5}{32}$	600	5GA-T60	40C305	$\frac{5}{16} \times \frac{5}{32}$	10	30GA-Q10	19C312	$\frac{3}{8} \times \frac{1}{4}$
8	5GA-V80	40C38A	$\frac{5}{16} \times \frac{5}{32}$	680	5GA-T68	40C212A	$\frac{5}{16} \times \frac{5}{32}$	12	30GA-Q12	19C313	$\frac{3}{8} \times \frac{1}{4}$
10	5GA-Q10	40C67A	$\frac{5}{16} \times \frac{5}{32}$	750	5GA-T75	40C235A	$\frac{5}{16} \times \frac{5}{32}$	15	30GA-Q15	19C314	$\frac{3}{8} \times \frac{1}{4}$
12	5GA-Q12	40C138	$\frac{5}{16} \times \frac{5}{32}$	800	5GA-T80	40C213A	$\frac{5}{16} \times \frac{5}{32}$	18	30GA-Q18	19C292	$\frac{3}{8} \times \frac{1}{4}$
15	5GA-Q15	40C65A	$\frac{5}{16} \times \frac{5}{32}$	820	5GA-T82	40C237A	$\frac{5}{16} \times \frac{5}{32}$	20	30GA-Q20	19C315	$\frac{3}{8} \times \frac{1}{4}$
18	5GA-Q18	40C132A	$\frac{5}{16} \times \frac{5}{32}$	.001 $\mu\text{F}$	5GA-D10	40C214A	$\frac{5}{16} \times \frac{5}{32}$	22	30GA-Q22	19C316	$\frac{3}{8} \times \frac{1}{4}$
20	5GA-Q20	40C114	$\frac{5}{16} \times \frac{5}{32}$	.0012	5GA-D12	40C239A	$\frac{5}{16} \times \frac{5}{32}$	25	30GA-Q25	19C317	$\frac{3}{8} \times \frac{1}{4}$
22	5GA-Q22	40C16A2	$\frac{5}{16} \times \frac{5}{32}$	.0013	5GA-D13	40C261	$\frac{5}{16} \times \frac{5}{32}$	27	30GA-Q27	19C318	$\frac{3}{8} \times \frac{1}{4}$
25	5GA-Q25	40C113A1	$\frac{5}{16} \times \frac{5}{32}$	.0015	5GA-D15	40C215A	$\frac{5}{16} \times \frac{5}{32}$	30	30GA-Q30	19C319	$\frac{3}{8} \times \frac{1}{4}$
27	5GA-Q27	40C153	$\frac{5}{16} \times \frac{5}{32}$	.0016	5GA-D16	19C301	$\frac{3}{8} \times \frac{5}{32}$	33	30GA-Q33	19C320	$\frac{3}{8} \times \frac{1}{4}$
30	5GA-Q30	40C111A	$\frac{5}{16} \times \frac{5}{32}$	.0018	5GA-D18	19C217A	$\frac{3}{8} \times \frac{5}{32}$	39	30GA-Q39	19C321	$\frac{3}{8} \times \frac{1}{4}$
33	5GA-Q33	40C42A	$\frac{5}{16} \times \frac{5}{32}$	.002	5GA-D20	19C203A	$\frac{3}{8} \times \frac{5}{32}$	47	30GA-Q47	19C322	$\frac{3}{8} \times \frac{1}{4}$
39	5GA-Q39	40C43A	$\frac{5}{16} \times \frac{5}{32}$	.0022	5GA-D22	19C219A	$\frac{3}{8} \times \frac{5}{32}$	50	30GA-Q50	19C323	$\frac{3}{8} \times \frac{1}{4}$
47	5GA-Q47	40C44A	$\frac{5}{16} \times \frac{5}{32}$	.0025	5GA-D25	20C179	$\frac{7}{16} \times \frac{5}{32}$	56	30GA-Q56	19C324	$\frac{3}{8} \times \frac{1}{4}$
50	5GA-Q50	40C89	$\frac{5}{16} \times \frac{5}{32}$	.0027	5GA-D27	20C143A	$\frac{7}{16} \times \frac{5}{32}$	60	30GA-Q60	19C325	$\frac{3}{8} \times \frac{1}{4}$
56	5GA-Q56	40C130A3	$\frac{5}{16} \times \frac{5}{32}$	.003	5GA-D30	20C101A1	$\frac{7}{16} \times \frac{5}{32}$	62	30GA-Q62	19C326	$\frac{3}{8} \times \frac{1}{4}$
68	5GA-Q68	40C45A	$\frac{5}{16} \times \frac{5}{32}$	.0033	5GA-D33	20C124A	$\frac{7}{16} \times \frac{5}{32}$	68	30GA-Q68	19C327	$\frac{3}{8} \times \frac{1}{4}$
75	5GA-Q75	40C46A	$\frac{5}{16} \times \frac{5}{32}$	.0039	5GA-D39	20C126A	$\frac{7}{16} \times \frac{5}{32}$	75	30GA-Q75	19C328	$\frac{3}{8} \times \frac{1}{4}$
82	5GA-Q82	40C47A	$\frac{5}{16} \times \frac{5}{32}$	.004	5GA-D40	29C192A	$\frac{7}{16} \times \frac{5}{32}$	82	30GA-Q82	20C184	$\frac{7}{16} \times \frac{1}{4}$
91	5GA-Q91	40C112	$\frac{5}{16} \times \frac{5}{32}$	.0043	5GA-D43	29C292	$\frac{7}{16} \times \frac{5}{32}$	100	30GA-T10	20C43	$\frac{7}{16} \times \frac{1}{4}$
100	5GA-T10	40C200	$\frac{5}{16} \times \frac{5}{32}$	.0047	5GA-D47	29C203A	$\frac{7}{16} \times \frac{5}{32}$	120	30GA-T12	20C44	$\frac{7}{16} \times \frac{1}{4}$
120	5GA-T12	40C91	$\frac{5}{16} \times \frac{5}{32}$	.005	5GA-D50	29C204A	$\frac{7}{16} \times \frac{5}{32}$	150	30GA-T15	20C45	$\frac{7}{16} \times \frac{1}{4}$
130	5GA-T13	40C147	$\frac{5}{16} \times \frac{5}{32}$	.01	5GA-S10	33C29A	$\frac{1}{16} \times \frac{5}{32}$	180	30GA-T18	20C46	$\frac{7}{16} \times \frac{1}{4}$
150	5GA-T15	40C202	$\frac{5}{16} \times \frac{5}{32}$	.015	5GA-S15	36C263	$\frac{3}{4} \times \frac{5}{32}$	200	30GA-T20	20C47	$\frac{7}{16} \times \frac{1}{4}$
180	5GA-T18	40C99	$\frac{5}{16} \times \frac{5}{32}$	.02	5GA-S20	41C135A1	$\frac{7}{8} \times \frac{5}{32}$				



# SPRAGUE CAPACITORS

## CERA-MITE CERAMIC CAPACITORS, continued

### TEMPERATURE-COMPENSATING TYPES

- Eliminate oscillator drift in TV, f-m, v-h-f, and a-m receivers
- Negative Temperature Coefficient is 30 ppm/°C for N030 types, 80 ppm/°C for N080 types, 150 ppm/°C for N150 types, 220 ppm/°C for N220 types, 330 ppm/°C for N330 types, 470 ppm/°C for N470 types, and 750 ppm/°C for N750 types
- Rated at **1000 WVDC**
- Standard Capacitance Tolerance  $\pm 5\%$

$\mu\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
<b>N030</b>			
1.0	10TCM-V10	40C440	$\frac{5}{16} \times \frac{5}{32}$
1.2	10TCM-V12	40C441	$\frac{5}{16} \times \frac{5}{32}$
1.5	10TCM-V15	40C442	$\frac{5}{16} \times \frac{5}{32}$
1.8	10TCM-V18	40C443	$\frac{5}{16} \times \frac{5}{32}$
2.2	10TCM-V22	40C444	$\frac{5}{16} \times \frac{5}{32}$
2.7	10TCM-V27	40C445	$\frac{5}{16} \times \frac{5}{32}$
3.0	10TCM-V30	40C446	$\frac{5}{16} \times \frac{5}{32}$
3.3	10TCM-V33	40C447	$\frac{5}{16} \times \frac{5}{32}$
3.9	10TCM-V39	40C448	$\frac{5}{16} \times \frac{5}{32}$
4.7	10TCM-V47	40C412	$\frac{5}{16} \times \frac{5}{32}$
5.0	10TCM-V50	40C413	$\frac{5}{16} \times \frac{5}{32}$
5.6	10TCM-V56	40C414	$\frac{5}{16} \times \frac{5}{32}$
6.8	10TCM-V68	40C415	$\frac{5}{16} \times \frac{5}{32}$
8.2	10TCM-V82	40C416	$\frac{5}{16} \times \frac{5}{32}$
10	10TCM-Q10	40C417	$\frac{5}{16} \times \frac{5}{32}$
12	10TCM-Q12	40C418	$\frac{5}{16} \times \frac{5}{32}$
15	10TCM-Q15	40C508	$\frac{5}{16} \times \frac{5}{32}$
18	10TCM-Q18	19C394	$\frac{3}{8} \times \frac{5}{32}$
20	10TCM-Q20	19C408	$\frac{3}{8} \times \frac{5}{32}$
22	10TCM-Q22	19C395	$\frac{3}{8} \times \frac{5}{32}$
25	10TCM-Q25	19C413	$\frac{3}{8} \times \frac{5}{32}$
27	10TCM-Q27	20C240	$\frac{7}{16} \times \frac{5}{32}$
30	10TCM-Q30	20C259	$\frac{7}{16} \times \frac{5}{32}$
33	10TCM-Q33	20C241	$\frac{7}{16} \times \frac{5}{32}$
39	10TCM-Q39	20C266	$\frac{7}{16} \times \frac{5}{32}$
47	10TCM-Q47	29C395	$\frac{9}{16} \times \frac{5}{32}$
50	10TCM-Q50	29C456	$\frac{9}{16} \times \frac{5}{32}$
56	10TCM-Q56	29C396	$\frac{9}{16} \times \frac{5}{32}$
68	10TCM-Q68	29C397	$\frac{9}{16} \times \frac{5}{32}$
75	10TCM-Q75	29C444	$\frac{9}{16} \times \frac{5}{32}$
82	10TCM-Q82	33C180	$\frac{11}{16} \times \frac{5}{32}$
100	10TCM-T10	33C181	$\frac{11}{16} \times \frac{5}{32}$
120	10TCM-T12	33C211	$\frac{11}{16} \times \frac{5}{32}$
150	10TCM-T15	36C327	$\frac{3}{4} \times \frac{5}{32}$
175	10TCM-T175	41C247	$\frac{3}{4} \times \frac{5}{32}$
180	10TCM-T18	41C263	$\frac{3}{4} \times \frac{5}{32}$
200	10TCM-T20	41C264	$\frac{3}{4} \times \frac{5}{32}$
220	10TCM-T22	41C243	$\frac{3}{4} \times \frac{5}{32}$
270	10TCM-T27	33C196	$\frac{11}{16} \times \frac{5}{32}$
300	10TCM-T30	36C308	$\frac{3}{4} \times \frac{5}{32}$
330	10TCM-T33	41C244	$\frac{7}{8} \times \frac{5}{32}$
390	10TCM-T39	41C273	$\frac{7}{8} \times \frac{5}{32}$

$\mu\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
<b>N080</b>			
2.2	10TCN-V22	40C457	$\frac{5}{16} \times \frac{5}{32}$
2.7	10TCN-V27	40C459	$\frac{5}{16} \times \frac{5}{32}$
3.0	10TCN-V30	40C461	$\frac{5}{16} \times \frac{5}{32}$
3.3	10TCN-V33	40C464	$\frac{5}{16} \times \frac{5}{32}$
3.9	10TCN-V39	40C468	$\frac{5}{16} \times \frac{5}{32}$
4.7	10TCN-V47	40C404	$\frac{5}{16} \times \frac{5}{32}$
5.0	10TCN-V50	40C405	$\frac{5}{16} \times \frac{5}{32}$
5.6	10TCN-V56	40C406	$\frac{5}{16} \times \frac{5}{32}$
6.8	10TCN-V68	40C407	$\frac{5}{16} \times \frac{5}{32}$
8.2	10TCN-V82	40C408	$\frac{5}{16} \times \frac{5}{32}$
10	10TCN-Q10	40C409	$\frac{5}{16} \times \frac{5}{32}$
12	10TCN-Q12	40C411	$\frac{5}{16} \times \frac{5}{32}$
15	10TCN-Q15	40C509	$\frac{5}{16} \times \frac{5}{32}$
18	10TCN-Q18	19C391	$\frac{3}{8} \times \frac{5}{32}$
20	10TCN-Q20	19C409	$\frac{3}{8} \times \frac{5}{32}$
22	10TCN-Q22	19C392	$\frac{3}{8} \times \frac{5}{32}$
25	10TCN-Q25	19C390	$\frac{3}{8} \times \frac{5}{32}$
27	10TCN-Q27	19C416	$\frac{3}{8} \times \frac{5}{32}$

$\mu\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
<b>N080 (cont.)</b>			
30	10TCN-Q30	20C261	$\frac{7}{16} \times \frac{5}{32}$
33	10TCN-Q33	20C239	$\frac{7}{16} \times \frac{5}{32}$
39	10TCN-Q39	20C267	$\frac{7}{16} \times \frac{5}{32}$
47	10TCN-Q47	29C390	$\frac{9}{16} \times \frac{5}{32}$
50	10TCN-Q50	29C457	$\frac{9}{16} \times \frac{5}{32}$
56	10TCN-Q56	29C391	$\frac{9}{16} \times \frac{5}{32}$
68	10TCN-Q68	29C392	$\frac{9}{16} \times \frac{5}{32}$
75	10TCN-Q75	29C445	$\frac{9}{16} \times \frac{5}{32}$
82	10TCN-Q82	29C393	$\frac{9}{16} \times \frac{5}{32}$
100	10TCN-T10	33C179	$\frac{11}{16} \times \frac{5}{32}$
120	10TCN-T12	33C212	$\frac{11}{16} \times \frac{5}{32}$
150	10TCN-T15	33C195	$\frac{11}{16} \times \frac{5}{32}$
175	10TCN-T175	41C242	$\frac{7}{8} \times \frac{5}{32}$
180	10TCN-T18	41C239	$\frac{7}{8} \times \frac{5}{32}$
200	10TCN-T20	41C265	$\frac{7}{8} \times \frac{5}{32}$
220	10TCN-T22	41C240	$\frac{7}{8} \times \frac{5}{32}$
270	10TCN-T27	33C219	$\frac{11}{16} \times \frac{5}{32}$
300	10TCN-T30	33C197	$\frac{11}{16} \times \frac{5}{32}$
330	10TCN-T33	36C325	$\frac{3}{4} \times \frac{5}{32}$
390	10TCN-T39	41C274	$\frac{7}{8} \times \frac{5}{32}$
470	10TCN-T47	41C222	$\frac{7}{8} \times \frac{5}{32}$
<b>N150</b>			
2.2	10TCP-V22	40C458	$\frac{5}{16} \times \frac{5}{32}$
2.7	10TCP-V27	40C450	$\frac{5}{16} \times \frac{5}{32}$
3.0	10TCP-V30	40C451	$\frac{5}{16} \times \frac{5}{32}$
3.3	10TCP-V33	40C452	$\frac{5}{16} \times \frac{5}{32}$
3.9	10TCP-V39	40C453	$\frac{5}{16} \times \frac{5}{32}$
4.7	10TCP-V47	40C454	$\frac{5}{16} \times \frac{5}{32}$
5.0	10TCP-V50	40C480	$\frac{5}{16} \times \frac{5}{32}$
5.6	10TCP-V56	40C483	$\frac{5}{16} \times \frac{5}{32}$
6.8	10TCP-V68	40C488	$\frac{5}{16} \times \frac{5}{32}$
8.2	10TCP-V82	40C493	$\frac{5}{16} \times \frac{5}{32}$
10	10TCP-Q10	40C498	$\frac{5}{16} \times \frac{5}{32}$
12	10TCP-Q12	40C503	$\frac{5}{16} \times \frac{5}{32}$
15	10TCP-Q15	40C510	$\frac{5}{16} \times \frac{5}{32}$
18	10TCP-Q18	40C514	$\frac{5}{16} \times \frac{5}{32}$
20	10TCP-Q20	19C410	$\frac{3}{8} \times \frac{5}{32}$
22	10TCP-Q22	19C245A	$\frac{3}{8} \times \frac{5}{32}$
25	10TCP-Q25	19C414	$\frac{3}{8} \times \frac{5}{32}$
27	10TCP-Q27	19C417	$\frac{3}{8} \times \frac{5}{32}$
30	10TCP-Q30	19C345	$\frac{3}{8} \times \frac{5}{32}$
33	10TCP-Q33	20C264	$\frac{7}{16} \times \frac{5}{32}$
39	10TCP-Q39	20C268	$\frac{7}{16} \times \frac{5}{32}$
47	10TCP-Q47	20C271	$\frac{7}{16} \times \frac{5}{32}$
50	10TCP-Q50	20C273	$\frac{7}{16} \times \frac{5}{32}$
56	10TCP-Q56	29C438	$\frac{9}{16} \times \frac{5}{32}$
68	10TCP-Q68	29C440	$\frac{9}{16} \times \frac{5}{32}$
75	10TCP-Q75	29C446	$\frac{9}{16} \times \frac{5}{32}$
82	10TCP-Q82	29C449	$\frac{9}{16} \times \frac{5}{32}$
100	10TCP-T10	33C59A	$\frac{11}{16} \times \frac{5}{32}$
120	10TCP-T12	33C213	$\frac{11}{16} \times \frac{5}{32}$
150	10TCP-T15	33C215	$\frac{11}{16} \times \frac{5}{32}$
175	10TCP-T175	36C322	$\frac{3}{4} \times \frac{5}{32}$
180	10TCP-T18	36C314	$\frac{3}{4} \times \frac{5}{32}$
200	10TCP-T20	41C266	$\frac{7}{8} \times \frac{5}{32}$
220	10TCP-T22	41C229	$\frac{7}{8} \times \frac{5}{32}$
270	10TCP-T27	33C220	$\frac{11}{16} \times \frac{5}{32}$
300	10TCP-T30	33C221	$\frac{11}{16} \times \frac{5}{32}$
330	10TCP-T33	36C315	$\frac{3}{4} \times \frac{5}{32}$
390	10TCP-T39	41C231	$\frac{7}{8} \times \frac{5}{32}$
470	10TCP-T47	41C275	$\frac{7}{8} \times \frac{5}{32}$

$\mu\mu\text{F}$	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
<b>N220</b>			
3	10TCR-V30	40C462	$\frac{5}{16} \times \frac{5}{32}$
3.3	10TCR-V33	40C465	$\frac{5}{16} \times \frac{5}{32}$
3.9	10TCR-V39	40C469	$\frac{5}{16} \times \frac{5}{32}$
4.7	10TCR-V47	40C475	$\frac{5}{16} \times \frac{5}{32}$
5	10TCR-V50	40C455	$\frac{5}{16} \times \frac{5}{32}$
5.6	10TCR-V56	40C484	$\frac{5}{16} \times \frac{5}{32}$
6.8	10TCR-V68	40C489	$\frac{5}{16} \times \frac{5}{32}$
8.2	10TCR-V82	40C494	$\frac{5}{16} \times \frac{5}{32}$
10	10TCR-Q10	40C499	$\frac{5}{16} \times \frac{5}{32}$
12	10TCR-Q12	40C504	$\frac{5}{16} \times \frac{5}{32}$
15	10TCR-Q15	40C511	$\frac{5}{16} \times \frac{5}{32}$
18	10TCR-Q18	40C515	$\frac{5}{16} \times \frac{5}{32}$
20	10TCR-Q20	40C449	$\frac{5}{16} \times \frac{5}{32}$
22	10TCR-Q22	19C256A1	$\frac{3}{8} \times \frac{5}{32}$
25	10TCR-Q25	19C393	$\frac{3}{8} \times \frac{5}{32}$
27	10TCR-Q27	19C418	$\frac{3}{8} \times \frac{5}{32}$
30	10TCR-Q30	19C421	$\frac{3}{8} \times \frac{5}{32}$
33	10TCR-Q33	19C424	$\frac{3}{8} \times \frac{5}{32}$
39	10TCR-Q39	20C269	$\frac{7}{16} \times \frac{5}{32}$
47	10TCR-Q47	20C249	$\frac{7}{16} \times \frac{5}{32}$
50	10TCR-Q50	20C251	$\frac{7}{16} \times \frac{5}{32}$
56	10TCR-Q56	20C279	$\frac{7}{16} \times \frac{5}{32}$
68	10TCR-Q68	29C441	$\frac{9}{16} \times \frac{5}{32}$
75	10TCR-Q75	29C394	$\frac{9}{16} \times \frac{5}{32}$
82	10TCR-Q82	29C398	$\frac{9}{16} \times \frac{5}{32}$
100	10TCR-T10	29C401	$\frac{11}{16} \times \frac{5}{32}$
120	10TCR-T12	33C214	$\frac{11}{16} \times \frac{5}{32}$
150	10TCR-T15	33C198	$\frac{11}{16} \times \frac{5}{32}$
175	10TCR-T175	36C324	$\frac{3}{4} \times \frac{5}{32}$
180	10TCR-T18	36C319	$\frac{3}{4} \times \frac{5}{32}$
200	10TCR-T20	36C323	$\frac{3}{4} \times \frac{5}{32}$
220	10TCR-T22	41C236	$\frac{7}{8} \times \frac{5}{32}$
270	10TCR-T27	41C237	$\frac{7}{8} \times \frac{5}{32}$
300	10TCR-T30	41C230	$\frac{7}{8} \times \frac{5}{32}$
330	10TCR-T33	33C199	$\frac{11}{16} \times \frac{5}{32}$
390	10TCR-T39	36C321	$\frac{3}{4} \times \frac{5}{32}$
470	10TCR-T47	41C235	$\frac{7}{8} \times \frac{5}{32}$
560	10TCR-T56	41C277	$\frac{7}{8} \times \frac{5}{32}$
<b>N330</b>			
3.0	10TCS-V30	40C456	$\frac{5}{16} \times \frac{5}{32}$
3.3	10TCS-V33	40C466	$\frac{5}{16} \times \frac{5}{32}$
3.9	10TCS-V39	40C470	$\frac{5}{16} \times \frac{5}{32}$
4.7	10TCS-V47	40C476	$\frac{5}{16} \times \frac{5}{32}$
5.0	10TCS-V50	40C481	$\frac{5}{16} \times \frac{5}{32}$
5.6	10TCS-V56	40C485	$\frac{5}{16} \times \frac{5}{32}$
6.8	10TCS-V68	40C490	$\frac{5}{16} \times \frac{5}{32}$
8.2	10TCS-V82	40C495	$\frac{5}{16} \times \frac{5}{32}$
10	10TCS-Q10	40C500	$\frac{5}{16} \times \frac{5}{32}$
12	10TCS-Q12	40C505	$\frac{5}{16} \times \frac{5}{32}$
15	10TCS-Q15	40C512	$\frac{5}{16} \times \frac{5}{32}$
18	10TCS-Q18	40C516	$\frac{5}{16} \times \frac{5}{32}$
20	10TCS-Q20	40C518	$\frac{5}{16} \times \frac{5}{32}$
22	10TCS-Q22	40C522	$\frac{5}{16} \times \frac{5}{32}$
25	10TCS-Q25	19C415	$\frac{3}{8} \times \frac{5}{32}$
27	10TCS-Q27	19C419	$\frac{3}{8} \times \frac{5}{32}$
30	10TCS-Q30	19C422	$\frac{3}{8} \times \frac{5}{32}$
33	10TCS-Q33	19C425	$\frac{3}{8} \times \frac{5}{32}$
39	10TCS-Q39	20C270	$\frac{7}{16} \times \frac{5}{32}$
47	10TCS-Q47	20C252	$\frac{7}{16} \times \frac{5}{32}$
50	10TCS-Q50	20C274	$\frac{7}{16} \times \frac{5}{32}$
56	10TCS-Q56	20C277	$\frac{7}{16} \times \frac{5}{32}$
68	10TCS-Q68	29C442	$\frac{9}{16} \times \frac{5}{32}$
75	10TCS-Q75	29C447	$\frac{9}{16} \times \frac{5}{32}$
82	10TCS-Q82	29C450	$\frac{9}{16} \times \frac{5}{32}$
100	10TCS-T10	29C451	$\frac{11}{16} \times \frac{5}{32}$
120	10TCS-T12	33C92	$\frac{11}{16} \times \frac{5}{32}$
150	10TCS-T15	33C201	$\frac{11}{16} \times \frac{5}{32}$
175	10TCS-T175	33C217	$\frac{11}{16} \times \frac{5}{32}$
180	10TCS-T18	36C316	$\frac{3}{4} \times \frac{5}{32}$
200	10TCS-T20	36C326	$\frac{3}{4} \times \frac{5}{3$

# SPRAGUE CAPACITORS

## CERA-MITE CERAMIC CAPACITORS, continued

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
N330 (cont.)				N750 (cont.)				N750 (cont.)			
300	10TCS-T30	41C261	7/8 x 7/32	180	10TCU-T18	33C88	1 1/16 x 5/32	330	10TCU-T33	33C347	1 1/16 x 5/32
330	10TCS-T33	33C241	1 1/16 x 5/32	200	10TCU-T20	33C105	1 1/16 x 5/32	390	10TCU-T39	41C289	7/8 x 7/32
390	10TCS-T39	36C318	3/4 x 5/32	220	10TCU-T22	33C236	1 1/16 x 5/32	470	10TCU-T47	41C290	7/8 x 7/32
470	10TCS-T47	41C276	7/8 x 7/32	270	10TCU-T27	33C237	1 1/16 x 5/32	560	10TCU-T56	33C238	1 1/16 x 5/32
560	10TCS-T56	41C278	7/8 x 7/32	300	10TCU-T30	33C346	1 1/16 x 5/32	680	10TCU-T68	36C348	3/4 x 5/32

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
N470			
3.0	10TCT-V30	40C463	5/16 x 5/32
3.3	10TCT-V33	40C467	5/16 x 5/32
3.9	10TCT-V39	40C474	5/16 x 5/32
4.7	10TCT-V47	40C419	5/16 x 5/32
5.0	10TCT-V50	40C420	5/16 x 5/32
5.6	10TCT-V56	40C421	5/16 x 5/32
6.8	10TCT-V68	40C422	5/16 x 5/32
8.2	10TCT-V82	40C423	5/16 x 5/32
10	10TCT-Q10	40C424	5/16 x 5/32
12	10TCT-Q12	40C425	5/16 x 5/32
15	10TCT-Q15	40C426	5/16 x 5/32
18	10TCT-Q18	40C427	5/16 x 5/32
20	10TCT-Q20	40C519	5/16 x 5/32
22	10TCT-Q22	40C428	5/16 x 5/32
25	10TCT-Q25	40C352	5/16 x 5/32
27	10TCT-Q27	19C420	3/8 x 5/32
30	10TCT-Q30	19C423	3/8 x 5/32
33	10TCT-Q33	19C397	3/8 x 5/32
39	10TCT-Q39	19C436	3/8 x 5/32
47	10TCT-Q47	19C437	3/8 x 5/32
50	10TCT-Q50	20C275	7/16 x 5/32
56	10TCT-Q56	20C286	7/16 x 5/32
68	10TCT-Q68	20C287	7/16 x 5/32
75	10TCT-Q75	20C288	7/16 x 5/32
82	10TCT-Q82	29C399	7/16 x 5/32
100	10TCT-T10	29C463	7/16 x 5/32
120	10TCT-T12	29C464	7/16 x 5/32
150	10TCT-T15	33C183	1 1/16 x 5/32
175	10TCT-T175	33C232	1 1/16 x 5/32
180	10TCT-T18	33C233	1 1/16 x 5/32
200	10TCT-T20	33C234	1 1/16 x 5/32
220	10TCT-T22	33C335	1 1/16 x 5/32
270	10TCT-T27	36C343	3/4 x 5/32
300	10TCT-T30	41C286	7/8 x 7/32
330	10TCT-T33	41C287	7/8 x 7/32
390	10TCT-T39	41C288	7/8 x 7/32
470	10TCT-T47	36C344	3/4 x 5/32
560	10TCT-T56	41C248	7/8 x 7/32

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
N750			
4.7	10TCU-V47	40C477	5/16 x 5/32
5.0	10TCU-V50	40C482	5/16 x 5/32
5.6	10TCU-V56	40C486	5/16 x 5/32
6.8	10TCU-V68	40C491	5/16 x 5/32
8.2	10TCU-V82	40C496	5/16 x 5/32
10	10TCU-Q10	40C501	5/16 x 5/32
12	10TCU-Q12	40C506	5/16 x 5/32
15	10TCU-Q15	40C513	5/16 x 5/32
18	10TCU-Q18	40C517	5/16 x 5/32
20	10TCU-Q20	40C520	5/16 x 5/32
22	10TCU-Q22	40C523	5/16 x 5/32
25	10TCU-Q25	40C524	5/16 x 5/32
27	10TCU-Q27	40C287	5/16 x 5/32
30	10TCU-Q30	40C533	5/16 x 5/32
33	10TCU-Q33	40C534	5/16 x 5/32
39	10TCU-Q39	19C427	3/8 x 5/32
47	10TCU-Q47	19C438	3/8 x 5/32
50	10TCU-Q50	19C39	3/8 x 5/32
56	10TCU-Q56	19C40	3/8 x 5/32
68	10TCU-Q68	20C289	7/16 x 5/32
75	10TCU-Q75	20C290	7/16 x 5/32
82	10TCU-Q82	20C291	7/16 x 5/32
100	10TCU-T10	29C454	7/16 x 5/32
120	10TCU-T12	29C455	7/16 x 5/32
150	10TCU-T15	29C465	7/16 x 5/32
175	10TCU-T175	29C466	7/16 x 5/32

- ### TEMPERATURE-STABLE TYPES
- Used where minimum capacitance change with temperature is an important consideration
  - Standard capacitance tolerance: ±10% except 10TS-S15 10TS-S20, 10TS-S30 ±15%
  - Rated at **1000 WVDC**

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
3.3	10TS-V33	40C300A	5/16 x 5/16	350	10TS-T35	19C105A	3/8 x 5/16
5.0	10TS-V50	40C49A1	5/16 x 5/16	360	10TS-T36	19C106A	3/8 x 5/16
6.0	10TS-V60	40C299A	5/16 x 5/16	390	10TS-T39	19C131A1	3/8 x 5/16
6.8	10TS-V68	40C97A2	5/16 x 5/16	400	10TS-T40	19C294	3/8 x 5/16
7.5	10TS-V75	40C133A	5/16 x 5/16	470	10TS-T47	19C160A1	3/8 x 5/16
8.0	10TS-V80	40C38A2	5/16 x 5/16	500	10TS-T50	19C161A	3/8 x 5/16
10	10TS-Q10	40C219A3	5/16 x 5/16	560	10TS-T56	19C231A	3/8 x 5/16
12	10TS-Q12	40C252A	5/16 x 5/16	600	10TS-T60	19C108A	3/8 x 5/16
15	10TS-Q15	40C65A2	5/16 x 5/16	680	10TS-T68	20C133A	7/16 x 5/16
18	10TS-Q18	40C139A3	5/16 x 5/16	750	10TS-T75	20C135A	7/16 x 5/16
20	10TS-Q20	40C265A	5/16 x 5/16	800	10TS-T80	20C137A	7/16 x 5/16
22	10TS-Q22	40C56A	5/16 x 5/16	820	10TS-T82	20C139A	7/16 x 5/16
25	10TS-Q25	40C113A	5/16 x 5/16	.001 μF	10TS-D10	29C151A1	5/16 x 5/16
27	10TS-Q27	40C287A	5/16 x 5/16	.0012	10TS-D12	29C239A	5/16 x 5/16
30	10TS-Q30	40C303	5/16 x 5/16	.0013	10TS-D13	29C84A	5/16 x 5/16
33	10TS-Q33	40C57A	5/16 x 5/16	.0015	10TS-D15	29C155A3	5/16 x 5/16
39	10TS-Q39	40C58A	5/16 x 5/16	.0016	10TS-D16	29C85A	5/16 x 5/16
47	10TS-Q47	40C135A	5/16 x 5/16	.0018	10TS-D18	33C45A	1 1/16 x 5/16
50	10TS-Q50	40C157A	5/16 x 5/16	.0020	10TS-D20	33C12A2	1 1/16 x 5/16
56	10TS-Q56	40C130A2	5/16 x 5/16	.0022	10TS-D22	33C12A1	1 1/16 x 5/16
68	10TS-Q68	40C270A	5/16 x 5/16	.0025	10TS-D25	33C98	1 1/16 x 5/16
75	10TS-Q75	40C46A1	5/16 x 5/16	.0027	10TS-D27	33C99	1 1/16 x 5/16
82	10TS-Q82	40C281A	5/16 x 5/16	.0030	10TS-D30	36C246A	3/4 x 5/16
91	10TS-Q91	40C302	5/16 x 5/16	.0033	10TS-D33	36C143A	3/4 x 5/16
100	10TS-T10	40C200A	5/16 x 5/16	.0039	10TS-D39	41C91A	7/8 x 5/16
120	10TS-T12	40C60A	5/16 x 5/16	.0040	10TS-D40	41C56A	7/8 x 5/16
130	10TS-T13	40C147A	5/16 x 5/16	.0043	10TS-D43	41C146	7/8 x 5/16
150	10TS-T15	40C202A	5/16 x 5/16	.0047	10TS-D47	41C72A1	7/8 x 5/16
180	10TS-T18	40C99A1	5/16 x 5/16	.0050	10TS-D50	41C89A1	7/8 x 5/16
200	10TS-T20	40C81A	5/16 x 5/16	.0056	10TS-D56	33C100	1 1/16 x 7/16
220	10TS-T22	40C204A	5/16 x 5/16	.0068	10TS-D68	36C108A	3/4 x 7/16
240	10TS-T24	40C167A	5/16 x 5/16	.0075	10TS-D75	41C148	7/8 x 7/16
250	10TS-T25	40C101A2	5/16 x 5/16	.01	10TS-S10	41C121A1	7/8 x 7/16
270	10TS-T27	40C301	5/16 x 5/16	.015	10TS-S15	41C123A1	7/8 x 7/16
300	10TS-T30	40C106A	5/16 x 5/16	.02	10TS-S20	36C340A	3/4 x 7/16
330	10TS-T35	40C207A	5/16 x 5/16	.03	10TS-S30	41C284A	7/8 x 7/16

- ### HIGH-K TYPES
- Designed for By-Pass and Coupling Applications Where Additional Capacitance Will Not Affect Circuit Operation
  - Smallest Physical Size
  - 5HK-S15 thru 5HK-P10, **500 WVDC**, Capacitance Tolerance: +80 — 20%
  - All Other 5HK are **1000 WVDC**, Capacitance Tolerance: GMV

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.	μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
SINGLE UNITS				SINGLE UNITS (cont.)			
.001	5HK-D10	40C214	5/16 x 5/32	.04	5HK-S40	33C24	1 1/16 x 7/16
.0015	5HK-D15	19C237	3/8 x 5/32	.05	5HK-S50	33C58	1 1/16 x 7/16
.002	5HK-D20	19C203	3/8 x 5/32	.1	5HK-P10	41C92	7/8 x 7/16
.0022	5HK-D22*	20C254	7/16 x 5/32	DUAL UNITS			
.0025	5HK-D25	20C179A	7/16 x 5/32	2 x 470 μF	5HK-2T47	19C166	3/8 x 5/16
.0033	5HK-D33	20C124	7/16 x 5/32	2 x 800	5HK-2T80	19C167	3/8 x 5/16
.004	5HK-D40	29C192	5/16 x 5/32	2 x .001 μF	5HK-2D10	20C253	7/16 x 5/16
.0047	5HK-D47	29C203	5/16 x 5/32	2 x .0015	5HK-2D15	55C67	1/2 x 5/16
.005	5HK-D50	29C204	5/16 x 5/32	2 x .002	5HK-2D20	29C175	5/16 x 5/16
.0068	5HK-D68	33C49	1 1/16 x 5/32	2 x .0022	5HK-2D22	29C27	5/16 x 9/16
.01	5HK-S10	33C29	1 1/16 x 5/32	2 x .004	5HK-2D40	33C111	1 1/16 x 5/16
.015	5HK-S15	29C388A	7/16 x 5/32	2 x .0047	5HK-2D47	36C330	3/4 x 5/16
.02	5HK-S20	33C60A	1 1/16 x 5/32	2 x .01	5HK-2S10	41C238	7/8 x 9/16
.025	5HK-S25	33C57	1 1/16 x 5/32	2 x .02	5HK-2S20	41C219	7/8 x 7/16

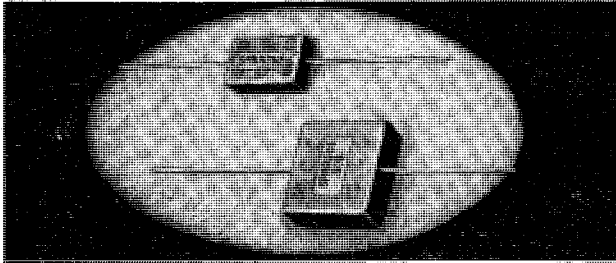
\*Available until present stock is exhausted



# SPRAGUE CAPACITORS

## MICA CAPACITORS

### TYPE MS and 1FM MICAS



**TYPE MS — SILVERED MICA**  
(Standard Capacitance Tolerance ±5%)

MF	Cat. No.	Net Ea.	MF	Cat. No.	Net Ea.	MF	Cat. No.	Net Ea.
<b>500 WVDC, 1000 V Test</b>								
.000005	MS-55	\$.27	.000120	MS-312	\$.27	.001300	MS-213	\$.75
.000010	MS-41	.24	.000130	MS-313	.27	.001500	MS-215	.81
.000012	MS-412	.24	.000150	MS-315	.27	.001600	MS-216	.81
.000015	MS-415	.24	.000160	MS-316	.27	.001800	MS-218	.81
.000018	MS-418	.24	.000180	MS-318	.27	.002000	MS-222	.81
.000020	MS-42	.24	.000200	MS-322	.27	.002200	MS-224	.90
.000022	MS-422	.24	.000220	MS-324	.33	.002400	MS-224	1.08
.000024	MS-424	.24	.000250	MS-325	.33	.002700	MS-227	1.14
.000025	MS-425	.24	.000270	MS-327	.33	.003000	MS-23	1.23
.000027	MS-427	.24	.000300	MS-33	.33	.003300	MS-233	1.23
.000030	MS-43	.24	.000330	MS-333	.33	.003600	MS-236	1.26
.000033	MS-433	.24	.000360	MS-336	.33	.003900	MS-239	1.29
.000036	MS-436	.24	.000390	MS-339	.39	.004000	MS-24	1.29
.000039	MS-439	.24	.000400	MS-34	.39	.004300	MS-243	1.29
.000040	MS-44	.24	.000430	MS-343	.39	.004700	MS-247	1.29
.000043	MS-443	.24	.000470	MS-347	.42	.005000	MS-25	1.35
.000047	MS-447	.24	.000500	MS-35	.42	.005100	MS-251	1.35
.000050	MS-45	.24	.000510	MS-351	.42	.005600	MS-256	1.50
.000051	MS-451	.24	.000560	MS-356	.45	.006000	MS-26	1.44
.000056	MS-456	.24	.000600	MS-36	.48	.006200	MS-262	1.56
.000060	MS-46	.24	.000620	MS-362	.48	<b>300 WVDC, 600 V Test</b>		
.000062	MS-462	.24	.000680	MS-368	.51	.006800	MS-268	1.56
.000066	MS-466	.24	.000700	MS-37	.51	.007000	MS-27	1.56
.000070	MS-47	.24	.000750	MS-375	.54	.007500	MS-275	1.68
.000075	MS-475	.24	.008000	MS-38	.57	.008000	MS-28	1.68
.000082	MS-482	.24	.008200	MS-382	.57	.008200	MS-282	1.68
.000091	MS-491	.24	.009000	MS-39	.60	.009000	MS-29	1.86
.000100	MS-31	.24	.009100	MS-391	.60	.009100	MS-291	1.86
.000110	MS-311	.27	.010000	MS-40	.66	.009100	MS-291	1.86
			.011000	MS-211	.72	.010000	MS-11	2.04
			.012000	MS-212	.78			

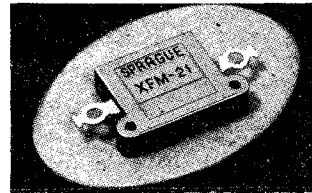
<b>TYPE 1FM</b> (Standard Capacitance Tolerance ±20%)								
MF	Cat. No.	Net Ea.	MF	Cat. No.	Net Ea.	MF	Cat. No.	Net Ea.
<b>500 WVDC, 1000 V Test</b>								
.000010	1FM-41	\$.15	.000150	1FM-315	\$.12	.001500	1FM-215	\$.18
.000012	1FM-412	.15	.000160	1FM-316	.12	.001600	1FM-216	.18
.000015	1FM-415	.15	.000180	1FM-318	.12	.001800	1FM-218	.24
.000018	1FM-418	.15	.000200	1FM-322	.12	.002000	1FM-22	.24
.000020	1FM-42	.15	.000220	1FM-324	.15	.002200	1FM-224	.24
.000022	1FM-422	.15	.000250	1FM-325	.15	.002400	1FM-224	.30
.000024	1FM-424	.15	.000270	1FM-327	.15	.002500	1FM-225	.30
.000025	1FM-425	.15	.000300	1FM-33	.15	.002700	1FM-227	.30
.000027	1FM-427	.15	.000330	1FM-333	.15	.003000	1FM-23	.30
.000030	1FM-43	.15	.000360	1FM-336	.15	.003300	1FM-233	.36
.000033	1FM-433	.15	.000390	1FM-339	.15	.003600	1FM-236	.36
.000036	1FM-436	.15	.000430	1FM-343	.15	.003900	1FM-239	.36
.000039	1FM-439	.15	.000470	1FM-347	.15	.004000	1FM-24	.33
.000040	1FM-44	.15	.000500	1FM-35	.15	.004300	1FM-243	.36
.000043	1FM-443	.12	.000560	1FM-356	.15	.004700	1FM-247	.36
.000047	1FM-447	.12	.000620	1FM-362	.15	.005000	1FM-25	.36
.000050	1FM-45	.12	.000680	1FM-368	.15	.005100	1FM-251	.36
.000051	1FM-451	.12	.007000	1FM-37	.15	.005600	1FM-256	.39
.000056	1FM-456	.12	.007500	1FM-375	.15	.006000	1FM-26	.39
.000062	1FM-462	.12	.008000	1FM-38	.15	.006200	1FM-262	.39
.000066	1FM-466	.12	.008200	1FM-382	.18	<b>300 WVDC, 600 V Test</b>		
.000075	1FM-475	.12	.009000	1FM-39	.18	.006800	1FM-268	.51
.000082	1FM-482	.12	.009100	1FM-391	.18	.007000	1FM-27	.51
.000091	1FM-491	.12	.009100	1FM-391	.18	.007500	1FM-275	.51
.000100	1FM-31	.12	.008000	1FM-28	.50	.008000	1FM-28	.50
.000110	1FM-311	.12	.008200	1FM-282	.60	.008000	1FM-282	.60
.000120	1FM-312	.12	.009000	1FM-29	.60	.009000	1FM-29	.60
.000130	1FM-313	.12	.009100	1FM-291	.60	.009100	1FM-291	.60
			.010000	1FM-11	.72	.010000	1FM-11	.72

**MS and 1FM Dimensions**

Catalog Nos.	L x W x T	Catalog Nos.	L x W x T
MS-55 thru MS-35	5/16 x 1/32 x 7/32	MS-29 thru MS-11	1 x 3/8 x 3/16
MS-351 thru MS-222	5/16 x 5/16 x 7/32	1FM-41 thru 1FM-462	5/16 x 1/32 x 7/32
MS-224	5/16 x 3/16 x 1/32	1FM-468 thru 1FM-475	5/16 x 3/16 x 7/32
MS-225 thru MS-227	5/16 x 5/16 x 7/32	1FM-482 thru 1FM-356	5/16 x 1/32 x 7/32
MS-23	5/16 x 5/16 x 1/32	1FM-362 thru 1FM-233	5/16 x 5/16 x 7/32
MS-233	5/16 x 5/16 x 7/32	1FM-236 thru 1FM-282	5/16 x 5/16 x 1/32
MS-236 thru MS-282	5/16 x 5/16 x 1/32	1FM-29 thru 1FM-11	1 x 3/8 x 3/16

- Each Mica Capacitor Section Receives a Radio Frequency Test Before Molding
- Careful Selection and Electrical Grading of Raw Mica Assures Maximum Quality
- Section Foils on Foil Micras are Connected to Terminals through Special Low-resistance R-F Bonds
- R-F Current Tested for Peak Ratings After Impregnation and Molding

### TYPES XFM, YFM and ZFM



(Standard Capacitance Tolerance ±10%)

MF	Cat. No.	Net Ea.
<b>XFM — 600 WVDC, 1200 V TEST</b>		
.00005	XFM-45	\$.72
.0001	XFM-31	.72
.0002	XFM-32	.72
.00025	XFM-325	.72
.0003	XFM-33	.72
.0004	XFM-34	.72
.0005	XFM-35	.72
.001	XFM-21	.72
.0015	XFM-215	.72
.002	XFM-22	.78
.0025	XFM-225	.78
.003	XFM-23	.87
.004	XFM-24	.90
.005	XFM-25	.93
.006	XFM-26	1.08
.007	XFM-27	1.11
.008	XFM-28	1.14
.01	XFM-11	1.29
.02	XFM-12	1.83
.03	XFM-13	2.67

Catalog Numbers	L x W x T
XFM-45 thru XFM-11	1 3/8 x 1 1/8 x 1 1/32
XFM-12 thru XFM-13	1 3/8 x 1 1/8 x 3/16

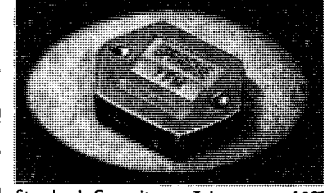
MF	Cat. No.	Net Ea.
<b>YFM — 1200 WVDC, 2500 V TEST</b>		
.00005	YFM-45	.96
.0001	YFM-31	.96
.0002	YFM-32	.96
.00025	YFM-325	.96
.0003	YFM-33	.96
.0004	YFM-34	.96
.0005	YFM-35	.96
.001	YFM-21	1.08
.0015	YFM-215	1.38
.002	YFM-22	1.44
.0025	YFM-225	1.68
.003	YFM-23	1.83
.004	YFM-24	1.83
.005	YFM-25	1.98
.006	YFM-26	1.98
.007	YFM-27	2.07
.008	YFM-28	2.31
.01	YFM-11	3.06

Catalog Numbers	L x W x T
YFM-45 thru YFM-24	1 3/8 x 1 1/8 x 1 1/32
YFM-25 thru YFM-11	1 3/8 x 1 1/8 x 3/16

MF	Cat. No.	Net Ea.
<b>ZFM — 2500 WVDC, 5000 V TEST</b>		
.00005	ZFM-45	1.14
.0001	ZFM-31	1.14
.0002	ZFM-32	1.14
.00025	ZFM-325	1.32
.0003	ZFM-33	1.35
.0004	ZFM-34	1.38
.0005	ZFM-35	1.44
.001	ZFM-21	1.68
.0015	ZFM-215	2.13
.002	ZFM-22	2.49
.003	ZFM-23	2.94
.004	ZFM-24	3.39
.005	ZFM-25	3.84

Catalog Numbers	L x W x T
ZFM-45 thru ZFM-22	1 3/8 x 1 1/8 x 1 1/32
ZFM-23 thru ZFM-25	1 3/8 x 1 1/8 x 3/16

### TYPES 7FM, 8FM and 9FM



(Standard Capacitance Tolerance ±10%)

MF	Cat. No.	Net Ea.
<b>7FM — 600 WVDC, 1200 V TEST</b>		
.00005	7FM-45	\$.87
.0001	7FM-31	.87
.00015	7FM-315	.87
.0002	7FM-32	.87
.00025	7FM-325	.87
.0005	7FM-35	.87
.001	7FM-21	.87
.002	7FM-22	.99
.0025	7FM-225	1.02
.003	7FM-23	1.11
.004	7FM-24	1.20
.005	7FM-25	1.26
.006	7FM-26	1.32
.008	7FM-28	1.47
.01	7FM-11	1.68
.015	7FM-115	1.83
.02	7FM-12	2.13
.03	7FM-13	2.73
.04	7FM-14	3.51
.05	7FM-15	4.26
.06	7FM-16	4.83

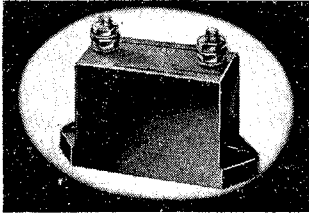
Catalog Numbers	L x W x T
7FM-45 thru 7FM-13	1 3/8 x 1 1/8 x 3/16
7FM-14 thru 7FM-16	1 3/8 x 1 1/8 x 3/8

MF	Cat. No.	Net Ea.
<b>8FM — 1200 WVDC, 2500 V TEST</b>		
.00005	8FM-45	.96
.0001	8FM-31	.96
.00015	8FM-315	.96
.0002	8FM-32	.96
.00025	8FM-325	.96
.0005	8FM-35	.96
.001	8FM-21	1.14
.002	8FM-22	1.50
.0025	8FM-225	1.68
.003	8FM-23	1.77
.004	8FM-24	1.86
.005	8FM-25	1.98
.006	8FM-26	2.07
.008	8FM-28	2.46
.01	8FM-11	2.82
.015	8FM-115	3.48
.02		

# SPRAGUE CAPACITORS

## MICA CAPACITORS, continued

### TYPES 1MC & 2MC



(Standard Capacity Tolerance ±5%)

MF VAC Peak Cat. No. Net

#### TYPE 1MC

Dimensions — 2" L. x 1 1/8" W. x 1 1/32" H.

MF	VAC Peak	Cat. No.	Net
.00005	3000	1MC-45	\$ 7.56
.0001	3000	1MC-31	7.56
.00015	3000	1MC-315	7.56
.0002	3000	1MC-32	7.56
.00025	3000	1MC-325	7.56
.0003	3000	1MC-33	7.56
.0004	3000	1MC-34	7.56
.0005	3000	1MC-35	7.56
.0006	3000	1MC-36	7.56
.0007	3000	1MC-37	7.56
.0008	3000	1MC-38	7.56
.001	3000	1MC-21	7.56
.0015	3000	1MC-215	7.56
.002	3000	1MC-22	7.56
.003	2000	1MC-23	7.56
.004	2000	1MC-24	7.56
.005	2000	1MC-25	7.56
.006	2000	1MC-26	7.56
.007	2000	1MC-27	7.56
.06	1500	1MC-28	7.56
.01	1000	1MC-11	7.56
.015	1000	1MC-115	7.56
.02	1000	1MC-12	8.58
.03	500	1MC-13	8.58
.04	500	1MC-14	8.58
.05	250	1MC-15	8.58
.1	250	1MC-1	9.06

#### TYPE 2MC

Dimensions — 2 1/4" L. x 1 1/4" W. x 1 13/32" H.

MF	VAC Peak	Cat. No.	Net
.00005	5000	2MC-45	\$10.38
.0001	5000	2MC-31	10.38
.00015	5000	2MC-315	10.38
.0002	5000	2MC-32	10.38
.00025	5000	2MC-325	10.38
.0003	5000	2MC-33	10.38
.0004	5000	2MC-34	10.38
.0005	5000	2MC-35	10.38
.0006	5000	2MC-36	10.38
.0007	5000	2MC-37	10.38
.0008	5000	2MC-38	10.38
.001	5000	2MC-21	10.38
.0015	5000	2MC-215	10.38
.002	5000	2MC-22	10.38
.003	3000	2MC-23	10.38
.004	3000	2MC-24	10.38
.005	3000	2MC-25	10.38
.006	3000	2MC-26	10.38
.007	3000	2MC-27	10.38
.008	2000	2MC-28	10.38
.01	2000	2MC-11	10.38
.015	2000	2MC-115	10.38
.02	2000	2MC-12	10.38
.03	1500	2MC-13	10.38
.04	1500	2MC-14	10.38
.05	1500	2MC-15	10.38
.06	1000	2MC-16	11.16
.07	1000	2MC-17	11.16
.08	500	2MC-18	11.52
.1	500	2MC-1	11.52

### TYPES 1CC, 2CC, 3CC & 4CC

(Standard Capacity Tolerance ±5%)

MF Cat. No. Net

#### TYPE 1CC

Dimensions — 2 1/8" D. x 2 1/2" H.

MF	VAC Peak	Cat. No.	Net
<b>6000 VAC Peak</b>			
.00005	1CC-45		\$22.92
.000075	1CC-475		24.00
.0001	1CC-31		24.36
.00015	1CC-315		24.36
.0002	1CC-32		24.36
.00025	1CC-325		24.36
.0003	1CC-33		26.61
.0004	1CC-34		26.61
.0005	1CC-35		27.99
.0006	1CC-36		27.99
.0007	1CC-37		27.99
.0008	1CC-38		27.99
.001	1CC-21		27.99
.0015	1CC-215		29.34
.002	1CC-22		29.34
.003	1CC-23		30.36
.004	1CC-24		30.36

#### 4000 VAC Peak

.005	1CC-25		30.36
.006	1CC-26		30.87
.007	1CC-27		30.37
.008	1CC-28		30.87
.01	1CC-11		30.87

#### 3000 VAC Peak

.015	1CC-115		30.87
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#### 2000 VAC Peak

.02	1CC-12		30.87
.025	1CC-125		31.08

#### 1500 VAC Peak

.03	1CC-13		33.45
.04	1CC-14		35.10
.05	1CC-15		36.45
.06	1CC-16		37.68

#### 1000 VAC Peak

.07	1CC-17		38.55
.08	1CC-18		39.45
.1	1CC-1		41.10

#### TYPE 2CC

Dimensions — 3 1/2" D. x 3" H.

MF	VAC Peak	Cat. No.	Net
<b>10,000 VAC Peak</b>			
.00005	2CC-45		39.33
.000075	2CC-475		39.33
.0001	2CC-31		39.33
.00015	2CC-315		39.33
.0002	2CC-32		39.33
.0003	2CC-33		39.33
.0004	2CC-34		39.33
.0005	2CC-35		39.33
.0006	2CC-36		39.33
.0007	2CC-37		29.33
.0008	2CC-38		39.33
.001	2CC-21		39.33
.0015	2CC-215		39.33
.002	2CC-22		39.33

#### 8000 VAC Peak

.003	2CC-23		39.33
.004	2CC-24		39.33

#### 6000 VAC Peak

.005	2CC-25		39.33
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#### 5000 VAC Peak

.006	2CC-26		41.49
.007	2CC-27		41.49
.008	2CC-28		41.49
.01	2CC-11		41.49

MF Cat. No. Net

#### 4000 VAC Peak

.015	2CC-115		41.49
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#### 3000 VAC Peak

.02	2CC-12		41.49
.025	2CC-125		43.20

#### 2000 VAC Peak

.03	2CC-13		44.10
.04	2CC-14		46.68
.05	2CC-15		48.45
.06	2CC-16		49.80

#### 1500 VAC Peak

.07	2CC-17		51.00
.08	2CC-18		51.90
.1	2CC-1		54.00

#### TYPE 3CC

Dimensions — 5" D. x 4" H.

MF	VAC Peak	Cat. No.	Net
<b>20,000 VAC Peak</b>			
.00005	3CC-45		66.54
.000075	3CC-475		72.60
.0001	3CC-31		72.60
.00015	3CC-315		78.66
.0002	3CC-32		78.66
.0003	3CC-33		78.66
.0004	3CC-34		82.29
.0005	3CC-35		82.29
.0006	3CC-36		82.29
.0007	3CC-37		82.29
.0008	3CC-38		82.29
.001	3CC-21		84.69

#### 15,000 VAC Peak

.0015	3CC-215		85.92
.002	3CC-22		85.92

#### 12,000 VAC Peak

.003	3CC-23		90.75
.004	3CC-24		90.75

#### 10,000 VAC Peak

.005	3CC-25		90.75
.006	3CC-26		90.75
.007	3CC-27		90.75
.008	3CC-28		90.75

#### 8000 VAC Peak

.01	3CC-11		90.75
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#### 5000 VAC Peak

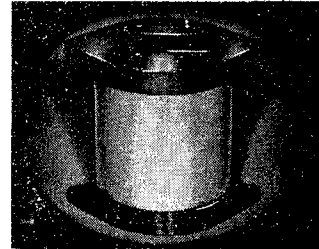
.015	3CC-115		90.75
.02	3CC-12		90.75

#### 3000 VAC Peak

.025	3CC-125		90.75
.03	3CC-13		90.75
.04	3CC-14		90.75
.05	3CC-15		90.75
.06	3CC-16		95.10

#### 2000 VAC Peak

.07	3CC-17		98.40
.08	3CC-18		103.20
.1	3CC-1		109.20



MF Cat. No. Net

#### TYPE 4CC

Dimensions — 5" D. x 5 3/4" H.

MF	VAC Peak	Cat. No.	Net
<b>30,000 VAC Peak</b>			
.0001	4CC-31		\$126.1
.00015	4CC-315		126.1
.0002	4CC-32		132.7
.0003	4CC-33		132.7
.0004	4CC-34		132.7
.0005	4CC-35		132.7
.0006	4CC-36		132.7
.0007	4CC-37		132.7
.0008	4CC-38		132.7
.001	4CC-21		132.7

#### 25,000 VAC Peak

.0015	4CC-215		137.4
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#### 20,000 VAC Peak

.002	4CC-22		137.4
.003	4CC-23		137.4

#### 15,000 VAC Peak

.004	4CC-24		140.6
.005	4CC-25		145.2
.006	4CC-26		151.3
.007	4CC-27		156.0

#### 12,000 VAC Peak

.008	4CC-28		156.0
.009	4CC-29		156.0

#### 10,000 VAC Peak

.01	4CC-11		163.4
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#### 8000 VAC Peak

.015	4CC-115		163.4
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#### 6000 VAC Peak

.02	4CC-12		163.4
.03	4CC-13		163.4

#### 5000 VAC Peak

.04	4CC-14		163.4
.05	4CC-15		163.4
.06	4CC-16		174.0

#### 4000 VAC Peak

.07	4CC-17		180.0
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#### 3000 VAC Peak

.08	4CC-18		184.8
.1	4CC-1		195.6

**CAIG LABORATORIES INC.**

New Hyde Park, L. I., N. Y.

*Cramolin*® products**FEATURES**

- **CLEANER**
- **LUBRICANT**
- **PRESERVATIVE**
- **ANTI-CORROSIVE**

**PRICES**

DESCRIPTION	CRAMOLIN (Red Color)	CRAMOLIN-SPECIAL (Blue Color)	CRAMOLIN-PASTE	CAEON SOLVENT #27
2 oz. Glass Bottle	\$1.95	\$2.25		
4 oz. Glass Bottle				\$1.60
½ pint, Glass Bottle	6.75	7.50		2.85
1 pint, Glass Bottle	13.00	14.50		4.00
1 quart, Glass Bottle	25.50	28.00		6.00
¼ Kg Can (½ lb.)			\$2.90	
6 oz. Spray Engineers Kit	3.00	3.50		
	6.75			

CRAMOLIN fluid is a combination protection and cleaning preparation. It is preferably applied on contacts already in use, or on apparatus where contact deficiency has occurred and where these contacts should be protected against oxidation. May be used on old and new contacts, and with other CRAMOLIN products.

CRAMOLIN-SPECIAL fluid is not a cleaning preparation, however, it does provide the essential protection needed. It is mainly used in the manufacture of new instruments or apparatus where the improvement of performance is desired as well as to preserve and increase the life of the apparatus. Should be used on new contacts or those contacts that have been previously cleaned with CRAMOLIN.

CRAMOLIN-PASTE is a semi-solid form and is also a combination protection and cleaning preparation. Usually used for high amperage and/or high voltage use. Can be used after applications of CRAMOLIN for good results.

Ask or write for Bulletin C-200 for complete Technical Data.

**THE BREAK-THRU FOR HIGHER PERFORMING ELECTRIC CONTACTS**

Reduces contact resistance and sparking by dissolving oxide film formations. Temp. operating range  $-34^{\circ}\text{C}$ . to  $150^{\circ}\text{C}$ . Effective on all metals and their alloys including gold, silver, copper, etc. Stays on moving contacts. Free of acids. Safe to use. Lasts for years.

**TYPICAL USES**

Switches, Relays, Commutators, Brushes, High-frequency Generators, High Speed Slip-rings, Plug-in Connectors, Radio & TV Tuners, Dialing Units, Transmitters, Tubes, Timers, Electric Rails, Slide Wires, Computers. Extensively used in Standards Laboratories, Military, Naval, Airborne, Missiles & all Industrial Electric & Electronic Apparatus.

**CAEON SOLVENT #27**

Repackaged Freon® TF Solvent  
(Trichlorotrifluoroethane)

A cleaning agent for removal of oil, grease, and dirt from objects without harm to metal, plastic, or elastomeric parts.



- **NON-FLAMMABLE**
- **VIRTUALLY NON-TOXIC**
- **CHEMICALLY AND PHYSICALLY PURE**
- **CHEMICALLY AND THERMALLY INERT**
- **STABLE**

The solvent exhibits a washing and penetrating action which aids its cleaning ability. High density and low surface tension enables Caeon #27 to wet the surface of most materials and wash away dirt and sludge.

The solvent is useful in ultrasonic and vapor degreasing equipment. Soils which are normally insoluble in any solvent can often be removed by this solvent with cavitation in ultrasonic units. Vapor rinsing is more easily accomplished without exposing object to high temperatures.

The solvent is compatible with most organic systems. It will remove soils or contaminants and leave the surface 'Residue-Free'. All standard methods of using a solvent may be employed.

**NEW***Cramolin Spray R***\$3.00**

6 oz. can



6" Extension Spray Tube — FREE!

Now — for those who prefer the spray can method of application. CRAMOLIN SPRAY R has same properties as CRAMOLIN FLUID. Packaged in neat spray can with automatic valve. Equipped with a whirl spray head, which will apply CRAMOLIN — breath thin — to most remote areas. The Hygrade propellant and speedy evaporating solvent leaves only a microfilm of actual CRAMOLIN on contact area.

**EACH KIT CONTAINS:**

- 2 OZ. CRAMOLIN
- 2 OZ. CRAMOLIN-SPECIAL
- ½ LB. CRAMOLIN-PASTE
- TECHNICAL GUIDE TO PROPERTIES & APPLICATIONS

**\$6.75**

complete plus postage

**NEW Cramolin ENGINEERS PRODUCT KIT**

The Engineers Kit provides the experimenter the opportunity to evaluate the best combination of CRAMOLIN product preservatives for his own particular contact problems.

**NEW  
SUPER**

**MIRACLE T.V. TUNER CLEANER**

ENGINEERED FOR TUNERS MADE WITH PLASTIC PARTS

**HUSH**

**CHEMICALLY ENGINEERED**

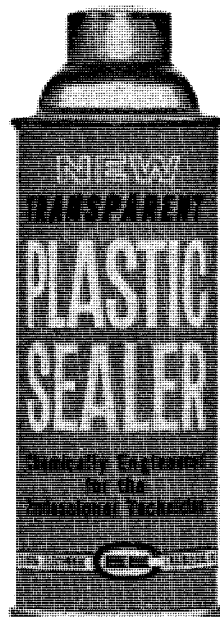
From the purest chemicals available for cleaning plastic boards with printed circuits. HUSH lubricates with Electro-Silicone for longest possible protection.

8 oz. Spray Can ..... **\$2.50**  
16 oz. Economy Spray Can.. **\$3.50**

FREE 6" Plastic Extender With Every Can



YOU  
CAN BE SURE  
WITH  
NEW SUPER HUSH



16 ounces \$1.95 Net

**STOPS**

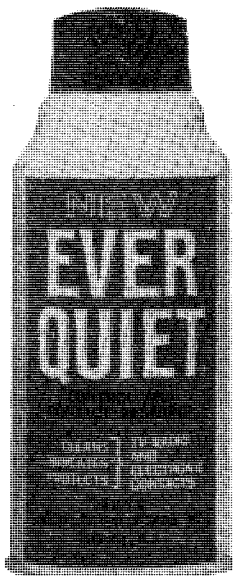
Corrosion

Corona Loss

Short Circuits

**NEW TRANSPARENT  
PLASTIC SEALER**

INSULATES and WATER PROOFS  
with HIGH DIELECTRIC STRENGTH



A FEW  
DROPS  
DOES THE  
JOB

**2 oz. Net 79c**  
(32 oz. sizes available)

SINCE 1949 THE ORIGINAL  
**SUPER EVER-QUIET®**

VOLUME CONTROL and CONTACT RESTORER

EVER-QUIET is a free-flowing liquid that leaves no power residue. Scientifically designed to seep around the shaft and penetrate the control or potentiometer, cleaning the contacts and leaving a safe protecting film.

EVER-QUIET is harmless to metals, wire or carbon.

FREE 6" Plastic Extender With Every Can

**6 oz. SPRAY CAN \$1.59** Net

**EVER-KLEER T.V. Picture Tubes, Protecting Glass Cleaner**

WRITE FOR CONFIDENTIAL COST PRICE LIST

**CHEMICAL ELECTRONIC ENGINEERING, INC.**  
MATAWAN, NEW JERSEY

# GC CHEMICALS AND KITS

**ELECTRONICS**


GC Chemicals (Cements, Thinners, Paints, Oils, Varnishes, etc.), are available in handy 2 oz. bottles with brush-in-cap. Also supplied in larger sizes.



**G-C RADIO-TELEVISION SERVICE CEMENT**—This high grade cement is specially prepared for Radio, Television and Speaker Work. Unexcelled for cementing and replacing cones on dynamic speakers, repairing rattling or torn cones, cementing voice coils, spiders, etc.  
Cat. No. 30-2 2-oz. Net \$ .48

**G-C PLASTIC CEMENT**—Excellent for cementing broken plastic cabinets, cementing grille cloth in place, cementing dial and glass crystal assemblies, cementing knots in dial, cords, etc.  
Cat. No. 32-2A 2-oz. Net \$ .48

**G-C "BAKELITE" CEMENT**—This cement is especially made for cementing "BAKELITE" to "BAKELITE" and to other materials.  
Cat. No. 32-2 2-oz. Net \$ .80

**G-C "VINYLITE" CEMENT**—This new G-C Cement based upon "VINYLITE" vinyl resins, has great adhesion, high tackiness and extreme flexibility.  
Cat. No. 58-2 2-oz. Net \$ .48

**G-C HOUSEHOLD and MODEL CEMENT**—Fast-drying cement, suitable for many uses. Excellent "Household Cement"; will cement wood, paper, plastics, metal, china, crockery, ceramics, etc.  
Cat. No. 45-2 2-oz. Net \$ .55

**G-C FABRIC and GRILLE CLOTH CEMENT**—For cementing grille cloth and fabrics to either metal, plastic or wood cabinets.  
Cat. No. 22-2 2-oz. Net \$ .63

**G-C WOOD CABINET GLUE**—This is the ordinary well-known wood glue that is used in repair of furniture, chairs, radio cabinets, etc.  
Cat. No. 39-2 2-oz. Net \$ .48

**G-C No. 28 CEMENT THINNER**—This thinner is made of same solvents as G-C Service Cement and makes the best thinner for G-C Service Cement.  
Cat. No. 28-2 2-oz. Net \$ .45

**G-C RADIO SERVICE SOLVENT**—The best solvent for loosening cement on speaker cones, frames, etc., made to dissolve all types of cements. Can also be used as a thinner for G-C Cement and other cements.  
Cat. No. 31-2 2-oz. Net \$ .45

**G-C No. 29 LACQUER THINNER**—Solvent for thinning all lacquers, lacquer enamels, telephone black and gray, touch-up lacquers.  
Cat. No. 29-2 2-oz. Net \$ .45

**G-C No. 67 PAINT THINNER**—Excellent for Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish and Rubber Cements.  
Cat. No. 67-2 2-oz. Net \$ .45

**G-C No. 41 Q-DOPE THINNER**—Excellent solvent for Polystyrene, Q-Dope and any other Polystyrene Coil Dopes and Cements. Will soften and dissolve polystyrene rous, sheets, etc. Clear water-white solvent will not change characteristics of original materials.  
Cat. No. 41-2 2-oz. Net \$ .45

**G-C RUBBER-TO-METAL & PHONO DRIVE CEMENT**—Specially prepared for cementing rubber phono and dial drives to shafts and pulleys.  
Cat. No. 35-2 2-oz. Net \$ .53

**G-C PLIOBOND CEMENT**—Bonds anything to anything—iron, steel, plastic, glass, aluminum, cotton, vinyl sheets, stainless steel, etc. A truly universal cement.  
Cat. No. 43-2 2-oz. Net \$ .53

**G-C ACRYLIC-PLEXIGLASS CEMENT**—Specially prepared for cementing Lucite, Plexiglass and other acrylic materials.  
Cat. No. 40-2 2-oz. Net \$ .53

**G-C NE-O-PRENE CEMENT**—For cementing neoprene rubber to neoprene or neoprene to other products, such as metal, wood, paper, etc.  
Cat. No. 52-2 2-oz. Net \$ .67

**G-C LABEL CEMENT**—Here's a label cement that will make labels stick to anything—metal, glass, wood, tin, etc.  
Cat. No. 46-2 2-oz. Net \$ .55

**G-C TV HIGH VOLTAGE CORONA DOPE**—Prevents corona shorts on high voltage circuits in Television sets.  
Cat. No. 47-2 2-oz. Net \$ .72

**G-C RED-X TV CORONA DOPE**—Prevents corona shorts in high voltage circuits in TV sets. Coat surfaces and sharp corners to stop corona effect.  
Cat. No. 50-2 2-oz. Net \$ .72

**G-C TV TUBE KOAT**—For recoating the outside of TV picture tubes that have become scratched or the surface is peeling.  
Cat. No. 49-2 2-oz. Net \$ .72

**G-C TV LINE SEAL FOR UHF and VHF**—Outdoor special acrylic sealer for sealing TV wires, terminals, screws, antennas, junction boxes.  
Cat. No. 17-2 2-oz. Net \$ .53

**G-C PHONO NON-SLIP COMPOUND**—Prevents slippage of phono drives on changers, tape recorders, and all types of recorder drives.  
Cat. No. 86-2-S 2-oz. NET \$ .96

**G-C RED GLYPTAL INSULATING VARNISH**—Most common of all protective insulating coatings, used on all solder connections, high voltage points, anti-corona.  
Cat. No. 90-2 2-oz. Net \$ .57

**NON-SLIP COMPOUND FOR RADIO DIALS**—Powder Compound for treating friction type dial drives such as cords, cables and belts.  
Cat. No. 1210 Non-Slip, 2-oz. Net \$ .45

**LIQUID NON-SLIP**—Penetrating and fast-drying liquid dressing. Shrinks fibres, prolongs life of cables and belts and prevents slipping.  
Cat. No. 1211 1/2-oz. Net \$ .33

**G-C DE-OX-ID**—Cleans and prevents oxidation on sensitive circuit contacts. Use in Television, Radio, Telephone, Relays, Instruments, etc.  
Cat. No. 19-1 1-oz. Net \$ .67  
19-2 2-oz. Net \$ .97

**G-C CONTACT AND CRYSTAL CLEANER**—A fast-evaporating cleaner specially prepared for cleaning contacts and crystals. Cleans easily and will not injure delicate parts, crystals, etc.  
Cat. No. 127-2 2-oz. Net \$ .45

**NEW G-C ELECTRONIC CONTACT CLEANER**—Most popular all-purpose contact cleaner on the market. Fast drying and fast acting. Leaves a non-corrosive film on the contacts that insures long, trouble-free action.  
Cat. No. 210-2 2-oz. Net \$ .53

**G-C DE-NOIZ ELECTRONIC TV CONTACT AND DETENT CLEANER**—Stops Noise on all types of contacts, volume controls, tuners, detents, switches, relays, etc.  
Cat. No. 51-2 2-oz. Net \$ .97

**G-C CARBON CONTROL CLEANER**—Makes it easy to repair most noisy volume controls, tone controls, switches, band switches, push-buttons—in fact, most all types of moving contacts. A special chemical that both removes oxidation and minimizes future trouble by coating the contacts.  
Cat. No. 212-2 2-oz. Net \$ .45

**G-C CARBON TETRA-CHLORIDE**—100% pure Carbon Tetra-Chloride, non-explosive and non-flammable. For cleaning electrical controls and contacts.  
Cat. No. 211-2 2-oz. Net \$ .45

**G-C GRAFOLINE**—Insures proper and lasting repairs for all air-exposed contacts, switches, and wire-wound volume controls—wherever dust and dirt affect the quiet action of adjustable radio parts or controls.  
Cat. No. 120-2 2-oz. Net \$ .53

**G-C CARBON-X**—A practical method to touch up those worn and noisy spots on carbon volume controls.  
Cat. No. 1205 2-oz. Net \$ .80

**G-C CONTACT DOPE**—Ideal contact cleaner for electronic switches, controls and contacts. Specially prepared to resist corrosion and oxidation on contacts.  
Cat. No. 1214 2-oz. Net \$ .48

**G-C NDN-CORROSIVE LIQUID SOLDERING FLUX**—Best quality non-corrosive flux for all types of radio and electrical soldering, for copper, brass, steel, nickel, etc.  
Cat. No. 42-2 2-oz. Net \$ .48

**G-C Q-DOPE (COIL DOPE)**—Specially prepared for coating, doping, sealing, cementing and impregnating coils and paints in "Very High" and "Ultra High" frequency ranges.  
Cat. No. 37-2 2-oz. Net \$ .55

**G-C LIQUIDOPE**—Gives coils a tough protective film that insures firmness and prevents characteristic changes due to weather.  
Cat. No. 36-2 2-oz. Net \$ .58

**G-C INSULATING & DIPPING VARNISH**—Produces a smooth, tough film that is water-proof, oil-proof and non-corrosive. Recommended for treating field coils, noisy or buzzing transformers and choke coils.  
Cat. No. 56-2 2-oz. Net \$ .60

**G-C FUNGUS VARNISH**—Used on all types of Radio, Electronics and Communication equipment to prevent moisture absorption and fungus growth, when equipment is used in hot and humid climates.  
Cat. No. 57-2 2-oz. Net \$ .67

**G-C STRIP-X**—Removes insulating enamel from wires for easy soldering. Use on magnet wire, etc.  
Cat. No. 26-2 2-oz. Net \$ .73

**G-C RECO-STATIC CHASER**—Minimize dust accumulation on records and picture tube. Reduces dust attracting static electricity.  
Cat. No. 48-2 2-oz. Net \$ .45

**G-C MAG-NETIK RECORDING HEAD CLEANER**—Cleans without injury to the recording head that gradually lose their sensitivity if oxide accumulates.  
Cat. No. 53-1 1-oz. Net \$ .57  
53-2 2-oz. \$ .97

**G-C RUF-KOAT**—The only finish that will air dry and give you a professional wrinkle job without baking. Colors: Black, Gray and Brown (Specify Color).  
Cat. No. 60-2 2-oz. Net \$ .67

**G-C No. 14-2 PRINT-KOTE SILICONE RESIN**—After repairing or replacing parts in printed circuits, protect the panel joints and parts. Fast air drying.  
Cat. No. 14-2 2-oz. Net \$1.30

**G-C No. 13-2 PRINT-KOTE SOLVENT FOR SILICONE RESIN**—The only solvent for G-C 14-2 Silicone Resin. Will dissolve and remove silicone resin from printed circuits.  
Cat. No. 13-2 2-oz. Net \$ .37

**G-C PRINT-KOTE SOLDERING FLUX**—Non-corrosive liquid flux for easy soldering and repairing of printed circuits.  
Cat. No. 12-2 2-oz. Net \$ .50

**G-C CEMENT KIT**—A kit containing a complete selection for every application. Kit includes 2-oz. samples of Service, Pli-O-Bond, Acrylic, Plastic, Bakelite, Vinylite, Grille Cloth, Model, Wood, Rubber-to-Metal, Electrical and Resistor, Neoprene, Label and Vinyl Cements. Ideal for research and development.  
Cat. No. 345 Net \$5.97

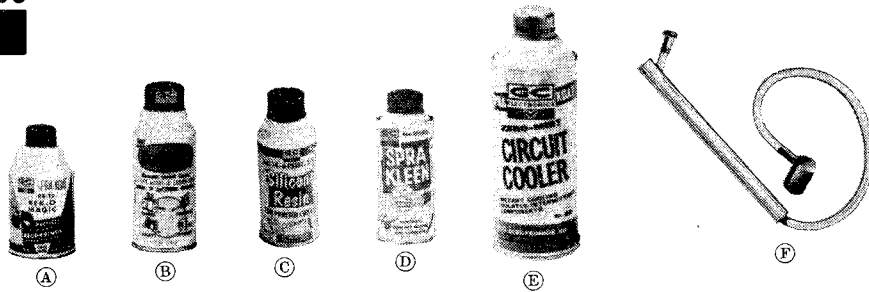


**G-C RADIO AND TELEVISION CEMENT**—High grade speaker cement in a handy tube for those who prefer to use a tube. Cement can be applied directly from tube on the parts to be cemented without the use of a brush. Also used for television work, sealing nuts, bolts, etc., on antennas, rotators, etc.  
Cat. No. 34-2

2-oz. tube Net \$ .55



# CHEMICALS AND KITS



(A) **NEW REK-O-MAGIC ANTI-STATIC SPRAY**—Eliminates abrasive dust that ruins records. Cleans and keeps clean. Easy to use.

Cat. No. 98-12 12 oz. Net \$1.88

(B) **DE-OX-10**—Electrical contact cleaner for silver, detent and radar contacts. Use in television, radio, telephone, relays, instruments, etc., the greatest development in electronic contact fluids.

Cat. No. 19-6 6 oz. Net \$2.33

(C) **K-27 PRINT-KOTE**—T-V Silicone resin for printed circuits. This is the original clear sili-

cone resin as used by manufacturers on all printed circuit sets. It insulates, protects and prevents shorts.

Cat. No. 14-6 6 oz. Net \$2.42

(D) **SPRA-KLEEN**—Eliminates noise due to dust, dirt and corrosion on electrical contacts the easy way. Just spray onto contacts or controls. No. 8666 6 oz. Spray Can Net \$ .99

**NEW 16 OUNCE KING SIZE THAT SPRAYS UP-SIDE DOWN.** A full 16 ounces that works equally well right side up or upside down for those hard to reach places.

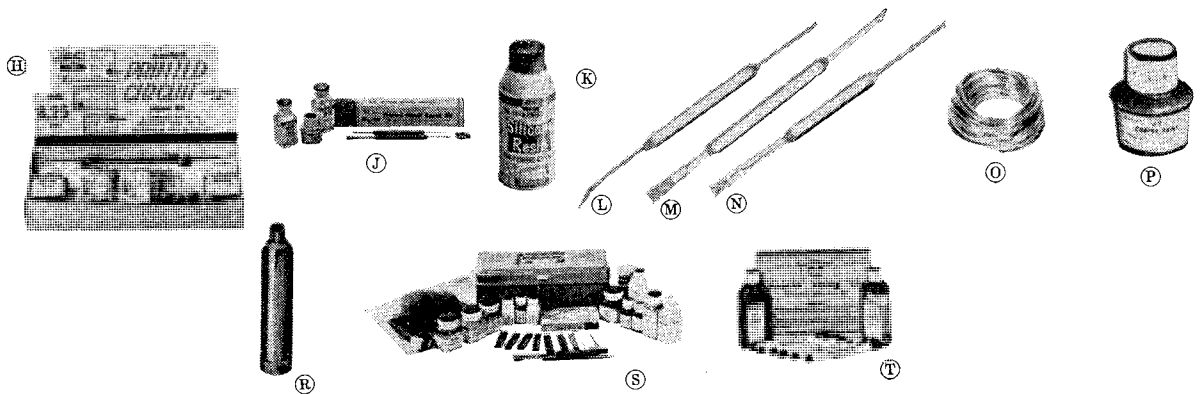
No. 8666-16 16 oz. Spray Can Net \$1.95

(E) **ZERO-MIST SPRA KOAT**—Instantly locates defective circuit components of an intermittent nature due to temperature change. Circuits cooled instantly . . . intermittent components isolated.

Cat. No. 8667 16-oz. Net \$2.42

(F) **G-C FLEX-SOL SPRA-CAN EXTENSION**—The device that adapts Spra-Cans to ANY use. Now you can reach and clean controls and tuners without removing them from the chassis. Speeds up and simplifies bench work.

Cat. No. 9344-1 Net \$ .83



(H) **NEW G-C STANDARD PRINTED CIRCUIT KIT**—Includes one box each of foil, solder washers, solder wire, one solder probe tool and brush, silicone resin lacquer and solvent, tweezers and complete instructions.

Cat. No. 682 Net \$ 5.33

(I) **G-C MASTER PRINTED CIRCUIT KIT**—Includes all items in G-C standard kit plus one Ungar Soldering iron with one special tip and a 6-oz. spray can G-C No. 14-6 Print-Kote Silicone Resin Spray and complete instructions.

Cat. No. 683 Net \$10.58

(J) **G-C No. 680—PRINTED CIRCUIT SILICONE RESIN SERVICE KIT**—Here's a complete kit with the materials you need to repair any Printed Circuits in radio and TV sets using Printed Circuits. Used by leading set manufacturers.

Cat. No. 680 Net \$ 6.06

**G-C No. 681—TV PRINTED CIRCUIT SILICONE RESIN SERVICE KIT**—No. 681 kit is the same kit as No. 680, except the 21-1 Pure Silver Print is not included in kit.

Cat. No. 681 Net \$3.48

(K) **G-C PRINT-KOTE SILICONE RESIN SPRAY**—Genuine Silicone Resin as used by leading TV set manufacturers to protect printed circuits. After repairing or replacing parts in printed circuit sets.

Cat. No. 14-6 6-oz. Net \$2.42

(L) **G-C No. 9093 PRINT-KOTE SOLDER AID PROBE**—Handy, fine point probe specially designed to

aid in probing and soldering printed circuits.

Cat. No. 9093 Net \$1.00

(M) **G-C No. 9094 PRINT-KOTE BRUSH AND SCRAPER**—Fine stainless steel brush and hardened steel scraper are required to scrape and clean the Silicone Resin from printed circuits before any repair can be made.

Cat. No. 9094 Net \$ .98

(N) **G-C HEAVY DUTY SOLDERING AID TOOL**—One end has a stiff wire brush for cleaning wire and terminal strip before soldering, and the other end is machined to hold the wires while being soldered.

Cat. No. 9088 Net \$1.00

(O) **G-C PRINT-KOTE SOLDER**—Special non-corrosive flux and low-melting solder combined with Pure Silver.

Cat. No. 9131 11-foot Coil Net \$ .52

(P) **G-C SILVER PRINT**—Same Pure Silver compounded as used by manufacturers in printed circuit design. Repair those printed circuits, touch up circuit around eyelets, rivets, parts, etc.

Cat. No. 21-1 ½ Troy oz. Net \$3.30

21-2 1 Troy oz. 5.75

**NEW G-C COPPERPRINT**—Excellent for repairing printed circuits. A high conductive, fast drying compound to touch up printed circuits.

Cat. No. 20-2 2-oz. Net \$ 2.17

(R) **G-C SKRATCH STIKS**—Available for Walnut, Mahogany and Light Wood. Removes scratches on all shades and colors of woods—makes them vanish like magic.

Cat. No. 909-W Net \$ .48

(S) **G-C No. 900 MASTER DELUXE CABINET REPAIR KIT**—With this Master Repair Kit all repairs can be made even for the most exacting customer. All of the essentials for a really satisfactory repair job are included in this Kit. Our new spirit stains, varnishes and enamels are included in this kit (all spirit solvent).

Cat. No. 900 Master Deluxe Kit Net \$9.10

**G-C No. 901 CABINET REPAIR KIT**—Here's a kit that is second to none. It is a complete kit that will meet any emergency or do any repair job. With this kit you can repair wood cabinets, as well as plastic and bakelite cabinets, knobs, etc. On dents or nicks you can use the shellac sticks and melt them in with the spatula and alcohol lamp.

Cat. No. 901 Net \$ 7.16

**No. 907 MASTER CABINET TOUCH-UP KIT**—A high-grade, complete fast Touch-Up Kit for repairing scratches and dents on radio cabinets and furniture.

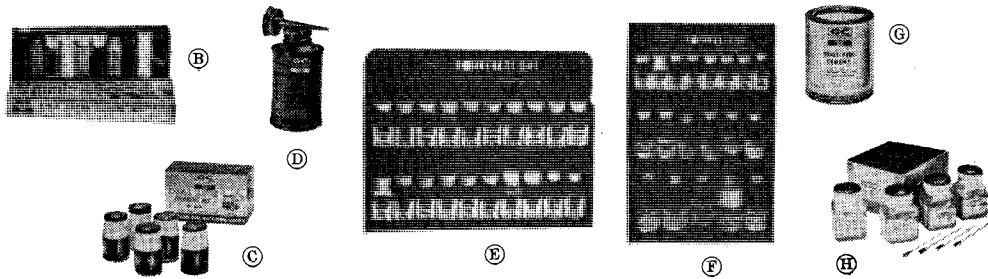
Cat. No. 907 Touch-Up Kit Net \$4.78

(T) **G-C MAGIC SCRATCH REMOVER KIT**—This kit is a combination of 6 shades of Scratch Crayon fillers and Light and Dark Scratch Fluid.

Cat. No. 915 Net \$2.25

# GC CHEMICALS AND KITS

**GC**  
ELECTRONICS



(B) **G-C E.I.A. COLOR CODING KIT**—Complete kit of all standard E.I.A. colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Grey and White. Brushes furnished and E.I.A. color chart is on box.

Cat. No. 677 Color Coding Kit Net \$1.75

(C) **G-C DIAL AND SIGNAL LIGHT COLORING**—Long-lasting coloring for signal systems, radio dials, decorative lighting, etc. Instant drying. Bright, durable colors of Red, Green, Blue, Amber, Purple and solvent.

Cat. No. 66-5 Kit of 5, no purple Net \$1.33  
66-6 Kit of 6 Net \$1.53

(D) **G-C DIAL AND APPLIANCE OIL**—A fine free-running oil for lubricating dial mechanisms, loosening and freeing controls, shafts, etc. Also use on small motors, appliances, etc.

Cat. No. 1245 4-oz. Net \$ .67

(E) **G-C RADIO-TV CHEMICAL LAB**—Twenty 2-oz. bottles in permanent rack that can be placed on your bench or hung on the wall. Every needed chemical and cement is included for all kinds of repairs, speakers, coils, contacts, dials, controls, etc.

Cat. No. 997 Net \$12.75

(F) **G-C DELUXE RADIO-TV CHEMICAL LAB**—For service shop and industrial plant. Complete

practical laboratory designed to the needs of all service men in their everyday work. Ideal for the service man, engineer, experimenter, etc.

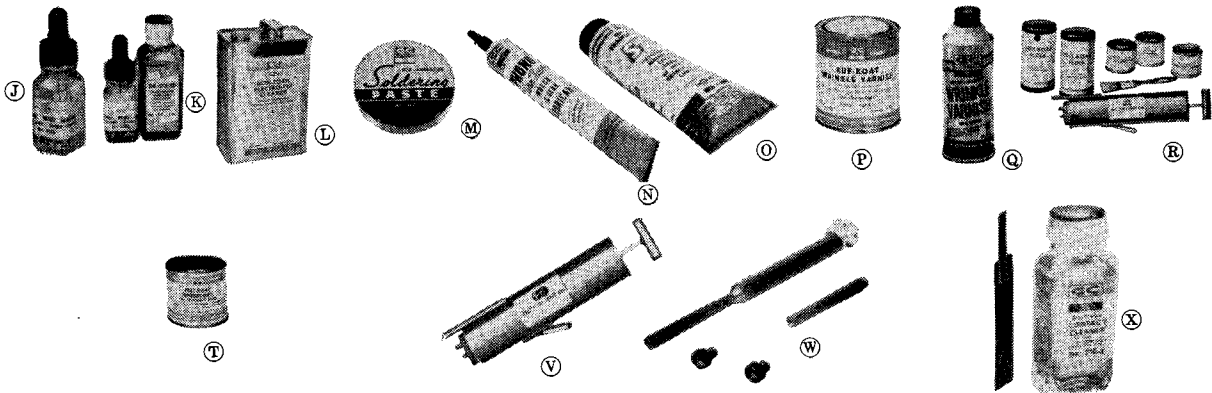
Cat. No. 998 Net \$16.17

(G) **G-C ROOF-SEEL COMPOUND**—Eliminate call-backs on roof antenna installations by sealing all contacts or fastenings; to the roof.

Cat. No. 18-16 Pint Net \$ .92

(H) **G-C LUMINOUS LITE-KOAT KIT**—Long-life, non-poisonous luminous coating that absorbs light in daytime and glows in the dark. Coat or stripe dials, knobs, switch plates, meter boxes, key holes, panels, instruments, hallways, staircases, etc.

Cat. No. 184-0 Net \$3.23



(J) **G-C ELECTRONIC CONTACT CLEANER HYPODERMIC NEEDLE INJECTOR**—Here's a handy applicator made on the hypodermic principle to inject cleaners and oils into shafts, controls and tight places.

Cat. No. 8393 Net \$ .48

(K) **G-C DE-OX-ID KIT WITH NEEDLE INJECTOR**—Kit contains 2 oz. bottle of De-Ox-Id and a hypodermic needle type injector for making it easy to apply.

Cat. No. 8460 Net \$1.42

**G-C CONTROL KLEENER**—Cleans and lubricates Volume, Brightness, Tone and other controls. Also good for push buttons, switches, contacts and tuners.

Cat. No. 65-16 16-oz. Net \$1.95

(L) **G-C NON-TOXIC ELECTRO-TET CLEANER**—Chlorothene, one of the least toxic of the Chlorinated Solvents. Closely parallels Carbon Tetrachloride, but much safer. Non-inflammable and fast drying.

Cat. No. 10-G 1 Gallon Net \$7.08

**G-C KLEEN-TEX CLEANER**—A safe, slow-burning, high flash, inexpensive cleaner for motors, chassis, vacuum cleaners, etc. Removes grease, oil, wax and tars.

Cat. No. 11-G 1-Gallon Net \$3.27

(M) **G-C SOLDERING PASTE**—New high quality, non-corrosive soldering paste for radio and electrical work.

Cat. No. 1207 2-oz. Net \$ .42

(N) **G-C PHONO-TURNTABLE MOTOR & GEAR LUBRICANT**—A new special lubricant for phonographs. Formulated so that the lubricant clings to the surface of the parts. Eliminate trouble on phono repairs by using the best.

Cat. No. 1223 2-oz. Net \$ .53

(O) **TRANSISTOR Z5 SILICONE COMPOUND**—G-C Silicone Compound is applied to transistor and chassis at the factory. IT MUST BE RE-APPLIED to transistor and chassis when replacing transistors.

Cat. No. 8101 1-oz. Net \$2.10

(P) **G-C RUF-KOAT WRINKLE VARNISH**—The only finish that will air dry and give you a professional wrinkle job without baking. Colors: Black, Gray and Brown (Specify Color).

Cat. No. 60-2 2-oz. Net \$ .67

(Q) **RUF-KOAT SPRA-KOAT**—In power spray cans.

Cat. No. 60-12 12-oz. Black Net \$2.25

60-13 12-oz. Gray Net \$2.25

(R) **G-C FELT-KOAT FLOCK FINISH SPRAY KITS**—The new G-C method of applying flock with the G-C patented gun. It distributes flock evenly and blows each fibre into the undercoat vertically with great power. The flock in reality "flocks to the undercoat in a heavy velvet coat."

Cat. No. 180-2 Deluxe Kit Complete Net \$12.50

(T) **G-C FLOCK SIZING UNDERCOAT**—A neutral base undercoat. This is first applied to the surface being flocked and then the flock spread over the wet surface.

Cat. No. 180-4 4-oz. Net \$ .72

(V) **G-C FELT-KOAT SPECIAL FLOCK PATENTED BLOWER GUN**—This gun distributes the flock evenly and blows each fibre into the undercoat vertically with great force, thereby giving a smooth, velvet finish.

Cat. No. 180-3 Flock Blower Gun Net \$6.75

(W) **G-C CONTROL GUN KIT**—Cleans and lubricates noisy volume controls. Constructed of solid aluminum—will not rust.

Cat. No. 9285 Net \$4.50

(X) **CONTACT BURNISHING TOOL KIT**—A complete kit for the servicing of relays, switches, etc. where critical contact points must be kept clean for ideal operating conditions.
























Cat. No. 9339 Complete Kit Net \$ .75

## FREE 400-PAGE CATALOG

shows all GC products. Ask your distributor or write direct.



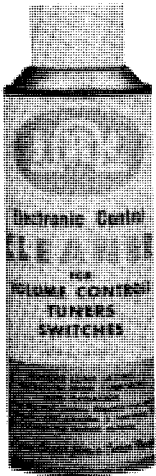
**INJECTORALL ELECTRONICS CORPORATION • BROOKLYN, N. Y.**

<p align="center"><b>AIR CONDITIONER</b></p> <p align="center"><b>Aero-Kleen</b></p> <p>Oil spray for air-conditioner filters, dripless and scented.</p> <p>495      16 oz. spray can      net \$1.29</p>		<p align="center"><b>CLEANERS</b></p> <p align="center"><b>Contact Cleaner</b></p> <p>Superior non-toxic spray solvent, dries quickly; with 4" steel needle.</p> <p>999WN      6 oz. spray can      net \$1.79</p>	
<p align="center"><b>CEMENTS &amp; GLUES</b></p> <p align="center"><b>Grip-Well</b></p> <p>Non-slip compound for dial cords, and slipping phono turntables.</p> <p>68      2 oz. glass bottle      net \$ .48</p>		<p align="center"><b>Degreaser No. 3</b></p> <p>Air drying cleaning compound, excellent for ultrasonic application.</p> <p>3      1 gal. can      net \$6.90</p>	
<p align="center"><b>Speaker Cement</b></p> <p>Vibration proof, fast drying, forms flexible bond; brush in cap.</p> <p>201      2 oz. glass bottle      net \$ .48</p>		<p align="center"><b>Lens Klean</b></p> <p>Plastic cleaner, antistatic, for plastic TV windows and meters; with cleaning cloth.</p> <p>20      6 oz. aerosol can      net \$ .99</p>	
<p align="center"><b>Stik-It</b></p> <p>All purpose glue in squeeze bottle, spreads white, dries clear.</p> <p>39      2 oz. squeeze bottle      net \$ .24</p>		<p align="center"><b>Fidelity Record Cleaner</b></p> <p>Antistatic spray, cleans and protects records; with record cleaning cloth.</p> <p>70WC      3 oz. spray can      net \$ .90</p>	
<p align="center"><b>CHEMICAL SERVICE AIDS</b></p> <p align="center"><b>E-Z Off Yoke Remover</b></p> <p>Loosens frozen yokes on picture tubes; with plastic needle.</p> <p>40      3 oz. spray can      net \$1.19</p>		<p align="center"><b>Hi-Fi Control Cleaner</b></p> <p>Cleaner and lubricant for volume controls; with plastic needle.</p> <p>799-3      3 oz. spray can      net \$ .90</p>	
<p align="center"><b>CIRCUIT COOLERS</b></p> <p align="center"><b>Chill-It</b></p> <p>A refrigerant spray, to pin-point defective electronic components.</p> <p>179-6      6 oz. spray can      net \$1.29 179-16      16 oz. spray can      net \$1.79</p>		<p align="center"><b>Tape Head Cleaner</b></p> <p>Cleans tape recorder heads, removes squeal; with needle and wire cleaner.</p> <p>250      3 oz. spray can      net \$1.19</p>	
<p align="center"><b>COATINGS &amp; INSULATORS</b></p> <p align="center"><b>Clear Spray</b></p> <p>A transparent plastic spray, waterproofs, insulates, prevents rust.</p> <p>399      16 oz. spray can      net \$1.29</p>		<p align="center"><b>Super 100</b></p> <p>Tuner cleaner and lubricant, will not affect plastics; with 6" steel needle.</p> <p>100-8      8 oz. spray can      net \$2.25</p>	
<p align="center"><b>Hi-Volt</b></p> <p>Red insulator, prevents arcing and corona in high voltage circuits.</p> <p>129-6      6 oz. spray can      net \$1.29 129-16      16 oz. spray can      net \$2.28</p>		<p align="center"><b>Tuner Cleaner</b></p> <p>Cleaner and lubricant for TV tuners and controls, non-toxic, non-flammable.</p> <p>899-3WN      3 oz. spray can with plastic needle      net \$ .39 899-6      6 oz. spray can only      net \$1.79 899WN      6 oz. spray can with 6" steel needle      net \$1.95 899-16      16 oz. spray can with 6" steel needle      net \$2.99</p>	
<p align="center"><b>FURNITURE POLISH</b></p> <p align="center"><b>Renew</b></p> <p>Scratch cover polish for dark finishes; with cloth.</p> <p>30WC      6 oz. aerosol can      net \$ .90</p>		<p align="center"><b>NEEDLES ONLY</b></p> <p align="center"><b>Injectorall Steel Needle</b></p> <p>Stainless steel tube with special fitting for INJECTORALL spray cans.</p> <p>6N      6 inch needle      net \$ .66</p>	
<p align="center"><b>OILS &amp; LUBRICANTS</b></p> <p align="center"><b>Spot Oil</b></p> <p>Non-gumming, for tape-recorders and record players; with plastic needle.</p> <p>10-3      3 oz. spray can      net \$ .90 10-16      16 oz. spray can      net \$1.79</p>		<p align="center"><b>PAINTS &amp; VARNISHES</b></p> <p align="center"><b>Siliconized Spray Paints</b></p> <p>211—Transformer Black—15 oz.      net \$1.29 212—Appliance White—15 oz.      net \$1.29 213—Antenna Aluminum—15 oz.      net \$1.29 214—Metallic Gold—15 oz.      net \$1.29 215—Ham Shack Grey—15 oz.      net \$1.29</p>	
<p align="center"><b>Squeal-Stop</b></p> <p>Dry lubricant, leaves no oily film, won't affect wires; with plastic needle.</p> <p>50      3 oz. spray can      net \$ .90</p>		<p align="center"><b>Anti-Fungus Varnish</b></p> <p>Conforms to MIL 173A specifications, natural color; prevents fungus growth.</p> <p>15-16      16 oz. spray can      net \$2.40 15G      1 gal. can      net \$14.95</p>	
			



# Service Accessories

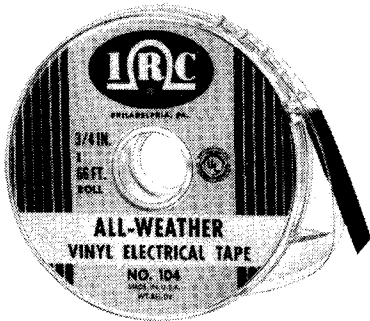
INTERNATIONAL RESISTANCE COMPANY



**ELECTRONIC CONTROL CLEANER.** IRC's Electronic Control Cleaner provides positive, long-lasting protection against damaging corrosion and oxidation. Sprayed on volume controls, tuners, switches and other sensitive components, it quickly removes dirt and clogging gum . . . deposits a non-drying film that lubricates contact surfaces.

**VINYL ELECTRICAL TAPES** for fast, safe, one-hand insulating. Has everything technicians, servicemen and hobbyists want.

- Meets MIL-I-7789A
- 2 to 18 times stronger than any other tapes
- UL approved for a single wrap
- Provides a tight insulated plastic seal that resists abrasion, water, acids and alkalis
- Adheres readily to all shapes
- Excellent for insulating tools



**NEW ALL-WEATHER TAPE — TYPE 104** for heavy duty outside or inside service when applying at temperatures below 40°F. Ideal for telephone and electric utilities, TV antenna installation and other applications requiring dependable service at extreme temperatures.

**GENERAL PURPOSE TAPE — TYPE 103** for use under less adverse conditions for TV servicing, routine maintenance, insulation and wire splicing, and industrial plant maintenance of electrical equipment.

**SIZES — TYPE 104 and TYPE 103**

3/8" wide by 20 feet long\*

3/4" wide by 20 feet long\*

3/8" wide by 36 yards long\*

3/4" wide by 66 feet long\*\*



**TAPE-AND-TEAR DISPENSER.** Seal and insulate in one fast movement. Save tape and time. Sturdy dispenser keeps tape clean and prevents stretch. Cutting blade is shielded. Holds 66 feet of 3/4" tape.

\* Type 103 only

\*\* Types 103 and 104



INTERNATIONAL RESISTANCE COMPANY

Distributor Division  
Philadelphia, Pa. 19108



## 12 KRYLON SPRAY WAYS TO SAVE YOU TIME...LABOR...MONEY!

**CLEANER-LUBRICANT**—For tuners, volume controls, switches. Provides lasting protection from corrosion and oxidation. Removes dirt, gummy deposits. Leaves non-toxic lubricating film. No carbon tetrachloride. 16 oz., \$1.95; 6 oz. 98¢.

**CRYSTAL CLEAR**—Acrylic spray coating for TV, radio, electronic use. Humidity and dust protection. Prevents rusting and pitting. High dielectric strength. Pint size, \$1.95; 5 oz., 98¢.

**RUST RELEASE**—Penetrating oil spray, instantly and easily frees rusted bolts and nuts that a wrench can't budge. Lubricates, too. 15 oz., \$1.69; 6 oz., 98¢.

**CLEANER AND DEGREASER**—Dissolves grease and oil deposits so that they can be rinsed away with water. Excellent for cleaning inaccessible places. 15 oz., \$1.39.

**ELECTRIC MOTOR CLEANER**—No washing, wiping or flushing! Removes grease, oil and dirt by mechanical and chemical solvent action. No carbon tetrachloride! 16 oz., \$1.69.

**RED INSULATING VARNISH**—Tough, lasting protective film for motor windings, armatures, etc. Won't crack, char, deteriorate. Fast drying! Pint size, \$1.95.

**SILICONE LUBRICANT**—Stops sticking and squeaking of doors, windows, drawers, hinges. Lubricates and protects a same time. Retards rust on metals. Repels water. 16 oz., \$1.95

**DULLING SPRAY**—A "must" in TV and photographic studios. Reduces glare and reflections from shiny surfaces. Simplifies lighting. Use for both black & white and color work. Semi-drying, removable. 16 oz., \$1.95.

**BEAUTIFUL COLORS**—Choice of 26 regular enamel colors and 7 glowing fluorescent paints. Use for repainting, color coding, touch-up or safety. Indoors or outdoors. Enamels: Pint size, \$1.79; 5 oz., 98¢. Fluorescents: Pint size, \$2.79; 5 oz., \$1.19.

**HIGH-HEAT ALUMINUM**—Withstands temperatures up to 500° for long periods... up to 1000° for intermittent periods. Exceptional film thickness. Pint size, \$2.49.

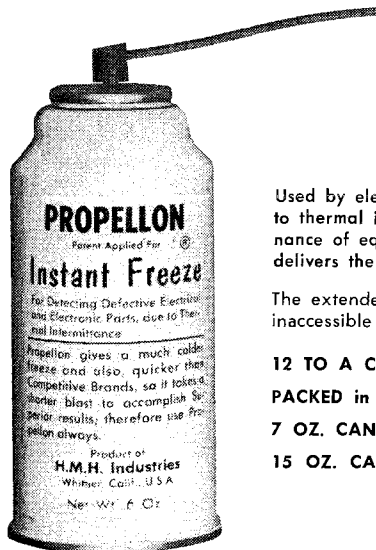
**RUST MAGIC**—Tough, penetrating primer. Stops rust, protects metal. Dry in 20 minutes... top coat in 2 hours. Compatible with lacquers, enamels, vinyls, acrylic latex finishes etc. Pint size, \$1.79.

*If you prize it...KRYLON-ize it!*

Contact your radio-TV jobber or write for Krylon's new industrial products catalog

**KRYLON INC., NORRISTOWN, PA.**

Heeger, Inc., Los Angeles, California, as national sales administrators, present the following chemicals that have found favor with engineers, laboratory technicians and production in industry, to assist them in procuring the best proven material to enable them to arrive at the best results.



From the laboratories of  
H. M. H. INDUSTRIES

## PROPELLON INSTANT FREEZE

Used by electronic engineers and technicians for detecting defective electronic and electrical parts, due to thermal intermittance. Valuable in the laboratory, field testing, service bench or field work, maintenance of equipment and in the electronic and electrical analysis of trouble. Propellon "Instant Freeze" delivers the lowest temperature practical far above uses. Odorless, non-toxic and non-flammable.

The extender facilitates in directing the spray directly onto the area tested. Also aids in getting into inaccessible places.

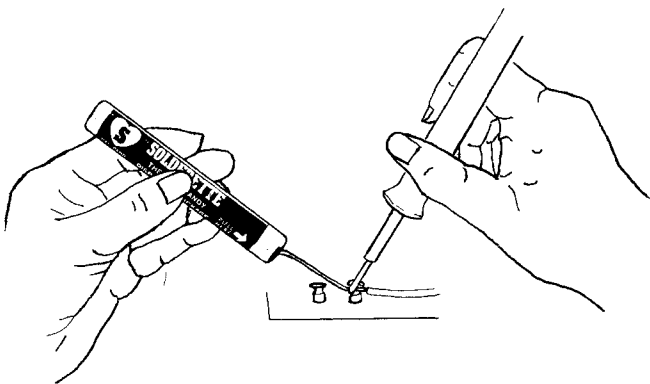
12 TO A CASE

PACKED in 7 OZ. CANS AND 15 OZ. CANS — 12" EXTENDER FREE WITH EACH CAN

7 OZ. CAN, with 12" extender ..... ea. \$1.45  
15 OZ. CAN, with 12" extender ..... ea. \$2.25

From the laboratories of

## V. SMOOT SOLDERETTE



**NEAT • HANDY • SAVING**

- ALWAYS READY
- NO FUSS
- NO TANGLE
- NO DECEPTION
- MORE SOLDER
- LESS PACKAGE

Contents - weight • size • composition - ALWAYS GIVEN

### THE HANDIEST AID TO SOLDERING

THE PACKAGE IS A HANDLE THAT HOLDS THE SOLDER FIRMLY AS IT IS APPLIED.

PULLS OUT EASILY AS NEEDED.

FOLD BACK ALONG SIDE FOR STORAGE.

**TAKES VERY LITTLE SPACE IN TUBE CADDY,  
TOOL BOX OR WORK BENCH.**

**— THE BEST MIL - SPEC SOLDER —**

Dispenser .....ea. .39

50 TO A DISPLAY CARTON

WRITE FOR COMPLETE CATALOG

From the laboratories of  
HASCOL ENTERPRISES

## LOC-JAW



### A SCIENTIFICALLY COMPOUNDED ADHERENT FORMULA

"Loc-Jaw" is an "Epoxy" base compound for bonding metal to metal, glass to metal, glass to glass, glass to wood, wood to wood, metal to wood, etc. Properly proportioned, it hermetically seals small parts and connections. After setting, it actively resists salt water and salt air, gasoline, chemicals and solvents of all types and withstands temperatures up to 300° F. Applicable to many industrial uses. Packed in its own plastic container and applicator. Indispensable where an adherent or sealer is needed.

INDIVIDUAL PLASTIC CONTAINER .....ea. 50c  
BAG OF 10 ..... per bag 4.50

From HASCOL LABORATORIES

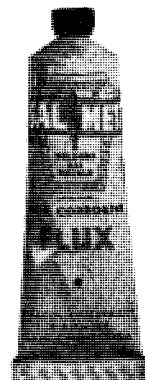
## SAL-MET

NON-CORROSIVE FLUX

- SOLDERS COPPER TO ALUMINUM
- ALUMINUM TO ALUMINUM
- SOLDERS ALL METALS

A scientific laboratory non-corrosive flux for soldering all metals. By using "SAL-MET," copper can be soldered to aluminum, aluminum to aluminum, copper to steel, copper to copper; in fact, any metal to metal is possible. No special preparation on material to be soldered. Use conventional solder, applied with quick heat, regular soldering iron, torch or pot.

1 oz. Tubes .....ea. .95  
1 lb. Can .....ea. \$7.88



PRICES SUBJECT TO CHANGE

**L M B • LOS ANGELES, CALIF.**

**"QUIETROLE" . . .****the original  
LUBRICANT  
CLEANER**

TRADE MARK REG. U.S. PAT. OFF.

**SPRAY <sup>IT</sup> <sub>or</sub> DROP IT . . .****the New QUIETROLE  
SPRAY-PACK**

or the

**QUIETROLE  
BOTTLE with the Eye Dropper**

"QUIETROLE" is the preferred, standard product of the industry! Your guarantee for quieting noisy television and radio controls, switches and other moving parts is QUIETROLE. Here is the original, non-inflammable, most reliable lubricant-cleaner on the market today—developed through years of factual and authentic research.

**There is no substitute for QUALITY . . . get QUIETROLE TODAY*****A First of the Industry . . . A Sixteen Year Plus Record of Proven Superiority. Built to Meet a Demand, Not a Price*****QUIETROLE BOTTLE**

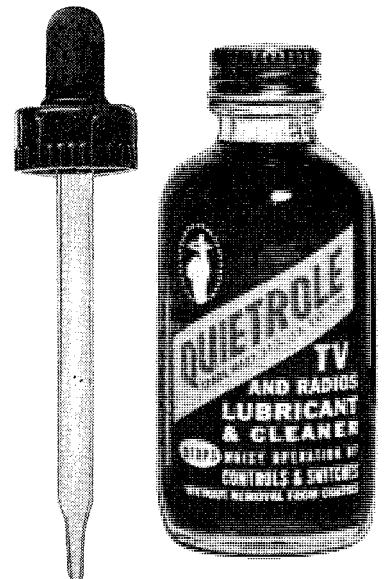
CAT. NO.	SIZE	MIN. ORDER	MIN. RE-ORDER	DISTR. NET RESALE PRICE
10-2	2 oz.	24	24	\$1.49
10-3	4 oz.	16	8	2.54
10-4	8 oz.	8	6	5.07

**QUIETROLE BOTTLE with BRUSH-N-CAP**

10-3A	4 oz.	16	8	\$2.64
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**QUIETROLE SPRAY-PACK (CAN)**

10-5	6 oz.	12	12	\$2.79
10-6	3 oz.	12	12	1.79

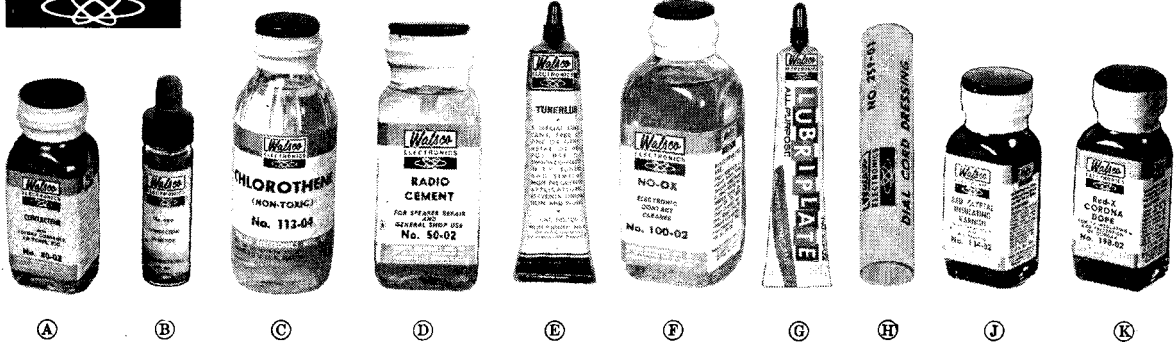


Mfd. by

**QUIETROLE COMPANY, SPARTANBURG, S. C.**

# Walsco CHEMICALS

ELECTRONICS



**(A) WALSCO CONTACTENE**

Lubricates as it cleans; fast acting, quick drying. Eliminate volume control noise with this specially compounded electronic contact cleaner. Absolutely anti-oxidant.

Cat. No. 80-02	2-oz. bottle	Net \$ .53
80-04	4-oz. bottle	.67
80-08	8-oz. bottle	1.13
80-16	16-oz. can	1.50
80-06	6-oz. spray can	.98
80-12	16-oz. spray can	1.35

**(B) CONTACTENE INJECTOR**

A fine surgical-grade steel needle. Designed to be inserted into places where ordinary applicators cannot reach. Makes lubrication of most volume controls and other parts possible without unsoldering or dismantling.

Cat. No. 989	Net \$ .45
--------------	------------

**(C) CHLOROTHENE (NON-TOXIC)**

An amazing, new powerful solvent for all-purpose cleaning of any electronic component, switch, chassis, etc. Quickly dissolves grease, dirt, oils, tar, and waxes. Safe even indoors, under normal conditions.

Cat. No. 113-04	4-oz. bottle	Net \$ .57
113-16	16-oz. bottle	Net 1.32

**(D) WALSCO RADIO CEMENT**

A fast drying, elastic adhesive that will not become brittle with age. Compounded especially for speaker repair. Not affected by cold or high temperature, moisture or oil.

Cat. No. 50-01	1 1/4 oz. tube	Net \$ .48
50-02	2 oz. bottle	.48
50-04	4 oz. bottle	.72
50-08	8 oz. bottle	1.27
50-16	1 pt. bottle	2.18

**(E) WALSCOLUB-B**

Electrically neutral lubricant that prevents corrosion. Walscolub-B makes for smooth, noise-free operation of electrical contacts, band switches, attenuators, push button tuners, remote control switches and other contacts.

Cat. No. 22-01	1 1/4 oz. tube	Net \$ .48
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**(F) WALSCO "NO-OX"**

A liquid, non-gumming chemical that dissolves corrosion with amazing speed without the use of drastic solvents. Lubricates and protects slide contacts long after application.

Cat. No. 100-01	1 oz. bottle	Net \$ .67
100-02	2 oz. bottle	.97
100-16	1 pt. bottle	7.50
100-33	1 gal. can	38.17
100-34	5 gal. can	177.99
100-06	6 oz. spray can	2.33

**(G) WALSCO "LUBRIPLATE"**

Super lubricant, grease type, protective. Lubriplate reduces friction loss, prevents rust and corrosion. Extends bearing life 50% . . . increases mechanical efficiency 20% over ordinary lubricant.

Cat. No. 23-02-S	2 oz. tube	Net \$ .75
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**(H) DIAL CORD FRICTION STICK**

To prevent slipping, simply rub Walsco Friction Stick on dial cord or belt. Increase grip, lengthens life of cord.

Cat. No. 259-01	Net \$ .25
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**(J) WALSCO GLYPTAL**

An outstanding insulating varnish. Resists heat, oils and acid. High arc resistance makes it essential in electrical and electronic application.

Cat. No. 134-02	2 oz. bottle	Net \$ .57
134-08	8 oz. bottle	1.65

**(K) WALSCO RED CORONA DOPE**

Positively stops high voltage "Corona". Protects against "shorts" in high voltage circuits of TV sets. Completely coat surfaces and sharp corners to stop dangerous corona effect.

Cat. No. 198-02	2 oz. bottle	Net \$ .72
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**AIR-DRY WRINKLE VARNISH**

Factory like finish without baking. Can be used on wood or metal. Gives a hard tough, durable finish. Covers in one, easy to apply coat.

Cat. No. 145-02	Black, 2 oz. jar	Net \$ .67
145-06	Black, 6 oz. jar	1.87
145-12	Black, 16 oz. Spray can	2.25
145-33	Black, 1 Gallon Can	15.91
146-02	Gray, 2 oz. jar	.67
146-12	Gray, 16 oz. Spray can	2.25
146-33	Gray, 1 Gallon Can	16.49

**WALSCO SOLVENT AND THINNERS**

TYPE CEMENT	USE SOLVENT	CAT. NO.	QTY.	NET
Plastic Cement	*Cement	201-02	2 oz.	\$ .45
Radio Cement	Solvent	201-04	4 oz.	.72
		201-08	8 oz.	.82
		201-16	16 oz.	1.32
		201-33	1 gal.	4.80
Polystyrene Cement	Polystyrene	202-02	2 oz.	.45
	Solvent	202-04	4 oz.	.67
		202-33	1 gal.	3.68
Vinylite Cement	Lacquer	203-02	2 oz.	.48
Radio Cement		203-33	1 gal.	4.95
Crystallizing Lacquer		203-34	5 gal.	21.30
Fungus Lacquer				
Telephone Black & Grey				
Light Bulb Coloring				
Anti-Corona Lacquer				
CR-Tubecoat				
Rubber Cement		204-04	4 oz.	.67
Wrinkle Varnish	Thinner	204-33	1 gal.	3.68
Flock Undercoat				
Elec. & Resistor Cement				
Wood Glue	Water			
Aluma-Flux				

\* Cement Solvent should be used to loosen hardened cement on speaker cones, voice coils, etc., Solvent will discolor Plastic and Radio Cements if used as a thinner; Lacquer Thinner is recommended for this purpose.



# SPRAY CHEMICALS



## KLEEN-TUNE TUNER CLEANER

Completely cleans and lubricates all tuners. Kleen-Tune is a non-flammable, non-toxic cleaner . . . formulated to clean, lubricate and renew all styles of TV tuners in one simple operation.

Kleen-Tune provides a protective film against noise and oxidation and is not harmful to other components. Just apply Kleen-Tune, then work the control a few times. Kleen-Tune does the rest. Saves time and money.

Kleen-Tune is easy to apply, dries quickly and gives complete satisfaction to the serviceman and customer.

Cat. No. 40-800 Std. Pkg.: 12 Net \$1.98



## TUBE CADDY SIZE KLEEN-TUBE TUNER CLEANER

Same High Quality Tuner cleaner in a 3 oz. spray can that fits in tube caddies.

Cat. No. 40-300 Net \$ .98



## INSUL-VOLT

### HI-VOLTAGE INSULATOR WITH SURE SHOT CONFINED STREAM

Insul-Volt is specifically designed to meet the requirements of Military Specification MIL-V-1137-A, Grade BA, Types M & N.

Insul-Volt is positive insulation against Hi-Voltage leaks, arcing and corona shorts such as Hi-Voltage sections of TV sets, or any electrical apparatus requiring this superior protection.

Insul-Volt is formulated and recommended for application and use on transformers, electrical motors, generators, and other types of electrical windings, operating at a maximum temperature of 275°F.

Insul-Volt is flexible, heat and acid resistant and impervious to oil, grease and moisture. Insul-Volt is an excellent protection for any exposed wiring or open connection requiring positive lasting insulation. Insul-Volt when applied properly will provide better than 20,000 volts and up of dielectrical strength. Follow directions carefully to insure maximum Hi-Voltage dielectric strength.

Cat. No. 40-804 8 Oz. Spray Can Net \$2.79  
Std. Pkg.: 12



## FREEZE-MIST CIRCUIT COOLER

Saves hours locating defective intermittent circuit components caused by temperature changes. Walsco Freeze-Mist cools instantly pinpointing faulty capacitors, resistors, transistors, cold solder and oxidized junctions, etc. due to temperature variances. Plus thousands of other uses in electronic field.

Cat. No. 40-808 8 oz. Spray Can Net \$1.98  
Std. Pkg.: 12



## PEN-A-LUBE

### VERY FINE PENETRATING & LUBRICATING OIL FROZEN YOKE REMOVER

Pen-A-Lube is a formulation of very fine penetrates and lubricants formulated for those hard to get at spots.

Pen-A-Lube is highly recommended as a lubricant for use on delicate instruments, record changes, tape recorders and stereo controls.

Pen-A-Lube's exacting formulation gives you positive action against rust and corrosion. Pen-A-Lubrication as a liquid wrench for loosening badly rusted or frozen parts such as frozen yokes or rusty control nuts and screws has been found to be highly effective.

Pen-A-Lube provides the answers to questions concerning rust, penetration, lubrication and is a very fine all purpose light machine oil.

Cat. No. 40-812 8 oz. Spray Can Net \$1.79  
Std. Pkg.: 12



## OX-NOX

### VOLUME CONTROL & CONTACT CLEANER

Ox-Nox is the answer for removing oxidation and noise from volume controls and electrical contacts. Ox-Nox cleans, lubricates and restores controls and tuning condensers back to like new operating condition.

Ox-Nox is a non-flammable and non-toxic cleaner and lubricant. Ox-Nox is blended to provide against oxidation and noise.

Cat. No. 40-802 8 Oz. Spray Can Net \$1.98  
Std. Pkg.: 12



## TUBE CADDY SIZE OX-NOX

### VOLUME CONTROL & CONTACT CLEANER

Same High Quality cleaner in handy 3 oz. tube caddy sized spray can.

Cat. No. 40-302 Net \$ .98



## KLEEN-UP

### WATERLESS HAND CLEANER

Walsco's own waterless hand cleaner Kleen-Up is so simple to use — just press the button. Using a handful of suds, wash hands and wipe off with clean towel.

Kleen-Up is ideal for every type of hand cleaning problem whether it's grease, grime, cement or ink. Kleen-Up does not contain harsh abrasives or strong irritating chemicals.

Kleen-Up is formulated from high grade liquid detergents fortified with lanolin and germ killing trichlorophenate with an aromatic additive. Kleen-Up is considered a very fine hand and skin conditioner and regular use is not harmful.

Cat. No. 40-810 8 Oz. Spray Can Net \$1.49  
Std. Pkg.: 12



## UNI-SOL

### UNIVERSAL SOLVENT & THINNER FOR CEMENTS, LACQUERS AND LIQUID INSULATORS

Uni-Sol is the all purpose fast acting solvent to loosen and remove most cements, liquid insulators and thinners and all commercial lacquers.

Uni-Sol is a specially engineered safe solvent and thinner prepared as a loosening agent in speaker repair to remove old cones, frames, spiders and voice coils.

Walsco's Uni-Sol is highly recommended for use as a general purpose all around loosening and thinning agent.

Cat. No. 40-814 8 Oz. Can Net \$ .98  
Std. Pkg.: 12



# PRICES

All prices listed in The MASTER are subject to change without notice — they should not be considered final.

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## DELIVERY

Delivery is often dependent on availability of raw materials. Check with your distributor for delivery information at the time you place your order.



# Chokes and Hardware

## TRANSMITTING CHOKES

### CERAMIC-COATED TYPE



Consists of five graduated pies continuously wound. Pies are not resonant on an amateur band. Distributed capacity kept at a minimum. Each choke is wound on 3/8" diameter steatite rod, has connection lugs and a mounting foot. All chokes have a heavy ceramic coating which prevents moisture absorption and enables them to withstand momentary overloads without collapsing between the individual pies.

Bud No.	Ind. Mh	Amp	DC Ohms	Net Each
CH-568	2.2	1.	5	\$3.15
CH-569	4.3	.6	12	3.45

### OPEN TYPE



Same as above, but enamel-covered wire is used without overall ceramic coating.

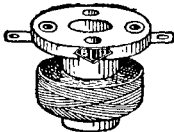
Bud No.	Ind. Mh	Current Ma	DC Ohms	Net Each
CH-578	2.2	1200*	4.8	\$2.25
CH-579	4.3	1000*	7	2.25

\*In milliamperes.

## LATTICE WOUND RF CHOKES

### SILK-COVERED WIRE TYPE

Wound from silk covered enameled copper wire on a white ceramic bobbin. Leads terminated with two convenient soldering lugs. Will take a 6-32 screw through the center of the form. Thoroughly impregnated against moisture. Base diameter, 1 1/8"; 1 1/2" between ends of leads.



Bud No.	Induct. Mh	DC Ohms	Current Ma	Height In.	Net Each
CH-1212	2.5	28	125	1 1/8"	\$0.63
CH-1214	5.5	46	125	1 1/8"	.83
CH-1215	8	60	125	1 1/8"	.83
CH-1217	16	84	125	1 1/8"	.83
CH-1218	30	190	100	1 1/8"	.85
CH-1219	60	279	90	1 1/8"	1.01
CH-1220	80	332	80	1 1/8"	1.08

### ENAMEL-COVERED WIRE TYPE

Same as above, but wire is enamel-covered type.

Bud No.	Induct. Mh	DC Ohms	Current Ma	Height In.	Net Each
CH-1222	2.5	22	200	1 1/8"	\$0.60
CH-1224	5.5	33	200	1 1/8"	.60
CH-1225	8	40	200	1 1/8"	.60
CH-1227	16	59	200	1 1/8"	.60
CH-1228	30	88	190	1 1/8"	.68
CH-1229	60	130	180	1 1/8"	.75
CH-1230	80	160	175	1 1/8"	.83

## PIE WOUND RF CHOKES

### SILK-COVERED WIRE TYPE



Continuous winding of silk covered enameled copper wire. The pies constituting this winding are wound on a 1/4" diameter ceramic core. Available with strap (S) and wire (W) leads. CH-876 is a heavy duty choke for circuits such as transmitter plate circuits where high currents are present. All are 1 1/2" long.

Bud Number	Induct. Mh	DC Ohms	Current Ma	Weight Lbs.	Net Each
CH-920S	2.5	45	125	1/4	\$0.63
CH-922S	5.5	60	125	1/4	.75
CH-924S	10.0	78	100	1/4	1.08
CH-876S	2.5	16	250	1/4	.93
CH-920W	2.5	45	125	1/4	.63
CH-922W	5.5	60	125	1/4	.75
CH-924W	10.0	78	100	1/4	1.08
CH-876W	2.5	16	250	1/4	.93

### ENAMEL-COVERED WIRE TYPE

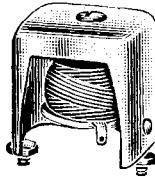
Same as above, but wire is enamel-covered type.

Bud No.	Induct. Mh	DC Ohms	Current Ma	Weight Lbs.	Net Each
CH-926S	2.5	25	200	1/4	\$0.60
CH-927S	5.5	32	200	1/4	.60
CH-928S*	10	49	200	1/4	.60
CH-929S	2.5	11	400	1/4	.60
CH-926W	2.5	25	200	1/4	.60
CH-927W	5.5	32	200	1/4	.60
CH-928W*	10	49	200	1/4	.60
CH-929W	2.5	11	400	1/4	.60

\*Wound with one pie only.

## IRON CORE RF CHOKES

### SILK-COVERED WIRE TYPE



Improves the efficiency of any circuit requiring an RF choke. Finely divided molded metallic core improves "Q"; results from DC resistance being 40-50% less for a given inductance than regular air-core types. DC voltage drop through the choke is considerably less, yet the choking action is equally as good. Windings are silk-covered enamel wire terminated on handy soldering lugs. Chokes mounted in small round shield can, 1 3/8" x 1 3/8" x 1 3/8".

Bud Number	Induct. Mh	DC Resis. Ohms	Current Ma	Wt., Lbs.	Net Each
CH-1283	16	57	125	1/4	\$1.46
CH-1284	30	90	100	1/4	1.50
CH-1285	60	150	100	1/4	1.71
CH-1286	80	190	90	1/4	1.83
CH-1287	125	340	90	1/4	2.03

### ENAMEL-COVERED WIRE TYPE

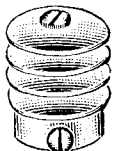
Same as above, but wire is enamel covered only.

Bud No.	Induct. Mh	DC Resis. Ohms	Current Ma	Wt., Lbs.	Net Each
CH-1293	16	38	200	1/4	\$1.20
CH-1294	30	62	190	1/4	1.20
CH-1295	60	105	175	1/4	1.20
CH-1296	90	162	150	1/4	1.28
CH-1297	125	220	150	1/4	1.35

Bud No. CH-294 Shield Can—For all RF chokes, above. Net Each..... 30c

## HEAT RADIATING PLATE AND GRID TUBE CONNECTORS

Fit all sizes of industrial and transmitting vacuum tubes. Dual purpose design permits use in making connections to plate or grid terminals, plus provide large heat radiating surface for heat dissipation from glass seal and tube element. Eight sizes fit all grid and plate leads; provide sufficient heat radiation for any tube in 50-2000 watt range. Machined from special aluminum rods. Edges rounded to minimize corona.



Bud No. TC-	Lead Hole	For Tube Types	Size L. x O.D.	Net Each
488	.052"	3C24, 24, 24G, 25T, 27	.900" x .615"	\$0.68
487	.062"	U1F50, HK24, 304B, 829B, 832A, 834	.900" x .615"	.68
489	.072"	35T, 35GB, 75TH, 11K-257B, HK254, 484, 8001, 4E27	.900" x .615"	.68
1923	.110"	HK57, 152TH	1.0" x .738"	.75
1924	.125"	4-125A, 150TH, 2-150D, 240R, 250TH, 250TL, 420A, 802, 803, 804, 807, 808 grid, 814, 815, 828, 2E24, 2E26, 3E22, 4-65A, 4-250A, 816, 6146, 1625, 4D32, 807W, 1B3GT, 6BG6G, 6CD6G	1.0" x .738"	.72
1920	.375"		1.0" x .738"	.68
1925	.125"	304TH, 304TL	1.0" x .924"	.74
1921	.570"	ZB60, HF60, HF100, 111H, 211H, 230H, HF175, HF300 grid, 100R, HK375C, 450TH, 454, 750TH, 805, 806, 808, 809, 810, 811, 812, 813, 828, 833, 866, 854, 1500T, 2000T, 1054, 5331, 5332, 8000, 8003, 2005	1.0" x .924"	.80
1926	.810"	WL468, WL463, WL460, HF200, HF201, MF300	1.0" x 1.115"	1.05

## MOUNTING BRACKETS

Permit mounting of midjet condensers, controls and other components in any position. Made of 3/4" wide, cadmium plated steel. Right-angle design with short side have two mounting holes; long side with 3/8" slot. No. AB-549 has additional 1/2" dia. hole centered on 3/8" slot.

Bud No.	Size	Wt. Per 100 Lbs.	Net Each, Lots of		
			1-99	100-199	200-299
AB-549	1 3/8" x 2"	2 1/4	9c	8c	7c
AB-550	1 3/8" x 2"	2	9c	8c	7c

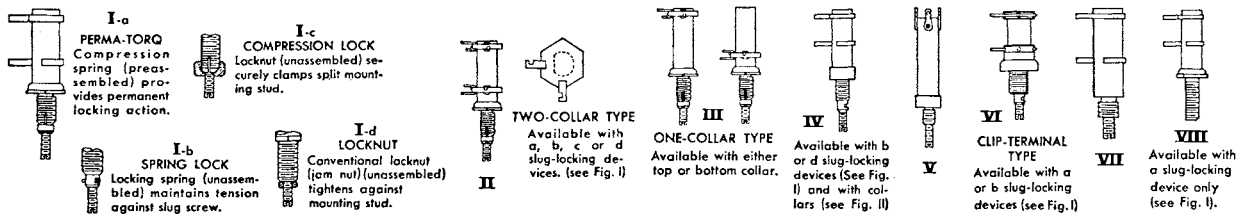
## ANGLES AND BRACKETS

Similar to above; made of 3/4" wide, nickel-plated brass. Right-angle design; Type 1 has single hole at end of each angle; Type 2 has two holes on long side; single hole on short side.

Bud No.	Size, Inches	Type	Wt. Per 100 Lbs.	Net Per 100, Lots of		
				1-99	100-199	200-299
AB-444	1/2 x 1 1/2	1	1 1/2	\$ 3.63	\$3.27	\$2.90
AB-445	3/4 x 3/4	1	1 1/2	4.20	3.78	3.36
AB-446	1 x 1	1	2	5.55	5.00	4.44
AB-447	1 1/2 x 1 1/2	1	2 1/4	6.75	6.48	5.76
AB-631	1 x 1 1/2	1	1 1/2	4.65	4.19	3.72
AB-632	1 1/2 x 5/8	1	1 1/2	5.70	5.13	4.56
AB-633	2 x 5/8	2	1 3/4	7.50	6.75	6.00
AB-634	3 x 3/4	2	2 1/2	9.25	8.33	7.40
AB-635	4 x 3/4	2	3 3/4	10.95	9.86	8.76

# CAMBRIDGE THERMIONIC CORPORATION GAMBION®

## COIL FORMS - CERAMIC AND PHENOLIC



**Standard Numbers:** Have silicone fiberglass collars, silver-plated solder terminals, cadmium-plated studs and ceramic body unless otherwise noted. Powdered iron core except 100 mc up (Suffix One, -5), which is brass. **To Order:** Use Model number followed by Suffix One (for frequency range) and Suffix Two (for terminal and collar types). Example: 1465-1-1 for 0.2-1.5 mc with two ring terminals. Types 1996 and 2151 come with clip terminals only, and require no final suffix (Two). **Alternate Numbers:** Identical coil form to standard numbers but have tin-plated terminals, nickel-plated studs and related hardware except for brass tuning slug with rhodium flash over silver-plate. Types 1465 and 1544 employ same slug but with brass load to increase range; no alternate finish available. All units available in same variations (suffixes) at same respective prices for adjacent standard number.

SUFFIX CHART

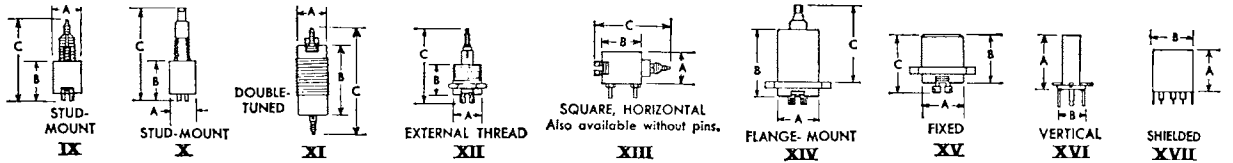
Suffix One	Freq. Range Mc	Suffix Two	Description
-1	0.2-1.5	-1	2 ring terminals
-2	1-20	-2	2 collars, 4 terminals
-3	20-50	-3	2 collars, 2 terminals
-4	50-200	-4	1 top collar, 2 terminals
-5	100 and up	-5	1 bottom collar, 2 terminals
-6	2-40		
-7	40-300		

Cambion Number & (Alt. No.)	Fig.	Mounting Stud L. x Thread x Base Dia., Inches	Hgt. In. Above Panel	Body O.D. In.	†	Tuning Tool Req'd.	Net Each, Lots of				
							1-49	50-249	250-499	500-999	1000-2499
1530(*)-1 (3607-)	I-b	1/4 x 8-32 x 1/4 hex	19/32	.205		2033-1	\$0.54	\$0.44	\$0.33	\$0.33	\$0.33
1530(*)-2, -3 (3607-)	II-b	1/4 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
1530(*)-4, -5 (3607-)	III-b	1/4 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
1531(*)-1 (3605-)	I-c	11/64 x 8-32 x 1/4 hex	19/32	.205		2033-1	0.54	0.44	0.33	0.33	0.33
1531(*)-2, -3 (3605-)	II-c	11/64 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
1531(*)-4, -5 (3605-)	III-c	11/64 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
1532(*)-1 (3606-)	I-a	11/64 x 8-32 x 1/4 hex	19/32	.205		2033-1	0.54	0.44	0.33	0.33	0.33
1532(*)-2, -3 (3606-)	II-a	11/64 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
1532(*)-4, -5 (3606-)	III-a	11/64 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
2020(*)-1 (3608-)	I-d	1/4 x 8-32 x 1/4 hex	19/32	.205		2033-1	0.54	0.44	0.33	0.33	0.33
2020(*)-2, -3 (3608-)	II-d	1/4 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
2020(*)-4, -5 (3608-)	III-d	1/4 x 8-32 x 1/4 hex	19/32	.205	1/32	2033-1	0.54	0.44	0.33	0.33	0.33
1533(*)-1 (3610-)	I-c	27/64 x 1/4-28 x 1/2 hex	1 1/16	.375	3/8	1970-1	0.66	0.56	0.44	0.44	0.44
1533(*)-2, -3 (3610-)	II-c	27/64 x 1/4-28 x 1/2 hex	1 1/16	.375	3/8	1970-1	0.66	0.56	0.44	0.44	0.44
1533(*)-4, -5 (3610-)	III-c	27/64 x 1/4-28 x 1/2 hex	1 1/16	.375	3/8	1970-1	0.66	0.56	0.44	0.44	0.44
1534(*)-1 (3611-)	I-a	9/16 x 1/4-28 x 1/2 hex	1 1/16	.375		1970-1	0.66	0.56	0.44	0.44	0.44
1534(*)-2, -3 (3611-)	II-a	9/16 x 1/4-28 x 1/2 hex	1 1/16	.375	3/8	1970-1	0.66	0.56	0.44	0.44	0.44
1534(*)-4, -5 (3611-)	III-a	9/16 x 1/4-28 x 1/2 hex	1 1/16	.375	3/8	1970-1	0.66	0.56	0.44	0.44	0.44
2024(*)-1 (3612-)	I-b	9/32 x 1/4-28 x 1/2 hex	1 1/16	.375		1970-1	0.66	0.56	0.44	0.44	0.44
2024(*)-2, -3 (3612-)	II-b	9/32 x 1/4-28 x 1/2 hex	1 1/16	.375	3/8	1970-1	0.66	0.56	0.44	0.44	0.44
2024(*)-4, -5 (3612-)	III-b	9/32 x 1/4-28 x 1/2 hex	1 1/16	.375	3/8	1970-1	0.66	0.56	0.44	0.44	0.44
1535(*)-1 (3615-)	I-c	15/32 x 10-32 x 3/8 hex	1 5/16	.260		1971-1	0.77	0.67	0.55	0.55	0.55
1535(*)-2, -3 (3615-)	II-c	15/32 x 10-32 x 3/8 hex	1 5/16	.260	15/32	1971-1	0.77	0.67	0.55	0.55	0.55
1535(*)-4, -5 (3615-)	III-c	15/32 x 10-32 x 3/8 hex	1 5/16	.260	15/32	1971-1	0.77	0.67	0.55	0.55	0.55
1536(*)-1 (3616-)	I-a	9/16 x 10-32 x 3/8 hex	1 5/16	.260		1971-1	0.77	0.67	0.55	0.55	0.55
1536(*)-2, -3 (3616-)	II-a	9/16 x 10-32 x 3/8 hex	1 5/16	.260	15/32	1971-1	0.77	0.67	0.55	0.55	0.55
1536(*)-4, -5 (3616-)	III-a	9/16 x 10-32 x 3/8 hex	1 5/16	.260	15/32	1971-1	0.77	0.67	0.55	0.55	0.55
2022(*)-1 (3617-)	I-b	9/32 x 10-32 x 3/8 hex	1 5/16	.260		1971-1	0.77	0.67	0.55	0.55	0.55
2022(*)-2, -3 (3617-)	II-b	9/32 x 10-32 x 3/8 hex	1 5/16	.260	15/32	1971-1	0.77	0.67	0.55	0.55	0.55
2022(*)-4, -5 (3617-)	III-b	9/32 x 10-32 x 3/8 hex	1 5/16	.260	15/32	1971-1	0.77	0.67	0.55	0.55	0.55
1537(*)-1 (3620-)	I-c	27/64 x 1/4-28 x 5/8 hex	1 45/64	.500		1970-1	0.93	0.83	0.71	0.71	0.71
1537(*)-2, -3 (3620-)	II-c	27/64 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	0.93	0.83	0.71	0.71	0.71
1537(*)-4, -5 (3620-)	III-c	27/64 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	0.93	0.83	0.71	0.71	0.71
1538(*)-1 (3621-)	I-a	9/16 x 1/4-28 x 5/8 hex	1 45/64	.500		1970-1	0.93	0.83	0.71	0.71	0.71
1538(*)-2, -3 (3621-)	II-a	9/16 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	0.93	0.83	0.71	0.71	0.71
1538(*)-4, -5 (3621-)	III-a	9/16 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	0.93	0.83	0.71	0.71	0.71
2048(*)-1 (3622-)	I-b	9/16 x 1/4-28 x 5/8 hex	1 45/64	.500		1970-1	0.93	0.83	0.71	0.71	0.71
2048(*)-2, -3 (3622-)	II-b	9/16 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	0.93	0.83	0.71	0.71	0.71
2048(*)-4, -5 (3622-)	III-b	9/16 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	0.93	0.83	0.71	0.71	0.71
3352(*)-1 (3632-)	I-b	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500		1970-1	0.99	0.89	0.77	0.77	0.77
3352(*)-2, -3 (3632-)	II-b	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	0.99	0.89	0.77	0.77	0.77
3352(*)-4, -5 (3632-)	III-b	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	0.99	0.89	0.77	0.77	0.77
3353(*)-1 (3630-)	I-c	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500		1970-1	0.99	0.89	0.77	0.77	0.77
3353(*)-2, -3 (3630-)	II-c	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	0.99	0.89	0.77	0.77	0.77
3353(*)-4, -5 (3630-)	III-c	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	0.99	0.89	0.77	0.77	0.77
3354(*)-1 (3631-)	I-a	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500		1970-1	0.99	0.89	0.77	0.77	0.77
3354(*)-2, -3 (3631-)	II-a	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	0.99	0.89	0.77	0.77	0.77
3354(*)-4, -5 (3631-)	III-a	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	0.99	0.89	0.77	0.77	0.77
2770(*)-1 (3633-)	VIII-a	15/32 x 10-32 x 1/4 hex	25/32	.205		2780-1	0.80	0.70	0.58	0.58	0.58
2770(*)-2, -3 (3633-)	VIII-a, II-a	15/32 x 10-32 x 1/4 hex	25/32	.205	9/32	2780-1	0.80	0.70	0.58	0.58	0.58
2770(*)-4, -5 (3633-)	VIII-a, III-a	15/32 x 10-32 x 1/4 hex	25/32	.205	9/32	2780-1	0.80	0.70	0.58	0.58	0.58
2771(*)-1 (3633-)	VIII-a	35/64 x 12-28 x 3/8 hex	1 3/32	.260		2780-1	0.93	0.83	0.71	0.71	0.71
2771(*)-2, -3 (3633-)	VIII-a, II-a	35/64 x 12-28 x 3/8 hex	1 3/32	.260	15/32	2780-1	0.93	0.83	0.71	0.71	0.71
2771(*)-4, -5 (3633-)	VIII-a, III-a	35/64 x 12-28 x 3/8 hex	1 3/32	.260	15/32	2780-1	0.93	0.83	0.71	0.71	0.71
2689(*)-1 (3627-)	VI-b	.140 x 4-40 x 5/32 hex	17/32	.122		2375-1	0.62	0.52	0.40	0.40	0.40
1996(*) (3627-)	VI-b	9/32 x 1/4-28 x 1/2 hex	25/32	.290		1971-1	0.55	0.45	0.33	0.33	0.33
2151(*) (3626-)	VI-a	9/32 x 1/4-28 x 1/2 hex	25/32	.290		1971-1	0.55	0.45	0.33	0.33	0.33
1540(*)-1† (3627-)	IV-b	1/4 x 10-32 x 5/16 hex	27/32	.250		1971-1	0.46	0.36	0.24	0.24	0.24
1540(*)-2, -3† (3627-)	IV-b, II-b	1/4 x 10-32 x 5/16 hex	27/32	.250	15/32	1971-1	0.46	0.36	0.24	0.24	0.24
1540(*)-4, -5† (3627-)	IV-b, III-b	1/4 x 10-32 x 5/16 hex	27/32	.250	15/32	1971-1	0.46	0.36	0.24	0.24	0.24
1542(*)-1† (3627-)	IV-a	.314 x 10-32 x 5/16 hex	27/32	.250		1971-1	0.44	0.34	0.22	0.22	0.22
1542(*)-2, -3† (3627-)	IV-a, II-a	.314 x 10-32 x 5/16 hex	27/32	.250	15/32	1971-1	0.44	0.34	0.22	0.22	0.22
1542(*)-4, -5† (3627-)	IV-a, III-a	.314 x 10-32 x 5/16 hex	27/32	.250	15/32	1971-1	0.44	0.34	0.22	0.22	0.22
1605(*)-1† (3639-)	IV-d	1/4 x 8-32 x 5/16 hex	27/32	.250		1971-1	0.46	0.36	0.24	0.24	0.24
1605(*)-2, -3† (3639-)	IV-d, II-d	1/4 x 8-32 x 5/16 hex	27/32	.250	15/32	1971-1	0.46	0.36	0.24	0.24	0.24
1605(*)-4, -5† (3639-)	IV-d, III-d	1/4 x 8-32 x 5/16 hex	27/32	.250	15/32	1971-1	0.46	0.36	0.24	0.24	0.24
1465(*)-1 (1546-)	VII	1/4 x 1/4-28 x none	1 1/8	.375		1970-1	0.44	0.34	0.22	0.22	0.22
1465(*)-2, -3† (1546-)	VII, II-	1/4 x 1/4-28 x none	1 1/8	.375		1970-1	0.44	0.34	0.22	0.22	0.22
1465(*)-4, -5† (1546-)	VII, III-	1/4 x 1/4-28 x none	1 1/8	.375		1970-1	0.44	0.34	0.22	0.22	0.22
1544(*)-1† (3639-)	VII-a	1/4 x 1/4-28 x none	1 1/8	.375		1970-1	0.46	0.36	0.24	0.24	0.24
1544(*)-2, -3† (3639-)	VII-a, II-a	1/4 x 1/4-28 x none	1 1/8	.375		1970-1	0.46	0.36	0.24	0.24	0.24
1544(*)-4, -5† (3639-)	VII-a, III-a	1/4 x 1/4-28 x none	1 1/8	.375		1970-1	0.46	0.36	0.24	0.24	0.24
1885(*) (3639-)	V	3/8 x 1/4-28 x 9/16 hex	2	.500		1970-1	0.70	0.61	0.49	0.49	0.49

\*Insert proper Suffix One, from chart above, to indicate frequency. †Phenolic body. ‡Space between collars, inches. §Ring terminals only. #Clip terminals only. \*Gold plated. \*Friction-lock type, similar to IV-d illustration(s).

# CAMBRIDGE THERMIONIC CORPORATION

# COIL FORMS—SHIELDED AND PRINTED CIRCUIT



Supplied with tuning slug assembled; other parts in bulk. Mounting hardware included. **To Order:** Add suffix for frequency followed by suffix for terminals desired to basic number, below. Example: 1150-7-2 specifies model 1150 in 40-300 mc range with 3 terminals. (†) Indicates frequency not available in shielded types.

### ORDERING CHART

Suffix One	Freq. Mc	Suffix Two	No. of Term.
-1	0.2-1.5	-1	2
-2	1-20	-2	3
-3	20-50	-3	4
-4	50-200	-4	5
-5	100 and up†	-5	6
-6	2-40		
-7	40-300		

### SHIELDED COIL FORMS

Powdered iron slug, silicone-fiberglass terminal board. Aluminum housing with Alodine 600 finish except as otherwise noted.

Cambion No.*	Fig.	Body Material	Size, inches A x B x C	Max. Wdg. Area, in. L. x O.D.	Terminals*	Notes	Tuning Tool	Net Each, Lots of			
								1-49	50-249	250-499	500-999
1150*	IX	PBG paper phenolic	.438 x .621 x 1.497	.147 x .247	2-6	¼-28 mtg. stud	2033-1	\$0.97	\$0.84	\$0.78	\$0.67
1151*	IX	Copolymer styrene	.438 x .621 x 1.497	.147 x .247	2-6	¼-28 mtg. stud	2033-1	1.07	.92	.86	.74
1152*	IX	Kel-F†	.438 x .621 x 1.497	.147 x .247	2-6	¼-28 mtg. stud	2033-1	1.17	1.01	.94	.81
1165**	IX	PBG paper phenolic	.438 x .621 x 1.497	.147 x .247	2-6	¼-28 mtg. stud	2033-1	1.03	.89	.83	.71
1166**	IX	Copolymer styrene	.438 x .621 x 1.497	.147 x .247	2-6	¼-28 mtg. stud	2033-1	1.11	.96	.89	.77
1167**	IX	Kel-F†	.438 x .621 x 1.497	.147 x .247	2-6	¼-28 mtg. stud	2033-1	1.23	1.06	.99	.85
1176*	X	Copolymer styrene	.406 x .641 x 1.500	.147 x .247	4	Immersion proof; ¼-28	3096-1	3.15	2.70	2.50	2.15
2455**	XII	PBG paper phenolic	.438 x .475 x 1.383	.147 x .247	2-6	¾-40 external thd.	2033-1	1.09	.94	.87	.75
2456**	XII	Copolymer styrene	.438 x .475 x 1.383	.147 x .247	2-6	¾-40 external thd.	2033-1	1.17	1.01	.94	.81
2457**	XII	Kel-F†	.438 x .475 x 1.383	.147 x .247	2-6	¾-40 external thd.	2033-1	1.27	1.09	1.02	.88
2560	XIII	PBG paper phenolic	.500 sq. x .625 x 1.459	.147 x .247	2-6	8-32 thd.; less pins	2033-1	1.58	1.36	1.27	1.10
2561	XIII	Copolymer styrene	.500 sq. x .625 x 1.459	.147 x .247	2-6	8-32 thd.; less pins	2033-1	1.66	1.44	1.34	1.15
2562	XIII	Kel-F†	.500 sq. x .625 x 1.459	.147 x .247	2-6	8-32 thd.; less pins	2033-1	1.76	1.52	1.42	1.22
2565	XIII	PBG paper phenolic	.500 sq. x .625 x 1.459	.147 x .247	2-6	8-32 thd.; with pins	2033-1	1.88	1.62	1.51	1.30
2566	XIII	Copolymer styrene	.500 sq. x .625 x 1.459	.147 x .247	2-6	8-32 thd.; with pins	2033-1	1.96	1.69	1.57	1.36
2567	XIII	Kel-F†	.500 sq. x .625 x 1.459	.147 x .247	2-6	8-32 thd.; with pins	2033-1	2.05	1.78	1.65	1.42
2685	XV	PBG paper phenolic	.438 x .500 x .621	.147 x .247	2-6	Fixed; 640° mtg. ctr.†		.95	.82	.76	.66
2686	XV	Copolymer styrene	.438 x .500 x .621	.147 x .247	2-6	Fixed; 640° mtg. ctr.†		1.03	.89	.83	.71
2687	XV	Kel-F†	.438 x .500 x .621	.147 x .247	2-6	Fixed; 640° mtg. ctr.†		1.11	.96	.89	.77
2688	XV	Powdered iron	.438 x .500 x .621	.147 x .247	2-6	Fixed; 640° mtg. ctr.†		1.03	.89	.83	.71
2690	XV	PBG paper phenolic	.625 x .890 x 1.022	.396 x .439	2-6	Fixed; 828° mtg. ctr.†		1.07	.92	.86	.74
2691	XV	Copolymer styrene	.625 x .890 x 1.022	.396 x .439	2-6	Fixed; 828° mtg. ctr.†		1.27	1.09	1.02	.88
2692	XV	Kel-F†	.625 x .890 x 1.022	.396 x .439	2-6	Fixed; 828° mtg. ctr.†		1.35	1.16	1.08	.93
2693	XV	Powdered iron	.625 x .890 x 1.022	.396 x .439	2-6	Fixed; 828° mtg. ctr.†		1.17	1.01	.94	.81
1155*	IX	PBG paper phenolic	.625 x .899 x 2.146	.399 x .439	2-6	¾-32 mtg. stud	1971-1	1.11	.96	.89	.77
1156*	IX	Copolymer styrene	.625 x .899 x 2.146	.399 x .439	2-6	¾-32 mtg. stud	1971-1	1.31	1.13	1.05	.90
1157*	IX	Kel-F†	.625 x .899 x 2.146	.399 x .439	2-6	¾-32 mtg. stud	1971-1	1.39	1.20	1.11	.96
1160*	IX	PBG paper phenolic	.344 x .531 x 1.148	.145 x .189	2-4	12-28 mtg. stud	2375-1	.95	.82	.76	.66
1161*	IX	Copolymer styrene	.344 x .531 x 1.148	.145 x .189	2-4	12-28 mtg. stud	2375-1	1.11	.96	.89	.77
1162*	IX	Kel-F†	.344 x .531 x 1.148	.145 x .189	2-4	12-28 mtg. stud	2375-1	1.23	1.06	.99	.85
2665	XIII	PBG paper phenolic	.375 sq. x .515 x 1.155	.137 x .189	2-4	6-32 thd.; less pins	2375-1	1.58	1.37	1.27	1.10
2666	XIII	Copolymer styrene	.375 sq. x .515 x 1.155	.137 x .189	2-4	6-32 thd.; less pins	2375-1	1.76	1.52	1.42	1.22
2667	XIII	Kel-F†	.375 sq. x .515 x 1.155	.137 x .189	2-4	6-32 thd.; less pins	2375-1	1.86	1.61	1.49	1.29
2670	XIII	PBG paper phenolic	.375 sq. x .515 x 1.155	.137 x .189	2-4	6-32 thd.; with pins	2375-1	1.88	1.62	1.51	1.30
2671	XIII	Copolymer styrene	.375 sq. x .515 x 1.155	.137 x .189	2-4	6-32 thd.; with pins	2375-1	2.05	1.78	1.65	1.42
2672	XIII	Kel-F†	.375 sq. x .515 x 1.155	.137 x .189	2-4	6-32 thd.; with pins	2375-1	2.15	1.86	1.73	1.50
2695	XV	PBG paper phenolic	.344 x .500 x .621	.143 x .189	2-4	Fixed; 546° mtg. ctr.†		.95	.82	.76	.66
2696	XV	Copolymer styrene	.344 x .500 x .621	.143 x .189	2-4	Fixed; 546° mtg. ctr.†		1.11	.96	.89	.77
2697	XV	Kel-F†	.344 x .500 x .621	.143 x .189	2-4	Fixed; 546° mtg. ctr.†		1.23	1.06	.99	.85
2698	XV	Powdered iron	.344 x .500 x .621	.143 x .189	2-4	Fixed; 546° mtg. ctr.†		1.03	.89	.83	.71
2191**	XVII	PBG paper phenolic	.585 x .500 sq. x .136x‡	.300 x .359	2-6	Printed circuit type	2375-1	.83	.72	.67	.58
2400**	XI	Copolymer styrene	.455 x 1.074 x 1.844	.698 x .292	4-6	¾-32 thread on body	2375-1	2.65	2.25	2.10	1.82
1181**	XVII	Powdered iron	.500 x .375 x .100x‡	.091 x .155	4, 5	Printed circuit type	2033-1	1.25	1.08	1.00	.86
1189**	XVII	Copolymer styrene	.500 x .375 x .100x‡	.091 x .158	4, 5	Printed circuit type	2033-1	1.45	1.25	1.16	1.00
2450**	XI	Copolymer styrene	.570 x 1.273 x 2.474	.876 x .369	4-6	¾-28 thread on body	2033-1	2.80	2.40	2.25	1.92
1170	XIV	PBG paper phenolic	.438 x .500 x 1.114	.147 x .247	2-6	.640° mtg. ctr.†	2033-1	2.25	1.95	1.81	1.56
1171	XIV	Copolymer styrene	.438 x .500 x 1.114	.147 x .247	2-6	.640° mtg. ctr.†	2033-1	2.35	2.05	1.89	1.63
1190	XIV	PBG paper phenolic	.625 x .778 x 1.778	.402 x .439	2-6	.828° mtg. ctr.†	1971-1	2.60	2.25	2.08	1.79
1191	XIV	Copolymer styrene	.625 x .778 x 1.778	.402 x .439	2-6	.828° mtg. ctr.†	1971-1	2.65	2.30	2.15	1.85

\*Specify frequency (-1 through -4, -6 and -7 available only) and terminal arrangement per Chart above. †On flange .844" l. x .516" w. ‡On flange 1.00" l. x .704" w. §On flange .750" l. x .422" w. #4 (50-200 mc) frequency not available. ¶Nickel-plated brass housing. \*\*Cadmium-plated brass housing. -8 (1-4.5 mc) and -9 (4.5-15.0 mc) frequencies also available; (No. 1181 with ferrite bobbin and cup core). †Max. terminal circle radius. ‡-4 (50-200 mc) frequency not available. \*Perma-Torq® slug locking device. †Reg. M.W. Kellogg TM.

### PRINTED CIRCUIT COIL FORMS

Powdered iron core (except -5, brass; -8 and -9, ferrite) and silicone impregnated ceramic coil forms except as noted.

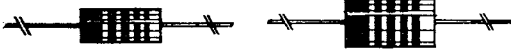
Cambion Number*	Fig.	Dimensions, Inches				Body O.D., in.	Terminals	Powdered Iron Core No.	Tuning Tool	Net Each, Lots of			
		A	B	C	D†					1-49	50-249	250-499	500-999
2170†	XVI	¾	.356	.....	.....	.219	2-4*	3226, 2250	1970-1	\$0.27	\$0.21	\$0.18	\$0.17
2173†	XVI	¾	.426	.....	.....	.285	2-4*	3227, 2250	2588-1	.27	.21	.18	.17
2175	XVI	¾	.404	.....	.....	.260	2, 3*	3226, 2250	2230-1	.29	.22	.19	.18
							4-6*			.33	.26	.22	.21
2206	XVI	13/16	.404	.....	.....	.260	2, 3*	3226, 2250	2230-1	.29	.22	.19	.18
							4-6*			.33	.26	.22	.21
2501	XVI	.625	.404	.....	.....	.260	4	3226, 2250	2230-1	.33	.26	.22	.21
2270	XVIII	.625	.426	.500	.200	.260	4	3226, 2250	2230-1	.68	.53	.45	.43
2271	XVIII	.813	.626	.700	.200	.260	4	3226, 2250	2230-1	.74	.57	.48	.45
2500	XVIII	1.328	1.126	1.200	.200	.260	4	3226, 2250	2230-1	.98	.74	.62	.58
2533	XVIII	.625	.425	.500	.300	.260	4	3226, 2250	2230-1	.74	.57	.48	.45
2534	XVIII	.813	.625	.700	.300	.260	4	3226, 2250	2230-1	.74	.57	.48	.45
2535	XVIII	1.328	1.125	1.200	.300	.260	4	3226, 2250	2230-1	.98	.74	.62	.58
2526	XIX	.888	.326	.400	.300	.205	4	20063, 2018, 2932	2033-1	.99	.80	.70	.64
2531	XIX	1.111	.526	.600	.300	.260	4	20063, 2018, 2931	1971-1	1.12	.90	.80	.73
2541	XIX	1.332	.626	.700	.400	.375	4	20063, 2018, 2930	1970-1	1.19	.96	.87	.81
2551	XIX	1.958	1.226	1.300	.400	.500	4	20063, 2018, 2934	1970-1	1.38	1.12	1.02	.93
3136#	XX	1.531	.589	.300	.200	.179	4	2943, 2944, 3842	2033-1	1.00	.75	.63	.59
3137#	XX	1.425	.589	.300	.200	.179	4	2943, 2944, 3842	2033-1	1.02	.77	.65	.61
3104#	XXI	.592	.438	.500	.250	.214	4	3225, 3058	2375-1	.86	.67	.57	.54

\*Specify frequency (-1 thru -7) and terminals per Chart. †Width between centers of terminals. ‡Phenolic coil form. §Molded diallyl coil form. #8 (1-4.5 mc) and -9 (4.5-15.0 mc) frequencies also available.

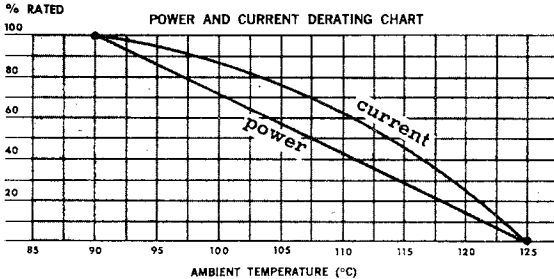
# Miller

## MIL-SPEC MOLDED CHOKES

MILLER MOLDED COILS CONFORM TO MIL-C-15305



This group of molded chokes affords the design engineer a wide range of inductance values, current ratings, and sizes which will fulfill most normal design requirements. Manufactured under strict Quality Control supervision and tested in accordance with MIL Standard 105 the user is guaranteed uniformity and reliability in every coil. This series conforms to MIL-C-15305, Grade and Class 7.



Tabulated currents in milliamperes are maximum values based on a temperature rise not to exceed 35° C., nor wattage dissipation in excess of listed values.

### "MICRO MITE" SERIES 9210

MOLDED R. F. CHOKES

Mold Size: .155 ± .010 diameter; .375 ± .010 length Leads: AWG #22 TCW; 1.44 ± .125 length. Power Rating: .22 Watt Max. at 90° C. \*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1 1/2 times rated current.

PART No.	L uh.	Q. MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9210-54	36 ± 5%	60	2.5	16.0	2.50	250	IRON	.90
9210-56	39 ± 5%	60	2.5	15.0	2.60	245	IRON	.90
9210-58	43 ± 5%	60	2.5	13.7	2.70	242	IRON	.90
9210-60	47 ± 5%	55	2.5	13.0	2.75	240	IRON	.90
9210-62	51 ± 5%	55	2.5	12.7	2.85	235	IRON	.90
9210-64	56 ± 5%	55	2.5	12.0	3.00	230	IRON	.90
9210-66	62 ± 5%	55	2.5	11.0	3.15	225	IRON	.90
9210-68	68 ± 5%	55	2.5	10.3	3.30	220	IRON	.90
9210-70	75 ± 5%	55	2.5	10.5	3.70	205	IRON	.90
9210-72	82 ± 5%	50	2.5	10.3	3.90	200	IRON	.90
9210-74	91 ± 5%	50	2.5	10.0	4.30	190	IRON	.90
9210-76	100 ± 5%	30	2.5	9.5	4.50	185	IRON	.96
9210-78	110 ± 5%	60	.790	8.5	4.90	180	IRON	.96
9210-80	120 ± 5%	65	.790	8.5	5.20	175	IRON	.96
9210-82	130 ± 5%	65	.790	8.5	5.45	170	IRON	.96
9210-84	150 ± 5%	65	.790	8.0	6.05	165	IRON	.96
9210-86	160 ± 5%	65	.790	8.0	6.40	160	IRON	.99
9210-88	180 ± 5%	65	.790	7.0	6.95	155	IRON	.99
9210-90	200 ± 5%	65	.790	6.5	6.90	150	IRON	.99
9210-92	220 ± 5%	65	.790	6.0	7.20	145	IRON	.99
9210-94	240 ± 5%	65	.790	6.0	7.40	140	IRON	.99

### "MICRO MITE" SERIES 9220

MOLDED R. F. CHOKES

\*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1 1/2 times rated current.

MOLD SIZE	MOLD DIAMETER	MOLD LENGTH	LEAD SIZE	LEAD LENGTH	MAX. WATT AT 90° C.
A	.190 ± .010	.440 ± .010	AWG #22	1.44 ± .126	.25
B	.215 ± .010	.560 ± .010	AWG #21	1.44 ± .125	.40
C	.240 ± .010	.740 ± .010	AWG #20	1.44 ± .125	.45

PART No.	L uh.	Q. MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	MOLD SIZE	CORE MTL.	NET PRICE
9220-00	270 ± 5%	65	.790	5.3	8.0	150	A	IRON	\$1.05
9220-02	300 ± 5%	65	.790	5.0	8.6	145	A	IRON	1.05
9220-04	330 ± 5%	65	.790	5.0	8.9	142	A	IRON	1.05
9220-06	360 ± 5%	65	.790	4.7	9.6	137	A	IRON	1.14
9220-08	390 ± 5%	65	.790	4.5	9.9	135	A	IRON	1.14
9220-10	430 ± 5%	65	.790	4.3	10.4	131	A	IRON	1.14
9220-12	470 ± 5%	65	.790	4.0	10.9	128	A	IRON	1.14
9220-14	500 ± 5%	65	.790	3.7	11.3	126	A	IRON	1.20
9220-16	560 ± 5%	65	.790	3.5	11.8	123	A	IRON	1.20
9220-18	620 ± 5%	60	.790	3.5	12.5	120	A	IRON	1.20
9220-20	680 ± 5%	60	.790	3.3	13.5	115	A	IRON	1.20
9220-22	750 ± 5%	60	.790	3.3	14.0	113	A	IRON	1.20
9220-24	820 ± 5%	60	.790	3.0	15.0	110	A	IRON	1.26
9220-26	910 ± 5%	60	.790	3.0	15.5	107	A	IRON	1.26
9220-28	1000 ± 5%	60	.790	2.8	16.5	104	A	IRON	1.26
9220-30	1100 ± 5%	60	.250	2.7	21.0	117	B	IRON	1.35
9220-32	1200 ± 5%	60	.250	2.7	22.0	114	B	IRON	1.35
9220-34	1300 ± 5%	60	.250	2.6	22.5	113	B	IRON	1.35
9220-36	1500 ± 5%	65	.250	2.3	24.5	108	B	IRON	1.35
9220-38	1600 ± 5%	65	.250	2.2	25.7	106	B	IRON	1.35
9220-40	1800 ± 5%	65	.250	2.2	27.3	102	B	IRON	1.35
9220-42	2000 ± 5%	65	.250	2.0	29.0	98	B	IRON	1.35
9220-44	2200 ± 5%	70	.250	2.0	30.0	98	B	IRON	1.35
9220-46	2400 ± 5%	70	.250	1.9	31.5	96	B	IRON	1.35
9220-48	2700 ± 5%	70	.250	1.9	33.0	93	B	IRON	1.35
9220-50	3000 ± 5%	70	.250	1.8	35.0	91	B	IRON	1.35
9220-52	3300 ± 5%	70	.250	1.6	37.8	87	B	IRON	1.35
9220-54	3600 ± 5%	70	.250	1.3	39.3	85	B	IRON	1.41
9220-56	3900 ± 5%	80	.250	1.5	43.0	85	C	IRON	1.41
9220-58	4300 ± 5%	80	.250	1.5	45.0	85	C	IRON	1.41
9220-60	4700 ± 5%	80	.250	1.4	47.0	83	C	IRON	1.41
9220-62	5000 ± 5%	80	.250	1.3	48.3	82	C	IRON	1.41
9220-64	5600 ± 5%	80	.250	1.2	52.0	79	C	IRON	1.50
9220-66	6200 ± 5%	80	.250	1.2	54.0	77	C	IRON	1.50
9220-68	6800 ± 5%	80	.250	1.2	56.5	75	C	IRON	1.50
9220-70	7500 ± 5%	80	.250	1.2	59.5	73	C	IRON	1.50
9220-72	8200 ± 5%	80	.250	1.1	62.5	72	C	IRON	1.59
9220-74	9100 ± 5%	80	.250	1.0	65.5	69	C	IRON	1.59
9220-76	10000 ± 5%	80	.250	1.0	70.0	68	C	IRON	1.59

### MILLER SERIES 9230

Mold Size: .095 ± .010 Diameter; .250 ± .010 Length. Leads AWG #24 TCW; 1.500 ± .125 Length. Power Rating: .17 Watt Max. at 90° C. For -00 thru -70 .15 Watt Max. at 90° C. For -72 thru -92. \*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1 1/2 times rated current.

PART No.	L uh.	Q. MIN.	TEST FREQ. L&Q (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9230-00	.15 ± 10%	38	25.0	600	.10	1100	PHENOLIC	\$1.02
9230-02	.18 ± 10%	35	25.0	550	.12	1010	PHENOLIC	1.02
9230-04	.22 ± 10%	33	25.0	510	.14	935	PHENOLIC	1.02
9230-06	.27 ± 10%	33	25.0	430	.16	875	PHENOLIC	1.02
9230-08	.33 ± 10%	30	25.0	410	.20	800	PHENOLIC	1.02
9230-10	.39 ± 10%	30	25.0	380	.30	640	PHENOLIC	1.02
9230-12	.47 ± 10%	30	25.0	340	.35	590	PHENOLIC	1.02
9230-14	.56 ± 10%	30	25.0	300	.50	485	PHENOLIC	1.02
9230-16	.68 ± 10%	28	25.0	275	.60	450	PHENOLIC	1.02
9230-18	.82 ± 10%	28	25.0	250	.85	380	PHENOLIC	1.02
9230-20	1.00 ± 10%	25	25.0	230	1.00	350	PHENOLIC	1.02
9230-22	1.20 ± 10%	25	7.9	150	.18	825	IRON	1.08
9230-24	1.50 ± 10%	28	7.9	145	.22	745	IRON	1.08
9230-26	1.80 ± 10%	30	7.9	125	.30	640	IRON	1.08
9230-28	2.20 ± 10%	30	7.9	120	.40	550	IRON	1.08
9230-30	2.70 ± 10%	37	7.9	100	.50	495	IRON	1.08
9230-32	3.30 ± 10%	45	7.9	90	.85	380	IRON	1.08
9230-34	3.90 ± 10%	45	7.9	85	1.00	350	IRON	1.08
9230-36	4.70 ± 10%	45	7.9	75	1.4	300	IRON	1.38
9230-38	5.60 ± 10%	50	7.9	70	1.80	260	IRON	1.23
9230-40	6.80 ± 10%	50	7.9	60	2.00	245	IRON	1.23
9230-42	8.20 ± 10%	55	7.9	60	2.70	210	IRON	1.23
9230-44	10.0 ± 10%	55	7.9	50	3.70	180	IRON	1.23
9230-46	12.0 ± 10%	45	7.9	45	4.70	210	IRON	1.23
9230-48	15.0 ± 10%	45	2.5	40	2.80	205	IRON	1.23
9230-50	18.0 ± 10%	50	2.5	32	3.10	195	IRON	1.23
9230-52	22.0 ± 10%	50	2.5	25	3.30	190	IRON	1.23
9230-54	27.0 ± 10%	50	2.5	22	3.50	185	IRON	1.23
9230-56	33.0 ± 10%	45	2.5	22	4.00	187	FERRITE	1.35
9230-58	39.0 ± 10%	45	2.5	25	3.60	180	FERRITE	1.35
9230-60	47.0 ± 10%	45	2.5	20	4.50	165	FERRITE	1.35
9230-62	56.0 ± 10%	45	2.5	18	5.70	145	FERRITE	1.35
9230-64	68.0 ± 10%	50	2.5	15	6.70	135	FERRITE	1.35
9230-66	82.0 ± 10%	50	2.5	14	7.30	130	FERRITE	1.35
9230-68	100.0 ± 10%	50	2.5	13	8.00	125	FERRITE	1.35
9230-70	120.0 ± 10%	30	.79	12	13.00	97	FERRITE	2.25
9230-72	150.0 ± 10%	30	.79	11	15.00	85	FERRITE	2.25
9230-74	180.0 ± 10%	30	.79	10	17.00	79	FERRITE	2.25
9230-76	220.0 ± 10%	30	.79	9	21.00	73	FERRITE	2.25
9230-78	270.0 ± 10%	30	.79	8	25.00	65	FERRITE	2.25
9230-80	330.0 ± 10%	30	.79	7	28.00	62	FERRITE	2.25
9230-82	390.0 ± 10%	30	.79	6.5	35.00	55	FERRITE	2.25
9230-84	470.0 ± 10%	30	.79	6	42.00	50	FERRITE	2.25
9230-86	560.0 ± 10%	30	.79	5	46.00	48	FERRITE	2.25
9230-88	680.0 ± 10%	30	.79	4.2	60.00	42	FERRITE	2.25
9230-90	820.0 ± 10%	30	.79	3.8	65.00	40	FERRITE	2.25
9230-92	1000.0 ± 10%	30	.79	3.4	72.00	38	FERRITE	2.25

### MILLER SERIES 9240

Size: 0.157" Diameter, 0.375" Length. Inductance: 0.1 uh thru 10,000 uh (611 values). Shielding: Less than 2% coupling. Environment: Grade 1, Class B, MIL-C-15305. Power Rating: .20 watts @ 90° ambient and rated current flow.

\*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1 1/2 times rated current. \*\*Current required to decrease inductance 5%.

PART No.	L ±10%	Q. MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	**Ma. APPRX.	NET PRICE
9240-770	.10 uh.	50	25	250	.015	3100	3100	\$1.65
9240-771	.12 uh.	50	25	250	.020	2650	2650	1.65
9240-701	.15 uh.	50	25	250	.025	2400	2400	1.65
9240-772	.18 uh.	50	25	250	.030	2190	2190	1.65
9240-702	.22 uh.	50	25	250	.035	2030	2030	1.65
9240-773	.27 uh.	50	25	250	.045	1790	1790	1.65
9240-703	.33 uh.	45	25	250	.055	1380	1380	1.65
9240-774	.39 uh.	45	25	250	.075	1300	1300	1.65
9240-704	.47 uh.	45	25	235	.100	1200	1200	1.65
9240-705	.56 uh.	45	25	210	.180	890	890	1.65
9240-706	.68 uh.	45	25	190	.200	850	850	1.65
9240-707	.82 uh.	45	25	180				

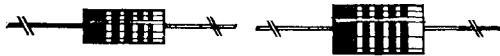


# Miller

## MIL-SPEC MOLDED CHOKES



MILLER MOLDED COILS CONFORM TO MIL-C-15305



### MILLER SERIES 9310

(MS 16225)

Mold Size: .155 ±.010 diameter; .375 ±.010 length. Leads: AWG #22 TCW; 1.437 ±.125 length. Power Rating: ¼ Watt Max. at 90° C. \*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9310-00	16225-1	.15 ± 20%	50	25	525	.03	2450	PHENOLIC	\$.78
9310-02	16225-2	.22 ± 20%	50	25	450	.05	1900	PHENOLIC	\$.60
9310-04	16225-3	.33 ± 20%	45	25	370	.09	1400	PHENOLIC	\$.78
9310-06	16225-4	.47 ± 20%	45	25	310	.12	1275	PHENOLIC	\$.60
9310-08	16225-5	.68 ± 10%	50	25	250	.15	1100	PHENOLIC	\$.60
9310-10	16225-6	.82 ± 10%	50	25	220	.22	900	PHENOLIC	\$.60
9310-12	16225-7	1.00 ± 10%	50	25	200	.26	830	PHENOLIC	\$.60
9310-14	16225-8	1.20 ± 10%	33	7.9	180	.42	650	PHENOLIC	\$.60
9310-16	16225-9	1.50 ± 10%	33	7.9	150	.50	600	PHENOLIC	\$.60
9310-18	16225-10	1.80 ± 10%	33	7.9	150	.85	525	PHENOLIC	\$.60
9310-20	16225-11	2.20 ± 10%	33	7.9	135	.95	435	PHENOLIC	\$.60
9310-22	16225-12	2.70 ± 10%	33	7.9	120	1.20	385	PHENOLIC	\$.60
9310-24	16225-13	3.30 ± 10%	33	7.9	110	2.00	300	PHENOLIC	\$.66
9310-26	16225-14	3.90 ± 10%	33	7.9	100	2.30	280	PHENOLIC	\$.66
9310-28	16225-15	4.70 ± 10%	33	7.9	90	2.60	260	PHENOLIC	\$.66
9310-30	16225-16	5.60 ± 10%	45	7.9	60	.32	750	IRON	\$.66
9310-32	16225-17	6.80 ± 10%	50	7.9	55	.50	600	IRON	\$.66
9310-34	16225-18	8.20 ± 10%	50	7.9	50	.50	545	IRON	\$.66
9310-36	16225-19	10.0 ± 10%	55	7.9	45	.90	445	IRON	\$.66
9310-38	16225-20	12.0 ± 10%	65	2.5	42	1.10	404	IRON	\$.66
9310-40	16225-21	15.0 ± 10%	65	2.5	40	1.30	370	IRON	\$.66
9310-42	16225-22	18.0 ± 10%	75	2.5	34	2.25	280	IRON	\$.66
9310-44	16225-23	22.0 ± 10%	75	2.5	30	2.50	285	IRON	\$.75
9310-46	16225-24	27.0 ± 5%	60	2.5	28	2.50	265	IRON	\$.75
9310-48	16225-25	27.0 ± 5%	60	2.5	25	2.60	260	IRON	\$.75
9310-50	16225-26	30.0 ± 5%	65	2.5	19	2.80	255	IRON	\$.75
9310-52	16225-27	33.0 ± 5%	65	2.5	19	2.90	250	IRON	\$.75

### MILLER SERIES 9320

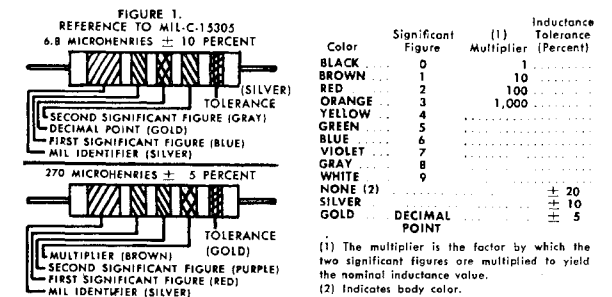
Mold Size: 0.185 ±.010 diameter; 0.437 ±.010 length. Leads: AWG #22 TCW; 1.437 ±.125 length. Power Rating: 25 Watt Max. at 90° C. \*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9320-00	75008-1	.15 ± 20%	55	25	510	.03	3000	PHENOLIC	\$.60
9320-02	75008-2	.22 ± 20%	55	25	415	.035	2650	PHENOLIC	\$.60
9320-04	75008-3	.33 ± 20%	55	25	350	.05	2000	PHENOLIC	\$.60
9320-06	75008-4	.47 ± 20%	55	25	300	.08	1700	PHENOLIC	\$.60
9320-08	75008-5	.68 ± 10%	55	25	270	.100	1450	PHENOLIC	\$.60
9320-10	75008-6	.82 ± 10%	55	25	250	.12	1300	PHENOLIC	\$.60
9320-12	75008-7	1.00 ± 10%	55	25	220	.180	1100	PHENOLIC	\$.60
9320-14	75008-8	1.20 ± 10%	35	7.9	180	.400	785	PHENOLIC	\$.60
9320-16	75008-9	1.50 ± 10%	35	7.9	150	.400	750	PHENOLIC	\$.60
9320-18	75008-10	1.80 ± 10%	35	7.9	120	.400	750	PHENOLIC	\$.60
9320-20	75008-11	2.20 ± 10%	35	7.9	100	.400	750	PHENOLIC	\$.60
9320-22	75008-12	2.70 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-24	75008-13	3.30 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-26	75008-14	3.90 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-28	75008-15	4.70 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-30	75008-16	5.60 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-32	75008-17	6.80 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-34	75008-18	8.20 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-36	75008-19	10.0 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-38	75008-20	12.0 ± 10%	35	7.9	85	.400	750	PHENOLIC	\$.60
9320-40	75008-21	15.0 ± 10%	50	2.5	36	.85	490	IRON	\$.66
9320-42	75008-22	18.0 ± 10%	55	2.5	30	1.20	460	IRON	\$.66
9320-44	75008-23	22.0 ± 10%	60	2.5	30	1.80	360	IRON	\$.66
9320-46	75008-24	27.0 ± 10%	60	2.5	24	2.00	335	IRON	\$.66
9320-48	75008-25	27.0 ± 10%	65	2.5	22	2.750	300	IRON	\$.66

### MILLER SERIES 9330

Mold Size: 0.215 ±.010 diameter; 0.560 ±.010 length. Leads: AWG #22 TCW; 1.437 ±.125 length. Power Rating: 33 Watt max. at 90° C. \*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9330-00	16222-1	.47 ± 20%	65	25	300	.06	1970	PHENOLIC	\$.66
9330-02	16222-2	.68 ± 20%	65	25	240	.08	1700	PHENOLIC	\$.66
9330-04	16222-3	1.00 ± 10%	65	25	200	.14	1290	PHENOLIC	\$.66
9330-06	16222-4	1.50 ± 10%	40	7.9	160	.28	925	PHENOLIC	\$.66
9330-08	16222-5	2.20 ± 10%	40	7.9	135	.50	680	PHENOLIC	\$.66
9330-10	16222-6	2.70 ± 10%	40	7.9	120	.65	600	PHENOLIC	\$.66
9330-12	16222-7	3.30 ± 10%	40	7.9	105	1.00	480	PHENOLIC	\$.66
9330-14	16222-8	3.90 ± 10%	40	7.9	100	1.20	440	PHENOLIC	\$.66
9330-16	16222-9	4.70 ± 10%	40	7.9	90	1.80	360	PHENOLIC	\$.66
9330-18	16222-10	5.60 ± 10%	35	7.9	55	.33	1340	IRON	\$.75
9330-20	16222-11	6.80 ± 10%	35	7.9	50	.70	1080	IRON	\$.75
9330-22	16222-12	8.20 ± 10%	35	7.9	44	.22	1030	IRON	\$.75
9330-24	16222-13	10.0 ± 10%	35	7.9	42	.26	990	IRON	\$.75
9330-26	16222-14	12.0 ± 10%	45	2.5	34	.45	720	IRON	\$.75
9330-28	16222-15	15.0 ± 10%	45	2.5	32	.52	670	IRON	\$.75
9330-30	16222-16	18.0 ± 10%	50	2.5	28	.70	580	IRON	\$.75
9330-32	16222-17	22.0 ± 10%	60	2.5	24	1.00	480	IRON	\$.75
9330-34	16222-18	27.0 ± 10%	60	2.5	22	1.30	420	IRON	\$.75
9330-36	16222-19	33.0 ± 10%	60	2.5	20	1.50	390	IRON	\$.75
9330-38	16222-20	39.0 ± 10%	70	2.5	18	2.00	340	IRON	\$.75



### MILLER SERIES 9340

Mold Size: 0.280 ±.010 diameter; 0.900 ±.010 length. Leads: AWG #21 TCW; 1.437 ±.125 length. Power rating: ¾ Watt Max. at 90° C. \*Current based on (1) Temperature rise not to exceed 25° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9340-00	91189-1	1.2 ± 10%	60	7.9	170	.075	2400	PHENOLIC	\$.78
9340-02	91189-15	1.5 ± 10%	60	7.9	160	.090	2150	PHENOLIC	\$.78
9340-03	91189-16	1.8 ± 10%	60	7.9	140	.135	1750	PHENOLIC	\$.78
9340-04	91189-17	2.2 ± 10%	60	7.9	125	.160	1600	PHENOLIC	\$.78
9340-05	91189-18	2.7 ± 10%	60	7.9	115	.220	1350	PHENOLIC	\$.78
9340-08	91189-19	3.3 ± 10%	60	7.9	100	.305	1150	PHENOLIC	\$.75
9340-10	91189-20	3.9 ± 10%	60	7.9	95	.45	955	PHENOLIC	\$.75
9340-12	91189-21	4.7 ± 10%	60	7.9	90	.560	860	PHENOLIC	\$.75
9340-14	91189-22	5.6 ± 10%	60	7.9	80	.745	745	PHENOLIC	\$.75
9340-15	91189-23	6.8 ± 10%	60	7.9	75	1.05	635	PHENOLIC	\$.75
9340-18	91189-24	8.2 ± 10%	60	7.9	60	1.4	550	PHENOLIC	\$.75
9340-20	91189-25	10.0 ± 10%	60	7.9	60	1.9	460	PHENOLIC	\$.75
9340-22	91189-26	12.0 ± 10%	40	2.5	53	2.65	395	PHENOLIC	\$.75
9340-24	91189-27	15.0 ± 10%	40	2.5	50	3.25	355	PHENOLIC	\$.75
9340-26	91189-28	18.0 ± 10%	40	2.5	45	4.15	315	PHENOLIC	\$.75
9340-28	91189-29	22.0 ± 10%	50	2.5	25	2.95	1150	IRON	\$.84
9340-30	91189-30	27.0 ± 10%	45	2.5	22	3.50	1050	IRON	\$.84
9340-32	91189-31	33.0 ± 10%	60	2.5	20	4.50	865	IRON	\$.84
9340-34	91189-32	39.0 ± 10%	55	2.5	18	6.65	810	IRON	\$.84
9340-36	91189-33	47.0 ± 10%	65	2.5	16	11.0	640	IRON	\$.84
9340-38	91189-34	56.0 ± 10%	65	2.5	14	11.5	620	IRON	\$.84
9340-39	91189-35	68.0 ± 10%	75	2.5	13	1.85	470	IRON	\$.84
9340-40	91189-36	82.0 ± 10%	75	2.5	13	2.10	440	IRON	\$.84
9340-42	91189-37	100.0 ± 10%	75	2.5	12	2.50	405	IRON	\$.84
9340-44	91189-38	120.0 ± 10%	95	7.90	10	4.00	315	IRON	\$.84

### MILLER SERIES 9350

\*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

COIL DIMENSIONS	LEAD DIMENSIONS			
	A	B	C	D
DIAMETER ± .010	.250	.310	.375	.468
LENGTH ± .010	.560	.625	.687	1.437 ± .125
MAX. WATT. AT 90° C	.30	.40	.45	.55

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	MIL. SIZE	CORE MTL.	NET PRICE
9350-00	16223-1	.47 ± 10%	18	2.5	13.5	5.9	195	A	PHENOLIC	\$1.02
9350-02	16223-2	.56 ± 10%	18	2.5	1					

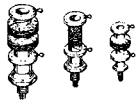


# Miller

## Industrial Adjustable R.F. Coils



### Ceramic Adjustable R.F. Coils



The forms used in this series feature terminal rings machined from the ceramic form material. Coils wound on these forms exhibit high Q and good stability. The adjusting core is held rigidly at any setting through the use of a newly designed tension device on the bushing.

**Sub Miniature Adjustable R.F. Coils**  
Dimensions (form) 7/32" dia. x 19/32" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
40A000CBI	Coil Form w/hdw. and Core		\$1.14
40A107CBI	.125 uh	.091 uh	1.68
40A157CBI	.188 uh	.124 uh	1.68
40A227CBI	.275 uh	.184 uh	1.68
40A337CBI	.413 uh	.265 uh	1.68
40A477CBI	.587 uh	.327 uh	1.71
40A687CBI	.850 uh	.482 uh	1.71
40A827CBI	1.02 uh	.630 uh	1.80
40A106CBI	1.25 uh	.730 uh	1.80
40A156CBI	1.88 uh	1.06 uh	1.80
40A226CBI	2.75 uh	1.50 uh	1.83
40A336CBI	4.13 uh	2.15 uh	1.83
40A476CBI	5.87 uh	3.00 uh	1.92
40A686CBI	8.50 uh	4.40 uh	1.92
40A826CBI	10.2 uh	5.25 uh	1.92
40A105CBI	12.5 uh	8.06 uh	1.98
40A155CBI	18.8 uh	11.9 uh	1.98
40A225CBI	27.5 uh	17.1 uh	2.04
40A335CBI	41.3 uh	26.6 uh	2.04
40A475CBI	58.7 uh	39.0 uh	2.13
40A685CBI	85.0 uh	58.0 uh	2.13
40A825CBI	102 uh	69.0 uh	2.31
40A104CBI	125 uh	84.0 uh	2.31
40A000CBI	Bulk pack per 100		99.00

**Miniature Adjustable R.F. Coils**  
Dimensions (form) 1/4" dia. x 13/16" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
41A000CBI	Coil Form w/hdw. and Core		\$1.20
41A106CBI	1.25 uh	.69 uh	1.80
41A156CBI	1.87 uh	1.20 uh	1.80
41A226CBI	2.75 uh	1.42 uh	1.80
41A336CBI	4.10 uh	2.00 uh	1.83
41A476CBI	5.80 uh	2.80 uh	1.83
41A686CBI	8.50 uh	4.00 uh	1.83
41A826CBI	10.0 uh	4.50 uh	1.86
41A105CBI	12.5 uh	6.50 uh	1.86
41A155CBI	18.7 uh	10.8 uh	1.86
41A225CBI	27.5 uh	15.2 uh	1.92
41A335CBI	41.0 uh	26.0 uh	1.92
41A475CBI	58.0 uh	32.5 uh	1.92
41A685CBI	85.0 uh	48.5 uh	1.98
41A825CBI	100 uh	61.0 uh	1.98
41A104CBI	125 uh	65.0 uh	2.04
41A154CBI	187 uh	110 uh	2.04
41A224CBI	275 uh	160 uh	2.13
41A334CBI	410 uh	253 uh	2.13
41A474CBI	580 uh	390 uh	2.25
41A684CBI	850 uh	560 uh	2.31
41A824CBI	1.00 mh	670 uh	2.37
41A103CBI	1.25 mh	700 uh	2.46
41A000CBI	Bulk pack per 100		108.60

**Standard Adjustable R.F. Coils**  
Dimensions (form) 3/8" dia. x 1" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
42A000CBI	Coil Form w/hdw. and Core		\$1.26
42A106CBI	1.25 uh	.68 uh	1.80
42A156CBI	1.87 uh	1.00 uh	1.80
42A226CBI	2.75 uh	1.35 uh	1.80
42A336CBI	4.10 uh	2.12 uh	1.83
42A476CBI	5.80 uh	2.40 uh	1.83
42A686CBI	8.50 uh	3.60 uh	1.86
42A826CBI	10.0 uh	4.45 uh	1.86
42A105CBI	12.5 uh	6.05 uh	1.98
42A155CBI	18.7 uh	9.40 uh	1.98
42A225CBI	27.5 uh	12.9 uh	2.01
42A335CBI	41.0 uh	18.8 uh	2.01
42A475CBI	58.0 uh	27.5 uh	2.16
42A685CBI	85.0 uh	37.5 uh	2.19
42A825CBI	100 uh	45.0 uh	2.25
42A104CBI	125 uh	54.0 uh	2.34

42A154CBI	187 uh	92.0 uh	2.34
42A224CBI	275 uh	123 uh	2.34
42A334CBI	410 uh	200 uh	2.37
42A474CBI	580 uh	300 uh	2.37
42A684CBI	850 uh	430 uh	2.37
42A824CBI	1.00 mh	510 uh	2.43
42A103CBI	1.25 mh	780 uh	2.43
42A153CBI	1.87 mh	1.10 mh	2.46
42A223CBI	2.90 mh	1.66 mh	2.46
42A333CBI	4.10 mh	2.40 mh	2.46
42A473CBI	5.80 mh	3.46 mh	2.52
42A683CBI	8.50 mh	5.25 mh	2.52
42A823CBI	10.0 mh	6.00 mh	2.61
42A102CBI	12.5 mh	9.20 mh	2.61
42A000CBI	Bulk pack per 100		112.20

**Jumbo Adjustable R.F. Coils**  
Dimensions (form) 1/2" dia. x 1-7/16" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
43A000CBI	Coil Form w/hdw. and Core		\$1.32
43A105CBI	12.5 uh	5.70 uh	1.95
43A155CBI	18.7 uh	9.00 uh	1.95
43A225CBI	27.5 uh	12.0 uh	1.95
43A335CBI	41.0 uh	17.0 uh	1.98
43A475CBI	58.0 uh	25.0 uh	1.98
43A685CBI	85.0 uh	38.0 uh	2.25
43A825CBI	100 uh	42.0 uh	2.25
43A104CBI	125 uh	65.0 uh	2.25
43A154CBI	187 uh	95.0 uh	2.37
43A224CBI	275 uh	138 uh	2.37
43A334CBI	410 uh	205 uh	2.37
43A474CBI	580 uh	240 uh	2.43
43A684CBI	850 uh	370 uh	2.43
43A824CBI	1.00 mh	450 uh	2.40
43A103CBI	1.25 mh	600 uh	2.40
43A153CBI	1.87 mh	900 uh	2.46
43A223CBI	2.75 mh	1.30 mh	2.46
43A333CBI	4.10 mh	1.95 mh	2.49
43A473CBI	5.80 mh	2.90 mh	2.49
43A683CBI	8.50 mh	4.30 mh	2.55
43A823CBI	10.0 mh	5.10 mh	2.55
43A102CBI	12.5 mh	6.50 mh	2.58
43A152CBI	18.7 mh	9.80 mh	2.58
43A222CBI	27.5 mh	13.0 mh	2.61
43A332CBI	41.0 mh	20.0 mh	2.61
43A472CBI	58.0 mh	29.0 mh	2.64
43A682CBI	85.0 mh	42.0 mh	2.70
43A822CBI	100 mh	50.0 mh	2.76
43A101CBI	125 mh	66.0 mh	2.97
43A000CBI	Bulk pack per 100		118.80

### Ceramic Adjustable Printed Circuit R.F. Coils

The following adjustable printed circuit coils are constructed with three soldering terminals. To hold the core stationary is a locking insert that can be tightened against the core.

Form Dimensions: .260 x .625 long.

Part No.	L Min. uh.	L Max. uh.	Net Price
46A000CPC	Coil Form w/core and Locking Insert		\$1.05
46A107CPC	.095	.105	1.59
46A127CPC	.114	.126	1.59
46A157CPC	.142	.158	1.59
46A187CPC	.171	.189	1.59
46A227CPC	.209	.231	1.62
46A277CPC	.256	.284	1.62
46A337CPC	.314	.347	1.62
46A397CPC	.370	.410	1.62
46A477CPC	.446	.495	1.62
46A567CPC	.532	.590	1.62
46A687CPC	.645	.715	1.62
46A827CPC	.770	.850	1.62
46A106CPC	.950	1.05	1.62
46A126CPC	1.14	1.26	1.62
46A156CPC	1.42	1.58	1.65
46A186CPC	1.62	1.98	1.65
46A226CPC	1.99	2.42	1.65
46A276CPC	2.42	2.96	1.65
46A336CPC	2.96	3.64	1.65
46A396CPC	3.50	4.27	1.65
46A476CPC	4.24	5.20	1.68
46A566CPC	5.00	6.30	1.68
46A686CPC	6.10	7.50	1.68
46A826CPC	7.30	8.90	1.68
46A105CPC	8.50	11.5	1.68

46A125CPC	10.8	13.2	1.68
46A155CPC	13.2	16.5	1.68
46A185CPC	16.2	19.5	1.68
46A225CPC	19.5	24.3	1.68
46A275CPC	24.2	29.5	1.71
46A335CPC	29.5	36.5	1.71
46A395CPC	35.0	43.0	1.71
46A475CPC	42.0	51.5	1.71
46A565CPC	50.0	62.0	1.71
46A685CPC	61.0	75.0	1.71
46A825CPC	74.0	90.0	1.71
46A104CPC	90.0	110.0	1.74
46A124CPC	108.0	132.0	1.74
46A154CPC	132.0	165.0	1.74
46A184CPC	162.0	198.0	1.74
46A224CPC	197.0	243.0	1.74
46A274CPC	242.0	295.0	1.74
46A334CPC	295.0	365.0	1.77
46A394CPC	350.0	430.0	1.77
46A474CPC	420.0	515.0	1.77
46A564CPC	500.0	620.0	1.77
46A684CPC	610.0	750.0	1.80
46A824CPC	740.0	900.0	1.80
46A103CPC	900.0	1100.0	1.80

### Ceramic Adjustable Printed Circuit R.F. Coils



These adjustable printed circuit coils are constructed with four soldering terminals in which two of them may be used for auxiliary impedance windings. To hold the core stationary is a locking insert that can be tightened against the core. Form Dimensions: .430 x .563 x .625 long.

Part No.	L Min. uh.	L Max. uh.	Net Price
47A000CPC	Coil Form w/Core and Locking Insert		1.77
47A107CPC	.095	.105	2.37
47A127CPC	.114	.126	2.37
47A157CPC	.142	.158	2.37
47A187CPC	.171	.189	2.37
47A227CPC	.209	.231	2.40
47A277CPC	.256	.284	2.40
47A337CPC	.314	.347	2.40
47A397CPC	.370	.410	2.40
47A477CPC	.446	.495	2.40
47A567CPC	.532	.590	2.40
47A687CPC	.645	.715	2.40
47A827CPC	.770	.850	2.40
47A106CPC	.950	1.05	2.40
47A126CPC	1.14	1.26	2.40
47A156CPC	1.42	1.58	2.43
47A186CPC	1.62	1.98	2.43
47A226CPC	1.99	2.42	2.43
47A276CPC	2.42	2.96	2.43
47A336CPC	2.96	3.64	2.43
47A396CPC	3.50	4.27	2.43
47A476CPC	4.24	5.20	2.46
47A566CPC	5.00	6.30	2.46
47A686CPC	6.10	7.50	2.46
47A826CPC	7.30	8.90	2.46
47A105CPC	8.50	11.5	2.46
47A125CPC	10.8	13.2	2.46
47A155CPC	13.2	16.5	2.46
47A185CPC	16.2	19.5	2.46
47A225CPC	19.5	24.3	2.46
47A275CPC	24.2	29.5	2.49
47A335CPC	29.5	36.5	2.49
47A395CPC	35.0	43.0	2.49
47A475CPC	42.0	51.5	2.49
47A565CPC	50.0	62.0	2.49
47A685CPC	61.0	75.0	2.49
47A825CPC	74.0	90.0	2.49
47A104CPC	90.0	110.0	2.55
47A124CPC	108.0	132.0	2.55
47A154CPC	132.0	165.0	2.55
47A184CPC	162.0	198.0	2.55
47A224CPC	197.0	243.0	2.55
47A274CPC	242.0	295.0	2.55
47A334CPC	295.0	365.0	2.61
47A394CPC	350.0	430.0	2.61
47A474CPC	420.0	515.0	2.61
47A564CPC	500.0	620.0	



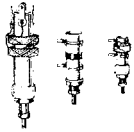


# Miller



## Industrial Adjustable R. F. Coils

### Resinite Adjustable R.F. Coils



Resinite is a phenolic impregnated tubing which can be certified to MIL-P-79B type PBG. This material combines good mechanical and electrical characteristics along with the noncorrosive properties of cellulose acetate.

### Miniature Adjustable R.F. Coils

Dimensions (form) 1/4" dia. x 13/16" long

Part No.	Coil Form w/hdw. and Core	L		Net Price
		Max. ± 5%	Min. ± 10%	
20A000RBI	.125 uh	.079 uh	.87	
20A107RBI	.187 uh	.119 uh	.87	
20A227RBI	.275 uh	.170 uh	.87	
20A337RBI	.410 uh	.240 uh	.90	
20A477RBI	.580 uh	.310 uh	.90	
20A687RBI	.850 uh	.430 uh	.90	
20A827RBI	1.00 uh	.580 uh	.90	
20A106RBI	1.25 uh	.670 uh	.90	
20A156RBI	1.87 uh	.900 uh	.90	
20A226RBI	2.75 uh	1.60 uh	.90	
20A336RBI	4.10 uh	2.00 uh	.90	
20A476RBI	5.80 uh	2.80 uh	.93	
20A686RBI	8.50 uh	3.80 uh	.93	
20A826RBI	10.0 uh	4.70 uh	.93	
20A105RBI	12.5 uh	6.40 uh	.93	
20A155RBI	18.7 uh	9.20 uh	.93	
20A225RBI	27.5 uh	12.0 uh	.93	
20A335RBI	41.0 uh	19.0 uh	.93	
20A475RBI	58.0 uh	27.0 uh	.93	
20A685RBI	85.0 uh	37.0 uh	.93	
20A825RBI	100 uh	53.0 uh	.93	
20A104RBI	125 uh	65.0 uh	.93	
20A154RBI	187 uh	92.0 uh	.93	
20A224RBI	275 uh	140 uh	.96	
20A334RBI	410 uh	215 uh	.96	
20A474RBI	580 uh	310 uh	.96	
20A684RBI	850 uh	450 uh	.96	
20A824RBI	1.00 mh	620 uh	.96	
.96 20A103RBI	1.25 mh	830 uh		

### Standard Adjustable R.F. Coils

Dimensions (form) 3/8" dia. x 1 1/8" long

Part No.	Coil Form w/hdw. and Core	L		Net Price
		Max. ± 5%	Min. ± 10%	
21A000RBI	.125 uh	0.68 uh	.90	
21A156RBI	1.87 uh	1.00 uh	.90	
21A226RBI	2.75 uh	1.35 uh	.90	
21A336RBI	4.10 uh	2.12 uh	.90	
21A476RBI	5.80 uh	2.40 uh	.90	
21A686RBI	8.50 uh	3.60 uh	.93	
21A826RBI	10.0 uh	4.45 uh	.93	
21A105RBI	12.5 uh	6.05 uh	.93	
21A155RBI	18.7 uh	9.40 uh	.93	
21A225RBI	27.5 uh	12.9 uh	.93	
21A335RBI	41.0 uh	18.8 uh	.93	
21A475RBI	58.0 uh	27.5 uh	.96	
21A685RBI	85.0 uh	37.5 uh	.96	
21A825RBI	100 uh	45.0 uh	.96	
21A104RBI	125 uh	54.0 uh	.96	
21A154RBI	187 uh	92.0 uh	.99	
21A224RBI	275 uh	123 uh	.99	
21A334RBI	410 uh	200 uh	1.02	
21A474RBI	580 uh	300 uh	1.07	
21A684RBI	850 uh	430 uh	1.05	
21A824RBI	1.00 mh	510 uh	1.05	
21A103RBI	1.25 mh	780 uh	1.08	
21A153RBI	1.87 mh	1.10 mh	1.08	
21A223RBI	2.75 mh	1.66 mh	1.11	
21A333RBI	4.10 mh	2.40 mh	1.11	
21A473RBI	5.80 mh	3.46 mh	1.23	
21A683RBI	8.50 mh	5.25 mh	1.32	
21A823RBI	10.0 mh	6.00 mh	1.41	
21A102RBI	12.5 mh	9.20 mh	1.50	

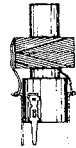
### Jumbo Adjustable R.F. Coils

Dimensions (form) 1/2" dia. x 1 1/8" long

Part No.	Coil Form w/hdw. and Core	L		Net Price
		Max. ± 5%	Min. ± 10%	
22A000RBI	1.25 uh	5.70 uh	1.23	
22A105RBI	18.7 uh	9.0 uh	1.23	
22A225RBI	27.5 uh	12.0 uh	1.26	
22A335RBI	41.0 uh	17.0 uh	1.26	
22A475RBI	58.0 uh	24.5 uh	1.29	
22A685RBI	85.0 uh	38.0 uh	1.29	
22A825RBI	100 uh	41.0 uh	1.32	
22A104RBI	125 uh	65.0 uh	1.32	
22A154RBI	187 uh	94.0 uh	1.35	
22A224RBI	275 uh	138 uh	1.35	

22A334RBI	410 uh	205 uh	1.38
22A474RBI	580 uh	290 uh	1.38
22A684RBI	850 uh	430 uh	1.41
22A824RBI	1.00 mh	595 uh	1.41
22A103RBI	1.25 mh	760 uh	1.44
22A153RBI	1.87 mh	1.04 mh	1.44
22A223RBI	2.75 mh	1.56 mh	1.44
22A333RBI	4.10 mh	2.30 mh	1.47
22A473RBI	5.80 mh	3.40 mh	1.47
22A683RBI	8.50 mh	5.00 mh	1.47
22A823RBI	10.0 mh	4.20 mh	1.50
22A102RBI	12.5 mh	5.30 mh	1.50
22A152RBI	18.7 mh	8.20 mh	1.62
22A222RBI	27.5 mh	12.7 mh	1.62
22A332RBI	41.0 mh	17.8 mh	1.65
22A472RBI	58.0 mh	27.5 mh	1.68
22A682RBI	85.0 mh	42.0 mh	1.71
22A822RBI	100 mh	51.0 mh	1.80
22A101RBI	125 mh	64.0 mh	1.95

9052	7.0 uh	14.0 uh	7.6	1.85
9053	14.0 uh	28.0 uh	10.3	1.85
9054	28.0 uh	60.0 uh	11.0	1.90
9055	60.0 uh	120.0 uh	10.3	1.90
9056	120.0 uh	280.0 uh	9.0	1.90
9057	280.0 uh	650.0 uh	8.0	1.95
9058	650.0 uh	1.3 Mh	8.0	1.95
9059	1.3 Mh	3.0 Mh	16.0	1.95
9060	3.0 Mh	10.0 Mh	7.0	2.10
9061	8.0 Mh	20.0 Mh	7.0	2.10
9062	15.0 Mh	40.0 Mh	7.0	2.10
9063	20.0 Mh	60.0 Mh	10.0	2.20



### Resinite Adjustable Printed Circuit R.F. Coils

This series of printed circuit coils are wound on a phenolic impregnated tubing which combines the mechanical and dielectric advantages. Dimensions: Form length 1", Collar 3/8" Dia.

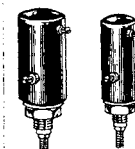
Part No.	L		Net Price
	Min.	Max.	
23A107RPC	.095 uh	.125 uh	.99
23A157RPC	.130 uh	.170 uh	.99
23A227RPC	.185 uh	.265 uh	.99
23A337RPC	.285 uh	.410 uh	.99
23A477RPC	.380 uh	.580 uh	.99
23A687RPC	.490 uh	.850 uh	.99
23A827RPC	.580 uh	1.00 uh	.99
23A106RPC	.690 uh	1.25 uh	.99
23A156RPC	1.10 uh	1.87 uh	.99
23A226RPC	1.50 uh	2.75 uh	.99
23A336RPC	2.20 uh	4.10 uh	.99
23A476RPC	3.10 uh	5.80 uh	.99
23A686RPC	4.20 uh	8.50 uh	.99
23A826RPC	5.10 uh	10.0 uh	.99
23A105RPC	6.50 uh	12.5 uh	.99
23A155RPC	9.00 uh	18.7 uh	1.17
23A225RPC	13.5 uh	27.5 uh	1.17
23A335RPC	20.0 uh	41.0 uh	1.17
23A475RPC	28.5 uh	58.0 uh	1.17
23A685RPC	39.5 uh	85.0 uh	1.17
23A825RPC	56.0 uh	100 uh	1.17
23A104RPC	69.0 uh	125 uh	1.17
23A154RPC	95.0 uh	187 uh	1.17
23A224RPC	145 uh	275 uh	1.17
23A334RPC	220 uh	410 uh	1.17
23A474RPC	330 uh	580 uh	1.17
23A684RPC	480 uh	850 uh	1.17
23A824RPC	640 uh	1.00 mh	1.26
23A103RPC	800 uh	1.25 mh	1.26
23A153RPC	930 uh	1.87 mh	1.26
23A223RPC	1.45 mh	2.75 mh	1.26
23A333RPC	2.20 mh	4.10 mh	1.26
23A473RPC	3.10 mh	5.80 mh	1.26
23A683RPC	4.70 mh	8.50 mh	1.26
23A823RPC	6.70 mh	10.0 mh	1.26
23A102RPC	8.90 mh	12.5 mh	1.26
23A152RPC	12.2 mh	18.7 mh	1.26
23A222RPC	11.0 mh	27.5 mh	1.32
23A332RPC	16.5 mh	41.0 mh	1.32
23A472RPC	25.0 mh	58.0 mh	1.32
23A682RPC	36.5 mh	85.0 mh	1.32
23A822RPC	45.0 mh	100 mh	1.32
23A101RPC	56.0 mh	125 mh	1.32

### Shielded Subminiature Adjustable R.F. Coils



These compact adjustable coils offer a minimum two-to-one inductance range with relatively small changes in Q. The tuning adjustment is accessible from either the top or bottom of the coil assembly. Magnetic shielding is achieved through the use of cup cores while the metal shield offers effective electrostatic shielding. Printed circuit terminals on base and shield.

Part No.	L		Typical Dist. C (pf)	Net Price
	Min.	Max.		
9050	1.5 uh	3.0 uh	3.5	\$1.80
9051	3.0 uh	7.0 uh	4.3	1.80



### Encapsulated Adjustable R.F. Coils

This series of encapsulated coils offer the maximum possible performance from an adjustable type of inductor. The coil is wound on an epoxy form which is placed inside an epoxy cup and this area filled with epoxy resin. In this manner a complete seal against moisture is achieved and good mechanical stability is assured.

Part No.	L		Net Price
	Max. ± 5%	Min. ± 10%	
50A106EBI	1.25 uh	0.62 uh	\$3.60
50A156EBI	1.87 uh	0.98 uh	3.60
50A226EBI	2.75 uh	1.26 uh	3.60
50A336EBI	4.10 uh	1.82 uh	3.63
50A476EBI	5.87 uh	2.56 uh	3.63
50A686EBI	8.50 uh	3.80 uh	3.63
50A826EBI	10.2 uh	4.40 uh	3.63
50A105EBI	12.5 uh	5.40 uh	3.69
50A155EBI	18.8 uh	7.80 uh	3.69
50A225EBI	27.5 uh	11.7 uh	3.78
50A335EBI	41.3 uh	18.8 uh	3.78
50A475EBI	58.7 uh	26.5 uh	3.81
50A685EBI	85.0 uh	36.0 uh	3.81
50A825EBI	102 uh	44.0 uh	3.84
50A104EBI	125 uh	63.0 uh	4.23
50A154EBI	187 uh	92.0 uh	4.26
50A224EBI	275 uh	130 uh	4.26
50A334EBI	410 uh	200 uh	4.29
50A474EBI	580 uh	280 uh	4.29
50A684EBI	850 uh	400 uh	4.32
50A824EBI	1.00 mh	540 uh	4.32
50A103EBI	1.25 mh	770 uh	4.35
50A153EBI	1.87 mh	950 uh	4.35
50A223EBI	2.75 mh	1.58 mh	4.38
50A333EBI	4.13 mh	2.40 mh	4.38
50A473EBI	5.80 mh	3.35 mh	4.44
50A683EBI	8.50 mh	5.20 mh	4.44
50A823EBI	10.00 mh	6.20 mh	4.44

### Economy Adjustable R.F. Chokes



Through the use of a recently developed Nylon molding process we are able to offer an inexpensive line of adjustable chokes. They can be adjusted from either the top or bottom. This lends a degree of flexibility to your design. Mounting is achieved by means of a metal clip in a 1/8" hole.

Cat. No.	Microhenries	Form only	Net Price
4200			\$ .60
4201	.3 - .58		.96
4201A	.55- 1.1		.96
4202	1- 2.5		.96
4203	2- 5.5		.99
4204	5- 12		1.02
4205	10- 25		1.05
4206	20- 55		1.14
4207	50-140		1.17
4208	120-330		1.20
4209	310-860		1.23

#4200 complete with hardware and core

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

J. W. MILLER COMPANY Los Angeles, California

# Miller

Industrial R.F. Chokes and Filters

### Sub-Miniature R.F. Chokes



An extremely versatile series of iron core R.F. chokes designed to meet the industries' demand for high reliability, ultra-miniature components.

The coils are ideally suited to network and filter design, delay lines, and computer applications. Rated at 50 milliamperes.

Part No	L*	Min. Q @ F	Net Pr.
70F106AI	1 uh	41 @ 7.9 Mc.	\$.57
70F126AI	1.2 uh	44 @ 7.9 Mc.	.57
70F156AI	1.5 uh	48 @ 7.9 Mc.	.57
70F186AI	1.8 uh	39 @ 7.9 Mc.	.57
70F226AI	2.2 uh	48 @ 7.9 Mc.	.57
70F276AI	2.7 uh	39 @ 7.9 Mc.	.57
70F336AI	3.3 uh	44 @ 7.9 Mc.	.57
70F396AI	3.9 uh	48 @ 7.9 Mc.	.57
70F476AI	4.7 uh	46 @ 7.9 Mc.	.57
70F566AI	5.6 uh	44 @ 7.9 Mc.	.57
70F686AI	6.8 uh	44 @ 7.9 Mc.	.57
70F756AI	7.5 uh	40 @ 7.9 Mc.	.57
70F826AI	8.2 uh	40 @ 7.9 Mc.	.57
70F916AI	9.1 uh	40 @ 7.9 Mc.	.57
70F105AI	10 uh	48 @ 2.5 Mc.	.66
70F125AI	12 uh	52 @ 2.5 Mc.	.66
70F155AI	15 uh	52 @ 2.5 Mc.	.66
70F185AI	18 uh	52 @ 2.5 Mc.	.66
70F225AI	22 uh	51 @ 2.5 Mc.	.66
70F255AI	25 uh	48 @ 2.5 Mc.	.66
70F275AI	27 uh	49 @ 2.5 Mc.	.66
70F335AI	33 uh	50 @ 2.5 Mc.	.66
70F395AI	39 uh	48 @ 2.5 Mc.	.66
70F475AI	47 uh	48 @ 2.5 Mc.	.66
70F565AI	56 uh	45 @ 2.5 Mc.	.66
70F685AI	68 uh	45 @ 2.5 Mc.	.66
70F755AI	75 uh	40 @ 2.5 Mc.	.66
70F825AI	82 uh	44 @ 2.5 Mc.	.66
70F915AI	91 uh	39 @ 2.5 Mc.	.66
70F104AI	100 uh	40 @ 790 Kc.	.66
70F124AI	120 uh	44 @ 790 Kc.	.66
70F154AI	150 uh	44 @ 790 Kc.	.66
70F184AI	180 uh	45 @ 790 Kc.	.66
70F204AI	200 uh	45 @ 790 Kc.	.66
70F224AI	220 uh	45 @ 790 Kc.	.66
70F254AI	250 uh	46 @ 790 Kc.	.66
70F274AI	270 uh	45 @ 790 Kc.	.66
70F304AI	300 uh	42 @ 790 Kc.	.66
70F334AI	330 uh	47 @ 790 Kc.	.66
70F354AI	350 uh	44 @ 790 Kc.	.66
70F394AI	390 uh	42 @ 790 Kc.	.75
70F474AI	470 uh	47 @ 790 Kc.	.75
70F504AI	500 uh	42 @ 790 Kc.	.75
70F564AI	560 uh	39 @ 790 Kc.	.75
70F684AI	680 uh	44 @ 790 Kc.	.75
70F754AI	750 uh	35 @ 790 Kc.	.75
70F824AI	820 uh	42 @ 790 Kc.	.75
70F914AI	910 uh	35 @ 790 Kc.	.75
70F103AI	1.00 mh	40 @ 790 Kc.	.75
70F123AI	1.20 mh	37 @ 250 Kc.	.75
70F153AI	1.50 mh	40 @ 250 Kc.	.75
70F183AI	1.80 mh	40 @ 250 Kc.	.75
70F223AI	2.20 mh	40 @ 250 Kc.	.81
70F253AI	2.50 mh	48 @ 250 Kc.	.84
70F273AI	2.70 mh	50 @ 250 Kc.	.84
70F333AI	3.30 mh	56 @ 250 Kc.	.84
70F393AI	3.90 mh	47 @ 250 Kc.	.84
70F473AI	4.70 mh	54 @ 250 Kc.	.84
70F563AI	5.60 mh	46 @ 250 Kc.	.84
70F683AI	6.80 mh	51 @ 250 Kc.	.84
70F753AI	7.50 mh	44 @ 250 Kc.	.84
70F823AI	8.20 mh	48 @ 250 Kc.	.99
70F913AI	9.10 mh	37 @ 250 Kc.	.99
70F102AI	10.0 mh	48 @ 250 Kc.	.99
70F122AI	12 mh	39 @ 79 Kc.	1.08
70F152AI	15 mh	40 @ 79 Kc.	1.08
70F182AI	18 mh	41 @ 79 Kc.	1.08
70F222AI	22 mh	42 @ 79 Kc.	1.17

### Single Pi Ferrite Core R.F. Chokes



This series of R.F. chokes affords maximum Q with minimum resistance through the use of ferrite core material. The coils are impregnated in a fungus resistant lacquer. Form Dim: .187 x 5/8" long.

Part No.	L*	Min. Q @ F	Net Pr.
73F104AF	100 uh	140 @ 790 kc.	\$.75
73F124AF	120 uh	140 @ 790 kc.	.75
73F154AF	150 uh	160 @ 790 kc.	.75
73F184AF	180 uh	160 @ 790 kc.	.75
73F224AF	220 uh	160 @ 790 kc.	.75
73F274AF	270 uh	160 @ 790 kc.	.75
73F334AF	330 uh	160 @ 790 kc.	.75
73F394AF	390 uh	160 @ 790 kc.	.75
73F474AF	470 uh	160 @ 790 kc.	.75
73F564AF	560 uh	160 @ 790 kc.	.75
73F684AF	680 uh	160 @ 790 kc.	.81
73F824AF	820 uh	150 @ 790 kc.	.81
73F103AF	1.0 mh	140 @ 790 kc.	.81
73F123AF	1.2 mh	140 @ 250 kc.	.81
73F153AF	1.5 mh	140 @ 250 kc.	.81
73F183AF	1.8 mh	140 @ 250 kc.	.81
73F223AF	2.2 mh	100 @ 250 kc.	.81
73F273AF	2.7 mh	100 @ 250 kc.	.81
73F333AF	3.3 mh	100 @ 250 kc.	.90
73F393AF	3.9 mh	95 @ 250 kc.	.90
73F473AF	4.7 mh	95 @ 250 kc.	.90
73F563AF	5.6 mh	95 @ 250 kc.	.99
73F683AF	6.8 mh	95 @ 250 kc.	.99
73F823AF	8.2 mh	70 @ 250 kc.	1.05
73F102AF	10.0 mh	65 @ 250 kc.	1.05

### Single Layer Color Coded R.F. Chokes

The following solenoid wound R.F. Chokes are impregnated with a thermosetting varnish and are color coded to EIA standards. Form Dimensions: .156 x 1/2" long.

Part No.	L	Min. Q @ F	Net Pr.
74F106AP	1.0 uh	45 @ 7.9 Mc.	\$.75
74F126AP	1.2 uh	45 @ 7.9 Mc.	.75
74F156AP	1.5 uh	45 @ 7.9 Mc.	.75
74F186AP	1.8 uh	45 @ 7.9 Mc.	.75
74F226AP	2.2 uh	45 @ 7.9 Mc.	.75
74F276AP	2.7 uh	45 @ 7.9 Mc.	.75
74F336AP	3.3 uh	45 @ 7.9 Mc.	.75
74F396AP	3.9 uh	45 @ 7.9 Mc.	.75
74F476AP	4.7 uh	50 @ 7.9 Mc.	.75
74F566AP	5.6 uh	50 @ 7.9 Mc.	.75
74F686AP	6.8 uh	50 @ 7.9 Mc.	.75
74F826AP	8.2 uh	50 @ 7.9 Mc.	.75
74F105AP	10 uh	50 @ 7.9 Mc.	.80
74F125AP	12 uh	30 @ 2.5 Mc.	.80
74F155AP	15 uh	30 @ 2.5 Mc.	.80
74F185AP	18 uh	30 @ 2.5 Mc.	.85
74F225AI	22 uh	85 @ 2.5 Mc.	.85
74F275AI	27 uh	80 @ 2.5 Mc.	.90
74F335AI	33 uh	80 @ 2.5 Mc.	.90
74F395AI	39 uh	90 @ 2.5 Mc.	.95
74F475AI	47 uh	90 @ 2.5 Mc.	1.00
74F565AI	56 uh	90 @ 2.5 Mc.	1.00
74F685AI	68 uh	90 @ 2.5 Mc.	1.00
74F825AI	82 uh	100 @ 2.5 Mc.	1.00
74F104AI	100 uh	100 @ 2.5 Mc.	1.00

L Tolerances: 1.0 to 2.2 uh ±20%,  
2.7 to 100 uh ±10%.



### Light Duty Duo-Lateral Line Filter Chokes

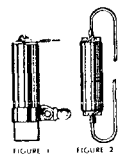
#### Single Line Filter Chokes

Part No.	Dim: 1 1/8" x 1 1/4"	uh.	Rdc.	Amps.	Net Price
7825	600	.7	2		\$1.80
7825-3	250	.25	3		1.80
7825-5	100	.1	5		1.80
7825-8	50	.05	8		1.80

#### Dual Line Filter Chokes

Part No.	Dim: 3 1/4" x 2 1/8"	uh.	Rdc.	Amps.	Net Price
D-7825	600	.7	2		\$3.00
D-7825-3	250	.25	3		3.00
D-7825-5	100	.1	5		3.00
D-7825-8	50	.05	8		3.00

### Frequency Selective R.F. Chokes

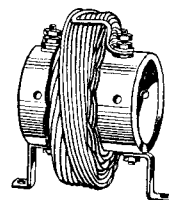


Designed for maximum efficiency and highest impedance at specific operating frequencies this group of R.F. chokes eliminates the designer's task of attempting to choose the best coil for a particular application from miscellaneous and often insufficient design data. Designed to cover the major Amateur, Industrial, and Citizens bands the coils will also operate efficiently at frequencies approximating the recommended frequencies.

The RFC-3.5, RFC-7, and RFC-14 are the standoff type, mounted by a single 6-32 screw. All other coils are mounted with axial leads.

Part No.	L*	Freq. Mc.	Fig.	Net Pr.
RFC-3.5	266 uh	1.8-5	1	\$1.20
RFC-7	208 uh	3-13	1	1.04
RFC-14	84 uh	7-20	1	.69
RFC-21	38.5 uh	15-30	2	.60
RFC-28	24 uh	25-40	2	.60
RFC-50	8.2 uh	30-90	2	.60
RFC-144	1.72 uh	75-180	2	.51
RFC-220	.82 uh	160-340	2	.51
RFC-420	.22 uh	325-500	2	.51

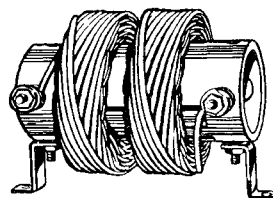
### Medium Duty Duo-Lateral Line Filter Chokes



These chokes combine small physical size with low distributed capacity. They are used essentially for radio interference filtering. The chokes are wound on ceramic forms with suitable brass terminals. Dim: 2 1/2" x 4"

Part No.	uh.	Rdc.	Amps.	Net Price
7826	570	.28	5	\$4.20
7827	370	.15	10	4.56
7828	200	.085	20	4.95
7829	135	.050	30	5.40

### Dual Line Filter Chokes



The following Dual Duo-Lateral Line Filter Chokes are wound with two coils on the one ceramic form. They are identical in electrical specifications. Dim: 4 1/2" x 4"

Part No.	uh.	Rdc.	Amps.	Net Price
D-7826	570	.28	5	\$6.42
D-7827	370	.15	10	7.20
D-7828	200	.085	20	7.92
D-7829	135	.050	30	8.85

\*TOLERANCE 0.1 TO 1.0 UH ± 20%, 1.1 TO 10 UH ± 10%, OVER 10 UH ± 5%

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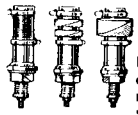
**J. W. MILLER COMPANY** Los Angeles, California



# Miller



## Adjustable R.F. Coils & Chokes



### Adjustable Ceramic Forms and R.F. Coils

Permeability tuned coils wound on silicone impregnated ceramic forms. Hardware necessary for assembly is supplied.

#### Standard Adjustable Ceramic Form and R.F. Coils

Dimensions (form):  $\frac{3}{8}$ " diameter x  $1\frac{1}{8}$ " long.

Cat. No.	Microhenries	Net Price
4400	Form only	\$1.14
4403	0.9- 1.6	1.62
4404	1.5- 3.2	1.65
4405	3.1- 6.8	1.68
4406	6.7- 15	1.74
4407	14.8- 31	1.80
4408	30 - 69	1.83
4409	68 - 130	1.89
4410	126 - 250	1.92
4411	245 - 475	1.95
4412	450 - 800	1.98
4413	750 -1400	2.01
4414	1300 -2100	2.01

#4400 comes complete with hardware and core\*  
 #4400 Bulk packed per 100 Net Price 99.00

#### Miniature Adjustable R.F. Coils

Dimensions (form):  $\frac{1}{4}$ " diameter x  $\frac{7}{8}$ " long.

Cat. No.	Microhenries	Net Price
4500	Form only	\$1.05
4501	.4- .8	1.50
4502	1.0- 1.6	1.50
4503	1.6- 2.8	1.56
4504	2.8- 5	1.59
4505	5 - 9	1.65
4506	9 - 16	1.71
4507	16 - 24	1.77
4508	24 - 35	1.80
4509	35 - 60	1.83
4511	60 -120	1.86
4512	110 -200	1.89
4513	190 -330	1.92
4514	320 -500	1.95
4514-1	480 -800	2.01

#4500 comes complete with hardware and core\*  
 #4500 Bulk packed per 100 Net Price 81.00

#### Sub-Miniature Adjustable R.F. Coils

Dimensions (form):  $\frac{3}{16}$ " diameter x  $\frac{5}{8}$ " long.

Cat. No.	Microhenries	Net Price
4300	Form only	\$1.05
4301	0.17- 0.27	1.50
4302	0.27- 0.41	1.50
4303	0.40- 0.65	1.56
4304	0.64- 0.95	1.59
4305	0.94- 1.55	1.65
4306	1.5 - 2.57	1.71
4307	2.5 - 4.40	1.77
4308	4.3 - 7.15	1.80
4309	7.1 - 12.5	1.83
4310	12.4 - 20.3	1.86
4311	20.1 - 32.8	1.89
4312	32.5 - 51.5	1.92
4313	51. -102.	1.95
4314	101. -180.	1.95
4315	178. -300.	1.95

#4300 comes complete with hardware and core\*  
 #4300 Bulk packed per 100 Net Price 81.00

Quantity orders can be wound to your specific requirements with extended inductances and Q values other than those shown. Your inquiries invited.

\*When ordering forms alone, the type of core should be specified by the addition of a suffix taken from the following.

Suffix	Frequency Range of Core Material
Y	50-1000 kc.
R	1- 30 Mc.
W	30- 300 Mc.



### Wide Range Adjustable Inductors

Due to the wide range of these coils they will find immediate application in many prototype designs where the exact value of the required inductance is not known.

Dimensions: Max. Dia.  $\frac{3}{4}$ " x  $2\frac{1}{4}$ " long both types Inductance measured at 1000 cycles

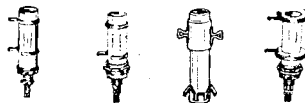
#### Untapped Inductors

Cat. No.	L Min.	L Max.	Net Price
9001	35 uh	.300 mh	\$1.11
9002	.150 mh	1.00 mh	1.44
9003	.500 mh	3.50 mh	1.65
9004	1.75 mh	10.0 mh	1.65
9005	5.00 mh	20.0 mh	1.77
9006	10.0 mh	50.0 mh	1.89
9007	25.0 mh	130 mh	1.95
9008	65.0 mh	300 mh	2.07

#### Tapped Osc. Inductors

9011	35 uh	.300 mh	\$1.29
9012	.150 mh	1.00 mh	1.59
9013	.500 mh	3.50 mh	1.80
9014	1.75 mh	10.0 mh	1.80
9015	5.00 mh	20.0 mh	1.89
9016	10.0 mh	50.0 mh	2.07
9017	25.0 mh	130 mh	2.07
9018	65.0 mh	300 mh	2.25

### Coil Forms



We have compiled a separate listing of our coil forms that have appeared for years in our catalogs as part of the R.F. Coil listings. Resinite material is a phenolic impregnated tubing that can be certified to MIL-P-798 type PBC. The ceramic material meets Jan 1-10, Grade L5 and is Silicone Impregnated to reduce moisture absorption. When ordering forms the type of core should be specified by the addition of a suffix taken from the following:

Suffix	Core Material
Y	50-1000 kc.
R	1-30 Mc.
W	30-300 Mc.

\*Core for this item is available only in Ferrite material.

R is supplied unless specified. All hardware is supplied.

Part No.	Dia.	Lgth.	Hole	Material	Net Price
20A000RBI	$\frac{1}{4}$	$1\frac{1}{8}$	$\frac{1}{16}$	Resinite	\$ .63
20A000RBI		Bulk Pkd. per 100 pcs			54.00
21A000RBI	$\frac{3}{16}$	$1\frac{1}{8}$	$\frac{1}{16}$	Resinite	.66
21A000RBI		Bulk Pkd. Per 100 pcs			57.00
22A000RBI	$\frac{1}{2}$	$1\frac{7}{8}$	$\frac{1}{4}$	Resinite	.81
22A000RBI		Bulk Pkd. per 100 pcs			69.00
40A000CBI	$\frac{7}{32}$	$1\frac{3}{32}$	$\frac{1}{16}$	Ceramic	1.44
40A000CBI		Bulk Pkd. per 100 pcs			129.00
41A000CBI	$\frac{1}{4}$	$1\frac{3}{16}$	$\frac{3}{16}$	Ceramic	1.50
41A000CBI		Bulk Pkd. per 100 pcs			135.00
42A999CBI	$\frac{3}{8}$	1	$\frac{1}{4}$	Ceramic	1.56
42A000CBI		Bulk Pkd. per 100 pcs			140.40
43A000CBI	$\frac{1}{2}$	$1\frac{1}{16}$	$\frac{1}{4}$	Ceramic	1.62
43A000CBI		Bulk Pkd. per 100 pcs			145.80
4200*	.289	$\frac{1}{8}$	$\frac{3}{16}$	Nylon	.60
4200*		Bulk Pkd. per 100 pcs			51.00
4300	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{1}{16}$	Ceramic	1.05
4300		Bulk Pkd. per 100 pcs			81.00
4400	$\frac{3}{8}$	$1\frac{1}{16}$	$\frac{1}{4}$	Ceramic	1.14
4400		Bulk Pkd. per 100 pcs			99.00
4500	$\frac{1}{4}$	$\frac{7}{8}$	$\frac{3}{16}$	Ceramic	1.05
4500		Bulk Pkd. per 100 pcs			81.00

190 Iron Core Assortment  
 Two each of 6 different cores  
 Cores color coded for easy identification 1.40

### Encapsulated R.F. Chokes



The following series of R.F. chokes range in value from 0.1 uh to 50 mh. Basically identical to our standard series of axial lead R.F. chokes bearing the equivalent number, these coils are encapsulated in epoxy resin and conform to MIL-C-15305.

Part No.	L*	R Max.	Current MA	Net Price
4580-E	0.1 uh.	.012	300	\$1.26
4582-E	0.15 uh.	.015	300	1.26
4584-E	0.22 uh.	.021	300	1.26
4586-E	0.33 uh.	.023	300	1.26
4588-E	0.47 uh.	.026	300	1.26
4590-E	0.68 uh.	.036	300	1.26
4592-E	0.75 uh.	.040	300	1.26
4594-E	0.82 uh.	.042	300	1.26
4602-E	1.0 uh.	.06	300	1.26
4604-E	1.5 uh.	.096	300	1.26
4606-E	2.4 uh.	.192	300	1.26
4608-E	3.9 uh.	.6	300	1.26
4609-E	5.5 uh.	.83	300	1.29
4610-E	6.2 uh.	.90	300	1.29
4611-E	8.2 uh.	1.34	300	1.29
4612-E	10.0 uh.	1.8	200	1.29
4622-E	10.0 uh.	.122	300	1.32
4624-E	15.0 uh.	.170	300	1.32
4626-E	24.0 uh.	.336	300	1.35
4628-E	39.0 uh.	.78	300	1.35
4629-E	55.0 uh.	1.10	300	1.35
4630-E	62.0 uh.	1.2	300	1.35
4631-E	82.0 uh.	1.92	300	1.35
4632-E	100.0 uh.	2.4	200	1.35

4642-E	0.10 mh.	4.92	125	1.50
4644-E	0.15 mh.	6.84	125	1.50
4646-E	0.24 mh.	8.16	125	1.50
4648-E	0.39 mh.	12.0	125	1.56
4649-E	0.55 mh.	13.2	125	1.98
4650-E	0.62 mh.	15.1	125	1.98
4651-E	0.75 mh.	16.4	125	1.98
4652-E	1.0 mh.	19.8	125	1.98

4662-E	1.0 mh.	8.4	125	2.01
4664-E	1.5 mh.	10.8	125	2.04
4666-E	2.4 mh.	14.4	125	2.13
4668-E	3.9 mh.	20.4	125	2.19
4669-E	5.5 mh.	26.4	125	2.31
4670-E	6.2 mh.	39.6	100	2.31
4671-E	8.2 mh.	54.0	100	2.37
4672-E	10.0 mh.	56.4	50	2.70

6302-E	2.5 mh.	9.36	200	2.28
6304-E	5.0 mh.	14.9	200	2.37
6306-E	10.0 mh.	36.0	125	2.52
6308-E	25.0 mh.	83.4	75	2.70
6310-E	50.0 mh.	133	75	2.94

### Heavy Duty Hash Chokes



Through the use of a molded powdered iron form we are able to offer a series of relatively high inductance, high current hash filter chokes.

Dim.  $9\frac{1}{16}$ " Diameter x  $1\frac{1}{4}$ " long.

Part No.	uh. $\pm 20\%$	Rdc. Max.	Amps.	Net Price
5218	3.35	.010	13	\$1.17
5219	4.9	.016	8	1.17
5220	8.8	.021	5	1.17
5230	4.0	.012	2	.90
5240	40.0	.082	2	1.05
5248	68.0	.054	2	1.05
5250	100.0	.216	2	1.17

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J. W. MILLER COMPANY Los Angeles, California



# Miller

## Radio Frequency Chokes



### R.F. Chokes with Axial Leads

These chokes cover an inductance range from .1 microhenry to 10 millihenries in 5 decades with 8 coils per decade. Inductance values increase in steps of approximately 50%. Either single layer or 3-pi universal windings are used to insure low distributed capacity. Chokes are wound on low-loss molded phenolic or powdered iron core forms and are impregnated with a moisture- and fungus-resistant varnish. The type of powdered iron used allows the chokes to operate at all frequencies up into the ultra-high frequency region.

Dimensions: Phenolic form  $\frac{3}{8}$ " diameter x  $\frac{3}{4}$ " long. Iron core form  $\frac{3}{8}$ " diameter x  $\frac{7}{8}$ " long. Leads are  $1\frac{1}{2}$ " long.

#### Phenolic Form Single Layer Windings

Cat. No.	uh.*	Ohms Max.	Ma.	Net Pr.
4580	0.1	.012	3000	\$.45
4582	0.15	.014	2900	.45
4584	0.22	.024	2800	.45
4586	0.33	.023	2600	.45
4588	0.47	.026	2500	.45
4590	0.68	.036	2400	.45
4592	0.75	.039	2200	.45
4594	0.82	.042	2100	.45
4602	1.	.060	2000	.45
4604	1.5	.096	1800	.45
4606	2.4	.192	1500	.45
4608	3.9	.600	1000	.45
4609	5.5	.828	850	.48
4610	6.2	.900	700	.48
4611	8.2	1.34	600	.46
4612	10	1.80	500	.48

#### Iron Core Form Single Layer Windings

Cat. No.	uh.*	Ohms Max.	Ma.	Net Pr.
4622	10	.072	1500	\$.51
4624	15	.170	1000	.51
4626	24	.336	800	.54
4628	39	.780	600	.54
4629	55	1.10	500	.57
4630	62	1.20	475	.57
4631	82	1.92	450	.57
4632	100	2.40	400	.57

#### Phenolic Form 3-Section Windings

Cat. No.	mh*	Ohms Max.	ma	Net Pr.
4642	0.1	4.92	125	\$.57
4644	0.15	6.84	125	.57
4646	0.24	8.16	125	.57
4648	0.39	12.0	125	.63
4649	0.55	13.2	125	.63
4650	0.62	15.1	125	.63
4651	0.75	16.4	125	.63
4652	1.0	19.8	125	.63

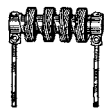
#### Iron Core Form 3-Section Windings

Cat. No.	mh*	Ohms Max.	ma	Net Pr.
4662	1	8.4	125	\$.66
4664	1.5	10.8	125	.69
4666	2.4	14.4	125	.75
4668	3.9	20.4	125	.81
4669	5.5	26.4	125	.93
4670	6.2	39.6	125	.93
4671	8.2	54.0	125	1.11
4672	10	56.4	50	1.29

### Ferrite Core R.F. Chokes

A new series of R.F. Chokes taking advantage of the high permeability of ferrite cores. These chokes combine high inductance and low D.C. resistance with a small physical size. Dimensions of core:  $\frac{1}{4}$ " diameter x  $\frac{7}{8}$ " long.  $1\frac{1}{2}$ " long axial leads.

Cat. No.	mh*	Ohms Max.	ma	Net Pr.
6302	2.5	9.36	200	\$.81
6304	5	14.9	200	.93
6306	10	36.0	125	1.08
6308	25	83.4	75	1.26
6310	50	133	75	1.44



### Multiple Pi Chokes

These Multiple Pi duo-lateral chokes have a low distributed capacity of 1.2-1.3 mmf. The current carrying capacity is comparatively high for this type of choke. Inductance tol.  $\pm 5\%$ .

Cat. No.	Mh.	Ohms Max.	MA	Net Price
4531-0	.25	9.6	200	\$.75
4531	.5	14.4	200	.75
4531-1	1	20.4	200	.75
4532	1.5	25.2	200	.78
4537	2.5	33.6	200	.81
4538	5	50.4	125	.96
4539	7.5	98.4	125	1.08
4540	10	114	125	1.20
4541	25	192	125	1.41

#4537 Bulk packed per 100 - Net Pr. 66.00  
R.F. Chokes wound to closer tolerances if required in lots of 100 pieces or more at slightly higher prices.



### Unshielded Chokes

This single section R.F. Chokes are ideally suited for general purpose applications in receiver and filter circuit. Solder lug terminals and single hole mounting. Inductance tol.  $\pm 5\%$ .

#### Air Core Type

Dimensions:  $1\frac{1}{8}$ " diameter x  $\frac{3}{8}$ "

Cat. No.	Mh.	Ohms Max.	MA	Net Price
610	.25	9.6	125	\$.60
615	.5	14.4	125	.60
620	.75	19.2	125	.60
622	1.0	21.6	125	.60
630	1.5	25.2	125	.66
640	2.5	34.8	125	.75
650	5.0	52.8	125	.75
660	7.5	66.0	125	.78
670	10	81.0	125	.81
680	12.5	92.5	125	.84
690	15	102	125	.87
691	20	120	125	.96
692	30	156	100	.99
693	60	240	100	1.14
694	80	264	100	1.23

#### Center Tapped Types

Cat. No.	Mh.	Ohms Max.	MA	Net Price
670-T	10	80.4	125	.87
691-T	20	120	125	.99
693-T	60	240	100	1.32

#### Iron Core Type

These chokes are similar in construction to the No. 600 series except that they are wound on powdered iron cores. Inductance tol.  $\pm 5\%$ .

Cat. No.	Mh.	Ohms Max.	MA	Net Price
951	.5	8.40	125	\$.78
952	1.0	13.2	125	.84
953	2.5	22.8	125	.93
954	5.0	34.8	125	1.05
955	7.5	44.4	125	1.14
956	10.0	56.4	125	1.20
957	25.0	99.5	100	1.32
958	50.0	156	100	1.50
959	75.0	204	100	1.65
960	100.0	240	100	1.86
961	150.0	312	100	1.98



### Shielded Chokes

Single section wound R.F. Chokes assembled in round aluminum shield with two spade bolts for mounting. Solder lug terminals.

#### Iron Core Type

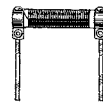
Dimensions:  $1\frac{1}{4}$ " dia. x  $1\frac{1}{8}$ " high

Cat. No.	Mh.	Ohms Max.	MA	Net Price
851	.5	9.60	125	\$1.17
852	1.0	13.2	125	1.23
853	2.5	24.0	125	1.26
854	5.0	37.2	125	1.32
855	7.5	50.4	125	1.38
856	10.0	56.4	125	1.50
857	25.0	112	125	1.65

Dimensions:  $1\frac{3}{8}$ " dia. x  $1\frac{1}{8}$ " high

Cat. No.	Mh.	Ohms Max.	MA	Net Price
858	50.0	192	100	1.71
859	75.0	228	100	1.89
860	100.0	384	100	2.04
861	150.0	576	100	2.31

### Ceramic Core R.F. Chokes



Miller ceramic core radio frequency chokes are the result of careful research and design, and present advantages found in no other comparable chokes. These chokes have extremely low distributed capacity.

All chokes are impregnated with a moisture- and fungus-resistant varnish.

Dimensions: (form)  $\frac{1}{4}$ " diameter by  $1\frac{1}{2}$ " long.

#### Single Layer Wound Chokes

Part No.	uh.*	Ohms Max.	ma	Net Price
4528-1	1	.036	300	\$.54
4528	2.5	.108	300	.54
4529	5	.300	300	.54
4529-10	10	1.14	300	.54

#### Progressive Wound Chokes

Part No.	uh.*	Ohms Max.	ma	Net Price
4515	25	1.92	300	\$.60
4517	50	2.52	300	.60
4519	100	3.60	300	.60

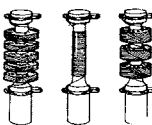
### PC Air Core R.F. Chokes



The following R.F. Chokes have been designed to offer a wide range of inductance values for use in printed circuit applications. Our standard stock of these coils is impregnated with a high grade coil varnish to prevent moisture absorption. On special orders we can supply these items treated with fungus resistant material, or encapsulated in epoxy resin to meet MIL-C-15305

Part No.	L*	R Max.	Current	Net Price
970	1.0 mh.	20.6 ohms	125 ma.	\$.57
971	1.2 mh.	23.8 ohms	125 ma.	.57
972	1.5 mh.	26.4 ohms	125 ma.	.57
973	1.8 mh.	29.6 ohms	125 ma.	.60
974	2.2 mh.	32.9 ohms	125 ma.	.60
975	2.7 mh.	37.4 ohms	125 ma.	.60
976	3.3 mh.	41.8 ohms	125 ma.	.63
977	3.9 mh.	46.7 ohms	125 ma.	.63
978	4.7 mh.	51.8 ohms	125 ma.	.63
979	5.6 mh.	57.6 ohms	125 ma.	.63
980	6.8 mh.	64.4 ohms	125 ma.	.66
981	8.2 mh.	73.0 ohms	100 ma.	.66
982	10.0 mh.	81.6 ohms	100 ma.	.72
983	12.0 mh.	92.4 ohms	100 ma.	.75
984	15.0 mh.	105 ohms	100 ma.	.78
985	18.0 mh.	117 ohms	100 ma.	.81
986	22.0 mh.	130 ohms	75 ma.	.93
987	27.0 mh.	145 ohms	75 ma.	.96
988	33.0 mh.	251 ohms	75 ma.	1.02
989	39.0 mh.	277 ohms	75 ma.	1.05
990	47.0 mh.	316 ohms	50 ma.	1.08
991	56.0 mh.	351 ohms	50 ma.	1.14
992	68.0 mh.	391 ohms	50 ma.	1.20
993	82.0 mh.	442 ohms	50 ma.	1.26
994	100.0 mh.	473 ohms	50 ma.	1.32

### Ceramic Form R.F. Chokes



A series of high quality fixed coils wound on a silicone impregnated steatite form. The coils are the standoff type and are mounted by a single 6-32 screw. They find primary application in low power transmitters and associated equipment where relatively high current capacity and low distributed capacitance are important.

Part Number	L*	Rated Current	Net Price
4552	0.25 mh.	150 ma.	\$.75
4553	0.50 mh.	150 ma.	.75
4554	1.0 mh.	150 ma.	.81
4555	2.5 mh.	150 ma.	.93
4556	5.0 mh.	150 ma.	.96
4557	0.25 mh.	300 ma.	.81
4558	0.50 mh.	300 ma.	.81
4559	1.0 mh.	300 ma.	.99
4560	2.5 mh.	300 ma.	1.08
4561	5.0 mh.	300 ma.	1.14

\*TOLERANCE 0.1 TO 1.0 UH  $\pm 20\%$ , 1.1 TO 10 UH  $\pm 10\%$ , OVER 10 UH  $\pm 5\%$

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J. W. MILLER COMPANY Los Angeles, California



# Miller



## Transistor Components and I.F. Transformers

### Adjustable Padder Condensers



Used as adjustable oscillator padding condenser in super-het receivers to insure proper three-point tracking. They also find application as the horizontal drive control in television receivers. 1/4" single hole mounting.

Dimensions: 7/8" x 1" x 3/8" thick.

Cat. No.	Capacity Range	Net Price
160-A	360-1000 mmfd.	\$.84
160-B	50-400 mmfd.	.75
160-C	200-600 mmfd.	.84
160-D	10-160 mmfd.	.66
160-E	25-280 mmfd.	.72

### Standard Transistor Antenna Rod



Dimensions: 3/4" x 9". Tuning Cond. Max. Net

Cat. No.	Q @ 790 KC	Freq. Range	Capacity	Price
2000	450	540-1650 KC	365 mmf.	\$1.95

### Miniature Transistor Antenna Rods



Dimensions: 3/4" x 3 3/4". Tuning Cond. Max. Net

Cat. No.	Q @ 790 KC	Freq. Range	Capacity	Price
2001	550	540-1650 KC	365 mmf.	\$1.80
2003	500	540-1650 KC	130 mmf.	1.80

### Ferrite-Strip Transistor Antenna Rods



Dimensions: 1/4" x 3/4" x 3 3/4" Tuning Cond. Max. Net

Cat. No.	Q @ 790 KC	Freq. Range	Capacity	Price
2004	500	540-1650 KC	365 mmf.	\$1.80
2005	450	540-1650 KC	130 mmf.	1.80

### Sub-Miniature Transistor Antenna Rods



Dimensions: 1/2" x 2 1/2". Tuning Cond. Max. Net

Cat. No.	Q @ 790 KC	Freq. Range	Capacity	Price
2002	250	540-1650 KC	250-450 mmf.	\$1.11
2007	220	540-1650 KC	100-250 mmf.	1.44

### High-Q Ferrite Antenna Coil



Supplied with mounting bracket  
Dimensions: 3/8" diameter x 2 1/4" long.

Cat. No.	Use	Freq. Range	Net Price
6300	Antenna Stage	540-1700 KC	\$ .90

### Unshielded Miniature Transistor Oscillators

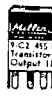


The 2020 oscillator coil (Revised 5-lug) is designed for use in a converter oscillator circuit. The 2023 oscillator coil (6-lug) is for use where a separate transistor is used for the oscillator and another transistor for the mixer.

Dimensions: 3/8" x 1" high

Cat. No.	Cond. Max. Capacity	I.F. Freq.	Net Price
2020	365 mmf.	455 KC	\$1.65
2022	78-100 mmf.	455 KC	1.65
2023	365 mmf.	455 KC	1.65

### Sub-Miniature Transistor I.F. Transformers & Matching Osc.



A high impedance, tapped primary winding coupled to a low impedance secondary provides optimum energy transfer.

Dimensions: 3/8" sq. x 5/8" high.

Cat. No.	Freq.	Impedance	Use	Net Price
9-C1	455 KC	25K-600 Ohms	Input	\$2.40
9-C2	455 KC	25K-1000 Ohms	Output	2.40
2021	Oscillator	(Tuning Cap. 78 mmfd)		2.10

### Miniature Transistor I.F. Transformers



Designed to have the proper impedance match when used with the transistors on our data sheets.

Dimensions: 1/2" sq. x 3/4" high.

Cat. No.	Freq.	Impedance	Use	Net Price
2031	455 KC	10K-600 Ohms	Input	\$2.10
2032	455 KC	10K-1000 Ohms	Output	2.10
2041	455 KC	25K-600 Ohms	Input	2.10
2042	455 KC	25K-1000 Ohms	Output	2.10
2043	455 KC	70K-1000 Ohms	Input	2.10
2044	455 KC	30K-4000 Ohms	Output	2.10
2045	455 KC	70K-500 Ohms	Input	2.10
2051	455 KC	100K-1000 Ohms	Input	2.10

### Sub-Miniature I.F. Trans.



Through the use of a Ferrite shell core material these Sub-Miniature I.F. Transformers offer the gain and bandwidth characteristics previously obtained in only larger I.F. assemblies. (For Battery or AC-DC Radios.)

Dimensions: 1/2" sq. x 1 1/2" high.

Cat. No.	Item	Net Price
10-C1	455 KC Input I.F. Trans.	\$2.85
10-C2	455 KC Output I.F. Trans.	2.85

### Micro Miniature Transistor I.F. Trans. & Matching Oscillator



Construction is ultra small, rugged and mechanically stable. Tuning being effected by means of a sturdy threaded cap core which engages a threaded coil support.

Dimensions: 5/32" sq. x 1 1/2" high

Cat. No.	Freq.	Impedance	Use	Net Price
2061	455 kc	50k - 800 ohms	Input	\$2.10
2062	455 kc	30k - 500 ohms	Instage	2.10
2063	455 kc	20k - 5k ohms	Output	2.10
2060	Oscillator	(Tuning cap. 78 to 100 mmfd, max.)		2.10

### Mini Miniature Transistor I.F. Trans. & Matching Oscillator



Similar in style to the Micro Miniature, these transformers are a little larger in size, with built-in capacitors for higher available Q.

Dimensions: 1 1/2" sq. x 1 1/2" high

Cat. No.	Freq.	Impedance	Use	Net Price
2066	455 kc	50k - 800 ohms	Input	\$2.10
2067	455 kc	30k - 500 ohms	Instage	2.10
2068	455 kc	20k - 5k ohms	Output	2.10
2065	Oscillator	(Tuning cap. 78 to 110 mmfd, max.)		2.10

### F.M. Transistor I.F. Transformers



This series of high quality I.F., Discriminator, and Ratio Detector transformers makes it possible for the first time to construct a completely self-contained battery operated F.M. receiver which compares favorably with its vacuum tube counterpart.

Dimensions: 3/4" sq. x 2" high.

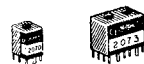
Cat.	Freq.	Use	Net Price
1601	10.7 Mc	First I.F. Input	\$2.28
1602	10.7 Mc	Second I.F. Instage	2.37
1603	10.7 Mc	Third I.F. Output	2.37
1604	10.7 Mc	Discriminator	2.55
1605	10.7 Mc	Ratio Det. w/Diodes	4.80
1606	10.7 Mc	Ratio Detector	2.25

### Printed Circuit Style

Dimensions: 3/4" sq. x 2 1/2" high.

Cat. No.	Freq.	Use	Net Price
1601-PC	10.7 Mc	Transistor First I.F.	\$2.85
1602-PC	10.7 Mc	Transistor Second I.F.	2.97
1603-PC	10.7 Mc	Transistor Third I.F.	2.37
1605-PC	10.7 Mc	Ratio Detector with Diodes	5.70

### Sub-Miniature Style



This series of transformers have single tuned I.F.'s and double tuned Ratio Detectors.

I.F. Trans. Dimensions: 1 1/2" sq. x 1 1/2" high  
Ratio Det. Dimensions: 1 1/2" x 3/4" x 1 1/2" high

Cat. No.	Freq.	Use	Net Price
2070	10.7 Mc	First I.F. Input	\$2.25
2071	10.7 Mc	Second I.F. Instage	2.25
2072	10.7 Mc	Third I.F. Output	2.25
2073	10.7 Mc	Ratio Detector	2.70

### Sub-Miniature Style

These imported transformers are designed for transistor operation with excellent impedance matching.

\* To be used as a pair

Dimensions: 8850, 8851, 8805, 8806 & 8807  
2 3/32" x 7/16" x 1/2" high.  
8852, 8853, & 8854  
1 1/2" sq. x 3/8" high.  
8808 & 8809  
1/4" sq. x 7/16" high.  
8810, 8811, 8812 & 8813  
7/32" sq. x 1 1/2" high.

### 10.7 Mc. Transistor Transformers

Cat. No.	Specs.	Use	Net Price
8850	300 kc. P/P	Discriminator	\$2.10
8851	6 db. 300 kc.	Double Tuned I.F.	2.10
8852	100K-300	Single Tuned I.F.	1.80
8853	20K-500	Single Tuned I.F.	1.80
8854	25K-500	Single Tuned I.F.	1.80

### 455 Kc. Transistor Transformers

Cat. No.	Specs.	Use	Net Price
8805	20 kc. P/P	Ratio Detector	\$2.10
8806	20 kc. P/P	Discriminator	2.10
8807	6 db 15 kc.	Double Tuned I.F.	2.10
8808	100K Input	Discriminator Pri.*	1.50
8809	20 kc. P/P	Discriminator Sec.*	1.50
8810	50K-800	Single Tuned I.F.	1.50
8811	30K-500	Single Tuned I.F.	1.50
8812	20K-5K	Single Tuned I.F.	1.50
8813	Oscillator (455 kc. I.F.)		1.50

(Tuning Cap. 78 to 110 pf. Max.)

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J. W. MILLER COMPANY Los Angeles, California



# Miller



## R. F. and I. F. Transformers



### Miniature Adjustable R.F. Coils

These high Q adjustable iron core coils are for general replacement use.

Dimensions:

70-A and 70-RF	1/2" dia x 1 1/2" long
69-Osc and 70-Osc	1/2" dia x 1 1/8" long
67-Osc	3/8" dia x 1 3/8" long
71-RF	3/4" dia x 1 3/4" long

Cat. No.	Item	Net Price
67-OSC	Oscillator Stage 540-1600 kc Autodyne type Oscillator	\$1.29
69-OSC	Oscillator Stage 540-1600 kc Capacity coupled type	1.14
70-A	Antenna Stage 540-1600 kc	1.14
70-RF	R.F. Stage 540-1600 kc	1.14
70-OSC	Oscillator Stage 540-1600 kc	1.14
71-RF	R.F. Coil 540-1600 kc	1.80



### Universal Adjustable Oscillator Coil

These adjustable iron core oscillator coils are for general replacement use.

Dimensions: 3/8" x 1 1/2" high.

Cat. No.	Use	Freq. Range	Net Price
71-OSC	Oscillator Stage R.F.	500-1800 KC	\$1.65 (I.F. 100-350 KC)



### Adjustable FM R.F. Coils

Dimensions: 1/2" O.D. x 1 1/8" long. Net. Pr.

1447	88-108 MC Antenna Coil	\$1.20
1448	88-108 MC R.F. Coil	1.20
1449	88-108 MC Osc. Coil (10.7 MC I.F.)	1.20



### Unshielded High-Q R.F. Coils

A complete line of Unshielded Permeability tuned coils for replacement use or as the front end components in new receiver design.

These #5495 series coils can be shielded in our #S-33 shields (1 1/8" sq.) with very little loss in Q. Mounting is by means of a single 1/4" hole. Dimensions (form): 3/8" x 2".

Ranges shown are for use with a 365 mmfd. variable tuning condenser.

Long Wave Coils (140-420 KC)		
Cat. No.	Use	Net Price
X-5495-A	Antenna Stage	\$1.65
X-5495-RF	RF Stage	1.65
X-5495-C	Standard Osc. 455 KC	1.65
X-5496-C	Tapped Osc. 455 KC	1.65

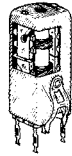
Broadcast Band Coils (540-1700 KC)		
Cat. No.	Use	Net Price
A-5495-A	Antenna Stage	1.65
A-5495-RF	RF Stage	1.65
A-5495-C	Standard Osc. 455 KC	1.65
A-5496-C	Tapped Osc. 455 KC	1.65

Medium Wave Coils (1.7-5.5 MC)		
Cat. No.	Use	Net Price
B-5495-A	Antenna Stage	1.65
B-5495-RF	RF Stage	1.65
B-5495-C	Standard Osc. 455 KC	1.65
B-5496-C	Tapped Osc. 455 KC	1.65

Short Wave Broadcast Coils (5-18 MC)		
Cat. No.	Use	Net Price
C-5495-A	Antenna Stage	1.65
C-5495-RF	RF Stage	1.65
C-5495-C	Standard Osc. 455 KC	1.65
C-5496-C	Tapped Osc. 455 KC	1.65

High Frequency Coils (12-36 MC)		
Cat. No.	Use	Net Price
D-5495-A	Antenna Stage	1.65
D-5495-RF	RF Stage	1.65
D-5495-C	Standard Osc. 455 KC	1.65
D-5496-C	Tapped Osc. 455 KC	1.65

### Miniature J-Tran Top Tuned I.F. Transformers



The standard J-TRAN series of miniature I.F. transformers has hollow hexagonal-hole cores and thereby, with the aid of a suitable tuning tool (#182), permits either double or single ended tuning. The transformer is mounted with a unique snap fastener which is permanently attached to the shield.

Dimensions: 3/4" by 3/4" by 2" high. \*(With diode filter capacitors)

Cat. No.	Item	Net Price
14-H1	262 kc Input I.F.	\$1.80
14-H2	262 kc Output I.F.	1.74
14-H6	262 kc Output I.F.*	1.89
14-C1	455 kc Input I.F.	1.62
14-C2	455 kc Output I.F.	1.62
14-C6	455 kc Output I.F.*	1.80
14-C7	455 kc Input I.F. Battery Radios	1.62
14-C8	455 kc Output I.F. Battery Radios	1.62
14-C9	455 kc Input I.F. AC-DC Radios	1.62
14-C10	455 kc Output I.F. AC-DC Radios	1.62
6270	4.5 Mc Input or Interstage	1.80
6271	4.5 Mc Ratio Detector	2.97
1457	10.7 MC Input or Interstage	1.95
1458	10.7 MC Discriminator	2.25
1459	10.7 MC Ratio Detector	2.34
1464-WB	10.7 MC Disc. 900 KC. P/P	2.25
1465-WB	10.7 MC Ratio Det. 800 KC. P/P	2.34
6230	TV Converter I.F.	1.80
6231	TV 44 MC First I.F. Trap	1.80
6232	TV 42.5 MC Second I.F. 41.25 MC	1.59
6233	TV 45.5 MC Third I.F. 47.25 MC	1.92
6234	TV 44 MC Fourth I.F.	1.50

### Miniature Printed Circuit Top Tuned I.F. Transformers



The printed circuit series of miniature J-TRAN I.F. transformers is similar to the standard J-TRAN shown in that both cores may be tuned from either end of the shield.

Dimensions: 3/4" by 3/4" by 2" high. \*(With diode filter capacitors)

Cat. No.	Item	Net Price
16-PH1	262 kc Input I.F.	\$1.71
16-PH2	262 kc Output I.F.	1.71
16-PH6	262 kc Output I.F.*	1.89
16-PC1	455 kc Input I.F.	1.65
16-PC2	455 kc Output I.F.	1.65
16-PC6	455 kc Output I.F.*	1.80
16-PC7	455 kc Input I.F. Battery Radios	1.65
16-PC8	455 kc Output I.F. Battery Radios	1.65
16-PC9	455 kc Input I.F. AC-DC Radios	1.65
16-PC10	455 kc Output I.F. AC-DC Radios	1.65
6270-PC	4.5 Mc Input or Interstage	1.80
6271-PC	4.5 MC Ratio Detector	2.97
6230-PC	TV 44 MC Converter I.F. Trans.	1.95
6231-PC	TV 44 MC First I.F. Trans. Trap	1.86
6232-PC	TV 42.5 MC Second I.F. 41.25 MC	1.68
6233-PC	TV 45.5 MC Third I.F. 47.25 MC	1.86
6234-PC	TV 44 MC Fourth I.F. Trans.	1.65



### Universal I.F. Transformers

For general replacement purposes in auto receivers and many types of household and portable receivers.

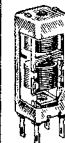
Dimensions: 1 1/4" square x 2 1/2" high.

Cat. No.	Freq.	KC Range	Use	Net Price
312-H1	262	250-275	Input	\$1.89
312-H2	262	250-275	Interstage	1.89
312-H4	262	250-275	Output	1.89
312-H6	262	250-275	Output & Filter	2.13
312-C1	455	440-470	Input	1.89
312-C2	455	440-470	Interstage	1.89
312-C4	455	440-475	Output	1.89
312-C6	455	440-470	Output & Filter	2.13

### Type No. 412 Iron Core Transformers

Dimensions: 1 1/4" square x 2 1/2" high.

Cat. No.	Freq.	KC Range	Use	Net Price
412-H1	262	250-275	Input	\$1.89
412-H2	262	250-275	Interstage	1.89
412-H4	262	250-275	Output	1.89
412-C1	455	440-470	Input	1.89
412-C2	455	440-470	Interstage	1.89
412-C4	455	440-470	Output	1.89



### Miniature I.F. Trans.

Designed for experimental use and for general replacement in "personal" radio receivers, this series of shell core permeability tuned transformers are becoming increasingly popular. Tuning from top and bottom of the shield. Transformers are available for all standard I.F.

\*(With diode filter capacitors) Dimensions: 3/4" by 3/4" by 2" high.

Cat. No.	Item	Net Price
12-H1	262 KC Input I.F. Trans.	\$1.74
12-H2	262 KC Output I.F. Trans.	1.74
12-H6	262 KC Output I.F. Trans.*	1.80
12-C1	455 KC Input 16 KC @ 6db	1.62
12-C2	455 KC Output 21 KC @ 6db	1.62
12-C6	455 KC Output I.F. Trans.	1.71
12-C7	455 KC Input I.F. Battery	1.62
12-C8	455 KC Output I.F. Battery	1.62
12-C9	455 KC Input I.F. AC-DC	1.62
12-C10	455 KC Output I.F. AC-DC	1.62
12-C12	455 KC Tapped Pri. I.F. Trans.	1.95
12-C30	455 KC Input 11.4 KC @ 6db	1.62
12-C31	455 KC Output 13.6 KC @ 6db	1.62
12-C45	455 KC Discriminator	2.70
13-W1	1500 KC Input or Interstage	1.65
13-W2	1500 KC Output I.F. Trans.	1.65
1463	10.7 MC Input or Interstage	1.95
1464	10.7 MC Discriminator	2.25
1465	10.7 MC Ratio Detector	2.34
1725	455 kc Xtal Filter I.F. Input	1.95
1726	455 kc Xtal Filter I.F. Output	1.95
6203	4.5 MC Input or Interstage	1.98
6204	4.5 MC Discriminator	2.25
6205	4.5 MC Ratio Detector	2.25
6260	21.25 MC I.F. Trans.	2.55
6261	21.25 MC Discriminator	2.70
6262	21.25 MC Radio Detector	2.70

### Miniature Printed Circuit I.F. Trans.

Same as our regular miniature I.F. transformers shown above, except for terminals and mounting. Supplied in all standard frequencies.

\*(With diode filter capacitors)

Dimensions: 3/4" sq. x 2" high. Net Price

Cat. No.	Item	Net Price
13-PH1	262 KC Input I.F. Trans.	\$1.71
13-PH2	262 KC Output I.F. Trans.	1.71
13-PH6	262 KC Output I.F. Trans. *	1.80
13-PC1	455 KC Input I.F. Trans.	1.65
13-PC2	455 KC Output I.F. Trans.	1.65
13-PC6	455 KC Output I.F. Trans. *	1.74
13-PC7	455 KC Input I.F. Trans. Battery	1.65
13-PC8	455 KC Output I.F. Trans. Battery	1.65
13-PC9	455 KC Input I.F. Trans. AC-DC	1.65
13-PC10	455 KC Output I.F. Trans. AC-DC	1.65
1463-PC	10.7 MC Input or Interstage	1.95
1464-PC	10.7 MC Discriminator Trans.	2.25
1465-PC	10.7 MC Ratio Detector Trans.	2.34
6203-PC	4.5 MC Input or Interstage	2.07
6204-PC	4.5 MC Discriminator Trans.	2.25
6205-PC	4.5 MC Ratio Detector Trans.	2.25

### Sub-Miniature I.F. Trans.



Through the use of a Ferrite shell core material these Sub-Miniature I.F. Transformers offer the gain and bandwidth characteristics previously obtained in only larger I.F. assemblies. (For Battery or AC-DC Radios.)

Dimensions: 1/2" sq. x 1 1/2" high.

Item	Net Price
10-C1	455 KC Input I.F. Trans. \$2.85
10-C2	455 KC Output I.F. Trans. 2.85

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J. W. MILLER COMPANY Los Angeles, California



# Miller

## Television Components



### Single Pi R.F. Coils



These fixed inductors are wound on a mineral filled phenolic form which has axial leads. The coils are impregnated with an R.F. varnish to assure against moisture absorption.

Part No.	L*	Q	Min.	Min. Fo. Mc	Net Price
72F105AP	10 uh	23	13		\$.60
72F125AP	12 uh	21	12		.60
72F155AP	15 uh	20	11		.60
72F185AP	18 uh	20	9.8		.60
72F225AP	22 uh	18	9.6		.60
72F275AP	27 uh	17	8.9		.60
72F335AP	33 uh	16	8.1		.60
72F395AP	39 uh	15	7.5		.60
72F475AP	47 uh	14	7.2		.60
72F565AP	56 uh	13	6.5		.60
72F685AP	68 uh	12	6.1		.60
72F825AP	82 uh	12	5.8		.60
72F104AP	100 uh	20	5.3		.69
72F124AP	120 uh	19	5.0		.69
72F154AP	150 uh	18	4.6		.69
72F184AP	180 uh	17	4.3		.69
72F224AP	220 uh	17	4.0		.75
72F274AP	270 uh	16	3.5		.75
72F334AP	330 uh	16	3.3		.81
72F394AP	390 uh	16	3.1		.81
72F474AP	470 uh	15	2.9		.84
72F564AP	560 uh	14	2.6		.84
72F684AP	680 uh	14	2.4		.84
72F824AP	820 uh	13	2.2		.84
72F103AP	1000 uh	28	1.9		.84

### Video Peaking Coils, Filament Choke



No. 6175 Filament Choke— $\frac{3}{32}$ " dia. x  $\frac{7}{8}$ " long; Video Peaking Coils— $\frac{3}{16}$ " dia. x  $\frac{3}{8}$ " long.

Cat. No.	Use	uh	Resistor	Net Price
6175	Filament	0.8	None	\$.57
6152	Peaking	20	None	.57
6176	Peaking	36	None	.57
6110	Peaking	60	None	.57
6172	Peaking	73	None	.57
6177	Peaking	93	None	.57
6112	Peaking	100	None	.57
6178	Peaking	120	22K	.57
6153	Peaking	120	None	.57
6120	Peaking	155	None	.57
6179	Peaking	180	39K	.57
6180	Peaking	180	None	.57
6154	Peaking	200	None	.57
6173	Peaking	250	22K	.57
6181	Peaking	250	None	.57
6130	Peaking	275	None	.57
6155	Peaking	300	None	.57
6132	Peaking	330	None	.57
6134	Peaking	375	None	.57
6136	Peaking	420	None	.57
6138	Peaking	470	None	.57
6174	Peaking	500	None	.57
6144	Peaking	550	None	.57
6146	Peaking	600	None	.57
6148	Peaking	700	None	.57
6156	Peaking	800	None	.57
6157	Peaking	950	None	.57



### 21.25 MC Television I.F. Transformers

Dimensions:  
6185-6186-6187  $\frac{7}{8}$ " sq. x  $2\frac{1}{4}$ " high  
6170, 6190 and 6191  $\frac{7}{8}$ " sq. x  $2\frac{1}{4}$ " hi  
6184 and 6192  $1\frac{1}{8}$ " x  $1\frac{1}{8}$ " x  $2\frac{1}{2}$ " high.  
6261 and 6262  $\frac{3}{4}$ " sq. x 2" high clip mtg.

Item	Freq.	Net Pr.
6185	21.8 MC Conv. I.F. Trans.	21.25 MC \$2.04
6186	25.3 MC 1st Pix I.F. Trans.	27.25 MC 2.04
6187	22.3 MC 2nd Pix I.F. Trans.	19.75 MC 1.65
6190	1st Sound I.F. Trans.	21.25 MC 1.80
6191	2nd Sound I.F. Trans.	21.25 MC 1.80
6192	Sound Disc. Trans.	21.25 MC 2.16
6184	Sound Ratio Det. Trans.	21.25 MC 2.52
6170	Sound Disc. Trans.	21.25 MC 2.46
6261	Sound Disc. Trans.	21.25 MC 2.70
6262	Sound Ratio Det. Trans.	21.25 MC 2.70



### Picture I.F. Inductors Unshielded

Dimensions:  $\frac{1}{2}$ " max. o.d. x  $1\frac{1}{2}$ " long.

Cat. No.	Description	Freq.	Net Pr.
6188	3rd Pix I.F. Trans.	25.2 MC	\$.99
6189	Video Detector I.F. Trans.	23.4 MC	.99
6193	Cathode Sound Trap	21.25 MC	1.50
6171	Tunable Choke	21-25 MC	.96
6171A	Tunable Choke	25-29 MC	.96

### 24 MC Unshielded

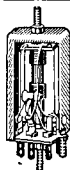
#### Picture I.F. Transformers



For use as replacement units in television receivers where unshielded coils are called for and standard circuitry is employed. Mounting clip to fit  $\frac{1}{8}$ " hole in chassis.

Shielded I.F. trans. are  $\frac{3}{4}$ " sq. x  $1\frac{1}{8}$ " high. Maximum Dimensions:  $2\frac{1}{2}$ " long.

Cat. No.	Description	Trap	Price
6245	25.5 MC First I.F.	27.25 MC	\$1.86
6246	22 MC Second I.F.	21.2 MC	1.86
6247	21.25 MC Cathode Trap		1.86
6248	24.5 MC Video Det. I.F.		1.17
6249	21-25 MC Bifilar Wound I.F.		1.17
6250	25-29 MC Bifilar Wound I.F.		1.17
6251	21-25 MC Bifilar I.F. Shielded		1.65
6252	25-29 MC Bifilar I.F. Shielded		1.65
6253	21-30 MC Bifilar I.F.	20-30 MC	2.13
6254	22-32 MC Bifilar I.F.	24-29 MC	2.13



### "40 MC" TV Picture I.F. Transformers

Converter transformer and 1st pix I.F. grid transformer have 75-ohm link winding.

Dimensions  
6215-16-17-18  $\frac{7}{8}$ " sq. x  $2\frac{1}{4}$ " high  
6240  $1\frac{1}{8}$ " sq. x  $2\frac{3}{8}$ " high

Description	Trap	Net Pr.
6215	Converter I.F. Trans.	\$1.80
6216	1st Pix I.F. Grid Trans.	39.25 MC 2.16
6217	1st Pix I.F. Plate Trans.	41.25 MC 2.16
6218	2nd Pix I.F. Grid Trans.	47.25 MC 2.04
6240	Video Detector with Diode	43.7 MC 4.80



### Unshielded

Max. Dim:  $\frac{3}{4}$ " O.D. x  $2\frac{1}{2}$ " long. Mtg. hole  $\frac{5}{16}$ ". Hardware supplied for  $\frac{7}{16}$ " mounting.

Description	Trap	Net Price
6219	41-47 Mc. 3rd, 4th, 5th I.F.	\$.99
6220	41-47 Mc. Converter I.F.	.99
6221	41-47 Mc. First I.F.	41.25 Mc. 1.92
6222	42-48 Mc. Second I.F.	47.25 Mc. 1.92
6223	41-47 Mc. Third I.F.	39.25 Mc. 1.92
6224	41-47 Mc. Fourth I.F.	1.02
6225	39-49 Mc. Single winding I.F.	1.14
6226	High Q Trap	39-47 Mc. 1.02
6227	41-47 Mc. Dbl. Tuned I.F. ( $\frac{1}{8}$ " long)	1.65



### Miniature 44 MC Picture Trans.

Converter and 1st pix I.F. Grid transformer have 75 ohm link winding. Dimensions:  $\frac{3}{4}$ " Square x 2" high.

Description	Trap	Net Price
6230	Converter I.F.	1.80
6231	44 MC First I.F.	1.80
6232	42.5 MC Second I.F.	41.25 MC 1.59
6233	45.5 MC Third I.F.	47.25 MC 1.92
6234	44 MC Fourth I.F.	1.50



### Adjustable Ion Trap

Due to its adjustable feature, which allows the magnetic field to be varied between 32-55 gauss, this trap will, in most instances, replace the older style ion traps having a specific magnetic field.

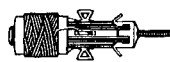
6295	Adjustable Ion Trap	\$ .90
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### 4.5 MC Intercarrier Sound Components

Dimensions 1466-67-68:  $1\frac{1}{8}$ " x  $1\frac{1}{8}$ " x  $2\frac{1}{8}$ " high.  
#1469, 1470 and 1480 Unshielded, Mounting hole  $\frac{5}{16}$ "  
1470-A and 1481  $\frac{3}{4}$ " x  $\frac{3}{4}$ " x 2" hi  
#1498  $1\frac{3}{8}$ " x  $1\frac{3}{8}$ " x  $2\frac{1}{2}$ " high  
1483-84-95-86-87  $\frac{7}{8}$ " Sq. x  $2\frac{1}{4}$ " high

Cat. No.	Item	Freq.	Net Pr.
1466	Input or Inter. I.F. Trans.	4.5 MC	\$1.98
1467	Sound Discrim. Trans.	4.5 MC	2.31
1468	Sound Ratio Det. Trans.	4.5 MC	2.46
1469	Sound Pick Off Coil	4.5 MC	.99
1470	Sound Trap Unshielded	4.5 MC	.99
1470-A	Sound Trap Shielded	4.5 MC	1.26
1480	Quadrature Coil	4.5 MC	.99
1481	Quadrature Coil Sh'd'd.	4.5 MC	1.29
1482IFT	Sound I.F. Trap	4.5 MC	1.35
1483IF	Sound I.F.	4.5 MC	1.80
1484RD	Sound Ratio Det	4.5 MC	2.10
1485RD	Sound Ratio Det	4.5 MC	2.10
1486RD	Sound Ratio Det	4.5 MC	2.10
1487RD	Sound Ratio Det	4.5 MC	2.10
1488RD	Sound Ratio Det	4.5 MC	2.25
1489RD	Sound Ratio Det	4.5 MC	2.25
1498	Sound Ratio Det. Trans.	4.5 MC	2.43

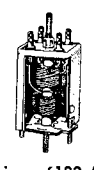


### Linearity & Width Controls

Dimensions:  $\frac{3}{4}$ " x  $2\frac{1}{2}$ " Max. The coils will mount in either a  $\frac{5}{16}$ " or  $\frac{7}{16}$ " hole with adapter supplied.

\* $\frac{7}{16}$ " Mounting hole only.

Cat. No.	Inductance Range Millihenries	Net Price
6313	.5-5	\$1.32
6314	2-18	1.23
6315	4-30	1.32
6316	4-30 (2.8-6.5 AGC)	1.80
6317	3.2-9 (.17-1.31 AGC)	1.65
6318	.3-3	1.11
6319	8-60	1.65
6320	.3-3 Tapped	1.14
6321	1-5 Tapped	1.32
6322	1.5-10	1.23
6323	.5-5 Tapped	1.14
6324	60-130 Tapped*	1.65
6325	4.2-30 (.78-1.37 AGC)	1.65
6326	2.5-19 Parallel (.18-1.7 Series)	2.25
6327	4-30 Parallel (.225-2.4 Series)	2.25
6328	9-24 (.19-1.1 AGC)	1.65
6329	2.2-10 Tapped	1.50
6330	45-215	1.80
6331	4-30 Parallel (.080-.7 Series)	2.10
6195	.185-1	.99
6196	.054-.245	.84
6196-A	.054-.5 Tapped	.96
6197	.55-2.3 Tapped	.96
6198	.17-.61	.84
6199-A	1.3-4.1 Tapped	1.82
6199-B	.5-1.7	.99



### Horizontal Oscillator & Sync. Control Coils

Dimensions:  $1\frac{1}{8}$ " x  $1\frac{1}{8}$ " x  $2\frac{1}{2}$ " high.  
6212 Unshielded, Mounting hole  $\frac{5}{16}$ "  
6211 and 6324 Unshielded, Mounting hole  $\frac{7}{16}$ "—6183 may be reversed in shield for top or bottom mounting.

ing. 6183-A coils reversed on form to tune Horiz. Osc. through chassis.

Cat. No.	Item	Net Price
6194	Osc. & A.F.C. Discrim. Trans.	\$2.04
6182	Osc. and Sync. Control Coil	1.65
6183	Osc. and Sync. Stabilizer Coil	2.10
6210	Sync. Stabilizer Coil 16-42 mh	1.65
6211	Sync. Stabilizer Trans-16-42 mh	1.65
6212	Horiz. Osc. tapped 12-35 mh	1.65
6324	Horiz. Osc. tapped 60-130 mh	1.65
6183-A	Horiz. Osc. coil position reversed	2.10

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J. W. MILLER COMPANY Los Angeles, California



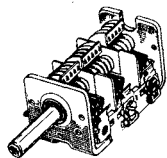


# Miller



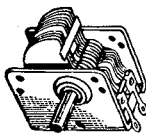
## Variable Cap. & Replacement Items

### Sub-Miniature Three Gang Variable Capacitor



An extremely small but stable air dielectric variable capacitor. Each section is composed of 4 stator and 5 rotor plates. Trimmer capacitors are mounted on the antenna and R.F. sections only. Capacitor range: 5-20 mmfd.; Trimmer range: 1.5-8 mmfd. Shaft .250" diameter and 3/4" long.

Dimensions: 1 1/8" wide x 1 3/8" high x 2" deep.  
 Cat. No. Item Net Price  
 1460 3-Gang Variable Capacitor \$3.96

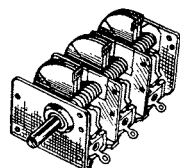


### Midget Variable Condensers

Shaft dia. 1/4" x 1" long. The #2110, 2-gang variable condenser antenna section has a range of 10-130 mmf. The oscillator section has a range of 10-78 mmf. The #2111, #2112 and #2113 are the standard size condensers having a range of 10-365 mmf. Mounting is provided by topped holes in the frame of the condensers. Counterclock rotation for capacity increase.

Cat. No.	Sections	Dimensions	Net Price
2110	2	1 5/8" x 1 3/8" x 1 1/8"	\$2.10
2111	1	1 3/8" x 1 3/8" x 1 1/8"	2.10
2112	2	2 3/8" x 1 1/8" x 1 3/8"	2.55
2113	3	3 3/8" x 1 1/8" x 1 3/8"	3.45

### F.M. Variable Capacitor



This 3-gang 7-plate variable capacitor is rigidly constructed with widely spaced (.042 Air Gap) plates to assure highest stability. The plate contour results in an almost linear frequency versus rotation characteristics. Although the capacitor is supplied with 3 trimmer capacitors attached, it is recommended that the oscillator trimmer be replaced with a small NPO adjustable ceramic. The tuning capacitor has a 1/4" diameter shaft 1 5/8" long. Capacitor range is 6.6-23 mmfd. Trimmer capacitor will add to these values.

Dimensions: 3 1/8" x 1 1/8" x 1 5/8"

Cat. No.	Item	Net Price
1461-B5	3-Gang FM Tuning Capacitor	\$4.05

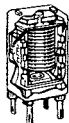


### Sub-Miniature Variable Condenser

It was necessary to use a four point suspension for the capacitor frame to insure against the frame becoming distorted and resultant shorting of plates. R.F. Cap. (11 Plates) 5.3 mmf—122.4 mmf  
 Os. Cap. (9 Plates) 4.2 mmf—78.6 mmf  
 Effective trimmer range: 1.8—8 mmf

Cat. No.	Sections	Dimensions	Net Price
2109	2	1 1/8" x 1 1/8" x 3/4"	\$2.19

### New F.M. Stereo Multiplex Inductors



For use in a newly designed circuit that eliminates the 19 kc Oscillator and resulting synchronizing problems. In conjunction with an improved low pass filter and detecting system improved separation can be achieved.

Dimensions: 3/4" Sq. x 1 1/32" High

Cat. No.	Description	Net Price
1356	19 kc. Amplifier Coil	\$2.31
1357	38 kc. Output Trans.	2.25
1358	67 kc. Low Pass Filter	2.40

### F.M. Stereo Multiplex Inductors



Basically the system involves pick-up of sound by two microphones, the left (L) and right (R). Subsequently the two audio signals are combined in such a way that L plus R frequency modulates an F-M carrier in the conventional way while L minus R amplitude modulates a 38KC stereophonic subcarrier, and the resulting double side-band AM signal (23-53KC) with suppressed carrier, likewise frequency modulates the FM carrier. A 19KC pilot sub-carrier signal also frequency modulates the FM carrier and at the receiver provides a means of controlling the frequency and phase of the 38 KC carrier for re-insertion. When broadcasting Stereo Multiplex the region of 53 to 75KC is allotted to the station for SCA signals.

In the receiver the output of the F-M detector comprises the L+R audio signal, the 19KC pilot sub-carrier, and the 23-53KC A-M modulated (L-R), suppressed carrier signal. It is then required to separate the 23-53KC signal by means of a suitable filter, generate a 38KC signal under the control of the 19KC pilot sub-carrier, re-insert the sub-carrier, and detect the resulting signal. This yields L-R. This must then be combined in a suitable matrix with the L+R signal in such a manner that the L signal appears at one output terminal and the R signal at another.

Dimensions: 3/4" Sq. x 1 1/32" High.

Cat. No.	Description	Net Price
1351	Low Pass Filter	\$1.95
1352	BP Filter Series Element	1.80
1353	BP Filter Shunt Element	1.80
1354	Locked Osc. 19 kc.	2.55
1355	Output Trans. 38 kc.	2.40

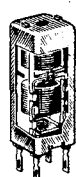
### Printed Circuit Multiplex Inductors

The following coils are electrically the same as the regular point to point wiring type listed above. The printed circuit board PCM can be adapted for use with either the regular coils or the printed circuit type.

Dimensions: 3/4" Sq. x 1 1/32" High.

Cat. No.	Description	Net Price
1351-PC	Low Pass Filter	\$1.95
1352-PC	BP Filter Series Element	1.80
1353-PC	BP Filter Shunt Element	1.95
1354-PC	Locked Osc. 19 kc.	1.95
1355-PC	Output Trans. 38 kc.	2.25
PCM	Printed Circuit Board	5.55

### Communications I.F. Transformers



Designed for experimental use in communications equipment where selectivity and stability are important. The 100 kc. I.F. transformer and BFO coil are intended for tube application, while the 455 kc. crystal filter I.F. transformers have taps on the winding to allow for use with both tubes and transistors. The 1800 kc. I.F. transformer offers the best possible "Q" with stability to give a degree of selectivity that compares with lower frequency I.F. transformers. This transformer is for use with tubes only. Part number 1770 is a double tuned I.F. transformer having taps on both Primary and Secondary winding.

Dimensions: 3/4" by 3/4" by 2" high.

Cat. No.	Description	Net Price
1710	100 KC I.F.—3 KC Bandwidth	\$2.10
1711	100 KC B.F.O.	1.95
1725	455 KC Crystal Filter I.F. Input	1.95
1726	455 KC Crystal Filter I.F. Output	1.95
1727	455 KC B.F.O.	1.80
1730	1800 KC I.F.—25 KC Bandwidth	2.10
1770	455 KC Double Tuned Transistor I.F.—30K:1K	2.34
1731	1610 KC Link Coupling Coil Unshielded	2.37
1732	1650 KC I.F. (C B Transceivers)	2.10
1740	9 Mc S.S.B. Input Trans.	1.95
1741	9 Mc S.S.B. Output Trans.	1.95

### Replacement for Color T.V.

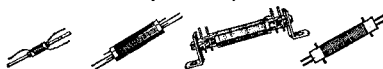


The following series of components are intended as exact replacements in the various models of color T.V. sets that R.C.A. has produced. With other manufacturers entering the field, but still depending on R.C.A. for a large number of basic components it is felt that these parts will be useful.

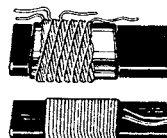
No.	Use	O.E.M. Part No.	Net Price
6021	Chroma BP Trans.	78887	\$2.10
6022	Chroma BP Coil	78888	1.53
6023	Burst Trans.	78886	3.30
6024	3.58 Mc. Output	78889	2.64
6025	Sync. and Phase	78895	4.80
6026	Chroma Ref. Osc.	78891	3.30
6027	3.58 Mc. Trap	* 78892	1.65
6028	3.58 Mc. Ch. Sync.	* 78892	1.65
6029-R	First Chroma	105213	3.96
6030-R	Burst Amp.	105214	2.52
6031-R	Video I.F.	106385	1.17
6032-R	Video I.F.	106386	1.26
6033-R	Video I.F.	106387	1.26
6034-R	Video I.F.	105292	1.08
6035-R	Video I.F.	105293	1.08
6036-R	Video I.F. & Trap	105294	4.32
6337-R	Horiz. Waveform	102195	1.20
6338-R	Horiz. Linearity	105196	1.98
7105-R	4.5 Mc. Sound I.F.	105286	1.17
7106-R	4.5 Mc. Sound I.F.	105287	3.00
7107-R	4.5 Mc. Quadrature	105288	1.80
7108-R	4.5 Mc. Sound I.F.	106381	1.29
7109-R	4.5 Mc. Sound I.F.	106382	3.06
7110-R	4.5 Mc. Quadrature	106383	2.04

\*Resistors and Capacitors are included.

### Antenna Matching Coils (Balun)



Cat. No.	O.E.M. Part No.	Net Price
7301	R.C.A. 1959 and 1960	\$ .69
7302	Philco 32-4432-3	1.53
7303	Motorola 74420, Olympic, Silvertone	.60
7304	R.C.A. 1955, 1956, 1957	.69
7305	R.C.A. 1955, 1956, 1957	.69
7306	R.C.A. 1955, 1956, 1957	.69
7307	G.E. RLA-043, RLA-045, Hotpoint	1.53
7308	G.E. WT37X8, RLA-042	1.53
7309	G.E. WT37X10, RLA-044	1.56
7310	G.E. RLA-047, Hotpoint	1.53
7311	G.E. RLA-050, Hotpoint	1.29
7312	G.E. RLA-053, Hotpoint	1.59
7313	G.E. RLA-046, Westinghouse V-19024-7, -9, Truetone	.96
7314	Philco 32-4799, G.E., Standard Coil	2.16
7315	Philco 32-4725-1, -3	1.14
7316	Philco 76-11489-1, Silvertone, Sylvania, Westinghouse	1.23
6103	G.E. RLA-041	.93
6104	R.C.A. 73591, 78396, Motorola 248720936	.69
6200	Philco 32-4725-3, -5, -6	1.35
6202	Philco 32-4432-1, -2, -3, Westinghouse V-8621-1, -2, -3, -4	1.35



### Replacement Antennas

These replacement loops can be used in a large number of the imported Broadcast Band Portable Receivers.

Dimensions: #2008 1/4" x 3/4" x 2 3/8"  
 #2009 3/8" x 1/2" x 2 1/8"

Cat. No.	Freq. Range	Tuning Cap.	Net Price
2008	540-1650 kc	200-240 mmfd	1.77
2009	540-1650 kc	120-140 mmfd	1.77

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

J. W. MILLER COMPANY Los Angeles, California

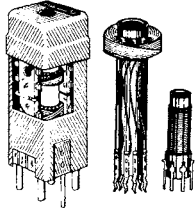


# Miller



## Exact Replacement Components

### Replacement for Original T.V. and Home Radio Equipment

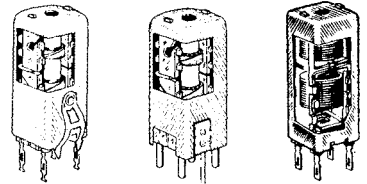


The following special parts have been manufactured as exact replacements for the set manufacturers shown, so as to assure top performance.

Cat. No.	O.E.M. Part No.	Net Price
<b>Admiral</b>		
1471-A	72B185-2	\$1.95
1472-A	72C132-19	1.35
5248	73A31-1	1.05
6332	94C17-4	2.01
7701	72B50, 1, 2, 3, 4, 5, 6	2.37
7116-A	72B208-1	1.95
7117-A	72B132-37	1.95
7127	72C132-61, 72E132-61	2.10
7501-A	72C132-38	2.25
7502-A	72C132-39	2.25
7503-A	72C132-31	2.10
7504-A	72C132-41	2.10
7505-A	72C132-42	2.25
7506-A	72C132-43	2.10
7507-A	72B191-3	4.05
7751	69C243-4	1.20
<b>Arvin</b>		
7752	43644-1	\$1.17
7753	43644-7	1.17
<b>Crosley</b>		
7101	157856-1	\$1.80
<b>Dumont</b>		
7103-DE	20004441	\$2.25
7104-DE	20004511	2.10
<b>Emerson</b>		
6339-E	708275	\$1.50
6340-E	716102	1.65
7112-E	708276	2.25
7138	720327	2.28
7514-E	720318	1.65
7515-E	720315	1.50
7516-E	720317	1.50
7706	720415	2.10
<b>General Electric and Hotpoint</b>		
12-C11	RTL-143 and 163	\$1.62
12-C13	RTL-172	2.10
6206-PC	RTD-026 (WT56X38)	3.30
6207-PC	RTD-025 (WT56X37)	2.49
6208-PC	RTD-020	2.97
6209-G1	RTD-024 (WT56X36)	2.85
6334-G	RLI-365	1.29
6335-G	WT36X402	1.29
6341	ET/WT36X349	1.65
7139	WT56X48	2.34
7707	EA56X2(671C205-3)	1.95
7754	EA35X5	1.35
7780	RS-2841	1.50
7781	RS-2167	1.50
7782	ET83X32	1.65
<b>Hallcrafters</b>		
1482 IFT	51B1996	\$1.35
7101	51A1859	1.80
<b>Motorola</b>		
1901	248637710	\$2.97
1902	248637486	2.97
7783	1V641198	1.65
<b>Muntz</b>		
7111-M	LO-0076	\$2.25
<b>Olympic</b>		
7124	CL4021	\$1.35

Cat No.	O.E.M. Part No.	Net Price
<b>Packard-Bell</b>		
7520	29779	\$4.65
<b>Philco</b>		
6209-P1	32-4721	\$5.70
6209-P2	32-4689-1, 2	2.85
6209-P3	32-4735-1, 2	2.85
6342	32-4754-3	1.35
7102-P	32-4688-10	2.10
7113-P	32-4631, 31A	2.97
7121-P	32-4644-13, 14, 19	1.50
7513-P	32-4686-2, -3, -25	1.65
7708	32-4825-1	2.10
7755	32-4756-1	1.17
<b>RCA</b>		
1483 IF	76437	\$1.80
1484 RD	102692	2.10
1485 RD	102644	2.10
1486 RD	102253	2.10
1487 RD	100364	2.10
1488 RD	79141	2.25
1489 RD	101219	2.25
6333	103103	1.77
6336-R	107284	2.10
6343	109947	1.65
7133	107,201, 972168-2	2.10
7134	109951, 973961-1	1.65
7135	104136, 972172-1	1.20
7136	105795, 972178-3	1.68
<b>Silvertone</b>		
6344	10-20-5	\$1.65
6345	10-34-5	1.17
7709	10-33-0	2.85
7128	10-57-5	1.35
7129	10-23-3	1.35
7130	10-31-3	1.50
7131	10-152-1	1.50
7756	10-55-4	1.17
<b>Sylvania</b>		
7132	99198-1	\$2.10
<b>Trav-Ler</b>		
7122	L-167	\$2.25
7123	L-154	2.10
7517	L-152	3.15
<b>Wells Gardner</b>		
7125	9A2526	\$1.35
7126	9A2529	1.35
7140	9A2429	1.65
7518	9A2436	1.95
7519	9A2444	1.65
7521	9A2435	4.05
7710	9A2519	1.65
<b>Westinghouse</b>		
12-C14	235V025H-11, 2 (V157661)	\$2.25
68 Osc	230V039H-01 (V15764-1)	1.65
6204-W3	V12128-1, 2, 3	4.05
6213	230V032H01	1.35
7118-W	230V030H02	1.65
7119-W	230V031H01	1.65
7120-W	235V046H01	1.62
7137	230V007H02	2.10
7508-W	230V030H01	1.50
7509-W	235V003H01	4.65
7510-W	235V020H01, 03	1.62
7511-W	235V048H01, 02	2.85
7512-W	235V049H01	1.65
<b>Zenith</b>		
7114-Z	S-41899	\$2.10
7115-Z	S-50341	2.10
7702-Z	95-1101	3.57
7703-Z	95-1102	3.57
7704-Z	95-1149/95-1350	3.57
7711	95-1900	1.50
7712	95-1866	1.50
7757	S-54155	1.50
7851-Z	95-1153	3.57
7852-Z	95-1150	3.57

### Exact Replacements for Original Auto Radio Equipment



In addition to our regular replacement line of I.F. transformers we are now offering the following special replacement items, as well as the exact replacement I.F. transformers for those parts which were supplied by the original manufacturer.

Cat No.	O.E.M. Part No.	Net Price
<b>Automatic</b>		
6570	14-2654	\$2.10
6571	14-2655	2.10
<b>Bendix</b>		
6501	2090237-1	\$2.25
6502	2090237-2	2.25
6503	2090237-3	2.40
6504	2090237-4	2.25
6505	2090237-5	2.25
6506	2090239-1	2.10
6507	2090239-2	2.10
6508	2090239-3	2.10
6509	2090907-2	2.10
6510	2090908-3	2.25
6511	2090907-3	2.10
6512	2090908-4	2.37
6513	2090907-5	2.10
6514	2090908-5	2.40
6515	2090907-1	2.25
6516	2090907-7	2.25
6517	2090876-7	1.80
6518	2090877-6	1.95
6519	2091217-8	2.10
6520	2091218-7	2.25
6521	2092202-5	2.10
6522	2092203-5	2.25
6523		
<b>Delco</b>		
6540	1221253	\$2.10
6541	1221255	2.10
6542	1221856	2.25
6543	1221857	2.25
6544	1221858	2.10
6545	1221859	2.10
6546	1221860	2.40
6547	1221861	2.40
<b>Motorola</b>		
6550	24C485553	\$2.10
6551	24C485554	1.95
6552	24C485555	1.95
6553	24D563300 (Mopar)	1.95
6554	24D40075A17	2.25
6555	24D40074A07	2.25
6556	24B64861A02	2.25
6557	24B64861A03	2.10
<b>General Replacement</b>		
6581	455 kc I.F. Output with Diode Filter	\$1.89
6582	455 kc I.F. Input	1.80
6583	455 kc I.F. Output	1.80
6584	262 kc I.F. Input	1.92
6585	262 kc I.F. Output with Diode Filter	1.98

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**J. W. MILLER COMPANY** Los Angeles, California

SANGAMO ELECTRIC COMPANY

# inductors



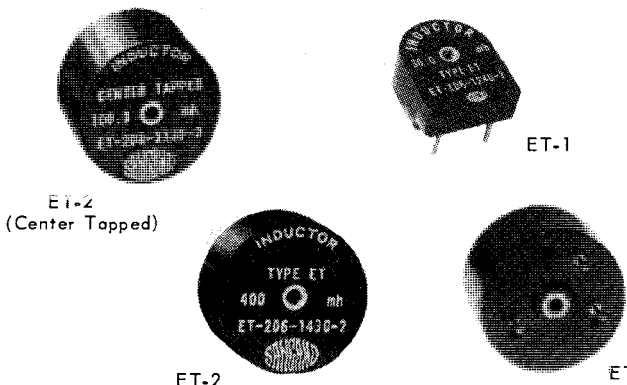
ELECTRONIC COMPONENTS

## Type ET-1, 2 and 4 INDUCTORS

Sangamo Type ET encapsulated inductors conform with all printed circuit board applications. All units are vacuum encapsulated to assure surrounding the coil with a void-free envelope. Type ET's are also available as center tapped units. Seventy-two hour prototype delivery is available on any inductance value.

For complete listings write for the following literature:

- Bulletin 2721 - Type ET-2 and ET-4 Inductors
- Supplement 2 - Type ET-1 Subminiature Inductors
- Supplement 1 - Type ET-2 and ET-4 Center Tapped Inductors

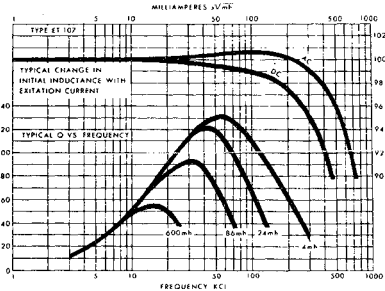


ET-2

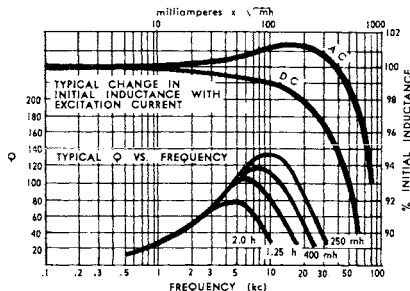
ET-1

ET-2 (Rear View)

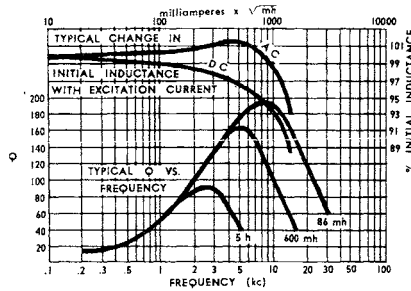
ET-107



ET-206



ET-406



Specification Number (S)	Inductance	Net Price 1-4	Net Price 5-14*	Specification Number (S)	Inductance	Net Price 1-4	Net Price 5-14*	Specification Number (S)	Inductance	Net Price 1-4	Net Price 5-14*
ET-107-1050-2	2.40mh	\$10.68	\$ 7.12	ET-206-1110-2	5.00mh	\$ 7.83	\$ 5.22	ET-406-1130-2	7.20mh	\$ 9.51	\$ 6.34
ET-107-1060-2	2.50	10.68	7.12	ET-206-1120-2	6.00	7.83	5.22	ET-406-1140-2	7.50	9.51	6.34
ET-107-1080-2	3.60	10.68	7.12	ET-206-1140-2	7.50	7.83	5.22	ET-406-1160-2	10.00	9.51	6.34
ET-107-1090-2	4.00	10.68	7.12	ET-206-1150-2	8.60	8.13	5.42	ET-406-1170-2	12.00	9.51	6.34
ET-107-1110-2	5.00	10.68	7.12	ET-206-1170-2	12.00	8.13	5.42	ET-406-1190-2	15.00	9.51	6.34
ET-107-1120-2	6.00	10.68	7.12	ET-206-1180-2	12.50	8.13	5.42	ET-406-1200-2	17.50	9.51	6.34
ET-107-1140-2	7.50	10.68	7.12	ET-206-1200-2	17.50	8.40	5.60	ET-406-1220-2	24.0	9.51	6.34
ET-107-1150-2	8.60	10.68	7.12	ET-206-1210-2	20.0	8.40	5.60	ET-406-1230-2	25.0	9.51	6.34
ET-107-1170-2	12.00	10.68	7.12	ET-206-1230-2	25.0	8.40	5.60	ET-406-1250-2	36.0	9.51	6.34
ET-107-1180-2	12.50	10.68	7.12	ET-206-1240-2	30.0	8.70	5.80	ET-406-1260-2	40.0	9.51	6.34
ET-107-1200-2	17.50	10.68	7.12	ET-206-1260-2	40.0	8.70	5.80	ET-406-1280-2	50.0	9.51	6.34
ET-107-1210-2	20.0	10.68	7.12	ET-206-1270-2	43.0	8.70	5.80	ET-406-1290-2	60.0	9.93	6.62
ET-107-1230-2	25.0	10.68	7.12	ET-206-1290-2	60.0	8.97	5.98	ET-406-1310-2	75.0	9.93	6.62
ET-107-1240-2	30.0	10.68	7.12	ET-206-1300-2	72.0	8.97	5.98	ET-406-1320-2	86.0	9.93	6.62
ET-107-1250-2	36.0	10.68	7.12	ET-206-1320-2	86.0	8.97	5.98	ET-406-1340-2	120.0	9.93	6.62
ET-107-1260-2	40.0	10.68	7.12	ET-206-1330-2	100.0	9.27	6.18	ET-406-1350-2	125.0	9.93	6.62
ET-107-1270-2	43.0	10.68	7.12	ET-206-1350-2	125.0	9.27	6.18	ET-406-1370-2	175.0	10.32	6.88
ET-107-1280-2	50.0	10.68	7.12	ET-206-1360-2	150.0	9.27	6.18	ET-406-1380-2	200.0	10.32	6.88
ET-107-1290-2	60.0	10.68	7.12	ET-206-1380-2	200.0	9.54	6.36	ET-406-1400-2	250.0	10.32	6.88
ET-107-1300-2	72.0	11.37	7.58	ET-206-1390-2	240.0	9.54	6.36	ET-406-1410-2	300.0	10.32	6.88
ET-107-1310-2	75.0	11.37	7.58	ET-206-1410-2	300.0	9.54	6.36	ET-406-1430-2	400.0	10.74	7.16
ET-107-1320-2	86.0	11.37	7.58	ET-206-1420-2	360.0	9.84	6.56	ET-406-1440-2	430.0	10.74	7.16
ET-107-1330-2	100.0	11.37	7.58	ET-206-1440-2	430.0	9.84	6.56	ET-406-1460-2	600.0	10.74	7.16
ET-107-1340-2	120.0	11.37	7.58	ET-206-1450-2	500.0	9.84	6.56	ET-406-1470-2	720.0	11.16	7.44
ET-107-1350-2	125.0	11.37	7.58	ET-206-1470-2	720.0	10.11	6.74	ET-406-1490-2	860.0	11.16	7.44
ET-107-1360-2	150.0	11.91	7.94	ET-206-1480-2	750.0	10.11	6.74	ET-406-1500-2	1,000h	11.16	7.44
ET-107-1370-2	175.0	11.91	7.94	ET-206-1500-2	1,000h	10.11	6.74	ET-406-1520-2	1,250	11.16	7.44
ET-107-1380-2	200.0	11.91	7.94	ET-206-1510-2	1,200	10.11	6.74	ET-406-1530-2	1,500	11.58	7.72
ET-107-1390-2	240.0	11.91	7.94	ET-206-1530-2	1,500	10.41	6.94	ET-406-1550-2	2,00	11.58	7.72
ET-107-1400-2	250.0	11.91	7.94	ET-206-1540-2	1,750	10.41	6.94	ET-406-1560-2	2,40	11.58	7.72
ET-107-1410-2	300.0	12.42	8.28	ET-206-1560-2	2,40	10.41	6.94	ET-406-1590-2	3.60	11.97	7.98
ET-107-1420-2	360.0	12.69	8.46	ET-206-1564-2	2,44	10.41	6.94	ET-406-1600-2	4.00	11.97	7.98
ET-107-1430-2	400.0	12.69	8.46	ET-206-1570-2	2,50	10.98	7.12	ET-406-1620-2	5.00	11.97	7.98
ET-107-1440-2	430.0	13.05	8.70	ET-206-1580-2	3.00	10.98	7.12	ET-406-1630-2	6.00	11.97	7.98
ET-107-1450-2	500.0	13.05	8.70	ET-206-1590-2	3.60	10.98	7.12	ET-406-1650-2	7.50	12.39	8.26
ET-107-1460-2	600.0	13.26	8.94	ET-206-1600-2	4.00	10.98	7.12	ET-406-1660-2	8.60	12.39	8.26
ET-107-1470-2	720.0	13.56	9.04	ET-206-1610-2	4.30	10.98	7.12	ET-406-1680-2	12.00	12.39	8.26
ET-107-1480-2	750.0	13.56	9.04	ET-206-1620-2	5.00	10.98	7.12	ET-406-1690-2	12.50	12.39	8.26
ET-107-1490-2	860.0	13.92	9.28	ET-206-1630-2	6.00	10.98	7.12	ET-406-1710-2	17.50	12.39	8.26
ET-107-1496-2	960.0	14.19	9.46	ET-206-1634-2	6.40	10.98	7.12	ET-406-1720-2	19.00	12.39	8.26

\*Prices for larger quantities are available on request.

STANDARD STOCK ITEMS

TYPE ET-1

Subminiature Inductors (.375" H x .690" W x .844" L)  
 4 Core Types—Frequency Range: to 500KC.  
 ET-104 - Inductance: 6.4 mh to 2.5 h  
 ET-106 - Inductance: 5.0 mh to 2.0 h  
 ET-107 - Inductance: 2.4 mh to 0.96 h  
 ET-108 - Inductance: 1.0 mh to 0.43 h

TYPE ET-2

Subminiature Inductors (.66" H x 1.08" Dia.)  
 4 Core Types—Frequency Range: to 100KC.  
 ET-203 - Inductance: 8.00 mh to 10.3 h  
 ET-204 - Inductance: 6.40 mh to 8.2 h  
 ET-206 - Inductance: 5.00 mh to 6.4 h  
 ET-207 - Inductance: 2.40 mh to 3.0 h

TYPE ET-4

Subminiature Inductors (.86" H x 1.34" Dia.)  
 4 Core Types—Frequency Range: to 60KC.  
 ET-403 - Inductance: 12.0 mh to 30.40 h  
 ET-404 - Inductance: 9.60 mh to 24.30h  
 ET-406 - Inductance: 7.20 mh to 19.00h  
 ET-407 - Inductance: 3.60 mh to 9.10 h

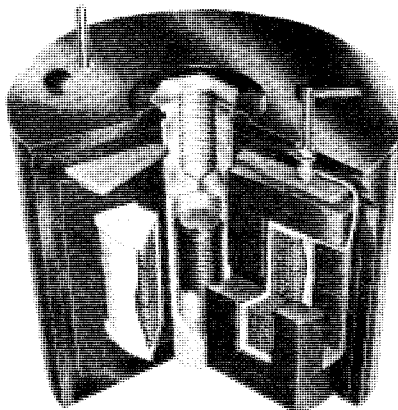
SANGAMO ELECTRIC COMPANY

# inductors

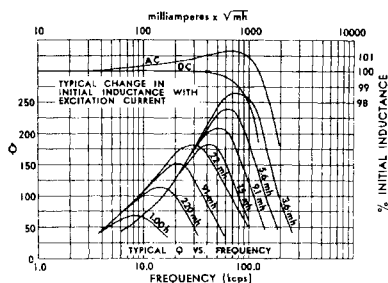


ELECTRONIC COMPONENTS

## Type EV-263 VARIABLE INDUCTORS



Sangamo Type EV encapsulated variable inductors are guaranteed adjustable  $\pm 10\%$  from nominal inductance value, enabling the designer to tune circuit characteristics to exact requirements. Terminals are on a 0.10" grid. The maximum operating temperature of these units is 105°C. Header pads keep unit off the mounting surface for easy flux removal and prevention of moisture accumulation. *For more complete information write for Bulletin 2720.*



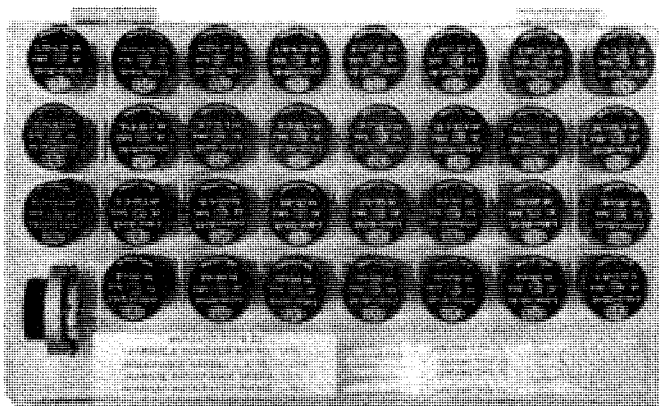
Specification Number (S)	Nominal Inductance	Guaranteed Tuning Range		Price
		Low	High	
EV-263-1100-2	3.0 mh	2.70 mh	3.3 mh	REFER TO TABLE 1
EV-263-1110-2	3.3	2.97	3.63	
EV-263-1120-2	3.6	3.24	3.96	
EV-263-1130-2	3.9	3.51	4.29	
EV-263-1140-2	4.3	3.87	4.73	
EV-263-1150-2	4.7	4.23	5.17	
EV-263-1160-2	5.1	4.59	5.61	
EV-263-1170-2	5.6	5.04	6.16	
EV-263-1180-2	6.2	5.58	6.82	
EV-263-1190-2	6.8	6.12	7.48	
EV-263-1200-2	7.5	6.75	8.25	
EV-263-1210-2	8.2	7.38	9.02	
EV-263-1220-2	9.1	8.90	10.0	
EV-263-1230-2	10.0	9.00	11.0	
EV-263-1240-2	11.0	9.90	12.1	
EV-263-1250-2	12.0	10.8	13.2	
EV-263-1260-2	13.0	11.7	14.3	
EV-263-1270-2	15.0	13.5	16.5	
EV-263-1280-2	16.0	14.4	17.6	
EV-263-1290-2	18.0	16.2	19.8	
EV-263-1300-2	20.0	18.0	22.0	
EV-263-1310-2	22.0	19.8	24.2	
EV-263-1320-2	24.0	21.6	26.4	
EV-263-1330-2	27.0	24.3	29.7	
EV-263-1340-2	30.0	27.0	33.0	
EV-263-1350-2	33.0	29.7	36.3	
EV-263-1360-2	36.0	32.4	39.6	
EV-263-1370-2	39.0	35.1	42.9	
EV-263-1380-2	43.0	38.7	47.3	
EV-263-1390-2	47.0	42.3	51.7	
EV-263-1400-2	51.0	45.9	56.1	

Specification Number (S)	Nominal Inductance	Guaranteed Tuning Range		Price
		Low	High	
EV-263-1410-2	56.0 mh	50.4 mh	61.6 mh	REFER TO TABLE 1
EV-263-1420-2	62.0	55.8	68.2	
EV-263-1430-2	68.0	61.2	74.8	
EV-263-1440-2	75.0	67.5	82.5	
EV-263-1450-2	82.0	73.8	90.2	
EV-263-1460-2	91.0	81.9	100	
EV-263-1470-2	100	90.0	110	
EV-263-1480-2	110	99.0	121	
EV-263-1490-2	120	108	132	
EV-263-1500-2	130	117	143	
EV-263-1510-2	150	135	165	
EV-263-1520-2	160	144	176	
EV-263-1530-2	180	162	198	
EV-263-1540-2	200	180	220	
EV-263-1550-2	220	198	242	
EV-263-1560-2	240	216	264	
EV-263-1570-2	270	243	297	
EV-263-1580-2	300	270	330	
EV-263-1590-2	330	297	363	
EV-263-1600-2	360	324	396	
EV-263-1610-2	390	351	429	
EV-263-1620-2	430	387	473	
EV-263-1630-2	470	423	517	
EV-263-1640-2	510	459	561	
EV-263-1650-2	560	504	616	
EV-263-1660-2	620	558	682	
EV-263-1670-2	680	612	748	
EV-263-1680-2	750	675	825	
EV-263-1690-2	820	738	902	
EV-263-1700-2	0.910h	0.819h	1.00h	
EV-263-1710-2	1.0	0.900h	1.10	

TABLE 1

Unit prices for all inductance values listed	1-4	5-14	15-49	50-99	100-249
	\$13.50	\$9.00	\$6.75	\$5.18	\$4.73

(S) STANDARD STOCK ITEMS



(S) STANDARD STOCK ITEMS

- (S) KIT 101A (includes: 31-variable inductors, 1-test socket, 6-tuning tools)  
Nominal Inductance: 3.3 mh - 1.00 h  
Nominal Inductance steps: 20%  
Nominal Inductance range:  $\pm 10\%$   
Frequency to 200 kc  

Price per Kit
\$195.00
- (S) KIT 101B (includes: 31-variable inductors, 1-test socket, 6-tuning tools)  
Nominal Inductance: 3.0 mh - 0.910 h  
Nominal Inductance steps: 20%  
Nominal Inductance range:  $\pm 10\%$   
Frequency to 200 kc  

Price per Kit
\$195.00
- (S) KIT 102 (includes: 62-variable inductors, 2-test sockets, 12-tuning tools)  
Nominal Inductance: 3.0 mh - 1.00 h  
Nominal Inductance steps: 10%  
Nominal Inductance range:  $\pm 10\%$   
Frequency to 200 kc  

Price per Kit
\$390.00



# NORTH HILLS ELECTRONICS, INC.

## GLEN COVE, LONG ISLAND, NEW YORK

### ADJUSTABLE COILS and COIL FORMS

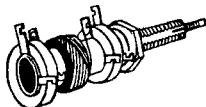
Cover Every Frequency Range from Audio to 200mc

These high quality coils enable engineers and experimenters to save valuable development time by filling a vast number of requirements with standard components from stock. All coils have the following features:

- All metal parts plated to MIL specifications.
- Built-in "perma-tune" tension for smooth "stay-pur" tuning.
- Litz wound higher inductance ranges.
- Two extra terminals for tie points or additional winding.
- Moisture and fungus resistant impregnant per MIL-V-173-A.
- Color coded ranges.

#### COILS ON CERAMIC FORM PER JAN-I-10

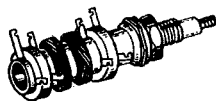
##### Subminiature 1100 Series



- $\frac{3}{8}$ " above mounting surface
- Mounting —  $\frac{1}{16}$ " hole
- For R.F. and I.F. applications

Part No.	Nominal Microhenries	Average Q
1100-A	0.9-1.4	45 @ 7.9 mc
1100-B	1.4-1.9	50 @ 7.9 mc
1100-C	1.9-2.6	55 @ 7.9 mc
1100-D	2.6-3.7	65 @ 7.9 mc
1100-E	3.7-5.5	65 @ 7.9 mc
1100-F	5.5-7.4	70 @ 7.9 mc
1100-G	7.4-12.5	64 @ 5.0 mc
1100-H	12.5-18.0	72 @ 5.0 mc
1100-I	18.0-28.0	74 @ 5.0 mc
1100-J	28.0-38.0	72 @ 5.0 mc
1100-K	38.0-55.0	75 @ 2.5 mc

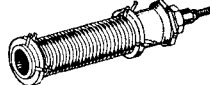
##### Miniature 1000 Series



- $\frac{7}{8}$ " above mounting surface
- Mounting — #10 hole
- For R.F. and I.F. applications

Part No.	Nominal Microhenries	Average Q
1000-A	1.0-1.6	70 @ 7.9 mc
1000-B	1.6-2.7	80 @ 7.9 mc
1000-C	2.7-4.5	85 @ 7.9 mc
1000-D	4.5-8.5	85 @ 7.9 mc
1000-E	8.5-14.5	75 @ 2.5 mc
1000-F	14.5-22	65 @ 2.5 mc
1000-G	22-29	65 @ 2.5 mc
1000-H	29-55	85 @ 2.5 mc
1000-I	55-110	80 @ 2.5 mc
1000-J	110-185	85 @ .79 mc
1000-K	185-305	85 @ .79 mc
1000-L	305-515	85 @ .79 mc
1000-M	515-820	85 @ .79 mc
1000-N	820-1100	75 @ .79 mc

##### Transmitter 1300 Series



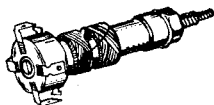
- $1\frac{1}{4}$ " above mounting surface
- Mounting —  $\frac{1}{4}$ " hole
- For low power transmitters and high Q receiver circuits

Part No.	Nominal Microhenries	Average Q
1300-A		For use from 90-200 mc
1300-B		For use from 40-90 mc
1300-C		For use from 20-40 mc
1300-D	0.7-1.1	130 @ 20 mc
1300-E	1.1-1.7	150 @ 18 mc
1300-F	1.7-2.7	150 @ 16 mc
1300-G	2.7-4.5	150 @ 14 mc
1300-H	4.5-6.8	150 @ 12 mc
1300-I	6.8-10.8	150 @ 10 mc
1300-J	10.8-17.0	150 @ 7 mc
1300-K	17.0-29.0	125 @ 5 mc
1300-L	29.0-45.0	125 @ 4 mc
1300-M	45.0-75.0	125 @ 3 mc

See Section 5600 for Wideband Transformers in this edition of The Radio-Electronic Master.

#### COILS ON MICA FILLED FORMS PER MIL-P-14-D

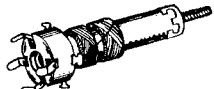
##### Standard 120 Series



- $1\frac{1}{4}$ " above mounting surface
- Mounting #10 hole
- For R.F. and I.F. applications

Part No.	Nominal Microhenries	Average Q
120-A	2-3	75 @ 7.9 mc
120-B	3-5	85 @ 7.9 mc
120-C	5-9	90 @ 7.9 mc
120-D	9-18	75 @ 7.9 mc
120-E	18-36	75 @ 2.5 mc
120-F	36-64	75 @ 2.5 mc
120-G	64-105	90 @ 2.5 mc
120-H	105-200	90 @ 2.5 mc
120-I	200-500	90 @ .79 mc
120-J	500-1000	90 @ .79 mc
120-K	1000-2000	70 @ .79 mc

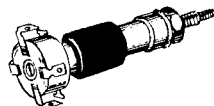
##### Printed Circuit P-120 Series



- Snaps into single 0.4" hole for dip soldering
- $1\frac{1}{4}$ " long

Part No.	Nominal Microhenries	Average Q
P-120-A	2-3	75 @ 7.9 mc
P-120-B	3-5	85 @ 7.9 mc
P-120-C	5-9	90 @ 7.9 mc
P-120-D	9-18	75 @ 7.9 mc
P-120-E	18-36	75 @ 2.5 mc
P-120-F	36-64	75 @ 2.5 mc
P-120-G	64-105	90 @ 2.5 mc
P-120-H	105-200	90 @ 2.5 mc
P-120-I	200-500	90 @ .79 mc
P-120-J	500-1000	90 @ .79 mc
P-120-K	1000-2000	70 @ .79 mc

##### Shielded, Encapsulated SE-120



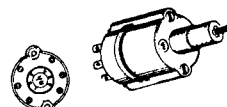
- Magnetic shielding cup
- Ruggedized construction
- $1\frac{1}{4}$ " long

Part No.	Nominal Microhenries	Average Q
SE-120-A	2-3	75 @ 7.9 mc
SE-120-B	3-5	85 @ 7.9 mc
SE-120-C	5-9	90 @ 7.9 mc
SE-120-D	9-18	75 @ 7.9 mc
SE-120-E	18-36	75 @ 2.5 mc
SE-120-F	36-64	75 @ 2.5 mc
SE-120-G	64-105	90 @ 2.5 mc
SE-120-H	105-200	90 @ 2.5 mc
SE-120-I	200-500	90 @ .79 mc
SE-120-J	500-1000	90 @ .79 mc

See Section 400b for Precision Power Sources AC & DC in current edition of Electronic Engineers Master.

#### ENCAPSULATED CUP-CORE COILS

##### Audio and Ultrasonic 700 Series



- $1\frac{1}{2}$ " above mounting surface
- Mounting Centers — Two #6 holes spaced  $1\frac{1}{4}$ "
- Magnetically shielded—High Q
- For standard or printed circuits

Part No.	Nominal Millihenries	Average Q
700-A	1.5-3	120 @ 200 kc
700-B	3-7	120 @ 150 kc
700-C	7-13	110 @ 100 kc
700-D	13-25	110 @ 60 kc
700-E	25-50	110 @ 40 kc
700-F	50-100	125 @ 20 kc
700-G	100-250	125 @ 20 kc
700-H	250-500	125 @ 5 kc
700-I	500-1000	125 @ 5 kc

#### SHIELDED COILS

##### 900 Series



- $\frac{3}{16}$ " Diameter
- Shielded and Encapsulated

Part No.	Nominal Microhenries	Average Q
900-A	0.5-0.8	80 @ 25 mc
900-B	0.8-1.3	70 @ 18 mc
900-C	1.3-2.0	60 @ 15 mc
900-D	2.0-4.0	70 @ 8 mc
900-E	4.0-7.0	70 @ 5 mc
900-F	7.0-12.0	70 @ 4 mc
900-G	12.0-20.0	70 @ 3 mc
900-H	20.0-35.0	70 @ 2.5 mc
900-I	35.0-60.0	70 @ 2.0 mc
900-J	60.0-100.0	70 @ 1.0 mc

##### 1500 Series



- $\frac{5}{16}$ " Diameter
- Shielded and Encapsulated

Part No.	Nominal Millihenries	Average Q
1500-A	.100-.175	80 @ 790 kc
1500-B	.175-.300	80 @ 790 kc
1500-C	.300-.500	80 @ 790 kc
1500-D	.500-.800	75 @ 790 kc
1500-E	.800-1.15	55 @ 500 kc
1500-F	1.15-1.50	55 @ 250 kc
1500-G	1.50-2.50	55 @ 250 kc
1500-H	2.50-3.50	50 @ 250 kc
1500-I	3.50-7.50	40 @ 250 kc

See SECTION 5600 for Wideband RF Transformers in this edition of The Radio-Electronic Master.  
See Section 2900 for Precision Bridges, Potentiometers and Galvanometers in this edition of Electronic Engineers Master.

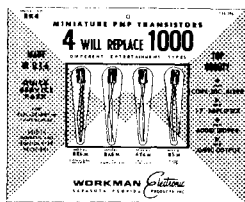
# REPLACEMENT COMPONENTS

**WORKMAN**  
SARASOTA, FLORIDA

*Electronic*  
PRODUCTS, INC.

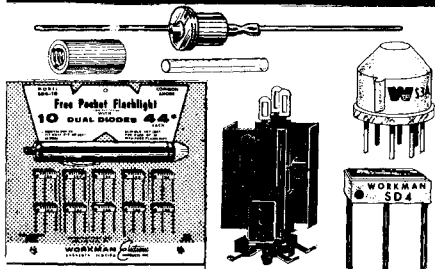


## TRANSISTORS



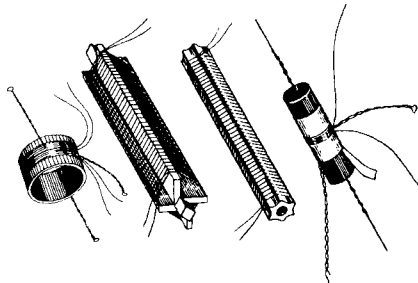
MODEL	DESCRIPTION	LIST	DLR.
99BE6	PNP conv. oscillator	1.65	.99
99BA6	PNP I. F. amplifier	1.65	.99
99AT6	PNP audio driver	1.65	.99
99B5	PNP audio output	1.65	.99
BE6	PNP conv. oscillator	2.70	1.62
BA6	PNP I. F. amplifier	2.50	1.50
AT6	PNP audio driver	2.50	1.50
B5	PNP audio output	2.50	1.50
BE6-M	PNP min. conv., osc., mixer	1.65	.99
BA6-M	PNP min. I. F. amplifier	1.65	.99
AT6-M	PNP min. audio driver	1.65	.99
B5-M	PNP min. audio output	1.65	.99
CK722	PNP output	1.33	.79
15V-MG	PNP 15V med. gain	1.05	.90
20V-LG	PNP 20V low gain	1.75	1.05
20V-MG	PNP 20V med. gain	2.00	1.20
20V-HG	PNP 20V high gain	2.25	1.35
30V-LG	PNP 30V low gain	2.50	1.50
30V-MG	PNP 30V med. gain	3.00	1.80
30V-HG	PNP 30V high gain	3.25	1.95
CB6	High freq., gen'l. purpose	3.00	1.80
J6	High freq., gen'l. purpose	3.00	1.80
SA7	NPN conv. oscillator	3.70	2.22
SK7	NPN I. F. amplifier	3.35	2.01
SQ7	NPN gen. purpose audio	3.35	2.01
L6	NPN audio output	3.35	2.01
99SA7	NPN conv. osc. mixer	1.65	.99
99SK7	NPN I. F. amplifier	1.65	.99
99SQ7	NPN gen. purpose audio	1.65	.99
99L6	NPN audio output	1.65	.99
RK4	PNP 4 pack	6.60	3.96
99RK6	PNP output 6 pack	—	4.45
99RK9	PNP and NPN 9 pack	—	9.95
TBX9	Replace. trans. for BX125	3.80	2.16
TBX10	Replace. trans. for BX15	4.20	2.52
TBX14	Replace. trans. for BX14	4.75	2.85

## RECTIFIERS



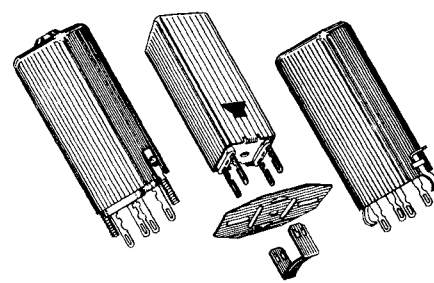
MODEL	DESCRIPTION	LIST	DLR.
S-500B	500 ma 450 PIV	1.85	1.11
S-500D	500 ma 400 PIV	2.00	1.20
S-750	750 ma 450 PIV	2.75	1.65
S-200	200-400 ma 1 pack	.45	.27
S-200A	200-400 ma 2 pack	.90	.54
S500C	500 ma 400 PIV	1.00	.60
S750C	750 ma 400 PIV rectifier	1.40	.84
S10	Halfwave assembly	3.25	1.95
S11	Silicon voltage doubler	4.95	2.97
S12	Silicon voltage doubler	4.95	2.97
SD4	Dual Diode	.75	.44
SD4-10	10 pk. with flashlight	—	4.40
SD5	Dual Diode	.75	.44
SD5-10	10 pk. with flashlight	—	4.40
SD6	Dual Diode	.75	.44
SD6-10	10 pk. with flashlight	—	4.40
S3A1.5	Twin Diode	2.00	.80
S6A1.5	Twin Diode	1.80	.72

## ANTENNA COILS



MODEL	DESCRIPTION	LIST	DLR.
T400-2	2 pcs. Admiral, RCA	2.00	1.20
T401-2	2 pcs. Philco	3.20	1.92
T402-2	2 pcs. Bendix, Motorola, etc	1.50	.90
T403-2	2 pcs. Motorola, Philco, etc	2.00	1.20
T404-2	2 pcs. RCA	2.00	1.20
T405-2	2 pcs. RCA	2.00	1.20
T406-2	2 pcs. RCA	2.00	1.20
T407-1	Bendix, G. E., West'hse, etc	1.55	.93
T408-1	G. E., Hotpoint	2.25	1.35
T409-1	G. E., Hotpoint	2.25	1.35
T410-1	G. E., Hotpoint Admiral	2.60	1.56
T411-1	G. E., Hotpoint	2.25	1.35
T412-1	G. E., Hotpoint	2.15	1.29
T413-1	G. E., Hotpoint	2.65	1.59
T414-1	G. E., Hallicrafters, etc	1.60	.96
T415-2	2 pcs. Philco, RCA, etc	3.65	2.19
T416-1	Matching Trans. 72/300Ω	3.00	1.80
T417-1	Matching Trans. 52/300Ω	3.00	1.80
T418-1	Admiral, Philco, G. E.	3.20	1.92
T419-2	2 pcs. Philco	3.40	2.04
T420-2	2 pcs. Philco	4.00	2.40
T421-2	2 pcs. Philco	3.70	2.22
T422-2	2 pcs. Philco	3.70	2.22
T423-2	2 pcs. Philco	3.70	2.22
T424-1	Admiral	1.85	1.11
T425-1	Motorola	2.70	1.62
T426-1	Westinghouse	1.60	.96
T427-1	General Electric	2.65	1.59
T428-1	General Electric	1.60	.96
T429-1	General Electric	2.65	1.59
T430-1	General Electric	2.65	1.59
T431-1	General Electric	3.25	1.95
T432-1	General Electric	2.00	1.20
T433-1	General Electric	2.00	1.20
T434-1	General Electric	1.65	.99
T435-1	General Electric	2.15	1.29
T436-1	General Electric	2.20	1.32
T437-1	General Electric	2.20	1.32
T438-1	Admiral	2.25	1.35
T439-1	Admiral	2.20	1.32
T440-1	Admiral	2.70	1.62
T441-1	Admiral	2.70	1.62
T442-1	Zenith	2.70	1.62
T443-1	G. E., Philco	2.70	1.62
T444-1	Philco	1.65	.99
T445-1	Philco	1.80	1.08
T446-1	Admiral	2.70	1.62
T447-1	Westinghouse	2.70	1.62
T448-1	Westinghouse	2.70	1.62
T450-1	Westinghouse	2.45	1.47
T451-1	Westinghouse	2.95	1.77
T453-1	RCA	3.00	1.80
T454-1	RCA	3.00	1.80
T455-1	General Electric	2.40	1.44
T457-1	Airline	1.55	.93
T460-1	General Electric	3.70	2.22
T461-1	Magnavox	3.20	1.92
T462-1	Motorola	2.10	1.26
T466-1	RCA	3.25	1.95
T467-1	Zenith	2.70	1.62
T468-1	Westinghouse	2.00	1.20
T469-1	Westinghouse	1.70	1.02
T470-1	Westinghouse	2.00	1.20
T471-1	2 pcs. CBS	3.70	2.22
T473-1	Dumont	2.70	1.62
T474-1	Silvertone	2.85	1.71
T476-1	Zenith	1.70	1.02
T477-1	Admiral	2.00	1.20
T478-2	2 pcs. Philco	3.70	2.22
T480	Sylvania	2.58	1.55
TB501-1	RCA	1.85	1.11

## I. F. TRANSFORMERS



MODEL	DESCRIPTION	LIST	DLR.
TC601-1	2nd I.F. Zenith#95-1102	3.05	1.83
TC622-1	1st I.F. Zenith#95-1101	3.05	1.83
TC623-1	2nd I.F. Zenith#95-1150	3.05	1.83
TC624-1	Output I. F. Zenith#95-1350	3.05	1.83
TC625-1	Output I. F. Zenith#95-1149	3.05	1.83
TC626-1	Disc. Zenith#95-1153	3.05	1.83
T604-2	262 KC input I. F.	4.95	2.97
T605-2	455 KC output I. F.	5.80	3.48
T606-2	262 KC output I. F./filter	5.55	3.33
T607-2	455 KC input I. F.	4.35	2.61
T607A-2	455 KC input I. F.	4.35	2.61
T608-2	455 KC output I. F.	4.35	2.61
T609-2	455 KC output I. F./filter	4.35	2.61
T610-2	455 KC input I. F. for bat.	4.35	2.61
T611-2	455 KC output I. F. for bat.	4.35	2.61
T646-2	455 KC input for AC-DC	4.95	2.97
T647-2	455 KC output I. F. for PC	4.95	2.97
T655-2	262 KC input I. F.	5.00	3.00
T656-2	262 KC output I. F./filter	4.35	2.61
T657-2	455 KC output I. F./filter	4.35	2.61
T661-2	262 KC output I. F.	4.95	2.97
T664-2	455 KC input I. F. for bat.	4.35	2.61
T665-2	455 KC output I. F.	4.35	2.61

## FIX 'n' PATCH



MODEL NO.	DESCRIPTION	LIST	DLR.
A10	Plastic Aluminum	.99	.60
A11	Trim Cement	.79	.48
A12	Speaker Cement	.95	.57
A13	Plastic Lock Washer	.69	.42
A14	Window Sealer	.69	.42
A15	Rust Remover	.79	.48
A16	Plastic Rubber (black)	.99	.60
A17	Spot Putty	.99	.60
A18	Porcelain Repair	.79	.48
A19	Liquid Solder	.49	.30
A20	Plastic Rubber (white)	.99	.60
A21	Plastic Steel	.99	.60
A22	White Glue	.79	.48
A23	Plastic Mender	.69	.42
A24	Scratch Remover	.79	.48
A25	Matchwood	.99	.60
A26	3 oz. "Wishh" Cleaner	1.30	.78
A27	Fabric Mender	.69	.42
A28	Household Cement	.49	.30
A29	E-Pox-E Glue	.99	.60

**COILS**  
Over 5000 Numbers  
IN STOCK  
Exact Replacements  
FOR OVER 200 MANUFACTURERS

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

FOR A COMPLETE LISTING OF EXACT REPLACEMENT COILS ASK YOUR JOBBER FOR OUR COIL CROSS REFERENCE.

WORKMAN PART NUMBERS FOR COILS, FUSING DEVICES, WIREWOUND AND SPECIAL PURPOSE RESISTORS ARE LISTED IN HOWARD SAM'S PHOTOFACTS AND COUNTER FACTS.

# ATR® Karadio®

"the oldest name in auto radio"

With  
Excellent Tone,  
Sensitivity,  
and Volume!

- HAND WIRED—NO PRINTED CIRCUITRY
- EQUIVALENT 8 TUBE PERFORMANCE

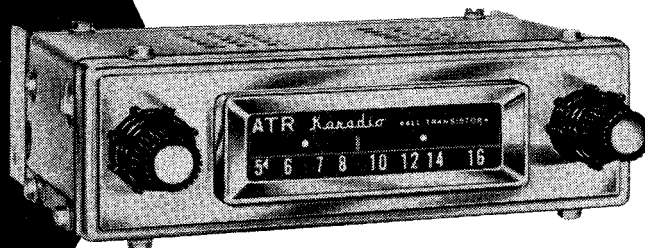
- FINGER-TIP TONE CONTROL
- AUTOMATIC VOLUME CONTROL

**ADDITIONAL FEATURES:**

- All hand wired . . . no printed circuits
- Variable tone control . . . higher priced set feature
- 7 tuned circuits . . . including high gain R.F. stage
- 7 solid-state semi-conductors . . . 5 transistors, 2 diodes
- 3 section "Magna Wave" tuner . . . not 2 section tuner
- Instant play . . . no warmup needed
- Built-in powerful speaker 5" x 3" elliptical speaker
- Large easy to read illuminated dial
- Automatic Volume Control
- Super-Heterodyne circuit
- One piece self-contained chassis
- Size only 6½" wide x 5½" deep x 2" high
- Neutral silver-gray baked enamel finish
- Fits under dash or in dash with standard available trim plate kits
- Fits-all design for practically all American and imported cars and trucks
- External speaker jack
- Available in 12 volt positive or negative ground—please specify
- Low battery drain
- Net Wt. 4 pounds

## ALL-TRANSISTOR

MODEL 707



MODEL 707N **\$29.95**  
List Price

**EXTERNAL SPEAKER MODELS 705N and 705P**

are all-transistor types similar to Model 707 except that they have an external speaker instead of a built-in speaker.

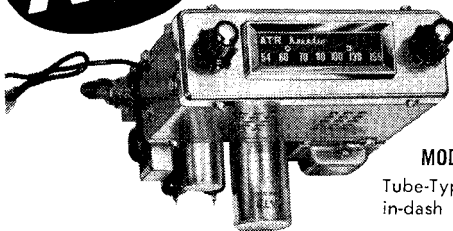
KARADIO DESCRIPTION	Karadio Model	Shipping Weight	List Price
Universal 12-Volt Negative Grd. only	707N	5 lbs.	\$29.95
Universal 12-Volt Positive Grd. only	707P	5 lbs.	32.95
Universal 12-Volt Negative Grd. only	705N	6 lbs.	34.95
Universal 12-Volt Positive Grd. only	705P	6 lbs.	37.95

# ATR

## TUBE-OPERATED

**\$39.95**

List Price



**MODEL 600 Series**

Tube-Type. Easily installed in-dash or under-dash.

**ALL-TUBE MODEL 606 (6V) MODEL 612 (12V)**

Large easy-to-read illuminated dial. Finger-tip control to adjust tone as you desire.

Automatic volume control to keep signals strong and steady.

6-Tube Superheterodyne circuit (utilizes two dual purpose tubes) with 8-Tube performance . . . pulls in those distant stations, with good tone and volume.

Is ATR Vibrator-Operated!

Uses tube-type rectifier for best tone and maximum sensitivity. Provides longer un-interrupted service.

No battery polarity input problem.

3-Section Super "Magna-Wave" Tuner with RF stage.

- Hand wired. No printed circuitry.
- Has two-piece chassis utilized as one unit for most installations—permitting maximum flexibility and easy servicing.
- Fits in-dash or under-dash.
- Furnished with external type speaker which is installed in original automobile speaker compartment for High Fidelity performance.

Neutral silver-gray baked enamel finish. Overall size, 4" deep x 6½" wide x 2" high, Tuner Chassis; with Amplifier Chassis, 2¾" deep x 6½" wide x 3¾" high.

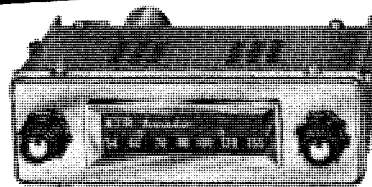
KARADIO DESCRIPTION	Karadio Model	Shipping Weight	List Price
Universal 6-Volt Neg. or Pos. Grd.	606	7 lbs.	\$39.95
Universal 12-Volt Neg. or Pos. Grd.	612	7 lbs.	39.95

# ATR

## TRANSISTOR-POWERED

**\$39.95**

List Price



**MODEL 400 Series**

Transistor-Powered. Easily installed in-dash or under-dash.

**TRANSISTOR-POWERED MODEL 401 (12V Neg. Grd.)**

- Large easy-to-read illuminated dial.
- Finger-tip control to adjust tone as you desire.
- Automatic volume control to keep signals strong and steady.
- Superheterodyne circuit utilizing 4 tubes (2 dual purpose tubes) together with two (2) transistors . . . pulls in those distant stations with good tone and volume.
- Uses no Vibrator or rectifier tube.
- 3-Section Super "Magna-Wave" Tuner with RF stage.
- Hand wired. No printed circuitry.
- Has one-piece self-contained chassis for easy installation.
- Fits in-dash or under-dash.
- Furnished with external type speaker which is installed in original automobile speaker compartment for High Fidelity performance.
- Available for 12-volt negative ground operation only.
- Low battery drain.

Neutral silver-gray baked enamel finish. Overall size 6½" deep x 6½" wide x 2" high.

KARADIO DESCRIPTION	Karadio Model	Shipping Weight	List Price
Universal 12-Volt Neg. Grd. only	401	6 lbs.	\$39.95



# 1964 INSTALLATION GUIDE and PRICE SCHEDULE

ATR KITS *Finest in Form Fit and Finish*

Install ATR UNIVERSAL KARADIO with Matching Dash Trimplate

KARADIO DESCRIPTION	Karadio Model	Ship. Wt.	List Price
Universal 12-Volt Negative Ground Only	707N	5 lbs.	\$29.95
Universal 12-Volt Positive Ground Only	707P	5 lbs.	32.95
Universal 12-Volt Negative Ground Only	705N	6 lbs.	34.95
Universal 12-Volt Positive Ground Only	705P	6 lbs.	37.95
Universal 6-Volt Negative or Positive Ground	606	7 lbs.	39.95
Universal 12-Volt Negative or Positive Ground	612	7 lbs.	39.95
Universal 12-Volt Negative Ground Only	401	6 lbs.	39.95

The Universal model KARADIOS at left, are equipped with tone control and are supplied with separate external 5" x 7" speaker and suppression kit ready for use. The Models 705N and 705P are all-transistor types similar to Model 707 except having external speaker instead of built-in speaker. The Model 401 is transistor-powered; whereas, the models 606 and 612 are all-tube type radios. The radio set cases are finished in neutral silver-grey baked enamel. The control centers are spaced 5/8". When used with trim plate kits for American cars, drilling or filing of mounting holes may be necessary to mount radio in dash.

## AMERICAN CARS

ATR Kit No.	Sugg. List Price	ATR Kit No.	Sugg. List Price
FORD Ranchero 1963	60FA6 2.95	PONTIAC 1959	9PON6 4.75
FORD 60/62	60FD6 2.95	1964	640P6 4.75
FORD 1959	59FD6 3.95	58/59	CUK600 4.75
FORD 1958	58FD6 3.95	(B) PEUGEOT 404	61/63 CUK600 4.75
FORD 1957	57FD6 3.95	(B) PEUGEOT 403	58/59 CUK600 4.75
INTERNATIONAL "Light Duty" Truck Models 900 thru 1500	63/64 63ITA6 5.95	(B) RENAULT R8	1964 64RT6 5.95
INTERNATIONAL TRUCK Series "C" Models 1600 thru 2000	61/64 61ITR6 4.75	1963	CUK600 4.75
INTERNATIONAL Scout	61/64 61INT6 9.95	(B) RENAULT Caravelle—Automatic—Dauphine	1964 CUK600 4.75
JEEP J200/J300	63/64 63JP6 4.75	1964	640P6 4.75
LANCER 1962	C6VAL6 4.75	59/63	CUK600 4.75
1961	6VAL6 4.95	(A) RENAULT 57/58	CUK600 4.75
MERCURY Meteor	62/63 62FL6 3.50	(B) SAAB 63/64	63SA6 4.95
MERCURY 1961	60FD6** 2.95	(B) SAAB GRAND TURISMO 707	59/62 CUK600 4.75
**60FD6 will install into Mercury Meteor models 600 and 800 only.			
OLDSMOBILE F-85	61/63 61BOP6 4.75	(B) SIMCA Elysee-Grand Large	59/63 9ELY6 4.75
PLYMOUTH 1964	64PD6 4.95	(B) SIMCA Aronde—Chatelaine—Deluxe—Super Deluxe	58/63 8SIM6 4.75
62/63	62PD6 4.75	(B) SIMCA Ocean-Plein Ceil-Vedette-Beaulieu	59/60 CUK600 4.75
60/61	6PLY6 4.75	(C) SUNBEAM Alpine	60/63 6ALP6 4.75
Note: Set mounting bracket behind dash (if present) must be removed before sets can be installed in 1960/61 Plymouth.			
1959†	59PLY6 4.75	(C) SUNBEAM Rapier	57/59 7HMX6 4.75
†Note: Some models require Finish Panel—FP324 without clock; FP324WC with clock, or cut original Finish Panel to accommodate radio opening. Finish Panel List \$3.50.			
PONTIAC Tempest	1964 64PT6 4.95	(A) TAUNUS 58/60	CUK600 4.75
1961/63	61BOP6 4.75	(C) TRIUMPH TR3	55/62 6TR16 4.95
PONTIAC Catalina	63/64 63PC6 4.75	(C) TRIUMPH TR4	62/64 62TR14-6 5.95
1960	9PON6 4.75	(C) TRIUMPH Spitfire	63/64 63SP6 4.95
PONTIAC (Except Catalina)	1960 6PON6 4.75	(C) TRIUMPH Sedan	62/63 CUK600 4.75
PONTIAC (all models except Tempest)	1961 61PON6 4.75	(C) VAUXHALL 58/60	9VHL6 4.75

ATR Kit No.	Sugg. List Price	ATR Kit No.	Sugg. List Price
RAMBLER, Ambassador and Classic (Except 1964 Model 770)	63/64 63RA6 4.95	(A) OPEL 1964	640P6 4.75
1962†	6RAM6 4.75	58/59	CUK600 4.75
†Note: Interfering bracket welded behind dash above radio cutout must be removed by filing before radio can be installed.			
RAMBLER American	1964 6RAM6 4.75	(B) SAAB 63/64	63SA6 4.95
1964	6AM6 4.75	(B) SAAB GRAND TURISMO 707	59/62 CUK600 4.75
61/63	61NA6 4.95	(B) SIMCA Elysee-Grand Large	59/63 9ELY6 4.75
55/60	6NA6 4.75	(B) SIMCA Aronde—Chatelaine—Deluxe—Super Deluxe	58/63 8SIM6 4.75
STUDEBAKER Lark	63/64 63LA6 4.75	(B) SIMCA Ocean-Plein Ceil-Vedette-Beaulieu	59/60 CUK600 4.75
1963/64 models require 4 x 10 speaker.	1962	62STL6 4.75	(C) SUNBEAM Alpine
1961	61STL6 4.75	59/62	CUK600 4.75
59/60	6STL6 4.75	(C) SUNBEAM Rapier	57/59 7HMX6 4.75
VALIANT 63/64	63DV6 4.75	(A) TAUNUS 58/60	CUK600 4.75
1962	C6VAL6 4.75	(C) TRIUMPH TR3	55/62 6TR16 4.95
60/61	6VAL6 4.95	(C) TRIUMPH TR4	62/64 62TR14-6 5.95

### IMPORTED CARS

Voltage Chart	Use Karadio
(A) 6 Volt Negative Ground	Model 606
(B) 12 Volt Negative Ground	Model 705N, 401 or 612
(C) 12 Volt Positive Ground	Model 705P or 612

Note: It is difficult to classify imported cars by year since most foreign makes do not have annual changes. Hence, parts may fit years not listed.

Many import cars require under-dash mounting only. No kits required.

(C) AUSTIN HEALEY Sprite	62/64 63MGM6 4.75	(C) AUSTIN A-55	60/62 9AUS6 4.75
(B) DATSUN 1200 (Ex. Conv.)	19*4 64DS6 4.75	(C) ENGLISH FORD (Consul-Zephyr-Zodiac)	60/62 6EFD6 4.75
(C) HILLMAN MINX	57/59 7EFD6 4.95	(C) HILLMAN MINX	57/58 7HM6 4.75
(C) LANCIA APPIA	1959 CUK600 4.75	(C) LANCIA APPIA	1959 CUK600 4.75
(C) MG MIDGET	63/64 63MGM6 4.75	(C) MG "B"	63/64 6MGB6 3.95
(C) MG "B"	56/63 6MGB6 4.75	(B) MERCEDES BENZ 220S and 190DC	60/63 6MB6 4.75
(B) MERCEDES BENZ 190SL	58/63 8MB6 4.75	(C) MORRIS MINOR	57/62 7MOR6 4.75

(A) OPEL 1964	640P6 4.75	(C) SUNBEAM Alpine	60/63 6ALP6 4.75
(B) PEUGEOT 404	61/63 CUK600 4.75	(C) SUNBEAM Rapier	57/59 7HMX6 4.75
(B) PEUGEOT 403	58/59 CUK600 4.75	(A) TAUNUS 58/60	CUK600 4.75
(B) RENAULT R8	1964 64RT6 5.95	(C) TRIUMPH TR3	55/62 6TR16 4.95
1963	CUK600 4.75	(C) TRIUMPH TR4	62/64 62TR14-6 5.95
(B) RENAULT Caravelle—Automatic—Dauphine	1964 CUK600 4.75	(C) TRIUMPH Spitfire	63/64 63SP6 4.95
1964	640P6 4.75	(C) TRIUMPH Sedan	62/63 CUK600 4.75
(B) RENAULT	59/63 CUK600 4.75	(C) VAUXHALL 58/60	9VHL6 4.75
(A) RENAULT 57/58	CUK600 4.75	(A) VOLKSWAGEN Microbus	57/64 VKM6 4.75
(B) SAAB 63/64	63SA6 4.95	(A) VOLKSWAGEN	58/64 8VKS6 4.75
(B) SAAB GRAND TURISMO 707	59/62 CUK600 4.75	52/57	7VKS6 4.75
(B) SIMCA Elysee-Grand Large	59/63 9ELY6 4.75	(A) KARMANN GHIA	58/64 8KG6 4.75
(B) SIMCA Aronde—Chatelaine—Deluxe—Super Deluxe	58/63 8SIM6 4.75	(B) VOLVO 122-S	63/64 CUK600 4.75
(B) SIMCA Ocean-Plein Ceil-Vedette-Beaulieu	59/60 CUK600 4.75	(A) VOLVO 122-S	60/62 CUK600 4.75
(C) SUNBEAM Alpine	60/63 6ALP6 4.75	(B) VOLVO 544	63/64 CUK600 4.75
(C) SUNBEAM Rapier	57/59 7HMX6 4.75	(A) VOLVO 544	59/62 CUK600 4.75
(A) TAUNUS 58/60	CUK600 4.75	(B) VOLVO Sport and P1800	62/64 CUK600 4.75
(C) TRIUMPH TR3	55/62 6TR16 4.95	<b>All prices and specifications subject to change without notice.</b>	
(C) TRIUMPH TR4	62/64 62TR14-6 5.95	®Trademarks of ATR Electronics, Inc Registered in the U.S. Patent Office	
(C) TRIUMPH Spitfire	63/64 63SP6 4.95		
(C) TRIUMPH Sedan	62/63 CUK600 4.75		
(C) VAUXHALL 58/60	9VHL6 4.75		
(A) VOLKSWAGEN Microbus	57/64 VKM6 4.75		
(A) VOLKSWAGEN	58/64 8VKS6 4.75		
52/57	7VKS6 4.75		
(A) KARMANN GHIA	58/64 8KG6 4.75		
(B) VOLVO 122-S	63/64 CUK600 4.75		
(A) VOLVO 122-S	60/62 CUK600 4.75		
(B) VOLVO 544	63/64 CUK600 4.75		
(A) VOLVO 544	59/62 CUK600 4.75		
(B) VOLVO Sport and P1800	62/64 CUK600 4.75		

## FULL CUSTOM KARADIO

Blends Perfectly With Dashboard Same as Original Equipment for Easy Installation

Write for Available Information

## UNIVERSAL TRIMPLATES ONLY

Item	Price	Item	Price
Install into make & models for which no kits are made—or not in stock—or boats, etc. Simply cut for nosepiece & drill for shaft centers using trimplate as template.		SK571B Universal Speaker Housing for 5 x 7 speaker.	2
Size 9 x 3	CUK219 List Price 1.75	9RSK Rear Deck Mount for 6 x 9 speaker.	3
Size 6 1/2 x 2	CUK220 List Price 1.75	RDG69 Rear Deck Mounting Grille Only for 6 x 9 Speaker.	1
Note: CUK219 can be bent for curved dash.—Sets using separate speaker require also speaker mount as below—Complete kits listed above include speaker mounts.		6CTR-SK Dash Mount to Install Speaker into '64 Chevrolet/GMC Trucks.	2
<b>ANTENNA</b> —Type 35 Telescopic chrome plated fender mounted antenna available. Extends to 35" complete with 48" cable. If antenna is desired, please so specify: this will be shipped as a separate item. Pricing for the antenna is as follows: List price, \$2.95. Side mounted antenna, Type 37, also available at similar price			

# ATR<sup>®</sup> TRUCK Karadio<sup>®</sup>

with Excellent Tone, Sensitivity and Volume!

## ALL-TRANSISTOR

MODEL TR-720

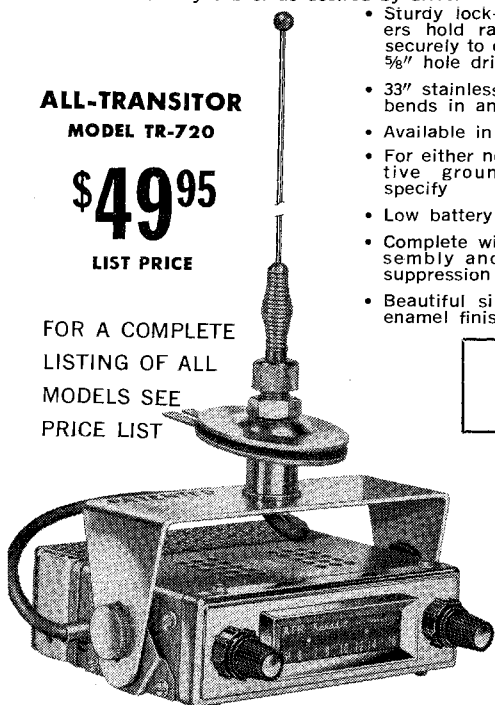
- Hand-wired . . . no printed circuits to warp or crack
- Seven tuned circuits with high gain RF stage
- Seven solid-state semi-conductors . . . five transistors, two diodes — gives seven-transistor or more performance
- Superheterodyne circuit
- Instant play . . . no warmup needed
- Variable tone control . . . to adjust tone as you desire
- Plug-in speaker jack for external speaker use if desired
- Automatic Volume Control
- Three-section "Magna-Wave" tuner
- Large easy-to-read illuminated dial
- Powerful 5" x 3" elliptical speaker
- The life of the radio has been increased considerably due to specially designed yoke-type flat-spring-mounting and excellent ventilation
- The ATR Karadio is simple to service — merely take off two easily accessible thumb nuts and remove the entire set
- The unit can be installed quickly and easily — drill ONE hole . . . connect ONE wire, and the set is ready for use
- Yoke-type tilt bracket mount permits radio to be adjusted to curvature of any cab or as desired by driver

### ALL-TRANSISTOR MODEL TR-720

**\$49<sup>95</sup>**

LIST PRICE

FOR A COMPLETE LISTING OF ALL MODELS SEE PRICE LIST



- Sturdy lock-nut and washers hold radio set mount securely to cab top through 5/8" hole drilled in roof
- 33" stainless steel antenna bends in any direction
- Available in 12-volts only
- For either negative or positive ground . . . please specify
- Low battery drain
- Complete with antenna assembly and interference suppression kit
- Beautiful silver-grey baked enamel finish

### ROOF-MOUNTED AND IN-DASH MODELS

FITS ALL MAKES  
OF TRUCKS . . .  
RUGGED ALL-METAL  
CONSTRUCTION . . .  
SHOCK-MOUNTED

DESCRIPTION — ALL-TRANSISTOR	Weight Shipping	Sugg. Price Retail
Model TR-720N 12-volt Negative ground only complete with No. 79 Antenna. Net Weight, 6 lbs.	8½ lbs.	\$49.95
Model TR-720N (L) 12-volt Negative ground only. Radio Set Only, as above, except No Antenna. Net Weight, 4½ lbs.	5 lbs.	36.95
Model TR-720P 12-volt Positive ground only complete with No. 79 Antenna. Net Weight, 6 lbs.	8½ lbs.	52.95
Model TR-720P (L) 12-volt Positive ground only. Radio Set Only, as above, except No Antenna. Net Weight, 4½ lbs.	5 lbs.	39.95
No. 79 TRUCK Karadio Patented Roof-Mount Antenna-Yoke assembly. Chrome plated.	3½ lbs.	13.50

## ALL-TUBE

MODELS TR-1279-6A  
& TR 1279-12A

- Hand-wired . . . no printed circuitry
- Seven tuned circuits with high gain RF stage
- Six-tube superheterodyne circuit (utilizes two dual-purpose tubes) giving eight-tube performance
- Pulls in distant stations with good tone and volume
- Is ATR Vibrator-Operated
- Uses tube-type rectifier for best tone and maximum sensitivity
- Variable tone control . . . to adjust tone as you desire
- Plug-in speaker jack for external speaker use, if desired
- Automatic Volume Control
- Three-section "Magna-Wave" tuner
- Large easy-to-read illuminated dial
- Powerful extra large Alnico 5-Magnet PM 4-inch speaker
- The life of the radio has been increased considerably due to specially designed yoke-type flat-spring-mounting and excellent ventilation
- The ATR Karadio is simple to service — merely take off two easily accessible thumb units and remove the entire set
- The unit can be installed quickly and easily — drill ONE hole . . . connect ONE wire, and the set is ready for use
- Yoke-type tilt bracket mount permits radio to be adjusted to curvature of any cab or as desired by driver

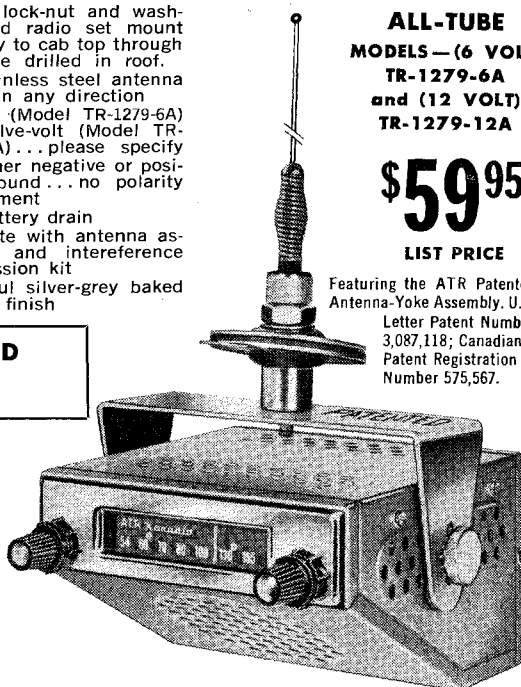
- Sturdy lock-nut and washers hold radio set mount securely to cab top through 5/8" hole drilled in roof.
- 33" stainless steel antenna bends in any direction
- Six-volt (Model TR-1279-6A) or Twelve-volt (Model TR-1279-12A) . . . please specify
- For either negative or positive ground . . . no polarity requirement
- Low battery drain
- Complete with antenna assembly and interference suppression kit
- Beautiful silver-grey baked enamel finish

### ALL-TUBE MODELS — (6 VOLT) TR-1279-6A and (12 VOLT) TR-1279-12A

**\$59<sup>95</sup>**

LIST PRICE

Featuring the ATR Patented Antenna-Yoke Assembly, U.S. Letter Patent Number 3,087,118; Canadian Patent Registration Number 575,567.



DESCRIPTION — ALL-TUBE	Weight Shipping	Sugg. Price Retail
Model TR-1279-12A 12-volt with No. 79 Antenna. Net Weight, 7½ lbs.	10½ lbs.	\$59.95
Model TR-1279-6A 6-volt with No. 79 Antenna. Net Weight, 7½ lbs.	10½ lbs.	59.95
Model TR-1279-12 12-volt, radio set only, no antenna. Net Weight, 6 lbs.	7 lbs.	47.95
Model TR-1279-6 6-volt, radio set only, no antenna. Net Weight, 6 lbs.	7 lbs.	47.95

IDEAL FOR TRUCKS, BOATS AND STATION WAGONS



# TRACTORRadio

with Excellent Tone, Sensitivity and Volume!

## ALL-TRANSISTOR

MODEL TT-727

## ALL-TUBE

MODELS TT-626 & TT-6212

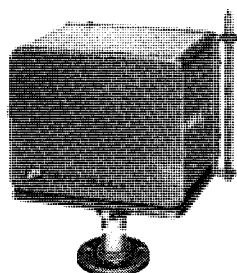
THREE MODELS TO CHOOSE FROM —  
TO PROVIDE BEST PERFORMANCE FROM  
YOUR TRACTOR BATTERY VOLTAGE!!

- Hand-wired . . . no printed circuits to warp or crack
- Seven tuned circuits with high gain RF stage
- Seven solid-state semi-conductors . . . five transistors, two diodes — gives seven transistor or more performance
- Superheterodyne circuit
- Instant play . . . no warmup needed
- Variable tone control . . . to adjust tone as you desire
- External plug-in speaker jack for plug-in ear-phone-piece or barn speaker
- Automatic Volume Control
- Three-section "Magna-Wave" tuner
- Large easy-to-read illuminated dial
- Powerful 9" x 6" built-in dust-proofed speaker . . . lifelike home radio tone
- Heavy-duty telescoping chrome-plated antenna
- Available in 12-volts only
- For either negative or positive ground . . . utilizing reversible polarity switch
- Low battery drain
- Complete with antenna, ear-phone-piece with cord and plug, interference suppression kit, shock-proof base and mounting fixture
- Beautiful silver-grey baked enamel finish

- Hand-wired . . . no printed circuitry
- Seven tuned circuits with high gain RF stage
- Six tube superheterodyne circuit (utilizes two dual purpose tubes) giving eight tube performance
- Pulls in distant stations with good tone and volume
- Is ATR Vibrator-Operated
- Uses tube-type rectifier for best tone and maximum sensitivity
- Variable tone control . . . to adjust tone as you desire
- External plug-in speaker jack for plug-in earphone-piece or barn speaker
- Automatic Volume Control
- Three-section "Magna-Wave" tuner
- Large easy-to-read illuminated dial
- Powerful 9" x 6" built-in dust-proof speaker . . . lifelike home radio tone
- Heavy-duty telescoping chrome-plated antenna
- Six-volt (Model TT-626) or Twelve-volt (Model TT-6212) . . . please specify
- For either negative or positive ground . . . no polarity requirement
- Low battery drain
- Complete with antenna, ear-phone-piece with cord and plug, interference suppression kit, shock-proof base, and mounting fixture
- Beautiful silver-grey baked enamel finish

MODEL DESCRIPTION	Shipping Weight	Retail Price
<b>MODEL TT-727</b> All-Transistor Type, Complete. Reversible Polarity. 12-volt operation.	18 lbs.	\$69.95
<b>MODEL TT-626</b> All-Tube Type, Complete. For negative or positive ground. 6-volt operation.	20 lbs.	79.95
<b>MODEL TT-6212</b> All-Tube Type, Complete. For negative or positive ground. 12-volt operation.	20 lbs.	79.95

**FITS ALL MAKES OF TRACTORS . . .  
RUGGED — ALL METAL CONSTRUCTION . . .  
WEATHER-PROOF . . . SHOCK-MOUNTED**



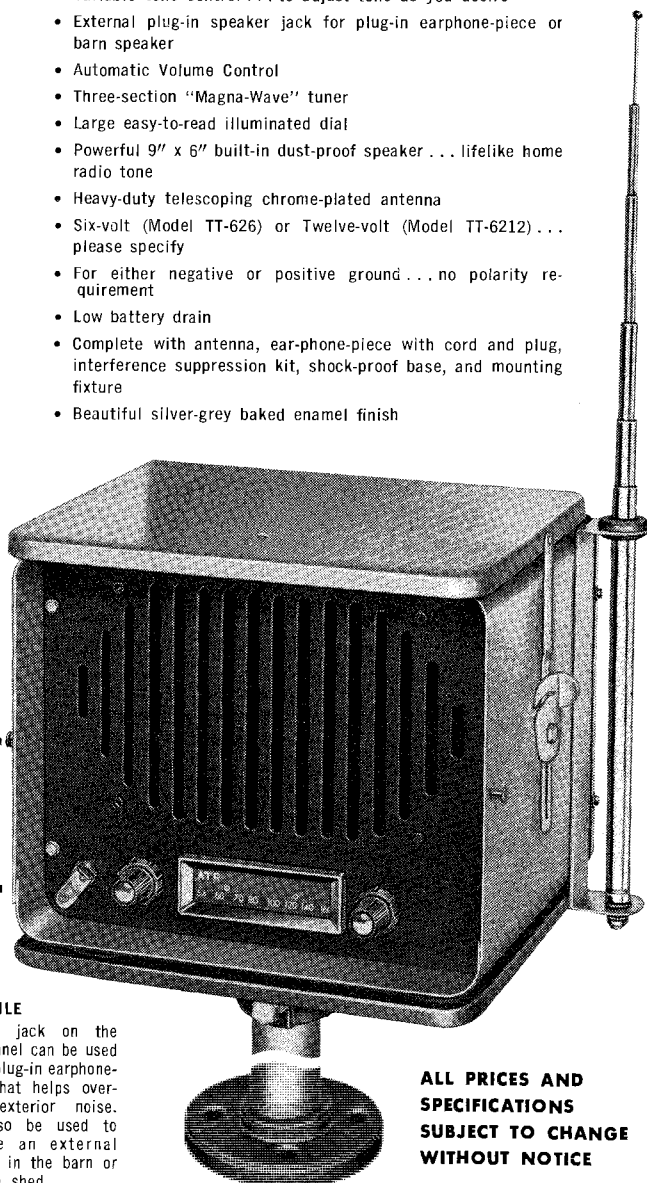
#### WEATHERPROOF

Unit is sealed in a heavy gauge metal case. Metal cover closes over the front when not in use. It protects against wind, rain, and dust. Cover locks tight—opened or closed.



#### VERSATILE

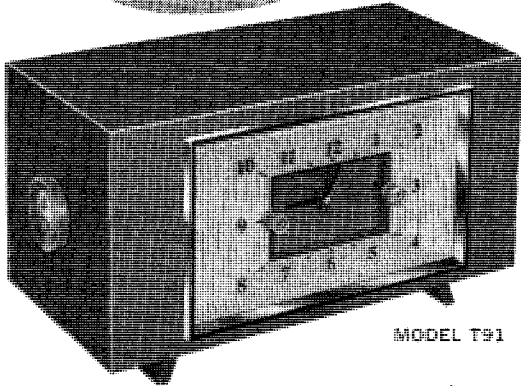
Speaker jack on the front panel can be used with a plug-in earphone-piece that helps overcome exterior noise. Can also be used to operate an external speaker in the barn or machine shed.



**ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

# ATR

## Ultra Modern TABLE RADIOS



MODEL T-91

### CLOCK RADIO WITH BUILT-IN SALES APPEAL

Excitingly styled clock radio—trim, modern cabinet in ebony or ivory plastic . . . rich gold-color trim and clock numerals. Powerful 5-tubes AM radio chassis with built-in "Magna-Plate" antenna. Full-toned 4" PM speaker. Popular features include: *Musical Alarm*—radio turns on automatically at any pre-set time; *Sleep Selector*—lulls user to sleep, turns radio off automatically during 60 minute period after retiring; *Automatic Appliance Timer*—outlet on back of radio times any electric appliance automatically (up to 1100 watts). Cabinet 10½ in. wide, 5 in. high, 5⅞ in. deep. Wt. approx. 8 lbs. A WONDERFUL TONIC FOR NEW SALES . . . BIGGER PROFITS!

Model T-91 Clock Radio, Black ..... Dealer Price \$22.45  
Model T-91 Clock Radio, Ivory ..... Dealer Price \$23.15

### CLOCK SPECIFICATIONS ON MODEL T91 ONLY

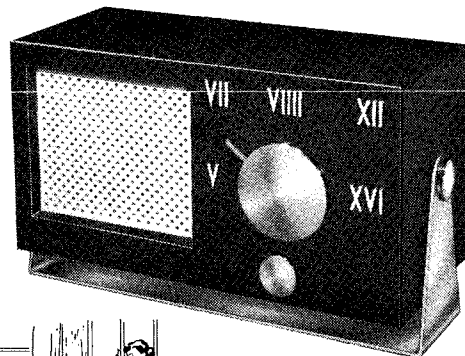
- Genuine Telechron Movement . . . Accurate, Quiet, and Long-Lived.
- Self-Starting . . . Never Needs Winding, Oiling, or Regulating.
- Simplified Clock Controls for Radio and Sleep Switch.
- 1100 Watt Controlled Appliance Outlet.
- Automatic Buzzer Alarm Sounds Approximately 10 Minutes After Sleep-Switch Turns On Radio.
- Gold-Plated Bezel and Numerals on Large Bone-White Dial. Dial Size 4¼" x 7¼"
- UL Approved

### GENERAL SPECIFICATIONS PERTAINING TO ALL ATR TABLE RADIOS

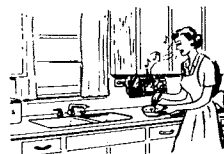
- **Advanced Super-heterodyne Circuit**—Increased selectivity and sensitivity with improved tube types . . . High audio output . . . Automatic volume control . . . two gang variable condenser.
- **Sealed Alnico 5 PM Dynamic Speaker**—Full range frequency . . . Power without distortion . . . Balanced tone quality.
- **Automatic Volume Control**—Maintains uniform volume on local and long distance reception.
- **Genuine Magna-Wand Ferrite Antenna**—Magna-Wand used in conjunction with Hi-Q Iron Core IF Coils for extreme sensitivity and selectivity . . . High signal-to-noise ratio.
- **Power Line Noise Filter**—Minimum interference from household appliances, motors, etc.
- **Wave Band:** 540 to 1600 KC
- **Tubes**—
 

12BA6—456 KC IF Amplifier	12BE6—Mixer
12AV6—2nd detector-1st Audio	35W4—Rectifier
50C5—Audio Power Output	
- **Power Supply:** 115 Volts, 60 Cycles AC
- **Cabinet**—Beautiful compression molded bakelite with shadow box effect dial and complementing golden knobs and trim. Resistant to heat.

**HAND WIRED — NO PRINTED CIRCUITRY**



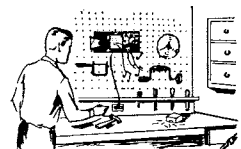
MODEL T-87



for Kitchen



for Den



for Workshop

**ATR "TILT-A-STAND" RADIO**  
**MOUNT ON THE WALL—UNDER A SHELF—**  
**OR SET ON A TABLE**  
**PERFECT for every room in YOUR home**

A NEW HIGH IN RADIO USEFULNESS . . . It rotates a full 360° on a beautiful golden pedestal. Pedestal is notched for screws, giving unlimited mounting possibilities. **THE HANDIEST RADIO EVER!** The gleaming molded bakelite cabinet is enhanced by a contrasting recessed grill and rich golden dial pointer and controls. Distinctive dial with large Roman numerals.

Excitingly new and different . . . radio is mounted on sturdy, gleaming brass-finished stand. Radio tilts up or down easily to any desired angle. Keyhole slot in stand makes this versatile performer easy to mount on wall out of way of small hands. Perfect for den, kitchen, or bedroom. Power-packed 5-tubes chassis. Built-in loop antenna. Automatic volume control. Full 4" Alnico 5 speaker. Distinctive Roman numerals on dial. Size: 9½" W x 4" D x 5¾" H. AC/DC. U.L. approved. Weight 5½ lbs.

Model T-87 (Tilt-A-Stand), Black ..... Dealer Price \$17.47  
Model T-87 (Tilt-A-Stand), Red ..... Dealer Price \$18.10

**JOBBER ATTENTION:** See Page 1039 in Section 4000 for your Catalog Needs!



# solid state citizens band transceivers

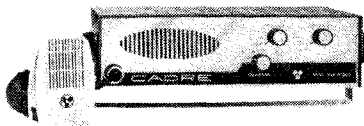
reliable • low cost • powerful 2-way radio communications

## FOUR 5-WATT, 5-CHANNEL MODELS, ALL FEATURING:

- 100% transistor reliability—no heat problems, no tubes to burn out—low current drain—withstands abuse of mobile application.
- Highest power possible—widest 27mc CB transmission range, up to 20 miles over land, 30 miles over water . . . speech clipping delivers maximum power without distortion.
- Bull's-eye tuning—with 5 crystal-controlled transmit and receive channels.
- Rugged press-to-talk mike with retractable cord
- Clearest reception . . . RF stage, four IF stages,  $\frac{1}{2}$   $\mu$ v sensitivity captures weakest signals . . . dual-conversion superheterodyne receiver has

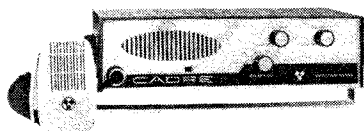
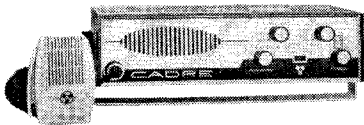
both crystal and new ceramic filters . . . automatic noise limiter cuts ignition noises . . . adjustable squelch silences speaker for noise-free standby reception.

- Light weight . . . small size . . . fits any vehicle, even compacts—without stealing leg room.
- Universal mounting bracket for use in virtually any location.
- 90-day EIA warranty on all parts.
- All U.S. parts.
- Professional appearance . . . crisp, streamlined styling, enhanced by handsome brushed aluminum and charcoal finish.



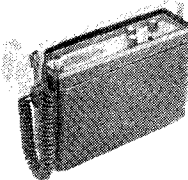
**CADRE 510-A**  
AC/DC operation—for use anywhere.  
Also offers crystal correlated  
23 channel manual tuning. \$199.95  
(DC cord & mounting kit included)

**CADRE 515-A**  
AC/DC operation—for use anywhere.  
\$185.00 (DC cord & mounting  
kit included)



**CADRE 520-A**  
DC operation only, with DC power  
cord and mounting kit. \$169.95

**CADRE 525-A**  
Model 520A in portable case for field  
use. Standard AC cord permits  
recharging of two built-in nickel-  
cadmium batteries . . . telescoping  
antenna . . . aluminum carrying  
handle. \$249.95



### ACCESSORIES FOR 5 WATT TRANSCEIVERS

#### CADRE 500-1 PORTABLE PACK

Lightweight case with recharger network adapts Cadre 510-A, 515-A and 520-A for full field portability. Has high-gain 6-section antenna with adjustable angle connector. Provision for two operating and two extra standby batteries (Model 500-2, 6V batteries). Aluminum carrying handle. Built-in recharger for operating on standard 117 VAC. Operates directly on 117 VAC or 12V storage batteries through recessed power receptacle. Optional shoulder carrying strap (500-3). Only 9 lbs. with transceiver and batteries. \$32.95.



500-2—6 volt 0.5 amp. nickel-cadmium batteries. Two required for 500-1 and for C-75. \$9.90 each. 524 **SELECTIVE CALLING UNIT**—Solid state throughout. 3 tones with switching provide 24 tone combinations. Designed to work with Cadre transceivers and any 12 VDC transceivers on the market. \$69.95. 522 **POWER S/METER**—Transistor battery-operated unit for use with 5-watt transceivers. \$29.95. 523 **BANDPASS FILTER**—(25-32 mc). \$9.90. **XTAL SETS**—Extra crystal sets. \$6.75. **AT-1**—Portable CB base loaded antenna. \$5.25.

500-3—Shoulder Strap. \$1.95. 500-6—Shock mount, \$9.50. 521—AC supply for 520-A. \$18.75.



## HAND-HELD, 2-CHANNEL TRANSCEIVERS

**CADRE C-75**—Portable solid-state CB radio with 1.5 watts transmitter input power. Two crystal-controlled channels, rechargeable battery or penlite cells power supply. Employs all solid state design. Sensitive superhet receiver ( $1\mu$ v for 10 db S/N ratio). Powerful transmitter delivers one watt output to antenna. Modulation averages 90% from 500 to 2500 cycles. Adjustable squelch. AGC. Built-in telescoping antenna. Weighs less than 2 lbs. Earphone and antenna jacks. Jacks for earphone, external speaker, external antenna and base operation while unit is recharging. Supplied with leatherette carrying case and set of channel 11 crystals. \$99.95.

**CADRE C-75M**—Same as C-75 with C-75-13 insulated antenna. Bureau of Mines approval. \$119.95.

**CADRE C-60**—100 milliwatt hand-held solid state portable. American-made. Rugged, reliable low-priced unit with 1 microvolt sensitivity. Delivers up to 70 mw output to antenna. Works on penlite cells or rechargeable batteries. Comes in high impact plastic case. Includes earphone jack, telescoping antenna. Two crystal-controlled channels. Channel 11 crystals furnished. Carrying case extra. \$59.95.

### ACCESSORIES FOR C-75 & C-60

C-75-101 Recharger for C-75, \$9.50. C-75-102 Recharger for 220 V. \$10.75. C-75-103 Recharger adaptor for 500-2 batteries used with C-75-101. \$4.75.

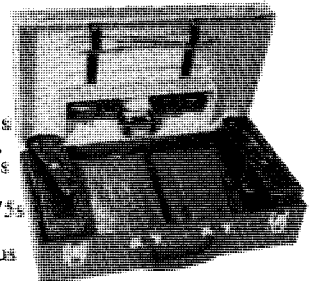
500-2 Six volt 0.5 amp nickel-cadmium battery. Two required in C-75. \$9.90. C-75-2 Battery holder for (9) 1.5 volt penlite cells. \$3.95. C-75-3 Shoulder carrying strap. \$1.95. C-75-7 Antenna cable adaptor. \$6.75. C-75-8 Battery charger indicator. \$8.25. C-75-9 Deluxe leather case. \$8.25.

C-75-10 Flexible 12" base-loaded antenna. \$8.25. C-75-13 12" insulated antenna. \$8.25. C-75-14 Earphone \$8.25.

C-75-15 Carrying case. \$15.00.

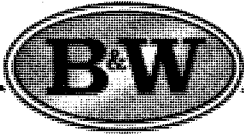
### COMPLETE PORTABLE COMMUNICATIONS SYSTEMS

A pair of portable hand-held transceivers plus accessories for recharging, external antennas, batteries etc. in a compact carrying case. CADRE 780-(2) C-75 plus accessories. \$295.00. CADRE 770-(2) C-60s plus accessories. \$220.00.



### CADRE CONSORT FM WIRELESS MICROPHONE

A complete, portable, wireless PA system when used with any FM radio. Features: • Unique tone signal zeroes in on any open FM channel in the 88 to 108 mc band. • Radio or receiver may be located up to 200 feet from transmitter. • Built-in dynamic microphone and built-in antenna. • 4 silicon transistors • Up to 300 hours use on mercury battery. \$44.95.

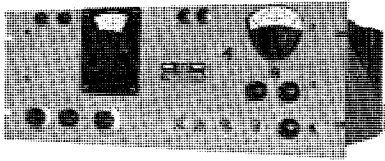


# BARKER & WILLIAMSON, Inc.

A SUBSIDIARY OF RENWELL INDUSTRIES, INC.

## RADIO COMMUNICATION EQUIPMENT

HF For Fixed Stations—Van Installations



**H. F. RECEIVER  
MODEL HFR-100A**

Provides reliable reception of ISB, SSB, DSB (AM), CW and FSK. Frequency control is maintained by up to 10 precision crystals in a highly stable oven. Front end is continuously tunable from 2 to 30 MC, with the use of external variable frequency oscillator or frequency synthesizer. Ideal for multi-channel narrow frequency shift, data handling systems, and independent sideband operation.

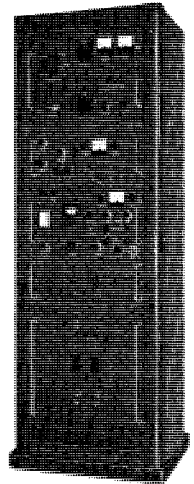
Price \$1,950.00

### INDEPENDENT SIDEBAND TRANSMITTER MODEL IST-1K

- 1000 Watts PEP or CW
- Low Distortion
- Bandswitched
- 10 Highly Stable Crystal Positions
- High Reliability
- Easily Serviced
- Solid State Power Supply
- Frequency 2 to 30 MC/s

The Model IST-1K has been designed to provide Military/Commercial users with a reliable and compact HF transmission system. The transmitter is capable of SSB, ISB, DSB (with any level of inserted carrier), CW and FSK modes of transmissions over the frequency range of 2 to 30 MC/s. Frequency control is maintained by up to 10 precision crystals in a highly stable oven providing a stability as high as 2 parts in 10 million per day. A separate Frequency Synthesizer can also be used to drive the transmitter if necessary.

Price \$7,958.85



## BAKER & WILLIAMSON ACCESSORIES FOR COMMERCIAL SYSTEMS

### DUMMY LOAD ANTENNA TERMINATORS

Frequency Range—D.C. to 30 MC  
Impedance—600 ohms balanced  
50-70-300 ohms unbalanced

MODEL	POWER RATING	PRICE
DL-6K	6 KW	\$1,550.00
DL-2K	2 KW	525.00
DL-500	500 Watts	232.00
DL-100	100 Watts	82.50

### RF FILAMENT CHOKES FOR GROUNDED GRID AMPLIFIERS

MODEL	FOR MAX. FILAMENT CURRENT TO:	PRICE
FC-15A	15 Amps	\$8.65
FC-30A	30 Amps	10.45
FC-50	50 Amps	50.00

### WHIP ANTENNA TUNING UNITS

For resonating Electrically Short Vertical Antennas  
Range—2-30 MC—Input Impedance 50 ohms Unbalanced

MODEL	POWER RATING	PRICE
TU-100	100 Watts—CW or PEP	\$572.35
TU-1K	1000 Watts—CW or PEP	825.00
TU-2.5K	2500 Watts—CW or PEP	1088.25

### HIGH FREQUENCY MATCHING TRANSFORMERS

For matching unbalanced power source to balanced loads.  
Input Impedance—50 or 70 Ohms unbalanced  
Output Impedance—200, 300, 600, 700 ohms balanced

MODEL	POWER RATING	PRICE
HFT-1K	1 KW	\$307.50
HFT-5K	5 KW	475.00

### RF FILTERS

from  
100 Watts  
to  
20 Kilowatts  
for suppression of spurious  
frequencies radiated by  
HF Transmitters.

MODEL	IMP. OHMS	BANDS	POWER	ATTENUATION	USE	TYPE	FUNCTION	PRICE
423	52-72	6 Meters	100 Watts	50 DB	Amateur	Low Pass	Suppresses signals above 55 MC	\$9.66
424	52-72	3.5-30 MC	100 Watts	50 DB	Citizens Amateurs	Low Pass	Suppresses signals above 44 MC	8.65
425	52	3.5-30 MC	1-KW	Min. 85 DB	Amateur	Low Pass	Suppresses signals above 34 MC	17.10
426	72	3.5-30 MC	1-KW	Min. 85 DB	Amateur	Low Pass	Suppresses signals above 34 MC	17.10
427	52-72	6 Meters	1-KW	Min. 85 DB	Amateur	Low Pass	Suppresses signals above 34 MC	19.86
FL-3K/50 U	50	2-3.6 MC	3-KW	Min. 60 DB	Commercial	Low Pass	Suppresses signals above 4.0 MC	on request
FL-3K/50 U	50	2-11.4 MC	3-KW	Min. 60 DB	Commercial	Low Pass	Suppresses signals above 14.3 MC	on request
FL-3K/50 U	50	2-30 MC	3-KW	Min. 50 DB	Commercial	Low Pass	Suppresses signals above 38.0 MC	on request
FL-5K/50 U	50	2-5.1 MC	5-KW	Min. 60 DB	Commercial	Low Pass	Suppresses signals above 6.0 MC	on request
FL-5K/50 U	50	2-16.0 MC	5-KW	Min. 50 DB	Commercial	Low Pass	Suppresses signals above 22.0 MC	on request
FL-5K/50 U	50	2-32.0 MC	5-KW	Min. 50 DB	Commercial	Low Pass	Suppresses signals above 44.0 MC	on request
FL-5K/50 U	50	2-30 MC	20-KW	Min. 50 DB	Commercial	Low Pass	Suppresses signals above 40.0 MC	on request

Other types and 70 ohm models are also available—Prices on Request—Inquiries invited.

Prices and specifications subject to change without notice.

# BARKER & WILLIAMSON, Inc.

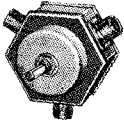
A SUBSIDIARY OF RENWELL INDUSTRIES, INC.

BRISTOL, PENNSYLVANIA 19007



## NEW B & W COAXIAL TYPE SWITCHES

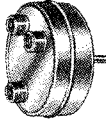
Connectors Mounted on Side



**MODEL 550A-2**  
\$7.35 ea.  
(Less Dial Plate)

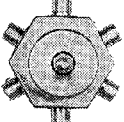
Models 550A-2 and 592 are single pole, 2 position switches with UHF-type connectors.

Connectors Mounted on Back



**MODEL 592**  
\$7.35 ea.  
(Includes Dial Plate)

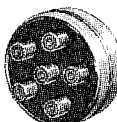
Connectors Mounted on Side



**MODEL 550A**  
\$8.25 ea.  
(Less Dial Plate)

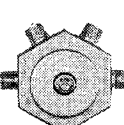
Models 550A and 590 are single pole, 5 position switches with UHF-type connectors.

Connectors Mounted on Back



**MODEL 590**  
\$8.25 ea.  
(Includes Dial Plate)

Connectors Mounted on Side



**MODEL 551A**  
\$7.95 ea.  
(Less Dial Plate)

Models 551A and 591 are 2 pole, 2 position special purpose switches with UHF-type connectors. Designed for switching any RF device in or out of series connection in coax line circuits.

Connectors Mounted on Back



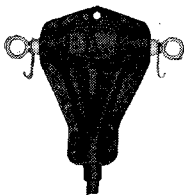
**MODEL 591**  
\$7.95 ea.  
(Includes Dial Plate)

PLUS A FULL LINE of single and multiple-gang units with choice of "UHF", "BNC", "N" and Phono-Type connectors (write for literature).

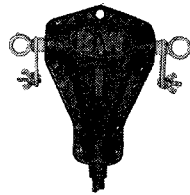
The New Switching Units shown above have the following specifications:

Power Rating: 1KW amplitude modulated, impedance 52-75 ohms—Frequency Range; Audio to 100 MC—Cross Talk; —45 db between adjacent outlets (at 30Mc) —60 db between alternate outlets.

## COAX ANTENNA CONNECTORS



Model CC50



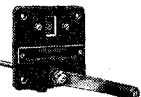
Model CC51 (Military Type)

Model CC50  
Price \$5.85

These connectors provide a weather proof, mechanically strong connection between a coaxial feed line and the center of a dipole antenna. It has an aluminum housing, rust proof eye-bolts and stealite insulation. Provision is made for internal soldered connections. Unit is furnished with rubber bushing for use with small coax cables and includes cement and instructions for installations. Size of both units 6 1/2" x 5 3/4" x 1 1/2". Shipping weight 2 lbs.

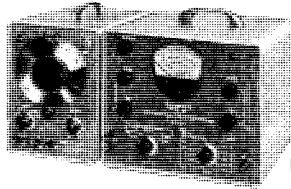
Model CC51  
(Military Type)  
Price \$7.65

## CYCLOMETER TYPE COUNTER



10 Turn Cyclometer-Model No. 3901 .... Price \$16.00  
100 Turn Cyclometer-Model No. 3902 .... Price \$16.00  
Numbers decrease with clockwise rotation  
Model No. 3902-1 ..... Price \$16.00  
Numbers increase with clockwise rotation.

## INSTRUMENTS FOR AUDIO MEASUREMENTS



Model 210

Price \$165.00

Model 410

Price \$189.50

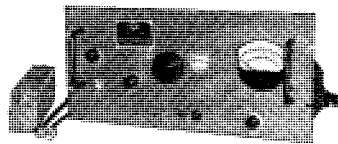
### MODEL 210 AUDIO OSCILLATOR

The model 210 Audio Oscillator is a source for low distortion signals from 10 to 100,000 cycles.

### MODEL 410 DISTORTION METER

The model 410 Distortion Meter measures audio distortion, noise level, audio gain or loss in DBs and AC voltages.

These two instruments used in conjunction are accepted for FCC proof-of-performance tests.

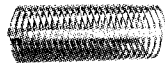


Price \$609.50

### MODEL HST-HARMONIC AND SPURIOUS TOTALIZER

The B & W Model HST, Harmonic and Spurious Totalizer, has been specifically designed to serve as an accurate laboratory and Factory Production instrument for the measurement of total harmonic and spurious radiation from high frequency transmitters.

## MINIDUCTORS



Highly efficient coils for those who like to build their own. Available in the types listed below.

Cat. No.	Coil Dia.	Turns Per In.	Lgth.	Net Price
3001	1/2"	4	2"	.45
3002	1/2"	8	2"	.45
3003	1/2"	16	2"	.45
3004	3/8"	32	2"	.45
3005	3/8"	4	2"	.54
3006	3/8"	8	2"	.54
3007	3/8"	16	2"	.54
3008	3/8"	32	2"	.54
3009	3/4"	4	3"	.63
3010	3/4"	8	3"	.63
3011	3/4"	16	3"	.63
3012	3/4"	32	3"	.63
3013	1"	4	3"	.69
3014	1"	8	3"	.69
3015	1"	16	3"	.69
3016	1"	32	3"	.69
3017	1 1/4"	4	4"	.75
3018	1 1/4"	8	4"	.75
3019	1 1/4"	16	4"	.75
3020	1 1/4"	32	4"	.75
3021	1 3/4"	4	4"	.90
3022	1 3/4"	8	4"	.90
3023	1 3/4"	16	4"	.90
3024	1 3/4"	32	4"	.90
3900	2"	8 #14	10"	1.95
3905-1	2 1/2"	6 #12	10"	2.35
3906-1	2 1/2"	8 #14	10"	2.35
3907-1	2"	10 #16	10"	1.95

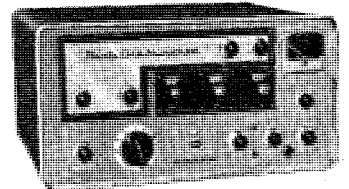
## MODEL 600 GRID DIP METER

A highly sensitive, accurately calibrated instrument which can be used as an RF Signal Monitor, Auxiliary Signal Generator, and Absorption Wave-meter. It can also be used in measuring capacity, inductance, circuit "Q", and as a means of determining other factors in electrical circuits. The wedge shape makes it easy to handle. Plug-in coils are protected by colored vinyl plastic sleeves. Sensitivity control permits adjustment for distinctive dips throughout entire 1.75 to 260 mc range. Overall size 3" x 3" x 7". Wt. approx. 2 lbs. Operates from 105-125 v-ac 50-60 cycles.



Price \$49.60

## MODEL 6100 TRANSMITTER



Price \$875.00

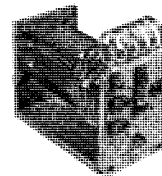
The Barker & Williamson Model 6100 Transmitter has been engineered and built to give the discriminating operator the ultimate in SSB and CW transmissions.

The 6100 uses the B&W crystal controlled frequency synthesizer, producing an order of stability which up to this time has been available only in costly communication systems.

### SPECIFICATIONS

- Type ..... Crystal Lattice Filter Sideband Generator.
- Operational Function ..... SSB, Linear AM, CW.
- Frequency Control ..... Crystal Controlled Frequency Synthesizer. Providing continuous coverage on all bands indicated below. No free running oscillators. Frequency set on three digital dials for "hundreds", "tens" and "units" of kilocycles. The "units" dial is continuously variable.
- Frequency Coverage ..... 3.5—4.1, 7.0—8.0, 14.0—15.0, 21.0—22.0, 28.0—29.0 and 29.0—30.0 mc. With one additional crystal the frequency coverage is extended 100 KC on the low end of each band, allowing coverage of the following MARS frequencies: 3497.5 KC, 6997.5 KC, 13995.0 KC
- Frequency Stability ..... In normal operating environment (room temperature) drift during the first 15 minutes not in excess of 100 cycles. During any hour of operation thereafter within ±25 cycles.
- Power ..... SSB: 180 watts PEP Input Max.  
CW: 180 watts DC Input Max.  
AM: 90 watts Input Max.
- Output Impedance ..... Will match 30-100 ohm resistive loads.
- Physical Characteristics ..... Mounted in table-top cabinet. Panel size—18" W x 8 3/4" H. Overall cabinet dimensions—18 3/4" W x 9 1/2" H x 16" D.
- Weight ..... 60 lbs.

## PI-NETWORK INDUCTORS



Ultra-compact highly efficient and integrally bandswitched, these pi-network inductor assemblies incorporate novel design features. They are designed for single or parallel tube operation from 80 through 10 meters. Windings provide ample current carrying capacity. Maximum "Q" over the entire operating range.  
Model 851 for 500 watt finals  
Price \$16.50  
Model 850A for 1 KW finals  
Price \$35.00  
Model 852 for 1 KW finals 1500 ohm plate load Price \$39.50

FOR MORE COMPLETE INFORMATION OF ANY ITEMS LISTED ON THESE PAGES CALL OR WRITE TO THE FACTORY FOR SALES BULLETINS.



**Barker & Williamson, Inc.**

A subsidiary of Renwell Industries, Inc.  
BRISTOL, PENNA. 19007

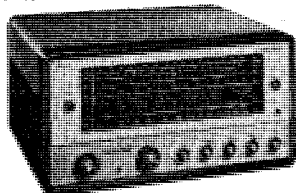
Prices and specifications subject to change without notice



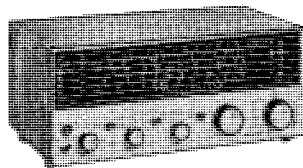


# hallicrafters

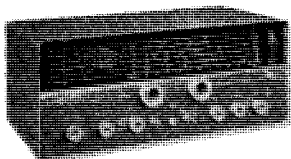
## Precision Built Short Wave and Special Purpose Receivers


**SX-62A** (Less speaker)

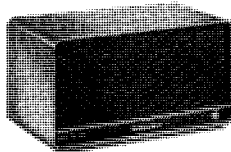
Broadcast 550-1620 kc. three S/W bands 1.62-32 Mc, FM 27-109 Mc. Wide vision dial, one band lights at a time, temperature compensated, voltage regulated, six-position selectivity, phone jack. Fourteen tubes plus one rectifier and one voltage regulator—105/125V. 50/60 cycle AC. Satin black steel cabinet, gray and silver trim—20" x 10½" x 16". Shipping wt. 66 lbs. approx. Use R-48 speaker. (U/L approved.).....\$430.00


**S-118**

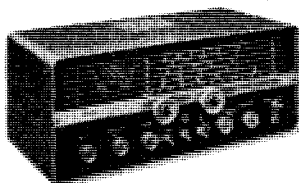
Broadcast 495-1620 kc, three S/W bands 1.7-31. Mc and low frequency band 185 to 420 kc. Slide rule dial and electrical bandspread. Ferrite loop on BC and low frequency band. Built-in speaker, B.F.O., A.N.L., head phone jack, phono input/tuner output socket, socket for external d.c. power. Five tubes plus two silicon diodes. Size 14½" x 5¾" x 8½", 105-125 volts 50/60 AC. Shipping wt. 19 lbs.....\$99.95


**SX-110** (Less speaker)

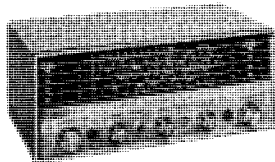
Broadcast 538-1600 kc, three S/W bands 1550 kc-34 Mc. Slide rule bandspread dial calibrated on 10, 15, 20, 40 and 80 meter amateur bands. Antenna trimmer, "S" meter. Crystal filter. Seven tubes plus one rectifier —105/125V. 50/60 cycles AC. Gray steel cabinet, silver trim. Uses R-48 speaker, 8" x 18¾" x 10¼". Shipping wt. 35 lbs. (U/L approved.).....\$169.95


**R-48A**

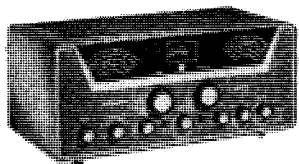
Matching 5½" x 7½" speaker for Hallicrafters or other receiver having a 3.2 ohm output. 3.16 oz. magnet produces a fully saturated air gap and distortion-free reproduction. A fidelity switch permits selection of full fidelity response or voice frequency for communications reception. For use with SX-62A, SX-122, SX-110 or any speaker with 3.2 ohm output. Gray steel cabinet. 6¾" x 13¼" x 8¾". Shipping wt. 9 lbs.....\$19.95


**S-108**

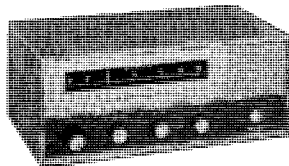
Broadcast 538-1600 kc, three S/W bands 1550 kc-34 Mc. Slide rule bandspread dial calibrated on 10, 15, 20, 40 and 80 meter amateur bands. Temp. compensated oscillator. Headphone jack. Seven tubes plus rectifier. 105/125V. 50/60 cycle. Gray steel cabinet, silver trim. 8" x 18¾" x 10¼". Shipping wt. 35 lbs. (U/L approved.).....\$139.95


**S-120**

Broadcast 540-1650 kc, three S/W bands 1650 kc-31 Mc. Three antennas ferrite loop for broadcast, adjustable whip for S/W and wire antenna. Front panel headphone jack, disconnects built-in speaker when headphones are plugged in. Four tubes plus selenium rectifier. 105/125V AC/DC. Gray steel cabinet with silver trim. 13½" x 5⅞" x 8¾". Shipping wt. 11¾ lbs. (U/L approved.) .....\$69.95


**SX-122** (Less speaker)

Deluxe general coverage receiver. Broadcast (538-1580 kc.) plus three S/W bands (1720 kc. - 34 Mc.). Dual conversion, superhetrodyne over the entire frequency range. SSB reception. Product detector for SSB/CW. Envelope detector for AM. Series noise limiter. Heavy-duty tuning capacitor with copper plates in oscillator section for maximum electro-mechanical stability. Antenna trimmer, amplified AVC. 2nd conversion oscillator crystal-controlled. Removable top and bottom. Cabinet size: 18¾" wide, 8" high, 9¾" deep. Shipping wt. approx. 31 lbs. Provisions for 100 kc. crystal calibrator accessory (HA-7). (UL approved.).....\$295.00


**CRX-1**

CRX-1 30-50 Mc and CRX-2 151-174 Mc receivers for split channel, narrow band FM. Triple conversion. Manual tuning and 2 crystal positions (crystals not included). Adjustable squelch. Built-in speaker with provision for external speaker. High speed and vernier tuning controls. 105/125V. 50/60 cycle AC. Mobile operation possible with external power converter. 13½" x 5⅞" x 8¾". Gray steel cabinet with silver trim. Shipping wt. 15 lbs.....\$99.95

**CRX-2**

151-174 Mc Version of CRX-1.....\$109.95

**CRX-3**

108-135 Mc high quality AM VHF receiver. 118V 50/60 cycle AC....\$94.95

The new ideas  
in communications  
are born at ...

# hallicrafters

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# UNEXCELLED PERFORMANCE WITH HALLMARK'S COMPLETE LINE OF BUSINESS BAND AND CB TRANSCEIVERS AND TRANSCEIVER TESTERS

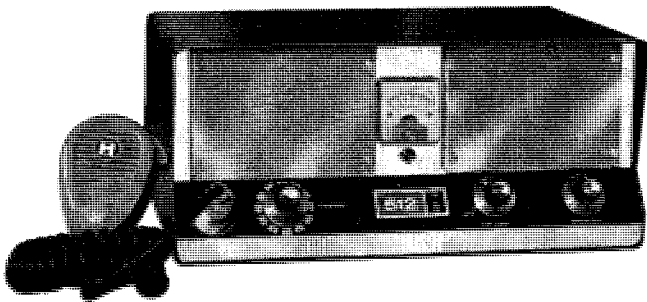


**Hallmark 3000** — 30-watt transceiver for business and industrial service. FCC type accepted. Amplitude modulation. Operation in 25 to 50 MC band. Receiver sensitivity  $0.3 \mu\text{v}$  for 10 db S+N/N ratio. Selectivity better than 30 db. Transistorized mobile power supply. Audio output 4 watts. Power output to antenna 20 watts. Rugged hand-wired construction. Suggested List: \$269.50



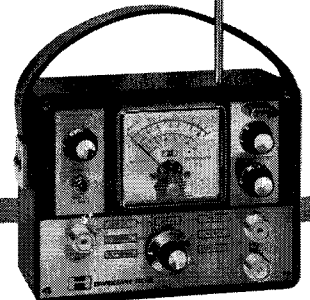
**Hallmark 1250** — 12 channel crystal-controlled CB. Hand-wired modular construction gives new small size to fit any vehicle. Designed like a 15-watt unit. Silicon rectifier full-wave bridge. Electronic switching. Ferrite speaker. Sensitivity  $0.3 \mu\text{v}$  for 10 db S+N/N ratio. Selectivity better than 45 db. Audio output 3 watts. Ultrasensitive squelch. RF power output 3.4 W or better. Modulation 95% or better. Dual powered. Size  $10'' \times 6\frac{1}{4}'' \times 4''$ . Shipping weight 12 lbs. Model 1250 Suggested List: \$169.50

**Model 1250-X** with plug-in transistorized power supply to replace vibrator: Suggested List: \$189.50



**Hallmark 512** — 12 channel crystal-controlled CB. Hand-wired construction. Electronic switching. "S" meter and neon modulation indicator standard. Dual powered. Sensitivity  $0.3 \mu\text{v}$  for 10 db S+N/N ratio. Selectivity: 30 db or better. Audio output 3 watts. Noise-immune adjustable level squelch. RF power out 3.2 watts or better. Modulation 85% or better. Size  $12'' \times 7'' \times 5\frac{3}{4}''$ . Shipping weight 15 lbs. Suggested List: \$149.50

**Hallmark Transceiver Tester**— Portable, battery-operated crystal controlled signal generator for checking low-power transceivers. Specifically designed to assist the technician in transceiver installation and servicing. Measures RF power (absolute) 0-5 w; 0-120% amplitude modulation; VSWR. Produces a 100 mw carrier (with or without amplitude modulation of a 1000 cps tone) for checking receivers. Use as a field strength meter. Suggested List: \$49.50.



## HALLMARK INSTRUMENTS



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**Thank you!**

  
**The**  
RADIO-ELECTRONIC  
**MASTER**



# JAN HARDWARE

MANUFACTURING COMPANY, INC.

LONG ISLAND CITY 1, NEW YORK



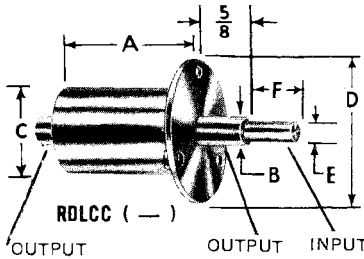
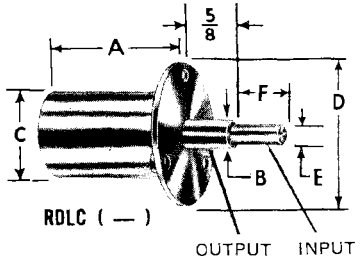
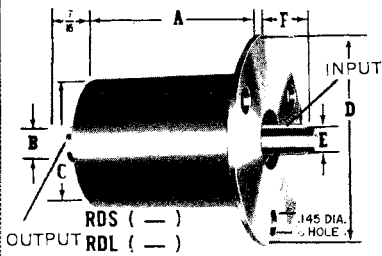
## RATIO DRIVES

for FINE INSTRUMENT AND MACHINE CONTROLS

**Ball Bearing Type** Compact, durable, exceptionally smooth action

These unique ratio drives employ precision ball bearings. Used for rotary control of components in instruments, they provide unexcelled smooth motion. Ruggedly built, permanently sealed and lubricated, JAN Ratio Drives accommodate applications where miniaturization is essential.

Input and output shafts of these units operate in the SAME DIRECTION. Types "RDL" and "RDS" provide "in-line" input-output shafts. Type "RDLC" is supplied with concentric shafts whereby the output envelopes the input shaft. An added feature of type RDLC is the output shaft in the rear.

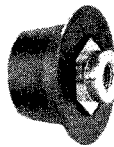


CAT. No.	RATIO	B			C	D	Input Shaft E	F	Bolt-Mtg. Dia.
		A	O.D.	I.D.					
RDS-1	2.70-1	3/4	—	—	5/8	1 1/16	1/8	—	3 1/32
RDS-2	7.28-1	3 1/32	—	—	5/8	1 1/16	1/8	—	3 1/32
RDS-3	19.65-1	1 1/32	—	—	5/8	1 1/16	1/8	—	3 1/32
RDL-1	2.66-1	1	3/8	1/4	1 1/8	1 1/16	1/4	3/4	1 15/32
RDL-2	7.08-1	1 13/32	3/8	1/4	1 1/8	1 1/16	1/4	3/4	1 15/32
RDL-3	18.80-1	1 13/16	3/8	1/4	1 1/8	1 1/16	1/4	3/4	1 15/32
RDLC-1	2.66-1	1	3/8	1/4	1 1/8	1 1/16	1/4	1 1/2	1 15/32
RDLC-2	7.08-1	1 13/32	3/8	1/4	1 1/8	1 1/16	1/4	1 5/4	1 15/32
RDLC-3	18.80-1	1 13/16	3/8	1/4	1 1/8	1 1/16	1/4	2 3/32	1 15/32
RDLC-C-1	2.66-1	1 13/32	3/8	1/4	1 1/8	1 1/16	1/4	1 3/4	1 15/32
RDLC-C-3	17.00-1	2 43/64	3/8	1/4	1 1/8	1 5/16	1/4	1 1/16	1 15/32

**KNOB RATIO DRIVE**  
(9 to 1)

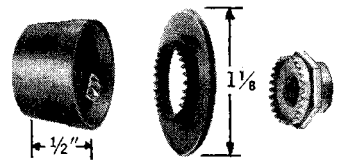
Cat. No. KR-D-11  
(plain gripping surface)

Cat. No. KR-D-12  
(knurled gripping surface)



Exploded view shows engineered miniature gear system, to permit precise, fine tuning of controls. As shown, 9 to 1 ratio. Other ratios designed to specifications.

Brass gears; black anodized aluminum knob and dial. Available with knurled or non-knurled outside knob.

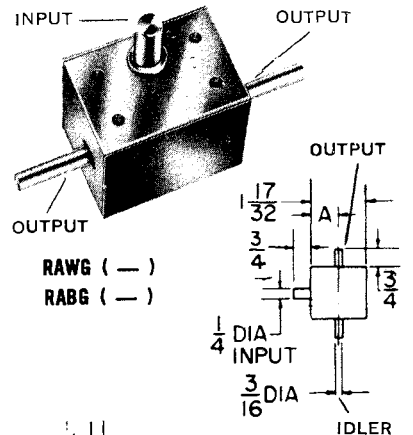


### RIGHT ANGLE RATIO DRIVES

Versatile, miniaturized, right angle rotary controls.

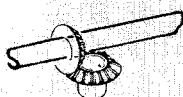
Featuring dual output stainless steel shafts at right angles to input, these engineered drives provide an ideal type of instrument control. Available with matched bevel or worm gears covering a wide range of ratios.

JAN'S RIGHT ANGLE DRIVES are especially useful for handling spring or gravity-loaded components since the output shaft automatically locks in any desired position yet remains free for smooth adjustment by the input shaft. Assembled in dust-proof housings, the gears are permanently pinned in place on stainless-steel shafts mounted in oilite bearings and held under constant pressure.



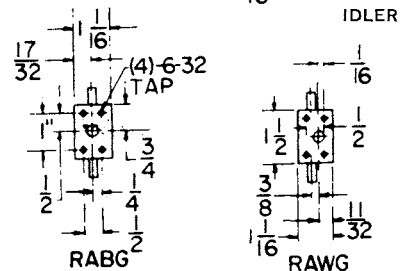
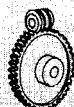
**BEVEL GEAR**  
**RIGHT ANGLE DRIVES**

CAT. No.	RATIO	"A"
RABG-1	1:1	3/8
RABG-2	2:1	3/8
RABG-3	3:1	3/8



**WORM GEAR**  
**RIGHT ANGLE DRIVES**

CAT. No.	RATIO	"A"
RAWG-1	5:1	3/4
RAWG-2	10:1	3/4
RAWG-22	12:1	3/4
RAWG-3	20:1	3/4





# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
LONG ISLAND CITY 1, NEW YORK



U.S. PATENT NO. 2,681,378

## HI-VOLTAGE INSULATED COUPLINGS

**MEETS MIL SPECS:**  
**TEMPERATURE - HUMIDITY**  
**SHOCK - VIBRATION - FUNGUS**  
**HI-VOLTAGE INSULATED COUPLINGS**

15 KV Breakdown 10 inch pounds torque  
Series No. AK-5079 & No. AK-5164

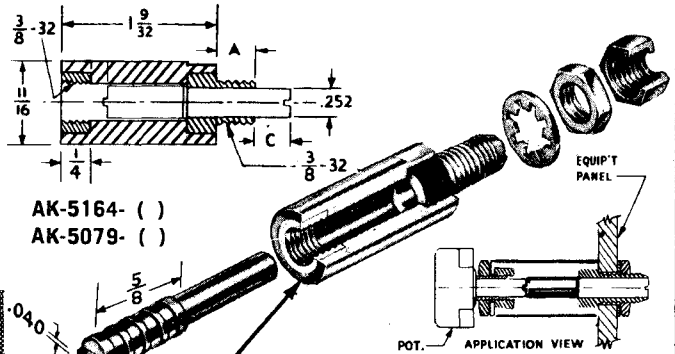
Engineered with stainless steel shaft and precision, screw-driver tip molded integrally with Mineral-Filled-Melamine in accordance with Military Specifications. Completely shock, vibration and fungus proof, they operate with ease over an ambient temperature range of -75 to +175° C. Supplied complete with nickel plated mounting hardware.

Stainless steel screw driver tip fits all standard slotted shafts (potentiometer, etc.) without need for further machining. Ideally suited to adjust high voltage controls thus protecting operating personnel against danger. They are also used to reduce ground capacitance on other types of sensitive instrument controls.

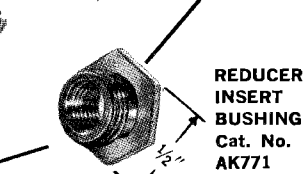
**\*Cat. No. 5144** 10 KV Breakdown  
15 inch pounds torque

This coupling is the same dimensionally as AK-5079, AK-5164 except that the body and insulated portion of shaft is molded in reinforced fiberglass (CYMEL) per MIL Spec. MIL-M-14E to withstand a minimum of 15 inch pounds torque. Can be used for switches, where greater torque is needed.

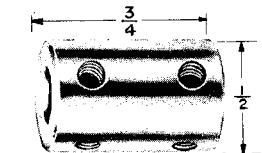
	CAT No.	"A"	"B"	SHAFT	"C"
STANDARD TYPE	AK-5144-X-2	3/8"	3/16"	Slotted	15/32"
	AK-5144-B-2	3/8"	1/16"	Slotted	15/32"
	AK-5164-X-1	3/8"	3/16"	Slotted	5/16"
	AK-5164-B-1	3/8"	1/16"	Slotted	5/16"
	AK-5164-X-2	3/8"	3/16"	Slotted	15/32"
	AK-5164-B-2	3/8"	1/16"	Slotted	15/32"
	AK-5164-X-3	3/8"	3/16"	No Slot	15/16"
	AK-5164-B-3	3/8"	1/16"	No Slot	15/16"
	AK-5164-X-4	3/8"	3/16"	No Slot	17/16"
	AK-5164-B-4	3/8"	1/16"	No Slot	17/16"
WITH LOCKING TYPE BUSHING	AK-5079-X-1	3/16"	3/16"	Slotted	1/8"
	AK-5079-B-1	3/16"	1/16"	Slotted	1/8"
	AK-5079-X-2	3/16"	3/16"	Slotted	9/32"
	AK-5079-B-2	3/16"	1/16"	Slotted	9/32"
	AK-5069-B-2 *	3/16"	1/16"	Slotted	9/32"
					Minus 1/16"



AK-5164- ( )  
AK-5079- ( )



Used as an adapter with high voltage insulated couplings to accommodate miniature (1/8" shaft) potentiometers. External thread 3/8x32. Internal thread 1/4x32.

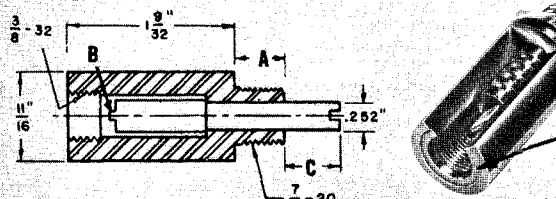


SHAFT COUPLING  
Cat. No. AP-15150

A rugged, nickel plated brass coupling for joining two 1/4" shafts. Supplied with 4 set screws for firm attachment to shafts.

CAT. NO. AP-15151  
Same as above, 2 set screws.

**COMMERCIAL INSULATED COUPLINGS**  
30 KV Breakdown Series No. AK-4160  
10 inch pounds torque For TV and Industrial Applications



	CAT No.	"A"	"B"	SHAFT	"C"
STANDARD TYPE	AK-4160-X-1	3/8"	3/8"	Slotted	1/8"
	AK-4160-B-1	3/8"	3/16"	Slotted	1/8"
	AK-4160-X-2	3/8"	3/8"	No Slot	1/2"
	AK-4160-B-2	3/8"	3/16"	No Slot	1/2"

**AUTOLINEAR (INSULATED) SHAFT COUPLINGS**  
2.5 - 5KV BREAKDOWN  
Universal, miniature, self-aligning  
Cat. No. AP-1530 & AP-1538

A unique series of shaft couplers that accommodate either similar or dissimilar 1/8", 3/16", or 1/4" shafts. Permits offset misalignment to 1/16" and 5° angle. Operates free of backlash. Plastic insulator between precision cast aluminum hubs. Each hub has 2 set screws for firm attachment. Alodine finish.

	PART NO.	DIA. HOLE	"A"	"B"	"C"
AP-1530	-2	1/8"	1/2"	15/16"	27/16"
	-3	3/16"	1/2"	15/16"	27/16"
	-4	1/4"	1/2"	15/16"	27/16"
AP-1538	-2	1/8"	1/2"	23/16"	1 1/16"
	-3	3/16"	1/2"	23/16"	1 1/16"
	-4	1/4"	1/2"	23/16"	1 1/16"

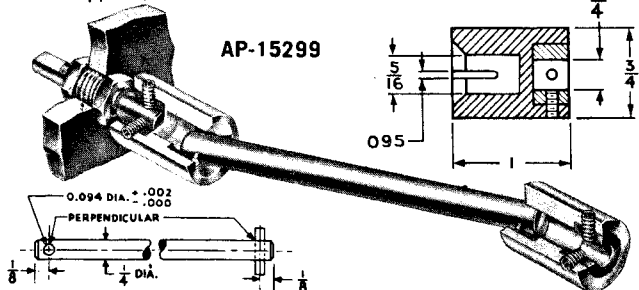
**TYPICAL PART NUMBERS:**  
AP-1530-34  
AP-1538-22

**VOLTAGE RATING:**  
AP-1530 — 2500 VOLTS  
AP-1538 — 5000 VOLTS

**OFFSET-SHAFT (INSULATED) COUPLINGS**  
10 KV Breakdown—±30° Offset  
Cat. No. AP-15299

Highly versatile, durable, insulated couplings made with single-unit, molded Nylon-to-metal insert construction. Application requires two couplings—permits smooth control for two parallel shafts offset from each other up to 30 degrees at separations greater than 3 inches. Secured to component and control shafts by 2 set screws.

Note: Coupling is accomplished with a 1/4" shaft of any length (not furnished). Coupling shaft keyed to coupler by steel drive pins supplied.





# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
LONG ISLAND CITY 1, NEW YORK



## JACK COVERS (TRIMMER COVERS)

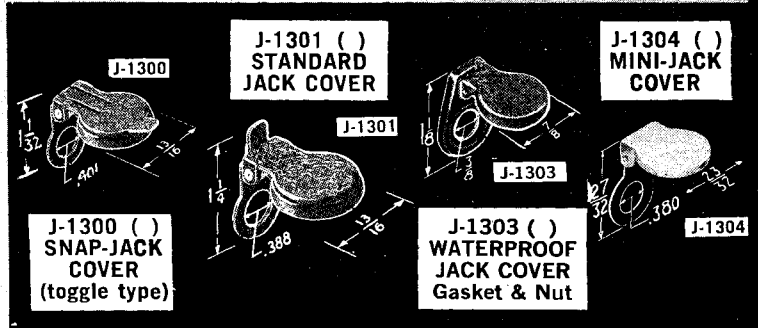
These sturdy Jack Covers fit jack or panel bushings and are used to keep out dust and moisture as well as to prevent inadvertent disturbance of control settings. Outer surfaces are finished in standard colors of baked enamel.

NOTE: No. J-1300 (SNAP-JACK) is made with toggle action. It snaps to open or shut position and will remain open until snapped shut. No. J-1304 is a miniaturized Jack Cover similar to a No. J-1301 but without thumb lift.

### To Order Colors: Specify:

(-1) Black Wrinkle; (-2) Smooth Gray; (-3) Smooth Olive; (-4) Smooth Black. Other colors on request.

Example: Jack cover, color black wrinkle, order as J-1300(-1)



## SHAFT LOCKS

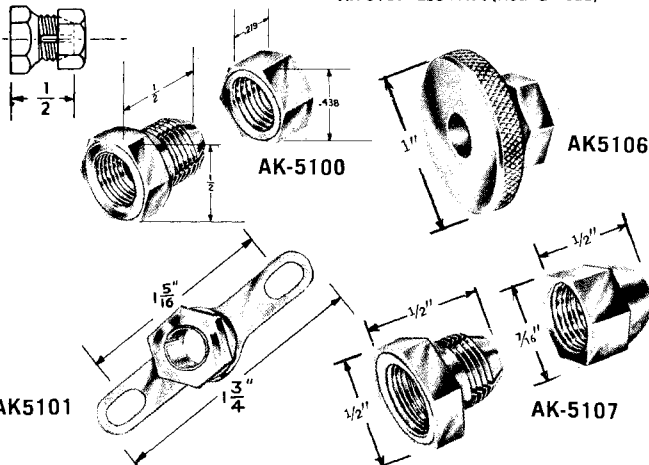
Cat. No. AK-5100 thru No. AK-5107  
Split-bushing, collet type locks.

Used to securely hold the shaft of volume controls, capacitors, switches, etc. in position. Body and lock nut are brass—nickel plated. Supplied with nickel plated internal tooth lock washers, upon request.

SPLIT BUSHING TYPE For 1/4" shafts

AK-5100 Standard Lock Nut  
AK-5101 Panel Mount Type

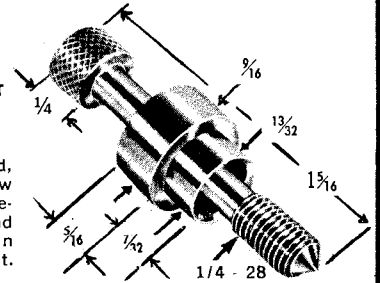
AK-5106 Knurled Shaft Lock (1" Q.D. Knurl)  
AK-5107 Lock Nut (Round Head)



## CAPTIVE SCREW & NUT ASSEMBLY

Cat. No. Ap-711

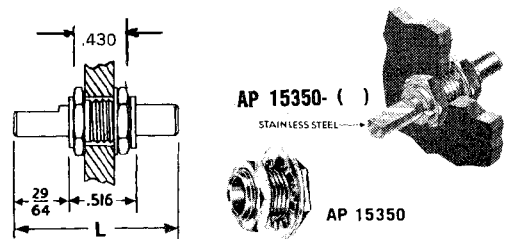
Consists of a slotted, knurled thumb screw made of corrosion resistant steel bar, and a nickel-plated (on brass) panel insert.



## PANEL BEARING & SHAFT ASSEMBLIES

Cat. No. AP-15350 series

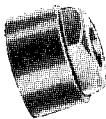
Used for rotary control of components. Passivated stainless steel shaft is 1/4" dia. with one end flattened for attaching to knob control by set screws. Supplied completely assembled with two retaining rings, jam nut with lock washer and nickel plated, brass panel bearing. Fits panels up to 3/16" thick; mounts in 1/2" dia. hole.



Cat. No.	Item	"L" Shaft Length
AP 15350	Panel Bearing	—
AP 15350-1	Panel Bearing & Shaft Assembly	1 3/4"
AP 15350-2		3"
AP 15350-3		6"

## NYLON SHAFT LOCK

Cat. No. AK-1050



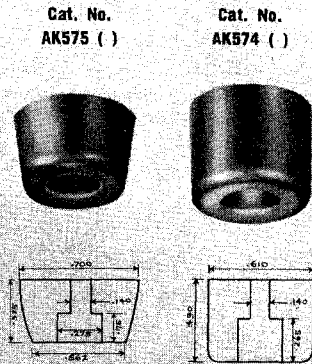
One-piece, black nylon; fits standard 3/8"-32 thread of shaft bushing. Friction grip holds 1/4" shaft to prevent accidental or vibrational disturbance of control settings. Adjustment for semi-permanent locking, provided.

## CHASSIS & CABINET BUMPERS

Durable, low-friction polyethylene. Guards against scuffing. Supplied in either black or russet brown, with recessed hole for screw or bolt usage.

### To Order Colors:

Black, specify (4);  
Brown specify (7).  
Other colors on request.

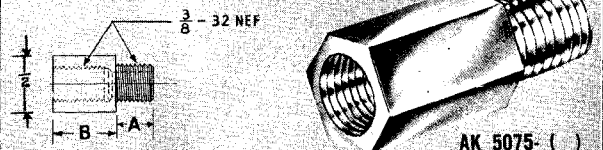


## BUSHING EXTENDERS

Cat. No. AK-5075-1 thru No. AK-5075-11

Permit staggered mounting of components having 1/4" shafts, behind a panel. Useful in meeting problems of space economy. Supplied in nickel plated brass.

Note: Extender No. AK-5075-9 is a locking (collet) type and is supplied by JAN with lock nut.



Cat. No.	"B"	"A"	Cat. No.	"B"	"A"
AK5075-1	3/8"	3/8"	AK5075-6	1 3/8"	1/4"
AK5075-2	3/8"	1/4"	AK5075-7	1 1/8"	3/16"
AK5075-3	5/8"	3/16"	AK5075-8	1 1/4"	1/4"
AK5075-4	3/4"	1/4"	AK5075-9	1 3/4"	1/2"
AK5075-5	2 1/4"	1/4"	AK5075-10	1 7/8"	3/8"
			AK5075-11	5/8"	3/16"





# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
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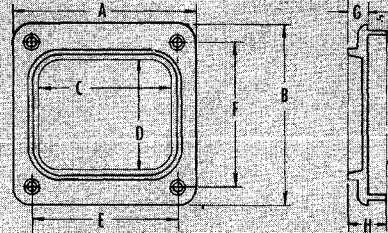


JAN's Bezels enhance the appearance of the instruments on which they are used. These units are functionally designed to provide OPTIMUM UTILIZATION OF THE CRT SCREEN, as well as safety against tube breakage and danger to operating personnel.

JAN Bezel Assemblies are supplied with a bezel, calibrated graticule, (where applicable) light filter and CRT cushion. Bezels are finished in a smooth dull black non-reflecting surface. These units fit JAN Mu-Metal Shields.

**Edge-lit Bezels\*\* (E.L.B.A.)** These Bezels are designed to provide edge lighting of the engraved scale-calibrated graticule by means of pilot lights.

**Camera Mount Bezel** These units provide an integral cast mounting flange that fits all standard 3", 5" and 7" CRT cameras.



Catalog No.	CRT Face	Material	Type	Panel Opening	A	B	C & D		E		F	G	H	Visible Area (Cushion)	
					Overall Width	Overall Height	Visible Area (Bezel) Width	Visible Area (Bezel) Height	Mounting Holes Width	Mounting Holes Height	Thickness (Face Only)	Thickness (Incl. Flange)	Height	Width	

**BEZELS FOR 2" C.R.T.**

CP-1110-P-2	Flat	Plastic*	Standard	2 3/8"	2 3/8"	2 3/8"	1 3/4"	1 3/4"	2"	2"	3/16"	3/16"	1 3/4"	1 3/4"	
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**BEZELS FOR 3" C.R.T.**

CP-1220-P†	Curved or Flat	Plastic*	Camera Mount	—	4 1/8"	3 3/4"	2 3/4"	2 1/4"	4"	2 1/2"	3/8"	1 1/8"	—		
CP-1328-P-1	Curved Flat	Plastic*	Standard	3 3/4"	3 3/4"	3 3/4"	2 5/8"	2 3/8"	3"	3"	3/8"	3/8"	2 1/2"	2 1/2"	
CP-1427-1	Curved Flat	Aluminum	Camera Mount	3 3/4"	4"	4"	2 3/4" Dia.		3"	3"	3/8"	3/8"	2 3/2" Dia.		
CP-1427-2	Curved Flat	Aluminum	Camera Mount	3 3/4"	4"	4"	2 3/4" Dia.		3"	3"	3/8"	3/8"	2 3/2" Dia.		
CP-1428-1**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	3 3/4"	4"	4"	2 3/4" Dia.		3"	3"	3/8"	3/8"	2 3/2" Dia.		
CP-1428-2**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	3 3/4"	4"	4"	2 3/4" Dia.		3"	3"	3/8"	3/8"	2 3/2" Dia.		
CP-1429-1	Curved Flat	Aluminum	Camera Mount	3 3/4"	4"	4"	2 3/4" Dia.		3"	3"	3/8"	3/8"	2 3/2" Dia.		
CP-1429-2	Curved Flat	Aluminum	Camera Mount	3 3/4"	4"	4"	2 3/4" Dia.		3"	3"	3/8"	3/8"	2 3/2" Dia.		
CP-3430-1	Curved Flat	Steel	Standard	—	4 1/8" Dia.		3 3/8" Dia.		3 3/4"	3 3/4"	1 1/4"	1 1/4"	2 1/2" Dia.		
CP-3430-2	Curved Flat	Steel	Standard	—	4 1/8" Dia.		3 3/8" Dia.		3 3/4"	3 3/4"	1 1/4"	1 1/4"	2 1/2" Dia.		

**BEZELS FOR 4" C.R.T.**

CP-1533-P†	Curved Flat	Plastic*	Camera Mount	3 1/2"	4 1/8"	3 3/4"	3"	3"	4"			1 1/2"	1 1/2"	No Cushion	
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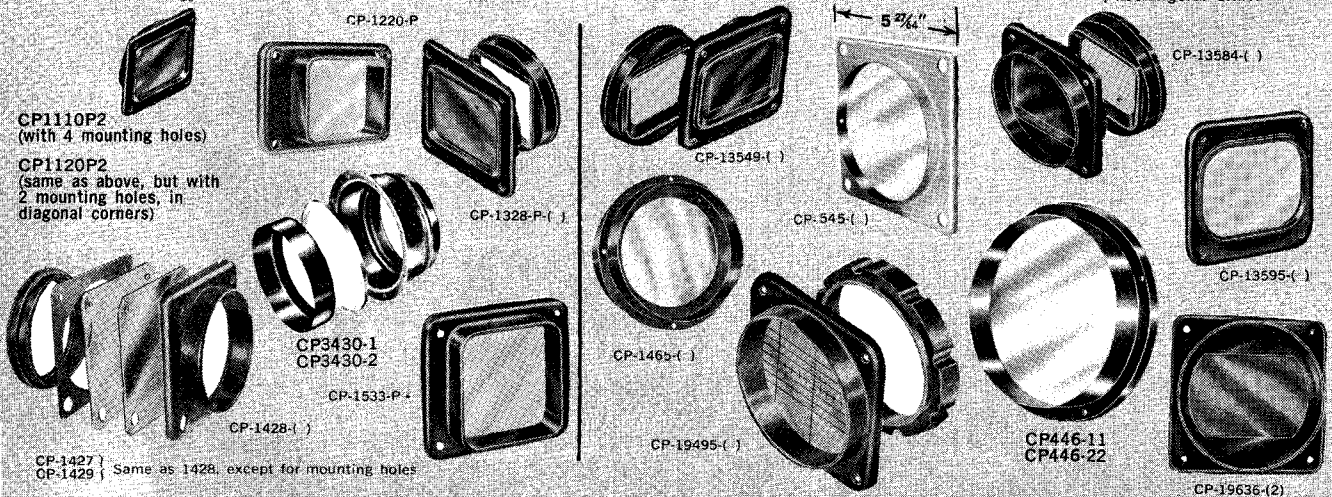
**BEZELS FOR 5" C.R.T.**

CP-13549-1	Curved Flat	Aluminum	Standard	6.0"	6 1/4"	6 1/4"	4 3/8"	3 3/4"	4 1/8"	4 1/8"	1 1/2"	1 1/2"	4 1/4"	3 3/8"	
CP-13549-2	Curved Flat	Aluminum	Standard	6.0"	6 1/4"	6 1/4"	4 3/8"	3 3/4"	4 1/8"	4 1/8"	1 1/2"	1 1/2"	4 1/4"	3 3/8"	
CP-13584-1	Curved Flat	Aluminum	Camera Mount	6.0"	6 1/4"	6 1/4"	4 3/8"	3 3/4"	4 1/8"	4 1/8"	1 1/2"	1 1/2"	4 1/4"	3 3/8"	
CP-13584-2	Curved Flat	Aluminum	Camera Mount	6.0"	6 1/4"	6 1/4"	4 3/8"	3 3/4"	4 1/8"	4 1/8"	1 1/2"	1 1/2"	4 1/4"	3 3/8"	
CP-13595-1**	Curved Flat	Aluminum	Standard E.L.B.A.**	5 3/8"	6 1/4"	6 1/4"	4 3/8"	3 3/4"	4 1/8"	4 1/8"	1 1/2"	—	4 3/4" Dia.		
CP-13595-2**	Curved Flat	Aluminum	Standard E.L.B.A.**	5 3/8"	6 1/4"	6 1/4"	4 3/8"	3 3/4"	4 1/8"	4 1/8"	1 1/2"	—	4 3/4" Dia.		
CP-1465	Curved or Flat	Steel	Camera Mount	5 3/8"	6 3/8" Dia.		5 3/4" Dia.		6"	6"	3/8"	3/8"	No Cushion		
CP-1465-2	Curved or Flat	Steel	Camera Mount	5 1/2"	6 3/8" Dia.		5 3/4" Dia.		6"	6"	3/8"	3/8"	4 1/2" Dia.		
CP-19495-1**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	5 3/8"	6 1/4"	6 1/4"	5 1/4" Dia.		4 1/8"	4 1/8"	1 3/2"	—	4 3/4" Dia.		
CP-19495-2**	Curved Flat	Aluminum	Camera Mount E.L.B.A.**	5 3/8"	6 1/4"	6 1/4"	5 1/4" Dia.		4 1/8"	4 1/8"	1 3/2"	—	4 3/4" Dia.		
CP-19636-2**	Flat	Aluminum	Camera Mount E.L.B.A.**	5 3/8"	5 7/8"	5 7/8"	4 1/2" Dia.	3"	4 7/8"	4 7/8"	1 1/4"	—	4 1/2" Dia.		
CP-446-11	Flat	Steel	Camera Mount	—	6 3/8" Dia.		5 3/8" Dia.		6 3/2"	6 3/2"	1"	1 1/8"	4 1/2" Dia.		
CP-446-22	Flat	Steel	Camera Mount	—	6 3/8" Dia.		5 3/8" Dia.		6 3/8"	6 3/8"	1"	1 1/8"	4 1/2" Dia.		

\* All Plastic Bezels are furnished in shock resistant plastic, per MIL P-3414

\*\* Edge Lit Bezel Assemblies

† Rectangular C.R.T.







# JAN HARDWARE

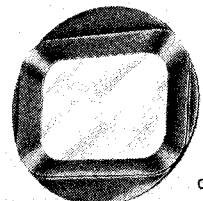
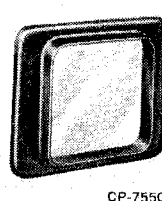
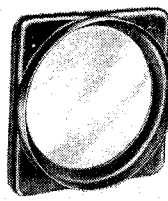
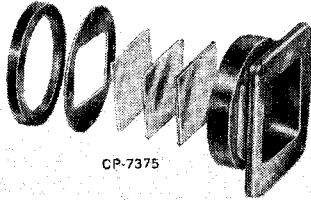
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LONG ISLAND CITY 1, NEW YORK



Catalog No.	CRT Face	Material	Type	Panel Opening		A	B	C Visible Area (Bezel)		E Mounting Holes		G	H	Visible Area (Cushion)	
				Width	Height	Overall Width	Overall Height	Width	Height	Width	Height	(Face Only)	(Incl. Flange)	Height	Width
<b>BEZELS FOR 7" C.R.T.</b>															
CP-7330 -1	Curved	Aluminum	Standard E.L.B.A.**	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	6 <sup>5</sup> / <sub>16</sub> " Dia.		6 <sup>3</sup> / <sub>16</sub> "	6 <sup>3</sup> / <sub>16</sub> "	3/4"	3/4"	6 <sup>3</sup> / <sub>16</sub> " Dia.	
CP-7331 -2**	Flat			7 <sup>13</sup> / <sub>32</sub> "	8"	8"	4 <sup>1</sup> / <sub>2</sub> "	4 <sup>1</sup> / <sub>2</sub> "	6 <sup>3</sup> / <sub>16</sub> "	6 <sup>3</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>32</sub> "	2 <sup>29</sup> / <sub>32</sub> "	4 <sup>1</sup> / <sub>2</sub> "	4 <sup>1</sup> / <sub>2</sub> "	
CP-7375 -1**	Curved	Aluminum	E.L.B.A.**	7 <sup>13</sup> / <sub>32</sub> "	8"	8"	8"	4 <sup>1</sup> / <sub>2</sub> "		6 <sup>3</sup> / <sub>16</sub> "	6 <sup>3</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>32</sub> "	2 <sup>29</sup> / <sub>32</sub> "	4 <sup>1</sup> / <sub>2</sub> "	
CP-7375 -2**	Flat			7 <sup>13</sup> / <sub>32</sub> "	8"	8"	4 <sup>1</sup> / <sub>2</sub> "	4 <sup>1</sup> / <sub>2</sub> "	6 <sup>3</sup> / <sub>16</sub> "	6 <sup>3</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>32</sub> "	2 <sup>29</sup> / <sub>32</sub> "	4 <sup>1</sup> / <sub>2</sub> "	4 <sup>1</sup> / <sub>2</sub> "	
CP-7420 -1**	Curved	Aluminum	Camera Mount	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	6 <sup>5</sup> / <sub>16</sub> " Dia.		6 <sup>3</sup> / <sub>16</sub> "	6 <sup>3</sup> / <sub>16</sub> "	3/4"	1 <sup>3</sup> / <sub>8</sub> "	6 <sup>3</sup> / <sub>16</sub> " Dia.	
CP-7420 -2**	Flat			7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	7 <sup>13</sup> / <sub>32</sub> "	6 <sup>5</sup> / <sub>16</sub> " Dia.	6 <sup>3</sup> / <sub>16</sub> "	6 <sup>3</sup> / <sub>16</sub> "	3/4"	1 <sup>3</sup> / <sub>8</sub> "	6 <sup>3</sup> / <sub>16</sub> " Dia.		
CP-7550	Curved or Flat	Aluminum	Camera Mount	4 <sup>25</sup> / <sub>32</sub> "	7 <sup>3</sup> / <sub>8</sub> "	6 <sup>1</sup> / <sub>4</sub> "	4 <sup>3</sup> / <sub>4</sub> "	4 <sup>3</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>4</sub> "	5 <sup>1</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>16</sub> "	1 <sup>3</sup> / <sub>16</sub> "	No Cushion		

\*\* Edge Lit Bezel Assemblies

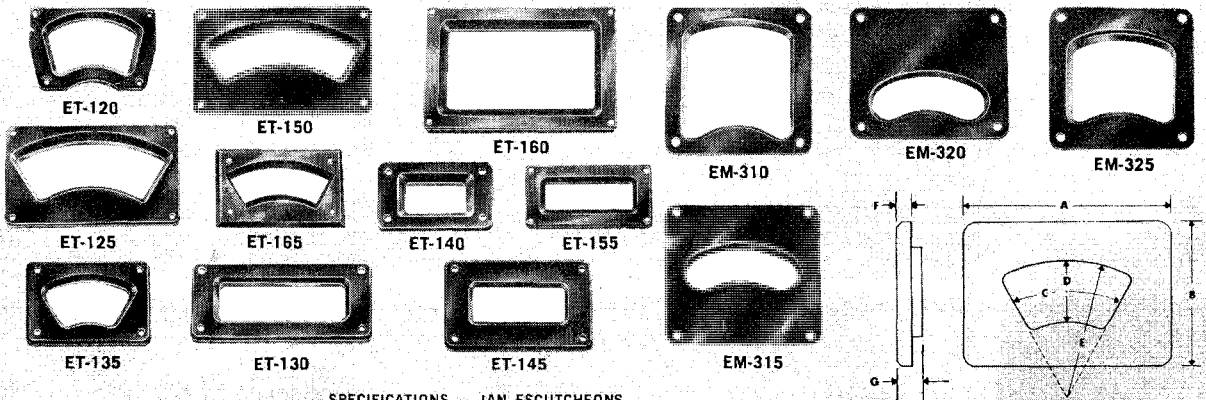
<b>BEZEL FOR 10" C.R.T.</b>															
CP-10860	Curved or Flat	Aluminum	Standard	11 <sup>1</sup> / <sub>32</sub> "	12 <sup>1</sup> / <sub>4</sub> " Dia.	8 <sup>1</sup> / <sub>16</sub> "	6 <sup>1</sup> / <sub>4</sub> "	11 <sup>1</sup> / <sub>2</sub> " B.C		1 <sup>1</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>16</sub> "	No Cushion			



**DISTINCTIVE FEATURES**

- Engineered for 2", 3", 4", 5", 7", 8" and 10" CRT
- Maximum display area
- Precision engraved, scale-calibrated graticules; standard or to customer's specifications
- Materials and finish to "Mil Spec"
- Heavy buna-S shock cushion
- Models for edge-lighting
- Phosphor-matched light filters
- Non-reflecting matte surfaces
- Rugged camera mounts
- Models for curved and flat-faced CRT

## ESCUTCHEON PLATES For Elegant Framing of Panel Openings



SPECIFICATIONS — JAN ESCUTCHEONS

Escutcheon Cat. No.	A Overall Width	B Overall Height	C Window Width	D Window Height	E Effective Outer Dial Radius	F—Face Only	G—Incl. Flange	Panel Opening Width	Panel Opening Height	Mounting Holes Width	Mounting Holes Height	Type of Dial	Material
ET-120	2 <sup>5</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1"	1 <sup>13</sup> / <sub>32</sub> "	3/16"	3/16"	2 <sup>1</sup> / <sub>32</sub> "	1 <sup>3</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>16</sub> " top 2 <sup>1</sup> / <sub>16</sub> " bottom	1 <sup>1</sup> / <sub>16</sub> "	Circular	Injection Molded Tenite II, Black Matte Finish
ET-125	3 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>16</sub> "	2 <sup>1</sup> / <sub>8</sub> "	1"	3 <sup>1</sup> / <sub>4</sub> "	3/16"	3/16"	3 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "		
ET-135	2 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3/8"	1 <sup>1</sup> / <sub>8</sub> "	3/16"	1/4"	1 <sup>13</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>3</sup> / <sub>8</sub> "		
ET-150	3 <sup>3</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "	3/4"	3 <sup>1</sup> / <sub>8</sub> "	3/16"	3/16"	3 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "		
ET-165	2 <sup>3</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>4</sub> "	3/8"	2 <sup>1</sup> / <sub>32</sub> "	3/16"	1/4"	2 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>16</sub> "		
ET-130	4"	1 <sup>3</sup> / <sub>16</sub> "	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>3</sup> / <sub>16</sub> "	—	3/16"	1/4"	2 <sup>1</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	3 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "	Flexible Tape,	Injection
ET-140	2 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>4</sub> "	3/8"	—	3/16"	3/16"	1 <sup>1</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	2"	1"	Digital	Molded
ET-145	3 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>16</sub> "	3/4"	—	3/32"	3/32"	2 <sup>1</sup> / <sub>32</sub> "	1 <sup>13</sup> / <sub>32</sub> "	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>16</sub> "	Counter,	Tenite II,
ET-155	2 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>16</sub> "	1/2"	—	3/32"	3/32"	2 <sup>1</sup> / <sub>32</sub> "	2 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>16</sub> "	Cylinder or Drum	Black Matte Finish
ET-160	3 <sup>3</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>8</sub> "	—	1/4"	1/8"	3"	2 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "		
EM-310	3"	3"	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "	3/32"	1/4"	3 <sup>1</sup> / <sub>32</sub> "	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>2</sub> "	Helical	Soft Aluminum with Black
EM-315	3 <sup>1</sup> / <sub>4</sub> "	3"	2 <sup>1</sup> / <sub>4</sub> "	5/8"	2 <sup>1</sup> / <sub>8</sub> "	3/32"	1/4"	2 <sup>1</sup> / <sub>32</sub> "	1 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>8</sub> "	Circular	Matte Enamel
EM-320	3 <sup>1</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "	5/8"	2 <sup>1</sup> / <sub>8</sub> "	3/32"	1/4"	2 <sup>1</sup> / <sub>32</sub> "	1 <sup>3</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "	Circular	Black Enamel
EM-325	3"	3"	2 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>8</sub> "	3/32"	1/4"	2 <sup>1</sup> / <sub>32</sub> "	1 <sup>3</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>2</sub> "	Helical	Finish

JAN'S molded, black, shock-resistant plastic escutcheons are available in an exceptionally wide variety of different types and sizes. They provide a pleasing window to frame dial plates mounted behind the panel. Plastic escutcheons are available in the following ways: frame only; frame with clear windows; frame with clear window scribed with a center line. For especially large working areas, stamped aluminum escutcheons, finished in dull black are available to meet the needs for space economy. Withstands temperature shock —65° to +85° C. **NON INFLAMMABLE**

\* To Order specify: (1) frame only; (2) frame with clear window; (3) frame with clear window scribed with a center line.





# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
LONG ISLAND CITY 1, NEW YORK



SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S5003	5UP	CP1465 CP13584-1 CP13549-1 CP13595-1 CP19495-1	
S5005 adaptable for edge-lighting	5AQP 5ABP 5ADP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2 CP446-11 CP446-22	
S5006 adaptable for edge-lighting	5RPA 5AWP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2	
S5008 adaptable for edge-lighting	5AMP	CP1465-2 CP13549-2 CP13584-2 CP13595-2 CP19495-2	
S5017 adaptable for edge-lighting	5ABP 5ADP	CP1465-2  CP19636-2	
S5027	5BTP	CP19495-2	

ALL SHIELDS ARE FABRICATED WITH OVERLAPPED AND SPOT WELDED CONSTRUCTION  
All 5" Shields have mounting provisions for edge lighting, except # 5021

The service of JAN's design engineers is available to assist you with your Shield & Bezel requirements. We will design and manufacture special Shields & Bezels to customers specifications. Complete facilities for prototype work.





# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
LONG ISLAND CITY 1, NEW YORK

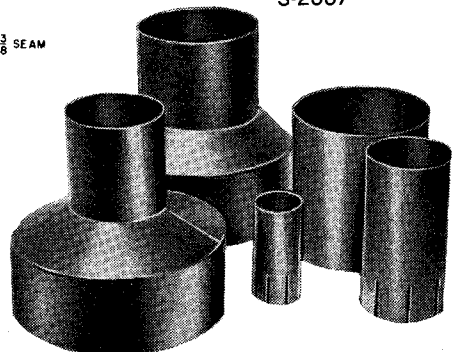
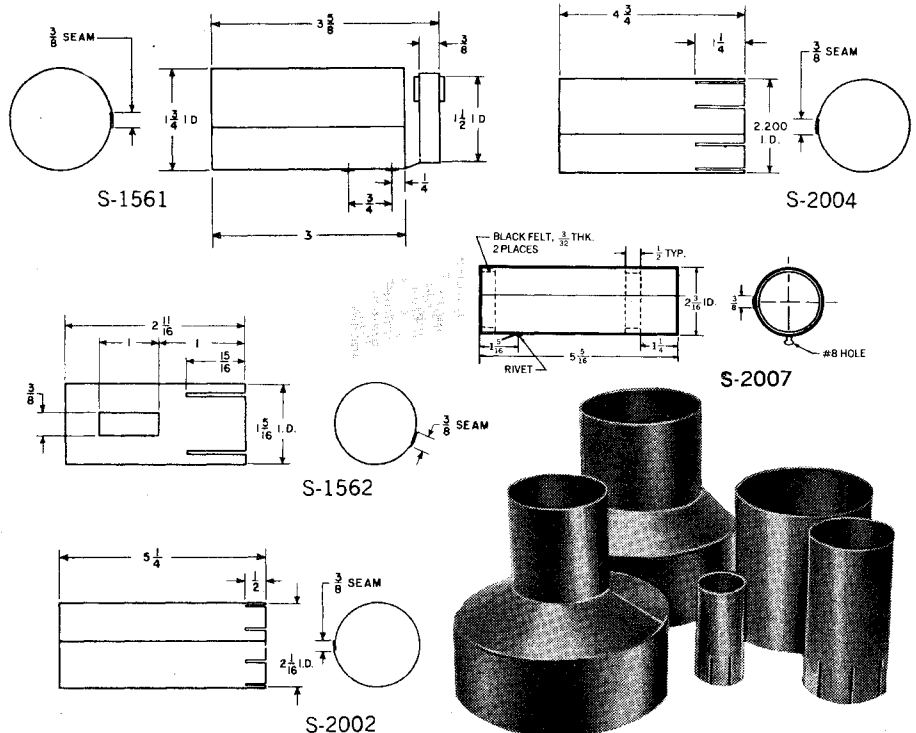


SHIELD CAT. NO.	FOR USE WITH C.R.T. NO.	MATCHING JAN BEZEL	
S7001	7GP 7JP 7VP	CP7330 CP7375 CP7331 CP7550 CP7420	
S7003 (Shield supplied as two separate sections)	7YP3	CP-7550	
S7006	7AEP	CP7330 CP7375 CP7331 CP7550 CP7420	
S10002	10KP 10WP		

When ordering, be sure to specify CRT type number. Anode openings provided, where required.

## MAGNETIC SHIELDS FOR PHOTO-MULTIPLIER & SPECIAL PURPOSE TUBES

SHIELD	TUBE	SHIELD	TUBE
S-1091	ICP1	S-2003	6903
	929		5819
	930		6217
S-1181	5581		6292
	5653	S-2004	6342
	IP39		6571
	IP40		6655
S-1500	6291	S-2005	6372
S-1561	6199	S-2007	7850
	7102		
	931	S-3015	1197
	6323		6363
S-1562	6328	S-5013	1112
	IP21		
	IP22	S-5018	1198
	IP28		6364
S-1563	1EP1	S-7009	1238
S-2002	6810		1287
	7264		





# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
LONG ISLAND CITY 1, NEW YORK



## JOLTA SHOCK TEST MACHINES

For reproducible impact-shock test pulses

Four models engineered to reproduce the entire spectrum of all significant impact shock waves.

Designed for laboratory and production testing of light to medium weight components as well as complete instrumentation. Produced to meet practically all requirements of common Mil. Spec. qualification tests. Each JOLTA is electronically calibrated to certify compliance with test specifications.

**JOLTA — Bench Model No. 1001** — Produced to meet JAN-S-44 & Mil-Std. 202 (202A). Standard model range 30-120G. Accessory plate springs available for test pulses to 500 G.

**JOLTA — Bench Model No. M-500** — Produced to meet Mil-T-12679A (Sig. C) and Mil. T-19500A. Standard model range —200 to 1000 G at 1.0 millisees. Alternate anvil and pad kits available to order.

**JOLTA—Floor Model Nos. F-3003-C1, C2, C-3**—Designed for high impact shock testing for small and moderate-sized components. Precision-machined magnesium casting utilized for higher shock amplitudes. Typical tests with these units 50 to 5000 G at .2 to 11.0 millisees. For high impact testing, accessory springs and twin anvil combinations yield impulses of 0.2 millisees to 5000 G.

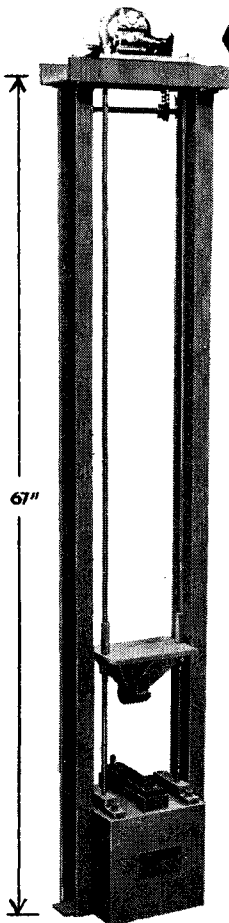
Note: New design allows for quick changeovers of accessories.

## FEATURES

- Economical
- Simple to operate
- Rugged
- Uniformly accurate

## JOLTA UNIVERSAL SHOCK TESTERS No. S-200-V

A functionally engineered test machine for large components and complete instrumentation. Accepts specimens up to 200 lbs. and volume of 2 cubic feet. Standard model provides pulses of from 20 to 250 G at 3.0 to over 30.0 millisees.



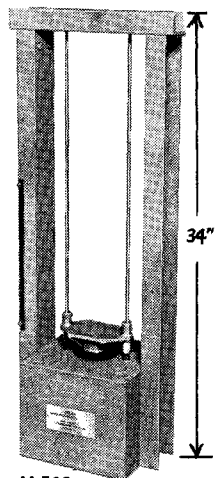
F-3003-C

61"

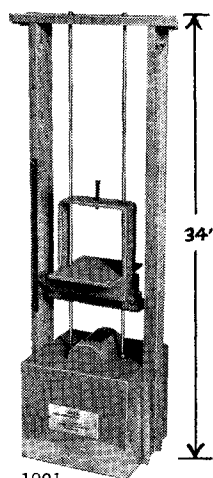
For Production Testing, JAN's Jolta Shock Test Machines can be automated for continuous operation.

### SPECIFICATIONS — JOLTA SHOCK TESTERS

Model No.	Carriage Volume	Test Weight	"G" Ranges
1001	4" x 4" x 5"	0-12 lbs.	25-500
M-500	3" cube	0-2.0 lbs.	100-1000
F-3003-C-1	5" cube	0-12 lbs.	50-1500
F-3003-C-2	5" cube	0-4.0 lbs.	350-5000
S-200-V	2 Foot cube	0-200 lbs.	20-250



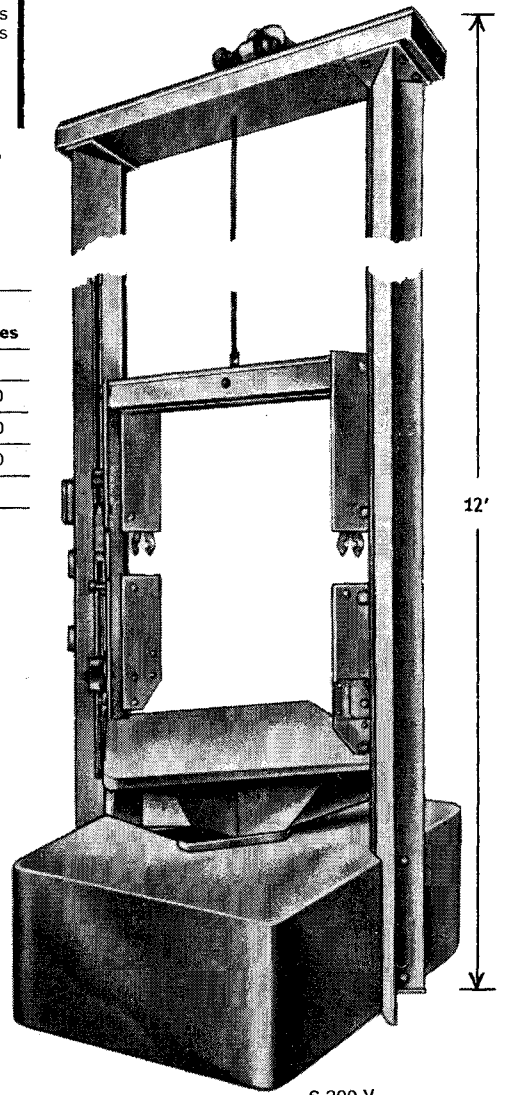
M-500



1001

34"

34"



S-200-V

12'

Free engineering services available to customers where adaptation or conversion of standard machines are needed to meet Mil. Spec. changes or other special needs.





# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
LONG ISLAND CITY 1, NEW YORK



## SLIP-CLUTCH, SAFETY KNOBS

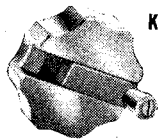
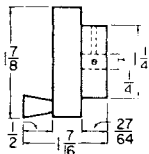
With Fixed or Retractable Spinners

Cat. Nos. K-1375 & K-1376 (For 1/4" shafts)

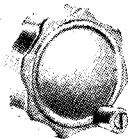
Designed for driving devices such as variable capacitors, inductors, potentiometers, etc., these knobs are based upon the principle of the "slip-clutch"; automatically disengaging and slipping when a pre-determined torque has been exceeded. JAN'S SLIP-CLUTCH SAFETY KNOBS are fluted to aid in sensitive adjustments and are equipped with either a fixed or retractable spinner for fast turning. Insert-molded-to-Bakelite construction provide durable, backlash-free units to safeguard delicate and costly instruments against careless or inadvertent cranking beyond their normal stops.

\*Normally set for 2 1/2 - 5" lbs. Can be modified for other requirements.

Model No. K-1376 is identical with No. K-1375 but has the additional feature of a retractable spinner. Spring loading provides positive, toggle-type action to lock spinner in either open or closed position. Model No. K-1376 is designed for use where economy of space is essential.



K1376



K1375

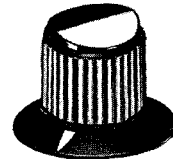
### SPINNER KNOBS

With Fixed or Retractable Spinners

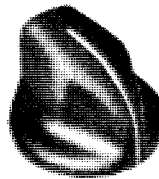
Cat. Nos. K-1275 & K-1276 (For 1/4" shafts)

In appearance, these knobs are identical with No. K-1375 and No. K-1376 but without JAN'S Slip-Clutch mechanism. Made with single-unit, molded Bakelite-to-metal-insert construction, with two set screws for firm attachment to shafts.

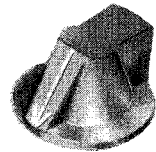
## TRANSILLUMINATED POINTER KNOBS



MS91528



NAS 539-1B

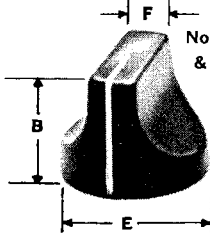


MS25165-1

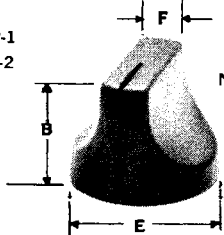
Precision molded of JAN's transparent plastic material, to NAS specs, with dull finish. Transilluminated pointers permit easy reading under subdued lighting conditions. For use on instrument panels, switchboards, electrical and electronic apparatus.

### SIGNAL CORPS DIE CAST ZINC ALLOY KNOBS

Manufactured in accordance with applicable military specifications.



No. K242-1 & K-242-2



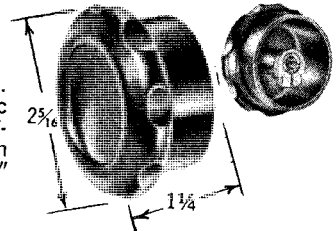
No. K242-3

Cat. No.	B	E	F	Marking
242-1	3/4"	1 3/8"	3/8"	White
242-2	7/8"	1 1/8"	3/8"	White
242-3	3/4"	1 3/8"	1 3/8"	None

### TUNING KNOB

Cat. No. K243

Die cast aluminum. Made to Fed. Spec QQ-A-591 and MIL-F-14072. Mounted with no-mar clamp for 3/8" shaft.



### POINTER KNOB

Cat. No. K-706

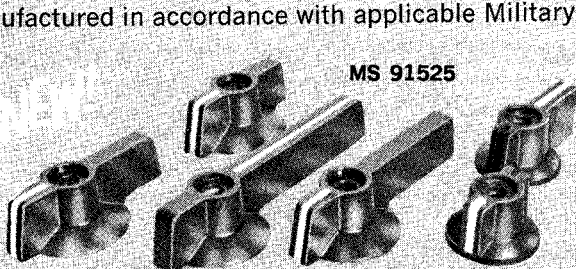
Molded thermosetting phenolic. Type CFG per MIL-P-14. Designed for square shaft, providing positive action.



## MS SIGNAL CORPS DIE-CAST ALUMINUM & ZINC ALLOY CONTROL KNOBS

Manufactured in accordance with applicable Military Specifications

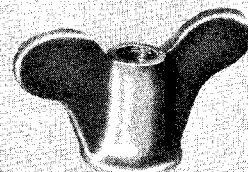
Cat. No. 680



MS 91525

MS 91524

(Many sizes available. Lengths from 1 3/8" to 2 5/8").



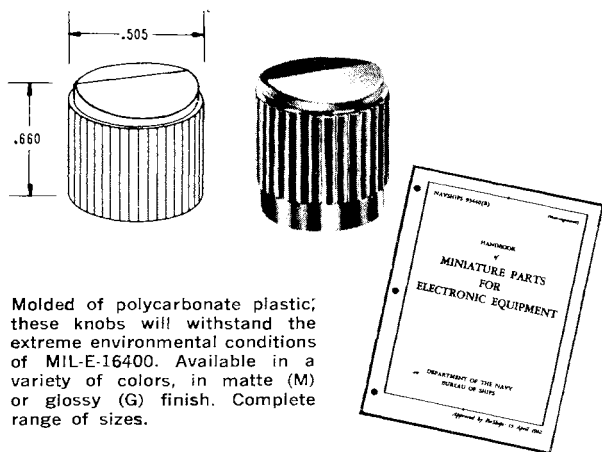


# JAN HARDWARE

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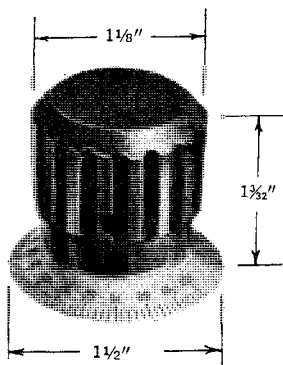
### INSTRUMENT KNOBS



Molded of polycarbonate plastic, these knobs will withstand the extreme environmental conditions of MIL-E-16400. Available in a variety of colors, in matte (M) or glossy (G) finish. Complete range of sizes.

### Cat. No. K936-1

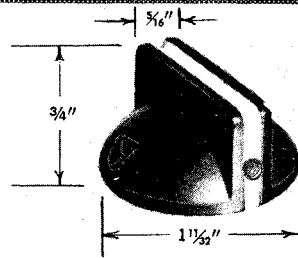
Black phenolic molded knob, with beveled satin aluminum skirt, anodized finish. Deeply etched and filled contrasting markings. Accurately centered brass insert, for 1/4" shafts. Variations on shaft sizes and markings available in production quantities.



### CONTROL KNOBS

Cat. No. K-772

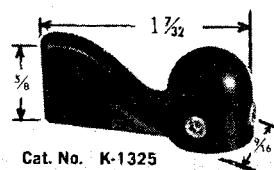
Positive action bar knob, furnished with protruding pin for setting of controls. Molded in Red, Yellow, Blue and Black, specify. Colors withstand MIL E-16400 environmental conditions.



### BAR-KNOB

Cat. No. AK-1325

Precision cast aluminum for 1/4" shafts. Furnished with twin set screws for shaft attachment. Provides a 1.0" integrally cast lever arm for heavy-load switching. Finished to specifications.

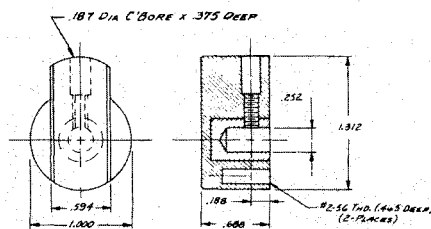
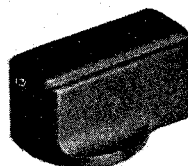


Cat. No. K-1325

### BAR KNOB

Cat. No. K783

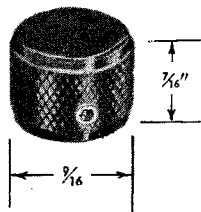
Phenolic molded knob, with metal insert. Set screw at back, for shaft attachment. Finished to specifications.



### KNOB

Cat. No. K-897

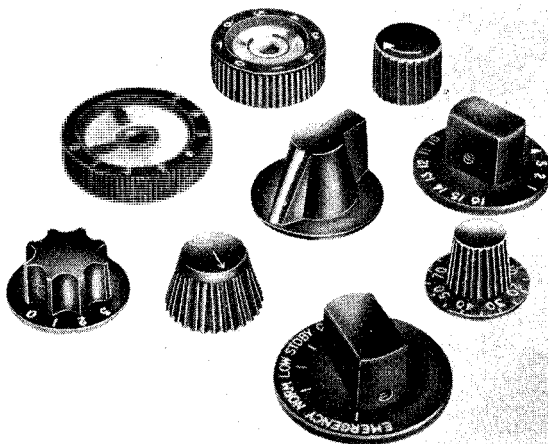
Machined knurled edge for easy turning. Has set screw for firm attachment to 1/4" shafts. Height 3/16" x 3/16" diam.



### STANDARD PLASTIC KNOBS

Knobs to satisfy almost any design or demand. Can be produced in any color or finish, either illuminated or non-illuminated. Knobs shown are only part of our stock. Let us quote on your specifications.

Knobs Back Lighted on special request only







# DELUXE INSTRUMENT KNOBS



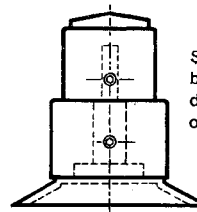
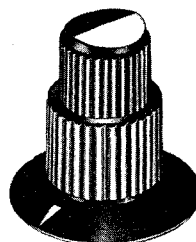
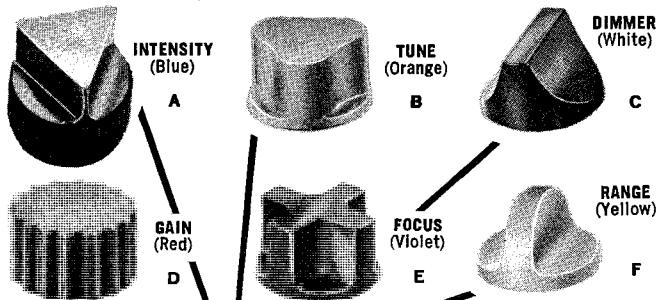
MEETS PERFORMANCE OF MIL-STD-242D (SHIPS) AND MS 91528C

JAN's Standard Instrument Control Knobs for use with electronic equipment. Molded of polycarbonate, these knobs will withstand the extreme environmental conditions of

MIL-E-16400. Either knob-cap or entire knob is available in a variety of colors, in MATTE (M) or GLOSSY (G) finish. Complete range of sizes... send for catalog.

## TACTILE SHAPE CONTROL KNOBS

Expressly made for both visual and tactile function identification. Each Tactile knob is produced in the standard recognizable color identified with its configuration. Available in other colors on special order. See column—below, for applicable tactile shape.



See diagrams below for dimensions of each knob.

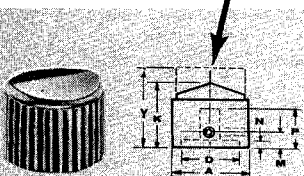
DUAL KNOBS FOR CONCENTRIC CONTROLS  
APPROVED FOR USE  
MIL STD 242D and MS 91528C

Molded of polycarbonate plastic, these "piggy-back" knobs are used with dual concentric potentiometers and in other similar applications. Meet performance of military specs above.

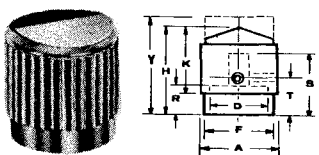
### DIMENSIONS

PART NO.		A	D	F	G	H	K	M	N	P	R	S	T	Y
5	1 A †	.505	.302					.509	.158	.026	.408			
7	1 A	.708	.486					.626	.158	.026	.406			.915
9	1 A	.911	.645					.798	.255	.114	.521			1.171
12	1 A	1.255	.974					.703	.260	.115	.458			1.220
17	1 A	1.755	1.465					.854	.255	.114	.521			
22	1 A	2.255	1.870					.885	.255	.114	.521			
5	1 B †	.505	.302	.450		.660	.509				.181	.563	.324	
7	1 B	.708	.486	.670		.805	.626				.188	.568	.340	1.100
9	1 B	.911	.654	.826		1.027	.798				.323	.730	.484	1.399
12	1 B	1.255	.974	1.155		.870	.703				.262	.605	.427	1.399
17	1 B	1.755	1.465	1.666		1.088	.854				.333	.740	.489	
22	1 B	2.255	1.870	2.153		1.114	.885				.333	.740	.489	
5	1 C †	.505	.302		.885	.660	.509				.181	.563	.324	
7	1 C	.708	.486		1.135	.805	.626				.188	.568	.340	1.100
9	1 C	.911	.645		1.510	1.027	.798				.323	.730	.484	1.399
12	1 C	1.255	.974		1.822	.870	.703				.262	.605	.427	1.399
17	1 C	1.755	1.465		2.453	1.088	.854				.333	.740	.489	
22	1 C	2.255	1.870		3.005	1.114	.885				.333	.740	.489	

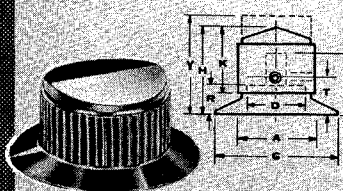
SPECIFY AS REQUIRED



NO SKIRT



PLAIN SKIRT



DIAL SKIRT

### TYPICAL PART NUMBERS

- 91CAGA = 90 Dia./Round/Dial/1/4"/Glossy/Black
- A71BANA = Triangle Top Blue/.72/Round/Plain/1/4"/Matte/Black
- BA71BANA = Triangle Top Red/.72/Round/Plain/1/4"/Matte/Black
- BT71BANA = Standard Top Red/.72/Round/Plain/1/4"/Matte/Black
- OT71BANA = No Top/.72/Round/Plain/1/4"/Matte/Black

(Specify whether Hole is drilled thru for Dual Knob Mounting)\*\*

\*\*—Specify if .127, .190, .250 hole is required for dual mounting

NOTE: \*T—Preceded by color code (BT—would mean Standard RED top)

IF WHITE DOTS ARE REQUIRED—ADD SUFFIX WD TO CATALOG NO.  
FOR SPECIAL KNOBS—GIVE FULL DESCRIPTION OR SKETCH WITH ORDER.

1 TOP (Color or Tactile)	2 BODY DIA.	3 BODY STYLE	4 SKIRT	5 SHAFT HOLE DIA.	6 FINISH	7 COLOR
O=NO TOP *T=STANDARD A=(INTENSITY—Blue) B=(TUNE—Orange) C=(DIMMER—White) D=(GAIN—Red) E=(FOCUS—Violet) F=(RANGE—Yellow)	7=.72 5=.51 7=.72 9=.90	1=ROUND 2=POINTER	A=NONE B=PLAIN C=DIAL W/ POINTER	2=.128 3=.190 4=.253	M=MATTE G=GLOSSY	A=BLACK B=RED C=GREY D=GREEN E=YELLOW F=PURPLE G=BLUE H=WHITE J=ORANGE

† Not suitable for 1/4"



# DELUXE INSTRUMENT KNOBS

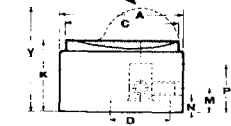
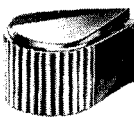
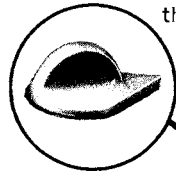


MEETS PERFORMANCE OF MIL-STD-242D (SHIPS) AND MS 91528C

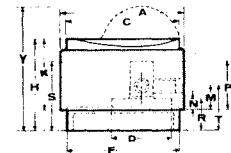
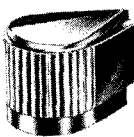
JAN's Standard Instrument Control Knobs for use with electronic equipment. Molded of polycarbonate, these knobs will withstand the extreme environmental conditions of

MIL-E-16400. Either knob-cap or entire knob is available in a variety of colors, in MATTE (M) or GLOSSY (G) finish. Complete range of sizes... send for catalog.

## POINTER KNOBS



POINTER †



POINTER WITH SKIRT

### DIMENSIONS

PART NO.				A	D	F	H	K	M	N	P	R	S	T	Y
5	2	A	†	.750	.406			.505	.158	.026	.402				
7	2	A		1.038	.486			.619	.187	.026	.406				.918
9	2	A		1.344	.645			.796	.255	.114	.555				1.171
5	2	B	†	.750	.406	.669	.655	.505			.402	.177	.563	.324	
7	2	B		1.038	.486	.940	.791	.619			.406	.193	.573	.364	1.100
9	2	B		1.344	.645	1.251	1.015	.796			.555	.328	.796	.479	1.400

SPECIFY AS REQUIRED

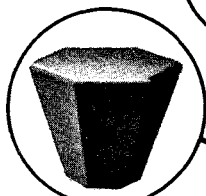
- 1 TOP (Color or Tactile)  
G=(RANGE—Yellow)
- 2 BODY DIA.  
5=.51  
7=.72  
9=.90
- 3 BODY STYLE  
2=POINTER  
C=DIAL W/ POINTER
- 4 SKIRT  
A=NONE  
B=PLAIN  
C=DIAL W/ POINTER
- 5 SHAFT HOLE DIA.  
2=.128  
3=.190  
4=.253
- 6 FINISH  
M=MATTE  
G=GLOSSY
- 7 COLOR  
A=BLACK  
B=RED  
C=GREY  
D=GREEN  
E=YELLOW  
F=PURPLE  
G=BLUE  
H=WHITE  
J=ORANGE

### TYPICAL PART NUMBERS

72B4MA=Regular Top  
G72A4MA=Tactile Top

† Not suitable for 1/4"

MARKER GREEN

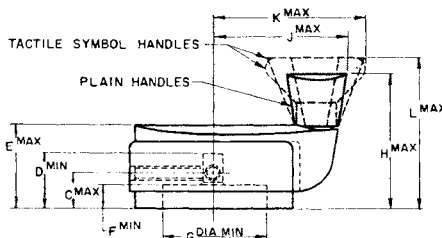
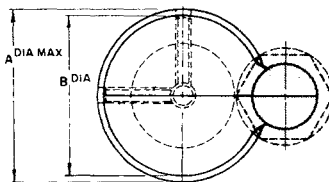


BEARING GRAY



TOP (Color or Tactile)  
H=GREEN  
J=GREY

## CRANK KNOBS



DIM.	SERIES		
	12	17	22
A	1.269	1.775	2.255
B	1.156	1.594	2.094
C	.427	.489	.489
D	.605	.740	.740
E	.870	1.088	1.114
F	.267	.328	.327
G	.700	.894	.925
H	1.379	1.773	1.799
J	1.110	1.504	1.754
K	1.275	1.719	1.969
L	1.475	1.961	1.987

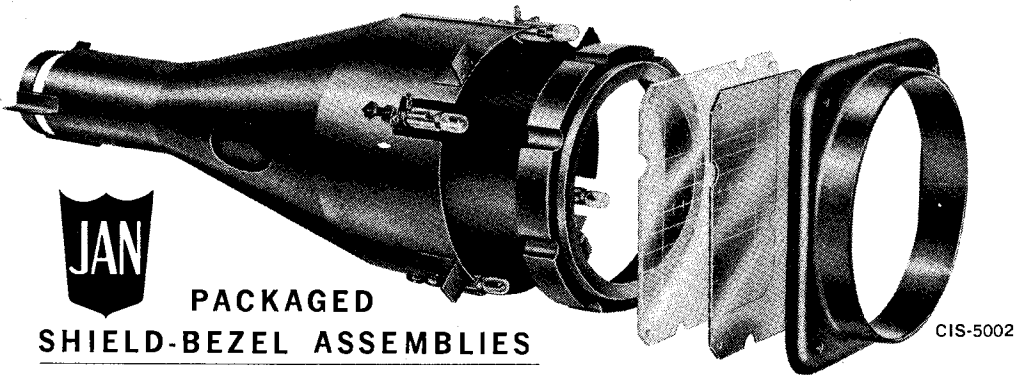
### TYPICAL PART NUMBERS

J17B4MA=Grey Tactile Handle  
121B4MA=Standard Handle



# JAN HARDWARE

MANUFACTURING COMPANY, INC.  
LONG ISLAND CITY 1, NEW YORK

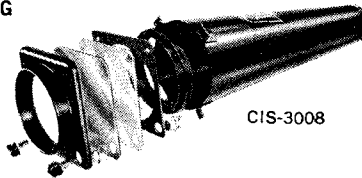


## PACKAGED SHIELD-BEZEL ASSEMBLIES

**SAVES TIME MONEY**      **ELIMINATES MULTIPLE PURCHASING**      **COMPLEX ENGINEERING**

All necessary items for CRT Magnetic Shield and Bezel applications are packaged in one unit.

EACH ASSEMBLY CONTAINS } Shield, JAN Bezel, CRT Rubber Cushion, Graticule, Filter, Light Sockets, Pilot Lamps (for edge-lit bezel-shield assemblies) plus Hardware.



**VIEWING HOOD**  
No. H-689-1 (5 $\frac{5}{8}$ " I.D.)  
No. H-689-2 (4 $\frac{7}{8}$ " I.D.)

Black neoprene rubber. contour-molded, fits shape of face. Keeps out ambient light when viewing scope.

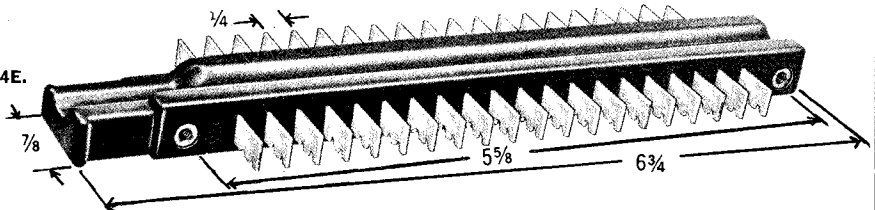
When ordering specify:

"JAN PACKAGED UNIT" giving JAN shield No., JAN bezel No. and CRT tube type with which it is to be used.

### "FEED THROUGH" TERMINAL BOARDS

Cat. No. T-746  
Molded of wood-filled melamine per MIL-M-14E.

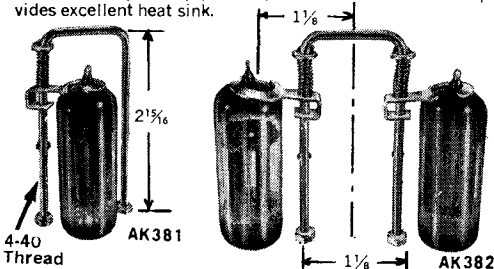
Avoid expensive tooling. Design around this integrally-molded 20 feed-through terminal board. Equally-spaced terminals can be used for wrap around and/or solder connections. Voltage Breakdown 4000 Volts.



### TUBE BAIL ASSEMBLIES

Positive protection against vibration and shock. Spring-loaded tube holders give positive protection that is free of strain on tube. Available as single and twin tube hold-downs.

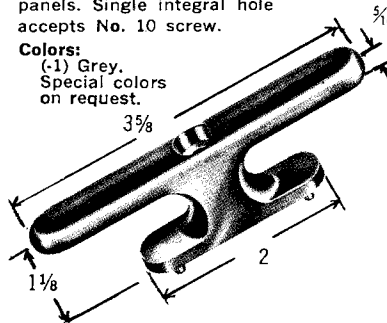
Holds securely in any position,—can't shake loose. Also provides excellent heat sink.



### HANDLE, CORD Cat. No. H-692-1

This durable, die-cast aluminum handle is designed for use on small instrument panels. Single integral hole accepts No. 10 screw.

**Colors:**  
(-1) Grey. Special colors on request.



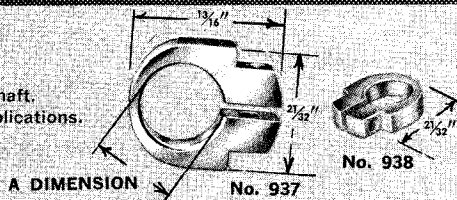
The service of JAN's design engineers is available to assist you with your Component requirements.

JAN will design and manufacture special Components to customers' specifications.

Complete facilities for prototype work.

### "NO-MAR" CLAMPS

Set screw does not touch shaft. Ideal for knob and gear applications. Variety of sizes available.

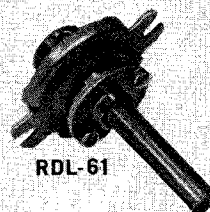


Cat. No.	-2	-3	-4	-5	-6	-7	-8
937	1/8"	3/16"	1/4"	5/16"	3/8"	13/32"	7/16"
938	1/8"	3/16"	1/4"	5/16"	3/8"	13/32"	7/16"

### IN-LINE RATIO DRIVE 6.3 : 1

For smooth rotary control of components requiring Vernier adjustments. Suitable for use where panel space is at a premium. Durable, ruggedized ball bearing mechanism.

Variations available to customers specifications.



# AIR VARIABLE CAPACITORS

Whatever the choice . . . sub-miniature capacitors for printed circuit use—or large, heavy duty types . . . time and again engineers specify Johnson Air Variables!

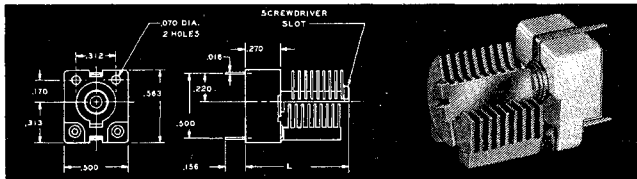
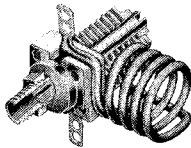
More than 11 basic capacitor types are readily available in a wide selection of single section, dual section, butterfly and differential models. Units range in size from the diminutive sub-miniature Type "U" capacitors, to large, rugged heavy duty "C" and "D" types. Standard stock capacitors in a wide range of plate spacings, capacity per section, breakdown ratings, and finishes will meet many military and commercial applications . . . specials to your specifications are also available in production quantities.

## TYPE "U", "UA" AND "UB" CAPACITORS

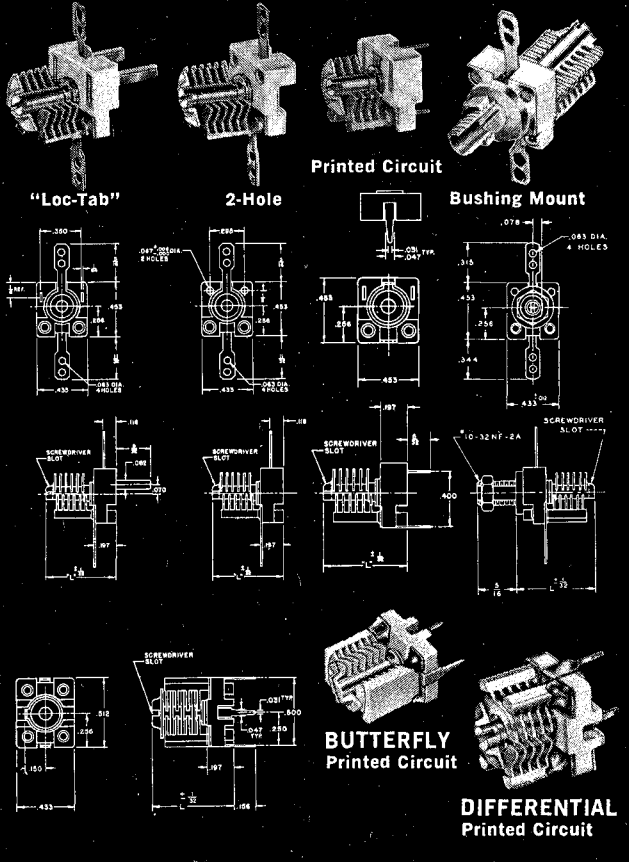
Cut costs, improve performance, and save valuable space in compact electronic equipment with these sub-miniature air variable capacitors. Available in single-section, differential and butterfly types, they occupy minimum mounting area—Type "U" requires less than 0.2 square-inch and Types "UA" and "UB" less than 0.23 square-inch area for chassis or printed board mounting. Rotors and stators are precision machined from one piece of solid brass, providing outstanding mechanical stability and uniformity. Units offer high "Q" (greater than 1500 at 1 mc.), high torque-to-mass ratio (2½ to 10 inch ounces), and exceptionally low temperature coefficient (plus 45 ± 15 PPM/°C) — provides absolute freedom from moisture entrapment found in trimmer capacitors of the enclosed or solid dielectric type. All metal parts silver-plated — ceramic is steatite, Grade L-4 or better. Exceptionally uniform delta C and voltage characteristics . . . breakdown ratings available to 1100 volts DC. No special tools required for installation — slotted and accommodates large screwdriver for quick adjustment. Choice of wide, double-pierced or printed circuit style terminals. Single-section models available in "Loc-Tab"; 2-Hole; Printed Circuit; and #10-32 Bushing Mount types—Differential and Butterfly models available in Printed Circuit types.

## "U-LC" TUNERS

Combines precision machined Type "U" capacitor with an air wound, silver-plated inductor to form a compact, tuneable LC circuit. Excellent "Q" and temperature stability — capacitor end frame equipped with #10-32 threaded bushing for mounting. Recessed screwdriver slot contributes to ease of tuning — slot on opposite end of rotor shaft also may be used for adjustment. High torque (2½ to 10 inch ounces) holds rotor to adjusted position. Printed circuit types available on special order.



## SINGLE SECTION



## TYPE "V" CAPACITORS

Slightly larger than the Type "U" capacitors, these miniature air variables offer all of the design, construction and performance features of the Type "U", plus higher capacity, with very little increase in mounting area requirement. Requires less than 0.3 square inch for printed board mounting.

# SPECIFICATIONS AND PRICES

## TYPE "U", "UA" AND "UB" CAPACITORS

Cat. No.	Nominal Cap. per Sec.		Plates per Sec.	L	Volts Peak Bkdwn.	Air Gap	Net Price
	Max.	Min.					
<b>SINGLE SECTION — "Loc-Tab"; 2-Hole; Printed Circuit Types</b>							
<b>NOTE:</b> To order "LocTab" type, add -1 to Cat. No.; for 2-Hole type, add -4; and for Printed Circuit type, add -5 to Cat. No.							
189-1	3.5	1.2	4	29/64"	750	.010"	\$0.60
189-2	5.4	1.3	6	1/2"	750	.010"	.63
189-3	7.3	1.4	8	35/64"	750	.010"	.65
189-4	9.1	1.5	10	19/32"	750	.010"	.68
189-5	11.0	1.7	12	5/8"	750	.010"	.70
189-6	13.0	1.8	14	43/64"	750	.010"	.72
189-7	15.0	2.0	16	47/64"	500	.010"	.74
189-8	17.0	2.2	18	25/32"	500	.010"	.76
189-26	4.1	1.3	6	1/2"	1100	.016"	.72
189-27	6.7	1.6	10	5/8"	1100	.016"	.74
189-28	8.9	1.8	14	3/4"	1100	.016"	.76

## SINGLE SECTION — #10-32 Bushing Mount Types

189-3-54	7.3	1.4	8	19/32"	750	.010"	(Available on special order)
189-4-54	9.1	1.5	10	41/64"	750	.010"	
189-5-54	11.0	1.7	12	11/16"	750	.010"	
189-6-54	13.0	1.8	14	3/4"	750	.010"	
189-7-54	15.0	2.0	16	51/64"	500	.010"	
189-8-54	17.0	2.2	18	27/32"	500	.010"	

## BUTTERFLY — Printed Circuit Types

189-251	4.5	1.7	12	17/32"	750	.010"	\$0.86
189-252	6.5	1.8	18	5/8"	750	.010"	.88
189-253	8.5	1.9	24	47/64"	750	.010"	.90

## TYPE "U", "UA" AND "UB" CAPACITORS

Cat. No.	Nominal Cap. per Sec.		Plates per Sec.	L	Volts Peak Bkdwn.	Air Gap	Net Price
	Max.	Min.					
<b>DIFFERENTIAL — Printed Circuit Types</b>							
189-351	3.5	1.2	6	7/16"	750	.010"	\$0.78
189-352	5.4	1.3	9	31/64"	750	.010"	.80
189-353	7.3	1.5	12	17/32"	750	.010"	.82
189-354	9.1	1.6	15	37/64"	750	.010"	.84
189-355	11.0	1.7	18	5/8"	750	.010"	.86
189-356	13.0	1.9	21	11/16"	750	.010"	.88

## TYPE "U-LC" TUNERS

Cat. No.	Resonant Freq. Mc.		Plates per Sec.	L	Volts Peak Bkdwn.	Air Gap	Coil Turns	Net Price
	Max.	Min.						
<b>#10-32 Bushing Mount Types</b>								
250-101-4	230	100	18	27/32"	500	.010"	4 1/4	(Available on special order)
250-102-4	340	190	12	11/16"	750	.010"	2 1/4	
250-103-4	450	280	10	41/64"	750	.010"	1 1/4	
250-104-4	520	360	6	35/64"	750	.010"	1 1/4	
250-105-4	750	450	10	41/64"	750	.010"	1/2	

## TYPE "V" CAPACITORS

Cat. No.	Nominal Cap. per Sec.		Plates per Sec.	L	Volts Peak Bkdwn.	Air Gap	Net Price
	Max.	Min.					
<b>SINGLE SECTION — Printed Circuit Types</b>							
193-4-5	13	1.4	8	.581	650	.010"	\$0.70
193-6-5	20	1.7	12	.683	650	.010"	.72
193-8-5	27	2.0	16	.785	650	.010"	.74
193-10-5	34	2.2	20	.887	650	.010"	.76

NOTE: For applications requiring capacity values other than those listed, specials may be furnished with 10, 14 or 18 plates.



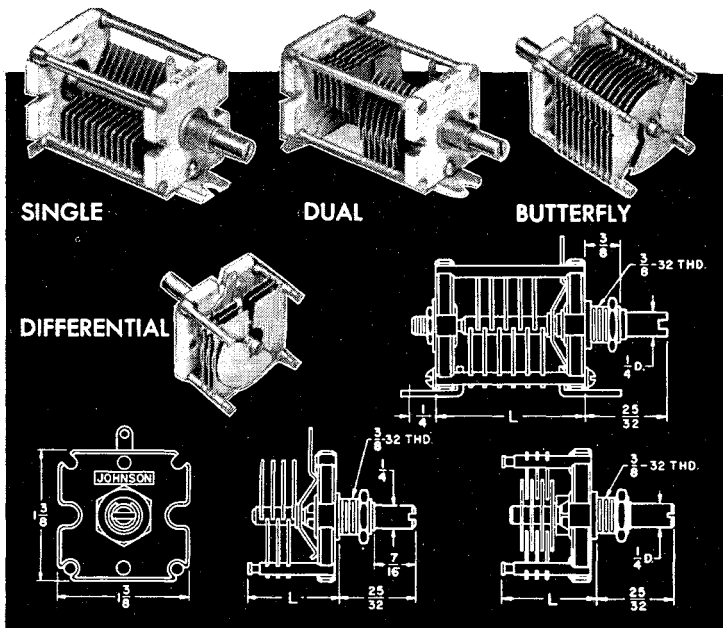
**E. F. JOHNSON COMPANY**  
WASECA, MINNESOTA, U.S.A.





TYPE "L" CAPACITORS

Ideal choice for applications requiring extreme stability and strength practically impervious to shock and vibration. Rotor bearings and stator support rods soldered directly to heavy 3/16" thick steatite insulator. Special split-sleeve tension bearing and silver-plated beryllium copper contact provide constant torque and smooth capacity variation. Heavy brass soldered plates and large diameter tie rods provide excellent rigidity. Removable chassis mounting brackets can be used to mount auxiliary equipment. Plating is heavy nickel - plate spacing .030". Peak voltage rating is 1500 volts. Also available with .020", .060", and .080" spacing as well as special platings, shaft lengths and stator terminal locations in production quantities. Bearings threaded 3/8-32", mounting nut provided. Models with 6-32 tapped mounting posts soldered to end frame also available on special order.



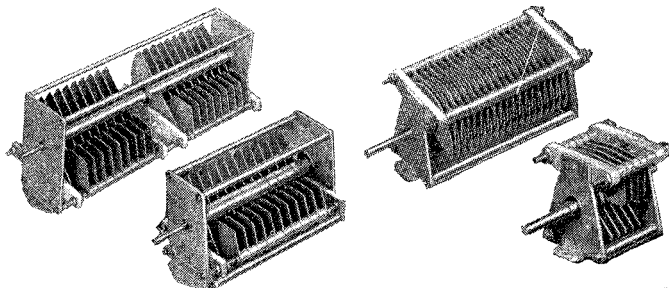
Cat. No.	Nom. Cap. per Sec. Max.	Min.	Plates per Sec.	L	Net Price
<b>SINGLE SECTION - Single End Plate</b>					
167-1	11	2.8	3	3/4"	\$1.85
167-2	27	3.5	7	6 1/4"	2.00
167-3	51	4.6	13	1 1/4"	2.20
167-4	75	5.7	19	1 9/16"	2.40
<b>SINGLE SECTION - Double End Plate</b>					
167-11	99	6.8	25	2 1/2"	3.90
167-12	202	11.6	51	3 21/64"	5.00
<b>BUTTERFLY</b>					
167-21	10.5	2.8	5	5 5/16"	2.25
167-22	26	4.3	12	1 1/4"	2.65
167-23	51	6.8	23	1 3/4"	3.25
<b>DIFFERENTIAL</b>					
167-31	11	2.8	3	3/4"	2.30
167-32	27	3.5	7	6 1/4"	2.50
167-33	51	4.6	13	1 1/4"	2.90
<b>DUAL SECTION</b>					
167-51	27	5.0	7	1 5/8"	4.00
167-52	51	6.5	13	2 15/64"	4.45
167-53	99	9.8	25	3 7/8"	5.30

TYPE "C" AND "D" CAPACITORS

Heavy .051" aluminum plates and 3/8" diameter aluminum tie rods; 1/4" cadmium-plated steel shafts; laminated phosphor bronze contact springs; and steatite insulation. Type "C" - overall width: 5 1/2" - height: 5 1/2" - height bottom to shaft center: 3 3/4". Type "D" - overall width: 4 1/4" - height: 4" - height bottom to shaft center: 2 5/8". Dual types have center rotor connection for better balance. End frames tapped 8-32, 3 holes, for panel mounting - brackets furnished for chassis mounting.

TYPE "E" AND "F" CAPACITORS

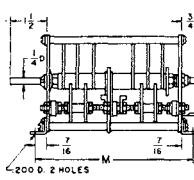
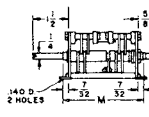
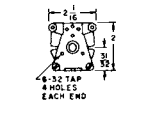
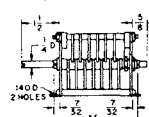
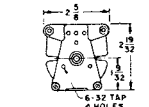
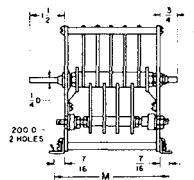
High capacity per cubic inch and extremely low capacity to chassis. Heavy aluminum plates .032" thick with rounded edges and large 1/4" tie rods; stainless steel shafts; sturdy phosphor bronze contact springs; and center rotor contact on dual types. End frames tapped 8-32, 3 holes for panel mounting - brackets furnished for chassis mounting.



SPECIFICATIONS AND PRICES

Cat. No.	Pkg. Volt-age	Nom. Cap. /Sec. Max. Min.	Air Gap	Plates per Sec. M	Net Price
<b>TYPE C SINGLE SECTION</b>					
152-1	7000	252	34 .175"	24 7 11/16"	\$17.95
152-2	7000	496	56 .175"	47 13 1/16"	24.50
152-6	11000	103	30 .350"	17 9 1/2"	15.90
152-8	13000	51	24 .500"	10 8 9/16"	14.10
152-9	13000	102	42 .500"	21 14 3/32"	18.35
<b>TYPE C DUAL SECTION</b>					
152-501	4500	204	21 .125"	15 9 1/2"	21.60
152-502	4500	290	26 .125"	21 11 3/16"	24.95
152-503	7000	198	27 .175"	19 13 1/16"	24.70
152-504	7000	305	37 .175"	29 17 1/2"	30.60
152-505	9000	147	30 .250"	19 15 23/32"	27.20
152-507	11000	50	18 .350"	8 11 1/16"	18.50
152-509	11000	103	32 .350"	17 17 1/2"	26.00
<b>TYPE D SINGLE SECTION</b>					
153-6	3500	496	36 .080"	39 7 11/16"	17.60
153-8	4500	146	23 .125"	17 5 21/32"	12.50
153-11	7000	98	23 .175"	15 5 21/32"	12.20
153-12	7000	151	31 .175"	23 7 1/16"	14.50
153-13	7000	244	45 .175"	37 11 3/16"	17.65
153-15	9000	53	20 .250"	10 5 21/32"	11.15
153-16	9000	73	25 .250"	14 6 1/16"	12.35
153-17	9000	99	30 .250"	19 8 9/16"	13.65
153-18	9000	149	43 .250"	29 11 3/16"	16.20
<b>TYPE D DUAL SECTION</b>					
153-501	3500	95	13 .080"	8 5 21/32"	14.70
153-502	3500	147	15 .080"	12 6 11/16"	16.00
153-503	3500	202	19 .080"	16 8 9/16"	19.00
153-504	3500	291	24 .080"	23 10 11/16"	21.80
153-505	3500	496	38 .080"	39 14 3/32"	30.15
153-506	4500	155	24 .125"	17 10 11/16"	19.60
153-507	4500	198	27 .125"	23 13 1/16"	22.00
153-508	7000	52	15 .175"	8 6 1/16"	14.50
153-509	7000	72	17 .175"	11 8 9/16"	16.15
153-510	7000	97	22 .175"	15 10 11/16"	18.30
153-511	7000	151	31 .175"	23 14 7/32"	23.80
153-513	9000	52	19 .250"	10 10 1/16"	16.45
153-514	9000	97	30 .250"	19 15 23/32"	22.75

Cat. No.	Pkg. Volt-age	Nom. Cap. /Sec. Max. Min.	Air Gap	Plates per Sec. M	Net Price
<b>TYPE E SINGLE SECTION</b>					
154-1	2000	244	12 .045"	23 3 7/32"	\$ 7.90
154-2	2000	353	15 .045"	33 3 31/32"	8.90
154-3	2000	488	19 .045"	45 4 29/32"	10.45
154-7	3000	100	11 .075"	15 3"	7.00
154-8	3000	154	14 .075"	23 3 3/8"	8.00
154-9	3000	251	20 .075"	37 5 5/8"	9.80
154-10	3000	347	25 .075"	51 6 5/8"	11.55
154-11	4500	38	9 .125"	9 2 3/4"	6.40
154-12	4500	53	11 .125"	12 3 13/32"	7.05
154-13	4500	74	13 .125"	17 4 1/2"	7.50
154-14	4500	101	16 .125"	23 4 31/32"	8.10
154-15	4500	145	20 .125"	33 6 1/2"	9.40
154-16	4500	241	32 .125"	55 10"	12.25
<b>TYPE E DUAL SECTION</b>					
154-502	2000	312	13 .045"	29 7 7/32"	14.85
154-503	3000	52	8 .075"	8 4 1/2"	9.80
154-504	3000	72	8 .075"	11 4 1/2"	10.40
154-505	3000	99	10 .075"	15 5 13/16"	11.55
154-506	3000	153	13 .075"	23 7 1/2"	13.70
154-507	3000	196	15 .075"	29 8 1/2"	15.40
154-508	4500	52	10 .125"	12 6 19/32"	10.70
154-509	4500	74	12 .125"	17 7 7/8"	12.30
154-510	4500	100	15 .125"	23 9 23/32"	14.05
<b>TYPE F SINGLE SECTION</b>					
155-1	2000	35	7 .045"	6 1 29/32"	5.90
155-2	2000	54	8 .045"	9 2 1/8"	6.15
155-3	2000	66	8 .045"	11 2 7/8"	6.40
155-4	2000	106	10 .045"	17 2 1/2"	7.00
155-5	2000	154	12 .045"	25 3 5/16"	7.85
155-6	2000	252	17 .045"	41 4 1/2"	9.60
155-8	3000	52	9 .075"	13 2 3/4"	6.80
155-9	3000	67	11 .075"	17 3 3/4"	7.10
155-10	3000	99	14 .075"	25 4 1/2"	7.80
155-11	3000	148	18 .075"	37 5 5/8"	9.55
<b>TYPE F DUAL SECTION</b>					
155-501	2000	53	7 .045"	9 3 15/16"	10.10
155-502	2000	66	7 .045"	11 4 1/4"	10.70
155-503	2000	104	9 .045"	17 5 5/32"	12.30
155-504	2000	153	11 .045"	25 6 13/32"	13.65
155-505	2000	202	14 .045"	33 7 5/8"	15.20
155-506	3000	51	8 .075"	13 5 1/4"	10.95
155-507	3000	66	10 .075"	17 6 1/8"	12.20
155-508	3000	99	13 .075"	25 7 7/8"	14.30



**E. F. JOHNSON COMPANY**  
WASECA, MINNESOTA, U. S. A.

**TUBE SOCKETS—GENERAL SPECIFICATIONS**

To simplify selection of sockets and to provide complete specifications for standard, industrial and military requirements, wherever applicable, Johnson tube sockets have been categorized under a socket standardization program. General specifications are listed on the following pages — detailed specifications on the complete socket line are covered in Socket Standardization Booklet 536. Should you desire a copy for Engineering Department use, please make your request on company letterhead.

**Standard** — Commercial grade for general requirements. Bayonet sockets have porcelain bases, glazed top and sides with .0002 cadmium-plated phosphor bronze contacts. Wafer sockets have glazed steatite bases, DC-200 treated. Contacts are plated brass with steel springs. Shells and shields are etched aluminum.

**Industrial** — Higher quality than Standard types. Glazed steatite bases, DC-200 treated. Contacts: .0005 silver-plated beryllium copper on Bayonet Sockets — .0005 silver-plated phosphor bronze with beryllium copper springs on Wafer Sockets. Shells and shields are aluminum, iridite No. 14 treated. (Except 123-206-100.) Fungus resistant cushion washers under contacts.

**Military** — Top quality for military requirements. Glazed grade L-4 or better steatite bases, DC-200 treated. Phosphor bronze contacts and beryllium copper springs, .001 silver-plated on Wafers — Bayonet sockets have .0005 silver-plated beryllium copper contacts. Aluminum shields on shielded Wafers are iridite treated — bayonet shells are brass .0003 nickel-plated. Threaded hardware .0002 nickel-plated, unthreaded hardware .0003. Hot tin-dipped terminals. Fungus resistant cushion washers. (Glass base melamine on Wafers.) Wafer sockets protected for 200 hour salt spray test.

**SOCKETS FOR 4X150A, 4X150D, 4X250B, 4CX250B, 4X250F, 7034, 7035**

For use with high power transmitting tubes. Available in many designs — with or without, low inductance screen grid by-pass capacitors. Basic socket molded of low dielectric loss-factor Kel-F plastic. Control grid contact "guide" machined for accurate alignment, tapped for 6-32 machine screw. Contacts are low-resistance silver-plated beryllium copper. Tube pin contacts heat treated to provide positive contact pressure and extended life. Annealed soldering tabs may be easily bent or formed. Additional specifications and information available on Data Sheet 755.

Rugged light weight basic socket with silver-plated brass mounting saddle. Cathode terminals insulated. Four elongated .140" x .234" mounting holes to accommodate mounting circle diameters from 2 7/8" to 2 3/4". Mounts below chassis in 1 1/2" diameter hole.

Cat. No. 124-107-1 ..... Net Price \$6.25

Same as 124-107-1 except cathode terminals grounded. Four mounting holes .136" diameter on circle of 2 1/2" diameter.

Cat. No. 124-108-1 ..... Net Price \$6.50

Low cost, light weight basic socket without metal mounting ring. Cathode terminals insulated. Mounts below chassis in 1 1/2" diameter hole.

Cat. No. 124-109-1 ..... Net Price \$5.30

Basic socket with mounting ring and low-inductance 2700 mmf. screen grid by-pass capacitor; cathode terminals insulated. Mounts above chassis through 2 1/2" diameter hole with 3 clips drilled for 6-32 screws. Provision for mounting socket skirt directly to 1.625" O.D. outer conductor of coaxial-type line.

Cat. No. 124-110-1 ..... Net Price \$12.25

Same as 124-110-1 except cathode terminals grounded.

Cat. No. 124-112-1 ..... Net Price \$12.50

Same as 124-108-1, less metal mounting saddle. Low inductance grounding of cathode terminals No. 2, 4, 6, and 8 through integral combination grounding and mounting lugs. Mounts below chassis in 1 1/2" diameter hole.

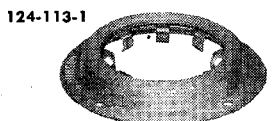
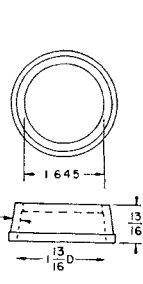
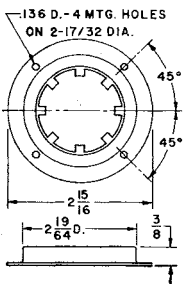
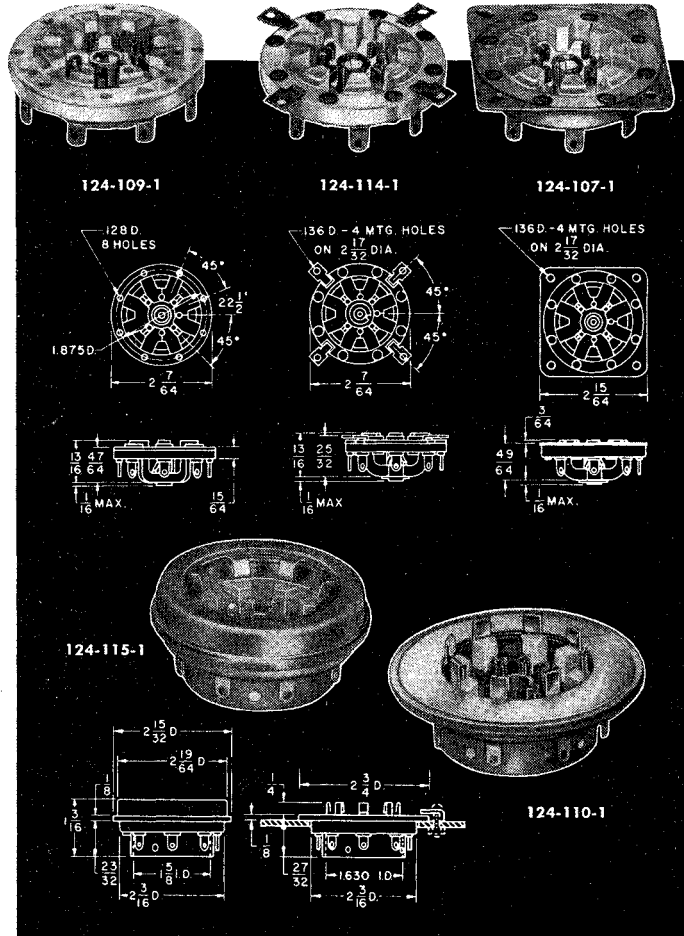
Cat. No. 124-114-1 ..... Net Price \$6.10

Basic socket with mounting ring and smaller low-inductance 1100 mmf. screen grid by-pass capacitor. Requires less mounting space than other screen grid by-pass type sockets. Withstands 1500 volts DC under applicable test specifications. Cathode terminals insulated. Recessed silver-plated beryllium copper screen grid contacts provide positive electrical contact and low inductance. Mounts above chassis through 2 1/2" diameter hole with 3 clips drilled for 6-32 screws. Provision for mounting socket skirt directly to 1.625" O.D. outer conductor of coaxial-type line.

Cat. No. 124-115-1 ..... Net Price \$13.75

Same as 124-115-1, except cathode terminals grounded.

Cat. No. 124-116-1 ..... Net Price \$13.50



High quality heat resistant steatite chimney for use with 124-107-1, 124-108-1, 124-109-1, 124-110-1, 124-112-1, and 124-114-1 sockets. Tapered construction directs air flow through tube cooling fins. Maximum base diameter 2 3/4".

Cat. No. 124-111-1 ..... Net Price \$0.45

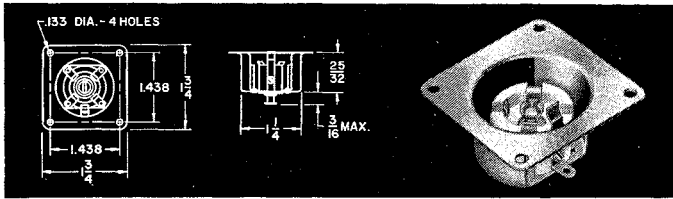
1450 mmf. circular silvered-mica screen grid by-pass capacitor mounted within a low-loss silicone resin sealed silver-plated drawn brass housing. Low inductance silver-plated beryllium copper screen grid contact fingers are heat treated to provide positive contact pressure as well as extended life. Capacitor dielectric strength tested at 1000 volts DC. Unique design permits replacement of screen grid by-pass capacitor by merely removing 4 mounting screws; socket rewiring unnecessary. Fully complies with MIL-C-10950A. For use with 124-107-1, 124-108-1, 124-109-1, 124-114-1, and similar sockets.

Cat. No. 124-113-1 ..... Net Price \$5.00



**E. F. JOHNSON COMPANY**  
WASECA, MINNESOTA, U.S.A.





**SOCKETS FOR RCA 6816, 6884, 7457, 7844, 7843, AND SIMILAR TUBES**

For ultra high frequency tubes such as RCA 6816, 6884, 7457, 7844, 7843, 7842 and similar tube types. Socket molded low dielectric loss-factor teflon, electrical grade per MIL-P-19468A. Contacts are low resistance silver-plated beryllium copper per QQ-C-533. Socket shell is silver-plated brass. Mounts below chassis in 1 3/8" diameter hole. Four mounting holes .133" diameter on circle of 2-1/32" diameter.

Cat. No. 124-152-1..... Net Price \$5.50

**SOCKETS FOR RCA 8072, 8121 AND SIMILAR TUBES**

For ultra high frequency tubes such as RCA #8072, #8121, and #8122 types. Base materials have low dielectric constants which result in low pin-to-pin and shunt capacity. Elevation pads permit excellent base pin cooling. Raised boss provides indexing - aids in aligning tube pins and socket contacts when inserting tube. Socket contacts grip tube pins directly at base of tube - providing minimum inductance. Barriers between terminals for increased leakage path and higher voltage breakdown. Means for direct cathode ground provided by tabs located at mounting points adjacent to cathode contacts. Large center hole and base configuration results in low capacity; three point mounting provides stability. Terminals numbered. Teflon chimney offers increased leakage path and higher voltage breakdown. Low inductance screen by-pass capacitor for VHF and UHF operation.

Diallyl Phthalate base and mill hardened beryllium copper contacts, silver plated, provide superior electrical characteristics. Continuous heat resistance to 400°F.

Cat. No. 124-311-1... Standard..... Net Price \$1.10

Same as 124-311-1, but with low-loss glass-filled silicone base and heat treated beryllium copper contacts, silver plated, offer continuous heat resistance to 500°F.

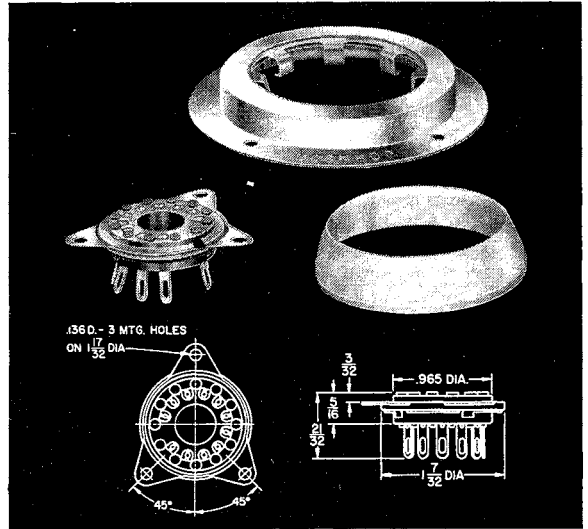
Cat. No. 124-311-100... Industrial..... Net Price \$1.35

Teflon chimney for 124-311-100

Cat. No. 124-119-1..... Net Price \$0.66

Screen by-pass capacitor for 124-311-100

Cat. No. 124-113-1..... Net Price \$5.00



**STANDARD WAFER SOCKETS**

Insulated with Grade L-4 steatite, or better. Countersunk rivets and bossed mounting holes permit sub-panel mounting. Brass contacts with cadmium-plated steel springs. Locating grooves facilitate tube insertion.

Cat. No.	Type	A	B	C	E	For Tube	Net Price
122-224-1	Standard	9/16"	1/4"	1 11/16"	7/8"	4 Pin	\$0.76
122-224-100	Industrial	9/16"	1/4"	1 11/16"	7/8"	4 Pin	.89
122-224-200	Military	9/16"	1/4"	1 11/16"	7/8"	4 Pin	1.07
122-225-1	Standard	9/16"	1/4"	1 11/16"	5/4"	5 Pin	.83
122-225-200	Military	9/16"	1/4"	1 11/16"	5/4"	5 Pin	1.20
122-226-1	Standard	9/16"	1/4"	1 11/16"	5/4"	6 Pin	.97
122-226-200	Military	9/16"	1/4"	1 11/16"	5/4"	6 Pin	1.35
122-227-1	Standard	9/16"	1/4"	1 13/16"	31/32"	7 Pin	1.05
122-227-200	Military	9/16"	1/4"	1 13/16"	31/32"	7 Pin	1.55
122-228-1	Standard	1 1/32"	3/16"	1 11/16"	5/4"	Octal	1.05
122-228-200	Military	1 1/32"	3/16"	1 11/16"	5/4"	Octal	1.65

**SUPER JUMBO 4 PIN SOCKET**

Heavy duty steatite insulated 4 pin wafer - for super jumbo base tubes such as the 8008, and many rectifier and thyatron types with E.I.A. Base Nos. A4-15, A4-16, and A4-18. Long, parallel contacts are designed to withstand high currents.

Cat. No.	Type	A	B	L	Net Price
122-244-1	Standard	1 1/16"	9/32"	2 5/8"	\$1.75
122-244-100	Industrial	1 1/16"	9/32"	2 5/8"	2.00
122-244-200	Military	1 1/16"	9/32"	2 5/8"	2.45

**GIANT 5 PIN SOCKET**

Large steatite wafer socket designed for tubes such as the 4-125A, 4-250A, and RK-48 with E.I.A. Base No. A5-19. Tube seal ventilation is provided by one central and five ventilating holes located between contacts. Contacts designed to withstand heavy current.

Cat. No.	Type	Net Price
122-275-1	Standard	\$2.35
122-275-100	Industrial	2.75
122-275-200	Military	3.25

**GIANT 7 PIN SOCKET**

A rugged wafer socket for tubes such as the 4E27, HK257, and 813 with E.I.A. Base No. A7-17. Contacts are designed with maximum surface area against tube prongs. 3/4" ventilating hole in base provides tube seal cooling.

Cat. No.	Type	A	B	L	Net Price
122-237-1	Standard	9/16"	1/4"	2 5/8"	\$1.40
122-237-100	Industrial	9/16"	1/4"	2 5/8"	1.65
122-237-200	Military	9/16"	1/4"	2 5/8"	1.90

**SEPTAR SOCKETS**

Designed for 7 pin tubes such as the 7094, with E.I.A. Base No. E7-2. Furnished with a separate aluminum shield ring.

Cat. No.	Type	L	Net Price
122-247-1	Standard	2 5/8"	\$1.75
122-247-100	Industrial	2 5/8"	2.00
122-247-200	Military	2 5/8"	2.30
122-248-1	Standard	2 3/8"	1.55
122-248-100	Industrial	2 3/8"	1.85
122-248-200	Military	2 3/8"	2.15

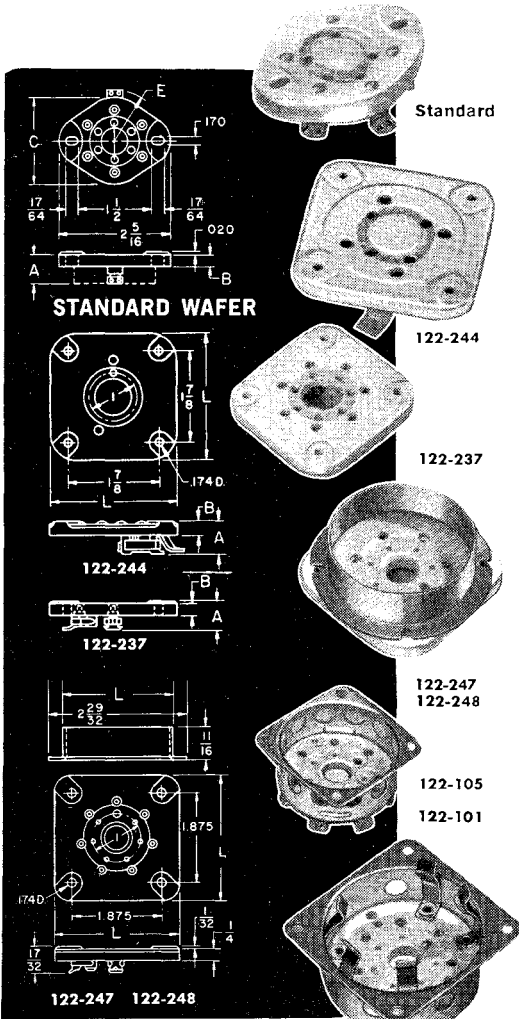
**VHF SEPTAR SOCKETS**

Takes 1/3 less space than previously available types - permits compact design with medium button septar bases such as the 5894, 6524, and 6252 with E.I.A. Base No. E7-20. Molded contact recesses in base prevents turning. Aluminum shell sub-mounts tube for maximum input and output shielding. 3/8" holes provide adequate ventilation.

Cat. No.	Type	Net Price
122-105-100	Industrial	\$1.80
122-105-200	Military	2.10

For tubes with medium molded flare septar base such as the 826, 832, 4D32, PL6549, PL-177A, Y-65 with E.I.A. Base No. E7-2. Industrial type has 5 and military type has 7 retainer springs. With ventilated shield. Provision for mounting button mica capacitors directly to socket. Special terminals permit direct mounting of grid coils - two holes provided for mounting of bus bar neutralizing leads.

Cat. No.	Type	Net Price
122-101-100	Industrial	\$2.85
122-101-200	Military	3.35



**E. F. JOHNSON COMPANY**

WASECA, MINNESOTA, U. S. A.

**CONNECTORS**

**NOTE:** Connectors, unless otherwise specified, are available in 10 molded colors to Federal Standard 595. Catalog number for color desired is determined by adding color numbers on chart below to 5th and 6th digits of catalog number listed for series. Example: To order 105-800 in Violet, add color number for Violet (12) to 5th and 6th digits of series number, and order 105-812. To order 105-680-16 in Violet, add 12 to 5th and 6th digits of series number, and order 105-692-16.

Color	No.	Color	No.	Color	No.
White	01	Orange	06	Violet	12
Red	02	Yellow	07	Grey	13
Black	03	Brown	08		
Dark Green	04	Dark Blue	10		

**DELUXE TIP JACK**  
(U.S. Pat. No. 2,704,357)

Molded body with recessed silver-plated machined beryllium copper contact. Hot tin-dipped solder terminal. Current rating: 10 amps. Voltage breakdown: 11,000 volts DC. Capacity to 1/8" panel: 2.0 mmf. 1/4"-32 nut furnished.

Cat. No. 105-600 (10 colors available—see above) Net Price \$0.20

**STANDARD TIP JACK**

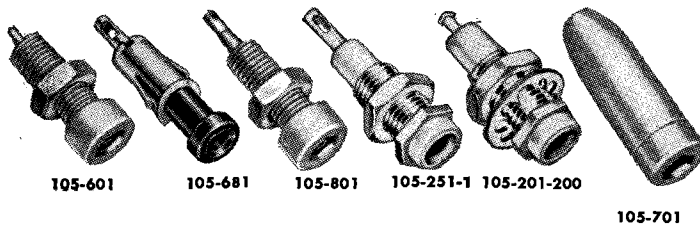
Molded body with recessed, cadmium-plated formed phosphor bronze contact. Current rating: 10 amps. Voltage breakdown: 9,000 volts DC. Capacity to 1/8" panel: 2.0 mmf. 1/4"-32 nut furnished.

Cat. No. 105-800 (10 colors available—see above) Net Price \$0.13

**RAPID-MOUNT TIP JACK**

Low cost — fast mounting! Snap "speed clip" into hole in .061" to .069" thick panels and insert jack. Silver-plated phosphor bronze contact. Voltage breakdown: 7,000 volts DC. Capacity to 1/8" panel: 3.8 mmf. Current rating: 10 amps.

Cat. No. 105-680-16 (10 colors available—see above) Net Price \$0.11



**METAL-CLAD TIP JACKS — STANDARD**

Molded body, nickel-plated machined brass jacket. Formed, silver-plated phosphor bronze contact. Current rating: 10 amps. Voltage breakdown: 7,000 volts DC. Capacity to 1/8" panel: 3.8 mmf. 1/4"-32 nut and lock washer furnished.

Cat. No. 105-250-1 (10 colors available—see above) Net Price \$0.18

**METAL-CLAD TIP JACKS — MILITARY**

(U.S. Pat. No. 2,704,357)

High reliability tip jack for military use or demanding industrial applications. Highest quality materials — withstands severe environmental temperature, vibration and salt spray conditions. Complies with MS-16108, Rev. F, of MIL-STD-242A. Closed entry contact design prohibits entry of tip plug .085" or larger — prevents accidental contact damage by careless probe insertion. Heavy nickel-plated brass jacket. Silver-plated, machined beryllium copper contact spring greatly exceeds minimum insertion/withdrawal cycle requirements of MS-16108. Current rating: 5 amps. Voltage breakdown: 8,000 volts DC. Capacity to 1/8" Panel: 3.8 PF. 1/4"-32 nut and lock washer furnished. Terminal style: "A". (Terminal Style "C" per MS-16108 available on special order in production quantities.)

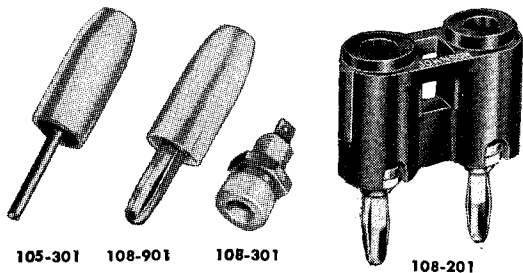
Cat. No. 105-200-200 (10 colors available—see color chart) Net Price \$0.27

**JACK AND SLEEVE ASSEMBLY**

(U.S. Pat. No. 2,704,357)

Includes Deluxe Tip Jack (105-601 to 105-613), less mounting nut, with inside threaded molded sleeve. Ideal for patch cords, or insulated rear connection of panel mounted tip jack.

Cat. No. 105-700 (10 colors available—see above) Net Price \$0.20



**SOLDERLESS TIP PLUG (Patent Pending)**

Completely insulated, molded sleeve. Recessed metal head prevents exposure of metal surfaces when engaged in any standard tip jack. All metal parts are nickel-plated brass. Designed for solderless connection of up to 16 gauge stranded wire. Fits all standard tip jacks. Current rating: 10 amps.

Cat. No. 105-300 (10 colors available—see above) Net Price \$0.15

**SOLDERLESS BANANA PLUGS**

Compact, high voltage insulated plug for a wide variety of applications. Designed for fast, solderless connection of up to 16 gauge stranded wire. Body and pin are constructed of one-piece, nickel-plated brass with high grade nickel silver springs. Sleeve is molded. Current rating: 15 amps.

Cat. No. 108-300 (10 colors available—see above) Net Price \$0.19

**DUAL SOLDERLESS BANANA PLUG**

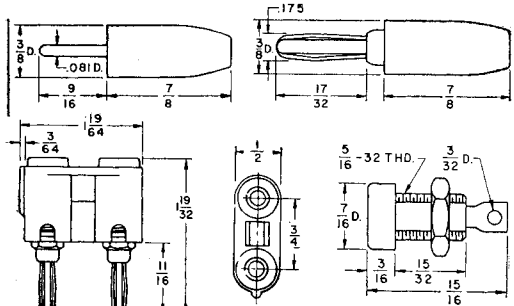
Extremely versatile solderless dual banana plug. Molded body incorporates polarity indication and strain relief hole for wire leads. Springs are high quality nickel silver — bodies are nickel-plated. Accurately machined brass studs extend the full length of pins for extra strength. Voltage breakdown: 10,000 volts DC. Capacity plug to plug: 1.3 mmf. Current carrying capacity: 15 amps.

Cat. No. 108-200 (10 colors available—see above) Net Price \$0.60

**BANANA JACK**

Completely insulated, molded body with cadmium-plated insert. Accommodates banana plugs of nominal .175" diameter. Voltage breakdown: 12,500 volts DC. Capacity to 1/4" panel: 2.4 mmf. nominal. Mounts in 3/16" diameter circular, "D," or double flat hole (1/4" across flats). Single nut furnished for mounting — no other mounting hardware needed.

Cat. No. 108-900 (10 colors available—see above) Net Price \$0.10



**BINDING POSTS (U.S. Pat. No. 2,806,999)**

Compact, insulated, pre-assembled binding posts with molded body and silver-plated shank. Fluted thumb nut self-captivated. Connection made at solder stud, or lug may be slipped over threaded portion and secured with a nut. Single banana plug fits hole in top of binding post. Insulation resistance greater than 200 meg. after MIL-T-5422B humidity test.

Rated at 15 amps. current carrying capacity. Voltage Breakdown: 8,000 volts DC. Capacity to 1/8" Panel: 3.3 pf. Mounts in 21/64" diameter circular hole, "D," or double flat hole — 1/4" across flats. Single 5/16-32 mounting nut furnished — no other hardware required.

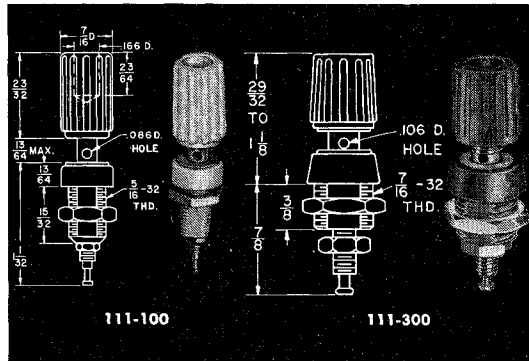
Cat. No. 111-100 (10 colors available—see color chart) Net Price \$0.30

Rated at 30 amps. current carrying capacity. Voltage Breakdown: 7,000 volts DC. Capacity to 1/8" panel: 3.5 pf. Mounts in 1/2" diameter circular hole, "D," or double flat hole — .422 across flats. Single 1/2-20 mounting nut furnished — no other hardware needed.

Cat. No. 111-300 (10 colors available—see color chart) Net Price \$0.40

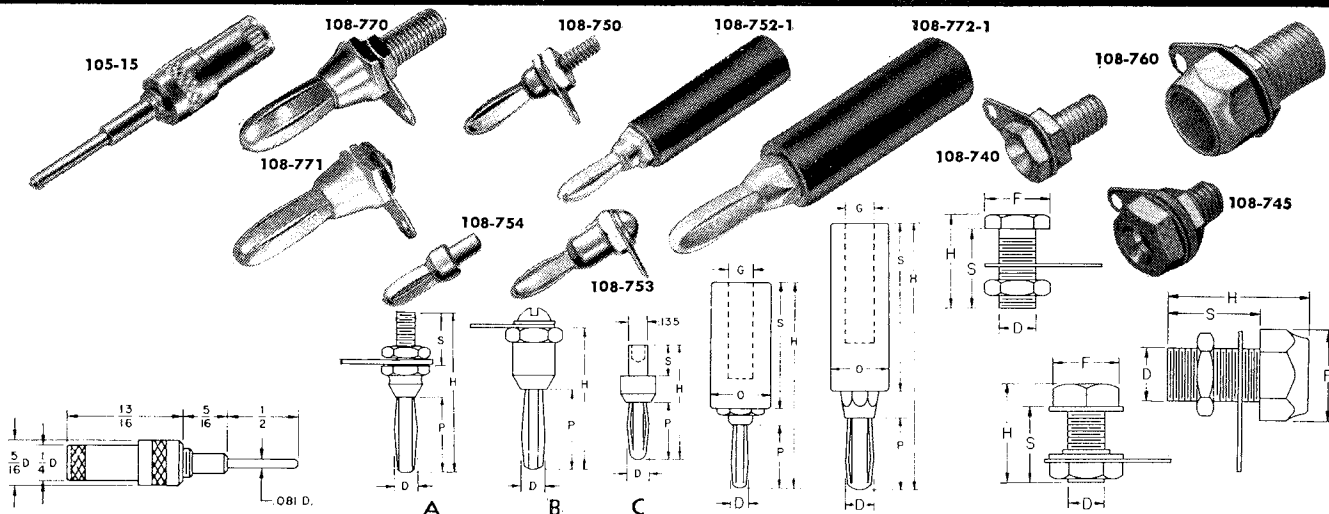
**MOUNTING PLATE** — Pre-punched, etched aluminum mounting plate for accurate mounting of two 111-100 binding posts, or 108-900 banana jacks in 21/64" diameter holes on exact 3/4" centers.

Cat. No. 111-20 Net Price \$0.02



**E. F. JOHNSON COMPANY**  
WASECA, MINNESOTA, U.S.A.

MISCELLANEOUS CONNECTORS



SOLDERLESS PHONE TIP PLUGS

Solderless phone tip plugs with knurled nickel-plated brass body and sleeve - construction permits leads to be firmly secured without soldering.  $\frac{3}{16}$ " pin ... last  $\frac{1}{2}$ " of tip .081" diameter. For use with all standard tip jacks.

Cat. No. 105-15 ..... Net Price \$0.20

STANDARD BANANA PLUGS

This group of standard banana plugs has accurately machined brass studs which extend the full length of the plugs, providing extra strength. Springs are nickel-silver - highly resistant to corrosion. Bodies and hardware .0001 nickel-plated. All banana plugs listed below, are available with beryllium copper springs and nickel, cadmium, or silver plating, when desired. A wide selection of miniature solder-type plugs is also available on special order - however quantities in special platings or plugs should be sufficiently large for economical production runs. Solder terminal and nut or screw furnished.

Cat. No.	Dwg.	S	P	D	H	Thread	Net Price
108-750	A	$\frac{3}{8}$ "	$\frac{17}{32}$ "	.175"	$1\frac{1}{8}$ "	6-32	\$0.14
108-750-2	A	$\frac{3}{4}$ "	$\frac{17}{32}$ "	.175"	$1\frac{1}{2}$ "	6-32	.15
108-753	B	...	$\frac{17}{32}$ "	.175"	$1\frac{1}{16}$ "	6-32	.15

This banana plug is similar to the standard types listed above, except that it is designed for riveting. Springs are beryllium copper, cadmium-plated.

108-754	C	$\frac{7}{32}$ "	$\frac{13}{32}$ "	.155"	$\frac{13}{16}$ "	...	\$0.10
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Jumbo type banana plugs with accurately machined brass studs extending full length of the pins. Nickel-silver springs. Bodies and hardware .0001 nickel-plated. With solder lug and nut or screw.

108-770	A	$\frac{5}{8}$ "	$\frac{3}{4}$ "	.300"	$\frac{125}{32}$ "	$\frac{1}{4}$ "-28	\$0.35
108-771	B	...	$\frac{3}{4}$ "	.300"	$1\frac{1}{8}$ "	10-32	.35

STANDARD INSULATED BANANA PLUGS

These standard size insulated banana plugs are equipped with plastic handles, brass nickel-plated bodies, and nickel-silver springs. The 108-752-1 has a black plastic handle - the 108-752-2 has a red plastic handle.

Cat. No.	S	P	D	H	G	O	Net Price
108-752-1	$1\frac{3}{8}$ "	$\frac{17}{32}$ "	.175"	$2\frac{1}{8}$ "	$\frac{7}{32}$ "	$\frac{7}{16}$ "	\$0.30
108-752-2	$1\frac{3}{8}$ "	$\frac{17}{32}$ "	.175"	$2\frac{1}{8}$ "	$\frac{7}{32}$ "	$\frac{7}{16}$ "	.30

JUMBO INSULATED BANANA PLUGS

These jumbo size insulated banana plugs are similar in design to the standard types listed above, but are somewhat larger in size. With brass nickel-plated bodies, and nickel-silver springs. The 108-772-1 has a black plastic handle - the 108-772-2 has a red plastic handle.

Cat. No.	S	P	D	H	G	O	Net Price
108-772-1	$1\frac{3}{4}$ "	$\frac{3}{4}$ "	.300"	$2\frac{25}{32}$ "	$\frac{3}{8}$ "	$\frac{5}{8}$ "	\$0.55
108-772-2	$1\frac{3}{4}$ "	$\frac{3}{4}$ "	.300"	$2\frac{25}{32}$ "	$\frac{3}{8}$ "	$\frac{5}{8}$ "	.55

STANDARD BANANA JACKS

High quality machined brass banana jack. Nickel-plated. Furnished complete with solder terminal and nut.

Cat. No.	F	D	S	H	Hole Dia.	Thread	Net Price
108-740	$\frac{3}{8}$ "	$\frac{1}{4}$ "	$\frac{17}{32}$ "	$\frac{5}{8}$ "	.166"	$\frac{1}{4}$ "-28	\$0.12

High quality machined brass banana jacks with plastic head molded to body. Nickel-plated. Furnished complete with solder terminal and nut. The 108-745-1 is equipped with red plastic head - the 108-745-2 is equipped with black plastic head.

108-745-1	$\frac{7}{16}$ "	$\frac{1}{4}$ "	$\frac{31}{64}$ "	$\frac{21}{32}$ "	.166"	$\frac{1}{4}$ "-28	\$0.22
108-745-2	$\frac{7}{16}$ "	$\frac{1}{4}$ "	$\frac{31}{64}$ "	$\frac{21}{32}$ "	.166"	$\frac{1}{4}$ "-28	.22

This jumbo banana jack will accommodate plugs such as the 108-770 and the 108-771 listed above. Machined brass, nickel-plated. Furnished complete with solder terminal and nut.

108-760	$\frac{9}{16}$ "	$\frac{3}{8}$ "	$\frac{21}{32}$ "	1"	.277"	$\frac{3}{8}$ "-32	\$0.35
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PRINTED CIRCUIT PLUGS AND JACKS

Designed for use in printed circuits. Tough, low-loss plastic construction per MIL-P-17091. Horizontal and vertical tip jacks designed to accommodate .080" tip plug. Choice of 10 molded colors for coded applications, see color ordering information on next page.

HORIZONTAL JACK

Unique design accepts .080" dia. tip plug in either end, or from top or bottom! Silver-plated beryllium copper formed contact. Two terminals.

Cat. No.	Color	Net Price
105-750	(10 colors, see preceding page)	\$0.08

VERTICAL JACK

Mounts through single .052" hole, requires minimum mounting area. Silver-plated, machined beryllium copper contact.

Cat. No.	Color	Net Price
105-850	(10 colors, see preceding page)	\$0.11

SUB-MINIATURE TIP PLUG

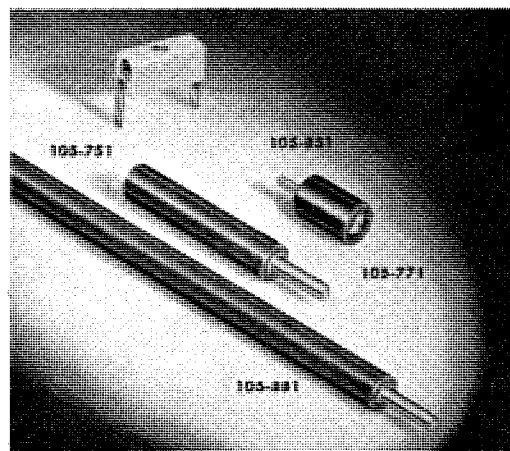
For use with miniature jack, .080" dia. tip. Nickel-plated machined brass body, solder type lead connection.

Cat. No.	Color	Net Price
105-770	(10 colors, see preceding page)	\$0.14

LONG HANDLE TIP PLUG

For use with horizontal, vertical, or standard .080" diameter tip jacks. Four-inch nylon handle for ready access to "hard to reach" test points. Nickel-plated machined brass body, solder type lead connection.

Cat. No.	Color	Net Price
105-880	(10 colors, see preceding page)	\$0.25



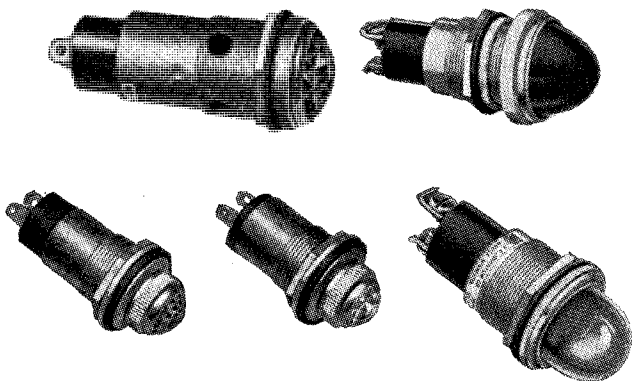
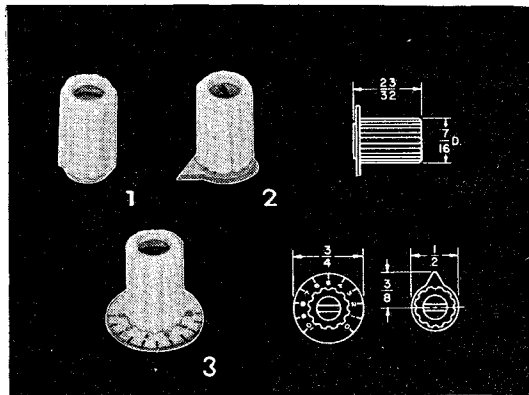
E. F. JOHNSON COMPANY  
WASECA, MINNESOTA, U.S.A.

## COLLET KNOBS

These molded knobs and dials for 1/4" shafts offer fresh, modern styling with a tough, shock-proof, high quality body. Ideal for laboratory and test instruments — collet and nickel-plated locking screw provide firm internal attachment. Available in 10 bright, molded colors to Federal Standard No. 595. Specify color desired by adding color number as indicated on chart below to the 5th and 6th digits of the series number listed in the price chart. Example: To order 116-550 in violet, request 116-562.

Color	No.	Color	No.	Color	No.
White	01	Orange	06	Violet	12
Red	02	Yellow	07	Grey	13
Black	03	Brown	08		
Dark Green	04	Dark Blue	10		

Cat. No.	Description	Illustration	Net Price
116-400	BASIC KNOB	1	\$0.20
116-500	POINTER KNOB	2	.25
116-550	DIAL KNOB 10-0/180	3	.42
116-600	DIAL KNOB 10-0/270	3	.42

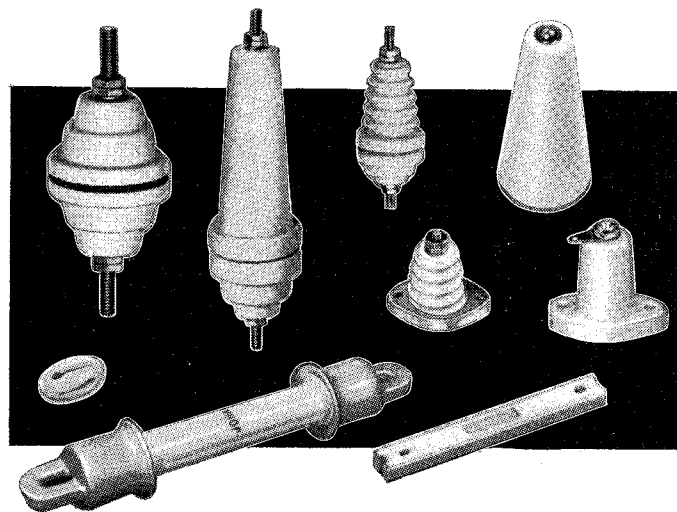


## PILOT LIGHTS

Cut valuable specification time by selecting your panel indicators from Johnson's "preferred" line. This group contains more than 47 separate assemblies carefully selected from Johnson's standard line by many of the nation's top design and development personnel. Available in a wide variety of types, these "preferred" units are immediately available at parts distributors throughout the country, for original equipment or in-the-field replacement.

**Available Types Include:** Continuous Indication Neon Types; models for High and Low Voltage Incandescent bulbs; Standard or Wide Angle Glass and Lucite Jewels in Clear, Red, Green, Amber, Blue or Opal. Specials, including those meeting military specifications are also available in production quantities.

**NOTE:** For detailed specifications and prices on "preferred" types as well as the complete line of Johnson Pilot Lights, write for your copy of our newest Pilot Light Catalog. See how easy it is to select the "right" pilot light . . . fast!



## STEATITE AND PORCELAIN INSULATORS

Available in a wide line of standard types, Johnson low-loss steatite and porcelain insulators are readily available for almost any electronic application. Fracture resistant, dense molded and glazed for low moisture absorption, Johnson stand-off and feed-thru types are designed with extended creepage paths for maximum voltage breakdown ratings — heavy integral mounting bases withstand high compression loads and considerable lateral stress. Insulators are equipped with heavily nickel-plated brass hardware — excellent for exposed applications . . . feed-thru types are available with jacks to accommodate Johnson or other standard banana plugs.

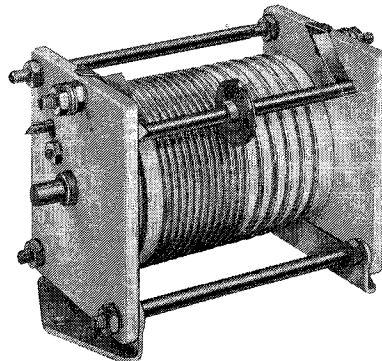
**Complete Line Includes the Following:** Insulated Thru-Panel Bushings; Thru-Panel Insulators; Antenna Strain Insulators; Feeder Insulators; Steatite Cone Insulators; Steatite and Porcelain Stand-off Insulators; Lead-In Bushings; and Feed-Thru Bowl Assemblies.

**NOTE:** Our current Components Catalog lists detailed specifications and prices on the complete Johnson insulator line. Write today for your free copy.

## "229" WIRE-WOUND VARIABLE INDUCTORS

Steatite insulated variable inductors for amateur transmitters or low power commercial equipment. Variable pitch, tinned copper wire windings on grooved steatite forms. 1/4" shafts extend 1/2" both ends. "L" dimension over mounting feet.

Cat. No.	Inductance	Current in Amps	Mounting Dimensions	Overall Dimensions L	W	H	Wire Size	Net Price
229-201	10 uh	3	3 15/32"	4 9/16"	2 1/2"	2 31/32"	No. 14	\$11.50
229-202	18 uh	5	5 15/32"	5 29/32"	2 1/2"	2 31/32"	No. 12	12.50
229-203	28 uh	5	6 23/32"	7 5/32"	2 1/2"	2 31/32"	No. 12	13.25



**E. F. JOHNSON COMPANY**  
WASECA, MINNESOTA, U.S.A.

## Keys and Practice Sets

### DELUXE SEMI-AUTOMATIC KEYS

Adjustable from lowest to highest speeds, this handsomely finished semi-automatic key has a smooth, easy action. Vibrator, posts, circuit closing switch, and all machine parts heavily chrome plated. Five adjustments with lock nuts—molded plastic paddles adjust separately to best height. Steel base 6 1/4" x 3 1/2" x 1/2"—complete with adjustable weight and rubber feet.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-500 1/4" contacts, black wrinkle base	\$20.30
114-501 1/4" contacts, polished chrome base	25.50

### SPECIAL SEMI-AUTOMATIC KEY

Many operating features—attractively finished, black wrinkle enamel base. All hardware and vibrator heavily chrome plated. Same vibrator as on deluxe key. Easy action, adjustable from lowest to highest speeds. 1/2" coin silver contacts—circuit closing switch—rubber mounting feet.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-520 Special Model, Semi-Automatic	\$17.75

### HEAVY DUTY KEYS

Heavy die cast base, chrome plated key arm. Well insulated for heavy duty service. Large 1/2" coin silver contacts. Improved Navy-type knob. Adjustable steel bearings and spring design give light keying touch.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-320 Black wrinkle enamel base	\$4.95
114-321 Polished chrome plated base	5.85

### STANDARD KEYS

Heavy die cast base. Smooth adjustable bearings. Provision for plugging in semi-automatic keys. 1/2" coin silver contacts. A high quality key at a low cost.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-310 Black wrinkle, no switch	\$3.50
114-310-3 Black wrinkle with switch	4.25
114-311 Chrome plated, no switch	5.50
114-311-3 Chrome plated with switch	6.50

### HIGH SPEED STANDARD KEYS

Fully adjustable spring tension, contact spacing and bearings. Brass base and binding posts—instrument lacquer finish. .072" platinum contacts.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-100 R48 Key, satin brass, no switch	\$6.95
114-100-3 M100 Key, satin brass with switch	7.95

### PRACTICE KEY

An inexpensive practice key—perfect in design for the average beginner. All the metal parts are nickel plated. Furnished with an adjustable key arm, spring and smooth action bearings. Contacts are of 1/8" coin silver.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-300 Molded phenolic base	\$2.40

### PHENOLIC BASE KEYS

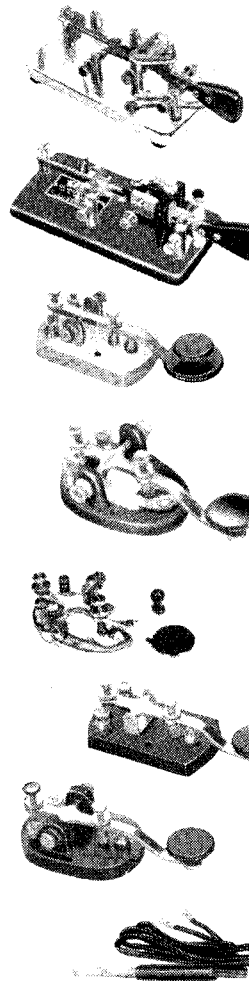
High quality key with adjustable bearings. Improved spring-plastic connection. 1/8" coin silver contacts—nickel plated metal parts.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-301 Molded phenolic base, no switch	\$2.50

### CORD AND WEDGE

Cord and wedge for easy attachment of semi-automatic key across circuit-closing switch of a standard hand key. Used almost universally by railroad telegraphers—ideal for amateur service where both hand key and semi-automatic are used.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-380 Cord and wedge	\$1.15



### PRACTICE SET

Constant frequency buzzer and key on a 4" x 6" molded bakelite base. Buzzer tone is fully adjustable. Coin silver contacts. Uses two dry cells of "C" battery. Connect singly or in pairs for code practice.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-450 Practice Set	\$5.25
114-400 Buzzer only as used on set above	\$1.85

### TELEGRAPH SOUNDER

Designed for instant response, brass sounder provides clear, resonant tone. Steel bar frame, black enamel finish. Brass bridge and adjustment screws, instrument lacquer finish. Sounder plate is black lacquered steel. Mahogany finished wood base, brass binding posts and rubber mounting feet.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-112 Sounder (4 ohms)	\$11.50
114-113 Sounder (20 ohms)	11.95

### LEARNER SET

Telegraph practice set. Bar frame steel, brass bridge and adjustment screws. Brass lacquer finish. Brass sounding bar—black lacquered steel sounder plate. Adjustable black nickel-plated key arm. High impact polystyrene base, black matte finish, brass binding posts, rubber feet.

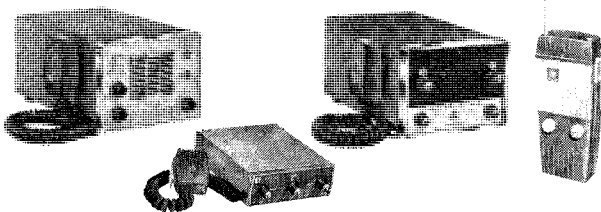
<b>Cat. No.</b>	<b>Amateur Net</b>
114-110 (4 ohms)	\$15.50
114-111 (20 ohms)	15.50

### PONY RELAY

Polished, plated steel armature—all other metal parts, brass with lacquer finish. Heavy duty magnets. Mahogany finish wood sub-base—cast iron black enamel base.

<b>Cat. No.</b>	<b>Amateur Net</b>
114-105 (20 ohms)	\$17.50

## Citizens Band Equipment



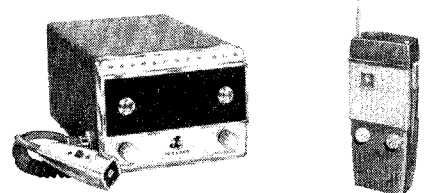
Hundreds of uses—ideal for builders, contractors or other "on the job" applications. Used by hunters, fishermen, or sportsmen. Anyone can operate . . . no examination necessary . . . license issued by the FCC on request.

## Amateur Radio Equipment



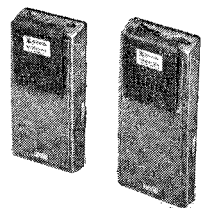
Amateur Radio is "adventure"—and the fortunate amateur owning Viking equipment enjoys the maximum amount of operating pleasure and performance. Johnson offers a complete line of amateur transmitters and station accessories . . . a line that's "first choice of amateurs the world over!"

## Industrial Radio Equipment



Every feature you could want for solid, low-cost 25 to 50 mc. Industrial Radio. Plenty of range for most industrial applications. Basic design and circuit performance-proved under thousands of exacting, mobile, marine, and field conditions with outstanding results!

## Radio Paging Equipment



"Messenger" Selective Radio Paging Systems . . . a valuable new management tool for men on the move! Reach key personnel instantly, privately. Built for day-in and day-out reliability. Tiny receiver slips into coat or jacket pocket, or fits into a leather belt pack. Saves hours and dollars—in seconds!



**E. F. JOHNSON COMPANY**  
WASECA, MINNESOTA, U.S.A.

# Philmore Guaranteed ELECTRONIC COMPONENTS

## COMPLETELY INTEGRATED 30 WATT\* STEREO RECEIVER



No. ST4000  
Net Price  
**\$12350**

Latest in design and engineering, includes FM-AM - FM Multiplex, and Stereo Amplifier.

- Automatic locking of stereo broadcasts
- 30 Watts peak power\*
- Drift free and static free reception
- Fly wheel tuning
- Clear view slide rule dial
- Just add speakers for a complete Stereo system
- AFC Control
- Special rocker-type switches

### SPECIFICATIONS

#### FM Tuner Section

Antenna Impedance: 300 ohms  
Frequency range: 88 to 108 MC  
Sensitivity: 3UV  
Selectivity: 250KC plus at 6db down  
Multiplex channel separation: 30rb  
Maximum AFC Action: 7UV for 20db quieting

#### AM Tuner Section

Frequency range: 535 to 1620KC  
Sensitivity: 600KC = 275UV  
1000KC = 225UV  
1400KC = 185UV  
at 3db down = 7KC  
Built-in Ferrite loop

#### Antenna Section

Maximum power: 10 Watts Music Power each channel  
15 Watts Peak Power each channel

#### Distortion:

at 3% = 3.5 Watts each channel  
Output terminals: 4, 8 and 16 ohms  
Input terminals: Phono, and auxiliary  
Frequency Response: ±2db from 30 to 18,000 CPS

#### Tone Control Action:

±9db at 10KC  
Tubes: 13 tubes plus 5 diodes  
Power Source: 117 Volts AC, 50/60 CPS  
Cabinet Size: 15 1/4" wide x 12" deep x 4 3/4" high

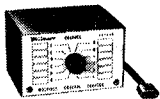
The cabinet is classic in design, will fit any decor. Charcoal Blue cabinet, Silvertone Gray panel with matching knobs of Silvertone Gray, trimmed in Charcoal Blue.  
No. ST4000 ..... Net Price \$123.50 ea.

## MULTIPLE C/B CRYSTAL ADAPTERS

12 Channel Crystal Selector switch assemblies, housed in smartly styled cabinet.

- 12 position switch for exact frequency location.
- 20" coaxial cable is fitted with 2 prong plug, which eliminates all soldering.
- Etched front panel allows C/B'er to fill in desired channels.
- Will operate up to 12 different channels.
- Indicator knobs are supplied to pin point the exact channel desired.
- Compact cabinet. Size 4 1/4" x 3 3/8" x 2 5/8".
- Supplied with 12 Ceramic sockets.

Available in two models.



Model No. CB150, designed to operate on either the transmit or receive section of the C/B Transceivers.  
No. CB150 ..... Net Price \$9.95 ea.

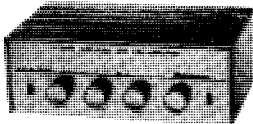
Model No. CB155 has the same operating characteristics as the model CB150, but includes the additional outstanding feature, which enables the user to operate six transmit channels and six receive channels simultaneously. Supplied with two 20" coaxial cables fitted with 2-prong plugs.  
No. CB155 ..... Net Price \$12.95 ea.

## HI-FI TURNOVER CRYSTAL CARTRIDGE WITH TONE ARM



Contains the CX401 cartridge with two Sapphire needles, 30 to 11,000 cps., 6 Volt output. Includes arm rest and hardware. Spring counter balanced aluminum arm. Needles are very easily replaceable. Individually boxed.  
No. C401 ..... Net Price \$2.65

## 14 WATT STEREO AMPLIFIER AND PRE-AMPLIFIER Model No. SA1400 Net Price \$3950

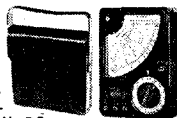


For the discriminating Hi-Fi enthusiast, who is also budget minded. Slim and compact (10 1/2" x 6 3/4" x 3 3/4") in appearance, features a built-in Pre-amplifier to accommodate a reluctance type cartridge. Also incorporates a separate switch selecting the type of cartridge to be used. Has four position mode selector, pilot light indicator, and convenient AC receptacle located on rear of chassis.

### SPECIFICATIONS

Output Power: 14 Watts (7 Watts per channel)  
Output Impedance: 4, 8 and 16 ohms  
Frequency Response: ±1db, 40 to 16000 CPS.  
Harmonic Distortion: Less than 1%  
Hum and Noise Level: 50db below rated output input for Full Output  
Phono: 5mV Magnetic  
300mV Ceramic or Crystal  
300mV  
Tuner or Auxiliary: Stereo-Phono, Tuner and Auxiliary  
Selector Switch: Monaural-Phono, Tuner and Auxiliary  
Tone Control: More than — 11db at 10000 C/S  
Power Supply: 117 Volts, 50/60 CPS.  
85 Watts  
Controls: Input Selector, Selector, Volume Control, Balance Control, Tone Control and Power Switch  
Cabinet: Smart Hammertone Gray finish with Silver etched front panel.  
Dimensions: 10 1/2" x 6 3/4" x 3 3/4"  
Tube Compliment: 6BM8-2  
12AX7-1  
6CA4-1  
No. SA1400 ..... Net Price \$39.50 ea.

## 20,000 OHMS PER VOLT MULTITESTER



A ruggedly compact, precision Multitester. Sensitivity is 20,000 ohms per Volt DC, 10,000 ohms per Volt AC. Recessed nylon range selector switch, and ohms adjustment knob. Easy reading 3 1/2" fan type scale, positive locking jacks, and direct reading capacitance scale.

### SPECIFICATIONS

DC Voltage: 5-25-50-250-500-2.5K (20,000 ohms per Volt)  
AC Voltage: 10-50-100-500-1000 Volts (10,000 ohms per Volt)  
DC Current: 0-50uA, 0-2.5MA, 0-250MA  
Resistance: 0-6K, 0-6 mg (330 ohm and 30K at center scale)  
Capacitance: 10uF to .001uF .001uF to .1uF  
Decibels: — 20 to +22 DB  
Molded bakelite case 4 1/2" high x 3 3/4" wide x 1 1/2" deep. Supplied with smart leather carrying case, test leads, instructions and battery. Uses one standard penlite type battery.  
No. M20K ..... Net Price \$10.95 ea.

## NEON PANEL LAMPS



Gives direct indication on 115 and 230 volt AC-DC lines. Totally enclosed with Jewel and lamp, 1 1/2" long. Mounts in 3/4" panel hole. Complete with mounting nut and washer. Uses external resistor 100K ohms for 115 volt, and 270K ohms for 230 volt. Available in Red, Clear or Yellow lens. Individually boxed. Specify color.  
No. NL50 ..... Net Price \$.42 ea.

## SHIELDED PHONE PLUG ADAPTER



Has RCA Type Phono Jack at one end, standard 2-way phone plug at other end. Grey molded thermo-plastic jacket for easy grip. Overall length 2 1/2". Packed 5 to a clear plastic bag.  
No. 114 ..... Net Price \$.35 ea.

## COMPACT TRANSISTORIZED CITIZENS BAND WALKIE-TALKIES

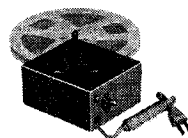


Completely wired, ready for instant use. Up to 1/2 mile communications. Fit any shirt pocket. (3 7/8" x 2 1/2" x 1 3/8"). Furnished in attractive sturdy plastic cabinet, with handy leatherette carrying case. No license required. Simply flip on the switch, push the button on the push-to-talk switch, and the C/B'er is on the air.

### SPECIFICATIONS

Crystal Controlled (27.125MC)  
Super-Regenerative Detector  
5 Section  
Range: Up to 1/2 mile  
Speaker-Microphone: PM Type  
Transistors: 3  
Battery: 9 Volt (supplied with each unit)  
Pair of Walkie-Talkies nested in attractive box  
No. WT3 ..... Net Price \$22.95 per pair

## BULK TAPE ERASER



Place the reel on the spindle, and by rotating two or three times, completely erases recordings and noise from all size tapes up to 7" reels. Residual ratio: - 60db.

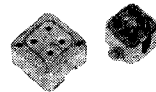
Also demagnetizes metal parts and tools, by simply passing these items over the surface. Has on-off toggle switch and built-in pilot light. Operates on 105-125 Volts AC, 60 cycle. Enclosed in a durable Grey hammertone finished cabinet, with a non-magnetic top. Cabinet is fitted with four rubber feet. Cabinet size 4 3/4" long x 4 1/2" wide x 2 5/8" high.  
No. BTE ..... Net Price \$10.95 ea.



## LAPEL TYPE CRYSTAL MICROPHONE

Supplied with sub-miniature plug attached to 5 foot gray plastic covered shielded cable. Suitable for Tape Recorders, P A Systems, etc. Specially designed for crisp speech reproduction. Supplied with lapel spring clip. Chrome plated finish on die cast case. Length of plug 1 1/8".

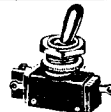
Specifications:  
Size: 1 1/2" diameter x 1/2". Net weight 1 1/2 ounces.  
Frequency Response: 70 to 8000 CPS  
Sensitivity: — 50 db  
High Impedance, non-directional.  
Skin packed on individual display card for peg-rack sales.  
No. LM101 ..... Net Price \$1.65 ea.



## TELEPHONE PLUG & JACK

PLUG: 4 prong male plug for portable telephones. Ivory color. Provided with screw terminals and screws for quick convenient installation. Individually packaged for peg-rack sales.  
No. TP1 ..... Net Price \$.75 ea.

JACK: 4 prong jack for portable telephones. Ivory color. Provided with screw terminals and mounting screws. Mate for our No. TP1 telephone plug. Individually packaged for peg-rack sales.  
No. TJ1 ..... Net Price \$.87 ea.



## TOGGLE SWITCHES BAT HANDLE

Manufactured by H. & H. for Philmore. Rated at 3 Amps, 125 Volts, 1 Amp, 250 Volts. Laminated insulation. Serves many uses. Furnished nickel-plated, with two mounting nuts. UL Approved.

No.	Description	Net
2206	SPST 1 1/2" Shank	\$.68
2209	SPDT 1 1/2" Shank	.86
2212	DPST 1 1/2" Shank	1.26
2215	DPDT 1 1/2" Shank	1.43

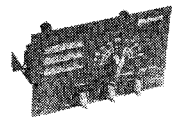
PHILMORE MFG. CO. INC. • Richmond Hill 18, N. Y.

We will be pleased to send our latest Catalog upon request.



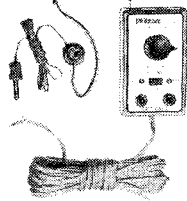
# Philmore Guaranteed ELECTRONIC COMPONENTS

## NEW IMPROVED THREE TUBE TWO-BAND AC-DC RADIO KIT



(Including Rectifier Tube)  
Provides signal strength sufficient to drive a 3 1/2" PM speaker.  
Simplified instructions, fully illustrated with pictorial and schematic diagrams, speed assembly. Chassis is completely punched and plated. Panel is attractive gray ham-mertone, with white silk-screened lettering and dial. Here is a professional radio kit that is perfect for the beginner in radio. When assembled, you have a TWO BAND set, covering the standard broadcast band (550-1650 KC) and SHORT WAVE band (3-13 MC).

No. 7001-CR.....Net \$14.50  
(Complete with PM speaker, less tubes)  
Uses 1 each: 35W4, 50C5 and 12AU6 tubes.



## PRIVATE RADIO-TV LISTENER WITH REMOTE VOLUME CONTROL

Housed in compact plastic cabinet (size 2 7/8" x 1 3/4" x 1 3/8") incorporating a speaker on-off switch, and built-in remote volume control for convenient listening.

Simple to attach on any make TV, Radio, FM, Phonograph, or HI-FI Sets. Does not interfere with the normal operation of the set. Supplied with 20 feet of Cable, and miniature earphone with plastic covered wire earholder. Has built-in extra jack for additional person to listen.  
No. TV5.....Net Price \$3.25 ea.



## MINIATURE PM SPEAKER

For Transistor and subminiature tube applications. 8-ohm impedance. Exact replacement for most Transistor Radios in use. Speakers are full round without individually boxed.

flange. No.	Size	Net Price
TS20	2"	\$1.10 ea.
TS21	2 1/4"	1.10 ea.
TS25	2 1/2"	1.10 ea.
TS26	2 3/4"	1.10 ea.

## 4" PM SPEAKER IN WOOD CABINET WITH VOLUME CONTROL



Smartly designed walnut finished cabinet, measuring 7 3/4" x 5 1/4" x 4". Attractive matching grille cloth. Built-in Volume Control. Also suitable for intercoms and similar applications. Has 2 screw terminal strip on back of cabinet.  
No. WC4.....Net Price \$4.85 ea.

## SEESAW SWITCH



SPST with on-off plastic key. Provided with flush mounting bracket. Rated at 3 amp, 125 volts, 1.5 amps, 250 volts.  
No. T125.....Net Price \$ .53 ea.

## GENERATOR NOISE FILTER



Frequency range 3-30 MCS. (10-11-15 and 20 meters). Maximum current 25 Amps. Provides quiet receiver operation for citizens band, amateur and industrial frequencies. Eliminates electrical interference caused by generator brush noises. Easily installed on any 6, 12, or 24 Volt generator. Each unit individually packed in clear plastic bag, mounted 6 to a Master display card. Instructions included.  
No. 9187.....Net Price \$2.50 ea.

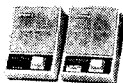
## ALLIGATOR CLIP



Nickel plated, with Screw connection. Strong spring with hard bite. 2" long. No soldering necessary.  
No. 10120.....Net Price \$.05 ea.

## TWO STATION TRANSISTORIZED INTERCOM

No. TC2  
Net Price \$10.95  
Per Set



Beautifully styled high-impact plastic cabinets, with sloping design for full maximum speaker performance. Consists of a master control, and listen-talk push button switch and a remote (sub). Both stations can call each other, even when master is in off position, by pressing either one of the push buttons, which sends a signal. Provides excellent communication between two locations in home, shop or office. Supplied complete with 66 feet connecting cable and plugs, 9 Volt battery, insulated staples, plastic tape and instructions. Size of cabinets 1 3/4" high x 4" deep x 3" wide. Eye appealing blister packed for quick sales.

## ALL-PURPOSE COMMUNICATION DYNAMIC MICROPHONE

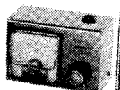


For Amateur or C/B use. Mobile or Fixed-Stations.

Push-to-talk switch, actuates both microphone and relay circuits. 16 1/2" retracted, 6 1/2 ft. extended 4 conductor (1 shielded) rubber covered coiled cord. Microphone has built-in hanger button. Supplied with standard hang-up bracket.. Sturdy heavy die cast case, 3 1/2" x 1 1/2" x 2 1/4". Output Level Impedance Frequency Response  
—56db 50K Ohms 200-10,000 CPS

No. DM50.....Net Price \$9.95 ea.

## R.F. STRENGTH METER FACTORY WIRE



Single band 1 to 250MC. Includes telescoping antenna, housed in compact grey cabinet, size 3 3/4" long x 1 1/4" deep 2 3/8" high. Sensitive indicator checks antenna efficiency, load matching etc. Has earphone jack for monitoring. No battery or power source required. R.F. is measured on an accurate clear plastic meter. Bottom of cabinet has powerful magnets, for attachment on any metal surface. Factory wired.  
No. FS20.....Net Price \$7.65 ea.

## STEREO PHONO AMPLIFIER WITH TRANSFORMERS



4-tube Stereo Amplifier plus Silicon Rectifier. Neat, compact, fully assembled, furnished with tubes. Two volume controls with on-off switch, two tone controls, standard RCA type input jacks for phono cartridge; features two 2500-ohm output transformers to match 3.2 ohm voice coil.  
No. PA63D.....Net Price \$12.75 ea.

## "L" PAD LEVEL CONTROLS



Adjust and match levels of two or more speakers in system. Brown plastic contour knob. Dial plate calibrated 0 thru 10, 2 1/8" square, finished in matte silver and black. Mounts in 3/8" hole in panel. Bushing 1" long.

No.	Impedance	Net Price
LP8	8 ohms	\$1.65
LP16	16 ohms	1.65

## FEED-THRU CAPACITOR

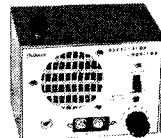


.5mfd. 50WV, 40 amps 1 inch diameter, 1 1/4" length. Aluminum container with steel mounting brackets, 1/4" mounting hole. Non-turnable, plated stud terminals with mounting nuts and lockwashers, completely insulated from case. Designed to suppress VHF radio interference currents, TVI from Short-Wave transmitters, diathermy machines, electric heating apparatus, generator and ignition coil interference, and line conducted radiation where standard capacitors are relatively ineffective.  
No. 9185.....Net Price \$1.72 ea.

## FLASHLIGHT



Miniature flashlight, only 3 1/2" long. Removable end cap. Unbreakable lens. Uses one penlite battery, not included. Supplied in Red and Ivory color combination. Packed 12 to a standard box.  
No. T1028.....Net Price \$.25 ea.



## TRANSISTORIZED KEYING MONITOR AND CODE PRACTICE OSCILLATOR

Monitor-Oscillator unit incorporates a slide switch separating the two functions. Equipped with the following features:

- Built-in speaker
- Transistor circuitry using 2 penlite batteries, makes this unit very efficient and economical to operate.
- Separate tone (pitch) control.
- Headphones, or external speaker can be plugged into built-in jack.
- Uses RF pickup link. When located near transmitter final tank coil, will monitor transmitted keying.

Attractively styled, and enclosed in a two color metal cabinet, 4 1/2" wide x 3 3/8" deep x 3 3/8" high. Batteries included.  
No. FB591.....Net Price \$14.50 ea.

## RESISTANCE SUBSTITUTION BOX



Fast accurate selection of 24 separate resistances, ranging from 15 ohms to 10 megohms, in two ranges, slide switch selected. All resistors are of the moisture proof carbon film deposited type in 1 watt rating. The selection of appropriate resistors is attained by the use of two rotary switches. Complete with 36" Red and Black test leads with plastic insulated alligator clips. Housed in attractive metal cabinet: 4 3/4" x 2 5/8" x 1 5/8".  
No. RB10.....Net Price \$3.95 ea.

## CAPACITANCE SUBSTITUTION BOX



Fast accurate selection for any of 9 capacitor values is available ranging from .0001 to .22 Mfd. Ranges are .0001, .0010, .0022, .0047, .01, .022, .047, .1 and .22 Mfd. All capacitors are of the moisture proof tubular type, rated at 600 Volts. Complete with 36" Red and Black test leads with plastic insulated alligator clips. Housed in attractive metal cabinet, size: 4 3/4" x 2 5/8" x 1 5/8".  
No. RB12.....Net Price \$2.95 ea.

## LIGHTWEIGHT DYNAMIC PHONES



For private listening on transistor sets, hearing aids, radio sets and TV sets. Equipped with slim plastic covered metal ear support. With either our No. 660 Ultra-Miniature plug, 1 1/2" length, or our No. 702 sub-miniature plug, 1 1/8" length, and 38" flexible plastic cord. Individually packed in clear plastic bags.

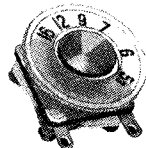
No.	Description	Net Price Ea.
140 P-6	8 ohm with No. 660 Plug	\$.33
140 P-7	8 ohm with No. 702 Plug	.33
140 P-6-15	15 ohm with No. 660 Plug	.33
140 P-7-15	15 ohm with No. 702 Plug	.33

## SUBMINIATURE PUSHBUTTON SWITCH



S.P.S.T. normally open momentary switch. Completely enclosed housing. Mounts in 1/4" hole, in panels up to 1/8" thick. Supplied with red plastic button and mounting nut.  
No. 2289.....Net Price \$.22

## SUB MINIATURE VARIABLE CAPACITOR



1 Gang 365 mmfd. Overall 1 1/4" square. Depth 1/2", 1 1/4" diameter clear plastic dial with Calibrations and Knurled edges. For Transistor-RF Circuits, calibrated 530 to 1600kc.  
No. 1950D.....Net Price \$.75 ea

PHILMORE MFG. CO. INC. • Richmond Hill 18, N. Y.

We will be pleased to send our latest Catalog upon request.





# CITIZENS' BAND RADIO

## THE RCA MARK VIII Type 17704

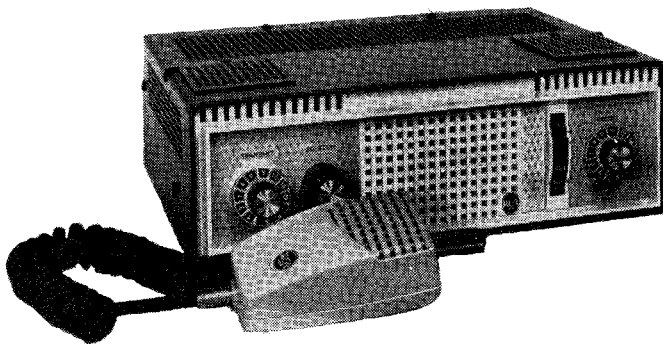
The RCA Mark VIII Radio-Phone is a 27 megacycle citizens' band 2-Way Radio designed to provide business and industry with a dependable short-range communications facility. Its low cost and uncomplicated operating features also make it ideal for use by sportsmen.

The Mark VIII may be operated for business or personal use. Although no operator's license is required, a station license is necessary and may be obtained through application to the FCC using the form supplied with the unit. This station license is granted only to citizens of the United States 18 years of age or older, but persons other than licensees, including those under 18, may operate units under the supervision of the licensee.

In many respects, the Mark VIII represents a significant departure from ordinary citizens' band radio design. Its low, slim silhouette (only 3 3/4 inches high) facilitates installation in extremely cramped locations permitting under-the-dash mounting even in today's small cars.

- 9 crystal controlled transmit and receive channels
- Tuneable receiver for reception of all 23 CB channels
- Excellent voice reproduction—high intelligibility
- Built-in ac power supply
- Separate 6 or 12-Volt dc power supply (optional) for mobile installation
- 5 Watt\* transmitter—Nominal output 3 Watts or better
- Highly selective superheterodyne receiver with one rf and two if amplifiers
- Fully adjustable squelch circuit to quiet receiver
- Improved Automatic Noise Limiter to reduce effects of ignition and similar interference
- Automatic Volume Control: affords maximum gain of weak signals and limits strong ones
- Unique "message monitor" feature: Calls from nearby stations can be heard even with volume control turned all the way down
- TVI trap eliminates interference with television sets in area
- PI network output assures more efficient antenna coupling—insures peak output
- Electronic switching—no relay noise or chatter
- Audio Output—2 1/2 watts

- Impact resistant plastic push-to-talk ceramic microphone with coil cord
- Rugged metal cabinet with plastic face plate—attractive midnight blue and gray scratch resistant vinyl finish
- Maximum plate input power to final radio frequency stage as defined by FCC Regulations



Mark VIII Transceiver  
(RCA Type 17704, complete) .....\$149.50\*

6-Volt dc power supply  
(RCA Type 17705A, complete) .....\$ 19.95\*

12-Volt dc power supply  
(RCA Type 17705, complete) .....\$ 19.95\*

## NEW RCA MARK NINE

**NEW/COMBINATION "S" METER AND RELATIVE RF OUTPUT METER • NEW/SPOTTING SWITCH (READABLE ON METER) • NEW/EXTERNAL SPEAKER JACK • Plus These Other Important MARK/NINE Features:**

- 9 crystal-controlled transmit and receive channels
- Tuneable receiver for reception of all 23 CB channels
- Excellent voice reproduction—high intelligibility
- Built-in AC power supply
- Separate 6- or 12-Volt DC power supply (optional) for mobile installation
- 5 Watt\* transmitter
- Highly selective superheterodyne receiver with one RF and two IF amplifier stages
- Fully adjustable squelch circuit to quiet receiver
- Improved Automatic Noise Limiter to reduce effects of ignition and similar interference
- Automatic Volume Control—affords maximum gain of weak signals and limits strong ones
- Includes built in TVI trap
- PI network output assures more efficient antenna coupling—insures peak output
- Electronic switching—no relay noise or chatter
- Audio output—2 1/2 Watts
- Impact-resistant push to talk ceramic microphone with coil cord
- Rugged metal cabinet with plastic face plate—attractive midnight blue and gray scratch-resistant vinyl finish
- Illuminated meter and working channel number
- Compact, lightweight—only 3 1/2" high, 11 1/4" wide, 8" deep—weighs only 9 lbs.
- Meets all FCC requirements.

Only \$134.75† AC unit, optional DC power supply (6 or 12-volt)

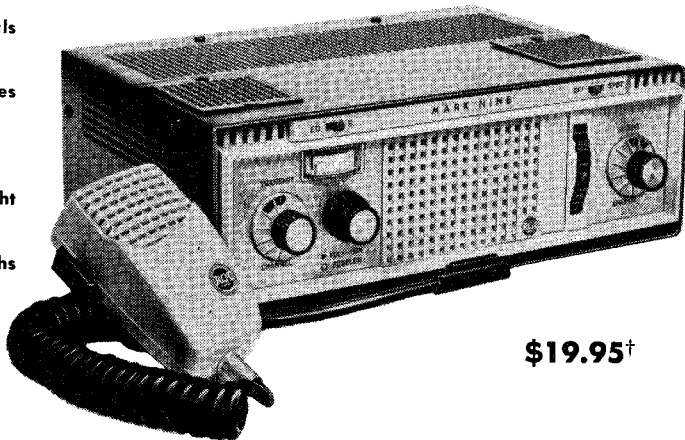
\*Maximum plate input power to final radio frequency stage as defined by FCC regulations.

† User Price (Optional)

One of the more unique features of the RCA MARK NINE is the combination "S" meter and relative RF output meter which provides the operator with a relative indication of the strength of the incoming signal ("S") and of the RF signal he himself is transmitting ("EO"—output voltage).

Another important new feature incorporated in the RCA MARK NINE is the Spotting switch. Use of the "spot" feature permits precise manual tuning of the receiver to any one of the transmit crystal frequencies. This feature has particular value in operations in which a number of vehicles are employed, each operating on a different frequency.

For applications where an additional speaker is required at some remote location, the RCA MARK NINE also incorporates an external speaker jack. Since use of the external speaker does not make the speaker in the unit inoperative, incoming calls can be heard at both locations.



**\$19.95†**

# THE TENNA MANUFACTURING CO. INC. • CLEVELAND, OHIO

## **RANGER** UNIVERSAL

## ALL TRANSISTOR AUTO RADIOS



- Deluxe quality and performance
- Modern up-to-date design to complement today's car styling.
- PUSH-BUTTON and MANUALLY OPERATED MODELS
- COMPLETE LINE... for all CARS — TRUCKS — BOATS and TRACTORS. 6 volt and 12 volt.

**ALL-TRANSISTOR CIRCUIT** on etched printed board gives 5 watts of superb audio power. Advanced design assures greater reliability, efficiency of operation, constant uniformity of high quality sound and low current consumption. Makes possible maximum duty at a minimum rate of battery drain. Models TC-100M and TC-200-PB are negative ground only.

**AUTOMATIC VOLUME CONTROL** provides constant comfort-level listening regardless of the frequent and heretofore annoying changes in signal level.

**CONTINUOUSLY VARIABLE TONE CONTROL** allows precision and spacious adjustment of both high and low frequencies. (Models TC-300-M and TC-400-PB only.)

**WIDE-RANGE SPEAKERS** bring a new panorama of listening pleasure. Distortion is at a minimum, yet a greater dimension to the highs and a depth to the lows. Voice clarity is particularly evident.

**BUILT-IN RELIABILITY** — Tried and proven beyond the shadow of a doubt, the solid state circuit with five transistors successfully eliminates the vibrator, with its common hum and noise interference, and reduces battery drain to an absolute minimum. Repeated quality control checks on all components and circuits. These auto radios are engineered and manufactured to the highest standards of quality.

**FIVE QUICK-SET PUSH BUTTONS** mean instantaneous, finger-tip station tuning. They are a snap to adjust to the exact frequencies of your five favorite stations. Extra sharp manual tuning is, of course, available at all times. †

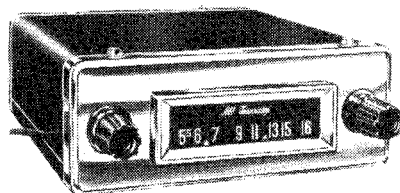
**SIMPLIFIED INSTALLATION** — Custom designed, each of these compact push button radios slips into the instrument panel in minutes. Conveniently located antenna trimmer, with which a front or rear custom antenna can be tuned with equal ease.

**SEVEN TUNED CIRCUITS**, including RF stage, give maximum sensitivity and selectivity in station choice. Local as well as certain distant stations, can therefore be brought in with utmost clarity.

**BEAUTIFUL CUSTOM APPEARANCE** — Rich radiant chrome blends beautifully with the interior of any car. Full-view, precision calibrated dials are completely illuminated to give perfect dialing vision at all times.

**SIMPLE TO SERVICE** — All alignments can be made with the cover in place.

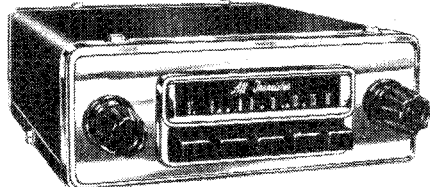
**NOTE: CUSTOM INSTALLATION KITS AVAILABLE • WRITE FOR CATALOG**



### UNIVERSAL MANUAL

#### Model TC-100-M

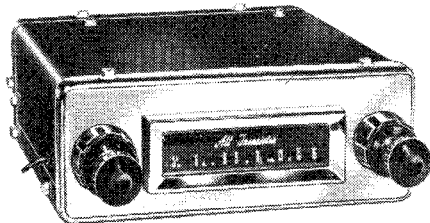
12 Volt (Negative ground only) List \$29.98. Shipping Wt. 5 lbs.



### UNIVERSAL PUSH-BUTTON

#### Model TC-200-PB

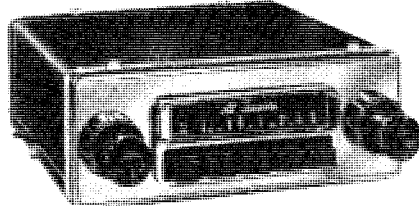
12 Volt (Negative ground only) List \$29.95. Shipping Wt. 6 lbs.



### DELUXE MANUAL

#### Model TC-300-M

6 or 12 volt; negative/positive ground. List \$39.95. Shipping Wt. 6 lbs.



### DELUXE PUSH-BUTTON

#### Model TC-400-PB

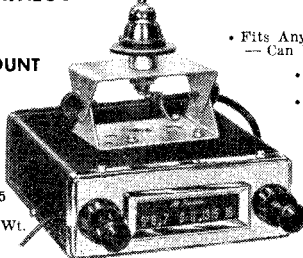
6 or 12 volt; negative/positive ground. List \$34.95. Shipping Wt. 6 lbs.

### TRUCK ROOF MOUNT RADIO

#### Model TRM-64-M

With  
Antenna  
List \$9.95

Shipping Wt.  
8 lbs.



- Fits Any Truck — All Models — All Makes — Can Be Used on Boats and Tractors.

- Anyone Can Install in Minutes.
- Sharp, Modern Styling.

- Corrosion-Proof. Stainless Steel Antenna with Triple Chrome Base... Rotates a Full 360 degrees.

- Radio Can Be Transferred Between Vehicles by Addition of TRM Truck Mounting Kits.

## RANGER *Play-mate*

The New IN and OUT INSTANTLY PORTABLE AM RECEIVER  
FOR CAR — BOAT — TRUCK OR HOUSE TRAILER

INSTALLED like any car radio... used like any portable radio.

### TWICE THE FUN — HALF THE COST

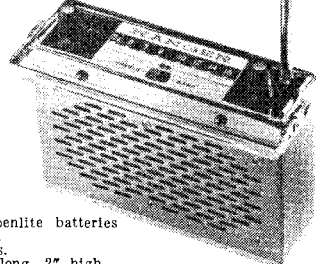
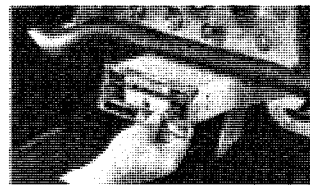
Ideal for — Beach Parties, Ball Games, Picnics, Vacations, Sporting Events.

- Locks in and operates on car battery for perfect in-car reception.

- Your Key Releases It.

- Portable plays on 4 penlite batteries.

List, \$49.95



- Powerful audio.
- Eight ohm speaker.
- Lock-in "Theft-proof"
- Automatic power changerover between auto and portable.
- Easy to install.
- Full year warranty.
- 12 Volt Negative-Positive ground in car.
- 6 Volt on penlite batteries as Portable.
- 3 transistors.
- Size—6½" long, 2" high, 5" depth.
- Weight as Portable — 3 lbs. — shipping weight 6 lbs. each.

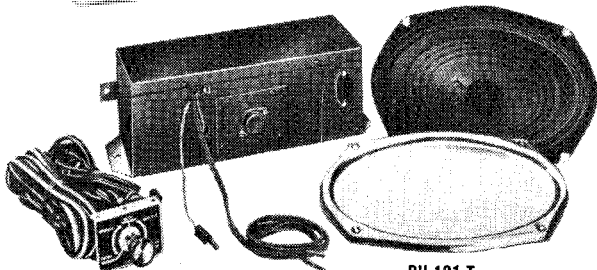
## The Greatest Adventure In Sound On The Highway

### RANGER-MAGIC

A NEW DIMENSION IN LISTENING

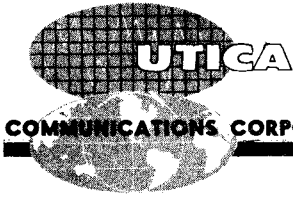
RANGER-MAGIC, when connected to your auto radio, is the nearest thing to stereo sound on the highway. Flick a single button, and instantly music sweeps throughout your car in a warm and wonderful way that is a joy forever. RANGER-MAGIC incorporates two electromechanics delay lines, a transistorized amplifier, and a rear deck speaker, to produce a genuine "tw source" musical reproduction. A unique control provides complete fader command, while a single knob turns RANGER-MAGIC "on" and "off" and permits flawless regulation of balance. Model RU-101-T. List \$32.98. Shipping Wt. 6 lbs.

Model RU-103-T — Same as RU-101-T, except not equipped with fader command control. List \$29.98. Shipping Wt. 6 lbs.



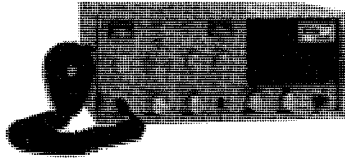
RU-101-T

DESIGNERS and MANUFACTURERS OF FINE ELECTRONIC EQUIPMENT

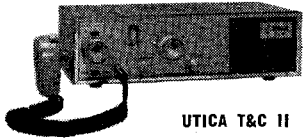


COMMUNICATIONS CORPORATION CHICAGO, ILLINOIS

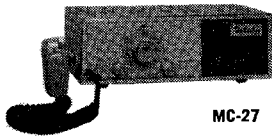
UTICA T&C III



**UTICA T&C III**—The ultimate in Citizens Band equip., 23 channel xtal controlled transmit & receive (not a synthesized circuit), push-pull modulation, power supply: 117VAC & transistorized 12VDC, 15 tubes & 6 diodes with 26 tube performance, built-in BFO, built-in PA, built-in distance expander, 2 dual purpose illuminated meters, adjustable RF Gain, volume, squelch, noise limiter & tone controls, receiver fine tune control, dual conversion superhet receiver. Comes complete with mic., & 117V power cable.  
**Model 91-03** ..... \$259.95



UTICA T&C II



MC-27

**UTICA T&C II**—Citizens Band Transceiver 6 channel xtal controlled transmit & receive, fully tunable receiver, S meter, output power indicator, external xtal socket, aux. speaker terminal, built-in dual power supply—117VAC & transistorized 12VDC, dual conversion superhet receiver.  
**Model 91-02** ..... \$162.50  
**Model 91-12 VIB**—Circuit for 6-12VDC and 117VAC operation ..... \$162.50

**UTICA MC-27 Citizens Band Transceiver**  
 6 channel xtal control, built-in dual power supply — 117VAC & transistorized 12VDC, dual conversion superhet receiver.  
**Model 91-01** ..... \$142.50  
**Model 9-11 VIB** circuit for 6-12VDC and 117VAC operation ..... \$142.50  
 Both units come complete with mic., 1 pr. of xtals & 1 power cord of your choice.



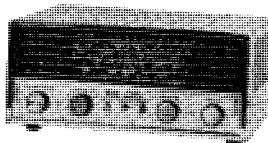
UTICA "650"



UTICA CD "652"

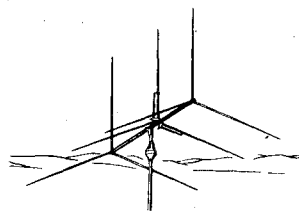
**UTICA "650"**—6 Meter Amateur Transceiver  
 Nominally rated at 22W input, 100% mod., built-in dual power supply for 117VAC or 12VDC operation, VFO in separate cab. included, built-in adj. BFO, dual conversion superhet receiver, series gated self adj. noise limiter, adj. R.F. gain control and squelch control.  
**Model 92-01** ..... 189.95

**UTICA CD "652"**—6 Meter Civil Defense Transceiver for operation on 52-54 Mc. 15W input, receives AM, SSB, & CW, dual conversion superhet receiver, tunable BFO, adj. squelch control, automatic noise limiter, built-in dual power supply for 117VAC & 12VDC.  
**Model 92-04** ..... \$150.00  
 Both units come complete with mic. & 117VAC power cable.



UTICA RECEPTOR

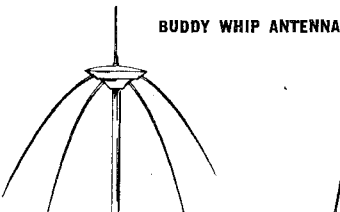
**UTICA RECEPTOR**—4 Band short wave receiver, 3 short wave bands plus standard AM broadcast, true electrical bandspread, major world-wide short wave stations on slide rule dial, beat frequency control, heavy 3x5 speaker, whip antenna, internal loopstick antenna, headphone jack with automatic speaker cutout, receiver controlled.  
**Model 92-05** ..... \$64.95



GIZMOTCHY 2 in 1 ANTENNA

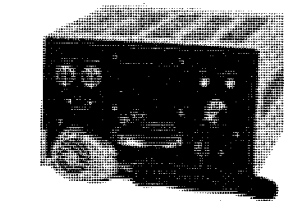
**GIZMOTCHY 2 in 1**  
 Vertical-horizontal beam antenna for hi-efficiency & greater distance base station performance.  
**Model 94-D1** ..... \$55.95

**GROUND PLANE**  
 Heavy duty grd. plane antenna, pre-matched for 52 ohm impedance.  
**Model 94-1D** ..... \$24.50



BUDDY WHIP ANTENNA

GROUND PLANE ANTENNA



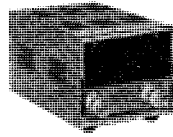
UTI-COM



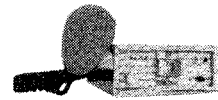
REMOTE HEAD

**UTI-COM FM Transceiver** for assigned frequencies in the 150-175 Mc FM commercial band. The power supply is available in 117VAC or transistorized 12VDC, modular construction, RF power input: 60W, RF power output: 30W minimum (50 ohm load), emission 20F3 (5.0Kc deviation).  
 117VAC **Model 93-01** ..... \$359.95  
 12VDC **Model 93-02** ..... \$359.95

**REMOTE HEAD ACCESSORY** for Uti-Com FM Transceiver includes speaker, volume control, squelch (channel selector switch for dual freq. models).  
**Model 93-05** ..... \$41.50



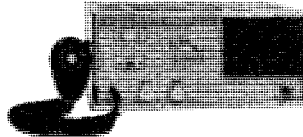
UTICA FMR-12



UTI-CALL TONE ALERT

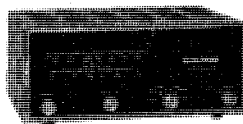
**UTI-COM FM RECEIVER**—the 12VDC mobile monitor for any of the assigned frequencies on the 150-175Mc FM commercial band with a sensitivity of 3.5uv or better for 20db quieting.  
**Model 93-06** ..... \$149.95

**UTI-CALL Tone Signal Alert** for selective calling of your operators, fully automatic.  
 For AM & FM Bus. Radio. **Model 93-15** ..... \$89.95  
 For Citizens Band Radio. **Model 91-05** ..... \$59.95  
 Also available in a model that will activate the horn in your vehicle for 1 sec.  
 For AM & FM Bus. Radio. **Model 93-16** ..... \$92.50  
 For Citizens Band Radio. **Model 91-06** ..... \$62.50



UTI-COM "30"

**UTI-COM "30" AM Bus. Radio Transceiver** for use on the 30-50Mc AM band, 30W input, dual power supply 117VAC & transistorized 12VDC, adj. squelch & volume control, built-in noise limiter, high level push-pull mod., dual conversion superhet receiver, key lock off-on switch, comes complete with 1 pr. of xtals & power cable of your choice.  
**Model 93-14** ..... \$234.95



DUO-BAND



AUXILIARY SPEAKER

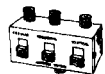
**UTICA DUO-BAND FM RECEIVER**, receives the low band (30-50Mc) and the hiband (152-174Mc) & has illuminated slide rule dial, 1 xtal controlled position on each band, dual conversion superhet receiver, squelch control, xtal controlled 2nd oscillator, temp. compensated for drift control.  
**Model 93-08** ..... \$164.95  
 Aux. speaker **93-09** ..... \$ 12.95

"HI-QER" LONG DISTANCE ANTENNA

**BUDDY WHIP**  
 96" fibreglass mobile antenna with unique pivot base that permits immediate antenna adj.  
**Model 94-05** ..... \$24.50

**"Hi-Qer" Long Distance Antenna**  
 Sturdily constructed fibreglass, omnidirectional fixed station antenna with a VSWR below 1.5:1 across the band.  
**Model 94-08** ..... \$32.95

ANTENNA SELECTOR BOX



**ANTENNA SELECTOR BOX**  
 For fast switching from base station to horizontal or vertical beam.  
**Model 94-04** ..... \$7.50

UTICA SIGNAL OPTIMIZER

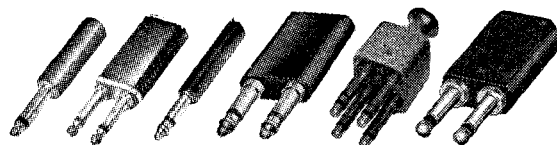


**UTICA SIGNAL OPTIMIZER**  
 Single unit to test CB equipment for: antenna power in watts, mod., field strength, antenna output, SWR, station efficiency.  
**Model 91-07** ..... \$47.50


**ADC PRODUCTS, INC.**

MINNEAPOLIS, MINNESOTA

## PLUGS



PJ-5 PJ-1 PJ-3 PJ-6 D7200 PJ-327

**PJ-5** Equivalent **PJ-055, WE-47**, fits  $\frac{1}{4}$ " phone jacks. Black plastic shell. Screw terminals. Two conductor.

**Net \$ .78**

**PJ-1** Equivalent **WE-241**, heavy duty die cast frame. Black phenolic shell. Self aligning plug prongs on  $\frac{5}{8}$ " center for use with all standard jack panels. Two tip conductors, plus sleeve connection common to both sleeves.

**Net \$2.55**

**PJ-3** Equivalent **PJ-051, WE-310**. Designed for use with  $\frac{1}{4}$ " tip, ring and sleeve jacks. Molded insulation, red plastic shell. Three conductor.

**Net \$2.40**

**PJ-6** Equivalent **WE-213**. Designed for applications requiring two separate 3 conductor circuits. Popularly used with operator's intercom/monitor headsets. Black shell notched for polarity identification. Self aligning plug prongs on  $1\frac{1}{16}$ " centers.

**Net \$9.78**

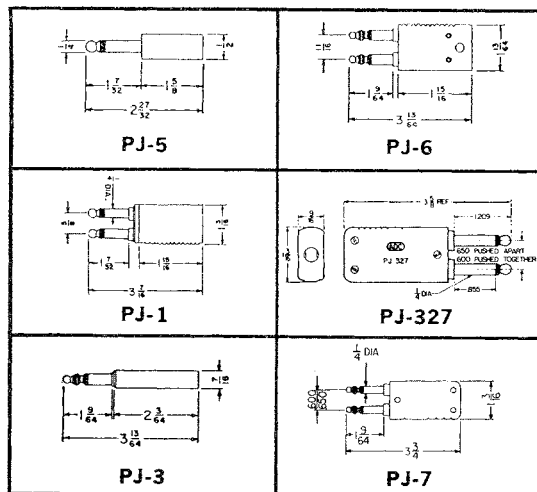
**D7200** Equivalent **WE-315B**. Four prong, self aligning plug. Molded insulation. Brass shell notched for polarity is nickel plated and connected to plug stems to provide shielding for tip conductors. For use with four PJ-318 double jacks mounted on  $\frac{5}{8}$ " centers. Five conductors.

**Net \$14.70**

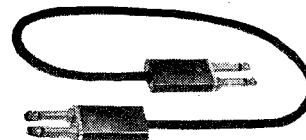
**PJ-327** Equivalent **WE-327**. The PJ-327 Twin Plugs provides two electrically independent, 2 conductor plugs in a black plastic shell which is notched to indicate polarity. Self aligning plug sleeves are on  $\frac{5}{8}$ " centers. Designed and constructed in accordance with Specification MIL-P-642A.

**Net \$2.55**

**PJ-7** Twin type plug with tip, ring and sleeve conductors on  $\frac{5}{8}$ " centers for use with all standard jack panels. Designed to mate with three conductor jacks having  $\frac{1}{4}$ " diameter sleeves. Molded insulation. Black phenolic shell is notched to indicate polarity.

**Net \$7.20**


## PATCH CORDS



Length	Cord With PJ-1 Plugs	Net Price	Cord With PJ-5 Plugs	Net Price	Replacement Cords Only	Net Price
6-inch	PJ-10½	\$6.38	PJ-50½	\$3.48	PJ-20½	\$1.11
1-foot	PJ-11	6.60	PJ-51	3.63	PJ-21	1.50
2-feet	PJ-12	6.75	PJ-52	3.84	PJ-22	1.65
3-feet	PJ-13	6.90	PJ-53	4.11	PJ-23	1.74
4-feet	PJ-14	7.13	PJ-54	4.44	PJ-24	1.80
5-feet	PJ-15	7.28	PJ-55	4.77	PJ-25	1.89
6-feet	PJ-16	7.58	PJ-56	5.25	PJ-26	2.49
10-feet	PJ-10	8.10	PJ-50	5.82	PJ-20	3.15

Length	Cord With PJ-3 Plugs	Net Price	Replacement Cords Only	Net Price
2-feet	PJ-82	\$8.70	PJ-62	\$2.10
4-feet	PJ-84	9.30	PJ-64	2.40
6-feet	PJ-86	9.90	PJ-66	2.82

ADC patch cords have become standards in the communications industry. Unmatched in quality, these shielded cords are made of tinned copper conductor wire with a heavy braided cover reinforced at each end. These cords, as well as cord assemblies with PJ-1 double plugs, PJ-5 or PJ-3 single plugs and standard black patch cords with shields grounded both ends, are considered standard. Unshielded cords or assemblies with shields grounded one end only available on special order. Gray, red, other color cords available on special order.

Length	Cord with PJ-7 Plugs
1 foot	PJ-171
2 feet	PJ-172
3 feet	PJ-173
4 feet	PJ-174
5 feet	PJ-175
6 feet	PJ-176

Four tinsel wire conductors plus shield (shield grounded to both sleeves of PJ-7 plugs). Conductors are rubber insulated. Heavy black braided glazed cotton cover overall.

Patch Cords Length	Nylon Cord With PJ-327 Plugs
1 foot	PJ-181
2 feet	PJ-182
3 feet	PJ-183
4 feet	PJ-184
5 feet	PJ-185
6 feet	PJ-186

Four tinsel wire conductors, thermoplastic insulated. Slate colored Nylon braided cover overall resists wear.

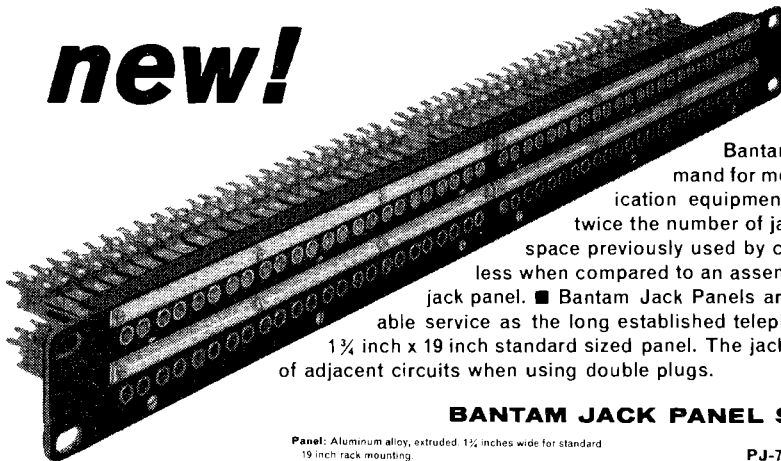




# ADC PRODUCTS, INC.

MINNEAPOLIS, MINNESOTA

## new!



## BANTAM JACK PANELS

Bantam Jack Panels are designed to satisfy the increasing demand for more compact patchfields in modern electronic and communication equipment. Bantam Jack Panels, with miniaturized jacks, provide twice the number of jacks in a standard size panel. They require only 1/2 the rack space previously used by conventional panels. The new panel assemblies weigh 65% less when compared to an assembly using an equivalent number of jacks in a conventional jack panel. ■ Bantam Jack Panels are compact, lightweight, and yet provide the same dependable service as the long established telephone types. This new design offers 96 jacks (48 pairs) in a 1 1/2 inch x 19 inch standard sized panel. The jacks on this panel are spaced to prevent the cross patching of adjacent circuits when using double plugs.

### BANTAM JACK PANEL SPECIFICATIONS

**Panel:** Aluminum alloy, extruded 1 1/2 inches wide for standard 19 inch rack mounting.  
**Jack Mounting:** Four molded plastic inserts, each provides for 24 jacks. Pairs of jacks on 3/8 inch centers. Double row panel provides 96 jacks total. Blank inserts can be furnished where only single row of jacks is required.  
**Panel mounting:** Mounting brackets are integral part of panel.  
**Designation Strip:** Extruded clear plastic.  
**Panel Finish:** Anodized, Black.

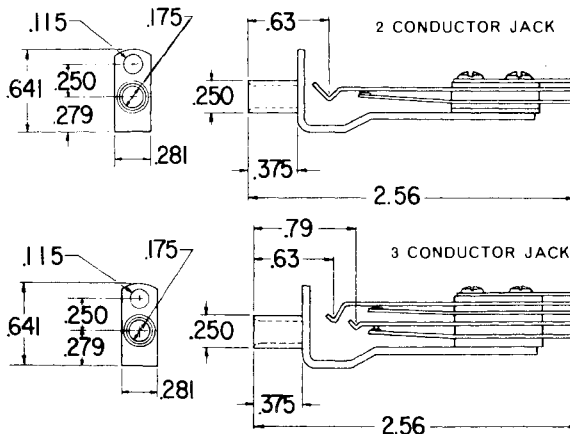
**PJ-731** Double row panel, assembly less jacks, hold 96 jacks. NET \$ 19.20  
**PJ-737** Double row panel, with 48 pair (96 total) PJ-818 jacks. 92.40  
**PJ-739** Double row panel, with 48 pair (96 total) PJ-839 jacks. 116.40  
**PJ-724** Panel inserts, less jacks, 24 holes. 2.40  
**PJ-700** Panel inserts, blank (same as PJ-724 without holes). 1.20  
 Custom panel assemblies with up to 104 jacks are available on special order.

### BANTAM JACKS

Bantam Jacks will meet the electrical, mechanical and environmental requirements of the military specification for long frame telephone jacks. Although reduced in size these jacks will provide the same reliable service equal to that expected from regular size telephone jacks. These jacks are available in a variety of two and three conductor types, with isolated circuit contacts as well as normalling contact.

#### SPECIFICATIONS:

**Frame:** Steel, Cadmium plate with chromate conversion coating to withstand 50 hours of salt spray.  
**Springs:** Nickel silver.  
**Contacts:** Palladium, cross-bar contacts are welded to springs.  
**Insulation:** Spacers, Phenolic Type PBE-P per Mil-P-3115B.  
**Bushing:** Brass, silver soldered to frame. Finish same as frame.



- 2 conductor—tip and sleeve ..... PJ-803
- 2 conductor—tip and sleeve ..... PJ-818
- 2 conductor—tip and sleeve ..... PJ-823
- 3 conductor—tip, ring and sleeve ..... PJ-838
- 3 conductor—tip, ring and sleeve ..... PJ-839

#### SPECIFICATIONS:

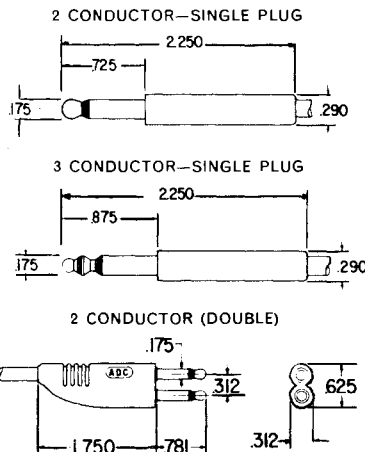
**Cord:** Plastic jacketed, shielded tinned copper conductors. Jacket color, Gray.  
**Plugs:** Conductor parts are precision machined of brass.  
**Plug Insulation:** Molded polystyrene, black.  
**Internal connections:** Soldered.  
**Plug shell:** Plastic, molded to cord. Gray.

### BANTAM PATCH CORDS

Length	Single (2) Conductor Plug	Net	Double (2) Conductor Plug	Net	Single (3) Conductor Plug	Net
6 inch	PJ-701	\$3.30	PJ-751	\$3.96	PJ-711	\$3.90
12 inch	PJ-702	3.36	PJ-752	4.02	PJ-712	3.96
24 inch	PJ-704	3.42	PJ-754	4.08	PJ-714	4.02
36 inch	PJ-706	3.48	PJ-756	4.14	PJ-716	4.08
48 inch	PJ-708	3.54	PJ-758	4.20	PJ-718	4.20

### BANTAM PATCH CORDS

Bantam Patch Cords are plastic jacketed, shielded cords complete with molded-on plugs. The plugs are made with molded insulation between conductors. Bantam Patch Cords are available with single and double two conductor plugs and single three conductor plugs. A cord strain relief feature is included in the plug construction.



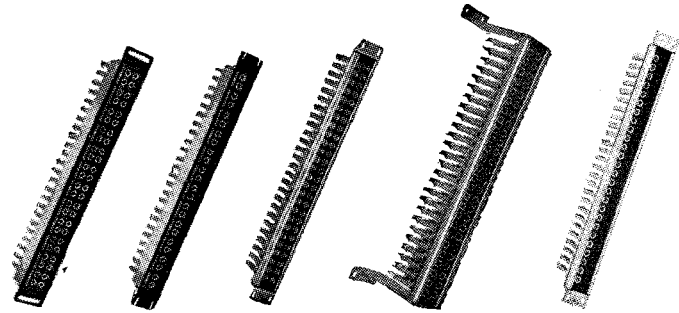


**ADC PRODUCTS, INC.**

MINNEAPOLIS, MINNESOTA

**JACK PANELS...**

ADC offers the most complete assortment of jack panels available today. ADC panels are used in television and broadcasting stations, recording studios, industrial paging systems, and communication equipment of all kinds where there is a need to efficiently switch and distribute audio signals. Molded of solid phenolic, reinforced with steel to provide maximum rigidity and strength. Jacks are spaced to permit use of any standard double plug with  $\frac{3}{8}$ " spacing. Mounting brackets and designation strips furnished with each panel. All panels designed to fit standard 19" relay rack. Consult ADC for your standard and special jack panel requirements.

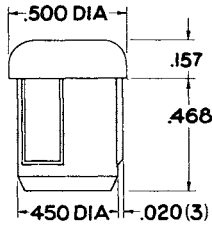


PJ-31 PJ-33 PJ-30 PJ-35 PJ-36  
 PJ-341 PJ-343 PJ-340 PJ-350 PJ-360  
 PJ-391 PJ-393 PJ-390 PJ-395 PJ-396

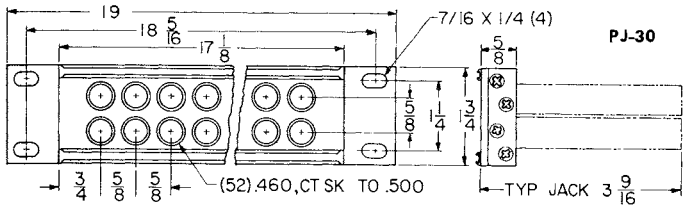
**HOLE PLUG**

Molded of black polyethylene plastic. Fits all ADC standard jack panels. Made to plug mused jack mounting holes in jack panels.

Net \$.15



Panel less Jacks	Net Price	Panel with PJ-318 Jacks	Net Price	Panel with PJ-339 Jacks	Net Price
PJ-30	\$12.90	PJ-340	\$49.50	PJ-390	\$64.80
PJ-31	9.45	PJ-341	42.75	PJ-391	57.30
PJ-33	8.52	PJ-343	25.14	PJ-393	32.40
PJ-35	15.60	PJ-350	52.50	PJ-395	67.50
PJ-36	8.70	PJ-360	27.90	PJ-396	35.10

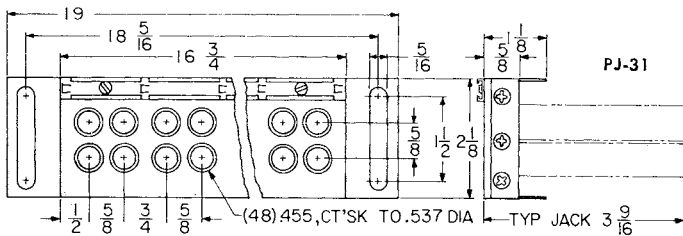


**PJ-30**

Double panel. Holds 52 jacks—requires 1 1/2" panel space. Double designation strip. Brackets for flush rack mounting. All jack mounting holes on  $\frac{3}{8}$ " centers.

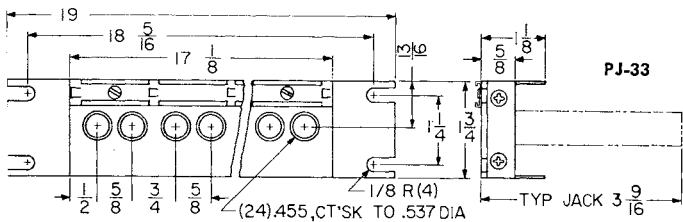
**PJ-35**

Double panel. Same as PJ-30 except with stand off brackets to hold panel 7" in front of mounting rack.



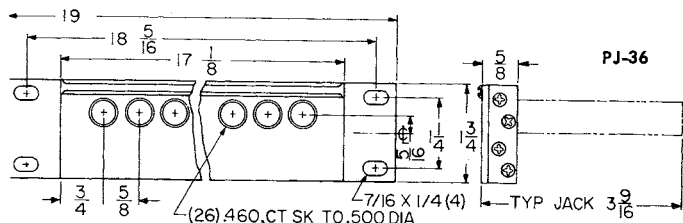
**PJ-31**

Double panel. Holds 48 jacks. Holes spaced to prevent patching adjacent circuits. Requires 2 1/8" panel space.



**PJ-33**

Single panel. Holds 24 jacks. Holes spaced to prevent patching adjacent circuits. Requires 1 1/2" panel space.



**PJ-36**

Single panel. Holds 26 jacks—requires 1 1/2" panel space. Brackets for flush rack mounting. All jack mounting holes on  $\frac{3}{8}$ " centers.

Panels with mil jacks and other telephone type jacks also available.




**ADC PRODUCTS, INC.**

MINNEAPOLIS, MINNESOTA

## NEW "WRAPID" TERMINAL BLOCKS FOR SOLDERLESS, WRAPPED WIRE CONNECTIONS

Shown here in actual size is one of a new series of ADC terminal blocks. This model gives you a total of 100 solderless connections in a 2½ inch space.

It's only 3¾ inches high, 2½ inches wide, and comes in one assembled piece that is mounted in seconds. Standard models available for 40, 60, 80 and 100 connections. Other configurations can be custom made in production quantities.

### ONE CONNECTION EVERY FIVE SECONDS

These are solderless, wrapped wire connections. In less than 5 seconds the most inexperienced operator can spin-on a wire and make the most positive connection obtainable. He can make 100 connections in less than 8 minutes using any commercially available wrapping tool.

### RUGGED, RELIABLE CONNECTIONS

Wrapped, solderless connections are mechanically stable and have less tendency to break due to handling and vibration than soldered connections. You get clean, metal-to-metal gas tight contact between wire and terminal with permanently low electrical resistance.

Both block and fanning strip are molded of durable, high-impact rubber modified acrylic plastic well known for its dimensional stability, strength and resistance to shock under adverse environmental conditions. Terminals are hard brass and plated for maximum conductivity.

Behind the development of these new terminal blocks is 25 years of experience in meeting rigid military specifications on a wide variety of devices. This is your assurance of top quality performance and long dependable service life.

Letters and numbers provide easy terminal identification.

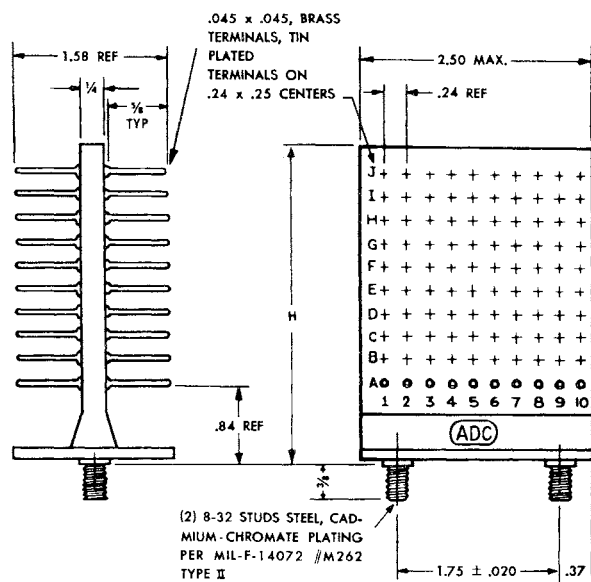
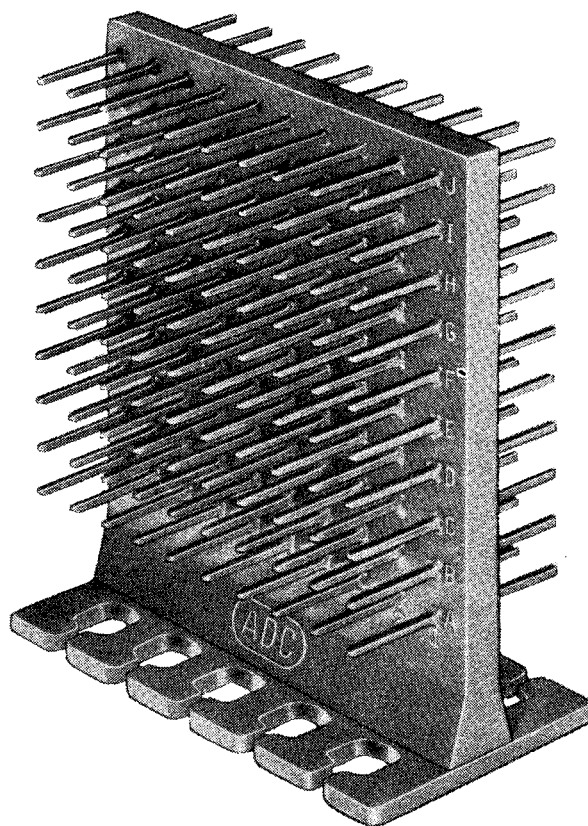
Mounting studs are steel cadmium-chromate plated to withstand 50 hours of salt-spray.

### CUT COSTS MANY WAYS

Not only do these new terminal blocks save space and time, they cut production costs.

Wrapped connections depend more on the wrapping tool — less on the operator. The result: the most positive, most uniform connections obtainable — with less need for inspection. The operator makes more connections with far less fatigue.

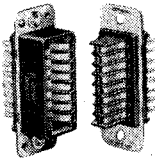
And, you eliminate expensive solders, connectors, damaging solder splashes, clippings, and deceptive cold-soldered joints.



PJ NO.	NO. OF TERMINALS	H DIM.	NET
PJ 604	40	1.75	\$2.64
PJ 606	60	2.25	3.24
PJ 608	80	2.75	3.84
PJ 610	100	3.25	4.44

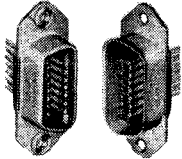


# RACK & PANEL CONNECTORS



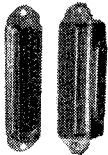
## BLUE *Ribbon*® CONNECTORS

The Amphenol gold-plated ribbon connector provides more contact mating surface than any connector of its type. Applying the principle of the wedge, ribbon contacts exert a continuous flexing action against each other while mated, providing unusually low contact resistance. The Blue Ribbon® contact is self-wiping for reliability throughout its long life, and is available with 8 to 32 contacts. Cable to panel versions are also available.



## *Micro* RIBBON® CONNECTORS

Amphenol's Micro Ribbon® connector is a miniature version of the Blue Ribbon. It features 14 to 50 contacts, low contact resistance, self-wiping action and miniature size.



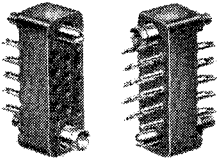
## *Min-Rac 17* CONNECTORS

Amphenol's Min-Rac 17® connector is highly suited for saving needed space for proper ventilation, component mounting, or chassis size reduction. Mounting depth is less than most "shell-less" rack-and-panel connectors. It provides up to 50 Poke-Home® terminals in half the insert space required for standard rack-and-panel connectors. Poke-Home contacts are available in either crimp or solder versions.



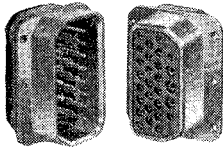
## HEX-TYPE CONNECTORS

Amphenol provides a complete family of miniature rack-and-panel and cable-to-chassis connectors for interconnection in a wide range of applications. Hardware and contacts are interchangeable. Bodies are molded of diallylphthalate; gold-over-silver contacts will not tarnish or corrode and can be soldered without pre-tinning even after long storage. All hardware is nickel-plated solid brass.



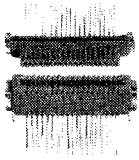
## 126 SERIES CONNECTORS

The 126 Series is a versatile group of connectors available in 11, 15, and 20 contacts—with or without protective can and cable clamp. Rated at 900 volts RMS, 60 CPS at sea level. Bodies are mica-filled phenolic; contacts are gold-plated.



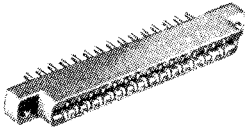
## 94 SERIES POKE-HOME® CONNECTORS

Amphenol's 94 Series rack-and-panel connectors feature Poke-Home contacts. Aluminum shells are cadmium plate, chromate treated. Useful for any rack-and-panel application, the 94 Series is especially valuable where circuits must be changed frequently within the connector. Poke-Home contacts can be wired and then inserted into the mounted or unmounted connectors in any desired position.



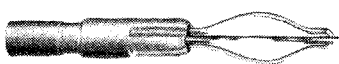
## MICRO-MINIATURE CONNECTORS

Amphenol provides three additional complete series of subminiature connectors designed for modules, stick-circuitry, thin style printed circuit boards, and other micro-miniature applications. Use of the Micro-Mod®, Micro-Min® Series, and Micro-Edge® connectors is limited only by the imagination of the design engineer.



## PRINTED CIRCUIT CONNECTORS

Amphenol's printed circuit connectors are available with ribbon or tuning fork contacts. The broad selection of contact tails represents the most complete line in the industry.



## WIRE-FORM POKE-HOME® CONNECTORS

Unique contact design in Amphenol's Wire-Form connectors places the spring tension member in the pin contact. The Wire-Form connector combines Poke-Home contact versatility with center to center spacing as close as .075. Four complete styles are available:

Mighty-Mite®—cable-to-panel and cable-to-cable application; 7 to 61 contacts.

Tiny Tim®—module and rack-and-panel application; 5 to 33 contacts.

Micro-Rac®—rack-and-panel, cable, and module application; 52 to 104 contacts.

Wire-Form Strip—permits cutting and stacking in unlimited shapes.

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# POWER CONNECTORS



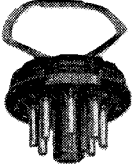

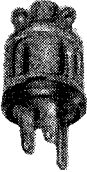
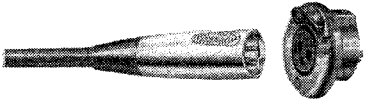
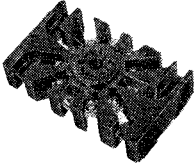
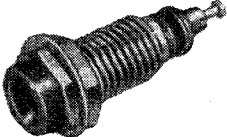
	<p><b>MS CONNECTORS</b></p> <p>Amphenol builds MS connectors to the latest issue of MIL-C-5015 Specification. They are designed, manufactured, and approved under this specification for the armed forces, and are ideal for commercial and industrial applications which require the same versatility and dependability.</p>
	<p><b>MS—E/R CONNECTORS</b></p> <p>Amphenol's resilient dielectric MS connector meets all environmental requirements of the latest revision of MIL-C-5015. Its unitized grommet eliminates the use of bulky cable clamps, and results in a considerable reduction of length and weight in relation to standard MS connectors.</p>
	<p><b>69 POKE HOME<sup>®</sup> CONNECTORS</b></p> <p>Amphenol Poke "R" solderless connectors provide all the lightweight environmental-resistant features of MIL-C-5015s "R" Class with two important additions: Poke-Home contacts and superior environmental performance. Incorporation of these two features make Poke "R" a highly preferred MIL-C-5015-type connector.</p>
	<p><b>48 SERIES—MIL-C-26500 (USAF)</b></p> <p>Meeting or exceeding all MIL-C-26500 requirements, Amphenol's 48 Series combines miniature environmentally-resistant construction and Poke-Home crimp type contacts. MIL-C-26500 connectors perform with utmost reliability in temperatures of <math>-55^{\circ}\text{C}</math> to <math>+260^{\circ}\text{C}</math>, with no de-rating up to 360,000 ft. Available with threaded and bayonet coupling.</p>
	<p><b>67 SERIES MINNIE<sup>®</sup> CONNECTORS</b></p> <p>Amphenol 67 Series MinnieE connectors are quick-disconnect, multi-contact, miniature bayonet types. MinnieE connectors feature inclined stainless steel slots and spring loaded coupling rings. A bright orange visual indicator signals full coupling. The 67 Series has a wide variety of shell styles with environmental capability. Receptacles are available in hermetics.</p>
	<p><b>89 SERIES CONNECTORS</b></p> <p>Rugged and completely leakproof, Amphenol 89 Series connectors provide efficient and dependable service even when entirely submerged in mud, ice, water, or mire. They are used extensively in missile ground-and-support systems, radar antenna installations, oil well and digging equipment, and other hard-service applications. Available in more than 70 insert configurations with 2 to 52 contacts.</p>
	<p><b>115 SERIES CONNECTORS</b></p> <p>Amphenol 115 Series connectors accommodate 50 or 100 No. 16 contacts and are nominally rated at 750 volts RMS, 60 CPS at sea level. They provide maximum space efficiency for all applications where a large number of circuits must be broken quickly and conveniently. The vise-action of the screw lock permits a quick-make quick-break switching action of all contacts.</p>
	<p><b>MINIATURE "AN" CONNECTORS</b></p> <p>Compact, efficient Amphenol 165 Series connectors are miniature versions of standard AN/MS types. Because of their weight and space saving design they are widely used in aircraft and miniaturized electronic equipment. 165 Series connectors use bayonet couplings, and are both pressure-proof and completely waterproof—mated or apart. Hermetically sealed, 182 Series connectors mate with connectors of the 165 Series.</p>
	<p><b>172 SERIES HERMETIC CONNECTORS</b></p> <p>Amphenol 172 Series hermetic receptacles use an improved hard-glass compression seal with high visibility "Identoseal" contact identification. Both insert faces have ceramic white marking permanently fused to the dark brown glass. Receptacles mate with MIL-C-5015 MS plugs. The 172 Series is available in round flange, square flange, hex flange, and flangeless shells.</p>

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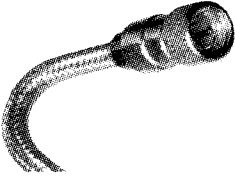
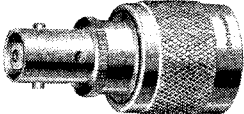
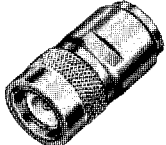
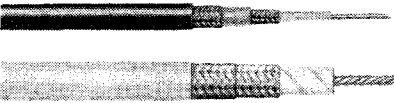
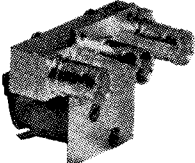
# TUBE SOCKETS, AND MICROPHONE CONNECTORS

	<p><b>"S" TYPE TUBE SOCKETS</b></p> <p>Amphenol "S" type tube sockets mount quickly and easily without screws or rivets by means of a patented "Retainer Ring Mounting." Sockets position to line up contacts for convenient wiring. The "S" type tube socket may be used with "Plug Caps" to make high-quality, low-cost cable connectors. Available also in mica-filled phenolic.</p>
	<p><b>"MIP" SOCKETS</b></p> <p>Amphenol's famous "MIP" socket (Molded-in-Plate) features Bakelite dielectric, and 4 to 20 contacts.</p>
	<p><b>"CP" PLUGS</b></p> <p>Amphenol "CP" plugs also mount simply through use of the patented "Retainer Ring Mounting." "CP" plugs are ideal as chassis connectors with plug-in units and are available optionally in mica-filled phenolic. They also adapt to cable applications when used with steel caps.</p>
	<p><b>110/220 VOLT PLUGS &amp; RECEPTACLES</b></p> <p>Amphenol's 110/220 volt plugs and receptacles may be panel or cable mounted. Available with rubber grommets or cable clamp type shields, recessed or raised mountings, two or three contacts.</p>
	<p><b>110 VOLT GROUND PLUGS &amp; RECEPTACLES</b></p> <p>Amphenol's 110 volt ground plugs and receptacles meet latest UL requirements. The 160 Series may be panel or cable mounted.</p>
	<p><b>MIKE CONNECTORS</b></p> <p>Designed for use with shielded microphone cables, Amphenol's family of microphone connectors are available in several series and include "Quik" Microphone Connectors with quick-button disconnect, 75 Series, single and double contact 80 Series, and its companion, 3 and 4 contact 91 Series.</p>
	<p><b>RELAY SOCKETS</b></p> <p>Amphenol relay sockets are available in a broad range of contact styles and sizes, with up to 20 contacts.</p>
	<p><b>MILITARY TIP JACKS</b></p> <p>Amphenol military tip jacks feature a recessed silver-plated contact for top durability and high performance. Tip jacks formerly were manufactured by the i.p.c. division.</p>

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## RF PRODUCTS

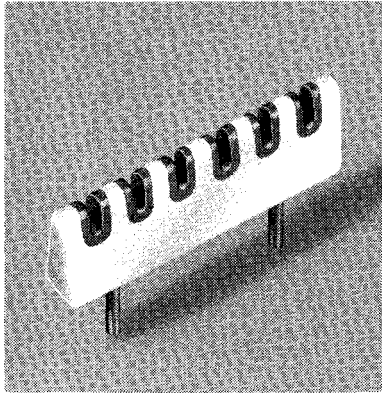
	<p><b>83 SERIES UHF CONNECTORS</b></p> <p>Amphenol's UHF 83 Series consists of both small and large single and twin contact connectors. All are low-cost, general purpose connectors of non-constant impedance. They operate satisfactorily at frequencies up to 200 megacycles, can be used with caution up to 500 megacycles, and can be used at peak voltages up to 500 volts.</p>
	<p><b>BNC SERIES CONNECTORS</b></p> <p>Amphenol Series BNC connectors for small coaxial cables consist of non-constant impedance types and an improved constant 50 ohm impedance type. All incorporate quick-connect and disconnect bayonet-lock coupling and are weatherproof. BNC connectors are small, lightweight, and are recommended for quality, low-voltage applications, both indoors and out.</p>
	<p><b>SERIES N CONNECTORS</b></p> <p>Completely weatherproof Series N connectors are the most popular constant impedance connectors for medium size coaxial cables. They can be used throughout microwave frequencies with minimum line unbalance or increase in standing-wave ratio. Although Series N 50 ohm and 70 ohm connectors do not mate, 70 ohm cables may be used with 50 ohm Series N connectors where impedance matching is not critical.</p>
	<p><b>SUBMinax<sup>®</sup> RF CONNECTORS</b></p> <p>Amphenol's SubMinax RF connector family provides the most complete subminiature line available from one source. The SubMinax 27 Series is gold-plated and uses a MIL-C-22557 screw-on and push-on coupling. The SubMinax 5116 is silver-plated and mates with competitive non-MIL-C-22557 screw-on, push-on coupling types. The 5116 contains only five components, saving as much as two-thirds assembly time.</p>
	<p><b>BETWEEN SERIES ADAPTERS</b></p> <p>Amphenol can provide the most complete line available of between-series adapters.</p>
	<p><b>OTHER RF CONNECTORS</b></p> <p>Types C, HN, LC, BN, TNC, LN, SKL, MB, MC, SM, TWINAX, MHV, and Terminations, as well as a variety of modifications, make up the complete Amphenol/i.p.c. line.</p>
	<p><b>COAXIAL CABLE</b></p> <p>Amphenol provides the broadest line of RG and non-RG coaxial cable available, and is generally accepted as the quality leader in this field. Dielectric includes Teflon, Polyethylene, and Polyfoam.</p>
	<p><b>COAXIAL SWITCHES</b></p> <p>Amphenol coaxial switches provide remote and manual switching up through 4000 mc. Single pole, single throw-through 12 pole. Available with a variety of terminating connectors and relay voltages.</p>

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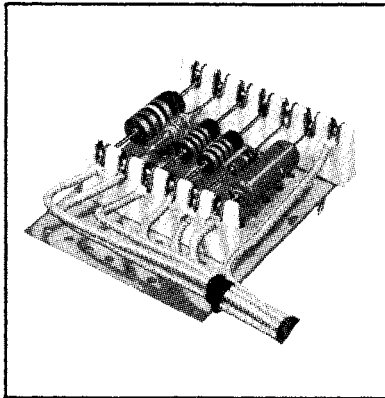
BROADVIEW, ILLINOIS

# CERAMIC TERMINAL STRIPS

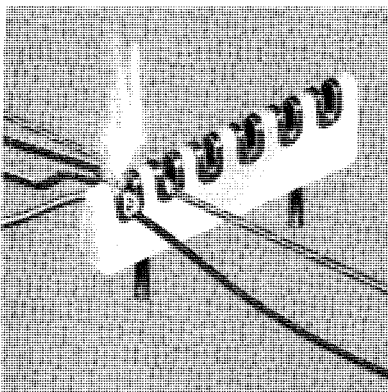
FOR INSTRUMENTS, COMPUTERS AND QUALITY ELECTRONIC EQUIPMENT



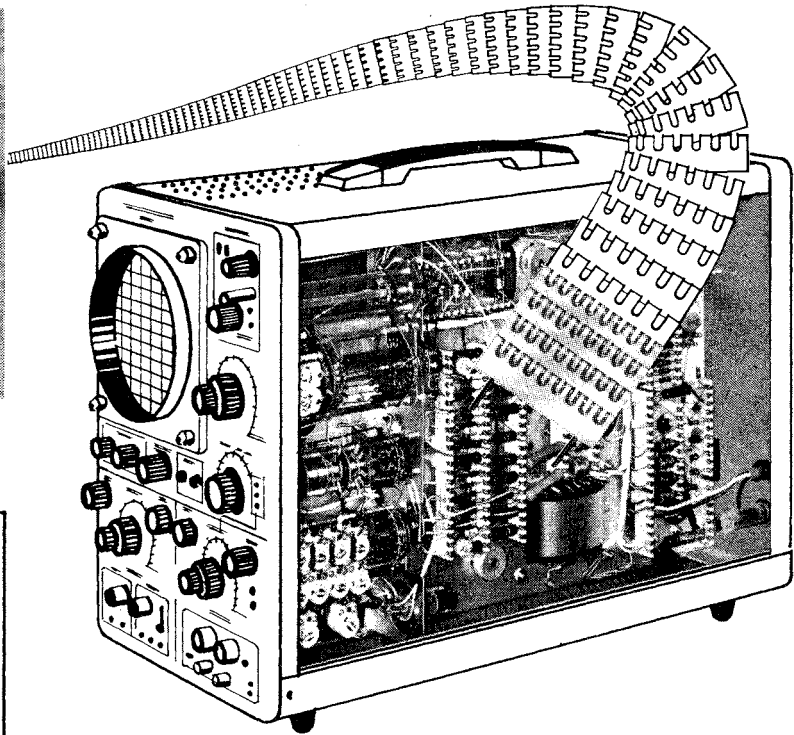
AVAILABLE  
 2-TERMINALS      8-TERMINALS  
 4-TERMINALS      10-TERMINALS  
 6-TERMINALS      12-TERMINALS



Designers can create functional chassis layouts.

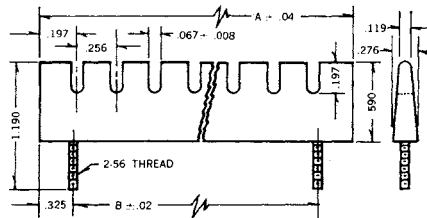


Simplifies repairing. Resolder over and over again. Allows picking up test points very easily.



FEATURES A PERMANENT BOND BETWEEN METAL AND CERAMIC, NOT JUST AN ADHESION, BUT "FIRED" TO PREVENT METAL FROM LOOSENING.

**ELECTRONIC ENGINEERS** who insist on high standards in manufactured products have found these new ceramic terminal strips as an answer to their "quality" problems. They are especially suitable for experimental design where components need to be resoldered and removed. Fired copperplate on ceramic is silverplated and tinned which facilitates soldering of components and leads. They are superior to the commonly used temperature afflicted plastics. The high temperature qualifications allow these ceramic strips to withstand excessive heat. The uniform manufacturing of the terminal strips gives the row after row assembly a neater appearance and adds a quality look overall. Standard 2-56 thread studs are made extra long to be cut off at any required dimension. Ideal for long life, low resistance. Recommended for prototypes and production uses.



MODEL	NO. SLOTS	"A"	"B"
MEP-2	2	.650	—
MEP-4	4	1.161	.512
MEP-6	6	1.673	1.024
MEP-8	8	2.185	1.535
MEP-10	10	2.697	2.047
MEP-12	12	3.209	2.560

MODEL	TERMINALS	One	10-	100
		.9	99	Over
MEP-2	2	36¢	24¢	21¢
MEP-4	4	45¢	30¢	25¢
MEP-6	6	60¢	40¢	34¢
MEP-8	8	75¢	50¢	42¢
MEP-10	10	87¢	58¢	49¢
MEP-12	12	99¢	66¢	56¢

Lawrence,  
 Mass.

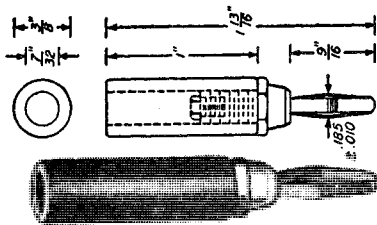
# ALCOSWITCH





BIRNBACH

INSULATED BANANA — GIANT — PLUGS and JACKS



INSULATED BANANA PLUG

Hexed brass n. pl. spring type. Fits standard banana jacks. Sertlok solderless connection. Molded handle. Colors: Red, Black, Yellow, Blue, Green, White.

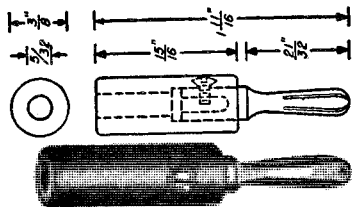
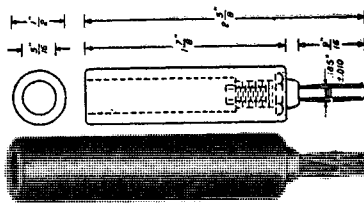
Cat. No. Spring Std. Pkg.  
404 Phos. Brz. 50  
404-CB Beryl. Cop. 50

INSUL. BANANA PLUG

Plug brass n.pl. Sertlok solderless connection. Spring type. Fits standard jacks. Plastic handle.

Colors: Red, Black.

Cat. No. Spring Std. Pkg.  
341 Phos. Brz. 50  
341B Beryl. Cop. 50



INSULATED BANANA PLUG

Split type plug brass n. pl. fits standard banana jacks. Set screw. Solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

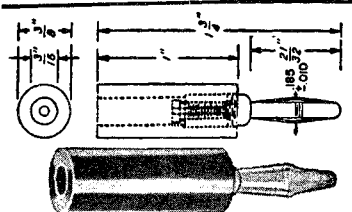
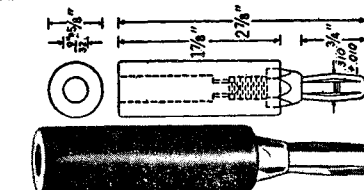
Cat. No. Std. Pkg.  
604 Banana Plug 50

INSUL. GIANT PLUG

Plug brass n.pl. Wire can be soldered to plug. Spring type. Fits giant banana jacks. Plastic handle.

Colors: Red, Black.

Cat. No. Spring Std. Pkg.  
392 Phos. Brz. 50  
392B Beryl. Cop. 50



INSULATED BANANA PLUG

Brass n.pl. plug. Fits standard banana jacks. Spring type. Sertlok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

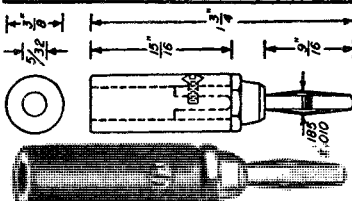
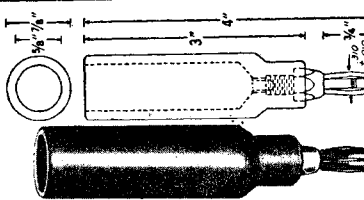
Cat. No. Spring Std. Pkg.  
465 Phos. Brz. 50  
465-B Beryl. Cop. 50

INSUL. GIANT PLUG

Plug brass n.pl. Wire can be soldered to plug. Spring type. Fits giant banana jacks. Polished giant hard rubber handle.

Colors: Red, Black.

Cat. No. Spring Std. Pkg.  
342 Phos. Brz. 50  
342B Beryl. Cop. 50



SPRING BANANA PLUG

Hexed brass n.pl. plug. Set screw solderless connection. 404-BC Beryllium springs. Highly resilient. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

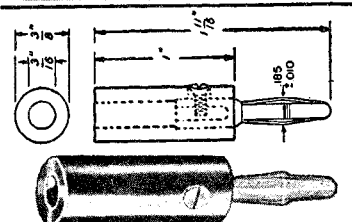
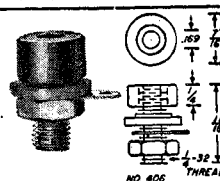
Cat. No. Spring Std. Pkg.  
404-B Phos. Brz. 50  
404-BC Beryl. Cop. 50

INSULATED BANANA JACK

Takes all standard banana plugs. Body is brass n.pl. Mounts in 3/8" hole in panels up to 3/8" thick. Molded head.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. Std. Pkg.  
406 Insulated Jack. 50



INSULATED BANANA PLUG

Plug brass n.pl. set screw solderless connection. Spring type. Fits standard banana jacks. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

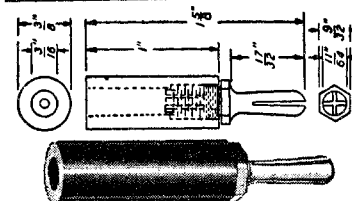
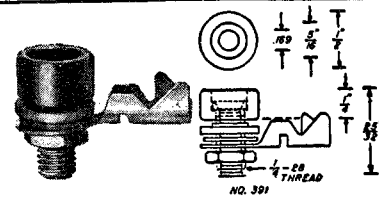
Cat. No. Spring Std. Pkg.  
404-B Phos. Brz. 50  
404-BC Beryl. Cop. 50

INSULATED BANANA JACK

Accommodates all standard banana plugs. Body is brass n.pl. Mounts in 3/8" hole in panels up to 3/8" thick. Complete with all hardware. Molded head.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. Std. Pkg.  
391 Insulated Jack. 50



INSULATED BANANA PLUG

Split type, brass n.pl. Sertlok solderless connection. Fits standard jacks. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

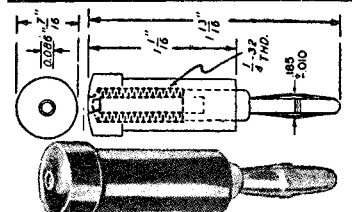
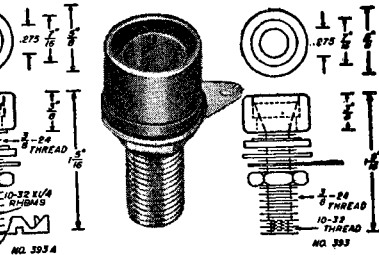
Cat. No. Std. Pkg.  
606 Banana Plug 50

INSULATED GIANT JACK

Accommodates all giant plugs. Body is brass n.pl. Mounts in 3/8" hole in panels up to 3/8" thick. Molded plastic head.

Colors: Red, Black.

Cat. No. Std. Pkg.  
393 Insulated Giant Jack. 50  
393A Insulated Giant Jack. 50



TIP PLUG TO BANANA PLUG ADAPTER

Fits standard banana jacks. Adapter for phone tip to banana plug. Molded handle. Colors: Red, Black, Yellow, Blue, Green, White.

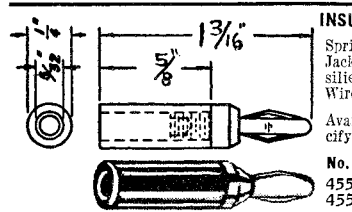
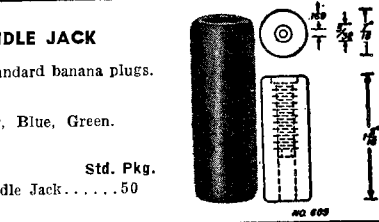
Cat. No. Spring Std. Pkg.  
467 Phos. Brz. 50  
467B Beryl. Cop. 50

INSULATED HANDLE JACK

Jack brass, n.pl. Fits all standard banana plugs. Plastic handle.

Colors: Red, Black, Yellow, Blue, Green.

Cat. No. Std. Pkg.  
605 Insulated Handle Jack. 50



INSULATED MIDGET BANANA PLUG

Spring Type. Fits all standard Banana Jacks. Beryllium spring retains resiliency after thousands of insertions. Wire soldered directly into Plug.

Available in Red or Black only. Specify color. Std. pkg. 50.

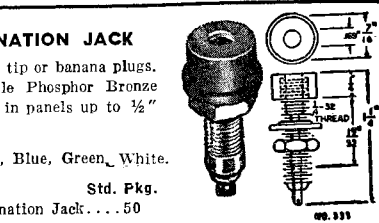
No. Spring Material Plating  
455 Phosphor Bronze Nickel  
455BC Beryllium Copper Silver

INSULATED COMBINATION JACK

Takes standard senior phone tip or banana plugs. Body is brass n.pl. Double Phosphor Bronze spring. Mounts in 3/8" hole in panels up to 1/2" thick. Molded head.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. Std. Pkg.  
333 Insulated Combination Jack. 50

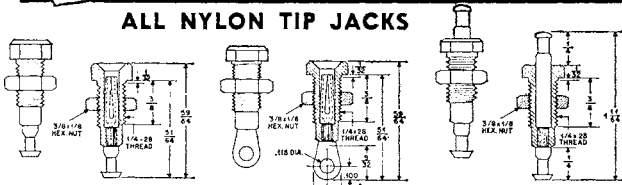


# Birnbach

## INSULATED PHONE TIPS, TIP JACKS TEST PRODS



### ALL NYLON TIP JACKS

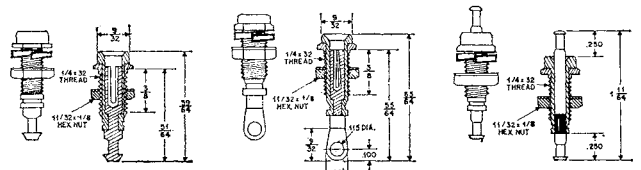


**No. 1180**  
Completely Molded Nylon Jack. Fits all standard phone tip plugs. Contact recessed in head for safe contact. Hexagon head for grip in tightening. Mounts in 1/4" hole in panels up to 1/4" thick. Meets following requirements: 1. Salt Spray Test—Withstands 100 hours. 2. Rated Voltage & Current—1000 volts peak at 5 amps. max. 3. Test Voltage—9000 volts DC peak. 4. Insulation Resistance—5000 megohms. 5. Operating Temperature—55 to +150 C. 6. Nominal Capacity—2.9 muf. 7. Material Specifications—A. Body: Nylon Grade FM 10001. A. Center Contact: Numbers 1180 and 1182 Heat Treated Beryllium Copper Silver plated per Spec 72-53. Number 1184 Brass, Tin Pl.; C. Hex Nut: Brass Nickel Pl. 8. Colors—Red, Black, Orange, Green, Blue, White, Brown, Yellow, Grey & Purple. Specify Color.

No.	Type	Std. Pkg.
1180	Wrap Around	25
1182	Spade Terminal	25
1184	Feed Through	25

### NYLON TIP JACK WITH METAL SHELL

Made to Meet MS-16108 Spec.



**No. 1190**  
Molded Nylon Tip Jack. Metal shell eliminates possibility of stripping threads during assembly. Meets following requirements: 1. Salt Spray Test—Withstands 100 hours. 2. Rated Voltage & Current—1000 volt peak @ 5 amps. maximum. 3. Test Voltage—2500 peak. 4. Insulation Resistance—5000 megohms. 5. Operating Conditions—A. Continuous; 23 hours on, 1 hour off; B. Elevation: Up to 15,000 feet; C. Temperature: -55 to +85 C; D. Humidity: Up to 95%.

**No. 1192**  
6. Material Specifications—A. Insulator: Nylon, Grade FM 10001; B. Shell & Nut: Brass Nickel Plated Per Spec 72-53; C. Lockwasher: Phosphor Bronze Nickel Plated Per Spec 72-53; D. Center Contact: Numbers 1190 and 1192 Heat Treated Bery. Copper Silver Plated per Spec 72-53. Number 1194 Brass, Tin Plated.

**No. 1194**  
7. Non-Operating Conditions—A. Elevation: Up to 50,000 feet; B. Temperature: Continuous exposure for 72 hours @ +160 F and 240 hours @ -80 F; C. Humidity: Up to 100%.

8. Colors—Red, Black, Orange, Green, Blue, White, Brown, Yellow, Grey & Purple. Specify Color.

No.	Type	Std. Pkg.
1190	Wrap Around	25
1192	Spade Terminal	25
1194	Feed Through	25

### SENIOR SOLDERLESS PHONE TIP

Brass nickel plated. Fits standard phone tip jacks. Wire fastens under knurled nut. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. 409 Sr. Std. Pkg. 50

### JUNIOR SOLDERLESS PHONE TIP

Same as above except 2" overall length. Specify colors.

Cat. No. 415 Jr. Std. Pkg. 50

### SCRULOK PHONE TIP

Brass nickel plated. Fits standard phone tip jacks. Scrulok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. 412 Std. Pkg. 50

### NEEDLE POINT PLUG

Brass nickel plated body. Needle point tip. Accommodates standard banana plug in molded plastic handle.

Colors: Red, Black.

Cat. No. 330 Std. Pkg. 50

### SCRULOK PHONE TIP

Fits standard phone tip jacks. Plug is brass, nickel plated. Has Scrulok solderless connection. Molded handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. 419 Std. Pkg. 50

### PHONE TIP

Plugs into standard phone tip jacks. Brass nickel plated plug. Accommodates standard banana plug in molded plastic handle.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. 331 Std. Pkg. 50

### PHONE TIP JACK

Fits all standard phone tips. Body is brass, n.pl. Double Phosphor Bronze springs. Mounts in 5/8" hole in panels up to 3/8" thick. Molded head.

Colors: Red, Black, Yellow, Blue, Green, White.

Cat. No. 407 Std. Pkg. 50

### BRASS NICKEL PLATED TIPS

Fits all standard phone tip jacks.

Cat. No.	Std. Pkg.
402—Standard Phone Tip	100
402A—Phone Tip Larger Diam	100
402B—Heavy Duty Phone Tip	100

### BAKELITE PENCIL TEST PROD

Body is brass nickel plated with steel n.pl. needle. Has Scrulok solderless connection. Bakelite handle.

Colors: Red, Black.

Cat. No. 411 Std. Pkg. 12

### SCRULOK NEEDLEPOINT TEST PRODS

Phenolic insulated prod, has Scrulok solderless connection. Body is brass nickel plated with steel n.pl. needle.

Colors: Red, Black.

Cat. No.	(A) Overall	(B) Handle Length	Std. Pkg.
417	5-3/32"	4"	50
418	6-3/32"	5"	50

### HEAVY DUTY HI-VOLTAGE TEST PROD HANDLE

Tip is heavy brass nickel plated. Bakelite finger guard. Accommodates IN-34 diode and condenser for use as RF Probe. Colors, Red, Black.

Cat. No. 559 Std. Pkg. 20

### SOLDERLESS TEST PRODS

Body is brass nickel plated with solderless knurled nut connection. Heavy duty needlepoint, nickel plated.

Colors: Red, Black.

Cat. No.	(A) Overall	(B) Handle Length	Std. Pkg.
410	5 1/2"	4"	50
343	6 1/4"	5"	50

### NEEDLEPOINT TEST PRODS

Brass nickel plated body with steel nickel plated needle. Chuck threaded in end of handle is removable for replacing needles. Polished cast phenolic handle.

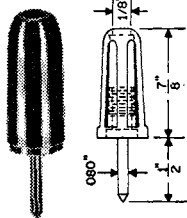
Cat. No.	(A) Overall	(B) Handle Length	Std. Pkg.
344	4-15/16"	3"	50
345	5-15/16"	3"	50

# Birnbach

PHONE TIPS, TIP JACKS TEST PRODS



### NEW NYLON INSULATED PLUG

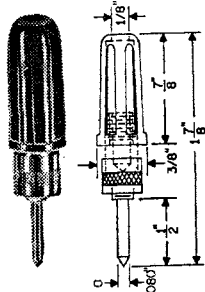


Molded of tough low-loss Nylon—provides high voltage insulation. Withstands extreme temperature changes without chipping or cracking. This series fits all standard Banana Jacks and standard Phone Tip Jacks.

Nylon Solderless Short Tip Plug. Molded Nylon handle, recessed metal head provides flush contact without metal exposure in any standard tip jack brass nickel plated plug. Solderless wire fits thru handle.

Cat. No. **NYLON PER**  
1169 **MIL-P-20693A** Std. Pkg. 100

Specify color as indicated above.

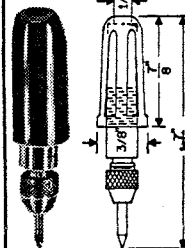


### NYLON SOLDERLESS TIP PLUG

Molded Nylon handle, Brass N.P.I. Solderless plug. Wire fits thru body of tip and is wrapped around screw portion and then tightened. Fits all standard tip jacks.

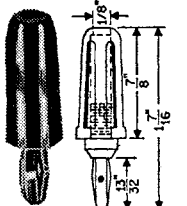
Cat. No. **NYLON PER**  
1170 **MIL-P-20693A** Std. Pkg. 100

Specify color as indicated above.



### NYLON BANANA PLUG—MIDGET

Molded Nylon Handle Brass N.P.I. Wire can be soldered directly into stud. Fits all Standard Banana Jacks.



Cat. No.	Spring Material	Plating	Std. Pkg.
1172	Phospor Bronze	Nickel	100
1173	Phospor Bronze	Silver	100
1174	Beryllium Copper	Nickel	100
1175	Beryllium Copper	Silver	100

Specify color as indicated in Color Code at right.

### NYLON PER MIL-P-20693A

Color Code For NYLON HANDLE PLUGS

Add to Catalog Numbers

—01 White	—08 Brown
—02 Red	—09 Lt. Green
—03 Black	—10 Dk. Blue
—04 Dk. Green	—11 Ivory
—05 Lt. Blue	—12 Violet (Purple)
—06 Orange	—13 Grey
—07 Yellow	

### PHONE NEEDLE TIP PLUG

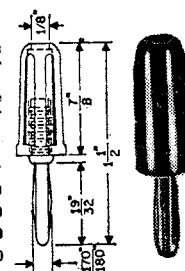
Molded Nylon Handle, Brass N.P.I. Plug. Has removable chuck for easy replacement of needles. Needle makes positive contact thru insulation or corrosion.

Cat. No. **NYLON PER**  
1171 **MIL-P-20693A** Std. Pkg. 100

Specify color as indicated above.

### NYLON BANANA PLUG

Molded Nylon handle, Brass N.P.I. plug. Springs Phosphor Bronze or Beryllium Copper, Nickel or Silver plated. Wire can be soldered into plug or brass stud.

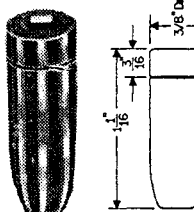


### NYLON HANDLE JACK

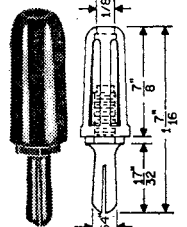
Made with our Nylon Tip Jack #1180 without mounting nut inside of threaded molded nylon insulated sleeve.

Cat. No. **NYLON PER**  
1179 **MIL-P-20693A** Std. Pkg. 100

Specify color as indicated above.



### NYLON BANANA PLUG NYLON PER MIL-P-20693A

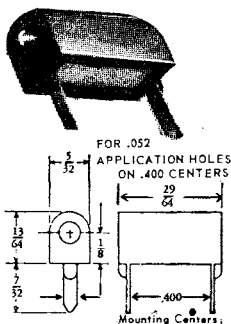


Molded Nylon handle, brass N.P. Plug, split type with solderless scrulock connection.  
Cat. No. **NYLON PER**  
1168 **MIL-P-20693A** Std. Pkg. 100

### PRINTED CIRCUIT TEST JACKS

Designed for permanent, soldered assembly to printed circuit boards. Nylon bodies. Has gold over silver plated Beryllium copper contacts which provide low resistance contact. Takes standard .080" diameter test probes. Colors: Red, Black, Green, Brown, Yellow, Blue, Purple, Grey, Orange, White.

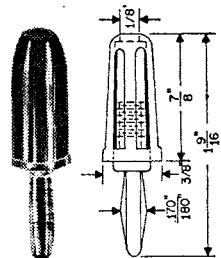
Cat. No. **NYLON PER**  
1177 **MIL-P-20693A** Printed Circuit Jack Std. Pkg. 25  
PER MIL F-14072, M301



### Same as above with Solderless Scrulock Connection. NYLON PER MIL-P-20693A

Cat. No.	Spring Material	Plating	Std. Pkg.
1160	Phos. Brz.	Nickel	100
1161	Phos. Brz.	Silver	100
1162	Beryl. Cop.	Nickel	100
1163	Beryl. Cop.	Silver	100

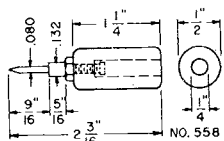
Specify color as indicated above.



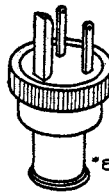
### HEAVY DUTY HIGH VOLTAGE TEST PROD HANDLES — No. 558

These bakelite prods are the same as used on the meter end of high voltage test leads Cat. No. 562. Tips are heavy brass with nickel plating.

Colors: Red, Black.  
Cat. No. **NYLON PER**  
558—1/4" H.V. Test Prod Handles. 20 Std. Pkge.



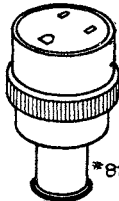
### ADAPTER PLUGS



### NEW TYPE 3 PRONG PLUG

NO.	LIST PRICE	STD. PKGE.
814T	.90	100

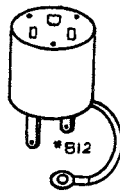
Two parallel blades plus ground pin for safe grounding of appliance.



### FEMALE CONNECTOR

NO.	LIST EA.	STD. PKGE.
811	2.25	25

For new type 3 prong plug. Female mate to No. 814T.



### ADAPTER FOR USING NEW TYPE 3 PRONG PLUG IN STANDARD OUTLET

NO.	LIST EA.	STD. PKGE.
812	.75	100

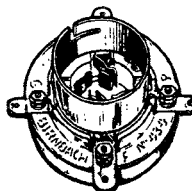
### BIRNBACH TRANSMITTING SOCKETS

Medium 4 Pin Bayonet and Jumbo 4 Pin Bayonet

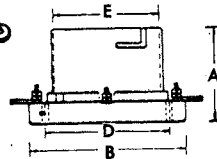
No. 434—"50 watt" socket for medium power bayonet based tubes such as 575A, 805, 810, 838, 845, 872A, 8000 and others with Retma Base No. A4-29. Has heavy phosphor bronze cadmium plated double wiping filament contacts will handle heavy currents. Terminals designed for solder or screw connections. Two mounting holes. Has polished nickel plated brass shell; white glazed porcelain base.

No. 435—"10 watt" socket for economy, has heavy phosphor bronze, cadmium plated side wiping contacts; white glazed porcelain base; heavy plated brass shell. Two mounting holes, for medium 4 pin bayonet based tubes such as 3B25, 3B28, 10Y, 801A, 808, 809, 811A, 812A, 834, 836, 860, 865, 866A, 1616, 8005 with Retma Base No. A4-10.

Cat. No.	Watt Socket	A	B	D	E	Mtg. Holes	Pin	Tube Base	Std. Pkg.
434	50	2-9/32"	3 3/8"	2-13/16"	1.886"	2	4	Std. Jumbo	25
435	10	1 7/8"	2 1/2"	2-1/16"	1.386"	2	4	Med. Bay	25



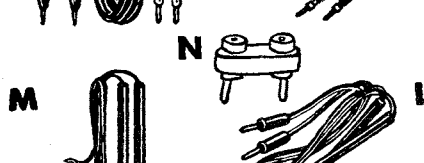
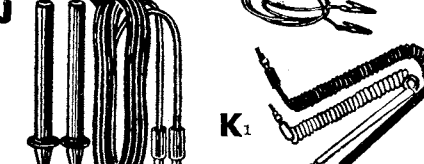
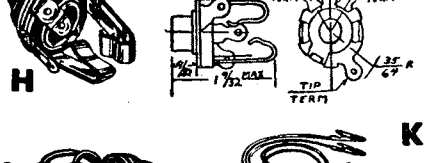
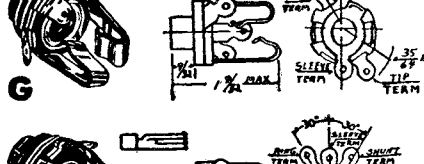
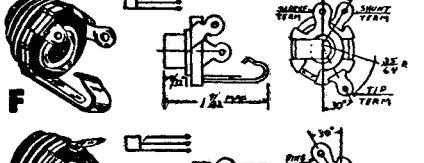
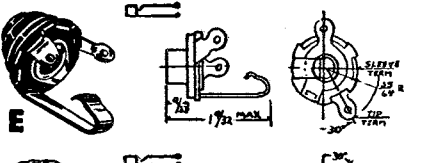
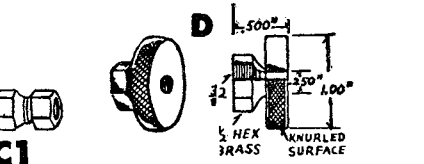
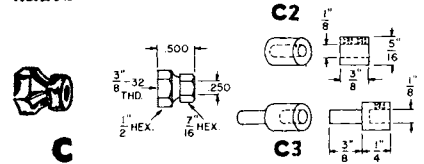
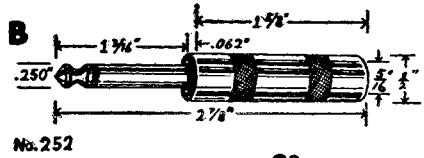
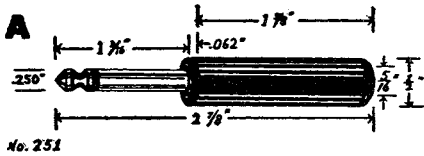
Nos. 434-435





# Birnbach

**STANDARD AND MINIATURE  
TELEPHONE TYPE  
JACKS • PLUGS • SHAFT LOCKS • TEST LEADS**



## TELEPHONE TYPE PLUGS

This standard two conductor plug fits all standard jacks. All metal parts brass with nickel plating except for contact screw. Barrel is molded bakelite. Red or Black.

- A — BAKELITE DOUBLE PHONE PLUG**  
Cat. No. 251.....Std. Pkg. 25
- B — SHIELDED PHONE PLUG**  
Cat. No. 252.....Std. Pkg. 25

## SHAFT LOCKS

- C — WRENCH TYPE**  
Brass, nickel plated. 1/2" length overall.  
Rear: 1/2" hex brass with 3/8-32 thread.  
Front: 1/8" hex brass.  
Cat. No. Std. Pkg.  
546 — For 1/4" Shaft .....25
- D — THUMB TYPE**  
Brass, nickel plated. 1/2" length overall.  
Rear: 1/2" hex brass with 3/8-32 thread.  
Front: 1" diam. knurled nut.  
Cat. No. Std. Pkg.  
547 — For 1/4" Shaft .....25

## MINIATURE SHAFT ACCESSORIES

- Brass Nickel plated for 1/8" shafts.
- C1 — MINIATURE LOCK—WRENCH TYPE**  
Cat. No. 546A Std. Pkg. 25
  - C2 — MINIATURE BRASS COUPLER**  
with allen head set screws  
Cat. No. 531A Std. Pkg. 25
  - C3 — MINIATURE SHAFT EXTENDER**  
with allen head set screws  
Cat. No. 538A Std. Pkg. 25

## TELEPHONE TYPE JACKS

The body is brass nickel plated. Small, rugged and they are designed for long life, with low contact resistance snap springs made specially from nickel silver alloy which is corrosion resistant. Mounts in 3/8" hole.

- E — Cat. No. 257 — Open Circuit Two Conductor .....Std. Pkg. 25**
- F — Cat. No. 258 — Single Closed Circuit Two Conductor .....Std. Pkg. 25**
- G — Cat. No. 259 — Open Circuit Three Conductor .....Std. Pkg. 25**
- H — Cat. No. 260 — Single Closed Circuit Three Conductor.....Std. Pkg. 25**

## TEST LEADS

### J — BIRNBACH HEAVY DUTY HIGH VOLTAGE TEST LEADS

Overall length 60". Tips are heavy solid brass nickel plated. Rugged, dependable heavy duty bakelite prods. Color coded Red and Black. Uses our Hi Volt kinkless test lead wire.

- Cat. No. Std. Pkg.
- 562 — Heavy Duty High Voltage Test Leads .....10

### L — DELUXE AND BAKELITE PENCIL TYPE TEST LEADS

No. 408 Bakelite pencil test leads, color coded, Red, Black, all with kinkless test lead wire. Overall length 60". #560 and #561 polished cast phenolic resin handles, solderless type tips. 50" long. Color coded Red, Black.

- Cat. No. Std. Pkg.
- 408 — Bakelite Pencil Type Test Leads, 6" handles .....10
- 560 — DeLuxe Solderless Prod Test Leads, 5" handles .....25
- 561 — DeLuxe Needlepoint Prod Test Leads, 5" handles .....25

### N — CRYSTAL SOCKET

Glazed ceramic base. Phosphor bronze silver plated contacts spaced .486". Pin diameter .051, mntg. hole .125. Std. Pkg. 25.

- Cat No. 595 Crystal Socket

### K — ALLIGATOR CLIP TEST LEADS

Black and Red kinkless test lead wire with Alligator Clips at each end.

- | Cat. No. | Wire Length | Std. Pkg. |
|----------|-------------|-----------|
| 675      | 12"         | 25        |
| 676      | 24"         | 25        |
| 677      | 36"         | 25        |
| 678      | 48"         | 25        |

SPECIAL ASSEMBLIES AVAILABLE TO ORDER

### K1 — STRETCH LEADS

Kink-Proof Retracted 9" Coil

No tangling or knotting of wires. Lead coil only 9", extends to 6 feet.

- Cat. No. 564 Solderless phone tip, retractile wire, solderless prod. Std. Pkg. 10.

### L — PUSH BUTTON KINKLESS TEST LEADS

- 556 Solderless phone tip one end, push button tip other end. Std. Pkg. 12
- 557 Solderless phone tip one end, push button banana plug other end. Std. Pkg. 12

### M — BIRNBACH NEEDLEPOINT TEST LEADS

Have Red and Black 4" fibre handles. Use kinkless lead wire. Overall length 50". Good, dependable low priced leads.

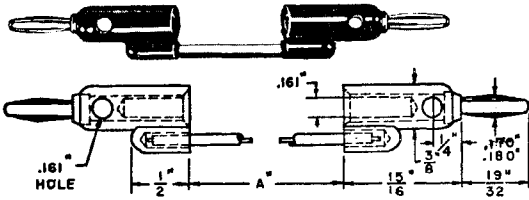
- | Cat. No.                               | Std. Pkg. |
|--|-----------|
| 420 — Needlepoint Phone Tip Test Leads | 25        |
| 421 — Needlepoint Spade Lug Test Leads | 25        |
| 422 — Solderless Phone Tip Test Leads  | 25        |
| 423 — Solderless Spade Lug Test Leads  | 25        |

# Birnbach

## PATCH CORDS PHONO JACK & PLUGS - PHONO SPLICE/TIP



### MOLDED "STACKING TYPE" PATCH CORDS



1. Never ending banana plug receptacle.
2. Interconnects unlimited amount of multiple circuits.
3. Positive and lasting contact for all standard banana plugs.
4. Four leaved heat treated beryllium copper spring.
  - a. 360 degrees spring contact
  - b. maintains resiliency after thousands of insertions.
5. Supplied in Red, Black, Yellow or Green. (Specify Color) (Special colors on request)
6. Handle molded to body and to wire.
7. 10,000 volt rubber covered flexible wire.
  - a. 65 strands #36 insulated to an O.D. of .140.

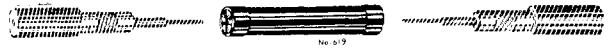
Cat. No.	("A") Wire	Std. Pkg.
655-8	8 inches	12
655-12	12 inches	12
655-24	24 inches	12
655-36	36 inches	12



Provides a never-ending banana plug receptacle to interconnect an unlimited amount of multiple circuits. The cross hole is designed for positive contact of all standard banana plugs. Fits all standard banana jacks. Four-leaved phosphor bronze nickel plated spring. Red or Black assemblies. Specify color. Std. pkg. 10.

Cat. No.	Wire Length	Pkg.
653-8	8"	12
653-12	12"	12
653-24	24"	12
653-36	36"	12

### PHONE TIP PLUG SPLICE



Takes all standard phone tip plugs excellent for quick connections or test, lead extensions.

Colors: Red, Black, Yellow, Green.

Cat. No. 619 — Insulated Banana Plug Splice ..... Std. pkg. 25

### IN-LINE PHONE TIP JACK



Takes all standard phone tip plugs. Can be used as lead extension.

Colors: Red, Black, Yellow, Green.

Cat. No. 621 — Insulated-In-Line Tip Jack ..... Std. pkg. 25

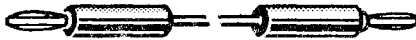
### PHONO-JACKS



Small, compact . . . where space is at a premium.

Cat. No.	Std. Pkg.
597	50
Space Saver . . . Rivets and grounds to chassis.	
Cat. No.	Std. Pkg.
598	50

### BIRNBACH PATCH CORDS



Birnbach No. 465 Banana Plugs connected to our kinkless test lead wire. Used to interconnect circuits. Fits all standard banana jacks. Specify red or black.

Cat. No.	Wire Length	Std. Pkg.
607	12"	25
608	24"	25
609	36"	25
610	48"	25

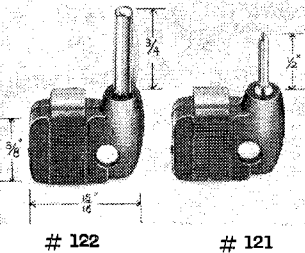
### SHIELDED EXTENSION JACK



Cadmium plated brass shell with black bakelite insert. Length is 2-7/16". Insulates for solder grip contact. Mates with No. 248 Phono Plug.

Cat. No.	Std. Pkg.
246—In-line Extension Jack	100

### PUSH BUTTON PHONE TIP PLUGS AND BANANA PLUGS



Description: Wire is fastened easily, speedily, and securely without soldering. Simply by pressing the push buttons the bare wire can be inserted into the opening of the plug.

Cat. No.	Std. Pkg.
121 Push Button Phone Tip Plug, Red and Black	100
122 Push Button Banana Plug, Red, Black, Yellow, Green, White	100

No. 121 Phone Tip Plug will fit all Standard Phone Tip Jacks. No. 122 Banana Plug will fit all Standard Banana Jacks.

### BIRNBACH NYLON HANDLE PATCH CORDS

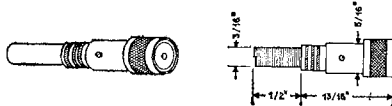


Birnbach #1162 Banana Plugs using molded nylon handle connected to our plastic kinkless test lead wire #18 65/3 TC. Suitable for 10 KV. Wire is same color as handle. For interconnecting circuits. Fits standard Banana Jacks.

Specify color: Red, Blk, Yellow, Green.

Cat. No.	Wire Length	Std. Pkge.
657-8	8"	25
657-12	12"	25
657-24	24"	25
657-36	36"	25
657-48	48"	25

### MINIATURE MICROPHONE CONNECTOR



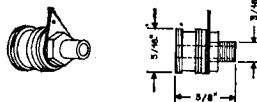
Single contact female.

No. 134 Miniature Female Conn. Std. pkg. 50



Single Contact Male  
No. 135 Miniature Male Conn. Std. pkg. 50

### MINIATURE CHASSIS CONNECTOR



Single Contact Male  
Complete with insulating washer and lug. Mounts in 1/4" hole. Mates with No. 134.

No. 136 Miniature Chassis Conn. Std. pkg. 50

### BIRNBACH THREADED RODS



These brass nickel plated threaded rods are standard parts of our insulator assemblies.

Cat. No.	Length	Thread	Std. Pkg.
16	4"	1/4-20	100
17	5 1/2"	1/4-20	100
18	10"	1/4-20	100
113	15"	1/4-20	100
114	1 3/8"	10-32	100
115	1 5/8"	10-32	100
116	2 1/4"	10-32	100
117	3"	10-32	100
118	8"	8-32	100
119	8"	6-32	100
15	2"	6-32	100

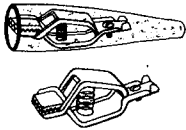
# Birnbach

## ALLIGATOR CLIPS — TEST CLIPS

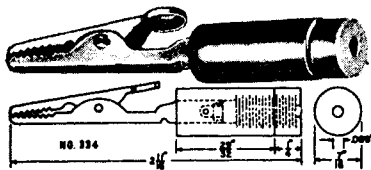


### BIRNBACH TEST CLIPS

The teeth mesh correctly permitting good contact to be made. The No. 27-C is a solid copper clip with a brass screw designed for high frequency work.



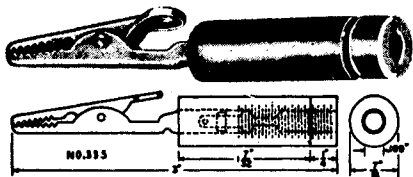
Cat. No.	Length	Jaw Spread	Capacity	Std. Pkg.
27—Pee Wee	1½"	⅜"	5 Amp.	50
28—Midget	2"	⅜"	10 Amp.	50
29—Medium	2⅞"	1"	25 Amp.	50
30—Large	4"	1¼"	50 Amp.	50
27C—Pee Wee Copper	1½"	⅜"	10 Amp.	50
27R—Vinyl Sleeve—Red or Black				50



#### ALLIGATOR CLIP WITH PHONE TIP JACK

Handle has our No. 31 clip and our No. 407 tip jack in rear for all standard phone tip plugs. Colors: Red, Black.

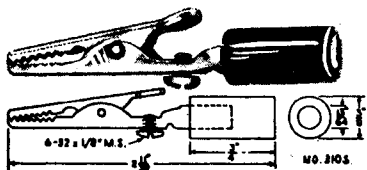
Cat. No.	Std. Pkg.
334—Alligator Clip with Phone Tip Jack	50
336—Same as above except with our #31C screw type Copper Alligator Clip	50



#### ALLIGATOR CLIP COMBINATION JACK

Insulated alligator clip is composed of our #31, steel, cadmium plated Alligator Clip with our #333 Combination Jack in rear allowing the adaption of both standard senior phone tip plugs and banana plugs to Alligator Clips. Colors: Red, Black.

Cat. No.	Std. Pkg.
335—Alligator Clip Combination Jack	50
337—Same as above except with our #31C screw type Copper Alligator Clip	50



#### INSULATED ALLIGATOR CLIP (Screw Type)

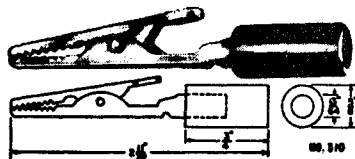
Made of steel, cadmium plated. Accurately matching jaws for tight grip. Has screw for solderless connection. Banana plug fits into rear of clip. Insulated handle. Colors: Red, Black.

Cat. No.	Std. Pkg.
310S—Insulated Alligator Clip	50
310C—Insulated Copper Alligator Clip	50

### MICRO-GATOR CLIPS

The Alligator Clip With the Microscopic Tip. Use it where no other clip can go—for tight spots, printed circuits, etc. Length 1½". Jaw spread, ⅜". Tiny tip, ⅜" across. New extra strong "keyed in" type hinge. Solder connection with clinching ears to relieve strain on wire.

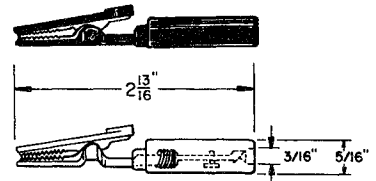
Cat. No.	Type	Std. Pkg.
31 MG/S	Steel, Cad. Plated	50
31 MG/C	Solid Copper	50
Specify color: 31 FB	Insulator Boots to Fit	50
Red, black, blue, yellow, white, green	31 MG/S or 31 MG/C	



#### INSULATED ALLIGATOR CLIP

Made of steel, cadmium plated. Insulated handle allows use of all banana plugs. Has small soldering lip. Colors: Red, Black.

Cat. No.	Std. Pkg.
310—Insulated Alligator Clip	50
310B—1½" Insulated handle Alligator Clip	50



#### ALL INSULATED ALLIGATOR CLIP

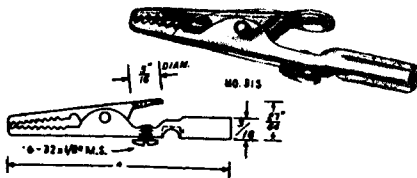
Steel Cadmium plated alligator clip. All metal parts covered with vinyl plastic insuring against shock. Solder Type connection. Red or Black. Specify color.

Cat. No. 123 Std. pkg. 50

#### PHONE TIP TO CLIP ADAPTER

Same as above with spring in rear of handle enabling the adapting of standard phone tip plugs to alligator clips, Red or Black. Specify color.

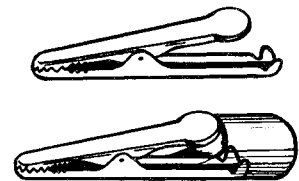
Cat. No. 124 Std. pkg. 50



#### ALLIGATOR CLIP (Screw Type)

Made of cadmium plated steel. The jaws match accurately, permitting them to grip all kinds of wire securely. Has screw for solderless wire connection. Banana plug fits into rear of clip.

Cat. No.	Std. Pkg.
31—Alligator Clip (no screw)	50
31S—Alligator Clip with screw	50
31C—Alligator Clip (Copper) w/scr.	50



#### MINIATURE ALLIGATOR CLIPS

Very small and compact. Useful where space is important. Accurately matching jaws for finger-tight grip. Length 1½". Jaws open to ⅜". Has lip for soldering.

Cat. No.	Type	Std. Pkg.
31 MS	STEEL (Cad Plate)	50
31 MC	Solid Copper	50

31 MB INSULATOR BOOT to fit 31 MS or 31 MC. Specify Black, Red, Blue, Yellow, White, Green.



#### ALLIGATOR CLIP VINYL INSULATOR BOOT

Extremely flexible. Made to fit Nos. 31, 31S, 31C. Colors: White, Red, Black, Yellow, Blue, Green.

Cat. No.	Std. Pkg.
31R—Vinyl Insulator	50



# Birnbach

## SUB-MINIATURE TEFLON TERMINALS



### NEW SUB-MINIATURE TEFLON TERMINALS

**NEW SUB-MINIATURE TEFLON\*** terminals provide instant mounting without any extra hardware of any kind because of the exceptional properties of Virgin Teflon\*.

Low dielectric constant, low power factor (60 cps to 30,000 mc), low capacitance, high volume, high surface resistivity, high dielectric strength (1500-2000 v/mil, s.t.), continuous service -450°F to plus 500°F, unaffected by soldering, chemically inert, damage resistant, water repellent.

Installed permanently in seconds, in metallic or non-metallic chassis in one, simple, corking motion into punched or drilled holes. Mounting Hole Data: 1. Punch or drill the hole to a diameter that is .012" less than the

diameter of the Teflon insulator which passes thru the chassis. 2. Where the thickness of the chassis permits, the entrance edge of the mounting hole should be countersunk 30° to the diameter of the insulator. Where chassis thickness will not permit (.040" or smaller), countersink 45° to the diameter of the insulator.

Speeds up assembly - cut production costs, no nuts, washers, staking or soldering necessary especially adapted in crowded assemblies.

As for HF, VHF, UHF, microwave, radar, telemetering, guided missile instrumentation and circuitry.

Your inquiries invited for sizes not shown here.

\*DuPont TM

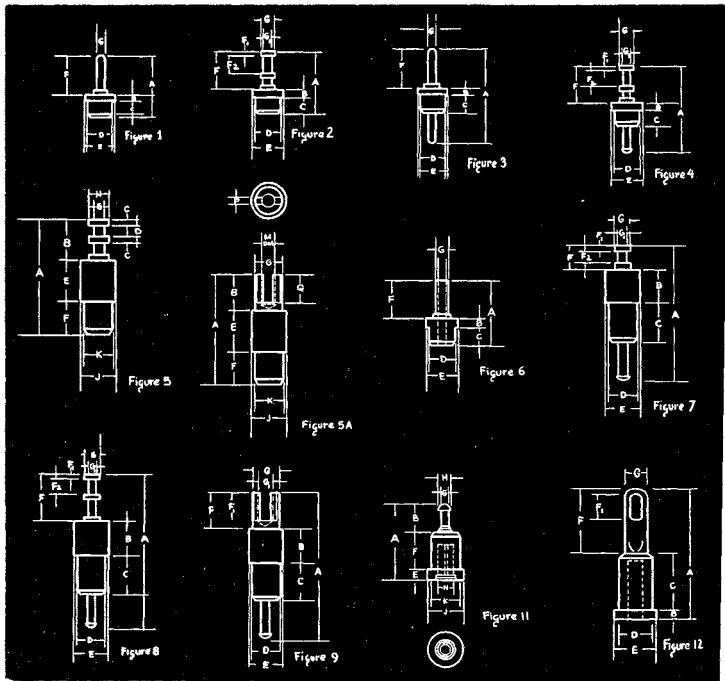
**MATERIALS**

Teflon\* (MIL-P-19468) ..... 100% Virgin Teflon\*, produced from raw resin to insure maximum quality for terminal body.

Property	ASTM Test	Value
<b>ELECTRICAL</b>		
Dielectric Strength Short Time	D149-55T	500-2000 V/Mil dependent upon thickness
Dielectric Constant 60 to 10 <sup>6</sup> cycles	D150-54T	2.0-2.1
Dielectric Constant 10 <sup>9</sup> cycles	D150-54T	2.0-2.1
Dissipation Factor 60 to 10 <sup>6</sup> cycles	D150-54T	Greater than 0.0003
Dissipation Factor 10 <sup>9</sup> cycles	D150-54T	Greater than 0.0003
Surface Resistivity 100% R.H.	D257-57	Less than 10 <sup>15</sup> OHMS/sq.
Surface Arc Resistance	D495-56T	Does not track
<b>MECHANICAL</b>		
Specific Gravity	D792-50	2.14-2.19
Hardness Durometer	D676-49T	D50-D65
Service Temperature		-450° to +500°F
Flammability		Non-Flammable
Water Absorption		Does not absorb moisture
Coefficient of Friction		.04 against polished steel
<b>CHEMICAL</b>		
Inert to all known chemicals and solvents except Molten Alkali Metals and Fluorine at elevated temperatures and pressures.		

Brass.....The brass used in the terminal meets Mil. Spec. QQ-B-626 comp. 1/2H.  
 Test Jack Material.....Beryllium Copper with .000030 min. Gold Flash over .0003 min. Silver Plate  
 Plating.....Solder Finish Electro Solder Plate (40 to 70% tin content) min. .0003 Electro Solder Plate over .0001 Copper

Also available in Silver, Gold Flash or Gold Plate to Mil Specs or other special plating.



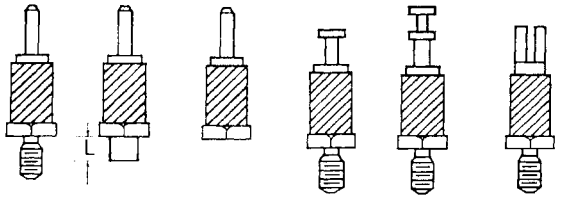
Cat. No.	Fig.	SUB-MINIATURE STAND-OFFS							STD. PKG. 100, 1000															
		VOLTAGE FLASHOVER					Cap. MMF	A	B	C	+.002" - .000 D diam.	E diam.	F	F <sub>1</sub>	F <sub>2</sub>	G diam.	G <sub>1</sub> diam.	L	N <sup>b</sup>	Q <sup>a</sup>				
Sea Level	50	100	200	300																				
506	1	3800	1400			.41	.350	.040	.100	.148	.172	.210				.040								
507	1	3950	1400			.39	.410	.040	.160	.148	.172	.210				.040								
508	1	3500	1410			.32	.500	.040	.250	.148	.172	.210				.040								
510	2	3960	1330			.41	.350	.040	.100	.148	.172	.210	.020	.100	.040	.080								
511	2	4060	1275			.36	.375	.040	.125	.148	.172	.210	.020	.100	.040	.080								
512	2	4150	1383			.36	.350	.040	.100	.179	.200	.210	.020	.100	.040	.080								
510-01	2	5580	1800			.45	.428	.093	.125	.148	.172	.210	.020	.100	.040	.080								
510-02	2	3730	1350			.37	.500	.040	.250	.148	.172	.210	.020	.100	.040	.080								
511-01	5	6220	1980			.58	.522	.125	.150	.165	.187	.250	.020	.095	.040	.093								
511-02	5	5300	1550	325	290	.60	.487	.046	.287	.185	.218	.154	.020	.046	.046	.093								
512-01	5A	4930	1933			.50	.478	.125	.150	.171	.187	.203	.156		.148	.078								
		SUB-MINIATURE FEED-THRU							STD. PKG. 100, 1000															
515	3	3960	1720			.55	.443	.040	.100	.148	.172	.210				.040								
514	3	4228	1135			.73	.515	.040	.100	.148	.172	.210				.045								
516	3	3984	1250			.71	.725	.040	.100	.148	.172	.210				.040								
518	4	3970	1340			.62	.500	.040	.100	.148	.172	.210	.020	.100	.040	.080								
519	4	4130	1190			.69	.500	.040	.165	.148	.172	.210	.020	.100	.040	.080								
517	6						.193	.025	.063	.125	.150	.105				.040	.030							
520	7	4000	1250	275	250	.80	.540	.063	.171	.171	.187	.133	.020	.093	.046	.093								
521	8	4230	1275			.72	.836	.187	.165	.148	.172	.250	.020	.093	.040	.093								
522	9	5740	1775			.81	.821				.171	.187	.203		.148							.078	.046	.156
		CONNECTORS AND TEST JACKS							STD. PKG. 100, 1000															
525-01	11	3500	725	275	250	.70	.637	.050	.400	.185*	.218	.187	.031	.104	.054	.074	.250	.080						
525-02	11	3500	1155			.80	.437	.046	.271	.185*	.218	.120	.037	.053	.054	.074	.195	.080						
525-03	11	3100				.50	.345	.046	.179	.148	.172	.120	.023	.077	.046	.050	.140	.040						
523	12	4300	975	300	275	.50	.687	.046	.287	.185*	.218	.354			.105		.263	.140						.042

**NOTES:**  
 Terminals may be ordered with Teflon insulators in reverse position of those shown making possible the entire assembly from one side. Add "R" to part number.  
<sup>a</sup> Altitude - Thousands of feet.      Capacitance measured when terminals installed in .062" thick aluminum chassis.  
<sup>\*</sup> Tolerance: ± .001".      <sup>b</sup> -Width of wire hole.      <sup>c</sup> -Diam. of probe received by contact.



# CAMBRIDGE THERMIONIC CORPORATION GAMBION®

# INSULATED TERMINALS— DIALLYL AND MELAMINE



I-a Threaded Stud Type  
I-b Rivet Type  
I-c Threaded Hole Type  
Also available in -b and -c types (See Fig. 1).

**\* QUANTITY DISCOUNTS**

For quantity discount, read price from stock listing below. Find the same price in this table in the first column, and read across for best price in quantity desired.

Each 1-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999
19c	15c	13c	12c	11c	10c	9c
20c	16c	14c	13c	12c	11c	10c
21c	17c	15c	14c	13c	12c	11c
22c	18c	16c	15c	14c	13c	12c
23c	19c	17c	16c	15c	14c	13c
24c	20c	18c	17c	16c	15c	14c
25c	21c	19c	18c	17c	16c	15c

**DIALLYL-INSULATED TERMINALS**

Brass mounting studs and terminals. **Stud Finish:** .0003" cadmium plate, colored chromate. **Hex Base:** 3/32" dia., types 4870-1 through 4893-1; 1/4" dia. all others. **Breakdown Volts:** 6000 v. rms, types 4810-1 through 4869-1; 3000 v. rms, all others.

**HOW TO ORDER**

Order by complete catalog number, i.e., Basic Part No., Terminal Finish, and Insulator Color.

Example: **4810-1-0516**

Basic Part No.	Terminal Finish (Electro Tin Lead)	Insulator Color (Blue)
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**TERMINAL FINISHES**

-05 Standard: Electro-tin lead. -01: Silver, available plated to order.

**INSULATOR COLORS**

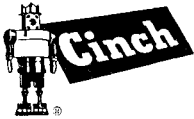
Standard Color -16: Blue. All others, below, available manufactured to order.

Code	Color	Code	Color	Code	Color	Code	Color
10	Black	12	Red	14	Yellow	16	Blue
11	Brown	13	Orange	15	Green	18	Gray
		19	Natural				

**MELAMINE-INSULATED TERMINALS**

All units listed here in diallyl are also available in melamine (-19 Natural color only), except Figure C types, threaded hole or internal thread configurations. Slightly lower prices for melamine units available upon request.

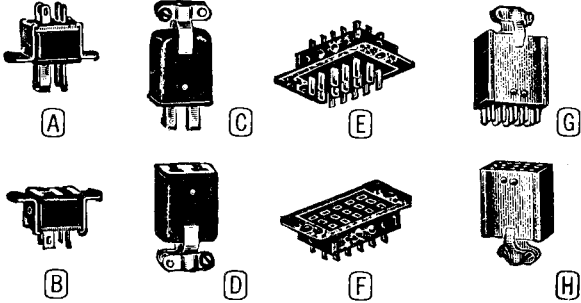
Camb. Basic Part No.	Fig.	Ht. Over Brd. In.	Pin, Tur. Dia., In.	Rivet Dia., or Thd. Size	Stud, "L" Lgth., or Tap Depth	Net Ea., 1-49*	Camb. Basic Part No.	Fig.	Ht. Over Brd. In.	Pin, Tur. Dia., In.	Rivet Dia., or Thd. Size	Stud, "L" Lgth., or Tap Depth	Net Ea., 1-49*	Camb. Basic Part No.	Fig.	Ht. Over Brd. In.	Pin, Tur. Dia., In.	Rivet Dia., or Thd. Size	Stud, "L" Lgth., or Tap Depth	Net Ea., 1-49*
4810-1	III-a	.719	.140	4-40	7/32	20c	4837-1	II-b	.594	.140	.141	.094*	20c	4865-2	IV-a	.844	#	6-32	1/8	25c
4811-1	III-a	.719	.140	6-32	7/32	20c	4837-2	II-b	.594	.140	.141	.125†	20c	4865-3	IV-a	.844	#	6-32	3/8	25c
4812-1	III-a	.719	.140	6-32	1/4	20c	4837-3	II-b	.594	.140	.141	.156†	20c	4866-1	IV-b	.844	#	.098	.094*	25c
4813-1	III-a	.719	.140	6-32	3/8	20c	4837-4	II-b	.594	.140	.141	.234‡	20c	4866-2	IV-b	.844	#	.098	.125†	25c
4812-1	III-b	.719	.140	.098	.094*	20c	4838-1	II-c	.594	.140	4-40	5/16	23c	4866-3	IV-b	.844	#	.098	.156†	25c
4812-2	III-b	.719	.140	.098	.125†	20c	4839-1	II-c	.594	.140	6-32	5/16	23c	4866-4	IV-b	.844	#	.098	.234‡	25c
4812-3	III-b	.719	.140	.098	.156†	20c	4840-1	II-a	.813	.140	4-40	7/32	22c	4867-1	IV-b	.844	#	.141	.094*	25c
4812-4	III-b	.719	.140	.098	.234‡	20c	4841-1	II-a	.813	.140	6-32	7/32	22c	4867-2	IV-b	.844	#	.141	.125†	25c
4813-1	III-b	.719	.140	.141	.094*	20c	4841-2	II-a	.813	.140	6-32	1/4	22c	4867-3	IV-b	.844	#	.141	.156†	25c
4813-2	III-b	.719	.140	.141	.125†	20c	4841-3	II-a	.813	.140	6-32	3/8	22c	4867-4	IV-b	.844	#	.141	.234‡	25c
4813-3	III-b	.719	.140	.141	.156†	20c	4842-1	II-b	.813	.140	.098	.094*	22c	4868-1	IV-c	.844	#	4-40	7/32	28c
4813-4	III-b	.719	.140	.141	.234‡	20c	4842-2	II-b	.813	.140	.098	.125†	22c	4869-1	IV-c	.844	#	6-32	7/32	28c
4814-1	III-c	.719	.140	4-40	5/16	23c	4842-3	II-b	.813	.140	.098	.156†	22c	4870-1	II-a	.390	.072	2-56	1/8	19c
4815-1	III-c	.719	.140	6-32	5/16	23c	4842-4	II-b	.813	.140	.098	.234‡	22c	4870-2	II-a	.390	.072	2-56	5/16	19c
4816-1	III-a	.938	.140	4-40	7/32	22c	4843-1	II-b	.813	.140	.141	.094*	22c	4870-3	II-a	.390	.072	2-56	1/4	19c
4817-1	III-a	.938	.140	6-32	7/32	22c	4843-2	II-b	.813	.140	.141	.125†	22c	4871-1	II-b	.390	.072	.078	.094*	19c
4817-2	III-a	.938	.140	6-32	1/4	22c	4843-3	II-b	.813	.140	.141	.156†	22c	4871-2	II-b	.390	.072	.078	.125†	19c
4817-3	III-a	.938	.140	6-32	3/8	22c	4843-4	II-b	.813	.140	.141	.234‡	22c	4872-1	II-c	.390	.072	2-56	5/16	20c
4818-1	III-b	.938	.140	.098	.094*	22c	4844-1	II-c	.813	.140	4-40	7/32	26c	4872-2	II-c	.390	.072	2-56	1/8	21c
4818-2	III-b	.938	.140	.098	.125†	22c	4845-1	II-c	.813	.140	6-32	7/32	26c	4873-1	II-a	.547	.072	2-56	5/16	21c
4818-3	III-b	.938	.140	.098	.156†	22c	4846-1	I-a	.665	.070	4-40	7/32	20c	4873-2	II-a	.547	.072	2-56	1/4	21c
4818-4	III-b	.938	.140	.098	.234‡	22c	4847-1	I-a	.665	.070	6-32	1/4	20c	4874-1	II-b	.547	.072	.078	.094*	21c
4819-1	III-b	.938	.140	.141	.094*	22c	4847-2	I-a	.665	.070	6-32	3/8	20c	4874-2	II-b	.547	.072	.078	.125†	21c
4819-2	III-b	.938	.140	.141	.125†	22c	4848-1	I-b	.665	.070	.098	.094*	20c	4875-1	II-c	.547	.072	2-56	.117	22c
4819-3	III-b	.938	.140	.141	.156†	22c	4848-2	I-b	.665	.070	.098	.125†	20c	4876-1	II-a	.453	.072	2-56	1/8	19c
4819-4	III-b	.938	.140	.141	.234‡	22c	4848-3	I-b	.665	.070	.098	.156†	20c	4876-2	II-a	.453	.072	2-56	5/16	19c
4820-1	III-c	.938	.140	4-40	7/32	26c	4848-4	I-b	.665	.070	.098	.234‡	20c	4876-3	II-a	.453	.072	2-56	1/4	19c
4821-1	III-c	.938	.140	6-32	7/32	26c	4849-1	I-b	.665	.070	.141	.094*	20c	4877-1	II-b	.453	.072	.078	.094*	19c
4822-1	III-a	.594	.093	4-40	7/32	20c	4849-2	I-b	.665	.070	.141	.125†	20c	4877-2	II-b	.453	.072	.078	.125†	19c
4823-1	III-a	.594	.093	6-32	7/32	20c	4849-3	I-b	.665	.070	.141	.156†	20c	4878-1	II-c	.453	.072	2-56	5/16	20c
4823-2	III-a	.594	.093	6-32	1/4	20c	4849-4	I-b	.665	.070	.141	.234‡	20c	4879-1	II-a	.610	.072	2-56	1/8	21c
4823-3	III-a	.594	.093	6-32	3/8	20c	4850-1	I-c	.665	.070	4-40	5/16	23c	4879-2	II-a	.610	.072	2-56	5/16	21c
4824-1	III-b	.594	.093	.098	.094*	20c	4851-1	I-c	.665	.070	6-32	5/16	23c	4880-1	II-b	.610	.072	.078	.094*	21c
4824-2	III-b	.594	.093	.098	.125†	20c	4851-2	I-c	.665	.070	6-32	3/8	23c	4880-2	II-b	.610	.072	.078	.125†	21c
4824-3	III-b	.594	.093	.098	.156†	20c	4852-1	I-a	.884	.070	4-40	7/32	22c	4881-1	II-c	.610	.072	2-56	.117	22c
4824-4	III-b	.594	.093	.098	.234‡	20c	4853-1	I-a	.884	.070	6-32	1/4	22c	4882-1	III-a	.390	.072	2-56	1/8	19c
4825-1	III-b	.594	.093	.141	.094*	20c	4853-2	I-a	.884	.070	6-32	3/8	22c	4882-2	III-a	.390	.072	2-56	5/16	19c
4825-2	III-b	.594	.093	.141	.125†	20c	4854-1	I-b	.884	.070	.098	.094*	22c	4882-3	III-a	.390	.072	2-56	1/4	19c
4825-3	III-b	.594	.093	.141	.156†	20c	4854-2	I-b	.884	.070	.098	.125†	22c	4883-1	III-b	.390	.072	.078	.094*	19c
4825-4	III-b	.594	.093	.141	.234‡	20c	4854-3	I-b	.884	.070	.098	.156†	22c	4883-2	III-b	.390	.072	.078	.125†	19c
4826-1	III-c	.594	.093	4-40	5/16	23c	4854-4	I-b	.884	.070	.098	.234‡	22c	4884-1	III-c	.390	.072	2-56	5/16	20c
4827-1	III-c	.594	.093	6-32	7/32	23c	4855-1	I-b	.884	.070	.141	.094*	22c	4885-1	III-a	.547	.072	2-56	1/8	21c
4828-1	III-a	.813	.093	4-40	7/32	22c	4855-2	I-b	.884	.070	.141	.125†	22c	4885-2	III-a	.547	.072	2-56	5/16	21c
4829-1	III-a	.813	.093	6-32	7/32	22c	4855-3	I-b	.884	.070	.141	.156†	22c	4885-3	III-a	.547	.072	2-56	1/4	21c
4829-2	III-a	.813	.093	6-32	1/4	22c	4855-4	I-b	.884	.070	.141	.234‡	22c	4886-1	III-b	.547	.072	.078	.094*	21c
4829-3	III-a	.813	.093	6-32	3/8	22c	4856-1	I-c	.884	.070	4-40	5/16	26c	4886-2	III-b	.547	.072	.078	.125†	21c
4830-1	III-b	.813	.093	.098	.094*	22c	4857-1	I-c	.884	.070	6-32	7/32	26c	4887-1	III-c	.547	.072	2-56	.117	22c
4830-2	III-b	.813	.093	.098	.125†	22c	4858-1	IV-a	.625	#	4-40	7/32	23c	4888-1	I-a	.422	.060	2-56	1/8	19c
4830-3	III-b	.813	.093	.098	.156†	22c	4859-1	IV-a	.625	#	6-32	1/4	23c	4888-2	I-a	.422	.060	2-56	5/16	19c
4830-4	III-b	.813	.093	.098	.234‡	22c	4859-2	IV-a	.625	#	6-32	3/8	23c	4888-3	I-a	.422	.060	2-56	1/4	19c
4831-1	III-b	.813	.093	.141	.094*	22c	4859-3	IV-a	.625	#	6-32	1/2	23c	4889-1	I-b	.422	.060	.078	.094*	19c
4831-2	III-b	.813	.093	.141	.125†	22c	4860-1	IV-b	.625	#	.098	.094*	23c	4889-2	I-b	.422	.060	.078	.125†	19c
4831-3	III-b	.813	.093	.141	.156†	22c	4860-2	IV-b	.625	#	.098	.125†	23c	4890-1	I-c	.422	.060	2-56	5/16	20c
4831-4	III-b	.813	.093	.141	.234‡	22c	4860-3	IV-b	.625	#	.098	.156†	23c	4891-1	I-a	.579	.060	2-56	1/8	21c
4832-1	III-c	.813	.093	4-40	7/32	26c	4860-4	IV-b	.625	#	.098	.234‡	23c	4891-2	I-a	.579	.060	2-		



# "Jones" Type Plugs, Sockets

## 300 SERIES CONNECTORS

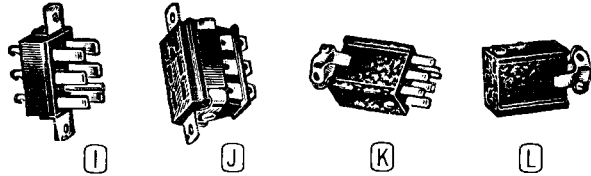
Compact, polarized connectors. Insulating material is molded Bakelite. Fiber lined metal caps are black wrinkle finished. New "Monoblock" construction eliminates internal moisture traps. Snap-in contacts may be prewired or replaced. Rated Voltage: 730 volts rms. Amps: 2-12 contacts, 7.5 a.; 15-33 contacts, 4.5 a.



## 400 AND 2400 SERIES CONNECTORS

**400 Series** are rated at 1200 volts rms at 15 amps. Polarized. Phosphor bronze "knifewitch" socket contacts engage both sides of flat plug contacts.

**2400 Series** are rated at 1700 volts at 15 amps. New design provides greater contact surface, increased pressure and smoother action. Greater contact-to-contact and contact-to-ground distance. Interchangeable with the 400 Series.



PLUGS WITH ANGLE BRACKETS (FIG. A)

Cinch No.	Contacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
P-302-AB	2	\$0.248	\$0.198	\$0.165	\$0.132	\$0.125
P-303-AB	3	.308	.246	.205	.164	.156
P-304-AB	4	.338	.27	.225	.18	.171
P-306-AB	6	.42	.336	.28	.224	.213
P-308-AB	8	.495	.396	.33	.264	.251
P-310-AB	10	.563	.45	.375	.30	.285
P-312-AB	12	.623	.498	.415	.332	.315

SOCKETS WITH ANGLE BRACKETS (FIG. B)

S-302-AB	2	\$0.27	\$0.216	\$0.18	\$0.144	\$0.137
S-303-AB	3	.323	.258	.215	.172	.163
S-304-AB	4	.36	.288	.24	.192	.182
S-306-AB	6	.45	.36	.30	.24	.228
S-308-AB	8	.563	.45	.375	.30	.285
S-310-AB	10	.668	.534	.445	.356	.338
S-312-AB	12	.773	.618	.515	.412	.391

PLUGS WITH CABLE CLAMPS (FIG. C)

P-302-CCT	2	\$0.57	\$0.456	\$0.38	\$0.304	\$0.289
P-303-CCT	3	.608	.486	.405	.324	.308
P-304-CCT	4	.668	.534	.445	.356	.338
P-306-CCT	6	.735	.588	.49	.392	.372
P-308-CCT	8	.81	.648	.54	.432	.41
P-310-CCT	10	.908	.726	.605	.484	.46
P-312-CCT	12	.99	.792	.66	.528	.502

SOCKETS WITH CABLE CLAMPS (FIG. D)

S-302-CCT	2	\$0.578	\$0.462	\$0.385	\$0.308	\$0.293
S-303-CCT	3	.623	.498	.415	.332	.315
S-304-CCT	4	.675	.54	.45	.36	.342
S-306-CCT	6	.773	.618	.515	.412	.391
S-308-CCT	8	.90	.72	.60	.48	.456
S-310-CCT	10	1.005	.804	.67	.536	.509
S-312-CCT	12	1.155	.924	.77	.616	.585

PLUGS WITH SHALLOW BRACKETS (FIG. E)

P-315-SB	15	\$1.223	\$0.978	\$0.815	\$0.652	\$0.619
P-318-SB	18	1.508	1.206	1.005	.804	.764
P-321-SB	21	1.778	1.422	1.185	.948	.901
P-324-SB	24	2.108	1.686	1.405	1.124	1.068
P-327-SB	27	2.37	1.896	1.58	1.264	1.201
P-330-SB	30	2.715	2.172	1.81	1.448	1.376
P-333-SB	33	2.993	2.394	1.995	1.596	1.516

SOCKETS WITH SHALLOW BRACKETS (FIG. F)

S-315-SB	15	\$1.373	\$1.098	\$0.915	\$0.732	\$0.695
S-318-SB	18	1.635	1.308	1.09	.872	.828
S-321-SB	21	1.913	1.53	1.275	1.02	.969
S-324-SB	24	2.258	1.806	1.505	1.204	1.144
S-327-SB	27	2.52	2.016	1.68	1.344	1.277
S-330-SB	30	2.865	2.292	1.91	1.528	1.452
S-333-SB	33	3.135	2.508	2.09	1.672	1.588

PLUGS WITH CABLE CLAMPS (FIG. G)

P-315-CCT	15	\$1.29	\$1.032	\$0.86	\$0.688	\$0.654
P-318-CCT	18	1.56	1.248	1.04	.832	.79
P-321-CCT	21	1.838	1.47	1.225	.98	.931
P-324-CCT	24	2.168	1.734	1.445	1.156	1.098
P-327-CCT	27	2.46	1.968	1.64	1.312	1.246
P-330-CCT	30	2.865	2.292	1.91	1.528	1.452
P-333-CCT	33	3.068	2.454	2.045	1.636	1.554

SOCKETS WITH CABLE CLAMPS (FIG. H)

S-315-CCT	15	\$1.133	\$0.906	\$0.755	\$0.604	\$0.574
S-318-CCT	18	1.703	1.362	1.135	.908	.863
S-321-CCT	21	1.973	1.578	1.315	1.052	.999
S-324-CCT	24	2.325	1.86	1.55	1.24	1.178
S-327-CCT	27	2.595	2.076	1.73	1.384	1.315
S-330-CCT	30	3.00	2.40	2.00	1.60	1.52
S-333-CCT	33	3.21	2.568	2.14	1.712	1.626

400 SERIES PLUGS WITH ANGLE BRACKETS (FIG. I)

Cinch No.	Contacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
P-402-AB	2	\$0.623	\$0.498	\$0.415	\$0.332	\$0.315
P-404-AB	4	.758	.606	.505	.404	.384
P-406-AB	6	.915	.732	.61	.488	.464
P-408-AB	8	1.05	.84	.70	.56	.532
P-410-AB	10	1.193	.954	.795	.636	.604
P-412-AB	12	1.313	1.05	.875	.70	.665

2400 SERIES PLUGS WITH SHALLOW BRACKETS

P-2402-SB	2	\$0.84	\$0.672	\$0.56	\$0.448	\$0.426
P-2404-SB	4	.99	.792	.66	.528	.502
P-2406-SB	6	1.155	.924	.77	.616	.585
P-2408-SB	8	1.305	1.044	.87	.696	.661
P-2410-SB	10	1.493	1.194	.995	.796	.756
P-2412-SB	12	1.635	1.308	1.09	.872	.828

400 SERIES SOCKETS WITH ANGLE BRACKETS (FIG. J)

S-402-AB	2	\$0.705	\$0.564	\$0.47	\$0.376	\$0.357
S-404-AB	4	.915	.732	.61	.488	.464
S-406-AB	6	1.11	.888	.74	.592	.562
S-408-AB	8	1.313	1.05	.875	.70	.665
S-410-AB	10	1.538	1.23	1.025	.82	.779
S-412-AB	12	1.733	1.386	1.155	.924	.878

2400 SERIES SOCKETS WITH SHALLOW BRACKETS

S-2402-SB	2	\$0.923	\$0.738	\$0.615	\$0.492	\$0.467
S-2404-SB	4	1.08	.864	.72	.576	.547
S-2406-SB	6	1.253	1.002	.835	.668	.635
S-2408-SB	8	1.425	1.14	.95	.76	.722
S-2410-SB	10	1.605	1.284	1.07	.856	.813
S-2412-SB	12	1.778	1.422	1.185	.948	.901

PLUGS WITH CABLE CLAMPS (FIG. K)

400 SERIES						
	Contacts	1-24	25-49	50-99	100-249	250-499
P-402-CCT	2	\$0.975	\$0.78	\$0.65	\$0.52	\$0.494
P-404-CCT	4	1.193	.954	.795	.636	.604
P-406-CCT	6	1.395	1.116	.93	.744	.707
P-408-CCT	8	1.59	1.272	1.06	.848	.806
P-410-CCT	10	1.793	1.434	1.195	.956	.908
P-412-CCT	12	2.003	1.602	1.335	1.068	1.015

2400 SERIES

P-2402-CCT	2	\$1.185	\$0.948	\$0.79	\$0.632	\$0.60
P-2404-CCT	4	1.343	1.074	.895	.716	.68
P-2406-CCT	6	1.50	1.20	1.00	.80	.76
P-2408-CCT	8	1.643	1.314	1.095	.876	.832
P-2410-CCT	10	1.815	1.452	1.21	.968	.92
P-2412-CCT	12	2.003	1.602	1.335	1.068	1.015

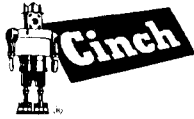
SOCKETS WITH CABLE CLAMPS (FIG. L)

400 SERIES						
	Contacts	1-24	25-49	50-99	100-249	250-499
S-402-CCT	2	\$1.058	\$0.846	\$0.705	\$0.564	\$0.536
S-404-CCT	4	1.32	1.056	.88	.704	.669
S-406-CCT	6	1.605	1.284	1.07	.856	.813
S-408-CCT	8	1.883	1.506	1.255	1.004	.954
S-410-CCT	10	2.168	1.734	1.445	1.156	1.098
S-412-CCT	12	2.438	1.95	1.625	1.30	1.235

2400 SERIES

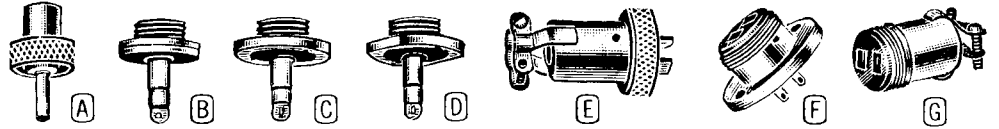
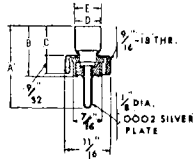
S-2402-CCT	2	\$1.275	\$1.02	\$0.85	\$0.68	\$0.646
S-2404-CCT	4	1.425	1.14	.95	.76	.722
S-2406-CCT	6	1.583	1.266	1.055	.844	.802
S-2408-CCT	8	1.763	1.41	1.175	.94	.893
S-2410-CCT	10	1.943	1.554	1.295	1.036	.984
S-2412-CCT	12	2.123	1.698	1.415	1.132	1.075

NOTE: The above are the factory OEM prices, FOB factory, and are subject to change without notice.



# Plugs and Sockets

## AUDIO PLUGS AND SOCKETS



### SERIES 101 PLUGS (FIG. A)

All plugs are identical except the cable ferrule which is furnished in five sizes listed below. All metal parts are of brass. Fit 101 Series sockets. Ideal for high frequency connections.

Cinch No.	A	B	C	D	E
P-101-1/4"	1 1/4"	3/4"	1 1/4"	1 1/4"	1 1/4"
P-101-.290	1 1/4"	3/4"	1 1/4"	.290"	.319"
P-101-3/16"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
P-101-3/8"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
P-101-1/2"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"

### QUANTITY PRICES FOR 101 SERIES PLUGS

Cinch No.	Net Each, Lots of				
	1-24	25-49	50-99	100-249	250-499
P-101-1/4"	\$0.653	\$0.522	\$0.435	\$0.348	\$0.331
P-101-.290	.795	.636	.53	.424	.403
P-101-3/16"	.795	.636	.53	.424	.403
P-101-3/8"	.795	.636	.53	.424	.403
P-101-1/2"	.885	.708	.59	.472	.448

### SERIES 101 SOCKETS

Brass base, bright nickel finish. Brass contact is silver plated. Insulation is of low loss natural color XXX Bakelite. Meets Navy specifications. Bakelite of No. S-101-D is recessed in the base. Two sides of base of No. S-101-D Mod are milled. Mounting Holes: No. S-101, #41 drill on 11/16" centers; all others, #30 drill on 13/16" centers.

Cinch No.	Fig.	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
S-101	B	\$0.578	\$0.462	\$0.385	\$0.308	\$0.293
S-101-D	C	.885	.708	.59	.472	.448
S-101-D Mod	D	.885	.708	.59	.472	.448

### MODEL 201-3/8" PLUG

Same as Series 101 but is of heavier stock and larger. Made in one size only with 3/8" ferrule. All metal parts are of brass. Same

finish as Series 101 and wax impregnated ceramic insulation. Length, 1 3/8", overall. Prong diameter, 3/32". Fits only Series 201 socket.

### MODEL S-201 SOCKET (FIG. C)

Similar to No. S-101-D except larger. Brass base is bright nickel finish. Brass contact is silver plated. Insulation is low loss natural color XXX Bakelite. Mounting holes, #30 drill on 1" centers. Thread, 3/4"-27.

### QUANTITY PRICES FOR 201 SERIES PLUG AND SOCKET

Cinch No.	Net Each, Lots of				
	1-24	25-49	50-99	100-249	250-499
P-201-3/8"	\$1.02	\$0.816	\$0.68	\$0.544	\$0.517
S-201	1.095	.876	.73	.584	.555

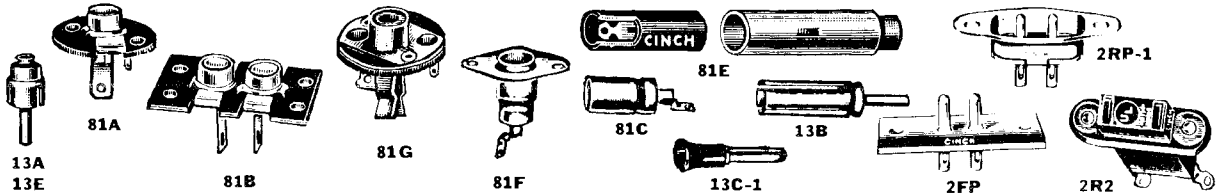
### SERIES 202 PLUGS AND SOCKETS

Made in two contacts only. Brass metal parts with bright nickel finish. Molded Bakelite insulation. Phosphor bronze "knife switch" type socket contacts engage both sides of flat brass plug contacts—double contact area. Formed fiber linings in caps. Polarized. Knurled nut has 3/4"-27 thread. Socket mounting holes, #30 drill on 1" centers. No. S-202-CCT-THR, when used with No. P-202-CCT, will make an ideal microphone connector.

Cinch No.	Fig.	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
P-202-CCT	F	\$0.81	\$0.648	\$0.54	\$0.432	\$0.41
S-202-CCT	E*	.825	.66	.55	.44	.418
P-202-FHT	F†	.653	.522	.435	.348	.331
S-202-FHT	F†	.668	.534	.445	.356	.338
S-202-B	F	.96	.768	.64	.512	.486
P-202-B	F	.923	.738	.615	.492	.467
S-202-CCT-THR	G	1.095	.876	.73	.584	.555

\*Socket instead of plug. †Less cable clamp. ‡Socket instead of plug, less cable clamp. §Plug instead of socket.

## JACKS AND PLUGS FOR RADIO, TV AND PHONOGRAPH APPLICATIONS



### RCA TYPE PHONO CONNECTORS

**Cinch No. 13A Plug**—3/8" long pin. List Price, ..... 13c\*  
**Cinch No. 13E Plug**—1 1/4" long pin. List Price, ..... 13.2c\*  
**Cinch No. 81A Jack**—Single jack for No. 13A. Mtg. ctrs., 1 1/4". List Price, ..... 21c\*  
**Cinch No. 81B Jack**—Double jack for No. 13A. Mtg. ctrs., 1 1/4". Jacks spaced on 1 1/4" ctrs. 1 1/4" x 1 1/4". List Price, ..... 37.5c\*  
**Cinch No. 81G Jack**—Normally connected; this connection breaks when plug is inserted, making plug connection. Brass mtg. plate. Mtg. holes, 136". List 69.5c\*

### ANTENNA CONNECTORS

**Cinch No. 81F Jack**—Motorola type. Shielded. Sturdy steel flange, 1 1/4" mtg. ctrs. with .136" dia. mtg. holes. Mounts with screws or rivets. Mates 13B plug. List Price, ..... 36c\*  
**Cinch No. 81C Jack**—Same as 81F less flange. May be soldered in position. Mates No. 13B. List Price, ..... 24c\*

### MOTOROLA TYPE ANTENNA PLUG

**Cinch No. 13B Plug**—Has 1/8" pin extending 1/4" from shell whose eight cutting edges provide positive grounded connection when inserted in No. 81C or No. 81F. List Price, ..... 28.8c\*

### INSULATED PIN PLUG

**Cinch No. 13C1 Plug**—Pin, 1/8" brass tube, 3/8" lg. Fiber insulator, 1 1/4" lg. Mates Nos. 81A and 81B phono jacks. List Price, ..... 22.5c\*

### SHIELDED EXTENSION JACK

**Cinch No. 81E Jack**—Cadmium plated brass shell 2 1/4" lg. with black Bakelite insert providing insulation for heat treated steel, hot solder coated positive grip contact. Mates No. 13E plug. Net Each, Lots of 1-99, 29.2c; 100-999, 14.6c

### MODEL 2FP CONNECTOR PLUG

Consists of two prongs mounted on a Bakelite board. One piece contact. Mounting

plate is of 1/4" natural XP Bakelite 1 1/2" lg. x 3/4" w. The .135/.140" mounting holes are on 1 1/4" centers. An inexpensive current supply connector for TV sets.  
**Cinch No. 2FP**—List Price, ..... 14.4c\*

### MODEL 2RP-1 RECESSED PLUG

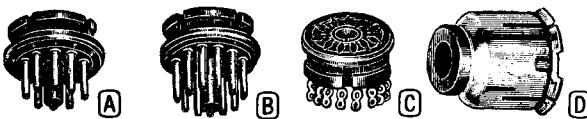
Recessed sub-panel mounting type plug. One piece contact. Perfect for current supply for TV sets. Rated at 125 v., 7 amps. Size: 3/8" w. x 1 1/4" lg., overall. Body Depth: 3/4". Mounting Centers: .140/.145". U/L Approved.  
**Cinch No. 2RP-1**—List Price, ..... 19.7c\*

### MODEL 2R2 110-250 VOLT SOCKET

Rated at 15 amps, 110 v., or 10 amps, 250 v. Accepts any standard 2-prong electric plug. Mounts in 2 1/4" x 2 1/2" hole. Ideal for radio and TV chassis. Underwriters Listed.  
**Cinch No. 2R2**—Net Each, Lots of 1-99, 18.9c; 100-999, 9.5c

\*LIST PRICE ONLY. NO QUANTITY PRICING

## MOLDED CONNECTOR PLUGS AND SOCKETS



### MODEL 8PB 8 CONTACT PLUG (FIG. A)

Molded from high dielectric black Bakelite. Pins are nickel-plated and have tapered ends for easy insertion. Mounts on 1/4" chassis using No. 8RO retaining ring, or can be used with No. 16F cap. Will fit any standard octal socket.  
**Cinch No. 8PB**—Net Each, Lots of 1-99, 19.5c; 100-999, 9.8c

### MODEL 11PB 11 CONTACT PLUG (FIG. B)

Molded from high dielectric black Bakelite. Pins are nickel-plated and have tapered ends for easy insertion. Mounts on 1/4" chassis using No. 8RO retaining ring. Can be used with No. 16F cap. Will fit No. 11RB socket.  
**Cinch No. 11PB**—Net Each, Lots of 1-99, 27c; 100-999, 13.5c

### MODEL 11RB 11 CONTACT SOCKET (FIG. C)

Molded from high dielectric black Bakelite. Solder coated brass contacts. Mounts on 1/4" chassis using No. 8RO retaining ring. Can be used with No. 16F cap. Mates with No. 11PB plug.  
**Cinch No. 11RB**—Net Each, Lots of 1-99, 31.8c; 100-999, 15.9c

### MODEL 16F PLUG CAP (FIG. D)

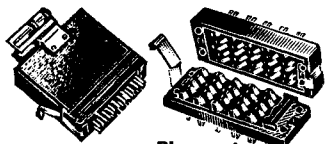
Cadmium plated steel plug cap for snapping on 8 or 11 prong sockets grooved for 1/4" chassis. Screwdriver slot at bottom to facilitate removal. Rubber grommet has 2 1/4" dia. hole.  
**Cinch No. 16F**—List Price Only, ..... 92.5c

NOTE: The above are the factory OEM prices, FOB factory, and are subject to change without notice.



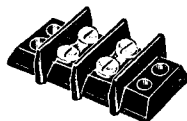
# Hinge Connectors & Barriers

## HINGE CONNECTORS

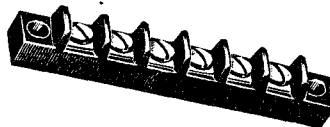


Plug and socket bodies showing contact arrangement.

No contact damage due to insertion and extraction. Maximum contact in minimum space; engaged with normal pressure. Simple locking device insures positive contact. Spring action contacts separate units after releasing the lock. Wiping contact action for clean contacts at all times. Castings are of black Bakelite, type CFG. Contacts are of phosphor bronze, cadmium plated (.0001). Current rating is 4.5 amps. **Alternate Lock:** For more secure locking, order Alternate Lock No. 37AL separately. It has a special device to prevent accidental unlocking. **Caps:** Formed fiber liners, nickel-plated cable clamps. Designed to take the alternate lock when required. Black wrinkle finish.



140-141-142 Series (2-140, 2-141, 2-142)



171 Series (6-171)

## "JONES" 140-141-142 SERIES BARRIER TERMINAL BLOCKS

Increased insulation is provided by having barriers placed between each terminal. These barriers follow around the edge of the strips and terminate at the base. They not only make a long leakage path but prevent direct shorts from frayed wires at terminals. **Size:** 140 Series—Base,  $\frac{3}{8}$ " w. x  $1\frac{1}{2}$ " h.; term. centers,  $\frac{3}{8}$ ". 141 Series—Base,  $1\frac{1}{8}$ " w. x  $\frac{1}{2}$ " h.; term. centers,  $\frac{1}{4}$ ". 142 Series—Base,  $1\frac{1}{8}$ " w. x  $\frac{3}{8}$ " h.; term. centers,  $\frac{3}{8}$ ".

### PLUG WITH LOCK

Cinch No. 37-	Contacts	Mtg. Ctrs. In.	Over-all Size, In.	Net Each, Lots of				
				1-24	25-49	50-99	100-249	250-499
M20L	20	1.375	1.750	\$2.25	\$1.80	\$1.50	\$1.20	\$1.14
M30L	30	1.812	2.187	2.663	2.13	1.775	1.42	1.349
M40L	40	2.250	2.625	3.075	2.46	2.05	1.64	1.558
M50L	50	2.687	3.062	3.488	2.79	2.325	1.86	1.767
M60L	60	3.125	3.500	3.90	3.12	2.60	2.08	1.976
M70L	70	3.562	3.937	4.313	3.45	2.875	2.30	2.185
M80L	80	4.000	4.375	4.725	3.78	3.15	2.52	2.394
M90L	90	4.438	4.812	5.138	4.11	3.425	2.74	2.603
M100L	100	4.875	5.250	5.55	4.44	3.70	2.96	2.812

### SOCKET WITH LOCK

Cinch No. 37-	Contacts	Mtg. Ctrs. In.	Over-all Size, In.	Net Each, Lots of				
				1-24	25-49	50-99	100-249	250-499
F20L	20	1.375	1.750	\$2.25	\$1.80	\$1.50	\$1.20	\$1.14
F30L	30	1.812	2.187	2.663	2.13	1.775	1.42	1.349
F40L	40	2.250	2.625	3.075	2.46	2.05	1.64	1.558
F50L	50	2.687	3.062	3.488	2.79	2.325	1.86	1.767
F60L	60	3.125	3.500	3.90	3.12	2.60	2.08	1.976
F70L	70	3.562	3.937	4.313	3.45	2.875	2.30	2.185
F80L	80	4.000	4.375	4.725	3.78	3.15	2.52	2.394
F90L	90	4.438	4.812	5.138	4.11	3.425	2.74	2.603
F100L	100	4.875	5.250	5.55	4.44	3.70	2.96	2.812

### PLUG WITHOUT LOCK

Cinch No. 37-	Contacts	Mtg. Ctrs. In.	Over-all Size, In.	Net Each, Lots of				
				1-24	25-49	50-99	100-249	250-499
M20	20	1.375	1.750	\$2.025	\$1.62	\$1.35	\$1.08	\$1.026
M30	30	1.812	2.187	2.438	1.95	1.625	1.30	1.235
M40	40	2.250	2.625	2.85	2.28	1.90	1.52	1.444
M50	50	2.687	3.062	3.263	2.61	2.175	1.74	1.653
M60	60	3.125	3.500	3.675	2.94	2.45	1.96	1.862
M70	70	3.562	3.937	4.088	3.27	2.725	2.18	2.071
M80	80	4.000	4.375	4.50	3.60	3.00	2.40	2.28
M90	90	4.438	4.812	4.913	3.93	3.275	2.62	2.489
M100	100	4.875	5.250	5.325	4.26	3.55	2.84	2.698

### SOCKET WITHOUT LOCK

Cinch No. 37-	Contacts	Mtg. Ctrs. In.	Over-all Size, In.	Net Each, Lots of				
				1-24	25-49	50-99	100-249	250-499
F20	20	1.375	1.750	\$2.025	\$1.62	\$1.35	\$1.08	\$1.026
F30	30	1.812	2.187	2.438	1.95	1.625	1.30	1.235
F40	40	2.250	2.625	2.85	2.28	1.90	1.52	1.444
F50	50	2.687	3.062	3.263	2.61	2.175	1.74	1.653
F60	60	3.125	3.500	3.675	2.94	2.45	1.96	1.862
F70	70	3.562	3.937	4.088	3.27	2.725	2.18	2.071
F80	80	4.000	4.375	4.50	3.60	3.00	2.40	2.28
F90	90	4.438	4.812	4.913	3.93	3.275	2.62	2.489
F100	100	4.875	5.250	5.325	4.26	3.55	2.84	2.698

Cinch No. 37AL Alternate Lock—For above series.  
Net Each, Lots of 1-24.....45c; 25-49.....36c; 50-99.....30c;  
100-249.....24c; 250-499.....22.8c;

### CAPS FOR PLUGS OR SOCKETS

Cinch No. 37-	For Casting with No. of Contacts	Hole Size, Inches	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250-499
C20	20	$\frac{3}{32}$	\$3.15	\$2.52	\$2.10	\$1.68	\$1.596
C30	30	$\frac{1}{8} \times 1$	3.188	2.55	2.125	1.70	1.615
C40	40	$\frac{1}{8} \times 1$	3.225	2.58	2.15	1.72	1.634
C50	50	$\frac{1}{8} \times 1$	3.263	2.61	2.175	1.74	1.653
C60	60	$\frac{1}{8} \times 1\frac{1}{2}$	3.30	2.64	2.20	1.76	1.672
C70	70	$\frac{1}{8} \times 1\frac{1}{2}$	3.338	2.67	2.225	1.78	1.691
C80	80	$\frac{1}{8} \times 1\frac{1}{2}$	3.375	2.70	2.25	1.80	1.71
C90	90	$\frac{1}{8} \times 1\frac{1}{2}$	3.413	2.73	2.275	1.82	1.729
C100	100	$\frac{1}{8} \times 1\frac{1}{2}$	3.45	2.76	2.30	1.84	1.748

### 170 SERIES SOLDER TERMINAL STRIPS



Heavy solder terminals are made of .032" brass, hot solder coated; mounted on  $\frac{3}{8}$ " centers. Black molded Bakelite. Size,  $\frac{3}{8}$ " w. x  $\frac{1}{2}$ " thick. Mounting holes,  $\frac{3}{8}$ " from center of end terminals.

Cinch No.	Terminals	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
1-170	1	19.5c	15.6c	13c	10.4c	9.9c
2-170	2	24.8c	19.8c	16.5c	13.2c	12.5c
3-170	3	28.5c	22.8c	19c	15.2c	14.4c
4-170	4	33.8c	27c	22.5c	18c	17.1c
5-170	5	39.8c	31.8c	26.5c	21.2c	20.1c
6-170	6	44.3c	35.4c	29.5c	23.6c	22.4c
7-170	7	48c	38.4c	32c	25.6c	24.3c
8-170	8	52.5c	42c	35c	28c	26.6c
9-170	9	58.5c	46.8c	39c	31.2c	29.6c
10-170	10	62.3c	49.8c	41.5c	33.2c	31.5c

NOTE: The above are the factory OEM prices, FOB factory, and are subject to change without notice.

### 140 SERIES

Cinch No.	Contacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
1-140	1	\$0.113	\$0.09	\$0.075	\$0.06	\$0.057
2-140	2	.18	.144	.12	.096	.091
3-140	3	.248	.198	.165	.132	.125
4-140	4	.315	.252	.21	.168	.16
5-140	5	.383	.306	.255	.204	.194
6-140	6	.443	.354	.295	.236	.224
7-140	7	.51	.408	.34	.272	.258
8-140	8	.578	.462	.385	.308	.293
9-140	9	.645	.516	.43	.344	.327
10-140	10	.713	.57	.475	.38	.361
11-140	11	.773	.618	.515	.412	.391
12-140	12	.84	.672	.56	.448	.426
13-140	13	.908	.726	.605	.484	.46
14-140	14	.983	.786	.655	.524	.498
15-140	15	1.05	.84	.70	.56	.532
16-140	16	1.118	.894	.745	.596	.566
17-140	17	1.178	.942	.785	.628	.597
18-140	18	1.245	.996	.83	.664	.631
19-140	19	1.313	1.05	.875	.70	.665
20-140	20	1.38	1.104	.92	.736	.699
21-140	21	1.448	1.158	.965	.772	.733

### 141 SERIES

Cinch No.	Contacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
1-141	1	\$0.150	\$0.120	\$0.10	\$0.08	\$0.076
2-141	2	.233	.186	.155	.124	.118
3-141	3	.315	.252	.21	.168	.16
4-141	4	.405	.324	.27	.216	.205
5-141	5	.488	.39	.325	.26	.247
6-141	6	.563	.45	.375	.30	.285
7-141	7	.66	.528	.44	.352	.334
8-141	8	.743	.594	.495	.396	.376
9-141	9	.825	.66	.55	.44	.418
10-141	10	.915	.732	.61	.488	.464
11-141	11	.998	.798	.665	.532	.505
12-141	12	1.08	.864	.72	.576	.547
13-141	13	1.17	.936	.78	.624	.593
14-141	14	1.253	1.002	.835	.668	.635
15-141	15	1.335	1.068	.89	.712	.676
16-141	16	1.425	1.14	.95	.76	.722
17-141	17	1.508	1.206	1.005	.804	.764
18-141	18	1.59	1.272	1.06	.848	.806
19-141	19	1.68	1.344	1.12	.896	.851
20-141	20	1.763	1.41	1.175	.94	.893

### 142 SERIES

Cinch No.	Contacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
1-142	1	\$0.173	\$0.138	\$0.115	\$0.092	\$0.087
2-142	2	.27	.216	.18	.144	.137
3-142	3	.383	.306	.255	.204	.194
4-142	4	.488	.39	.325	.26	.247
5-142	5	.585	.468	.39	.312	.296
6-142	6	.69	.552	.46	.368	.35
7-142	7	.803	.642	.535	.428	.407
8-142	8	.90	.72	.60	.48	.456
9-142	9	1.005	.804	.67	.536	.509
10-142	10	1.118	.894	.745	.596	.566
11-142	11	1.215	.972	.81	.648	.616
12-142	12	1.32	1.056	.88	.704	.669
13-142	13	1.425	1.14	.95	.76	.722
14-142	14	1.53	1.224	1.02	.816	.775
15-142	15	1.635	1.308	1.09	.872	.828
16-142	16	1.74	1.392	1.16	.928	.882
17-142	17	1.838	1.47	1.225	.98	.931

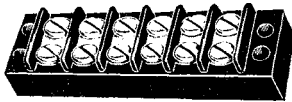
### "JONES" 171 SERIES BARRIER TERMINAL BLOCKS

Miniature barrier type terminal blocks with single screw terminals. Size:  $\frac{1}{2}$ " w. x  $\frac{3}{8}$ " h., overall. Binder head screws, 2-56 x  $\frac{3}{8}$ ". Mounting holes,  $\frac{3}{8}$ " dia.

Cinch No.	Contacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
2-171	2	18c	14.4c	12c	9.6c	9.1c
3-171	3	24.8c	19.8c	16.5c	13.2c	12.5c
4-171	4	31.5c	25.2c	21c	16.8c	16c
5-171	5	38.3c	30.6c	25.5c	20.4c	19.4c
6-171	6	45c	36c	30c	24c	22.8c
7-171	7	51.8c	41.4c	34.5c	27.6c	26.2c
8-171	8	58.5c	4			



# Barrier Terminal Blocks



172 Series (6-172)



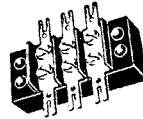
"Y" Solder Terminal



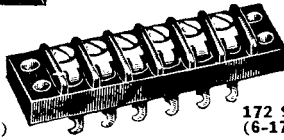
"W" Terminal



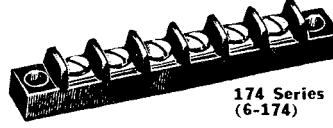
"3/4 W" Terminal



172 Series (3-172-W)



172 Series (6-172-Y)



174 Series (6-174)



500 Series (2-540)

## "JONES" 172 SERIES BARRIER TERMINAL BLOCKS WITH CONVENTIONAL TERMINALS

Double screw terminals mounted on  $\frac{1}{8}$ " centers with 2-56 x  $\frac{3}{16}$ " binder head screws. Mounting holes,  $\frac{1}{8}$ " dia.

Cinch No.	Con-tacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
2-172	2	\$0.428	\$0.342	\$0.285	\$0.228	\$0.217
3-172	3	.548	.438	.365	.292	.277
4-172	4	.668	.534	.445	.356	.338
5-172	5	.788	.63	.525	.42	.399
6-172	6	.90	.72	.60	.48	.456
7-172	7	1.02	.816	.680	.544	.517
8-172	8	1.14	.912	.76	.608	.578
9-172	9	1.26	1.008	.84	.672	.638
10-172	10	1.38	1.104	.92	.736	.699
11-172	11	1.508	1.206	1.005	.804	.764
12-172	12	1.628	1.302	1.085	.868	.825
13-172	13	1.74	1.392	1.16	.928	.882
14-172	14	1.86	1.488	1.24	.992	.942

## WITH "Y", "W" OR "3/4 W" TERMINALS

Series 172 barrier type terminal blocks also available with "Y", "W" or "3/4 W" terminals. For blocks with "W" terminals, change suffix "Y" to "W", for blocks with "3/4 W" terminals, change suffix "Y" to "3/4 W" (2-172-W, 2-172-3/4 W, etc.); same price.

Cinch No.	Con-tacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
2-172-Y	2	\$0.48	\$0.384	\$0.32	\$0.256	\$0.243
3-172-Y	3	.63	.504	.42	.336	.319
4-172-Y	4	.78	.624	.52	.416	.395
5-172-Y	5	.93	.744	.62	.496	.471
6-172-Y	6	1.08	.864	.72	.576	.547
7-172-Y	7	1.23	.984	.820	.656	.623
8-172-Y	8	1.38	1.104	.92	.736	.699
9-172-Y	9	1.53	1.224	1.02	.816	.775
10-172-Y	10	1.68	1.344	1.12	.896	.851
11-172-Y	11	1.83	1.464	1.22	.976	.927
12-172-Y	12	1.98	1.584	1.32	1.056	1.003
13-172-Y	13	2.13	1.704	1.42	1.136	1.079
14-172-Y	14	2.28	1.824	1.52	1.216	1.155

## "JONES" 174 SERIES BARRIER TERMINAL BLOCKS

Single screw terminals mounted on  $\frac{3}{8}$ " centers. Size,  $\frac{3}{8}$ " w. x  $\frac{1}{2}$ " h., overall. Brass binder head screws, 4-40 x  $\frac{5}{16}$ ". Mounting holes,  $\frac{5}{16}$ " dia.

Cinch No.	Con-tacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
2-174	2	\$0.18	\$0.144	\$0.12	\$0.096	\$0.091
3-174	3	.248	.198	.165	.132	.125
4-174	4	.315	.252	.21	.168	.16
5-174	5	.383	.306	.255	.204	.194
6-174	6	.45	.36	.30	.24	.228
7-174	7	.518	.414	.345	.276	.262
8-174	8	.585	.468	.39	.312	.296
9-174	9	.653	.522	.435	.348	.331
10-174	10	.72	.576	.48	.384	.365

## "JONES" 500 SERIES BARRIER TERMINAL BLOCKS

Barrier type terminal blocks designed for applications where electrical and mechanical performance requirements are especially critical. Closed bottoms eliminate additional insulating strips. Knockouts are molded into the base so that "Y" terminals can be accommodated if desired. Heavy construction adds strength to strip minimizing warpage and shrinkage. Top-mounted marker strip available.

### 540 TERMINAL BLOCKS

Terminals are mounted on  $\frac{3}{8}$ " centers with 5-40 binder head screws. Size,  $1\frac{1}{8}$ " w. x  $\frac{3}{16}$ " h. Creepage distance,  $\frac{1}{2}$ ". Rating: 2300 v. rms, 15 amps.

Cinch No.	Con-tacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
1-540	1	\$0.128	\$0.102	\$0.085	\$0.068	\$0.065
2-540	2	.195	.156	.130	.104	.099
3-540	3	.270	.216	.180	.144	.137
4-540	4	.345	.276	.230	.184	.175
5-540	5	.420	.336	.280	.224	.213
6-540	6	.488	.390	.325	.260	.247
7-540	7	.563	.450	.375	.300	.285
8-540	8	.638	.510	.425	.340	.323
9-540	9	.713	.570	.475	.380	.361
10-540	10	.788	.630	.525	.420	.399
11-540	11	.848	.678	.565	.452	.429
12-540	12	.923	.738	.615	.492	.467
13-540	13	.998	.798	.665	.532	.505
14-540	14	1.080	.864	.720	.576	.547

## 540 TERMINAL BLOCKS (CONT'D)

Cinch No.	Con-tacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
15-540	15	\$1.155	\$0.924	\$0.770	\$0.616	\$0.585
16-540	16	1.230	.984	.820	.656	.623
17-540	17	1.298	1.038	.865	.692	.657
18-540	18	1.373	1.098	.915	.732	.695
19-540	19	1.448	1.158	.965	.772	.733
20-540	20	1.515	1.212	1.010	.808	.768
21-540	21	1.590	1.272	1.060	.848	.806
22-540	22	1.665	1.332	1.110	.888	.844
23-540	23	1.740	1.392	1.160	.928	.882
24-540	24	1.808	1.446	1.205	.964	.916
25-540	25	1.883	1.506	1.255	1.004	.954
26-540	26	1.958	1.566	1.305	1.044	.992
27-540	27	2.033	1.626	1.355	1.084	1.030
28-540	28	2.100	1.680	1.400	1.120	1.064
29-540	29	2.175	1.740	1.450	1.160	1.102
30-540	30	2.250	1.800	1.500	1.200	1.140
31-540	31	2.325	1.860	1.550	1.240	1.178

## 541 TERMINAL BLOCKS

Terminals are mounted on  $\frac{1}{2}$ " centers with 6-32 binder head screws. Size,  $1\frac{3}{8}$ " w. x  $\frac{1}{16}$ " h. Creepage distance,  $\frac{3}{8}$ ". Rating: 2800 v. rms, 20 amps.

Cinch No.	Con-tacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
1-541	1	\$0.165	\$0.132	\$0.110	\$0.088	\$0.084
2-541	2	.255	.204	.170	.136	.129
3-541	3	.345	.276	.230	.184	.175
4-541	4	.443	.354	.295	.236	.224
5-541	5	.540	.432	.360	.288	.274
6-541	6	.623	.498	.415	.332	.315
7-541	7	.728	.582	.485	.388	.369
8-541	8	.818	.654	.545	.436	.414
9-541	9	.908	.726	.605	.484	.460
10-541	10	1.005	.804	.675	.536	.509
11-541	11	1.095	.876	.730	.584	.555
12-541	12	1.185	.948	.790	.632	.600
13-541	13	1.290	1.032	.860	.688	.654
14-541	14	1.380	1.104	.920	.736	.699
15-541	15	1.470	1.176	.980	.784	.745
16-541	16	1.568	1.254	1.045	.836	.794
17-541	17	1.658	1.326	1.105	.884	.840
18-541	18	1.748	1.398	1.165	.932	.885
19-541	19	1.845	1.476	1.230	.984	.935
20-541	20	1.943	1.554	1.295	1.036	.984
21-541	21	2.033	1.626	1.355	1.084	1.030
22-541	22	2.123	1.698	1.415	1.132	1.075
23-541	23	2.213	1.770	1.475	1.180	1.121
24-541	24	2.310	1.848	1.540	1.232	1.170
25-541	25	2.400	1.920	1.600	1.280	1.216
26-541	26	2.490	1.992	1.660	1.328	1.262
27-541	27	2.580	2.064	1.720	1.376	1.307
28-541	28	2.670	2.136	1.780	1.424	1.353
29-541	29	2.768	2.214	1.845	1.476	1.402
30-541	30	2.858	2.286	1.905	1.524	1.448

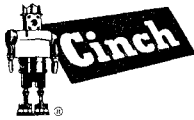
## 542 TERMINAL BLOCKS

Terminals are mounted on  $\frac{3}{8}$ " centers with 8-32 binder head screws. Size,  $1\frac{3}{8}$ " w. x  $\frac{3}{8}$ " h. Creepage distance,  $\frac{3}{4}$ ". Rating: 4000 v. rms, 30 amps.

Cinch No.	Con-tacts	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
1-542	1	\$0.188	\$0.150	\$0.125	\$0.100	\$0.095
2-542	2	.300	.240	.200	.160	.152
3-542	3	.420	.336	.280	.224	.213
4-542	4	.540	.432	.360	.288	.274
5-542	5	.645	.516	.430	.344	.327
6-542	6	.758	.606	.505	.404	.384
7-542	7	.885	.708	.590	.472	.448
8-542	8	.990	.792	.660	.528	.502
9-542	9	1.103	.882	.735	.588	.559
10-542	10	1.230	.984	.820	.656	.623
11-542	11	1.335	1.068	.890	.712	.676
12-542	12	1.455	1.164	.970	.776	.737
13-542	13	1.568	1.254	1.045	.836	.794
14-542	14	1.680	1.344	1.120	.896	.851
15-542	15	1.800	1.440	1.200	.960	.912
16-542	16	1.913	1.530	1.275	1.020	.969
17-542	17	2.025	1.620	1.350	1.080	1.026
18-542	18	2.145	1.716	1.430	1.144	1.087
19-542	19	2.258	1.806	1.505	1.204	1.144
20-542	20	2.370	1.896	1.580	1.264	1.201
21-542	21	2.490	1.992	1.660	1.328	1.262
22-542	22	2.603	2.082	1.735	1.388	1.319
23-542	23	2.715	2.172	1.810	1.448	1.376
24-542	24	2.835	2.268	1.890	1.512	1.436
25-542	25	2.948	2.358	1.965	1.572	1.493
26-542	26	3.060	2.448	2.040	1.632	1.550

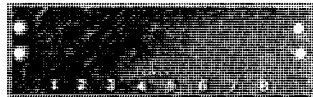
NOTE: The above are the factory OEM prices, FOB factory, and are subject to change without notice.



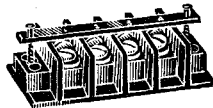


# Marker and Fanning Strips

## MARKER STRIPS FOR BARRIER TERMINAL BLOCKS



MS-8-140



MSX-4-540  
(Installed)

### 140 AND 160 SERIES MARKER STRIPS

For labelling terminal positions on barrier terminal blocks and insulating exposed portions of terminals from metallic mounting surface. Mounting holes correspond with those on appropriate barrier terminal block. Made of 1/2" vulcanized fiber and numbered sequentially from 1 with legible white numerals.

#### MARKER STRIPS FOR 140, 140W, 140-3/4 W, 164, 164W AND 164-3/4 W

Cinch No.	Term.	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
MS-2-140	2	6.6c	5.3c	4.4c	3.5c	3.3c
MS-3-140	3	7.3c	5.8c	4.9c	3.9c	3.7c
MS-4-140	4	8c	6.4c	5.4c	4.3c	4.1c
MS-5-140	5	8.7c	7c	5.8c	4.6c	4.4c
MS-6-140	6	9.5c	7.6c	6.3c	5c	4.8c
MS-7-140	7	10.1c	8.1c	6.8c	5.4c	5.1c
MS-8-140	8	10.9c	8.7c	7.3c	5.8c	5.5c
MS-9-140	9	11.6c	9.2c	7.7c	6.2c	5.9c
MS-10-140	10	16.1c	12.8c	10.7c	8.6c	8.1c
MS-11-140	11	16.7c	13.4c	11.2c	8.9c	8.5c
MS-12-140	12	17.5c	14c	11.7c	9.3c	8.9c
MS-13-140	13	18.2c	14.5c	12.1c	9.7c	9.2c
MS-14-140	14	18.9c	15.1c	12.6c	10.1c	9.6c
MS-15-140	15	19.6c	15.7c	13.1c	10.4c	9.9c
MS-16-140	16	24.1c	19.3c	16.1c	12.8c	12.2c
MS-17-140	17	24.8c	19.8c	16.5c	13.2c	12.5c
MS-18-140	18	25.5c	20.4c	17c	13.6c	12.9c
MS-19-140	19	26.2c	20.9c	17.5c	14c	13.3c
MS-20-140	20	30.7c	24.5c	20.5c	16.4c	15.5c
MS-21-140	21	31.4c	25.1c	20.9c	16.7c	15.9c

#### MARKER STRIPS FOR 141, 141W AND 141-3/4 W

MS-2-141	2	7.1c	5.6c	4.7c	3.8c	3.6c
MS-3-141	3	8c	6.4c	5.4c	4.3c	4.1c
MS-4-141	4	9c	7.2c	6c	4.8c	4.6c
MS-5-141	5	9.9c	7.9c	6.6c	5.3c	5c
MS-6-141	6	10.9c	8.7c	7.3c	5.8c	5.5c
MS-7-141	7	11.9c	9.5c	7.9c	6.3c	6c
MS-8-141	8	12.8c	10.2c	8.5c	6.8c	6.5c
MS-9-141	9	13.7c	11c	9.2c	7.3c	7c
MS-10-141	10	18.4c	14.7c	12.3c	9.8c	9.3c
MS-11-141	11	19.4c	15.5c	12.9c	10.3c	9.8c
MS-12-141	12	20.3c	16.3c	13.6c	10.8c	10.3c
MS-13-141	13	21.2c	17c	14.2c	11.3c	10.8c
MS-14-141	14	22.2c	17.8c	14.8c	11.8c	11.3c
MS-15-141	15	26.9c	21.5c	18c	14.4c	13.6c
MS-16-141	16	27.8c	22.3c	18.6c	14.8c	14.1c
MS-17-141	17	28.8c	23c	19.2c	15.4c	14.6c
MS-18-141	18	29.8c	23.8c	19.9c	15.9c	15.1c
MS-19-141	19	34.4c	27.5c	23c	18.4c	17.4c
MS-20-141	20	35.4c	28.3c	23.6c	18.9c	17.9c

#### MARKER STRIPS FOR 142, 142W AND 142-3/4 W

MS-2-142	2	7.6c	6.1c	5.1c	4c	3.8c
MS-3-142	3	8.7c	7c	5.8c	4.6c	4.4c
MS-4-142	4	48.8c	39c	32.5c	26c	24.7c
MS-5-142	5	11.1c	8.9c	7.4c	5.9c	5.6c
MS-6-142	6	12.3c	9.8c	8.2c	6.6c	6.2c
MS-7-142	7	13.5c	10.8c	9c	7.2c	6.8c
MS-8-142	8	14.6c	11.7c	9.8c	7.8c	7.4c
MS-9-142	9	15.8c	12.7c	10.6c	8.4c	8c
MS-10-142	10	20.8c	16.6c	13.9c	11.1c	10.5c
MS-11-142	11	22c	17.6c	14.7c	11.7c	11.1c
MS-12-142	12	23.2c	18.5c	15.5c	12.4c	11.7c
MS-13-142	13	24.4c	19.5c	16.3c	13c	12.4c
MS-14-142	14	25.5c	20.4c	17c	13.6c	12.9c
MS-15-142	15	30.5c	24.4c	20.3c	16.2c	15.4c
MS-16-142	16	31.7c	25.3c	21.1c	16.9c	16c
MS-17-142	17	32.9c	26.3c	21.9c	17.5c	16.6c

### 500 SERIES MARKER STRIPS

For labelling terminal positions on "500" series barrier terminal blocks. Made of 1/8" XP Bakelite, 1/2" wide. Numbered sequentially from 1 with 3/8" legible white numerals. Mounted on top of terminal block as illustrated. Mounting screws furnished.

### SERIES 162 FANNING STRIPS FOR CONNECTING TO SERIES 142 BARRIER BLOCKS



Terminals are of .032" brass, cadmium plated. Bakelite strips furnished with a hole in either the right or left end for fastening the cable with a clamp or lacing twine. Simplifies cable or harness wiring, assuring positive connections. Terminals mounted on 3/8" Bakelite, 3/8" w. and on 3/4" cns. L, cable clamp on left, R, right. Fanning strips for 140, 141 series barrier blocks available.

Cinch No.	Cinch No.	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
2-162-L	2-162-R	\$0.143	\$0.114	\$0.095	\$0.076	\$0.072
3-162-L	3-162-R	.188	.15	.125	.10	.095
4-162-L	4-162-R	.24	.192	.16	.128	.122
5-162-L	5-162-R	.293	.234	.195	.156	.148
6-162-L	6-162-R	.353	.282	.235	.188	.179

### MARKER STRIPS FOR 540

Cinch No.	Term.	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250-499
MSX-2-540	2	11.3c	9c	7.5c	6c	5.7c
MSX-3-540	3	12c	9.6c	8c	6.4c	6.1c
MSX-4-540	4	12c	9.6c	8c	6.4c	6.1c
MSX-5-540	5	12c	9.6c	8c	6.4c	6.1c
MSX-6-540	6	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-7-540	7	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-8-540	8	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-9-540	9	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-10-540	10	16.5c	13.2c	11c	8.8c	8.4c
MSX-11-540	11	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-12-540	12	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-13-540	13	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-14-540	14	18.8c	15c	12.5c	10c	9.5c
MSX-15-540	15	22.5c	18c	15c	12c	11.4c
MSX-16-540	16	22.5c	18c	15c	12c	11.4c
MSX-17-540	17	24.8c	19.8c	16.5c	13.2c	12.5c
MSX-18-540	18	26.3c	21c	17.5c	14c	13.3c
MSX-19-540	19	26.3c	21c	17.5c	14c	13.3c
MSX-20-540	20	30c	24c	20c	16c	15.2c
MSX-21-540	21	30c	24c	20c	16c	15.2c
MSX-22-540	22	31.5c	25.2c	21c	16.8c	16c
MSX-23-540	23	31.5c	25.2c	21c	16.8c	16c
MSX-24-540	24	31.5c	25.2c	21c	16.8c	16c
MSX-25-540	25	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-26-540	26	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-27-540	27	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-28-540	28	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-29-540	29	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-30-540	30	42c	33.6c	28c	22.4c	21.3c
MSX-31-540	31	42c	33.6c	28c	22.4c	21.3c

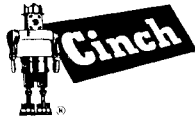
### MARKER STRIPS FOR 541

MSX-2-541	2	12c	9.6c	8c	6.4c	6.1c
MSX-3-541	3	12c	9.6c	8c	6.4c	6.1c
MSX-4-541	4	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-5-541	5	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-6-541	6	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-7-541	7	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-8-541	8	13.5c	10.8c	9c	7.2c	6.8c
MSX-9-541	9	13.5c	10.8c	9c	7.2c	6.8c
MSX-10-541	10	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-11-541	11	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-12-541	12	18.8c	15c	12.5c	10c	9.5c
MSX-13-541	13	18.8c	15c	12.5c	10c	9.5c
MSX-14-541	14	18.8c	15c	12.5c	10c	9.5c
MSX-15-541	15	26.3c	21c	17.5c	14c	13.3c
MSX-16-541	16	26.3c	21c	17.5c	14c	13.3c
MSX-17-541	17	26.3c	21c	17.5c	14c	13.3c
MSX-18-541	18	26.3c	21c	17.5c	14c	13.3c
MSX-19-541	19	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-20-541	20	31.5c	25.2c	21c	16.8c	16c
MSX-21-541	21	31.5c	25.2c	21c	16.8c	16c
MSX-22-541	22	31.5c	25.2c	21c	16.8c	16c
MSX-23-541	23	31.5c	25.2c	21c	16.8c	16c
MSX-24-541	24	31.5c	25.2c	21c	16.8c	16c
MSX-25-541	25	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-26-541	26	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-27-541	27	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-28-541	28	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-29-541	29	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-30-541	30	42c	33.6c	28c	22.4c	21.3c

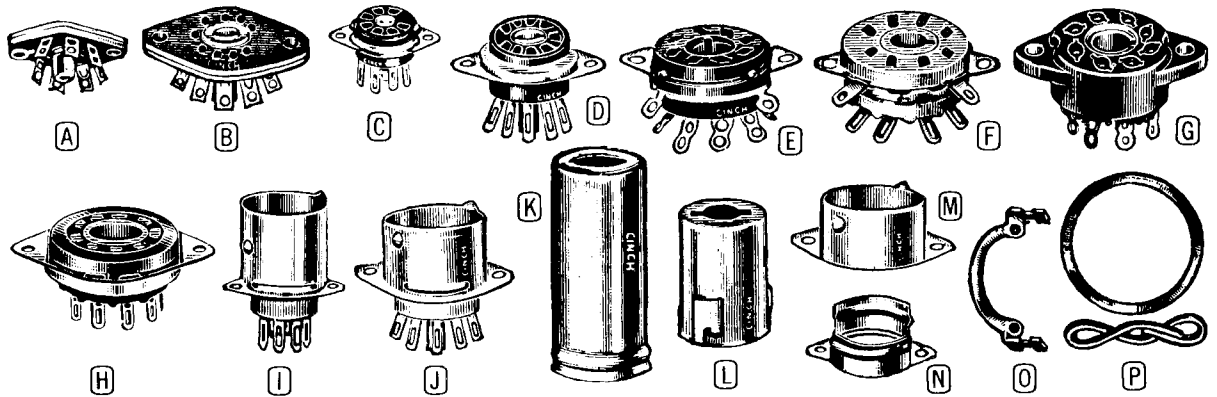
### MARKER STRIPS FOR 542

MSX-2-542	2	12c	9.6c	8c	6.4c	6.1c
MSX-3-542	3	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-4-542	4	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-5-542	5	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-6-542	6	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-7-542	7	13.5c	10.8c	9c	7.2c	6.8c
MSX-8-542	8	13.5c	10.8c	9c	7.2c	6.8c
MSX-9-542	9	15c	12c	10c	8c	7.6c
MSX-10-542	10	18.8c	15c	12.5c	10c	9.5c
MSX-11-542	11	18.8c	15c	12.5c	10c	9.5c
MSX-12-542	12	22.5c	18c	15c	12c	11.4c
MSX-13-542	13	22.5c	18c	15c	12c	11.4c
MSX-14-542	14	22.5c	18c	15c	12c	11.4c
MSX-15-542	15	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-16-542	16	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-17-542	17	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-18-542	18	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-19-542	19	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-20-542	20	34.5c	27.6c	23c	18.4c	17.5c
MSX-21-542	21	34.5c	27.6c	23c	18.4c	17.5c
MSX-22-542	22	34.5c	27.6c	23c	18.4c	17.5c
MSX-23-542	23	34.5c	27.6c	23c	18.4c	17.5c
MSX-24-542	24	34.5c	27.6c	23c	18.4c	17.5c
MSX-25-542	25	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-26-542	26	38.3c	30.6c	25.5c	20.4c	19.4c

Cinch No.	Cinch No.	Net Each, Lots of				
		1-24	25-49			



# Tube Sockets, Accessories



### WAFER TYPE SOCKETS

Cadmium-plated brass contacts; hot-solder-coated center shield.

Cinch No.	Fig.	Description	Mtg. Ctrs.	Net Ea., Lots of	
				1-99	100-999
7W2A	A	7-pin miniature. Chocolate XP	1 3/8"	6.8c	3.4c
7WL2	A	Bakelite laminations.	1 3/8"	6.8c	3.4c
7WL4	A	Bakelite laminations.	1 3/8"	8c	4c
9W1	B	9-pin miniature	1 1/2"	8.4c	4.2c
9W2	B	9-pin miniature	1 1/2"	9.3c	4.7c

### SHIELD BASE TYPE SOCKETS

#### MINIATURE AND NOVAL TYPES

Miniature (Fig. I): Mtg. holes, .125" dia. on 7/8" mtg. ctrs. Noval (Fig. J): Mtg. holes, .093" dia. on 1 1/8" mtg. ctrs.

Description	Cinch No.	Fig.	Net Ea., Lots of		Cinch No.	Fig.	Net Ea., Lots of	
			1-99	100-999			1-99	100-999
Black	7XB1	I	17c	8.5c	9XB	J	20.9c	10.4c
Mica	7XM1	I	19.3c	9.6c	9XM	J	*	*
Ceramic	7XC	I	33c	16.5c	9XC	J	35.7c	17.9c

\*List Price 37.8c; No Quantity Pricing.

### SADDLE TYPE SOCKETS

Cinch No.	Fig.	Description	Mtg. Centers	Mounting	Net Each, Lots of	
					1-99	100-999
7EB	C	Black	7/8"	Bottom	9.4c	4.7c
7EM	C	Mica	7/8"	Bottom	11.3c	5.6c
7AB1	C	Black	7/8"	Top	9.4c	4.7c
7AM1	C	Mica	7/8"	Top	11.3c	5.6c
9EB	D	Black	1 1/8"	Bottom	12.4c	6.2c
9EM	D	Mica	1 1/8"	Bottom	14.6c	7.3c
9AB	D	Black	1 1/8"	Top	12.4c	6.2c
9AM	D	Mica	1 1/8"	Top	14.6c	7.3c
8AB	E	Black	1 1/2"	Bottom	9.9c	5.0c
8AM	E	Mica	1 1/2"	Bottom	13.6c	6.8c
8EB	E	Black	1 1/2"	Bottom	10.2c	5.1c
8EM	E	Mica	1 1/2"	Bottom	12.9c	6.5c

Cinch No. 8EC (Fig. E)—Ceramic. Mtg. ctrs., 1 1/2". List... 75c\*

### MIL-S-12883A TYPE SOCKETS

Mtg. ctrs., 7-pin, 7/8"; 9-pin, 1 1/8".

Cinch No.	Fig.	MIL-S-12883A No.	Description	Net Each, Lots of	
				1-99	100-999
7JC-2	I	TS102C01	Ceramic	30.8c	15.4c
7JMN-1	C	TS102P02	MFE	25c	12.5c
7JM-2	I	TS102P01	MFE	22.8c	11.4c
7JCN-1	C	TS102C02	Ceramic	32.7c	16.3c
9JM-2	J	TS103P01	MFE	24.8c	12.4c
9JMN-1	D	TS103P02	MFE	21.3c	10.6c
9JC-2	J	TS103C01	Ceramic	34.3c	17.1c
9JCN-1	D	TS103C02	Ceramic	34.5c	17.3c

### MIL-S-12883A SADDLE TYPE SOCKETS

MIL Type: 7-pin, TS102P03 (MFE), TS102C03 (ceramic); 9-pin, TS103P03 (MFE), TS103C03 (ceramic). Bottom mounting.

Cinch No.	Fig.	Description	Mtg. Ctrs.	Mtg. Holes	Net Each, Lots of	
					1-99	100-999
7JM-3	C	MFE	7/8"	.125" dia.	20c	10c
7JC-3	C	Ceramic	7/8"	.125" dia.	32.7c	16.3c
9JM-3	D	MFE	1 1/8"	.125" dia.	21.3c	10.6c
9JC-3	D	Ceramic	1 1/8"	.125" dia.	34.5c	17.3c

### MIL MOLDED OCTAL SOCKETS (FIG. F)

Ceramic casting material for 8JC-2 and 8JCN-2; 8JM-2 and 8JMN-2 material is MFE. Silver plated phosphor bronze contacts, with heavy tinned tails. Heavy brass saddle, hot-soldered-coated, with four hot tinned ground lugs. Mounting centers, 1 1/2".

Cinch No.	MIL-S-12883A No.	Mtg. Hole, In.	Net Each, Lots of	
			1-99	100-999
8JC-2	TS101C01	.156 dia.	71.5c	35.8c
8JCN-2	TS101C02	6-32 tap	90c	45c
8JM-2	TS101P01	.156 dia.	35.4c	17.7c
8JMN-2	TS101P02	6-32 tap	54c	27c

### ALL MOLDED OCTAL SOCKETS (FIG. G)

All-molded octal socket offers complete one-piece construction; the saddle and body are a single casting. The standard socket is molded of high dielectric black Bakelite. Contacts are brass, cadmium plated. No. 8XM mica filled phenolic insulation, prevents loss from leakage. The mounting hole centers for both sockets are 1 1/2".

Cinch No. 8XM Socket—Mica. Net Each, Lots of 1-99... 13.2c; 100-999... 6.6c  
Cinch No. 8XB Socket—Black. Net Each, Lots of 1-99... 8.7c; 100-999... 4.4c

### NOVAR SOCKETS (FIG. H)

#### BOTTOM-MOUNTED NOVAR SOCKETS

Cinch No. 9NS-B—Molded from high dielectric black Bakelite. Cadmium plated brass contacts. Mounting centers, 1 1/2". List Price... 15.2c\*

Cinch No. 9NS-M—Same as above except molded from mica-filled low-loss Bakelite. List Price... 18.4c\*

#### TOP-MOUNTED NOVAR SOCKETS

Cinch No. 9NS-B1—Molded from high dielectric black Bakelite. Cadmium-plated brass contacts. Mounting centers, 1 1/2". List Price... 15.2c\*

Cinch No. 9NS-M1—Same as above except molded from mica-filled low-loss Bakelite. List Price... 18.4c\*

\*List Price Only; No Quantity Pricing.

### "J" SLOT TYPE TUBE SHIELDS (FIG. L)

Cinch No.	Description	Length, Inches	Net Each, Lots of	
			1-99	100-999
7S2	Steel	1 3/4"	11c	5.5c
7S3	Steel	1 3/4"	11.6c	5.8c
7S4	Steel	2 1/4"	17.8c	8.9c
7SJ2-1	MIL*, brass	1 3/4"	14.3c	7.2c
7SJ3-1	MIL*, brass	1 3/4"	16.1c	8c
7SJ4-1	MIL*, brass	2 1/4"	17.8c	8.9c
9S1	Steel	1 1/2"	16.3c	8.2c
9S2	Steel	1 1/2"	16.4c	8.2c
9S3	Steel	2 3/8"	29.9c	15c
9SJ1-1	MIL*, brass	1 1/2"	17.6c	8.8c
9SJ2-1	MIL*, brass	1 1/2"	19.3c	9.7c
9SJ3-1	MIL*, brass	2 3/8"	21.1c	10.5c

\*JAN-S-28A.

### SNAP ON TYPE TUBE SHIELD (FIG. K)

Cinch No. 7S1—Size: 1 3/4". Net Each, Lots of 1-99... 9c; 100-999... 4.5c

### SHIELD BASES

Cinch No.	Fig.	Dimensions, In.			Material	Net Each, Lots of	
		H.	Mtg. Hole	Mtg. Ctrs.		1-99	100-999
7SB1	M	3/8"	.125 dia.	7/8"	Steel	5.4c	2.7c
7SB2	M	3/8"	.125 dia.	7/8"	Brass	7.2c	3.6c
7SB3	N	11/32"	.098 dia.	7/8"	Steel	3.5c	1.7c
9SB1	M	...	3/8 dia.	1 1/8"	Steel	7.2c	3.6c

### STRAP NUTS (FIG. O)

Cinch No. 7SN—Cadmium plated brass strap nuts for use in mounting sockets with saddles or shield bases. One strap nut takes the place of two conventional type nuts. Mounting centers: 7/8". For 7 contact sockets. Net Each, Lots of 1-99... 16.8c; 100-999... 8.4c

Cinch No. 9SN—Same as Model 7SN except mounting centers are 1 1/2" and are for 9 contact sockets. Net Each, Lots of 1-99... 18.3c; 100-999... 9.2c

### MODEL 8RO RETAINER RING (FIG. P)

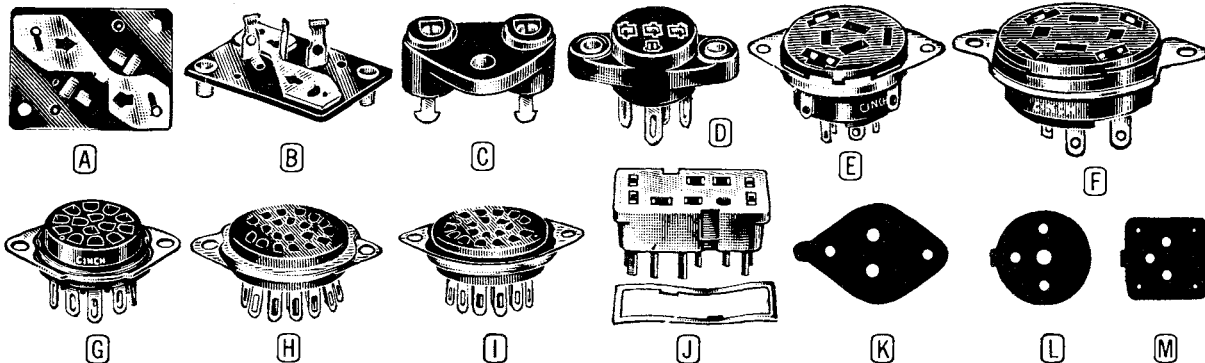
A crimped retaining ring formed of .020" spring steel. Will securely anchor sockets designed for ring mounting. Standard finish is cadmium.

Cinch No. 8RO—Net Each, Lots of 1-99... 3.5c; 100-999... 1.7c

NOTE: The above are the factory OEM prices, FOB factory, and are subject to change without notice.



# Sockets for All Purposes



## POWER TRANSISTOR SOCKETS LAMINATED TYPE

**Cinch No. 2TS-1 (Fig. A)**—Top and bottom plates are of natural XP Bakelite, vacuum wax impregnated. Contacts are of brass, cadmium plated. Formed thread for 6-20 screw. Has  $104/110^\circ$  dia. hole in CR steel plate. Provides easy attachment to a heat sink. Net Each, Lots of 1-99, **9.8c**; 100-999, **4.9c**  
**Cinch No. 2TS-2 (Fig. B)**—Identical with above except equipped with integral eyelets for easy assembly to chassis. Net Each, Lots of 1-99, **10.7c**; 100-999, **5.4c**

## MODEL 2TS-3 MOLDED TYPE (FIG. C)

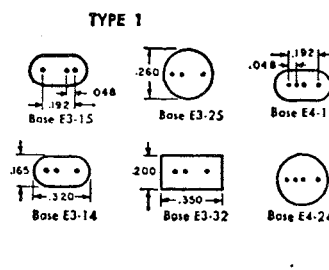
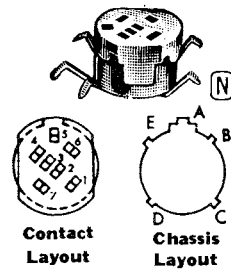
Molded power transistor socket. Casting is molded of general purpose Bakelite. Contacts are phosphor bronze, cadmium plated. Mounting holes are  $.098^\circ$  dia.; mounting centers are  $.425^\circ/435^\circ$ .  
**Cinch No. 2TS-3**—Net Each, Lots of 1-99, **9c**; 100-999, **4.5c**

## MODEL 2TS-4 GENERAL PURPOSE (FIG. D)

This new transistor socket was originally designed for an all-transistor television set; however, its future applications are many. This socket may be used in industrial communications, test equipment, ham gear, etc. Socket has a triangular base layout with  $0.2^\circ$  by  $0.1^\circ$  (JTEFC-30) contact centers, as well as three contacts in line ( $.048^\circ$  by  $.192^\circ$  contact centers). Casting is molded of general purpose Bakelite; contacts are phosphor bronze, cadmium plated. May be used with the following EIA base designations: E3-14, E3-15, E3-25, E3-32, E3-38, E3-39, E3-42, E3-43, E3-44, E3-51, E3-53, E4-13, E4-24, E4-31, E4-43, E4-52, ET-103-D.  
**Cinch No. 2TS-4**—Net Each, Lots of 1-99, **16.9c**; 100-999, **8.5c**

## CAPACITOR "PLUG-IN" SOCKETS

**Cinch No. 2C5 (Fig. E)**—Designed for use with Mallory and Magnavox  $1^\circ$  FP type capacitors. Molded from high dielectric black Bakelite. Sturdy steel mounting saddle has four ground lugs. Mounting centers,  $1\frac{1}{2}^\circ$ . Three recessed center contacts for extended prongs of capacitor and two outer contacts flush with surface for short prongs of capacitor. All contacts are cadmium plated for fast, easy soldering. Net Each, Lots of 1-99, **43.5c**; 100-999, **21.8c**  
**Cinch No. 2C7 (Fig. F)**—Designed for use with Mallory and Magnavox  $1\frac{3}{8}^\circ$  FP type capacitors. Molded from high dielectric black Bakelite. Sturdy cadmium plated steel saddle has  $1\frac{27}{32}^\circ$  mounting centers. Four recessed center contacts for extended prongs of capacitor and three outer contacts flush with surface for short prongs of capacitor. All contacts are cadmium plated. Net Each, Lots of 1-99, **67.8c**; 100-999, **33.9c**



## RELAY SOCKETS

### MODEL 14RS RELAY SOCKET (FIG. G)

A 14-contact relay socket with mica-filled low-loss Bakelite casting. Contacts are of beryllium copper, silver plated with hot tinned tails. Overall length of top mount saddle is  $1\frac{11}{32}^\circ$ . Mounting centers:  $1\frac{1}{2}^\circ$ .  
**Cinch No. 14RS**—Net Each, Lots of 1-99, **\$0.738**; 100-999, **\$0.369**

### MODEL 20RS TOP MOUNTED RELAY SOCKET (FIG. H)

A 20-pin top-mounted relay socket. Contacts are of beryllium copper, silver-plated with hot tinned tails. Steel saddle, cadmium plated;  $1\frac{3}{8}^\circ$  mounting centers.  
**Cinch No. 20RS**—Net Each, Lots of 1-99, **\$1.68**; 100-999, **\$0.84**

### BOTTOM-MOUNTED RELAY SOCKETS (FIG. I)

**Cinch No. 20RS-1**—A 20-contact relay socket with mica-filled low-loss Bakelite casting. Contacts are of beryllium copper, silver-plated with hot-tinned tails. Mounting centers,  $1\frac{3}{8}^\circ$ . Net Each, Lots of 1-99, **\$1.68**; 100-999, **\$0.84**  
**Cinch No. 14RS-1**—A 14-contact relay socket. Same as above except contacts 15 to 20 are omitted. Net Each, Lots of 1-99, **\$1.32**; 100-999, **\$0.66**

**Cinch No. 16RS-1**—A 16-contact relay socket. Same as Model 20RS-1 except contacts 15, 17, 18 and 20 are omitted. Net Each, Lots of 1-99, **\$1.44**; 100-999, **\$0.72**

### MODEL 8RS RELAY SOCKET (FIG. J)

This relay socket is molded of mica filled phenolic and is attached to the chassis with a cold rolled steel clip that is cadmium plated. The contacts are beryllium copper, silver plated. Mounting clip 20731 furnished with each socket. This socket fits the following relays: Advance MV-2C, AEMCO 95-3274, Brubaker K110A, Filtrors P.26.A1.P.6A, G.E. D200A and G-203A, Potter & Brumfield SL and Acc Relay No. 50-6-A (single contact type).  
**Cinch No. 8RS**—Net Each, Lots of 1-99, **45c**; 100-999, **22.5c**

## POWER TRANSISTOR HEAT SINKS

Hard anodized aluminum insulator wafers for use with power transistors. Feature high thermal conductivity, high dielectric resistance, high abrasion resistance and high corrosion resistance.  
**Cinch No. 2W-1 (Fig. K)**—For Motorola transistors 2N179, 2N176 and 2N554.  
**Cinch No. 2W-2 (Fig. L)**—For Delco transistor 2N174.  
**Cinch No. 2W-3 (Fig. M)**—For Texas Instruments transistor 2N389.  
**Any Model Listed Above**—Net Each, Lots of 1-24, **31.5c**; 25-49, **25.2c**; 50-99, **21c**; 100-249, **16.8c**; 250-499, **16c**; 500-999, **15.1c**

## SUBMINIATURE TUBE SOCKETS

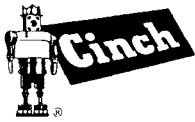
Use extensively for hearing aids, radios and other electronic apparatus. Molded from mica-filled low loss Bakelite with silver plated beryllium copper contacts. No. 2H5 can be used for four prong tube or as a transistor socket. No. 5PC for printed circuits. No. 5WC for wired circuits.

Cinch No.	Base Types	Tabs Used (See Diag.)	Cont. Pos. Used	Net Ea., Lots of
				1-99 100-999
7UTS	All	A, B, C, D, E	1, 3, 4, 7	67.5c 33.8c
7UTS-1	1 and 3	C, D, E	1, 3, 4, 7	45c 22.5c
7UTS-3	3	C, D, E	1, 4, 7	40.5c 20.25c
7UTS-4	4	A, B, C, D, E	1, 4, 5, 6, 7	54c 27c
7UTS-5	5	B, D, E	1, 6, 7	40.5c 20.25c
7UTS-6	1 and 3	C, D, E	1, 3, 4, 7	45c 22.5c

Cinch No.	Pin	Fig.	Net Ea., Lots of	Cinch No.	Pin	Fig.	Net Ea., Lots of
			1-99 100-999				1-99 100-999
2H3*	3	O	20.8c 10.4c	5PC	5	Q	39.6c 19.8c
2H5*	5	P	22.4c 11.2c	5WC	5	R	37.6c 18.8c
2H6*	6	...	29.8c 14.9c	8SM*	8	S	42c 21c
2H7*	7	...	31c 15.5c	8SM-P†	8	...	54c 27c

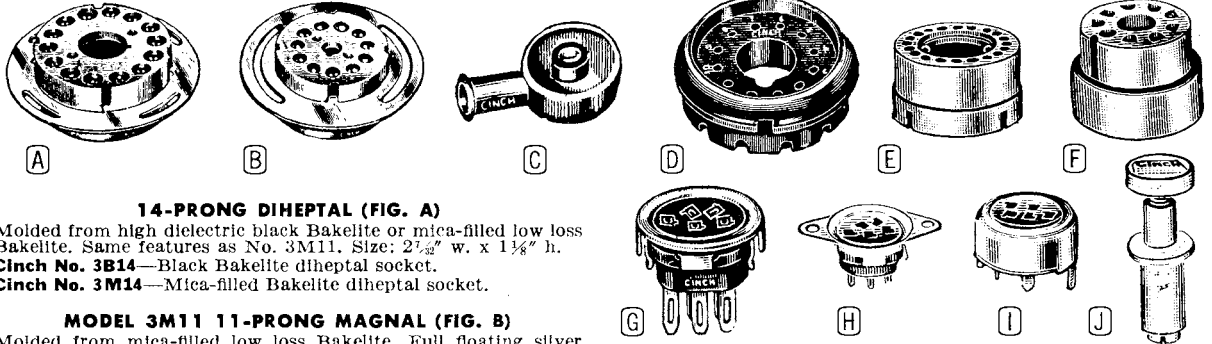
\*Mounting ring included. †No. 8SM with a mounting plate.

NOTE: The above are the factory OEM prices, FOB factory, and are subject to change without notice.



# Sockets and Connectors

## SOCKETS FOR SPECIAL PURPOSE TUBES



**14-PRONG DIHEPTAL (FIG. A)**

Molded from high dielectric black Bakelite or mica-filled low loss Bakelite. Same features as No. 3M11. Size: 2 7/8" w. x 1 1/8" h.  
**Cinch No. 3B14**—Black Bakelite diheptal socket.  
**Cinch No. 3M14**—Mica-filled Bakelite diheptal socket.

**MODEL 3M11 11-PRONG MAGNAL (FIG. B)**

Molded from mica-filled low loss Bakelite. Full floating silver plated beryllium copper contacts insure easy insertion of tubes and provide excellent electrical connections. For use with 5BP1 and 2AP1 cathode ray tubes. Size: 1 23/32" w. x 1 3/4" h.

### MOUNTING RINGS

**Cinch No. 3R11**—Steel mounting ring for No. 3M11.  
**Cinch No. 3R14**—Steel mounting ring for Nos. 3B14 and 3M14.

**MODEL 3A1 SECOND ANODE CONNECTOR (FIG. C)**

Snap over .096" dia. prong on side of diheptal tubes. Cadmium plated brass contact surrounded by rubber insulator. Size, 3/4" w. x 1 3/4" lg.  
**Cinch No. 3A1**—List Price only . . . . . 90c

**12-PRONG DUODECAL (FIG. D)**

Slightly larger in diameter than the tube base and only slightly longer than the tube pin. Integral wire strain relief contact. For use with 10BP4, 2BP1, 5TP4, etc. type tubes. Also RCA 6199 tube.  
**Cinch No. 3B12**—Bakelite duodecal socket.  
**Cinch No. 3M12**—Mica duodecal socket.

**MODEL 20-PM PHOTO-MULTIPLIER (FIG. E)**

Twenty-contact socket for RCA photo-multiplier tube Nos. 6810, C7187A, C7122 and 7265. Casting material is MAI-60 Alkyd Glass Fiber. JETEC No. is 20-102. Contacts are cadmium plated brass.

**MODEL 7-VT VIDICON (FIG. F)**

Seven-contact socket for RCA vidicon tube Nos. 6198 and 7038. Casting material is mica. Contacts are silver-plated phosphor bronze. JETEC No. is ES-11.

### NUVISTOR SOCKETS

Five-contact sockets. Socket body is of low-loss phenolic insulation (MFE). Cadmium-plated cold-rolled steel saddle. Contacts are of copper alloy with cadmium plating.

**Cinch No. 5NS (Fig. G)**—Crimp-mounting type. Fastened to chassis by two tabs.

**Cinch No. 5NS-1 (Fig. H)**—Conventional-mounting type. Mounts with screws, eyelets, rivets or self-tapping screws. Any #2 screw or 3/8" dia. rivet with head dia. of up to .190" may be used.

**Cinch No. 5NS-2 (Fig. I)**—Standoff type. For printed circuit applications. Has two grounding terminals.

**MODEL TP-1 NUVISTOR TUBE PULLER\* (FIG. J)**

Unique device for removing Nuvistor tubes from their sockets without scratching them. Size; Approximately 2 1/4" h. x 1" w.  
 \*Patent Pending.

**Cinch No. TP-1**—Net Each, any quantity . . . . . 79c

Cinch No.	Net Each, Lots of				
	1-24	25-49	50-99	100-249	250-499
3B12	\$0.60	\$0.48	\$0.40	\$0.32	\$0.304
3B14	1.05	.84	.70	.56	.532
3M11	4.50	3.60	3.00	2.40	2.280
3M12	1.80	1.44	1.20	.96	.912
3M14	1.35	1.08	.90	.72	.684
3R11	.30	.24	.20	.16	.152
3R14	.30	.24	.20	.16	.152
5NS	.138	.138	.138	.16	.069
5NS-1	.213	.213	.213	1.065	1.065
5NS-2	1.05	1.05	1.05	.525	.525
7-VT	2.10	1.68	1.40	1.12	1.064
20-PM	5.003	4.002	3.335	2.668	2.535

## PRINTED CIRCUIT EDGE CONNECTORS AND SOCKETS

### TYPE 252

Bifurcated contacts, double-row. Contact tails designed for dip soldering, and will fit into .051" diameter holes.

Cinch No.	Cont. Pos.	No. of Cont.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250-499
50-12B-10	6	12	\$1.26	\$1.008	\$0.84	\$0.672	\$0.638
50-20B-10	10	20	1.74	1.392	1.16	.928	.882
50-24B-10	12	24	1.98	1.584	1.32	1.056	1.003
50-30B-10	15	30	2.34	1.872	1.56	1.248	1.186
50-36B-10	18	36	2.70	2.160	1.80	1.440	1.368
50-44B-10	22	44	3.18	2.544	2.12	1.696	1.611

### TYPE 253

Standard contacts, double-row. Contact tails are for wire-wrapping.

Cinch No.	Cont. Pos.	No. of Cont.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250-499
50-12B-20	6	12	\$1.913	\$1.530	\$1.275	\$1.020	\$0.969
50-20B-20	10	20	2.483	1.986	1.655	1.324	1.258
50-24B-20	12	24	2.768	2.214	1.845	1.476	1.402
50-30B-20	15	30	3.195	2.556	2.130	1.704	1.619
50-36B-20	18	36	3.623	2.898	2.415	1.932	1.835
50-44B-20	22	44	4.193	3.354	2.795	2.236	2.124

### PRINTED CIRCUIT EDGE CONNECTORS

Designed for minimum printed circuit card wear, low insertion force and positive contact with the printed circuit board. Insulation is glass-filled diallyl phthalate, type SDC-F per MIL-M-14. Contacts are of phosphor bronze with .00003" minimum gold plated. Types 250, 251 and 252 utilize bifurcated contacts, permitting two flexing surfaces instead of one for positive contact. Bifurcated contacts are especially recommended for added contact reliability where vibration or printed circuit board irregularities would otherwise cause trouble. Connectors meet requirements of MIL-C-21097A (Ships) where applicable. One plastic polarizing key furnished unassembled. Rating: 830 v. AC rms.

**TYPE 250 (Fig. A)**

Bifurcated contacts, single row. Conventional wiring tails.

Cinch No.	Cont. Pos.	No. of Cont.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250-499
50-6A-20	6	6	\$1.125	\$0.90	\$0.75	\$0.60	\$0.57
50-10A-20	10	10	1.50	1.20	1.00	.80	.76
50-12A-20	12	12	1.688	1.35	1.125	.90	.855
50-15A-20	15	15	1.973	1.578	1.315	1.052	.999
50-18A-20	18	18	2.25	1.80	1.50	1.20	1.14
50-22A-20	22	22	2.625	2.10	1.75	1.40	1.33

**TYPE 251 (Fig. B)**

Bifurcated contacts, double row. Conventional wiring tails.

Cinch No.	Cont. Pos.	No. of Cont.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250-499
50-12A-30	6	12	\$1.125	\$0.90	\$0.75	\$0.60	\$0.57
50-20A-30	10	20	1.50	1.20	1.00	.80	.76
50-24A-30	12	24	1.688	1.35	1.125	.90	.855
50-30A-30	15	30	1.973	1.578	1.315	1.052	.999
50-36A-30	18	36	2.25	1.80	1.50	1.20	1.14
50-44A-30	22	44	2.625	2.10	1.75	1.40	1.33

### PRINTED CIRCUIT MINIATURE SOCKETS

**Cinch No. 7PC-B (Fig. C)**—Seven-pin, brass contacts with hot-solder-coated finish. General purpose black phenolic casting. Special tabs prevent tube shields from contacting the printed wire chassis. Center shields provide mechanical retention of the socket in the chassis.  
 Net Each, Lots of 1-99 . . . . . 6.3c; 100-999 . . . . . 3.15c

**Cinch No. 7PC-B1 (Fig. C)**—Same as 7PC-B but without center shield or tabs.  
 Net Each, Lots of 1-99 . . . . . 7.1c; 100-999 . . . . . 3.5c

**Cinch No. 9PC-B (Fig. D)**—Same as 7PC-B but 9-pin noval.  
 Net Each, Lots of 1-99 . . . . . 8.58c; 100-999 . . . . . 4.29c

**Cinch No. 9PC-B1 (Fig. D)**—Same as 7PC-B1 but 9-pin noval.  
 Net Each, Lots of 1-99 . . . . . 9.5c; 100-999 . . . . . 4.7c

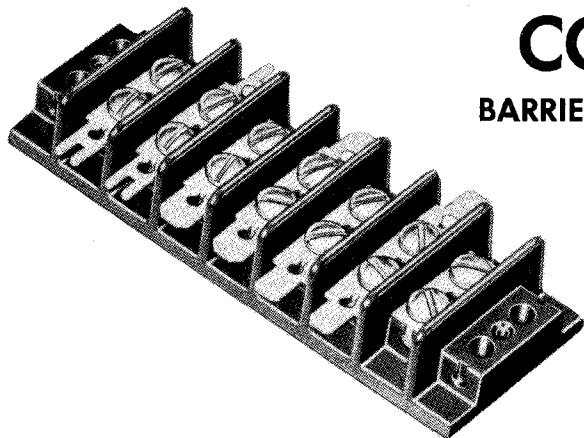
### PRINTED CIRCUIT SOCKETS WITH SHIELD BASES

**Cinch No. 7PC-M2 (Fig. E)**—Seven-pin miniature standoff socket. Has an attached bayonet type shield base with ground tab. For use with 1/8" printed circuit boards. Castings are low-loss mica-filled phenolic (MFE). Contacts are phosphor bronze with a hot-tinned finish. Center shield and ground tab are brass, hot-tinned and base, nickel-plated brass.  
 Net Each, Lots of 1-99 . . . . . \$0.948; 100-999 . . . . . \$0.474

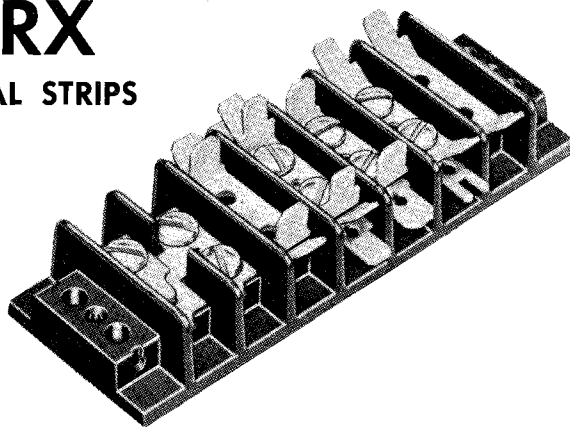
**Cinch No. 9PC-M2 (Fig. F)**—Same as 7PC-M2 but 9-pin noval.  
 Net Each, Lots of 1-99 . . . . . \$1.17; 100-999 . . . . . \$0.585

NOTE: The above are the factory OEM prices, FOB factory, and are subject to change without notice.

# CONECTRIX Incorporated



## CON-TRX BARRIER TERMINAL STRIPS



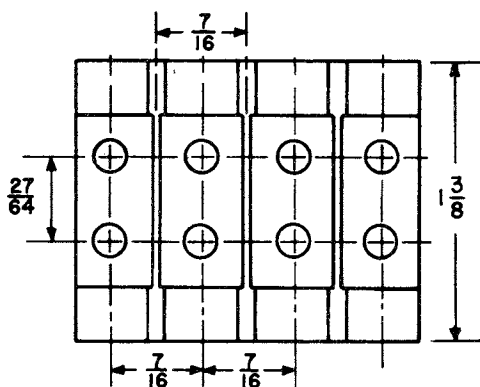
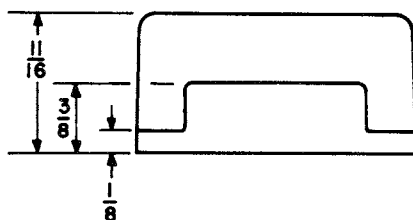
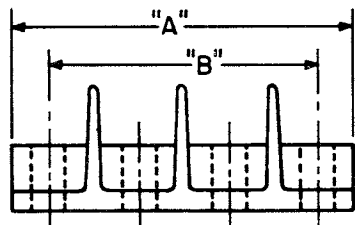
### 6-33 TB SERIES

CONECTRIX BARRIER STRIPS are made of General Purpose Phenolics and also are available in military composition. The strips conform to standard terminal block specifications offering to you the consumer a completely interchangeable and compatible block. Heavier and higher barriers with webbing at the base strengthens the barriers and increases the creepage distance contact to contact and contact to ground.

### CODED TERMINAL STRIPS LETTER NUMERAL OR COLOR

The code characters are applied on the base webbing and may be applied in any desired combination. The code may also be hot or rubber stamped, whichever preferred.

### BARRIER TERMINAL STRIPS GENERAL SPECIFICATIONS



### PHYSICAL DIMENSIONS

No. of Terminals	"A"	"B"
1	1 $\frac{3}{16}$	$\frac{7}{8}$
2	1 $\frac{5}{8}$	1 $\frac{5}{16}$
3	2 $\frac{1}{16}$	1 $\frac{3}{4}$
4	2 $\frac{1}{2}$	2 $\frac{3}{16}$
5	2 $\frac{5}{16}$	2 $\frac{5}{8}$
6	3 $\frac{3}{8}$	3 $\frac{1}{16}$
7	3 $\frac{13}{16}$	3 $\frac{1}{2}$
8	4 $\frac{1}{4}$	3 $\frac{5}{16}$
9	4 $\frac{11}{16}$	4 $\frac{3}{8}$

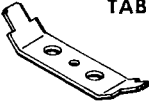
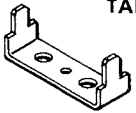

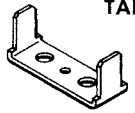
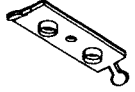

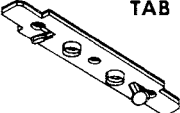
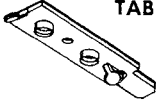
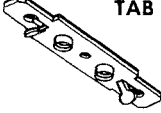
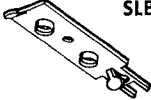
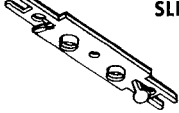

No. of Terminals	"A"	"B"
10	5 $\frac{1}{8}$	4 $\frac{13}{16}$
11	5 $\frac{9}{16}$	5 $\frac{1}{4}$
12	6	5 $\frac{11}{16}$
13	6 $\frac{7}{16}$	6 $\frac{1}{8}$
14	6 $\frac{7}{8}$	6 $\frac{9}{16}$
15	7 $\frac{5}{16}$	7
16	7 $\frac{3}{4}$	7 $\frac{7}{16}$
17	8 $\frac{3}{16}$	7 $\frac{7}{8}$
18	8 $\frac{5}{8}$	8 $\frac{5}{16}$
19	9 $\frac{1}{16}$	8 $\frac{3}{4}$
20	9 $\frac{1}{2}$	9 $\frac{3}{16}$

No. of Terminals	"A"	"B"
21	9 $\frac{15}{16}$	9 $\frac{5}{8}$
22	10 $\frac{3}{8}$	10 $\frac{1}{16}$
23	10 $\frac{13}{16}$	10 $\frac{1}{2}$
24	11 $\frac{1}{4}$	10 $\frac{5}{16}$
25	11 $\frac{11}{16}$	11 $\frac{3}{8}$
26	12 $\frac{1}{8}$	11 $\frac{13}{16}$
27	12 $\frac{9}{16}$	12 $\frac{1}{4}$
28	13	12 $\frac{11}{16}$
29	13 $\frac{7}{16}$	13 $\frac{3}{8}$
30	13 $\frac{7}{8}$	13 $\frac{3}{16}$
31	14 $\frac{5}{16}$	14

CONECTRIX, INC. FRANKLIN PARK, ILLINOIS

# CONECTRIX Incorporated

## TERMINAL VARIATIONS AVAILABLE Series 6-33

 <p><b>TAB 4</b></p> <p><b>.187-45° DOUBLE TAB</b> The TAB 4 may be used singularly or as a multiple connection when used in junction with TAB 6 or 9.*</p>	 <p><b>TAB 9</b></p> <p><b>.187-90° DOUBLE TAB</b> The TAB 9 may be used singularly or as a multiple connection when used in junction with TAB 3 or 4.*</p>	 <p><b>TAB 3</b></p> <p><b>.250-45° DOUBLE TAB</b> The TAB 3 may be used singularly or as a multiple connection when used in junction with TAB 6 or 9.*</p>	 <p><b>TAB 6</b></p> <p><b>.250-90° DOUBLE TAB</b> The TAB 6 may be used singularly or as a multiple connection when used in junction with TAB 3 or 4.*</p>	 <p><b>SB</b></p> <p><b>SCREW BLANK</b> Terminal SB is the standard screw terminal. The SB may be applied singularly or in buss sections of 2, 3, 4, etc. for multiple screw connection applications. The terminal is supplied with two bright nickel 6-32 screws in bulk or prefastened form. PLEASE SPECIFY.**</p>	 <p><b>TAB 0</b></p> <p><b>.250 SINGLE TAB</b> TAB 0 may be used where a screw terminal to tab connection is required. The tab is supplied with two 6-32 bright nickel screws in bulk or prefastened form. PLEASE SPECIFY.**</p>
 <p><b>TAB 2</b></p> <p><b>.250 TAB BLANK</b> TAB 2 is used where a double tab connection is required. The tab is supplied with two 6-32 bright nickel screws in bulk or prefastened form. PLEASE SPECIFY.**</p>	 <p><b>TAB 7</b></p> <p><b>.187 SINGLE TAB</b> TAB 7 may be used where a screw terminal to tab connection is required. The tab is supplied with two 6-32 bright nickel screws in bulk or prefastened form. PLEASE SPECIFY.**</p>	 <p><b>TAB 1</b></p> <p><b>.187 TAB BLANK</b> TAB 1 is used where a double tab connection is required. The tab is supplied with two 6-32 bright nickel screws in bulk or prefastened form. PLEASE SPECIFY.**</p>	 <p><b>SLB 5</b></p> <p><b>SINGLE SL BLANK</b> The SLB 5 Terminal is used when a solder lug to screw terminal connection is required. The terminal is supplied with two 6-32 bright nickel screws in bulk or prefastened form. PLEASE SPECIFY.**</p>	 <p><b>SLB</b></p> <p><b>SOLDER LUG BLANK</b> The SLB terminal is used where a double solder lug connection is required. The terminal is supplied with two 6-32 bright nickel screws in bulk or prefastened form. PLEASE SPECIFY.**</p>	 <p><b>SLF</b></p> <p><b>90° SOLDER LUG FEED</b> The SLF is used when a solder lug feed through is required. The SLF is fastened with a single 6-32 bright nickel screw. When fastened the solder lug tongue extends through the bottom of the block. This terminal may be purchased in bulk or fastened form.***</p>




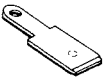





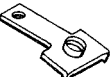





### MATERIAL AND PLATING SPECIFICATIONS

All of the above terminals are made of .032 brass and are Electro Tin plated with the exception of the 6-33 SLF which is Hot Tin dipped.

\*When these terminals are used singularly, they are fastened with a drive screw directly to the block. When used with the following terminals: SB, SLB, SLB 5, Tab 0, Tab 1, Tab 2, Tab 7.

\*\*This terminal may also be used as a base, upon which is placed Tabs 3 and 6 or 4 and 9 or any of the four singularly; when a multiple connection is required. In the case of multiple connections a drive screw may be substituted for the two 6-32 screws—PLEASE SPECIFY DRIVE SCREW WHEN PREFERRED.

\*\*\*In the bulk form it is necessary for the consumer to punch out the break out plug in the bottom of the barrier strip where the tongue is to protrude.

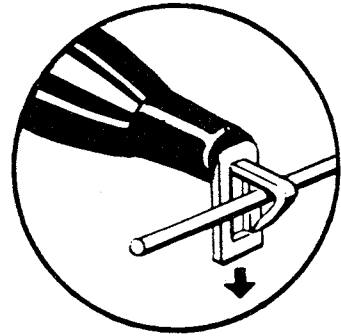
<h3>SPECIAL TERMINALS AVAILABLE</h3>			 <p><b>T 1</b></p> <p>.250-90° Brass tab with .093 clearance hole.</p>	 <p><b>T 2</b></p> <p>.250-45° Brass tab with .093 clearance hole.</p>	 <p><b>T 3</b></p> <p>.250-180° Brass tab with .093 clearance hole.</p>
 <p><b>T 6</b></p> <p>.250-flat Brass tab with .093 clearance hole.</p>	 <p><b>T 7</b></p> <p>.250-90° Brass tab with .093 clearance hole.</p>	 <p><b>T 8</b></p> <p>.250-90° Long tab with .093 clearance hole.</p>	 <p><b>T 9</b></p> <p>.187-90° Brass tab with .098 clearance hole.</p>	 <p><b>S 1</b></p> <p>6-32-90° Brass screw terminal with .104 clearance hole.</p>	 <p><b>S 2</b></p> <p>6-32 Brass screw terminal with .093 clearance hole.</p>
 <p><b>S 4</b></p> <p>6-32 Brass screw terminal with .093 clearance hole. 1/8 inch longer than the S2 screw terminal.</p>	 <p><b>L 1</b></p> <p>90° Silver plated brass solder lug with .093 clearance hole.</p>	 <p><b>L 2</b></p> <p>Flat silver plated solder lug with .093 clearance hole.</p>	 <p><b>L 3</b></p> <p>Flat silver plated brass jumper with two .093 clearance holes set at .265 center to center.</p>	 <p><b>L 4</b></p> <p>Flat silver plated brass jumper with two .104 clearance holes set at .343 center to center.</p>	 <p><b>L 6</b></p> <p>90° Hot tin dipped brass solder lug with .093 clearance hole.</p>

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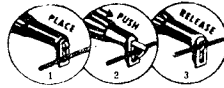
# E-Z-HOOK

## TEST AND PRODUCTION CONNECTORS

- CLIPS • ADAPTERS • TEST LEADS • PROBES



- Instantly connects anywhere — Won't cut or nick.
- Won't short or jump off — Leaves your hands free.
- Saves time and temper — Money back guarantee.



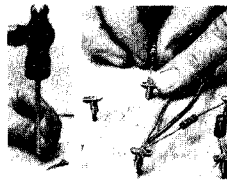
Patented hook tip connects anywhere, 1. Push to connect. 2. Push again to remove.

U.S. PATENT No. 2702892

### HARNESS BOARD CLIPS

- Save Up to 30% in Board Construction Time!
- Speeds wiring... Improves Quality

No need to waste valuable time drilling holes, placing screws, nuts, & washers. The "Nail" Clip drives into wood like a nail! Pulls out as easy. Make Eng. Changes in seconds. Use them to speed Processing—Save Construction & Production time.



E-Z-HOOK "Nail" Clips

Easy finger-tip operation speeds wire placing — makes it easier. Patented E-Z-HOOK holds firmly — won't cut nick or damage wire ends. L. 1-3-16". Made of tough Stainless Steel and Durable Nylon. ... Over 62,000 used by Company X...

No. 81-1	E-Z-HOOK "Nail" Clip (Use T-20 Tool)	24¢ ea.	10 for 1.98
No. K8150T-1	"Nail" Clip Kit (50 Clips, Tool & Instr.)	Wt. 2 oz.	ea. 8.95
No. T-20	E-Z-HOOK "Nail" Clip Driving Tool	Wt. 1-3 oz.	ea. .35

### TEST PROD TIP ADAPTERS

- For testing as you like it
- Sharp point to an E-Z-HOOK in seconds

Handiest, most trouble-free adapter you can get. Convenient E-Z-HOOK Tip slips easily on, or off, — in seconds! Doubles regular test prod utility, 1. as a sharp point for probing, 2. as an extra hand when needed. Safer, too! ... remote connections made easily while your hand stays out in the clear — safe from shock.

A smart investment in trouble-free design. Exclusive spring chuck eliminates loose, wobbly fit on Prod... insures pleasant, irritation-free performance. ... Over 12,300 used by Company Y...

Made of rust-proof Stainless Steel, Brass, and tough Zytel Nylon in Red, Black, Blue, Green, Orange, and Yellow. Lgth. 2 1-16", O.D. 19-64", Wt. 1-8 oz.

No. 55-0	E-Z-HOOK Tip (Needle—.060")	ea. .69
No. 56-1	E-Z-HOOK Tip (Standard—.080")	ea. .69
No. 57-10	E-Z-HOOK Tip (Tec—10-32 female thread)	ea. .69
No. 59-4	E-Z-HOOK Tip (Banana—Standard.)	ea. .69

### PART SUBSTITUTION CLIPS

- Eliminate Guessing

You can be sure! — when you substitute, and this E-Z-H Sub is just the thing to use... quick, easy, temporary connections in seconds... no lead twisting or solder tacking to damage parts or wiring. Speeds trouble-shooting, makes it easier... saves hours and dollars in valuable production time and material.

Long-lasting Zytel Nylon and tough Stainless Steel. In colors for easy lead identification: Red, Black, Blue, Green, Orange, and Yellow. Length 2 1-2", O.D. 19-64", Weight: 1-12th oz.

No. 71-1	E-Z-HOOK Sub	ea. .49
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Solderless Clips Eliminate Broken Lugs

### JUMPER - METER CLIPS

- Convert needless delays... to pleasant productive checks



Let carefree E-Z-HOOK Clips help speed your checks... make it easier. They quickly pay for themselves in savings.

Easy slip-on design saves in assembly and maintenance... safe solder connection and strain relief assures longer trouble-free lead life.

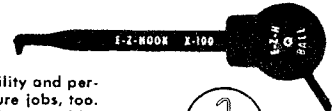
... Over 37,000 used by Company Z...

Made of tough Stainless, durable Nylon in colors for easy lead identification: Red, Black, Blue, Green, Orange, Yellow. Lgth. 21-8", OD 5-8", Wt. 1-13 oz.

No. 61-1	E-Z-HOOK Clip (Standard)	ea. .39
No. 61-2	E-Z-HOOK Clip (Gold Plated)	ea. .59

### Miniature CLIP & LEADS

- Make Impossible Connections... Easy



Now enjoy famous E-Z-HOOK reliability and performance on your small, sub-miniature jobs, too. Easily make test connections never before possible.

Tiny E-Z-HOOK with the new "Hypo Action" gives you the small size and positive control needed to make such tedious work easier, more efficient, pleasant and profitable.



FULL SIZE

Use "Q" Balls two ways—1, as a versatile low voltage test connector, 2, as a tiny mechanical hand to handle small parts. Will save you hours of unnecessary delays and aggravation.

Durably constructed of the finest materials—Red Nylon insulation, Stainless Steel spring, & Beryllium Copper conductor to assure reliable performance.

Also available on 32"—Ready-to-Plug-In—Test Leads of flexible Red and Black striped, 24 AWG (19-36) thermoplastic wire—Standard or Banana Tip. Over all length 2 1-4". Maximum width at hook only .079". Wt. 1-6th oz.

No. X-100	E-Z-HOOK 'Q' Ball Mini-HOOK (No lead)	ea. .49
No. AX-1	E-Z-HOOK 'Q' Ball Test Lead (32"—Std. Tip)	ea. .89
No. BX-1	E-Z-HOOK 'Q' Ball Test Lead (32"—Ban. Tip)	ea. .94

### SCOPE - METER PROBES

- Now—Special Probes assembled in minutes



Custom PROBE

Never before such efficiency and convenience in a replacement probe... SPECIAL TERMINALS speeds assembly, makes it easier... E-Z-HOOK for easy time-saving care-free connections... SCREW-ON COVER for ready access and repair... STRAIN-RELIEF prolongs life of single or shielded leads.



Built-In Terminals For easy assembly

For Professional or Production use. Finest streamlined feather-weight construction of rust proof Stainless, durable Zytel Nylon (slide), tough Tenite (body) in Red, Black, Blue, Green, Orange, & Silver. Lgth. 4 3-4", O.D. 15-32", Wt. 1-3 oz.

No. 54-1	E-Z-HOOK Custom PROBE	ea. .89
No. 54-2	E-Z-HOOK Custom PROBE (Gold Plated)	ea. 1.09

#### LET THEM HELP YOU CUT YOUR COSTS

To Order:- Order E-Z-HOOKS from your convenient Parts Distributor.

Factory Delivery:- Usually shipped -via Parcel Post- within 10 days.

Terms:- Rated Firms -- 2% 10th E.O.M. - Net 30 Days E.O.M. F.O.B. Covington, Ky.

Prices:- All Prices Net U.S.A., and Subject to Change Without Notice. All Patent Rights Reserved.

(In Canada order from Len Finkler Ltd., 2 Tycos Dr., Toronto 19)

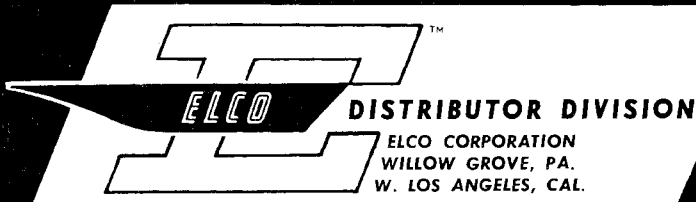
E-Z-HOOK Test Products

Covington, Ky.

## E-Z-HOOK TEST PRODUCTS • Covington, Ky.

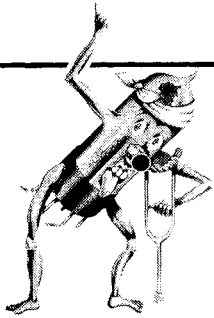
Canadian Representative:  
Len Finkler, Ltd., Toronto, Ontario





IF IT'S NEW . . . IF IT'S NEWS . . . IT'S FROM ELCO . . . and in-stock at your Authorized ELCOneer Distributor . . . who can give you same-day, off-the-shelf delivery, in most cases . . . plus invaluable Engineering advice.

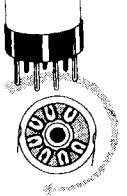
**SOCKETS**



TUBES OF THE WORLD UNITE! Revolt against out-moded, out-dated sockets that break our pins, damage our usefulness, relegate us to the scrap heap. Beseech your Engineers and P.A.'s to specify ELCO E-Z MATE\* Sockets . . . exclusively!

**ELCO'S PATENTED SOCKET FEATURE**

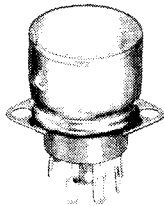
CONFORMING TO MIL-S-12883-A, our exclusive, patented SOCKET design will be found in all our 7-Pin and 9-Pin Base-Shield and Saddle Type Sockets (except Ceramic). This ingenious design provides a positioning-key at the top of the socket which permits the tube to "find" its correct insertion position without loss of time or pin damage. And by virtue of the E-Z MATE\* feature, tube locations may now be designed into "blind" or formerly inaccessible positions.



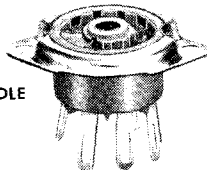
**Military Sockets per MIL-S-12883-A**

PHSPTD = Phosphor Bronze, Silver Plated, Tin Dipped CER = Ceramic BR = Brass, Cad. Plated BC = Beryllium Copper

**MIL SOCKETS**  
All 7-pin, 9-pin and octal sockets available per MIL-S-12883-A Specifications. All base shield sockets fit "J" slot shields. Contacts are phosphor bronze, silver plated, tin dipped. BOT — Bottom mounted saddle. TOP — Top mounted saddles.



BASE SHIELD



TOP MOUNTED SADDLE



BOTTOM MOUNTED SADDLE WITH GROUND LUGS

Military No.	Model No.	Contact Material	Insulator Material	Center Shield	Per 1000		
					1-499	500-1499	1500-4999
TS102C01	04-715-03	PHSPTD	Cer	Yes	227.20	143.45	126.25
TS102P01	04-715-01	PHSPTD	Mica	Yes	157.41	99.40	87.45

7-PIN SADDLE — TOP MOUNTED					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS102C02	04-711-04	PHSPTD
TS102P02	04-711-03	PHSPTD	Mica	Yes	138.10	87.20	76.75

7-PIN SADDLE — BOTTOM MOUNTED W/GROUND LUGS					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS102C03	04-703-07	PHSPTD
TS102P03	04-703-08	PHSPTD	Mica	Yes	138.10	87.20	76.75

9-PIN BASE SHIELD TYPE					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS103C01	04-915-04	PHSPTD
TS103P01	04-915-02	PHSPTD	Mica	Yes	177.21	110.65	97.35

9-PIN SADDLE TOP MOUNTED					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS103C02	04-911-05	PHSPTD
TS103P02	04-911-04	PHSPTD	Mica	Yes	150.10	94.75	83.40

9-PIN SADDLE — BOTTOM MOUNTED W/GROUND LUGS					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS103C03	04-903-06	PHSPTD
TS103P03	04-903-07	PHSPTD	Mica	Yes	150.10	94.75	83.40



WITHOUT TAPPED BUSHING



WITH TAPPED BUSHING

OCTAL SOCKETS BOTTOM MOUNTED W/GROUND LUGS					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS101C01	04-813-09	PHSPTD
TS101P01	04-813-06	PHSPTD	Mica	No	274.25	173.15	152.35

OCTAL SOCKETS BOTTOM MOUNTED W/GROUND LUGS AND TAPPED BUSHINGS					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS101C02	04-813-08	PHSPTD
TS101P02	04-813-07	PHSPTD	Mica	No	347.70	219.50	193.50



14-PIN MILITARY RELAY SOCKET — TOP MOUNTED					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS1405P01	05-0423-02	PHSPTD

2-PIN MILITARY CRYSTAL SOCKET					Per 1000		
Military No.	Model No.	Contact Material	Insulator Material	Center Shield	1-499	500-1499	1500-4999
					TS0205C01	04-210-01	PHSPTD
TS0205P01	04-210-04	BC	Cer	No	119.10	75.19	66.17

\*TRADE-MARK

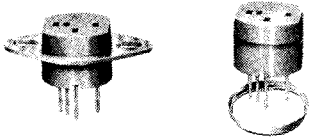
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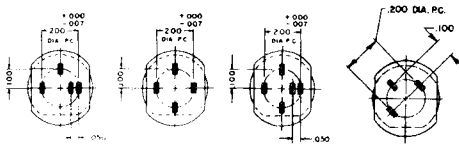
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ELCO CORPORATION

WILLOW GROVE, PA. • W. LOS ANGELES, CAL.

**SERIES 3300  
SUBMINIATURE  
TRANSISTOR SOCKETS**



Multi-purpose for use with 3- or 4-pin inline, 3-pin circular, or 4-pin circular transistors. Low-loss mica-filled phenolic body; contacts gold flashed over silver-plated beryllium copper. Types 3324-3326 for .030" dia. pins. Others for .016" dia. pins.



PATTERN A PATTERN B PATTERN C PATTERN D

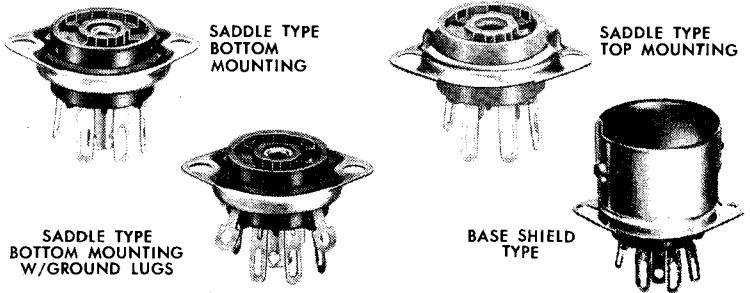
Model No.	Pin Pattern	Mtg. Type	Per 1000		
			1-499	500-1499	1500-4999
05-3301	A	Saddle	176.90	111.70	98.30
05-3304	A	Ring	143.55	90.65	79.75
05-3303	A	P.C.	144.54	91.25	80.30
05-3305	A	P.C.	144.13	91.00	80.10
05-3307	B	Ring	172.44	108.90	95.80
05-3308	B	P.C.	170.05	107.40	94.50
05-3313	C	Ring	201.90	127.45	112.15
05-3324	D	Ring	159.50	90.65	79.75
05-3326	D	Saddle	263.34	166.25	146.30
55-47202	Mtg. Ring		19.80	11.25	9.90

**SPECIFICATIONS**

Current Rating — 1 Ampere  
Contact Resistance — .03 Ohm Maximum  
Contact Materials — Beryllium Copper, Gold Flashed over Silver Plate  
Saddle and Mounting Ring — Brass, Nickel Plated

**MINIATURE SOCKETS**

7- and 9-pin Sockets with saddles or shield-base. 7-pin have 7/8" mounting centers; 9-pin have 1 1/8" mounting centers. Contact Material: BR = Brass Cad. Plate; PH = Phosphor Bronze; SP = Silver Plate; TD = Tin Dipped; BC = Beryllium Copper; TL = Tin Lead. Insulator Materials: GP = General Purpose Phenolic; M = Mica.



**7-PIN RMA SADDLE TYPE — BOTTOM MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-702-01	GP	BR	Yes	.125	81.77	51.63	45.43
04-702-02	GP	BR	No	.125	71.08	44.88	39.49

**7-PIN JAN SADDLE TYPE — TOP MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-711-01	Mica	PH	Yes	.093	107.91	68.13	59.95
04-711-02	Mica	BR	No	.093	68.31	43.13	37.95

**7-PIN RMA SADDLE TYPE — TOP MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-701-02	Mica	PH	No	.125	81.87	51.69	45.48

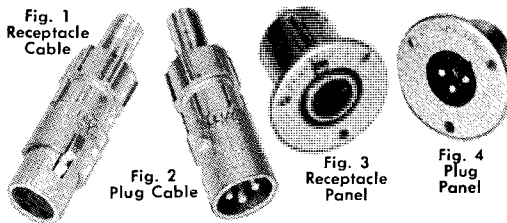
**7-PIN RMA SADDLE TYPE W/GROUND LUGS — BOTTOM MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-703-13	GP	BR	Yes	.125	84.55	53.38	46.97
04-703-02	Mica	BR	Yes	.125	84.15	53.15	46.75
04-703-14	GP	BR	No	.125	71.87	45.38	39.93
04-703-04	Mica	BR	No	.125	74.75	47.20	41.55
04-703-05	Mica	PH	No	.125	82.70	52.20	45.95
04-703-06	Mica	BC	No	.125	124.05	78.30	68.90

**7-PIN ELCO SHIELD BASE TYPE — TOP MOUNTING**

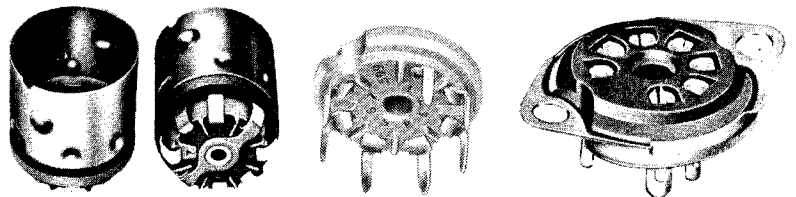
Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-705-01	Mica	PH	Yes	.125	128.40	81.05	71.35
04-705-02	Mica	PH	No	.125	122.30	77.20	67.95

**"EL" SERIES AUDIO CONNECTORS**



Rugged, high-quality, low-priced connectors for audio and general purpose applications. Satin-finished, nickel-plated, zinc shells feature positive key and groove polarization, and push-action latchlock. Silver-plated contacts rated for 300 v. AC; 3-contact type for #14 wire, rated 16 amps. Cable types accommodate up to 5/16" dia. wire.

Model No.	No. of Contacts	Fig.	— Net Ea., Lots of —			
			1-9	10-24	25-29	100-249
00-2214-003	3	1	1.93	1.84	1.78	1.62
00-2216-003	3	2	.90	.81	.75	.60
00-2215-003	3	3	.93	.84	.78	.62
00-2213-003	3	4	.72	.65	.60	.48



PRINTED CIRCUIT W/SHIELD BASE

U.H.F. PRINTED CIRCUIT STAND-OFF

MINIATURE U.H.F. BOTTOM MOUNTED

**7-PIN PRINTED CIRCUIT SNAP-IN W/SHIELD BASE FOR 1/16" CARD**

Model No.	Insulator Material	Contact Material	Center Shield	Per 1000		
				1-499	500-1499	1500-4999
04-765-01	Mica	PHSP	No	585.00	400.00	350.00

**7-PIN UHF PRINTED CIRCUIT STAND-OFF**

Model No.	Insulator Material	Contact Material	Center Shield	Per 1000		
				1-499	500-1499	1500-4999
04-730-01	Mica	PHSPDT	No	138.50	87.44	76.95

**7-PIN SOCKET UHF MINIATURE BOTTOM MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Per 1000		
				1-499	500-1499	1500-4999
04-722-02	Mica	PHSPDT	No	151.50	95.65	84.15
04-722-01	Mica	PHSPDT	No	156.75	98.95	87.05

\*TRADE-MARK

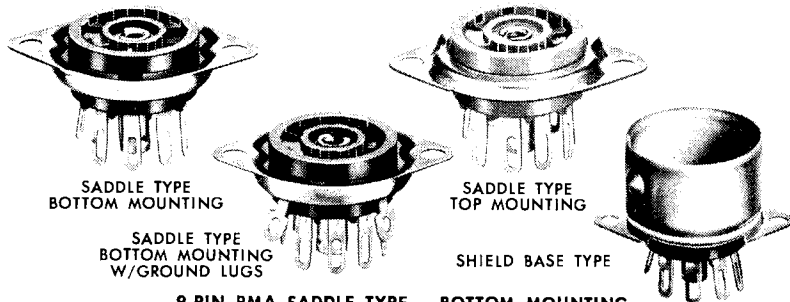
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**MINIATURE SOCKETS**



SADDLE TYPE  
BOTTOM MOUNTING

SADDLE TYPE  
BOTTOM MOUNTING  
W/GROUND LUGS

SADDLE TYPE  
TOP MOUNTING

SHIELD BASE TYPE

**9-PIN RMA SADDLE TYPE — BOTTOM MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-902-01	GP	BR	Yes	.125	88.50	55.90	49.20
04-902-02	Mica	PH	Yes	.125	109.40	69.05	60.80
04-902-03	GP	BR	No	.093	75.15	47.45	41.75
04-902-04	Mica	BR	No	.093	85.15	53.75	47.30

**9-PIN RMA SADDLE TYPE — BOTTOM MOUNTED W/GROUND LUGS**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-903-01	GP	BR	Yes	.125	89.70	56.65	49.85
04-903-02	Mica	PH	Yes	.125	121.77	76.88	67.65
04-903-03	Cer	BR	Yes	.093	229.20	144.70	127.35
04-903-04	GP	BR	No	.125	81.00	51.15	45.00
04-903-05	†Cer	BR	No	.093	219.00	138.25	121.65

†Not E-Z MATE

**9-PIN RMA SADDLE TYPE — TOP MOUNTING**

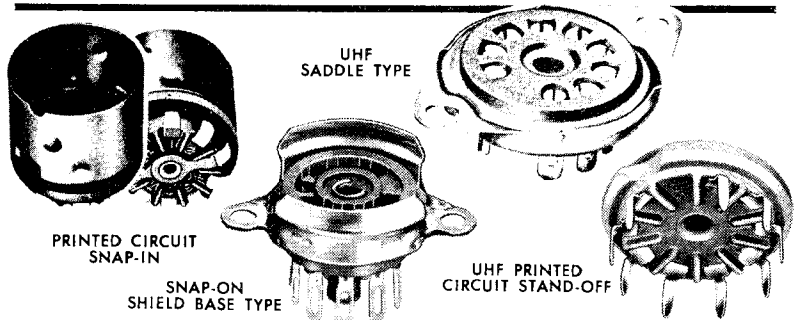
Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-901-02	Mica	PH	Yes	.125	109.40	69.05	60.80
04-901-03	Mica	PH	No	.125	96.60	61.00	53.70

**9-PIN JAN SADDLE TYPE — TOP MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-911-01	Mica	PH	Yes	.125	115.83	73.13	64.35
04-911-02	Mica	PH	Yes	.093	106.95	67.50	59.40
04-911-03	Mica	PH	No	.125	92.07	58.15	51.15

**9-PIN RMA SHIELD BASE TYPE — TOP MOUNTING**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-905-01	GP	BR	Yes	.125	132.35	83.55	73.55
04-905-02	GP	BR	No	.125	118.65	74.90	65.90
04-905-03	Mica	PHSPTD	No	.125	188.75	107.25	94.40



UHF  
SADDLE TYPE

PRINTED CIRCUIT  
SNAP-IN

SNAP-ON  
SHIELD BASE TYPE

UHF PRINTED  
CIRCUIT STAND-OFF

**9-PIN PRINTED CIRCUIT SNAP-IN W/SHIELD BASE FOR 1/16" CARD**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-965-01	Mica	BC	No	None	675.00	450.00	400.00

**9-PIN RMA SNAP-ON SHIELD BASE TYPE**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-904-07	Mica	PHTL	Yes	.125	115.74	73.05	64.30
04-904-08	Mica	PHTL	No	.125	106.45	67.20	59.15

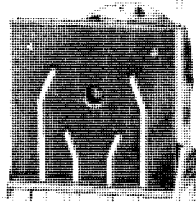
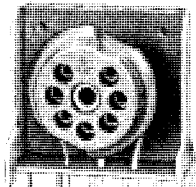
**9-PIN UHF SADDLE TYPE — BOTTOM MOUNTED**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-922-01	DAP	PHSPTD	No	.125	204.93	129.38	113.85
04-922-02	DAP	PHCP	No	.125	191.07	120.63	106.15

**9-PIN UHF PRINTED CIRCUIT STAND-OFF**

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000		
					1-499	500-1499	1500-4999
04-930-01	Mica	PHSPTD	No	None	180.87	114.19	100.49

**RIGHT-ANGLE  
PRINTED  
CIRCUIT  
CONTINUOUS  
CONTACT  
SOCKETS**



REAR VIEW

Units listed are for both 1/16" and 3/32" glass filled epoxy cards. Types listed have mica insulation. Beryllium copper gold flashed contacts standard.

Model No.	Description	Net Ea., Lots of		
		1-99	100-499	500-999
05-4006	7-Pin Mica, w/o shield base	1.96	1.22	1.04
05-4007	7-Pin Mica, w/shield base	2.52	1.57	1.34
05-4008	9-Pin Mica, w/o shield base	2.00	1.25	1.07
05-4009	9-Pin Mica, w/shield base	2.72	1.69	1.45

**SPECIFICATIONS**

Voltage Rating—500 Volts  
Current Rating—1 Ampere  
Withstanding Voltage (Sea Level)—2,000 Volts RMS  
Withstanding Voltage (3.4 inches/Hg.)—660 Volts RMS  
Contact Resistance—.03 Ohm (Max.)  
Insulation Resistance (Dry)—1,000 Megohms Min.

**TRANSISTOR SOCKETS**



FIG. A  
FLAT-IN-LINE

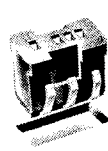


FIG. B  
PRINTED CIRCUIT



FIG. C  
ROUND

Model No.	No. of Contacts	Insulator Material	Type	Figure	Per 1000		
					1-499	500-1499	1500-4999
05-0799	3	Mica	1	A			
05-0803	4	Mica	2	A			
05-0786	3	Mica	1	B			
05-0805	4	Mica	2	B			
05-0788	5	Mica		B			
05-0731-01	8	Mica		C			
05-0731-02†	8	Mica		C			
55-47202	Retainer for 05-0731-01 and 05-0731-02						
55-47105	Retainer for 05-0799 and 05-0803						

TYPES: 1. For Point Type and Junction Transistors.  
2. For Linotetray Type.

Model No.	Per 1000		
	1-499	500-1499	1500-4999
05-0799	103.95	68.25	63.00
05-0803	109.90	72.15	66.60
05-0786	118.80	75.00	69.00
05-0805	119.80	78.65	72.60
05-0788	122.76	77.50	68.20
05-0731-01	259.38	163.76	144.10
05-0731-02†	277.20	175.00	154.00
55-47202	19.80	11.25	9.90
55-47105	12.60	10.00	8.80

†With Center Shield

\*TRADE-MARK

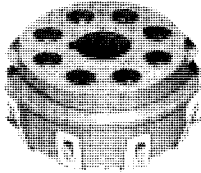
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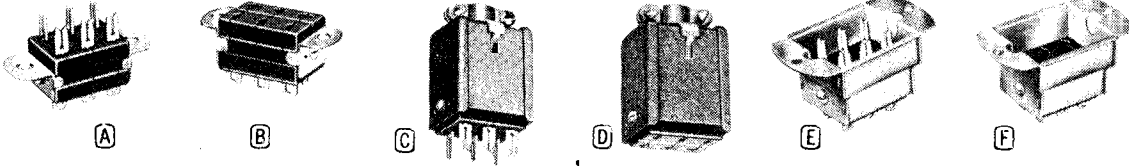
**OCTAL SOCKETS**



**OCTAL PRINTED CIRCUIT SOCKET**

Model No.	Insulator Material	Chassis Thickness	Contact Material	Center Shield	Per 1000		
					1-499	500-1499	1500-4999
04-860-01	Mica	1/16	PH	No	247.50	156.25	137.50
04-860-02	Mica	3/32	PH	No	247.50	156.25	137.50
04-860-03	Mica	1/4	PH	No	257.40	162.50	143.00

**ELCO VARICON\* Connectors**



ELCO VARICON\* Connectors provide the most positive contacts under all operating conditions. Contacts in use are always under pressure; cannot be over-stressed or over-strained. Contacts are silver-plated and cadmium-plated. Covers are blue wrinkle finish. Current Rating: 20 amps, 115 v., 30°C temperature rise. Voltage Rating: 1500 volts at sea level. Contact Resistance: .002 ohm. Request VARICON\* Catalog.

**SINGLE TIER WITH STANDARD BRACKETS (FIGS. A, B)**

Available in double tier for 20, 24, 28, 32 and 36 contacts. Plug type (Fig. A) mates with receptacle type (Fig. B) and Cover Type (Fig. D); (see other listings). Receptacle unit also mates with Cover Type (Fig. C).

Fig. A	Number of Contacts	PLUG				
		1-49	50-99	100-249	250-499	500-999
01-1102-111	2	.20	.17	.14	.13	.12
01-1104-111	4	.27	.23	.18	.17	.16
01-1106-111	6	.34	.29	.23	.22	.21
01-1108-111	8	.41	.34	.27	.26	.24
01-1110-111	10	.50	.42	.34	.32	.30
01-2112-111	12	.61	.51	.40	.38	.36
01-2114-111	14	.71	.60	.48	.45	.43
01-2116-111	16	.82	.68	.54	.52	.49
01-2118-111	18	.93	.78	.62	.59	.56

Fig. B	Number of Contacts	RECEPTACLE				
		1-49	50-99	100-249	250-499	500-999
01-3102-111	2	.19	.16	.13	.12	.12
01-3104-111	4	.26	.22	.17	.16	.15
01-3106-111	6	.32	.27	.21	.20	.19
01-3108-111	8	.38	.32	.26	.24	.23
01-3110-111	10	.46	.39	.31	.29	.28
01-4112-111	12	.56	.47	.38	.36	.34
01-4114-111	14	.66	.55	.44	.42	.40
01-4116-111	16	.76	.64	.51	.48	.46
01-4118-111	18	.86	.72	.57	.54	.51

**SINGLE TIER WITH COVERS AND CLAMPS (FIGS. C, D)**

Plug unit (Fig. C) mates with receptacle unit (Fig. D), plus standard bracket type (Fig. B) and recessed housing type (Fig. F). Receptacle unit also mates with standard bracket type (Fig. A) and recessed housing type (Fig. E).

**PLUG**

Fig. C	Number of Contacts	Per Each				
		1-49	50-99	100-249	250-499	500-999
01-1104-105	4	.52	.43	.34	.33	.31
01-1106-104	6	.59	.49	.39	.37	.35
01-1108-104	8	.65	.55	.44	.41	.39
01-1110-104	10	.76	.64	.51	.48	.46
01-2112-104	12	.92	.77	.62	.59	.55
01-2114-104	14	1.07	.89	.71	.68	.64
01-2116-104	16	1.21	1.01	.80	.76	.72
01-2118-104	18	1.35	1.13	.90	.86	.81

**RECEPTACLE**

Fig. D	Number of Contacts	Per Each				
		1-49	50-99	100-249	250-499	500-999
01-3104-105	4	.50	.42	.34	.32	.30
01-3106-104	6	.56	.47	.38	.36	.34
01-3108-104	8	.63	.53	.42	.40	.38
01-3110-104	10	.72	.60	.48	.46	.43
01-4112-104	12	.88	.74	.59	.56	.53
01-4114-104	14	1.01	.85	.68	.64	.61
01-4116-104	16	1.15	.96	.77	.73	.69
01-4118-104	18	1.28	1.07	.86	.81	.77

**SINGLE TIER WITH RECESSED HOUSING (FIGS. E, F)**

Units available in double tier for 20, 24, 28, 32 and 36 contacts. Plug unit (Fig. E) does not mate with receptacle unit (Fig. F); mates with cover and clamp type (Fig. D) only. Receptacle unit mates with cover and clamp type (Fig. C) only.

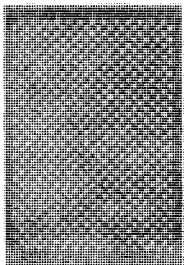
**PLUG**

Fig. E	Number of Contacts	Per Each				
		1-49	50-99	100-249	250-499	500-999
01-1104-106	4	.49	.41	.32	.31	.29
01-1106-106	6	.58	.48	.38	.36	.35
01-1108-106	8	.66	.55	.44	.42	.40
01-1110-106	10	.78	.65	.52	.49	.47
01-2112-106	12	.95	.79	.63	.60	.57
01-2114-106	14	1.09	.91	.73	.69	.66
01-2116-106	16	1.23	1.03	.82	.78	.74
01-2118-106	18	1.37	1.15	.92	.87	.82

**RECEPTACLE**

Fig. F	Number of Contacts	Per Each				
		1-49	50-99	100-249	250-499	500-999
01-3104-106	4	.47	.40	.32	.30	.28
01-3106-106	6	.55	.46	.36	.35	.33
01-3108-106	8	.64	.53	.42	.40	.38
01-3110-106	10	.74	.62	.49	.47	.44
01-4112-106	12	.91	.76	.60	.57	.54
01-4114-106	14	1.04	.87	.69	.66	.62
01-4116-106	16	1.18	.98	.78	.74	.71
01-4118-106	18	1.31	1.09	.87	.83	.78

**ELCO-VECTOR Plugbord and Receptacles**



Ideal for printed circuit prototypes, plug-in test circuits and computer cards. Saves times and money. Permits circuit changes with simple hand tools. Several cards may be used in conjunction with each other by wiring connections between receptacles. CARD MATERIAL: Epoxy paper 1/16" thick, suffix WE (example: 837WE) indicates Epoxy glass card. Pattern "G," 0.062 holes on alternate 0.1" grid.

CONTACTS—ELCO VARICON\* Contacts, phosphor bronze, .0002 nickel plated and gold flashed on both card and receptacle.

RECEPTACLE—One piece glass filled Diallyl Phthalate insulator with .078 base taper tab termination. Models R612-1 and R616-1 supplied without P. C. Card Guides, Model R635 with Guides.

USE: Graph paper 10 squares per inch, may be used for initial circuit layout. Push-in terminals are then positioned on card as designed in layout. Contacts are soldered to staked eyelets on bottom edge for terminations. Bare wire may be used for inter-component connections. REQUEST BULLETIN 02-5000.

ELCO/Vector No.	No. of Contacts	PLUGBORD Size, in Width x Length	Per Ea.		
			1-19	20-99	100-199
812	16	4 1/2 x 6 1/2	2.73	2.46	2.29
812WE	16	4 1/2 x 6 1/2	3.23	2.91	2.71
837	12	3 x 4 1/2	2.13	1.92	1.79
837WE	12	3 x 4 1/2	2.36	2.12	1.98
848WE	35	4 1/2 x 6 1/2	5.58	5.02	4.69

ELCO/Vector No.	No. of Contacts	ELCO No.	Per Ea.	
			1-99	100-249
R612-1	12	00-5009-012-146-001	1.64	1.12
R616-1	16	00-5009-016-146-001	2.04	1.58
R635	35	00-7008-035-146-001	4.46	2.97

**ACCESSORY HARDWARE**

Model No.	Description	Per Bag (100)
T28	Terminals	1.55
P.91	Pusher Tool	.30 Ea.

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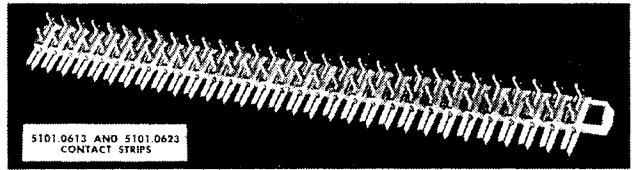


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**ELCO VARICON\* Printed Circuit Contact Strips**

ELCO Contacts, sold under the trade-mark VARICON, are supplied on disposable plastic strips at .200" spacing, except ELCO MICROCON\* Contacts, which are at .100" spacing. One to 60 contacts to a strip. All ELCO Connector distributors will cut strips to your requirements. Staking of the contacts to printed circuit card is made in accordance with modern mass-production techniques with the special staking tools. Contacts: Phosphor Bronze. Finish: Gold flash over nickel plate. Contact Resistance: .002 ohm max. Insertion and withdrawal force: 8 oz. per contact, average. Contact Life: unchanged after 5000 insertions and withdrawals. Request Bulletin 02-5101, 02-5200.



Model No.	Description	Pattern†	Price Per Ea. Contact**
02-???-013-5200	Module Card 1/16"	5	.035
02-???-014-5200	Module Card 3/32"	5	.035
02-???-111-5200	45° for 1/16" Card	5	.035
02-???-112-5200	45° for 3/32" Card	5	.035
02-???-113-6200	Stand-off 1/16" Card	6	.035
02-???-114-6200	Stand-off 3/32" Card	6	.035
02-???-135-5200	Lower Card—1/16" Card	5	.035
02-???-136-5200	Lower Card—3/32" Card	5	.035
02-???-137-5200	Upper Card—1/16" Card	5	.04
02-???-138-5200	Upper Card—3/32" Card	5	.04
02-???-147-5200	Lower Card—1/16" Card	5	.035
02-???-148-5200	Lower Card—3/32" Card	5	.035
02-???-701-3100	MICROCON*—Stand-off 1/32" Card	3	.035
02-???-702-5100	MICROCON*—1/32" Card	5	.035
02-???-703-5100	MICROCON*—1/16" Card	5	.035

Indicate No. of Contacts required on Strip in place of ???, i.e., 02-015-013-5200

†PATTERN TYPES: Description: (Looking at Contact Legs, Plastic Down.)

TYPE 3 — — — — — 1 Straight Row of Contacts.

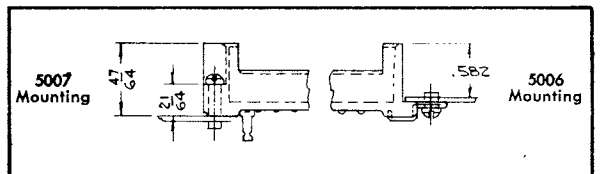
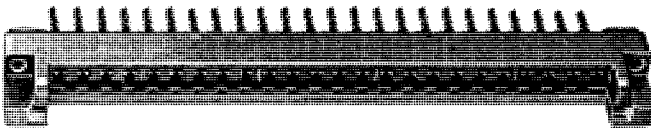
TYPE 5 | | | | | 1 Straight Row—Contacts Parallel to Each Other.

TYPE 6 / / / / / / 1 Row of Contacts Mounted at 45° Angle

\*\*PRICE: Multiply No. of Contacts Required by Each Price.

**Series 5006 and 5007**

**ELCO VARICON\* Miniature Printed Circuit Connectors**



- CONNECTOR BODY is constructed of a one-piece molding with guides integrally molded in the end sections of the connector.
- MOUNTING is accomplished in two ways:  
Series 5006—End sections have projections for mounting in rectangular cutouts in metal panels as used in ELCO's VARIPAK\* card cages. All connectors can be secured simultaneously by a common metal bar screwed to the connector panel.  
Series 5007—End sections with guides and mounting holes similar to Series 7001 for direct mounting to chassis.
- CONTACT CONFIGURATION is a single row of contacts on .200 spacing.
- POLARIZATION is accomplished simply by insertion of a polyethylene insert. No loss of contact positions is incurred. Insert can be supplied loose or inserted in specified position at ELCO, No. 50-5006-3414.
- Request Bulletin 00-5006 for other variations.

**SPECIFICATIONS**

Current Rating: 10 Amperes

Contact Resistance (at rated current): 0.005 Ohm, Maximum

Insulator Material: Diallyl Phthalate

Contact Material and Finish: Phosphor Bronze Nickel Plated, Gold Flashed

Military Specifications: Applicable Portions of MIL-C-21097, Specified by MIL-E-19600 (WEP) Paragraph 3.5.5.

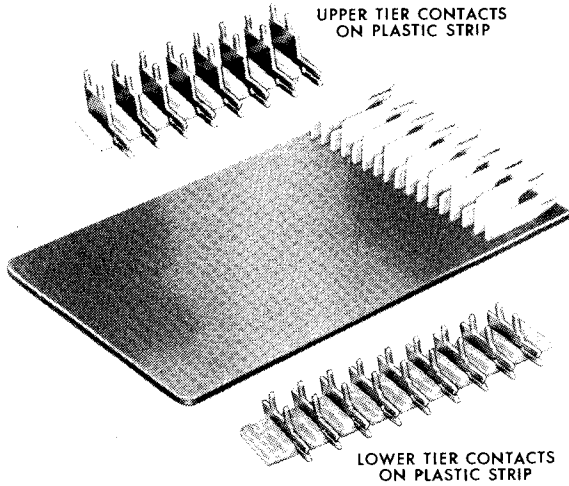
**RECEPTACLE FOR 1/16" MODULE CARD**

.098 Taper Tab W/Wire Hole	No. of Contacts	Conventional Solder Termination for 3 Wires	— Per Ea. —	
			1-99	100-249
00-5006-012-163-005	12	00-5006-012-189-005	1.68	1.30
00-5006-015-163-005	15	00-5006-015-189-005	2.02	1.56
00-5006-020-163-005	20	00-5006-020-189-005	2.59	2.00
00-5006-023-163-005	23	00-5006-023-189-005	2.93	2.28
00-5007-012-163-001	12	00-5007-012-189-001	1.61	1.24
00-5007-019-163-001	19	00-5007-019-189-001	2.36	1.84
00-5007-020-163-001	20	00-5007-020-189-001	2.48	1.92
00-5007-024-163-001	24	00-5007-024-189-001	2.92	2.26
50-5006-3414—Polarizing Tab			.015	.015
<b>PLUG</b>			<b>1-249</b>	<b>PLUG</b>
02-012-013-5200	12	02-020-013-5200	20	.70
02-015-013-5200	15	02-023-013-5200	23	.81
02-019-013-5200	19	02-024-013-5200	24	.84

\*TRADE-MARK

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**Series 7001 and 7008**  
**ELCO VARICON\* Miniature Printed Circuit Connectors**



**SPECIFICATIONS**

Current Rating: 10 Amperes. Withdrawal Force: 8 ounces per contact, average.  
 Contact Resistance: 0.005 Ohm, Maximum. Military Specifications: MIL-C-21097 (Bu. Ships) — Applicable portions. MIL-E-19600 (Bu. Weaps), Paragraph 3.5.5.  
 Insulator Material: Diallyl Phthalate, Glass Filled.

- CONNECTOR BODY consists of a one-piece molding with guides integrally molded at each end of the connector.
- MOUNTING of connector is accomplished with two .128" diameter holes.
- CONTACT CONFIGURATION is a double row of contacts, the center line of one row .125" from the other. Contacts are on .200" centers with each row. One row is offset .100" from the other.
- POLARIZATION:  
 7001 SERIES — a tubular metal pin is used at odd contact numbers. Pins are factory assembled.  
 7008 SERIES — a polyethylene insert is inserted into the card slot at even contact numbers. Can be factory assembled, or furnished loose for your own inserting. When ordering separately, specify part number 50-5006.3414 (1/16" card).
- NOTE: FOR NEW APPLICATIONS USE OF SERIES 7008 IS RECOMMENDED
- PRINTED CIRCUIT LOCATIONS should be held to plus or minus .003" of true positions. Overall dimensions of a given pattern must not accumulate individual tolerances and should also be held to plus or minus .003".
- SEE ELCO BULLETIN 00-7008 for other contact types and combinations available.

**RECEPTACLES**

**SERIES 7001 WITH GUIDES FOR 1/16" MODULE CARDS**

With .078" Taper Tab Contacts	No. of Contacts	.098" Taper Tab Contact	— Per Each —	
			1-99	100-249
00-7001-017-146-001	17	00-7001-017-163-001	3.12	2.09
00-7001-023-146-001	23	00-7001-023-163-001	3.60	2.40
00-7001-029-146-001	29	00-7001-029-163-001	3.94	2.63
00-7001-035-146-001	35	00-7001-035-163-001	4.46	2.97
00-7001-041-146-001	41	00-7001-041-163-001	4.95	3.30
00-7001-047-146-001	47	00-7001-047-163-001	5.51	3.68
50-7001-4012 Polarizing Tab			.03	.03





**SERIES 7008 WITH GUIDES FOR 1/16" MODULE CARDS**

With .078" Taper Tab Contacts	No. of Contacts	With .098" Taper Tab W/Wire Hole	— Per Each —	
			1-99	100-249
00-7008-017-146-001	17	00-7008-017-163-001	3.12	2.09
00-7008-023-146-001	23	00-7008-023-163-001	3.60	2.40
00-7008-029-146-001	29	00-7008-029-163-001	3.94	2.63
00-7008-035-146-001	35	00-7008-035-163-001	4.46	2.97
00-7008-041-146-001	41	00-7008-041-163-001	4.95	3.30
00-7008-047-146-001	47	00-7008-047-163-001	5.51	3.68
50-5006-3414 Polarizing Tab			.015	.015

**NEW ORDERING CODES FOR 7001 AND 7008**  
**MODULE CARD CONTACT STRIPS PLUGS**

- NOTE: Two Contact Strips are required—one Lower Tier and One Upper Tier. The Lower Tier has two choices: with or without wire hole.

CONTACTS SUPPLIED ON DISPOSABLE PLASTIC STRIPS. SEE SERIES 7021-7022 FOR MOLDED PLUG.

NO. OF CONNECTOR CONTACTS	LOWER TIER		UPPER TIER	
	1/16" CARD			
				
		Per Ea. 1-249		Per Ea. 1-249
17	02-009-135-5200	02-009-147-5200	.32	02-008-137-5200 .28
23	02-012-135-5200	02-012-147-5200	.42	02-011-137-5200 .39
29	02-015-135-5200	02-015-147-5200	.53	02-014-137-5200 .49
35	02-018-135-5200	02-018-147-5200	.63	02-017-137-5200 .60
41	02-021-135-5200	02-021-147-5200	.74	02-020-137-5200 .70
47	02-024-135-5200	02-024-147-5200	.84	02-023-137-5200 .81

\*TRADE-MARK

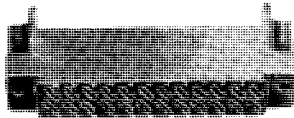
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**ELCO VARITWIN-PIN\***  
**Printed Circuit Connector Receptacles**



SERIES 7009

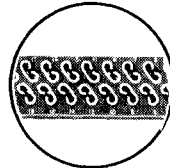


SERIES 7014 — BOTTOM VIEW



SERIES 5011 — TOP VIEW

Series 5011, 7009, 7012 and 7014 offer a new dimension in versatility through the use of ELCO contacts sold under the trade-mark VARITWIN-PIN. The bifurcated termination of this VARITWIN-PIN\* contact accepts two Series 53 wired taper pins. The advantages of pre-assembled wiring and adaptability to alterations in circuitry provide significant flexibility in design applications. ELCO engineered ruggedness and reliability are standard features for all Series.



BACK VIEW  
OF VARITWIN-PIN\*  
CONNECTOR

**SPECIFICATIONS**

Current Rating: 10 Amps  
Contact Resistance: 0.005 OHM, Maximum  
Contact Material: Phosphor Bronze — nickel plated gold flashed  
Insulator Material: Diallyl Phthalate  
Withdrawal Force: 8 ounces per contact, average  
Military Specifications:  
MIL-C-21097 (BU-SHIPS) — Applicable Portions  
MIL-E-19600 (BU-WEPS) — Paragraph 3.5.5.

**RECEPTACLES WITH CARD GUIDES (UNLESS SPECIFIED)**

- SERIES 5011 — Supplied with molded card guides available in 16 contact size only. Contact configuration is one row of contacts at .200" spacing allowing .200" spacing of contacts on the module card.
- SERIES 7009 — Available with molded card guides in 24, 34, and 40 contact sizes; or without guides in 34 and 40 contact sizes.
- SERIES 7012 — Supplied with molded card guides in 23, 35 and 47 contacts. Similar in appearance to Series 7009.
- SERIES 7014 — Has straight through, open-end card slot. Has no card guides. Available with 20 contacts only. Contact configuration consists of two rows of contacts; one row spaced on .200" centers; rows are spaced .125" apart, and offset at .100" from each other.
- Connector body is one-piece, molded construction for 1/16" module cards. See ELCO Bulletins 5011 and 7009 for additional information.

Model No.	No. of Contacts	— Per Each —	
		1-99	100-249
00-5011-016-193-001	16	4.28	2.85
00-7009-024-193-001	24	6.19	4.13
00-7009-034-193-001	34	6.75	4.50
00-7009-034-193-002†	34	6.75	4.50
00-7009-040-193-001	40	7.43	4.95
00-7009-040-193-002†	40	7.43	4.95
00-7012-023-193-001	23	6.19	4.13
00-7012-035-193-001	35	6.98	4.65
00-7012-047-193-001	47	7.88	5.25
00-7014-020-193-000†	20	5.96	3.98
†W/O Card Guides			
50-5006-3414	Polarizing Tab, Even Positions	.015	.015
50-7012-3224	Polarizing Tab, Odd Positions	.015	.015

**PLUGS (CONTACT STRIPS)**

Contacts supplied on disposable plastic strips. (See Series 7021-7022 for molded plugs).

SERIES 5011 — PLUG			
No. of Contacts	Model No.		Per Each 1-249
16	02-016-013-5200		.56

**SERIES 7009, 7012, 7014 PLUGS**

NOTE: Two Contact Strips are required — one Lower Tier and one Upper Tier. The Lower Tier has two choices; the Upper Tier, one choice.

	No. of Contacts	Description	LOWER TIER — Choice of One (Same Price)			UPPER TIER	
					Price Each 1-249		Per Each 1-249
SERIES 7009	24	12 Lower Tier 12 Upper Tier	02-012-135-5200	02-012-147-5200	.42	02-012-137-5200	.48
	34	17 Lower Tier 17 Upper Tier	02-017-135-5200	02-017-147-5200	.60	02-017-137-5200	.68
	40	20 Lower Tier 20 Upper Tier	02-020-135-5200	02-020-147-5200	.70	02-020-137-5200	.80
SERIES 7012	23	12 Lower Tier 11 Upper Tier	02-012-135-5200	02-012-147-5200	.42	02-011-137-5200	.44
	35	18 Lower Tier 17 Upper Tier	02-018-135-5200	02-018-147-5200	.63	02-017-137-5200	.68
	47	24 Lower Tier 23 Upper Tier	02-024-135-5200	02-024-147-5200	.84	02-023-137-5200	.92
SERIES 7014	20	10 Lower Tier 10 Upper Tier	02-010-135-5200	02-010-147-5200	.35	02-010-137-5200	.40

\*TRADE-MARK

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## ELCO VARILOK\* Crimp-Type Printed Circuit and Rack-and-Panel Connectors

The ELCO VARILOK\* contact is the most recent development in applying the reliability of ELCO VARICON\* Contacts to advanced self-locking, crimped-wiring applications.

The ELCO VARILOK\* contact may be crimped to the wire independently, stocked until needed, then inserted into the insulator. Insertion is accomplished by merely inserting contact into any insulator hole location. May be extracted with equal facility by the use of an extraction tool. The ELCO VARILOK\* contact locks into position using a spring

lance. It will not twist, turn, or bend out of alignment; and has passed many stringent commercial and military pull-out tests.

ELCO VARILOK\* contacts are sold loose for usage where quantities are relatively low, and for repair and/or replacement if ever necessary.

ELCO VARILOK\* contacts are also available in reels containing 1800 contacts for economical long-runs of larger quantities, where automatic crimping machines are used.

### ELCO VARILOK\* Self-Locking, Crimped Wiring Contacts



50-8017.0313 SUPPLIED LOOSE  
FOR USE WITH HAND-CRIMPING TOOL



50-8017.0323 SUPPLIED IN CONTINUOUS STRIPS  
FOR USE WITH VARIMATIC\* AUTOMATIC CRIMPING MACHINE (1800 TO REEL)

### ELCO VARILOK\* Contacts

(PURCHASED SEPARATELY)

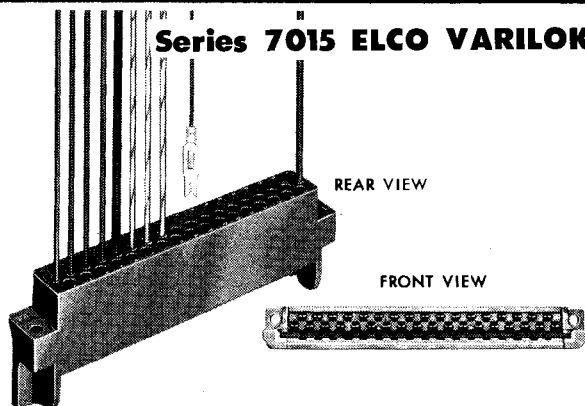
	-Per Ea.-
	1-24.999
Loose—50-8017.0313	.06
Reel Form—1800 to a reel of 50-8017.0323, 117.00 Per Reel—1-24.999 Contacts	

### ELCO VARILOK\* Tools

		Per Ea.
Hand-Crimping Tool	56-067515-01	37.50
Hand-Crimping Tool	56-061728-02	98.00
Withdrawal Tool	56-061877-02	2.75
Insertion Tool	56-061742-04	2.50

ELCO also supplies a bench crimping tool for mass production requirements.

## Series 7015 ELCO VARILOK\* Printed Circuit Connectors



### RECEPTACLES

Miniature printed circuit connectors of ELCO's Series 7000 family. Series 7015 is available with basic dimensions and specifications of Series 7008 connector, in sizes 17, 23, 29, 35, 41 and 47. Receptacles will accommodate both 1/16" and 3/32" module cards. Request Bulletin 00-7015 for further information.

For 1/16" Module Cards	No. of Contacts	For 3/32" Module Cards	Per ea.—	
			1-99	100-249
00-7015-017-000-001	17	00-7015-017-000-002	1.90	1.05
00-7015-023-000-001	23	00-7015-023-000-002	2.00	1.10
00-7015-029-000-001	29	00-7015-029-000-002	2.10	1.20
00-7015-035-000-001	35	00-7015-035-000-002	2.25	1.25
00-7015-041-000-001	41	00-7015-041-000-002	2.35	1.30
00-7015-047-000-001	47	00-7015-047-000-002	2.45	1.35





Polarization: May be field polarized

Even # Positions	50-5006.3414	.015	.015
Odd # Positions	50-7012.3224	.015	.015

## Series 7015 ELCO Plug Contacts

Contacts are supplied on disposable plastic strips—See Series 7021-7022 for molded plugs.

NOTE: Two contact strips are required—one Lower Tier and one Upper Tier. The Lower Tier has two choices for either 1/16" card or 3/32" card sizes. The Upper Tier has only one contact for either card size.

NO. OF CONNECTOR CONTACTS	LOWER TIER				UPPER TIER							
	1/16" CARD		3/32" CARD		1/16" CARD		3/32" CARD					
		Per Ea.		Per Ea.		Per Ea.		Per Ea.				
17	02-009-135-5200	.32	02-009-147-5200	.32	02-009-136-5200	.32	02-009-148-5200	.32	02-008-137-5200	.32	02-008-138-5200	.32
23	02-012-135-5200	.42	02-012-147-5200	.42	02-012-136-5200	.42	02-012-148-5200	.42	02-011-137-5200	.44	02-011-138-5200	.44
29	02-015-135-5200	.53	02-015-147-5200	.53	02-015-136-5200	.53	02-015-148-5200	.53	02-014-137-5200	.56	02-014-138-5200	.56
35	02-018-135-5200	.63	02-018-147-5200	.63	02-018-136-5200	.63	02-018-148-5200	.63	02-017-137-5200	.68	02-017-138-5200	.68
41	02-021-135-5200	.74	02-021-147-5200	.74	02-021-136-5200	.74	02-021-148-5200	.74	02-020-137-5200	.80	02-020-138-5200	.80
47	02-024-135-5200	.84	02-024-147-5200	.84	02-024-136-5200	.84	02-024-148-5200	.84	02-023-137-5200	.92	02-023-138-5200	.92

\*TRADE-MARK

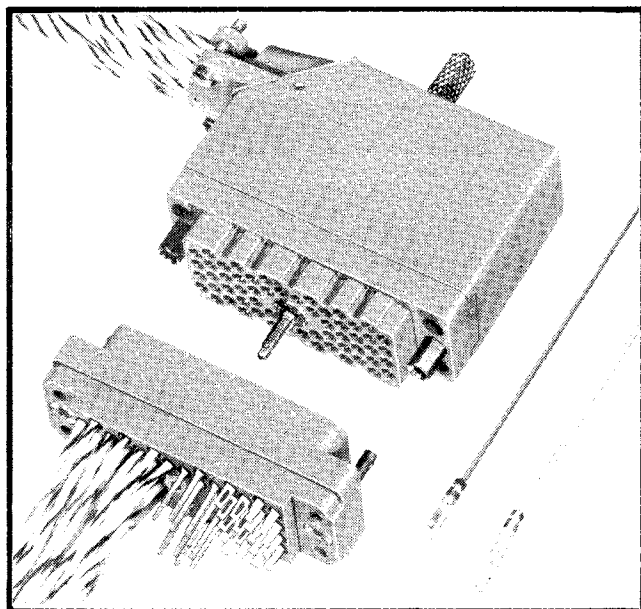
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**Series 8016**



- High contact-density Rack and Panel Connector with 38 and 56 contacts. A die-cast cover is also usable with the plug or receptacle. The cable clamp can be riveted to the body of the cover for cable entry either from the side or the top. Both insulator halves are designed for VARILOK\* contacts or factory installed contacts. Casting material available in polycarbonate (Lexan) only.

**SERIES 8016 — FOR VARILOK\* CONTACTS**  
(Cover Supplied Separately)

PLUG with Actuating Screw	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Fixed Nut	- Per Ea. —
00-8016-038-000-001	1.99	249	00-8016-038-000-007	1.45 1.25
00-8016-056-000-001	2.09	1.81	00-8016-056-000-007	1.58 1.37

**SERIES 8016 — FOR VARILOK\* CONTACTS**  
(Cover Supplied Separately)

PLUG with Fixed Nut	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Actuating Screw	- Per Ea. —
00-8016-038-000-002	1.45	1.25	00-8016-038-000-008	1.95 1.69
00-8016-056-000-002	1.58	1.37	00-8016-056-000-008	2.09 1.81

**COVERS (Loose)**

SIDE CABLE OPENING	- Per Ea. —	No. of 100-Contacts	TOP CABLE OPENING	- Per Ea. —
00-8016-038-000-100	1.90	1.65	00-8016-038-000-101	1.90 1.65
00-8016-056-000-101	1.90	1.65	00-8016-056-000-100	1.90 1.65

**SERIES 8016 — FACTORY INSTALLED CONTACTS**  
(.098 Base Taper Tab with Wire Hole)

PLUG with Actuating Screw	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Fixed Nut	- Per Ea. —
00-8016-038-217-001	3.85	3.29	00-8016-038-217-007	3.28 2.88
00-8016-056-217-001	4.69	4.19	00-8016-056-217-007	4.13 3.77

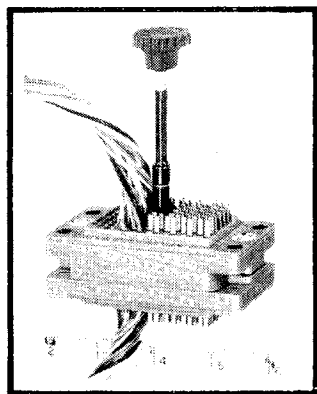
PLUG with Fixed Nut	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Actuating Screw	- Per Ea. —
00-8016-038-217-002	3.28	2.88	00-8016-038-217-008	3.85 3.29
00-8016-056-217-002	4.13	3.77	00-8016-056-217-008	4.69 4.19

**SPECIFICATIONS**

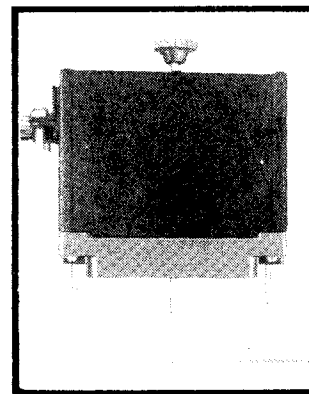
Current Rating—  
 VARICON\*—Contacts 5 Amps  
 VARILOK\* Contacts—10 Amps  
 Contact Resistance—  
 0.005 OHM, Maximum  
 Contact Material: Phosphor Bronze  
 —Nickel Plated—Gold Flashed  
 VARILOK\* Contacts and covers are ordered separately.

Withdrawal Force: 8 ounces per contact average  
 Military Specifications:  
 MIL-C-21097 (BU-SHIPS)—  
 Applicable Portions  
 MIL-E-19600 (BU-WEPS)—  
 Paragraph 3.5.5.

**Series 8017-8018**



- A high contact density in the Rack and Panel connector family with .150" between contacts and rows, alternate rows offset .075". Series 8017 with screw-down device is available in sizes having 75, 100 and 130 contacts. Series 8018, without the screw-down feature, is available in sizes having 80, 110 and 140 contacts. Both series, plug as well as receptacle, can be supplied with cover and cable clamp.
- The VARILOK\* contact can be used in the plug and/or receptacle. Factory inserted contacts also available. Casting material Diallyl Phthalate only.
- Specifications identical to Series 8016.
- See Bulletin 8017 for other combinations available.



**FOR VARILOK\* CONTACTS**  
(Covers Have Side Cable Entrance)

PLUG with Actuating Screw and Cover	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Fixed Nut No Cover	- Per Ea. —
00-8017-075-000-004	7.75	4.85	00-8017-075-000-007	5.90 3.30
00-8017-100-000-004	8.00	5.05	00-8017-100-000-007	6.15 3.45
00-8017-130-000-004	8.35	5.25	00-8017-130-000-007	6.25 3.50

PLUG with Fixed Nut No Cover	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Actuating Screw and Cover	- Per Ea. —
00-8017-075-000-002	5.00	2.80	00-8017-075-000-012	10.15 6.20
00-8017-100-000-002	5.25	2.90	00-8017-100-000-012	10.50 6.45
00-8017-130-000-002	5.40	3.00	00-8017-130-000-012	10.85 6.65

**FACTORY INSTALLED .098" BASE TAPER**  
**TAB WITH HOLE CONTACTS**  
(Covers Have Side Cable Entrance)

PLUG with Actuating Screw and Cover	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Fixed Nut No Cover	- Per Ea. —
00-8017-075-217-004	12.15	8.90	00-8017-075-217-007	9.25 6.00
00-8017-100-217-004	14.45	10.45	00-8017-100-217-007	11.45 7.45
00-8017-130-217-004	17.00	12.15	00-8017-130-217-007	13.85 9.05

PLUG with Fixed Nut No Cover	- Per Ea. —	No. of 100-Contacts	RECEPTACLE with Actuating Screw and Cover	- Per Ea. —
00-8017-075-217-002	9.25	6.00	00-8017-075-217-012	12.15 8.90
00-8017-100-217-002	11.45	7.45	00-8017-100-217-012	14.45 10.45
00-8017-130-217-002	13.85	9.05	00-8017-130-217-012	17.00 12.15

Other combinations and wire tails available. See Bulletin 8017.

\*TRADE-MARK

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## New Series 7021-7022 and 7023-7024

### ELCO VARICON\* All-Molded, Double Tier Miniature Connector Plugs

New, one-piece molded body provides full protection for lower and upper tier printed circuit module card contacts of the 7000 Series family.

One fully assembled unit replaces lower and upper card contacts supplied on removable plastic strips. High rigidity of the all-molded body minimizes card warpage at the point of connection for perfect mating with receptacle.

ELCO Contacts, sold under the trade-mark VARICON, are securely bonded into slots of the insulator, thereby maintaining precise spacing between contacts for perfect mating, resulting in low insertion and withdrawal values, low wear, low contact resistance and long life.

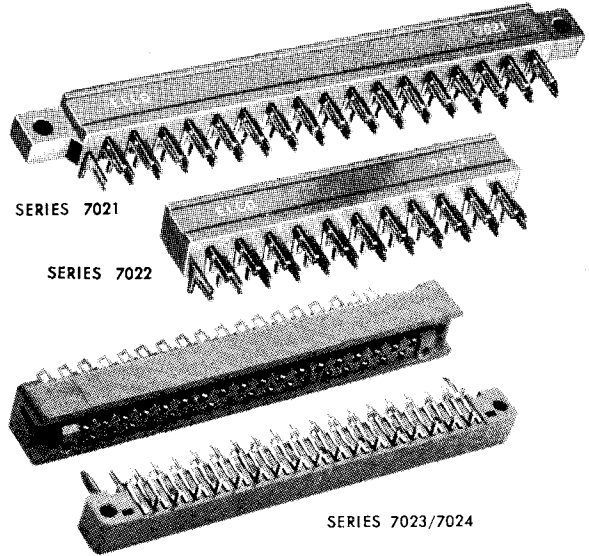
Lower and upper tier contacts are each equipped with only one leg, instead of double legs, thereby:

- a. Reducing cost of producing module cards, because only two rows of holes must be drilled or punched instead of four.
- b. Simplifying the printed circuit layout with the result of larger distance between adjacent printed circuit pads.
- c. Reducing cost of staking because lower and upper tier contacts can be staked simultaneously instead of each row individually.

One solid unit with lower and upper tier contacts bonded in position reduces assembly cost. Connector plug can be mounted directly to printed circuit module, and at customer's option staked and soldered in place or merely dip-soldered without staking. Assembly time to remove plastic strip is omitted.

Plugs are supplied two ways:

1. Type 7021 with mounting ears to be used with connectors of the 7000 Series type *without* molded guides.
2. Type 7022 for use with 7000 Series connectors *with* molded-on guides.



#### SPECIFICATIONS

Current Rating: 10 Amperes  
 Contact Resistance: .005 Ohm (Max.)  
 Contact Material: Phosphor Bronze - Nickel plated and gold flashed  
 Insulator Material: Diallyl Phthalate  
 Withdrawal Force: 8 ounces average per contact (approximate)  
 Military Specifications:  
 MIL-C-21097 (Bu. Ships) Applicable Portions  
 MIL-E-19600 (Bu. Weaps) Paragraphs 3.5.5.

#### SERIES 7021 — WITH MOUNTING FLANGE

FOR 1/16" MODULE CARD		FOR 3/32" MODULE CARD		- Per Each - 1-99 100-249 Size		
Model No.	No. of Contacts	Model No.	No. of Contacts			
00-7021-017-000-001	17	00-7021-017-000-002	17	1.44	1.15	17
00-7021-023-000-001	23	00-7021-023-000-002	23	1.74	1.40	23
00-7021-029-000-001	29	00-7021-029-000-002	29	2.04	1.65	29
00-7021-034-000-001	34	00-7021-035-000-002	35	2.34	1.89	34
00-7021-035-000-001	35	00-7021-041-000-002	41	2.34	1.89	35
00-7021-040-000-001	40	00-7021-047-000-002	47	2.64	2.10	40
00-7021-041-000-001	41			2.64	2.10	41
00-7021-047-000-001	47			2.94	2.38	47

#### SERIES 7022 — WITHOUT MOUNTING FLANGE

FOR 1/16" MODULE CARD		FOR 3/32" MODULE CARD	
Model No.	No. of Contacts	Model No.	No. of Contacts
00-7022-017-000-001	17	00-7022-017-000-002	17
00-7022-023-000-001	23	00-7022-023-000-002	23
00-7022-029-000-001	29	00-7022-029-000-002	29
00-7022-034-000-001	34	00-7022-035-000-002	35
00-7022-035-000-001	35	00-7022-041-000-002	41
00-7022-040-000-001	40	00-7022-047-000-002	47
00-7022-041-000-001	41		
00-7022-047-000-001	47		

#### SERIES 7023 PLUG

Series 7023 Plug for mounting to 1/16" and 3/32" thick printed circuit module cards used with Series 7024 Receptacle. Similar to Series 7021 and 7022, but provides stainless steel guide pins and holes. Double row of contacts spaced on .200" centers. Rows .125" apart; offset .100" from each other. Accommodates .050 modular grid pattern. Utilizes phosphor bronze ELCO VARICON\* contacts nickel plated under gold flash. 10 Amp rating. Plug and receptacle, glass filled diallyl phthalate per MIL-M-18794 SDG.

#### PLUG

FOR 1/16" MODULE CARD		FOR 3/32" MODULE CARD		- Per Each - 1-99 100-249	
Model No.	No. of Contacts	Model No.	No. of Contacts		
00-7023-023-000-001	23	00-7023-023-000-002	23	2.56	1.75
00-7023-029-000-001	29	00-7023-029-000-002	29	2.82	1.98
00-7023-035-000-001	35	00-7023-035-000-002	35	3.08	2.21
00-7023-041-000-001	41	00-7023-041-000-002	41	3.35	2.44

#### SERIES 7024 RECEPTACLE

Series 7024 Printed Circuit Receptacle for use with Series 7023 Plug. Double row of contacts spaced on .200" centers. Rows spaced .125" apart; offset .100" from each other. Accommodates .050 modular grid on 1/16" or 3/32" thick printed circuit cards. Polarization accomplished by inserting polyethylene inserts in receptacle card slot and matching printed circuit module card with no loss of contacts. Utilizes phosphor bronze ELCO VARICON\* contacts, nickel plated under gold flash. 10 amp rating. Receptacle, glass filled diallyl phthalate per MIL-M-18794 SDG. Connectors shown below have .098" taper tap w/wire hole contacts. Other types available.

#### RECEPTACLE

FOR 1/16" MODULE CARD		FOR 3/32" MODULE CARD	
Model No.	No. of Contacts	Model No.	- Per Each - 1-99 100-249
00-7023-023-163-001	23	00-7024-023-163-002	3.75 2.55
00-7023-029-163-001	29	00-7024-029-163-002	4.09 2.78
00-7023-035-163-001	35	00-7024-035-163-002	4.61 3.12
00-7023-041-163-001	41	00-7024-041-163-002	5.10 3.45
50-5006.3414	Pol. Tab 1/16"		.015 .015
50-5006.3424	Pol. Tab 3/32"		.015 .015

\*TRADE-MARK

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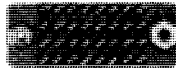
**DISTRIBUTOR DIVISION**  
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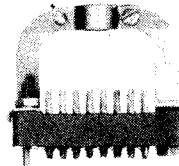
## Series 8125 Sub-Miniature ELCO VARICON\* Connector



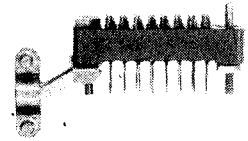
SIDE VIEW



TOP VIEW




TOP CABLE CLAMP



SIDE CABLE CLAMP

- **CONNECTOR BODY** consists of two sections, a plug and a receptacle, each of one-piece malded construction.
- **GUIDE PINS AND SOCKETS** are factory assembled. Extra-thick guide pins prevent bending of the pins and damage to the contacts during disconnect.
- **MOUNTING** is by means of two studs, extending from the guide pin and guide socket respectively, which screw directly into the chassis.

Units Above Right Have ELCO Contacts, Sold Under the Trade-Mark VARICON, for .098" Base Taper Tab. 

- **CONTACT CONFIGURATION** is 4 rows of 8 contacts each, with spacing between rows of .125".
- **POLARIZATION** is by means of a small locating pin which fits into a slot on one side of the guide socket. Six positions are possible for each guide pin and socket, resulting in 36 polarization possibilities.
- **ACCESSORIES** include top or side Cable Clamp, Potting Shell with or without flange, Locking Clips, and Honeycomb Insulator.
- **REQUEST BULLETIN 8125.**

### SPECIFICATIONS

Current Rating: 3 Amperes.  
Contact Resistance: 0.005 Ohm, Maximum.  
Contact Material: Phosphor Bronze, + Nickel plated, gold flash.  
Insulator Material: Diallyl Phthalate

Withdrawal Force: 8 ounces per contact, average.  
Military Specifications: MIL-C-21097 (Bu. Ships) — Applicable portions.  
MIL-E-19600 (Bu. Weps), Paragraph 3.5.5.

### .098" BASE TAPER TAB WITH WIRE HOLE CONTACT

#### NO HARDWARE

Plug	Receptacle	Per Each	
		1-99	100-249
00-8125-032-605-001	00-8125-032-605-002	4.90	3.95

### POTTING SHELL WITH FLANGE — TOP CABLE ENTRANCE HOLE

00-8125-032-605-005	00-8125-032-605-006	5.40	3.73
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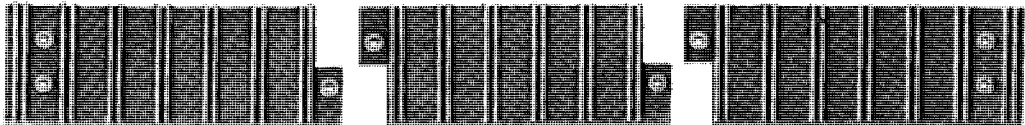
#### TOP CABLE CLAMP

00-8125-032-605-021	00-8125-032-605-027	5.40	3.73
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#### SIDE CABLE CLAMP

00-8125-032-005-025	00-8125-032-605-026	5.40	3.73
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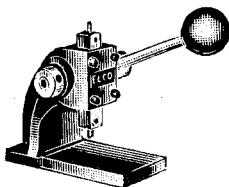
## Series 9011, 9012 Guide Strips



Guide strips are ideal time and labor savers designed for use in printed circuit packaging. Reduce engineering and production costs. Printed circuit modules are guided smoothly and accurately when insertion is made into the unit. Guide strips are for 1/16" boards, at .750" spacing, and are made of glass filled Diallyl Phthalate. Series 9011 guide strips are assembled as "building blocks." Sectional arrangement allows the designer to include as many strips as the equipment may require, in increments of seven guide locations. Series 9012 guide strips are wider and longer than Series 9011, and can be utilized in a similar fashion. REQUEST BULLETIN 03-9011.

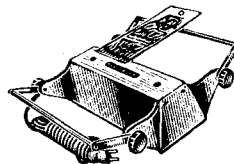
Model No.	Description	Per Ea.	
		1-24	25-249
53-9011.3011	Right/Left Guide — 2" high	2.50	1.95
53-9011.3021	Center Guide — 2" high	2.50	1.95
53-9012.3029	Right Guide — 3 7/8" high	3.50	2.95
53-9012.3019	Left Guide — 3 7/8" high	3.50	2.95

### HAND STAKER



Offers laboratory and prototype staking of ELCO printed circuit contacts, sold under the trade-mark VARICON. Accommodates staking of most types of contacts presently available on model shop or laboratory basis. Punches for microcon and miniature printed circuit contacts. Rating: 1/4 ton. Ram Dimensions: 1/2" x 1/2" x 2 1/2". Ram Stroke: 13/16". Height of Opening: 1 1/8". Throat Depth from Center of Ram: 1". Working Surface: 2" x 2 7/8".  
ELCO No. 56-061856-01 (HS-1)  
REQUEST BULLETIN 06-1856.

### HEATING PLATEN



Designed for removal of plastic strips from ELCO printed circuit contacts, sold under the trade-mark VARICON. Supplied on plastic strips to facilitate handling and staking to printed circuit cards. Heating Platen T-1751 is designed for easy removal of the plastic strips after contact staking and soldering operations are completed. Platen is 10" long. ELCO No. 06-1751 (T-1751)  
REQUEST BULLETIN 06-1751.

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**Series 9016**  
**ELCO VARIPAK\* Printed Circuit Card Enclosure**

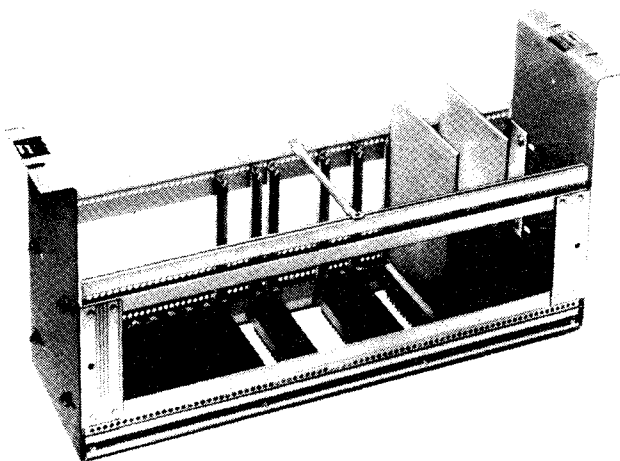
VARIPAK\* is designed to be adapted to any packaging technique utilizing printed or etched circuitry, and to provide maximum density. It holds the printed circuit cards and printed circuit connectors in correct alignment; and its adaptability to any packaging program is universal.

VARIPAK\* is available in 4 standard sizes, making it possible to package all 4.500 wide printed circuit cards.

VARIPAK\* is made completely of aluminum. Guide Plate is extruded aluminum 6063-T6. Mounting Hanger and Connector Panel are made of No. 14 gauge aluminum 6061-T4.

- **CONNECTOR PANEL**—Available for two types of connector mounting—panel type and strap type. Strap type  $\frac{1}{8}$ " thick,  $\frac{3}{4}$ " wide aluminum strap mounted to each Guide Plate. The Connector Panel is a precision blanked part.
- **GUIDE PLATE**—Available in various sizes. Has provisions to mount VARIPAK\* Guides in 82 different positions on a .200" grid. The greatest density possible is 41 guides on a .400" spacing.
- **VARIPAK\* GUIDES**—made of polycarbonate with a temperature rating of 280° - 300° F. Designed to snap in place in any of 82 positions provided in the Guide Plate. Available in three printed circuit card thicknesses— $\frac{1}{16}$ ",  $\frac{3}{32}$ " and  $\frac{1}{8}$ ". Quickly removable from any position without damage to either Guide or Guide Plate.
- **ACCESSORIES**—The following are accessory parts supplied on request at additional cost:

Market Strip—53-9016.2402, an extruded flexible white polyvinyl



strip provides an area upon which component identification can be imprinted.

Front Panel—53-9016.2201, a panel of 14 gauge aluminum 6061-T4. Hinge and mounting hardware can be provided to serve a decorative, protective or functional purpose.

• REQUEST BULLETIN 03-9016 FOR OTHER VARIATIONS POSSIBLE.

**VARIPAK\***

Units listed on right use 4.50" wide printed circuit cards. Height of the unit is 5.218" and is adjustable 1" either way. The vertical distance between mounting holes is  $2\frac{1}{4}$ ". Unit measures 19" long with standard mounting slots pre-cut.

	With Blank Connector Panel	With $\frac{3}{4}$ " Mounting Strap	Depth of Guide Plate	Depth of Unit	Inside Distance Between Guide Plate	Per Ea.	
						1-24	25-99
	03-9016-02-1	03-9016-02-2	4"	5 $\frac{1}{2}$ "	4.560"	19.50	16.00
	03-9016-06-1	03-9016-06-2	5 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	4.560"	19.50	16.00
	03-9016-10-1	03-9016-10-2	7"	8 $\frac{1}{2}$ "	4.560"	19.50	16.00
	03-9016-14-1	03-9016-14-2	8"	11"	4.560"	19.50	16.00

**PART NUMBER FOR VARIPAK\* GUIDES**

Part Number	Nominal P.C. Card Thickness	Will Fit Assemblies	All Guides Per Ea.		Part Number	Nominal P.C. Card Thickness	Will Fit Assemblies	All Guides Per Ea.	
			1-499	500 and up				1-499	500 and up
53-9016.1201	1/16		.10	.08	53-9016.1207	1/16		.10	.08
53-9016.1202	3/32	02	.10	.08	53-9016.1208	3/32	10	.10	.08
53-9016.1203	1/8		.10	.08	53-9016.1209	1/8		.10	.08
53-9016.1204	1/16		.10	.08	53-9016.1210	1/16		.10	.08
53-9016.1205	3/32	06	.10	.08	53-9016.1211	3/32	14	.10	.08
53-9016.1206	1/8		.10	.08	53-9016.1212	1/8		.10	.08

Snap Rivet Supplied with Each Guide.  
All guides are supplied in light grey color.

**PART NUMBERS FOR VARIPAK\* GUIDE PLATES †††**

Part Number	Per Ea.		Depth	Overall Length
	1-49	50-199		
53-9016.1301	5.50	4.50	4"	
53-9016.1302	5.50	4.50	5 $\frac{1}{2}$ "	16 $\frac{7}{8}$ "
53-9016.1303	5.50	4.50	7"	
53-9016.1304	5.50	4.50	8"	

††† Use this ordering code when ordering guide plates individually for use in drawer assemblies, etc.

**ACCESSORIES**

	Per Ea.	
	1-24	25-99
Front Panel	9.25	7.50
53-9016.2201		
Market Strip	1-24	25-99
53-9016.2402	.09	.09

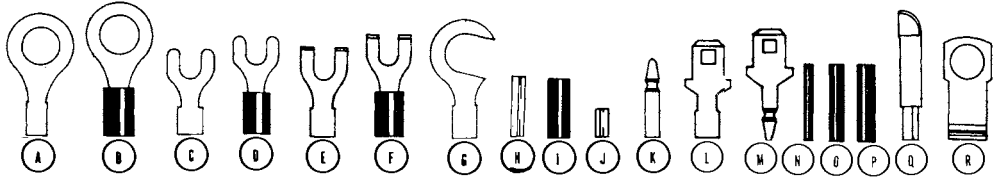
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SECTION 2100



SOLDERLESS TERMINALS and CONNECTORS

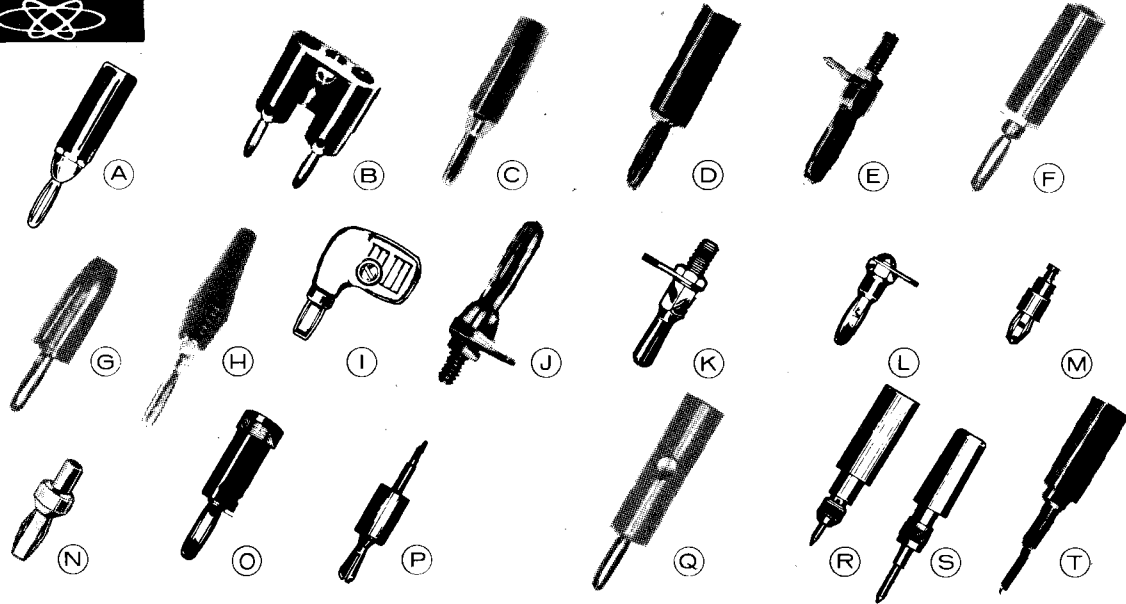


WIRE SIZE	STUD SIZE	LENGTH	FIG.	PART. NO.	100 PACK NET/100	1000 PACK PART. NO.	1000 PACK NET/100
<b>RING TONGUE — NON INSULATED</b>							
22-16	4-6	17/32	A	13-000-C	\$2.21	13-000-M	\$18.90
22-16	4-6	23/32	A	13-002-C	2.21	13-002-M	18.90
22-16	8	41/64	A	13-004-C	2.21	13-004-M	18.90
22-16	8	23/32	A	13-006-C	2.48	13-006-M	21.00
22-16	8-10	23/32	A	13-008-C	2.21	13-008-M	18.90
22-16	10	57/64	A	13-010-C	1.94	13-010-M	16.60
16-14	4-6	19/32	A	13-012-C	2.23	13-012-M	19.10
16-14	4-6	45/64	A	13-014-C	2.23	13-014-M	19.10
16-14	8	45/64	A	13-016-C	2.23	13-016-M	19.10
16-14	10	45/64	A	13-018-C	2.23	13-018-M	19.10
16-14	1/4	57/64	A	13-020-C	3.11	13-020-M	26.65
12-10	4-6	3/4	A	13-022-C	3.11	13-022-M	26.65
12-10	8-10	3/4	A	13-024-C	3.11	13-024-M	26.65
12-10	1/4	1-1/32	A	13-026-C	3.87	13-026-M	33.15
16-14	5-6	3/4	A				
16-14	10	55/64	A	13-030-C	6.55	13-030-M	56.10
<b>RING TONGUE — INSULATED</b>							
22-16	4-6	45/64	B	13-050-C	\$5.04	13-050-M	\$43.20
22-16	4-6	29/32	B	13-052-C	5.04	13-052-M	43.20
22-16	8-10	29/32	B	13-054-C	5.04	13-054-M	43.20
16-14	4-6	25/32	B	13-056-C	5.04	13-056-M	43.20
16-14	4-6	57/64	B	13-058-C	5.04	13-058-M	43.20
16-14	10	57/64	B	13-060-C	5.04	13-060-M	43.20
16-14	1/4	1-5/64	B	13-062-C	5.88	13-062-M	50.40
12-10	8-10	1-3/64	B	13-064-C	5.88	13-064-M	50.40
12-10	1/4	1-21/64	B	13-066-C	6.74	13-066-M	57.60
22-16	4/6	45/64	B				
22-16	8-10	29/32	B				
16-14	5-6	25/32	B				
16-14	5-6	57/64	B				
<b>SPADE TERMINAL — NON INSULATED</b>							
22-16	4-6	3/4	C	13-100-C	\$2.21	13-100-M	\$18.90
22-16	8	3/4	C	13-102-C	1.94	13-102-M	16.60
16-14	4-6	3/4	C	13-104-C	2.21	13-104-M	18.90
16-14	10	3/4	C	13-106-C	2.21	13-106-M	18.90
<b>SPADE TERMINAL — INSULATED</b>							
22-16	4-6	1-3/16	D	13-108-C	\$5.04	13-108-M	\$43.20
16-14	4-6	1-3/16	D	13-110-C	5.04	13-110-M	43.20
16-14	10	1-3/16	D	13-112-C	5.04	13-112-M	43.20
<b>FLANGE SPADE TERMINAL — NON INSULATED</b>							
22-16	4-6	5/8	E	13-114-C	\$2.21	13-114-M	\$18.90
16-14	10	3/4	E	13-116-C	3.05	13-116-M	26.20
16-14	4-6	3/4	E	13-118-C	4.54	13-118-M	38.80
16-14	8	3/4	E	13-120-C	4.54	13-120-M	38.80
22-16	8-10	3/4	E	13-122-C	4.54	13-122-M	38.80
<b>FLANGE SPADE TERMINAL — INSULATED</b>							
22-16	4-6	13/16	F	13-124-C	\$7.42	13-124-M	\$61.70
22-16	8-10	13/16	F	13-126-C	9.17	13-126-M	76.20
16-14	4-6	13/16	F	13-128-C	7.93	13-128-M	67.80
16-14	8	13/16	F	13-130-C	9.76	13-130-M	83.50
16-14	10	13/16	F	13-132-C	9.76	13-132-M	83.50
<b>HOOK TERMINAL</b>							
22-16	4-6	23/32	G	13-200-C	\$1.94	13-200-M	\$16.60
22-16	8-10	23/32	G	13-202-C	2.25	13-202-M	19.30
<b>BUTT CONNECTOR — NON INSULATED</b>							
22-16	—	9/16	H	13-220-C	\$2.36	13-220-M	\$20.20
16-14	—	9/16	H	13-222-C	1.94	13-222-M	16.60
12-10	—	9/16	H	13-224-C	2.25	13-224-M	19.30
<b>BUTT CONNECTOR — INSULATED</b>							
22-16	—	1	I	13-226-C	\$5.88	13-226-M	\$50.40
16-14	—	1	I	13-228-C	5.17	13-228-M	44.30
12-10	—	1-1/16	I	13-230-C	6.30	13-230-M	54.00
22-16	—	1	I				
16-14	—	1	I				
<b>PARALLEL CONNECTOR — NON INSULATED</b>							
22-16	—	5/16	J	13-240-C	\$2.38	13-240-M	\$20.40
16-14	—	5/16	J	13-242-C	3.84	13-242-M	33.00
<b>SNAP TERMINAL</b>							
16-14	—	5/8	K	13-250-C	1.96	13-250-M	\$16.78
<b>TAB TERMINALS — NON INSULATED</b>							
18-14	—	—	L	13-260-C	\$2.31	13-260-M	\$19.80
18-14	—	—	L	13-262-C	2.31	13-262-M	19.80
18-14	—	—	L	13-264-C	2.52	13-264-M	21.60
18-14	—	—	L	13-266-C	2.36	13-266-M	20.20
<b>ADAPTER</b>							
—	—	7/8	M	13-270-C	\$4.00	13-270-M	\$34.20
—	—	5/16	M	13-272-C	4.04	13-272-M	34.60
—	—	7/8	M	13-274-C	4.00	13-274-M	34.20
—	—	49/64	M	13-276-C	4.00	13-276-M	34.20
<b>INSULATING TUBING</b>							
22-16	—	5/8	N	13-280-C	\$2.46	13-280-M	\$21.10
<b>CONNECTOR INSULATOR</b>							
16-14	—	1-7/8	O	13-282-C	\$2.46	13-282-M	\$21.10
<b>TERMINAL INSULATOR</b>							
16-14	—	1-5/8	P	13-284-C	\$2.46	13-284-M	\$21.10
<b>KNIFE DISCONNECT</b>							
22-16	—	—	Q	13-290-C	\$7.35	13-290-M	\$63.00
<b>FLAG TERMINAL</b>							
22-16	8-10	11/16	R	13-294-C	\$2.36	13-294-M	\$20.20
16-14	8-10	5/8	R	13-296-C	2.21	13-296-M	18.90



# ELECTROCRAFT COMPONENTS

BANANA PLUGS • TIP PLUGS



## BANANA PLUGS

Electrocraft plugs are carefully designed, accurately molded and machined of best available material and rigidly inspected. Except as otherwise noted, all Banana Plugs are made to standard industry dimensions and mate with jacks with an 0.161" bore. Design provides for sufficient spring tension to assure good holding power and minimum contact resistance.

(A) **BANANA PLUG**—Four leaved, phosphor bronze, nickel plated spring; hex brass body, separate internal brass stud.  
Cat. No. 33-000 Red Net \$ .25  
Cat. No. 33-000-BU Net \$21.00/C  
Cat. No. 33-002 Blk Net \$ .25  
Cat. No. 33-002-BU Net \$21.00/C

(B) **BANANA PLUG**—Four leaved, phosphor bronze, nickel plated spring; lead wire connection with set screw through plastic handle.  
Cat. No. 33-006 Red Net \$ .22  
Cat. No. 33-006-BU Net \$18.00/C  
Cat. No. 33-008 Blk Net \$ .22  
Cat. No. 33-008-BU Net \$18.00/C

(C) **DUAL BANANA PLUG**—Four leaved, phosphor bronze, nickel plated spring and steel, cadmium plate screw.  
Cat. No. 33-010 Blk Net \$ .78

(D) **BANANA PLUG**—Unbreakable plastic handle, cross slotted, nickel plated brass body; separate internal brass stud.  
Cat. No. 33-012 Red Net \$ .22  
Cat. No. 33-012-BU Net \$18.00/C  
Cat. No. 33-014 Blk Net \$ .22  
Cat. No. 33-014-BU Net \$18.00/C

(E) **BANANA PLUG**—cross slotted, nickel plated brass body; lead wire connection with set screw through plastic handle.  
Cat. No. 33-018 Red Net \$ .22  
Cat. No. 33-018-BU Net \$18.00/C  
Cat. No. 33-020 Blk Net \$ .22  
Cat. No. 33-020-BU Net \$18.00/C

(F) **BANANA PLUG**—Midget Type, unbreakable plastic handle, four leaved, nickel plated, phosphor bronze spring, lead wire connection solders to drilled body.  
Cat. No. 33-024 Red Net \$ .25  
Cat. No. 33-024-BU Net \$20.66/C  
Cat. No. 33-026 Blk Net \$ .25  
Cat. No. 33-026-BU Net \$20.66/C

(G) **BANANA PLUG**—unbreakable plastic handle; four leaved, nickel plated, phosphor bronze spring; lead wire connection through cross drilled hole in threaded spacer for solderless connection.  
Cat. No. 33-028-1 Red Net \$ .37  
Cat. No. 33-028-1 BU Net \$33.00/C  
Cat. No. 33-028-2 Blk Net \$ .37  
Cat. No. 33-028-2 BU Net \$33.00/C

(H) **BANANA PLUG**—Threaded shank; four leaved, nickel plated phosphor bronze spring. Term. lug & hex nut.  
Cat. No. 33-034-BU Net \$15.00/C

(I) **INSULATED BANANA PLUG**—nickel plated brass plug with 4 leaved beryllium copper, nickel plated spring—fits standard Banana Jack, bakelite handle.  
Cat. No. 33-036-1 Red Net \$ .19  
Cat. No. 33-036-1 BU Net \$16.00/C  
Cat. No. 33-036-2 Blk Net \$ .19  
Cat. No. 33-036-2 BU Net \$16.00/C

(J) **INSULATED BANANA PLUG**—flexible handle, unbreakable—shockproof plastic. Phosphor bronze, nickel plated spring.  
Cat. No. 33-040-1 Red Net \$ .26  
Cat. No. 33-040-1 BU Net \$21.00/C  
Cat. No. 33-040-2 Blk Net \$ .26  
Cat. No. 33-040-2 BU Net \$21.00/C

(K) **BANANA PLUG**—flexible handle, unbreakable—shockproof plastic. Phosphor bronze, nickel plated spring.  
Cat. No. 33-042-1 Red Net \$ .28  
Cat. No. 33-042-1 BU Net \$23.00/C  
Cat. No. 33-042-2 Blk Net \$ .28  
Cat. No. 33-042-2 BU Net \$23.00/C

(L) **BANANA PLUG**—Right angle "Gun" tip (meter plug), molded plastic handle (2 half-shells), four leaved, phosphor bronze, nickel plated springs; lead wire solders to body.  
Cat. No. 33-046 Red Net \$ .42  
Cat. No. 33-046 BU Net \$36.00/C  
Cat. No. 33-048 Blk Net \$ .42  
Cat. No. 33-048 BU Net \$36.00/C

(M) **BANANA PLUG**—Threaded shank; four leaved, nickel plated phosphor bronze spring. Term. lug & hex nut.  
Cat. No. 33-058-BU Net \$15.00/C

## BANANA PLUGS

These Banana Plugs meet standard industry specifications, mate with jacks with 0.163" bore.

(N) **BANANA PLUG**—Unbreakable plastic handle; four leaved, nickel plated phosphor bronze spring.  
Cat. No. 33-032-1BU Red Net \$18.00/C  
Cat. No. 33-032-2BU Blk Net \$18.00/C  
Cat. No. 33-032-3BU Yel Net \$18.00/C  
Cat. No. 33-032-4BU Grn Net \$18.00/C  
Cat. No. 33-032-5BU Blu Net \$18.00/C

(O) **BANANA PLUG**—Threaded shank; four leaved, nickel plated phosphor bronze spring. Term. Lug & hex nut.  
Cat. No. 33-034-BU Net \$15.00/C

(P) **INSULATED BANANA PLUG**—nickel plated brass plug with 4 leaved beryllium copper, nickel plated spring—fits standard Banana Jack, bakelite handle.  
Cat. No. 33-036-1 Red Net \$ .19  
Cat. No. 33-036-1 BU Net \$16.00/C  
Cat. No. 33-036-2 Blk Net \$ .19  
Cat. No. 33-036-2 BU Net \$16.00/C

(Q) **INSULATED BANANA PLUG**—flexible handle, unbreakable—shockproof plastic. Phosphor bronze, nickel plated spring.  
Cat. No. 33-040-1 Red Net \$ .26  
Cat. No. 33-040-1 BU Net \$21.00/C  
Cat. No. 33-040-2 Blk Net \$ .26  
Cat. No. 33-040-2 BU Net \$21.00/C

(R) **BANANA PLUG**—flexible handle, unbreakable—shockproof plastic. Phosphor bronze, nickel plated spring.  
Cat. No. 33-042-1 Red Net \$ .28  
Cat. No. 33-042-1 BU Net \$23.00/C  
Cat. No. 33-042-2 Blk Net \$ .28  
Cat. No. 33-042-2 BU Net \$23.00/C

(S) **BANANA PLUG**—Right angle "Gun" tip (meter plug), molded plastic handle (2 half-shells), four leaved, phosphor bronze, nickel plated springs; lead wire solders to body.  
Cat. No. 33-046 Red Net \$ .42  
Cat. No. 33-046 BU Net \$36.00/C  
Cat. No. 33-048 Blk Net \$ .42  
Cat. No. 33-048 BU Net \$36.00/C

(T) **BANANA PLUG**—Threaded shank; four leaved, nickel plated phosphor bronze spring. Term. lug & hex nut.  
Cat. No. 33-058-BU Net \$15.00/C

(U) **BANANA PLUG ADAPTOR**—Adapts tip plug to banana plug; insulated handle, standard tip jack one end; other end four leaved banana plug.  
Cat. No. 33-072 Red Net \$ .35  
Cat. No. 33-072-BU Net \$30.00/C  
Cat. No. 33-074 Blk Net \$ .35  
Cat. No. 33-074-BU Net \$30.00/C

(V) **BANANA PLUG-KLIPZON ADAPTOR**—One end cross slotted; brass, nickel plated banana plug; other end "Klipzon" self holding wire piercing tip.  
Cat. No. 33-076 Red Net \$ .52  
Cat. No. 33-076-BU Net \$45.00/C  
Cat. No. 33-078 Blk Net \$ .52  
Cat. No. 33-078-BU Net \$45.00/C

(W) **ADAPTOR, KLIPZON TIP TO BANANA PLUG**—For connection of test leads terminated with Klipzon prods to equipment with banana jacks  
Cat. No. 33-080 Red Net \$ .42  
Cat. No. 33-080-BU Net \$36.00/C  
Cat. No. 33-082 Blk Net \$ .42  
Cat. No. 33-082-BU Net \$36.00/C

(X) **STACK BANANA PLUG**—stack type, 4 leaved, phosphor bronze, nickel plated spring. 2" long with plastic handle. Fits standard banana plugs in top and side.  
Cat. No. 33-084-1 Red Net \$ .32  
Cat. No. 33-084-1 BU Net \$27.00/C  
Cat. No. 33-084-2 Blk Net \$ .32  
Cat. No. 33-084-2 BU Net \$27.00/C

(Y) **STACK BANANA PLUG**—stack type, 4 leaved beryllium copper, nickel plated spring. 2" long, with plastic handle. Fits standard banana plugs in top and side.  
Cat. No. 33-086-1 Red Net \$ .35  
Cat. No. 33-086-1 BU Net \$30.00/C  
Cat. No. 33-086-2 Blk Net \$ .35  
Cat. No. 33-086-2 BU Net \$30.00/C

(Z) **TIP PLUGS**  
The following Tip Plugs are, unless otherwise noted, made to the standard industry specifications of .080" pin diameter. Careful machining, close tolerances and the use of brass alloy assures good contact and service ability.  
(R) **PHONO NEEDLE TIP PLUG**—Insulated handle; nickel plated brass body; chuck design to hold .058 phono needle which is easily replaceable. Wire solders to body.  
Cat. No. 33-100 Red Net \$ .18  
Cat. No. 33-100-BU Net \$15.00/C  
Cat. No. 33-102 Blk Net \$ .18  
Cat. No. 33-102-BU Net \$15.00/C

(S) **INSULATED TIP PLUG**—Solderless type, wire tightens securely under knurled collar. Handle is unbreakable plastic and body is machined brass, nickel plated.  
Cat. No. 33-106 Red Net \$ .18  
Cat. No. 33-106-BU Net \$15.00/C  
Cat. No. 33-108 Blk Net \$ .18  
Cat. No. 33-108-BU Net \$15.00/C

(T) **HEAVY DUTY PHONE TIP PLUG**—Standard tip, large diameter for soldering heavy duty wire into nickel plated brass body.  
Cat. No. 33-110-1BU Red Net \$15.00/C  
Cat. No. 33-110-2BU Blk Net \$15.00/C  
Cat. No. 33-110-3BU Yel Net \$15.00/C  
Cat. No. 33-110-4BU Grn Net \$15.00/C  
Cat. No. 33-110-5BU Blu Net \$15.00/C

(U) **ADAPTOR, KLIPZON TIP TO BANANA PLUG**—For connection of test leads terminated with Klipzon prods to equipment with banana jacks

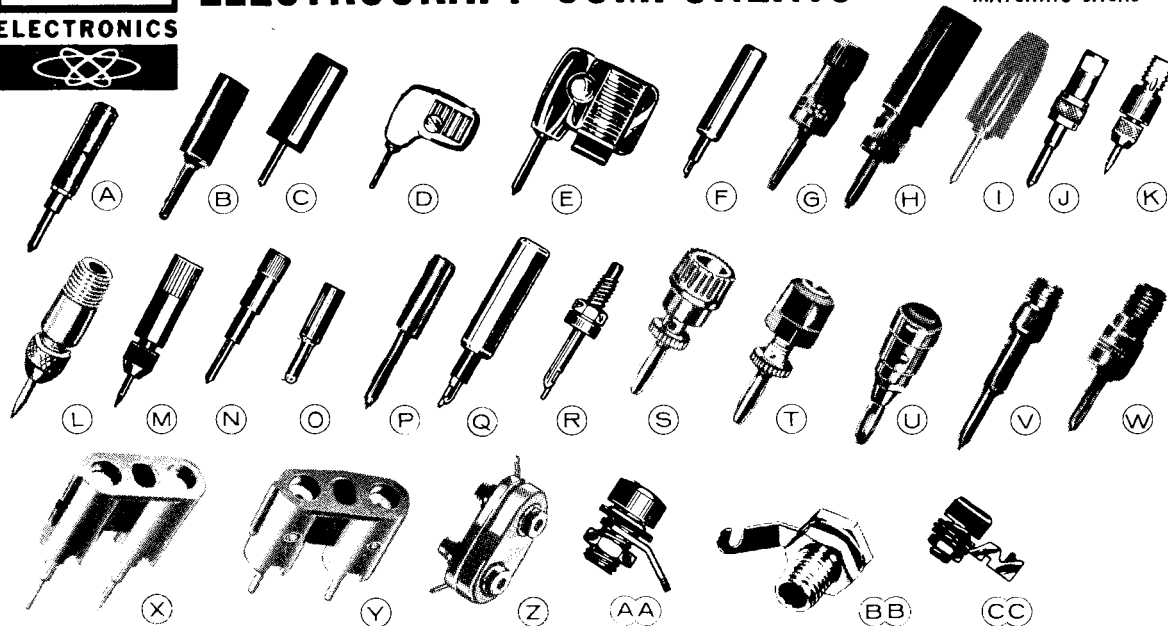
(V) **ADAPTOR, KLIPZON TIP TO BANANA PLUG**—For connection of test leads terminated with Klipzon prods to equipment with banana jacks





# ELECTROCRAFT COMPONENTS

## BANANA PLUGS • TIP PLUGS MATCHING JACKS



**(A) SUB-MINIATURE PHONE TIP PLUG**—Standard tip, extra-small diameter, machined bone fibre insulated handle. Wire solders to nickel plated, brass body.

Cat. No. 33-112 Red Net \$ .22  
Cat. No. 33-112-BU Net \$18.00/C  
Cat. No. 33-114 Blk Net \$ .22  
Cat. No. 33-114-BU Net \$18.00/C

**(B) INSULATED HOLLOW TIP PLUG**—Drawn brass, nickel plated, solder type.

Cat. No. 33-116-1BU Red Net \$10.20/C  
Cat. No. 33-116-2BU Blk Net \$10.20/C

**(C) INSULATED SHORT TIP PLUG**—Unbreakable plastic handle; wire solders to brass nickel plated body.

Cat. No. 33-118 Red Net \$ .15  
Cat. No. 33-118-BU Net \$12.00/C  
Cat. No. 33-120 Blk Net \$ .15  
Cat. No. 33-120-BU Net \$12.00/C

**(D) RIGHT ANGLE TIP PLUG**—Two insulated plastic handle half shells assemble with one screw and nut. Maximum wire insulation  $\frac{3}{4}$ "; wire solders to body.

Cat. No. 33-128 Red Net \$ .32  
Cat. No. 33-128-BU Net \$27.00/C  
Cat. No. 33-130 Blk Net \$ .32  
Cat. No. 33-130-BU Net \$27.00/C

**(E) "TRIGGER-QUIK" TIP PLUG**—right angle plug, similar to 33-128 and 33-130. Spring loaded solderless wire connection, "trigger" design. 1 Red and 1 Black plug per pair.

Cat. No. 33-132 Red Net \$ .45  
Cat. No. 33-132-BU Net \$39.00/C  
Cat. No. 33-134 Blk Net \$ .45  
Cat. No. 33-134-BU Net \$39.00/C  
Cat. No. \*33-136 Pkg.

per. pr. Net \$ .75  
\*20 pair per package display.

**(F) KLIPZON MINI-PROD**—Insulated tip plug can be snapped securely on wires. Incorporates sharp point to pierce insulation; fits standard tip jacks; wire solders to body.

Cat. No. 33-138 Red Net \$ .42  
Cat. No. 33-138-BU Net \$36.00/C  
Cat. No. 33-140 Blk Net \$ .42  
Cat. No. 33-140-BU Net \$36.00/C

**(G) "JR." SOLDERLESS PHONE TIP**—Press fit; nickel plated brass body; wire fastens under knurled collar.

Cat. No. 33-142-BU Net \$18.66/C

**(H) "JR." SOLDERLESS PHONE TIP**—Threaded nickel plated brass body; wire fastens under knurled collar.

Cat. No. 33-144-1BU Red Net \$20.83/C  
Cat. No. 33-144-2BU Blk Net \$20.83/C  
Cat. No. 33-144-3BU Yel Net \$20.83/C  
Cat. No. 33-144-4BU Grn Net \$20.83/C  
Cat. No. 33-144-5BU Blu Net \$20.83/C

**(I) INSULATED TIP PLUG** short tip type, nickel plated brass plug with nylon handle. Fits standard phone tip jack.

Cat. No. 33-145-1 Red Net \$ .14  
Cat. No. 33-145-1 BU Net \$10.50/C  
Cat. No. 33-145-2 Blk Net \$ .14  
Cat. No. 33-145-2 BU Net \$10.50/C

**(J) SOLDERLESS TIP PLUG**—All metal. Precision machined brass, nickel plated; wire fastens under knurled collar.

Cat. No. 33-146 Net \$ .13  
Cat. No. 33-146-BU Net \$10.20/C

**(K) PHONO NEEDLE TIP PLUG**—Nickel plated brass body with  $\frac{1}{4}$ " thread; chuck design to hold phono needle.

Cat. No. 33-148 Net \$ .17  
Cat. No. 33-148-BU Net \$13.20/C

**(L) NEEDLE TIP AND CHUCK** brass nickel plated body, with steel nickel plated needle. Chuck is removable for quick replacement. Needle pierces corrosion or plating for positive reading.

Cat. No. 33-149 Net \$ .17  
Cat. No. 33-149-BU Net \$13.20/C

**(M) PUSH-ON NEEOLE CHUCK**—Nickel plated brass. Knurled body for press fit into Test Prod handles drilled with  $\frac{1}{4}$ " hole.

Cat. No. 33-150 Net \$ .17  
Cat. No. 33-150-BU Net \$13.20/C

**(N) HEAVY DUTY PHONE TIP PLUG**—Nickel plated brass; knurled shank for press fit into Test Prod handles, drilled with  $\frac{1}{4}$ " hole.

Cat. No. 33-152 Net \$ .13  
Cat. No. 33-152-BU Net \$10.20/C

**(O) STANDARD HOLLOW PHONE TIP**—Drawn brass, bright nickel plated.

Cat. No. 33-154 Net \$ .13  
Cat. No. 33-154-BU Net \$3.50/C

**STANDARD SOLID PHONE TIP**—Brass, bright nickel plated.

Cat. No. 33-156 Net \$ .17  
Cat. No. 33-156-BU Net \$4.20/C

**(P) HEAVY DUTY PHONE TIP PLUG**—Brass; bright nickel plated, solder type.

Cat. No. 33-158-BU Net \$4.75/C

**(Q) KLIPZON MINI-PROD ADAPTOR**—Converts standard Tip Plug and Test Prod to self holding Klipzon wire piercing prod.

Cat. No. 33-160 Red Net \$ .42  
Cat. No. 33-160-BU Net \$36.00/C  
Cat. No. 33-162 Blk Net \$ .42  
Cat. No. 33-162-BU Net \$36.00/C

**(R) KLIPZON PANEL MOUNTS**—Wire holding patented Klipzon Test Prod with threaded shank (6-32 x  $\frac{3}{8}$ ") for panel mount. Designed for test setups.

Cat. No. 33-164 Net \$ .52  
Cat. No. 33-164-BU Net \$45.00/C

**(S) COMBINATION POST-PLUG** captive head, molded of Butyrate per MIL-P-349A, type 3, class MS. Brass, nickel plated body, with 4 leaved phosphor bronze, nickel plated spring. Used to convert any panel-mounted banana jack to 5-way binding post termination. Accepts solid or stranded wire, spade lug, phone tip, banana plug or alligator clip.

Cat. No. 33-165-1 Red Net \$ .30  
Cat. No. 33-165-1 BU Net \$27.00/C  
Cat. No. 33-165-2 Blk Net \$ .30  
Cat. No. 33-165-2 BU Net \$27.00/C

**(T) COMBINATION POST-PLUG** captive head, molded of nylon, per MIL-P-20693A. Brass, nickel plated insert is molded in body with 4 leaved phosphor bronze, nickel plated spring. Used to convert any panel-mounted banana jack to 5-way binding post termination. Accepts solid or stranded wire, spade lug, phone tip, banana plug or alligator clip.

Cat. No. 33-166-1 Red Net \$ .30  
Cat. No. 33-166-1 BU Net \$27.00/C  
Cat. No. 33-166-2 Blk Net \$ .30  
Cat. No. 33-166-2 BU Net \$27.00/C

**(U) COMBINATION POST-PLUG** captive, brass nickel plated head with molded styrene cap per MIL-L-P416, type 1. Brass, nickel plated body with 4 leaved phosphor bronze, nickel plated spring. Used to convert any panel-mounted banana jack to a spring-loaded push post. Accepts solid or stranded wire, or standard phone tip which locks in place upon release of pressure on cap.

Cat. No. 33-167 Net \$ .45  
Cat. No. 33-167 BU Net \$42.00/C

**(V) HEAVY DUTY PHONE TIP PLUG**—Soldering well in nickel plated brass body large enough for standard banana plugs; threaded to fit into plastic handle.

Cat. No. 33-170-BU Net \$10.20/C

**(W) "JR." SOLDERLESS PHONE TIP**—Nickel plated brass body; wire fastens under knurled collar; threaded to fit into plastic handle.

Cat. No. 33-172-BU Net \$11.40/C

**(X) DUAL STANDARD TIP PLUGS**—solderless type, insulated molded black plastic body. Brass, nickel plated body with dual tip plugs on  $\frac{3}{4}$ " centers. Designed to mate with dual combination jack assembly 33-206. Set screws secure wires.

Cat. No. 33-174 Net \$ .78  
Cat. No. 33-174 BU Net \$72.00/C

**(Y) DUAL SHORT TIP SOLDERLESS PLUG** insulated molded black plastic body with brass, nickel plated tip plugs on  $\frac{3}{4}$ " centers. Mates with dual tip jack 33-206. Set screws secure wire without soldering.

Cat. No. 33-176 Net \$ .80  
Cat. No. 33-176 BU Net \$74.00/C

**(Z) DUAL BANANA JACK** insulated-molded black styrene, per MIL-LP416, type 1. Brass, nickel plated body. Mounting requires two  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers in panel up to  $\frac{1}{4}$ " thick. Accepts standard and dual banana plugs. Dual jack comes complete with 2 hex nuts, 4 flat washers and brass tinned lugs.

Cat. No. 33-179 Net \$ .53  
Cat. No. 33-179 BU Net \$48.00/C

### BANANA AND TIP PLUG JACKS

Jacks are made to standard industry specifications. On Banana Jacks, the bore is .163" which fits all standard Banana Plugs. Tip Plug Jacks have built in spring contacts and are designed for all standard tip plugs with .080" diameter.

**(AA) BANANA JACK**—Molded phenolic head; nickel plated brass body supplied with tinned solder lug, fibre washer and mounting nut. Mounts in  $\frac{3}{8}$ " hole.

Cat. No. 33-180 Red Net \$ .17  
Cat. No. 33-180-BU Net \$13.20/C  
Cat. No. 33-182 Blk Net \$ .17  
Cat. No. 33-182-BU Net \$13.20/C

**(BB) BANANA JACK**—A hex brass nickel plated body recessed head and supplied with nut and lug.

Cat. No. 33-184-BU Blk Net \$10.20/C

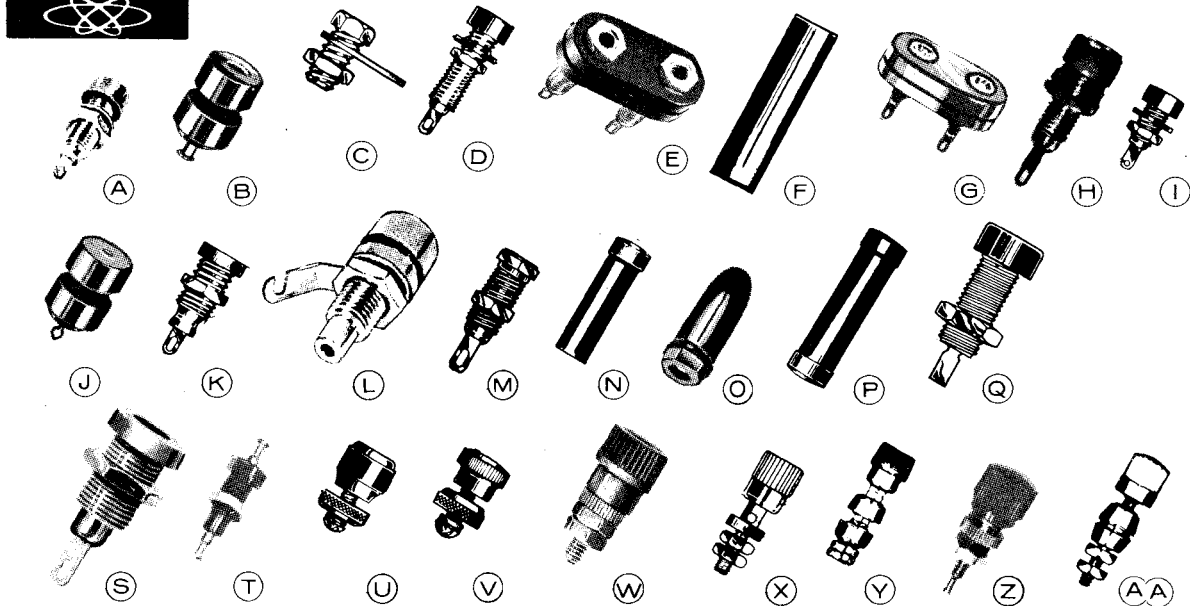
**(CC) BANANA JACK, HEAVY DUTY**—Molded phenolic head; nickel plated brass body; extruded fibre washer, lock washer, heavy duty solder lug and mounting nut.

Cat. No. 33-186 Red Net \$ .23  
Cat. No. 33-186-BU Net \$20.00/C  
Cat. No. 33-188 Blk Net \$ .23  
Cat. No. 33-188-BU Net \$20.00/C



# ELECTROCRAFT COMPONENTS

PHONE JACKS • PHONO PIN PLUGS  
AND JACKS • CONNECTORS



(A) **TIP JACK**—Featuring positive hold hex lock between molded head and jack body.

	Net
Cat. No. 33-190 Red	\$ .18
Cat. No. 33-190-1BU Red	\$15.00/C
Cat. No. 33-190-2BU Blk	\$15.00/C
Cat. No. 33-190-3BU Yel	\$15.00/C
Cat. No. 33-190-4BU Grn	\$15.00/C
Cat. No. 33-190-5BU Blu	\$15.00/C
Cat. No. 33-190 Blk	\$ .18

(B) **HIGH VOLT. NYLON BANANA JACK**—high voltage flashover to panel prevented by heavy molded nylon body and cup washer, made per MIL-P-20693A. Colors conform to Federal Standard 595. Hex nuts and insert shell are nickel plated brass per QQ-N-290 type V (FC). Phosphor bronze contact, silver plated per QQ-S-365, overall Gold plated. Withstands 100 hours salt spray test.

Cat. No. 33-191-1 Red	Net \$ .52
Cat. No. 33-191-1 BU	Net \$45.00/C
Cat. No. 33-191-2 Blk	Net \$ .52
Cat. No. 33-191-2 BU	Net \$45.00/C

(C) **BANANA JACK**—ALL METAL brass nickel plated body; supplied with solder lug and hex mounting nut. Mounts in  $\frac{1}{4}$ " hole; fits panels up to  $\frac{3}{8}$ " thick.

Cat. No. 33-192	Net \$ .13
Cat. No. 33-192-BU	Net \$10.20/C

(D) **BANANA-TIP JACK COMBINATION**—Molded phenolic head; brass nickel plated body. Phosphor bronze spring. Supplied with extruded fibre washer and mounting nut.

Cat. No. 33-194 Red	Net \$ .20
Cat. No. 33-194-BU	Net \$16.20/C
Cat. No. 33-196 Blk	Net \$ .20
Cat. No. 33-196-BU	Net \$16.20/C

(E) **DUAL BANANA AND STAND. TIP PLUG**—insulated molded black plastic brass, nickel plated body. Mounts in two  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers on panels up to  $\frac{3}{8}$ " thick, mates with Dual Banana Plug 33-010 and Dual Standard Tip Plug 33-174.

Cat. No. 33-197	Net \$ .79
Cat. No. 33-197 BU	Net \$73.00/C

(F) **BANANA PLUG SPLICE**—Insulated plastic handle, brass insert for coupling 2 standard Banana Plugs.

Cat. No. 33-200 Red	Net \$ .30
Cat. No. 33-200-BU	Net \$26.66/C
Cat. No. 33-202 Blk	Net \$ .30
Cat. No. 33-202-BU	Net \$26.66/C

(G) **DUAL TIP JACK ASSEMBLY**—insulated molded black styrene body, per MIL-L-P416, type I. Recessed body made of nickel plated brass with phosphor bronze contact. Mounting takes two  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers in panels up to  $\frac{1}{4}$ " thick. Accepts standard phone tip

plugs. Complete with two hex nuts.

Cat. No. 33-206	Net \$ .60
Cat. No. 33-206 BU	Net \$54.00/C

(H) **INSULATED TIP JACK**—Molded plastic head and washer; brass, nickel plated body with hex nut. Requires  $\frac{3}{8}$ " hole; fits panels up to  $\frac{1}{4}$ " thick.

	Net
Cat. No. 33-208-1BU Red	\$18.00/C
Cat. No. 33-208-2BU Blk	\$18.00/C
Cat. No. 33-208-3BU Yel	\$18.00/C
Cat. No. 33-208-4BU Grn	\$18.00/C
Cat. No. 33-208-5BU Blu	\$18.00/C

(I) **STANDARD TIP JACK**—Molded phenolic plastic head; nickel plated brass body with phosphor bronze spring; supplied with extruded fibre washer.

Cat. No. 33-210 Red	Net \$ .17
Cat. No. 33-210-BU	Net \$13.20/C
Cat. No. 33-212 Blk	Net \$ .17
Cat. No. 33-212-BU	Net \$13.20/C

(J) **HIGH VOLT. NYLON PHONE TIP JACK**—high voltage flashover to panel prevented by heavy molded nylon body and cup washer, made per MIL-P-20693A. Colors conform to Federal Standard 595. Hex nuts and insert shell are nickel plated brass per QQ-N-290 type V (FC). Phosphor bronze contact, silver plated per QQ-S-365, overall Gold plated. Withstands 100 hours salt spray test.

Cat. No. 33-214-1 Red	Net \$ .81
Cat. No. 33-214-1 BU	Net \$75.00/C
Cat. No. 33-214-2 Blk	Net \$ .81
Cat. No. 33-214-2 BU	Net \$75.00/C

(K) **TIP JACK, ALL-INSULATED**—Head and body molded of nylon, in one piece; phosphor bronze spring; supplied with mounting nut; mounts in  $\frac{3}{8}$ " hole.

Cat. No. 33-216 Red	Net \$ .22
Cat. No. 33-216-BU	Net \$18.00/C
Cat. No. 33-218 Blk	Net \$ .22
Cat. No. 33-218-BU	Net \$18.00/C

(L) **MINIATURE BANANA JACK**—Molded nylon head and insulating washer provide excellent isolation from panel. Fits  $\frac{3}{8}$ " mounting hole; for panels up to  $\frac{1}{4}$ " thick.

	Net
Cat. No. 33-220-1BU Red	\$18.00/C
Cat. No. 33-220-2BU Blk	\$18.00/C
Cat. No. 33-220-3BU Yel	\$18.00/C
Cat. No. 33-220-4BU Grn	\$18.00/C
Cat. No. 33-220-5BU Blu	\$18.00/C

(M) **TIP JACK, ALL METAL**—Brass nickel plated body; phosphor bronze spring.

Cat. No. 33-226	Net \$ .13
Cat. No. 33-226-BU	Net \$10.20/C

(N) **TIP JACK, IN-LINE STYLE**—Insulated handle, brass nickel plated body; phosphor bronze spring.

Cat. No. 33-228 Red	Net \$ .25
Cat. No. 33-228-BU	Net \$21.00/C
Cat. No. 33-230 Blk	Net \$ .25
Cat. No. 33-230-BU	Net \$21.00/C

(O) **NYLON IN-LINE TIP JACK**—insulated, molded nylon handle and body per MIL-P-20693A. Heat treated, phosphor bronze, gold plated contact. Safe, recessed contact accommodates all standard phone tip plugs—well suited for use with patch and extension cords. Also may be used for mounting on panel when wrap around terminal must be insulated in rear.

Cat. No. 33-231-1 Red	Net \$ .35
Cat. No. 33-231-1 BU	Net \$30.00
Cat. No. 33-231-2 Blk	Net \$ .35
Cat. No. 33-231-2 BU	Net \$30.00

(P) **TIP PLUG SPLICE**—Insulated; brass nickel plated body; phosphor bronze springs.

Cat. No. 33-232 Red	Net \$ .32
Cat. No. 33-232-BU	Net \$27.00/C
Cat. No. 33-234 Blk	Net \$ .32
Cat. No. 33-234-BU	Net \$27.00/C

(Q) **NYLON TIP JACK**—Nylon insulated body with machined beryllium copper contact, silver plated contact recessed in head, hot tin dipped solder terminal.

Cat. No. 33-240 Blk	Net \$ .32
Cat. No. 33-240-BU	Net \$27.00/C
Cat. No. 33-242 Red	Net \$ .32
Cat. No. 33-242-BU	Net \$27.00/C

(R) **NYLON TIP JACK — SPADE TERMINAL**—insulated nylon molded body; brass, nickel plated hex nut. Fits all standard phone tip plugs. Mounts in  $\frac{1}{4}$ " hole in panel up to  $\frac{1}{4}$ " thick.

Cat. No. 33-245-1 Red	Net \$ .30
Cat. No. 33-245-1 BU	Net \$24.50/C
Cat. No. 33-245-2 Blk	Net \$ .30
Cat. No. 33-245-2 BU	Net \$24.50/C

(S) **NYLON TIP JACK — SPADE TERMINAL**—insulated nylon molded body; brass, nickel plated hex nut. Fits all standard phone tip plugs. Mounts in  $\frac{1}{4}$ " hole in panel up to  $\frac{1}{4}$ " thick.

Cat. No. 33-245-1 Red	Net \$ .30
Cat. No. 33-245-1 BU	Net \$24.50/C
Cat. No. 33-245-2 Blk	Net \$ .30
Cat. No. 33-245-2 BU	Net \$24.50/C

(T) **NYLON FEED-THRU JACK**—feed thru type. Insulated nylon molded body; brass, nickel plated hex nut. Fits all standard phone tip plugs. Mounts in  $\frac{1}{4}$ " hole in panel up to  $\frac{1}{4}$ " thick.

Cat. No. 33-247-1 Red	Net \$ .26
Cat. No. 33-247-1 BU	Net \$21.00
Cat. No. 33-247-2 Blk	Net \$ .26
Cat. No. 33-247-2 BU	Net \$21.00

(U) **BINDING POST**—Brass nickel plated body; supplied with 8-32 mounting screw and lock washer.

Cat. No. 33-250 Red	Net \$ .22
Cat. No. 33-250-BU	Net \$17.67/C
Cat. No. 33-252 Blk	Net \$ .22
Cat. No. 33-252-BU	Net \$17.67/C

(V) **BINDING POST**—Brass nickel plated body supplied with #8-32 mounting screw and lock washer.

Cat. No. 33-254	Net \$ .18
Cat. No. 33-254-BU	Net \$15.33/C

(W) **BINDING POST-COMBINATION TYPE**—Accepts banana plug, tip plug, bare wire or spade lug. Threaded #8-32 mounting stud  $\frac{1}{2}$ " long; supplied with 2 hex nuts.

Cat. No. 33-255 Red	Net \$ .18
Cat. No. 33-255 BU	Net \$15.33/C

(X) **BINDING POST-COMBINATION**—Similar in construction to 33-256/8 except with molded shoulder-type plastic washers to insulate post from chassis.

Cat. No. 33-256 Red	Net \$ .22
Cat. No. 33-256-BU	Net \$18.00/C
Cat. No. 33-258 Blk	Net \$ .22
Cat. No. 33-258-BU	Net \$18.00/C

(Y) **BINDING POST-INSULATED UNIVERSAL TYPE**—Non-removable, molded brass; brass nickel plated body with threaded #8-32 mounting stud.

Cat. No. 33-264 Red	Net \$ .32
Cat. No. 33-264-BU	Net \$27.00/C
Cat. No. 33-266 Blk	Net \$ .32
Cat. No. 33-266-BU	Net \$27.00/C

(Z) **BINDING POST**—molded plastic head and brass nickel plated body. Insulating washer and 2 hex nuts supplied. Stud length  $1\frac{1}{2}$ ", 8-32 threaded. Accommodates phone tip plug, spade lug, alligator clip, banana plug or stranded wire.

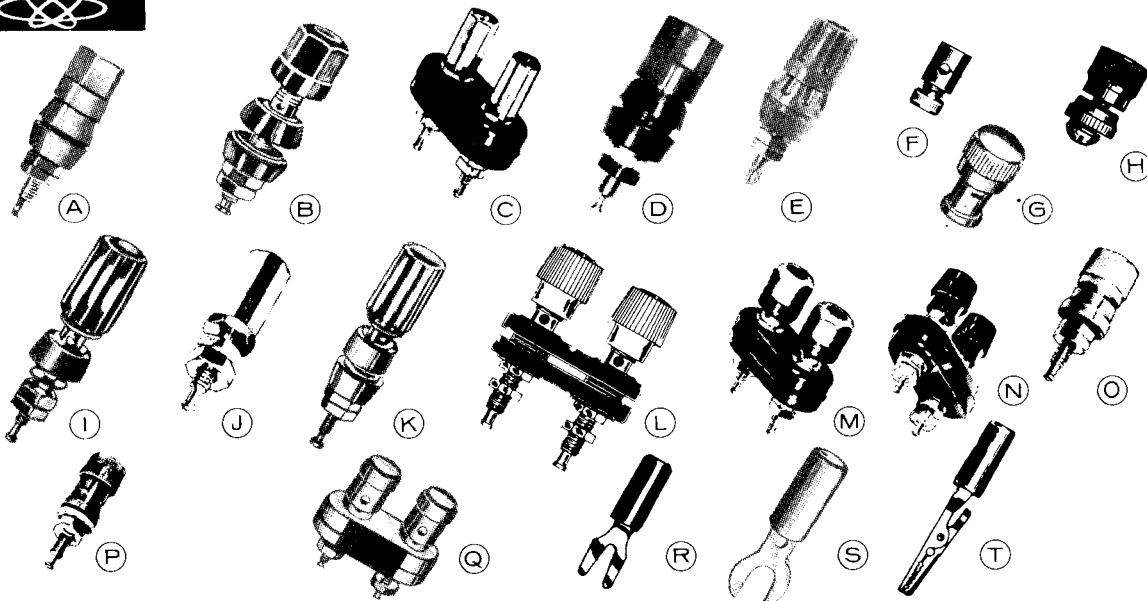
Cat. No. 33-265 Red	Net \$ .18
Cat. No. 33-265 BU	Net \$16.00
Cat. No. 33-267 Blk	Net \$ .19
Cat. No. 33-267 BU	Net \$16.00

(AA) **HEAVY DUTY BINDING POST**—Machined brass nickel plated body; supplied with a thick molded insulating spacer; shoulder keys into



# ELECTROCRAFT COMPONENTS

BINDING POSTS-SPADE LUGS-CLIPS



chassis mounting hole and positively prevents post from turning.

Cat. No. 33-268 Red Net \$ .47  
Cat. No. 33-268-BU Net \$42.00/C  
Cat. No. 33-270 Blk Net \$ .47  
Cat. No. 33-270-BU Net \$42.00/C

**(A) HEAVY DUTY BINDING POST**—Identical in design to binding post No. 33-268/270, except end of stud milled flat and drilled for solder connection.

Cat. No. 33-272 Red Net \$ .47  
Cat. No. 33-272-BU Net \$42.00/C  
Cat. No. 33-274 Blk Net \$ .47  
Cat. No. 33-274-BU Net \$42.00/C

**(B) NYLON BINDING POST**—molded nylon head and washer insulates post from panel. Banana plug receptacle .161" I.D. Molded in brass bushing in head and washers. Wire hole at right angle to flat on insulated washers. Punched keyed slot for mounting washers. Head is non-removable from stud. Mounting requires  $\frac{1}{8}$ " hole in panels up to  $\frac{1}{4}$ " thick. Direct solder connection to stud. Body and inserts are brass, gold plated overall.

Cat. No. 33-275-1 Red Net \$ .47  
Cat. No. 33-275-1 BU Net \$42.00/C  
Cat. No. 33-275-2 Blk Net \$ .47  
Cat. No. 33-275-2 BU Net \$42.00/C

**(C) DUAL BINDING POST**—dual binding post assembly with metal posts. Can accept standard dual banana plug and wire, etc. Mounts in two  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers in  $\frac{1}{4}$ " to  $\frac{1}{2}$ " panels. With wrap-around solder studs. Has  $\frac{5}{8}$ " x  $1\frac{1}{8}$ " rounded black base.

Cat. No. 33-276 Net \$ .66  
Cat. No. 33-276 BU Net \$60.00/C

**(D) HEAVY DUTY BINDING POST**—captive plastic head with molded in brass inserts; machined brass nickel plated body; accepts banana or tip plug, spade lug, alligator clip or bare wire; supplied with a thick molded insulating spacer; spacer has a "D" shaped shoulder; shoulder keys into chassis mounting hole and positively prevents post from turning. Maximum rating 30 amps—2000 R.M.S. volt; supplied with 2 hex nuts.

Cat. No. 33-278 Red Net \$ .42  
Cat. No. 33-278 BU Net \$36.00/C  
Cat. No. 33-280 Blk Net \$ .42  
Cat. No. 33-280 BU Net \$36.00/C

**(E) BINDING POST**—5-way, nylon. Fluted style, insulated, Banana adapter type. Wrap around tips—Brass nickel plated.

Cat. No. 33-279-1 Red Net \$ .49  
Cat. No. 33-279-1 BU Net \$42.00/C  
Cat. No. 33-279-2 Blk Net \$ .49  
Cat. No. 33-279-2 BU Net \$42.00/C

**BINDING POST**—5-way, nylon. Fluted style, insulated, Banana adapter type. Spade type tip—Brass nickel plated.

Cat. No. 33-281-1 Red Net \$ .52  
Cat. No. 33-281-1 BU Net \$45.00/C  
Cat. No. 33-281-2 Blk Net \$ .52  
Cat. No. 33-281-2 BU Net \$45.00/C

**(F) BINDING POST, ALL METAL**—Brass nickel plated body and knurled cap; accepts banana plug, phone tip or wire.

Cat. No. 33-282 Net \$ .15  
Cat. No. 33-282-BU Net \$12.00/C

**(G) BINDING POST**—compression type captive brass, nickel plated head. Knurled for finger grip. Brass, nickel plated body. Screw head down to tighten wire between body and sliding contact. Threaded internally for 6-32 mounting screw. Base of post is knurled for sure grip to panel.

Cat. No. 33-283 Net \$ .25  
Cat. No. 33-283 BU Net \$21.00/C

**(H) BINDING POST-ALL METAL**—Heavy brass nickel plated body and knurled cap; #8-32 x  $\frac{1}{2}$ " mounting screw and lock washer supplied.

Cat. No. 33-284 Net \$ .18  
Cat. No. 33-284-BU Net \$15.00/C

**(I) METAL BINDING POST**—gold plated, fluted brass, captive head. Molded black nylon washer with gold plated brass insert. Use where direct ground connection is made to panel or chassis. Complete with gold plated brass flat washer for grounding. Accepts phone tip plug, spade lug, banana plug, alligator clip or stranded wire.

Cat. No. 33-285 Net \$ .32  
Cat. No. 33-285 BU Net \$27.00/C

**(J) BINDING POST**—5-way metal binding post. Can accept banana plug. Mounts in .171" hole in  $\frac{1}{4}$ " to  $\frac{3}{8}$ " panels. Has wrap around solder stud. 8-32 thread.

Cat. No. 33-286 Net \$ .25  
Cat. No. 33-286 BU Net \$21.60/C

**(K) METAL BINDING POST**—gold plated, fluted brass, captive head. Molded black nylon washer with gold plated brass insert. Use where internal ground circuit is isolated from chassis or panel. Accepts phone tip plug, spade lug, banana plug, alligator clip or wire strand.

Cat. No. 33-287 Net \$ .32  
Cat. No. 33-287 BU Net \$27.00/C

**(L) DUAL BINDING POST—INSULATED**—5-way binding post assembly with black insulated, fluted heads. Accepts dual banana plugs. Mounts in 2  $\frac{3}{8}$ " holes.  $\frac{3}{4}$ " centers on  $\frac{1}{4}$ " to  $\frac{1}{2}$ " panels. Has solder studs;

$\frac{5}{8}$ " x  $1\frac{1}{8}$ " rounded base. Supplied with 4 hex nuts, two flat washers.

Cat. No. 33-288 Net \$ .60  
Cat. No. 33-288 BU Net \$54.00/C

**(M) DUAL BINDING POST**—insulated head, washer of molded black styrene, drilled to accept standard phone tips, forward or sideways. Brass, nickel plated body, molded nylon, hex head with brass nickel plated insert. Mounts in two  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers in panels up to  $\frac{1}{4}$ " thick. Accommodates single or dual banana plugs.

Cat. No. 33-290 Blk Net \$ .72  
Cat. No. 33-290 BU Net \$66.00/C

Cat. No. 33-292 One Red Head and One Blk Head Net \$ .72  
Cat. No. 33-292 BU One Red Head and One Blk Head Net \$66.00/C

**(N) DUAL BINDING POST**—captive type nylon head with nickel plated brass insert. Molded black styrene washer, with cross slot to accommodate standard phone tip forward, back or sideways. Supplied with 4 hex nuts and 2 washers. Mounts in two  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers on panels up to  $\frac{1}{4}$ " thick.

Cat. No. 33-291 2 black heads Net \$ .56  
Cat. No. 33-291 BU 2 black heads Net \$50.00/C

Cat. No. 33-293 2 red heads Net \$ .56  
Cat. No. 33-293 BU 2 red heads Net \$50.00/C

Cat. No. 33-295 1 black and 1 red heads Net \$ .56  
Cat. No. 33-295 BU 1 black and 1 red heads Net \$50.00/C

**(O) NYLON BINDING POST**—grounding type, with molded nylon non-removable head takes direct solder connection to stud. High quality, durable binding post.

Cat. No. 33-294-1 Red Net \$ .31  
Cat. No. 33-294-1 BU Net \$26.40

Cat. No. 33-294-2 Blk Net \$ .31  
Cat. No. 33-294-2 BU Net \$26.40

**(P) NYLON BINDING POST**—all metal parts are brass insulated. Molded nylon head (non-removable). Takes direct solder connection to stud. High quality.

Cat. No. 33-296-1 Red Net \$ .31  
Cat. No. 33-296-1 BU Net \$26.40

Cat. No. 33-296-2 Blk Net \$ .31  
Cat. No. 33-296-2 BU Net \$26.40

**(Q) DUAL SPRING LOADED BINDING POST**—captive brass, nickel plated head with molded black styrene insulator, cross-slotted to accept standard phone tips or wire either forward or sideways. Molded black styrene cap; nickel plated brass body. Requires 2  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers for mounting on panels up to  $\frac{1}{4}$ " thick. Accommodates standard phone tips or wires in side holes and secures them when pressure on cap

is released. Complete with 4 hex nuts and 2 flat washers.

Cat. No. 33-298 Net \$ .81  
Cat. No. 33-298 BU Net \$75.00/C

**DUAL BINDING POST**—captive type bakelite head with nickel plated brass insert. Molded black styrene washer, with cross slot to accept standard phone tip forward, back or sideways. Supplied with 4 hex nuts and 2 washers. Mounts in two  $\frac{3}{8}$ " holes on  $\frac{3}{4}$ " centers on panels up to  $\frac{1}{4}$ " thick.

Cat. No. 33-299 Red Net \$ .72  
Cat. No. 33-299 BU Net \$66.00/C

**(R) SPADE LUG PLUG, INSULATED**—Molded plastic handle; tapered "fork" fits binding posts and terminal screws up to #10 size.

Cat. No. 33-300 Red Net \$ .15  
Cat. No. 33-300 BU Net \$10.80/C

Cat. No. 33-302 Blk Net \$ .15  
Cat. No. 33-302 BU Net \$10.80/C

**(S) INSULATED SPADE LUG**—molded butyrate handle with brass, nickel plated lug. Designed to fit all standard multi purpose binding posts. Wire up to #10 solders in front hole.

Cat. No. 33-304-1 Red Net \$ .15  
Cat. No. 33-304-1 BU Net \$12.00/C

Cat. No. 33-304-2 Blk Net \$ .15  
Cat. No. 33-304-2 BU Net \$12.00/C

**(T) ALLIGATOR CLIP—INSULATED HANDLE**— $\frac{3}{8}$ " jaw opening; made of cadmium plated steel with unbreakable plastic handle.

Cat. No. 33-310 Red Net \$ .13  
Cat. No. 33-310 BU Net \$8.50/C

Cat. No. 33-312 Blk Net \$ .13  
Cat. No. 33-312 BU Net \$8.50/C

**ALLIGATOR CLIP, SCREW CONNECTION**—Molded plastic handle, cadmium plated steel jaws with maximum  $\frac{3}{8}$ " opening.

Cat. No. 33-314 Red Net \$ .13  
Cat. No. 33-314 BU Net \$9.50/C

Cat. No. 33-316 Blk Net \$ .13  
Cat. No. 33-316 BU Net \$9.50/C

**ALLIGATOR CLIP, SOLID COPPER**—Identical to #33-314/16, except solid copper for higher current carrying capacity.

Cat. No. 33-318 Red Net \$ .15  
Cat. No. 33-318 BU Net \$11.50/C

Cat. No. 33-320 Blk Net \$ .15  
Cat. No. 33-320 BU Net \$11.50/C

**ALLIGATOR CLIP**—With extra long insulated handle; cadmium plated steel jaws which open to maximum  $\frac{3}{8}$ ".

Cat. No. 33-322 Red Net \$ .25  
Cat. No. 33-322 BU Net \$21.00/C

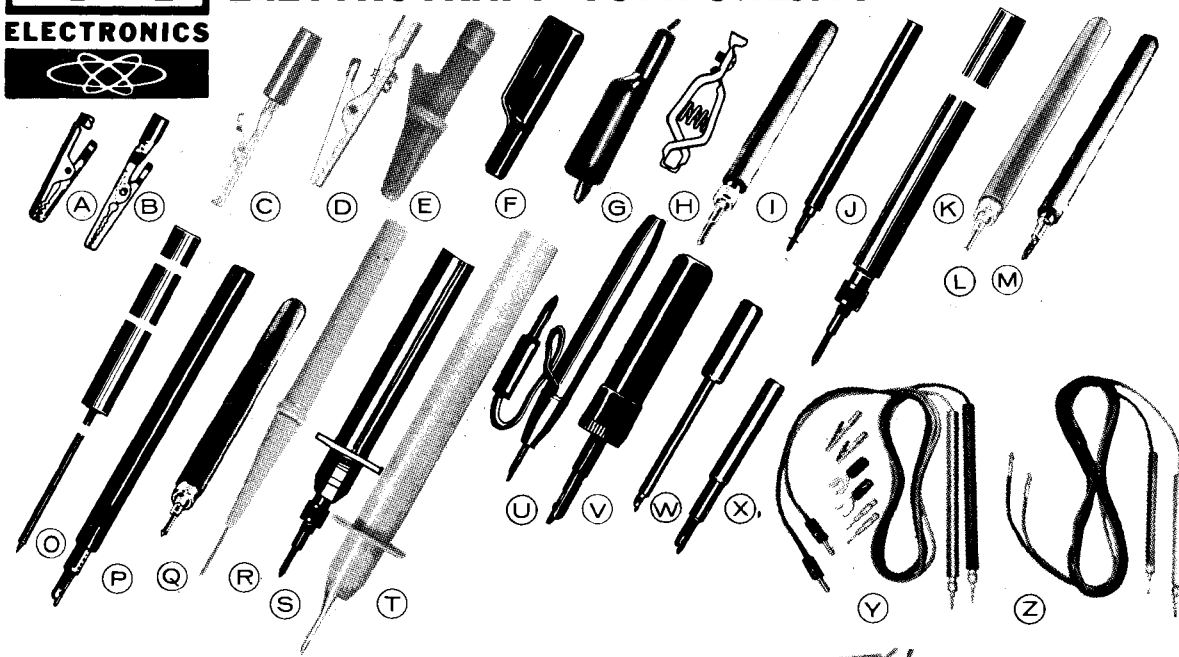
Cat. No. 33-324 Blk Net \$ .25  
Cat. No. 33-324 BU Net \$21.00/C

**INSULATED ALLIGATOR CLIP ADAPTERS**—Completely insulated with black molded plastic.



# ELECTROCRAFT COMPONENTS

TEST PRODS LEADS



Cat. No. 33-326 Net \$ .52  
 Cat. No. 33-326 BU Net \$45.00/C  
 Cat. No. 33-328 Net \$ .63  
 Cat. No. 33-328 BU Net \$54.00/C  
**ALLIGATOR CLIP ADAPTOR**—Accommodates standard tip plug or banana plug.

Cat. No. 33-330 Red Net \$ .45  
 Cat. No. 33-330-BU Net \$39.00/C  
 Cat. No. 33-332 Bik Net \$ .45  
 Cat. No. 33-332-BU Net \$39.00/C  
**ALLIGATOR CLIP ADAPTOR**—Adapts standard tip plug to alligator clip.  
 Cat. No. 33-334 Red Net \$ .37  
 Cat. No. 33-334-BU Net \$33.00/C  
 Cat. No. 33-336 Bik Net \$ .40  
 Cat. No. 33-336 BU Net \$33.00/C  
**ALLIGATOR-KLIPZON PROD ADAPTOR**—Adapts Klipzon Mini-Prod connectors and standard tip plugs to Alligator clip.

Cat. No. 33-338 Red Net \$ .42  
 Cat. No. 33-338-BU Net \$36.00/C  
 Cat. No. 33-340 Bik Net \$ .42  
 Cat. No. 33-340-BU Net \$36.00/C  
**(A) MINI-GATOR CLIP (MUELLER)**—Very small alligator clip, for applications where space is a factor.  
 Cat. No. 33-342 Net \$ .10  
 Cat. No. 33-342-BU Net \$7.20/C  
 Cat. No. 33-344 Net \$ .10  
 Cat. No. 33-344-BU Net \$7.20/C  
**(B) ALLIGATOR CLIP-ALL METAL**—Cadmium plated jaws with 3/8" opening.

Cat. No. 33-346 Net \$ .08  
 Cat. No. 33-346 BU Net \$5.40/C

**(D) ALLIGATOR CLIP-ALL METAL** For solderless connection of wire by means of a #6-32 binding head screw.

Cat. No. 33-348 Net \$ .08  
 Cat. No. 33-348-BU Net \$6.00/C  
 Cat. No. 33-350 Net \$ .12  
 Cat. No. 33-350-BU Net \$9.00/C  
**All copper**

**(E) ALLIGATOR CLIP** insulated with standard banana plug adapter. Molded plastic over steel jaws and clips.

Cat. No. 33-352-1 Red Net \$ .48  
 Cat. No. 33-352-1 BU Net \$41.00/C  
 Cat. No. 33-352-2 Bik Net \$ .48  
 Cat. No. 33-352-2 BU Net \$41.00/C

**(F) ALLIGATOR CLIP INSULATOR**—Flexible molded vinyl insulator fits over most standard alligator clips.  
 Cat. No. 33-360 Red Net \$ .08  
 Cat. No. 33-360-BU Net \$4.80/C

Cat. No. 33-362 Bik Net \$ .08  
 Cat. No. 33-362-BU Net \$4.80/C  
**(G) ALLIGATOR CLIP BOOT**—molded vinyl plastic; allows maximum jaw opening of clip while still insulating clip. "Miniature."

Cat. No. 33-363-1 Red Net \$ .06  
 Cat. No. 33-363-1 BU Net \$ 4.00/C  
 Cat. No. 33-363-2 Bik Net \$ .06  
 Cat. No. 33-363-2 BU Net \$ 4.00/C

**(W) BATTERY CONNECTING & TESTING CLIP**—5 amp rating; steel cadmium plated jaws with 1/2" spread.  
 Cat. No. 33-370 Net \$ .08  
 Cat. No. 33-370-BU Net \$6.00/C

**BATT. CONNECTING & TESTING CLIP**—10 amp rating; steel cadmium plated jaws with 3/4" spread.  
 Cat. No. 33-372 Net \$ .08  
 Cat. No. 33-372-BU Net \$6.00/C

**(I) SOLDERLESS FIBRE TEST PROD** bone fibre handle, machined to nickel plated brass tip. Features .245" inside diameter for heavy duty wire. Overall length 5 1/4"

Cat. No. 33-376-1 Red Net \$ .35  
 Cat. No. 33-376-1 BU Net \$30.00/C  
 Cat. No. 33-376-2 Bik Net \$ .35  
 Cat. No. 33-376-2 BU Net \$30.00/C

**(J) HEAVY DUTY TEST PROD** heavy duty Test Prod. Threaded type. Extra sturdy brass, nickel plated tip with red or black molded plastic handle. Overall length 6 3/4".

Cat. No. 33-378-1 Red Net \$ .38  
 Cat. No. 33-378-1 BU Net \$33.00/C  
 Cat. No. 33-378-2 Bik Net \$ .38  
 Cat. No. 33-378-2 BU Net \$33.00/C

**(K) DELUXE TEST PROD 5 1/4"**—Solderless design; wire fits through handle and is fastened to tip with knurled collar.

Cat. No. 33-380 BU Net \$33.00/C  
 Cat. No. 33-382 BU Net \$33.00/C

**(L) LONG TEST PROD, NEEDLE POINT TYPE**—Extra safe design due to long unbreakable plastic handle; replaceable phono needle tip.

Cat. No. 33-384 BU Net \$30.00/C  
 Cat. No. 33-386 BU Net \$30.00/C

**(M) SUBMINIATURE TEST PROD** handle bone fibre—red or black. Tip brass, nickel plated. Designed for checking all types of miniature products and equipment. Easily assembled due to threading.

Cat. No. 33-388-1 Red Net \$ .27  
 Cat. No. 33-388-1 BU Net \$24.00  
 Cat. No. 33-388-2 Bik Net \$ .27  
 Cat. No. 33-388-2 BU Net \$24.00

**THIN HANDLE TEST PROD** With solderless wire connection; extruded plastic handle, press fitted on nickel plated brass test tip.

Cat. No. 33-392 BU Net \$21.60/C  
 Cat. No. 33-394 BU Net \$21.60/C  
**(O) LONG REACH TEST PROD**—Has 4" very thin insulated extension beyond handle. Needle point assembly; brass nickel plated.

Cat. No. 33-396 BU Net \$24.60/C  
 Cat. No. 33-398 BU Net \$24.60/C  
**(P) KLIPZON TEST PROD**—Klipzon tip clips on wire or chassis; sharp point, easily penetrates insulation or corrosion; thin plastic handle.

Cat. No. 33-400 BU Net \$63.00/C  
 Cat. No. 33-402 BU Net \$63.00/C

**(Q) SOLDERLESS TEST PRD** threaded prod with 5" long plastic handle, 3/8" diameter. Nickel plated phone tip. Wire fits through handle, wraps around screw portion.

Cat. No. 33-404-1 Red Net \$ .35  
 Cat. No. 33-404-1 BU Net \$30.00/C  
 Cat. No. 33-404-2 Bik Net \$ .35  
 Cat. No. 33-404-2 BU Net \$30.00/C

**(R) TEST PROD** tapered slim-type. Fully insulated plastic—solder type. 5 1/2" overall nickel-plated brass tip.

Cat. No. 33-406-1 Red Net \$ .81  
 Cat. No. 33-406-1 BU Net \$75.00/C  
 Cat. No. 33-406-2 Bik Net \$ .81  
 Cat. No. 33-406-2 BU Net \$75.00/C

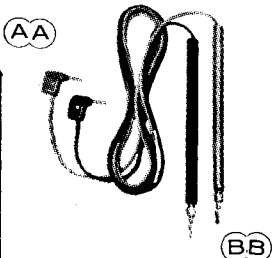
**(S) HIGH VOLTAGE TEST PROD**—Heavy-duty type; has guard ring to prevent accidental touching of tip; handle accepts wires up to 3/8" diameter.

Cat. No. 33-408 Red Net \$ .78  
 Cat. No. 33-408-BU Net \$72.00/C  
 Cat. No. 33-410 Bik Net \$ .78  
 Cat. No. 33-410-BU Net \$72.00/C

**(T) R.F. TEST PROD** heavily insulated fibre probe. Coax cable or IN-34 crystal for R.F. Probes may be used because of larger inside diameter. Heavy duty tip is removable.

Cat. No. 33-411-1 Red Net \$ .70  
 Cat. No. 33-411-1 BU Net \$63.00/C  
 Cat. No. 33-411-2 Bik Net \$ .70  
 Cat. No. 33-411-2 BU Net \$63.00/C

**(U) KLIPZON CRYSTAL PROD KIT**—Self-holding prod, complete with Germanium Diode and other parts to assemble low capacity crystal probe.



Cat. No. 33-412 Red Net \$1.83  
 Cat. No. 33-414 Bik Net \$1.83  
**(V) KLIPZON JUMBO PROD HANDLE**—Tip pierces insulation. Self-holding point clips on wires (up to .220" diameter); chassis, screws, terminals, etc.

Cat. No. 33-416 BU Net \$66.00/C  
 Cat. No. 33-418 BU Net \$66.00/C  
**(W) KLIPZON LONGIE ADAPTOR**—Long, slender self-holding point with needle to pierce insulation.

Cat. No. 33-420 BU Net \$45.00/C  
 Cat. No. 33-422 BU Net \$45.00/C

**(X) KLIPZON JUMBO ADAPTOR**—Adapts regular tip plug or test prod to self holding Klipzon type.

Cat. No. 33-424 BU Net \$63.00/C  
 Cat. No. 33-426 BU Net \$63.00/C

**(Y) UNIVERSAL TEST LEADS**—50" flexible cable; one end 6" break-resistant plastic handle, with solderless tip plug; other end terminated in banana plug; supplied with alligator clip, spade lugs and phono tip plugs, fit the banana plug end.

Cat. No. 33-450-S Net \$1.88  
**UNIVERSAL "NEEDLEPOINT" TEST LEADS**—One end 6" break-resistant Test Prod, with phono needle type test prod; other end terminated with banana plug; furnished with spade lugs, alligator clips and phono tip plug, fit on banana plug.

Cat. No. 33-452-S Net \$1.88  
**(Z) "THRIFTY" TEST LEADS**—50" flexible kink-proof cable; one end 4" insulated test prods with solderless wire connections; other ends terminated in standard phone tips.

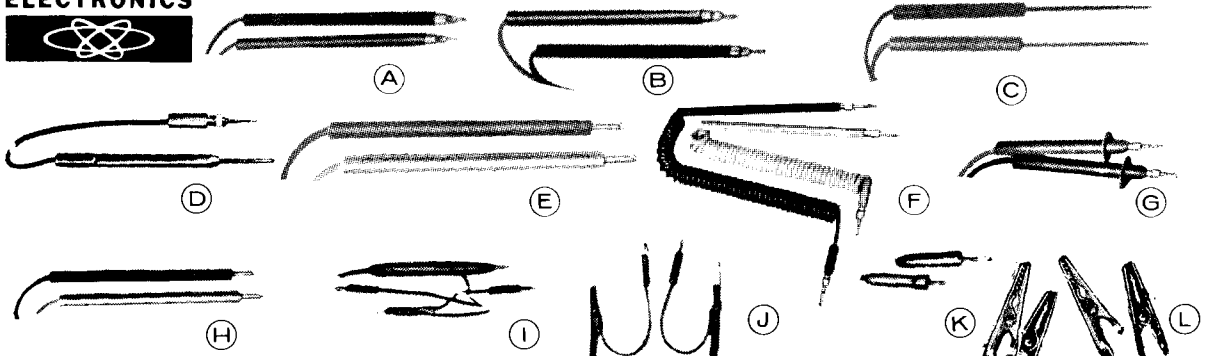
Cat. No. 33-454-S Net \$ .75  
**(AA) SOLDERLESS TIP TEST LEADS** red and black 4" x 3/8" diameter plastic handle, with red and black flexible, kinkless 50" leads.

Cat. No. 33-455-S Net \$ .85  
 Cat. No. 33-457-S Net \$ .91

**(BB) HEAVY DUTY TEST LEADS**—50" flexible kink-proof cable; 7 1/2" long, heavy-duty unbreakable test prods.



# ELECTROCRAFT COMPONENTS TEST LEADS - PHONE PLUGS



solderless wire connections.  
 Cat. No. 33-456-S Net \$1.27  
 Cat. No. 33-458-S Net \$1.38

**(A) PHONO NEEDLE TEST LEADS**—red and black 4" x 3/8" diameter plastic handle, with red and black flexible, kinkless 50" leads. Tips are extremely sharp phonograph needles.  
 Cat. No. 33-459-S Net \$ .87  
 Cat. No. 33-461-S Net \$ .93

**(B) HEAVY DUTY NEEDLE TEST LEADS**—50" flexible, kink-proof cable; 7" long, heavy duty needle point prods, unbreakable plastic handle.  
 Cat. No. 33-460-S Net \$1.33  
 Cat. No. 33-462-S Net \$1.43

**(C) LONG REACH TEST LEADS**—50" flexible, kink-proof cable; one end "long reach" with 5" insulated test prod, very thin extension; other end terminated in right angle, meter-type insulated tip plug.  
 Cat. No. 33-464-S Net \$1.65

**(D) RETRACTABLE TEST PRODE**—electrocraft's own printed circuit test prod with the exclusive retractable tip. This exclusive feature allows complete testing of printed circuitry without shorting or shock to the user.  
 Cat. No. 33-465-1-S Red Net \$ 1.65  
 Cat. No. 33-465-2-S Blk Net \$ 1.65

**(E) SUBMINIATURE TEST LEADS** red and black fibre handles, O.D. only 1/4"; insulated tips. Flexible, kinkless rubber leads 50" long, and threaded phone tips. Ideal for testing in tight or cramped places.  
 Cat. No. 33-466-S Net \$ 1.26

**(F) STRETCH TYPE TEST LEADS**—Kink-proof, spiral-type 9" cable; extended length 6 feet; one end 6 3/8" heavy duty test prods with solderless wire connection; other end insulated, solderless tip plug.  
 Cat. No. 33-470-S Net \$2.97

**(G) HIGH VOLTAGE TEST LEADS**—48" heavy insulated high tension wire (22,000/V).  
 Pair of 1 red, 1 black, with tip plugs, Cat. No. 33-472-S Net \$2.57  
 Pair of 1 red, 1 black, with insulated spade lugs, Cat. No. 33-474-S Net \$2.40  
 Pair of 1 red, 1 black, with alligator clips, Cat. No. 33-476-S Net \$2.48

**(H) KLIPZON TEST LEADS**—48" flexible, kink-proof cable; one end slim handle, self-holding and insulation piercing, other end Klipzon Tip Plugs. Klipzon prods and tips fit standard tip jacks, have sharp needle point to penetrate wire insulation, corrosion. Pair of 1 red and 1 black.  
 Cat. No. 33-480-S Net \$2.03

**KLIPZON TEST LEADS**—Same as above, but with standard Phone Tip Plugs.  
 Cat. No. 33-482-S Net \$1.65

**KLIPZON TEST LEADS**—Same as above, but other end insulated banana plug.  
 Cat. No. 33-484-S Net \$1.95

**(J) KLIPZON CRYSTAL PROBE**—Germanium diode probe with self-holding points, for measuring high fre-

quency voltages; flexible lead wires are terminated on meter end with Klipzon tip plug.  
 Cat. No. 33-486-S Net \$4.35

**KLIPZON CRYSTAL PROBE**—Crystal probe on one end, plus ground lead terminated on each end with tip plug.  
 Cat. No. 33-488-S Net \$4.35

**(J) KLIPZON SHIELDED LOW CAPACITY**—36" low capacity, coaxial type lead, with self-holding insulation piercing, tip prods.  
 Cat. No. 33-490-S Net \$2.97

**(K) HEAVY DUTY KLIPZON TEST LEADS**—48" 16-gauge, heavy insulated lead wires, terminated on one end with Klipzon Jumbo prod handles.  
 Cat. No. 33-492-S Net \$2.87

**(L) ALLIGATOR CLIP TEST LEADS**—cadmium plated steel alligator clips on both ends of heavy duty test lead wire. Priced per pair.  
 Cat. No. 33-496-S 12" Net \$ .55  
 Cat. No. 33-497-S 24" Net \$ .61  
 Cat. No. 33-498-S 36" Net \$ .70  
 Cat. No. 33-499-S 48" Net \$ .79

**(M) ALLIGATOR CLIP JUMPER LEADS**—Flexible, kink-proof, lead wires, terminate at each end with fully insulated steel nickel plated alligator clips.  
 Pair of 1 red and 1 black, 12" long, Cat. No. 33-500-S Net \$ .92  
 Pair of 1 red and 1 black, 24" long, Cat. No. 33-502-S Net \$ .95  
 Pair of 1 red and 1 black, 36" long, Cat. No. 33-504-S Net \$1.05  
 Pair of 1 red and 1 black, 48" long, Cat. No. 33-506-S Net \$1.10

**(N) MID-ALLIGATOR CLIP TEST LEAD**—cadmium plated steel alligator clips with red vinyl plastic boots. Priced per pair.  
 Cat. No. 33-501-S 12" Net \$ .81  
 Cat. No. 33-503-S 18" Net \$ .84  
 Cat. No. 33-505-S 24" Net \$ .87  
 Cat. No. 33-507-S 36" Net \$ .96

**(O) KLIPZON JUMPER LEADS**—Flexible, kink-proof cable, with patented tips, which clip on wires and terminals, have sharp insulation and corrosion piercing points.  
 Cat. No. 33-510, 12" Net \$ .77  
 Cat. No. 33-512, 12" Net \$ .77  
 Cat. No. 33-514, 24" Net \$1.12  
 Cat. No. 33-516, 24" Net \$1.12

**(P) TEST LEAD WIRE**—Flexible, rubber-coated and kink-resistant replacement wire for test leads. Package of two, 50" length, red &

black, 6000/V insulation.  
 Cat. No. 33-518-S Net \$ .60  
 Package of two, 48" length, red & black, 22,000/V test leads.  
 Cat. No. 33-520-S Net \$ .87

**(Q) STRETCH LEAD WIRE**—Coiled wire, for all applications. Package contains 1 red and 1 black lead. 9" long—stretches to 6 Ft.  
 Cat. No. 33-522-S Net \$1.95

**UNIVERSAL TEST LEAD KIT**—two 55" leads and 12 interchangeable testing tips and connectors. Convert test leads to many different types. Has four phone tips, two alligator clips, two needle tips, two banana plugs, two spade lugs. Plastic wallet-style kit.  
 Cat. No. 33-528 Net \$ 2.40

**TEST LEAD PLUG INTERCHANGE KIT**  
 — Contains pairs of alligator clips, banana plugs, spade lugs and phone tips, (1 each in red and black) to adapt standard test leads to many different types.  
 Cat. No. 33-530 Net \$2.25

**PRINTED CIRCUIT CONNECTORS**  
 These Tiny Sub-miniature Tip Plugs and Tip Jacks are ideally suited for use in printed circuit or limited space applications. Extremely Compact!

**(R) MINIATURE HORIZONTAL JACK**—Unique design accepts .080" diameter tip plug in either end, or from top or bottom! Silver-plated beryllium copper formed contact. Two terminals.  
 Cat. No. 33-235-1 Red Net \$ .14  
 Cat. No. 33-235-1 BU Net \$ 9.90/C  
 Cat. No. 33-235-2 Blk Net \$ .14  
 Cat. No. 33-235-2 BU Net \$ 9.90/C  
 Cat. No. 33-235-3 BU Yel. Net \$ 9.90/C

Cat. No. 33-235-4 BU Grn. Net \$ 9.90/C  
 Cat. No. 33-235-5 BU Blue Net \$ 9.90/C

**(S) MINIATURE VERTICAL JACK**—Mounts through single .052" hole, requires minimum mounting area. Silver-plated, machined beryllium-copper contact.  
 Cat. No. 33-237-1 Red Net \$ .17  
 Cat. No. 33-237-1 BU Net \$13.60/C  
 Cat. No. 33-237-2 Blk Net \$ .17  
 Cat. No. 33-237-2 BU Net \$13.60/C  
 Cat. No. 33-237-3 BU Yel. Net \$13.60/C  
 Cat. No. 33-237-4 BU Grn. Net \$13.60/C  
 Cat. No. 33-237-5 BU Blue Net \$13.60/C

**(T) MINIATURE LONG HANDLE TIP PLUG**—For use with horizontal, vertical or standard .080" diameter tip jacks. Four-inch handle for ready access to "hard-to-reach" test points. Nickel-plated machined brass body, solder type lead connection.  
 Cat. No. 33-238-1 Red Net \$ .34  
 Cat. No. 33-238-1 BU Net \$28.90/C  
 Cat. No. 33-238-2 Blk Net \$ .34  
 Cat. No. 33-238-2 BU Net \$28.90/C

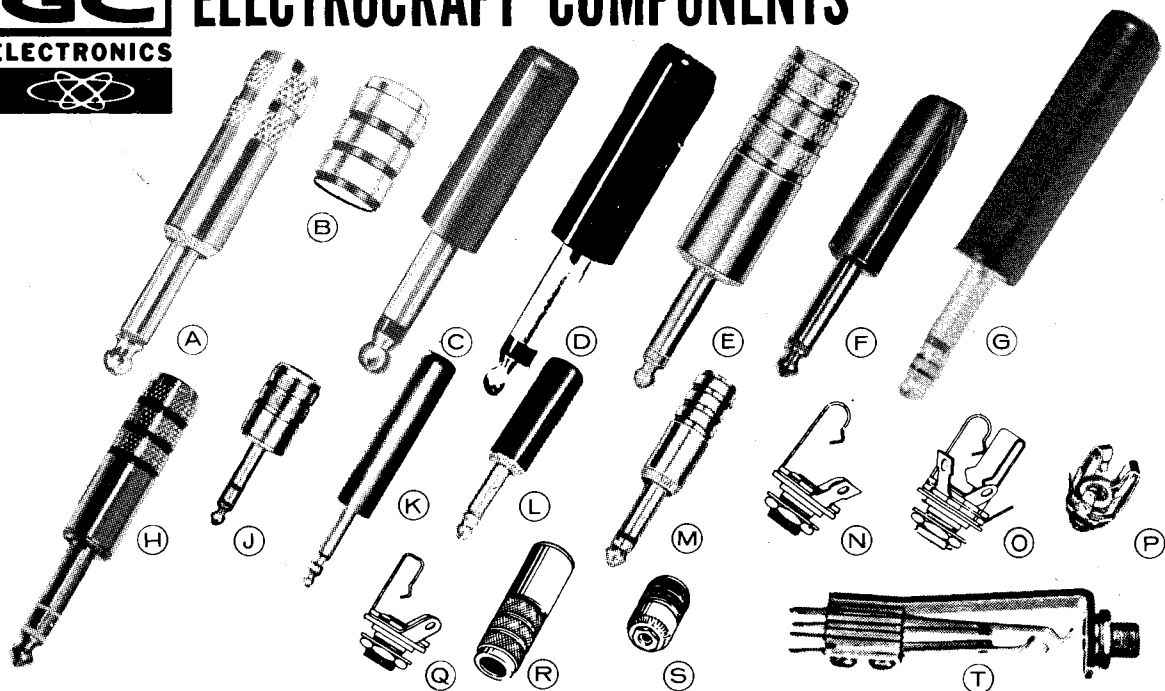
**(U) SUB-MINIATURE TIP PLUG**—For use with miniature jack, .080" diameter tip. Nickel-plated machined brass body, solder type lead connection.  
 Cat. No. 33-239-1 Red Net \$ .21  
 Cat. No. 33-239-1 BU Net \$16.80/C  
 Cat. No. 33-239-2 Blk Net \$ .21  
 Cat. No. 33-239-2 BU Net \$16.80/C  
 Cat. No. 33-239-3 BU Yel. Net \$16.80/C  
 Cat. No. 33-239-4 BU Grn. Net \$16.80/C  
 Cat. No. 33-239-5 BU Blue Net \$16.80/C

**(V) TWO-CONDUCTOR PHONE PLUG,**  
**(W) TWO-CONDUCTOR PHONE PLUG,**  
 Single closed circuit, 3-conductor.  
 Cat. No. 33-710 Net \$ .48  
 Cat. No. 33-710 BU Net \$44.32/C



# ELECTROCRAFT COMPONENTS

## PHONE PLUGS



clamps around cable insulation or shield, and acts as strain relief.

With black plastic handle.  
 Cat. No. 33-606 BIK Net \$ .45  
 Cat. No. 33-606-BU Net \$39.90/C  
 With red plastic handle  
 Cat. No. 33-608 Red Net \$ .45  
 Cat. No. 33-608-BU Net \$39.90/C  
 Metal (shielded) handle.  
 Cat. No. 33-610 Net \$ .63  
 Cat. No. 33-610-BU Net \$57.50/C

**(A) TWO-CONDUCTOR-PHONE PLUG, PLAIN SOLDER PLUGS**—Standard size plug.  
 Cat. No. 33-612 BIK Net \$ .45  
 Cat. No. 33-612-BU Net \$39.17/C

**(B) SHIELDED TWO-CONDUCTOR PHONE PLUG**—Standard phone plug with special, short metal handle.  
 Cat. No. 33-614 Net \$ .57  
 Cat. No. 33-614-BU Net \$51.30/C

**(C) STAND. SHIELDED TWO-CONDUCTOR PHONE PLUG**—Regular plug with metal (shielded) handle.  
 Cat. No. 33-616 Net \$ .63  
 Cat. No. 33-616-BU Net \$57.00/C

**(D) TWO-CONDUCTOR-PHONE PLUG, TYPE PJ-055B**—Made in accordance with military specifications; solder terminal and screw connection.  
 Cat. No. 33-618 Net \$ .87  
 Cat. No. 33-618-BU Net \$80.63/C

**SHORT FINGER, TWO-CONDUCTOR PHONE PLUG**—Special short finger (barrel) type plug to connect microphone or telephone pickup to Revere/Wollensack tape recorders.  
 Cat. No. 33-620 Net \$ .69  
 Cat. No. 33-620-BU Net \$63.30/C

**(E) LARGE HANDLE TWO-CONDUCTOR PHONE PLUG**—With black plastic handle, 1½" long.  
 Cat. No. 33-622 BIK Net \$ .48  
 Cat. No. 33-622-BU Net \$42.30/C  
 With red plastic handle, 1½" long.  
 Cat. No. 33-624 Red Net \$ .48  
 Cat. No. 33-624-BU Net \$42.30/C  
 Metal (shielded) handle, 1" long.  
 Cat. No. 33-626 Net \$ .70  
 Cat. No. 33-626-BU Net \$63.00/C  
 Metal (shielded) handle, 2¼" long.  
 Cat. No. 33-628 Net \$ .75  
 Cat. No. 33-628-BU Net \$69.00/C

**(F) "THIN FINGER" TWO-CONDUCTOR PHONE PLUGS**—"Undersize" finger (barrel) diameter of .206" for applications where polarized input is desired to distinguish between different connections.  
 With black plastic handle.  
 Cat. No. 33-630 BIK Net \$ .47

Cat. No. 33-630-BU Net \$41.40/C  
 With metal (shielded) handle.  
 Cat. No. 33-632 Net \$ .56  
 Cat. No. 33-632-BU Net \$61.00/C

**(G) 3-CONDUCTOR PHONE PLUG: COMB. CLAMP AND SOLDER LUG TERMINALS:** With black plastic handle.

Cat. No. 33-640 BIK Net \$ .65  
 Cat. No. 33-640-BU Net \$58.35/C  
 With metal (shielded) handle.  
 Cat. No. 33-642 Net \$ .79  
 Cat. No. 33-642-BU Net \$73.35/C

**(H) 3-CONDUCTOR PHONE PLUG, SCREW TERMINALS**—

With black plastic handle.  
 Cat. No. 33-644 BIK Net \$ .76  
 Cat. No. 33-644-BU Net \$70.83/C  
 With red plastic handle.  
 Cat. No. 33-646 Red Net \$ .80  
 Cat. No. 33-646-BU Net \$70.83/C  
 With metal (shielded) handle.  
 Cat. No. 33-648 Net \$ .90  
 Cat. No. 33-648-BU Net \$83.17/C

**(J) 3-CONDUCTOR PHONE PLUG, LARGE HANDLE**—Accommodate large diameter cables, with room in handle for wired-in resistors or capacitors.  
 Cat. No. 33-650 Net \$ .78  
 Cat. No. 33-650-BU Net \$72.00/C

**(K) 3-CONDUCTOR PHONE PLUG, TYPE PJ-068**—With solder terminals and screw connection.  
 Cat. No. 33-654 Net \$2.20  
 Cat. No. 33-654-BU Net \$209.99/C

**(L) MINIATURE PHONE PLUGS: COMB. CLAMP AND SOLDER TERMINALS**—

Two-conductor style, tested for 500/V breakdown.  
 With metal (shielded) handle.  
 Cat. No. 33-660 Net \$ .59  
 Cat. No. 33-660-BU Net \$51.66/C  
 With black plastic handle.  
 Cat. No. 33-662 BIK Net \$ .45  
 Cat. No. 33-662-BU Net \$40.02/C  
 With red plastic handle.  
 Cat. No. 33-664 Red Net \$ .45  
 Cat. No. 33-664-BU Net \$40.02/C

**(M) MINIATURE PHONE PLUGS: COMB. CLAMP AND SCREW TERMINALS**—

Same plugs as listed above except for different style terminals.  
 With metal (shielded) handle.  
 Cat. No. 33-666 Net \$ .67  
 Cat. No. 33-666-BU Net \$59.85/C  
 With black plastic handle.  
 Cat. No. 33-668 BIK Net \$ .48  
 Cat. No. 33-668-BU Net \$42.51/C  
 With red plastic handle.  
 Cat. No. 33-670 Red Net \$ .48  
 Cat. No. 33-670-BU Net \$42.51/C

GC Electrocraft Jacks require a minimum panel space and depth behind panel. Parts are keyed and mechanically interlocked. Springs are made of nickel silver, with phenolic spaces and brass, nickel plated mounting bushings. Panel mounting jacks furnished with nickel plated steel washers and nickel plated brass mounting nut.

### PHONE JACKS

**(N) PANEL MOUNTING, TWO-CONDUCTOR PHONE JACKS**—Open circuit, 2-conductor.

Cat. No. 33-690 Net \$ .32  
 Cat. No. 33-690-BU Net \$27.00/C

Closed circuit, 2-conductor.

Cat. No. 33-692 Net \$ .34  
 Cat. No. 33-692-BU Net \$29.83/C

Open circuit, 2-conductor, MIL type, JJ-034.

Cat. No. 33-694 Net \$ .40  
 Cat. No. 33-694-BU Net \$34.17/C

Open circuit, 2-conductor .210" ID

Sleeve fits plugs 33-630/2.

Cat. No. 33-700 Net \$ .28  
 Cat. No. 33-700-BU Net \$24.98/C

Closed circuit, 2-conductor .210" ID

Sleeve—fits plugs 33-630/2.

Cat. No. 33-702 Net \$ .32  
 Cat. No. 33-702-BU Net \$26.67/C

**(O) PANEL MOUNTING 3-CONDUCTOR PHONE JACKS**—Open circuit, 3-conductor.

Cat. No. 33-708 Net \$ .42  
 Cat. No. 33-708-BU Net \$36.00/C

Single closed circuit, 3-conductor.

Cat. No. 33-710 Net \$ .48  
 Cat. No. 33-710-BU Net \$44.32/C

Open circuit, 3-conductor, MIL type JJ-033.

Cat. No. 33-712 Net \$ .45  
 Cat. No. 33-712-BU Net \$39.98/C

**(P) STEREO TELEPHONE JACK**—new jack designed for switching out speakers when connecting stereo headphones and for switching three wire stereo input circuits. Normally closed dual switch contacts open both stereo circuits separately when three circuits plug is inserted.

Cat. No. 33-711 Net \$ .60  
 Cat. No. 33-711 BU Net \$54.00

**(Q) MINIATURE PANEL MOUNTING JACKS**—These jacks mate with plugs 33-660 through 33-670. Open circuit, 2-conductor.

Cat. No. 33-720 Net \$ .27  
 Cat. No. 33-720-BU Net \$23.32/C

Closed circuit, 2-conductor.  
 Cat. No. 33-722 Net \$ .30  
 Cat. No. 33-722-BU Net \$26.66/C

**(R & S) CORD MOUNTED JACKS**—Often referred to as "extension jacks" or "In-line jacks."

2-conductor, open circuit style, with solder lug terminals and metal (shielded) handle.

Cat. No. 33-730 Net \$ .87  
 Cat. No. 33-730-BU Net \$77.51/C

2-conductor, open circuit style, with solder lug terminals and black plastic handle.

Cat. No. 33-732 BIK Net \$ .63  
 Cat. No. 33-732-BU Net \$55.83/C

2-conductor, open circuit, screw type terminal, with metal (shielded) handle.

Cat. No. 33-734 Net \$ .97  
 Cat. No. 33-734-BU Net \$90.00/C

2-conductor, open circuit, screw type terminals, with black plastic handle.

Cat. No. 33-736 BIK Net \$ .72  
 Cat. No. 33-736-BU Net \$66.60/C

3-conductor, open circuit style, with solder lug terminals and metal (shielded) handle.

Cat. No. 33-740 Net \$1.12  
 Cat. No. 33-740-BU Net \$99.90/C

3-conductor, open circuit style, with screw type terminal and metal (shielded) handle.

Cat. No. 33-742 Net \$1.20  
 Cat. No. 33-742-BU Net \$110.01/C

Miniature type, mates with plugs #33-660 through #33-670, with solder lugs and metal (shielded) handle.

Cat. No. 33-746 Net \$ .78  
 Cat. No. 33-746-BU Net \$70.01/C

**(T) LONG FRAME JACKS**—2-conductor, open circuit.

Cat. No. 33-750 Net \$ .48  
 Cat. No. 33-750-BU Net \$44.16/C

3-conductor, single closed circuit.  
 Cat. No. 33-752 Net \$ .67  
 Cat. No. 33-752-BU Net \$61.65/C

3-conductor, single closed circuit ring grounded.

Cat. No. 33-754 Net \$ .67  
 Cat. No. 33-754-BU Net \$61.65/C

2-conductor, open circuit w/insulated break.

Cat. No. 33-756 Net \$ .67  
 Cat. No. 33-756-BU Net \$61.65/C

3-conductor, 2 closed circuit.

Cat. No. 33-758 Net \$ .75  
 Cat. No. 33-758-BU Net \$70.80/C

2-conductor, closed circuit w/insulated make.

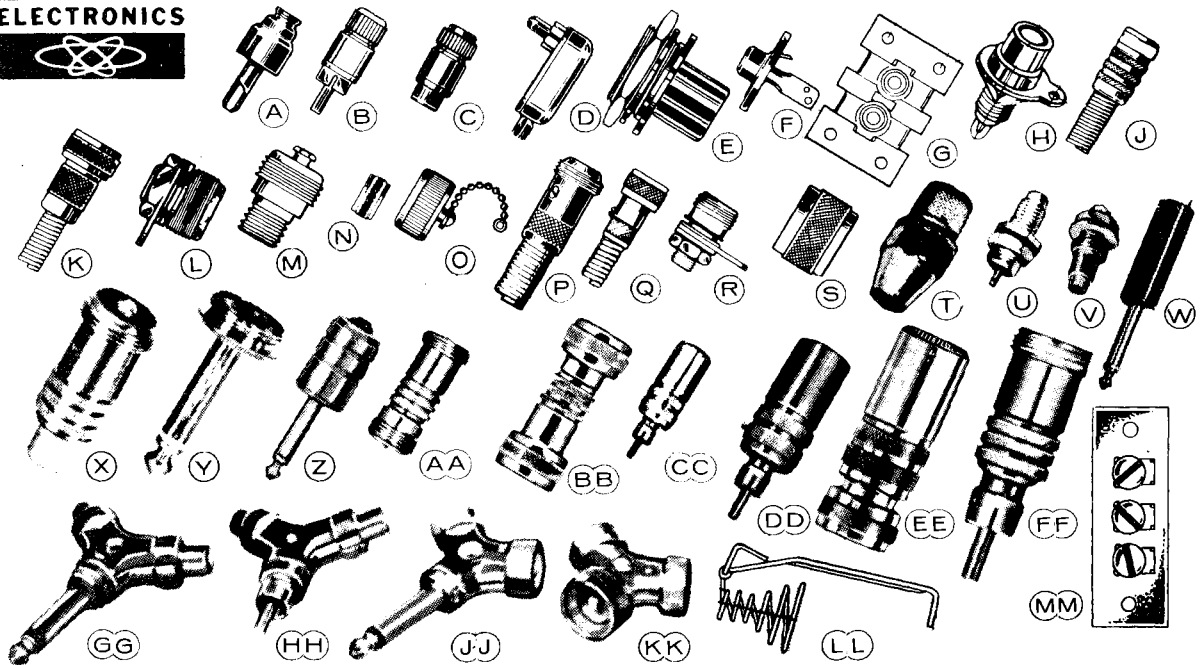
Cat. No. 33-760 Net \$ .75  
 Cat. No. 33-760-BU Net \$70.80/C





## ELECTROCRAFT COMPONENTS

ADAPTORS



These plugs and jacks are universal—used for audio connections, phonographs, pre-amplifiers and amplifiers in connection with single conductor shielded cable.

**(A) PHONE PLUGS**—Solder type.  
Cat. No. 33-770 Net \$ .08  
Cat. No. 33-770-BU Net 4.80/C

**(B) PHONO PLUGS**—Combination clamp, solder type, with removable metal (shielded) handle.  
Cat. No. 33-772 Net \$ .32  
Cat. No. 33-772-BU Net 28.50/C

**(C) PHONO JACK, CORD MOUNTED**—Combination clamp and solder, terminal; removable metal (shielded) handle.  
Cat. No. 33-774 Net \$ .40  
Cat. No. 33-774-BU Net 34.17/C

**(D) SOLDERLESS PHONO PLUGS**—Positive, noise-free pressure connection. Right angle style, designed for regular shielded cable with approximately  $\frac{3}{4}$ " OD. Grey plastic shell.  
Cat. No. 33-776 Net \$ .28  
Cat. No. 33-776-BU Net 23.40/C

Black plastic shell.  
Cat. No. 33-778 Net \$ .28  
Cat. No. 33-778-BU Net 23.40/C

Red plastic shell.  
Cat. No. 33-780 Net \$ .28  
Cat. No. 33-780-BU Net 23.40/C

Yellow plastic shell.  
Cat. No. 33-782 Net \$ .28  
Cat. No. 33-782-BU Net 23.40/C

Blue plastic shell.  
Cat. No. 33-784 Net \$ .28  
Cat. No. 33-784-BU Net 23.40/C

**(E) PHONO JACK, SINGLE HOLE MOUNTING**—Supplied with washer and mounting nut.  
Cat. No. 33-790 Net \$ .25  
Cat. No. 33-790-BU Net 20.67/C

**(F) PHONO JACK**—Fastens to chassis with 2 rivets or 2 screws. W/oval, space saving metal mounting plate.  
Cat. No. 33-792 Net \$ .11  
Cat. No. 33-792-BU Net 7.33/C

With regular round mounting plate.  
Cat. No. 33-796 Net \$ .11  
Cat. No. 33-796-BU Net 7.50/C

**(G) DOUBLE PHONO PIN JACK**  
Cat. No. 33-800 Net \$ .15  
Cat. No. 33-800-BU Net 12.00/C

**TRIPLE PHONO PIN JACK**  
Cat. No. 33-802 Net \$ .18  
Cat. No. 33-802-BU Net 15.00/C

**(H) SINGLE HOLE PANEL PHONO JACK**—Mounts in  $\frac{3}{8}$ " hole, requires only one hole drilled. With washer, nut

and solder lug for ground.  
Cat. No. 33-804 Net \$ .20  
Cat. No. 33-804-BU Net 16.20/C

Designed for use with single conductor, shielded microphone cable. Bodies, lock nuts and mounting nuts: brass, nickel plated; contact terminals, brass, hot-tinned; insulation is high-grade phenolic.

**(J) CORD MOUNTED MICROPHONE CONNECTORS**—Flexible spring protects cable; center conductor solders to contact; braid is clamped securely by set screw. Male connector.  
Cat. No. 33-810 Net \$ .28  
Cat. No. 33-810-BU Net 24.00/C

**(K) FEMALE CONNECTOR.**  
Cat. No. 33-812 Net \$ .37  
Cat. No. 33-812-BU Net 31.50/C

**(L) PANEL MOUNTED MICROPHONE CONNECTORS**—May be insulated with suitable fibre washers; mates with No. 33-812 connector. Single contact connector.  
Cat. No. 33-814 Net \$ .23  
Cat. No. 33-814-BU Net 19.38/C

**(M) MICROPHONE AND CHASSIS CONNECTOR**—Closed circuit type which grounds center contact when cable connector removed.  
Cat. No. 33-816 Net \$ .30  
Cat. No. 33-816-BU Net 26.50/C

**(N) COUPLING NUT**—Converts #33-810 male connector to 812 female type.  
Cat. No. 33-818 Net \$ .12  
Cat. No. 33-818-BU Net 8.33/C

**(O) CAP FOR PANEL CONNECTORS**—Protects unused connectors from mechanical damage and dust.  
Cat. No. 33-820 Net \$ .47  
Cat. No. 33-820-BU Net 42.48/C

**(P) MINIATURE MICROPHONE CONNECTORS**—Made to the same specifications and of same materials as standard size connectors. Cord mounted male connector.  
Cat. No. 33-826 Net \$ .30  
Cat. No. 33-826-BU Net 26.00/C

**(Q) Cord mounted female connector.**  
Cat. No. 33-828 Net \$ .37  
Cat. No. 33-828-BU Net 33.15/C

**(R) Panel mounted connector.**  
Cat. No. 33-830 Net \$ .23  
Cat. No. 33-830-BU Net 20.33/C

**(S) COUPLING NUT**—Converts male connector #33-826 to female connector #33-828.  
Cat. No. 33-832 Net \$ .08  
Cat. No. 33-832-BU Net 5.48/C

**(T) MALE COAXIAL CONNECTORS**—Low-cost solderless coaxial cable connector. For use with RG-8/U, RG-11/U, RG-13/U and RG-59/U. Mates with No. 33-836 receptacle or No. 33-838 female coupler. Low-loss insulation.  
Cat. No. 33-834 Net \$ .53  
Cat. No. 33-834-BU Net \$48.00

**(U) FEMALE CHASSIS FITTINGS**—Silver-plated, low-loss insulated coaxial cable connector. Mates with No. 33-834.  $\frac{5}{8}$ " threaded stem.  
Cat. No. 33-836 Net \$ .53  
Cat. No. 33-836-BU Net \$48.00

**(V) FEMALE COUPLER**—highly conductive, silver-plated cable connector. Mates at either end with No. 33-834 connector.  
Cat. No. 33-838 Net \$ .65  
Cat. No. 33-838-BU Net \$60.00

GC Electronics Adaptors are designed for quickly interchanging various cable connectors; these handy devices are small, yet sturdy and of attractive modern design.

**(W) PHONO JACK INPUT, STANDARD PHONE PLUG OUTPUT:**  
Cat. No. 33-850 Net \$ .75  
Cat. No. 33-850-BU Net \$67.50/C

**PHONO JACK INPUT, STANDARD PHONE PLUG OUTPUT, HEAVY DUTY METAL SHIELDED TYPE.**  
Cat. No. 33-852 Net \$ .87  
Cat. No. 33-852-BU Net \$78.30/C

**(X) PHONO JACK INPUT, MALE MICROPHONE CONNECTOR OUTPUT:**  
Cat. No. 33-854 Net \$ .67  
Cat. No. 33-854-BU Net \$59.40/C

**PHONO JACK INPUT, FEMALE MICROPHONE CONNECTOR OUTPUT:**  
Cat. No. 33-856 Net \$ .75  
Cat. No. 33-856-BU Net \$67.50/C

**(Y) FEMALE MICROPHONE CONNECTOR INPUT, STANDARD PHONE PLUG OUTPUT:**  
Cat. No. 33-858 Net \$ .35  
Cat. No. 33-858-BU Net \$30.00/C

**(Z) MINIATURE PHONE JACK INPUT, STANDARD PHONE PLUG OUTPUT:**  
Cat. No. 33-860 Net \$ .87  
Cat. No. 33-860-BU Net \$78.30/C

**(AA) COUPLER, CONNECTS 2 FEMALE MICROPHONE CONNECTORS.**  
Cat. No. 33-862 Net \$ .45  
Cat. No. 33-862-BU Net \$40.00/C

**(BB) COUPLER, CONNECTS 2 MALE MICROPHONE CONNECTORS.**  
Cat. No. 33-864 Net \$ .50  
Cat. No. 33-864-BU Net \$44.17/C

**(CC) MIN. PHONE JACK INPUT, STANDARD PHONE PLUG OUTPUT:**  
Cat. No. 33-865 Net \$ .87  
Cat. No. 33-865-BU Net \$78.30

**(DD) STANDARD PHONE JACK INPUT, PHONO PLUG OUTPUT:**  
Cat. No. 33-866 Net \$1.10  
Cat. No. 33-866-BU Net 105.84/C

**(EE) STANOARD PHONE JACK INPUT, FEMALE MICROPHONE CONNECTOR OUTPUT:**  
Cat. No. 33-868 Net \$1.08  
Cat. No. 33-868-BU Net \$99.17/C

**STANDARD PHONE JACK INPUT, MALE MICROPHONE CONNECTOR OUTPUT:**  
Cat. No. 33-870 Net \$ .98  
Cat. No. 33-870-BU Net \$89.10/C

**(FF) MALE MICROPHONE CONNECTOR INPUT, PHONO PLUG OUTPUT:**  
Cat. No. 33-872 Net \$ .75  
Cat. No. 33-872-BU Net \$67.50/C

**(GG) "Y" ADAPTOR**—Input: 2 phono jacks (in parallel); output: phone plug.  
Cat. No. 33-880 Net \$1.05  
Cat. No. 33-880-BU Net \$94.50/C

**"Y" ADAPTOR**—Input: 2 phono jacks (in parallel); output: single phono jack.  
Cat. No. 33-882 Net \$1.05  
Cat. No. 33-882-BU Net \$94.50/C

**(HH) "Y" ADAPTOR**—Input: 2 phono jacks (in parallel); output: standard phono plug.  
Cat. No. 33-884 Net \$1.13  
Cat. No. 33-884-BU Net \$102.60/C

**(JJ) "Y" ADAPTOR**—Input: 2 male mike connectors (in parallel); output: standard phono plug.  
Cat. No. 33-886 Net \$1.12  
Cat. No. 33-886-BU Net \$102.60/C

**(KK) "Y" ADAPTOR**—Input: 2 male microphone connectors (in parallel); output: female microphone connector.  
Cat. No. 33-888 Net \$ .98  
Cat. No. 33-888-B Net \$89.63/C

**(LL) MINIATURE SPRINGS**—Guards miniature tubes and provides 2-way support. Direct axial pressure downward plus a sideways support to keep the tube upright and perpendicular to the chassis. Resilient spring maintains life and action indefinitely.

Cat. No. Tube Size Net  
33-900-BU for 7 pin, 2 inch long tube \$10.20/C

33-901-BU for 1 pin, 1 1/2 inch tube \$10.20/C

33-902-BU for 7 pin, 1 1/8 inch tube \$10.20/C

33-903-BU for 9 pin, 1 1/2 inch tube \$10.80/C

**(MM) HEAVY DUTY TERMINAL BOARDS**—Brass, cadmium plated lugs, .042 thick on 1/2" centers. Numbered terminals. X. P. Bakelite Strip 7/8" wide, 3/8" thick. Nickel plated 8-32 x 3/8" brass screw.



**whatever electronic products  
you require...**



**...you'll find it  
faster in  
this catalog...**

**...the world's largest catalog  
of electronic  
products  
sold through  
distributors**



# CANNON AUDIO PLUGS for low level circuit applications



Cannon Audio Plugs are designed for use on audio/video and other low level circuit applications in the electronic/industrial fields where reliability, quiet operation and the elimination of mechanical interference are necessary. Some common uses are: microphones, tape recorders, medical instruments, cameras and test instrumentation computers.

## XLR PLUG SERIES

The XLR incorporates the most advanced audio/electronic design concepts. Small and compact, it features resilient insulators on the socket side plus resilient ribs for shock protection and quiet operation.

Shells are zinc (receptacles), steel or zinc (plugs), with satin nickel finish. Insulators are rigid molded plastic (pin side), resilient polychloroprene (socket side). Contacts are brass, silver plated. Coupling is by the latch-lock method.

### FEATURES

#### • QUIET OPERATION

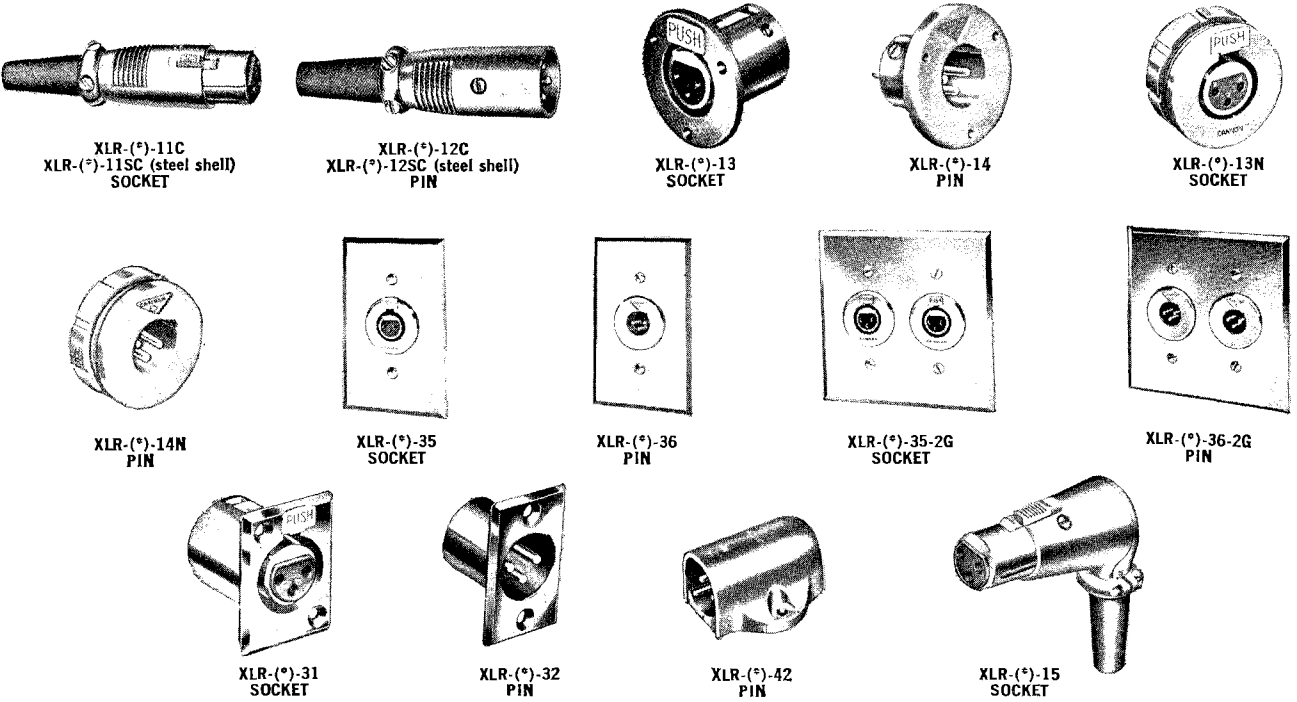
Thick zinc cross sections for shell strength, plus resilient insulators and resilient ribs on the socket side, insures elimination of mechanical interference from shock.

#### • EASY TO WORK WITH

Finger grips for positive handling.

Integral cable clamp with two clamping positions for positive grip on cable sizes from 7/32 to 5/16 of an inch.

Large internal space for ease of wiring.



XLR-(\*)-11C  
XLR-(\*)-11SC (steel shell)  
SOCKET

XLR-(\*)-12C  
XLR-(\*)-12SC (steel shell)  
PIN

XLR-(\*)-13  
SOCKET

XLR-(\*)-14  
PIN

XLR-(\*)-13N  
SOCKET

XLR-(\*)-14N  
PIN

XLR-(\*)-35  
SOCKET

XLR-(\*)-36  
PIN

XLR-(\*)-35-2G  
SOCKET

XLR-(\*)-36-2G  
PIN

XLR-(\*)-31  
SOCKET

XLR-(\*)-32  
PIN

XLR-(\*)-42  
PIN

XLR-(\*)-15  
SOCKET

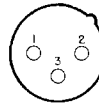
Adapter Receptacles



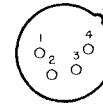
XLR(\*)-50 (with plain shell)  
XLR(\*)-50N (with coupling nut)  
XLR(\*)-50T (with threaded barrel)

### INSERT ARRANGEMENTS

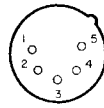
FACE VIEW OF PIN INSERTS



3  
3-15 AMP CONTACTS



4  
4-10 AMP CONTACTS



5  
5-7½ AMP CONTACTS

\*Add insert arrangement to complete ordering number.

## P PLUG SERIES

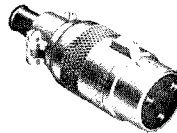
The Cannon P is a versatile plug in terms of the wide range of insert arrangements offered. It is a proven plug, and has been the standard of quality in the audio field for many years. Socket contacts are full floating and precision-made from milled bar stock.

Shells are zinc (receptacles), steel or zinc (plugs), with satin chrome finish. Insulators are phenolic. Contacts are brass, silver plated. Coupling is by the latch-lock method.

Other P Series plugs not shown.

- P(\*)-CG-12S Straight cord plug. (Pin)
- P(\*)-13 Flush panel receptacle. (Socket)
- P(\*)-CG-15 90° angle cord plug. (Socket)
- P(\*)-CG-16 90° angle cord plug. (Pin)
- P(\*)-17 Surface panel receptacle. (Socket)
- P(\*)-18 Surface panel receptacle. (Pin)
- P(\*)-23 Straight cord plug. (Socket)
- P(\*)-24 Straight cord plug. (Pin)
- P(\*)-35 Single gang wall receptacle. (Socket)
- P(\*)-36 Single gang wall receptacle. (Pin)
- P(\*)-35-2G Two gang wall receptacle. (Socket)
- P(\*)-36-2G Two gang wall receptacle. (Pin)
- P(\*)-41 Microphone mounting receptacle. (Socket)
- P(\*)-42 Microphone mounting receptacle. (Pin)

\*Add insert arrangement to complete ordering number.



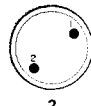
P(\*)-CG-11S  
SOCKET



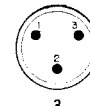
P(\*)-14  
PIN

### INSERT ARRANGEMENTS

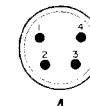
FACE VIEW OF PIN INSERTS



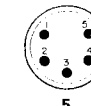
2  
2-30 AMP CONTACTS



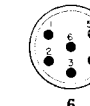
3  
3-30 AMP CONTACTS



4  
4-30 AMP CONTACTS



5  
5-30 AMP CONTACTS



6  
6-30 AMP CONTACTS



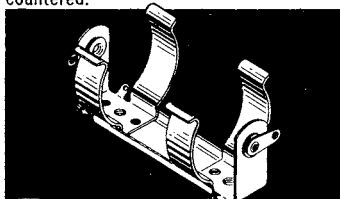
8  
8-15 AMP CONTACTS

# KEYSTONE ALL STEEL BATTERY HOLDERS



## STANDARDIZED ALL STEEL BATTERY HOLDERS

An important advance in design that has gained wide acceptance for military and commercial usage. Battery when installed is held under spring tension at a constant pressure assuring low resistance contact will hold up to 4 cells in series in sturdy insulating tube. Retainer clips available to lock battery securely. This prevents shifting or loosening of battery in holder. Recommended for use where shock or severe vibration is encountered.



- CORROSION RESISTANT NICKEL PLATED
- STAINLESS STEEL CONTACTS
- MOISTURE PROOF INSULATING WASHERS
- IDEAL FOR NI-CAD AND ALKALINE CELLS

### SPECIFICATIONS

Made of SAE 1065 Carbon Steel to MIL Spec. 17919, heat treated to spring temper and nickel plated .0002 thick. Contact assembly consists of a stainless steel eyelet, moisture proof vulcoid washers and a coated copper solder lug. Ribbed carbon steel base for added support is nickel plated and has 2 mounting holes for ease in mounting.

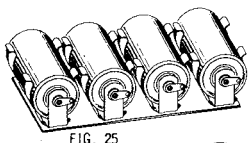


FIG. 25

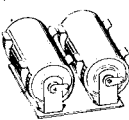


FIG. 23

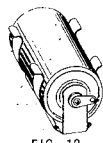


FIG. 19

FIG. 20

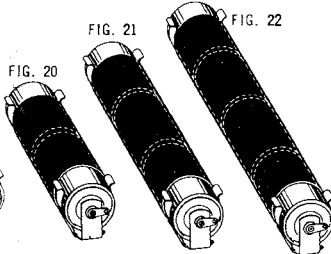
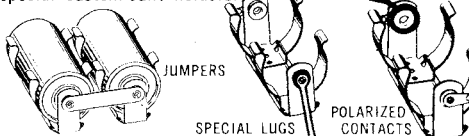


FIG. 21

FIG. 22

## MODIFICATIONS AVAILABLE

Variety of stock parts permits fast delivery on special requirements. Use our engineering service for your special custom-built holders.



## SPACE SAVER BATTERY CLIPS



DIMPLE AND INSULATED CONTACTS

Std. Pkg. 10 Pieces



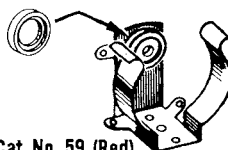
These holders are available insulated contact or with a dimple contact. Provides positive contact in either case. They are compact and economical. The "AA", "C", "D", Mercury and Ni-Cad batteries are accommodated. Made of SAE 1065 steel heat treated to spring temper and nickel plated. Insulated type has steel nickel plated eyelet and resin impregnated vulcanized fibre insulation. Snap-on washer for polarization will be supplied upon request.

Cat. No.	Battery Types	Min. to max. Diameter	Net Each	
			5-19	20-99
92*	AA	.531-.660	.05	.04
99*	AA	.531-.660	.05	.04
100†	AA	.531-.660	.08	.07
86*	C	.875-1.125	.08	.08
87†	C	.875-1.125	.12	.11
88†	D	1.187-1.375	.13	.12
89*	D	1.187-1.375	.10	.09

\*Non-insulated

†Insulated

## INSULATED POLARIZING WASHERS



Cat. No. 59 (Red)  
Cat. No. 60 (Black)

Molded Insulated Polarizing Washers. The washers hold securely when snapped over the eyelets used on our standardized battery holders.

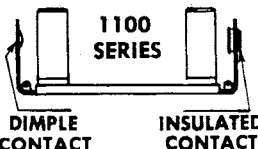
## POLARITY LABELS

Cat. No. 58



- PRESSURE SENSITIVE
- WILL ADHERE TO ANY SURFACE
- NO GLUE OR DAMPING REQUIRED
- ECONOMICAL

Wherever circuit polarity is to be shown labels colored Blue and Red.



1100 SERIES

DIMPLE CONTACT



2100 SERIES

INSULATED CONTACTS

One Insulated Contact	Net Each		All Contacts Insulated	Net Each		Fig. No.	Holds No. of Cells	All Batteries in the Group are of Similar Size and Fit Holders Listed		
	5-19	20-99		5-19	20-99			Burgess	Eveready	RCA

### PENCELL HOLDERS

Cat. No.	.25	.23	Cat. No.	.30	.26	19	1	Z, HG9	E9, E12	VS034A
1139	—	—	2139	.40	.38	23	2	CD6, 9R	E91, E133	VS144
	—	—	2171*	.65	.64	24	3	HG12R	E502, N46	VS149
	—	—	2182*	.75	.70	25	4	H133	515, 915	VS313A
1189	.40	.38	2189	.40	.38	20	2	HG502R	1015	VS334
1191	.45	.41	2191	.45	.40	21	3	920		
1194	.50	.48	2194	.55	.51	22	4	930		

### "C" CELL HOLDERS

Cat. No.	.35	.30	Cat. No.	.35	.33	19	1	1		VS035A
1173	—	—	2173	.50	.49	23	2	P6	E233	VS300
	—	—	2187*	.75	.70	24	3	120	635	VS335
	—	—	2188*	.95	.85	25	4	130	935	VS400
1185	.50	.45	2185	.50	.49	20	2	H233		
1195	.50	.48	2195	.55	.51	21	3	302599		
1198	.55	.51	2198	.60	.57	22	4			

### "D" CELL HOLDERS

Cat. No.	.35	.30	Cat. No.	.35	.33	19	1	2	E42	VS036
1175	—	—	2175	.50	.49	23	2	2R	N56	VS036A
	—	—	2190*	.75	.70	24	3	CD7	E95	VS336
	—	—	2192*	.95	.85	25	4	210	D99	
1186	.48	.44	2186	.50	.49	20	2	230	A100	
1199	.55	.51	2199	.55	.51	21	3		950	
1162	.60	.54	2162	.60	.57	22	4		1050	
1179	.35	.30	2179	.35	.34	19	1		E94	

\*Clips mounted on phenolic 1/8" thick Mil Spec 31158

## BATTERY AND COMPONENT HOLDERS

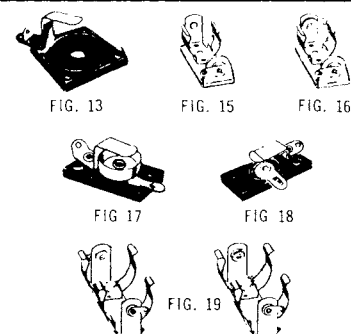
Cat. No.	Battery Types	Min. to Max. Diameters		NET EACH		Cat. No.	Battery Types	Min. to Max. Diameters		NET EACH	
		5-19	20-99	5-19	20-99			5-19	20-99		
69	2U6 or (2) AA	5/8	1 1/4	.07	.06	96	(1) K 20	5/8	1 1/4	.08	.07
70	(2) RM 12	5/8	1 3/8	.09	.08	97	(2) "C"	(2) 1 1/4 Dia.		.09	.08
90	#7	3/8	2 3/4	.06	.04	98	(2) D	(2) 1 3/4 Dia.		.11	.10
91	(1) AA	1/2	2 1/2	.07	.05	217	1 3/4 Dia.	1 3/4 Dia.		.18	.14
93	(1) C	3/4	1 1/2	.07	.06	218	1 1/4 Dia.	1 1/4 Dia.		.20	.15
94	(1) D	1 1/4	1 3/4	.08	.07	219	2" Dia.	2" Dia.		.22	.16
95	(1) U-15	5/8	1 1/2	.07	.06						

Clips are made of Aluminum except Nos. 69, 217, 218, 219 are made of Steel.

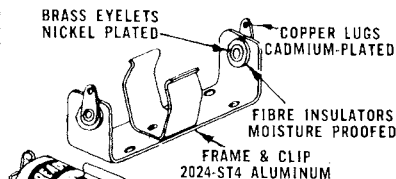
# KEYSTONE BATTERY HOLDERS



## MERCURY BATTERY HOLDERS



A standard line of battery holders available for immediate shipment from stock. Low cost, lightweight and sturdily constructed of quality materials. Good electrical contact, low leakage current and snap-fit clips are the outstanding features.



Cat. No.	NET EACH		Holds No. of Cells	Fig. No.	ALL BATTERIES LISTED WITHIN BOXES ARE IN THE SAME SIZE GROUP BATTERY CROSS REFERENCE Burgess Eveready RCA		
	5-19	20-99			Burgess	Eveready	RCA

MINIATURE CELL HOLDERS							
137	.23	.21	1	1	7	912	VS074
138	.38	.34	2	2			
189	.49	.44	3	3			
170	.64	.57	4	4			

PENCELL HOLDERS							
139	.23	.21	1	1	CD6	E9, E12	VS034A
140	.38	.34	2	2	9R, Z	E91	VS144
171	.49	.44	3	3	HC9	E133	VS149
182	.64	.57	4	4	HG12R	333	VS313A
189	.45	.36	2	5	H133	E502	VS334
191	.49	.44	3	6	HC502R	515	
192	.64	.54	4	7	920	915, 1015	
193	.93	.81	6	8	930	N46	

"C" CELL HOLDERS							
173	.30	.26	1	1	1	226	VS035A
174	.38	.34	2	2	P6	E233	VS300
187	.45	.36	3	3	120	635	VS335
185	.45	.36	2	5	130	935	VS400
195	.49	.44	3	6	H233		
196	.64	.54	4	7	302599		
197	.93	.81	6	8			

"D" CELL HOLDERS							
175	.30	.26	1	1	2	E42	VS036A
176	.38	.34	2	2	2R	N56	VS036
190	.49	.44	3	3	CD7	E95	VS336
186	.46	.37	2	5	210	D99	
199	.50	.45	3	6	230	A100	
200	.65	.55	4	7		950	
201	.95	.85	6	8		1050	
205	.95	.85	6	12			

1 1/2 VOLT CELL HOLDERS							
154	.21	.20	1	1	N	E340	VS073
155	.35	.32	2	2		F400	
156	.49	.44	3	3		E401	
160	.49	.44	1	1	21R	964	VS236
179	.30	.26	1	1		E94	

4 1/2 VOLT CELL HOLDERS							
139	.23	.21	1	1		333	VS1149

9 VOLT CELL HOLDERS							
139A	.26	.24	1	1		206	VS327
203P	.44	.30	1	14	2U6	216	VS323
173P	.30	.29	1	1	P6M	226	VS300A

15 VOLT CELL HOLDERS							
163	.30	.26	1	11	K10	417	
161	.30	.26	1	11	U10	411	VS083
166	.30	.26	1	9			
167	.38	.34	2	10			
225	.21	.20	1	1	Y10	504	
226	.35	.32	2	2			

22 1/2 VOLT CELL HOLDERS							
164	.30	.26	1	11	K15		
168	.30	.26	1	11		420	
177	.30	.26	1	9	U15	412	VS084
178	.38	.34	2	10			
139A	.26	.24	1	1	Y15	505	
140A	.41	.37	2	2			
171A	.52	.47	3	3			
182A	.67	.60	4	4			

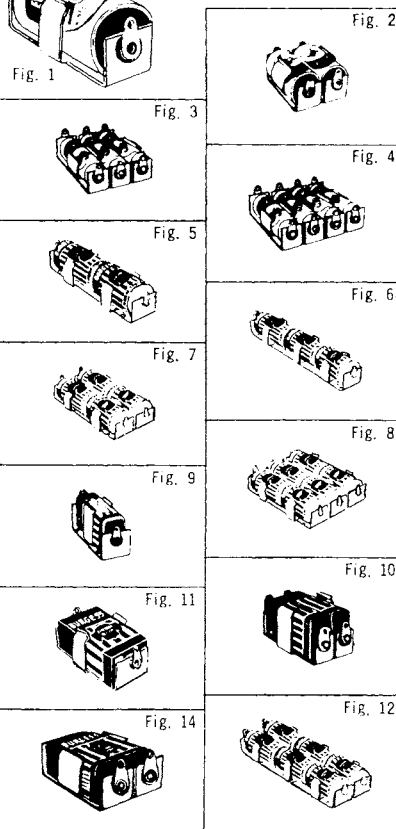
30 VOLT CELL HOLDERS							
157	.30	.26	1	14	Y20	506	
165	.30	.26	1	11	K20	430	
183	.30	.26	1	9	U20	413	VS085
184	.38	.34	2	10			
134	.38	.34	1	1	Y20S	507	

### INSULATED POLARIZING WASHERS

Insulated Polarizing Washers eliminate the danger of damage and short circuit to expensive transistor equipment. The washers hold securely when snapped over the eyelets used on our standardized battery holders.

Material: Precision molded of plastic.

Cat. No.	NET COST EACH		5-19	20-99
	5-19	20-99		
59	.04	.03		



### RETAINER CLIPS

These retainers prevent the battery from shifting or loosening in the holder. Made of high carbon steel, heat treated to spring temper and nickel plated.

Cat. No. 61 - Retainer for "A" or Mercury cells with diameters of 1/2" to 3/8" when used with Keystone #91, 92, 99 or 100 clips also clip #95 for rectangular battery.

Cat. No. 62 - Retainer for C cells or other batteries with maximum diameter of 1 1/2" when used with Keystone #93, 86 or 87 clips.

Cat. No. 63 - Retainer for D cells or other batteries with maximum diameter of 1 1/2" when used with Keystone #94, 88 or 89 clips.

Cat. No. 66 - Retainer for mercury cells with .650 dia. when used with our #91 clips.

Any above, Net Each (5-19) .05; (20-99) .04

Mallory Mercury Battery Listing	Aluminum and Phenolic Base Holders		All Steel Holders One Insulated Contact		All Steel Holders All Contacts Insulated	
	Cat. No.	Fig. No.	Cat. No.	Fig. No.	Cat. No.	Fig. No.
RM1R	101*	13	1101	15	2101	16
RM3R	103*	13	1103	15	2103	16
RM4R	104*	13	1104	15	2104	16
ZM9	139	1	1139	19	2139	19
RM12R	139	1	1139	19	2139	19
RM42	175	1	1175	19	2175	19
TR113			1113	15	2113	16
TR114			1114	15	2114	16
TR115	132	1	1132	15	2132	16
TR132	132	1	1132	15	2132	16
TR133	135	1	1139	19	2139	19
TR134	134	1	1134	19	2134	19
TR135	135	5	1135	19	2135	19
TR136	189	5	1189	19	2189	19
TR137			1125	19	2125	19
TR145			1145	15	2145	16
TR152	124**	1				
TR153	106**	1				
TR162			1113	15	2113	16
TR163	132	1	1132	15	2132	16
TR164	109	1	1109	19	2109	19
TR165	110	1	1110	19	2110	19
TR169	189	5	1189	19	2189	19
TR175	124**	1				
TR177			1142	19	2142	19
TR233	173	1	1173	19	2173	19
TR234			1144	19	2144	19
RM400	111*	18				
RM401	124**	1				
RM411	166**	9				
RM412	177**	9				
RM413	183**	9				
RM450	112*	17				
RM502	139	1	1139	19	2139	19
RM601			1116	15	2116	16
RM625	117*	17				
RM630	126*	18				
RM640	118*	13				
RM675	127*	18				
302351	119	1	1119	19	2119	19
302478	120	5	1120	19	2120	19
302642	121	1	1121	19	2121	19
302435	122**	1				
302437	139	1	1139	19	2139	19
302599	173	1	1173	19	2173	19

\*Bakelite Base Holders  
\*\*Available Only in Aluminum

### NET EACH PRICE LIST

#### MERCURY BATTERY HOLDERS

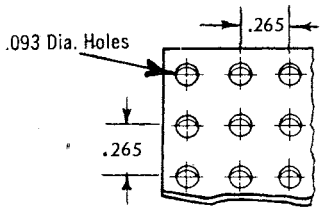
No.	5-19	20-99	No.	5-19	20-99	No.	5-19	20-99
101	.30	.26	175	.30	.26	1175	.35	.30
103	.30	.26	177	.30	.26	1189	.40	.36
104	.30	.26	183	.30	.26	2101	.35	.34
106	.30	.26	189	.45	.36	2103	.35	.34
109	.30	.26	1101	.35	.30	2104	.35	.34
110	.38	.34	1103	.35	.30	2109	.35	.34
111	.30	.26	1104	.35	.30	2110	.35	.34
112	.30	.26	1109	.35	.30	2113	.35	.34
117	.30	.26	1110	.35	.30	2114	.35	.34
118	.30	.26	1113	.35	.30	2116	.35	.34
119	.38	.34	1114	.35	.30	2119	.35	.34
120	.38	.34	1116	.35	.30	2120	.45	.41
121	.38	.34	1119	.35	.30	2121	.45	.41
122	.38	.34	1120	.40	.38	2125	.35	.34
124	.23	.21	1121	.40	.38	2132	.35	.34
126	.30	.26	1125	.35	.30	2134	.35	.34
127	.30	.26	1132	.35	.30	2135	.40	.37
132	.30	.26	1134	.35	.30	2139	.30	.26
134	.38	.34	1135	.35	.30	2142	.30	.26
135	.38	.34	1139	.25	.23	2144	.30	.26
139	.23	.21	1142	.25	.23	2145	.35	.34
166	.30	.26	1145	.25	.23	2173	.35	.33
173	.30	.26	1173	.35	.30	2189	.40	.38



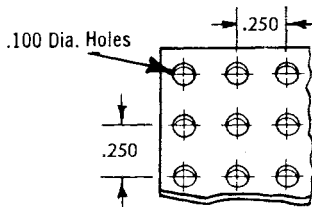
# PRE-PUNCHED TERMINAL BOARDS



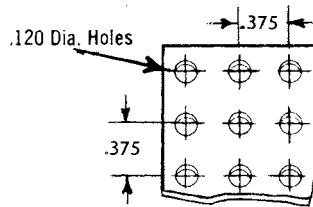
- COMPLETE RANGE OF SIZES AND SUITABLE HARDWARE
- "DO IT YOURSELF" STAKING TOOLS
- COPPER CLAD FOR PRINTED CIRCUITS
- UNCLAD TYPE FOR WIRED CIRCUITS
- STANDARD AND CUSTOM-MADE



"A" PATTERN .093 DIA. HOLES



"E" PATTERN .100 DIA. HOLES



"H" PATTERN .120 DIA. HOLES

## "A" PATTERN .093 DIA. HOLES .265 x .265 C to C

Size Width & Length	No. of Holes W & L	1/16" THICK		
		XXXX Natural	Glass Epoxy	Paper Base Epoxy
		Cat. No.	Cat. No.	Cat. No.
.82 x 8.50	3 x 32	1731	1790	1796EP
1.88 x 8.50	7 x 32	1737	1791	1797EP
2.44 x 8.50	9 x 32	1738	1788	1798EP
3.25 x 8.50	13 x 32	1785	1789	1801EP
3.25 x 17.00	13 x 64	1786	1787	1802EP
4.88 x 4.88	18 x 18	1806	1807	1803EP
4.88 x 8.50	18 x 32	1784	1792	1804EP
4.88 x 17.00	18 x 64	1739	1793	1805EP
8.50 x 8.50	32 x 32	1732	1794	1808EP
8.50 x 17.00	32 x 64	1733	1795	1809EP
<b>3/32" THICK</b>				
1.38 x 1.88	5 x 7	1758	—	1758EP
1.38 x 4.00	5 x 15	1760	—	1760EP
1.38 x 8.50	5 x 32	1749	—	1749EP
1.88 x 2.94	7 x 11	1759	—	1759EP
1.88 x 8.50	7 x 32	1740	—	1740EP
2.44 x 8.50	9 x 32	1741	—	1741EP
3.25 x 8.50	13 x 32	1814	—	1814EP
3.25 x 17.00	13 x 64	1816	—	1816EP
4.88 x 8.50	18 x 32	1756	—	1756EP
4.88 x 17.00	18 x 64	1742	—	1742EP
8.50 x 8.50	32 x 32	1817	—	1817EP
8.50 x 17.00	32 x 64	1757	—	1757EP

## "E" PATTERN .100 DIA. HOLES .250 x .250 C to C

Size Width & Length	No. of Holes W & L	XXXX Natural	
		1/16" THICK	3/32" THICK
		Cat. No.	Cat. No.
2.13 x 4.00	8 x 16	1750	—
2.13 x 8.50	8 x 34	1765	—
3.63 x 8.50	14 x 34	1766	—
8.50 x 8.50	34 x 34	1767	—
8.50 x 17.00	34 x 68	1768	—
<b>3/32" THICK</b>			
2.13 x 8.50	8 x 34	1770	—
8.50 x 8.50	34 x 34	1771	—
8.50 x 17.00	34 x 68	1772	—

## "H" PATTERN .120 DIA. HOLES .375 x .375 C to C

Size Width & Length	No. of Holes W & L	XXXX Natural	
		1/16" THICK	Paper Base Epoxy
		Cat. No.	Cat. No.
1.88 x 8.25	5 x 22	1743	—
2.25 x 8.25	6 x 22	1744	—
4.13 x 8.25	11 x 22	1782	—
4.13 x 16.50	11 x 44	1745	—
<b>3/32" THICK</b>			
1.88 x 8.25	5 x 22	1746	1746EP
2.25 x 8.25	6 x 22	1747	1747EP
4.13 x 8.25	11 x 22	1783	1783EP
4.13 x 16.50	11 x 44	1748	1748EP
6.00 x 8.25	16 x 22	1941	1941EP
6.00 x 16.50	16 x 44	1942	1942EP
8.25 x 8.25	22 x 22	1943	1943EP
8.25 x 16.50	22 x 44	1939	1939EP

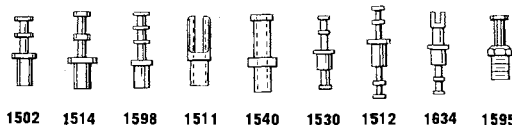
## TERMINALS AND EYELETS For Boards with .093-.100 dia. Holes

### TERMINALS

Brass (Mil Spec QQ626) and Silver Plated.

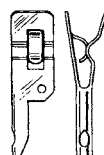
NOTE: When ordering Turret Terminals BE SURE TO SPECIFY Cat. No. of Terminal and add -2 for 1/16" thick Board and -3 for 3/32" thick Board  
I.E. 1598-2 for 1/16" thick Board and 1598-3 for 3/32" thick Board

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.

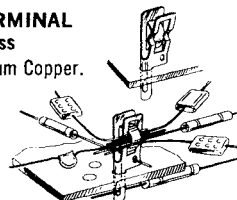


### PUSH-IN TERMINAL SOLDERLESS

Made of Beryllium Copper.



Cat. No. 1498-CP (cadmium plate)  
Cat. No. 1498-SP (silver plate)



### PRECISION MADE EYELETS

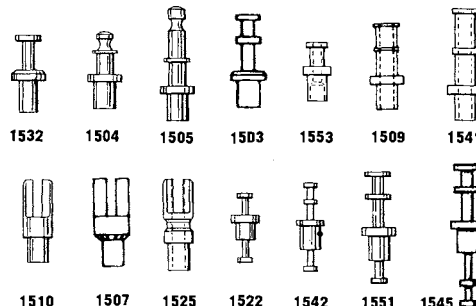
Made of Brass and Hot Tinned for easy solderability

Specify Cat. No. 33 for 1/16" thick Board  
Cat. No. 34 for 3/32" thick Board

## TERMINALS AND EYELETS For Boards with .120 dia. Holes

### TERMINALS

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.



### PRECISION MADE EYELETS

Specify Cat. No. 43 eyelet for 1/16" thick Board  
Cat. No. 44 eyelet for 3/32" thick Board



# PRE-PUNCHED TERMINAL BOARDS



**THE PRACTICAL APPROACH TO SIMPLE OR COMPLEX CIRCUITRY**  
**LOW COST — IMMEDIATE DELIVERY — CHOICE OF SIX POPULAR PATTERNS AND MATERIALS**

**STANDARDIZED KEYBOARDS:** Permits time saving, low cost, assembly of components. Used extensively in development of prototype breadboarding, test design or production runs. A large selection of sizes and materials offers the designer the flexibility and convenience needed to create special circuitry on short notice.

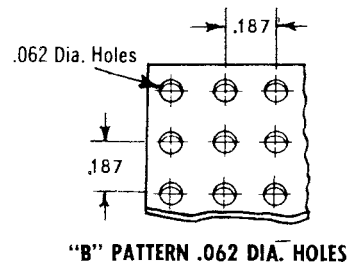
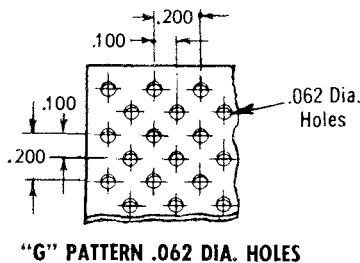
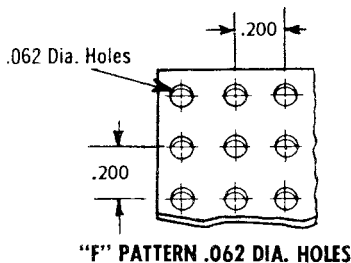
**ELECTRONIC HARDWARE:** A large selection of turret, push-in and stamped terminals, brackets, eyelets, etc. available from stock.

**STAKING TOOLS:** Inexpensive tooling supplied for staking eyelets, bushings, turret terminals, etc. You can do an entire assembly at your bench with ease, using our impact tool. Other tools for arbor, kickpress, drill press. See Staking Tool page

**SPECIAL SERVICES:** We will install eyelets or terminals to suit your application. We invite inquiries for special sizes or additional holes drilled. Prompt quotations rendered at no cost to you.

**MATERIAL SPECIFICATIONS & TOLERANCES**

XXXX Type PBE (Paper Base Elect.) Mil-P-3115C Temp. 250° F Max.  
 XXXPC Type PP Copper Clad Mil-P-13949 Temp. 250° F Max.  
 PAPER BASE EPOXY Mil-P-22324 (Type PEE) Temp. 250° F Max.  
 GLASS EPOXY UNCLAD Mil-P-18177 G-10 (GEE) Temp. 300° F. Max.  
 GLASS EPOXY Copper Clad Mil-P-13949B (GE) Temp. 300° F Max.  
**TOLERANCE:** Length and width overall dimension after fabrication Plus or Minus .015.  
**HOLE SIZE:** Plus or Minus .003.  
**Thickness of standard sheet varies Plus or Minus .008 for 1/16" or .010 for 3/32" thick.**



**"F" PATTERN .062 DIA. HOLES .200 x .200 C to C**

Size Width & Length	No. of Holes W & L	XXXP Natural	1/16" THICK					
			Glass Epoxy	Paper Base Epoxy	Glass Epoxy Cop. Clad (1 Side)	Glass Epoxy Cop. Clad (2 Sides)	XXXP Cop. Clad (1 Side)	XXXP Cop. Clad (2 Sides)
		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	
1.25 x 8.50	8 x 42	1730	1844	1730EP	1846	1847	1848	1853
3.00 x 4.50	14 x 20	1835	1845	1835EP	1836	1837	1838	1839
3.63 x 8.50	18 x 42	1773	1854	1773EP	1855	1856	1857	1858
3.63 x 17.00	18 x 85	1775	1859	1775EP	1864	1865	1866	1867
4.50 x 6.50	22 x 30	1868	1870	1868EP	1876	1877	1878	1879
4.50 x 8.50	22 x 42	1869	1871	1869EP	1881	1886	1887	1888
4.88 x 8.50	24 x 42	1774	1872	1774EP	1882	1889	1894	1899
4.88 x 17.00	24 x 85	1776	1873	1776EP	1883	1891	1895	1902
8.50 x 8.50	42 x 42	1777	1874	1777EP	1884	1892	1896	1903
8.50 x 17.00	42 x 85	1778	1875	1778EP	1885	1893	1897	1904

**"G" PATTERN .062 DIA. HOLES .100 GRID ALTERNATES**

Size Width & Length	No. of Holes W & L	XXXP Natural	Glass Epoxy	Paper Base Epoxy	Glass Epoxy Copper Clad	
					(1 Side)	(2 Sides)
1/16" THICK						
		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
1.75 x 4.00	(8 x 19) x 2	1752	1909	1752EP	1919	1920
2.25 x 8.50	(11 x 42) x 2	1754	1910	1754EP	1921	1922
3.50 x 4.00	(17 x 19) x 2	1753	1911	1753EP	1923	1924
3.50 x 8.50	(17 x 42) x 2	1905	1912	1905EP	1925	1926
3.50 x 17.00	(17 x 85) x 2	1906	1913	1906EP	1927	1928
3.88 x 8.50	(19 x 42) x 2	1907	1914	1907EP	1929	1930
4.88 x 8.50	(24 x 42) x 2	1908	1915	1908EP	1931	1932
4.88 x 17.00	(24 x 85) x 2	1779	1916	1779EP	1933	1934
8.50 x 8.50	(42 x 42) x 2	1780	1917	1780EP	1935	1936
8.50 x 17.00	(42 x 85) x 2	1781	1918	1781EP	1937	1938

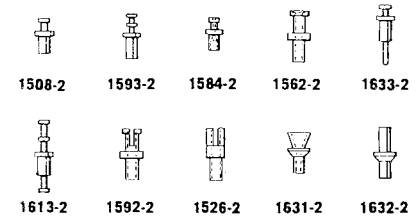
**"B" PATTERN .062 DIA. HOLES .187 x .187 C to C**

Size Width & Length	No. of Holes W & L	XXXP Natural	XXXP Copper Clad	
			(1 Side)	(2 Sides)
1/16" THICK				
		Cat. No.	Cat. No.	
1.38 x 8.50	6 x 45	1761	1818	
1.88 x 8.50	8 x 45	1734	1819	
2.44 x 3.38	12 x 17	1812	1813	
2.84 x 8.50	15 x 45	1735	1820	
3.66 x 6.75	19 x 35	1824	1825	
5.69 x 8.50	30 x 45	1762	1834	
5.69 x 17.00	30 x 90	1736	1831	
6.75 x 7.31	19 x 35	1826	1827	
7.31 x 10.50	38 x 56	1828	1829	
7.31 x 18.00	38 x 95	1832	1830	
8.50 x 17.00	45 x 90	1763	1833	

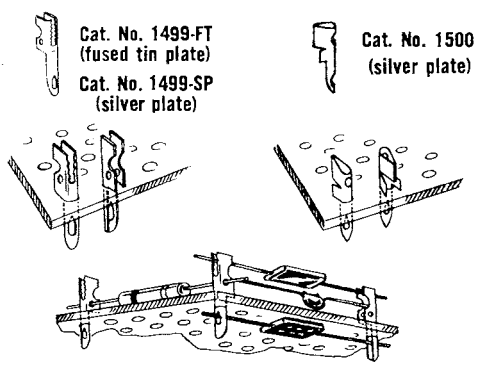
**TERMINALS AND EYELETS For Boards with .062 dia. Holes**

**TERMINALS**  
 Brass, (Mil Spec QQ626) and Silver Plated.

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.



**PUSH-IN TERMINALS**  
 Made of Beryllium Copper.



**PRECISION MADE EYELETS**  
 Made of Brass and Hot Tinned for easy solderability.  
**Cat. No. 23** For 1/16" thick Board

A variety of mounting brackets and staking tools are listed on the following pages.

# STANDARDIZED TERMINAL BOARDS



## STANDARDIZED TURRET TERMINAL BOARDS

Cut your production cost by eliminating the tooling and setup charge usually applied to nonstandardized boards. Terminals are securely riveted and hot tinned for easy soldering.

**TERMINALS:** Your choice of most popular types. Made of Brass: QQ-626, comp. 22, 1/2 hard. Hot Dip Solder finish: Mil-F-14072 Type 221.

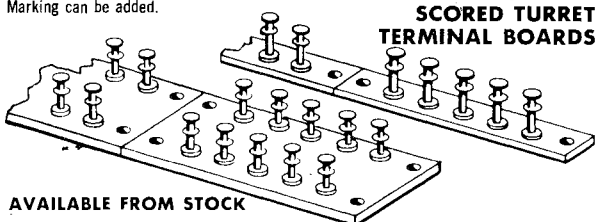
**Material:** Your choice of either PBE or GEE Phenolic.

**PBE:** Paper base electrical, Mil-P-3115C, Temp. 250° F max. Type XXXP.

**GEE:** Glass Epoxy, Mil-P-18177, Temp. 300° F max. Type G-10.

Five sections SCORED for easy separation M'tg. holes in each section.

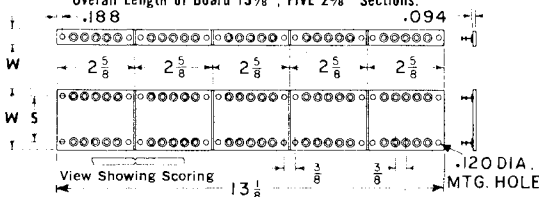
These boards CAN BE MODIFIED with terminals staked in all holes, scoring eliminated. Marking can be added.



AVAILABLE FROM STOCK

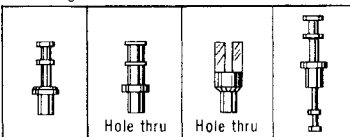
## 3/8" SPACING AND SCORED

3/32" THICK PHENOLIC — Choice of 4 Types of Terminals  
Overall Length of Board 13 1/8", FIVE 2 5/8" Sections.



Five sections SCORED for easy operation. M'tg. holes in each section.

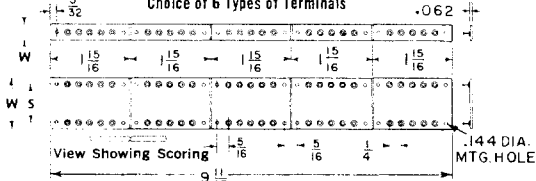
CHOICE OF TERMINALS



W	S	No. of Terms.	Material	With 1503 Term. Cat. No.	With 1509 Term. Cat. No.	With 1507 Term. Cat. No.	With 1545 Term. Cat. No.
1/2	Single Row	25	PBE	15031	15091	15071	15041
			GEE	15231	15291	15271	15241
1 1/2	1	50	PBE	15032	15092	15072	15042
			GEE	15232	15292	15272	15242
1 1/2	1 1/4	50	PBE	15036	15096	15076	15046
			GEE	15236	15296	15276	15246
2	1 1/2	50	PBE	15033	15093	15073	15043
			GEE	15233	15293	15273	15243
2 1/2	2	50	PBE	15034	15094	15074	15044
			GEE	15234	15294	15274	15244
3	2 1/2	50	PBE	15035	15095	15075	15045
			GEE	15235	15295	15275	15245

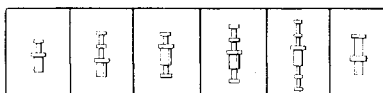
## MINIATURE TURRET TERMINAL BOARDS

1/4" SPACING AND SCORED — 1/16" THICK PHENOLIC  
Overall Length of Board is 9 11/16", Five 1 15/16" Sections  
Choice of 6 Types of Terminals



Five sections SCORED for easy operation. M'tg. holes in each section.

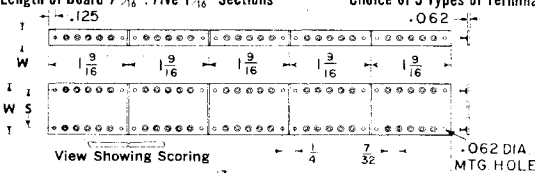
CHOICE OF TERMINALS



W	S	No. of Terms.	Material	With 1572 Term. Cat. No.	With 1573 Term. Cat. No.	With 1574 Term. Cat. No.	With 1575 Term. Cat. No.	With 1583 Term. Cat. No.	With 1559 Term. Cat. No.
5/16	Single Row	25	PBE	15047	15057	15067	15077	15087	15097
			GEE	15247	15257	15267	15277	15287	15297
7/8	9/16	50	PBE	15048	15058	15068	15078	15088	15098
			GEE	15248	15258	15268	15278	15288	15298
1 1/8	13/16	50	PBE	15049	15059	15069	15079	15089	15099
			GEE	15249	15259	15269	15279	15289	15299

## MINIATURE TURRET TERMINAL BOARDS

7/32" SPACING AND SCORED — 1/16" THICK PHENOLIC  
Overall Length of Board 7 13/16", Five 1 9/16" Sections  
Choice of 5 Types of Terminals



Five sections SCORED for easy operation. M'tg. holes in each section.

CHOICE OF TERMINALS



W	S	No. of Terms.	Material	With 1502 Term. Cat. No.	With 1562 Term. Cat. No.	With 1526 Term. Cat. No.	With 1512 Term. Cat. No.	With 1533 Term. Cat. No.
5/16	Single Row	25	PBE	15021	15023	15025	15063	15053
			GEE	15221	15223	15225	15263	15253
3/4	1/2	50	PBE	15028	15029	15026	15064	15054
			GEE	15228	15229	15226	15264	15254
1	3/4	50	PBE	15022	15024	15030	15065	15056
			GEE	15222	15224	15230	15265	15256

## UNIVERSAL TERMINAL BOARDS

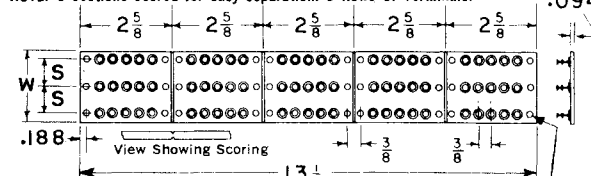
Designed for production or experimental use, these standardized boards are well suited for any electronic application requiring a sturdy mounting surface for resistors, condensers and components.

**TERMINAL:** 1503-3 HOT TIN DIP finish for easier soldering and infinite shelf life.

**MATERIALS:** PBE (Paper Base Elect. Mil-P-3115C type XXXP)

GEE (Glass Epoxy Mil-P-18177 type G-10)

NOTE: 5 Sections Scored for easy separation. 3 Rows of Terminals.



MODIFICATIONS: Other materials and terminals of your choice supplied. Marking can be added.

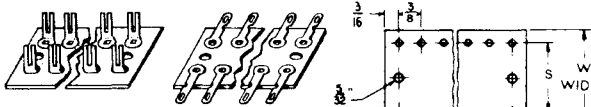
.120 DIA. MTG. HOLE



W	S	Total No. of Terms.	Material	Cat. No.
2 1/2	1	75	PBE	15332
			GEE	15342
3 1/2	1 1/2	75	PBE	15333
			GEE	15343

## READI-MADE TERMINAL BOARDS

- ECONOMICAL • SAVE TOOLING COST
- DELIVERY FROM STOCK • RANGE OF SIZES • APPROVED MATERIALS



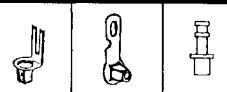
Read-made Terminal Boards are ideal for General Use. Excellent for mounting resistors, condensers, etc. Choice of Terminals.

**MATERIAL:** 1/16" thick Bakelite (Mil Spec 3115C Pbe-P grade).

**TERMINALS:** 1204 and 1268 are stamped from .023 thick brass. 1539 is turned from 3/16" dia. brass rod.

**PLATING:** 1204 is Cadmium plated. 1268 and 1539 are Hot Tinned for easy soldering.

### CHOICE OF TERMINALS



W	L	S	A	Terminals Each Side	With 1268 Term. Cat. No.	With 1204 Term. Cat. No.	With 1539 Term. Cat. No.
1	1 1/4	3/8	1 1/2	5	1268-10	1204-10	1239-10
1	2 1/4	3/8	1 3/4	6	1268-12	1204-12	1239-12
1	5 1/4	3/8	4 1/4	14	1268-28	1204-28	1239-28
1 1/4	3 3/4	1 1/8	3 3/8	10	1268-20	1204-20	1239-20
1 3/4	4 1/4	1 1/8	3 3/4	11	1268-22	1204-22	1239-22
1 3/4	7 1/4	1 1/8	6 3/4	19	1268-38	1204-38	1239-38
1 1/2	7 3/8	Single Row	6 3/4	19	1268-19	1204-19	1239-19



# STANDARDIZED PLUG-IN HOUSINGS



## BANANA PLUG IN MODULES

3/4" Centers

- Suitable for test adaptors, modules, filters, etc.
- Low resistance Beryllium Copper spring plugs
- Shielded or molded hi-impact Butyrate cover
- Mates with all standard patch board plugs

**MATERIAL SPECIFICATIONS—**  
(For All Items On This Page)

**BANANA PLUG SPRINGS:** One piece Beryllium Copper per QQ-C-533 and heat treated to 15N, 73-79.

**PLUG BODY:** Brass QQ-626 Comp. 22½ H; silver plated, MIL-P-14072 per QQ S-365.

**BAKELITE:** Black per MIL-P-3115C, TYPE PBE.

**PLASTIC HOUSING:** Molded of high impact clear Butyrate plastic will withstand temp. 210°F. Ample room for wiring or terminal board.

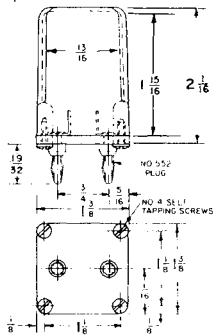
**HEADER:** Precision machined black bakelite which mounts flush to housing with self-tap screws. Solder lugs firmly staked to banana plugs.

**ALUMINUM HOUSING:** For circuits requiring shielding. Banana plugs attached to ¼" thick bakelite and staked to solder lugs. Hole for cable entry can be supplied at small additional charge.

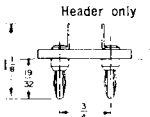
**MODIFICATIONS:** We welcome the opportunity to quote on variations of standard items.

### PLASTIC HOUSING

**Cat. No. 658**  
Complete with header and 4 screws

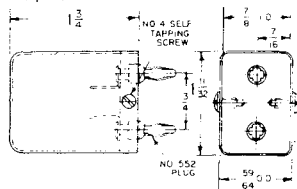


**Cat. No. 656**  
Header only

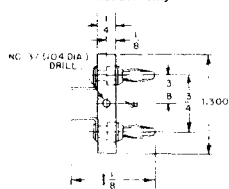


### ALUMINUM SHELL

**Cat. No. 659**  
Complete with header and 2 screws



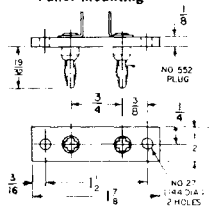
**Cat. No. 657**  
Header only



## BANANA PLUG AND JACK STRIP

3/4" Centers — Mate with all Stack-Up Plugs

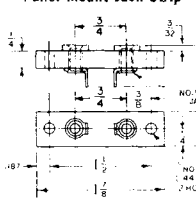
**BANANA PLUG STRIP**  
Panel Mounting



**Cat. No. 621**

A much needed accessory for patch-board and stack-up plugs. Low resistance banana plugs are spaced on ¾" centers, staked into ¼" thick black bakelite and solder plugs.

**JACK STRIP**  
Panel Mount Jack Strip

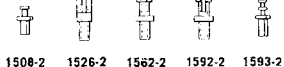


**Cat. No. 653**

These panel mounting strips mate with any ¾" spaced stack-up plug or individual patchboards. Silver plated jacks are staked into ¼" thick black bakelite with solder lugs. Multiples can be supplied in most instances without tooling or setup charges.

## TERMINALS AND EYELETS

**TERMINALS:** Turret terminals can be staked into .062 dia holes.



Cat. No.	O.D.	Height Above The Board
1508-2	.093	3/32
1526-2	.095	5/32
1562-2	.125	5/32
1592-2	.125	5/32
1593-2	.093	5/32

**EYELETS:** High quality precision formed and hot dip solder finish for good solderability.



Specify Cat. No. 23  
For .062 dia. hole  
BOARD THICKNESS 1/16"

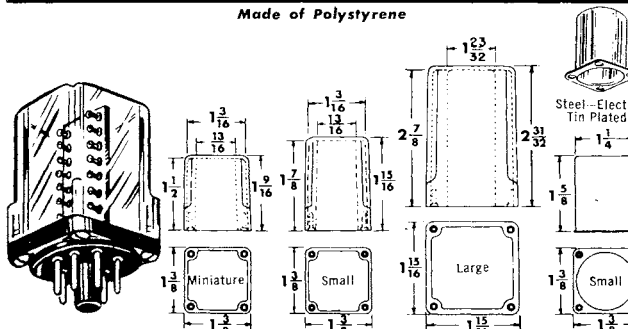
## SELF-TAPPING SCREWS



**CAT. NO. 688** — For miniature and small covers #4 x 3/16"  
**CAT. NO. 689** — For large covers #4 x 3/8"

## PLASTIC MOLDED HOUSINGS

Made of Polystyrene



### LOW COST DUST COVERS — AVAILABLE FROM STOCK

- Variety of molded materials
- Good chemical resistance
- Low water absorption
- A choice of 4 types
- Rigid construction

## PLUG IN HOUSINGS

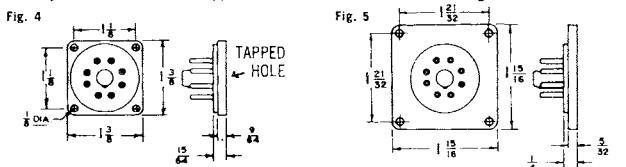
A wide range of colors is available in Polystyrene and Butyrate on special order

TERMINAL BOARDS NOT INCLUDED

Housing with Octal Header & 4 Screws	Housing only LESS Header & Screws	TYPE	MATERIAL	COLOR
Cat. No.	Cat. No.			
662	672	Miniature	Polystyrene	Clear
663	673	Small	Butyrate	Clear
664	674	Small	Nylon	Natural (White)
665	676	Small	Polystyrene	Clear
668	679	Large	Polystyrene	Clear
669	680	Small	Steel—Electro Tin Plated	—

## HEADERS

**HEADERS:** Headers are available in two sizes and a variety of pin configurations that standard sockets. Molded of general purpose phenolic with brass nickel plated pins sturdily staked. Guide hole tapped 8-32 for terminal board mounting stud.



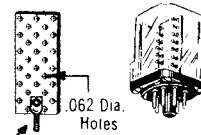
1 3/8" square for miniature and small covers—Fig. 4	Pin Configuration	1 1/2" Square for large covers—Fig. 5
Cat. No.		Cat. No.
681	Octal	685
682	Nine Pin	Not Avail.
683	Eleven Pin	686
684	Twenty Pin	687

Mica Filled Headers — Available on special order

## TERMINAL BOARDS

(For Use with Above Housings)

These boards are stocked in XXXP paperbase and glass epoxy material. Spacing of holes is .100 and .200 alternates. An 8-32 threaded stud is firmly eyeletted to the board and is easily assembled into the tapped hole of the headers.

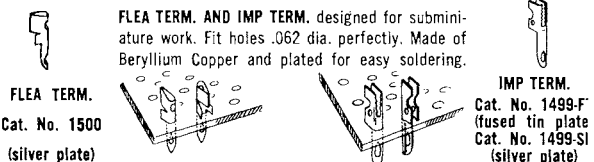


XXXP PBE MIL-P-3115C Bakelite	Glass Epoxy G-10, GEE MIL-P-18177B	Size of Board with Stud	For Cover Listed Above
Cat. No.	Cat. No.		
692	696	1 x 1 1/4"	Miniature
693	697	1 1/8 x 1 3/4"	Small
694	698	1 1/2 x 2 3/4"	Large
695	699	1 3/8 x 1 1/2"	Metal Cas.

8-32 Mounting Stud  
BOARD THICKNESS 1/16"

## PUSH-IN TERMINALS

Recommended for use with above Terminal Boards



**FLEA TERM.**  
Cat. No. 1500  
(silver plate)

**IMP TERM.**  
Cat. No. 1499-F  
(fused tin plate)  
Cat. No. 1499-SI  
(silver plate)

**LAB-TRONICS INC.**

Chicago, Illinois 60613

**CONNECTING CABLES**with *Lenite*MFD. IN  
U.S.A.**MOLDED PLUGS and JACKS**


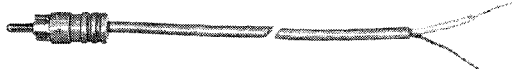
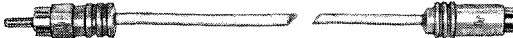

Lab-Tronics' molded cable construction is the accepted standard for appearance, durability, and handling ease. L-Ts' molded connectors are waterproof; no strain on soldered connections; eliminate need for unsightly external clamps. Molded plugs and jacks are attractive gray, to match cable. Cables are soldered to connectors before molding, assuring completely noise-free operation; highest quality, low-

capacitance type, insuring minimum loss. Jacket is smooth silver-gray, non-contaminating high temperature plastic. Plugs and jacks of highly polished brass, machined to close tolerances, then double-plated. Individually packaged in strong, clear plastic bags or attractive boxes with complete description and length of cable printed on the label.

**SHIELDED****SHIELDED CONNECTING CABLES WITH MOLDED PHONO PIN PLUGS AND MOLDED PHONO PIN JACKS**

The silver gray cable is of high quality, low-capacitance type for minimum loss. Used for interconnecting tuners, pre-amps, amplifiers,

record changers, recorders, and accessories — wherever a Phono Pin Jack or Plug is used.


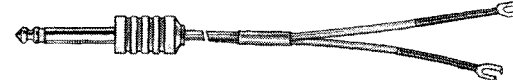

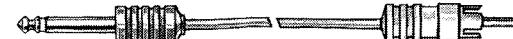


	Shielded Cable. Molded Phono Pin Plug each end.	C101	18"	.54
		C102	36"	.63
		C103	72"	.81
		C104	120"	1.11
<b>NET</b>				
	Shielded Cable. Molded Phono Pin Plug; Stripped and Tinned.	C105	18"	.39
		C106	36"	.48
		C107	72"	.66
		C108	120"	.96
<b>NET</b>				
	Shielded Cable. Molded Phono Pin Plug; Phono Pin Jack.	C201	18"	.63
		C202	36"	.72
		C203	72"	.90
		C204	120"	1.20
<b>NET</b>				
	Shielded Cable. Molded Phono Pin Jack each end.	C401	18"	.84
		C402	36"	.93
		C403	72"	1.11
		C404	120"	1.41

→ (Where a RIGHT ANGLE molded phono pin plug is desired, add "R" to stock number.)

**FOR CABLE EXTENSION APPLICATIONS**

Extra length shielded cables to meet the growing demand for stereophonic and extension use in Hi-Fi and Stereo. Extra long molded

grips on phono pin plug for ease of handling when jack is recessed into the cabinet or chassis.

	Shielded Cable. Molded SHIELDED Phone Plug; Stripped and Tinned.	C4006	6'	.96
		C4010	10'	1.20
		C4015	15'	1.50
<b>NET</b>				
	Shielded Cable. Molded SHIELDED Phone Plug; Lugs.	C4106	6'	1.02
		C4110	10'	1.26
		C4115	15'	1.56
<b>NET</b>				
	Shielded Cable. Molded SHIELDED Phone Plug each end.	C4306	6'	1.32
		C4310	10'	1.56
		C4315	15'	1.86
		C4325	25'	2.46
<b>NET</b>				
	Shielded Cable. Molded SHIELDED Phone Plug; Phono Pin Plug.	C4406	6'	1.11
		C4410	10'	1.35
		C4415	15'	1.65
<b>NET</b>				
	Shielded Cable. Molded SHIELDED Phone Plug; Phono Pin Jack.	C4506	6'	1.17
		C4510	10'	1.41
		C4515	15'	1.71
<b>NET</b>				
	Shielded Cable. Molded SHIELDED Phone Plug; Molded SHIELDED Phone Jack.	C4606	6'	1.71
		C4610	10'	1.89
		C4615	15'	2.19

→ (Where a RIGHT ANGLE molded phone pin plug is desired, add "R" to stock number.)

## CONNECTING CABLES

with *Lenite*

## MOLDED PLUGS and JACKS

**LAB-TRONICS INC.**

Chicago, Illinois 60613



FOR MICROPHONES, PROFESSIONAL RECORDERS, SPECIAL AUDIO EQUIPMENT, TV EYES, ELECTRONIC INSTRUMENTS, OFFICE EQUIPMENT, ETC.

L-T cables and molded connectors are designed to provide a noise-free, trouble-free, strain-proof connection. All metal parts are machined brass, smoothly polished and nickel plated. Soldered connections are imbedded in unbreakable molded plastic and cannot loosen or pull

out. Low loss, fully shielded cable. Can be used with high impedance inputs. Handy grooved plastic handles for easy gripping. Cables and molded plugs are color-matched in soft, pleasing silver-gray.

**SHIELDED****NEW TINY MOLDED PHONE PLUGS**

NEW TINY PHONE PLUG, used in some of the latest models of recording equipment, business machines, hearing aids, pocket radios, meters, etc. The miniature, two-conductor phone plug is approximately  $\frac{1}{3}$  size of standard phone plug. Molded body cannot come

apart. Low-capacitance shielded cable and parallel unshielded cord available. Silver-gray cable and matching molded unbreakable plastic termination.



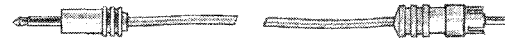
Shielded Cable. Tiny Plug; Stripped and Tinned.

		NET
T2003	3'	.96
T2006	6'	1.17
T2010	10'	1.38



Shielded Cable. Tiny Plug; Standard Phone Plug.

		NET
T2303	3'	1.26
T2306	6'	1.47
T2310	10'	1.65



Shielded Cable. Tiny Plug; Phono Pin Plug.

		NET
T2403	3'	1.11
T2406	6'	1.32
T2410	10'	1.50



Shielded Cable. Tiny Plug; Phono Pin Jack.

		NET
T2503	3'	1.14
T2506	6'	1.35
T2510	10'	1.53

**SHIELDED****MICROPHONE CONNECTORS**

A new molded connector which is interchangeable with the present type now on the market. Molded grip with the cable molded directly onto the polished nickel plated brass connector. BOTH conductor AND shield are soldered to the connector prior to molding, insuring noise-free operation. Heavy duty co-axial shielded cable, low loss, with

a nominal capacitance of approximately 25mmf/ft. For use with microphones, pre-amps, test equipment, VTVM, oscilloscopes, recorders, custom Hi-Fi installations or wherever a standard microphone connector is used. Coupling ring may be screwed back to convert connector from female to male type. Molded in gray to match the cable.



Shielded Cable. Molded Microphone Connector. Molded Phono Pin Plug.

		NET
E801	1'	.78
E803	3'	.90
E806	6'	1.11



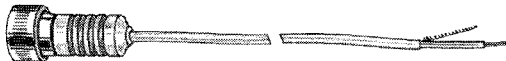
Shielded Cable. Molded Male and Female Microphone Connector.

		NET
E906	6'	1.29
E912	12'	1.71
E925	25'	2.64



Shielded Cable. Molded Microphone Connector; Clips.

		NET
E1003	3'	1.14
E1006	6'	1.35
E1012	12'	1.77



Shielded Cable. Molded Microphone Connector; Stripped and Tinned.

		NET
E1106	6'	.99
E1110	10'	1.29
E1125	25'	2.40



Shielded Cable. Molded Microphone Connector; Molded Phone Plug.

		NET
E1306	6'	1.29
E1310	10'	1.59
E1325	25'	2.76



Shielded Cable. Molded Microphone Connector; Molded Pin Jack.

		NET
E1506	6'	1.26
E1510	10'	1.56
E1525	25'	2.67



Shielded Cable. Molded Microphone Connector; Molded Phone Jack.

		NET
E1606	6'	1.59
E1610	10'	1.89
E1625	25'	3.00



## CONNECTING CABLES

with *Lenite*

## MOLDED PLUGS and JACKS

FOR HI-FI, TUNERS, AMPLIFIERS, PRE-AMPLIFIERS, RECORDERS, SPEAKERS, SPEAKER EXTENSIONS, RECORD CHANGERS, PUBLIC ADDRESS SYSTEMS, AUDIO EQUIPMENT, RADIO AND STEREOPHONIC SYSTEMS

## MOLDED DUAL PHONO PIN PLUG FOR ALL STEREO AMPLIFIERS

Plugs into standard 7/16" centers dual phono jacks on all stereo amplifiers. Used for interconnecting stereo record changers, amplifiers and

accessories. All cables are isolated — separately shielded to prevent cross talk.



Two conductor separately shielded stereo cable; Molded dual phono pin plug; stripped and tinned.

		NET
SP8003	3'	1.41
SP8006	6'	1.68
SP8010	10'	2.04



Two conductor separately shielded stereo cable; Molded dual phono pin plugs each end.

		NET
SP8403	3'	1.71
SP8406	6'	1.98
SP8410	10'	2.34



Two conductor separately shielded cables; Molded dual phono pin plugs; dual phono pin jacks.

		NET
SP8503	3'	2.07
SP8506	6'	2.34
SP8510	10'	2.70

## MOLDED DUAL PHONO PIN PLUGS — "SEPARATE PLUGS"

For use in applications where distances between centers are greater than the standard 7/16" spacing, and extending to 6". Color coded for ease in identification.



Two individually shielded pin plugs; stripped and tinned.

		NET
CP8003	3'	1.47
CP8006	6'	1.74
CP8010	10'	2.10



Two individually shielded pin plugs; each end.

		NET
CP8403	3'	1.77
CP8406	6'	2.04
CP8410	10'	2.40



Two individually shielded pin plugs; phono pin jacks.

		NET
CP8503	3'	1.95
CP8506	6'	2.22
CP8510	10'	2.58

## PARALLEL CABLE (NOT SHIELDED)

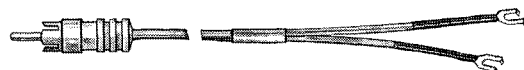
MOLDED CONNECTORS AND PLUGS WITH *Lenite* FOR VARIOUS TERMINATIONS

Flexible parallel cable (not shielded) with molded plugs for voice coil recording, speaker extensions, audio output, low impedance lines, etc.



Flexible Cable. Molded Phono Pin Plug; Stripped and Tinned.

		NET
P6006	6'	.45
P6010	10'	.57
P6020	20'	.87



Flexible Cable. Molded Phono Pin Plug; Lugs.

		NET
P6106	6'	.51
P6110	10'	.63
P6120	20'	.93



Flexible Cable. Molded Phono Pin Plug; Clips.

		NET
P6206	6'	.75
P6210	10'	.87
P6220	20'	1.17



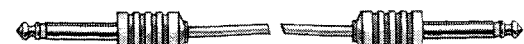
Flexible Cable. Molded Phono Pin Plug each end.

		NET
P6406	6'	.66
P6410	10'	.78
P6420	20'	1.08



Flexible Cable. Molded Phone Plug; Stripped and Tinned.

		NET
P7006	6'	.75
P7010	10'	.87
P7020	20'	1.17



Flexible Cable. Molded Phone Plug each end.

		NET
P7306	6'	1.26
P7310	10'	1.38
P7320	20'	1.68



Flexible Cable. Molded Phone Plug; Molded Phono Pin Plug.

		NET
P7406	6'	.96
P7410	10'	1.08
P7420	20'	1.38



Flexible Cable. Molded Phone Plug; Phono Pin Jack.

		NET
P7506	6'	1.02
P7510	10'	1.14
P7520	20'	1.44

→ (Where a RIGHT ANGLE molded phono pin plug is desired, add "R" to stock number.)

MOLDED ADAPTERS & CONNECTORS



with *Lenite*

for VARIOUS TERMINATIONS






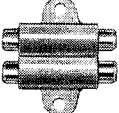

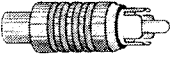
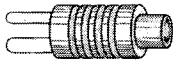
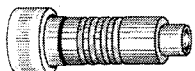
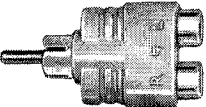
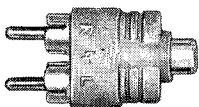
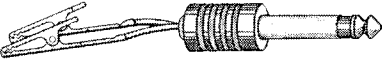
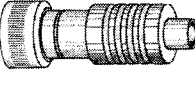
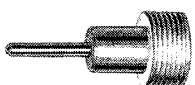









FOR MATING DIFFERING TERMINATIONS WITH MICROPHONES, SPEAKERS AND AMPLIFIERS

ADAPTERS AND CONNECTORS

Lab-Tronics' line of adapters was extensively researched, and is a most useful and complete line. A *must* for the lab or repair kit. Reduces the number of cables required. Capable of connecting almost any

termination to any other termination. Microphone connectors are convertible from female to male. American-engineered and American-manufactured to the highest standards of performance and durability.

 <b>C400</b> Phono Pin Jack; Phono Pin Jack. C400.....NET .60	 <b>P55A</b> Phono Pin Jack; Phono Plug. P55A.....NET .75	 <b>M75P</b> Male Mic; Phone Plug. M75P.....NET .30	 <b>MP</b> Mic; Phono Pin Plug. MP.....NET .60	 <b>C800</b> Mic; Mic. C800.....NET .60
 <b>CD400</b> Dual Phono; Dual Phono. CD400.....NET 1.20	 <b>A753</b> Phone Jack; Phono Pin Jack. A753.....NET 1.05	 <b>A750</b> Phone Jack; Phono Pin Plug. A750.....NET 1.05	 <b>A780</b> Phono Pin Jack; 2 Prong Polarized 1/4" centers. A780.....NET .75	 <b>A751</b> Mic Connector; Phono Pin Jack. A751.....NET .75
 <b>A754</b> Two Phono Pin Jacks; Phono Pin Plug. A754.....NET 1.20	 <b>A755</b> Two Phono Pin Plugs; Phono Pin Jack. A755.....NET 1.20	 <b>A782</b> Phone Plug; Clips. A782.....NET .75		 <b>A752</b> Mic Connector; Phone Jack. A752.....NET 1.05
 <b>A259</b> Adapts PL-259 plug to auto radio (Motorola type) plug. A259.....NET 1.05	 <b>A455</b> Phono Pin Plug; 2 Phono Pin Jacks. A455.....NET 1.14	 <b>A544</b> Phono Pin Jack; 2 Phono Pin Plugs. A544.....NET 1.14	 <b>A444</b> Phono Pin Plug; 2 Phone Pin Plugs. A444.....NET 1.14	

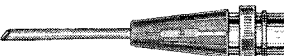

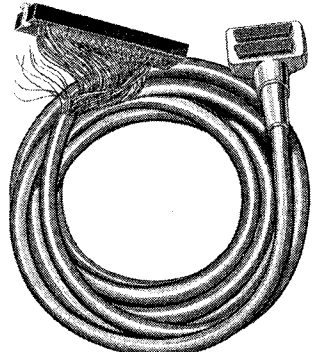





**EXACT DUPLICATE CABLES FOR ORIGINAL EQUIPMENT REPLACEMENT**

Molded Male Plugs, Molded Female Receptacles, Molded Octal Plugs, etc. (as widely used on Record Changers, Audio and TV equipment).

**ORIGINAL EQUIPMENT MANUFACTURERS:**

We invite manufacturers to submit prints or sketches through our local representatives or direct to factory.

ALL PRICES QUOTED ARE U.S.A. PRICES

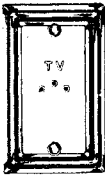
**Guarantee**

L-T Molded Plugs and Jacks are **GUARANTEED** against defects for two years from the time they are purchased. This guarantee covers breakage, mechanical, electrical or operational failures. Any L-T molded termination which becomes defective within 2 years and is returned to the factory, will be replaced at no charge.

# Mosley

# Mosley

### FLUSH MOUNTED TV SOCKETS



Easy-to-install, attractive wall plate TV sockets for every installation requirement. Ivory or brown plates are styled to harmonize with existing electrical plates. Available in types for single, dual or triple lead-in lines and for single and dual lines plus 4-wire rotor cable. Packaged with mating plug(s), F-9 mounting brackets and full instructions.

- |   |        |
|---|--------|
|   | Net    |
| F-1PK iv. Single Flush Socket w/Plug and Mtg. Hdw. . . . .    | \$1.25 |
| F-1PK br. Single Flush Socket w/Plug and Mtg. Hdw. . . . .    | \$1.25 |
| F-11PK iv. Dual Flush Socket w/Plug and Mtg. Hdw. . . . .     | \$1.72 |
| F-11PK br. Dual Flush Socket w/Plug and Mtg. Hdw. . . . .     | \$1.77 |
| F-14PK iv. Single Lead-in and 4-Wire Socket / Plugs . . . . . | \$2.26 |
| F-14PK br. Single Lead-in and 4-Wire Socket / Plugs . . . . . | \$2.26 |
| F-114PK iv. Dual Lead-in and 4-Wire Socket / Plugs . . . . .  | \$2.26 |
| F-114PK br. Dual Lead-in and 4-Wire Socket / Plugs . . . . .  | \$2.32 |

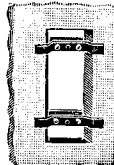
### "ANTI-STUB" TV/FM WALL PLATE OUTLETS

Similar to F-1PK, above, but with switch to disconnect system beyond outlet being used. Prevents "stub-effect". Silver plated positive action contacts. Brown or ivory polystyrene. With polarized plug and mounting hardware.

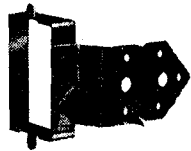
- |   |        |
|---|--------|
| D-1PK iv. Single Flush Switching Outlet . . . . . | \$1.35 |
| D-1PK br. Single Flush Switching Outlet . . . . . | \$1.39 |

### MOUNTING HARDWARE

Type F-9, Mounting Brackets of heavy gauge steel for installing F-Series Sockets in walls of existing buildings. Requires rectangular opening  $\frac{3}{4}$ " wide by 4" long.



Net, F-9 . . . . . \$ .24

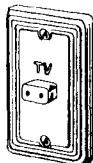


Type F-8 Plaster Ring for installing F-Series Sockets in new construction. Mounts easily and quickly to wood studs. Adjustable for plaster thicknesses up to 1 1/2". Heavy plated steel.

Net, F-8 . . . . . \$ .40

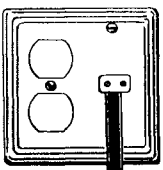
### SURFACE MOUNTED SOCKETS

Surface mounted sockets resemble flush wall plate types but may be used for either concealed wiring or where TV line is brought along surface of wall. No wall opening required. In brown or ivory polystyrene. Supplied with mating plug(s) and wood screws.



- |   |        |
|---|--------|
|   | Net    |
| M-1PK iv. Single Lead-in Socket w/Plug . . . . .              | \$1.06 |
| M-1PK br. Single Lead-in Socket w/Plug . . . . .              | \$1.10 |
| M-11PK iv. Dual Lead-in Socket w/Plug . . . . .               | \$1.49 |
| M-11PK br. Dual Lead-in Socket w/Plug . . . . .               | \$1.49 |
| M-14PK iv. Single Lead-in and 4-Wire Socket w/Plugs . . . . . | \$2.44 |
| M-14PK br. Single Lead-in and 4-Wire Socket w/Plugs . . . . . | \$2.44 |

### AC/TV WALL PLATE SOCKETS

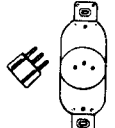


Combination TV lead-in outlet and plate for double convenience outlet. Ideal for installation during new construction or remodeling. Metal barrier plate, supplied separates AC and TV services to comply with electrical codes. Install in ganged electrical boxes. Brown or ivory. With mating plug(s) and mounting screws.

- |  |        |
|--|--------|
|  | Net    |
| C-1PK iv. 300 ohm Socket w/Plug . . . . .              | \$1.27 |
| C-1PK br. 300 ohm Socket w/Plug . . . . .              | \$1.30 |
| C-11PK iv. Two 300 ohm Sockets w/Plug . . . . .        | \$1.73 |
| C-11PK br. Two 300 ohm Sockets w/Plug . . . . .        | \$1.73 |
| C-14PK iv. 300 ohm and 4-Wire Socket w/Plugs . . . . . | \$2.30 |
| C-14PK br. 300 ohm and 4-Wire Socket w/Plugs . . . . . | \$2.30 |

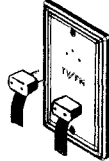
### TV/FM WALL PLATE OUTLETS

Permits all electrical and TV/FM outlets to be matched. Designed to fit standard, single or double convenience outlet plates, either plastic or metal. Brown or ivory polystyrene.



- |  |             |
|--|-------------|
| FY-1 iv. Single TV/FM Outlet w/Mtg. Hdw. . . . .                 | Net, \$ .67 |
| FY-1 br. Single TV/FM Outlet w/Mtg. Hdw. . . . .                 | \$ .67      |
| FY-1PK iv. Single TV/FM Outlet w/Plug, Mtg. Hdw. . . . .         | \$1.06      |
| FY-1PK br. Single TV/FM Outlet w/Plug, Mtg. Hdw. . . . .         | \$1.06      |
| FY-14 iv. Single TV/FM Outlet and 4-Wire Socket . . . . .        | \$ .87      |
| FY-14 br. Single TV/FM Outlet and 4-Wire Socket . . . . .        | \$ .87      |
| FY-14PK iv. Single Outlet & 4-Wire Socket w/Plugs, Hdw . . . . . | \$1.70      |
| FY-14PK br. Single Outlet & 4-Wire Socket w/Plugs, Hdw . . . . . | \$1.70      |

### STEREO TV/FM WALL PLATE OUTLETS

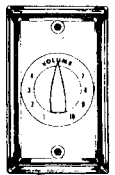


For use in areas where FM can be received with TV antenna. Resistor-type 2 set coupler built-in to isolate TV from FM permitting simultaneous reception without interaction.

- |   |        |
|---|--------|
| WPS-11PK iv. TV/FM Stereo Plate . . . . . | \$1.46 |
| WPS-11PK br. TV/FM Stereo Plate . . . . . | \$1.46 |

### AUDIO PAD PLATE w/KNOB

Attractive brown or ivory polystyrene plate with satin finished anodized aluminum dial face and modern indicator knob. Use to assemble L-pad, T-pad, Fader, etc., for audio and Hi-Fi systems. Less control.



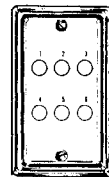
- |                      |        |
|----------------------|--------|
| Type FAV-1 . . . . . | \$1.09 |
|----------------------|--------|

### ATTENUATOR PLATE with SPEAKER JACK

Same as Type FAV-1. Plug and jack have been supplied for additional external speaker unit. Less control.

- |                      |        |
|----------------------|--------|
| Type FAV-2 . . . . . | \$1.63 |
|----------------------|--------|

### FLUSH SPEAKER SWITCH PLATE



High quality 6 position switch plate selects any speaker or combination of speakers in remote locations. Heavy duty push button switches on brown or ivory plate. Complete with plated machine screws and instructions.

- |                      |         |
|----------------------|---------|
| Type FAS-6 . . . . . | \$11.43 |
|----------------------|---------|

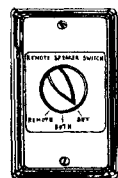
### SPEAKER WALL PLATE OUTLETS

Brown or ivory polystyrene flush mounting outlets. Speaker socket and plug polarized and solderless. Ideal for custom Hi-Fi installations where remote speakers are not permanently installed. Complete with mounting brackets and instructions.



- |                                |        |
|--------------------------------|--------|
| Type FAS-1PK Single . . . . .  | \$1.86 |
| Type FAS-11PK Double . . . . . | \$2.03 |

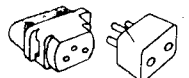
### 3-POSITION SPEAKER SWITCH



Three position speaker switch for Hi-Fi or Stereo Speaker Systems. Will operate single speaker system, remote system or both. Type FSS-2 is supplied with external plug and jack for additional speaker.

- |                      |        |
|----------------------|--------|
| Type FSS-1 . . . . . | \$2.50 |
| Type FSS-2 . . . . . | \$2.68 |

### TV/FM INTERCHANGEABLE OUTLET



Permits all electrical and TV/FM outlets to be matched. Designed to fit interchangeable type electrical plates styles 91041 Brown, 92041 Ivory and 97011 Stainless Steel. Molded of low loss polystyrene in brown or ivory. Supplied with Mosley 303 Polarized 300 ohm Transmission Line Plug.

- |  |        |
|--|--------|
| FG-1PK iv. Replaceable Outlet and Plug . . . . . | \$ .59 |
| FG-1PK br. Replaceable Outlet and Plug . . . . . | \$ .59 |

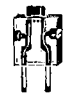
# Mosley

# Mosley

### 300 OHM CONNECTORS



Precision molded low loss 300 ohm connectors for UHF and VHF transmission lines. Constant impedance. Solderless.



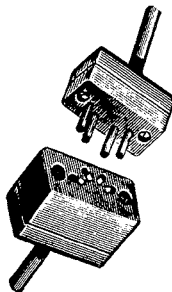
Type 301	Line Plug	Net, \$ .21
Type 311	Line Socket	\$.21
Type 321	Polarized, pair	\$.40
Type 304	Input Adapter	\$.21
Type 27-S	Flat-line Splicer	\$.13
Type 29-S	Round/Flat Splicer	\$.14



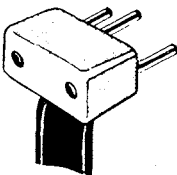
### MULTI-WIRE CONNECTORS

For rotator cable connections and many other low voltage uses. No set screws in line plugs and line sockets. In brown or ivory.

Type 354	4-wire Base Socket	Net, \$ .95
Type 364	4-wire Line Socket	\$.67
Type 374iv.	4-wire Line Plug	\$.51
Type 374Br.	4-wire Line Plug	\$.52



### 300 OHM TV PLUG



300 ohm plug, one piece construction and utilizing set screws to hold line. Supplied with 3 pins to mate with AC-TV series plates but center pin is removable to use with Mosley 2 pin sockets. Brown or ivory.

Type 303iv.	Net, \$ .21
Type 303Br.	\$.22

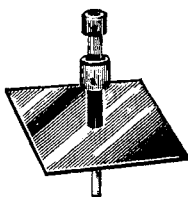
### UNIVERSAL TV SOCKET

Compact, neat plug-in socket for FM or TV lead-in line. Use as line tap or terminal socket. Low loss polystyrene, constant impedance design for 300 ohm line. In brown or ivory. Complete with mating plug.



343PK iv. above w/plug	Net, \$ .68
343PK br. above w/plug	\$.70

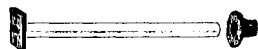
### ROOF-THRU



8" x 9" copper flashing with polystyrene feed through bushing permits direct weather-proof roof entrance of flat TV line and rotor cable. Easy to install.

Type 624	Net, \$4.07
Type 623. Similar to Type 624 but for round or oval 300 ohm line only.	
Type 623	Net, \$4.07

### WALL-THRU



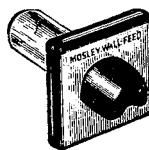
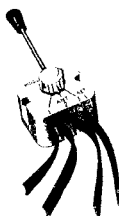
Neat, low loss wall entrance for all popular oval, round or flat transmission lines. Fits walls up to 1 1/2" thick. Type 343 TV Socket mounts on inside plate. Brown or ivory.

625 iv.	Net, \$1.32
625 br.	\$1.36
625Pk iv. above w/plug	\$2.03
625PK br. above w/plug	\$2.09

### TV ANTENNA SWITCHES

Top quality rotary TV Antenna Switches for UHF and VHF. Silver-to-silver contacts and constant impedance design assures low insertion loss. Solderless. Brown or ivory.

F-20 iv.	3-Way TV Switch	Net, \$2.53
F-20 br.	3-Way TV Switch	\$2.61
F-42 iv.	2-Way TV Switch	\$1.39
F-42 br.	2-Way TV Switch	\$1.39



### WALL FEED

Install at gable end or under roof overhang to provide weatherproof TV lead-in entrance into attic. Ideal for house trailer installations. Ivory or brown polystyrene plate with weatherhood and 2" tube. In trailer installation cut tube

flush with inside wall and install Type 343 TV Socket directly over opening.

626 iv.	Net, \$ .86
626 br.	\$.88
626PK iv. Wall Feed w/Socket	\$1.56
626PK br. Wall Feed w/Socket	\$1.61

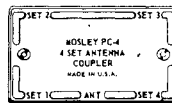
### MULTI-SET COUPLERS

"Tiny-Mite" Multi-set Coupler and plug-in socket with plug. Resistor type tap-off unit will operate two TV sets from one antenna. Neat, compact. In brown or ivory.



912 iv.	Net, \$1.22
912 br.	\$1.22

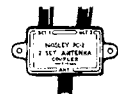
4-Set Coupler. Resistor type coupler designed for metropolitan areas, the major multi-set markets. Ideal for motels, small apartment buildings, etc. Brown or ivory polystyrene case.



PC-4 iv.	Net, \$3.19
----------	-------------

A unique, compact two set coupler, designed to minimize set interaction and radiation.

PC-2 iv.	Net, \$1.45
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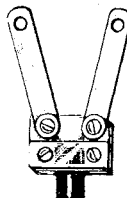


### TUNABLE WAVE TRAPS

High Q series resonant wave traps for eliminating interference patterns and cross-talk on TV and FM. Use on any receiver input, 50 to 600 ohms, balanced or unbalanced. Solderless. Install on set terminal strip. Choose type with range including frequency of interfering station.

WT-7	brown	For Freqs. 6.8 - 8.5 mc.
WT-14	brown	For Freqs. 13.8 - 16 mc.
WT-21	brown	For Freqs. 16 - 28 mc.
WT-41	brown	For Freqs. 27 - 55 mc.
WT-78	brown	For Freqs. 47 - 110 mc.
WT-168	brown	For Freqs. 100 - 230 mc.
		Net, \$3.1

### MOSLEY "Y-TY"



Solderless strain relief connector prevent transmission line from breaking at the antenna. Easy to install, fits all types line Use Type 263-L for antennas with terminals more than 4" apart.

263-S black Y-TY (small)	Net, \$ .4
263-L black Y-TY (large)	\$.4

### POLYETHYLENE TV CONDUIT

Black polyethylene tubing makes ideal conduit for running TV and FM transmission lines within walls. Simplifies placement of hidden wires. 3/4" inside diameter. Flexible easy to install. Many other applications such as intercom and other low voltage cables.

80-25	black	500'	TV Conduit	Net, \$ .2
80-50	black	500'	TV Conduit	\$.2
80-100	black	500'	TV Conduit	\$.2
80-500	black	500'	TV Conduit	\$.2

See MOSLEY Antennas and other Amateur Components listed in another section of this book.



# mueller clips

a complete line of

## ALLIGATOR TEST & BATTERY CLIPS

Mueller Electric Co. CLEVELAND, OHIO 44114



### "60 SERIES" ALLIGATOR CLIPS

#### No. 60—CONVENTIONAL TYPE

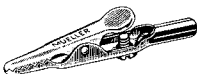
New slim design with full-meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2" long.



EACH NET.....\$0.07      LOTS OF 10.....\$0.046

#### No. 60-S—SCREW CONNECTION

Eliminates necessity for soldering. Otherwise same as No. 60.



EACH NET.....\$0.08      LOTS OF 10.....\$0.052

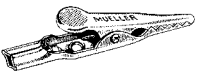
#### No. 60-CS—COPPER ALLIGATOR CLIP

Solid copper version of No. 60-S. Screw connection. 2" long. 10 per box.

EACH NET.....\$0.12      LOTS OF 10.....\$0.08

#### No. 60PR-2—SPECIAL BARREL

FOR TEST PROD OR PHONE TIP



Barrel crimped to provide friction fit on standard test prod or phone tip. Holds prod on test, frees hand for other work.

EACH NET.....\$0.10      LOTS OF 10.....\$0.072

#### No. 62 FLEXIBLE VINYL INSULATOR

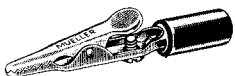
Red and black insulators for Alligator Clips 60, 60-S, 60-CS, 60PR-2.



EACH NET.....\$0.05      LOTS OF 10.....\$0.035

#### No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE

Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. 2 1/4" long. Shipped half red, half black.



EACH NET.....\$0.11      LOTS OF 10.....\$0.075

#### No. 60-CHS—COPPER ALLIGATOR CLIP, INSULATED HANDLE

Solid copper version of No. 60-HS. Screw connection. Shipped with half red, half black insulating sleeves. 10 per box.

EACH NET.....\$0.15      LOTS OF 10.....\$0.10

### "70 SERIES" ALLIGATOR CLIPS

U.S. Patent No. 2,762,028

A trim, modern Alligator Clip.

Features simplified design, fast connection of wire with cord strain relief ears. Patented hinge construction and lower cost.

Mueller's traditionally snappy spring, full jaw spread, fine meshing teeth, round thumb grip and trim shape give most wanted features for test work in close quarters.

#### No. 70—FOR SOLDERED CONNECTION

Steel, cadmium plated. 1 1/4" long.

EACH NET.....\$0.07      LOTS OF 10.....\$0.042



#### No. 70-S—SCREW CONNECTION

Otherwise same as No. 70.

EACH NET.....\$0.08      LOTS OF 10.....\$0.048

#### No. 70-CS—COPPER SCREW CONNECTION

Solid copper version of No. 70-S.

EACH NET.....\$0.11      LOTS OF 10.....\$0.075



#### No. 72—SKIN-TIGHT INSULATOR

FOR 70 SERIES ALLIGATOR CLIPS!



For the first time complete, skin-tight, one-piece insulation for a standard size Alligator Clip! Covers entire clip right down to nose. Special tip slot permits full jaw opening without exposing teeth.

EACH NET.....\$0.05      LOTS OF 10.....\$0.035



#### WEE-PEE-WEE No. 88

Entirely Non-ferrous.

An extremely small clip for fine testing in radio and electrical work. Light-Weight; thin-nosed; spring-temper phosphor bronze. Ideal for close-wound coils. 1 1/4" long; jaw spread 3/8". 10 per box.

EACH NET.....\$0.23      LOTS OF 10.....\$0.16

Use No. 98 Insulator.

### NEW! MICRO-GATOR CLIP

(Smallest Insulated Clip Ever Made)

U.S. Patent No. 2,762,028

Trademark Reg.

The alligator clip with the microscopic tip! This is the alligator clip you now can use where no other clip will do . . . on printed circuits, in tight spots and on tiny terminals too crowded for anything but its microscopic tip. It offers the speed, free-handed ease and convenience associated with other Mueller alligator clips. The Micro-gator is truly small (takes 30 to weigh an ounce!) Including separate skin-tight insulator the tip is no bigger than the head of a pin! Yet the Micro-gator has ample thumb grip, and plenty of bite to stand up straight on the smallest terminals. Ample 1/32" jaw spread. Solder connection. Skin-tight flexible vinyl insulator (sold separately) has "lip-action" tip slot so that jaws stay covered whether open or closed.



Micro-Gator



Micro-Gator with Insulator

#### No. 34 (Steel, cadmium plated)

EACH NET.....\$0.06      LOTS OF 10.....\$0.04

#### No. 34-C (Solid Copper)

EACH NET.....\$0.07      LOTS OF 10.....\$0.05

#### No. 36 (Insulator for Nos. 34 and 34-C)

EACH NET.....\$0.05      LOTS OF 10.....\$0.03

### MINI-GATOR CLIP

U.S. Patent No. 2,762,028

Trademark Reg.

Indispensable for testing or incorporation into miniaturized equipment. Skin-tight flexible Vinyl insulator (sold separately) covers completely — has slotted "lip action" tip. Clip weighs 1/20th oz., has tiny 1/64" O.D. nose, but ample 3/32" jaw spread. Crimping ears. Solder connection. Surprisingly strong bite penetrates corrosion and coatings.



Mini-gator



Mini-gator with Insulator

#### No. 30 (Steel, cadmium plated)

EACH NET.....\$0.06      LOTS OF 10.....\$0.04

#### No. 30-C (Solid Copper)

EACH NET.....\$0.07      LOTS OF 10.....\$0.05

#### No. 32 (Insulator for Nos. 30 and 30-C)

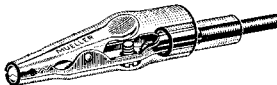
EACH NET.....\$0.05      LOTS OF 10.....\$0.03

### COMPLETELY INSULATED ALLIGATOR CLIPS

Patent Pending

#### No. 63 or 63-C Clip

Sold only as a unit, with factory-applied insulators.



A radically new development that doubles the usefulness of Alligator Clips! Completely insulated right down to the nose. Flexible 2-piece skin-type vinyl insulator of high dielectric strength, with "lip action" slotted nose that permits opening of clip without exposing metal. Insulator nose is only 13/64" O.D. The tight fitting sheath preserves all the slimness of the Alligator Clip, still giving complete protection against shorts in even the tightest spots. These clips could be bunched together—touching all around—without danger of shorting. Screw connection easily made by slipping insulator forward.

#### No. 63—INSULATED ALLIGATOR CLIP (STEEL)

Composed of Mueller No. 60-S Alligator Clip steel, cadmium plated, screw connection, complete with 2-piece vinyl insulator. Shipped half with red insulators, half black. 10 per box.

EACH NET.....\$0.19      LOTS OF 10.....\$0.13

#### No. 63-C—INSULATED ALLIGATOR CLIP (COPPER)

Composed of Mueller No. 60-CS Alligator Clip, solid copper, screw connection. Shipped half with red insulators, half black. 10 per box.

EACH NET.....\$0.22      LOTS OF 10.....\$0.15

### CROCODILE CLIPS



No. 85 or 85-C Clip with No. 87 Insulator



No. 85-T Clip

No. 85—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Screw connection. 2 1/8" long.

EACH NET.....\$0.09      LOTS OF 10.....\$0.065

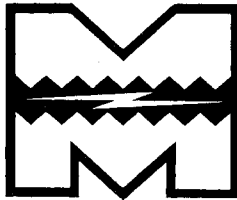
No. 85-C—Same as No. 85, except solid copper. A radio frequency, entirely non-ferrous test clip. 10 per box.

EACH NET.....\$0.18      LOTS OF 10.....\$0.12

No. 85-T—Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removable heads. 2 3/8" long. 10 per box.

EACH NET.....\$0.23      LOTS OF 10.....\$0.163

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and Black. Cover entire clip except nose. Protect against short and shock. Help to distinguish leads.



# mueller clips

a complete line of  
**ALLIGATOR TEST & BATTERY CLIPS**  
*Mueller Electric Co.* CLEVELAND, OHIO 44114

### TEST CLIPS



**No. 45 PEE WEE**

A very small test clip for radio, ignition, meter and similar work. 1 1/2" long. Jaw spread 1/8". Steel, cadmium plated.

EACH NET.....\$0.08      LOTS OF 10.....\$0.053



**No. 45-C Clip  
No. 47 Insulator**

**No. 45-C  
Solid Copper R.F. Test Clip**

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1 1/2" long. 10 per box.

EACH NET.....\$0.14      LOTS OF 10.....\$0.095

Use No. 47 Insulator for clips 45 and 45-C.



**No. 48-B**

A small test and battery clip for radio use and general testing purposes. 2" long. Jaw spread 3/8". Steel, cadmium plated. 10 per box.

EACH NET.....\$0.12      LOTS OF 10.....\$0.086

No. 48C—Solid Copper. Same size as 48-B.  
EACH NET.....\$0.17      LOTS OF 10.....\$0.12



**No. 50-C Needle Clip**

Solid bronze. Needle pierces insulation of wire for quick test contact. 2 1/4" long. 10 per box.

EACH NET.....\$0.28      LOTS OF 10.....\$0.20

No. 51-C—Large crocodile clip. Same as 50-C but without needle. 10 per box.

EACH NET.....\$0.19      LOTS OF 10.....\$0.133

Use No. 49 insulator for Clips 48-B, 48-C, 50-C and 51-C.



**No. 27**

A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work 2 1/8" long. Jaw spread 3/8". Steel, cadmium plated. 10 per box.

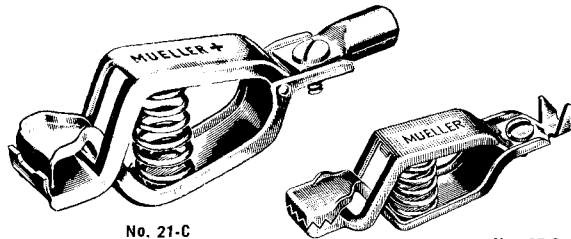
EACH NET.....\$0.14      LOTS OF 10.....\$0.098

No. 27-C—Solid copper. Same size as No. 27. 10 per box.

EACH NET.....\$0.23      LOTS OF 10.....\$0.16

Use No. 29 Insulator for clips 27 and 27-C.

### LARGER SIZES OF CLIPS



**No. 21-C**

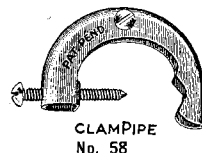
**No. 25-C**

All packed 10 per box.

No.	Description	Each Net	Lots of 10
No. 24-A	25 Amp. Steel, lead plated, 2 1/2" long	\$0.24	\$0.163
No. 25	40 Amp. Steel, cadmium plated, 3" long	.21	.15
No. 25C	75 Amp. Solid Copper, 3" long	.43	.30
No. 21-A	50 Amp. Steel, lead plated, 4" long	.42	.29
No. 21-C*	100 Amp. Solid Copper, 4 1/2" long	.97	.68
No. 11-A*	100 Amp. Steel, lead plated, 6" long	1.06	.75
No. 11C*	200 Amp. Solid Copper, 6" long	1.81	1.27
No. 35-C*	300 Amp. Solid Copper, 7 1/2" long	3.45	2.41

(\*Furnished with detachable lug connection for easy securing to large cables.)

### GROUND CLAMP

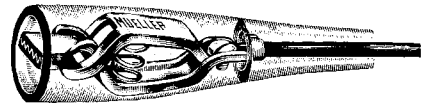


**CLAMPIPE  
No. 58**

The ClampPipe will not spread, bend or lop over when applied. Point of large screw bites through corrosion into clean metal to insure good contact. Applicable to pipe 3/4" to 1 1/2" O.D. The best ground clamp on the market!

EACH NET.....\$0.20      LOTS OF 10.....\$0.14

### FLEXIBLE INSULATORS FOR CLIPS



A convenient protection against short circuit and electric shock. Colors help to distinguish leads. Packed half red and half black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly. NOW AVAILABLE also in blue, white, yellow and green at 10% above regular price are insulators marked \* below.

Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13*	11-A, 11-C	\$0.80	\$0.56
23*	21-A, 21-C	.40	.28
24*	24-A, 25, 25-C	.21	.15
29*	27, 27-C	.13	.09
32*	30, 30-C	.05	.03
35	33-C	2.93	2.05
36*	34, 34-C	.05	.03
47*	45, 45-C	.06	.04
49*	48-B, 48-C, 50-C, 51-C	.09	.065
62*	60, 60-S, 60-CS, 60R-2 (also 70 Series)	.05	.035
72*	70, 70-S, 70-CS	.05	.035
87*	85, 85-C, 85-T	.06	.04
93	88	.12	.08

\*Also available in blue, white, yellow and green.

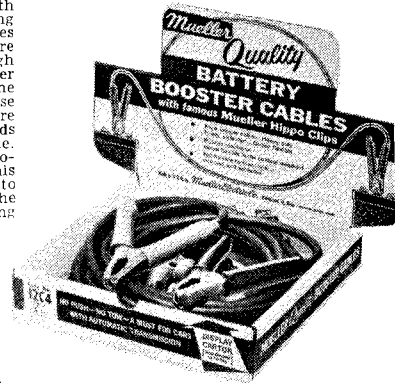
### MUELLER QUALITY BATTERY BOOSTER CABLE

Highest quality cables, equipped with famous Hippo-Clips, for boosting "dead" 6 or 12-volt vehicle batteries with an external battery. Cables are pure copper, finely stranded for high flexibility and covered with rubber insulation which stays flexible in the coldest weather and resists oil, grease and acid. 413 strands of No. 30 wire in the 4-gauge cable and 259 strands of No. 30 wire in the 6-gauge cable. The many fine features of the Hippo-Clips alone are listed elsewhere on this page. The clips are both soldered to the cable and clinched around the cable insulation by means of clinching ears.

Packaged: pair of cables with clips in a bright, attractive display carton. Standard shipping container 10 cartons.

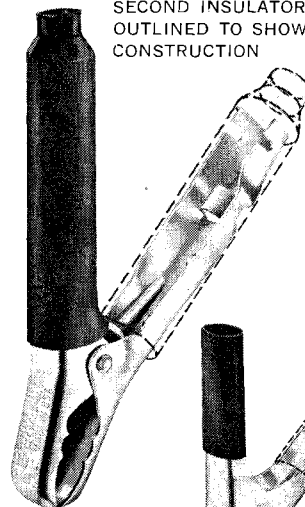
**No. 8A6—8 ft., 6-gauge, with No. 41A Hippo-Clips (Steel, bright copper plated)  
NET PRICE PER PAIR .....\$4.50**

**No. 12A6—12 ft., 6-gauge, with No. 41A Hippo-Clips (Steel, bright copper plated)  
NET PRICE PER PAIR.....\$6.00**



**No. 12C4—12 ft., 4-gauge, with No. 41C Hippo-Clips (Solid Copper)  
NET PRICE PER PAIR.....\$11.40**

### SECOND INSULATOR OUTLINED TO SHOW CONSTRUCTION



### SECOND INSULATOR OUTLINED TO SHOW CONSTRUCTION

### HIPPO-CLIP

**HIPPO-CLIP**—For battery booster cables and fast chargers. Proved higher quality and superior design. Built-in solder strap and clinching ears for fast, sure cable connection. Supplied with vinyl handle insulators in red or black. Full 1-9/16" jaw spread. 6" long.

Net price ea.

No. 41-A Steel, bright copper plated, 100 amp. ....\$ .45  
No. 41-C Solid Copper, 200 amp. .... .90

### NEW!

### PIGMY HIPPO-CLIP

**PIGMY HIPPO-CLIP**—A new small pie clip for battery operated equipment and automotive test. Flat, wide handle allow positive grip. Won't "squirt away" Built-in solder strap and wire clinching ears. Supplied with vinyl handle insulators in red or black. Ample 1 1/8" jaw spread. 3" long.

Net price ea.

No. 46-A Steel, bright copper plated, 50 amp. ....\$ .14  
No. 46-C Solid Copper, 75 amp. .... .24

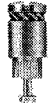


**NATIONAL TEL-TRONICS CORP.**  
 YONKERS, N. Y.

## NEW PRODUCTS


**NEW**
**COMBINATION TERMINAL  
STAKE-IN BINDING POST**

Screw head, turret terminal. Knurled shank. Lock-washer. Nickel plated brass 15/16 long. Knurled end 7/32, tip 3/16. Screw ¼ 10-32. No. 1-872.


**NEW**
**COMBINATION TERMINAL  
STAKE-IN BINDING POST**

Similar to above. 13/16 long. Knurled end 6/32, tip 3/16. Screw 1/4 8-32. No. 872.


**NEW**
**COMBINATION BINDING POST  
BANANA PLUG**

Converts any standard jack into 5-way binding post. Molded fluted nylon head. Red or black. Captive head. Phosphor Bronze, nickel plated spring. 15/16 overall closed. No. 863.


**NEW**
**COMBINATION BINDING POST  
BANANA PLUG**

Molded hex head. Otherwise same as above. 1-7/16 overall closed. No. 864. Available in red and black.


**NEW**
**METAL BINDING POST**

Captive head. Wrap-around terminal. Brass, nickel plated. Can be insulated from panel. Accepts phone tip, spade lug, banana plug, alligator clip, or wire strand. 1-5/32 overall length. No. 873.


**NEW**
**METAL BINDING POST**

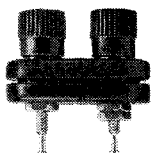
Gold plated. Fluted brass. Molded black nylon insulator. 5-way, will accept phone, spade, banana, alligator or wire connector. No. 1-873.


**NEW**
**INSULATED TIP PLUG**

Plastic handle. Black and red. Nickel plated brass body. Handle 1", tip length 1/2". No. 858.

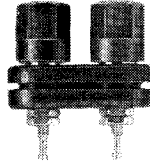

**NEW**
**INSULATED BANANA JACK**

With wrap-around terminal. Molded bakelite. Red, white, blue, green, yellow, black. Brass, nickel plated. No. 846.


**NEW**
**DUAL 5-WAY BINDING POST**

Nylon glued head. Red or black. Accepts phone, spade, banana, alligator, or wire connections. No. 2-878.

## NEW PRODUCTS


**NEW**
**DUAL 5-WAY BINDING POST**

Nylon hexagonal. Similar to preceding. No. 4-876. Available in red and black.


**NEW**
**5-WAY BINDING POST**

Molded nylon. Hexagonal head. Screw end. Accepts phone, spade, banana, alligator, or wire connection. No. 1-876. Available in red and black.


**NEW**
**5-WAY BINDING POST**

Molded nylon. Hexagonal head. Spade lug. Accepts phone, spade, banana, alligator, or wire connection. No. 2-876. Available in red and black.


**NEW**
**4-WAY BINDING POST**

Molded nylon. Hexagonal head. Wrap-around lug. Accepts phone jack in head or shaft hole. Also alligator, spade, or wire connection. No. 3-876. Available in red and black.


**NEW**
**5-WAY BINDING POST**

Molded nylon. Fluted head. Wrap-around end. Accepts phone, spade, banana, alligator, or wire connection. No. 877. Available in red and black.


**NEW**
**5-WAY BINDING POST**

Molded nylon. Fluted head. Screw end. Accepts phone spade, banana, alligator, or wire connection. No. 1-877. Available in red and black.


**NEW**
**5-WAY BINDING POST**

Molded nylon. Fluted head. Spade end. Accepts phone, spade, banana, alligator, or wire connection. No. 2-877. Available in red and black.


**NEW**
**5-WAY BINDING POST**

Self-locking. Molded nylon. Fluted head. Screw end. Accepts phone, spade, banana, alligator or wire connection. No. 882. Available in red and black.

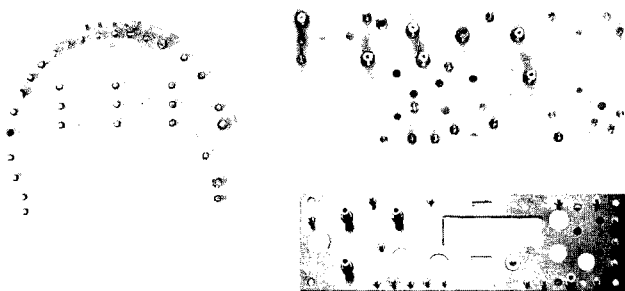
**NATIONAL TEL-TRONICS CORP.**  
YONKERS, N. Y.



**ntt**

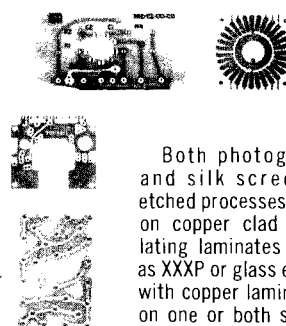
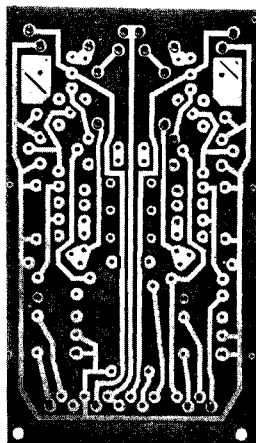
**SPECIAL CUSTOM PRODUCTS**

**TERMINAL BOARDS**



All terminal boards manufactured to rigid Commercial and Military specifications. Materials used include paper, cloth, glass or nylon laminates bonded with phenolic, silicone or melamine resins. Terminal boards can be supplied lacquered or varnished, printed, rubber stamped, silk screened, hot stamped, engraved or fungus proofed.

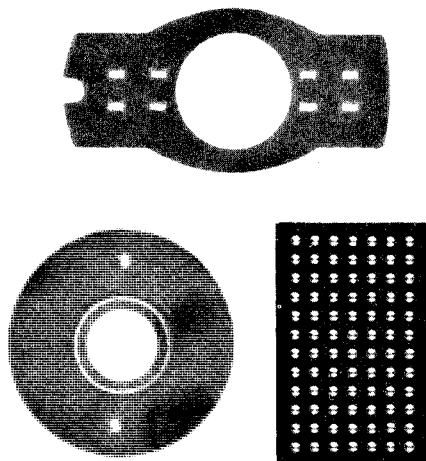
**PRINTED CIRCUITS**



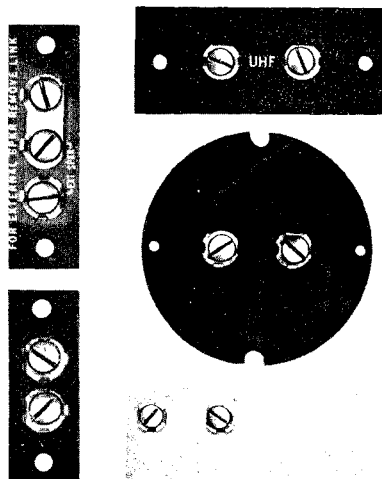
Both photograph and silk screened etched processes used on copper clad insulating laminates such as XXXP or glass epoxy with copper laminated on one or both sides. Boards can be supplied drilled or punched and with protective coatings to prevent oxidation. Various platings are also available such as gold, silver, albaloy and nickel Rhodium.

**FABRICATED PARTS**

National Tel-Tronics facilities include complete tool room and fabrication facilities to supply customers with all types of intricate and precisely machined or punched parts. Fabrication materials include all types of insulation materials and metals. Facilities are also available for all types of plating and lacquered, anodized or irridite finishes.

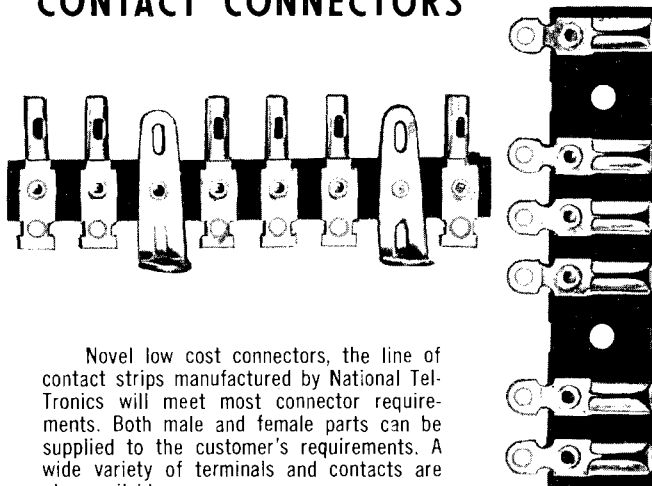


**BINDING POST BOARDS**



A complete line of binding post boards designed to meet the customers specifications. National Tel-Tronics facilities and engineering staff are highly qualified to assist the customer in the design and tooling of all shapes. Binding posts can be supplied marked, lacquered or fungus proofed.

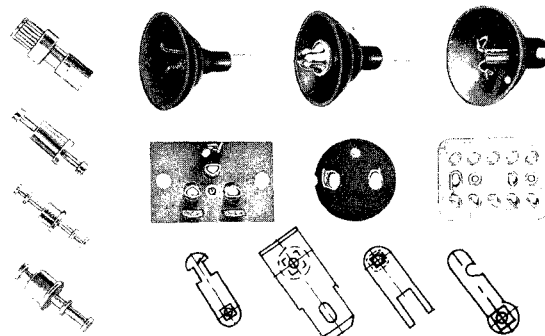
**CONTACT CONNECTORS**



Novel low cost connectors, the line of contact strips manufactured by National Tel-Tronics will meet most connector requirements. Both male and female parts can be supplied to the customer's requirements. A wide variety of terminals and contacts are also available.

*Photos shown are not to size or scale*

**OTHER SPECIAL PRODUCTS**



National Tel-Tronics manufactures a complete line of turret terminals designed to meet Commercial and Military specifications. Anode leads, both of the button and spring types are available to specifications. Inter-chassis and in-line connectors are available to the customer's requirements and specifications.



NATIONAL TEL-TRONICS CORP.  
YONKERS, N. Y.



2404



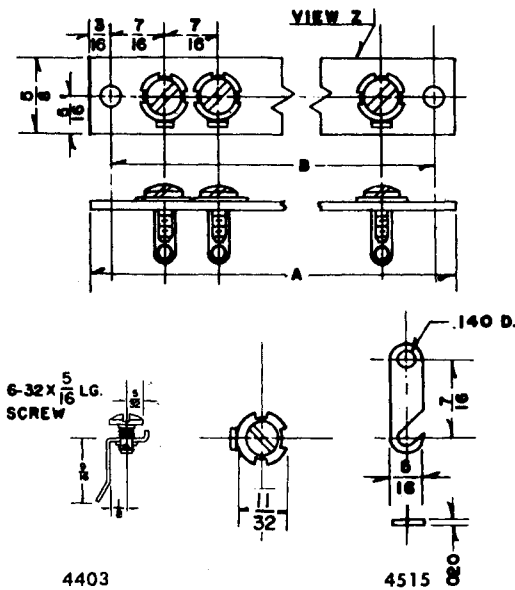
2403 SPECIAL

# BINDING POST BOARDS

**Boards**—1/16" thick XP Laminated Phenolic, other grades of insulating material when

specified. **Terminals**—1/32" thick, brass, cadmium plated. **Screws**—Steel nickel plated.

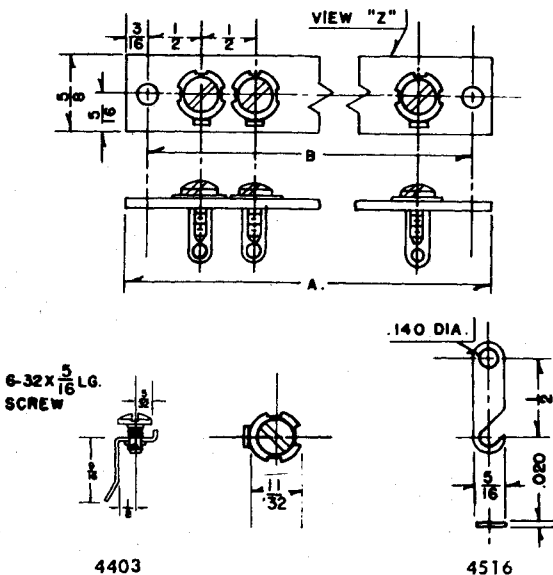
## 2400 SERIES



PART NO.	A	B	● LUG POSITIONS (AS PER VIEW "Z")													
			1	2	3	4	5	6	7	8	9	10	11	12		
2401	1 1/4"	7/8"	○	●	○											
2402	1 11/16"	1 5/16"	○	●	●	○										
2403	2 7/8"	1 3/4"	○	●	●	●	○									
2404	2 5/16"	2 3/16"	○	●	●	●	●	○								
2405	3"	2 5/8"	○	●	●	●	●	●	○							
2406	3 1/16"	3 1/16"	○	●	●	●	●	●	●	○						
2407	3 7/8"	3 1/2"	○	●	●	●	●	●	●	○						
2408	4 5/16"	3 5/16"	○	●	●	●	●	●	●	●	○					
2409	4 3/4"	4 3/8"	○	●	●	●	●	●	●	●	○					
2410	5 3/16"	4 13/16"	○	●	●	●	●	●	●	●	●	○				
2411	5 5/8"	5 1/4"	○	●	●	●	●	●	●	●	●	○				
2412	6 1/16"	5 1/16"	○	●	●	●	●	●	●	●	●	○				

○—INDICATES MOUNTING HOLE ●—INDICATES TERMINAL

## 2500 SERIES



PART NO.	A	B	● LUG POSITIONS (AS PER VIEW "Z")													
			1	2	3	4	5	6	7	8	9	10	11	12		
2501	1 3/8"	1"	○	●	○											
2502	1 7/8"	1 1/2"	○	●	●	○										
2503	2 3/8"	2"	○	●	●	●	○									
2504	2 7/8"	2 1/2"	○	●	●	●	●	○								
2505	3"	3"	○	●	●	●	●	●	○							
2506	3 7/8"	3 1/2"	○	●	●	●	●	●	●	○						
2507	4 3/8"	4"	○	●	●	●	●	●	●	○						
2508	4 7/8"	4 1/2"	○	●	●	●	●	●	●	●	○					
2509	5 3/8"	5"	○	●	●	●	●	●	●	●	○					
2510	5 7/8"	5 1/2"	○	●	●	●	●	●	●	●	○					
2511	6 3/8"	6"	○	●	●	●	●	●	●	●	○					
2512	6 7/8"	6 1/2"	○	●	●	●	●	●	●	●	○					

○—INDICATES MOUNTING HOLE ●—INDICATES TERMINAL

Photos shown are not to size or scale

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**ntt**

# BINDING POST BOARDS

SCREW TYPE



2553 SPECIAL



2554

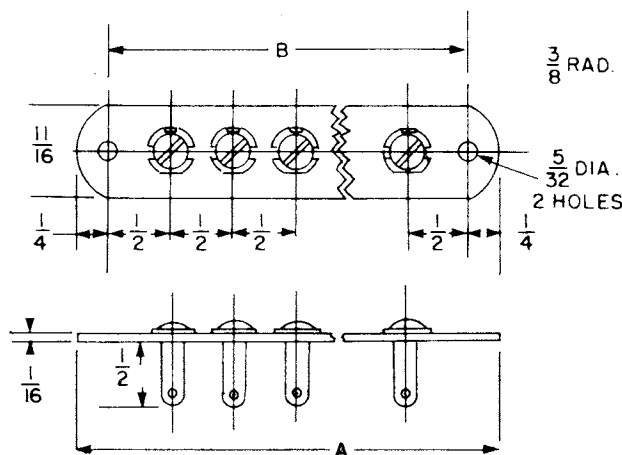
**Boards**—1/16" thick XP Laminated Phenolic, other grades of insulating material when

specified. **Terminals**—1/32" thick, brass, cadmium plated. **Screws**—Steel nickel plated.

## .....2550 SERIES.....

PART NO.	A	B	● TERMINAL POSITIONS												
			1	2	3	4	5	6	7	8	9	10	11	12	13
2551	1½"	1"	○	●	○										
2552	2"	1½"	○	●	●	○									
2553	2½"	2"	○	●	●	●	○								
2554	3"	2½"	○	●	●	●	●	○							
2555	3½"	3"	○	●	●	●	●	●	○						
2556	4"	3½"	○	●	●	●	●	●	○						
2557	4½"	4"	○	●	●	●	●	●	●	○					
2558	5"	4½"	○	●	●	●	●	●	●	○					
2559	5½"	5"	○	●	●	●	●	●	●	○					
2560	6"	5½"	○	●	●	●	●	●	●	○					
2561	6½"	6"	○	●	●	●	●	●	●	○					
2562	7"	6½"	○	●	●	●	●	●	●	○					

●—INDICATES TERMINAL      ○—INDICATES MOUNTING HOLE



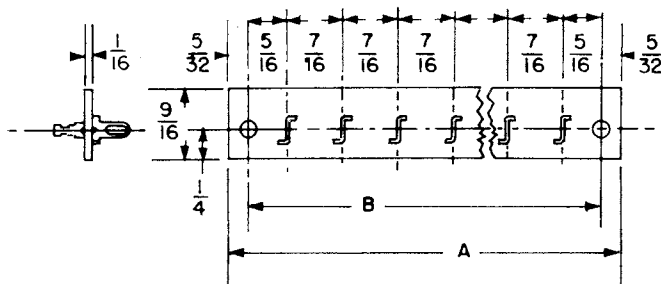
## .....2620 SERIES (Double End).....

PART NO.	A	B	TERMINAL POSITIONS								
			1	2	3	4	5	6	7	8	9
2621	15/16"	5/8"	○		○						
2622	1 3/8"	1 1/16"	○			○					
2623	1 13/16"	1 1/2"	○				○				
2624	2 1/4"	1 15/16"	○					○			
2625	2 1/16"	2 3/8"	○						○		
2626	3 1/8"	2 13/16"	○							○	
2627	3 9/16"	3 1/4"	○							○	
2628	4"	3 11/16"	○							○	

|—INDICATES TERMINAL POST      ○—INDICATES MOUNTING HOLE

**Boards** — 1/16" thick XP laminated phenolic. Other grades of insulating material when specified.

**Terminals**—.025 brass, cadmium plated.



Photos shown are not to size or scale

**ntt**



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2703

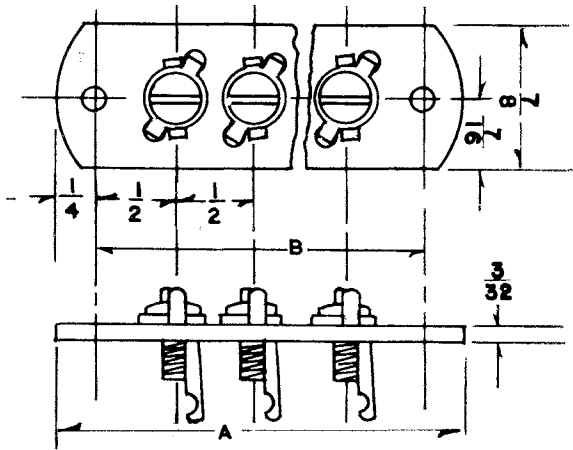


2704

# BINDING POST BOARDS

HEAVY DUTY - SCREW TYPE

## STANDARD



These #2700 binding post boards are used on heavy electronic equipment by an ever-increasing number of customers.

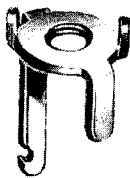
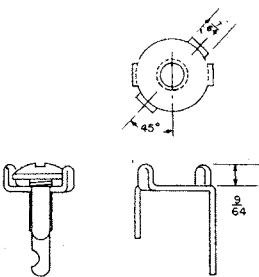
The boards are made from XP laminated phenolic sheet material 3/32" thick. Terminal No. 4418 made from .062 thick brass with steel or brass 8/32" x 3/8" screws. Boards may be marked or fungus proofed as desired.

PART NO.	A	B	POSITION OF LUGS												
			1	2	3	4	5	6	7	8	9	10			
2701	1 1/2"	1"	○	●	○										
2702	2"	1 1/2"	○	●	●	○									
2703	2 1/2"	2"	○	●	●	●	○								
2704	3"	2 1/2"	○	●	●	●	●	○							
2705	3 1/2"	3"	○	●	●	●	●	●	○						
2706	4"	3 1/2"	○	●	●	●	●	●	●	○					
2707	4 1/2"	4"	○	●	●	●	●	●	●	●	○				
2708	5"	4 1/2"	○	●	●	●	●	●	●	●	●	○			
2709	5 1/2"	5"	○	●	●	●	●	●	●	●	●	●	○		
2710	6"	5 1/2"	○	●	●	●	●	●	●	●	●	●	●	○	

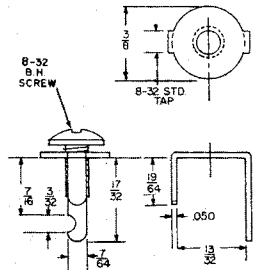
○—INDICATES MOUNTING HOLE      ●—INDICATES TERMINAL

## CUSTOM

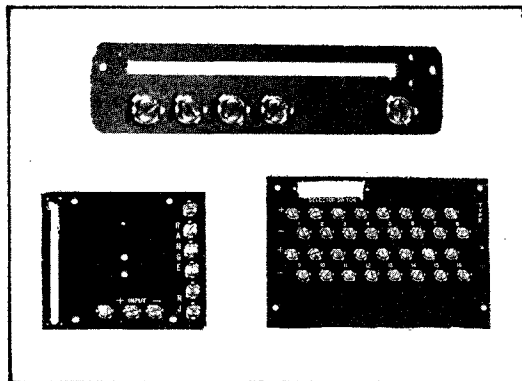
Photos of boards shown on this page represent several binding post boards made to our customers' specifications. Our well facilitated tool room and highly qualified engineering staff are ready to assist you with your special requirements.



4418



4419



Photos shown are not to size or scale



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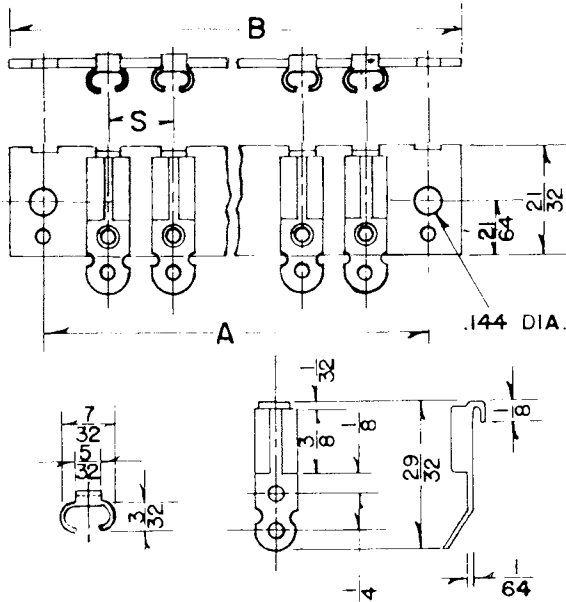
**ntt**



**CONTACT STRIPS**

500 & 550 SERIES

Contact strips are used as low cost connectors made in 3/8" and 1/2" spacing. Contacts will accommodate 1/8" or 5/32" pin plugs. Boards are furnished with .144 diameter mounting holes or may be supplied with metal brackets.



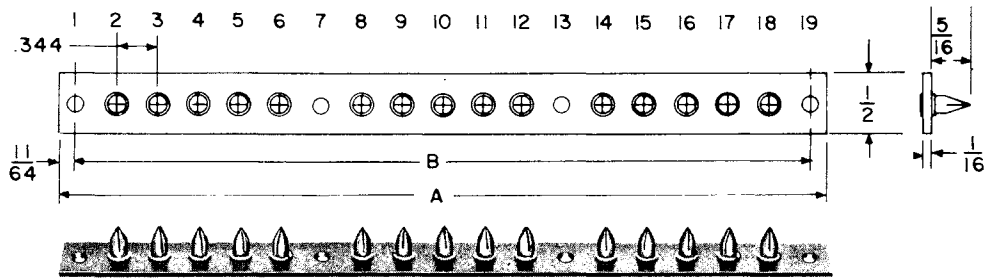
PART NO.	A	B	S	POSITIONS OF TERMINALS						
				1	2	3	4	5	6	
501	3/4"	1 1/8"	3/8"	o	C	o				
502	1 1/8"	1 1/2"	3/8"	o	C	C	o			
503	1 1/2"	1 7/8"	3/8"	o	C	C	C	o		
504	1 7/8"	2 1/4"	3/8"	o	C	C	C	C	o	
505	2 1/4"	2 1/2"	3/8"	o	C	C	C	C	C	o
506	2 5/8"	3"	3/8"	o	C	C	C	C	C	o
507	1 1/8"	1 1/2"	3/8"	o	C	D	o			
508	1 1/8"	1 1/2"	3/8"	o	D	C	o			
509	1 1/2"	1 7/8"	3/8"	o	C	C	D	o		
510	1 7/8"	2 1/4"	3/8"	o	D	C	C	C	o	
551	1"	1 1/2"	1/2"	o	C	o				
552	1 1/2"	2"	1/2"	o	C	C	o			
553	2"	2 1/2"	1/2"	o	C	C	C	o		
554	2 1/2"	3"	1/2"	o	C	C	C	C	o	
555	3"	3 1/2"	1/2"	o	C	C	C	C	C	o
556	3 1/2"	4"	1/2"	o	C	C	C	C	C	o
557	1 1/2"	2"	1/2"	o	C	D	o			
558	1 1/2"	2"	1/2"	o	D	C	o			
559	2"	2 1/2"	1/2"	o	C	C	D	o		
560	2 1/2"	3"	1/2"	o	D	C	C	C	o	

C=Contact for 1/8" Pin-4501  
D=Contact for 5/32" Pin-4502

o-INDICATES MOUNTING HOLE

**GRIP-TYPE CONICAL TERMINAL ASSEMBLIES**

1600 SERIES



TERMINAL LUG and HOLE POSITIONS and SIZE OF STRIP

PART NO.	A	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1601	2.06	1.72	.136	⊕	⊕	⊕	⊕	.136													
1602	1.71	1.376	.136	⊕	⊕	⊕	.136														
1603	2.41	2.063	.136	⊕	⊕	⊕	⊕	.136													
1604	4.47	4.125	.136	⊕	⊕	⊕	⊕	⊕	.136	⊕	⊕	⊕	⊕	⊕	.136						
1605	2.75	2.406	.136	⊕	⊕	⊕	⊕	⊕	.136												
1606	3.784	3.44	.136	⊕	⊕	⊕	⊕	.136	⊕	⊕	⊕	⊕	.136								
1607	3.44	3.093	.136	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	.136									
1608	6.53	6.187	.136	⊕	⊕	⊕	⊕	⊕	.136	⊕	⊕	⊕	⊕	⊕	.136	⊕	⊕	⊕	⊕	⊕	.136

Photos shown are not to size or scale

denotes grip-type terminal

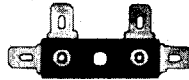


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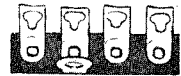
# TERMINAL STRIPS



TT5TT



ZOL



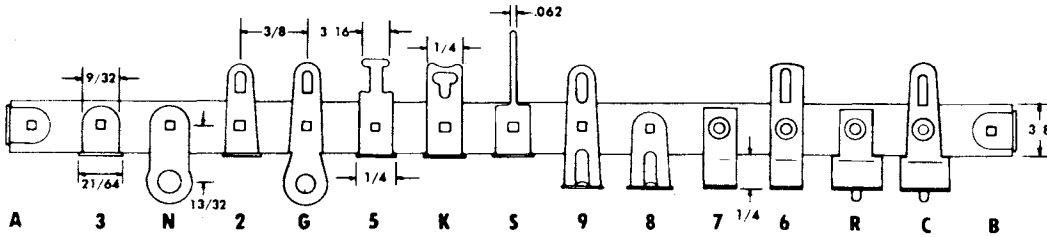
UKUU

Custom Tie Lug Terminal Strips are fabricated to meet each customer's individual requirements. Made from NEMA grade XP laminated phenolic 1/16" thick by 3/8" wide. Brass or Steel lugs and mounting brackets are securely eyeletted in position at 3/8" or 1/2" spacing, arranged in desired sequence. Other insulation materials such as: XXP, XXXP,

Canvas, Linen, Nylon, Paper Epoxy, Glass Epoxy, Glass Melamine and Silicone may be furnished on request. The insulation itself can be waxed or varnish impregnated if so specified. Lugs and brackets are cadmium plated unless otherwise specified. Hot tin, electro tin plate, cadmium over copper and tin plate over copper finishes for the lugs are available.

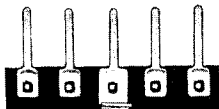
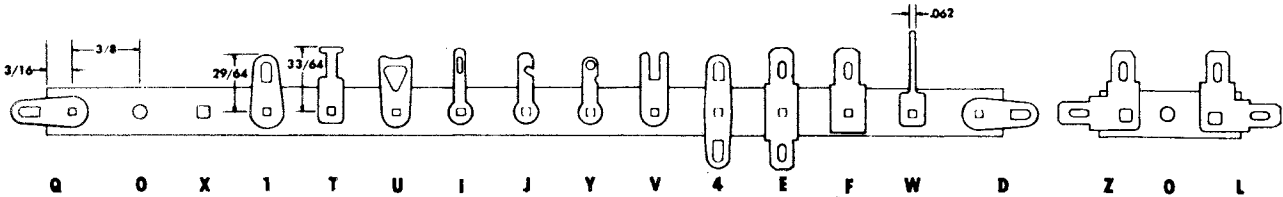
## ..... MOUNTING LUGS and BRACKETS .....

Mounting Holes .140 to .145 are standard. .170 and .199 mounting holes are available when requested.



## ..... SOLDER, WIRE-A-WRAP AND FASTON LUGS .....

Lugs can be furnished BENT AT RIGHT ANGLE if desired.  
X denotes square hole; no lug in that position. O denotes round hole; no lug in that position.



WWSWW



131

### HOW TO DETERMINE PART NUMBERS

To arrive at the correct part number, for a Terminal Strip, refer to the drawings above and select the LETTERS or NUMBERS of the terminal, mounting lug or bracket desired; indicate them in the sequence desired, reading from left to right. May be supplied with as many as 16 lugs on a strip.

For example: In the photograph of terminal strips shown above, the first is "WWSWW." This means that the first two lugs are "W," the mounting lug is "S" and then two additional "W" lugs.

In the second strip, "131," the first lug is "1", the mounting lug is "3" and the last lug is "1".

Photos shown are not to size or scale

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# ntt



M-V7VVV7V



M-VV3VV



M-T3T



M-1121

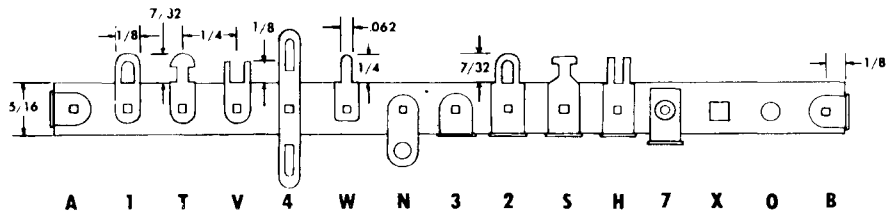
## TERMINAL STRIPS

MINIATURE

National Miniature Terminal Strips are recommended for all applications where space is a factor. These strips are made of the same materials as the STANDARD Terminal Strips described on the opposite page except smaller. Strips are 1/16" by 5/16"

wide NEMA grade XP laminated phenolic with brass lugs securely eyeletted in position. Lugs are supplied in any of the finishes used on the STANDARD series with the insulation likewise available in a choice of materials and finishes.

Mounting Holes .093 are standard. .125 mounting holes are available when requested.



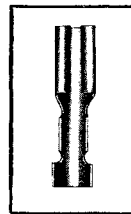
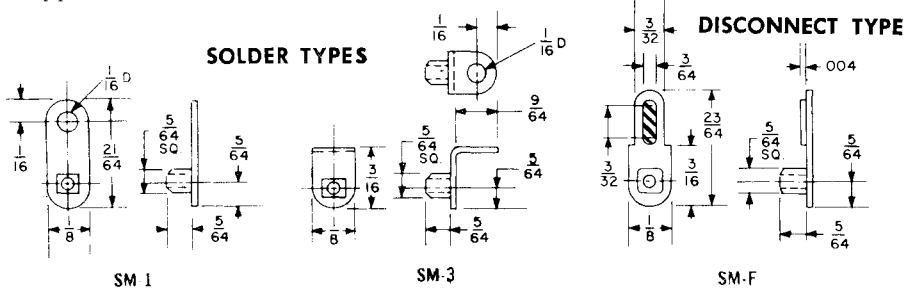
### HOW TO DETERMINE PART NUMBERS

The identical system is used to determine the terminals, mounting lugs and brackets for the miniature series of terminal strips with one notable exception: in each instance the prefix "M" ap-

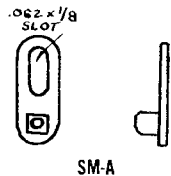
pears before the part number to designate miniature terminal strip. The LETTERS and NUMBERS are selected from those appearing on this page. May be supplied with 24 lugs on a strip.

When importance is placed on space saving, Sub-miniature tie lug strips are selected. Indicate type desired.

### SUB-MINIATURE



RECOMMENDED  
Female Faston  
Berg #T-3775  
New Cumberland, Pa.



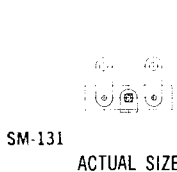
SM-A

PART NO. PREFIX	TERMINAL COMBINATION				
SM	1	1	3	1	1
SM		●	●		
SM			●	●	
SM		●	●	●	
SM	●	●	●	●	
SM		●	●	●	●
SM	●	●	●	●	●

PART NO. PREFIX	TERMINAL COMBINATION				
SM	F	F	3	F	F
SM		●	●		
SM			●	●	
SM		●	●	●	
SM	●	●	●	●	
SM		●	●	●	●
SM	●	●	●	●	●

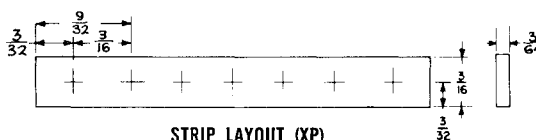
Chart indicates standard combinations

●—INDICATES TERMINAL



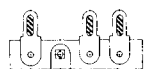
SM-131

ACTUAL SIZE



STRIP LAYOUT (XP)

ACTUAL SIZE



SM-F3FF

ACTUAL SIZE

Photos shown are not to size or scale



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# TERMINAL STRIPS



We have listed several combinations of terminal strips as Standard Stock items. For other combinations of terminals for strips,

refer to pages 12 and 13 for detailed instructions. We welcome your inquiries on specials as well as standard items.

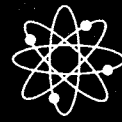
121111112

11311-1/2

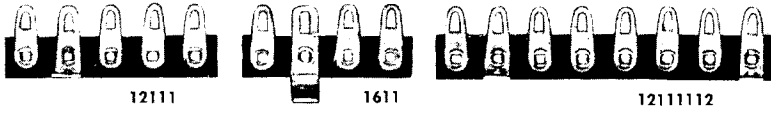
<p>AD</p>	<p>31</p>	<p>13</p>	<p>12</p>	<p>21</p>
<p>4B</p>	<p>16</p>	<p>61</p>	<p>17</p>	<p>71</p>
<p>131</p>	<p>121</p>	<p>A44</p>	<p>171</p>	<p>161</p>
<p>1311</p>	<p>1131</p>	<p>1211</p>	<p>1121</p>	<p>A444</p>
<p>1171</p>	<p>1161</p>	<p>1711</p>	<p>1611</p>	<p>11311</p>
<p>11211</p>	<p>13131</p>	<p>4444B</p>	<p>11711</p>	<p>11611</p>

Photos shown are not to size or scale

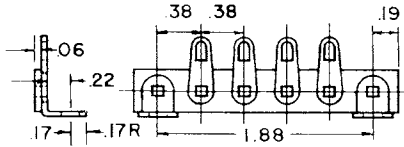
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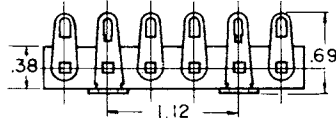
**ntt**



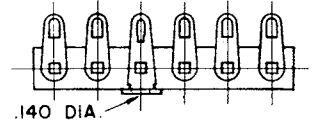
**TERMINAL STRIPS**



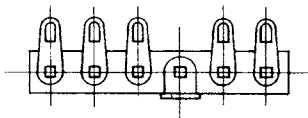
311113



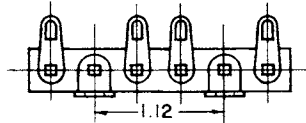
121121



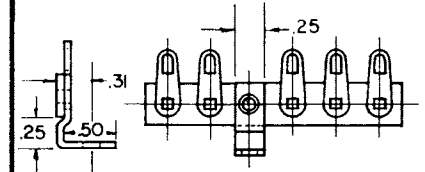
112111



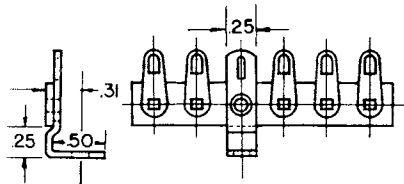
111311



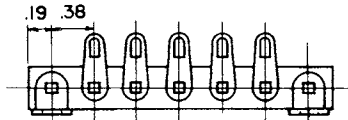
131131



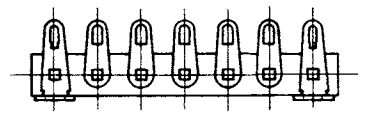
117111



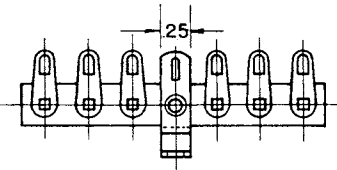
116111



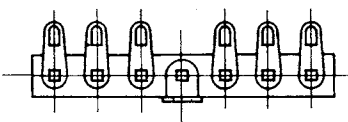
311113



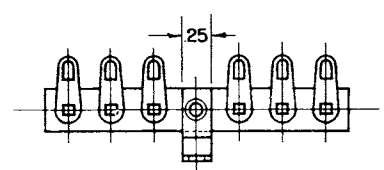
211112



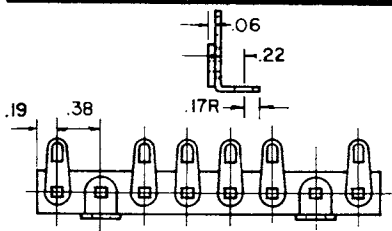
111611



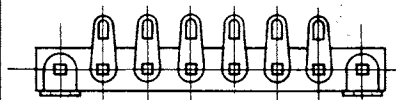
111311



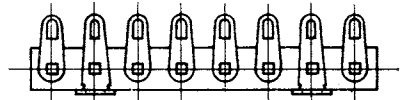
111711



1311131



3111113



1211121

Photos shown are not to size or scale



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**ntt**



SP-8



SP-10

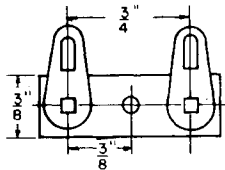


101 SPEC

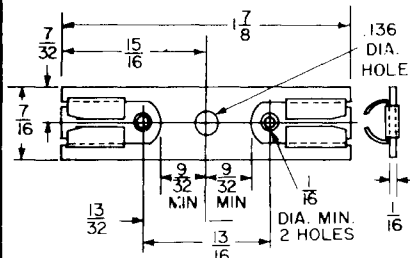
# SPEAKER TERMINAL STRIPS

Strips shown on this page are most commonly used on speakers. Insulating strip made of 1/16" vulcanized fiber, terminals made of steel or brass cadmium plated, contacts made of spring steel tempered or spring brass cadmium plated.

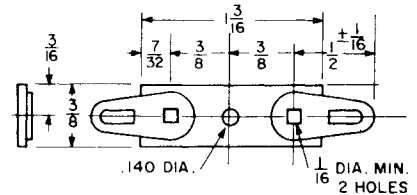
Miniature crescent shaped speaker strips used for 2" speakers. Insulating strip made of 3/64" vulcanized fiber, terminals brass cadmium plated or hot tinned.



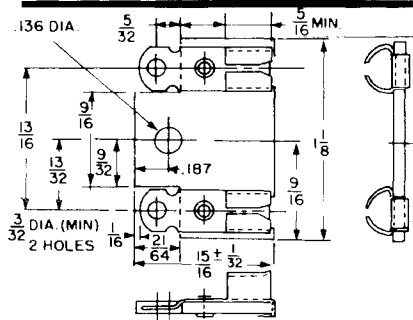
SP-1



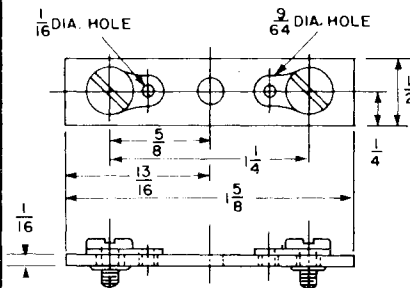
SP-2



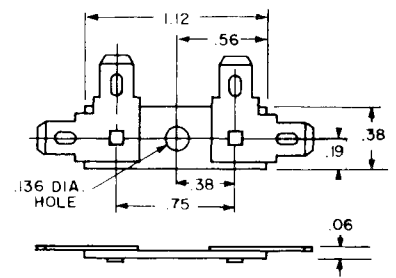
SP-3



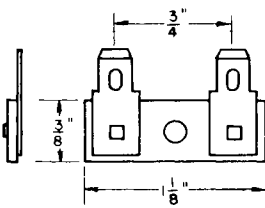
SP-4



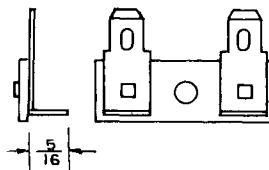
SP-5



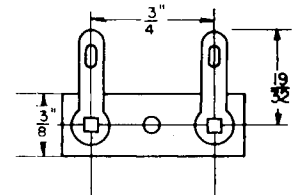
SP-8



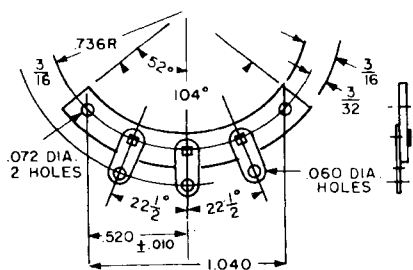
SP-9



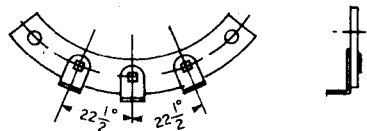
SP-10



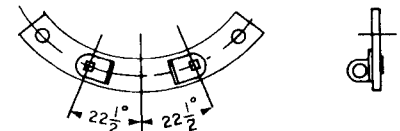
SP-13



SP-15



SP-16



SP-20

Photos shown are not to size or scale





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# MOLDED TERMINAL BLOCKS



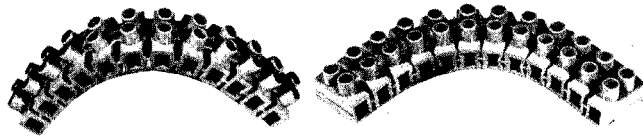
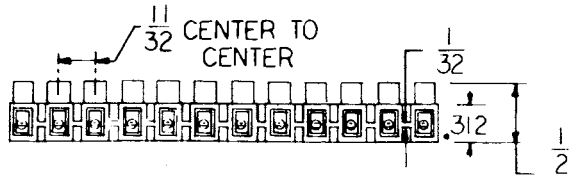
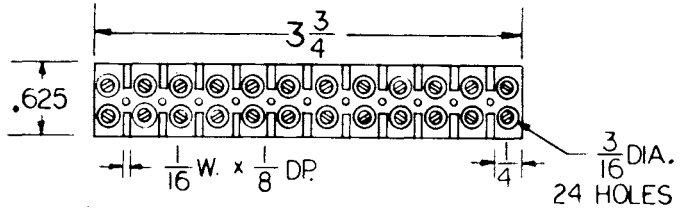
## ..... 905 SERIES • FLEXIBLE .....

Type No. 905 Solderless Terminal Blocks are specially designed for applications where space and weight conservation are important factors. Because they are molded of flexible polyester material they may be bent in any direction to fit contours and sharp angles. Typical applications for these terminal blocks include missile guidance systems, computers, aircraft communications, underwater detecting equipment, etc.

The shortest distance between the live parts of Type No. 905 Terminal Block is  $\frac{3}{8}$ ". Its brass terminals will accommodate a #10 wire as a maximum. The polyester material of which the blocks are made is rated at 25 amperes.

Connection of the conductor to the block is simple. No solder is required. Insert the conductor in block and tighten the set screw.

Flexible Terminal Block No. 905 measures  $3\frac{3}{4}$ " long,  $\frac{5}{8}$ " wide,  $\frac{1}{2}$ " high and  $1\frac{11}{32}$ " between terminal centers. It may be cut to smaller sizes as required.



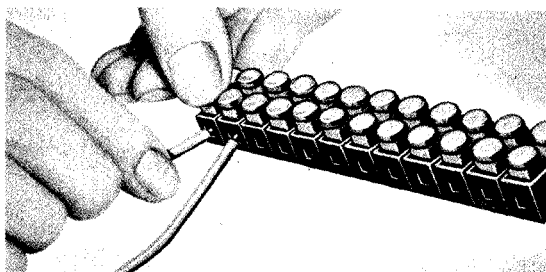
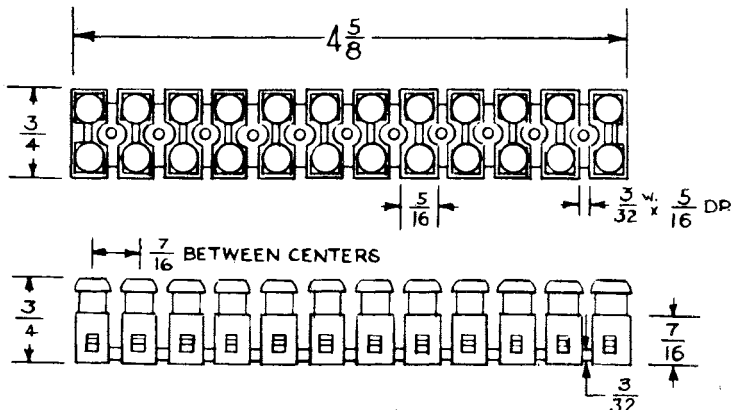
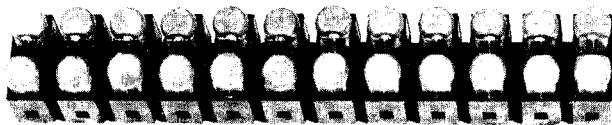
## ..... 900 SERIES • PUSH BUTTON .....

Like Type No. 905, the No. 900 Terminal Block is solderless, and is molded of black nylon plastic. The push buttons are molded of red nylon plastic.

These terminal blocks have extremely high dielectric properties and are approved to resist 380 volts between terminals.

Connection of the conductor is extremely fast. Press the red button and insert the wire. Release pressure for locking. The beryllium copper contacts are molded into the block.

Type No. 900 Terminal Block is available for 12 connectors. It may be cut to smaller size if required.



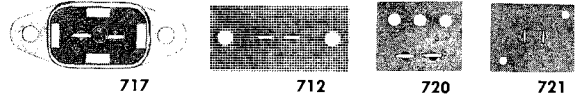
Photos shown are not to size or scale

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YONKERS, N. Y.



**ntt**

# INTERLOCK RECEPTACLES



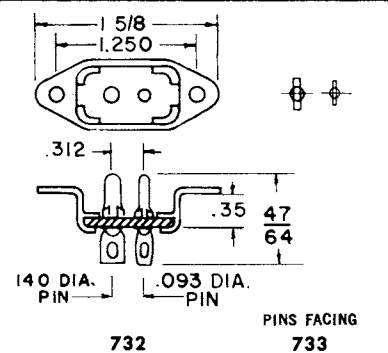
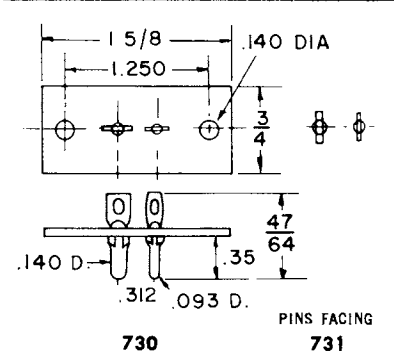
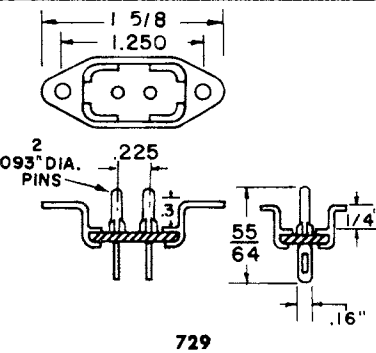
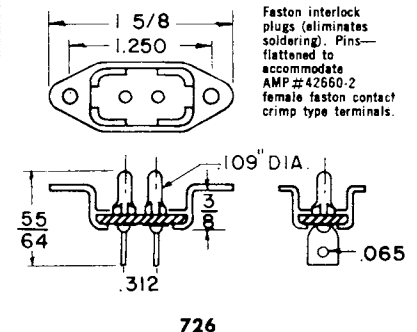
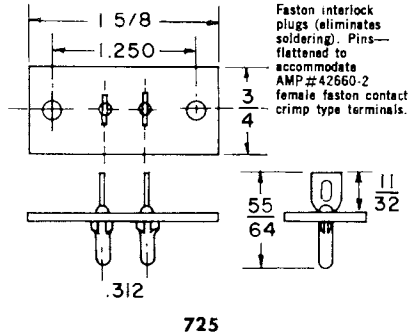
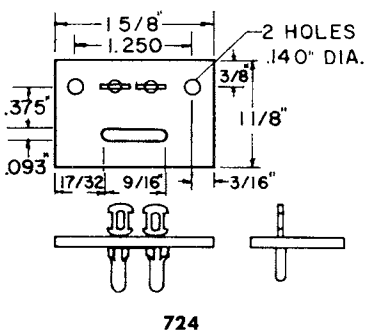
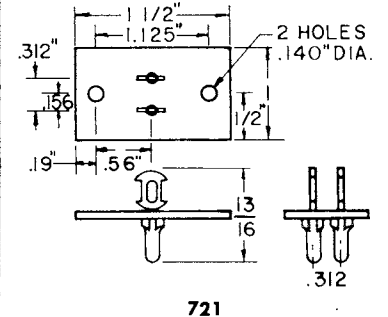
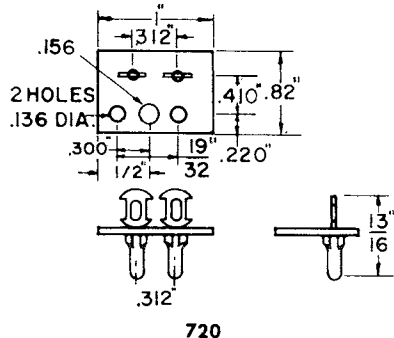
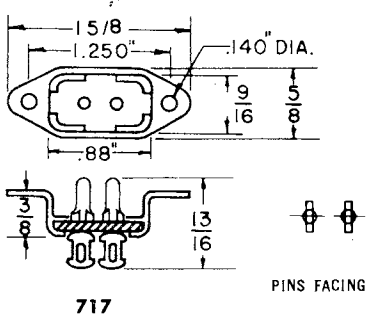
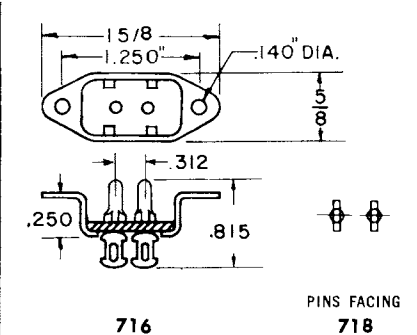
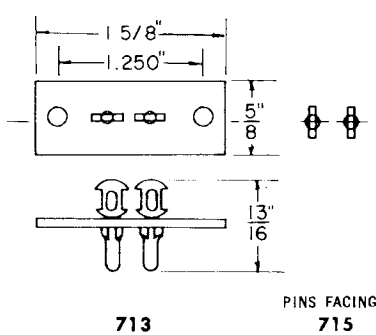
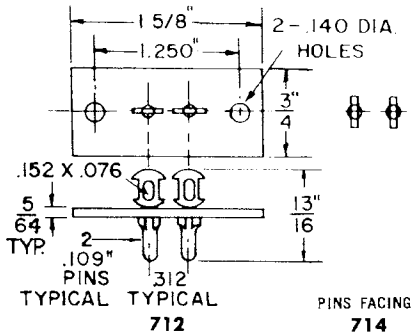
Flush type boards made from XP laminated phenolic, 5/64" and 3/32" thick.

Pins are made from 1/4-hard brass wire cadmium plated. Solder ends of pins are flattened, pierced and trimmed to facilitate either a feed thru, wrap around or faston connection.

Bath tub shells made from .020 steel cadmium plated.

Polarized interlocks are made both in flush and bath tub styles.

Most items shown are approved by underwriter laboratories.



Photos shown are not to size or scale

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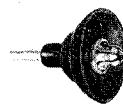


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# ANODE CONNECTORS



243



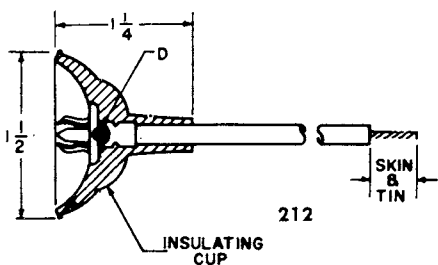
212



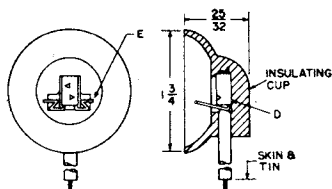
240

Anode Connectors are used as a connection between the High Voltage section of a T.V. set or oscilloscope and the second anode button on a

cathode ray picture tube thus delivering the electric energy between those two points. Refer to charts for type desired.



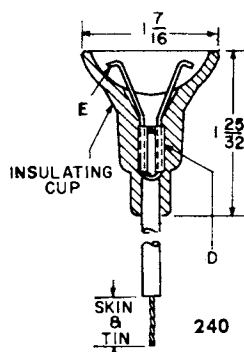
212



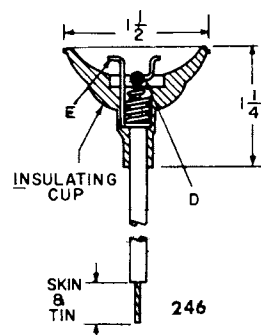
238

PART NO.	CONTACT POSITION	CONTACT TYPE	D ASSEMBLY METHOD	CLIP E MUSIC WIRE DIA.
212	180°	SNAP BUTTON	SOLDER	—
238	90°	WIRE CLIP STRAIGHT END	MECHANICAL	.041
240	180°	WIRE CLIP STRAIGHT END	MECHANICAL	.041
246	180°	WIRE CLIP ST. END SPIRAL	SOLDER	.051

Dash No. preceded by Part No. denotes customer's specified wire length, suction cup, neoprene. Example: Part No. 246-18". Specify wire size desired.

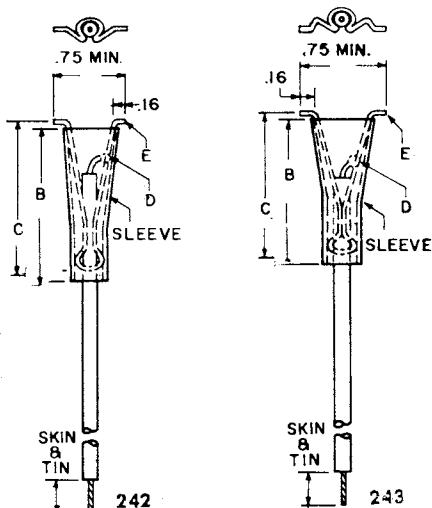


240



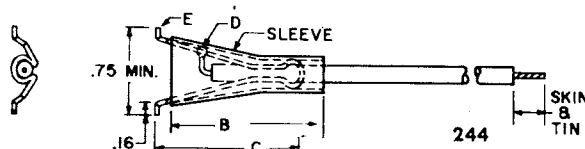
246

All anode connectors in this group assembled with vinyl insulating sleeves as shown in Part Nos. 242 to 245. Dash No. preceded by Part No. denotes customer's specified wire length. Example: Part No. 245-18. Specify wire size desired.

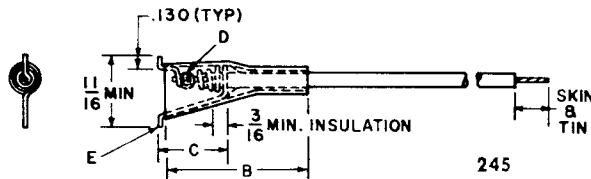


242

243



244



245

PART NO.	CONTACT POSITION	CONTACT TYPE	B	C	D ASSEMBLY METHOD	CLIP E MUSIC WIRE DIA.
242	180°	WIRE CLIP STRAIGHT END	2	1 7/16	SOLDER	.051
243	90°	WIRE CLIP STRAIGHT END	2	1 7/16	SOLDER	.051
244	90°	WIRE CLIP STRAIGHT END	1 1/4	7/8	SOLDER	.051
245	180°	WIRE CLIP ST. END SPIRAL	1 1/2	2 1/8	SOLDER	.051

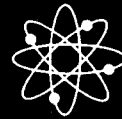
Photos shown are not to size or scale





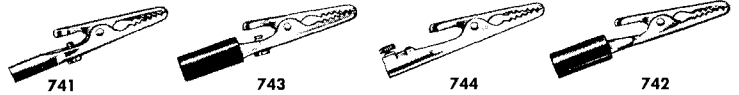
# NATIONAL TEL-TRONICS CORP.

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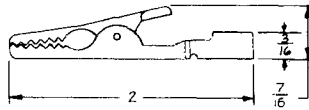


# ntt

## ALLIGATOR CLIPS

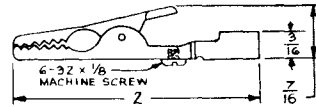


**No. 740**  
**ALLIGATOR CLIP**  
**Solder Type**



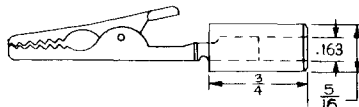
Cadmium-plated steel with  $\frac{3}{8}$ " jaw opening. Accurately matched jaws grip securely.

**No. 741**  
**ALLIGATOR CLIP**  
**Screw Type**



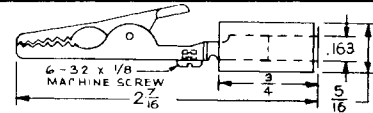
Screw supplied for solderless connection when required. Accurately matched, cadmium-plated steel jaws with  $\frac{3}{8}$ " opening, provide secure grip.

**No. 742**  
**INSULATED ALLIGATOR CLIP**  
**Solder Type**



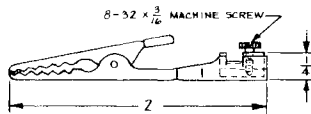
Accurately matched, cadmium-plated steel jaws, with  $\frac{3}{8}$ " opening, provide secure grip. Red or Black Molded Plastic handle. Indicate color desired. Accepts standard banana plug in back.

**No. 743**  
**INSULATED ALLIGATOR CLIP**  
**Screw Type**



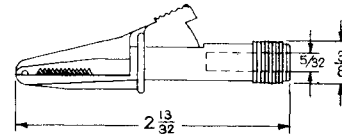
Molded Plastic handle in Red or Black. Indicate color desired. Accurately matched, cadmium-plated steel jaws opening  $\frac{3}{8}$ " provide secure grip. Supplied with screw for solderless connection when required. Accepts standard banana plug in back.

**No. 744**  
**ALLIGATOR CLIP**  
**Special Screw Type**



Jaws of cadmium-plated steel open to  $\frac{3}{8}$ " and grip securely. Supplied with screw for solderless connection.

**No. 745**  
**ALLIGATOR CLIP**  
**Fully Insulated Type**



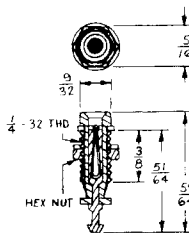
Cadmium-plated steel jaws open to  $\frac{3}{8}$ " and grip securely. Accepts standard banana plug in back. Can be supplied in Red or Black.

## NYLON TIP JACKS

Available Colors: Red, Black, Green, Blue, White, Orange, Yellow.

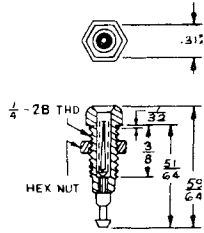


**No. 883**  
**NYLON TIP JACK**  
**Wrap Around Type with Metal Shell**



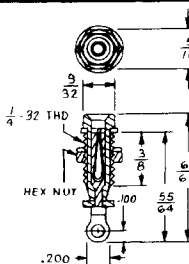
Molded nylon tip jack with metal shell eliminates the possibility of threads stripping during assembly. Indicate color desired; see above.

**No. 886**  
**ALL NYLON TIP JACK**  
**Wrap Around Type**



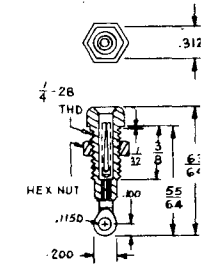
Completely molded. Accepts all standard phone tip plugs. Contact recessed in hexagon head for safe contact and for grip in tightening. Mounts in panels up to  $\frac{1}{4}$ " thick in  $\frac{1}{4}$ " hole. Nylon Grade FM 10001 is used for body. Nickel-plated brass hex nut. Indicate color desired, see above.

**No. 884**  
**NYLON TIP JACK**  
**Spade Terminal Type with Metal Shell**



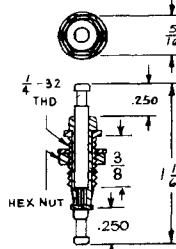
Metal shell eliminates the possibility of threads stripping during assembly. Indicate color desired; see above.

**No. 887**  
**ALL NYLON TIP JACK**  
**Spade Terminal Type**



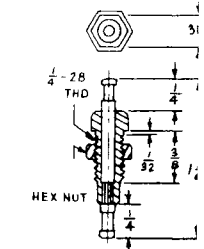
Completely molded. Accepts all standard phone tip plugs. Contact recessed in hexagon head for safe contact and for grip in tightening. Mounts in panels up to  $\frac{1}{4}$ " thick in  $\frac{1}{4}$ " hole. Nylon Grade FM 10001 is used for body. Center contact is heat treated silver-plated phosphor bronze. Nickel-plated brass hex nut. Indicate color desired; see above.

**No. 885**  
**NYLON TIP JACK**  
**Feed-Through Type with Metal Shell**



Thread stripping during assembly is eliminated with metal shell. Indicate color desired; see above.

**No. 888**  
**ALL NYLON TIP JACK**  
**Feed-Through Type**



Completely molded. Contact recessed in hexagon head for both safe contact and grip in tightening. Mounts in panels up to  $\frac{1}{4}$ " thick, in  $\frac{1}{2}$ " hole. Nylon Grade FM 10001 for body. Center contact is tin-plated brass. Nickel-plated brass hex nut. Indicate color desired; see above.





# NATIONAL TEL-TRONICS CORP.

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## PHONE PLUGS

### TWO & THREE CONDUCTORS

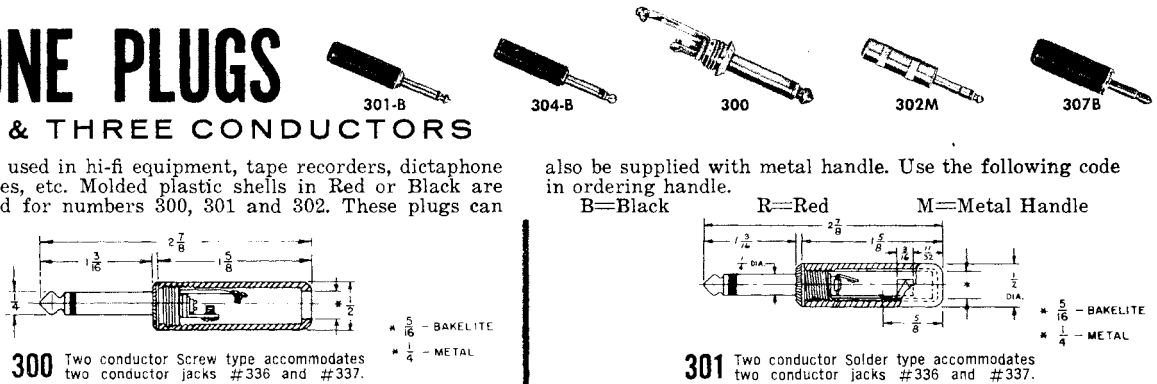
Widely used in hi-fi equipment, tape recorders, dictaphone machines, etc. Molded plastic shells in Red or Black are supplied for numbers 300, 301 and 302. These plugs can

also be supplied with metal handle. Use the following code in ordering handle.

B=Black

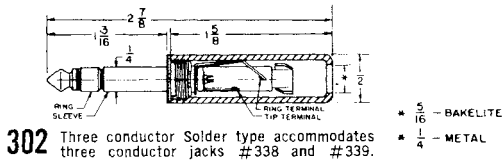
R=Red

M=Metal Handle

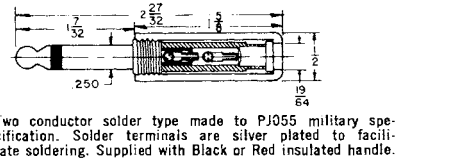


**300** Two conductor Screw type accommodates two conductor jacks #336 and #337.

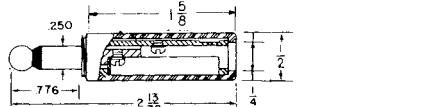
**301** Two conductor Solder type accommodates two conductor jacks #336 and #337.



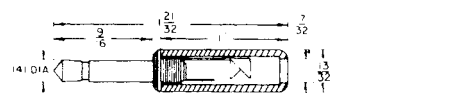
**302** Three conductor Solder type accommodates three conductor jacks #338 and #339.



**304** Two conductor solder type made to PJ055 military specification. Solder terminals are silver plated to facilitate soldering. Supplied with Black or Red insulated handle.



**305** Two conductor solder type made to PJ054 military specification. Solder terminals are silver plated to facilitate soldering. Supplied with Red or Black Insulated Handle.



**307** Two conductor solder type. Accommodates sub miniature jacks #311 and #313. May be supplied with Red, Black or White handles.

## PHONE JACKS

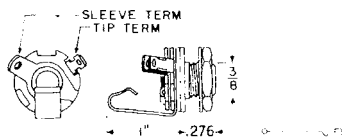
### TWO & THREE CONDUCTORS

These telephone jacks are of two basic types, open circuit and closed circuit and are available as two conductor and three conductor jacks. The nickel plated special spring

brass springs are designed to retain their tension throughout unlimited use. The standard size jacks mount in  $\frac{3}{8}$ " holes.

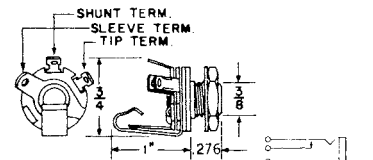
**336**

Two Conductor, open circuit; will accommodate plugs #300, 301 and 304.



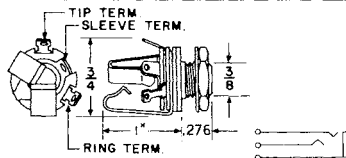
**337**

Two Conductor, closed circuit; Will accommodate plugs #300, 301 and 304.



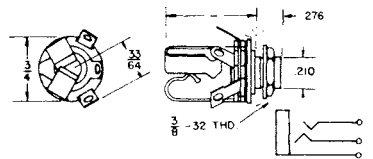
**338**

Three Conductor, open circuit; will accommodate plug #302.



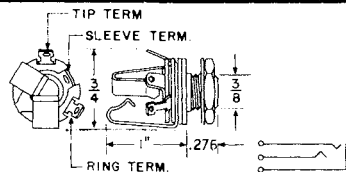
**338-A**

Three Conductor, open circuit with .210 I.D. Will accommodate plug #PJ068.



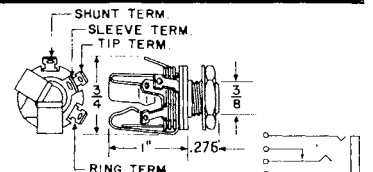
**338-B**

Three Conductor open circuit with Bright Brass Bushing. Will accommodate plug #302.



**339**

Three Conductor closed circuit; Will accommodate plug #302.



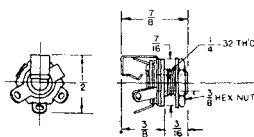
### SUB-MINIATURE JACKS — FOR MINIATURE ELECTRONIC APPLICATION

Tape Recorders Computing Machines Dictating Machines Miniature Radios Despite their tiny size (about one third that of standard models) these subminiature jacks are precision made and are ruggedized for all elec-

tronic applications. Mounting bushings are made of nickel plated brass and require  $\frac{1}{4}$ " diameter mounting holes. Insulators are laminated phenolic and spring contacts are silverplated.

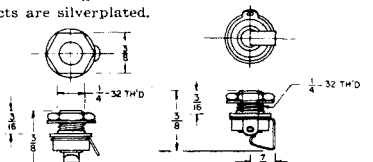
**311**

Subminiature Phone Jack two conductor closed circuit will accommodate plug #307.



**313**

Subminiature Jacks, two conductor open circuit will accommodate plug #307.

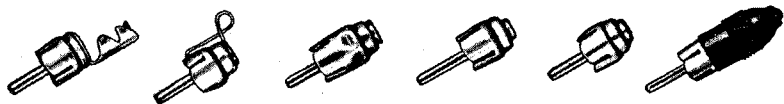


Photos shown are not to size or scale

**ntt**



**NATIONAL TEL-TRONICS CORP.**  
YONKERS, N. Y.



# PHONO PLUGS

**SHELLS**—.016 Brass or Steel Cadmium Plated, designed to have a wiping action with mating part, for good ground.

**PINS**—Drawn brass bright nickel plated.

**INSULATOR WASHER**—.062 thick fibre. IF low loss material is desired for insulating washer add "L" to part #. Example #36A with low loss washer would be #36AL.

PART NO.	A	B	C	D	FIG.
36A	1/8	.175	11/16	15/16	1
36B	1/8	.175	3/8	5/8	1
36C	1/8	.175	9/16	13/16	1
37A	1/8	.145	11/16	15/16	1
37B	1/8	.145	3/8	5/8	1
37C	1/8	.145	9/16	13/16	1
38A	1/8	.125	11/16	15/16	1
38B	1/8	.125	3/8	5/8	1
38C	1/8	.125	9/16	13/16	1
39A	1/8	.125	9/16	53/64	2
39B	1/8	.145	9/16	53/64	2
39C	1/8	.175	9/16	53/64	2
40A	1/8	.125	11/16	57/64	2
40B	1/8	.145	11/16	57/64	2
40C	1/8	.175	11/16	57/64	2
41A	1/8	.125	3/8	41/64	2
41B	1/8	.145	3/8	41/64	2
41C	1/8	.175	3/8	41/64	2
42A	1/8	.145	11/16	1-3/32	3
42B	1/8	.145	3/8	25/32	3
42C	1/8	.145	9/16	31/32	3
43A	1/8	none	11/16	15/16	4
43B	1/8	none	3/8	5/8	4
43C	1/8	none	9/16	13/16	4
44A	1/8	.145	11/16	1-7/16	5
44B	1/8	.145	3/8	1-1/8	5
44C	1/8	.145	9/16	1-1/4	5
60A	1/8	.175	11/16	1-5/8	6
60B	1/8	.175	3/8	1-5/16	6
60C	1/8	.175	9/16	1-1/2	6

**EW CRIMP TYPES**

46A	1/8	.175	11/16	1-7/32	7
46B	1/8	.175	3/8	29/32	7
46C	1/8	.175	9/16	1-3/32	7
39D-A	1/8	.175	11/16	1-3/32	8
39D-B	1/8	.175	3/8	25/32	8
39D-C	1/8	.175	9/16	31/32	8

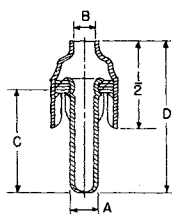


FIG. 1

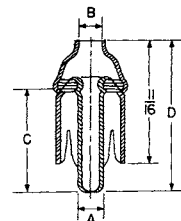


FIG. 2

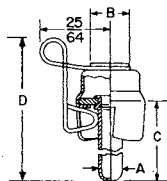


FIG. 3

Self shorting Phono Plug Steel piano wire spring is cadmium plated.

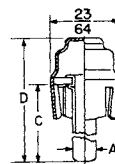


FIG. 4

Self shorting Phono Plug has no hole for a wire and is used to insure that mating jack cannot be activated accidentally. Has copper washer for complete shorting action.

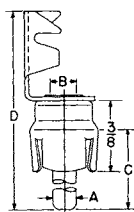


FIG. 5

Has strain relief lug to insure strong connection. Crimp type.

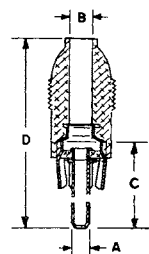


FIG. 6

Snap on Plug with handle.

**NEW Crimp Type**

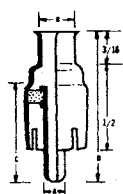


FIG. 7

**NEW Crimp Type**

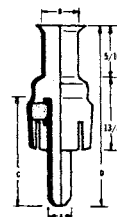


FIG. 8

# NATIONAL TEL-TRONICS CORP.

YONKERS, N. Y.



# ntt

## PHONO JACKS



331-2



318



340



333



327

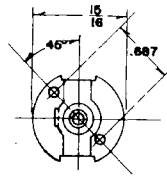


318A

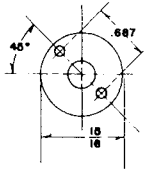
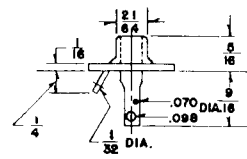


319

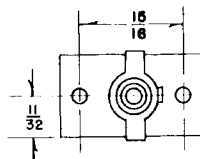
#318, #319, #326 and #327  
Single Conductor, Phono Jacks  
**INSULATOR DISC**—XP Laminated Phenolic  
**INSULATOR BUSHING**—Ceramic  
**SHELL**—Steel-cadmium plated.  
**CONTACT**—Spring brass cadmium plated.  
#328—Printed Circuit Dip Solder Type  
Assembled to printed circuit board as  
shown in fig. 2.  
#329 and #332—Compact Design. Assembled  
to chassis by curling as shown in fig. 1  
accommodates #36B, #37B, #38B Plugs.  
**CONTACT**—Lance acts as solder barrier  
and provides hole for soldering wire.  
#330—Similar to #329 with longer  
terminal on contact.  
#331-2—Connector. Consists of #330 Jacks  
assembled to a XP Board on 1/2" centers,  
providing individual ground connections  
avoiding ground loop.  
#333—Snap in Dip Solder Printed  
Circuit Type. Assembled as shown in fig. 3.  
#340-341—Panel Mounting Jack, Shells  
made of Brass, nickel plated.  
**INSULATOR**—Ceramic.  
**CONTACT**—Spring brass.  
**NUT** 1/4"-32 Brass nickel plated.  
**LUG**—Brass cadmium plated.



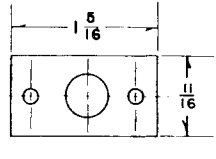
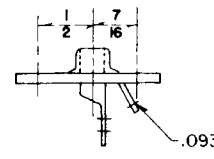
318



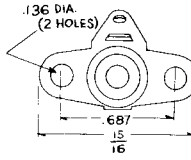
318A



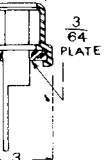
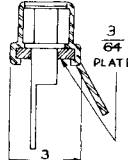
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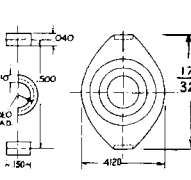
319A



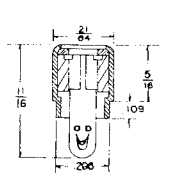
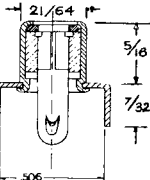
326



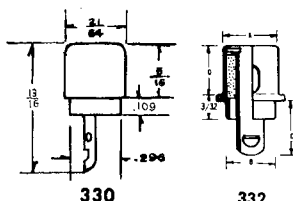
327



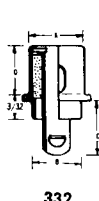
328



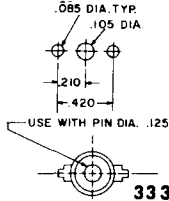
329



330



332



333

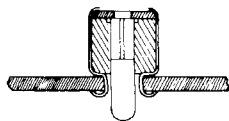
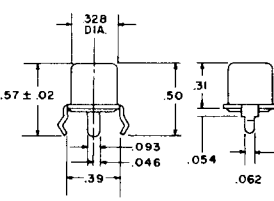


FIG. 1

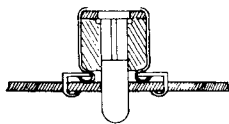


FIG. 2

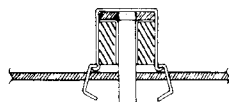
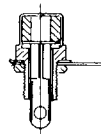
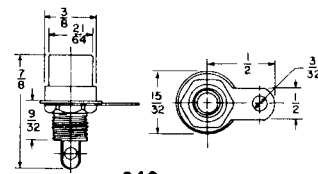


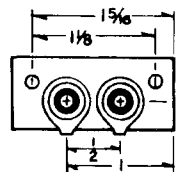
FIG. 3



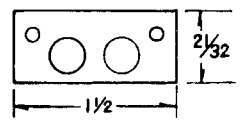
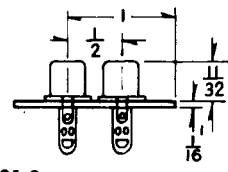
340



341



331-2



331-2A

Photos shown are not to size or scale





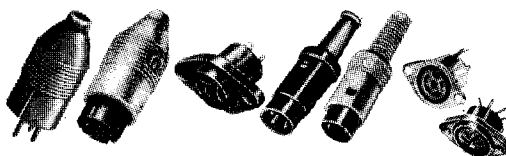




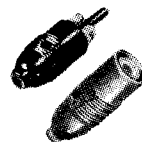
## hirschmann • plugs • sockets • terminals



6-36 POLE MULTIPLE CONNECTORS



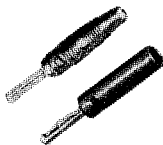
SMALL, MULTI-POLE CONNECTORS



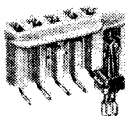
PICK-UP PLUGS AND SOCKETS



THIRD-HAND PROBE CONNECTORS



FULL CONTACT PLUGS



SOCKET WITH SWITCH



BUNCH-PIN PLUGS FLEX-HANDLES



BINDING POSTS & TERMINALS



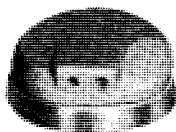
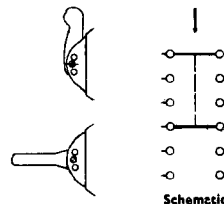
ALLIGATOR CLIPS

## sound/transducers



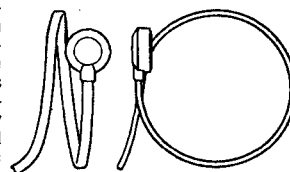
**HEADSETS:** stereo or mono monitoring for maximum intelligibility. Lightweight units available in a variety of styles with choice of earpads, earloops, eartips, lucite earcups, cords and plugs. Impedance range 15 to 8000 ohms.

**MINIATURE SWITCHES:** for low voltage applications. These switches are subjected to the most stringent mechanical and metallurgical inspections and can be employed with full confidence on the widest range of electrical equipment.



**EARPHONES:** quality magnetic transducers in flesh or grey; power, frequency or sensitivity to fit the application. Standard U.S. polarized-type cord connection. Impedances from 3.2 to 8000 ohms.

**CONTACT THROAT MICROPHONES/HEART BEAT MICROPHONES:** effective for use in surroundings with high background sound levels because only the operator's voice is registered. Microphone diaphragm is held in place by a light steel band covered by soft plastic. Impedances: 50, 120, 200 and 500 ohms. In grey only.

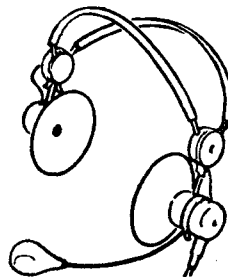


## beyer • microphones • headsets • transformers

### PROFESSIONAL MICROPHONES FOR STUDIO USE

Dynamic, moving coil ribbon and double ribbon.

OPTIMUM PERFORMANCE MICROPHONES FOR HIGH FIDELITY SPEECH & MUSIC REPRODUCTION • MICROPHONES FOR HOME TAPE RECORDERS AND AMATEUR USE • INDUSTRIAL AND SPECIAL APPLICATION MICROPHONES • SOUND PROBES • DYNAMIC HEADPHONES • TRANSFORMERS, WIND-SCREENS, STANDS, TRIPODS, ADAPTORS.





# POMONA *Electronics*

## 3/4" SPACED MOLDED DOUBLE BANANA PLUGS

Pomona Banana Plug and stack-up accessories are of the highest quality—tough thermo-plastic—molded directly on to the metal body of plugs and connectors for maximum strength, moisture resistance and insulative properties:

General Specifications listed below apply to items using banana plugs in this catalog.

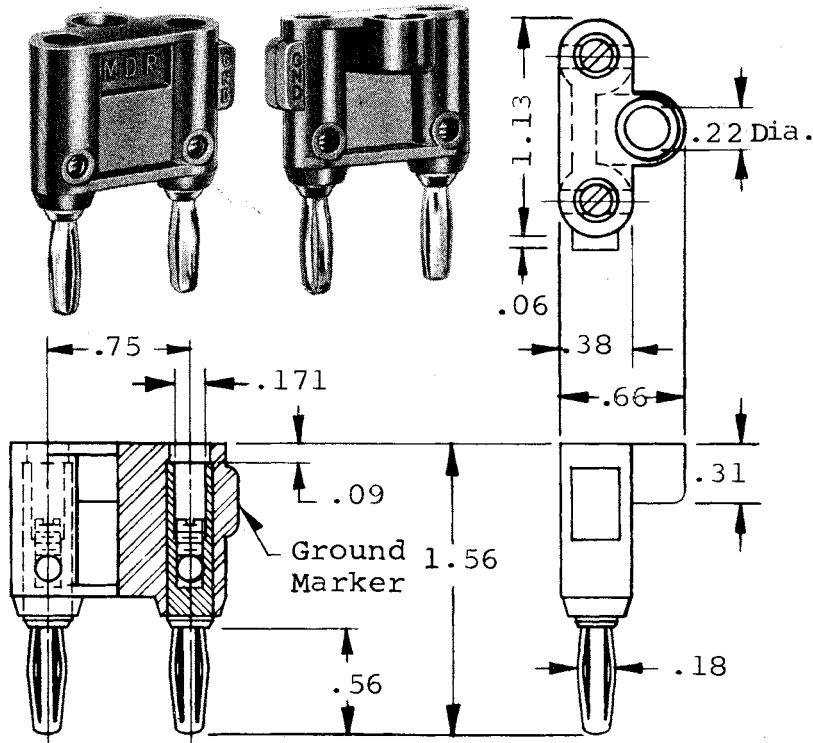
### FEATURES . . .

- One piece beryllium copper heat treated spring for maximum long life.
- Rounded spring design results in maximum contact area.
- STACK-UP feature allows an unlimited number of connections at the same electrical point.

### SPECIFICATIONS . . .

- Fits standard 0.166 dia. banana jacks.
- Spring, beryllium copper alloy 25 per QQ-C-533.
- Plug body, Brass per QQ-B-626 Comp. 22.
- Nickel plated per QQ-N-290, Class 2.
- Contact resistance less than 0.001 ohms per plug.

ACTUAL SIZE

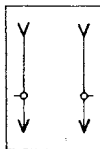
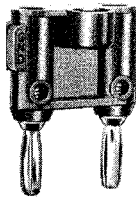


#### RATINGS

Models: MDP; MDP-ST; 1330; 1330-ST

Capacity :	0.8 pf to 10 MC
Current :	15 Amps. Cont., 30 Amps. Int.
Voltage :	5000 W.V.
Temperature :	-25°C to +85°C.

### DOUBLE BANANA PLUG



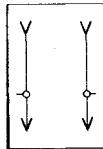
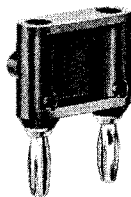
Double banana plug on 3/4" centers; set screws secure leads; simplifies cable construction or component mounting; banana jacks permit top Stack-Up for multiple connections.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL MDP (Specify Color)

NET .75

### COMPONENT MOUNTING DOUBLE BANANA PLUG



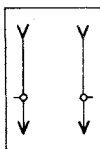
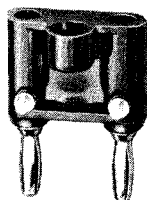
Double banana plug on 3/4" centers; set screws secure leads; features recess for mounting small components; banana jacks permit top Stack-Up for multiple connections.

COLORS: Black, Red

MODEL 1330 (Specify Color)

NET .75

### DOUBLE BANANA PLUG WITH SOLDER TURRET TERMINALS



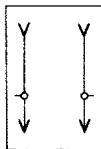
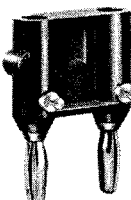
Similar to Model MDP, except has solder turret terminals for permanent noise-free connections of cables and components. Double banana plug on 3/4" centers; banana jacks permit top Stack-Up for multiple connections.

COLOR: Black

MODEL MDP-ST

NET .85

### COMPONENT PLUG WITH SOLDER TURRET TERMINALS



Similar to Model 1330, except has solder turret terminals for permanent noise-free connections of components, etc. Double banana plug on 3/4" centers; Banana jacks permit top Stack-Up for multiple connections.

COLORS: Black, Red.

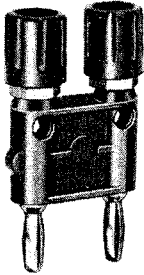
MODEL 1330-ST (Specify Color)

NET .85

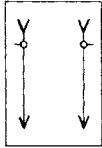
# POMONA Electronics

## 3/4" SPACED BANANA PLUG TEST ACCESSORIES

### BINDING POSTS TO DOUBLE BANANA PLUG



Features insulated binding posts on 3/4" centers for rapid mounting and interchangeability of components. Binding posts allow top Stack-Up for multiple connections. Side Stack-Up provided by thru-holes in plug body.

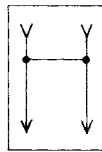
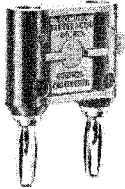


UPPER: Insulated double binding posts, 3/4" on centers with .166 dia. banana jack.  
 LOWER: Double banana plug, 3/4" on center. Cross holes in body provide side Stack-Up connections.  
 COLORS: Body, Black. Binding Posts, Black/Red.

MODEL 1286

NET 2.50

### INSULATED SHORTING BAR

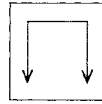
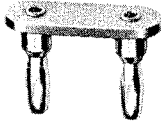


Ideal as a connecting link for use with 3/4" spaced banana jacks. Banana plugs internally solder-bonded with #14 AWG wire. Banana jacks provide top Stack-Up. Resistance less than 1.5 milliohms installed. Current rating 15 Amps. Cont., 30 Amps. Int. "Shorting Bar" marked on top of plug.  
 COLORS: Natural, Black, Red.

MODEL MDP-S (Specify Color)

NET .95

### METAL SHORTING BAR

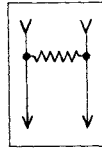
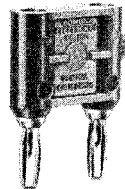


Low profile, nickel plated brass shorting bar. Double banana plugs 3/4" on centers swaged to 3/32" thick brass bar. Resistance, less than 1.5 milliohms installed. Current rating: 15 Amps. Cont., 30 Amps. Int.

MODEL 1855

NET .75

### MOLDED PRECISION RESISTOR



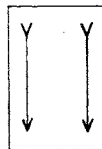
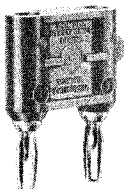
Ideal where rapid change of resistance values is required. Used in breadboarding, R & D labs., Standards, Terminations, etc. Deposited carbon 1% resistor, 1/2 watt, molded internally. Resistor soldered to double banana plug, 3/4" on centers. Top Stack-Up provided for multiple connections. Resistance value stamped on top of plug.

(OHMS)	50	200	1K	100K	1 Meg.
	75	250	5K	200K	2 Meg.
	120	500	10K	250K	5 Meg.
	130	600	20K	500K	10 Meg.
	150	900	50K		

MODEL MDP-R (Specify Value)

NET 2.75

### ADAPTER — .080 RECEPTACLE TO DOUBLE BANANA PLUG

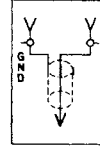
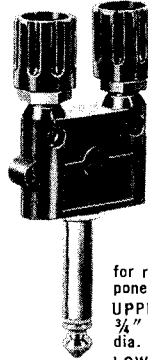


Permits .080 Tip plugs to be used with equipment having banana jacks.  
 UPPER: Receptacles, beryllium copper, gold flashed; spaced 3/4" on center to accept .080 dia. pin tip plugs.  
 LOWER: Double banana plug, 3/4" on centers, nickel plated. Cross holes in body provide Stack-Up connections.  
 COLOR: Black

MODEL 1845

NET .85

### ADAPTER — BINDING POSTS TO PHONE PLUG

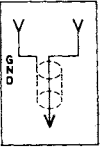
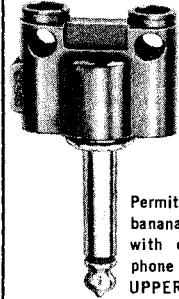


Permits single or double banana plugs to be used with equipment having phone jacks. Ideal for rapid mounting of components and test leads.  
 UPPER: Insulated posts, 3/4" on center with .166 dia. banana jack.  
 LOWER: 1/4" dia. phone plug, 1-3/16" long.  
 COLOR: Body, Black. Binding Posts: Black/Red.

MODEL 1285

NET 4.85

### ADAPTER — BANANA JACKS TO PHONE PLUG

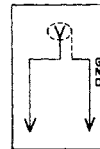
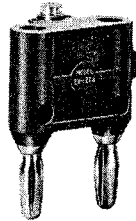


Permits single or double banana plugs to be used with equipment having phone jacks.  
 UPPER: Double banana jack, 3/4" on centers .166 dia.  
 LOWER: Standard 1/4 dia. phone plug, 1-3/16" long.  
 COLOR: Black

MODEL 1980

NET 2.8

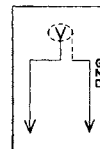
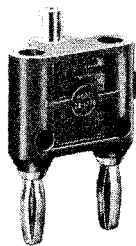
### ADAPTER — MICRODOT RECEPTACLE TO BANANA PLUGS



Permits Microdot miniature coaxial plugs be used with equipment having banana jack. Cross holes in body provide side Stack-Up connections.  
 UPPER: Microdot receptacle, Screw-On Type.  
 LOWER: Double banana plug, 3/4" on centers.

MODEL	Type (Ohms)	Body Color	Receptacle Thread	NET
1275	50	Green	10-32	5.85
1277	70	Violet	12-32	5.85
1279	93	White	1/4-32	5.85

### ADAPTER — MICRODOT RECEPTACLE TO BANANA PLUGS

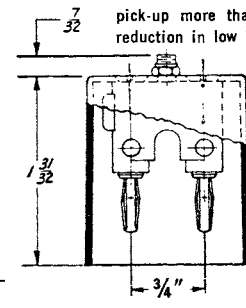
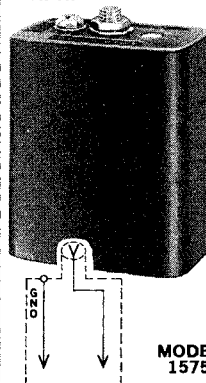


Permits Microdot miniature coaxial plugs be used with equipment having banana jacks. Cross holes in body provide side Stack-Up connections.  
 UPPER: Microdot Receptacle, Slide-On Type. Universally adapts to 50, 70 or 93 ohm plug.  
 LOWER: Double banana plug, 3/4" on centers.  
 COLOR: Black

MODEL 1276

NET 5.0

### ADAPTER — MICRODOT RECEPTACLE TO SHIELDED BANANA PLUG



Permits Microdot miniature coaxial plug, 50 ohm be used with equipment having banana jacks. B anodized aluminum shield reduces pickup more than 70 DB. Ideal for reduction in low level acceleration system

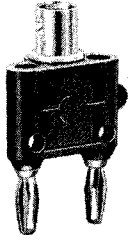
UPPER: Microdot Receptacle, Screw Type, Receptacle Thread 10-32.  
 LOWER: Shielded Double banana plug, 3/4" on centers.  
 COLOR: Black

MODEL 1575

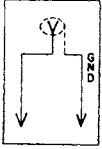
NET 6

# POMONA *Electronics*

## BNC ADAPTERS



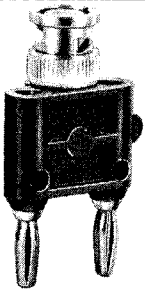
### ADAPTER — BNC RECEPTACLE TO BANANA PLUGS



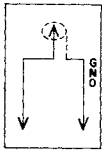
Permits BNC plug to be used with equipment having banana jacks. Excellent for adapting laboratory VTVM, oscilloscopes and signal generator inputs to readily available coaxial cables. UPPER: BNC receptacle. LOWER: Double banana plug,  $\frac{3}{4}$ " on centers. COLOR: Black

MODEL 1269

NET 2.85



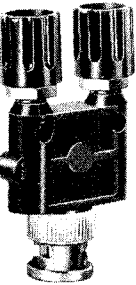
### ADAPTER — BNC PLUG TO BANANA PLUGS



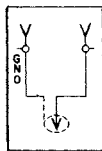
Permits BNC receptacle to be used with equipment having banana jacks. Minimizes number of coaxial connections for maximum efficiency. UPPER: BNC plug. LOWER: Double banana plug,  $\frac{3}{4}$ " on centers. COLOR: Black

MODEL 1270

NET 3.85



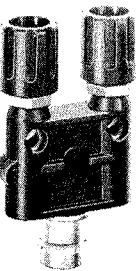
### ADAPTER — BINDING POSTS TO BNC PLUG



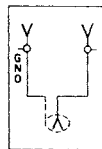
Permits single or double banana plug to be used with equipment having BNC receptacle. Excellent for use with laboratory oscilloscopes. UPPER: Insulated binding posts,  $\frac{3}{4}$ " on centers with .166 dia. banana jacks. LOWER: BNC plug. COLOR: Body, Black. Binding Posts: Black/Red.

MODEL 1296

NET 4.85



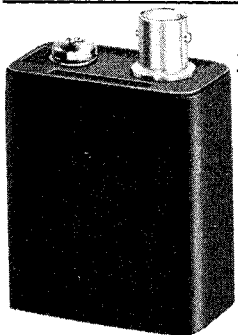
### ADAPTER — BINDING POSTS TO BNC RECEPTACLE



Permits single or double banana plugs to be used with equipment having BNC plug. UPPER: Insulated binding posts,  $\frac{3}{4}$ " on centers with .166 dia. banana jacks. LOWER: BNC receptacle. COLOR: Body, Black. Binding Posts: Black/Red.

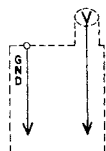
MODEL 1452

NET 4.85



### ADAPTER — BNC RECEPTACLE TO SHIELDED BANANA PLUGS

Permits BNC plug to be used with equipment having banana jacks. Black anodized aluminum shield reduces noise pick-up more than 70 DB. Ideal for low level inputs to oscilloscopes, wave analyzers, etc.



UPPER: BNC Receptacle. LOWER: Shielded double banana plug,  $\frac{3}{4}$ " on centers.

MODEL 1645

NET 3.45

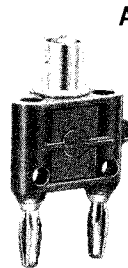
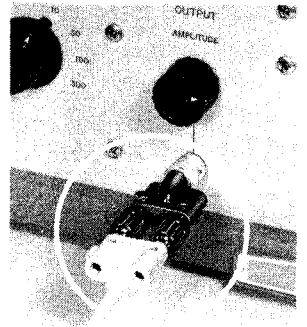
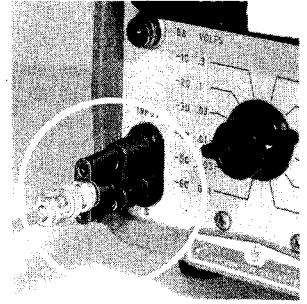
Now! Increase the flexibility of your laboratory with the use of POMONA molded test accessories.

Minimize the necessity of stocking a large quantity and variety of coaxial cables by using POMONA molded adapters.

Tough thermo-plastic material molded to plug body or connectors insures maximum strength, moisture resistance and excellent insulative properties.

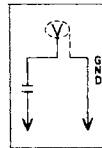
POMONA ELECTRONICS adapters are designed and engineered with you in mind, from the selection of the best in materials, incorporated with a quality control program that enables us to offer to you, products that are unequalled in reliability and quality.

Complete engineering facilities are offered to our customers for special adapter problems that may arise.



### ADAPTER — SIGNAL ISOLATOR — BNC RECEPTACLE TO BANANA PLUGS

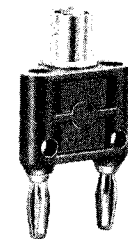
Permits BNC male connector to be used with equipment having banana jacks. General purpose ceramic capacitor molded internally. Rated @ .01 mfd  $\pm 20\%$ , 200 WVDC. Insulation resistance 10,000 megohms min. Ideal for isolating DC signals from VTVM inputs and signal generator outputs.



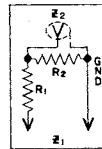
UPPER: BNC receptacle. LOWER: Double banana plug,  $\frac{3}{4}$ " on centers. COLOR: Blue

MODEL 1868

NET 7.85



### ADAPTER — BNC MATCHING PAD



Adapts 600 OHM sources to 50, 75 or 93 OHM cables. Excellent for matching signal generators and VTVM's to standard coaxial cables. Ideal for receiver alignment. Molded in deposited carbon resistors 1%,  $\frac{1}{4}$ W.

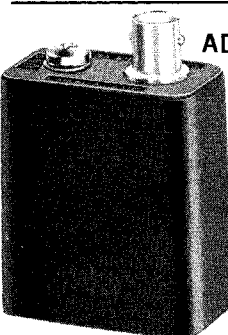
UPPER: BNC receptacle. LOWER: Double banana plug,  $\frac{3}{4}$ " on centers.

MODEL  
1656-1  
1656-2  
1656-3

COLOR  
Yellow  
Red  
White

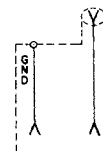
RANGE — OHMS  
600 to 50  
600 to 75  
600 to 93

NET  
10.85  
10.85  
10.85



### ADAPTER — BNC RECEPTACLE TO SHIELDED BANANA JACKS

Permits BNC plug to be used with equipment having banana plugs. Black anodized aluminum shield reduces noise pick-up more than 70 DB. Ideal for low level inputs to oscilloscopes, wave analyzers, etc.



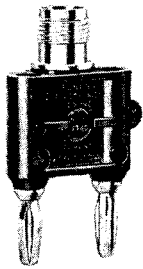
UPPER: BNC receptacle. LOWER: Shielded double banana jacks,  $\frac{3}{4}$ " on centers. COLOR: Black

MODEL 1681

NET 3.45

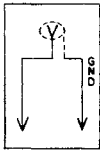
# POMONA *Electronics*

## TNC & "N" ADAPTERS



MODEL 1340

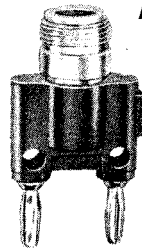
### ADAPTER — TNC RECEPTACLE TO BANANA PLUGS



Permits TNC plug to be used with equipment having banana jacks. Perfect for connecting modern control systems to laboratory test equipment.

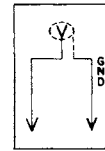
UPPER: TNC Receptacle.  
LOWER: Double banana plug,  $\frac{3}{4}$ " on centers.  
COLOR: Black

NET 5.85



MODEL 1740

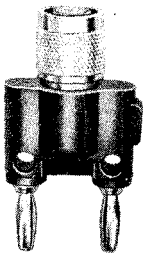
### ADAPTER — TYPE "N" RECEPTACLE TO BANANA PLUGS



Permits Type "N" plug to be used with equipment having banana jacks. Ideal for low loss measurement systems.

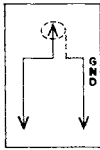
UPPER: Type "N" receptacle.  
LOWER: Double banana plug,  $\frac{3}{4}$ " on centers.  
COLOR: Black

NET 5.85



MODEL 1981

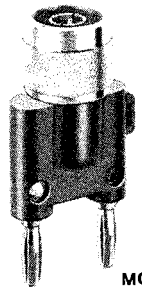
### ADAPTER — TNC PLUG TO BANANA PLUGS



Permits TNC receptacle to be used with equipment having banana jacks. Minimizes your stock of coaxial cables.

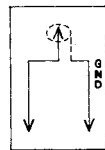
UPPER: TNC plug.  
LOWER: Double banana plug,  $\frac{3}{4}$ " on centers.  
COLOR: Black

NET 6.85



MODEL 1770

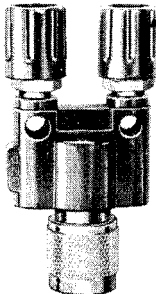
### ADAPTER — TYPE "N" PLUG TO BANANA PLUGS



Permits type "N" receptacle to be used with equipment having banana jacks.

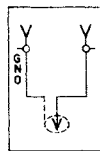
UPPER: Type "N" plug.  
LOWER: Double banana plug,  $\frac{3}{4}$ " on centers.  
COLOR: Black

NET 5.85



MODEL 1982

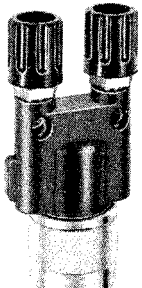
### ADAPTER — BINDING POSTS TO TNC PLUG



Permits single or double banana plug to be used with equipment having a TNC receptacle. Exceptional for signal insertion with rapid interchangeability of terminations.

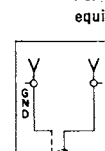
UPPER: Insulated binding posts,  $\frac{3}{4}$ " on centers with .166 dia. banana jacks.  
LOWER: TNC plug.  
COLOR: Body, Black. Binding Posts: Black/Red.

NET 6.85



MODEL 1796

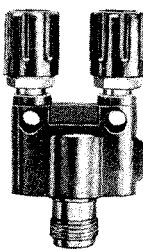
### ADAPTER — BINDING POSTS TO TYPE "N" PLUG



Permits single or double banana plug to be used with equipment having Type "N" receptacle. Binding post allow component insertion.

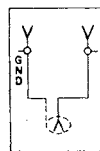
UPPER: Insulated binding posts,  $\frac{3}{4}$ " on centers with .166 dia. jacks.  
LOWER: Type "N" plug.  
COLOR: Black. Binding Posts: Black/Red.

NET 5.85



MODEL 1976

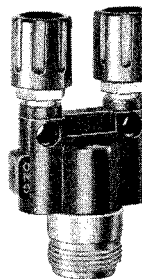
### ADAPTER — BINDING POSTS TO TNC RECEPTACLE



Permits single or double banana plug to be used with equipment having TNC plug. Useful for rapid interconnection of systems and components.

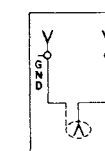
UPPER: Insulated binding posts,  $\frac{3}{4}$ " on centers with .166 dia. banana jacks.  
LOWER: TNC receptacle  
COLOR: Body, Black. Binding Posts: Black/Red.

NET 5.85



MODEL 1992

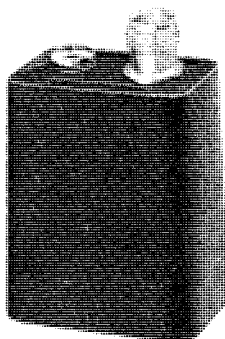
### ADAPTER — BINDING POSTS TO TYPE "N" RECEPTACLE



Permits single or double banana plug to be used with equipment having type "N" plug. Useful for rapid interconnection of systems and components.

UPPER: Insulated binding posts,  $\frac{3}{4}$ " on centers with .166 dia. jacks.  
LOWER: Type "N" receptacle  
COLOR: Body, Black. Binding Posts: Black/Red.

NET 5.85

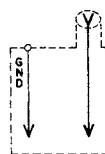


MODEL 1975

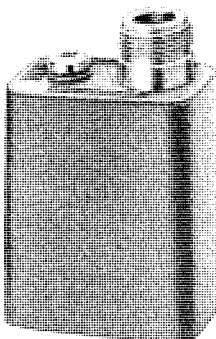
### ADAPTER — TNC RECEPTACLE TO SHIELDED BANANA PLUGS

Permits TNC plug to be used with equipment having banana jacks. Black anodized aluminum shield reduces noise pick-up more than 70 DB.

UPPER: TNC receptacle.  
LOWER: Double banana plug,  $\frac{3}{4}$ " on centers.  
COLOR: Black



NET 4.85

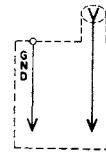


MODEL 1983

### ADAPTER — TYPE "N" RECEPTACLE TO SHIELDED BANANA PLUGS

Permits type "N" plug to be used with equipment having banana jacks. Black Anodized aluminum shield reduces noise pick up more than 70 DB.

UPPER: Type "N" receptacle.  
LOWER: Double banana plug,  $\frac{3}{4}$ " on centers.  
COLOR: Black

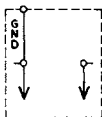
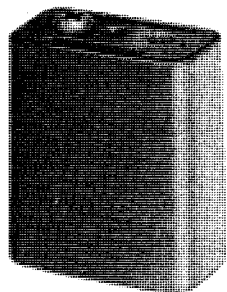


NET 4.8

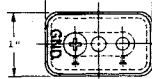
# POMONA Electronics

## SHIELDED BANANA PLUGS UHF ADAPTERS

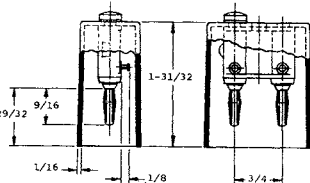
### SHIELDED DOUBLE BANANA PLUG IN-LINE CABLE ENTRY



**RATED:** 15A CONTINUOUS  
1200 WVDC  
3400 VDC BREAKDOWN  
2.5 PF @ 1 MC



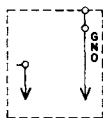
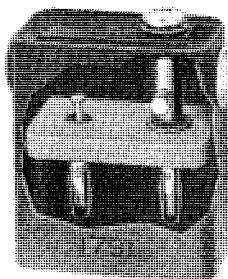
- Shielded double plug 3/4" spaced
- Die cast aluminum shell, black anodized
- Noise pick-up reduced 70 DB
- Gold flashed solder turret terminals for positive reliable cable connections
- One piece nickel plated beryllium copper spring for use with standard 0.166 dia. banana jacks
- Rounded banana spring design results in maximum contact area and minimum contact resistance
- GND clearly molded in shell
- Cable opening, 7/32" diameter



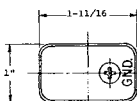
MODEL 1433

NET 2.25

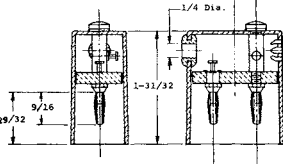
### SHIELDED DOUBLE BANANA PLUG RIGHT ANGLE CABLE ENTRY



**RATED:** 15A CONTINUOUS  
2800 PEAK WV  
5000 VDC BREAKDOWN  
2.0 PF @ 1 MC.



- Shielded double plug, 3/4" spaced
- Ceramic insulating base
- Die cast aluminum shell, black anodized
- GND clearly molded in shell
- Noise pick-up reduced 70 DB
- One piece nickel plated beryllium copper springs for use with 0.166 diameter banana jacks
- Rounded banana spring design results in maximum contact area and minimum contact resistance
- Vinyl grommet and nickel plated snap button supplied



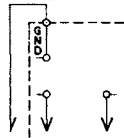
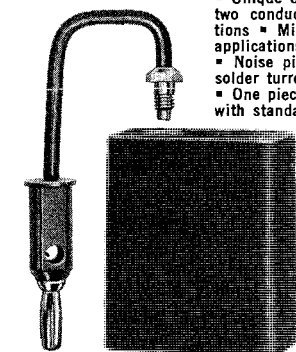
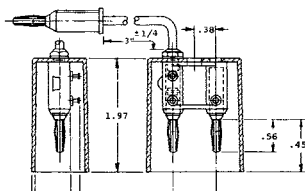
MODEL 1791

NET 2.95

### BALANCED LINE SHIELDED DOUBLE BANANA PLUG

- Unique 3 terminal design allows connection to shielded two conductor cable while maintaining balanced conditions
- Minimizes ground loop errors in low signal level applications
- Die cast aluminum shell, black anodized
- Noise pick-up reduced at least 70 DB
- Gold flashed solder turret terminals for reliable noise free connections
- One piece nickel plated beryllium copper spring for use with standard 0.166 dia. banana jacks.

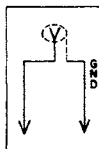
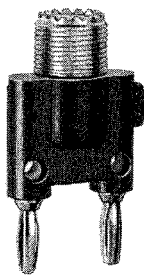
**RATED:**  
15A Continuous 5000 V peak break-down, line to line  
1000 WV Peak; line to shield  
2000 WV peak; line to line  
2500 V peak break-down; line to shield  
2.0 pf @ 1 MC Capacity; line to line  
3.0 pf @ 1 MC. capacity; both lines to shield.



MODEL 1921

NET 4.85

### ADAPTER — UHF RECEPTACLE TO DOUBLE BANANA PLUG

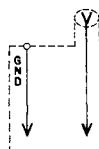
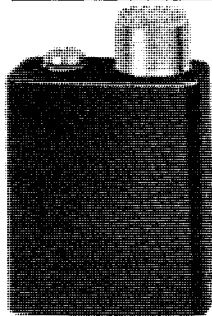


Permits UHF plug to be used with equipment having banana jacks.  
UPPER: UHF receptacle, 5/8" dia.  
LOWER: Double banana plug, 3/4" on centers.  
COLOR: Black.

MODEL 1707

NET 4.85

### ADAPTER — UHF RECEPTACLE TO SHIELDED BANANA PLUGS

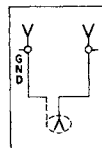
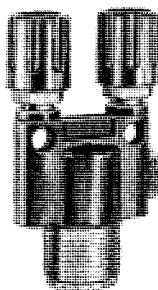


Permits UHF plug to be used with equipment having banana jacks. Black anodized shield reduces noise pick-up at least 70 DB.  
UPPER: UHF receptacle, 5/8" dia.  
LOWER: Double banana plug, 3/4" on centers  
COLOR: Black

MODEL 1708

NET 4.85

### ADAPTER — BINDING POSTS TO UHF RECEPTACLE

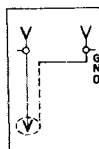
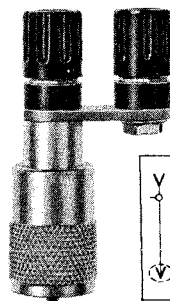


Permits single or double banana plug to be used with equipment having UHF plug.  
UPPER: Insulated binding posts, 3/4" on centers, with .166 dia. jacks.  
LOWER: UHF receptacle, 5/8" dia.  
COLOR: Body, Black.  
Binding Posts: Black/Red.

MODEL 1792

NET 5.85

### ADAPTER — BINDING POSTS TO UHF PLUG



Permits single or double banana plug to be used with equipment having a UHF receptacle, 5/8" dia. Convenient for use with modern oscilloscopes. Center conductor binding post Red; Ground, Black.  
UPPER: Insulated binding posts 3/4" on centers with .166 dia. jacks.  
LOWER: UHF plug

MODEL 1699

NET 4.85

### ADAPTER — BINDING POSTS TO UHF PLUG



Permits single banana plug to be used with equipment having a UHF receptacle, 5/8" dia. Adds flexibility to your oscilloscope.  
UPPER: Insulated binding post with .166 dia. banana jack.  
LOWER: UHF plug.

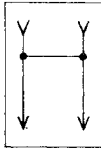
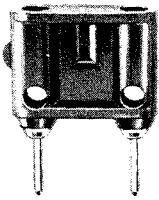
MODEL 1698

NET 3.85

# POMONA *Electronics*

## .080 TIP AND BANANA PLUG ACCESSORIES

### INSULATED SHORTING BAR



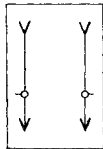
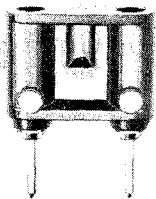
Used as a connecting link with equipment having tip jacks. Plugs internally solder bonded with 14 AWG wire. Top stack-up feature.

UPPER: Banana jacks, .166 dia., 3/4" on centers. Brass, nickel plated.  
LOWER: Pin Tip, .080 dia., Brass, nickel plated.  
COLORS: Black, Red

MODEL 1730 (Specify color)

NET .75

### PLUG — COMPONENT MOUNTING, PIN TIP



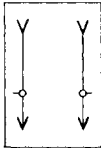
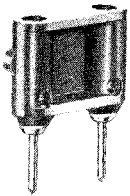
Features recess for mounting components. Gold flashed solder turret terminals for permanent noise-free connections.

UPPER: Receptacle accepts .080 pin, beryllium copper, gold flashed, 3/4" on centers.  
LOWER: Pin tip, .080 dia. Brass, nickel plated.  
COLORS: Black, Red

MODEL 1904 (Specify color)

NET .85

### ADAPTER — BANANA JACKS TO PIN TIP



Permits single or double banana plugs to be used in equipment having tip jacks. Features recess for component mounting. Internal set screws firmly secure wire leads.

UPPER: Banana jacks, .166 dia., 3/4" on centers.  
LOWER: Pin tip, .080 dia.  
COLOR: Black

MODEL 1858

NET .75

### ADAPTER — BANANA JACK TO PIN TIP



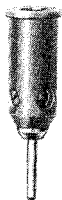
Permits single banana plug to be used with equipment having tip jacks. Brass, nickel plated.

UPPER: Banana jack, .166 dia.  
LOWER: Pin tip, .080 dia.  
COLORS: Black, Red.

MODEL 1432 (Specify Color)

NET .15

### PLUG — PIN TIP, SOLDERLESS

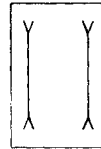


Wire firmly held in place with internal set screw, eliminating soldering. Assembly of test leads simplified.  
UPPER: Receptacle accepts .080 dia. pin, beryllium copper, gold flashed.  
LOWER: Pin tip, .080 dia., brass, nickel plated.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

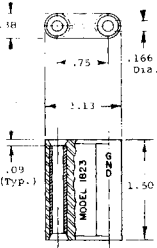
MODEL 1922 (Specify color)

NET .50

### DOUBLE BANANA PLUG SPLICE



Provides rapid method for splicing cables. Reduces necessity of storing extra long cables. Molded thermo-plastic body eliminates shock hazard by completely enclosing banana plug contact. Brass, nickel plated banana jacks. .166 dia., 3/4" on centers.  
COLORS: Black, Red.



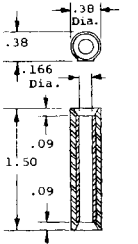
MODEL 1823 (Specify color)

NET .50

### SINGLE BANANA PLUG SPLICE



Provides rapid method for splicing cables. Reduces the necessity of storing extra long cables. Molded thermo-plastic body eliminates shock hazard by completely enclosing banana plug contact. Brass, nickel plated banana jack. .166 dia.  
COLORS: Black, Red



MODEL 1829 (Specify color)

NET .25

### ADAPTER — PIN TIP RECEPTACLE TO BANANA PLUG



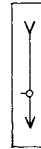
Permits .080 dia. pin tip to be used with equipment having banana jacks. Insulation molded to plug body.

UPPER: Receptacle accepts .080 dia. pin, beryllium copper, gold flashed.  
LOWER: Banana plug, one piece nickel plated beryllium copper spring for use with standard 0.166 dia. banana jacks.  
COLORS: Black, Red.

MODEL 1809 (Specify Color)

NET .50

### SOLDERLESS BANANA PLUG



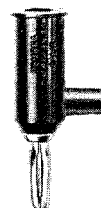
Wire firmly held in place with internal set screw, eliminating soldering. Assembly of test leads simplified.

UPPER: Banana jack, .166 dia.  
LOWER: Banana plug, one piece nickel plated beryllium copper spring for use with standard 0.166 dia. banana jacks.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL 1325 (Specify color)

NET .50

### SOLDERLESS BANANA PLUG WITH SAFETY COLLAR



Features: Integral safety collar insulates exposed wire leads. Wire firmly held in place with internal set screw eliminating soldering. Assembly of test leads simplified.

UPPER: Banana jack, .166 dia.  
LOWER: Banana plug, one piece nickel plated beryllium copper spring for use with standard 0.166 dia. banana jacks.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL 1825 (Specify Color)

NET .50

# POMONA *Electronics*

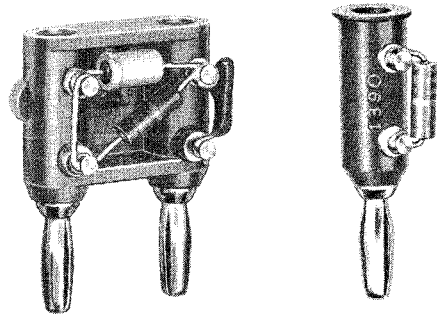
## ISOLATION PLUGS — COMPONENT MOUNTINGS

**CREATE** passive and active networks, voltage dividers, isolation networks or attenuators with the Split-Terminal isolation plugs described below.

Gold flashed solder turret terminals provide permanent, reliable noise-free connections for component mounting.

Tough thermo-plastic material molded to plug body and connectors insures maximum strength, moisture resistance and excellent insulative properties.

### TYPICAL APPLICATION

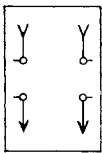
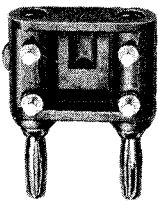


ACTUAL SIZE

MODEL MDP-X

MODEL 1390

### PLUG — DOUBLE BANANA, ISOLATION

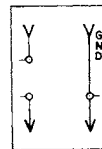
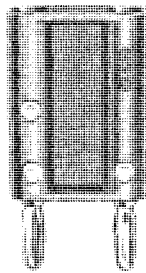


Provides four terminal isolation. Top Stack-up receptacles isolated from lower plugs. Ideal for insertion of matching networks in laboratory VTVM's, signal generators, etc. Gold flashed solder turret terminals for permanent noise-free connections  
 UPPER: Double banana jacks, .166 dia., 3/4" on centers  
 LOWER: Double banana plug.  
 COLOR: Red

MODEL MDP-X

NET 3.25

### PLUG — BANANA, ISOLATION

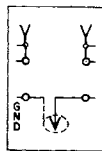
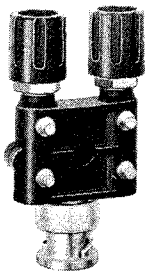


Provides three terminal isolation. Excellent for "T" and "Pi" networks. Plug and receptacle nickel plated. Gold flashed solder turret terminals for permanent noise-free connections. "Ground" is straight feed-thru. Hot side isolated.  
 UPPER: Banana jack, .166 dia. 3/4" on centers.  
 LOWER: Double banana plug.  
 COLOR: Blue

MODEL 1837

NET 2.50

### ADAPTER — BNC — BINDING POST, ISOLATION

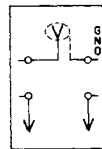
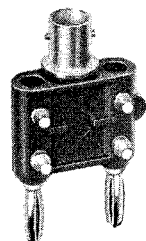


Permits single or double banana plug to be used with equipment having BNC receptacle. Provides isolation for a four terminal network. Binding post facilitates connections of test leads or additional components. Gold flashed solder turret terminals provide permanent noise-free connections.  
 UPPER: Insulated binding posts, 3/4" on centers with .166 dia. jacks.  
 LOWER: BNC plug.  
 COLOR: Body, Black.  
 Binding Posts: Black/Red.

MODEL 1469

NET 10.85

### ADAPTER — BNC RECEPTACLE TO BANANA PLUGS

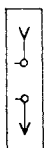


Permits BNC plug to be used with equipment having banana jacks. Provides isolation for a four terminal network. Excellent for matching pad networks. Gold flashed solder turret terminals for permanent noise-free connections.  
 UPPER: BNC receptacle.  
 LOWER: Double banana plug, 3/4" on centers.  
 COLOR: Black

MODEL 1468

NET 9.85

### PLUG — SINGLE BANANA, ISOLATION

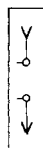
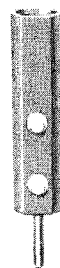


Provides two terminal isolation. Top Stack-Up receptacle is isolated from lower plug to permit addition of series resistors, diodes, etc. Ideal for computers, lab circuit design and testing. Gold flashed solder turret terminate for permanent noise-free connections.  
 UPPER: Banana jack, .166 dia.  
 LOWER: Banana plug  
 COLORS: Black, Red.

MODEL 1390 (Specify color)

NET .95

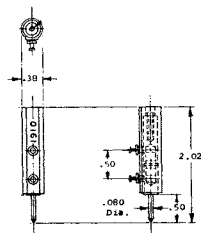
### PLUG — PIN TIP, ISOLATION



Pin tip receptacle is isolated from .080 pin tip plug. Provides for addition of series components. Ideal for use with computer boards, lab circuit designs, etc. Gold flashed solder turret terminals for permanent noise-free connections.  
 UPPER: Receptacle accepts .080 dia. pin. Beryllium copper, gold flashed.  
 LOWER: Pin tip, .080 dia. Brass, nickel plated.  
 COLORS: Black, Red.

MODEL 1910 (Specify color)

NET .95

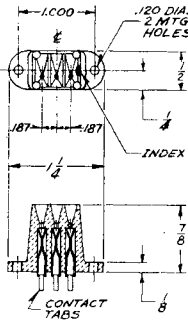




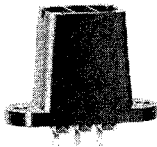
# POMONA Electronics

# TEST ACCESSORIES

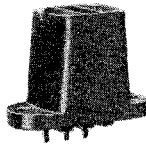
## TRANSISTOR SOCKET



For use in testing 3 lead transistors with .017 dia. leads. Beryllium copper springs for long life. Ideal for aging racks, incoming inspection, life testing, etc.



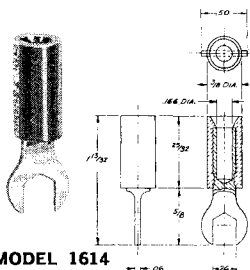
MODEL TS-187



MODEL TS-187R

MODEL	TEMP. RANGE	INSULATION RESISTANCE	COLOR	NET
TS187	-100°C To +300°C.	1 x 10 <sup>5</sup> Megohms Min. @ 500 V.D.C. @ 40% R.H., 24°C.	Black	1.75
TS187R	-125°C To +700°C.	1 x 10 <sup>6</sup> Megohms Min. @ 500 V.D.C. @ 40% R.H., 24°C.	Red	3.75

## INSULATED SPADE LUG ADAPTER



Permits single banana plug to be used with equipment having binding posts. Tough thermoplastic molded to body for maximum reliability and low shock hazard. Spade lug body, one piece machined brass, nickel plated.

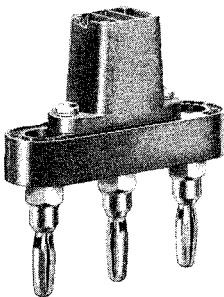
UPPER: Banana jack, .166 dia.  
LOWER: Spade lug, .26 opening.  
COLORS: Black, Red

MODEL 1614

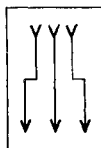
(Specify color)

NET .35

## ADAPTER — TRANSISTOR TEST SOCKET



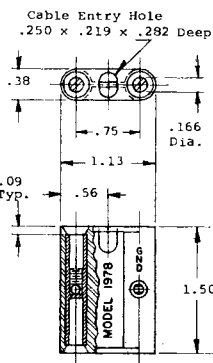
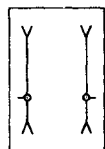
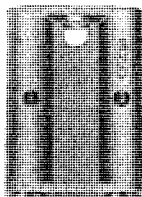
MODEL 1472



Permits the insertion of transistors with .017 dia. leads into equipment having banana jacks 3/4" on centers. Ideal for incoming inspection. Transistor socket contact and banana spring made of beryllium copper. Heavy duty phenolic construction. Insulation resistance: 1 x 10<sup>5</sup> megohms min. @ 500 V.D.C., at 40% R.H., 24°C.

NET 5.85

## DOUBLE BANANA PLUG CABLE SPLICE

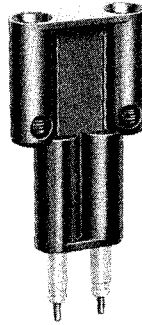


Provides rapid method for splicing cables. Internal set-screws firmly secure leads. Cable strain relief provided for extra pull-strength. Beveled thru-holes eliminate shock hazard by completely enclosing banana plug contact. Standard .166 dia. banana jacks, 3/4" on centers.  
RECEPTACLES: Brass, nickel plated, .166 dia.  
PLUG BODY: Tough Thermoplastic molded to receptacle.  
COLORS: Black, Red.

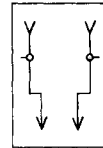
MODEL 1978 (Specify Color)

NET .75

## ADAPTER — AMP PROGRAM BOARD



MODEL 1977



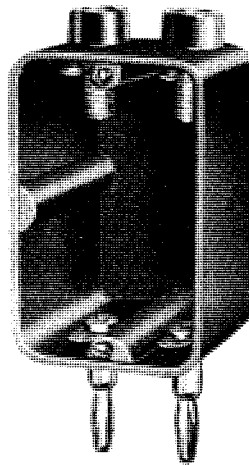
Permits single or double banana plug to be used with AMP program boards having 1/4" or 3/8" center to center spacing. Ideal for mounting components. Internal set screws secure leads. Useful in analog computer applications, etc.

UPPER: Banana jacks, 3/4" on centers. Brass nickel plated.

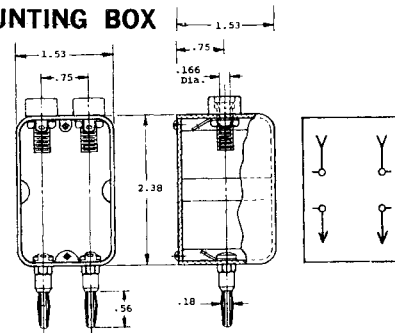
LOWER: Dual AMP pins, 1/4" or 3/8" on centers.

MODEL	PIN SPACING	COLOR	NET
1977	3/8"	Black	3.85
1991	1/4"	Gray	3.85

## COMPONENT MOUNTING BOX



MODEL 1224

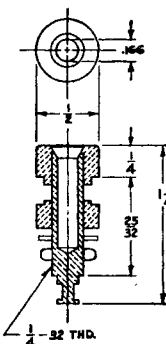


Build your own active or passive networks. A multitude of uses. Molded housing of electrical grade phenolic. Cover plate and mounting screws included.  
UPPER: Insulated banana jacks, 3/4" on center .166 dia. Brass, nickel plated.  
LOWER: Banana plugs, 3/4" on centers. One piece nickel plated beryllium copper spring for use with standard 0.166 dia. banana jacks.  
COLOR: Housing and cover, Black.  
Banana jack insulators: Black, Red.

NET 2.9

## INSULATED BANANA JACK ASSEMBLY

Used with standard banana plugs. Body, one piece brass, silver plated. Heavy duty shouldered ceramic insulator. Lockwasher and hex nut included, unassembled.



### FEATURES:

- Closed entry receptacle, .166 dia.
- Insulator head molded to body
- Mounts in 3/8" dia. hole, panels up to 3/8" thick
- Solder turret terminal
- Rated: 2,500 WVDC

- |                 |                 |
|-----------------|-----------------|
| 1581 — Black    | 1581-5 — Green  |
| 1581-1 — Brown  | 1581-6 — Blue   |
| 1581-2 — Red    | 1581-7 — Violet |
| 1581-3 — Orange | 1581-8 — Gray   |
| 1581-4 — Yellow | 1581-9 — White  |

Standard Package: 10 (per color)

MODEL 1581 (Specify Color)

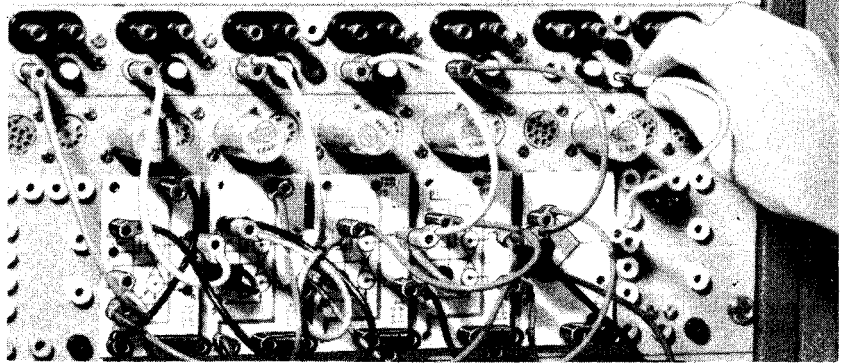
NET .2

# POMONA Electronics

## PATCH CORDS BANANA PLUG

### POMONA BANANA PLUG PATCH CORDS

Tough thermoplastic insulation molds the plug and leads into a strong moisture resistant integral unit. Excellent for computer board and test equipment applications. Used by leading industries in applications where extreme reliability is of prime importance.



#### FEATURES

- One piece beryllium copper heat treated spring for maximum long life.
- Rounded spring design results in maximum contact area.
- Extra flexible polyvinyl insulation used on all leads.

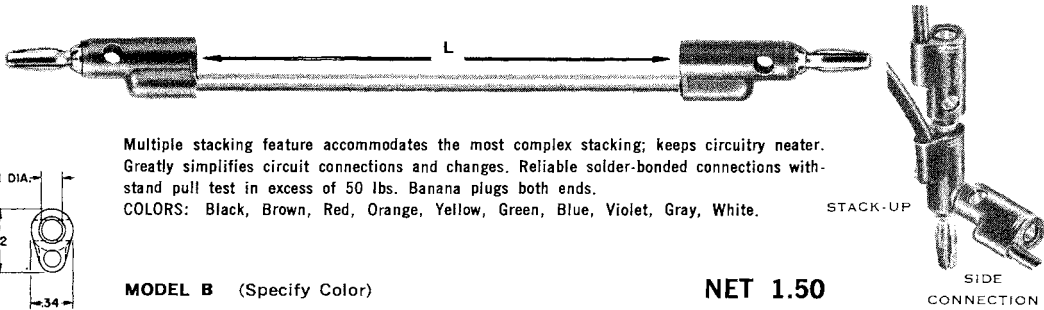
#### SPECIFICATIONS

- Fits standard 0.166 dia. banana jacks.
- Spring, beryllium copper alloy 25 per QQ-C-533.
- Plug body, brass per QQ-B-626, Comp. 22.
- Nickel plated per QQ-N-290, Class 2.
- Contact resistance less than 0.001 ohms per plug.
- Temp. Range:  $-0^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$ .
- Wire, 18 AWG, stranding 65 x 36 T.C.
- Insulation, polyvinyl .140" O.D.
- Ratings: 15 A. Cont., 30 A. Int. 10,000 W.V.D.C.

#### MODEL LENGTH

B-4	4"
B-8	8"
B-12	12"
B-18	18"
B-24	24"
B-36	36"

### STACK-UP BANANA PLUG PATCH CORD



Multiple stacking feature accommodates the most complex stacking; keeps circuitry neater. Greatly simplifies circuit connections and changes. Reliable solder-bonded connections withstand pull test in excess of 50 lbs. Banana plugs both ends.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

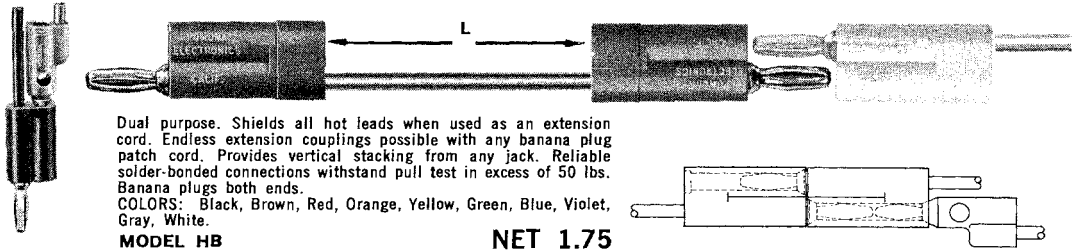
MODEL B (Specify Color)

NET 1.50

#### MODEL LENGTH

HB-4	4"
HB-8	8"
HB-12	12"
HB-18	18"
HB-24	24"
HB-36	36"

### EXTENSION STACKING BANANA PLUG PATCH CORD



Dual purpose. Shields all hot leads when used as an extension cord. Endless extension couplings possible with any banana plug patch cord. Provides vertical stacking from any jack. Reliable solder-bonded connections withstand pull test in excess of 50 lbs. Banana plugs both ends.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

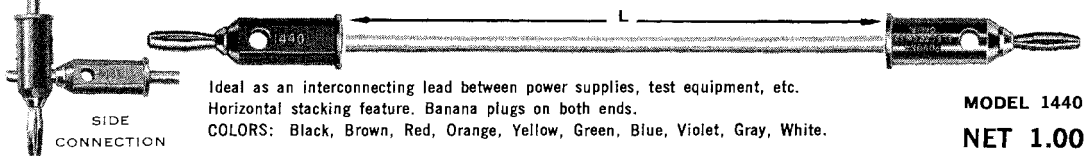
MODEL HB

NET 1.75

#### MODEL LENGTH

1440-4	4"
1440-8	8"
1440-12	12"
1440-18	18"
1440-24	24"
1440-36	36"

### HORIZONTAL STACKING BANANA PLUG PATCH CORD



Ideal as an interconnecting lead between power supplies, test equipment, etc. Horizontal stacking feature. Banana plugs on both ends.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL 1440

NET 1.00

#### MODEL LENGTH

1985-4	4"
1985-8	8"
1985-12	12"
1985-18	18"
1985-24	24"
1985-36	36"

### BANANA PLUG PATCH CORD



Excellent for general lab work. Permits interconnection between test instruments, etc. Banana plugs both ends.

COLORS: Black, Brown, Red, Orange, Red, Yellow, Green, Blue, Violet, Gray, White.

MODEL 1985

NET .85

OTHER LENGTHS AVAILABLE TO ORDER

# POMONA Electronics

## PATCH CORDS .080 TIP

MODEL LENGTH

P-4	4"
P-8	8"
P-12	12"
P-18	18"
P-24	24"
P-36	36"

MODEL P  
(Specify Color)

NET 1.75



STACK-UP

### PIN TIP VERTICAL STACKING PATCH CORD



A must in circuit designing and testing, with instruments that utilize tip jacks.  
PIN TIP: .080 dia., 1/2" long, brass, gold flashed.  
RECEPTACLE: Beryllium copper, gold flashed. Accepts .080 dia. pin.

WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible polyvinyl insulation .087" O.D.  
RATED: 5 A. Cont., 10 A. Int.  
3,000 W.V.D.C.  
TEMP. RANGE: -0°C to +105°C.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL LENGTH

1727-4	4"
1727-8	8"
1727-12	12"
1727-18	18"
1727-24	24"
1727-36	36"

MODEL 1727  
(Specify Color)

NET 1.85



Dual purpose, insulates exposed leads when used as an extension cord. Endless extension coupling possible. Also provides stacking from .080 jack.  
PIN TIP: .080 dia., 1/2" long, brass, gold flashed.  
RECEPTACLE: Beryllium copper, gold flashed. Accepts .080 dia. pin.

WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible polyvinyl insulation .087" O.D.  
RATED: 5 A. Cont., 10 A. Int.  
3,000 W.V.D.C.  
TEMP. RANGE: -0°C to +105°C.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.



13/32"

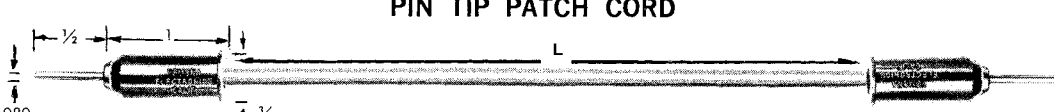


MODEL LENGTH

1990-4	4"
1990-8	8"
1990-12	12"
1990-18	18"
1990-24	24"
1990-36	36"

MODEL 1990  
(Specify Color)

NET .75



Heavy Duty patch cord. Excellent for general lab work. Permits interconnection between test instruments that utilize tip jacks.  
PIN TIP: .080 dia., 1/2" long, brass, nickel plated.  
WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.

RATED: 5 A. Cont., 10 A. Int.  
10,000 W.V.D.C.  
TEMP. RANGE: -0°C to +105°C.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL LENGTH

PT063-4	PT080-4	PM080-4	4"
PT063-8	PT080-8	PM080-8	8"
PT063-12	PT080-12	PM080-12	12"
PT063-18	PT080-18	PM080-18	18"
PT063-24	PT080-24	PM080-24	24"
PT063-36	PT080-36	PM080-36	36"

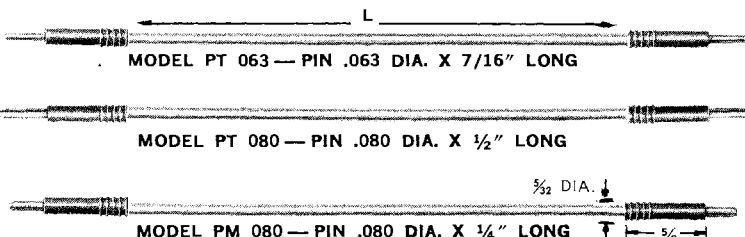
MODEL PT & PM (Specify Color)

NET .85

Small body style permits usage in equipment having receptacles spaced closely together. Three models shown.

PIN TIP: Brass, gold flashed.  
WIRE: 22 AWG, Strand. 19 x 34 T.C. Insulation, polyvinyl .064" O.D.  
RATED: 3 A. Cont., 7.5 A. Int.  
1,000 W.V.D.C.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

### PIN TIP PATCH CORD



MODEL LENGTH

1126-4	4"
1126-8	8"
1126-12	12"
1126-18	18"
1126-24	24"
1126-36	36"

MODEL 1126  
(Specify Color)

NET 1.75



SIDE CONNECTION

STACK-UP

### BANANA PLUG TO PIN STACK-UP PATCH CORD

Adapts to equipment using banana jacks and pin jacks. Banana plug and pin tip allow vertical stack-up.

BANANA PLUG: Spring, one piece beryllium copper, heat treated, nickel plated.  
PIN TIP: .080 dia. 1/2" long, brass, gold flashed.

Receptacle, beryllium copper, gold flashed.  
Accepts .080 Dia. pin.  
WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible

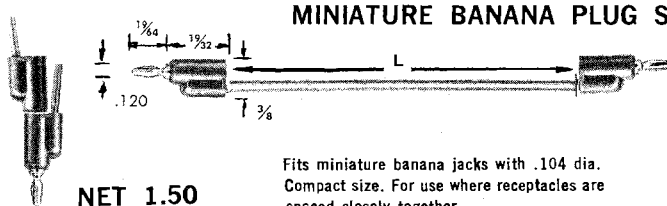
polyvinyl insulation .087" O.D.  
RATED: 5 A. Cont., 10 A. Int.  
3,000 W.V.D.C.  
TEMP. RANGE: -0°C to +105°C  
COLORS: Black, Red.

MODEL LENGTH

1081-4	4"
1081-8	8"
1081-12	12"
1081-18	18"
1081-24	24"
1081-36	36"

MODEL 1081  
(Specify Color)

NET 1.50



Fits miniature banana jacks with .104 dia. Compact size. For use where receptacles are spaced closely together.

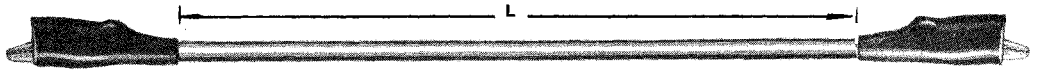
BANANA PLUG: Spring, one piece beryllium copper heat treated. Gold flashed.  
WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flex polyvinyl insulation .087" O.D.  
RATED: 5 A. Cont., 10 A. Int.  
3,000 W.V.D.C.  
TEMP. RANGE: -0°C to +105°C.  
COLORS: Black, Brown, Red, Orange, Yellow, Gray, Blue, Gray White.

OTHER LENGTHS AVAILABLE TO ORDER

# POMONA *Electronics*

## JUMPERS — CLIP LEADS

MODEL	LENGTH
MG-B-4	4"
MG-B-8	8"
MG-B-12	12"
MG-B-24	24"
MG-B-36	36"



### INSULATED MINIGATOR CLIP TEST LEADS

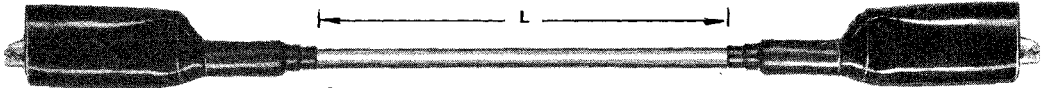
**CLIP:** Minigator, steel, cad plated.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.

**INSULATOR:** Red vinyl with red wire. Black on all other colors.  
**COLORS:** Black, Red.

**NET .95**

**MODEL MG-B**  
 (Specify Color)

MODEL	LENGTH
AL-B-4	4"
AL-B-8	8"
AL-B-12	12"
AL-B-24	24"
AL-B-36	36"



### INSULATED ALLIGATOR CLIP TEST LEADS

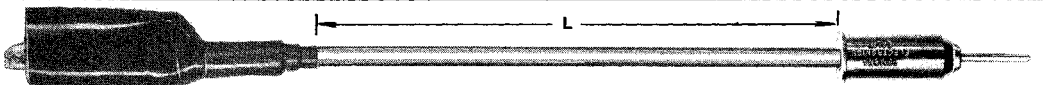
**CLIP:** Alligator, steel, cad plated.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.

**INSULATOR:** Red vinyl with red wire. Black on all other colors.  
**COLORS:** Black, Red.

**NET .95**

**MODEL AL-B**  
 (Specify Color)

MODEL	LENGTH
1958-4	4"
1958-8	8"
1958-12	12"
1958-24	24"
1958-36	36"



### ALLIGATOR CLIP TEST LEADS TO PIN TIP

Adapts to equipment using tip jacks.  
**CLIP:** Alligator, steel, cad plated.  
**PIN TIP:** .080 dia. x 1/2" long. Brass nickel plated.  
 Tough thermo-plastic molded to body.

**INSULATOR:** Red vinyl with red wire. Black on all other colors.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.  
**COLORS:** Black, Red.

**NET .95**

**MODEL 1958**  
 (Specify Color)

MODEL	LENGTH
1959-4	4"
1959-8	8"
1959-12	12"
1959-24	24"
1959-36	36"



### ALLIGATOR CLIP TEST LEADS TO BANANA PLUG

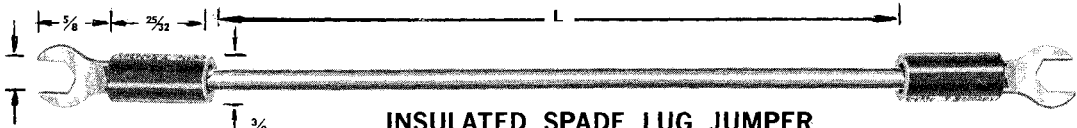
Adapts to equipment using standard banana jacks.  
**CLIP:** Alligator, steel, cad plated.  
**BANANA PLUG:** Spring, one piece beryllium copper heat treated, nickel plated. Tough thermoplastic molded to body.

**INSULATOR:** Red vinyl with red wire. Black on all other colors.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.  
**COLORS:** Black, Red.

**NET .95**

**MODEL 1959**  
 (Specify Color)

MODEL	LENGTH	NET
1743-12	12"	.95
1743-24	24"	.95
1743-36	36"	.95
1743-48	48"	1.00
1743-60	60"	1.05



### INSULATED SPADE LUG JUMPER

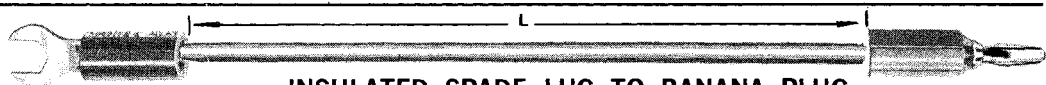
Spade lug heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug body.  
**SPADE LUGS:** Brass 1/8" thick, nickel plated.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.

**RATED:** 15 A. Cont., 30 A Int. 10,000 W.V.D.C.  
**TEMP. RANGE:** -0°C to +105°C.  
**COLORS:** Black, Red, Green, White.

(Typical Dimensions spade lug)

**MODEL 1743**  
 (Specify Color)

MODEL	LENGTH	NET
1987-12	12"	.95
1987-24	24"	.95
1987-36	36"	.95
1987-48	48"	1.00
1987-60	60"	1.05



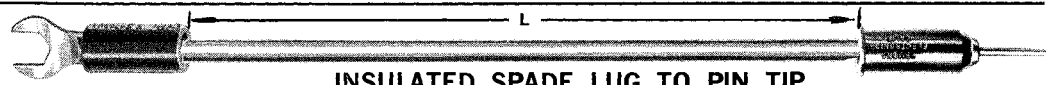
### INSULATED SPADE LUG TO BANANA PLUG

Spade lug, heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug and banana plug body.  
**SPADE LUG:** Brass 1/8" thick, nickel plated.  
**BANANA PLUG:** Spring one piece beryllium copper heat treated, nickel plated.

**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.  
**RATED:** 15 A. Cont., 30 A Int. 10,000 W.V.D.C.  
**TEMP. RANGE:** -0°C to +105°C.  
**COLORS:** Black, Red, Green, White.

**MODEL 1987**  
 (Specify Color)

MODEL	LENGTH	NET
1989-12	12"	.95
1989-24	24"	.95
1989-36	36"	.95
1989-48	48"	1.00
1989-60	60"	1.05



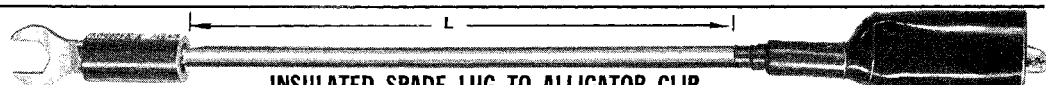
### INSULATED SPADE LUG TO PIN TIP

Spade lug, heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug and pin tip body.  
**SPADE LUG:** Brass 1/8" thick, nickel plated.  
**PIN TIP:** .080 dia. 1/2" long. Brass nickel plated.

**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.  
**RATED:** 5 A. Cont. 10 A Int. 10,000 W.V.D.C.  
**TEMP. RANGE:** -0°C to +105°C.  
**COLORS:** Black, Red, Green, White.

**MODEL 1989**  
 (Specify Color)

MODEL	LENGTH	NET
1960-12	12"	.95
1960-24	24"	.95
1960-36	36"	.95
1960-48	48"	1.00
1960-60	60"	1.05



### INSULATED SPADE LUG TO ALLIGATOR CLIP

Spade lug, heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug body.  
**SPADE LUG:** Brass 1/8" thick, nickel plated.  
**CLIP:** Alligator, steel, cad plated.

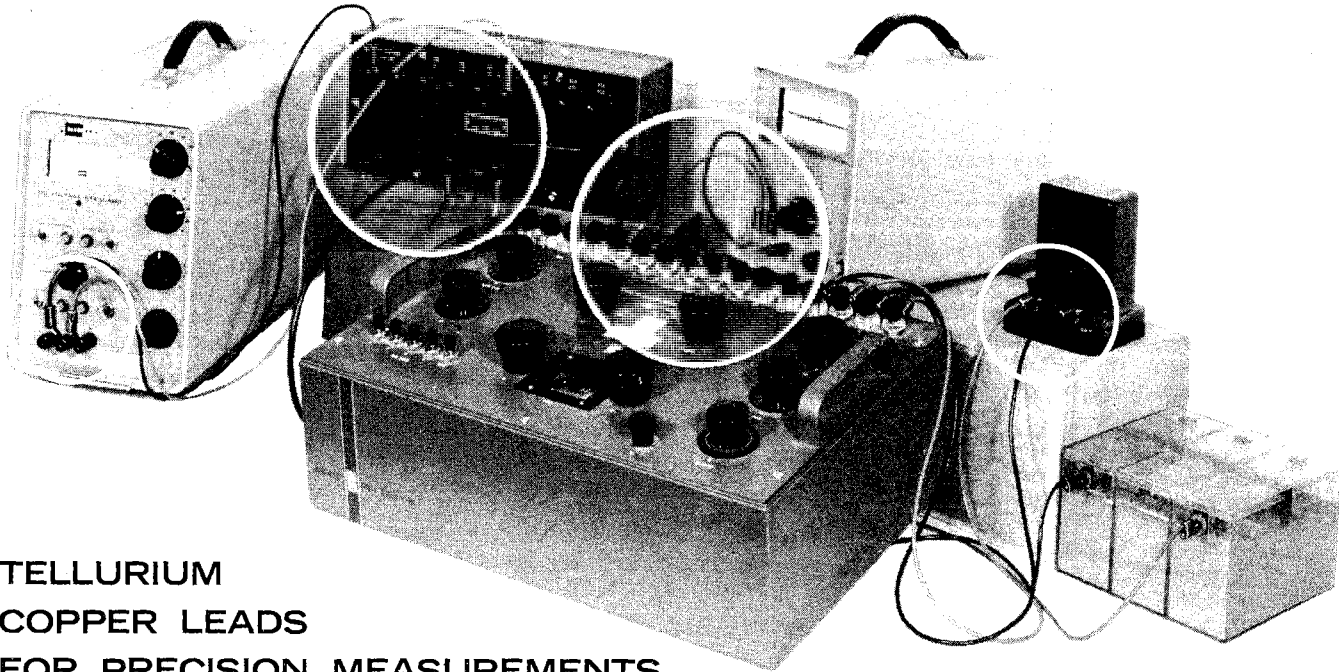
**INSULATOR:** Red vinyl with red wire. Black on all other colors.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.  
**COLORS:** Black, Red, Green, White.

**MODEL 1960**  
 (Specify Color)

OTHER LENGTHS AVAILABLE TO ORDER

# POMONA *Electronics*

# JUMPERS— LOW THERMAL E.M.F.



## TELLURIUM COPPER LEADS FOR PRECISION MEASUREMENTS

POMONA ELECTRONICS has advanced the state of the art in measurements where Thermoelectric Effects are significant sources of error. Comparators designed for use with the Kelvin-Varley voltage divider and microvolt leads were tested with Primary Standards Laboratory equipment.

Thermoelectric voltages were not detected until the most sensitive galvanometer range was used.

**THERMOELECTRIC PROPERTIES**—Tellurium copper gold plated spade lugs cold-staked to multi-stranded

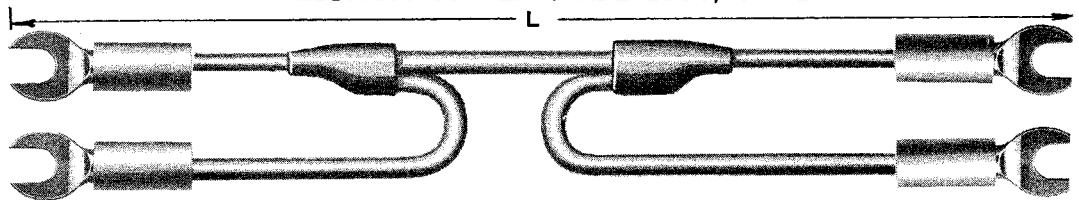
12 gauge COPPER wire minimize thermoelectric effects—an absolute necessity for low voltage, high precision measurements.

**LOW RESISTANCE**—12 gauge multi-stranded COPPER wire results in extremely low cable resistance. Spade lugs plated with 50 micro inches gold for minimum contact resistance and minimum thermal EMF when using copper binding posts (Less than  $0.1 \mu\text{V}/\text{C}^\circ$ ).

### TELLURIUM COPPER SPADE LUGS, SHIELDED LEAD

MODEL	LENGTH
1756-24	24"
1756-48	48"

MODEL 1756  
(Specify Length)



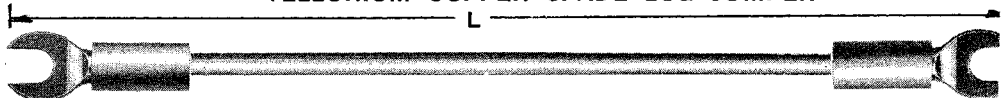
Designed for use with Kelvin Varley voltage dividers where extreme precision is required for low voltage measurement. Features guard shield to effectively reduce shunt resistance. Tough thermo-plastic molded to spade lug body. Tellurium copper heavy duty one piece machined spade lug gold plated per MIL-G-45204, Type II Class I. Conductor 12 AWG multi-strand bare copper. Polyethylene primary insulation. Braided shield bare copper. Polyvinyl jacket, color black, per MIL-C-17C Type IIA

NET 9.85

MODEL	LENGTH	NET
1693-12	12"	2.50
1693-18	18"	2.50
1693-24	24"	2.50
1693-36	36"	2.50
1693-48	48"	2.55
1693-60	60"	2.60

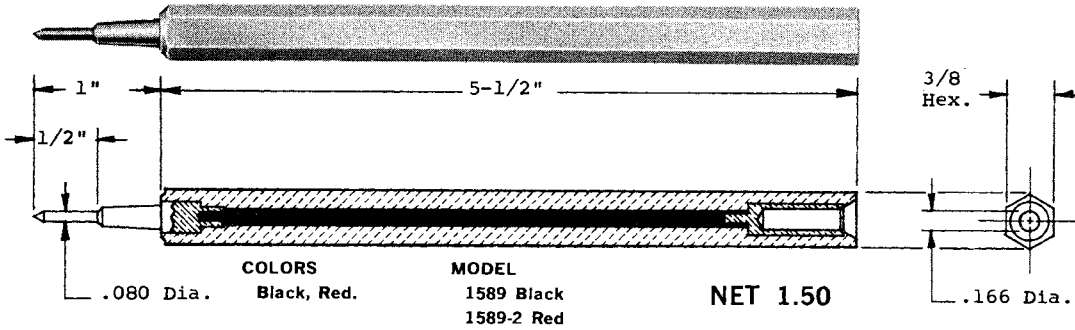
MODEL 1693  
(Specify Color)

### TELLURIUM COPPER SPADE LUG JUMPER



Single conductor tellurium copper spade lug jumper used in applications where guard shield is not required. Tough thermo-plastic molded to spade lug body. Tellurium Copper heavy duty one piece machined spade lug gold plated per MIL-G-45204, Type II, Class I. Conductor, 12 AWG multi-stranded bare copper. Insulation polyvinyl, 105°C, .144" O.D. COLORS: Black, Red, Green.

TEST PROBE TO BANANA JACK



Banana jack in handle connected to tip. Permits use of standard banana plugs for circuit testing as a test prod. Heavy duty insulated handle molded to banana jack and tip.

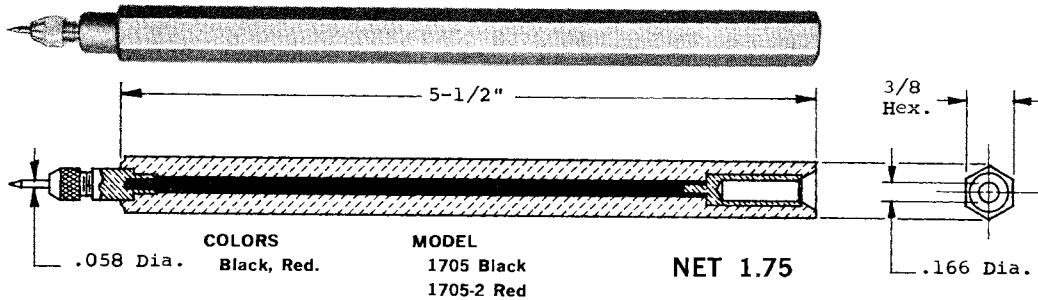
**PIN TIP:** .080 dia. x 1/2" long, brass nickel plated.

**RECEPTACLE:** .166 dia. Brass nickel plated. Accepts standard banana plug.

**COLORS** Black, Red.  
**MODEL** 1589 Black  
1589-2 Red

NET 1.50

NEEDLE TIP PROBE TO BANANA JACK



Sharp replaceable needle tip allows testing of encapsulated circuits. Banana jack in handle connected to tip. Permits use of standard banana plugs for circuit testing as a test prod. Heavy duty insulated handle molded to banana jack and tip.

**PIN TIP:** Replaceable needle tip, steel nickel plated.

**RECEPTACLE:** .166 dia. Brass nickel plated. Accepts standard banana plug.

**COLORS** Black, Red.  
**MODEL** 1705 Black  
1705-2 Red

NET 1.75



TEST PROBE TO BANANA PLUG

Insulated handle molded to probe tip and wire lead.  
**PROBE PIN TIP:** .080 dia. x 1/2" long. Brass nickel plated.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation, .140" O.D.

**BANANA PLUG:** Spring, one piece beryllium copper, heat treated, nickel plated. Tough thermo-plastic molded to body.  
**COLORS:** Black, Red.

MODEL	LENGTH	COLOR	NET
1986-48-B	48"	Black	1.75
1986-48-R	48"	Red	1.75

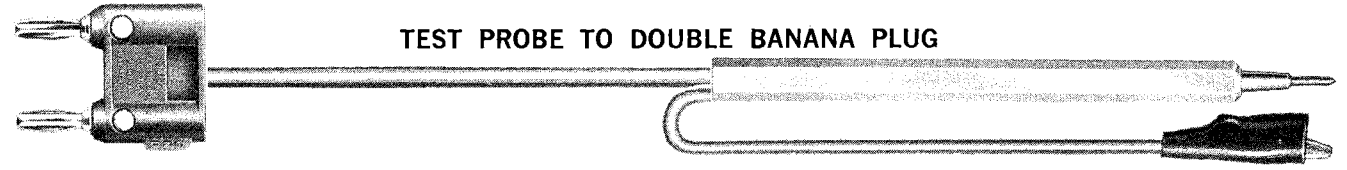
TEST PROBE TO PIN TIP



Insulated handle molded to probe tip and wire lead.  
**PROBE PIN TIP:** .080 dia. x 1/2" long. Brass nickel plated.  
**WIRE:** 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .140" O.D.

**PIN TIP:** .080 dia. x 1/2" long. Brass nickel plated. Tough thermo-plastic molded to body.  
**COLORS:** Black, Red.

MODEL	LENGTH	COLOR	NET
1988-48-B	48"	Black	1.75
1988-48-R	48"	Red	1.75



TEST PROBE TO DOUBLE BANANA PLUG

One piece molded construction. Insulated handle molded to probe tip and cable. Double banana plug molded to cable. Insulated minigator clip connected to shield lead.  
**PROBE PIN TIP:** .080 dia. x 1/2" long. Brass nickel plated.  
**BANANA PLUG:** Spring, one piece beryllium copper, heat treated, nickel plated. Tough thermo-plastic molded to double plug body. Color, Gray.

**CLIP:** Minigator, steel, cad plated.  
**INSULATOR, VINYL:** Color, Black.  
**CABLE:** Shielded microphone cable: Polyethylene insulation. Vinyl jacket. Nom. capacity 25 pf./ft. Color, Gray.  
**HANDLE:** Color, red, molded of tough thermo-plastic.

MODEL	LENGTH	NET
1569-B-48	48"	NET 5.85

OTHER LENGTHS AVAILABLE TO ORDER

### POMONA MOLDED DOUBLE BANANA PLUG PATCH CORDS AND TEST LEADS

... indispensable for bridge transformer connections, three terminal capacitor measurements and general hook-up for two wire systems. They are horizontally and vertically stackable in parallel.

Tough thermo-plastic material molded to plug body and cable insures maximum strength, moisture resistance and excellent insulative properties.

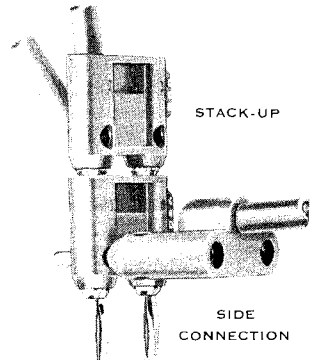
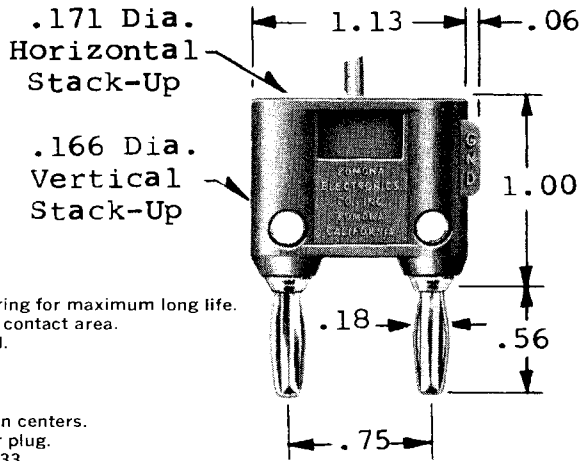
Used by leading industries in applications where extreme reliability is of prime importance.

**FEATURES . . .**

- One piece beryllium copper heat treated spring for maximum long life.
- Rounded spring design results in maximum contact area.
- GND., clearly molded on plug body and shell.
- Solder-bonded noise-free connections.

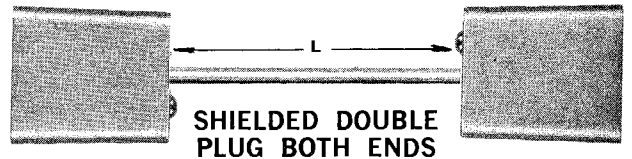
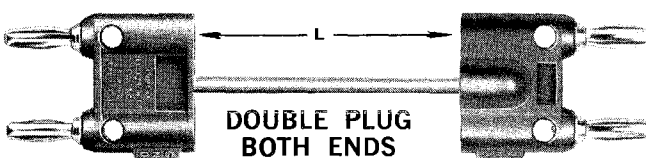
**SPECIFICATIONS . . .**

- Fits standard 0.166 dia. banana jacks, 3/4" on centers.
- Contact resistance less than 0.001 ohms per plug.
- Spring beryllium copper alloy 25 per QQ-C-533.
- Plug body brass per QQ-B-626, Comp. 22.
- Nickel plated per QQ-N-290, Class 2.



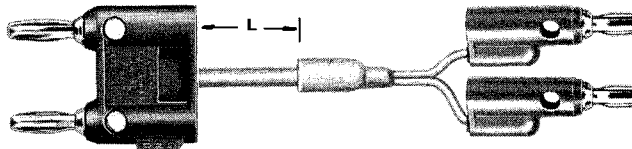
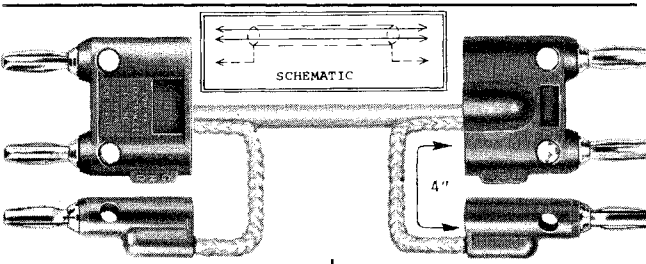
### CABLE TYPE DESCRIPTION

<b>TWO COND. TWISTED PAIR</b>	18 AWG, Strand. 65 x 36 T.C. Vinyl insulation. Vinyl jacket, .250" O.D. Nom. Cap. 30 pf/ft. COLOR: Gray.	<b>SHIELDED MICROPHONE CABLE</b>	Polyethylene insulation. Vinyl jacket, .205" O.D. Nom. Cap. 25 pf/ft. COLOR: Gray.	<b>COAXIAL SHIELDED CABLE</b>	RG58C/U Polyethylene insulation. Vinyl jacket, .195" O.D. Nom. Cap. 28.5 pf/ft. COLOR: Black.
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TWO COND. TWISTED PR.	SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
2BA-18	2BB-18	2BC-18	18"	4.85
2BA-24	2BB-24	2BC-24	24"	4.85
2BA-30	2BB-30	2BC-30	30"	4.85
2BA-36	2BB-36	2BC-36	36"	4.85
2BA-48	2BB-48	2BC-48	48"	5.00
2BA-60	2BB-60	2BC-60	60"	5.15

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
1550-B-18	1550-C-18	18"	5.85
1550-B-24	1550-C-24	24"	5.85
1550-B-30	1550-C-30	30"	5.85
1550-B-36	1550-C-36	36"	5.85
1550-B-48	1550-C-48	48"	6.00
1550-B-60	1550-C-60	60"	6.15



### DOUBLE PLUG TO SINGLE BANANA PLUGS

CABLE DESCRIPTION	MODEL	LENGTH
2-Cond. shielded mic. cable. Polyethylene insulation. Vinyl jacket, .231" O.D. Nom. Cap. between cond. 18 pf./ft. Nom. Cap. between one cond. and remaining cond. connected to shield, 32 pf./ft. COLOR: Cable and double plug, Gray. Single ground plug, Green.	1167-18	18"
	1167-24	24"
	1167-30	30"
	1167-36	36"
	<b>MODEL 1167</b>	
	<b>NET 7.85</b>	

CABLE DESCRIPTION	MODEL	LENGT
TWO COND. TWISTED PAIR 18 AWG, Strand. 65 x 36 T.C. Vinyl insulation. Vinyl jacket, .250" O.D. Nom. Cap. 30 pf/ft. COLOR: Gray.	1368-18	18"
	1368-24	24"
	1368-30	30"
	1368-36	36"
	<b>MODEL 1368</b>	
	<b>NET 5.85</b>	

**NOTE:** Molded double plug matches color of cable.  
Two cond. Twisted pair, GRAY. Shielded mic. cable, GRAY.  
Coaxial RG58C/U Cable, BLACK.

1. Other cable colors available to order on the Two Cond. Twisted Pair and Shield Mic. cable models with plug to match.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, Wh
2. Other lengths and cable types available to order.

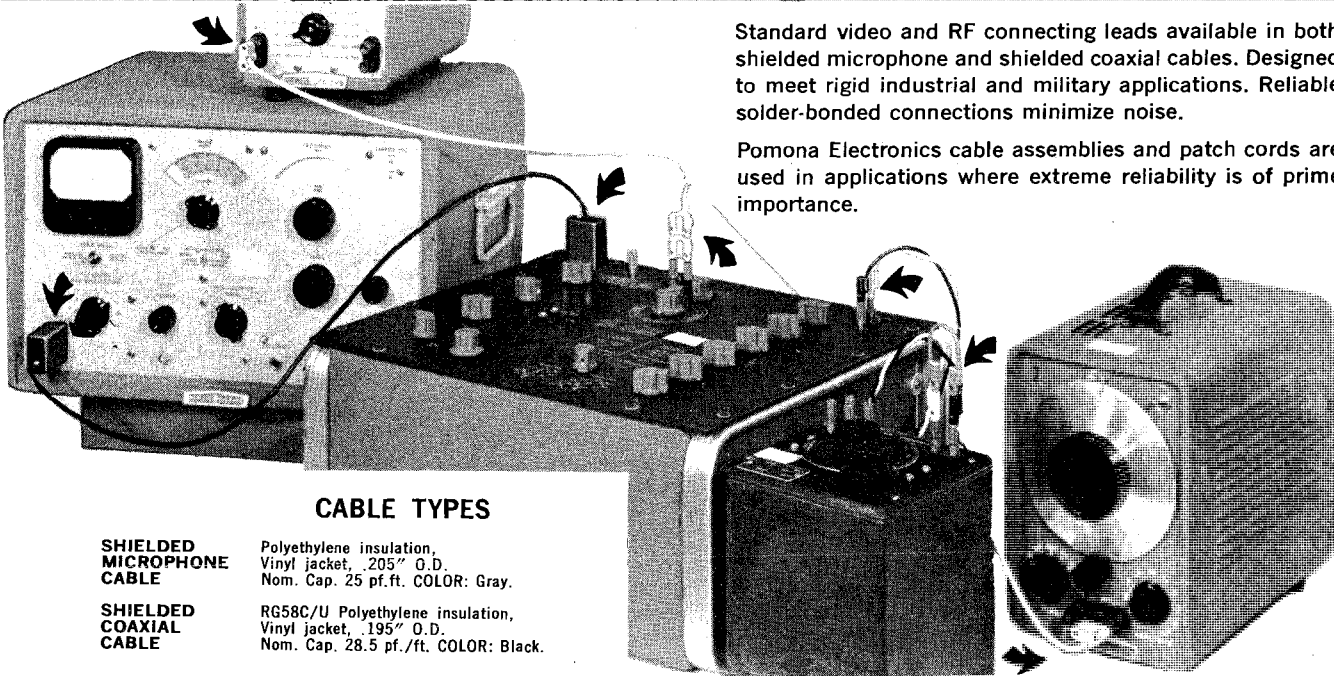


# POMONA *Electronics*

## PATCH CORDS BNC CONNECTING LEADS

Standard video and RF connecting leads available in both shielded microphone and shielded coaxial cables. Designed to meet rigid industrial and military applications. Reliable solder-bonded connections minimize noise.

Pomona Electronics cable assemblies and patch cords are used in applications where extreme reliability is of prime importance.



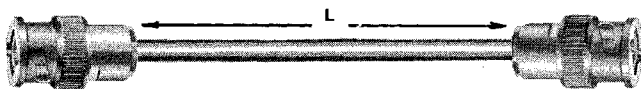
### CABLE TYPES

**SHIELDED MICROPHONE CABLE**

Polyethylene insulation, Vinyl jacket, .205" O.D. Nom. Cap. 25 pf./ft. COLOR: Gray.

**SHIELDED COAXIAL CABLE**

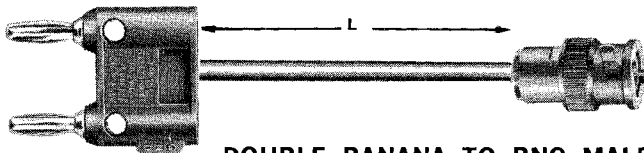
RG58C/U Polyethylene insulation, Vinyl jacket, .195" O.D. Nom. Cap. 28.5 pf./ft. COLOR: Black.



### BNC MALE BOTH ENDS

CONN.: } UG88C/U, CABLE: Shielded Mic. or CONN.: } UG88C/U,  
1ST END } Male BNC Shielded Coax, RG58C/U. 2ND END } Male BNC

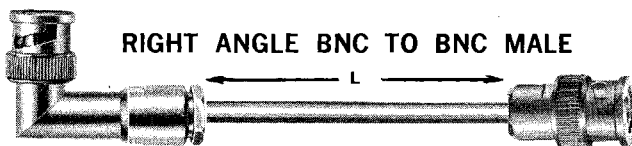
SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
BNC-B-18	BNC-C-18	18"	5.85
BNC-B-24	BNC-C-24	24"	5.85
BNC-B-30	BNC-C-30	30"	5.85
BNC-B-36	BNC-C-36	36"	5.85
BNC-B-48	BNC-C-48	48"	6.00
BNC-B-60	BNC-C-60	60"	6.15



### DOUBLE BANANA TO BNC MALE

CONN.: } Double Banana Plug, CABLE: Shielded Mic. or CONN.: } UG88C/U,  
1ST END } 3/4" on Centers Shielded Coax, RG58C/U. 2ND END } Male BNC

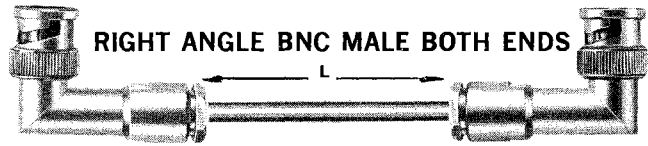
SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
2BB-BNC-18	2BC-BNC-18	18"	5.85
2BB-BNC-24	2BC-BNC-24	24"	5.85
2BB-BNC-30	2BC-BNC-30	30"	5.85
2BB-BNC-36	2BC-BNC-36	36"	5.85
2BB-BNC-48	2BC-BNC-48	48"	6.00
2BB-BNC-60	2BC-BNC-60	60"	6.15



### RIGHT ANGLE BNC TO BNC MALE

CONN.: } UG913A/U, CABLE: Shielded Mic. or CONN.: } UG88C/U,  
1ST END } Angle Male BNC Shielded Coax, RG58C/U. 2ND END } Male BNC

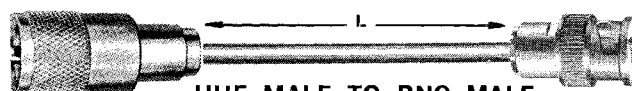
SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
1383-B-18	1383-C-18	18"	7.85
1383-B-24	1383-C-24	24"	7.85
1383-B-30	1383-C-30	30"	7.85
1383-B-36	1383-C-36	36"	7.85



### RIGHT ANGLE BNC MALE BOTH ENDS

CONN.: } UG913A/U, CABLE: Shielded Mic. or CONN.: } UG913A/U,  
1ST END } Angle Male BNC Shielded Coax, RG58C/U. 2ND END } Angle Male BNC

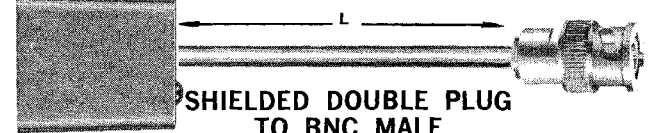
SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
1155-B-18	1155-C-18	18"	10.85
1155-B-24	1155-C-24	24"	10.85
1155-B-30	1155-C-30	30"	10.85
1155-B-36	1155-C-36	36"	10.85



### UHF MALE TO BNC MALE

CONN.: } PL259, CABLE: Shielded Mic. or CONN.: } UG88C/U,  
1ST END } UHF Male Shielded Coax, RG58C/U. 2ND END } Male BNC

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
1367-B-18	1367-C-18	18"	5.85
1367-B-24	1367-C-24	24"	5.85
1367-B-30	1367-C-30	30"	5.85
1367-B-36	1367-C-36	36"	5.85



### SHIELDED DOUBLE PLUG TO BNC MALE

CONN.: } Shielded Double plug, CABLE: Shielded Mic. or CONN.: } UG88C/U,  
1ST END } 3/4" on centers. Shielded Coax, RG58C/U. 2ND END } Male BNC

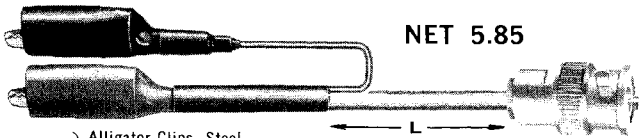
SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH	NET
1555-B-18	1555-C-18	18"	6.85
1555-B-24	1555-C-24	24"	6.85
1555-B-30	1555-C-30	30"	6.85
1555-B-36	1555-C-36	36"	6.85

OTHER LENGTHS AND CABLE TYPES AVAILABLE TO ORDER

# POMONA Electronics

# PATCH CORDS CONNECTING LEADS

## ALLIGATOR CLIPS TO BNC MALE



NET 5.85

CONN.: } Alligator Clips, Steel, cad plated.  
1ST END } Insulators, Vinyl: Black/Red.  
CABLE: Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } UG88C/U.  
2ND END } BNC, Male.

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
AL-B-BNC-18	AL-C-BNC-18	18"
AL-B-BNC-24	AL-C-BNC-24	24"
AL-B-BNC-30	AL-C-BNC-30	30"
AL-B-BNC-36	AL-C-BNC-36	36"

## MINIGATOR CLIPS TO BNC MALE

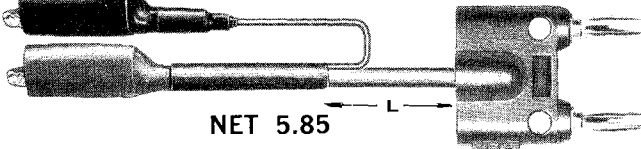


NET 5.85

CONN.: } Minigator Clips, Steel, cad plated.  
1ST END } Insulators, Vinyl: Black/Red.  
CABLE: Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } UG88C/U.  
2ND END } BNC, Male

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
MG-B-BNC-18	MG-C-BNC-18	18"
MG-B-BNC-24	MG-C-BNC-24	24"
MG-B-BNC-30	MG-C-BNC-30	30"
MG-B-BNC-36	MG-C-BNC-36	36"

## ALLIGATOR CLIPS TO DOUBLE PLUG\*

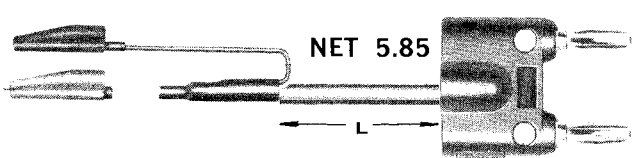


NET 5.85

CONN.: } Alligator Clips, Steel, cad plated.  
1ST END } Insulators, Vinyl: Black/Red.  
CABLE: Two Cond. Twisted Pair, Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } Double Banana Plug, 3/4" on centers.  
2ND END }

TWO COND. TWISTED PAIR	SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
2BA-AL-18	2BB-AL-18	2BC-AL-18	18"
2BA-AL-24	2BB-AL-24	2BC-AL-24	24"
2BA-AL-30	2BB-AL-30	2BC-AL-30	30"
2BA-AL-36	2BB-AL-36	2BC-AL-36	36"

## MINIGATOR CLIPS TO DOUBLE PLUG\*

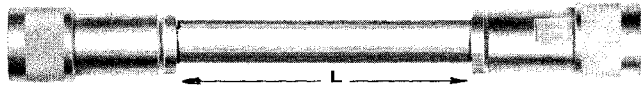


NET 5.85

CONN.: } Minigator Clips, Steel, cad plated.  
1ST END } Insulators, Vinyl: Black/Red.  
CABLE: Two Cond. Twisted pair, Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } Double Banana Plug, 3/4" on centers.  
2ND END }

TWO COND. TWISTED PAIR	SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
2BA-MG-18	2BB-MG-18	2BC-MG-18	18"
2BA-MG-24	2BB-MG-24	2BC-MG-24	24"
2BA-MG-30	2BB-MG-30	2BC-MG-30	30"
2BA-MG-36	2BB-MG-36	2BC-MG-36	36"

## SERIES "N" MALE BOTH ENDS

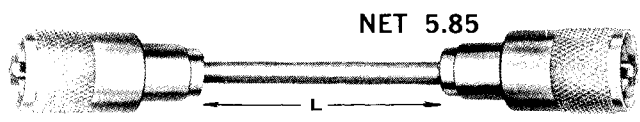


CONN.: } UG21B/U  
1ST END } "N" Male  
CABLE: Coax, RG213/U or RG8/AU  
CONN.: } UG21B/U  
2ND END } "N" Male

CABLE DESCRIPTION	MODEL	LENGTH
Shielded Coax. Polyethylene Insulation, Vinyl jacket, Black, Nom. Cap. 29.5 pf/ft. Nom. Imp. 52 ohms. Nom. O.D. .405".	1658-18	18"
	1658-24	24"
	1658-30	30"
	1658-36	36"

NET 10.85

## UHF MALE BOTH ENDS

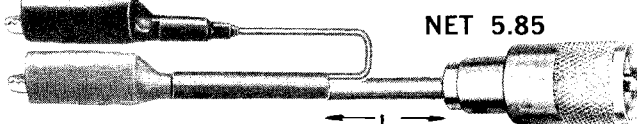


NET 5.85

CONN.: } PL259,  
1ST END } UHF, Male  
CABLE: Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } PL259,  
2ND END } UHF, Male

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
UHF-B-18	UHF-C-18	18"
UHF-B-24	UHF-C-24	24"
UHF-B-30	UHF-C-30	30"
UHF-B-36	UHF-C-36	36"

## ALLIGATOR CLIPS TO UHF MALE



NET 5.85

CONN.: } Alligator Clips, Steel, cad plated.  
1ST END } Insulators, Vinyl: Black/Red.  
CABLE: Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } PL259,  
2ND END } UHF, Male

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
AL-B-UHF-18	AL-C-UHF-18	18"
AL-B-UHF-24	AL-C-UHF-24	24"
AL-B-UHF-30	AL-C-UHF-30	30"
AL-B-UHF-36	AL-C-UHF-36	36"

## MINIGATOR CLIPS TO UHF MALE

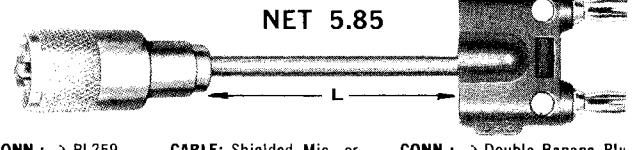


NET 5.85

CONN.: } Minigator Clips, Steel, cad plated.  
1ST END } Insulators, Vinyl: Black/Red.  
CABLE: Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } PL259,  
2ND END } UHF, Male

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
MG-B-UHF-18	MG-C-UHF-18	18"
MG-B-UHF-24	MG-C-UHF-24	24"
MG-B-UHF-30	MG-C-UHF-30	30"
MG-B-UHF-36	MG-C-UHF-36	36"

## UHF MALE TO DOUBLE PLUG\*

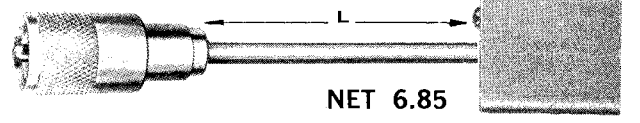


NET 5.85

CONN.: } PL259  
1ST END } UHF, Male  
CABLE: Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } Double Banana Plug, 3/4" on centers.  
2ND END }

SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
2BB-UHF-18	2BC-UHF-18	18"
2BB-UHF-24	2BC-UHF-24	24"
2BB-UHF-30	2BC-UHF-30	30"
2BB-UHF-36	2BC-UHF-36	36"

## UHF MALE TO SHIELDED DOUBLE PLUG\*



NET 6.85

CONN.: } PL259,  
1ST END } Male, UHF  
CABLE: Shielded Mic. or Shielded Coax, RG58C/U.  
CONN.: } Shielded Double Plug, 3/4" on centers.  
2ND END }

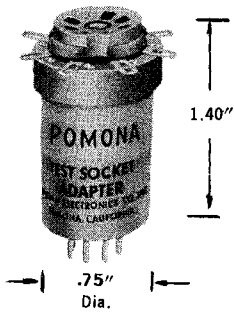
SHIELDED MIC. CABLE	SHIELDED COAX. CABLE	LENGTH
1556-B-18	1556-C-18	18"
1556-B-24	1556-C-24	24"
1556-B-30	1556-C-30	30"
1556-B-36	1556-C-36	36"

\*NOTE: Molded double plug matches color of cable.  
Two cond. Twisted pair, GRAY. Shielded mic. cable, GRAY.  
Coaxial RG58C/U cable, BLACK.

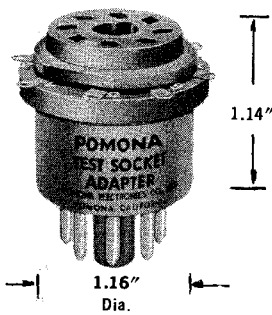
1. Other CABLE COLORS available to order on the Two Cond. Twisted Pair Shielded Mic. cable models, with plug to match.  
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, WI  
2. Other lengths and cable types available to order.

# POMONA *Electronics*

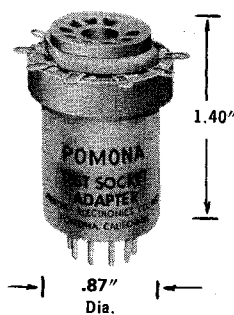
## TEST SOCKET TUBE ADAPTERS BREADBOARD SOCKETS



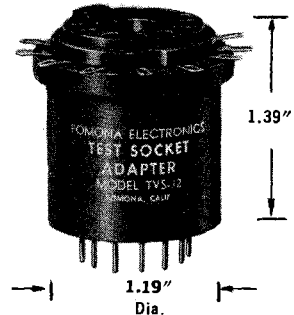
**MODEL TVS-7**  
7 PIN MIN.  
NET 1.65



**MODEL TVS-8**  
8 PIN OCTAL  
NET 1.75



**MODEL TVS-9**  
9 PIN MIN.  
NET 1.85



**MODEL TVS-12**  
12 PIN COMPACTRON  
NET 2.25

Pomona Test Socket Tube Adapters are ideal for making measurements of voltage, resistance, audio and video without tracing complicated circuits from the bottom of the chassis. They feature: Extended test tabs for easy use with either alligator clips or test prods; Low loss MICA-FILLED molded phenolic construction per MIL-M-14, MFE. Power factor less than 0.010

at 10 Mc; high insulation resistance, the I.R. exceeds 500,000 megohms at 40% R.H., at 24°C; Distributed capacity, inter-element approximately 1 micro-micro farad; high voltage operation, voltage breakdown elements exceeds 1700 volts AC or DC. Model TVS-12 molded of electrical grade Black phenolic.

### TVS-789 KIT SET OF THREE 5.25 (TVS-7, TVS-8, TVS-9)

## TUNER TV TEST SOCKET TUBE ADAPTERS

FOR USE WITH TUNERS HAVING  
CAPTIVE OR TELESCOPING  
TUBE SHIELDS

IT'S TALL • IT'S SLIM • IT FITS

Extra height—exact fit—clears shields

Ready access to socket connections

Exposed operation saves time

MUST for every modern TV Service Shop

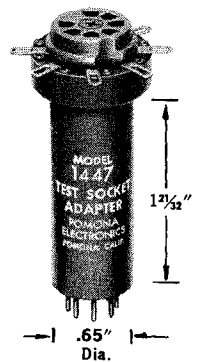
The 7-, 9- or 10-HIGH adapter rises above the shields and places testing in the open. Shields or tuner covers do not have to be removed. All construction is the highest quality. Interelement distributed capacity is approximately 1.5 micro-micro farad. Voltage breakdown elements exceed 1800 V. AC or DC. The insulation resistance exceeds  $5 \times 10^5$  megohms at 40% R.H. at 24°C.



**MODEL 1710**  
10 HIGH  
10 pin, Miniature  
NET 2.25



**MODEL 1449**  
9 HIGH  
9 pin, Miniature  
NET 1.95

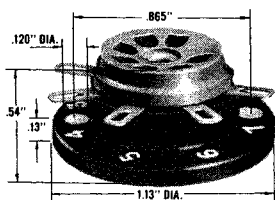


**MODEL 1447**  
7 HIGH  
7 pin, Miniature  
NET 1.85

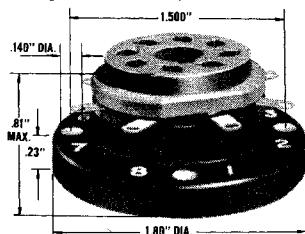
## SURFACE MOUNTED BREADBOARD SOCKETS IDEAL FOR ELECTRONIC AND EXPERIMENTAL USE

Surface Mounted Breadboard Sockets are used for experimental circuit design, portable and enclosed units, plug-in and packaged assemblies. Key feature: An insulated base to prevent connections from shorting to chassis; Eliminates double chassis design; Circuits may be wired in an enclosed unit; The base connections are numbered for easy identification;

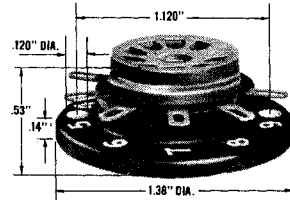
Grade-A phosphor bronze spring contacts; Standard center to center mounting holes; For ease of installation the 7 and 9 Pin Miniatures may be mounted either in the center or on the sides, the 8 Pin Octal is mounted on the sides; Small mounting holes permit the re-use of experimental chassis.



**MODEL XS-7**  
7 PIN MINIATURE  
NET .49



**MODEL XS-8**  
8 PIN OCTAL  
NET .57

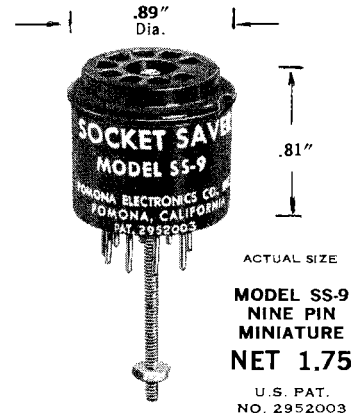
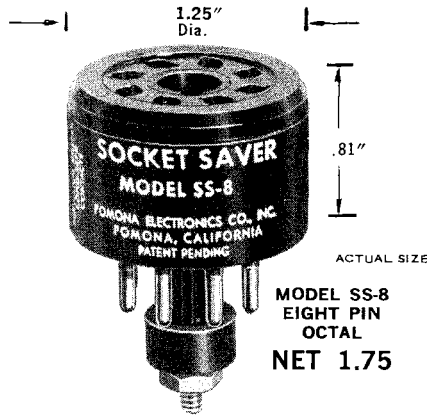
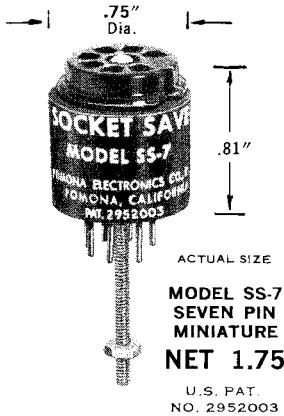


**MODEL XS-9**  
9 PIN MINIATURE  
NET .57

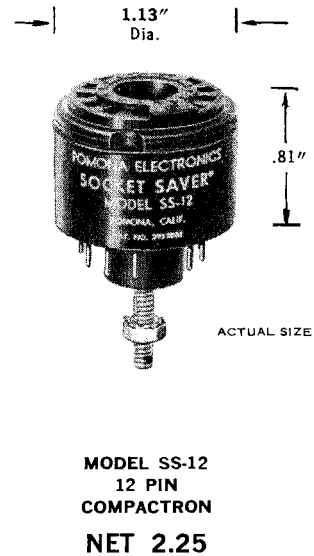
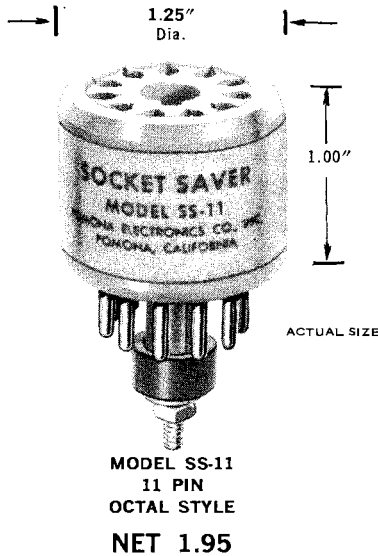
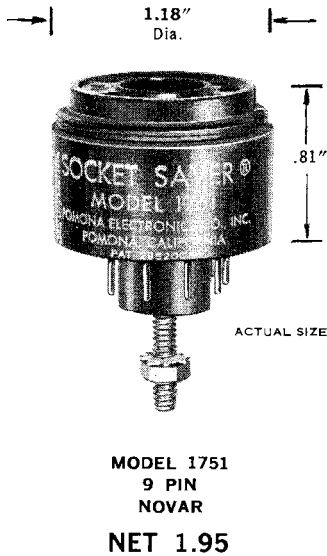
# POMONA *Electronics* SOCKET SAVERS

The Socket Saver® is designed to be installed on tube checkers and other electronic equipment to prevent wear and tear of sockets on original equipment. They are easy to install and remove. This eliminates the necessity

of replacing and rewiring sockets on original equipment. Built of quality materials. BERYLLIUM COPPER LONG LIFE CONTACTS to give maximum service.

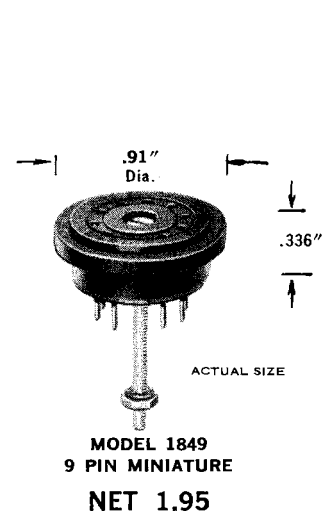
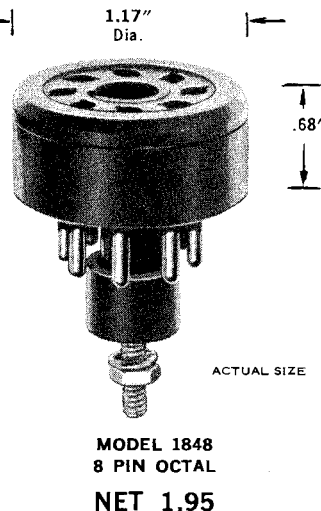
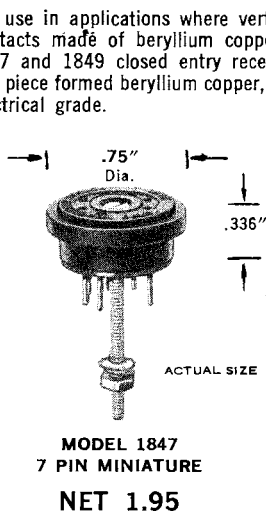


**MODEL SS-789 KIT SET OF THREE 5.25**  
(SS-7, SS-8, SS-9)



## MINIATURIZED SOCKET SAVERS®

For use in applications where vertical height is restricted. Contacts made of beryllium copper, heat treated. Models 1847 and 1849 closed entry receptacles, contact and pin one piece formed beryllium copper, molded of black phenolic electrical grade.

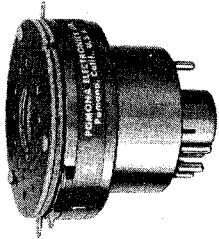


# POMONA *Electronics*

## CATHODE RAY TUBE TEST ADAPTERS

■ POMONA Test Socket Adapters are ideal for making measurements of voltage, resistance, and video from the base of the picture tube. The test socket adapter is inserted between the CR Tube base and its socket.

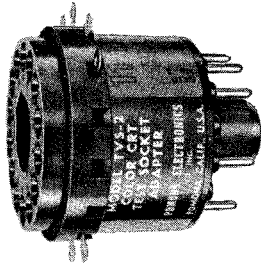
This completes the circuit and makes all connections readily accessible. Measurements can be made without tracing circuit wiring to test points below the chassis, thereby saving valuable time and increasing efficiency in trouble shooting.



**MODEL TVS-1**

DUO DECAL  
For Television  
picture tubes

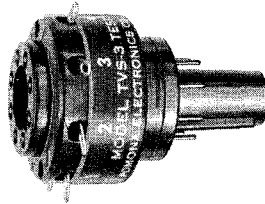
**NET 1.95**



**MODEL TVS-2**

NEO-DIHEPTAL  
For color Television  
picture tubes

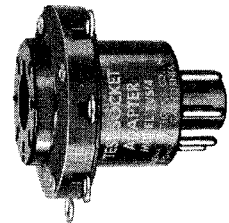
**NET 7.45**



**MODEL TVS-3**

EIGHTAR (.040 PINS)  
For 110° Television  
picture tubes

**NET 2.55**



**MODEL TVS-4**

7 PIN (.093 PINS)  
For 110° Television  
picture tubes

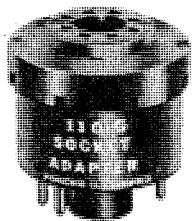
**NET 1.95**

### TUBE SOCKET CONVERSION ADAPTERS

110° CRT SOCKET ADAPTER TO DUO DECAL BASE.

FOR TESTING NEW NARROW-NECK 110° TUBES.

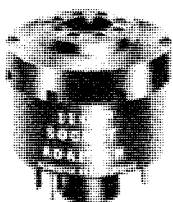
Modernize your present test equipment with these simple adapters. Just plug in adapter to convert to 110° socket. Used for testing, ageing, and lifetesting, etc.



**MODEL 110-G**

Eightar socket end, 8JS Basing, accepts pins with .040 dia., (.600 pin circle dia.). Wired to test 110° series similar to 17DLP4, 21ESP4, 23KP4, etc. Plug end wired to Duo Decal 12L Basing.

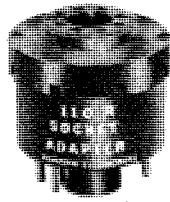
**NET 1.55**



**MODEL 110-P**

Eightar socket end, 8JK Basing, accepts pins with .040 dia., (.600 pin circle dia.). Wired to test 110° Semi-Flat S-F series 17DAP4/SF17, 21EAP4/SF21, etc. Plug end wired to Duo Decal 12L Basing.

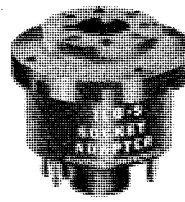
**NET 1.55**



**MODEL 110-R**

Eightar socket end, 8HR Basing, accepts pins with .040 dia., (.600 pin circle dia.). Wired to test 110° series similar to 17BZP4, 21CEP4, 23CP4, etc. Plug end wired to Duo Decal 12L Basing.

**NET 1.55**



**MODEL 110-S**

Socket end, button base, 7FA Basing, accepts 7 pins .093 dia., (.820 pin circle dia.). Wired to test 110° series similar to 17BVP4, 21CSP4, 23JP4, etc. Plug end wired to Duo Decal 12L Basing.

**NET 1.55**



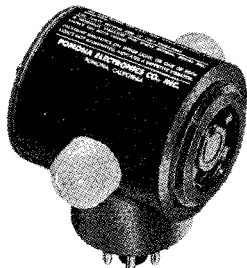
**MODEL 110-RS**

Eightar socket end, 8HR Basing, accept pins with .040 dia., (.600 pin circle dia.). Wired to test 110° series similar to 17BZP4, 21CEP4, 23CP4, etc. Plug end, 7 pin Button, 7FA Basing.

**NET 1.95**

### VIBRATOR TEST ADAPTER

FOR CHECKING ANY STANDARD  
3 OR 4 PRONG  
6 OR 12 VOLT



**MODEL DA-34**  
3 OR 4 PRONG  
6-12 VOLT

**NET 4.95**

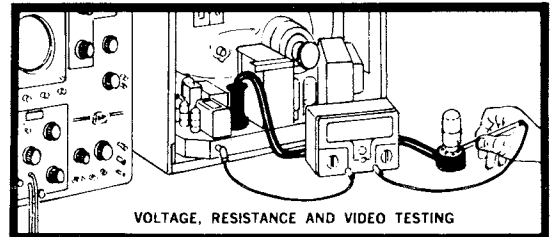
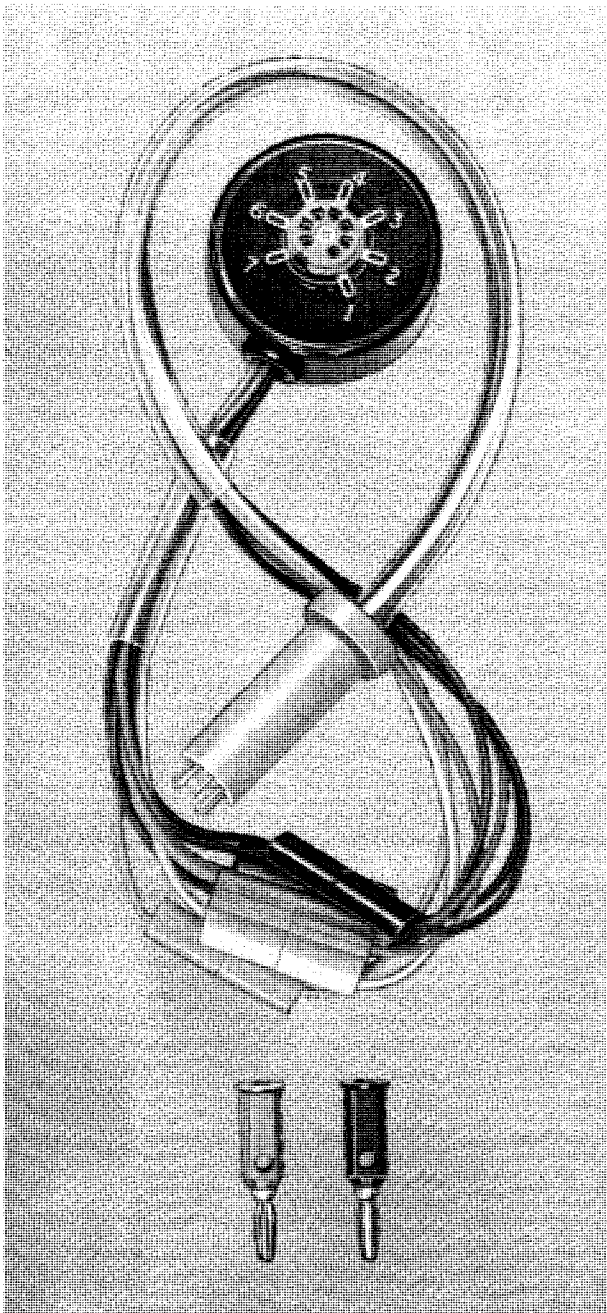
The Pomona Vibrator Test Adapter simplifies servicing of auto radios by eliminating the vibrator as a possible source of trouble. Features compact rugged phenolic construction. Instantly shows when contacts are sticking or open. Will indicate starting voltage. Eliminates all guesswork.

POMONA *Electronics*UNIVERSAL HARNESS  
TESTING ADAPTER

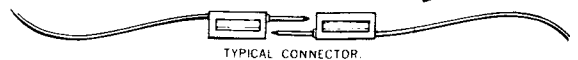
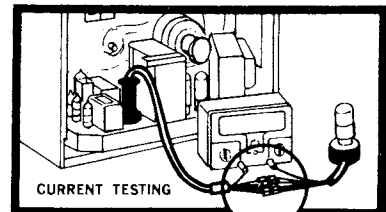
# New! Universal Harness Testing Adapter

*Takes the Trouble out of Trouble Shooting!*

Provides quick testing of CURRENT . . . VOLTAGE . . . RESISTANCE and VIDEO. All test points made accessible; extends 24" from chassis. Eliminates time-consuming operations of unsoldering and resoldering connections. Color-coded connections for current and in-circuit testing. Three models available for 7, 8 and 9 pin sockets. Two combination phone tip/banana plug adapters permit use with all meters.



**Pays for itself  
in testing time  
saved!**



- \* TEST SOCKET . . . Extended test tabs, phosphor bronze contacts, heavy duty molded phenolic base with easy-to-read socket connections.
- \* CURRENT MEASUREMENT CONNECTIONS . . . Fully insulated, molded .080 phone tip plugs.
- \* INSULATED PLUG . . . Fits either shielded or unshielded tube sockets.

7 Pin Model 1737  
8 Pin Model 1738  
9 Pin Model 1739

**\$14.95**  
NET EA.

PAT. PEND.



PRESS-FIT®

TEFLON† TERMINALS

†Reg. Trademark, E. I. Du Pont de Nemours & Co.

INSTALLATION PROCEDURE

FEED-THRU AND STAND-OFF

Use 60° countersink for chassis thickness .040" and over.

Use 82° countersink for chassis thickness under .040".

Punched and Drawn Hole

PUNCH AND COUNTERSINK DETAIL

DRAW PUNCH AND DIE DETAIL

Bushing minor diameter $\begin{matrix} +.002 \\ -.000 \end{matrix}$	Hole or punch Dia. "A" $\pm .002$	Dia. "B" $\begin{matrix} +.010 \\ -.000 \end{matrix}$
.093	.086	.110
.104	.091	.115
.125	.113	.135
.127	.114	.140
.135	.122	.145
.148	.136	.160
.165	.152	.175
.171-.172	.158	.175
.175	.162	.195
.179	.166	.185
.185	.172	.195
.200	.187	.210
.204	.191	.235
.215	.203	.235
.217-.218	.205	.235
.234	.221	.240
.263	.250	.280
.266	.253	.280

**NOTES**

- Teflon should protrude .040" min. below chassis.
- Clearance between punch and die should be held to normal shop tolerances governed by material and thickness and type.
- Predrawn hole size is governed by material type and thickness.
- Die diameter is punch diameter plus double the metal thickness, tolerances being consistent with normal shop practice.

INSTALLATION PROCEDURE

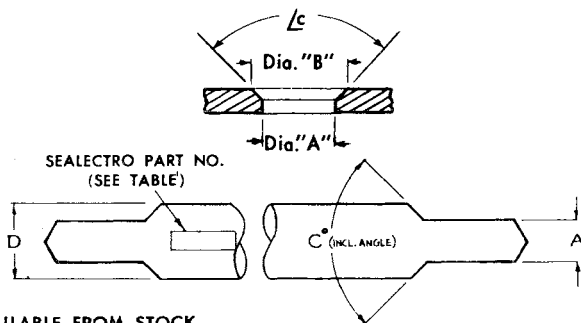
Simplest, fastest, most economical terminal installation known, with practically no restriction as to chassis material and thickness.

Inexpensive insertion tool available from Sealectro, facilitates installation. Tool fits any drillpress (power off) or hand arbor press, to hold given PRESS-FIT Terminal. Centered over chassis hole, and with applied pressure, the PRESS-FIT Terminal slips into the hole for a rigid permanent, trouble-free installation. Just PRESS-FIT — that's it! In four easy steps:

- PUNCH OR DRILL HOLE . . .**  
 .013"  $\pm .002$ " less than diameter of terminal section (dia. "G" in tables) passing through chassis. Minimum protrusion of bushing passing through chassis, .040". Maximum thickness of chassis .125"; for greater thickness, ask for our recommendations. Countersink from breakout or die side of chassis (not from punch side).

- COUNTERSINK ENTRANCE EDGE . . .**  
 Use 60° countersink when chassis thickness is .040" and over; use 82° countersink when chassis thickness is less than .040". This enables centering of terminal in hole and prevents scoring the Teflon bushing. Depth and maximum diameter of countersink is determined by thickness of chassis stock and bushing's major diameter.
- INSERTION TOOL . . .**  
 Insertion tool is placed in chuck of drillpress (power off) or hand arbor press. Terminal is held by tool, leaving assembler's hands free to index and center chassis hole underneath tool. Proper pressure is applied and released just as soon as major diameter of terminal seats itself.
- PERMANENT INSTALLATION . . .**  
 PRESS-FIT Terminal is now permanently secured in place.

DRILL AND COUNTERSINK IN 1 OPERATION



SEALECTRO PART NO.	DIMENSION			
	A	B*	C°	D
086 - 115 - 60	.086	.115	60	.187
112 - 140 - 60	.112	.140	60	.187
136 - 160 - 60	.136	.160	60	.187
136 - 160 - 82	.136	.160	82	.187
152 - 175 - 60	.152	.175	60	.187
158 - 175 - 60	.158	.175	60	.187
172 - 195 - 60	.172	.195	60	.250

Note: B\* is recommended diameter of countersink  $\begin{matrix} +.010 \\ -.000 \end{matrix}$



**STAND-OFFS** MICROMINIATURE and SUBMINIATURE

FIG.	PART No.	TOOL NO.	CAPACITANCE mmf	V <sub>RMS</sub> 60 CPS		A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	±.002 G DIA.	K	K
				NOMINAL RATING	FLASHOVER SEA LEVEL												
1	ST-SM-3C1-L6	B3-10	0.35	750	2500	.213	.093			.031	.089	.040		.125	.093		
1	ST-SM-7	B3-1	0.30	1000	3000	.262	.147			.040	.075	.040		.125	.093		
1	ST-SM-7LT	B3-1	0.40	1000	3000	.299	.174			.040	.085	.040		.125	.093		
1	ST-SM-16	B3-1	0.60	1000	3000	.350	.210			.040	.100	.040		.125	.093		
1	ST-SM-3C1-L4	B3-4	0.50	750	2500	.250	.130			.031	.089	.040		.125	.104		
1	ST-SM-1	B-8	0.45	1000	3000	.350	.210			.040	.100	.040		.172	.148		
1	*ST-SM-1C2	B-8	0.50	1000	3000	.410	.210			.040	.160	.040		.172	.148		
1	ST-SM-1C6	B-8	0.50	1000	3000	.500	.210			.040	.250	.040		.172	.148		
1	ST-SM-1L2	B-8	0.40	1000	3000	.265	.125			.040	.100	.040		.172	.148		
1	ST-SM-1L2-C2	B-8	0.40	1000	3000	.280	.125			.040	.115	.040		.172	.148		
1	ST-SM-1L4	B-8	0.35	1000	3000	.250	.110			.040	.100	.040		.172	.148		
1	ST-SM-1L6	B-8	0.40	1000	3000	.285	.145			.040	.100	.040		.172	.148		
1	ST-SM-1L6-C2	B-8	0.30	1000	3000	.260	.145			.040	.075	.040		.172	.148		
1	ST-SM-1L8	B-8	0.50	1000	3000	.750	.610			.040	.100	.040		.172	.148		
1	ST-SM-1L10	B-8	0.50	1000	3000	.594	.450			.040	.100	.040		.172	.148		
1	ST-SM-1L12	B-8	0.40	1000	3000	.460	.320			.040	.100	.040		.172	.148		
1	ST-SM-2	B-8	0.35	1000	3000	.310	.210			.050	.050	.040		.172	.148		
1	ST-SM-2C2	B-8	0.50	1000	3000	.335	.210			.050	.075	.040		.172	.148		
1	ST-SM-2C2-L2	B-8	0.20	1000	3000	.230	.105			.050	.075	.040		.172	.148		
1	ST-SM-2C4	B-8	0.40	1000	3000	.370	.210			.050	.110	.040		.172	.148		
1	ST-SM-2C6	B-8	0.40	1000	3000	.305	.145			.050	.110	.040		.172	.148		
1	ST-SM-2C6-C2	B-8	0.30	1000	3000	.247	.147			.050	.050	.040		.172	.148		
1	*ST-SM-2L2	B-8	0.35	1000	3000	.250	.150			.030	.070	.040		.172	.148		
1	ST-SM-2L4	B8-G1	0.30	1000	3000	.210	.120			.030	.060	.040		.172	.148		
1	ST-SM-500	B8-18A	0.40	1000	3000	.360	.204			.046	.110	.046		.172	.148		
1	ST-SM-6	B-8	0.40	1200	3500	.345	.210			.060	.075	.040		.172	.148		
1	ST-SM-8	B-8	0.45	1000	3000	.370	.210			.040	.120	.040		.172	.148		
1	ST-SM-15	B-8	0.35	1500	4000	.350	.210			.078	.062	.040		.172	.148		
1	ST-SM-19	B-8	0.45	1000	3000	.365	.193			.040	.132	.040		.172	.148		
1	ST-SM-3	B-15	0.45	1000	3000	.350	.210			.040	.100	.040		.195	.172		
1	ST-SM-4	B-16	0.35	1200	3500	.350	.210			.040	.100	.040		.200	.179		
1	ST-SM-5	B-22	0.35	1200	3500	.350	.210			.040	.100	.040		.250	.218		
2	ST-SM-1SL	B8-16	0.40	1000	3000	.265	.125			.040	.100	.040		.172	.148	.010	.01
3	ST-MM-10-TUR	B3-2C	0.40	1000	3000	.310	.170	.020	.060	.040	.100	.030	.060	.125	.093		
3	ST-SM-16-TUR	B3-2B	0.60	1000	3000	.350	.210	.020	.100	.040	.100	.040	.080	.125	.093		
3	ST-SM-027-TUR	B8-A	0.60	1000	3000	.480	.250	.020	.093	.040	.190	.040	.093	.172	.130		
3	ST-SM-1 TUR	B-8	0.40	1000	3000	.350	.210	.020	.100	.040	.100	.040	.080	.172	.148		
3	ST-SM-1 TUR-C2	B-8	0.50	1000	3000	.375	.210	.020	.100	.040	.125	.040	.080	.172	.148		
3	ST-SM-TUR-C4	B-8	0.40	1000	3000	.360	.210	.020	.100	.040	.110	.040	.080	.172	.148		
3	ST-SM-19 TUR-C2	B-8	0.55	1000	3000	.500	.210	.020	.100	.040	.250	.040	.080	.172	.148		
3	ST-SM-22 TUR	B-8	0.50	1700	4500	.428	.210	.020	.100	.093	.125	.040	.080	.172	.148		
3	ST-SM-22 TUR-C2	B-8	0.30	1700	4500	.461	.210	.020	.100	.093	.158	.040	.080	.172	.148		
3	*ST-SM-25 TUR	B8-A	0.50	1000	3000	.334	.154	.020	.046	.040	.140	.046	.093	.172	.148		
3	ST-SM-25 TUR-C2	B8-A	0.35	1000	3000	.254	.154	.020	.046	.040	.060	.046	.093	.172	.148		
3	*ST-SM-29 TUR	B8-A	0.50	1000	3000	.455	.250	.020	.093	.040	.165	.040	.093	.172	.148		
3	ST-SM-29 TUR-C2	B8-A	0.60	1000	3000	.540	.250	.020	.093	.040	.250	.040	.093	.172	.148		
3	ST-SM-29 TUR-L2	B8-A	0.50	1000	3000	.470	.250	.020	.093	.040	.180	.040	.093	.172	.148		
3	ST-SM-51-TUR-C2	B8-A	0.45	1400	3800	.346	.156	.020	.047	.040	.150	.047	.093	.172	.152		
3	ST-SM-51-TUR-C4	B8-A	0.40	1000	3000	.296	.156	.020	.047	.040	.100	.047	.093	.172	.152		
3	ST-SM-51-TUR-C6	B8-A	0.50	1000	3000	.361	.156	.020	.047	.040	.165	.047	.093	.172	.152		
3	ST-SM-51-TUR-L2	B8-A	0.40	1000	3000	.335	.207	.020	.100	.040	.088	.047	.093	.172	.152		
3	ST-SM-52-TUR	B8-A	0.30	1000	3000	.347	.207	.020	.100	.040	.100	.047	.093	.172	.152		
3	ST-SM-4 TUR	B-16	0.35	1000	3000	.350	.210	.020	.100	.040	.100	.040	.080	.200	.179		
3	ST-SM-20 TUR	B-18	0.40	1000	3000	.350	.210	.020	.100	.040	.100	.040	.080	.218	.185		
3	ST-SM-21 TUR	B-18	0.40	1000	3000	.375	.210	.020	.100	.040	.125	.040	.080	.218	.185		
3	ST-SM-23 TUR	B-22	0.40	1200	3500	.350	.210	.020	.100	.040	.100	.040	.080	.250	.204		
4	ST-SM-50-TUR	B-8	0.30	1000	3000	.262	.125	.020	.085	.050	.087	.040	.080	.172	.148		
4	ST-SM-352-TUR	B-8	0.30	1000	3000	.250	.110	.020	.080	.040	.100	.040	.080	.172	.148		
4	ST-SM-36 TUR	B-16	0.35	1500	4000	.320	.120	.020	.080	.075	.125	.048	.090	.200	.172		
5	ST-SM-40 TUR	B-9	0.40	1000	3000	.392	.232	.029	.031	.050	.110	.070	.109	.172	.148		
5	ST-SM-45 TUR	B8-13B	0.40	1000	3000	.362	.232	.029	.031	.050	.080	.070	.109	.172	.148		
6	ST-SM-47 TUR	B-8	0.30	1000	3000	.328	.210	.020	.120	.040	.078	.040	.080	.172	.148		
6	ST-SM-47 TUR-C2	B-8	0.40	1000	3000	.350	.210	.020	.120	.040	.100	.040	.080	.172	.148		
6	ST-SM-47 TUR-C4	B-8	0.50	1000	3000	.415	.210	.020	.120	.040	.165	.040	.080	.172	.148		
6	ST-SM-47-TUR-C6	B-8	0.50	1000	3000	.428	.210	.020	.120	.093	.125	.040	.080	.172	.148		
7	ST-SM-42 TUR	B3-2A	0.40	1000	3000	.334	.153	.015	.031	.041	.140	.068	.078	.125	.093		
7	ST-SM-44 TUR	B-2	0.40	1000	3000	.255	.150	.015	.031	.030	.075	.068	.078	.125	.093		

Terminal Lug: Brass, Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Minimum Thick (\*Silver—\*Gold Flash over Silver)  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.

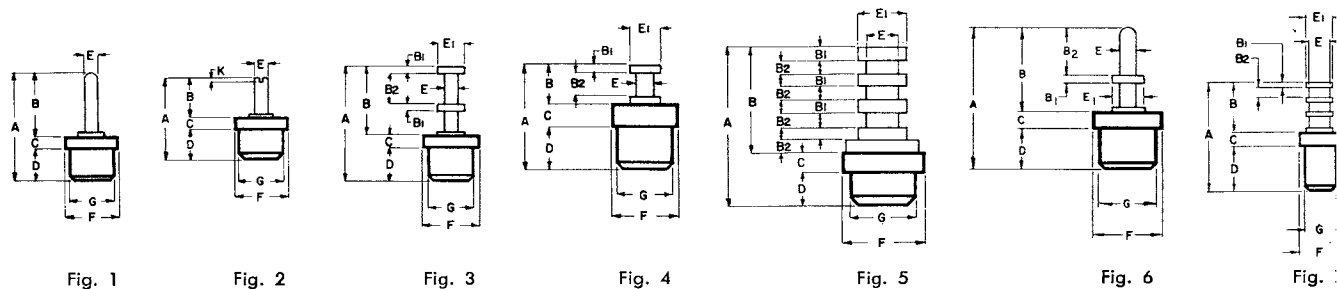


Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig.

**Sealectro** PRESS-FIT® TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS

**STAND-OFFS** MICROMINIATURE and SUBMINIATURE

FIG.	PART No.	TOOL NO.	CAPACITANCE mmf	V.RMS 60 CPS		A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	G DIA. +.002 -.000	K	K <sub>1</sub>
				NOMINAL RATING	FLASHOVER SEA LEVEL												
51	RST-SM-3-C1	B-3-B	0.40	1000	3000	.250	.130			.031	.089	.040		.125	.093		
51	RST-SM-16	B-3-2X	0.40	1000	3000	.350	.210			.040	.100	.040		.125	.093		
51	RST-SM-3	B-3-B	0.30	1000	3000	.250	.130			.031	.089	.040		.125	.104		
51	RST-SM-3-C3	B-3-B	0.30	1000	3000	.250	.130			.031	.089	.040		.125	.106		
51	RST-SM-11C1	B8-G	0.45	1500	4000	.350	.210			.020	.120	.040		.172	.112		
51	RST-SM-39-C1	B-8-M	0.35	1000	3000	.350	.210			.015	.125	.040		.172	.112		
51	RST-SM-13	B6-X1	0.50	500	2000	.310	.210			.040	.060	.040		.150	.125		
51	RST-SM-1	B8-X1	0.40	1200	3500	.350	.210			.040	.100	.040		.172	.148		
51	RST-SM-1B2	B8-G	0.40	1200	3500	.330	.210			.020	.100	.040		.172	.148		
51	RST-SM-1-CB	B8-X1	0.30	1000	3000	.330	.210			.046	.074	.040		.170	.148		
51	RST-SM-1C6	B8-X1	0.40	2000	5000	.500	.210			.040	.250	.040		.172	.148		
51	RST-SM-1L2	B8-X1	0.50	1200	3500	.265	.125			.040	.100	.040		.172	.148		
51	RST-SM-1L8	B8-X1	0.50	1200	3500	.750	.610			.040	.100	.040		.172	.148		
51	RST-SM-2	B8-X2	0.40	1000	3000	.310	.210			.050	.050	.040		.172	.148		
51	RST-SM-6	B8-X	0.35	1200	3500	.345	.210			.060	.075	.040		.172	.148		
51	RST-SM-7C2	B8-X1	0.30	1200	3500	.382	.210			.040	.132	.045		.172	.148		
51	** RST-SM-11	B8-G	0.30	1200	3500	.350	.210			.020	.120	.040		.172	.148		
51	RST-SM-28	B8-X1	0.35	1500	4000	.390	.218			.040	.132	.040		.172	.148		
51	RST-SM-39	B-8-M	0.30	1200	3500	.350	.210			.015	.125	.040		.172	.148		
51	RST-SM-3CD3	B-15-X	0.45	1000	3000	.500	.360			.040	.100	.040		.195	.172		
52	RST-SM-3SL	B3-2X	0.50	500	2000	.350	.210			.040	.100	.080		.125	.104	.036	.180
52	RST-SM-41SL	B6-C	0.30	750	2500	.150	.062			.025	.063	.050		.150	.125	.020	.047
53	RST-SM-47-TUR	B8-X-1	0.40	1000	3000	.328	.210	.020	.120	.040	.078	.040	.080	.172	.148		
53	RST-SM-47-TUR-C2	B8-X-1	0.40	1200	3500	.350	.210	.020	.120	.040	.100	.040	.080	.172	.148		
54	RST-MM-10-TUR	B1-2	0.40	500	2000	.310	.170	.020	.060	.040	.100	.030	.060	.125	.093		
54	RST-SM-25-TUR-C4	B8-X-1	0.40	1500	4000	.295	.156	.020	.046	.040	.100	.046	.093	.172	.148		
54	RST-SM-38-TUR	B10	0.40	1500	4000	.405	.210	.020	.100	.040	.155	.040	.080	.188	.171		
54	RST-SM-1-TUR	B8-X-1	0.40	1200	3500	.350	.210	.020	.100	.040	.100	.040	.080	.172	.148		
54	RST-SM-4-TUR	B16	0.40	1500	4000	.350	.210	.020	.100	.040	.100	.040	.080	.200	.179		
54	RST-SM-20-TUR	B18	0.40	1500	4000	.350	.210	.020	.100	.040	.100	.040	.080	.218	.185		
54	RST-SM-21-TUR	B18	0.30	1700	4500	.375	.210	.020	.100	.040	.125	.040	.080	.218	.185		
54	RST-SM-23-TUR	B22-X-2	0.30	1500	4000	.350	.210	.020	.100	.040	.100	.040	.080	.250	.204		
55	RST-SM-31-TUR	B8-X-1	0.50	1700	4500	.455	.227	.020	.187	.040	.187	.040	.080	.172	.148		
55	RST-SM-31-TUR-CD1	B8-3	0.35	1500	4000	.382	.227	.020	.187	.025	.130	.040	.080	.172	.148		
55	RST-SM-31-TUR-L2	B8-X-1	0.40	1200	3500	.296	.156	.020	.116	.040	.100	.046	.093	.172	.148		
55	RST-SM-352-TUR	B8-X-1	0.40	1200	3500	.250	.110	.020	.080	.040	.100	.040	.080	.172	.148		
55	RST-SM-350-TUR	B10	0.20	1500	4000	.320	.125	.020	.080	.040	.155	.040	.080	.188	.171		
55	RST-SM-36-TUR	B16	0.30	1500	4000	.320	.120	.020	.080	.075	.125	.048	.090	.200	.172		

Terminal Lug: Brass, Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Minimum Thickness. Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.

\*\*Gold flash over silver.

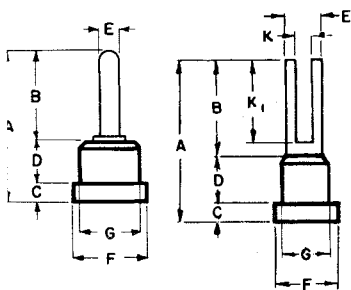


Fig. 51

Fig. 52

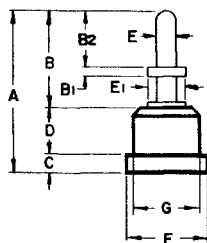


Fig. 53

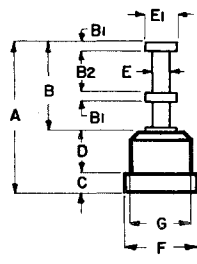


Fig. 54

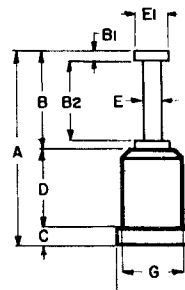


Fig. 55

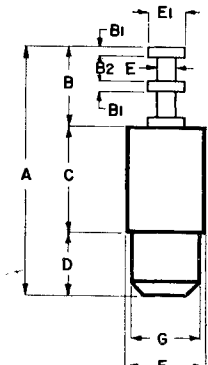


Fig. 101

**Sealectro PRESS-FIT® TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS**

**STAND-OFFS MINIATURE**

FIG. #	PART No.	TOOL NO.	CAPACITANCE mmf	V,RMS		A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	G DIA.	+ .002 - .000
				NOMINAL RATING	60 CPS FLASHOVER SEA LEVEL											
101	ST-210	B3-A	0.50	1500	4000	.346	.156	.020	.046	.103	.087	.046	.093	.125	.104	
101	ST-211	B3-A	0.50	1500	4000	.346	.156	.020	.046	.103	.087	.046	.093	.125	.104	
101	ST-215	B3-A	0.50	1500	4000	.359	.156	.020	.046	.103	.100	.046	.093	.125	.104	
101	ST-1200	B6-10	0.20	3000	7000	.531	.156	.020	.046	.219	.156	.046	.093	.156	.127	
101	ST-1400L2	B12-3	0.30	2800	7500	.647	.250	.020	.093	.250	.150	.040	.093	.187	.135	
101	ST-230L2	B9-3	0.50	2500	6000	.482	.250	.020	.094	.125	.110	.040	.093	.172	.148	
101	ST-1175L2	B9-3	0.30	3200	7500	.598	.250	.020	.093	.187	.165	.040	.093	.172	.148	
101	ST-250	B12	0.30	2500	6000	.431	.156	.020	.046	.125	.150	.046	.093	.187	.165	
101	ST-250L2	B12	0.50	2500	6000	.522	.250	.020	.093	.125	.150	.040	.093	.187	.165	
101	ST-250L3	B12-2	0.60	2000	5000	.556	.281	.031	.093	.125	.150	.046	.125	.187	.165	
101	ST-250L6	B12	0.50	2500	6000	.485	.210	.020	.100	.125	.150	.040	.093	.187	.165	
101	ST-260L3	B13	0.60	3000	7000	.556	.281	.031	.093	.175	.100	.046	.125	.187	.165	
101	ST-1000	B13	0.20	2800	6700	.493	.156	.020	.046	.187	.150	.046	.093	.187	.165	
101	ST-1000L2	B13	0.30	2800	6700	.584	.250	.020	.093	.187	.150	.040	.093	.187	.165	
101	ST-1000L3	B13-3B	0.65	2500	6000	.616	.281	.031	.093	.187	.150	.046	.125	.187	.165	
101	ST-1000-2C	B13	0.30	2800	6700	.468	.156	.020	.046	.187	.125	.046	.093	.187	.165	
101	ST-1450L3	B13-3B	0.55	3000	7000	.681	.281	.031	.093	.200	.200	.046	.125	.187	.165	
101	ST-1500	B12-3	0.20	3100	7300	.556	.156	.020	.046	.250	.150	.046	.093	.187	.165	
101	ST-1500L2	B12-3	0.30	3100	7300	.647	.250	.020	.093	.250	.150	.040	.093	.187	.165	
101	ST-1500L3	B13	0.35	3100	7300	.681	.281	.031	.093	.250	.150	.046	.125	.187	.165	
101	ST-1525	B12-3	0.25	3000	7000	.706	.156	.020	.046	.250	.300	.046	.093	.187	.165	
101	ST-1900	B13-4	0.20	3500	8000	.831	.281	.031	.093	.350	.200	.046	.125	.187	.165	
101	ST-1901	B12	0.25	3500	8000	.893	.343	.031	.125	.350	.200	.047	.125	.187	.165	
101	ST-2000	B13-3B	0.25	4500	10000	.831	.281	.031	.093	.400	.150	.046	.125	.187	.165	
101	ST-2000L2	B12-3	0.20	4500	10000	.797	.250	.020	.093	.400	.150	.040	.093	.187	.165	
101	ST-2000L2-C2	B12-3	0.20	4500	10000	.797	.250	.020	.093	.400	.100	.040	.093	.187	.165	
101	ST-2000L3	B12-3	0.15	4500	10000	.706	.156	.020	.046	.400	.150	.046	.093	.187	.165	
101	ST-2000L3-C2	B12-3	0.20	4500	10000	.656	.156	.020	.046	.400	.100	.046	.093	.187	.165	
101	ST-250C1	B12	0.30	2500	6000	.431	.156	.020	.046	.125	.150	.046	.093	.187	.171	
101	ST-250L3-C1	B12-2	0.60	2000	5000	.556	.281	.031	.093	.125	.150	.046	.125	.187	.171	
101	ST-250L4	B12-2	0.60	2000	5000	.556	.281	.031	.093	.125	.150	.062	.125	.187	.171	
101	ST-250L4-C2	B12	0.65	2000	5000	.621	.281	.031	.093	.125	.215	.062	.125	.187	.171	
101	ST-250L5	B12	0.50	2500	6000	.485	.210	.020	.100	.125	.150	.040	.080	.218	.171	
101	ST-251C1	B12	0.35	2500	6000	.485	.210	.020	.100	.125	.150	.040	.080	.187	.171	
101	ST-1000C1	B13	0.20	2800	6700	.493	.156	.020	.046	.187	.150	.046	.093	.187	.171	
101	ST-1000L2-C1	B13	0.35	2800	6700	.584	.250	.020	.093	.187	.150	.040	.093	.187	.171	
101	ST-1500C1	B12-3	0.25	3100	7300	.556	.156	.020	.046	.250	.150	.046	.093	.187	.171	
101	ST-1500L3-C1	B13	0.40	3100	7300	.681	.281	.031	.093	.250	.150	.046	.125	.187	.171	
101	ST-1500L4-C1	B12-3	0.15	3200	7500	.610	.210	.020	.100	.250	.150	.040	.080	.187	.171	
101	ST-1501C1	B13	0.20	3100	7300	.593	.156	.020	.046	.250	.187	.046	.093	.187	.171	
101	ST-1525C1	B12-3	0.20	3000	7000	.706	.156	.020	.046	.250	.300	.046	.093	.187	.171	
101	ST-2000C1	B13-3B	0.25	4500	10000	.831	.281	.031	.093	.400	.150	.046	.125	.187	.171	
101	ST-2000C4	B13-3B	0.40	3000	7000	.831	.281	.031	.093	.250	.300	.046	.125	.187	.171	
101	ST-2500C1	B26	0.20	5500	12000	.968	.281	.031	.093	.500	.187	.046	.125	.250	.171	
101	ST-4000C1	B26	0.25	6000	13000	1.268	.281	.031	.093	.800	.187	.046	.125	.250	.171	
101	ST-941	B19-A	0.60	2500	6000	.546	.281	.031	.093	.125	.140	.046	.125	.218	.185	
101	ST-1510L3	B24-1	0.40	3000	7000	.718	.281	.031	.093	.250	.187	.046	.125	.250	.215	
101	ST-2500	B26	0.20	5500	12000	.968	.281	.031	.093	.500	.187	.046	.125	.250	.215	
101	ST-2500B2	B24-1	0.30	4000	9000	.968	.281	.031	.093	.370	.317	.046	.125	.250	.215	
101	ST-2500L2	B26	0.20	5200	11500	.934	.250	.020	.093	.500	.187	.040	.093	.250	.215	
101	ST-2500L3	B26	0.20	5200	11500	.843	.156	.020	.046	.500	.187	.046	.093	.250	.215	
101	ST-4000	B26	0.30	6000	13000	1.268	.281	.031	.093	.800	.187	.046	.125	.250	.215	
101	ST-4000L2	B26	0.25	6000	13000	1.234	.250	.020	.093	.800	.187	.040	.093	.250	.215	
101	ST-4000L3	B26	0.15	6000	13000	1.143	.156	.020	.046	.800	.187	.046	.093	.250	.215	

Terminal Lugs: Brass, Silver Plate .0003" Min. Thick.

Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.

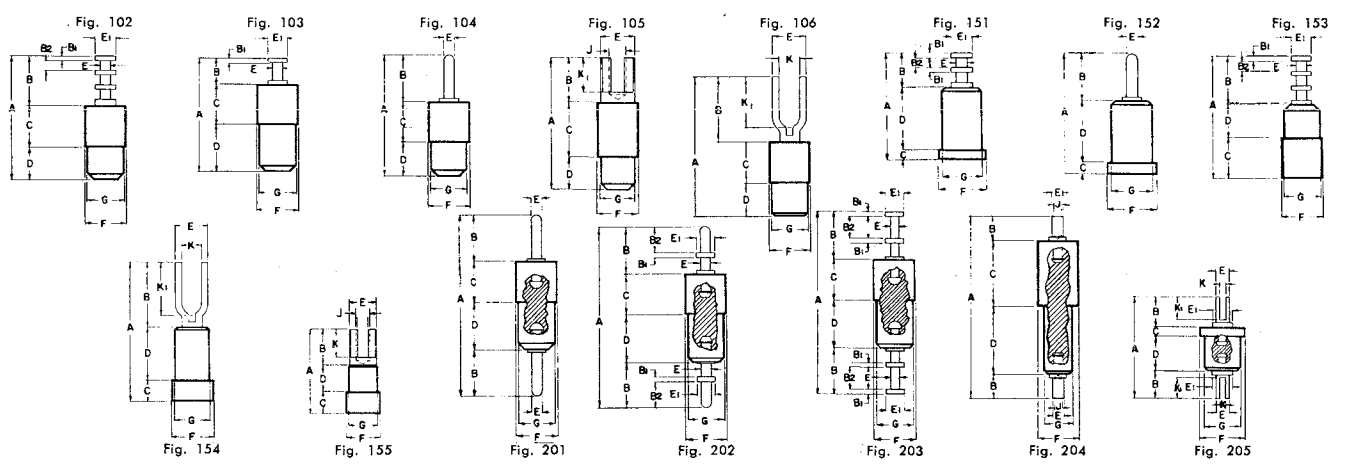
# See preceding page for figure drawing

*Selectro* PRESS-FIT® TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS

**STAND-OFFS MINIATURE and SUBMINIATURE**

FIG.	PART No.	TOOL NO.	CAPACITANCE mmf	V <sub>RMS</sub> 60 CPS		A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	±.002 -.000 G DIA.	J DIA.	K	K <sub>1</sub>
				NOMINAL RAT. ING	FLASH OVER SEA LEVEL													
102	ST-1150	B12	0.60	2500	6000	.555	.218	.020	.046	.187	.150	.046	.093	.187	.171			
103	ST-1500TUR	B12-3	0.20	2700	6500	.520	.120	.020		.250	.150	.048	.090	.187	.165			
103	ST-1600-TUR	B13-3B	0.20	2000	6000	.519	.120	.020		.187	.212	.048	.090	.187	.171			
104	ST-251*	B13-3	0.45	2000	5000	.485	.210			.125	.150	.040		.187	.165			
104	ST-1020L5*	B13-3	0.40	2200	5500	.547	.210			.187	.150	.040		.187	.165			
104	ST-1181*	B13	0.70	2200	5500	.718	.312			.187	.218	.040		.187	.165			
104	ST-1182*	B16-1	0.55	2500	5500	.600	.300			.125	.150	.062		.200	.180			
105	ST-1500SL-C3	B11	0.50	2700	6500	.603	.203			.250	.150	.148		.187	.165	.078		.156
105	ST-250SL	B11	0.70	2000	5000	.478	.203			.125	.150	.148		.187	.171	.078		.156
105	ST-250SL-1L	B11	0.70	2000	5000	.478	.203			.125	.150	.148		.187	.171	.046		.161
105	ST-1000SL	B11	0.70	2300	5600	.540	.203			.187	.150	.148		.187	.171	.078		.156
105	ST-1000SL-1L	B11	0.70	2300	5600	.540	.203			.187	.150	.148		.187	.171	.046		.161
105	ST-1150SL-1L	B11	0.50	2300	5600	.555	.203			.187	.165	.148		.187	.171	.046		.156
105	ST-1180SL	B11	0.70	2300	5600	.602	.203			.187	.212	.148		.187	.171	.078		.156
105	ST-1180SL-C2	B11	0.80	2300	5600	.620	.203			.187	.230	.148		.187	.171	.078		.156
105	ST-1500SL	B11	0.45	2700	6500	.603	.203			.250	.150	.148		.187	.171	.078		.156
105	ST-1500SL-1L	B11	0.45	2700	6500	.603	.203			.250	.150	.148		.187	.171	.046		.156
105	ST-2000SL	B11	0.30	4200	9500	.753	.203			.400	.150	.148		.187	.171	.078		.156
105	ST-2000SL-1L	B11	0.30	4200	9500	.753	.203			.400	.150	.148		.187	.171	.046		.161
105	ST-2000SL-C2	B11	0.30	4200	9500	.703	.203			.400	.100	.148		.187	.171	.078		.156
105	ST-2500SL-C1	B25	0.30	5000	11000	.890	.203			.500	.187	.148		.250	.171	.078		.156
105	ST-4000SL-C1	B25	0.25	6000	13000	1.190	.203			.800	.187	.148		.250	.171	.078		.156
105	ST-2500SL	B25	0.30	5000	11000	.890	.203			.500	.187	.148		.250	.217	.078		.156
105	ST-2500SL-1L	B25	0.30	5000	11000	.890	.203			.500	.187	.148		.250	.217	.046		.161
105	ST-4000SL	B25	0.20	6000	13000	1.190	.203			.800	.187	.148		.250	.217	.078		.156
105	ST-4000SL-1L	B25	0.25	6000	13000	1.190	.203			.800	.187	.148		.250	.217	.046		.161
106	ST-35ML	B11-C	0.85	2000	5000	.633	.296			.187	.150	.150		.187	.171	.090		.234
151	RST-1	B18-1B	0.40	3000	7000	.487	.154	.020	.046	.046	.287	.046	.093	.218	.185			
151	RST-1L2	B18-1B	0.20	3000	7000	.583	.250	.020	.093	.046	.287	.046	.093	.218	.185			
152	RST-2	B18	0.15	3200	7500	.543	.210			.046	.287	.040		.218	.185			
152	RST-2C2	B18-1B	0.50	4000	9000	.756	.210			.046	.500	.040		.218	.185			
152	RST-2L2	B18	0.70	2500	6000	1.133	.800			.046	.333	.040		.218	.185			
153	RST-1150	B13-X	0.70	1200	3500	.555	.218	.020	.046	.187	.150	.046	.093	.187	.171			
154	RST-15ML	B13-X-2	0.75	2000	5000	.629	.296			.093	.240	.150		.187	.171	.090		.234
155	RST-250SL	B12-X	0.75	1900	4800	.478	.203			.125	.150	.148		.187	.165	.078		.156
201	DST-SM-110*	B8-16	0.20	1000	3000	.560	.180			.040	.160	.040		.172	.148			
201	DST-SM-110-L4*	B8-11	0.15	1500	4000	.600	.155			.080	.210	.040		.172	.148			
201	DST-1010-C2*	B13-3-1	0.20	2700	6400	.819	.210			.187	.212	.040		.187	.148			
201	DST-1010-C4*	B9	0.20	2700	6400	.819	.210			.187	.212	.040		.172	.148			
201	DST-SM-105*	B17	0.25	1000	3000	.640	.210			.050	.170	.040		.205	.169			
201	DST-900*	B12	0.15	2000	5000	.572	.110			.140	.212	.040		.187	.171			
201	DST-900-L2	B12	0.20	2000	5000	.696	.172			.140	.212	.040		.187	.171			
201	DST-1010*	B13-3-1	0.20	2700	6500	.819	.210			.187	.212	.040		.187	.171			
201	DST-1010-L1*	B13	0.20	1500	4000	.587	.125			.187	.150	.040		.187	.171			
202	DST-1001*	B13	0.20	2000	6000	.819	.210	.020	.120	.187	.212	.040	.080	.187	.171			
203	DST-1000-C2*	B13	0.20	2000	5000	.819	.210	.020	.100	.187	.212	.040	.080	.187	.148			
203	DST-SM-105-TUR*	B17	0.20	1000	3000	.640	.210	.020	.100	.050	.170	.040	.080	.205	.169			
203	DST-1000*	B13	0.20	2500	6000	.819	.210	.020	.100	.187	.212	.040	.080	.187	.171			
203	DST-1015*	B20	0.20	2700	6500	.819	.210	.020	.100	.187	.212	.040	.080	.218	.187			
203	DST-1550	B24-1	0.40	3500	8000	1.187	.281	.031	.093	.250	.375	.046	.125	.250	.218			
203	DST-2550	B26	0.35	5000	11000	1.687	.281	.031	.093	.500	.625	.046	.125	.250	.218			
203	DST-4050	B26	0.30	6000	13000	2.287	.281	.031	.093	.800	.925	.046	.125	.250	.218			
204	DST-2560	B28	0.15	4000	9000	1.377	.176			.500	.525	.085		.312	.217	.062		.156
205	DTS-SM-101SL*	B10-3	0.20	1000	3000	.480	.140			.040	.160	.060	.093	.185	.165	.032		.110
205	DST-SM-100SL*	B17	0.20	1000	3000	.480	.140			.040	.160	.060	.093	.205	.169	.032		.110

Terminal Lug: Brass, Silver Plate .0003" Min. Thick. \*Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Min. Thick.  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.

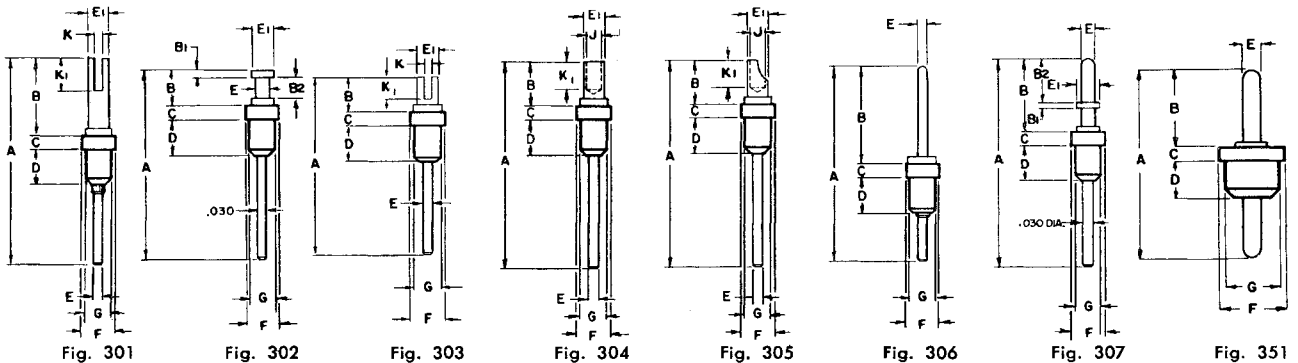


**FEED-THRU MICROMINIATURE and SUBMINIATURE**

FIG.	PART No.	TOOL NO.	CAPACITANCE mmf	V.RMS		A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	+.002 -.000 G DIA.	J	K	K <sub>1</sub>
				NOM-INAL RATING	60 CPS FLASH-OVER SEALEVEL													
301	FT-MM-3SL	B0-1	0.65	400	1800	.510	.100			.040	.090	.030	.060	.093	.075		.024	.080
301	FT-MM-3SL-2L	B0-1-A	0.75	400	1800	.635	.225			.040	.090	.030	.060	.093	.075		.024	.075
301	FT-MM-3SL-4L	B0-1	0.65	400	1800	.471	.110			.040	.090	.030	.060	.093	.075		.024	.080
302	FT-MM-5-TUR	B0	0.70	400	1800	.510	.100	.020	.060	.040	.100	.040	.060	.093	.075			
303	FT-MM-5SL	B0-1	0.70	400	1800	.510	.100			.040	.100	.030	.060	.093	.075		.024	.080
303	FT-MM-6SL	B0-1	0.70	400	1800	.552	.100			.040	.100	.030	.060	.093	.075		.024	.080
304	FT-MM-7	B0-1	0.70	400	1800	.588	.125			.040	.100	.030	.060	.093	.075	.040		.080
305	FT-MM-7ML	B0-1	0.70	400	1800	.588	.120			.040	.100	.030	.060	.093	.075	.040		.080
306	FT-MM-16L2	B0-2	0.70	400	1800	.550	.275			.040	.100	.030		.093	.075			
307	FT-MM-47-TUR	B0-A	1.05	500	2000	1.500	.210	.020	.100	.040	.125	.032	.060	.093	.075			
307	FT-MM-47-TUR-BC*	B0-A	1.10	500	2000	1.500	.210	.020	.100	.040	.125	.032	.060	.093	.075			
307	FT-MM-47-TUR-SS#	B0-A	1.00	500	2000	1.500	.210	.020	.100	.040	.125	.032	.060	.093	.075			
307	FT-MM-48-TUR-BC*	B0-5	0.70	500	2000	1.700	.210	.020	.100	.090	.125	.032	.060	.093	.075			
351	FT-SM-7	B3-1	0.50	500	2000	.375	.147			.040	.075	.040		.125	.093			
351	FT-SM-16	B3-1	0.75	500	2000	.515	.210			.040	.100	.040		.125	.093			
351	FT-SM-16L2	B3-1	0.65	500	2000	.453	.156			.040	.100	.040		.125	.093			
351	FT-SM-16L6	B3-1	0.80	500	2000	.987	.687			.040	.100	.040		.125	.093			
351	FT-SM-16L14	B3-1	0.80	500	2000	.438	.125			.040	.100	.040		.125	.093			
351	FT-SM-13	B6	0.50	750	2500	.515	.210			.040	.060	.040		.150	.125			
351	FT-SM-23	B6	0.45	750	2500	.335	.125			.040	.060	.040		.150	.125			
351	FT-SM-23L2	B6	0.60	750	2500	.375	.125			.040	.100	.040		.150	.125			
351	FT-SM-022	B8-A	0.65	1000	3000	.630	.210			.040	.170	.040		.172	.148			
351	FT-SM-023	B8	0.65	1000	3000	.630	.210			.040	.217	.040		.172	.148			
351	FT-SM-1	B8-16	0.50	1000	3000	.515	.210			.040	.100	.040		.172	.148			
351	FT-SM-1C6	B8-A	0.70	1000	3000	.710	.210			.040	.250	.040		.172	.148			
351	FT-SM-1L2	B8-16	0.50	1000	3000	.443	.210			.040	.100	.040		.172	.148			
351	FT-SM-1L3	B8-16	0.70	1000	3000	.725	.210			.040	.100	.040		.172	.148			
351	FT-SM-1L4	B8-16	0.70	1000	3000	1.000	.210			.040	.100	.040		.172	.148			
351	FT-SM-1L6	B8-16	0.55	1000	3000	.562	.210			.040	.100	.040		.172	.148			
351	FT-SM-2	B8-18	0.40	1000	3000	.515	.210			.050	.050	.040		.172	.148			
351	FT-SM-2C4	B8-18	0.50	1200	3500	.535	.210			.050	.110	.040		.172	.148			
351	FT-SM-2C4-L2	B8-13	0.50	1200	3500	.431	.106			.050	.110	.040		.172	.148			
351	FT-SM-2C6	B8-18	0.50	1200	3500	.410	.147			.050	.110	.040		.172	.148			
351	FT-SM-8	B8-16	0.60	1000	3000	.535	.210			.040	.120	.040		.172	.148			
351	FT-SM-9	B8-16	0.50	1000	3000	.535	.210			.040	.132	.040		.172	.148			
351	FT-SM-9L1	B8-16	0.55	1000	3000	.515	.210			.040	.132	.040		.172	.148			
351	FT-SM-9L2	B8-16	0.50	1000	3000	.407	.125			.040	.132	.040		.172	.148			
351	FT-SM-14**	B8-16	0.50	1000	3000	.375	.125			.040	.100	.040		.172	.148			
351	FT-SM-14L2**	B8-16	0.50	1000	3000	.325	.075			.040	.100	.040		.172	.148			
351	FT-SM-18	B8-16	0.55	1000	3000	.443	.093			.040	.100	.040		.172	.148			
351	FT-SM-19	B8-16	0.60	1000	3000	.535	.210			.040	.160	.040		.172	.148			
351	FT-SM-19L1	B8-16	0.60	1000	3000	.571	.210			.040	.160	.040		.172	.148			
351	FT-SM-35	B8	0.70	1200	3500	.890	.625			.040	.100	.045		.172	.148			
351	FT-SM-35L2	B8	0.60	1000	3000	.585	.320			.040	.100	.045		.172	.148			
351	FT-SM-1C1	B8-16	0.55	1000	3000	.515	.210			.040	.100	.040		.172	.157			
351	FT-SM-10	B18	1.10	1000	3000	2.500	.460			.040	.100	.040		.219	.169			
351	FT-SM-10L1	B18	1.30	1000	3000	2.500	.460			.040	.100	.049		.219	.169			
351	FT-SM-10L2	B18	1.00	1000	3000	1.875	.125			.040	.100	.049		.218	.169			
351	FT-SM-10L4	B18	0.65	1000	3000	.937	.125			.040	.100	.049		.218	.169			
351	FT-SM-10L6	B18-E	0.85	1000	3000	1.250	.125			.040	.100	.049		.218	.169			
351	FT-SM-27L2	B18-1	0.70	1000	3000	1.090	.680			.050	.110	.040		.218	.171			
351	FT-SM-3	B15	0.50	1200	3500	.515	.210			.040	.100	.040		.195	.172			
351	FT-SM-3L2	B15	0.55	1200	3500	.560	.210			.040	.100	.040		.195	.172			
351	FT-SM-4	B16	0.50	1200	3500	.515	.210			.040	.100	.040		.200	.179			
351	FT-SM-5	B22	0.50	1200	3500	.515	.210			.040	.100	.040		.250	.218			

Terminal Lug: Brass, Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Minimum Thick  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.  
 \* Beryllium Copper  
 # Stainless Steel

\*\*Gold Flash over Silver  
 † E Diameter ±.001

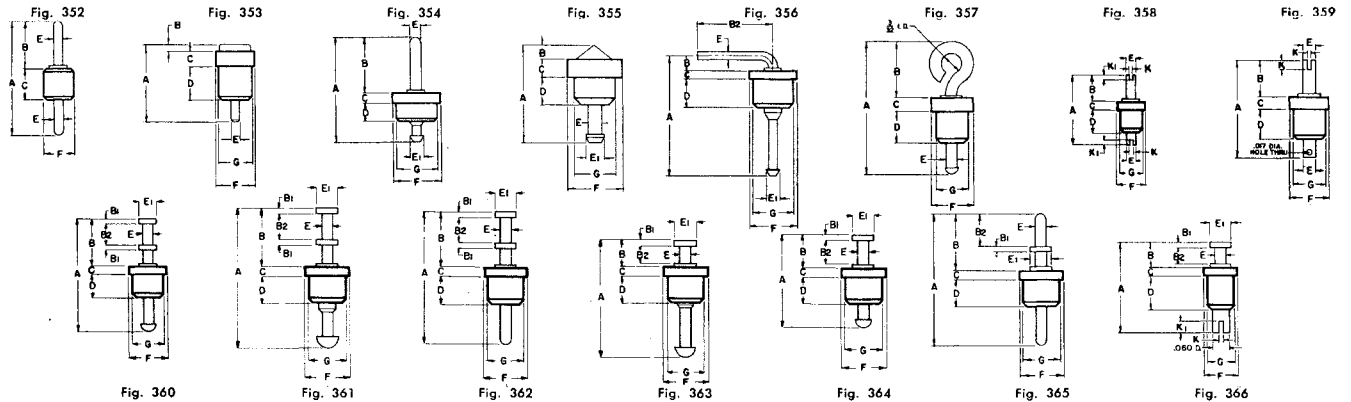


**Sealectro PRESS-FIT® TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS**

**FEED-THRUS SUBMINIATURE**

FIG.	PART No.	TOOL NO.	CAPACITANCE mmf	V <sub>RMS</sub> NOMINAL RATING	60 CPS FLASHOVER SEA LEVEL	A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	+0.002 -0.000 G DIA.	K	K <sub>1</sub>
352	FT-SM-024		—	—	—	.515	.210			.140		.040		.148			
352	FT-SM-17		—	—	—	.375	.200			.140		.040		.180			
353	FT-SM-80	B9-X	0.70	1700	4500	.531	.031			.156	.218	.050		.172	.148		
353	FT-SM-81	B9-X1	0.70	1000	3000	.281	.031			.040	.100	.040		.172	.148		
354	FT-SM-125	B3-1	0.50	500	2000	.306	.078			.040	.075	.040	.050	.125	.093		
354	FT-SM-021	B18	0.40	1200	3500	.449	.250			.046	.060	.051	.060	.218	.185		
355	FT-SM-706	B3-5	0.40	500	2000	.218	.031			.040	.060	.030	.040	.125	.093		
356	FT-SM-400	B18-H	1.00	1000	3000	.561	.053		.718	.040	.125	.040	.060	.218	.185		
356	FT-SM-400L2	B18-H	1.10	1000	3000	.718	.210		1.031	.040	.125	.040	.060	.218	.185		
356	FT-SM-400L4	B18-H	1.30	1000	3000	.998	.490		1.343	.040	.125	.040	.060	.218	.185		
357	FT-M-9L4	B10-2	0.80	1000	3000	.593	.250			.062	.140	.050		.187	.148		
357	FT-SM-9L6	B8-15-2	0.60	1000	3000	.479	.250			.040	.070	.050		.172	.148		
358	FT-SM-1SL	B3-1	0.60	500	2000	.312	.116			.040	.100	.040		.125	.106	.010	.020
358	FT-SM-100SL	B17	0.65	1500	4000	.480	.140			.040	.160	.060		.205	.169	.032	.110
359	FT-SM-1SL-1	B3-1	0.50	500	2000	.312	.116			.040	.100	.040		.125	.106	.010	.020
360	FT-SM-16-TUR	B-3-2B	0.70	500	2000	.500	.210	.020	.100	.040	.100	.040	.080	.125	.093		
360	FT-SM-1TUR-C6	B8	0.70	1000	3000	.500	.210	.020	.100	.040	.100	.040	.080	.172	.116		
360	FT-SM-028TUR	B8	0.60	1000	3000	.550	.245	.020	.070	.040	.125	.040	.080	.172	.148		
360	FT-SM-029TUR	B8	0.50	1000	3000	.812	.210	.020	.100	.040	.165	.040	.080	.172	.148		
360	FT-SM-1TUR	B8	0.50	1000	3000	.500	.210	.020	.100	.040	.100	.040	.080	.172	.148		
360	FT-SM-1TUR-C4	B8	0.50	1000	3000	.500	.210	.020	.100	.040	.165	.040	.080	.172	.148		
360	FT-SM-1TUR-C10	B8	0.40	1000	3000	.438	.210	.020	.100	.040	.083	.040	.080	.172	.148		
360	FT-SM-1TUR-L2	B8	0.50	1000	3000	.438	.210	.020	.100	.040	.100	.040	.080	.172	.148		
360	FT-SM-1TUR-L6	B8	0.70	1000	3000	.609	.210	.020	.100	.040	.165	.040	.080	.172	.148		
360	FT-SM-22-TUR-C2	B9	0.70	1200	3500	.609	.210	.020	.100	.093	.158	.040	.080	.172	.148		
360	FT-SM-4-TUR	B16	0.50	1200	3500	.500	.210	.020	.100	.040	.100	.040	.080	.200	.179		
360	FT-SM-1TUR-C8	B18	0.50	1200	3500	.438	.210	.020	.100	.040	.100	.040	.080	.218	.185		
360	FT-SM-33-TUR	B22	0.50	1500	4000	.500	.210	.020	.100	.040	.100	.040	.080	.250	.234		
361	FT-SM-2-TUR-C1	B8	0.50	1000	3000	.531	.210	.020	.100	.040	.100	.040	.080	.172	.112		
361	FT-SM-23-TUR	B6	0.50	750	2500	.500	.210	.020	.100	.040	.060	.040	.080	.150	.125		
361	FT-SM-025-TUR	B8	0.65	1000	3000	.609	.210	.020	.100	.040	.165	.040	.080	.172	.148		
361	FT-SM-026-TUR	B8-A	0.55	1000	3000	.437	.156	.020	.047	.040	.065	.040	.080	.172	.148		
361	FT-SM-1-TUR-C2	B8	0.45	1000	3000	.500	.210	.020	.100	.040	.060	.040	.080	.172	.148		
361	FT-SM-2-TUR	B8	0.70	1000	3000	.531	.210	.020	.100	.040	.100	.040	.080	.172	.148		
361	FT-SM-2-TUR-C2	B8	0.70	1000	3000	.531	.210	.020	.100	.040	.125	.040	.080	.172	.148		
361	FT-SM-22-TUR	B9	0.65	1200	3500	.609	.210	.020	.100	.093	.125	.040	.080	.172	.148		
361	FT-SM-51-TUR	B8-A	0.55	1000	3000	.437	.156	.020	.047	.040	.088	.047	.093	.172	.152		
361	FT-SM-51-TUR-C2	B8-A	0.65	1000	3000	.500	.156	.020	.047	.040	.150	.047	.093	.172	.152		
361	FT-SM-51-TUR-C4	B8-A	0.60	1000	3000	.437	.156	.020	.047	.040	.100	.047	.093	.172	.152		
361	FT-SM-20-TUR-C1	B18	0.55	1200	3500	.531	.210	.020	.100	.040	.100	.040	.080	.218	.175		
361	FT-SM-20-TUR	B18	0.65	1200	3500	.531	.210	.020	.100	.040	.100	.040	.080	.218	.185		
361	FT-SM-21-TUR	B18	0.65	1200	3500	.531	.210	.020	.100	.040	.125	.040	.080	.218	.185		
361	FT-SM-34-TUR	B19-A	0.55	1500	4000	.609	.210	.020	.100	.093	.125	.040	.080	.218	.185		
361	FT-SM-26-TUR	B28-A	0.50	1500	4000	.531	.210	.020	.100	.040	.100	.040	.080	.312	.264		
362	FT-SM-1-TUR-L4	B8	0.50	1000	3000	.500	.210	.020	.100	.040	.100	.040	.080	.172	.148		
363	FT-SM-28-TUR	B6	0.45	750	2500	.350	.125	.020	.095	.040	.060	.040	.080	.150	.125		
363	FT-SM-18-TUR	B8	0.60	1000	3000	.443	.093	.020	.062	.040	.100	.040	.080	.172	.148		
363	FT-SM-37-TUR-C1	B8-G-1	0.65	750	2500	.493	.093	.020	.063	.020	.170	.040	.080	.172	.148		
363	FT-SM-84-TUR	B8	0.60	1000	3000	.640	.250	.020	.100	.040	.125	.040	.080	.172	.148		
363	FT-SM-36-TUR	B16	0.60	1200	3500	.500	.120	.020	.080	.075	.125	.048	.090	.200	.172		
363	FT-SM-36-TUR-L1	B16-1-A	1.00	1000	3000	.500	.120	.020	.080	.075	.125	.080	.125	.200	.172		
364	FT-SM-16-TUR-L2	B3-5	0.60	500	2000	.350	.125	.020	.085	.040	.100	.040	.080	.125	.093		
364	FT-SM-32-TUR	B8	0.50	1000	3000	.350	.125	.020	.095	.040	.100	.040	.080	.172	.148		
364	FT-SM-32-TUR-L2	B8	0.60	1000	3000	.385	.160	.020	.130	.040	.100	.040	.093	.172	.148		
364	FT-SM-47-TUR-L2	B8	0.50	1000	3000	.380	.090	.020	.060	.040	.100	.040	.080	.172	.148		
365	FT-SM-47-TUR	B8	0.55	1000	3000	.500	.210	.020	.120	.040	.100	.040	.080	.172	.148		
365	FT-SM-47-TUR-L1	B8	0.50	1000	3000	.500	.210	.020	.120	.040	.100	.040	.080	.172	.148		
366	FT-SM-6-TUR-SL	B3-4-1	0.70	750	2500	.346	.093	.020	.060	.030	.130	.040	.080	.125	.106	.015	.047

Terminal Lug: Brass, Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Minimum Thick  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.



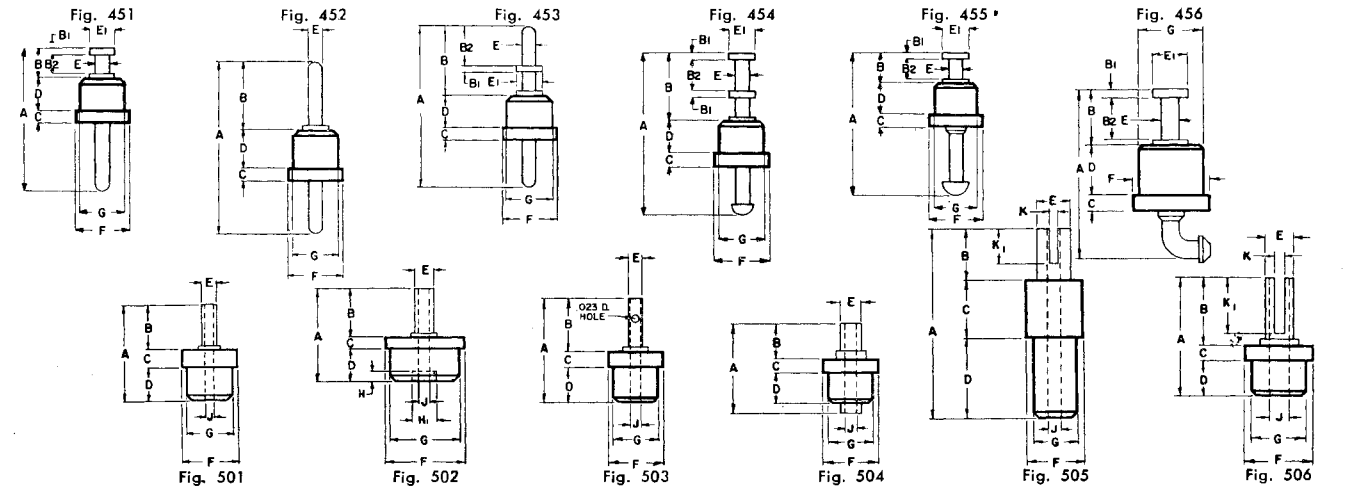
**Sealectro PRESS-FIT® TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS**

**FEED-THRU SUBMINIATURE - SUBMINIATURE, MINIATURE (TUBULAR)**

FIG.	PART No.	TOOL No.	CAPACITANCE mmf	60 CPS		A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	+.002 -.000 G DIA.
				V.RMS NOMINAL RATING	FLASHOVER SEA LEVEL										
451	RFT-SM-9	B8	0.50	1000	3000	.443	.093	.020	.062	.040	.100	.040	.080	.172	.148
452	RFT-SM-1	B8	0.50	1000	3000	.515	.210			.040	.100	.040		.172	.148
452	RFT-SM-2	B8	0.40	750	2500	.515	.210			.050	.050	.040		.172	.148
452	RFT-SM-9L4	B8-19	1.15	1200	3500	2.500	1.750			.040	.132	.040		.172	.148
453	RFT-SM-47-TUR-L1	B8	0.60	1200	3500	.500	.210	.020	.120	.040	.100	.040	.080	.172	.148
454	RFT-SM-16-TUR	B3-12	0.85	500	2000	.500	.210	.020	.100	.040	.100	.040	.080	.125	.093
454	RFT-SM-23-TUR	B6	0.50	1000	3000	.500	.210	.020	.100	.040	.060	.040	.080	.150	.125
454	RFT-SM-1-TUR	B8	0.50	1000	3000	.500	.210	.020	.100	.040	.100	.040	.080	.172	.148
454	RFT-SM-1-TUR-L6	B8	0.60	1200	3500	.609	.210	.020	.100	.040	.165	.040	.080	.172	.148
454	RFT-SM-2-TUR	B8	0.70	1000	3000	.531	.210	.020	.100	.040	.100	.040	.080	.172	.148
454	RFT-SM-2-TUR-C4	B8	0.60	1200	3500	.531	.210	.020	.100	.040	.165	.040	.080	.172	.148
454	RFT-SM-2-TUR-C6	B8	0.70	1200	3500	.531	.210	.020	.100	.040	.125	.040	.080	.172	.148
454	RFT-SM-22-TUR	B8	0.70	1200	3500	.609	.210	.020	.100	.093	.125	.040	.080	.172	.148
454	RFT-SM-21-TUR	B18	0.50	1500	4000	.531	.210	.020	.100	.040	.125	.040	.080	.218	.185
455	RFT-SM-18-TUR	B8	0.55	1000	3000	.443	.093	.020	.062	.040	.100	.040	.080	.172	.148
455	RFT-SM-32-TUR	B8	0.45	1000	3000	.350	.125	.020	.094	.040	.100	.040	.080	.172	.148
455	RFT-SM-35-TUR	B8	0.60	1000	3000	.500	.120	.020	.080	.040	.130	.040	.080	.172	.148
455	RFT-SM-37-TUR	B8	0.50	1200	3500	.493	.093	.020	.062	.040	.150	.040	.080	.172	.148
456	RFT-SM-18-TUR-L2##	B8-15-1	0.60	1000	3000	.378	.093	.020	.062	.040	.100	.040	.080	.172	.148

FIG.	PART No.	TOOL No.	CAPACITANCE mmf	V.RMS NOMINAL RATING	60 CPS FRASHOVER SEA LEVEL	A	B	C	D	E DIA.	F DIA.	+.002 -.000 G DIA.	H	H <sub>1</sub> DIA.	J	K	K <sub>1</sub>	
																		501
501	FT-SM-59C2	B3-1	0.40	500	2000	.215	.125	.040	.050	.040	.125	.093			.030			
501	FT-SM-59L2	B3-1	0.45	500	2000	.312	.207	.040	.060	.040	.125	.093			.030			
501	FT-SM-600	B3-1	0.45	500	2000	.317	.187	.040	.090	.040	.125	.093			.030			
501	FT-SM-601	B3-1	0.40	500	2000	.405	.275	.040	.090	.040	.125	.093			.030			
501	FT-SM-54	B4-1	0.40	750	2500	.310	.207	.050	.053	.040	.130	.120			.030			
501	FT-SM-52	B6	0.40	750	2500	.225	.125	.040	.060	.040	.150	.125			.030			
501	FT-SM-50L2	B8-13-A	0.30	750	2500	.250	.147	.050	.053	.040	.172	.148			.030			
501	FT-SM-55	B8-4	0.50	1000	3000	.296	.136	.060	.100	.040	.172	.148			.030			
501	FT-SM-55L2	B8-4	0.45	1000	3000	.234	.074	.060	.100	.040	.172	.148			.030			
501	FT-SM-62	B8-13-A	0.75	750	2500	.367	.207	.050	.110	.085	.172	.148			.063			
501	FT-SM-62C2	B8-13-A	0.90	1000	3000	.413	.207	.050	.156	.085	.172	.148			.063			
501	FT-SM-62C6	B8-13-A	0.70	1000	3000	.332	.207	.050	.075	.085	.172	.148			.063			
501	FT-SM-62C8	B8-13-A	0.60	1000	3000	.312	.207	.050	.055	.085	.172	.148			.063			
501	FT-SM-62L1	B8-13-A	0.70	1000	3000	.367	.207	.050	.110	.085	.172	.148			.070			
501	FT-SM-57	B18-2	0.40	1200	3500	.367	.207	.050	.110	.040	.218	.171			.030			
501	FT-SM-60	B18-1	0.70	1000	3000	.367	.207	.050	.110	.085	.218	.171			.063			
501	FT-SM-63	B21-A	0.65	1200	3500	.367	.207	.050	.110	.085	.240	.200			.063			
502	FT-SM-56	B8-13-A	0.35	1200	3500	.307	.207	.050	.110	.040	.172	.148	.057	.050	.030			
502	FT-SM-58	B8-4	0.30	1000	3000	.282	.147	.060	.075	.040	.172	.148	.042	.070	.030			
502	FT-SM-61	B18-1	0.75	1200	3000	.417	.207	.050	.160	.085	.218	.171	.050	.085	.063			
502	FT-SM-61L2	B18-1	0.95	1000	3000	.710	.500	.050	.160	.085	.218	.171	.050	.085	.063			
502	FT-SM-51	B21	0.35	1200	3500	.367	.207	.050	.110	.040	.240	.200	.057	.050	.030			
502	FT-SM-53	B22	0.35	1200	3500	.287	.147	.040	.100	.060	.250	.218	.030	.050	.030			
503	FT-SM-55-1A	B8-4	0.45	1000	3000	.296	.136	.060	.100	.040	.172	.148			.030			
503	FT-SM-50L2-1A	B8-13-A	0.30	1000	3000	.250	.147	.050	.053	.040	.172	.148			.030			
504	FT-SM-71L4	B8-A	0.55	1000	3000	.270	.100	.040	.100	.060	.172	.148			.030			
505	FT-SM-42SL	B3-3	0.65	1500	4000	.412	.065	.109	.238	.062	.125	.089			.030	.020	.050	
505	FT-102SSL	B11	0.90	2000	5000	.602	.203	.187	.212	.148	.187	.171			.052	.072	.156	
505	FT-150-SL*	B11-A	1.0	1000	3000	.426	.203	.060	.163	.148	.218	.185			.078		.156	
506	FT-SM-59SL	B3-1	0.40	500	2000	.225	.125	.040	.060	.040	.125	.093			.030	.015	.115	
506	FT-SM-52SL	B6	0.40	750	2500	.225	.125	.040	.060	.040	.150	.125			.030	.015	.115	
506	FT-SM-50SL	B8-13-A	0.30	1000	3000	.310	.207	.050	.053	.040	.172	.148			.030	.010	.125	
506	FT-SM-62C4SL	B8-13-A	0.75	1000	3000	.320	.190	.050	.080	.085	.172	.148			.050	.030	.175	
506	FT-SM-50SL-C1	B8-13-A	0.30	1000	3000	.310	.207	.050	.053	.040	.172	.165			.030	.010	.125	
506	FT-SM-60SL	B18-1	0.70	1000	3000	.367	.207	.050	.110	.085	.218	.171			.062	.030	.175	

Terminal Lug: Brass, Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Minimum Thick  
 Cavacitance and voltage measured with terminals installed in .050" thick aluminum chassis. \*Silver Finish  
 ## Gold over Silver



**Sealectro PRESS-FIT® TEFLON TERMINALS - AVAILABLE IN TEN EIA COLORS**

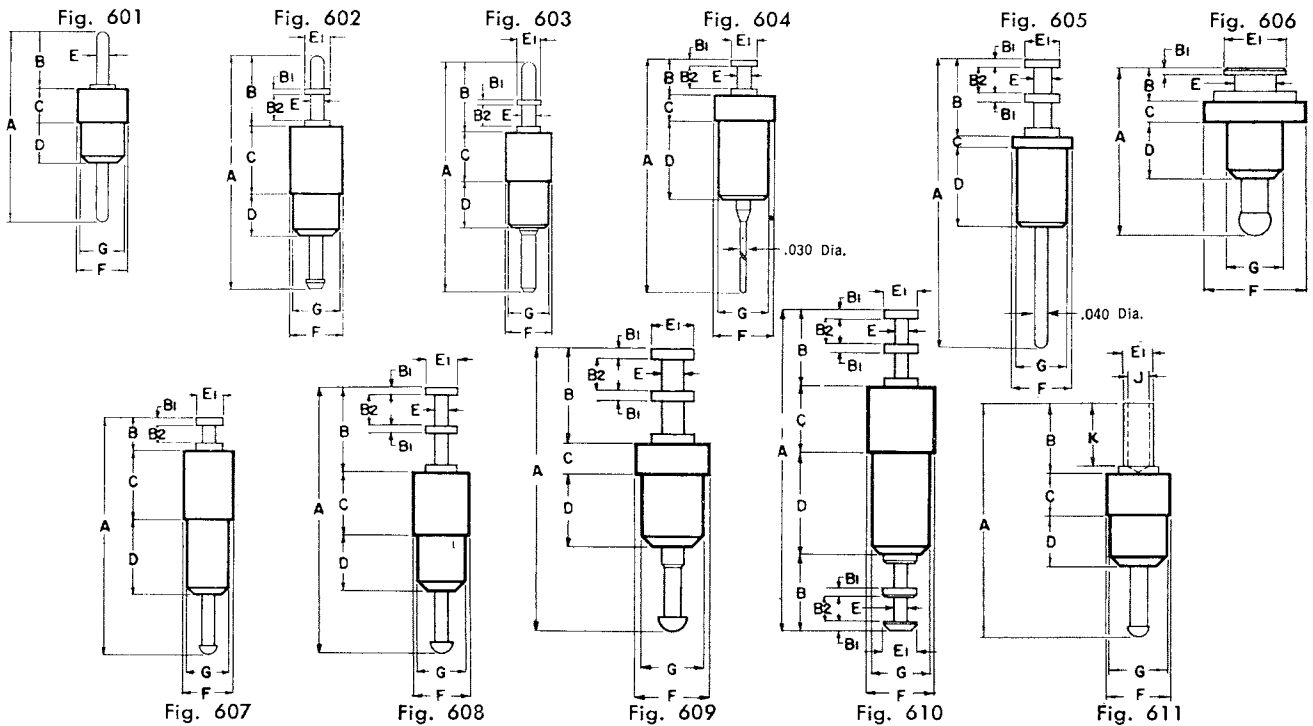




**FEED-THRUS MINIATURE**

FIG.	PART No.	TOOL No.	CAPACITANCE mmf	V.RMS		A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E OIA.	E <sub>1</sub> OIA.	F DIA.	+0.002 -0.000 G DIA.	J DIA.	K
				NOMINAL RATING	60 CPS FLASHOVER SEA LEVEL												
601	FT-225*	B9	0.60	1500	4000	.619	.187			.140	.105	.040		.172	.148		
601	FT-800-L5*	B12	0.60	1700	4500	.675	.200			.125	.150	.040		.187	.165		
601	FT-311*	B10	0.60	1700	4500	.540	.133			.063	.171	.046		.187	.171		
601	FT-1000-L5*	B13-3A	0.80	2000	5000	.740	.125			.187	.212	.063		.187	.171		
601	FT-1500-L5*	B13	0.80	2500	6000	.865	.125			.250	.275	.050		.187	.171		
602	FT-1101	B12-3	0.75	2000	5000	.836	.250	.020	.093	.250	.150	.050	.093	.187	.171		
603	FT-992	B9-3	0.75	1700	4500	.836	.250	.020	.073	.187	.165	.050	.093	.172	.148		
603	FT-1001	B13	0.75	2000	5000	.836	.250	.020	.093	.187	.212	.050	.093	.187	.171		
604	FT-M-1*	B19	1.10	2000	5000	2.005	.125	.020	.085	.093	.287	.050	.093	.218	.185		
604	FT-M-1L2*	B19	0.75	2000	5000	1.000	.125	.020	.085	.093	.287	.050	.093	.218	.185		
604	FT-M-2BC*	B19	1.00	2000	5000	2.000	.125	.020	.085	.230	.150	.050	.093	.218	.185		
605	FT-M-3**	B18-1B	0.95	1000	3000	1.052	.281	.031	.093	.046	.287	.060	.125	.218	.185		
606	FT-310#	B10	0.75	1700	4500	.540	.133	.020	.093	.063	.171	.046	.093	.187	.171		
606	FT-320*#	B28-A	0.70	1700	4500	.540	.133	.020	.093	.063	.171	.046	.093	.312	.171		
606	FT-325**	B28	1.20	750	2500	.506	.099	.020	.048	.063	.171	.125	.188	.312	.171		
607	FT-960	B13	0.70	1500	4000	.740	.125	.031	.062	.187	.125	.050	.093	.187	.171		
607	FT-1000	B13	0.70	2200	5500	.740	.125	.031	.062	.187	.212	.050	.093	.187	.171		
607	FT-1000B1	B24	0.80	2500	6000	.740	.125	.031	.062	.187	.212	.050	.093	.250	.171		
607	FT-1100	B12-3	0.70	2500	6000	.740	.125	.031	.062	.250	.150	.050	.093	.187	.171		
607	FT-1500	B12-3	0.70	3000	7000	.865	.125	.031	.062	.250	.275	.050	.093	.187	.171		
607	FT-1990	B13	0.90	2500	6000	1.115	.125	.031	.062	.365	.318	.050	.125	.187	.171		
607	FT-1995	B13	0.90	2500	6000	1.115	.125	.031	.062	.375	.340	.050	.125	.187	.171		
607	FT-2000	B13-3B	0.95	3500	8000	1.115	.125	.031	.062	.375	.400	.050	.125	.187	.171		
607	FT-2000B2	B13-3B	0.80	2000	5000	1.115	.125	.031	.062	.562	.212	.050	.125	.187	.171		
607	FT-2500C1	B26	1.45	4500	10000	1.365	.125	.031	.062	.500	.525	.050	.125	.250	.171		
607	FT-4000C1	B26	1.65	6000	13000	1.965	.125	.031	.062	.800	.825	.050	.125	.250	.171		
607	FT-400	B19-A	0.80	2000	5000	.640	.133	.020	.093	.093	.210	.046	.093	.215	.185		
607	FT-410	B19-A	0.80	2000	5000	.718	.133	.020	.093	.093	.288	.046	.093	.215	.185		
607	FT-2500	B26	1.70	4500	10000	1.365	.125	.031	.062	.500	.525	.050	.125	.250	.217		
607	FT-4000	B26	1.50	6000	13000	1.965	.125	.031	.062	.800	.825	.050	.125	.250	.217		
608	FT-990-DTUR	B9-3	0.80	1500	4000	.836	.250	.020	.093	.187	.165	.050	.093	.172	.148		
608	FT-995-DTUR	B9-3	0.85	1500	4000	.836	.250	.020	.093	.125	.230	.050	.093	.172	.148		
608	FT-1000-DTUR-C3	B13-3B	0.75	2000	5000	.836	.250	.020	.093	.187	.212	.050	.093	.187	.165		
608	FT-1000-DTUR	B13-3B	0.80	2000	5000	.836	.250	.020	.093	.187	.212	.050	.093	.187	.171		
608	FT-1100-DTUR	B12-3	0.75	2000	5000	.836	.250	.020	.093	.250	.150	.050	.093	.187	.171		
608	FT-2000-DTUR	B13	1.00	3500	8000	1.337	.281	.031	.093	.375	.400	.050	.093	.187	.171		
608	FT-1050-DTCR	B24	0.80	2500	6000	.836	.250	.020	.093	.187	.212	.050	.093	.250	.204		
608	FT-1050-DTUR-C3	B24	0.70	2500	6000	.836	.250	.020	.093	.187	.212	.050	.093	.250	.230		
609	FT-950-DTUR*	B12	1.00	1500	4000	.828	.281	.031	.093	.125	.200	.062	.125	.187	.171		
609	FT-940-DTUR*	B19-A	1.00	1200	3500	.828	.281	.031	.093	.094	.210	.062	.125	.218	.185		
609	FT-996-DTUR*	B19-A	1.00	2500	6000	.828	.281	.031	.093	.187	.212	.062	.125	.218	.185		
610	FT-1550-DTUR	B24-A	1.25	3000	7000	1.187	.281	.031	.093	.250	.375	.062	.125	.250	.218		
610	FT-2550-DTUR	B26	1.60	5000	11000	1.687	.281	.031	.093	.500	.625	.062	.125	.250	.218		
610	FT-4050-DTUR	B40	1.90	6000	13000	2.287	.281	.031	.093	.800	.925	.062	.125	.250	.218		
611	FT-800	B12	0.75	1700	4500	.680	.207			.125	.150		.085	.187	.171	.063	.187
611	FT-801**	B12	0.70	1700	4500	.535	.062			.125	.150		.085	.187	.171	.067	.062

Terminal Lug: Brass, Silver Plate .0003" Min. Thick. \*Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Minimum Thick  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis #Seating Turret E1 dimension.  
 \*\*Gold flash over silver.



**FEED-THRU MINIATURE**

FIG.	PART No.	TOOL No.	CAPACITANCE mmf	V,RMS		A	B	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	+.002 - .000 G DIA.	J DIA.	K	K <sub>1</sub>	L Class 2
				NOMINAL RATING	60 CPS FLASHOVER SEA LEVEL												
612	FT-E-4**	B19	1.00	1500	4000	.500		.281	.100	.050	.062	.218	.185				4-40
613	FT-1000T	B13-2	0.80	2000	5000	.899	.281	.187	.212	.050		.187	.171				4-36
613	FT-1000T1	B13-2	0.80	2000	5000	.899	.281	.187	.212	.050		.187	.171				4-40
613	FT-1500T	B13-2	0.90	2500	6000	1.024	.281	.250	.275	.050		.187	.171				4-36
613	FT-1500T1	B13-2	0.90	2500	6000	1.024	.281	.250	.275	.050		.187	.171				4-40
613	FT-1800T1	B13-6	0.90	2000	5000	1.039	.421	.187	.212	.050		.187	.171				4-40#
613	FT-2000T	B13-2	0.95	3500	8000	1.274	.281	.375	.400	.050		.187	.171				4-36
613	FT-2000T1	B13-2	0.95	3500	8000	1.274	.281	.375	.400	.050		.187	.171				4-40
614	FT-500T1	B13-4	0.80	1500	4000	.743	.281	.187	.150	.070		.187	.171				4-40
615	FT-1000SL	B11	0.80	2000	5000	.821	.203	.187	.212	.148		.187	.171	.078		.156	
615	FT-1000SL-1L	B11	0.75	2000	5000	.821	.203	.187	.212	.148		.187	.171	.046		.156	
615	FT-1000SL-C2	B11	0.80	2000	5000	.821	.203	.187	.230	.148		.187	.171	.078		.156	
615	FT-1500SL	B13-X-3	0.90	2500	6000	.947	.203	.250	.275	.148		.187	.171	.078		.156	
615	FT-1500SL-1L	B13-X-3	0.80	2500	6000	.947	.203	.250	.275	.148		.187	.171	.046		.156	
615	FT-2000SL	B11	1.20	3500	8000	1.197	.203	.375	.400	.148		.187	.171	.078		.156	
615	FT-2000SL-1L	B11	0.85	3500	8000	1.197	.203	.375	.400	.148		.187	.171	.046		.156	
615	FT-2035SL	B11	1.10	2500	6000	1.197	.203	.225	.550	.148		.187	.171	.078		.156	
615	FT-2035SL	B11	1.00	2500	6000	1.197	.203	.250	.525	.148		.187	.171	.078		.156	
616	FT-900SL	B11	0.90	1000	3000	.593	.203	.150	.100	.148		.187	.171	.078		.156	
617	FT-1500ML	B13-B	0.90	2500	6000	1.040	.296	.250	.275	.148		.187	.171		.110	.250	
618	FT-35ML	B11-C	1.40	2000	5000	1.015	.296	.187	.427	.150		.187	.171		.090	.234	
619	FT-2010ML*	B33	1.35	2500	6000	1.285	.281	.562	.250	.050		.250	.171				
625	FT-1600T10	B32-1	1.80	2000	5000	.737	.050	.125	.250	.125	.187	.375	.312	##			
630	FT-E-2**	B10	0.85	1000	3000	.225	.020	.040	.150	.125		.187	.165	†			
630	FT-E-1	B23-X-1	0.90	1000	3000	.225	.015	.040	.155	.195		.250	.203	.096			
630	FT-E-5	B23-X-1	0.75	1000	3000	.210	.010	.040	.155	.170		.250	.203	.072			
651	RFT-195SL	B10	0.60	1000	3000	.477	.125	.040	.187	.148		.187	.171	.078		.078	
651	RFT-200SL	B10	0.70	1000	3000	.532	.125	.040	.187	.148		.187	.171	.078		.078	
651	RFT-210SL	B10	0.70	1000	3000	.586	.125	.040	.140	.148		.187	.171	.078		.078	
652	RFT-1000SL	B13	0.80	2000	5000	.821	.203	.187	.212	.148		.187	.171	.078		.156	
652	RFT-1500SL	B13-X-1	1.00	2500	6000	.947	.203	.250	.275	.148		.187	.171	.078		.156	
652	RFT-2000SL	B13	1.00	3500	8000	1.197	.203	.375	.400	.148		.187	.171	.078		.156	
653	RFT-1500ML	B13	0.95	2500	6000	1.040	.296	.250	.275	.148		.187	.171		.110	.250	

Terminal Lug: Brass, Silver Plated .0003" Min. Thick.

Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.

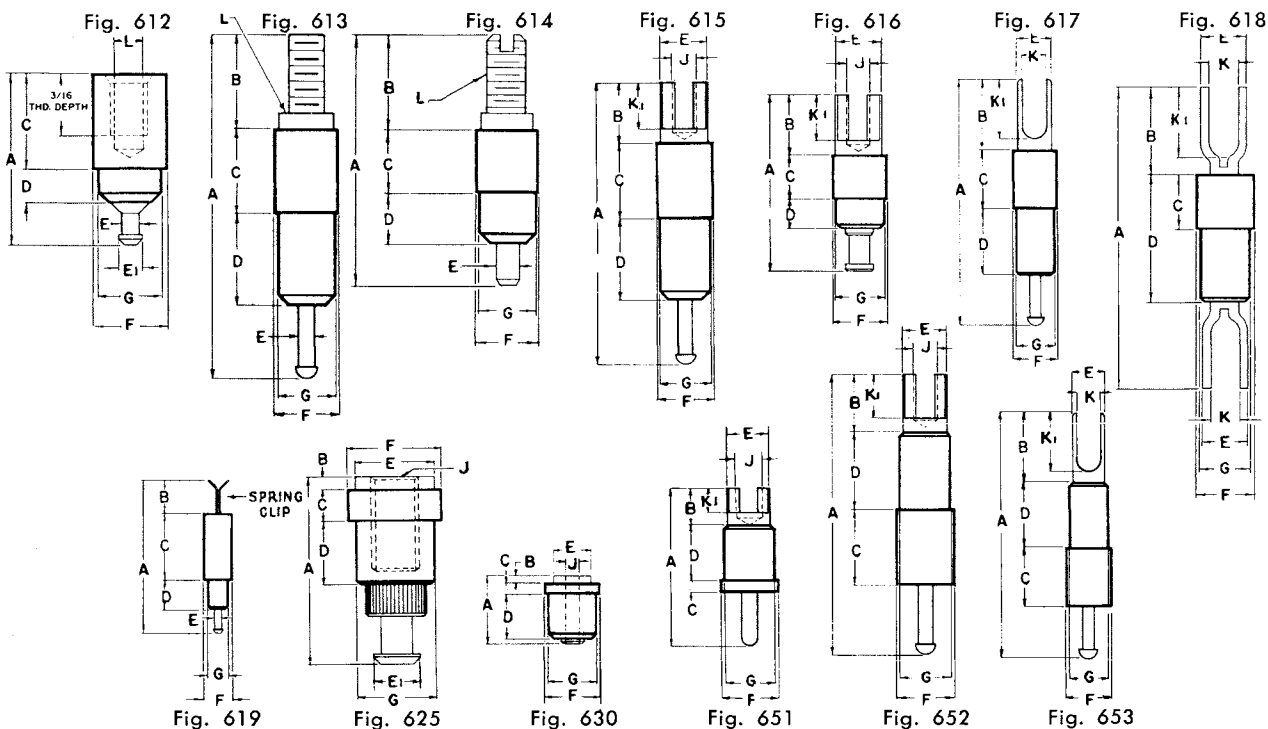
\*\* Gold Flash over Silver

# .156 Hex Brass Base.

† 0-80 Thread.

## 10/32 Thread

\* Solder dip on tail only.



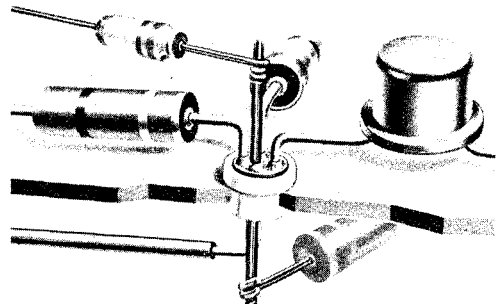
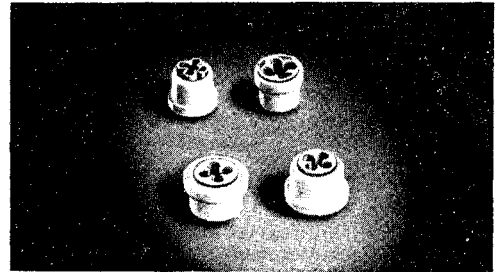
## FEED-THRUS

# CLOVERLEAF TEFLON RECEPTACLES

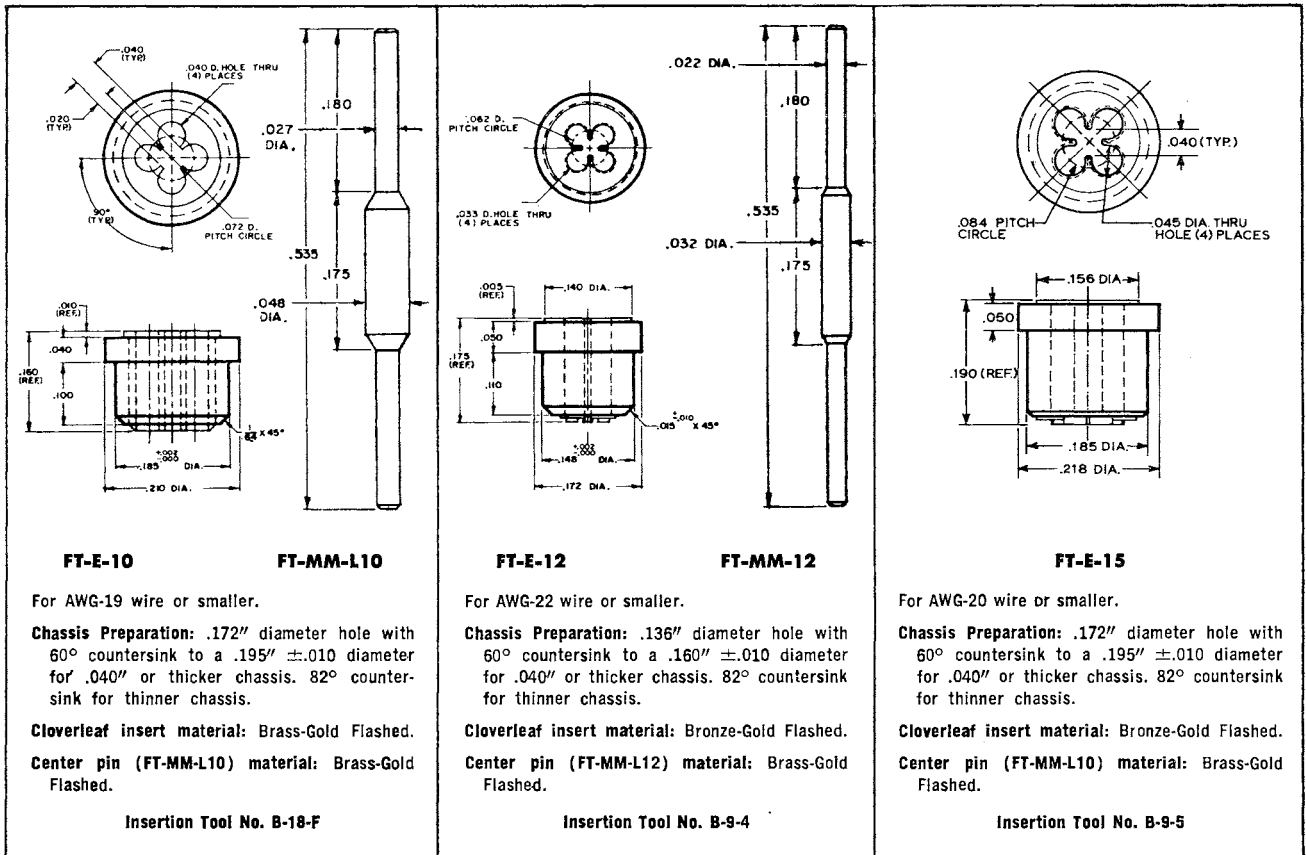
The "Press-Fit" Cloverleaf Receptacle provides economical, yet uniformly perfect solder joints by means of dip-soldering with metal chassis. The unique Cloverleaf configuration permits insertion of four, or more wire leads, plus an optional center pin post for mounting additional components after the dip-soldering operation. The Cloverleaf design provides an encompassing hold on the leads, and excellent capillary flow of solder. The Cloverleaf receptacle is a Sealectro "Press-Fit" design. Virgin Teflon insulation, precisely machined to "Press-Fit" into the chassis provides fast, positive installation.

The reliability of dip solder joints made with the Cloverleaf receptacle, combined with the inherent dependability and repairability of metal chassis construction makes it ideal for use in high density, complex electronic instrumentation packaging, while the low cost of the terminal and its installation provides a new and better assembly technique for premium quality radio and television manufacturing.

- Best of both—dip soldering economies and uniformity with metal chassis reliability and repairability.
- Fast, positive "Press-Fit" installation. Terminal may be oriented by insertion tool.
- Optional center pin for additional component mounting.
- Cloverleaf design provides holding position of leads during soldering operations.
- Shaped and plated for maximum capillary flow of solder. No pre-cleaning required.



Optional center pin provides top and bottom extra component mounting. Extremely useful in high-density packaging, or for after-mounting of delicate components.



**Sealectro PRESS-FIT® TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS**

# FEED-THRUS FOR WELDED CONNECTIONS

FIG.	Part No.	TOOL No.	CAPACITANCE mmf	V.RMS NOMINAL RATING	60 CPS FLASHOVER SEA LEVEL	A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E	E <sub>1</sub>	F	F <sub>1</sub>	J	J <sub>1</sub>	K	K <sub>1</sub>
660	FT-SM-705-L2	B10-5	.80	750	2500	.463	.100			.035	.155	.060	.149	.187	.172	.068	.100	.018	.125
660	FT-SM-705-L4	B10-6	.80	750	2500	.581	.218			.035	.155	.060	.149	.187	.172	.068	.100	.018	.125
307	FT-MM-47-TUR-BC*	B0-A	1.10	500	2000	1.500	.210	.020	1.00	.040	.125	.032	.060	.093	.075				.080
307	FT-MM-48-TUR-BC*	B0-S	0.70	500	2000	1.700	.210	.020	1.00	.090	.125	.032	.060	.093	.075				.080

Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis  
 \*Beryllium copper gold plate over copper flash.

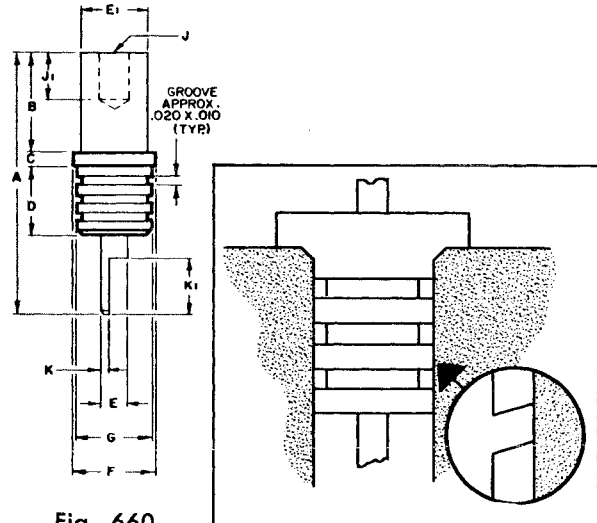


Fig. 660

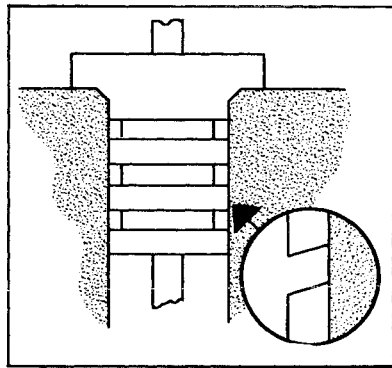


Fig. 307

"Press-Fit" installation for deep holes. As the terminal is pressfitted into the hole, the lands and grooves of the body are deflected upward, thus providing a high degree of pull-out strength as illustrated in the accompanying sketch.

Typical deep hole terminal Type FT-SM-705-L2 is a feedthru featuring a weld terminal at bottom. In this particular case, the wire is welded to the bottom terminal and drawn through the hole before terminal is pressfitted into place.

# BUSHINGS

FIG.	PART No.	A	D	D <sub>1</sub>	F	G	G <sub>1</sub>	J
1001	B-1440	.140	.100		.125	.093		.040
1001	B-1440-1	.140	.100		.125	.093		.035
1001	B-1441	.100	.060		.125	.093		.037
1001	B-1464	.100	.080		.125	.093		.038
1001	B-1414	.140	.100		.172	.148		.060
1001	B-1435	.140	.100		.172	.148		.040
1001	B-1439	.160	.120		.172	.148		.073
1001	B-1452	.125	.075		.172	.148		
1001	B-1455	.165	.125		.172	.148		.083
1001	B-1475	.140	.100		.172	.148		.073
1001	B-1446	.330	.250		.218	.185		
1001	B-1447	.225	.185		.218	.185		.120
1001	B-1447-1	.130	.090		.218	.185		.120
1001	B-1451	.327	.140		.218	.185		
1001	B-1473	.450	.400		.218	.185		.150
1001	B-1443	.140	.075		.250	.218		
1001	B-1454	.240	.200		.250	.218		
1002	B-1409	.080	.060		.172	.148		.030
1002	B-1447-2	.130	.090		.218	.185		.120
1003	B-1453	.082	.042	.017	.145	.103	.115	.067
1003	B-1449	.070	.040	.020	.187	.123	.143	.052
1003	B-1403	.104	.069	.040	.218	.154	.164	.120
1003	B-1401	.104	.054	.025	.218	.154	.164	.085
1003	B-1406	.094	.044	.015	.218	.154	.164	.099
1003	B-1407	.104	.069	.040	.218	.154	.164	.085
1003	B-1408	.094	.044	.015	.218	.154	.164	.085
1003	B-1413	.094	.044	.015	.218	.154	.164	.120
1003	B-1416	.104	.069	.040	.218	.154	.164	.099
1003	B-1418	.085	.035	.015	.195	.154	.164	.085
1003	B-1419	.134	.099	.070	.218	.154	.164	.120
1003	B-1420	.104	.054	.025	.218	.154	.164	.099
1003	B-1421	.104	.069	.040	.218	.154	.164	.120
1003	B-1424	.094	.044	.025	.195	.154	.164	.085
1003	B-1432	.104	.054	.025	.218	.154	.164	.120
1003	B-1437	.125	.075	.060	.218	.154	.164	.120
1003	B-1463	.104	.054	.035	.218	.154	.164	.099
1003	B-1466	.140	.105	.075	.218	.154	.164	.120
1003	B-1472	.135	.085	.060	.218	.154	.164	.085
1003	B-1462	.156	.106	.076	.218	.168	.178	.089
1003	B-1431	.104	.069	.040	.248	.184	.194	.150
1003	B-1467	.104	.054	.035	.250	.190	.200	.157
1003	B-1436	.104	.069	.040	.260	.199	.210	.128
1003	B-1450	.190	.140	.120	.230	.199	.210	.128
1003	B-1459	.104	.069	.040	.268	.204	.214	.170
1003	B-1459-1	.104	.069	.040	.268	.204	.214	.125
1004	#B-1470	.260	.140	.070	.500	.431	.450	.302

# Can be used as Transistor Holder for TO-5 Header.

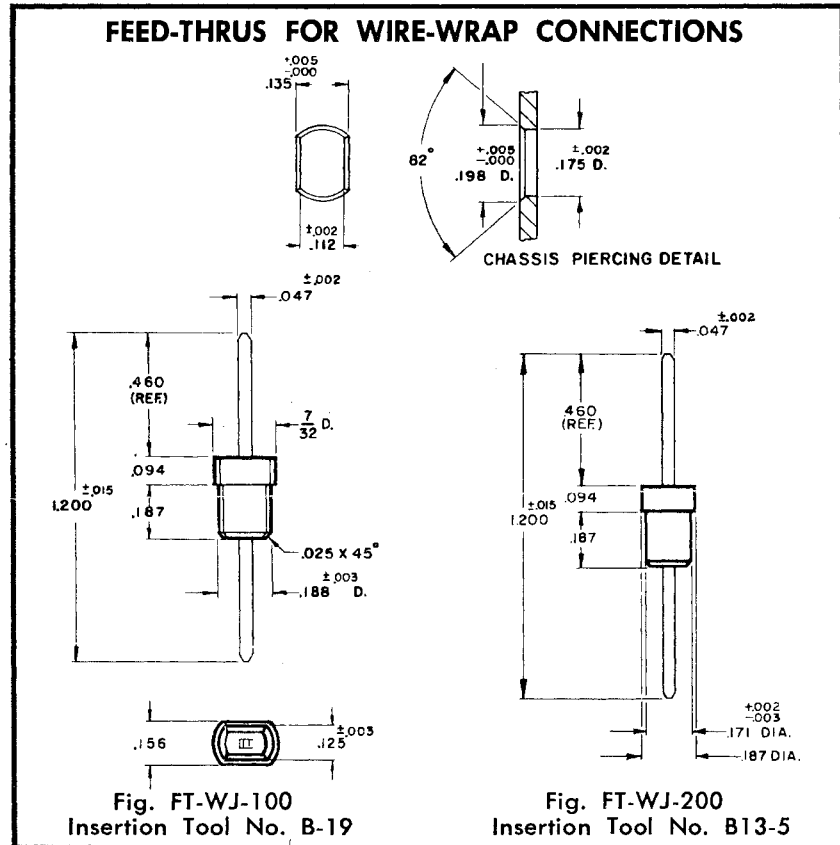
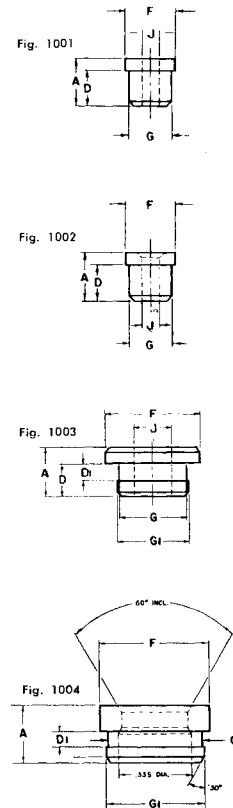


Fig. FT-WJ-100  
Insertion Tool No. B-19

Fig. FT-WJ-200  
Insertion Tool No. B13-5

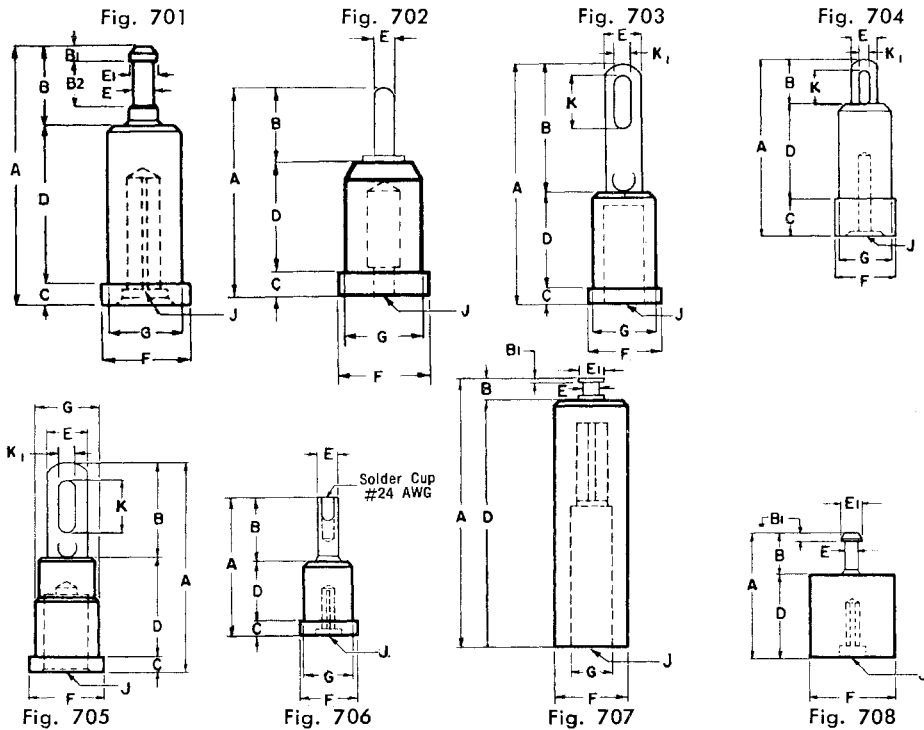


# TEST POINT JACKS

FIG.	PART No.	TOOL No.	CAPACITANCE mmf	V,RMS		REF. A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E DIA.	E <sub>1</sub> DIA.	F DIA.	+0.002 -0.000 G DIA.	J* PROBE DIA.	J <sub>1</sub> PROBE LENGTH	K	K <sub>1</sub>
				NOMINAL RATING	60 CPS FLASHOVER SEA LEVEL														
701	SKT-13C3	S13-1	0.45	500	2000	.203	.060	.010	.040	.030	.113	.046	.080	.150	.120	.040	.078		
701	SKT-22	S4	0.20	1500	4000	.449	.120	.030	.060	.046	.283	.040	.060	.142	.120	.040	.245		
701	SKT-22C2	S22	0.30	1500	4000	.410	.120	.030	.060	.046	.244	.040	.060	.142	.120	.040	.205		
701	SKT-13B2	S14	0.30	750	2500	.253	.060	.010	.040	.050	.143	.046	.080	.172	.140	.040	.125		
701	SKT-14B2	S14	0.30	1000	3000	.345	.120	.023	.077	.046	.179	.040	.060	.172	.140	.040	.140		
701	SKT-13B4	S13	0.40	750	2500	.203	.060	.010	.040	.046	.097	.046	.080	.172	.148	.040	.078		
701	SKT-13L2	S13	0.40	750	2500	.190	.050	.010	.030	.046	.094	.046	.080	.172	.148	.040	.078		
701	SKT-14	S5	0.35	1000	3000	.345	.120	.023	.077	.046	.179	.040	.060	.172	.148	.040	.140		
701	SKT-12	S7	0.70	1000	3000	.375	.060	.010	.040	.046	.269	.046	.078	.218	.170	.090	.250		
701	SKT-2BC	S2	0.70	1000	3000	.437	.120	.037	.053	.046	.271	.054	.074	.218	.185*	.080	.195		
701	SKT-5BC	S2	0.60	1000	3000	.437	.120	.037	.053	.046	.271	.054	.074	.218	.185*	.080	.195		
701	SKT-5BC-C2	S35	0.45	1000	3000	.453	.120	.037	.053	.046	.287	.054	.074	.218	.185*	.050	.195		
701	SKT-10	S1	0.70	1200	3500	.640	.187	.037	.104	.050	.400	.054	.074	.218	.185*	.080	.287		
701	SKT-37C1	S12	0.55	1000	3000	.340	.120	.023	.077	.046	.174	.054	.074	.218	.185*	.090	.140		
701	SKT-41	S2	0.55	1200	3500	.467	.120	.035	.047	.046	.301	.054	.074	.218	.185*	.080	.225		
701	SKT-42	S23-1	0.40	2000	5000	.455	.105	.020	.065	.050	.300	.080	.125	.218	.185*	.080	.315		
701	SKT-27	S11	0.80	3200	7500	.761	.187	.035	.116	.187	.386	.054	.074	.218	.200	.093	.455		
701	SKT-27L1	S12	0.70	2000	5000	.699	.187	.035	.116	.125	.386	.054	.074	.218	.200	.093	.390		
701	SKT-0930	S37	0.70	3200	7500	.834	.187	.035	.116	.230	.417	.054	.074	.375	.200	.093	.518		
701	SKT-3BC	S2	0.60	1000	3000	.437	.120	.037	.053	.046	.271	.054	.074	.250	.204	.080	.195		
701	SKT-19	S9	0.60	1200	3500	.400	.060	.010	.037	.046	.294	.066	.098	.250	.218	.105	.250		
702	SKT-35	B8-14	0.25	1200	3500	.400	.150			.046	.204	.040		.172	.148	.032	.200		
703	SKT-1	S31	0.55	1200	3500	.687	.354			.046	.287	.115		.218	.185*	.050	.250	.140	.042
703	SKT-4	S30	0.40	1200	3500	.687	.354			.046	.287	.104		.218	.185*	.041	.250	.140	.050
703	SKT-8	S1	0.50	1200	3500	.687	.330			.046	.287	.103		.218	.185*	.080	.250	.156	.046
703	SKT-8B2	S1	0.55	2000	5000	.711	.354			.070	.287	.103		.218	.185*	.080	.274	.156	.048
703	SKT-18	S25	0.50	1500	4000	.687	.354			.052	.281	.115		.218	.185*	.050	.250	.140	.042
703	SKT-20	S27	0.80	1000	3000	.687	.330			.187	.146	.103		.218	.185*	.080	.187	.156	.046
703	SKT-20L1	S25	0.75	1000	3000	.687	.330			.187	.146	.110		.218	.185*	.050	.250	.156	
703	SKT-23	S28	0.65	1000	3000	.625	.355			.046	.224	.115		.218	.185*	.050	.200	.140	.042
703	SKT-26	S26	0.60	1000	3000	.718	.316			.046	.356	.104		.218	.185*	.060	.315	.125	.052
704	SKT-15	S32	0.60	3500	8000	.732	.188			.157	.387	.110		.250	.220	.050	.320	.140	.042
705	SKT-36	S28	0.80	1000	3000	.620	.287			.046	.287	.115		.218	.185*	.050	.250	.156	.052
706	SKT-31	S17	0.45	1000	3000	.408	.187			.046	.175	.060		.172	.148	.040	.135		
707	SKT-38					1.000	.060	.010			.940	.046	.078	.218	.125#	.090	.825		
707	SKT-38C1					1.000	.060	.010			.940	.046	.078	.187	.125#	.090	.825		
707	SKT-13					.203	.060	.010			.143	.046	.080	.140		.040	.075		
707	SKT-13C1					.203	.060	.010			.143	.046	.080	.120		.040	.075		
707	SKT-13L1					.203	.060	.010			.143	.046	.080	.140		.025	.075		
708	SKT-39					.370	.120	.023			.250	.040	.060	.250		.040	.165		
708	SKT-39C1					.370	.120	.023			.250	.040	.060	.270		.040	.140		
708	SKT-43B1					.460	.120	.037			.340	.054	.074	.400		.070	.250		

Terminal Lug: Beryllium Copper — Gold Flash over Silver Plate.  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.

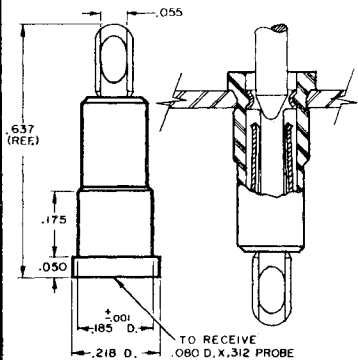
\*±.001  
 #±.005



## SKT-0804—GUIDED ENTRY TEST POINT JACK FOR INCREASED CHASSIS PULL-OUT STRENGTH

Featuring a beryllium-copper formed lug with unique design configuration, the SKT-0804 test point jack offers greater pull-out strength and high torque resistance. The jack is designed to provide guided-entry for an .080" diameter probe. The SKT-0804 construction permits uniform retention and greater support of the Teflon bushing by the lug.

Insertion Tool No. S-38



# TEST POINT JACKS

FIG.	Part No.	Tool No.	Capacitance mmf	V <sub>RMS</sub> Nominal Rating	60 CPS Flashover Sea Level	Ref. A	B	B <sub>1</sub>	B <sub>2</sub>	G	D	E Dia.	E <sub>1</sub> Dia.	F Dia.	+0.002 -0.000 G Dia.	J* Probe Dia.	J <sub>1</sub> Probe Lgth
709	SKT-50	S23	0.50	2700	5500	.435	.105	.020	.065	.046	.284	.080	.125	.218	.184	.080	.310
710	SKT-34	B8-14	0.25	1700	4500	.425	.175	.020	.060	.046	.250	.040	.080	.172	.184	.032	.200
710	SKT-24	S18	0.65	1000	3000	.437	.154	.020	.046	.046	.391	.050	.080	.250	.204	.080	.145
711	SKT-100	S8	0.60	2200	5500	.912	.534	.125	.060	.378	.050	.080	.250	.218	.080	.080	.250
712	SKT-28	S20	0.70	1000	3000	.450	.180	.120	.046	.224	.110	.080	.218	.185*	.080		
713	SKT-401	S17	0.50	1000	3000	.359	.140		.065	.154			.172	.148	.040	.125	
713	SKT-400	S17	0.50	1000	3000	.359	.140		.065	.154			.187	.148	.040	.125	
713	SKT-820	S33	0.60	1200	3500	.437	.156		.065	.216			.218	.171	.062	.187	
713	SKT-800	S18	0.60	1200	3500	.437	.156		.065	.216			.250	.185*	.080	.187	
714	SKT-113PC					.381	.090		.281		.062		.187	.080	.080	.250	
714	SKT-110PC					.441	.078		.343		.112		.218	.080	.080	.250	
714	SKT-111PC					.381	.080		.281		.112		.218	.080	.080	.250	
730	SKT-16L2	S15	0.80	1200	3500	.640		.140	.050	.400	.031		.218	.185*	.050	.200	
731	SKT-100PC	S8	0.55	2200	5500	.500	.250	.130	.062	.316	.050	.080	.250	.218	.080	.250	
731	SKT-101PC	S8	0.45	2200	5500	.400	.250	.130	.062	.316	.050	.080	.250	.218	.080	.250	
732	SKT-102PC		0.45	1200	3500	.500	.140	.125		.378	.050	.080	.218	.187†	.080	.250	
732	SKT-102PC-B2		0.40	1500	4000	.520	.140	.130		.398	.040	.080	.218	.187†	.080	.250	
732	SKT-103PC		0.50	1200	3500	.400	.140	.125		.378	.050	.080	.218	.187†	.080	.250	
732	SKT-103PC-L1		0.50	1200	3500	.400	.140	.187		.378	.035	.080	.218	.187†	.080	.250	
732	SKT-0802		0.50	2700	6500	.500	.140	.125		.689	.050	.080	.218	.187†	.080	.500	
733	SKT-105PC					.385	.233	.125		.062	.050	.080	.218	.185*	.080	.250	

Terminal Lug: Beryllium Copper, Gold Flash over Silver.  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.  
 \*±.001 † Tolerance ±.005

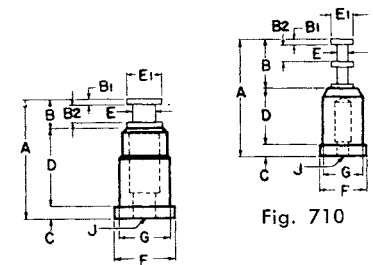


Fig. 710

Fig. 709

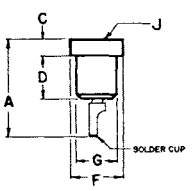


Fig. 713

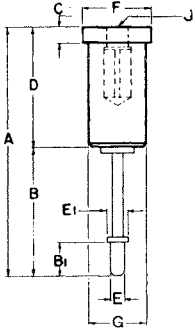


Fig. 711

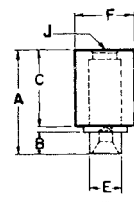


Fig. 714

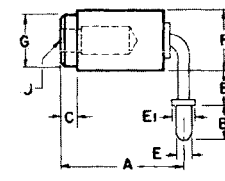


Fig. 733

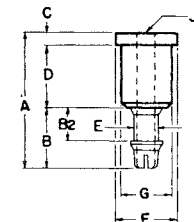


Fig. 712

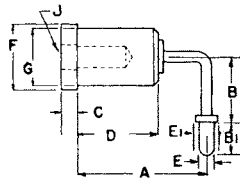


Fig. 731

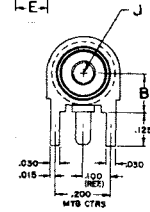


Fig. 732

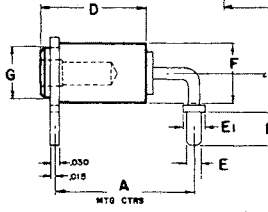


Fig. 730

# TAPER PIN RECEPTACLES AND SPECIAL UNITS

Fig.	Part No.	Tool No.	Capacitance mmf	V <sub>RMS</sub> Nominal Rating	60 CPS Flashover Sea Level	A	B	B <sub>1</sub>	B <sub>2</sub>	C	D	E Dia.	E <sub>1</sub> Dia.	F Dia.	+0.002 -0.000 G
751	TP-ST-201	B22	0.70	1000	3000	.350	.133	.020	.093	.080	.140	.093	.149	.250	.200
752	TP-ST-203	B8-13	0.90	1500	4000	.383	.133	.020	.093	.050	.200	.093	.125	.172	.133
753	TP-ST-202	B22	0.65	1000	3000	.453	.293	.025	.093	.060	.100	.093	.149	.250	.200
753	TP-ST-202-B2	B23	0.75	1500	4000	.513	.293	.025	.093	.080	.140	.093	.149	.250	.200
754	TP-FT-200	S22	1.10	1000	3000	.593	.210	.020	.180	.040	.143	.093	.125	.250	.200
755	TP-FT-201	B22	0.70	1000	3000	.500	.133	.020	.093	.080	.140	.093	.149	.250	.200
756	TP-FT-100	B6A-1	1.10	1000	3000	1.798	.133	.020	.093		.171	.080	.093		.150
757	RFT-340**	B22	0.90	1500	4000	.650	.182			.040	.138	.093	.125	.250	.200
758	PL-20**	B23-B	1.40	1000	3000	.940	.140	.020		.050	.450	.050	.078	.250	.218

Terminal Lug: Brass, Solder Finish (40 to 70% Tin Content) Electro-Plate .0003" Minimum Thick.  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.  
 \*\*Gold Flash over Silver Plate.

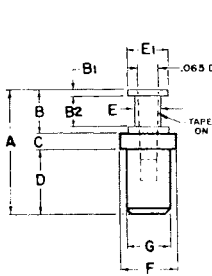


Fig. 752

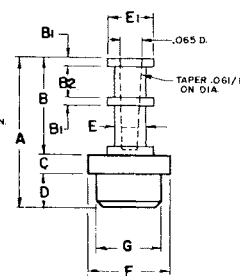


Fig. 753

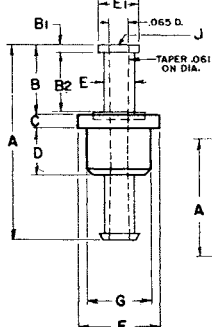


Fig. 754

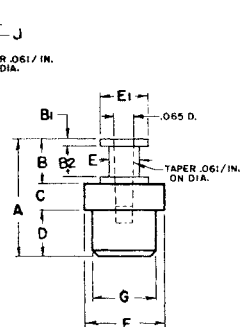


Fig. 751

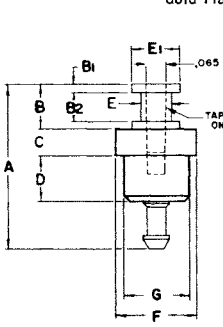


Fig. 755

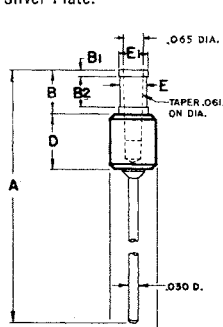


Fig. 756

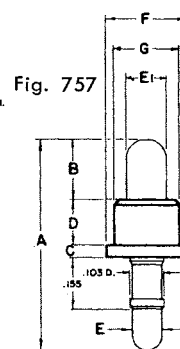


Fig. 757

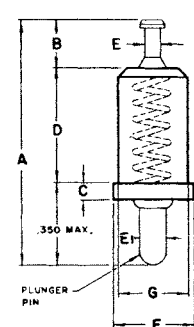


Fig. 758

**Sealectro PRESS-FIT® TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS**



# PROBES AND PLUGS

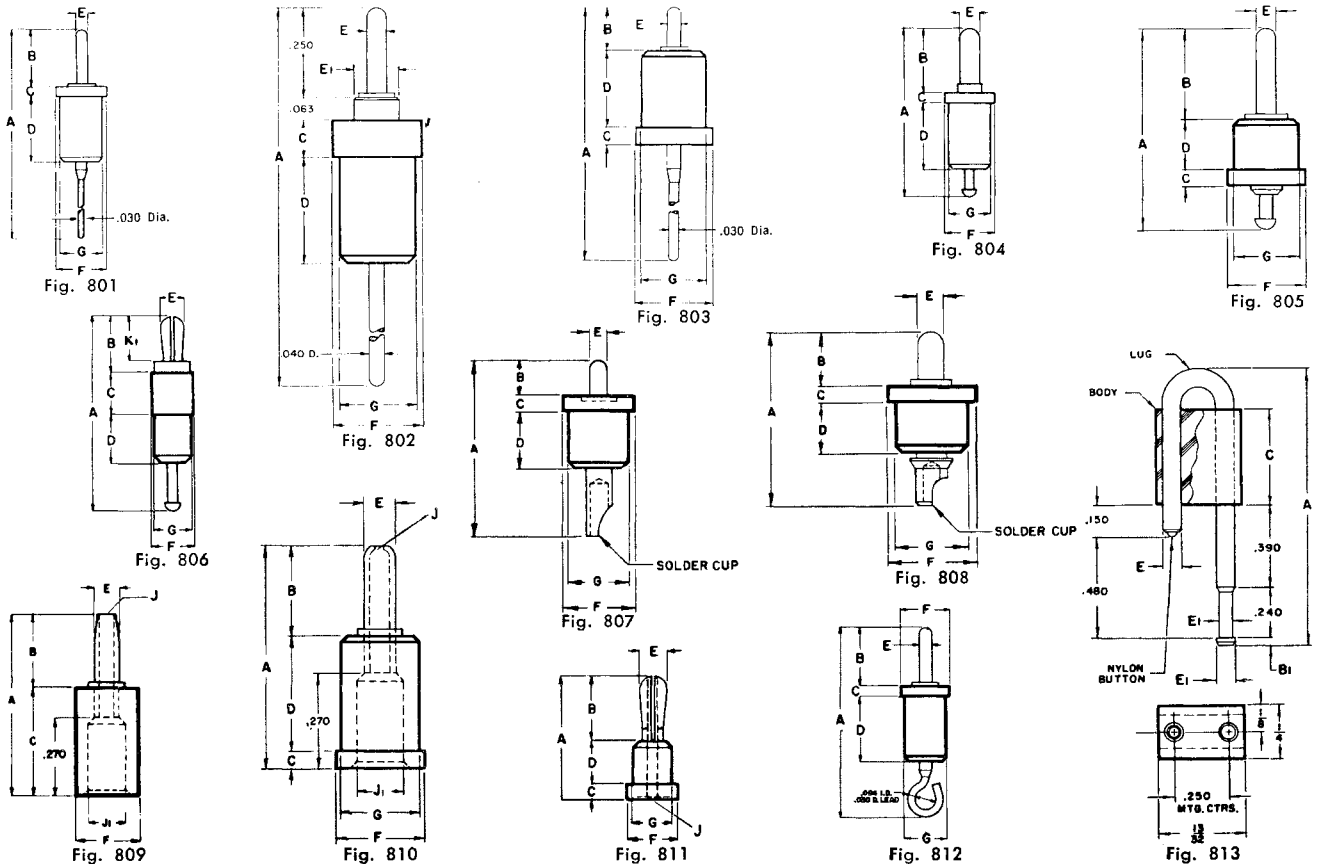
FIG.	PART No.	TOOL No.	CAPACITANCE mmf	V.RMS		A	B	B <sub>1</sub>	C	D	±.001 E DIA.	E <sub>1</sub> DIA.	F DIA.	+.002 — .000 G DIA.	J DIA.	J <sub>1</sub> DIA.	K <sub>1</sub>
				NOMINAL RATING	60 CPS FLASHOVER SEA LEVEL												
801	FT-M-9C1	B8-16	1.0	1000	3000	1.937	.250		.046	.165	.050		.172	.148			
801	FT-M-9	B18-1B	1.0	1000	3000	1.937	.250		.046	.141	.050		.218	.185*			
801	FT-M-2	B18-1B	1.10	1000	3000	2.083	.250		.046	.287	.050*		.218	.185*			
801	FT-M-2L2	B18-1B	0.70	1000	3000	.906	.250		.046	.287	.050		.218	.185*			
801	FT-M-2L4	B18-1B	0.85	1000	3000	1.531	.250		.046	.287	.050*		.218	.185*			
801	FT-M-19	B18-1B	1.0	1000	3000	1.870	.120		.046	.250	.040		.218	.185*			
802	PR-15	B-23	0.90	3000	7000	1.531			.157	.375	.050*	.125	.250	.220			
803	RFT-M-14	B-18-1C	0.90	1700	4500	1.940	.120		.046	.320	.040*		.218	.185*			
804	FT-M-4#	B18-1B	0.80	1000	3000	.739	.281		.046	.287	.081*		.218	.185*			
804	FT-M-12	B-10	0.65	1000	3000	.687	.272		.040	.212	.040		.187	.171			
804	FT-M-7	B18-1B	0.80	1000	3000	.739	.281		.046	.287	.081*		.218	.185*			
804	FT-M-8	B18-1B	0.90	1000	3000	.562	.250		.046	.141	.050*		.218	.185*			
804	FT-M-8-L1	B18-E	0.90	1000	3000	.562	.250		.046	.141	.081		.218	.185*			
804	FT-M-11	B18-1B	0.90	1000	3000	.562	.250		.052	.135	.050*		.218	.185			
804	FT-M-14	B18-E	0.80	1000	3000	.906	.250		.046	.287	.050		.218	.185			
804	FT-M-16	B18-1B	0.80	1000	3000	.648	.190		.046	.287	.090*		.218	.185*			
804	FT-M-17	B18-1B	0.80	1000	3000	.612	.250		.046	.141	.062*		.218	.185*			
805	RFT-M-11	B18-E	0.80	1000	3000	.562	.250		.052	.135	.050*		.218	.185*			
806	FT-M-6###	B13-2	0.85	2000	5000	.867	.250		.187	.212	.100**		.187	.171			.203
807	PR-10	B8-14	0.70	1000	3000	.538	.130		.046	.175	.040		.172	.148			
807	PR-10-B-L2	B-9-3	0.70	1500	4000	.571	.125		.125	.160	.040		.172	.148			
807	PR-13	B-8	0.65	1000	3000	.416	.080		.040	.135	.040		.172	.148			
807	PR-13C1	B-8	0.65	1000	3000	.416	.080		.040	.135	.040		.172	.148			
808	PR-400	B13-3	0.55	1000	3000	.407	.125		.065	.090	.040		.187	.148			
808	PR-620	B18-1	0.55	1200	3500	.559	.187		.065	.176	.062		.218	.171			
808	PR-800	B23-A	0.70	1200	3500	.559	.187		.065	.169	.080		.250	.185*			
809	PR-300					.645	.270		.375		.080		.218		.062	.128	
809	PR-0900					.645	.270		.375		.090		.218		.062	.128	
810	PR-302	B22-X1				.645	.270		.050	.325	.080		.250	.218	.062	.128	
811	PR-100**	B6-X	0.75	750	2500	.365	.194		.046	.125	.077**		.150	.120	.030		
812	FT-M-5	B18-1B	0.70	1000	3000	.833	.250		.046	.287	.050		.218	.185			
812	FT-M-9L2	B18-1B	0.65	1000	3000	.682	.250		.046	.141	.050		.218	.185			
813	PR-28***					1.300		.030	.453		.080	.060					

Terminal Lug: Gold Flash over Silver Plate.  
 Capacitance and voltage measured with terminals installed in .050" thick aluminum chassis.  
 # No ball on end of Lug.  
 ## Silver Plate .0003" Min. Thick.

\*\*Beryllium Copper — E Dimension +.003 — .002

\*\*\*Gold over Copper.

\*±.001



SECTION 2100  
**TRANSISTOR UNITS SOCKETS**

# NEW--"T" SERIES DESIGN

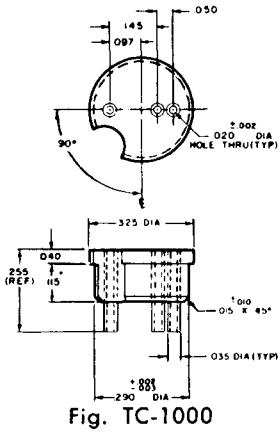


Fig. TC-1000

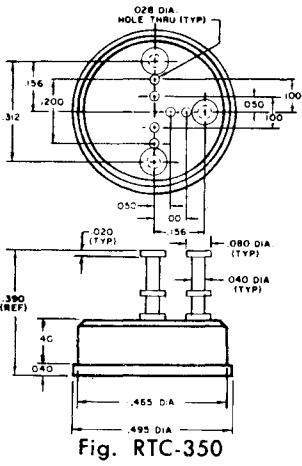


Fig. RTC-350

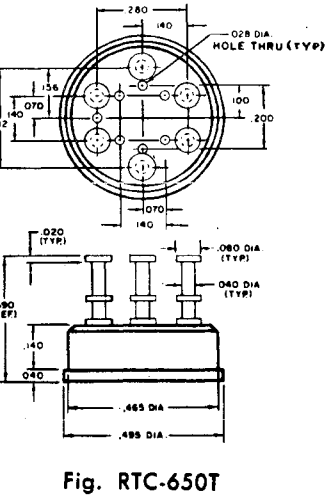


Fig. RTC-650T

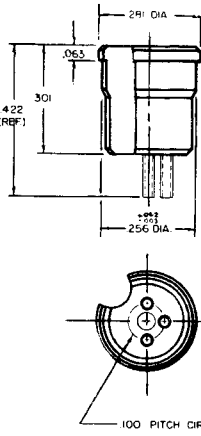


Fig. TS-305-1

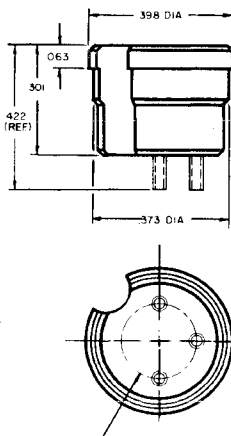


Fig. TS-306

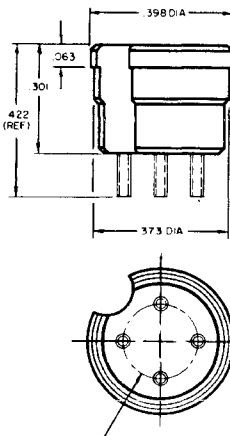


Fig. TS-401

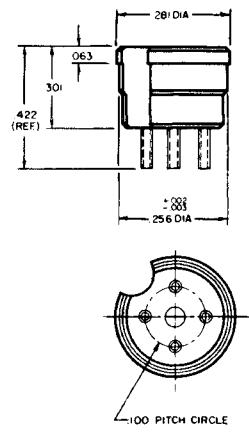


Fig. TS-401-1

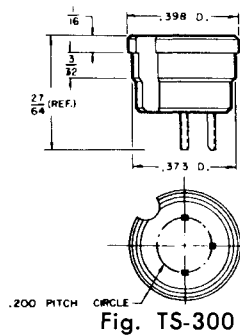


Fig. TS-300

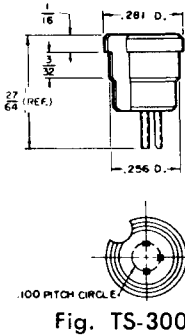


Fig. TS-300-1

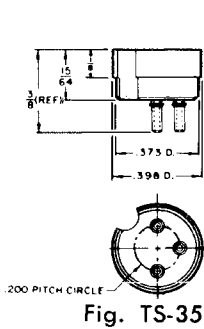


Fig. TS-350

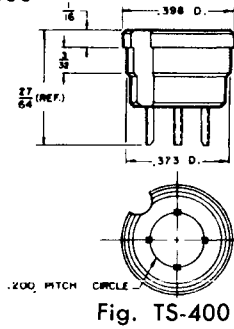


Fig. TS-400

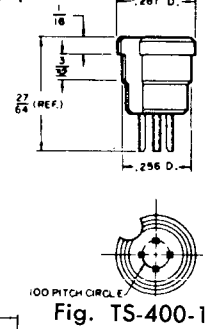


Fig. TS-400-1

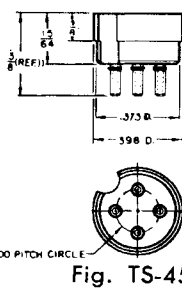


Fig. TS-450

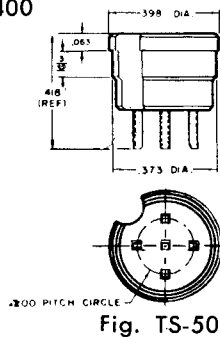


Fig. TS-500

**Sealctro PRESS-FIT®** TEFLON TERMINALS — AVAILABLE IN TEN EIA COLORS

TRANSISTOR UNITS HOLDERS

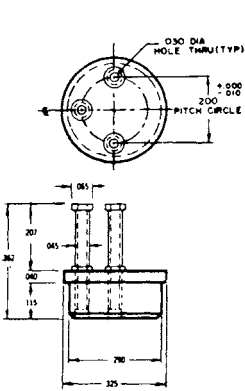


Fig. TC-300T

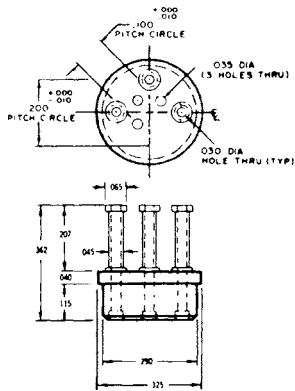


Fig. TC-303T

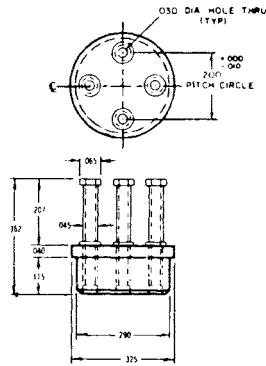


Fig. TC-400T

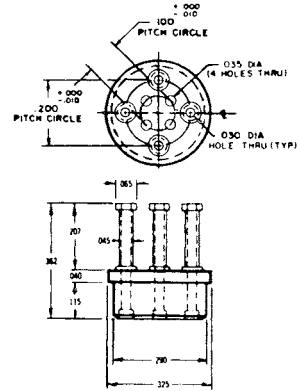


Fig. TC-404T

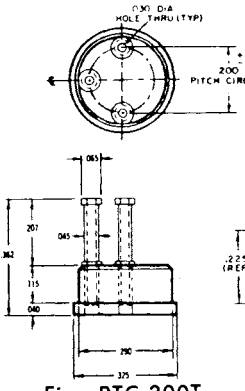


Fig. RTC-300T

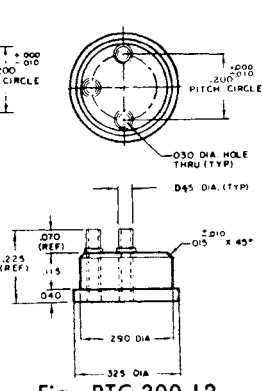


Fig. RTC-300-L2

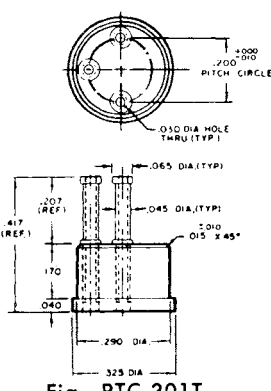


Fig. RTC-301T

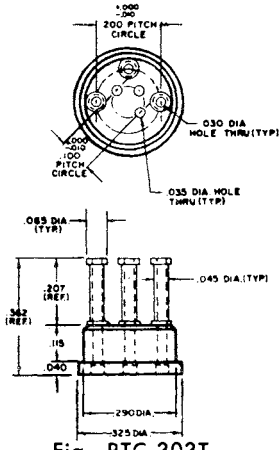


Fig. RTC-303T

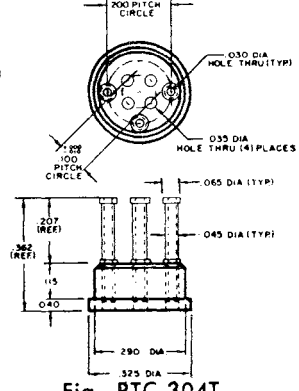


Fig. RTC-304T

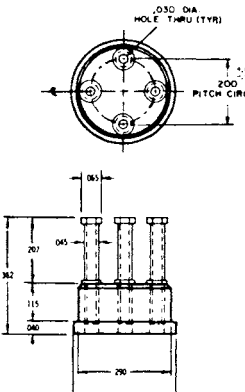


Fig. RTC-400T

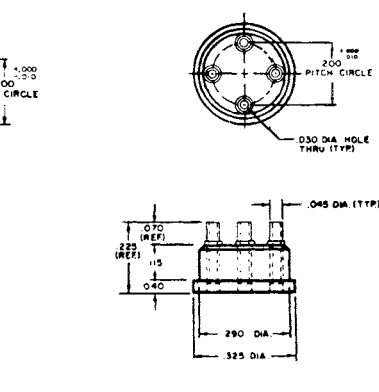


Fig. RTC-400-L2

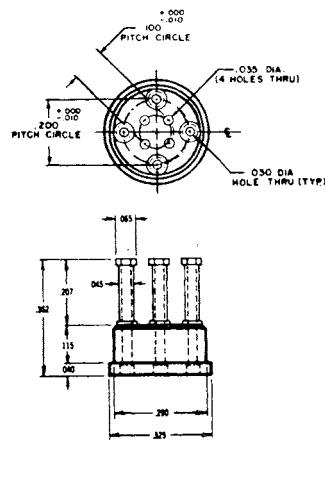


Fig. RTC-404T

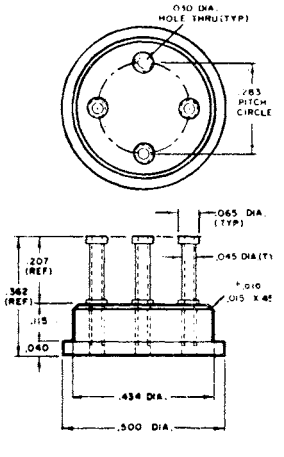


Fig. RTC-460T



SUB-MINIATURE  
R. F. CONNECTORS

\*Designed for use with 50 ohm sub-miniature cables such as the RG-188/U or RG-174/U.

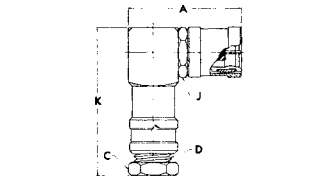
50 OHM

75 OHM

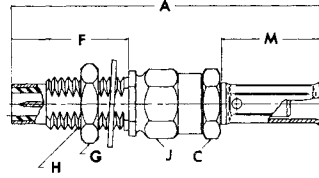
†Designed for use with many of the 75 ohm sub-miniature cables and 95 ohm sub-miniature cables.

50 OHM

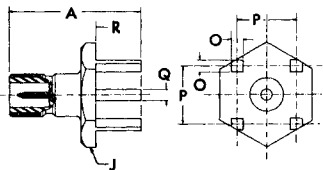
75 OHM



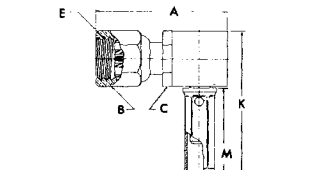
	3105*	3135†
A	19/32	11/16
C	15/64 HEX	5/16 HEX
D	#10-32, UNF-2A	#9/32-40, UNS-2A
J	15/64 HEX	11/32 HEX
K	3/4 approx.	27/32 approx.



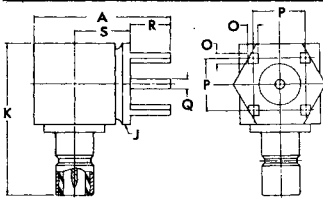
	6003*	6033†
A	1-1/8 approx.	1-5/32 approx.
C	7/32 HEX	5/16 HEX
F	.425	.425
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 approx.	11/32 HEX
M	.375	.400



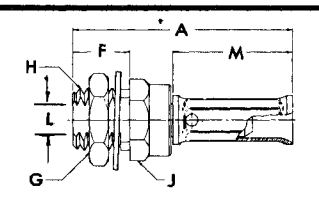
	3107	3137
A	.448	.448
J	5/16 HEX	3/8 HEX
O	.040 (Typ.)	.040 (Typ.)
P	.200	.200
Q	.038D	.038D
R	.155	.155



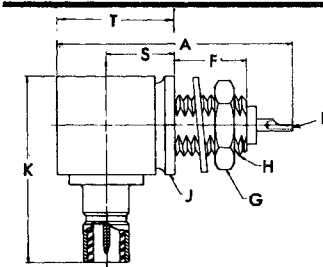
	6005*	6035†
A	39/64 approx.	21/32 approx.
B	15/64 HEX	11/32 HEX
C	15/64 HEX	11/32 HEX
E	#10-32, UNF-2B	#5/16-32, UNEF-2B
K	5/8 approx.	23/32 approx.
M	.375	.400



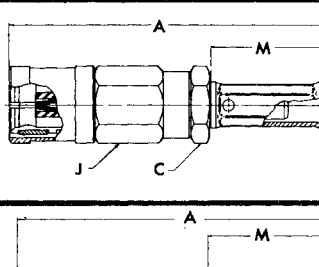
	3108	3138
A	17/32 approx.	19/32 approx.
J	5/16 HEX	3/8 HEX
K	19/32	21/32
O	.040 (Typ.)	.040 (Typ.)
P	.200	.200
Q	.038D	.038D
R	.155	.155
S	.215	.247



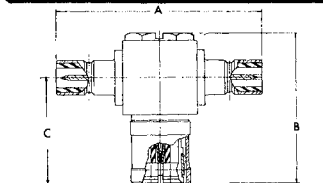
	6006*	6036†
A	47/64 approx.	51/64 approx.
F	.228	.228
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 HEX	11/32 HEX
L	.067D	.111D
M	.375	.400



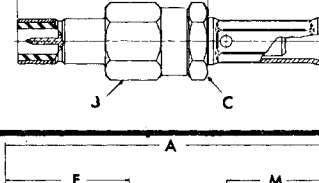
	3109	3139
A	3/4 approx.	13/16 approx.
F	.228	.228
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	5/16 HEX	3/8 HEX
K	19/32	21/32
N	.038 O.D. x .025 I.D. x .078 Deep	.038 O.D. x .025 I.D. x .078 Deep
S	.215	.247
T	.372	.435



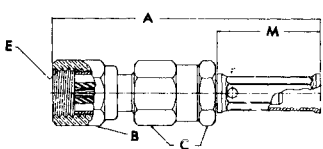
	6100*	6130†
A	1-1/64 approx.	1-3/64 approx.
C	7/32 HEX	5/16 HEX
J	7/32 HEX	11/32 HEX
M	.375	.400



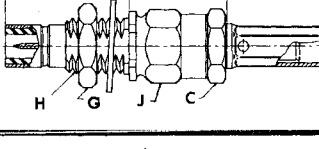
	3114	3144
A	.860	.923
B	41/64	45/64
C	.456	.488



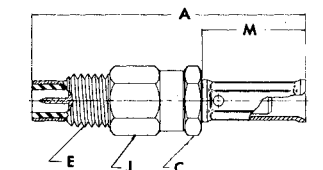
	6101*	6131†
A	63/64 approx.	1-1/64 approx.
C	7/32 HEX	5/16 HEX
J	7/32 HEX	5/16 HEX
M	.375	.400



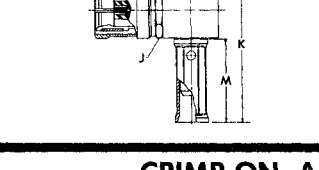
	6000*	6030†
A	1-1/32 approx.	1-1/16 approx.
B	15/64 HEX	11/32 HEX
C	7/32 HEX	5/16 HEX
E	#10-32, UNF-2B	#5/16-32, UNEF-2B
M	.375	.400



	6103*	6133†
A	1-1/8 approx.	1-5/32 approx.
C	7/32 HEX	5/16 HEX
F	.425	.425
G	1/4 HEX	3/8 HEX
H	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 HEX	11/32 HEX
M	.375	.400



	6001*	6031†
A	63/64 approx.	1-1/64 approx.
C	7/32 HEX	5/16 HEX
E	#10-32, UNF-2A	#5/16-32, UNEF-2A
J	7/32 HEX	5/16 HEX
M	.375	.400



	6105*	6135†
A	19/32	41/64
J	15/64 HEX	11/32 HEX
K	5/8 approx.	23/32 approx.
M	.375	.400

CRIMP-ON ASSEMBLY TOOL — Part No. CT-6

TYPICAL SPEC CABLES FOR USE WITH "CONHEX" CONNECTORS

RG-161/U	3000, -1, -3, -5, -6 — 3100, -1, -3, -5	RG-187/U	3000SB, -1SB, -3SB, -5SB, -6SB 3100SB, -1SB, -3SB, -5SB, -6SB
RG-174/U	3000, -1, -3, -5, -6 — 3100, -1, -3, -5	RG-188/U	3000, -1, -3, -5, -6 — 3100, -1, -3, -5 6000, -1, -3, -5, -6 — 6100, -1, -3, -5
RG-179/U	3000, -1, -3, -5, -6 — 3100, -1, -3, -5	RG-195/U	3030, -31, -33, -35, -36 — 3130, -31, -33, -35 6030, -31, -33, -35, -36 — 6130, -31, -33, -35
RG-179A/U	3000, -1, -3, -5, -6 — 3100, -1, -3, -5		
RG-180/U	3030, -31, -33, -35, -36 — 3130, -31, -33, -35		



PLATING: 0.0001 Gold over 0.0001 Copper.

MATING CONNECTORS: All Screw-On (Snap-On) plugs will mate with all Screw-On (Snap-On) jacks & receptacles of the same resistance rating.

U. S. Pat. No. 2,937,360

# SUB-MINIATURE R. F. CONNECTORS

*Designed for use with 50 ohm sub-miniature cables such as the RG-188/U or RG-174/U.		50 OHM	75 OHM	†Designed for use with many of the 75 ohm sub-miniature cables and 95 ohm sub-miniature cables.		50 OHM	75 OHM
	<b>3000*</b>	<b>3030†</b>	A 7/8 approx.	13/16 approx.		<b>3008</b>	<b>3038</b>
	B 15/64 HEX	11/32 HEX	E #10-32, UNF-2A	#9/32-40 UNS-2A		A 17/32 approx.	19/32 approx.
	C 15/64 HEX	5/16 HEX	F #10-32, UNF-2B	#5/16-32, UNEF-2B		E #10-32, UNF-2A	#5/16-32, UNEF-2A
	D #10-32, UNF-2A	#9/32-40 UNS-2A	J 15/64 HEX	5/16 HEX		J 5/16 HEX	3/8 HEX
	E #10-32, UNF-2B	#5/16-32, UNEF-2B				K 19/32	21/32
	J 15/64 HEX	5/16 HEX				O .040 (Typ.)	.040 (Typ.)
	<b>3001*</b>	<b>3031†</b>	A 27/32 approx.	51/64 approx.		<b>3009</b>	<b>3039</b>
	C 15/64 HEX	5/16 HEX	E #10-32, UNF-2A	#5/16-32, UNEF-2A		A 3/4 approx.	13/16 approx.
	D #10-32, UNF-2A	#9/32-40, UNS-2A	J 15/64 HEX	5/16 HEX		E #10-32, UNF-2A	#5/16-32, UNEF-2A
	E #10-32, UNF-2A	#5/16-32, UNEF-2A				F .228	.228
	J 15/64 HEX	5/16 HEX				G 1/4 HEX	3/8 HEX
						H #10-32, UNF-2A	#5/16-32, UNEF-2A
	<b>6002</b>	<b>6032</b>	A 19/32	19/32		<b>3014</b>	<b>3044</b>
	F .426	.426	A 19/32	19/32		A .860	.923
	G 1/4 HEX	3/8 HEX	F .426	.426		B 21/32 approx.	23/32 approx.
	H #10-32, UNF-2A	#5/16-32, UNEF-2A	G 1/4 HEX	3/8 HEX		C 15/32 approx.	1/2 approx.
	J 1/4 HEX	3/8 HEX	H #10-32, UNF-2A	#5/16-32, UNEF-2A		D #10-32, UNF-2A	#5/16-32, UNEF-2A
	N .060 O.D. x .040 I.D. x .078 Deep	.060 O.D. x .040 I.D. x .078 Deep	J 1/4 HEX	3/8 HEX		E 15/64 HEX	11/32 HEX
	<b>3003 BA*</b>	<b>3033 BA†</b>	A 7/8 approx.	7/8 approx.		<b>3100*</b>	<b>3130†</b>
	C 15/64 HEX	5/16 HEX	A 7/8 approx.	7/8 approx.		A 7/8 approx.	27/32 approx.
	D #10-32, UNF-2A	#9/32-40, UNS-2A	C 15/64 HEX	5/16 HEX		C 15/64 HEX	5/16 HEX
	F .425	.425	D #10-32, UNF-2A	#9/32-40, UNS-2A		D #10-32, UNF-2A	#9/32-40, UNS-2A
	G 1/4 HEX	3/8 HEX	F .425	.425		E 15/64 HEX	11/32 HEX
	H #10-32, UNF-2A	#5/16-32, UNEF-2A	G 1/4 HEX	3/8 HEX		F #10-32, UNF-2B	#5/16-32, UNEF-2B
	<b>6004</b>	<b>6034</b>	A .671	.671		<b>3101*</b>	<b>3131†</b>
	B .397	.397	A .671	.671		A 7/8 approx.	51/64 approx.
	C #10-32, UNF-2A	#5/16-32, UNEF-2A	B .397	.397		C 15/64 HEX	5/16 HEX
	D 1/4 HEX	3/8 HEX	C #10-32, UNF-2A	#5/16-32, UNEF-2A		D #10-32, UNF-2A	#9/32-40, UNS-2A
	E 1/4 HEX	3/8 HEX	D 1/4 HEX	3/8 HEX		J 15/64 HEX	5/16 HEX
			E 1/4 HEX	3/8 HEX			
	<b>3005*</b>	<b>3035†</b>	A 39/64 approx.	23/32 approx.		<b>6102</b>	<b>6132</b>
	B 15/64 HEX	11/32 HEX	A 39/64 approx.	23/32 approx.		A 19/32	19/32
	C 15/64 HEX	5/16 HEX	B 15/64 HEX	11/32 HEX		F .426	.426
	D #10-32, UNF-2A	#9/32-40, UNS-2A	C 15/64 HEX	5/16 HEX		G 1/4 HEX	3/8 HEX
	E #10-32, UNF-2B	#5/16-32, UNEF-2B	D #10-32, UNF-2A	#9/32-40, UNS-2A		H #10-32, UNF-2A	#5/16-32, UNEF-2A
	J 15/64 HEX	11/32 HEX	E #10-32, UNF-2B	#5/16-32, UNEF-2B		J 1/4 HEX	3/8 HEX
	<b>3006 BA*</b>	<b>3036 BA†</b>	A 49/64 approx.	3/4 approx.		<b>3103 BA*</b>	<b>3133 BA†</b>
	C 15/64 HEX	5/16 HEX	A 49/64 approx.	3/4 approx.		A 7/8 approx.	7/8 approx.
	D #10-32, UNF-2A	#9/32-40, UNS-2A	C 15/64 HEX	5/16 HEX		C 15/64 HEX	5/16 HEX
	E #10-32, UNF-2A	#5/16-32, UNEF-2A	D #10-32, UNF-2A	#9/32-40, UNS-2A		D #10-32, UNF-2A	#9/32-40, UNS-2A
	F .277	.277	E #10-32, UNF-2A	#5/16-32, UNEF-2A		F .425	.425
	G 1/4 HEX	3/8 HEX	F .277	.277		G 1/4 HEX	3/8 HEX
	<b>3007</b>	<b>3037</b>	A .448	.448		<b>6104</b>	<b>6134</b>
	E #10-32, UNF-2A	#5/16-32, UNEF-2A	A .448	.448		A .671	.671
	J 5/16 HEX	3/8 HEX	E #10-32, UNF-2A	#5/16-32, UNEF-2A		B .430	.430
	O .040 (Typ.)	.040 (Typ.)	J 5/16 HEX	3/8 HEX		C #10-32, UNF-2A	#5/16-32, UNEF-2A
	P .200	.200	O .040 (Typ.)	.040 (Typ.)		D 1/4 HEX	3/8 HEX
	Q .038D.	.038D.	P .200	.200		E 1/4 HEX	3/8 HEX



# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

### INSULATED TIP PLUG

Solderless

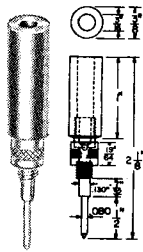
**HANDLE:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**BODY:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. Std. Pkg. 100

No.	Type	NET Per C
200	Senior	\$15.00



### INSULATED TIP PLUG

Solderless

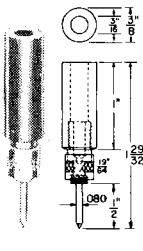
**HANDLE:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**BODY:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. Std. Pkg. 100

No.	Type	NET Per C
201	Junior	\$15.00



### INSULATED TIP PLUG

Signal Corps Approved

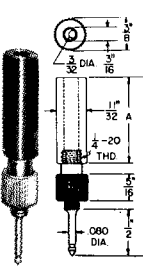
**HANDLE:** ETHYL CELLULOSE, Type EM-1, per MIL-P-3412. Red, Black. SPECIFY COLOR

**PLUG:** Steel, case hardened to Signal Corps specs.

**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Recess at end of prod tip holds plugs more firmly in jack spring. Prevents tip from falling out when in an inverted position. Std. Pkg. 50

No.	Handle (A)	Overall (B)	Per C
250	1 inch	2 3/4"	\$54.00
358	3 inch	4 3/4"	84.00



### INSULATED TIP PLUG

Solder Type

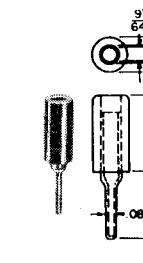
**HANDLE:** MOLDED BUTYRATE, per FED. SPEC. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

**BODY:** Brass, nickel plated our No. 158.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Drawn hollow tip for easy soldering. Fits standard phone tip jack. Std. Pkg. 100

No.	NET Per C
237	\$10.20



### INSULATED TIP PLUG

Heavy Duty Type

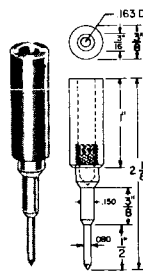
**HANDLE:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**PLUG:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
229	\$15.00



### SUB-MINIATURE TIP PLUG

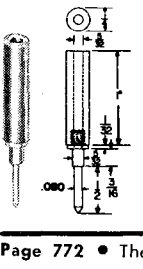
**HANDLE:** FIBRE, per MIL-F-148A, Grade CH. Red, Black. SPECIFY COLOR

**TIP:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Ideally suited for checking sub-miniature equipment. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
270	\$18.00



### INSULATED SHORT TIP PLUG

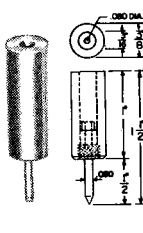
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**PLUG:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Inserts flush to insulate handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
203	\$12.00



### INSULATED SHORT TIP PLUG

Solderless

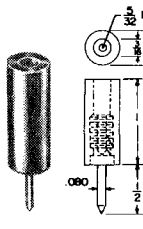
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**PLUG:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Solderless: wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to insulate handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 50

No.	NET Per C
253	\$13.20



### INSULATED TIP PLUG

Phono Needle

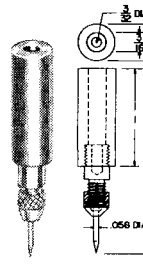
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**BODY:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Removable chuck for easy replacement of broken needle. Needle pierces corrosion or plating for positive reading. Std. Pkg. 50

No.	NET Per C
216	\$15.00



### ADAPTER

Banana Plug to Tip Plug

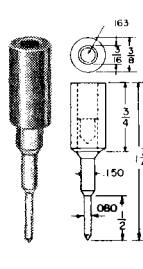
**HANDLE:** MOLDED BUTYRATE, per FED. SPEC. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

**BODY:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Accepts standard banana plugs, adapts to standard tip plug. Std. Pkg. 100

No.	NET Per C
215	\$15.00



### SUB-MINIATURE TIP PLUG

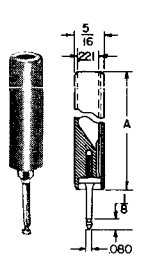
AND TEST PROD

**HANDLE:** Molded Nylon, per MIL-P-20693A. Available in Red or Black. SPECIFY COLOR

**TIP:** Brass, Silver plated.

**DESCR.:** Solderless assembly. Ideal for use with sub-miniature printed-circuit tip jacks. Sharp tip breaks flux or oxide coating on printed-circuit pattern for positive contact when used as prod. Grooved head or prod makes positive contact when laid across wires. Fits all standard .080" tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
348	1 inch	1 1/2"	\$15.00
349	4 inches	4 1/2"	30.00



### METER TIP PLUG

**HANDLE:** MOLDED THERMOSETTING plastic per MIL-M-14 CFG. Red and Black. SPECIFY COLOR

**TIP:** Brass, nickel plated.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Molded in two halves for easy assembly with screw and nut. Fits standard phone tip jacks. Std. Pkg. 50

No.	NET Per C
235	\$27.00



### INSULATED BANANA PLUG

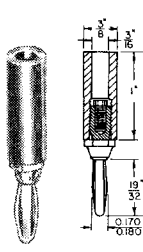
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**PLUG:** Hex brass, nickel or silver plated.

**SPRING:** Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100



No.	Spring Material	Plating	NET Per C
212	Phosphor Bronze	Nickel	\$21.00
232	Phosphor Bronze	Silver	24.00
242	Beryllium Copper	Nickel	30.00
262	Beryllium Copper	Silver	35.00

### INSULATED BANANA PLUG

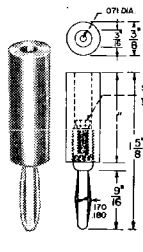
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**PLUG:** Brass, nickel or silver plated.

**SPRING:** Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100



No.	Spring Material	Plating	NET Per C
211	Phosphor Bronze	Nickel	\$18.00
261	Phosphor Bronze	Silver	21.00
271	Beryllium Copper	Nickel	24.00
281	Beryllium Copper	Silver	27.00

### INSULATED BANANA PLUG

Solderless

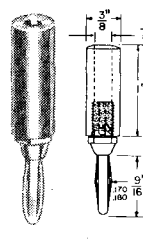
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR

**PLUG:** Hex brass, nickel or silver plated.

**SPRING:** Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.

**RATING:** 15 AC Amps for 10°C Temp. rise, continuous duty.

**DESCR.:** Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Fits standard banana jacks. Std. Pkg. 50



No.	Spring Material	Plating	NET Per C
295	Phosphor Bronze	Nickel	\$18.00
296	Phosphor Bronze	Silver	21.00
297	Beryllium Copper	Nickel	24.00
298	Beryllium Copper	Silver	27.00

### INSULATED BANANA PLUG

Solderless

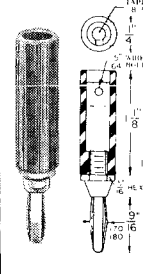
**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black. SPECIFY COLOR

**BODY:** Hex brass, nickel plated with mating brass spacer.

**SPRING:** Four-leaved phosphor bronze, nickel plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Cross drilled hole in spacer enables quick solderless connection of wire to plug. Fits standard banana jacks. Std. Pkg. 100



No.	NET Per C
236	\$38.00

### METER BANANA PLUG

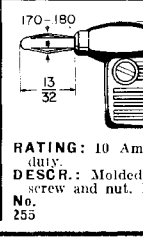
**HANDLE:** MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR

**PLUG:** Brass, nickel plated.

**SPRING:** Four-leaved phosphor bronze, nickel plated.

**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Molded in two halves for easy assembly with screw and nut. Fits standard banana jacks. Std. Pkg. 50



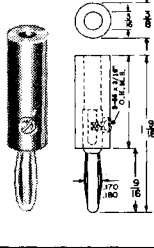
No.	NET Per C
255	\$36.00

# HERMAN H. SMITH, INC.



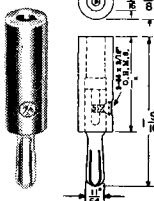
"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

### INSULATED BANANA PLUG With Side Screw



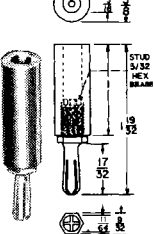
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CPG, Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze or beryllium copper, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Set screw secures wire without soldering. Fits standard banana jacks. Std. Pkg. 100  
 No. Spring NET Per C  
 204 Phosphor Bronze \$18.00  
 254 Beryllium Copper 27.00

### INSULATED BANANA PLUG Split Type With Side Screw



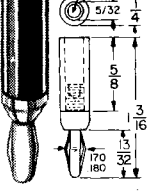
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CPG, Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR.  
**PLUG:** Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Cross-slotted for spring tension. Set screw secures wire, without soldering. Fits standard banana jacks. Std. Pkg. 100  
 No. NET Per C  
 219 \$18.00

### INSULATED BANANA PLUG Split Type With Internal Stud



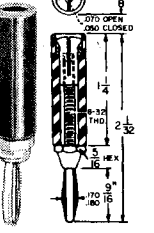
**HANDLE:** MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CPG, Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR.  
**PLUG:** Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100  
 No. NET Per C  
 253 \$18.00

### INSULATED BANANA PLUG Midget Type



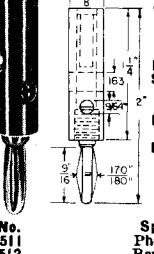
**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black. SPECIFY COLOR.  
**PLUG:** Brass, nickel or silver plated.  
**SPRING:** Phosphor bronze or beryllium copper, nickel or silver plated.  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Wire soldered directly into stud. Fits standard banana jacks. Std. Pkg. 50  
 No. Spring Material Plating NET Per C  
 291 Phosphor Bronze Nickel \$18.00  
 292 Phosphor Bronze Silver 21.00  
 293 Beryllium Copper Nickel 24.00  
 294 Beryllium Copper Silver 27.00

### INSULATED BANANA PLUG With Internal Spring Collet



**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red or Black. SPECIFY COLOR.  
**BODY:** Hex brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Spring collet provides quick connect/disconnect of wire. Tin wire for secure contact. Fits standard banana jack. Std. Pkg. 100  
 No. NET Per C  
 239 \$39.00

### STACK BANANA PLUG Solderless



**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow or Green. SPECIFY COLOR.  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze or beryllium copper, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless connection. Accepts standard banana plug in top and side. Interconnects unlimited amount of multiple circuits. Std. Pkg. 50  
 No. Spring Material Plating NET Per C  
 1511 Phosphor Bronze Nickel \$27.00  
 1512 Beryllium Copper Silver 30.00

### NYLON PLUGS COLOR CODE SUFFIX

Add to Catalog Number as required

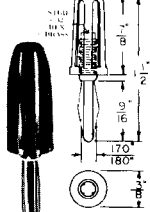
- 101 WHITE
- 102 RED
- 103 BLACK

- 104 GREEN
- 105 BLUE

- 106 ORANGE
- 107 YELLOW
- 108 BROWN

- 112 PURPLE
- 113 GREY

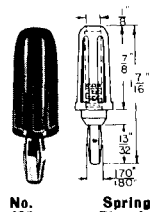
### BANANA PLUG TYPE



No.	Spring Material	Plating	NET Per C
476	Phosphor Bronze	Nickel	\$21.00
477	Phosphor Bronze	Silver	24.00
478	Beryllium Copper	Nickel	27.00
479	Beryllium Copper	Silver	30.00

### NYLON BANANA PLUG

**HANDLE:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Phosphor bronze or beryllium copper nickel or silver plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100

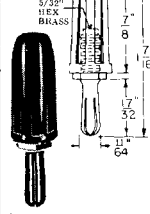


No.	Spring Material	Plating	NET Per C
426	Phosphor Bronze	Nickel	\$18.00
427	Phosphor Bronze	Silver	21.00
428	Beryllium Copper	Nickel	24.00
429	Beryllium Copper	Silver	27.00

### NYLON BANANA PLUG Midget

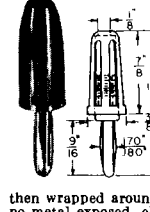
**HANDLE:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.  
**PLUG:** Brass, nickel or silver plated.  
**SPRING:** Phosphor bronze or beryllium copper, nickel or silver plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Wire soldered directly into stud. Fits standard banana jacks. Std. Pkg. 100  
 No. Spring Material Plating NET Per C  
 426 Phosphor Bronze Nickel \$18.00  
 427 Phosphor Bronze Silver 21.00  
 428 Beryllium Copper Nickel 24.00  
 429 Beryllium Copper Silver 27.00

### NYLON BANANA PLUG Split Type



No.	Spring Material	Plating	NET Per C
494	Phosphor Bronze	Nickel	\$18.00

**HANDLE:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.  
**PLUG:** Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100  
 No. Spring Material Plating NET Per C  
 494 Phosphor Bronze Nickel \$18.00

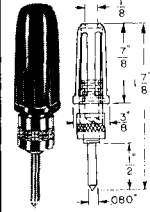


No.	Spring Material	Plating	NET Per C
455	Phosphor Bronze	Nickel	\$21.00
456	Phosphor Bronze	Silver	24.00
457	Beryllium Copper	Nickel	27.00
458	Beryllium Copper	Silver	30.00

### NYLON BANANA PLUG Solderless

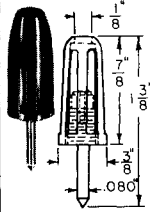
**HANDLE:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.  
**PLUG:** Brass, nickel or silver plated.  
**SPRING:** Phosphor bronze or beryllium copper nickel or silver plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard banana jacks. Std. Pkg. 100  
 No. Spring Material Plating NET Per C  
 455 Phosphor Bronze Nickel \$21.00  
 456 Phosphor Bronze Silver 24.00  
 457 Beryllium Copper Nickel 27.00  
 458 Beryllium Copper Silver 30.00

### PIN TIP TYPE



No.	Spring Material	Plating	NET Per C
490	Phosphor Bronze	Nickel	\$16.80

**HANDLE:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.  
**PLUG:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Wire fits through body of tip then wrapped around screw portions and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. Std. Pkg. 100  
 No. Spring Material Plating NET Per C  
 490 Phosphor Bronze Nickel \$16.80

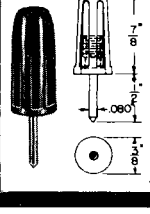


No.	Spring Material	Plating	NET Per C
491	Phosphor Bronze	Nickel	\$16.80

### NYLON SHORT TIP PLUG

**HANDLE:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.  
**PLUG:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Inserts flush to insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 100  
 No. Spring Material Plating NET Per C  
 491 Phosphor Bronze Nickel \$16.80

### NYLON SHORT TIP PLUG Solderless





# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



**INSULATED PHONE TIP JACK**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**SPRING:** Phosphor bronze.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Positive contact with standard phone tip plugs. Supplied complete with hex nut and fibre washer. Mounts in 1/8" hole in panels up to 3/8" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

No. 202 **NET Per C \$19.20**

**INSULATED PHONE TIP JACK**

**HEAD:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**SPRING:** Phosphor bronze.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Complete with hex nut and fibre washer. Mounts in 1/8" hole in panels up to 3/8" thick. Accepts standard phone tip plugs. **Std. Pkg. 50**

No. 223 **NET Per C \$21.00**

**MOLDED NYLON TIP JACK**

**BODY:** MOLDED NYLON, per MIL-P-20693A. Red, Black, Yellow, Green, Blue. **SPECIFY COLOR**

**CONTACT:** Phosphor bronze.

**CAP:** Brass, nickel plated.

**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty. 5 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.

**DESCR.:** Mounts in 3/16" hole in panels up to 3/8" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

No. 240 **NET Per C \$18.00**

**INSULATED PHONE TIP JACK**

**HEAD:** Fluted Head, MOLDED NYLON, per MIL-P-20693A. With molded nylon washer. Red, Black, Yellow, Green, Blue. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**SPRING:** Phosphor bronze.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Extruded portion of head and washer provides excellent insulation from panel. Supplied with hex nut. Mounts in 1/8" hole in panels up to 3/8" thick. Accepts standard tip plugs. **Std. Pkg. 100**

No. 241 **NET Per C \$18.00**

**INSULATED TIP JACK Meter Type**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**SPRING:** Phosphor bronze.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied complete with hex nut and fibre washer. Mounts in 1/8" hole in panels up to 3/8" thick. Recessed jack body prevents possibility of shock or grounding. Accepts standard phone tip plugs. **Std. Pkg. 50**

No. 282 **NET Per C \$15.00**

**INSULATED TIP JACK Meter Type**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**SPRING:** Phosphor bronze.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied complete with hex nut and fibre washer. Mounts in 1/8" hole in panels up to 3/8" thick. Recessed jack body prevents possibility of shock or grounding. Accepts standard phone tip plugs. **Std. Pkg. 50**

No. 282 **NET Per C \$15.00**

**INSULATED TIP JACK Meter Type**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**SPRING:** Phosphor bronze.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied complete with hex nut and fibre washer. Mounts in 1/8" hole in panels up to 3/8" thick. Recessed jack body prevents possibility of shock or grounding. Accepts standard phone tip plugs. **Std. Pkg. 50**

No. 282 **NET Per C \$15.00**

**"SPEEDI-MOUNT" BANANA JACKS**

**#398—Small Head**

**#399—Large Head**

**BODY:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, per LC-726-1. **SPECIFY COLOR**

**CONTACT:** Brass, cadmium plated.

**WASHER:** Steel cadmium plated, internal and external tooth.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty. 3 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Unusual dish lockwasher permits fast assembly. Teeth embed into jack and panels, prevent pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard banana plugs. **Std. Pkg. 100**

No. 398 **NET Per C \$6.60**  
 No. 399 **NET Per C \$6.60**

**"SPEEDI-MOUNT" TIP JACKS**

**#279—Small Head**

**#299—Large Head**

**BODY:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. **SPECIFY COLOR**

**SPRING:** Phosphor bronze.

**WASHER:** Steel cadmium plated, internal and external tooth.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty. 3 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.

**DESCR.:** Unusual dish lockwasher permits fast assembly. Teeth embed into jack and panels, prevents pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

No. 279 **NET Per C \$6.60**  
 No. 299 **NET Per C \$6.60**

**GIANT BANANA JACK**

**BODY:** HEX BRASS, nickel plated.

**RATING:** 25 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Supplied with hex nut and brass tinned lug, mounts in 1/2" hole in panels up to 5/8" thick. **Std. Pkg. 25**

No. 157 **NET Per C \$30.00**

**INSULATED BANANA JACK With Solder Tab**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**TAB:** Brass, cadmium plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied with hex nut and fibre washer. Mounts in 1/8" hole in panels up to 3/8" thick. Solder direct to tab. Accepts standard banana plugs. **Std. Pkg. 100**

No. 255 **NET Per C \$15.00**

**NYLON BANANA JACKS**

**"DOUBLE-D" BODY**

**BODY:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above. **CONTACT:** Brass, cadmium plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous working voltage. CAPACITANCE 5.5 mmfd.

**DESCR.:** Mounts in 5/16" hole in panels up to 5/16" thick. Accepts standard banana plugs. Wide temperature and humidity range. "Double-D" body mounts in round or punched hole to fit. **Std. Pkg. 50**

No. 1509 **NET Per C \$12.00**

**INSULATED BANANA JACK**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied with hex nut, fibre washer, and brass tinned lug. Mounts in 1/8" hole in panels up to 3/8" thick. Accepts standard banana plugs. **Std. Pkg. 100**

No. 205 **NET Per C \$13.20**

**INSULATED BANANA JACK With Solder Tab**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**TAB:** Brass, cadmium plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied with hex nut and fibre washer. Mounts in 1/8" hole in panels up to 3/8" thick. Solder direct to tab. Accepts standard banana plugs. **Std. Pkg. 100**

No. 255 **NET Per C \$15.00**

**INSULATED BANANA JACK**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied with hex nut, fibre washer, lockwasher and brass tinned lug. Mounts in 1/8" hole in panels up to 3/8" thick. Jack body recessed for snug contact. Accepts standard banana plugs. **Std. Pkg. 100**

No. 219 **NET Per C \$15.00**

**INSULATED MIDGET BANANA JACK**

**HEAD:** Fluted Head, MOLDED NYLON, per MIL-P-20693A. With molded nylon washer. Red, Black, Yellow, Green, Blue. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Extruded portion of head and washer provides excellent insulation from panel. Supplied with hex nut, brass tinned lug. Mounts in 1/8" hole in panels up to 3/8" thick. Accepts standard banana plugs. **Std. Pkg. 100**

No. 221 **NET Per C \$18.00**

**INSULATED JACK Combination Type**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**SPRING:** Phosphor bronze.

**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Supplied with hex nut and fibre washer. Accepts standard phone tip plugs or standard banana plugs. **Std. Pkg. 100**

No. 206 **NET Per C \$16.20**

**INSULATED BANANA JACK**

**HEAD:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. **SPECIFY COLOR**

**BODY:** Brass, nickel plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.

**DESCR.:** Mounts in 1/8" hole in panels up to 3/8" thick. Accepts standard banana plugs. Wide temperature and humidity range. **Std. Pkg. 50**

No. 1508 **NET Per C \$12.00**

**COLOR CODE SUFFIX — Add to Catalog Number as required**

— 101 WHITE	— 104 GREEN	— 108 BROWN
— 102 RED	— 105 BLUE	— 112 PURPLE
— 103 BLACK	— 106 ORANGE	— 113 GREY
	— 107 YELLOW	

**FULL ROUND BODY**

**BODY:** MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.

**CONTACT:** Brass, cadmium plated.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 5.0 mmfd.

**DESCR.:** Mounts in 1/8" hole in panels up to 3/8" thick. Accepts standard banana plugs. Wide temperature and humidity range. **Std. Pkg. 50**

No. 1508 **NET Per C \$12.00**

# HERMAN H. SMITH, INC.



"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

## NYLON TIP JACKS

With Metal Shell  
Made to Meet MS-16108 Spec.

COLOR CODE SUFFIX  
(Add to Catalog Number as Required)

- 101 WHITE
- 102 RED
- 103 BLACK
- 104 GREEN
- 105 BLUE
- 106 ORANGE
- 107 YELLOW
- 108 BROWN
- 112 PURPLE
- 113 GREY

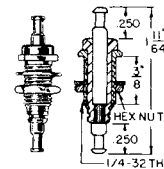
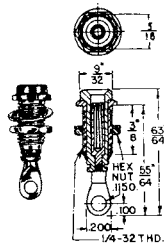
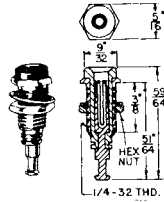
Molded Nylon Tip Jack. Metal shell eliminates possibility of stripping threads during assembly. Meets following requirements:

1. Salt Spray Test - Withstands 100 hours.
2. Rating - 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 10.0 mmfd.
3. Insulation Resistance - 5,000 megohms.
4. Operating Conditions -
  - A. Continuous: 23 hours on, 1 hour off.
  - B. Elevation: Up to 5,000 ft.
  - C. Temperature: -55 to +85°C.
  - D. Humidity: Up to 95%.

5. Material Specifications -
  - A. Insulator: Molded Nylon, per MIL-P-20693A. Specify color as coded above.
  - B. Shell and Nut: Brass Nickel Plated per QQ-N-290, type V (FC).
  - C. Lockwasher: Phosphor Bronze Nickel Plated per Spec. QQ-N-290, type V (FC).
  - D. Center Contact: Heat Treated Bery. Co per. Silver plated per QQ-S-365, Gold plated overall.

6. Non-Operating Conditions -
  - A. Elevation: Up to 50,000 ft.
  - B. Temperature: Continuous exposure for 72 hours at +160°F and 240 hours at -80°F.
  - C. Humidity: Up to 100%.

No.	Type	Pkg.	Per C
1501	Wrap Around	25	\$28.80
1502	Spade Terminal	25	42.00
1503	Feed Through	25	39.00

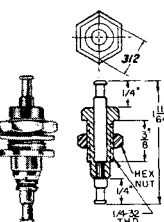
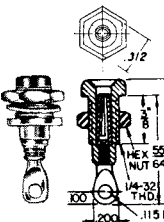
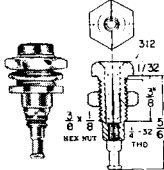


## All Nylon

Completely Molded Nylon Jack. Fits all standard phone tip plugs. Contact recessed in head for safe contact. Hexagon head for grip in tightening. Mounts in 1/4" hole in panels up to 1/4" thick. Meets following requirements:

1. Salt Spray Test - Withstands 100 hours.
2. Rating: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.
3. Insulation Resistance - 5,000 megohms.
4. Operating Temperature - -55 to +150°C.
5. Material Specifications -
  - A. Body: Molded Nylon, per MIL-P-20693A. Specify Color as coded above.
  - B. Center contact: Heat treated Beryllium Copper. Silver plated per QQ-S-365, Gold plated overall. No. 1507 Brass, per QQ-B-626, Comp. 22, plated as above.
  - C. Hex Nut: Brass Nickel Plated.

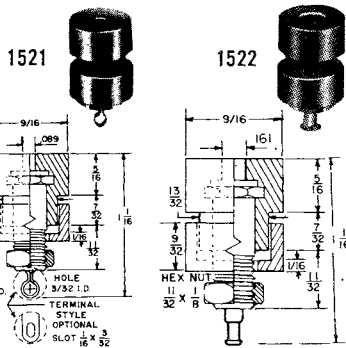
No.	Type	Pkg.	Per C
1505	Wrap Around	25	\$21.00
1506	Spade Terminal	25	30.00
1507	Feed Through	25	28.20



## HIGH VOLTAGE NYLON JACKS

Color Code Suffix

- Add to Catalog Number as Required
- 101 WHITE
  - 102 RED
  - 103 BLACK
  - 104 GREEN
  - 105 BLUE
  - 106 ORANGE
  - 107 YELLOW
  - 108 BROWN



Made to meet MS-16107 Spec.

Heavy molded nylon body and cup washer prevent high-voltage flashover to panel. Meets following requirements:

1. Salt Spray Test - Withstands 100 hours.
2. Electrical Rating - 15 Amps AC for 10°C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage. Millivolt drop per MIL-J-6751.
3. Material Specifications -
  - A. Insulator and Washer: Nylon Grade FM 10001, in accordance with MIL-P-17091 spec.
  - B. Insert Shell and Nut: Brass, Nickel plated per spec. QQ-N-290, type V (FC). Insert gold washed overall.
  - C. Contact: Phosphor bronze or beryllium copper, gold washed.
  - D. Terminal style: Optional formed cylinder or slotted flat terminals as shown.

No.	Type	Std. Pkg. 25	NET Per C
1521	TIP JACK		\$45.00
1522	BANANA JACK		\$45.00

## NYLON IN-LINE TIP JACK

Color Code Suffix  
Add to Catalog Number as Required

- 101 WHITE
- 102 RED
- 103 BLACK
- 104 GREEN
- 105 BLUE
- 106 ORANGE
- 107 YELLOW
- 108 BROWN
- 112 PURPLE
- 113 GREY

All Nylon

HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.

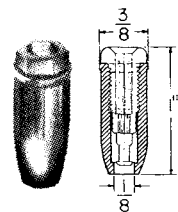
BODY: Molded Nylon, per MIL-P-20693A.

CONTACT: Heat treated beryllium copper, gold washed.

RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage.

DESCR.: Fits all standard phone-tip plugs, with recessed contact for safe connection. Ideally suited for use in patch and extension cords. Can also be used for panel mounting where wrap-around terminal connection must be insulated at rear.

No.	NET Per C
1515	\$30.00



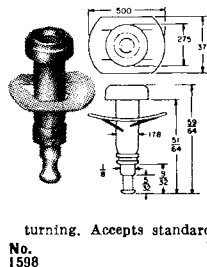
## NYLON TEST JACK

BODY: Nylon, Grade FM 10001. SPECIFY COLOR

CONTACT: Phosphor bronze, gold plated.

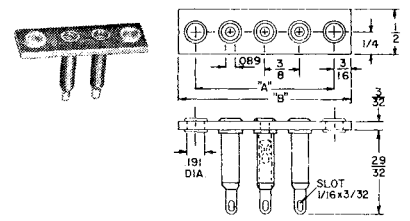
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 3 KV 60 cycle AC continuous working voltage.

DESCR.: Mounts in 1/4" hole, with Tinneman Speed Nut for fast permanent assembly. Teeth embed into jack body, preventing pulling out of turning. Accepts standard phone tip plugs.



No.	NET Per C
1598	\$25.00

## PIN JACK STRIPS



STRIP: LAMINATED PHENOLIC, XP, Black. Meets Federal Spec. L-L-31, Type I.

BODY: Brass, nickel plated.

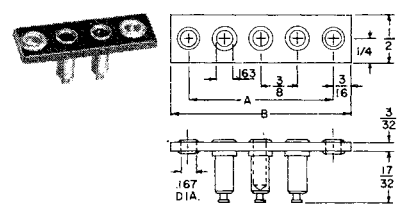
SPRING: Phosphor bronze.

RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 KV, 60 cycle AC continuous working voltage.

DESCR.: From 2 to 10 pin jacks assembled on 3/4" centers on a heavy-duty board. Provides positive contact with standard phone tip plugs. Mounting holes accept screws up to #8.

No.	Jacks	Mtg. Ctrs. ("A")	Length ("B")	Std. Pkg. 25	NET Per C
1982	2	1 1/2"	1 1/2"		\$21.00
1983	3	1 1/2"	1 1/2"		27.00
1984	4	1 1/2"	2 1/4"		36.00
1985	5	2 1/4"	2 1/4"		45.00
1986	6	2 1/4"	3"		51.00
1987	7	3"	3 3/4"		60.00
1988	8	3 3/4"	3 3/4"		69.00
1989	9	3 3/4"	4 1/2"		75.00
1990	10	4 1/2"	4 1/2"		84.00

## BANANA JACK STRIPS



STRIP: LAMINATED PHENOLIC, XP, Black. Meets Federal Spec. L-L-31, Type I.

BODY: Brass, nickel plated.

RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 KV, 60 cycle AC continuous working voltage.

DESCR.: From 2 to 10 Banana jacks assembled on 3/4" centers on a heavy-duty board. Provides positive contact with standard banana plugs. Mounting holes accept screws up to #8.

No.	Jacks	Mtg. Ctrs. ("A")	Length ("B")	Std. Pkg. 25	NET Per C
1972	2	1 1/2"	1 1/2"		\$21.00
1973	3	1 1/2"	1 1/2"		27.00
1974	4	1 1/2"	2 1/4"		36.00
1975	5	2 1/4"	2 1/4"		45.00
1976	6	2 1/4"	3"		51.00
1977	7	3"	3 3/4"		60.00
1978	8	3 3/4"	3 3/4"		69.00
1979	9	3 3/4"	4 1/2"		75.00
1980	10	4 1/2"	4 1/2"		84.00

## IN-LINE PHONE TIP JACK

HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II, Red, Black, Yellow, Green.

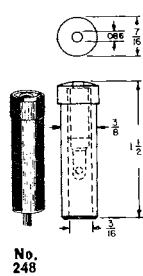
CAP.: MOLDED THERMOSETTING plastic Red and Black per MIL-M-14 CFG. Yellow, Green, per LC-726-1.

BODY: Brass, nickel plated.

SPRING: Phosphor bronze.

RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Suitable for test lead extension where long leads are required. Accepts standard phone tip plug.



No.	NET Per C
248	\$21.00

## IN-LINE BANANA JACK

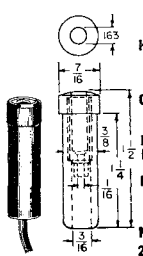
HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II, Red, Black, Yellow, Green.

CAP.: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, per LC-726-1.

BODY: Brass, nickel plated.

RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Suitable for test lead extension where long leads are required. Accepts standard banana plugs.



No.	NET Per C
251	\$21.00



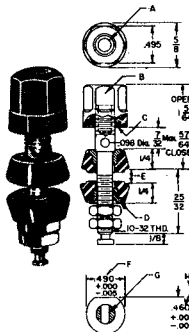




# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

## BINDING POST - Multipurpose



**NOTES:**  
**A** Banana Plug Receptacle, 16 $\frac{1}{2}$  I.D.  
**B** Head non-removable from stud.  
**C** Molded-in Brass Bushing in Head.  
**D** Molded-in Brass Bushing in Washers.  
**E** For Panels 1/16" to 1/4" thick.  
**F** Drill 1/2" hole for mounting washers.  
**G** Wire Hole is at right angle to Flat on insulated Washers.  
**H** Production Punch for keyed Slot for mounting Washers. (Sample Washer Sent on Request.)

**RATING:** 30 Amps AC for 10°C Temp. rise, continuous working voltage. CAPACITANCE 5.0 mmfd.

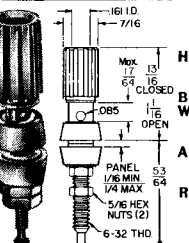
**CURRENT:** 30 amps safe current carrying capacity.  
**ACCEPTS:** Phone tip plug, spade lug, banana plug, alligator clip or wire strand.  
**DESCR.:** MOLDED NYLON, per MIL-P-20693A, head and washer completely insulated. Mounts in 1/2" or keyed hole as indicated. Wrap around type—direct solder connection to stud. Metal parts brass.  
**COLORS:** Red, Black, Yellow, Green, Blue, White. Specify color. **Std. Pkg. 100**  
**No. 257** **NET Per C \$36.00**

## MIL-SPEC BINDING POST

Same as our #257 above, made to meet MIL-P-55149/1. **Std. Pkg. 50**  
**No. 267** **NET Per C \$42.00**

## PIN JACK TYPE

Same as above, with Beryllium copper, gold plated pin tip receptacle replacing Note "A" above. All other specifications apply. **Std. Pkg. 100**  
**No. 258** **NET per C \$42.00**

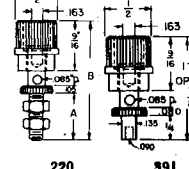


## NYLON BINDING POST Insulated

**HEAD:** CAPTIVE, MOLDED NYLON, per MIL-P-20693A, with brass Gold-Plated Insert.  
**BODY:** Brass, Gold Plated.  
**WASHERS:** MOLDED NYLON, per MIL-P-20693A, with brass Gold-plated inserts.  
**ACCEPTS:** Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.

**DESCR.:** Molded washers completely insulate post from panel. Miniature washers and narrow fluted head require minimum panel space. Mounts in 3/8" round or "D" hole in panel as indicated. Wrap-around solder terminal on stud for direct connection.  
**COLORS:** Red, Black, Yellow, Green, Blue, White.  
**SPECIFY COLOR** **Std. Pkg. 100**  
**No. 1517** **NET Per C \$33.00**

## BINDING POST Five-Way Grounding Type

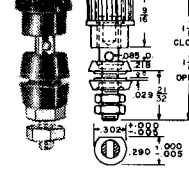


**HEAD:** CAPTIVE, MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black.  
**SPECIFY COLOR**  
**BODY:** Brass, nickel plated.  
**ACCEPTS:** Phone tip plug, spade lug, banana plug, alligator clip or wire strand.

**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 5.0 mmfd.  
**DESCR.:** Can be insulated from panel with our 2155 and 2163 fibre washers; supplied with 2 hex nuts. **Std. Pkg. 100**

No.	Description	NET Per C
220	8-32 x 1/2 Stud	\$18.00
230	6-32 x 3/8 Stud	18.00
291	Rivet Type	15.00
With brass nickel plated insert in head		
280	8-32 Stud	\$24.00
264	6-32 Stud	24.00
294	Rivet Type	15.00

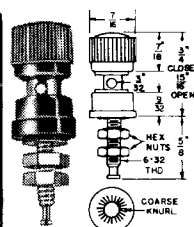
## All Insulated Type



**HEAD:** As above.  
**BODY:** As above.  
**WASHERS:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. With brass inserts.  
**ACCEPTS:** Phone tip plug, spade lug, banana plug, alligator clip or wire strand.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.

**DESCR.:** Mounts in 1/4" hole in panel with milled slot for locking, supplied with two hex nuts. **Std. Pkg. 100**

No.	Description	NET Per C
280	8-32 Stud	\$27.00
299	6-32 Stud	27.00
With brass nickel plated insert in head		
290	8-32 Stud	\$33.00
281	6-32 Stud	33.00

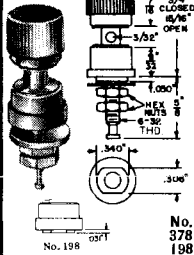


## NYLON BINDING POSTS Grounding Type

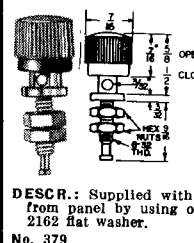
**HEAD:** CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.  
**WASHER:** MOLDED NYLON with brass nickel plated insert.  
**BODY:** Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 5.0 mmfd.

**DESCR.:** Supplied with 2 hex nuts. Grounds to panel but supplied with nylon washer for uniformity of height with No. 373 when used on same panel. Can be insulated from panel by using our No. 2150 shoulder washer. **Std. Pkg. 100**  
**No. 377** **NET Per C \$26.40**

## ALL INSULATED

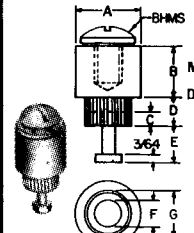


**HEAD:** CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.  
**WASHER:** MOLDED NYLON with brass nickel plated insert.  
**BODY:** Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.  
**DESCR.:** Supplied with two hex nuts. Boss washer insulates post from chassis when used with bakelite washer supplied. **Min. Panel Std. Pkg. 100**  
**Thickness** **NET Per C**  
 1/16" \$26.40  
 1/32" \$26.40



## GROUNDING TYPE

**HEAD:** CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.  
**SPECIFY COLOR**  
**BODY:** Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 7.0 mmfd.  
**DESCR.:** Supplied with two hex nuts. Can be insulated from panel by using our No. 2150 shoulder washer and 2162 flat washer. **Std. Pkg. 100**  
**No. 379** **NET Per C \$26.40**

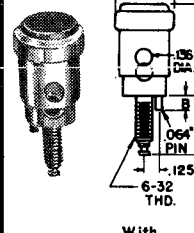


## COMBINATION TERMINALS

**MATERIAL:** BRASS, alloy D-10.  
**DESCR.:** Combination Screw and Turret Terminal. Knurled shank prevents turning. Supplied complete with BHMS and Internal Tooth Lockwasher, unassembled. **Std. Pkg. 25**

No.	A	B	C	D	E	F	G	BHMS	Panel	Net
2045	5/8	1/4	1/4	3/4	1 1/4	1 1/4	2.20	6-32	3/16	\$11.40
2046	1 1/2	5/8	5/8	1 1/4	1 3/4	1 3/4	2.50	8-32	7/16	11.40
2047	3/4	5/8	5/8	1 1/4	1 3/4	1 3/4	2.57	10-32	3/4	11.40

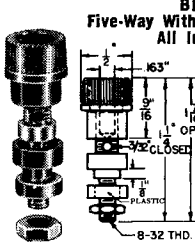
## SPRING LOADED BINDING POSTS



**HEAD:** CAPTIVE, Brass nickel plated.  
**CAP.:** STYRENE, per Fed. Spec. L-P416, Type 1, Black.  
**BODY:** Brass, nickel plated.  
**PIN:** Nickel Silver.  
**ACCEPTS:** Standard phone tip or wire in side hole and locks them in place on release of pressure on stud.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Side dowel pin locates and prevents post from turning when mounted in panel. **Std. Pkg. 50**

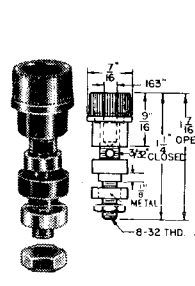
	With Dowel Pin	Less Dowel Pin
No.	2701	2801
NET Per C	\$85.00	\$80.00
	2702	2802
	2703	2803
	2704	2804
	2705	2805
	2706	2806
	2707	2807
	2708	2808

Same as above less threaded stud. Supplied with 6-32 internal mounting thread.  
**No.** **Description** **NET Per C**  
 2709 With 1/2" lg. Dowel Pin \$33.00  
 2809 Without Dowel Pin 27.00



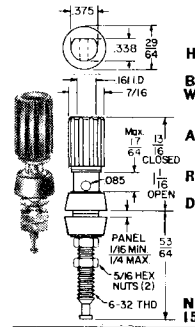
## BINDING POST Five-Way With Molded Mounting Washers All Insulated Type

**HEAD:** CAPTIVE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black.  
**SPECIFY COLOR**  
**BODY:** Brass, nickel plated.  
**WASHERS:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.  
**ACCEPTS:** Phone tip plug, spade lug, banana plug, alligator clip or wire strand.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 5.0 mmfd.  
**DESCR.:** Mounts in 1/4" hole in panel. Supplied with one hex nut. **Std. Pkg. 100**  
**No. 386** **NET Per C \$24.00**



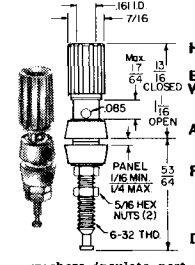
## GROUNDING TYPE

**HEAD:** CAPTIVE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black.  
**SPECIFY COLOR**  
**BODY:** Brass, nickel plated.  
**WASHERS:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Mounting Washer—Molded plastic. Back-up Washer—Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Mounts in 1/4" hole in panel. Grounded to panel by back-up washer. Supplied with one hex nut. **Std. Pkg. 100**  
**No. 387** **NET Per C \$24.00**



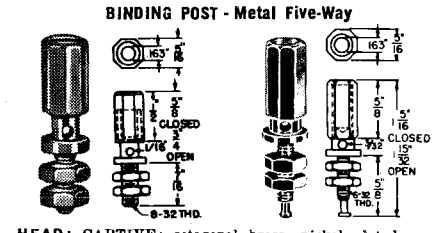
## METAL BINDING POST Grounded

**HEAD:** CAPTIVE, Fluted Brass, Gold-plated.  
**BODY:** Brass, Gold-plated.  
**WASHER:** MOLDED BLACK NYLON, per MIL-P-20693A, with brass Gold-plated insert.  
**ACCEPTS:** Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Fluted-head metal post to match our No. 1517. For use where direct ground connection is made to panel or chassis. Supplied with brass, gold-plated flat metal washer for grounding. **Std. Pkg. 100**  
**No. 1518** **NET Per C \$27.00**



## METAL BINDING POST Insulated

**HEAD:** CAPTIVE, Fluted Brass, Gold-plated.  
**BODY:** Brass, Gold-plated.  
**WASHER:** MOLDED BLACK NYLON, per MIL-P-20693A, with brass Gold-plated insert.  
**ACCEPTS:** Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts, 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.  
**DESCR.:** Fluted-head metal post to match our No. 1517. Molded washers insulate post from panel for use where internal ground circuit is isolated from chassis or panel. **Std. Pkg. 100**  
**No. 1519** **NET Per C \$27.00**



## BINDING POST - Metal Five-Way

**HEAD:** CAPTIVE: octagonal brass, nickel plated.  
**BODY:** Brass, nickel plated.  
**ACCEPTS:** Phone tip, spade lug, banana plug, alligator clip or wire strand.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 5.0 mmfd.  
**DESCR.:** Can be completely insulated from panel by using our 2155 and 2163 fibre washers. Supplied with two hex nuts. **Std. Pkg. 100**

No.	Description	NET Per C
137	Standard	\$21.00
208	Wrap-around	\$25.00







# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

**SOLDERLESS TIP TEST LEAD**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

TIP: Solderless: Brass, nickel plated.

No.	Meter End	NET Per Pr.
600	Phone Tips (No. 158)	\$.87
601	Spade Lugs (No. 129)	.87
602	Alligator Clips (No. 300)	.93

**PHONO NEEDLE TEST LEAD**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

BODY: Brass, nickel plated.

NEEDLE: Steel, nickel plated.

No.	Meter End	NET Per Pr.
613	Phone Tips (No. 158)	\$.87
614	Spade Lugs (No. 129)	.87
615	Alligator Clips (No. 300)	.93

**ALL SOLDERLESS TEST LEAD**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.

TIP: Solderless: Brass, nickel plated.

No.	Meter End	NET Per Pr.
609		\$1.26

**HIGH TENSION TEST LEAD**

HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.

PLUG: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.

TIP: Brass, nickel plated.

No.	Meter End	NET Per Pr.
620	Ins. Phone Tips	\$1.98
621	Ins. Spade Lugs	1.98
622	Ins. Alligator Clips	2.40

**SHORT TIP TEST LEAD**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Grade CH. Red and Black.

PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.

TIP: Brass, nickel plated.

No.	Meter End	NET Per Pr.
624		\$1.05

**SLIM HANDLE TEST LEAD**

HANDLES: MACHINED BUTYRATE, per MIL-P10408A, Type 1, Class 2. Red and Black (#384).

TIPS: Prod: Brass, Nickel Plated. Meter End: Drawn Brass Nickel Plated (#158).

No.	NET Per Pr.
670	\$.66

**BANANA PLUG TEST LEAD**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.

TIP: Solderless: Brass, nickel plated.

BODY: Brass, nickel plated.

SPRING: Four leaved phosphor bronze, nickel plated.

No.	NET Per Pr.
628	\$1.50

**SUB MINIATURE TEST LEAD**

HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.

PLUG: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.

TIPS: Brass, nickel plated.

No.	NET Per Pr.
678	\$1.26

**TEST LEAD KIT**

DESCR.: Each kit is supplied with one pair of test leads. One end test prods, other end ins. banana plugs.

FITTINGS: Two each: Phone tips, alligator clips, spade lugs.

No.	Type	NET Ea.
610	Solderless Prods	\$1.80
611	Needle Tip Prods	1.80

**SHIELDED TEST LEADS**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

TIP: Prod tip brass, nickel plated. Meter end, see type.

DESCR.: Plugs insert flush to insulated handle. Prods have retractable cover leaving no metal exposed. Eliminates possibility of shock or grounding. Supplied with either phone tip or banana plug meter ends. Other variations on special order.

No.	Type	NET Per Pr.
616	Phone Tip End (No. 203)	\$1.80
617	Banana Plug End (No. 211)	1.86

**ALLIGATOR CLIP TEST LEAD**

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black (#320).

TIPS: Solderless: Brass, nickel plated.

CLIPS: Steel, cadmium plated (No. 300).

BOOT: Vinyl Plastic. Red and Black (No. 331).

No.	NET Per Pr.
672	\$1.26

**ALLIGATOR CLIP TEST LEAD**

CLIPS: STEEL, cadmium plated.

No.	Wire	NET Per Pr.
604	12 inches	\$.57
605	24 inches	.63
606	36 inches	.72
607	48 inches	.81

**ALLIGATOR CLIP TEST LEAD**

With Boots

CLIPS: Steel, Cadmium Plated (#300).

BOOTS: Vinyl plastic (#398) Red and Black.

No.	Wire	NET Per Pr.
629	12 inches	\$.81
657	24 inches	.97
658	36 inches	.96
659	48 inches	1.02

**ALLIGATOR CLIP TEST LEAD**

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black (#301).

PLUG HANDLES: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black (#270).

CLIPS: Steel, cadmium plated (No. 301).

TIPS: Solderless: Brass, nickel plated.

No.	NET Per Pr.
627	\$.99

**ALLIGATOR CLIP TEST LEAD**

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black (#301).

CLIPS: Steel, cadmium plated (#301).

ELBOWS: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black (#235).

TIPS: Brass, nickel plated.

No.	NET Per Pr.
628	\$1.20

**ALLIGATOR CLIP TEST LEAD**

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black (#301).

CLIPS: Steel, cadmium plated.

ELBOWS: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black (#235).

No.	NET Per Pr.
647	\$1.20

**ALLIGATOR CLIP TEST LEAD**

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black (#301).

CLIPS: Steel, cadmium plated (#301).

LUGS: Steel, hot tinned (#129).

No.	NET Per C
649	\$1.20

**CROCODILE CLIP TEST LEAD**

CLIP: STEEL, cadmium plated.

BOOT: Vinyl plastic. Red and Black.

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black (#218).

LUG: Steel, Hot tinned (#129).

No.	NET Per Pr.
671	\$1.20

**CROCODILE CLIP TEST LEAD**

CLIPS: Steel, Cadmium plated.

BOOTS: Vinyl plastic, Red and Black.

ELBOWS: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black (#255).

No.	NET Per Pr.
648	\$1.14

**CROCODILE CLIP TEST LEAD**

CLIPS: STEEL, cadmium plated.

BOOT: Vinyl plastic. Red and Black.

ELBOW: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black (#235).

TIP: Brass, nickel plated.

No.	NET Per Pr.
675	\$1.14

**"UNIVERSAL TEST LEAD"**  
Completely interchangeable

Fifty Leads in One! One lead can make any required test lead combination. All parts adapt into prod handle or tip handle. Complete as shown. With plastic kit.

No.	NET Ea.
699	\$2.40

**"UNIVERSAL TEST LEAD"**  
Miniature Accessories  
Completely interchangeable

Fifty Leads in One. One lead can make any required test lead combination. All parts adapt into prod handle or meter tip. Supplied with miniature tips, clips, banana plugs and spade tips. Complete as shown. With plastic kit.

No.	NET Ea.
679	\$2.40

**METER TEST LEADS**  
Solderless Prod

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

TIP: Solderless: Brass, nickel plated.

ELBOW: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black.

BODY: Brass, nickel plated.

SPRING: Four leaved, phosphor bronze, nickel plated.

No.	Type	NET Per Pr.
625	Phone Tip Meter Tip	\$1.35
685	Banana Meter Tip	1.50

**NEEDLE PROD**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

NEEDLE: Steel, nickel plated.

ELBOW: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black.

BODY: Brass, nickel plated.

SPRING: Four leaved, phosphor bronze, nickel plated.

No.	Type	NET Per Pr.
626	Phone Tip Meter Tip	\$1.35

**SLIM JIM TEST LEAD**

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

PROBE: Steel, cadmium plated.

INSULATOR: Vinyl spaghetti tubing, Red and Black.

ELBOWS: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black.

TIPS: Brass, nickel plated.

No.	NET Per Pr.
696	\$1.14

**MIDGET ALLIGATOR CLIP TEST LEAD**

CLIPS: STEEL, Cadmium plated (#338).

BOOTS: Vinyl plastic (#389) Red and Black.

No.	Wire	Std. Pkg. 6	NET Per Pr.
716	12 inches		\$.81
717	18 inches		.84
718	24 inches		.87
719	36 inches		.96

**RETRACTILE ALL SOLDERLESS TEST LEAD**

HANDLE: MOLDED BUTYRATE per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.

PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.

TIP: Solderless brass, nickel plated.

WIRE #20 gauge, 41/36 strand, 4000 volt, nom. O.D. .165. Retracts to 12". Extends to 6 ft.

No.	NET Per Pr.
618	\$2.95

**TEST LEAD WIRE SPECIFICATIONS**

All test leads on this page are supplied with extra-flexible rubber-covered kinkless wire, 50-in. long, unless specified otherwise. #20 wire, 26/34 strands, 5000 Volts, .125" O.D.

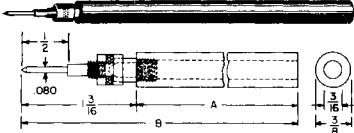


# HERMAN H. SMITH, INC.



"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

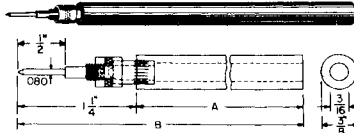
### SOLDERLESS TEST PROD—Threaded Type



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
302	4"	5 1/2"	\$30.00
303	5 1/2"	6 3/4"	33.00

### SOLDERLESS TEST PROD—Force Fit Type



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
382	4"	5 1/2"	\$24.00
383	5 1/2"	6 3/4"	27.00

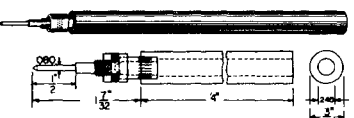
### SOLDERLESS TEST PROD—Force Fit Type Extra Large Inside Diameter



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Extra large I.D. for heavy duty wire. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
352	4"	5 1/2"	\$24.00
353	5 1/2"	6 3/4"	27.00

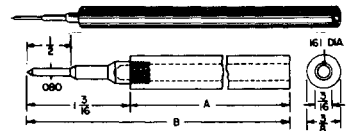
### SOLDERLESS FIBRE TEST PROD Extra Large Inside Diameter



**HANDLE:** FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Large I.D. permits use of heavy duty wire. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
323	4"	5 1/2"	\$30.00

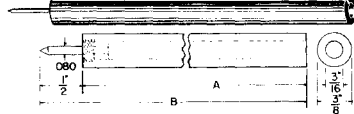
### HEAVY DUTY TEST PROD—Threaded Type



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
319	4"	5 1/2"	\$30.00
329	5 1/2"	6 3/4"	33.00

### SHORT TIP TEST PROD



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Inserts flush with insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
363	4"	4 1/2"	\$21.00
364	5 1/2"	6"	24.00

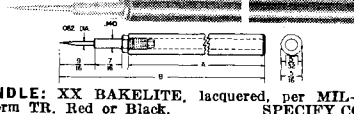
### PHONO NEEDLE TEST PROD



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, cont. duty.  
**DESCR.:** Removable chuck for easy replacement or broken needles. Needle pierces corrosion or plating for positive reading. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
317	4"	4 1/2"	\$30.00
318	5 1/2"	6 1/2"	33.00

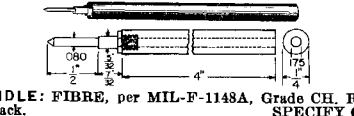
### SOLDERLESS PHONO NEEDLE TEST PROD



**HANDLE:** XX BAKELITE, lacquered, per MIL-P-79, Form TR. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**NEEDLE:** Phono needle, steel.  
**RATING:** 12 Amps AC for 10°C Temp. rise, cont. duty.  
**DESCR.:** Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to pellet for solderless connections. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
314	4"	5 1/2"	\$75.00
313	5 1/2"	7 1/2"	81.00

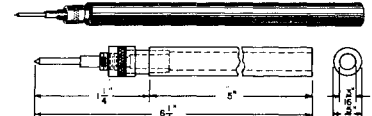
### SUB-MINIATURE TEST PROD



**HANDLE:** FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY COLOR  
**TIP:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, cont. duty.  
**DESCR.:** Threaded for easy assembly. Ideally suited for checking all types sub-miniature equipment. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
322	4"	5 1/2"	\$24.00

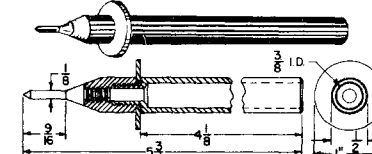
### PENCIL TYPE SOLDERLESS TEST PROD



**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class 2. Red or Black. SPECIFY COLOR  
**PLUG:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless: Wire fits through handle and body of plug, then wraps around screw portion and is tightened with knurled collar. Std. Pkg. 25

No.	Force Fit Type	NET Per C
384		\$21.00

### TEST PROBE HIGH VOLTAGE TYPE

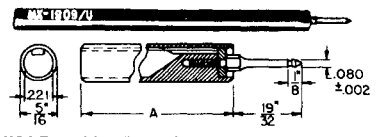


**HANDLE:** FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY COLOR  
**PROBE:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty. 15 KV 60 cycle AC continuous working voltage.  
**DESCR.:** Heavy insulated fibre probe with flash-over shield for high-voltage applications. Large internal I.D. accommodates shielded cable or R.F. networks. Heavy duty removal tip. Std. Pkg. 10

No.	NET Per C
630	\$ 72
630D	8.64

Display of 12

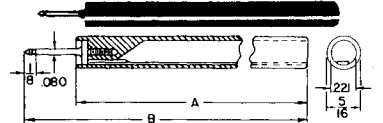
### NYLON HANDLE PRODS AND TIPS



**HANDLE:** MOLDED NYLON, per MIL-P20693A. Specify color as coded above.  
**TIP:** Brass, silver plated.  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Solderless. Made to meet Signal Corps Drawing SC-C-82781. Std. Pkg. 25

No.	Sig. Corps. Drawing and Part No.	Size ("A")	Color	NET Per C
176	MX-1906/U	1"	Red	\$54.00
177	MX-1907/U	1"	Black	54.00
178	MX-1909/U	4"	Red	60.00
179	MX-1910/U	4"	Black	60.00

### SUB-MINIATURE TEST PROD



**HANDLE:** Molded Nylon, per MIL-P-20693A. Available in Red or Black. SPECIFY COLOR  
**TIP:** Brass, Silver plated.  
**DESCR.:** Solderless assembly. Ideal for use with sub miniature printed-circuit tip jacks. Sharp tip break flux or oxide coating on printed-circuit pattern for positive contact when used as prod. Grooved head of prod makes positive contact when laid across wires. Fits all standard .080" tip jacks. Std. Pkg. 2

No.	Handle (A)	Overall (B)	NET Per C
348	1"	1 1/2"	\$15.00
349	4"	4 1/2"	30.00

### RADIO CHASSIS PUNCHES

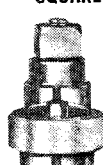
An assortment of round, square, "D", an Keyed holes can be punched by inserting a drilled pilot hole, and turning with wrench. Finished hole is smooth, accurately size without burrs. Round punches are provide with center-line markings for alignment holes larger than pilot hole. Individually packed in re-usable plastic box for keeps punch sharp and rust-free.



ROUND



SQUARE



"KEY"



"D"

### ROUND HOLE PUNCHES

No.	Hole Size	NET Ea.	No.	Hole Size	NET Ea.
3801	1/2"	\$2.60	3814	1 1/4"	\$3.10
3802	5/8"	2.80	3815	1 1/2"	3.10
3803	3/4"	2.80	3816	1 3/4"	3.10
3804	1"	2.80	3817	1 1/2"	4.10
3805	3/4"	2.60	3818	1 1/2"	4.10
3806	5/8"	2.60	3819	1 3/4"	5.10
3807	3/4"	2.60	3820	1 1/2"	6.10
3808	1"	2.85	3821	2"	7.10
3809	1 1/4"	2.85	3822	2 1/8"	11.10
3810	1 1/2"	3.00	3823	2 1/4"	7.10
3811	1 3/4"	3.00	3824	2 1/2"	19.10
3812	1 1/2"	3.00	3825	2 3/8"	18.10
3813	1 3/4"	3.00	3826	3"	25.10

### SQUARE PUNCHES

No.	Hole Size	NET Ea.	No.	Hole Size	NET Ea.
3827	1/2"	4.85	3830	7/8"	6.10
3828	5/8"	5.00	3831	1"	6.10
3829	3/4"	5.70			

### "KEY" PUNCHES

No.	Hole Size	NET Ea.	No.	Hole Size	NET Ea.
3832	1 1/2"	5.00	3834	1 1/4"	5.10
3833	1 3/4"	5.00	3835	1 3/4"	6.10

### METER HOLE PUNCH

No.	Hole Size	NET Ea.
3836	2 3/4"	12.10

### "D" PUNCHES

No.	Hole Size	NET Ea.
3837	1/2 x 1 1/2"	4.50
3839	5/8 x 1 1/2"	4.10

### BALL BEARING DRIVE SCREWS

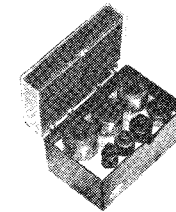
Reduces friction and effort when punch round holes 1/4" and larger. For use on Round punches listed above.

No.	Use with Nos.	NET
3839	3804 to 3808	\$1.10
3840	3809 to 3817	1.10
3841	3818 to 3819	1.10
3842	3820 to 3824 and 3826	1.10
3843	3825 to 3826	1.10

### CHASSIS PUNCH SET

A set of 7 of the most of used chassis punch sizes electronic construction. Pac in a plastic platform box keep punches sharp and rust free. Contains the following sizes: 1/8", 5/16", 3/16", 1/4", 1/2", 3/8", 1/2".

No.	NET
3844	\$2.10

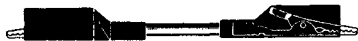




# SMITH JUMPERS & PATCH CORDS

**COLOR CODE SUFFIX**  
 Add to Catalog Number as required  
 —101 WHITE —103 BLACK —105 BLUE  
 —102 RED —104 GREEN —107 YELLOW

**STANDARD ALLIGATOR CLIP TO PIN PLUG**



**CLIPS:** STEEL, Cadmium plated (No. 300)  
**BOOTS:** Vinyl plastic (No. 331). Boot colors match wire.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Available in Red, Black, Yellow, Green, Blue, and White.

No.	Length	Std. Pkg. 10	Net Ea.
1596-12	12 inches		\$.40
1596-24	24 inches		.43
1596-36	36 inches		.48
1596-48	48 inches		.51
1596-60	60 inches		.55

**MINIATURE ALLIGATOR CLIP BOTH ENDS**



**CLIPS:** STEEL, Cadmium plated (No. 338).  
**BOOTS:** Vinyl plastic (No. 389). Boot colors match wire.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** General purpose, PVC insulated 1/64" wall, #18 AWG, 16/30 stranded conductor. Available in Red, Black, Yellow, Green, Blue, and White.

No.	Length	Std. Pkg. 10	Net Ea.
1597-12	12 inches		\$.40
1597-18	18 inches		.42
1597-24	24 inches		.43
1597-36	36 inches		.48
1597-48	48 inches		.51
1597-60	60 inches		.55

**STANDARD ALLIGATOR CLIP TO BANANA PLUG**



**HANDLES:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR  
**PLUG:** Hex brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**CLIPS:** STEEL, Cadmium plated (No. 300) match wire.  
**BOOTS:** Vinyl plastic (No. 331). Boot colors match wire.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Std. Pkg. 10	Net Ea.
1866-12	12 inches		\$.45
1866-24	24 inches		.50
1866-36	36 inches		.55
1866-48	48 inches		.60
1866-60	60 inches		.65

**STANDARD ALLIGATOR CLIP TO SPADE LUG**



**HANDLES:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red, Black, Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR  
**LUG:** Brass, .050 thick, nickel plated.  
**CLIPS:** STEEL, Cadmium plated (No. 300).  
**BOOTS:** Vinyl plastic (No. 331). Boot colors match wire.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Std. Pkg. 10	Net Ea.
1867-12	12 inches		\$.35
1867-24	24 inches		.40
1867-36	36 inches		.45
1867-48	48 inches		.50
1867-60	60 inches		.55

**SPADE LUG BOTH ENDS**



**HANDLES:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red, Black, Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR  
**LUG:** Brass, .050 thick, nickel plated.  
**RATING:** 25 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Std. Pkg. 10	Net Ea.
1864-12	12 inches		\$.30
1864-24	24 inches		.35
1864-36	36 inches		.40
1864-48	48 inches		.45
1864-60	60 inches		.50

**STANDARD ALLIGATOR CLIP TO PIN PLUG**



**HANDLES:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR  
**PLUG:** Brass, nickel plated.  
**CLIPS:** STEEL, Cadmium plated (No. 300).  
**BOOTS:** Vinyl plastic (No. 331). Boot colors match wire.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Std. Pkg. 10	Net Ea.
1865-12	12 inches		\$.40
1865-24	24 inches		.45
1865-36	36 inches		.50
1865-48	48 inches		.55
1865-60	60 inches		.60

**PIN PLUG BOTH ENDS**



**HANDLES:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR  
**PLUGS:** Brass, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Std. Pkg. 10	Net Ea.
1862-12	12 inches		\$.50
1862-24	24 inches		.55
1862-36	36 inches		.60
1862-48	48 inches		.65
1862-60	60 inches		.70

**PIN PLUG TO BANANA PLUG**



**HANDLES:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR  
**PLUGS:** Brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Std. Pkg. 10	Net Ea.
1868-12	12 inches		\$.50
1868-24	24 inches		.55
1868-36	36 inches		.60
1868-48	48 inches		.65
1868-60	60 inches		.70

**BANANA PLUG BOTH ENDS**



**HANDLES:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR  
**PLUGS:** Brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140". Std. Pkg. 10

No.	Length	Std. Pkg. 10	Net Ea.
1863-12	12 inches		\$.60
1863-24	24 inches		.65
1863-36	36 inches		.70
1863-48	48 inches		.75
1863-60	60 inches		.80

**"CROSS PATCH" BANANA PLUG CORD**



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140".  
**DESCR.:** Interconnects unlimited number of multiple circuits. Positive, lasting contact for all banana plugs on top and side. Std. Pkg. 10

**WITH PLUG SPRING 9/16" LONG**

No.	Length ("A")	NET Per C
1510-8	8 inches	\$90.00
1510-12	12 inches	90.00
1510-24	24 inches	90.00
1510-36	36 inches	102.00

**WITH PLUG SPRING 13/32" LONG**

No.	Length ("A")	NET Per C
1515-8	8 inches	90.00
1515-12	12 inches	90.00
1515-24	24 inches	96.00
1515-36	36 inches	102.00

**"CROSS PATCH" PIN TIP CORD**



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Red, Black, Yellow, Green, Blue, White. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**CONTACT:** Beryllium copper.  
**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, insulated to an O.D. of .140".

**DESCR.:** Interconnects an unlimited number of multiple circuits. .080" tip plug and female jack in rear of body fits all standard phone tips and jacks. Side holes accept standard banana plugs. Std. Pkg. 10

No.	Length ("A")	NET Per C
1595-8	8 inches	\$90.00
1595-12	12 inches	90.00
1595-24	24 inches	96.00
1595-36	36 inches	102.00

**"CROSS PATCH" CORD**



**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green assemblies. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved, beryllium copper, nickel plated.

**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140".

**DESCR.:** Provides a never ending banana plug receptacle, and can be used to interconnect an unlimited amount of multiple circuits. Accepts standard banana plug in side. Std. Pkg. 10

No.	Length ("A")	NET Per C
680	8 inches	\$87.00
681	12 inches	93.00
682	24 inches	99.00
683	36 inches	105.00

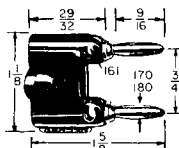
**FOR YOUR SPECIAL REQUIREMENTS IN**  
 • PATCH CORDS • JUMPERS • TEST LEADS •  
**WHAT DO YOU NEED?**

We are equipped to manufacture Patch Cords, Jumpers and Test Leads in every conceivable combination of terminal ends — plugs, jacks, clips and connectors — to be found in our entire line.

What are YOUR special requirements? We welcome your inquiry!

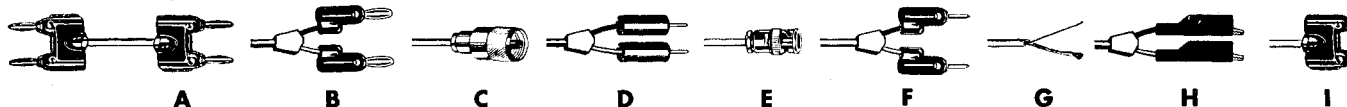


# SMITH DOUBLE BANANA PATCH CORDS



## CABLE TYPES AVAILABLE

	WIRE "A"	WIRE "B"	WIRE "C"
DESCRIPTION	2-cond. tw. 18 ga. 65/36 str.	Shielded audio cable	Coaxial Cable RG58C/U.
INSULATION	Vinyl	Polyethylene	Polyethylene
JACKET	Vinyl, Color Grey	Vinyl, Color Grey	Vinyl, Color Black
NOM. CAP.	30 mmf./ft.	25 mmf./ft.	28.5 mmf./ft.



**A DOUBLE PLUG BOTH ENDS**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits top and side. Each end terminates with molded double banana plug.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1530-12	1540-12	1580-12	12"	\$2.15
1530-24	1540-24	1580-24	24"	2.28
1530-36	1540-36	1580-36	36"	2.40
1530-48	1540-48	1580-48	48"	2.52
1530-60	1540-60	1580-48	60"	2.65

**D PLUG TO PHONE TIP**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**WIRE:** Our No. 203.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana plug, other end with insulated tip plug, one red and one black.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1533-12	1543-12	1583-12	12"	\$1.55
1533-24	1543-24	1583-24	24"	1.68
1533-36	1543-36	1583-36	36"	1.80
1533-48	1543-48	1583-48	48"	1.92
1533-60	1543-60	1583-60	60"	2.05

**G PLUG TO TINNED LEADS**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on the side. One end terminates with double banana plug, other end stripped and tinned.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1532-12	1542-12	1582-12	12"	\$1.19
1532-24	1542-24	1582-24	24"	1.32
1532-36	1542-36	1582-36	36"	1.44
1532-48	1542-48	1582-48	48"	1.56
1532-60	1542-60	1582-60	60"	1.69

**B PLUG TO "CROSS-PATCH" BANANA PLUGS**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**PLUG:** Our No. 1510.  
**DESCR.:** Mates with standard dual binding post having 3/4" centers. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana plug, other end with "Cross-Patch" banana plugs, color coded Red and Black.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1523-12	1524-12	1525-12	12"	\$2.15
1523-24	1524-24	1525-24	24"	2.28
1523-36	1524-36	1525-36	36"	2.40
1523-48	1524-48	1525-48	48"	2.52
1523-60	1524-60	1525-60	60"	2.65

**E PLUG TO UG 88C/U**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**CONN.:** UG 88C/U.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana plug, other end with UG 88 C/U.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1544-12	1544-12	1584-12	12"	\$2.76
1544-24	1544-24	1584-24	24"	2.88
1544-36	1544-36	1584-36	36"	3.00
1544-48	1544-48	1584-48	48"	3.12
1544-60	1544-60	1584-60	60"	3.24

**H DOUBLE PLUG TO ALLIGATOR CLIPS**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**CLIP:** Steel cadmium plated (No. 300).  
**INSUL.:** Molded vinyl plastic (No. 331).  
**WIRE:** As specified above.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana plug, other end with insulated alligator clips, one red one black.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1531-12	1541-12	1581-12	12"	\$1.5
1531-24	1541-24	1581-24	24"	1.6
1531-36	1541-36	1581-36	36"	1.8
1531-48	1541-48	1581-48	48"	1.9
1531-60	1541-60	1581-60	60"	2.0

**C DOUBLE PLUG TO PL 259**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**CONN.:** PL-259A.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on side. One end terminates with double banana plug, other end with PL-259A.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1545-12	1545-12	1585-12	12"	\$2.88
1545-24	1545-24	1585-24	24"	3.00
1545-36	1545-36	1585-36	36"	3.12
1545-48	1545-48	1585-48	48"	3.24
1545-60	1545-60	1585-60	60"	3.36

**F PLUG TO "CROSS PATCH" PIN PLUGS**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**PLUG:** Our No. 1595.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana plug, other end with "Cross-Patch" Pin plugs with standard .080" tip and jack in rear, banana jack in side, color coded Red and Black.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1592-12	1593-12	1594-12	12"	\$2.15
1592-24	1593-24	1594-24	24"	2.28
1592-36	1593-36	1594-36	36"	2.40
1592-48	1593-48	1594-48	48"	2.52
1592-60	1593-60	1594-60	60"	2.65

**I DOUBLE JACK TO DOUBLE PLUG**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**DESCR.:** Mates with standard dual binding post having 3/4" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits top and side. One end terminates with molded double banana plug, other end in double extension jack.  
 Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1881-12	1822-12	1883-12	12"	\$2.1
1881-24	1882-24	1883-24	24"	2.2
1881-36	1882-36	1883-36	36"	2.4
1881-48	1882-48	1883-48	48"	2.2
1881-60	1882-60	1883-60	60"	2.1

**COMBINATION BINDING POST AND BANANA PLUG**  
**HEAD:** CAPTIVE, Molded Butyrate, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**RATING:** 15 AMPS AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Converts any panel-mounted banana jack into a five-way binding post termination. Accepts phone tip, spade lug, banana plug, alligator clip, or solid or stranded wire.  
 Std. Pkg. 25

No.	NET Per C
233	\$27.00

**COMBINATION NYLON BINDING POST AND BANANA PLUG**  
**HEAD:** CAPTIVE, Molded Nylon, per MIL-P-20693A. Available in Red, Black, Yellow, Green, Blue, White. Molded-in brass nickel plated insert. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Converts any panel-mounted banana jack into a nylon five-way binding post termination. Accepts phone tips, spade lugs, banana plug, alligator clips, or solid or stranded wires.  
 Std. Pkg. 25

No.	NET Per C
234	\$27.00

**COMBINATION PUSH PO AND BANANA PLUG**  
**HEAD:** Captive, brass nickel plated.  
**CAP:** Molded Styrene, Fed. Spec. L-P416, T. Black.  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**RATING:** 15 Amps AC 10°C Temp. rise, continuous duty.  
**DESCR.:** Converts any panel-mounted banana jack into spring loaded push-post. Accepts standard phone solid or stranded wire, and locks them in place on relief of pressure on cap.  
 Std. Pkg. 10

No.	NET Per C
2714	\$42

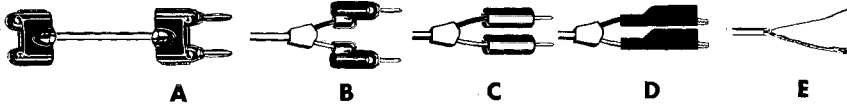
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# SMITH PATCH CORDS

## CABLE TYPES AVAILABLE

	WIRE "A"	WIRE "B"	WIRE "C"
<b>DESCRIPTION</b>	2-cond. tw. 18 ga. 65/36 str.	Shielded audio cable	Coaxial Cable RG58C*U.
<b>INSULATION</b>	Vinyl	Polyethylene	Polyethylene
<b>JACKET</b>	Vinyl, Color Grey	Vinyl, Color Grey	Vinyl, Color Black
<b>NOM. CAP.</b>	30 mmf./ft.	25 mmf./ft.	28.5 mmf./ft.



### A DOUBLE JACK TO "CROSS-PATCH" PLUGS

**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**BODY:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.  
**PLUG:** Our No. 1510. Red and black.

**DESCR.:** Mates with standard dual banana plugs having 3/8" centers. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana jack, other end with "Cross-Patch" banana plugs, color coded Red and Black. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1895-12	1896-12	1897-12	12"	\$2.15
1895-24	1896-24	1897-24	24"	2.28
1895-36	1896-36	1897-36	36"	2.40
1895-48	1896-48	1897-48	48"	2.52
1895-60	1896-60	1897-60	60"	2.65

### B DOUBLE JACK TO "CROSS-PATCH" PIN PLUGS

**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.  
**BODY:** Brass, nickel plated.  
**WIRE:** As specified above.  
**PLUG:** Our No. 1595. Red and black.

**DESCR.:** Mates with standard dual banana plugs having 3/8" centers. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits on top and side. One end terminates with double banana jacks, other end with "Cross-Patch" Pin plugs with standard .080" tip and jack in rear, banana jack in side, color coded Red and Black.

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1861-12	1898-12	1899-12	12"	\$2.15
1861-24	1898-24	1899-24	24"	2.28
1861-36	1898-36	1899-36	36"	2.40
1861-48	1898-48	1899-48	48"	2.52
1861-60	1898-60	1899-60	60"	2.65

### UHF COAXIAL CABLE CONNECTORS

#### Solder Type

t.F. Connectors for use with RG-8, 9, 10, 11, 12, 63, 65/U coaxial cables. Std. Pkg. 5



### STRAIGHT COAXIAL CONNECTOR

Brass, Silver-plated shell.  
 No. Type NET Per C  
 1713 PL-259 \$67.50



### CHASSIS TYPE COAXIAL RECEPTACLE

1715 SO-239 \$67.50



### COAXIAL JUNCTION

For joining separate cable lengths.  
 1716 PL-258 \$121.50

### RF COAXIAL CABLE CONNECTORS



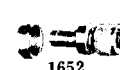
Small, weatherproof low-voltage connectors with bayonet action for quick-disconnect. Constant impedance, 50 ohms. Brass, silver-plated. For RG-55 and 58/U Cables. Std. Pkg. 5

No.	Type	Description	Each
17	UG-88C/U	Plug	\$8.1
18	UG-913/U	90° Plug	2.70
19	UG-290AA/U	Receptacle	1.08
10	UG-89B/U	Jack	1.35

### SOLDERLESS COAXIAL CABLE CONNECTORS

For RG-8/U, RG-11/U, RG-13/U and RG-59/U Cables  
 Designed to use the inner conductor of the coaxial cable for the male pin. Can be wrench-tightened for positive contact. Brass, silver plated. Std. Pkg. 25

#### Crimp Type



#### MALE CONNECTORS

Both types mate with female chassis fitting #1600 and Female Coupling #1680. Designed for quick and easy assembly using #1752 Crimping Tool. Withstands 350-lb pull when assembled. Packaged individually, with instruction sheet. Std. Pkg. 25



No.	For Cables	NET Ea.
1652	RG-59/U	\$ .48
1652D	Display of 24	11.52
1655	RG-6/U	.63
1656D	Display of 24	15.12
1752	Crimping Tool	8.00

#### FEMALE CHASSIS FITTING

Mates with #1652 connector. Mounts in 3/16" hole. Threaded stem is 3/8".



No.	NET Ea.
1660	Individually Packaged \$ .48
1660D	Display of 24 11.52

#### FEMALE COUPLING

Accepts two #1680, 1652 or 1656 connectors.



No.	NET Ea.
1680	Individually Packaged \$ .60
1680D	Display of 24 14.40

### SHIELDED DOUBLE PLUG TO SHIELDED DOUBLE PLUG



**SHIELD:** Aluminum, black anodized.  
**BODY:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.

**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**DESCR.:** Mates with standard dual binding post having 3/8" center. Both ends terminate with double shielded banana plugs. Std. Pkg. 10

No. Wire	No. Wire	Length	NET Ea.
1876-12	1877-12	12 inches	\$7.50
1876-24	1877-24	24 inches	7.62
1876-36	1877-36	36 inches	7.75
1876-48	1877-48	48 inches	7.88
1876-60	1877-60	60 inches	8.00

### DOUBLE JACK TO SHIELDED DOUBLE PLUG



**SHIELD:** Aluminum, black anodized.  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Color to match wire.

**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** As specified above.

**DESCR.:** Mates with standard dual binding post having 3/8" center. Polarity indicated by the word GROUND molded on side. Interconnects unlimited number of multiple circuits top and side. One end terminates with molded double shielded banana plug, other end in double extension jack. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1884-12	1885-12	12"	\$5.15	
1884-24	1885-24	24"	5.28	
1884-36	1885-36	36"	5.40	
1884-48	1885-48	48"	5.52	
1884-60	1885-60	60"	5.65	

### BNC MALE TO SHIELDED DOUBLE PLUG



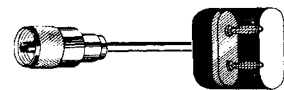
**BODY:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Assemblies.  
**SHIELD:** Aluminum, black anodized.

**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.  
**WIRE:** RG-58C/U.

**CONN.:** UG 88C/U. (BNC Series)  
**DESCR.:** Mates with standard dual binding post having 3/8" center. One end terminates with double shielded banana plug, other end with UG 88 C/U. Std. Pkg. 10

No.	Length	NET Ea.
1873-12	12 inches	\$6.00
1873-24	24 inches	6.12
1873-36	36 inches	6.25
1873-48	48 inches	6.38
1873-60	60 inches	6.50

### UHF MALE TO SHIELDED DOUBLE PLUG



**SHIELD:** Aluminum, black anodized.  
**BODY:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS.

**CONN.:** PL-259 (UHF Series).  
**PLUG:** Brass, nickel plated.  
**SPRING:** Four-leaved beryllium copper, nickel plated.

**DESCR.:** Mates with standard dual binding post having 3/8" center. One end terminates with double shielded banana plug, other end in UHF Conn. Std. Pkg. 10

No. Wire	No. Wire	Length	NET Ea.
1874-12	1875-12	12 inches	\$6.00
1874-24	1875-24	24 inches	6.12
1874-36	1875-36	36 inches	6.25
1874-48	1874-48	48 inches	6.38
1874-60	1875-60	60 inches	6.50

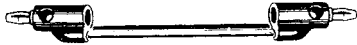


# SMITH JUMPERS & PATCH CORDS

**COLOR CODE SUFFIX**  
Add to Catalog Number as required

- 101 WHITE
- 102 RED
- 103 BLACK
- 104 GREEN
- 105 BLUE
- 106 ORANGE
- 107 YELLOW
- 108 BROWN
- 112 PURPLE
- 113 GREY

**SUB-MINIATURE "CROSS PATCH" CORD**



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. SPECIFY COLOR

**BODY:** Brass, silver plated.

**SPRING:** Four-leaved beryllium copper, silver plated.

**WIRE:** General purpose, PVC insulated, 1/64" wall, #18 AWG, 41/34 stranded conductor. Voltage rating up to 1 KV RMS.

**DESCR.:** Interconnects unlimited number of multiple circuits. Positive, lasting contact for banana plugs on top and side. Special lengths on request. Std. Pkg. 10

No.	Length ("A")	NET Per C
1590-6	8 inches	\$60.00
1590-12	12 inches	69.00
1590-18	18 inches	75.00
1590-24	24 inches	84.00

**NYLON HANDLE PATCH CORD**



**HANDLE:** MOLDED NYLON, per MIL-P-20693A, Red, Black, Yellow or Green. SPECIFY COLOR

**BODY:** Brass, nickel plated.

**SPRING:** Four-leaved beryllium copper, nickel plated.

**WIRE:** 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140".

**DESCR.:** Uses our standard No. 478 banana plug to interconnect circuits. Fits standard banana jacks. Std. Pkg. 10

No.	Length	NET Per C
1520-8	8 inches	\$54.00
1520-12	12 inches	60.00
1520-24	24 inches	66.00
1520-36	36 inches	72.00

**PATCH CORD**



**HANDLE:** MOLDED THERMOSETTING plastic. Red and Black per MIL-M-14 CFG. Yellow, Green and LC-721-1. SPECIFY COLOR

**BODY:** Brass, nickel plated.

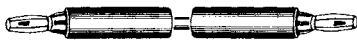
**SPRING:** Four-leaved beryllium copper, nickel plated.

**WIRE:** 10 KV PVC flexible wire, 85 strands #36 copper, insulated to an O.D. of .140".

**DESCR.:** Uses our standard No. 271 banana plug to interconnect circuits. Fits standard banana jacks. Std. Pkg. 10

No.	Length ("A")	NET Per C
690	8 inches	\$48.00
691	12 inches	54.00
692	24 inches	60.00
693	36 inches	66.00

**HIGH-CURRENT PATCH CORD**



**HANDLE:** MACHINED PHENOLIC plastic, per MIL-P-77B, Type 1, Red or Black assemblies. SPECIFY COLOR

**BODY:** Brass, nickel plated.

**SPRINGS:** Six-leaved, phosphor bronze, nickel plated.

**WIRE:** #10, PVC insulated stranded wire, 105 strands #30 tinned copper wire, insulated to an O.D. of .215".

**RATING:** 25 Amps AC for 10°C Temp. rise, continuous duty.

**DESCR.:** Tapered recessed plug so that no metal portions are exposed when plugged into mating jacks. Std. Pkg. 10

No.	Length	NET Per C
1591-8	8 inches	\$135.00
1591-12	12 inches	135.00
1591-24	24 inches	140.00
1591-36	36 inches	145.00

**CABLE TYPES AVAILABLE**

DESCRIPTION	WIRE "A"	WIRE "B"	WIRE "C"
	2-cond. tw. 18 ga. 65/36 str.	Shielded audio cable	Coaxial Cable RG58C/U.
INSULATION	Vinyl	Polyethylene	Polyethylene
JACKET	Vinyl, Color Grey	Vinyl, Color Grey	Vinyl, Color Black
NOM. CAP.	30 mmf./ft.	25 mmf./ft.	28.5 mmf./ft.

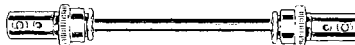
**BNC MALE BOTH ENDS**



CONN.: UG 88 C/U. (BNC Series)

No.	No.	No.	Lgth.	NET
Wire "A"	Wire "B"	Wire "C"		Ea.
1869-24	1539-12	1589-12	12"	\$4.00
—	1539-24	1589-24	24"	4.20
—	1539-36	1589-36	36"	4.32
—	1539-48	1589-48	48"	4.34
—	1539-60	1589-60	60"	4.55

**BNC FEMALE BOTH ENDS**



CONN.: UG-89B/U. (BNC Series)  
WIRE: RG-58C/U.

No.	Length	NET Ea.
1869-12	12 inches	\$3.75
1869-24	24 inches	3.85
1869-36	36 inches	4.00
1869-48	48 inches	4.15
1869-60	60 inches	4.25

**UHF MALE BOTH ENDS**



CONN.: PL-259. (UHF Series)

No.	No.	Length	NET
RG-58C/U	RG-11/U		Ea.
1871-12	1870-12	12 inches	\$4.50
1871-24	1870-24	24 inches	4.62
1871-36	1870-36	36 inches	4.75
1871-48	1870-48	48 inches	4.88
1871-60	1870-60	60 inches	5.00

**BNC FEMALE TO BNC MALE**



CONN.: UG-89B/U. (BNC Series)  
UG-89B/U. (BNC Series)  
WIRE: RG-58C/U.

No.	Length	NET Ea.
1878-12	12 inches	\$4.00
1878-24	24 inches	4.20
1878-36	36 inches	4.20
1878-48	48 inches	4.34
1878-60	60 inches	4.55

**BNC MALE TO ALLIGATOR CLIPS**



CONN.: UG-88C/U. (BNC Series)  
CLIPS: Steel Cad. Plated (#300).

INSUL.: Molded Vinyl (#331).  
WIRE: As specified above.

DESCR.: For testing of wave patterns etc. One end termination with UG-88C/U other end with insulated alligator clips, one red, one black. Std. Pkg. 10

No.	No.	No.	Lgth.	NET
Wire "A"	Wire "B"	Wire "C"		Ea.
—	1537-12	1587-12	12"	\$3.75
—	1537-24	1587-24	24"	3.98
—	1537-36	1587-36	36"	4.08
—	1537-48	1587-48	48"	4.20
—	1437-60	1587-60	60"	4.30

**RIGHT ANGLE BNC TO RIGHT ANGLE BNC**



CONN.: UC-913/U. (BNC Series)

WIRE: As specified above.  
DESCR.: Used for patching and jumping. Each end terminates with UG-913/U.

No.	No.	No.	Lgth.	NET
Wire "A"	Wire "B"	Wire "C"		Ea.
—	1538-12	1588-12	12"	\$5.88
—	1538-24	1588-24	24"	6.00
—	1538-36	1588-36	36"	6.12
—	1538-48	1588-48	48"	6.24
—	1538-60	1588-60	60"	6.35

**UHF MALE TO BNC MALE**



CONN.: UG-88C/U. (BNC Series)  
PL-259. (UHF Series)

No.	Length	NET Ea.
1879-12	12 inches	\$4.00
1879-24	24 inches	4.20
1879-36	36 inches	4.32
1879-48	48 inches	4.34
1879-60	60 inches	4.55

**UHF MALE TO BNC FEMALE**



CONN.: UG-89B/U. (BNC Series)  
PL-259. (UHF Series)

No.	Length	NET Ea.
1880-12	12 inches	\$4.21
1880-24	24 inches	4.41
1880-36	36 inches	4.51
1880-48	48 inches	4.51
1880-60	60 inches	4.71

**UHF MALE TO ALLIGATOR CLIPS**



CONN.: PL-259. (UHF Series)  
CLIPS: Steel Cad. Plated (#300).  
INSUL.: Molded Vinyl (#331).  
WIRE: As specified above.

DESCR.: For testing of wave patterns, etc. One end terminates with PL-259, other end with insulated alligator clips one red, one black. Std. Pkg. 1

No.	No.	No.	Lgth.	NET
BG-11/U	Wire "B"	Wire "C"		Ea.
1872-12	1536-12	1586-12	12"	\$3.7
1872-24	1536-24	1586-24	24"	3.1
1872-36	1536-36	1586-36	36"	4.0
1872-48	1536-48	1586-48	48"	4.1
1872-60	1536-60	1586-60	60"	4.1

**SPECIAL REQUIREMENTS?**

We are equipped to manufacture Probes, Test Leads, Jumpers, Patch Cords, etc., for NON-STANDARD applications. Our nationwide network of technically qualified sales-engineers is at your service, eager to help you with your special requirements and production runs.

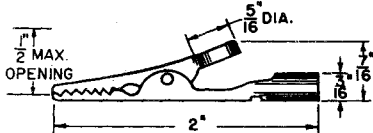
**HERMAN H. SMITH, INC. • Brooklyn 10, N. Y.**



# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

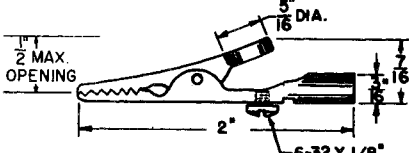
### ALLIGATOR CLIPS Solder Connection



**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** 1/2" jaw opening. Jaws match accurately and grip securely, accepts standard banana plugs in rear.

No.	Type	NET Per C	Std. Pkg. 100
300	Steel, Cad. Pl.	\$5.00	\$4.40
380	Solid Copper	7.50	6.50
392	Brass N.P.	10.40	8.40

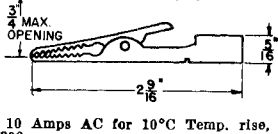
### Screw Connection



**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** 1/2" jaw opening. Supplied with screw for solderless connection when required. Jaws match accurately and grip securely. Accepts standard banana plugs in rear.

No.	Type	NET Per C	Std. Pkg. 100
350	Steel, Cad. Pl.	\$5.80	\$4.80
860	Solid Copper	8.40	7.20
399	Brass N.P.	13.00	9.50

### JUMBO ALLIGATOR CLIP Solder Connection



**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty, #392.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty, #396.  
**DESCR.:** 3/4" jaw opening. Jaws match accurately. For heavy terminal use.

No.	Type	NET Per C	Std. Pkg. 100
392	Steel, Cad. Pl.	\$15.00	
396	Solid Copper	18.00	

### Screw Connection

**RATING:** STEEL: 10 Amps AC for 10°C Temp. rise, continuous duty.  
**RATING:** COPPER: 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** 3/4" jaw opening. Jaws match accurately. Supplied with screw for solderless connection. For heavy terminal use.

No.	Type	NET Per C	Std. Pkg. 100
368	Steel, Cad. Pl.	\$18.00	
356	Solid Copper	21.00	

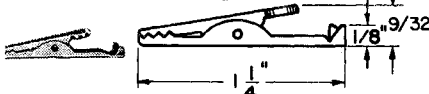
### ALLIGATOR CLIP BOOTS



**MATERIAL:** MOLDED VINYL PLASTIC, Red, Black, Yellow, Green, Blue or White. SPECIFY COLOR  
**RATING:** 1 K Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Fully insulated clip while allowing maximum jaw opening. No. 331 for use on standard size alligator clips such as our No. 300, No. 389 for use on miniature alligator clips, such as our No. 338.

No.	Description	NET Per C	Std. Pkg. 100
189	Miniature	\$4.80	\$4.00
131	Standard	4.80	4.00

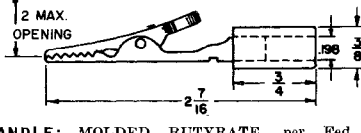
### MIDGET ALLIGATOR CLIP



**DESCR.:** 1/8" jaw opening, jaws match accurately and grip securely. Unique SMITH spring construction. Solder connection and ears for crimping.

No.	Type	NET Ea.	Std. Pkg. 100
38	Steel, Cad. Pl.	\$0.07	\$0.04
37	Copper	.07	.044

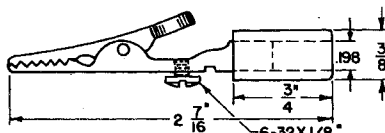
### INSULATED ALLIGATOR CLIPS Solder Connection



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** 1/2" jaw opening. Jaws match accurately and grip securely, accepts standard banana plugs in rear.

No.	Type	NET Per C	Std. Pkg. 100
301	Steel, Cad. Pl.	\$8.50	\$7.50
381	Solid Copper	10.50	9.00
354	Brass N.P.	15.00	11.40

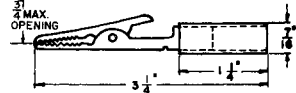
### Screw Connection



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** 1/2" jaw opening. Supplied with screw for solderless connection when required. Jaws match accurately and grip securely. Accepts standard banana plugs in rear.

No.	Type	NET Per C	Std. Pkg. 100
351	Steel, Cad. Pl.	\$9.50	\$8.00
361	Solid Copper	11.00	9.60
362	Brass N.P.	19.00	12.40

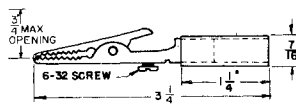
### INSULATED JUMBO ALLIGATOR CLIPS Solder Connection



**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II, Red or Black. SPECIFY COLOR  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty, #393.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty, #397.  
**DESCR.:** 3/4" jaw opening. Jaws match accurately. For heavy terminal use.

No.	Type	NET Per C	Std. Pkg. 100
393	Steel, Cad. Pl.	\$21.00	
397	Solid Copper	24.00	

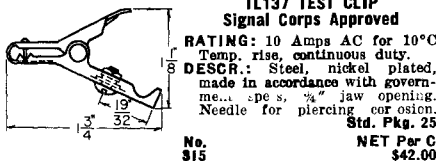
### Screw Connection



**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II, Red or Black. SPECIFY COLOR  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty, #369.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty, #357.  
**DESCR.:** 3/4" jaw opening. Jaw match accurately. Supplied with screw for solderless connection. For heavy terminal use.

No.	Type	NET Per C	Std. Pkg. 100
369	Steel, Cad. Pl.	\$24.00	
357	Solid Copper	27.00	

### TL137 TEST CLIP Signal Corps Approved



**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Steel, nickel plated, made in accordance with government specs, 1/8" jaw opening. Needle for piercing corrosion.

No.	NET Per C	Std. Pkg. 25
315	\$42.00	

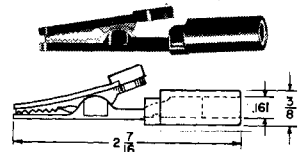
### BATTERY TEST CLIP



**MATERIAL:** Steel, electro plated.

No.	Spread	Lgth.	Rating	Spring	100	10
365	1/4"	1 1/2"	5 amp	7 lbs	4.20	.05
366	3/8"	2"	10 amp	10 lbs	6.00	.07

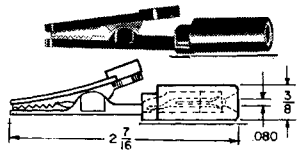
### All Insulated Clip



**INSULA.:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage.  
**DESCR.:** All metal parts fully insulated with molded plastic. Insures against shock or grounding. Solder type connection.

No.	NET Per C	Std. Pkg. 25
337	\$24.00	

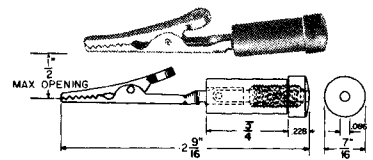
### ALL INSULATED ADAPTERS



**Phone Tip to Alligator Clip**  
**INSULA.:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**CLIP:** Steel, cadmium plated.  
**BODY:** Brass.  
**CONTACT:** Phosphor bronze.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** All metal parts fully insulated with molded plastic. Insures against shock or grounding. Jack in rear permits adapting standard phone tip plugs to alligator clips.

No.	NET Per C	Std. Pkg. 25
356	\$36.00	

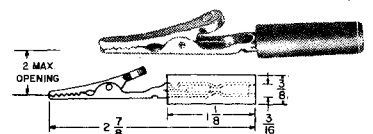
### ALLIGATOR CLIP ADAPTERS



**Phone Tip to Alligator Clip**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**CAP:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.  
**CLIP:** Steel, cadmium plated or solid copper.  
**BODY:** Brass.  
**SPRING:** Phosphor bronze.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Jack in rear permits adapting standard phone tip plugs to alligator clips.

No.	Description	NET Per C	Std. Pkg. 25
304	Steel Clip	\$33.00	
384	Copper Clip	36.00	

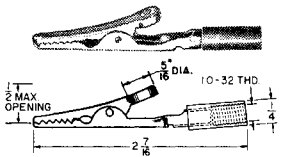
### Phone Tip or Banana Plug to Alligator Clip



**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR  
**CLIP:** Steel, cadmium plated or solid copper.  
**BODY:** Brass.  
**SPRING:** Phosphor bronze.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Combination jack in rear, permits the adapting standard phone tip plug or banana plugs to alligator clip.

No.	Description	NET Per C	Std. Pkg. 25
305	Steep Clip	\$39.00	
355	Copper Clip	42.00	

### ALLIGATOR CLIP ADAPTER



**BUSHING:** Brass, nickel plated.  
**CLIP:** Steel cadmium plated.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Adapts standard solderless tips to alligator clip. This novel quick-adapter is a must for all types of bench work.

No.	NET Per C	Std. Pkg. 50
310	\$13.20	

# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



## INSTRUMENT KNOBS



**Plain** Moulded black bakelite instrument knobs with molded in brass insert for 1/4" shafts. **Style B pointer knobs** have white vinyl pointer. **Style C skirt type** have white indicator line. **Style D** same as style A except with protruding brass insert for mounting special dials and pointers.

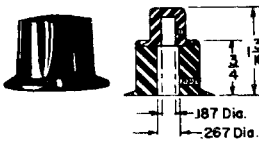
No.	Style	O.D.	Pointer Size	Height	Per C	NET
2200	A	1 1/2"		5/8"		\$28.20
2201	A	1 3/4"		1 1/4"		29.40
2202	A	1 5/8"		3/4"		33.60
2203	A	2 3/4"		7/8"		48.00
2204	B	1 1/2"	3/4" pointer	1 1/4"		44.40
2205	B	1 3/4"	1 1/4" pointer	1 3/4"		45.00
2206	B	1 5/8"	1 3/8" pointer	1 3/8"		48.00
2207	B	2 3/4"	1 3/8" pointer	1 3/8"		64.20
2208	C	1 1/2"	1 1/2" Skirt	1 3/8"		53.40
2209	C	1 3/4"	1 3/4" Skirt	1 3/8"		55.20
2210	C	1 5/8"	2 1/4" Skirt	1 3/8"		65.40
2211	C	2 3/4"	3" Skirt	1 3/8"		85.80
2212	D	1 1/2"		1 3/8"		34.80
2213	D	1 3/4"		1 3/8"		35.40
2214	D	1 5/8"		1 3/8"		40.20
2215	D	2 3/4"		1 3/8"		55.20
<b>SKIRT ONLY</b>						
2216		1 1/2"	Skirt only			10.80
2217		1 3/4"	Skirt only			12.60
2218		1 5/8"	Skirt only			14.40
2219		2 3/4"	Skirt only			21.00

### Matte Finish — Made to Meet MS-91531

Molded Black, Matte finish bakelite instrument knobs, with molded-in brass insert for 1/4" shafts. All knobs supplied with two (2) Allen-head set-screws. **Style B** pointer knobs have white vinyl pointer. **Style C** skirt knobs have white indicator line on skirt.

No.	Style	O.D.	Pointer size	Height	Per C	NET
2460	A	1 1/2"		5/8"		\$81.00
2461	A	1 3/4"		1 1/4"		99.00
2462	A	1 5/8"		3/4"		122.00
2463	B	1 1/2"	3/4" pointer	1 1/4"		92.00
2464	B	1 3/4"	1 1/4" pointer	1 3/4"		106.00
2465	B	1 5/8"	1 3/8" pointer	1 3/8"		132.00
2466	C	1 1/2"	1 1/2" skirt	1 3/8"		123.00
2467	C	1 3/4"	1 3/4" skirt	1 3/8"		152.00
2468	C	1 5/8"	2 1/4" skirt	1 3/8"		191.00

## FLUTED INSTRUMENT KNOBS



Molded black bakelite fluted instrument knobs, supplied with white-filled line on crown and skirt, opposite set-screw. Supplied with 1/4" plain hole with set-screw.

No.	Skirt Dia.	Height	Per C	NET
2391	3/8"	1 1/2"		\$21.00
2392	1 1/4"	1 3/4"		22.00
2393	1 1/2"	1 5/8"		24.00
2394	1 3/4"	1 3/4"		27.00
2395	1 5/8"	1 3/8"		45.00
2396	With 1/4" plain hole with set-screw			\$22.00

## CONCENTRIC FLUTED

Molded black and Red bakelite dual-concentric fluted instrument knobs. Outside knob is black with white filled line on skirt. Inner knob is red with white-filled line on skirt and crown. Both knobs supplied with set-screws.

No.	NET Per C
2897	\$44.00

## POINTER KNOBS



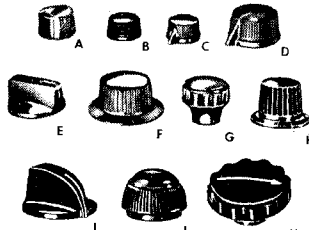
Molded bakelite pointer knobs, supplied with 1/4" plain hole or brass insert. Complete with set screw.

No.	Style	Type Hole	Color	NET Per C
2220	A	1/4" Plain	Black	\$10.80
2221	A	1/4" Plain	Walnut	11.40
2222	A	1/4" Plain	Ivory	12.00
2223	A	1/4" Brass Insert	Black	16.80
2224	A	1/4" Brass Insert	Walnut	17.40
2225	A	1/4" Brass Insert	Red	18.00
2226	B	1/4" Plain	Black	21.60
2227	B	1/4" Plain	Walnut	22.20
2228	B	1/4" Plain	Black	27.00
2229	B	1/4" Brass Insert	Walnut	27.00
2230	C	1/4" Plain	Black	13.80
2231	C	1/4" Plain	Walnut	14.40

## HERMAN H. SMITH, INC.

More than 2,000 electronic component parts manufactured under one roof.

## CONTROL KNOBS



Molded bakelite control knobs. Supplied with 1/4" molded hole; complete with set screw. \*Recessed for locknut.

No.	Style	O.D.	Height	Color	NET Per C
2240	A	3/4"	1 1/2"	Black	\$12.00
2241	A	5/4"	1 1/2"	Walnut	12.00
2242	B	1 1/4"	1 1/2"	Black	9.60
2243	B	1 1/4"	1 1/2"	Walnut	9.60
2244*	B	1"	1 1/2"	Black	13.20
2245*	B	1"	1 1/2"	Walnut	13.80
2275†	B	1 1/4"	1 1/2"	Black	21.60
2276†	B	1 1/4"	1 1/2"	Red	21.60
2246	C	1 1/4"	1 1/2"	Black	9.60
2247	C	1 1/4"	1 1/2"	Walnut	9.60
2273†	C	1 1/4"	1 1/2"	Black	21.60
2274†	C	1 1/4"	1 1/2"	Red	22.20
2248*	D	1"	1 1/2"	Black	16.80
2249*	D	1"	1 1/2"	Walnut	17.40
2251*	E	1 1/8"	3/4"	Black	14.40
2252*	F	1 1/8"	3/4"	Walnut	15.00
2253*	F	1 1/2"	1 1/4"	Black	17.40
2254*	F	1 1/2"	1 1/4"	Walnut	18.00
2255*	F	1 1/2"	1 1/4"	Ivory	19.20
2258	G	7/8"	3/4"	Black	15.00
2259	G	7/8"	3/4"	Walnut	15.60
2265	H	2 3/4"	1 1/2"	Black	13.80
2266	H	2 3/4"	1 1/2"	Red	14.40
2267	J	1 1/4"	5/8"	Black	12.60
2268	J	1 1/4"	5/8"	Red	13.80
2269	K	7/8"	5/8"	Black	14.40
2270	K	7/8"	5/8"	Red	18.60
2283	L	7/8"	1 1/2"	Black	19.20
2284	L	7/8"	1 1/2"	Red	19.80

† Supplied with brass insert.

## LEVER KNOBS



Molded bakelite lever knobs with 1/4" brass insert, complete with set screw.

No.	Style	Length	Height	Color	NET Per C
2232	A	1 5/8"	1 3/4"	Black	\$22.20
2233	A	1 5/8"	1 3/4"	Walnut	22.80
2234	B	1 1/4"	1 3/4"	Black	38.40
2235	B	1 1/4"	1 3/4"	Walnut	38.40
2236	C	2 1/4"	5/8"	Black	24.00
2237	C	2 1/4"	5/8"	Walnut	24.00
2238	D	2 1/4"	5/8"	Black	43.20
2239	D	2 1/4"	5/8"	Walnut	43.80

## KNOB DIAL PLATES



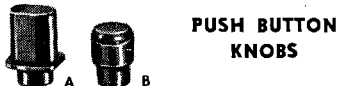
**DIAL: BRASS, chrome silver, 1 5/8" O.D.**  
**KNOB: Molded bakelite black (our 2250).**  
**DESCR.:** For matching dials on instruments, receivers, amplifiers. Dial has clear black etched numbers. Knob fits 1/4" shaft.

No.	Type	NET Each
2261	10 to 0 180 Degrees	\$7.25
2262	10 to 0 270 Degrees	.75
<b>DIAL PLATES ONLY 1/2" I.D.</b>		
2263	10 to 0 180 Degrees	.45
2264	10 to 0 270 Degrees	.45

**DIAL: Nickel silver, 1 5/8" O.D.**  
**KNOB: Molded bakelite.**

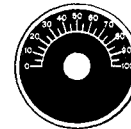
**DESCR.:** Engraved numerals, varnish coated. 10 to 0, in 360 degrees. Knob fits 1/4" shaft.

No.	NET Each
2290	\$7.50



## PUSH BUTTON KNOBS

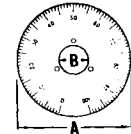
No.	Style	O.D.	Height	Color	NET Per C
2277	A	1 1/2"	5/8"	Black	\$7.20
2278	A	1 1/2"	5/8"	Red	8.40
2279	B	1 3/4"	5/8"	Black	4.80
2280	B	1 3/4"	5/8"	Red	6.00



## CONTROL PLATES

**MATERIAL:** Brass Black Satin Finish, Etched silver numerals.  
**DIMENSION:** 1 3/32" I.D. x O.D. as specified, x .020" thick.

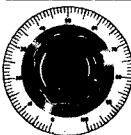
Clock-wise Calib. 0-100 No.	Counter-clockwise Calib. 100-0 No.	Degrees	O.D.	NET Per C
2900	2906	180	2"	\$45.00
2901	2907	270	2"	45.00
2902	2908	325	2"	45.00
2903	2909	180	3 1/2"	90.00
2904	2910	270	3 1/2"	90.00
2905	2911	325	3 1/2"	90.00



## DIAL PLATES

**MATERIAL:** Brass Chrome Silver Finish. .020" thick.  
**DESCR.:** Mounting Holes 3/64".

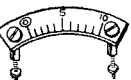
Clock-wise Calib. 0-100 No.	Counter-clockwise Calib. 100-0 No.	Degrees	A	B	NET Per C
2912	2928	180	1 1/8"	3/8"	\$45.00
2913	2929	270	1 1/8"	3/8"	45.00
2914	2930	325	1 1/8"	3/8"	45.00
2915	2931	360	1 1/8"	3/8"	45.00
2916	2932	180	1 3/4"	3/4"	60.00
2917	2933	270	1 3/4"	3/4"	60.00
2918	2934	325	1 3/4"	3/4"	60.00
2919	2935	360	1 3/4"	3/4"	60.00
2920	2936	180	2 3/4"	3/4"	75.00
2921	2937	270	2 3/4"	3/4"	75.00
2922	2938	325	2 3/4"	3/4"	75.00
2923	2939	360	2 3/4"	3/4"	75.00
2924	2940	180	4"	1 1/2"	120.00
2925	2941	270	4"	1 1/2"	120.00
2926	2942	325	4"	1 1/2"	120.00
2927	2943	360	4"	1 1/2"	120.00



## DIAL AND KNOB ASSEMBLY

**DIAL:** Brass Chrome Silver Finish. .020" thick.  
**KNOB:** Molded Bakelite with 1/4" Brass insert.

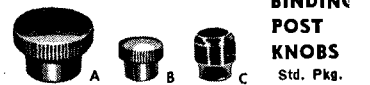
Clock-wise Calib. 0-100 No.	Counter-clockwise Calib. 100-0 No.	Degrees	O.D.	NET Eac
2960	2976	180	1 1/2"	\$1.3
2961	2977	270	1 1/2"	1.3
2962	2978	325	1 1/2"	1.3
2963	2979	360	1 1/2"	1.3
2964	2980	180	1 3/4"	1.4
2965	2981	270	1 3/4"	1.4
2966	2982	325	1 3/4"	1.4
2967	2983	360	1 3/4"	1.4
2968	2984	180	2 3/4"	3.0
2969	2985	270	2 3/4"	3.0
2970	2986	325	2 3/4"	3.0
2971	2987	360	2 3/4"	3.0
2972	2988	180	4"	3.4
2973	2989	270	4"	3.4
2974	2990	325	4"	3.4
2975	2991	360	4"	3.4



## VERNIER DIAL MARKERS

**MATERIAL:** Brass Chrome Silver Finish. Supplied with hardware.

No.	For °Dials	Dial O.D.	NET Per
2944	180	1 1/2"	\$30.0
2945	270	1 1/2"	30.0
2946	325	1 1/2"	30.0
2947	360	1 1/2"	30.0
2948	180	1 3/4"	30.0
2949	270	1 3/4"	30.0
2950	325	1 3/4"	30.0
2951	360	1 3/4"	30.0
2952	180	2 3/4"	30.0
2953	270	2 3/4"	30.0
2954	325	2 3/4"	30.0
2955	360	2 3/4"	30.0
2956	180	4"	30.0
2957	270	4"	30.0
2958	325	4"	30.0
2959	360	4"	30.0



## BINDING POST KNOBS

No.	Style	O.D.	Height	Color	NE Per
2271	A	3/4"	1 1/2"	Black	\$8.
2272	A	3/4"	1 1/2"	Red	9.
2285	B	1 1/2"	7/8"	Red	9.
2286	B	1 1/2"	7/8"	Black	9.
2287	C	1 1/2"	1 1/2"	Red	9.
2288	C	1 1/2"	1 1/2"	Black	9.



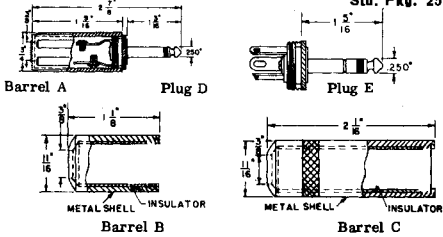


# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

### STANDARD PHONE PLUGS

**BODY:** Body, tip, and sleeve—Brass, nickel plated.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC working voltage.  
**DESCR.:** Fits standard phone jacks. Molded styrene separator insures maximum insulation between elements.  
**LUGS:** 2 circuit plugs are screw terminals with ribbed clips and cord anchor. 3 circuit plugs are solder lugs.  
 Std. Pkg. 25



### Bakelite Barrel

**BARREL:** MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR

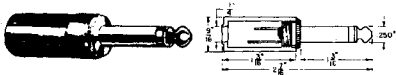
No.	Circuit	Terminals	Plug	Barrel	NET Per C
222	2	Screw	D	A	\$98.00
227	3	Solder	E	A	\$64.00

### Shielded Barrel

**BARREL:** BRASS, nickel plated with tubular insert.

No.	Circuit	Terminals	Plug	Barrel	NET Per C
252	2	Screw	D	C	\$54.00
272	2	Screw	D	C	\$6.00
228	3	Solder	E	B	\$90.00
238	3	Solder	E	C	\$111.00

### STANDARD PHONE PLUG Baby Bakelite Barrel



**BARREL:** MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR  
**BODY:** Body, tip, sleeve—Brass, nickel plated.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Molded styrene separator insures maximum insulation between conductors. Fits standard phone jacks.  
 Std. Pkg. 25

No.	Circuit	Terminals	NET Per C
143	Two	Solder	\$24.00

### PJ055 AND PJ068 PLUGS

**BARREL:** MOLDED plastic.  
**BODY:** Body, tip, sleeve—Machined brass.  
**TERM.:** Brass, hot tinned.  
**INSUL.:** Ethyl cellulose type EM-1 MIL-P-3412.  
**DESCR.:** Designed especially for high quality communications equipment and to meet the exacting requirements of the armed services. Parts are assembled together in a mold, providing a finished plug with complete continuity of thermo plastic insulation between the tip rod and plug sleeve.  
 Std. Pkg. 25

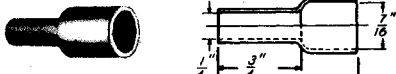
No.	Type	Each
117	PJ055B	\$1.35
147	PJ068B	\$3.65

### CORD CLAMP STRAIN RELIEF

**MATERIAL:** Cold Rolled Steel, per QQ-S-636. Finish zinc per Spec. 7253, Table II, Type I.  
**DESCR.:** Used on Government cord assemblies. Made in accordance with Signal Corps. Spec. SC-A-767.  
 Std. Pkg. 100

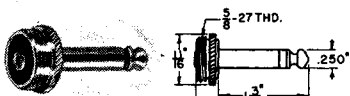
No.	NET Per C
747	\$1.80

### TELEPHONE CORD SLEEVE



**MATERIAL:** Neoprene in accordance with Grade SC415A5FP per MIL-R-3065.  
**DESCR.:** Used on Government cord assemblies, for Strain Relief, Dust and Moisture Seal.  
 Std. Pkg. 100

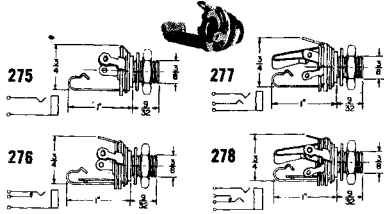
### PHONE PLUG ADAPTER



**BODY:** Body, Tip, Sleeve—Brass, nickel plated.  
**SUL.:** XXXP Bakelite.  
**DESCR.:** Mates with No. 116 microphone connector. Fits standard phone jacks.  
 Std. Pkg. 25

No.	NET Per C
116	\$30.00

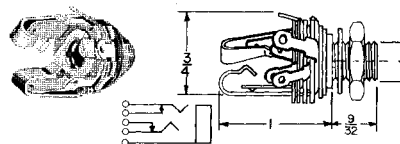
### TELEPHONE JACKS



**BUSHING:** BRASS, nickel plated.  
**INSUL.:** Bakelite, type PBE-P per MIL-P-3115B.  
**SPRING:** Nickel-Silver alloy, spring temper. New tapered design provides for ease of insertion while eliminating possibility of shorts.  
**SLEEVE TERM.:** Brass, hot tinned.  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty. 1.2 K Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Notched insulating washers accurately locate all parts, and eliminate possibility of shorts and arc-over. Springs designed for firm, low-resistance electrical contact. Bushings 3/4" long, threaded 3/32. Mounts in 3/8" hole in panels up to 1/2" thick. Overall diameter 7/8". Require 1" clearance behind panel. Supplied with 1/2" hex brass nut and 5/8" steel panel washer, all nickel plated.  
 Std. Pkg. 50

No.	Circuit	NET Per C
275	Two Conductor Open	\$27.00
276	Two Conductor Closed	\$30.00
277	Three Conductor Open	\$6.00
278	Three Conductor Closed	\$45.00

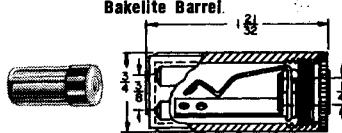
### STEREO TELEPHONE JACK



A new jack specially designed for switching-out speakers when connecting stereo headphones, and for switching three-wire stereo input circuits. Dual, normally-closed switch contacts open both stereo circuits independently when three circuit plug is inserted.  
 Std. Pkg. 50

No.	Circuit	NET Per C
268	Three Conductor Dual Closed	\$54.00

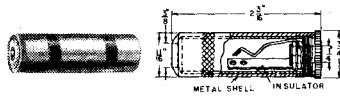
### IN-LINE EXTENSION JACK Bakelite Barrel



**BARREL:** MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR  
**BODY:** Brass, nickel plated.  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage.  
**SPRING:** Nickel, silver, special alloy, spring temper.  
**INSUL.:** XXXP Bakelite.  
**DESCR.:** For microphone and Hi-Fi extension cords. Mates with standard phone plugs.  
 Std. Pkg. 50

No.	Type	NET Per C
274	Solder Connection	\$54.00
288	Screw Connection	\$66.00

### Shielded Barrel



**BARREL:** Brass, nickel plated, with tubular insulator.  
**BODY:** Brass, nickel plated.  
**RATING:** 10 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage.  
**SPRING:** Nickel, silver, special alloy, spring temper.  
**INSUL.:** XXXP Bakelite.  
**DESCR.:** For microphone and Hi-Fi extension cords. Mates with standard phone plugs.  
 Std. Pkg. 25

No.	Type	NET Per C
279	Solder Connection	\$75.00
289	Screw Connection	\$84.00

### MINIATURE MICROPHONE CONNECTORS 3/32 THREAD

**DESCR.:** Ideal for lapel microphone, musical instruments, etc., wherever small cable is used. Accepts cable up to 3/16" diameter.  
 Std. Pkg. 50

No.	Type	Length	NET Per C
484	Single Contact Female	1 1/4"	\$36.00
485	Single Contact Male	1 1/4"	\$70.00

### CHASSIS CONNECTOR

Mounts in 3/16" hole grounded; 3/4" hole insulated with shoulder washer.

No.	NET Per C
486 Single Contact Male	\$21.00

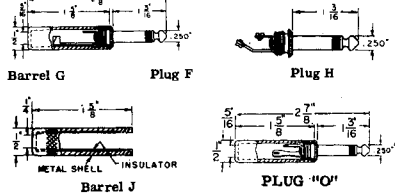
### CAP AND CHAIN

**DESCR.:** Brass, nickel plated. Seals chassis connectors against dust. Eliminates noisy connections. Used with any threaded one or two conductor chassis unit.  
 Std. Pkg. 10

No.	NET Per C
118 3/4-27 Thread	\$45.00

### SLIM PHONE PLUGS Cable Clamp Style

**BODY:** Body, tip, and sleeve—Brass, nickel plated.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Fits standard phone jacks. Molded styrene separator insures maximum insulation between elements.  
 Std. Pkg. 25



### Bakelite Barrel

**BARREL:** MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR

No.	Circuit	Terminals	Plug	Barrel	NET Per C
225	2	Solder	F	G	\$39.00
307	2	Solder	H	G	\$45.00

### Shielded Barrel

**BARREL:** BRASS, nickel plated with tubular insert.

No.	Circuit	Terminals	Plug	Barrel	NET Per C
226	2	Solder	F	J	\$60.00
316	2	Solder	H	J	\$63.00

### ECONOMY TYPE

**BODY:** Body, tip, sleeve—Brass, nickel plated.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage.  
**DESCR.:** An inexpensive modified version of our popular #225 and #225 plugs shown above. Features two small solder lugs.  
 Std. Pkg. 25

### Bakelite Barrel

**BARREL:** MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR

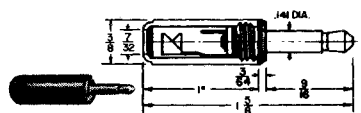
No.	Circuit	Terminals	Plug	Barrel	NET Per C
320	2	Solder	O	G	\$30.00

### Shielded Barrel

**BARREL:** BRASS, nickel plated with tubular insert.

No.	Circuit	Terminals	Plug	Barrel	NET Per C
330	2	Solder	O	J	\$39.00

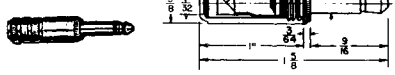
### MINIATURE PHONE PLUG



**HANDLE:** MOLDED plastic. Black.  
**BODY:** Body, tip, sleeve—Brass, nickel plated.  
**TERM.:** Brass, hot tin dipped.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 350 Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Designed for use with hearing aids, small meters, etc. Solder terminals.  
 Std. Pkg. 50

No.	NET Per C
480	\$42.00

### Shielded Barrel



**BARREL:** BRASS, nickel plated with tubular insulator.  
**BODY:** Body, tip, sleeve—Brass, nickel plated.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 350 Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Designed for use with hearing aids, small meters, etc. Solder terminals.  
 Std. Pkg. 50

No.	Circuit	NET Per C
481	Two Conductor	\$51.00

### MICROPHONE CONNECTORS



**BODY:** Brass, chrome plated.  
**SPRING:** Steel cadmium plated.  
**INSUL.:** XXXP Bakelite.  
**EYELET:** Brass, hot tinned for easy soldering.  
 Standard Type 3/4-27 Thread

**DESCR.:** Designed for use with single conductor cable. Microphone connectors provided with flexible protector spring. Cable clamped firmly to connector by hollow point set screw.  
 Std. Pkg. 50

No.	Type	Length	NET Per C
115	Single Contact Male	1 1/4"	\$21.00
116	Single Contact Female	2"	\$18.00

### CHASSIS CONNECTORS

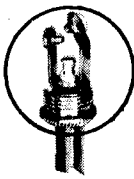
Mount in .385 hole grounded; .500 hole insulated with shoulder washer.

No.	NET Per C
117 Single Contact Male 3/4"	\$21.00

# HERMAN H. SMITH, INC.

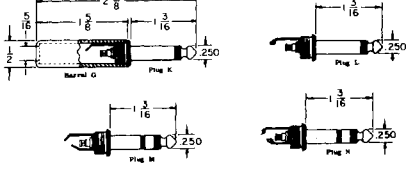


"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"




### IMPROVED "TURRET-CENTER" STYLE

**BODY:** Body, Tip, Ring, and sleeve — Brass, nickel plated.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 1.5 KV 60 cycle AC continuous working voltage.  
**DESCR.:** New, improved construction has co-axial "turret-terminal" tip lug and widely separated contacts for maximum voltage ratings. Styrene separator, Mylar sleeves, and Nylon bushings used for increased performance. Fits standard phone jacks. **Std. Pkg. 25**



**Bakelite Barrel**   
**BARREL:** MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. **SPECIFY COLOR**

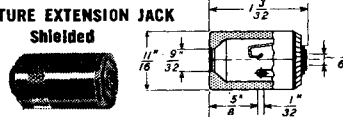
No.	Circuit	Terminals	Plug	Barrel	NET Per C
171	2	Solder	K	G	\$39.00
172	2	Screw	L	G	45.00
308	3	Solder	M	G	68.00
309	3	Screw	N	G	72.00

**Shielded Barrel**   
**BARREL:** BRASS, nickel plated with tubular insert. **Std. Pkg. 25**

No.	Circuit	Terminals	Plug	Barrel	NET Per C
173	2	Solder	K	J	\$60.00
174	2	Screw	L	J	68.00
311	3	Solder	M	J	78.00
312	3	Screw	N	J	84.00

**MINIATURE TELEPHONE JACKS**   
**BUSHING:** BRASS, nickel plated.  
**INSUL.:** XXXP bakelite, type PBE-P per MIL-P-3115A.  
**SPRING:** Nickel silver alloy, spring temper.  
**TERM.:** Brass, hot tinned.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 500 Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Niche insulation washers interlock springs and lugs, eliminate possibility of shifting which result in electrical shorts. Springs firmly hold mating plug. Supplied with hex brass nut and steel mounting washer all nickel plated. **Std. Pkg. 50**

No.	Circuit	NET Per C
482	Two Conductor, Open	\$24.00
483	Two Conductor, Closed	27.00

**MINIATURE EXTENSION JACK**   
**Shielded**  
**BARREL:** Brass, nickel plated.  
**BODY:** Brass, nickel plated.  
**SPRING:** Nickel silver alloy, spring temper.  
**INSUL.:** Bakelite.  
**RATING:** 5 Amps AC for 10°C Temp. rise, continuous duty. 500 Volts 60 cycle AC continuous working voltage.  
**DESCR.:** Mates with Miniature Phone Plugs. **Std. Pkg. 25**  
**no. 487** **NET Per C \$72.00**

**ADAPTER Tip Plug to Banana Plug**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. **SPECIFY COLOR**  
**CAP:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.  
**PLUG:** Brass, nickel plated.  
**CONTACT:** Phosphor Bronze.  
**SPRING:** Four-leaved phosphor bronze, nickel plated.  
**JACK:** Brass, nickel plated.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Accepts standard phone tip plugs and adapts to standard banana plugs. **Std. Pkg. 50**  
**No. 214** **NET Per C \$50.00**

**LABORATORY INTERCHANGE KIT**  
**DESCR.:** All parts interchangeable, converts any standard test lead to an all purpose unit. Packaged in an electronically sealed vinyl kit.  
 Consists of one Red, one Black of the following:  
 Phone tip No. 215 Spade lugs No. 218  
 Tip plug adapter No. 214  
 Alligator clip jack No. 305 **Std. Pkg. 1**  
**No. 640** **NET Ea. \$2.25**

**PHONE TIP PLUG SPLICE**  
**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. **SPECIFY COLOR**  
**CAP:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, per LC-726-1.  
**BODY:** Brass, nickel plated.  
**SPRING:** Phosphor bronze.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Invaluable for quick splicing connections or for test lead extension. Accepts standard phone tip plugs. **Std. Pkg. 50**  
**NET Per C \$27.00**

**BANANA PLUG SPLICE**  
**HANDLE:** MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. **SPECIFY COLOR**  
**INSERT:** Brass.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Invaluable for quick splicing connections. Accepts standard banana plugs. **Std. Pkg. 50**  
**NET Per C \$24.00**

**INSULATED SPADE LUG**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. **SPECIFY COLOR**  
**LUG:** Steel, hot tinned, .030 thick.  
**RATING:** 25 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Banana plug can be inserted into spade lug thru rear of handle. **Std. Pkg. 100**  
**No. Description NET Per C**  
 218 Insulated Spade Lug \$10.80  
 129 Lug Only 1.20

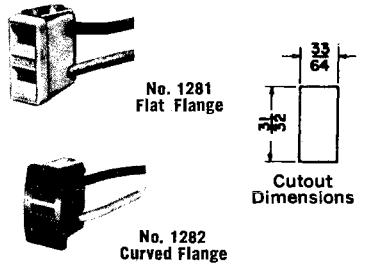
**ADAPTER Phone Tip to Spade Lug**  
**HANDLE:** MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3 Class MS. Red or Black. **SPECIFY COLOR**  
**CAP:** MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.  
**JACK:** Brass.  
**SPRING:** Phosphor Bronze.  
**SPADE LUG:** Steel hot tinned .030 thick.  
**RATING:** 15 Amps AC for 10°C Temp. rise, continuous duty.  
**DESCR.:** Tip jack accepts standard phone tip plugs and adapts to spade lug. **Std. Pkg. 50**  
**No. Deser. NET Per C**  
 249 Adapter \$33.00

## CONVENIENCE OUTLETS

For small unit electrical appliances and Electronic devices, UL Approved RADIOS — CLOCK TOASTERS, ETC.

RADIOS — CLOCKS — T.V. SETS — LAMPS — TOASTERS, ETC.

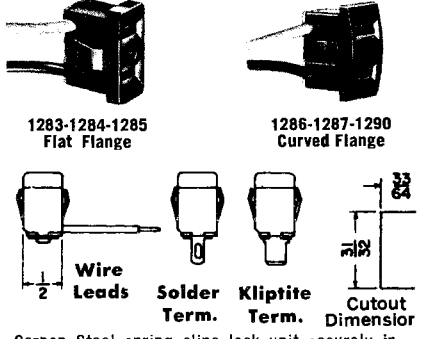
### SINGLE SCREW BRACKET TYPE WIRE LEADS



Can be dropped into opening and held in place by metal bracket and single central screw, supplied. UL Approved.  
**Rating:** 15 amps, 125 Volts AC or DC.  
**Leads:** Plastic wire #14 gauge, 6" long.

No.	COLOR	Std. Pkg. 50	NET Per C
1281-103	Black	\$17.00	
1281-101	White	19.00	
1282-103	Black	17.00	
1282-101	White	19.00	

### PUSH-IN SNAP-LOCK BRACKET TYPE

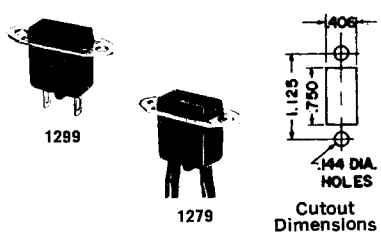


Carbon Steel spring clips lock unit securely in place when pushed into opening. UL Approved.  
**Rating:** 15 Amps, 125 Volts AC or DC.  
**Leads:** Plastic wire #14 gauge, 6" long.

No.	Terminals	Color	Std. Pkg. 50	NET Per C
1283-103	Wire Leads	Black	\$17.00	
1283-101	Wire Leads	White	19.00	
1284-103	Solder	Black	15.00	
1284-101	Solder	White	17.00	
1285-103	Kliptite	Black	15.00	
1285-101	Kliptite	White	17.00	
1286-103	Wire Leads	Black	15.00	
1286-101	Wire Leads	White	17.00	
1287-103	Solder	Black	15.00	
1287-101	Solder	White	17.00	
1290-103	Kliptite	Black	15.00	
1290-101	Kliptite	White	15.00	

### BRACKET TYPE

Top or Bottom Mount



Flat steel bracket mounts with two #6 screws or equivalent size eyelets from top or bottom. UL Approved.  
**Rating:** 15 Amps, 125 Volts AC or DC.  
**Leads:** No. 1279 has two leads, plastic wire #16 gauge, 8" long. UL Approved.

No.	Terminals	Std. Pkg. 50	NET Per C
1299	Solder	\$ 9.00	
1279	Wire Leads	22.00	

### THREE WIRE OUTLET (With grounding lead)



Carbon Steel spring clips lock unit securely in place when pushed into opening. UL Approved.  
**Rating:** 15 Amps, 125 Volts AC or DC.  
**Leads:** Two #14 gauge 6" long plastic wire and one #16 gauge green ground lead 6" long.  
**Std. Pkg. 50**  
**No. Color NET Per C**  
 1280-103 Black \$25.00  
 1280-101 White 27.00



# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



## TURRET TERMINALS

2021	2022	2023	2024	2025	2026	2027																																																																																																																																																																																																																																											
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2038C	.165	1/8																																																																																																																																																																																																																																															

**ADDITIONAL NUMBERS**

We invite your inquiries on other types of turret terminals not shown here.



# SMITH TEFLON TERMINALS



**COLOR CODE SUFFIX**

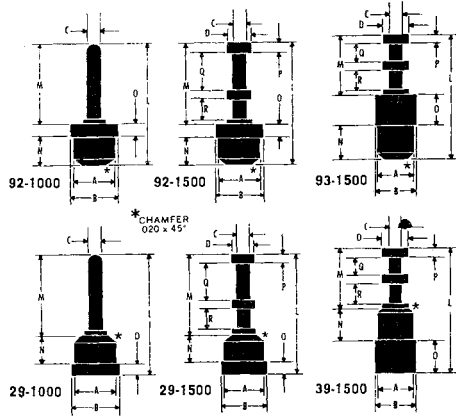
Add to Catalog Number as required

- 101 WHITE\*
- 102 RED
- 103 BLACK
- 104 GREEN
- 105 BLUE
- 106 ORANGE
- 107 YELLOW
- 108 BROWN
- 109 GREY
- 112 PURPLE
- 113 GREY

**PLATING FINISH**

STANDARD .0002 Silver Plate, Gold Flash.  
OTHER Finishes supplied on request.

\* WHITE is natural Teflon, supplied if no color specified. Color does not affect electrical, mechanical, physical or thermal characteristics. Std. Pkg. 100



SUBMINIATURE STANDOFF TERMINALS

PART NO.	A	B	C	L	M	N	O	Net Per C
92-1000	.148	.172	.040	.350	.210	.100	.040	\$ 9.00
92-1001	.148	.172	.040	.375	.210	.110	.050	9.00
92-1003	.172	.195	.040	.350	.210	.100	.040	11.00
92-1004	.179	.200	.040	.350	.210	.100	.040	11.00
92-1005	.218	.250	.040	.350	.210	.100	.040	12.00
92-1006	.148	.172	.040	.345	.210	.075	.060	9.00
92-1007	.148	.172	.040	.370	.210	.120	.040	11.00
92-1008	.148	.172	.040	.350	.210	.082	.078	11.00
92-1009	.148	.172	.040	.406	.210	.156	.040	11.00
92-1010	.148	.172	.040	.500	.210	.250	.040	12.00
92-1012	.148	.172	.040	.335	.210	.075	.050	9.00
92-1016	.148	.172	.040	.295	.125	.100	.040	11.00
92-1034	.093	.125	.040	.350	.210	.100	.040	10.00

REVERSE TYPE

29-1000	.148	.172	.040	.350	.210	.100	.040	\$11.00
29-1001	.148	.172	.040	.375	.210	.110	.050	11.00
29-1003	.172	.195	.040	.350	.210	.100	.040	12.00
29-1004	.179	.200	.040	.350	.210	.100	.040	12.00
29-1005	.218	.250	.040	.350	.210	.100	.040	13.00
29-1006	.148	.172	.040	.345	.210	.075	.060	11.00
29-1007	.148	.172	.040	.370	.210	.120	.040	12.00
29-1008	.148	.172	.040	.350	.210	.082	.078	11.00
29-1009	.148	.172	.040	.406	.210	.156	.040	12.00
29-1010	.148	.172	.040	.500	.210	.250	.040	13.00
29-1012	.148	.172	.040	.335	.210	.075	.050	11.00
29-1016	.148	.172	.040	.295	.125	.100	.040	11.00
29-1034	.093	.125	.040	.350	.210	.100	.040	11.00

SUBMINIATURE STANDOFF TURRET

PART No.	A	B	C	D	L	M	N	O	P	Q	R	NET Per C
92-1500	.148	.172	.040	.080	.350	.210	.100	.040	.020	.100	.050	\$10.00
92-1501	.148	.172	.040	.080	.375	.210	.125	.040	.020	.100	.050	10.00
92-1502	.179	.200	.040	.080	.350	.210	.100	.040	.020	.100	.050	12.00
92-1503	.185	.218	.040	.080	.375	.210	.125	.040	.020	.100	.050	12.00
92-1504	.148	.172	.040	.080	.345	.210	.125	.040	.020	.100	.050	12.00
92-1505	.148	.172	.040	.080	.428	.210	.125	.093	.020	.100	.050	12.00
92-1506	.148	.172	.040	.080	.455	.250	.165	.040	.020	.093	.097	12.00
92-1507	.148	.172	.040	.080	.500	.210	.250	.040	.020	.100	.050	11.00
92-1508	.185	.218	.040	.080	.350	.210	.100	.040	.020	.093	.097	10.00
92-1512	.148	.172	.040	.080	.405	.210	.155	.040	.020	.100	.050	13.00
92-1513	.171	.188	.040	.080	.405	.210	.155	.040	.020	.100	.050	13.00
92-1519	.148	.172	.040	.093	.334	.154	.140	.040	.020	.046	.048	12.00
92-1520	.172	.200	.040	.080	.320	.120	.125	.075	.020	—	.080	11.00
92-1521	.148	.172	.040	.080	.455	.227	.187	.040	.020	—	.087	10.00

REVERSE TYPE

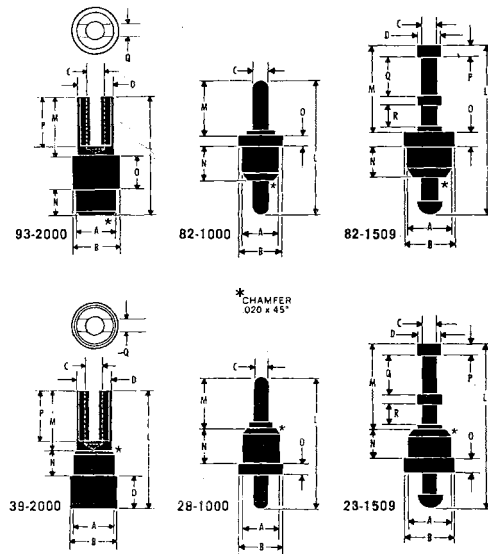
29-1500	.148	.172	.040	.080	.350	.210	.100	.040	.020	.100	.050	\$11.00
29-1501	.148	.172	.040	.080	.375	.210	.125	.040	.020	.100	.050	11.00
29-1502	.179	.200	.040	.080	.350	.210	.100	.040	.020	.100	.050	13.00
29-1503	.185	.218	.040	.080	.375	.210	.125	.040	.020	.100	.050	14.00
29-1504	.148	.172	.040	.093	.334	.154	.140	.040	.020	.046	.048	13.00
29-1505	.148	.172	.040	.080	.428	.210	.125	.093	.020	.100	.050	14.00
29-1506	.148	.172	.040	.093	.455	.250	.165	.040	.020	.093	.097	14.00
29-1507	.148	.172	.040	.080	.500	.210	.250	.040	.020	.100	.050	13.00
29-1508	.185	.218	.040	.080	.350	.210	.100	.040	.020	.093	.097	10.00
29-1512	.148	.172	.040	.093	.340	.250	.250	.040	.020	.093	.097	14.00
29-1513	.171	.188	.040	.080	.405	.210	.155	.040	.020	.100	.050	13.00
29-1519	.148	.172	.040	.093	.340	.154	.140	.040	.020	.046	.048	12.00
29-1520	.172	.200	.040	.080	.320	.120	.125	.075	.020	—	.080	12.00
29-1521	.148	.172	.040	.080	.455	.227	.187	.040	.020	—	.187	12.00

MINIATURE STANDOFF TURRET (set in 6 no. 20)

PART No.	A	B	C	D	L	M	N	O	P	Q	R	NET Per C
13-1500	.165	.187	.046	.093	.431	.156	.150	.125	.020	.046	.050	\$12.00
13-1501	.165	.187	.046	.093	.493	.156	.156	.187	.020	.046	.050	13.00
13-1502	.165	.187	.046	.093	.522	.250	.150	.125	.020	.093	.095	12.00
13-1503	.165	.187	.046	.125	.556	.281	.150	.125	.021	.093	.095	12.00
13-1504	.165	.187	.046	.093	.584	.250	.150	.187	.020	.093	.097	13.00
13-1505	.165	.187	.046	.093	.556	.156	.150	.250	.020	.046	.050	14.00
13-1506	.165	.187	.046	.125	.616	.281	.150	.187	.031	.093	.095	13.00
13-1507	.165	.187	.046	.125	.831	.281	.150	.400	.031	.093	.095	18.00
13-1508	.215	.250	.046	.125	.968	.281	.187	.500	.031	.093	.095	22.00
13-1509	.215	.250	.046	.125	1.268	.281	.187	.800	.031	.093	.095	31.00
13-1510	.171	.187	.046	.093	.431	.156	.150	.125	.020	.046	.050	12.00
13-1516	.148	.172	.040	.093	.482	.250	.110	.125	.020	.093	.097	12.00

REVERSE TYPE

9-1500	.165	.187	.046	.093	.431	.156	.150	.125	.020	.046	.050	\$13.00
9-1501	.165	.187	.046	.093	.493	.156	.150	.187	.020	.046	.050	14.00
9-1502	.165	.187	.046	.093	.552	.250	.150	.125	.020	.093	.097	13.00
9-1503	.165	.187	.046	.125	.556	.281	.150	.125	.031	.093	.095	13.00
9-1504	.165	.187	.046	.093	.584	.250	.150	.187	.020	.093	.097	14.00
9-1505	.165	.187	.046	.093	.556	.156	.150	.250	.020	.046	.050	14.00
9-1506	.165	.187	.046	.125	.616	.281	.150	.187	.031	.093	.095	14.00
9-1507	.165	.187	.046	.125	.831	.281	.150	.400	.031	.093	.095	19.00
9-1508	.215	.250	.046	.125	.968	.281	.187	.500	.031	.093	.095	23.00
9-1509	.215	.250	.046	.125	1.268	.281	.187	.800	.031	.093	.095	31.00
9-1510	.171	.187	.046	.093	.431	.156	.150	.125	.020	.046	.050	13.00
9-1518	.148	.172	.040	.093	.482	.250	.110	.125	.020	.093	.097	13.00



MINIATURE STANDOFF SLOTTED LUG

PART NO.	A	B	C	D	L	N	M	O	P	Q	NET Per C
93-2000	.171	.187	.078	.148	.478	.203	.150	.125	.156	.046	\$12.00
93-2001	.171	.187	.078	.148	.540	.203	.130	.187	.156	.046	13.00
93-2002	.171	.187	.078	.148	.603	.203	.130	.250	.156	.046	14.00
93-2003	.171	.187	.078	.148	.753	.203	.150	.400	.156	.046	18.00
93-2004	.217	.250	.078	.148	.890	.203	.187	.500	.156	.046	22.00
93-2005	.217	.250	.078	.148	1.190	.203	.187	.800	.156	.046	30.00

REVERSE TYPE

39-2000	.171	.187	.078	.148	.478	.203	.150	.125	.156	.046	\$13.00
39-2001	.171	.187	.078	.148	.540	.203	.150	.187	.156	.046	14.00
39-2002	.171	.187	.078	.148	.603	.203	.150	.250	.156	.046	15.00
39-2003	.171	.187	.078	.148	.753	.203	.150	.400	.156	.046	19.00
39-2004	.217	.250	.078	.148	.890	.203	.187	.500	.156	.046	23.00
39-2005	.217	.250	.078	.148	1.190	.203	.187	.800	.156	.046	31.00

SUBMINIATURE FEED-THRU TERMINALS

PART NO.	A	B	C	L	M	N	O	NET Per C
82-1000	.148	.172	.040	.443	.210	.100	.040	\$11.00
82-1001	.148	.172	.040	.410	.147	.110	.050	10.00
82-1002	.148	.172	.040	.410	.147	.110	.050	10.00
82-1003	.148	.172	.040	.515	.210	.100	.040	10.00
82-1004	.148	.172	.040	.535	.210	.110	.050	10.00
82-1005	.179	.200	.040	.515	.210	.100	.040	12.00
82-1006	.218	.250	.040	.515	.210	.100	.040	13.00
82-1007	.148	.172	.040	.535	.210	.120	.040	12.00
82-1008	.148	.172	.040	.535	.210	.132	.040	12.00



SMITH TEFLON TERMINALS



COLOR CODE SUFFIX

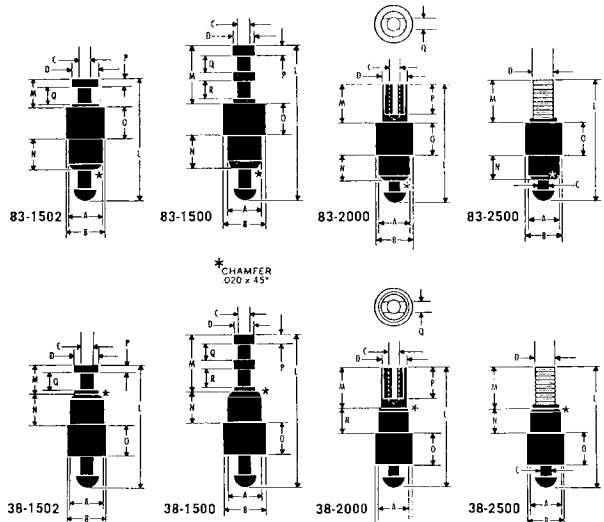
Add to Catalog Number as required

- 101 WHITE\* 102 RED 103 BLACK 104 GREEN 105 BLUE 106 ORANGE 107 YELLOW 108 BROWN 109 GREY 112 PURPLE 113 GREY

PLATING FINISH

STANDARD .0002 Silver Plate, Gold Flash. OTHER Finishes supplied on request.

\* WHITE is natural Teflon, supplied if no color specified. Color does not affect electrical, mechanical, physical or thermal characteristics. Std. Pkg. 10C



MINIATURE FEED-THRU STANDARD TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, P, Q, NET Per C. Rows include 83-1502, 83-1503, 83-1504, 83-1505, 83-1506, 83-1507, 83-1508, 83-1516, 82-1510, 82-1513, 38-1502, 38-1503, 38-1504, 38-1505, 38-1506, 38-1507, 38-1508, 38-1516, 28-1510, 28-1513.

REVERSE TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, P, Q, NET Per C. Rows include 38-1502, 38-1503, 38-1504, 38-1505, 38-1506, 38-1507, 38-1508, 38-1516, 28-1510, 28-1513.

MINIATURE FEED-THRU TURRET STANDARD TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, P, Q, R, NET Per C. Rows include 83-1500, 83-1501, 83-1509, 83-1510, 83-1511, 83-1512, 83-1513, 83-1523, 83-1524.

REVERSE TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, P, Q, R, NET Per C. Rows include 38-1500, 38-1501, 38-1509, 38-1510, 38-1511, 38-1512, 38-1513, 38-1523, 38-1524.

MINIATURE FEED-THRU SLOTTED LUG STANDARD TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, P, Q, NET Per C. Rows include 83-2000, 83-2001, 83-2002, 83-2003, 83-2004, 83-2005, 83-2006, 83-2007.

REVERSE TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, P, Q, NET Per C. Rows include 38-2000, 38-2001, 38-2002, 38-2003, 38-2004, 38-2005, 38-2006, 38-2007.

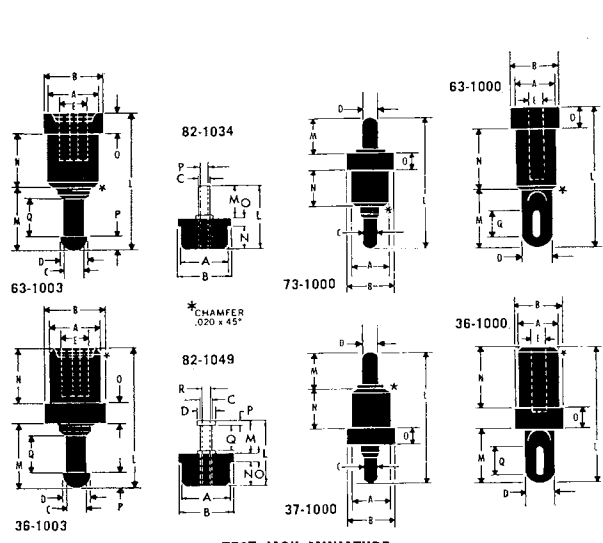
MINIATURE FEED-THRU THREADED LUG STANDARD TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, NET Per C. Rows include 83-2500, 83-2501, 83-2502, 83-2503, 83-2504, 83-2505.

REVERSE TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, NET Per C. Rows include 38-2500, 38-2501, 38-2502, 38-2503, 38-2504, 38-2505.

† CLASS 2 THREAD



TEST JACK MINIATURE

These Jacks have Beryllium Copper Contacts

STANDARD TYPE

Table with columns: PART NO., A, B, C, D, E, L, M, N, O, P, Q, NET Per C. Rows include 63-1003, 63-1004, 63-1005, 63-1010.

REVERSE TYPE

Table with columns: PART NO., A, B, C, D, E, L, M, N, O, P, Q, NET Per C. Rows include 36-1003, 36-1005, 36-1010.

SUB-MINIATURE TUBULAR FEED-THRU

Table with columns: PART NO., A, B, C, D, L, M, N, O, P, Q, NET Per C. Rows include 82-1034, 82-1041, 82-1040, 82-1043, 82-1045.

PROBES AND PLUGS MINIATURE

STANDARD TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, NET Per C. Rows include 73-1000, 83-1001, 73-1002.

REVERSE TYPE

Table with columns: PART NO., A, B, C, D, L, M, N, O, NET Per C. Rows include 37-1000, 37-1001, 37-1002.

CONNECTOR AND TEST JACK MINIATURE

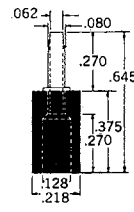
These Jacks have Beryllium Copper Contacts

STANDARD TYPE

Table with columns: PART NO., A, B, D, E, L, M, N, O, NET Per C. Rows include 63-1000, 63-1001, 63-1002.

REVERSE TYPE

Table with columns: PART NO., A, B, D, E, L, M, N, O, NET Per C. Rows include 36-1000, 36-1001, 36-1002.



PROBES

PART NO. NET Per C 73-3001 \$16.00

SMITH TEFLON TERMINALS are available for IMMEDIATE DELIVERY from stock!



# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

## EQUIPMENT HANDLES

### MATERIALS AND FINISH SPECIFICATIONS

The following specifications are met by all panel handles, ferrules, and hardware where applicable:

**Materials:**  
 Brass: In accordance with Federal Spec. QQ-B-626, Composition 22, 1/2 Hard.  
 Aluminum: In accordance with Federal Spec. QQ-A-385, Composition A, Type 3.  
 Steel: Cold-Rolled, in accordance with QQ-S-833B, Grade FS-1010.

### Finishes:

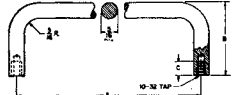
Nickel Plate: Polished Nickel Plate, in accordance with Federal Spec. QQ-N-290, Class I, Type VI.  
 Black Oxide: In accordance with MIL-F-495A.  
 Satin Etch: Commercial finish.  
 Black Anodize: In accordance with MIL-A-8625A.  
 Optical Black: Color in accordance with Fed. Std. 595, Type 3703B. Paint complies with Fed. Spec. TT-E-527.

### Note:

Aluminum Handles, either round or oval, and matching ferrules, can be supplied anodized in colors per MIL-A-8625A on special order.

### PANEL HANDLES

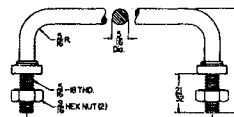
Brass Panel Handles, finished as shown, with internal 10-32 thread. Individually packaged. Std. Pkg. 10



No.	Mtg. Ctrs. (A)	Height (B)	Tap Depth (C)	Finish	NET Ea.
050	3"	1-5/16"	7/16"	Nickel Plate	.63
601	3"	1-5/16"	7/16"	Black Oxide	.63
057	3"	1-1/2"	9/16"	Nickel Plate	.63
602	3"	1-1/2"	9/16"	Black Oxide	.63
056	4-1/4"	1-1/2"	9/16"	Nickel Plate	.72
604	4-1/4"	1-1/2"	9/16"	Black Oxide	.72
051	4-9/16"	1-1/2"	9/16"	Nickel Plate	.75
605	4-9/16"	1-1/2"	9/16"	Black Oxide	.75
052	6-7/16"	1-3/4"	9/16"	Nickel Plate	.78
606	6-7/16"	1-3/4"	9/16"	Black Oxide	.78

### PANEL HANDLES

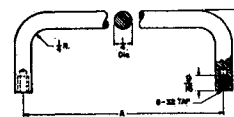
Brass Panel Handles, finished as shown with male threaded stud. Supplied complete with matching ferrules, and brass, nickel plated hex nuts. Mount in 1/2" panel holes. Individually packaged. Std. Pkg. 10



No.	Mtg. Ctrs. (A)	Height (B)	Finish	NET Ea.
607	2"	2 1/2"	Nickel Plate	\$.81
608	2"	2 1/2"	Black Oxide	.81
609	2"	2 1/2"	Nickel Plate	.84
610	3"	2 1/2"	Black Oxide	.84
611	4"	2 1/2"	Nickel Plate	.87
612	4"	2 1/2"	Black Oxide	.87
055	4 1/4"	2 1/2"	Nickel Plate	.90
613	4 1/4"	2 1/2"	Black Oxide	.90
614	6"	2 1/2"	Nickel Plate	.98
615	6"	2 1/2"	Black Oxide	.98

### PANEL HANDLES

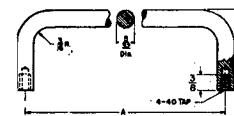
1/4" Diameter panel handles. Brass and Aluminum, finished as shown, with internal 8-32 thread. Individually packaged. Std. Pkg. 10



No.	Mtg. Ctrs. (A)	Height (B)	Material	Finish	NET Ea.
616	2"	1 1/2"	Brass	Nickel Plate	\$.60
617	2"	1 1/2"	Brass	Black Oxide	.80
618	2"	1 1/2"	Aluminum	Satin	.60
619	2"	1 1/2"	Aluminum	Blk. Anodize	.80
620	3"	1 1/2"	Brass	Nickel Plate	.63
621	3"	1 1/2"	Brass	Black Oxide	.63
622	3"	1 1/2"	Aluminum	Satin	.63
623	3"	1 1/2"	Aluminum	Blk. Anodize	.63
624	4"	1 1/2"	Brass	Nickel Plate	.69
625	4"	1 1/2"	Brass	Black Oxide	.69
626	4"	1 1/2"	Aluminum	Satin	.66
627	4"	1 1/2"	Aluminum	Blk. Anodize	.69
628	6"	1 1/2"	Brass	Nickel Plate	.75
629	6"	1 1/2"	Brass	Black Oxide	.75
630	6"	1 1/2"	Aluminum	Satin	.75
631	6"	1 1/2"	Aluminum	Blk. Anodize	.75

### PANEL HANDLES

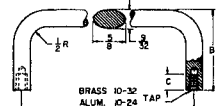
5/16" Diameter panel handles. Brass and Aluminum, finished as shown, with internal 4-40 thread. Individually packaged. Std. Pkg. 10



No.	Mtg. Ctrs. (A)	Height (B)	Material	Finish	NET Ea.
632	1 1/2"	1"	Brass	Nickel Plate	\$.82
633	1 1/2"	1"	Aluminum	Black Oxide	.82
634	1 1/2"	1"	Aluminum	Satin	.82
635	1 1/2"	1"	Aluminum	Blk. Anodize	.82
636	2"	1"	Brass	Nickel Plate	.86
637	2"	1"	Brass	Black Oxide	.86
638	2"	1"	Aluminum	Satin	.86
639	2"	1"	Aluminum	Blk. Anodize	.86
640	3"	1"	Brass	Nickel Plate	.90
641	3"	1"	Brass	Black Oxide	.90
642	3"	1"	Aluminum	Satin	.90
643	3"	1"	Aluminum	Blk. Anodize	.90

### OVAL PANEL HANDLES

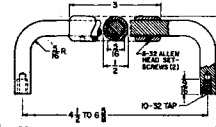
Flat, oval panel handles in Brass and Aluminum, finished as shown. Brass handles have internal 10-32 thread, Aluminum handles have internal 10-24 thread. Individually packaged. Std. Pkg. 10



No.	Mtg. Ctrs. (A)	Height (B)	Tap Depth (C)	Material	Finish	NET Ea.
1644	3"	1 1/2"	3/8"	Brass	Nickel Plate	\$1.35
1645	3"	1 1/2"	3/8"	Brass	Black Oxide	1.35
1646	3"	1 1/2"	3/8"	Aluminum	Blk. Anodize	1.03
1647	4 1/4"	1 1/2"	3/8"	Brass	Nickel Plate	1.52
1648	4 1/4"	1 1/2"	3/8"	Brass	Black Oxide	1.52
1649	4 1/4"	1 1/2"	3/8"	Aluminum	Blk. Anodize	1.10
1651	6 1/2"	1 1/2"	3/8"	Brass	Nickel Plate	1.73
1653	6 1/2"	1 1/2"	3/8"	Brass	Black Oxide	1.73
1654	6 1/2"	1 1/2"	3/8"	Aluminum	Blk. Anodize	1.20
1655	9"	1 1/2"	3/8"	Brass	Nickel Plate	1.91
1657	9"	1 1/2"	3/8"	Brass	Black Oxide	1.91
1658	9"	1 1/2"	3/8"	Aluminum	Blk. Anodize	1.31

### ADJUSTABLE HANDLES

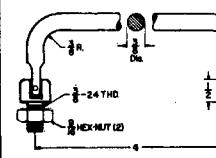
Adjustable Brass Panel handles, with mounting center range from 4 1/2" to 8 1/2". Finished as shown. Internal 10-32 thread, supplied with Allen-Head locking screws. Individually packaged. Std. Pkg. 10



No.	Finish	NET Ea.
1659	Nickel Plate	\$2.85
1661	Black Oxide	2.85

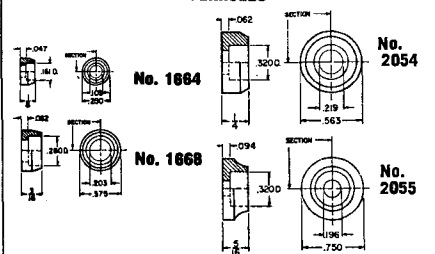
### FOLDING HANDLES

Folding Brass panel handles, with spring-loaded detents which snap into upright or left-or-right folded position. Finished as shown. Supplied with brass, nickel plated hex nuts. Mounts in 1/2" panel holes. Individually packaged. Std. Pkg. 10



No.	Finish	NET Ea.
1662	Nickel Plate	\$2.55
1663	Black Oxide	2.55

### FERRULES



Brass and Aluminum ferrules, finished as shown, to match handles listed above. Std. Pkg. 50

No.	Material	Finish	NET Per C
1664	Brass	Nickel Plate	\$15.00
1665	Brass	Black Oxide	15.00
1666	Aluminum	Satin	15.00
1667	Aluminum	Black Anodize	15.00

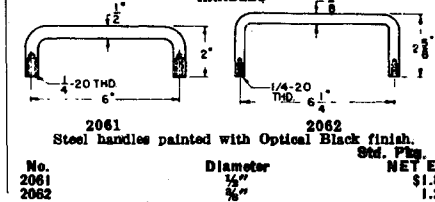
  

No.	Material	Finish	NET Per C
1668	Brass	Nickel Plate	\$15.00
1669	Brass	Black Oxide	15.00
1670	Aluminum	Satin	15.00
1671	Aluminum	Black Anodize	15.00

No.	Material	Finish	NET Per C
2054	Brass	Nickel Plate	\$15.00
1672	Brass	Black Oxide	15.00
2055	Brass	Black Oxide	15.00
1673	Brass	Nickel Plate	15.00

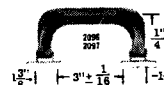
### HANDLES



No.	Diameter	NET Ea.
2061	1/4"	\$1.80
2062	3/8"	1.20

### MOLDED GRIP HANDLES

HANDLE: Molded High Impact styrene.  
 HDWRE.: Steel, nickel plated.  
 DESCR.: Designed for economy and rugged use. Std. Pkg. 10



No.	Color	NET Per C
2096	Black	\$45.00
2097	Grey	45.00

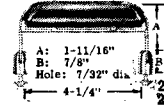
ATTACHES WITH RIVETS OR SCREWS

ATTACHES WITH THREADED STUD

No.	Color	Stud Lgth.	NET Ea.
2098	Black	3/4"	\$4.00
2099	Grey	3/4"	4.00

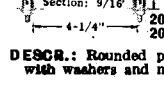
### MOLDED GRIP HANDLES

HANDLE: Molded high impact Styrene, Fungus Resistant.  
 HDWRE.: Steel, Nickel plated.  
 DESCR.: Rounded palm fitting design. Attaches to case with machine screws. Std. Pkg. 10



No.	Color	NET Ea.
2085	Black	\$1.75
2086	Grey	1.75

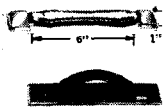
HANDLE: Molded high impact Styrene, Fungus Resistant.  
 HDWRE.: Steel, Nickel plated.  
 DESCR.: Rounded palm fitting design. Attaches to case with washers and nuts supplied. Will support 100 lbs. Std. Pkg. 10



No.	Color	Stud Lgth.	NET Ea.
2087	Black	3/4"	\$1.25
2088	Grey	3/4"	1.05

### SPRING GLIDE HANDLE

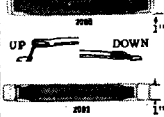
HANDLE: Genuine leather, contoured BLACK, matching stitching, 6" long.  
 CAPS: Steel, chrome plated.  
 DESCR.: Strong, silent spring glide, frequency of decibel extremes will not induce handle rattle. Handle moves up for comfortable carrying down when not in use. Std. Pkg. 10



No.	Color	NET Ea.
2089	Black	\$2.40

### RETRACTO-LINK HANDLES

HANDLE: Genuine leather, matching stitching, BLACK.  
 HDWRE.: Steel, nickel plated.  
 DESCR.: Assemblies are shaped with all hardware installed except for decorative cover caps which are packed separately. Supplied in two styles—different lengths. Std. Pkg. 10



No.	Length	Ea.
2090	4 1/2"	\$2.10
2091	5 1/2"	2.10
2092	6 1/2"	2.10

### ATTACHES WITH PRONGS THAT BEND INSIDE CASE

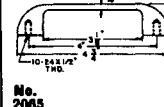
No.	Length	Ea.
2093	4 1/2"	\$2.10
2094	5 1/2"	2.10
2095	6 1/2"	2.10

### ATTACHES WITH RIVETS OR SCREWS

No.	Length	Ea.
2096	4 1/2"	\$2.10
2097	5 1/2"	2.10
2098	6 1/2"	2.10

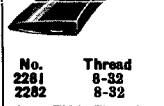
### OVAL HANDLE

Die Cast Zamac Handle. Brush chrome plated. Std. Pkg. 10 NET Per C \$90.00



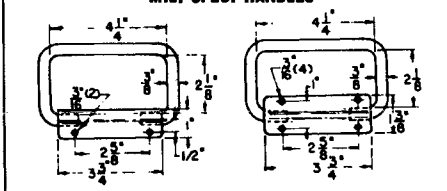
### BAKELITE HANDLE

Std. Pkg. 10



No.	Thread	O.D.	Mtg. Center	Color	NET Per C
2281	8-32	4 1/2"	2 1/2"	Black	\$14.40
2282	8-32	4 1/2"	Center	Red	15.90

### MIL. SPEC. HANDLES



MATERIAL: Aluminum.  
 FINISH: Alodine per MIL-C-5541 Spec. Sprayed to MIL-E-15990. Gloss gray color #1640 per MIL SPEC. PKC-595. Std. Pkg. 10

No.	Material	NET Ea.
2063	Half Bracket	\$1.35
2064	Full Bracket	1.35

With Transflux Plastic Protector

No.	Material	NET Ea.
2048	Half Bracket	\$1.80
2049	Full Bracket	1.80

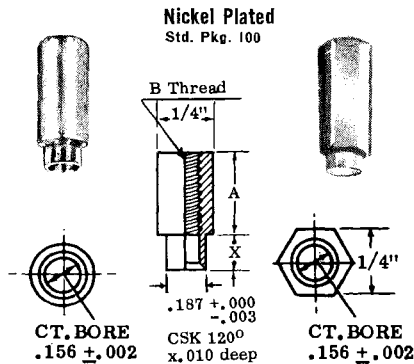


# HERMAN H. SMITH, INC.



"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

### BRASS THREADED SWAGE STANDOFFS



#### ROUND

No.	Per C	A	B	X
4100	4.50	1/4	4/40	.105
4101	4.50	3/4	4/40	.135
4102	4.50	3/4	4/40	.165
4103	5.10	3/4	4/40	.105
4104	5.10	3/4	4/40	.135
4105	5.10	3/4	4/40	.165
4106	5.70	1/2	4/40	.105
4107	5.70	1/2	4/40	.135
4108	5.70	1/2	4/40	.165
4109	6.90	5/8	4/40	.105
4110	6.90	5/8	4/40	.135
4111	6.90	5/8	4/40	.165
4112	8.10	3/4	4/40	.105
4113	8.10	3/4	4/40	.135
4114	8.10	3/4	4/40	.165
4115	10.50	1	4/40	.105
4116	10.50	1	4/40	.135
4117	10.50	1	4/40	.165

#### HEX

No.	Per C	A	B	X
4200	5.10	1/4	4/40	.105
4201	5.10	3/4	4/40	.135
4202	5.10	3/4	4/40	.165
4203	5.70	1/2	4/40	.105
4204	5.70	1/2	4/40	.135
4205	5.70	1/2	4/40	.165
4206	6.45	1/2	4/40	.105
4207	6.45	1/2	4/40	.135
4208	6.45	1/2	4/40	.165
4209	7.35	5/8	4/40	.105
4210	7.35	5/8	4/40	.135
4211	7.35	5/8	4/40	.165
4212	8.40	3/4	4/40	.105
4213	8.40	3/4	4/40	.135
4214	8.40	3/4	4/40	.165
4215	11.10	1	4/40	.105
4216	11.10	1	4/40	.135
4217	11.10	1	4/40	.165

No.	Per C	A	B	X
4118	4.50	1/4	6/32	.105
4119	4.50	1/4	6/32	.135
4120	4.50	1/4	6/32	.165
4121	5.10	3/4	6/32	.105
4122	5.10	3/4	6/32	.135
4123	5.10	3/4	6/32	.165
4124	5.70	1/2	6/32	.105
4125	5.70	1/2	6/32	.135
4126	5.70	1/2	6/32	.165
4127	6.90	5/8	6/32	.105
4128	6.90	5/8	6/32	.135
4129	6.90	5/8	6/32	.165
4130	8.10	3/4	6/32	.105
4131	8.10	3/4	6/32	.135
4132	8.10	3/4	6/32	.165
4133	10.50	1	6/32	.105
4134	10.50	1	6/32	.135
4135	10.50	1	6/32	.165

No.	Per C	A	B	X
4136	4.50	1/4	8/32	.105
4137	4.50	1/4	8/32	.135
4138	4.50	1/4	8/32	.165
4139	5.10	3/4	8/32	.105
4140	5.10	3/4	8/32	.135
4141	5.10	3/4	8/32	.165
4142	5.70	1/2	8/32	.105
4143	5.70	1/2	8/32	.135
4144	5.70	1/2	8/32	.165
4145	6.90	5/8	8/32	.105
4146	6.90	5/8	8/32	.135
4147	6.90	5/8	8/32	.165
4148	8.10	3/4	8/32	.105
4149	8.10	3/4	8/32	.135
4150	8.10	3/4	8/32	.165
4151	10.50	1	8/32	.105
4152	10.50	1	8/32	.135
4153	10.50	1	8/32	.165



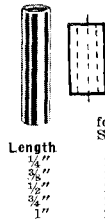
### FIBRE SPACERS

These fibre bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc.

Length	for #4 Screw	for #8 Screw	NET Per C
3/4"	2335	2130	\$3.90
5/8"	2336	2131	4.95
3/4"	2337	2132	6.00
5/8"	2338	2133	7.20
1"	2339	2134	8.25

### BRASS SPACERS Cadmium Plated

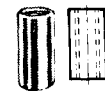
These brass bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a #4, #6, or #8 screw.



Length	for #4 Screw	for #6 Screw	for #8 Screw	NET Per C
3/4"	2340	2100	2105	\$3.30
5/8"	2341	2101	2106	4.95
3/4"	2342	2102	2107	5.28
5/8"	2343	2103	2108	6.80
1"	2344	2104	2109	7.20
3/4"	2345	2110	2115	\$5.28
5/8"	2346	2111	2116	6.30
3/4"	2347	2112	2117	7.20
5/8"	2348	2113	2118	8.25
1"	2349	2114	2119	9.30

### BRASS THREADED SPACERS Cadmium Plated

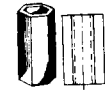
1/4" O.D. Threaded 4-40, 6-32 and 8-32.



Length	THD 4-40	THD 6-32	THD 8-32	NET Per C
3/4"	2370	2120	2125	\$3.90
5/8"	2371	2121	2126	4.95
3/4"	2372	2122	2127	6.00
5/8"	2373	2123	2128	7.20
1"	2374	2124	2129	8.25

### BRASS HEX SPACERS Cadmium Plated

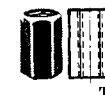
1/4" HEX Std. Pkg. 100



Length	for #4 Screw	for #6 Screw	for #8 Screw	NET Per C
3/4"	2380	2300	2305	\$3.60
5/8"	2381	2301	2306	4.65
3/4"	2382	2302	2307	5.58
5/8"	2383	2303	2308	6.75
1"	2384	2304	2309	7.80
3/4"	2385	2310	2315	6.18
5/8"	2386	2311	2316	7.20
3/4"	2387	2312	2317	8.25
5/8"	2388	2313	2318	9.90
1"	2389	2314	2319	10.50

### BRASS THREADED HEX SPACERS Cadmium Plated

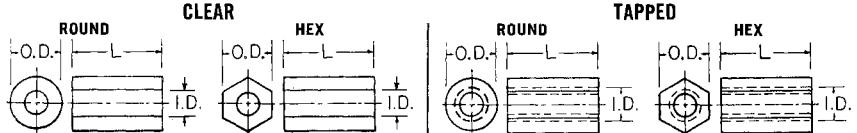
1/4" HEX Std. Pkg. 100



Length	THD 4-40	THD 6-32	THD 8-32	NET Per C
3/4"	2320	2320	2325	\$4.20
5/8"	2321	2321	2326	5.25
3/4"	2322	2322	2327	6.30
5/8"	2323	2323	2328	7.65
1"	2324	2324	2329	8.85

### ALUMINUM SPACERS

Iridite 14-2 per MIL-C-5541



#### ROUND

OUTSIDE DIAMETER (O.D.)	INSIDE DIAMETER	LENGTH "L"	NET Per C
.250	.250	.125	5.40
.250	.250	.250	6.00
.250	.250	.312	7.20
.312	.312	.125	5.40
.312	.312	.250	6.00
.312	.312	.375	7.20
.375	.375	.125	5.40
.375	.375	.250	6.00
.375	.375	.375	7.20
.437	.437	.125	5.40
.437	.437	.250	6.00
.437	.437	.375	7.20
.500	.500	.125	5.40
.500	.500	.250	6.00
.500	.500	.375	7.20
.562	.562	.125	5.40
.562	.562	.250	6.00
.562	.562	.375	7.20
.625	.625	.125	5.40
.625	.625	.250	6.00
.625	.625	.375	7.20
.687	.687	.125	5.40
.687	.687	.250	6.00
.687	.687	.375	7.20
.750	.750	.125	5.40
.750	.750	.250	6.00
.750	.750	.375	7.20
.812	.812	.125	5.40
.812	.812	.250	6.00
.812	.812	.375	7.20
.875	.875	.125	5.40
.875	.875	.250	6.00
.875	.875	.375	7.20
.937	.937	.125	5.40
.937	.937	.250	6.00
.937	.937	.375	7.20
1.000	1.000	.125	5.40
1.000	1.000	.250	6.00
1.000	1.000	.375	7.20
1.062	1.062	.125	5.40
1.062	1.062	.250	6.00
1.062	1.062	.375	7.20
1.125	1.125	.125	5.40
1.125	1.125	.250	6.00
1.125	1.125	.375	7.20
1.187	1.187	.125	5.40
1.187	1.187	.250	6.00
1.187	1.187	.375	7.20
1.250	1.250	.125	5.40
1.250	1.250	.250	6.00
1.250	1.250	.375	7.20
1.312	1.312	.125	5.40
1.312	1.312	.250	6.00
1.312	1.312	.375	7.20
1.375	1.375	.125	5.40
1.375	1.375	.250	6.00
1.375	1.375	.375	7.20
1.437	1.437	.125	5.40
1.437	1.437	.250	6.00
1.437	1.437	.375	7.20
1.500	1.500	.125	5.40
1.500	1.500	.250	6.00
1.500	1.500	.375	7.20
1.562	1.562	.125	5.40
1.562	1.562	.250	6.00
1.562	1.562	.375	7.20
1.625	1.625	.125	5.40
1.625	1.625	.250	6.00
1.625	1.625	.375	7.20
1.687	1.687	.125	5.40
1.687	1.687	.250	6.00
1.687	1.687	.375	7.20
1.750	1.750	.125	5.40
1.750	1.750	.250	6.00
1.750	1.750	.375	7.20
1.812	1.812	.125	5.40
1.812	1.812	.250	6.00
1.812	1.812	.375	7.20
1.875	1.875	.125	5.40
1.875	1.875	.250	6.00
1.875	1.875	.375	7.20
1.937	1.937	.125	5.40
1.937	1.937	.250	6.00
1.937	1.937	.375	7.20
2.000	2.000	.125	5.40
2.000	2.000	.250	6.00
2.000	2.000	.375	7.20

#### ROUND

OUTSIDE DIAMETER (O.D.)	INSIDE DIAMETER	LENGTH	NET Per C
.250	.250	.125	5.40
.250	.250	.250	6.00
.250	.250	.312	7.20
.312	.312	.125	5.40
.312	.312	.250	6.00
.312	.312	.375	7.20
.375	.375	.125	5.40
.375	.375	.250	6.00
.375	.375	.375	7.20
.437	.437	.125	5.40
.437	.437	.250	6.00
.437	.437	.375	7.20
.500	.500	.125	5.40
.500	.500	.250	6.00
.500	.500	.375	7.20
.562	.562	.125	5.40
.562	.562	.250	6.00
.562	.562	.375	7.20
.625	.625	.125	5.40
.625	.625	.250	6.00
.625	.625	.375	7.20
.687	.687	.125	5.40
.687	.687	.250	6.00
.687	.687	.375	7.20
.750	.750	.125	5.40
.750	.750	.250	6.00
.750	.750	.375	7.20
.812	.812	.125	

# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



### PANEL INDICATORS

Indicators supplied with faceted jewels in Red, Green, Amber, Blue, Opal and White. SPECIFY COLOR. Std. Pkg. 10

1/2" JEWEL—Mounts in 7/16" Hole		No.	Type	NET Per C
1900	Miniature Screw	1900		\$27.00
1901	Candelabra	1901		35.00
1902	Candelabra	1902		
	w/Univ. Bkt.			34.80
1903	Bayonet	1903		27.00
1904	Bayonet w/Univ. Bkt.	1904		30.00
1912	1/2" Jewel Only	1912		21.00

3/4" JEWEL—Mounts in 11/16" Hole		No.	Type	NET Per C
1905	Miniature Screw	1905		\$57.00
1906	Bayonet	1906		60.00
1907	Candelabra	1907		60.00
1914	3/4" Jewel Only	1914		42.00

3/8" JEWEL—Mounts in 5/16" Hole		No.	Type	NET Per C
1908	Miniature Screw	1908		\$27.00
1909	Bayonet	1909		28.80
1941	3/8" Jewel Only	1941		21.00

### OPEN TYPE

Jewel Removable From Front		No.	Type	NET Per C
1920	Miniature Screw Open Type	1920		\$39.00
1921	Bayonet, Open Type	1921		39.00
1942	Bayonet, "U" Bkt.	1942		54.00
1943	1/2" Jewel Only	1943		25.20

1" JEWEL—Mounts in 1" Hole		No.	Type	NET Per C
1917	Miniature Screw	1917		\$96.00
1918	Bayonet	1918		96.00
1919	Candelabra	1919		102.00
1916	1" Jewel Only	1916		75.00

### NEON INDICATORS

UL Approved. Supplies 180 degree light spread. Available in Red, Amber, White, Yellow and Clear caps. Neon removable from front. Candelabra screw base; 105-125 volts 1" mtg. clearance hole. Std. Pkg. 10

No.	Type	NET Per C
1953	Lens Cap Only	\$171.00
1954	Built-in 56K ohm, 1/2 watt resistor	70.20

11/16" mtg. clearance hole.

No.	Type	NET Per C
1955	Lens Cap Only	\$135.00
1956	Lens Cap Only	22.20

### INDICATOR ASSEMBLIES

Enclosed Type  
UL Approved. Available in Red, Green, Amber, Blue, Yellow, Clear and White. Std. Pkg. 10

Candelabra screw base; 1" mtg. clearance hole; 1" indicator. Uses No. 1916 Jewel. NET Per C \$172.20

Bayonet base; 11/16" mtg. clearance hole; 1/2" indicator. Uses No. 1943 Jewel. NET Per C \$128.40

### SNAP-IN BULB CONNECTOR

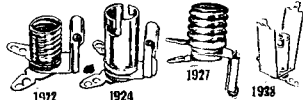
Designed for use with the new Twin Pin Baseless Miniature Lamps (G.E. #10-25 volts, #12-6.3 volts, or #15-7.0 volts). Easily assembled to any unit for indicating purposes. Withstands excessive temperatures. Snaps into a .500x.296 rectangular hole in panels .032 to .062 thick. Bezel—brass, cad. plated; contacts—brass, silver plated. Std. Pkg. 25

No. 1504 NET Per C \$10.20

No.	Type	NET Per C
1963	Brass Cad. Plate	\$3.60
1978	Plain Brass	3.30
1969	Flared Brass Cad. Plate	4.20

### PILOT LIGHT SOCKETS

#### Clip-On Type



Can be used by clipping on to variable condenser or chassis. All brackets are cadmium plated. Std. Pkg. 50

No.	Type	NET Per C
1922	Miniature Screw Up Clip	\$9.30
1923	Miniature Screw Down Clip	9.30
1924	Miniature Bayonet Up Clip	9.30
1925	Miniature Bayonet Down Clip	9.30
1926	Candelabra Up Clip	10.20
1927	Candelabra Down Clip	10.20
1936	Clip-in Socket	9.30

### PILOT LIGHT SOCKETS

#### Bracket Type

No.	Type	NET Per C
1928	Miniature Screw Up Bracket	\$9.30
1929	Miniature Screw Down Bracket	9.30
1930	Miniature Bayonet Up Bracket	9.30
1931	Miniature Bayonet Down Bracket	9.30
1932	Candelabra Up Bracket	10.20
1933	Candelabra Down Bracket	10.20

### UNMOUNTED TYPE SOCKETS

No.	Type	NET Per C
1934	Miniature Screw Base	\$9.30
1935	Miniature Bayonet Base	9.30
1936	Candelabra Base	10.20

### NAVY TYPE LAMP SOCKETS

#### 75W-125V Bayonet Base

Vibration-proof socket for surface mounting. Made to rigid specifications of black phenolic. Has bayonet sleeve of brass and double contacts of heavy spring phosphor bronze. Std. Pkg. 10

No. 1950 NET Per C \$84.00

### SCREW BASE

Made of black phenolic to strict requirements. Instead of usual screw shell has phosphor bronze wire coiled spring for perfect contact and elimination of vibration. Designed for soldering wire leads. Std. Pkg. 10

No. 1951 NET Per C \$84.00

### SCREW BASE

Easily wired and mounted. A very practical unit made of black phenolic to rigid specifications. Has phosphor bronze spring contact to assure positive contact and elimination of vibration. Std. Pkg. 10

No. 1952 NET Per C \$84.00

### MINI-SHIELDS FOR MINI-TUBES

These Mini-Shields fit snugly on all Mini-Tubes. Serrations in base clip prevent shielded tube from jiggling or working loose. Available in two sizes for 1 1/2" & 2" long tubes. Std. Pkg. 50

No.	Type	NET Per C
550	for 2" tube	1 1/2" \$7.80
551	for 1 1/2" tube	1 1/4" 6.60
553	3 prong base clip	3.30
554	single clips	1.00

### MINI-SPRING FOR MINI-TUBES

Maintains a direct axial pressure downwards plus a sideways support that keeps the tube upright and perpendicular to the chassis. The spring action is constant and resilient permanently. Std. Pkg. 50

No.	Type	NET Per C
560	Short	\$10.20
561	Medium	10.20
562	Long	10.20
563	9 Prong	10.80

### GRID CAPS

No.	Type	NET Per C
1450	1/4" Glass Tubes	\$1.20
1453	3/8" Glass Tubes	1.20
1454	1/2" Mini Tubes	1.20

### MINIATURE WAFER SOCKETS

Miniature bakelite sockets with brass cadmium plated contacts. XP bakelite top plate 1/16" thick, bottom plate 3/64" thick; high grade spring brass cadmium plated contact; .095 dia. mounting holes. Std. Pkg. 50

No.	Description	MTG. Cen.	NET Per C
880	Eyelet only	3/4"	\$6.60
881	Eyelet and Shield	3/4"	6.90
882	Grd Strap and Shield	3/4"	7.20
887	Eyelet only	1"	6.60
888	Eyelet and Shield	1"	6.90
889	Grd Strap and Shield	1"	7.20

No.	Description	MTG. Cen.	NET Per C
890	Eyelet only	1 1/4"	\$ 8.60
891	Eyelet and Shield	1 1/4"	8.90
892	Grd Strap and Shield	1 1/4"	9.30

### MOLDED MINIATURE SOCKETS

#### Saddle Type

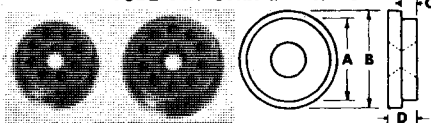
Molded from either high dielectric black general purpose bakelite or low loss mica-filled bakelite. Both types supplied with center pin. .098 dia. mtg. holes. Std. Pkg. 50

GENERAL PURPOSE		BLACK BAKELITE	
No.	Type	Pin	NET Per C
895	Bottom Mount	7 3/4"	\$9.00
896	Top Mount	7 3/4"	9.00
897	Bottom Mount	9 1 1/2"	10.80
898	Top Mount	9 1 1/2"	10.80

LOW LOSS MICA-FILLED BAKELITE		BLACK BAKELITE	
No.	Type	Pin	NET Per C
883	Bottom Mount	7 3/4"	\$11.40
884	Top Mount	7 3/4"	11.40
885	Bottom Mount	9 1 1/2"	13.20
886	Top Mount	9 1 1/2"	13.20

### TUBE PIN STRAIGHTENERS

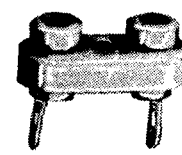


MATERIAL: MOLDED BLACK STYRENE.  
DESCR.: Can be mounted from top with #4 wood screw or screw and nut, or from rear thru hole in plate with supporting bracket. Std. Pkg. 50

No.	Type	A	B	C	D	NET Per C
893	7-Pin	3/64"	1 1/4"	1/4"	1/4"	\$5.40
894	9-Pin	4/64"	5/64"	1/8"	1/4"	5.40
899	Set					10.20

### CRYSTAL SOCKET

Suitable for Citizen's Band



Glazed ceramic base. Phosphor bronze silver plated contacts spaced .486". Pin diameter .051. mtg. hole .125. Std. Pkg. 25

No. 1945 NET Per C \$15.00

### COOLING FAN

An exceptionally efficient fan for cooling tubes, rectifiers, etc. for industrial equipment. Amateur Transmitters, and other devices requiring assisted convection flow of air. Permits more efficient RF shielding of equipment without depending on convection cooling. Shaded pole induction motor with Nylon Fan Blade runs 3000 RPM on 105-125 Volts, 60 cycle AC. Blade diameter 2 1/2", over-all size 3 1/2" x 2 1/2" x 3". Mounts either horizontally or vertically. Supplied complete with two 6-32 x 1 1/2" screws and nuts, and two 1" fibre standoffs.

No. 2427 NET Each \$4.40

### METER CASES

Molded Black Bakelite, with threaded brass inserts for cover mounting.

No.	Case Size	Insert	NET Each
2255	3 3/4" x 6 1/4" x 2"	6-32	\$1.03
2257	5-9/32" x 6-13/16" x 2-5/16"	4-36	1.28
2289	7" x 8" x 2 3/4"	6-32	2.40

No.	Case Size	NET Each
2256	Cover for 2255	.59
2260	Cover for 2257	1.02
2390	Cover for 2289	

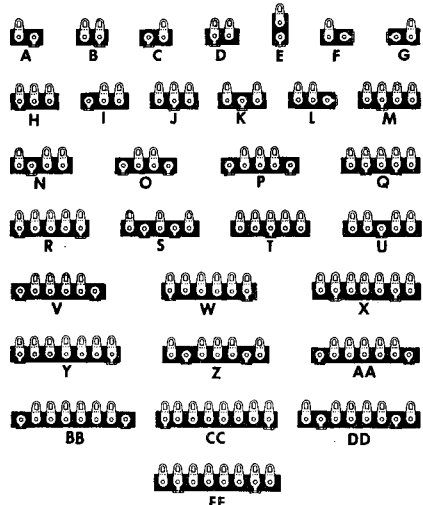




# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

### TIE DOWN TERMINAL STRIPS



#### Standard Type

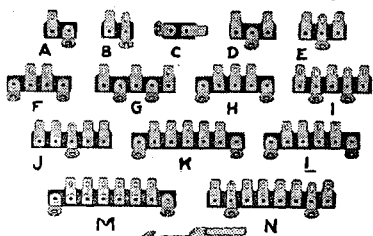
#### Miniature Type

LUG: Steel, Cadmium plated. Spaced 3/8" centers.  
STRIP: X.P. Bakelite, 5/16" wide x .062 thick.  
MOUNT: .140 I.D. for No. 6 screw.

LUG: Steel, Cadmium plated. Spaced 1/4" centers.  
STRIP: X.P. Bakelite, 5/16" wide x .062 thick.  
MOUNT: .096 I.D. for No. 3 screw or 3/32" rivet.

STANDARD TYPE		MINIATURE TYPE	
No.	NET Per C	No.	NET Per C
861	\$2.10	1061	\$2.40
862	2.10	1062	2.70
813	2.10	1003	2.70
820	2.10	1004	2.70
849	2.40	1039	2.70
828	2.40	1065	2.70
821	2.40	1009	2.70
830	3.00	1055	3.60
829	2.70	1043	3.60
864	2.40	1064	3.60
863	2.40	1063	3.30
846	2.70	1059	3.60
850	3.90	1074	4.80
857	3.90	1072	4.80
867	3.60	1067	3.80
853	4.80	1073	5.25
868	4.20	1068	5.70
847	4.20	1071	5.85
865	4.20	1065	5.25
866	3.60	1066	5.40
855	3.30	1084	5.85
869	5.10	1069	6.00
354	5.10	1076	7.20
879	5.10	1158	8.10
359	5.10	1156	8.10
371	4.80	1157	8.10
360	4.95	1080	6.60
348	5.85	1078	7.80
900	5.85	1075	9.60
358	5.40	1096	9.30
370	5.85	1070	8.10

### "QUICK-CONNECT" TERMINAL STRIPS



No.	III.	NET Per C	No.	III.	NET Per C	No.	III.	NET Per C
1085	A	\$2.82	1090	F	\$4.80	1095	K	\$9.60
086	B	3.00	1091	G	4.80	1097	L	8.10
087	C	2.82	1092	H	4.80	1098	M	10.80
088	D	4.20	1093	I	6.30	1099	N	11.40
089	E	4.50	1094	J	6.60			

Terminal Strip Connectors NET Per C \$3.90

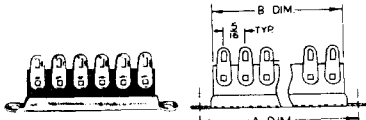
### BRACKET TYPE TERMINAL STRIPS



LUGS: STEEL, cadmium plated, spaced 1/2" centers.  
BRACKETS: Brass, cadmium plated.  
STRIPS: X.P. Bakelite 5/16" wide x .062 thick.  
MOUNT: .140 I.D. for No. 6 screw.

No.	Fig.	Lugs	NET Per C
677	A	2	\$6.96
079	C	3	6.60
080	E	3	6.60
081	E	4	7.20
082	E	5	7.80
083	E	6	8.40

### TERMINAL STRIP ASSEMBLY



LUG: STEEL, cadmium plated.  
BASE: STEEL, cadmium plated. Mounting holes for No. 6 screw.  
STRIP: X.P. Bakelite.

No.	Terminals	Dimensions "A"	"B"	NET Per C
3002	2	1.000	1/2"	\$6.00
3003	3	1.312	1/2"	6.90
3004	4	1.625	1/2"	7.80
3005	5	1.937	1/2"	8.70
3006	6	2.250	1/2"	9.60
3007	7	2.562	1/2"	10.50
3008	8	2.875	1/2"	11.40
3009	9	3.187	1/2"	12.30
3010	10	3.500	1/2"	13.20
3011	11	3.812	1/2"	14.10
3012	12	4.125	1/2"	15.00

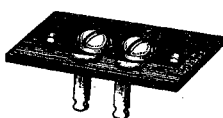
### SCREW TYPE TERMINAL BOARD



LUGS: BRASS, hot tinned, spaced 1/2" centers.  
SCREW: Steel, cadmium plated 6-32 x 1/2".  
STRIP: X.P. Bakelite 5/16" wide x .062 thick.

No.	Terminals	Mounting Center	Std. Pkg.	NET Per C
872	2	1 1/2"	50	\$6.00
873	3	1 7/8"	50	9.00
874	4	2 1/8"	25	11.20
875	5	2 3/8"	25	13.20
876	6	3 1/8"	25	16.80
877	7	3 3/8"	25	21.00

878 Shorting Link 1.80



### HEAVY DUTY TERMINAL BOARDS

LUG: BRASS, cadmium plated .042 thick spaced 1/2" centers. Terminals numbered.  
STRIP: X.P. Bakelite 5/16" wide x 3/32" thick, numbered.  
SCREW: Brass, nickel plated 8-32 x 1/2".

No.	Terminals	Mtg. Center	NET Per C
902	2	1 1/2"	\$20.40
903	3	2 1/8"	28.20
904	4	2 3/8"	34.20
905	5	3 1/8"	40.80
906	6	3 3/8"	46.20
907	7	4 1/8"	52.20
908	8	4 3/8"	58.50
909	9	5 1/8"	64.80
910	10	5 3/8"	70.80
911	11	6 1/8"	78.80
912	12	6 3/8"	82.80

### CONTACT STRIPS

CONTACTS: STEEL, cadmium plated, spring tension spaced 1/2" centers.  
STRIP: X.P. Bakelite 5/16" wide x .062 thick.  
BRACKET: Steel cadmium plated .140 I.D. for No. 6 screw.

DESCR.: Quick connect and disconnect. Spring tension contacts for .125 dia. contact pins. Single hole mounting. Even number contacts have mtg. bracket in center; odd number contacts have extra contact on right. Special contacts on request.

No.	Contacts	Std. Pkg.	NET Per C
822	2	100	\$6.60
823	3	50	8.40
824	4	25	10.20
825	5	25	12.00
828	6	25	15.00
827	Pin Only	100	1.20

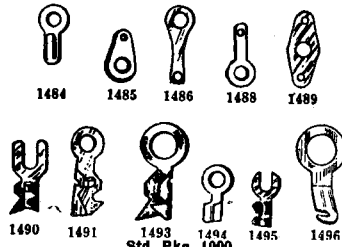
### "T" TYPE TERMINAL STRIPS



LUGS: STEEL, cadmium plated, spaced 1/2" centers.  
STRIP: X.P. Bakelite 5/16" wide x .062 thick.  
MOUNT: .140 I.D. for No. 6 screw.

No.	Lugs	NET Per C
815	1	\$8.90
816	2	5.10
817	3	8.80
818	4	7.50
819	5	8.70

### SOLDER TYPE LUGS—Hot Tinned



No.	Material	L.	Thick.	Hole	NET Per M
1484	Ph. Br.	5/8"	.020"	No. 6	\$5.70
1485-4	Ph. Br.	17/32"	.012"	No. 4	5.40
1485-6	Ph. Br.	17/32"	.012"	No. 6	5.40
1485-8	Ph. Br.	17/32"	.012"	No. 8	5.40
1485-10	Ph. Br.	17/32"	.012"	No. 10	5.40
1486-4	Ph. Br.	13/16"	.012"	No. 4	5.40
1486-6	Ph. Br.	13/16"	.012"	No. 6	5.40
1486-8	Ph. Br.	13/16"	.012"	No. 8	5.40
1486-10	Ph. Br.	13/16"	.012"	No. 10	5.40
1488-4	Ph. Br.	9/16"	.012"	No. 4	4.35
1488-6	Ph. Br.	9/16"	.012"	No. 6	4.35
1488-8	Ph. Br.	9/16"	.012"	No. 8	4.35
1489	Brass	7/8"	.015"	No. 8	6.00
1490	Brass	3/4"	.020"	No. 10	6.60
1491	Copper	15/16"	.020"	No. 10	10.50
1492	Brass	1-1/8"	.027"	1/2"	16.80
1494-6	Brass	5/8"	.020"	No. 6	4.35
1494-8	Brass	5/8"	.020"	No. 8	5.40
1495	Brass	5/8"	.020"	No. 8	8.60
1496	Brass	3/4"	.020"	1/2"	10.20
1497	Brass	7/8"	.017"	3/4"	24.00

### SOLDER LUG ASSORTMENT

A complete assortment of the most widely used Solder Lug styles, with hole sizes from #4 thru #10. Packed in a re-usable clear plastic compartmented box.

No.	Approx. Quantity of Terminals	NET
1548	1400	\$9.00

### LOCKING TYPE TERMINAL LUGS



No.	L	Thick	Hole	NET Per M
1410-4	1/2"	.018"	No. 4	\$9.00
1410-6	5/8"	.018"	No. 6	9.00
1410-8	3/4"	.018"	No. 8	9.00
1410-10	7/8"	.018"	No. 10	9.00
1410-14	1 3/16"	.018"	1/2"	10.20
1411-4	1/2"	.020"	No. 4	10.20
1411-6	5/8"	.020"	No. 6	9.00
1411-8	3/4"	.020"	No. 8	9.00
1412-4	1/2"	.018"	No. 4	8.00
1412-6	5/8"	.018"	No. 6	8.40
1412-8	3/4"	.018"	No. 8	8.40
1413-4	1/2"	.018"	No. 4	8.40
1413-6	5/8"	.018"	No. 6	9.00
1413-8	3/4"	.018"	No. 8	9.00
1414-4	1/2"	.018"	No. 4	9.00
1414-6	5/8"	.018"	No. 6	9.00
1414-8	3/4"	.018"	No. 8	9.00
1414-10	7/8"	.018"	No. 10	9.00
1415-4	1/2"	.018"	No. 4	9.00
1415-6	5/8"	.018"	No. 6	9.00
1415-8	3/4"	.018"	No. 8	9.00
1416-4	1/2"	.020"	No. 4	9.00
1416-6	5/8"	.020"	No. 6	9.00
1416-8	3/4"	.020"	No. 8	9.00

### LOCKING TYPE TERMINAL LUGS

Brass Electro Plated

No.	Hole Size	Thick	Length	NET Per M
1465	No. 4	.020"	4 3/8"	\$10.20
1466	No. 6	.020"	4 3/8"	10.20
1467	No. 8	.020"	4 3/8"	10.20
1468	1/2"	.020"	1 1/2"	12.00

A complete assortment of the most widely used Locking Terminal Lug styles, with hole sizes from #1 thru #10. Packed in a re-usable clear plastic compartmented box.

No.	Approx. Quantity of Terminals	NET
1547	900	\$9.00

### LAMINATED TERMINAL STRIPS WITH WIRE WRAP TERMINALS



LUG: Brass, electro-tinned.  
STRIP: Cotton Fabric Base Phenolic, Type LE.  
SCREW: Brass, nickel plated.

DESCR.: Accommodates lugs for wires, size AWG #18 to #22. Rated 750 volts RMS (1/2 breakdown voltage).  
Std. Pkg. 25

No.	Term.	(A) Mtg Ctrs.	B	NET Per C
941	8	3 3/8"	3 3/8"	\$10.20
942	10	4 1/8"	4 1/8"	12.00
943	12	5"	5"	14.00

# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



## SOLDERLESS TERMINALS



**"SOLISTRAND"**  
Non-Insulated



The only terminal designed for use with solid, stranded or irregularly shaped wires, or combinations of wires. Corrosion resistant, high strength, electro-tinned; versatile — widely adaptable.

Std. Pkg. 100

### RING TONGUE (A)

Wire Size	AMP No.	Stud Size	Tongue Width	O'all Stud	NET Per C
22	2850 32989	4	3/32	1/32	\$4.20
22	2851 34194	6	3/32	1/32	4.20
to	2852 32990	8	3/32	1/32	4.80
16	2853 33214	10	3/16	1/16	4.80
to	2854 33215	1/4	5/32	3/16	6.60
16	2855 33452	3/8	1/32	1/16	6.60
to	2856 33453	3/8	1/32	1/16	6.60
16	2857 32991	4	1/4	3/16	\$4.80
to	2858 34197	6	1/4	3/16	4.80
16	2859 32992	8	5/16	1/32	4.80
to	2860 320093	10	5/16	1/32	4.80
14	2861 33218	1/4	5/32	3/16	6.60
to	2862 33454	3/8	5/32	3/16	6.60
14	2863 33455	3/8	1/32	1/16	6.60

### SPADE TONGUE (B)

Wire Size	AMP No.	Stud Size	Tongue Width	O'all Stud	NET Per C
22	2864 32897	6	1/32	3/16	\$4.20
to	2865 32898	8	1/32	3/16	4.20
16	2866 32899	10	1/32	3/16	4.20
to	2867 32903	6	1/32	3/16	\$4.20
16	2868 32904	8	1/32	3/16	4.20
14	2869 32905	10	1/32	3/16	4.20

### BUTT CONNECTOR (C)

Wire Size	AMP No.	Stud Size	O'all I.D.	NET Per C
22	2870 31818	22-16	.140 I.D.	\$5.10
16	2871 31819	16-14	.170 I.D.	5.10

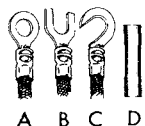
## SOLDERLESS TERMINAL ASSORTMENTS

A basic assortment of the most commonly used Ring Tongue and Spade Terminals for wire sizes 22 thru 14. Packed in a re-usable clear plastic compartment box.

No.	Approx. Quantity of Terminals	Style	NET
1526	200	"PLASTI-GRIP"	\$16.20
1527	300	"PLASTI-GRIP"	22.80
1528	200	"SOLISTRAND"	12.00
1529	300	"SOLISTRAND"	18.00
1577	200	"P.I.D.G."	21.00
1578	300	"P.I.D.G."	30.00



**"PLASTI-GRIP" (P.G.)**



Insulated, strong, special plastic has high dielectric strength. Applied with single operation of press dies or hand tools. High tensile strength. High conductivity copper, electro-tinned. Color coded for wire size.

Std. Pkg. 100

### RING TONGUE (A)

Wire Size	AMP No.	Stud Size	Tongue Width	O'all Stud	NET Per C
22	2750 34141	4	3/32	2/32	\$6.60
to	2752 34142	6	3/32	2/32	6.60
16	2753 34143	8	3/32	2/32	6.60
to	2754 34144	10	3/32	2/32	6.60
16	2754 34150	1/4	5/32	3/16	7.80
to	2755 34151	3/8	5/32	3/16	7.80
16	2756 34152	3/8	1/32	1/16	7.80
16	2757 34157	4	1/4	1/16	\$6.60
to	2758 34158	6	1/4	1/16	6.60
16	2759 34160	8	1/32	2/32	6.60
to	2760 34161	10	1/32	2/32	6.60
14	2761 34162	1/4	5/32	3/16	7.80
to	2762 34163	3/8	5/32	3/16	7.80
14	2763 34164	3/8	1/32	1/16	7.80

### SPADE TONGUE (B)

Wire Size	AMP No.	Stud Size	Tongue Width	O'all Stud	NET Per C
22	2764 34153	6	1/32	4/16	\$6.60
to	2765 34155	8	3/8	5/16	6.60
16	2766 34156	10	3/8	5/16	6.60
16	2767 34165	6	3/8	5/16	\$5.70
to	2768 34166	8	3/8	5/16	6.60
14	2769 34167	10	3/8	5/16	6.60

### HOOK TONGUE (C)

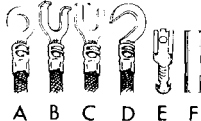
Wire Size	AMP No.	Stud Size	Tongue Width	O'all Stud	NET Per C
20-16	2770 34501	6	3/32	4/16	\$6.60
16-14	2771 321699	8	1/32	5/16	6.60
16-14	2772 320263	8	1/32	5/16	\$9.60

### BUTT CONNECTOR (D)

Wire Size	AMP No.	Stud Size	O'all I.D.	NET Per C
22	2773 34070	22-16	.140 I.D.	\$8.10
16	2774 34071	16-14	.170 I.D.	8.10



**Pre-Insulated Diamond Grip**



Color-coded for wire size. Std. Pkg. 100

### RING TONGUE (A)

Wire Size	AMP No.	Stud Size	Tongue Width	Overall Length	Stud Clear.	NET Per C
22	1550 320882	4	3/16	2 1/2	5/32	\$9.00
to	1551 31881	6	3/32	2 1/2	5/32	9.00
16	1552 31886	8	3/32	2 1/2	1/4	9.00
to	1553 31887	10	3/32	2 1/2	1/4	9.00
16	1554 31894	1/4	5/32	1 1/16	2/64	9.60
14	1555 32441	4	1/4	1 1/4	1/64	9.00
to	1556 32442	6	1/4	1 1/4	1/64	9.00
16	1557 31902	8	1 1/2	2 1/2	3/32	9.00
to	1558 322238	10	1 1/2	2 1/2	1/4	9.00
16	1559 31906	1/4	5/32	1/16	7/16	9.60

### FLANGED SPADE (B)

Wire Size	AMP No.	Stud Size	Tongue Width	Overall Length	NET Per C
22-16	1560 32562	6	1/32	1 3/4	\$9.00
14-16	1561 32498	8	2/64	1 3/4	9.60

### SPADE TONGUE (C)

Wire Size	AMP No.	Stud Size	Tongue Width	Overall Length	NET Per C
22-16	1565 34541	6	1/4	5/4	\$9.00
to	1566 32053	8	3/8	5/4	9.00
16	1567 32054	10	3/8	5/4	9.00

### HOOK TONGUE (D)

Wire Size	AMP No.	Stud Size	Tongue Width	Overall Length	NET Per C
22-16	1568 35559	6	1/32	4/16	\$9.00
14-16	1569 321233	8	1/32	4/16	9.00
16	1570 32060	10	3/8	5/4	9.00

18-14 1576 47100 .250 Faston Receptacle (E) w/insulation support \$ 3.30

### BUTT CONNECTOR (F)

Wire Size	AMP No.	Stud Size	O'all I.D.	NET Per C
22-16	1548 320559	.125	I.D.	\$6.00
16-14	1549 320562	.150	I.D.	60.00

## HAND CRIMPING TOOL

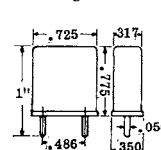
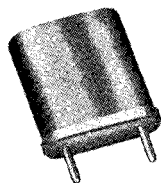


Makes strong, solderless connections; cuts and strips wire, and has threaded hole cutter.

No.	Type	NET Ea.
1579	For P.I.D.G. & P.G.	\$7.20
2872	For Solistrand Type	7.20

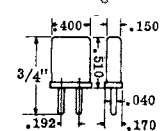
## MINIATURE HOLDER

TYPE HC-6/U



## SUBMINIATURE HOLDER

TYPE HC-18/U



## CITIZENS BAND CRYSTALS

Extremely accurate crystals, designed to meet FCC tolerance of ±.005%. Recommended for use with 3rd overtone type oscillator having approximately 32 mmd. input capacities. (For use with other oscillators a trimming capacitor may be necessary). These crystals match most Class D equipment in use today.

All crystals are stamped with channel number, frequency, and use (transmitting or receiving). Std. Pkg. 1

## TRANSMITTING CRYSTALS

## RECEIVING CRYSTAL

(455 Kc Below Transmitting Frequency)

Channel Number	Frequency Megacycles	Holder Type		Channel Number	Frequency Megacycles	Holder Type	
		HC-6/U	HC-18/U			HC-6/U	HC-18/U
1	26.985	8601	8624	1	26.510	8647	8670
2	26.975	8602	8625	2	26.520	8648	8671
3	26.985	8603	8626	3	26.530	8649	8672
4	27.005	8604	8627	4	26.550	8650	8673
5	27.015	8605	8628	5	26.560	8651	8674
6	27.025	8606	8629	6	26.570	8652	8675
7	27.085	8607	8630	7	26.580	8653	8676
8	27.055	8608	8631	8	26.600	8654	8677
9	27.085	8609	8632	9	26.610	8655	8678
10	27.075	8610	8633	10	26.620	8656	8679
11	27.085	8611	8634	11	26.630	8657	8680
12	27.105	8612	8635	12	26.850	8658	8681
13	27.115	8613	8636	13	26.860	8659	8682
14	27.125	8614	8637	14	26.870	8660	8683
15	27.135	8615	8638	15	26.880	8661	8684
16	27.155	8616	8639	16	26.700	8662	8685
17	27.185	8617	8640	17	26.710	8663	8686
18	27.175	8618	8641	18	26.720	8664	8687
19	27.185	8619	8642	19	26.730	8665	8688
20	27.205	8620	8643	20	26.750	8666	8689
21	27.215	8621	8644	21	26.760	8667	8690
22	27.225	8622	8645	22	26.770	8668	8691
23*	27.255	8623	8646	23*	26.800	8669	8692

Each.....NET \$2.75

Each.....NET \$2.75

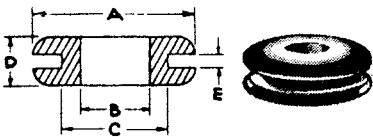
\*Channel 23 is used on a shared basis with Class C Radio Control devices, which are allowed higher power levels than class D Citizens' Band Radio.

# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



### RUBBER GROMMETS



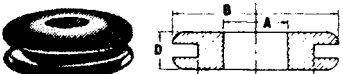
No.	A	B	C	D	E	NET Per C
2185	3/8"	1/2"	3/8"	3/8"	1/16"	\$2.31
2172	7/16"	3/4"	3/8"	3/8"	1/16"	1.98
2170	5/8"	3/4"	3/8"	1/4"	1/16"	2.31
2174	5/8"	3/4"	3/8"	1/4"	1/16"	2.16
2175	1 1/16"	3/8"	1/2"	1/4"	1/16"	2.31
2177	3/4"	3/4"	3/8"	1/4"	1/16"	2.16
2186	1 1/16"	1/2"	3/4"	3/8"	1/16"	4.20
2187	1 1/16"	5/8"	3/8"	3/8"	1/16"	4.20
2188	1 1/16"	3/4"	3/8"	3/8"	1/16"	4.20
2189	1"	3/4"	3/8"	3/8"	1/32"	5.10

### VINYL GROMMETS

DESCR.: Exceptional aging qualities. High dielectric properties. Oil resistant. Durometer hardness 45 to 85.

No.	A	B	C	D	E	NET Per C
2145	1/32"	1/4"	1/4"	3/16"	1/16"	\$ .90
2146	3/16"	3/8"	3/8"	1/2"	1/16"	.96
2147	3/16"	1/4"	3/8"	1/4"	1/16"	1.32
2148	5/8"	3/8"	1/2"	1/4"	1/16"	1.50
2149	1 1/16"	1/2"	5/8"	3/32"	1/16"	2.28

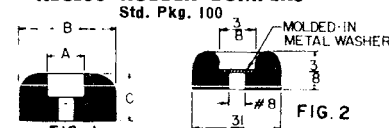
### GROMMETS



Formerly listed by Radio Essentials, Inc., and American Radio Hardware Inc., (Their catalog numbers as below, minus first digit.)

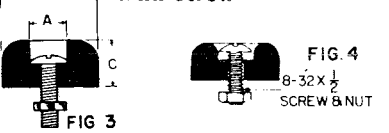
No.	A	B	C	D	E	NET Per C
91100	3/8"	1 1/8"	1/2"	1 3/8"	3/4"	\$7.50
91101	7/8"	1 1/8"	1 1/4"	5/8"	3/4"	13.20
91102	3/8"	5/8"	1 1/2"	3/8"	3/16"	3.15
91103	3/8"	7/8"	1 1/2"	3/8"	3/16"	3.00
91104	1/4"	7/8"	5/8"	1 1/2"	3/8"	5.40
91106	3/8"	5/8"	1 1/2"	1 1/2"	3/8"	6.60
91107	3/8"	5/8"	7/8"	5/8"	3/16"	3.30
91108	1/4"	5/8"	7/8"	1 1/2"	3/8"	7.50
91109	3/8"	1 1/8"	7/8"	3/8"	1/4"	13.50
91110	1 3/4"	1 1/2"	9/8"	7/8"	3/8"	4.20
91111	3/8"	7/8"	1 1/8"	1 1/2"	3/4"	6.60
91112	4 9/16"	1 5/8"	1 3/8"	8/16"	3/4"	7.05
91113	2 1/8"	5/8"	1 3/8"	1 1/4"	3/16"	2.85
91114	1 3/8"	1 1/2"	1 1/4"	3/8"	1/16"	2.34
91115	1 1/4"	3/8"	3/8"	1 1/2"	3/8"	4.05
91116	3/8"	3/4"	1 1/2"	3/8"	1 1/8"	4.35
91117	3/8"	7/8"	1 1/2"	3/8"	3/16"	3.15
91118	3/8"	7/8"	5/8"	1 1/2"	3/8"	2.40
91119	1 1/8"	3/8"	1 3/8"	1 1/4"	1/16"	2.55
91120	1 3/4"	5/8"	3/4"	1 1/4"	1/16"	3.00
91121	3/8"	1 1/8"	1 1/2"	1 1/4"	1/16"	2.85
91122	1 1/4"	1 1/2"	1 1/2"	5/8"	3/32"	2.85
91123	3/8"	1 1/8"	1 1/2"	7/8"	3/4"	5.10
91124	3/8"	3/4"	3/8"	1 1/4"	1/16"	3.45

### RECESS RUBBER BUMPERS



No.	Fig.	A	B	C	NET Per C
2192	1	7/32"	1 1/32"	1/4"	\$1.50
2193	1	1/4"	3/8"	3/8"	1.95
2194	1	1/2"	3/4"	3/8"	3.00
2184	1	1 1/2"	3/4"	3/8"	3.00

### With Screw



Supplied complete with 1/2" mounting screw and hex nut for panels up to 1/8" thick. Specify longer screw for thicker panels.

No.	Fig.	A	B	C	Screw	NET Per C
2196	3	7/32"	1 1/32"	3/8"	6-32	\$6.60
2197	3	1/4"	3/8"	3/8"	6-32	6.90
2198	3	9/32"	3/8"	3/8"	6-32	7.50
2199	3	1/4"	3/8"	3/8"	6-32	7.50

### With molded-in metal washer

No.	Fig.	A	B	C	Screw	NET Per C
2195	4	9/16"	3 1/32"	9/16"	8-32	9.30

### FIBRE SHOULDER WASHERS



All material based on N.E. M.A. Standard and A.S.T.M. Spec. D-710. Std. Pkg. 1000

- A. Inside Diameter
- B. Outside Diameter
- C. Thickness Overall
- D. Height of Shoulder
- E. Diameter of Shoulder

No.	(Hole Size)	A	B	C	D	E	NET Per M
2150	.140	No. 6	.375	.093	.031	.237	\$6.90
2151	.110	No. 4	.250	.062	.031	.187	5.70
2152	.136	No. 6	.250	.093	.031	.187	6.00
2153	.136	No. 6	.312	.093	.031	.187	6.50
2154	.250	1/4"	.500	.062	.028	.112	7.20
2155	.172	No. 8	.375	.093	.031	.246	6.60
2156	.196	No. 10	.375	.093	.031	.308	6.60
2159	.265	1/4"	.500	.097	.031	.365	7.20
2157	.375	3/8"	.750	.097	.031	.500	8.70
2158	.385	3/8"	.625	.093	.031	.500	8.40

### NYLON SHOULDER WASHERS

MATERIAL: Natural Nylon per MIL-P-20693A. Std. Pkg. 1000

No.	(Hole Size)	A	B	C	D	E	NET Per M
2660	.140	No. 6	.250	.062	.031	.187	15.00
2661	.140	No. 4	.375	.093	.031	.237	18.00
2662	.136	No. 6	.250	.093	.031	.187	15.00
2663	.136	No. 6	.312	.093	.031	.187	16.20
2664	.250	1/4"	.500	.062	.028	.112	17.25
2665	.172	No. 8	.375	.093	.031	.246	18.00
2666	.196	No. 10	.375	.093	.031	.308	18.00
2669	.265	1/4"	.500	.097	.031	.365	25.00
2667	.375	3/8"	.750	.093	.031	.500	45.00
2668	.385	3/8"	.625	.093	.031	.500	30.00

### FLAT FIBRE WASHERS

All material based on N.E.M.A. Standard and A.S.T.M. Spec. D-710. Std. Pkg. 1000

No.	(Hole Size)	I.D.	O.D.	Thickness	NET Per M
2160	No. 6	.136	.250	1/16	\$5.70
2161	No. 4	.110	.250	1/16	5.70
2162	No. 6	.140	.375	1/16	5.10
2163	No. 8	.172	.375	1/16	5.10
2164	No. 10	.196	.375	1/16	5.10
2165	1/4"	.250	.500	1/16	5.40
2166	1/4"	.312	.500	3/32	5.70
2167	5/16"	.312	.500	1/16	5.40
2168	3/8"	.385	.625	1/16	6.60
2169	3/8"	.375	.750	1/16	8.40

### NYLON FLAT WASHERS

MATERIAL: Natural Nylon per MIL-P-20693A. NET Per M

No.	(Hole Size)	I.D.	O.D.	Thickness	NET Per M
2514	No. 4	.110	.281	.047	\$18.00
2670	No. 6	.136	.250	1/16	12.90
2671	No. 4	.110	.250	1/16	12.90
2672	No. 6	.140	.375	1/16	16.30
2515	No. 6	.140	.312	.047	18.60
2673	No. 8	.172	.375	1/16	18.00
2516	No. 8	.170	.375	.062	21.00
2674	No. 10	.196	.375	1/16	16.30
2517	No. 10	.200	.437	.062	22.20
2675	1/4"	.250	.500	1/16	18.00
2676	1/4"	.250	.500	3/32	21.00
2518	1/4"	.260	.562	.062	24.00
2677	5/16"	.312	.500	1/16	18.00
2678	3/8"	.385	.625	1/16	19.50
2679	3/8"	.375	.750	1/16	21.75

### NYLON SPACER BUSHINGS

Natural Nylon per MIL-P-20693A. Std. Pkg. 100

No.	I.D. (A)	B	C	D	E	NET Per M
2534	#4(.115)	.235	3/64	1/4	.147	\$21.00
2535	#6(.140)	.290	3/64	1/4	.170	21.00
2536	#8(.170)	.344	1/16	3/8	.205	22.00
2537	#10(.200)	.399	1/16	3/8	.260	24.00
2538	#10(.260)	.513	1/16	3/8	.312	27.00

### NYLON SCREWS

Natural Nylon per MIL-P-20693A. Std. Package 1000

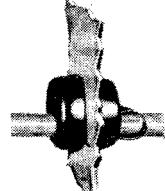
Size	No.	No.	No.	No.	No.	No.	NET Per M
4-40x1/4	2500	2520	2540	2580	2560	2480	\$30.00
4-40x3/8	2501	2521	2541	2581	2561	2481	33.00
4-40x1/2	2502	2522	2542	2582	2562	2482	31.20
6-32x1/4	2503	2523	2543	2583	2563	2483	30.60
6-32x3/8	2504	2524	2544	2584	2564	2484	30.60
6-32x1/2	2505	2525	2545	2585	2565	2485	31.20
6-32x5/8	2506	2526	2546	2586	2566	2486	31.20
6-32x3/4	2507	2527	2547	2587	2567	2487	31.80
8-32x1/4	2509	2529	2549	2589	2569	2489	30.60
8-32x3/8	2510	2530	2550	2590	2570	2490	31.20
8-32x1/2	2511	2531	2551	2591	2571	2491	31.20
8-32x5/8	2512	2532	2552	2592	2572	2492	31.80

### NYLON HEX NUTS

Black Nylon per MIL-P-20693A. Std. Pkg. 100

No.	Size	NET Per C
2554	4-10	\$6.00
2555	6-32	6.30
2556	8-32	6.60
2557	10-32	6.90

### NYLON STRAIN RELIEF BUSHINGS



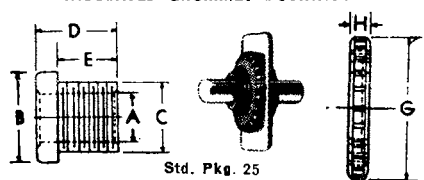
One piece construction. Eliminates grommets, wire knots and costly labor. Completely insulates wire from chassis and prevents cord pull push and twist. No. 937 Ideal for small mike cables; No. 938 for line cords; No. 939 for Co-Ax Wire.

No.	Wire Size	A	B	C	D	E	NET Per C
937	1/8-3/4"	.375	.440	.415	to 1/2"	1/16"	\$3.60
938	SP-1 & SPT-1	.437	.468	.406	to 1/2"	1/16"	3.60
939	.235-.265	.500	.560	.438	to 3/32"	1/32"	4.20



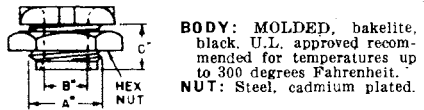
No. 940 Setting Pliers NET Each \$10.20

### INSULATED GROMMET BUSHINGS



No.	A	B	C	D	E	G	H	NET Per C
931	3/8"	3/8"	1/4"-32	.375	5/16"	1/2"	1/4"	\$17.40
932	3/8"	3/8"	3/16"-32	.425	5/16"	5/8"	3/8"	17.40
933	3/8"	3/8"	1/8"-27	.4375	5/16"	1 1/16"	3/8"	18.00
934	3/8"	3/8"	1/8"-32	.4500	5/16"	7/8"	3/8"	19.80
935	3/8"	3/8"	3/8"-27	.4500	5/16"	1"	1/8"	21.60

### BAKELITE INSULATING BUSHINGS



BODY: MOLDED, bakelite, black. U.L. approved recommended for temperatures up to 300 degrees Fahrenheit. NUT: Steel, cadmium plated.

No.	A	B	C	Std. Pkg.	NET Per C
2136	1 3/8"	1 7/8"	1/4"	50	\$8.40
2137	1 1/2"	2"	5/16"	50	9.00
2138	1 3/4"	2 1/8"	3/8"	50	9

# HERMAN H. SMITH, INC.



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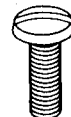
**ROUND HEAD STEEL MACHINE SCREWS**  
CADMIUM PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
2-56 x 1/4"	1173C	.45	1173M	3.00
2-56 x 3/8"	1174C	.48	1174M	3.25
2-56 x 1/2"	1175C	.55	1175M	3.83
3-48 x 3/8"	1176C	.58	1176M	4.17
4-36 x 1/2"	1177C	.48	1177M	3.25
4-36 x 3/4"	1178C	.50	1178M	3.45
4-36 x 1"	1183C	.52	1183M	3.50
4-36 x 1 1/4"	1184C	.67	1184M	5.00
4-36 x 1 1/2"	1185C	.77	1185M	5.95
4-40 x 1/2"	1350C	.48	1350M	3.25
4-40 x 3/4"	1351C	.50	1351M	3.45
4-40 x 1"	1352C	.53	1352M	3.75
4-40 x 1 1/4"	1353C	.57	1353M	4.05
4-40 x 1 1/2"	1354C	.78	1354M	6.00
6-32 x 1/2"	1000C	.58	1000M	4.17
6-32 x 3/4"	1001C	.61	1001M	4.48
6-32 x 1"	1002C	.65	1002M	4.73
6-32 x 1 1/4"	1355C	.68	1355M	5.05
6-32 x 1 1/2"	1356C	.80	1356M	6.30
6-32 x 1 3/4"	1357C	.83	1357M	6.67
6-32 x 2"	1358C	1.50	1358M	13.20
8-32 x 1/2"	1006C	.72	1006M	5.55
8-32 x 3/4"	1007C	.75	1007M	5.73
8-32 x 1"	1008C	.80	1008M	6.30
8-32 x 1 1/4"	1359C	.93	1359M	7.67
10-32 x 1/2"	1360C	.95	1360M	8.50
10-32 x 3/4"	1361C	1.12	1361M	9.45
10-32 x 1"	1362C	1.25	1362M	11.00



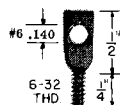
**BRASS MACHINE SCREWS**  
Round Head Nickel Plated  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
4-36 x 1/4"	1044C	\$.80	1044M	\$6.31
4-36 x 3/8"	1045C	.88	1045M	7.14
4-36 x 1/2"	1046C	.98	1046M	8.05
4-40 x 1/4"	1047C	.80	1047M	6.31
4-40 x 3/8"	1048C	.61	1048M	6.72
4-40 x 1/2"	1049C	.98	1049M	8.05
6-32 x 1/4"	1050C	1.03	1050M	8.55
6-32 x 3/8"	1051C	1.08	1051M	9.05
6-32 x 1/2"	1052C	1.20	1052M	10.29
8-32 x 3/8"	1056C	1.43	1056M	12.62
8-32 x 1/2"	1057C	1.50	1057M	13.28
8-32 x 1"	1058C	1.68	1058M	15.11



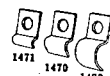
**BINDING HEAD STEEL MACHINE SCREWS**  
CADMIUM PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
2-56 x 1/4"	1369C	.45	1369M	3.00
2-56 x 3/8"	1370C	.48	1370M	3.07
2-56 x 1/2"	1371C	.55	1371M	3.83
4-40 x 1/4"	1372C	.48	1372M	3.07
4-40 x 1/2"	1373C	.53	1373M	3.75
4-40 x 3/4"	1374C	.78	1374M	6.00
6-32 x 3/4"	1375C	.55	1375M	3.83
6-32 x 1"	1425C	.58	1425M	4.17
6-32 x 1 1/4"	1426C	.62	1426M	4.50
6-32 x 1 1/2"	1427C	.65	1427M	4.75
6-32 x 1 3/4"	1376C	.68	1376M	5.05
6-32 x 2"	1377C	.80	1377M	6.30
8-32 x 1/2"	1428C	.72	1428M	5.55
8-32 x 3/4"	1378C	.74	1378M	5.70
8-32 x 1"	1429C	.75	1429M	5.75
8-32 x 1 1/4"	1430C	.80	1430M	6.30
8-32 x 1 1/2"	1379C	.93	1379M	7.67
10-32 x 1/2"	1380C	.95	1380M	8.50
10-32 x 3/4"	1381C	1.03	1381M	8.55



**STEEL SPADE BOLTS**

Size	No.	Net per C	No.	Net per M
6-32 x 3/8"	1500C	1.25	1500M	10.20



**CABLE CLAMPS**  
Steel Cadmium Plated with No. 8 Mt. Hole.  
Std. Pkg. 100

No.	Length	Width	Cable	NET Per C
1471	3/4"	3/8"	3/8"	\$.78
1470	1"	3/8"	3/8"	\$.84
1472	1"	3/8"	1/2"	\$.90

**SELF TAPPING SCREWS**  
Std. Pkg. 100

**ROUND HEAD—TYPE A—Sharp Point**

Size	No.	NET per C	No.	NET per M
4 x 1/2"	1801C	\$.77	1801M	\$6.00
6 x 1/4"	1802C	.83	1802M	6.67
6 x 3/8"	1803C	.87	1803M	7.00
6 x 1/2"	1804C	.98	1804M	8.10
8 x 3/8"	1805C	.92	1805M	7.50
8 x 1/2"	1806C	1.12	1806M	9.45

**ROUND HEAD—TYPE Z—Blunt Point**

Size	No.	NET per C	No.	NET per M
4 x 1/2"	1807C	\$.87	1807M	\$7.00
6 x 1/4"	1808C	.87	1808M	7.00
6 x 3/8"	1809C	.87	1809M	7.00
6 x 1/2"	1810C	.98	1810M	8.10
8 x 3/8"	1811C	.92	1811M	7.50
8 x 1/2"	1812C	1.12	1812M	9.45

**SLOTTED HEX HEAD—TYPE Z Blunt Point**

Size	No.	NET per C	No.	NET per M
6 x 1/4"	1830C	\$1.12	1830M	\$9.45
6 x 3/8"	1831C	1.12	1831M	9.45
6 x 1/2"	1832C	1.12	1832M	9.45
8 x 3/8"	1833C	.92	1833M	7.50
8 x 1/2"	1834C	1.12	1834M	9.45



**PAN HEAD SHEET METAL SCREWS**  
CADMIUM PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
4 x 1/2"	1389C	.87	1389M	7.00
6 x 1/2"	1390C	.87	1390M	7.00
6 x 3/8"	1391C	.90	1391M	7.25
6 x 1/4"	1392C	.92	1392M	7.50
6 x 3/4"	1393C	1.00	1393M	8.40
8 x 1/2"	1394C	1.00	1394M	8.40
8 x 3/8"	1395C	1.05	1395M	8.60
8 x 1/4"	1396C	1.08	1396M	9.17
8 x 1"	1397C	1.38	1397M	12.08



**ROUND HEAD STEEL WOOD SCREWS**  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
4 x 1/2"	1384C	.78	1384M	6.00
4 x 3/4"	1385C	.90	1385M	7.25
6 x 3/4"	1386C	.97	1386M	8.00
6 x 1"	1387C	1.20	1387M	10.00
8 x 3/4"	1388C	1.15	1388M	9.75



**OVAL HEAD STEEL NICKEL PLATED RACK SCREWS**  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
6-32 x 3/4"	1382C	.75	1382M	5.75
8-32 x 3/4"	1383C	.95	1383M	8.00
10-32 x 1/2"	1111C	.90	1111M	7.22
10-32 x 3/4"	1112C	1.03	1112M	8.63



**COUNTER SUNK WASHERS BRASS**  
NICKEL PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
#6	1115C	.55	1115M	3.83
#8	1116C	.65	1116M	5.10
#10	1117C	1.08	1117M	5.75

**FANNESTOCK SPRING BATTERY CLIPS**



Clips are made of brass, nickel plated and are available in the single and double clip types.  
Std. Pkg. 100

No.	Type	Length	NET Per C
539	Single	5/8"	\$1.20
533	Single	3/4"	1.44
534	Single	1"	2.10
535	Double	1 1/4"	2.40
536	Double	2 1/8"	9.60



**HEXAGON NUTS**  
Brass Nickel Plated  
Std. Pkg. 100

Size	No.	NET per C	No.	NET per M
4-36 x 1/4"	1188C	\$1.10	1188M	\$9.33
4-40 x 1/4"	1188C	1.10	1188M	9.25
6-32 x 1/4"	1189C	1.08	1189M	9.17
6-32 x 5/16"	1190C	1.28	1190M	11.08
8-32 x 5/16"	1192C	1.28	1192M	11.08
10-32 x 5/16"	1193C	1.38	1193M	12.08
1/4-32"	1187C	1.97	1187M	18.00

**Steel Nickel Plated**  
1/4-32" 1186C 1.50 1186M \$13.20



**HEX NUTS STEEL**  
CADMIUM PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
2-56 x 3/8"	1363C	.68	1363M	5.05
3-48 x 3/8"	1364C	.68	1364M	5.05
4-46 x 1/2"	1365C	.67	1365M	5.00
4-40 x 1/2"	1179C	.70	1179M	5.25
6-32 x 3/4"	1180C	.72	1180M	5.55
8-32 x 1/2"	1366C	.73	1366M	5.60
8-32 x 3/4"	1181C	.73	1181M	5.70
10-32 x 3/8"	1367C	.97	1367M	8.00
1/4-20 x 3/8"	1368C	1.33	1368M	11.50
1/4-32 x 3/8"	1186C	1.50	1186M	13.20



**VOL CONTROL & TOGGLE SWITCH NUTS**  
Nickel Plated  
Std. Pkg. 500

Vol. Cont. Brass*	No.	NET per C	No.	NET per M
Vol. Cont. Steel*	1195C	\$1.65	1195M	\$15.00
Toggle Sw. Hex†	1199C	1.32	1199M	12.00
Toggle Sw. Ring‡	1196C	1.98	1196M	18.00
	1197C	3.30	1197M	30.00

\*3/8-32 x 1/2 x 3/32 †1 1/2 x 3/8 x 3/8 ‡1 1/2 x 3/8 x 1/8



**FLAT STEEL WASHERS**  
NICKEL PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
For #2 Screw	1138C	.65	1138M	6.80
For #4 Screw	1149C	.83	1149M	8.00
For #6 Screw	1150C	.65	1150M	4.80
For #8 Screw	1151C	.65	1151M	4.80
For #10 Screw	1152C	.83	1152M	6.60
For 1/4" Screw	1147C	.83	1147M	6.60
For 3/8" Screw	1148C	.90	1148M	7.25



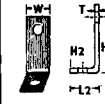
**INTERNAL TOOTH LOCKWASHERS STEEL**  
CADMIUM PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
#4	1127C	.51	1127M	3.50
#6	1128C	.51	1128M	3.50
#8	1129C	.55	1129M	3.83
#10	1130C	.55	1130M	3.83
1 1/4"	1132C	.67	1132M	5.00
3/4"	1131C	1.02	1131M	8.50
Narrow Rim 3/4"	1145C	1.02	1145M	8.50
Narrow Rim 1 1/2"	1146C	1.02	1146M	8.50



**EXTERNAL TOOTH LOCKWASHERS STEEL**  
CADMIUM PLATED  
Std. Pkg. 100

Size	No.	Net per C	No.	Net per M
#4	1139C	.51	1139M	3.50
#6	1140C	.51	1140M	3.50
#8	1141C	.55	1141M	3.83
#10	1142C	.55	1142M	3.83
1 1/4"	1144C	.67	1144M	5.00
3/4"	1143C	1.02	1143M	8.50



**ANGLES**  
L1 — Length of leg H1 — Hole Location  
L2 — Length of leg H2 — Hole Location  
T — Thickness A — Hole Diameter  
W — Width B — Hole Diameter  
Std. Pkg. 100

**STEEL, Cadmium Plated**

No.
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# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

## JUMPER CORDS

Male Phono Plug with fingergrasp handle on each end. Std. Pkg. 6

No.	Length	NET Ea.
631	18 inches	\$ .75
632	24 inches	.78
633	36 inches	.84
634	48 inches	.96
635	72 inches	1.05
636	120 inches	1.50
745	180 inches	1.68

Right Angle Phono Plug to Right Angle Phono Plug. Std. Pkg. 6

No.	Length	NET Ea.
2720	18 inches	\$ .75
2721	24 inches	.78
2722	36 inches	.84
2723	48 inches	.96
2724	72 inches	1.05
2725	120 inches	1.50
2726	180 inches	1.68

## EXTENSION CORDS

Male Phono Plug with fingergrasp handle one end; Female In-line Jack other end. Std. Pkg. 6

No.	Length	NET Ea.
641	18 inches	\$ .95
642	24 inches	1.02
643	36 inches	1.08
644	48 inches	1.20
645	72 inches	1.29
646	120 inches	1.62

Right Angle Phono Plug to In-line Jack. Std. Pkg. 6

No.	Length	NET Ea.
2728	18 inches	\$ .99
2729	24 inches	1.02
2730	36 inches	1.08
2731	48 inches	1.20
2732	72 inches	1.20
2733	120 inches	1.62

Male Phono Plug one end; In-line Jack other end. Std. Pkg. 6

No.	Length	NET Ea.
639	72 inches	NET ea. \$1.44

Right Angle Phono Plug to In-line Jack. Std. Pkg. 6

No.	Length	NET Ea.
2740	72 inches	NET ea. \$1.44

## INPUT-OUTPUT CORDS

Male Phono Plug with fingergrasp handle one end; Male Phono Plug other end. Std. Pkg. 6

No.	Length	NET Ea.
662	72 inches	NET Ea. \$1.38

Right Angle Phone Plug to Straight Phono Plug. Std. Pkg. 6

No.	Length	NET Ea.
2786	6 feet	NET Ea. \$1.38

Male Phono Plug with Molded Fingergrasp handle one end; Miniature Phono Plug other end. Std. Pkg. 6

No.	Length	NET Ea.
715	72 inches	NET Ea. \$1.38

Right Angle Phono Plug to Phone Plug. Std. Pkg. 6

No.	Length	NET Ea.
2739	72 inches	NET Ea. \$1.38

Right Angle Phone Plug to Right Angle Phono Plug. Std. Pkg. 6

No.	Length	NET Ea.
2787	6 feet	NET Ea. \$1.38

Right Angle Phono Plug to Miniature Phono Plug. Std. Pkg. 6

No.	Length	NET Ea.
2741	72 inches	NET Ea. \$1.38

## CONNECTOR CORDS

For Imported HI-FI Equipment

Two banana plugs one end, phono jack other end. Std. Pkg. 6

No.	Length	NET Ea.
712	72 inches	NET Ea. \$1.38

Two banana plugs one end, in-line banana jacks other end. Std. Pkg. 6

No.	Length	NET Ea.
713	72 inches	NET Ea. \$1.62

Two banana plugs one end, ins. alligator clips other end. Std. Pkg. 6

No.	Length	NET Ea.
714	72 inches	NET Ea. \$1.38

Two banana plugs one end, stripped and tinned other end. Std. Pkg. 6

No.	Length	NET Ea.
709	72 inches	NET Ea. \$1.02

Two banana plugs one end, phone plug other end. Std. Pkg. 6

No.	Length	NET Ea.
710	72 inches	NET Ea. \$1.44

Two banana plugs one end, phono plug other end. Std. Pkg. 6

No.	Length	NET Ea.
711	72 inches	NET Ea. \$1.20

## PHONO PLUG CONNECTOR CORDS

Male Phono Plug with fingergrasp handle one end; Spade Lugs other end. Std. Pkg. 6

No.	Length	NET Ea.
668	72 inches	NET Ea. \$0.72

Male Phono Plug with fingergrasp handle one end; other end stripped and tinned. Std. Pkg. 6

No.	Length	NET Ea.
637	36 inches	\$ .66
638	72 inches	.84

Male Phono Plug with fingergrasp handle one end; Insulated Alligator Clips other end. Std. Pkg. 6

No.	Length	NET Ea.
673	36 inches	\$ .72
674	72 inches	.94

Right Angle Phone Plug to Spade Lugs. Std. Pkg. 6

No.	Length	NET Ea.
2734	72 inches	NET Ea. \$0.72

Right Angle Phone Plug to stripped and tinned ends. Std. Pkg. 6

No.	Length	NET Ea.
2735	36 inches	\$ .66
2736	72 inches	.84

Right Angle Phone Plug to Insulated Alligator Clips. Std. Pkg. 6

No.	Length	NET Ea.
2737	36 inches	\$ .72
2738	72 inches	.90

## PHONE PLUG JUMPER CORDS

Male Phono Plugs on each end. Std. Pkg. 6

No.	Length	NET Ea.
677	72 inches	NET Ea. \$1.38

Right Angle Phone Plug to Right Angle Phone Plug. Std. Pkg. 6

No.	Length	NET Ea.
2784	6 feet	\$1.38
2785	10 feet	1.71

Right Angle Phone Plug to Straight Phone Plug. Std. Pkg. 6

No.	Length	NET Ea.
2783	6 feet	NET Ea. \$1.38

## PHONE PLUG EXTENSION CORDS

Male Phone Plug one end; Female In-line Jack other end. Std. Pkg. 6

No.	Length	NET Ea.
663	72 inches	NET Ea. \$1.80

Right Angle Phone Plug to In-line Phono Jack. Std. Pkg. 6

No.	Length	NET Ea.
2788	6 feet	NET Ea. \$1.80

Male Phone Plug one end; In-line Jack other end. Std. Pkg. 6

No.	Length	NET Ea.
669	72 inches	NET Ea. \$1.98

Right Angle Phone Plug to In-line Phone Jack. Std. Pkg. 6

No.	Length	NET Ea.
2789	6 feet	NET Ea. \$1.98

## PHONE PLUG CONNECTOR CORDS

Male Phone Plug one end; Spade Lugs other end. Std. Pkg. 6

No.	Length	NET Ea.
665	72 inches	NET Ea. \$1.08

Male Phone Plug one end; other end stripped and tinned. Std. Pkg. 6

No.	Length	NET Ea.
667	72 inches	NET Ea. \$1.20

Male Phone Plug one end; insulated Alligator Clips other end. Std. Pkg. 6

No.	Length	NET Ea.
664	72 inches	NET Ea. \$1.20

Right Angle Phone Plug to Insulated Spade Lug. Std. Pkg. 6

No.	Length	NET Ea.
2780	6 feet	NET Ea. \$1.08

Right Angle Phone Plug to Stripped and Tinned Ends. Std. Pkg. 6

No.	Length	NET Ea.
2781	6 feet	NET Ea. \$1.20

Right Angle Phone Plug to Insulated Alligator Clips. Std. Pkg. 6

No.	Length	NET Ea.
2782	6 feet	NET Ea. \$1.29

# HERMAN H. SMITH, INC.



"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

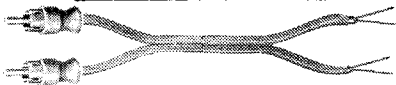
## STEREO CONNECTOR CABLES

Twin shielded audio cables, individually color coded with molded connectors, for neat, simultaneous connections of both channels in Stereo Hi-Fi equipment.



Male Phono Plugs (out No. 1201) with finger grip handle on each end.

No.	Length	NET Each
754	36 inches	\$1.80
755	72 inches	2.04
756	144 inches	2.70



Male Phone Plugs (our No. 1201) with finger grip handle, one end. Other end stripped and tinned with color-coded insulation.

No.	Length	NET Each
757	36 inches	\$1.59
758	72 inches	1.74
759	144 inches	2.25



Male Phone Plugs (our No. 1201) with finger grip handle, one end. Female molded in-line jacks other end.

No.	Length	NET Each
760	36 inches	\$2.25
761	72 inches	2.40
762	144 inches	3.00

## HI-FI CORDS

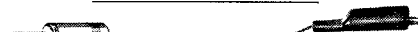
For Revere Equipment  
Std. Pkg. 6  
CONNECTOR CORDS



Short-sleeve Phone Plug one end; other end stripped and tinned.  
No. 700 120 inches NET Ea. \$2.10



Short-sleeve Phone Plug one end; other end Spade Lugs.  
No. 701 120 inches NET Ea. \$2.22



Short-sleeve Phone Plug one end; Insulated Alligator Clips other end.  
No. 702 120 inches NET Ea. \$2.43

## EXTENSION CORDS



Short-sleeve Phone Plug one end; Revere type In-line Jack other end.  
No. 703 120 inches NET Ea. \$4.98



Short-sleeve Phone Plug one end; Standard In-line Jack other end.  
No. 704 120 inches NET Ea. \$2.88



Short-sleeve Phone Plug one end; Phono In-line Jack other end.  
No. 705 120 inches NET Ea. \$2.64

## INPUT-OUTPUT



Short-sleeve Phone Plug one end; Standard Phone Plug other end.  
No. 706 120 inches NET Ea. \$2.64

## CONNECTOR CORD FOR WEBCOR TAPE RECORDER



Three way Phone Plug with built in resistor to cut down on audio one end; Insulated Alligator Clips other end.  
No. 676 120 inches NET Ea. \$2.34

## PHONO PLUGS

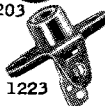


RCA Type Phone Plug. For use with record players, recording and reproducing equipment, etc. Extra large hole in cap (.175") for coaxial cable. Std. Pkg. 100  
No. Type NET Per C  
1201 Long Pin (1" overall) \$3.60  
1202 Short Pin (13/16" overall) 3.60

## PHONO JACKS



Female for No. 1201 plug. Single prong positive grip jack mounted on 1/16" bakelite with 11/16" mounting centers. Std. Pkg. 100  
No. NET Per C  
1203 1203-1 Insulating Washer 1.80



Small, compact... where space is at a premium. 7/16" Mtg. Ctrs.  
Std. Pkg. 100  
No. NET Per C  
1223 1223 \$7.20



Space Saver Rivets and grounds to chassis. Mounts in 19/64" hole.  
Std. Pkg. 50  
No. NET Per C  
1233 1233 \$6.60

## PANEL MOUNT PHONO JACK



Mounts in 29/64" hole (.453) with nut and washer. Easy installation for the home Hi-Fi enthusiast.  
Std. Pkg. 50  
No. NET Per C  
1247 1247 \$21.00



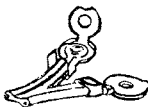
## HANDY GRIP PHONO PLUG

Quick connect: strip wire, solder inner conductor to pin and either solder braid to lug or crimp to lug. Fits all standard phono jacks.  
Std. Pkg. 100  
No. NET Per C  
1246 1246 \$9.00



## SHIELDED EXTENSION JACK

Brass shell, cadmium plated, 1 1/8" long, with black bakelite insert. Provides insulation for solder-coated positive grip contact. Uses No. 1201 phono plug. Std. Pkg. 50  
No. NET Per C  
1237 1237 \$27.00



## TV ANTENNA LUG

Solderless Type

A secure, swift, positive and permanent method of connecting TV wire to antenna. Simply strip wire, coil around groove and fold over. Insure positive contact.  
Std. Pkg. 100  
No. Type Length Hole NET Per C  
1480 Double Cup 1 1/8" No. 10 \$2.64  
1481 Double Cup 1 1/8" 3/4" 2.10

## MICROPHONE CABLES

### Coaxial Extension Cable



No.	Length	NET Ea.
687	36 inches	\$1.40
688	72 inches	1.80
689	144 inches	2.58

### Coaxial Jumper Cable



No.	Length	NET Ea.
694	36 inches	\$1.62
696	72 inches	1.98
697	144 inches	2.52

## ADAPTER



### Phone Plug to Phone Plug

Adapts standard phono plug to phone plug with built in resistor to adapt either crystal or magnetic pickups. Std. pkg. 10.

No. 707	With Resistor	\$1.59 Ea.
No. 708	Without Resistor	\$ .90 Ea.

## FEED THRU

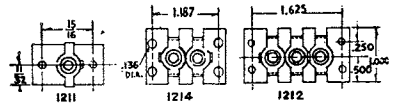


Accepts Phono Plug on Each End. Std. Pkg. 10  
No. 661 NET ea. \$7.2



## PHONO JACKS

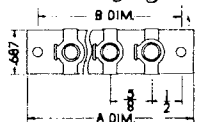
Used on recording units, phono plays, etc. Std. pkg. 50



No.	NET Per C
1211—Single Jack	\$ 7.20
1214—Double Jack	9.60
1212—Triple Jack	15.00
1214-1—Insulating Washer for No. 1214	2.40



## MULTIPLE PHONO JACKS



Individual phono jacks (no interconnected grounds) mounted on narrow width bakelite strip.

No.	No. of Jacks	Dimensions "A"	Dimensions "B"	Std. Pkg. 50	NET Per C
1261	1	1 3/8"	1.000		\$4.80
1262	2	2"	1.625		8.70
1263	3	2 5/8"	2.250		14.10
1264	4	3 1/4"	2.875		17.10
1265	5	3 7/8"	3.500		21.60
1266	6	4 1/2"	4.125		25.20
1267	7	4 7/8"	4.750		28.40
1268	8	5 3/8"	5.375		33.60



## MINIATURE HUM BALANCING CONTROLS

Rheostat rated at 2 watts, grounded rotor, tolerance ± 20%. Screwdriver slot adjustment from front or rear. Useful for hum balancing, centering, hold and locking. linearly. AGC sensitivity, etc.

No.	Total Res. Ohms	Std. Pkg. 25	NET Per C
2291	50		\$39.00
2292	100		39.00
2293	300		39.00
2294	500		39.00
2295	700		39.00
2296	1000		39.00
2297	2000		39.00
2298	3000		39.00
2299	4000		39.00



## HEX AND SPLINE KEYS

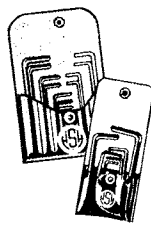
Made of special alloy steel, tempered to avoid brittleness and impose maximum resistance to torsional strain. Ends ground for easy insertion.

### HEX KEYS

No.	Screw	Hex	NET Per C
340	No. 2	.034	\$7.80
341	No. 3, 4	.050	7.80
342	No. 5, 6	.062	7.80
343	No. 8	.078	7.80
344	No. 10	.093	9.00
345	No. 1/4"	.125	9.00
346	No. 5/16"	.156	9.00

### SPLINE KEYS

No.	Screw	O. D.	NET Per C
370	No. 4	.058	\$7.80
371	No. 5	.068	7.80
372	No. 6	.075	7.80
373	No. 8	.093	7.80
374	No. 10	.109	9.00
375	No. 1/4"	.143	9.00
376	No. 5/16"	.182	9.00



## HEX AND SPLINE KEY KITS

Attractive tearproof vinyl plastic kit with individual pockets for each of six keys in kit.

Std. Pkg. 5  
Kit of 6 hex keys for screws from No. 3 to 5/16"  
No. 355 \$100.00 NET Per C  
Kit of 6 spline keys for screws from No. 5 to 5/16"  
No. 385 \$100.00 NET Per C  
Combination Kit of 3 hex and 3 spline keys for No. 6-8-10 screws.  
No. 390 \$100.00 NET Per C  
Kit of 7 hex keys for screws from No. 2 to 5/16" and 4 spline keys Nos. 4, 6, 8, and 10.

## HEX KEYS SPLINE KEYS

No.	Display of 24 Hex Kits No. 355	NET Each
355D	Display of 24 Hex Kits No. 355	\$24.00
385D	Display of 24 Spline Kits No. 385	24.00
390D	Display of 24 Comb. Kits No. 390	24.00
395D	Display of 20 Comb. Kits No. 395	40.00



# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

## CUTLER-HAMMER SWITCHES

### TOGGLE SWITCHES

STANDARD DUTY

15 Amps. 125 Volts — 10 Amps. 250 Volts  
AC, UL Approved 15/32" shank; slow-make and break; bakelite case, AC rated only for longer life and greater capacity. Std. Pkg. 10

#### BACK CONNECTED LUG TERMINALS



No.	C-H No.	Type	NET Each
966	7501K13	SPST	\$ .69
967	7505K4	SPDT	.81
968	7561K4	DPST	1.08
969	7565K5	DPDT	1.26
970	7611K2	TPST	2.19
971	7616K2	TPDT	2.70

#### BACK CONNECTED SCREW TERMINALS



No.	C-H No.	Type	NET Each
972	7500K14	SPST	\$ .81
973	7504K4	SPDT	.96
974	7560K5	DPST	1.26
975	7564K6	DPDT	1.56
976	7610K2	TPST	2.55
977	7614K2	TPDT	3.24

### CENTER OFF STANDARD DUTY TOGGLE SWITCHES

#### BACK CONNECTED LUG TERMINALS

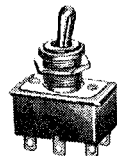


No.	C-H No.	Type	NET Each
978	7503K13	SPDT	\$ .81
979	7563K4	DPDT	1.26
980	7613K2	TPDT	2.70

#### BACK CONNECTED SCREW TERMINALS

No.	C-H No.	Type	NET Each
981	7502K13	SPDT	\$ .96
982	7562K4	DPDT	1.56
983	7612K2	TPDT	3.24

### TOGGLE SWITCHES LIGHT DUTY



AC-DC, UL Approved; 15/32" shank; quick make — quick break; bakelite case. Unusually small size for electrical capacity. Std. Pkg. 10

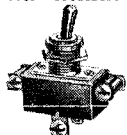
### BACK CONNECTED LUG TERMINALS SMALL BAT HANDLE 1/32" LONG

No.	C-H No.	Current Rating		NET Each
		Type	125 V. 250 V	
950	8280K16	SPST	3 Amps.	\$ .69
951	8381K8	SPDT	6 Amps. 3 Amps.	.81
952	8282K14	SPDT	3 Amps. 1 Amp.	.87
953	8283K14	DPST	3 Amps. 1 Amp.	.93
954	8386K7	DPST	3 Amps.	1.26
955	8370K7	DPST	6 Amps.	1.38
956	8363K7	DPDT	3 Amps.	1.44
957	8373K7	DPDT	6 Amps. 3 Amps.	1.56

### STANDARD BAT HANDLE 1/16" LONG

No.	C-H No.	Type	NET Each
1160	8908K446	SPST	3 Amps. \$ .69
1161	8908K447	SPST	6 Amps. 3 Amps. .81
1162	8908K448	SPDT	3 Amps. 1 Amp. .87
1163	8908K449	DPST	3 Amps. 1 Amp. .93
1164	8908K450	DPST	3 Amps. 1.26
1165	8908K451	DPST	6 Amps. 3 Amps. 1.38
1166	8908K452	DPDT	3 Amps. 1.44
1167	8908K453	DPDT	6 Amps. 3 Amps. 1.56

### SIDE CONNECTED SCREW TERMINALS



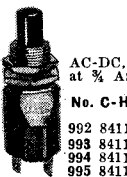
No.	C-H No.	Type	NET Each
958	8285K3	SPST	3 Amps. \$ .84
959	8366K8	SPST	6 Amps. 3 Amps. .86
960	8297K8	SPDT	3 Amps. 1 Amp. 1.11
961	8372K7	DPST	6 Amps. 3 Amps. 1.65
962	8365K7	DPDT	3 Amps. 1.89
963	8375K7	DPDT	6 Amps. 3 Amps. 2.01

### WIRE LEADS—SIX INCHES LONG Std. Pkg. 10



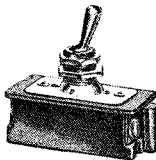
No.	C-H No.	Type	NET Each
964	8290K16	SPST	125 V. \$ .84
965	8391K8	SPST	6 Amps. .96
966	8291K16	SPST	250 V. \$ .84
967	8392K8	SPST	3 Amps. .96

### PUSH BUTTON MOMENTARY SWITCHES Std. Pkg. 10



AC-DC, UL Approved, 15/32" shank; rated at 3/4 Amp, 125 volts — 1/4 Amp, 250 volts.

No.	C-H No.	Type	Term.	NET Each
992	8411K4	SP Norm. Op	Lug	\$ .48
993	8411K3	SP Norm. Op	Screw	.54
994	8411K8	SP Norm. Cl	Lug	.36
995	8411K7	SP Norm. Cl	Screw	.39



### TOGGLE SWITCHES HEAVY DUTY

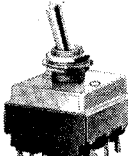
AC-DC, UL Approved; 15/32" shank; quick make-quick break; bakelite case. Screw Terminals.

Std. Pkg. 10

No.	C-H No.	Current Rating	NET Each
984	7321K3	SPST 12 A	\$ 1.32
985	7320K3	DPST 12 A	6 A 1.32
986	7361K5	SPST 15 A	10 A 2.31
987	7360K8	DPST 15 A	10 A 2.31
988	7402K4	DPST	20 A 3.24

\*1 Hp — 125/250V; ±1 1/2 Hp — 125/250V.  
±1 1/2 Hp — 125V, 2 Hp — 250V.

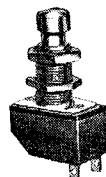
### FOUR POLE SWITCHES



AC-DC GOVERNMENT APPROVED PER MIL-S-6745. 15/32" shank. Rated 10 amps, 115 volt AC—20 amps, 28 volts DC (Nominal rating per pole). SEALED LEVER Std. Pkg. 10

No.	C-H No.	Type	Terminals	NET Each
944	7661K6	4 PBT	Solder Lugs	\$4.56
945	7665K4	4 PDT	Solder Lugs	5.61
946	7660K8	4 PST	Screw Term.	4.95
947	7664K3	4 PDT	Screw Term.	6.15
948	7663K5	4 PDT	Solder Lugs	\$5.61
949	7662K5	4 PDT	Screw Term.	6.15

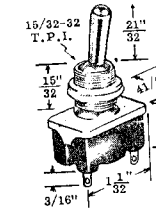
### PUSH BUTTON SWITCHES



Push to make—Push to break AC-DC, UL Approved; 11/16" shank; bakelite case. Pushing the button once closes the contacts. Pushing it again opens the contacts. Rated at 6 Amps, 125 Volts; 3 Amps, 250 Volts. Std. Pkg. 10

No.	C-H No.	Type	Term.	NET Each
989	7206K4	SPST	Lug	\$ .96
990	7208K4	SPST	Screw	1.08
991	7207K4	SPST	Wire	1.08

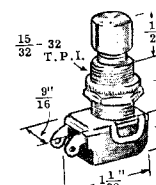
### MIDGET TOGGLE SWITCH



Bat lever. Molded phenolic base. 15/32 x 3/32" long. Slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Back connected silver plated solder contacts. Rated 1 amp.-250 volts; 3 amps.-125 volts. Std. Pkg. 10

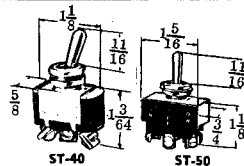
No.	Circuit	NET Each
920	SPST	\$ .93
921	SPDT	1.11
922	2 Circ.	1.14
923	DPST	1.35
924	DPDT	1.56

### MIDGET MOMENTARY SWITCH



Molded Phenolic Base 15/32 x 3/16" slotted sleeve, Nickel Finish. Supplied with hex nut and knurled nut. Side connected silver plated solder contacts. Rated at 3 amps.-120 volts A.C. Supplied less button; order button separately. Std. Pkg. 10

No.	Circuit	NET Each
925	SPST	\$ .75
926	2 Circ.	.81
927	SPST	NET Each \$ .75



### "ST" SWITCHES

Nominal Rating Per. Pole: 10 Amps, 115 V. AC 20 Amps, 28V. DC Std. Pkg. 10

ST-40 SERIES—Single Pole With Screw Terminals				
HHS	C-H	JAN Type	Circuit	NET Each
1720	8801K13	ST40A	SPST	On-None-Off \$1.68
1721	8813K12	ST40B	SPST	On-None-Mom-Off 1.86
1722	8811K12	ST40C	SPST	On-None-Mom-On 1.86
1723	8810K12	ST40D	SPDT	On-None-On 2.04
1724	8800K13	ST40E	SPDT	On-Off-On 2.04
1725	8804K12	ST40F	SPDT	Mon-None-Mom-On 2.19
1726	8812K13	ST40G	SPDT	Mom-On-Off-Mom-On 2.19
1727	8809K13	ST40H	SPDT	Off-On-Mom-On 2.19

All ST-40 Switches have Sealed Lever.

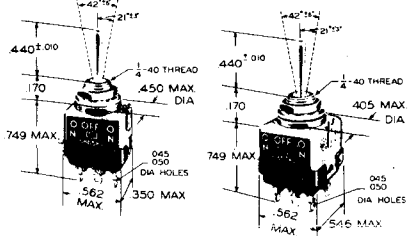
ST-42 SERIES—Single Pole With Solder Lugs				
HHS	C-H	JAN Type	Circuit	Each
1730	8803K6	ST42A	SPST	On-None-Off \$1.26
1731	8819K5	ST42B	SPST	On-None-Mom-Off 1.38
1732	8817K5	ST42C	SPST	On-None-Mom-On 1.38
1733	8816K5	ST42D	SPDT	On-None-On 1.47
1734	8802K6	ST42E	SPDT	On-Off-On 1.47
1735	8805K5	ST42F	SPDT	On-None-Mom-On 1.82
1736	8818K5	ST42G	SPDT	Mom-On-Off-Mom-On 1.62
1737	8815K6	ST42H	SPDT	On-Off-Mom-On 1.62

ST-5D SERIES—Double Pole With Screw Terminals				
HHS	C-H	JAN Type	Circuit	Each
1740	8822K8	ST50K	DPST*	On-None-Off \$2.25
1741	8828K5	ST50L	DPST	On-None-Mom-Off 2.70
1742	8826K5	ST50M	DPST	Off-None-Mom-On 2.70
1743	8824K8	ST50N	DPDT*	On-None-On 2.70
1744	8820K10	ST50P	DPDT*	On-Off-On 2.70
1745	8830K5	ST50R	DPDT	On-None-Mom-On 2.94
1746	8834K4	ST50S	DPDT*	Mom-On-Off-Mom-On 2.94
1747	8832K4	ST50T	DPDT*	On-Off-Mom-On 2.94

\* These switches are equipped with Sealed Lever.

ST-52 SERIES—Double Pole With Solder Lugs				
HHS	C-H	JAN Type	Circuit	Each
1760	8823K5	ST52K	DPST	On-None-Off \$1.50
1761	8829K5	ST52L	DPST	On-None-Mom-Off 1.68
1762	8827K5	ST52M	DPST	Off-None-Mom-On 1.68
1763	8825K5	ST52N	DPDT	On-None-On 1.68
1764	8821K5	ST52P	DPDT	On-Off-On 1.68
1765	8831K5	ST52R	DPDT	On-None-Mom-On 1.95
1766	8835K3	ST52S	DPDT	Mom-On-Off-Mom-On 1.95
1767	8833K3	ST52T	DPDT	On-Off-Mom-On 1.95

### C-H MINIATURE MILITARY SWITCHES



Extremely compact, highly reliable power or dry circuit switches. Usable as a pre-set switch in aircraft recognition systems; for walkie-talkies; for electronic instruments and communication systems.

RATINGS: 2 Amps. @ 28 V.D.C. 1 Amp @ 50 V.D.C. 2 Amps @ 115 V.A.C.  
MINIMUM RATING: 30 Microamps. @ 50 Milli-volts.

SINGLE POLE				
WEIGHT: 5.0 Grams. CUBIC CONTENT: .147 cubic inches "behind panel" volume. Std. Pkg. 5				
HHS	C-H	Circuit	NET Each	
1841	8866K1	SPDT	On-Off-On \$6.00	
1842	8866K2	SPDT	Mom. On-Off-Mom. On 6.09	
1843	8866K3	SPDT	On-Off-Mom. On 6.09	
1844	8866K4	SPDT	On-None-On 6.00	
1845	8866K5	SPST	On-Off-None 6.00	
1846	8866K6	SPST	None-Off-Mom. On 6.09	
1847	8866K7	SPST	On-None-Off 6.00	

DOUBLE POLE				
WEIGHT: 6.5 grams. CUBIC CONTENT: .230 cubic inches "behind panel" volume. Std. Pkg. 5				
HHS	C-H	Circuit	NET Each	
1851	8867K1	DPDT	On-Off-On \$7.53	
1852	8867K2	DPDT	Mom. On-Off-Mom. On 8.76	
1853	8867K3	DPDT	On-Off-Mom. On 8.76	
1854	8867K4	DPDT	On-None-On 7.53	
1855	8867K5	DPST	On-Off-None 7.53	
1856	8867K6	DPST	None-Off-Mom. On 8.76	
1857	8867K7	DPST	On-None-Off 7.53	

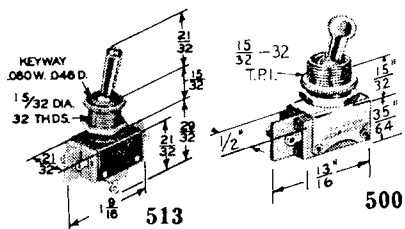
# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



## ARROW HART & HEGEMAN SWITCHES

### SMALL CANOPY TYPE SWITCHES



Laminated type 15/32-32 slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Solder terminals. SPST rated at 3 amps-250 volts AC-DC; all other rated at 1 amp-250 volts, 3 amps-125 volts AC-DC. Std. Pkg. 10

#### BAT LEVER POSITIVE ACTION

15/32" long shaft			13/32" long shaft		
No.	NET Each	CIRCUIT	No.	NET Each	
510	\$.69	SPST	584	\$.69	
511	.87	SPDT	585	.87	
542	.93	2-Circ.	586	.93	
512	1.26	DPST	587	1.26	
513	1.44	DPDT	588	1.44	

#### BAT LEVER MOMENTARY ACTION

15/32" long shaft			Normally Open (OFF)		
Normally Closed (ON)			Normally Open (OFF)		
No.	NET Each	CIRCUIT	No.	NET Each	
1020	\$1.11	SPST	1024	\$1.11	
1021	1.29	SPDT	1025	1.68	
1022	1.68	DPST			
1023	1.86	DPDT			

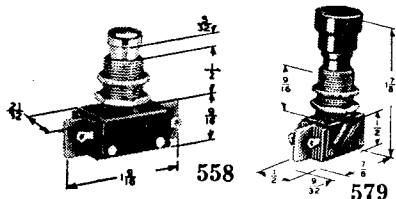
#### BALL LEVER POSITIVE ACTION

15/32" long shaft			3/4" long shaft		
No.	NET Each	CIRCUIT	No.	NET Each	
500	\$.69	SPST	501	\$.84	
502	.87	SPDT	503	1.08	
540	.87	2-Circ.	541	1.08	
504	.26	DPST	505	1.44	
506	1.44	DPDT	507	1.59	

#### 6" WIRE LEADS POSITIVE ACTION

15/32" long shaft			BAT LEVER		
BALL LEVER			BAT LEVER		
No.	NET Each	CIRCUIT	No.	NET Each	
1010	\$.84	SPST	1015	\$.84	
1011	1.17	SPDT	1016	1.17	
1012	1.29	2-Circ.	1017	1.29	
1013	1.65	DPST	1018	1.65	
1014	2.01	DPDT	1019	2.01	

### MOMENTARY PUSH SWITCHES



Laminated type 15/32-32 x 9/16" slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. All switches accept snap on button. SPST rated at 3 amps-250 volts AC-DC. All others rated at 1 amp-250 volts, 3 amps-125 volts AC-DC. Std. Pkg. 10

SUPPLIED LESS BUTTON: ORDER BUTTON SEPARATELY.

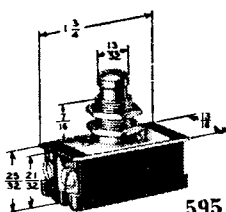
#### QUICK MAKE AND BREAK

Normally Closed (ON)			Normally Open (OFF)		
No.	NET Each	CIRCUIT	No.	NET Each	
552	\$1.35	SPST	555	\$1.35	
556	1.56	SPDT			
557	1.53	2-Circ.			
584	1.86	DPST	558	1.86	
559	2.07	DPDT			

#### SLOW MAKE AND BREAK

Rated at 1 amp.-125 volts AC			Normally Open (OFF)		
Normally Closed (ON)			Normally Open (OFF)		
No.	NET Each	CIRCUIT	No.	NET Each	
582	\$.75	SPST	579	\$.75	
580	.96	2-Circ.			

### STANDARD DUTY MOMENTARY PUSH SWITCHES



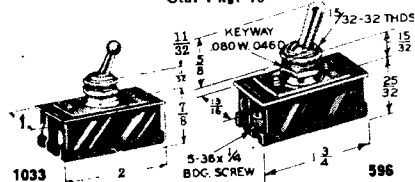
Molded phenolic base. 15/32-32 x 7/16" long slotted sleeve, nickel finish. Screw terminals. Supplied with hex nuts.

Two circ. rated at 3 amps.-250 volts, 6 amps.-125 volts, AC-DC. All others rated at 6 amps.-250 volts, 12 amps.-125 volts AC-DC. DPST also rated at 1 HP at 250 volts AC-DC. Std. Pkg. 10

Normally Closed (ON)			Normally Open (OFF)		
No.	NET Each	CIRCUIT	No.	NET Each	
1026	\$1.98	SPST	544	\$1.98	
1027	1.98	SPDT			
1028	1.98	2-Circ.			
1029	1.98	DPST	595	1.98	

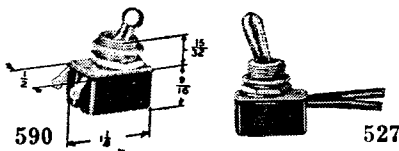
### STANDARD DUTY TOGGLE SWITCHES QUICK MAKE AND BREAK

Std. Pkg. 10



BALL LEVER			BAT LEVER		
No.	NET Each	CIRCUIT	No.	NET Each	
1030	\$1.32	SPST	597	\$1.32	
1031	1.32	SPDT	598	1.32	
1032	1.32	2-Circ.	599	1.32	
1033	1.32	DPST	596	1.32	

### MIDGET SIZE TOGGLE SWITCHES



Molded phenolic base, 15/32-32 x 15/32" long slotted sleeve, nickel finish. Side connected silver plated solder contacts. Supplied with hex nut and knurled nut. SPST rated at 3 amps-250 volts, 6 amps.-125 volts; all others rated at 1 amp-250 volts, 6 amps.-125 volts. Std. Pkg. 10

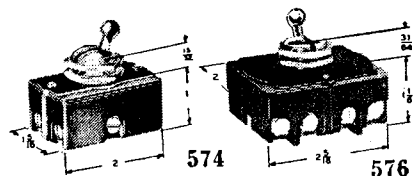
BALL LEVER			BAT LEVER		
No.	NET Each	CIRCUIT	No.	NET Each	
590	\$.78	SPST	591	\$.78	
589	.99	2-Circ.	592	.99	
594	1.02	DPST	593	1.02	

#### 6" WIRE LEADS

BALL LEVER			BAT LEVER		
No.	NET Each	CIRCUIT	No.	NET Each	
526	\$.96	SPST	527	\$.96	
538	1.26	SPDT	528	1.26	
543	1.41	2-Circ.	514	1.41	

### EXTRA HEAVY DUTY POWER SWITCHES

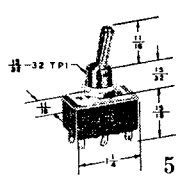
3 POSITION—POSITIVE CENTER OFF



Slotted sleeve 3/4-32, nickel finish. Screw terminals. Supplied with 2 hex nuts. Rated at 5 amps-250 volts, 10 amps-125 volts plus IHP rating shown below. Std. Pkg. 5

No.	Circuit	Description	NET Each
574	DPDT	3/4 HP 250 volts AC-DS	\$ 4.89
575	TPDT	1/2 HP 115/230 volts AC, 3 phase	7.53
576	4PDT	1/2 HP 115/230 volts AC, 2 phase	10.05

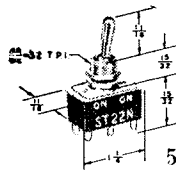
### INTERMEDIATE SIZE TOGGLE SWITCHES



Molded phenolic base. 15/32-32 x 15/32" long slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Back connected silver plated solder contacts. SPDT rated at 1 amp-250 volts, 6 amps-125 volts AC-DC; all others rated at 3 amps-250 volts, 6 amps-125 volts AC-DC. Std. Pkg. 10

POSITIVE ACTION			MOMENTARY ACTION		
No.	NET Each	CIRCUIT	No.	NET Each	
520	\$.93	SPST	524	OFF	\$1.32
521	1.11	SPDT	549		1.50
528	1.14	2-Circ.			
522	1.35	DPST	537	OFF	1.89
523	1.56	DPDT	525		2.07

### ST TYPE TOGGLE SWITCHES



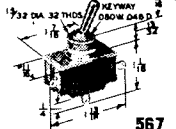
MEETS AN SPEC. JAN-23  
Rated at 3 amps-250 volts, 6 amps-125 volts AC-DC. Std. Pkg. 10

No.	AWS No.	CIRCUIT	Position	NET Each
545	ST 12A	SPST	OFF-ON	\$1.23
546	ST 12D	SPDT	ON-ON	1.41
1040	ST 12V	2-Circ.	ON-OFF	1.44
547	ST 22K	DPST	OFF-ON	1.77
548	ST 22N	DPDT	ON-ON	1.92

#### MOMENTARY NORMALLY OPEN (OFF)

No.	CIRCUIT	Position	NET Each
1041	ST 12C	SPST OFF-ON	\$1.62
1042	ST 22M	DPST OFF-ON	2.13

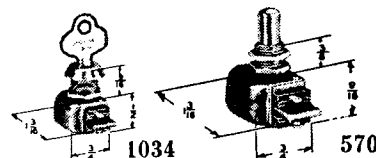
### 3 POSITION CENTER OFF



Rated at 3 amps-250 volts, 6 amps-125 volts AC-DC. Std. Pkg. 10

No.	CIRCUIT	NET Each
566	SPDT	\$1.68
565	2-Circ.	1.89
567	DPDT	2.07

### CANOPY TYPE ROTARY SWITCHES



Laminated type, 11/32-32 x 15/32" sleeve, nickel finish. Solder lugs. Supplied with hex nut and dress nut. SPST rated at 3 amps-250 volts AC-DC, all others rated at 1 amp-250 volts, 3 amps-125 volts. AC-DC. Key removable in OFF position only on SPST and DPST—key removable in both positions on all others. 1 1/2" shaft. Std. Pkg. 10

KEY TYPE		ROTARY TYPE		
No.	NET Each	No.	NET Each	
1034	\$1.32	570	\$.87	
1035	1.50	571	1.05	
1036	1.53	2-Circ.		
1037	1.89	DPST	572	1.44
1038	2.07	DPDT	573	1.62

### SWITCH ACCESSORIES



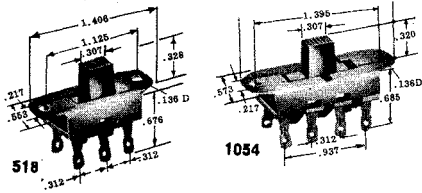
No.	Description	Std. Pkg.	NET Per C
508	ON-OFF name plate	50	\$ 5.40
509	HI-LO name plate	50	5.40
581	Snap-On Button (Red or Black)	20	24.00
1146	Narrow Rim Lockwasher	100	1.02
1170	Key—Remove off position	50	21.00
1171	Key—Remove both positions	50	21.00
1172	Locking Ring	100	2.40
1196	Hex Nut—Brass N.P.	100	1.98
1197	Ring Nut—Brass N.P.	100	3.30
1198	Dress Nut—Brass N.P.	100	18.00



# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

## CONTINENTAL-WIRT SLIDE SWITCHES



With Detent

UL APPROVED

General purpose switches, used on hi-fi equipment, test instruments, etc. Steel cadmium plated housings. Black phenolic buttons. Std. Pkg. 25

No.	Circuit	Rating @ 125 Volts AC Amps	DC Amps	NET Per C
515	SPST	.75	.75	\$11.40
516	SPDT	.75	.75	12.00
517	DPST	.5	.5	15.00
518	DPDT	.5	.5	18.00
1105	SPST	6.0	1.0	14.40
1106	SPDT	6.0	1.0	15.00
1107	DPST	6.0	1.0	24.00
1108	DPDT	6.00	1.0	27.00

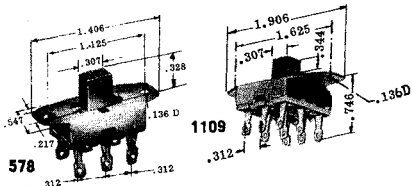
With Spring Return

No.	Circuit	Rating 125V ACDC	NET Per C
568	SPST	.5 Amp	\$24.00
569	SPDT	.5 Amp	28.80

## TRIPLE THROW

With Detent

No.	Circuit	Rating 125V ACDC	NET Per C
1053	SPST	.5 Amp	\$28.80
1054	DPST	.5 Amp	30.00



## SLIDE SWITCHES

With Detent

CENTER OFF

No.	Circuit	Rating 125V ACDC	NET Per C
577	SP 3-Position	.5 Amp	\$28.80
578	DP 3-Position	.5 Amp	30.00

## MULTI-POLE SWITCHES

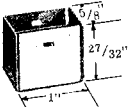
With Detent

Unique construction, all poles are in the same plane, more compact, easier wiring. Std. Pkg. 25

No.	Circuit	Rating @ 125 Volts AC Amps	DC Amps	NET Per C
1109	3PDT	3.0	1.0	\$48.00
1110	3PDT	3.0	1.0	45.00

Same as above but 1.005" wide

1104	4PDT	.5	.5	60.00
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## SLIDE SWITCH SHIELD

For terminal protection or electrostatic shielding. Shield is made of steel, cadmium plated, with fibre insulation. Std. Pkg. 25

No. 519 Each \$ 10

## SMITH STOCKS SWITCHES FOR INDUSTRY

- CUTLER HAMMER
- KULKA "ST" SWITCHES
- MICRO TOGGLE SWITCHES
- ARROW, HART & HEGEMAN
- CONTINENTAL-WIRT

The Major Portions of these foremost brands of switch lines are stocked in depth at our plant in Brooklyn, N.Y., for quick availability either from our warehouse or thru our nationwide network of leading electronic parts distributors.

## MICRO TOGGLE SWITCHES

### ROCKER-ACTUATED TOGGLE SWITCHES

Combines advantages of Toggle Switch circuitry and current capacity with pushbutton control. Snag-proof keys prevent false actuation. Translucent plastic keys feature edge light indication. Lower half of key emits soft glow from light source in panel. Enables easy identification of actuator position. Transparent plastic keys mounted above flush. An insert with signs, symbols, or letters can be placed under the key.

Temperature range -65°F to +160°F. Sealed between bushing and rocker actuator, and between cover and case. Std. Pkg. 10

Circuit Code #	Circuit	Circuit Code #	Circuit
1	ON-OFF-ON	8	OFF-NONE-ON(MOM)
2	ON-NONE-OFF	9	ON(MOM)OFF-ON
3	ON-NONE-ON	10	ON-NONE-ON(MOM)
4	ON-OFF-NONE	11	ON-OFF(MOM)-NONE
5	ON-ON-NONE	12	ON(MOM)-ON-NONE
6	ON-NONE-OFF(MOM)	13	NONE-OFF-ON(MOM)
7	ON-OFF-ON(MOM)		

RATING: CURRENT CAPACITY (AMPS)

CON-TINU-30	RESISTIVE LOAD			LAMP LOAD			INDUC-TIVE LOAD		
	115 vdc	250 vdc	115 230 30 vdc vac	115 vdc	230 vdc	30 vdc vac	115 vdc	30 vdc	115 vdc
A	45	20	.75 .5 15	6	5	3	15	10	
B	45	15	.75 .5 15	6	4	2	10	7	
C	40	20	.75 .5 15	6	7	4	15	15	
D	40	18	.75 .5 11	6	5	4	12	15	
E	40	20	.75 .5 15	6	5	4	12	15	
F	40	18	.75 .5 11	6	4	2	10	8	

HHS MICRO Circuit Rating NET

### 1 POLE

HHS	MICRO	Circuit	Rating	NET
3401	ITP1-1	1	A	\$ 8.58
3402	ITP1-2	2	A	8.58
3403	ITP1-3	3	A	8.58
3404	ITP1-4	4	A	8.87
3405	ITP1-5	5	A	8.87
3406	ITP1-6	6	B	8.58
3407	ITP1-7	7	B	8.58
3408	ITP1-8	8	B	8.58
3409	ITP1-9	9	B	8.58
3410	ITP1-10	10	B	8.58
3411	ITP1-11	11	B	8.87
3412	ITP1-12	12	B	8.87
3413	ITP1-13	13	B	8.87

### TRANSPARENT KEY

3414	ITP4-1	1	A	\$10.30
3415	ITP4-2	2	A	10.30
3416	ITP4-3	3	A	10.30
3417	ITP4-4	4	A	10.60
3418	ITP4-5	5	A	10.60
3419	ITP4-6	6	B	10.30
3420	ITP4-7	7	B	10.30
3421	ITP4-8	8	B	10.30
3422	ITP4-9	9	B	10.30
3423	ITP4-10	10	B	10.30
3424	ITP4-11	11	B	10.60
3425	ITP4-12	12	B	10.60
3426	ITP4-13	13	B	10.60

### 2 POLE

HHS	MICRO	Circuit	Rating	NET
3427	2TP1-1	1	C	\$ 9.98
3428	2TP1-2	2	C	9.98
3429	2TP1-3	3	C	9.98
3430	2TP1-4	4	C	10.21
3431	2TP1-5	5	C	10.21
3432	2TP1-6	6	D	9.98
3433	2TP1-7	7	D	9.98
3434	2TP1-8	8	D	9.98
3435	2TP1-9	9	D	9.98
3436	2TP1-10	10	D	9.98
3437	2TP1-11	11	D	10.21
3438	2TP1-12	12	D	10.34
3439	2TP1-13	13	D	10.21

### TRANSPARENT KEY

3440	2TP4-1	1	C	\$11.70
3441	2TP4-2	2	C	11.70
3442	2TP4-3	3	C	11.70
3443	2TP4-4	4	C	11.93
3444	2TP4-5	5	C	11.93
3445	2TP4-6	6	D	11.70
3446	2TP4-7	7	D	11.70
3447	2TP4-8	8	D	11.70
3448	2TP4-9	9	D	11.70
3449	2TP4-10	10	D	11.70
3451	2TP4-11	12	D	12.06
3452	2TP4-13	13	D	11.93

### 4 POLE

HHS	MICRO	Circuit	Rating	NET
3453	4TP1-1	1	E	\$12.29
3454	4TP1-2	2	E	12.29
3455	4TP1-3	3	E	12.29
3456	4TP1-4	4	E	12.48
3457	4TP1-5	5	E	13.26
3458	4TP1-6	6	F	12.29
3459	4TP1-7	7	F	12.29
3460	4TP1-8	8	F	12.29
3461	4TP1-9	9	F	12.29
3462	4TP1-10	10	F	12.29
3463	4TP1-11	11	F	12.48
3464	4TP1-12	12	F	13.49

### TRANSPARENT KEY

3466	4TP4-1	1	E	\$14.01
3467	4TP4-2	2	E	14.01
3468	4TP4-3	3	E	14.01
3469	4TP4-4	4	E	14.01
3470	4TP4-5	5	E	14.98
3471	4TP4-6	6	F	14.01
3472	4TP4-7	7	F	14.01
3473	4TP4-8	8	F	14.01
3474	4TP4-9	9	F	14.01
3475	4TP4-10	10	F	14.01
3476	4TP4-11	11	F	14.20
3477	4TP4-12	12	F	15.24
3478	4TP4-13	13	F	14.20

### BUSHING-MOUNTED TOGGLE SWITCHES

Tested and approved under MIL-S-3850A. Silicone sealed between cover and case, and between bushing and toggle lever. Integral terminals provide stronger wiring connections. Wide temperature range of -85°F to +250°F. Std. Pkg. 10

Circuit Code #	Circuit	Circuit Code #	Circuit
1	ON-OFF-ON	8	OFF-NONE-ON(MOM)
2	ON-NONE-OFF	9	ON(MOM)OFF-ON
3	ON-NONE-ON	10	ON-NONE-ON(MOM)
4	ON-OFF-NONE	11	ON-OFF(MOM)-NONE
5	ON-ON-NONE	12	ON(MOM)-ON-NONE
6	ON-NONE-OFF(MOM)	13	NONE-OFF-ON(MOM)
7	ON-OFF-ON(MOM)		

RATING: CURRENT CAPACITY (AMPS)

CON-TINU-30	RESISTIVE LOAD			LAMP LOAD			INDUC-TIVE LOAD		
	115 vdc	250 vdc	115 230 30 vdc vac	115 vdc	230 vdc	30 vdc vac	115 vdc	30 vdc	115 vdc
A	45	20	.75 .5 15	6	5	3	15	10	
B	45	15	.75 .5 15	6	4	2	10	7	
C	40	20	.75 .5 15	6	7	4	15	15	
D	40	18	.75 .5 11	6	5	4	12	10	

HHS MICRO "MS" No. Cir- Rating Net

### 1 POLE (MS 24523)

3101	ITL1-1	MS24523-21	1	A	\$4.16
3102	ITL1-2	MS24523-22	2	A	4.16
3103	ITL1-3	MS24523-23	3	A	4.42
3104	ITL1-4	MS24523-24	4	A	4.42
3105	ITL1-5	MS24523-25	5	A	4.42
3106	ITL1-6	MS24523-26	6	B	4.16
3107	ITL1-7	MS24523-27	7	B	4.16
3108	ITL1-8	MS24523-28	8	B	4.16
3109	ITL1-9	MS24523-29	9	B	4.16
3110	ITL1-10	MS24523-30	10	B	4.16
3111	ITL1-11	MS24523-31	11	B	4.42
3112	ITL1-12	MS24523-32	12	B	4.42
3113	ITL1-13	MS24523-33	13	B	4.42

### 2 POLE (MS 24524)

3114	2TL1-1	MS24524-21	1	C	\$5.53
3115	2TL1-2	MS24524-22	2	C	5.53
3116	2TL1-3	MS24524-23	3	C	5.83
3117	2TL1-4	MS24524-24	4	C	5.75
3118	2TL1-5	MS24524-25	5	C	5.75
3119	2TL1-6	MS24524-26	6	D	5.53
3120	2TL1-7	MS24524-27	7	D	5.53
3121	2TL1-8	MS24524-28	8	D	5.53
3122	2TL1-9	MS24524-29	9	D	5.53
3123	2TL1-10	MS24524-30	10	D	5.53
3124	2TL1-11	MS24524-31	11	D	5.75
3125	2TL1-12	MS24524-32	12	D	5.88
3126	2TL1-13	MS24524-33	13	D	5.75

### 4 POLE (MS 24525)

3127	4TL1-1	MS24525-21	1	C	\$7.77
3128	4TL1-2	MS24525-22	2	C	7.77
3129	4TL1-3	MS24525-23	3	C	7.83

# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



## MICRO TOGGLE SWITCHES

### "TS" TOGGLE SWITCHES "UL" LISTED

"UL" listed "Commercial" type are identical to military type except for bat handle finish. Bright chrome plating to enhance panel appearance. Also certified by the Canadian Standards Association (CSA). Std. Pkg. 10

Circuit Code #	Circuit	Circuit Code #	Circuit
1	ON-OFF-ON	8	OFF-NONE-ON (MOM)
2	ON-NONE-OFF	9	ON(MOM)OFF-ON (MOM)
3	ON-NONE-ON	10	ON-NONE-ON (MOM)
4	ON-OFF-NONE	11	ON-OFF (MOM)-NONE (MOM)
6	ON-NONE-OFF (MOM)	13	NONE-OFF-ON (MOM)
7	ON-OFF-ON (MOM)		

RATING "A"		RATING "B"		RATING "C"	
15 Amps.,	125-250 VAC	10 Amps.,	125-250 VAC	15 Amps.,	125-250 VAC
1/2 HP, 125 VAC		1/2 HP, 125 VAC		1/2 HP, 125 VAC	
1 HP, 250 VAC		1/2 HP, 250 VAC		1/2 HP, 250 VAC	

HHS	MICRO	Circuit	Rating	Net Ea.
<b>1 POLE</b>				
<b>SCREW TERMINALS</b>				
3331	11TS15-1	1	A	\$2.18
3332	11TS15-2	2	A	2.18
3333	11TS15-3	2	A	2.18
3334	11TS15-6	8	B	2.02
3335	11TS15-61	13	B	2.02
3336	11TS15-7	9	B	2.37



HHS	MICRO	Circuit	Rating	Net Ea.
<b>QUICK DISCONNECT TERMINALS</b>				
3337	11TS95-1	1	A	\$2.11
3338	11TS95-2	2	A	1.76
3339	11TS95-21	4	A	1.76
3340	11TS95-3	3	A	2.11
3341	11TS95-4	6	B	1.95
3342	11TS95-5	7	B	2.31
3343	11TS95-6	8	B	1.95
3344	11TS95-61	13	B	1.95
3345	11TS95-7	9	B	2.31
3346	11TS95-8	10	B	2.31

HHS	MICRO	Circuit	Rating	Net Ea.
<b>SOLDER TERMINALS</b>				
3347	11TS115-1	1	A	\$2.05
3348	11TS115-2	2	A	1.72
3349	11TS115-3	3	A	2.05
3350	11TS115-4	6	B	1.92
3351	11TS115-7	9	B	2.24



HHS	MICRO	Circuit	Rating	Net Ea.
<b>2 POLE</b>				
<b>SCREW TERMINALS</b>				
3352	12TS15-1	1	A	\$2.93
3353	12TS15-2	2	A	2.44
3354	12TS15-21	4	A	2.44
3355	12TS15-3	3	A	2.93
3357	12TS15-5	7	C	3.15
3359	12TS15-61	13	C	2.93
3360	12TS15-7	9	C	3.15
3361	12TS15-8	10	C	3.15



HHS	MICRO	Circuit	Rating	Net Ea.
<b>QUICK DISCONNECT</b>				
3362	12TS95-1	1	A	\$2.76
3363	12TS95-2	2	A	2.31
3365	12TS95-3	3	A	2.76
3366	12TS95-4	6	C	2.83
3367	12TS95-5	7	C	3.02
3369	12TS95-61	13	C	2.83
3370	12TS95-7	9	C	3.02

HHS	MICRO	Circuit	Rating	Net Ea.
<b>SOLDER TERMINALS</b>				
3372	12TS115-1	1	A	\$2.63
3373	12TS115-2	2	A	2.24
3374	12TS115-21	4	A	2.24
3375	12TS115-3	3	A	2.63
3376	12TS115-4	6	C	2.73
3377	12TS115-5	7	C	2.89
3378	12TS115-6	8	C	2.73
3379	12TS115-61	13	C	2.73
3380	12TS115-7	9	C	2.89
3381	12TS115-8	10	C	2.89

### 3-HOLE MOUNT "TS" TOGGLE SWITCHES

"Au" Type tested and approved under MIL specs. "JAN" Type conform to JAN-S-23. Sealed LML. Std. Pkg. 10

Circuit Code #	Circuit	Circuit Code #	Circuit
1	ON-OFF-ON	8	OFF-NONE-ON (MOM)
2	ON-NONE-OFF	9	ON(MOM)OFF-ON (MOM)
3	ON-NONE-ON	10	ON-NONE-ON (MOM)
4	ON-OFF-NONE	11	ON-OFF (MOM)-NONE (MOM)
6	ON-NONE-OFF (MOM)	13	NONE-OFF-ON (MOM)
7	ON-OFF-ON (MOM)		

RATING: CURRENT CAPACITY (AMPS)											
CON-TINUOUS	RESISTIVE LOAD			LAMP LOAD			INDUCTIVE LOAD				
	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc		
A	55	40	.75	.5	20	7.5	7	7	20	15	
B	55	30	.75	.5	20	7.5	5	4	18	11	
C	55	40	.75	.5	25	8	10	7	20	15	
D	55	30	.75	.5	20	7	7	4	18	11	

1 POLE (MIL-S-6745)											
HHS	MICRO	"AN" No.	"JAN" No.	Circuit	Rating	Net Ea.					
3301	31TS1-1	3022-1	ST45E	1	A	\$2.57					
3302	37TS1-2	3022-2	ST45A	2	A	2.11					
3303	31TS1-3	3022-3	ST45D	3	A	2.57					
3304	31TS1-21			4	A	2.11					
3305	31TS1-4	3022-9	ST45B	6	B	2.34					
3306	31TS1-5		ST45C	7	C	2.76					
3307	31TS1-6	3022-8	ST45C	8	B	2.34					
3308	31TS1-7	3022-7	ST45G	9	B	2.76					
3309	31TS1-8	3022-11	ST45F	10	B	2.76					
3310	31TS2-5	3022-6		7	B	2.96					
3311	31TS1-61			13	B	2.34					

2 POLE (MIL-S-3950A)											
HHS	MICRO	"MS" No.	Circuit	Rating	Net Ea.						
3312	532TS1-1	MS25103-21	1	C	\$5.33						
3313	532TS1-3	MS25103-23	3	C	5.33						
3314	532TS1-21	MS25103-24	4	C	4.45						
3315	532TS1-5	MS25103-31	7	D	5.79						
3316	532TS1-7	MS25103-27	9	D	5.79						
3317	532TS1-8	MS25103-26	10	D	5.79						
3319	532TS1-61	MS25103-28	13	D	5.23						

RATING: CURRENT CAPACITY (AMPS)											
CON-TINUOUS	RESISTIVE LOAD			LAMP LOAD			INDUCTIVE LOAD				
	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc		
E	30	25	22	5	3	15	15	15	15	15	
F	20	20	20	5	4	12	15	15	15	15	
G	20	18	11	4	2	10	8	8	8	8	

3 POLE (MIL-S-3950A)											
HHS	MICRO	"MS" No.	Circuit	Rating	Net Ea.						
3320	533TS1-1	MS25105-21	1	E	\$4.97						
3321	533TS1-3	MS25105-23	3	E	4.97						
3322	533TS1-21	MS25105-24	4	E	4.16						

4 POLE (MIL-S-6745)											
HHS	MICRO	"AN" No.	Circuit	Rating	Net Ea.						
3323	34TS1-1	3227-1	1	F	\$6.66						
3324	34TS1-2	3227-2	2	F	5.33						
3325	34TS1-3	3227-3	3	F	6.66						
3326	34TS1-21	3227-9	4	F	7.83						
3327	34TS1-5	3227-5	7	G	8.03						
3328	34TS1-6	3227-8	10	G	7.22						
3329	34TS1-7	3227-7	9	G	8.03						
3330	34TS1-61	3227-10	13	G	7.22						

RATING: CURRENT CAPACITY (AMPS)											
CON-TINUOUS	RESISTIVE LOAD			LAMP LOAD			INDUCTIVE LOAD				
	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc		
H	30	25	22	5	3	15	15	15	15	15	
I	20	20	20	5	4	12	15	15	15	15	
J	20	18	11	4	2	10	8	8	8	8	

5 POLE (MIL-S-3950A)											
HHS	MICRO	"MS" No.	Circuit	Rating	Net Ea.						
3331	534TS1-1	MS25107-21	1	F	\$6.66						
3332	534TS1-2	MS25107-22	2	F	5.33						
3333	534TS1-3	MS25107-23	3	F	6.66						
3334	534TS1-21	MS25107-24	4	F	7.83						
3335	534TS1-5	MS25107-25	7	G	8.03						
3336	534TS1-6	MS25107-26	10	G	7.22						
3337	534TS1-7	MS25107-27	9	G	8.03						
3338	534TS1-61	MS25107-28	13	G	7.22						

### SEALED "TS" TOGGLE SWITCHES

These switches have a panel seal in addition to all other "TS" features. When mounted, the seal provides a dust, liquid and moisture seal at the panel. Std. Pkg. 10

Circuit Code #	Circuit	Circuit Code #	Circuit
1	ON-OFF-ON	7	ON-OFF-ON (MOM)
2	ON-NONE-OFF	8	OFF-NONE-ON (MOM)
3	ON-NONE-ON	9	ON(MOM)OFF-ON (MOM)
4	ON-OFF-NONE	10	ON-NONE-ON (MOM)
6	ON-NONE-OFF (MOM)		

RATING: CURRENT CAPACITY (AMPS)											
CON-TINUOUS	RESISTIVE LOAD			LAMP LOAD			INDUCTIVE LOAD				
	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc	30 vdc	125 vdc	250 vdc		
A	40	20	.75	.5	15	6	5	3	15	10	
B	40	15	.75	.5	15	6	4	2	10	7	
C	30	30	.75	.5	25	9	7	4	15	15	
D	30	20	.75	.5	15	6	5	2	10	8	

1 POLE											
HHS	MICRO	Circuit	Rating	NET Each							
3201	211TS1-1	1	A	\$3.45							
3202	211TS1-2	2	A	3.06							
3203	211TS1-3	3	A	3.45							
3206	211TS1-5	7	B	3.61							
3207	211TS1-6	8	B	3.25							
3209	211TS1-8	10	B	3.61							

2 POLE											
HHS	MICRO	Circuit	Rating	NET Each							
3211	211TS11-1	1	A	\$3.28							
3212	211TS11-2	2	A	2.96							
3213	211TS11-3	3	A	3.28							
3215	211TS11-4	6	B	3.15							
3216	211TS11-5	7	B	3.48							
3217	211TS11-6	8	B	3.15							
3218	211TS11-7	9	B	3.48							
3219	211TS11-8	10	B	3.48							

3 POLE											
HHS	MICRO	Circuit	Rating	NET Each							
3221	212TS1-1	1	C	\$4.13							
3222	212TS1-2	2	C	3.54							
3223	212TS1-3	3	C	4.13							
3224	212TS1-21	4	C	3.64							
3225	212TS1-4	6	D	4.13							
3226	212TS1-5	7	D	4.39							
3227	212TS1-6	8	D								



ARROW, HART & HEGEMAN

"SNAP ACTING" MOMENTARY CONTACT SWITCHES

**PRECISION SNAP-ACTING SWITCH** A precision snap-acting switch is a mechanically operated electric switch having predetermined and accurately controlled characteristics, and having contacts other than the blade and jaw, or mercury type, where the maximum separation between any butting contacts is 1/8 inch.

**MOMENTARY CONTACT SWITCH** A momentary contact switch is a switch which returns from the operated

condition to its normal circuit condition when the actuating force is removed.

**ACTUATOR** An actuator is the mechanism of the switch or enclosure which, when moved as intended, will operate the contacts.

**OPERATING FORCE** Operating force is that straight line force in the designated direction applied to the actuator to cause the switch contacts to snap to the operated contact position.

**PRETRAVEL** Pretravel is the distance or angle through which the actuator moves from the actuator free position to the actuator operating position.

**OVERTRAVEL** Overtravel is the movement of the actuator beyond the operating position.

**MOVEMENT DIFFERENTIAL** Movement differential is the distance or angle from the operating position to the releasing position.

Std. Pkg. 5

**PIN TYPE (G)**

**General Purpose 15 Amp**

RATINGS		Operating Characteristics	
15 Amp., 480 V., A.C.	Operating Force..... 9 to 13 oz.		
1/2 Amp., 125 V., D.C.	Pretravel..... .015" max.		
1/4 Amp., 250 V., D.C.	Overtravel..... .005" min.		
	Diff. Travel..... .0004 to .0025 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4529	\$1.50	4561	\$1.50	4593	\$1.77
C	4530	1.56	4562	1.56	4594	1.89
L	4531	1.56	4563	1.56	4595	1.89
Q	4532	1.56	4564	1.50	4596	1.77

**Heavy Duty 20 Amp**

RATINGS		Operating Characteristics	
20 A., 480 V., A.C.	Operating Force..... 14 to 22 oz.		
10 A., 125 V., A.C. "L" Load	Pretravel..... .050" max.		
1/2 A., 125 V., D.C.	Overtravel..... .010" min.		
	Diff. Travel..... .002 to .0075 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4629	\$1.56	4661	\$1.56	4693	\$1.86
C	4630	1.62	4662	1.62	4694	1.95
L	4631	1.62	4663	1.62	4695	1.95
Q	4632	1.56	4664	1.56	4696	1.86

**PANEL MOUNTED TYPE (H)**

**General Purpose 15 Amp**

RATINGS		Operating Characteristics	
15 Amp., 480 V., A.C.	Operating Force..... 9 to 13 oz.		
1/2 Amp., 125 V., D.C.	Pretravel..... 1/64" max.		
1/4 Amp., 250 V., D.C.	Overtravel..... 7/32" min.		
	Diff. Travel..... .0004 to .002 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4509	\$3.54	4541	\$3.54	4573	\$3.96
C	4510	3.57	4542	3.57	4574	4.02
L	4511	3.57	4543	3.57	4575	4.02
Q	4512	3.54	4544	3.45	4576	3.96

**Heavy Duty 20 Amp**

RATINGS		Operating Characteristics	
20 A., 480 V., A.C.	Operating Force..... 14 to 22 oz.		
10 A., 125 V., A.C. "L" Load	Pretravel..... .050" max.		
1/2 A., 125 V., D.C.	Overtravel..... .219" min.		
	Diff. Travel..... .002 to .0075 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4609	\$3.63	4641	\$3.63	4673	\$4.08
C	4610	3.69	4642	3.69	4674	4.14
L	4611	3.69	4643	3.69	4675	4.14
Q	4612	3.63	4644	3.63	4676	4.08

**SHORT OVERTRAVEL BUTTON (I)**

**General Purpose 15 Amp**

RATINGS		Operating Characteristics	
15 Amp., 480 V., A.C.	Operating Force..... 9 to 13 oz.		
1/2 Amp., 125 V., D.C.	Pretravel..... 1/64" max.		
1/4 Amp., 250 V., D.C.	Overtravel..... 1/16" min.		
	Diff. Travel..... .0004 to .002 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4513	\$1.86	4545	\$1.86	4577	\$2.19
C	4514	1.89	4546	1.89	4578	2.25
L	4515	1.89	4547	1.89	4579	2.25
Q	4516	1.86	4548	1.86	4580	2.19

**Heavy Duty 20 Amp**

RATINGS		Operating Characteristics	
20 A., 480 V., A.C.	Operating Force..... 14 to 22 oz.		
10 A., 125 V., A.C. "L" Load	Pretravel..... .050" max.		
1/2 A., 125 V., D.C.	Overtravel..... .093" min.		
	Diff. Travel..... .002 to .0075 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4613	\$1.89	4645	\$1.89	4677	\$2.25
C	4614	1.95	4646	1.95	4678	2.31
L	4615	1.95	4647	1.95	4679	2.31
Q	4616	1.89	4648	1.89	4680	2.25

**SHORT ROLLER (J)**

**General Purpose 15 Amp**

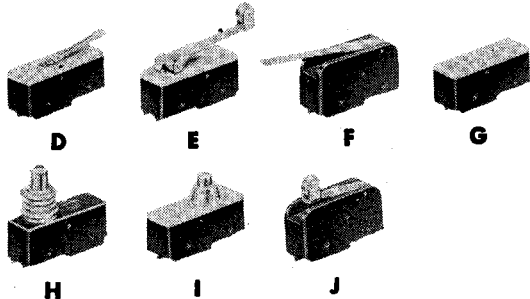
RATINGS		Operating Characteristics	
15 Amp., 480 V., A.C.	Operating Force..... 6 oz. max.		
1/2 Amp., 125 V., D.C.	Pretravel..... 9/64" max.		
1/4 Amp., 250 V., D.C.	Overtravel..... 3/32" min.		
	Diff. Travel..... .003 to .020 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4517	\$2.52	4549	\$2.52	4581	\$2.88
C	4518	2.64	4550	2.64	4582	3.00
L	4519	2.64	4551	2.64	4583	3.00
Q	4520	2.52	4552	2.52	4584	2.88

**Heavy Duty 20 Amp**

RATINGS		Operating Characteristics	
20 A., 480 V., A.C.	Operating Force..... 6 oz. max.		
10 A., 125 V., A.C. "L" Load	Pretravel..... 1/4" max.		
1/2 A., 125 V., D.C.	Overtravel..... 1/32" min.		
	Diff. Travel..... 3/64" max.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4617	\$2.64	4649	\$2.64	4681	\$3.00
C	4618	2.70	4650	2.70	4682	3.06
L	4619	2.70	4651	2.70	4683	3.06
Q	4620	2.64	4652	2.64	4684	3.00



TERMINAL CODE: L = screws, lock washers C = screws, cup washers  
S = solder lugs Q = quick disconnect

**FLEXIBLE LEAF ACTUATOR (D)**

**General Purpose 15 amp**

RATINGS		Operating Characteristics	
15 Amp., 480 V., A.C.	Operating Force..... 5 oz. max.		
1/2 Amp., 125 V., D.C.	Pretravel..... 5/32" max.		
1/4 Amp., 250 V., D.C.	Overtravel..... not over 1/16 in.		
	Diff. Travel..... .050" max.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4505	\$1.62	4537	\$1.62	4569	\$1.95
C	4506	1.68	4538	1.68	4570	2.07
L	4507	1.68	4539	1.68	4571	2.07
Q	4508	1.62	4540	1.62	4572	1.95

**Heavy Duty 20 Amp**

RATINGS		Operating Characteristics	
20 A., 480 V., A.C.	Operating Force..... 9 oz. max.		
10 A., 125 V., A.C. "L" Load	Pretravel..... 11/32" max.		
1/2 A., 125 V., D.C.	Overtravel..... not over 1/16 in.		
	Diff. Travel..... .065" max.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4605	\$1.68	4637	\$1.68	4669	\$2.97
C	4606	1.74	4638	1.74	4670	2.13
L	4607	1.74	4639	1.74	4671	2.13
Q	4608	1.68	4640	1.68	4672	2.07

**STANDARD ROLLER (E)**

**General Purpose 15 Amp**

RATINGS		Operating Characteristics	
15 Amp., 480 V., A.C.	Operating Force..... 3 1/2 oz. max.		
1/2 Amp., 125 V., D.C.	Pretravel..... 9/32" max.		
1/4 Amp., 250 V., D.C.	Overtravel..... .156" min.		
	Diff. Travel..... .004 to .040 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4521	\$2.52	4553	\$2.52	4585	\$2.88
C	4522	2.64	4554	2.64	4586	3.00
L	4523	2.64	4555	2.64	4587	3.00
Q	4524	2.52	4556	2.52	4588	2.88

**Heavy Duty 20 Amp**

RATINGS		Operating Characteristics	
20 A., 480 V., A.C.	Operating Force..... 2 1/2 oz. max.		
10 A., 125 V., A.C. "L" Load	Pretravel..... 15/32" max.		
1/2 A., 125 V., D.C.	Overtravel..... 1/16" min.		
	Diff. Travel..... .085" max.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4621	\$2.64	4653	\$2.64	4685	\$3.00
C	4622	2.70	4654	2.70	4686	3.06
L	4623	2.70	4655	2.70	4687	3.06
Q	4624	2.64	4656	2.64	4688	3.00

**RIGID HINGE (F)**

**General Purpose 15 Amp**

RATINGS		Operating Characteristics	
15 Amp., 480 V., A.C.	Operating Force..... 2 1/2 oz.		
1/2 Amp., 125 V., D.C.	Pretravel..... %" max.		
1/4 Amp., 250 V., D.C.	Overtravel..... .219" min.		
	Diff. Travel..... .007 to .050 in.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4525	\$1.95	4557	\$1.95	4589	\$2.31
C	4526	2.01	4558	2.01	4590	2.43
L	4527	2.01	4559	2.01	4591	2.37
Q	4528	1.95	4560	1.95	4592	2.31

**Heavy Duty 20 Amp**

RATINGS		Operating Characteristics	
20 A., 480 V., A.C.	Operating Force..... 2 1/2 oz. max.		
10 A., 125 V., A.C. "L" Load	Pretravel..... %" max.		
1/2 A., 125 V., D.C.	Overtravel..... .078" min.		
	Diff. Travel..... .109" max.		

WITH TERMINALS	S.P. NORM. OPEN		S.P. NORM. CLOSED		S.P.D.T.	
	No.	NET Ea.	No.	NET Ea.	No.	NET Ea.
S	4625	\$2.07	4657	\$2.07	4689	\$2.37
C	4626	2.13	4658	2.13	4690	2.43
L	4627	2.13	4659	2.13	4691	2.43
Q	4628	2.07	4660	2.07	4692	2.37



# HERMAN H. SMITH, INC.



"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"

## TEFLON\* SPAGHETTI TUBING

Teflon tubing is ideal for slip-on insulation in electrical and electronics applications. Its exceptional insulating properties provide greater reliability and resistance to high temperatures. Due to its resistance to soldering temperatures, shrink-back during soldering is virtually eliminated.

SMITH Teflon tubing is available in most AWG sizes from #30 to #0, in three basic wall thicknesses; Standard (.011 to .020"), Thin Wall (.009 to .015"), and Lightweight (.006 to .012"). Specific wall thickness for various AWG sizes is detailed in the table. All sizes are available in Natural Teflon, and any of 10 colors as indicated in the Color Code chart.

SMITH Teflon Spaghetti Tubing meets or exceeds the requirements of MIL-I-22129B, and colors conform to MIL STD-104. Standard and Thin-Wall tubing in sizes AWG #30 to #8, and Lightweight tubing in sizes AWG #28 to #9 are supplied in 100-foot dustproof, re-useable reels, polyethylene covered and closed with a special polyethylene plug. Sizes to AWG #0 are carefully packaged in 50 foot coils to prevent distortion of the tubing. SPECIFY COLOR

\*Registered Trademark, E.I. DuPont DeNemours & Co.



### COLOR CODE CHART

- 101 WHITE
- 102 RED
- 103 BLACK
- 104 GREEN
- 105 BLUE
- 106 ORANGE
- 107 YELLOW
- 108 BROWN
- 112 PURPLE
- 113 GREY
- 115 NATURAL

(If no color is specified, Natural Teflon (-115) will be supplied.)

LIGHTWEIGHT						THINWALL						STANDARD WALL					
Awg Wire Size	Nom. I.D.	Cat. No.	Nom. Wall Thk.	Std. Pkg. Ft.	NET Ea.	Awg Wire Size	Nom. I.D.	Cat. No.	Nom. Wall Thk.	Std. Pkg. Ft.	NET Ea.	Awg Wire Size	Nom. I.D.	Cat. No.	Nom. Wall Thk.	Std. Pkg. Ft.	NET Ea.
30	.012					30	.012	7702-30	.009	100	\$10.53	30	.012				
28	.015	7703-28	.006	100	\$7.63	28	.015	7702-28	.009	100	9.20	28	.015				
26	.018	7703-26	.006	100	7.75	26	.018	7702-26	.009	100	8.88	26	.018				
24	.022	7703-24	.006	100	8.19	24	.022	7702-24	.010	100	9.63	24	.022	7701-24	.012	100	\$11.68
22	.027	7703-22	.006	100	9.38	22	.027	7702-22	.010	100	10.75	22	.027	7701-22	.012	100	12.95
20	.034	7703-20	.006	100	11.13	20	.034	7702-20	.012	100	13.63	20	.034	7701-20	.016	100	17.75
19	.038	7703-19	.006	100	12.38	19	.038	7702-19	.012	100	14.68	19	.038	7701-19	.016	100	19.38
18	.042	7703-18	.006	100	13.58	18	.042	7702-18	.012	100	15.75	18	.042	7701-18	.016	100	20.88
17	.047	7703-17	.006	100	14.88	17	.047	7702-17	.012	100	17.38	17	.047	7701-17	.016	100	22.93
16	.053	7703-16	.006	100	16.13	16	.053	7702-16	.012	100	19.00	16	.053	7701-16	.016	100	24.63
15	.059	7703-15	.006	100	16.75	15	.059	7702-15	.012	100	19.63	15	.059	7701-15	.016	100	25.90
14	.066	7703-14	.008	100	19.50	14	.066	7702-14	.012	100	21.90	14	.066	7701-14	.016	100	27.25
13	.076	7703-13	.008	100	22.25	13	.076	7702-13	.012	100	23.75	13	.076	7701-13	.016	100	30.50
12	.085	7703-12	.008	100	24.38	12	.085	7702-12	.012	100	25.50	12	.085	7701-12	.016	100	32.75
11	.095	7703-11	.008	100	27.38	11	.095	7702-11	.012	100	28.38	11	.095	7701-11	.016	100	36.38
10	.106	7703-10	.008	100	29.50	10	.106	7702-10	.012	100	30.50	10	.106	7701-10	.016	100	40.00
9	.118	7703-09	.008	50	16.63	9	.118	7702-09	.015	100	44.00	9	.118	7701-09	.020	100	57.10
8	.125	7703-08	.008	50	17.88	8	.125	7702-08	.015	100	45.00	8	.125	7701-08	.020	100	61.00
7	.148	7703-07	.008	50	20.00	7	.148	7702-07	.015	50	26.63	7	.148	7701-07	.020	50	33.69
6	.166	7703-06	.010	50	25.88	6	.166	7702-06	.015	50	29.75	6	.166	7701-06	.020	50	36.44
5	.186	7703-05	.010	50	28.38	5	.186	7702-05	.015	50	33.50	5	.186	7701-05	.020	50	40.10
4	.208	7703-04	.010	50	31.38	4	.208	7702-04	.015	50	36.75	4	.208	7701-04	.020	50	43.56
3	.234	7703-03	.010	50	34.50	3	.234	7702-03	.015	50	40.75	3	.234	7701-03	.020	50	49.88
2	.250	7703-02	.010	50	36.69	2	.250	7702-02	.015	50	43.75	2	.250	7701-02	.020	50	52.88
1	.294	7703-01	.010	50	41.19	1	.294	7702-01	.015	50	50.69	1	.294	7701-01	.020	50	60.94
1/2	.312	7703-51	.012	50	48.69	1/2	.312	7702-51	.015	50	55.12	1/2	.312	7701-51	.020	50	67.50
0	.330	7703-00	.012	50	49.63	0	.330	7702-00	.015	50	56.12	0	.330	7701-00	.020	50	68.57

### AUTO RADIO CONDENSERS



Eliminates radio interference caused by auto electrical system. Fits all cars — Proven quality — Guaranteed long life. Std. Pkg. 25

No.	Cap.	Type	NET Per C
811	.5 MPD	General, Univ.	\$60.00
812	.25 MPD	Universal	\$4.00



### ANTENNA CONNECTOR

For use as connection of auto radio antenna lead-in to auto radio receiver. Std. Pkg. 50

No.	1300
NET Per C	\$17.00



### FUSE RETAINER

Recommended for use in auto radio power supply cables. Std. Pkg. 50

No.	1301
NET Per C	\$10.20

### PARTS FOR CONNECTOR & RETAINER

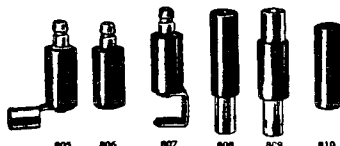
No.	Type	NET Per C
1305	Male Cap for #1300 & #1301	\$2.00
1306	Female Shell for #1300	2.31
1307	Contact for #1300 & #1301	3.30
1308	Spring for #1300 & #1301	.66
1309	Washer for #1300 & #1301	.33
1310	Insulating Tube for #1301	.60
1311	Female Shell for #1301	5.40

### BATTERY PLUGS



No.	Voltage	Eveready No.	RCA No.	Philco No.	NET Per C
915	1 1/2 "A"	467, 455, 457	VS004	P04, P06	\$6.00
916	1 1/2 "A"	490	VS005	P8F1	6.00
917	1 1/2 "A"	477, 437, 479, 495	VS007	—	6.00
918	1 1/2 "A"	276	VS008	—	6.00
1234	4 1/2	243	—	—	24.00
1296	4 1/2	216, 246, 415, 416	—	—	24.00
1297	4 1/2	Female	—	—	100 4.50
1297	4 1/2	Male	—	—	100 4.50

### Auto Radio IGNITION SUPPRESSORS



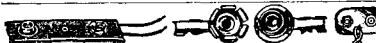
Std. Pkg. 50	Cat. No.	Type	NET Per C
	805	Snap-On Type Suppressor	\$27.00
	806	Univ. Type with Double Thrd.	27.00
	807	Angle Type Suppressor	33.00
	808	Distributor Screw Type	45.00
	809	Distributor Plug-In Type	36.00
	810	Double Screw Type	27.00

### MOTOROLA PLUGS & JACKS



Std. Pkg. 50	No.	Type	NET Per C
	1200	Motorola Type Plug	\$10.20
	1240	Motorola Type Plug	\$10.20
	1207	Antenna Connector, Takes 1200 Plug	18.00
	1204	Lead-in Adapter, converts Motorola pin plug to Delco	9.00
	1235	Female for #1200 plug, without flange	7.20

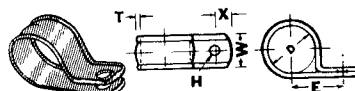
### BATTERY CONNECTORS



No.	Volts	Eveready No.	Std. Pkg.	Per C
1205	6 1/2	467, 455, 457	25	\$18.00
1206	9	490	25	24.00
1210	6 1/2	477, 437, 479, 495	25	18.00
1217	7 1/2	707	25	18.00
1218	9	276	25	18.00
1219	4 1/2	243	25	24.00
1234	4 1/2	216, 246, 415, 416	25	24.00
1296	4 1/2	Female	100	4.50
1297	4 1/2	Male	100	4.50

Send for New Complete Catalog of SMITH Components & Accessories

### PLASTIC CABLE CLIPS — ETHYL CELLULOSE



These clips are well known for ability to withstand age moisture, corrosion, shock and vibration. This tough light weight, durable clip withstands temperatures from -60 to +175 degrees F. Made to MIL Std. 242A (Ships) T .060 — W 1/2" X 7/32" — H .204

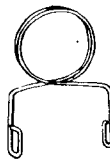
No.	Hole (D)	E	NET Per C	NET Per C
831	1/8	.360	\$2.34	\$19.2
832	1/8	.423	2.40	19.8
833	1/8	.457	2.58	21.6
834	1/8	.498	2.85	24.0
835	1/8	.529	3.00	25.2
836	1/8	.560	3.30	27.6
837	1/8	.622	3.60	30.0
838	1/8	.693	4.20	34.2
839	1/8	.754	4.50	39.6
840	1/8	.752	4.80	42.6
841	1/8	.783	5.10	44.4
842	1/8	.845	5.40	48.0
843	1/8	.908	5.70	51.6
844	1/8	.970	6.00	54.6
845	1/8	1.062	6.30	58.2

### NYLON

These strong and tough molded nylon clamps hold their shape under severest stress. Do not support combustion Withstands temperatures from -60 to +250 degrees F Made to MIL P17091A amend. 2

No.	Hole (D)	E	NET Per C	NET Per C
771	1/8	.310	\$5.60	\$50.0
772	1/8	.373	5.90	51.8
773	1/8	.407	6.20	54.8
774	1/8	.448	6.65	58.4
775	1/8	.479	6.80	60.2
776	1/8	.510	7.10	62.6
777	1/8	.542	7.40	65.0
778	1/8	.573	7.70	67.4
779	1/8	.604	8.00	70.0
780	1/8	.635	8.30	72.6
781	1/8	.666	8.60	75.0
782	1/8	.697	8.90	77.4
783	1/8	.728	9.20	79.8
784	1/8	.759	9.50	82.2
785	1/8	.790	9.80	84.6

### SPRING GRID CLIP



Small and large type grid clip used to replace clips that have lost their tension due to heat causing poor contact. Available in bulk or 24 \$45. List envelopes on attractive display card. Std. Pkg. 100

No.	Type	Per C	Display Per C	NET Per C
1288	1X2-6BQ6	\$8.00	1288D	\$6.48
1289	1B3-6BG6	8.00	1289D	6.48



# HERMAN H. SMITH, INC.

Exclusive Distributors of **KULKA BARRIER TERMINAL BLOCKS** To Radio Parts Jobbers Only

To Series Number Add Suffix	600-2					To Series Number Add Suffix	600-3/4-ST-2					600-ST-2					600-Y-2					To Series Number Add Suffix	600-XY-2					600-Z-2							
	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'			
-1	.15	.16	.30	.42	.50	-1	.19	.20	.38	.45	.53	-1	.23	.24	.46	.53	.61	-1	.15	.16	.30	.42	.50	-1	.19	.20	.38	.45	.53	-1	.23	.24	.46	.53	.61
-2	.24	.25	.48	.68	.82	-2	.32	.33	.64	.76	.89	-2	.40	.41	.80	.92	1.05	-2	.24	.25	.48	.68	.82	-2	.32	.33	.64	.76	.89	-2	.40	.41	.80	.92	1.05
-3	.33	.36	.66	.91	1.09	-3	.44	.47	.88	1.00	1.18	-3	.60	.63	1.20	1.32	1.50	-3	.33	.36	.66	.91	1.09	-3	.44	.47	.88	1.00	1.18	-3	.60	.63	1.20	1.32	1.50
-4	.42	.46	.84	1.15	1.38	-4	.57	.61	1.14	1.30	1.53	-4	.73	.81	1.46	1.62	1.85	-4	.46	.51	.92	1.26	1.51	-4	.57	.61	1.14	1.30	1.53	-4	.73	.81	1.46	1.62	1.85
-5	.51	.56	1.02	1.40	1.68	-5	.69	.74	1.38	1.58	1.86	-5	.93	.98	1.86	2.06	2.34	-5	.56	.62	1.12	1.54	1.85	-5	.69	.74	1.38	1.58	1.86	-5	.93	.98	1.86	2.06	2.34
-6	.59	.65	1.18	1.62	1.94	-6	.83	.89	1.66	1.86	2.18	-6	1.07	1.17	2.14	2.34	2.66	-6	.65	.72	1.30	1.79	2.15	-6	.83	.89	1.66	1.86	2.18	-6	1.07	1.17	2.14	2.34	2.66
-7	.68	.75	1.36	1.89	2.27	-7	.95	1.02	1.90	2.14	2.51	-7	1.23	1.34	2.46	2.70	3.07	-7	.75	.83	1.50	2.06	2.47	-7	.95	1.02	1.90	2.14	2.51	-7	1.23	1.34	2.46	2.70	3.07
-8	.77	.85	1.54	2.11	2.53	-8	1.08	1.16	2.16	2.42	2.84	-8	1.40	1.52	2.80	3.16	3.58	-8	.85	.94	1.70	2.33	2.83	-8	1.08	1.16	2.16	2.42	2.84	-8	1.40	1.52	2.80	3.16	3.58
-9	.86	.95	1.72	2.36	2.83	-9	1.21	1.30	2.22	2.72	3.24	-9	1.57	1.70	3.14	3.44	3.81	-9	.95	1.05	1.90	2.61	3.13	-9	1.21	1.30	2.22	2.72	3.24	-9	1.57	1.70	3.14	3.44	3.81
-10	.95	1.05	1.90	2.61	3.13	-10	1.33	1.43	2.66	2.99	3.55	-10	1.73	1.87	3.46	3.76	4.28	-10	1.05	1.16	2.10	2.88	3.46	-10	1.33	1.43	2.66	2.99	3.55	-10	1.73	1.87	3.46	3.76	4.28
-11	1.03	1.13	2.06	2.83	3.40	-11	1.45	1.55	2.90	3.25	3.86	-11	1.89	2.09	3.78	4.13	4.69	-11	1.13	1.25	2.26	3.12	3.74	-11	1.45	1.55	2.90	3.25	3.86	-11	1.89	2.09	3.78	4.13	4.69
-12	1.12	1.23	2.24	3.08	3.70	-12	1.58	1.69	3.16	3.54	4.20	-12	2.06	2.21	4.12	4.50	5.11	-12	1.23	1.36	2.46	3.38	4.06	-12	1.58	1.69	3.16	3.54	4.20	-12	2.06	2.21	4.12	4.50	5.11
-13	1.21	1.33	2.42	3.32	3.98	-13	1.71	1.83	3.42	3.82	4.54	-13	2.23	2.39	4.46	4.86	5.52	-13	1.36	1.51	2.66	3.63	4.38	-13	1.71	1.83	3.42	3.82	4.54	-13	2.23	2.39	4.46	4.86	5.52
-14	1.31	1.44	2.62	3.60	4.32	-14	1.84	1.97	3.68	4.13	4.90	-14	2.40	2.57	4.80	5.05	5.77	-14	1.44	1.60	2.80	3.86	4.64	-14	1.84	1.97	3.68	4.13	4.90	-14	2.40	2.57	4.80	5.05	5.77
-15	1.40	1.54	2.80	3.85	4.62	-15	1.96	2.10	3.92	4.41	5.18	-15	2.56	2.74	5.12	5.61	6.38	-15	1.54	1.71	3.08	4.15	4.92	-15	1.96	2.10	3.92	4.41	5.18	-15	2.56	2.74	5.12	5.61	6.38
-16	1.49	1.64	2.98	4.10	4.92	-16	2.09	2.24	4.18	4.70	5.48	-16	2.73	2.92	5.46	5.88	6.70	-16	1.64	1.82	3.28	4.51	5.41	-16	2.09	2.24	4.18	4.70	5.48	-16	2.73	2.92	5.46	5.88	6.70
-17	1.57	1.70	3.14	4.30	5.17	-17	2.21	2.37	4.42	4.96	5.82	-17	2.89	3.09	5.78	6.32	7.18	-17	1.73	1.91	3.46	4.74	5.69	-17	2.21	2.37	4.42	4.96	5.82	-17	2.89	3.09	5.78	6.32	7.18
-18	1.66	1.83	3.32	4.56	5.47	-18	2.34	2.51	4.68	5.25	6.16	-18	3.06	3.27	6.12	6.69	7.60	-18	1.83	2.02	3.66	5.02	6.02	-18	2.34	2.51	4.68	5.25	6.16	-18	3.06	3.27	6.12	6.69	7.60
-19	1.75	1.93	3.50	4.81	5.77	-19	2.46	2.64	4.92	5.52	6.48	-19	3.22	3.44	6.44	7.04	8.00	-19	1.93	2.13	3.86	5.29	6.35	-19	2.46	2.64	4.92	5.52	6.48	-19	3.22	3.44	6.44	7.04	8.00
-20	1.84	2.03	3.68	5.06	6.07	-20	2.60	2.78	5.20	5.82	6.83	-20	3.40	3.70	6.80	7.42	8.43	-20	2.03	2.24	4.06	5.57	6.68	-20	2.60	2.78	5.20	5.82	6.83	-20	3.40	3.70	6.80	7.42	8.43
-21	1.93	2.13	3.86	5.30	6.36	-21	2.72	2.90	5.44	6.10	7.16	-21	3.56	3.90	7.12	7.78	8.84	-21	2.13	2.35	4.26	5.83	7.00	-21	2.72	2.90	5.44	6.10	7.16	-21	3.56	3.90	7.12	7.78	8.84
-22	2.02	2.23	4.04	5.55	6.66	-22	2.86	3.07	6.14	6.40	7.51	-22	3.74	3.98	7.48	8.04	9.15	-22	2.23	2.46	4.46	6.10	7.32	-22	2.86	3.07	6.14	6.40	7.51	-22	3.74	3.98	7.48	8.04	9.15

Height 1/2", Width 7/8", Thickness 1/4", Terminals 3/8" Centers, 3/16" Mtg., 6-32 x 1/4 Screws.

600A-SERIES	600A-					Suffix	600A-3/4-ST-					600A-Y-					Suffix	600-YSY-					600A-Z-												
	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'	General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF' 'MDG' 'B'	MAI-60 'D' 'GDI-30 'H'								
-1	.16	.18	.32	.47	.56	-1	.20	.22	.40	.50	.59	-1	.24	.26	.48	.54	.63	-1	.16	.18	.32	.47	.56	-1	.20	.22	.40	.50	.59	-1	.24	.26	.48	.54	.63
-2	.25	.28	.50	.70	.91	-2	.33	.37	.66	.83	.97	-2	.41	.45	.82	.91	1.05	-2	.25	.28	.50	.70	.91	-2	.33	.37	.66	.83	.97	-2	.41	.45	.82	.91	1.05
-3	.36	.40	.72	1.00	1.20	-3	.47	.51	.94	1.10	1.30	-3	.63	.69	1.26	1.39	1.59	-3	.36	.40	.72	1.00	1.20	-3	.47	.51	.94	1.10	1.30	-3	.63	.69	1.26	1.39	1.59
-4	.46	.51	.92	1.26	1.51	-4	.61	.66	1.22	1.43	1.68	-4	.81	.82	1.62	1.80	2.05	-4	.46	.51	.92	1.26	1.51	-4	.61	.66	1.22	1.43	1.68	-4	.81	.82	1.62	1.80	2.05
-5	.56	.62	1.12	1.54	1.85	-5	.74	.80	1.48	1.74	2.04	-5	.98	1.00	1.96	2.18	2.46	-5	.56	.62	1.12	1.54	1.85	-5	.74	.80	1.48	1.74	2.04	-5	.98	1.00	1.96	2.18	2.46
-6	.65	.72	1.30	1.79	2.15	-6	.89	.96	1.78	2.05	2.40	-6	1.17	1.20	2.34	2.57	2.92	-6	.65	.72	1.30	1.79	2.15	-6	.89	.96	1.78	2.05	2.40	-6	1.17	1.20	2.34	2.57	2.92
-7	.75	.83	1.50	2.06	2.47	-7	1.02	1.10	2.04	2.36	2.77	-7	1.34	1.38	2.68	2.94	3.35	-7	.75	.83	1.50	2.06	2.47	-7	1.02	1.10	2.04	2.36	2.77	-7	1.34	1.38	2.68	2.94	3.35
-8	.85	.94	1.70	2.33	2.83	-8	1.16	1.25	2.32	2.67	3.13	-8	1.57	1.62	3.04	3.34	3.80	-8	.85	.94	1.70	2.33	2.83	-8	1.16	1.25	2.32	2.67	3.13	-8	1.57	1.62	3.04	3.34	3.80
-9	.95	1.05	1.80	2.60	3.12	-9	1.30	1.40	2.60	3.00	3.52	-9	1.70	1.76	3.40	3.67	4.19	-9	.95	1.05	1.80	2.60	3.12	-9	1.30	1.40	2.60	3.00	3.52	-9	1.70	1.76	3.40	3.67	4.19
-10	1.05	1.16	2.10	2.88	3.46	-10	1.43	1.54	2.86	3.30	3.87	-10	1.87	1.94	3.74	4.11	4.68	-10	1.05	1.16	2.10	2.88	3.46	-10	1.43	1.54	2.86	3.30	3.87	-10	1.87	1.94	3.74	4.11	4.68
-11	1.13	1.25	2.26	3.12	3.74	-11	1.55	1.67	3.10	3.58	4.20	-11	2.03	2.11	4.06	4.46	5.08	-11	1.13	1.25	2.26	3.12	3.74	-11	1.55	1.67	3.10	3.58	4.20	-11	2.03	2.11	4.06	4.46	5.08
-12	1.23	1.36	2.46	3.38	4.06	-12	1.69	1.82	3.38	3.90	4.57	-12	2.21	2.30	4.42	4.86	5.53	-12	1.23	1.36	2.46	3.38	4.06	-12	1.69	1.82	3.38	3.90	4.57	-12	2.21	2.30	4.42	4.86	5.53
-13	1.33	1.47	2.66	3.65	4.38	-13	1.83	1.97	3.66	4.21	4.94	-13	2.39	2.49	4.78	5.25	5.98	-13	1.33	1.47	2.66	3.65	4.38	-13	1.83	1.97	3.66	4.21	4.94	-13	2.39	2.49	4.78	5.25	5.98
-14	1.44	1.60	2.80	3.86	4.75	-14	1.97	2.13	4.04	4.54	5.33	-14	2.57	2.69	5.14	5.62	6.44	-14	1.44	1.60	2.80	3.86	4.75	-14											

# HERMAN H. SMITH, INC.



Exclusive Distributors of **KULKA BARRIER TERMINAL BLOCKS** To Radio Parts Jobbers Only

WITH SCREW TERMINALS



WITH ONE-SIDED SOLDER TERMINALS



WITH TWO-SIDED SOLDER TERMINALS



To Series Number Add Suffix

General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		
			MDG 'B'	MAI-60 'D'				MDG 'B'	MAI-60 'D'	
Height 3/4", Width 1 1/16", Thickness 3/16", Terminals 1/16" Centers, 5/8" Mtg., 10-32 x 3/8" Screws.										
603-SERIES		603-			603-3/4-ST-		603-Y		603-ST-	
-1	\$ .55	\$ .61	\$1.10	\$1.51	\$1.81	\$ .66	\$ .72	\$1.32	\$1.62	\$1.92
-2	.94	1.03	1.88	2.58	3.10	1.13	1.22	2.26	2.77	3.28
-3	1.32	1.45	2.64	3.63	4.36	1.60	1.73	3.20	3.91	4.63
-4	1.71	1.88	3.42	4.70	5.64	2.07	2.24	4.14	5.06	6.00
-5	2.09	2.30	4.18	5.75	6.90	2.53	2.73	5.06	6.18	7.23
-6	2.48	2.74	4.96	6.82	8.18	3.00	3.25	6.00	7.34	8.70
-7	2.86	3.15	5.72	7.86	9.43	3.46	3.75	6.92	8.46	10.02
-8	3.25	3.58	6.50	8.93	10.72	3.92	4.25	7.48	9.60	11.38
-9	3.63	3.99	7.26	9.99	11.99	4.40	4.77	8.80	10.75	12.74
-10	4.02	4.45	8.04	11.05	13.26	4.80	5.23	9.60	11.83	14.03
-11	4.57	5.03	9.14	12.57	—	5.53	5.98	11.06	13.52	—
-12	4.96	5.46	9.92	13.64	—	6.00	6.50	12.00	14.68	—

General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		
			MDG 'B'	MAI-60 'D'				MDG 'B'	MAI-60 'D'	
Height 1 1/8", Width 2", Thickness 1/2", Terminals 7/8" Centers, 3/4" Mtg., 12-32 x 3/8" Screws.										
604-SERIES		604-			604-3/4-ST-		604-ST-			
-1	\$ .90	\$ .99	\$1.80	\$2.47	\$2.96	\$1.10	\$1.19	\$2.20	\$2.67	\$3.15
-2	1.65	1.82	3.30	4.53	5.44	2.00	2.17	4.00	4.92	5.82
-3	2.40	2.64	4.80	6.60	7.92	2.90	3.14	5.80	7.10	8.42
-4	3.15	3.46	6.30	8.66	10.39	3.80	4.11	7.60	9.31	11.03
-5	3.90	4.29	7.80	10.72	12.86	4.70	5.09	9.40	11.52	13.66
-6	4.65	5.11	9.30	12.78	15.34	5.60	6.06	11.20	13.75	16.27
-7	5.40	5.94	10.80	14.85	17.82	6.50	7.03	13.00	16.00	18.90
-8	6.15	6.76	12.30	16.91	20.29	7.40	8.01	14.80	18.16	21.54

General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		
			MDG 'B'	MAI-60 'D'				MDG 'B'	MAI-60 'D'	
Height 1 1/8", Width 2 1/2", Thickness 5/8", Terminals 1 1/8" Centers, 7/8" Mtg. 1/4-28 x 1/2" Screws										
605-SERIES		605-			605-3/4-ST-		605-ST-			
-1	\$1.25	\$1.38	\$2.50	\$3.43	\$4.12	\$1.45	\$1.58	\$2.90	\$3.63	\$4.31
-2	2.42	2.64	4.80	6.60	7.92	2.80	3.04	5.60	7.00	8.32
-3	3.50	3.85	7.00	9.62	11.54	4.20	4.55	8.40	10.32	12.24
-4	4.70	5.17	9.40	12.92	15.50	5.60	6.07	11.20	13.82	16.40
-5	5.80	6.38	11.60	15.95	19.14	7.00	7.50	14.00	17.15	20.33
-6	7.00	7.70	14.00	19.25	23.10	8.30	9.00	16.60	20.55	24.39

### 599 SERIES NARROW WIDTH TERMINAL BLOCK

Single Screw Terminal. Height 1/2", Width 3/8", Thickness 1/4", Terminals 3/8" Centers, .156 dia mtg. holes: 5-40 x 1/4" brass nickel plated screws.

General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		
			MDG 'B'	MAI-60 'D'				MDG 'B'	MAI-60 'D'	
599-3/4-ST-599-ST-599-Z										
-1	\$ .15	\$ .16	\$ .30	\$ .42	\$ .50	\$ .19	\$ .20	\$ .38	\$ .45	\$ .53
-2	.24	.25	.50	.69	.82	.32	.33	.64	.76	.89
-3	.33	.36	.66	.91	1.09	.44	.47	.88	1.00	1.18
-4	.42	.46	.84	1.15	1.38	.57	.61	1.14	1.30	1.53
-5	.51	.56	1.02	1.40	1.68	.69	.74	1.38	1.58	1.85
-6	.59	.65	1.18	1.62	1.94	.83	.89	1.66	1.86	2.18
-7	.68	.75	1.36	1.89	2.27	.95	1.02	1.90	2.14	2.51
-8	.77	.85	1.54	2.11	2.53	1.08	1.16	2.16	2.42	2.89
-9	.86	.95	1.72	2.36	2.83	1.21	1.30	2.42	2.72	3.19
-10	.95	1.05	1.90	2.61	3.13	1.33	1.43	2.66	2.99	3.51
-11	1.03	1.13	2.06	2.83	3.40	1.45	1.55	2.90	3.25	3.81
-12	1.12	1.23	2.24	3.08	3.70	1.58	1.69	3.16	3.54	4.15
-13	1.21	1.33	2.42	3.32	3.98	1.71	1.83	3.42	3.82	4.48
-14	1.31	1.44	2.62	3.60	4.32	1.84	1.97	3.68	4.13	4.85
-15	1.40	1.54	2.80	3.85	4.62	1.96	2.10	3.92	4.41	5.18
-16	1.49	1.64	2.98	4.10	4.92	2.09	2.24	4.18	4.70	5.52
-17	1.57	1.73	3.14	4.31	5.17	2.21	2.37	4.42	4.96	5.82
-18	1.66	1.83	3.32	4.56	5.47	2.34	2.51	4.68	5.25	6.16
-19	1.75	1.93	3.50	4.81	5.77	2.46	2.64	4.92	5.52	6.48
-20	1.84	2.03	3.68	5.06	6.07	2.59	2.78	5.16	5.82	6.83
-21	1.93	2.13	3.86	5.30	6.37	2.72	2.90	5.44	6.10	7.16
-22	2.02	2.23	4.04	5.55	6.6	2.86	3.07	5.68	6.40	7.51

### 699 SERIES NARROW WIDTH TERMINAL BLOCK

Single Screw Terminal. Height 1/2", Width 5/8", Thickness 3/8", Terminals 1/8" Centers, .175 Dia. Mtg. Holes 6-32 x 1/4" Brass Nickel Plated Screws.

General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		
			MDG 'B'	MAI-60 'D'				MDG 'B'	MAI-60 'D'	
699-3/4-ST-699-ST-699-Z										
-1	\$ .20	\$ .22	\$ .40	\$ .55	\$ .66	\$ .24	\$ .26	\$ .48	\$ .59	\$ .69
-2	.31	.34	.62	.85	1.02	.41	.44	.82	.95	1.11
-3	.42	.46	.84	1.15	1.38	.57	.61	1.14	1.30	1.52
-4	.54	.59	1.08	1.48	1.78	.74	.79	1.48	1.68	1.96
-5	.64	.72	1.28	1.76	2.11	.90	.98	1.80	2.02	2.36
-6	.75	.83	1.50	2.06	2.47	1.07	1.15	2.14	2.38	2.78
-7	.88	.97	1.76	2.42	2.90	1.23	1.32	2.46	2.77	3.25
-8	.99	1.09	1.98	2.72	3.26	1.40	1.50	2.80	3.13	3.67
-9	1.10	1.21	2.20	3.02	3.62	1.56	1.67	3.12	3.48	4.08
-10	1.22	1.34	2.44	3.35	4.02	1.73	1.83	3.46	3.86	4.53
-11	1.33	1.46	2.66	3.65	4.38	1.89	2.02	3.78	4.21	4.93
-12	1.44	1.58	2.88	3.96	4.75	2.06	2.20	4.12	4.58	5.36
-13	1.56	1.72	3.12	4.29	5.15	2.22	2.38	4.44	4.95	5.79
-14	1.67	1.84	3.34	4.59	5.51	2.39	2.56	4.78	5.31	6.22
-15	1.78	1.96	3.56	4.90	5.88	2.55	2.73	5.10	5.72	6.70
-16	1.90	2.09	3.80	5.22	6.26	2.72	2.91	5.42	6.09	7.13
-17	2.01	2.21	4.02	5.52	6.62	2.88	3.08	5.76	6.45	7.55
-18	2.12	2.33	4.24	5.83	7.00	3.05	3.26	6.10	6.80	7.96
-19	2.24	2.46	4.48	6.16	7.39	3.21	3.43	6.42	7.19	8.41
-20	2.35	2.59	4.70	6.46	7.75	3.38	3.62	6.76	7.54	8.82
-21	2.47	2.73	4.94	6.79	8.15	3.55	3.80	7.10	7.92	9.27
-22	2.59	2.85	5.18	7.12	8.54	3.72	3.98	7.44	8.30	9.72
-23	2.71	2.98	5.42	7.45	8.94	3.89	4.16	7.78	8.68	10.16

### 409 SERIES SUBMINIATURE TERMINAL BLOCK

Single Screw Terminal. Height .260, Width .312, Thickness 1/16" Terminals .187 Centers, .093 dia. mtg. holes: 0.80 x 3/8" brass silver plated or gold flash screws.

General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		General Purpose Bakelite	CFG 'C'	MFE 'M'	MME 'GMF'		
			MDG 'B'	MAI-60 'D'				MDG 'B'	MAI-60 'D'	
409-3/4-ST-409-ST-										
-1	\$ .40	\$ .80	\$ .90	\$ .47	\$ .87	\$ .40	\$ .80	\$ .90	\$ .47	\$ .87
-2	.60	1.10	1.20	.74	1.24	.60	1.10	1.20	.74	1.24
-3	.80	1.40	1.50	.99	1.59	.80	1.40	1.50	.99	1.59
-4	1.00	1.70	1.80	1.25	1.95	1.00	1.70	1.80	1.25	1.95
-5	1.20	2.00	2.10	1.53	2.33	1.20	2.00	2.10	1.53	2.33
-6	1.40	2.30	2.40	1.79	2.69	1.40	2.30	2.40	1.79	2.69
-7	1.60	2.60	2.70	2.05	3.05	1.60	2.60	2.70	2.05	3.05
-8	1.80	2.90	3.00	2.32	3.42	1.80	2.90	3.00	2.32	3.42
-9	2.00	3.20	3.30	2.59	3.79	2.00	3.20	3.30	2.59	3.79
-10	2.20	3.50	3.70	2.83	4.13	2.20	3.50	3.70	2.83	4.13
-11	2.40	3.80	4.00	3.11	4.51	2.40	3.80	4.00	3.11	4.51
-12	2.60	4.10	4.30	3.33	4.88	2.60	4.10	4.30	3.33	4.88
-13	2.80	4.40	4.60	3.64	5.24	2.80	4.40	4.60	3.64	5.24
-14	3.00	4.70	4.90	3.90	5.60	3.00	4.70	4.90	3.90	5.60
-15	3.20	5.00	5.20	4.17	5.97	3.20	5.00	5.20	4.17	5.97
-16	3.40	5.30	5.50	4.42	6.32	3.40	5.30	5.50	4.42	6.32
-17	3.60	5.60	5.80	4.69	6.69	3.60	5.60	5.80	4.69	6.69
-18	3.80	5.90	6.10	4.96	7.06	3.80	5.90	6.10	4.96	7.06
-19	4.00	6.20	6.40	5.23	7.53	4.00	6.20	6.40	5.23	7.53
-20	4.20	6.50	6.70	5.50	7.80	4.20	6.50	6.70	5.50	7.80
-21	4.40	6.80	7.00	5.77	8.17	4.40	6.80	7.00	5.77	8.17

### 410 SERIES MINIATURE TERMINAL BLOCK

Double Screw Terminals. Height 3/8", Width 5/8", Thickness 1/8", Terminals 1/4" Centers, .125 dia. mtg



# HERMAN H. SMITH, INC.

Exclusive Distributors of **KULKA BARRIER TERMINAL BLOCKS** To Radio Parts Jobbers Only

**FIBRE AND XP BAKELITE MARKER STRIPS**  
 Marker strips are supplied to fit each size terminal block — either plain or imprinted — in vulcanized fibre or Bakelite (1/32" thick).

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>410-411-600-600A</b>				
MS600-1	\$ 2.90	\$ 7.90	\$ 3.40	\$ 8.40
MS600-2	3.80	8.80	4.60	9.60
MS600-3	4.70	9.70	5.70	10.70
MS600-4	5.70	10.70	6.70	11.70
MS600-5	6.60	11.60	8.00	13.00
MS600-6	7.60	12.60	9.10	14.10
MS600-7	8.50	13.50	10.20	15.20
MS600-8	9.50	14.50	11.40	16.40
MS600-9	10.40	15.40	12.50	17.50
MS600-10	11.40	16.40	13.70	18.70
MS600-11	12.30	17.30	14.80	19.80
MS600-12	13.30	18.30	15.90	20.90
MS600-13	14.20	19.20	17.10	22.10
MS600-14	15.20	20.20	18.20	23.20
MS600-15	16.10	21.10	19.40	24.40
MS600-16	17.10	22.10	20.50	25.50
MS600-17	18.00	23.00	21.60	26.60
MS600-18	19.00	24.00	22.80	27.80
MS600-19	19.90	24.90	23.90	28.90
MS600-20	20.90	25.90	25.00	30.00
MS600-21	21.80	26.80	26.20	31.20
MS600-22	22.70	27.70	27.40	32.40

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>410-Y-600-Y-600-XY-600A-Y-600A-XY</b>				
MS600-Y-1	\$ 6.60	\$ 11.60	\$ 7.20	\$ 12.20
MS600-Y-2	7.60	12.60	8.30	13.30
MS600-Y-3	8.50	13.50	9.50	14.50
MS600-Y-4	9.50	14.50	10.80	15.80
MS600-Y-5	10.40	15.40	11.90	16.90
MS600-Y-6	11.40	16.40	12.90	17.90
MS600-Y-7	12.30	17.30	14.00	19.00
MS600-Y-8	13.30	18.30	15.20	20.20
MS600-Y-9	14.20	19.20	16.30	21.30
MS600-Y-10	15.20	20.20	17.50	22.50
MS600-Y-11	16.10	21.10	18.60	23.60
MS600-Y-12	17.10	22.10	19.70	24.70
MS600-Y-13	18.00	23.00	20.90	25.90
MS600-Y-14	19.00	24.00	22.10	27.10
MS600-Y-15	19.90	24.90	23.30	28.30
MS600-Y-16	20.90	25.90	24.30	29.30
MS600-Y-17	21.80	26.80	25.40	30.40
MS600-Y-18	22.80	27.80	26.50	31.50
MS600-Y-19	23.70	28.70	27.70	32.70
MS600-Y-20	24.70	29.70	28.80	33.80
MS600-Y-21	25.60	30.60	30.00	35.00
MS600-Y-22	26.50	31.50	31.20	36.20

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>601-699</b>				
MS601-1	\$ 3.20	\$ 8.20	\$ 3.80	\$ 8.80
MS601-2	4.40	9.40	5.30	10.30
MS601-3	5.70	10.70	6.80	11.80
MS601-4	7.00	12.00	8.30	13.30
MS601-5	8.20	13.20	9.50	14.50
MS601-6	9.50	14.50	11.40	16.40
MS601-7	10.80	15.80	12.90	17.90
MS601-8	12.00	17.00	14.40	19.40
MS601-9	13.30	18.30	15.90	20.90
MS601-10	14.50	19.50	17.50	22.50
MS601-11	15.80	20.80	19.00	24.00
MS601-12	17.10	22.10	20.50	25.50
MS601-13	18.30	23.30	22.00	27.00
MS601-14	19.60	24.60	23.50	28.50
MS601-15	20.90	25.90	25.00	30.00
MS601-16	22.10	27.10	26.50	31.50
MS601-17	23.40	28.40	28.10	33.10
MS601-18	24.70	29.70	29.60	34.60
MS601-19	25.90	30.90	31.10	36.10
MS601-20	27.20	32.20	32.60	37.60
MS601-21	28.50	33.50	34.10	39.10
MS601-22	29.80	34.80	35.50	40.50
MS601-23	31.10	36.10	37.00	42.00

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>603</b>				
MS603-1	\$ 7.60	\$ 12.60	\$ 9.10	\$ 14.10
MS603-2	9.40	14.40	11.20	16.20
MS603-3	11.10	16.10	13.40	18.40
MS603-4	12.90	17.90	15.50	20.50
MS603-5	14.70	19.70	17.60	22.60
MS603-6	16.40	21.40	19.70	24.70
MS603-7	18.20	23.20	21.80	26.80
MS603-8	20.00	25.00	24.00	29.00
MS603-9	21.80	26.80	26.10	31.10
MS603-10	23.50	28.50	28.20	33.20
MS603-11	25.30	30.30	30.30	35.30
MS603-12	27.10	32.10	32.40	37.40

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>603-Y</b>				
MS603-Y-1	\$ 11.40	\$ 16.40	\$ 12.90	\$ 17.90
MS603-Y-2	13.20	18.20	15.00	20.00
MS603-Y-3	14.90	19.90	18.20	22.20
MS603-Y-4	16.70	21.70	19.30	24.30
MS603-Y-5	18.50	23.50	21.40	26.40
MS603-Y-6	20.20	25.20	23.50	28.50
MS603-Y-7	22.00	27.00	25.70	30.70
MS603-Y-8	23.80	28.80	27.80	32.80
MS603-Y-9	25.60	30.60	29.90	34.90
MS603-Y-10	27.30	32.30	32.00	37.00
MS603-Y-11	29.10	34.10	34.10	39.10
MS603-Y-12	30.90	35.90	36.20	41.20

NOTE: XXXP Bakelite Markers are 25% more than XP Bakelite Markers.

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>601-Y-601-XY</b>				
MS601-Y-1	\$ 7.00	\$ 12.00	\$ 7.60	\$ 12.60
MS601-Y-2	8.20	13.20	9.10	14.10
MS601-Y-3	9.50	14.50	10.60	15.60
MS601-Y-4	10.80	15.80	12.10	17.10
MS601-Y-5	12.00	17.00	13.60	18.60
MS601-Y-6	13.30	18.30	15.20	20.20
MS601-Y-7	14.50	19.50	16.70	21.70
MS601-Y-8	15.80	20.80	18.20	23.20
MS601-Y-9	17.10	22.10	19.70	24.70
MS601-Y-10	18.30	23.30	21.30	26.30
MS601-Y-11	19.60	24.60	22.80	27.80
MS601-Y-12	20.90	25.90	24.30	29.30
MS601-Y-13	22.10	27.10	25.80	30.80
MS601-Y-14	23.40	28.40	27.30	32.30
MS601-Y-15	24.70	29.70	28.80	33.80
MS601-Y-16	25.90	30.90	30.40	35.40
MS601-Y-17	27.20	32.20	32.00	37.00
MS601-Y-18	28.50	33.50	33.50	38.50
MS601-Y-19	29.70	34.70	35.10	40.10
MS601-Y-20	31.00	36.00	36.60	41.60
MS601-Y-21	32.30	37.30	38.20	43.20
MS601-Y-22	33.60	38.60	39.70	44.70
MS601-Y-23	34.90	39.90	41.30	46.30

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>602</b>				
MS602-1	\$ 3.50	\$ 8.50	\$ 4.20	\$ 9.20
MS602-2	5.10	10.10	6.10	11.10
MS602-3	6.60	11.60	8.00	13.00
MS602-4	8.20	13.20	9.90	14.90
MS602-5	9.80	14.80	11.80	16.80
MS602-6	11.40	16.40	13.70	18.70
MS602-7	13.00	18.00	15.60	20.60
MS602-8	14.50	19.50	17.50	22.50
MS602-9	16.10	21.10	19.40	24.40
MS602-10	17.70	22.70	21.30	26.30
MS602-11	19.30	24.30	23.10	28.10
MS602-12	20.90	25.90	25.00	30.00
MS602-13	22.50	27.50	26.90	31.90
MS602-14	24.00	29.00	28.80	33.80
MS602-15	25.60	30.60	30.70	35.70
MS602-16	27.20	32.20	32.60	37.60
MS602-17	28.80	33.80	34.50	39.50
MS602-18	30.40	35.40	36.50	41.50
MS602-19	32.00	37.00	38.50	43.50
MS602-20	33.60	38.60	40.40	45.40
MS602-21	35.20	40.20	42.30	47.30
MS602-22	36.80	41.80	44.30	49.30
MS602-23	38.40	43.40	46.30	51.30
MS602-24	40.00	45.00	48.20	53.20
MS602-25	41.60	46.60	50.20	55.20
MS602-26	43.20	48.20	52.20	57.20

Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>602-Y-602-XY</b>				
MS602-Y-1	\$ 7.30	\$ 12.30	\$ 8.00	\$ 13.00
MS602-Y-2	8.90	13.90	9.90	14.90
MS602-Y-3	10.40	15.40	11.80	16.80
MS602-Y-4	12.00	17.00	13.70	18.70
MS602-Y-5	13.60	18.60	15.60	20.60
MS602-Y-6	15.20	20.20	17.50	22.50
MS602-Y-7	16.80	21.80	19.40	24.40
MS602-Y-8	18.30	23.30	21.30	26.30
MS602-Y-9	19.90	24.90	23.10	28.10
MS602-Y-10	21.50	26.50	25.00	30.00
MS602-Y-11	23.10	28.10	26.90	31.90
MS602-Y-12	24.70	29.70	28.80	33.80
MS602-Y-13	26.30	31.30	30.70	35.70
MS602-Y-14	27.80	32.80	32.60	37.60
MS602-Y-15	29.40	34.40	34.50	39.50
MS602-Y-16	31.00	36.00	36.40	41.40
MS602-Y-17	32.60	37.60	38.30	43.30
MS602-Y-18	34.20	39.20	40.20	45.20
MS602-Y-19	35.80	40.80	42.10	47.10
MS602-Y-20	37.40	42.40	44.00	49.00
MS602-Y-21	39.00	44.00	45.90	50.90
MS602-Y-22	40.60	45.60	47.80	52.80
MS602-Y-23	42.20	47.20	49.70	54.70
MS602-Y-24	43.80	48.80	51.60	56.60
MS602-Y-25	45.40	50.40	53.50	58.50
MS602-Y-26	47.00	52.00	55.40	60.40

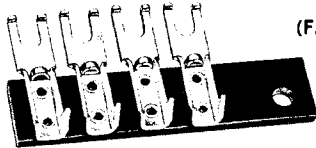
Cat. No.	Fibre Per C	Imp. Fibre Per C	XP Bake. Per C	Imp. XP Bake. Per C
<b>604</b>				
MS604-1	\$ 7.70	\$ 12.70	\$ 9.20	\$ 14.20
MS604-2	11.70	16.70	14.10	19.10
MS604-3	15.			

# HERMAN H. SMITH, INC.

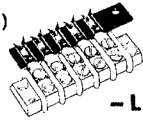


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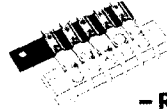
## TERMINAL CONNECTING STRIPS



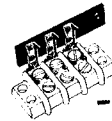
(FANNING STRIPS)



-L



-R



-AL



-AR

**MATERIALS AVAILABLE:** XP bakelite is supplied unless otherwise specified. All are 3/32" thick.

- XP** Black laminated paper base phenolic.
- XXXX** Natural Color laminated paper base phenolic, per MIL-P-3115A.
- GMG** Laminated glass cloth melamine per MIL-P-15037.

CODE	CABLE HOLE AT	STYLE
-L	LEFT	FLAT
-R	RIGHT	FLAT
-AL	LEFT	ANGLE
-AR	RIGHT	ANGLE

**CODE EXAMPLE**

Catalog Number	Flat or Angle & Clamp Hole	Number of Terminals	Type of Material*
652	AL	22	GMG

652-AL-22-GMG

\*Specify only if other than XP.

649 Series used on 410 Series Terminal Blocks  
 650 Series used on 600 Series Terminal Blocks  
 651 Series used on 601 Series Terminal Blocks  
 652 Series used on 602 Series Terminal Blocks

No. of Tmnl's	649-L 649-R	650-L 650-R	651-L 651-R	652-L 652-R	649-AL 649-AR	650-AL 650-AR	651-AL 651-AR	652-AL 652-AR
- 2	.19	.14	.15	.19	.25	.21	.22	.25
- 3	.25	.22	.23	.25	.35	.32	.33	.35
- 4	.32	.28	.29	.32	.45	.41	.42	.45
- 5	.39	.35	.36	.39	.55	.52	.53	.55
- 6	.47	.43	.44	.47	.67	.63	.64	.67
- 7	.53	.50	.51	.53	.76	.79	.74	.76
- 8	.61	.56	.57	.61	.87	.83	.84	.87
- 9	.67	.63	.64	.67	.98	.92	.94	.98
-10	.75	.70	.72	.75	1.08	1.03	1.05	1.08
-11	.81	.77	.79	.81	1.18	1.13	1.16	1.18
-12	.88	.84	.85	.88	1.28	1.24	1.24	1.28
-13	.95	.91	.92	.95	1.38	1.34	1.35	1.38
-14	1.03	.98	1.00	1.03	1.50	1.44	1.46	1.50
-15	1.09	1.06	1.07	1.09	1.58	1.55	1.56	1.58
-16	1.17	1.11	1.13	1.17	1.69	1.64	1.66	1.69
-17	1.22	1.19	1.20	1.22	1.78	1.75	1.76	1.78
-18	1.27	1.28	1.29	1.27	1.88	1.87	1.88	1.88
-19	1.32	1.33	1.34	1.32	1.98	1.96	1.97	1.98
-20	1.37	1.41	1.42	1.37	2.08	2.07	2.08	2.08
-21	1.42	1.46	1.50	1.42	2.18	2.16	2.18	2.18
-22	1.47	1.51	1.58	1.47	2.28	2.25	2.29	2.28
-23	--	--	1.66	1.52	--	--	2.39	2.38
-24	--	--	--	1.57	--	--	--	2.48
-25	--	--	--	1.62	--	--	--	2.58
-26	--	--	--	1.67	--	--	--	2.68

Series	Bent -YL		Two-Sided -STL		One-Sided -3/4STL		Spade -SLS		Flag -SLF	
	Part #	Per C	Part #	Per C	Part #	Per C	Part #	Per C	Part #	Per C
409			73104	\$4.40	73115	\$4.40				
410			73105	4.40	73116	4.40	73126	\$3.00	73134	\$3.00
411			73106	4.40	73117	4.40	73127	3.00	73135	3.00
599			73107	4.40	73118	4.40	73128	3.00	73136	3.00
600	73101	\$4.40	73108	4.40	73119	4.40	73129	3.00	73137	3.00
601	73102	5.90	73109	5.90	73120	5.90	73130	3.50	73138	3.50
602	73103	7.20	73110	7.20	73121	7.20	73131	4.00	73139	4.00
603	73178	10.00	73111	10.00	73122	10.00	73132	5.00	73140	5.00
604			73112	18.00	73123	18.00				
605			73113	26.00	73124	26.00				
699			73114	5.90	73125	5.90	73133	3.50	73141	3.50

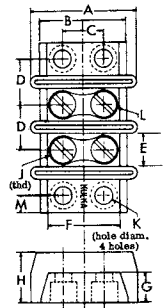


**CABLE CLAMPS**  
For Terminal Connecting Strips

Made of nickel plated brass with 6-32 plated brass screws.

No.	Size	Per C
1435	3/8"	\$16.00
1436	1/2"	16.00
1437	5/8"	16.00
1438	3/4"	16.00
1439	7/8"	16.00

Series	Hole -SLH		Jumper -J		Straddle Plate -SP		Comb. YL-3/4STL -XYL		Outside Bent -ZL		Long Bent -YSYL	
	Part #	Per C	Part #	Per C	Part #	Per C	Part #	Per C	Part #	Per C	Part #	Per C
409					73160	\$3.50						
410	73142	\$3.00	73150	\$3.50								
411	73143	3.00	73151	3.50					73169	\$4.40		
599	73144	3.00	73152	3.50					73170	4.40		
600	73145	3.00	73153	3.50	73161	3.50	73167	\$4.40	73171	4.40	73175	\$4.40
601	73146	3.50	73154	4.00	73162	4.00			73172	5.90	73176	5.90
602	73147	4.00	73155	4.50	73163	4.50	73168	7.20	73173	7.20	73177	7.20
603	73148	5.00	73156	5.50	73164	7.50						
604			73157	7.50	73165	15.00						
605			73158	10.00	73166	20.00						
699	73149	3.50	73159	4.00					73174	5.90		



**DIMENSIONAL DRAWING AND ELECTRICAL RATING OF TERMINAL BLOCKS**

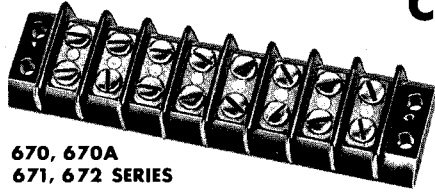
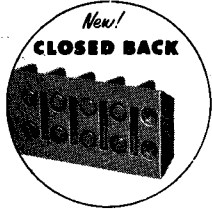
Series No.	A	B	C	D	E	F	G	H	J	K	L	M	Max. Tms.	Voltage Breakdown		Current Rating Amps	Maximum AWG Wire Sizes
														Without Marker Strip	With Marker Strip		
409	3/8	1/4	--	3/8	3/8	3/16	3/32	1/4	0-80	.093	1/8	1/4	21	750	1500	2	26 to 22
410	3/8	3/8	1/4	1/4	3/8	3/16	3/32	3/16	2-56	.125	3/16	1/8	22	1000	2000	5	20 to 18
411	1/32	1/32	--	1/4	3/8	1/32	3/32	3/16	2-56	.125	3/16	1/8	22	1000	2000	5	20 to 18
599	3/8	3/8	--	3/8	1/8	3/32	1/4	1/32	5-40	.156	1/4	3/8	22	1100	2500	15	22 to 16
600	3/8	1/16	3/8	3/8	1/8	3/32	1/4	1/32	5-40	.156	1/4	3/8	22	1100	2500	15	22 to 16
601	1/8	3/8	2/64	3/8	2/64	3/4	3/8	1/2	6-32	.175	1/4	3/32	23	1100	3000	20	16 to 14
602	1/8	1/16	1/2	3/8	2/64	3/8	3/8	3/8	8-32	.209	3/8	1/64	26	1600	3300	30	14 to 12
603	1/16	1/16	3/8	1/16	1/32	1/16	3/16	3/4	10-32	.165	3/8	1/2	10	1700	3000	50	6
604	2	1/2	3/4	3/8	3/8	1/2	1/2	1/16	12-32	.195	3/8	1/64	8	1800	3400	70	4
605	2 1/2	1 1/8	7/8	3/8	3/8	3/8	3/2	1/2	4-40	.156	3/8	1/64	13	2100	3800	90	2
609	3/8	3/8	--	1/8	2/32	1 1/2	3/8	1 1/8	1/4-29	.209	1/2	3/8	6	1000	2000	10	20 to 18
699	1/16	1/2	--	3/8	2/64	1/32	3/8	1/2	6-32	.156	1/4	3/32	23	1100	3000	20	16 to 14



# HERMAN H. SMITH, INC.

Exclusive Distributors of **KULKA BARRIER TERMINAL BLOCKS** To Radio Parts Jobbers Only

## COMMERCIAL CLOSED BACK TERMINAL BLOCKS



670, 670A  
671, 672 SERIES

**MOLDED MATERIALS:**

General Purpose Phenolic, (commercial grade) unless otherwise specified.

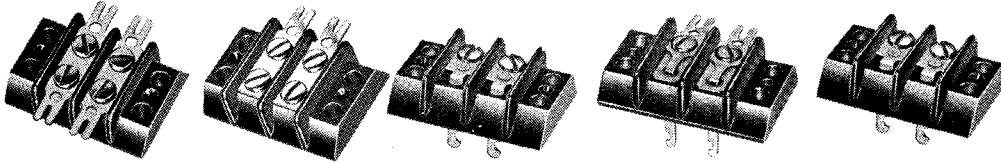
**HARDWARE:**

SCREWS & TERMINALS: Brass, Nickel Plated.

SOLDER TERMINALS: Brass, Hot-tinned.

**SCREW SIZES:**

- 670 Series: 5-40 x 1/4
- 670A Series: 6-32 x 1/4
- 671 Series: 6-32 x 1/4
- 672 Series: 8-32 x 1/4



-ST SERIES

-3/4ST SERIES

-Y SERIES

-XY SERIES

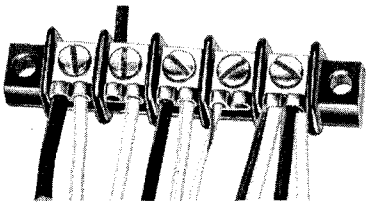
-YSY SERIES

To Series Number Add Suffix:	670 Series	670-Y Series	670-XY Series	To Series Number Add Suffix:	670A Series	670A-ST Series	670A-XY Series	To Series Number Add Suffix:	671 Series	671-3/4ST Series	671-XY Series	To Series Number Add Suffix:	672 Series	672-3/4ST Series	672-XY Series
-1	\$.15	\$.19	\$.19	-1	\$.16	\$.20	\$.20	-1	\$.20	\$.24	\$.25	-1	\$.23	\$.30	\$.31
-2	.24	.32	.33	-2	.25	.33	.34	-2	.31	.41	.43	-2	.36	.50	.52
-3	.33	.44	.45	-3	.36	.47	.48	-3	.42	.57	.60	-3	.51	.70	.73
-4	.42	.57	.59	-4	.46	.61	.63	-4	.54	.74	.78	-4	.65	.90	.94
-5	.51	.69	.71	-5	.56	.74	.76	-5	.64	.90	.95	-5	.78	1.11	1.16
-6	.59	.83	.86	-6	.65	.89	.90	-6	.75	1.07	1.13	-6	.92	1.31	1.37
-7	.68	.95	.98	-7	.75	1.02	1.05	-7	.88	1.23	1.30	-7	1.07	1.52	1.59
-8	.77	1.08	1.12	-8	.85	1.16	1.20	-8	.99	1.40	1.48	-8	1.20	1.72	1.80
-9	.86	1.21	1.25	-9	.95	1.30	1.34	-9	1.10	1.56	1.65	-9	1.34	1.93	2.02
-10	.95	1.33	1.38	-10	1.05	1.43	1.48	-10	1.22	1.73	1.83	-10	1.49	2.12	2.22
-11	1.03	1.45	1.50	-11	1.13	1.55	1.60	-11	1.33	1.89	2.00	-11	1.62	2.33	2.44
-12	1.12	1.58	1.64	-12	1.23	1.69	1.75	-12	1.44	2.06	2.18	-12	1.76	2.53	2.65
-13	1.21	1.71	1.77	-13	1.33	1.83	1.91	-13	1.56	2.22	2.35	-13	1.90	2.74	2.87
-14	1.31	1.84	1.91	-14	1.44	1.97	2.04	-14	1.67	2.39	2.53	-14	2.04	2.94	3.08
-15	1.40	1.96	2.03	-15	1.54	2.10	2.17	-15	1.78	2.55	2.70	-15	2.18	3.15	3.30
-16	1.49	2.09	2.17	-16	1.64	2.24	2.32	-16	1.90	2.72	2.88	-16	2.32	3.34	3.50
-17	1.57	2.21	2.29	-17	1.73	2.37	2.45	-17	2.01	2.88	3.05	-17	2.45	3.54	3.71
-18	1.66	2.34	2.43	-18	1.83	2.51	2.60	-18	2.12	3.05	3.23	-18	2.58	3.74	3.92
-19	1.75	2.46	2.55	-19	1.93	2.64	2.73	-19	2.24	3.21	3.40	-19	2.76	3.99	4.18
-20	1.84	2.60	2.70	-20	2.03	2.78	2.83	-20	2.35	3.38	3.58	-20	2.90	4.20	4.40
-21	1.93	2.72	2.82	-21	2.13	2.90	3.05	-21	2.47	3.55	3.76	-21	3.04	4.41	4.62
-22	2.02	2.86	2.97	-22	2.24	3.07	3.18	-22	2.59	3.72	3.94	-22	3.19	4.62	4.84
-23	2.11	2.96	3.07	-23	2.32	3.17	3.28	-23	2.71	3.89	4.12	-23	3.33	4.83	5.06
-24	2.20	3.08	3.20	-24	2.42	3.30	3.42	-24	2.83	4.06	4.30	-24	3.48	5.04	5.28
-25	2.29	3.20	3.32	-25	2.52	3.43	3.55	-25	2.95	4.23	4.48	-25	3.62	5.25	5.50
-26	2.38	3.32	3.45	-26	2.62	3.56	3.69	-26	3.07	4.40	4.66	-26	3.77	5.46	5.72
-27	2.47	3.44	3.57	-27	2.72	3.69	3.82	-27	3.19	4.57	4.84	-27	—	—	—
-28	2.56	3.56	3.70	-28	2.82	3.82	3.96	-28	3.31	4.74	5.02	-28	—	—	—
-29	2.65	3.68	3.80	-29	2.92	3.95	4.09	-29	3.43	4.91	5.20	-29	—	—	—
-30	2.74	3.80	3.95	-30	3.02	4.08	4.32	-30	3.55	5.08	5.38	-30	—	—	—

## KULKA TERMINAL BLOCKS with SCREW CLAMP TERMINALS No Lugs Required on Leads

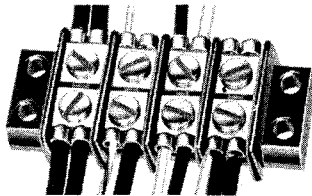
• Allows for different sizes of wire (AWG #14 to 22) in same terminal, either solid or stranded. • Pressure Clamp takes up to four leads per side, as illustrated.

699-3701 SERIES  
SINGLE ROW



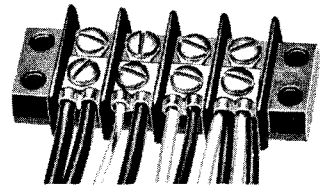
Add Suffix	NET Ea.	Add Suffix	NET Ea.	Add Suffix	NET Ea.
-1	\$.30	-9	\$2.00	-17	\$3.71
-2	.51	-10	2.22	-18	3.92
-3	.72	-11	2.43	-19	4.14
-4	.94	-12	2.64	-20	4.35
-5	1.14	-13	2.86	-21	4.57
-6	1.35	-14	3.07	-22	4.79
-7	1.58	-15	3.28	-23	5.01
-8	1.79	-16	3.50		

601-3700 SERIES  
DOUBLE ROW  
(Screw Clamps Both Sides)



Add Suffix	NET Ea.	Add Suffix	NET Ea.	Add Suffix	NET Ea.
-1	\$.40	-9	\$2.90	-17	\$5.41
-2	.71	-10	3.22	-18	5.72
-3	1.02	-11	3.53	-19	6.04
-4	1.34	-12	3.84	-20	6.36
-5	1.64	-13	4.16	-21	6.67
-6	1.95	-14	4.47	-22	6.99
-7	2.28	-15	4.78	-23	7.31
-8	2.59	-16	5.10		

601-3701 SERIES  
DOUBLE ROW  
(Screw Clamps One Side)



Add Suffix	NET Ea.	Add Suffix	NET Ea.	Add Suffix	NET Ea.
-1	\$.30	-9	\$2.90	-17	\$5.41
-2	.51	-10	3.22	-18	5.72
-3	.72	-11	3.53	-19	6.04
-4	.94	-12	3.84	-20	6.36
-5	1.14	-13	4.16	-21	6.67
-6	1.35	-14	4.47	-22	6.99
-7	1.58	-15	4.78	-23	7.31
-8	1.79	-16	5.10		

### PRINTED CIRCUIT TERMINAL BLOCKS

410-1921  
SERIES



Similar to 410-Y Series Blocks except that solder lug is cut off to fit into printed circuit board for soldering.

411-1921  
SERIES

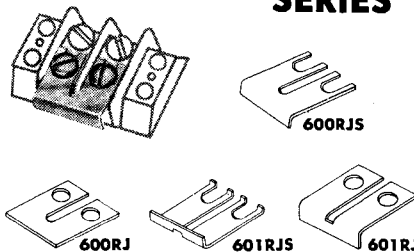


Similar to 411-Z Series Blocks except that solder lug is cut off to fit into printed circuit board for soldering.

NOTE: Not Stocked; Prices on Request.

### SERIES JUMPERS

NOTE: 600RJ, 600RJS and 601RJS are nickel-plated. 601RJ is cadmium-plated.



Stations	600RJ	600RJS	600RJ	600RJS	
	601RJ	601RJS	601RJ	601RJS	
-2	.23	.25	-13	.90	1.00
-3	.27	.40	-14	.93	1.03
-4	.30	.44	-15	.97	1.07
-5	.35	.50	-16	1.00	1.10
-6	.47	.63	-17	1.03	1.14
-7	.50	.70	-18	1.05	1.17
-8	.54	.74	-19	1.08	1.20
-9	.58	.78	-20	1.10	1.23
-10	.81	.90	-21	1.13	1.25
-11	.84	.93	-22	1.15	1.28
-12	.87	.95	-23*	1.18	1.30

\*601 Series only

# HERMAN H. SMITH, INC.



Exclusive Distributors of **KULKA BARRIER TERMINAL BLOCKS** To Radio Parts Jobbers Only

### NAVY TERMINAL BOARDS



Made According to BUREAU of SHIPS Drawings No. 9000—S6505F-73214 Rev. 5 and Spec. MIL-T-16784 (Ships).

Part No.	Type Desig.	NET Each	Part No.	Type Desig.	NET Each
73601	3TB10	\$7.50	73627	10TB12	\$7.90
73602	4TB8	3.50	73628	10TB18	8.86
73603	4TB20	5.40	73629	10TB28	9.50
73604	5TB8	8.80	73630	11TB4	4.92
73605	5TB10	9.85	73631	11TB6	5.81
73606	5TB12	10.50	73632	11TB9	6.25
73607	6TB6	2.95	73633	11TB14	6.60
73608	6TB10	3.20	73634	15TB10	3.25
73609	6TB24	5.52	73635	15TB24	5.50
73610	7TB8	5.20	73636	16TB4	4.20
73611	7TB12	6.41	73637	16TB10	5.60
73612	8TB2	1.20	73638	17TB4 <sup>3, 4</sup>	5.85
73613	8TB2C	1.00	73639	17TB10 <sup>3, 4</sup>	7.12
73614	8TB2M	.80	73640	25TB2	1.20
73615	8TB6	2.10	73641	25TB5	1.50
73616	8TB6C	2.00	73642	25TB6	1.70
73617	8TB6M	1.80	73643	25TB7	1.80
73618	8TB8	2.25	73644	25TB9	1.96
73619	8TB8C	2.60	73645	25TB10	2.18
73620	8TB8M	2.30	73646	25TB12	2.25
73621	8TB10	2.70	73647	25TB2 <sup>3</sup>	1.25
73622	8TB10C	3.20	73648	26TB6 <sup>3</sup>	1.72
73623	8TB10M	2.80	73649	26TB8 <sup>3</sup>	2.55
73624	9TB2	1.85	73650	26TB10 <sup>3</sup>	3.00
73625	9TB4	2.04	73651	26TB12 <sup>3</sup>	3.20
73626	10TB8	6.70	73652	27TB12	8.00

Send for our Engineering Data Brochure on the complete line of Kulka Navy Terminal Boards and Hardware.

### SLOTTED NUTS AND CONNECTORS FOR BOARDS

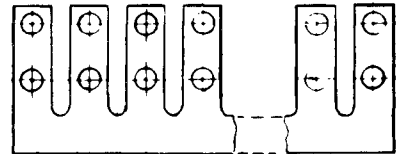
All slotted nuts furnished with Kulka Military Terminal Boards meet applicable military specifications. The following lists the styles of nuts and/or connectors furnished with respective terminal boards.



All Nuts and Connectors List Price, Each..... \$.04

Terminal Board	Nut	Connector	Terminal Board	Nut	Connector
3TB	4		11TB	21	4
4TB	4		15TB	4	
5TB	4		16TB	4	
6TB	21		17TB	4	88
7TB	21		25TB	96	
8TB	12	70	26TB	96	99
9TB	21		27TB	96	
10TB	21				

### JUMPERS MATERIAL: Brass



Stations*	3TBJ fig. 1	4TBJ fig. 1	6TBJ fig. 1	8TBJ fig. 2	10TBJ fig. 1	17TBJ fig. 2	25TBJ fig. 1	26TBJ fig. 2	27TBJ fig. 1
—2	.26	.20	.20	.30	.20	.30	.16	.20	.18
—3	.30	.25	.24	.36	.24	.35	.20	.24	.22
—4	.36	.30	.28	.42	.28	.40	.24	.28	.26
—5	.40	.35	.32	.48	.32	.45	.28	.32	.30
—6	.46	.40	.36	.54	.36	.50	.32	.36	.34
—7	.50	.45	.40	.60	.40	.55	.36	.40	.38
—8	.54	.50	.44	.66	.44	.60	.40	.44	.42
—9	.58	.55	.48	.72	.48	.65	.44	.48	.46
—10	.62	.60	.52	.78	.52	.70	.48	.52	.50
—11	.66	—	.56	—	—	—	.52	.56	.54
—12	.70	—	.60	—	—	—	.56	.60	.58

NOTE: Prices are for Brass, unplated. Add 10¢ each to List Price for Plating.  
\* Indicate number of sections as suffix to part number.



### MINIATURE PRINTED CIRCUIT TERMINAL BLOCK TYPE 520

Height 3/8", Width 3/8", Terminals 5/32" centers.

Multiple connections provided by a single block regardless of how close the printed wiring leads may be. Securely mounts by dip-soldering pins into connector mounting holes. This block can be supplied in any of the molded materials shown on page 63.

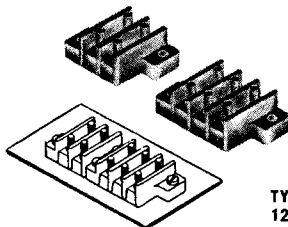
No.	Each	No.	Each
520-1	\$.50	520-13	\$3.98
520-2	.82	520-14	4.32
520-3	1.09	520-15	4.62
520-4	1.38	520-16	4.92
520-5	1.68	520-17	5.17
520-6	1.94	520-18	5.47
520-7	2.27	520-19	5.77
520-8	2.53	520-20	6.07
520-9	2.83	520-21	6.36
520-10	3.13	520-22	6.66
520-11	3.40	520-23	7.50
520-12	3.70	520-24	7.66

### 521 SERIES

Similar to 620 Series Blocks above, except without soldering posts (feedthru).

No.	NET Ea.	No.	NET Ea.
521-1	\$.50	521-13	3.98
521-3	1.09	521-15	4.62
521-5	1.68	521-17	5.17
521-7	2.27	521-19	5.77
521-9	2.83	521-21	6.36
521-11	3.40		

### HIGH TEMPERATURE TERMINAL BLOCKS



TYPE 1215

Height 25/32", Width 1/2", Thickness 3/8", Terminals 17/32" centers.

Stud type terminal boards specifically designed for high temperature applications. Available in two and three terminal configurations, which interlock to make strips of any desired number of terminals. Stainless steel terminals and Mykroy (glass-bonded mica) body allow use up to 850°F, continuous duty. Rated at 5,000 V. RMS, 50 amps.

No.	Terminals	Each
1215-2	2	\$5.80
1215-3	3	6.50

### PRESSURE CONTACT TERMINAL BLOCK

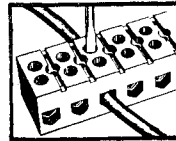


TYPE 9-85

Height 1 1/8", Width 1 1/4", Terminals 5/8" centers.

For heavy amperage, high voltage applications. Rated 85 amps, 8,000 volts between terminals and from terminals to mounting surface. Maximum wire size No. 4AWG solid or stranded cable. Cables can be disconnected from either side of the block, while cables on opposite side remain connected. Available in general purpose phenolic or plastics per MIL-M-14.

No.	Gen. Purp. MAI-60	No.	Gen. Purp. MAI-60
9-85-2	\$1.16 \$1.56	9-85-8	\$3.55 \$5.15
9-85-3	1.75 2.35	9-85-9	4.35 6.15
9-85-4	2.20 3.00	9-85-10	4.60 6.60
9-85-5	2.60 3.60	9-85-11	4.95 7.15
9-85-6	2.85 4.05	9-85-12	5.10 7.50
9-85-7	3.30 4.70		



### NARROW WIDTH TERMINAL BLOCK



609 SERIES

Single Screw Terminal. Height 1/2", Width 3/8", Thickness 9/32", Terminals 3/32" Centers, .156 dia. mtg. holes; 4-41 x 3/16" Panhead, Phillips type semi brass nickel plated screws.

Cat. No.	Purp. Gen. Bake. CFG'C'	MME MFE'M' GMF MDG'B'	Cat. No.	Purp. Gen. Bake. CFG'C'	MME MFE'M' GMF MDG'B'
609-1	\$.20	\$.50	608-8	\$1.02	\$2.30
609-2	.30	.75	609-9	1.14	2.60
609-3	.42	1.02	609-10	1.26	2.90
609-4	.54	1.29	609-11	1.38	3.20
609-5	.66	1.56	609-12	1.50	3.50
609-6	.78	1.83	609-13	1.62	3.80
609-7	.90	2.00			

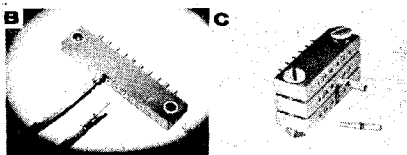
### 610 SERIES

Similar to 609 Series above, except has Binding Head Screws

Cat. No.	Purp. Gen. Bake. CFG'C'	MME MFE'M' GMF MDG'B'	Cat. No.	Purp. Gen. Bake. CFG'C'	MME MFE'M' GMF MDG'B'
610-1	\$.16	\$.46	610-8	\$.78	\$1.96
610-2	.41	.69	610-9	.87	2.33
610-3	.33	.93	610-10	.96	2.60
610-4	.42	1.17	610-11	1.05	2.87
610-5	.51	1.41	610-12	1.14	3.14
610-6	.60	1.65	610-13	1.23	3.41
610-7	.69	1.79			



### Kulka MINIATURE TAPER-PIN TERMINAL BLOCKS



### MOUNTING

- (A) Upright, on printed circuit boards, with solder studs thru holes for dip-soldering on reverse side.
- (B) Flat-mounted on board, chassis or casing with connections front and rear.
- (C) Stack-mounted for multiple units.

### CONNECTIONS:

One side of block has taper-pin receptacles that accept AMP type 53, Burndy or equivalent pins for solderless wiring. Other side has counter-bored brass terminal studs, gold plated over silver, for wire sizes to No. 20 AWG.

### MATERIALS:

Made of GDI-30 plastic (Glass fiber filled Diallyl Phthalate per MIL-M-19833).

No.	Number of Terminals	NET Each
399-6	6	\$2.17
399-10	10	2.93



812 SERIES

9/16" centers, 8-32 x 5/16 screws. Single Row Terminal Blocks.

Height 23/32", Width 3/4", Thickness 13/32", Terminal

Add Suffix	812-Y	812-XY	812-X'	812-Y	812-X'
	812-2T	812-2T	812-2T	812-2T	812-2T
—1	\$.26	\$.35	\$.39	—14	\$2.35 \$3.38 \$4.02
—2	.41	.58	.67	—15	2.51 3.62 4.31
—3	.59	.81	.94	—16	2.67 3.84 4.58
—4	.75	1.04	1.22	—17	2.82 4.07 4.97
—5	.90	1.28	1.51	—18	2.97 4.30 5.13
—6	1.06	1.51	1.78	—19	3.17 4.59 5.46
—7	1.23	1.75	2.07	—20	3.34 4.83 5.75
—8	1.38	1.98	2.35	—21	3.50 5.07 6.04
—9	1.54	2.22	2.63	—22	3.67 5.31 6.33
—10	1.71	2.44	2.90	—23	3.83 5.55 6.61
—11	1.86	2.68	3.19	—24	4.00 5.80 6.90
—12	2.02	2.91	3.46	—25	3.16 6.03 7.18
—13	2.19	3.15	3.75	—26	4.32 6.28 7.48





# HERMAN H. SMITH, INC.

Exclusive Distributors of KULKA BARRIER TERMINAL BLOCKS To Radio Parts Jobbers Only

**KULKA MILITARY TERMINAL BOARDS**  
MADE TO MEET MIL-T-55164

Molded in terminals, mounting holes and reinforcement plates.

**MATERIAL:**  
PLASTIC: Diallyl Phthalate, Type GD-30F per MIL-M-19833.  
SCREWS: Brass per QQ-W-321, Nickel Plate per QQ-N-290.

**SCREW SIZES:**  
20000 Series: 5-40 x 7/32  
21000 Series: 6-32 x 1/4  
22000 Series: 9-32 x 1/2

TERMINAL PLATES: Brass per QQ-B-613. Plates are nickel plated per QQ-N-290.



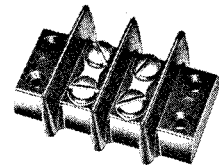
## KULKA HIGH BARRIER TERMINAL BLOCKS



**620A SERIES**

Height 1/2", Width 7/8", Thickness 1/4", Terminals 9/16" centers, 5/16" Mtg. 6-32 screws. (Similar to 602A series except has higher barriers).

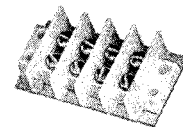
Add Suffix	620A	620A-Y 620A-ST 620A-3/4ST	620A-XY 620A-Z
-1	.18	.22	.26
-2	.27	.35	.43
-3	.39	.50	.66
-4	.50	.65	.85
-5	.61	.79	1.03
-6	.82	1.09	1.41
-7	.93	1.24	1.60
-8	1.04	1.39	1.79
-9	1.15	1.53	1.97
-10	1.23	1.65	2.13
-11	1.34	1.80	2.32
-12	1.45	1.95	2.51
-13	1.57	2.10	2.70
-14	1.68	2.24	2.91
-15	1.79	2.39	3.07
-16	1.89	2.53	3.25
-17	2.00	2.68	3.44
-18	2.11	2.82	3.62
-19	2.21	2.96	3.80
-20	2.32	3.09	3.97
-21	2.43	3.26	4.19
-22			



**622 SERIES**

Height 3/4", Width 1 1/8", Thickness 3/8", Terminals 9/16" centers, 5/8" mtg. 8-32 screws. (Similar to 602 Series except has higher barriers.)

Add Suffix	622	622-Y 622-ST 622-3/4ST	622-XY 622-Z
-1	.24	.31	.35
-2	.37	.52	.60
-3	.54	.73	.86
-4	.68	.94	1.11
-5	.81	1.16	1.37
-6	.96	1.37	1.62
-7	1.12	1.59	1.89
-8	1.26	1.80	2.14
-9	1.40	2.02	2.40
-10	1.58	2.22	2.64
-11	1.70	2.44	2.90
-12	1.84	2.65	3.16
-13	1.99	2.87	3.42
-14	2.14	3.08	3.67
-15	2.28	3.30	3.93
-16	2.43	3.50	4.17
-17	2.57	3.71	4.53
-18	2.70	3.92	4.68
-19	2.89	4.18	4.98
-20	3.04	4.41	5.25
-21	3.19	4.63	5.51
-22	3.34	4.85	5.77
-23	3.49	5.07	6.03
-24	3.65	5.29	6.30
-25	3.80	5.51	6.56
-26	3.94	5.73	6.82



**601RZ SERIES**

Height 1 1/16", Width 1 1/8", Thickness 3/8", Terminals 7/16" centers, 27/64" mtg., 6-32 screws. Molded of Zytel 31 (Nylon) Plastic.

Add Suffix	NET Ea.	Add Suffix	NET Ea.	Add Suffix	NET Ea.
-1	.78	-8	2.32	-15	3.92
-2	1.00	-9	2.54	-16	4.16
-3	1.22	-10	2.76	-17	4.40
-4	1.44	-11	2.98	-18	4.64
-5	1.66	-12	3.20	-19	4.88
-6	1.88	-13	3.42	-20	5.12
-7	2.10	-14	3.68		

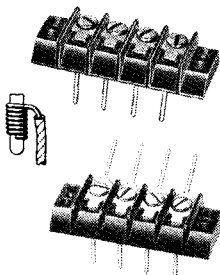
Send for Kulka Terminal Block Catalog containing complete descriptions and engineering data.

HERMAN H. SMITH, INC. Brooklyn 10, N. Y.

Screw Type			Feed-thru (Y)			Two-Sided (ST)*			One-Sided (3/4ST)*		
MILITARY PART NO.	KULKA PART NO.	EACH	MILITARY PART NO.	KULKA PART NO.	EACH	MILITARY PART NO.	KULKA PART NO.	EACH	MILITARY PART NO.	KULKA PART NO.	EACH
37TB2	20002	\$1.31	40TB2	20102	\$1.38	20202	\$1.38		20302	\$1.38	
37TB3	20003	1.69	40TB3	20103	1.80	20203	1.80		20303	1.80	
37TB4	20004	1.98	40TB4	20104	2.13	20204	2.13		20304	2.13	
37TB5	20005	2.18	40TB5	20105	2.36	20205	2.36		20305	2.36	
37TB6	20006	2.40	40TB6	20106	2.64	20206	2.64		20306	2.64	
37TB7	20007	2.57	40TB7	20107	2.89	20207	2.89		20307	2.89	
37TB8	20008	3.01	40TB8	20108	3.32	20208	3.32		20308	3.32	
37TB9	20009	3.20	40TB9	20109	3.55	20209	3.55		20309	3.55	
37TB10	20010	3.46	40TB10	20110	3.84	20210	3.84		20310	3.84	
37TB11	20011	3.69	40TB11	20111	4.11	20211	4.11		20311	4.11	
37TB12	20012	4.11	40TB12	20112	4.57	20212	4.57		20312	4.57	
37TB13	20013	4.36	40TB13	20113	4.86	20213	4.86		20313	4.86	
37TB14	20014	4.57	40TB14	20114	5.20	20214	5.20		20314	5.20	
37TB15	20015	4.86	40TB15	20115	5.42	20215	5.42		20315	5.42	
37TB16	20016	5.13	40TB16	20116	5.73	20216	5.73		20316	5.73	
37TB17	20017	5.38	40TB17	20117	6.02	20217	6.02		20317	6.02	
37TB18	20018	5.61	40TB18	20118	6.29	20218	6.29		20318	6.29	
37TB19	20019	5.92	40TB19	20119	6.63	20219	6.63		20319	6.63	
37TB20	20020	6.12	40TB20	20120	6.86	20220	6.86		20320	6.86	
37TB21	20021	6.36	40TB21	20121	7.15	20221	7.15		20321	7.15	
37TB22	20022	6.65	40TB22	20122	7.47	20222	7.47		20322	7.47	
37TB23	20023	6.95	40TB23	20123	7.79	20223	7.79		20323	7.79	
37TB24	20024	7.25	40TB24	20124	8.13	20224	8.13		20324	8.13	
37TB25	20025	7.55	40TB25	20125	8.45	20225	8.45		20325	8.45	
37TB26	20026	7.97	40TB26	20126	8.93	20226	8.93		20326	8.93	
37TB27	20027	8.25	40TB27	20127	9.26	20227	9.26		20327	9.26	
37TB28	20028	8.50	40TB28	20128	9.58	20228	9.58		20328	9.58	
37TB29	20029	8.80	40TB29	20129	9.90	20229	9.90		20329	9.90	
37TB30	20030	9.61	40TB30	20130	10.14	20230	10.14		20330	10.14	
37TB31	20031	9.24	40TB31	20131	10.39	20231	10.39		20331	10.39	
38TB2	21002	1.75	41TB2	21102	1.85	21202	1.85		21302	1.85	
38TB3	21003	1.90	41TB3	21103	2.05	21203	2.05		21303	2.05	
38TB4	21004	2.11	41TB4	21104	2.31	21204	2.31		21304	2.31	
38TB5	21005	2.41	41TB5	21105	2.65	21205	2.65		21305	2.65	
38TB6	21006	2.78	41TB6	21106	3.10	21206	3.10		21306	3.10	
38TB7	21007	3.26	41TB7	21107	3.61	21207	3.61		21307	3.61	
38TB8	21008	3.86	41TB8	21108	4.07	21208	4.07		21308	4.07	
38TB9	21009	4.07	41TB9	21109	4.53	21209	4.53		21309	4.53	
38TB10	21010	4.51	41TB10	21110	5.02	21210	5.02		21310	5.02	
38TB11	21011	4.92	41TB11	21111	5.48	21211	5.48		21311	5.48	
38TB12	21012	5.33	41TB12	21112	5.95	21212	5.95		21312	5.95	
38TB13	21013	5.77	41TB13	21113	6.43	21213	6.43		21313	6.43	
38TB14	21014	6.18	41TB14	21114	6.90	21214	6.90		21314	6.90	
38TB15	21015	6.38	41TB15	21115	7.15	21215	7.15		21315	7.15	
38TB16	21016	6.60	41TB16	21116	7.42	21216	7.42		21316	7.42	
38TB17	21017	6.90	41TB17	21117	7.77	21217	7.77		21317	7.77	
38TB18	21018	7.12	41TB18	21118	8.05	21218	8.05		21318	8.05	
38TB19	21019	7.41	41TB19	21119	8.38	21219	8.38		21319	8.38	
38TB20	21020	7.76	41TB20	21120	8.79	21220	8.79		21320	8.79	
38TB21	21021	8.01	41TB21	21121	9.09	21221	9.09		21321	9.09	
38TB22	21022	8.32	41TB22	21122	9.45	21222	9.45		21322	9.45	
38TB23	21023	8.53	41TB23	21123	9.71	21223	9.71		21323	9.71	
39TB2	22002	3.00	42TB2	22102	3.14	22202	3.14		22302	3.14	
39TB3	22003	3.45	42TB3	22103	3.64	22203	3.64		22303	3.64	
39TB4	22004	3.90	42TB4	22104	4.15	22204	4.15		22304	4.15	
39TB5	22005	4.20	42TB5	22105	4.53	22205	4.53		22305	4.53	
39TB6	22006	4.50	42TB6	22106	4.89	22206	4.89		22306	4.89	
39TB7	22007	5.02	42TB7	22107	5.47	22207	5.47		22307	5.47	
39TB8	22008	5.40	42TB8	22108	5.92	22208	5.92		22308	5.92	
39TB9	22009	5.85	42TB9	22109	6.44	22209	6.44		22309	6.44	
39TB10	22010	6.29	42TB10	22110	6.92	22210	6.92		22310	6.92	
39TB11	22011	6.52	42TB11	22111	7.33	22211	7.33		22311	7.33	
39TB12	22012	6.96	42TB12	22112	7.73	22212	7.73		22312	7.73	
39TB13	22013	7.27	42TB13	22113	8.11	22213	8.11		22313	8.11	
39TB14	22014	8.58	42TB14	22114	8.48	22214	8.48		22314	8.48	
39TB15	22015	8.95	42TB15	22115	9.92	22215	9.92		22315	9.92	
39TB16	22016	9.35	42TB16	22116	10.37	22216	10.37		22316	10.37	
39TB17	22017	9.70	42TB17	22117	10.79	22217	10.79		22317	10.79	
39TB18	22018	10.12	42TB18	22118	11.18	22218	11.18		22318	11.18	

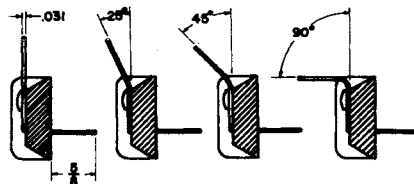
\* No Military Part Number Assigned

## WIRE WRAP\* TERMINAL BLOCKS



**670A-3000 SERIES**  
BOTTOM WIRE WRAP TERMINALS

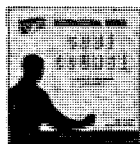
**670A-3100 SERIES**  
TOP & BOTTOM WIRE WRAP TERMINALS



\* NOTE: Similar to Kulka 670A Series, 1 to 30 terminals. Not stocked, prices on request.

# HERMAN H. SMITH, INC.

"It's Sound Planning to Specify SMITH for ELECTRONIC COMPONENTS"



**SINGLE RECORD**  
33-1/3 R.P.M.  
TEN LESSONS  
UP TO 15 WORDS  
PER MINUTE  
Complete on Two Sides

This twelve inch long play record contains all ten of the Code Course Lessons listed above, five on each side. 20-Page SMITH Instruction Book is included, and the record is housed in attractive, sturdy jacket with International Morse Code table on reverse side.  
No. 2420 NET Each \$4.80



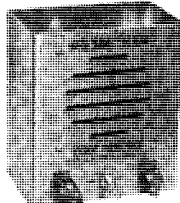
**ADVANCED CODE COURSE**  
Single Record—  
33 1/3 R.P.M.  
TWELVE LESSONS  
16 to 25 Words  
Per Minute

Specially prepared to increase skills in copying code at high speeds. 12 step-by-step lessons are provided plus specific directions with each.

20 page Advanced Code Instruction Book included. Record comes in sturdy jacket with International Morse Code table on reverse side.  
No. 2435 Advanced Code Course complete with 20 page instruction Book NET \$4.80

**BEGINNERS AND ADVANCED CODE COURSES IN COMBINATION PACKAGE**

Advanced Code Course #2435 PLUS Beginners' Code Course #2420 (see above) both complete with 20-page instruction books, attractively packaged in combination carton.  
No. 2436 NET \$9.00



**CODE PRACTICE OSCILLATOR & MONITOR**

Ideal for the beginner as well as the experienced operator, this versatile instrument can be used as a code practice oscillator, as a keying monitor to check ICW signals, or as a monitor for phone signals.

Two tubes are used, in an up to date circuit that provides continuously variable tone and volume. Self-contained PM speaker affords ample volume for group use, with phone jack available for individual headphone listening.

The handsome Hammertone finish cabinet has additional provision for wall mounting, an exclusive SMTM feature that eliminates need for valuable desk space. The unit is designed for use on 110 Volts AC or DC, and is supplied complete with two tubes.

No.	Description	NET Each
2425	Kit	\$13.50
2426	Wired	18.00



**INTERLOCK PLUGS**

No.	Std. Pkg. 100 Type	NET Per C
1208	Recessed	\$7.80
1228	Flush	5.40



**AMERICAN-FOREIGN PLUG ADAPTERS**

Streamlined bakelite plug adapters. Adapts from American to Foreign type. Std. Pkg. 25

No.	Female End	Male End	NET Per C
852	American	Continental	\$24.00
856	American	British	24.00
851		Continental Plug	18.00

**"CLEAPS" (Connectors for Joining Severed Wires)**



**MATERIAL:** Brass, cadmium plated.  
**WIRE SIZE:** For wires, .010" to .050" (B&S Gauge 16 to 30)

**DESCR.:** Used to splice cut leads of condensers, resistors, etc., in process of trouble-shooting. Insert wire in each tapered end and solder thru center opening. Std. Pkg. 100

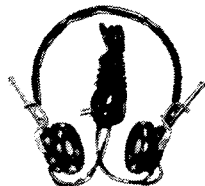
No.	Kit	NET Per C
1270	Stand Only	\$3.00



**TELEGRAPH KEY**

A well-built, smooth operating key, low priced, ideal for the beginner. Molded, bakelite base and knob. Simple adjustments. All metal parts plated, 3/8" silver contacts. Base size 3 1/4 x 1 3/4"  
No. 2442 NET Each \$.87

**HIGH SENSITIVITY HEADPHONES**



The latest in deluxe design, with many features of more expensive types. Feather-weight construction assures fatigue-free use. Alnico V magnets, dual coil construction provide excellent tonal fidelity. Adjustable vinyl covered headband, molded plastic cases. Cord equipped with phone tips.

No.	Description	Ohms	NET Each
2441	Single	1000	\$1.65
2440	Double	2000	2.70
2446	Single	2-4	1.65
2447	Double	4-8	2.70
2448	Single	2000	1.60
2449	Double	4000	3.00

**FOR STEREO USE**

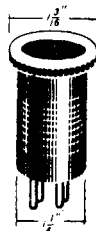
Same as above, except each Phone has leads brought out separately.

2477	Double	2000	3.00
2478	Double	4-8	3.00
2479	Double	4000	3.30



**RUBBER EAR CUSHIONS**

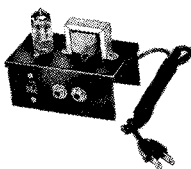
Finest quality soft rubber ear cushions, fit all standard ear-phones. For comfortable listening over long periods of time.  
No. 2410 Per Pair \$1.08



**PLUG-IN COILS**

For Short Wave and Broadcast Molded bakelite, black. Precision wound low loss forms. Four prongs. Equipped with special rim making it easy to insert and pull out. Grooved for color coding.

No.	Description	NET Each
2408	No Winding	\$.50
2413	Set of 2	3.00
2414	9 1/2 to 217 Meters	2.40
2412	190 to 500 Meters - Ribbed, 6-Prong	.60



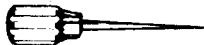
**JUNIOR CODE OSCILLATOR**

For Headset Only

A neat, compact little unit that provides a clean audio tone, ideal for code practice. It is equipped with two standard telephone jacks, to take phone plugs of both key and headset. A single 12AX7 tube is used in an improved circuit, designed for operation on 110 volts AC or DC. Available in wired or kit form, either type supplied with tube.

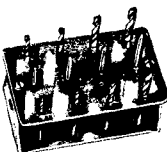
No.	Description	NET Each
2430	Kit	\$6.60
2431	Wired	8.70

**SCRATCH AWL**



Scratch awl with unbreakable amber handle. Overall length 5". A "must" in a serviceman's tool kit.

No.	Std. Pkg. 10	NET Per C
814		\$36.00



**DRILL & TAP KIT FOR**

- Hams
- Laboratories
- Servicemen

Specially designed for electronic bench duty, this kit contains the most popular sizes of taps and corresponding tap and body drills for precise and speedy work. Drill and tap size identifications are engraved on the steel cadmium plated drill stand, to facilitate correct replacement as needed. Contains: 4-40, 6-32, 8-32, 10-32 Taps with eight corresponding tap and body drills.

No.	Kit	NET Each
750	Stand Only	\$9.00
749		.66



**COMPLETE MULTI-VIBRATOR COURSE**

"AutoTutor" Modern Teaching Technique, using new "re-inforced learning" principles. Designed as a refresher course for the practicing technician or engineer; as a detailed exploration of Multi-vibrators, for student electronic technician. Complete course consists of 4 hi-fi unbreakable 33 1/3 RPM recordings, a 56-page instruction book, illustrations and check sheets, in attractive album package.  
No. 2450 NET \$12.60

**"PANELABELS"**

Modern Panel Title Decals



New size type face on all word titles to match modern instrument panels and sound equipment.

Packaged individually in clear plastic boxes — instant selection — box itself can be used as water tray for applying the decals. Standard Packages of 6.

Please order by catalog number.  
NET, EACH PACKAGE \$1.50

**TRANSMITTER**

For industrial prototype use. Hams, Citizens' Banders. Also for Microwave and Broadcast stations.

No. 3700	BLACK
No. 3701	WHITE

**RECEIVER**

Hams, Citizens' Banders, industrial prototypes, Hi-Fi and Experimenter applications.

No. 3702	BLACK
No. 3703	WHITE
No. 3704	RED
No. 3705	GOLD

**DIALS**

For all uses in transmitters, Ham and Citizens' Band industrial prototypes, Hi-Fi, electricians, experimenters.

No. 3706	BLACK
No. 3707	WHITE
No. 3708	RED
No. 3709	GOLD

**ALPHABETS**

Most popular item in the line! For all general uses above.

3710	2-inch	BLACK
3711	2-inch	WHITE
3712	2-inch	RED
3713	2-inch	GOLD
3714	5/8-inch	BLACK
3715	5/8-inch	WHITE
3716	5/8-inch	RED
3717	5/8-inch	GOLD
3718	Assorted	BLACK
3719	Assorted	WHITE
3720	Assorted	RED
3721	Assorted	GOLD

**INSTRUMENTS**

Primarily for Technicians, Hams and industrial use.

No. 3722	BLACK
No. 3723	WHITE

**HI-FI AND STEREO**

For experimenters, commercial sound distributors, industrial prototypes.

No. 3724	BLACK
No. 3725	WHITE
No. 3726	RED
No. 3727	GOLD

**SOUND SYSTEMS**

For industrial use by commercial sound distributors, custom installers, electricians and experimenters.

No. 3728	BLACK
No. 3729	WHITE
No. 3730	RED
No. 3731	GOLD

**TRANSISTORS AND DIDDIES**

Used by Hams, experimenters, technicians, and industrial prototype use. Includes complete list of transistor anode numbers plus symbols of PNP, NPN, 4 and element transistors, diode symbols.

No. 3732	BLACK
No. 3733	WHITE

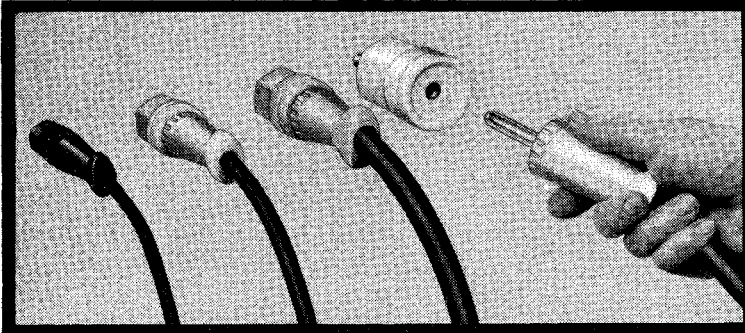
**ELECTRICAL DISTRIBUTION**

Used primarily by electricians and custom installers on the job and in distribution panel design.

No. 3734	BLACK
No. 3735	WHITE

**BOOKLET OF COMPLETE TITLE LISTS OF ALL PANELABELS AVAILABLE ON REQUEST**

# SUPERCON® Electrical Connectors



- CURRENT CARRYING PARTS GOLD-PLATED
- SIMPLIFIED, QUICK ASSEMBLY

Socket and pin types single-conductor plugs and receptacles available. Plugs have a functionally designed grip for handling ease and convenience. Wiring connection to the same plug can be either soldered or solderless. Cable-fastening screws permit a range of cable sizes to be accommodated by the plug. Plug grips are of a simple, two-piece threaded construction for quick assembly. All plastic parts of a receptacle are molded of the same color nylon to permit more rapid and accurate circuit identification front and back of panel when installed. Six colors are available.

COLOR	PIN PLUGS				SOCKET PLUGS			
	25 AMPERE TYPES	50 AMPERE TYPES	100 AMPERE TYPES	250 AMPERE TYPES	25 AMPERE TYPES	50 AMPERE TYPES	100 AMPERE TYPES	250 AMPERE TYPES
BLACK	PP25GB	PP50GB	PP100GB	PP250GB	PS25GB	PSS0GB	PS100GB	PS250GB
YELLOW	PP25GY	PP50GY	PP100GY	PP250GY	PS25GY	PS50GY	PS100GY	PS250GY
RED	PP25GR	PP50GR	PP100GR	PP250GR	PS25GR	PS50GR	PS100GR	PS250GR
BLUE	PP25GBL	PP50GBL	PP100GBL	PP250GBL	PS25GBL	PS50GBL	PS100GBL	PS250GBL
GREEN	PP25GGN	PP50GGN	PP100GGN	PP250GGN	PS25GGN	PS50GGN	PS100GGN	PS250GGN
WHITE	PP25GWT	PP50GWT	PP100GWT	PP250GWT	PS25GWT	PS50GWT	PS100GWT	PS250GWT

	25 AMPERE TYPES	50 AMPERE TYPES	100 AMPERE TYPES	250 AMPERE TYPES	25 AMPERE TYPES	50 AMPERE TYPES	100 AMPERE TYPES	250 AMPERE TYPES
PANEL:	3/16 MAX.	1/4 MAX.	1/4 MAX.	1/4 MAX.	3/16 MAX.	1/4 MAX.	1/4 MAX.	1/4 MAX.
HOLE:	11/16	1	1 3/16	1 9/16	11/16	1	1 3/16	1 9/16
BLACK	RS25GB	RS50GB	RS100GB	RS250GB	RP25GB	RP50GB	RP100GB	RP250GB
YELLOW	RS25GY	RS50GY	RS100GY	RS250GY	RP25GY	RP50GY	RP100GY	RP250GY
RED	RS25GR	RS50GR	RS100GR	RS250GR	RP25GR	RP50GR	RP100GR	RP250GR
BLUE	RS25GBL	RS50GBL	RS100GBL	RS250GBL	RP25GBL	RP50GBL	RP100GBL	RP250GBL
GREEN	RS25GGN	RS50GGN	RS100GGN	RS250GGN	RP25GGN	RP50GGN	RP100GGN	RP250GGN
WHITE	RS25GWT	RS50GWT	RS100GWT	RS250GWT	RP25GWT	RP50GWT	RP100GWT	RP250GWT

SOCKET RECEPTACLES

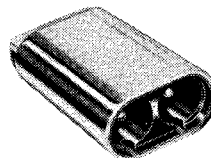
PIN RECEPTACLES

## DUB-L-PLUG Dual Electrical Connectors

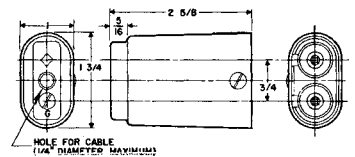
DUB-L-PLUG Dual Electrical Connectors are designed for making safe, rapid connections to binding posts mounted on 3/4" centers. All conducting metal parts are gold-plated. Completely recessed integral banana plugs prevent accidental shorting; captive black and white thumbnuts facilitate circuit and polarity identification.

### SHIELDED/INSULATED

Has sturdy, die-cast chrome-plated case, removable grounding banana plug, black nylon body.

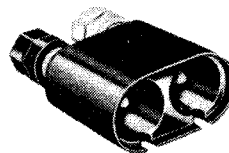


TYPE SPGK2BC

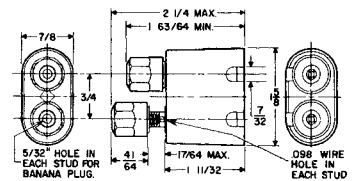


### INSULATED TYPES

Have wire slots to permit stacking if desired. Available with bodies in choice of six colors.



TYPE IPG2BC



NYLON BODY COLOR	INSULATED TYPE	SHIELDED/INSULATED TYPE
BLACK	IPG2BC	SPGK2BC
RED	IPG2RC	—
WHITE	IPG2WTC	—
BLUE	IPG2BLC	—
YELLOW	IPG2YC	—
GREEN	IPG2GNC	—



THE SUPERIOR ELECTRIC COMPANY

Bristol, Connecticut, U.S.A.

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 3500, 4000 AND 5600

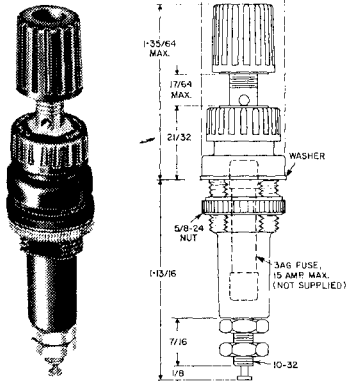
# SUPERIOR 5-WAY® Binding Posts

● 5 WAYS TO CONNECT

● GOLD-PLATED BRASS PARTS

● RANGE OF COLORS

## FUSED TYPE



Rated for 250 volts, 15 amperes maximum. Built-in fuseholder accepts standard type 3AG fuse (not supplied). Fuse can be replaced from front of panel. Type FP15BGC has black captive thumbnut; types with noncaptive black, red, white, blue, yellow and green thumbnuts available on special order.

TYPE	FP15BGC
COLOR	BLACK

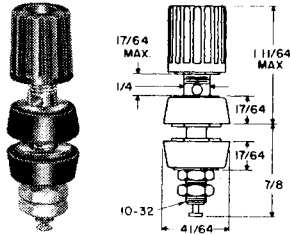
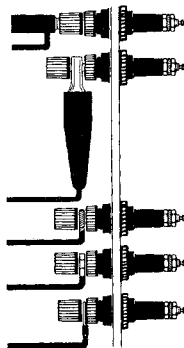
Plug in for standard banana plug

Clip lead to shaft

Wire looped around shaft and clamped

Wire fed to No. 12 permanently clamped through center hole

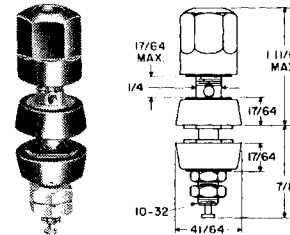
Clamped spade lug connection



## FLUTED NUT TYPES

Plastic parts of standard (not miniature) size types molded of Lexan polycarbonate resin; brass parts are gold-plated. Rated for 30 amperes, 1000 volts working. Nickel-plated brass types available on special order.

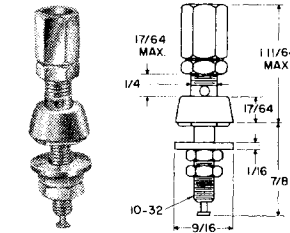
COLOR	RED	BLUE	GREEN	WHITE	BLACK	YELLOW
FLUTED TYPE	DF31RC	DF31BLC	DF31GNC	DF31WTC	DF31BC	DF31YC



## HEX NUT TYPES

Rated for 30 amperes, 1000 volts working. Brass parts are gold-plated; plastic parts are of nylon compounded to meet military specifications MIL-P-20693, Type IV. Nickel-plated brass types available on order.

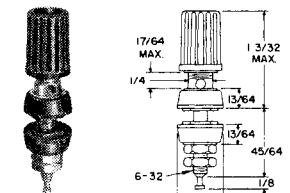
COLOR	RED	BLUE	GREEN	WHITE	BLACK	YELLOW
HEX TYPE	DF30RC	DF30BLC	DF30GNC	DF30WTC	DF30BC	DF30YC



## GROUNDING TYPE

For making rapid connections to ground. Made of finely machined brass nickel-plated and polished. Panel grounding collar frozen to shaft has "D" type shoulder for locking in keyed panel hole.

TYPE	GP30NC
FINISH	NICKEL-PLATED



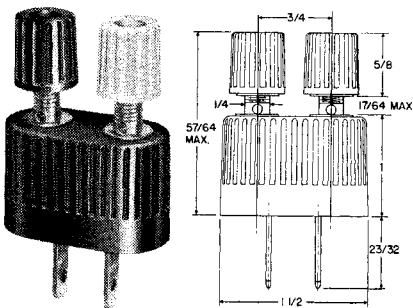
## MINIATURE TYPES

Fluted nut design only. Rated for 15 amperes, 1000 volts working. Gold-plated brass parts; nylon plastic parts compounded to meet military specification MIL-P-20693, Type IV. Types with nickel-plated brass available also.

COLOR	RED	BLUE	GREEN	WHITE	BLACK	YELLOW
TYPE	DF21RC	DF21BLC	DF21GNC	DF21WTC	DF21BC	DF21YC

## DUAL ADAPTER TYPE

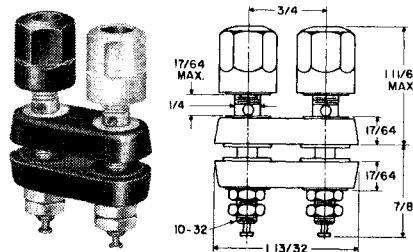
Facilitates line voltage connections from output receptacles to binding posts. Has integral parallel-blade plug. Rating is 15 amperes, 125 volts. Brass parts are gold-plated.



TYPE	DAP15BWC
NUTS	WHITE & BLACK
BODY	BLACK

## DOUBLE ASSEMBLY TYPES

For instrument and equipment panels requiring binding posts mounted on 3/4" centers. Rated for a current capacity of 30 amperes and a working voltage of 1000 volts. Brass parts are gold-plated. Panel insulators in black only.



TYPE	NUTS
DF30-2-BWTC	WHITE & BLACK
DF30-2-BBC	BLACK
DF30-2-BRC	RED & BLACK

FOR MORE DETAILED INFORMATION about specifications and technical data on all Superior Electric electrical connectors, write for literature.



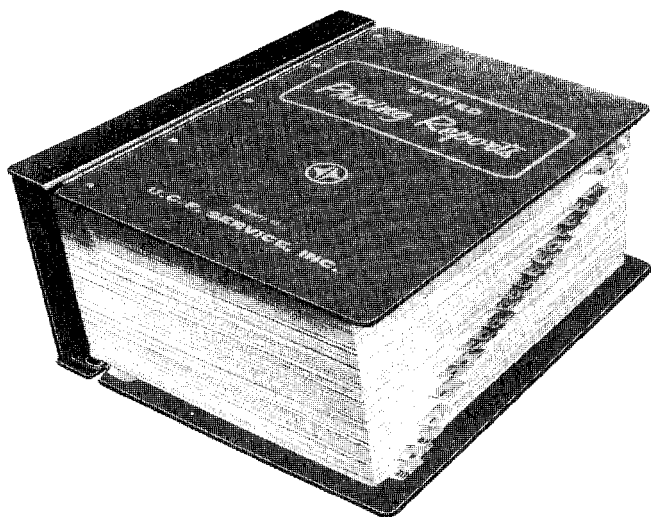
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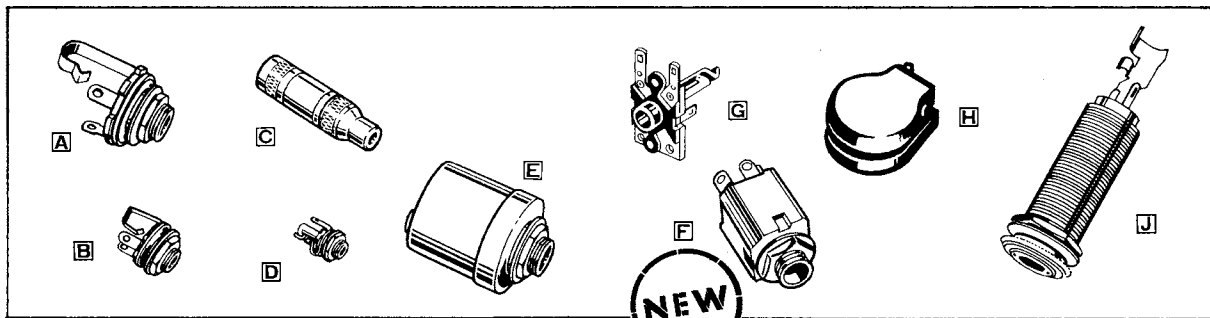
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GARDEN CITY, N. Y. 11533

## DELIVERY

Delivery is often dependent on availability of raw materials. Check with your distributor for delivery information at the time you place your order.

# SWITCHCRAFT Phone Jacks



## "LITTEL-JAX" PHONE JACKS

**A** Quality phone jacks that mate with standard 1/4" phone plugs. Notched insulating washers mechanically interlock springs and solder lugs. "V" bend in tip spring firmly "holds" mating plug. Minimum space requirements. Economical. Mount in single 3/8" hole, panels up to 3/32" thick, except L-11 and L-12A in panels up to 1/4" thick.

Nos. C-11 and C-12A mate with No. 440 (PJ-055B) Plug; C-12B, S-12B and S-13B mate with No. 480 (JAN-PJ-068) or No. 484 (W.E. No. 309) Plug. Nos. C-11 and C-12B have locating pins (non-turn devices). No. S-11 similar to No. 11 except .210" I.D. sleeve. C-11, C-12B and C-12A per JAN-J-641. All others mate with standard 1/4" dia. plugs.

No. 14B Stereo Littell-Jax, switches-out speakers when connecting stereo headphones. Dual, N.O. switch contacts, open both stereo circuits independently when a 3-conductor plug is inserted.

### TWO-CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
11	I	250	—	\$0.40
C-11	I	440	JJ-034	.60
L-11	I	250	—	.50
S-11	I	S-250	—	.45
12A	III	250	—	.45
C-12A	III	440	JJ-089	.75
L-12A	III	250	—	.55
13	V	250	—	.90
13A	VI	250	—	.85
13E	IX	250	—	.90

### THREE-CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
12B	IV	267	—	\$0.55
C-12B	IV	480	JJ-033	.70
L-12B	IV	267	—	.65
S-12B	IV	480	—	.65
13B	VIII	267	—	.75
S-13B	VIII	480	—	.95
14B	X	267	—	.95

## "TINI-JAX" MINIATURE PHONE JACKS

**B** Miniature 2-conductor Jacks, approximately 1/2 the size of the "Littell-Jax"; otherwise similar in construction. Mount in 1/4" dia. hole; panel up to 3/8" thick. No. 43A has a unique spring design that requires a pear shaped tip, such as Switchcraft "Tini-Plug" No. 750.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
41	I	750	2	\$0.40
42A	III	750	2	.45
43A	VI	750	2	.70

## "TINI-EXTENSION JAX"

**C** An extension or cable jack to mate with "Tini-Plugs". Two-conductor. Metal housing for ruggedness and electrical shielding. Solder lug terminals.

Switchcraft Part No. 125 ..... U.S.A. List Price \$1.25

## "MICRO-JAX" SUB-MINIATURE PHONE JACKS

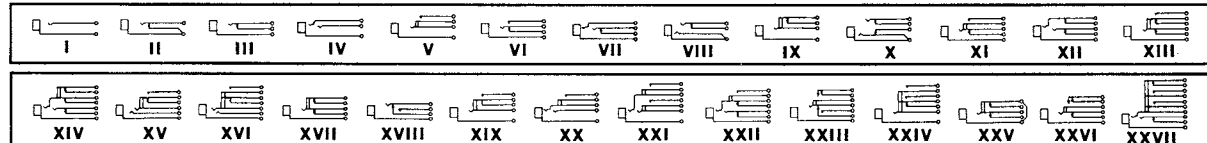
**D** Precision manufactured jack for miniaturized applications. Two-conductor, single closed circuit. See Schematic Circuit 111. Silver plating on special tempered nickel silver springs. Internally keyed nylon insulation interlocks springs and solder lugs to eliminate shorts. Fits .190" dia. hole in panels to 3/32" thick. Only 1/25th the size of standard phone jacks. Mates with "Micro-Plug", Series 850, 880.

Switchcraft Part No. TR-2A ..... U.S.A. List Price \$0.45

## "SHIELDED JAX"

**E** A unique modification of the "Littell-Jax". The shield is assembled into and made part of the jack. Ideal for high impedance circuits.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
CN-11	I	250	2	\$0.80
CN-12A	III	250	2	.85
CN-12B	IV	267	3	.95
CN-13B	VIII	267	3	1.15



The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.

## "HI-D JAX" PHONE JACKS

**F** New, smaller, more compact phone jacks that mate with standard 1/4" phone plugs. Molded box body protects the integral silver-plated, nickel silver springs. Exceptionally low contact resistance and electrical leakage with relatively little capacity between the springs. Mounts on 3/8" centers in two planes. Ideal for P.C. board mounting. Mounts in single 3/8" hole, in panels up to 3/32" thick, depth behind panel, 1 3/8". Weight, only 7 1/8 grams.

### TWO-CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	U.S.A. List Price
111	I	250	\$0.40
112A	III	250	.45

### THREE-CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	U.S.A. List Price
112B	IV	267	.50
113B	VII	267	.65
113F	VII	267	.65
114B	X	267	.75

## "R-JAX" ECONOMY PHONE JACKS

**G** Radically new jack design. Simple mounting needs only two (2) 3/32" dia. rivets to fasten securely to mounting panel. Accept standard 1/4" dia. phone plugs.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
1	I	250	2	\$0.35
2A	II	250	2	.40
2B	IV	267	3	.45
3A	VI	250	2	.65
3B	VIII	267	3	.55
3E	IX	250	2	.75
3F	VII	267	3	.55
4B	X	267	3	.65

## "JACK COVERS"

**H** Handy, rugged, spring-load phone jack covers. Covers jack openings when phone plug is removed. Protects against dust and moisture.

Series 500—Use with standard 3/8"-32 threaded bushing type phone jacks.

Series 600—Use with certain type tip jacks with 1/4" mounting; height of tip jack head 1/8" to 3/8". Also used as covers for "Tini-Jax."

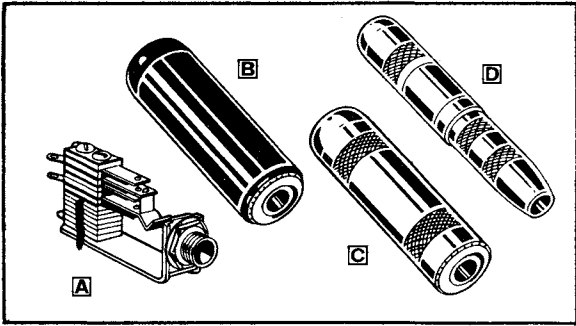
Part No.	Color	U.S.A. List Price
510	Olive Drab	\$1.05
512	Bright Nickel	1.05
515	Black	1.05
520	Navy Gray	1.05
610	Olive Drab	.75
612	Bright Nickel	.75
615	Black	.75
620	Navy Gray	.75

## "THICK PANEL JAX"

**J** Phone jacks with long bushing. Mount in single 15/32" dia. hole in panels up to 1 1/4" thick. Solder lug terminals. Ideal for use with microphones; extra shielding virtually eliminates audio hum. No. 151, 2-conductor mates with 240, 245, 250, 255, 270 and 280 Plugs. No. 152B, 3-conductor mates with 260, 267, 269 and 297 Plugs.

Part No.	Description	U.S.A. List Price
151	2-cond. Brass Nickel Plated	\$1.35
152B	3-cond. Brass Nickel Plated	1.50

# SWITCHCRAFT JACKS



## "LF-JAX" LONG FRAME JACKS

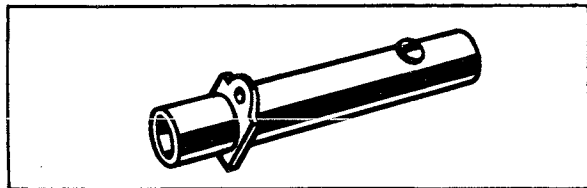
**A** Quality long frame phone jacks with a ground lug that is an integral part of the frame. Fine silver contacts rated at 3 amp., 300 watts, A.C., non-inductive load. Frame also available with a non-turn device, prefix Part No. with letter "R". Standard types mount in single 3/8" dia. hole in panels up to 3/16" thick. Depth behind panel, only 2 5/8".

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
31	I	250	2	\$0.75
32	II	250	2	.95
32A	III	250	2	.95
32B	IV	267	3	.95
33	V	250	2	1.05
33A	VI	250	2	1.05
33B	VII	267	3	1.05
33C	VIII	267	3	1.05
33E	IX	250	2	1.05
34	X	267	3	1.20
34A	XI	250	2	1.20
34B	XII	267	3	1.20
35	XIII	250	2	1.45
36	XIV	267	3	1.70

## "EXTENSION JAX" CABLE EXTENSION JACKS

Standard 1/4", 2 and 3-conductor extension phone jacks with solder lugs or screw type terminals. Size 1 1/8" O.D., 2 3/8" long; 121 and 131 1/8" O.D., 2 1/2" long. Black handles are durable plastic. Shielded handles are brass, bright nickel plated.

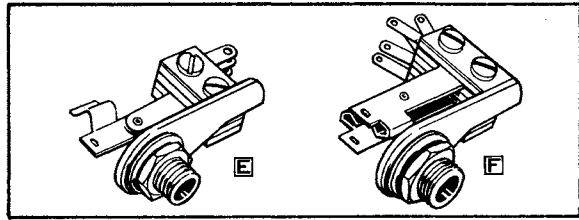
Part No.	Fig.	Cond.	Typical Mating Plug	Term.	Handle	U.S.A. List Price
80	B	2	250	Screw	Black	\$1.15
88	B	2	250	Solder	Black	1.00
120	C	2	270	Screw	Shielded	1.55
121	D	2	270	Solder	Shielded	1.60
126	C	2	R-280	Solder	Shielded	1.80
128	C	2	270	Solder	Shielded	1.40
S-128	C	2	S-250	Solder	Shielded	1.50
131	D	3	290	Solder	Shielded	2.00
830	B	3	267	Screw	Black	1.55
S-830	B	3	480	Screw	Black	2.00
838	B	3	267	Solder	Black	1.40
1230	C	3	290	Screw	Shielded	1.95
S-1230	C	3	480	Screw	Shielded	2.50
1238	C	3	290	Solder	Shielded	1.80



## COAXIAL-VIDEO JACK

High quality coaxial-video jack designed for use in 75 ohm circuitry. Used in audio and video patching panels, broadcast and test equipment. Features heavy gold plated finish, insulation washers of Teflon, contact fingers of heat-treated beryllium copper, exclusive heat-sink device for faster, safer soldering of braided wire to shield termination. For use with RG59/U type cable. Mates with standard coaxial-video plugs. Mounts in single 1/8" dia. hole.

Switchcraft Part No. 3601.....U.S.A. List Price \$10.00



## "SF-JAX" SHORT FRAME PHONE JACKS

**E** Series 20—High quality commercial jacks, solder lugs parallel to mounting surface. Mount in 3/8" dia. holes, panels up to 3/16" thick.  
**F** Series 50—Similar to Series 20, except solder lug location necessitates more depth but requires less panel space. Mount in panels up to 1/4" thick.

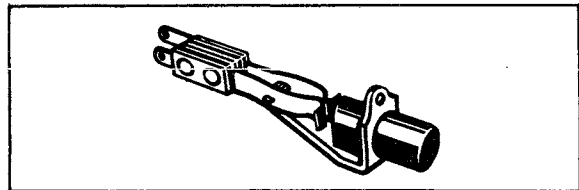
Series C-20 and C-50—MIL Types with Military insulation and finishes, otherwise similar to commercial Series 20 and 50; both will mount in panels up to 1/4" thick.

### SERIES 20 and C-20

Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
21	I	250	—	\$0.65
22	II	250	—	.80
22A	III	250	—	.80
22B	IV	267	—	.80
23	V	250	—	.95
C-23	V	440	JJ-099	1.35
23A	VI	250	—	.95
C-23A	VI	440	JJ-098	1.35
23B	VII	267	—	.95
23C	VIII	267	—	.95
23E	IX	250	—	.95
C-23E	IX	440	JJ-102	1.35
24	X	267	—	1.10
24A	XI	250	—	1.10
24B	XII	267	—	1.10
25	XIII	250	—	1.30
26	XIV	267	—	1.40

### SERIES 50 and C-50

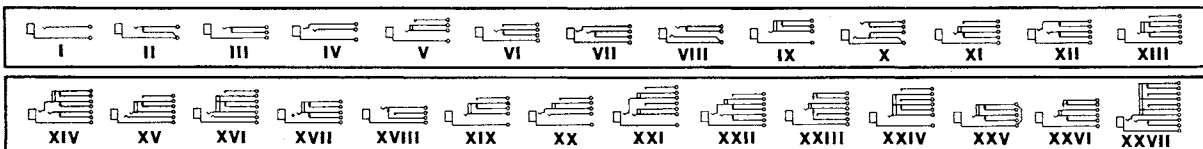
Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
51	I	250	—	\$0.65
C-51	I	440	JJ-096	1.20
52	II	250	—	.80
52A	III	250	—	.80
C-52A	III	440	JJ-097	1.30
52B	IV	267	—	.80
C-52B	IV	480	JJ-103	1.30
53	V	250	—	.95
53A	VI	250	—	.95
C-53A	VI	440	JJ-092	1.55
53B	VII	267	—	.95
53C	VIII	267	—	.95
53E	IX	250	—	.95
54	X	267	—	1.10
54A	XI	250	—	1.10
C-54A	XI	440	JJ-093	1.60
54B	XII	267	—	1.10
C-54B	XII	480	JJ-101	1.60
55	XIII	250	—	1.30
C-55B	XV	480	JJ-095	1.85
56	XIV	267	—	1.40



## "LAMP JAX" SWITCHBOARD PANEL TYPE

Black nylon lamp housing completely insulates lamp from frame. Interchangeable with W.E. Nos. 47A and 47B. Accepts standard switchboard lamps and lamp caps, W.E. Nos. 2 and 72, etc.

Switchcraft Part No. LT-47.....U.S.A. List Price \$1.40

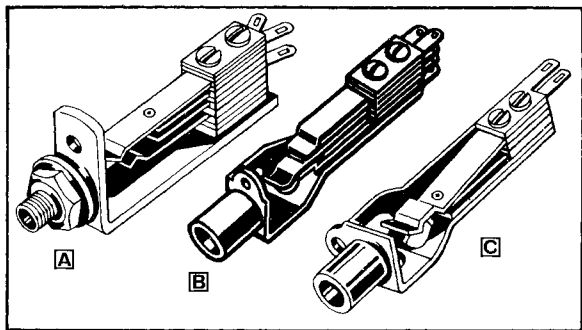


The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.





# Jacks and Plugs

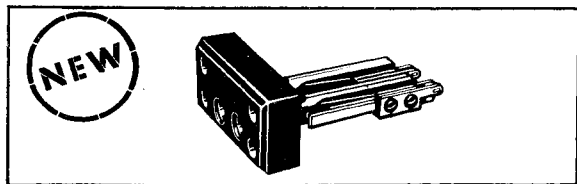


**"T-JAX" TELEPHONE TYPE PHONE JACKS**

Long frame, switchboard type, phone jacks. For high quality communication equipment. Springs of nickel silver alloy for maximum life and corrosion resistance. Fine silver contacts are standard. Available in two frame designs. Part numbers in chart cover "A" frame design as shown in Fig. C. For frame design "C" as shown in Fig. B, add prefix letter "C" to part numbers. All jacks listed mate with standard 1/4" dia. phone plugs.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
T-331	I	250	2	\$1.05
T-332A	III	250	2	1.20
T-332B	IV	267	3	1.20
T-332C	XVIII	250	2	1.45
T-333	V	250	2	1.35
T-334A	XI	250	2	1.50
T-334B	XII	267	3	1.60
T-334C	XVII	250	2	1.50
T-334F	XIX	250	2	1.50
T-335	XIII	250	2	1.60
T-336	XXVI	250	2	1.75

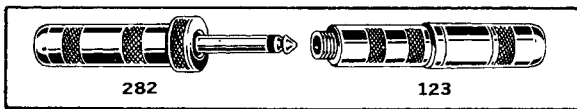
**"DUAL-JACK BLOCKS"**



Molded black phenolic jack blocks for mounting "MT-JAX" and "T-JAX" long frame phone jacks, on 3/8" centers. Can be rack panel mounted individually or in multiples. Blocks are 2 3/4" W. x 1 1/4" H. x 3/8" D. Mount with four No. 8-32 flat head screws.

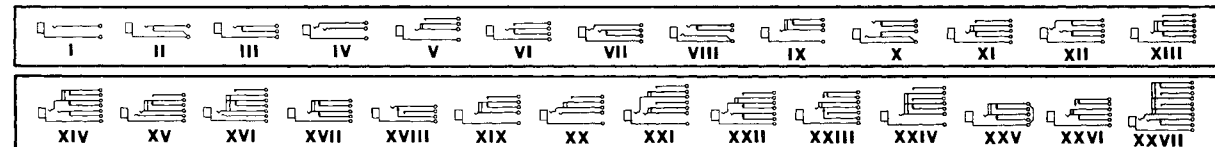
Part No.	Description	U.S.A. List Price
2300	Jack Block, less jacks	\$1.50
2331	2 MT-331	4.50
2332A	2 MT-332A	4.90
2332B	2 MT-332B	4.90
2333	2 MT-333	5.40

**"LOCK PLUG AND EXTENSION JAX"**



Standard size 1/4", 2 and 3 conductor phone plugs and mating cable extension jacks with built-in device. Plug has coupling ring that can be threaded to the bushing of a "Littel-Jax" or to the mating end of the "Lock Extension Jax". Lock Plug handle, 1 3/16" long; 1/2" dia. Lock Extension Jax, 1/2" O.D.; 2 1/2" long. All have solder lug terminals.

Part No.	Description	U.S.A. List Price
282	2-Conductor Lock Plug	\$1.40
298	3-Conductor Lock Plug	1.75
123	2-Conductor Extension Jax	1.75
133	3-Conductor Extension Jax	2.25



The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.

**"M-JAX" MILITARY TYPE PHONE JACKS**

Very heavy long frame jacks often referred to as the Navy Jack. Ideal for industrial and Military equipment. Long heavy duty springs with fine silver contacts. Mounts on single 3/8" hole, in panels up to 1/4" thick.

Part No.	Schematic No.	Adjusted for Plug	Mil-Type No.	U.S.A. List Price
M-441	I	250	—	\$1.50
M-442A	III	440	JJ-107	1.70
M-443A	VI	440	JJ-105	1.95
M-443B	VII	482	JJ-106	2.10
M-444*	XII	484 & 480	JJ-083	2.30
M-444B	XII	482	JJ-082	2.20
M-445	XIII	440	JJ-104	2.75
M-446	XIV	482	JJ-079	3.50
M-446A	XVI	482	JJ-081	3.90

\*Bushing, .2085".

**"MT-JAX" MILITARY TELEPHONE JACKS**

Long frame, telephone switchboard jacks designed for high quality communication and military equipment. Springs are of a special nickel silver alloy with welded cross bar palladium contacts. MT-Jax are available in two frame designs, namely "A" & "C". Part numbers in chart cover "A" frame design as shown in Fig. C. For frame design "C" as shown in Fig. B, add prefix letter "C" to part numbers.

Part No.	Schematic No.	Adjusted for Plug	Mil-Type No.	U.S.A. List Price
MT-331	I	440*	JJ-086	\$1.50
MT-332	II	440	—	1.70
MT-332A	III	440	JJ-024	1.70
MT-332B	IV	482†	JJ-022	1.70
MT-332C	XVIII	440	JJ-016	1.95
MT-333	V	440	JJ-084	1.95
MT-333B	VII	482	—	1.95
MT-333E	IX	440	—	1.95
MT-334A	XI	440	—	2.00
MT-334B	XII	482	JJ-042	2.00
MT-334C	XVII	440	JJ-072	2.00
MT-334E	XXV	440	JJ-085	2.00
MT-334F	XIX	440	JJ-035	2.00
MT-335	XIII	440	—	2.25
MT-335A	XXVI	440	JJ-017	2.25
MT-336	XX	482	JJ-074	2.25
MT-336A	XIV	482	JJ-075	2.75
MT-336B	XXI	482	JJ-077	2.75
MT-336C	XXII	482	JJ-073	2.75
MT-336F	XXIII	440	—	2.75
CMT-336E	XIII	440	JJ-019	2.75
MT-337	XXIV	440	JJ-087	2.75
CMT-337	XXIV	440	JJ-015	2.75
MT-339	XXVII	482	JJ-078	4.00
MT-342B§	IV	480‡	—	1.95
MT-344B§	XII	480	—	2.25

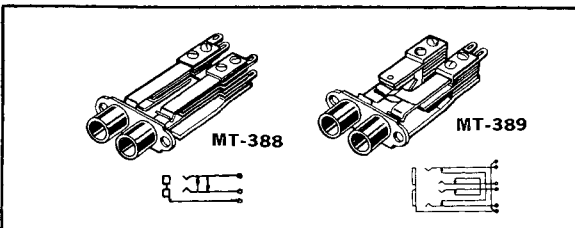
\*MIL Type PJ-055.

†MIL Type PJ-068.

‡MIL Type PJ-051B.

§Bushing, .2085".

**"TWIN JAX" DUAL MILITARY JACKS**



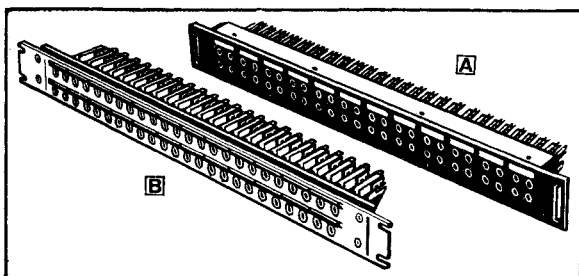
Similar in design to "MT-Jax" except frame is double width, with two mounting ears on 1 3/8" centers; bushings are on 3/8" centers. MT-388, MIL-Type No. JJ-088, mates with Nos. 411, 412, 413, 420 and 425 plugs. MT-389 has two 3-conductor jacks interconnected; mates with No. 482 Plug.

Switchcraft Part No. MT-388 ..... U.S.A. List Price \$5.15  
Switchcraft Part No. MT-389 ..... U.S.A. List Price 5.65

# SWITCHCRAFT

## Jack Panels, Plugs, Patch Cords

### "JACK PANELS"



Rugged, heavy-duty jack panels for switching, distribution and control of audio signals in broadcasting stations, theaters, P. A. systems installations, etc. **Series 1200**, Fig. A, black phenolic panels reinforced with steel for the utmost rigidity. Mounting brackets slotted to fit all standard 19" relay racks. Panel includes plastic covered designation strips. **Series 2800**, Fig. B, clear anodized aluminum panel. Extremely rugged, yet lightweight. Includes new narrow designation strip for each row. Add Prefix "X" to part numbers to indicate offset ground lugs on jacks. Aluminum panels available only with offset lugs.

Part No.	Fig.	Rows	Number of Jacks	Size, In. W x D x H	U.S.A. List Price
1200	A	Single	24 *	19x1 1/4x1 3/4	\$ 18.00
1232A	A	Single	24 T-332A	19x1 1/4x1 3/4	45.00
1332A	A	Single	24 MT-332A	19x1 1/4x1 3/4	55.00
1400	A	Single	26 *	19x 5/8x1 3/4	20.00
1432A	A	Single	26 T-332A	19x 5/8x1 3/4	50.00
1532A	A	Single	26 MT-332A	19x 5/8x1 3/4	62.00
2400	A	Double	48 *	19x1 1/4x2 1/8	20.00
2432A	A	Double	48 T-332A	19x1 1/4x2 1/8	75.00
2532A	A	Double	48 MT-332A	19x1 1/4x2 1/8	95.00
2600	A	Double	52 *	19x 5/8x1 3/4	25.00
2632A	A	Double	52 T-332A	19x 5/8x1 3/4	85.00
2732A	A	Double	52 MT-332A	19x 5/8x1 3/4	110.00
2800	B	Double	48 *	19x 5/8x1 3/4	40.00
X2832A	B	Double	48 T-332A	19x 5/8x1 3/4	99.00
X2932A	B	Double	48 MT-332A	19x 5/8x1 3/4	115.00

\*Supplied less jacks.

### MILITARY TYPE "TWIN-PLUGS"

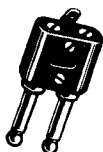
Meet exact industrial and military requirements. **No. 411**, both design and materials, is manufactured in accordance with MIL-P-642(A) specs. **Nos. 412 and 413**, use identical materials. "Twin-Plug" sleeves spaced 5/8" center to center with self-aligning feature.

**Part No. 411**—Two electrically independent 2-conductor plugs in black plastic handle. Has provision for Cord Clamp No. S-2674. Military Type **PJ-327** (Old Navy No. 491242). Interchangeable with W.E. 327. . . . . U.S.A. List Price **\$4.75**

**Part No. 412**—Two electrically independent 2-conductor plugs in black plastic handle. Has external cord clamp. Old Military Type **PJ-289**. Similar to W.E. 289B. . . . . U.S.A. List Price **\$4.50**

**Part No. 413**—Three circuit plug with two electrically independent tip circuits in heavy duty die cast frame. Molded black phenolic handle notched to indicate polarity. Interchangeable with MIL-Type **PJ-421** and W.E. 241. . . . . U.S.A. List Price **\$4.50**

**Part No. S-2674**—Strain relief clamp, natural brass. For use with No. 411 Twin-Plug. Package of ten. . . . . U.S.A. List Price **\$0.50**



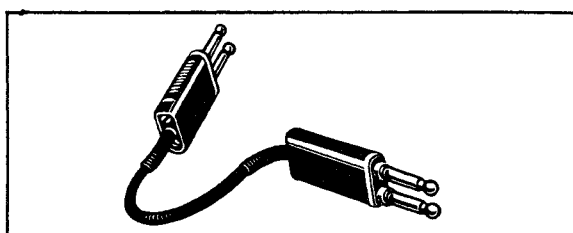
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### "DUMMY PLUGS"

Low cost, 2- and 3-conductor molded plastic, dummy plugs for use in switchboards, jack panels. Inserts in jack as does a phone plug to switch circuits, but can not couple incoming signals. Can also be used to plug up unused phone jacks to prevent accidental insertion of a phone plug. **Series 491**, 3-conductor, .207" dia. finger. **Series 492**, 3-conductor, .250" dia. finger. **Series 493**, 2-conductor, .250" dia.

Part No.	Fig.	Handle	Typical Mating Jack	U.S.A. List Price
491-01	C	Red	MT-342B	\$0.50
491-02	C	Black	MT-342B	.50
491-05	C	White	MT-342B	.50
492-01	D	Red	MT-332B	.50
492-02	D	Black	MT-332B	.50
492-05	D	White	MT-332B	.50
493-01	E	Red	MT-331	.50
493-02	E	Black	MT-331	.50
493-05	E	White	MT-331	.50

### PATCH CORD SETS



All patch cords are constructed of bronze tinsel conductors, insulated and shielded, with a heavy black nylon braid overall.

**Series 17Q**—2-conductor patch cords have No. 413 "Twin-Plug" at each end with shields grounded both ends.

**Series 17P**—Same as 17Q, except shield grounded one plug only.

**Series 18Q**—2-conductor patch cords use Military Plug **PJ-051** (Switchcraft Part No. 482) at each end with shields grounded both ends.

**Series 19Q**—Single conductor patch cords utilize Military Plug **PJ-047B** (Switchcraft Part No. 420) connected to each end with shield grounded both ends.

Part No.	Length	Plugs Used	U.S.A. List Price
17QA17	6 inch	413	\$11.00
17QB17	1 foot	413	11.25
17QD17	2 feet	413	11.50
17QF17	3 feet	413	11.75
17QH17	4 feet	413	12.15
17QK17	6 feet	413	13.00
17QN17	10 feet	413	13.75
17PA17	6 inch	413	11.00
17PB17	1 foot	413	11.25
17PD17	2 feet	413	11.50
17PF17	3 feet	413	11.75
17PH17	4 feet	413	12.15
17PK17	6 feet	413	13.00
17PN17	10 feet	413	13.75
18QA18	6 inch	482	11.50
18QB18	1 foot	482	12.00
18QD18	2 feet	482	12.50
18QF18	3 feet	482	13.00
18QH18	4 feet	482	13.50
18QK18	6 feet	482	14.50
18QN18	10 feet	482	16.50
19QA19	6 inch	420	6.00
19QB19	1 foot	420	6.25
19QD19	2 feet	420	6.75
19QF19	3 feet	420	7.25
19QH19	4 feet	420	7.75
19QK19	6 feet	420	9.10
19QN19	10 feet	420	10.50

### REPLACEMENT PATCH CORDS

Patch cords are made of bronze tinsel conductors, insulated and shielded, with a heavy black nylon braid overall. Cords designed for use with Switchcraft plugs 413, 420 and 482 or equivalents. When used with No. 420, clip off unnecessary lead.

**Series 89Q**—2-conductor shielded cord with shield termination at both ends.

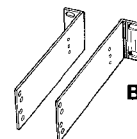
**Series 89P**—2-conductor shielded cord with shield termination at one end only.

Part No. Both Ends Shielded	Part No. One End Shielded	Length	U.S.A. List Price
89QA89	89PA89	6 inch	\$2.25
89QB89	89PB89	1 foot	2.75
89QD89	89PD89	2 feet	3.00
89QF89	89PF89	3 feet	3.25
89QH89	89PH89	4 feet	3.50
89QK89	89PK89	6 feet	4.50
89QN89	89PN89	10 feet	6.50

### JACK PANEL ACCESSORIES



HOLE PLUG



BRACKET KIT

Hole Plug, P-1801, molded nylon, fits all Switchcraft jack panels, **Series 1200, 1400, 2400, 2600, 2800**. Designed to plug unused holes in jack panels. Bracket Kit, K-107, consists of 2 long L-shaped steel, stand-off brackets and eight No. 6-32 self-tapping screws. To hold jack panels, **Series 1400, 2600, 7"** in front of mounting rack.

Part No.	Description	U.S.A. List Price
P-1801	Hole Plug	\$0.30
K-107	Bracket Kit	4.50

# SWITCHCRAFT Phone Plugs

## "LITTEL PLUG" PHONE PLUGS

Small size phone plugs fit standard 1/4" phone jacks except \*Nos. S-250, S-260, S-280 and S-290 which have a .206" dia. sleeve. \*\*Nos. C-240, C-245 and C-270 feature an integral cable clamp with screw terminals. †No. R-280 has short sleeve for Revere Recorders. ‡No. 288 has a wide insulator between tip and sleeve for use in a 3-conductor jack to perform a 2-conductor function without shorting. Plugs with solder terminals have built-in cable clamp. Shielded metal handles are nickel plated brass; others are molded of durable plastic; 5/8" long x 1/4" dia.

### TWO-CONDUCTOR TYPE

Part No.	Fig.	Typical Mating "Littel-Jax"	Handle	Terminals	U.S.A. List Price
240	A	11	Black	Screw	\$0.75
C-240**	A	11	Black	Screw	.90
245	A	11	Red	Screw	.75
C-245**	A	11	Red	Screw	.90
250	A	11	Black	Solder	.70
255	A	11	Red	Solder	.70
270	B	11	Shielded	Screw	1.05
C-270**	B	11	Shielded	Screw	1.20
280	B	11	Shielded	Solder	1.00
288†	C	11	Shielded	Solder	1.05
S-250	A	S-11	Black	Solder	.75
S-280	B	S-11	Shielded	Solder	1.00
R-280†	B	—	Shielded	Solder	1.25

### THREE-CONDUCTOR TYPE

Part No.	Fig.	Typical Mating "Littel-Jax"	Handle	Terminals	U.S.A. List Price
260	A	12B	Black	Screw	\$1.20
S-260*	A	S-12B	Black	Screw	1.65
267	A	12B	Black	Solder	1.05
269	A	12B	Red	Solder	1.05
290	B	12B	Shielded	Screw	1.40
S-290*	B	S-12B	Shielded	Screw	1.85
297	B	12B	Shielded	Solder	1.30

## STANDARD 1/4" PHONE PLUGS

Available with phenolic or shielded, nickel plated over brass handle.

### TWO-CONDUCTOR TYPE—SCREW TERMINALS

Typical mating jack "Littel-Jax" No. 11. Nos. 49 and 169 feature circuit closing device. Nos. 170 and 475 (MIL PJ-636) have two-piece handle with built-in clamp for 1/4" cable. No. 180 has wide insulator between tip and sleeve for use in a 3-conductor jack to perform a 2-conductor function without shorting.

Part No.	Fig.	Handle	Length & Dia.	U.S.A. List Price
40	A	Black	2 1/16 x 3/4	\$0.75
45	A	Red	2 1/16 x 3/4	.75
49	A	Black	2 1/16 x 3/4	1.50
70	B	Shielded	2 1/16 x 1 1/16	1.20
160	C	Shielded	1 x 1 1/16	.90
169	C	Shielded	1 x 3/4	1.75
170	D	Shielded	2 1/16 x 1 1/16	1.65
180	—	Shielded	1 x 3/4	1.05
475	D	Shielded	1 3/4 x 3/4	1.95

### THREE-CONDUCTOR TYPE—SOLDER TERMINALS

Typical mating jack "Littel-Jax" No. 12B. No. 190A has two-piece handle with built-in cable clamp for 1/4" cable.

Part No.	Fig.	Handle	Length & Dia.	U.S.A. List Price
60	A	Black	2 1/16 x 1 1/16	\$1.05
90	C	Shielded	1 x 1 1/16	1.30
190	B	Shielded	2 1/16 x 1 1/16	1.50
190A	D	Shielded	2 1/16 x 1 1/16	1.95

## "LUG-PLUG" PHONE PLUGS

Low cost, two-conductor phone plugs. Fit all 1/4" phone jacks.

No. 385 Plug has a .206" dia. sleeve and mates with S-11 "Littel-Jax". All have solder lug terminals. Handle: Shielded metal or phenolic.

Part No.	Fig.	Typical Mating "Littel-Jax"	Handle	Length & Dia.	U.S.A. List Price
350	A	11	Black	1 5/8 x 1/2	\$0.55
355	A	11	Red	1 5/8 x 1/2	.55
380	—	11	Shielded	1 x 1/2	.70
385	—	S-11	Shielded	1 x 1/2	1.00

## "TINI-PLUGS" SUB-MINIATURE PHONE PLUGS

Miniature 2-conductor phone plugs for use with "TINI-JAX" only 1/3 the size of standard phone plugs. Handle 1 5/8" overall length, are plastic or brass, nickel plated.

Part No.	Fig.	Terminal	Handle	U.S.A. List Price
740	E	Screw	Black	\$0.75
745	E	Screw	Red	.75
750	E	Solder	Black	.70
755	E	Solder	Red	.70
770	E	Screw	Shielded	1.05
780	E	Solder	Shielded	1.05

## "MICRO-PLUGS" ULTRA-MINIATURE PHONE PLUGS

Ultra-miniature 2-conductor phone plugs, only 1 1/16" long; 1/4" O.D., .097" dia. sleeve. Mate with No. TR-2A. Have screw on handles in black, red or natural anodized aluminum; accommodates cables up to 1/4" dia. All plugs have integral cable clamps.

Part No.	Fig.	Description	U.S.A. List Price
850	F	Black Handle	\$0.75
855	F	Red Handle	.75
880	F	Natural Handle	.75



## MILITARY TYPE

### "LITTEL-PLUGS" AND EXTENSION JACK

Designed to meet exact industrial and military requirements. Plugs are made in accordance with MIL-P-642(A) specifications. One-piece tip rod and one-piece sleeve and plug body provide internal interlock to prevent parts shifting in position. Type 820 Extension Jack meets MIL-J-641A specifications and mates with "Littel-Plug" No. 430. No. 470 has shielded handle; all others plastic; †Red; ‡Black. All plugs have screw terminals.

Part No.	Fig.	Mil-Type No.	Typical Mating Jack	Cond.	U.S.A. List Price
420†	G	PJ-047B	MT-388	2	\$1.50
425†	G	PJ-047R	MT-388	2	1.50
430†	H	PJ-054B	820	2	1.40
435†	H	PJ-054R	820	2	1.40
440†	—	PJ-055B	MT-331	2	1.40
445†	—	PJ-055R	MT-331	2	1.40
450†	H	PJ-540B	820	2	1.40
455†	H	PJ-540R	820	2	1.40
470	—	PJ-055M	MT-331	2	2.00
480†	I	PJ-068	MT-342B	3	3.60
482†	J	PJ-051R	MT-332B	3	4.00
483†	J	PJ-051B	MT-332B	3	4.00
484†	J	PJ-309	M-444	3	3.60
820†	—	JJ-026	430 Plug	2	2.00

Switchcraft Part No. P-1074-1—Strain Relief Clamp. Nickel Plate Brass. Package of 25..... U.S.A. List Price \$0.85

## TYPE 410 PLUG AND TYPE 810 JACK

Miniature 2-conductor extension jack and mating plug; often referred to as "Throat Microphone Plug and Jack". Plug is Military Type PJ-291; jack is Type JJ-048. Each is of two-piece molded construction. Plug has solder-cup terminals; jack has solder lugs. After wiring, shells must be cemented and clamped till dry. Overall size (engaged), 2 5/8" x 1 1/2" x 3/8".

Switchcraft Part No. 410 Plug..... U.S.A. List Price \$0.60  
Switchcraft Part No. 810 Jack..... U.S.A. List Price .80

## "FLAT PLUGS" FLAT PHONE PLUGS



1/4" phone plugs featuring flat, space-saving handles. Ideal for applications where conventional plugs would protrude too far. Nos. 220, 225 have adapter clips which make them convenient to clamp standard phone tips to terminals. Shielded flat plugs, Nos. 228 and 238 have nickel plated steel handles; all others have red or black plastic handles. Nos. S-230 and S-235 have .206" dia. sleeve.

### TWO-CONDUCTOR TYPE

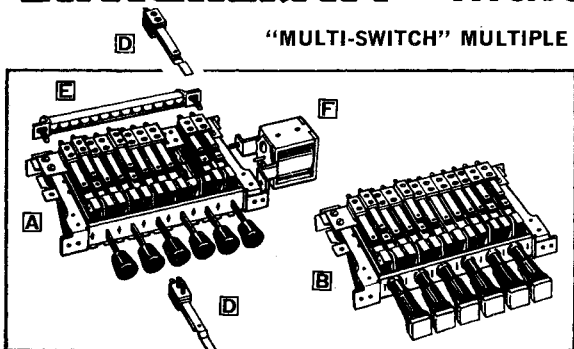
Part No.	Fig.	Typical Mating Jack	Handle	Terminals	U.S.A. List Price
220	K	11	Black	Screw	\$0.90
225	K	11	Red	Screw	.90
227	K	11	Black	Solder	.85
228	K	11	Shielded	Solder	.95
229	K	11	Red	Solder	.85

### THREE-CONDUCTOR TYPE

Part No.	Fig.	Typical Mating Jack	Handle	Terminals	U.S.A. List Price
230	K	12B	Black	Screw	\$1.30
S-230	K	S-12B	Black	Screw	1.75
235	K	12B	Red	Screw	1.30
S-235	K	S-12B	Red	Screw	1.75
237	K	12B	Black	Solder	1.25
238	K	12B	Shielded	Solder	1.40
239	K	12B	Red	Solder	1.25

# SWITCHCRAFT "Multi-Switches"

## "MULTI-SWITCH" MULTIPLE STATION PUSH BUTTON SWITCHES



New basic design simplicity provides a multiple station push button switch that's rugged, compact, versatile and extremely flexible in functions. All switching components—frame, stack switches, lamps and accessories are changeable to give you hundreds of circuit and function combinations. You can order a "Multi-Switch" with the function you now desire; and later change circuits and/or functions in the field by simple positioning adjustments of "stop plate", "latch bar spring" and/or interchanging switch stacks. For a complete multiple station assembly, you must order the proper frame and the necessary stack switch for each button on the frame. Optional accessories include lock-out bar and solenoid release. Frames can be set up for: 1. Interlock; 2. Non-Lock; 3. All-Lock; 4. Interlock and Non-Lock combinations; 5. All-Lock and Non-Lock combinations. Interlock action restores to normal any previously actuated buttons when actuating a button. Non-Lock is momentary action of each button. All-Lock is accumulative locking of all buttons with restoration of all buttons to normal when release button is depressed. Specify switching function when ordering the frames listed below.

### SERIES 7000 NON-ILLUMINATED FRAMES

**A** Switch frames mount on panels up to 3/8" thick, with 3 3/8" depth behind panel. End brackets of frames have four No. 8/32 tapped holes for mounting. A round brown push-on button is furnished for each station; one extra red button included for use when switch requires a release. Center to center distance between buttons is 3/8". Standard plunger is 1 1/2" long, can be supplied up to 4 3/4" long on special order. Switch frames with buttons on 3/4" centers are available in Series 8000. This Series has all other features of Series 7000. Series 7000 "Multi-Switch" frames available from 1 to 37 stations. Series 8000, from 1 to 31 stations. Add 10% to the below prices when ordering Series 8000. Only the most commonly used frames are listed here:

Part No.	No. of Stations	U.S.A. List Price	Part No.	No. of Stations	U.S.A. List Price
7100	1	\$ 7.50	7700	7	\$18.00
7200	2	8.50	7800	8	20.00
7300	3	9.75	7900	9	22.00
7400	4	12.00	71000	10	24.00
7500	5	14.00	71100	11	26.00
7600	6	16.00	71200	12	28.00

### SERIES 21000 ILLUMINATED FRAMES

**B** Similar in switching functions and characteristics to non-illuminated "Multi-Switches," but features modern square buttons with front and side illumination, lamp diffusers that provide uniform lighting; knurled retaining collar for quick and easy front panel lamp replacement. A 6-volt or 28-volt lamp can be used. Buttons with white jewels and white diffusers are furnished for switching and release stations. Plungers are on 3/8" centers; 3/4" centers are available on special order by specifying Series 22000. Lighting circuits on both series are isolated from switching stacks. Prefix part numbers with "L" if push buttons are to light in "IN" position; with "M" to light in "OUT" position; with "N" to light in "IN" and "OUT" positions. Stacks for illumination circuits are mounted on frame. Series 21000 available up to 37 stations; Series 22000 up to 31 stations. Add 10% to below prices when ordering Series 22000. Only the most commonly used frames are listed below. All frames are supplied less lamps and stack switches.

Part No.	No. of Stations	U.S.A. List Price	Part No.	No. of Stations	U.S.A. List Price
21100	1	\$11.50	21700	7	\$40.00
21200	2	14.50	21800	8	45.00
21300	3	19.50	21900	9	50.00
21400	4	24.50	211000	10	55.00
21500	5	29.50	211100	11	60.00
21600	6	34.50	211200	12	65.00

### SOLENOID RELEASE—"J" SERIES

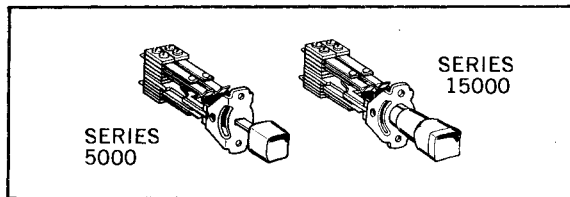
**F** A simple solenoid assembly that can be added on the end of standard frames by two screws to provide automatic remote release of depressed stations. For use in 115 volt, A.C., 60 cycle circuits. Other voltages available on special order. J-3 designed for use with up to 12 stations. Complete with mounting bracket and screws.

Part No.	Function Used on	U.S.A. List Price	Part No.	Function Used on	U.S.A. List Price
J-1	Interlock	\$8.50	J-3	All-Lock	\$9.50

### ESCUTCHEON PLATES

Attractive escutcheon plates for "Multi-Switches", non-illuminated Series 7000. Black satin finish over a 1/8" thick aluminum plate; back side has pressure sensitive adhesive. Listed below are standard lengths; can be made available from 1 to 37 stations.

For Series 7000 Part No.	Stations	U.S.A. List Price
ES-04	4	\$0.90
ES-06	6	1.10
ES-08	8	1.30
ES-12	12	1.75
ES-18	18	2.50



### "PUSH-PUSH" SWITCHES SERIES 5000—NON-ILLUMINATED SERIES 15000—ILLUMINATED

Push-to-lock, push-to-release or momentary action push-button switches. Available in numerous multiple pole circuits. Welded cross bar palladium contacts rated at 3 amps, 300 watts max., non-inductive A.C. load. Mounts with two 3-48 screws on 3/8" centers. Depth behind panel, 2 1/4". Series 5000 supplied with square, brown button. Series 15000, lighting circuits and buttons are identical to those on Series 21000 "Multi-Switch." Series 15000 supplied less lamps. \*Add suffix letter "L" to part number to indicate locking type.

#### NON-ILLUMINATED SERIES 5000

Part Number Non-locking*	Action	Schematic Circuit	U.S.A. List Price
5003	S.P.D.T.	1-C	\$ 6.00
5004	D.P.S.T.n.o.	2-A	6.50
5006	D.P.D.T.	2-C	6.75
5008	4 P.S.T.n.o.	4-A	7.60
5009	3 P.D.T.	3-C	7.75
5012	4 P.D.T.	4-C	9.00

#### ILLUMINATED SERIES 15000

Part No.	Action	Schematic Circuit	U.S.A. List Price
15003	S.P.D.T.	1-C	\$8.50
15004	D.P.S.T.n.o.	2-A	9.00
15006	D.P.D.T.	2-C	9.25
15008	4 P.S.T.n.o.	4-A	10.00
15009	3 P.D.T.	3-C	10.25
15012	4 P.D.T.	4-C	11.50

### STACK SWITCHES

**D** Interchangeable stack switches for "Multi-Switch" frames. Two types listed below: Series 70, silver contacts for power circuits; Series 70P, welded cross bar palladium contacts for low level circuits. Both rated at 3 amps, 300 Watts, max., A.C. non-inductive load. If more than one circuit will be required specify two (or more) stacks in order to balance the load on the plunger. For example, if two form "C" circuits are required, specify two No. 73 rather than one No. 76; locate stacks to balance load on plunger for easier action. Two mounting screws and one pressure plate furnished with each switch. In addition to Series 70 and 70P Stack Switches, four other Series are available, as standard, from stock.

#### SERIES 70—SILVER CONTACTS

Part No.	Contacts	U.S.A. List Price	Part No.	Contacts	U.S.A. List Price
71	1 "A"	\$0.50	74	2 "A"	\$0.80
72	1 "B"	.50	75	2 "B"	.80
73	1 "C"	.60	76	2 "C"	.95
73D	1 "D"	.70	76D	2 "D"	1.15

#### SERIES 70P—PALLADIUM CONTACTS

Part No.	Contacts	U.S.A. List Price	Part No.	Contacts	U.S.A. List Price
71P	1 "A"	\$0.60	74P	2 "A"	\$0.95
72P	1 "B"	.60	75P	2 "B"	.95
73P	1 "C"	.80	76P	2 "C"	1.15
73PD	1 "D"	.90	76PD	2 "D"	1.40

#### BASIC CONTACT FORMS



### LOCK-OUT BAR "K" SERIES

**E** Prevents the operation of more than one button at a time. For example, a switch with interlock function, automatically releases a previously actuated station when a new station is depressed, but it is possible to depress more than one station simultaneously, unless the "K" Series Lock-Out Bar has been added. Mounts on back of standard Multi-Switch frame with two screws (furnished). Available from 2 to 37 stations for a single frame. Lock-Out Bars listed below for 3/8" center plungers only; for 3/4" centers, order special.

Part No.	Stations	U.S.A. List Price	Part No.	Stations	U.S.A. List Price
K-02	2	\$3.00	K-08	8	\$3.75
K-03	3	3.15	K-09	9	4.00
K-04	4	3.25	K-10	10	4.25
K-05	5	3.40	K-11	11	4.50
K-06	6	3.50	K-12	12	4.75
K-07	7	3.65			

### LAMPS FOR "MULTI-SWITCHES" AND "PUSH-PUSH" SWITCHES

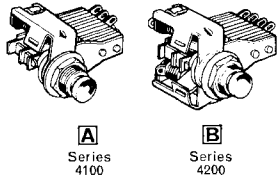
Lamps are not furnished with Series 15000, 21000 switches. For initial order or replacement, specify the following part numbers.

Part No.	Volts	Lamp Base	For Frame Series	U.S.A. List Price
P-1593-1	28	Flange	Ind. 327	\$1.50
P-1593-2	6	Flange	Ind. 328	1.20

Many other "Multi-Switch" frames, buttons, diffusers, stack switches, lock-out bars, etc., are available from your distributor.

# SWITCHCRAFT Push-Button Switches

## NEW ILLUMINATED "NF-LITE" SWITCHES



Series 4100 and 4200 "NF-LITE" illuminated switches indicate switching and circuit functions at a glance. Flat frame construction provides multiple pole momentary action switching. Lighting circuit is independent of switching circuit. Ideal for control panel or press-to-test applications. Contacts are fine silver rated at 3 amps, 300 watts max., A.C., non-inductive load. Series 4100, Fig. A, uses single miniature lamp, 6V or 28V. Light from lamp is filtered through color chip to clear plastic push-button. Series 4200, Fig. B, same as Series 4100, except utilizes two lamps for greater illumination or color coding of two circuit conditions. Both series require 1 1/8" min., 1 3/8" max. depth behind panel depending on size of stack; mounts in 3/8" hole in panels up to 1/4" thick. Series 4100 furnished with one kit of 4 color chips (red, amber, green, and yellow). Series 4200 furnished with two kits. Lamps must be purchased separately. See lamp listing below.

### SERIES 4100

Part Number	Action	Schematic Circuit	U.S.A. List Price
4101	S.P.S.T.n.o.	1-A	\$ 1.95
4103	S.P.D.T.	1-C	2.10
4104	D.P.S.T.n.o.	2-A	2.20
4106	D.P.D.T.	2-C	2.45
4109	3 P.D.T.	3-C	3.00

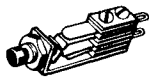
### SERIES 4200

Part Number	Action	Schematic Circuit	U.S.A. List Price
4201	S.P.S.T.n.o.	1-A	\$2.85
4203	S.P.D.T.	1-C	3.00
4204	D.P.S.T.n.o.	2-A	3.10
4206	D.P.D.T.	2-C	3.35
4209	3 P.D.T.	3-C	3.90

## LAMPS FOR ILLUMINATED SWITCHES

The "NF-Lite", "Littel-Lite" Switches are not supplied with lamps. When ordering these switches, be sure to specify:

Part No.	Used in Switch	Voltage	Base	Ind. No.	U.S.A. List Price
P-1217	NF-Lite	6	Screw	1768	\$1.20
P-1218	Littel-Lite NF-Lite Littel-Lite	28	Screw	335	2.00



## MINIATURE "TF" BUTTON SWITCHES

"Tiny Frame" switches. Small, sturdily constructed, provides simple, direct acting push button switching for use where space is at a premium. Available in Series 970L, push-to-lock, pull-to-release; or Series 970, momentary action. Nickel silver springs, integral contacts, recommended for low level circuits where contact resistance is unimportant. Requires only 1 1/8" depth behind panel; mounts in single 1/4" hole in panels up to 3/8" thick.

### SERIES 970—NON-LOCKING

Part No.	Action	Schematic Circuit	U.S.A. List Price
974	D.P.S.T. n.o.	2-A	\$1.30
975	D.P.S.T. n.c.	2-B	1.30
976	D.P.D.T.	2-C	1.30

### SERIES 970L—LOCKING

Part No.	Action	Schematic Circuit	U.S.A. List Price
974L	D.P.S.T. n.o.	2-A	\$1.55
975L	D.P.S.T. n.c.	2-B	1.55
976L	D.P.D.T.	2-C	1.55



## "CORD SWITCHES"

An attractive bright nickel plated housing supports Series 903 and 913 button switches. Ideal for cord mounted or pendant switch on remote control applications. Sleeve 1 1/8" diameter, 2 3/8" long.

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
E-903	E-913	S.P.D.T.	1-C	\$2.50
E-903D	E-913D	"Break-Make" S.P.D.T.	1-D	2.50

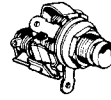


## "TINY SWITCHES"

Series 950, red button, and Series 960, black button, sub-miniature push-button switches for limited space applications. Integral contacts suitable for low level circuits where contact resistance is not important. Mounts in 1/4" hole in panels up to 3/8" thick; depth behind panel 3/8".

Part Number Red Button	Part Number Black Button	Action	Schematic Circuit	U.S.A. List Price
951	961	S.P.S.T.n.o.	1-A	\$0.90
952	962	S.P.S.T.n.c.	1-B	.90
953	963	S.P.D.T.	1-C	1.00

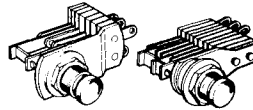
## NEW ILLUMINATED "LITTEL-LITE" SWITCHES



Series 210 "Littel-Lite" Switches are unusually small, momentary contact, illuminated push-button types. Requires minimum panel space; ideal for limited space applications and press-to-test circuits. One-piece, clear plastic button and shaft is illuminated by a single miniature lamp, 6V or 28V. Lamps are not furnished, see lamp listing below. Includes kit of 4 color chips (red, amber, green, and yellow), can be inserted in switch at any time. Nickel silver spring contacts are recommended for low level circuits where contact resistance is not important. Also available, fine silver contacts (Part No. suffix "S") rated at 3 amps, 300 watts, max., A.C. non-inductive load. Lighting circuit is independent of switching circuit. Mounts in single 3/8" hole in panels up to 1/4" thick; depth behind panel 1 3/16".

Part Number	Action	Schematic Circuit	U.S.A. List Price
211	S.P.S.T.n.o.	1-A	\$1.65
212	S.P.S.T.n.c.	1-B	1.65
213	S.P.D.T.	1-C	1.90
211S	S.P.S.T.n.o.	1-A	1.85
212S	S.P.S.T.n.c.	1-B	1.85
213S	S.P.D.T.	1-C	2.10

## NON-LOCKING FLAT FRAME SWITCHES



FF Switches. Fig. E, Series 1000. Flat frame construction provides multiple pole switching with minimum depth behind panel. Fine silver contacts rated at 3 amps, 300 Watts Max., A.C., non-inductive load. One piece black button and shaft. 3/8" diameter threaded shank; mounts in panels up to 1/4" thick.

NF Switches. Fig. F, Series 4000, same as FF Switches, except smaller spring design, ideal for mounting in ultra-compact equipment. Only 1/2" W.; 1 3/8" L.; mounts in 3/8" hole in panels up to 3/16" thick.

Part Numbers Series 1000	Part Numbers Series 4000	Action	Schematic Circuit	U.S.A. List Price
1001	4001	S.P.S.T.n.o.	1-A	\$1.05
1002	4002	S.P.S.T.n.c.	1-B	1.05
1003	4003	S.P.D.T.	1-C	1.20
1004	4004	D.P.S.T.n.o.	2-A	1.30
1005	4005	D.P.S.T.n.c.	2-B	1.30
1006	4006	D.P.D.T.	2-C	1.55
1009	4009	3 P.D.T.	3-C	2.10



## "BUTTON SWITCHES"

Series 903, 923. Unusually small, momentary action push button switches. Enclosed in metal housing; black or red plastic button. Series 903, Fig. G, back panel mounting; 1 1/8" hole, mounts in panels up to 1 1/8" thick. Series 923, Fig. H, front panel mounting; 1/2" hole, mounts in panels up to 3/8" thick. Both rated at 250 mils, AC, non-inductive load, 30 watts max.

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
903	913	S.P.D.T.	1-C	\$1.50
903D	913D	"Break-Make" S.P.D.T.	1-D	1.50
923	933	"Make-Break" S.P.D.T.	1-C	1.75
923D	933D	"Break-Make" S.P.D.T.	1-D	1.75



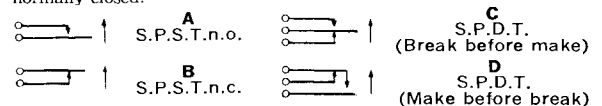
## "LITTEL-SWITCHES"

Series 100, 200, tiny momentary contact push button switches. Rugged, dependable action. All contacts insulated from panel bushing with interlocking phenolic washers. Series 100 and 200, springs are of nickel silver, recommended only for low level circuits where contact resistance is unimportant. Series 100S and 200S have fine silver contacts rated at 3 amps or 300 watts max., A.C., non-inductive load. One-piece plastic button and shaft in red or black. Mounts in 3/8" hole in panels up to 1/4".

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
101	201	S.P.S.T. n.o.	1-A	\$0.90
101S	201S	S.P.S.T. n.o.	1-A	1.05
102	202	S.P.S.T. n.c.	1-B	.90
102S	202S	S.P.S.T. n.c.	1-B	1.05
103	203	S.P.D.T.	1-C	1.00
103S	203S	S.P.D.T.	1-C	1.20

## BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.

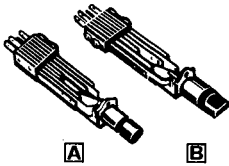




# Push Button and Lever Switches



## "T-SWITCHES"



Rugged, long frame switches for quality communication equipment. Welded cross bar palladium contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Requires minimum of panel space, only 1/8" x 1 1/8"; 2 7/8" depth behind panel. **Series 11000, Fig. A**, push button T-Switch. Available in momentary action and push-to-lock, pull-to-release action. **Series 11200, Fig. B**, two position turn button T-Switch. Available in non-locking and locking action. Black button with white arrow to indicate switching position.

\*Add Suffix "L" to Part Numbers to Indicate Locking Type.

### A PUSH BUTTON—SERIES 11000

Part No. Non-Locking*	Action	Schematic Circuit	U.S.A. List Price
11001	S.P.S.T. n.o.	1-A	\$3.50
11002	S.P.S.T. n.c.	1-B	3.50
11003	S.P.D.T.	1-C	4.00
11003D	S.P.D.T.	1-D	4.00
11004	D.P.S.T. n.o.	2-A	4.50
11005	D.P.S.T. n.c.	2-B	4.50
11006	D.P.D.T.	2-C	5.00
11006D	D.P.D.T.	2-D	5.00
11008	4 P.S.T. n.o.	4-A	5.60
11009	3 P.D.T.	3-C	6.00
11012	4 P.D.T.	4-C	6.80

### B TURN BUTTON—SERIES 11200

Part No.	Action	Schematic Circuit	U.S.A. List Price
11201	S.P.S.T. n.o.	1-A	\$3.50
11202	S.P.S.T. n.c.	1-B	3.50
11203	S.P.D.T.	1-C	4.00
11203D	S.P.D.T.	1-D	4.00
11204	D.P.S.T. n.o.	2-A	4.50
11205	D.P.S.T. n.c.	2-B	4.50
11206	D.P.D.T.	2-C	5.00
11206D	D.P.D.T.	2-D	5.00
11208	4 P.S.T. n.o.	4-A	5.60
11209	3 P.D.T.	3-C	6.00
11212	4 P.D.T.	4-C	6.80



## MINIATURE "TF" BUTTON SWITCHES

"Tiny Frame" switches. Small, sturdily constructed, provides simple, direct acting push button switching for use where space is at a premium. Available in Series 970L push-to-lock, pull-to-release; or Series 970, momentary action. Nickel silver springs, integral contacts, recommended for low level circuits where contact resistance is unimportant. Requires only 1 1/8" depth behind panel; mounts in single 1/4" hole in panels up to 3/8" thick.

### SERIES 970—NON-LOCKING

Part No.	Action	Schematic Circuit	U.S.A. List Price
974	D.P.S.T. n.o.	2-A	\$1.30
975	D.P.S.T. n.c.	2-B	1.30
976	D.P.D.T.	2-C	1.30

### SERIES 970L—LOCKING

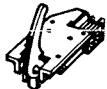
Part No.	Action	Schematic Circuit	U.S.A. List Price
974L	D.P.S.T. n.o.	2-A	\$1.55
975L	D.P.S.T. n.c.	2-B	1.55
976L	D.P.D.T.	2-C	1.55

## "CORD SWITCHES"



An attractive bright nickel plated housing supports Series 903 and 913 button switches. Ideal for cord mounted or pendant switch on remote control applications. Sleeve 1 1/8" diameter, 2 3/8" long.

Part Nos. Red Button	Black Button	Action	Schematic Circuit	U.S.A. List Price
E-903	E-913	S.P.D.T.	1-C	\$2.50
E-903D	E-913D	"Break-Make" S.P.D.T.	1-D	2.50
		"Make-Break"		



## "HOOK SWITCHES"

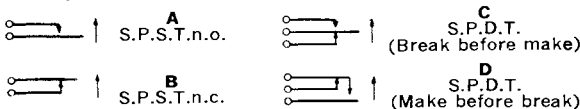
Quality constructed leaf-type switch actuated by a hook (or hanger). Ideal for equipment where it is necessary to actuate a circuit by hanging an accessory on a "hook", as a headset, telephone or microphone. Fine silver contacts, rated at 3 amps, 300

watts, max., A.C., non-inductive load. Requires only 1 1/8" depth behind panel.

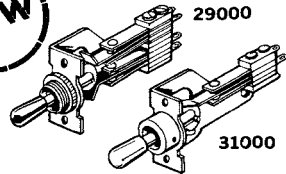
Part No.	Action	Schematic Circuit	U.S.A. List Price
14004	D.P.S.T. n.o.	2-A	\$2.75
14005	D.P.S.T. n.c.	2-B	2.75
14006	D.P.D.T.	2-C	3.00
14012	4 P.D.T.	4-C	3.85

## BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.



## "FEATHER LEVER" SWITCHES



Miniature lever switches, light-weight, compact, mount on 7/16" centers. Available in 2 and 3 position, locking and non-locking types. Actuator designed with nylon roller for smoother, easy lever operation over entire life of switch. Rugged steel frame withstands rough usage, shock and vibration. Nickel

silver springs with fine silver contacts, rated at 2 amperes, 200 watts, max., A.C., non-inductive load. Supplied with black plastic push-on knob. Other push-on knobs, available in 10 colors. See listing below. **Series 29000**, with bushing, mounts in 7/16" O.D. panel hole. Supplied with locknut. **Series 31000**, mounts with 2 No. 2-56 machine screws. Both Series supplied with black push-on knob. Require only 1 1/8" depth behind panel, mount in panels up to 3/8" thick. In o.c. center position off. Inter-communications "Talk-Listen" switches, lever locks on one side of neutral and operates non-locking on the other side. \*Add suffix letter "L" to Part No. to indicate locking type.

### SERIES 29000, 31000 TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price	
29201	31201	S.P.S.T. n.o.	1-A	\$1.95
29203	31203	S.P.D.T.	1-C	2.25
29204	31204	D.P.S.T. n.o.	2-A	2.50
29206	31206	D.P.D.T.	2-C	2.75

### THREE POSITION TYPES

Part No.	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price	
29303	31303	S.P.D.T. n.o.	1-C†	\$2.50
29304	31304	S.P.S.T. n.o. ea. sec.	1-A 1-A	2.60
29306	31306	S.P.D.T. ea. sec.	1-C 1-C	2.90
29307	31307	S.P.D.T. n.o. ea. sec.	1-C† 1-C†	2.95
29312	31312	D.P.D.T. ea. sec.	2-C 2-C	3.75

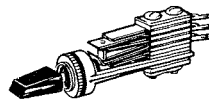
### INTER-COMM SWITCHES

Part No.	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price	
29303T	31303T	S.P.D.T. n.o.	1-C†	\$2.50
29307T	31307T	S.P.D.T. n.o. ea. sec.	1-C 1-C	2.95

## PUSH-ON COLOR KNOBS

Kit of molded plastic knobs. Available in 10 colors. For "Feather-Lever" Switches, Series 29000, 31000. Knobs can be changed quickly—simply pull off present knob and push-on new one. For permanence, use plastic cement.

Part No.	Color	Part No.	Color	U.S.A. List Price Per Pkg. of 10
K-108	One of ea. color	K-114	Brown	\$0.75
K-109	Red	K-115	Orange	0.75
K-110	Black	K-116	Yellow	0.75
K-111	Green	K-117	Ivory	0.75
K-112	Blue	K-118	Gray	0.75
K-113	White	—	—	0.75



## "LEV-R SWITCHES"

"Lev-r Switches." Series 28000 Compact, lever action switch in two and three position, locking and non-locking types. Smooth, easier lever action assured with special nylon roller. Supplied with locknut, non-turn ring (slips over slotted bushing

to prevent switch from turning in mounting hole), and a black knob which is molded directly to the lever. Eliminates loose or lost knobs. Fine silver contacts rated at 3 amps, 300 watts, max., A.C., non-inductive load. Mounts on 3/8" centers in panels up to 3/8" thick. Requires only one 1 1/8" dia. mounting hole for bushing and one 1/8" dia. hole for non-turn device; depth behind panel, 2 1/2". \*Add suffix letter "L" to Part No. to indicate locking type. †Center position open (OFF).

### TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price
28201	S.P.S.T. n.o.	1-A	\$2.70
28203	S.P.D.T.	1-C	3.00
28204	D.P.S.T. n.o.	2-A	3.25
28206	D.P.D.T.	2-C	3.50

### THREE POSITION TYPES

Part No.	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price
28304	S.P.S.T. n.o. ea. sec.	1-A 1-A	\$3.35
28306	S.P.D.T. ea. sec.	1-C 1-C	3.65
28307	S.P.D.T. n.o. ea. sec.	1-C† 1-C†	3.70
28312	D.P.D.T. ea. sec.	2-C 2-C	4.50

## "TINY SWITCHES"



Series 950, red button, and Series 960, black button, sub-miniature push-button switches for limited space applications. Integral contacts suitable for low level circuits where contact resistance is not important. Mounts in 1/2" hole in panels up to 3/8" thick; depth behind panel 3/8".

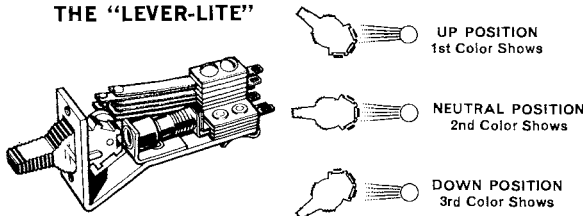
Part Number Red Button	Black Button	Action	Schematic Circuit	U.S.A. List Price
951	961	S.P.S.T. n.o.	1-A	\$0.90
952	962	S.P.S.T. n.c.	1-B	.90
953	963	S.P.D.T.	1-C	1.00



# Lever Switches

## COLOR ILLUMINATED LEVER SWITCHES

### THE "LEVER-LITE"



"Lever-Lite", Series 25000. Illuminated switches indicate positions at a glance. Individual color chips can be inserted in each switch position. Available in 2 or 3 positions, locking and non-locking types. Reduces panel space; minimizes costly wiring. Supplied with 6V miniature screw base lamp and six color chips, Red, Green, Amber, Yellow, Blue and White; 28V lamp also available. See lamp listing below. Nickel-silver springs, silver contacts rated 3 amps, 300 watts max. A.C., non-inductive load. Requires only 2 1/4" depth behind panel, can be mounted on 3/8" centers in panels up to 3/8" thick.

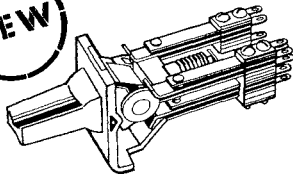
Size: 2 1/4" L. x 3 3/8" W. x 1 1/2" H. \*Add suffix letter "L" to Part No. to indicate locking type.

#### TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price
25201	S.P.S.T. n.o.	1-A	\$4.00
25203	S.P.D.T.	1-C	4.25
25206	D.P.D.T.	2-C	5.00
25209	3 P.D.T.	3-C	5.75

#### THREE POSITION TYPES

25304	S.P.S.T. n.o. Ea. Sec.	1-A 1-A	\$4.50
25306	S.P.D.T. Ea. Sec.	1-C 1-C	5.00
25308	D.P.S.T. n.o. Ea. Sec.	2-A 2-A	5.50
25312	D.P.D.T. Ea. Sec.	2-C 2-C	6.00



### "LEVER-LITE" SWITCHES SERIES 27000

"Lever-Lite," Series 2700, illuminated lever switch, three color lighting identical to Series 25000, but utilizes a larger, contoured lever and larger, factory installed color filters. Available in 2 or 3 position, locking and non-locking types. Mounts on 3/8" centers, in panels up to 3/8" thick. Depth behind panel 2 3/8". Nickel silver springs with fine silver contacts rated at 3 amps, 300 watts, max. A.C., non-inductive load. On standard 2 position type AMBER lights in the "NEUTRAL" position; GREEN lights in the "DOWN" position. On 3 position types, RED lights in the "UP" position, AMBER in "NEUTRAL" position and GREEN in the "DOWN" position. Supplied with a 6 V lamp. † n. o. center position off. \*Add suffix "L" to part number to indicate locking type.

#### TWO POSITION TYPES

Part No. Non-locking*	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price
27206	D.P.D.T.	2-C	\$6.50
27212	4 P.D.T.	4-C	8.00

#### THREE POSITION TYPES

27306	S.P.D.T. ea. sec.	1-C 1-C	6.50
27307	S.P.D.T. n.o. ea. sec.	1-C† 1-C†	6.65
27312	D.P.D.T. ea. sec.	2-C 2-C	8.00

### LAMPS FOR "LEVER-LITE" SWITCHES

Lamps are mounted in a "snap-out" frame assembly. A 6V lamp is furnished with each of the above listed switches. Specify the following part numbers when ordering replacement lamps:

Part No.	Voltage	Base	Ind. No.	U.S.A. List Price
P-1217	6V	Screw	1768	\$1.20
P-1218	28V	Screw	Hudson 369	2.00

### ESCUTCHEON PLATES FOR "LEVER-LITE" SWITCHES

For easy and convenient mounting of Series 25000 and 27000 Switches. Satin black finish. Eliminates punching rectangular hole in mounting panel. Part No. 531 for Series 25000, complete with two No. 3-48 black machine screws. Part No. 532 for Series 27000, complete with two No. 2-56 machine screws.

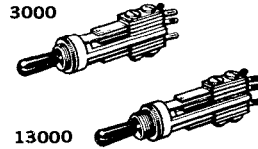
Switchcraft Part No. 531.....U.S.A. List Price \$0.15  
Switchcraft Part No. 532.....U.S.A. List Price 0.25

### AMBIENT LIGHT SHIELD

For use where "LEVER-LITE" Series 27000 switches are mounted on minimum centers. Shield gives positive separation of lighting between switches. Shield is placed between panel and switch, held in place by mounting screws. Two shields can be used per switch if desired.

Switchcraft Part No. P-1864.....U.S.A. List. Price \$0.10

### LEV-R SWITCHES



Small lever action switches in two and three position types, locking and non-locking action. Requires half the space usually needed for a lever switch; frame bushing and shaft nickel plated brass. Supplied with locknut and screw-on black knob. Fine silver contacts rated at 3 amps, 300 watts, max. A.C. non-inductive load. Non-locking types have spring return. Series 3000 mounts in panels up to 3/8" thick; Series 13000 mounts in panels up to 1/4" thick. Both Series are 3/8" wide; requires 2 1/4" behind panel; mounts in single 1/8" dia. hole. †n. o. center position off. ‡Inter-communications "Talk-Listen" switches, lever locks on one side of neutral and operates non-locking on the other side. \*Add suffix letter "L" to Part No. to indicate locking type.

#### SERIES 3000 TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price
3001	S.P.S.T. n.o.	1-A	\$1.95
3002	S.P.S.T. n.c.	1-B	1.95
3003	S.P.D.T.	1-C	2.25
3003D	S.P.D.T.	1-D	2.40
3004	D.P.S.T. n.o.	2-A	2.50
3005	D.P.S.T. n.c.	2-B	2.50
3006	D.P.D.T.	2-C	2.75
3006D	D.P.D.T.	2-D	2.90
3009	3 P.D.T.	3-C	3.40

#### THREE POSITION TYPES

3033	S.P.D.T. n.o.	1-C†	\$2.65
3034	S.P.S.T. n.o. Ea. Sec.	1-A 1-A	2.75
3035	S.P.S.T. n.c. Ea. Sec.	1-B 1-B	2.75
3036	S.P.D.T. Ea. Sec.	1-C 1-C	3.10
3036D	S.P.D.T. Ea. Sec.	1-D 1-D	3.25
3037	S.P.D.T. n.o. Ea. Sec.	1-C† 1-C†	3.10
30312	D.P.D.T. Ea. Sec.	2-C 2-C	4.00
30313	D.P.D.T. n.o. Ea. Sec.	2-C† 2-C†	4.00

#### SERIES 13000 TWO POSITION TYPES

13001	S.P.S.T. n.o.	1-A	\$2.10
13002	S.P.S.T. n.c.	1-B	2.10
13003	S.P.D.T.	1-C	2.40
13003D	S.P.D.T.	1-D	2.50
13004	D.P.S.T. n.o.	2-A	2.65
13005	D.P.S.T. n.c.	2-B	2.65
13006	D.P.D.T.	2-C	2.75
13006D	D.P.D.T.	2-D	2.90
13009	3 P.D.T.	3-C	3.75

#### THREE POSITION TYPES

13033	S.P.D.T. n.o.	1-C†	\$2.65
13034	S.P.S.T. n.o. Ea. Sec.	1-A 1-A	2.75
13035	S.P.S.T. n.c. Ea. Sec.	1-B 1-B	2.75
13036	S.P.D.T. Ea. Sec.	1-C 1-C	3.10
13036D	S.P.D.T. Ea. Sec.	1-D 1-D	3.25
13037	S.P.D.T. n.o. Ea. Sec.	1-C† 1-C†	3.10
130312	D.P.D.T. Ea. Sec.	2-C 2-C	4.00
130313	D.P.D.T. n.o. Ea. Sec.	2-C† 2-C†	4.00

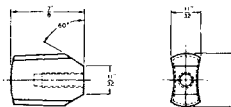
#### INTER-COM SWITCHES† SERIES 3000

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price
3033T	S.P.D.T. n.o.	1-C†	\$2.50
3037T	S.P.D.T. n.o. Ea. Sec.	1-C† 1-C†	2.95

#### SERIES 13000

13033T	S.P.D.T. n.o.	1-C†	\$2.65
13037T	S.P.D.T. n.o. Ea. Sec.	1-C† 1-C†	3.10

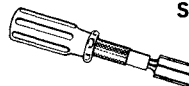
### CONTOUR KNOBS FOR LEVER SWITCHES



Attractive contour knobs designed for today's modern equipment. Series M-1177 knobs, 8-32" tapped hole for use with "LEVER-R" switches Series 3000, 12000, and 13000. Series M-1178 knobs, 6-32" tapped hole for use with "TELEVER" switches Series 6000 and 16000.

Part No. Series 1177	Part No. Series 1178	Color	U.S.A. List Price Per Pkg. of 10
M-1177-1	M-1178-1	Red	\$3.50
M-1177-2	M-1178-2	Black	3.50
M-1177-15	M-1178-15	White	3.50

### SPECIAL WRENCHES



Special Switchcraft wrenches designed to assemble knurled locknuts normally furnished with lever and button switches and jacks. A-1070 wrench fits 1 1/2"-32 locknuts; A-1071 for use with 1/4"-32 knurled locknuts.

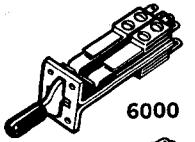
Part No. A-1070.....U.S.A. List Price \$6.65  
Part No. A-1071.....U.S.A. List Price 6.65



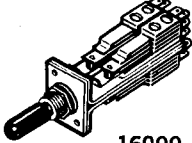


# Lever Switches

## "TELEVER SWITCHES"



6000



16000

Series 6000 and 16000. Rugged telephone type lever switches featuring "T-Beam" frame construction which results in a relatively light construction with sturdiness of a structural "T-Beam". Available in two and three positions, locking and non-locking types. Nylon rollers on the lever actuate the special nickel silver springs, providing smooth action; assures long dependable spring life. Welded cross bar palladium contacts are standard, rated at 3 amps, 300 watts max., A.C., non-inductive load. Series 6000 mounts with four No. 3-48 machine screws. Mounting centers  $1\frac{1}{4}$ " x  $1\frac{3}{16}$ ", mounts in panels up to  $\frac{1}{4}$ " thick. Series 16000 features single hole mounting;  $1\frac{3}{16}$ "-32 threaded bushing. Mounts in  $\frac{1}{2}$ " dia. hole in panels up to  $\frac{1}{4}$ " thick. Part No. 545, "Stop Plate" provides positive "stops" for two position action. Part No. 540,

"Stop Plate" provides non-locking or momentary action. The "Stop Plates" can be changed in the field. Both Series switches supplied with black insulated knob. All have tinned solder lug terminals. \*Add suffix letter "L" to Part No. to indicate locking type. Series 16000 non-locking type can be converted to locking type by removing "Stop Plate".

### SERIES 6000 TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit		U.S.A. List Price
		Pos. 1	Pos. 2	
6006	D.P.D.T.	2-C		\$5.00
6006D	D.P.D.T.	2-D		5.60
6008	4 P.S.T. n.o.	4-A		5.60
6009	3 P.D.T.	3-C		6.00
60012	4 P.D.T.	4-C		6.80
60012D	4 P.D.T.	4-D		7.50
60024	8 P.D.T.	8-C		10.00

### THREE POSITION TYPES

6036	S.P.D.T. Ea. Sec.	1-C	1-C	\$5.00
6036D	S.P.D.T. Ea. Sec.	1-D	1-D	5.60
6038	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	5.60
60312	D.P.D.T. Ea. Sec.	2-C	2-C	6.80
60312D	D.P.D.T. Ea. Sec.	2-D	2-D	7.50
60316	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	8.80
60324	4 P.D.T. Ea. Sec.	4-C	4-C	10.00

### SERIES 16000 TWO POSITION TYPES

16006	D.P.D.T.	2-C		\$5.00
16006D	D.P.D.T.	2-D		5.60
16008	4 P.S.T. n.o.	4-A		5.60
16009	3 P.D.T.	3-C		6.00
160012	4 P.D.T.	4-C		6.80
160012D	4 P.D.T.	4-D		7.50
160024	8 P.D.T.	8-C		10.00

### THREE POSITION TYPES

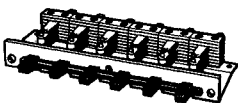
16036	S.P.D.T. Ea. Sec.	1-C	1-C	\$5.00
16036D	S.P.D.T. Ea. Sec.	1-D	1-D	5.60
16038	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	5.60
160312	D.P.D.T. Ea. Sec.	2-C	2-C	6.80
160312D	D.P.D.T. Ea. Sec.	2-D	2-D	7.50
160316	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	8.80
160324	4 P.D.T. Ea. Sec.	4-C	4-C	10.00

Part No. 530 Escutcheon Plate. For Series 6000 Telever switches with 4 mounting screws..... U.S.A. List Price \$0.60

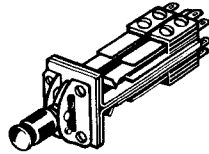
Part No. 540 Stop Plate. For Series 16000 Telever switches. To convert from locking to non-locking action. Includes two mounting screws..... U.S.A. List Price \$0.25

Part No. 545 Stop Plate. For Series 16000 Telever switches. To convert from 3-position to 2-position. Includes two mounting screws..... U.S.A. List Price \$0.25

## MULTIPLE LITTEL-KEY SWITCH



TYPE "MLK". The Multiple Littell-Key switches are designed for control panels in industrial, educational, military and communication equipment. Available in assemblies of 6 and 12 stations only. All "MLK" switch assemblies are handled as "special orders". Both the 6 and 12 station assemblies are available in two or three positions, locking and non-locking types. Switches on frames are on  $\frac{1}{2}$ " centers. Leaf springs of special nickel silver; fine silver contacts rated at 3 amps, 300 watts max., A.C., non-inductive load.



## SERIES 26000 "LEVER-LOCK" SWITCHES

Rugged telephone-type lever switches. "Lever-Lock" feature guards against accidental switching due to shock, vibrations, operator fatigue, or unintended operation. Ideal for mobile communication equipment. Index bracket and release plunger "locks" lever in any position. Turning actuator knob to extreme left actuator will be permanently locked. To unlock, turn knob to the right. Pressing release plunger frees actuator from index bracket and allows actuator to be moved to another switching position. Welded cross bar palladium contacts rated

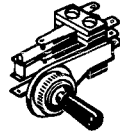
at 3 amps, 300 watts max., A.C., non-inductive load. Mounts with four No. 3-48 screws in panels up to  $\frac{3}{16}$ " thick. Requires  $3\frac{1}{16}$ " depth behind panel.

### TWO POSITION TYPES

Part No. Locking Type Only	Action	Schematic Circuits		U.S.A. List Price
		Pos. 1	Pos. 2	
26206L	D.P.D.T.	2-C		\$8.50
26208L	4 P.S.T. n.o.	4-A		9.10
26212L	4 P.D.T.	4-C		10.30
26212DL	4 P.D.T.	4-D		11.00

### THREE POSITION TYPES

26306L	S.P.D.T. Ea. Sec.	1-C	1-C	\$8.50
26308L	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	9.10
26312L	D.P.D.T. Ea. Sec.	2-C	2-C	10.30
26312DL	D.P.D.T. Ea. Sec.	2-D	2-D	11.00
26316L	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	12.30
26324L	4 P.D.T. Ea. Sec.	4-C	4-C	13.50



## "LEV-R SWITCHES", SERIES 12000

Small right-angle action switches requiring minimum of depth behind panel. Available in two and three position, locking and non-locking types. Long leaf-type springs insure long switch life. Fine silver contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Requires only  $\frac{3}{16}$ " depth behind panel; single  $\frac{1}{2}$ " dia. mounting hole; mounts in panels up to  $\frac{3}{16}$ " thick. Supplied with nickel plated locknut and removable black plastic knob. n.o. center position off. \*Add suffix letter "L" to Part No. to indicate locking type.

### TWO POSITION TYPES

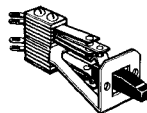
Part No. Non-Locking*	Action	Schematic Circuit		U.S.A. List Price
		Pos. 1	Pos. 2	
12001	S.P.S.T. n.o.	1-A		\$1.75
12002	S.P.S.T. n.c.	1-B		1.75
12003	S.P.D.T.	1-C		2.00
12003D	S.P.D.T.	1-D		2.25
12004	D.P.S.T. n.o.	2-A		2.25
12005	D.P.S.T. n.c.	2-B		2.25
12006	D.P.D.T.	2-C		2.50
12006D	D.P.D.T.	2-D		2.75

### THREE POSITION TYPES

12033	S.P.D.T. n.o.	1-C†		\$2.25
12034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	2.35
12035	S.P.S.T. n.c. Ea. Sec.	1-B	1-B	2.35
12036	S.P.D.T. Ea. Sec.	1-C	1-C	2.65
12036D	S.P.D.T. Ea. Sec.	1-D	1-D	2.85
12037	S.P.D.T. Ea. Sec.	1-C†	1-C†	2.75

### THREE POSITION TYPES LOCKING ONE SIDE—NON-LOCKING OTHER SIDE

12033T	S.P.D.T. n.o.	1-C†		\$2.25
12037T	S.P.D.T. Ea. Sec.	1-C†	1-C†	2.75



## "LK" LITTEL-KEY SWITCHES

Series 23000. Short frame lever-type switches available in 2 or 3 positions, locking or non-locking types. Ideal for applications where panel mounting space and depth behind panel is at a premium. Fine silver contacts, rated at 3 amps, 300 watts max., A.C., non-inductive load. Frame has 2 tapped No. 3-48 holes for easy mounting. Mounts in panels up to  $\frac{1}{8}$ " thick. Depth behind panel only  $2\frac{1}{16}$ ". \*Add suffix letter "L" to Part No. to indicate locking type.

### TWO POSITION TYPES

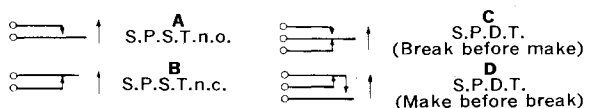
Part No. Non-Locking*	Action	Schematic Circuit		U.S.A. List Price
		Pos. 1	Pos. 2	
23201	S.P.S.T. n.o.	1-A		\$1.65
23203	S.P.D.T.	1-C		1.95
23206	D.P.D.T.	2-C		2.25

### THREE POSITION TYPE

23304	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	\$2.10
23306	S.P.D.T. Ea. Sec.	1-C	1-C	2.25
23308	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	2.50

## BASIC SCHEMATIC CIRCUITS

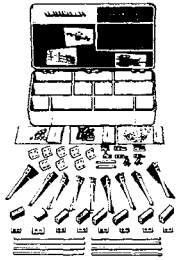
Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.





# Switches and Microphone Connectors

## STACK SWITCH KITS



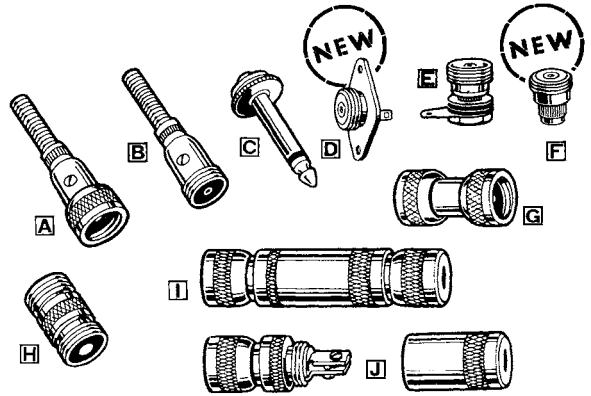
Experimental kits of component parts for assembling stack switches. Designed to speed the assembly of engineering samples in the lab, aid maintenance men in the field and save time in general replacement. Ideal for mechanical engineers and coin machine servicing; used in relays, electronic organs, etc. Each kit consists of 136 springs in different thicknesses, over 152 phenolic spacers and insulators in various sizes, hard-rubber insulating tubing, two sets of stack assembling pins, two roller assemblies, assorted contacts, etc. All in compartmented plastic box.

**Kit No. K-101.** Assorted 1/4" and 3/8" mtg. center contact springs and associated parts.....NET \$9.90

**Kit No. K-102.** Assorted 1/4" mtg. center contact springs and associated parts.....NET \$9.90

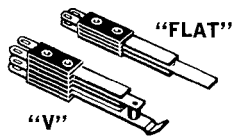
**Kit No. K-103.** Assorted 3/8" mtg. center contact springs and associated parts.....NET \$9.90

## MICROPHONE CONNECTORS



Standard connectors with 5/8"-27 threads. Designed for use with single conductor microphone cable with 9/32" max. O.D. **Coupling ring** on 2501F removable for fast change of female to male type. Spring assembled into body, cable braid and spring clamped by hollow set screw. No. 44 adapts 2501F to fit standard 2-cond. phone jack. No. 2501MP mounts in .385" dia. hole. \*No. 2501MPC same as 2501MP except closed circuit type. No. 2501FT, coupler, two female connectors at each end. No. 2501MT, coupler, two male connectors at each end. Nos. 2501FL, 2501FS, for attaching cable to female connector without soldering; screw terminals. No. 2501MBL, insulated male panel receptacle. No. 2501MPF, male panel receptacle for PRESS-FIT mounting. \*\*Cable clamp.

Part No.	Fig.	Description	U.S.A. List Price
2501F	A	Female Connector	\$0.60
2501M	B	Male Connector	.45
44	C	Phone Plug Adapter	.50
2501MBL	D	Panel Receptacle	.50
2501MP	E	Panel Receptacle	.35
*2501MPC	F	Panel Receptacle	.45
2501MPF	F	Panel Receptacle	.35
2501FT	G	Double Female Connector	.80
2501MT	H	Double Male Connector	.70
**2501FL	I	Screw Term. Female Connector	2.25
2501FS	J	Screw Term. Female Connector	1.65



## STACK SWITCHES

General purpose stack switch assemblies made from a pile-up of various actuator springs, contact springs and lifters. These stack switch assemblies can be used on manually operated devices where switching is operated by cams, levers, push buttons, and other mechanical devices. General purpose stack switches are available with a "Flat" or "V" actuator spring.

Fine silver or palladium cross bar welded contacts are standard, rated at 3 amps., 300 watts max., A.C., non-inductive load. Supplied with pressure plate and two No. 5-40 screws; mount on 3/8" centers. Height of stack depends on switching circuit; 1-B circuit 3/16" H., min.; 2-C circuit 45/64" H., max.

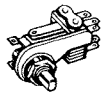
### FLAT ACTUATOR SPRING

Part No.	Contact Material	Action	Schematic Circuit	U.S.A. List Price
AA01AA	Silver	S.P.S.T. n.o.	1-A	\$0.70
AA01AB	Palladium	S.P.S.T. n.o.	1-A	.80
AA02AA	Silver	S.P.S.T. n.c.	1-B	.70
AA02AB	Palladium	S.P.S.T. n.c.	1-B	.80
AA03AA	Silver	S.P.D.T.	1-C	.90
AA03AB	Palladium	S.P.D.T.	1-C	1.10
AA06AA	Silver	D.P.D.T.	2-C	1.25
AA06AB	Palladium	D.P.D.T.	2-C	1.55

### "V" FORMED ACTUATOR SPRING

Part No.	Contact Material	Action	Schematic Circuit	U.S.A. List Price
AA01BA	Silver	S.P.S.T. n.o.	1-A	\$0.80
AA01BB	Palladium	S.P.S.T. n.o.	1-A	.90
AA02BA	Silver	S.P.S.T. n.c.	1-B	.80
AA02BB	Palladium	S.P.S.T. n.c.	1-B	.90
AA03BA	Silver	S.P.D.T.	1-C	1.00
AA03BB	Palladium	S.P.D.T.	1-C	1.20
AA06BA	Silver	D.P.D.T.	2-C	1.45
AA06BB	Palladium	D.P.D.T.	2-C	1.65

## "RS-SWITCHES"



Rugged rotary switches, available in various multiple circuits, two and three position types, locking or non-locking action. Ideal for communication, musical and test equipment applications. **Fibre cam** actuates long, leaf-type springs resulting in easy action; good wiping action of contacts.

Fine silver contacts rated at 3 amps, 300 watts max., AC, non-inductive load. Requires only 1/4" depth behind panel, mounts in single 3/8" hole in panels up to 1/4" thick.

\*Add suffix letter "L" to part number to indicate locking type.

### TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit		U.S.A. List Price
		Pos. 1	Pos. 2	
2001	S.P.S.T. n.o.	1-A	1-A	\$1.25
2002	S.P.S.T. n.c.	1-B	1-B	1.25
2003	S.P.D.T.	1-C	1-C	1.50
2004	D.P.S.T. n.o.	2-A	2-A	1.50
2005	D.P.S.T. n.c.	2-B	2-B	1.50
2006	D.P.D.T.	2-C	2-C	1.95

### THREE POSITION TYPES

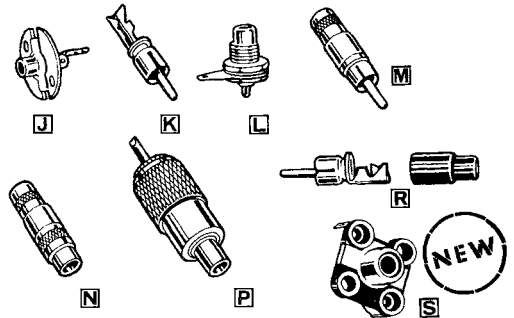
Part No.	Action	1-A	1-B	1-C	U.S.A. List Price
2034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	1-A	\$1.50
2035	S.P.S.T. n.c. Ea. Sec.	1-B	1-B	1-B	1.50
2036	S.P.D.T. Ea. Sec.	1-C	1-C	1-C	1.95

## RF-JACKS and RF-PLUGS

Standard phono jacks and plugs with nylon insulation. For use in radio frequency applications—low cost, max. insulation resistance. No. 3504M, 3/8" O.D. No. 3505F mounts front of panel in 3/8" hole—fits panel up to 1/4" thick. No. 3506 adapter has coaxial connector (Amphenol 83-1SP) one end; 3505F at other end. No. 3507 has 13/64" O.D. shielded, screw-on handle with cable clamp.

Part No.	Fig.	Description	U.S.A. List Price
3504M	L	Plug	\$0.20
3505F	M	Chassis jack	.60
3506	Q	Adapter	2.00
3507	N	Plug	.80

## PHONO JACKS AND PLUGS



Low cost 2-cond. jacks and plugs for record players, FM-AM tuners, tape recorders, test equipment, etc. 3501MC has 3/8" O.D. shell and cable clamp. 3501FP for front panel mount in 1/4" hole, in panels up to 1/8" thick. 3501FR for rear panel mount in 3/8" hole, in panels up to 13/64" thick. 3502 has unique cable clamp with 13/64" O.D. shielded removable handle. 3503 ext. jack has shielded removable handle, 13/64" O.D. with cable clamp. 3508 Series, new color coded phono plugs with cable clamp and "snap-on" plastic handles in Red, Black, and White. Series 3511 "4-Leaf Clover" Jax. Molded phono jack with dual contact surfaces for minimum shunt resistance, greater reliability. Open and closed circuit types. Mate with all Switchcraft phono plugs.

Part No.	Fig.	Description	U.S.A. List Price
3501F	K	Chassis jack	\$0.15
3501M	—	Plug, less cable clamp	.10
3501MC	L	Plug with cable clamp	.15
3501FP	M	Chassis jack	.35
3501FR	—	As above, chassis jack	.40
3502	N	Plug	.50
3503	P	Extension jack	.60
3508-1	R	Plug, Red handle	.25
3508-2	R	Plug, Black handle	.25
3508-5	R	Plug, White handle	.25
3511	S	Chassis jack, open circuit	.25
3511A	S	Chassis jack, open circuit, grounded	.25
3512	S	Chassis jack, closed circuit	.30
3512A	S	Chassis jack, closed circuit, grounded	.30



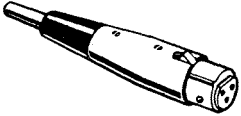
# Audio Connectors

Patent Applied For

## \*NEW AUDIO CONNECTORS WITH COMPLETE GROUNDING PROVISIONS!

Switchcraft's "Quick-Ground" connectors feature a separate "Ground-Terminal" electrically integral with the connector shell. Ground continuity between mating plugs automatically accomplished through the exclusive "Ground Contactors." Possible loss of insert screw is eliminated by new "Captive Design" Insert Screw. Socket and pin assemblies utilize "wedge-action" to insure firm, reliable positioning in connector shell. Q-G\* Series 3 and 4-contact audio connectors, offer 4 and 5-contact versatility when "Ground Terminal" is utilized. Can be used interchangeably with Cannon type XLR-3, XLR-4 and Amphenol type 91-850 Series. \*Number of insert contacts or pins must be specified to complete Part Number.

### A(\*)F CORD PLUGS

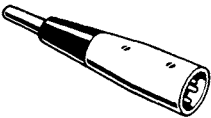


Fresh, streamlined design includes rugged, diecast zinc body, satin nickel finish, high-impact resistant thermosetting plastic socket insert, molded latchlock, dual pressure plates, keyed neoprene relief bushing. Features "Ground Terminal" and "Ground Contactors" offers 4 and 5-contact versatility. Mates with Switchcraft A(\*)M

and other connectors with similar contact arrangements. Takes 1/8" O.D. cable. Overall length 3 1/2"; dia. 3/4".

Part No.	Insert Contacts	U.S.A. List Price
A3F	3	\$2.25
A4F	4	2.75

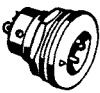
### A(\*)M CORD PLUGS



Has "Captive Design" insert screw, one-piece pin insert assembly easily removable for fast soldering. Polarizing groove. Die-cast zinc shell, satin nickel finish. Mates with Switchcraft A(\*)F and other connectors with similar contact arrangements. Brass, silver plated chromate dipped pins to resist tarnishing. Overall length 2 5/8"; dia. 3/4".

Part No.	Insert Pins	U.S.A. List Price
A3M	3	\$1.90
A4M	4	2.00

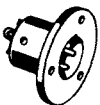
### B(\*)M RECEPTACLES



For panel or chassis mounting; locknut accommodates panels up to 3/4" thick. Single hole mounting, can be keyed by using "D" shaped panel hole or S-3519 mounting adapter. Pin insert features "Captive Design" insert screw and "Ground Terminal." Mates with Switchcraft A(\*)F and other connectors with similar contact arrangements. Diecast zinc shell, satin nickel finish. Dimensions: Flange 1 1/4" dia.; Barrel 1 3/8" overall; pin extensions 9/32".

Part No.	Insert Pins	U.S.A. List Price
B3M	3	\$2.90
B4M	4	3.00

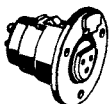
### C(\*)M RECEPTACLES



Mounts on wall, panel or chassis with three .136" dia. mounting holes. High impact thermosetting plastic pin insert. "Captive Design" insert screw, "Ground Terminal." Pins, brass, silver plated, chromate dipped; resists tarnishing. Mates with Switchcraft A(\*)F and other connectors with similar contact arrangements. Dimensions: Flange 1 1/8" dia.; Barrel 1 3/8" overall; pin extensions 9/32".

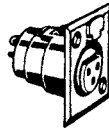
Part No.	Insert Pins	U.S.A. List Price
C3M	3	\$1.40
C4M	4	1.50

### C(\*)F RECEPTACLES



For panel or chassis mounting; has socket insert, push-type latch locking device. Flange has three .136" holes for mounting screws. Mates with Switchcraft A(\*)M and other connectors with similar contact arrangements. Dimensions: Flange 1 1/8" dia.; Barrel 1 3/8" overall; pin extension 1/4".

Part No.	Insert Pins	U.S.A. List Price
C3F	3	\$3.10
C4F	4	3.20

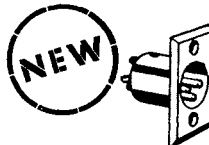


Part No.  
D3F  
D4F

### D(\*)F RECEPTACLES

Rectangular flange design receptacle permits close mounting on crowded panel or chassis. Features "Captive Design" loss-proof insert screw, positive latch locking device and high impact thermosetting socket insert. Mates with Switchcraft A(\*)M and other connectors with similar contact arrangements. Dimensions: Flange 1 1/8" x 1 1/8"; Barrel 1 3/8" overall; pin extension 1/4".

Insert Contacts	U.S.A. List Price
3	\$3.20
4	3.30



Part No.  
D3M  
D4M

### D(\*)M RECEPTACLES

Narrow, rectangular flange design receptacle for mounting on compact panel or chassis. Mates with Switchcraft A(\*)F and other connectors with similar contact arrangements. Dimensions: Flange 3/8" x 1 1/8"; Barrel 1 3/8" overall; pin extension 9/32".

Insert Pins	U.S.A. List Price
3	\$1.90
4	2.00

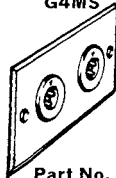


Part No.  
G3M  
G4M  
G3MS  
G4MS

### G(\*)M TYPE WALL PLATES

Single gang wall plates with a B(\*)M male receptacle. Fits standard electrical outlet box. Wall plates available in brushed brass or brushed stainless steel. Dimensions: Wall Plate 4 1/2"H x 2 3/4"W.

Part No.	Finish	Insert Pins	U.S.A. List Price
G3M	Brass	3	\$4.50
G4M	Brass	4	4.75
G3MS	Stainless Steel	3	5.00
G4MS	Stainless Steel	4	5.25

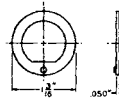


Part No.  
H3M  
H4M  
H3MS  
H4MS

### H(\*)M TYPE WALL PLATES

Two gang wall plates with two B(\*)M male receptacles. Mounts in standard electrical switch box (single). Wall plates available in brushed brass or brushed stainless steel. Dimensions: Wall Plate 4 1/2"H x 2 3/4"W. Six contacts.

Part No.	Finish	Insert Pins	U.S.A. List Price
H3M	Brass	3 ea.	\$6.50
H4M	Brass	4 ea.	7.00
H3MS	Stainless Steel	3 ea.	7.00
H4MS	Stainless Steel	4 ea.	7.50



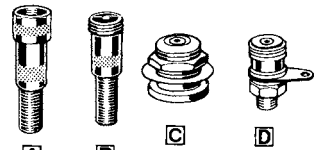
### MOUNTING ADAPTER

For use with B3M panel and chassis receptacle. Eliminates necessity of providing a flatted "D" shaped hole in panel to prevent turning of receptacle.

Switchcraft Part No. S-3519 ..... U.S.A. List Price \$0.40

### "MINI-CON" MINIATURE CONNECTORS

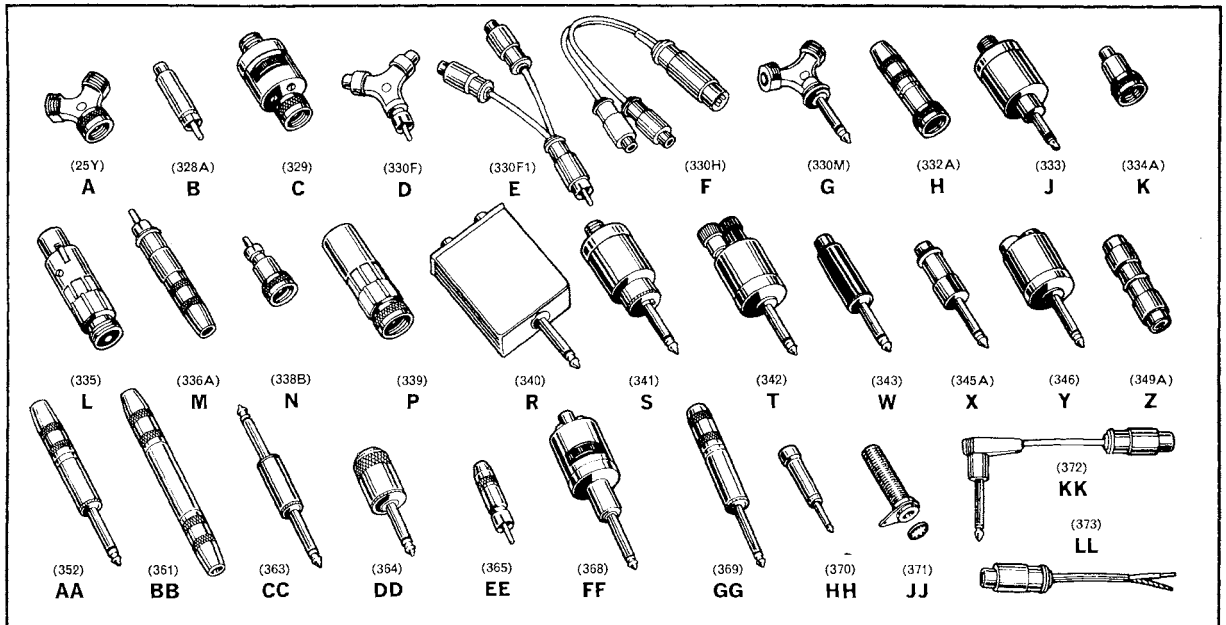
Popular "Mini-Con" microphone-type connectors used with miniaturized audio equipment, lapel microphones, musical instruments, etc. About 1/2 the size of standard microphone connectors. Accepts single conductor shielded cables up to 3/16" O.D. Nickel plated brass bodies.



Coupling ring on 5501F removable for quick change of female to male type. Cable-braid spring clamped to body by hollow point set screw. 5501MF mounts by lock-nut front side of panel, in 3/8" dia. hole. 5501MP mounts back side of panel in 3/8" dia. hole. 5501MPC same as 5501MP except shorting type

Part Number	Fig.	Description	U.S.A. List Price
5501F	A	Female Cord Connector	\$0.60
5501M	B	Male Cord Connector	.45
5501MF	C	Panel Connector, Male	.45
5501MP	D	Panel Connector, Male	.35
5501MPC	D	Panel Connector, Male	.60

# SWITCHCRAFT INC. Adapters



A versatile and complete line of adapters for interconnecting components that do not have mating jacks and/or plugs. For hi-fi, stereo, phonographs, tuners, tape recorders, amplifiers, P.A. systems, etc. Positive mating contacts of high quality material prevent resistive line-losses. **Nickel plated finish** for long life. **No. 328A, audio equalizer**, converts ceramic phono cartridge to magnetic input. **No. 329 Volume Control Adapter** for use in high impedance circuits. **No. 330H**, adapts 3-pin European type plug to standard Switchcraft phono plugs. **No. 335** has unsoldered internal wire at one end to permit user to convert terminal needed. **No. 341, silent plug adapter**, includes a circuit closing device to eliminate amplifier "squeals" when disconnecting. **No. 352**, converts stereo headphones and/or microphones to a monaural input. **Nos. 332A, 334A, 338B** can be used as male or female connector; coupling ring screws back converting to male mike connector.

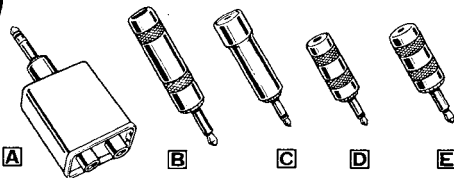
Part No.	Fig.	Description	U.S.A. List Price	Part No.	Fig.	Description	U.S.A. List Price
25Y	A	Y-Adapter, two male mike connectors in parallel to one female mike connector.	\$1.65	340	R	Two 2-cond. phone jack inputs in parallel to a 2-cond. phone plug output. Shielded.	\$3.75
328A	B	Audio Equalizer. Phono jack input to phono plug output.	2.95	341	S	Silent-Plug Adapter. 2-cond. phone jack input to 2-cond. phone plug output.	2.95
329	C	Volume Control, female mike connector to male mike connector.	6.95	342	T	Dual purpose binding post/banana jack input to 2-cond. phone plug output.	2.60
330F	D	Y-Adapter. Two phono jacks in parallel to a phono plug. Shielded.	1.75	343	W	Phono jack input to phone plug output. Built-in limiting resistor for Webcor tape recorders.	1.95
330F1	E	Flexible Y-Adapter, phono plug in parallel to 2 phono jacks. Shielded 4" cable.	2.00	345A	X	Phone plug output to phono jack input.	1.25
330F2	—	Same as above, but phono plug and phono jack to a phono plug.	2.00	346	Y	Tip jack input to 2-cond. phone plug output.	2.15
330F3	—	Same as above, but 2 phono plugs to 1 phono plug.	2.00	349A	Z	Phono plug coupler, mates with phono plug at each end. Shielded.	1.00
330H	F	Flexible Y-Adapter. 3-pin European type plug to 2 phono jacks. Shielded 5" cable.	3.00	352	AA	Stereo to monaural adapter. 3-cond. phone jack to 2-cond. phone plug output. Shielded.	2.00
330M	G	Y-Adapter, two male mike connectors in parallel to a 2-conductor phone plug.	1.90	361	BB	Coupler. 2-cond. phone jack at each end. Shielded.	2.25
330PJ	—	Y-Adapter, as above, except two phono jacks in parallel to a 2-cond. phone plug. Shielded.	1.90	362	—	Same as above, but 3-cond. phone jack at each end.	2.75
333	J	Phone jack input to special 2-cond. plug for American Geloso recorders.	2.35	363	CC	Coupler. 2-Cond. phone plug at each end. Shielded.	2.00
332A	H	Phone jack input to female mike connector output.	1.75	364	DD	2-Cond. "Tini-Jax" 9/64" dia. sleeve, to 2-cond. 1/4" O.D. phone plug. Shielded.	1.45
334A	K	Phono jack input to female mike connector output. Shielded.	1.25	365	EE	2-Cond. "Tini-Jax" (as above) input to phono jack output. Shielded.	1.45
334B	—	Same as above, but phono jack input to male mike connector output. Shielded.	1.25	368	FF	Input volume control, phono jack input to a 2-cond. phone plug output. Shielded.	4.50
335	L	2-cond. input has Switchcraft 2501MP (Amphenol 75PCJM) to output connector Cannon XL-3-11.	2.95	369	GG	2-Cond. Reverse/Wollensak phone jack input to a standard 2-cond. phone plug output. Shielded.	2.00
336A	M	2-Cond. phone jack input to phono plug output. Shielded.	1.45	370	HH	Phono jack input to a 2-cond. "Tini-Plug" (9/64" dia. finger) output. Shielded.	1.40
336B	—	Same as above, but 2-cond. phone jack input to phono jack output.	1.45	371	JJ	Thick panel adapter for 3501P phono jack. Permits mounting of jack in panels up to 1 1/4" thick.	.95
338A	—	Phono plug input to male mike connector output. Shielded. Similar to 338B.	1.00	372	KK	2-Cond. molded right angle phone plug to a molded phono jack. 2" shielded cable.	1.75
338B	N	Phono plug input to female mike connector output. Shielded.	1.00	373	LL	2-Cond. molded phono jack to 3" shielded cable, stripped and tinned leads.	.75
339	P	Same as 335, but output connector Switchcraft 2501F (Amphenol 75MCIF) to input connector Cannon XL-3-12.	2.95				



# Microphone Mixers and HI-FI Adapters and Cables



## ADAPTERS

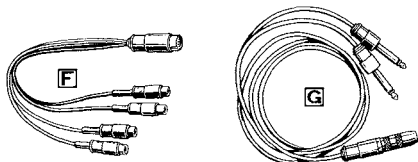


New, versatile adapters for interconnecting components and cables that do not have mating jacks and/or plugs. Positive mating contacts prevent resistive line-losses. No. 353, stereo headphone adapter, permits use of 2 stereo headphones in a single 3-circuit jack, instead of only one. Nos. 374, 375, 376, 377 have shielded, nickel plated brass handles.

Part No.	Fig.	Description	U.S.A. List Price
353	A	Stereo Headphone Adapter. 3-circuit plug wired to two 3-circuit jacks. Housed in shielded, metal case, tan finish.	\$4.25
374	B	Phone jack input to a 2-cond. "Tini-Plug" (5/16" dia. finger) output.	1.70
375	C	Phono jack input to a 2-cond. "Micro-Plug" (.097" dia. finger) output.	1.50
376	D	"Tini-Jax" input to a 2-cond. "Micro-Plug" (.097" dia. finger) output.	1.50
377	E	"Micro-Jax" input to a 2-cond. "Tini-Plug" (5/16" dia. finger) output.	1.50



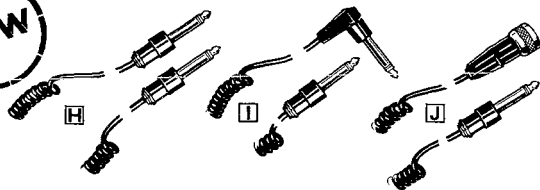
## STEREO ADAPTER CABLES



Part No. 330G, Fig. F, flexible stereo cable adapter. Adapts European-type 5-contact sockets to standard Switchcraft phono plugs. Color coded. Fits Norelco, Korting, Grundig, Sony, Elber tape recorders; Grundig radios. Part No. 05FH81, Fig. G, adapts 3-circuit phone plugs to two separate 2-cond. phone jacks as used on stereo tape recorders.

Part No.	Fig.	Description	U.S.A. List Price
330G	F	Stereo Adapter Cable. 5-pin European-type plug to four phono jacks. Shielded stereo cables, each 1 ft.	\$5.50
05FH81	G	Stereo Headphone Adapter Cable. Two std. 2-cond. phone plugs wired to a 3-cond. phone jack. Shielded, 4 ft. stereo cable.	4.35

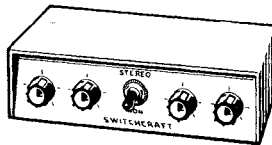
## MOLDED COILED CORD CABLE ASSEMBLIES



Shielded, coiled cord assemblies with molded phone plugs and/or microphone connectors. 12 ft. or 20 ft. extended lengths. Black plastic jacket over single cond., shielded cable.

Part No.	Fig.	Description	U.S.A. List Price
05LP05	H	Straight 2-cond. phone plug at each end. 12 ft.	\$7.50
05LP15	I	Straight 2-cond. phone plug at one end, right angle phone plug at other. 12 ft.	7.50
05LP87	J	Straight 2-cond. phone plug at one end, Switchcraft 2501F connector molded to other end. 12 ft.	7.65
05LT05	H	Same as 05LP05, except 20 ft.	10.50
05LT15	I	Same as 05LP15, except 20 ft.	10.50
05LT87	J	Same as 05LP87, except 20 ft.	10.65

## MICROPHONE MIXERS



### STEREOPHONIC MIXERS

**MODEL 306.** Two channel stereophonic, high impedance microphone mixers. Extremely versatile, feeds up to two pairs of stereo signals such as microphones, tuners, phonos into two outputs to a recorder or amplifier. Individual gain control for each channel. With a flip of a lever switch, converts to 4 monophonic channels. Four standard 2-cond. phone jack inputs on rear panel; two phono jacks for output to amplifier or tape recorder. Size: 2"x3"x6".

Switchcraft Part No. 306..... U.S.A. List Price \$22.50

**MODEL 306TR,** same as above, but with two battery operated transistor amplifiers. Provides 6 db gain. Permits use of microphone with up to 30' of cable without loss. Low noise level, low distortion, frequency response: 20 to 20,000 c.p.s. On-Off switch lengthens battery life. Battery included. Tan finish, brown knobs with gold inserts. Rubber feet on base prevents scratching of finished surfaces.

Switchcraft Part No. 306TR..... U.S.A. List Price \$37.50

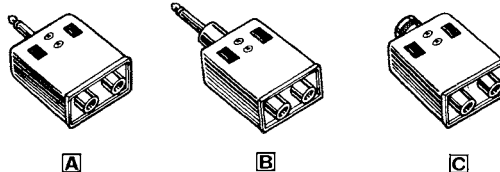
### MONOPHONIC MIXERS

**MODEL 301** (not illustrated). Similar to 306, except monaural only. Switchcraft Part No. 301..... U.S.A. List Price \$19.50

**MODEL 301TR.** Same as above, but with one battery powered transistor amplifier. Battery included.

Switchcraft Part No. 301TR..... U.S.A. List Price \$30.00

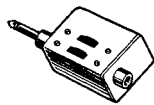
## "MINI-MIX" AUDIO MIXERS



Miniature, high impedance microphone mixer. Feeds 2 signals into a single output. Each channel has separate gain control recessed inside housing. Very low loss factor. Size: 2-1/6"x1-13/16"x1-1/6".

Part No.	Fig.	Description	U.S.A. List Price
310	A	Two 2-cond. phone jack inputs to 2-cond. phone plug output.	\$7.95
311	B	As above, but has long plug output to fit recorders with recessed jacks.	8.95
312	B	Similar to above, except has special size plug and jacks for use with American Geloso recorders.	8.95
313	B	Similar to No. 311, except has short Reverse plug and jacks for standard or short phone plugs.	8.95
315	C	Two 2-cond. phone jack inputs to a female mike connector.	7.95
316	—	(Not illustrated.) Two phono jack inputs to a phono plug output.	7.95
320	C	Similar to No. 315, except 2 male mike connector inputs to a female mike connector output.	7.95
326	B	Two 3-cond. phone jack inputs to long 2-cond. phone plug output. Internal resistor network for use with Webcor recorders.	9.95

## "MIX-AMP" Miniature Transistorized Amplifier



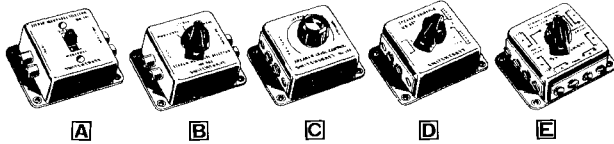
Designed for use with resistance type mixers to overcome loss factor. Battery powered transistor amplifier. When used with "MINI-MIX", provides 3 db gain and accepts signals up to 2 V. On-Off switch. Hi-Lo impedance switch. Frequency response 20 to 20,000 c.p.s. Battery included. Size: 2 1/4" x 1 1/2" x 1 1/8".

Part No.	Description	U.S.A. List Price
501	2-cond. phone jack input to extra long 2-cond. phone plug output to fit recorders with recessed jacks.	\$20.00
502	Same as 501, but male mike connector input to female mike connector output.	20.00



# Hi-Fi Switches, Controls

## HI-FI, STEREO SWITCHES AND CONTROLS



Quality Switchcraft Hi-Fi and Stereo volume controls and selector switches are completely wired and ready for use. Attractive tan finished metal housing. 2"x2"x1". Each unit is complete with mounting hardware and instruction sheet.

**Stereo-Monaural Selector. Fig. A.** Fast switching from monaural to stereo. Two phono jack inputs and two phono jack outputs.

**Switchcraft Part No. 661.** U.S.A. List Price **\$3.00**

**Stereo-Monaural Selector with Reverse. Fig. B.** Same as above, but provides channel reversing.

**Switchcraft Part No. 662.** U.S.A. List Price **\$3.50**

**Phono-Tuner Adapter. Fig. A.** Modernizes old sound equipment. Provides amplifier with two inputs for phono and tuner, etc. Switch selects either input. Phono jack output for amplifier; two phono jack inputs for phono and tuner.

**Switchcraft Part No. 663.** U.S.A. List Price **\$2.50**

**Multiple Selector Control. Fig. B.** Accepts up to 5 input circuits. Switch selects any one of the five inputs labeled **AM, FM, Phono, Tape, AUX** to amplifier output. Five phono jack inputs to one phono jack output.

**Switchcraft Part No. 664.** U.S.A. List Price **\$4.95**

**Speaker Phase Control. Fig. A.** Provides proper phasing in stereo and other speaker installations. Slide switch alters phasing. Screw terminals.

**Switchcraft Part No. 665.** U.S.A. List Price **\$2.50**

**Speaker Volume Control with L-Pad. Fig. C.** For volume control of remote or extra speakers. 5 watts peak, 8 ohm, screw terminals.

**Switchcraft Part No. 666.** U.S.A. List Price **\$6.50**

**Speaker Selector Switch. Fig. D.** Connects remote or extra speakers to radio, T.V. or Hi-Fi set. Three position switch selects either one or both speakers at same time. Screw terminals. Shielded housing.

**Switchcraft Part No. 667.** U.S.A. List Price **\$4.25**

**Stereo Selector Switch. Fig. B.** Switch permits selection of both channels of any one of three stereo sources such as FM tuner, tape recorder and record player to one pair of outputs such as a stereo amplifier. Three pairs of phono jack inputs to one pair of phono jack outputs.

**Switchcraft Part No. 668.** U.S.A. List Price **\$6.25**

**Stereo Volume Control. Fig. C.** Specially matched tandem control for high impedance circuits. Use as a master gain control for ceramic type stereo cartridges, stereo tape decks, etc., when connected to separate amplifiers. One pair of phono jack inputs to one pair of phono jack outputs.

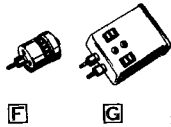
**Switchcraft Part No. 669.** U.S.A. List Price **\$6.50**

**Stereo Speaker Selector Switch. Fig. E.** Designed to connect two remote pairs of stereo speakers to a stereo amplifier. Three position switch selects either pair of stereo speakers or both pairs at the same time. Screw terminals.

**Switchcraft Part No. 670.** U.S.A. List Price **\$6.25**

**Monaural Speaker Selector Switch. Fig. B.** Five position tap switch selects any one of five monaural speakers. Inputs labeled 1 through 5. Five phono jack inputs to one phono jack output for amplifier.

**Switchcraft Part No. 671.** U.S.A. List Price **\$5.50**



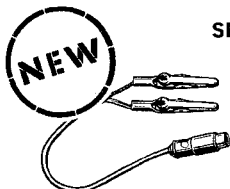
## STEREO LINE BALANCE CONTROLS

**Volume Control Adapter. Fig. F.** Single channel for high impedance circuits only, such as crystal mike, phono, etc. Ideal for use in balancing stereo channels; used in pairs for dual stereo channel control. Phono jack input to phono plug output. Shielded. Nickel plated.

**Switchcraft Part No. 366.** U.S.A. List Price **\$3.95**

**Dual Volume Control Adapter. Fig. G.** Twin-channel for high impedance circuits. Same as above, but two phono jack inputs and two phono jack outputs with recessed volume controls for each channel. Shielded housing, tan finished. Size: 2 1/8" x 1 1/8" x 1-1/8".

**Switchcraft Part No. 367.** U.S.A. List Price **\$7.50**



## SPEAKER ADAPTER CABLE

Adapts speaker screw terminals to phono plug. Two alligator clips wired to a molded, phono extension jack. Completely shielded, 12" cable, grey plastic jacket. Alligator clips are ideal for use as a quick connect-disconnect to speaker terminals. The molded phono extension jack can be used to add extra lengths of cable for remote speakers.

**Switchcraft Part No. 82AB86.** U.S.A. List Price **\$1.10**

## SPEAKER VOLUME CONTROLS



Designed for custom installations. Constant impedance "T"-pad controls speaker volume. Rated at 10 watts (20 watts, peak). Mounts in standard electrical outlet boxes, mounting center 3 3/8", 8 ohms. Brushed brass wall plate; ivory and black dial. Screw terminals; mounting screws and instructions. Plate size: 2 3/4" x 4 1/2" x 1 3/8".

**Switchcraft Part No. 651.** U.S.A. List Price **\$9.95**

Same as above, except brushed stainless steel wall plate.

**Switchcraft Part No. 651-S.** U.S.A. List Price **\$9.95**

Constant impedance "T"-pad speaker volume control switch. All features of No. 651, but 16 ohms. Use with single 16 ohm speaker or two 8 ohm speakers in series. Brushed brass wall plate.

**Switchcraft Part No. 652.** U.S.A. List Price **\$9.95**

Same as No. 652, except brushed stainless steel wall plate.

**Switchcraft Part No. 652-S.** U.S.A. List Price **\$9.95**

## SPEAKER VOLUME CONTROLS WITH JACK CONNECTION



Mounts in standard electrical wall outlet box. Constant impedance "T"-pad controls volume of speakers. Phone jack mounted on wall plate permits use of external speaker or headphones; accepts standard 2-cond. phone plug. Rated at 4 watts. Brushed brass wall plate; ivory and black dial. 8 ohms. Wall plate size: 4 1/2" x 2 3/4" x 1 1/8".

**Switchcraft Part No. 653.** U.S.A. List Price **\$12.00**

Same as above, but 16 ohm impedance.

**Switchcraft Part No. 654.** U.S.A. List Price **\$12.00**



## MULTI-SPEAKER SELECTOR SWITCH

7-position switch mounted on wall plate; fits standard outlet box. Selects any combination of three speakers. Ivory and black dial; brushed brass plate. Screw terminals. Maintains constant impedance regardless of switch position. Size: 4 1/2" x 2 3/4" x 1 3/8".

**Switchcraft Part No. 655.** U.S.A. List Price **\$5.50**

Same as above, except brushed stainless steel wall plate.

**Switchcraft Part No. 655-S.** U.S.A. List Price **\$5.50**

## SPEAKER VOLUME CONTROL WITH QUALITY L-PAD



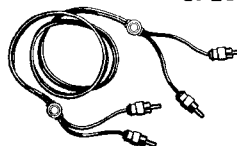
Specially designed "L"-pad volume control to prevent mismatch to amplifier at different volume settings. Brushed brass wall plate, ivory and black dial. Fits standard electrical outlet boxes. Solder lug terminals. Rated at 10 watts of peak audio power. 8 ohms. Size: 4 1/2" x 2 3/4" x 1 3/8".

**Switchcraft Part No. 656.** U.S.A. List Price **\$6.95**

Same as above, except brushed stainless steel wall plate.

**Switchcraft Part No. 656-S.** U.S.A. List Price **\$6.95**

## SPECIAL STEREO CABLES

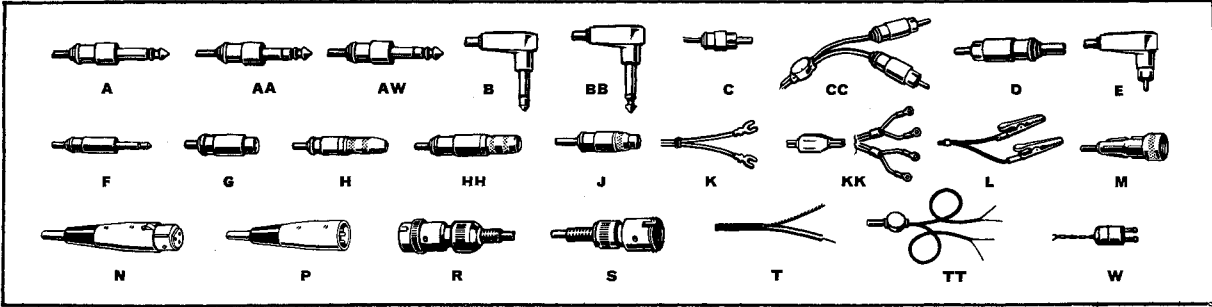


New, small diameter, molded stereo cable assemblies. All cable connections are soldered for noise-free connections. 2 shielded insulated cables (tandem) inside a common grey plastic jacket; provides two completely isolated channels. Phono plugs are color coded for easy identification of channels. Ideal for use in all stereo applications,

such as tape recorders, record players, amplifiers, tuners, etc. Cable capacity, 36 pF per foot.

Part No.	Description	U.S.A. List Price
25FF25	2 straight phono plugs on ea. end. Grey stereo cable, 36" long, shielded.	\$3.25
25FK25	Same as above, but 6' long.	3.75
25FN25	Same as 25FF25, but 10' long.	4.50
25FF84	2 straight phono plugs on one end to stripped and tinned leads on other end. Grey stereo cable, 36" long, shielded.	2.90
25FK84	Same as above, but 6' long.	3.25
25FN84	Same as 25FF84, but 10' long.	3.75

# SWITCHCRAFT HI-FI MOLDED CABLES



Only Switchcraft quality molded cable assemblies offer built-in cable clamps to support cable and eliminate strain—functionally designed handles to provide an easy grip. Cables 05LH84, 15LH84 and 87LH84 use coiled cord. Cable is chrome grey (unless otherwise specified) with matching plastic handles. Fig. AW Phone Plug with Resistor, 3-Conductor. Fig. M Microphone Connector—Female. Fig. N Switchcraft 3-Pin Connector—Female. Fig. P Switchcraft 3-Pin Connector—Male. Fig. R Amphenol 3-Pin Connector—Female. Fig. S Amphenol 3-Pin Connector—Male. Fig. W Ear-Receiver Plug.

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>STRAIGHT 2-CONDUCTOR PHONE PLUG TO VARIOUS CONNECTIONS</b>			
05AC05	A	A	18" \$1.60
05AD05	A	A	24" 1.75
05AK05	A	A	6' 2.60
05AN05	A	A	10' 3.50
05AU05	A	A	25' 4.75
05AK15	A	BB	6' 2.60
05AN15	A	BB	10' 3.50
05AK25	A	C	6' 2.00
05AN25	A	C	10' 2.75
05AR25	A	C	15' 3.00
05AK30	A	E	6' 2.00
05AN30	A	E	10' 2.75
05AK80	A	H	6' 2.60
05AN80	A	H	10' 3.50
05AR80	A	H	15' 4.00
05AU80	A	H	25' 4.75
05AK82	A	G	6' 2.20
05AN82	A	G	10' 3.00
05AR82	A	G	15' 3.25
05AK87	A	M	6' 2.60
05AN87	A	M	10' 3.50
05AU87	A	M	25' 4.75
05AK84	A	T	6' 1.75
05AN84	A	T	10' 2.25
05AR84	A	T	15' 2.75
05CK84*	A	T	6' 1.40
05CN84*	A	T	10' 1.90
05CK85*	A	K	6' 1.50
05CN85*	A	K	10' 2.00
05CK86*	A	L	6' 1.90
05CN86*	A	L	10' 2.40
05CR86*	A	L	15' 2.60
05CT86*	A	L	20' 3.00
05LH84†	A	T	4' 3.25

Monaural Replacement Headphone Cords for Brush BA-200, BA-205, BA-206 headphones and RCA M1-38107B headphone. Molded "Y" junction.

05KF88*	A	KK	3'	\$3.00
05KJ88*	A	KK	5'	3.20

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>STRAIGHT 3-CONDUCTOR PHONE PLUG TO VARIOUS CONNECTIONS</b>			
10BD10	AA	AA	24" \$3.25
10BF10	AA	AA	36" 3.65
10BK10	AA	AA	6' 4.80
10BN10	AA	AA	10' 6.00
10BU10	AA	AA	25' 8.75
10BK81	AA	H	6' 4.80
10BN81	AA	H	10' 6.00
10BU81	AA	H	25' 8.75

Stereo replacement headphone cords for direct replacement on Jensen HS-10 and Knight KN-840 stereo headphones. Quality tandem shielded stereo cable.

10FJ84	AA	TT	5'	\$2.95
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Stereo Cable Assembly for use with stereo tape recorders using 3-conductor dual microphone inputs—Norelco, Webcor, Revere, Wollensak.

10FK25	AA	CC	6'	\$4.00
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Webcor cable assemblies. 3-Cond. phone plug with internal resistor to various connections.

11AK26	AK	D	6'	\$3.25
11AN26	AK	D	10'	4.00
11CN86	AK	L	10'	3.25

2-Conductor Revere and Wollensak cables with R.A. Phone Plug to various connections.

12HK25	B	B	6'	\$2.50
12HB79	B	HH	12'	3.25
12HR79	B	HH	15'	5.00
12HU79	B	HH	25'	5.95
12HD80	B	H	24'	3.95

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>RIGHT ANGLE 2-CONDUCTOR PHONE PLUG TO VARIOUS CONNECTIONS</b>			
15AK15	BB	BB	6' \$2.60
15AN15	BB	BB	10' 3.50

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>Terminations</b>			
15AU15	BB	BB	25' \$4.75
15AK25	BB	C	6' 2.00
15AN25	BB	C	10' 2.75
15AR25	BB	C	15' 3.00
15AK30	BB	E	6' 2.00
15AN30	BB	E	10' 2.75
15AK80	BB	H	6' 2.60
15AN80	BB	H	10' 3.50
15AU80	BB	H	25' 4.75
15AK82	BB	G	6' 2.20
15AN82	BB	G	10' 3.00
15AK87	BB	R	6' 2.60
15AN87	BB	R	10' 3.50
15AN84	BB	T	10' 2.25
15AR84	BB	T	15' 2.75
15CN84*	BB	T	10' 1.90
15CK85*	BB	K	6' 1.50
15CN85*	BB	K	10' 2.00
15CK86*	BB	L	6' 1.90
15CN86*	BB	L	10' 2.40
15LH84†	BB	T	4' 3.25

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>STRAIGHT PHONO PLUG TO VARIOUS CONNECTIONS</b>			
25AC25	C	C	18" \$1.05
25AF25	C	C	36" 1.20
25AH25	C	C	4' 1.35
25AK25	C	C	6' 1.50
25AN25	C	C	10' 2.00
25AR25	C	C	15' 2.50
25AT25	C	C	20' 3.00
25AU25	C	C	25' 3.50
25AC30	C	E	18" 1.05
25AF30	C	E	36" 1.20
25AK30	C	E	6' 1.50
25AN30	C	E	10' 2.00
25AU30	C	E	25' 3.50
25AK80	C	H	6' 2.00
25AN80	C	H	10' 2.75
25AR80	C	H	15' 3.25
25AC82	C	G	18" 1.25
25AF82	C	G	36" 1.35
25AH82	C	G	4' 1.60
25AK82	C	G	6' 1.75
25AN82	C	G	10' 2.00
25AR82	C	G	15' 2.50
25AT82	C	G	20' 3.00
25AU82	C	G	25' 3.50
25AC84	C	T	18" .80
25AF84	C	T	36" .95
25AH84	C	T	4' 1.00
25AK84	C	T	6' 1.15
25AN84	C	T	10' 1.65
25AR84	C	T	15' 2.25
25AT84	C	T	20' 2.75
25AU84	C	T	25' 3.25
25CF84*	C	T	36" .75
25CK84*	C	T	6' .90
25CN84*	C	T	10' 1.40
25CK85*	C	K	6' 1.00
25CN85*	C	K	10' 1.50
25CK86*	C	L	6' 1.75
25CN86*	C	L	10' 2.25
25CR86*	C	L	15' 2.35
25CT86*	C	L	25' 2.60
25AK87	C	M	6' 2.45
25AN87	C	M	10' 3.35
25AU87	C	M	25' 4.60

Special Stereo Cables. Two shielded insulated cables inside a common grey plastic jacket. Provides two isolated channels for all stereo applications. Phono plugs color coded.

25FF25	CC	CC	36" \$3.25
25FK25	CC	CC	6' 3.75
25FN25	CC	CC	10' 4.50
25FF84	CC	TT	36" 2.90
25FK84	CC	TT	6' 3.25
25FN84	CC	TT	10' 3.75

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>STRAIGHT PHONO PLUG (LONG HANDLE) TO VARIOUS CONNECTIONS</b>			
26AF26	D	D	36" \$1.30
26AK26	D	D	6' 1.60

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>Terminations</b>			
26AN26	D	D	10' \$2.10
26AR26	D	D	15' 2.60
26AK05	D	A	6' 2.20
26AN05	D	A	10' 2.75
26AF82	D	G	36" 1.50
26AK82	D	G	6' 1.95
26AN82	D	G	10' 2.25
26AR82	D	G	15' 2.25
26AF84	D	T	36" 1.10
26AK84	D	T	6' 1.30
26AN84	D	T	10' 1.80

RIGHT ANGLE PHONO PLUG TO VARIOUS CONNECTIONS

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>RIGHT ANGLE PHONO PLUG TO VARIOUS CONNECTIONS</b>			
30AC30	E	E	18" \$1.05
30AF30	E	E	36" 1.20
30AH30	E	E	4' 1.35
30AK30	E	E	6' 1.50
30AN30	E	E	10' 2.00
30AR30	E	E	15' 2.50
30AT30	E	E	20' 3.00
30AU30	E	E	25' 3.50
30AK80	E	H	6' 2.00
30AN80	E	H	10' 2.75
30AC82	E	G	18" 1.25
30AF82	E	G	36" 1.35
30AK82	E	G	6' 1.75
30AN82	E	G	10' 2.00
30AR82	E	G	15' 2.50
30AT82	E	G	20' 3.00
30AU82	E	G	25' 3.50
30AF84	E	T	36" .95
30AK84	E	T	6' 1.15
30AN84	E	T	10' 1.65
30CF84*	E	T	36" .75
30CK84*	E	T	6' .90
30CN85*	E	K	10' 1.50
30CF86*	E	L	6' 1.75
30CK86*	E	L	10' 2.25

STRAIGHT TINI-PLUG TO VARIOUS CON.

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>STRAIGHT TINI-PLUG TO VARIOUS CON.</b>			
40DK05	F	A	6' \$2.75
40DF25	F	C	36" 2.10
40DK25	F	C	6' 2.50
40DK80	F	H	6' 2.75
40DK82	F	G	6' 2.50
40DK83	F	J	6' 2.75
40DN83	F	J	10' 3.25
40DF84	F	T	36" 1.75
40DK84	F	T	6' 2.00
40DN84	F	T	10' 2.50
40DN86	F	W	10' 2.50
41EF75†	F	W	36" 2.00
41EH75†	F	W	4' 2.25
45AN25	F	C	10' 2.75
45AR25	F	C	15' 3.25
45AU25	F	C	25' 4.25

EXTENSION JACK CORDS

82AC82	G	G	18" \$1.50
82AF82	G	G	36" 1.65
82AK82	G	G	6' 1.95
83DK05	J	A	6' 2.75

CORDS W/ SPADE LUGS, ALLIGATOR CLIPS

85CN85*	K	K	10' \$0.90
85CT85*	K	K	20' 1.50
85CU85*	K	K	25' 1.75
86CN86*	L	L	10' 1.70
86CU86*	L	L	25' 2.55

MICROPHONE CONNECTOR TO VARIOUS CONNECTIONS

Part Number	Terminations		U.S.A. Length List Price
	End No. 1 Fig.	End No. 2 Fig.	
<b>MICROPHONE CONNECTOR TO VARIOUS CONNECTIONS</b>			
87AF84	M	T	36" \$1.50
87AK84	M	T	6' 1.75
87AN84	M	T	10' 2.25
87AU84	M	T	25' 4.25
87LH84†	M	T	4' 3.35
87AF87	M	M	36" 2.00
87AK87	M	M	6' 2.50
87AP87	M	M	12' 3.50
87AU87	M	M	25' 5.00
91BU92	N	P	25' 12.50
93BU94	R	S	25' 9.75

\*Parallel unshielded cable. †Shielded, tinsel coiled cord. Black plastic jacket, extends to 4'. ‡Hearing Aid Tinsel Cord. All other cables shielded.

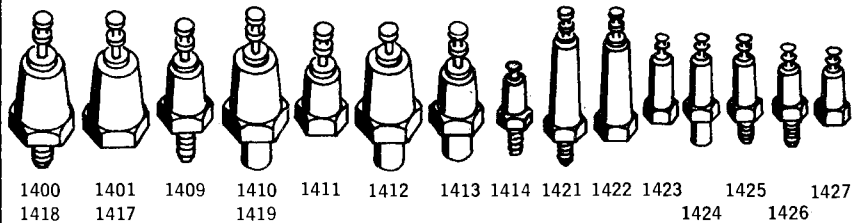


SECTION 2100

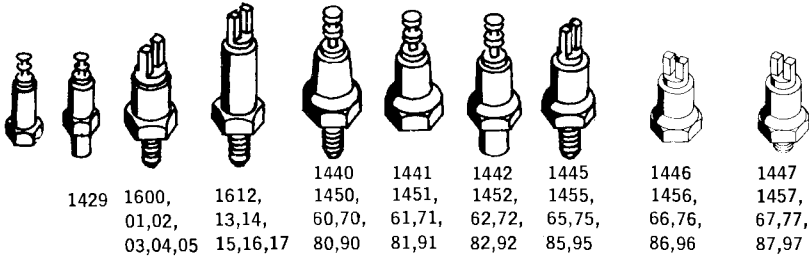


**STANDARDIZED  
ELECTRONIC HARDWARE**

**INSULATED TERMINALS (MIL-T-55155 Terminals also available)**

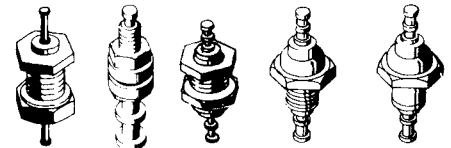


1400 1401 1409 1410 1411 1412 1413 1414 1421 1422 1423 1425 1427  
1418 1417 1419 1419 1424 1426



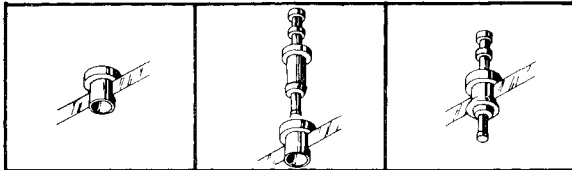
1429 1600, 1612, 1440 1441 1442 1445 1446 1447  
01,02, 13,14, 1450, 1451, 1452, 1455, 1456, 1457,  
03,04,05 15,16,17 60,70, 61,71, 62,72, 65,75, 66,76, 67,77,  
80,90 81,91 82,92 85,95 86,96 87,97

**Feed-Thru**



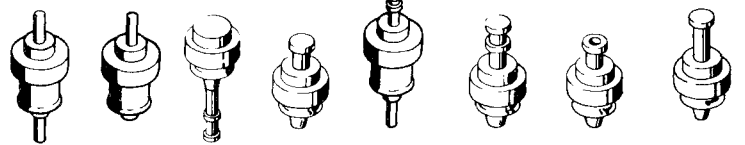
1430 1432 1433, 1483 1484  
1431 34,35 36

**LOC-FIT TEFLON INSULATED TERMINALS**

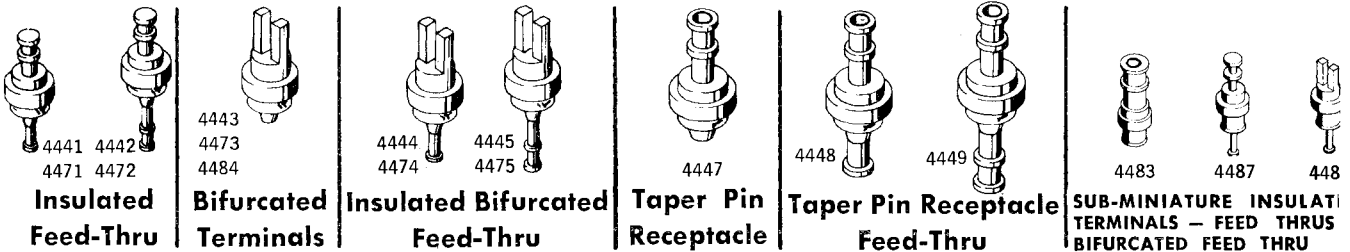


1. Push Teflon Grommet into hole.  
2. Insert LOC-FIT terminal.  
3. Snap LOC-FIT into place.

**Insulated Terminals**

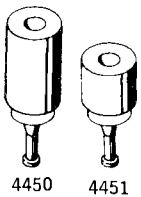


4401 4402 4430 4435 4437 4440 4446 4460  
4485 4480 4433 4435 4437 4470 4476 4482

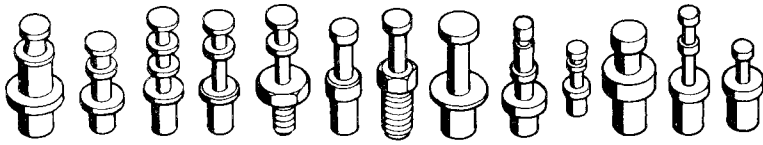


4441 4442 4443 4444 4445 4447 4448 4449 4483 4487 448  
4471 4472 4473 4474 4475 4447 4448 4449 4483 4487 448  
**Insulated Feed-Thru** **Bifurcated Terminals** **Insulated Bifurcated Feed-Thru** **Taper Pin Receptacle** **Taper Pin Receptacle Feed-Thru** **SUB-MINIATURE INSULATED TERMINALS - FEED THRU BIFURCATED FEED THRU**

**STANDARD TERMINALS Turret**

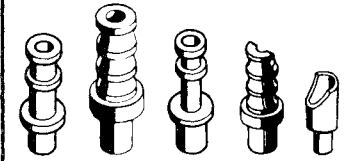


4450 4451  
**Insulated Test Point**



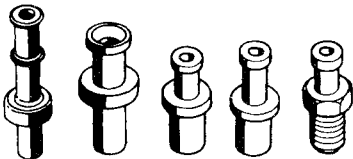
1210 1280 1299 1300 1300T 1340 1340T 1350 1370 2030 2060 2520 2540  
81, 82 2035 2031 2061 2064 2062

**Hollow Lug**

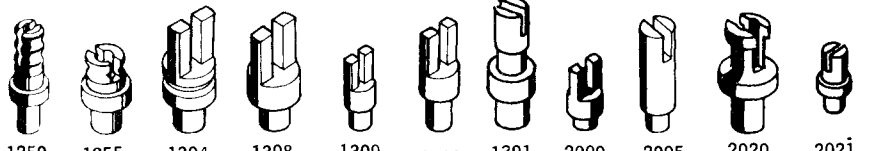


1200 1260 1330 1380 2063

**Bifurcated**

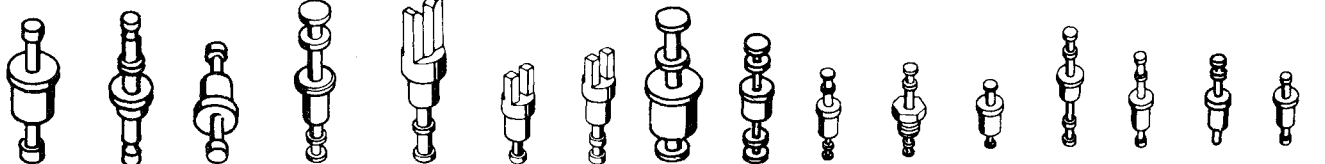


1390 1392 2010 2011 2010T



1250 1255 1304 THRU 1308 1309 1310 1391 2000 THRU 2005 2020 2022 2021  
1240 1307 2023 2004 2065

**Feed-Thru**



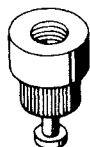
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02, 09 2510

SECTION 2100



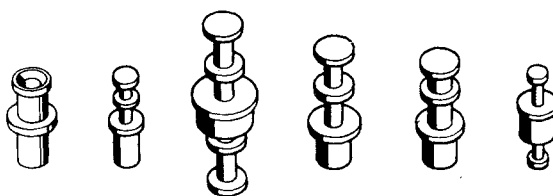
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Combination Terminal



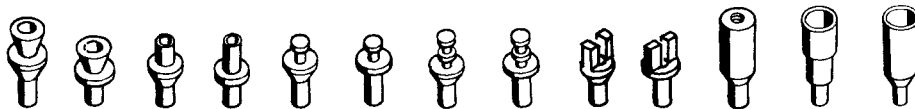
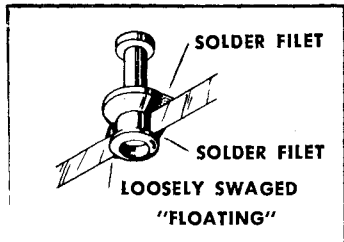
1203

NAS Terminals (Mil-T-55155 Terminals also available)



704 705 706 707 708 709

FLOATING PRINTED CIRCUIT TERMINALS



7000 7001 7010 7011 7020 7021 7030 7031 7040 7041 7050 7051 7052

WELDABLE TERMINALS



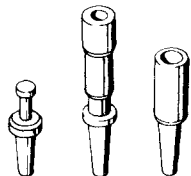
7200 7201  
11,21 10,20

EYELETS



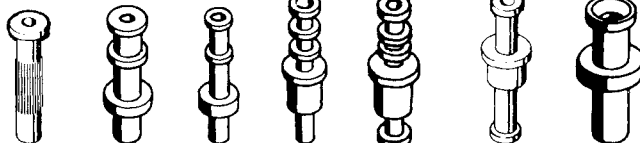
7600 7650

TAPER PINS



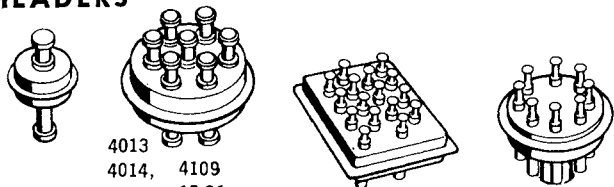
2770 2775 2776

TAPERED RECEPTACLE



2710 2720 2730 2750 2760 2761 2762 2764

HEADERS

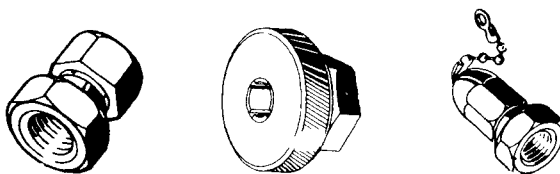


4013  
4014, 4109  
33,55, 15,51,  
4008 56,64, 52,62,  
4010 67,68, 63,64,  
4011 74,78 65,67

4107  
4166

4098

SHAFT LOCKS

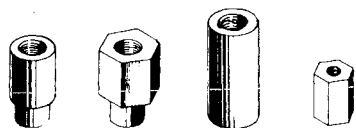


1510  
1511  
1512

1513  
1520

1515  
1514  
(CAP ONLY)

TAND-OFFS



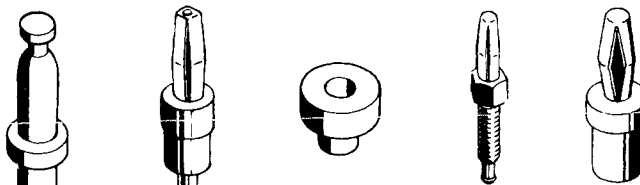
1530 1531 1532 1550 1551 1580

Chassis Fastener



1590  
1591

PLUGS & SOCKETS



1700  
1785

1705  
1782

1710  
1786

1715  
1716

1780  
1781

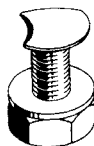
ACCESSORY HARDWARE



1560 series  
1561 series  
Chassis  
Bushing



1800  
Dial  
Lock



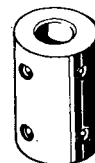
1815  
Dial  
Indicator



3100-6  
8, 10  
Thumb  
Screw



3200-6  
8,10,25  
Captive  
Panel Screw



3316A, B  
Shaft  
Coupling

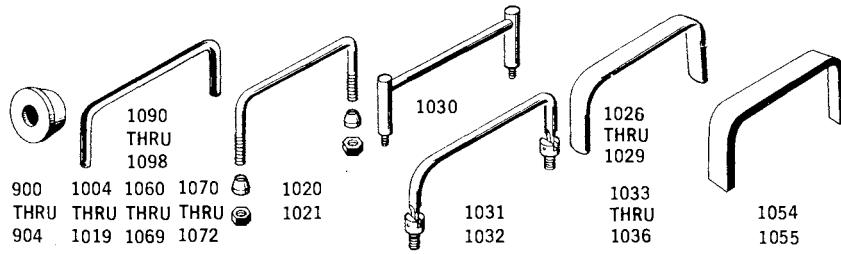
SECTION 2100



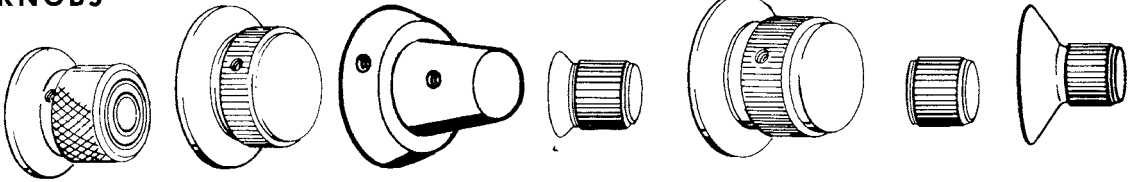
**STANDARDIZED  
ELECTRONIC HARDWARE**

**HANDLES & FERRULES**

Brass, Aluminum and Stainless Steel



**KNOBS**



300 series  
305 series  
310 series

400 series  
410 series

450 series

500 series  
501 series  
502 series

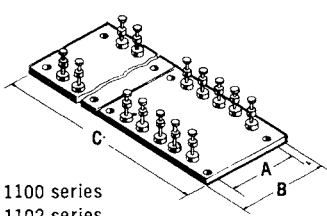
550 series  
555 series  
560 series

625 series  
626 series  
627 series

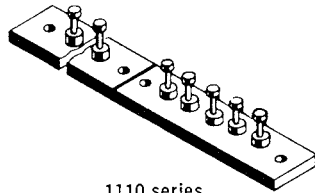
1000 series  
1038 series  
1040 series

FOR ANODIZED COLORS  
ORDER BY DASH NO.  
-20 PLAIN -25 GREEN  
-21 BROWN -26 BLUE  
-22 RED -27 VIOLET  
-23 ORANGE -28 GREY  
-24 YELLOW -30 BLACK

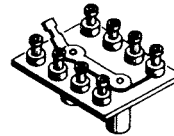
**TERMINAL BOARDS & BRACKETS**



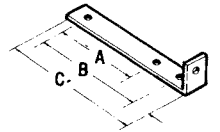
1100 series  
1102 series  
2200 series  
2202 series



1110 series  
1112 series  
2210 series  
2212 series

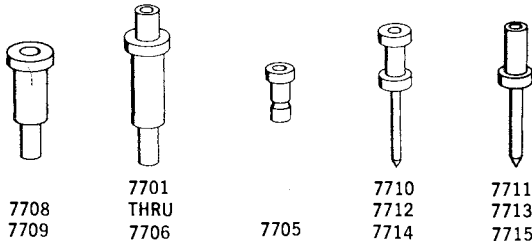


1180  
1181  
1182



NO.	A	B	C	D	USE ON
11-2	1.50	—	2-1/8	.35	1100E
11-3	1.50	2.00	2-5/8	.35	1100B 1100C
11-4	2.00	2.50	3-5/16	.56	1100C 1100E
11-5	1.50	2.00	2-13/16	.56	1100E 1100C

**UNIJAK CONNECTORS**



7708  
7709

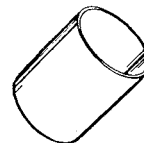
7701  
THRU  
7706

7705

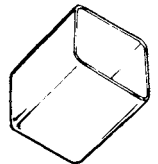
7710  
7712  
7714

7711  
7713  
7715

**ENCAPSULATION CAPS**

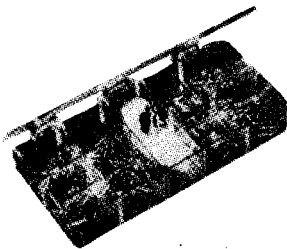


Series  
100



Series  
200

**ENGINEERING DESIGN KIT**



K-44-1  
K-14-1  
K-14-2  
K-14-3

**LOC FIT  
HI ALUMINA  
TEFLON  
PLASTIC**

**SWAGING MACHINES AND TOOLS**



Model A

**How To Order**

Order by basic part number of terminal for which tool is to be used. Disregard letter and/or number following basic number.

Example:

1. For terminal #1300 A-1 order tool #1300
2. For LOC-FIT #4430 B-9 order tool #4330

note: unless otherwise specified, tolerances are  $\pm .010$

Standard Catalog Items are stocked by USECO Authorized Distributors throughout the country. Special Items and information may be obtained by writing Litton Industries, USECO DIVISION Van Nuys, Calif.



**LITTON INDUSTRIES  
USECO DIVISION**

SECTION 2100



Al = Aluminum  
 Bd. Thick. = Board Thickness  
 Br = Brass  
 C = Consecutively  
 CW = Clockwise  
 CCW = Counter-clockwise  
 D = Swage Diameter  
 H = Height  
 M = Material

Mtg. D = Mounting Diameter  
 O.H. = Overall Height  
 O.L. = Overall Length  
 S.D. = Shaft Diameter  
 Sk. D. Skirt Diameter  
 T = Thread  
 X = Shank or Thread Length, see box as indicated

SHANK LENGTH						
NAS	-1	-2	-3	-4		
	A	B	C	D	E	F
	.075	.105	.135	.165	.195	.230

SHANK LENGTH				
AA	A	B	C	D
.037	.053	.084	.115	.147

SHANK LENGTH						
A	B	C	D	E	F	G
.054	.094	.125	.156	.188	.219	.281

THREAD LENGTH			
A	B	C	D
.187	.250	.312	.375

THREAD LENGTH	
A	B
.125	.218

SHANK LENGTH			
NAS	-1	-2	-3
	A	B	C
	.062	.094	.125

SHANK LENGTH			
NAS	-1	-2	-3
	.078	.109	.141

HEIGHT ABOVE BOARD							
1/8	3/16	1/4	5/16	3/8	7/16	1/2	1.00

TERMINALS & EYELETS

Order by Part Number and Letter. For example, 1300A, NAS 704-1, etc., Standard Plating All Metal Terminals -1, Insulated Terminals, -9, P.C. Terminals and Eyelets -7.

Part Number	X (see box no.)	Tor D	Bd Thick.—Order by Letter								H above/below bd.	Insulation Material
			1/4	3/32	1/8	5/32	3/16	1/4	1/2	3/4		
1200	#1	.114	A	B	C	D					.328/—	
1203C	.141	.221	B	C	D						.250/.172	
1203D	.172	.251				D					.312/.203	
1203E	.234	.258					E				.375/.203	
1210	#1	.114	A	B	C	D					.266/—	
1220	#1	.163	B	C	D						.250/.203	
1230	#1	.183	B	C	D						.469/.297	
1240	#1	.183	B	C	D						.481/—	
1250	#1	.114	A	B	C	D					.312/—	
1255	#1	.114	A	B	C	D					.188/—	
1260	#1	.114	A	B	C	D					.312/—	
1280	#1	.091	A	B	C	D					.239/—	
1281	#7	.090	A	B	C	D					.219/—	
1282	#7	.090	A	B	C	D					.281/—	
1290	#1	.114	A	B	C	D					.156/.125	
1299	#1	.114	A	B	C	D					.421/—	
1300	#1	.114	A	B	C	D					.364/—	
1300T	.188	4.40									.364/—	
1301	#1	.114		C	D						.364/.312	
1304	#1	.114	B	C	D						.344/—	
1305	#1	.114	B	C	D						.344/—	
1306	#1	.135	B	C	D						.500/—	
1307	#1	.186	B	C	D						.688/—	
1308	#2	.114	A	B	C	D					.328/—	
1309	#1	.091	A	B	C	D					.239/—	
1310	#1	.114	A	B	C	D					.312/—	
1311	#1	.114	A	B	C	D					.310/.250	
1315	#3	.094	B	C	D						.188/.100	
1316	#3	.094	B	C	D						.188/.194	
1320	#1	.204	B	C	D						.344/.125	
1330	#1	.135	B	C	D						.312/—	
1340	#1	.079	A	B	C	D					.181/—	
1340T	.125	2.56									.181/—	
1350	#1	.114	B	C	D						.234/—	
1360	#1	.204	B	C	D						.364/.315	
1370	#1	.114	B	C	D						.469/—	
1380	#1	.114	B	C	D						.312/—	
1390	#1	.079	A	B	C	D					.328/—	
1391	#1	.151	A	B	C	D					.375/—	
1392	#1	.111	A	B	C	D					.188/—	
1400A,B,C,D	#4	6-32									.59/—	Phenolic
1400E,F,G,H	#4	4-40									.59/—	"
1401		6-32									.59/—	"
1401A		4-40									.59/—	Alkyd
1409A,B,C,D	#4	6-32	A	B	C	D					.59/—	Phenolic
1409E,F,G,H	#4	4-40									.50/—	"
1410	#3	.188	A	B	C	D					.59/—	Phenolic
1411A		6-32									.50/—	Alkyd
1411B		4-40									.50/—	"
1412	#3	.115	A	B	C	D					.42/—	"
1413	#3	.115	A	B	C	D					.50/—	"
1414	.080	3.48									.375/—	"
1417		6-32									.59/—	"
1417A		4-40									.59/—	"
1418A,B,C,D	#4	6-32									.59/—	"
1418E,F,G,H	#4	4-40									.59/—	"
1419	#3	.188	A	B	C	D					.59/—	"
1421	.250	6-32									1.08/—	"
1422		6-32									1.08/—	"
1423		6-32									.88/—	"
1424	#1	.115	B	C	D						.53/—	"
1425	.218	2.56									.53/—	"
1426A	.125	2.56									.38/—	"
1426B	.218	2.56									.38/—	"
1427		2.56									.53/—	"
1428		2.56									.38/—	"
1429	#1	.115	B	C	D						.38/—	"
1430		10-32									.26/.42*	Diallyl Phthalate
1431		10-32									.26/.42*	Teflon
1432	.358	5-40									.43/.348	"
1433		1/4-28									.355/.538*	Diallyl Phthalate
1434		1/4-28									.355/.538*	Teflon
1435		3/8-32									.542/.768*	Diallyl Phthalate
1436		3/8-32									.542/.768*	Teflon
1440A,B,C,D	#4	6-32									.53/—	Hi-Alumina
1440E,F,G,H	#4	4-40									.53/—	"
1441A		2.56									.57/—	"
1441B		4-40									.57/—	"
1442	#1	.115	A	B	C	D					.53/—	"
1445A,B,C,D	#1	6-32									.55/—	"
1445E,F,G,H	#4	4-40									.55/—	"
1446A		2.56									.60/—	"
1446B		4-40									.60/—	"
1447	#1	.115	A	B	C	D					.53/—	"
1450A,B,C,D	#4	6-32									.60/—	Teflon
1450E,F,G,H	#4	4-40									.60/—	"
1451		6-32									.63/—	"
1451A		4-40									.63/—	"
1452	#4	.188	A	B	C	D					.60/—	"
1455A,B,C,D	#4	6-32									.60/—	"
1455E,F,G,H	#4	4-40									.60/—	"
1456		6-32									.63/—	"
1456A		4-40									.63/—	"
1457	#3	.188	A	B	C	D					.60/—	"
1460A,B,C,D	#4	6-32									.60/—	Hi-Alumina
1460E,F,G,H	#4	4-40									.60/—	"
1461		6-32									.63/—	"
1461A		4-40									.63/—	"
1462	#3	.188	A	B	C	D					.60/—	"
1465A,B,C,D	#4	6-32									.60/—	"
1465E,F,G,H	#4	4-40									.60/—	"
1466		6-32									.63/—	"
1466A		4-40									.63/—	"
1467	#3	.188	A	B	C	D					.60/—	"
1470A,B,C,D	#4	6-32									.51/—	Teflon
1470E,F,G,H	#4	4-40									.51/—	"
1471A		2.56									.55/—	Teflon
1471B		4-40									.55/—	"

Part Number	X (see box no.)	Tor D	Bd Thick.—Order by Letter				H above/below bd.	Insulation Material
			1/4	3/32	1/8	5/32		
1472	#1	.115	A	B	C	D	.51/—	Teflon
1475A,B,C,D	#4	6-32					.51/—	"
1475E,F,G,H	#4	4-40					.51/—	"
1476A		2.56					.55/—	"
1476B		4-40					.55/—	"
1477	#1	.115	A	B	C	D	.51/—	"
1480A,B	#5	2.56					.36/—	Hi-Alumina
1480C,D	#5	4-40					.36/—	"
1481A		4-40					.42/—	"
1481B		2.56					.42/—	"
1482	#3	.115	A	B	C	D	.36/—	"
1483	.250	1/4-28					.359/.552	"
1484	#1	.188	B				.39/.29	"
1485AB	#5	2.56					.36/—	"
1485CD	#5	4-40					.36/—	"
1486A		4-40					.42/—	"
1486B		2.56					.42/—	"
1487	#3	.115	A	B	C	D	.36/—	"
1490A,B	#5	2.56					.36/—	Teflon
1490C,D	#5	4-40					.36/—	"
1491A		2.56					.39/—	"
1492	#3	.115	A	B	C	D	.36/—	"
1495A,B	#5	2.56					.36/—	"
1495C,D	#5	4-40					.36/—	"
1495E		2.56					.39/—	"
1497	#3	.115	A	B	C	D	.36/—	"
1600A,B,C,D	#4	6-32					.62/—	Alkyd
1600E,F,G,H	#4	4-40					.62/—	"
1601A		6-32					.62/—	"
1601B		4-40					.62/—	"
1602	#1	.115	A					

**SECTION 2100**

LITTON INDUSTRIES/USECO DIVISION

TERMINALS & EYELETS

**TERMINALS & EYELETS (Cont'd)**

Part Number	X (see box no.)	Tor D	Bd Thick—Order by Letter				H above/below bd.
			1/32	1/16	3/32	1/8	
4443	.142	A B C			.312/.081		
4444	.142	A B C			.312/.205		
4445	.142	A B C			.312/.319		
4446	.142	A B C			.230/.081		
4447	.188	A B C			.400/.081		
4448	.188	A B C			.400/.247		
4449	.188	A B C			.400/.369		
4450	.126	A B C D			.346/.280		
4451	.189	A B C			D .135/.197		
4460	.142	A B C			.312/.081		
4470	.154	A B C			.312/.081		
4471	.154	A B C D			.312/.205		
4472	.154	A B C			.312/.319		
4473	.154	A B C D			.312/.081		
4474	.154	A B C			.312/.205		
4475	.154	A B C			.312/.319		
4476	.154	A B C			.230/.081		
4480	.126	A B			.260/.060		
4482	.126	A B			.289/.060		
4483	.126	A B			.253/.060		
4484	.126	A B			.289/.060		
4485	.126	A B			.260/.218		
4487	.126	A B			.289/.218		
4489	.126	A B			.289/.218		
7000	#6	.062	A B C D		.136/—		
7001	#6	.062	A B C D		.104/—		
7010	#6	.062	A B C D		.188/—		
7011	#6	.062	A B C D		.156/—		
7020	#6	.062	A B C D		.136/—		
7021	#6	.062	A B C D		.104/—		
7030	#6	.062	A B C D		.188/—		

Part Number	X (see box no.)	Tor D	Bd Thick—Order by Letter				H above/below bd.	
			1/32	1/16	3/32	1/8		
7031	#6	.062	A	B	C	D	.156/—	
7040	#6	.062	A	B	C	D	.188/—	
7041	#6	.062	A	B	C	D	.156/—	
7050	#6	.062	A	B	C	D	.312/—	
7051	#2	.038	A	B	C	D	.325/—	
7052	Teflon	#2	.047	A	B	C	D	.310/—
7600	#5	.030	A	B	C	D		
7601	#5	.047	A	B	C	D		
7602	#5	.058	A	B	C	D		
7603	#5	.075	A	B	C	D		
7604	#5	.090	A	B	C	D		
7650A	.051	.030	A					
7650B	.082	.030	A	B				
7651A	.054	.047	A					
7651B	.085	.047	A	B				
7651C	.117	.047	A	B	C			
7651D	.148	.047	A			D		
7652A	.068	.058	A					
7652B	.099	.058	A	B				
7652C	.131	.058	A	B	C			
7652D	.162	.058	A			D		
7653A	.084	.075	A					
7653B	.095	.075	A	B				
7653C	.127	.075	A	B	C			
7653D	.158	.075	A			D		
7654A	.068	.090	A					
7654B	.099	.090	A	B				
7654C	.131	.090	A	B	C			
7654D	.162	.090	A			D		
NAS 704	#7	.110	-1	-2	-3	-4	.188/—	
NAS 705	#1	.090	-1	-2	-3	-4	.237/—	
NAS 706	#6	.201	-2	-3	-4		.342/.315	
NAS 707	#7	.112	-2	-3	-4		.360/—	
NAS 708	#7	.112	-2	-3	-4		.313/—	
NAS 709	#6	.116	-1	-2	-3	-4	.156/-.125	

Part Number	X (See Box No.)	Tor D	Bd Thick—Order by Letter				H above/below bd.	
			1/32	1/16	3/32	1/8		
7200	#2	.046	AA	A	B	C	D	.312/—
7201	#2	.046	AA	A	B	C	D	.312/—
7210	#6	.046	A	B	C	D		.086/—
7211	#2	.046	AA	A	B	C	D	.097/—
7220	#6	.046	A	B	C	D		.086/—
7221	#2	.046	AA	A	B	C	D	.097/—
7701	#2	.062	B	C				.245/—
7702	#2	.062	B	C				.345/—
7705	NA	.060						.030/—
7706	#3	.062	B	C				.245/—
7708	NA	.072						.062/—
7709	NA	.072						.062/—
7710	NA	NA						.395/—
7711	#6	.060	C					.270/—
7712	NA	NA						.215/—
7713	.065	.040	AA					.150/—

**TERMINAL BOARDS & BRACKETS**

A, B, C Letters Indicated on Drawing

Part Number	M	A	See Dwg		C
			B	C	
11-2, 3, 4, 5	Steel	(See bracket box)			
1100A	XXX	1.00	1.50		13.12
1100B	XXX	1.50	2.00		13.12
1100C	XXX	2.00	2.50		13.12
1100D	XXX	2.50	3.00		13.12
1102A	GEE	1.00	1.50		13.12
1102B	GEE	1.50	2.00		13.12
1102C	GEE	2.00	2.50		13.12
1102D	GEE	2.50	3.00		13.12
1110	XXX	—	.50		13.12
1112	GEE	—	.50		13.12
1180	GMG	.50	.72		.88
1181	GMG	.75	1.03		1.22
1182	GMG	.88	1.16		1.50
1183	GEE	.50	.72		.88
1184	GEE	.75	1.03		1.22
1185	GEE	.88	1.16		1.50
2200B	XXX	.75	1.00		7.81
2200C	XXX	.50	.75		7.81
2202B	GEE	.75	1.00		7.81
2202C	GEE	.50	.75		7.81
2210	XXX	—	.31		7.81
2212	GEE	—	.31		7.81
8001	(materials)	(See 1100 series)			
8002	and	(See 1110)			
8003	configurations	(See 2200 series)			
8004	on request	(See 2210)			
1100 and 2200 series scored for 5 sections					

**KNOBS (Cont'd)**

Part Number	SD	H	SKD
450	.250/.125	.99	1.00
590	.250	.50	.62
501	.188	.50	.62
502	.125	.50	.62
550	.250	.612	.81
551	.188	.612	.81
552	.125	.612	.81
555	.250	.675	1.03
556	.188	.675	1.03
557	.125	.675	1.03
560	.250	.750	1.23
561	.188	.750	1.23
562	.125	.750	1.23
625	.250	.56	.45
626	.188	.56	.45
627	.125	.56	.45
1000	.250	.75	1.00
1001	.188	.75	1.00
1002	.125	.75	1.00
1038	.250	.88	1.38
1039	.188	.88	1.38
1040	.125	.88	1.38

**HANDLES & FERRULES**

Part Number	M	T	OL	H
900	Br	(Fits 1004 thru 1019)		
901	Al	(Fits 1060 thru 1069)		
903	Br	(Fits 1070 thru 1072)		
904	Ss	(Fits 1090 thru 1098)		
1004	Br	10-32	6.44	1.50
1005	Br	10-32	6.44	1.75
1006	Br	10-32	3.00	1.31
1007	Br	10-32	6.00	1.50
1010	Br	10-32	4.25	1.50
1012	Br	10-32	4.00	1.50
1013	Br	10-32	4.56	1.50
1015	Br	10-32	3.00	1.50
1016	Br	8-32	3.00	1.31
1017	Br	10-32	2.00	1.50
1018	Br	10-32	8.00	1.50
1019	Br	10-32	10.00	1.50
1020	Br	5/16-18	4.25	2.12
1021	Al	5/16-18	4.25	2.12
1030	Br	5/16-18		1.50
1031 (90° fold)	Br	3/8-24	4.00	1.81
1032 (180° fold)	Br	3/8-24	4.00	1.81
1033	Br	10-32	3.00	1.28
1034	Br	10-32	4.56	1.50
1035	Br	10-32	6.44	1.75
1036	Br	10-32	9.00	1.75
1050	Al	10-32	3.00	1.28

\*Available lengths 3" to 6" in 1/2" increments.

**HANDLES & FERRULES (Cont'd)**

Part Number	SD	H	SKD
1051	Al	10-32	4.56 1.50
1052	Al	10-32	6.44 1.75
1053	Al	10-32	9.00 1.75
1054	Al	8-32	4.25 1.50
1055	Al	8-32	6.00 1.50
1060	Al	10-32	6.44 1.50
1061	Al	10-32	6.44 1.75
1062	Al	10-32	6.00 1.50
1063	Al	10-32	4.00 1.50
1064	Al	10-32	4.00 1.50
1065	Al	10-32	4.56 1.50
1066	Al	10-32	3.00 1.50
1067	Al	10-32	2.00 1.50
1068	Al	10-32	8.00 1.50
1069	Al	10-32	10.00 1.50
1070	Br	6-32	1.25 1.00
1071	Br	6-32	1.75 1.00
1072	Br	6-32	2.25 1.00
1090	Ss	10-32	2.00 1.50
1091	Ss	8-32	3.00 1.31
1092	Ss	10-32	3.00 1.50
1093	Ss	10-32	4.00 1.50
1094	Ss	10-32	4.25 1.50
1095	Ss	10-32	4.56 1.50
1096	Ss	10-32	6.00 1.50
1097	Ss	10-32	8.00 1.50
1098	Ss	10-32	10.00 1.50

**HEADERS**

Part No.	Mtg. D	O.H.	Pins Numbered
4008	1 3/64	3/16	1
4010	2 3/64	7/32	1
4011	2 3/64	1 1/32	1
4013	2 3/64	7/32	1 thru 7 CCW
4014	1 3/32	3/16	1 thru 7 CCW
4033	1 13/32	7/32	1 thru 16 CCW
4055	3/4	1 1/32	1 thru 9 CW
4056	2 3/32	1 1/32	1 thru 12 CW
4064	4 1/32	7/16	1 thru 8 CW
4067	3/4	7/16	1 thru 9 CW
4068	2 3/32	7/16	1 thru 12 CW
4074	3 1/4	1 1/16	1 thru 7 CW
4078	1 3/8	3/32	1 thru 7 CW
4098	6 1/64	7/16	1 thru 8 CW
4107	1 3/32 x 2 3/32	7/16	1 thru 16 C
4109	2 3/32	1/2	1 thru 12 CW
4115	3/4	2 3/32	1 thru 9 CW
4151	2 3/32	2 3/32	1 thru 7 CCW
4152	2 3/32	2 3/32	1 thru 7 CCW
4162	4 1/64	1 3/16	1 thru 8 CW
4163	2 3/64	1 3/16	1 thru 7 CW
4164	2 3/32	1 3/32	1 thru 12 CW
4165	3/4	1 3/32	1 thru 9 CW
4166	1 3/32 x 2 3/32	1 3/32	1 thru 16 C
4167	2 3/32	7/32	1 thru 7 CW

**MISC. HARDWARE**

Part Number	X (see box no.)	T and D	Bd. Thick.—Order by Letter				H above/below bd.
			1/32	1/16	3/32	1/8	
1510			.250			3/8-32	
1511			.250			3/8-32	
1512			.125			1/4-32	
1513			.125			1/4-32	
1514		Cap Only					
1515			.250			3/8-32	
1520			.250				

# TRIMM INC. LIBERTYVILLE • ILLINOIS

## PLUGS & JACKS



### "511-513" STANDARD PHONE PLUGS

General purpose plugs, designed to fit all standard jacks and available in both two and three conductor types. The "511" series, the two conductor plugs, are provided with binding head screws (No. 6) in terminals, and handles made of molded bakelite or metal when shielded plugs are required. The "513" series are three conductor types and use solder lug connections only. The 515 adapter provides a means of coupling Amphenol type microphone plugs to standard jacks. Tip and stem solid one piece construction, staked after assembly with terminal, prevents loosening in service. All metal parts brass; tip, sleeve, body, and shielded shells bright plated. Stay cord anchorage provided. Shielded types have tubular fiber liners. All plugs fit standard 0.250 I.D. jacks.

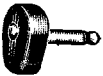
#### TWO CIRCUIT TYPE

	List
No. 511 —Black plastic shell .....	\$0.70
No. 511-1—Red plastic shell .....	0.70
No. 511-2—Shielded, single piece shell .....	1.20
No. 511-3—Shielded, two piece shell with cable clamp .....	1.65
No. 511-4—Shielded, stubby shell .....	0.90
No. 511-5—Two circuit, shielded, stubby shell. Has long tip to sleeve insulator which leaves "ring" spring open when inserted in three circuit jack .....	1.05
No. 515 —Adapter. See description in above paragraph .....	0.50

#### THREE CIRCUIT TYPE

No. 513 —Three circuit, black plastic shell .....	1.05
No. 513-1—Three circuit, red plastic shell .....	1.05
No. 513-2—Three circuit, shielded, single piece shell .....	1.50
No. 513-3—Three circuit, shielded, two piece shell with cable clamp .....	1.95
No. 513-4—Three circuit, shielded, stubby shell .....	1.30

### "512" FLAT TYPE PLUG



Compact, non-protruding design. Ideal for group hearing aid systems, centralized radio systems, etc. Body molded of phenolic plastic. All exposed edges rounded. Provision for stay cord anchorage. Fits standard jacks (0.250").

	List		List
No. 512 —Black .....	\$0.90	No. 512-1—Red .....	\$0.90
No. 512-2—Same as No. 512 plus hook projecting outward from face of plug on which headset may be hung. Used on centralized radio installations .....			\$1.35



### "514" MIN-A-PLUG

Developed especially for shielded microphone cable. Available in both 2-conductor tip and sleeve construction and 3-conductor tip, ring and sleeve construction. 2-conductor types available in both 0.250" and 0.206" dia. Shell is only 1/4" in dia., and 1 1/2" long except stubby type—1" long. Wing type terminal lugs project directly on to cord shield. Tip and stem solid one piece construction, taken after assembly, to prevent loosening in service. Shielded types have tubular fiber liners. All external metal parts bright nickel plated.

#### TWO CONDUCTOR TYPES (0.250" dia.)

SOLDER TERMINALS	List
No. 514 —Black plastic shell .....	\$0.70
No. 514-1—Red plastic shell .....	0.70
No. 514-2—Shielded .....	1.00
No. 514-4—Shielded, stubby type .....	0.90

#### TWO CONDUCTOR TYPES (0.206" dia.)

SOLDER TERMINALS	List
No. 514-20—Black plastic shell .....	\$0.80
No. 514-21—Red plastic shell .....	0.80
No. 514-22—Shielded .....	1.10
No. 514-24—Shielded, stubby type .....	1.00

#### THREE CONDUCTOR TYPES (0.250" dia.)

SCREW TERMINALS	List	SOLDER TERMINALS	List
No. 514-6—Black plastic shell .....	0.90	No. 514-30—Black plastic shell .....	\$1.20
No. 514-7—Red plastic shell .....	0.90	No. 514-31—Red plastic shell .....	1.20
No. 514-8—Shielded .....	1.20	No. 514-32—Shielded .....	1.50

### "518" PLUG—"562" JACK



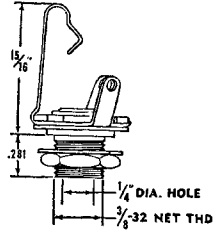
Two-circuit miniature disconnect plug and jack series. Ideal for small size cordage. Plugs have two grooved, parallel pins which engage with multi-leafed contact springs in jack. No. 518 and 562 have acetate half shells cemented together.

No. 518-7 and 562-7 have molded bakelite shells held together with screws.	
	List
No. 518 —Plug .....	\$0.60
No. 518-7—Plug .....	0.80
No. 562 —Jack .....	0.80
No. 562-7—Jack .....	1.00
No. 518-8—Polarized disconnect plug (Like 518-7 except has 1 pin and 1 female terminal per plug) .....	Pr. 1.00

### "525" CONNECTORS

The "525" series provides means of attaching headset cords, or any two wires, single contact mike plugs (Amphenol 75-MC series of plugs). Main body is similar to shell of "511" series plug. Connector held to receptacle by threaded taining ring.

	List
No. 525 —Black plastic shell .....	\$1.30
No. 525-1—Red plastic shell .....	1.30
No. 525-2—Shielded, single piece shell .....	1.70
No. 525-3—Shielded, two piece shell with cable clamp .....	2.25
No. 525-4—Shielded, stubby shell .....	1.65



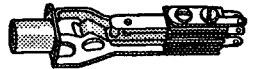
### "95" SERIES JACKS

Widely used on P.A. amplifiers, tape recorders, short wave radios, servicemen test instruments, etc. Used where space behind panel is limited. Jack is mounted by a threaded bushing which fits a 3/4" dia. hole. Springs are nickel silver and are held in place by interlocking insulators. Circuit types can be identified by referring to "Jack Circuits" as shown below.

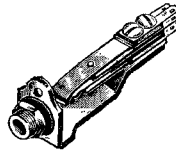
	List
No. 95-01—Open circuit, two conductor .....	\$0.40
No. 95-02—Closed circuit, two conductor .....	0.48
No. 95-25—Open circuit, three conductor (for 0.250" dia. plugs) .....	0.55
No. 95-50—Open circuit, three conductor (for 0.206" dia. plugs) .....	0.65

### "90" SERIES JACKS

Commonly known as the telephone jack. Extensively used on jack panels. Bushing fits 3/4" dia. hole. Depth behind panel 2 1/4". Frame of steel, cadmium plated with dichromate treatment. Bushing is nickel plated. Springs of nickel silver with terminal ends hot tinned. Contacts are silver with diffused gold coating. Steel 6-32 x 3/4" mounting screws supplied. Note: listings below are only a few of the most commonly used versions of this series. There is a wide assortment of other circuits available as well as variations in construction and contact surfaces. Consult factory for further information.



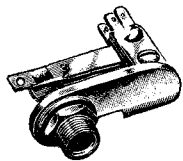
Code	List	Code	List
90SN-01	\$1.05	90SN-09	\$1.70
90SN-02	1.20	90CSN-14	2.80
90SN-06	1.40	90SN-25	1.20
90SN-07	1.50	90SN-26	1.60
90SN-08	1.60	90SN-27	1.90



### "91" SERIES JACKS

A long frame jack having threaded mounting bushing and which can be attached to panel by this alone, or by mounting screw as in "90" Series. Can be mounted on panels up to 1/4" thick. Mounts in 3/8" dia. hole. Depth behind panel 3 1/2". Bushing threaded for 3/8"—32 nut, furnished (also washer).

Code	List	Code	List
91-01	\$0.75	91-09	\$1.20
91-02	0.95	91-25	1.00
91-05	1.05	91-26	1.20
91-06	1.10	91-50	1.20
91-07	1.20	91-51	1.40



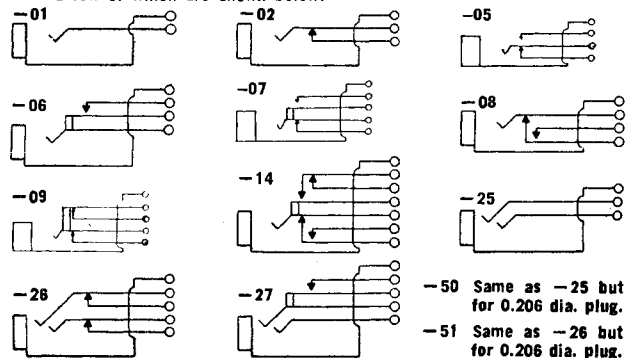
### "93" SERIES JACKS

A short frame jack with springs mounted parallel to panel. Used particularly where depth behind panel is limited, on such applications as intercom systems, P.A. amplifiers, etc. Mounting is by means of threaded bushing 3/8" diameter, rigidly attached to a steel frame. May be mounted on panels up to 3/8" thick. Contact springs of nickel silver, terminals hot tinned. See diagrams below for circuits.

	List		List
No. 93-01	\$0.65	No. 93-07	\$1.10
No. 93-02	0.80	No. 93-25	0.85
No. 93-06	1.00	No. 93-26	1.10
		No. 93-27	1.40

### JACK CIRCUITS

All TRIMM jacks have a standardized coding consisting of the Jack series number plus a dash number indicating spring arrangement, a few of which are shown below.



# TRIMM INC. LIBERTYVILLE • ILLINOIS

## PATCH CORDS, AUDIO TYPE



Trimm Patch Cords feature telephone type plugs, described below, on cords built up of two conductors of multiple strands of bronze tinsel covered with numerous layers of insulation and moisture proofing, color coded, and cabled to produce a highly flexible and water resistant construction. Over this is applied a woven shield, if required, and then a final braid of nylon to assure long dependable service. Reinforced at ends. Color is black unless specified otherwise, (available in blue, brown, green, red, slate and white to order).

### "840" SERIES

Widely used broadcast type employing "506" twin plugs at both ends. Conductors wired to the tips and cord shields (when used), to grounded sleeves. Supplied with shield attached to plug at one end only, but also available without shield (W in code number), or with shield attached to plug at both ends (X in code number). Standard types listed below.

"X" SHIELDING		"W" NO SHIELD	
840-05-PP	\$10.90	840-05X-PP	\$10.90
840-1-PP	11.00	840-1X-PP	11.00
840-2-PP	11.25	840-2X-PP	11.25
840-3-PP	11.50	840-3X-PP	11.50
840-4-PP	11.80	840-4X-PP	11.80
840-5-PP	12.10	840-5X-PP	12.10
840-6-PP	12.40	840-6X-PP	12.40
840-10-PP	13.80	840-10X-PP	13.80
		840-2W-PP	\$11.10
		840-3W-PP	11.40

### "841" SERIES

Uses 2 "517" single, triple circuit plugs of special design for broadcast service. Conductors wired to tip and ring. Shield, if used, wired to sleeve of plug. Special contour on plug permits ring spring on jack to make contact before normally closed tip spring contact is open, to reduce "clicks." Stock types listed below.

841-01-PP	\$9.50	841-1X-PP	\$9.50
841-2-PP	9.80	841-2X-PP	9.80
841-3-PP	10.20		
841-4-PP	10.60		
841-5-PP	11.00		
841-6-PP	11.50	841-2W-PP	9.35
841-10-PP	13.60	841-3W-PP	9.65

### "851" SERIES

Uses two "516" 3-circuit plugs. Conductors wired to tip and ring. Shield (if used) to sleeve of plug. Stock types listed below.

851-1-PP	\$9.50	851-05X-PP	\$9.60	851-2W-PP	\$9.80
851-2-PP	9.90	851-1X-PP	9.80	851-3W-PP	10.20
851-3-PP	10.30	851-2X-PP	10.20		
851-4-PP	10.70	851-3X-PP	10.50		
851-5-PP	11.20	851-4X-PP	10.90		
851-6-PP	11.70	851-6X-PP	11.90		
851-10-PP	13.30				

NOTE: Patch Cord Code System—First three digits are cord style. No letters following first three digits indicates black cord. Letters following first three digits abbreviate color. After first dash next one or two digits indicate cable length (05 is six inches).

## "96" SERIES JACK PANELS



Extensively used in the broadcast field, on instrumentation systems, communication networks, etc. Uses 3/8" thick bakelite panel with appropriate end brackets, side reinforcing strips and designation strips. All jack bushings are insulated from each other. Jacks, as ordinarily supplied (mounted on panels) have offset ground lugs, which considerably reduces wiring cost of installation. Straight ground lugs (duplicating W.E. jacks) available. Types 96-71, 96-72, etc., use tip rings and sleeve plugs (No. 516 and No. 517); others usually used with twin plugs (No. 506) but will fit other standard two-circuit jacks.

Code No.	Rows	No. of Jacks	Jack Type	Jack Mounting Strip Type	Width	List
96-01	1	24	90L-02	96-21	1 3/4"	\$43.50
96-02	2	48	90L-02	96-22	2 3/8"	72.50
96-03	2	48	90L-02	96-23	3 1/2"	78.00
96-04	2	48	90L-02	96-24	3 3/4"	80.00
96-06	1	26	90L-02	96-26	1 3/4"	47.20
96-07	2	52	90L-02	96-27	1 3/4"	78.00
96-71	1	24	90L-26	96-21	1 3/4"	53.00
96-72	2	48	90L-26	96-22	2 3/8"	90.00
96-74	2	48	90L-26	96-24	3 3/8"	97.50
96-76	1	26	90L-26	96-26	1 3/4"	57.50
96-77	2	52	90L-26	96-27	1 3/4"	99.00

## JACK MOUNTING STRIPS — LESS JACKS

Used where non-standard arrangements of jacks, lamp sockets, turn or push keys, video jacks, etc., are desired to be mounted onto a jack strip. Listed below are the most commonly used types. Numerous other types are available

Code No.	Rows	Jack Holes per Row.	Width	Desig. Qty.	Strip Type	List
96-21	1	24	1 3/4"	1	JP-30	\$15.50
96-22	2	24	2 3/8"	1	JP-30	16.40
96-23	2	24	3 1/8"	1	JP-30	22.00
96-24	2	24	3 3/8"	2	JP-30	24.00
96-26	1	26	1 3/4"	1	JP-34	17.00
96-27	2	26	1 3/4"	2	JP-34	18.00

## DESIGNATION STRIPS

A variety of types are produced by TRIMM. The types listed are those used on most panels, others differing in length and accepting up to 5 rows of typing are produced.

Code No.	No. of Windows	Size	Notes	List
*JP-30	12	16 3/4" x 1 3/8"		\$1.60
†JP-31	13	16 3/2" x 3/16"	Equiv. WE. 99A	4.50
†JP-32	13	16 3/2" x 3/16"	Equiv. WE. 99B	5.50
*JP-33	12	14 1/4" x 2 3/4"	Equiv. WE. 90A	2.20
*JP-34	1	17" x 1/4"		1.20
*JP-35	1	16 3/4" x 1 3/2"		1.50
†JP-37	1	16 3/4" x 3/8"		1.80

\* Dull black baked enamel finish.

† Bright nickel plated.

‡ Extruded lucite.

## TELEPHONE TYPE PLUGS

### "516" PLUG

One of the most frequently used three-circuit plugs. The accepted standard for many years on telephone switchboards. Used extensively in communication networks, circuit patching of instrument systems and many other applications. Supplied on TRIMM No. 851 series patch cords. Polished red fiber shell furnished; black or gray shell optional. Shell can be attached without removing cord. No. 516 plug interchangeable with WE 310; No. 516-10 plug with Mil PJ-051.



### "506" PLUG — TWIN, THREE-CIRCUIT

The standard twin plug for broadcast applications. Now widely used in the instrumentation and missile control fields. Supplied on TRIMM No. 840 series patch cords. Live circuits connected to tips of each plug; shield, if used, connected to sleeves which are electrically common. Sleeves are spaced 3/8" c. to c. with self-aligning construction. Shell, molded of bakelite, is notched along one edge to indicate correct polarization. Interchangeable with WE 241 and Mil PJ-241.

### "501" PLUG

Widely used on high quality military communication equipment. Commonly referred to as PJ-055. Black plastic shell is furnished for non-shielded types and nickel plated brass for shielded types; red plastic shell optional.



## PART NUMBERS, DESCRIPTIONS AND BASE PRICES\*

Part No.	Description	Base Price
500	2-ckt. Telephone Plug, Red Shell	\$0.90
500-1	As above, Black Shell	0.90
500-10	As above, Red, Shell, "PJ-047R"	0.95
500-11	As above, Black Shell, "PJ-047B"	0.95
501	Description at left, Black Shell	0.72
501-1	As above, Red Shell	0.72
501-2	As above, Metal Shell	1.00
501-10	As above, Black Shell, "PJ-055B"	0.71
501-11	As above, Red Shell, "PJ-055R"	0.71
501-12	As above, Metal Shell, "PJ-055M"	1.00
506	Description at Left, Black Shell	2.61
506-1	As above, Red Shell	2.61
508-	3 Ckt., 0.206" Sleeve, Red Shell	1.61
509-10	2 Ckt., 0.206" Sleeve, Black Shell "PJ-068"	1.61
516	Description at Left, Red Shell	1.5
516-1	As above, Black Shell	1.5
516-10	As above, Red Shell, "PJ-051"	1.6
516-11	As above, Black Shell "PJ-051B"	1.6
517	3 Ckt., 0.250" Sleeve, Red Shell	1.7
517-1	As above, Black Shell (Broadcast Use)	1.7

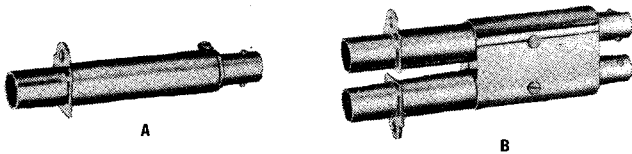
\*BASE PRICE—Applies to Telephone Type Plugs above only. This is actual net price in single quantities. (Departs from traditional List Price Less 40%, commonly used in Electronics Industry).



# TRIMM INC. LIBERTYVILLE • ILLINOIS

## COAXIAL COMPONENTS

### "89" SERIES JACKS



Single Types—Fig. A

Part No.	RG - Cable	Notes	Base
89-01	58		\$ 6.00
89-02	59		6.00
89-04	62		6.00
89-05	11		6.25
89-06	8, 9.		6.25
89-07	54	Also fits W.E. 724, Belden 8281 cable. Jack similar to W.E. 477B	6.25
89-08	54	Jack similar to W.E. 477C.	15.00
89-09	2-59	Paralleling 2-RG-59	6.25
89-11	187		6.00
89-12	11, 13		6.25
89-14		Amphenol 2-597	6.00
89-15		Equivalent to W.E. 470B	5.00
89-31		Female UHF. Fitting	20.00
89-32		Female BNC. Fitting	7.00
89-33		Female C Fitting	16.00
†89-715			5.25
†89-731		Female UHF. Fitting	20.00
†89-732		Female BNC. Fitting	7.00
†89-733		Female C Fitting	16.00

†Compatible with RCA., otherwise W.E. equipment.

### Twin Types—Fig. B NON-SWITCHING

Code No.	RG Cable Type	Notes	Base
89-51	58		\$13.00
89-52	59		13.00
89-57	54-W.E.724 Belden 8281	Equiv. W.E. 465C.	13.50
89-825	N/A	Has single BNC at rear—used for paralleling	15.50
<b>SWITCHING</b>			
89-132		Double BNC at rear	17.50
89-1010		{ Single BNC plus turret terminal for other half to connect to circuit board	17.00
89-1011		{ Double turret terminal at rear to connect to circuit board	16.50

### "530" SERIES PLUGS—Fig. C



Part No.	Cable	Notes	Base
530-1	RG-58		\$4.60
530-2	RG-59		4.60
530-4	RG-62		4.60
530-5	RG-11		5.00
*530-6	{ RG-54 Belden 8281 W.E. 724	Equiv. to W.E. 358A	3.60
530-7	RG-8 & 9		5.00
530-9	RG-59	Similar to W.E. 337C	16.00
530-10	RG-55		5.00
*530-15	RG-58 & 59		4.20
*530-32	N/A	{ Mates with male BNC connection at rear end	5.00
*530-701	RG-58		4.60
*530-702	RG-59		4.60
*530-705	RG-11 & 13		5.00

Compatible with RCA; other types W.E.

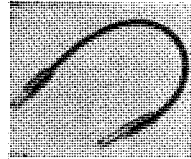
### "531" SERIES BRIDGING PLUGS—Fig. D

twin coaxial plug (sometimes called a looping plug) internally wired and having no external cord connection.

Part No.	Imp.	Notes	Base	Part No.	Imp.	Base
1-1	52 ohm	Compatible	\$7.30	531-702	75 ohm	\$7.30
1-2	75 ohm	with and	7.30	531-7	75 ohm	29.00
1-3	90 ohm	Equival. to	7.60	531-707	75 ohm	29.00
1-701	50 ohm	W.E. 477B	7.30			

### PATCH CORDS — "849" SERIES

The following cords use two, 530-2 (for W.E.), or 530-702 (for RCA), plugs and RG-59B/U cable (75 ohm).



W.E.	Base	RCA	Base
849-05X-PPG	\$ 9.60	849-1X-700PPG	\$ 9.60
849-1X-PPG	9.60	849-105X-700PPG	9.60
849-105X-PPG	9.60	849-2X-700PPG	10.00
849-2X-PPG	10.00	849-3X-700PPG	10.00
849-3X-PPG	10.00		
849-4X-PPG	10.00		

The following cords, as above, but with RG-58C/U cable (50 ohm).

W.E.	Base	RCA	Base
849-1X58-PPG	\$ 9.60	849-1X58-700PPG	\$ 9.60
849-105X58-PPG	9.60	849-105X58-700PPG	9.60
849-2X58-PPG	10.00	849-2X58-700PPG	10.00
849-3X58-PPG	10.00	849-3X58-700PPG	10.00

### "869" HYBRID AUDIO-VIDEO SERIES

Provides a method of simultaneously patching audio and video signals. TWIN plug at each end consists of one coaxial section fitting the "89" series jack and one three circuit telephone-type plug fitting the "90" series jacks. On 5/8" centers, providing either horizontal or vertical positioning on appropriate "96" or "99" panels. The coax section uses RG-187 cable (75 ohm) and audio is carried by two additional conductors with shield overall (not common to coax shield).

Standard Types	Base
869-1X-PPG	\$30.00
869-105X-PPG	30.00
869-2X-PPG	30.00

### JACK PANEL ASSEMBLIES

The "89" series coaxial jacks can be mounted on the "96" or "99" series strips in almost any specified configuration. Listed below are some of the more standard types already produced. Consult factory for information regarding price or your special requirements.

W.E.	RCA	Qty/Row	Rows	Jack Type	Jack Mtg. Strip
99-80		12	1	89-32	99-20
	99-780	12	1	89-732	99-20
98-84		24	2	89-02	96-24
	96-784	24	2	89-702	96-24
*96-94-2		24	2	89-02	96-524-2
	*96-794-2	24	2	89-702	96-524-2
96-85		12	2	89-02	96-25
	96-785	12	2	89-702	96-25
*96-95-2		12	2	89-02	96-525-2
	*96-795-2	12	2	89-702	96-525-2
*96-98-2		Top 24	2	89-02	96-528-2
		Bottom 12			
	*96-798-2	Top 24	2	89-702	96-528-2
		Bottom 12			

\*Denotes sub-chassis with 24 UHF connectors.

### JACK MOUNTING STRIPS, LESS JACKS

The "96" Series Panels, described and listed on a previous page are readily adaptable for coaxial use. In addition to the panels previously listed, the following ones are also available in this series.

Code No.	No. of Rows	Holes/Row	Jack Hole Spacing c. to c. Left to right	Width	Designation Strip Qty.	Strip Type	List
96-20	1	12	1 3/8"	1 3/4"	1	JP-30	\$27.00
96-20-1	1	12	5/8" - 2 1/4" - 5/8"	1 3/4"	1	JP-35	27.00
96-28	2	upper 24	5/8" - 3/4" - 5/8"	3 1/2"	2	JP-35	33.00
		lower 24	1 3/8"				
96-32	2	24	5/8" - 3/4" - 5/8"	2 1/8"	2	JP-33	18.40
*96-38	1	32	5/8"	1 3/4"	1	JP-34-3	48.00
*96-39	2	32	5/8"	1 3/4"	2	JP-34-3	54.00

\*Fits 23" racks having 22 1/4" spacing between mounting screw holes.

### "99" SERIES

Features an all aluminum, sandwich-like construction of the jack mounting strip. Front panel (3/16" thick) separated from a rear sub-panel (1/8" thick) by spacers. Jacks are mounted on sub-panel. Overall thickness 1 3/8". Built for use on 19" relay rack. Not usable where one jack must be insulated from another.

Code No.	Rows	Jacks/Row	Jack Hole Spacing c. to c.	Width	Designation Strip Qty.	Strip Type	Notes	List
99-20	1	12	1 3/8"	1 3/4"	1	JP-37		\$26.00
99-20-1	1	12	5/8" - 2 1/4" - 5/8"	1 3/4"	1	JP-37		26.00
99-21	1	24	5/8" - 3/4" - 5/8"	1 3/4"	1	JP-37		27.00
99-22	2	24	5/8" - 3/4" - 5/8"	2 1/8"	1	JP-30		34.00
99-22-1	2	24	5/8" - 3/4" - 5/8"	2 1/8"	2	JP-33	1	35.50
99-22-2	2	24	5/8" - 3/4" - 5/8"	2 1/8"	2	JP-33	2	36.00
99-24	2	24	5/8"	3 1/2"	2	JP-37	1	40.00
99-26	1	26	5/8"	1 3/4"	1	JP-34		27.00
99-27	2	26	5/8"	1 3/4"	2	JP-34	1	36.00

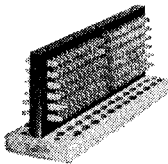
#### NOTES

- Designation strip above top, and below bottom row.
- Designation strip above each row.

### OTHER STRIPS

"96-500" Sub-series feature steel subchassis mounted 5/16" behind regular bakelite panel. "99-200" Sub-series feature 3/16" aluminum front panel backed by bakelite strip to make total thickness 5/8". Jacks mount to bakelite to isolate them from each other. Contact factory for details.

# TRIMM INC. LIBERTYVILLE • ILLINOIS



## TERMINAL BLOCKS

Originally developed for telephone and telegraph exchange use, now are quite generally found in broadcast and microwave relay stations, large instrument systems—wherever very large numbers of circuits need convenient places of termination.

### "421 SERIES"

Molded of black phenolic plastic material, including base. Provides 20 terminals per row, in two banks of ten, with up to ten rows. Base  $6\frac{1}{8}$ " long x 3" wide. Has steel mounting strip inset in groove in base, with standard mounting dimensions and accommodating #10-24 screws.

Terminals are of 0.040" tin plated brass, and are removable without disassembly of block. Have "butterfly" notched design assuring better retention of wire. Lengths of terminals in three graduated lengths for ease of wiring, and are usually identified by numbering along top row. (Not illustrated). Interchangeable with W.E. "L" series, as indicated by ( ) following TRIMM No.

Code No.	No. Rows	No. Term	Base
421C-1	1	20	\$ 4.40
421C-2	2	40	5.00
421C-3 (L34)	3	60	5.75
421C-4 (L4A)	4	80	6.50
421C-5 (L5A)	5	100	7.30
421C-6 (L6A)	6	120	8.00
421C-7	7	140	8.80
421C-8 (L8A)	8	160	9.60
421C-9	9	180	11.20
421C-10	10	200	12.50

### OTHER SERIES

Summarized below are terminal arrangements and base dimensions for other series available. All bases  $\frac{3}{8}$ " hard maple. Available in 1 to 10 rows. Write for additional information.

Series	Term. per Row	Base Dim.	Notes
421A	20	$6\frac{1}{8}$ " x $2\frac{3}{4}$ "	Eq. to W.E. "M" Type
421B	20	8" x $2\frac{3}{4}$ "	Fits Cook Elec. Frame
425A	24	$7\frac{1}{8}$ " x $2\frac{3}{4}$ "	
425B	24	8" x $2\frac{3}{4}$ "	Fits Cook Elec. Frame
427B	26	8" x $2\frac{3}{4}$ "	Fits Cook Elec. Frame

## MINIATURIZED JACKS, PLUGS, PATCH CORDS AND PANELS

A complete new line of quality miniature components possessing the high reliability characteristics of long frame telephone jacks, plugs, cords and panels, but requiring only half the space.

### "94" SERIES JACKS

Special features include:

1. Frame, steel cadmium plated, heavily ribbed for increased rigidity.
2. Silver soldered bushing to frame joint.
3. 18% Nickel silver springs.
4. Unique glass-filled-alkyd molded insulation of springs, making entire spring assembly a single modular unit keyed to frame, the springs being embedded into the plastic material as inserts.
5. Gold cross-bar contacts, welded to springs providing exceedingly low noise levels and uniform contact resistance with time.

Stock types (see jack circuits on previous page).

94S-01 BASE 0.72 94S-02B BASE 0.90 94S-08B BASE 1.04 94S-25I BASE 0.80  
94S-26B 1.20

### "536" - "537" SERIES PLUGS

Miniaturized two circuit (536), and three circuit (537) types for use with "94" series jacks. Reduced in size, but constructed similarly to TRIMM telephone type plugs. The tip, or tip and ring, are molded into place within the body of the plug by means of a high melting molded zytel insulating matrix. Cords are attached by small terminal screws within the plug and can be replaced in a manner similar to regular switchboard patch cords.

### "866" - "867" SERIES PATCH CORDS

Two conductor (866) and three conductor (867) cords using "536" and "537" plugs. Cords have overall nylon braid and other construction details of standard patch cords.

### "96-700" SERIES JACK MOUNTING STRIPS

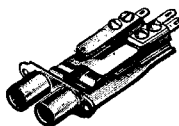
Bakelite panels,  $\frac{3}{8}$ " thick,  $1\frac{1}{4}$ " wide. For "94" series jacks. One or two rows, with either 48 or 52 jacks per row. Standard designation strip is JP-35.

CONSULT FACTORY FOR ADDITIONAL INFORMATION ON MINIATURIZED LINE.

## OTHER TELEPHONE TYPE PLUGS

These are in addition to listing of commonly used plugs on previous page. A large number of other plugs, of less commonly used types are available. Consult Factory.

Part No.	Description	Base
504	Twin, 4 Ckt., 0.250 Sleeves, Black Shell (PJ-327, WE. 327)	\$2.50
505	Twin, 4 Ckt., 0.250 Sleeves, Black Shell (WE. 289B)	2.70
523	Twin, Two 3 Ckt. 508, One 2 Ckt. 504	4.50



### "92" SERIES JACKS

Twin jacks, principally used in toll and carrier frequency systems. 92-1009B provides unbalanced normal through circuitry and 92-1030B provides balanced normal through circuitry between jacks. Single plug inserted into either side of jack opens circuit, permitting testing or patching of circuit up to jack-through circuitry. Bushing brass, as 92-1009B, or nickel as 92N-1009B. G indicates gold contacts.

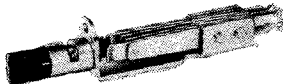
No.	92-1009B	92N-1009B	Base
92-1009BG		92N-1009BG	2.20
92-1030B		92N-1030B	2.80
92-1030BG		92N-1030BG	3.20
92-25			2.00

### MILITARY TYPE JACKS — "90" SERIES

See previous page for description. Listing below covers military types only.

Mil No.	TRIMM No.	List	Mil No.	TRIMM No.	List
JJ-016	90SN-08BM	\$1.90	JJ-022	90SN-25M	\$1.80
JJ-017	90SN-24BM	2.40	JJ-042	90SN-26BM	2.10
JJ-024	90SN-02BM	1.50	JJ-073	90SN-32BM	2.85
JJ-035	90SN-10BM	2.00	JJ-074	90SN-27BM	2.35
JJ-072	90SN-09BM	2.00	JJ-075	90SN-35BM	2.90
JJ-084	90SN-06BM	1.80	JJ-077	90SN-28BM	2.60
JJ-085	90SN-09ABM	2.00	JJ-078	90SN-34BM	4.10
JJ-086	90SN-01M	1.20			
JJ-087	90SN-13BM	2.70	JJ-015	90CS-13BM	2.85
JJ-088	90SN-1009BM	4.00	JJ-019	90CS-14BM	2.70

### "205" - "207" TURN KEYS



Long frame rotating cam type keys or switches. Intended to be assembled on to standard  $\frac{5}{16}$ " thick jack mounting strips having  $\frac{3}{16}$ " dia. jack bushing holes. Hole for #6-32 screw  $\frac{3}{8}$ " off center provided. Entirely interchangeable with telephone

type jacks, and essentially similar to W.E. "552" series. See table below for cross reference.

Knob of molded black nylon, has two flat areas on each side to provide convenience in turning. White filled line on front of knob readily identifies in which of two positions key has been turned. Requires  $2\frac{3}{32}$ " depth behind panel.

### LOCKING TYPE "205"

Part No.	Base	Part No.	Base	Part No.	Base	Part No.	Base
205-1A	\$2.10	205-2A	\$2.50	205-3A	\$3.00	205-2A2B	\$3.10
205-1B	2.10	205-2B	2.50	205-3C	3.50	205-1A2C	3.30
205-1C	2.30	205-2C	3.00	205-4A	3.50	205-1000	3.50
205-10	2.30	205-2D	3.10	205-4C	4.10	205-1001	3.80

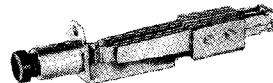
### NON-LOCKING TYPE "207"

Part No.	Base	Part No.	Base	Part No.	Base
207-1A	\$2.10	207-1B	\$2.10	207-2C	\$3.00

### CROSS REFERENCE W.E. to TRIMM

W.E. Type	TRIMM Code	W.E. Type	TRIMM Code
552A	205-2C	552E	205-1000
552B	205-3A	552G	205-1D
552C	205-1001	552H	205-2C1A
552D	205-2B 2C		

### "204" - "206" PUSH KEY!



Long frame push button type key very similar to turn keys. The usual applications for push button type keys are as impulse switch for relays, or motor starters; buzzer signals, test circuits requiring momentary contact, etc.

Mounting, dimensional and contact data, similar to turn keys. Available in non locking and locking forms. Knob of black plastic material with depressed dimple for finger.

### LOCKING TYPE "204"

Part No.	Base	Part No.	Base
204-1A	\$2.10	204-2A	\$2.50

### NON-LOCKING TYPE "206"

Part No.	Base	Part No.	Base	Part No.	Base	Part No.	Base		
206-1A	\$2.10	206-1C	\$2.30	206-2A	\$2.50	206-2C	\$3.00	206-4A	\$3.50
206-1B	2.10	206-1D	2.30	206-2B	2.50	206-3C	3.50		

### "247" SERIES LAMP SOCKETS



Switchboard type lamp socket; intended for use with standard No. 2 switchboard lamps, and to be assembled on to standard  $\frac{5}{16}$ " thick jack mounting strips with  $\frac{3}{16}$ " dia. jack bushing holes. Has lug for #6-32 mounting screw  $\frac{3}{8}$ " off center line. May be mounted  $\frac{3}{8}$ " c. to c. horizontally.

Frame, one piece steel construction. Springs nickel silver insulated from frame and each other with XXXP phenolic laminated spacers. Lamp mounts close lens of lamp cap, giving maximum illumination.

### "240" SERIES LAMP CAP

For use in the "247" series lamp sockets. Interchangeable with W.E. No. 2 type. Lenses of glass, dome shaped, held firmly in place in the cap case by spinnings edges over the lenses. The cases are slotted to give a spring fit for the lamp cap in the socket.

		W.E.EQ.	Base
247	Lamp Socket	47B	.80
240-AY	Lamp Cap White Opalescent	2-AY	.22
240-H	Lamp Cap Red Opalescent	2-H	.22
240-L	Lamp Cap Green Opalescent	2-L	.22
240-U	Lamp Cap Amber	2-U	.22
240-W	Lamp Cap Blue	2-W	.22

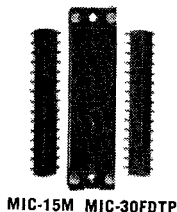
# THE ONLY COMPLETE SOURCE FOR YOUR ELECTRONIC CONNECTORS

## U. S. COMPONENTS

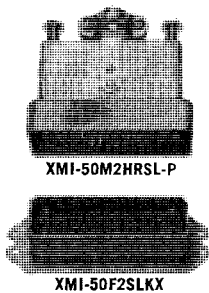
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MISSILES • PORTABLE EQUIPMENT • PRINTED CIRCUITS • TEST APPARATUS

### A CONNECTOR MAKES IT WORK!

U. S. Components makes connectors for every conceivable purpose. Write for details and information on these new series.



MIC-15M MIC-30FDTP



XMI-50M2HRSL-P

XMI-50F2SLKX



901-25M



901-25F



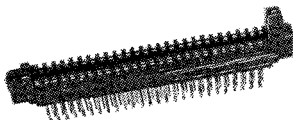
REPC-32F



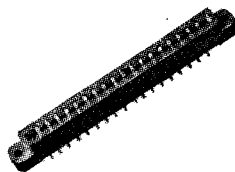
MPCC-GM29



UPCC-GF29



RPCR-52

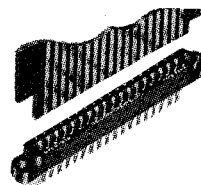


### UPCR SERIES

**Single Row Printed Card Receptacle**  
Number of contacts—(Beryllium Copper) 6, 10, 15, 18, 22  
Solder wire hole size ..... 1/16"x3/32"  
Voltage breakdown between contacts—sea level 2500 V A.C. RMS.  
Current rating ..... 5 amps.  
Polarizing pins and contacts—snap-in or out design permitting easy interchangeability.  
Pat. #2,853,689.

### UPCR-D. Double Row Printed Card Receptacle. Solder Type Terminals

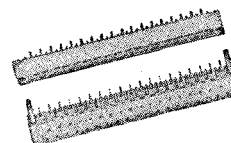
Card range thickness accommodation  
UPCR-D ..... .052—.072 (nom. 1/16")  
UPCR-93D ..... .080—.104 (nom. 3/32")  
Number of contacts (Beryllium Copper) 6, 10, 15, 18, 22 per row, (2) rows  
Solder wire hole size ..... 3/64"x3/32"  
Voltage breakdown between contacts—sea level 2500 V A.C. RMS.  
Current rating ..... 5 amps.



Pat. #2,909,755

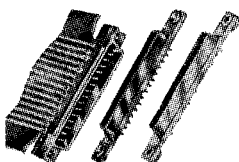
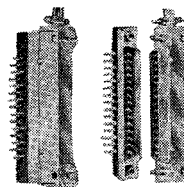
### MPC SERIES—Micro Miniature Printed Circuit Connectors

Number of contacts ..... 15, 23, 33, 37, 49  
Maximum wire size ..... #26 AWG Wire  
Voltage breakdown between contacts—sea level 3100 V. A.C., RMS.  
Current rating ..... 3 amps.



### UPCC-SLH SERIES. Hooded Screw Lock

UPCC-M2SL ..... Male Chassis Screw Lock  
UPCC-F2HSL ..... Female Hooded Mating Unit  
Available ..... 7, 11, 15, 19, 23, 32 contacts  
Voltage Breakdown between contacts—sea level 2500 V. A.C. RMS.  
Male — available solder dip, wire solder turret, taper tab terminals  
Female — available wire solder, turret tab terminals  
Pat. #2,953,767



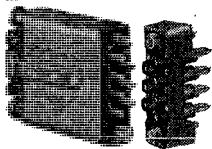
**UPCC SERIES. Printed Circuit Connector**  
Card range thickness accommodation—Male Dip Solder  
UPCC-M ( ) A ..... 1/16"  
UPCC-M ( ) B ..... 1/8"  
UPCC-M ( ) C ..... 1/4"  
UPCC-F ( ) female ..... #20 AWG wire  
UPCC-FDN ( ) Solder dip terminals  
Maximum wire size—female ..... #20 AWG wire  
Number of contacts ..... 7, 11, 15, 19, 23, 32  
Voltage Breakdown between contacts—sea level 2500 V. A.C. RMS.  
Current rating ..... 7.5 amps.

### UPCC-SL SERIES. Printed Circuit Screw Lock

Card range thickness accommodation—Male Dip Solder  
UPCC MSL ( ) A ..... 1/16"  
UPCC MSL ( ) B ..... 1/8"  
UPCC MSL ( ) C ..... 1/4"  
UPCC-FSL ( ) female ..... #20 AWG wire  
UPCC-FD-SL ( ) Solder dip terminals  
Number of contacts ..... 7, 11, 15, 19, 23, 32  
Voltage Breakdown between contacts—sea level 2500 V. A.C. RMS.  
Current rating ..... 7.5 amps.



Pat. #2,953,767



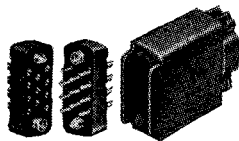
**990-SL SERIES. Power Screw Lock**  
Number of contacts ..... 7, 10, 15, 18  
Maximum wire size ..... #16 AWG, wire  
Voltage breakdown between contacts—sea level 5300 V. A.C. RMS.  
Current rating ..... 13 amps.  
990-SL-SDL (solderless) uses #53 taper pin  
Patent #2,761,108. Double lead threads. "Twice the speed with double lead."

### MH SERIES. Miniature Hex

Number of contacts ..... 4, 5, 7, 9  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level 1215 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
MH-SDL (solderless) uses #37 taper receptacle  
Also available HMM Hermetic Seal. Plug Series.



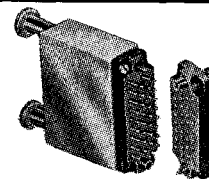
Pat. #2,848,702



**SMI SERIES. Subminiature**  
Number of contacts 5, 7, 11, 14, 20, 26, 29, 34, 42, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage Breakdown between contacts—sea level 1950 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
SMI-SDL (solderless) uses #37 taper receptacle  
Other configurations upon request.

### SMI-SL SERIES. Subminiature Screw Lock

Number of contacts 5, 7, 11, 14, 20, 26, 29, 34, 42, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage Breakdown between contacts—sea level 1950 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
SMI-SL-SDL (solderless) uses #37 taper receptacle  
Other configurations upon request.  
Pat. #2,761,108



**GENERAL NOTE**  
All Sub-miniature (SMI), Miniature (MI), 980, 990 series Connectors, available with Solder Type, Solderless Type (SDL) and Turret Type (TU) Terminals

Connectors are available with molded bodies made of asbestos-filled me'amine, glass-filled alkyd, asbestos or glass-filled diallyl phthalate, or mica-filled bakelite. All connectors meet or surpass all applicable sections of MIL-Q-9858, MIL-C-8384B, MS, MIL-C-21097A, MIL-C-25955 and NAS specifications. Rigid quality control is applied on a 100% basis for inspection and testing. All solder cups can be provided with 60-40 solder or projecting terminals can be solder dipped.



# U. S. COMPONENTS, INC.

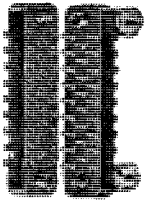
NEW YORK, N. Y. • Cable Address: COMPONENTS, N. Y.



# THE ONLY COMPLETE SOURCE FOR YOUR ELECTRONIC CONNECTORS

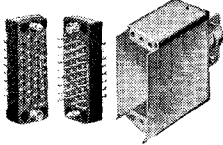
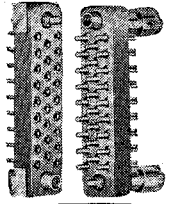
## U. S. COMPONENTS

AVIONICS • AUTOMATION • COMMUNICATION • CONTROLS • INSTRUMENTATION  
MISSILES • PORTABLE EQUIPMENT • PRINTED CIRCUITS • TEST APPARATUS



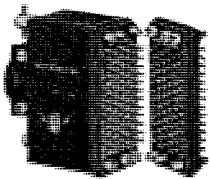
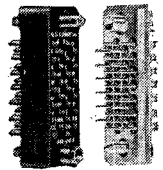
**SMI-K SERIES**  
Subminiature Hoodless Knob Type Screw Lock  
Number of contacts ..... 5, 7, 11, 14, 20, 26, 29, 34, 42, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage Breakdown between contacts—sea level ..... 1950 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
SMI-K-SDL (solderless) uses #37 taper receptacle  
Pat. 2,761,108. Other configurations on request.

**SMI-KC SERIES**  
Subminiature Hoodless Knob Type Screw Lock  
Reentrancy female contact...Anti-Rotation Brackets  
Number of contacts ..... 5, 7, 11, 14, 20, 26, 29, 34, 42, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage Breakdown between contacts—sea level ..... 1950 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
SMI-K-SDL (solderless) uses #37 taper receptacle  
Pat. 2,761,108. Other configurations on request.



**MI-SERIES. Miniature**  
Number of contacts ..... 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level ..... 2800 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
MII-SDL (solderless) uses #37 taper receptacle  
MIP Series #18 wire — MIW Series #16 wire

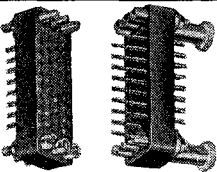
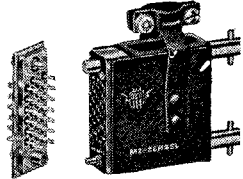
**HMI SERIES. Hermetic Seal Miniature**  
Number of contacts ..... 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level ..... 2200 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
Mates with corresponding MI-F (female) series connectors.



Pat. #2,761,108

**MI-SL SERIES. Miniature Screw Lock**  
Number of contacts ..... 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level ..... 2800 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
MI-SL-SDL (solderless) uses #37 taper receptacle  
Pat. #2,761,108  
ALSO AVAILABLE FOR #18 AWG WIRE  
6-32—Double or single lead threads can be furnished.

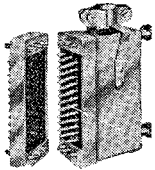
**HMI-SL SERIES**  
Hermetic Seal Miniature Screw Lock  
Number of contacts ..... 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level ..... 2200 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
Mates with corresponding MI-FSL (female screw lock) series connectors.  
6-32—Double or single lead threads can be furnished.



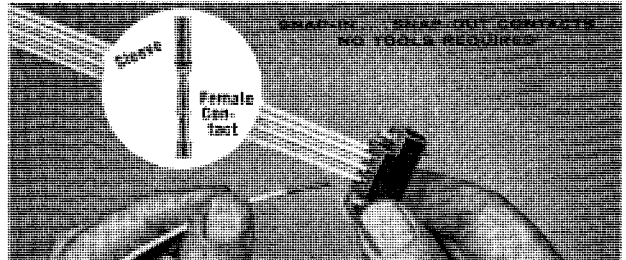
Pat. #2,761,108

**MI-KSL SERIES**  
Miniature Hoodless Knob Type Screw Lock  
Number of contacts ..... 7, 12 (8-4), 14, 18, 20, 21, 26, 34, 41, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level ..... 2800 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
MI-K-SDL (solderless) uses #37 taper receptacle  
ALSO AVAILABLE FOR #18 AWG WIRE

**MI-BSL "FBI" SERIES**  
Miniature Bracket Screw Lock  
Number of contacts ..... 34, 41, 50, 75  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level ..... 2800 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
Hoods ..... aluminum anodized  
Brackets ..... die-cast aluminum  
MI-BSL-SDL (solderless) uses #37 taper receptacle  
Pat. #2,761,108; #2,845,603; #2,845,604



**MI-MBSL SERIES**  
Miniature Bracket Modular Screw Lock  
Number of contacts ..... 123, 150, 225  
Maximum wire size ..... #20 AWG wire  
Voltage Breakdown between contacts—sea level ..... 2800 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
Hoods ..... aluminum anodized  
Brackets ..... die-cast aluminum  
MI-MBSL-SDL (solderless) uses #37 taper receptacle  
ALSO AVAILABLE FOR #18 AWG WIRE  
Pat. #2,761,108; #2,845,603; #2,933,713; #2,845,604; Additional Patents Pending.  
Other configurations upon request.

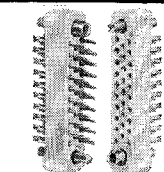


ALSO AVAILABLE FOR #18 AWG WIRE

**MRO-MRA. Miniature Round**  
Number of contacts ..... 7, 9  
Maximum wire size ..... #20 AWG wire  
Voltage breakdown between contacts—sea level ..... 1215 V. A.C. RMS.  
Current rating ..... 7.5 amps.  
MRO-SDL—MRA-SDL (solderless) uses #37 taper receptacle

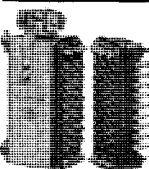
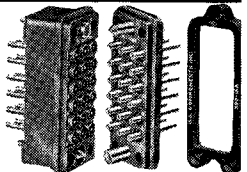
**REMI SERIES—Standard and Screwlock**  
Number of contacts ..... 7, 12 (8-4) 14, 18, 20, 21, 26, 34, 41, 50, 75, 10  
Type of contact ..... crimp style, removable with "snap-in, snap-out" feature  
Wire sizes accommodated ..... 18, 20, 22, 24, 26, 28  
Pat. 2,979,689

REMI counterparts of our MI, MI-SL, MI-KSL, MI-BSL and MI-MBSL SERIES can be provided.



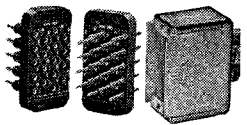
**UMI SERIES—Ultra Miniature Series**  
Number of Contacts ..... 5, 7, 9, 11, 14, 20, 26, 29, 34, 44, 50  
Max. Wire Size ..... #22 AWG Wire  
Voltage breakdown between contacts—sea level ..... 1330 V. A.C., RMS.  
Current rating ..... .3 amps.  
ALSO AVAILABLE IN UMI-SL SCREWLOCK SERIES

**980 SERIES. Power-Guide Pin Spring Release**  
Number of contacts ..... 12, 18, 24, 34  
Maximum wire size ..... #16 AWG wire  
Voltage breakdown between contacts—sea level ..... 4000 V. A.C. RMS.  
Current rating ..... 13 amps.  
980-SL-SDL (solderless) uses #53 taper pin  
Patent #2,658,182



**980-SL SERIES. Power Screw Lock**  
Number of contacts ..... 12, 18, 24, 34  
Maximum wire size ..... #16 AWG wire  
Voltage breakdown between contacts—sea level ..... 4000 V. A.C. RMS.  
Current rating ..... 13 amps.  
980-SDL (solderless) uses #53 taper pin  
Patents #2,658,182; #2,761,108

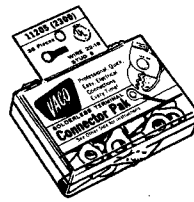
**990 and 990S (Short Contacts) SERIES.**  
Power  
Number of contacts ..... 7, 10, 15, 18  
Maximum wire size ..... #16 AWG wire  
Voltage breakdown between contacts—sea level ..... 5300 V. A.C. RMS.  
Current rating ..... 13 amps.  
990-SDL (solderless) uses #53 taper pin



**U. S. COMPONENTS, INC.**  
NEW YORK, N. Y. • Cable Address: COMPONENTS, N. Y.



All Vaco Solderless Terminals have been engineered and tested to give you perfect connections every time. Four distinct classes are available to meet your requirements. See illustrations at right for selective packaging.

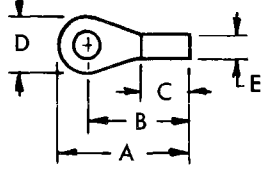


**\$ CONNECTOR PAK**

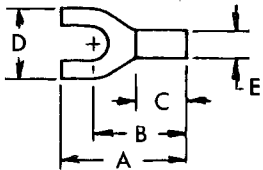
Plastic box holds adequate quantity of terminals for on-the-job use. Tab shows actual size terminal illustration and pertinent information

**SOLDERLESS TERMINALS and CONNECTORS**

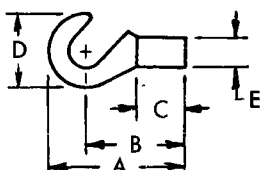
**SINGLE-GRIP SOLDERLESS TERMINALS**



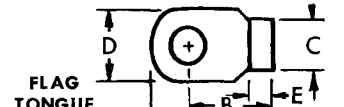
Catalog Number	Wire Size	Stud Size	A	B	C	D	E
11204	22-18	4	19 32	15 32	1 4	7 32	9 64
11205	22-18	5-6	19 32	15 32	1 4	7 32	9 64
11206	22-18	5-6	21 32	33 64	1 4	9 32	9 64
11208	22-18	8	43 64	1 2	1 4	21 64	9 64
11210	22-18	10	43 64	1 2	1 4	21 64	9 64
11214	22-18	12-4	59 64	11 16	1 4	29 64	9 64
11238	22-18	3	1 16	51 64	1 4	17 32	5 64
11304	16-14	4	9 16	29 64	1 4	15 64	5 32
11305	16-14	5-6	16 64	4 64	1 4	15 64	5 32
11306	16-14	5-6	43 64	33 64	1 4	21 64	5 32
11308	16-14	8	23 32	35 64	1 4	21 64	5 32
11310	16-14	10	23 32	35 64	1 4	21 64	5 32
11314	16-14	12-4	59 64	11 16	1 4	29 64	5 32
11338	16-14	3	1 8	51 64	1 4	17 32	5 32



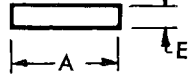
Catalog Number	Wire Size	Stud Size	A	B	C	D	E
13204	22-18	4	17 32	27 64	1 4	15 64	1 8
13206	22-18	5-6	5 8	15 32	1 4	19 64	1 8
13208	22-18	8	41 64	15 32	1 4	11 32	1 8
13210	22-18	10	11 16	1 2	1 4	13 32	1 8
13306	16-14	4-6	19 32	29 64	1 4	19 64	5 32
13308	16-14	8	32 64	31 64	1 4	11 32	5 32
13310	16-14	10	45 64	1 2	1 4	13 32	5 32
14206	22-18	4-6	16 32	11 32	1 4	19 64	1 8



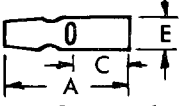
Catalog Number	Wire Size	Stud Size	A	B	C	D	E
15208	22-18	4-8	23 32	9 16	1 4	11 32	1 8
15306	16-14	4-6	19 32	29 64	1 4	19 64	5 32
15308	16-14	8	21 32	31 64	1 4	11 32	5 32
15310	16-14	10	45 64	1 2	1 4	13 32	5 32



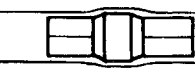
Catalog Number	Wire Size	Stud Size	A	B	C	D	E
16210	22-18	8-10	41 64	29 64	1 4	3 8	1 8
16310	16-14	8-10	21 32	15 32	1 4	3 8	5 32
16410	12-10	8-10	23 32	17 32	1 4	3 8	7 32



Catalog Number	Wire Size	A	B	C	D	E
17202	22-18	9 16	9 16	9 16	9 16	9 16
17302	16-14	9 16	9 16	9 16	9 16	9 16
17402	12-10	9 16	9 16	9 16	9 16	9 16



Catalog Number	Wire Size	A	B	C	D	E
19301	16-14	5 8	1 4	1 4	1 8	5 32
19303	16-14	43 64	1 4	1 4	5 32	5 32



Catalog Number	Wire Size	A	B	C	D	E	F
19302	16-14	3 4				3 16	1 4
19304	16-14	51 64				7 32	1 4
19305	16-14	11 16	3 8	1 4	3 16	1 8	

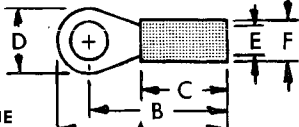


Catalog Number	Wire Size	A	B	C	D	E
18301	16-14	45 64	13 64	1 4	1 4	5 32
18303	16-14	9 16	1 4	1 4	1 4	5 32



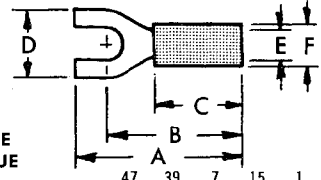
Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
18204	22-18	17 32	3 16	3 16	3 16	3 16	3 32	
18302	16-14	39 64	13 64	1 4	1 4	1 8	1 8	
18304	16-14	15 32	1 4	1 4	1 4	9 64	9 64	

**INSULATED SINGLE-GRIP SOLDERLESS TERMINALS**



Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
51204	22-18	4	25 32	43 64	7 16	7 32	1 8	3 16
51205	22-18	5-6	25 32	43 64	7 16	7 32	1 8	3 16

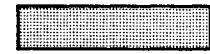
Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
51206	22-18	5-6	27 32	23 32	7 16	7 32	1 8	3 16
51208	22-18	8	55 64	45 64	7 16	21 64	1 8	3 16
51210	22-18	10	55 64	45 64	7 16	21 64	1 8	3 16
51214	22-18	12-4	7 16	64 64	7 16	29 64	1 8	3 16
51238	22-18	3 8	1 14	63 64	7 16	17 32	1 3	3 16
51304	16-14	4	3 4	41 64	7 16	15 64	5 32	13 64
51305	16-14	5-6	3 4	41 64	7 16	15 64	5 32	13 64
51306	16-14	5-6	55 64	45 64	7 16	21 64	5 32	13 64
51308	16-14	8	29 32	47 64	7 16	21 64	5 32	13 64
51310	16-14	10	29 32	47 64	7 16	21 64	5 32	13 64
51314	16-14	12-4	7 16	57 64	7 16	29 64	5 32	13 64
51338	16-14	3 8	1 14	63 64	7 16	17 32	5 32	13 64



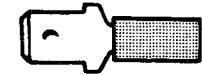
Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
53204	22-18	4	47 64	39 64	7 16	15 64	1 8	3 16
53206	22-18	5-6	13 16	21 32	7 16	19 64	1 8	3 16
53208	22-18	8	53 64	21 32	7 16	11 32	1 8	3 16
53210	22-18	10	57 64	11 16	7 16	13 32	1 8	3 16
53306	16-14	4-6	25 32	41 64	7 16	19 64	5 32	13 64
53308	16-14	8	27 32	43 64	7 16	11 32	5 32	13 64
53310	16-14	10	57 64	11 16	7 16	19 64	5 32	13 64
54206	22-18	4-6	7 8	21 32	7 16	19 64	1 8	3 16



Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
55208	22-18	4-8	59 64	3 4	7 16	11 32	1 8	3 16
55306	16-14	4-6	25 32	41 64	7 16	19 64	5 32	13 64
55308	16-14	8	27 32	43 64	7 16	11 32	5 32	13 64
55310	16-14	10	57 64	11 16	7 16	19 64	5 32	13 64



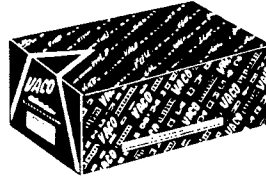
Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
57202	22-18	1					1 8	3 16
57302	16-14	1					5 32	13 64
57402	12-10	1					13 64	17 64



Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
58301	16-14	15 16	7 16	7 16	1 4	5 32	5 32	13 64
58302	16-14	55 64	7 16	1 4	1 4	5 32	5 32	13 64



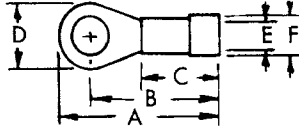
"C" PAK contains 100 terminals of a number and convenient for larger quantity users. Each carton readily identifiable from outside.



"MB" PAK contains 1000 terminals providing minimum terminal cost to large quantity users.

**SOLDERLESS TERMINALS and CONNECTORS**

**DOUBLE-GRIP SOLDERLESS TERMINALS**



**RING TONGUE**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
41204	22-18	4	47 64	5 8	13 32	7 32	5 32	11 64
41205	22-18	5-6	47 64	5 8	13 32	7 32	5 32	11 64
41206	22-18	5-6	13 16	43 64	13 32	9 32	5 32	11 64
41208	22-18	8	13 16	21 32	13 32	9 64	5 32	11 64
41210	22-18	10	13 16	21 32	13 32	9 64	5 32	11 64
41304	16-14	4	23 32	19 32	13 32	15 64	3 16	13 64
41305	16-14	5-6	23 32	19 32	13 32	15 64	3 16	13 64
41306	16-14	5-6	53 64	21 32	13 32	21 64	3 16	13 64
41308	16-14	8	55 64	45 64	13 32	21 64	3 16	13 64
41310	16-14	10	55 64	45 64	13 32	21 64	3 16	13 64
41314	16-14	12-4	5 164	27 32	13 32	29 64	3 16	13 64
41338	16-14	3-8	13 164	15 16	13 32	17 32	3 16	13 64

**SPADE TONGUE**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
43204	22-18	4	23 32	9 16	13 32	15 64	5 32	11 64
43206	22-18	5-6	49 64	39 64	13 32	19 64	5 32	11 64
43208	22-18	8	51 64	39 64	13 32	11 64	5 32	11 64
43210	22-18	10	27 32	41 64	13 32	13 64	5 32	11 64
43306	16-14	4-6	3 51	19 5	13 32	19 64	3 16	13 64
43308	16-14	8	51 64	5 8	13 32	11 32	3 16	13 64

**SPADE TONGUE (cont.)**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
43310	16-14	10	27 32	21 32	13 32	13 32	3 16	13 64
44206	22-18	4-6	27 32	5 8	13 32	19 64	5 32	11 64

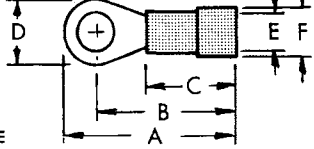
**HOOK TONGUE**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
45208	22-18	4-8	7 8	45 64	13 32	11 32	5 32	11 64
45306	16-14	4-6	3 4	19 32	13 32	19 64	3 16	13 64
45308	16-14	8	51 64	5 8	13 32	11 32	3 16	13 64
45310	16-14	10	27 32	21 32	13 32	13 32	3 16	13 64

**QUICK CONNECTORS**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
48301	16-14		29 32		13 32	1 4	3 16	13 64
48302	16-14		13 16		13 32	1 4	5 32	11 64

**INSULATED DOUBLE-GRIP SOLDERLESS TERMINALS**



**RING TONGUE**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
91204	22-18	4	51 64	11 16	11 29	7 32	11 64	13 64
91205	22-18	5-6	51 64	11 16	11 29	7 32	11 64	13 64
91206	22-18	5-6	55 64	47 64	29 32	9 64	11 64	13 64
91208	22-18	8	7 8	23 32	29 64	21 64	11 64	13 64
91210	22-18	10	7 8	23 32	29 64	21 64	11 64	13 64
91304	16-14	4	25 32	21 32	29 64	15 64	13 64	15 64
91305	16-14	5-6	25 32	21 32	29 64	15 64	13 64	15 64

**RING TONGUE (cont.)**

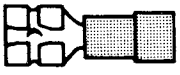
Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
91306	16-14	5-6	57 64	23 32	29 64	21 64	13 64	15 64
91308	16-14	8	59 64	49 64	29 64	21 64	13 64	15 64
91310	16-14	10	59 64	49 64	29 64	21 64	13 64	15 64
91314	16-14	12-4	1 18	1 32	29 64	29 64	13 64	15 64
91338	16-14	3-8	17 164	1 64	29 32	17 64	13 64	15 64

**SPADE TONGUE**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
93204	22-18	4	3 4	5 8	29 64	15 64	11 64	13 64
93206	22-18	5-6	53 64	43 64	29 64	19 64	11 64	13 64
93208	22-18	8	27 29	43 45	29 64	11 32	11 13	13 64
93210	22-18	10	32 13	45 21	29 64	32 19	11 11	13 13
93306	16-14	4-6	16 55	32 11	29 64	64 29	11 13	13 15
93308	16-14	8	64 29	16 45	32 29	64 13	32 13	64 15
93310	16-14	10	32 57	64 11	64 29	32 19	64 11	64 13
94206	22-18	4-6	64 16	64 64	64 64	64 64	64 64	64 64

**HOOK TONGUE**

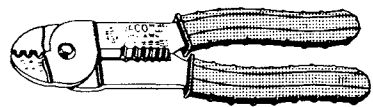
Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
95208	22-18	4-8	15 16	49 64	29 64	11 32	11 64	13 64
95306	16-14	4-6	13 16	21 32	29 64	19 64	13 64	15 64
95308	16-14	8	55 64	11 16	29 64	11 32	13 64	15 64
95310	16-14	10	29 32	45 64	29 64	13 32	13 64	15 64



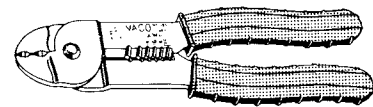
**QUICK CONNECTOR**

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
98301	16-14		61 64		29 64	1 4	13 16	15 64
98302	16-14		7 8		29 64	1 4	13 16	15 64

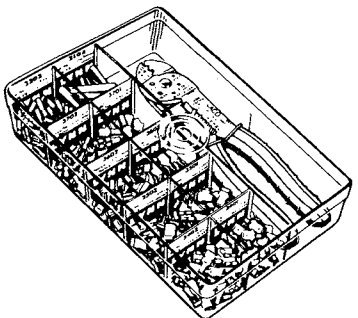
**VACO CRIMPING TOOLS and KITS**



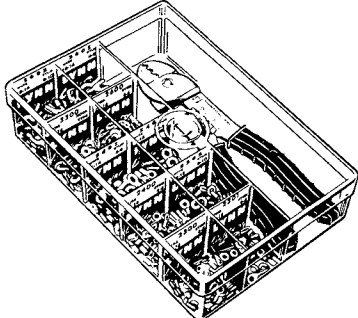
No. 1900 cuts wire, strips wire from 22 to 10 gauge, and crimps non-insulated solderless terminals. Plastic comfort handles are used on all Vaco crimping tools.



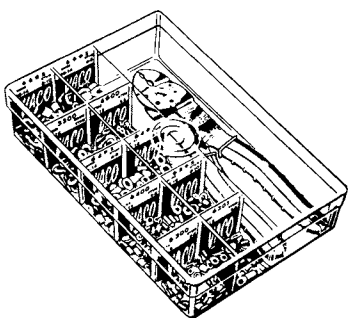
No. 1906 cuts and strips wire 22 to 10 gauge and crimps insulated solderless terminals. All Vaco tools are chrome plated, high quality steel.



No. 2195 Service Kit for Radio-TV and General Purpose Use. Contains No. 1900 crimping tool and one bin each of the following numbers: 11205, 11206, 11210, 11305, 11306, 11310, 14206, 13306, 13310, 15208.



No. 3185 Service Kit for Appliance, Automotive and Electrical Use. Contains No. 1900 crimping tool plus popular assortment of quick-connect terminals and adapters as follows: 18301, 18302, 18303, 18304, 18001, 18002, 18008, 18007, 19301, 19302.

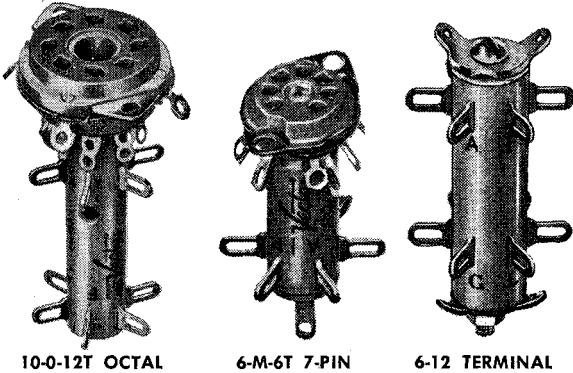


No. 6175 Service Kit for Electronics, Electrical and General Purpose Use. Contains No. 1906 crimping tool plus insulated single-grip terminals as follows: 51205, 51206, 51210, 51305, 53206, 53306, 53310, 51306, 51310, 54206.

# Vector Electronic Company

GLENDALE, CALIFORNIA

## POST SOCKET TURRETS



10-0-12T OCTAL

6-M-6T 7-PIN

6-12 TERMINAL

VECTOR SOCKET TURRETS AND TERMINAL TURRETS simplify electronic construction. Faster wiring, greater component density and higher reliability are assured by their use. Military types (premium grade- have MIL sockets with beryllium copper silver plated socket contacts, brass nickel plated hot tin dipped saddles and glass silicone turret post with fused tin brass terminals. Commercial types have mica filled sockets, hot tin dipped steel saddle, XXXP Phenolic turret post with brass fused tin terminals.

CATALOG NUMBERS		TURRET DETAILS		Space		NET PRICE
Commercial Types	Military Types	Height	No. of Term	No. of Rings	Between Rings	Comm. 1-19
<b>OCTAL SOCKET-TURRETS</b>						
* 6-0- 6T	680	1 1/2"	6	1	—	\$.54
* 8-0- 9T	681	2"	9	2	1"	.60
8-0-12T	682	2"	12	2	1"	.63
* 10-0- 9T	683	2 1/2"	9	2	1 3/8"	.63
10-0-12T	684	2 1/2"	12	2	1 3/8"	.66
<b>7-PIN SOCKET TURRETS</b>						
* 6-M - 6T	687	1 1/2"	6	1	—	.63
* 8-M - 9T	688	2"	9	2	1"	.69
8-M -12T	689	2"	12	2	1"	.72
10-MB-12T	690	2 1/2"	12	2	1 3/8"	.81
<b>9-PIN SOCKET TURRETS</b>						
* 6-N - 6T	693	1 1/2"	6	1	—	.63
* 8-N - 9T	694	2"	9	2	1"	.69
8-N -12T	695	2"	12	2	1"	.72
10-NB-12T	696	2 1/2"	12	2	1 3/8"	.81
<b>TERMINAL-TURRETS</b>						
6-12	676	1 1/2"	12	2	5/8"	.45
8-12	677	1 7/8"	12	2	1"	.48
10-12	678	2 1/2"	12	2	1 3/8"	.51

NOTE: Tolerance on dimensions  $\pm 1/16"$   
 \* Indicates preferred types.  
 Longer or shorter types and other terminal configurations to order.

## SOCKET SADDLE NUTS

U-Nuts for easy socket mounting slip over saddle ears. Packed in bags of 50. 4Z thread is No. 4 Sheet Metal.

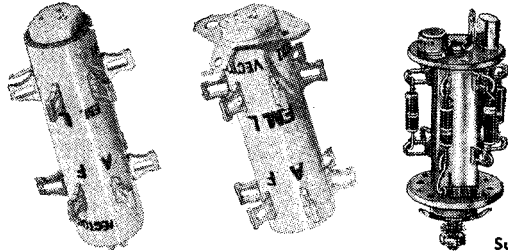
Cat. No.	Thread	Net Price 1-19 Bags
4-40 U Nut	4-40	\$1.00
4-Z U Nut	4Z	1.25
4-40 x 1/4" Screw	4-40	.60
4Z x 1/4" Screw	4Z	.40

## TUBE SHIELD BASES

Mount above sockets as base for conventional bayonet type shields.

Cat. No.	Description	Net Price 1-19
S7	7 Pin Steel Cad. Plated	\$.05
S7.17	7 Pin Steel Cad. Iridited	.06
S9	9 Pin Steel Cad. Plated	.05
S9.17	9 Pin Steel Cad. Iridited	.06

## TRANSISTOR TURRETS



7-A-12T-440

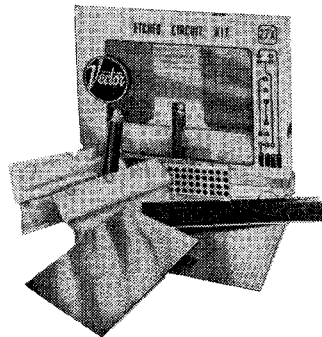
8-A-12T

#654 Supplied without wiring

TRANSISTOR SOCKET TURRETS enable user to mount one transistor and other necessary circuit components on a post structure. Sockets furnished accommodate 3-in-line or "top-hat" type transistors. Units furnished with saddle or recessed 4-40 Knurl nut in end opposite socket.

TRANSISTOR WAFER TURRET: Holds four transistors on wafer punched to take JEDEC or in-line leads. 5-40 screw projects 3/16" Min. beyond bottom ground lug for chassis mounting.

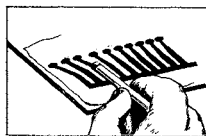
Catalog No.	Height	Space Between Rings	Space Between Wafers	Saddle	Knurl Nut	Net Price 1-19
6-A-12T	1 1/2"	7/8"	—	YES	NO	1.06
7-A-12T-440	1 3/4"	7/8"	—	NO	YES	1.04
8-A-12T	2"	1 3/8"	—	YES	NO	1.08
652	2"	1"	1 1/16"	NO	NO	.81
654	2 1/2"	1 3/8"	2 3/4"	NO	NO	.87



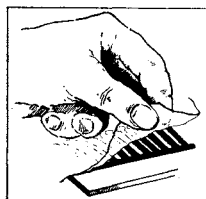
27X ETCHED CIRCUIT KIT

Etched circuits in minutes. All you need add is hot water! Complete with two 4 1/2" x 6 1/2" copper clad one side pre-punched Vectorboards, etch resist tape strips and circles, etch resist ink and applicator, dry chemical etchant in ready-touse plastic bag, layout paper; instructions. \$5.95 complete or parts available separately as follows:

Cat. No.	Description	Price 1-19
2592	Tape strips-Resist	\$.62/Card
2593	Tape circles-Resist	.72/Card
2594	Etchant per box containing two bags	1.25
3070-1XXXX	4 1/2" x 6 1/2" copper clad one side Vector-board punched	.85
CU65/45-2	4 1/2" x 6 1/2" copper clad two sides unpunched	.77
3082	Ready-to-use etch resist liquid, 1/4 oz.	.45
3086	Etch resist brush	.15



## VECTORRESIST RUB-ON RESIST FOR MAKING ETCHED CIRCUITS

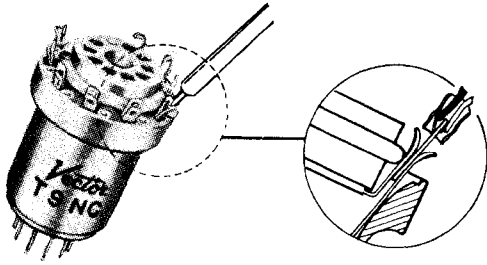


Vectorresist is an easy-to-use method of making experimental etched circuits which eliminates need for resist tapes and pens. 10" x 15" sheet has various width lines, curves, circles, pads, solid areas and .156" spaced plug contacts printed as resist. To apply to copper clad board just rub back of sheet and character, line, or figure transfers. Works in Ferric Chloride or Ammonium Persulphate solution.

Cat. No. R-322 Price \$2.00 per sheet



**CURRENT TEST ADAPTERS**

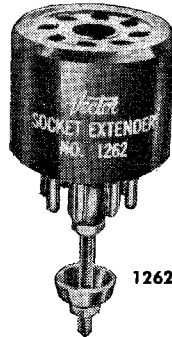


Versatile VECTOR CURRENT TEST ADAPTERS make possible tube circuit current or voltage measurements without cutting leads or making computations. All measurements may be made from the tube side of the electronic equipment without disturbing the chassis.

Cat. No.	Type	Net Price 1-19
T-7-M-C	7 Pin Min.	2.20
T-8-O-C	8 Pin Octal	2.45
T-9-N-C	9 Pin Noval	2.45
P-2	Dual Sided Plug-in Probe, Required for above	.75
T-789-C	Set of Above 3 Adapters with P-2 Probe in Case	8.40

**SOCKET EXTENDERS**

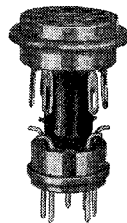
Socket extenders provide a replaceable unit for use in tube testers and expensive meters. Wear is shifted from the socket in the tester to the one in the extender so that when it is worn out a new one can be easily inserted. Sockets have beryllium copper silver plated contacts for long life. An all molded outside shell is used with socket leads soldered to plug pins. All units provided with 1 1/4" long screw to hold unit firmly in place if desired.



Cat. No.	Socket Type	Net Price 1-19
#1262	Octal 8	1.75
#1263	9 P. Noval	1.75
#1264	7 P. Miniature	1.75

**SOCKET CHANGE ADAPTERS**

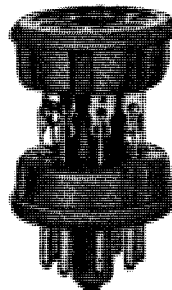
SOCKET CHANGE ADAPTERS facilitate use of unlike tube bases in existing sockets where a change of tube types is required. To be wired by user. Add "S" to number for an outer shell which may be cemented in place.



Cat. No.	Socket	Plug	Net Price 1-19
T 780	7 P. Min.	Octal 8	1.05
T 79	7 P. Min.	9 P. Nov.	1.02
T 807	Octal 8	7 P. Min.	1.23
T 809	Octal 8	9 P. Nov.	1.23
T 97	9 P. Nov.	7 P. Min.	1.02
T 980	9 P. Nov.	Octal 8	1.05

**EXPERIMENTER'S TEST ADAPTERS**

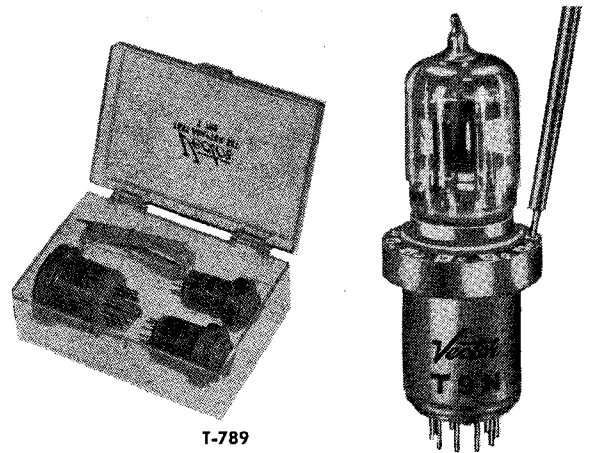
EXPERIMENTER'S TEST ADAPTERS. These are similar to the Socket Test Adapter but are less the shells and tabs so that connections can be cross-connected in any desired way. User must solder connections (Outer shells available at factory — add "S" to number to obtain).



Cat. No.	Socket Type	Net Price 1-19
TX-8-O	Octal	1.30
TX-7-M	Miniature	.80
TX-9-N	Noval	.85
TX-789	Set of above three in kit	3.25

TX-8-O

**TUBE SOCKET TEST ADAPTERS**



T-789

T9N

TUBE SOCKET TEST ADAPTERS are ideal for making voltage resistance and wave form measurements from the tube side of electronic equipment. To use, insert adapter between tube and socket, and replace tube in adapter socket. Special test tabs are recessed on the adapter skirt and have a hole to grip test probe and protect operator's fingers during insertion and withdrawal. Regular alligator test-clipped probes also hold on tab and socket. Castings are low loss phenolic and fit all shield bases for miniature and noval type or into standard tube clamps. Reduced body diameter permits insertion into new telescoping shields. Adapter socket contacts are beryllium copper, silver plated for long life and low resistance. Electrostatic capacity between adjacent leads of the adapter is approximately 1 micro-micro-farad. Flash over voltage between adjacent terminals is in excess of 1500 volts DC.

Adapters may be purchased separately or in kits. Kit T789 consists of the 3 popular "must have" sizes, 7-pin miniature, 8-pin octal, 9-pin noval plus a P1 probe packed into a handy clear plastic carrying case.

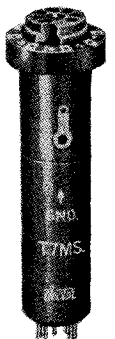
Kit T429 consists of 9 adapters as listed below packed in a sturdy plastic case and is a commercial equivalent of the well known Navy tube socket test adapter kit.

Cat. No.	Tube Type	Body Dia.	Skirt Dia.	Length Less Prongs	Price 1 - 19
T-4	4 Pin	1.26	1.56	1.50	2.76
T-5	5 Pin	1.26	1.56	1.50	2.82
T-6	6 Pin	1.26	1.56	1.50	2.89
T-7-0	7 Pin Small	1.26	1.56	1.50	2.95
T-7-L	7 Pin Large	1.45	1.75	1.50	2.95
T-7-M	7 Pin Min.	0.75	1.03	1.50	1.65
T-8-0	8 Pin Octal	1.25	1.56	1.50	1.60
T-8-L	8 Pin Octal	1.26	1.56	1.50	3.95
T-9-N	9 Pin Noval	0.87	1.16	1.50	1.85
T-429	Set of above Nine types in case.				27.00
T-789	Set of types T-7-M, T-8-0, T-9-N, P1, in case.				5.90
P1	Plug-in Probe with 30" lead.				.39

Special Adapters Designed to Customer Specifications—Write Factory.

**EXTENDED TUBE SOCKET TEST ADAPTERS**

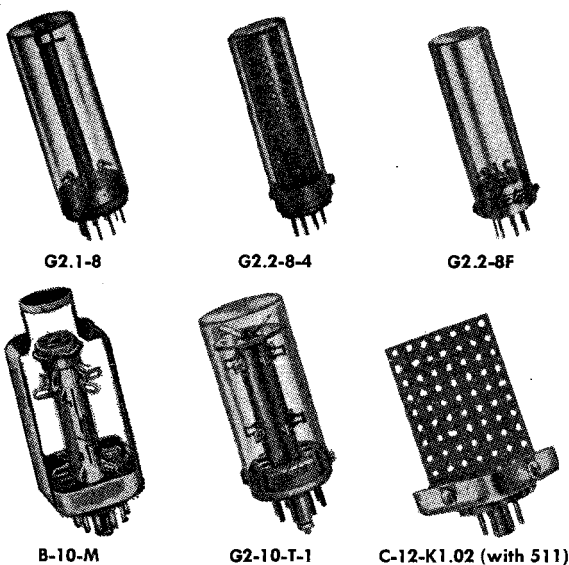
For most work the short, unshielded adapters are adequate. For hard to reach locations, or where surrounding equipment restricts use of regular test adapters, the 3 to 4 inch extended adapter may be used. In these the leads between plug and socket are individually shielded to minimize coupling. The shield is brought out to a lug on the wall of the adapter and should be connected to the chassis being tested. Capacity to shield is approx. 8 mmf. per lead.



T7MS

Cat. No.	Tube Type	Body Dia.	Skirt Dia.	Length Less Prongs	Price 1 - 19
T-7-M-S	7 Pin Min.	0.75	1.03	3.25	5.37
T-8-0-S	8 Pin Octal	1.25	1.56	4.00	5.05
T-9-N-S	9 Pin Noval	0.87	1.16	3.25	6.00
P1	Plug-in Probe with 30" lead				.39
T-789-S	Set of above in case				17.70

**SMALL ROUND AND SQUARE PLUG INS**



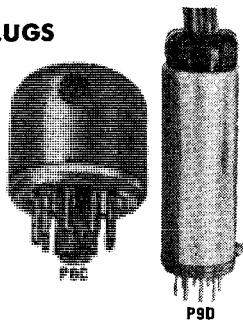
SMALL ROUND AND SQUARE PLUG-INS are ideal for packaging hand wired, printed, or solid state plug-in modules. Aluminum cases provide shielding and strength. Wide variety of internal structures eases circuit wiring. Plugs are standard tube base style with case sizes as follows: "B" type 8-pin Octal 1.42" square; "C" type 8-pin Octal 2" square; G2, 8-pin Octal 1 1/4" diameter; G2.1, in square Octal based units points toward case corner. Sockets in case top, when furnished, are mica-filled phenolic with brass cadmium plated contacts. Military type (premium grade) have "MIL" sockets with beryllium copper silver plated contacts. (Add "J" to catalog number for this).

Catalog Number	Type of Socket	Internal Structure	Height	Net Price 1-19
B-8	None	None	2"	.99
B-10	None	None	2 1/2"	1.03
B-10-M	7-p. Min.	Turret	2 1/2"	2.01
B-10-N	9-p. Nov.	Turret	2 1/2"	2.05
B-10-T	None	Turret	2 1/2"	1.73
B-10-4	None	Strip "A"	2 1/2"	1.82
C-10	None	None	2 1/2"	1.16
C-10-NN	9-p. Nov. (2)	Turret	2 1/2"	3.01
C-12	None	None	3"	1.20
C-12K1.02	None	None	3"	.97
C-12-M	7-p. Min.	Turret	3"	2.24
C-12-N	9-p. Nov.	Turret	3"	2.27
C-12-NN	9-p. Nov. (2)	Turret	3"	3.04
511*	None	None	3"	.63
514*	None	None	3"	.83
C-12-T	None	Turret	3"	1.88
C-12-4	None	Strip "A"	3"	2.85
G2-10	None	None	2 1/2"	1.05
G2-10-M	7-p. Min.	Post	2 1/2"	1.66
G2-10-N	9-p. Nov.	Post	2 1/2"	1.69
G2-10-T-1	None	Wafer	2 1/2"	1.68
G2-10-4	None	Strip "D"	2 1/2"	1.85
G2.1-8F	None	None	2"	1.35
G2.1-8N	9-p. Nov.	Post	2"	2.04
G2.1-8-4	None	Strip "G"	2"	1.90
G2.2-8F	None	None	2"	1.30
G2.2-8-M	7-p. Min.	Post	2"	1.93
G2.2-8-4	None	Strip "G"	2"	1.88

NOTE: \*Indicates wall w/mtg. brackets attached for use in C-12-K1.02. 511 has holes per strip A — .093 holes spc. .265". 514 has 1/16" holes per strip G — 1/16" holes spaced .141 to fit JEDEC Transistor leads. Strip "D" has .093" holes spaced 0.2" x 0.25". "Wafer" is 1" diameter used on Transistor Turret 654.

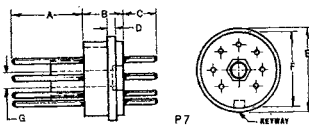
**CABLE CONNECTOR PLUGS**

Used to permit plugging cables into 8-pin octal, 7 and 9-pin miniature tube sockets. Construction: P7C, P9C, Aluminum shells, side outlet with rubber grommet with 1/4" hole, center screw thru length; P7D, P9D, Aluminum shells attached with side screws, end outlet furnished with Heyco strain relief grommet. P8C, PK1D snap-on Polyethylene case with 1/4" diam. hole end or side.



End Outlet	Side Outlet	Plug Style	Outside Diam.	Length Less Prongs	Net Price 1-19
P7D	P7C	7-p Min.	5/8"	2.2"	1.58 1.13
PK1D	P8C	8-p Oct.	1 1/4"	1 1/4"	.50 .50
P9D	P9C	9-p Min.	3/4"	2.3"	1.67 1.26

**TUBE BASE PLUGS**



K1.434



Vector tube base plugs have Mica-filled phenolic castings and phosphor bronze cadmium plated pins. The wide variety of pin configurations on the top side of the plugs allow design features not possible with other types of plugs. Plugs may be mounted as follows:

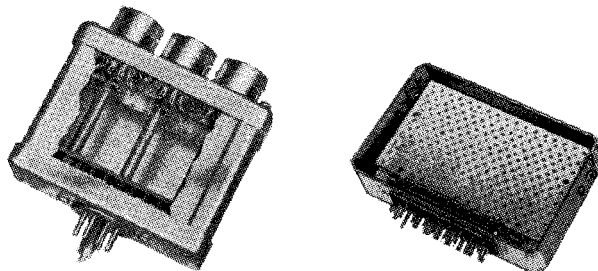
1. With a 4-40 or 5-40 screw through the center.
2. With a split retainer ring around plug, in a plate or chassis. Retainer rings are indicated by adding "R" after "K" or "P" in the catalog number.
3. With a stamped metal saddle B36-4 for 7-pin, B37-4 for 9-pin, B38-2 for 14-pin.
4. Round shells may be attached by screws and threaded 1/2 inserts in plug periphery, except plugs with a keyway. Add "F" after "K" or "P" in the catalog number. (See Plug-in Can Section for complete units).

Cat. No.	Type	A	B	C	D	E	F	G	Net Price 1-19
P7	7-pin min.	1/2"	.300"	.265"	1/8"	.621	.568	.125	.47
P9	9-pin noval	1/2"	.300"	.265"	1/8"	.748	.700	.125	.52
P7A	7-pin min.	3/8"	.300"	.265"	1/8"	.621	.568	.125	.47
P9A	9-pin noval	3/8"	.300"	.265"	1/8"	.748	.700	.125	.52
*K1.302	(Same as P7 exc. no centerpost)								.47
*K1.402	(Same as P9 exc. no centerpost)								.52
	Min. hooked								
K1.334	Pin	.150	.300"	.265"	1/8"	.621	.568	.125	.59
	Noval								
K1.434	hooked pin	.162	.300"	.265"	1/8"	.748	.700	.125	.64
*P8L	Loctal	13/16"	3/8"	13/32"	100	1.17	1.00	.110	.95
K1.14	14 pin	1 1/2"	.300"	.265"	1/8"	.750	.700	None	.63

Add R after "P" or "K" for retainer ring. .45

\*ADD \$5.00 SET-UP CHARGE FOR ADDING "R"

**MULTI-USE PLUG-IN-KIT:**



TUBE SOCKET TYPE

TRANSISTOR TYPE

MULTI USE PLUG-IN KITS enable the user to readily wire and package a wide variety of circuits. Kits consist of an aluminum case with plug and accessories for mounting (a) Tube Sockets, or (b) Transistor type assemblies. For the tube circuits the Lip-Loc Case units (see left fig.) are used. These include the following parts: Mounted noval sockets, shield bases, 2 Zip wiring decks, and 11-pin Octal plug plus extra components as follows: equal number of 7-pin miniature sockets, shield bases and adapter mounting rings; plug buttons to close unused socket holes; one extra unpunched base with spacers and screws for mounting larger plugs such as the Amphenol Blue Line (not supplied in kit); one extra zip wiring deck. The extra components may be readily installed as required in place of the furnished items.

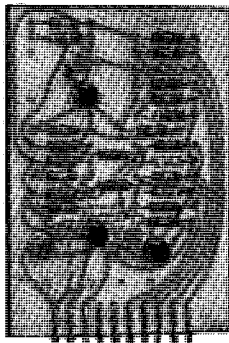
For transistor and printed circuit assemblies, the Frame-Loc type case shown at the right above is furnished with snap-in aluminum sides (not illustrated), Elco Varicon 16-pin plug, and perforated epoxy paper center wall with 1/16" holes on alternate centers of a 0.1" grid. Loose T28 Push-in terminals are furnished. Order Rectacle R1.72.

Material specifications are as follows: case, caustic etch on aluminum; sockets, mica-filled phenolic, commercial grade; terminal strips and spacers are phenolic for tube units and epoxy-paper for transistor units. Overall height of all units is 3".

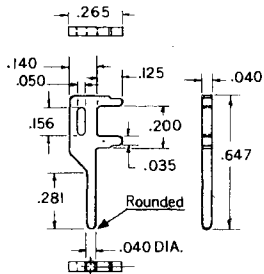
Cat. No.	Sockets	Base Dimen.	Deck Spacing (2 Decks)	Number Terminals per Deck	Base Price 1-19
4-EK3	3N & 3M	1 5/8" x 3 3/8"	1 1/8"	22	6.60
5-E2K3	4N & 4M	1.68" x 4.82"	1 1/8"	30	7.20
6-E1K3	5N & 5M	1 5/8" x 5 7/8"	1 1/8"	38	7.87
4-HK3	None	1" x 4"	1 Wall	—	6.84
5-HK3	None	1" x 5"	1 Wall	—	7.04
6-HK3	None	1" x 6"	1 Wall	—	7.54
K1.72	16 pins		1.19 Net	any Quantity	

## SECTION 2100

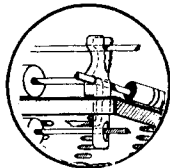
### VECTOR PLUGBOARDS



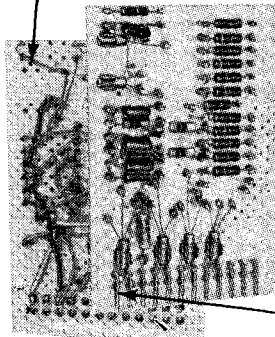
**R315**



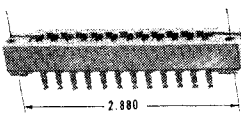
**EDGE PIN K23A**



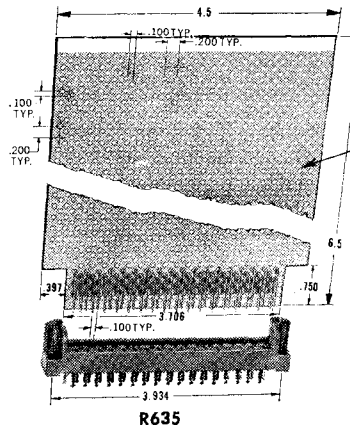
**T28**



**837 (WIRED)**

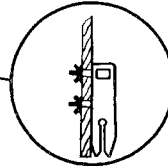


**R612-1**

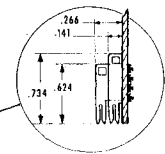


**848WE**

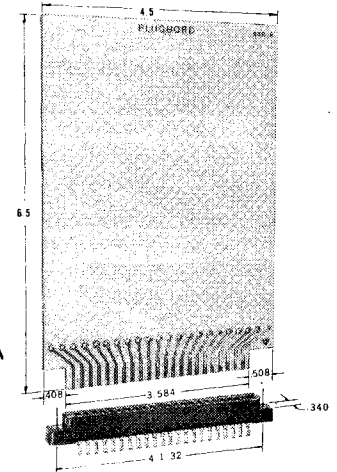
**R635**



**VARICON  
CONTACT**



**838A**



**R644**

Use Plugboards with attached contacts for test circuits, P. C. prototypes and short runs. Precision pre-punched  $\frac{1}{16}$ " diameter holes on alternate 0.1" centers permit maximum flexibility of component location. Vector T28 MINI-KLIPS, eyelets, or standard turned terminals may be located wherever desired. For maximum economy use epoxy paper boards; for military specification requirements or additional strength use epoxy glass. All Plugboards are  $\frac{1}{16}$ " thick and are available with Elco Varicon, 2 oz. copper etched or Vector Edge-pin contacts. Epoxy paper boards meet requirements MIL-P-22323 type PEE; Epoxy glass is G-10 grade per MIL-P-18177. Copper clad Epoxy paper meets MIL-P-13949 type PX, and copper-clad Epoxy glass meets MIL-P-13949B type FLGE-91.

Receptacles listed are glass filled diallyl phthalate, except R315 which is mineral filled phenolic. Edge-pins as used on 846 and 846A may be purchased separately for customer installation and may be staked readily along the edge of a "G" pattern Vectorbord with hand tool P93. Production staker available. Micro-plugboard cards available with .025" and .040" diameter holes. See Radio Master page 854 on Micro-Vectorbord.

Catalog No.	Description	Net Price 1-19
812	4½" x 6½" Epoxy Paper, 16 Varicon Contacts	2.73
812WE	4½" x 6½" Epoxy Glass, 16 Varicon Contacts	3.23
R616-1	Molded Receptacle for 812, 812WE	2.38
837	3" x 4½" Epoxy Paper, 12 Varicon Contacts	2.13
837WE	3" x 4½" Epoxy Glass, 12 Varicon Contacts	2.36
R612-1	Molded Receptacle for 837, 837WE	1.64
838	4½" x 6½" Epoxy Paper, 43 Etched Contacts, 2 sides	3.34
838A	4½" x 6½" Epoxy Paper, 22 Etched Contacts, 1 side	2.57
838AWE	4½" x 6½" Epoxy Glass, 22 Etched Contacts, 1 side	3.19
838WE	4½" x 6½" Epoxy Glass, 43 Etched Contacts, 2 sides	3.92
R644	Receptacle for above (Fits all above etched boards)	2.62
846A	3" x 4½" Epoxy Paper, 10-Edge-pin Contacts	1.60
846AWE	3" x 4½" Epoxy Glass, 10-Edge-pin Contacts	2.15
R310	Receptacle for 846A, 846AWE	1.75
848WE	4½" x 6½" Epoxy Glass, 35 Varicon Contacts	5.58
R635	Receptacle for 848WE	4.46
K23A-PKG L	Vector Edge-pins, Half Hard Brass, Gold Plt. (50)	1.00
P93	Installing Tool for Vector Edge-pins	Net 20.50

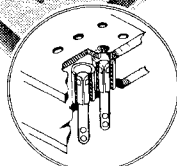
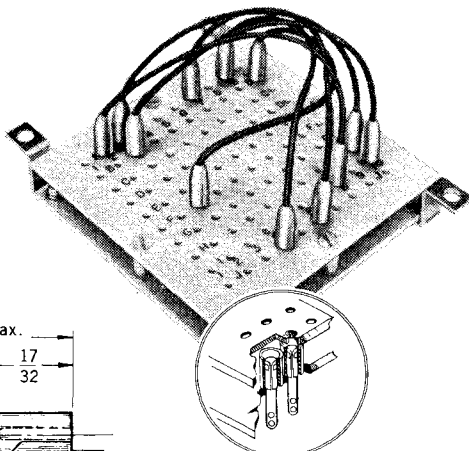
### PATCH BOARDS



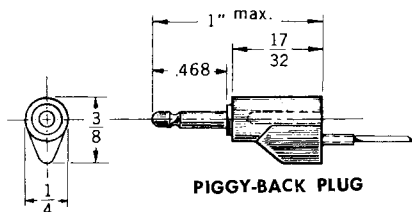
**PATCH CORD  
K2.06**



**JUMPER PLUG  
K2.02-1**



**DETAIL**



**PIGGY-BACK PLUG**

**SPECIFICATIONS:**

**Panels:** Black XXXP phenolic, Type PBE-P, Grade 810 per MIL-P-3115. .093" thick with printed white numbers and letters. PB1010 has epoxy paper, ivory color, .093" thick with black numbers and letters.

**Contacts:** Beryllium copper, nickel plated gold finished, 2 holes for soldering on leads. Add letter "A" to Cat. No. if wire-wrap tabs are desired.

**Dimensions:** All boards 7/8" thick. See Description column for width and length.

**Patchcords:** Plugs .087" - .091" diameter x .468" long, nickel plated with standard #20 gage wire vinyl insulation. 6" black, 9" yellow, 15" blue.

Vector Patchboards provide simple, but reliable low-cost units for multiple connection, single conductor patching on computers, test and central equipment. Holes are on .265" centers. PB33 has a 3x3 hole layout, PB110 has 1x10, PB210 has 2x10, PB510 has 5x10, PB1010 and PB1010-1 have a 10x10, PB1020 has two blocks of 1"x10 and PB1520 is arranged in one block of holes in a 15 hole by 15 hole layout in a single panel.

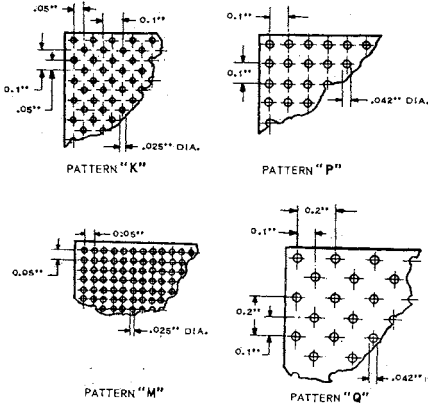
Extremely low contact resistance (less than .001 ohms) and long contact life (over 2000 insertion per contact without resistance change) assures reliability. All boards are marked front and back with horizontal rows lettered alphabetically and vertical columns numbered. "Z" type brackets for flush mounting using pre-drilled mounting holes on back supplied. Special size patchboards to order.

Cat. No.	Description	Net Price 1-19
PB33	Patchboard 9 contacts, Black color 1.4" x .94"	\$2.95
PB110	Patchboard 10 contacts, Black color 3.25"x .40"	3.25
PB210	Patchboard 20 contacts, Black color 3.25"x .67"	4.25
PB510	Patchboard 50 contacts, Black color 3.25"x1.46"	6.45
PB1010	Patchboard 100 contacts, Ivory color 3.25"x3.25"	10.75
PB1010-1	Patchboard 100 contacts, Black color 3.25"x3.25"	10.85
PB1020	Patchboard 200 contacts, Black color 6.03"x3.38"	21.00
PB1520	Patchboard 200 contacts, Black color 6.03"x3.71"	32.35
K2.02-1	Jumper Plug Jumper Type (25 per bundle)	2.50
K2.06	Patchcord Single Contact ea. end 6" (25 per bundle)	2.00
K2.09	Patchcord Single Contact ea. end 9" (25 per bundle)	2.25
K2.15	Patchcord Single Contact ea. end 15" (25 per bundle)	2.50
K9.06	Patchcord Piggy-back each end 6"	.93 ea.
K9.09	Patchcord Piggy-back each end 9"	.93 ea.
K9.15	Patchcord Piggy-back each end 15"	.93 ea.

PATCHCORD PRICES ARE NET ANY QUANTITY.

REMOVABLE PRE-PROGRAMING PATCHBOARDS AVAILABLE — WRITE FACTORY.

# Micro Vectorbord



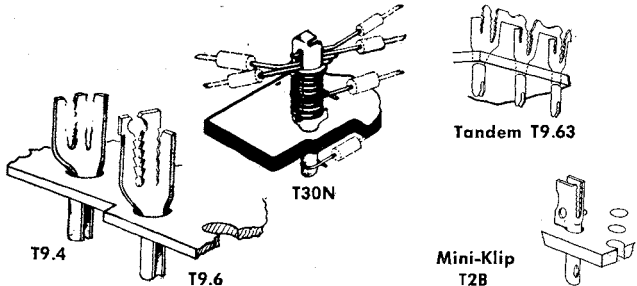
Pattern	Spacing	Pattern	Spacing
M	.05 Centers	P	.10 Centers
K	.05 x .10	Q	.10 x .20

Micro-Vectorbord has been specially designed for the denser packaging required by cordwood construction and mounting micro-miniature components. All boards listed are 1/2" thick epoxy glass, Type GEE, Grade G-10 per MIL-P-18177. Other thicknesses available on order.

### MICRO-VECTORBORD TABLE OF SIZES

Cat. No.	Pattern	Hole Size	Dimension	Number of Holes	Price 1-19
59P19/032	P	.042"	6" x 2" x 1/2"	59 x 19	\$1.09
169P59/032	P	.042"	17" x 6" x 1/2"	169 x 59	4.82
29Q9/032	Q	.042"	6" x 2" x 1/2"	(29 x 9) x2	.90
84Q29/032	Q	.042"	17" x 6" x 1/2"	(84 x 29) x2	4.39
76M38/032	M	.025"	4" x 2" x 1/2"	76 x 38	1.52
336M75/032	M	.025"	17" x 4" x 1/2"	336 x 76	7.26
38K19/032	K	.025"	4" x 2" x 1/2"	(38 x 19) x2	1.30
168K38/032	K	.025"	17" x 4" x 1/2"	(168 x 38) x2	6.42

### VECTOR PUSH-IN TERMINALS

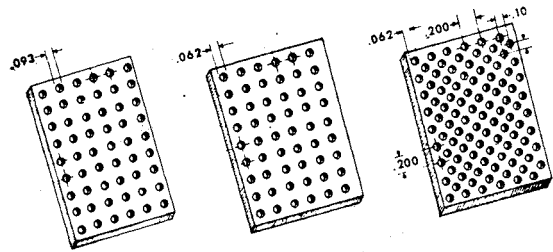


VECTOR PUSH-IN TERMINALS simplify "breadboarding" and production. Push them into .062" or .093" holes in 1/16" or 1/32" Vectorbord panels and they hold without staking. (May be staked by clipping off flush with board surface or flattening with a pair of pliers for maximum holding, if desired). All terminals except T9.4A have serrated slots to grip inserted wires. Large slot accommodates most resistor and capacitor wires. Small slot hold transistor leads. The T9.4A is supplied without "teeth" on the wire slots to permit easy removal of leads when soldered components must be changed. The T9.6 has a special "snap-in" slot to accommodate .075-080 diode leads. All types have thru hole construction enabling riser wires to be inserted down through center of terminal, and slot or hole in shank for additional connections.

SOLDERLESS SPRINGCLIP TERMINALS—Reliable truly solderless terminals for fast setup of experimental circuitry. May be used over and over—permits reusing expensive components by eliminating heat damage. Extremely low contact resistance—less than .002 ohms for T30. Order insertion tool P-92A for easy insertion in .093" holes. Suggested board thickness 1/32" for best support of terminal.

Cat. No.	Fits Holes	Description	Quantity Per Bag	Net Price 1-19 Bags	Bulk Price 1M-4999
T9.4	.093"	Brass, Fused Tin Pltg.	100	\$1.25	\$ 8.90/M
T9.4A	.093"	Brass, Fused Tin Pltg.	100	1.25	8.90/M
P122		Inserting tool for T9.4 & T9.4A	1	.50	
T28	.062"	Beryllium Copper, Fused Tin Pltg.	100	1.55	11.00/M
T28S	.062"	Beryllium copper silver pltg.	100	1.63	11.68
T91		Inserting tool for T28 & T28S	1	.50	
T30	.093"	Brass, Silver Pltg.	10	1.20	
T30	.093"	Brass, Silver Pltg.	100	8.95	63.93/M
T30N	.093"	Brass, Nickel Pltg.	10	1.15	
T30N	.093"	Brass, Nickel Pltg.	100	8.45	58.90/M
T92C		Inserting-Spring Depressing Tool for T30 and T30N	1	.50	
T9.62	.093"	Two T9.6 in Tandem	25	1.22	
T9.63	.093"	Three T9.6 in Tandem	25	1.75	
T9.64	.093"	Four T9.6 in Tandem	25	2.27	

### VECTORBORD



Pattern	Spacing	Pattern	Spacing	Pattern	Spacing
A	.265 Centers	B	.188 Centers	H	.100 Centers
C	.200 Centers	E	.141 Centers	G	.20 x .10
F	.200 Centers				

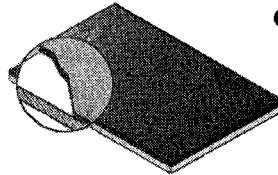
VECTORBORD (Pre-Punched Terminal Board) has precision pre-punched .093" or .062" holes at various spacings on tan XXXP Phenolic (MIL-P-18177) ivory epoxy paper (MIL-P-22324), G-10 Epoxy Glass (MIL-P-1877) or Copper clad epoxy glass type FLGE-91 (MIL-P-13949-B). Ideal for prototypes and many production uses. Vector Push-in Terminals or standard turned terminals and eyelets fit pre-punched holes. User can make own etched circuits with listed copper clad boards. May be sawed, drilled, or punched.

### VECTORBORD TABLE OF SIZES

Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Price 1-19
<b>XXXP Phenolic</b>					
18A18	A	.093	4.80 x 4.80 x 1/16	18 x 18	\$ .43
32A9	A	.093	8.51 x 2.41 x 1/16	32 x 9	.45
32AA18	A	.093	8.51 x 4.80 x 1/32	32 x 18	.84
64A18	A	.093	4.8 x 16.99 x 1/16	64 x 18	1.25
64AA18	A	.093	4.8 x 16.99 x 1/32	64 x 18	1.60
64AA32	A	.093	16.99 x 8.51 x 1/32	64 x 32	2.45
45B30	B	.062	8.51 x 5.69 x 1/16	45 x 30	.84
90B30	B	.062	16.97 x 5.69 x 1/16	90 x 30	1.62
85C24	C	.093	16.99 x 4.80 x 1/16	85 x 23	1.41
95G175	G	.062	35.00 x 19.00 x 1/16	(94 x 175) x 2	7.62
<b>Epoxy Paper</b>					
32AA18EP	A	.093	8.51 x 4.80 x 1/32	32 x 18	1.40
64AA18EP	A	.093	16.99 x 4.80 x 1/32	64 x 18	2.73
64AA32EP	A	.093	16.99 x 8.51 x 1/32	64 x 32	4.39
85F24EP	F	.062	16.99 x 4.80 x 1/16	85 x 23	2.06
85G24EP	G	.062	16.99 x 4.80 x 1/16	(85 x 23) x 2	2.06
85G42EP	G	.062	16.99 x 8.5 x 1/16	(85 x 42) x 2	3.17
120E33EP	E	.062	16.99 x 4 1/8 x 1/16	120 x 33	2.23
<b>Epoxy Glass</b>					
32A18WE	A	.093	8.51 x 4.80 x 1/16	32 x 18	1.89
42G24WE	G	.062	8.5 x 4.80 x 1/16	(42 x 23) x 2	1.94
85G24WE	G	.062	16.99 x 4.80 x 1/16	(85 x 23) x 2	3.81
170H48WE	H	.062	17.00 x 4.80 x 1/16	170 x 47	4.07
120E33WE	E	.062	16.99 x 4 1/8 x 1/16	120 x 33	3.99
<b>Copper Clad XXXP Phenolic</b>					
849-1-XXXP*	F	.062	3 x 4 1/2	20 x 14	.45
849-2-XXXP**	F	.062	3 x 4 1/2	20 x 14	.55
850-1-XXXP*	F	.062	4 1/2 x 6 1/2	28 x 22	.84
850-2-XXXP**	F	.062	4 1/2 x 6 1/2	28 x 22	1.04
42F22C1*	F	.062	4.5 x 8.5	42 x 22	1.05
42F22C2**	F	.062	4.5 x 8.5	42 x 22	1.32
<b>Copper Clad Epoxy Paper</b>					
850-1-EP*	F	.062	4.5 x 6.5 x 1/16	28 x 22	1.39
850-2-EP**	F	.062	4.5 x 6.5 x 1/16	28 x 22	1.67
<b>Copper Clad Epoxy Glass</b>					
42G22WEC1*	G	.062	8.5 x 4.5 x 1/16	(42 x 22) x 2	2.55
42G22WEC2**	G	.062	8.5 x 4.5 x 1/16	(42 x 22) x 2	2.60
85F42WEC1*	F	.062	16.99 x 8.51 x 1/16	85 x 42	8.33
85F42WEC2**	F	.062	16.99 x 8.51 x 1/16	85 x 42	10.25
849-1*	F	.062	3.0 x 4.5 x 1/16	20 x 14	1.01
849-2**	F	.062	3.0 x 4.5 x 1/16	20 x 14	1.10
850-1*	F	.062	4.5 x 6.5 x 1/16	28 x 22	2.03
850-2**	F	.062	4.5 x 6.5 x 1/16	28 x 22	2.21

\* Indicates 2 oz. Copper Clad 1 Side  
 \*\* Indicates 2 oz. Copper Clad 2 Sides

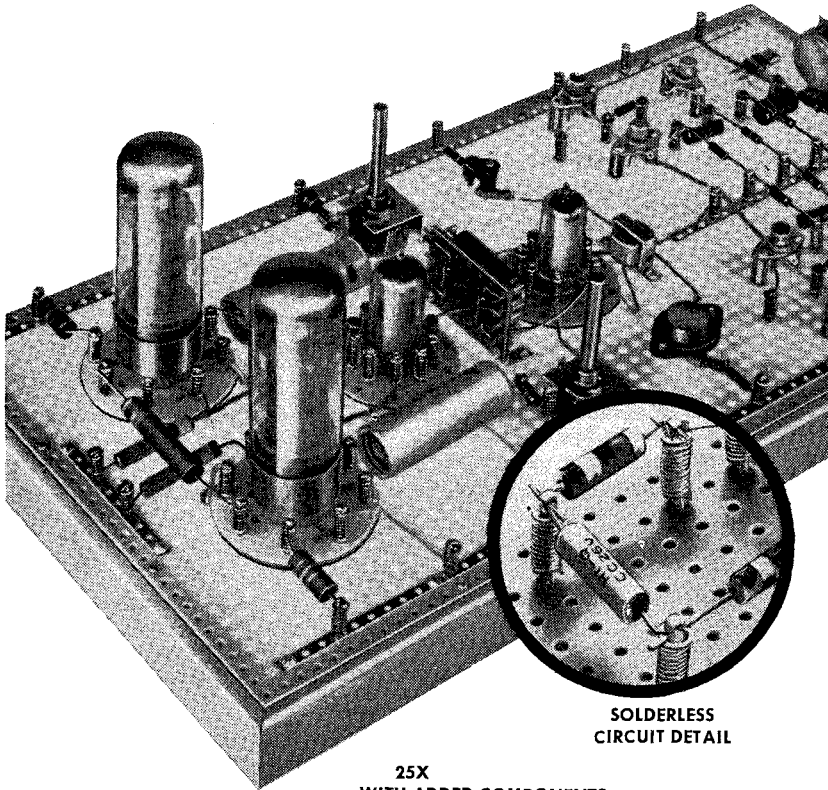
### COPPER CLAD PLASTIC SHEETS



1/16" copper clad unperforated. For making etched circuits, shielding, 2 oz. (.003") clad one or two sides XXXP per MIL-P-13949 Type PP and G-10 epoxy glass per MIL-P-13949B Type FLGE.

4 1/2" x 3" XXXP Phenolic	CU 453-1	.30	CU 453-2	.40
6 1/2" x 4 1/2" XXXP Phenolic	CU 6545-1	.55	CU 6545-2	.77
8 1/2" x 4 1/2" XXXP Phenolic	CU 8545-1	.70	CU 8545-2	.98
4 1/2" x 3" Epoxy Glass	CU 453WE-1	.69	CU 453WE-2	.77
6 1/2" x 4 1/2" Epoxy Glass	CU 6545WE-1	1.34	CU 6545WE-2	1.52
8 1/2" x 4 1/2" Epoxy Glass	CU 8545WE-1	1.71	CU 8545WE-2	1.95

EXPERIMENTER'S CIRCUIT SET-UP KITS



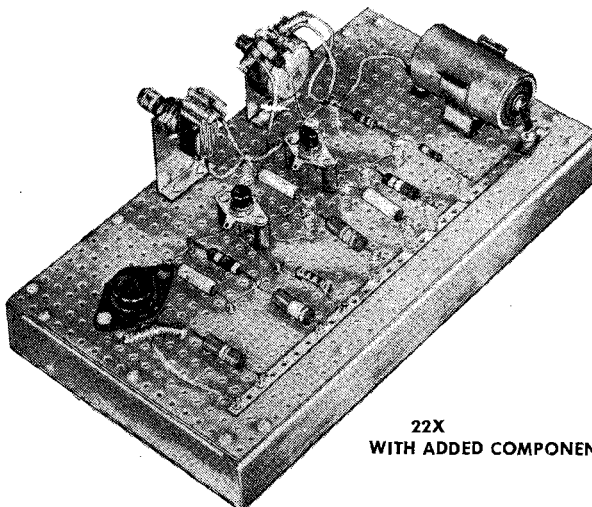
25X  
WITH ADDED COMPONENTS

All Kits are provided with supporting side rails (Aluminum in 20X, 21X, and 22X; wood in 25X). The 20X is a starter assortment, 21X a larger size with more components, 22X is for transistor experimentation, and 25X is the largest and designed for solderless circuit set ups with tubes or transistors. Detailed contents as follows:

20X 4 $\frac{3}{16}$ " x 8 $\frac{1}{2}$ " Vectorbord deck, 8 tube sockets (3-7 pin, 3-9 pin, 2-8 octal); 75-T9.4 push-in terminals; 20 T30N SOLDERLESS SPRINGCLIPS, 10 springclips for pot lugs, 2 pieces bus strip; terminal installation tool; 2 sheets grid layout paper; 66 miscellaneous screws, spacers for set up; 2 pot and switch brackets, \$6.25.

21X 4 $\frac{3}{16}$ " x 17" Vectorbord deck, 2 pieces Vectorbord as follows: 1-5AA5, 1-32AA7; Sockets as follows: Tube type: 3-7 pin, 3-9 pin, 2-8 pin octal, transistor: 6 Universal type; terminals: 10-T9.6 push-in, 4-T9.62 tandem, 100-T9.4, 100-T30N SOLDERLESS SPRINGCLIPS, 15 springclips for pot lugs; 3 pieces bus strip; 170 miscellaneous screws, nuts, spacers; terminal installation tool, 70' hookup wire; 6 sheets grid layout paper, 4 pot and switch brackets; 14 miscellaneous mounting brackets, \$15.25.

25X 8 $\frac{1}{2}$ " x 17" Vectorbord deck, 2 pieces Vectorbord as follows: 1-15AA5, 1-32AA7, transistor sockets as follows: 2 power transistor sockets, 4 Universal; tube sockets: 3-7 pin, 3-9 pin, 2-8 pin; terminals: 10-T9.6 push-in, 4-T9.62 tandem, 100-T9.4, 100-T30N SOLDERLESS SPRINGCLIPS, 15 springclips for pot lugs; 3 pieces bus strip, 160 miscellaneous screws, nuts, spacers, 8 wafers to make solderless sockets; terminal installation tool, 70' hookup wire, 6 sheets grid layout paper, 4 pot and switch brackets; 8 miscellaneous brackets, \$19.50.

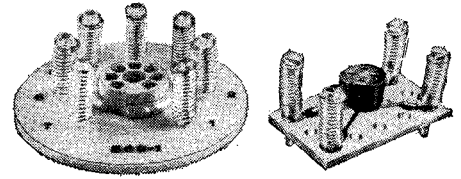


22X  
WITH ADDED COMPONENTS

22X 4 $\frac{3}{16}$ " x 8 $\frac{1}{2}$ " Vectorbord deck; 2 pieces Vectorbord as follows: 1-15AA5, 1-32AA7; transistor sockets as follows: 3 power, 4 Universal, 2 tetrode; terminals: 10-T9.6 push-in, 2-T9.62 tandem, 75-T9.4 push-in; 20 T30N SOLDERLESS SPRINGCLIPS, 10 springclips for pot lugs; 3 pieces bus strip; 102 miscellaneous screws, nuts, spacers; terminal installation tool; 70' hookup wire, 6 sheets grid layout paper; 4 pot and switch brackets; 8 miscellaneous brackets; \$10.50.

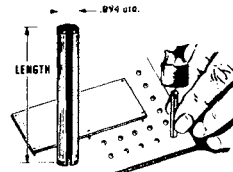
ACCESSORIES

SOLDERLESS SOCKETS



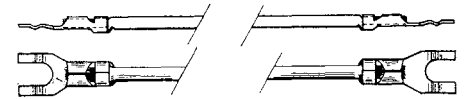
567-1C	Solderless Octal Socket	1.50 ea.
568-1C	Solderless Noval (9 pin) Socket	1.65 ea.
569-1C	Solderless Miniature (7 pin) Socket	1.35 ea.
570-B	Solderless Universal Transistor Socket	1.20 ea.

DRIVE PIN  
CHASSIS LEGS



1111-40	.094" Dia. x 1" long	Pkg. of 2 .5
1110-49	.063" Dia. x 3/4" long	.5

Inexpensive, reusable Vectorbord chassis supports. Mount both sides of board if desired for component protection when inverting chassis.

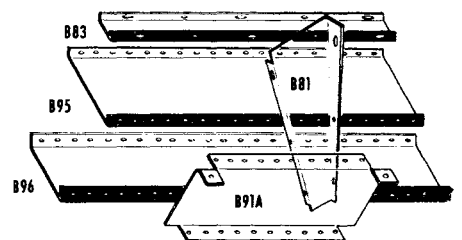


PATCHCORDS FOR INTERCONNECTION  
BETWEEN SPRINGCLIP TERMINALS

Corrugated spade type lug slips between coils of Springclip terminal and holds tightly. Cords 20 gage standard; lugs plated brass.

Cat. No.	Description	Price
K8.06	8" overall lug ea. end	\$4.50/Bdle 25
K8.09	9" overall lug ea. end	4.75/Bdle 25
K8.13	13" overall lug ea. end	5.00/Bdle 25

CHASSIS SUPPORTS

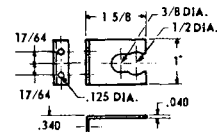


Heavy 0.040" aluminum in 1" & 2 $\frac{1}{4}$ " heights. Punched holes along top surface accept #4 self tap screws in A or AA pattern VECTORBOARD.

Cat. No.	Description (Alum. Channel)	L.	H.	Price
B81	Z Type End piece	4 $\frac{3}{4}$ " x 1"	1"	.38 ea.
B83	U Type Side rail	8 $\frac{1}{2}$ " x 1"	1"	.43 ea.
B91A	Z Type End piece	4 $\frac{3}{4}$ " x 2 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	.45 ea.
B85	U Type Side rail	8 $\frac{1}{2}$ " x 2 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	.51 ea.
B86	U Type Side rail	17" x 2 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	.60 ea.

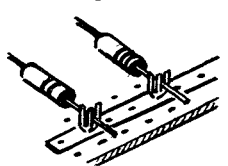
POT & SWITCH  
BRACKET

B20 Bracket  
Pkg. of 4 \$ .44



BUS STRIP

T-57—PKG X 16" long .95  
T-58—PKG X 8" long .65  
Pkg. of 10



GRID PAPER

Tracing paper printed with dot pattern corresponding to Vectorbord patterns A (.093 holes on .265 grid) or "G" (.062 holes on staggered 0.1 grid). Speeds circuit construction by facilitating optimum arrangement of components. Paper, when laid on Vectorbord can serve as layout or checking template. Printed dots "WASH OUT" on reproduced copies supplied in pads of 50 sheets per pad.

R173A	(A pattern) 8 $\frac{1}{2}$ " x 11" sheets	\$1.45/pad
R173A-1	(A pattern) 8 $\frac{1}{2}$ " x 17" sheets	2.50/pad
R173F	(F pattern) 8 $\frac{1}{2}$ " x 11" sheets	1.45/pad
R173G	(G pattern) 8 $\frac{1}{2}$ " x 11" sheets	1.45/pad



# WABER Industrial OUTLET BOXES

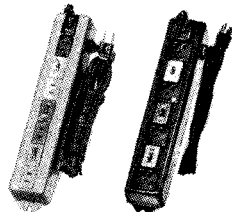
THE Safe INSTANT WIRING LINE FOR PLANT, LAB OR SCHOOL

## WABER COLOR CODED SWITCH-OUTLET BOXES

Model 30 series, two wire type and Model 32 "U" ground type

Net	
Model 30 (fuse type)	\$5.95
Model 30CB (circuit breaker type)	6.95
Model 32 (fuse, 6' cord-set)	8.50
Model 32-15 (fuse, 15' cord-set)	9.50
Model 32CB (crct. brkr., 6' cord-set)	9.50
Model 32CB-15 (crct. brkr., 15' cord-set)	10.50

**FEATURES** — Panel mounted fuse or circuit breaker • 4 On-off switches • Tough neoprene cord-set • UL approved components • 12 3/4" mounting centers. Size: 1 3/8" x 2 3/8" x 1 1/2". Rated 15 amperes, 130 volts continuous duty • Steel case finished in silver gray textured hammertone.



MODEL 30 MODEL 32

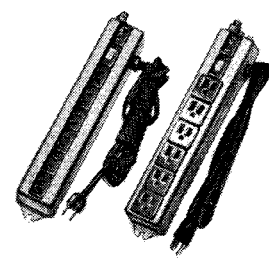
## WABER MODEL 20 TWO WIRE OUTLET BOX

Model 20 (fuse type)	Net \$ 5.95
Model 20CB (circuit breaker type)	6.95

## WABER "U" GROUND OUTLET BOX MODEL 24

Model 24 (fuse, 6' cord-set)	8.50
Model 24-15 (fuse, 15' cord-set)	9.50
Model 24CB (crct. brkr., 6' cord-set)	9.50
Model 24CB-15 (crct. brkr., 15' cord-set)	10.50

**FEATURES** — Panel mounted fuse or circuit breaker • Bright neon pilot light • On-off switch • Tough neoprene cord-set • UL approved components • 12 3/4" mounting centers. Size: 1 3/8" x 2 3/8" x 1 1/2". Rated 15 amperes, 130 volts continuous duty • Steel case finished in silver gray textured hammertone.



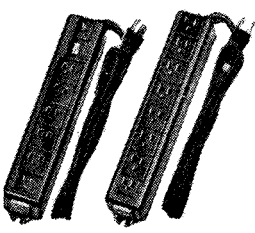
MODEL 20 MODEL 24

## WABER "IN-LINE" TYPE "U" GROUND OUTLET BOXES

Outlet on the end and cord out other end permits series stringing. Model 15 is the control unit, with fuse or circuit breaker, switch, pilot light and 7 "U" ground outlets. Model 17 is the slave unit with 9 outlets only.

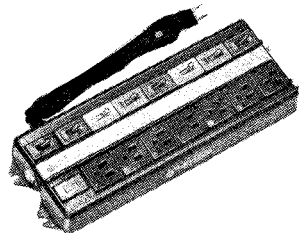
Net	
Model 15 (fuse, 6' cord-set)	\$8.75
Model 15-15 (fuse, 15' cord-set)	9.75
Model 15CB (crct. brkr., 6' cord-set)	9.75
Model 15CB-15 (crct. brkr., 15' cord-set)	10.75
Model 17 (6' cord-set)	6.75
Model 17-15 (15' cord-set)	7.75

**FEATURES** — Panel mounted fuse or circuit breaker • Bright neon pilot light • On-Off Switch • Tough neoprene cord-set • UL approved components • 12 3/4" mounting centers • Size: 1 3/8" x 2 3/8" x 1 1/2". Rated 15 amperes, 130 volts continuous duty • Steel case finished in silver gray textured hammertone.



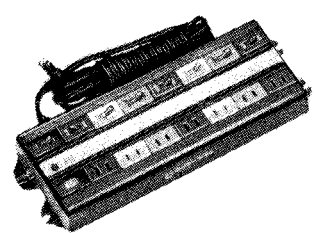
MODEL 15 MODEL 17

## WABER DELUXE OUTLET BOXES FEATURE INDIVIDUAL CONTROL, MASTER CONTROL & CENTER WRITE-ON STRIP



WABER "25" SERIES MASTER POWER CONTROL CENTER

Model 25 (fuse, 6' cord-set)	\$15.50
Model 25-15 (fuse, 15' cord-set)	16.50
Model 25CB (crct. brkr., 6' cord-set)	16.50
Model 25CB-15 (crct. brkr., 15' cord-set)	17.50



WABER "35" SERIES MASTER POWER CONTROL CENTER

Model 35 (fuse type)	Net 13.50
Model 35CB (circuit breaker type)	14.50

**FEATURES** — Panel mounted fuse or circuit breaker • Bright neon pilot light • Master on-off switch plus seven switch outlet sets • Tough neoprene cord-set • UL approved components • 12 3/4" mounting centers. Size 1 3/8" x 4 3/8" x 1 1/2". Rated at 15 amperes, 130 volts continuous duty • Steel case finished in silver gray textured hammertone.

## NEW! WABER GIANT 4 FT. HEAVY DUTY OUTLET BOXES — "Long John" Series

**TOUGH NEOPRENE CORD SET • BRIGHT NEON PILOT LIGHT • ON-OFF SWITCH • UL APPROVED COMPONENTS • STEEL CASE FINISHED IN SILVER GRAY TEXTURED HAMMERTONE • RATED AT 15 AMPERES, 130 VOLTS CONTINUOUS DUTY • MOUNTING CENTERS 48 3/4" • SIZE: 49 x 2 x 1 1/2" • FUSE OR PUSH TO RESET CIRCUIT BREAKER AVAILABLE IN MOST MODELS.**

### WABER MODEL 700 SERIES, 8 U GROUND OUTLETS ON-OFF SWITCH, BRIGHT PILOT LIGHT.

Net	
Model 700 (fuse, 6' cord-set)	\$14.95
Model 700-15 (fuse, 15' cord-set)	15.95
Model 700CB (crct. brkr., 6' cord-set)	15.95
Model 700CB-15 (crct. brkr., 15' cord-set)	16.95

### WABER MODEL 705 SERIES, 15 U GROUND OUTLETS ON-OFF SWITCH, BRIGHT PILOT LIGHT.

Model 705 (fuse, 6' cord-set)	\$18.95
Model 705-15 (fuse, 15' cord-set)	19.95
Model 705CB (crct. brkr., 6' cord-set)	19.95
Model 705CB-15 (crct. brkr., 15' cord-set)	20.95

### WABER MODEL 707 SERIES, 14 U GROUND OUTLETS ON-OFF SWITCH, BRIGHT PILOT LIGHT.

Model 707 (fuse, 6' cord-set)	\$15.75
Model 707-15 (fuse, 15' cord-set)	16.75
Model 707CB (crct. brkr., 6' cord-set)	16.75
Model 707CB-15 (crct. brkr., 15' cord-set)	17.75

### WABER MODEL 710 SERIES, 8 U GROUND OUTLETS ONLY.

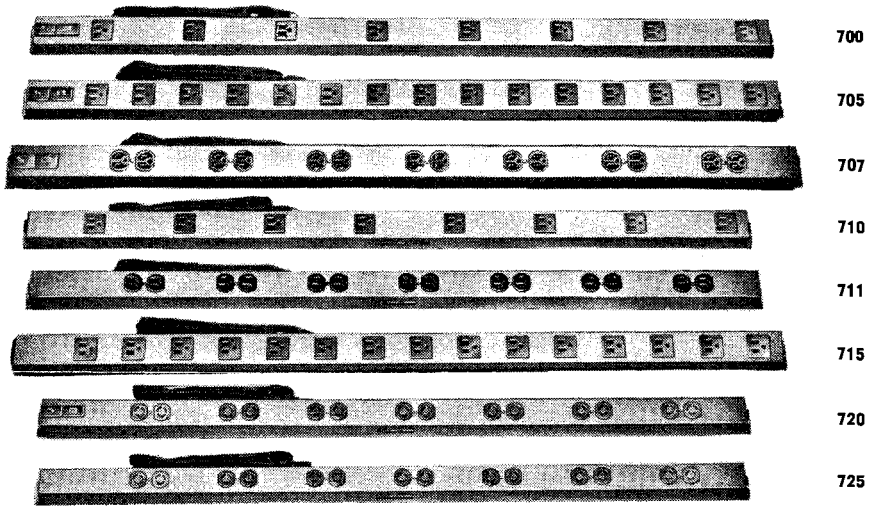
Model 710 (6' cord-set)	\$12.95
Model 710-15 (15' cord-set)	13.95

### WABER MODEL 711 SERIES, 14 U GROUND OUTLETS ONLY.

Model 711 (6' cord-set)	\$13.95
Model 711-15 (15' cord-set)	14.95

### WABER MODEL 715 SERIES, 15 U GROUND OUTLETS ONLY.

Model 715 (6' cord-set)	\$16.95
Model 715-15 (15' cord-set)	17.95



Models 730 and 735 not illustrated (same as Models 720 and 725)

### WABER MODEL 720 SERIES, 14 LOCKING TYPE OUTLETS, ON-OFF SWITCH, BRIGHT PILOT LIGHT.

Net	
Model 720 (fuse, 6' cord-set)	\$32.95
Model 720-15 (fuse, 15' cord-set)	33.95
Model 720CB (crct. brkr., 6' cord-set)	33.95
Model 720CB-15 (crct. brkr., 15' cord-set)	34.95

### WABER MODEL 725 SERIES, 14 LOCKING TYPE OUTLETS ONLY.

Model 725 (6' cord-set)	\$31.95
Model 725-15 (15' cord-set)	32.95

### WABER MODEL 730 SERIES, 14 CROW'S FOOT OUTLETS, ON-OFF SWITCH, BRIGHT PILOT LIGHT.

Net	
Model 730 (fuse, 6' cord-set)	\$32.95
Model 730-15 (fuse, 15' cord-set)	33.95
Model 730CB (crct. brkr., 6' cord-set)	33.95
Model 730CB-15 (crct. brkr., 15' cord-set)	34.95

### WABER MODEL 735 SERIES, 14 CROW'S FOOT OUTLETS ONLY.

Model 735 (6' cord-set)	\$31.95
Model 735-15 (15' cord-set)	32.95



# WABER ELECTRONICS INC. PHILADELPHIA 33, PENNA.

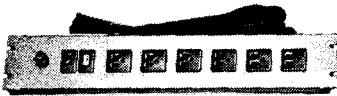




# WABER Industrial OUTLET BOXES

THE Safe INSTANT WIRING LINE FOR PLANT, LAB OR SCHOOL

## WABER RACK MOUNTS — MASTER POWER CONTROLS



MODEL 900

STANDARD 3 1/2" X 19" UNITS MADE TO BE MOUNTED ON A RACK PANEL FOR REMOTE CONTROL OF OTHER WABER POWER OUTLET BOXES MOUNTED INSIDE THE RACK CABINET, OR SUPPLYING POWER TO COMPONENTS IN THE CABINET.

Waber Model 900 has six "U" ground outlets controlled by an on-off switch, with a pilot light, and fuse or circuit breaker. The 6 or 15 foot cord-set is of tough, durable neoprene.

Waber Models 904, 905, and 906 Rack Power Mounts have two outlets on the front and four outlets mounted on the rear of the panel. This provides an excellent source of power for equipment mounted in the rack. Control is from the front with the convenience of a pilot light, on-off switch, and fuse or circuit breaker for protection.

Model 904 is fitted with "U" ground type outlets, Model 905 with locking type, and Model 906 with crow's foot.

MODEL 900 SERIES, ON-OFF SWITCH, PILOT LIGHT, FUSE OR PUSH TO RESET CIRCUIT BREAKER, AND SIX "U" GROUND OUTLETS.

Model 900 (fuse, 6' cord-set)	Net \$10.95
Model 900-15 (fuse, 15' cord-set)	11.95
Model 900CB (crct. brkr., 6' cord-set)	11.95
Model 900CB-15 (crct. brkr., 15' cord-set)	12.95

DUST AND SAFETY COVER FOR RACK MOUNT PANELS \$4.00



MODEL 904

MODEL 904 SERIES, ON-OFF SWITCH, PILOT LIGHT, FUSE OR PUSH TO RESET CIRCUIT BREAKER, AND SIX "U" GROUND OUTLETS, 2 IN FRONT, 4 IN BACK.

Model 904 (fuse, 6' cord-set)	Net \$12.95
Model 904-15 (fuse, 15' cord-set)	13.95
Model 904CB (crct. brkr., 6' cord-set)	13.95
Model 904CB-15 (15' cord-set, crct. brkr.)	14.95

MODEL 905 SAME FEATURES AS MODEL 904 EXCEPT FITTED WITH LOCKING TYPE RECEPTACLES AND PLUG.

Model 905 (fuse, 6' cord-set)	Net \$23.95
Model 905-15 (fuse, 15' cord-set)	24.95
Model 905CB (crct. brkr., 6' cord-set)	24.95
Model 905CB-15 (crct. brkr., 15' cord-set)	25.95

MODEL 906 SAME FEATURES AS MODEL 904 EXCEPT FITTED WITH CROW'S FOOT RECEPTACLES AND PLUG.

Model 906 (fuse, 6' cord-set)	Net \$24.95
Model 906-15 (fuse, 15' cord-set)	25.95
Model 906CB (crct. brkr., 6' cord-set)	25.95
Model 906CB-15 (crct. brkr., 15' cord-set)	26.95

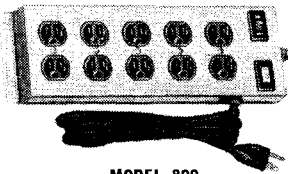
DUST AND SAFETY COVER FOR RACK MOUNT PANELS \$4.00

## WABER 800 SERIES DUPLEX MASTER POWER CONTROLS

ON-OFF SWITCH • BRIGHT PILOT LIGHT • TOUGH NEOPRENE CORD SET • UL APPROVED COMPONENTS • RATED AT 15 AMPERES, 130 VOLTS CONTINUOUS DUTY • STEEL CASE FINISHED IN SILVER GRAY TEXTURED HAMMERTONE YOUR CHOICE OF FUSE OR PUSH TO RESET CIRCUIT BREAKER • 12 3/4" X 2 7/8" MOUNTING CENTERS • SIZE 1 3/4" X 4 1/4" X 1 1/2"

MODEL 800 SERIES, "U" GROUND OUTLETS.	
Model 800 (fuse, 6' cord-set)	\$13.50
Model 800-15 (fuse, 15' cord-set)	14.50
Model 800CB (crct. brkr., 6' cord-set)	14.50
Model 800CB-15 (crct. brkr., 15' cord-set)	15.50

MODEL 801 SERIES, LOCKING TYPE OUTLETS.	
Model 801 (fuse, 6' cord-set)	\$29.95
Model 801-15 (fuse, 15' cord-set)	30.95
Model 801CB (crct. brkr., 6' cord-set)	30.95
Model 801CB-15 (crct. brkr., 15' cord-set)	31.95



MODEL 800

MODEL 802 SERIES, CROW'S FOOT TYPE OUTLETS.

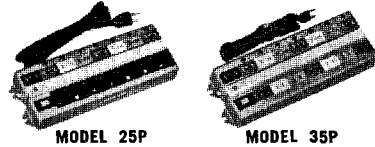
Model 802 (fuse, 6' cord-set)	Net \$34.95
Model 802-15 (fuse, 15' cord-set)	35.95
Model 802CB (crct. brkr., 6' cord-set)	35.95
Model 802CB-15 (crct. brkr., 15' cord-set)	36.95

## WABER "POWER POINT" MASTER POWER CONTROL BOXES WITH BRIGHT PILOT LIGHT ON EACH COLOR CODED SWITCH-OUTLET SET

Brilliant pilot light on each switch-outlet set, in addition to color coding, makes identification immediate.

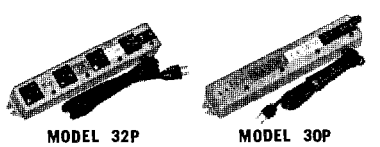
FEATURES — PANEL MOUNTED FUSE OR CIRCUIT BREAKER • PILOT LIGHT, SWITCH, OUTLET SETS (7 ON 25P-35P SERIES, AND 4 ON 30P-32P SERIES)

• MASTER SWITCH AND PILOT LIGHT • TOUGH NEOPRENE CORD-SET • UL APPROVED COMPONENTS • 12 3/4" MOUNTING CENTERS • SIZE: 1 3/8" x 4 3/4" x 1 5/8" • RATED AT 15 AMPERES, 130 VOLTS CONTINUOUS DUTY • STEEL CASE FINISHED IN SILVER GREY TEXTURED HAMMERTONE.



MODEL 25P

MODEL 35P



MODEL 32P

MODEL 30P

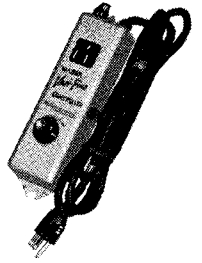
Model 25P (fuse, 6' cord-set)	Net \$19.50
Model 25P-15 (fuse, 15' cord-set)	20.50
Model 25PCB (crct. brkr., 6' cord-set)	20.50
Model 25PCB-15 (crct. brkr., 15' cord-set)	21.50
Model 35P (fuse, 10' cord-set)	17.50
Model 35PCB (crct. brkr., 10' cord-set)	18.50

Model 32P (fuse, 6' cord-set)	Net 10.50
Model 32P-15 (fuse, 15' cord-set)	11.50
Model 32PCB (crct. brkr., 6' cord-set)	11.50
Model 32PCB-15 (crct. brkr., 15' cord-set)	12.50
Model 30P (fuse, 10' cord-set)	7.50
Model 30PCB (crct. brkr., 10' cord-set)	8.50

## Stepless Control From Zero To Maximum!

### WABER VARI-FINE CONTROLLER

The Waber "Vari-Fine" Controller, a solid state device for speed and light control, provides infinite control of motor speed and light intensity, and the speed of AC/DC motors of the universal type. It is rated at 7 amperes, 117 volts. It may be plugged into any standard wall outlet, and is fused for circuit protection. Compact and portable, it features mounting ears for use where a fixed installation is desired. The Waber "Vari-Fine" Controller has many applications in the home, laboratory, school, or factory where regulation is desirable.



Model 200 ..... \$14.95 Net

### MODEL 602 SERIES, 5 "U" GROUND OUTLETS ONLY.

Model 602 (6' cord-set)	Net \$4.80
Model 602-15 (15' cord-set)	5.80

### MODEL 603 SERIES, 4 "U" GROUND OUTLETS, FUSE OR PUSH TO RESET CIRCUIT BREAKER.

Model 603 (fuse, 6' cord-set)	\$5.25
Model 603-15 (fuse, 15' cord-set)	6.25
Model 603CB (crct. brkr., 6' cord-set)	6.25
Model 603CB-15 (crct. brkr., 15' cord-set)	7.25

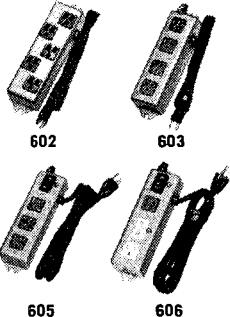
### MODEL 605 SERIES, 3 "U" GROUND OUTLETS, PILOT LIGHT, ON-OFF SWITCH, FUSE OR PUSH TO RESET CIRCUIT BREAKER.

Model 605 (fuse, 6' cord-set)	\$5.95
Model 605-15 (fuse, 15' cord-set)	6.95
Model 605CB (crct. brkr., 6' cord-set)	6.95
Model 605CB-15 (crct. brkr., 15' cord-set)	7.95

### MODEL 606 SERIES, 2 SETS (SWITCH, PILOT LIGHT, OUTLET), FUSE OR PUSH TO RESET CIRCUIT BREAKER.

Model 606 (fuse, 6' cord-set)	\$6.75
Model 606-15 (fuse, 15' cord-set)	7.75
Model 606CB (crct. brkr., 6' cord-set)	7.75
Model 606CB-15 (crct. brkr., 15' cord-set)	8.75

## WABER LOW COST COMPACTS HAVE QUALITY FEATURES



## NEW WABER "STRING BEAN" SERIES SPACE-SAVER SIZE IN A STURDY STEEL CASE! COMPLETELY WIRED FOR INSTANT USE

TOUGH NEOPRENE CORD SET • BRIGHT NEON PILOT LIGHT • ON-OFF SWITCH • UL APPROVED COMPONENTS • STEEL CASE FINISHED IN SILVER GRAY TEXTURED HAMMERTONE • RATED AT 15 AMPERES, 130 VOLTS CONTINUOUS DUTY • MOUNTING CENTERS 49" x 1 1/2" x 1 1/8" • FUSE OR CIRCUIT BREAKER AVAILABLE IN MOST MODELS.

### MODEL 1000 SERIES, 12 "U" GROUND OUTLETS, BRIGHT PILOT LIGHT, ON-OFF SWITCH.

Model 1000 (fuse, 6' cord-set)	Net \$17.95
Model 1000-15 (fuse, 15' cord-set)	18.95
Model 1000CB (crct. brkr., 6' cord-set)	18.95
Model 1000CB-15 (crct. brkr., 15' cord-set)	19.95

### MODEL 1001 SERIES, 12 "U" GROUND OUTLETS, FUSE OR CIRCUIT BREAKER.

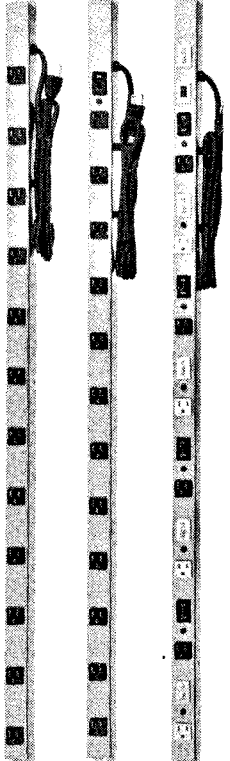
Model 1001 (fuse, 6' cord-set)	\$16.95
Model 1001-15 (fuse, 15' cord-set)	17.95
Model 1001CB (crct. brkr., 6' cord-set)	17.95
Model 1001CB-15 (crct. brkr., 15' cord-set)	18.95

### MODEL 1002 SERIES, 12 "U" GROUND OUTLETS ONLY.

Model 1002 (6' cord-set)	\$15.95
Model 1002-15 (15' cord-set)	16.95

### MODEL 1010 SERIES, MASTER ON-OFF SWITCH, PILOT LIGHT, AND 8 SETS OF "U" GROUND OUTLETS, PILOT LIGHTS, AND ON-OFF SWITCHES.

Model 1010 (fuse, 6' cord-set)	\$25.95
Model 1010-15 (fuse, 15' cord-set)	26.95
Model 1010CB (crct. brkr., 6' cord-set)	26.95
Model 1010CB-15 (crct. brkr., 15' cord-set)	27.95



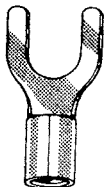
# WABER ELECTRONICS INC. PHILADELPHIA 33, PENN/



**WALDOM**

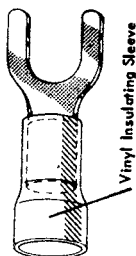
**SOLDERLESS TERMINALS AND CONNECTORS**

COMPLETE LINE . . . 21 TYPES, 5 CONSTRUCTION STYLES



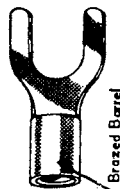
**KRIMPTITE®**

Basic non-insulated electro-tin plated copper terminal. One-piece construction for maximum strength and conductivity.



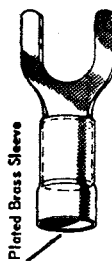
**INSULKRIMP®**

All advanced features of KRIMPTITE, plus permanently attached rigid vinyl plastic insulating sleeve for increased vibration resistance.



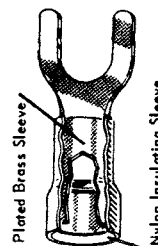
**VERSAKRIMP®**

Advantageous features of KRIMPTITE plus the higher tensile strength afforded by BRAZED BARREL construction.



**VIBRAKRIMP®**

Particularly suitable where high vibration is a factor. KRIMPTITE construction plus seamless annealed electro-tin plated brass sleeve.



**AVIKRIMP®**

All VIBRAKRIMP features, tin-plated-brass sleeve plus permanently attached overlapping nylon insulating sleeve.

Insulated terminals color coded: 22-18 Red, 16-14 Blue, 12-10 Yellow, 8 Red, 6 Blue

**BASIC TERMINAL CONSTRUCTION DETAILS**

Material: Annealed electrolytic copper, electro-tin finish. Modern one-piece design for maximum strength and conductivity. With strength gusset, open end rapid inspection, beveled edge to facilitate wire insertion. Circumferential serrations for maximum contact area and grip. Full 1/4 inch barrel length, wide crimping area, easy location.

Wire ranges 22-18, .032 stock. Wire Ranges 12-10, .040 stock. Terminals in 22-18 and 16-14 wire ranges. Are available with 5/32" barrel by adding "S" to front of part desired. Listed by Underwriter Labs., Inc.

**FOR CRITICAL APPLICATIONS - VERSAKRIMP® AND AVIKRIMP® TERMINALS**

**SPADE TONGUE TERMINALS (FIG. A)**

Basic Dimensions				Versakrimp®					Avikrimp®				
Wire Range	Stud Size	Width	Stud Clearance	Length	Part No.	100-999 Per C	1000-4999 Per M	5000 Up Per M	Length	Part No.	100-999 Per C	1000-4999 Per M	5000 Up Per M
22-18	5-6	1/4"	7/32"	5/8"	B-3118	3.18	25.44	19.08	13/16"	N-5118	6.55	53.19	39.91
22-18	10	5/16"	5/16"	3/4"	B-3032	3.18	25.44	19.08	15/16"	N-5032	6.55	53.19	39.91
16-14	5-6	1/4"	7/32"	5/8"	B-3123	3.18	25.44	19.08	13/16"	SN-5123	6.55	53.19	39.91
16-14	10	23/64"	9/32"	3/4"	B-3016	3.18	25.44	19.08	15/16"	SN-5016	6.55	53.19	39.91

**FLANGED SPADE TERMINALS (FIG. C)**

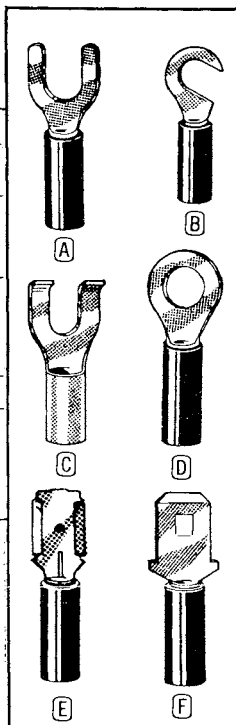
22-18	5-6	19/64"	7/32"	5/8"	B-3080	3.18	25.44	19.08	13/16"	N-5080	6.55	53.19	39.91
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**RING TONGUE TERMINALS (FIG. D)**

22-18	1-2	7/32"	5/32"	33/64"	B-3099	3.18	25.44	19.08	45/64"	N-5099	6.55	53.19	39.91
22-18	3-4	7/32"	5/32"	33/64"	B-3047	3.18	25.44	19.08	45/64"	N-5047	6.55	53.19	39.91
22-18	5-6	7/32"	5/32"	33/64"	B-3001	3.18	25.44	19.08	45/64"	N-5001	6.55	53.19	39.91
22-18	8	9/32"	1/4"	41/64"	B-3097	3.18	25.44	19.08	53/64"	N-5097	6.55	53.19	39.91
22-18	10	9/32"	1/4"	41/64"	B-3098	3.18	25.44	19.08	53/64"	N-5098	6.55	53.19	39.91
22-18	1/4	15/32"	.400"	57/64"	B-3004	4.43	35.59	26.68	1-5/64"	N-5004	8.20	65.61	49.22
16-14	3-4	11/32"	5/16"	47/64"	B-3095	3.18	25.44	19.08	59/64"	N-5095	6.55	53.19	39.91
16-14	5-6	1/4"	7/32"	19/32"	B-3006	3.18	25.44	19.08	45/64"	SN-5006	6.55	53.19	39.91
16-14	10	5/16"	9/32"	45/64"	B-3008	3.18	25.44	19.08	13/16"	SN-5008	6.55	53.19	39.91
16-14	1/4	15/32"	.400"	57/64"	B-3009	4.43	35.59	26.68	1"	SN-5009	8.20	65.61	49.22
12-10	10	3/8"	5/16"	3/4"	B-3011	4.43	35.59	26.68	1-3/64"	N-5011	8.20	65.61	49.22
12-10	1/4	17/32"	13/32"	59/64"	B-3100	5.12	40.94	30.71	59/64"	N-5100	8.38	66.99	50.26
8	10	15/32"	11/32"	61/64"	B-3202	6.99	61.41	52.64					
8	1/4	15/32"	11/32"	61/64"	B-3203	6.99	61.41	52.64					
8	3/8	19/32"	13/32"	1-5/64"	B-3208	9.33	81.63	69.97					
6	10	5/8"	1/2"	1-1/4"	B-3228	10.81	94.58	81.07					
6	1/4	5/8"	1/2"	1-1/4"	B-3229	10.81	94.58	81.07					
6	3/8	5/8"	1/2"	1-1/4"	B-3231	10.81	94.58	81.07					
4	10	21/32"	1/2"	1-5/16"	B-3251	15.50	135.64	116.27					
4	1/4	21/32"	1/2"	1-5/16"	B-3252	15.50	135.64	116.27					
4	3/8	21/32"	1/2"	1-5/16"	B-3254	15.50	135.64	116.27					
2	1/4	5/8"	43/64"	1-17/32"	B-3281	20.76	181.69	155.74					
1/0	1/4	13/16"	5/8"	1-59/64"	B-3307	25.81	226.77	194.37					
2/0	1/4	29/32"	5/8"	1-15/16"	B-3322	32.92	289.24	247.92					

**HIGH TEMPERATURE TERMINALS - RING TONGUE**

Wire Range	Stud Size	Part No.	100-999 Per C	1000-4999 Per M	5000 Up Per M
22-16	5-6	S-1165	1.88	15.02	11.27
22-16	8	S-1167	1.88	15.02	11.27
22-16	10	S-1168	1.88	15.02	11.27
16-14	5-6	S-1170	2.08	16.62	12.47
16-14	8	S-1172	2.08	16.62	12.47
16-14	10	S-1173	2.08	16.62	12.47
12-10	10	S-1177	2.77	22.14	16.61



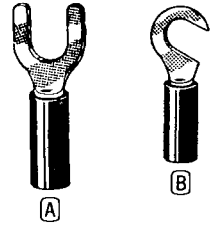
Only a partial listing of more than 2000 items in the WALDOM line of solderless terminals and connectors. Includes many more sizes and types, including Heavy Duty, Flared Insulation, Military Types, Terminal Black Terminals, Flag Terminals, insulation sleeve and many more. Write for WALDOM CATALOG #6E2.

**WALDOM**

**KRIMPTITE® AND INSULKRIMP® TERMINALS**

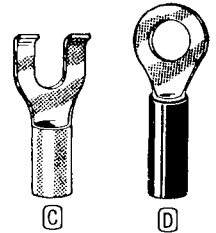
**SPADE TONGUE TERMINALS (FIG. A)**

Basic Dimensions				Krimptite®					Insulkrimp®				
Wire Range	Stud Size	Width	Stud Clearance	Length	Part No.	100-999 Per C	1000-4999 Per M	5000 Up Per M	Length	Part No.	100-999 Per C	1000-4999 Per M	5000 Up Per M
22-18	3-4	1/4"	7/32"	5/8"	S-1116	1.96	14.12	11.03	13/16"	T-2116	4.06	30.05	23.48
22-18	5-6	1/4"	7/32"	5/8"	S-1118	1.96	14.12	11.03	13/16"	T-2118	4.06	30.05	23.48
22-18	5-6	19/64"	7/32"	5/8"	S-1014	1.96	14.12	11.03	13/16"	T-2014	4.06	30.05	23.48
22-18	5-6	5/16"	5/16"	3/4"	S-1029	1.96	14.12	11.03	15/16"	T-2029	4.06	30.05	23.48
22-18	8	19/64"	7/32"	5/8"	S-1030	1.96	14.12	11.03	13/16"	T-2030	4.06	30.05	23.48
22-18	8	5/16"	5/16"	3/4"	S-1031	1.96	14.12	11.03	15/16"	T-2031	4.06	30.05	23.48
22-18	10	5/16"	5/16"	3/4"	S-1032	1.96	14.12	11.03	15/16"	T-2032	4.06	30.05	23.48
16-14	5-6	19/64"	7/32"	5/8"	S-1015*	2.05	14.77	11.54	13/16"	T-2015	4.06	30.05	23.48
16-14	8	19/64"	7/32"	5/8"	S-1033	2.05	14.77	11.54	13/16"	T-2033	4.06	30.05	23.48
16-14	10	23/64"	9/32"	3/4"	S-1016*	2.05	14.77	11.54	15/16"	T-2016	4.06	30.05	23.48
12-10	10	3/8"	5/16"	25/32"	S-1017	2.85	20.52	16.03	1-3/32"	T-2017	5.26	38.93	30.41



**HOOK TONGUE TERMINALS (FIG. B)**

22-18	5-6	5/16"	5/16"	23/32"	S-1018*	1.96	14.12	11.03	29/32"	T-2018	4.06	30.05	23.48
16-14	5-6	23/64"	9/32"	23/32"	S-1038	2.05	14.77	11.54	29/32"	T-2038	4.06	30.05	23.48

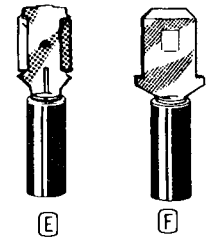


**FLANGED SPADE TERMINALS (FIG. C)**

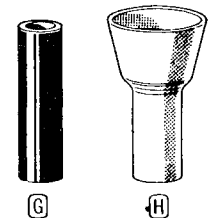
22-18	5-6	19/64"	7/32"	5/8"	S-1080*	1.96	14.12	11.03	13/16"	T-2080†	4.06	30.05	23.48
22-18	8	19/64"	7/32"	5/8"	S-1081	1.96	14.12	11.03	13/16"	T-2081	4.06	30.05	23.48
22-18	10	3/8"	1/4"	23/32"	S-1082*	1.96	14.12	11.03	29/32"	T-2082	4.06	30.05	23.48
16-14	5-6	19/64"	7/32"	5/8"	S-1083	2.05	14.77	11.54	13/16"	T-2083	4.06	30.05	23.48
16-14	8	19/64"	7/32"	5/8"	S-1084	2.05	14.77	11.54	13/16"	T-2084	4.06	30.05	23.48
16-14	10	3/8"	1/4"	23/32"	S-1085	2.05	14.77	11.54	29/32"	T-2085	4.06	30.05	23.48
12-10	10	3/8"	5/16"	3/4"	S-1088	2.85	20.52	16.03	1-1/16"	T-2088	5.26	38.93	30.41

**RING TONGUE TERMINALS (FIG. D)**

22-18	1-2	7/32"	5/32"	33/64"	S-1099	1.96	14.12	11.03	45/64"	T-2099	4.06	30.05	23.48
22-18	3-4	7/32"	5/32"	33/64"	S-1047	1.96	14.12	11.03	45/64"	T-2047	4.06	30.05	23.48
22-18	5-6	7/32"	5/32"	33/64"	S-1001	1.96	14.12	11.03	45/64"	T-2001	4.06	30.05	23.48
22-18	5-6	9/32"	1/4"	41/64"	S-1002*	1.96	14.12	11.03	53/64"	T-2002†	4.06	30.05	23.48
22-18	8	9/32"	1/4"	41/64"	S-1097	1.96	14.12	11.03	53/64"	T-2097	4.06	30.05	23.48
22-18	8	5/16"	5/16"	23/32"	S-1021	1.96	14.12	11.03	29/32"	T-2021	4.06	30.05	23.48
22-18	10	9/32"	1/4"	41/64"	S-1098	1.96	14.12	11.03	53/64"	T-2098	4.06	30.05	23.48
22-18	10	5/16"	5/16"	23/32"	S-1003*	1.96	14.12	11.03	23/32"	T-2003†	4.06	30.05	23.48
22-18	1/4	15/32"	.400"	57/64"	S-1004	2.69	19.36	15.13	1-5/64"	T-2004	5.26	38.93	30.41
22-18	5/16	15/32"	.400"	57/64"	S-1005	2.69	19.36	15.13	1-5/64"	T-2005	5.26	38.93	30.41
22-18	3/8	9/16"	9/16"	1-7/64"	S-1143	3.54	25.49	19.91	1-19/64"	T-2143	5.26	38.93	30.41
16-14	3-4	1/4"	7/32"	19/32"	S-1048	2.05	14.77	11.54	25/32"	T-2048	4.06	30.05	23.48
16-14	3-4	11/32"	5/16"	47/64"	S-1095	2.05	14.77	11.54	59/64"	T-2095	4.06	30.05	23.48
16-14	5-6	1/4"	7/32"	19/32"	S-1006*	2.05	14.77	11.54	25/32"	T-2006†	4.06	30.05	23.48



16-14	5-6	5/16"	9/32"	45/64"	S-1007	2.05	14.77	11.54	57/64"	T-2007	4.06	30.05	23.48
16-14	8	5/16"	9/32"	45/64"	S-1024	2.05	14.77	11.54	57/64"	T-2024	4.06	30.05	23.48
16-14	10	5/16"	9/32"	45/64"	S-1008*	2.05	14.77	11.54	57/64"	T-2008†	4.06	30.05	23.48
16-14	1/4	15/32"	.400"	57/64"	S-1009	2.69	19.36	15.13	1-5/64"	T-2009	5.26	38.93	30.41
16-14	5/16	15/32"	.400"	57/64"	S-1041	2.69	19.36	15.13	1-5/64"	T-2041	5.26	38.93	30.41
16-14	3/8	9/16"	9/16"	1-7/64"	S-1147	3.54	25.49	19.91	1-19/64"	T-2147	5.26	38.93	30.41
12-10	5-6	3/8"	5/16"	3/4"	S-1049	2.85	20.52	16.03	1-1/16"	T-2049	5.26	38.93	30.41
12-10	8	3/8"	5/16"	3/4"	S-1050	2.85	20.52	16.03	1-1/16"	T-2050	5.26	38.93	30.41
12-10	10	3/8"	5/16"	3/4"	S-1011*	2.85	20.52	16.03	1-1/16"	T-2011†	5.26	38.93	30.41
12-10	1/4	17/32"	13/32"	59/64"	S-1100	3.76	27.08	21.15	1-15/64"	T-2100	5.57	41.22	32.20
12-10	5/16	17/32"	13/32"	59/64"	S-1101	3.76	27.08	21.15	1-15/64"	T-2101	5.57	41.22	32.20
12-10	3/8	19/32"	31/64"	1-1/32"	S-1013	4.14	29.81	23.29	1-11/32"	T-2013	6.19	45.81	35.79



**QUICK DISCONNECTS - PUSH-ON TYPE (FIG. E & F)**

18-14	Male .250"	Length 21/32	S-1089*	2.25	16.21	12.66	27/32	T-2089†	4.36	32.28	25.21
18-14	Female .250"	41/64	SS-1090	2.25	16.21	12.66	27/32	ST-2090†	4.36	32.28	25.21
18-14	Female .187"	17/32	SS-1187	2.25	16.21	12.66	47/64	ST-2187	4.36	32.28	25.21
18-14	Female .110-.125"	29/64	SS-1186	2.25	16.21	12.66	21/32	ST-2186	4.36	32.28	25.21

**SNAP PLUG & RECEPTACLE**

16-14	Snap Plug	19/32	S-1055	1.86	13.28	10.38	27/32	T-2055	4.06	30.05	23.48	
16-14	Plug Receptacle	1-3/8	PR-1426	6.52	52.16	40.75						

**BUTT CONNECTORS (FIG. G)**

22-18		9/16	S-1019*	2.16	15.56	12.15	15/16	T-2019†	4.80	35.52	27.75
16-14		9/16	S-1020	2.16	15.56	12.15	15/16	T-2020	4.80	35.52	27.75
12-10		9/16	S-1046	3.84	27.65	21.60	1-1/16	T-2046	6.55	48.48	37.88

**NYLON INSULATED CLOSED END CONNECTORS (FIG. H)**

Wire Range	O.D.	Barrel Length	I.D.	Circular Mil Area	Length	Part No.	100-999 Per C	1000-4999 Per M	5000 Up Per M
22-14	5/16	11/32	1/4	600-5,180	39/64	CE-2214	3.36	24.20	18.90
16-10	7/16	3/8	3/8	2,400-13,000	23/32	CE-1610†	4.92	35.43	27.68

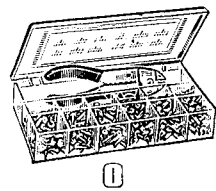
**ASSORTMENTS (FIG. I)**

Assortment K-170 (Fig. I) - Contains 215 Krimptite® (non-insulated) terminals of types indicated by asterisks (\*) in listings above, plus Universal Crimping Tool  
 Net Each. . . . . \$ 8.95

Assortment K-180 (Fig. I) - Contains 138 Insulkrimp® (insulated) terminals of types indicated by daggers (†) in above listings plus Universal Crimping tool.  
 Net Each. . . . . \$10.95

**UNIVERSAL CRIMPING TOOL (FIG. J)**

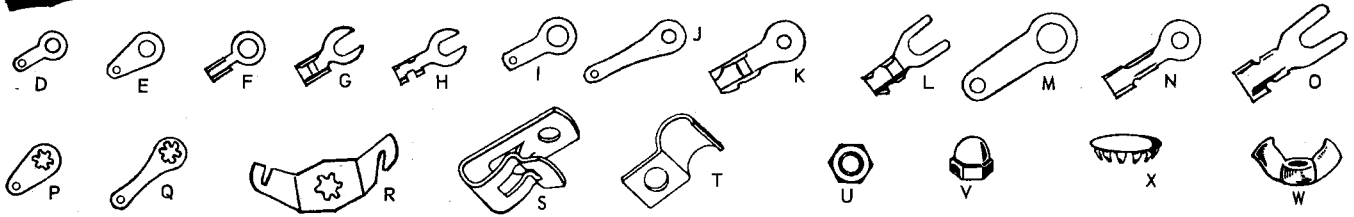
Part No. CT-4050 - Crimps both insulated and non-insulated terminals, wire sizes 22 thru 10. Cuts and strips wire.  
 Net Each. . . . . \$ 3.95



Only a partial listing of more than 2000 items in the WALDOM line of solderless terminals and connectors. Includes many more sizes and types, including Heavy Duty, Flared Insulation, Military Types, Terminal Block Terminals, Flag Terminals, insulation sleeve and many more. Write for WALDOM CATALOG #6E2.

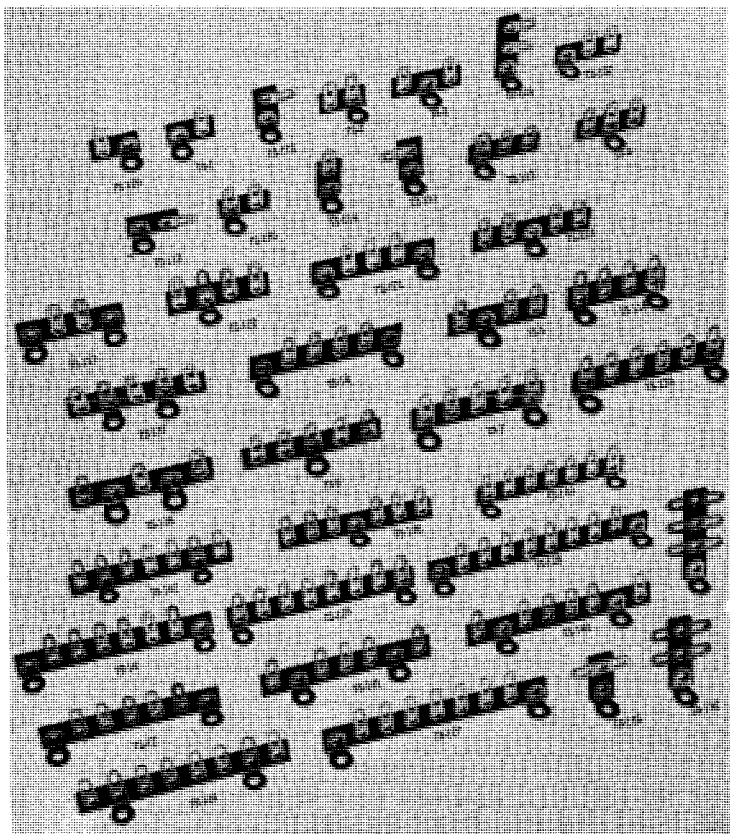
**WALDOM**

**ELECTRONIC HARDWARE**



TERMINAL AND SPADE LUGS						LOCKING-TYPE LUGS						CONTROL AND SWITCH MTG. HEX NUTS (FIG. U)									
Terminal lugs for all applications. Supplied with hot-tin dipping in brass, copper or steel as specified in Material (Mtl.) column below.						Locking-type construction eliminates need for additional washer. Fabricated from .018 phosphor bronze and tinned for ease in soldering.															
Waldom No.	Fig.	Mtl., In.	Hole Size	Length In.	Pkg. of 100	Per 1000 4999	Per 1000 5000 Up	Waldom No.	Fig.	Screw Size	Length, In.	Pkg. of 100	Per 1000 4999	Per 1000 5000 Up	F-565	3/8-32x 1/2x3/32	\$1.47	\$12.05	\$ 9.19		
T-151	D	.020B	#6	1/2	\$0.76	\$ 6.23	\$ 4.75	T-194	P	#6	5/8	\$1.09	\$ 7.89	\$ 6.39	F-566	15/32x 9/16x5/64	1.80	14.76	11.26		
T-152	D	.020B	#8	13/16	.82	6.72	5.13	T-195	P	#8	5/8	1.09	7.89	6.39	F-567*	475-32X19/32x1/16	3.40	27.24	20.78		
T-153	D	.020B	#10	13/16	.82	6.72	5.13	T-196	Q	#4	7/8	1.16	8.04	6.50	*Knurled ring nut (Fig. J)						
T-154	E	.020B	#6	9/16	.88	7.22	5.51	T-197	Q	#6	7/8	1.16	8.04	6.50							
T-224	E	.015C	#8	17/32	.97	7.95	6.07	T-198	Q	#8	7/8	1.16	8.04	6.50	ACORN NUTS NICKEL-PLATED (FIG. V)						
T-155	F	.032C	3/16"	19/32	1.42	11.64	8.88	T-223	Q	#10	7/8	1.18	8.15	6.60	F-574	6-32	\$2.74	\$27.22	\$20.77		
T-156	F	.032C	#6	1/2	.94	7.71	5.88	T-220	R	#4	53/64	2.06	16.89	12.89	F-575	8-32	2.91	19.52	14.89		
T-157	G	.020B	#8	41/64	.80	6.56	5.01	T-221	R	#6	53/64	2.06	16.89	12.89	F-576	10-32	3.52	21.73	16.58		
T-158	H	.020B	#6	21/32	.88	7.22	5.51	T-222	R	#8	53/64	2.06	16.89	12.89	WING NUTS NICKEL-PLATED (FIG. W)						
T-159	H	.020B	#8	21/32	.88	7.22	5.51	SPRING CLIPS (FIG. S)						WING NUTS NICKEL-PLATED (FIG. W)							
T-160	H	.020B	#8	13/16	.98	8.04	6.13	Brass, nickel-plated spring clips.						WING NUTS NICKEL-PLATED (FIG. W)							
T-162	J	.015B	#8	47/64	.86	7.05	5.38	Waldom No.	Thick-ness	Ht., In.	W., In.	Mtg. Hole In.	Pkg. of 100	Per 1000 4999	Per 1000 5000 Up	F-571	6-32	\$2.63	\$21.88	\$16.69	
T-163	I	.025B	#6	1	.98	8.04	5.51	C-101	.016	45/64	7/32	.130	\$1.37	\$10.85	\$ 8.28	F-572	8-32	2.63	21.88	16.69	
T-164	J	.025B	#8	1	.98	8.04	5.51	C-102	.020	25/32	5/16	.144	1.82	14.35	10.95	F-573	10-32	2.63	21.88	16.69	
T-166	K	.020C	#6	15/16	1.62	13.28	10.13	C-103	.022	1	3/8	.144	2.67	22.23	16.96	SNAP BUTTON HOLE PLUGS (FIG. X)					
T-167	K	.020C	#8	15/16	1.62	13.28	10.13	METAL CABLE CLAMPS (FIG. T)						SNAP BUTTON HOLE PLUGS (FIG. X)							
T-168	K	.020C	#10	15/16	1.62	13.28	10.13	Mounting hole, .144". Material (Mtl.) abbreviations: B, brass, hot-tin dipped; S, steel, cadmium plated.						SNAP BUTTON HOLE PLUGS (FIG. X)							
T-170	L	.020B	3/16"	25/32	.94	7.71	5.88	Waldom No.	Mtl., In.	Ht., In.	W., In.	Wire Hold Area	Pkg. of 100	Per 1000 4999	Per 1000 5000 Up	HP-1	1/4" hole	\$2.20	\$18.04	\$12.54	
T-173	M	.020B	#10	1-5/32	1.56	12.55	9.58	C-201	.020B	7/16	1/4	3/32"	\$0.81	\$ 6.25	\$ 5.07	HP-2	3/8" hole	2.50	20.50	14.25	
T-187	N	.032B	#8	15/16	2.81	23.04	17.58	C-202	.032S	5/8	3/8	10/64"	1.02	8.35	6.37	HP-3	1/2" hole	2.40	19.68	13.68	
T-188	N	.032B	#10	15/16	3.10	25.42	19.40	C-203	.032S	11/16	3/8	1/4"	1.17	9.60	7.32	HP-4	3/4" hole	3.30	27.06	18.81	
T-193	O	.032B	#8	1	4.25	34.85	26.59	C-204	.032S	15/16	3/8	10/32"	1.30	10.65	8.12	HP-5	1" hole	4.40	36.08	25.08	

**TERMINAL STRIPS**



**STANDARD TERMINAL STRIPS**

Standard type lug mounting terminal strips. Fabricated from X Grade bakelite 1/16" thick, 3/8" wide. Square barrelled construction prevents twisting and slippage. End Terminals are spaced 3/16" from end of strip. All strips are furnished with lug holes spaced 3/8" center to center.

Catalog No.	Bag of 25	100-Over per/C	Catalog No.	Bag of 25	100-Over per/C
2 and 3 Position			4, 5 and 6 Position		
TS-1	.58	1.58	TS-123	1.18	3.08
TS-129	.58	1.58	TS-9	1.18	3.15
TS-2	.63	1.65	TS-137	1.38	3.68
TS-130	.63	1.65	TS-7	1.38	3.68
TS-113	.68	1.92	TS-10	1.50	4.05
TS-114	.68	1.92	TS-139	1.55	4.18
TS-115	.68	1.92	7, 8 and 9 Position		
TS-131	.58	1.58	TS-141	1.70	4.55
TS-3	.80	2.08	TS-12	1.70	4.55
TS-132	.80	2.08	TS-126	1.55	4.08
TS-4	.80	2.15	TS-142	1.75	4.68
TS-133	.80	2.15	TS-140	1.75	4.68
TS-134	.80	2.08	TS-143	1.88	5.05
4, 5 and 6 Position			TS-14	1.88	5.05
TS-117	1.13	3.05	TS-144	1.95	5.18
TS-5	.95	2.58	TS-125	1.95	5.18
TS-122	1.00	2.65	TS-127	2.08	5.55
TS-118	1.20	3.18	TS-128	2.25	6.05
TS-136	1.33	3.55	TS-116	.88	2.30
TS-121	1.33	3.55	TS-135	1.33	3.53
			TS-138	1.80	4.75

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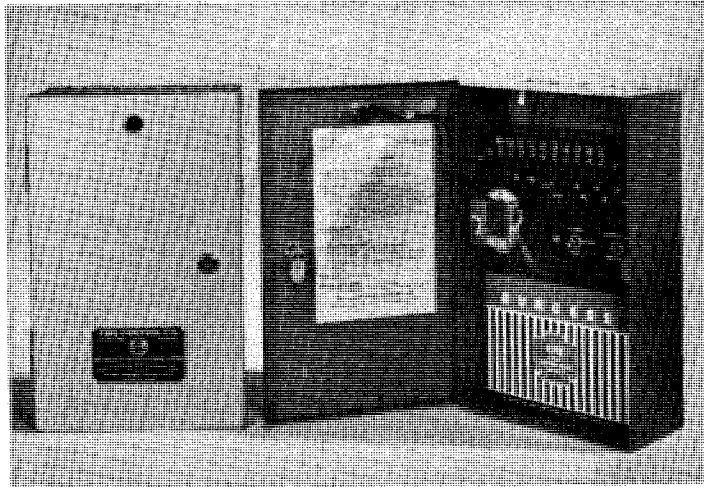
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MASTER.**

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**The**   
**RADIO-ELECTRONIC**  
**MASTER**

# AUTOMATIC FIRE DETECTION AND ALARM SYSTEMS



Control Unit #SC-600R Underwriters' Laboratories Approved

## COMPARE!

SPECIAL FEATURES MEET AND EXCEED  
NATIONAL FIRE CODES PAMPHLET #72

### MAIN POWER SUPPLY

Input 110-125 Volts AC, 60 Cycles. Maximum current 0.25 ampere. Transformed and rectified to 6 Volts DC, maximum load 2.0 amperes. The Supply is **electrically supervised** so that a failure will sound immediate trouble alarm and automatically transfer to Emergency Power, thus assuring continuity of fire protection. When power is restored, the System automatically returns to Main Power Supply.

### EMERGENCY POWER SUPPLY

6 Volt dry battery, Burgess #4F4H or equivalent. Maximum load under alarm condition 2.0 amperes. Order locally.

### DETECTOR CIRCUIT

6 Volts DC, maximum current 0.15 ampere. Maximum wire run 5000 ft. #18/2. This Double-Loop Safety Circuit is **electrically supervised** so that a wire break will sound immediate trouble alarm. Emergency circuits compensate for such fault (see N/E Switch), thus assuring continuity of fire protection. Use UL Approved Fire Detector Cable #18/2 for substantial savings in installation.

### ALARM CIRCUITS

6 Volts DC, maximum load 1.5 amperes. If only one bell is used, it is **electrically supervised** so that a failure will sound immediate trouble alarm. If two or more bells are used, and/or Annunciator #A-604 is added to the System, they are alternately-connected to the two alarm circuits provided. Use #14/2 wire.

### NORMAL/EMERGENCY SWITCH

- Provides emergency circuit adjustment.
- A) Compensates for wire break in Detector Loop, permitting full response from every Detector until repairs are made.
  - B) Silences Trouble Buzzer but maintains Red Light to show emergency condition.

### TEST/RESET/SILENCE SWITCH

- Provides simple operating procedure.
- A) Test the System.
  - B) Silence all Firebells and transfer to Red Light.
  - C) Reset to normal supervised operation.

### CABINET

14" x 9" x 4". Gray Hammertone. Surface Mount. Cylinder lock, 2 keys.

# FIRE CONTROL CO.



WILMINGTON 1, DEL.

**PRICE  
BREAK-  
THROUGH  
!!!**

**NOW YOU CAN OFFER A PREMIUM-QUALITY, ALL-UL-APPROVED  
FIRE ALARM SYSTEM AT LOWEST COST, EVEN IN THE HOME MARKET!!**  
ORDER THE BASIC SYSTEM—COVERS AVERAGE 3 BEDROOM RANCH HOUSE

**\$120<sup>00</sup> NET**

- 1 Control Unit #SC-600R
- 1 Underdome Inside Bell #A-6"
- 6 FyrGuard Detectors #3S
- 4 FyrGuard Detectors #3H

Same System, but substituting #501 & #502 Detectors ..... **\$132.50**

**UL APPROVED!** The finest quality underdome bells made today. Clear pitch, firm tone. Low current draw. Flush easy-mount on all standard outlet boxes. Use #14/2 wire.



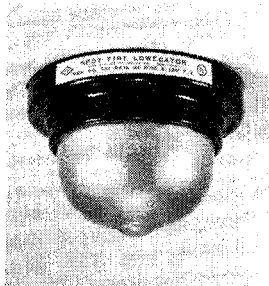
**INSIDE BELLS #A**

6" .....	\$18.00
8" .....	21.00
10" .....	24.00

**WEATHERPROOF BELLS #AP**

6" .....	\$19.50
8" .....	22.50
10" .....	25.50

**NET EACH**



**UL APPROVED!** The famous Spot Fire Locators. Combination Rate-of-Rise & Fixed-Temperature Automatic Detectors. The standard in the industry and specified in commercial, industrial, and military installations.

Rated to cover 2500 sq. ft. (Room Area 50' x 50').

Use #501 in offices, showrooms, living rooms, bedrooms, etc.

Use #502 in high temperature areas: furnace room, kitchen, attic.

**NET EACH ..... \$3.25** Case Lot of 50, **NET EACH ..... \$3.00**

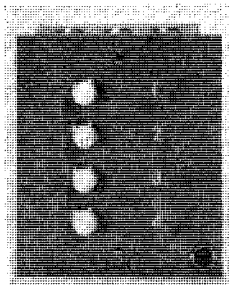
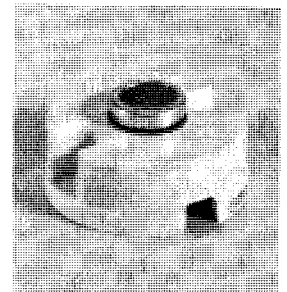
**UL APPROVED!** FyrGuard Automatic Detectors, Fixed-Temperature. A small, unobtrusive and economical fire detector. It is the most widely-used unit in home fire alarm installations.

Rated to cover 400 sq. ft. (Room Area 20' x 20').

Use #3S in living rooms, bedrooms, closets, halls, etc.

Use #3H in high temperature areas: furnace room, kitchen, attic.

**NET EACH ..... \$2.00** Case Lot of 50, **NET EACH ..... \$1.75**



**UL APPROVED!** 4 Zone Annunciator with all Detector Circuits **electrically supervised**. Simple tie-in connections to Control Unit #SC-600R. Optional, for use where large installations require quick identification of the fire area.

Gray Hammertone Cabinet, Flush Mount: 7" x 6" x 3".

Annunciator #A-604, **NET ..... \$45.00**

**UL APPROVED!** #5C Manual Pull Station, non-code. Add where required. Wire into Detector Circuit exactly as an Automatic Detector. Flush mount on all handy boxes.

#5C, **NET EACH .... \$7.50.** Back Box for surface mount .... **\$2.00**

**UL APPROVED!** #18/2 Fire Detector Cable. Ivory plastic parallel cord specified for Detector Circuits. **250' Coil, NET ..... \$5.00**



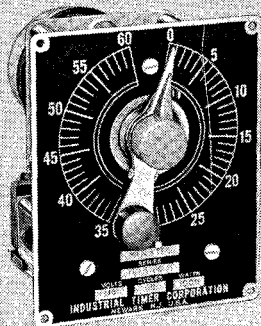
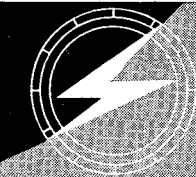
**FIRE CONTROL CO.**



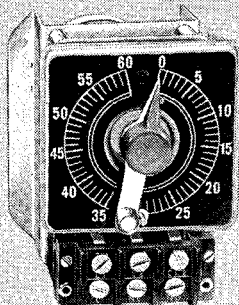
**WILMINGTON 1, DEL.**

# INDUSTRIAL TIMER CORPORATION

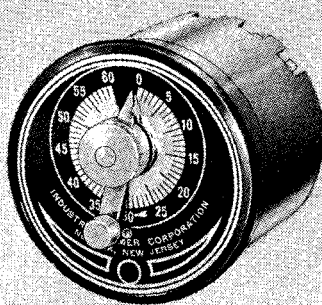
PARSIPPANY, N. J.



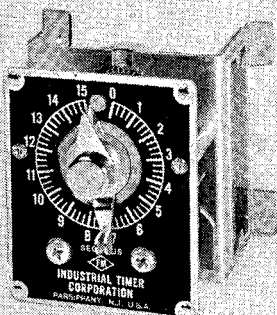
TDAB



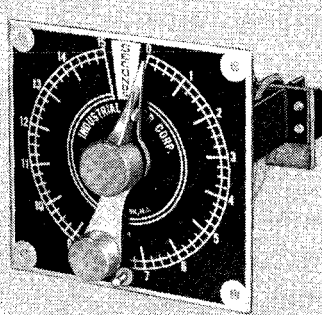
TD



TD



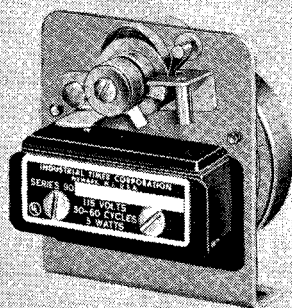
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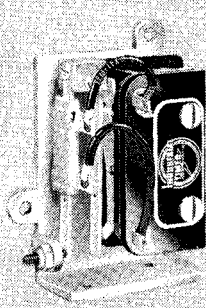
"H"



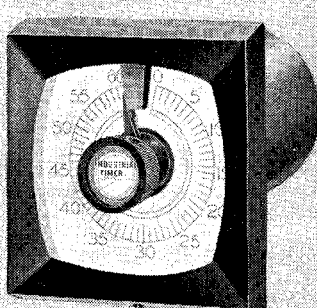
400



90



TH



GTD

## DELAY TIMERS

This type of timer introduces a pre-determined time delay between the closing of a switch and the opening or closing of a load switch. The sequence is: The timer is started by a switch closure, the load switch remains in normal condition until commencement of time delay, at which time it is operated.

**TDAB** (BULLETIN #300) Time cycles from 1/60 second to 3 hours, instant reset, 10 amp contact rating, panel mounting, extremely accurate.

**\$43.00**

**TDAB** (BULLETIN #300) Time cycles from 1/60 second to 3 hours, instant reset, 10 amp contact rating, back mounted or available in housing, extremely accurate.

**\$43.00**

**TD** (BULLETIN #300) Time cycles from 1/10 second to 5 minutes, 10 amp contact rating, auto-reset, mounts through a round hole.

**\$30.50**

**SF** (BULLETIN #300) Time cycles from 1/10 second to 5 minutes, 10 amp contact rating, back mounted, auto-reset.

**\$23.00**

**"H"** (BULLETIN #300) Time cycles from 1/10 second to 5 minutes, 10 amp contact rating, panel mounted, auto-reset.

**\$26.50**

**400** (BULLETIN #300) Time cycles from 1/60 second to 3 hours, designed for infrequent adjustment, load rating 10 amps, auto-reset, back mounted.

**\$38.50**

**90** (BULLETIN #300) Time cycles from 1/2 second to 90 seconds. 10 amp contact rating, auto-reset.

**\$17.00**

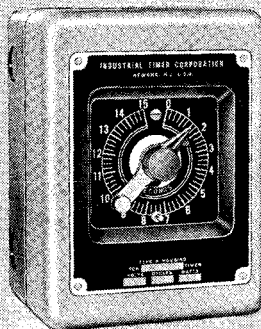
**TH** (BULLETIN #300) Thermal Time delay switch, snap action contacts rated at 10 amps. Time cycles from 15 seconds to 2 minutes, temperature compensated, adjustable.

**\$8.50**

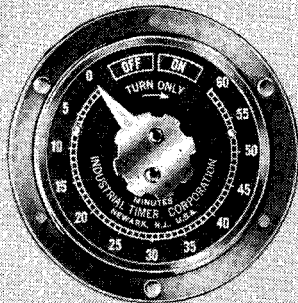
**GTD** (BULLETIN #302) Automatic reset, available in 11 models ranging in time cycles from 3 seconds to 3 hours. 10 amp isolated load contacts. Unit mounts through 3 inch hole in panel and features built-in self locking feature that eliminates mounting screws. A.C. voltages of 115 or 220.

**\$39.50**

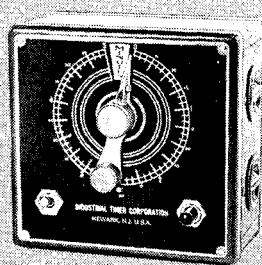
PAB



RS



P &amp; M



## INTERVAL TIMERS

An Interval Timer closes (or opens) a load switch at the beginning of a time cycle; at the end of the time interval the load circuit is returned to its original condition.

**PAB** (BULLETIN #400) Time Intervals from 1/60 second to 3 hours. 15 amp non-inductive. Instant automatic reset. Available with housing. Momentary starting.

**\$55.00**

**RS** (BULLETIN #400) Time Intervals from 15 seconds to 24 hours. 20 amp, non-inductive. Manual reset. Available with housing.

**\$18.50**

**P & M** (BULLETIN #400) "P" Series—1/10 second to 5 minutes, remote momentary start, auto-reset, 15 amp load rating.

**\$33.00**

"M" Series—1 second to 1 minute, push button start, auto-reset, 10 amp contact rating.

**\$26.50**



# INDUSTRIAL TIMER CORPORATION

PARSIPPANY, N. J.

## PROGRAMMING CAM TIMERS

A Recycling Timer opens and closes an electrical circuit in a continuous pre-set sequence.

**TANDEM** (BULLETIN #500) Interchangeable timing elements provide individual time cycles from 1/10 seconds to 3 hours. Elements operate in sequence. 15 amp load rating. **\$142.50 complete**

**CM** (BULLETIN #200) Single switch rated at 10 amps. Adjustable cam provides 2% to 98% "ON"—"OFF" of any of 600 available time cycles. Each model has 50 available time cycles through use of interchangeable gear racks, cycles continuously. **\$20.50**

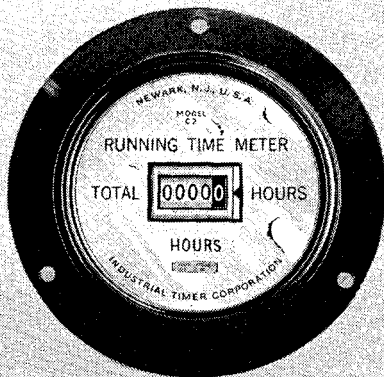
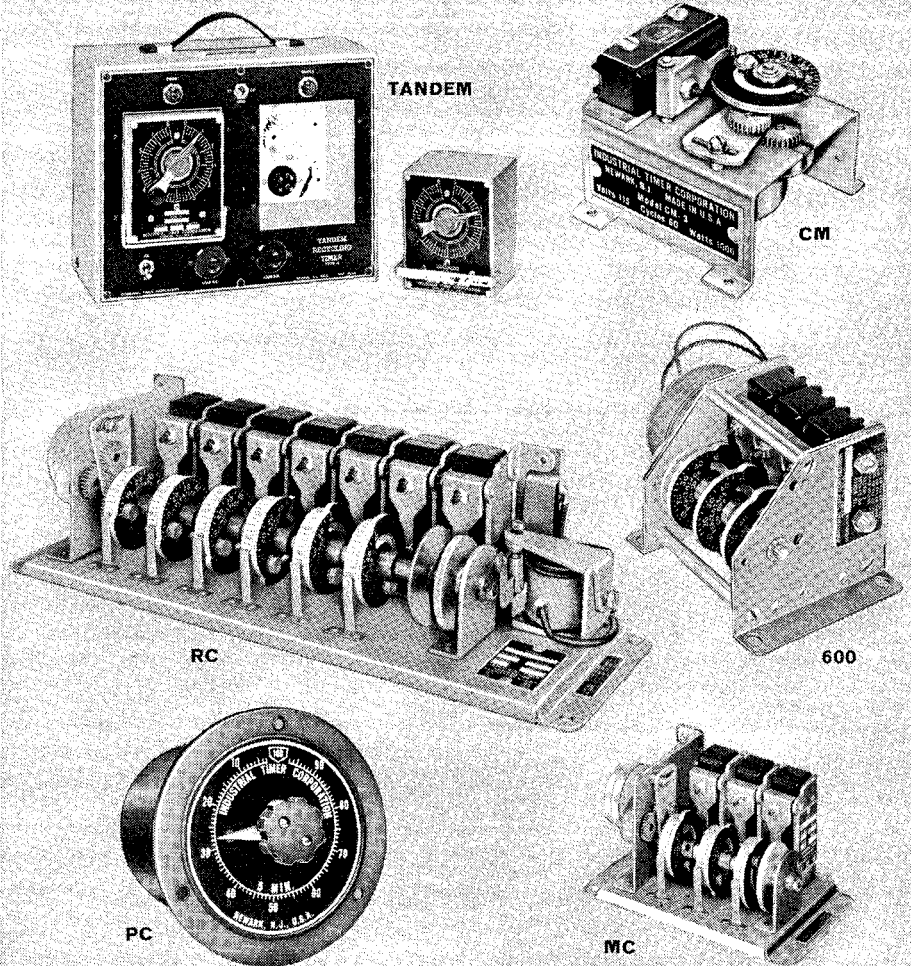
**RC** (BULLETIN #200) Similar to Series MC, but starts from momentary pulse, makes 1 revolution of cam shaft and stops. The timer recycles from a sustained start. Time cycles from 2/3 second to 72 hours are available, switch rating is 10 amps. **\$30.50 to \$198.50**

**600** (BULLETIN #203) Simplified Recycling Cam Timer available with up to 7 switches from 15 seconds to 60 hours. **\$17.00 to \$53.00**

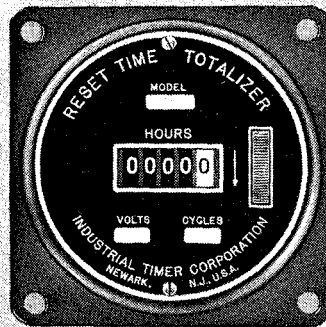
**PC** (BULLETIN #500) Opens and closes a 15 amp load switch continuously. Adjustable from 3% to 97% of time cycles from 15 seconds to 24 hours. Available in housing. **\$31.00**

**MC** (BULLETIN #200, 201, 202) Available with up to 20 individual load circuits. Time cycles from 2/3 second to 72 hours. 10 amp load rating, available in Kit for prototype assembly, or with shaft extension for external drive.

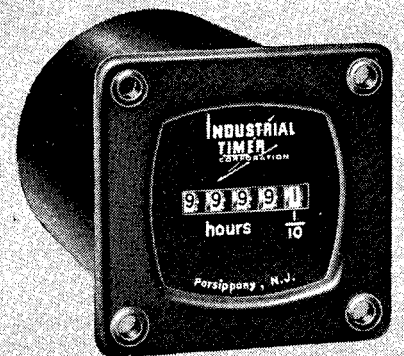
**\$35.50 for 2 sw. unit  
up to \$191.50 for  
20 load switches**



C-2



C-5



C-8 D.C.

## TIME MEASUREMENT DEVICES

The running Time Meters and Reset Time Totalizers are used to record the operating time of equipment requiring periodic maintenance.

**C-2** (BULLETIN #700) The Series C-2 Running Time Meter is available in counts from 1/10 second to 1 hour. Total accumulation ranges are 10,000 seconds to 100,000 hours. **\$20.50**

**C-5** (BULLETIN #700) This is a cased type instrument, mounted in a black, baked-finish housing. With heavy steel mounting flange. Screw terminals on back. Model C-5 incorporates a special type of counter that permits resetting to zero at any time. Offered for 115 and 220 volts, 60, 50, and 25 cycles. **\$42.50**

**C-8 D.C.** (BULLETIN #701) The C-8 is a compact Running Time Meter for use on equipment using D.C. voltages. Available for 6, 12, 24, 28 or 32 VDC. Mounts through round 2-3/16" hole in panel, secures with 4 screws. The C-8 accumulates up to 9999.9 hours with a minimum count of 1/10 hour. **\$19.25**



# BRISTOL MOTORS / DIVISION OF VOCALINE



## SYNCHRONOUS MOTORS AND TIMERS

Versatility is the characteristic which design engineers need—and find—in Bristol Synchronous Motors and Timing Devices. Bristol's unusually broad experience and range of design and manufacturing skills are particularly valuable where special requirements must be met.

The devices shown are among the most widely used. All can be mounted in any position, and take a minimum of space. Materials are selected on the basis of their suitability to provide long service, and perform well under a variety of conditions.

Bristol engineering service is available for applications that require custom design and manufacture.



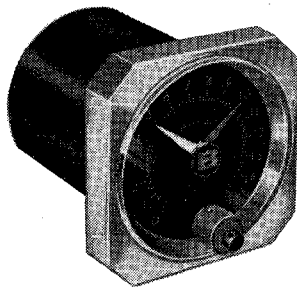
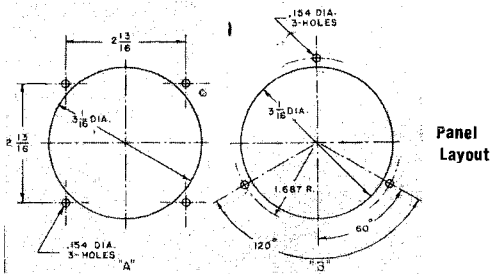
**Series 61 Time Delay Relay.** Universal Time Delay Relay provides self-holding solenoid starting with adjustable timed contact operation. Series 61 provides three types of load contacts which give seven types of load circuit operation in a single unit. This model may be wired up for one of four basic types of operation: momentary start, automatic reset; momentary start, manual reset; sustained switching; and tandem or cascaded operation. Size 3" in diameter by 5 $\frac{3}{4}$ " long. Timer case bezel  $\frac{1}{2}$ " thick x 3 $\frac{3}{8}$ " inches square. Universal mounting allows standard 3-stud or 4-stud panel mounting. 115 VAC — Price \$44.00 each.

**TWO TYPES OF FRAMES WITH INTERCHANGEABLE DIAL FACES PROVIDE 4 STYLE COMBINATIONS!** (See 62 Series)

### Full Scale Available from 6 Sec. to 24 Hours Interchangeable Mounting

The 61 series timers are provided with removable threaded studs. Timers are normally mounted with four studs, Figure A. Threaded holes are provided for alternate three-hole mounting, Figure B.

Two independent load switches rated 15 Amps at 115-230 VAC.



**Series 62 Interval Timer.** Companion to the 61 series timers. This model is operated by a manual push button start on the face of the timer and provides unusual circuit versatility. This unit times out to the zero position and remains timed out until started by the manual push button. This timer does not reset on power failure. Size, 3 inches in diameter x 4 $\frac{7}{16}$ " long. Intended for lower cost variable delay timer operations. 115 VAC — Price \$27.00 each.

**TWO TYPES OF FRAMES WITH INTERCHANGEABLE DIAL FACES PROVIDE 4 STYLE COMBINATIONS!**



STYLE A



STYLE B



STYLE C



STYLE D\*

### New "Bristol-Vision" Dial Design

Features square-dial plate, provides background contrast for better viewing. Pointer-position knob is easily adjusted without covering hands.

### Rugged Dial Frame

Die-cast in gleaming, rust-and-corrosion-resistant Zamac. Light weight; modern, clean lines.

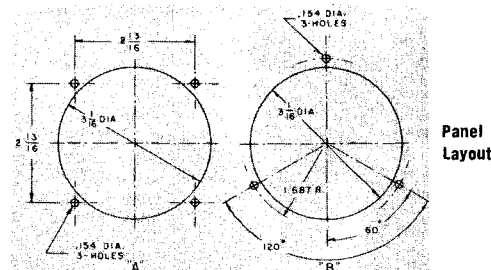
### Bevelled Glass Dial Face

Non-scratch surface won't buckle or deform over wide range of environmental conditions. Fully sealed for permanent protection against dust.

### Full Scale Available from 6 Sec. to 24 Hours Interchangeable Mounting

The 62 series timers are provided with removable threaded studs. Timers are normally mounted with four studs, Figure A. Threaded holes are provided for alternate three-hole mounting, Figure B. \*Type D supplied as standard unless otherwise specified.

Two independent load switches rated 15 Amps at 115-230 VAC.



**VOCALINE COMPANY OF AMERICA, INC., Old Saybrook, Conn.**

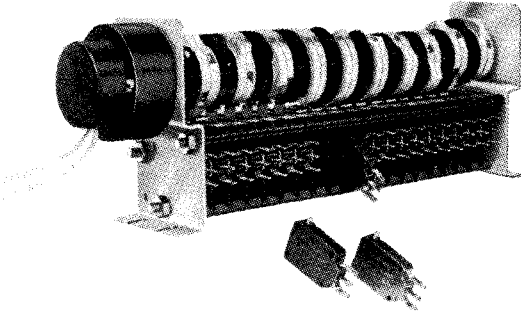
Timers and Motors to meet special applications are available from distributors. See Vocaline Bristol Motors Catalog for complete line of motors and timers.

**IMMEDIATE DELIVERY FROM FRANCHISED VOCALINE/BRISTOL MOTORS DISTRIBUTORS**





# BRISTOL MOTORS / DIVISION OF VOCALINE



### SERIES 47 REPEAT CYCLE TIMER

**Pocket timer ... microminiature ... adjustable ... compact ... high repeat accuracy.** This replaceable switch repeat cycle timer is a multi-contact program timer which permits easy switch replacement without disassembling. In addition, one turn of the calibrated adjusting screw provides a 2% variation of cam time sequence. Switches are D.P.S.T. rated at 5 amps-115 volts. Timer available in speeds of 1 rev. per minute to 1 rev. per day. 1 to 20 switches available.

Price: 4-switch—\$21.00  
8-switch—\$35.00

### SERIES 63 PERCENTAGE TIMER

An easily adjustable Repeat Cycle Timer to make or break a circuit for an adjustable percentage of the full cycle time.

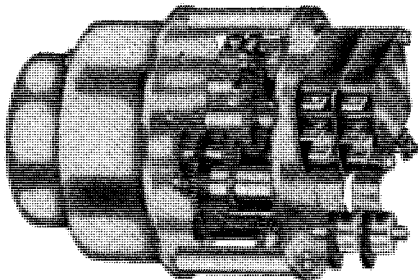
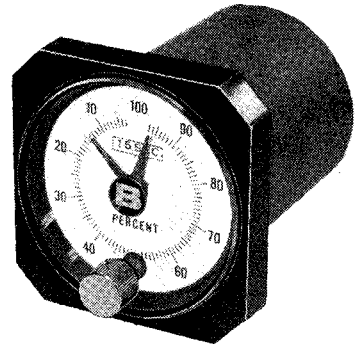
Equipped with a manually adjustable setting hand and a rotating progress pointer to indicate the present progress of the cycle. Load switch rated 20 Amps at 115-230 VAC.

Numerous standard time ranges available.

For styles and mounting provisions, see Series 62.

115 VAC

Price \$27.00

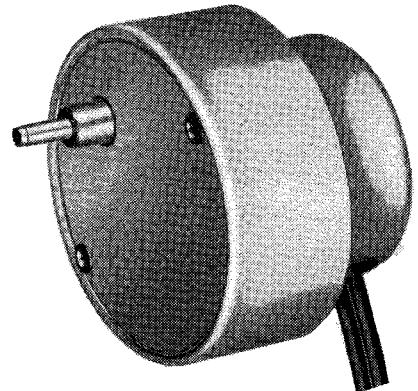
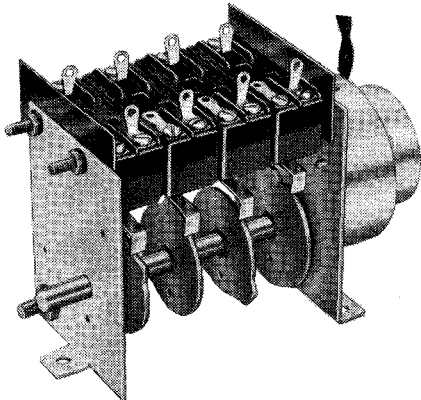


**Bristol time delay relay. Series 21** features instantaneous reset action (under 1/5 second) for such applications as photographic timers, electronic circuit safety, alarms, signals, etc. Repeat accuracy better than 1% full scale. Standard unit has two switches rated at 10 amps-non inductive, 5 amps inductive load. Delay period may be changed by positioning of set screw cams. Adjustable cycling time available. 115 VAC—Price \$29.00 (2 switches)

### SERIES 31

**Repeat cycle or program timer.** A multi-contact timer with high repeat accuracy. Switches are double pole-single throw and rated 20 amps 115-230 volts. Dual/adjustable cams available for easy setting. Unit available with motor speeds of 1 rev. per minute to 1 rev. per hour. 115 VAC.

Price: 4 switch—\$24.00



**The Bristol hysteresis synchronous motor model 447** features high starting torque (40 inch-ounces at 1 RPM) and considerably higher running torque. The Model 447 is 2 inches in diameter by 1<sup>3</sup>/<sub>4</sub>" deep. Numerous output speeds and standard shafts available from stock. Be sure to specify clockwise or counter-clockwise rotation (Rotation is determined facing motor output shaft) Price \$5.00 each.

U/L Approved.

Model 425—Speeds 4/5 RPM to 1800 RPM.

115 VAC. Price \$4.50



VOCALINE COMPANY OF AMERICA, INC.



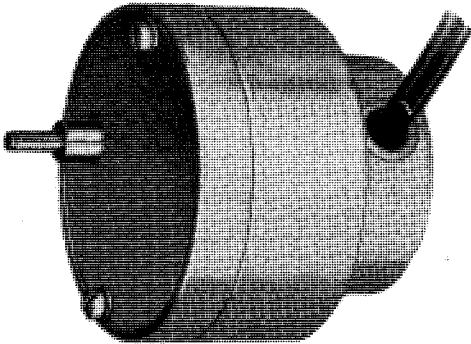


# BRISTOL MOTORS /

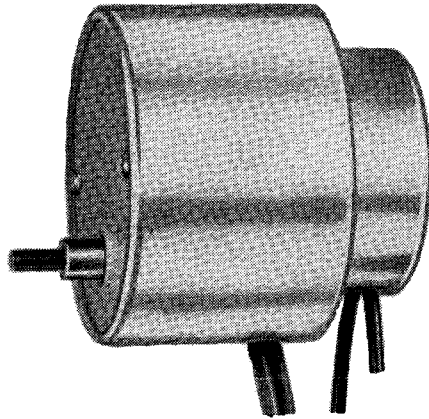
# DIVISION OF VOCALINE



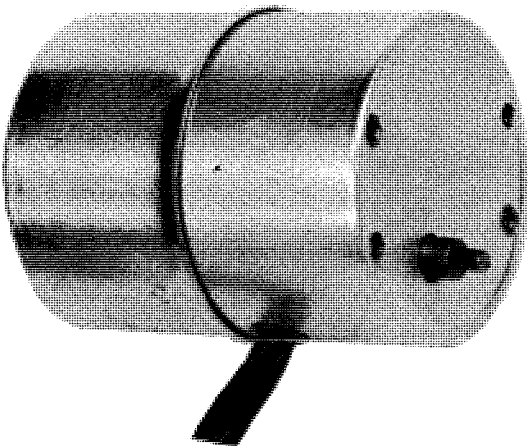
## SYNCHRONOUS MOTORS AND TIMERS



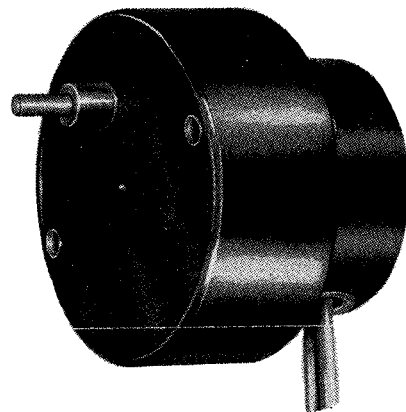
The Bristol Model 420 is a low speed version of Model 447 and develops high torque. The motor's gear train is rated at 20 inch-ounces for continuous operation and 5 inch pounds for static loading or intermittent duty. Size is 2" in diameter by 1 $\frac{3}{4}$ " deep. The following speeds are available for 115 volt operation in both clockwise and counter-clockwise rotation — 1 rev. 30 minutes, 1 rev. per hour, 1 rev. per 6 hours, 1 rev. per 12 hours, 1 rev. per 24 hours, 1 rev. per 30 days. Price \$6.70 each. U/L Approved.



Bristol Model 830 hysteresis synchronous reversible motor develops 100 inch-ounce starting torque at 1 RPM. This motor employs a resistor and condenser as a phase shift network and these components are included in the price. Available off the shelf in same speeds as Model 447 for 115 volt A.C. operation — \$9.20 each.



Series 900 reversible instrument drive motor provides the highest starting and running torque of any motor in the Bristol line. It incorporates a phase shift network . . . a resistor and capacitor is included with each motor. Starting torque in 200 inch ounces at 1RPM. Available speeds for 115 VAC operation: 5 RPM, 10 RPM, 15 RPM, and 60 RPM. Price: \$20.00



Bristol shift motor Model 350. This motor features a solenoid action clutch which disengages the rotor from gear train when motor is not energized allowing easy manual positioning or resetting of the output shaft. Develops 16 inch ounce starting torque. Available at 1 RPM, 2 RPM, 4 RPM, and 10 RPM for 115 volt operation. Be sure to specify clockwise or counter-clockwise rotation. Price \$7.00 each. U/L Approved.

AVAILABLE "OFF THE SHELF"

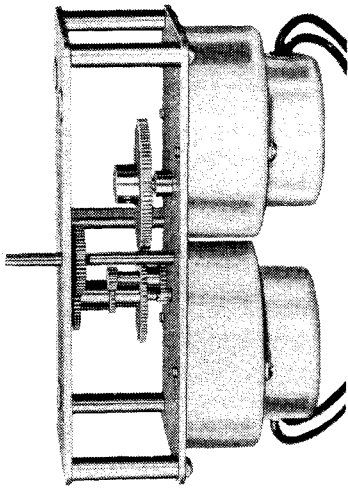
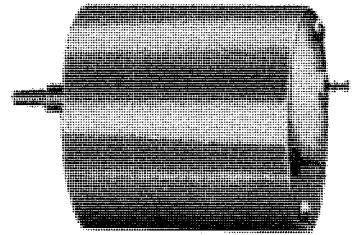
VOCALINE COMPANY OF AMERICA, INC.



**BRISTOL MOTORS**DIVISION OF  
**VOCALINE***MOTORS AND TIMERS*

**Bristol Model 318 D.C. motor for 6, 12 or 24 VDC operation.** The self-contained transistorized inverter system is moulded into the housing. Freedom from radio interference. No brushes. Long life. Output speed accuracy plus or minus 10% at 68°F ambient. Starting torque 16 inch ounces at 1 RPM. Operating ambient range plus 50 Degrees C to minus 30 Degrees C. Model 318 has 2" diameter and is 2 3/8" deep and weighs less than 9 ounces. Nominal speeds 1 RPM, 10 RPM, 30 RPM, and 60 RPM. Additional speeds available.

Price—12 Volt—\$30.00  
24 Volt—\$35.00

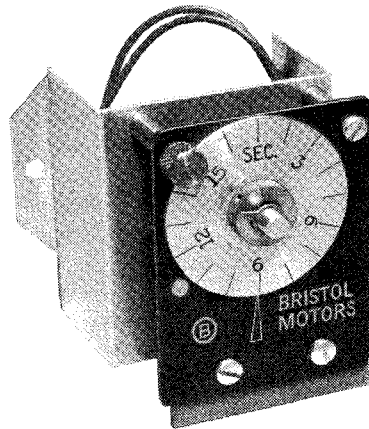
**Series 42 DSU**

Two Bristol uni-directional motors drive through a common gear train to give three output shaft speeds; direction of rotation optional.

Reversible motors available where speed of output shaft equals the sum or difference of input speeds.

115 VAC.

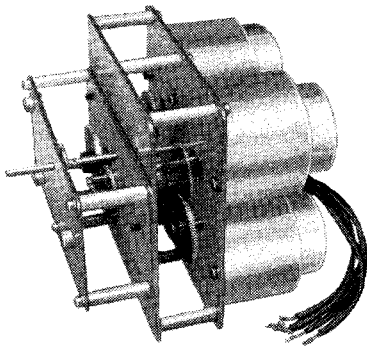
Price, (Uni-directional motors) \$18.00

**SERIES 55 TIMER**

A Time Delay Relay with an adjustable graduated dial and a progress pointer. Can remain stalled indefinitely at the end of the cycle. Automatically resets when power is removed and is ready for another cycle. Load switch SPDT rated 20 Amps at 115 or 230 VAC.

Standard Time Cycles are 15, 30, 60 and 120 seconds.

115 VAC Price \$13.50

**SERIES 40 MSU**

**Bristol elapsed time indicators, Model ET-1B.** A Bristol motor to a common output shaft through three differentials, provide, through electrical switching, up to 40 speeds. 115 VAC —Price \$110.00 each.

**SERIES 41**

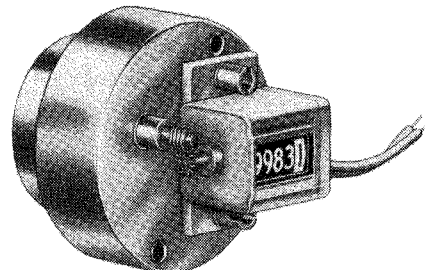
**Bristol elapsed time indicators, Model ET-1B.** A Bristol motor coupled to a counter records operating hours registered in hours and tenths of hours up to 9999.9. Two inches in diameter by 2 1/2" in depth. 115 VAC—

**ET-1A Registers Hours By Hours. 0 to 99999**

**ET-1C Registers Minutes. 0 to 99999**

Price \$14.00 Each

Price \$29.00 Each (with Manual re-set)

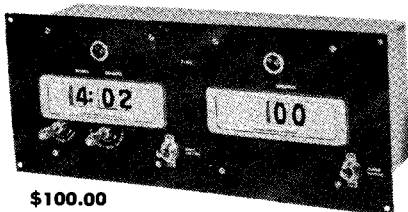
*IMMEDIATE DELIVERY FROM FRANCHISED DISTRIBUTORS***VOCALINE COMPANY OF AMERICA, INC.**



# DIGITAL READ-OUT CLOCKS ELAPSED TIME COMPUTERS INTERVAL, COUNT DOWN, IMPULSE TIMERS

Featuring:

- FRONT PANEL MOUNT
  - DESK OR BENCH USE
  - DIGITS RESETTABLE INDIVIDUALLY
- CSA and UL approved motor & cord



\$100.00

## DIGITAL CLOCK SECOND BY SECOND

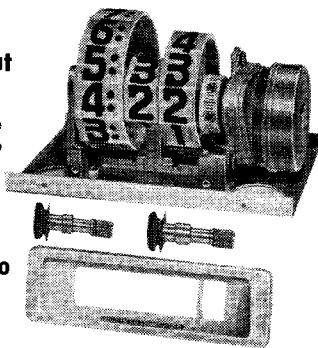
Time registered on 5 polygonal drums. One Hour drum, one 10-minute drum, one minute drum, two seconds drums. 4 1/2" h, 12" w, 3 1/4" d. Wt. 6 lbs. Anodized metal dustproof case.

- # 110-12H ..... 12 Hour
- # 110-24H ..... 24 Hour

### MOVEMENT

#### 6-Digit Read Out

3" high  
5 1/2" wide  
3 1/2" deep  
Wt. 2 lbs.

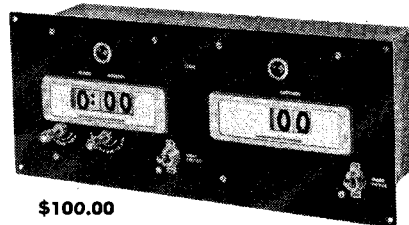


\$16.00

Consists of Tymeter Digital Clock Movement, mounting bracket, window escutcheon assembly, 2 time reset assemblies

- # 130-12H ..... 12 Hour
- # 131-24H ..... 24 Hour

All Tymeters available in:  
120 VAC, 50 or 60 CPS  
240 VAC, 50 or 60 CPS  
115 VAC, 400 CPS



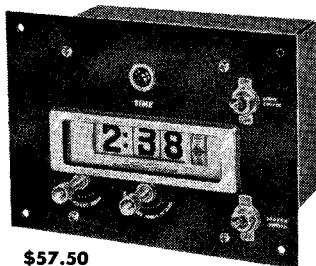
\$100.00

## ELAPSED TIME DIGITAL COMPUTER

Automatically calculates and registers elapsed time in hours, 10 minutes, minutes and seconds. Second by second. 4 1/2" h, 12" w, 3 1/2" d. Wt. 6 lbs.

Available In:

- #115 30 Minute 12 Hour
- 60 Minute 24 Hour



\$57.50

## DIGITAL CLOCK

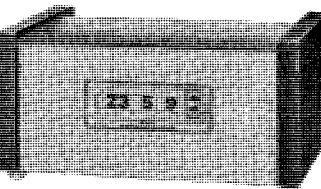
12 and 24 hour 6 digit read out ... minutes, 10 minutes and hours. Rotating visual 1 RPM calibrated seconds drum. 4 1/2" h, 6" w, 3 1/4" d. Wt. 3 1/2 lbs. Anodized metal dustproof case.

- # 160-12H ..... 12 Hour
- # 161-24H ..... 24 Hour

## 24-HOUR DIGITAL READ OUT CLOCK

Calculates time automatically. Stainless steel case with walnut wood ends. 3 7/8" h, 7 3/4" w, 3 3/4" d. Wt. 3 lbs. 110V 60 Cy. AC.

- # 920-24 Hour ..... \$24.50\*
- # 920-12 Hour ..... 19.95\*



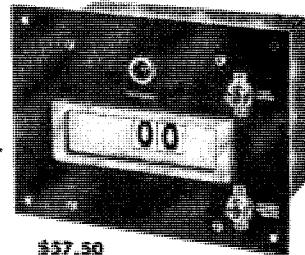
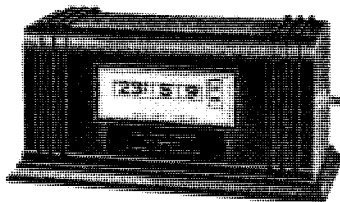
\*Plus applicable taxes  
PAT. No. 2587277 Other Pats. Pend.

### CALL-IDENT

## 24-HOUR CLOCK with 10-MINUTE STATION CALL REMINDER

Walnut or ebony plastic case. 4" h, 7 3/4" w, 4" d. Wt. 3 lbs.

- # 124 ..... 22.50\*



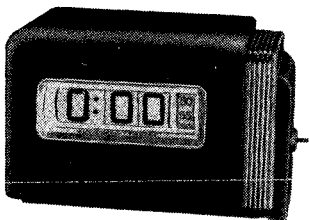
\$57.50

## ELAPSED TIME DIGITAL COMPUTER

Automatically calculates and registers elapsed time in seconds. Second by second 2 digit read out ... 00-59. 4" h, 6" w, 3 1/4" d. Wt. 3 1/2 lbs. Anodized metal dustproof case.

- # 10-60S ..... 60 Seconds

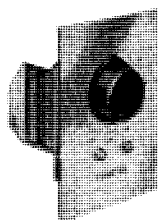
## TIME DELAY, CYCLE, INTERVAL TIMERS



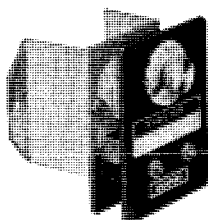
## ELAPSED TIME DIGITAL COMPUTER

Automatically calculates and registers elapsed time ... and repeats. Grey or ebony plastic case. Self starting electric. 3 3/4" h, 5 5/8" w, 3 1/4" d. Wt. 3 lbs. 120V 60 cy. AC. Ranges available: 60 seconds, 10 minutes, 30 minutes, 60 minutes, 12 hour and 24 hour. UL approved motor and cord.

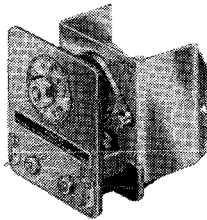
- # 80 ..... \$17.50\*



PN-11P\*\* Time Delay Timer



PN-11 Time Delay Timer

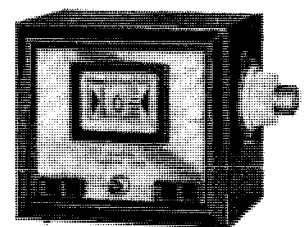


PN-21 Time Delay Timer

	PN-11P	PN-11	PN-21
Delay Ranges	0-14 sec. 0-57 sec. 0-4.5 min.	0.14 sec. 0-57 sec. 0-4.5 min.	0-14 sec. 0-57 sec. 0-4.5 min. 0-9.5 min.

\*\* Optional Private Label on small and large requirements

Complete Line of Timers in All Ranges & Voltages.  
Catalog and Specifications on Request



## DIRECT READ OUT INTERVAL TIMER

Adjustable reset stop to enable rapid repeat timing. Closes load circuit during OR after a preset interval. Buzzer sounds at end of interval. 120V 60 cy. AC. Ranges available: 60 seconds, 60 minutes, 6 hours, 12 hours, 24 hours and 60 hours. 5" h, 5 1/2" w, 3 1/2" d. Wt. 3 1/2 lbs.

- # 90 ..... \$22.50\*

WRITE FOR CATALOG OF COMPLETE LINE SHOWING SPECIFICATIONS

**TYMETER ELECTRONICS-PENNWOOD NUMECHRON CO.**  
PITTSBURGH 8, PENNA.





# Crystals

- AMATEUR • AIRCRAFT
- CITIZENS BAND • INDUSTRIAL
- RADIO CONTROL • DIATHERMY
- FREQUENCY STANDARD

## PRICE LIST

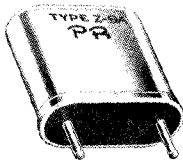
Effective July 1, 1964  
Subject to Change Without Notice

## MINIMUM ORDER \$10.00

### FOR AMATEUR SERVICE



Z-2



Z-9A

Z-2 and Z-9A Crystals are supplied ONLY in the following bands and calibrated INTEGRAL KILOCYCLES only, NO FRACTIONS. All Z-2 crystals are calibrated with a load of 32 mmfd.

Type	Frequency Range	For	Price
Z-2 Fundamental	1750 to 2000 Kc.	160M.	\$2.95
	±250 Cycles		
	3500 to 4000 Kc.		
	7000 to 7425 Kc.		
Z-9A 3rd Over-tone	8000 to 8222 Kc.	80M.	\$3.95
	8334 to 9000 Kc.	40M.	
		2M.	
Z-9A 5th Over-tone		6M.	\$4.95

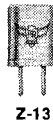
Type	Frequency Range	Price
Z-9A 3rd Over-tone	24000 to 24666 Kc. } ±3 Kc. 25000 to 27000 Kc. }	\$3.95
Z-9A 5th Over-tone	28000 to 29700 Kc. ±5 Kc.	\$4.95
	50000 to 54000 Kc. ±15 Kc.	

### CITIZENS BAND, TRANSMITTER

Supplied in all 23 assigned frequencies. Be sure to specify channel desired, with name of manufacturer and model of equipment. Calibrated .005%. Type Z-9R



Z-9R



Z-13

Crystals have .486" pin spacing; .050" pin diameter; .758" height, above pins; width .720" and depth .309". Z-13 Crystals have .192" pin spacing; .040" pin diameter; .530" height above pins; width .402" and thickness .150". Z-13P Crystals are same as Z-13 except for having .017" wire leads instead of pins.

Type Z-9R—Transmitter .....\$2.95  
Type Z-13—Transmitter ..... 2.95  
Type Z-13P—Transmitter ..... 2.95

### CITIZENS BAND, RECEIVER



Calibrated .005%. Specifications are same as for transmitter crystals, listed above. In ordering, be sure to specify channel desired, with manufacturer and model number of equipment.

Type Z-9R—Receiver .....\$2.95  
Type Z-13—Receiver ..... 2.95  
Type Z-13P—Receiver ..... 2.95

### Type Z-9R, RADIO CONTROL

Supplied in all FCC assigned frequencies. Calibrated .005%. In ordering, be sure to specify frequency desired, with manufacturer and model number of equipment.



Type Z-9R—Radio Control .....\$2.95

### VHF Types, AIRCRAFT

For Lear, Narco and similar equipment operating in the 121 Mc. region, requiring crystals in 30 Mc. range. Z-9R Crystals have .486" pin spacing; .050" pin diameter; .758" height above pins; width .720" and depth .309". Z-13 Crystals have .192" pin spacing; .040" pin diameter; .530" height above pins; width .402" and thickness .150". Z-13P Crystals are same as Z-13, except for having .017 wire leads instead of pins.



Type Z-9R—Aircraft .....\$4.95  
Type Z-13—Aircraft ..... 4.95  
Type Z-13P—Aircraft ..... 4.95

### Type Z-6A, FREQUENCY STANDARD



Correlated in oscillator having load capacity of 32 mmfd. .486" pin spacing; .050" pins.

Type Z-6A—100 Kc. ....\$6.95

### Type Z-1, MARS and CAP

Calibrated to .005% with 32 mmfd. crystal load capacity. Official assigned transmitter frequencies in the range.



1600 to 10000 Kc. ....\$3.45

### Type Z-1, TV MARKER

Channels 2 through 13 .....\$6.45  
4.5 Mc. Intercarrier, .01% ..... 2.95  
5.0 Mc. Signal Generator, .01% ..... 2.95  
10.7 Mc. FM, IF, .01% ..... 2.95

### Type 2XP, EXPERIMENTAL



Suitable for converters, experimental, etc. Same holder specifications as Type Z-2.

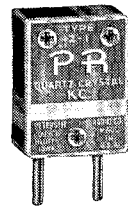
1600 to 12000 Kc. ± 5 Kc. (Fund.) .....\$3.45  
12001 to 25000 Kc. ±10 Kc. (3rd Overtone) ..... 4.45

### MILITARY EQUIVALENTS

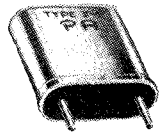
Table below shows PR Crystal types that are interchangeable with Military types.

Military Type	PR Equivalent
HC/6	Z-9, Z-9A, Z-9R
FT-243	Z-1, Z-2
CR-1, CR-1A, etc.	Z-1D
FT-241	Z-1R, Z-1
DC-20	Z-1, Z-1R
DC-30	Z-1D
CM-1	Z-1B, Z-22, Z-1A
DC-34, DC-35	Z-1A Banana Pins
FT-171	Z-1A Banana Pins
DC-11	Z-1A, Z-1B

### COMMERCIAL TYPES



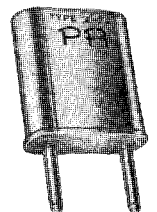
Z-1



Z-9, Z-9R



Z-9T



Z-22

### SPECIFICATIONS

Type	Pin Spacing	Pin Diameter	Height Above Pins
Z-1	.486"	.093"	1 3/8"
Z-1A	3/4"	.125"	1 3/8"
Z-1B	3/4"	.125"	1 3/8"
Z-1D	1/2"	.125"	1 3/8"
Z-6A	.486"	.050"	1.526"
Z-9	.486"	.050"	.758"
Z-9R	.486"	.050"	.758"
Z-9T	.486"	.050"	1.526"
Z-13	.192"	.040"	.530"
Z-13P	.192"	.017 wire	.530"
Z-22	3/4"	.125"	1 1/2"
Z-30	3/4"	.125"	1 1/4"

Note: Z-1A can be supplied with Standard Banana Pins. Specify when ordering. Z-9, Z-9R, and Z-9T can be supplied with .093 Pins. All Fundamental Crystals are correlated in oscillator having load capacity of 32 mmfd. unless otherwise specified.

### PRICES WITH .005% TOLERANCE

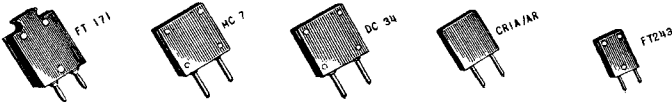
Type	Frequency Range	Each
Z-1—Fund.	900 to 1600 Kc.	\$7.00
Z-1—Fund.	1601 to 12000 Kc.	6.50
Z-1—Overtone	12001 to 20000 Kc.	7.00
Z-1A—Fund.	900 to 1600 Kc.	7.00
Z-1A—Fund.	1601 to 2000 Kc.	6.50
Z-1B—Fund.	1000 to 12000 Kc.	6.50
Z-1D—Fund.	Same as Z-1	
Z-1R—Fund.	455 to 900 Kc.	7.50
Z-6A—Fund.	100 Kc. only	6.95
Z-9T—Fund.	101 to 174 Kc.	8.50
Z-9—Fund.	1601 to 2000 Kc.	9.00
Z-9—Fund.	2001 to 15000 Kc.	6.50
Z-9—Fund.	15001 to 18000 Kc.	7.50
Z-9R—3rd Overtone	15001 to 50000 Kc.	7.50
Z-9R—5th Overtone	50001 to 60000 Kc.	9.00
Z-22—Fund.	150 to 500 Kc.	9.50
Z-22—Fund.	1000 to 3000 Kc.	9.00
Z-22—Fund.	3001 to 12000 Kc.	8.50
Z-22—Fund.	12001 to 15000 Kc.	9.00
Z-9—Marine	2000 to 3000 Kc.	6.00
Z-30—Marine	2000 to 3000 Kc.	6.00

NOTE: When ordering Fundamental Crystals, specify Crystal Load Capacity. For tolerances of .01% and .02%, also for quantities of more than 10 of the same frequency, write for quotations.



# TEXAS CRYSTALS...FOR EVERY PURPOSE

## CRYSTALS MADE TO ORDER

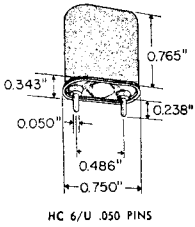


Made to order crystals in pressure type holders can be supplied in five types as shown. All TEXAS CRYSTALS are cut, lapped, and etched to exact frequencies. They are supplied for oscillator circuits having 32 MMFD capacity, unless otherwise ordered, as the crystal frequency will vary with capacity of the circuit.

M 1,001 to 1,600 KC .005% TOL.	\$4.50
1,601 to 2,000 KC .005% TOL.	3.55
2,001 to 2,500 KC .005% TOL.	2.75
2,501 to 9,000 KC .005% TOL.	2.50
9,001 to 11,000 KC .005% TOL.	3.00

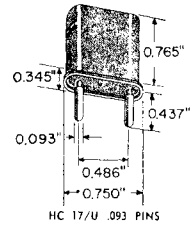
Low frequency crystals from 1001 KC to 2100 KC are space mounted—all others are pressure mounted. The advantage of the pressure mount crystal is its ability to handle more current (up to 50 Milliwatts) without fracture. Order by frequency, type holder, tolerance, and circuit capacity (if known) or type of equipment in which it is to be used.

### HERMETICALLY SEALED CRYSTALS MADE TO ORDER



In recent years, manufacturers have engineered new equipment utilizing the hermetically sealed plated crystal (HC6/U). This crystal is either gold or silver plated, the plating acting as electrodes. These crystals should be used in circuits designed for them as the maximum current capacity is 10 milliwatts (5 milliwatts for overtone type). High stability of frequency is a characteristic of this crystal. All TEXAS CRYSTALS are made to conform with military specifications. When ordering for G. E.,

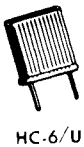
Motorola, Link, etc., for split channel operation, a sample of both transmitting and receiving crystals known to be correct, be sent us with order specifying exact crystal frequency desired. We will correlate crystals and return your samples. Type HC6/U has .050 pins and fits CE-1 socket. Type HC17/U is the same physical size except the pins are .093 diameter. Specify type circuit, if known. Order by fundamental frequency, type circuit, type holder. All plated crystals are .005% tolerance.



1,000 KC to 1,600 KC (Fundamental Frequency)	Prices on Request
1,601 KC to 2,000 KC (Fundamental Frequency)	\$5.00 ea.
2,001 KC to 2,500 KC (Fundamental Frequency)	4.00 ea.
2,501 KC to 5,000 KC (Fundamental Frequency)	3.50 ea.
5,001 KC to 7,000 KC (Fundamental Frequency)	3.90 ea.
7,001 KC to 10,000 KC (Fundamental Frequency)	3.25 ea.
10,001 KC to 15,000 KC (Fundamental Frequency)	3.75 ea.
15 MC to 20 MC (Fundamental Frequency)	5.00 ea.

#### OVERTONE CRYSTALS

15 MC to 30 MC Third Overtone	\$3.85 ea.
30 MC to 40 MC Third Overtone	4.10 ea.
45 MC to 65 MC Third or Fifth Overtone	4.50 ea.
65 MC to 100 MC Fifth Overtone	6.00 ea.



**\$2.95**  
EACH

### CLASS "D" CITIZEN BAND CRYSTALS

#### 23 Frequencies—3rd Overtone—.005% TOL.

All "Citizen Band" crystals supplied in HC-6/U holders. Pin spacing .493—Pin dia. .050—Frequencies listed in megacycles. Use circuit recommended in our catalog. Order by frequency.



CE-1 ..... 20c  
Ceramic Low Loss  
Socket for HC-6/U  
Holder — 1/2" Pin  
Spacing .050"  
Holes.

CHANNEL	CHANNEL	CHANNEL	CHANNEL	CHANNEL
26.965 1	27.005 4	27.065 9	27.105 12	27.175 18
26.975 2	27.015 5	27.075 10	27.115 13	27.185 19
26.985 3	27.025 6	27.085 11	27.125 14	27.205 20
	27.035 7		27.135 15	27.215 21
	27.055 8		27.155 16	27.225 22
			27.165 17	27.255 23

Can be supplied with .093 pins—15c extra. Available in counter display unit

We supply crystals for every popular make of Citizen Band Transceivers

#### SUB MINATURE CRYSTALS

#### TYPE HC18/U



Miniature type

Sub Miniature Crystals will operate in the same circuits as HC6/U and HC17/U Crystals. They were designed for use where space is a factor. Supplied in either Pin Type or Wire Leads (1/2" length for soldering directly into circuit). Be sure to specify Pin Type or Wire Leads.

Fund Freq. Overtones	
8MC to 12MC	\$3.95
12MC to 17MC	4.50
20MC to 30MC	3.95
30MC to 40MC	4.25
40MC to 65MC	4.65

#### CR24/U (BARREL TYPE) CRYSTALS



CR24/U

Designed for the Armed Services the CR24/U is a Pressure Type "AT" Crystal which will accommodate more current than the plated crystal. From 15 to 25MC the crystal is a third overtone—From 25.001 to 60MC the crystal is a fifth overtone.

All Frequencies from 15MC to 50 MC \$5.95

#### TEXAS AMATEUR CRYSTALS

All Texas amateur crystals are lapped and etched to frequency and supplied in FT 243 holders. They can be supplied in MC7, FT171 or DC34 holders for 25¢ extra per crystal.....\$1.50 each

#### AIRCRAFT CRYSTALS

All crystals are supplied at 1/4 operating frequency unless otherwise specified. Tolerance .005%. Order by final frequency and type equipment. Be sure to designate 'HC6/U' holder, or 'miniature' type.

Frequencies in stock from 118 MC to 130 MC.  
Type HC6/U—all frequencies .....\$3.85 each  
Miniature type—all frequencies ..... 4.75 each  
Note: Above crystals can be supplied with wire leads for soldering directly to equipment at 25c per crystal extra.

AIRPORT OWNERS AND SERVICE DEPARTMENTS WRITE FOR QUANTITY PRICES

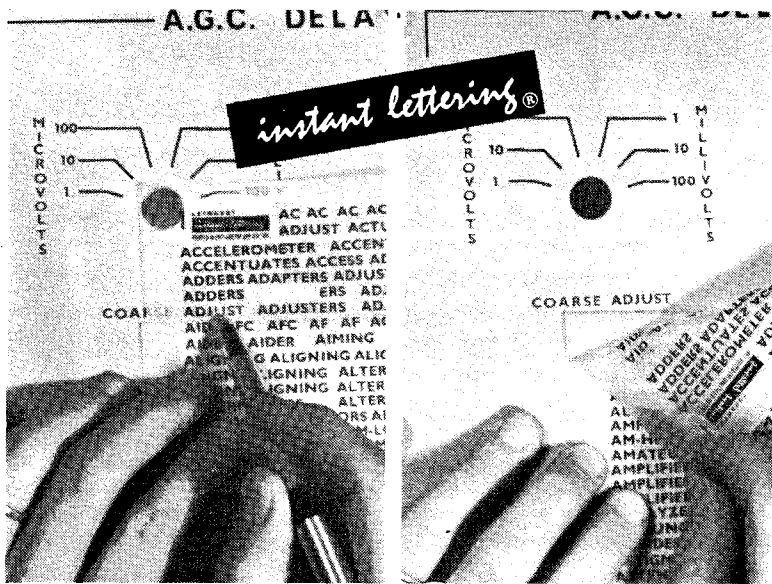
#### MARINE CRYSTALS

Supplied in 4 types of holders—FT243, MC7, CR1/AR, HC6/U. .005% tolerance. Order by frequency for transmitter for transmitter types and actual crystal frequency for receiver (including 455 KC IF).

ANY MARINE FREQUENCY FROM 2000 KC to 3200 KC  
IN FT243, FT171, MC7 or CR1AR .....\$2.50  
HERMETICALLY SEALED CRYSTALS FOR MARINE IN ANY FREQUENCY (Specify either .050 or .093 pins)..... 3.50

#### TEXAS LOW FREQUENCY CRYSTALS

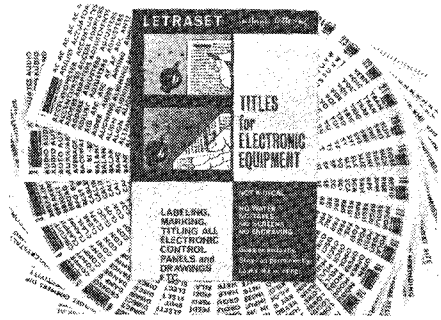
Our own manufacture at military tolerances in HC6/U and HC13/U holders.  
25 to 79KC. Prices on Request 371 to 540KC.....\$3.95  
80 to 99KC.....\$6.50 541 to 729KC..... 4.50  
100 to 199KC..... 4.50 730 to 1000KC..... 3.55  
200 to 370KC..... 4.25



# A REVOLUTIONARY NEW METHOD FOR MARKING ELECTRONIC EQUIPMENT

"Instant Lettering" brings you the newest easiest way to get professional lettering instantly on all electronic equipment, drawings, schematics, etc. Self-adhesive letters printed on a special plastic sheet are just pressed down into position. Transfers instantly to practically any surface... looks like printing... makes prototypes look like finished production equipment!

## instant lettering MARKING KITS



With these three kits you can completely mark electronic equipment from component parts to finished control panel — even especially calibrated two-color meter dials, tap switch markings, panel nomenclatures, pilot light jewels, sub-assemblies, circuit boards — at less cost and greater ease. Makes prototypes look like finished production equipment! Ideal for field changes.

### TITLES FOR ELECTRONIC EQUIPMENT

**AC CRYOSTAT OFF TRIPLEXOR VIDEO**  
This set contains 24 (3" x 5") sheets — thousands of preprinted titles — researched to give you up to 95% of all electronic panel marking. For labeling, marking, titling all electronic control panels, drawings, prototypes, etc.

No. 958 — BLACK.....\$4.95      No. 959 — WHITE.....\$4.95

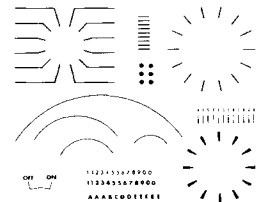
### TERMINAL & CHASSIS MARKING KIT

**A B C CR TP 1 2 3 4 5 6 7 99 100 101 102**  
Contains 24 (3" x 5") sheets of all the necessary letters, letter combinations and numerals for marking chassis, printed circuit and terminal boards, rotating components, etc.

No. 966 — BLACK.....\$4.95      No. 967 — WHITE.....\$4.95

### METER & DIAL MARKING KIT

This set has 12 (5"x7") sheets — in black, red and white — containing arcs, dial patterns, lines, dots, wedges, graduation lines, switch symbols, alphabets and numerals for marking standard and special rotary and tap switches, potentiometers, prototype and especially calibrated meter dials. Different colors on scales and switches simplify usage of complex instruments.



No. 968 — METER & DIAL MARKING KIT.....\$4.95

(reduced)

### instant lettering DATAKOAT

#### Clear Protective Coating

DATAKOAT protective coating is specially designed for "Instant Lettering." It is water-clear, dries quickly and protects "Instant Lettering" from abrasion and weathering.

DATAKOAT Protective Coating Kit contains a 1 ounce bottle of DATAKOAT with applicator brush in the cap and a 1 ounce bottle of Thinner.

No. 04176 ..... \$1.00

DATAKOAT Spray Coating is the handy spray can form of DATAKOAT. 16 ounce spray can.

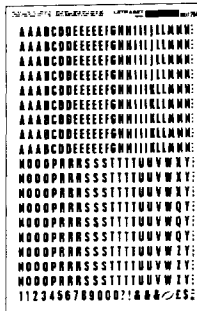
No. 04177 ..... \$2.95

### instant lettering STANDARD SHEETS

The amazing new "Instant Lettering" method of dry transfer lettering brings you unequalled quality and speed. By shading over the letter with a ballpoint pen anyone can produce reproduction quality lettering instantly!

"Instant Lettering" transfers dry to practically any surface, smooth or textured, even wood and metals, glass, plastics and cloth.

Standard 10" x 15" sheets are available in complete alphabets and/or numerals in a wide variety of type faces and colors. Letter sizes range from 8 point to 3 inch display letters.



FREE SAMPLE AND COMPLETE TYPE CHART AVAILABLE

### instant lettering MADE TO YOUR OWN SPECIFICATIONS

**TWA** **CORNING** **Bendix**

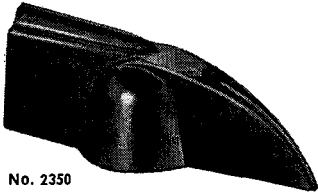
"Instant Lettering" sheets can be made to meet all your own special needs. Hundreds of companies all over the country have had their logo, drawings, symbols, etc. made in "Instant Lettering." They have found that "Instant Lettering" saves time and money. Hundreds of lettering and marking problems that were impossible or too expensive become possible and inexpensive with "Instant Lettering."

**COMPLETE INFORMATION AVAILABLE UPON REQUEST.**

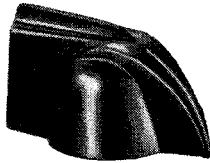
# HARRY DAVIES MOLDING CO.

## MOLDERS OF PLASTICS

### POINTERS AND BAR KNOBS



No. 2350



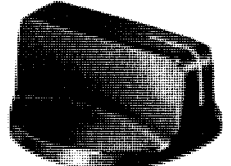
No. 2300



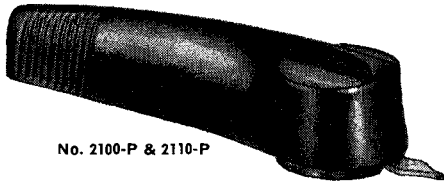
No. 2150



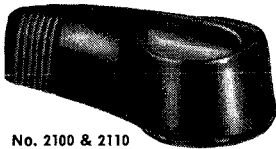
No. 1550



No. 1500, 1510 & 1520



No. 2100-P & 2110-P



No. 2100 & 2110

**No. 2350**

Length 2", hgt.  $\frac{5}{8}$ ",  $\frac{1}{4}$ " molded hole or metal insert, set screw mounting, locknut recess.

**No. 2300**

Length  $1\frac{1}{4}$ ", hgt.  $\frac{5}{8}$ ",  $\frac{1}{4}$ " molded hole, also  $\frac{1}{4}$ " metal insert, set screw or knurled hole mounting, locknut recess.

**No. 2150**

Length  $1\frac{1}{4}$ ", hgt.  $\frac{3}{8}$ ",  $\frac{1}{4}$ " molded hole, set screw mounting, locknut recess.

**No. 1550**

Dia.  $1\frac{1}{8}$ ", hgt.  $\frac{5}{8}$ ",  $\frac{1}{4}$ " molded hole or metal insert, set screw, spring or knurled hole mounting, locknut recess.

**No. 1500**

Dia.  $1\frac{1}{8}$ ", hgt.  $\frac{3}{8}$ ",  $\frac{1}{4}$ " molded hole. Set screw mounting. Locknut recess. Indicator line filled or unfilled.

**No. 1510**

Dia.  $\frac{3}{4}$ ", Hgt.  $\frac{3}{8}$ ",  $\frac{1}{8}$ ",  $\frac{3}{16}$ " or  $\frac{1}{4}$ " Molded Hole and Set Screw,  $\frac{1}{4}$ " Knurled Hole Mounting.

**No. 1520**

Dia.  $1\frac{1}{2}$ ", Hgt.  $\frac{3}{4}$ ",  $\frac{1}{4}$ " Molded Hole or Brass Insert with Set Screw.

**No. 2100-P**

Length  $2\frac{1}{2}$ ", hgt.  $\frac{5}{8}$ ", width  $\frac{3}{4}$ ",  $\frac{1}{4}$ " metal insert and  $\frac{3}{16}$ " pointer, set screw mounting.

**No. 2110-P**

Length  $1\frac{5}{8}$ ", hgt.  $\frac{1}{32}$ ", width  $\frac{3}{4}$ ",  $\frac{1}{4}$ " metal insert and  $\frac{3}{16}$ " pointer, set screw mounting.

**No. 2100**

Length  $2\frac{1}{2}$ ", hgt.  $\frac{5}{8}$ ", width  $\frac{3}{4}$ ",  $\frac{1}{4}$ " molded hole or metal insert, set screw mounting, locknut recess.

**No. 2110**

Length,  $1\frac{5}{8}$ ", hgt.  $\frac{1}{32}$ ", width  $\frac{3}{4}$ ",  $\frac{1}{4}$ " molded hole or metal insert, set screw or knurled hole mounting, locknut recess.

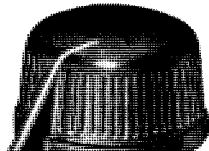
### CONTROL KNOBS



No. 1400



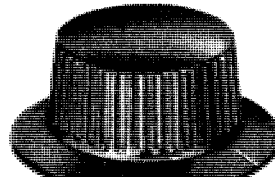
No. 1450



No. 1470



No. 1475



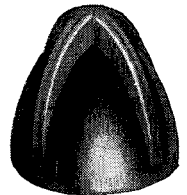
No. 1600



No. 1610



No. 1700



No. 2500 & 2600

**No. 1400**

Dia.  $1\frac{1}{8}$ ", hgt.  $1\frac{1}{32}$ ",  $\frac{1}{8}$ " or  $\frac{1}{4}$ " molded hole or brass insert, set screw, spring or knurled hole mounting.

**No. 1450**

Dia.  $1\frac{1}{8}$ ", hgt.  $1\frac{1}{32}$ ",  $\frac{1}{8}$ " or  $\frac{1}{4}$ " molded hole or brass insert, set screw, spring or knurled hole mounting.

**No. 1470**

Dia. 1", hgt.  $\frac{1}{2}$ ",  $\frac{1}{4}$ " molded hole or brass insert, set screw, spring or knurled hole mounting, indicator line filled or unfilled, locknut recess.

**No. 1475**

Dia. 1", hgt.  $\frac{1}{2}$ ",  $\frac{1}{4}$ " molded hole or brass insert, set screw, spring or knurled hole mounting, locknut recess.

**No. 1600**

Dia.  $1\frac{1}{2}$ ", hgt.  $1\frac{1}{16}$ ",  $\frac{1}{4}$ " molded hole or metal insert, set screw mounting, locknut recess, indicator line filled or unfilled.

**No. 1610**

Dia.  $1\frac{3}{16}$ ", hgt.  $\frac{5}{8}$ ",  $\frac{1}{8}$ " or  $\frac{1}{4}$ " molded hole or metal insert, set screw mounting, locknut recess, indicator line filled or unfilled.

**No. 1700**

Dia.  $\frac{3}{4}$ ", hgt.  $1\frac{1}{32}$ ",  $\frac{1}{4}$ " molded hole or brass insert, set screw, spring or knurled hole mounting.

**No. 2500**

Dia.  $\frac{3}{4}$ ", hgt.  $\frac{3}{4}$ ",  $\frac{1}{4}$ " molded hole, set screw, spring or knurled hole mounting.

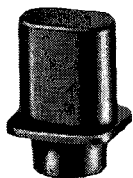
**No. 2600**

Dia.  $\frac{7}{8}$ ", hgt.  $\frac{7}{8}$ ",  $\frac{1}{4}$ " molded hole, set screw, spring or knurled hole mounting.

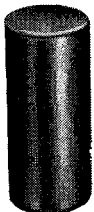
### PUSH BUTTONS

### TERMINAL NUTS

### METER CASE AND COVERS



No. 5149-A



No. 1800



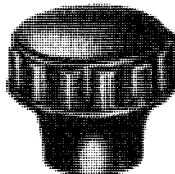
No. 1750 & 1770

**No. 5149-A**  
Hgt.  $\frac{5}{16}$ ", oval touch tuning. Push-on to fit flattened shaft.  $.050" \times .187"$ .

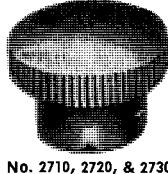
**No. 1800**  
Dia.  $\frac{3}{16}$ ", hgt.  $1"$  to  $1\frac{3}{8}"$ , touch tuning, plain or recessed top, push-on, to fit

flatted shaft  $.050" \times .187$  patented friction fit. Also with studs of various lengths.

**No. 1750**  
Dia.  $\frac{3}{16}$ ", hgt.  $\frac{3}{16}"$  to  $1\frac{1}{8}"$ , touch tuning, push on, to fit flatted shaft  $.050" \times .187"$ .



No. 2960



No. 2710, 2720, & 2730

**No. 1770**

Dia.  $\frac{3}{16}$ ", hgt.  $\frac{1}{2}"$  to  $\frac{7}{8}"$ , 6-32 or 8-32 female metal insert. 8-32 male stud.

**No. 2960**

Dia.  $\frac{7}{8}"$ , hgt.  $\frac{3}{4}"$ , 8-32 or 10-32 female metal insert, 10-24 or 10-32 male stud.

**No. 2710**

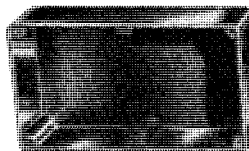
Dia.  $\frac{3}{4}"$ , hgt.  $\frac{1}{2}"$ , 8-32, 10-32, 10-24 metal insert.

**No. 2720**

Dia.  $\frac{5}{8}"$ , Hgt.  $\frac{3}{4}"$ , 10-24, 10-32 Female Metal Insert.

**No. 2730**

Dia.  $1\frac{1}{4}"$ , Hgt.  $\frac{3}{4}"$ , 10-24, 10-32 Female Metal Insert, 10-32 Male Stud.

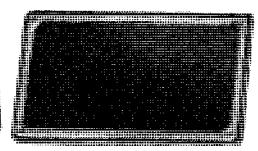


No. 240 Case

$2"$  hgt. x  $3\frac{3}{4}"$  wide x  $6\frac{1}{4}"$  long. (Outside Dimensions)  $\frac{1}{8}"$  (Wall Thickness).

**No. 220 Case**

$1\frac{1}{8}"$  hgt. x  $2\frac{7}{8}" \times 4"$  long (outside dimensions).  $.109"$  (wall thickness).



No. 241

Mating cover with interlocking lip for No. 240 series cases.

**No. 260 Case**

$2\frac{3}{16}"$  hgt. x  $5\frac{3}{32}"$  w x  $6\frac{1}{16}"$  l. (Outside Dimensions)— $\frac{3}{32}"$  (Wall Thickness).

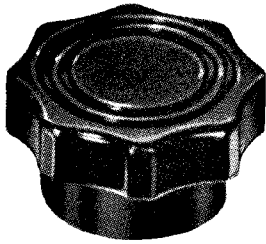
**No. 261**

Mating cover with interlocking lip for No. 260 case.

# HARRY DAVIES MOLDING CO.

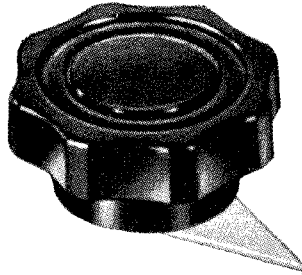
## MOLDERS OF PLASTICS

### INSTRUMENT KNOBS



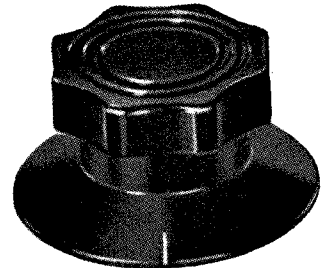
Part No.	Knob Dia.	Knob Hgt.
4100	1 1/8"	5/8"
4101	1 3/8"	1 1/4"
4102	1 5/8"	3/4"
4103	2 3/8"	7/8"

Entire series available with 1/4" molded hole or metal insert. Set screw mounting.



Part No.	Knob Dia.	Knob Hgt.
4100 W/PTR	1 1/8"	5/8"
4101 W/PTR	1 3/8"	1 1/4"
4102 W/PTR	1 5/8"	3/4"
4103 W/PTR	2 3/8"	7/8"

White vinylite pointer available. Pointer lengths 5/8", 3/4", 7/8", 1 1/8", 1 1/4".

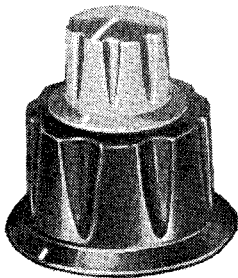


Part No.	Knob Dia.	Skirt Dia.
4104	1 1/8"	1 1/2"
4107	1 3/8"	1 3/4"
4108	1 5/8"	2 1/4"
4109	2 3/8"	3"

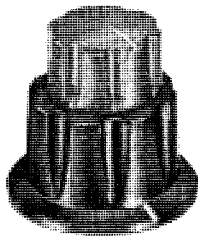
Skirt available with or without indicator line filled. Branding stamps constructed to your specifications.

This series can be furnished in compliance with MS 91531.

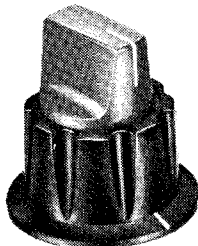
### NEW FLUTED INSTRUMENT KNOBS



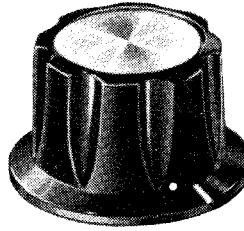
No. 1915 & 1935



No. 1916



No. 1917



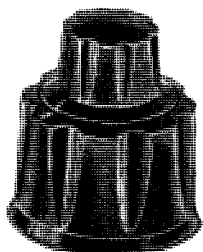
No. 1925-SS



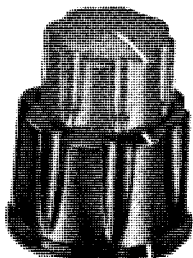
No. 1913



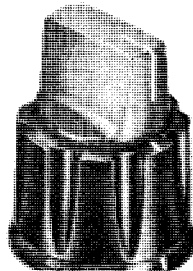
No. 1914



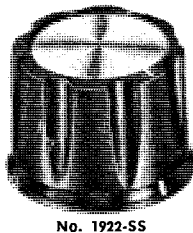
No. 1905



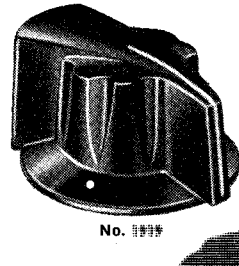
No. 1906



No. 1910



No. 1922-SS



No. 1910



No. 1910

**No. 1935**  
Dual control, dia. 1 1/2", hgt. 1 3/8". See 1930 and 1910 for mountings.

**No. 1915**  
Dual control, dia. 1 1/4", hgt. 1 3/8". See 1925 and 1910 for mountings.

**No. 1905**  
Dual control, dia. 1 1/8", hgt. 1 3/8". See 1922 and 1910 for mountings.

**No. 1916**  
Dual Control, Dia. 1 1/4", hgt. 1 3/4". See 1925 and 1914 for Mountings.

**No. 1906**  
Dual Control, Dia. 1 1/8", hgt. 1 3/4". See 1922 and 1914 for Mountings.

**No. 1917**  
Dual Control, Dia. 1 1/4", hgt. 1 3/8". See 1922 and 1510 for Mountings.

**No. 1907**  
Dual Control, Dia. 1 1/8", hgt. 1 3/8". See 1922 and 1510 for Mountings.

**No. 1913**  
Dia. 1 1/8", hgt. 5/8". 1/4" molded hole or brass insert. Set screw mounting 1/4" CRL knurl.

**No. 1919**  
Length 1 1/4", hgt. 5/8". 1/4" molded hole or brass insert. Set screw mounting.

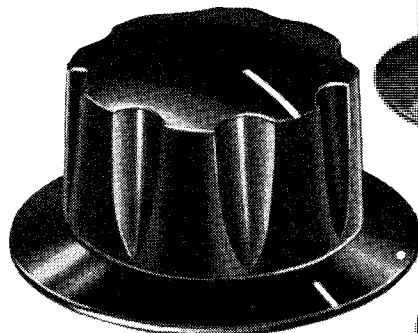
**No. 1914**  
Dia. 3/4", hgt. 1/2". 1/8", 3/16", 1/4" molded hole or insert.

**No. 1910**  
Dia. 3/4", hgt. 1/2". 1/8", 3/16" or 1/4", molded hole or brass insert, set screw, spring or knurled hole mounting.

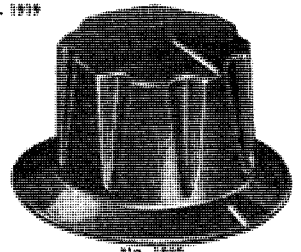
**No. 1930**  
Dia. 1 1/2", hgt. 7/8". 1/4" molded hole or brass insert, set screw.

**No. 1940**  
Dia. 2", hgt. 1 3/8". 1/4" molded hole or brass insert. Set screw mounting.

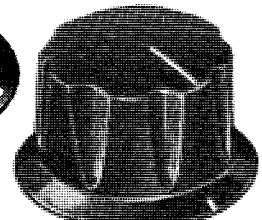
**No. 1920**  
Dia. 1 1/4", hgt. 3/4". 1/4" molded hole or brass insert, set screw, spring or knurled hole mounting.



No. 1940



No. 1920



No. 1920

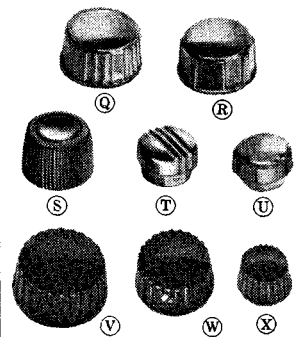
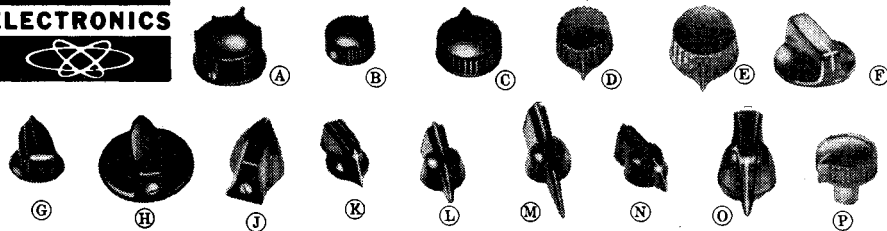
Please specify if paint filled indicator line is desired on top of knob and/or on skirt of knob.

Knobs shown are only part of our stock on hand. Our stock molds are interchangeable and meet most requirements with only minor tooling variations. Let us quote on your specifications.

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 CHICAGO, ILLINOIS



# REPLACEMENT KNOBS



**POINTER KNOBS**

(A) **TENITE POINTER KNOB**—1" Diameter, 1/2" Height, Fits 1/4" shafts.

**Knurl**  
Cat. No. 24-464 Walnut Net \$ .12  
24-466 Ivory .12

**Set Screw**  
Cat. No. 24-468 Walnut Net \$ .20  
24-470 Ivory .20

(B) **TENITE POINTER KNOB** — 3/2" Diameter, 3/8" Height, Fits 1/4" shafts.

**Knurl**  
Cat. No. 24-472 Walnut Net \$ .08  
24-474 Ivory .08

**Set Screw**  
Cat. No. 24-476 Walnut Net \$ .17  
24-478 Ivory .17

(C) **TENITE POINTER KNOB** — 1 1/2" Diameter, 3/8" Height, Fits 1/4" shafts.

**Knurl**  
Cat. No. 24-480 Walnut Net \$ .08  
24-482 Ivory .08

(D) **BAKELITE POINTER KNOB** — 1" Diameter, 1/2" Height, Fits 1/4" shafts.

**No Insert—Set Screw**  
Cat. No. 24-484 Walnut Net \$ .17  
24-486 Black .17

**With Insert—Set Screw**  
Cat. No. 24-488 Walnut Net \$ .33  
24-490 Black .33

(E) **BAKELITE POINTER KNOB**—1 1/4" Diameter, 5/8" Height, Fits 1/4" shafts.

**No Insert—Set Screw**  
Cat. No. 24-492 Walnut Net \$ .37  
24-494 Black .37  
24-496 Ivory .37

**Brass Insert—Set Screw**  
Cat. No. 24-498 Walnut Net \$ .37  
24-500 Black .37  
24-502 Ivory .37

(F) **BAKELITE POINTER KNOB**—Line filled, 1 1/8" Diameter, 3/8" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-504 Walnut Net \$ .25  
24-506 Black .25  
24-508 Red .25  
24-510 Ivory .25

(G) **BAKELITE POINTER KNOB**—1 3/8" Length, 3/4" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-512 Walnut Net \$ .18  
24-514 Black .18

(H) **TENITE POINTER KNOB** — 1 1/4" Diameter, 3/8" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-516 Walnut Net \$ .27  
24-518 Black .27  
24-522 White .27

(J) **BAKELITE POINTER KNOB**—1 1/4" Length, 1 1/8" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-524 Black Net \$ .25  
24-526 Red .25  
24-528 Ivory .25

(K) **BAKELITE POINTER KNOB**—1 1/4" Length, 3/8" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-530 Black Net \$ .22  
24-532 Walnut .22  
24-534 Red .22  
24-536 Ivory .22

(L) **BAKELITE POINTER KNOB**—1 1/4" Length, 5/8" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-538 Black Net \$ .20  
24-540 Walnut .20  
24-542 Red .20  
24-544 Ivory .20

(M) **BAKELITE BRASS INSERT** — 2" Length, 5/8" Height, Fits 1/4" shafts.

**No Insert—Set Screw**  
Cat. No. 24-546 Black Net \$ .33  
24-548 Walnut .33  
24-550 Red .33  
24-552 Ivory .33

**Brass Insert—Set Screw**  
Cat. No. 24-554 Black Net \$ .42  
24-556 Walnut .42  
24-558 Red .42  
24-560 Ivory .42

(N) **BAKELITE BRASS INSERT**—1 1/4" Length, 5/8" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-562 Black Net \$ .27  
24-564 Walnut .27  
24-566 Red .27

(O) **BAKELITE POINTER KNOB**—1 1/4" Length, 5/8" Height, Fits 1/4" shafts.

**No Insert—Set Screw**  
Cat. No. 24-570 Walnut Net \$ .18  
24-572 Black .18  
24-574 Red .18  
24-576 Ivory .18

**Brass Insert—Set Screw**  
Cat. No. 24-578 Walnut Net \$ .28  
24-580 Black .28  
24-582 Red .28

(P) **PLASTIC POINTER KNOB** — 1 1/2" Diameter, 1/2" shank extension for 1/4" knurled shaft.

**Knurl**  
Cat. No. 24-586 Walnut Net \$ .12  
24-588 Ivory .12

(Q) **BAKELITE KNOB**—1 1/8" Diameter, 3/8" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-772 Walnut Net \$ .30  
24-774 Ivory .30

(R) **BAKELITE KNOB**—1" Diameter, 3/8" Height, Fits 1/4" shaft.

**Set Screw**  
Cat. No. 24-776 Walnut Net \$ .23  
24-778 Ivory .23

(S) **TENITE KNOB** — 1" Diameter, 1 1/8" Height, Fits 1/4" shaft.

**Knurl**  
Cat. No. 24-780 Walnut Net \$ .13  
24-782 Ivory .13

**Spring Type**  
Cat. No. 24-784 Walnut Net \$ .13  
24-786 Ivory .13

(T) **BAKELITE KNOB**—7/8" Diameter, 5/8" Height, Fits 1/4" shaft.

**Set Screw**  
Cat. No. 24-788 Walnut Net \$ .30  
24-790 Ivory .30

(U) **BAKELITE KNOB**—7/8" Diameter, 5/8" Height, Fits 1/4" shaft.

**Set Screw**  
Cat. No. 24-792 Walnut Net \$ .15

(V) **BAKELITE KNOB**—1 1/4" Diameter, 5/8" Height, Fits 1/4" shaft.

**Set Screw—No Insert**  
Cat. No. 24-796 Walnut Net \$ .28  
24-798 Black .28

**Brass Insert—Set Screw**  
Cat. No. 24-800 Walnut Net \$ .32  
24-802 Black .32

(W) **BAKELITE KNOB**—1" Diameter, 1/2" Height, Fits 1/4" shaft.

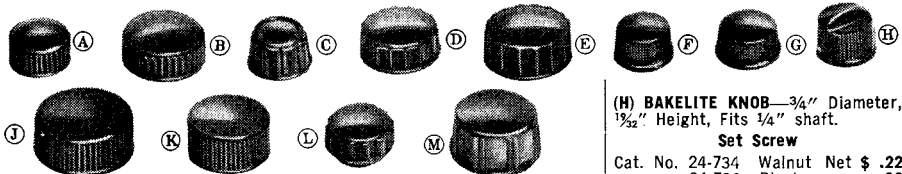
**Set Screw—No Insert**  
Cat. No. 24-804 Black Net \$ .25  
24-806 Red .25

**Brass Insert—Set Screw**  
Cat. No. 24-808 Black Net \$ .28

(X) **BAKELITE KNOB**—5/8" Diameter, 1 1/2" Height, Fits 1/4" shaft.

**Set Screw—No Insert**  
Cat. No. 24-812 Walnut Net \$ .15  
24-814 Black .15  
24-816 Red .17  
24-818 Ivory .17

**Set Screw—Brass Insert**  
Cat. No. 24-820 Walnut Net \$ .22  
24-822 Black .22  
24-824 Red .22  
24-826 Ivory .22



(A) **TENITE KNOB**—3/2" Diameter, 1 1/2" Height, Fits 1/4" shaft.

**Knurl**  
Cat. No. 24-666 Walnut Net \$ .12  
24-668 Ivory .12

**Set Screw**  
Cat. No. 24-670 Walnut Net \$ .18  
24-672 Ivory .18

(B) **TENITE KNOB**—1 1/8" Diameter, 3/8" Height, Fits 1/4" shaft.

**Knurl**  
Cat. No. 24-674 Walnut Net \$ .12  
24-676 Ivory .12

**Spring Type**  
Cat. No. 24-678 Walnut Net \$ .12  
24-680 Ivory .12

(C) **TENITE KNOB**—3/4" Diameter, 1/2" Height, Fits 1/4" shaft.

**Knurl**  
Cat. No. 24-682 Walnut Net \$ .12  
24-684 Ivory .12

**Set Screw**  
Cat. No. 24-686 Walnut Net \$ .15  
24-688 Ivory .15

(D) **TENITE KNOB**—1 1/8" Diameter, 3/8" Height, Fits 1/4" shaft.

**Knurl**  
Cat. No. 24-692 Ivory Net \$ .12

**Spring Type**  
Cat. No. 24-694 Walnut Net \$ .12

(E) **TENITE KNOB**—1 1/8" Diameter, 3/8" Height, Fits 1/4" shafts.

**Knurl**  
Cat. No. 24-700 Walnut Net \$ .12

**Spring Type**  
Cat. No. 24-704 Walnut Net \$ .12  
24-706 Ivory .12

**Set Screw**  
Cat. No. 24-708 Walnut Net \$ .18  
24-710 Ivory .18

(F) **BAKELITE KNOB**—1 1/4" Diameter, 1 1/2" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-712 Walnut Net \$ .17  
24-714 Black .17  
24-716 Red .17  
24-718 Ivory .17

**Set Screw with Arrow**  
Cat. No. 24-720 Walnut Net \$ .23  
24-722 Black .23  
24-724 Red .23  
24-726 Ivory .28

(G) **BAKELITE KNOB**—1" Diameter, 1/2" Height, Fits 1/4" shafts.

**Set Screw**  
Cat. No. 24-728 Black Net \$ .25  
24-730 Red .25  
24-732 Ivory .25

(H) **BAKELITE KNOB**—3/4" Diameter, 1 1/2" Height, Fits 1/4" shaft.

**Set Screw**  
Cat. No. 24-734 Walnut Net \$ .22  
24-736 Black .22  
24-738 Ivory .22

(J) **TENITE KNOB**—1 1/8" Diameter, 1/2" Height, Fits 1/4" shaft.

**Knurl**  
Cat. No. 24-740 Walnut Net \$ .13  
24-742 Ivory .13

(K) **TENITE KNOB**—1 1/8" Diameter, 1/2" Height, Fits 1/4" shaft.

**Knurl**  
Cat. No. 24-744 Walnut Net \$ .13  
24-746 Ivory .13

**Set Screw with Arrow**  
Cat. No. 24-748 Walnut Net \$ .15  
24-750 Ivory .15

(L) **BAKELITE KNOB**—7/8" Diameter, 1/2" Height, Fits 1/4" shaft.

**Set Screw**  
Cat. No. 24-752 Walnut Net \$ .23  
24-754 Black .23  
24-756 Ivory .25

**Set Screw with Arrow**  
Cat. No. 24-758 Walnut Net \$ .30  
24-760 Black .30  
24-762 Ivory .30

(M) **BAKELITE KNOB**—1" Diameter, 3/8" Height, Fits 1/4" shaft.

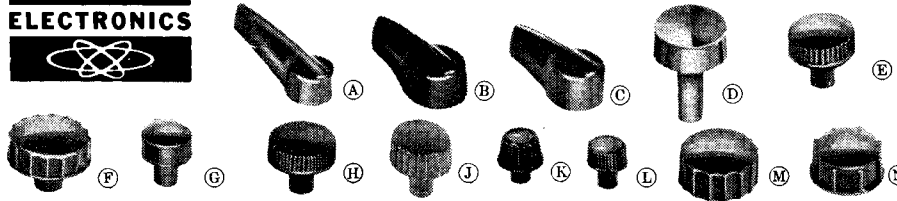
**Set Screw**  
Cat. No. 24-764 Walnut Net \$ .28  
24-766 Ivory .28



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# GEE-LAR REPLACEMENT KNOBS



(A) BAKELITE KNOB—2½" Length, ⅝" Height, Fits ¼" shafts.

**NO INSERT—SET SCREW**  
Cat. No. 24-590 Black Net \$ .30  
24-592 Walnut .30

**BRASS INSERT—SET SCREW**  
Cat. No. 24-594 Black Net \$ .37  
24-596 Walnut .37

(B) BAKELITE KNOB—1½" Length, ⅜" Height, Fits ¼" shafts.

**SET SCREW**  
Cat. No. 24-598 Black Net \$ .25  
24-600 Walnut .25

(C) BAKELITE BRASS INSERT—1½" Length, ⅜" Height, Fits ¼" shafts.

**SET SCREW**  
Cat. No. 24-602 Black Net \$ .37  
24-604 Walnut .37

(D) TENITE KNOB—1⅞" Shank, 1⅞" Diameter, ⅜" Height, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-606 Walnut Net \$ .18  
24-608 Ivory .18

(E) TENITE KNOB—1⅞" Diameter, ⅜" Height, ½" Shank Extension, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-610 Walnut Net \$ .13  
24-612 Ivory .13

(F) TENITE KNOB—1¼" Diameter, ⅜" Height, ½" Shank Extension, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-614 Walnut Net \$ .15  
24-616 Ivory .15

(G) TENITE KNOB—¾" Diameter, ⅜" Height, ½" Shank Extension, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-618 Walnut Net \$ .12  
24-620 Ivory .12

(H) TENITE KNOB—1⅞" Diameter, ⅜" Height, ½" Shank Extension, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-622 Walnut Net \$ .13  
24-624 Ivory .13

(J) PLASTIC KNOB—1⅞" Diameter, ½" Shank Extension for ¼" Knurled Shaft.

**KNURL**  
Cat. No. 24-626 Walnut Net \$ .12  
24-628 Ivory .12

(K) PLASTIC KNOB MIDGET TYPE—¾" Diameter, ⅜" Shank Extension, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-634 Walnut Net \$ .12  
24-636 Ivory .12

(L) PLASTIC KNOB MIDGET TYPE—¾" Diameter, ½" Shank Extension, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-640 Ivory Net \$ .12

(M) TENITE KNOB—1⅞" Diameter, ⅜" Height, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-642 Walnut Net \$ .12  
24-644 Ivory .12

**SPRING TYPE**  
Cat. No. 24-646 Walnut Net \$ .18  
24-648 Ivory .18

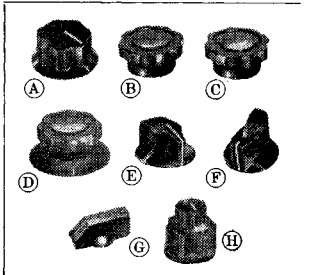
**SET SCREW**  
Cat. No. 24-650 Walnut Net \$ .18  
24-652 Ivory .18

(N) TENITE KNOB—1" Diameter, ⅜" Height, Fits ¼" shafts.

**KNURL**  
Cat. No. 24-654 Walnut Net \$ .12  
24-656 Ivory .12

**SPRING TYPE**  
Cat. No. 24-658 Walnut Net \$ .15

**SET SCREW**  
Cat. No. 24-662 Walnut Net \$ .18  
24-664 Ivory .18



## GEE-LAR KURZ-KASCH KNOBS

(A) POINTER KNOBS—Indicator Line.

¾" Diameter, ⅜" Height.  
Cat. No. 25-034 Net \$ .48  
1" Diameter, ⅜" Height.  
Cat. No. 25-036 Net \$ .55  
1¼" Diameter, ⅜" Height.  
Cat. No. 25-038 Net \$ .55  
1½" Diameter, ⅜" Height.  
Cat. No. 24-040 Net \$ .55  
2" Diameter, ⅜" Height.  
Cat. No. 25-042 Net \$1.03  
No Indicator Line.  
1½" Diameter, ¾" Height.  
Cat. No. 25-044 Net \$ .52  
2" Diameter, ¾" Height.  
Cat. No. 25-046 Net \$ .98

(B) POINTER KNOBS—1" Diameter

⅝" Height, ¾" Pointer.  
Cat. No. 25-048 Net \$ .70  
1½" Diameter, ⅝" Height, ¾" Pointer.  
Cat. No. 25-050 Net \$ .70  
1¾" Diameter, ⅞" Height, 1¼" Pointer.  
Cat. No. 25-052 Net \$ .95  
1¾" Diameter, ¾" Height, 1¼" Pointer.  
Cat. No. 25-054 Net \$ .95  
2¾" Diameter, ⅞" Height, 1¼" Pointer.  
Cat. No. 25-056 Net \$1.28

(C) NO POINTER—1" Diameter, ⅝" Height.

Cat. No. 25-058 Net \$ .60  
1¾" Diameter, ⅝" Height.  
Cat. No. 25-060 Net \$ .73  
1¾" Diameter, ⅞" Height.  
Cat. No. 25-062 Net \$ .97  
1¾" Diameter, ¾" Height.  
Cat. No. 25-064 Net \$ .80  
2¾" Diameter, ⅞" Height.  
Cat. No. 25-066 Net \$1.17

(D) SKIRT KNOBS—1½" Diameter, 1⅜" Height, 1½" Skirt.

Cat. No. 25-068 Net \$1.42  
1¾" Diameter, 2⅜" Height, 1¼" Skirt.  
Cat. No. 25-070 Net \$1.37  
1¾" Diameter, ⅞" Height, 2⅜" Skirt.  
Cat. No. 25-072 Net \$1.53  
2¾" Diameter, 1¾" Height, 3" Skirt.  
Cat. No. 25-074 Net \$2.33

(E) POINTER KNOB BRASS INSERT—1½" Diameter, ⅝" Height.

Cat. No. 25-076 Net \$ .63

(F) POINTER KNOB NO BRASS INSERT—1½" Diameter, 1¼" Height, 1 Set Screw.

Cat. No. 25-078 Net \$ .18

(G) BAR KNOB NO BRASS INSERT—1½" Length, ⅝" Height, 1 Set Screw.

Cat. No. 25-080 Net \$ .33

(H) DUAL CONTROL—1" Diameter, 1¾" Height.

Cat. No. 25-086 Net \$1.23



## GEE-LAR KURZ-KASCH

(A) POINTER KNOB BRASS INSERT—1¼" Length, ⅝" Height, MIL Spec. AN3219-1.

Cat. No. 25-088 Black Net \$ .32  
25-100 Black Net \$ .78

(B) POINTER KNOB BRASS INSERT—1½" Length, ⅞" Height.

Cat. No. 25-092 Black Net \$ .42  
25-098 Black Net \$ .83

(C) BAR KNOB BRASS INSERT—1¼" Length, ⅜" Height, Black only.

Cat. No. 25-098 Black Net \$ .83  
25-102 Black Net \$ .45

(D) BAR KNOB BRASS INSERT—1¼" Length, ⅜" Height, Black only.

Cat. No. 25-100 Black Net \$ .78  
25-104 Black Net \$ .42

(E) BRASS INSERT NO ARROW—¾" Diameter, ⅜" Height, Black only.

Cat. No. 25-102 Black Net \$ .45  
25-106 Black Net \$ .47

(F) BRASS INSERT WITH ARROW—1½" Diameter, ⅜" Height.

Cat. No. 25-104 Net \$ .42  
25-106 Black Net \$ .47

(G) POINTER KNOB BRASS INSERT—1¼" Length, ⅞" Height.

Cat. No. 25-108 Black Net \$ .43

(H) POINTER KNOB ⅞" BRASS INSERT—¾" Diameter, ⅞" Height.

Cat. No. 25-116 Black Net \$ .50

(L) POINTER BAR KNOB BRASS BUSHING—2¾" Length, Fits ¼" shaft, Metal pointer can be removed.

Cat. No. 24-456 Black Net \$ .55  
24-458 Walnut .58

(M) POINTER BAR KNOB BRASS BUSHING—1½" Length, Fits ¼" shaft, Metal pointer can be removed.

**SET SCREW**  
Cat. No. 24-460 Black Net \$ .55

(N) BAKELITE POINTER KNOB—1¾" Diameter, ⅞" Height, with molded white arrow, brass bushing, Black only.

Cat. No. 25-000 Set Screw Type Net \$ .47

(O) BAKELITE WITH BRASS INSERT—1½" Diameter, ¾" Height, Indicator line, Black only.

Cat. No. 25-002 Set Screw Type Net \$ .33

(P) BAKELITE SKIRT KNOBS—1½" Skirt Diameter, 1⅞" Height.

Cat. No. 25-004 Set Screw Type Net \$ .27

(Q) POINTER KNOBS—1½" Diameter, ⅝" Height, ¾" Pointer.

Cat. No. 25-006 Net \$ .63  
25-008 Net \$ .65

(R) SKIRT KNOBS—1½" Diameter, 1⅞" Height, 1½" Skirt.

Cat. No. 25-014 Net \$ .78  
25-016 Net \$ .78

1¾" Diameter, ⅞" Height, 1½" Skirt.  
Cat. No. 25-018 Net \$ .80

1¾" Diameter, ⅞" Height, 1¾" Skirt.  
Cat. No. 25-020 Net \$ .80

1¾" Diameter, 2⅞" Height, 2¼" Skirt.  
Cat. No. 25-022 Net \$ .95

2¾" Diameter, 1½" Height, 3" Skirt.  
Cat. No. 25-024 Net \$1.33

(S) BAKELITE KNOB—1½" Diameter, ⅝" Height.

Cat. No. 25-026 Net \$ .40  
25-028 Net \$ .45

1¾" Diameter, ¾" Height.  
Cat. No. 25-030 Net \$ .52  
2¾" Diameter, ⅞" Height.  
Cat. No. 25-032 Net \$ .72

## GEE-LAR KURZ-KASCH PUSH BUTTON KNOBS

PUSH BUTTON KNOB—1½" Diameter, 1⅞" Height, ⅜" Hole Depth, Black only. Tapered sides.

Cat. No. 25-118 Black Net \$ .13

PUSH BUTTON RECESSED TOP—1½" Diameter, 1⅞" Height, ⅜" Hole Depth, Top recessed for selector tab, Black only.

Cat. No. 25-120 Black Net \$ .13

PUSH BUTTON KNOB—¾" Diameter, 1⅞" Height, ⅜" Hole Depth, Black only.

Cat. No. 25-122 Black Net \$ .13

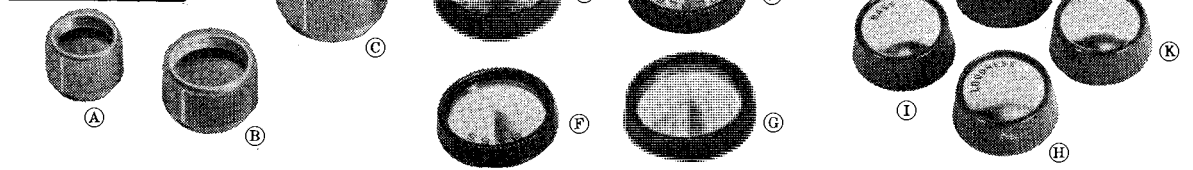
PUSH BUTTON KNOB—¾" Diameter, ⅝" Height, ⅜" Hole Depth, Top recessed for selector tab, Black only.

Cat. No. 25-124 Black Net \$ .15

PUSH BUTTON RECESSED TOP—¾" Diameter, ⅝" Height, ⅜" Hole Depth, Top recessed for selector tab, Black only.

Cat. No. 25-126 Black Net \$ .15

# GC HI-FI AND STEREO KNOBS



**HI-FI STEREO KNOB SERIES**—For Hi-Fi Stereo Cabinets and Custom Installations. Precision made of TENITE with sparkling brass top ring inserts and indicator lines. Set screw type.

- Cat. No. 24-012 Set of 3, Black Net \$ .97
  - 24-014 Set of 3, Ivory Net \$ .97
- INDIVIDUAL KNOBS**
- "A" Small  
1" Diameter, 3/8" Height, Fits 1/4" shaft.  
Cat. No. 24-000 Black Net \$ .30  
24-002 Ivory .30
  - "B" Medium  
1 1/8" Diameter, 1/2" Height, Fits 3/8" shaft.  
Cat. No. 24-004 Black Net \$ .33  
24-006 Ivory .33
  - "C" Large  
1 1/2" Diameter, 7/8" Height, Fits 1/4" shaft.

- Cat. No. 24-008 Black Net \$ .40
  - 24-010 Ivory .40
- AUDIO-PHILE KNOB SERIES**—For Hi-Fi Custom Installations. TENITE with brass inserts. Indicated for Volume, Treble, Bass or Plain.
- Cat. No. 24-024 Set of 4, Maroon Net \$1.42
- "D" Volume  
1 1/2" Diameter, 5/8" Height, Fits Knurl shaft.  
Cat. No. 24-016 Maroon Net \$ .40
- "E" Treble  
1 1/2" Diameter, 5/8" Height, Fits Knurl shaft.  
Cat. No. 24-018 Maroon Net \$ .40
- "F" Bass  
1 1/2" Diameter, 5/8" Height, Fits Knurl shaft.  
Cat. No. 24-020 Maroon Net \$ .40
- "G" Plain  
1 1/2" Diameter, 5/8" Height, Fits Knurl shaft.  
Cat. No. 24-022 Maroon Net \$ .30

- HIGH-FIDELITY KNOB SERIES TENITE**—with handsome, individually marked brass inserts for Volume, Bass, Treble and Plain.
- Cat. No. 24-034 Set of 4, Maroon Net \$1.35
- "H" Loudness  
1 1/8" Diameter, 1/2" Height, For .250 Diameter and .156 Flat Spring Type Shaft.  
Cat. No. 24-026 Maroon Net \$ .35
- "I" Bass  
1 1/8" Diameter, 1/2" Height, For .250 Diameter and .156 Flat Spring Type Shaft.  
Cat. No. 24-028 Maroon Net \$ .35
- "J" Treble  
1 1/8" Diameter, 1/2" Height, For .250 Diameter and .156 Flat Spring Type Shaft.  
Cat. No. 24-030 Maroon Net \$ .35
- "K" Plain  
1 1/8" Diameter, 1/2" Height, For .250 Diameter and .156 Flat Spring Type Shaft.  
Cat. No. 24-032 Maroon Net \$ .33



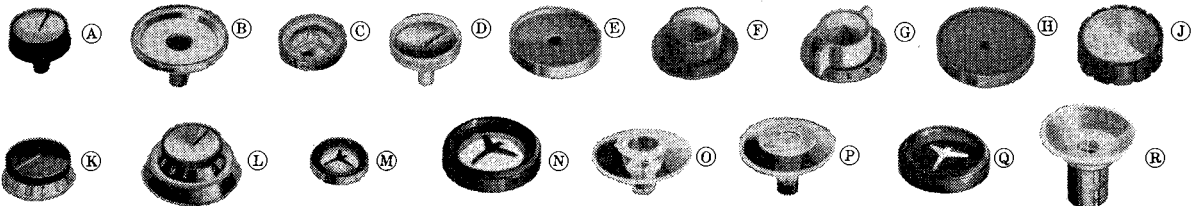
- (A) TENITE PLATED GOLD INLAY—1 1/4" Diameter, 1/2" Height, Fits 1/4" shaft.
- SPRING TYPE**
- Cat. No. 24-070 Walnut Net \$ .33
  - 24-072 Ivory .33
- (B) TENITE PLATED GOLD INLAY—1" Diameter, 3/8" Height, Fits 1/4" shaft.
- KNURL TYPE**
- Cat. No. 24-074 Walnut Net \$ .25
  - 24-076 Ivory .25
- (C) TENITE PLATED GOLD INLAY—1" Diameter, 1/2" Height, Fits 1/4" shaft.

- KNURL TYPE**
- Cat. No. 24-078 Walnut Net \$ .23
  - 24-080 Ivory .23
- (D) TENITE PLATED GOLD INLAY—1" Diameter, 3/8" Height, Fits 1/4" shaft.
- KNURL TYPE**
- Cat. No. 24-082 Walnut Net \$ .25
  - 24-084 Ivory .25
- SPRING TYPE**
- Cat. No. 24-086 Walnut Net \$ .27
  - 24-088 Ivory .27
- SET SCREW**
- Cat. No. 24-090 Walnut Net \$ .40
  - 24-092 Ivory .40
- (E) TENITE PLATED GOLD INLAY—

- 3/4" Diameter, 3/8" Height, Fits 1/4" shaft.
- KNURL TYPE**
- Cat. No. 24-094 Walnut Net \$ .22
  - 24-096 Ivory .22
- SPRING TYPE**
- Cat. No. 24-098 Walnut Net \$ .27
  - 24-100 Ivory .27
- (F) TENITE PLATED GOLD INLAY—1 1/8" Diameter, 1/2" Height, Fits 1/4" shaft.
- KNURL TYPE**
- Cat. No. 24-102 Walnut Net \$ .27
  - 24-104 Ivory .27
- SET SCREW**
- Cat. No. 24-106 Walnut Net \$ .42

- 24-108 Ivory Net \$ .42
- (G) TENITE PLATED GOLD INLAY—1" Diameter, 1/2" Height, Fits 1/4" shaft.
- SET SCREW**
- Cat. No. 24-110 Walnut Net \$ .37
  - 24-112 Ivory .37
- (H) TENITE PLATED GOLD INLAY—1 1/8" Diameter, 1/2" Height, Fits 1/4" shaft.
- KNURL TYPE**
- Cat. No. 24-114 Walnut Net \$ .28
  - 24-116 Ivory .28
- SET SCREW**
- Cat. No. 24-118 Walnut Net \$ .35

## GENERAL ELECTRIC KNOB REPLACEMENTS



- (A) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. G 1001, Color Black & Gold.  
Cat. No. 27-064 Channel Knob Net \$ .92
- CHANNEL SELECTOR KNOB**  
Original Mfg.'s Part No. G 1002, Color Black & Silver.  
Cat. No. 27-066 Channel Knob Net \$ .92
- (B) FINE TUNING KNOB—Original Mfg.'s Part No. G 1003, Color Silver.  
Cat. No. 27-068 Fine Tuning Net \$ .92
- (C) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. GWT43x246, Color Green & Gold.  
Cat. No. 27-070 Channel Knob Net \$1.25
- (D) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. GWT43x269, Color Clear & Gold.  
Cat. No. 27-072 Channel Knob Net \$2.10
- (E) FINE TUNING KNOB—Original Mfg.'s Part No. WT43x40 (RDK222), Color Fawn.  
Cat. No. 27-074 Fine Tuning Net \$ .57

- (F) OFF-ON VOLUME KNOB—Original Mfg.'s Part No. WT43x41 (RDK223), Color Fawn.  
Cat. No. 27-076 Off-On Volume Net \$ .75
- (G) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x42 (RDK224), Color Fawn.  
Cat. No. 27-078 Channel Knob Net \$ .87
- (H) PICTURE VOLUME KNOB—Original Mfg.'s Part No. WT43x43 (RDK225), Color Fawn.  
Cat. No. 27-080 Picture Volume Net \$ .57
- (J) OFF-ON VOLUME KNOB—Original Mfg.'s Part No. WT43x53 (RDK263), Color Brown & Fawn.  
Cat. No. 27-082 Off-On Volume Net \$1.00
- CHANNEL SELECTOR KNOB**  
Original Mfg.'s Part No. WT43x54 (RDK264), Color Brown & Fawn.  
Cat. No. 27-084 Channel Knob Net \$1.50
- (K) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x76 (RDK331), Color Brown & Gold.  
Cat. No. 27-086 Channel Knob Net \$1.92

- CHANNEL SELECTOR KNOB**  
Original Mfg.'s Part No. WT43x152 (RDK455), Color Brown.  
Cat. No. 27-090 Channel Knob Net \$2.85
- (L) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x139 (RDK434), Color Brown & Gold.  
Cat. No. 27-092 Channel Knob Net \$2.10
- CHANNEL SELECTOR KNOB**  
Original Mfg.'s Part No. WT43x141 (RDK438), Color Fawn & Gold.  
Cat. No. 27-094 Channel Knob Net \$2.28
- (M) CHANNEL SELECTOR KNOB—Original Mfg.'s Part No. WT43x159 (RDK469), Color Brown.  
Cat. No. 27-096 Channel Knob Net \$1.77
- (N) ON-OFF VOLUME OR BRIGHTNESS—Original Mfg.'s Part No. WT43x158 (RDK467), Color Mahogany & Gold.  
Cat. No. 27-462 On-Off Volume Net \$1.27
- ON-OFF VOLUME OR BRIGHTNESS**—Original Mfg.'s Part No. WT43x163 (RDK473), Color Brown.  
Cat. No. 27-464 On-Off Volume Net \$1.00

- CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x164 (RDK474), Color Mahogany.  
Cat. No. 27-466 Channel Knob Net \$1.50
- ON-OFF VOLUME KNOB**—Original Mfg.'s Part No. WT43x165 (RDK475), Color Mahogany & Gold.  
Cat. No. 27-468 On-Off Volume Net \$1.27
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x169 (RDK479), Color Mahogany & Gold.  
Cat. No. 27-470 UHF Channel Net \$1.77
- (O) PICTURE TUNING KNOB—Original Mfg.'s Part No. WT43x171 (RDK490), Color Clear.  
Cat. No. 27-472 Picture Knob Net \$ .90
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x176 (RDK521), Color Mahogany & Gold.  
Cat. No. 27-474 UHF Channel Net \$1.77

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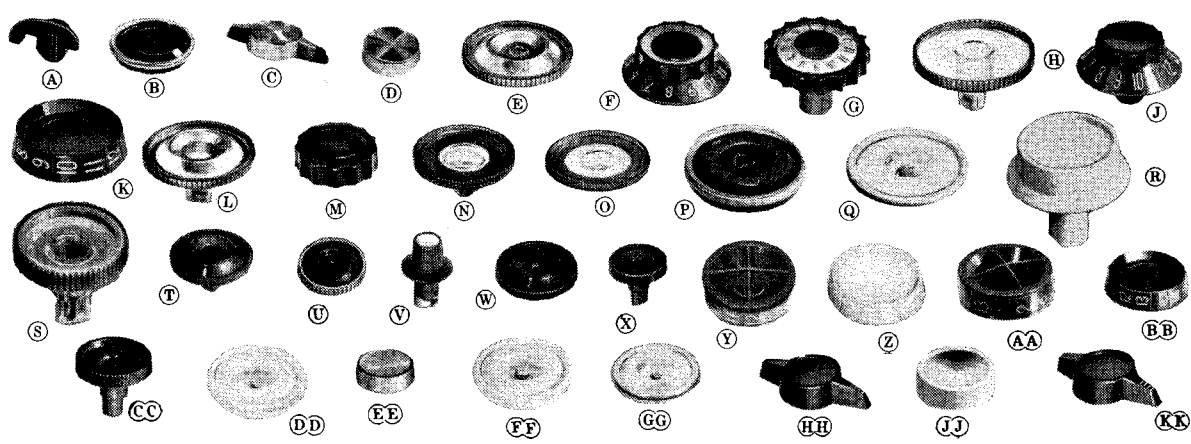


# REPLACEMENT KNOBS

GENERAL ELECTRIC KNOB REPLACEMENTS . . . See previous page for illustrations

- CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x179 (RDK524), Color Mahogany. Cat. No. 27-476 Channel Knob Net \$1.50
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x182 (RDK527), Color Gold. Cat. No. 27-478 UHF Channel Net \$1.77
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x184 (RDK530), Color Clear. Cat. No. 27-480 Contrast Tuning Net \$ .90
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x187 (RDK540), Color Navy Blue. Cat. No. 27-482 UHF Channel Net \$1.17
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x192 (RDK550), Color Bronze & Gold. Cat. No. 27-484 UHF Channel Net \$1.77
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x194 (RDK552), Color Peacock Blue & Gold. Cat. No. 27-486 UHF Channel Net \$1.77
- BRIGHTNESS KNOB**—Original Mfg.'s Part No. WT43x209 (RDK569), Color Navy Blue. Cat. No. 27-488 Brightness Knob Net \$1.00
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x207 (RDK568), Color Cream & Gold. Cat. No. 27-490 UHF Channel Net \$1.77
- VHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x217 (RDK587), Color Cream & Gold. Cat. No. 27-492 VHF Channel Net \$1.77
- UHF CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. WT43x219 (RDK599), Color Green & Gold. Cat. No. 27-494 UHF Channel Net \$1.77
- BRIGHTNESS KNOB**—Original Mfg.'s Part No. WT43x226 (RDK609), Color Clear. Cat. No. 27-496 Brightness Knob Net \$ .42

## RCA EXACT TV REPLACEMENT KNOBS



- (A) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 76770, Color Dark Maroon & Gold. Cat. No. 27-200 Channel Knob Net \$ .76
- (B) FINE TUNING KNOB**—Original Mfg.'s Part No. 77707, Color Brown with Polished Brass Shell. Cat. No. 27-202 Fine Tuning Net \$1.57
- (C) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 77708, Color Red with Polished Brass Shell. Cat. No. 27-204 Channel Knob Net \$1.50
- (D) ON-OFF VOLUME KNOB**—Original Mfg.'s Part No. 77710, Color Black with Polished Brass Shell. Cat. No. 27-206 On-Off Volume Net \$1.57
- (E) FINE TUNING KNOB**—Original Mfg.'s Part No. 79464, Color Gold & Maroon. Cat. No. 27-208 Fine Tuning Net \$1.26
- (F) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 79466, Colors Amber, Gray, Maroon & Gold. Cat. No. 27-210 Channel Knob Net \$1.77
- (G) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 100627, Color Maroon & Polished Brass. Cat. No. 27-212 Channel Knob Net \$2.70
- (H) FINE TUNING KNOB**—Original Mfg.'s Part No. 100629, Color Clear with Gold Edge. Cat. No. 27-214 Fine Tuning Net \$1.27
- (J) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 100637, Color Brown. Cat. No. 27-216 Channel Knob Net \$1.77
- (K) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 100944, Color Dark Wine. Cat. No. 27-218 Channel Knob Net \$1.35
- (L) FINE TUNING KNOB**—Original Mfg.'s Part No. 101015, Color Gold & Maroon. Cat. No. 27-220 Fine Tuning Net \$1.26
- (M) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 101150, Color Dark Wine. Cat. No. 27-222 Channel Knob Net \$ .90
- (N) FINE TUNING KNOB**—Original Mfg.'s Part No. 101154, Color Gold & Maroon. Cat. No. 27-224 Fine Tuning Net \$1.00
- (O) FINE TUNING KNOB**—Original Mfg.'s Part No. 101276, Color Gold & Maroon. Cat. No. 27-226 Fine Tuning Net \$1.26
- (P) BRIGHTNESS KNOB**—Original Mfg.'s Part No. 77709, Color Brown & Gold. Cat. No. 27-700 Brightness Net \$1.35
- (Q) FINE TUNING KNOB**—Original Mfg.'s Part No. 77717, Color Beige & Gold. Cat. No. 27-702 Fine Tuning Net \$1.35
- BRIGHTNESS KNOB**—Original Mfg.'s Part No. 77718, Color Beige & Gold. Cat. No. 27-704 Brightness Net \$1.35
- (R) ON-OFF VOLUME KNOB**—Original Mfg.'s Part No. 100621, Color Gray. Cat. No. 27-706 On-Off Volume Net \$ .67
- ON-OFF VOLUME KNOB**—Original Mfg.'s Part No. 101138, Color Brown. Cat. No. 27-708 On-Off Volume Net \$ .67
- (S) BRIGHTNESS KNOB**—Original Mfg.'s Part No. 101124, Color Clear & Gold. Cat. No. 27-710 Brightness Net \$1.17
- (T) FINE TUNING KNOB**—Original Mfg.'s Part No. 100639, Color Brown. Cat. No. 27-712 Fine Tuning Net \$1.28
- (U) CONTRAST-BRIGHTNESS**—Original Mfg.'s Part No. 79470, Color Mahogany. Cat. No. 27-714 Contrast-Bright-Net \$1.50
- (V) HORIZONTAL CONTROL KNOB**—Original Mfg.'s Part No. 101010, Color Maroon. Cat. No. 27-716 Horizontal Net \$ .82
- (W) FINE TUNING KNOB**—Original Mfg.'s Part No. 79864, Color Brown. Cat. No. 27-718 Fine Tuning Net \$1.26
- (X) CONTRAST KNOB**—Original Mfg.'s Part No. 100622, Color Mahogany. Cat. No. 27-720 Contrast Net \$ .82
- CONTRAST KNOB**—Original Mfg.'s Part No. 100623, Color Gray. Cat. No. 27-722 Contrast Net \$ .82
- (Y) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 104304, Color Mahogany. Cat. No. 27-724 Channel Knob Net \$1.35
- (Z) UHF CHANNEL SELECTOR**—Original Mfg.'s Part No. 104305, Color Mahogany. Cat. No. 27-726 Channel Knob Net \$1.35
- UHF CHANNEL SELECTOR**—Original Mfg.'s Part No. 104306, Color Gray. Cat. No. 27-728 Channel Knob Net \$1.35
- (AA) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 102503, Color Gray. Cat. No. 27-730 Channel Knob Net \$3.00
- CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 102502, Color Mahogany. Cat. No. 27-732 Channel Knob Net \$3.00
- (BB) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 104303, Color Gray. Cat. No. 27-734 Channel Knob Net \$1.35
- (CC) CONTRAST KNOB**—Original Mfg.'s Part No. 104386, Color Maroon. Cat. No. 27-736 Contrast Knob Net \$ .82
- (DD) BRIGHTNESS KNOB**—Original Mfg.'s Part No. 79080, Color Beige. Cat. No. 27-738 Brightness Knob Net \$1.35
- (EE) ON-OFF VOLUME KNOB**—Original Mfg.'s Part No. 77710M, Color Mahogany & Gold. Cat. No. 27-740 On-Off Volume Net \$1.35
- VOLUME KNOB**—Original Mfg.'s Part No. 79445, Color Beige & Gold. Cat. No. 27-742 Volume Knob Net \$1.35
- VOLUME KNOB**—Original Mfg.'s Part No. 79471, Color Mahogany & Gold. Cat. No. 27-744 Volume Knob Net \$1.35
- (FF) FINE TUNING KNOB**—Original Mfg.'s Part No. 79077, Color Beige. Cat. No. 27-746 Fine Tuning Net \$1.35
- (GG) BRIGHTNESS KNOB**—Original Mfg.'s Part No. 77718M, Color Mahogany & Gold. Cat. No. 27-748 Brightness Knob Net \$1.35
- FINE TUNING KNOB**—Original Mfg.'s Part No. 77717M, Color Mahogany & Gold. Cat. No. 27-750 Fine Tuning Net \$1.35
- (HH) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 79222BL, Color Black. Cat. No. 27-752 Channel Knob Net \$1.17
- CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 79222, Color Mahogany. Cat. No. 27-754 Channel Knob Net \$1.17
- (JJ) ON-OFF VOLUME KNOB**—Original Mfg.'s Part No. 77710B, Color Beige & Gold. Cat. No. 27-756 On-Off Volume Net \$1.35
- (KK) CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 77708B, Color Beige & Gold. Cat. No. 27-758 Channel Knob Net \$1.35
- CHANNEL SELECTOR KNOB**—Original Mfg.'s Part No. 77708M, Color Brown & Gold. Cat. No. 27-760 Channel Knob Net \$1.35

**ALSO AVAILABLE**  
Replacement Knobs for  
Admiral  
Crosley  
Emerson  
Hotpoint  
Motorola  
Muntz  
Olympic  
Philco  
Westinghouse  
Zenith

**WRITE FOR LATEST LISTING**



# ELECTRONIC COMPONENTS

## GC TV-RADIO DIAL CABLES

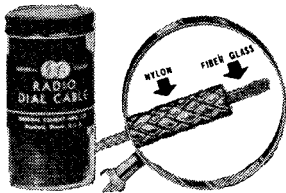
Nylon cord with a fibreglass core. All especially treated to prevent stretching and slipping. G-C Cords No. 75, 75-A and 74 will handle 90% of replacements. 25-Ft., 50-Ft., 100-Ft. Spools are supplied in permanent, clear plastic containers.

**G-C No. 75 STANDARD THIN NYLON CORD .028" Diameter**—Used on 95% of the latest sets manufactured. Made of finest braided Nylon over a Fibreglass Core. It is pre-stretched and chemically treated.

Cat. No. 75-25	25 ft. spool	Net \$ .75
75-50	50 ft. spool	1.43
75-100	100 ft. spool	2.37
75-1000	1000 ft. spool	15.57

**G-C No. 75-A EXTRA THIN NYLON CORD .025" Diameter**—Used on Motorola, RCA, GE, Sentinel, Stromberg Carlson and others. Extra thin, made of finest braided Nylon, chemically treated.

Cat. No. 75A-25	25 ft. spool	Net \$ .75
75A-50	50 ft. spool	1.43



75A-100	100 ft. spool	2.37
75A-1000	100 ft. spool	14.25

**G-C No. 74 MEDIUM NYLON CORD .040" Diameter**—Used on models of RCA, Philco, Majestic, Wells Gardner, etc. Made of finest braided Nylon over a Spun Fibreglass Core.

Cat. No. 74-25	25 ft. spool	Net \$ .75
74-50	50 ft. spool	1.43
74-100	100 ft. spool	2.37

**G-C No. 70 BRAIDED BRONZE CABLE .035" Diameter**—Braided phosphor bronze cable made over a Fibreglass core for greater strength and flexibility. Will not unravel.

Cat. No. 70-25	25 ft. spool	Net \$ .97
70-50	50 ft. spool	1.63
70-100	100 ft. spool	2.70
70-1000	1000 ft. spool	22.20

**G-C No. 71 42-STRAND BRONZE CABLE .040" Diameter**—42-strand twisted phosphor bronze cable used on Majestic, Bosch, Philco, etc. 42 fine strands braided over a cotton core.

Cat. No. 71-25	25 ft. spool	Net \$ 1.23
71-50	50 ft. spool	1.88
71-100	100 ft. spool	3.52
71-1000	1000 ft. spool	25.80

**G-C No. 73 HEAVY NYLON CORD .062" Diameter**—This is a heavier cord such as used on models of Philco, Silver Marshall, Majestic, Brunswick, etc.

Cat. No. 73-25	25 ft. spool	Net \$ 1.02
73-50	50 ft. spool	1.73
73-100	100 ft. spool	2.97
73-1000	1000 ft. spool	24.90

**G-C No. 76 SPECIAL THIN BRONZE CABLE .023" Diameter**—Extra thin braided bronze cable such as is used on GE and RCA sets. Also used for speaker cones, pigtales, etc.

Cat. No. 76-25	25 ft. spool	Net \$ .97
76-50	50 ft. spool	1.43
76-100	100 ft. spool	2.70
76-1000	1000 ft. spool	20.47

## G-C COLOR TV NO-STRETCH DIAL CORD

**EXTRA FINE .025" Diameter**—Supplied on metal spools.

Cat. No. 87-25	25 ft. spool	Net \$ .90
87-100	100 ft. spool	2.70

**STANDARD .028" Diameter**—Supplied on metal spools.

Cat. No. 88-25	25 ft. spool	Net \$ .90
88-100	100 ft. spool	2.70

**MEDIUM .040" Diameter**—Supplied on metal spools.

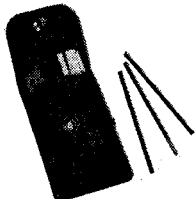
Cat. No. 89-25	25 ft. spool	Net \$ .90
89-100	100 ft. spool	2.70



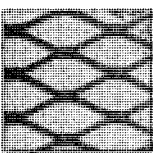
(A) **G-C DIAL CABLE TOOL**—A handy tool to aid in replacing worn out cables or cables slipped off of drums, to replace dial cord springs also.  
Cat. No. 5096 Net \$ .60



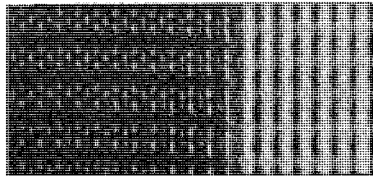
(B) **G-C DIAL CORD NON-SLIP DRESSING STICK**—Simply rub the stick on cord and job is done. Prevents and stops slipping.  
Cat. No. 1212 Net \$ .25



**G-C SWED. STEEL SPEAKER SHIMS**—Four sizes are furnished in a handy gold-lettered partitioned snap case. .004, .006, .008 and .010 in. Instructions included with kit.  
Cat. No. 701 Net \$ .53



**G-C ORNAMENTAL METAL GRILLE SCREEN**—Made of heavy metal, finished in beautiful "Brushed Brass-Rich Gold Color" and lacquered for durability.  
Cat. No. 9252 12"x18" Net \$ 2.10  
9253 18"x24" 3.67  
9254 24"x36" 6.27  
9255 24"x48" 8.67  
9256 36"x48" 11.70



**G-C PLASTIC SARAN WOVEN GRILLE CLOTH**—A beautiful "lumite" plastic woven cloth in attractive patterns. Easily cleaned with a damp cloth. Won't stain, rot or mildew.

Cat. No. 8736	12"x18" Bronze & Gold	Net \$ .98
8739	36"x36" Bronze & Gold	Net \$ 5.55
8737	12"x18" Ecru & Ivory	Net \$ .98
8740	36"x36" Ecru & Ivory	Net \$ 5.55

**G-C GRILLE CLOTH ASSORTMENT**—All patterns are modern and the assortment will provide for nearly all of the smaller and moderate size speaker grille openings.

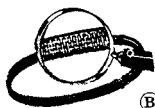
Cat. No. 9114	Net \$ 1.08
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**G-C TV GRILLE CLOTH**—New, modern patterns specially selected to blend in with the best of television cabinets. Gold metallic braid makes this an outstanding TV grille cloth. Colors: Walnut, Mahogany and Blonde. (Specify color when ordering).

Cat. No. 8656-E	Envelope 18"x24"	Net \$ 1.92
8657-E	Envelope 24"x36"	3.50
8658-E	Envelope 36"x36"	5.13
8659	36" Wide, per yard, bulk	4.97

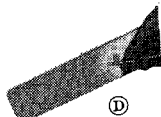
**G-C RADIO CABINET SPEAKER GRILLE CLOTH**—The cloth is supplied in light and dark shades in patterns for both small and large cabinets. It is also available in the light and ivory shades for light wood and plastic cabinets. Colors: Walnut, Mahogany, Ivory, (Specify Color Wanted).

Cat. No. 949-1	1-Yard Packages	Net \$ 3.78
949-1R	40" Wide Cont. Length, Yd.	3.60
949-2R	50" Wide Cont. Length, Yd.	3.90
940	18"x20"	.98
941	9"x18"	.45
942	12"x12"	.65
943	14"x18"	.60
944	24"x13"	.82
945	18"x13"	.53
955	18"x25"	1.73



(B) **G-C RADIO DIAL BELTS**—G-C Belt are approved replacements for all sets. They are made of the very best quality belting material and will not stretch. Especially treated to prevent slipping.  
Cat. No. 101 thru 195 Net \$ .30

**G-C SERVICEMEN'S KIT**—Kits contain more popular belts, belt scale and complete listing of over 1100 models. Cat. No. G-25 Net \$ 8.37



(D) **G-C WIRE MARKERS**—Handy wire markers needed for tracing circuits, marking wires in replacing parts, etc. Nos. 1 to 33—3 full strips included to kit. Cat. No. 9229 Net \$ 1.00

(E) **G-C MOTOROLA TV DIAL BELT**—Replacement belt as used on Motorola TV Tuners. Original replacement part. Cat. No. 196 Net \$ .30



(F) **G-C RCA TUNER BELT**—Belt used on RCA Tuners such as 8T, 8TC, 8TK, 9TC, etc.  
Cat. No. 195 Net \$ .30

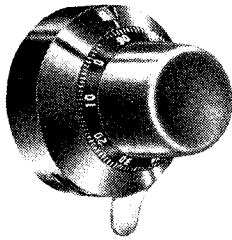


(G) **G-C RCA-TV CHANNEL INDICATOR DRIVE BELT**—Exact replacement for 1956 model RCA TV sets. Cat. No. 197 Net \$ 1.10

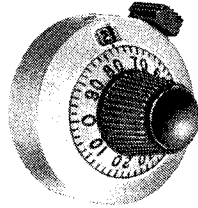


# MULTIDIAL®

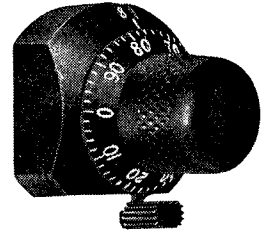
## URNS COUNTING DIALS



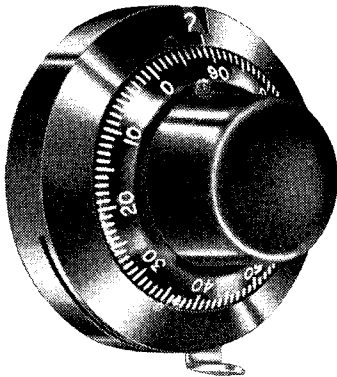
**MODEL 10**  
10-Turn  
1" Diameter



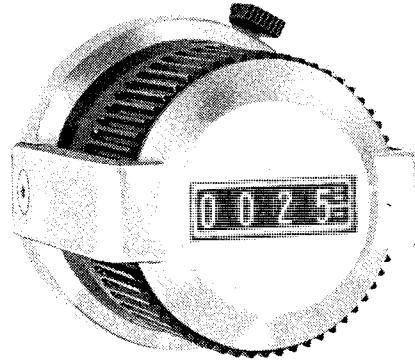
**MODEL 11**  
11-Turn  
1" Diameter



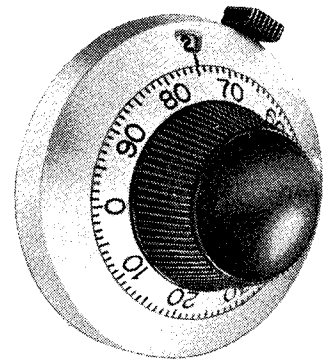
**MODEL 14**  
10-Turn  
1" Diameter



**MODEL 20**  
10-Turn  
1 1/8" Diameter



**MODEL 25#**  
100-Turn  
1 1/8" Diameter  
Digital Dial



**MODEL 30**  
10-Turn  
1 1/8" Diameter

MODEL	10	11	14	20	25 - 3 Wheel	25 - 4 Wheel	30
Number of Turns	10	11	10	10	11	100	10
Minor Scale Division	1/100 turn	1/50 turn	1/50 turn	1/100 turn	1/500 turn	1/500 turn	1/100 turn
Shaft Bore (in.)	1/4*	1/4*	1/4*	1/4*	1/4	1/4	1/4*
Finish	Black Anodized	Satin Chrome	Black Anodized†	Black Anodized	Satin Chrome	Satin Chrome	Satin Chrome
Body Size (in.)	1 diam.	1 diam.	1 3/8 W x 7/8 H	1 1/8 diam.	1 1/8 diam.	1 1/8 diam.	1 1/8 diam.
Depth (in.)	1	7/8	1	1	1 1/8	1 1/8	1
Weight (oz.)	0.7	0.8	0.5	2.0	5.5	5.5	2.2
Price for 1 - 9 Pieces	\$8.75	\$7.75	\$9.75	\$7.50	\$14.25	\$19.75	\$5.75

\* Accommodations for 1/8" and 3/16" diameter shafts available

† Also available in red, blue, gold, green, olive, violet

# 25-3 or -4 available with 2 set screws as std.

# SPECTROL

## SPECTROL ELECTRONICS CORPORATION

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# NEW PACKAGED "99" LINE TEKNI-LABELS

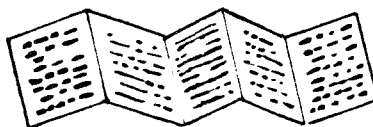
HUNDREDS OF NEEDED TITLES AND DESIGNS FOR  
QUICK, EASY LABELING OF ELECTRONIC EQUIPMENT!



NEW!...Complete sets of needed titles for all engineering and experimental electronic applications. Distinctive labels provide a professional appearance to the finished job. In use by engineers, designers, manufacturers, technicians, hi-fi enthusiasts, amateurs, custom builders and particularly the "do-it-yourself" group.

Part No.	Description	Net	Part No.	Description	Net
<b>AMATEUR RADIO EQUIPMENT</b>					
42-100	White .....	\$ .99	42-122	White .....	\$ .99
42-101	Black .....	\$ .99	42-123	Black .....	\$ .99
<b>CITIZENS BAND RADIO</b>					
42-102	White .....	\$ .99	42-124	White .....	\$ .99
42-103	Black .....	\$ .99	42-125	Black .....	\$ .99
<b>MOBILE RADIO UNITS</b>					
42-104	White .....	\$ .99	42-126	White .....	\$ .99
42-105	Black .....	\$ .99	42-127	Black .....	\$ .99
<b>RADIO TELETYPE</b>					
42-106	White .....	\$ .99	42-128	White .....	\$ .99
42-107	Black .....	\$ .99	42-129	Black .....	\$ .99
<b>AUDIO AND INTERCOM SYSTEMS</b>					
42-108	White .....	\$ .99	42-130	White .....	\$ .99
42-109	Black .....	\$ .99	42-131	Black .....	\$ .99
<b>ELECTRICAL DISTRIBUTION</b>					
42-114	White .....	\$ .99	42-132	White .....	\$ .99
42-115	Black .....	\$ .99	42-133	Black .....	\$ .99
<b>COMPUTER AND DIGITAL</b>					
42-116	White .....	\$ .99	42-134	White .....	\$ .99
42-117	Black .....	\$ .99	42-135	Black .....	\$ .99
<b>TRANSISTOR</b>					
42-118	White .....	\$ .99	42-136	White .....	\$ .99
42-119	Black .....	\$ .99	42-137	Black .....	\$ .99
<b>RADIO CONTROL MODELS</b>					
42-120	White .....	\$ .99	42-138	White .....	\$ .99
42-121	Black .....	\$ .99	42-139	Black .....	\$ .99
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<b>REPAIRMEN'S TITLES</b>					
<b>STEREO AND HI-FI</b>					
<b>DIAL LABELS</b>					
<b>ALPHABET AND NUMERALS, LARGE</b>					
<b>ALPHABET AND NUMERALS, MEDIUM</b>					
<b>ALPHABET AND NUMERALS, SMALL</b>					

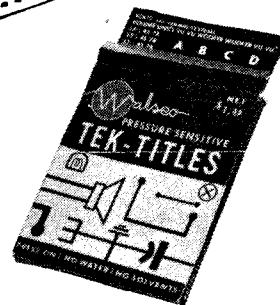
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42-222	Stereo & High Fidelity Systems
42-224	Transistor Titles
42-226	Intercom Systems
42-228	Intercom Systems
42-230	Lubrication Titles
42-232	Maintenance & Calibration
42-234	Repairman's Titles
42-236	Sound Systems
42-238	Amateur Equipment
42-240	Alphabets, Large
42-242	Alphabets, Large
42-244	Alphabets & Numerals, Medium
42-246	Alphabets & Numerals, Medium
42-248	Numerals, Large
42-250	Numerals, Large
42-252	Alphabets & Numerals, Small
42-254	Alphabets & Numerals, Small
42-256	Electrical Distribution
42-258	School Electrical Systems
42-260	U.S. Government Property
42-262	U.S. Army Property
42-264	U.S. Navy Property
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#### Foil Comp.

(Gold on White)  
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(Silver on Black)  
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(Silver on Black)  
(Silver on Black)



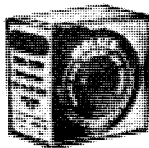
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Diameter .025", Breaking Strength 15 lbs.

Cat. No. 656-02	25 feet	Net \$ .75
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Cat. No. 656-50	500 feet	Net 8.58

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Cat. No. 652-02	25 feet	Net \$ .75
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### PHOSPHOR BRONZE CABLE

42-strand, .032" diameter, 40 lb. breaking strength. Numerous strands give cable extraordinary flexibility.

Cat. No. 662-02	25 feet	Net \$ 1.23
Cat. No. 662-10	100 feet	Net 3.52
Cat. No. 662-50	500 feet	Net 16.20



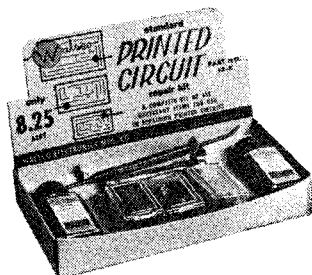
### WALSCO SAFETY GLASS REMOVER

Chrome plated, steel handle is combined with two powerful, long lasting suction cups to insure trouble free removal of safety glass on TV sets.

Cat. No. 2575 Net \$ .90

### PRINTED CIRCUIT ACCESSORIES

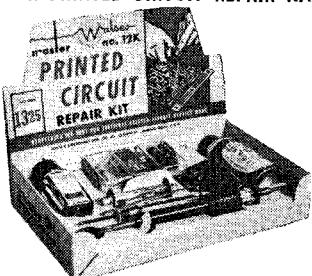
#### STANDARD PRINTED CIRCUIT REPAIR KIT



Contains one box each of foil, solder washers, solder wire, 1 solder-ease tool, fiber glass brush, printed circuit insulating varnish and solvent, tweezers and complete instructions.

Cat. No. 13-K Net \$5.33

#### MASTER PRINTED CIRCUIT REPAIR KIT



Contains all items above plus 1 Ungar soldering iron with 1 special tip and a 6 oz. spray can of printed circuit insulating varnish. Also includes practice wiring board.

Cat. No. 12-K Net \$10.58

### BRAIDED BRONZE CABLE

16-strand, .039" O.D., 50 lb. breaking strength. Good flexibility, excellent abrasion resistance.

Cat. No. 660-02	25 feet	Net \$ .97
Cat. No. 660-50	500 feet	Net 2.70
Cat. No. 654-02	25 feet	Net 12.00

### STANDARD

Diameter .032", Breaking Strength 20 lbs.

Cat. No. 654-02	100 feet	Net \$ .75
Cat. No. 654-10	100 feet	Net 2.37
Cat. No. 654-50	50 feet	Net 8.58

### HEAVY

(Used on many Philco and Majestic sets.) Diameter .060".

Cat. No. 650-02	25 feet	Net \$1.02
Cat. No. 650-10	100 feet	Net 2.97

### THIN BRONZE CABLE

An extra-thin cable with diameter of only .022". Surprisingly strong and flexible. Non-raveling.

Cat. No. 664-02	25 feet	Net \$ .97
Cat. No. 664-10	100 feet	Net 2.70
Cat. No. 664-50	500 feet	Net 12.00

### DIAL CORD CLIPS



This assortment of 24 Walsco Dial Cord Clips contains the proper sizes for all standard thicknesses of cords.

Cat. No. 7745-F Net \$ .36

### FLAT NYLON LACING CORD



The new, waxed and fungus resistant flat cord for tying harnesses, wrapping coils, etc. Will not cut wire insulation. Breaking strength 50 lbs., approx. width, .085", approx. thickness, .0125".

Cat. No. 666-15	150 ft. spool	Net \$2.97
Cat. No. 666-75	750 ft. spool	Net 9.00

### STANDARD LACING CORD

Meets specifications JAN T-713—type N—Class 3. In natural gray color. Approximately .040". Min. tensile strength 32 lbs., low stretch.

Cat. No. 665-10	100 ft. spool	Net \$1.05
Cat. No. 665-45	450 ft. spool	Net 2.00
Cat. No. 665-80	1800 ft. spool	Net 6.60

### PRINTED CIRCUIT ACCESSORIES



(A)



(B)



(C)



(D)



(E)



(F)

(A) **PRINTED CIRCUIT REPAIR SOLDER** — Especially compounded 11" solder wire with flux core to give a perfect solder joint and flow quickly and easily at lower temperatures required for printed circuit work.

Cat. No. 649 Net \$ .52

(B) **PRINTED CIRCUIT REPAIR FOIL** — Copper foil with thermo-plastic backing 24 sq. in. For use in repair of damaged or burned out sections of a printed circuit. Bonds permanently to panel with heat of soldering iron.

Cat. No. 647 Net \$ .48

(C) **PRINTED CIRCUIT SOLDER WASHERS** — Supplies the exact amount solder and flux when replacing components on printed circuit board. Center hole permits passage of most standard wire leads. Box of 60 washers.

Cat. No. 648 Net \$ .60

(D) **PRINTED CIRCUIT INSULATING VARNISH** — A special formula insulating varnish designed for the protection of printed circuits after they have been worked upon in repair or replacement of parts.

Cat. No. 120-02W 2 oz. bottle with brush

Net \$1.30

Cat. No. 120-06 6 oz. spray can

\$2.42 each

**INSULATING VARNISH SOLVENT** — Excellent for dissolving and removing insulating varnish from printed circuits, etc. Also thinner for the Walsco Printed Circuit Insulating Varnish.

Cat. No. 205-02 2 oz. Net \$ .37 each

(E) **WALSCO SILVER AND COPPER PRINT** — "No more wires" when you use Silver or Copper Print. The same "Pure Silver" or Copper compound as used in Printed Circuit design.

Cat. No. 36 1/2 Troy oz. Silver Print Net \$3.30

Cat. No. 36-1 1 Troy oz. Silver Print Net \$5.75

Cat. No. 37-02 2 oz. bottle Copper Print

Net \$2.17

(F) **PRINTED CIRCUIT SOLDER-AID TOOL** — Has probe on one end for tightening contacts, etc., and a fork on opposite end for handling wires or wire leads while soldering and unsoldering. 8" long plastic handle.

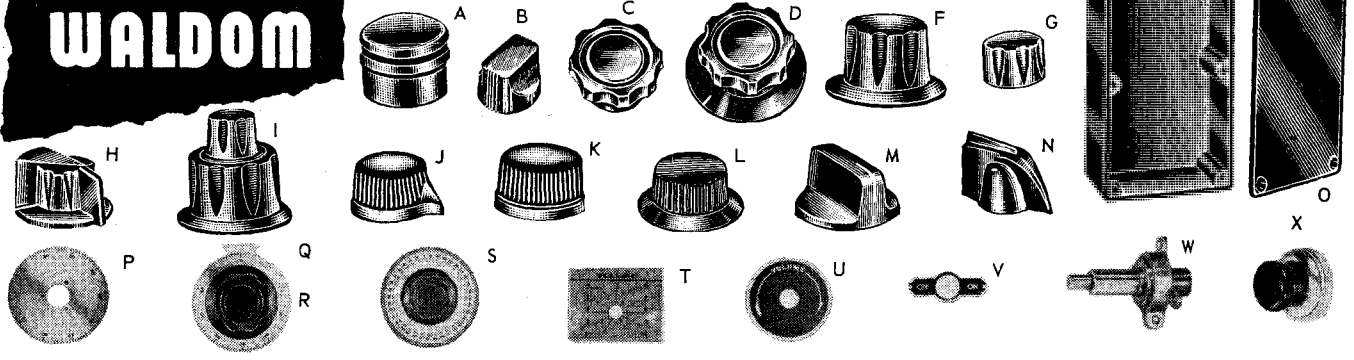
Cat. No. 2530 Net \$1.00

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# INSTRUMENT KNOBS AND DIALS



MODERN KNOBS Styrene 1/4" brass insert, slotted set screw					POINTER AND LEVER CONTROL KNOBS—FIG. N Black bakelite, white filled pointer For 1/4" shaft, set screw					ALUMINUM DIAL PLATES — FIG. T 2-3/16" H. x 2-5/8W.					
Part No.	Diameter	Height	1-99 Ea.	100-Up	Part No.	Diameter	Height	1-99 Ea.	100-Up	Part No.	Description	Calibration	1-49 Ea.	50-99 Ea.	100-Up
6126	5/8"	7/16"	.25	.207	WA-2300	1-1/4"	5/8"	.13	.1008	410	Title	0-10	.52	.44	.313
WA-4101	5/8"	7/16"	.29	.238	WA-2300A*	1-1/4"	5/8"	.20	.1573	415	Microphone	0-10	.52	.44	.313
6129	5/8"	19/32"	.40	.32	WA-2350	2"	5/8"	.26	.2037	423	Increase	Arrow	.52	.44	.313
<b>BAR KNOB — FIG. B</b>					<b>STANDARD KNOBS — FIG. J</b> Small Pointer knobs - 11/16" dia., 13/32" high					<b>ROUND ALUMINUM CONTROL PLATES — FIG. U</b> 1-3/4" Diameter					
BK-1B	11/16"	1/2"	.31	.28	WA-1400	1/4"	molded hole	.11	.09	25	Volume		.28	.24	.168
<b>FULL FLUTED KNOBS — FIG. C</b> Black bakelite, 1/4" brass insert, slotted set screw					<b>SKIRTED KNOBS — FIG. L</b> 1-1/2" O.D. x 3/4" high					<b>HORIZONTAL SWITCH PLATE — FIG. V</b> "Off-On" Switch Plate. Etched aluminum with black background and polished aluminum letters and border. 11/16" x 1-11/16".					
WA-4100	1-1/8"	5/8"	.35	.28	WA-1470	1/4"	molded hole	.22	.1694	26	Off-Tone Control		.28	.24	.168
WA-4101	1-3/8"	11/16"	.36	.2905	WA-1470C	1/4"	brass insert	.30	.2284	569	0-100 thru 180°		.28	.24	.168
WA-4102	1-5/8"	3/4"	.41	.3248	<b>SMALL ROUND KNOB — FIG. K</b> 11/16" diameter, 13/32" high					<b>AUXILIARY PLANETARY DRIVES — FIG. W</b> Fits 1/4" shafts; Operates at 5:1 ratio. Maximum smoothness with adequate torque. 2 Speed Drive. Slow speed 5:1, High Speed 1:1					
WA-4103	2-3/8"	7/8"	.59	.4748	WA-1450	1/4"	molded hole	.11	.09	905	0-100 thru 270°		.28	.24	.168
<b>W/Skirt — FIG. D</b>					<b>PAIR OF KNOBS — FIG. X</b>					<b>INSTRUMENT CASES — PANELS — COVERS — FIG. O</b> Wall thickness 1/8" w/highly polished finish. Will withstand rugged usage.					
WA-4104	1-1/2"	51/64"	.56	.4718	WA-1450W	1/4"	brass insert	.28	.2130	Part No.		1-9 Ea.	10-24 Ea.	25-99 Ea.	100-Over-Ea.
WA-4107	1-3/4"	55/64"	.63	.5168	WA-1450G	1/4"	molded hole	.17	.1228	599	7.25	7.00	6.81	5.54	
WA-4108	2-1/16"	7/8"	.73	.6105	<b>MATCHING BAR AND POINTER KNOBS</b> Black bakelite, set screw, white indicator line. For 1/4" shaft, 1-1/8" diameter, 9/16" high.					Single speed. Threaded sleeve w/shoulder for mounting dial or pointer					
WA-4109	3"	1"	.95	.7875	WA-1500	Bar knob - Fig. M	.19	.14		27067	7.40	7.15	6.96	5.69	
<b>W/Pointer (plastecel)</b>					<b>DUO CONCENTRIC KNOB</b> Small knob WA-101C - large knob for 1/4" shaft					<b>PAIR OF KNOBS — FIG. X</b>					
6566-P	1-1/8"	5/8"	.63	.5250	WA-107	1-1/4"	1-3/16"	.49	.3967	Duo-Concentric knobs for 599		1-99 Ea.	100-Over		
6571-P	1-3/8"	11/16"	.68	.5004	<b>LATEST SERIES INSTRUMENT KNOBS</b> Black bakelite, slotted set screw, white marker line on skirt					<b>INDICATORS — FIG. Q</b> Dials below 2-3/4" D take SL-1, 2-3/4 & 4" Dials take calibrated indicator matched w/its number					
6570-P	1-5/8"	3/4"	.73	.6044	WA-101	3/4"	1/2"	.22	.1738	SL-1	Single line indicator	.10	.09	.06	
6559-P	2-3/8"	7/8"	.98	.8040	WA-101B*	3/4"	1/2"	F .29	.2379	VI-3	For DO-3	.30	.26	.18	
<b>BAR KNOB — FIG. B</b>					WA-101C†	3/4"	1/2"	F .23	.1868	VI-4	For DO-4	.30	.26	.18	
<b>FULL FLUTED KNOBS — FIG. C</b>					WA-102	1-1/8"	5/8"	F .23	.188	VI-21	For DO-21	.30	.26	.18	
<b>W/Skirt — FIG. D</b>					WA-102B*	1-1/8"	5/8"	F .32	.2499	VI-5	For DO-5	.30	.26	.18	
<b>W/Pointer (plastecel)</b>					WA-103	1-1/4"	3/4"	F .25	.2003	VI-6	For DO-6	.30	.26	.18	
<b>LATEST SERIES INSTRUMENT KNOBS</b>					WA-103B*	1-1/4"	3/4"	F .33	.2621	VI-7	For DO-7	.30	.26	.18	
<b>DUO CONCENTRIC KNOB</b>					WA-104	1-1/2"	7/8"	F .27	.2141	VI-22	For DO-22	.30	.26	.18	
<b>SMALL ROUND KNOB — FIG. K</b>					WA-104B*	1-1/2"	7/8"	F .36	.2866	VI-8	For DO-8	.30	.26	.18	
<b>SKIRTED KNOBS — FIG. L</b>					WA-105	2"	15/16"	F .47	.3822	VI-8A	For DO-8A	.30	.26	.18	
<b>SMALL ROUND KNOB — FIG. K</b>					WA-105B*	2"	15/16"	F .58	.4627						
<b>SMALL ROUND KNOB — FIG. K</b>					WA-108	3/4"	1/2"	G .36	.2879						
<b>SMALL ROUND KNOB — FIG. K</b>					WA-108B*	3/4"	1/2"	G .45	.3549						
<b>SMALL ROUND KNOB — FIG. K</b>					WA-109	1-1/4"	5/8"	H .31	.2499						
<b>SMALL ROUND KNOB — FIG. K</b>					WA-109B*	1-1/4"	5/8"	H .39	.3099						
<b>SMALL ROUND KNOB — FIG. K</b>					<b>INSTRUMENT CASES — PANELS — COVERS — FIG. O</b>					<b>INDICATORS — FIG. Q</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BAR KNOB — FIG. M</b>					<b>DIALS — FIG. P</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>POINTER KNOB — FIG. N</b>					<b>ALUMINUM W/HAND SPUN FINISH. BLACK NUMERALS.</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>ABOVE W/BRASS INSERT</b>					<b>TYPE</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>DESCRIPTION</b>					<b>1-49 Ea.</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>1-49 Ea.</b>					<b>50-99 Ea.</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>100-Up</b>					<b>100-Up</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BC-138</b>					<b>DO-15</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BC-138B1</b>					<b>DO-16</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BP-137</b>					<b>DO-17</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BP-137A</b>					<b>DO-18</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BC-140</b>					<b>DO-19</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BC-140B1</b>					<b>DO-20</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BP-138</b>					<b>DO-3</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>BP-139A</b>					<b>DO-4</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>2"H x 3-3/4"W x 6-1/4"L</b>					<b>DO-21</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>W/BRASS INSERTS IN 4 CORNERS</b>					<b>DO-5</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>Molded cover for above</b>					<b>DO-6</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>2-15/16"H x 5-9/32"W x 6-13/16"L</b>					<b>DO-7</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>W/BRASS INSERTS IN 4 CORNERS</b>					<b>DO-8</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>Flat panel for above</b>					<b>DO-8A</b>					
<b>SMALL ROUND KNOB — FIG. K</b>					<b>Molded Cover for above</b>										

HIGH QUALITY DIALS — FIG. P						DIRECT DRIVE DIAL ASSEMBLIES — FIG. R					
Aluminum w/hand spun finish. Black numerals.						Above dials with knob attached and supplied complete w/indicator. Dials under 2-3/4" supplied with knob only, others w/knob and skirt.					
Type	Calibration	Diameter	1-49 Ea.	50-99 Ea.	100-Up	Part No.	Calibration	Diameter	1-49 Ea.	50-99 Ea.	100-Up
DO-15	0-100/180°	1-1/8	.45	.38	.27	27084	0-100/180°	1-1/8	1.07	.91	.642
DO-16	0-100/270°	1-1/8	.45	.38	.27	27085	0-100/270°	1-1/8	1.07	.91	.642
DO-17	0-100/325°	1-1/8	.45	.38	.27	27086	0-100/325°	1-1/8	1.07	.91	.642
DO-18	0-100/360°	1-1/8	.45	.38	.27	27087	0-100/360°	1-1/8	1.07	.91	.642
DO-19	0-100/180°	1-3/4	.60	.51	.36	27088	0-100/180°	1-3/4	1.40	1.19	.84
DO-20	0-100/270°	1-3/4	.60	.51	.36	27069	0-100/270°	1-3/4	1.40	1.19	.84
DO-19	0-100/325°	1-3/4	.60	.51	.36	27080	0-100/325°	1-3/4	1.40	1.19	.84
DO-20	0-100/360°	1-3/4	.60	.51	.36	27081	0-100/360°	1-3/4	1.40	1.19	.84
DO-3	0-100/180°	2-3/4	.75	.64	.45	294	0-100/180°	2-3/4	1.84	1.56	1.104
DO-4	0-100/270°	2-3/4	.75	.64	.45	295	0-100/270°	2-3/4	1.84	1.56	1.104
DO-21	0-100/325°	2-3/4	.75	.64	.45	27082	0-100/325°	2-3/4	1.84	1.56	1.104
DO-5	0-100/360°	2-3/4	.75	.64	.45	303	0-100/360°	2-3/4	1.84	1.56	1.104
DO-6	0-100/180°	4	1.20	1.02	.72	292	0-100/180°	4	2.54	2.16	1.524
DO-7	0-100/270°	4	1.20	1.02	.72	293	0-100/270°	4	2.54	2.16	1.524
DO-22	0-100/325°	4	1.20	1.02	.72	27083	0-100/325°	4	2.54	2.16	1.524
DO-8	0-100/360°	4	1.20	1.02	.72	302	0-100/360°	4	2.54	2.16	1.524
DO-8A	0-360/360°	4	1.20	1.02	.72	302A	0-360/360°	4	2.54	2.16	1.524

# PAMOTOR

## Miniature Axial Fans for High-Reliability Applications

Pamotor axial fans offer features that surpass all similar devices in construction, performance, and reliability. These miniature cooling devices have a multitude of applications in electronic gear and equipment such as computers, instrumentation equipment, industrial and military communications apparatus, military ground support systems, mobile radio gear, test and maintenance equipment, power supplies, data processing equipment, video tape recorders, entertainment electronic equipment, etc. Pamotor fans are equally-suited for use in X-ray and other heat-generating equipment which require ultra-reliable cooling. Every Pamotor fan incorporates the following construction features (most of which cannot be found in conventional fans), assuring maximum dependability at reasonable cost.

**MOTOR:** Inside-outside rotating motor design yields higher torque capabilities. Flywheel effect produces constant, quiet fan speed. Exceptionally close tolerances maintained for air gap result in maximum efficiency. Available in both induction and shaded-pole types.

**BEARING SYSTEM:** New bearing system designed for permanent lubrication uses large surface sinter-metal sleeve-bearings individually hand-fitted for radial load, plus thrust ball bearing with felt oil reservoirs for long life lubrication.

**MOUNTING:** Can be mounted and operated in any position without sacrifice in performance.

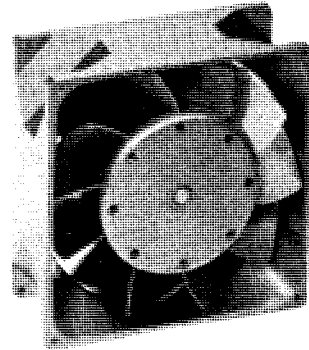
**BALANCE:** Rotor is accurately, dynamically balanced. Stator windings for induction type motor are uniform, allowing for minimum magnetic field density within the air gap.

**HOUSING:** Precision die cast housings insure accurate overall dimensions plus uniformity of quality. Rugged metal construction withstands physical damage in handling and installation. Warp-free materials are corrosion resistant and will not expand or contract in extreme temperature variations.

**PERFORMANCE:** Designed and precision manufactured for extra-long life with minimum of maintenance.

**SPECIFICATIONS:** All electrical materials are Class E, allowing extra margin of safety for operating in the higher ambient temperature range. Qualified environmentally to Specification MIL-T-5422E.

**WARRANTY:** Motor guaranteed against defects in workmanship and material for period of one year.



### SERIES 1000

Characteristic	MODEL 1000A	MODEL 1000B	MODEL 1100	MODEL 1200	MODEL 1300A	MODEL 1300B
Voltage	115 volts	115 volts	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	400 cycle	60 cycle	60 cycle	50 cycle
Air Flow	125 cfm	100 cfm	100 cfm	60 cfm	125 cfm	110 cfm
Speed	3300 rpm	2850 rpm	2950 rpm	1800 rpm	3300 rpm	2850 rpm
Input Power	23 watts	26 watts	38 watts	20 watts	23 watts	33 watts
Capacitor	Cat. No. 1004 6 mf	Cat. No. 1003 7 mf	Cat. No. 1008 .75 mf	Cat. No. 1005 4 mf	Cat. No. 1007 1.25 mf	Cat. No. 1006 2 mf
Weight	1 lb. 10 oz.	1 lb. 10 oz.	1 lb. 10 oz.	1 lb. 10 oz.	1 lb. 10 oz.	1 lb. 10 oz.

### SERIES 2000

Characteristic	MODEL 2000A	MODEL 2000B	MODEL 2000C	MODEL 2000D
Voltage	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	50 cycle	60 cycle
Air Flow	134 cfm	116 cfm	116 cfm	134 cfm
Speed	3300 rpm	2850 rpm	2850 rpm	3300 rpm
Input Power	23 watts	26 watts	33 watts	23 watts
Capacitor	Cat. No. 1005 4 mf	Cat. No. 1005 4 mf	Cat. No. 1006 2 mf	Cat. No. 1005 4 mf
Weight	1 lb. 6 oz.	1 lb. 6 oz.	1 lb. 6 oz.	1 lb. 6 oz.

### SERIES 2500

(SHADED-POLE TYPES)

Characteristic	MODEL 2500A	MODEL 2500B	MODEL 2500C	MODEL 2500D
Voltage	115 volts	220 volts	220 volts	115 volts
Frequency	60 cycle	60 cycle	50 cycle	50 cycle
Air Flow	100 cfm	100 cfm	80 cfm	80 cfm
Speed	3200 rpm	3200 rpm	2580 rpm	2580 rpm
Input Power	23 watts	27 watts	25 watts	23 watts
Weight	1 lb. 10 oz.	1 lb. 10 oz.	1 lb. 10 oz.	1 lb. 10 oz.

### SERIES 3000

Characteristic	MODEL 3000A	MODEL 3000B	MODEL 3000C	MODEL 3000D
Voltage	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	50 cycle	60 cycle
Air Flow	60 cfm	54 cfm	54 cfm	60 cfm
Speed	3200 rpm	2850 rpm	2850 rpm	3200 rpm
Input Power	16 watts	19 watts	21 watts	16 watts
Capacitor	Cat. No. 1005 4 mf	Cat. No. 1005 4 mf	Cat. No. 1006 2 mf	Cat. No. 1006 2 mf
Weight	1 lb. 2 oz.	1 lb. 2 oz.	1 lb. 2 oz.	1 lb. 2 oz.

### SERIES 5000

Characteristic	MODEL 5000A	MODEL 5000B
Voltage	115 volts	220 volts
Frequency	60 cycle	50 cycle
Air Flow	115 cfm	100 cfm
Speed	2550 rpm	2250 rpm
Input Power	10 watts	12 watts
Capacitor	Cat. No. 1005 4 mf	Cat. No. 1007 1.25 mf
Weight	1 lb. 6 oz.	1 lb. 6 oz.

PAMOTOR FANS ARE STOCKED FOR IMMEDIATE DELIVERY FROM LEADING ELECTRONICS DISTRIBUTORS THROUGHOUT THE UNITED STATES AND CANADA. CONTACT YOUR LOCAL DISTRIBUTOR OR PAMOTOR FOR COMPLETE ENGINEERING DATA AND PRICES.

# PAMOTOR INC. SAN FRANCISCO, CALIF.



Superior ...  
RIPLEY COMPANY, INC.

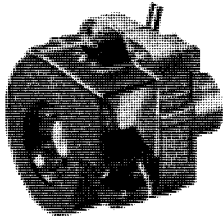


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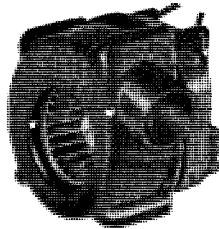
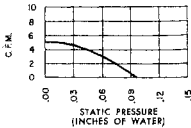
# SPACE-SAVING Precision Bearing MOTOR-BLOWERS

A new line of compact Motor-Blowers are now available with air deliveries ranging from 5 to 19 cfm free air output. Designed to fill the requirement where space is a problem and a minimum of 5-year maintenance-free performance is imperative. The precision bearing "power-pac" motor with permanent sealed-in lubrication requires no oiling and operates at

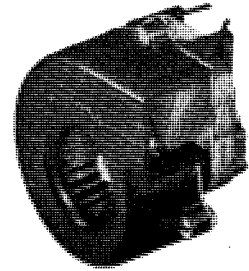
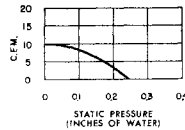
an extremely low noise level. The unit can be mounted in any position. The low input wattage required is a cost saving factor of particular advantage in multiple installations. The metal wheels are carefully balanced and individually matched to assure maximum efficiency and quietness of operation. Blower housings are high-impact phenolic.



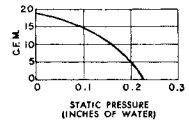
No. 1 1/2



No. 2

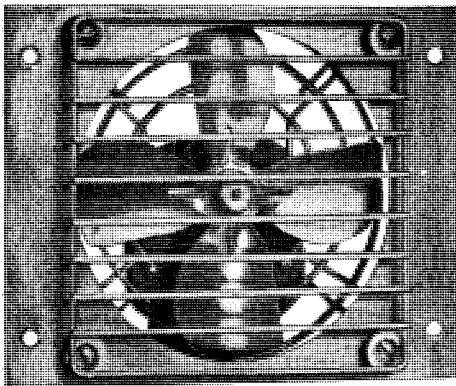


No. 2 1/2



MODEL NUMBER	TYPE	INPUT VOLTAGE	WATTS	DUTY CYCLE	RPM	OUTPUT FREE AIR CFM	DIMENSIONS			LIST PRICE
							H	X	D	
UK-1500	1 1/2	115 V. AC-60 Cycle	7.5	Continuous	3400	5	2 15/16"	x 3 5/8"	x 3 1/16"	\$9.69
UK-2000	2	115 V. AC-60 Cycle	7.5	Continuous	3300	10	3 3/4"	x 3 1/2"	x 3 1/4"	\$9.78
UK-2500	2 1/2	115 V. AC-60 Cycle	8	Continuous	3250	19	4 3/8"	x 3 7/8"	x 3 1/4"	\$9.90

For applications demanding maintenance-free reliability in excess of 5-years!

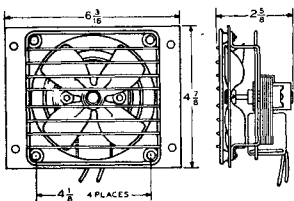


## AXIAL FAN MODEL 4.25

THE BIG VALUE IN RUGGEDNESS, COMPACTNESS & HIGH EFFICIENCY

Specifically designed for electronic and instrumentation cooling with tight space requirements — this quiet, dependable 100 CFM "Power-Pac" Axial Fan is recommended for applications where compactness, high-level performance, mounting flexibility and economical price are imperative. "Power-Pack" motor with sealed-in lubrication requires no oiling or maintenance.

Typical applications include: Computers, Electronic Transmitters, Receivers, Radar, TV Cameras, Hi-Fi Equipment, Tape Recorders, Light Projectors, Amplifiers, Test Equipment, Telephone Booths.

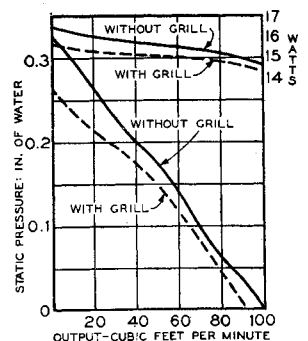


SPACE SAVING DESIGN

Overall mounting plate size is 4 7/8" x 6 3/16" and depth is 2 5/8". Total weight of complete assembly is 1 1/2 pounds. All metal fire-proof construction.

### 100 CFM CAPACITY

High output of 100 CFM free air delivery. For larger air volumes, two or more units may be mounted in parallel. Note chart for high performance over wide range of static pressures. Unit designed for operation on 50/60 cycles.

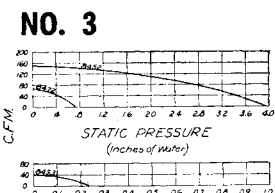
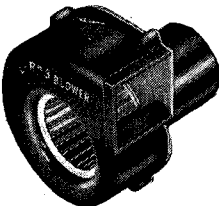
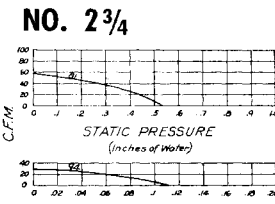
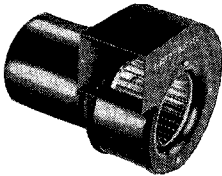
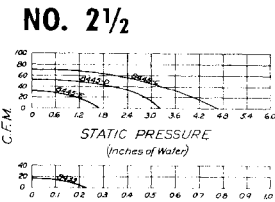
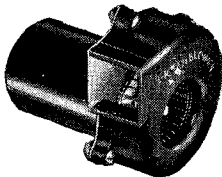
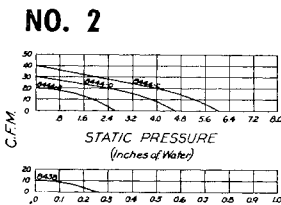
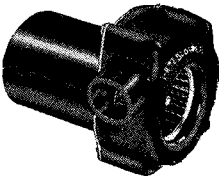
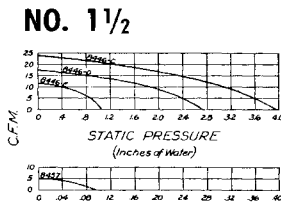
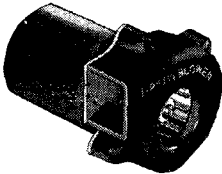
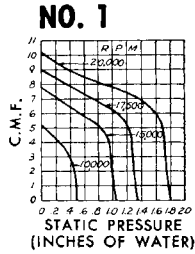
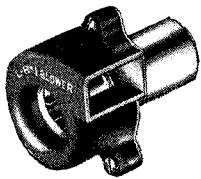


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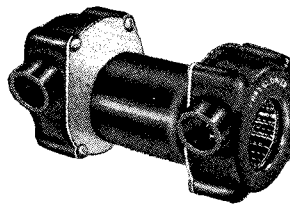
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## L-R MOTOR & BLOWER ASSEMBLIES

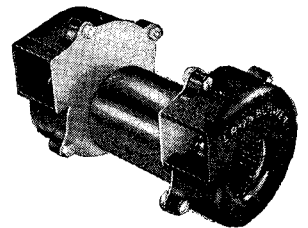
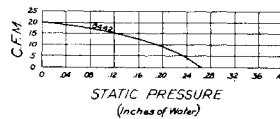


Model No.	Type	Input Voltage	Watts	Duty Cycle	R.P.M.	Output Free		Motor Dia.	List Price
						Air C.F.M.	Length O.A.		
8474	1	27.5V. DC	8	Continuous	18,000	9	2 1/8	7/8	\$49.00
8437	1 1/2	115V. AC-60 Cycle	15	Continuous	3,150	4	4 1/8	2 1/4	13.29
8446-E	1 1/2	115V. AC/DC	25	Intermittent	8,000	12	4 1/2	2 1/2	17.96
8446-D	1 1/2	115V. AC/DC	45	Intermittent	11,000	17	4 1/2	2 1/2	17.96
8446-C	1 1/2	115V. AC/DC	70	Intermittent	15,000	23	4 1/2	2 1/2	17.96
8438	2	115V. AC-60 Cycle	16	Continuous	3,100	10	4 1/2	2 1/4	13.48
8444-E	2	115V. AC/DC	27	Intermittent	6,500	20	4 1/8	2 1/2	18.14
8444-D	2	115V. AC/DC	53	Intermittent	10,000	30	4 1/8	2 1/2	18.14
8444-C	2	115V. AC/DC	90	Intermittent	13,000	40	4 1/8	2 1/2	18.14
8433	2 1/2	115V. AC-60 Cycle	17	Continuous	2,800	17	4 1/2	2 1/4	13.60
8445-E	2 1/2	115V. AC/DC	30	Intermittent	6,000	35	4 7/8	2 1/2	18.26
8445-O	2 1/2	115V. AC/DC	55	Intermittent	9,000	53	4 7/8	2 1/2	18.26
8445-C	2 1/2	115V. AC/DC	105	Intermittent	12,000	70	4 7/8	2 1/2	18.26
94	2 3/4	115V. AC-60 Cycle	26	Continuous	1,600	28	5 1/8	3 1/4	16.50
81	2 3/4	115V. AC-60 Cycle	40	Continuous	3,100	58	5 3/8	2 3/8	16.50
8453	3	115V. AC-60 Cycle	35	Continuous	1,600	40	5 1/2	3 1/4	16.95
8472	3	115V. AC-60 Cycle	40	Continuous	3,100	77	6 3/4	2 3/8	16.05
8452	3	115V. AC/DC	120	Intermittent	6,000	150	6 3/4	2 3/4	22.40

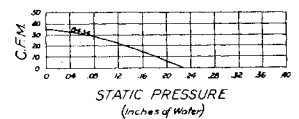
### L-R BLOWERS DUAL ASSEMBLY



**NO. 2 Dual**



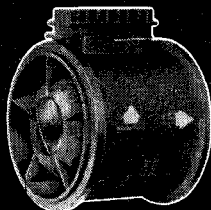
**NO. 2 1/2 Dual**



Model No.	Type	Input Voltage	Watts	Duty Cycle	R.P.M.	Output Free		Motor Dia.	List Price
						Air C.F.M.	Length O.A.		
8442	2 Dual	115V. AC-60 Cycle	18	Continuous	3,000	10-10	5 1/8	2 1/4	\$19
8434	2 1/2 Dual	115V. AC-60 Cycle	20	Continuous	2,800	17-17	5 1/8	2 1/4	20

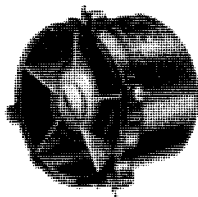
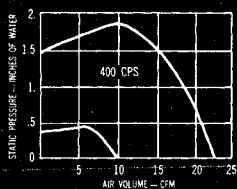


# fans and blowers for cooling



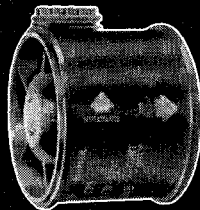
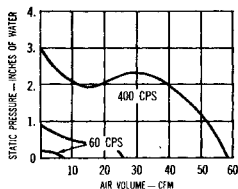
## AXIMAX® 1

Ideal for small, tightly packed airborne equipments. Delivers 23 CFM free delivery. Diameter 1.5" by 1.4" length. Weight 4 ounces. Choose from constant or varying speed designs. Airflow instantly reversible. Servo rim mounting, electrical connections to compact terminal block. Operates on 115 or 200 VAC, 400 CPS, 1 or 3 phase. Meets applicable military specifications. 60 CPS version available.



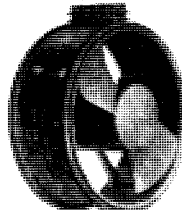
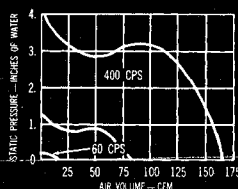
## AXIMAX® 2

Air delivery of 60 CFM free delivery from fan 2" diameter by 1.5" axial length. Weighs 4½ ounces. Designed for maximum cooling against high static pressures with minimum space and weight loss. Available in choice of constant speed or variable speed Altivar® motor designs. Power requirements 115 or 200 VAC, 400 CPS, 1 or 3 phase. Meets applicable military specifications. 60 CPS version available.



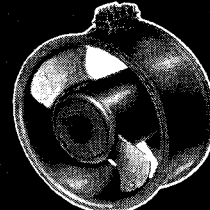
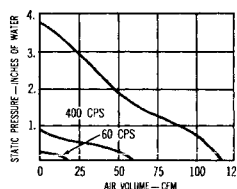
## AXIMAX® 3

Air delivery of 165 CFM free delivery. Fan only 3" in diameter by 2.3" in length. Weighs only 14 ounces. Selection from constant or varying speed motors. Reversible airflow. Servo rim mounting. Meets applicable military specifications. Power requirements 115 or 200 VAC, 400 CPS, 1 or 3 phase. Rapid electrical connections to compact terminal block. 60 CPS version available.



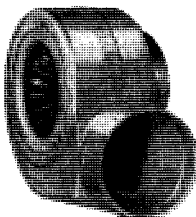
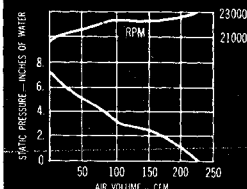
## PROPIMAX® 2

Air delivery of 120 CFM from fan only 3" in diameter by 1.5" axial length. Fan weighs only 6½ ounces. Selection from constant or varying speed motors. Ideal for missile and airborne applications. Reversible airflow. Servo rims at either end for quick mounting. Power requirements 115 or 200 VAC, 400 CPS, 1 or 3 phase. Meets applicable military specifications. Electrical connections made to terminal block. 60 CPS version available.



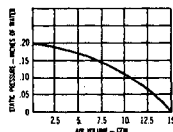
## PROPIMAX® 3

For ground or airborne military applications where line frequencies are high; size, weight and reliability critical; and where high heat loads must be dissipated. Delivers 220 CFM at 22,000 RPM. Size 3¾" in diameter by 2" in depth. Airflow reversible. Servo rim mounting. High altitude designs available. 115 or 200 VAC, 400 CPS, 1 or 3 phase. Available as Propimax 3B for 200 CFM at 11,000 RPM, 400 CPS and also 60 CFM at 3,300 RPM, 60 CPS operation.



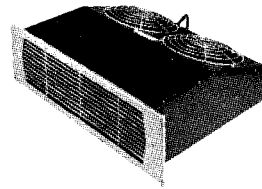
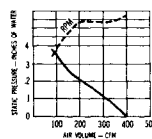
## nugget blower™

For spot cooling requirements in commercial electronic equipment. Features 15 CFM at free delivery. Lightweight — only .6 lbs. Compact design — 3½" x 4½" x 2¼". 115 VAC, 60 CPS, 1 phase, 3200 RPM. Draws only 7



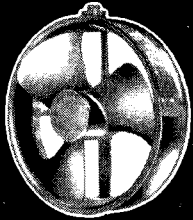
watts. Extremely quiet operation. Low cost. "Centraxial" wheel for greater volume-to-pressure characteristics. Air impeller and blower housing molded of high impact strength polycarbonate plastic. Unit can be mounted from inlet side, from motor side, or from a flange (optional) located on outlet side.

## TWINPAX-2™



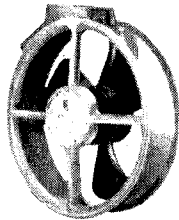
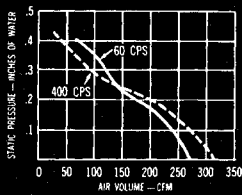
Efficient cabinet cooling at noise level of only 55 db. Delivers up to 400 CFM of clean, filtered air from twin "Feather Fans." Mounts easily to any standard 19" relay rack and requires only 5¼" of panel height. Directs air to minimize dead-spots or eddying. Long-life motors complete with capacitors. Pre-lubricated bearings for maintenance-free operation. Twinpax 1 available for 60 and 400 CPS military requirements.

# electronic equipment by



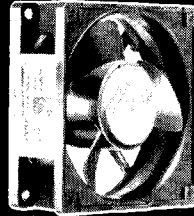
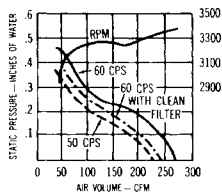
## SAUCER® FAN

Perfect for flushing tightly packed electronic cabinets requiring filtered cooling air. Delivers up to 280 CFM. Driving motor entirely contained in propeller hub. Measures 7" in diameter by 1.7" in axial depth. Weighs 1 lb. 9 ounces. Airflow reversible. Servo rims for easy mounting. Electrical connections to compact terminal block. 115 VAC, 50-60 CPS, 1 phase. 400 CPS version available. Meets applicable military specifications.



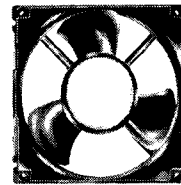
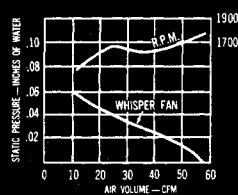
## FEATHER FAN

Delivers 270 CFM of air at free delivery. 7" in diameter by 2 1/8" in axial depth. Weighs only 1.5 pounds. Rated for continuous duty from -55°C to +65°C. Draws only 22 watts. 3380 RPM, 115 VAC, 50-60 CPS, single phase. High quality commercial unit with military type performance. Made from high strength polycarbonate plastic. Filter assembly available. Ideal for cooling computer consoles, relay racks, power supplies and semiconductor packages.



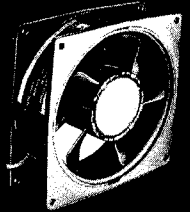
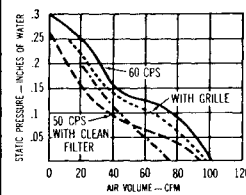
## Whisper Fan

Specifically designed to deliver a substantial quantity of cooling with maximum reliability and minimum acoustical disturbance. Delivers 60 CFM. Size 4 1/8" square by only 1 1/2" deep. Lightweight — only 1.2 pounds. Long life, advanced bearing system. 1800 RPM, 115 VAC, 60 CPS, 1 phase. Dimensionally interchangeable with "Sentinel" Fan. Maintenance-free design. Installs in seconds. Airflow instantly reversible. Available with washable dust filter.



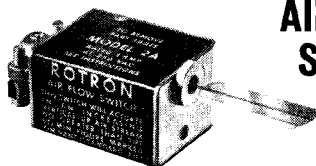
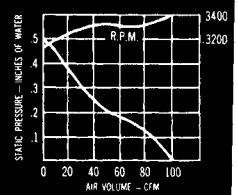
## Sentinel™ FAN

Trouble-free cooling in a compact package. Measures 4 1/8" square by only 1 1/2" in depth. Rugged and reliable. Features stainless-steel ball-bearings. Lubricated for long life. Suitable for 160°F applications. 115 VAC, 50-60 CPS, 1 phase. Weighs just 1 pound. Venturi and spider molded of high impact strength phenolic. Propeller molded of polyolifin. Grill molded of polycarbonate. Quiet operation. Available in "Skeleton," "Venturi," "Grille" and "Filter" versions.



## SPARTAN™ FAN

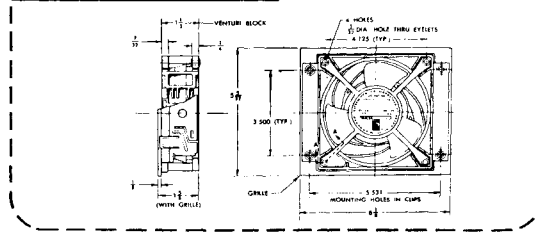
Power packed performer for military applications. Delivers 100 CFM at free delivery. Available with square flanges to mount to 4 holes spaced 4 1/8" apart, interchangeable with "Sentinel" Fan mounting dimensions. Only 1 1/2" axial depth. Clamping rings available for mounting with standard motor clamps. 115 VAC, 50-60 CPS, 1 phase. Airflow reversible. Stainless-steel ball-bearings. Built to military specifications (MIL-E-5272C).



## AIRFLOW SWITCH

Interlocks equipment operation with cooling airflow. Actuates on velocity change. Detects air stoppages up and down. Eight air velocity ratings — mil-

ions of operations life expectancy. Determinator Kit available consisting of airflow switch and 8 actuating vanes for selecting correct vane size.



**ROTRON** mfg. co., inc  
 WOODSTOCK, NEW YORK  
 West Coast: Rotron/Pacific, Glendale, Calif.  
 Canada: The Hoover Co., Ltd., Hamilton, Ont

# Birnbach

## WIRE MEASURING MACHINE, BINDING POSTS, PHONO JACKS - HANDLES



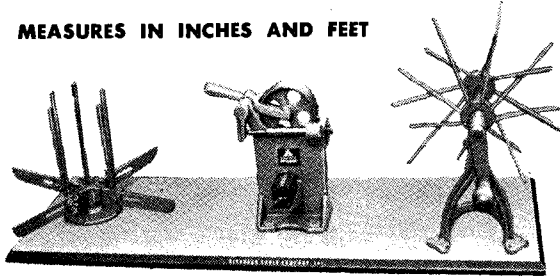
### "NEW" COMPLETE WIRE MEASURING OUTFIT

ACCURATE • COMPACT • NOISELESS

CERTIFICATE OF APPROVAL  
 NO. 498-61  
 DEPARTMENT OF STATE OF  
 AGRICULTURE CALIFORNIA  
 PRICES

**MEASURING MACHINE**  
 Sturdy and compact construction. Has a precision quality built counter with large numbers for easy reading and will register wire up to .9,999 feet for direct accurate reading. Can be easily reset to zero position. Wire passes through two rollers, the upper roller being self-adjusting and the tension of the upper roller can be set by a thumb screw to provide the proper grip for very fine as well as for heavy wire. Two hardened lead bushings with an opening of  $\frac{3}{8}$ " diameter will guide the wire properly through the rollers. Bushings are removable to allow cables up to 1" dia. to pass through. Will measure accurately all electric wires, cables, coaxial cables, rope, tape, etc.

MEASURES IN INCHES AND FEET



Sold without baseboard.

**WIRE WINDER**

Has adjustable arms to be set to the desired coil size and the arms will open to a flat position for easy removal of the coil. Simply open thumb screw which holds the front collar tight on the shaft, push the collar in any direction to

the desired position and tighten the thumb screw again.

**HOLDING REEL**

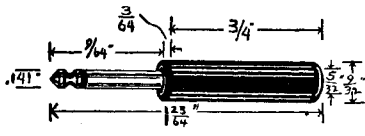
Compact, adjustable to size of coil and folding. Will hold spools or coils of wire.

	MODEL	LIST	NET
<b>COMPLETE WIRE MEASURING OUTFIT</b>	7389A	\$252.50	\$126.25
<b>Separately:</b>			
<b>HOLDING REEL</b>	7398-1M	35.00	17.50
<b>MEASURING MACHINE</b>	7398-2MA	175.00	87.50
<b>WIRE WINDER</b>	7398-3M	59.00	29.50

### MINIATURE PLUGS & JACKS

Insulated type. Solder terminals, two conductor mini. phone plug. Ideal for hearing aids, portable receivers, small instruments, etc. Rated 500 volts.

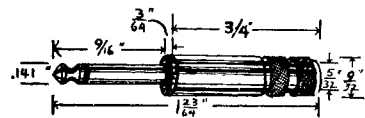
**MINIATURE PHONE PLUG**



No. 130  
 130 Red or Black 50

**SHIELDED MINIATURE PHONE PLUG**

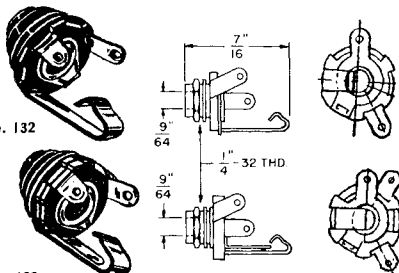
Same as No. 130 except with brass, bright nickel plated barrel with insulating tube inside.



No. 131  
 131 50

**MINIATURE TELEPHONE TYPE JACK**

Tugged construction, smaller than standard type Jacks. Mount in  $\frac{1}{4}$ " dia. hole in panels  $\frac{1}{8}$ " to  $\frac{1}{4}$ " thick.



No. 132  
 132 Open circuit type 50  
 No. 133  
 133 Single closed circuit type 50

### HANDLES

**MATERIAL: BRASS**  
**FINISH: NICKEL PLATED**

Has 10-32 thread individually packaged for a perfect finish.

Cat. No.	A	B	Std. Pkg.
1065-3	3"	1 $\frac{1}{16}$ "	10
1065-4	4 $\frac{1}{16}$ "	1 $\frac{1}{2}$ "	10
1065-6	6 $\frac{1}{16}$ "	1 $\frac{3}{4}$ "	10
1065-9	9"	1 $\frac{3}{4}$ "	10

### CABINET HANDLE

**MATERIAL: BRASS**  
**FINISH: NICKEL PLATED**

Mounts in  $\frac{3}{16}$ " Hole.

Supplied with Hex Nut and Washer. Individually packaged for perfect finish.

Cat. No.	Std. Pkg.
1066 Handle	10

### INSULATED BINDING POST

Molded bakelite head with brass insert molded-in. Supplied complete with 8/32 x  $\frac{1}{2}$ " screw, lock washer. Has brass insert molded-in. Supplied with washer. Available in black.

Cat. No. 184. Binding Post 50

Molded bakelite head with brass insert molded-in. Supplied complete with 8/32 x  $\frac{1}{2}$ " screw and lock washer. Has brass nickel-plated retaining washer.

Colors: Red, Black.  
 Cat. No. 185. Binding Post 50

Brass, heavily nickel-plated overall. Complete with screw and lock washer. Designed for high amperage, low resistance connections.

Cat. No. 186. Metal Binding Post 50

### BIRNBACH FLEXIBLE SHAFTS



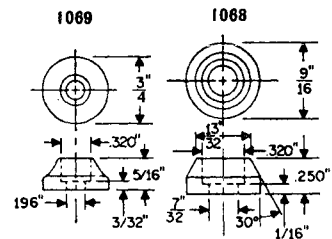
Modern construction calls for more compact arrangement of parts. At times there is difficulty getting the controls to the proper position on the panel. With couplings and these flexible shafts, locations can be made with ease on an offset and angles up to 90 degrees. The flexible shafts are made of phosphor bronze and fitted into  $\frac{1}{4}$ " dia. hubs.

Cat. No.	Std. Pkg.
553—Flexible Shaft 3" long	25
554—Flexible Shaft 6" long	25

### FERRULE

**BRASS—NICKEL PLATED**  
 Used for mounting handles.

Cat. No.	Ferrule	Std. Pkg.
1068	Ferrule	100
1069	Ferrule	100

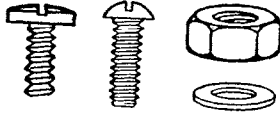




SCREWS & NUTS • WASHERS • STANDOFFS  
ALL-NYLON FASTENINGS



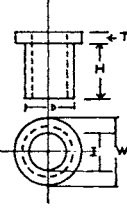
Non-Corrosive, Non-Conducting



Used in variety of applications, such as; appliances, computers and business machines, chemical and food processing equipment, electronic equipment and instruments, airborne equipment, etc.  
\*Reg. T.M. of DuPont

ALL-NYLON FASTENINGS

Zytel 101 per Mil P 20693 Spec, Mil S 7742 Spec  
Birnback All-Nylon Fastenings are made of Zytel 101\*, a Polyamide plastic of the Nylon 6.6 Type. They offer outstanding insulating properties plus resistance to heat, shock, vibration and chemical solvents plus lightness elasticity and superior torque strength. In most cases, because of their high dielectric strength, they eliminate the need of bushings, washers or other insulation. They are corrosion resistant, non-magnetic and good torque strength thru a wide temperature range. Continuous service temperature to 300°F (150°C). Stock color: Natural. Additional colors available to order. Zytel 101 per MIL-P-17019B.



BIRNBACH NYLON BUSHINGS AND SPACERS

Designed with wide flanges to completely isolate screw from mounting surface, useful where hi tensile and torque requirements require high strength non-insulating screws. Natural color.

Cat. No.	Used U with Screw Size	Dimensions			
		I	W	H	D
6549	#4 (.115")	.235"	3/64"	1/4"	.148"
6549A	#6 (.140")	.290"	3/64"	1/4"	.170"
6549B	#8 (.173")	.344"	1/16"	3/8"	.205"
6549C	#10 (.200")	.399"	1/16"	3/8"	.260"
6549D	1/4" (.260")	.513"	1/16"	3/8"	.312"

ALL NYLON MACHINE SCREWS  
STANDARD PKG.: 100, 1000

Cat. No.	Size	Type
6640	2-56 x 1/4"	Round Head
6640A	2-56 x 1/4"	Fillister Head
6640B	2-56 x 1/4"	Binding Head
6641	2-56 x 3/8"	Round Head
6641A	2-56 x 3/8"	Fillister Head
6641B	2-56 x 3/8"	Binding Head
6550	2-56 x 1/2"	Round Head
6551	2-56 x 1/2"	Fillister Head
6551A	2-56 x 1/2"	Binding Head
6643	4-40 x 1/4"	Round Head
6643A	4-40 x 1/4"	Fillister Head
6643B	4-40 x 1/4"	Binding Head
6644	4-40 x 3/8"	Round Head
6644A	4-40 x 3/8"	Fillister Head
6644B	4-40 x 3/8"	Binding Head

ROUND HEAD MACHINE SCREWS

Standard Package 1000  
STEEL NICKEL PLATED BRASS NICKEL PLATED

Cat. No.	Size	Cat. No.	Size
6300	2-56 x 3/8"	6402	4-36 x 1/2"
6301	2-56 x 1/2"	6403	4-36 x 3/4"
6302	2-56 x 5/8"	6404	4-36 x 1"
6303	3-48 x 3/8"	6312	4-40 x 1/4"
6304	4-36 x 1/4"	6313	4-40 x 3/8"
6305	4-36 x 1/2"	6314	4-40 x 1/2"
6306	4-36 x 3/4"	6315	4-40 x 5/8"
6307	4-40 x 1/4"	6405	6-32 x 1/4"
6308	4-40 x 1/2"	6406	6-32 x 3/8"
6309	4-40 x 3/4"	6407	6-32 x 1/2"
6420	6-32 x 1/4"	6408	6-32 x 3/8"
6421	6-32 x 1/2"	6409	6-32 x 5/8"
6422	6-32 x 3/4"	6410	6-32 x 1"
6423	6-32 x 5/8"	6410A	6-32 x 1 1/4"
6424	6-32 x 1"	6411	6-32 x 1 1/2"
6425	6-32 x 1 1/4"	6412	6-32 x 1 3/4"
6426	8-32 x 1/4"	6413	8-32 x 3/8"
6427	8-32 x 1/2"	6414	8-32 x 5/8"
6428	8-32 x 3/4"	6415	8-32 x 1"
6429	8-32 x 5/8"	6416	8-32 x 1 1/4"
6430	8-32 x 1"	6417	8-32 x 1 1/2"
6431	8-32 x 1 1/4"	6418	8-32 x 1 3/4"
6432	8-32 x 1 3/4"	6316	10-32 x 1/4"
6433	10-32 x 3/8"	6317	10-32 x 3/8"
6434	10-32 x 1/2"	6318	10-32 x 1/2"
6435	10-32 x 3/4"	6318A	10-32 x 3/4"
6436	10-32 x 5/8"	6319	10-32 x 1"
6437	10-32 x 3/4"	6319A	12-24 x 1"
6438	10-32 x 1"	6320	10-32 x 1 1/4"
6439	1 1/4-20 x 1/2"	6320A	1 1/4-20 x 3/4"
6310	1 1/4-20 x 1"	6320B	1 1/4-20 x 1 1/4"
6311	1 1/4-20 x 2 1/2"	6320C	1 1/4-20 x 1 3/4"
6400	4-36 x 3/4"		
6401	4-36 x 1"		

BINDING HEAD MACHINE SCREWS

Cat. No.	Size	Std. Pkg.
6321	6-32 x 1/4"	1000
6322	6-32 x 3/8"	1000
6323	6-32 x 1/2"	1000
6324	6-32 x 3/4"	1000
6325	8-32 x 3/8"	1000
6326	8-32 x 1/2"	1000

OVAL HEAD RACK SCREWS  
Steel Nickel Plated

Widely used for mounting panels on racks and cabinets. Screws are nickel-plated brass.

Cat. No.	Size	Std. Pkg.
6600	6-32 x 1/4"	1000
6601	6-32 x 1/2"	1000
6602	6-32 x 3/4"	1000
6603	6-32 x 1"	1000
6604	8-32 x 1/4"	1000
6605	8-32 x 3/8"	1000
6606	8-32 x 1/2"	1000
6607	8-32 x 3/4"	1000
6608	10-32 x 1/4"	1000
6609	10-32 x 3/8"	1000
6610	10-32 x 1/2"	1000
6611	10-32 x 3/4"	1000
6611-A	10-32 x 1"	1000

FINISHING RACK WASHERS  
Brass Nickel Plated

Cat. No.	Size	Std. Pkg.
6612	6-32 Cup Washer	1000
6613	8-32 Cup Washer	1000
6614	10-32 Cup Washer	1000

ALL NYLON MACHINE SCREWS

Cat. No.	Size	Type
6552	4-40 x 1/2"	Round Head
6552A	4-40 x 1/2"	Fillister Head
6552B	4-40 x 1/2"	Binding Head
6646	6-32 x 1/4"	Round Head
6646A	6-32 x 1/4"	Fillister Head
6646B	6-32 x 1/4"	Binding Head
6553	6-32 x 3/8"	Round Head
6554	6-32 x 3/8"	Binding Head
6555	6-32 x 3/8"	Fillister Head
6556	6-32 x 1/2"	Flat Head
6557	6-32 x 1/2"	Round Head
6558	6-32 x 1/2"	Binding Head
6559	6-32 x 3/4"	Fillister Head
6560	6-32 x 3/4"	Flat Head
6648	6-32 x 3/4"	Round Head
6648A	6-32 x 3/4"	Fillister Head
6648B	6-32 x 3/4"	Binding Head
6561	6-32 x 1"	Round Head
6561C	6-32 x 1"	Flat Head
6650	8-32 x 1/4"	Round Head
6650A	8-32 x 1/4"	Fillister Head
6650B	8-32 x 3/4"	Binding Head
6562	8-32 x 3/8"	Round Head
6563	8-32 x 3/8"	Binding Head
6564	8-32 x 3/8"	Flat Head
6565	8-32 x 3/8"	Fillister Head
6566	8-32 x 1/2"	Round Head
6567	8-32 x 3/4"	Binding Head
6568	8-32 x 3/4"	Flat Head
6569	8-32 x 3/4"	Fillister Head
6570	8-32 x 3/8"	Round Head
6571	8-32 x 3/8"	Fillister Head
6572	8-32 x 3/8"	Round Head
6572A	8-32 x 3/8"	Fillister Head
6572B	8-32 x 3/8"	Binding Head
6573	8-32 x 1"	Flat Head
6573A	8-32 x 1"	Fillister Head
6574	10-32 x 3/8"	Round Head
6575	10-32 x 1/2"	Round Head
6576	10-32 x 3/4"	Flat Head
6577	10-32 x 3/4"	Round Head
6578	10-32 x 1"	Round Head
6579	10-32 x 1"	Flat Head

THREADED NYLON ROD in 6-32, 8-32, 10-32 and 1/4-20 thread sizes available.

SHEET METAL SELF TAPPING SCREWS  
Steel Cadmium Plated  
TYPE A - SHARP POINT

Cat. No.	Size	Std. Pkg.
6500	#4 x 1/2"	144
6501	#6 x 1/4"	144
6502	#6 x 3/8"	144
6503	#6 x 1/2"	144
6504	#6 x 3/4"	144
6540	#8 x 3/8"	144
6541	#8 x 1/2"	144
6505	#8 x 1"	144
6542	#10 x 1/2"	144
6543	#10 x 3/4"	144
6506	#10 x 1"	144
6507	#10 x 1 1/4"	144

HEX HEAD SELF TAPPING SCREWS  
TYPE B - BLUNT POINT SLOTTED  
Steel Cadmium Plated

Cat. No.	Size	Std. Pkg.
6510	#6 x 3/8"	144
6511	#6 x 1/2"	144
6512	#6 x 3/4"	144
6513	#8 x 1/4"	144
6514	#8 x 3/8"	144
6515	#8 x 1/2"	144
6516	#8 x 3/4"	144
6517	#8 x 1"	144
6518	#10 x 1/2"	144
6519	#10 x 1"	144

VOLUME CONTROL AND TOGGLE NUTS  
STEEL - BRASS - NICKEL PLATED

No.	Type	Size	Std. Pkg.
6337	Vol. Control Brass	3/8-32 x 1/2 x 3/8	1000
6337A	Vol. Control Steel	3/8-32 x 1/2 x 3/8	1000
6338	Toggle Switch Brass	15-32 x 3/8 x 1/4	1000
6339	Toggle Ring Nut	15-32 x 3/8 x 1/16	1000

All parts are manufactured to American Thread Standards to a class 2A or 2B fit. B 18.2 (hex nuts), B 18.6 (machine screws), B 1.1 (thread specs).

BIRNBACH ALL NYLON HEX NUTS  
STANDARD PKG.: 100, 1000

Cat. No.	Size	Cat. No.	Size
6585	2-56	6588	8-32
6586	4-40	6589	10-32
6587	6-32	6590	1/4-20

BIRNBACH ALL-NYLON WASHERS  
STANDARD PKG.: 100, 1000

Cat. No.	Fits	O.D.	I.D.	Thkless
6592	2	3/4"	3/32"	.016"
6593	4	1/2"	3/64"	.016"
6594	6	5/16"	5/32"	.031"
6595	8	3/8"	.170"	.031"
6596	10	3/8"	.195"	.031"
6597	1/4"	3/8"	9/32"	.063"

BIRNBACH HEXAGON STEEL MACHINE SOREW NUTS  
Nickel Plated

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6330	2-56	3/16"	1/16"	1000
6331	3-48	3/16"	1/16"	1000
6332	4-36	1/4"	3/32"	1000
6333	4-40	1/4"	3/32"	1000
6448	6-32	1/4"	3/32"	1000
6449	6-32	5/16"	7/64"	1000
6334	8-32	1/4"	3/32"	1000
6450	8-32	5/16"	7/64"	1000
6335	10-32	3/8"	1/8"	1000
6336	1/4-20	7/16"	3/16"	1000

BIRNBACH HEXAGON MACHINE SCREW NUTS  
BRASS - NICKEL PLATED

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6440	4-36	1/4"	3/32"	1000
6442	4-40	1/4"	3/32"	1000
6441	6-32	1/4"	5/64"	1000
6443	6-32	5/16"	7/64"	1000
6444	8-32	11/32"	1/8"	1000
6445	10-32	5/16"	7/64"	1000
6446	10-32	3/8"	1/8"	1000
6447	1/4-20	7/16"	1/8"	1000

BIRNBACH BRASS NICKEL PLATED FLAT WASHERS

Cat. No.	Fits	Hole Size	O.D.	Thickness	Std. Pkg.
6479	4	.118"	9/32"	.025"	1000
6480A	6	.145"	5/16"	.025"	1000
6480B	6	.145"	3/8"	.025"	1000
6481	8	.172"	3/8"	.032"	1000
6482	10	.203"	7/16"	.032"	1000
6483	1/4-20	.265"	9/16"	.040"	1000

BIRNBACH STEEL KANKLINK LOCKWASHERS

Cat. No.	Screw Size	O.D.	Thickness	Std. Pkg.
6484	4	3/16"	1/32"	1000
6485	6	15/64"	1/32"	1000
6486	8	15/64"	.025"	1000
6487	10	5/16"	.050"	1000
6488	1/4	7/16"	5/64"	1000

BIRNBACH SHAKEPROOF LOCKWASHERS  
EXTERNAL TEETH

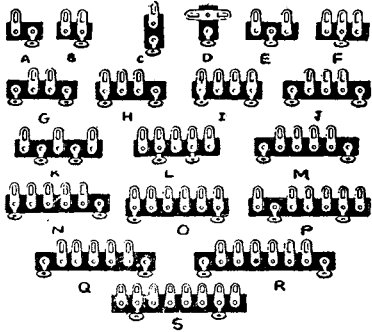
Cat. No.	Screw Size	Std. Pkg.
6358	4	1000
635		

# Birnbach

## TERMINAL STRIPS • LUGS • BUSHINGS SHAFT COUPLINGS • PANEL BEARINGS SPACERS • TUBE CLAMPS



### TIE DOWN LUG TERMINAL STRIPS



These lugs made of 1/16" (.062" thick) XP bakelite x 3/8" wide with cadmium plated brass lugs. Lugs are 3/8" centers with 140 diam. mounting holes. Strips illustrated are standard; special combinations on request.

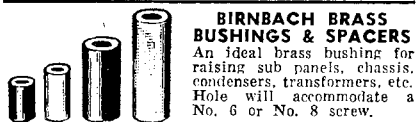
Cat. No.	Illustration	Std. Pkg.	Cat. No.	Illustration	Std. Pkg.
1382	A	100	1385B	J	100
1382A	B	100	1385C	K	100
1382B	C	100	1385D	L	100
1382C	D	100	1385E	M	100
1383	E	100	1385F	N	100
1383A	F	100	1385G	O	100
1384	G	100	1385H	P	100
1384A	H	100	1385I	Q	100
1384B	I	100	1385J	R	100
1385	J	100	1385K	S	100
1385A	K	100			

### STANDARD TYPE

### MINIATURE TYPE

These lugs made of 1/16" (.062" thick) XP bakelite x 5/16" wide. Brass, cadmium plated lugs are 1/4" centers; .096 diam. mounting hole. Clearance for 3/32" rivet or No. 3 screw. Strips illustrated are standard; special combinations on request.

Cat. No.	Illustration	Std. Pkg.	Cat. No.	Illustration	Std. Pkg.
1352	A	100	1355A	K	100
1352A	B	100	1355B	L	100
1352B	C	100	1355C	M	100
1352C	D	100	1355D	N	100
1353	E	100	1355E	O	100
1353A	F	100	1355F	P	100
1354	G	100	1355G	Q	100
1354A	H	100	1355H	R	100
1354B	I	100	1355I	S	100
1355	J	100			



### BIRNBACH BRASS BUSHINGS & SPACERS

An ideal brass bushing for raising sub panels, chassis, condensers, transformers, etc. Hole will accommodate a No. 6 or No. 8 screw.

Cat. No.	Std. Pkg.	Length	Cat. No.	Std. Pkg.
1125	100	1/4" O.D.	1130	100
1126	100	3/8"	1131	100
1127	100	1/2"	1132	100
1128	100	3/4"	1133	100
1129	100	1"	1134	100
1135	100	3/8" O.D.	1140	100
1136	100	1/2"	1141	100
1137	100	3/4"	1142	100
1138	100	1"	1143	100
1139	100	1 1/4"	1144	100

### THREADED BRASS SPACERS

Cat. No.	Std. Pkg.	Length	Cat. No.	Std. Pkg.
1125T	100	1/4"	1130T	100
1126T	100	3/8"	1131T	100
1127T	100	1/2"	1132T	100
1128T	100	3/4"	1133T	100
1129T	100	1"	1134T	100

### BIRNBACH INSULATED BUSHINGS AND SPACERS

Cat. No.	Std. Pkg.	Length	Cat. No.	Std. Pkg.
1145	100	1/4"	1149	100
1146	100	3/8"	1150	100
1147	100	1/2"	1151	100
1148	100	3/4"	1152	100

### BIRNBACH CABLE CLAMPS

Cat. No.	Cable To Fit	Lth.	Wth.	Hole	Mtg. Std. Pkg.
1153	3/16"	1 1/2"	3/8"	3/16"	4-100
1154	1/4"	1 3/4"	3/8"	1/4"	6-100
1155	5/16"	2"	3/8"	5/16"	6-100
1156	3/8"	2 1/4"	3/8"	3/8"	8-100
1157	1/2"	3"	3/8"	1/2"	10-100

### SHAFT COUPLING REDUCERS AND EXTENDERS

By the use of these units all 1/4" and 3/8" dia. shafts can be assembled together. The insulated units are for use where electrical isolation is desired. Furnished complete with set screws shown. Be sure to specify whether Brass or Insulated is desired.



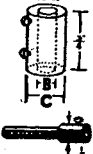
### SHAFT COUPLINGS

Cat. No.	Insul.	Shaft Dia.	Hole Dia.	O.D.	Std. Pkg.
534	63	1/4"	1/4"	3/8"	50
535	635	3/8"	3/8"	1/2"	50
536	636	1/2"	1/2"	5/8"	50
537	637	3/4"	3/4"	1"	50

### COUPLINGS

Cat. No.	Insul.	Shaft Dia.	Hole Dia.	O.D.	Std. Pkg.
531	631	1/4"	1/4"	1/2"	50
532	632	3/8"	3/8"	5/8"	50
533	633	1/2"	1/2"	7/8"	50

### EXTENDERS



Cat. No.	Over-all Lgth.	Shaft I.D.	Hole I.D.	Shaft O.D.	Std. Pkg.
538	1 1/2"	1/4"	1/4"	1/2"	50
539	1 3/4"	3/8"	3/8"	5/8"	50

### BRASS SHAFTING

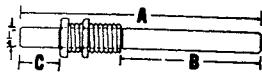
Cat. No.	Dia.	Length	Std. Pkg.
540	1/4"	6" Long	12
541	3/8"	12" Long	12
542	1/2"	8" Long	12

### FIBRE SHAFTING

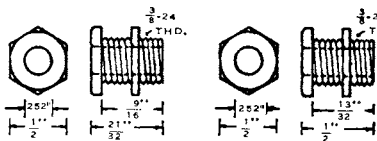
Cat. No.	Dia.	Length	Std. Pkg.
543	1/4"	6" Long	12
544	3/8"	12" Long	12
545	1/2"	8" Long	12

### BIRNBACH FRONT PANEL BEARINGS

Cadmium plated brass for panels up to 3/8" in thickness and for 1/4" dia. shafts. The No. 551 and No. 552 are complete assemblies of the No. 550 and 1/4" dia. brass shaft cadmium plated.



Cat. No.	A	B	C	Std. Pkg.
551	3"	1 1/4"	1/2"	50
552	6"	4 1/4"	1/2"	25



(Same as used on No. 551 and No. 552)

Cat. No.	Std. Pkg.
550	50
550A	50
550-B	50
550-C	50

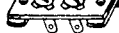
### BAKELITE TERMINAL STRIPS



Terminals are made of brass and cadmium plated. Terminals are mounted on 1/16" bakelite. 7, 8, 9 and 10 terminals are mounted on 3/32" bakelite. All terminals are space 7/16" center to center.

Cat. No.	Terminals	Mtg. Center	Cat. No.	Terminals	Marked
1372	2	1-3/8"	1260	2	A-G
1373	3	1-3/8"	1261	2	Output
1374	4	1-3/8"	1262	3	Input
1375	5	1-3/8"	1263	3	1-2-3-4
1376	6	1-3/8"	1264	4	1-2-3-4
1377	7	1-3/8"	1265	5	1-2-3-4-5
1378	8	1-3/8"	1266	6	1-2-3-4-5-6
1379	9	1-3/8"			
1380	10	1-3/8"			

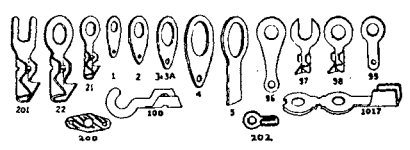
### TERMINAL STRIPS 2 POST



Excellent mounting for twin lead transmission lines. Brass hot tinned lugs spaced 3/8" center to center. 3/8" bakelite. 1 1/8" mounting center.

Cat. No. T16	Std. Pkg. 50
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### BIRNBACH TINNED TERMINAL LUGS



Cat. No.	Hole for Screw	Material	Thickness	Length
1	8	Tinned Copper	.015"	1 1/2"
2	10	Tinned Copper	.016"	1 3/4"
3	252	Tinned Copper	.015"	1 3/4"
3A	1/4	Tinned Copper	.015"	1 3/4"
4	3/8	Tinned Copper	.016"	1 3/4"
5	1/2	Hot Tin. Cop.	.024"	1 3/4"
21	10	Hot Tin. Cop.	.020"	1 3/4"
22	1/4	Hot Tin. Cop.	.025"	1 3/4"
200	8	Brass Hot Tin.	.015"	1 3/4"
201	10	Brass Hot Tin.	.020"	1 3/4"
202	6	Brass Hot Tin.	.020"	1 3/4"
96	4-6-8-10	Brass Hot Tin.	.020"	1 3/4"
97	8	Tinned Copper	.016"	1 3/4"
98	4-6-8-10	Brass Hot Tin.	.020"	1 3/4"
99	4-6-8-10	Brass Hot Tin.	.020"	1 3/4"
100	10	Brass Hot Tin.	.020"	1 3/4"
1017	10	N. Pl. Cop.	.023"	1 3/4"

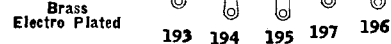
Standard Package — 1000



### LOCKWASHER TERMINAL LUGS BRASS HOT TINNED

Cat. No.	Hole for Screw	Thickness	Length	Std. Pkg.
140-4	4	.018"	7/8"	100
140-6	6	.018"	7/8"	100
140-8	8	.018"	7/8"	100
140-10	10	.018"	7/8"	100
140-14	14	.018"	1 1/2"	100
141-4	4	.018"	1 1/4"	100
141-6	6	.018"	1 1/4"	100
141-8	8	.018"	1 1/4"	100
142-4	4	.018"	1 1/2"	100
142-6	6	.018"	1 1/2"	100
142-8	8	.018"	1 1/2"	100
143-4	4	.018"	1 3/4"	100
143-6	6	.018"	1 3/4"	100
143-8	8	.018"	1 3/4"	100
144-4	4	.018"	1 3/4"	100
144-6	6	.018"	1 3/4"	100
144-8	8	.018"	1 3/4"	100
144-10	10	.018"	1 3/4"	100
145-4	4	.018"	2 1/4"	100
145-6	6	.018"	2 1/4"	100
145-8	8	.018"	2 1/4"	100
146-4	4	.018"	2 1/4"	100
146-6	6	.018"	2 1/4"	100
146-8	8	.018"	2 1/4"	100

### BIRNBACH LOCKING TYPE TERMINAL LUGS



Cat. No.	Hole for Screw	Thickness	Length	Std. Pkg.
193	4	.020"	3/4"	1000
194	6	.020"	3/4"	1000
195	8	.020"	3/4"	1000
197	10	.020"	3/4"	1000
196	1/4"	.020"	1 1/2"	1000

### BRASS AND STEEL ANGLES

Cat. No.	Material	Size	Mtg. Holes	Std. Pkg.
1120	Cadmium Pltd.	1/2" x 1/2"	165	100
1121	Brass N.P.	1/2" x 1/2"	169	100
1122	Brass N.P.	5/8" x 5/8"	169	100
1123	Steel H.T.	3/4" x 3/4"	144	100
1124	Steel H.T.	1" x 1"	169	100



### BIRNBACH 3 POST

A synchronizing lock strip for RCA type television receivers.

Brass hot tinned lugs. Spaced 7/16" center to center. Mounting center 1 1/8". 1/16" bakelite.

Cat. No. T16A	Std. Pkg. 50
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NATIONAL TEL-TRONICS CORP.  
YONKERS, N. Y.



1503



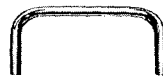
1568



1535



1551

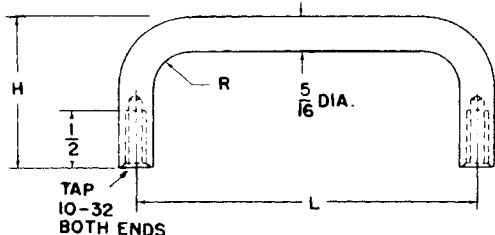


1500

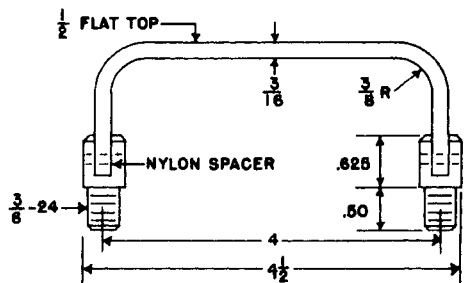
# HARDWARE

## H A N D L E S

Material: Brass, Nickel-Plated  
Request quotation for other sizes or styles.



PART No.	L	H
1500	6-7/16	1-3/4
1501	4-1/4	1-1/2
1502	3	1-1/2

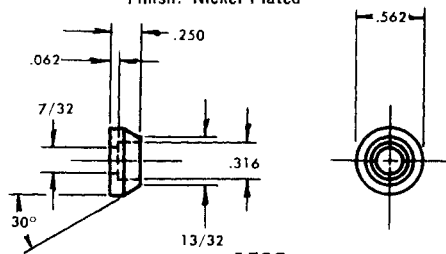


### 1503 FOLDING HANDLE

Handle folds full 180° has nylon bushings at knuckle joint to retain handle to desired position.

## HANDLE FERRULE

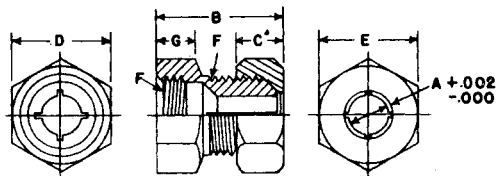
Material: Half-Hard Brass  
Finish: Nickel-Plated



1535

## S H A F T L O C K S

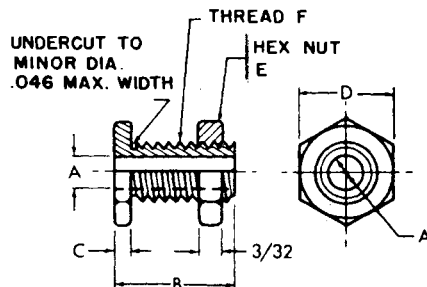
Material: Brass Finish: Nickel-Plated



PART No.	A	B	C	D	E	F	G	FOR SHAFT DIA.
1551	.127	3/8	.150	5/16	5/16	1/4 x 32	.140	1/8
1552	.127	7/16	.187	3/8	3/8	1/4 x 32	.156	1/8
1553	.127	1/2	.218	3/8	5/16	1/4 x 32	.187	1/8
1554	.252	1/2	.250	1/2	7/16	3/8 x 32	.187	1/4
1555	.252	9/16	.250	1/2	7/16	3/8 x 32	.187	1/4

## PANEL MOUNTS

PART NO.	SHAFT SIZE	A	B	C	D	E	F	PANEL THICKNESS	FINISH
1560	1/8	.127	5/16	1/16	3/8	3/8	1/4 x 32	1/8	Nickel Plated
1561	1/8	.127	5/16	1/16	3/8	3/8	1/4 x 32	1/8	Dull Black Oxide
1562	1/8	.127	7/16	1/16	3/8	3/8	1/4 x 32	1/4	Nickel Plated
1563	1/8	.127	7/16	1/16	3/8	3/8	1/4 x 32	1/4	Dull Black Oxide
1564	1/8	.127	9/16	1/16	3/8	3/8	1/4 x 32	3/8	Nickel Plated
1565	1/8	.127	9/16	1/16	3/8	3/8	1/4 x 32	3/8	Dull Black Oxide
1566	1/4	.252	3/8	3/32	1/2	1/2	3/8 x 32	1/8	Nickel Plated
1567	1/4	.252	3/8	3/32	1/2	1/2	3/8 x 32	1/8	Dull Black Oxide
1568	1/4	.252	1/2	3/32	1/2	1/2	3/8 x 32	1/4	Nickel Plated
1569	1/4	.252	1/2	3/32	1/2	1/2	3/8 x 32	1/4	Dull Black Oxide
1570	1/4	.252	5/8	3/32	1/2	1/2	3/8 x 32	3/8	Nickel Plated
1571	1/4	.252	5/8	3/32	1/2	1/2	3/8 x 32	3/8	Dull Black Oxide
1572	1/4	.252	3/4	3/32	1/2	1/2	3/8 x 32	1/2	Nickel Plated
1573	1/4	.252	3/4	3/32	1/2	1/2	3/8 x 32	1/2	Dull Black Oxide



Photos shown are not to size or scale

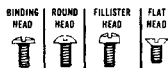


# DABURN ELECTRONICS & CABLE CORP.

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

## DABURN NYLON FASTENINGS

ZYTEL 101 PER MIL-P-17019B

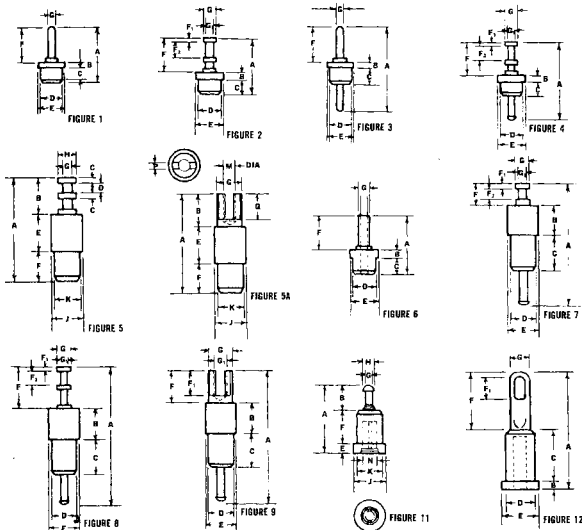


Has outstanding insulation specs. hi-resistance to heat, shock, vibration, chemical. Is light in weight, superior torque strength. Corrosion resistant, non magnetic. Continuous service temperature to 300°F. All parts made to American thread standards to Class 2A or 2B fit. B18.2 (hex nuts), B18.6 (machine screws), B1.1 (thread specs.).

DABURN No.	Size	Type	DABURN No.	Size	Type
14-40	2-56 x 1/4"	Rd. Hd.	14-48B	6-32 x 1/2"	Fill. Hd.
14-40A	2-56 x 1/4"	Fill. Hd.	14-48C	6-32 x 1/2"	Flat. Hd.
14-40B	2-56 x 1/4"	Bind. Hd.	14-49	6-32 x 3/4"	Rd. Hd.
14-41	2-56 x 3/8"	Rd. Hd.	14-49A	6-32 x 3/4"	Fill. Hd.
14-41A	2-56 x 3/8"	Fill. Hd.	14-49B	6-32 x 3/4"	Bind. Hd.
14-41B	2-56 x 3/8"	Bind. Hd.	14-50	6-32 x 1"	Rd. Hd.
14-42	2-56 x 1/2"	Rd. Hd.	14-50C	6-32 x 1"	Flat. Hd.
14-42A	2-56 x 1/2"	Fill. Hd.	14-51	8-32 x 1/4"	Rd. Hd.
14-42B	2-56 x 1/2"	Bind. Hd.	14-51A	8-32 x 1/4"	Fill. Hd.
14-43	4-40 x 1/4"	Rd. Hd.	14-51B	8-32 x 1/4"	Bind. Hd.
14-43A	4-40 x 1/4"	Fill. Hd.	14-52	8-32 x 1/2"	Rd. Hd.
14-43B	4-40 x 1/4"	Bind. Hd.	14-52A	8-32 x 1/2"	Fill. Hd.
14-44	4-40 x 3/8"	Rd. Hd.	14-52B	8-32 x 1/2"	Bd. Hd.
14-44A	4-40 x 3/8"	Fill. Hd.	14-52C	8-32 x 1/2"	Flat. Hd.
14-44B	4-40 x 3/8"	Bind. Hd.	14-54	8-32 x 5/8"	Rd. Hd.
14-45	4-40 x 1/2"	Rd. Hd.	14-54A	8-32 x 5/8"	Fill. Hd.
14-45A	4-40 x 1/2"	Fill. Hd.	14-55	8-32 x 3/4"	Rd. Hd.
14-45B	4-40 x 1/2"	Bind. Hd.	14-55A	8-32 x 3/4"	Fill. Hd.
14-46	6-32 x 1/4"	Rd. Hd.	14-55B	8-32 x 3/4"	Bd. Hd.
14-46A	6-32 x 1/4"	Fill. Hd.	14-56A	8-32 x 1"	Fill. Hd.
14-46B	6-32 x 1/4"	Bind. Hd.	14-56C	8-32 x 1"	Flat. Hd.
14-47	6-32 x 3/8"	Rd. Hd.	14-57	10-32 x 3/8"	Rd. Hd.
14-47A	6-32 x 3/8"	Bind. Hd.	14-58	10-32 x 1/2"	Rd. Hd.
14-47B	6-32 x 3/8"	Fill. Hd.	14-59	10-32 x 5/8"	Rd. Hd.
14-47C	6-32 x 3/8"	Flat. Hd.	14-60	10-32 x 1"	Rd. Hd.
14-48	6-32 x 1/2"	Rd. Hd.	14-60C	10-32 x 1"	Flat. Hd.
14-48A	6-32 x 1/2"	Bind. Hd.			

STOCK COLOR: Natural Std. Pkg.: 100, 1000  
Additional sizes available to order.

## SUB-MINIATURE TEFLON\* TERMINALS



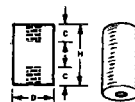
Material, pure virgin Teflon, conforms to MIL-P-19468 and AMS 3651B spec. This terminal series provides instant mounting without any extra fastening hardware. Easily inserted into punched or drilled holes, self locking, unaffected by soldering. Resistant to thermal-mechanical shock, vibration, corrosion moisture. Speeds up assembly—cuts production costs. Suitable for crowded assemblies. Brass meets QQ-B-626 comp. 1/2 H.

Daburn No.	Fig.	Cap. MMF.	A	B	C	D	E	F	G
11-06	1	.41	.35	.04	.10	.148	.172	.210	.040
11-07	1	.39	.41	.04	.16	.148	.172	.210	.040
11-08	1	.32	.50	.04	.25	.148	.172	.210	.040
11-10	2	.41	.35	.04	.10	.148	.172	.210	.040
11-11	2	.36	.375	.04	.125	.148	.172	.210	.040
11-12	2	.35	.35	.04	.100	.179	.200	.210	.040
11-10-01	2	.45	.425	.093	.125	.148	.172	.210	.040
11-16-02	2	.37	.59	.040	.250	.148	.172	.210	.040
11-11-01	5	.58	.522	.125	.150	.165	.187	.250	.040
11-15	3	.55	.443	.04	.100	.148	.172	.210	.040
11-14	3	.73	.515	.04	.100	.148	.172	.210	.045

## DABURN STEATITE STANDOFFS

JAN-I-8 AND JAN-I-10 SPECS.

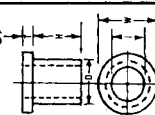
These threaded Steatite pillars are made of L5 glazed Steatite with threaded holes on both sides have one hole mounting. COLOR: White



DABURN No.	Conforms to Type	Hgt.	Diam.	L'gth. of Thread	Thread	Std. Pkg.
10-41		1/4"	1/4"	All	6-32	100
10-41B		3/8"	1/4"	3/4"	6-32	100
10-41A		1/2"	1/4"	3/4"	6-32	100
10-44A		3/4"	1/4"	1/4"	6-32	100
10-45A		1"	1/4"	1/4"	6-32	100
10-42		3/8"	3/8"	3/4"	6-32	100
10-42A	NS5W0104	1/2"	3/8"	3/4"	6-32	100
10-43A	NS5W0105	5/8"	3/8"	1/4"	6-32	100
10-44B	NS5W0106	3/4"	3/8"	1/4"	6-32	100
10-45B	NS5W0108	1"	3/8"	3/8"	6-32	100
10-46B	NS5W0110	1 1/4"	3/8"	3/8"	6-32	100
10-46A	NS5W0112	1 1/2"	3/8"	3/8"	6-32	100
10-46C	NS5W0116	2"	3/8"	3/8"	6-32	100
10-43		1/2"	1/2"	1/4"	6-32	100
10-44		3/4"	1/2"	1/4"	6-32	100
10-45		1"	1/2"	3/8"	6-32	100
10-46		1 1/2"	1/2"	3/8"	6-32	100
10-47		2 1/2"	1/2"	3/8"	6-32	100
10-40	NS5W0205	5/8"	1/2"	3/8"	8-32	100
10-40A	NS5W0206	3/4"	1/2"	1/4"	8-32	100
10-40B	NS5W0208	1"	1/2"	3/8"	8-32	100
10-40C	NS5W0210	1 1/4"	1/2"	3/8"	8-32	100
10-40D	NS5W0212	1 1/2"	1/2"	3/8"	8-32	100
10-40E	NS5W0216	2"	1/2"	3/8"	8-32	100
10-40F	NS5W0220	2 1/2"	1/2"	3/8"	8-32	100
10-44C		3/4"	3/4"	1/4"	10-32	100
10-45C	NS5W0308	1"	3/4"	3/8"	10-32	100
10-45D	NS5W0310	1 1/4"	3/4"	3/8"	10-32	100
10-45E	NS5W0312	1 1/2"	3/4"	3/8"	10-32	100
10-45F	NS5W0316	2"	3/4"	3/8"	10-32	100
10-45G	NS5W0320	2 1/2"	3/4"	3/8"	10-32	100
10-47B	NS5W0412	1 1/2"	1"	1/2"	1/4-20	50

## DABURN NYLON SPACER/BUSHINGS

Wide flanges isolates screw from mounting surface. Has hi-tensile and torque strength. COLOR: Natural. Std. Pkg.: 100, 1000.



Daburn No.	Screw Size I.D.	A	B	C	D
14-79	# 4 (.115")	.235"	3/4"	1/4"	.146"
14-79A	# 6 (.140")	.290"	3/4"	1/4"	.170"
14-79B	# 8 (.173")	.344"	3/4"	3/8"	.205"
14-79C	# 10 (.200")	.399"	3/4"	3/8"	.260"
14-79D	1/4" (.260")	.513"	3/8"	3/8"	.312"

## DABURN NYLON HEX NUTS

Daburn No.	Size	Daburn No.	Size
14-85	2-56	14-88	8-32
14-86	4-40	14-89	10-32
14-87	6-32	14-90	1/4-20

COLOR: Natural Std. Pkg.: 100, 1000



## DABURN NYLON FLAT WASHERS

Daburn No.	For Screw Size	I.D.	O.D.	Thickness
14-92	2	3/8"	1/4"	.016"
14-93	4	1/8"	1/4"	.016"
14-94	6	3/8"	3/8"	.031"
14-95	8	.170"	3/8"	.031"
14-96	10	.195"	3/8"	.031"
14-97	1/4	3/8"	5/8"	.063"

COLOR: Natural Std. Pkg.: 100, 1000



JACK MATERIAL: Beryllium copper with .000030 min. gold flash over .0003 min. silver plate.

PLATING: Solder finish electro solder plate. Available in all other platings.

COLOR: Natural (White). Std. Pkg.: 100, 1000.

Daburn No.	Fig.	Cap. MMF.	A	B	C	D	E	F	G
11-16	3	.71	.725	.04	.100	.148	.172	.210	.040
11-18	4	.62	.500	.04	.100	.148	.172	.210	.040
11-19	4	.69	.500	.04	.165	.148	.172	.210	.040
11-17	6	.193	.025	.063	.125	.150	.105	.040	
11-20	7	.80	.540	.063	.171	.171	.187	.133	.046
11-21	8	.72	.836	.187	.165	.148	.172	.250	.040
11-22	9	.81	.821			.171	.187	.203	.148
11-25-01	11	.70	.637	.050	.40	.185	.218	.187	.054
11-25-02	11	.80	.437	.046	.271	.185	.218	.120	.054
11-25-03	11	.50	.345	.046	.179	.148	.172	.120	.046
11-23	12	.50	.687	.046	.287	.185	.218	.354	.105

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

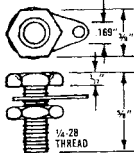
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**BANANA JACK — No. 17-03**

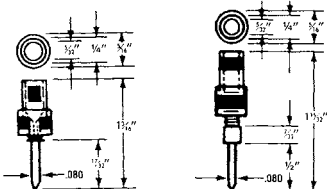
Hexed brass nickel plated hex nut and tinned copper lug. Has recessed head. Mounts in 1/4" hole in panels up to 3/16" thick. Fits all standard banana plugs.

**Rated:** 15 amps AC.

DABURN No.	Std. Pkg.
17-03 Banana Jack	100



**SOLDERLESS PHONE TIP PLUG**



Brass nickel plated. Both fit all standard phone tip jacks. Slipping the wire thru body of tip, then wrapping same around screw, is tightened by knurled collar.

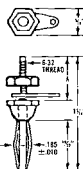
DABURN No.	Description Type	Std. Pkg.
17-33	Junior	100
17-34	Senior	100

**BANANA PLUG — No. 17-40**

Fits all standard banana jacks. Hex brass, nickel plated. Comes thru with hex N. PL. nut and tinned copper lug. Spring is four leaf phosphor bronze, nickel plated.

**RATED:** 15 Amps. AC.

DABURN No.	Spring	Dim. A	Std. Pkg.
17-40	Phosphor Bronze	1/2"	100
17-40A	Phosphor Bronze	3/8"	100
17-40B	Beryllium Copper	1/2"	100

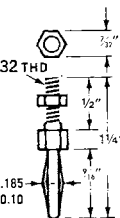


**BANANA PLUG — No. 17-14**

Nickel plated hex brass; spring is four leaf phosphor bronze, nickel plated. Comes thru with hex nut, nickel plated. Fits all standard banana jacks. Similar to Smith 103 or BB414.

**RATED:** 15 Amps. AC.

DABURN No.	Spring	Std. Pkg.
17-14	Phosphor Bronze	100

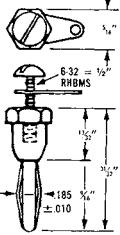


**BANANA PLUG — No. 17-41**

Body is hex brass, nickel plated, comes thru complete with N. PL. screw and tinned copper lug; spring is four leaf phosphor bronze or beryllium copper, nickel plated. Fits all standard banana jacks.

**RATED:** 15 Amps. AC.

DABURN No.	Spring	Std. Pkg.
17-41	Phosphor Bronze	100
17-41B	Beryllium Copper	100

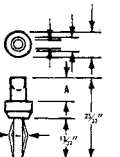


**MIDGET BANANA PLUG RIVET TYPE**

Brass silver plated body. Spring is four leaf phosphor bronze, silver plated.

**RATED:** 10 Amps. AC.

DABURN No.	Std. Pkg.
17-26 Rivet Type Midget Plug	100



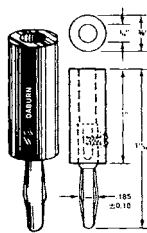
Additional Midget Plugs & Jacks Available. Also Sub-Miniature Plugs & Jacks.

**INSULATED BANANA PLUG SOLDERLESS**

Fits standard banana jacks. Plug is brass nickel plated. Spring is four leaf phosphor bronze, nickel plated. Side set screw holds wire without soldering. Molded plastic handle.

**COLORS**  
Red, Black, Yellow, Green, Blue (Specify)

DABURN No.	SPRING	Std. Pkg.
19-46	Phosphor Bronze N.P.	50
19-46B	Beryllium Copper N.P.	50

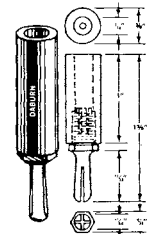


**INSULATED BANANA PLUG SOLDERLESS**

This split plug, brass N. PL., has internal brass N. PL., stud for solderless connection. Fits standard banana jacks. Molded plastic handle.

**COLORS**  
Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	Std. Pkg.
19-47	50



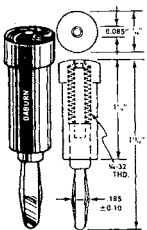
**ADAPTER**

**TIP PLUG TO BANANA PLUG**

Fits standard banana jacks, accepts standard phone tips. Plug is brass nickel plated. Spring is four leaf phosphor bronze, nickel plated. Phone tip jack is phosphor bronze molded plastic handle and cap.

**COLORS**  
Red, Black (Specify)

DABURN No.	Std. Pkg.
19-67	50

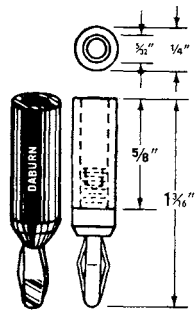


**INSULATED MIDGET BANANA PLUG SOLDERLESS**

Spring is four leaf phosphor bronze, or beryllium copper, nickel plated. Wire can be soldered directly into plug. Molded plastic handle. Fits standard banana jacks.

**COLORS**  
Red, Black. (Specify)

DABURN No.	SPRING	Std. Pkg.
19-55	50 Phosphor Bronze N.P.	
19-55B	50 Beryllium Copper S.P.	



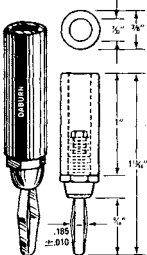
**INSULATED BANANA PLUG SOLDERLESS**

Fits standard banana jacks. Plug is hex brass, Nickel plated. Spring is four leaf phosphor bronze nickel plated. Molded plastic handle.

For solderless connection: wire can be passed thru hex brass N.P. stud and spread, which locks wire to plug. Wire can also be soldered directly to plug.

**COLORS**  
Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	SPRING	Std. Pkg.
19-04	Phosphor Bronze N.P.	50
19-04B	Beryllium Copper S.P.	50

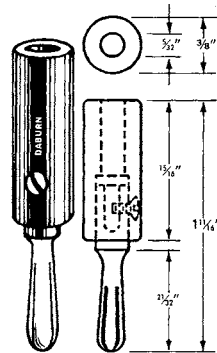


**INSULATED BANANA PLUG SOLDERLESS**

Split plug, brass N. PL., with side screw fits standard banana jacks. Plug is slotted, set screw holds wire without soldering. Molded plastic handles.

**COLORS**  
Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	Std. Pkg.
19-44	50



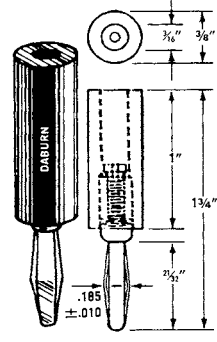
**INSULATED BANANA PLUG SOLDERLESS**

Fits standard banana jacks. Plug is brass nickel plated. Spring is four leaf phosphor bronze nickel plated. Molded plastic handle.

**COLORS**  
Red, Black, Yellow, Green, Blue. (Specify)

For solderless connection same as our No. 19-04.

DABURN No.	SPRING	Std. Pkg.
19-65	50 Phos. Bronze N.P.	
19-65B	50 Beryllium Copper S.P.	

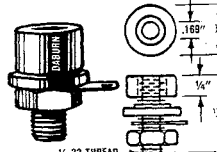


**INSULATED BANANA JACK**

Body is brass nickel plated, mounts in 3/16" hole in panels up to 3/16" thick. Comes thru with hex nut, tinned copper lug and fibre washer. Takes all standard banana plugs. Molded plastic head.

**COLORS**  
Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	Description	Std. Pkg.
19-06	Insulated Jack	50

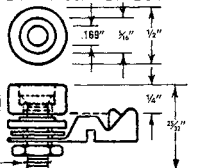


**INSULATED BANANA JACK**

Body is brass nickel plated. Mounts in 5/16" hole in panels up to 3/16" thick. Comes thru with hex nut, tinned copper lug, lockwasher, fibre washer. Takes all standard banana plugs. Jack body is recessed for tight contact. Molded plastic head.

**COLORS:** Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	Description	Std. Pk.
19-91	Insulated Jack	50

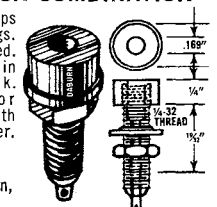


**INSULATED JACK COMBINATION**

Will take senior phone tips or standard banana plugs. Body is brass, nickel plated. Mounts in 3/16" hole in panels up to 1/2" thick. Springs are phosphor bronze. Comes thru with hex nut and fibre washer. Molded plastic head.

**COLORS**  
Red, Black, Yellow, Green, Blue. (Specify)

DABURN No.	Description	Std. Pl
19-33	Insulated Combination Jack	50



**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**NYLON TIP JACK WITH METAL SHELL**

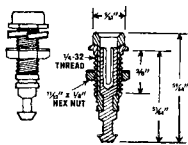
Made to Meet MS-16108 Spec — Wrap Around

Molded nylon tip jack with metal shell eliminates possibility of threads stripping during assembly. Made to meet the requirements of MS-16108 specification. Contact recessed in head for safety. Nylon, grade FM 10001, brass N.P. Shell and nut per Spec. 72-53. Tough and rugged. Fits all standard phone tip plugs.

**CENTER CONTACT:** Heat treated beryllium copper, silver plated.

**COLORS:** Red, Black, Yellow, Green, Blue, White. (Specify Color)

Daburn No.		Std. Pkg.
19-90	Wrap Around	25

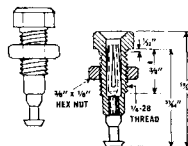


**ALL NYLON TIP JACK WRAP AROUND**

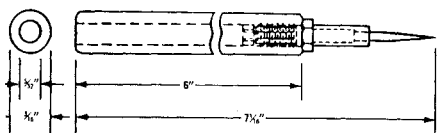
All nylon molded tip jack. Takes all standard phone tip plugs. Contact recessed in head for safety. Hex head for ease in tightening. Mounts in 1/4" hole in panels up to 1/4" thick. Body is nylon, grade FM 10001. Tough and rugged. Complete with brass nickel plated hex nut. Center contact. Heat treated beryllium copper, silver plated.

**COLORS:** Red, Black, Yellow, Green, Blue, White. (Specify)

Daburn No.		Std. Pkg.
19-80	Wrap Around	25



**BAKELITE PENCIL TYPE TEST PROD**

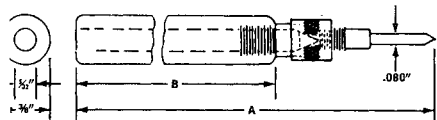


Body is brass nickel plated with heavy steel phono needle in tip. Handle is XX bakelite per MIL-P-79 Spec. Wire threaded thru stud and tightened allows for solderless connection.

**COLOR:** Red, Black. (Specify)

Daburn No.		Std. Pkg.
19-11	Bakelite Pencil Type Prod	25

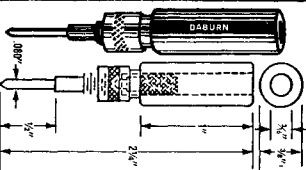
**SOLDERLESS TEST PROD**



Body is brass nickel plated with molded plastic handle. Solderless connection for wire fits thru handle and lug body and wraps under knurled nut.

**COLOR:** Red, Black. (Specify)

Daburn No.	Handle (B)	Overall L'gth (A)	Std. Pkg.
19-10	4"	5 3/8"	50
19-43	5"	6 1/2"	50



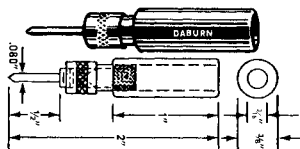
**INSULATED PHONE TIP SOLDERLESS — SENIOR**

Fits standard phone tip jacks. Brass nickel plated. Solderless connection for wire which fits thru body of tip and fastens under knurled nut. Molded plastic handle.

**COLORS:** Red, Black, Yellow, Green, Blue. (Specify)

Daburn No.		Std. Pkg.
19-09	Senior	50

**INSULATED PHONE TIP SOLDERLESS — JUNIOR**

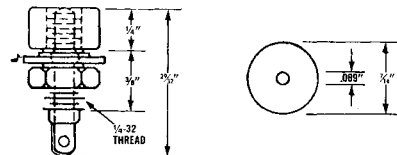


Fits standard phone tip jacks. Brass nickel plated. Solderless connection for wire which fits thru body of tip and fastens under knurled nut. Molded plastic handle.

**COLORS:** Red, Black, Yellow, Green, Blue. (Specify)

Daburn No.		Std. Pkg.
19-15	Junior	50

**INSULATED PHONE TIP JACK**

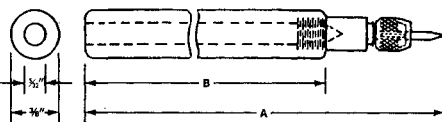


Fits all standard phone tips. Brass nickel plated body. Phosphor bronze spring provides positive contact. Comes thru complete with hex nut and fibre washer. Molded plastic head.

**COLORS:** Red, Black, Yellow, Green, Blue. (Specify)

Daburn No.		Std. Pkg.
19-07		50

**NEEDLEPOINT TEST PROD**



Brass nickel plated plug, chuck is removable for replacement of broken needles. Sharp needle pierces insulation or corrosion for testing purposes. Molded plastic handle.

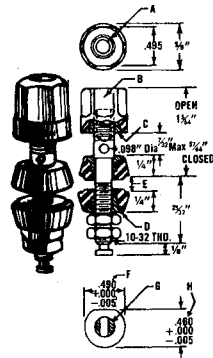
**COLORS:** Red, Black. (Specify)

Daburn No.	Handle (B)	Overall L'gth (A)	Std. Pkg.
19-44	4"	4 7/8"	50
19-45	5"	6 3/8"	50

**BINDING POSTS — MULTI-PURPOSE WRAP AROUND TYPE**

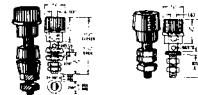
Molded nylon body. Accepts tip plug, spade lug, banana plug, wire alligator clip and direct solder connection. Has molded-in brass inserts in head and washer. Rated at 30 amps. AC, capacitance 5.0 MMFD. Banana plug receptacle .161" I.D. head non-removable from stud and washer completely insulates post from panel. For panels 1/8" to 1/4" thick; drill 1/2" hole for mounting washers. Wire hole is at right angle to flat on insulated washer.

**COLORS:** Red, Black. (Specify)



Daburn No.	Description	Std. Pkg.
18-75	Nylon Binding Post	100
18-72	Nylon Fluted Head Post	100

**STANDARD DUTY BINDING POST**

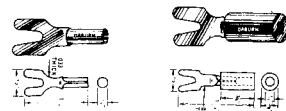


Molded-in brass bushings similar as above. Rated at 15 Amps. AC, capacitance 3.0 MMFD. Body is brass nickel plated. Mounts in 3/8" hole for locking. Has milled slot complete with two hex nuts.

**COLOR:** Red, Black. (Specify)

Daburn No.	Description	Std. Pkg.
18-78	All Insulated Type	100
18-79	Grounding Type	100

**INSULATED SPADE LUG**



Molded plastic handle lug is steel hot tinned. Rated at 25 Amps. AC. Rear barrel accommodates all standard banana plugs.

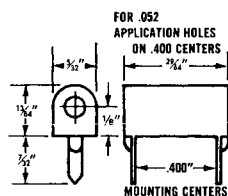
**COLORS — Insulated Spade:** Red, Black.

Daburn No.		Std. Pkg.
19-32	Insulated Spade Lug	50
19-32A	Spade Lug Only	50

**PRINTED CIRCUIT TEST JACKS**

Nylon bodies, designed for permanent, soldered connection to printed circuit boards. Beryllium copper contacts have gold over silver plate. Accepts .080" diameter per MIL F-14072, M301 test probes. For .052 application holes on .400 centers.

**COLORS:** Red, Black, Green, Yellow, Blue. Additional colors available.



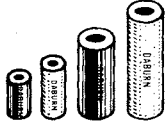
Daburn No.		Std. Pkg.
19-77	Printed Circuit Jacket	25

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**DABURN BRASS BUSHINGS AND SPACERS**



Suitable for raising sub panels, condensers, transformers, chassis, etc. Bushing hole accommodates a No. 4, No. 6 or No. 8 screw.

1/4" O.D.

Length	For No. 8 Screw Cat. No.	For No. 6 Screw Cat. No.	For No. 4 Screw Cat. No.
1/4"	14-320	14-315	14-310
3/8"	14-321	14-316	14-311
1/2"	14-322	14-317	14-312
3/4"	14-323	14-318	14-313
1"	14-324	14-319	14-314

Std. Pkg. 100

3/8" O.D.

Length	For No. 8 Screw Cat. No.	For No. 6 Screw Cat. No.	For No. 4 Screw Cat. No.
1/4"	14-330	14-325	14-305
3/8"	14-331	14-326	14-306
1/2"	14-332	14-327	14-307
3/4"	14-333	14-328	14-308
1"	14-334	14-329	14-309

Std. Pkg. 100

**THREADED BRASS SPACERS**

Threaded spacers for 4-40, 6-32 and 8-32 application. 1/4" O.D.

Length	For 8-32 Screw Cat. No.	For 6-32 Screw Cat. No.	For 4-40 Screw Cat. No.
1/4"	14-340	14-335	14-300
3/8"	14-341	14-336	14-301
1/2"	14-342	14-337	14-302
3/4"	14-343	14-338	14-303
1"	14-344	14-339	14-304

Std. Pkg. 100

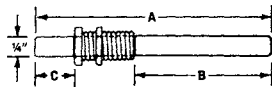
**DABURN FIBRE SPACERS**

Fibre material per MIL-F-1148A, Grade CH. 1/4" O.D.

Length	For No. 8 Screw Cat. No.	For No. 6 Screw Cat. No.	For No. 4 Screw Cat. No.
1/4"	14-365	14-360	14-355
3/8"	14-366	14-361	14-356
1/2"	14-367	14-362	14-357
3/4"	14-368	14-363	14-358
1"	14-369	14-364	14-359

Std. Pkg. 100

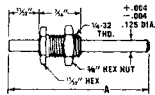
**PANEL BEARINGS ASSEMBLY**



Brass nickel plated for 1/4" shaft up to 3/8" panels.

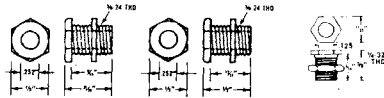
Daburn No.	Description	Std. Pkg.
14-372	3" Overall Length	25
14-374	6" Overall Length	25

**MINIATURE PANEL BEARING ASSEMBLY**



Daburn No.	Description	Std. Pkg.
14-376	2" Overall Length	25
14-377	4" Overall Length	25

**PANEL BEARINGS**



Brass nickel plated. Same as used on the above bearing assemblies.

Daburn No.	Description	Std. Pkg.
14-370	3/16" Threaded Length	50
14-370A	13/32" Threaded Length	50
14-370B	3/8-32 Thread 3/16" Threaded Length, 2 1/2" O.L.	50
14-370C	Miniature — 1/4-32 Thd., Threaded L'gth. 3/16", 3/8" O.L., .125" 1 1/2" Hex.	50

**BAKELITE TERMINAL BOARD SCREW TYPE**

Terminals made of brass, hot tinned, mounted on X.P. Bakelite 5/8" wide x 1/4" thick, spaced 3/4" centers. Screws are 6-32 x 3/8" steel, cadmium plated.



Daburn No.	Terminals	Mtg. Center	Std. Pkg.
15-72	2	1 1/4"	50
15-73	3	1 3/4"	50
15-74	4	2 3/4"	50
15-75	5	2 5/8"	50
15-76	6	3 3/8"	50
15-77	7	3 1/2"	50
15-81	SHORTING LINK		100

**DABURN TERMINAL BOARD HEAVY DUTY**

Terminals made of brass, cadmium plated, .042" thick, spaced 1/2" centers. Mounted on XP bakelite 7/8" wide x 3/32" thick. Screws are 8-32 x 3/4" brass, nickel plated.

Daburn No.	Terminals	Mtg. Center	Std. Pkg.
15-60	2	1 1/2"	25
15-61	3	2"	25
15-62	4	2 1/2"	25
15-63	5	3"	25
15-64	6	3 1/2"	25
15-65	7	4"	25
15-66	8	4 1/2"	25
15-67	9	5"	25
15-68	10	5 1/2"	25
15-69	11	6"	25
15-70	12	6 1/2"	25

**LUG TERMINAL STRIP STANDARD TYPE**

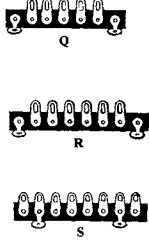
Lugs are 3/8" centers with .140 diam. mounting holes. Lugs are 1/4" (.062") thick XP bakelite by 3/8" wide lugs. Special combinations available. Mount: .140 I.D. for #6 screw.

Daburn No.	Illustration	Std. Pkg.
15-82	A	100
15-82A	B	100
15-82B	C	100
15-82C	D	100
15-83	E	100
15-83A	F	100
15-84A	H	100
15-84B	I	100
15-85	J	100
15-85A	K	100
15-85B	L	100
15-86	M	100
15-86A	N	100
15-86B	O	100
15-87	P	100
15-88	Q	100
15-89	R	100
15-90	S	100

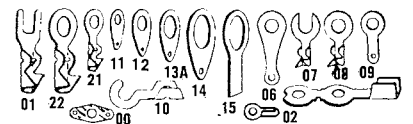
**MINIATURE TYPE**

Lugs are 1/4" centers. Lugs are .062" thick XP bakelite x 3/8" wide. Steel cadmium plated. Mount: .096 I.D. for 3/32" rivet or No. 3 screw.

Daburn No.	Illustration	Std. Pkg.
15-52	A	100
15-52A	B	100
15-52B	C	100
15-52C	D	100
15-53	E	100
15-53A	F	100
15-54	G	100
15-54A	H	100
15-54B	I	100
15-55	J	100
15-55A	K	100
15-55B	L	100
15-56	M	100
15-56A	N	100
15-56B	O	100
15-57	P	100
15-58	Q	100
15-59	R	100
15-60	S	100



**DABURN TINNED TERMINAL LUGS**



No. Daburn	Hole Standard	Material	L'gth	Thickness
101-11	6	Tinned Copper	1 1/2"	.015"
101-12	10	Tinned Copper	5/8"	.018"
101-13	.252	Tinned Copper	1 1/2"	.015"
101-13A	1/4	Tinned Copper	1 3/8"	.015"
101-14	3/8"	Tinned Copper	7/8"	.016"
101-15	1/2	Hot Tin. Copper	1 3/4"	.024"
101-21	10	Hot Tin. Copper	3/8"	.020"
101-22	1/4	Hot Tin. Copper	1 1/4"	.025"
101-00	8	Brass Hot Tin.	7/8"	.015"
101-01	10	Brass Hot Tin.	2 1/2"	.020"
101-02	6	Brass Hot Tin.	5/8"	.020"
101-06	4-6-8-10	Brass Hot Tin.	7/8"	.020"
101-07	8	Tinned Copper	5/8"	.016"
101-08	4-6-8-10	Brass Hot Tin.	1 1/4"	.020"
101-09	4-6-8-10	Brass Hot Tin.	1 1/4"	.020"
101-10	10	Brass Hot Tin.	7/8"	.020"

Std. Pkg. 1000

**TERMINAL LUGS**



**LOCKWASHER • BRASS • HOT TINNED**

Daburn No.	Hole	Thickness	Length
101-40-4	4	.018"	7/8"
101-40-6	6	.018"	7/8"
101-40-8	8	.018"	7/8"
101-40-10	10	.018"	7/8"
101-40-14	1 1/4"	.018"	1 3/8"
101-41-4	4	.018"	4 7/8"
101-41-6	6	.018"	4 7/8"
101-41-8	8	.018"	4 7/8"
101-42-4	4	.018"	5/8"
101-42-6	6	.018"	5/8"
101-42-8	8	.018"	5/8"
101-43-4	4	.018"	2 3/8"
101-43-6	6	.018"	2 3/8"
101-43-8	8	.018"	2 3/8"
101-44-4	4	.018"	1 3/4"
101-44-6	6	.018"	1 3/4"
101-44-8	8	.018"	1 3/4"
101-44-10	10	.018"	1 3/4"
101-45-4	4	.018"	2 3/8"
101-45-6	6	.018"	2 3/8"
101-45-8	8	.018"	2 3/8"
101-46-4	4	.018"	4 1/8"
101-46-6	6	.018"	4 1/8"
101-46-8	8	.018"	4 1/8"

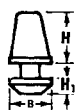
Std. Pkg. 1000

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

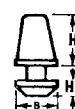
**DABURN FEED-THRU INSULATORS**



These are quality porcelain insulators smoothly glazed. Heavy nickel plated brass hardware used. Cushion washers supplied.

Daburn No.	Hgt. H	B	H <sub>1</sub>	Mounting Hole	H'dwe	Std. Pkg.
10-58	5/8"	1 1/16"	3/4"	3/16"	6-32	50
10-78	1"	1 3/4"	3/4"	3/16"	10-32	25
10-125	1 1/4"	7/8"	3/8"	3/16"	10-32	25
10-234	2 3/4"	2"	1"	1 1/4"	1/4-20	10

**CORRUGATED FEED-THRU INSULATOR**



These numbers have twice the leakage path of the straight type due to the increased surface area. Brass nickel plated hardware and cushion washers supplied.

Daburn No.	Hgt. H	B	H <sub>1</sub>	Mounting Hole	H'dwe	Std. Pkg.
10-79	1 3/8"	1 1/4"	1 1/16"	3/16"	10-32	25
10-76	2 3/4"	1 5/8"	1"	3/4"	1/4-20	10
10-52	4 1/2"	2 1/8"	1 1/2"	1"	1/4-20	5

**DABURN METAL BASE INSULATORS**



Made of hi tensile strength, low absorption ceramic, fully glazed corrugated surface. Provides longer leakage path. Drawn metal bases.

Daburn No.	Hgt. H	B	D	Mtg. Screw	H'dwe	Std. Pkg.
10-67	1 3/8"	1 7/8" x 1 5/8"	1 1/2"	2 #8	10-32	25
10-176	2 3/4"	1 3/4" x 1 3/4"	1 3/8"	4 #10	1/4-20	10
10-451	4 1/2"	2 1/4" x 2 1/4"	1 3/4"	4 #10	1/4-20	5

**DABURN STEATITE CONE INSULATORS**



Steatite cones have smooth glaze white. Come complete with brass nickel plated screws and cushion washers.

Daburn No.	Hgt. H	B	B <sub>1</sub>	T	Mtg. Hole	Std. Pkg.
10-30	5/8"	5/8"	3/16"	6-32	3/32"	100
10-31	1"	1 1/16"	1/2"	8-32	3/16"	50
10-32	1 1/2"	3/16"	5/8"	10-32	3/32"	50

**DABURN LEADIN INSULATORS**



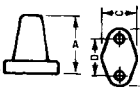
Sections are each 2 3/4" high hi vitrified porcelain glazed. Comes thru with 2 additional bushings 1/4" and 1/2" long, permitting complete insulation of the threaded rod of any length in multiples of 1/4". Complete with brass nickel plated hardware. Lead and cushion washers permit a water tight seal.

Daburn No.	Description	Std. Pkg.
10-237	10" Rod/Bushings	10
10-238	15" Rod/Bushings	10

**DABURN STANDOFF INSULATORS**

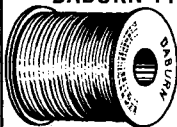


Quality glazed porcelain insulators — mounting surface ground flat. Brass nickel plated hardware supplied.



Daburn No.	H	B	B <sub>1</sub>	D	Hole	Mtg. H'dwe	Std. Pkg.
10-16	1"	1 3/8"	7/8"	1"	3/32"	8-32	50
10-17	1 1/2"	1 3/4"	1 1/8"	1 1/4"	3/32"	10-32	25

**DABURN FIBERGLASS GUY WIRE**

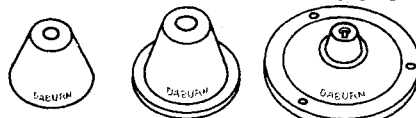


Gives complete isolation for any antenna system. Non-radiating, non-absorbing, no rot, no shrink, no sag. This non metallic guy wire has an overall (PVC) polyvinylchloride jacket.

Daburn No.	Put-Up	Tensile Strength	Color	Nom. O.D.
10-01	100', 500', 1000'	500 lbs.	Green	.125"
10-02	100', 500', 1000'	1000 lbs.	Gray	.218"
10-03	100', 500', 1000'	2500 lbs.	White	.313"

Doubling the cable will double the strength.

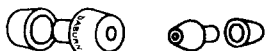
**STEATITE FEED-THRU INSULATORS**



Suitable for hi-dielectric and mechanical strength. Made of L5 glazed Steatite. No hardware included.

Daburn No.	Figure	Hgt. H.	Base Diam.	Screw Size Max.	Std. Pkg.
10-200	I	7/8"	1 1/4"	10-32	25
10-202	I	1 1/8"	1 3/4"	1/4-20	25
10-202	II	1 5/8"	2 1/2"	3/8-16	25
10-203	III	1"	3 1/8"	8-32	12

**DABURN STEATITE FEED-THRU INSULATORS**



Feedthrus come thru with tops and bottoms for chassis, panel, shields, rack mounting. No hardware included. Made of L5 glazed Steatite.

Daburn No.	Hgt. Top	Diam.	Hole Panel	T'kness Panel To	Screw Size Max.	Std. Pkg.
10-204	1/8"	1/2"	3/16"	1/8"	6-32	50
10-205	3/32"	5/8"	3/16"	1/8"	8-32	50
10-206	3/8"	1/2"	1/4"	3/16"	6-32	50
10-207	3/8"	5/8"	3/8"	3/8"	8-32	50
10-208	3/4"	1 1/8"	3/4"	3/8"	10-32	50
10-209	1 5/8"	1 1/4"	1/2"	2"	10-32	50

**DABURN FISH SPINE BEADS**



Made of L5 Steatite. Suitable for buss and heavy lines insulation. Beads follow bends and curves because of ball and socket style interlocks. Four beads cover approximately 1". 100 will cover 25" of wire. Size: 3/16" O.D. x 1/8" I.D. Beads treated with Dow Corning compound to prevent accumulation of surface moisture.

Daburn No.	Description	Std. Pkg.
10-215	Fish Spine Beads	100, 1000

**DABURN AIRPLANE INSULATORS**

Suitable for mobile and aircraft or guy wire application. Compression type strain insulators. Nos. 10-73, 10-74 made of white glazed low absorption porcelain. No. 10-72 made of wet process porcelain.



Daburn No.	Description	Std. Pkg.
10-73	2" White	100
10-74	1 1/2" White	100
10-72	2 1/4" Brown	25

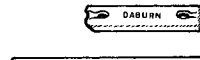


**DABURN STEATITE AIRPLANE INSULATOR**

Compression type Steatite insulator has small wind resistance. Fully glazed.

Daburn No.	Description	Std. Pkg.
10-63	1 1/2" Lgth.; 1 1/2" Diam. 3/4" Line Spacing	25

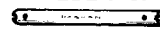
**ANTENNA STRAIN INSULATORS**



Porcelain glazed to prevent moisture absorption. All have long leakage path — small cross section strength under continuous tension — white glaze prevents accumulation of dirt and ice.

Daburn No.	Description	Std. Pkg.
10-68	4 1/2" Long Center Ins.	10
10-69	4 1/4" Long	25
10-70	7" Long	10

**FEEDER SPREADER INSULATORS**



Made of highly vitrified — low absorption — hi tensile strength porcelain, with white glaze overall.

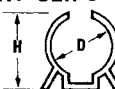
Daburn No.	Description	Std. Pkg.
10-62	2" Long Spreader	25
10-64	4" Long Spreader	25
10-65	6" Long Spreader	25

**ANTENNA INSULATORS**



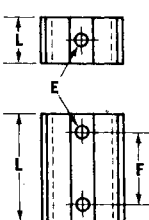
Daburn No.	Description	Std. Pkg.
10-0	Glass Insulator	100
10-06	Porcelain Insulator — White	100

**DABURN COMPONENT CLIPS**



Hold and insulate, electrical and electronic components, accessories — spare parts. Holds firmly and still permits fast and easy insertion. Convenient for fastening. Clips and retainers for transistors, batteries, fuses, capacitors, resistors, lamps, etc. These Daburn clips are made of black vinyl (polyvinylchloride). Has high dielectric strength. Can be mounted with screws, rivets or other fastening means.

MATERIAL: Rigid Vinyl.  
TEMPERATURE RANGE: -20° to +165°F.  
STANDARD PACKAGE: 100, 1000.



Stock Number	D Diam.	H Height	L L'gth.	E Diam. of Hole	F Dist. Bet. Holes
600-1/4"	1/4"	1 3/32"	1/2"	3/32"	—
600-3/16"	3/16"	1 3/32"	1/2"	3/32"	—
600-3/8"	3/8"	1/2"	1/2"	3/32"	—
600-1/2"	1/2"	1/2"	1/2"	3/32"	—
600-5/8"	5/8"	5/8"	1/2"	3/32"	—
600-3/4"	3/4"	5/8"	1/2"	3/32"	—
600-7/8"	7/8"	5/8"	1/2"	3/32"	—
600-1"	1"	1 1/4"	1 1/8"	3/32"	3/4"
600-1 1/8"	1 1/8"	1 1/2"	1 1/8"	3/32"	—
600-1 1/4"	1 1/4"	1 3/4"	1 1/4"	3/32"	—
600-1 1/2"	1 1/2"	2"	1 1/2"	3/32"	—
600-1 3/4"	1 3/4"	2 1/4"	1 3/4"	3/32"	—
600-2"	2"	2 1/2"	2"	3/32"	—

# **PRICES**

Prices in this *MASTER* should not be considered as final.  
*Inquire about latest prices and delivery.*

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# **DISCOUNTS**

Trade discounts apply in most cases  
where *list prices* are shown.

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# **ORDERING**

Since previous editions of The *MASTER* are frequently referred to, it is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.





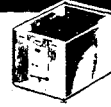
# RADIO AND TV HARDWARE



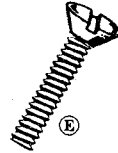
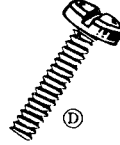
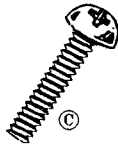
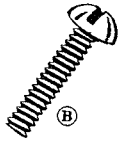
HINGED COVER  
PLASTIC BOXES  
— 50 LINE —  
Dir. Net Price. 36c  
Per Box



BOXES OF 100  
Standard Carton  
10 Boxes of 100



BULK  
HARDWARE  
Box of 1000



**(A) G-C ROUND HEAD MACHINE SCREWS  
STEEL — NICKEL PLATED**

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted Screws	H1000-F	35				
Assorted Screws & Nuts	H1001-F	40				
Assorted No. 2 & 4 Screws & Nuts	H1002-F	35				
Assorted 4-36 Screws	H1010-F	40				
Assorted 6-32 Screws	H1012-F	40				
Assorted 8-32 Screws	H1016-F	40				
Assorted 10-32 Screws	H1018-F	25				
2-56 x 1/4"	H1022-F	40	7130-C \$ .45	7130-M \$3.53		
2-56 x 1/2"	H1024-F	40	7131-C .48	7131-M 3.85		
2-56 x 3/4"	H1026-F	40	7132-C .55	7132-M 4.43		
3-48 x 3/4"	H1028-F	40	7124-C .58	7124-M 4.65		
4-36 x 1/4"	H1032-F	40	6005-IC .48	6005-M 3.87		
4-36 x 3/8"	H1033-F	35	7138-C .50	7138-M 3.97		
4-36 x 1/2"	H1034-F	35	6006-C .52	6006-M 4.18		
4-36 x 5/8"			5651-C .87	5651-M 7.36		
4-36 x 3/4"			6007-C .77	6997-M 6.63		
4-40 x 1/4"	H1036-F	35	6005-AC .48	6005-AM 3.87		
4-40 x 1/2"	H1042-F	40	6005-BC .53	6005-BM 4.22		
4-40 x 3/4"	H1044-F	35	5652-C .57	5652-M 4.53		
4-40 x 5/8"			6005-CC .78	6005-CM 6.60		
6-32 x 1/4"	H1046-F	35	6008-C .53	6008-M 4.25		
6-32 x 1/2"	H1062-F	40	6009-C .62	6009-M 4.93		
6-32 x 3/8"	H1064-F	30	5653-C .68	5653-M 5.40		
6-32 x 5/8"			6010-C .80	6010-M 6.86		
6-32 x 1"	H1066-F	30	6011-C .83	6011-M 6.67		
6-32 x 1 1/4"	H1068-F	30	7141-C 1.00	7141-M 8.00		
6-32 x 2"	H1070-F	30	7148-C 1.50	7148-M 12.07		
8-32 x 1/4"	H1076-F	20	6013-C .70	6013-M 5.55		
8-32 x 3/8"	H1082-F	30	6014-C .78	6014-M 6.48		
8-32 x 1/2"	H1083-F	25	6015-C .82	6015-M 6.48		
8-32 x 3/4"	H1084-F	25	5654-C .87	5654-M 6.95		
8-32 x 5/8"			6016-C .93	6016-M 7.42		
8-32 x 1"	H1086-F	25	6017-C 1.07	6017-M 8.50		
8-32 x 1 1/4"	H1088-F	20	7142-C 1.23	7142-M 9.87		
8-32 x 2"	H1090-F	20	6020-C .95	6020-M 7.63		
10-32 x 1/2"	H1104-F	20	5655-C 1.03	5655-M 8.32		
10-32 x 3/4"			6021-C 1.12	6021-M 8.93		
10-32 x 1"	H1106-F	20	6022-C 1.25	6022-M 10.05		
10-32 x 1 1/2"	H1108-F	15	7143-C 1.65	7143-M 13.22		

**(B) G-C ROUND HEAD MACHINE SCREWS  
BRASS — NOT PLATED**

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted	H1210-F	30				
2-56 x 1/4"			5657-C .67	5657-M \$ 5.32		
2-56 x 1/2"			5658-C .80	5658-M 6.42		
2-56 x 3/8"			5659-C .87	5659-M 6.97		
2-56 x 3/4"			5660-C .93	5660-M 7.50		
3-48 x 3/4"			5661-C 1.05	5661-M 8.33		
4-36 x 1/4"			5662-C .80	5662-M 6.45		
4-36 x 1/2"			5663-C 1.02	5663-M 8.10		
4-36 x 3/8"			5664-C 1.10	5664-M 8.82		
4-36 x 1/2"			5665-C 1.20	5665-M 9.53		
4-40 x 1/4"			5666-C .93	5666-M 7.73		
4-40 x 1/2"			5667-C 1.02	5667-M 8.10		
4-40 x 3/8"			5668-C 1.43	5668-M 12.79		
4-40 x 1/2"			5669-C 1.27	5669-M 10.80		
6-32 x 1/4"			8501-C 1.08	8501-M 8.63		
6-32 x 3/8"			5670-C 1.15	5670-M 9.22		
6-32 x 1/2"			8502-C 1.30	8502-M 10.38		
6-32 x 3/4"			5671-C 1.43	5671-M 11.47		
6-32 x 5/8"			8503-C 1.58	8503-M 12.67		
6-32 x 1"			8504-C 1.88	8504-M 15.00		
6-32 x 1 1/4"			5672-C 2.18	5672-M 17.82		
6-32 x 2"			5673-C 3.68	5673-M 29.40		
8-32 x 1/4"			8505-C 1.60	8505-M 12.78		
8-32 x 3/8"			5674-C 1.68	5674-M 13.43		
8-32 x 1/2"			8506-C 1.92	8506-M 15.37		
8-32 x 3/4"			5675-C 2.12	5675-M 16.92		
8-32 x 5/8"			8507-C 2.35	8507-M 18.75		
8-32 x 1"			8508-C 2.80	8508-M 22.35		
8-32 x 1 1/4"			5676-C 3.28	5676-M 26.25		
10-32 x 1/2"			5677-C 2.43	5677-M 19.50		
10-32 x 3/4"			5678-C 2.70	5678-M 21.67		
10-32 x 1"			5679-C 2.95	5679-M 23.55		
10-32 x 1 1/2"			5680-C 3.52	5680-M 28.08		
10-32 x 2"			5681-C 4.80	5681-M 38.40		

**(C) G-C PHILLIPS TYPE ROUND HEAD MACHINE SCREWS  
STEEL — NICKEL PLATED**

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted	H1180-F	25				
6-32 x 1/4"			8511-C 1.18	8511-M \$ 9.47		
6-32 x 1/2"			8512-C 1.07	8512-M 8.53		
6-32 x 3/8"			5689-C 1.18	5689-M 9.47		
6-32 x 3/4"			8513-C 1.22	8513-M 9.75		
6-32 x 1"			8514-C 1.37	8514-M 10.87		
8-32 x 3/8"			8515-C 1.03	8515-M 8.32		
8-32 x 1/2"			8516-C 1.27	8516-M 10.70		
8-32 x 3/4"			5690-C 1.23	5690-M 9.90		
8-32 x 1"			8517-C 1.33	8517-M 10.65		
8-32 x 1 1/2"			8518-C 1.45	8518-M 13.57		

**(D) G-C BINDING HEAD MACHINE SCREWS  
STEEL — NICKEL PLATED**

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted	H1168-F	35				
5-36 x 1/4"	H1170-F	35	7154-C .53	7154-M \$4.20		
6-32 x 3/8"			7151-C .53	7151-M 4.20		
6-32 x 1/2"	H1172-F	35	7152-C .53	7152-M 4.20		
6-32 x 3/4"			7153-C .57	7153-M 4.50		
7-32 x 3/8"	H1174-F	30	7155-C 1.57	7155-M 12.48		
8-32 x 3/8"			7158-C .87	7158-M 7.41		

**(E) G-C OVAL HEAD RACK AND CABINET SCREWS  
STEEL — NICKEL PLATED**

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted Screws and Washers	H1005-F	15				
6-32 x 1/2"			6540-C .62	6540-M \$4.93		
6-32 x 5/8"			5691-C .87	5691-M 7.43		
6-32 x 3/4"			6541-C .73	6541-M 5.80		
8-32 x 5/8"			5692-C .95	5692-M 7.90		
8-32 x 3/4"			6542-C .93	6542-M 7.42		
10-32 x 1/2"			8848-C 1.17	8848-M 9.30		
10-32 x 5/8"			5693-C 1.03	5693-M 8.32		
10-32 x 3/4"			6543-C 1.12	6543-M 8.93		

**(F) G-C ORNAMENTAL HEAD SCREWS  
STEEL — BRONZE PLATED**

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted	H1250-F	20				
6-32 x 3/4"	H1252-F	25	1097-C 1.28	1097-M \$10.27		
6-32 x 1"	H1253-F	20	1098-C 1.40	1098-M 11.28		
8-32 x 1 1/4"	H1255-F	12	1099-C 1.92	1099-M 15.30		

**(G) G-C WOOD SCREWS  
ROUND HEAD — STEEL — NICKEL PLATED**

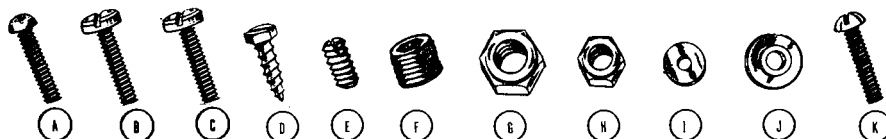
Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted	H1502-F	25				
No. 4 x 1/2"			6114-C .78	6114-M \$ 6.23		
No. 4 x 5/8"			5694-C .90	5694-M 7.33		
No. 4 x 3/4"			6115-C .90	6115-M 7.20		
No. 6 x 3/4"			6116-C .97	6116-M 7.73		
No. 6 x 1"			6117-C 1.20	6117-M 9.57		
No. 8 x 1"			6118-C 1.15	6118-M 9.15		
No. 8 x 3/4"			8071-C 1.58	8071-M 12.68		
No. 8 x 1 1/4"			8073-C 2.12	8073-M 16.95		
No. 10 x 1 1/2"			8075-C 2.70	8075-M 21.60		
No. 12 x 1 1/2"			8076-C 3.80	8076-M 30.45		

**(H) G-C SPADE BOLTS OR MOUNTING SCREWS  
STEEL — NICKEL PLATED**

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted	H1570-F	15				
6-32 6 3/32"			6081-C 1.15	6081-M \$ 9.15		
6-32 6 1/32"			6082-C 1.75	6082-M 14.66		
8-32 8 1/4"			6084-C 2.93	6084-M 23.40		



## ELECTRONIC HARDWARE



DESCRIPTION	100 PACK		1000 PACK	
	Part No.	Net/100	Part No.	Net/1000

**(A) GC-PHILLIPS TYPE  
ROUND HEAD MACHINE SCREWS  
STEEL — NICKEL PLATED**

Machine Screws, Phillips 6-32x $\frac{3}{16}$ "	8510-C	\$1.18	8510-M	\$ 9.47
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**(B) GC-BINDING HEAD MACHINE SCREWS  
STEEL — NICKEL PLATED**

Machine Screws, 2-56x $\frac{1}{4}$ "	7160-C	\$.63	7160-M	\$ 5.33
Machine Screws, 2-56x $\frac{1}{2}$ "	7161-C	.63	7161-M	5.33
Machine Screws, 2-56x $\frac{3}{4}$ "	7162-C	.63	7162-M	5.33
Machine Screws, 4-36x $\frac{1}{4}$ "	7163-C	.63	7163-M	5.33
Machine Screws, 4-36x $\frac{1}{2}$ "	7164-C	.63	7164-M	5.33
Machine Screws, 4-36x $\frac{3}{4}$ "	7165-C	.63	7165-M	5.33
Machine Screws, 4-40x $\frac{1}{4}$ "	7170-C	.63	7170-M	5.33
Machine Screws, 4-40x $\frac{1}{2}$ "	7171-C	.63	7171-M	5.33
Machine Screws, 4-40x $\frac{3}{4}$ "	7172-C	.64	7172-M	5.35
Machine Screws, 6-32x $\frac{3}{4}$ "	7173-C	.72	7173-M	5.62
Machine Screws, 8-32x $\frac{1}{4}$ "	7174-C	.72	7174-M	5.62
Machine Screws, 8-32x $\frac{3}{4}$ "	7175-C	.95	7175-M	7.57
Machine Screws, 10-32x $\frac{1}{2}$ "	7176-C	.99	7176-M	7.70
Machine Screws, 10-32x $\frac{3}{4}$ "	7177-C	1.15	7177-M	9.20

**(C) GC-BINDING HEAD MACHINE SCREWS  
BRASS — NICKEL PLATED**

Machine Screws, 2-56x $\frac{1}{4}$ "	7160-1-C	\$.84	7160-1-M	\$ 6.98
Machine Screws, 2-56x $\frac{1}{2}$ "	7161-1-C	.96	7161-1-M	8.28
Machine Screws, 2-56x $\frac{3}{4}$ "	7162-1-C	1.11	7162-1-M	9.55
Machine Screws, 4-36x $\frac{1}{4}$ "	7163-1-C	.97	7163-1-M	8.32
Machine Screws, 4-36x $\frac{1}{2}$ "	7164-1-C	1.19	7164-1-M	10.18
Machine Screws, 4-36x $\frac{3}{4}$ "	7165-1-C	1.40	7165-1-M	12.05
Machine Screws, 4-40x $\frac{1}{4}$ "	7170-1-C	.97	7170-1-M	8.32
Machine Screws, 4-40x $\frac{1}{2}$ "	7171-1-C	1.19	7171-1-M	10.18
Machine Screws, 4-40x $\frac{3}{4}$ "	7172-1-C	1.40	7172-1-M	12.15
Machine Screws, 5-36x $\frac{1}{4}$ "	7154-1-C	1.40	7154-1-M	12.99
Machine Screws, 6-32x $\frac{3}{16}$ "	7151-1-C	1.34	7151-1-M	11.47
Machine Screws, 6-32x $\frac{1}{4}$ "	7152-1-C	1.27	7152-1-M	10.90
Machine Screws, 6-32x $\frac{3}{8}$ "	7153-1-C	1.35	7153-1-M	11.54
Machine Screws, 6-32x $\frac{1}{2}$ "	7118-1-C	1.51	7118-1-M	12.90
Machine Screws, 6-32x $\frac{3}{4}$ "	7173-1-C	1.83	7173-1-M	15.65
Machine Screws, 8-32x $\frac{1}{4}$ "	7174-1-C	1.85	7174-1-M	15.70
Machine Screws, 8-32x $\frac{3}{8}$ "	7119-1-C	1.94	7119-1-M	16.65
Machine Screws, 8-32x $\frac{1}{2}$ "	7120-1-C	2.20	7120-1-M	18.80
Machine Screws, 8-32x $\frac{3}{4}$ "	7158-1-C	1.88	7158-1-M	16.20
Machine Screws, 8-32x $\frac{3}{4}$ "	7175-1-C	2.70	7175-1-M	23.15
Machine Screws, 10-32x $\frac{1}{2}$ "	7176-1-C	2.54	7176-1-M	21.80
Machine Screws, 10-32x $\frac{3}{4}$ "	7177-1-C	3.43	7177-1-M	29.50

DESCRIPTION	100 PACK		1000 PACK	
	Part No.	Net/100	Part No.	Net/1000

**(D) GC-SHEET METAL SCREWS  
HEX HEAD — SLOTTED — SELF-TAPPING — NICKEL PLATED**

Sheet Metal Screws, No. 4x $\frac{3}{8}$ "	6089-C	\$.77	6089-M	\$ 6.32
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**(E) GC-RADIO KNOB SET SCREWS**

Set Screws, 6-32x $\frac{1}{8}$ "	6071-C	\$1.80	6071-M	\$14.40
Set Screws, 6-32x $\frac{1}{4}$ "	6073-C	1.80	6073-M	14.40
Set Screws, 8-32x $\frac{1}{8}$ "	6074-C	1.80	6074-M	14.40
Set Screws, 8-32x $\frac{1}{2}$ "	6077-C	1.80	6077-M	14.40
Set Screws, 10-32x $\frac{3}{16}$ "	6078-C	1.80	6078-M	14.40

**(F) GC-ALLEN HEX SET SCREWS  
STEEL — HARDENED — HEADLESS**

Hex Set Screws, 6-32x $\frac{1}{8}$ "	7196-C	\$4.93	7196-M	\$39.45
Hex Set Screws, 6-32x $\frac{3}{16}$ "	7197-C	4.93	7197-M	39.45

**(G) GC-HEXAGON NUTS  
STEEL — NICKEL PLATED**

Hex Nuts, Thread 8-32, Width $\frac{5}{16}$ ", Thickness $\frac{1}{8}$ "	7232-C	\$.73	7232-M	\$ 5.85
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**(H) GC-BRASS HEXAGON NUTS  
NOT PLATED**

Hex Nuts, Thread 4-40, Width $\frac{5}{16}$ ", Thickness $\frac{1}{4}$ "	7246-C	\$1.17	7246-M	\$ 9.33
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**(I) GC-FLAT FIBRE WASHERS**

Screw Size No. 4: I.D. .020", O.D. $\frac{1}{4}$ ", Thickness $\frac{1}{32}$ "	6512-C	\$.50	6512-M	\$ 4.08
Screw Size No. $\frac{3}{16}$ ", I.D. .440", O.D. $\frac{3}{4}$ ", Thickness $\frac{1}{32}$ "	6519-C	.83	6519-M	6.63

**(J) GC-EXTRUDED FIBRE WASHERS**

Screw Size No. 4: A- $\frac{3}{32}$ ", B-203, C- $\frac{1}{8}$ ", D-.031	6524-C	\$.87	6524-M	\$ 6.90
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**(K) GC-ROUND HEAD MACHINE SCREWS  
BRASS — NOT PLATED**

Machine Screws, 4-36x $\frac{3}{8}$ "	8509-C	\$.91	8509-M	\$ 7.34
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# RADIO AND TV HARDWARE



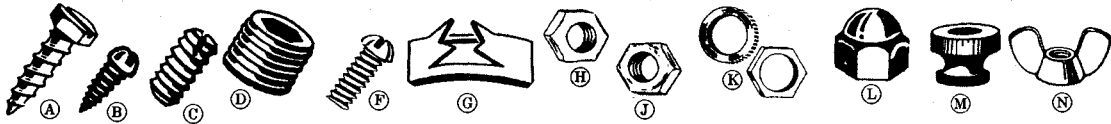
HINGED COVER  
PLASTIC BOXES  
— 50 LINE —  
Dir. Net Price 36c  
Per Box



BOXES OF 100  
Standard Carton  
10 Boxes of 100



BULK  
HARDWARE  
Box of 1000



**(A) G-C SHEET METAL SCREWS**  
HEX HEAD — SLOTTED — SELF-TAPPING — NICKEL PLATED  
POINTED TYPE "A"

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Asstd	H1300-F	25				
Asstd. No. 4 & 6						
Asstd. No. 8 & 10						
No. 4 x 1/2"	H1350-F	35	6090-C \$ .87	6090-M \$ 7.33		
No. 6 x 1/4"	H1362-F	30	6091-C .87	6091-M 7.33		
No. 6 x 3/8"	H1363-F	25	6092-C .90	6092-M 7.66		
No. 6 x 1/2"	H1364-F	25	6093-C .92	6093-M 7.75		
No. 6 x 5/8"			5695-C .95	5695-M 7.57		
No. 6 x 3/4"	H1366-F	20	6094-C 1.00	6094-M 8.16		
No. 8 x 1/4"	H1382-F	20	8102-C 1.00	8102-M 8.03		
No. 8 x 3/8"	H1383-F	20	6095-C 1.05	6095-M 8.33		
No. 8 x 1/2"	H1384-F	20	6096-C 1.08	6096-M 8.63		
No. 8 x 5/8"			5696-C 1.10	5696-M 8.78		
No. 8 x 1"	H1388-F	15	6097-C 1.38	6097-M 11.03		
No. 10 x 3/8"	H1403-F	15	6098-C 1.25	6098-M 10.00		
No. 10 x 1/2"	H1404-F	15	6099-C 1.27	6099-M 10.13		
No. 10 x 3/4"	H1406-F	12	6100-C 1.40	6100-M 11.17		

**(B) G-C ESCUTCHEON PLATE SCREWS**  
ROUND HEAD — SLOTTED — BRONZE PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asstd.	H1500-F	25				
No. 2 x 1/4"			1091-C \$ .87	1091-M \$ 7.08		
No. 2 x 3/8"			1093-C .80	1093-M 6.61		

**(C) G-C RADIO KNOB SET SCREWS**  
SLOTTED — HEADLESS — CUP POINT Standard

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asstd. 6-32, 8-32, 10-32	H1605-F	15				
6-32 x 3/16"	H1623-F	15	6072-C \$1.80	6072-M \$14.40		
8-32 x 3/16"	H1633-F	15	6075-C 1.80	6075-M 14.40		
8-32 x 1/4"	H1634-F	15	6076-C 1.80	6076-M 14.40		
10-32 x 1/4"			6079-C 1.80	6079-M 14.40		

**(D) G-C ALLEN HEX SET SCREWS**  
STEEL — HEADLESS

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asstd. Lengths, 4-36	H1674-F	5				
Asstd. Lengths, 6-32	H1676-F	5				
Asstd. Lengths, 8-32	H1678-F	5				
8-32 x 1/8"			7201-C \$4.93	7201-M \$39.45		
8-32 x 3/16"			7202-C 4.93	7202-M 39.45		

**(F) PHONO CARTRIDGE MOUNTING SCREWS**  
STEEL — NICKEL PLATED

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asstd.	H1560-F	60				
4-36 x 1/4"	H1562-F	40	6005-1C .48	6005-M \$3.87		
4-40 x 1/4"	H1564-F	40	6005-AC .48	6005-AM 3.87		

**(G) G-C TINNEMAN SPEED NUTS**

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asstd.	H1960-F	30				
No. 4			6051-C \$ .93	6051-M \$ 7.70		
No. 6			6052-C .78	6052-M 6.23		
No. 8			6053-C .78	6053-M 6.23		

**(H) G-C HEXAGON NUTS**  
STEEL — NICKEL PLATED

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Assorted	H1800-F	30				
Thread	Width	Thick-ness				
2-56	3/16"	1/16"	H1802-F 30	7225-C \$ .68	7225-M \$ 5.52	
3-48	3/16"	1/16"	H1803-F 30	7226-C .68	7226-M 5.52	
4-36	1/4"	3/32"	H1805-F 30	6041-C .67	6041-M 5.28	
4-40	1/4"	3/32"	H1804-F 30	6041-AC .67	6041-AM 5.28	
5-40	3/8"	7/64"		6045-BC .73	6045-BM 5.82	
6-32	1/4"	3/32"	H1806-F 30	6042-C .68	6042-M 5.52	
6-32	3/16"	7/64"	H1807-F 30	7230-C .73	7230-M 5.82	
8-32	1/4"	3/32"	H1808-F 30	6043-C .73	6043-M 5.85	
8-32	1/2"	1/8"	H1809-F 30	7233-C .73	7233-M 5.85	
10-32	3/8"	5/64"	H1810-F 30	6044-C .97	6044-M 7.68	
10-32	3/8"	1/8"		6049-C .87	6049-M 6.98	
1/4-20	7/16"	3/16"	H1820-F 25	7235-C 1.33	7235-M 10.62	
1/2-32	1/2"	1/16"		7236-C 1.95	7236-M 15.60	
3/8-32	3/8"	3/32"	H1923-F 15	6050-AC 1.47	6050-AM 11.70	
7/16-27	7/16"	1/8"	H1924-F 10	7238-C 3.30	7238-M 26.40	
1/2-32	1/2"	5/64"		6050-BC 1.80	6050-BM 14.40	

**(J) G-C BRASS HEXAGON NUTS**  
NOT PLATED

Thread	Width	Thick-ness	50-Line		
			Part No.	Dir. Net Per 100	
2-56	3/16"	1/16"	7241-C \$ .98	7241-M \$ 7.83	
3-48	3/16"	1/16"	7242-C .90	7242-M 7.13	
4-36	1/4"	3/32"	H1842-F 35	7243-C 1.18	7243-M 9.42
4-40	1/4"	3/32"	H1844-F 25	7244-C 1.17	7244-M 9.33
6-32	1/4"	3/32"	H1846-F 25	7245-C 1.17	7245-M 9.33
6-32	3/16"	7/64"		5697-C 1.40	5697-M 11.18
8-32	1/4"	3/32"		5698-C 1.17	5698-M 9.30
8-32	3/8"	1/8"	H1848-F 15	7248-C 1.40	7248-M 11.18
10-32	3/8"	1/8"	H1850-F 15	7249-C 1.53	7249-M 12.27
1/4-20	7/16"	3/16"		5699-C 3.13	5699-M 25.02

**(K) G-C MOUNTING NUTS**  
STEEL — NICKEL PLATED

Thread	Width	Thick-ness	50-Line		
			Part No.	Dir. Net Per 100	
Assorted			H1920-F	12	
1/2-32 (Rotary Switch Size)	1/2"	1/16"	7236-C	\$1.95	7236-M \$15.60
3/8-32 (Volume Control Size)	3/8"	3/32"	H1923-F 15	6050-AC 1.47	6050-AM 11.70
7/16-27 (Pilot Light Size)	7/16"	1/8"		7238-C 3.30	7238-M 26.40
1/2-32 (Toggle Switch Size)	1/2"	5/64"	H1924-F 10	6050-BC 1.80	6050-BM 14.40
1/2-32 Round Ring Nut (Toggle Switch Size)	1/2"	1/16"	H1926-F 8	6050-CC 3.47	6050-CM 27.78

**(L) G-C ACORN NUTS**  
SOLID BRASS — NICKEL PLATED

Thread	Width	Thick-ness	50-Line		
			Part No.	Dir. Net Per 100	
Assorted			H1950-F	10	
6-32			6031-C	\$2.82	6031-M \$22.50
8-32			6032-C	3.00	6032-M 24.00
10-32			6033-C	3.63	6033-M 29.10

**(M) G-C KNURLED THUMB NUTS**  
BRASS — NICKEL PLATED

Thread	Width	Thick-ness	50-Line			
			Part No.	Dir. Net Per 100		
Assorted			H1941-F	10		
6-32			H1943-F	8	6655-C \$2.27	6655-M \$18.15
8-32			H1944-F	8	6656-C 2.27	6656-M 18.15
10-32			H1945-F	5	6657-C 4.98	6657-M 39.90

**(N) G-C WING NUTS**  
NICKEL PLATED

Thread	Width	Thick-ness	50-Line			
			Part No.	Dir. Net Per 100		
Assorted			H1931-F	10		
6-32			H1933-F	10	6658-C \$3.32	6658-M \$26.52
8-32			H1934-F	10	6659-C 2.45	6659-M 19.65
10-32			H1935-F	8	6660-C 2.73	6660-M 21.90

# GC RADIO AND TV HARDWARE

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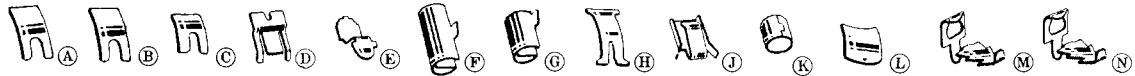
HINGED COVER  
PLASTIC BOXES  
— 50 LINE —  
Dir. Net 36c  
Per Box



BOXES OF 100  
Standard Carton  
10 Boxes of 100



BULK  
HARDWARE  
Box of 1000



## G-C RADIO KNOB SPRINGS

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asst.	H480-F	18				
TV Spring Asst.	H460-F	12				
No. 1050 Kit of 35 Springs						
No. 1051 Kit of 100 Springs						
<b>Width Length For Knob Shaft Dia.</b>						
(A) 1/32" Light	3/16"	1/4"	H482-F	20 6460-C 1.05	6460-M	\$ 8.38
(B) 1/32" Heavy	3/16"	1/4"	H484-F	20 6461-C 1.10	6461-M	8.78
(C) 1/32"	3/16"	1/4"	H487-F	20 6462-C .88	6462-M	7.10

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
(D) 3/8" 3/32" 1/4"	H489-F	10	6463-C	\$1.18	6463-M	\$ 9.40
(E) 7/32" 1/32" 1/4"			6464-C	1.85	6464-M	14.78
(F) 3/32" 9/32" 1/4"	H492-F	8	6465-C	2.35	6465-M	18.83
(G) 3/32" 1/4" 1/4"			6466-C	2.80	6466-M	22.43
(H) 3/32" 1/2" 1/4"			6467-C	1.27	6467-M	10.10
(J) 3/32" 9/8" 1/4"	H494-F	10	6468-C	1.50	6468-M	11.93
(K) 1/32" 1/4" 1/4"			6469-C	2.35	6469-M	18.83
(L) 3/32" 3/8" 1/4"	H497-F	10	6470-C	1.50	6470-M	12.02
(M) 3/8" 7/16" 1/4"	H498-F	10	6471-C	2.55	6471-M	20.40
(N) 3/8" 7/16" 3/8"	H499-F	10	6472-C	2.33	6472-M	18.88
TV Knob Spring .202" Shaft	H462-F	10	8541-C	1.27	8451-M	10.10
TV Knob Spring 3/8" Flat Shaft	H464-F	10	8542-C	1.52	8542-M	12.08



## (A) G-C BRASS EYELETS

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asst. Rivets and Eyelets	H526-F	55				
Asst. Eyelets and Clamps	H744-F	60				
Eyelet Asst.	H510-F	50				
<b>Length</b>						
Shank Dia.	Under Head	Head Dia.				
.087	1/8"	.145	7251-C	\$.28	7251-M	\$ 2.27
.087	3/32"	.145	7252-C	.35	7252-M	2.85
.087	1/32"	.145	7253-C	.47	7253-M	3.20
.087	1/32"	.180	7254-C	1.08	7254-M	8.70
.123	5/32"	.197	7257-C	.50	7257-M	3.98
.123	5/32"	.195	7259-C	.40	7259-M	3.20
.123	1/4"	.195	7260-C	.52	7260-M	4.18
.123	3/32"	.195	7261-C	.53	7261-M	4.25
.125	5/16"	.289	7264-C	.92	7264-M	7.30
.127	5/32"	.222	7265-C	1.12	7265-M	8.93
.182	3/16"	.315	7269-C	.32	7269-M	2.53

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
1/2" 3/16" 1/4" 1/16" 5/16"			5710-C	\$3.80	5710-M	\$34.15
1/2" 1/4" 3/16" 1/8" 3/8"			7566-C	2.45	7566-M	19.53
7/8" 3/16" 1/4" 1/16" 3/4"			5711-C	3.53	5711-M	31.82
3/4" 7/16" 1/4" 1/16" 3/8"			5712-C	5.15	5712-M	41.22
1 1/16" 1/2" 3/32" 1/16" 5/8"	H038-F	8	1043-IC	2.88	1043-IM	26.40
1 1/16" 3/8" 3/16" 1/16" 1 1/16"			7569-C	5.75	7569-M	45.93
3/4" 3/16" 1 1/32" 3/32" 1 1/32"			5715-C	6.80	5715-M	54.36
1 1/8" 3/8" 3/16" 1/16" 7/8"			5716-C	5.73	5716-M	45.90
1 1/16" 1 1/16" 3/8" 3/16" 1"			5717-C	11.55	5717-M	98.46

## (E) G-C PURE GUM GROMMETS SOFT RUBBER GROMMETS FOR SHOCK DAMPENING. FOR MOUNTING TUNING CONDENSERS, SOCKETS, PHONO MOTORS, ETC.

Description & Specs.	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
Asst.	H040-F	12				
No. 7581 Kit of 100						
Asst. Grommets.				\$1.62		
A 3/16" 3/16" 1/4" 1/16" 5/16"	H042-F	12	7582-C	1.62	7582-M	12.90
3/16" 1/4" 1/4" 1/16" 3/8"	H043-F	10	7584-C	2.30	7584-M	18.38

## (F) G-C RADIO KNOB FELTS

3/4" O.D. x 1/4" Hole, Brown	H760-F	40	1065-C	.38	1065-M	3.22
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## (G) G-C RUBBER FEET — Screw Type

O.D.	High	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
3/8"	3/16"	H050-F	8				
1/2"	3/16"	H052-F	8	1075-BC	1.13	1075-BM	7.83
5/8"	1/4"	H054-F	8	1075-CC	1.47	1075-CM	11.70
5/8"	3/8"	H056-F	8	1075-FC	2.22	1075-FM	17.75

## (H) G-C RUBBER BUTTON BUMPERS

A O.D.	B Height	C Hole	E Height	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
3/8"	3/8"	3/16"	3/16"						
1/2"	3/8"	1/4"	1/4"	H058-F	8	7597-C	2.10	7597-M	16.85
5/8"	3/8"	3/8"	3/8"			7598-C	3.38	7598-M	27.10

## (J) G-C RUBBER TACK BUMPERS

3/8" O.D.	H071-F	10	1075-C	1.85	1075-M	14.78
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## (K) G-C FELT PADS

Asstd. Felt Pads	H074-F	40				
1/2" O.D. x 1/4" Thick Felt Pads			1071-C	.30	1071-M	2.38

## (L) G-C CORD STRAIN RELIEFS

Will Fit P.O.S.J. Cord	H048-F	5	6675-C	5.27	6675-M	42.11
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## (M) G-C ANGLES AND BRACKETS

A	B	C	Hole Size	50-Line Part No.	Quan. In Box	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
1/2"	1/8"	3/16"	1/16"	H030-F	16	1041-2C	\$1.12	1041-2M	\$8.93
3/16"	3/16"	3/16"	3/16"	H032-F	14	1041-C	1.27	1041-M	10.08
3/16"	1/4"	1/4"	1/8"	H034-F	12	1042-C	1.68	1042-M	13.50
3/8"	3/8"	1/4"	1/16"	H036-F	10	1043-C	1.90	1043-M	15.15

# GC RADIO AND TV HARDWARE

**GC ELECTRONICS**



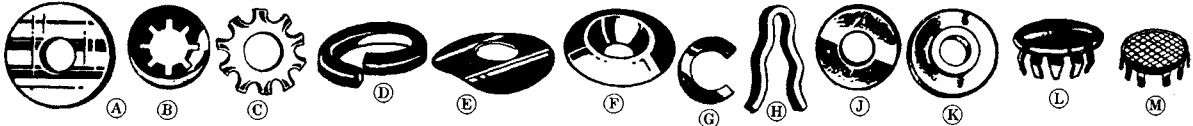
HINGED COVER  
PLASTIC BOXES  
— 50 LINE —  
Dir. Net 36c  
Per Box



BOXES OF 100  
Standard Carton  
10 Boxes of 100



BULK  
HARDWARE  
Box of 1000



**(A) G-C METAL WASHERS  
NICKEL PLATED**

Asstd.		50-Line		Part No.		Dir. Net	
Desc. and Spec.		Part No.	Quan. In Box	No.	Per 100	No.	Per M
Asstd. H870-F 80							
Screw Size	Hole Size	O.D.	Thick-ness				
4	1/16"	3/32"	1/32"	H874-F	80	6154-C	\$ .50
6	3/32"	9/64"	1/32"	H876-F	80	6155-C	\$ .50
8	1/8"	3/16"	1/32"	H878-F	80	6156-C	\$ .50
10	5/32"	7/16"	1/32"	H880-F	70	7306-C	.47
10	15/64"	3/8"	1/32"			7307-C	.47
10	13/64"	1/2"	.049			6157-C	.50
12	.228	1/2"	.021			7308-C	.47
1/4"	9/32"	5/8"	1/16"	H882-F	50	6158-C	.57
1/4"	17/64"	1/2"	1/16"			7311-C	.63
3/16"	3/16"	1/2"	1/16"			7312-C	.58

**(B) G-C LOCK WASHERS  
INTERNAL LOCK WASHERS  
CADMIUM PLATED**

Asstd. All Types		H918-F 45	
Asstd. Internal Screw		H920-F 50	
Screw Size	O.D.		
2		H922-F	35
3		7322-C	\$ .72
4		7323-C	.63
6		7324-C	.45
8		7326-C	.45
10		7328-C	.50
1/4"	3/16"	7330-C	.50
3/8"	1/2"	7332-C	.65
1/2"	5/8"	7333-C	.82
3/8"	1/2"	7334-C	1.10
1/2"	5/8"	7335-C	1.25
3/4"	1 1/8"	7338-C	1.58

**(C) EXTERNAL LOCK WASHERS  
CAD PLATED**

Asstd.		H950-F 60	
No. 4		7354-C	\$ .45
No. 6		7356-C	.45
No. 8		7358-C	.50
No. 10		7360-C	.48
No. 1/4"	1/2"	7361-C	.65
No. 3/8"	1/2"	7363-C	.97

**(D) SPLIT TYPE LOCK WASHERS  
CAD PLATED**

Asstd.		H960-F 60	
Screw Size	O.D. Thick.		
No. 4	3/16"	6503-C	\$ .57
No. 6	1/8"	6504-C	.48
No. 8	1/2"	6505-C	.47
No. 10	3/16"	6506-C	.53
No. 1/4"	3/16"	6507-C	.80

**(E) G-C SPRING FRICTION WASHERS**

Asstd.		H750-F 12	
A	B	C	Thick.
3/64"	3/16"	1/32"	.012
3/16"	3/8"	1/32"	.008
3/16"	3/8"	1/16"	.008
1/4"	3/16"	1/16"	.012

**(F) G-C CUP FINISHING WASHERS  
NICKEL PLATED**

Asstd. Screws & Washers		H1005-F 15	
Asstd. Washers		H805-F 40	
No. 6	H806-F	45	6161-C
No. 8	H808-F	45	6162-C
No. 10	H810-F	35	6163-C

**(G) G-C WASHERS AND RETAINING RINGS  
STEEL-CAD PLATED**

Asstd. C-Washers		H770-F 25	
Shaft		H772-F 15	
Diam. A B C D		H774-F 15	
3/16"	.171	.125	.062
1/4"	.234	.156	.046
1/4"	.260	.187	.062
1/4"	3/32"	O.D. Wire Ring .029	

**(H) G-C HAIR PIN COTTERS**

Asstd.		H380-F 50	
A	B	C	
3/32"	1/16"	.026	7375-C
3/8"	1/8"	.026	7376-C
1/2"	3/8"	.026	7377-C
1/2"	5/8"	.026	7378-C
3/4"	3/4"	.032	7379-C

**(J) G-C FLAT FIBRE WASHERS**

Asstd.		H820-F 35	
Screw Size	I.D. O.D. Thick.		
6	.140	1/4"	1/32"
8	11/64"	3/8"	1/32"
10	.196	3/8"	1/32"
1/4"	1/4"	1/2"	3/64"
3/8"	.390	2 3/8"	3/64"
1/2"	1 1/2"	1 3/4"	3/32"

**(K) G-C EXTRUDED FIBRE WASHERS**

Asstd. Extruded & Flat		H854-F 30	
Asstd. Extruded		H855-F 30	
Screw Size	A B C D		
6	5/16"	.187	.140
8	3/8"	.250	.169
10	7/16"	.255	.196
1/4"	1/2"	.375	.250
3/8"	5/8"	.437	.380

**(L) G-C SNAP BUTTON HOLE PLUGS  
NICKEL PLATED**

Asstd.		H300-F 8	
No. 1710 Asst. 50 Plugs in Box Dir. Net \$3.05			
1/4"	1 3/4"	1/4"	1 7/8"
3/8"	1 3/4"	1/4"	2 1/8"
1/2"	1 3/4"	3/8"	2 1/8"
3/4"	1 3/4"	1/2"	2 1/8"
1"	1 3/4"	3/4"	2 1/8"
1 1/8"	1 3/4"	1 1/8"	2 1/8"
1 1/4"	1 3/4"	1 1/4"	2 1/8"
1 1/2"	1 3/4"	1 1/2"	2 1/8"
1 3/4"	1 3/4"	1 3/4"	2 1/8"
2"	1 3/4"	2"	2 1/8"
2 1/4"	1 3/4"	2 1/4"	2 1/8"
2 1/2"	1 3/4"	2 1/2"	2 1/8"
2 3/4"	1 3/4"	2 3/4"	2 1/8"
3"	1 3/4"	3"	2 1/8"

**(M) G-C SNAP-IN VENTILATING PLUGS  
NICKEL PLATED**

1" Punched Holes	H334-F	4	1709-C	\$ 8.10	1709-M	\$65.16
1" Screen Vent			1708-C	21.38	1708-M	170.99



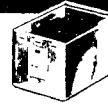
# RADIO AND TV HARDWARE



HINGED COVER  
PLASTIC BOXES  
— 50 LINE  
Dir. Net 36c  
Per Box



BOXES OF 100  
Standard Carton  
10 Boxes of 100



BULK  
HARDWARE  
Box of 1000



## G-C SNAP-IN TRIMOUNTS

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
No. 1720 Asst. 100 Trimounts Net Price ..... \$ .82 Assorted			H370-F	20		
<b>To Fit Hole</b>	<b>A</b>	<b>B</b>				
1/8"	3/32"	3/16"			1721-C \$1.13	1721-M \$ 9.60
1/8"	3/32"	13/64"	H373-F	25	1722-C 1.20	1722-M 9.90
.136	1/32"	1/16"			1723-C 1.38	1723-M 11.10
.136	23/64"	23/64"	H375-F	20	1724-C 1.45	1724-M 11.63
3/32"	3/16"	23/64"	H378-F	17	1726-C 1.77	1726-M 14.10
3/32"	3/16"	23/64"	H379-F	15	1727-C 1.77	1727-M 14.10



## G-C DIAL CORD CLIPS NICKEL PLATED

Description & Specs.	50-Line		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
	Part No.	Quan. In Box				
Used on Cord No. A B C			H745-F	30		
75-75A 1/8" 7/64" 3/32"			H746-F	40	6221-C \$ .68	6221-M \$ 5.43
74-74L 1/4" 5/32" 3/32"					6222-C .77	6222-M 6.08
73-73X 3/16" 3/64" 3/16"					6223-C .78	6223-M 6.30



## G-C FUSE CLIPS

For 1/4" Fuses, No. 6  
Mounting Hole TV Fuse  
Clip, No. 8618  
(\$ .25) Net

Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
H600-F 12	6311-C \$1.85	6311-M	\$14.82



## G-C SOLDERING LUGS TINNED

No. 1020, 100 Asst. Dir. Net ..... \$ .67 Assorted		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
No. 6, 5/8" Length (A)	H100-F 30				
No. 6, 23/32" Length (B)		8467-C 2.82	8467-M 22.50		
No. 8, 23/32" Length (B)		8468-C 2.65	8468-M 21.15		
No. 6, 23/32" Length (C)	H104-F 25	1021-BC 1.05	1021-BM 8.40		
No. 8, 23/32" Length (C)	H106-F 25	7445-C 1.20	7445-M 9.57		
No. 10, 23/32" Length (C)		8473-C 1.17	8473-M 9.30		
No. 6, 1/2" Length (D)		5708-C 1.68	5708-M 13.50		
No. 8, 1/2" Length (D)		5704-C 1.68	5704-M 13.50		
No. 10, 1/2" Length (D)		5705-C 1.68	5705-M 13.50		
No. 6, 1/4" Length (E)	H108-F 30	1021-CC .93	1021-CM 8.08		
No. 6, 1/4" Length (E)	H112-F 30	1021-FC .92	1021-FM 7.38		
No. 8, 1/4" Length (E)	H113-F 30	7451-C .87	7451-M 6.98		

No. 6, 1" Length (F)	H114-F 25	7454-C \$ .67	7454-M \$ 5.33
No. 8, 1" Length (F)	H117-F 25	7455-C .86	7455-M 6.50
No. 10, 1" Length (F)	H118-F 25	7456-C .86	7455-M 6.50
No. 4, 13/16" Length (G)		7458-C 1.85	7458-M 14.85
No. 8, 13/16" Length (G)		7460-C 1.87	7460-M 14.88
No. 10, 13/16" Length (G)		7461-C 1.87	7461-M 14.88
No. 6, 5/8" Length (H)	H122-F 20	7462-C 1.07	7462-M 8.52
No. 8, 5/8" Length (H)		7463-C 1.07	7463-M 8.52
No. 4, 7/8" Length (E)		5706-C 1.68	5706-M 13.50
No. 8, 7/8" Length (E)		5707-C 1.68	5707-M 13.50
No. 6, 7/8" Length (E)		5708-C 1.68	5708-M 13.50
No. 6, 1/2" Length (J)	H124-F 25	7441-C 1.18	7441-M 9.45
No. 8, 1/2" Length (J)	H134-F 25	7442-C 1.13	7442-M 9.12
No. 10, 1/2" Length (J)	H102-F 25	1021-AC 1.13	1021-AM 9.12
Solderless TV Line Lug (K)	H225-F 10	8633-C 1.65	8633-M 13.13



## G-C FAHNESTOCK CLIPS NICKEL PLATED

Assorted	L	W	Hole	Wire	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
(A) 1/2"	7/32"	4	16		H592-F 15	6301-C 1.50	6301-M \$13.05	
(B) 3/4"	5/16"	6	14		H594-F 14	6302-C 1.73	6302-M 13.98	
(C) 1 1/8"	3/8"	8	10			6303-C 2.97	6303-M 23.85	
(D) 1 1/2"	5/16"	6	10			6304-C 11.02	6304-M 98.06	
(E) 3/4"	5/16"	6	14			6306-C 4.03	6306-M 32.28	



## G-C CABLE HOLDER CLAMPS NICKEL PLATED

Assorted	Mounting Hole	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
		H500-F	20		
1/8" to 3/8"	No. 6	H502-F 25	6251-C \$ .98	6251-M	\$ 7.83
3/8" to 1/4"	No. 6	H503-F 20	6252-C 1.12	6252-M	8.88
1/4" to 3/8"	No. 6		7503-C 1.73	7503-M	13.80
3/8" to 1/2"	No. 6	H506-F 15	6253-C 1.27	6253-M	10.13
Baseboard Clips Blk.		H509-F 20	8345-C 2.07	8345-M	16.17



## G-C TERMINAL STRIP ASSORTMENT 1/16" INSULATION — 3/8" SPACING

Assorted	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
1 Lug	H250-F 4	1781-C \$ 2.70		
2 Lugs		1782-C 2.70		
3 Lugs		1783-C 2.82		
4 Lugs		1784-C 3.90		
5 Lugs		1785-C 4.50		
6 Lugs		1786-C 4.80		
7 Lugs		1787-C 8.70		
8 Lugs		1788-C 9.60		



## G-C COMPRESSION SPRINGS

Asst. Small	H440-F 20		
Asst. Large	H441-F 15		

## G-C DIAL DRIVE TENSION PHONO SPRINGS STEEL CAD. PLATED

Asst. Reg. Dial Drive		Asst. Small Dial Drive							
No. 1055 Kit of 25 Asst. Net ..... \$1.23									
	H401-F	8							
No. 1056 Kit of 100 Asst. Net ..... \$3.57									
	H400-F	10							
Asst. Lge. Tension Spgs.		H421-F	10						
Asst. Sm. Tension Spgs.		H420-F	10						
A	B	C	Wire Old Size No	Part No.	Quan. In Bx	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
1/8"	1/2"	1/4"	.019 T1	H403-F	10	6450-C \$ 5.03	6450-M \$40.33		
1/8"	1"	3/4"	.019 T2	H406-F	8	6451-C 3.78	6451-M 30.30		
3/8"	1"	5/8"	.020 T3	H408-F	8	6452-C 4.23	6452-M 33.82		
3/8"	1 3/8"	1"	.020 T4	H410-F	8	6453-C 4.33	6453-M 34.72		
1/4"	1 1/2"	1"	.026 T5	H412-F	6	6454-C 5.60	6454-M 44.85		
1/4"	2"	1 1/2"	.026 T6			6455-C 6.92	6455-M 55.35		



## G-C PHONO TURNTABLE MOUNTING SPRINGS

O.D.	Lgth.	Wire No. of Size Coils	Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
1"x1/16"	1 3/16"	.079 4	7497-C	\$ 3.17	7497-M	\$25.35



## G-C DIAL PULLEYS BRASS

Assorted		(Groove D Wd.)		Part No.	Dir. Net Per 100	Part No.	Dir. Net Per M
3/8"	.120	1/8"	3/32"	6057-AC	4.62	6057-AM	36.97
3/8"	.067	1/4"	1/8"	6057-BC	6.85	6057-BM	54.88
1/2"	1/8"	3/8"	3/32"	6057-GC	8.48	6057-GM	67.93
.620	.128	.165	1/4"	6057-CC	9.35	6057-CM	74.76
.860	.128	3/32"	.050	6057-FC	16.05	6057-FM	128.34

# WALDOM Electronic Hardware

## ROUND HEAD STEEL MACHINE SCREWS

Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-579	2-56 x 1/8"	.64	4.70	3.59
F-461	2-56 x 1/4"	.47	3.54	2.70
F-462	2-56 x 1/2"	.50	3.85	2.94
F-463	2-56 x 3/4"	.58	4.47	3.41
F-464	3-48 x 3/4"	.58	4.47	3.41
F-465	4-36 x 1/4"	.50	3.85	2.94
F-466	4-36 x 3/8"	.52	4.03	3.08
F-467	4-36 x 1/2"	.54	4.18	3.19
F-580	4-36 x 5/8"	.57	4.51	3.44
F-468	4-36 x 3/4"	.64	5.00	3.81
F-469	4-40 x 1/4"	.50	3.85	2.94
F-581	4-40 x 3/8"	.52	4.03	3.07
F-470	4-40 x 1/2"	.54	4.18	3.19
F-582	4-40 x 5/8"	.57	4.54	3.44
F-471	4-40 x 3/4"	.64	5.00	3.81
F-472	6-32 x 1/4"	.53	4.25	3.24
F-583	6-32 x 3/8"	.57	4.50	3.43
F-473	6-32 x 1/2"	.62	4.92	3.75
F-584	6-32 x 5/8"	.68	5.41	4.13
F-474	6-32 x 3/4"	.72	5.87	4.48
F-475	6-32 x 1"	.83	6.64	5.07
F-476	6-32 x 1-1/4"	1.00	8.04	6.13
F-477	6-32 x 2"	1.50	12.06	9.20
F-478	8-32 x 1/4"	.70	5.58	4.26
F-479	8-32 x 3/8"	.78	6.15	4.69
F-480	8-32 x 1/2"	.82	6.56	5.00
F-585	8-32 x 5/8"	.87	6.97	5.32
F-481	8-32 x 3/4"	.93	7.38	5.63
F-482	8-32 x 1"	1.07	8.50	6.48
F-483	8-32 x 1-1/4"	1.23	9.95	7.59
F-484	10-32 x 1/2"	.95	7.54	5.75
F-586	10-32 x 5/8"	1.03	8.20	6.26
F-485	10-32 x 3/4"	1.12	8.98	6.85
F-486	10-32 x 1"	1.25	9.92	7.57
F-487	10-32 x 1-1/2"	1.65	13.12	10.01
F-587	12-24 x 3/4"	1.49	12.22	9.32
F-588	12-24 x 1"	1.73	14.60	11.14
F-589	12-24 x 1-1/2"	2.30	18.86	14.39
F-590	12-24 x 2"	2.71	22.22	16.95
F-488	1/4-20 x 1/2"	1.81	14.84	11.32
F-489	1/4-20 x 3/4"	2.06	16.89	12.88
F-490	1/4-20 x 1"	2.35	19.27	14.69
F-491	1/4-20 x 1-1/4"	2.67	21.89	16.70
F-492	1/4-20 x 1-3/4"	3.24	26.57	20.27
F-493	1/4-20 x 2-1/2"	4.08	33.40	25.53

## BRASS ROUND HEAD MACHINE SCREWS

Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-461B	2-56 x 1/4"	.70	5.49	4.19
F-462B	2-56 x 1/2"	.80	6.45	4.92
F-463B	2-56 x 3/4"	.93	7.63	5.82
F-464B	3-48 x 3/4"	1.05	8.61	6.57
F-465B	4-36 x 1/4"	.80	6.45	4.92
F-466B	4-36 x 3/8"	1.02	8.10	6.18
F-467B	4-36 x 1/2"	1.12	8.36	6.38
F-580B	4-36 x 5/8"	1.20	9.02	6.88
F-468B	4-36 x 3/4"	1.27	9.84	7.51
F-469B	4-40 x 1/4"	.80	6.45	4.92
F-470B	4-40 x 1/2"	1.02	8.10	6.18
F-582B	4-40 x 5/8"	1.20	9.02	6.88
F-471B	4-40 x 3/4"	1.27	9.84	7.51
F-472B	6-32 x 1/4"	1.08	8.63	6.58
F-583B	6-32 x 3/8"	1.15	9.22	7.03
F-473B	6-32 x 1/2"	1.30	10.38	7.92
F-584B	6-32 x 5/8"	1.51	11.47	8.75
F-474B	6-32 x 3/4"	1.58	12.76	9.67

## BRASS ROUND HEAD MACHINE SCREWS

(Continued)

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-475B	6-32 x 1"	1.88	15.00	11.44
F-476B	6-32 x 1-1/4"	2.18	17.82	13.18
F-477B	6-32 x 2"	3.68	29.40	22.43
F-478B	8-32 x 1/4"	1.69	13.12	10.01
F-479B	8-32 x 3/8"	1.68	13.43	10.25
F-480B	8-32 x 1/2"	1.92	15.37	11.73
F-585B	8-32 x 5/8"	2.24	17.36	13.25
F-481B	8-32 x 3/4"	2.35	18.75	14.30
F-482B	8-32 x 1"	2.80	22.35	17.05
F-483B	8-32 x 1-1/4"	3.28	26.25	20.03
F-484B	10-32 x 1/2"	2.43	19.50	14.88
F-586B	10-32 x 5/8"	2.70	21.67	16.53
F-485B	10-32 x 3/4"	2.95	23.55	17.97
F-486B	10-32 x 1"	3.52	28.08	21.42
F-487B	10-32 x 1-1/2"	4.80	39.36	30.03

## BINDER HEAD STEEL MACHINE SCREWS

Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-591	2-56 x 1/8"	.64	4.70	3.59
F-592	2-56 x 1/4"	.47	3.54	2.70
F-593	2-56 x 1/2"	.50	3.85	2.94
F-594	2-56 x 5/8"	.58	4.43	3.38
F-020	4-40 x 1/4"	.50	3.85	2.94
F-021	4-40 x 1/2"	.54	4.18	3.19
F-022	4-40 x 3/4"	.64	5.00	3.81
F-502	6-32 x 3/16"	.55	4.26	3.25
F-503	6-32 x 1/4"	.53	4.25	3.24
F-504	6-32 x 3/8"	.57	4.50	3.43
F-014	6-32 x 1/2"	.62	4.92	3.75
F-015	6-32 x 3/4"	.72	5.87	4.48
F-621	6-32 x 5/8"	.68	5.41	4.13
F-023	8-32 x 1/4"	.70	5.55	4.23
F-505	8-32 x 5/16"	.78	6.15	4.69
F-024	8-32 x 3/8"	.78	6.15	4.69
F-025	8-32 x 1/2"	.82	6.56	5.00
F-026	8-32 x 3/4"	.93	7.38	5.63
F-577	10-32 x 1/2"	.95	7.54	5.75
F-578	10-32 x 3/4"	1.12	8.98	6.85

## BINDER HEAD BRASS MACHINE SCREWS

Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-503B	6-32 x 1/4"	1.08	8.63	6.58
F-504B	6-32 x 3/8"	1.15	9.22	7.03
F-014B	6-32 x 1/2	1.30	10.38	7.92
F-015B	6-32 x 3/4"	1.58	12.67	9.67
F-023B	8-32 x 1/4"	1.60	13.12	10.01
F-024B	8-32 x 3/8"	1.68	13.43	10.25
F-025B	8-32 x 1/2"	1.92	15.37	11.73
F-026B	8-32 x 3/4"	2.35	18.75	14.30

## FILLISTER HEAD STEEL MACHINE SCREWS

Cadmium Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-606	2-56 x 1/4"	.47	3.54	2.70
F-607	2-56 x 1/2"	.50	3.85	2.94
F-608	4-40 x 1/4"	.50	3.85	2.94
F-609	4-40 x 1/2"	.54	4.18	3.19
F-610	4-40 x 3/4"	.64	5.00	3.81
F-611	6-32 x 1/4"	.53	4.25	3.24
F-612	6-32 x 1/2"	.62	4.92	3.75
F-613	6-32 x 3/4"	.72	5.87	4.48
F-614	8-32 x 3/8"	.78	6.15	4.69
F-615	8-32 x 1/2"	.82	6.56	5.00
F-616	8-32 x 3/4"	.93	7.38	5.63
F-617	10-32 x 1/2"	.95	7.54	5.75
F-618	10-32 x 3/4"	1.12	8.98	6.85

## OVAL HEAD STEEL MACHINE SCREWS

Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-506	6-32 x 1/2"	.62	4.92	3.75
F-507	6-32 x 3/4"	.72	5.87	4.48
F-508	8-32 x 3/4"	.93	7.38	5.63
F-509	10-32 x 1/2"	.95	7.54	5.75
F-510	10-32 x 3/4"	1.12	8.98	6.85

## PHILLIPS HEAD ROUND STEEL M.S.

Cadmium Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-494	6-32 x 1/4"	1.18	9.35	7.13
F-018	6-32 x 5/16"	1.18	9.51	7.26
F-495	6-32 x 1/2"	1.07	8.61	6.57
F-496	6-32 x 3/4"	1.22	9.68	7.39
F-497	6-32 x 1"	1.37	10.91	8.32
F-019	8-32 x 1/4"	1.30	10.66	8.13
F-498	8-32 x 5/16"	1.03	8.20	6.26
F-499	8-32 x 1/2"	1.22	9.75	7.44
F-500	8-32 x 3/4"	1.33	10.58	8.07
F-501	8-32 x 1"	1.48	12.14	9.26

## SLOTTED HEX HEAD SHEET METAL SCREWS

(Type A)

Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-016	4 x 3/8"	.77	6.25	4.77
F-523	4 x 1/2"	.82	6.72	5.13
F-524	6 x 1/4"	.87	7.25	5.53
F-525	6 x 3/8"	.89	7.30	5.57
F-526	6 x 1/2"	.94	7.75	5.91
F-595	6 x 5/8"	.95	7.80	5.95
F-527	6 x 3/4"	1.00	7.95	6.06
F-528	8 x 1/4"	1.00	7.95	6.06
F-529	8 x 3/8"	1.05	8.36	6.38
F-530	8 x 1/2"	1.08	8.61	6.57
F-017	8 x 5/8"	1.10	8.77	6.69
F-531	8 x 1"	1.41	11.13	8.49
F-532	10 x 3/8"	1.17	9.35	7.13
F-533	10 x 1/2"	1.27	10.09	7.70
F-534	10 x 3/4"	1.40	11.15	8.51

## HEX WASHER HEAD SHEET METAL SCREW

(Type A)

Steel-Indented Slotted Head  
Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-060	4 x 3/8"	.81	6.51	4.97
F-061	4 x 1/2"	.86	7.05	5.38
F-056	6 x 1/4"	.91	7.38	5.63
F-057	6 x 3/8"	.94	7.75	5.91
F-050	6 x 1/2"	.99	7.89	6.02
F-058	6 x 5/8"	1.02	8.36	6.38
F-054	6 x 3/4"	1.07	8.77	6.69
F-051	8 x 1/4"	1.07	8.77	6.69
F-052	8 x 3/8"	1.12	9.18	7.00
F-053	8 x 1/2"	1.16	9.51	7.13
F-055	8 x 5/8"	1.18	9.68	7.39
F-059	8 x 3/4"	1.32	10.82	8.26

## PAN HEAD SHEET METAL SCREWS

(Type A)

Nickel Plated

	PKG. OF 100	1000- 4999 PER M	5000 OVER PER M	
F-596	4 x 1/2"	.77	6.25	4.77
F-033	6 x 1/4"	.82	6.72	5.13
F-597	6 x 3/8"	.84	6.89	5.26
F-034	6 x 1/2"	.89	7.30	5.57
F-035	6 x 3/4"	.97	7.85	5.99
F-036	8 x 1/4	.97	7.85	5.99
F-598	8 x 3/8"	1.02	8.25	6.29
F-037	8 x 1/2"	1.05	8.36	6.38
F-038	8 x 1"	1.34	10.99	8.38



# WALDOM Electronic Hardware

**ROUND HEAD STEEL WOOD SCREWS**  
Nickel Plated

	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
F-514 4 x 1/2"	.78	6.26	4.78
F-515 4 x 3/4"	.90	7.23	5.52
F-516 6 x 3/4"	.97	7.76	5.92
F-517 6 x 1"	1.20	9.60	7.32
F-518 8 x 3/4"	1.15	9.18	7.00
F-047 8 x 1"	1.33	11.07	8.45
F-519 8 x 1-1/4"	1.58	12.72	9.70
F-520 10 x 1-1/2"	2.12	16.99	12.96
F-521 12 x 1-1/2"	2.70	21.67	16.53
F-522 14 x 1-3/4"	3.80	30.53	23.29



**FLAT HEAD STEEL WOOD SCREWS**  
Cadmium Plated

	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
F-027 4 x 1/2"	.78	6.26	4.78
F-028 4 x 3/4"	.90	7.23	5.52
F-029 6 x 3/4"	.97	7.76	5.92
F-030 6 x 1"	1.20	9.60	7.32
F-031 8 x 3/4"	1.15	9.18	7.00
F-048 8 x 1"	1.35	11.07	8.45
F-032 8 x 1-1/4"	1.58	12.72	9.70
F-044 10 x 1-1/2"	2.12	16.99	12.96
F-045 12 x 1-1/2"	2.70	21.67	16.53
F-046 14 x 1-3/4"	3.80	30.53	23.29



**HEX STEEL NUTS**  
Nickel Plated

Thrd.	Width	Thk.	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
F-554	2-56 x 3/16 x 1/16"	.68	5.41	4.13	
F-555	3-48 x 3/16 x 1/16"	.68	5.41	4.13	
F-556	4-36 x 1/4 x 3/32"	.67	5.33	4.07	
F-557	4-40 x 1/4 x 3/32"	.67	5.33	4.07	
F-559	6-32 x 1/4 x 3/32"	.67	5.33	4.07	
F-560	6-32 x 5/16 x 7/64"	.73	5.82	4.44	
F-561	8-32 x 1/4 x 3/32"	.67	5.33	4.07	
F-562	8-32 x 5/16 x 7/64"	.73	5.82	4.44	
F-563	10-32 x 3/8 x 1/8"	.85	6.80	5.19	
F-619	12-24 x 7/16 x 5/32"	1.13	9.27	7.07	
F-564	1-1/4-20 x 7/16 x 3/16"	1.22	9.76	7.44	
F-565	3/8-32 x 1/2 x 3/32"	1.47	12.05	9.19	



**HEX BRASS NUTS**  
Nickel Plated

Thrd.	Width	Thk.	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
F-554B	2-56 x 3/16 x 1/16"	.98	7.86	6.00	
F-555B	3-48 x 3/16 x 1/16"	.89	7.18	5.48	
F-556B	4-36 x 1/4 x 3/32"	1.18	9.45	7.21	
F-557B	4-40 x 1/4 x 3/32"	1.17	9.36	7.14	
F-559B	6-32 x 1/4 x 3/32"	1.16	9.33	7.12	
F-560B	6-32 x 5/16 x 7/64"	1.40	11.26	8.59	
F-561B	8-32 x 1/4 x 3/32"	1.16	9.33	7.12	
F-562B	8-32 x 5/16 x 1/8"	1.40	11.26	8.59	
F-563B	10-32 x 3/8 x 1/8"	1.53	12.32	9.40	



**STEEL LOCK WASHERS - (INTERNAL AND EXTERNAL)**  
Cadmium Plated

INTERNAL Screw Size	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
MW-416 #4	.44	2.88	2.00
MW-417 #6	.44	2.88	2.00
MW-418 #8	.48	2.98	2.07
MW-419 #10	.48	2.98	2.07
MW-420 1/4	.63	4.04	2.80
MW-421 3/8	.94	7.10	4.93

EXTERNAL Screw Size	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
MW-422 #4	.44	2.88	2.00
MW-423 #6	.44	2.88	2.00
MW-424 #8	.48	2.98	2.07
MW-425 #10	.48	2.98	2.07
MW-426 1/4	.63	4.04	2.80
MW-427 3/8	.94	7.10	4.93



**STEEL CUP WASHERS**  
Nickel Plated

	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
CW-6 For #6 Oval Head or Flat Head Screws	.46	3.78	2.88
CW-8 For #8 Oval Head or Flat Head Screws	.49	4.05	3.09
CW-10 For #10 Oval or Flat Head Screws	.55	4.35	3.32



**FLAT STEEL WASHERS**  
Nickel Plated

Screw Size	I.D.	O.D.	Thick.	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
MW-400 #2 .092" 7/32" .018"	.43	3.55	2.71			
MW-401 #4 .125" 9/32" .025"	.33	2.75	2.10			
MW-402 #6 .150" 3/8" .032"	.33	2.75	2.10			
MW-403 #8 .170" 3/8" .032"	.33	2.75	2.10			
MW-404 #10 .204" 3/8" .032"	.37	3.12	2.38			
MW-408 1/4 .281" 5/8" .050"	.67	5.33	4.07			
MW-410 3/8 .392" 11/16" .050"	.70	5.63	4.30			



**FLAT BRASS WASHERS**  
Nickel Plated

Screw Size	I.D.	O.D.	Thick.	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
MW-400B #2 .092" 7/32" .018"	.45	3.70	2.82			
MW-401B #4 .125" 9/32" .025"	.47	3.85	2.94			
MW-402B #6 .150" 3/8" .032"	.62	4.92	3.75			
MW-403B #8 .170" 3/8" .032"	.62	4.92	3.75			
MW-404B #10 .204" 3/8" .032"	.67	5.33	4.07			



**Insulating Fibre Washers** - Precision made insulating washers, both flat and extruded, for insulation of components and controls from chassis or from each other.

**FLAT**

Screw Size	I.D.	O.D.	Thick.	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
FW-374 #4 .020" 1/4" 1/32"	.44	3.60	2.75			
FW-375 #6 .145" 1/4" 1/32"	.44	3.60	2.75			
FW-376 #8 3/16" 3/8" 1/32"	.47	3.85	2.94			
FW-377 #10 .192" 3/8" 1/32"	.47	3.85	2.94			
FW-378 1/4 .255" 1/2" 3/64"	.52	4.03	3.07			
FW-379 3/8 3/8" 5/8" 3/64"	.77	6.15	4.69			
FW-380 7/16 .440" 3/4" 1/32"	.83	6.75	5.15			

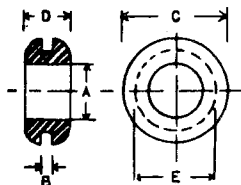


**EXTRUDED**

Screw Size	A	B	C	D	E	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
FW-384 #4 9/32" 13/64" 1/8" 1/32" 5/64"	.87	6.89	5.26					
FW-385 #6 5/16" 7/32" 9/64" 1/32" 5/64"	.87	6.89	5.26					
FW-386 #8 3/8" 1/4" 11/64" 1/32" 3/32"	.87	6.89	5.26					
FW-387 #10 7/16" 9/32" 13/64" 1/32" 3/32"	.95	7.54	5.75					
FW-388 1/4" 1/2" .375" .296" 1/32" 3/32"	.95	7.54	5.75					
FW-389 3/8" 5/8" .437" .375" 1/32" 3/32"	.98	7.79	5.94					



**VINYL GROMMETS**



- Exceptional Aging Qualities\*
- High Dielectric Properties
- Oil Resistant
- Durometer Hardness 45 to 85
- Cost Less Than Rubber
- Will Not Stain Most Surfaces

\*These grommets were tested by Underwriters Laboratories in a circulating air oven at 212 degree F. for seven days with no visible change.

Cat. No.	A	B	C	D	E	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
G-401 1/8 1/16 11/32 3/16 1/4	.90	7.40	5.65					
G-402 3/16 1/16 7/16 7/32 5/16	.99	8.25	6.29					
G-403 1/4 1/16 9/16 1/4 3/8	1.32	9.51	7.26					
G-404 5/16 1/16 5/8 1/4 7/16	1.44	10.17	7.76					
G-405 3/8 1/16 5/8 1/4 1/2	1.44	10.17	7.76					
G-406 1/2 1/16 13/16 9/32 5/8	2.27	17.71	13.51					
G-407 5/8 1/16 1-1/8 9/32 7/8	3.71	30.42	23.21					

**WALDOM RUBBER GROMMETS** - A complete selection of highest quality rubber grommets for use in protecting insulation from raw edges of chassis hole, shock and vibration dampening. For mounting tuning condensers, sockets, phono motors, chassis, etc.



	A	B	C	D	E	PKG. OF 100	1000-4999 PER M	5000 OVER PER M
G-300 11/32" 1/8" 3/16" 1/16" 1/4"	1.44	11.46	8.74					
G-301 9/16" 5/16" 3/16" 1/16" 15/32"	1.46	11.64	8.88					
G-302 11/16" 3/8" 9/32" 1/16" 1/2"	2.26	18.53	14.14					
G-305 7/16" 3/16" 7/32" 1/16" 5/16"	1.48	11.81	9.01					
G-307 3/4" 7/16" 1/4" 3/64" 19/32"	2.50	21.50	15.64					
G-309 5/8" 1/32" 5/16" 1/16" 15/32"	1.53	12.25	9.35					
G-311 1-1/8" 5/8" 5/16" 1/16" 7/8"	5.54	45.43	34.66					

**Nylon and Ethyl Cellulose Cable Clamps**

These clamps combine lightweight and chemical resistance with excellent shock resisting properties in a temperature range of from 185° F. to -40° F. in the Ethyl Cellulose and 300° F. to -60° F. in the Nylon.

Approved 7-21-44 Army-Navy Aeronautical AN742.

- OPENS EASILY FOR FAST ASSEMBLY - ONE NAIL INSTEAD OF TWO
- FORM STABILITY AT HIGH TEMPERATURES • ECONOMY
- ABRASION AND MOISTURE RESISTANCE • CHEMICAL RESISTANCE
- LIGHTNESS IN WEIGHT • TOUGHNESS AND RESILIENCY
- GOOD ELECTRICAL PROPERTIES • STRENGTH AND DURABILITY

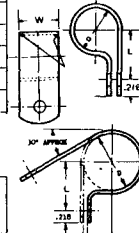
**NYLON CABLE CLAMPS**

Cat. No.	For Use With Rod O.D.	Dia.	Width	Length	Mat. Thick.	PKG. OF 100	1000-4999 PER M
CCN-31 1/8" .125" 3/8" 0.328 .050	2.85	24.30					
CCN-32 3/16" .188" 3/8" 0.390 .050	3.00	25.72					
CCN-33 1/4" .250" 3/8" 0.421 .050	3.30	28.12					
CCN-34 5/16" .313" 3/8" 0.453 .050	3.66	31.06					
CCN-35 3/8" .375" 3/8" 0.483 .050	3.89	32.65					
CCN-36 7/16" .438" 3/8" 0.531 .050	4.05	34.53					
CCN-37 1/2" .500" 3/8" 0.562 .050	4.30	36.75					
CCN-38 9/16" .563" 1/2" 0.625 .060	5.32	45.37					
CCN-39 5/8" .625" 1/2" 0.610 .060	6.24	53.16					



**ETHYL CELLULOSE PLASTIC CLAMPS** - Width 3/8"

Cat. No.	For Use With Rod O.D.	Dia.	Length	Mat. Thick.	PKG. OF 100	1000-4999 PER M
CCE-1 1/8" .125" 0.328 .063	1.87	16.03				
CCE-2 3/16" .188" 0.390 .063	1.89	16.14				
CCE-3 1/4" .250" 0.421 .063	1.87	17.79				
CCE-4 5/16" .313" 0.453 .063	2.30	19.63				
CCE-5 3/8" .375" 0.483 .063	2.41	21.69				
CCE-6 7/16" .438" 0.531 .063	2.64	22.54				
CCE-7 1/2" .500" 0.562 .063	2.81	24.00				
CCE-8 9/16" .563" 0.625 .063	3.30	28.09				
CCE-9 5/8" .625" 0.610 .063	3.73	31.81				
CCE-10 11/16" .688" 0.666 .063	4.06	34.59				
CCE-11 3/4" .750" 0.765 .063	4.25	36.25				
CCE-12 7/8" .875" 0.812 .063	4.60	39.36				
CCE-13 1" 1.000" 0.906 .063	4.90	41.79				
CCE-14 1-1/8" 1.125" 0.968 .063	4.91	41.91				
CCE-15 1-1/4" 1.250" 1.156 .063	5.52	47.14				



**WALDOM Skru-Box**

**VARIETY ASSORTMENT: SCREWS & NUTS**



**ROUND HEAD MACHINE SCREWS, NUTS, SHEET METAL SCREWS, R.H.S.M.S**  
4-40 x 1/2, 6-32 x 1/4, 6-32 x 3/4, 8-32 x 1/2, Sheet Metal Screw #6 x 1/2, Nuts 4-40, 6-32, 8-32, 265 Total Pieces.

No. HD-4013 Net 1.59

**BINOER-HEAD SCREWS** - Same assortment as above, but machine screws have binder-head!

No. HD-4018 Net 1.59

**SHEET METAL SCREWS** - Slotted Hex Head Sheet Metal Screws Type A in 4 x 3/8", 6 x 1/4", 6 x 1/2", 6 x 3/4", 8 x 3/8", 8 x 1/2", 8 x 5/8". 165 Total Pieces.

No. HD-4014 Net 1.59

**WASHER-HEAD SHEET METAL SCREWS** - Slotted Hex Head Type A w/flat washer attached, sizes 6 x 1/4, 6 x 3/8, 6 x 1/2, 6 x 3/4, 8 x 1/4, 8 x 3/8, 8 x 1/2, 8 x 5/8. 120 Total Pieces.

No. HD-4011 Net 1.59</



# ELECTRONIC HARDWARE

## WALSCO BINDING HEAD MACHINE SCREWS

—  
STEEL  
NICKEL PLATED



SIZE	BOX OF 100		BOX OF 1000	
	PART NO.	NET/100	PART NO.	NET/1000
Machine Screws, 2-56 x 1/2"	8151-C	\$.63	8151-M	\$ 5.33
Machine Screws, 2-56 x 3/4"	8152-C	.63	8152-M	5.33
Machine Screws, 4-36 x 1/4"	8154-C	.63	8154-M	5.33
Machine Screws, 4-36 x 1/2"	8155-C	.63	8155-M	5.33
Machine Screws, 4-36 x 3/4"	8156-C	.63	8156-M	5.33
Machine Screws, 4-40 x 1/4"	8157-C	.63	8157-M	5.33
Machine Screws, 4-40 x 1/2"	8158-C	.63	8158-M	5.33
Machine Screws, 2-56 x 3/4"	8159-C	.63	8159-M	5.33
Machine Screws, 4-40 x 3/4"	8160-C	.64	8160-M	5.35
Machine Screws, 5-36 x 1/4"	8161-C	.53	8161-M	4.20
Machine Screws, 6-32 x 3/16"	8162-C	.53	8162-M	4.20
Machine Screws, 6-32 x 1/4"	8163-C	.53	8163-M	4.20
Machine Screws, 6-32 x 3/8"	8164-C	.57	8164-M	4.50
Machine Screws, 6-32 x 1/2"	8166-C	.65	8166-M	5.12
Machine Screws, 6-32 x 3/4"	8167-C	.72	8167-M	5.17
Machine Screws, 7-32 x 3/8"	8165-C	1.57	8165-M	12.48
Machine Screws, 8-32 x 1/4"	8168-C	.72	8168-M	5.62
Machine Screws, 8-32 x 3/8"	8169-C	.75	8169-M	5.85
Machine Screws, 8-32 x 1/2"	8170-C	.78	8170-M	6.27
Machine Screws, 8-32 x 3/16"	8171-C	.72	8171-M	5.73
Machine Screws, 8-32 x 3/4"	8172-C	.95	8172-M	7.57
Machine Screws, 10-32 x 1/2"	8173-C	.79	8173-M	7.70
Machine Screws, 10-32 x 3/4"	8174-C	1.15	8174-M	9.20

## WALSCO BINDING HEAD MACHINE SCREWS

—  
BRASS  
NICKEL PLATED



Machine Screws, 2-56 x 1/4"	8151-1-C	.84	8151-1-M	6.98
Machine Screws, 2-56 x 1/2"	8152-1-C	.96	8152-1-M	8.28
Machine Screws, 2-56 x 3/4"	8154-1-C	1.11	8154-1-M	9.55
Machine Screws, 4-36 x 1/4"	8155-1-C	.97	8155-1-M	8.32
Machine Screws, 4-36 x 1/2"	8156-1-C	1.19	8156-1-M	10.18
Machine Screws, 4-36 x 3/4"	8157-1-C	1.40	8157-1-M	12.05
Machine Screws, 4-40 x 1/4"	8158-1-C	.97	8158-1-M	8.32
Machine Screws, 4-40 x 1/2"	8159-1-C	1.19	8159-1-M	10.18
Machine Screws, 4-40 x 3/4"	8160-1-C	1.40	8160-1-M	12.15
Machine Screws, 5-36 x 1/4"	8161-1-C	1.40	8161-1-M	12.99
Machine Screws, 6-32 x 3/16"	8162-1-C	1.34	8162-1-M	11.47
Machine Screws, 6-32 x 1/4"	8163-1-C	1.27	8163-1-M	10.90
Machine Screws, 6-32 x 3/8"	8164-1-C	1.36	8164-1-M	11.54
Machine Screws, 6-32 x 1/2"	8166-1-C	1.51	8166-1-M	12.90
Machine Screws, 6-32 x 3/4"	8167-1-C	1.83	8167-1-M	15.65
Machine Screws, 8-32 x 1/4"	8168-1-C	1.85	8168-1-M	15.70
Machine Screws, 8-32 x 3/8"	8169-1-C	1.94	8169-1-M	16.65
Machine Screws, 8-32 x 1/2"	8170-1-C	2.20	8170-1-M	18.80
Machine Screws, 8-32 x 3/16"	8171-1-C	1.88	8171-1-M	16.20
Machine Screws, 8-32 x 3/4"	8172-1-C	2.70	8172-1-M	23.15
Machine Screws, 10-32 x 1/2"	8173-1-C	2.54	8173-1-M	21.80
Machine Screws, 10-32 x 3/4"	8174-1-C	3.43	8174-1-M	29.50

## HEX NUTS STEEL NICKEL PLATED



Thread	Width	Thickness				
2-56	3/16"	1/16"	8802-C	.68	8802-M	5.52
4-36	1/4"	3/32"	8824-C	.67	8824-M	5.28
4-40	5/16"	7/64"	8804-C	.67	8804-M	5.28
6-32	1/4"	3/32"	8806-C	.68	8806-M	5.52
6-32	5/16"	7/64"	8826-C	.73	8826-M	5.82
8-32	1/4"	3/32"	8808-C	.73	8808-M	5.85
8-32	11/32"	1/8"	8828-C	.73	8828-M	5.85
10-32	3/8"	5/64"	8810-C	.97	8810-M	7.68
10-32	3/8"	1/8"	8830-C	.87	8830-M	6.98

## HEX NUTS BRASS

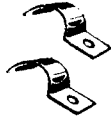


2-56	3/16"	1/16"	8802-1-C	.98	8802-1-M	7.83
4-36	1/4"	3/32"	8845-C	1.18	8845-M	9.42
4-40	5/16"	7/64"	8844-C	1.17	8844-M	9.33
6-32	1/4"	3/32"	8846-C	1.17	8846-M	9.30
6-32	5/16"	7/64"	8826-1-C	1.40	8826-1-M	11.18
8-32	1/4"	3/32"	8848-C	1.40	8848-M	11.18
10-32	3/8"	1/8"	8850-C	1.53	8850-M	12.27



# ELECTRONIC HARDWARE

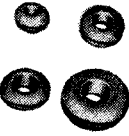
## WALSCO CABLE CLAMPS



For all cable or wire groups from 1/8" to 3/4" in diameter.  
**Description**  
 1/8" to 3/16" cable diameter #6  
 3/16" to 1/4" cable diameter #8  
 1/4" to 3/8" cable diameter #8  
 Assorted

50 LINE		100 Pack		BULK PACK		Dealer
Dir. Net	.36/Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
7502-F	25	7502-C	100	\$ .98	7502-M 1000	\$ 7.83
7503-F	20	7503-C	100	1.73	7503-M 1000	13.80
7505-F	16	7505-C	100	2.08	7505-M 1000	16.65
7500-F	20					

## VINYL GROMMETS



Protects insulated wires from sharp edges of chassis holes. Easily installed. Extremely useful for damping vibration in mounting parts.

DIMENSIONS				
A	B	C	D	E
1 1/32	3/8	3/16	1/16	1/4
3/16	3/16	1/32	1/16	3/16
3/16	1/4	1/4	1/16	3/8
5/8	3/8	1/4	1/16	1/2
1 1/16	1/2	3/32	1/16	5/8
Assorted				

50 LINE		100 Pack		BULK PACK		Dealer
Cat. No.	Qty. Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
7030-F	14	7030-C	100	\$1.00	7030-M 1000	\$ 8.13
7032-F	12	7032-C	100	1.25	7032-M 1000	10.00
7034-F	12	7034-C	100	1.37	7034-M 1000	10.88
7036-F	10	7036-C	100	1.47	7036-M 1000	11.73
7038-F	8	7038-C	100	2.27	7038-M 1000	18.22
7025-F	12					

## CABINET FEET — SCREW TYPE



Made of synthetic rubber. Easily installed with wood screws, metal screws or tacks. Screw type is supplied with wood screws on "50" and "99" line packages.

Diameter	Height
3/8	3/16
1/2	1/4
5/8	3/8
3/4	3/8
Assorted	

50 LINE		100 Pack		BULK PACK		Dealer
Dir. Net	.36/Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
7052-F	8**	7052-C	100**	\$1.13	7052-M* 1000	\$ 7.83
7054-F	8**	7054-C	100**	1.47	7054-M* 1000	11.70
7056-F	8**	7056-C	100**	2.22	7056-M* 1000	17.70
7050-F	8**	7058-C	100**	2.82	7058-M* 1000	22.50

## TACK TYPE



Same as above, but with handy tacks molded in feet.

Diameter
3/8
1/2
Assorted

50 LINE		100 Pack		BULK PACK		Dealer
Dir. Net	.36/Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
		7071-C	100	\$1.85	7071-M 1000	\$14.78
		7072-C	100	1.95	7072-M 1000	15.57
7070-F	8					

\* No screws included

\*\* Wood screws included

## WALSCO INSULATING WASHERS

(Flat and Extruded)

Precision made from vulcanized phenolic fiber. Assures the proper and safe insulation between components and controls from each other or the chassis and other metal parts.



Fits Screw Size	DIMENSIONS				
	A	B	C	D	
#6	3/16	3/16	.140	.039	Extruded Flat
	3/16	3/16	.140		Fl. & Ex. Extruded Flat
#8	3/8	1/4	.169	1/32	Extruded Flat
	3/8	3/8	.166		Fl. & Ex. Extruded Flat
#10	3/8	.308	.195	1/32	Extruded Flat
	3/8	3/8	.195		Fl. & Ex. Extruded Flat
1/4"	1/2	1 1/32	.250	1/32	Extruded Flat
	1/2	1/2	.250		Fl. & Ex. Extruded Flat
3/8"	3/8	1/2	.380	1/32	Extruded Flat
	3/8	3/8	.380		Fl. & Ex. Extruded Flat

50 LINE		100 Pack		BULK PACK		Dealer
Dir. Net	.36/Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
		7856-C	100	\$ .87	7856-M 1000	\$6.90
		7836-C	100	.42	7836-M 1000	3.30
7824-F	30	7858-C	100	.87	7858-M 1000	6.90
		7838-C	100	.42	7838-M 1000	3.30
7825-F	30	7860-C	100	.95	7860-M 1000	7.53
		7840-C	100	.42	7840-M 1000	3.30
7826-F	30	7862-C	100	.95	7862-M 1000	7.53
		7842-C	100	.47	7842-M 1000	3.68
7827-F	24	7864-C	100	.98	7864-M 1000	7.92
		7844-C	100	.77	7844-M 1000	6.12
7828-F	20					

## WALSCO SPADE BOLTS



Ideal for fastening condensers, coils, shields, etc. The type 8572 is straight and has 3/32" long thread. Thread on type 8573 is 3/16" long. Both types are 3/8" long overall, have 6-32 thread and hole for 6-32 screw or 1/8" rivet.  
 Hole Dia., .141.

Size	A	B	C	D
6-32 Straight	3/4"	3/16"	3/32"	1/4"
6-32 Offset	3/4"	3/16"	3/16"	1 1/64"
Assorted				

50 LINE		100 Pack		BULK PACK		Dealer
Dir. Net	.36/Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
8570-F	15	8572-C	100	\$1.22	8572-M 1000	\$12.23
		8573-C	100	2.55	8573-M 1000	20.33

## WALSCO SNAP-HOLE PLUGS



The quickest, simplest way ever devised to cover a hole in chassis or panel. Spring flanges hold polished nickel-plated flat-head button firmly in place. Use Walsco Snap-Hole Plugs to seal adjustments, cover unused holes, etc.

Fits Hole Diameter
1/8"
3/16"
1/4"
3/8"
1/2"
5/8"
3/4"
7/8"
1"
1 1/8"
1 1/4"
Assorted

50 LINE		100 Pack		BULK PACK		Dealer
Dir. Net	.36/Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
		7306-C	100	\$2.25	7302-M 1000	\$25.65
		7308-C	100	2.85	7304-M 1000	24.38
7306-F	8	7310-C	100	3.08	7306-M 1000	18.00
		7312-C	100	3.30	7308-M 1000	22.87
7308-F	8	7314-C	100	3.60	7310-M 1000	24.60
		7315-C	100	4.62	7312-M 1000	26.40
7310-F	6	7316-C	100	4.95	7314-M 1000	28.80
		7318-C	100	5.93	7315-M 1000	36.90
7312-F	6	7320-C	100	6.45	7316-M 1000	39.60
					7318-M 1000	59.40
7314-F	5				7320-M 1000	51.60
7316-F	4					
7318-F	4					
7300-F	6					

## VENTILATING HOLE PLUGS



Assorted 7330-F 3  
 Snap these protective screen coverings into ventilating holes on chassis, portable equipment cases, amplifiers, amateur rigs, etc. Spring flange holds plug in place.

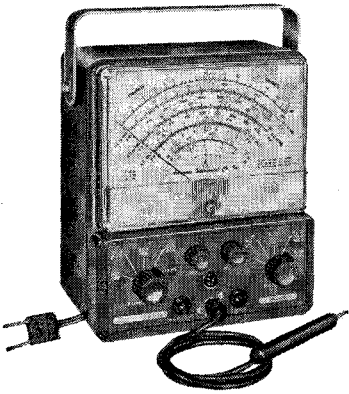
Fig. No.	Type	Hole Size	Finish
1	Screened	1"	Steel
2	Eyelet	1 1/2"	Brass—Not Plated
2	Eyelet	3/4"	Brass

50 LINE		100 Pack		BULK PACK		Dealer
Dir. Net	.36/Pkg.	Cat. No.	Qty. Pkg.	Dir. Net	Std. Pack	Net Per 1000
		7331-C	100	\$21.38	7331-M 1000	\$170.99
		7332-C	100	4.50	7332-M 1000	40.43
		7333-C	100	6.37	7333-M 1000	57.23

# THE FIRST EIGHT MODELS IN THE NEW "ACCURATE" LINE—MORE TO COME!

## Model 152 A Modern, Streamlined **SENIOR V.T.V.M.** FEATURES GIANT 6½" METER

Only \$29.95 COMPLETE! Not a kit . . . the 152 is a completely Wired and Calibrated Tester . . . Ready to use!



### MODEL 152 FEATURES AND SPECIFICATIONS

• **D.C. VOLTMETER:** Ranges 0 to 3, 30, 150, 300, 1500 volts; Accuracy  $\pm 3\%$  of full scale; Input resistance: 11 megohms. • **ZERO CENTER VOLTMETER** (For discriminator alignment): Ranges 0 to 1.5, 15, 75, 150, 750 volts; Accuracy  $\pm 3\%$  of full scale. Input resistance: 11 megohms. • **A.C. VOLTMETER:** R.M.S. Ranges: 0 to 3, 30, 150, 300, 1500 volts; Peak to Peak Ranges: 0 to 8, 80, 400, 800 volts; Accuracy:  $\pm 3\%$  of full scale.

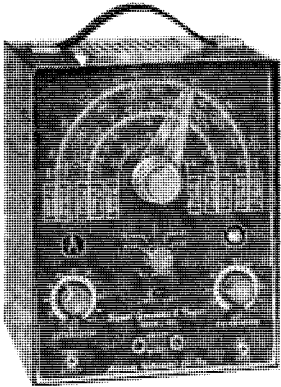
• **OHMMETER:** Ranges: 0 to 1000 megohms (5 overlapping ranges); Center Scale Values: 10, 100, 1000, 100,000 ohms, 10 megohms. • **DECIBEL METER** (for all audio measurements): Ranges  $-10$  to  $+5$ ,  $+6$  to  $+25$ ,  $+26$  to  $+45$  decibels. All based on zero db at 1.73 volts on 500 ohm line; • Pilot light indicates when unit is "on". • Housed in beautiful grey high-impact case, with color matched etched aluminum panel and portable handle.

Model 152 comes complete with D.C. V.T.V.M. Probe and cable, pair of standard test leads for all other services, detailed instructions. Net Price

**\$2995**

## Model 153—A Combination

# SIGNAL GENERATOR and SIGNAL TRACER



The true test of the claim "two instruments in one" is: can each of the two units be used separately as well as in conjunction with each other? In the case of this versatile combination instrument, the answer is emphatically yes, for, the Signal Generator will function as a full service instrument with a range of 250 Kilocycles to 120 Megacycles and the Signal Tracer will follow any signal whether generated by a broadcasting station or injected by the

Signal Generator section of Model 153. When used in combination with no dependence on outside signals, the compatibility of Model 153 provides ideal service, for unlike any standard signal tracer, the Model 153 first injects its own signal then traces that controllable signal to locate the source of trouble whether due to component or circuit by standard signal tracing technique.

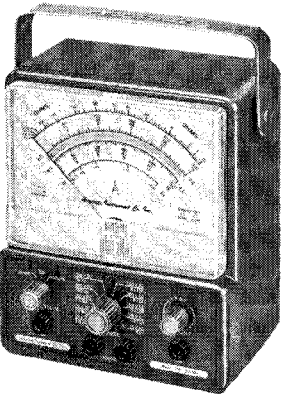
### SPECIFICATIONS:

**SIGNAL TRACER:** • Hi-gain cascode pre-amplifier • Pre-amplifier output available at front panel jacks for use with VTVM, oscilloscope or phones. • Low distortion triode output stage. • Audio Attenuator provided to prevent high signal overloading. • 4½ inch permanent magnet speaker. • Separate R.F. and Audio Signal tracing probes. **SIGNAL GENERATOR** • Covers from 250 KC to 120 MC in

5 bands. • All popular and most used frequencies marked on panel in color. • High stability electron coupled R.F. oscillator. • Attenuator used on both R.F. and Audio circuits.

Model 153 comes complete with all necessary probes. Net Price

**\$2840**



## Model 154, A Modern, Streamlined **20,000 OHMS-PER-VOLT V.O.M.** FEATURES GIANT 6½" METER . . . only \$29.95 COMPLETE!

The 20,000 Ohms-per-Volt-V.O.M. has been the one "must have" tester for all Radio and TV technicians since 1935 . . . and now . . . we proudly announce the most recent,

streamlined edition of this all-around useful standard with a 6½" meter and at an unbelievably low price.

### Model 154 Features and Specifications

• Mirrored Scale permits fine accurate measurements where fractional readings are important. • Selected resistors are used as multipliers to assure unchanging accurate readings on all ranges. • 6 D.C. VOLTAGE RANGES (at 20,000 Ohms per Volt) 0 to 15/75/150/300/750/3000 Volts. 6 A.C. VOLTAGE RANGES (at 5,000 Ohms per Volt) 0 to 15/75/150/300/750/3000 Volts.

• 5 RESISTANCE RANGES: 0 to 2000/20,000/200,000 Ohms. 0 to 2/20 Megohms. • 5 D.C. CURRENT RANGES: 0 to 75/750 Microamperes; 0 to 7.5/75 Milliampers; 0 to 7.5 Amperes; • 3 DECIBEL RANGES:  $-6$  db to  $+18$  db;  $+14$  db to  $+38$  db;  $+28$  db to  $+52$  db.

Model 154 comes complete with operating instructions and test leads. Net Price

**\$2995**

## New Model 155—Combination

# VOLT-OHM MILLIAMMETER

plus CAPACITY, REACTANCE, INDUCTANCE and DECIBEL MEASUREMENTS.

### Also Tests

SELENIUM and SILICON RECTIFIERS, SILICON and GERMANIUM DIODES.

### SPECIFICATIONS:

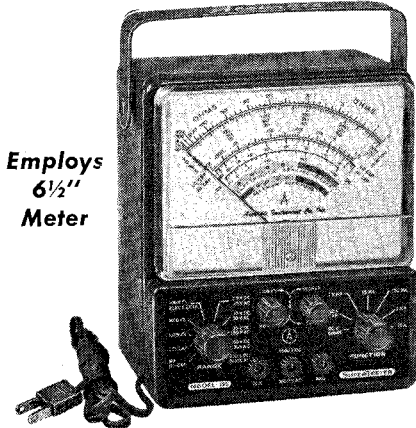
✓ D.C. Volts: 0 to 7.5/15/75/150/750/1,500.  
✓ A.C. Volts: 0 to 15/30/150/300/1,500/3,000.  
✓ D.C. Current: 0 to 1.5/15/150 Ma.; 0 to 1.5/15 Amperes.  
✓ Resistance: 0 to 2,000/200,000 Ohms. 0 to 20 Megohms.  
✓ Capacity: .001 to 1 Mfd. 1 to 20 Mfd.  
✓ Reactance: 130 to 2,600 Ohms, 2600 Ohms to 2.6 Meg-ohms.  
✓ Inductance: .35 to 7 Henries, 7 to 7,000 Henries.  
✓ Decibels:  $-6$  to  $+18$ ,  $+14$  to  $+38$ ,  $+34$  to  $+58$ .

The following components are all tested for QUALITY at appropriate test potentials. Two separate BAD-GOOD scales on the meter are used for direct readings.

✓ All Electrolytic Condensers from 1 Mfd to 1000 Mfd.  
✓ All Selenium Rectifiers  
✓ All Silicon Rectifiers  
✓ All Germanium Diodes ✓ All Silicon Diodes

Model 155 comes complete with operating instructions and test leads. Use it on the bench—use it on calls. Complete with all instructions and leads. Net Price

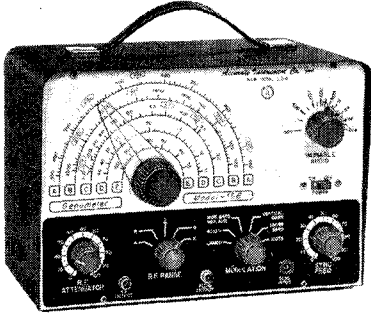
**\$2840**



Employs  
6½"  
Meter

Manufactured By: **ACCURATE INSTRUMENT CO., INC.** BRONX 59, N. Y.

# THE FIRST EIGHT MODELS IN THE NEW "ACCURATE" LINE—MORE TO COME!



The Model 156 comes absolutely complete with shielded leads and operating instructions. Net Price .....

**\$3850**

## New Model 156 SEVEN (7) SIGNAL GENERATORS IN ONE!

- R.F. Signal Generator for A.M. • R.F. Signal Generator for F.M. • Audio Freq. Generator • Bar Generator • Cross Hatch Generator • Color Dot Pattern Generator • Marker Generator

### SPECIFICATIONS:

**R. F. SIGNAL GENERATOR:** The Model 156 Genometer provides complete coverage for A.M. and F.M. alignment. Generates Radio Frequencies from 250 Kilocycles to 45 Megacycles on fundamentals and from 35 Megacycles to 120 Megacycles on powerful harmonics.

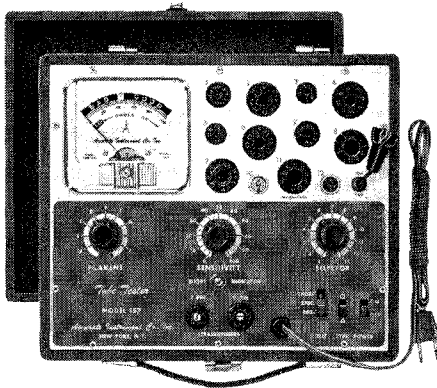
**CROSS HATCH GENERATOR:** The Model 156 Genometer will project a cross-hatch pattern on any TV picture tube.

**VARIABLE AUDIO FREQUENCY GENERATOR:** In addition to a fixed 400 cycle sine-wave audio, the Model 156 Genometer provides a variable 300 cycle to 20,000 cycle peaked wave audio signal.

**DOT PATTERN GENERATOR (FOR COLOR TV):** The Dot Pattern projected on any color TV Receiver tube by the Model 156 will enable you to adjust for proper color convergence.

**BAR GENERATOR:** The Model 156 projects an actual Bar Pattern on any TV Receiver Screen. Pattern will consist of 4 to 16 horizontal bars or 7 to 20 vertical bars.

**MARKER GENERATOR:** The Model 156 includes all the most frequently needed marker points. The following markers are provided: 262 Kc., 456 Kc., 600 Kc., 1000 Kc., 1600 Kc., 2500 Kc., 3,579 Mc., 4.5 Mc., 10.7 Mc., (3,579 Mc is the color burst frequency.)



## Model 157, A Modern, Streamlined TUBE TESTER

Not a kit . . . The Model 157 is a completely wired and calibrated Tester . . . Ready to use!

TESTS ALL MODERN TUBES INCLUDING THE NEW

- ✓ Novars ✓ Nuvistors ✓ Compactrons ✓ 10 Pins ✓ Magnovals

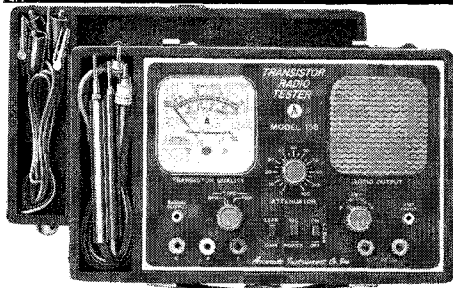
### MODEL 157 FEATURES AND SPECIFICATIONS:

- Tests over 1,000 tube types. • Makes all necessary tests. Checks for shorts and leakages between all elements; tests for filament continuity; indicates the quality (emission) of all tubes. • Checks all modern tubes including 7-pin miniatures; octals, lock-ins, 9-pin noval miniatures; new T-9 types; novars, nuvistors, compactrons; 10 pins, magnovals. • Speedy operation assured by use of a new improved circuit which enables us to use a single rotary switch in place of the one-at-a-time slide switches previously used. • 7 and 9 pin tube

straighteners permanently mounted on front panel. • Employs a rugged, accurate, highly damped meter movement with sealed air-damping chamber. • Comes housed in a beautiful portable carrying case with slip-on cover.

Model 157 comes complete — **\$2840** absolutely no extras. Net Price

PICTURE TUBE ADAPTER DESIGNED ESPECIALLY FOR MODEL 157 . . . ONLY \$3.85



Model 158 comes housed in a handsome portable case. Complete with a set of clip-on cables for testing transistors; an R.F. diode probe for R.F. and I.F. signal tracing; an audio probe for amplifier tracing and a signal injector cable.

Complete. Nothing else to buy! **\$2995**

Net Price

## TEST ALL TRANSISTORS . . . EXCEPTION . . . AND ALL . . .

## TRANSISTOR OPERATED DEVICES

With New Model 158 TRANSISTOR RADIO TESTER

SEE Read the relative gain and leakage of any transistor directly on the meter.

HEAR All audio stage signals through the front panel speaker

Simplified procedure —

Model 158 ① Injects a signal ② Follows the injected signal through each and every stage including all transistors!

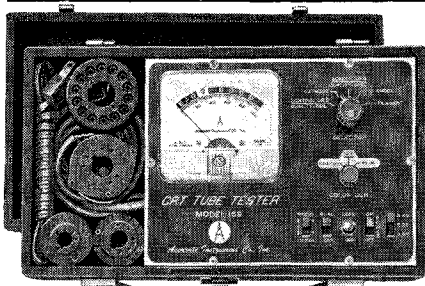
### Specifications:

#### TESTING TRANSISTORS WITH MODEL 158

The Model 158 will test all transistors including NPN and PNP, Silicon and Germanium types, without referring to characteristic data sheets. The time-saving advantage of this method is self-evident. A further benefit of this service is that it will enable you to test new transistors as they are released, since no characteristic sheets are required.

#### TESTING TRANSISTOR RADIOS AND OTHER TRANSISTOR DEVICES WITH MODEL 158

An R.F. signal source modulated by an audio tone is injected into the transistor radio from the antenna through the R.F. stage past the mixer into the I.F. amplifier and detector stages and on to the audio amplifier. This injected signal is followed and traced through the receiver by means of the signal tracing section incorporated in the Model 158. The injected signal is heard on the front panel speaker as it is followed through the various stages.



Model 159 comes housed in a beautiful portable carrying case. Complete with sockets for all black and white tubes and all color tubes. Net Price .....

**\$2995**

## Model 159 TESTS AND REJUVENATES ALL PICTURE TUBES

ALL BLACK AND WHITE TUBES . . .

From 50 degree to 110 degree types — from 8" to 30" types.

ALL COLOR TUBES . . .

Test ALL picture tubes — in the carton — out of the carton — in the set!

### Specifications:

Provides separate filament operating voltages for the older 6.3 types and the newer 8.4 types.

Properly tests the red, green and blue sections of color tubes individually—for each section of a color tube contains its own filament, plate, grid and cathode.

Detects tubes which are apparently good but require rejuvenation. Such tubes will provide a picture seemingly good but lacking in proper definition contrast and focus.

Rejuvenation: Model 159 applies a selective low voltage uniformly to assure increased life with no danger of cathode damage.

Manufactured By: **ACCURATE INSTRUMENT CO., INC.** BRONX 59, N. Y.

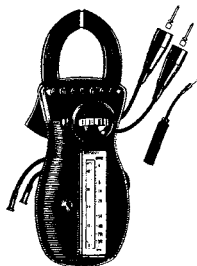


AMPROBE INSTRUMENT CORP., Lynbrook, N.Y

# AMPROBE INSTRUMENTS

## ROTARY SCALE MODELS

Offer you these outstanding features. • Only the Ohms scale plus one voltage scale or current scale is visible at any one time, providing greater reading speed and accuracy; on models other than RS-3 or RS-1000 only scale selected appears. • Magnified unbreakable window. • Pointer-lock "freezes" pointer at reading. • Accurate within  $\pm 3\%$  full scale reading. • One hand operation.

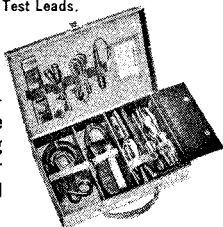


MODEL	RANGES	PRICE
RS-1	0-5/15/40/100 Amps A.C. 0-150/600 Volts A.C.	\$39.85
RS-2	0-5/15/40/100 Amps A.C. 0-150/300 Volts A.C.	39.85
RS-3	0-5/15/40/100/300 Amps A.C. 0-150/300/600 Volts A.C. 25 $\Omega$ Mid-Scale	52.50
RS-300	0-5/15/40/100/300 Amps A.C. 0-150/300/600 Volts A.C.	47.50
RS-1000	0-15/40/100/300/1000 Amps A.C. 0-150/300/600 Volts A.C. 25 $\Omega$ Mid-Scale	69.50

Price includes Top-Grain Cowhide Leather Carrying Case and Test Leads.

## AMPROBE TEST-MASTER KITS

Truly the sign of the professional, these good-looking, rugged, genuine cowhide cases contain all the equipment you need to do all your electrical testing jobs with precision and accuracy. The Test-Master has a separate covered section to hold your small hand tools easily within reach.



**MODEL TM-43** Super Test-Master Kit contains the famous Amprobe RS-3 snap-around volt-ammeter-ohmmeter; the New Model PSA-1 Amprobe Phase Sequence Adaptor; determines phase sequence of polyphase circuits; the New A-45L Energizer; permits series connection to simplify current readings on permanently installed equipment and multiplies sensitivity of RS-3, 5x or 10x; Model A-50-1 Deca-Tran when 10x amperage range extension is required. Price: \$94.50

**MODEL TM-53** contains the Amprobe RS-3, Model PSA-1 Phase Sequence Adaptor, A-45L Energizer. Price: \$69.85

**MODEL TM-33** contains the Amprobe RS-3, Model A-50-1 Deca-Tran and Model A-45 Energizer. Price: \$84.50

**MODEL TM-11** contains the Amprobe RS-1, economy snap-around volt-ammeter; Model A-50-1 Deca-Tran and Model A-45 Energizer. Price: \$71.75

**MODEL HK** contains Model A-50-1 Deca-Tran and A-45 Energizer. (to be used with instrument already in possession). Price: \$39.75

## HIGH CURRENT AMPROBES

Designed to fill the need of the individual consistently working in current and voltage ranges higher than scale reading available on the rotary scale models.

MODEL	RANGE	PRICE
600	0-15/30/60/150/300/600 Amps A.C. 0-150/300/600 Volts A.C.	\$59.50
1200	0-15/30/60/150/300/1200 Amps A.C. 0-150/300/600 Volts A.C.	67.50

Price includes Top-Grain Cowhide Leather Carrying Case and Model VL-22 Voltage Test Leads.



## AMPROBE ENERGIZERS



The New, more versatile, Model A-45L ENERGIZER now permits current readings on permanently wired low-current electrical equipment by simplifying series connection. It increases the sensitivity of your ammeter 5x or 10x for more precise readings directly at outlets by "splitting" double conductor line cords while the appliance is connected to the line. Capacity 10 amps. Price w/weatherproof pouch: \$6.75

**Model A-45 ENERGIZER** multiplies sensitivity of any Amprobe by 5x or 10x for more precise readings. It also permits low-current readings by "splitting" double conductor line cords. Price w/weatherproof pouch: \$5.00

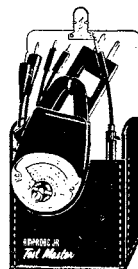
All prices slightly higher outside the U. S.

CANADIAN SALES DIVISION: ATLAS RADIO CORP., 50 WINGOLD AVE., TORONTO, ONTARIO • EXPORT CABLE ADDRESS: AMPROBE LYNBROOK

## AMPROBE JR. TEST-MASTER KITS

The Amprobe Jr. Test-Master Kit consists of a specially designed leather case that contains one of the all new YO Amprobe Jr. voltage testers, an Amprobe A-45 Energizer, battery attachment and test leads.

The New YO models are the only precision instruments in their price class that measure voltage, amperage and resistance, instantly and accurately on a calibrated scale. Price: \$32.85



MODEL	3 AMMETER RANGES (full scale)			2 VOLTAGE RANGES
	BASIC INST.	ENERGIZER		
TM-YO "525"	0-25	0-5	0-2.5	0-150/600
TM-YO "550"	0-50	0-10	0-5	0-150/600
TM-YO "500"	0-100	0-10	0-10	0-150/600
TM-YO "25"	0-25	0-5	0-2.5	0-125/250
TM-YO "50"	0-50	0-10	0-5	0-125/250
TM-YO "100"	0-100	0-10	0-10	0-125/250

**OHMMETER RANGE:** 25 Ohms Mid-Scale  
Frequency—60 cycles A.C. (other frequencies available)

## AMPROBE JR. YO MODELS

The only voltage testers in their price class that measure voltage, amperage and resistance. Ranges and models are the same as for TM-YO Models above, except furnished with test leads only. When ordering specify YO "525", YO "550", etc. Price: \$24.85  
P-1 Leather Pouch optional at \$2.85. Order Separately.



## AMPROBE JR.

The only voltage testers in their price class that also measure amperage. They are precision instruments that measure instantly and accurately on a calibrated scale  $\pm 3\%$  full scale (not just an indication). Price: \$19.85

MODEL	RANGES
Y10	0-10 Amps A.C. 0-125/250 Volts A.C.
Y25	0-25 Amps A.C. 0-125/250 Volts A.C.
Y50	0-50 Amps A.C. 0-125/250 Volts A.C.
Y100	0-100 Amps A.C. 0-125/250 Volts A.C.
Y525	0-25 Amps A.C. 0-150/600 Volts A.C.
Y550	0-50 Amps A.C. 0-150/600 Volts A.C.
Y500	0-100 Amps A.C. 0-150/600 Volts A.C.

Price includes Test Leads.  
P-1 Leather Pouch optional at \$2.85. Order Separately.



## AMPROBE CABLE TRACER

Revolutionary new CABLE TRACER lets you search—and unmistakably identify—up to 10 separate circuits simultaneously. With CABLE TRACER there's no needless handling of wires to locate a conductor. Every time the Indicator Button is pressed, you identify a circuit without extra trips between conductor ends. Price: \$39.50



## AMPROBE DECA-TRAN

The Model A-50-1 Amprobe Deca-Tran can be used with any model Amprobe to extend the amperage ranges 10 times up to 1200 amps. For example, by using the A-50-1 with an RS-1 you can obtain a current reading of 1000 amps AC on the RS-1 range of 0-100 amp. Leather case.

Model A-50-1 w/2' Line Cord Price: \$27.50

Model A-50 Price: 24.75



## PHASE SEQUENCE ADAPTOR



The Model PSA-1 Phase Sequence Adaptor is used to determine the phase sequence of polyphase circuits. When used in conjunction with any Amprobe RS model it permits you to determine phase sequence of motors and other electrical equipment using three phase lines up to 550 volts. Price w/leather case: \$10.85



AMPROBE INSTRUMENT CORPORATION  
Lynbrook, N. Y.

# AMPROBE RECORDERS

Leather-cased Amprobe Miniature Strip Chart Recorders are supplied with permanently attached motor line cord and one roll each of strip charts. Meter line cord, extensions, adaptors, transducers, etc., supplied where indicated.

Fig. 1  
LEATHER-CASED  
TYPE "A"

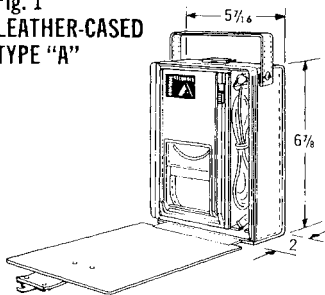
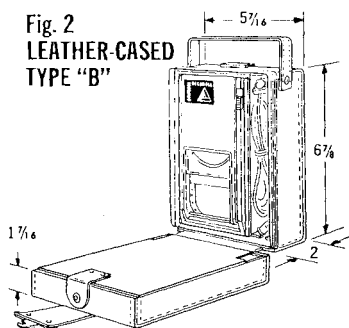


Fig. 2  
LEATHER-CASED  
TYPE "B"



## AMPROBE RECORDER MODELS

Model No.	Fig.	Description	Range	Price
<b>AC VOLTMETERS</b>				
LAV2X	1	Dual Range, Expanded Scale AC Voltmeter	95-130v AC 190-260v AC	\$89.85
LAV8600	1	Three Range, AC Voltmeter 1380Ω/V	0-150/300/600v AC	89.85
<b>AC AMMETERS</b>				
LAA81	2	AC Ammeter. Furnished with Model A-70FL Transducer	0-10/50/250/500 Amps AC	99.85
LAA82	2	AC Ammeter. Furnished with Model A-60FL Transducer	0-5/25/100/250 Amps AC	94.85
<b>AC VOLT/AMMETERS</b> All models supplied with appropriate transducer, one RAL-4 Adaptor lead and one five-foot extension lead.				
LAVA81	2	AC Volt/Ammeter. Furnished with A-70FL Transducer.	Volts: 95-130/190-260 Amps: 0-10/50/250/500	134.85
LAVA82	2	AC Volt/Ammeter. Furnished with A-60FL Transducer.	Volts: 95-130/190-260 Amps: 0-5/25/100/250	129.85
<b>TEMPERATURE RECORDERS</b> All models supplied with appropriate Temperature probe.				
LT8100	1	Temperature Recorder. Furnished with FL-RBT-1 Thermometer.	-50° to +100°F +50° to +250°F	103.85

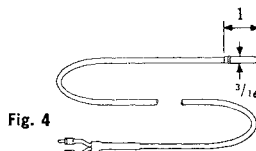
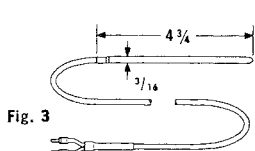
## STRIP CHARTS

Perforated and Printed Two Colors. Individually Boxed 30' Rolls. Minimum Order—Box of six Strip Charts. Price \$9.00 per box.

Cat. No.	Description	For Use With Recorder Model
835XA	Marked: 95-130/190-260 Volts, AC	LAV2X, LAVA81, LAVA82
830AV600	Marked: 0-150/300/600 Volts, AC	LAV8600
850A	Marked: 0-5/25/100/250 Amps, AC.	LAA81, LAA82, LAVA81, LAVA82
823T1	Marked: -50°F to +100°F	LT8100
833T2	Marked: +50°F to +250°F	LT8100

## THERMOMETERS

Amprobe Resistance Bulb Thermometers are available with either 4 3/4" or 1" bulb. They are liquid tight and are furnished with a 12 foot lead, allowing flexibility in locating Recorder.



Model	Description	Fig.	Price
FL-RBT-1	Resistance Bulb Thermometer. Use with Model LT8100. Range: -50°F to +100°F, +50°F to +250°F.	3	\$6.50
FL-RBT-2	Resistance Bulb Thermometer. Use with Model LT8100. Range: -50°F to +100°F, +50°F to +250°F.	4	6.50

## SPECIFICATIONS

Strip Chart Size: 2 1/2" wide x 30' long

Standard Chart Speeds: 1 inch or 6 inches or 12 inches per hour. (Other speeds available.) Unless otherwise specified, 12 inches per hour chart speed will be shipped.

Impression Rate: Once every 5 seconds at 12 inches per hour  
Once every 10 seconds at 6 inches per hour  
Once every 1 minute at 1 inch per hour

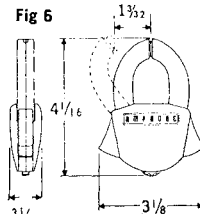
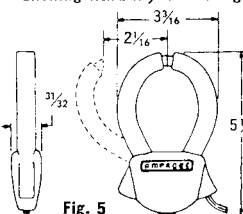
Power Requirements: 115v AC, 60 cycles 2.5 Watts (Unless otherwise specified)

Accuracy: AC Ammeters and AC Voltmeters: ±3% F.S.  
AC Expanded Scale Voltmeters: ±1.25% F.S.

Temperature Recorders: High Range: +50°F to +250°F: ±5°F  
Low Range: -50°F to +20°F: ±4°F  
+20°F to +100°F: ±3°F

## TRANSDUCCERS

Amprobe snap-around (split-core) transformers monitor current without interrupting line or service. Output is provided through six-foot lead, allowing flexibility in locating Recorder.



Model	Description	Fig.	Price
A-70FL	Current Transducer: Range: 0 to 10/50/250/500 Amps	5	\$24.75
A-60FL	Current Transducer: Range: 0 to 5/25/100/250 Amps	6	19.75

All prices slightly higher outside the U.S.

CANADIAN SALES DIVISION: ATLAS RADIO CORP., 50 WINGOLD AVE., TORONTO, ONTARIO • EXPORT CABLE ADDRESS: AMPROBE LYNBROOK

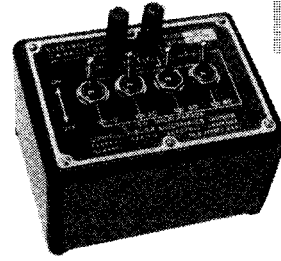


# Capacitor and Resistor Decades

## DECADE CAPACITORS

CDE decade capacitors provide a reliable and accurate source of precision selected capacitance for substitution purposes in a wide variety of electronic and electrical applications. Individual capacitor decade boxes are available in mica and paper-oil dielectrics, as well as aluminum electrolytic and tantalum electrolytic types. Metal shielded three-unit decades for rack mounting are also available.

Individual decades feature quality CDE capacitors, ease of range selection, and heat and shock-resistant phenolic cases. Six-way molded nylon terminal posts (polarized for electrolytic decades) are provided. All CDE decades are individually calibrated with a calibration chart showing actual capacitor values to  $\pm 1\%$  permanently attached to the unit.

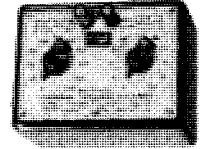


Class  
259 • 00

CDE



CDC



CDT

## CAPACITOR DECADE RATING INFORMATION

CDE Type No.	User's Net	Cap. Tol.	Capacitor Dielectric	Voltage Max.	Capacitance, mfd.			Type of Range Selector	Approximate Size (Inches)
					Min.	Max.	@ ea. step		
CDA-2	\$17.50	$\pm 2\%$	Silvered Mica	600vDC 220vAC	.0001	.011	.0001	2 Rotary Switches	3 $\frac{3}{8}$ x 5 x 3 $\frac{1}{16}$
CDA-5	14.20	$\pm 5\%$							
CDB-3	16.35	$\pm 3\%$	Paper — Oil	600vDC 220vAC	.01	1.1	.01	2 Rotary Switches	3 $\frac{3}{8}$ x 5 x 3 $\frac{1}{16}$
CDB-5	14.20	$\pm 5\%$							
CDC-3	27.25	$\pm 3\%$	Paper — Oil	600vDC 220vAC	1.0	10.0	1.0	1 Rotary Switch	3 $\frac{3}{8}$ x 5 x 3 $\frac{1}{16}$
CDC-5	24.65	$\pm 5\%$							
CDE	14.20	-10%, +50%	Etched cathode aluminum electrolytic	450vDC	10	150	10	4 Toggle Switches	3 $\frac{3}{8}$ x 5 x 3 $\frac{1}{16}$
CDT	99.50	$\pm 5\%$ (10-100 mfd.) $\pm 10\%$ (100-1000 mfd)	Polarized Tantalum Foil 10-100 mfd - Plain 100 to 1000 mfd - Etched	50vDC Polarized	10	1100	10	2 Rotary Switches	3 $\frac{3}{8}$ x 5 x 3 $\frac{1}{16}$
CDRM	58.85	Standard unit has one each CDA-2, CDB-3 and CDC-3. Special units may be equipped with any combination of decades.							5 x 19 x 3 $\frac{1}{2}$

## DECADE RESISTORS

CDE resistance decade boxes feature construction very similar to the type CD-capacitance decades described above. Resistors used in these decades are of relatively high wattage rating for maximum versatility.

Range selection is made by two rotary type selector switches in each decade. Like CDE capacitance decades, the resistance decades feature a custom chart permanently attached to each decade box.

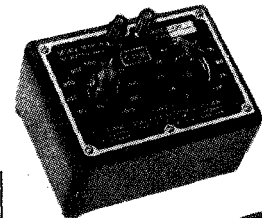
Approximate dimensions for types RDA, RDB and RDC resistance decades are 3 $\frac{3}{8}$ " x 5" x 3". The metal encased, rack mounted type RDRM is approximately 19" x 3 $\frac{1}{2}$ " x 5".

## RESISTOR DECADE RATINGS

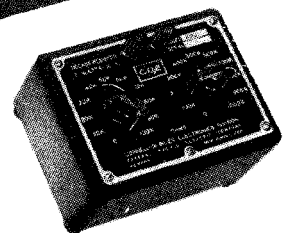
CDE Type No.	User's Net	Type of Resistor	Resistance, ohms				Resistance Tolerance	Watts Max.
			Low Range	High Range	Max.	@ ea. Step		
RDA	\$15.35	Wire Wound	1-10	10-100	110	1	Low Range $\pm 5\%$ High Range $\pm 3\%$	10
RDB	15.65	Non-Inductive Wire Wound	100-1K	1K-10K	11K	100	$\pm 3\%$	10
RDC	15.65	Non-Inductive Carbon Precision	10K-100K	100K-1M	1.1M	10K	$\pm 1\%$	2
RDRM	55.00	Standard rack mount has 1 each RDA, RDB, RDC. Special units may be supplied with any combination of resistor decades.						



RDRM



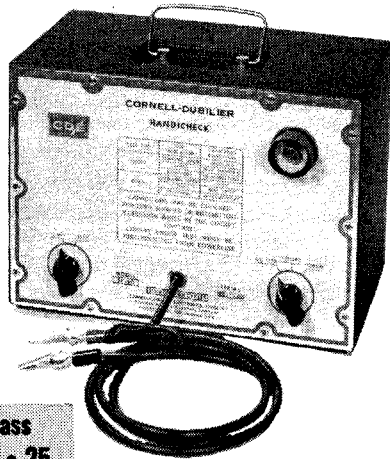
RDB



RDC

## Service Test Instruments

Type	Class
BF-90	259 • 22

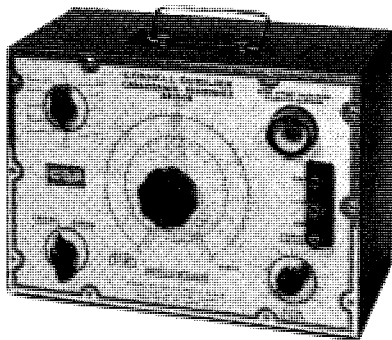


### "HANDICHECK" IN-CIRCUIT CAPACITOR TESTER

The BF-90 is designed to detect open, shorted or intermittent capacitors without removing the faulted capacitor from the circuit. Indication of capacitor condition is given by a tuning eye which opens, closes, or flutters depending on capacitor condition. The BF-90 will indicate condition of capacitors from 30 pf. to .1 mfd. with as little as 50 ohms in parallel and from .1 mfd. to 2000 mfd. with as little as 1 ohm in parallel. The capacitor tester is designed for operation on 110-125V AC, 50 or 60 cycles. It is supplied in a portable metal case with dark brown wrinkle finish. Case dimensions are 5½" deep x 7" high and 10" wide. Weight of the unit is 6 lbs. 12 oz.

**NET PRICE \$41.75**

Type	Class
BF-60	259 • 25

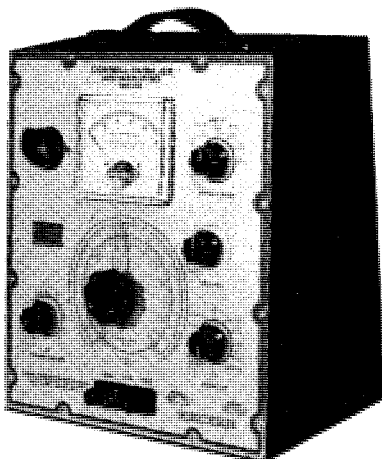


### CAPACITOR RESISTOR BRIDGE

The type BF-60 bridge is designed to measure the most important capacitor and resistor characteristics. The Wein bridge used an electron "eye" for bridge null indications. The bridge will measure resistance and capacitance as well as detect defects such as shorts, opens, intermittents, high leakage and power factor and low insulation resistance. The bridge measures capacitance from 10 pf. to 1000 mfd. in four ranges; resistance from 1000 ohms to 5 meg-ohms in two ranges; and power factor to 50% at 60 cycles. Five fixed DC polarizing voltages are provided. AC power requirements are 110-125V AC, 50 or 60 cycles. Case is dark brown wrinkle finish, 5½" deep x 7" high x 10" wide. Weight is 8 lbs. 4 oz.

**NET PRICE \$51.85**

Type	Class
BF71A	259 • 31



### CAPACITANCE-RESISTANCE ANALYZER

The BF-71A capacitance-resistance analyzer performs functions comparable to units many times the price. The unit is a versatile addition to any service shop or laboratory. The BF-71A uses Wein bridge circuitry with an electron "eye" for null indication. It measures capacitance values from 10 pf. to 2000 mfd. in four ranges with an accuracy of  $\pm 3\%$ . Bridge measurement voltage is .5 volts rms. Resistance measurements are from 2.5 ohms to 25 meg-ohms in three ranges; current measurements, from 2 microamps to 100 milliamps in three ranges; voltage, to 500 volts DC in three ranges; and power factor measurement, from 0 to 50%. The unit measures leakage current by meter and insulation resistance by indicator or calculation. The 3½" multi-scale meter has a sensitivity of 10,000 ohms per volt with an accuracy of 2% of full scale. The internal power supply is continuously variable from 0 to 500 volts DC, 35 milliamps maximum. The BF-71A is supplied in a portable metal case finished in dark brown wrinkle enamel. Dimensions are 11" high x 10" wide x 6½" deep. Weight is 14 lbs. Power requirements are 110-125 v AC, 50 or 60 cycles.

**NET PRICE \$129.75**

Tracks 'em Down Dead or Alive



ONLY THE VERSATILE

**Circuitracer**

GIVES YOU A 3-IN-1  
ELECTRICAL TEST LABORATORY

*Satisfaction Unconditionally Guaranteed*

**DON'T SEND A MAN TO DO A BOY'S JOB!**

Are the technicians in your laboratories and shops using expensive meters and instruments for simple continuity and voltage checks? Speed up production through the use of the tool specifically designed for this application. A meter should be used only when the value of voltage, resistance or current must be known. Under any other conditions a Circuitracer will provide the required information faster and easier than expensive, bulky meters.

**CIRCUIT TESTING WITH A CIRCUITRACER IS FASTER** because the signal light is in the tip at the point of contact. This makes it possible to determine the existence of a circuit or voltage without removing the eyes from the test point to read a meter.



LIST PRICE

**\$4.95** Weighs only 2½ ozs.

**SAVE METER REPAIR MONEY BY USING DESCO CIRCUITRACERS.** An overvoltage across a meter usually results in extensive damage which takes the meter out of service until repaired or replaced. The worst that can happen to your Circuitracer is a burned out lamp that can be replaced by the operator in less than a minute. Total cost, ten or fifteen cents for the lamp!

The **CIRCUITRACER** is the only electrical tester (other than expensive meters) that can test dead circuits, low voltage live circuits **AND** high voltage live circuits. It is made of the finest materials available and is designed for long life.



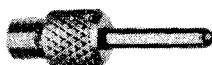
**WS-12**  
Socket to fit 12 ga. connector pin



**WS-16**  
Socket to fit 16 ga. connector pin



**WS-20**  
Socket to fit 20 ga. connector pin



**WP-12**  
Pin to fit 12 ga. connector socket



**WP-16**  
Pin to fit 16 ga. connector socket



**WP-20**  
Pin to fit 20 ga. connector socket

WRITE FOR CATALOG WITH FULL INFORMATION

\*T.M. Reg.

**DESCO  
TEST  
PROBE  
ADAPTERS**

**INSURE CONNECTOR RELIABILITY**

Manual probing of harness connectors while circuit testing can damage connectors and impair reliability. Desco Test Probe Adapters were developed to provide a test fitting identical to the pins and sockets in the connectors being tested. They make the same electrical and mechanical contact as the mating connector, and insure against scratching, bending and warping.

The adapters are made in three sizes to fit connectors using #12, #16 and #20 wire gauges. The sockets are gold plated copper with a brass sheath which retains a beryllium copper spring. The pins are stainless steel to insure long life. All are made to rigid MIL-SPECS. The adapters will fit Desco Jumper Wires and the Desco Circuitracer® Tester interchangeably.

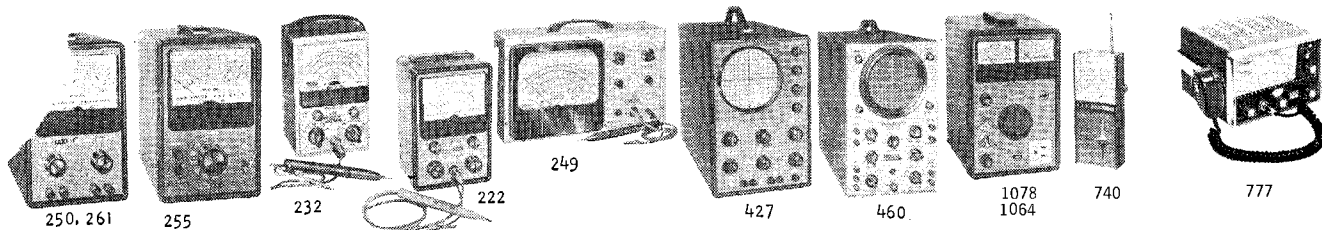
Several aircraft and missile manufacturers specify Desco Test Probe Adapters for most manual test connections. (names on request)

\*  
**DESCO**

**DESCO MFG. CO.**

**Glendale 1, Calif.**

# EICO® KITS and WIRED...TEST INSTRUMENTS • HI-FI • HAM GEAR



## AC VTVM & AMPLIFIER #250

Kit \$49.95      Wired \$79.95  
Highly sensitive, reliable AC VTVM & wideband amplifier. Measures 100 microvolts to 300V in 12 ranges; 10c-600kc  $\pm 0$ db response, 10 megohms input impedance,  $\pm 3\%$  accuracy. Wideband amplifier switch-controlled for external use: 8c-800kc response, 5VRMS output, 5K ohms output impedance, gain control, noise  $-40$ db. Frame-grid triode cathode follower input circuit, freq.-compensated input attenuator, cathode circuit attenuator. Regulated power supply.  $8\frac{1}{2}'' \times 5\frac{3}{4}'' \times 7''$ . Wt. 7 lbs.

## AC VTVM #255

Kit \$44.95      Wired \$72.95  
Same as #250 less external use amplifier.

## AC VOLT-WATT METER #261

Kit \$49.95      Wired \$79.95  
AC voltmeter & load-compensated audio watt-meter of unique quality. Measures AC voltages from 1mv to 1000V in 11 ranges, power from .015mw to 150W in 7 ranges, across standard loads from 4 to 600 ohms. Tapped power resistor load (4, 8, 16 and 600 ohms) handles up to 80W on 8 ohms and 40W on other taps. Switch to external load up to 150W. Meter automatically compensated for any load selected, internal or external, to provide single watt scale.  $8\frac{1}{2}'' \times 5\frac{3}{4}'' \times 7''$ . Wt. 6 lbs.

## VACUUM TUBE VOLTMETER #222

Complete with exclusive dual-purpose Uni-Probe®  
Kit \$27.95      Wired \$42.95  
Entirely electronic, direct reading measurement of resistance, and AC & DC to 1500V in 5 ranges. May be calibrated without removal from cabinet. Complete electronic overload protection, plus fuse. 1% precision ceramic resistors. Exclusive AC/DC Uni-Probe® selects DC or AC-Ohms. DC voltmeter input impedance 11 megohms, accuracy  $\pm 3\%$ . AC voltmeter input impedance 1 megohm, accuracy  $\pm 5\%$ . Ohmmeter 0.2 ohms to 1000 megohms in 5 ranges.  $8\frac{1}{2}'' \times 5\frac{3}{4}'' \times 7''$ . Wt. 5 lbs.

## PEAK-TO-PEAK VTVM #232 with DUAL-PURPOSE AC/DC UNI-PROBE®

Kit \$29.95      Wired \$49.95  
Measure directly p-p voltage of complex and sine waves: 0-4, 14, 42, 140, 420, 1400, 4200. DC/RMS sine volts: 0-1.5, 5, 15, 50, 150, 500, 1500 (up to 30,000 V. with HVP probe, and 250 mc with PRF probe). Ohms: 0.2 ohms to 1000 megs. 7 non-skip ranges on every function. Calibration without removing from cabinet.  $4\frac{1}{2}''$  meter, can't-burn-out circuit. Zero center, 1% multipliers. Exceptional stability and accuracy.  $8\frac{1}{2}'' \times 5'' \times 5''$ . Wt. 5 lbs.

## DELUXE PEAK-TO-PEAK VTVM #249 7 1/2" METER and UNI-PROBE®

Kit \$39.95      Wired \$59.95  
All features of Model 232—PLUS big  $7\frac{1}{2}''$  meter.  $8\frac{1}{2}'' \times 13'' \times 5''$ . Wt. 9 lbs.

## VACUUM TUBE VOLTMETER #221

Kit \$25.95      Wired \$39.95  
 $4\frac{1}{2}''$  meter in can't-burn-out circuit. Zero center for TV/FM discriminator alignment. AC/DC Volts 0-5, 10, 100, 500, 1000 (up to 30,000 V. with HVP probe, up to 250 mc with PRF probe, and peak-to-peak with PTP probe). Ohms: 0.2 ohms to 1000 megs. DB:  $-20$  to  $+55$ . Input R: 25 megs. 1% precision multipliers. Stable, accurate double-triode bridge circuit.  $9\frac{1}{2}'' \times 6'' \times 5''$ . Wt. 7 lbs.

## VTVM PROBES

DUAL-PURPOSE AC/DC UNI-PROBE®  
Kit \$4.95      Wired \$6.95  
Performs all functions—half-turn of probe-tip selects DC or AC-OHMS!

## PEAK-TO-PEAK VTVM PROBES PTP 11 & 25

Kit \$4.95      Wired \$6.95  
Read p-p voltages directly on DC scales of your VTVM. Use with any 11 or 25 megohm VTVM.

†U. S. Pat.

## RF VTVM PROBES PRF-11 & 25

Kit \$3.95      Wired \$4.95  
For RF voltage measurements up to 250 mc. Accuracy  $\pm 10\%$ . Use with any 11 or 25 megohm VTVM.

## HIGH VOLTAGE PROBE

HVP-2      Wired \$4.95  
For safe measurement up to 30,000 volts dc with any VTVM or 20,000 ohms/volt VOM. HVP-1 supplied with matching resistor for your instrument; HVP-2 supplied with choice of high quality multiplier resistors to match most popular instruments.

## ADVANCED GENERAL PURPOSE 5" OSCILLOSCOPE #427

Kit \$69.95      Wired \$109.95  
Six-stage vertical amplifier direct-coupled for minimum phase distortion & push-pull throughout for maximum linearity. Frequency-compensated vertical input attenuator. Intensity, focus and astigmatism controls on front panel. Non-blooming trace. Instantaneous, drift-free positioning permits centering and part of a trace expanded. Easy, direct connection to vertical deflection plates. Mu metal shielded 50EP1 CRT. V Amp: flat DC-500kc,  $-6$ db @ 1MC; sensitivity 3.5mv rms/cm. H Amp: flat 2cps-450kc; sensitivity 0.18V rms/cm. Sweep: 10cps-100kc.  $12\frac{1}{2}'' \times 8\frac{1}{2}'' \times 16\frac{1}{4}''$ . Wt. 26 lbs.

## GENERAL PURPOSE 3" SCOPE #430

Kit \$69.95      Wired \$99.95  
Does everything many bigger, more expensive scopes do. Vert amp flat from 2 c to 500 kc,  $-6$ db @ 1 mc. Sensitivity 25 mv/cm. Horiz amp flat from 2 c to 300 kc. Sensitivity .25 V/cm. Frequency-compensated coarse attenuator plus fine attenuator adjust size of pattern. Vert and horiz positioning controls permit centering any portion of trace expanded as much as 3 times CRT dia vertically, 2 times horizontally. Sweep frequencies from 10 c to 100 kc in 4 overlapping ranges. Int or ext sweep. Full retrace blanking. Sync fully automatic on all ranges. Flat-face  $3''$  tube; mu-metal neck shield eliminates effects of external fields. Trace controls include intensity and focus; astigmatism adjustment without cabinet removal.  $8\frac{1}{2}'' \times 5\frac{3}{4}'' \times 11\frac{1}{4}''$ . Wt. 11 lbs.

## DC WIDEBAND 3" OSCILLOSCOPE #435

Kit \$99.95      Wired \$149.95  
Really portable scope for color & black & white tv service on location ( $\frac{1}{3}$  the size of 5" scopes) and fully equipped to do the job. Quality equal to or better than the finest 5" TV service scopes is achieved with a far sharper, brighter trace on a flat-face CRT. Flat from DC—4.5mc (+1, -3db). Zener diode-controlled square wave calibrating voltage, edge-lit calibration grid. Automatic sync full retrace blanking.

## DC WIDE BAND 5" SCOPE #460

Kit \$89.95      Wired \$129.50  
Flat from DC to 4.5 mc. usable to 10 mc., featuring DC amplifiers. Vert. Sens: 25 mv/in., push-pull thruout. Sweep freqs.: 10 cps to 100 kc, low sweep with ext. condenser. Automatic sync limiter and amplifier eliminates sync voltage adjustment. On front panel: int. mod., saw-tooth output, 60 cps, ext. sync, ext. capacitor jacks! 60 cps variable phase sine sweep. Pre-set TV V&H sweep positions. Edge-lit plexiglass filter screen with variable illumination. 4 freq. compensated attenuator positions up to 1000:1 on either direct or capacitive coupled input.  $13'' \times 8\frac{1}{2}'' \times 16''$ . Wt. 29 lbs.

## ELECTRONIC SWITCH #488

Kit \$23.95      Wired \$39.95  
Simultaneously observe 2 patterns on 1 scope: compare voltage and current amplitudes, waveforms, freqs. and phase relationships. Continuously variable switching rates from less than 10 cps to over 2000 cps. Very useful as square wave generator over same range.  $6'' \times 8'' \times 6''$ . Wt. 7 lbs.

## SCOPE PROBES

MODEL PSD DEMODULATOR PROBE  
Kit \$3.95      Wired \$5.95  
Demodulates amplitude-modulated carriers between 150 kc and 250 mc.

MODEL PD DIRECT PROBE  
Kit \$2.95      Wired \$3.95  
Eliminates stray pickup and signal re-radiation.

## MODEL PLC LOW CAPACITY PROBE

Kit \$3.95      Wired \$5.95  
For TV waveform tracing in high Z, high frequency or wide-band circuits.

## METERED VARIABLE AUTO-TRANSFORMER AC BENCH SUPPLIES #1078: 7 1/2A rating      Kit \$42.95      Wired \$54.95

Delivers any voltage up to 140VAC with linear variation of output throughout entire range. Smooth rotary brush-tap controlled by panel dial. Highly efficient variable toroidal core design. Auto-transformer. No waveform distortion or voltage drop from no-load to full load. Separate output ammeter & output voltmeter.  $8\frac{1}{2}'' \times 5\frac{3}{4}'' \times 7''$ . Wt. 13 lbs.

## DELUXE CITIZENS BAND TRANSCEIVER MODEL 777

Kit \$99.95      Wired \$149.95

Deluxe CB transceiver that will delight the most demanding CB user. Receiver is super-selective dual conversion superheterodyne with RF stage; three-way power supply permits 117 VAC, 12 VDC, or 6 VDC operation; illuminated panel selection of 6 transmit crystals and 6 receiving crystals (all easily accessible through trap door), plus illuminated dial continuous vernier tuning; optional side-mounting 23 channel adaptor; illuminated "S" meter; adjustable squelch plus automatic noise limiter; spotting switch; 3 watts audio output at only 5% distortion; variable "pi" network with control knobs for simplified antenna loading;  $3\frac{1}{2}'' \times 3\frac{1}{2}''$  heavy-magnet speaker, ceramic element mike with push-to-talk switch. New extra-sturdy Posi-Lock permits 360° rotation with positive lock every 90°. New deluxe appearance with chrome plated bezel and brushed aluminum panel. In the kit, the Model 777 is supplied with the entire transmitter oscillator circuit and RF final mounted, wired, precisely tuned, and sealed at the factory to comply with FCC regulations (section 19.71 part d). This legally permits you to build the kit and put it on the air without the supervision of a person holding a commercial radio-telephone license. 1 transmit and 1 receiver crystal supplied. Others available as required.  $6'' \times 8\frac{1}{2}'' \times 10''$ . Wt. 15 lbs.

## CITIZENS BAND TRANSCEIVERS

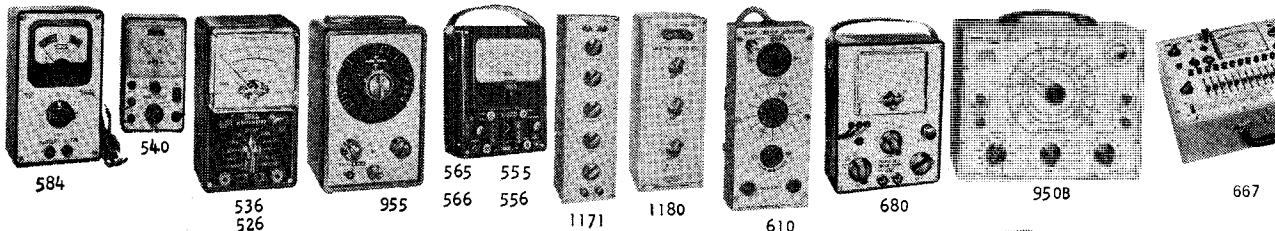
Model	Kit	Wired
Model 772: 117 VAC, 12 VDC*	69.95	99.95

\*Includes mounting bracket.

4-channel crystal-controlled transmitting chosen by channel-selector knob on front panel - Crystal-controlled receiving available on one transmit channel, continuous tuning over all 23 CB channels on the three other transmit channels - Press-to-talk button microphone: transmit-receive switching accomplished by high-quality relay with minimum capacity between contacts to prevent current leakage at RF frequencies. Superhet receiver with RF stage for high sensitivity and low s/n ratio; 1750 kc prealigned IF strip for unequalled image rejection and freedom from oscillator "pulling" on strong signals - Current metering jack in series in cathode circuit permits checking of input power to transmitter final, adjusting to FCC limit. 13-tube performance (4 dual function, 4 single function tubes, 1 germ. diode) - Adjustable squelch, automatic noise limiter - Built-in AVC - Built-in  $3'' \times 5''$  oval PM speaker and detachable ceramic-element cartridge - Posi-Lock mounting bracket - 1 transmit xtal supplied; others available, with matched receiving xtals if desired.  $6'' \times 8\frac{1}{2}'' \times 9''$ . Wt. 12 lbs.

## CITIZENS BAND WALKIE-TALKIE #740

Kit \$54.95      Wired \$79.95  
Including nickel-cadmium battery and charger, plus transmit and receive crystals for 1 channel. US-made. Crystal controlled transmit and receive. Full superhet receiver with crystal-controlled local oscillator; and high-level AM type transmitter incorporating quality circuit boards, and 9 transistors. Rechargeable nickel-cadmium battery.  $7\frac{1}{8}'' \times 2\frac{5}{8}'' \times 1\frac{5}{8}''$ . Wt. 19 oz.



**6 EICO VOLT-OHM MILLIAMMETERS**

**#565 — 20,000 OHMS/VOLT V-O-M**  
 Kit \$24.95 **Wired \$29.95**  
 31 Full Scale Ranges - DC/AC/Output Volts: 0-2.5, 10, 50, 250, 1000, 5,000 - DC Current: 0-100 uA; 10, 100, 500 mA; 10 Amp. - Ohms: 0-2000, 200K, 20 meg. - 5 DB Ranges: -12 to +55. - Large 4 1/2" 50 uA Meter Movement. - High-Impact Bakelite case. 6 3/4" x 5 1/4" x 3". Wt. 3 lbs.

**#555 — 20,000 OHMS/VOLTS V-O-M**  
 Kit \$29.95 **Wired \$34.95**  
 As above, with 1% precision resistors.

**#566 — 1000 OHMS/VOLT V-O-M**  
 Kit \$16.95 **Wired \$22.95**  
 Ranges: Same as Model 536 (see below), plus 7 output voltage ranges. Large 4 1/2" 400 uA meter movement. 6 3/4" x 5 1/4" x 3". Wt. 3 lbs.

**#556 — 1000 OHMS/VOLT V-O-M**  
 Kit \$18.95 **Wired \$25.95**  
 Same as Model 566, with 1% precision resistors.

**#536 — 1000 OHMS/VOLT V-O-M**  
 Kit \$14.95 **Wired \$18.95**  
 31 1000 Full-Scale Ranges Ohms/Volt. - DC/AC Volts: Zero to 1, 5, 10, 50, 100, 500, 5000. - DC/AC Current: 0-1, 10 mA.; 0.1, 1 Amp. - Ohms: 0-5000, 100K, 1 meg. - 6 DB Ranges: -20 to +69 - Large 3" 400 uA Meter Movement - High-Impact Bakelite case. 6 1/4" x 3 3/4" x 2". Wt. 2 lbs.

**#526 — 1000 OHMS/VOLT V-O-M**  
 Kit \$15.95 **Wired \$19.95**  
 As above, with 1% precision resistors.

**BATTERY TESTER #584**

Kit \$9.95 **Wired \$12.95**  
 For accurate, true DYNAMIC test of all A and B portable radio batteries, lantern batteries, and other types — in or out of equipment. Test Positions (Volts): 1.5, 4.5, 6.0, 7.5, 9.0, 22.5, 45, 67.5, 75, 90 plus Spare Position. Test leads provided. High-impact Bakelite case and satin aluminum panel. 6 1/4" x 3 3/4" x 2". Wt. 2 lbs.

**READI-TESTER #540**

Kit \$12.95 **Wired \$15.95**  
 For electrical and electronic servicing; for home and automotive repairs, an all-in-one multi-range ac/dc voltmeter, ammeter, ohmmeter, wattmeter and leakage checker. Instruction book contains an introduction to electricity, operating method, and repair procedures. 3 3/4" x 6 1/2" x 3 1/2". Wt. 3 lbs.

**DECADE RESISTANCE BOX #1171**

Kit \$24.95 **Wired \$29.95**  
 Exceptionally accurate, wide-range, versatile instrument. 0-99,999 ohms in 1-ohm steps with 5 decades and 1/2% precision. 12" x 3 1/2" x 3". Wt. 3 lbs.

**DECADE CONDENSER BOX #1180**

Kit \$17.95 **Wired \$24.95**  
 Precision silver-mica capacitors (±1% accuracy, 500 VDC rated) arranged in 3 decades for extremely wide range of 100 mmf to 0.111 mf in steps of 100 mmf. Positive detent ceramic wafer switches, silverplated contacts. 9" x 3 1/2" x 3 1/2". Wt. 3 lbs.

**RESISTANCE SUBST. BOX #1100**

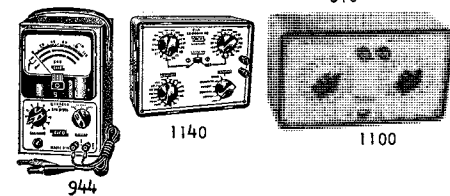
Kit \$7.95 **Wired \$12.95**  
 Enables rapid substitution of wide range of EIA resistance values from 15 ohms to 10 megohms in decade multiples of 15, 22, 33, 47, 68, 100 ohms. Uses standard 1 watt, ±10% EIA resistors. 3 3/4" x 6 1/2" x 3 1/2". Wt. 2 lbs.

**CAPACITANCE SUBST. BOX #1120**

Kit \$6.95 **Wired \$10.95**  
 Enables rapid substitution of a wide range of EIA capacitance values from 0.0001 to 0.22 mfd in an operating circuit. Minimum accuracy ±10%. Uses silver mica and molded plastic capacitors, conservatively rated at 600 volts. Convenient 5-way jack-top binding posts. 3 3/4" x 6 1/2" x 3 1/2". Wt. 2 lbs.

**SERIES/PARALLEL R-C COMBINATION BOX #1140**

Kit \$13.95 **Wired \$19.95**  
 Combines Model 1100 and 1120 with switching facilities permitting selection of any R alone, any C alone, or 1350 combinations of same in series or parallel. Open and short circuit positions provided. Standard EIA values, 10% accuracy. Jack-top binding posts. 6 1/4" x 5 1/4" x 2 3/8". 3 lbs.



**IN-CIRCUIT CAPACITOR TESTER #955**

Kit \$19.95 **Wired \$39.95**  
 Tests capacitors in the circuit without unsoldering. Checks for shorts, (even in the presence of as little as 1 ohm shunt resistance). Checks open units (as little as 5mmf in the circuit). Measures capacitance with ±10% accuracy between 0.1mf and 50mf. Measures RC product, convertible into dissipation or power factor. Utilizes electron-ray tube EM84/6FG6 with sharp bar pattern. Line adjust control permits maximum sensitivity regardless of the line voltage variations. 8 1/2" x 5 3/4" x 6". Wt. 6 lbs.

**R-C BRIDGE & R-C-L COMPARATOR #950B**

Kit \$19.95 **Wired \$29.95**  
 Direct measurement of capacity or resistance over a wide range of values. For leakage testing of electrolytics, a continuously variable polarizing test voltage from 0 to 500 VDC (±10%) is provided. Bridge balance and leakage are both indicated by a sensitive electron-ray tube indicator. The bridge provides 4 capacitance ranges from 10 mmf to 5000 mf and 4 resistance ranges from 0.5 ohms to 500 megohms. A comparator range permits comparison measurement of capacitance, resistance, or inductance against a standard. Transformer-operated power supply. 8" x 10" x 4 3/4". Wt. 8 lbs.

**DYNAMIC CONDUCTANCE TUBE AND TRANSISTOR TESTER #667**

Kit \$79.95 **Wired \$129.95**  
 Combines mutual inductance test with peak emission test to give a single reading of tube quality. Spots bad transistors by gain and leakage tests. Tests almost all receiving tubes including 5- and 7- pin Nuvistor; 9-pin Novars; 12-pin compactors; 7-, 9-, and 10-pin miniatures; 5-, 6-, 7-, and 8-pin subminiatures; octals; loctals; & many low-power transmitting & special purpose tubes, voltage regulators, cold-cathode regulators, electron ray indicators, ballast tubes, & pilot lamps. Tests are made under actual tube operating conditions. When one section of a multi-purpose is being tested all sections are drawing their full rated current. N-p-n & p-n-p transistors are checked in two steps: first for leakage, then for Beta. Both are read directly off the meter dial. Multi-circuit lever switch sets up plate, screen, and control grid voltages rapidly. 13 push-button switches insert alternate elements for rapid leakage testing. 200-mA 4 1/2-inch D'Arsonval meter gives accurate readings even for tubes with low cathode current. 20 heater voltages cover all tube types. 12" x 15" x 4 1/2". Wt. 20 lbs.

**TUBE TESTER #628**

Kit \$44.95 **Wired \$59.95**  
 Simple test set-up procedure for checking emission, shorted elements, open elements, & continuity. 13 individual lever-type elements switches for complete flexibility. 4 1/2" meter with 3-color REPLACEMENT-WEAK-GOOD scale, 0 to 100 scale for matching. Tests 7-9- & 10-pin miniatures, octal, loctal, 5- & 7-pin nuvistors, novars, and compactors, series string, magic eye, VR's. Model CRU adapter available for testing all CRT's, both color & black & white. New, 3-column wide roll chart for extra tube listing capacity. Snap-out chart window. Pilot light test socket (contact type). Line adjust control. Protective overload lamp shows transformer overloads and acts as fuse. Continuous, full-time roll chart development at EICO insures issuance of new up-to-date roll charts as frequently as required. 9 1/2" x 12 1/2" x 4 1/4". Wt. 8 lbs.

**UNIVERSAL CRT TEST ADAPTER CRU**

**Wired \$9.95**  
 New color & black & white TV picture tube adapter for EICO models 667 and 628 has 12-pin socket for 70° and early 90° deflection black & white tubes. 3 additional back-to-back plug-socket adapters provide connectors for 7 & 8-pin 90° & 110° CRT's, & for color tubes. Adaptable to many other tube testers.

**CRT TESTER & REJUVENATOR #632**

Kit \$54.95 **Wired \$79.95**

In luggage-type carrying case with accessory compartment containing line cord & universal multi-socket cable that accommodates any CRT, black- & white or color. Incorporates transformer-operated 1000 vdc supply for repairing CRT defects, a 150 v negative dc supply with a potentiometer providing continuously variable grid cut-off voltage to indicate contrast range of CRT, plus 25-watt rheostat & 3-range filament voltage selector providing precisely controlled filament voltage in 3 ranges 0-5, 5-10, 10-15. Both grid-cut-off & filament voltages are read on the 4 1/2" meter, as is beam current on a 3-color BAD-?GOOD scale. Meter reading of filament voltage assures accuracy regardless of line voltage variation. Neon-lamp circuit is used for short-open testing. 6 push-buttons are used for short-open, beam current, gas, & life testing to enable instantaneous measurement that will not damage tube. Panel switch selects the red, green, & blue guns of color CRT's for individual testing as for black and white tubes. A spring return repair push-button is used to apply the 1000 vdc for rejuvenate-welding procedures or for removing inter-element shorts. The 632 is completely versatile & is designed to be applicable to both tube & transistor TV CRT's, either color or black & white. 9 3/4" x 12" x 5". Wt. 8 lbs.

**TRANSISTOR & CIRCUIT TESTER #680**

Kit \$25.95 **Wired \$39.95**

Measures ICEO, ICBO & DCβ directly, ACβ indirectly, without charts or special settings — plus all dc volts, currents & resistances needed to service transistor equipment. Battery powered. 50uA, 3 1/2" face meter movement provides sensitivity & scale length necessary for accuracy. Built-in 20,000Ω VOM facilities frees your other test equipment. 6 3/4" x 5 1/4" x 3". Wt. 3 lbs.

**TUBE TESTER ADAPTER #610**

Kit \$5.95 **Wired \$11.95**

Adapts EICO models 625 or 666 tube testers for testing the following new tube types: nuvistor 5-pin; nuvistor 7-pin; novar; 10-pin miniature; compactor, 12-pin. Included are roll chart supplements for both 625 and 666 models. 1 1/4" x 2 1/2" x 6". Wt. 1 lb.

**IM/HARMONIC DISTORTION METER & AC VTVM #902**

**Wired \$250.00**

Unique combination audio instrument accurately measures IM distortion in four ranges and harmonic distortion in 6 ranges with ±5% FSD accuracy. Residual IM distortion is 0.05%, and residual harmonic distortion is 0.1%. Also 10-range AC VTVM and db meter. 8 1/2" x 12 1/2" x 10 1/8". 18 lbs.

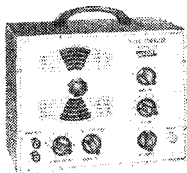
**PROFESSIONAL CAPACITANCE ANALYZER w/RC BRIDGE & RCL COMPARATOR #965**

Kit \$99.95 **Wired \$169.95**

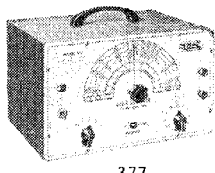
Incorporates low voltage (0.45 VAC rms) bridge for safe testing of transistor circuit capacitance, with accurate null reading on meter. Capacitance measurements from 5 pF-5000 mF in four ranges, resistance measurements from 0.5 ohm-500 megohm in four ranges. A built-in variable 0-500 VDC supply is used for capacitor leakage and I-R analysis in conjunction with a 6-range DC VTVM, and an 11-range DC VT micro-milliammeter capable of reading down to 0.015 uA and up to 15 mA. 8 1/2" x 12 1/2" x 9". 15 lbs.



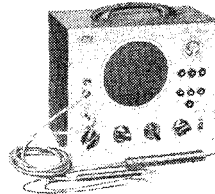
# KITS and WIRED...TEST INSTRUMENTS·HI-FI·HAM GEAR



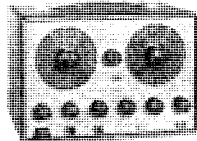
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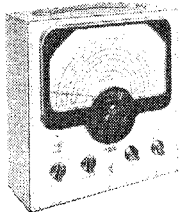
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147A



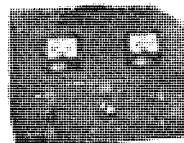
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315



1020



1050, 1060

## RF SIGNAL GENERATOR #324

Kit \$28.95

Wired \$39.95

Extended frequency range: 150 kc to 145 mc on fundamentals in 6 bands; 111-435 mc on calibrated harmonics.  $\pm 1.5\%$  frequency accuracy; 61 vernier tuning knob and excellent spread at most important alignment frequencies. Etched tuning dial, plexiglass windows, edge-lit hairlines. Colpitts RF oscillator, directly plate-modulated by cathode follower for improved modulation. Variable depth of internal modulation 0-50% by 400 cps Colpitts oscillator. Variable gain external modulation amplifier; only 3.0 volts needed for 30% modulation. Turret-mounted slug-tuned coils. Fine and Coarse (3-step) attenuators, 50-ohm output Z. RF and AF outputs respectively 100,000 uv and up to 10 V. Tubes: 12AU7, 12AV7, selenium rectifier, xfmr-operated. 5-way jack-top binding posts for AF in/out; coaxial connector and shielded cable for RF out. Satin aluminum panel and grey wrinkle steel case. 8" x 10" x 4 3/4". Wt. 8 lbs.

## TV-FM SWEEP & POST INJECTION MARKER GENERATOR #369

Kit \$89.95

Wired \$139.95

Feeds only sweep signal to circuit; picks off signal at output and feeds it to internal mixer where markers are added. So circuitry is not affected by marker; marker is not affected by circuit. All-electronic, controllable, inductor sweep circuit is independent of marker gen. Five fund ranges: 3.5-9 mc; 7.5-19 mc; 16-40 mc; 32-85 mc; and 75-216 mc. Retrace blanking obtained with tube that conducts during negative excursion. 3-stage AGC circuit keeps signal level constant, even at sweep width of 20 mc. Phasing control permanently adjusts horizontal sweep. Marker gen has four ranges, from 2-225 mc, 60-225 range is third harmonic of next lower; all others are funds. 8 1/2" x 12 1/2" x 7". Wt. 16 lbs.

## SOLID STATE N.T.S.C. STANDARD COLOR SIGNAL & DOT-BAR GENERATOR #380

Kit \$129.95

Wired \$169.95

Provides N.T.S.C. color signals, including both chrominance and luminance. Color burst is precisely gated and delayed according to N.T.S.C. standards. Phase angles are permanently established by a linearly distributed delay line. No adjustments are ever required. Provides square "clean" waveforms without significant overshoots or ringing. In addition to generating 11 different color signals, one at a time, for hue and demodulator adjustments, the Model 380 generates dots, cross-hatch, horizontal lines, and vertical lines for convergence and linearity adjustments. Both video and RF outputs are provided, with gain controls. Three crystal-controlled oscillators for color burst and color information, convergence and sync signals, and RF output on TV channel. Outstandingly compact and weighs only 4 lbs.

## DELUXE RF SIGNAL GENERATOR #315

Kit \$49.95

Wired \$69.95

Laboratory-precision generator EICO Service-Engineered with 1% accuracy. Frequency range: 75 kc-150 mc in 7 calibrated ranges. Extremely stable. Illuminated hairline VERNIER TUNING. VR stabilized line supply. 400-cycle pure sine wave with less than 5% distortion. Tube complement: 6X5, 6SL7, 6CA, VR-150. Satin aluminum etched panel; rugged steel case. 115 V. 60 cycles AC. 13" x 12" x 7". Wt. 18 lbs.

## TV-FM SWEEP GENERATOR #360

Kit \$39.95

Wired \$59.95

Covers all TV-FM alignment frequencies, 500 kc-228 mc. Vernier-driven dial. Center of each of 13 TV channels marked on front panel. Sweep width variable 0-30 mc with mechanical inductive sweep — permits gain comparison of adjacent TV channels. Crystal marker oscillator, variable amplitude. Provides for injection of external marker. Phasing control. Complete with HF tubes. Less Crystal. 10" x 8" x 6 3/4". Wt. 11 lbs.

EICO 5 MC and 4.5 MC Crystals — \$3.95 ea.

## SINE & SQUARE WAVE AUDIO OSCILLATOR #377

Kit \$37.95

Wired \$54.95

RC (Wein Bridge) oscillator incorporating 1% resistors and a 2-gang tuning capacitor providing sine wave frequencies from 20 cps to 200 kc in 4 bands. Sine wave distortion is less than 1%. Output amplitude is flat  $\pm 1.5$  db from 60 cps to 150 kc. Square wave output is obtained from an overdriven clipper and the waveform is free of excessive tilt or rounding between 200 cps and 20 kc. A high degree of frequency stability is obtained after a very short warm-up, and calibration accuracy is the greater of  $\pm 3\%$  or 1 cps. The output stage is a split-load cathode follower providing 10 V rms into a 1000-ohm load. The power supply employs full-wave rectifiers and a pi-type LC filter. Hum is less than 0.4% of rated output. 7 1/8" x 11 5/8" x 7 5/8". Wt. 13 lbs.

## FM MULTIPLEX SIGNAL GENERATOR #342

Kit \$99.95

Wired \$149.95

A compact instrument for test or alignment of multiplex circuits of FM Multiplex Stereo receivers. Enables you to quickly measure and adjust channel separation and balance, or the input level needed for synchronization or switchover to stereo operation.

## DELUXE MULTI-SIGNAL TRACER #147A

Kit \$29.95

Wired \$44.95

Entirely new 5-tube instrument provides high gain RF and low gain audio channels with both visual and aural monitors (electron-ray tube and 5" speaker). Permits RF, IF and audio signal tracing in TV, FM and AM sets. Highly useful noise localizer circuit that applies DC test voltage thru probe to suspected component and simultaneously picks up and amplifies effect. Wattmeter circuit detects abnormal power consumption in TV and radio receivers. May be connected as test speaker, amplifier or output transformer, and has output for VTVM or scope. Excellent for gain-per-stage estimation, null detector, scope preamplifier, utility amplifier, small P.A. system. New satin finish etched panel; grey wrinkle steel case. 105-125 VAC, 50/60 cps. 8" x 10" x 4 3/4". Wt. 10 lbs.

## LOW-COST MULTI SIGNAL TRACER #145A

Kit \$23.95

Wired \$32.95

More than enough RF gain to trace up to receiver input; signal heard through built-in 5" PM speaker. Shielded RF crystal demodulator and direct probes supplied. Noise localizer circuit applies DC test voltage through probe to suspected component and simultaneously picks up and amplifies effect. 7 1/8" x 5 1/8" x 5 1/8". Wt. 7 lbs.

## POWER & BIAS SUPPLY FOR TRANSISTORIZED EQUIPMENT #1020

Kit \$23.95

Wired \$29.95

Extremely low ripple DC power supply for hum-free operation of transistor radios, hearing aids, "walkie-talkie" transistor transceivers, transistor preamps and tuners, language lab transistor amplifiers, transistor test equipment, etc. May also be used in TV and radio service work as a bias supply to offset AVC and AGC voltages during alignment, and to cut off the color burst amplifier in color TV adjustments. May also be used as a variable bias supply in the development of transistor and tube circuits, including the supply of the DC bias for filaments or as a filament DC power supply within the current ratings. Output Voltage Range: 0-30 V DC, continuously variable. Max. Output Current Capacity (continuous): 150 ma from 0-12 V, 200 ma from 12-24 V, 300 ma from 24-30 V. Ripple: (120 cps); 0.005% at full load. Power Requirements: 117 V, 60 cps. 5" x 4" x 5 1/2". Wt. 5 lbs.

## 6V & 12V BATTERY ELIMINATOR AND CHARGER #1050

Kit \$29.95

Wired \$38.95

All the power you need for 6-volt and 12-volt battery charging and auto radio servicing. Two DC ranges: 0-8 V (10 amps continuous, 20 amps intermittent), 0-16 volts (6 amps continuous, 12 amps intermittent). Continuous voltage adjustment with variable-type transformer. Separate voltmeter and ammeter. Heavy duty selenium rectifier. Fused primary; automatic reset circuit-breaker opens secondary circuit upon overload. Rugged, well-ventilated steel cabinet. 8 3/4" x 10 1/2" x 7 3/4". Wt. 13 lbs.

## EXTRA-FILTERED 6V & 12V BATTERY ELIMINATOR AND CHARGER #1060

Kit \$39.95

Wired \$49.95

Combines Model 1050K Battery Eliminator and Model 1055 Filter in a single unit. Powers both transistor and conventional equipment. 8 3/4" x 10 1/2" x 7 3/4". Wt. 17 lbs.

## 6 & 12 VOLT BATTERY ELIMINATOR & CHARGER #1064

Kit \$45.95

Wired \$54.95

Heavy-duty 2-ranges for operating any mobile radio & transceiver including transistor or "hybrid" types. Also usable as charger for either 6 or 12 volt batteries. Variable transformer provides continuous output adjustment. 2 meters simultaneously observe output voltage and current. Ratings: 0-8V; 10A continuous, 20A intermittent; 0-16V; 6A cont., 10A interm. AC ripple: 0-16V range: 0.3% @ 2A, 1% @ 6A. Heavy-duty selenium rectifiers, & automatic reset overload relay. 8 1/2" x 5 3/4" x 7 1/2". Wt. 14 lbs.

ALL PRICES 5% HIGHER IN THE WEST

# EMICO

PRECISION-PLUS

# PRECISIO

*the Recognized Leader . .*

## PRICE LIST

PRICES—Prices listed are net and include all hardware and individual boxing. Resistance approximate. If important request factory engineering confirmation.

### DC AMMETERS

Range	Approximate Resist. Ohms	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price	MODEL RF-2 1/4C Catalog Number	Dealers' Net Price	Approximate Resist. Ohms	MODEL 13 Catalog Number	Dealers' Net Price
0-1	.15	2101	\$1.90	2201	\$2.00	2301	\$2.30			
0-3	.032	2101-A	1.90	2201-A	2.00	2301-A	2.30			
0-5	.016	2102	1.90	2202	2.00	2302	2.30			
0-10	.00115	2103	1.90	2203	2.00	2303	2.30	.0025	2403	\$2.30
0-15	.00115	2103-A	1.90	2203-A	2.00	2303-A	2.30	.0025	2403-A	2.30
0-20	.00115	2104	1.90	2204	2.00	2304	2.30			
0-25	.00115	2104-A	1.90	2204-A	2.00	2304-A	2.30			
0-30	.00115	2105	1.90	2205	2.00	2305	2.30	.0006	2405	2.30
0-60	.000116	2106-A	2.60	2206-A	2.70	2306-A	3.00			
1-0-1	.08	2109	1.90	2209	2.00	2309	2.30			
3-0-3	.00115	2110	1.90	2210	2.00	2310	2.30			
6-0-6	.00115	2111	1.90	2211	2.00	2311	2.30			
10-0-10	.00115	2112	1.90	2212	2.00	2312	2.30			
15-0-15	.00115	2113	1.90	2213	2.00	2313	2.30			
20-0-20	.00115	2114	1.90	2214	2.00	2314	2.30	.0006	2414	2.30
30-0-30	.00115	2115	1.90	2215	2.00	2315	2.30	.0006	2415	2.30
75-0-75	.000116	2116-A	2.95	2216-A	3.05	2316-A	3.35			

### DC MILLIAMMETERS

Range	Approximate Resist. Ohms	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price	MODEL RF-2 1/4C Catalog Number	Dealers' Net Price	Approximate Resist. Ohms	MODEL 13 Catalog Number	Dealers' Net Price
0-1	850	2120	\$3.70	2220	\$3.75	2320	\$4.05	950	2420	\$4.05
0-3	425	2121	2.60	2221	2.65	2321	2.95	130	2425	2.70
0-5	925	2125	2.35	2225	2.40					
0-5	1300					2325	2.70	75	2426	2.55
0-10	300	2126	2.20	2226	2.25					
0-10	350			2227	2.00	2326	2.55	23	2427	2.30
0-20	95	2127	1.90							
0-20	105			2227-A	2.00	2327	2.30			
0-25	65	2127-A	1.90	2228	2.00	2327-A	2.30	12	2428	2.30
0-30	37	2128	1.90							
0-30	45			2229	2.00	2328	2.30	5.5	2429	2.30
0-50	14.5	2129	1.90							
0-50	18.0			2230	2.00	2329	2.30	1.8	2430	2.30
0-100	7.0	2130	1.90							
0-100	8.3			2230-A	2.00	2330	2.30	1.0	2430-A	2.30
0-150	1.8	2130-A	1.90							
0-150	2.15			2230-B	2.00	2330-A	2.30	.5	2430-B	2.30
0-200	1.5	2130-B	1.90							
0-200	1.7			2231	2.00	2330-B	2.30	.35	2431	2.30
0-300	.61	2131	1.90							
0-300	.8			2232	2.00	2331	2.30	12	2432	2.30
0-500	.21	2132	1.90							
0-500	.27					2332	2.30			

### DC VOLTMETERS (HIGH RESISTANCE)

(100 ohms/volt except 150 and 300 volt ranges are 200 ohms per volt)

Range	Approximate Resist. Ohms	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price	MODEL RF-2 1/4C Catalog Number	Dealers' Net Price
0-10	1050	2140	\$2.75	2240	\$2.85	2340	\$3.15
0-30	2800	2141	2.75	2241	2.85	2341	3.15
0-50	4000	2142	2.95	2242	3.05	2342	3.35
0-150	28000	2143	3.10	2243	3.20	2343	3.60
0-300	55000	2144	3.20	2244	3.30	2344	3.60

### DC VOLTMETERS (LOW RESISTANCE)

Range	Approximate Resist. Ohms	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price	MODEL RF-2 1/4C Catalog Number	Dealers' Net Price
0-1	33	2134	\$1.90	2234	\$2.00	2334	\$2.30
0-3	100	2135	1.90	2235	2.00	2335	2.30
3-0-3	30	2136	1.90	2236	2.00	2336	2.30
0-5	140	2136-A	1.90	2236-A	2.00	2336-A	2.30
0-8	225	2136-B	1.90	2236-B	2.00	2336-B	2.30
0-10	280	2137	1.90	2237	2.00	2337	2.30
0-15	450	2137-A	1.90	2237-A	2.00	2337-A	2.30
0-20	600	2137-B	1.90	2237-B	2.00	2337-B	2.30
0-30	1000	2137-C	1.90	2237-C	2.00	2337-C	2.30
0-50	1400	2138	1.90	2238	2.00	2338	2.30
0-1	.365	6101	\$3.05	6201	\$3.15	6301	\$3.45
0-3	.078	6102	3.05	6202	3.15	6302	3.45
0-5	.023	6103	3.05	6203	3.15	6303	3.45
0-10	.013	6104	3.05	6204	3.15	6304	3.45
0-25	750	6125	\$3.05	6225	\$3.15	6325	\$3.45
0-50	175	6126	3.05	6226	3.15	6326	3.45
0-100	58	6127	3.05	6227	3.15	6327	3.45
0-250	12	6128	3.05	6228	3.15	6328	3.45
0-500	1.75	6129	3.05	6229	3.15	6329	3.45
0-5	50	6135	\$3.05	6235	\$3.15	6335	\$3.45
0-10	175	6136	3.05	6236	3.15	6336	3.45
0-15	300	6137	3.05	6237	3.15	6337	3.45
0-25	920	6137-A	3.05	6237-A	3.15	6337-A	3.45
0-50	1800	6138	3.05	6238	3.15	6338	3.45
0-150	9530	6139	3.60	6239	3.70	6339	4.00
0-300	32000	6140	4.20	6240	4.25	6340	4.55

### AC AMMETERS

Range	Approximate Resist. Ohms	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price	MODEL RF-2 1/4C Catalog Number	Dealers' Net Price
0-1	.365	6101	\$3.05	6201	\$3.15	6301	\$3.45
0-3	.078	6102	3.05	6202	3.15	6302	3.45
0-5	.023	6103	3.05	6203	3.15	6303	3.45
0-10	.013	6104	3.05	6204	3.15	6304	3.45

### AC MILLIAMMETERS

Range	Approximate Resist. Ohms	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price	MODEL RF-2 1/4C Catalog Number	Dealers' Net Price
0-25	750	6125	\$3.05	6225	\$3.15	6325	\$3.45
0-50	175	6126	3.05	6226	3.15	6326	3.45
0-100	58	6127	3.05	6227	3.15	6327	3.45
0-250	12	6128	3.05	6228	3.15	6328	3.45
0-500	1.75	6129	3.05	6229	3.15	6329	3.45

### AC VOLTMETERS

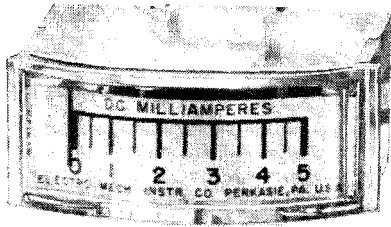
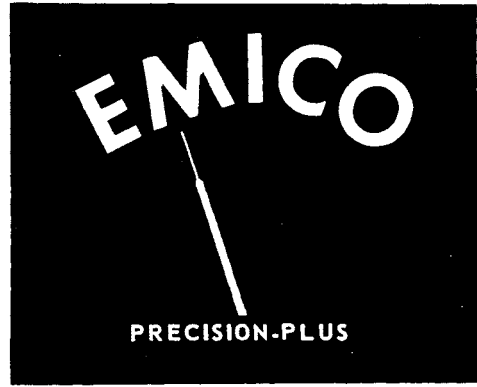
Range	Approximate Resist. Ohms	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price	MODEL RF-2 1/4C Catalog Number	Dealers' Net Price
0-5	50	6135	\$3.05	6235	\$3.15	6335	\$3.45
0-10	175	6136	3.05	6236	3.15	6336	3.45
0-15	300	6137	3.05	6237	3.15	6337	3.45
0-25	920	6137-A	3.05	6237-A	3.15	6337-A	3.45
0-50	1800	6138	3.05	6238	3.15	6338	3.45
0-150	9530	6139	3.60	6239	3.70	6339	4.00
0-300	32000	6140	4.20	6240	4.25	6340	4.55

ELECTRO-MECHANICAL INSTRUMENT CO. PERKASIE, PENNSYLVANIA

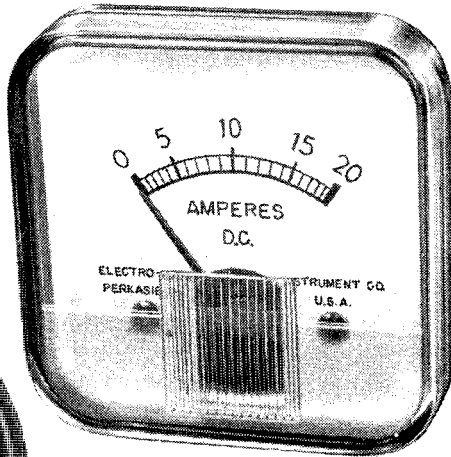


# EMICO

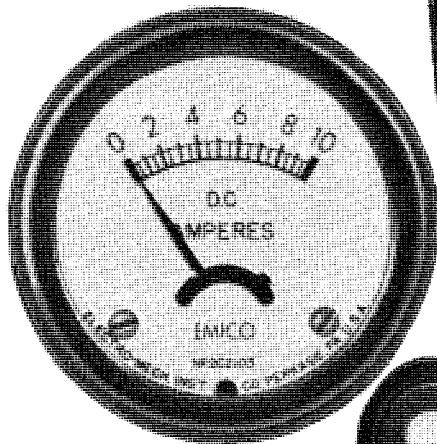
Precision Products



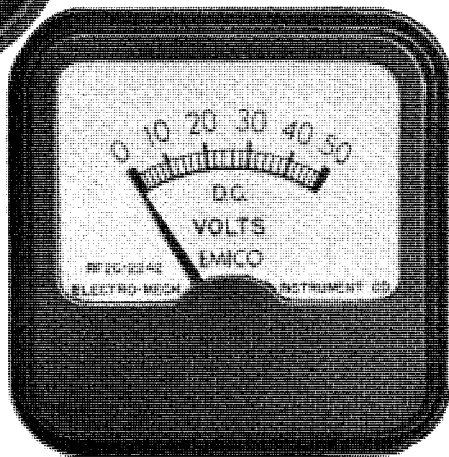
MODEL 13  
Edge Reading Type



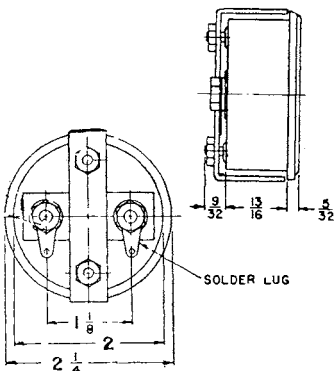
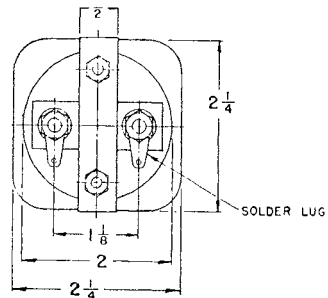
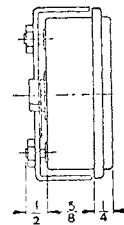
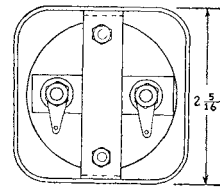
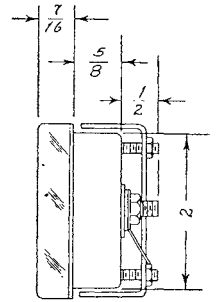
MODEL RF2 $\frac{1}{4}$ C



MODEL NF2C



MODEL RF2C



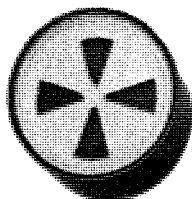
Precision instruments engineered for

- accuracy
- long life
- economy

**EMICO Miniature  
Circuit Indicator  
MODEL 801**

Gives snap-action response at .001 (milliwatt) to monitor all circuit malfunctions or on-off conditions. Dependable through millions of on-off cycles. Simplified panel installation.

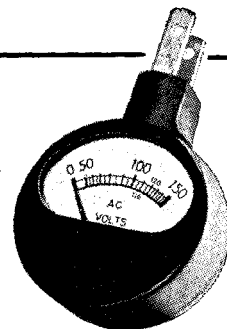
Dealer's Net \$5.00



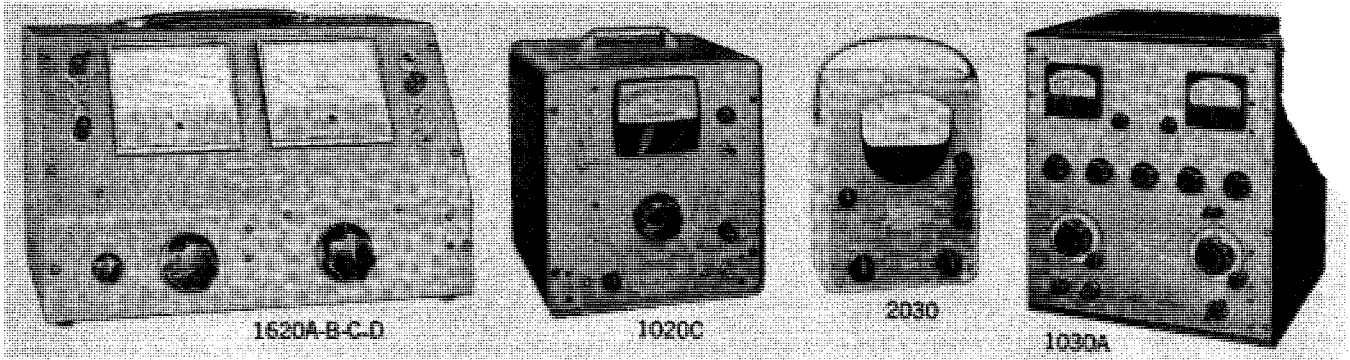
**EMICO A.C. Voltage Tester**

Accurate, precision mechanism plug-in type with damped meter movement. Convenient 90° swivel prongs for ease of reading from any position.

Dealer's Net \$3.45



ELECTRO-MECHANICAL INSTRUMENT CO., PERKASIE, PENNSYLVANIA

**FREED TRANSFORMER CO., INC.****MEGOHMMETERS**

Freed manufactures a complete range of insulation resistance measuring equipment with fixed and variable d.c. test voltages from 5 to 2500 volts. Insulation and leakage measurements can

be made on transformers, motors, cables, electronic assemblies and components, dielectric materials, electrical appliances and tools, capacitors and resistors.

Type	Resistance Range	Test Voltage	Accuracy	Power and Requirements	Size and Weight
1620	0.1 to 4,000,000 megohms 1 to 2,000,000 megohms @ 500 volts	Variable 50 to 1000 volts d.c.	±5% at full scale	105-125 volts 50-60 cycles	15" x 9" x 7½" 24 lbs. *
1620-A	0.01 to 4,000,000 megohms 0.1 to 200,000 megohms @ 50 volts 1 to 2,000,000 megohms @ 500 volts	Variable 50-100 volts d.c. 100-1000 volts d.c.	±5% at full scale	105-125 volts 50-60 cycles	15" x 9" x 7½" 24 lbs. *
1620-B	1 to 2,000,000 megohms 10 to 2,000,000 megohms @ 2500 volts	Variable 250-2500 volts d.c.	±5% at full scale	105-125 volts 50-60 cycles	15" x 9" x 7½" 24 lbs. *
1620-C	All features same as Type 1620 with additional circuitry for capacitor measurements	Variable 50 to 1000 volts d.c.	±5% at full scale	105-125 volts 50-60 cycles	15" x 9" x 7½" 24 lbs. *
1620-D	0.01 to 40,000,000 megohms 0.1 to 2,000,000 megohms @ 50 volts 1 to 20,000,000 megohms @ 500 volts Circuitry for capacitor measurements	Variable 5-100 volts d.c. 100-1000 volts d.c.	±5% at full scale except highest range ±10%	105-125 volts 50-60 cycles	15" x 9" x 7½" 25 lbs. *
1020-C	0.1 to 2,000,000 megohms 0.1 to 200,000 megohms @ 50 or 100 volts d.c. 1 to 2,000,000 megohms @ 500 volts d.c.	Fixed 50, 100, 500 volts Regulated	±3% all ranges except highest range ±5%	105-125 volts 50-60 cycles	9½" x 10½" x 8" 18 lbs. *
1020-D	0.1 to 2,000,000 megohms 0.1 to 200,000 megohms @ 100 or 200 volts d.c. 1 to 2,000,000 megohms @ 500 volts d.c.	Fixed 100, 200, 500 volts Regulated	±3% all ranges except highest range ±5%	105-125 volts 50-60 cycles	9½" x 10½" x 8" 18 lbs. *
2030-A	10 to 2,000,000 megohms	Fixed 500 volts d.c.	±5% full scale	battery operated transistor supply	6" x 8" x 4" 8 lbs.
2030-B	1 to 20,000,000 megohms	Fixed 500 volts d.c.	±5% full scale	battery operated transistor supply	6" x 8" x 4" 8 lbs.
2030-C	0.1 to 2,000,000 megohms	Fixed 50 volts d.c.	±5% full scale	battery operated transistor supply	6" x 8" x 4" 8 lbs.
2030-D	1 to 2,000,000 megohms	Fixed 100 volts d.c.	±5% full scale	battery operated transistor supply	6" x 8" x 4" 8 lbs.
2030-E	1 to 2,000,000 megohms	Fixed 200 volts d.c.	±5% full scale	battery operated transistor supply	6" x 8" x 4" 8 lbs.
2035	10,000 ohms to 10,000 megohms single scale, no multiplier	Fixed 50 volts d.c.	±20%	battery operated transistor supply	6" x 8" x 4" 8 lbs.

\*Rack models available, 19" x 10½" x 9½". Weight 25 lbs.

**NON-DESTRUCTIVE D.C. VOLTAGE BREAKDOWN EQUIPMENT**

Freed can supply non-destructive voltage breakdown testers for applications where the d.c. test voltage must be removed within microseconds in the event of a breakdown. Simultaneously the component under test is short circuited to prevent it from being damaged by its own capacitive charge.

The instrument contains a variable slope ramp generator to apply the test voltage in applications where the capacitive current in the test sample exceeds the preset leakage current limit. An indicating voltmeter holds the reading of the breakdown voltage until reset.

Type	Leakage Current	Test Voltage	Output Accuracy	Power Requirements	Size and Weight
1625	10, 100 & 500 microamperes	*2500 volts d.c.	±5%	105-125 volts 50-60 cycles	19" x 8¾" 25 lbs.

\*Other test voltages available. Write for specifications.

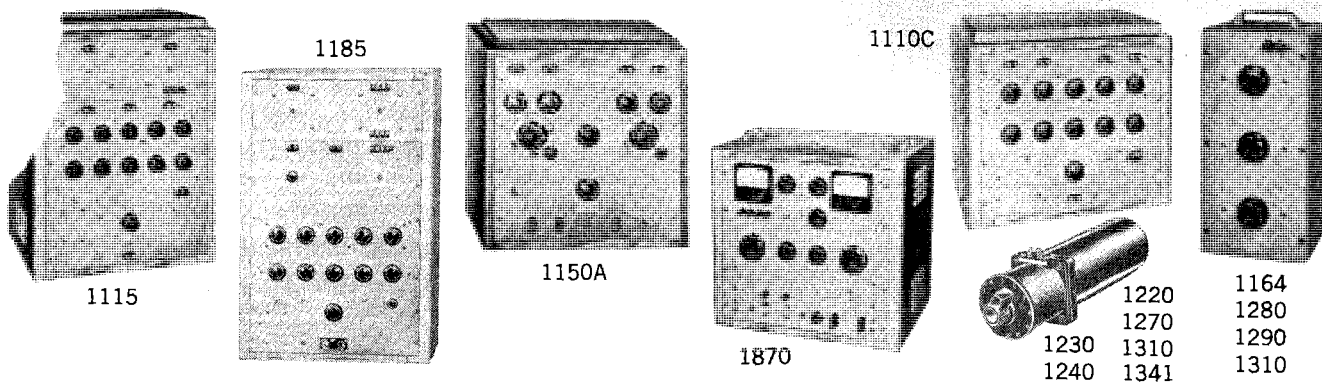
**LOW FREQUENCY "Q" INDICATORS**

Direct indication of "Q" at low frequencies, inductance, distributed capacity, impedance and dielectric loss can also be measured. Instrument may be used to study the magnetic properties of iron core material for stability as a function of applied voltage and losses as a function of the frequency.

Two units are available, the 1030-A indicates "Q" as a product of meter readings multiplied by dial settings, the 1030-B displays "Q" directly in digital readout.

Type	Test Frequency	Q Range	Accuracy	Test Voltage	Power Requirements	Dimensions and Weight
1030-A	20 cycles to 200 K.C.	1-1000	±5% 20 cycles to 50 KC— to 200 KC at reduced accuracy	Voltage to series circuit, 0.01 to 10 volts voltage across coil variable to 100 volts	105-125 volts 50-60 cycles	21" x 23" x 15" 120 lbs.
1030-B			Specifications as 1030-A with digital "Q" readout			

# FREED TRANSFORMER CO., INC.



## DECADE INDUCTORS

Each unit is an assembly of four toroids wound on a stabilized Molybdenum permalloy dust core. The coils have a nominal inductance of 1-2-3-4 and are connected in series and switched to vary the inductance from 0-10.

Type	Frequency Range, Cycles	Maximum Q*	Inductance per Step	Total Inductance	Accuracy	Dimensions and Weight	
1220	500-20,000	230 @ 4 KC	0.001 h	0.01 h	±2%	3" x 3" x 9"	4½ lbs.
1230	500-20,000	280 @ 3 KC	0.01 h	0.1 h	±1%	3" x 3" x 9"	4½ lbs.
1240	500-20,000	260 @ 3 KC	0.1 h	1 h	±0.5%	3" x 3" x 9"	4½ lbs.
1270	500-20,000	190 @ 2 KC	1 h	10 h	±0.25%	3" x 3" x 9"	4½ lbs.
1341	100-2,000	100 @ 1 KC	10 h	100 h	±0.25%	3" x 3" x 9"	4½ lbs.
1280	500-20,000	280 @ 3 KC	0.001 h	1.11 h	See note* *	13¾" x 6½" x 5½"	16 lbs.
1290	500-20,000	280 @ 3 KC	0.001 h	11.11 h	See note* *	15" x 7" x 5½"	20 lbs.
1310	500-20,000	280 @ 3 KC	0.01 h	11.1 h	See note* *	13¾" x 6½" x 5½"	16 lbs.
1164†	30-2,000	60 @ 300	0.1 h	111 h	±1%	15" x 7" x 5½"	28 lbs.

†Type 1164 inductors are wound on special nickel alloy laminated cores.

*Inductance per step:	1 mh	10 mh	100 mh	1 h	10h
**Nominal Accuracy:	±2%	±1%	±0.5%	±0.25%	±0.25%

\*Maximum Q depending on inductance value and a.c. voltage across coil.

## INCREMENTAL INDUCTANCE BRIDGES

Direct in-line readings of inductance and conductance of iron core component at audio frequencies with or without superimposed direct current. The bridge uses the Owens circuit with provisions for measuring the series or parallel inductance and conductance of the unknown inductor; five precision resistance

and capacitance decades are provided to indicate these values. "Q" or storage factor can be measured as the product of the inductive reactance and the conductance.

Type	Inductance Range	Conductance Range	Frequency Range	D.C. Current	Accuracy	Dimensions and Weight
1110-C	111.1 h to 1 mh 5 decades 1.1 h to 1 µh 2 decades	0.015 µmho—100 mho "Q" = 600 max @ 100 cycles	20 cycles to 10KC	up to 2 amperes	±5% to 5 KC ±2% to 10 KC	21¾" x 17½" x 15¼" 50 lbs.
1115	111.1 h to 100 µh 5 decades 0.11 h to 0.1 µh 2 decades	0.15 µmho—1000 mho "Q" = 600 max @ 100 cycles	20 cycles to 10 KC	up to 15 amperes	±1% to 5 KC ±3% to 10 KC	21¾" x 28" x 15¼" 80 lbs.
1185	111.1 h to 100 µh 5 decades 0.11 h to 0.1 µh 2 decades	0.15 µmho—1000 mho "Q" = 600 max @ 100 cycles	20 cycles to 10 KC	up to 30 amperes	±1% to 5 KC ±3% to 10 KC	21¾" x 33¼" x 15¼" 100 lbs.
1115-A	Same specifications as type 1115 except excitation range to 1000 volts.					

## UNIVERSAL BRIDGE

The Freed Type 1150-A Universal Bridge offers the laboratory a combination of eight bridges in one instrument. This bridge will measure the reactive and resistive component of impedances, capacitance, resistance and phase angle.

In the Hay and/or Owen bridge configuration the incremental permeability of an inductance can be measured.

Type	Inductance Range	Capacitance Range	Resistance Range	"D" Hay Bridge
1150-A	5 µh 1110 h	5 pf-10 mf	0.05 Ω-1 MΩ	0.001-10 Q = 0.1-1000
	"Q" Maxwell 0.01-50	"Q" Series Owen 0.01-600 @ 100 cycles	"Q" Parallel Owen 80 @ 100 cycles	"Q" Parallel Resistor-Condenser Bridge 0.01-11.1
Accuracy Inductance ±.5% up to 1 KC. ±2% to 10 KC. Capacitance ±1% @ 1 KC. "D", "Q" ±5% @ 1 KC. Resistance (ac.) ±1% @ 1 KC.				Dimensions and Weight 21¾" x 24½" x 17" 65 lbs.

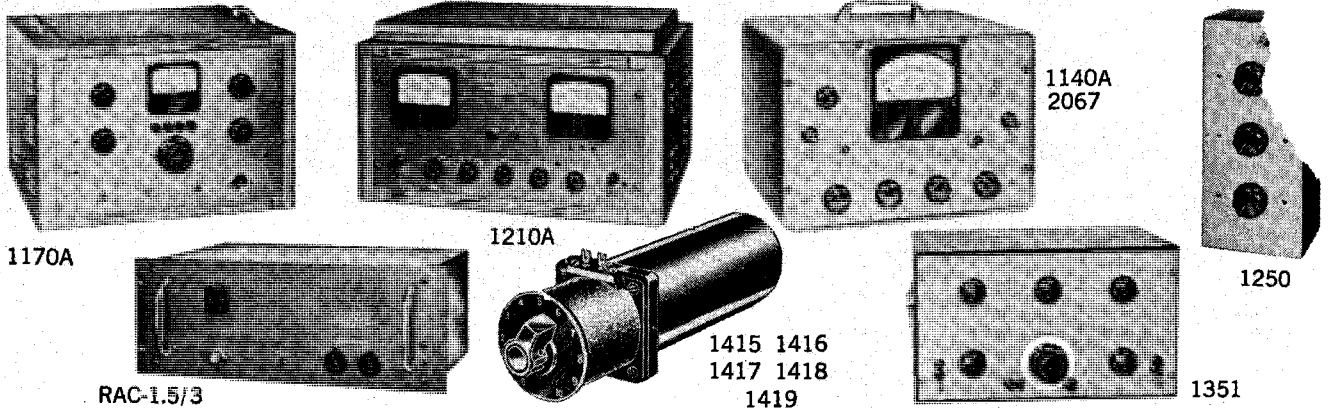
## INDUCTANCE COMPARISON BRIDGE

A complete production unit for comparing transformer and inductor impedances under dynamic conditions against a standard resistor. The instrument has a self-contained metered 500 Ma. d.c. supply, metered 135 volt a.c. source and

a direct reading percentage deviation indicator, provision for connecting external test frequencies up to 10 Kc. is provided.

Type	Inductance Range	Deviation Range	Test Frequency	D.C. Current Range	Dimensions and Weight
1870	25 mh - 100 h	±20%, accuracy 1% ±30%, accuracy 5%	60-10,000 cycles	0.5 ma., 0-25 ma., 0-100 ma., 0-500 ma.	22" x 19½" x 15" 150 lbs.

# FREED TRANSFORMER CO., INC.



## A.C. LINE REGULATOR

A distortion free 60/400 cycle electromechanical a.c. line regulator. Features a tubeless fast response phase reversible magnetic preceded by a transistor comparison amplifier with zener reference.

Type	Nominal Input Voltage	Input Frequency	Output Voltage	Regulation Accuracy	Dimensions and Weight
RAC-1.5/3	115 volts	60 or 400 cycles	Adjustable 110-120 volts	±0.25% for a ±10% Regulation Range ±50% for a ±20% Regulation Range	19" x 7" x 13" 45 lbs.
<b>KUA Rating and Regulation Range</b>		<b>Regulation Accuracy</b>		<b>Response Speed volts/sec.</b>	
3 KUA for a Regulation Range of ±10% 1.5 KUA for a Regulation Range of ±20%		±0.25% for ±10% Regulation Range ±0.5% for ±20% Regulation Range		10 @ ±10% 20 @ ±20%	

## NULL DETECTORS

Sensitive null detectors for bridge measurements, with self contained selective filters to limit the amplifier characteristics at various bridge measuring frequencies.

Type	Sensitivity	Frequency Range	Filter	Power Requirements	Dimensions and Weight
1140-B	10 $\mu$ volts @ 1 KC for 15% meter deflection filter in	20 to 20,000 cycles	Fixed 60, 400, 1000 cycles Adjustable ±5% of center Other frequencies available	105-125 volts 50-60 cycles	Cabinet 12" x 8½" x 10"—18 lbs. Rack—19" x 6" x 10"
2076	1 $\mu$ volts @ 1 KC for 15% meter deflection filter in	20 to 20,000 cycles	Fixed 60, 400, 1000 cycles Adjustable ±5% of center Other frequencies available	Transistorized Battery operated	Cabinet—8" x 6" x 8" Rack—19" x 5¼" x 8"

## NULL DETECTOR—VACUUM TUBE VOLTMETER

Designed primarily for a.c. bridge measurements, a dual purpose instrument for indicating bridge balance and the a.c. excitation across the unknown.

Type	Null Sensitivity	Frequency Range	Filter	Power Requirements	Dimensions and Weight
1210-B	10 M volts @ 1 KC for 15% meter deflection	20-20,000 cycles	Fixed 60, 400, 1000 cycles provision for other frequencies	105-125 volts 50-60 cycles	*21" x 12" x 13" 37 lbs.
	<b>Voltage Range</b> 0.1 to 150 volts ac. 0.15-1.5-15-150 volts full scale	<b>Input Impedance</b> 50 M $\Omega$ in parallel with 25 PF.	<b>Frequency Range</b> 20 to 20,000 cycles ±1 db	<b>Accuracy</b> 2% of full scale	

## D.C. SUPPLY

A constant voltage transformer regulated current source designed for use with the Freed Incremental Inductance Bridges. Solid state bridge rectification, L-C

filters and low internal impedance provides good current regulation with a minimum of circuit complexity.

Type	Current Ranges	Voltage Ranges	Regulation	Power Requirement	Dimensions and Weight
1170-A	4 ranges, 0-5, 25, 100 and 1000 milliamperes	Maximum no load voltage, 1000 Ma, 270V, 100 Ma, 270V, 25 Ma, 85 V, 5 Ma, 48 V	±1% for line variation 105-125 V	105-125 volts 60 cycles	19" x 10½" x 13½" 66 lbs.

## DECADE CAPACITORS

The Freed series of Decade Capacitors cover a wide range of values and can be supplied as individual decades from 0.0001 PF. per step to 1 mf. per step or in

various combinations of assembled decade boxes. All capacitors are non-inductively wound and heat treated for stability.

Type	Total Capacity	Dielectric	Dissipation Factor	Accuracy	Dimensions and Weight
1415	10 $\mu$ f in steps of 1 $\mu$ f	Mylar	<0.005	±1%	3" x 3" x 7" 2 lbs.
1416	1 $\mu$ f in steps of 0.1 $\mu$ f	Polystyrene	<0.0002	±1%	3" x 3" x 7" 2 lbs.
1417	0.1 $\mu$ f in steps of 0.01 $\mu$ f	Polystyrene	<0.0002	±1%	3" x 3" x 7" 2 lbs.
1418	0.01 $\mu$ f in steps of 0.001 $\mu$ f	Polystyrene	<0.0002	±1%	3" x 3" x 7" 2 lbs.
1419	0.001 $\mu$ f in steps of 0.0001 $\mu$ f	Polystyrene	<0.0002	±1%	3" x 3" x 7" 2 lbs.
1250	1.110 $\mu$ f in steps of 0.001 $\mu$ f	Polystyrene	<0.0002	±1%	13¾" x 6" x 4½" 8 lbs.
1351	11.111 $\mu$ f in steps of 0.0001 $\mu$ f plus 100 pf variable air capacitor	Mylar Polystyrene Air	<0.005	±1%	19" x 10¾" x 8" 25 lbs.
1352	1.111 $\mu$ f in steps of 0.0001 $\mu$ f	Polystyrene	<0.0002	±1%	19" x 5¼" x 10" 13 lbs.
1353	11.111 $\mu$ f in steps of 0.0001 $\mu$ f	Mylar Polystyrene	<0.005	±1%	19" x 5¼" x 10" 14 lbs.

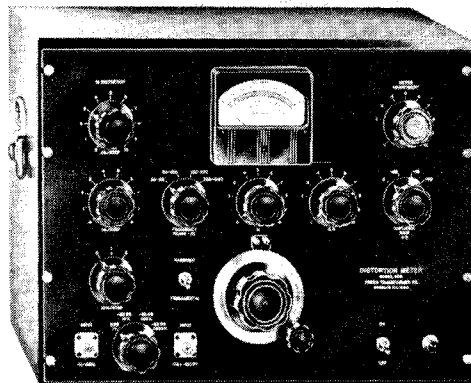
Maximum operating voltage, 500 VDC or peak. Capacitors can be supplied to better than ±1%, write for complete information.

**FREED TRANSFORMER CO., INC.**

1010A



1410

**COMPARISON & LIMIT BRIDGE**

A rapid and convenient method for laboratory or production testing of resistors, capacitors and inductors. Components may be sorted for tolerances up to  $\pm 20\%$  or selected in matched pairs.

Type	Inductance Range	Capacitance Range	Resistance Range	Test Frequency	Accuracy	Dimensions and Weight
1010-A	10 $\mu$ h-100 h	10 Pf-100 mf.	1 $\Omega$ -20 M $\Omega$	50 or 60 cycles 1 KC-10 KC	$\pm 0.1\%$ on 5% range	10 $\frac{1}{2}$ " x 12" x 12" 17 lbs.

**IMPEDANCE & ADMITTANCE BRIDGE**

An audio frequency bridge for measuring the complex impedances of inductors, transformers, filter networks and capacitors.

Type	Frequency Range	Impedance and Admittance	Accuracy	Maximum Applied Voltage	Dimensions and Weight
1120	20 to 20,000 cycles	XL, XC and R up to 1000 ohms, BL, BC and G up to 1000 microhms	R: $\pm 1\%$ G: $\pm 2\%$ X: $\pm 1\%$ up to 5 KC B: $\pm 1\%$ up to 5 KC	125 Volts	10 $\frac{1}{2}$ " x 12" x 12" 25 lbs.

**DISTORTION METERS**

The type 1410 Distortion Meter measures distortion in the ultra-sonic or carrier frequency range and features high input impedance with high sensitivity. Having

a wide input voltage range it can be used for distortion measurements in low output oscillators, carrier frequency amplifiers and transmitters.

Type	Frequency Range	Input Impedance	Input Voltage	Sensitivity	Power Requirements	Dimensions and Weight
1410	20 KC to 1 MC	50 K $\Omega$ shunted by 70 Pf	0.2 to 1000 volts	Distortion level of 0.1% for 0.2 volts input	105-125 volts 50-60 cycles	21" x 16 $\frac{1}{4}$ " x 15" 60 lbs.

The type 1917 Distortion Meter is a wide range low input impedance instrument, designed with passive circuitry resulting in high stability, low residual distortion and hum levels.

Type	Frequency Range	Input Impedance	Input Voltage	Sensitivity	Dimensions and Weight
1970	20 cycles to 1 megacycle	75-150 300-600	1 to 200 volts	Distortion level of 0.02% for 1 volt input	19" x 10 $\frac{1}{2}$ " x 12" 30 lbs.

**PRICE LIST**

RAC-1.5/3	AC Line Regulator	\$ 390.00
1010-A	Comparison Bridge	325.00
1020-C	Megohmmeter	250.00
1020-D	Megohmmeter	265.00
1030-A	Low Frequency "Q" Indicator	1150.00
1030-B	Low Frequency "Q" Indicator	1350.00
1110-C	Incremental Inductance Bridge	495.00
1120	Impedance and Admittance Bridge	425.00
1115	Incremental Inductance Bridge	795.00
1115-A	Incremental Inductance Bridge	995.00
1140-B	Null Detector Amplifier	250.00
1150-A	Universal Bridge	795.00
1164	Decade Inductor	275.00
1170-A	D.C. Supply	350.00
1180	A.C. Supply	115.00
1185	Incremental Inductance Bridge	1250.00
1210-B	Null Detector—UTUM	350.00
1220	Decade Inductor	90.00
1230	Decade Inductor	85.00
1240	Decade Inductor	90.00
1250	Decade Capacitor	170.00
1270	Decade Inductor	100.00
1280	Decade Inductor	290.00
1290	Decade Inductor	365.00
1310	Decade Inductor	290.00

1341	Decade Inductor	\$ 100.00
1351	Decade Capacitor	305.00
1352	Decade Capacitor	220.00
1353	Decade Capacitor	275.00
1410	Distortion Meter	875.00
1415	Decade Capacitors	35.00
1416	Decade Capacitors	50.00
1417	Decade Capacitors	35.00
1418	Decade Capacitors	30.00
1419	Decade Capacitors	45.00
1620	Megohmmeter	335.00
1620-A	Megohmmeter	350.00
1620-B	Megohmmeter	385.00
1620-C	Megohmmeter	360.00
1620-D	Megohmmeter	405.00
1625	Non destructive Breakdown Tester	795.00
1870	Inductance Comparison Bridge	550.00
1970	Distortion Meter	425.00
2030-A	Megohmmeter	195.00
2030-B	Megohmmeter	250.00
2030-C	Megohmmeter	215.00
2030-D	Megohmmeter	215.00
2030-E	Megohmmeter	215.00
2035	Megohmmeter	215.00
2076	Null Detector—Amplifier	265.00

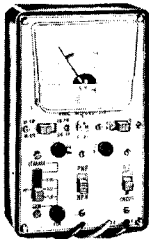
We reserve the right to change specifications or design, without incurring any obligation to incorporate new features in instruments sold.

**FREED TRANSFORMER COMPANY, INC.**

Brooklyn (Ridgewood) 27, N. Y.

# Transistor - Tube Testers

## ALL AMERICAN-MADE

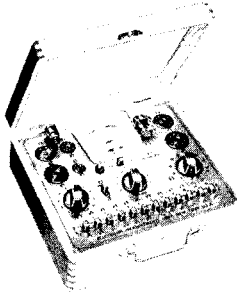


**Model 212 — TRANSISTOR ANALYZER**

ALL THESE FEATURES NOT AVAILABLE AT ANY PRICE!...

1. Checks DC current gain (BETA) in 3 ranges to 200.
2. Checks leakage on 3 colored scale.
3. Checks all transistors—high or low power for gain and leakage.
4. Checks all transistors as AC current amplifiers. (OSCILLATOR CHECK).
5. Checks all transistors in circuit without removing them.
6. Can be used to signal trace AF, IF or RF circuits.
7. Measures Battery Voltage on 0-12 volt scale.
8. Measures DC current drain on 0-80 milliamper scale.
9. Checks condition of diodes.
10. Supplied with 3 external leads as well as a socket for checking transistors.
11. Comes complete with instruction manual and transistor listing.

Wired... \$18.50 Kit Form... \$13.50  
Size: 3 3/4" x 8 1/2" x 2" Weight 1 1/2 lbs.



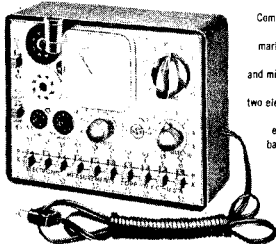
**Model 213 — TUBE TESTER**

COMPLETELY MODERN! COMPLETELY FLEXIBLE! COMPLETELY NEW!...

Checks all the new 12 prong (Compacktron, Novistor, Novar and 10 prong tubes, in addition to octal, loctal, miniature, and 9 prong tubes. Tests each tube for shorts, leakage, intermittents, as well as for quality. Tube quality is indicated directly on a three color metal dial. Each section of a multi-purpose tube is checked separately.

Magic eye, Voltage Regulator and Hi-Fi tubes are also tested. Unique switching arrangement makes the checker obsolescence proof. Panel is etched for long wear. It comes complete with instructions and tube charts in ring bound manual.

MODEL 213 (in high impact bakelite case with strap)... Wired \$28.90  
MODEL 213 Kit... 18.90  
MODEL 213P (Illustrated in Wood Carrying Case)... 32.25  
MODEL 213P Kit... 21.80  
MODEL CRT picture tube adapter... 4.50  
Size: 8 1/2" x 7 1/2" x 4" Weight: 4 1/2 lbs.

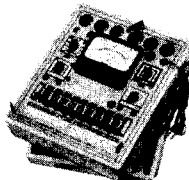


**ALL NEW!... Model 211 — TUBE TESTER**

Completely flexible, obsolescence proof. We believe to be the smallest, lowest priced complete tube tester on the market today. It checks each section of multi-purpose tubes separately... checks all octal, loctal, 9 prong, novistor and miniature tubes for shorts, leakages, opens, intermittents as well as for quality. Shorts or leakages between any two elements in the tube can be detected. Quality is indicated directly on a two color metal dial using the standard emission test. It uses an etched panel and a high impact bakelite case. Comes complete with instructions and tube charts in ring bound manual.

Wired... \$22.90 Kit... \$14.90  
EMC Model CRT (Picture Tube Adaptor)... \$4.50  
Size: 6 1/4" x 5 1/4" x 2 1/4" deep. Weight: 3 lbs

**Model 204 TUBE-BATTERY-OHM CAPACITY TESTER**



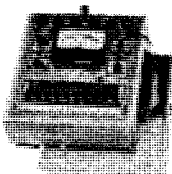
An Emission Tube Tester, with a completely flexible switching arrangement. Tests all tubes, including Noval and sub-miniatures. Checks batteries under rated load on "reject good" scale. Tests all cold cathode, magic eye, voltage regulator and ballasts. Uses 75V line voltage control. Checks condenser leakage to 1 meg. Checks resistance up to 4 megs. Checks capacity from .01 to 1 mfd.

MODEL 204P — Illustrated... \$55.80  
MODEL CRA — Cathode Ray Tube Adaptor... 4.50

**Model 205AP — TUBE TESTER**

Uses standard emission test on all tubes, it checks all octal, loctal, noval, novar, novistor, 10 pin and compaction tubes. Completely flexible switching arrangement. Checks Voltage Regulators and ballasts. Uses four position lever-type switches. Line voltage control compensates for line variations between 105 and 135 volts. Checks for shorts and leakages.

MODEL 205AP — Hand rubbed oak carrying case (illustrated)... \$47.50  
MODEL 205APPK — Kit Form... 36.20  
MODEL CRA — Cathode ray tube adaptor... 4.50  
Size: 4 1/2" x 10 1/4" x 12 3/4". Weight: 8 1/4 lbs.



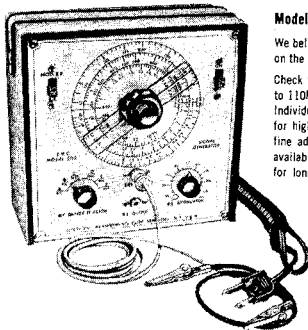
**Model 206AP — DYNAMIC MUTUAL CONDUCTANCE TUBE TESTER**

Completely flexible, obsolescence-proof instrument incorporates a full range of tests for any tube types, including VR and ballast tubes, and any biasing arrangement, including compaction, novar, novistor, 10-pin, octal, loctal, etc. Checks mutual conductance (in 3 ranges up to 12,000 micromhos plus "Reject-Good" scale) emission, gas, noise, shorts, open elements, and reserve life. 10 multi-position lever switches for electrode selection permit complete flexibility in testing present and future types. Independent checks for sections of multi-element tubes. Separate sensitivity and grid-bias controls for critical evaluation. Full filament-voltage range from 75V to 117V. Supplementary test data for new tubes, at no charge, keep instrument up to date. Roll chart also revised regularly.

MODEL 206AP  
With hand-rubbed oak carrying case... \$83.50  
MODEL CRA  
Cathode-ray tube adaptor for Model 206... 4.50  
Size: 6" x 14 1/2" x 15". Weight: 13 1/2 lbs.

# Signal Generator - Oscilloscope

## ALL AMERICAN-MADE

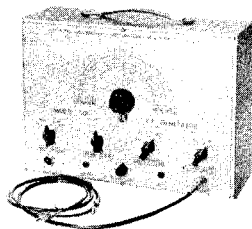


**Model 502 — RF SIGNAL GENERATOR**

We believe this is the smallest, lowest priced Signal Generator on the market today.

Check these outstanding features: Has 6 bands from 115KC to 110MC on fundamentals and up to 220MC on second harmonic. Individual slug tuned coils for each band. Colpitts RF oscillator for high stability. Planetary drive tuning condenser for fine adjustment of frequencies. 400 cycle internal modulation available. RF accuracy within 1 1/2%. 2 color etched panel for long durability. Provision made for external modulation.

Small, compact size, measures only 6 1/2" x 6 1/2" x 4" deep. Supplied with RF output lead. Cathode follower output and RF attenuator. Model 502 wired is priced at \$24.95 and in kit form \$17.95. Weight 4 lbs.



**Model 501 — R.F. SIGNAL GENERATOR**... A versatile signal generator, 6 bands from 115 kc to 110 mc on fundamentals. This significant new instrument has a Colpitts R.F. oscillator and cathode follower output, precision factory tuned coils, a variable gain external modulation amplifier, a 400 cycle sine wave-variable depth output, R.F. output to 100,000  $\mu$ V, frequency accuracy of  $\pm 1.5\%$ , and provision for audio output to test amplifiers.

MODEL 501 — As illustrated in hammer tone metal case... \$37.90\*  
MODEL 501 — In easy-to-assemble Kit Form... 24.90

\*Completely wired and tested

**Model 700 RF-AF-CRYSTAL MARKER-TV BAR-GENERATOR**



Unlimited test facilities and flexibility in AM, TV, FM, and hi-fi audio are made possible with complete coverage in a single instrument from 18 cps to 216 mc (to 108 mc on fundamentals; calibrated harmonics to 216 mc). Two separate, independently usable oscillators provide unique output variety, including audio sine or square waves, crystal for marking or calibration, and choice of RF modes: unmodulated, or internally modulated with sine or square waves at any frequency and percentage of modulation. This simplifies response and bandwidth checks. AF oscillator uses Wien Bridge for true sine-wave output from 18 to 300,000 cps in 5 bands. Square-wave output to 20 kc. RF oscillator has 5 fundamental and 1 calibrated harmonic bands. RF output across constant, 72-ohm impedance, adjustable with fixed 3-position, decade attenuator plus vernier control. Jack for sync pickup lead locks horizontal or vertical bar display for TV linearity adjustment. Plug-in crystal holder. Continuous amplitude control for AF, square-wave, and crystal outputs, as well as for modulation percentage.

MODEL 700 — Wired and Tested... \$55.80  
Weight: 11 lbs.

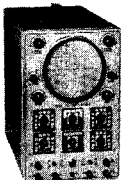
**Model 600 — OSCILLOSCOPE**

Has these EXCLUSIVE FEATURES:

- Uses new SUP1-5" scope tube for sharp focusing and good intensity.
- Retrace blanking amplifier eliminates confusion, gives clearer pictures.
- Has built-in 60 cycle phasing control and sweep for TV servicing.
- Uses astigmatism control for better focusing.
- Provision for Z axis input or intensity modulation.
- Synchronization available on positive or negative phase of input voltage, or from external source.
- Uses a 2 step compensated attenuator input.
- Has a 2 stage push-pull vertical amplifier with sensitivity of .02v per inch.
- Multivibrator sweep from 15 cycles to over 75 kilocycles.
- Direct connections to scope plates available.

Size: 8 3/4" side x 14" high x 15 1/2" deep. Weight: 29 lbs.

MODEL 600 — Completely Wired and Tested... \$98.50



**Model 601 — WIDE BAND OSCILLOSCOPE**...

For Color TV and Monochrome. Check these EXCLUSIVE EMC FEATURES: Full 5 mc bandwidth for color TV servicing. Push-pull vertical amplifier with sensitivity of .02 volts per inch. Retrace blanking amplifier eliminates confusion and gives clearer pictures. Multivibrator sweep from 15 cycles to over 75 kilocycles. SUP1 cathode ray.

**SWEEP GENERATOR** — Multivibrator type. Frequency range 15 to over 75,000 cycles.

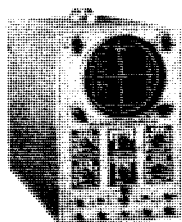
**POWER REQUIREMENTS** — 105-130 volts 50/60 cycles A6-50 watts.

**VERTICAL AMPLIFIER** — Maximum sensitivity: .02 volts RMS per inch. Frequency response: Flat within 1.5 DB from 15 cycles to 5 megacycles. Input Impedance: 2 megohms — 30 MMFD.

**SYNCHRONIZATION** — Positive or negative from vertical amplifier or from external source.

Size: 8 1/4" side x 14" high x 15 1/2" deep. Weight: 29 lbs.

MODEL D — Direct Probe... \$3.95  
MODEL DEM — Demodulator Probe... 5.75  
MODEL LC — Low Capacity Probe... 5.75  
MODEL 801 — Wired... 117.80\*

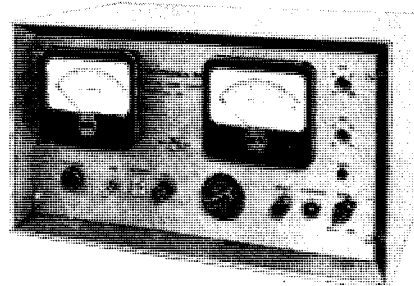


**ELECTRONIC MEASUREMENTS CORPORATION**  
New York 12, New York

# HIPOTRONICS NON-DESTRUCTIVE HIPOT & INSULATION TESTERS

## FEATURES

- Portable . . . Most models 17"W x 9"H x 11"D
- Overload continuously adjustable from 20 microamps to 5 milliamperes
- Safety and convenience controls
- Series limiting resistor
- Overload light with re-set button
- Front panel re-entrant output jacks
- Output connected 2% KV meter with AC/DC switch on AC-DC models
- 5 ma. current meter in grounded return (50/500/5,000 ua. meter available on DC models — \$30. additional)



### AC OUTPUT

VOLTAGE	MODEL	PRICE
0-2KV @ 5 ma.	102A	\$200
0-5KV @ 5 ma.	105A	225
0-10KV @ 5 ma.	110A	275
0-25KV @ 5 ma.	125A	500

### DC OUTPUT

VOLTAGE	MODEL	PRICE
0-3 @ 5 ma	103D	\$200
0-6 @ 5 ma	106D	220
0-12 @ 5 ma	112D	290
0-20 @ 5 ma	120D	350
0-30 @ 5 ma	130D	400
0-60 @ 5 ma	160D	800
0-120 @ 5 ma	1120D	1,500

### AC/DC OUTPUT

VOLTAGE	MODEL	PRICE
0-3 DC, 2.5 AC	103	\$230
0-6 DC, 5 AC	106	250
0-15 DC, 10 AC	115	330
0-25 DC, 10 AC	125	425

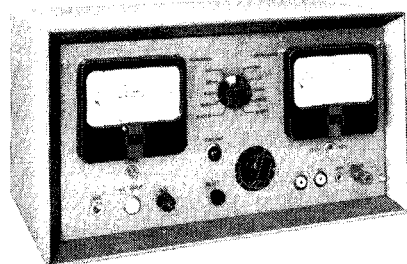
All have 5 ma. capacity. Heavier current models available.

### OPTIONAL EXTRAS:

- HV hold button ..... \$10.00      Test probes ..... \$10.00  
 Output shorting relay ..... \$30.00      Rack mount ..... \$10.00

Triple range current meter 50/500/5000 ua . . . \$30.00 (DC models only)

## AC-DC HIPOT AND MEGOHMMETER



MODEL 306B

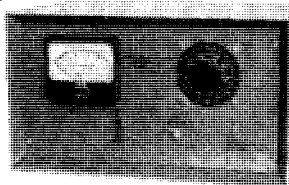
- Voltage to 6 KV, megohms to 100,000
- Overload adjustable from 20 microamperes to 5 ma.
- Performs non-destructive quantitative tests.
- Continuously adjustable output from 0 to maximum
- Overload light with reset button, 2% meter accuracies

### SPECIFICATIONS & MODELS

Model No.	Voltage		Current Meter ua.	Megohms at 500V	Ranges	Size W x H x D"	Price
	DC	RMS					
301A	1.5 KV	1.0 KV	0-50/500	1-1000	2	17 x 9½ x 11	\$390
301B	1.5	1.	0-.5/5/50/500	1-100,000	4	17 x 9½ x 11	510
303A	3	2.5	0-50/500	1-1000	2	17 x 9½ x 11	410
303B	3	2.5	0-.5/5/50/500	1-100,000	4	17 x 9½ x 11	530
306A	6	5	0-50/500	1-1000	2	17 x 9½ x 11	440
306B	6	5	0-.5/5/50/500	1-100,000	4	17 x 9½ x 11	565

## UL AND ASTM AC TESTERS HEAVY KVA

- Meets ASTM, U.L. and other test specifications calling for heavier KVA than current limited hipots.
- Continuously adjustable output
- Output connected KV meter with 3% accuracy
- Instantaneous overload circuit breaker
- 3 wire grounding cord and plug
- Line switch, fuse and pilot light
- Grounded front panel and high voltage output return
- Available with either 6 ft. output lead or bushing on top of cabinet

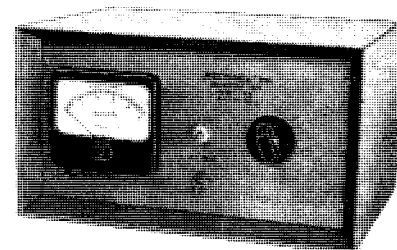


KV	KVA	W	SIZE H	D	MODEL	PRICE
0-1500	½	17"	9"	11"	C1	\$350
0-2500	1	17"	9"	11"	C2	425
0-5000	1	22"	13"	15"	C5	495
0-10000	2	22"	13"	15"	C10	625

Available with DC output — consult factory

## PRODUCTION HIPOT TESTERS

- In stock production hipot testers at low cost.
- Automatically current limited to safe value.
- Continuously adjustable output.
- Output connected KV meter gives visual indication of arcing or short circuit.
- Six ft. output leads with alligator clips.
- All models have 115 volts, 60 cps, input
- Size: 14"W x 8"H x 10"D



KV	MODEL	PRICE	KV	MODEL	PRICE
0-3 AC	A3	\$ 95.00	0-6 DC	B6	\$135.00
0-5 AC	A5	110.00	0-12 DC	B12	175.00
0-4 DC	B4	120.00	0-20 DC	B20	235.00

### OPTIONAL EXTRAS:

- Audible leakage, arcing, or short circuit signal—any model.....\$50.00  
 Test Probe ..... 10.00  
 AC/DC output models available — check with factory.

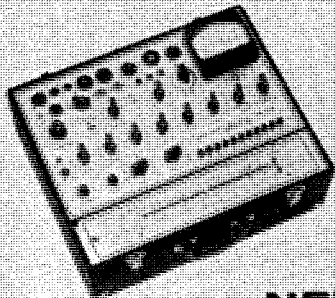
# HIPOTRONICS, INC.

BREWSTER, NEW YORK



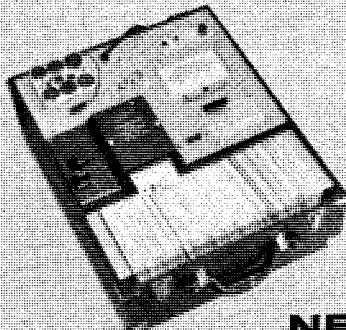
# HICKOK

## TEST EQUIPMENT



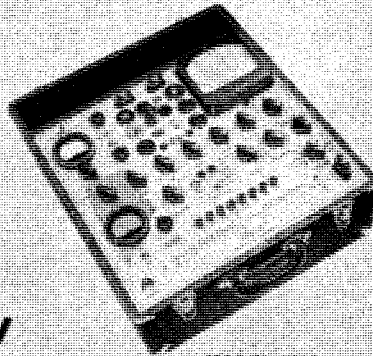
**NEW!**

**MODEL 580**  
Laboratory and Industrial Portable Tube Tester

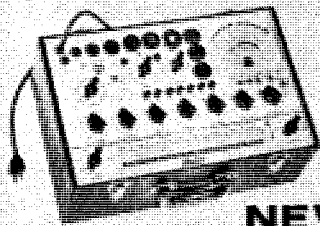


**NEW**

**MODEL 123R**  
Cardmatic® Automatic Tube Tester

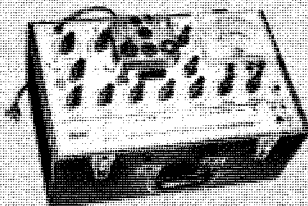


**MODEL 539C**  
New Industrial and Laboratory Portable Tube Tester

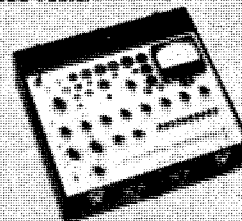


**NEW!**

**MODEL 800A**  
Service Technician's Portable Tube, Transistor and Diode Tester



**MODEL 6000A**  
Service Technician's Deluxe Portable Tube and Transistor Tester



**MODEL 752A**  
New Industrial and Communications Portable Tube Tester

**MODEL 580**  
Laboratory and Industrial Portable Tube Tester

An entirely new instrument which can be set up directly to any tube test condition without having to rely upon the built-in roll chart. All tube potentials individually variable. Accommodates 4, 5, 6, 7-pin, octal, octal, 7, 9 and 10-pin miniature, 7 and 8-pin sub-miniature, 5 and 7-pin Nuvisitors, Compactrons and Novars. Leakage test sensitivity to 50 megohms. Gas test circuit detects grid current to 0.05 microamperes.  $G_m$  ranges to 60,000  $\mu$ mhos. Cathode reserve test. Push button feature speeds check on dual section tubes. In black leatherette portable case, 19" x 15½" x 7". 105-125v, 60 cycles. 60 watts. Shipping weight, 35 lbs.

**Model 580 Laboratory and Industrial Portable Tube Tester—Net Each . . . . . \$585.00**

**MODEL 123R**  
Cardmatic® Automatic Tube Tester

Ideal for Industrial and laboratory application. A genuinely complete tube tester, card-programs complete "fringe" tests, saturation and cut-off tests, in addition to basic  $G_m$  measurement.  $G_m$  ranges: 500-26,000  $\mu$ mhos; Current ranges: 100  $\mu$ a to 510MA. Complete with pin straighteners, socket savers and 500 selected cards. In black leatherette portable case, 19½" x 16½" x 9¼". 105-125v, 50-60 cycles, 55 watts. Shipping weight, 57 lbs.

**Model 123R Cardmatic® Automatic Tube Tester—Net Each \$585.00**

**Model 121 Cardmatic® Automatic Tube Tester.** Low-priced version of the Model 123R. Measures  $G_m$  plus saturation, cut-off and important "fringe" tests. Also Tests transistors and diodes. Supplied with 342 selected cards covering popular entertainment tube types. In red leatherette portable case, 19¾" x 13¾" x 8". Shipping weight, 39 lbs.

**Net Each . . . . . \$359.50**

**NEW MODEL 752A**  
New Industrial and Communications Portable Tube Tester

Designed for use in maintaining communications equipment and industrial electronic apparatus. New voltage regular test circuit tests VR tubes to handbook specifications, including firing point, regulating voltage and current range. Tests Nuvisitors, Compactrons, Novars, 10-pin types. Push button test for dual-section tubes speeds selection of tubes for balanced or matched characteristics. Covers 1500 to 30,000  $\mu$ mhos in five ranges. Interelement leakage read directly on the meter (Sensitivity to 10 megohms). Illuminated meter and roll chart. Complete with socket savers and pin-straighteners. In black leatherette portable case, 18¾" x 16¾" x 7½". 105-125v, 50-60 cycles, 40-70 watts. Shipping weight, 27 lbs.

**Model 752A Industrial and Communications Portable Tube Tester—Net Each . . . . . \$355.00**

**MODEL 539C**  
New Industrial and Laboratory Portable Tube Tester

Tests VR tubes, low power thyratrons, "4 digit" types. VR test evaluates voltage regulator tubes under actual operating conditions. Tests Nuvisitors, Novars, Compactrons, 10-pin types. Provision for separate monitoring of plate current. Panel terminals provide access to grid, plate, cathode and heater circuits, permitting direct measurement of voltages and current for "non-standard" or "tailored" tests. Covers 600 to 60,000  $\mu$ mhos in six ranges. Dual leakage readings: directly on meter or by neon short indicators (Sensitivity to 50 megohms). Complete with socket savers. In black leatherette portable case, 16¾" x 18¾" x 7½". 105-125v, 50-400 cycles, 40 watts. Shipping weight, 35 lbs.

**Model 539C Industrial and Laboratory Portable Tube Tester—Net Each . . . . . \$485.00**

**MODEL 6000A**  
Service Technician's Deluxe Portable Tube and Transistor Tester.

Has replaceable socket plate for obsolescence protection. Sensitive, instantaneous inter-element leakage and shorts test (Sensitivity—in excess of 3 megohms) filament continuity test. Covers 3,000 to 15,000  $\mu$ mhos in 3 ranges. Tests Compactrons, Nuvisitors, Novars and 10-pin types. 14-position selector switches, no paralleled elements. Also tests transistors and diodes. In red leatherette portable case, 16¾" x 11¼" x 7½". 105-125v, 50-70 cycles, 40 watts. Shipping weight, 21 lbs.

**Model 6000A Deluxe Portable Tube and Transistor Tester—Net Each . . . . . \$239.50**

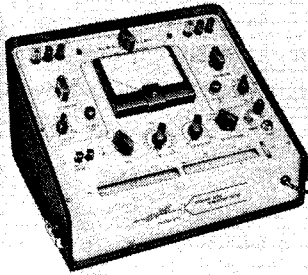
**MODEL 800A**  
Service Technician's Portable Tube, Transistor and Diode Tester

Tests 4, 5, 6, 7-pin, octal, compactrons, 10-pin "headers," 5 and 7-pin Nuvisitors and Novars. 14-position selector switches, no paralleled elements. Provides direct meter reading of inter-element leakage and shorts. New filament continuity test speeds test of series string tubes. Also tests transistors and diodes. Complete with test leads. In red leatherette portable case, 16¾" x 11¼" x 7½". Shipping weight 21 lbs.

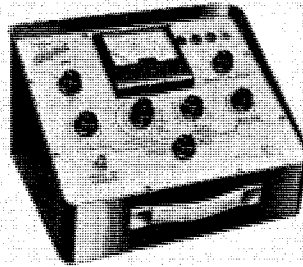
**Model 800A Portable Tube, Transistor and Diode Tester—Net Each . . . . . \$199.95**

**Model 800A Tube Tester with CRT Adapter, Replaceable Socket Savers and SA-2 Subminiature Socket Adapter—Net Each . \$234.15**

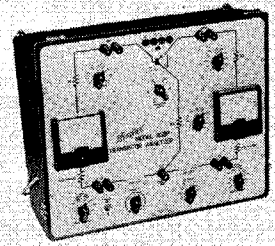
**Hickok Electrical Instrument Co. • Cleveland, Ohio**

**HICKOK****TEST EQUIPMENT**

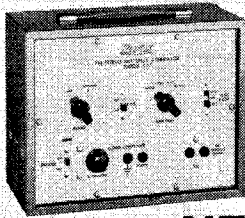
**MODEL 870**  
Dynamic Beta Transistor Tester



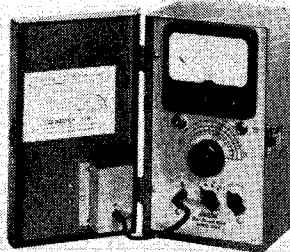
**MODEL 890**  
Dynamic Beta In-Circuit Transistor Tester



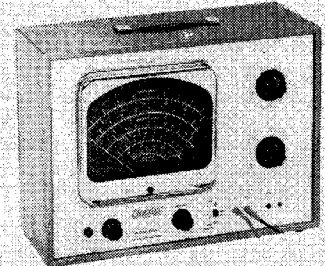
**MODEL 850P**  
Engineer's Portable Transistor Analyzer



**MODEL 727** **NEW!**  
FM Stereo Multiplex Generator



**MODEL 235A** **NEW!**  
UHF/VHF Field Strength Meter



**MODEL 209B**  
True Vacuum Tube Volt-Ohm-Milliampere  
and Capacitance Meter

**MODEL 870**  
**Dynamic Beta Transistor Tester**

Measures AC and DC Beta. Collector test current variable up to 2 amperes, permitting Beta measurement on power transistors rated 5 amperes or more. Variable collector voltage and current permit tests according to manufacturers' specifications—Tests switching transistors, measures large signal DC Beta on power transistors—small signal AC Beta on low and medium power transistors. Icbo Ranges: 100ua, 1ma, 10ma; Beta Ranges: 0-100, 0-300. Complete with replaceable roll chart and test leads in black leatherette portable case 14 $\frac{1}{16}$ " x 11 $\frac{3}{4}$ " x 7 $\frac{7}{8}$ ". 115v-60 cycles, 40 watts. Shipping weight, 22 lbs.

**Model 870 DYNAMIC BETA Transistor Tester—Net Each . . . \$355.00**

**MODEL 890**  
**Dynamic Beta In-Circuit Transistor Tester**

Utilizes unique new test circuit to measure AC Beta in OR OUT of circuit with 5% accuracy. Measures these in-circuit parameters: AC Beta, Ic, Rin (transistor input impedance), Z Ohms (base-emitter circuit impedance). Measures AC Beta, Ic, Rin and Icbo out of circuit. Portable, completely self-contained, fully-transistorized—battery operated. 10 $\frac{3}{4}$ " x 9" x 6 $\frac{1}{2}$ ". Shipping weight 8 lbs.

**Model 890 Dynamic Beta In-Circuit Transistor Tester—Net Each . . . \$137.50**

**MODEL 850P**  
**Engineer's Portable Transistor Analyzer**

Ideal for use as a "breadboard" in transistor circuit design and development. Checks basic transistor parameters in any of three configurations; common base, common emitter and common collector. Identical input and output meters cover 100ua to 1 ampere in 5 ranges. Battery operated. Furnished complete with leads in black leatherette portable case, 16 $\frac{1}{2}$ " x 8" x 13 $\frac{1}{2}$ ". Shipping weight 20 lbs.

**Model 850P Engineer's Portable Transistor Analyzer—Net Each . . . \$169.50**

**MODEL 727**  
**FM Stereo Multiplex Generator**

Composite audio output includes main channel (L+R) and sub-channel (L-R). Basic audio source is 1000 cycle oscillator switchable to left or right channel. Crystal-controlled 19KC pilot carrier included. RF output at 100MC, adjustable to  $\pm 200$  KC. Level fixed at 500 microvolts. Separate 38KC signal available for filter and band-pass alignment. 67KC signal for adjusting SCA trap and filter. Separation of 35db or better. Fully transistorized, choice of portable battery operation or optional AC power supply, 105-125v, 50-60 cycles,  $\frac{1}{2}$  watt. Furnished with leads and instruction book, less battery, in steel case, 11" x 8 $\frac{1}{2}$ " x 5". Shipping weight, 7 lbs.

**Model 727 FM Stereo Multiplex Generator—Net Each . . . \$199.95**

**MODEL 235A**  
**UHF/VHF Field Strength Meter**

Reads directly in absolute field strength in microvolts from channel 2 through 83. Range 10 to 100,000 microvolts VHF, 30 to 50,000 microvolts UHF. Choice of 75 or 300 ohm input. Headphone jack for audio monitoring. Battery operated and completely portable. Shipped less batteries and headphone. In case, 10 $\frac{1}{2}$ " x 6 $\frac{1}{4}$ " x 6". Shipping weight, 10 lbs.

**Model 235A UHF/VHF Field Strength Meter—Net Each . . . \$229.50**

**MODEL 209B**  
**True Vacuum Tube Volt-Ohm-Milliampere and Capacitance Meter**

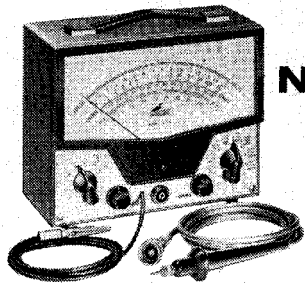
100 millivolt sensitivity. Special "lo-ohms" range. Measures capacitance as low as 1 uuf and up to 1,000 uf; inductance, 50 mh to 100 henries (with conversion chart). 1% stability with  $\pm 10\%$  variation in line voltage. Complete with AC and DC probe assemblies, test leads, low capacity-high frequency probe. Shipping weight, 26 lbs.

**Model 209B True Vacuum Tube Volt-Ohm Milliampere and Capacitance Meter—Net Each . . . \$239.50**

**Hickok Electrical Instrument Co.**  
Cleveland, Ohio

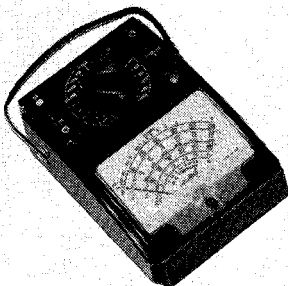
# HICKOK

## TEST EQUIPMENT

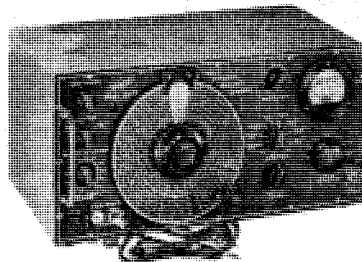


**NEW!**

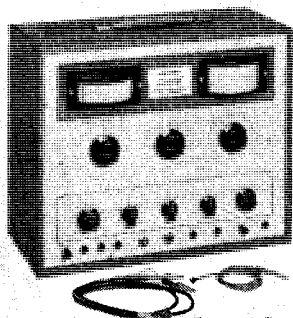
**MODEL 470A**  
Electronic Volt-Ohmmeter



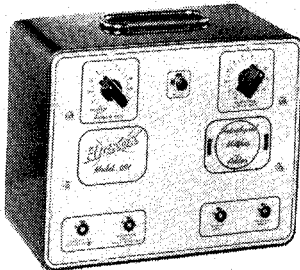
**MODEL 455A**  
Burn-Out Proof Volt—Ohm—Milliammeter



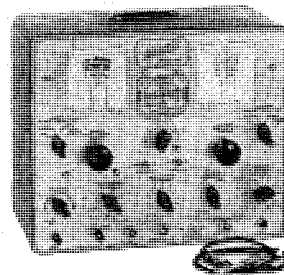
**MODEL 295X**  
Microvolt and Crystal Controlled Generator



**MODEL 288AX**  
Crystal Controlled AM-FM Sweep and Marker Generator



**MODEL 691**  
Heterodyne Marker-Adder



**MODEL 615**  
Sweep and Marker Alignment Generator

**MODEL 470A**  
Electronic Volt-Ohmmeter

A major advance in VTVM design, the 470A provides increased ranges in all functions—using just two basic scales to cover eight ranges. AC and DC values are read from the same scales—AC errors due to crowding are eliminated. Ranges: DC, AC rms and AC peak-to-peak, 0.5-1500v. New AC-DC—Ohms single unit probe eliminates the need for multiple leads. Ohmmeter: Center Scale, 10 Ohms, Ohms X1, X10, X100, X1000, X10,000, X100,000, X1M, X10M. Readability 0.2 ohms to 100 megohms. Input impedance DC volts 15 megohms, AC volts 15 megohms. DC resistance paralleled with approximately 150 uufd. 105-125v, 50-400 cycles, 15 watts, 6 $\frac{3}{8}$ " x 7 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ ". Complete with single unit probe and test leads. Shipping weight, 8 lbs.

**Model 470A Electronic Volt-Ohmmeter—Net Each . . . . . \$ 79.50**

**MODEL 455A**  
Burn-Out Proof Volt—Ohm—Milliammeter

Has Hickok's exclusive overload cut-out and protection system providing complete safety against burn-outs for the meter and all multipliers, shunts and other components. 20,000 ohms/volt AC and DC. AC/DC Volts: 3, 15, 60, 150, 600, 1200v; Resistance, 0-100 megohms in 4 ranges: Center Scale Ranges: 5, 500, 5000, 500,000 ohms. Current Ranges: 50 ua, 1, 10, 100, 100 MA, 10 amperes. Attractive, streamlined case, large easy to read meter. Battery operated. 8 $\frac{1}{2}$ "L x 5 $\frac{7}{8}$ "W x 3"H tapering to 1 $\frac{3}{4}$ "H. Complete with leads. Shipping weight (two per carton), 12 lbs.

**Model 455A Burn-Out Proof Volt-Ohm-Milliammeter—Net Each . . . . . \$89.50**

**MODEL 295X**  
Microvolt and Crystal Controlled Generator

Provides continuous frequency coverage in 8 bands from 125KC to

175 MC. Calibrated, metered output from 0.1 to 100,000 microvolts. 1% Dial calibration accuracy. Built-in 1MC crystal standard. Precision step attenuator, direct reading, vernier tuning. 105-125v, 50-400 cycles, 90 watts in steel case 19" x 12 $\frac{1}{2}$ " x 9". Complete with 1MC crystal, 48-inch output cable with 2 connectors. Shipping weight, 47 lbs.

**Model 295X Microvolt and Crystal Controlled Generator—Net Each . . . . . \$655.00**

**MODEL 288AX**  
Crystal Controlled AM-FM Sweep and Marker Generator

A complete alignment instrument with built-in decibel meter and crystal frequency standard (100KC and 1000KC). Covers 35KC to 110MC in 8 bands frequency modulated and 35KC to 160MC in 8 bands amplitude modulated. Includes new ultrasonic range from 35KC to 125KC. Supplied with 100KC/1000KC crystal, cable assembly and meter leads. Case size, 16" x 7" x 13". Shipping weight, 33 lbs.

**Model 288AX Crystal Controlled AM-FM Sweep and Marker Generator—Net Each . . . . . \$315.00**

**MODEL 691**  
Heterodyne Marker-Adder

Provides continuously visible marker (including trap points) that will not distort the receiver's response curve. Functions with any marker and sweep equipment with output capability of 0.5 volts, or more. 105-125v, 50-60 cycles, 25 watts. Furnished in steel case, 11 $\frac{1}{4}$ " x 7" x 8 $\frac{1}{4}$ ", complete with leads. Shipping weight, 16 lbs.

**Model 691 Heterodyne Marker-Adder—Net Each . . . . . \$129.50**

**MODEL 615**  
Sweep and Marker Alignment Generator

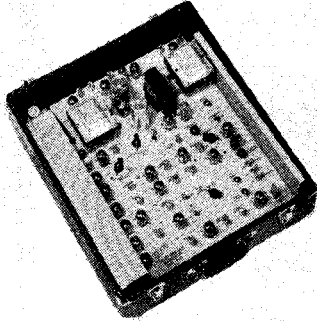
For complete TV, IF and RF alignment, including color TV alignment. Also provides harmonic output on UHF. All electronic Sweep with no moving parts. Amplitude modulation less than 0.1db/MC. 110-120v, 60 cycles, 40 watts. Furnished in steel carrying case, 16 $\frac{1}{4}$ " x 8" x 13 $\frac{1}{2}$ " complete with leads. Shipping weight 39 lbs.

**Model 615 Sweep and Marker Alignment Generator—Net Each . . . . . \$359.50**

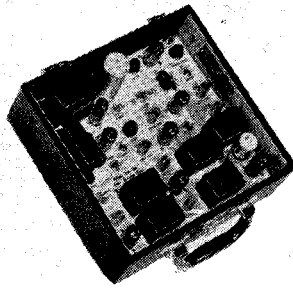
**Hickok**  
**Electrical Instrument Co.**  
Cleveland, Ohio



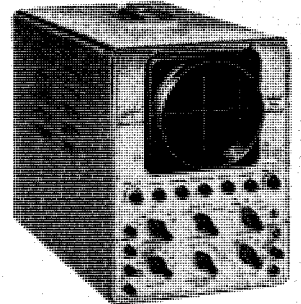
**TEST EQUIPMENT**



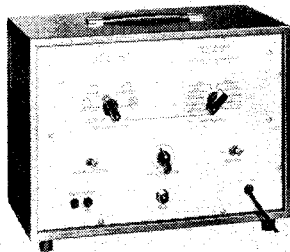
**MODEL 656XC**  
Color Bar-White Dot Generator



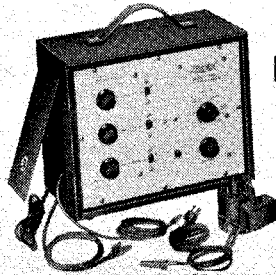
**MODEL 660**  
Crystal Controlled White Dot-Bar Color Display TV Generator



**MODEL 675A**  
Wide Band, High Sensitivity Oscilloscope



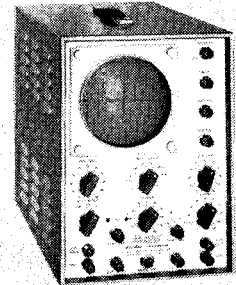
**MODEL 661**  
Chrom-Aligner Combined NTSC Color Bar-White Dot Generator



**MODEL 662**  
Installer's Color TV Generator

**NEW!**

**NEW!**



**MODEL 677**  
Wide-Band Service Technicians 5" AC Oscilloscope

**MODEL 656XC**  
Color Bar-White Dot Generator

Produces 100% fully-saturated NTSC standard patterns. Provides complete range of signals for chroma alignment, including R-Y, B-Y, G-Y demodulation systems. 105-125v, 60 cycles, 40 watts. Furnished in black leatherette portable case, 16 $\frac{1}{4}$ " x 18 $\frac{3}{8}$ " x 7 $\frac{1}{4}$ ", complete with cable. Shipping weight, 48 lbs.

Model 656XC Color Bar-White Dot TV Generator—Net Each \$549.50

**MODEL 661**  
Chrom-Aligner NTSC Color Bar-White Dot Generator

Generates individual 100% saturated color bars to NTSC standards. Provides the following demodulator alignment signals: R-Y, B-Y, G-Y, G-Y at 90°, RF output on channels 3 or 4. Crystal-controlled chroma and sync. Separate video output. 110v, 60 cycles, 20 watts. Complete with leads and 3.58MC crystal. Shipping weight, 20 lbs.

Model 661 Chrom-Aligner Generator—Net Each \$349.50

**MODEL 660**  
White Dot/Color Display Generator

A stable, crystal-controlled white dot and crosshatch generator employing the same dot and sync generating circuitry as the Model 656XC described above. Color display is rainbow type. Lightweight and portable for installation, convergence and in-the-home service. 105-125v, 60 cycles, 40 watts. 10 $\frac{1}{2}$ " x 10 $\frac{1}{2}$ " x 5 $\frac{3}{4}$ ", complete with crystal and output cable. Shipping weight, 21 lbs.

Model 660 White Dot/Color Display Generator—Net Each \$245.00

**MODEL 662**  
Installer's Color TV Generator

Generates ultra-fine dots, crosshatch, vertical bars and horizontal bars. Uses 500 dot system for smallest practical dot and complete screen coverage. Has exclusive crystal-controlled burst phase color reference signal for checking color circuits, trouble shooting and color alignment. Gun killer facilitates convergence, purity check and chroma alignment. Supplied with leads, "quick-connect" cable assembly and instruction book. In steel case, 11" x 8 $\frac{1}{2}$ " x 5 $\frac{3}{8}$ ". Available with accessory carrying case. 105-125v, 60 cycle, 25 watts. Shipping weight, 15 lbs.

Model 662 Installer's Color TV Generator—Net Each \$159.95

**Model CR33 Color Picture Tube Tester:** Checks beam current capabilities of all 3 guns of color picture tube. Makes color purity tests of each gun individually. Adapter socket fits all color kinescopes. 105-125v AC operated.

Net Each \$39.9

**MODEL 677**  
Wide-Band Service Technicians 5" AC Oscilloscope

5 cps to 4.5MC within 3db. New 1-2-3 circuit approach simplifies peak-to-peak measurements. Pre-set horizontal and vertical sweep positions. Sharp, bright trace with astigmatic correction, facilitates detailed observations of TV sync wave forms, including 3.58MC color burst. Furnished complete with detailed application and instruction book and test leads. Shipping weight, 36 lbs.

Model 677 Wide-Band Service Technicians 5" Oscilloscope—Net Each \$199.5

**MODEL 675A**  
Wide Band, High Sensitivity Oscilloscope

5" scope with an illuminated, calibrated screen. Vertical amplifier response within 3 db, DC through 4.5MC, flat through 3.58MC color burst frequency. Astigmatic control provides a new standard of undistorted trace detail. 105-125v, 50-400 cycles, 125 watts. In steel case 10" x 16" x 13" complete with low capacity probe and ground lead. Shipping weight, 45 lbs.

Model 675A, Wide Band, High Sensitivity Oscilloscope—Net Each \$299.1

**Model 770A Industrial and Laboratory 5" oscilloscope.** DC amplifier designed for optimum pulse response, rise time better than 0.07  $\mu$ sec. Sweep calibrated in writing speed, 0.5 sec/div. to 1  $\mu$ sec/div. Three mode horizontal sweep: free-running, driven, automatic. Built calibrator.

Net Each To be announce

**Hickok Electrical Instrument Co.**  
Cleveland, Ohio





60th Anniversary

# HOYT ELECTRICAL INSTRUMENTS

For Original Equipment and Replacement Applications

D.C. Meters for indicating 60 cycle Voltage and Current of the repulsion type with pneumatic damping. Made in the same case styles and sizes as HOYT D.C. meters, they match the D.C. meter where both types are used on the same panel. See DC-AC Specification Chart on opposite page.

Accuracy is 2%. A choice of pointers is available, and special

shields can be supplied at additional cost.

VU METERS, with "A" scale, available in #649, #653, #645 and #647 case styles. Prices on request.

NOTE: A.C. Meters calibrated at any special frequency. Prices on request.

**PRICE LIST:**

Size:	PANEL MOUNTING					PORTABLE	
	2½"	3½"	3¾"	4½"	6"	3" x 4"	5" x 4"
	#1026	#560		#617		#562	#517
	#552	#1038		#601		Prices on request	
	#636	#654		#648			
	#650	#584	#580	#642			
Range		#598	#610	#646	#1046		
Approx. Resist.							

**A.C. MILLIAMMETERS**

0/6	6000	\$11.50	\$12.35	\$12.90	\$13.70	—	—
0/10	2700	10.40	11.25	11.80	12.60	15.10	—

Prices for ranges: 0/30, 0/50, 0/100, 0/150, 0/200, 0/300, 0/500 MA. for all models—same as 0/10 MA. range above.

**A.C. AMMETERS**

0/1	0.271	10.40	11.25	11.80	12.60	15.10	—
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Above prices also apply to all models of standard single ammeter ranges—0/3, 0/5\*, 0/10, 0/15, 0/25, 0/30\*, 0/50\* amps. A.C. Ammeters are self-contained to 50 amps.

For High Current Ranges—See Transformer Section below.

**A.C. VOLTMETERS (Repulsion Type)**

0/25	1476	10.75	11.25	11.95	12.60	15.10	—
Above prices also apply to all models in standard ranges of 0/30, 0/50, 0/100 volts.							
0/150*	25,000	11.75	12.40	12.95	13.70	16.10	—
0/300*	50,000	11.75	12.40	12.95	13.70	17.35	—
0/500	83,300	—	17.85	18.40	19.00	21.55	—
0/600*	99,960	—	17.85	18.40	19.00	21.55	—

\*These ranges carried IN STOCK on Models #584, #598 and #648 only (calibrated for non-magnetic panels).

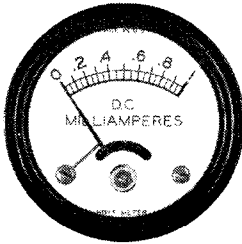
NOTE: If "in-between" ranges are required, add \$3.00 to next higher price as shown above (add \$5.00, if above 150 volts). Standard calibration is for non-magnetic panels. Steel panel calibration at no extra charge if order specifies thickness of steel and size of panel hole. Please specify type of meter case.

DIAL COSTS: Standard range dials only—\$1.00 each; special hand drawn single range dials Prices on Request; other custom dials on special order.

**HIGH CURRENT DONUT TYPE TRANSFORMERS (In Stock)**

For prices on HIGH CURRENT AC AMMETERS, add price of ammeter model above to transformer price below, plus an additional \$4.00 except on model #552, #584, and #648. Transformers have 2-ft. leads and 2 VA burden. Other ranges available on request.

50/5	\$9.60	100/5	\$9.60	200/5	\$9.60	500/5	\$17.35
75/5	9.60	150/5	9.60	300/5	9.60	600/5	17.35



MODEL No. 640, D.C. 2½" Metal Case

**MOVING MAGNET INDICATORS**

HOYT Moving Magnet Indicators have been used for many years by the leading manufacturers of electrical devices. Feature long scales and accuracy within 5%. Attractive appearance is combined with a sturdy movement.

Furnished in round or square cases at low cost. Standard finish on metal cases is black. Chrome Plate is available at slight additional cost. Many types of mounting arrangements available.

NOTE: A.C. Vane Meters are furnished in quantity only. Prices on request.

NOTE: If in-between ranges are required—add \$5.00 to next higher range price; for "zero-center" ranges, add \$5.00 to same range price.

NOTE: DC Ammeters up to 100 amps. have internal shunts.

MODEL DC AC	CASE TYPE PANEL MTG.	SCALE LENGTH DC	FLANGE	BODY DIA. DC	BODY DEPTH DC
640 531AC	Nar. Metal Rd.	1.400"	2.281"	2.000"	1.078"
640 531AC	Metal Surface	1.400"	2.375"	2.000"	—
693 594	Metal Sq.	1.400"	2.625"	2.000"	0.563"
793 794	Plastic Sq.	1.715"	2.375"	2.000"	0.500"
740 741	Plastic Rd.	1.715"	2.375"	2.000"	0.520"

**D.C. MILLIAMMETERS**

Range	Approx. Resist.	#640	#693	#740 #793
0/1	1000	\$4.25	\$4.30	\$4.60
0/3	700	3.15	3.25	3.50
0/5	480	2.90	2.95	3.25
0/10	180	2.70	2.80	3.05
0/15	130	2.30	2.35	2.70

Prices for 0/25, 0/30, 0/50, 0/100, 0/150, 0/200, 0/300, 0/500 MA. ranges:

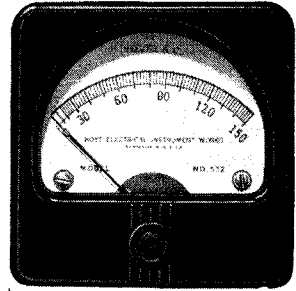
\$2.25	\$2.30	\$2.65
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**D.C. AMMETERS**

Range	#640	#693	#740 #793
0/1	\$2.25	\$2.30	\$2.65
Above prices also apply to 1/0/1, 3/0/3, 0/5, 5/0/5, 0/10, 10/0/10, 0/15 amp. ranges.			
20/0/20	2.85	2.90	3.15
Above prices also apply to 0/25, 0/30, 30/0/30 amp. ranges.			
0/50	3.05	3.10	3.40
50/0/50	3.05	3.10	3.40
0/75	3.50	3.60	4.00
0/100	4.10	4.20	4.50

**D.C. VOLTMETERS**

Range	Approx. Resist.	#640	#693	#740 #793
0/1		\$2.25	\$2.30	\$2.65
Above prices also apply to 0/3, 0/5, 0/10, 0/15 volt ranges.				
0/25	1375	2.65	2.70	3.00
0/30	1650	2.65	2.70	3.00
0/50	2200	2.85	2.90	3.15
0/100	20,000	2.85	2.90	3.15
0/150	30,000	2.90	2.95	3.25
0/300	60,000	3.90	4.00	4.30



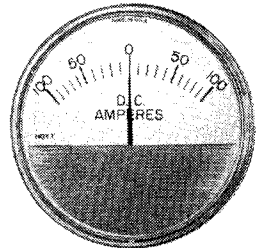
MODEL Nos. 635 and 597, D.C. MODEL Nos. 636 and 598, A.C.

**5% RECTIFIER TYPE VOLTMETERS**

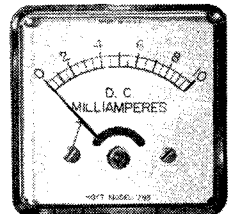
Available in the following ranges: 0/5, 0/10, 0/15, 0/25, 0/30, 0/50, 0/100, 0/150, 0/300 volts.

Above ranges apply to models #584-R, #598-R, #654-R at \$17.00 ea.

Above ranges apply to models #642-R, #646-R, #648-R at \$18.85 ea.



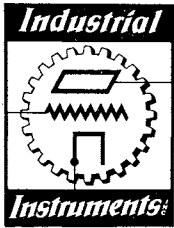
MODEL No. 740 D.C. Indicator 2½" Metal Case w/Plastic Cover



MODEL No. 793 D.C., 794 A.C. 2½" Metal Case with Plastic Cover



# ELECTRICAL

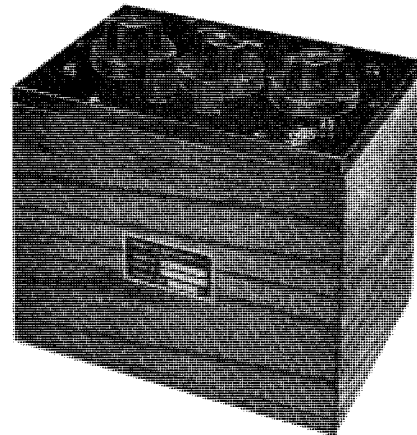


## RESISTANCE DECADES

• Available in a wide variety of standard models. Accuracy at 1.0 and 0.1 ohm steps is  $\pm 0.25\%$ . Accuracy of all other resistors is  $\pm 0.1\%$  of indicated value. Self-cleaning, molded nylon and silver plated brass switch mounted below panel. Zero resistance is less than .003 ohms per dial. Hardwood case. Models DR-1D to DR-4D, 8" x 5½" x 4½". Weight 4 lbs. net, 6 lbs. shipping. Models DR-50D to DR-52D, 9" x 6" x 4½" h. Weight 5 lbs. net, 7 lbs. shipping. Models DR-70D and DR-71D, 17¼" x 5" x 4½" h. Weight 6 lbs. net, 8 lbs. shipping.

### ELECTRICAL SPECIFICATIONS AND PRICES

Model No.	Total Resistance Ohms	Decade Steps	Accuracy	Price
DR-1D	1,110,000	10x(1,000 + 10,000 + 100,000)	$\pm 0.1\%$	\$ 78.00
DR-2D	111,000	10x(100 + 1,000 + 10,000)	$\pm 0.1\%$	67.00
DR-3D	11,100	10x(10 + 100 + 1,000)	$\pm 0.1\%$	65.00
DR-4D	1,110	10x(1 + 10 + 100)	$\pm 0.25$ & $\pm 0.1\%$	65.00
DR-50D	11,111	10x(.1 + 1 + 10 + 100 + 1,000)	$\pm 0.25$ & $\pm 0.1\%$	95.00
DR-51D	111,110	10x(1 + 10 + 100 + 1,000 + 10,000)	$\pm 0.25$ & $\pm 0.1\%$	100.00
DR-52D	1,111,100	10x(10 + 100 + 1,000 + 10,000 + 100,000)	$\pm 0.1\%$	112.00
DR-70D	1,111,111	10x(.1 + 1 + 10 + 100 + 1,000 + 10,000 + 100,000)	$\pm 0.25$ & $\pm 0.1\%$	165.50
DR-71D	11,111,110	10x(1 + 10 + 100 + 1,000 + 10,000 + 100,000 + 1,000,000)	$\pm 0.25$ & $\pm 0.1\%$	215.25



## CAPACITANCE DECADES

• These are 3-dial units with the sum of the dial settings indicating total capacity in microfarads. Mylar and silver-mica capacitors are used for high stability, low-loss characteristics. Polished hardwood case, engraved dial graduations.

### ELECTRICAL SPECIFICATIONS AND PRICES

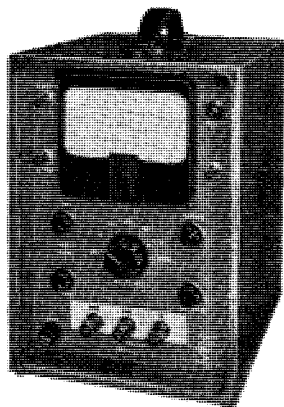
Model	Decade Steps MF	Accuracy	Dielectric	P.F.	Peak Volts	Price
DK-2A	10x(.001 + .01 + 0.1)	$\pm 1\%$	Silver Mica	0.2%	700 (.001) (.01) 500 (.1)	\$175.00
DK-4	10x(.001 + .01 + 0.1)	$\pm 1\%$ (.001) (.01) $\pm 3\%$ (0.1)	Silver Mica Mylar	0.2% 1%	700 400	80.00
DK-5A	10x(.01 + 0.1 + 1.0)	$\pm 1\%$ (.01) $\pm 3\%$ (0.1) (1.0)	Silver Mica Mylar	0.2% 1%	700 400	95.00
DK-11A	10x(.01 + 0.1 + 1.0)	$\pm 0.5\%$ (.01) (0.1) $\pm 2\%$ (1.0)	Silver Mica Mylar	0.2% 1%	700 (.01) 500 (0.1) 400 (1.0)	185.00
DK-10	10x(.0001 + 0.001 + .01)	$\pm 0.5\%$ or 10 mmf	Silver Mica	0.2% 2% (.0001)	700	95.00

### PHYSICAL SPECIFICATIONS

	Overall Dimensions	Weight (Lbs.)	
		Net	Shipping
DK-2A, DK-4, DK-10	8 x 5½ x 7½	8	10
DK-5A, DK-11A	10¾ x 7¾ x 7½	10	12



# TEST EQUIPMENT



## TYPE L MEGOHMMETERS

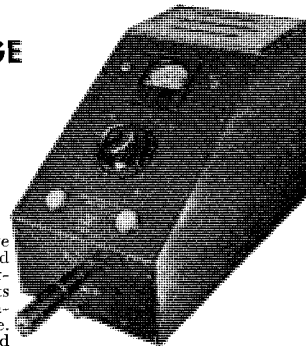
Type L Megohmmeters are used for both laboratory and high speed production testing of motor and transformer winding insulation, cable insulation, high value resistors, capacitor insulation, and for the measurement of surface and volume leakage of insulating materials. These instruments meet the requirements for testing insulation resistance in accordance with ASTM D-257, and Federal Specification LP-406B, Method 4041.

### ELECTRICAL SPECIFICATIONS AND PRICES

Model	TEST Voltage	RANGE		POWER Consumption	WEIGHT		Size	Price
		Low in meg.	High in meg.		Net	Ship.		
L-2A	200 fixed	1	100,000	40 Watts	12	15	15"x8"x10"	\$175.
L-4A	200 and 500 fixed	1	100,000	52 Watts	14	17	15"x8"x10"	215.
L-6B	100 to 600*	1	100,000	82 Watts	15	18	15"x8"x10"	310.
L-7	100 to 600*	1	5x10 <sup>13</sup>	75 Watts	20	24	8"x10 1/2" x11 1/2"	383.

\*Continuously variable, built-in voltmeter for accurate setting.

## TYPE P—VOLTAGE BREAKDOWN TESTERS



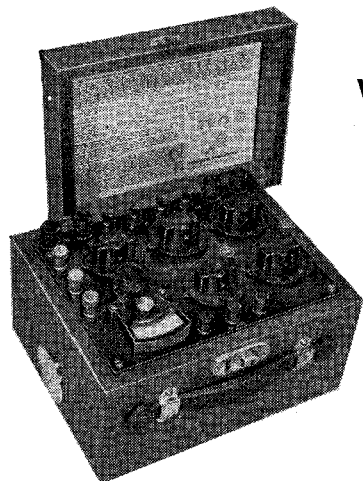
The Type P Series Voltage Breakdown Testers are designed for safe, accurate and fast testing of materials, components and circuits both in the laboratory and on the production line. All types have self-contained metered high-voltage power supply with safety features including interlock switches and pilot warning lights. Load current is limited to values shown in table below. Output voltage continuously variable over range listed for each model.

### ELECTRICAL SPECIFICATIONS AND PRICES

Model	VOLTAGE RANGE		CURRENT RANGE		Price
	AC volts RMS	DC volts	AC	DC	
P1	-	0-4000		5 ma (max)*	\$218.00
P2	0-3000	0-4000	7 ma (max)	5 ma (max)*	264.00
P3B	0-8000	0-10,000	60 ma (max)	50 ma (max)*	488.00

\*Models P1, P2 and P3B incorporate a variable series resistance which limits short circuit current independently of voltage.

Other power supplies up to 100 KV can be supplied to your specifications. Send complete details for quotation.



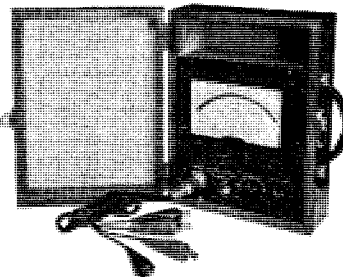
## WHEATSTONE BRIDGES TYPE RN

Universally used for the measurement of all types of resistance devices and circuits where high accuracy is required. Models available for performing Murray-Varley Loop tests.

Model	Total Resistance of Decade	Ratio Dial Settings	Circuits	Dimensions	Price
RN-1	9x(1+10+100+1000)	.001, .01, .1, 1, 10, 100, 1000	.....	9"x8"x6 1/2"	\$176.50
RN-2	9x(1+10+100+1000)	.001, .01, .1, 1, 10, 100, 1000, M10, M100, M1000	Murray & Varley	9"x8"x6 1/2"	193.25
RN-3	10x(1+10+100+1000)	1/1000, 1/100, 1/10, 1/9, 1/4, 1/1, 10/1, 100/1, M10, M100, M1000	Murray & Varley	9 1/2"x8"x6 1/2"	226.00

## TYPE LRO-1 LOW RESISTANCE OHMMETER

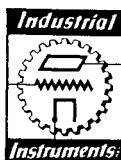
The Type LRO-1 Low Resistance Ohmmeter is useful for the measurement of resistance of sensitive relay contacts, fuses, bus-bars and connections, rail joints, pipe or conduit, switch contacts, transformer windings, motor windings, bonding, grounding and similar applications. The current through the unknown resistance never exceeds 110 ma.



Price \$148.85

**FEATURES:** Extreme accuracy for the most critical measurements. • Entirely self-contained, including 1 1/2 volt flashlight battery • Ranges: .1 ohm, 1 ohm and 10 ohms. 100 meter scale divisions. • Accuracy of plus/minus 1 1/2% on LRO-1 based on full scale values. • Full Scale Readings. • Maximum current through piece under test = 0.11 amp.

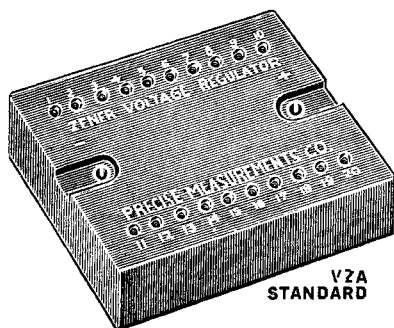
• Other electrical test equipment manufactured by Industrial Instruments can be found in current editions of ELECTRONIC ENGINEERS MASTER. For complete technical details and specifications on test equipments listed here and many others request a copy of Catalog 25.



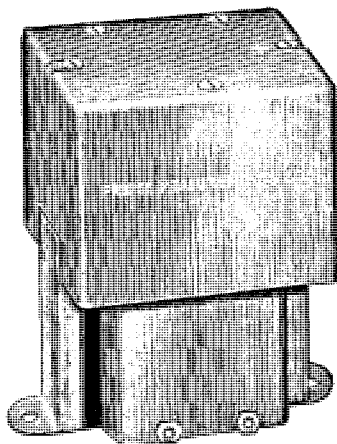
**Industrial  
Instruments INC.**

**CEDAR GROVE, N. J.**

# PRECISE VOLTAGE STANDARDS

VZA  
STANDARD

Use these convenient reference standards for direct calibration of voltmeters, or use as a null type voltmeter by simple addition of a galvanometer. Each VZA STANDARD has twenty taps arranged in two rows. The bottom row is exactly 1/10 the voltage drop of the top row. Type VZ STANDARDS have just one known voltage (without taps), resulting in cost savings and is used for standard cell replacement. Precise Voltage Standards have several advantages over chemical cells, since they are completely solid state and can take voltage and current overloading without loss of accuracy. May be powered from batteries, external power packs or purchased complete with built in power source. Several standards may be wired in series for higher voltages or finer adjustment. All reference standards listed have 1% accuracy. Higher accuracy types with 0.1%, 0.01% and 0.001% available at higher cost.



POWER SOURCE

TYPE VZA STANDARDS			VZA
VOLT.	MODEL	TAP VOLTS	PRICE
1.000	VZA-1	.01 & .1	\$ 54.00
5.000	VZA-5	.05 & .5	54.00
10.00	VZA-10	.1 & 1	54.00
100.0	VZA-100	1 & 10	63.00
1,000	VZA-1K	10 & 100	85.00
2,000	VZA-2K	20 & 200	100.00
4,000	VZA-4K	40 & 400	110.00

# INSULATION TEST SETS

Used in testing insulation where AC voltages are desired. Dual instruments are also available which provide choice of AC or DC output. Includes kilovolt-meter, current meter and automatic overload limiter circuits.



Model	Voltage	VA	Price	
			AC	AC and DC
3000	0 to 3,000	75	\$165.00	\$ 250.00
3010	0 to 3,000	300	250.00	400.00
3050	0 to 3,000	1,500	500.00	650.00
3100	0 to 6,000	3,000	700.00	1,100.00
5000	0 to 5,000	75	175.00	300.00
1000	0 to 10,000	75	250.00	375.00
1500-AC	0 to 15,000	75	285.00	AC only
2500-AC	0 to 25,000	75	400.00	AC only
2500-DC	0 to 25,000		DC only	420.00
4000-DC	0 to 40,000		DC only	600.00

## INDUSTRIAL INSTRUMENTS, INC.

PRECISE MEASUREMENTS COMPANY

CEDAR GROVE, NEW JERSEY

# KILOVOLTMETERS

NOW MEASURE UP TO 100,000 VOLTS AC OR DC

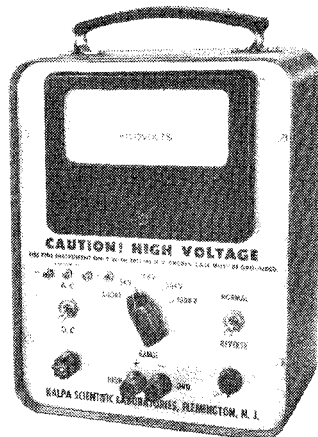
Large rugged 6 inch precision mirror scale meter, ideal for use around lab or field testing. Completely transistorized with stabilized anti-drift circuitry results in sensitivity in the order of a few microamperes. Panel mounted trimmers allow for instant recalibration, should this ever be required. Special highly insulated probes supplied with instrument. Has a fast spike bypass circuitry and novel automatic voltage coefficient compensator.

## RANGES

0 to 5,000/10,000/50,000/100,000 Volts DC. or 60 cycles AC.

Model 60-DC only \$350.00

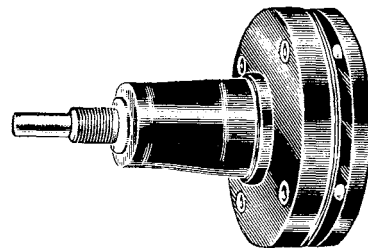
Model 50-AC and DC \$400.00



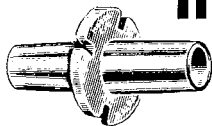
## HIGH VOLTAGE SWITCH

For use in High Voltage low current circuits where complete isolation is required. Nominal rating 5,000 Volts DC or AC (peak). Model A or D switch may be used in lower duty circuits up to 10,000 Volts DC. Current rating 500 Milliamperes, steady state (when not being switched). 5 Ma. when switching. Isolated for 15,000 Volts DC test to ground. Special Modified Diallyl Phthalate used in construction.

MODEL	TYPE	PRICE Single Gang
A	2 Pole Reversible (for polarity reversing of power supplies)	\$20.00
B	D. P. D. T.	22.00
C	3. P. D. T.	25.00
D	4 Position	20.00
E	6 Position	22.00
F	8 Position	24.00
G	10 Position	26.00



## HIGH VOLTAGE CONNECTORS



**MODEL C-0**  
RATED FOR  
5,000 VOLTS DC

These high voltage connectors are sturdily constructed of Modified Diallyl Phthalate for superior arc resistance and low power factor. Miniature physical size is combined with extra long air paths. Sealed center conductor will handle up to 20 amperes. Neoprene gasket included for mounting on oil-filled tanks. Easily mated with any standard banana jack for quick disconnect, or 10/32 machine bolt for permanent service. Neat and attractive styling is ideal for mounting on front panels.

AVAILABLE IN 10 COLORS:

BLACK, BROWN, RED, ORANGE, YELLOW, GREEN, BLUE, VIOLET, GREY AND WHITE

Miniature Model C-0

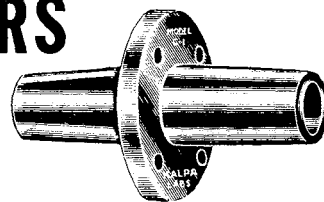
5,000 Volt DC service.

PRICE  
\$ 5.00 each.

Standard Model C-1

25,000 Volt DC maximum.

\$10.00 each.



**MODEL C-1**  
RATED FOR  
25,000 VOLTS DC  
MAXIMUM

INTRODUCTORY  
SAMPLE KIT OF TEN  
(one of each color)

\$30.00

\$60.00

## INDUSTRIAL INSTRUMENTS, INC.

KALPA SCIENTIFIC LABORATORIES

CEDAR GROVE, NEW JERSEY



25 YEARS OF INTEGRITY IN MANUFACTURING.....

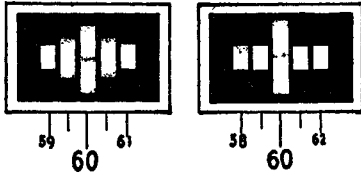
J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

## VIBRATING REED FREQUENCY METERS (PATENTED)

• **USES** — J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, and television service, on engine generator sets, in laboratories, in many types of electronic equipment, on panel and control boards, in inspection set-ups—wherever constant or known frequency is important to efficient operation of equipment. More than 20 years of continuous experience covering many thousands of these instruments are your assurance of quality for both commercial and defense applications.

• **OPERATING PRINCIPLE** — The patented, simplified design used in the J-B-T meter operates on AC or interrupted DC. Each reed is adjusted to respond by resonance to but one frequency. As the current excites the driving coil, the reed "in tune" with the frequency in the coil will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. To determine frequency, simply read the reed.

• **RESPONSE PATTERNS** — These patterns differ with the increments of frequency between reeds. For example, at 60 cycles, half-cycle steps give the broad response shown below at left, whereas full cycle steps bring the sharp response at right. In general, the lower the frequency the greater the amplitude, the higher the frequency the less the amplitude. Thus a 12 cycle reed normally will have substantially greater amplitude than a 1000 cycle reed.



• **ADVANTAGES** — Guaranteed accuracy at reference temperatures of 77°F is  $\pm 0.3\%$  or better of the AC frequency being measured, unless otherwise stated. Accuracy on interrupted DC may be somewhat less. High fatigue safety factor for continuous operation. Temperature compensations are not required as temperature coefficient of reeds is only approximately 75 parts per million per degree F., negative.

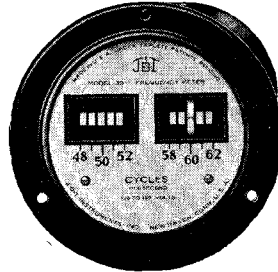
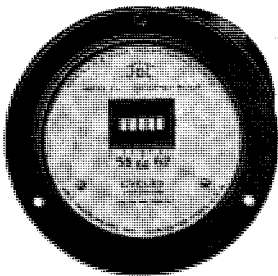
• **STABILITY** — All meters are permanently calibrated at the factory and do not require subsequent adjustment. J-B-T reeds have relatively high Q characteristics, an especially desirable factor in electronic circuits. Wave form or external fields do not ordinarily have an adverse effect. Built with no pivoted parts and with lock washers at every critical point, these rugged meters can take rougher treatment than many instruments.

• **TRUST THE METER** — If a meter plugged in on a 60-cycle AC power line does not indicate exactly 60 cycles, trust the meter! Power supply may momentarily be off-frequency due to changing load conditions. All J-B-T Frequency Meters are meticulously calibrated at the factory, entirely independent of frequency of power supply. Production and inspection equipment are checked regularly against National Bureau of Standards frequency signals.

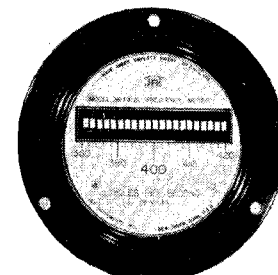
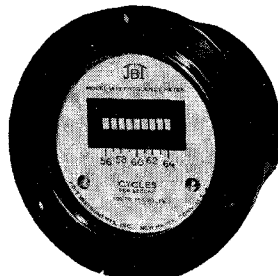
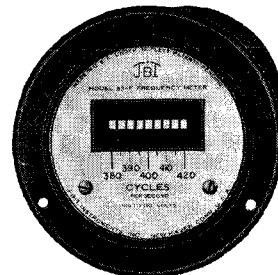
### 5 OR 7 REEDS

Used on standby power equipment. Handy for accurately measuring frequency of power source. 5 reeds (as illustrated), 58-62 cycles, or 7 reeds, 7-63 cycles, 100-130 volts. Other characteristics and accuracy same as Model 30-F. See Table of Dimensions, lines 4 and 5.

- 1-F, (illustrated) 58-62 cy., 5 reeds, 3-1/4" metal case ..... \$26.65  
 1-FX, 58-62 cy., 5 reeds, 3-1/2" Molded case, MIL-M-6B mtg. \$23.65  
 1-FX-7, 57-63 cy., 7 reeds, 3-1/2" Molded case, MIL-M-6B mtg. \$25.85



(Meter operating at 60 cycles)



### 10 REEDS

**Range:** 48-52 and 58-62 cycles. Double window for ease of reading either range. Often specified for export. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Other voltages available on special order. Accuracy  $\pm 0.3\%$  at reference temperature. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

30-F, (illustrated), 48-52 and 58-62 cy., 3/4" Metal Case..... \$30.50

30-FX, 48-52 and 58-62 cy., 3/2" Molded Case, MIL-M-6B mtg. .... \$27.50

### 9 REEDS — 400 CY.

Used for measuring frequency of high-cycle power sources, particularly aircraft. Accuracy  $\pm 0.3\%$  at reference temperature. Nine reeds, 380-420 cycle range. 100-130 volts; 90 ohms per volt; 1.5 watts power consumption. Other voltages available on special order. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

33-F, (illustrated), 380-420 cy., 3/4" Metal Case ..... \$37.10

33-FX, 380-420 cy., 3/2" Molded Case, MIL-M-6B mtg. .... \$34.10

### 9 REEDS — 60 CY.

Covers a broad frequency band. Nine reeds, 56-64 cycles, or in half-cycle steps (accuracy  $\pm 0.2\%$ ) 58-62 cycles. 100-130 volts; 110 ohms per volt; 1 watt power consumption. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

34-F, 56-64 cy., 3/4" Metal Case 1-cycle steps. .... \$30.25

34-FX, (illustrated), 56-64 cy., 3/2" Molded Case, MIL-M-6B mtg. \$27.25

34-F-Z, 58-62 cy., 3/4" Metal Case, 1/2-cycle steps. .... \$31.90

34-FX-Z, 58-62 cy., 3/2" Molded Case, MIL-M-6B mtg. .... \$28.90

### 18 OR 21 REEDS

Advanced design offers 21 reeds as an interchangeable 3/2" panel meter with 2-cycle intervals for close reading over the band of 380 to 420 cycles per second. Accuracy  $\pm 0.3\%$  at reference temperature. The reed flag size is necessarily smaller than in a 9-reed 400-cycle meter, such as the model 33-FX, but the 21 reeds are located in an enlarged window 2" wide with flags 3/8" high x 1/16" wide to give maximum readability. A patented internal construction for mounting the reeds in one clamp assures ruggedness. These instruments and their variations are particularly useful where unusually close indication of frequency throughout the band is desirable. See Table of Dimensions, line 5. All have 3/2" Molded Case, MIL-M-6B mounting.

36-FX-21, (as illustrated), 380-420 cycles, 21 reeds, 28 volts operation, 3/2" Molded Case; 18 ohms per volt; 1.6 watts power consumption ..... \$43.75

36-FX-21-115, 380-420 cycles, 21 reeds, 100-130 volts; 90 ohms per volt; 1.5 watts power consumption ..... \$45.00

30-FX-18, (not illustrated), 46-54 and 56-64 cycles, 18 reeds in one window with two groupings, 100-130 volts; 320 ohms per volt; 0.35 watts power consumption ..... \$47.50

### 3" SQUARE-CASED FREQUENCY METERS

The meters described above are also available with square black molded cases designated as **FS series** per print SK-59, Rev. D. For example, 30-FS is same as 30-FX except for the case.

PRICES NET, F.O.B. New Haven, Conn., Individually Boxed, Domestic Packed, Effective July 1, 1964

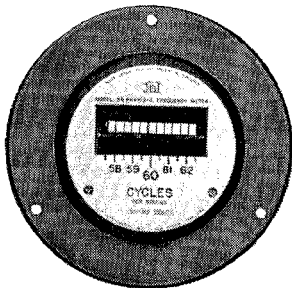


.....25 YEARS OF INTEGRITY IN MANUFACTURING

J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

**3 1/2" SEALED FREQUENCY METERS**

**FHXX TYPE** Sealed meters, glass-to-metal construction, with solder terminals and detachable flange, supersede the former FHX sealed meters. While JAN-I-6, MIL-M-6B, and MIL-M-10304B (Type MR36) do not refer specifically to frequency indicators, the FHXX series uses the front mounting dimensions of these specifications, and meets or exceeds the sealing and electrical requirements including 3000 volt breakdown. Electrical characteristics and accuracy are the same as for corresponding F models without the HXX designation. Every meter is tested in water where the absolute pressure of the air above the water is reduced to 2.5 inches of mercury (approx. 57,000 ft. altitude) and is maintained for one minute. For dimensions, see Table, Line 8, and Print SK-51 Rev. E. Standard voltage is 100-130.



30-FHXX, 10 reeds, 48-52 cy. and 58-62 cy. ....	\$34.30
31-FHXX, 5 reeds, 58-62 cy. ....	30.45
33-FHXX, 9 reeds, 380-420 cy. ....	40.90
34-FHXX, 9 reeds 56-64 cy. ....	34.05
34-FHXX-11, 11 reeds, 55-65 cy. ....	36.25
34-FHXX-Z-11, illustrated, 11 reeds, 57.5-62.5 cy. ....	37.90

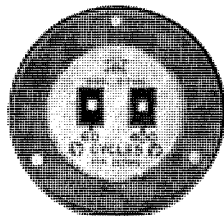
**2 1/2" SEALED METERS**

J-B-T manufactures 2 1/2" sealed frequency meters which are similar to the 3 1/2" sealed above, except with dimensions per Line 3 of Table.

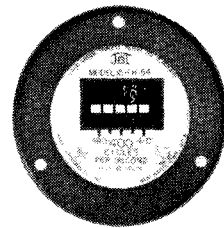
21-FHXX, 5 reeds, 58-62 cy., 100-130 volts .....	\$34.85
23-FHXX, 5 reeds, 380-420 cy., 100-130 volts (normally stocked) ....	\$39.80

**1 1/2" SEALED METERS**

**MODEL 15-FHAC.** Widely used as the frequency standard on audio-oscillators, the model illustrated operates 2 reeds, 60 and 400 cycles, at approximately 8-10 volts on 0.04 watts for a cathode follower circuit. Accuracy  $\pm 0.5\%$  at 77°F. Steel case has telephone black finish, solder terminals. Barrel is 1 1/2" diameter; 2-3/32" detachable flange FL-4 covers glass-to-metal seal. See Table of Dimensions, line 1



15-FHAC .....	\$20.30
15-FH-5 METERS (lower photo) also use the 1 1/2" black metal case with 2-3/32" detachable flange and glass-to-metal seal. The 15-FH-5 series features 5 reeds in a row for 100-130 volt operation. Specified where size and weight are important. Same 100% inspection for approx. 57,000 ft. altitude as FHXX types. Standard meters, but not regularly stocked. See Table of Dimensions, line 1.	
15-FH-54, 5 reeds, 390-410 cycles, 1.25 watts power consumption .....	\$25.85
15-FH-56, 5 reeds, 58-62 cycles, 0.25 watts power consumption .....	\$21.45
15-FH-400, 5 reeds, 380-420 cy., 1.25 watts power consumption .....	\$25.85



**RUGGEDIZED AND ILLUMINATED METERS**

**Model with "RUG"**—Sealed vibrating reed frequency meters and sealed elapsed time meters are available, when so ordered, to the intent of MIL-M-10304B, which covers ruggedization of other kinds of meters. This feature usually is specified only for extra-severe shock and vibration.

**LL Construction**—Requirements for lighted meter dials have led to illuminating the 3 1/2" FHXX Series of sealed meters. Light from a source behind the panel is admitted through a sealed window built into the meter case. Inquiries are invited.

**400 CYCLES, IN 1 CYCLE STEPS; 800 CYCLES**

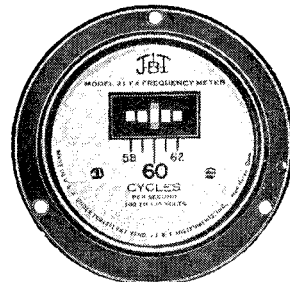
Among the variations which J-B-T produces on special order, are 21-reed, 390-410 cycles in 3 1/2" case; and 11-reed, 780-820 cycles with 5-cycle increments. Quotations on request.

**NOTE ON METER VOLTAGE**

J-B-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made for the purpose of using at two or more voltages, not additional phases.

**2 1/2" METERS — 5 REEDS**

**MODEL 21-FX, 23-FX.** Matches other 2 1/2" panel instruments. Meets A/C 39.1-1951 and MIL-M-6B (Type MR 24 or MR 25) in depth of case and mounting dimensions. Weighs only 4 1/2 ozs.; 5 reeds, 58-62 cycles, 100-130 volts, 600 ohms per volt, 0.25 watt power consumption. At 400 cycles, 120 ohms per volt, 0.7 watts power consumption. Flush panel mounting; see print MD-20, Rev. B, also Table of Dimensions, Line 2.

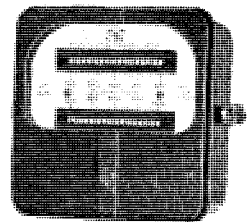


(Operating at 60 cycles)

21-FX, 58-62 cy., 2-11/16" Molded Case, 1 cy. steps .....	\$22.55
23-FX-54, 390-410 cy., 2-11/16" Molded Case, 5 cy. steps .....	\$27.50
23-FX, 380-420 cy., 2-11/16" Molded Case, 10 cy. steps .....	\$27.50

**400 CYCLE BROAD AND VERNIER INDICATORS**

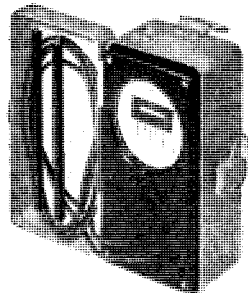
**MODEL 41-FX-42** (supersedes Model 41-FX) Widely used in commercial and military testing, this model provides two windows: for 300-500 cycles, 21 reeds in 10-cycle steps, and, for a vernier effect, 380-420 cycles with 21 reeds in 2-cycle steps. Black molded case, flush front is 4 3/4" high x 4 3/4" wide x 2 1/2" deep behind panel over studs. 100-130 volts is standard; also made with 4 studs for 200-240, 115 and 30 volts, 4.5 watts at 115 volts, 7.7 watts at 200 volts, 2 watts at 30 volts. For mounting, see Print MD-38-11.



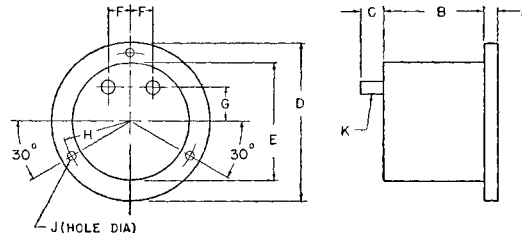
41-FX-42, 100-130 volts .....	\$125.00
41-FX-42, 3 voltages, without switch .....	140.00

**PORTABLE FREQ. TESTERS**

**FP SERIES, METAL OR MOLDED CASE.** Accuracy of  $\pm 0.3\%$  meets the exacting test requirements of aviation, signal, and communication equipment. **M-Types** use anodized gray aluminum case, 6 3/8" long x 4" wide x 3-9/32" deep. Leads permanently attached. See Print SK-63-10. With pertinent name plate, **33-FP-9M** is known as **TS-328 A/U. L-Types**, sturdy molded case within top grain leather carrying case 6-3/32" x 4 1/4" x 2 3/4"; 4' leads with 5" test picks and banana plugs.



33-FP-9M, (illustrated) 380-420 cy., 9 reeds, 100-130 volts, 70 ohms per volt, 1.5 watts power consumption; com. quality and packing .....	\$49.2
34-FP-9M, 56-64 cy., 9 reeds, 100-130 volts, 130 ohms per volt, 1 wa power consumption, com. quality and packing .....	\$47.3
33-FP-9L, 380-420 cy., 9 reeds, 100-130 volts .....	\$47.6
34-FP-9L, 56-64 cy., 9 reeds, 100-130 volts .....	\$40.7



**FREQUENCY AND FREQUENCY — TIME METERS, TABLE OF DIMENSIONS, INCHES**

MODEL	MIL-M-6B* MOUNTING	A	B	C	D	E	F	G	H	J	K	TERMINAL DESCRIPTION
Line 1 15-FH Series	—	1/8	1-9/16	3/8	2-3/32	1-1/2	3/8	3/8	0.875	0.125	Solder, 1/16" dia. hole	
Line 2 21-FX and 23-FX Series	MR 24, MR 25	13/64	1-3/8	23/32	2-11/16	2-5/32	7/16	9/16	1.220	0.116	10-32 NF-2 studs	
Line 3 21-FHXX, 23-FHXX	MR 26**	3/32	1-27/32	11/16	2-11/16	2-1/8	1/2	1/2	1.220	0.125	Solder, 3/32 hole	
Line 4 30-F to 34-F Series	—	7/64	2-3/32	23/32	3-1/4	2-9/16	7/16	7/8	1.453	0.150	10-32 NF-2 studs	
Line 5 30-FX to 36-FX Series	MR 34, MR 35	19/64	2	23/32	3-1/2	2-11/16	7/16	7/8	1.580	0.150	10-32 NF-2 studs	
Line 6 31-FE Series	—	7/64	3-7/8	23/32	3-1/4	2-9/16	7/16	7/8	1.453	0.150	10-32 NF-2 studs	
Line 7 31-FEX-1 Series	MR 34, MR 35	5/32	3-7/8	23/32	3-1/2	2-9/16	7/16	7/8	1.453	0.150	10-32 NF-2 studs	
Line 8 30-FHXX to 34-FHXX Series	MR36**	3/32	2-1/4	5/8	3-1/2	2-11/16	1/2	3/4	1.580	0.150	Solder, 3/32 hole	

\*Also JAN-I-6 and ASA C39.1-1951 Mounting

\*\*Also MIL-M-10304B Mounting

PRICES NET, F.O.B. New Haven, Conn., Individually Boxed, Domestic Packed, Effective July 1, 1964



25 YEARS OF INTEGRITY IN MANUFACTURING.....

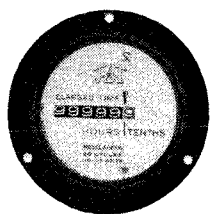
J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

**ELAPSED TIME METERS; FREQUENCY-TIME METERS;  
REED RELAYS AND OSCILLATOR CONTROLS**

• **USES AND ADVANTAGES OF ELAPSED (OR RUNNING) TIME METERS**

To record operating time of AC electrical and electronic equipment, these self-starting synchronous instruments normally register in 1/10th hour steps to 9,999.9 or 99,999.9 hours, then automatically reset. They are widely used for tube life, TV equipment, punch presses, conveyors, oil burners, ground support equipment, maintenance schedules, etc. J-B-T engineers recommend the AC type of elapsed time meter for superior accuracy, especially where voltage or ambient temperature vary widely.

**6-Digit WIDE-NUMERAL ELAPSED TIME METERS**

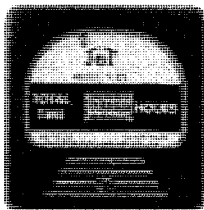


**MODEL 31-EXW.** The latest J-B-T elapsed time meter is Model 31-EXW, illustrated. Easily-read, wide 6-digit numerals register to 99,999.9 hours then automatically reset. Distinctive contemporary dial shows tenths in black on white, and units in white on black. The 3 1/2" black molded case is interchangeable with Model 31-EX and FX types of frequency meters. Print SK-125 gives mounting information.

**Model 31-EXW, 6-digits, 0-99,999.9 hours, 60 cy., 110-125 volts. \$16.95**

**SQUARE-CASED ELAPSED TIME METERS**

**MODEL 31-ES.** A square black molded case, matching other 3" x 3" meters, differentiates this model from the round 31-EX. Ask for Print SK-110, Rev. F showing standard rear mounting 2 1/4" bet. centers of molded-in studs, new rugged case with overall depth 3-11/32" behind flange, and electrical studs on center line. Variations can be made for 99,999 hours (suffix U), 230 volts, minutes, matte finish, or 50 cycles.



**31-ES, 60 cy., 110-125 volts, 0-9,999.9 hours. \$17.05**

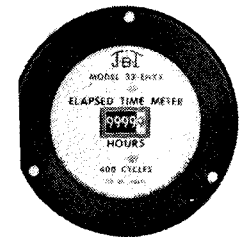
**3 1/2" SEALED ELAPSED TIME METERS — 60 Cycles**



**MODEL 31-EHXX.** Where rugged requirements make a completely sealed elapsed time meter desirable, this glass-to-metal construction with flat glass front and 3 1/2" diameter separable flange, often is specified. Heavy-duty solder terminals are supplied. Every instrument is checked in a vacuum chamber. Overall dimensions and appearances match the FHXX series sealed frequency meters. Maximum voltage between terminals and case, 1,000 volts, R.M.S. The meter registers in 1/10 hour steps to 9,999.9 hours, then automatically resets. Tenths indicator is red on white, all others in white on black. Mount according to SK-85, Rev. C.

**31-EHXX, 60 cy., 110-125 volts... \$19.75**

**3 1/2" SEALED ELAPSED TIME METERS — 400 Cycles**



**MODEL 33-EHXX.** This stable, self-starting 400-cycle elapsed time meter is extensively used for preventive maintenance and for reliability testing and checking in a wide variety of equipment. The instrument is entirely enclosed in a 3 1/2" flanged case, glass-to-metal sealed construction with separable flange; heavy-duty solder terminals; flat glass front. 1/10 hours are shown in red on white, all other numerals white on black. The external appearance matches FHXX frequency meter series. For dimensional details see SK-61, Rev. B.

**33-EHXX, 400 cy., 0-9,999.9 hours, 1/10 hour steps, 110-125 volts \$58.00**

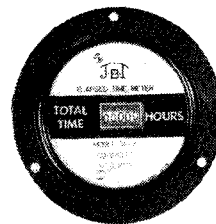
**2 1/2" SEALED ELAPSED TIME METERS**

**ODEL 21-EHXX.** A full size counter reading 9,999.9 hours in 1/10 hour steps and a rugged self-starting synchronous motor are built to this 2 1/2" sealed meter. Its front mounting dimensions are the same as Type MR26 electrical indicating instruments in MIL-M-6B. ass-to-metal seal makes the instrument completely tamper-proof. Ask for Print SK-68, Rev. G. (2 1/2" 400-cycle meter, **Model 23-EHXX** so is made on special order.)

**21-EHXX, 60 cy., 110-125 volts \$26.00**

**Popular BASIC 3 1/2" ELAPSED TIME METERS**

**MODEL 31-EX.** First in popularity among all J-B-T elapsed time meters, this self-starting instrument registers to 9,999.9 hours in 1/10 hour steps before automatically resetting. Red numerals on white are used for tenths, all others are white on black. Black molded case matches FX series 3 1/2" frequency meters and completely encloses all parts. This case, with centered terminals, meets type MR34 or MR35 mounting dimensions of MIL-M-6B, also JAN-I-6. Referring to line 5 of the Table of Dimensions on the preceding page, barrel depth (B) is 2 1/2", stud height above center (G) is zero, and all other measurements are as shown. Types for 99,999 hours, or 50 cycles, or special voltages are available on special order.



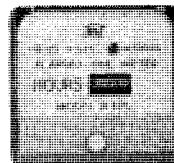
**31-EX, 60 cy., 110-125 volts \$15.95**  
**31-EX-200, 60 cy., 230 volts (not regularly stocked) \$17.05**

**ELAPSED TIME METERS — Tenths of Minutes**

**MODEL 31-EXM, 60 cycles, 110-125 volts, reading 0-9,999.9 minutes;** for short-run applications or readings at closer intervals than 31-EX. Tenths of minutes in red on white, minutes in white on black numerals, otherwise identical with 31-EX **\$16.25**

**CLEAR-PLASTIC ELAPSED TIME METERS**

**EPL TYPE.** The modern clear-plastic front gathers light from every side and is compatible with many other instruments. A sturdy metal case with solder terminals is used behind the panel. The 2 1/2" size is 2-19/32" wide x 2 3/8" high with 2 1/8" diam. meter barrel, per print SK-102, Rev. C. The 3 1/2" is per print SK-108, Rev. C.



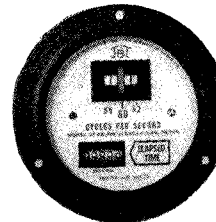
**21-EPL, 2 1/2" size (illus.), 60 cy., 110-125 v., 0-9,999.9 hrs. \$25.75**  
**31-EPL, 3 1/2" size (not illus.), 60 cy., 110-125 v., 0-9,999.9 hrs. \$23.75**

**RUGGEDIZED METERS TO MIL-M-7793C**

This specialized specification at present omits the popular 3 1/2" sealed sizes. J-B-T 2 1/2" and 3 1/2" round sealed and ruggedized types can be certified as to various test conditions under present MIL-M-7793C and General Meter Specification MIL-M-10304B. Inquiries are invited on smaller sizes to MIL-M-7793C and subsequent revisions as they are released.

**ELAPSED TIME — FREQUENCY METERS**

**31-FE SERIES.** To conserve panel space and centralize information, this panel instrument combines elapsed time or running time meter with frequency reeds. It is used on motor generator sets and on electrical equipment where maintenance routine calls for periodic servicing. The J-B-T design, proved by years of field experience, uses a separate exciting coil for the reeds to achieve close control of reed amplitude and frequency. Reads 0-9,999.9 hours and 58-62 cy. with 5 reeds, for 100-130 volt operation; self starting. Tenths shown in red on white, all other numerals in white on black. Black metal case with front mounting per Table of Dimensions, line 6. Power consumption is 4.7 watts. For variations having 7, 9, or 11 reeds, not regularly stocked, such as Model 34-FE, see print SK-45, Rev. D.



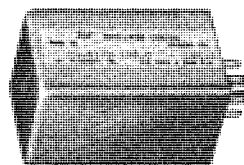
**31-FE, 3 1/4" metal case 4-19/32" deep, \$33.00**  
**31-FEX-1, (per print SK-44 Rev. D—not regularly stocked) like Model 31-FE, except with 3 1/2" metal flange permanently attached for MIL-M-6B front mounting per line 7, Table of Dimensions \$34.10**

**RESONANT — REED RELAYS (Decoders) AND OSCILLATOR CONTROLS (Encoders)**



**Typical Frequency Sensitive Relays RR-K11A-136.5**

**Typical Sealed Oscillator Control RO-B10B-188.0**



For full technical description of J-B-T frequency-sensitive electro-mechanical control devices, see Bulletins 162R and D664; for representative models and prices, see Section 5100 of this book.

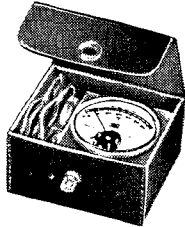
PRICES NET, F.O.B. New Haven, Conn., Individually Boxed, Domestic Packed, Effective July 1, 1964



.....25 YEARS OF INTEGRITY IN MANUFACTURING

J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

**TEMPERATURE TESTERS AND ACCESSORIES  
FOR APPLIANCE SERVICING, QUALITY INSPECTION, AND LABORATORY SET-UPS**

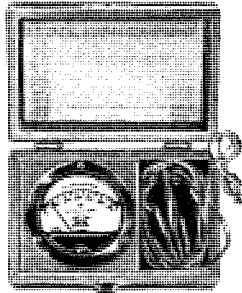


**OVEN OR HEAT CHAMBER TESTERS**

**MODEL 23-JP-1.** This popular portable indicating pyrometer saves time and furnishes reliable information in testing and setting thermostats on electric or gas ranges and other appliances by showing oven temperatures as they change. Standard size dial, 0-650°F., with 2 3/8" scale arc reading, is used but covered by clear-plastic instrument front. The indicator is mounted on a black metal panel affixed inside a pocket-sized, black top-grain leather case 4 1/2" x 2 7/8" x 4 1/4" over hardware. Characteristic of more expensive pyrometers, the 23-JP-1 is automatically compen-

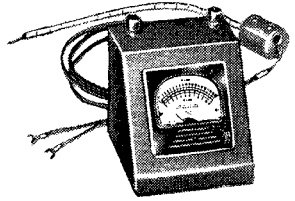
sated for ambient temperature. Thus the tester eliminates calculations, avoids likelihood of serious error as temperature changes inside the instrument itself, and gives reliable direct readings. Supplied with attached SA-116, 5 1/2' calibrated thermocouple, clip, and convection shield **\$26.00**

**MODEL 32-JP-3.** This time-tested model uses a rigid outer carrying case 6" x 3 7/8" x 3 3/4", covered in black leatherette. The glass-covered indicator shows 0-650°F. range in 10° divisions readable to 2 1/2° on a 2 3/8" scale arc. Exceptionally fast, continuous response. Automatic compensation for ambient temperature is a valuable feature whether the tester is used for service work, sales demonstrations, or inspection. Attached SA-116, 5 1/2' thermocouple, clip for affixing to grill and convection shield included **\$28.00**



**HEAT INDICATORS**

**MODEL 32-J PYROMETER IN SN-7 STAND.** Mounted in sloping front black metal stand, 4 1/4" high x 4 3/8" deep x 4 1/8" wide. Compensated for ambient temperature. Medium resistance system, damped for quick reading on 2 3/8" scale, assures ruggedness and pointer stability. For ±2% accuracy, use only the type and resistance of thermocouple and lead provided; if extra length—coil it—to maintain calibration. A protection tube usually is not required. For convenience keep an extra thermocouple and lead on hand.

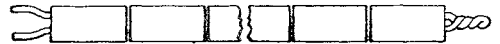


**MODEL 32-J IN SN-7 STAND (Supersedes SN-3 Stand)**  
0° — 650°F-350°C, includes SA-91 thermocouple, SA-84 lead, and CB-1 connector block **\$33.50**  
0°-1200°F-650°C, includes SA-87, SA-82, and CB-1 **33.50**  
0°-2000°F-1100°C, includes SA-87, SA-82, and CB-1 **33.50**

**MODEL 32-J IN SN-8 STAND (not illustrated).** With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations. 0°-650°F including SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-86 flexible leads and thermocouple. **\$37.50**

**TEMPERATURE AND TESTER ACCESSORIES**

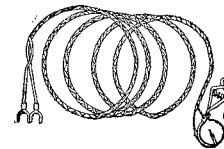
**THERMOCOUPLES...** For J-B-T pyrometers and leads, thermocouple are carefully selected, standardized, and tested.



- SA-87. 12" #14 Ga. chromel-alumel, 2 hole ceramic beads, fits 5/16" hole; welded tip **\$3.40**
- SA-88. Same construction as SA-87 but 24" long **\$4.20**
- SA-89. 12" No. 8 Ga. chromel-alumel, 2-hole ceramic beads, fits 7/16" hole; welded tip **\$3.40**
- SA-90. Same as SA-89 but 24" long **\$4.20**
- SA-91. 12" #14 Ga. iron-constantan, 1938 calibration; 2 hole ceramic beads, fits 5/16" hole; welded tip **\$2.90**
- SA-92. Same construction as SA-91 but 24" long **\$3.70**

**SA-116 with SHIELD and CLIP.** Flexible No. 22 gauge iron constantan, asbestos insulated, 5 1/2', with attachment clip and convection shield for use with 23-JP-1, 32-JP-2, 32-JP-3, 32-JP-4, 32-JP-7, 60-JRT or 61-JRT Testers. (See SA-199 for extra quality glass insulated type) **\$2.00**

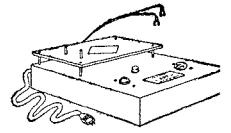
**SA-175 (PLAIN TIP).** For roasters, waffle irons, etc., 5 1/2' #22 Ga. with small ball tip use where clip and shield are unsuitable **\$1.60**



SA-116

- SA-176 (for TOASTERS, etc). Same as SA-175 except tip has specific disc to collect heat **\$3.00**
- SA-188 (for AUTOMATIC WASHER TEMPERATURES, etc.). 3/16" dia copper tube, 4" long, encloses couple; for use in pipe or sample of water; 5 1/2' lead **\$4.50**
- SA-199 (with SHIELD and CLIP). Same as SA-116 except duplex not fraying glass braid construction; dia. .115"; for frequent use above 400°F. **\$2.60**
- SA-300 (for SURFACE READINGS). Spring-type I-C in Transite tip with handle and 5' #22 Ga. lead for rapid reading; not regularly stocked **\$6.00**

**ACCESSORY IRON TESTER, MODEL IT-1.** This attachment is identical with 32-JIT except there is no meter. Attach to 32-JP-7 or 61-JRT. **\$18.00**

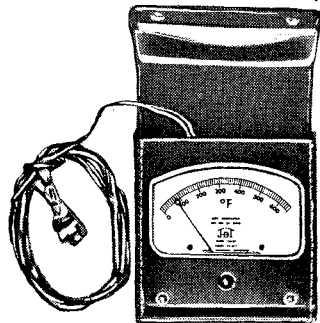
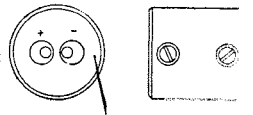


IT-1

**LEAD WIRES SA-82.** 6' compensating lead for chromel-alumel thermocouples; duplex stranded, asbestos-insulated; outside moisture-proof and flame-proof (not interchangeable with SA-84) **\$1.70**

- SA-83. Same construction as SA-82 but 26' long **\$5.50**
- SA-84. 6' for iron constantan thermocouples **\$1.70**
- SA-85. Same construction as SA-84 but 26' long **\$5.50**
- SA-86. 7" iron constantan thermocouple and lead combined; #20 G. twisted pair asbestos insulated **\$2.10**
- TRANSFORMERS. AS-TR-2. Attachment for 61-JRT to read 30 and 60 A amp scales on tester; includes jumper lead and panel **\$18.00**
- AS-TR-3 For 60-JRT tester. To read 30 and 60 AC amp by dividing v.c. scale by 10 or 5. Complete with attachments **\$20.00**
- RESISTANCE BULBS (for cold testing). SA-142. Bulb with 14' polyethylene ribbon lead, for 60-JRT only. **\$ 6.50**
- SA-162. Bulb, with 14' polyethylene ribbon lead, for 50-50 and 61-JF testers **\$ 6.50**

**CONNECTOR BLOCK MODEL CB-1.** Lava connector block, withstands high temperatures, accommodates all thermocouples. Heavy brass connectors keep contact resistance low. Usable with or without connector head **\$1.85**

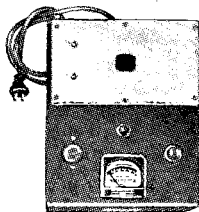


**NEWEST MODEL 32-JP-7.** Most versatile, and easiest to read of J-B-T temperature testers, Model 32-JP-7 offers a 650°F scale more than 4" long. Automatic compensation for ambient temperature is included, so that temperatures are read directly and without calculations. The 32-JP-7 also provides color-coded external binding posts. These permit quick attachment or interchanging of various J-B-T thermocouples placed in one or more of the heat zones to be checked. An SA-116 5 1/2' thermocouple with attachment clip and convection shield is supplied and is left attached when the tester is carried. For maximum usefulness in checking irons, washers, toasters, clothes dryers, etc., use appropriate accessory thermocouples. Tester price includes stitched Ever-ready case, 5" wide x 5 1/2" high x 2 3/4" deep, of sturdy, scuff resistant black vinyl. **\$29.50**

ness in checking irons, washers, toasters, clothes dryers, etc., use appropriate accessory thermocouples. Tester price includes stitched Ever-ready case, 5" wide x 5 1/2" high x 2 3/4" deep, of sturdy, scuff resistant black vinyl. **\$29.50**

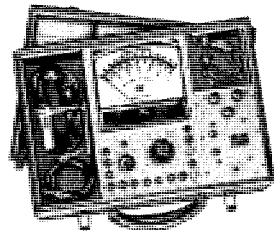
**IRON TESTER**

**MODEL 32-JIT.** Self-contained bench-type tester; checks all makes of irons; measures thermostat temperatures; shows open or short circuits. Automatically compensated for room temperature. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. Black metal base; overall size 10" x 12" x 5 1/2", scale 0-650°F, 15 amp fuse, 6' cord, 110 volt, 50-60 cycles. **\$34.50**



**MULTI-PURPOSE TESTER**

**MODEL 61-JRT.** A 9-in-1 tester to speed accurate temperature adjustment and electrical analysis of ranges, refrigerators, test apparatus, etc. Rapidly reads four cold zones —100°F, +80°F, up to 14' distant; two heat zones 0-600°F, up to 5 1/2' distant; one voltage range 0-300 AC; and, with transformer, two current ranges, 0-30 and 0-60 amps, AC. Sturdy, polished walnut case, 15 1/2" x 10-3/16" x 4 3/4". Two color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flashlight cell, replaceable in the field. Temperature accuracy ±2% of full scale; rectified AC readings ±5%. Accessories as listed may be added for testing appliances. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, electrical leads, and AS-TR-2 built-in transformer. **\$124.00**



flashlight cell, replaceable in the field. Temperature accuracy ±2% of full scale; rectified AC readings ±5%. Accessories as listed may be added for testing appliances. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, electrical leads, and AS-TR-2 built-in transformer. **\$124.00**

**MODEL 61-JRT (LESS TRANSFORMER).** Same unit, same scales except no reading in amperes; AS-TR-2 transformer omitted. **\$110.00**

PRICES NET. F.O.B. New Haven, Conn., Individually Boxed, Domestic Packed, Effective July 1, 1964

**J-B-T INSTRUMENTS, INC.**  
NEW HAVEN, CONN. 06508

Electrical Instruments, Testers,  
Switches and Other Components

For other J-B-T Products,  
see Sec. 5100

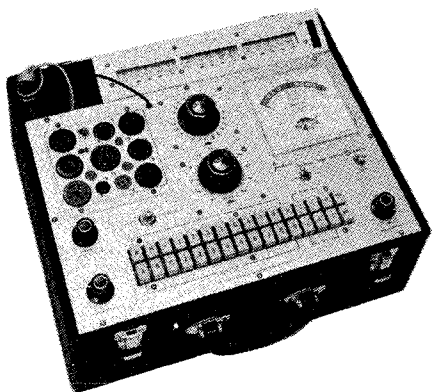




## "SERVICE ENGINEERED" TEST EQUIPMENT

**Jackson** ELECTRICAL INSTRUMENT COMPANY

Dayton, Ohio



### Model 648S DYNAMIC TUBE TESTER

- Exclusive Color Keyed panel makes this unit faster to set up - easier to use - and applicable for "Do-It-Yourself" operations.
- Exclusive color coded chart - fastest moving types printed in red for faster selection of tube settings.
- Best for servicemen - faster more accurate and versatile for new tubes.
- First with push-button sequence switching - makes set-up time less than tube warm - up time.
- Semi-conductor rectifier for instant warm-up.
- 23 separate heater voltages from .75 to line voltage.
- Variable sensitivity shorts test up to 2 megohms.
- Automatic line voltage indicator.
- Angled view zig-zag roll chart.

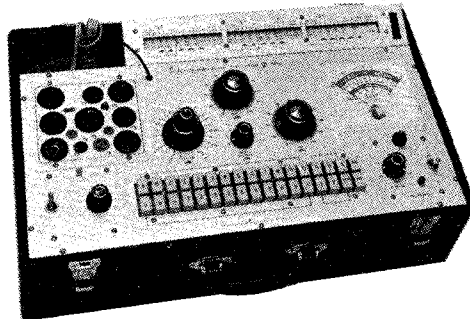
NET \$169.95 SHIPPING WT. 21½ LBS.

.....FASTER, MORE ACCURATE, CHECKS MORE TUBES, MORE PROFITABLE.....

### Model 658A DYNAMIC OUTPUT TUBE TESTER

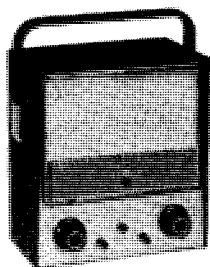
- Dynamic output merit test
- AC rectification test for diodes
- Accurate tests for all 12 volt hybrid tubes
- 231 heater voltages in 2% steps from .7 of a volt to line voltage
- Grid leakage checks up to 80 megohms
- Heater current test for series - string tubes
- Heater continuity check without warm-up
- Dynamic test for "eye" tubes - shows actual operation
- Shows striking point and operating range for regulator and reference tubes

NET \$234.95 SHIPPING WT. 25 LBS.



**DYNAMIC OUTPUT PRINCIPLE** - A sensational new improvement on the time tested Jackson Dynamic Principle. In the Dynamic Output test, variable DC bias voltage, plus variable AC signal voltage are applied to the control grid. Variable DC voltage is applied to plate and screen. The metering circuit, a low impedance bridge type then reads only the AC component of the plate current. Obviously this is the most valid kind of test for amplifiers, it considers the entire output curve of the tube, not just a small portion.

...FREE! NEW TUBE INFORMATION AVAILABLE MONTHLY THROUGH YOUR DISTRIBUTOR..

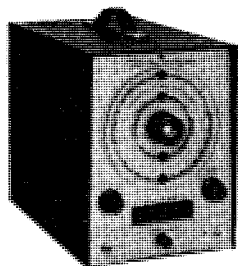


NET \$79.95

### New Model 805 VTVM

The New Model 805 VTVM features the New Weston Taut Band Suspension Meter. Taut Band Suspension eliminates pivots and jewels, eliminating pivot friction and error due to pivot fall-over. No movement springs - spring-set hysteresis eliminated. It may be operated in any position without degrading performance and is 4 times more sensitive than conventional movements.

- Static free face ● DC accuracy 3% of full scale ● DC ranges 0 - 1 - 5 - 10 - 50 - 100 - 500 - 1000 ● Zero center reference for any DC range ● AC accuracy 5% of full scale ● Frequency 20 cycles to 4.5 mc ● RMS ranges 0 - 1 - 5 - 10 - 50 - 100 - 500 - 1000 ● P-P ranges 0 - 2.8 - 14 - 28 - 140 - 280 - 1400 - 2800 ● Ohmeter resistance ranges 0 - 1K - 10K - 100K - 1meg - 10meg - 100meg - 1000meg ● Accuracy 3% of total scale length ● Direct probe - no probe switching necessary ● 6" meter face ● DC input impedance 10 megohms ● AC input impedance .2 megohms shunted by 150 mmf



### New Model 605D AUDIO SINE/SQUARE WAVE OSCILLATOR

A new, precision audio generator with a choice of either sine wave or true square wave output. Square wave is NOT a clipped sine wave but is generated by a special Schmitt Trigger circuit. Features push-button range selection and variable output.

Range: 20 cycles to 200,000 cycles, sine or square wave in 4 ranges.

Accuracy: 3% or 1 cycle, whichever is greater.

Output: High Impedance, continuously variable. Sine wave 0 to 5.0 RMS Volts, Square Wave 20 mv to 7.0 P-P.

Sine Waveform: Less than 1% distortion.

Output Level Characteristic: ±1 db over full range.

Hum Level: Down more than 50 db at all output levels.

Square Wave Rise Time: Less than 0.2 μsec.

Square Wave Tilt: 5% at 60 cycles. Less than 1% above 200 cycles.

NET \$144.95 SHIPPING WT. 17½ LBS.



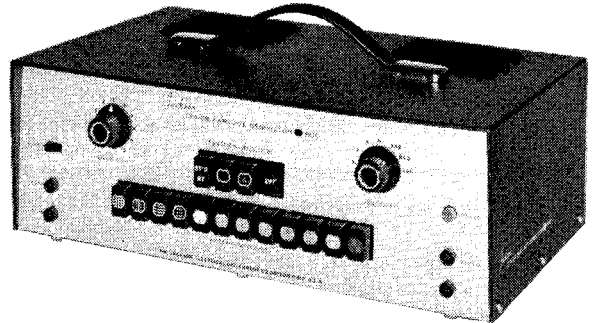
## "SERVICE ENGINEERED" TEST EQUIPMENT

**Jackson** ELECTRICAL INSTRUMENT COMPANY

Dayton, Ohio

### Model 800 COLOR BAR-DOT GENERATOR

- Exclusive push-button panel makes separate pattern or color selection easier—faster—clearly marked for error-free selection
  - Stand by • ON-OFF • Crosshatch • Horizontal Lines
  - Pattern • Sound • Vertical Lines • Dot Pattern
  - Eight different color combinations
- Convergence simplified—No deconvergence necessary speed up color alignment.
- Easy to set up—Only four simple wire connections necessary
- Front panel jacks allows easy access of video-sync or color demodulator signals.
- Video level control and video output jack provides either positive or negative video information.
- New modern functional styling—Vynal coated aluminum for long durable service.
- Color gun killer switch allows you to quickly and easily select any combinations of 3 color guns. No extra connections necessary.



NET \$239.95 SHIPPING WT. 16 LBS.

COLOR SERVICE, CONVERGENCE FASTER, MORE PROFITABLE WITH PUSH BUTTON EASE

### Model CRO-3 5-INCH WIDE-BAND HIGH SENSITIVITY OSCILLOSCOPE

Laboratory quality scope with highly stable circuitry and every feature for accurate TV work, color and black & white. Widely used, too, in many laboratory and industrial applications.

- Wide Band Amplifier, flat within 1 db 20 cycles to 4.5 mc.
- Two-range vertical deflection sensitivity from 0.018 rms volts-per-inch
- Highly stable amplifier circuits. No balancing required.
- Positive or negative internal horizontal sync.
- Linear sawtooth oscillator, 20 cycles through 50 kc.
- Input calibrating voltage, 10 volts peak-to-peak
- Vertical polarity reversal

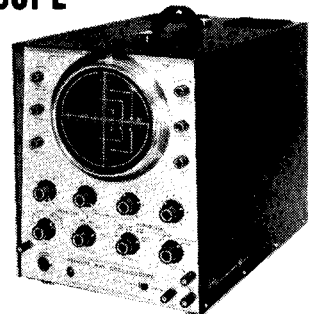
- Variable sweep expansion
- Return trace blanking
- Z-axis modulation—internal, external or 60-cycle
- Direct connection to deflection plates when required

#### ACCESSORY PROBES

LC2-1P Low Capacity Probe. Cathode follower type. 2:1 attenuation. Not more than 8  $\mu$ uf effective impedance

LC10-P High Voltage Low Capacity Probe. 10:1 attenuation ratio. For circuits where up to 1,000-volts is present

DEM-P Demodulation Probe. For RF or IF signal tracing



NET \$234.95 SHIPPING WT. 23 LBS.

.....FIRST FOR COLOR SERVICE - FIRST IN SALES.....



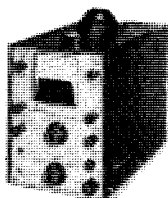
### Model 655D WIDE RANGE AUDIO OSCILLATOR

- Push-button range selection
- Exceptionally stable RC tuned sine wave generator
- Frequency range 20 cycles to 200,000 cycles in 4 steps
- Up to 500 milliwatt output
- Output impedances of 10, 250, 500, or 5,000 ohms plus resistive output
- Frequency characteristic within 1 db 30 to 15,000 cycles on transformer output

- Accuracy, 3% or 1 cycle whichever is greater
- Sinusoidal Waveform
- Hum Level down 60 db at maximum output
- Logarithmic Calibration Curve
- Continuously variable output
- Factory-calibrated for guaranteed accuracy

NET \$179.95 SHIPPING WT. 21½ LBS.

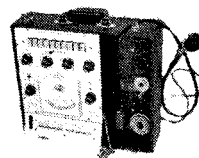
### Model 607D VARIABLE REGULATED POWER SUPPLY



NET \$79.95  
SHIPPING WT. 11½ LBS.

- DC Regulated Output: Low Position 150 to 225 VDC, 0 to 100 ma. max. High Position 225 to 300 VDC, 0 to 100 ma. Regulation: Within 1.5%, no load to 100 ma. at 300 volts.
  - Ripple Content: Bias Supply: Less than 0.003% at 20 ma. Regulated Supply: Less than 0.005% at 100 ma.
  - Metered Output: For Bias and Regulated B+ Supply.
- A complete laboratory power supply which provides heater, bias and regulated variable B+ voltages in one compact package.
- AC Heater Output: 6.3 VAC at 3 A max.
  - DC Bias Output: 30 to 275 VDC, no load. 15 to 150 VDC at 20 ma.

### MODEL 825 picture tube tester/booster



NET \$119.95  
Shipping Weight 16 Lbs.

- 12 separate heater voltages — including color.
- Continuity and leakage checks.
- Line indicator control — for accurate voltages.
- FM tuning eye tube — indicates leakage or continuity — no separate lights to interpolate.
- Push button operation.
- Picture tube cut-off test.
- Life test.
- Removes shorts — welds cathodes.
- Boosts picture tube back to life.
- Grid guard — limits peak current for protection of picture tube against burn-out.
- Separate variable voltages — applied to G1-G2 of picture tube.
- Calibrating control for proper test indications.
- Angled view roll chart — tube set-up information always at your finger tips.
- Checks each color gun separately.
- Plug-in tube socket cable — allows for easy repair or replacement when necessary.



Technician Approved Test Equipment...TOPS in PERFORMANCE...QUALITY...and VALUE



## Model 501 COMPONENT SUBSTITUTOR

Places a complete range of components at your fingertips for fast substitution

**CARBON RESISTORS:** 24 values from 10 ohms to 5,600,000 ohms • **POWER RESISTORS:** 20 values from 2.5 ohms to 15,000 ohms • **ELECTROLYTICS:** 17 values from 4 mfd. to 230 mfd. • **RECTIFIERS**—(Universal): **Crystal diodes**—all general purpose low voltage types **Selenium power rectifiers**—up to 500 ma., 800 PIV **Silicon power rectifiers**—up to 750 ma., 800 PIV

**SPECIAL FEATURES:** Substitutes up to 4 different components at the same time • A surge protector switch prevents arcing, sparking or heating of electrolytics • Electrolytics are discharged automatically • Size 10"x6¼"x4½".

Dealer Net ... **\$3750**

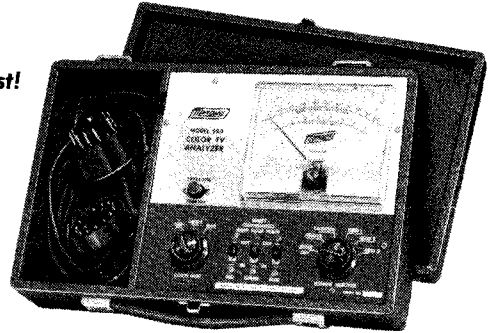
## Model 900 COLOR TV ANALYZER

A new engineering concept enables you to test color TV at a very low cost!

...Checks color, video and picture tube circuits... Checks the overall performance of color TV sets... Provides for fast purity, convergence and gray scale tracking adjustments

Tests each control grid voltage • Tests each color gun screen voltage and screen current • Tests focus voltage of color picture tubes • Tests each cathode voltage • Tests each control grid emission current • Tests each color gun cathode emission • Enables you to cut-out color guns in any combination and adjust for proper purity, convergence and gray scale tracking • Makes all tests dynamically while color set is in operation...no need to get under TV chassis • Size: 13½"x8"x3½".

Dealer Net ... **\$4495**



## Model 1400 IN-CIRCUIT CAPACITOR TESTER

Eliminates the time consuming method of unsoldering and resoldering when checking capacitors...

### EXCLUSIVE!

Special low test voltage of 2.9 volts AC provided to prevent damage to the new low voltage electrolytics use in transistorized equipment

### SIMPLE TO OPERATE

Test leads connect across the capacitor in-circuit... set range switch and it automatically indicates shorted or open capacitors

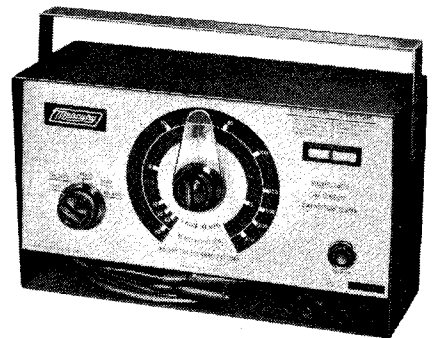
### SPECIFICATIONS

**SHORTS TEST**—Detects shorted capacitors of all type in-circuit with shunt resistance as low as 6 ohms.

**OPEN TEST**—Detects open capacitors for all values in-circuit down to 7 mmfd., with shunt resistance as low as 150 ohms.

**VALUE TEST**—Indicates value of electrolytics in-circuit from 2 mfd. to 450 mfd. • Size: 10"x6¼"x4½".

Dealer Net ... **\$2950**



## Model 301 COMBINATION TESTER

3 essential instruments combined into one compact unit!

1. TUBE TESTER 2. CRT TESTER-REACTIVATOR 3. 20,000 OHMS PER VOLT VOM

**TUBE TESTER SECTION**... will test all tube types, old and new including Nu-vistors, Compactrons, Novars, 10-pin types, etc. • Tests dynamic cathode emission, interelement leakage and gas content • 5 year FREE tube data • **CRT TESTER-REACTIVATOR SECTION**... will test, repair and reactivate all black and white and all color picture tubes • **VOM SECTION**... sensitivity is 20,000 ohms per volt/DC and 5000 ohms per volt/AC • 6 DC Voltage Ranges • 6 AC Voltage Ranges • 3 Ohms Ranges • 5 DC Current Ranges • 2 Capacity Ranges • Size: 17½"x13⅞"x4½".

Dealer Net ... **\$10975**



## Model 801 CRT TESTER-REACTIVATOR

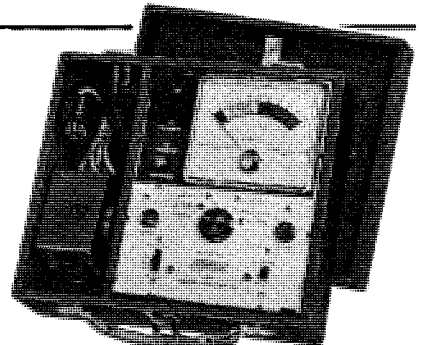
TESTS, REPAIRS and REACTIVATES all BLACK and WHITE and all COLOR PICTURE TUBES...

**TESTS**—cathode emission, inter-element leakage, screen grid continuity, opens and life expectancy • **REPAIRS**—inter-element shorts and open elements • **REACTIVATES**—low emission tubes to restore brightness.

**SPECIAL FEATURES:** "Watch-it-reactivate" feature... see and control the reactivation process on the meter as it takes place • Filament burn-out-protection • No adapters required • Provides 2v, 8v and 12v filament voltages • Visual life expectancy test—estimates remaining life of picture tube

• Size: 11"x9½"x4½".

Dealer Net ... **\$4995**



MERCURY ELECTRONICS CORP., Mineola, New York



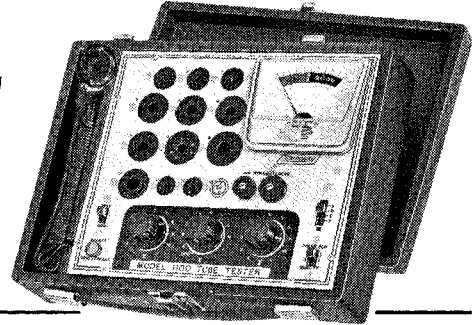
# TUBE TESTERS FOR EVERY PURPOSE

## Model 1100 TUBE TESTER

*A dependable, professional performing tube tester at an economy price!*

Tests all tube types, old and new including Novars, Nuvisitors, Compactrons, 10-pin type, battery type, foreign, hi-fi, Thyratrons, voltage regulators and most industrial types • Tests picture tubes • Tests for dynamic cathode emission, shorts, leakage and gas • Checks each section of multi-section tubes separately • Will detect any short in a tube even where internal pins are tied or heater is tapped • Long lasting phosphor bronze tube sockets • Two-tone etched aluminum panel • 5 year FREE tube data • Size: 10 $\frac{3}{4}$ "x8 $\frac{3}{4}$ "x3 $\frac{1}{4}$ ".

Dealer Net . . . **\$3950**

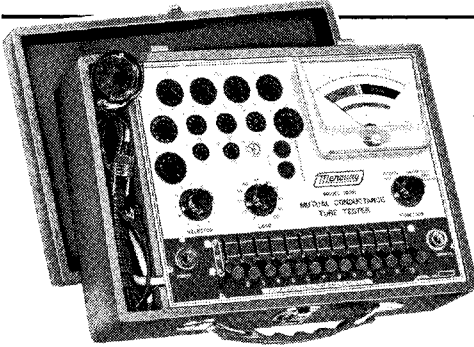


## Model 1000 MUTUAL CONDUCTANCE TUBE TESTER

*A true dynamic mutual conductance tube tester at an amazingly low price!*

Tests all tube types, old and new including Novars, Nuvisitors, Compactrons, 10-pin type, battery type, foreign, hi-fi, Thyratrons, voltage regulators and most industrial types • Tests picture tubes • Tests for true dynamic mutual conductance (Gm) • Tests for shorts, leakage and gas • Lever switches provide complete versatility in accommodating all tube types and basing arrangements—today and in the future • Checks each section of multi-section tubes separately • Automatic line voltage regulation • Long lasting phosphor bronze tube sockets • Two-tone etched aluminum panel • 5 year FREE tube data • Size: 14"x9 $\frac{1}{2}$ "x4 $\frac{3}{4}$ ".

Dealer Net . . . **\$7995**

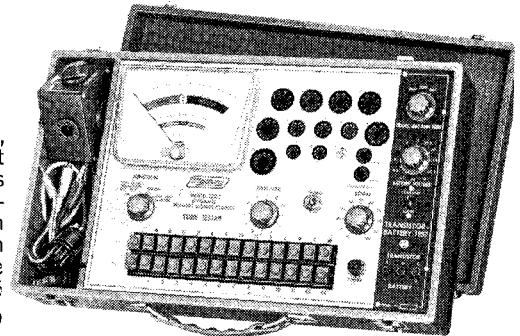


## Model 1200 MUTUAL CONDUCTANCE TUBE TESTER

*Deluxe dynamic mutual conductance tube tester with FAST PUSH BUTTON SETTINGS . . .*

Tests all tube types, old and new including Novars, Nuvisitors, Compactrons, 10-pin type, battery type, foreign, hi-fi, Thyratrons, voltage regulators and most industrial types • Tests all black and white and all color picture tubes • Tests transistors and diodes • Tests batteries under load • Tests for true dynamic mutual conductance (Gm) • Tests for shorts, leakage and gas • Checks each section of multi-section tubes separately • Push buttons provide complete versatility in accommodating all tube types and basing arrangements—today and in the future • Automatic line voltage regulation • Two-tone etched aluminum panel • 5 year FREE tube data • Size: 18 $\frac{1}{4}$ "x10 $\frac{3}{4}$ "x4 $\frac{3}{4}$ ".

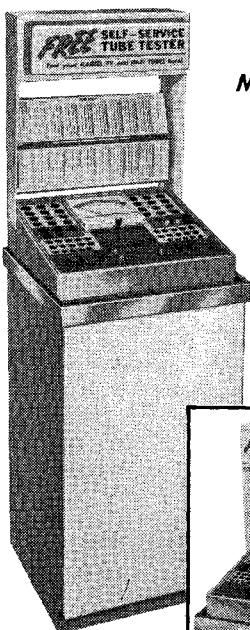
Dealer Net . . . **\$11995**



## MERCURY SELF-SERVICE TUBE TESTERS

*Modern eye-stopping testers . . . big income producers in any location*

Here is everything you want in self-service tube testers at down-to-earth prices. **VERSATILITY**—Tests emission, shorts and gas of over 1200 tube types including the very latest NUVISITORS, NOVARS, COMPACTRONS, 10-PIN type, etc . . . Also tests fuses, pilot lights, 6 and 12 volt auto radio vibrators, all type batteries under load. **SMART APPEARANCE**—Modern cabinet design finished in rich green and white color combination with gold trim. **QUALITY FEATURES**—Completely self-service . . . only two easy-to-use controls are required to test any tube . . . Easy-to-read quick flip tube charts list over 1200 tube types . . . Engineered to accommodate new tube types as they are introduced . . . Etched aluminum panel always retains its handsome appearance . . . 63 phosphor-bronze beryllium tube sockets assure positive contacts and long life.



**Model 202-LB**  
(Lo-Boy Floor Model)

Dealer Net **\$18450**

**Model 202-C**  
(Counter Model)

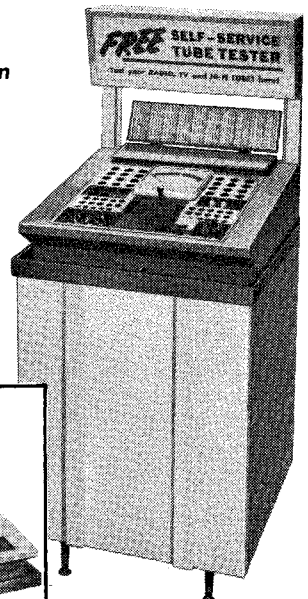
Dealer Net **\$12995**

**Model 203-LB**  
(Deluxe Lo-Boy  
Floor Model)

Dealer Net **\$25450**

**Model 203-C**  
(Deluxe Counter  
Model)

Dealer Net **\$16695**

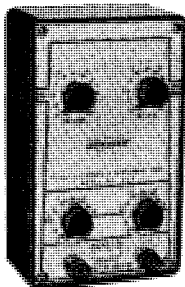


# MERCURY ELECTRONICS CORP., Mineola, New York



# PRECISE TEST EQUIPMENT KITS AND FACTORY WIRED

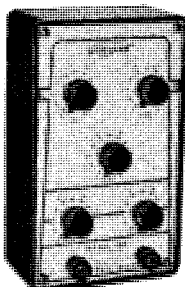
PRECISE ELECTRONICS & DEVELOPMENT CORP. Subsidiary of Designatronics, Inc., Mineola, N. Y.



### MODEL 478 CAPACITY DECADE BOX

Reaches over 1 MFD at 1% accuracy. FOUR DECADES. All capacitors within  $\pm 1\%$  and of silver mica and low-drift, molded construction. Aluminum panel; rugged construction; complete with simplified construction manual. Size  $3\frac{3}{4} \times 6\frac{1}{4} \times 2$ ".

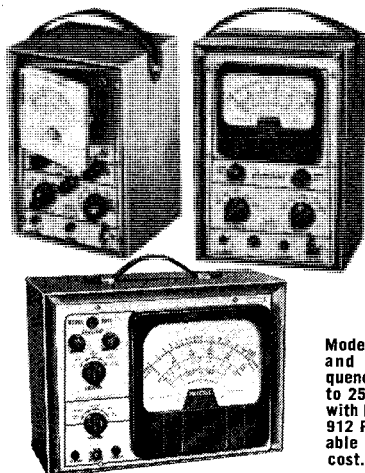
Model 478K, Kit—NET.....\$51.95  
Model 478W, Wired—NET.....\$59.95



### MODEL 468 RESISTANCE DECADE BOX

5 Separate Switches, 11 Positions on Each; Better than  $\pm 1\%$  for Extreme Accuracy; Readings from 10 OHM to 1,111,110 OHM in 5 Decades. Aluminum Panel; Rugged Construction; Complete with Simplified Construction Manual. High impact Bakelite case  $3\frac{3}{4} \times 6\frac{1}{4} \times 2$ ".

Model 468K (kit).....NET \$51.95  
Model 468W (wired).....NET \$59.95



Models 904, 907 and 9071. Frequency range up to 250 megacycles with Precise Model 912 Probe—available at additional cost.

**MODEL 904 VACUUM TUBE VOLTMETER** You can tilt the meter left, or right, or up, or down—or even straight ahead—so that it follows the user correcting for parallax all the way. Another Precise first is the "Lead Magician Switch"—which allows your leads to remain in any circuit while you short the VTVM for proper 'Zero Adjust' and open the leads for 'Infinite ohms Adjust'—all this without changing leads. Since three leads are provided, you can leave the 904 connected to both an AC and a DC voltage and take both measurements by rotating the FUNCTION switch and the Lead Magician Switch.

The 904 is fully B+ and B—regulated to maintain readings. Rugged oversize  $4\frac{1}{2}$ " meter. Wt. 10 lbs.  $10 \times 7 \times 5$ ".

RANGES: AC-VOLTS: RMS 1.5, 5, 15, 50, 150, 500, 1,500 Peak to Peak 4, 14, 140, 400, 1,400, 4,000.

—DC VOLTS: 1.5, 5, 15, 50, 150, 500, 1500 +DC VOLTS: 1.5, 5, 15, 50, 150, 500, 1500

OHMS: Rx1: Rx10: Rx100: Rx1000: Rx10,000: Rx100,000: Rx1,000,000.

MODEL 904K. Kit. NET.....\$39.95; MODEL 904W. Factory Wired. NET.....\$49.95

**MODEL 909 VACUUM TUBE VOLTMETER** 1% precision Resistors; Coax DC connector; FM zero alignment scale; burn-out proof circuit; 25 megohm input impedance on DC complete with test leads and internal battery. Rugged oversize  $4\frac{1}{2}$ " meter. Wt. 10 lbs.  $10 \times 7 \times 5$ ".

RANGES: +DC: 0-5-25-250-500-1000 Volts; —DC: 0-5-25-250-500-1000 Volts; AC: 0-5-25-250-500-1000 Volts; Ohms: Rx1-Rx10-Rx1000-Rx10,000-Rx1,000,000 ohms: from .2 Ohms to 1 Billion Ohms; DB: From —20 to +55 DB.

MODEL 909K. Kit. NET.....\$29.95; MODEL 909W. Factory wired. NET.....\$39.95

### MODEL 9071 . . . VACUUM TUBE VOLTMETER WITH VR.

VR TUBE assures true, accurate and stable readings . . . no drift . . . no shift . . . large, rugged  $7\frac{1}{2}$ " meter; 1% precision resistors; separate 5V AC scale; 25 MEG input on DC; true zero center; aluminum panel; sturdy steel case; step-by-step 3 color construction book. Wt.: 11 lbs. Size:  $11 \times 8 \times 5$ ".

(same ranges as Model 909) MODEL 9071K. Kit. NET.....\$39.95  
MODEL 9071W. Factory wired. NET.....\$59.95

### MODEL 630-K. RF-AF AND TV MARKER GENERATOR

Reaches 110 mc on fundamentals; 330 mc on harmonics. pre-assembled calibrated heads; audio, 20-20,000 cps; cathode follower output; variable percent modulation; crystal marker; RF, AF stand-by; Wien Bridge AF oscillator; Colpitts RF oscillator; coax fittings. Also has constant output impedance; Vernier tuning; separate RF section; individually tuned coils; full shielding; filtered line. Size  $8 \times 11 \times 15$ ". Has aluminum panel, leather carrying handle. For 110-120 v., 50-60 cycle AC.

MODEL 630K. Kit. NET.....\$44.95

MODEL 630-KA preassembled RF head. NET.....\$52.50

MODEL 630-W wired. NET.....\$69.95

### MODEL 635 UNIVERSAL AF SINE, SQUARE AND PULSE GENERATOR

For accurate testing of audio and video circuits. 1% Ceramic precision resistors; Wien Bridge; variable Z and cathode-follower output; minimum overshoot and roundoff through 100,000 cycles; sine waves through 200 KC. Size:  $8 \times 11 \times 15$ ".

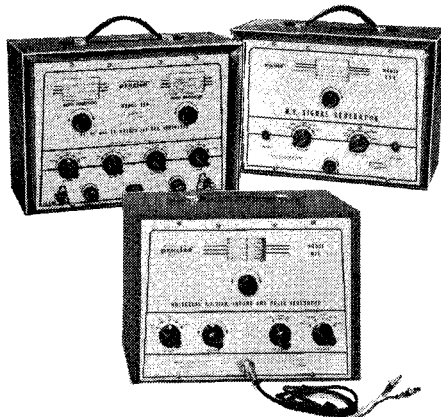
MODEL 635K Kit .....\$39.95 MODEL 635W. wired.....\$54.95

### MODEL 610 RF SIGNAL GENERATOR

Same RF head as Model 630; 110 MC on fundamentals; 330 MC on harmonics; 60 and 400 cycle AF; Cathode-follower output; Ext. Mod.; Individually tuned coils. Size:  $8 \times 11 \times 15$ ".

MODEL 610KA (pre-assembled head) NET.....\$34.95; MODEL 610K (Kit) NET.....\$27.50

MODEL 610W (wired) NET.....\$39.95



**MODEL 760 VOLTAGE REGULATED POWER SUPPLY** Compact, Versatile. A must for every serviceman, ham and lab man. 140 Volts to over 450 Volts D.C. with 1% accuracy. Measures current up to 100 ma. depending on voltages. Unregulated variable D.C. from 450 to 1000 Volts, positive or negative. Unregulated A.C. 6.3 and 375 Volts.

MODEL 760 K. (kit) NET .....\$49.95

MODEL 760 W. (wired) NET .....\$69.95

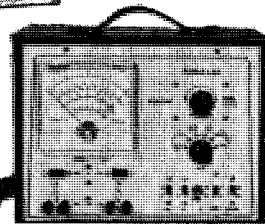
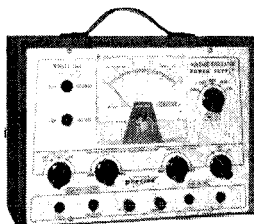
**MODEL 713 POWER LAB** Most versatile bench-type power supply on the market. Combines variable low and high-voltage AC and DC supplies, wattmeter, voltmeter, AC and DC ammeter, and isolation transformer in one compact unit. DC power available is 0-30 v. at 10 amps and 140 to 200 v. at .75 amps. (1 amp intermittent) AC power: 0-24 v. at 20 amps; 90-140 v. at 10 amps continuous (1000 watts) and 20 amps intermittent (2000 watts) without isolation: 90-140 v. at 3 amps (300 watts) with isolation. Meter reads AC, DC current to 20 amps, AC, DC voltage to 180 v.; power to 2 KW.  $12 \times 8\frac{1}{2} \times 5\frac{1}{4}$ ". For 110-120 v., 60 cycle AC.

MODEL 713-K. (kit) (300 watts of isolation) NET .....\$69.95

MODEL 713-W (wired) NET.....\$89.95

MODEL 711-K. (kit) (100 watts of isolation) NET .....\$59.95

MODEL 711-W. (wired) NET.....\$74.95



Prices Slightly Higher West of Miss.

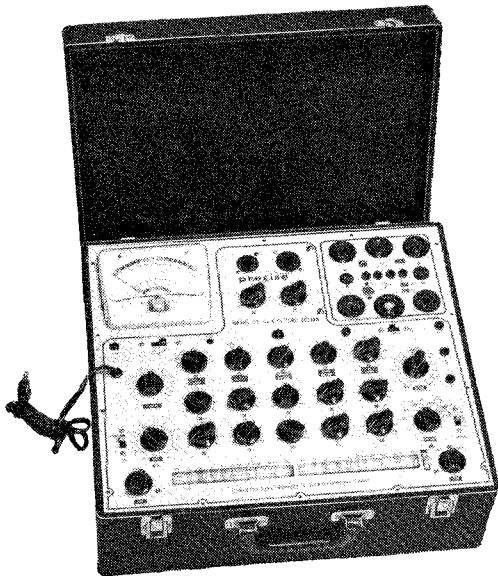


# PRECISE TEST EQUIPMENT

## KITS AND FACTORY WIRED

PRECISE ELECTRONICS & DEVELOPMENT CORP. Subsidiary of Designatronics, Inc., Mineola, N. Y.

**NEVER OBSOLETE!**  
USE ROLL CHART OR TUBE MANUAL



### Model 111M Gm, Em TUBE AND TRANSISTOR TESTER

A highly accurate and dependable instrument for checking ALL modern tube types as well as transistors and diodes. Check Cathode-Ray Tubes with an adaptor.

#### LOOK AT THESE OUTSTANDING FEATURES:

- Any test voltage can be applied to any pin of the many test sockets.
- New tubes are tested by using base connections indicated in tube manual or data sheet.
- Voltages from zero to higher-than-normal test tube over entire characteristic range.
- Rotary switches connect elements individually. No resetting necessary to make short tests.
- Meter indicates filament current, Bias, Em and Gm.
- Short test checks elements against each other. Test may be made at any time—with tube hot or cold—without resetting element switches. Shorts are indicated directly—no conversion charts.
- Sockets for testing large 4, 5, 6 and 7 prong tube base as well as medium 7, in-line 7, miniature 7 and 9, subminiature 8 pin, octal, loctal, 10-pin Sylvania, Nuvistor, Novar and Compactor.

- Roll chart indicates best test—Gm for RF and IF tubes, Em for power tubes—for Evaluation.
- Semiconductor diodes, transistors and tetrode transistors are checked for leakage and gain.
- Pilot lamps are tested in special socket.
- Gas current test for multiple-element tubes.
- Life test available as guide to tube quality.
- Noise test indicates intermittents.
- Self-bias testing simulates actual operation.
- Characteristic curve can be viewed on oscilloscope with jacks provided.
- Case is rugged, attractive, Leatherette-covered wood. Size: 14 x 16 x 6 inches. Weight 24 pounds—with aluminum panelled instrument.

Model 111MK — Kit NET.....\$115.95

Model 111MW — Wired NET..... 199.95

#### ADAPTOR FOR CATHODE RAY TUBES

Model 111M PTA-K — Kit NET.....\$ 4.15

Model 111M PTA-W — Wired NET..... 6.25

### MODEL 315 5" OSCILLOSCOPE

A high quality Oscilloscope for Industrial, general radio and television applications. It has frequency compensated vertical and horizontal attenuators along with identical vertical and horizontal amplifiers.

The Model 315 is rugged and in kit form simple to build. Both the horizontal and vertical sections are cathode-follower input and AC coupled.

The instrument is housed in a steel cabinet, attractive brushed aluminum front panel with black lettering.

#### SPECIFICATIONS

**VERTICAL:** The vertical amplifier,  $\pm 3$ db through 250 KC. Single ended, AC coupled cathode-follower, frequency compensated step attenuator input, sensitivity approximately 250 MV/inch, Outputs are push-pull.

**HORIZONTAL:** The same general specifications as the vertical amplifiers.

**SYNCHRONIZATION:** External and internal.

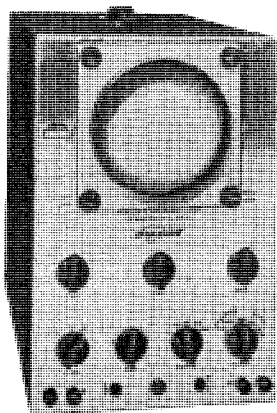
**SWEEP RATE:** From approximately 10 cycles through 100 KC. Hard vacuum tube type sweep circuit.

**CALIBRATION:** 6.3 volts sine wave.

**FOCUSING:** Focus, Intensity and Astigmatic controls. The astigmatism control is available from the rear of the cabinet. A standby switch is used to turn-off the CRT filament when not in use.

Model 315K — Kit NET.....\$ 79.95

Model 315W — Wired NET..... 113.95



### MODEL 3151 COLOR OSCILLOSCOPE

Here's an Oscilloscope that goes up to and over 5mc and relatively flat through 5mc. It not only takes color in its stride, but is ready for the new advances still on the drafting boards.

There are no short cuts in this laboratory type service scope — Push-pull Vertical and Horizontal — High sensitivity — Frequency Compensated Step Attenuators for both Vertical and Horizontal — Focus, Intensity and Astigmatism controls — Calibration output voltage.

**VERTICAL:** The vertical amplifiers are  $\pm 3$  db through 5 MC and useable through 7.5 MC. The sensitivity is 10 MV/cm. Frequency compensated step attenuator in the input. The output, push-pull amplifiers.

**HORIZONTAL:** The horizontal amplifiers are within  $\pm 3$ db through 250 KC. Push-pull output. Frequency compensated step attenuator input and cathode-follower assures linear horizontal trace. Sweep circuit provides sufficient expansion to see color bursts clearly. Horizontal sensitivity is approximately 40 MV/cm.

**SYNCHRONIZATION:** External and internal.

**SWEEP RATE:** From approximately 10 cycles through 100 KC. Hard vacuum tube type sweep circuit.

**CALIBRATION:** 6.3 volts sine wave.

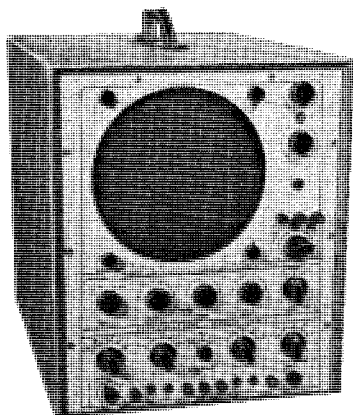
**FOCUSING:** Focus, Intensity and Astigmatism controls.

Brushed aluminum Panel. Heavy steel cabinet. 13 $\frac{1}{4}$ " x 8 $\frac{1}{4}$ " x 18 $\frac{1}{2}$ "

Model 3151K — Kit NET.....\$ 89.95

Model 3151W — Wired NET..... 137.95

### MODEL 300 C OSCILLOSCOPE



A high quality Oscilloscope for general laboratory, radio and television applications.

#### SPECIFICATIONS

**VERTICAL:** Vertical amplifiers  $\pm 2$ db DC through 5 mc. Sensitivity greater than 10 MV/inch, (3.94 MV/cm). Frequency compensated vertical step attenuator selects AC or DC inputs. Push-pull DC amplifiers from input through output.

\*Internal electronic input mixing through inputs 1 and 2.

**HORIZONTAL:** Frequency compensated step attenuator and horizontal amplifier, Push-pull horizontal output.

**BLANKING:** Internal (return trace blanked), external (return trace not blanked), 60 & 120 cycle blanking through blanking amplifier circuits.

**SWEEP RATE:** Driven or non-driven linear sweeps from one cycle through 80 KC in 5 ranges (1 to 10 cycles uses external C Circuit), Trigger potentiometer.

**MAGNIFIER:** Electronic magnifier and magnifier positioner allows any part of a signal to be magnified up to ten times, (up to 80" of magnification).

**SYNCHRONIZATION:** Sensitive circuitry provides jitter free high frequency synchronization.

**CALIBRATION:** Internal calibration wave-form, potentiometer controlled. Edge-illuminated graticule may be turned on or off.

**OUTPUTS ON FRONT PANEL:** Plus gate output; sawtooth output; 60 cycle phasing output; 60 cycle unphased output; Calibration output.

**FOCUSING:** Focus, Intensity and Astigmatism controls on front panel.

**DIRECT:** Deflection plates available from rear of cabinet.

**INTENSITY MODULATION:** Z modulation through modulation amplifier circuits.

**CATHODE RAY TUBE:** 7" tube normally supplied with medium persistency screen, green trace; (high persistency types available at additional cost).

**GENERAL:** Power supply adequate for additional circuitry; high quality low loss components; Brushed Aluminum panel; steel cabinet 11" x 14" x 17"; complete with instruction book.

**ACCESSORIES:** Model 912T (MM) Demodulator Probe and Model 960 Capacity Attenuator Probe available at extra cost.

\*Input attenuator switch #2. Additional switch and components available factory wired or in kit form, available at extra cost. Hole for installation of attenuator Switch #2 located above input binding posts on front panel.

Model 300 CK — Kit NET.....\$169.95

Model 300 CW — Wired NET..... 222.95

#### MODEL 308

The same basic specifications as the Model 300C with the following additional and two changes (4 & 5).

1. Voltage regulation in the horizontal circuits.
2. Hi-Low, normal synchronization switch.
3. High B+ supply employing a 6AU4 rectifier for the second anode voltage of CRT.
4. An 8" Cathode Ray tube (8CP1) is used instead of 7JP1)
5. Size 11" x 14" x 19".

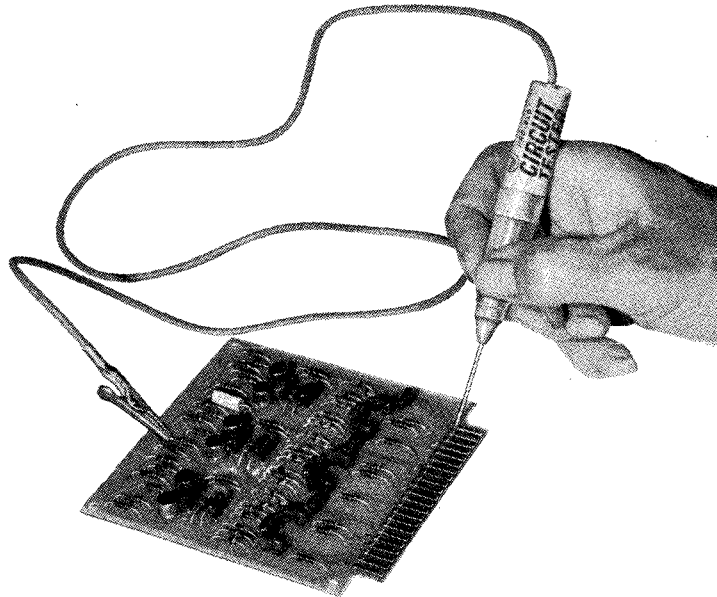
Model 308K — Kit NET.....\$179.95

Model 308W — Wired NET..... 249.50



# PARAGON® PRO-GLO® CIRCUIT TESTER

A simple,  
inexpensive  
instrument  
for quick  
checking of  
non-energized  
circuits



## For Checking

relay contact points  
wiring harnesses  
ground connections  
terminal strips  
printed circuits  
switches  
chassis wiring  
fuses  
motor windings

## and in the Home

extension cords  
floor lamps  
power tools  
fuses  
electrical appliances

Consists simply of plastic case containing a battery and lamp, a pointed probe and 3-foot lead wire with alligator clip. In use, clip is connected to ground or common circuit point and probe is touched to various other circuit points. When resistance is less than 1 ohm, lamp glows brightly in translucent case. On open or high resistance circuits, no glow appears, and if continuity is poor, lamp glows dimly.

Signal light at point of contact eliminates necessity for shifting eyes to read meter, increases

speed and accuracy in point-to-point testing; avoids distractions from buzzers of nearby workers. Inexpensive enough to be distributed to each person who checks circuits.

To assure long life and reliability, probe and battery contact spring are tin-plated beryllium copper, case is high-impact plastic, and wire is heavy-duty, highly flexible test lead. Uses standard size AA penlight battery and #112 lamp. Model CT-1.

Dealer Net Price **\$ .98**

## NEW PRO-GLO® DIODE TESTER

### CHECKS FOR

- POLARITY
- SHORTS
- OPENS

Similar and made of the same high quality materials as PRO-GLO Circuit Tester Model CT-1 described above, but larger case accommodates two AA penlight batteries and #222 lamp. In addition to testing diodes, extra voltage makes this a useful instrument for checking continuity in circuits with resistance up to 10 ohms. Model CT-2

Dealer Net Price **\$1.35**



### PARAGON ELECTRIC COMPANY, INC.

Subsidiary of American Machine & Foundry Company  
TWO RIVERS, WISCONSIN

EXPORT SALES OFFICE: AMF INTERNATIONAL  
Division of American Machine & Foundry Company  
261 Madison Avenue, New York, New York 10016  
Cable: "AMMAFOCO" New York

Stocked, sold and serviced in Canada through  
Phillips Electrical Company Limited  
26 Hollinger Road, Toronto 16, Ontario

OVER 85 AUTHORIZED PARAGON SERVICE CENTERS



# RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

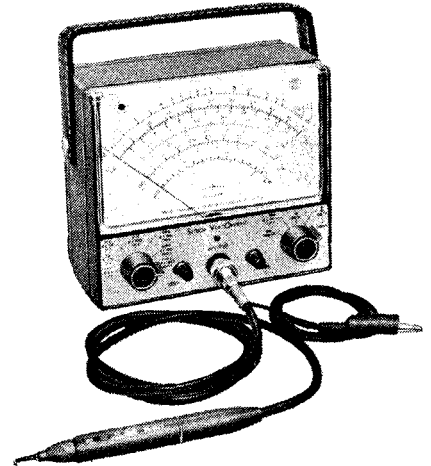
Application: provides direct reading of peak-to-peak voltages of complex waveforms found in video, sync and deflection circuits. Includes an improved circuit providing  $\pm 3\%$  accuracy full scale on both ac and dc measurements with less than 1% tracking error. Separate color-coded, peak-to-peak and rms-voltage scales in two distinctive colors simplify readings. Features die-cast aluminum case; high input resistance; electronic protection against burnout; rugged 200-microampere meter movement; precision multiplier resistors with accuracy of  $\pm 1\%$  and 0.5-volt full-scale dc range for checking transistor circuits.

- Large 6½" easy-to-read, full vision meter (26 sq. in.).
- Measures complex waveforms directly from 0.2 volt to 4200 volts peak-to-peak in 7 overlapping ranges.
- Measures rms values of sine waves from 0.1 volt to 1500 volts in 7 overlapping ranges.
- Measures from 0.02 volt to 1500 volts dc on two scales in 7 overlapping "3-to-1" ranges.
- INPUT RESISTANCE — 11 megohms on all dc ranges.
- Measures resistance from 0.2 ohm to 1000 megohms on single scale, with 7 overlapping ranges.
- FREQUENCY RESPONSE — 30 cps to 250 Mc with WG-301A Crystal-Diode Accessory Probe.
- Compact design: 7" wide, 3¾" deep, 6½" high.

Kit features pre-assembled DC/AC-OHMS Probe

## WV-98C Senior VoltOhmyst®

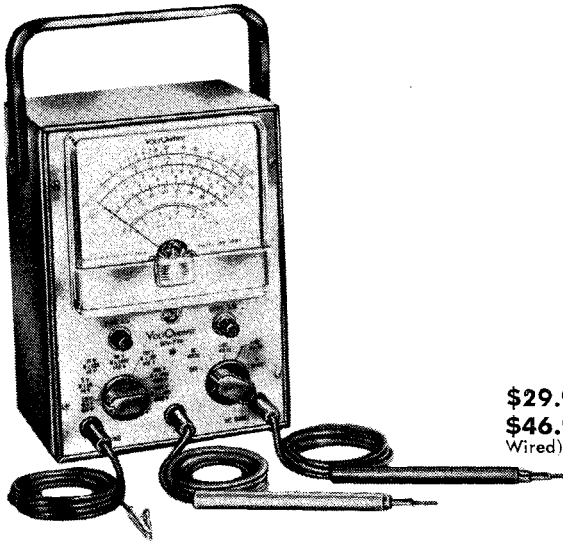
(Kit or Wired)



**\$57.95\*** WV-98C(k) Senior VoltOhmyst Kit.

**\$79.50\*** WV-98C Senior VoltOhmyst (Factory Wired).

## WV-77E VoltOhmyst® (Kit or Wired)



The WV-77E features flat frequency response  $\pm 5\%$  from 40 cps to 5 Mc on the 1.5, 5, and 15-volt rms ranges and the 4, 14, and 40-volt peak-to-peak ranges. The WV-77E measures dc from 0.02 volt to 1500 volts, rms ac from 0.1 volt to 1500 volts, peak-to-peak ac from 0.2 volt to 4000 volts, and resistance from 0.2 ohm to 1000 megohms—all in seven overlapping ranges! Full-scale accuracy is  $\pm 3\%$  on dc and  $\pm 5\%$  on ac. Meter is electronically protected against burnout. Separate scales are provided for low ac measurements. Input resistance is standard 11 megohms. Width 5½", Height 7¾", Depth 4¾", Weight 5 lbs.

- Fuse in ohms circuit prevents accidental burnout
- Circuit minimizes effect of residual gas in bridge tube
- Color-coded scales for easier, faster readings
- Ultra-slim probes and extra-flexible cables

**\$29.95\*** WV-77E(K) VoltOhmyst Kit  
**\$46.95\*** WV-77E VoltOhmyst (Factory-Wired)

(Prices for WV-77E(K) and WV-77E include dc probe and cable, ac/ohms probe and cable, ground lead and clip, and instruction booklet. Assembly instruction sheet is provided with the WV-77E(K) VoltOhmyst Kit.)

## WV-76A HIGH-SENSITIVITY AC VACUUM-TUBE VOLTMETER

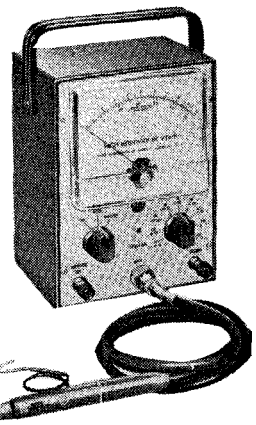
(Kit or Wired)

This RCA high-sensitivity AC Vacuum-Tube Voltmeter is designed for audio application in industry, laboratories and schools. It is also useful in broadcast, design and development, production, and servicing applications. Typical uses include frequency response test of pre-amplifiers, power amplifiers and tone-control circuits; feedback circuit design, signal tracing, audio-level and power-level measurements, gain measurements, amplifier balancing application and general audio voltage measurements.

- Nine overlapping AC voltage ranges — from 10 millivolts to 100 volts full scale. When the WG-300B input probe is set in the "Low-Cap" position, up to 500 volts or +56 db may be measured.
- Frequency response is flat from 10 cps to 500 Kc with "Low-Cap" probe, 10 cps to 1.5 Mc with "Direct" probe.
- May be used as preamplifier: 38 db maximum gain on 10-millivolt range
- High input impedance—permits measurements in circuits sensitive to loading
- Probe and cable shielded throughout its length—eliminates pick-up from stray fields
- Feedback loop from metering circuit provides additional stability and linearity
- Heavy filtering in power-supply section keeps hum to extremely low level

### EQUIPMENT SUPPLIED:

The RCA WG-300B shielded direct/low capacitance probe and cable is supplied with the WV-76A. A switch in the probe housing provides for switching from direct to low-capacitance input. In "DIRECT" position, probe measures up to 100 volts; in "LOW-CAP" position, probe can be used to measure up to 500 volts or +56 db.



**\$79.95\*** factory wired and calibrated.

**\$57.95\*** Kit

\*User Price (Optional)

# RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

## WV-38A V-O-M (KIT or WIRED)

### NEW FEATURES:

- Meter movement protected against burnout
- New 2-color front panel

Ohms-divider network fuse-protected. Easier-to-read scales on extra-large 5½ inch meter. Polarity reversal switch. Full-wave bridge rectifier. Less circuit loading. Standard dbm ranges.

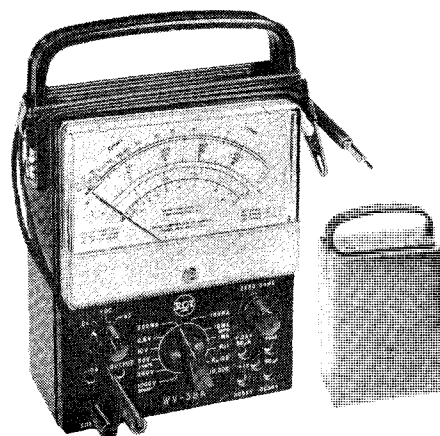
Extra 1-volt and 0.25-volt (250 mv) ranges.

Handle clips accommodate probes and test leads for extra carrying convenience.

The WV-38A VOM has an input resistance of 20,000 ohms-per-volt on dc and 5,000 ohms-per-volt on ac and an accuracy of  $\pm 3\%$  of full scale on dc,  $\pm 5\%$  of full scale on ac. Regular scales: 2.5, 10, 50, 250, 1000, 5000 volts, ac and dc; 50  $\mu$ amp, 1, 10, 100, 500 ma, 10 amps (dc); plus extra scales of 250 mv and 1-volt (dc)! Frequency response (ac), flat from 10 cps to 50 Kc with usable response at 500 Kc. Ohms—3 ranges—R x 1 (0-2,000 ohms), R x 100 (0-200,000 ohms), R x 10,000 (0-20,000,000 ohms). Dimensions: W 5½" x H 6¾" x D 3¾".

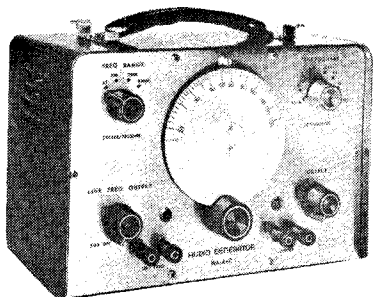
**\$29.95\*** WV-38A(K) VOM Kit

**\$43.95\*** WV-38A VOM (factory wired and calibrated)



WG-270A Accessory Carrying Case for WV-38A VOM **\$4.95\***

## WA-44C AUDIO SIGNAL GENERATOR SINE/SQUARE WAVE OUTPUT



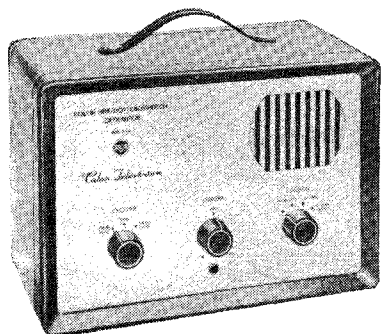
**\$98.50\*** Complete with 20 page instruction booklet.

The Compact WA-44C is ac operated from a 50-to-60 cycle, 105-125 volt source, and covers in four bands a range from 20 cps to 200,000 cps. Can be used for a wide variety of applications, including the measurement of frequency response characteristics of audio amplifiers, and the testing of loudspeakers and enclosures or finding the impedance of LC combinations. Width 10 $\frac{1}{16}$ ", Height 7", Depth 6 $\frac{1}{8}$ ".

The circuit of the sine-wave function consists of a "Bridged-T" oscillator with a cathode follower output stage. The square-wave output is developed by using the sine-wave oscillator output to drive a clipping and shaping circuit. Produces a stable signal with an amplitude variation of not more than  $\pm 1.5$  db. Total harmonic distortion is limited to 0.25% over the range of 30 cps to 15 kc.

- Switch selection for sinewave or squarewave output
- Simple one-scale dial
- Separate 60 cps output for intermodulation distortion measurements
- Wide frequency range, 20 cps to 200,000 cps.
- Less than  $\frac{1}{4}$  of 1% distortion over the audio-frequency range

## WR-64A COLOR-BAR/DOT/CROSSHATCH GENERATOR



**\$189.50\***

Complete with RF output cable, cable-carrying bracket attachment and instruction booklet.

\*User Price (Optional)

For checking over-all operation of Color-TV receivers. A "must" for adjusting and trouble-shooting color phasing and matrixing circuits. Generates signals for producing ten bars of different colors simultaneously. Also provides extremely stable fine-line crosshatch and dot patterns free from "jitter" and "crawl". Fixed number of bars and dots facilitate adjustment of over-scan (height and width) and linearity in both color and black-and-white sets.

The Color-Bar and Dot/Crosshatch generating functions require no external sync connections. All three patterns are RF outputs, factory set to channel 3 (can be set to channel 4). A sound carrier is provided to permit accurate adjustment of the fine-tuning control on the receiver.

The WR-64A features a chroma control helpful in checking color sync lock and color AFC alignment. The color sub-carrier frequency, the horizontal sync-pulse frequency, and the "bar" frequency are all crystal controlled. A shielded output cable is provided with the instrument. Width 13 $\frac{1}{2}$ ", Height 10", Depth 7 $\frac{1}{2}$ ". Weight only 13 pounds.

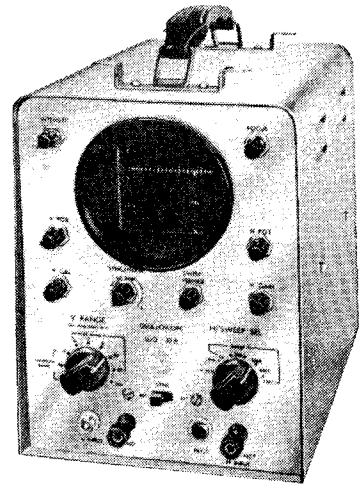
# RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

## WO-33A OSCILLOSCOPE (Kit or Wired)

The WO-33A 3-inch Oscilloscope is the "all purpose" scope! All the bandwidth you need for servicing color-TV, video broadcast monitors and cameras; and for square-wave testing of audio and ultrasonic equipment! All the gain you need for low-level audio work — servicing pickups, microphones, preamps; plus signal-tracing radios, amplifiers—trouble shooting communications signaling systems, ham radio and hi-fi equipment, industrial electronics machinery and other applications. With vertical amplifier in narrow-band position, sensitivity is 3 rms millivolts/inch; bandwidth within -3 db, 20 cps to 150 Kc. Wide band position: sensitivity 100 rms millivolts/inch; bandwidth within -3 db, 5.5 cps to 5.5 Mc. Sweep circuit: Sawtooth range from 15 cps to 75 Kc; sync — external,  $\pm$  internal; line sweep — 160° adjustable phase; sync range—to 4.5 Mc.

- for accuracy—voltage-calibrated frequency-compensated, 3-to-1 step attenuator
- for measurements—scaled graph screen and calibrating voltage source allows direct reading of peak-to-peak voltages
- for stability—"plus-minus" internal sync... holds sync to 4.5 Mc
- for completeness—shielded input cable with low-capacitance probe included
- for portability—compact size—W 6½" x H 8¾" x D 10¼"—weight only 14 lbs. Plus built-in brackets to hold power cord and cables

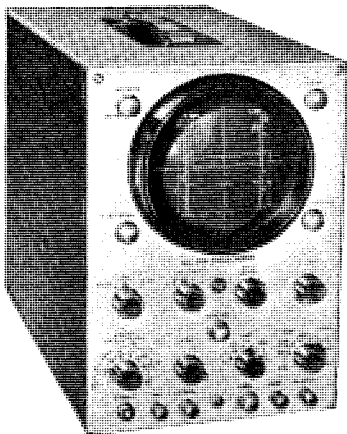


**\$79.95\***—WO-33A(K) Oscilloscope Kit

**\$129.95\***—WO-33A Oscilloscope

(Prices for the WO-33A(K) and WO-33A include Direct Low-Cap probe and cable, and instruction booklet.

## WO-91A 5" OSCILLOSCOPE



**\$249.50\*** complete with WG-300B two-way Direct/Low-Capacitance Probe and Cable, alligator clip and insulator, ground cable; green graph screen, instruction booklet.

Application: for production and servicing both black-and-white and color TV receivers. Used to measure color burst signals and for trouble-shooting wide-band color circuits, signal tracing and aligning wide-band video amplifiers, and chrominance circuits. A multi-scale graph screen makes peak-to-peak voltage measurements as simple as with a VTVM. Response: Wide-band within  $\pm 1$  db from 10 cps to 4.5 Mc; High sensitivity within -1 db from 10 cps to 0.5 Mc; within -6 db to 1.5 Mc. Sensitivity: 0.05 volt peak-to-peak per inch (0.018 volts rms) in high-sensitivity position; 0.15 volt peak-to-peak per inch (0.053 rms volts in wide-band position).

- Voltage - calibrated, frequency - compensated, 3-to-1 step attenuator for "V" amplifier.
- Shielded vertical-input connector and shielded cable minimize hum, stray field pickup.
- Input Resistance—1 megohm shunted by 40 $\mu$ f. Low capacitance position—10 megohm shunted by 11  $\mu$ f.
- Z-Axis input 12 volts for blanking.
- Preset "V" and "H" sweep positions
- "Plus" or "Minus" internal-sync selector.
- Positive-lock internal sync.
- Sweep Frequency: 10 cps to 100 Kc.
- Maximum ac input: 600 volts peak-to-peak.
- Weight: 30 lbs. Size 13½" x 16½" x 9".

## WR-50A RF SIGNAL GENERATOR

The RCA WR-50A RF Signal Generator is a highly versatile, readily portable instrument designed for use in the shop, laboratory or classroom for general television and radio servicing and other applications requiring a continuous wave or modulated RF sine-wave signal in the range from 85 Kc to 40 Mc. The unit is particularly well suited for such applications as alignment and signal tracing of AM, FM, High-Fidelity and Citizens' Band Receivers, and signal tracing and trouble-shooting in television receivers.

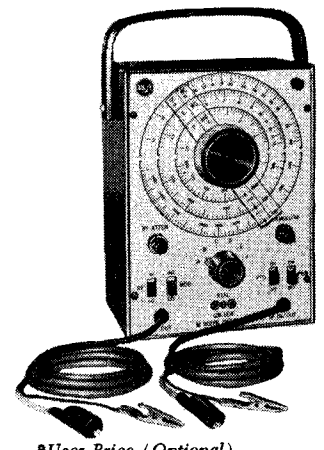
- Easy-to-read dial scale and pointer for variable oscillator
- Convenient switch and control locations on front panel
- Output cables permanently attached
- Built-in DC blocking capacitors
- Calibrating oscillator circuit with front panel socket for crystal
- 400-cycle oscillator for internal modulation of AF output
- Shielded cables for RF and AF output
- Height 7¾", Width 5¾", Depth 4¾", Weight 5 lbs.

**\$39.95\*** —WR-50A(K)

RF-Signal Gen. Kit

**\$59.95\*** —WR-50A

RF Signal Generator



\*User Price (Optional)

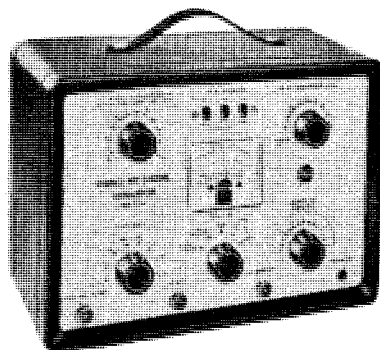
# RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

## WR-51A STEREO FM SIGNAL SIMULATOR

The RCA WR-51A Stereo FM Signal Simulator is a compact, light-weight instrument designed to generate the signals necessary for complete service and maintenance of stereo multiplex FM receivers and adaptors.

- Choice of 4 FM signals—Left Stereo, Right Stereo, Special Phase Test, Monaural FM
- Choice of 8 sine-wave frequencies (400 cps, 1 Kc, 5 Kc, 19 Kc, 28 Kc, 38 Kc, 48 Kc, 67 Kc) available separately or for modulating FM signals
- 100 Mc carrier tuneable  $\pm 0.8$  Mc to permit selection of a quiet point in the FM band
- 19 Kc subcarrier, crystal-controlled within  $\pm 2$  cps
- 100 Mc sweep signal adjustable from 0 - 750 Kc at 60 cps rate
- Choice of 3 composite stereo output signals—Left Stereo, Right Stereo, Special Phase Test
- Choice of 3 sine-wave frequencies for composite stereo signals
- Crystal-controlled markers for receiver IF and RF alignment
- Zero-Center meter for checking the balance of stereo amplifier output
- Height 10", Width 13½", Depth 8", Weight 14 lbs.

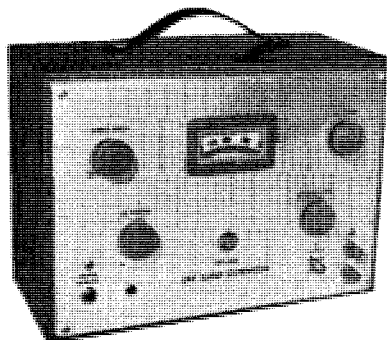


**\$249.50\***

## WR-86A UHF SWEEP GENERATOR

Invaluable for UHF TV application from 300 to 950 Mc, this UHF sweep generator combines a wide sweep range with a high output voltage of excellent amplitude linearity. A blanking circuit is included to provide a reference base line on an oscilloscope. Horizontal sweep frequency for the scope can be obtained from front-panel terminals. The WR-86A has 50-ohm output and will work into a 50-ohm unbalanced load or with the WG-296 padded balun provided into a 300-ohm balanced load. Use accessory WG-298A UHF Demodulator for visual observation and measurement of standing-wave ratio of termination on 300-ohm line. Width 13½", Height 9", Depth 7½".

- Output frequency continuously variable on center frequencies from 300 to 950 Mc.
- Sweep width is 10% of indicated dial frequency up to 750 Mc; 85 Mc width from 750 to 950 Mc.
- Adjustable piston-type attenuator gives 60 db range of attenuation.
- At least 0.6-volt output across either 50 ohms or 300 ohms.
- Amplitude variation at maximum sweep width no greater than 0-1 db/Mc.
- Lightweight and portable, attractively styled.



### EQUIPMENT SUPPLIED:

RF Output Cable — WG-227  
50 to 300-ohm Padded Balun  
Instruction Book

**\$137.50\***

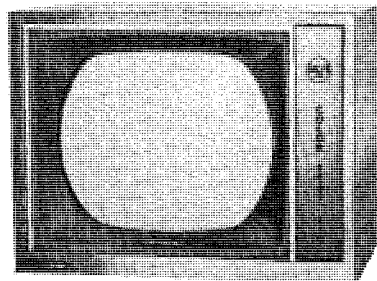
## 11A1015 COLOR TEST JIG

A "must" for any serviceman now servicing or planning to service Color TV receivers, the RCA Color Test Jig makes a one man service call out of costly two man cabinet pulling jobs. Eliminates necessity of removing picture tube from cabinet and of reconverging tube when chassis is returned. Convergence control panel provides dynamic as well as static convergence.

- Versatile—Can be used with CTC-4, 5, 7, 9, 10, 11 and 12 chassis.
- Safe—Supplied with factory-installed safety glass and kine mask.

### SERVICE ACCESSORIES AVAILABLE FOR USE WITH RCA COLOR TEST JIG:

13A-100 High Voltage Extension Cable	223-X1 High Voltage Extension Cable
13A-101 High Voltage Extension Cable	224-X1 Convergence Magnet Extension Cable
205-W1 Degaussing Coil	225-X1 High Voltage Extension Cable
220-X1 Kinescope Socket Extension Cable	226-X1 Grid Shunt Switch & Cable
221-X1 Deflection Yoke Extension Cable	228-X1 Deflection Yoke Extension Cable
222-X1 Convergence Magnet Extension Cable	237-X1 Color Equalizer Magnet Kit



**\$135.00\***

Includes kit with all necessary components, hardware and instructions for installation of an RCA Tri-Color Kinescope (Kine not included)

\*User Price (Optional)

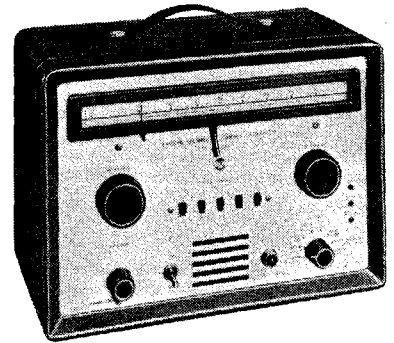
# RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

Application: supplies a fundamental frequency rf carrier of crystal accuracy for use in aligning and trouble-shooting TV (color and black-and-white) and FM receivers, and other electronic equipment operating in the range of 19 to 260 Mc. Built-in crystal calibrator, heterodyne detector, amplifier and speaker provides calibrating beats at 1 Mc or 10 Mc intervals throughout entire tuning range which is covered by 8 bands. A built-in 4.5 Mc crystal provides necessary accuracy for alignment of intercarrier-if amplifiers and discriminators.

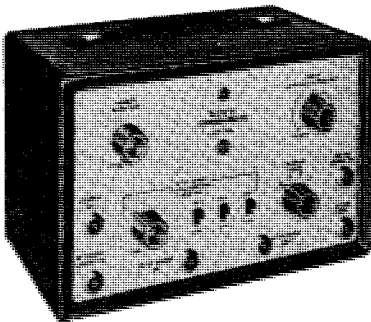
- At least 0.1 volt output, into 95 ohms terminated.
- Provides signals for adjusting vertical or horizontal linearity.
- Precision matched impedance/resistance pad attenuator, 0-60 db in 5 db steps.
- Special modulation input available for re-transmission.
- Provision for use as Heterodyne Frequency Meter.
- Provides dual markers for band-width checks and rf alignment
- Triple markers for sound-if alignment and band-width checks.
- Adjustable dial pointer for accurate registration with crystal-calibration check points.

## WR-99A CRYSTAL-CALIBRATED MARKER GENERATOR



**\$256.50\*** complete with rf output cable, instruction booklet.

## WR-70A RF/IF/VF MARKER ADDER



**\$74.50\*** complete with four coaxial cables and instruction booklet.

Application: for rf, if and video sweep alignment of both color and black-and-white TV receivers. Provides sharp, easy-to-read markers for alignment. A choice of four different marker shapes is available, permitting use of marker type best suited to the response curve. Designed for use with conventional marker and sweep generators, such as the RCA WR-39 and WR-89 series marker generators and the WR-59 and WR-69 series TV sweep generators. With the WR-70A, the marker signal is added to the sweep-response curve after the sweep signal is taken out of the receiver under test.

- Eliminates or reduces distortion of sweep curve by the marker.
- Permits trap alignment without marker "suckout."
- Hi-Q markers — high in amplitude, narrow in width.
- Four marker choices — positive peak, negative peak, positive and negative peaks (wide band), positive and negative peaks (narrow band).
- Voltage stabilized for rock-steady trace display.

### SPECIFICATIONS

IF/VF sweep input — 50 Kc to 50 Mc. RF input — 50 Mc to 250 Mc.

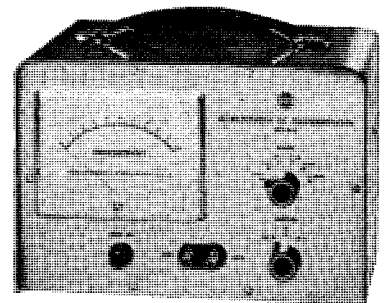
**MINIMUM INPUT VOLTAGES** — IF/VF — 0.1 volts rms. RF Sweep sample input — 0.005 volts rms. Marker input — 0.1 volts rms. Maximum demodulator signal input — 8 volts peak-to-peak.

**MAXIMUM SIGNAL OUTPUT** — Marker signal — 2.5 volts rms. Demodulator signal — 10 volts peak-to-peak. Input and output impedances all 100 ohms except demodulator signal input of 0.5 megohm. Weight: 8 lbs. Size: 7½" x 10½" x 6¼".

## WV-84C ULTRA-SENSITIVE DC MICROAMMETER

Application: a battery-operated vacuum tube microammeter designed for measuring minute direct currents, for making current and voltage measurements in electrolysis and corrosion investigations, and for checking currents in light meters, ultra-violet and infrared detectors, and spectrophotometric devices. Self-contained batteries permit use almost anywhere. Low-drain tubes extend battery life and protect the delicate meter against burnout due to accidental overloads. When used as a voltmeter, it is especially suited to measurements in circuits where loading is a critical factor. Can also be used as an ohmmeter to measure extremely high resistances, such as leakage and insulation resistance.

- Six direct-current ranges for measuring currents from 0.0002 to 1000 microamperes.
- Can be used as ohmmeter to measure resistance in the order of billions of ohms.
- Voltage drop for full-scale deflection only 0.5 volts.
- Input resistance of 100 megohms for measurement of voltages from 0.1 to 1 volt; 1000 megohms input resistance for voltages from 1 to 10 volts, 1005 megohms for voltages from 1 to 100 volts.



**\$110.00\*** includes 50- and 950-megohm multiplier resistors, instruction booklet. (less batteries)

- Over-all microammeter accuracy on .01 range  $\pm 5\%$  or better; accuracy on all other ranges  $\pm 4\%$  or better
- Size 7½" x 10½" x 6¼". Weight: 10 lbs. including batteries.

\*User Price (Optional)

# RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

## WT-115A COLOR PICTURE TUBE TESTER



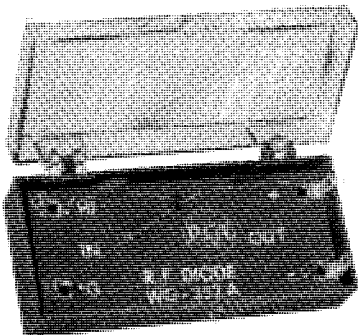
The RCA WT-115A Color Picture Tube Tester is designed specifically for the testing of color picture tubes, including types 21AXP22, 21AXP22A, 21CYP22, 21CYP22A, 21FBP22, 21FKP22, and 21FJP22. The RCA WT-115A offers a quick, reliable means of testing each gun of the color picture tube for emission quality (including warm-up performance), interelectrode leakage, and shorted elements. Readily portable, the WT-115A provides distributors and dealers with an accurate instrument for the testing of color picture tubes in the customer's home or in the store.

- Designed specifically for testing TV color picture tubes
- Tests each gun for emission quality, interelectrode leakage, and shorts
- Large, 3-color, sensitive meter with two scales:
  - Red/green "quality" scale, with reference marks from 0 to 10
  - Separate yellow scale to indicate interelectrode leakage
- Sensitive meter and cut-off adjustment control for evaluating the true emission of each gun
- Neon shorts indicator
- AC line-voltage adjustment for accurate measurements
- Test procedure includes 2-minute and 4-minute tests for determining warm-up performance of tube
- Tests color picture tube in-set or out-of-set
- Built-in cable and socket assembly

**\$89.50\*** Complete with sturdy laminated vinyl case with convenient cable storage compartment.

\*User Price (Optional)

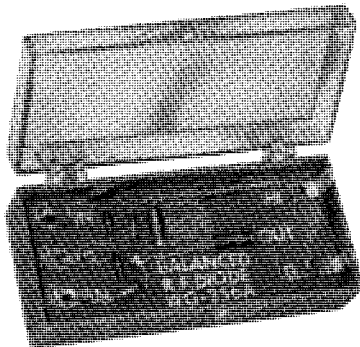
**WG-352A**  
**RF DIODE**



The RCA WG-352A Rf Diode is designed for use with the RCA WV-38A or WV-38A(K) Volt-Ohm-Milliammeter in rf applications from approximately 100 kc to 100 Mc. When the WG-352A is connected in a high frequency circuit, it will provide rectified output which can be read directly from the meter scales of the WV-38A.

**\$2.95\***

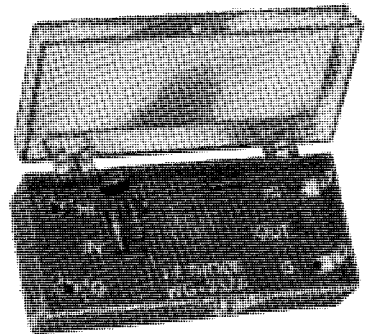
**WG-356A**  
**BALANCED RF DIODE**



The RCA WG-356A Balanced RF Diode is designed for use with an oscilloscope, such as the RCA WO-33A or WO-91A, in measuring the voltage output of sweep-frequency generators having balanced, 300-ohm output circuits, and for checking the bandpass and gain characteristics of VHF TV rf preamplifiers and antenna distribution amplifiers. The diode is useful through the video/if/rf frequency range up to approximately 250 Mc.

**\$3.95\***

**WG-357A**  
**IF DIODE**



The RCA WG-357A IF Diode is an unbalanced detector-demodulator designed primarily for use with an oscilloscope, such as the RCA WO-33A or WO-91A, in displaying the sweep output from an if/video sweep generator having an unbalanced output circuit. The WG-357A, which is usable up to approximately 100 Mc, can also be used to observe the rf/if response of individual amplifier stages. It has a maximum input signal rating of 20 rms volts, and a maximum dc voltage rating of 250 volts.

**\$3.95\***

\*User Price (Optional)

# RCA TEST EQUIPMENT

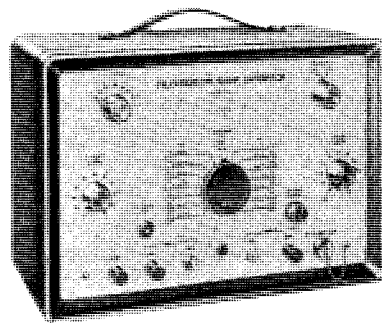
FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

## WR-69A

### TELEVISION/FM SWEEP GENERATOR

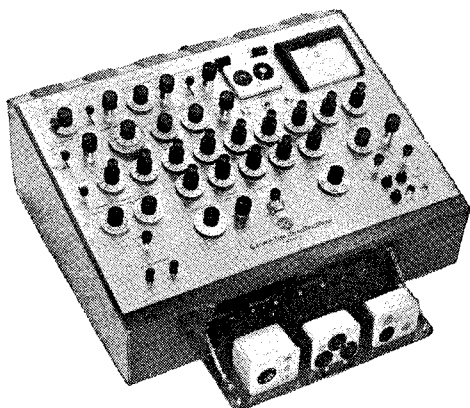
Tops for visual alignment of both TV and FM receivers, the WR-69A has preset switch positions for all VHF TV channels, the FM broadcast band, and TV video, chrominance, and IF frequencies. VHF output is on fundamental frequencies only; no beat notes or harmonics are used. Exceptionally good linearity is provided by a precision vibrator capacitor. Continuously adjustable sweep width and flat output make for accurate sweep response portrayals. The WR-69A is especially suited to alignment of color receivers. Special sample-voltage terminal on panel permits use with marker-adder units in alignment. Dual-piston attenuator provides smooth even attenuation over 60 db range. Width 13", Height 10", Depth 7".

- IF/Video output frequency continuously tunable from 50 Kc to 50 Mc.
- Sweep-frequency bandwidth continuously adjustable from 50 Kc to 20 Mc on if/video and fm - 12 Mc max. on TV channels.
- Return trace blanking.
- Two adjustable bias voltages available on front panel.



**\$295.00\***

(complete with RF Output cable, IF/Video Output cable and instruction booklet.)



**\$989.00\*** Electron-Tube MicroMhoMeter

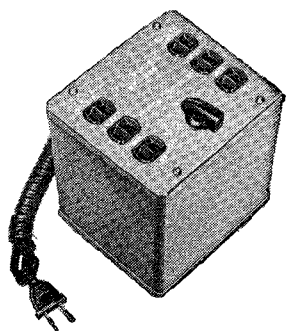
(complete with 4 multiple-socket plug-in units, instruction booklet.)

- measures transconductance to an accuracy of better than  $\pm 3\%$
- accurate measurement of "hybrid" auto receiver tube types under actual operating conditions
- built-in shorts test for any combination of tube elements

## WT-100A Electron-Tube MicroMhoMeter

A precision laboratory measuring instrument which tests tubes under typical operating conditions as specified in the tube manufacturers' technical data manuals. It is particularly useful in production line testing, design and development work, pre-selecting for critical applications, quality control programs, and preventive maintenance. MEASUREMENTS PERFORMED: ac heater current from 0.02 ampere to 5 amperes • dc filament current up to 250 ma • voltage drop across rectifier tubes and semiconductor diodes • transconductance from 10 micromhos to 100,000 micromhos. Within the range of its facilities it will test: vacuum tubes—diodes, triodes, tetrodes, pentodes, heptodes, spetodes, octodes, and multi-unit types; gas tubes—thyatron, voltage regulators, cold-cathode and hot cathode rectifiers; in these bases and envelopes—bases with 4, 5, and 6 pins, lock-in, miniature, sub-miniature, pencil and lighthouse; and semi-conductor diodes—small dry-disc rectifiers, germanium and silicon diode types. Size: W 23½" x H 8" x D 18½". Weight: 50 lbs.

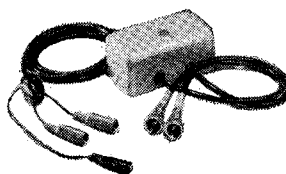
- measures transconductance up to 100,000 micromhos in six ranges
- measures both control-grid-to-plate and suppressor-grid-to-plate transconductance
- built-in calibrating circuit—no null meters or extra devices required
- meter completely burnout-proof
- regulated power supplies for dc plate and screen test voltages



## WP-25A TV ISOTAP

Speeds up servicing, prevents damage to test equipment, minimizes shock hazard, cuts down costly returns. The WP-25A may be used as a high-medium-low voltage isolation transformer or as an auto-transformer for testing radio and TV receivers at various settings of line voltage. Supplies outputs of 130, 115, and 105 volts at maximum load and is tapped to match line voltages from 105 to 130 volts in six steps ..... **\$22.00\***

## WG-304B RF MODULATOR



An accessory used to check the over-all frequency response of TV receivers from antenna to picture tube grid. The unit permits modulation of an rf marker signal from a marker generator (such as WR-89A or WR-99A) by a signal from a video sweep generator (such as WR-59C or WR-69A).

\*User Price (Optional)

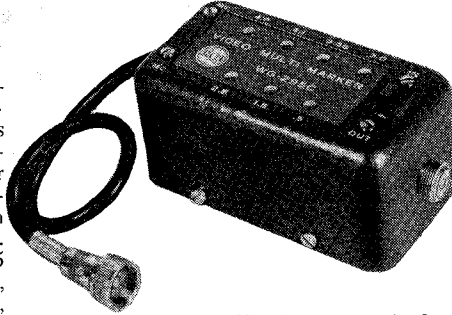
**\$16.50\***



# RCA TEST EQUIPMENT ACCESSORIES

## WG-295C VIDEO MULTIMARKER

Provides seven simultaneous absorption-type markers at accurately preset frequencies for marking video response curves in color receivers. Markers are at 0.5 Mc (For (O, R-Y, B-Y, G-Y filters), 1.5 Mc (for J filter), 2.5 Mc (for bandpass filter), 3.58 Mc (color subcarrier frequency), 3 and 4.1 Mc (video and bandpass amplifiers), and 4.5 Mc (sound-trap frequency). Each marker is identified simply by touching a corresponding contact on the WG-295C case. This reduces the amplitude of the particular marker. The WG-295C connects between the IF/VF output on the sweep generator and the video output cable. Equipped with shorting switch. With instruction booklet ..... **\$32.50\***



## WG-289, WG-297 HIGH-VOLTAGE PROBES

The WG-289 extends the dc-voltage range of the WV-77A, WV-77B, WV-77C, WV-87A, WV-87B, WV-97A, WV-98A and WV-98B VoltOhmysts to 50,000 volts. The WG-297 extends the range of the WV-77E VoltOhmyst® and WV-38A volt-ohms-milliammeter to 50,000 volts dc.

The WG-289 is provided with a microphone-type connector, and the WG-297 is provided with banana-plugs for use with appropriate VoltOhmysts and other VTVM's, VOM's.

A choice of three multiplier resistors is available, enabling these probes to be used with many popular electronic and non-electronic volt-ohm-meters! WG-206-1090-megohm multiplier resistor for VTVM's having 11-megohm input (multiplying factor 100).

WG-210-900-megohm resistor multiplies 5000-volt dc range of 20,000-ohms-per-volt VOM's by a factor of 10.

WG-211-495-megohm resistor multiplies 250-volt dc range of 20,000-ohms-per-volt VOM's by a factor of 100.

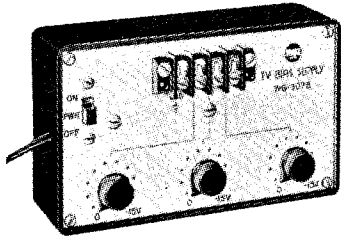
WG-289 or WG-297, Probe Only ..... **\$11.95\***

WG-206, WG-210, or WG-211, Multiplier Resistor Only (each) ... **\$ 3.50\***

\*User Price (Optional)

## WG-307B(K) TV BIAS SUPPLY KIT

Three separate dc output voltages each adjustable from 0 to -15 V. Panel isolated from all circuits. Measures 6½" x 3¾" x 2". Weight: 22 ounces.



**\$11.95\***

## WG-301A CRYSTAL-DIODE PROBE



"Slip-on" type for use with the WG-299A, B or C DC/AC Ohms Probe and Cable extending the frequency range of VoltOhmysts® to 250 Mc.

**\$7.75\***

## WG-299D DC/AC OHMS PROBE AND CABLE



The WG-299D is a single-unit probe for use with Volt Ohmysts® except WV-77E. Switch provides instant selection of dc or ac/ohms

operation. The WG-299D replaces the WG-299A, WG-299B and WG-299C. .... **\$7.95\***

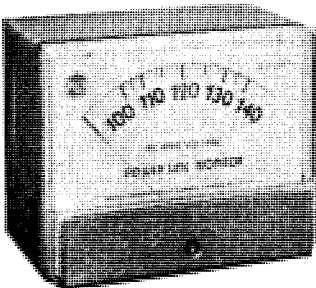
## WG-300B DIRECT/LOW CAPACITANCE PROBE AND CABLE



Designed for use with the RCA Scopes. Cable is 48" long, completely shielded from microphone connector to probe tip to minimize hum and stray field pick-up. Built-

in switch provides instant selection of direct or low-capacitance operation. Input characteristics: 10 megohms resistance, less than 12.5 μf capacitance in low capacitance position. Includes ground lead and clip. .... **\$9.95\***

## WV-120A POWER LINE MONITOR



For constant indication of power line voltage

Features: • expanded scale 100 to 140 volts indicates true rms values • accuracy ±2% at 120 volts, ±3% at 100 and 140 volts • readable from 10 feet or more • plugs in to power line outlet • wide frequency range, 25 to 400 cps. H 3½", W 5", D 3¼"; Weight: 1½ lbs. .... **\$14.95\***

\*User Price (Optional)

## WG-349A DIRECT/LOW-CAPACITANCE PROBE



A 48-inch, small diameter, extremely flexible shielded cable designed for use with the WO-33A Oscilloscope. The probe consists of three short leads with alligator clips for ground, direct, and low-capacitance connections. For convenient use, the WG-394A eliminates the need for switching. It connects to the oscilloscope by means of a miniature-type microphone connector. Input characteristics: 10 megohms, 12 uF capacitance, when used with the WO-33A and WO-33A(K).

**\$5.95\***

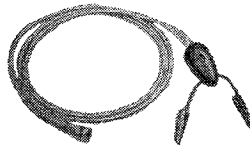
## WG-302A RF/IF/VF SIGNAL TRACING PROBE



"Slip-on" type high-frequency probe designed for use with the WG-300A and B probe and cable to permit visual signal tracing for rapid isolation

of trouble in radio receivers and in television if and video stages. .... **\$8.50\***

## WG-350A DEMODULATOR PROBE



For use with the WO-33A Super-Portable Oscilloscope for demodulation and signal tracing of radio/TV rf and if signals. .... **\$4.95\***

## WG-351A CRYSTAL DIODE PROBE



For extending the rf measuring capability of the WV-77E VoltOhmyst, and WV-77E(K) VoltOhmyst Kit, to over 100 Mc. .... **\$4.95\***

## WG-360A PHASE CHECKER

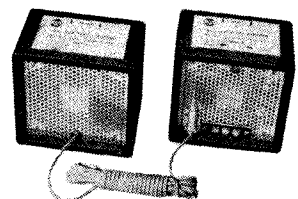
Used for a dynamic check of phasing in any audio system from input to the output of the speakers.

Features:

- sound powered; requires no external voltage source
- any VOM, VTVM, or oscilloscope may be used as the indicator

**\$14.95\***

\*User Price (Optional)



# SPRAGUE TEST EQUIPMENT

## TO-6 TEL-OHMIKE® CAPACITOR ANALYZER



The TO-6 TEL-OHMIKE capacitor analyzer is a must for checking all capacitors. It is a moderately priced instrument with laboratory quality and accuracy—the highest accuracy of any instrument of its type available to the service trade!

- **CAPACITANCE BRIDGE** measures up to 2000  $\mu$ F. Five overlapping ranges include exclusive 1 pF to 100 pF range. Special shielded transformer for bridge voltage. Extremely low AC voltage; 1.35 volts for electrolytic capacitors, 2.85 for all others, permits safe testing of all low voltage capacitors.
- **INSULATION RESISTANCE** of papers, ceramics and micas directly read on large meter. No guessing with neon lamps. Dual range—to 10KM $\Omega$ @ 30V for low voltage units . . . to 50KM $\Omega$ @ 150V for higher voltage components. Fast charge feature speeds testing of high capacitance units.

- **LEAKAGE CURRENT** of electrolytics measured directly on meter. Four ranges; .06, .6, 6, and 60mA. Three ranges of DC voltage (continuously variable within each range) permit testing capacitors at exact rated voltage up to 600 volts.
- **POWER FACTOR** of electrolytics, up to 50% measured by Wien Bridge.
- **METER PROTECTOR** of solid-state design allows severe accidental over-loads without burn-outs.
- **MAGIC-EYE TUBE** simplifies bridge balancing for capacitance and power factor measurements. High gain amplifier provides greatly improved sensitivity.
- **PUSH-BUTTONS** color-keyed for instant range selection.
- **MODERN CASE:** Silver-grey hammertone finish, panel is charcoal grey with highly contrasting white designations. Measures 8 $\frac{7}{8}$ " high, 14 $\frac{5}{8}$ " wide, 6 $\frac{1}{8}$ " deep. Weight only 13 pounds.

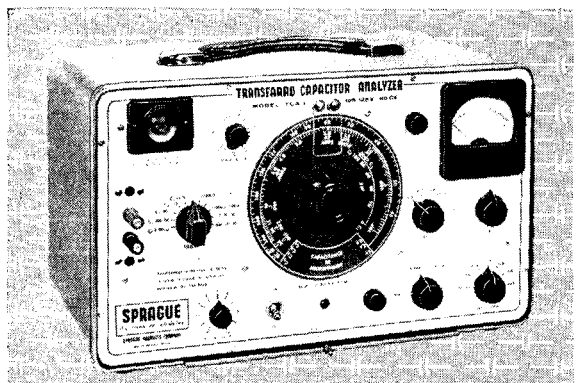
MODEL TO-6 ..... 115 VAC/50-60 cy ..... \$ 99.50  
 MODEL TO-6S ..... 115-230V/50 cy ..... 105.75

### TEL-OHMIKES FOR RACK MOUNTING

Electrically identical to TO-6 and TO-6S. These models have a standard 19" w. x 10 $\frac{1}{2}$ " h. panel so that it can be mounted in standard 1/2 relay racks.

MODEL TO-6RM ..... 115 VAC/50-60 cy ..... \$109.50  
 MODEL TO-6SRM ..... 115-230 V/50 cy ..... 115.75

## TCA-1 TRANSFARAD®



The Transfarad is specifically designed to safely test all low-voltage, low-leakage aluminum, tantalum, film, paper, and ceramic capacitors used in transistorized circuits. A must for modern industrial laboratories and electronic service shops.

### SAFELY TESTS TRANSISTOR CIRCUIT CAPACITORS INCLUDING TANTALUM TYPES

- The only analyzer which gives the complete story on tantalum and other low leakage current capacitors.
- **CAPACITANCE BRIDGE** measures 1 $\mu$ F to 2000 $\mu$ F in five overlapping ranges. Only 0.5 volt is applied to the bridge from a continuously adjustable power supply. The voltage across the capacitor is less than this applied voltage, the amplitude depending on the capacitance being measured. No possibility of overheating or deforming any low voltage capacitor during measurements.

- **INSULATION RESISTANCE** directly read from 50 megohms to 20,000 megohms. Only 25v d-c is applied, permitting measurements on low voltage ceramic, mica, and film capacitors. IR of ceramics rated below 25v may be calculated from leakage current measurement at exact rated voltage.
- **LEAKAGE CURRENT** measured directly on meter at exact rated d-c voltage of capacitor. Sensitive circuit makes full scale measurements from 0.6  $\mu$ A to 600 $\mu$ A in seven ranges.
- **POWER FACTOR** measured by Wien bridge from 0 to 50 per cent.
- **MAGIC EYE** null detector in high-gain amplifier has sensitivity control permitting accurate measurement of small capacitors.
- **SHORT-TIME STABILITY** is assured by dual regulation of the power supply. Specially processed etched circuits and complete encapsulation of the critical bridge-null amplifier insure long-time stability.
- **BINDING POSTS** are shielded against strays, assuring greater accuracy during low capacitance measurements.
- **FOR SAFETY** the capacitor under test is automatically discharged after testing. Three wire line cord grounds instrument case.
- **OPERATING PROCEDURES** are clearly shown on convenient pull-out slide.

MODEL TCA-1 TRANSFARAD 115 VAC/60cy \$197.50 net  
 MODEL TCA-1S TRANSFARAD 115/230 VAC, 50cy \$232.50 net

### TRANSFARADS FOR RACK MOUNTING

Electrically identical to the above instruments, these models have a standard 19" w. x 10 $\frac{1}{2}$ " h. panel so that they can be mounted in the conventional relay rack.

MODEL TCA-1RM ..... 115VAC/60cy ..... \$207.50 net  
 MODEL TCA-1SRM ..... 115/230 VAC, 50cy ..... \$242.50 net

# Shurite® PANEL METERS

• **SHURITE** makes attractive, rugged, dependable instruments with accuracy well within  $\pm 5\%$ , and the ability to duplicate readings. DC meters are polarized-vane solenoid type (moving-magnet or bridge-type construction where indicated); AC meters are double-vane repulsion type with jeweled bearing. The jewel construction costs more to build, but it pays off in continuing accuracy during a longer useful life. Models 550 and 950 fit 2-5/32" hole; Model 850 fits 2-5/32" to 2-1/32" hole. All are guaranteed.

## FEATURES

**GUARANTEE:** Meters are guaranteed to users against defective workmanship and material, and will be repaired or replaced if sent to the factory postpaid with 50¢ handling charge within one year after purchase . . . **ALL METAL DIALS**—age and moisture resistant, lithographed in black on white for high visibility . . . **STURDY DESIGN**—with husky coil frames designed to prevent breakage, rigidly mounted in cases with anti-turning square head studs . . . **VISCOSITY DAMPING**—careful application of new silicone compound on bearing surfaces damps pointer overtravel . . . **WIDE SELECTION**—Shurite offers the broadest line of standard meters in the economy-priced field. Distributor stocks are backed by an extensive factory inventory.

★ ★ ★ **NEW PRODUCTS** — To meet the growing demand for more sensitive meters without sacrifice of ruggedness, Shurite now catalogs: \*A) three 0-500 DC Microammeters with 1000 ohms int. res.; \*B) a 0-1 DC Milliammeter, Stock No. 8334, 800 ohms int. res., with Bridge-Type design to minimize effect of external magnetic forces; and \*C) a field strength meter, Stock No. 8903Z. Also, produced in quantity at extra cost but not yet cataloged, are several expanded scale meters. For example: 10-12.5 DC Volts, with accuracy of  $\pm 125$  Volt.

## DC MICROAMMETERS

RANGE	RESIST. Approx. Ohms	Model 550* Stock No.	Model 950* Stock No.	Net Each	Model 850* Stock No.	Net Each
0-500**	1000	5902	9902	\$4.10	8902	\$4.30

\* For zero adjuster, add 35¢ to price and Z to stock number  
\*\* Sensitive type, note internal resistance. DC bridge-type construction.

## DC MILLIAMMETERS

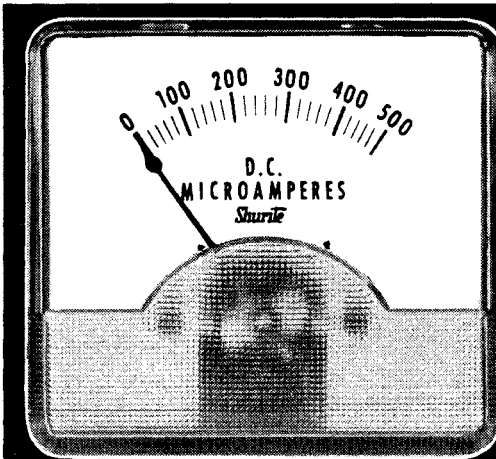
RANGE	RESIST. Approx. Ohms	MODEL 550* Stock No.	MODEL 950* Stock No.	Net Each	MODEL 850* Stock No.	Net Each
0-1**	1000	5300Z	9300Z	\$4.00	8300Z	\$4.15
0-1#	800	—	—	—	8334	3.95
0-3L**	500	5332Z	9332Z	4.00	8332Z	4.15
0-3	4500	5301	9301	3.10	8301	3.25
0-5	3650	5302	9302	2.85	8302	3.00
0-10	920	5303	9303	2.60	8303	2.75
0-15	485	5304	9304	2.40	8304	2.55
0-25	172	5305	9305	2.40	8305	2.55
0-50	46	5306	9306	2.40	8306	2.55
0-100	10.4	5307	9307	2.40	8307	2.55
0-150	4.7	5308	9308	2.40	8308	2.55
0-200	2.8	5309	9309	2.40	8309	2.55
0-300	1.5	5310	9310	2.40	8310	2.55
0-400	.46	5311	9311	2.40	8311	2.55
0-500	.30	5312	9312	2.40	8312	2.55

\* For zero adjuster, add 35¢ to price and Z to stock number.  
\*\* Sensitive type, moving-magnet construction, zero adjuster built-in.  
# Bridge-type construction; internal magnet design minimizes effects of external magnetic forces. Price does not include zero adjuster.

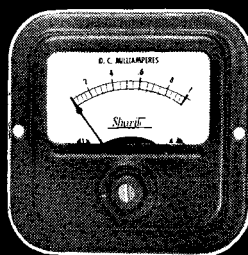
## AC MILLIAMMETERS

RANGE	RESIST. Approx. Ohms	MODEL 550 Stock No.	MODEL 950 Stock No.	Net Each	MODEL 850* Stock No.	Net Each
0-10	4800	5607	9607	\$3.75	8607	\$3.90
0-25	750	5601	9601	3.60	8601	3.75
0-50	150	5602	9602	3.60	8602	3.75
0-100	37	5603	9603	3.60	8603	3.75
0-250	5.4	5604	9604	3.60	8604	3.75
0-500	1.34	5605	9605	3.60	8605	3.75

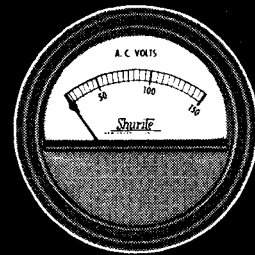
NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850.  
\* For zero adjuster add 35c to price and Z to stock number.



MODEL 850  
(Actual Size)  
MICRO-AMMETER SHOWN  
ZERO ADJUSTER OPTIONAL



MODEL 950 SERIES WITH ZERO ADJUSTER (metal-case)



MODEL 550 SERIES (Rimless Round) (metal-case)

## CLEAR PLASTIC INSTRUMENTS

... The 850 snap-on front of crystal-clear high temperature polystyrene 2-17/32" wide by 2-5/16" high, admits light from all sides and accentuates the appearance of the dial which has the longest scale arc in its field. The case back is black, but of similar high temperature, high impact material, to provide weight reduction and superior insulation.

## TYPICAL USES

Amateur radio rigs . . . Citizens Band equipment . . . battery eliminators . . . battery chargers . . . volt-ohm-milliammeters and kits . . . model train equipment . . . tuning circuits for stereo and tape recorders . . . burglar, fire alarm, or emergency lighting systems . . . transistor testers . . . plating equipment . . . voltage regulators . . . detergent strength analyzers . . . demonstrators . . . many other applications.

## DC AMMETERS

RANGE	RESIST. Approx. Ohms	MODEL 550* Stock No.	MODEL 950* Stock No.	Net Each	MODEL 850* Stock No.	Net Each
0-1	.105	5201	9201	\$2.40	8201	\$2.55
0-3	.02 Max.	5202	9202	2.40	8202	2.55
0-5	.02 Max.	5203	9203	2.40	8203	2.55
0-8	.02 Max.	5204	9204	2.40	—	—
0-10	.02 Max.	5205	9205	2.40	8205	2.55
0-15	.02 Max.	5206	9206	2.40	8206	2.55
0-25	.02 Max.	5207	9207	2.85	8207	3.00
0-50	.02 Max.	5208	9208	2.85	8208	3.00
3-0-3	.02 Max.	5210	9210	2.50	—	—
5-0-5	.022 Max.	5211	9211	2.50	—	—
6-0-6	.02 Max.	5212	9212	2.50	—	—
10-0-10	.02 Max.	5213	9213	2.85	8213	3.00
20-0-20	.02 Max.	5214	9214	2.85	8214	3.00
30-0-30	.02 Max.	5215	9215	2.85	8215	3.00
50-0-50	.02 Max.	5216	9216	3.00	8216	3.15

\* For zero adjuster, add 35c to price and Z to stock number.

## AC AMMETERS

RANGE	RESIST. Approx. Ohms	MODEL 550 Stock No.	MODEL 950 Stock No.	Net Each	MODEL 850* Stock No.	Net Each
0-1	.42 Max.	5501	9501	\$3.50	8501	\$3.65
0-3	.072 Max.	5502	9502	3.50	8502	3.65
0-5	.041 Max.	5503	9503	3.50	8503	3.65
0-10	.02 Max.	5504	9504	3.50	8504	3.65
0-15	.02 Max.	5508	9508	3.50	8508	3.65
0-30	.02 Max.	5505	9505	3.60	8505	3.75
0-50	.02 Max.	5506	9506	4.00	8506	4.15
0-80	.02 Max.	—	—	—	8507	4.35

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850.  
\* For zero adjuster add 35c to price and Z to stock number.

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective July 1, 1964

**DC VOLTMETERS**

RANGE Volts	RESIST. MODEL 550*		MODEL 950*		MODEL 850*	
	Approx. Ohms	Stock No.	Stock No.	Net Each	Stock No.	Net Each
0-1	10	5101	9101	\$2.40	—	—
0-3	93	5102	9102	2.40	8102	\$2.55
3-0-3	250	5103	9103	2.40	—	—
0-5	300	5104	9104	2.40	8104	2.55
0-6	390	5105	9105	2.40	—	—
0-8	600	5106	9106	2.40	8106	2.55
0-10	880	5107	9107	2.40	8107	2.55
0-15	2370	5108	9108	2.40	8108	2.55
0-20	3500	5121	9121	2.40	8121	2.55
0-25	1420	5109	9109	2.70	8109	2.85
0-25H**	5000	5110	9110	3.10	8110	3.25
0-50	2920	5122	9122	2.65	8122	2.80
0-50H**	10000	5111	9111	3.35	8111	3.50
0-75	4280	5112	9112	2.70	—	—
0-100	5740	5113	9113	2.70	—	—
0-100H**	20000	5114	9114	3.25	—	—
0-150	8000	5115	9115	2.85	8115	3.00
0-150H**	30000	5116	9116	3.50	8116	3.65
0-300H**†	60000	5117	9117	3.60	8117	3.75
0-500H**†	100000	5118	9118	3.85	8118	4.00
0-750H**†	154000	5119	9119	4.35	—	—

\* For zero adjuster add 35c to price and Z to stock number.  
 \*\* H denotes high resistance.  
 † Supplied with external resistors.

**AC VOLTMETERS**

RANGE Volts	RESIST. MODEL 550		MODEL 950		MODEL 850*	
	Approx. Ohms	Stock No.	Stock No.	Net Each	Stock No.	Net Each
0-4	11	5401	9401	\$3.65	—	—
0-6	15.8	5402	9402	3.65	—	—
0-10	27	5403	9403	3.65	8403	\$3.80
0-15	35	5404	9404	3.65	8404	3.80
0-25	53	5412	9412	3.65	8412	3.80
0-50	96	5405	9405	3.85	8405	4.00
0-150	100	5406	9406	4.05	8406	4.20
0-300**	100	5407	9407	4.60	8407	4.75
0-600**	100	5408	9408	5.15	—	—
0-750**	100	5409	9409	5.75	—	—

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850  
 \* For zero adjuster add 35c to price and Z to stock number.  
 \*\* Supplied with external resistors.

**VU, S, and FIELD STRENGTH METERS**

**VU METERS**—To measure volume levels in audio transmission circuits; range —20 to +3 VU, red and black scale; AC rectifier type; pointer normally at —20 VU; 1400 Ohms ±5% internal resistance; see Bulletin VUS-63 for application circuitry.

STOCK NO. 8801Z, 850 series case, zero adjuster included .....\$5.85

STOCK NO. 3801, 350 series edgewise case; zero adjuster not available .....\$5.50

**S METERS**—To measure relative signal strength; range 0-40 db; black and red scale; basic movement is 0.5 Ma. DC with 1000 ohms internal resistance ±5%; for application notes and typical circuits, see Bulletin VUS-63.

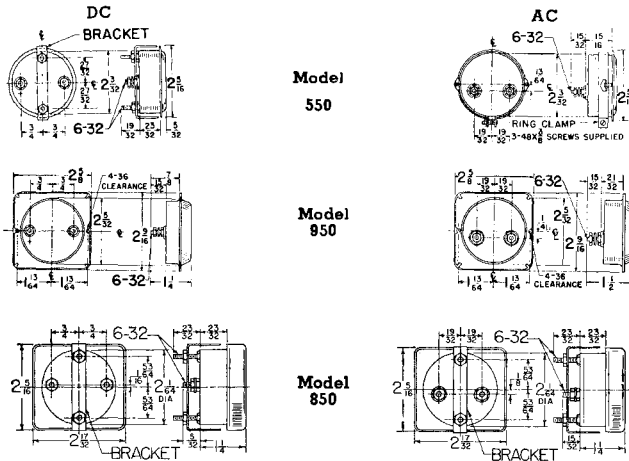
STOCK NO. 3333, 350 Series edgewise case, as illustrated, pointer normally at 40 .....\$3.45

STOCK NO. 8333\*, 850 Series case, pointer normally at 60 (Formerly supplied with pointer at zero) .....\$3.35

\*For zero adjuster, add 35c to price and Z to stock number.

\*\*\* **FIELD STRENGTH METER**—When this new meter—a variation of a 0-1 D.C. Milliammeter—is built into an elementary circuit such as described in Bulletin VUS-63, antenna systems may be easily checked, tuned, phased, or matched to transmission lines.

STOCK NO. 8903Z, 850 Series case; topside marked .1, .5, 1, 2, 3, 4, 5, 7, 10; bottom scale marked 2, 4, 6, 8, 10; zero adjuster included: meter only .....\$3.95



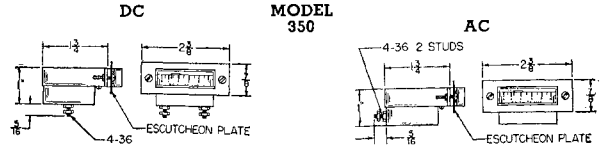
**EDGEWISE (MODEL 350)**

**Including S and VU Meters**

STOCK NO. 3333

The high-temperature crystal polystyrene front of the Model 350 series adds beauty to panel designs and the 1.2" scale length offers easy reading. Requires less than half the panel space of other Shurite meters. Horizontal mounting; weight under 2 oz.; accuracy well within ±5%; black escutcheon plate supplied. Case back normally black; available in light-transmitting frosted polystyrene on special order.

RANGE	Resistance Approx. Ohms	Stock No.	Net Each
0-1 DC Milliamperes	500	3300	\$3.70
0-5 DC Milliamperes	3100	3302	3.45
0-10 DC Milliamperes	700	3303	3.45
0-25 DC Milliamperes	150	3305	3.35
0-50 DC Milliamperes	28	3306	3.35
0-100 DC Milliamperes	7	3307	3.35
0-200 DC Milliamperes	3	3309	3.35
0-300 DC Milliamperes	2	3310	3.35
0-500 DC Milliamperes	1.5	3312	3.35
0-100 AC Milliamperes	32	3603	3.45
0-3 DC Amperes	.02 Max.	3202	3.35
0-5 DC Amperes	.02 Max.	3203	3.35
0-10 DC Amperes	.02 Max.	3205	3.4*
10-0-10 DC Amperes	.02 Max.	3213	3.55
0-5 AC Amperes	.04	3503	3.45
0-5 DC Volts	725	3104	3.35
0-10 DC Volts	1200	3107	3.35
0-15 DC Volts	2200	3108	3.35
0-15 AC Volts	728	3404	3.45
0-150 AC Volts	14000	3406	4.10
VU Meter —20 to +3 VU	1400	3801	5.50
S Meter 0—40 db	1000	3333	3.45



**RESISTANCE METERS**

RANGE Ohms	MODEL 550*		MODEL 950*		MODEL 850*	
	Volts	Stock No.	Stock No.	Net Each	Stock No.	Net Each
10,000	4.5**	5701	9701	\$3.00	8701	\$3.15

\*For zero adjuster add 35c to price and Z to stock number.  
 \*\*Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.

**POCKET TYPE METERS**

Please ask for Catalog 94-E which describes 12 types of battery testers (pocket meters). Their stock numbers begin with the digit 4. Typical is Stock No. 4151, 0-7 DC volts, approx. res. 670 ohms .....\$3.00

**3-HOLE MOUNTING ADAPTER**

To adapt any Model 550 (round) meter for 3-hole flange mounting (former Model 650) attach this 2 3/4" flange from front of panel Model 5-A, standard black with hardware, each .....\$0.11

**HANDY AC-DC LINE VOLTAGE TESTER**

STOCK NO. 5406-LT—Plug-in to read line voltage, then find (and demonstrate voltage drop or inadequate wiring by plugging in TV set, iron, toaster, washer air-conditioner, shop equipment, etc. Features of this tester: (a) attached plug receptacle permits continuous reading while loads are changed; (b) reads 151 V AC or DC; (c) cord allows convenient angle for reading; (d) jewel bearing construction provides continuing accuracy. Standard package of 6 meters come with convenient counter display. Per meter .....\$4.21

**IMPORTANT — HOW TO ORDER**

Give (1) Model Number, (2) Range, (3) Stock Number.  
**ZERO ADJUSTERS (Z)** For DC meters, available only on Models 550, 850, and 950. For AC meters, available on Model 850. When ordering add Z to stock number, as 5101Z, and 35c to price.  
**PANEL CALIBRATION (S)** Meters are calibrated for non-magnetic panels. If steel panel mounting, specify thickness and overall size c panel; add S to stock number, as 5101S.  
**SEE YOUR DISTRIBUTOR** Authorized Shurite distributors carry most models and can obtain your other needs promptly.



PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective July 1, 1964

# Simpson

## VOMs and ADAPTERS

All Prices Net

### World Famous 260<sup>®</sup> VOM TWO VERSIONS

- New Self-Shielded Movement
- New Higher Accuracy: 2% DC, 3% AC
- New Ruggedness from Spring-Backed Jewels
- Greater Repeatability
- Increased Linearity and Stability

## OTHER FEATURES

- Converts to 9 Different Testers (See Adapters Below)
- Over a Million Purchased... Recognized Reliability
- 20,000 opv, DC; 5,000 opv, AC
- Adjust-A-Vue Handle
- Polarity Reversing Switch
- 50 Microampere-250 Millivolt Range
- Easy-to-Read Scales: Black and red, spread out for faster reading, less errors.
- Popular DBM Ranges: -20 Dbm to +50 DBM, one milliwatt in 600 ohms!
- Improved Frequency Response in AC Measurements: 5 to 500,000 cps.
- Full-Wave Bridge Rectifier System.

## VOLTAGE RANGES

DC: 0-250mv; 0-2.5v; 0-10v; 0-50v; 0-250v; 0-1000v; 0-5000v.

AC: 0-2.5v; 0-10v; 0-50v; 0-250v; 0-1000v; 0-5000v.

AF: 0-2.5v; 0-10v; 0-50v; 0-250v.

DB (1MW—600Ω): -20 to +10 db; -8 to +22 db; +6 to +36 db; +20 to +50 db.

## CURRENT RANGES

DC: 0-50ua; 0-1ma; 0-10ma; 0-100ma; 0-500ma; 0-10 amps.

## RESISTANCE RANGES

0-2000Ω (12Ω ctr.); 0-200KΩ (1200Ωctr.); 0-20 meg. (120KΩ ctr.)

## FREQUENCY RESPONSE

Essentially flat through 50,000 cps.

## ACCURACIES

DC Volts ±2% of full scale. DC current ±1.5% of full scale. AC Volts ±3% of full scale. DC resistance ±2% of arc length.

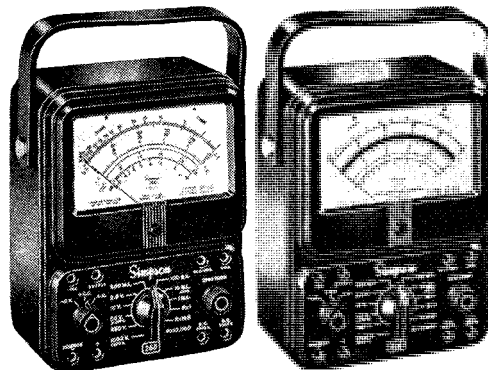
Size: 5¼" x 7" x 3½" ... Net Wt.: 3½ lbs.

**260 (Series 4) with Std. Scale** complete with test leads No. 7500 and operator's manual... **\$48.95** (in roll-top case)... **\$54.95**

**260 (SERIES 4M) with MIRROR SCALE** complete with No. 7500 lead and operator's manual... **\$50.95** (in roll-top case)... **\$56.95**

## ACCESSORIES

Leads, Probes and Cases	Part No.	Price
Banana plugs and alligator clip	7500	\$ 2.10
Banana plugs and test prods	7538	2.50
10,000v High voltage probe....	0507	10.20
25,000v High voltage probe....	0508	11.50
50,000v High voltage probe....	0509	12.50
Leather Carrying Case .....	1818	8.50
Ever-Redy Carry Case .....	4236	9.75
Roll-top safety case only for		
260, Series 3, 4, 4M, and		
model 261.....	0249	9.95



Series 4  
(Std. Scale)

Series 4M  
(Mirror Scale)

## 260<sup>®</sup> VOM

### MODEL 261 VOM



ACCURACY (77°F): DCV, 0-1000 v, ±1½% F.S., 5000 v, ±2½% F.S.; DC MA & AMP, ±1½% F.S.; ACV, ±3%; ohms, ±1½% of linear arc.

OTHER SPECIFICATIONS: See 260 VOM.

PRICE: Complete with leads and manual ..... **\$59.95**

### 270 Series 2—HIGH ACCURACY VOM

- New High Flux, Self-Shielded Movement
  - New Spring-Backed Jewels
  - New Diode Overload Protection
  - Special Calibration Circuit for Increased Accuracy
  - Mirror Scale, Knife-Edge Pointer
  - Gold Bonded Diodes for AC
  - Excellent Repeatability
  - Greater Accuracy Predictable Over a Wide Temperature Range
  - DC Accuracy, 1¼% \* Full Scale
  - AC Accuracy, 2% \* Full Scale
  - Resistance Accuracy, ±1° of Arc
- \*At an Ambient Temperature of 77°F

## RANGES

DC Voltage (20,000 opv): 0-250 mv; 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v.

AC Voltage (5000 ohms-per-volt): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v.

AF Output Voltage (With .1 mfd. int. series capacitor): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v.

Volume Level, Decibels (Zero DB equal to 1 mw across a 600 ohm line): -20 to +10 DB; -8 to +22 DB; +6 to +36 DB; +20 to +50 DB.

DC Resistance: 0-2000 ohms (12 ohms center); 0-200,000 ohms (1200 ohms center); 0-20 meg-ohms (120,000 ohms center).

Direct Current: 0-50 mu a; 0-1 ma; 0-10 ma; 0-100 ma; 0-500 ma; 0-10 amp.

270, Series 2, complete with test leads and Operator's Manual ..... **\$64.95**

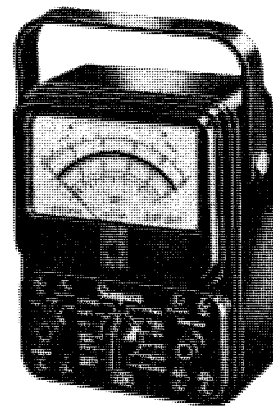
270 RT, in Roll-Top Case ..... **\$70.95**  
See accessories under 260 VOM above.

### 270 SERIES 2 VOM

CONVERTS TO  
9 DIFFERENT  
TESTERS  
WITH  
ADAPTERS  
BELOW



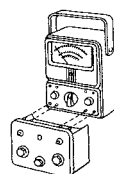
ADJUST-A-VUE  
HANDLE



### PLUG-IN ADAPTERS FOR 260<sup>®</sup> AND 270 VOMs ABOVE

Transistor Testers, Model 650 .....	\$29.95
DC VTVM, Model 651 .....	39.95
Temperature Tester, Model 652 .....	39.95
AC Ammeter, Model 653 .....	19.95
Battery Tester, Model 656 .....	19.95

Microvolt Attenuator, Model 655 .....	\$19.95
Audio Wattmeter, Model 654 .....	19.95
Milliohmmeter, Model 657 .....	44.95
DC Ammeter, Model 661 .....	19.95



See your distributor or write for Bulletin 2066 giving specifications

WRITE ON LETTERHEAD FOR GENERAL CATALOG 18 — DEPT. V

## SIMPSON ELECTRIC CO. • CHICAGO, ILLINOIS

# Simpson

# VOLT-OHM-MILLIAMMETERS

All Prices Net

## NEW! Dual Sensitivity VOM, Model 263

Overlapping ranges offer greater accuracy expressed as a percentage of reading. Diode overload protection (Prevents movement burn-out even on 200,000% overload). External battery compartment makes battery replacement easier. Uses 1½ volt alkaline battery. Complete with test leads No. 0115 and operator's manual

**\$78.95**

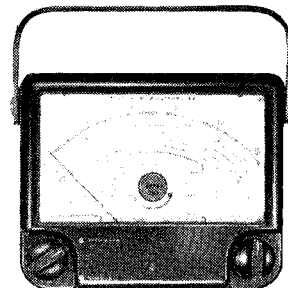
**RANGES**  
**DC Volts:** 0-0.15 / 0-.75 / 0-3 / 0-7.5 / 0-30 / 0-75 / 0-300 / 0-750 / 0-3000 @ 20KΩ/V ... 0-0.3 / 0-1.5 / 0-6 / 0-15 / 0-60 / 0-150 / 0-600 / 0-1500 / 0-6000 @ 10KΩ/V  
**AC Volts:** 0-2.5 / 0-7.5 / 0-30 / 0-150 / 0-750 @ 10KΩ/V ... 0-5 / 0-15 / 0-60 / 0-300 / 0-1500 @ 5KΩ/V  
**DC Microamperes:** 0-75 @ 150 MV; 0-150 @ 300 MV  
**DC Milliamperes:** 0-0.75 / 0-7.5 / 0-75 / 0-750 @ 150 MV; 0-1.5 / 0-15 / 0-150 @ 300 MV

**DC Amperes:** 0-7.5 @ 150 MV; 0-1.5 / 0-15 @ 300 MV  
**DB Scale (11MW-600):** -20 to +75.5 db in 10 ranges  
**Output Ranges:** 0.1 mfd capacitor in series with all AC Voltage ranges through 300 Volts  
**Resistance Ranges (4.5Ω center):** R×1 0-500Ω, R×10 0-5000Ω, R×100 0-50KΩ, R×1K 0-500KΩ, R×10K 0-5 megΩ, R×100K 0-50 megΩ

**ACCURACIES**  
**DC Volts:** 0-0.15 to 1500 ±1½%; 0-3000 to 6000 ±2½%  
**AC Volts:** ±3%  
**DC Current:** ±1½%  
 R×1: ±3° of Arc  
 R×10, R×100K: ±2½° of Arc

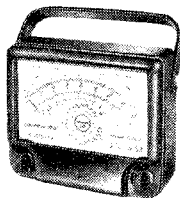
**ACCESSORIES**  
**High Voltage Probes:** 30KV @ 10KΩ/V, 15KV @ 20KΩ/V  
 Cat. No. 0141 ..... **\$11.95**

Carrying Cases: Ever-Redy Vinyl Carrying Case  
 Cat. No. 5262 ..... **\$ 9.95**

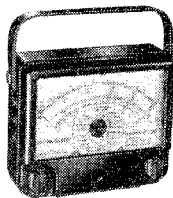


20,000 Ω/VDC  
 10,000 Ω/VDC  
 10,000 Ω/VAC  
 5,000 Ω/VAC

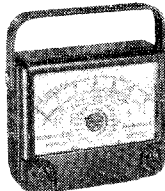
## AC/DC VOLT-OHM-MILLIAMMETERS AND TESTERS\*



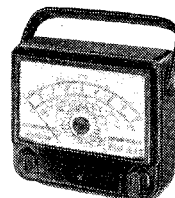
NEW, IMPROVED  
 MODEL 269-2 VOM  
 100,000 opv



MODEL 267 VOM  
 20,000 opv



MODEL 268 VOM  
 20,000 opv



MODEL 262 VOM  
 20,000 opv



MODEL 355  
 VOLT-OHMMETER

**MODEL 269-2**  
**VOLTAGE RANGES**

**DC:** 1.6v; 8v; 40v; 160v; 400v; 800v; 1600v; 4000v.  
**AC:** 3v; 8v; 40v; 160v; 400v; 800v.  
**DB: (1MW-600Ω):** -12 to +45.5 db in four ranges.

**CURRENT RANGES**

**DC:** 0-16ua; 0-160ua; 0-1.6ma; 0-16ma;  
 0-160ma; 0-1.6 amps; 0-8 amps.

**RESISTANCE RANGES (12 Ω Center)**

0-200Ω; 0-20KΩ; 0-200KΩ; 0-2 megΩ; 0-20 megΩ; 0-200 megΩ.

**ACCURACIES**

**DC Volts** ±2% and ±3% of full scale. **DC Current** ±2%. **AC Volts** ±3% of full scale. **DC Resistance** ±2.5% and ±3% of arc length.

Complete with test leads No. 0115, 4000 V DC probe extension and operator's manual.

**\$89.95**

**MODEL 267**

**DC Volts:** 0-.25/2.5/10/50/250/500/1000.

**AC Volts:** 0-2.5/10/50/250/500/1000.

**DC Microamperes:** 0-50.

**DC Milliamperes:** 0-1/10/100/500.

**DC Amperes:** 0-10.

**DB Scale:** -20 +10, 1 mw, 600 ohms.

**Output Ranges:** AC volt ranges to 250 V with .1/mfd condenser in series.

**RESISTANCE RANGES**

0-2000Ω (12Ω ctr.); 0-200KΩ (1200Ω ctr.); 0-20 meg. (120KΩ ctr.)

\*See "ACCESSORIES" Section for carrying cases, etc.

**FREQUENCY RESPONSE**

2.5/10 VAC 20 cps — 500 KC ±5%  
 50 VAC 20 cps — 150 KC ±5%

**ACCURACY**

**DC V, Milliamperes, Amperes** ±3% F.S.; **DC Mics** ±2% F.S.; **AC Volts** ±5% F.S.; **Ohms** ±2.5 and ±3% of linear arc.

Complete with test leads No. 7500 and operator's manual **\$54.95**

**MODEL 262**

**VOLTAGE RANGES**

**DC:** 1.6v; 8v; 40v; 160v; 400v; 800v; 1600v; 4000v.

**AC:** 3v; 8v; 40v; 160v; 800v.

**AF:** 3v; 8v; 40v; 160v.

**DB: (1 MW-600Ω):** -12 to +45.5 db in four ranges.

**CURRENT RANGES**

**DC:** 80ua; 160ua; 1.6 ma; 16 ma; 1.6 amps; 16 amps.

**RESISTANCE RANGES**

**DC:** 0-500Ω (4.5Ω ctr.); 0-5KΩ (45Ω ctr.); 0-50KΩ (450Ω ctr.); 0-500KΩ (4,500Ω ctr.); 5 megΩ (45Ω ctr.); 0-50 megΩ (450KΩ ctr.).

**FREQUENCY RESPONSE**

Essentially flat through 50 kc.

**ACCURACIES**

**DC Volts** ±3% of full scale. **AC Volts** ±5% of full scale. **DC Resistance** ±2.5% and ±3% of arc length. Complete with test leads No. 8463, 4000 V DC probe extension and operator's manual.

**\$69.95**

**MODEL 268**

**AC Volts:** 0-3/12/60/300/600/1200

**DC Volts:** 0-3/12/60/300/600/1200

**DC Microamperes:** 0-60.

**DC Milliamperes:** 0-1.2/12/120

**DC Amperes:** 0-12

**DB Scale:** -12 +11, 1 mw, 600 ohms

**OUTPUT RANGES**

**AC Volt:** Ranges to 300 V with .1/mfd condenser in series

**RESISTANCE RANGES**

0-2000Ω (12Ω ctr.); 0-200KΩ (1200Ω ctr.); 0-20 meg (120KΩ ctr.)

**FREQUENCY RESPONSE**

2.5/10 VAC 20 cps — 500 kc ±5%; 50 VAC 20 cps — 150 kc ±5%

**ACCURACY**

**DC V, Milliamperes, Amperes** ±3% F.S.; **DC Mics** ±2% F.S.; **AC Volts** ±5% F.S.; **Ohm** ±2.5% and ±3% of linear arc.

Complete with test leads No. 7500 and operator's manual

**\$54.95**

**MODEL 355, MIDGETESTER®**

10,000 Ohms per Volt AC-DC

Size: 2¾" x 4½" x 1"

Complete with test leads and operator's manual

**\$34.95**

(WRITE FOR BULLETIN 2066)

WRITE ON LETTERHEAD FOR GENERAL CATALOG 18 — DEPT. V

**SIMPSON ELECTRIC CO. • CHICAGO, ILLINOIS**

# Simpson

# VTVMs

All Prices Net

## VACUUM TUBE VOLT-OHMMETERS\*

### MODEL 311 VOLTAGE RANGES

**DC:** 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v.  
(22 megΩ input impedance)  
**AC:** 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v;  
(RMS) (Min. 2.2 megΩ input impedance)  
**PP:** 0-4v; 14v; 40v; 140v; 400v; 1400v; 4000v.  
(Min. 2.2 megΩ input impedance)  
**AF:** 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v.  
(30 cycles to 100Kc ±5%)  
**RF:** 1.5v; 5v; 15v; 50v; 150v.  
with probe (50 cycles to 100mc, 0-150 VRMS)

### RESISTANCE RANGES

1KΩ (10Ω center); 10KΩ (100Ω center); 100KΩ  
(1KΩ center); 1 megΩ (10KΩ center); 10 megΩ  
(100KΩ center); 100 megΩ (1 megΩ center);  
1000 megΩ (10 megΩ center).

### FREQUENCY RESPONSE

±5% to 100 kc (with RF probe, usable to  
250 mc)

### LINE VOLTAGE

105/125 v, 50/60 cycles.

### ACCURACIES

**DC Volts:** ±3% of full scale.

**AC Volts:** ±5% of full scale.

**DC Resistance:** ±3% of arc length (resistance).

**Model 311** with AC/DC ohms probe No. 0734,  
ground lead No. 0733 and operator's manual.

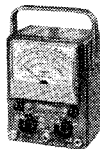
**\$69.95**

### MODEL 303 VOLTAGE RANGES

**AC-DC:** 1.2v; 12v; 60v; 300v; 1200v.

**AF:** 1.2v; 12v; 60v.

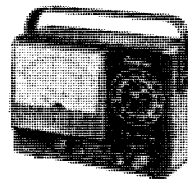
MODEL 311  
AC-DC



MODEL 303  
AC-DC



MODEL 715  
AC ONLY



**RF:** 20 volts maximum. (With RF Probe)  
**DB:** -20 to +63 db in five ranges.

### RESISTANCE RANGES

1KΩ (10Ω center); 100KΩ (1000Ω center);  
1 megΩ (10KΩ center); 10 megΩ (100KΩ cen-  
ter); 1000 megΩ (10 megΩ center).

### INPUT IMPEDANCE

10 megohms (all ranges) on DCV; 275K ohms  
shunted by 210 uuf on ACV.

### FREQUENCY RESPONSE

**AF:** Flat to 100 Kc on the three low AC ranges  
**RF:** 20 Kc to 100 Mc (with RF probe)

### LINE VOLTAGE

105/125 v, 50/60 cycles.

### ACCURACIES

**DC Volts:** ±3% of full scale.

**AC Volts:** ±5% of full scale.

**DC Resistance:** ±3% of arc length (resistance).

**Model 303** with DCV probe No. 0067, ACV-  
ohm probe No. 0068, ground lead No. 0069  
and operator's manual.

**\$73.95**

**Model 303RT** (in roll top safety case) **\$82.95**

### MODEL 715 RANGES

**Volts:** 0-.01/.03/.1/.3/1/3/10 30 100 300  
rms.

**Decibels:** Total Range -52 to +52 DBM.

**Zero DBM:** 1 millivolt in 600 ohms.

**Scale Markings:** -12 to +2 DB.

### ACCURACY

±5% of full scale.

### TESTER SENSITIVITY

10 millivolts full scale on lowest range.

### INPUT IMPEDANCE

Minimum 1 meg @ 1 KC shunted by 25 uuf.

### INTERNAL MULTIPLIERS

±1% precision resistors.

### FREQUENCY RESPONSE

10 cps to 400 KC ±1 DB.

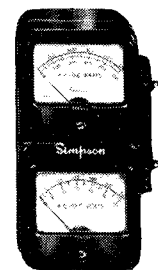
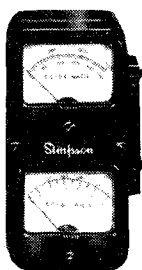
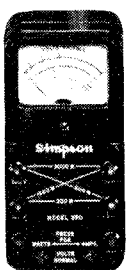
### INPUT POWER REQUIREMENTS

110 to 125 VRMS, 50/60 cps @ 10 watts.

Complete with operator's manual and  
shielded input cable. **\$69.95**

\*Also See "ACCESSORIES" Section.

## HAND-SIZE MICROTESTERS — DIMENSIONS, 3" x 5 7/8" x 2 1/2"



**AC-DC Volt-Ohm-Milliammeter, Model 240** —  
1000 ohms per volt, AC and DC.

**AC Volts:** 15, 150, 750, 3000.

**DC Volts:** 15, 75, 300, 750, 3000.

**DC Milliampers:** 15, 150, 750.

**Ohms:** 0-3000 (center scale 30); 0-300,000  
(center scale 3000). With Leads.....**\$34.95**

**AC-DC Volt-Ohm-Milliammeter, Model 230** —  
AC Volts: 10, 250, 1000 (400 ohms per volt)

— DC Volts: 10, 50, 250, 1000 (1000 ohms  
per volt) — DC Milliampers: 10, 50, 250 —  
Ohms: 0-1000, 0-100,000 — With Leads.....**\$33.95**

**DC Ammeter, Model 375** — 0-1, 2.5, 5, 10, 25  
amps .....**\$23.95**

**DC Milliammeter, Model 373** — 0-1, 5, 10, 25,  
50, 100, 250, 1000 ma .....**\$23.95**

**DC Microammeter, Model 374** — 0-50, 100,  
250, 500, 1000 ua .....**\$26.95**

**AC Ammeter, Model 370** — 0-1, 0-2.5, 0-5,  
0-10, 0-25 amps .....**\$22.95**

**AC Milliammeter (Self-contained transformer),  
Model 378** — 0-5, 25, 100, 250,  
1000 ma .....**\$26.95**

**DC Voltmeter (Res. 1000 ohms per volt), Model  
377** — 0-1, 2.5, 5, 10, 25, 50, 100, 250, 500,  
1000 DC volts .....**\$24.95**

**Millivoltmeter, Model 387** — 10, 30, 100, 1000  
mv; with leads and manual .....**\$29.95**

**AC Voltmeter (Rec. Type — 1000 ohms per  
volt), Model 376** — 0-5, 10, 25, 50, 100, 250,  
500, 1000 AC volts .....**\$23.95**

**AC Voltmeter, Model 371** — 0-150, 0-300,  
0-600 volts .....**\$24.95**

**Ohmmeter, Model 372** — 0-500 ohms (5 ohms  
center); 0-5000 ohms (50 ohms center);  
0-50,000 ohms (500 ohms center); 0-500,000

ohms (5,000 ohms center); 0-5 meg. (50,000  
ohms center); 0-50 meg. (500,000 ohms center)

— with Leads .....**\$29.95**

**Low Ohmmeter, Model 362** — 0-5, 0-25 ohms,  
with Leads and Manual .....**\$26.95**

**AC Volt-Amp-Wattmeter, Model 390** — Volts:  
0-150, 300 — Amps: 0-0.3, 15 — Watts: 0-300,  
600, 1500, 3000 — with break-in plug and  
Leads .....**\$54.95**

**AC-DC Volt-Wattmeter, Model 391** — AC or  
DC — Volts: 0-130, 0-260 — Watts: 0-1500,  
0-3000 — with Cord and Plug .....**\$47.95**

**AC-DC Volt-Wattmeter, Model 392** — AC or  
DC — Volts: 0-130, 0-260 — Watts: 0-1000,  
0-5000 — with Cord and Plug .....**\$49.95**

**Battery Tester, Model 379** — (Separate arcs for  
Radio A Batteries, Hearing Aid A Batteries,  
and for all B Batteries) — with Leads ....**\$29.95**

WRITE ON LETTERHEAD FOR GENERAL CATALOG 18 — DEPT. V

**SIMPSON ELECTRIC CO. • CHICAGO, ILLINOIS**



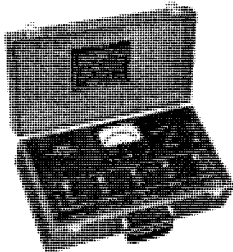
# Simpson

# TEST EQUIPMENT

All Prices Net

## LABORATORY TYPE TEST EQUIPMENT

Model 1900 and NEW Model 1901

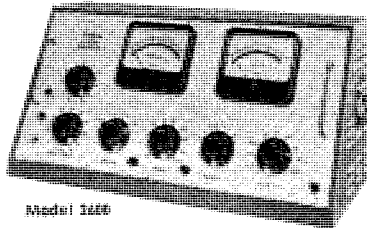


### DECADING VOLTMETERS

(AC-DC, Model 1901) (DC, Model 1900)

- **Voltage Range:** 1 through 1000 Volts
- **Voltage Accuracy:** p/m .1% of reading at 25°C; p/m .25% of reading from 15°C to 35°C
- **Accuracy of Calibration Source:** p/m .05%
- **Accuracy of Decades:** p/m .05%
- **Sensitivity:** 1000 ohms per volt
- **External Power Requirements:** none
- **Internal Power Requirements:** 1-45 volt battery Eveready No. 482 or equivalent (used for the calibration circuit only)
- **Battery Life:** approx. 1 yr. (2 calib./day)

AC-DC Model 1901 .....\$645.00  
DC, Model 1901 ..... 345.00

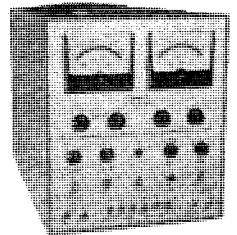


Model 2600

### SELF-POWERED LAB STANDARD CALIBRATOR MODEL 2600

**A Self-Powered Calibrator for Electrical Instrument Maintenance and High Accuracy Testing.** Two terminal connections cover all 49 ranges for unusually fast operation. DC accuracy is  $\pm 0.5\%$  F.S.; AC,  $\pm 0.75\%$  F.S. (at 77°F, 25°C). Separate meters (self shielded movements) for DC and AC readings. **Size:** 15" x 31" x 15". **Power Requirement:** Approx. 50 watts. **Net Wt:** 132 lbs. @ 117.5 volts, 60 cps.

Price \$1620



Model 2620

### PULSE GENERATOR MODEL 2620

**No Other Unit Offers Such Accuracy, Versatility, and Set-Up Speed Within This Price Range.** Twin meters read pulse repetition frequency and pulse duration simultaneously. Rise time is 0.02 microseconds; decay time, 0.03 microseconds. Pulse duration, continuously variable from 0.1 to 1000 microseconds. Jitter, less than 0.005 microseconds. Pulse repetition rate, continuously variable from 10 to 100,000 pps in four ranges. **Size** 15 1/2" x 13 1/4" x 21". **Net Wt.** 66 lbs. 110v., 50/60 cycles.

Price \$625

WRITE FOR ADDITIONAL SPECIFICATIONS

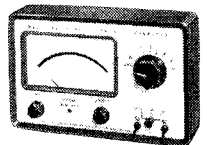
## NEW! $\pm 1\%$ MULTI-RANGE MILLIOHMMETERS, Model 1699

Large 7" meter with mirrored scale and knife-edge pointer. Easy readability. Single arc, 90° dial with 100 divisions. Complete with operator's manual and test leads .....\$150.00

**Ranges:** 0-.05 / .1 / .25 / .50 / 1 / 5 / 10 / 50. **Accuracy:**  $\pm 1\%$  of full scale.

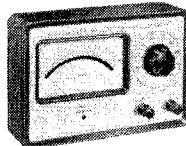
**Test Leads:** Coaxial cable terminated in Kelvin clips. **Power:** Battery operated.

**Controls:** Function switch, Range switch. Zero adjust, Full Scale adjust. **Size:** 11 3/8" x 7 3/8" x 3 1/4". **Net Weight:** 5 lbs., 10 oz.

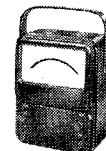


## PORTABLE STANDARDS

SERIES 1700 MULTI-RANGE



MODELS 9 & 10



MODEL 880



**Accuracy:** Model 9, 1/2 of 1% of Full Scale @ 77°F. Models 10 and 880, 1% of Full Scale @ 77°F. 4 1/2" Hand drawn scale, mirror; knife-edge pointer.

SPECIFICATIONS	DC Voltmeter MODEL 1700	DC Ammeter MODEL 1701	DC Milliammeter MODEL 1702	DC Microammeter MODEL 1703	DC Millivoltmeter MODEL 1704
<b>RANGES</b>	0-1.5, 3, 7.5, 15, 30, 75, 150, 300, 750, 1500	0-0.75, 1.5, 3.0, 7.5, 15, 30, 75	0-1.5, 3, 7.5, 15, 30, 75, 150, 300, 750, 1500	0-75, 150, 750, 1500	0-30, 75, 150, 750, 1500
<b>ACCURACY</b>	1/2 of 1% of Full Scale in Horizontal Position @ 25°C				
<b>LOSS (Max.)</b>	1 milliampere	45 mv (approx.)	50 to 150 mv	.160—578 Volts	5 ma
<b>EXT. TEMP. INFLUENCE</b>	1/4 of 1%	1/4 of 1%	1/4 of 1%	1/4 of 1%	1/4 of 1%
<b>DIELECTRIC TEST</b>	3000 V. RMS	3000 V. RMS	3000 V. RMS	3300 V. RMS	3300 V. RMS
<b>MIRROR SCALE LENGTH</b>	5.5"	5.5"	5.5"	5.5"	5.5"
<b>DAMPING</b>	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic
<b>METER MOVEMENT</b>	Deep Core Magnet Meter Movement (1-5/16")				
<b>SENSITIVITY</b>	1000 $\Omega/V$	—	—	—	200 $\Omega/V$
<b>ZERO ADJUSTER</b>	External	External	External	External	External
<b>SIZE</b>	11 3/8" x 7 3/8" x 3 1/4"	11 3/8" x 7 3/8" x 3 1/4"	11 3/8" x 7 3/8" x 3 1/4"	11 3/8" x 7 3/8" x 3 1/4"	11 3/8" x 7 3/8" x 3 1/4"
<b>PRICE</b>	\$160.00	\$155.00	\$135.00	\$140.00	\$150.00

Made to Conform to ASA C 39.1-1959

MODELS 9 & 10 — D'ARSONVAL (DC) AND IRON VANE (AC)

SINGLE RANGE		MULTIPLE RANGE	
DC Model 9	AC Model 10	DC Model 9	AC Model 10
<b>VOLTMETERS</b>			
50 \$ 49.50	\$43.95	15-150 \$ 55.00	—
100 49.50	43.95	150-300 60.45	\$55.00
150 49.50	43.95	300-750 66.00	60.45
300 55.00	49.50	15-150-300 63.75	—
—	—	150-300-600 66.00	60.45
<b>MILLIAMMETERS</b>			
1 57.15	—	10-100 55.00	—
50 49.50	43.95	25-250 55.00	—
100 49.50	43.95	100-500 55.00	—
500 49.50	43.95	—	—
<b>AMMETERS</b>			
5 49.50	43.95	2.5-5 55.00	—
15 49.50	43.95	5-10 55.00	—
30 49.50	43.95	2.5-10-25 60.45	—
50 49.50	43.95	10-25-50 60.45	—
100 52.50	—	—	—
<b>MICROAMMETERS</b>			
5 71.55	—	—	—
100 67.00	—	—	—
200 64.95	—	—	—

MODEL 880 — AC-DC DYNAMOMETER TYPE METER MOVEMENT

WATTMETERS, SINGLE PHASE — Maximum Volts 150-300

Amperes	Watts Range		Price	
	Normal	High		
1	1.5	100	200	\$60.45
2	3.0	200	400	60.45
5	7.5	500	1000	60.45
10	15	1000	2000	60.45
20	30	2000	4000	66.00
50	75	5000	10000	66.00

WATTMETERS, DOUBLE CURRENT RANGE — Maximum Volts 150-300

2.5- 5	3.75- 7.5	250- 500-1000	Price
5-10	7.5 -15.0	500-1000-2000	\$76.95
—	—	—	76.95

VOLTMETERS — Single and Multiple Ranges

Maximum Volts	Price
0-150	\$60.45
0-150-300	71.55
0-75-150-300	76.95
0-150-300-600	76.95

# Simpson

## TEST EQUIPMENT and ACCESSORIES

All Prices Net

### TEMPERATURE TESTERS



Model 385-3L

Models 388-3L  
and 389-3L

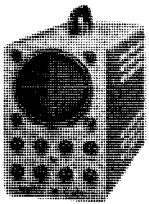
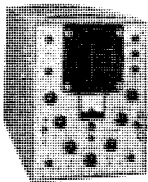
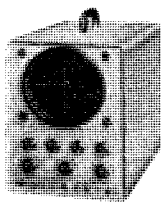
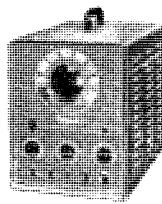
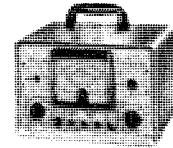
**MODEL 385-3L** — Accuracy:  $\pm 1^\circ\text{F}$  about center scale;  $\pm 2^\circ\text{F}$  at either end. For measuring temperatures from  $+70^\circ\text{F}$  to as low as  $-50^\circ\text{F}$ . Available in 3 lead model only. Supplied with one No. 0010 15 ft. thermistor probe and operator's manual. **\$35.95\***

**MODEL 388-3L** — Therm-O-Meter — Measures Temperatures  $-50^\circ\text{F}$  to  $+1000^\circ\text{F}$ . Accuracy:  $+1\frac{1}{2}$  scale divisions. Standard models have combination Fahrenheit and Centigrade scale. Sensing Element: Thermocouple (Iron-Constantan). Supplied with internal battery and one 8" general purpose probe No. 0190, and operator's manual. Order additional probes as required. Model 388-3L: For three probes. **\$67.95\***

**MODEL 389-3L** — This dual range instrument provides a means for temperature measurements between  $-50^\circ\text{F}$  and  $+100^\circ\text{F}$  and between  $+100^\circ\text{F}$  and  $+250^\circ\text{F}$ . Accuracy is  $\pm 2^\circ\text{F}$ . Supplied with internal battery and one 15' thermistor type probe (No. 0010). Order additional probes as required. Model 389-3L (for 3 leads). **\$62.95\***

\* See accessories for other types of probe leads.

### SCOPES, COLOR BAR GENERATOR, CAPACITOR LEAKAGE TESTER

Model 466  
General  
Purpose  
ScopeModel 2610  
Wide Band  
ScopeModel 458  
Color  
ScopeModel 430  
Color Bar  
GeneratorModel 383A Capacitor  
Leakage Tester

#### Model 466 GENERAL PURPOSE SCOPE

**Freq. Resp. of Vert. Ampl.:** From 15 cycles/sec to 100 kc/sec, flat within  $\pm 1$  db; 6 db down at 250 kc/sec; usable to 1 Mc/sec.

**Maximum Vertical Deflection Sensitivity:** 30 Millivolts RMS/inch.

**Frequency Response of Horizontal Amplifier:** From 15 cycles/sec to 20 Kc, flat within  $\pm 1$  db; 6 db down at 100 Kc/sec.

**Maximum Horizontal Deflection Sensitivity:** 0.7 volt RMS/inch.

**Z-Axis Sensitivity (Voltage Required to Extinguish Beam):** 20 volts RMS.

**Calibrating Voltage** (at 117.5 VAC power source): 1 volt P-P  $\pm 10\%$ .

**Maximum Input Voltage:** 400 volts peak.

**Input Resistance:** 0.1 Meg (at atten. x 1); 0.5 Meg (at atten. x 100).

**Input Capacitance:** 40 uuf (at atten. x 1); 35 uuf (at atten. x 100).

**Sawtooth Sweep Range:** 15 cps to 80 Kc/sec. Size:  $7\frac{7}{8}'' \times 12\frac{1}{4}'' \times 16\frac{1}{8}''$ . Net Wt: 19 lbs. For use on 110 volts, 60 cycles.

Complete with input cable No. 0100 and operator's manual . . . **\$149.95**

Dual Voltage Model for 220/110 volts, 50/60 cycle . . . **\$159.95**

#### Model 2610 WIDE BAND OSCILLOSCOPE

For the 1001 Jobs Where You Don't Need an Expensive Specialized Scope. Vertical sensitivity, 6 mv RMS/in. Vertical calibration accuracy,  $\pm 3\%$ . Response (linear position): DC to

5.0 mc/sec,  $\pm 0.5$  db; DC to 8.0 mc/sec,  $\pm 1.5$  db. Response (transient position): DC to 3.5 mc/sec, -3 db, and -6 db at 5.0 mc/sec. Triggered and recurrent sweeps. Precalibrated triggered sweep positions of 5, 50, 500, 5000 microseconds. Size:  $15'' \times 11\frac{1}{2}'' \times 20\frac{1}{2}''$ . Net Wt. 53 lbs. Power Requirements: Approx. 200 watts at 117.5 v., 50/60 cps. Price **\$575.00**

**WRITE FOR ADDITIONAL SPECIFICATIONS**

#### MODEL 458 COLOR SCOPE

- 7" Cathode Ray Tube.
- Wide band operation, the frequency response is flat within  $\pm 1.0$  db to 4.5 Mc. Faithfully displays COLOR BURST frequency with a sensitivity greater than 40 Mv rms per inch of vertical deflection.
- Narrow band operation, the frequency response is flat within  $\pm 2$  db from 10 cycles to 300 Kc with a sensitivity greater than 15 Mv rms per inch.
- Good square wave response provides accurate representation of sync pulses and composite wave-form pattern for trouble-shooting video, sync, and sweep circuits.
- Horizontal sweep, to 250 Kc, for expansion of high frequency wave-form detail and color burst.
- Vernier and Compensated Decimal Step Attenuator for better signal controls.
- Provision for Intensity Modulation of CRT.
- 1 volt peak calibrating voltage.

**Line Voltage:** 105/125v, 50/60 cycle.

**Size:**  $11'' \times 16\frac{1}{2}'' \times 14\frac{1}{2}''$ . **Weight:** 29 lbs.

Complete with operator's manual . . . **\$249.95**

#### Model 430 COLOR BAR GENERATOR

- 100% Saturated NTSC Signals • Outputs pictured on a single, master control . . . a color print of the signal output is featured at each

position on the master control • Line Voltage 105/125 volts, 60 cycle only.

**Outputs**—Y; chroma; color bar (8 bars simultaneously); R-Y; B-Y; R-Y and B-Y simultaneously; I; Q; I and Q simultaneously; G-Y at  $90^\circ$ ; sync and burst; horizontal sync; high level 3.58 megacycle output; high level modulated rf output; positive or negative video output. 4.5 Megacycle (crystal controlled) marker for proper tuning.

**Chroma Level Switch** — Zero db for checking older style receivers and some current models; -6 db for video checks of newer receivers using vestigial color sideband alignment; -15 db for checking color sync lock under weak signal conditions. Variable chroma control position for other chroma levels.

**Size:**  $19\frac{1}{4}'' \times 17\frac{1}{2}'' \times 14''$ . **Shpg. Wt:** 26 lbs.

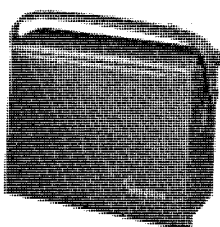
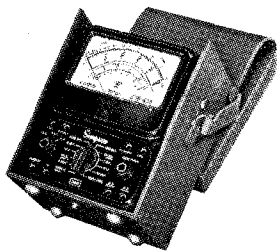
Complete with operator's manual and test leads . . . **\$395.00**

#### MODEL 383A CAPACITOR LEAKAGE TESTER

- Measures the leakage resistance of defective paper, mica, or ceramic capacitors. Indicates directly the capacitance of good paper, mica, or ceramic capacitors over a range of 10.0 mmf to 10.0 mf.

Pulse technique detects many marginal capacitors. All measurements are made under load conditions. No adjusting of a bridge circuit and balancing controls. **Line Voltage:** 105/125 v, 60 cycle only. Complete with test leads and operator's manual . . . **\$99.95**

### CARRYING CASES FOR SIMPSON TEST EQUIPMENT



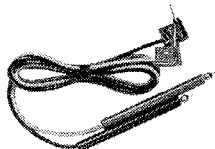
For Models	Cat. No.	Price
260, 261, 270 — Leather	1818	\$8.50
260, 261, 270, 303 — Ever-Redy Leather	4236	9.75
262, 267, 268, 269, 388-3L, 389-3L— Ever-Redy Vinyl	5262	9.95
385-3L — Ever-Redy Leather	8073	8.75
391, 392 — Leatherette-Covered	3413	5.95
355 — Ever-Redy Leather	6355	3.95
All Microtesters — Ever-Redy Leather	4299	7.50
All Microtesters — Leatherette-Covered	3011	5.95
Roll Top Safety Case For 260-2, 9, 10, 880's	6192	9.95
Roll Top Safety Case for 260-3, 261, 270	0249	9.95
Roll Top Safety Case For 303	6379	9.95
1700 Series — Ever-Redy Leather	9808	18.90

WRITE ON LETTERHEAD FOR GENERAL CATALOG 18 — DEPT. V

**SIMPSON ELECTRIC CO. • CHICAGO, ILLINOIS**

# Simpson

## TEST EQUIPMENT ACCESSORIES and METERS



### LEADS

For Models	Cat. No.	Price
260 Series 3, 4, 261, 270 Banana plugs and alligator clip	7500	\$2.10
260 Series 3, 267, 268 Banana plugs and test prods...	7538	2.50
355 Test prods.	8600	1.85
385-3L, 389-3L Free Air Temperature Probe	0789	7.45
385-3L, 389-3L, 15 ft. Thermistor lead	0010	5.50
385-3L, 389-3L, 30 ft. Thermistor lead	0216	6.45
385-3L, 389-3L, 50 ft. Thermistor lead	0415	7.60
385-3L, 389-3L, 100 ft. Thermistor lead	0416	10.40
385-3L, 389-3L, 150 ft. Thermistor Lead	0417	12.90
388-3L Rugged Service Lead (8 ft.)	0496	5.25
388-3L General purpose thermocouple	0190	4.95
388-3L Surface temperature thermocouple (300°F. Max.)	0187	8.90
385-3L, 389-3L Surface temperature probe	0790	5.95
650 Test Lead	7545	1.20
651 Ground Lead	7547	1.20
1704 — 0.26Ω leads for Millivolt Standard; spade lugs both ends	0105	2.95
466, 715 Input cable	0100	2.85
Test prods and elbow terminals 230/240/260-2/372	8381	2.50
Test prods and spade terminals — all microtesters...	8379	2.50
Alligator clips and elbow terminals — 230/240/260-2/372	8375	1.75
Alligator clips and spade terminals — all microtesters	8376	1.75
Combination test prods with removable alligator clips and elbow terminals 262/269	8463	2.30
263, 269-2 Combination test prods with removable alligator clips and elbow terminals	0115	2.30

### PROBES (High Voltage Types) & MULTIPLIERS

For Models	Cat. No.	Price
221 (30,000v)	0009	\$12.55
260 Series 2 (25,000v)	0007	10.75
260 Series 2 (50,000v)	0179	12.50
260 Series 3, 4, 4M, 261, 267, 270 (10,000v).....	0507	10.20
260 Series 3, 4, 4M, 261, 267, 270 (25,000v).....	0508	11.50
260 Series 3, 4, 4M, 261, 267, 270 (50,000v).....	0509	12.50

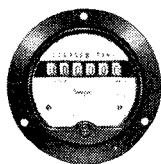
For Models	Cat. No.	Price
262, Series 1 and 2 (16,000v).....	0172	\$11.95
262, Series 1 and 2 (40,000v).....	0180	12.50
263, 30 KV at 10K Ω/V and 15 KV at 20 Ω/V	0141	11.95
267 2500 V DC Multiplier	8568	3.60
267 5000 V DC Multiplier	8569	3.60
267 2500 V AC Multiplier	8570	3.60
267 5000 V AC Multiplier	8571	3.60
267 10,000 V DC	0507	10.20
267 25,000 V DC	0508	11.50
267 50,000 V DC	0509	12.50
268 3000 V DC Multiplier	8572	3.60
268 6000 V DC Multiplier	8573	3.60
268 3000 V AC Multiplier	8574	3.60
268 6000 V AC Multiplier	0004	3.60
268 12,000 V DC	0510	10.95
268 30,000 V DC	0511	10.95
269, Series 1 (16,000v).....	0173	11.95
269, Series 1 (40,000v).....	0181	13.50
269, Series 2 (16,000v).....	0119	11.95
269, Series 2 (40,000v).....	0120	12.95
270 (10,000v)	0507	10.20
270 (25,000v)	0508	11.50
270 (50,000v)	0509	12.50
303 (30,000v)	0074	11.95

### PROBES — Miscellaneous Types

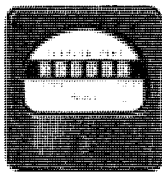
For Models	Cat. No.	Price
303 High frequency	0073	\$8.75
303 AC Probe	0068	3.55
303 DC Probe	0067	3.55
303 Ground lead	0069	1.00
311 High Frequency	0731	11.50
311 High voltage	0732	11.75
311 DC-AC/OHMS	0734	8.50
311 Ground lead	0733	1.25
2610 Low Capacity	0299	17.55
Voltage Doubler	0740	14.65
Low Capacitance	0741	14.00
100:1 Voltage Divider	0742	15.20
Direct Resistive		
Dual Purpose	0743	11.55

### OSCILLOSCOPE PROBE KIT — Model 739

For use with Model 458 Oscilloscope. Includes \*low capacity probe, voltage doubler, detector, 100:1 voltage divider and dual direct—resistive. (isolation)  
Complete with 4 probes, plastic roll, and operator's manual.....\$45.15  
\*For Model 458 only.



Model 55ET



Model 57ET

### 3 1/2" ELAPSED TIME METERS

These meters use self-starting synchronous clock motors. They indicate up to 99999.9, then recycle and begin again at 00000.0. Molded bakelite case.

Range	Model 55 ET	Model 57 ET
120V-60 cps	\$18.85	\$18.85
240V-60 cps	19.15	19.15

### EDGEWISE METERS



Types: Direct Current and AC Rectifier. Accuracy: DC 2% of full scale; AC Rectifier, 3%. Movement: Self-shielded.

#### DC MILLIAMMETERS

Range	Approx. Resistance	Model 1522
0-1	20 ohms	\$14.85
0-5	2.5 ohms	14.85
0-10	13.5 ohms	14.85
0-25	5.4 ohms	15.45
0-50	2.7 ohms	15.45
0-100	1.35 ohms	15.45
0-150	.9 ohms	15.45
0-200	.675 ohms	15.45
0-250	.54 ohms	15.45
0-300	.45 ohms	15.45
0-500	.27 ohms	15.45

#### DC MILLIVOLTMETERS

0-50	10 ohms	\$15.75
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#### VOLUME LEVEL INDICATORS—VU Meters

Range	Model 1542
"A" SCALE	\$24.75
"B" SCALE	24.75

#### AC VOLTMETERS—Rectifier Type

Range	Approx. Resistance	Model 1542
0-150	1000 ohms per volt	\$19.20
0-300		19.20

#### DC VOLTMETERS

Range	Approx. Resistance	Model 1522
0-10	1000 ohms per volt	\$15.00
0-15	1000 ohms per volt	15.00
0-25	1000 ohms per volt	15.00
0-50	1000 ohms per volt	15.00
0-150	1000 ohms per volt	15.00
0-300	1000 ohms per volt	15.00
0-500	2000 ohms per volt	15.15

#### DC AMMETERS

0-1	.050 ohms	\$15.75
0-5	.010 ohms	15.75
0-10	.005 ohms	15.75
0-15	.0033 ohms	15.75
0-25	.002 ohms	15.75
0-50	.001 ohms	15.75

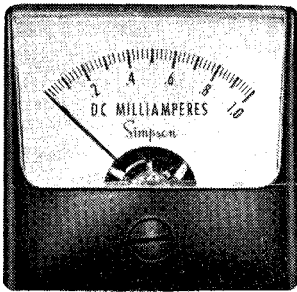
#### DC MICROAMMETERS

0-25	3150 ohms	\$22.20
0-50	1800 ohms	19.50
0-100	1100 ohms	17.40
0-200	290 ohms	15.75
0-500	90 ohms	15.30

# Simpson

## 1 1/2", 2 1/2", 3 1/2", 4 1/2" WIDE-VUE PANEL METERS

All Prices Net



### WIDE-VUE SPECIFICATIONS

Size	Model No.	Accuracy	Scale Length
1 1/2"	1212	±2% of full scale	1.5"
	1214	±3% F. S. @ 25°C. & 60 cy. Sine Wave	@ 90° Arc (38.1 mm)
2 1/2"	1227	±2% of full scale	2.5"
	1257	±2% of full scale	(63.8 mm)
3 1/2"	1327	±2% of full scale	3.04"
	1337	±2% of full scale	
	1347	±3% F. S. @ 25°C. & 60 cy. Sine Wave	(77.2 mm)
	1357	±2% of full scale	
4 1/2"	1329	±2% of full scale	3.93"
	1339	±2% of full scale	
	1349	±3% F. S. @ 25°C. & 60 cy. Sine Wave	
	1359	±2% of full scale	(100 mm)

**CALIBRATION AND DIALS**—All DC Wide-Vue meters listed below have the Simpson self-shielded movement (Calibration not affected by stray magnetic fields or magnetic mounting). All AC Wide-Vue meters have the Simpson Iron-vane type movement. AC Milliammeters and Ammeters, except 0-10 amps, are calibrated for use on 25 through 800 cps; 0-10 AC Ammeters and all AC Voltmeters are calibrated for use on 25 through 125 cps. For other specified frequencies up to 800 cps add \$1.65 to the list price.

### DC VOLTMETERS — Self-Shielded Movement

Range	Resistance	1 1/2" Model 1212	2 1/2" Model 1227	3 1/2" Model 1327	4 1/2" Model 1329
0-5		\$12.75	\$13.80	\$14.25	\$15.75
0-8		—	—	14.25	15.75
0-10		12.75	13.80	14.25	15.75
0-15		12.75	13.80	14.25	15.75
0-25	1000	12.75	13.80	14.25	15.75
0-30	ohms	12.75	13.80	14.25	15.75
0-50	Per	12.75	13.80	14.25	15.75
0-100	volt	12.75	13.80	14.25	15.75
0-150		12.75	13.80	14.25	15.75
0-200		—	13.80	14.25	15.75
0-250		—	13.80	14.25	15.75
0-300		—	13.80	14.25	15.75
0-300	2000	12.75	—	—	—
0-500	ohms	16.05	14.25	15.00	16.20
0-750	per	—	17.55	15.00	16.20
0-1000	volt	—	17.85	18.60	19.80

External Multipliers, Model 183 on 1 1/2" DC meters 500 volts or higher; on 2 1/2" DC meters 750 volts or higher; and on 3 1/2" and 4 1/2" DC meters 1000 volts or higher. All others are self contained.

### DC AMMETERS — Self-Shielded Movement

Range	Resistance	1 1/2" Model 1212	2 1/2" Model 1227	3 1/2" Model 1327	4 1/2" Model 1329
0-1	.050	\$12.75	\$13.05	\$13.65	\$15.00
0-1.5	.033	—	13.05	13.65	15.00
0-2	.025	12.75	13.05	13.65	15.00
0-3	.0166	12.75	13.05	13.65	15.00
0-5	.010	12.75	13.05	13.65	15.00
0-10	.005	12.75	13.05	13.65	15.00
0-15	.0033	12.75	13.05	13.65	15.00
0-25	.0020	12.75	13.05	13.65	15.00
0-30	.0017	—	13.05	13.65	15.00
0-50	.001	12.75	13.05	13.65	15.00
0-100	10.0	—	13.05	13.65	15.00
0-150	10.0	—	13.05	13.65	15.00
0-200	10.0	—	13.05	13.65	15.00
0-300	10.0	—	13.05	13.65	15.00
0-500	10.0	—	—	13.65	15.00
15-0-15	.0033	—	—	14.55	—
30-0-30	.0017	—	—	14.55	—
50-0-50	.001	—	—	14.55	—

1 1/2" DC Ammeters are self contained through 10 amps. 15 Amps and higher are supplied as 50 MV meters to be used with external shunts. 2 1/2", 3 1/2" and 4 1/2" DC ammeters are self contained through 50 amps. Higher range DC ammeters are 50 MV meters to be used with external shunts.

### DC MILLIAMMETERS — Self-Shielded Movement

Range	Resistance	1 1/2" Model 1212	2 1/2" Model 1227	3 1/2" Model 1327	4 1/2" Model 1329
0-1	46	\$12.30	\$12.90	\$13.50	\$14.25
0-3	46	—	12.90	13.50	14.25
0-5	23	12.30	12.90	13.50	14.25
0-10	2.2	12.30	12.90	13.50	14.25
0-15	2.2	12.30	12.90	13.50	14.25
0-20	2.2	—	12.90	13.50	14.25
0-25	6.0	12.75	13.20	13.80	15.00
0-50	3.0	12.75	13.20	13.80	15.00
0-100	1.5	12.75	13.20	13.80	15.00
0-150	1.0	12.75	13.20	13.80	15.00

### DC MILLIAMMETERS (Continued)

Range	(ohms) Approx. Resistance	1 1/2" Model 1212	2 1/2" Model 1227	3 1/2" Model 1327	4 1/2" Model 1329
0-200	.75	12.75	13.20	13.80	15.00
0-250	.60	12.75	13.20	13.80	15.00
0-300	.50	12.75	13.20	13.80	15.00
0-500	.30	12.90	13.20	13.80	15.00
0-750	.20	—	—	13.80	15.00
0-1000	.05	—	13.20	13.80	15.00

### DC MICROAMMETERS Self-Shielded Movement

Range	(ohms) Approx. Resistance	1 1/2" Model 1212	2 1/2" Model 1227	3 1/2" Model 1327	4 1/2" Model 1329
0-15	4500	—	—	\$22.50	\$24.60
0-25	2200	—	\$19.20	20.10	22.20
0-50±	2000	\$16.20	16.65	17.10	18.45
0-100	2000	14.40	15.00	15.60	17.40
0-200	1000	13.05	13.65	14.25	15.75
0-500	200	12.80	13.50	13.95	15.15
25-0-25	2000	16.35	—	17.25	18.60
50-0-50	2000	14.55	15.15	15.75	17.55
100-0-100	1000	13.20	13.80	14.40	15.90
500-0-500	46	12.45	13.05	13.65	14.40

### DC MILLIVOLTMETERS Self-Shielded Movement

Range	(ohms) Approx. Resistance	1 1/2" Model 1212	2 1/2" Model 1227	3 1/2" Model 1327	4 1/2" Model 1329
0-50	10	\$12.75	\$13.05	\$13.65	\$15.00
50-0-50	10	—	—	13.65	15.00

Simpson VC meters meet all the Electrical and Ballistic specifications established by Bell Laboratories and American Standards Association as required by broadcasting, communication and sound engineers. They are available with either type A or B scales. Type A scale stresses the level in VC for monitoring wire lines. Type B scale stresses per cent use of transmitter output and is the standard for broadcast service.

### VOLUME LEVEL INDICATORS; DECIBEL METERS

Zero Power Level—6 MW. 500 Ohm Line—Core Magnet Type Movement

Range	1 1/2" Model 1214	2 1/2" Model 1247	3 1/2" Model 1347	4 1/2" Model 1349
General-Purpose				
5000 ohms	—	\$18.35	\$19.60	\$20.25

### VOLUME LEVEL INDICATORS—V. U. METERS

Reference Level—1 MW. 600 Ohms Line. External Magnet Type Movement except Model 1214C which is core magnet type movement.

Range	1 1/2" Model 1214	2 1/2" Model 1247	3 1/2" Model 1347	4 1/2" Model 1349
A—Scale	\$19.80	\$21.90	\$22.50	\$23.70
B—Scale	—	—	22.50	23.70

### DC GALVANOMETERS Self-Shielded Movement

Scale	Sensitivity Micro-Amperes	Resist- ance (ohms)	1 1/2" Model 1212C	2 1/2" Model 1227C	3 1/2" Model 1327C	4 1/2" Model 1329C
50-0-50	500-0-500.	46	\$12.45	\$12.90	\$13.65	\$14.40
50-0-50	75-0-75	2000	13.20	13.95	15.15	16.65

### RF AMMETERS — Self-Shielded Movement

Range Amperes	(ohms) Approx. Resistance	1 1/2" Model 1212	2 1/2" Model 1237	3 1/2" Model 1337	4 1/2" Model 1339
0-1	.343	—	—	\$15.90	\$18.15
0-1.5	.200	—	—	15.90	18.15
0-2	.120	—	—	15.90	18.15

### RF AMMETERS (Continued)

0-2.5	.10	—	—	15.90	18.15
0-3	.08	—	—	15.90	18.15
0-5	.045	—	—	15.90	18.15
0-8	.031	—	—	15.90	18.15
0-10	.023	—	—	15.90	18.15

### RF MILLIAMMETERS

0-500	.63	—	—	\$18.75	\$21.15
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### AC VOLTMETERS—Iron Vane Type Movement

Range	(ohms) Approx. Resistance	1 1/2" Model 1257	2 1/2" Model 1357	3 1/2" Model 1357	4 1/2" Model 1359
0-5	33	—	—	\$12.60	\$14.40
0-10	133	\$12.30	12.60	12.60	14.40
0-15	300	12.30	12.60	12.60	14.40
0-25	833	12.45	13.05	13.05	14.40
0-50	3,333	12.45	13.05	13.05	14.40
0-100	16,666	12.75	13.65	13.65	14.40
0-150	25,000	13.05	13.95	13.95	15.00
0-250	41,166	13.05	13.95	13.95	15.00
0-300	50,000	13.05	13.95	13.95	15.00
0-500	83,333	16.65	17.85	17.85	19.05

External Multipliers, Model 183 (Featured on back page) are furnished on AC meters having a range of 500 volts or higher. All others are self contained.

### AC AMMETERS—Iron Vane Type Movement

Range	(ohms) Approx. Resistance	1 1/2" Model 1257	2 1/2" Model 1357	3 1/2" Model 1357	4 1/2" Model 1359
0-1	.287	\$11.70	\$12.45	\$12.45	\$14.55
0-1.5	.185	11.70	12.45	12.45	14.55
0-2	.115	—	12.45	12.45	14.55
0-3	.027	11.70	12.45	12.45	14.55
0-5	.012	11.70	12.45	12.45	14.55
0-10	.0031	11.70	12.45	12.45	14.55
0-15	.0022	11.70	12.45	12.45	14.55
0-25	.0003	12.30	12.90	12.90	15.00
0-30	.0003	12.30	12.90	12.90	15.00
0-50	.0006	12.30	12.90	12.90	15.00
0-75	.012	—	13.05	13.95	—
0-100	.012	11.70	12.45	12.45	14.55
0-150	.012	11.70	12.45	12.45	14.55
0-200	.012	11.70	12.45	12.45	14.55
0-300	.012	11.70	12.45	12.45	14.55

2 1/2" AC ammeters are self contained through 50 amps. 3 1/2" and 4 1/2" AC ammeters self contained through 75 amps. Higher range AC ammeters are 5 amp meters to be used with external current transformer.

### AC MILLIAMMETERS — Iron Vane Movement

0-10	2,000	\$11.70	\$12.45	\$14.55
0-50	80	11.70	12.45	14.55
0-100	20	11.70	12.45	14.55
0-250	5	11.70	12.45	14.55
0-500	.9	11.70	12.45	14.55

### AC VOLTMETERS—RECTIFIER TYPE Self-Shielded Movement

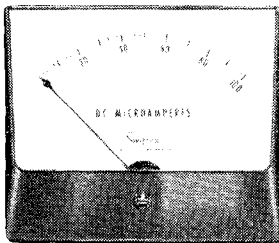
Range Volts	Resistance	1 1/2" Model 1214	2 1/2" Model 1247	3 1/2" Model 1347	4 1/2" Model 1349
0-5		\$17.70	\$16.50	\$18.30	\$20.10
0-10	1000	17.70	16.50	18.30	20.10
0-15	ohms	—	—	18.30	20.10
0-50	per	—	—	18.30	20.10
0-150	volt	17.70	16.50	18.30	20.10
0-300	2000	—	16.50	18.30	20.10
0-150	ohms per volt	—	—	19.05	20.85
0-300	ohms per volt				

# Simpson

## METERS and METER RELAYS

All Prices Net

### NEW WIDE-VUE METERS—TAUT BAND and WATTMETERS



#### TAUT BAND — DC MICROAMMETERS

##### Self-Shielded TAUT BAND Movement

Range	Resistance	1½" Model 1212T	2½" Model 1227T	3½" Model 1327T	4½" Model 1329T
10	4900	—	\$30.00	\$31.20	\$33.60
15	1960	—	27.30	28.20	30.60
25	1960	—	23.40	24.30	26.40
50	960	—	20.55	21.00	22.65
100	503	—	18.90	19.50	21.30

NOTE: Wattmeters calibrated for either magnetic or nonmagnetic panels and for frequency range of 25-125 cycles.

#### WATTMETERS, Dynamometer Type,

##### Single Phase

Watts	Range Volts	Max. Amps	2½" Model 1277	3½" Model 1377	4½" Model 1379
0-75	150	1.0	—	—	\$34.92
0-150	150	2.0	—	—	34.92
0-300	150	4.0	—	—	34.92
0-750	150	10.0	—	—	34.92
0-600	300	4.0	—	—	37.47
0-1500	300	10.0	—	—	37.47
0-3000	300	20.0	—	—	37.47

##### Compensated Wattmeters

Range	Max. Amps	Price
0-10	300	0.175
0-20	300	0.400
0-30	300	0.650

### NEW CONTACTLESS METER RELAYS — Self-Contained, 3½"



#### RUGGED SEAL CONSTRUCTION

Set points are adjusted thru external, front-adjusted gear drive. Set point is indicated by separate lance pointers. Sensing is accomplished thru an infinite life lamp and photo-conductors. A solid state switching circuit and D.P.D.T. slave relay are provided (internally

for each control point. Slave relays will switch 10 amperes @ 115 volts A.C.

#### ELECTRICAL SPECIFICATIONS

**Calibration Accuracy:** ±2% of full scale.

**Control Point Adjustment:** Control points are externally adjustable over 95% of the scale arc. Control point indication is within 2% of actual switching.

**Control Point Differential:** Difference between "on" and "off" is within .5% of full scale.

**Power Requirements:** 115 Volts A.C.; 50-500 CPS.

**Output:** D.P.D.T. relay contacts for each control point. Contacts rated @ 10 amperes, 115 volts A.C. resistive.

**Meter Indication:** Continuous, unaffected by control point setting.

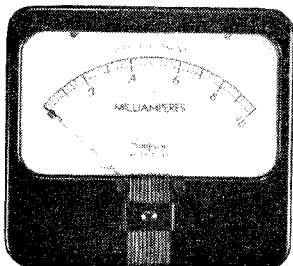
**Control Circuitry:** Fail-safe. Both slave relays "open" in event of power failure.

#### CONTACTLESS TYPE — MODEL 3324XA

##### SINGLE CONTROL DOUBLE CONTROL

Range	Approx. Ohms	Price	Price
0-50	3000	\$90.00	\$123.90
0-100	1300	87.30	121.50
0-200	570	87.30	121.20
0-500	220	87.30	121.20
0-1	80	86.40	120.30
0-50	10	86.70	120.75

### 4½" METER RELAY — FRONT ADJUSTABLE — MODEL 29XA



**General:** Model 29XA Relays are of the D'Arsonval Type. Externally adjusted limit setting contacts are non-locking and intended for circuits with external locking provisions or for light duty non-locking applications.

**Calibration:** Accuracies ±2% of full scale.

**Contacts:** Platinum Alloy. For use @ 15 volts DC @ 10 milliamperes maximum on resistive or diode protected inductive loads.

**Contact Adjustment:** Contacts are externally adjustable over 95° of 100° scale arc, and within 5° of each other. The pointer will indicate the contact make position within 2° of actual contact intercept.

**Contact Differential:** Normally, contacts will close within 2% of full scale value and break within 10% of full scale value.

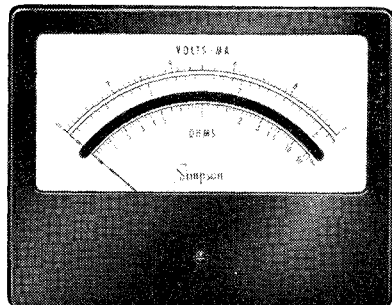
**Insulation:** Breakdown 300 volts AC from Relay contacts to meter circuit. 3 KV AC from Relay terminals to mounting panel. (All Tests at 60 cycles.)

Range	Description	Approx. Resistance (ohms)	Price
0-50	DC Microammeter	2500	\$44.10
0-100	DC Microammeter	1800	42.15
0-200	DC Microammeter	1000	39.60
0-500	DC Microammeter	280	39.00
0-1	DC Milliammeter	140	38.10
0-50	DC Millivoltmeter	10	38.25

### 1% AND 2% PANEL METERS — 6" SIZE

Red knife-edge pointers; ¼-28 studs; front surface glass mirrors on 1% meters; molded black phenolic case; scale length, 4.6" (114.8 mm).

#### 6 INCH RECTANGULAR PANEL METERS — 1% & 2% tolerance



Range	Approx. Resist.	DC Volt-meters <sup>1</sup> Model 1150E, 2% Resist. (ohms)	DC Millivolt-meters <sup>1</sup> Model 1150E, 2% Resist. (ohms)	DC Am-meters <sup>1</sup> Model 1150E, 2%	Range	Approx. Resist.	DC Milli-ammeters <sup>1</sup> Model 1150E, 2% Resist. (ohms)	DC Micro-ammeters <sup>2</sup> Model 1150H-1, 1% Resist. (ohms)
0-1	—	—	.050	\$19.65	0-1	46	\$18.90	\$23.85
0-5	—	—	.010	19.65	0-10	10	18.90	—
0-10	—	—	.005	19.65	0-15	—	—	5500
0-15	—	—	.0033	19.65	0-25	—	—	5500
0-25	1000	18.90	.0020	19.65	0-50	2.0	18.90	5000
0-30	OHMS	—	.0016	19.65	0-100	1.0	18.90	23.85
0-100	PER VOLT	18.90	.001	19.65	0-200	—	—	1200
0-150	—	18.90	—	—	0-500	.2	18.90	23.85
0-200	—	—	—	—				200
0-300	—	18.90	—	—				19.80
0-500	2000 Ω/V	19.50	—	—				—

<sup>1</sup>All ranges 1-5/16" shallow core movement.

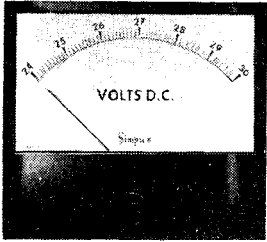
<sup>2</sup>Ranges 15 through 100 use high flux movements designated as Model 1150H and cannot be calibrated for use on steel panels. Ranges 200 through 500 use 1-5/16" shallow core movement designated as 1150E.

<sup>†</sup>Supplied as Model 1150E which has 1-5/16" shallow core meter movement. Ranges listed without prices (—) are available on special order only.

WRITE ON LETTERHEAD FOR GENERAL CATALOG 18 — DEPT. V  
**SIMPSON ELECTRIC CO. • CHICAGO, ILLINOIS**

# Simpson "RUGGED SEAL" and SEGMENTAL VOLTMETERS

## NEW "RUGGED SEAL" METERS—3½", 4½", 4" x 6" (Sq. and Rect.)



Completely sealed and commercially ruggedized. Metal cased and shielded. Not affected by steel panel mounting. DC meters have ±2% F.S. accuracy; AC meters, ±2% F.S. at 25°C and 60-cycle sine wave. Scale lengths: 3½" meter, 2.9" (74 mm); 4½" meter, 3.9" (101 mm); 4" x 6" meter, 4.7" (120 mm).

Movement is external magnet type shielded by metal case. All AC meters are rectifier type, and maintain accuracy from 25 to 2000 cps (except AC ammeter, 50 to 500 cps).

Range	Approx. Resist.	3½" Model 3323	4½" Model 3324	4"x6" Model 3326
0-1.5		\$17.10	\$18.60	\$20.40
0-10	(1000 ohms)	17.10	18.60	20.40
0-15	ohms	17.10	18.60	20.40
0-25	per volt	17.10	18.60	20.40
0-50		17.10	18.60	20.40
0-100		17.10	18.60	20.40
0-500		17.10	18.60	20.40

Range	(inf. shunt 75 mv. max.)	\$17.40	\$18.90	\$21.00
0-5				
0-10		17.40	18.90	21.00

Range	80 ohms	\$16.50	\$18.00	\$19.95
0-1				
0-100	0.5 ohms	17.40	18.90	21.00

Range	3000 ohms	\$22.20	\$23.70	\$25.95
0-50				
0-100	3000 ohms	20.10	21.60	24.00

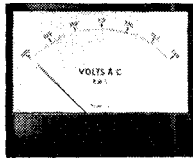
Range	Approx. Resist.	3½" Model 3343	4½" Model 3344	4"x6" Model 3346
0-150	(1000 ohms per volt)	\$20.70	\$21.90	\$24.00
0-300		20.70	21.90	24.00

Range	(int. Trans. Burden, 0.5 VA Max.)	\$25.80	\$27.00	\$29.10
0-1				
0-5		25.80	27.00	29.10

Range	600 ohms	\$20.40	\$21.60	\$23.40
0-1				

Range	400 ohms	\$21.60	\$22.50	\$24.60
0-100				

## SEGMENTAL VOLTMETERS — "Rugged Seal" Construction



The significant portion of the overall voltage scale of these meters is expanded to occupy the full scale length. In addition to the stock expansions and accuracies shown, special segmental voltmeters can be built on order.

Meters are completely sealed and commercially ruggedized; metal cased and shielded; and are not affected by mounting on steel panels. Movement is external magnet type shielded by the metal case.

Accuracies shown are in percent of center scale value.

All of these AC segmental voltmeters are the RMS sensing type which are preferred when working with distorted waveforms.

### AC VOLTMETERS, RMS SENSING, RECTIFIER (ROUND)

Center Scale Value — 115 V

Range	Sensitivity	Accuracy	2½" Model 3282	3½" Model 3283	4½" Model 3284
100-130	50 opv	1.0%	\$70.00	\$64.50	\$71.50
105-125	65 opv	0.6%	70.00	64.50	71.50
110-120	80 opv	0.3%	70.00	64.50	71.50

Range	Center Scale Value	Accuracy	2½" Model 3222	3½" Model 3223	4½" Model 3224
24-30	27 V	0.6%	\$74.50	\$68.50	\$76.00

Range cps	Center Scale cps	Accuracy	.....	3½" Model 3283	4½" Model 3284
57-63	60	0.25%	.....	\$152.50	\$159.50
380-420	400	0.25%	.....	152.50	159.50

### AC VOLTMETERS, RMS SENSING, RECTIFIER (RECTANGULAR)

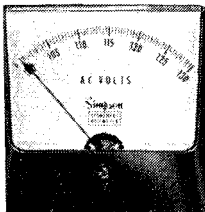
Center Scale Value — 115 V

Range	Sensitivity	Accuracy	3½" Model 3383	4½" Model 3384	4"x6" Model 3386
100-130	50 opv	1.0%	\$59.00	\$65.00	\$69.50
105-125	65 opv	0.6%	59.00	65.00	69.50
110-120	80 opv	0.3%	59.00	65.00	69.50

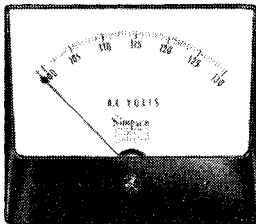
Range	Center Scale Value	Accuracy	3½" Model 3323	4½" Model 3324	4"x6" Model 3326
24-30	27 V	0.6%	\$49.20	\$55.20	\$59.40

Range cps	Center Scale cps	Accuracy	3½" Model 3383	4½" Model 3384	4"x6" Model 3386
57-63	60	0.25%	\$148.25	\$153.00	\$157.50
380-420	400	0.25%	148.25	153.00	157.50

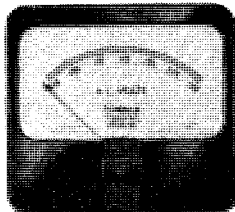
## SEGMENT VOLTMETERS (Average Sensing) 100-130 AC Volts



3½" Model 1347 Wide-View



4½" Model 1349 Wide-View



4½" Model 49 Rectangular

Size	WIDE-VUE		RECTANGULAR	
	(Single Range) Model	(Multi-Range) Price	Model	Price (Single Range)
3½"	1347	\$40.80	—	—
4½"	1349	40.95	1349	\$50.60

Simpson Segmental AC Voltmeters improve meter accuracy and readability over most conventional type meters. Used primarily in monitoring line voltage, these segmental Voltmeters increase the efficiency, reliability and life of costly components.

MODEL NO.	1347	1349	49
Scale Length	3.14" (79.7 mm)	3.93" (100 mm)	3.5" (89.0 mm)
Operating Frequency Range	20-2000 cps		
Accuracy	±.5% of Center scale value at 25°C and 60 cps sine wave		
Movement Type	Core Magnet Meter Movement		
Frequency Influence	Less than 0.5% of Center scale value for temperature range of ±20° from 25°C.		
Sensitivity	160 to 100 ohms/volt end scale values. Sensitivity decreases as input voltage increases.		
Intermittent Input Voltage (max.)	150 volt RMS for 10 seconds		

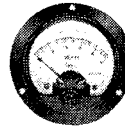
WRITE ON LETTERHEAD FOR GENERAL CATALOG 18 — DEPT. V

**SIMPSON ELECTRIC CO. • CHICAGO, ILLINOIS**

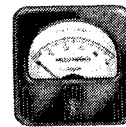
# Simpson

## 2 1/2, 3 1/2, 4 1/2 ROUND AND RECTANGULAR PANEL METERS

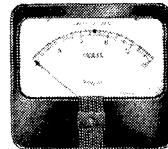
All Prices Net



2 1/2" Models 125, 135, 145, 155, 175  
3 1/2" Models 25, 35, 45, 55, 75



2 1/2" Models 127, 137, 147, 157, 177  
3 1/2" Models 27, 37, 47, 57, 77



4 1/2" Models 29, 39, 49, 59, 79, 142

ACCURACY: DC METERS OR AC IRON VANE TYPE METERS ±2% OF FULL SCALE; RECTIFIER TYPE ±3% OF FULL SCALE @ 25°C. AND 60 CYCLE SINE WAVE.

All meters listed below, except wattmeters, have the Simpson external magnet meter movement, calibrated for non-magnet panel. When ordering these meters for use on steel panels, state panel thickness and add 1.65 to price shown below for re-calibration. Wattmeters listed below have the Simpson dynamometer movement calibrated for either magnetic or non-magnetic panels and for a frequency range of 25—125 cycles.

Range	Ohms	2 1/2" Models 145/147	3 1/2" Models 45/47	4 1/2" Model 49
0-1	—	—	18.75	20.55
0-3	—	—	18.75	20.55
0-5	—	—	18.75	20.55
0-10	2000	—	18.75	20.55
0-15	ohms	—	18.75	20.55
0-50	per volt	—	18.75	20.55
0-100	—	—	18.75	20.55
0-150	—	—	18.75	20.55
0-300	—	—	18.75	20.55

Range	Ohms	2 1/2" Models 145/147	3 1/2" Models 45/47	4 1/2" Model 49
0-1	600	—	18.00	19.50
0-2	400	—	18.00	19.50
0-5	200	—	18.00	19.50

Range	Ohms	2 1/2" Models 145/147	3 1/2" Models 45/47	4 1/2" Model 49
0-100	3400	—	20.55	22.05
0-200	2400	—	18.15	19.80
0-300	1800	—	18.00	19.50
0-500	1200	—	17.70	19.20

Range	Approx. Resistance	2 1/2" Models 155/157	3 1/2" Models 55/57	4 1/2" Model 59
0-1.5	3 ohms	\$11.70	\$12.45	\$14.10
0-3	12	11.70	12.45	14.10
0-5	33	11.70	12.45	14.10
0-10	133	11.70	12.45	14.10
0-15	300	11.70	12.45	14.10
0-25	833	12.15	12.75	14.10
0-50	3,333	12.15	12.75	14.10
0-100	16,666	13.20	13.80	14.70
0-150	25,000	12.90	13.65	14.85
0-250	41,166	12.90	13.65	14.85
0-300	50,000	12.90	13.65	14.85
0-500	83,333	17.40	17.70	18.30
0-750	125,000	19.20	19.35	20.10
0-1000	166,666	20.70	20.85	21.75

Range	Approx. Resistance	2 1/2" Models 145/147	3 1/2" Models 45/47	4 1/2" Model 49
†0-1	.287	\$11.55	\$12.15	\$14.40
†0-1.5	.185	11.55	12.15	14.40
†0-2	.115	11.55	12.15	14.40
†0-3	.027	11.55	12.15	14.40
†0-5	.012	11.55	12.15	14.40
†0-10	.003	11.55	12.15	14.40
†0-15	.0022	11.55	12.15	14.40
†0-25	.0003	11.85	12.45	15.00
†0-30	.0003	11.85	12.45	15.00
†0-50	.0006	11.85	12.45	15.00
0-75	.012	11.55	12.15	14.40
†0-75	.012	—	13.20	14.55
0-100	.012	11.55	12.15	14.40
0-150	.012	11.55	12.15	14.40
0-200	.012	11.55	12.15	14.40
0-250	.012	11.55	12.15	14.40
0-300	.012	11.55	12.15	14.40
0-500	.012	11.55	12.15	14.40

Range	Ohms	2 1/2" Models 145/147	3 1/2" Models 45/47	4 1/2" Model 49
0-10	2,000 ohms	\$11.55	\$12.15	\$14.40
0-15	875	11.55	12.15	14.40
0-25	390	11.55	12.15	14.40
0-50	80	11.55	12.15	14.40
0-100	20	11.55	12.15	14.40
0-250	5	11.55	12.15	14.40
0-500	.9	11.55	12.15	14.40

External Magnet Meter Movement				
Range	(ohms) Approx. Resistance	2 1/2" Models 125/127	3 1/2" Models 25/27	4 1/2" Model 29
0-1.5	1000	\$13.05	\$13.50	\$14.85
0-3	1000	13.05	13.50	14.85
0-5	1000	13.05	13.50	14.85
0-8	1000	13.05	13.50	14.85
0-10	1000	13.05	13.50	14.85
0-15	1000	13.05	13.50	14.85
0-25	1000	13.05	13.50	14.85
0-30	1000	13.05	13.50	14.85
0-50	1000	13.05	13.50	14.85
0-100	1000	13.05	13.50	14.85
0-150	1000	13.05	13.50	14.85
0-200	1000	13.05	13.50	14.85
0-250	1000	13.05	13.50	14.85
0-300	1000	13.05	13.50	14.85
0-500	2000	13.80	14.10	15.30
0-750	2000	16.65	14.10	15.30
0-1000	2000	16.95	17.55	19.20
0-1500	2000	—	17.85	19.50
0-2000	2000	17.55	18.15	19.80
0-2500	2000	—	18.45	20.10
0-3000	2000	18.15	18.75	20.40
0-4000	2000	—	19.05	20.70
0-5000	2000	—	19.35	21.00

External Magnet Meter Movement				
Range	Ohms	2 1/2" Models 125/127	3 1/2" Models 25/27	4 1/2" Model 29
0-1	46	\$12.15	\$12.75	\$13.95
0-1.5	46	12.15	12.75	13.95
0-3	46	12.15	12.75	13.95
0-5	23	12.15	12.75	13.95
0-10	2.2	12.15	12.75	13.95
0-15	2.2	12.15	12.75	13.95
0-20	2.2	12.15	12.75	13.95
0-25	6.0	12.90	13.35	14.85
0-50	3.0	12.90	13.35	14.85
0-75	2.0	12.90	13.35	14.85
0-100	1.5	12.90	13.35	14.85
0-150	1.0	12.90	13.35	14.85
0-200	.75	12.90	13.35	14.85
0-250	.60	12.90	13.35	14.85
0-300	.50	12.90	13.35	14.85
0-500	.30	12.90	13.35	14.85
0-750	.20	12.90	13.35	14.85
0-1000	.05	12.90	13.35	14.85

0-1	.050	\$12.90	\$13.35	\$14.70
0-1.5	.033	12.90	13.35	14.70
0-2	.025	12.90	13.35	14.70
0-3	.0166	12.90	13.35	14.70
0-5	.010	12.90	13.35	14.70
0-10	.005	12.90	13.35	14.70
0-15	.0033	12.90	13.35	14.70
0-25	.0020	12.90	13.35	14.70
0-30	.0017	12.90	13.35	14.70
0-50	.001	12.90	13.35	14.70
0-75	10.0	12.45	12.90	14.40
0-100	10.0	12.45	12.90	14.40
0-150	10.0	12.45	12.90	14.40
0-200	10.0	12.45	12.90	14.40
0-250	10.0	12.45	12.90	14.40
0-300	10.0	12.45	12.90	14.40
0-500	10.0	12.45	12.90	14.40
0-750	10.0	12.45	12.90	14.40
0-1000	10.0	12.45	12.90	14.40
15-0-15	.0033	13.20	13.65	15.15
30-0-30	.0017	13.20	13.65	15.15
50-0-50	.001	13.20	13.65	15.15

0-15*	4500	—	\$22.95	\$25.05
0-25†	2200	\$19.65	20.55	22.65
0-50	2000	17.10	17.55	18.90
0-100	2000	14.85	15.45	17.25
0-200	1000	13.20	13.95	15.45
0-500	200	12.75	13.35	14.85
25-0-25	2000	17.35	17.70	19.05
50-0-50	2000	15.00	15.60	17.40
100-0-100	1000	12.90	14.10	15.75
500-0-500	46	12.30	12.90	14.10

0-50	10	\$12.45	\$12.90	\$14.40
0-100	20	12.45	12.90	14.40

Range	Approx. Resistance	2 1/2" Model 135/137	3 1/2" Model 35/37	4 1/2" Model 39
0-1	.343 ohms	\$14.10	\$15.00	\$17.25
0-1.5	.200	14.10	15.00	17.25
0-2	.120	14.10	15.00	17.25
0-2.5	.10	14.10	15.00	17.25
0-3	.08	14.10	15.00	17.25
0-5	.045	14.10	15.00	17.25
0-8	.031	14.10	15.00	17.25
0-10	.023	14.10	15.00	17.25

†0-115	4.0 ohms	—	28.35	29.85
0-150	4.5	—	18.00	20.40
0-250	3.5	—	18.00	20.40
0-500	.63	—	18.00	20.40

Zero Power Level — 6 MW 500 Ohm Line				
Range	2 1/2" Models 145/147	3 1/2" Models 45/47	4 1/2" Model 49	
General Purpose Type	—	—	—	—
-10 to +6 db 5000 ohms	\$18.30	\$18.45	\$20.10	
High Speed Type	—	20.40	21.75	
-10 to +6 db 5000 ohms	—	—	20.25	21.15
Low Speed Type	—	—	—	—
-10 to +6 db 5000 ohms	—	—	—	—

Reference Level — 1 MW 600 Ohm Line				
Range	Scale	2 1/2" Models 145/147	3 1/2" Models 45/47	4 1/2" Model 142
†"A" Scale; Not Illuminated	—	\$22.35	\$24.15	
†"B" Scale; Not Illuminated	—	22.35	24.15	
†"A" Scale; Illuminated	—	—	26.70	
†"B" Scale; Illuminated	—	—	26.70	

Single Phase						
Range	Watts	Max. Volts	Max. Amps.	2 1/2" Model 175/177	3 1/2" Model 75/77	4 1/2" Model 79
0-70	150	1.0	—	\$26.25	\$27.60	\$33.90
0-150	150	2.0	—	26.25	27.60	33.90
0-300	150	4.0	—	26.25	27.60	33.90
0-750	150	10.0	—	26.25	27.50	33.90
0-600	300	4.0	—	28.65	30.00	36.45
0-1500	300	10.0	—	28.65	30.00	36.45
0-3000	300	20.0	—	28.65	30.00	36.45

0-10	300	.175	—	44.10	45.75
0-20	300	.400	—	44.10	45.75
0-20	500	.175	—	44.10	45.75
0-30	300	.650	—	44.10	45.75
0-30	500	.300	—	44.10	45.75
0-50	500	1.25	—	44.10	45.75

Scale	Sensitivity Micro-Amperes	Res. Ohms	2 1/2" Models 125/127	3 1/2" Models 25/27	4 1/2" Model 29
50-0-50	75-0-75	2000	13.65	15.00	15.45
50-0-50	500-0-500	46	\$12.75	\$13.20	\$14.85

†AC ammeters are self-contained. Higher range AC ammeters can be supplied with external current transformers and include 2 foot leads. External current transformers should be ordered separately. DC ammeters are self-contained for ranges up to and including 50 amperes. Higher range DC ammeters (50MW) listed above can be supplied with external shunts and include 5 foot leads. \*These meters use the HI Flux magnet and cannot be recalibrated for use on steel panels. ‡The Model 29 meters in this range use the HI Flux magnet and cannot be recalibrated for use on steel panels.



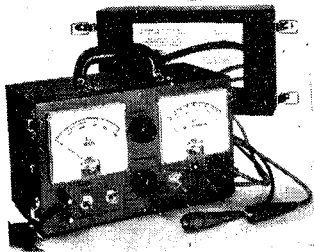
# Insulation Testers

WRITE FOR DATA SHEETS ON THE INSTRUMENTS SHOWN . . . ALL ARE STANDARD PRODUCTION MODELS, AVAILABLE FOR IMMEDIATE DELIVERY FROM STOCK . . . LET US QUOTE ON YOUR REQUIREMENTS FOR MODIFIED UNITS OR SPECIAL TEST EQUIPMENT.

**SLAUGHTER CO.**  
ARDMORE, OKLA.

## High-voltage Leakage Tester

checks insulation for...leakage  
...grounds  
....arcing



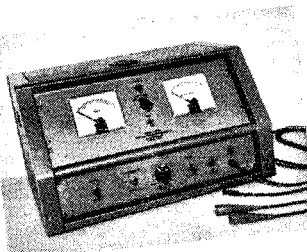
MODEL  
**122**

16 lb. Portable  
for lab and  
field work

VARIABLE VOLTAGE RATINGS TO 5 KV  
AC & DC. DUAL RANGE LEAKAGE METER  
0/100/1000 $\mu$ a . . . CAPACITY COMPEN-  
SATION. . . MEASURES INSULATION RES-  
ISTANCE, CAPACITY, POWER FACTOR.

## Automatic H-V Insulation Tester

for precision checking...breakdowns  
...leakage  
...grounds



MODEL  
**103-MP**

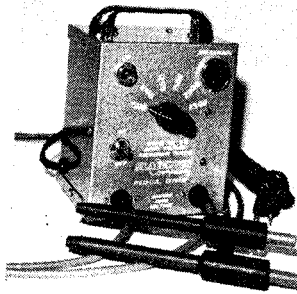
Automatic  
Test Cycle

FULLY AUTOMATIC TEST CYCLE. . . CON-  
TROLLED RATE-OF-RISE. . . ADJUSTABLE  
TEST VOLTAGE, DWELL TIME, & LEAK-  
AGE LIMIT. . . CAPACITY COMPENSATION  
ON AC TEST. . . FOR PRECISION TEST  
OF CRITICAL PARTS & ASSEMBLIES. . .

**SLAUGHTER CO.** • ARDMORE, OKLA.

## High-voltage Insulation Tester

with buzzer signal on breakdowns  
... grounds  
.... shorts



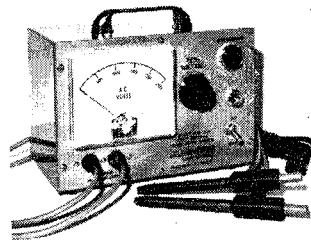
MODEL  
**101**

Watch what you  
are doing . . .  
not the tester

SIX TEST VOLTAGES . . 500 to 2500 V.A.C.  
PRICED SO YOU CAN AFFORD TO SPOT A  
FEW ALONG YOUR ASSEMBLY LINES.  
FOR SAFETY

## Adjustable High-voltage Tester

with buzzer signal on breakdowns  
... grounds  
.... shorts



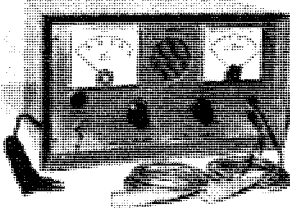
MODEL  
**106**

Voltmeter  
shows actual  
Test Voltage

CONTINUOUSLY VARIABLE TEST VOLTAGE  
RATINGS TO 10,000 VOLTS AC & DC . .  
RECOMMENDED FOR BREAKDOWN TESTING  
AT FINAL ASSEMBLY AND INSPECTION

## High-voltage Leakage Tester

audibly signals excess leakage  
... grounds  
.... arcing



MODEL  
**103**

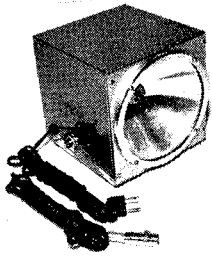
Measures Leakage  
... not capacity  
current

TEST VOLTAGE CONTINUOUSLY VARIABLE  
ADJUSTABLE LEAKAGE LIMIT. . CAPACITY  
COMPENSATION ON AC TESTS. . RATINGS  
TO 10,000 VOLTS AC & DC. . . LIMITED  
ENERGY. . NON-DESTRUCTIVE. . . FOR LAB  
AND PRODUCTION LINE SERVICE. . . . .

**SLAUGHTER CO.** • ARDMORE, OKLA.

## Inspection Stroboscope

.....with high intensity daylight lamp



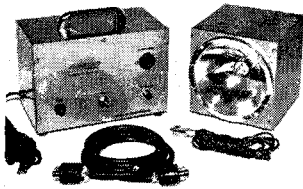
MODEL  
**161**

0/2,000  
Flashes per  
Minute

LIGHT WEIGHT INEXPENSIVE TRIGGERED FLASH UNIT....PUSH-TO-SEE SWITCH.... INTENSE WHITE LIGHT FOR INSPECTION ON -THE -GO

## Inspection Stroboscope

...with extra high intensity daylight lamp



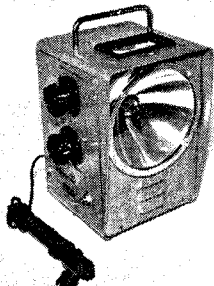
MODEL  
**167**

0/600  
Flashes per  
Minute

SUPER INTENSITY TRIGGERED FLASH UNIT ... PUSH-TO-SEE SWITCH.... FOR INSPECTION ON-THE-GO UNDER HIGH AMBIENT LIGHT CONDITIONS.

## Metered Precision Stroboscope

.....with high intensity daylight lamp



MODEL  
**165**

50/16,000  
Flashes per  
Minute

PRECISION STROBOSCOPE TACHOMETER INSTANT STARTING. . . HIGH INTENSITY WHITE LIGHT. . . OPERATES FROM EXTERNAL CONTACTS OR INTERNAL OSCILLATOR. . EASILY SYNCHRONIZED. . OUTPUT JACKS TO COUPLE SCOPE, ETC....

**SLAUGHTER CO.** • ARDMORE, OKLA.

# Stroboscopes

WRITE FOR DATA SHEETS ON THE INSTRUMENTS SHOWN . . . ALL ARE STANDARD PRODUCTION MODELS, AVAILABLE FOR IMMEDIATE DELIVERY FROM STOCK . . . LET US QUOTE ON YOUR REQUIREMENTS FOR MODIFIED UNITS OR SPECIAL TEST EQUIPMENT.

## SLAUGHTER CO.

ARDMORE, OKLA.

## MIDGET STROBOSCOPE FLASH HEAD



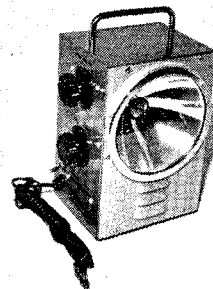
MODEL  
**166**

0/10,000  
Flashes per  
Minute

FOR WORK ON MINIATURIZED EQUIPMENT . . . FOR PRINTING TRADES . . . FOR BIO-MEDICAL WORK . . ADAPTS TO ANY SLAUGHTER STROBOSCOPE...

## Universal Stroboscope

...with high intensity daylight lamp



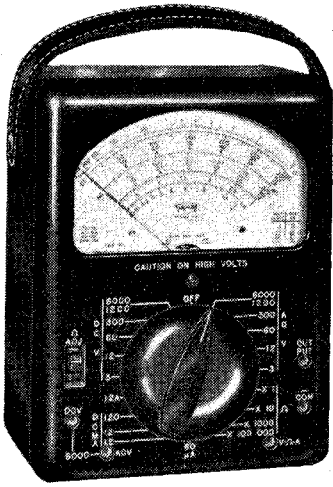
MODEL  
**163**

50/16,000  
Flashes per  
Minute

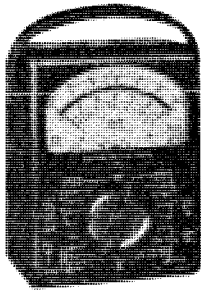
UNIVERSAL UNIT FOR MOTION STUDY & INSPECTION ON-THE-GO... INSTANT STARTING ... HIGH INTENSITY WHITE LIGHT .... TRIGGER EXTERNALLY OR OPERATE FROM INTERNAL OSCILLATOR

**SLAUGHTER CO.** • ARDMORE, OKLA.

# TRIPLET TEST EQUIPMENT



630  
TYPE 2



630-A

## Volt-Ohm-Milliammeter

MODEL 630  
TYPE 2

1. One selector switch minimizes chance of incorrect setting and burn-out. 2. 5,000 ohms per volt AC sensitivity; 20,000 DC. 3. Four resistance ranges to 100 megohms. Outstanding resistance ranges: low reading .1 ohm, high 100 megs. Fuse affords protection to the resistors in the ohmmeter circuit, especially the X1 setting. Spring-backed instrument jewels for ruggedness. Accuracy 2% DC, 3% AC.

**RANGES**

**DC Volts:** 0-3-12-60-300-1,200-6,000 at 20,000 ohms per volt.  
**AC Volts:** 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt.  
**Ohms:** 0-1,000-10,000.

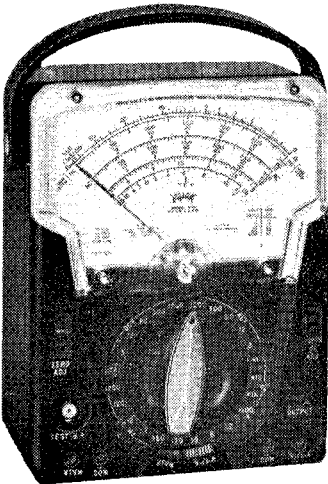
**Megohms:** 0-1-100.  
**DC Microamperes:** 0-60 at 250 millivolts.  
**DC Milliamperes:** 0-1.2-12-120 at 250 millivolts.  
**DC Amperes:** 0-12.  
**DB:** -20 to +77 (600 ohm line at 1 MW).  
**Output Volts:** 0-3-12-60-300-1,200; jack with condenser in series with AC ranges. Usable with frequencies through 500 Kc.  
**CASE**—Molded, fully insulated, 3-7/32" x 5 1/2" x 7 1/2".  
**MODEL 630**—Suggested U. S. A. \*User Net....\$49.50 Complete with leads, alligator clips, rubber feet, batteries and instructor manual. Shipping wt. 5 lbs.

## Volt-Ohm-Milliammeter

MODEL 630-A

A laboratory type V-O-M with 1 1/2% resistors for greater accuracy. Long range scale to eliminate parallax. Ranges and other features as described for Model 630, above. Accuracy 1 1/2% DC, 3% AC.

**MODEL 630-A**—Suggested U. S. A. \*User Net \$59.50 Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.



631

## Combination V-O-M and VTVM

MODEL 631

1. One selector switch. 2. Complete V-O-M in combination with battery operated VTVM. 3. 11 megohm input to VTVM. Two fundamental units at the price of a single tester; VTVM stability assured by long life battery operation. Sensitivity plus—sensitivity of the 1.2 volt (VTVM) range is equal to over nine million ohms per volt. Usable with frequencies through 500 Kc. Large meter easy to read; unbreakable meter face. Spring-backed instrument jewels for ruggedness. Accuracy 3% DC, 4% AC, VTVM 4%.

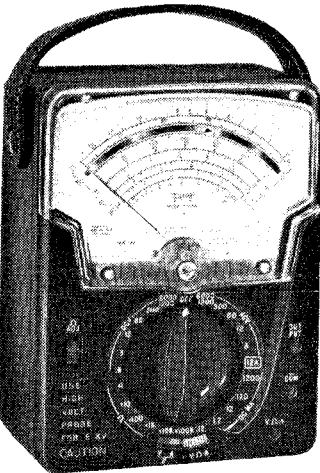
**V-O-M RANGES**

**DC Volts:** 0-3-12-60-300-1,200 (20,000 ohms per volt).  
0-0.25 at 60 microamperes.  
**AC Volts:** 0-3-12-60-300-1,200 (5,000 ohms per volt).

**Ohms:** 0-1,500-15,000.  
**Megohms:** 0-1.5-150.  
**DC Microamperes:** 0-60 at 250 MV.  
**DC Milliamperes:** 0-1.2-12-120-1,200 at 250 MV.  
**DC Amperes:** 0-12 at 250 MV.  
**DB:** -20, +11, +23, +37, +51, +63. (600 ohm line at 1 MW).  
**Output Volts:** 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.

**VTVM RANGES**

**DC Volts:** 0-1.2-6-30-120.  
**Case:** Molded, fully insulated, 3 11/32" x 5 1/2" x 7 1/2".  
**MODEL 631**—Suggested U. S. A. \*User Net.....\$69.50  
**RF PROBE FOR 631**  
With this probe and Model 631 RF measurements can be made up to 250 MC.  
Pt. T-79A-145 .....\*\$7.70 Net  
Shipping wt. 5 lbs.



630-NS

## Volt-Ohm-Milliammeter

MODEL 630-NS

1. 200,000 ohms per volt DC for greater accuracy on high resistance circuits. 20,000 ohms per volt AC. 2. Suspension Meter Movement. No pivots, no bearings, no hairsprings; no rolling friction. Extremely rugged. Greater sensitivity and repeatability. 3. 62 ranges. Temperature and frequency compensated. The unit is precision designed to give maximum coverage, to withstand accidental overloads and to offer greater reading accuracy. Special precision resistors rigidly mounted and directly connected to the switch to form a simplified unit. Usable with frequencies through 100 Kc. Accuracy 1 1/2% DC, 3% AC. **CASE**—Molded, fully insulated, 3 11/32" x 5 1/2" x 7 1/2". Shipping wt. 5 lbs.

**RANGES**

**DC Volts:** 0-0.6-3-12-60-300-1,200 at 100,000 Ohms/Volt.

0-0.3-1.5-6-30-150-600 at 200,000 Ohms/Volt.  
0-0.150 at 60 microamperes.  
**AC Volt:** 0-3-12-60-300-1,200 at 10,000 Ohms/Volt.  
0-1.5-6-30-150-600 at 20,000 Ohms/Volt.  
**DB:** -20 to +63 in 10 ranges.  
**DC Microamperes:** 0-60-600 at 150 Mv. 0-5-120 at 300 Mv.  
**DC Milliamperes:** 0-6-60-600 at 150 Mv. 0-1.2-12-120-1,200 at 300 Mv.  
**DC Amperes:** 0-6 at 150 Mv. 0-12 at 300 Mv.  
**Ohms:** 0-1K-10K-100K (4.4-44-440 at center scale).  
**Megohms:** 0-1-10-100 (4400-44,000-440,000 Ohms center scale).  
**Output:** Condenser in series with AC Volt ranges.  
**MODEL 630-NS**  
Suggested U. S. A. \*User Net.....\$99.50

ALL PRICES ARE SUGGESTED U.S.A. USER NET, SUBJECT TO CHANGE, SPECIFICATIONS SUBJECT TO REVISION.

# TEST EQUIPMENT

# TRIPLET

## Volt-Ohm-Milliammeter

1. Comprehensive overload protection. 2. One selector switch minimizes chance of incorrect settings. 3. Polarity reversing switch. Transistorized electronic switching circuit guards against accidental burnouts. Eliminate bent pointers, burned-out coils, changes in accuracy due to overheating, in fact nearly any need for repairs. Accuracy  $\pm 2\%$  on DC,  $\pm 3\%$  AC.

### RANGES

**DC Volts:** 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt, 0-0.25 at 100 microamperes.  
**AC Volts:** 0-3-10-50-250-1,000-5,000 at 5,000 ohms/volt.

## Volt-Ohm-Milliammeter

1. One selector switch. 2. 70 ranges;  $1\frac{1}{2}\%$  DC accuracy on meter; with mirror scale and overload protection. 3. Temperature and frequency compensation.

The super deluxe of V-O-Ms. Usable with frequencies through 500 Kc. Spring-backed instrument jewels for ruggedness. Accuracy  $1\frac{1}{2}\%$  DC, 3% AC.

### RANGES

**DC Volts:** 0-.6-3-12-60-300-1,200-6,000 at 10,000 ohms per volt.  
 0-3-1.5-6-30-150-600-3,000 at 20,000 ohms per volt.  
 0-0.120 at 60 microamperes.  
**AC Volts:** 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt.  
 0-1.5-6-30-150-600-3,000 at 10,000 ohms per volt.  
**Ohms:** 0-1K-10K-100K.

## MODEL 630-NA-RM—RACK MOUNTED V-O-M

Rack mounted V-O-M with ranges same as Model 630-NA above, except no 3000 or 6000 AC or DC Volts. The heavy etched aluminum panel,  $19'' \times 5\frac{1}{2}''$  has two chrome plated handles for easy removal of the tester from the rack. The 4" meter has mirror scale and knife-edge pointer. Standard test leads come out the front. Accuracy  $1\frac{1}{2}\%$  DC, 3% AC.

## Volt-Ohm-Milliammeter

1. One selector switch minimizes chance of incorrect settings and burnouts. 2. Polarity reversing switch. 3. Usable with frequencies through 500 Kc. Unbreakable plastic window.

Outstanding resistance ranges: low reading .1 ohm; high to 100 megs. Fuse affords extra protection to the resistors in the ohmmeter circuit, especially the X1 setting. Spring-backed instrument jewels for ruggedness.

High sensitivity: 5,000 ohms per volt AC; 20,000 ohms per volt DC. Accuracy 2% DC, 3% AC.

### RANGES

**DC Volts:** 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt.  
 0-0.25 at 100 microamperes.  
**AC Volts:** 0-3-10-50-250-1,000-5,000 at 5,000 ohms/volt.

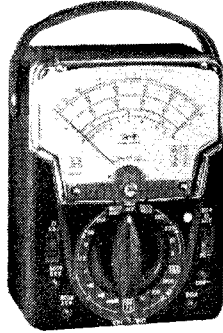
## Volt-Ohm-Milliammeter

Laboratory type V-O-M featuring  $\frac{1}{2}\%$  resistors and more accurate movement for greater accuracy. Long MIRROR scales to eliminate parallax in reading. RANGES and other features same as Model 630-PL above. Accuracy  $1\frac{1}{2}\%$

ALL PRICES ARE SUGGESTED U.S.A. USER NET, SUBJECT TO CHANGE, SPECIFICATIONS SUBJECT TO REVISION.

## MODEL 630-PLK—Type 2

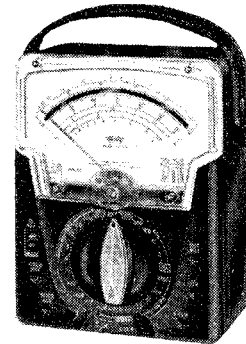
**Decibels:** -20 to +11, +21, +35, +49, +61, +75; "O" DB at 1MW on 600 ohm line.  
**DC Microamperes:** 0-100 at 250 Mv.  
**DC Milliamperes:** 0-10-100-1000 at 250 Mv.  
**DC Amperes:** 0-10 at 250 Mv.  
**Ohms:** 0-1,000-10,000 (4.4-44 at center scale).  
**Megohms:** 0-1-100 (4,400-440,000 at center scale).  
**Output Volts (AC):** 0-3-10-50-250-1,000, at 5,000 ohms/volt; jack with condenser in series with AC ranges.  
**Case:** Molded, fully insulated;  $3\frac{1}{2}'' \times 5\frac{1}{2}'' \times 7\frac{1}{2}''$ .  
 Suggested U.S.A. User Net.....\$79.50



630-PLK  
TYPE 2

## MODEL 630-NA

**Megohms:** 0-1-10-100.  
**DC Microamperes:** 0-120 at 240 millivolts.  
 0-60-600 at 120 millivolts.  
**DC Milliamperes:** 0-1.2-12-120-1,200 at 240 millivolts.  
 0-6-60-600 at 120 millivolts.  
**DC Amperes:** 0-12 at 240 millivolts.  
 0-6 at 120 millivolts.  
**DB.** -20 to +77 (600 ohm line at 1 MW).  
**Output Volts:** 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.  
**Case—**Molded, fully insulated.  $3\frac{1}{2}'' \times 5\frac{1}{2}'' \times 7\frac{1}{2}''$ .  
**MODEL 630-NA—**  
 Suggested U. S. A. \*User Net.....\$79.50  
 Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.

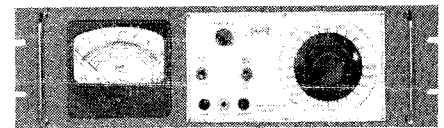


630-NA

Also provision in the back for a three-lead connector. There is a DC reversing switch on the panel. Large, easy to turn single selector switch. Test components and wiring enclosed in aluminum housing. Shipping wt. 22 lbs.

## MODEL 630-NA-RM—

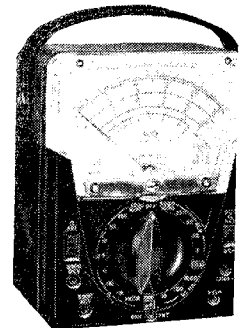
Suggested U. S. A. \*User Net.....\$109.50



630-NA-RM

## MODEL 630-PL—Type 2

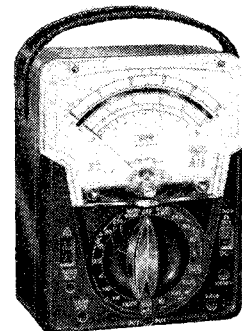
**Decibels:** -20 to +11, +21, +35, +49, +61, +75; "O" DB at 1 MW on 600 ohm line.  
**DC Microamperes:** 0-100 at 250 millivolts.  
**DC Milliamperes:** 0-10-100-1,000 at 250 millivolts.  
**DC Amperes:** 0-10 at 250 millivolts.  
**Ohms:** 0-1,000-10,000 (4.4-44 at center scale).  
**Megohms:** 0-1-100 (4,400-440,000 at center scale).  
**Output V (AC):** 0-3-10-50-250-1,000 at 5,000 ohms/volt; jack with condenser in series with AC ranges.  
**Case:** Molded, fully insulated;  $3\frac{1}{2}'' \times 5\frac{1}{2}'' \times 7\frac{1}{2}''$ .  
**MODEL 630-PL—**  
 Suggested U. S. A. \*User Net.....\$49.50  
 Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.



630-PL  
TYPE 2

## MODEL 630-APL

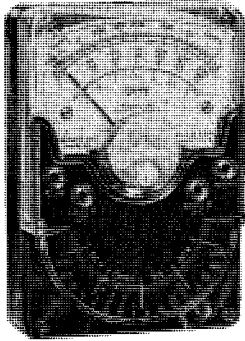
DC, 3% AC.  
**MODEL 630-APL—**  
 Suggested U. S. A. \*User Net.....\$59.50  
 Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.



630-APL

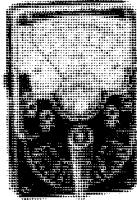
# TEST EQUIPMENT

# TRIPLETT



MODEL  
310

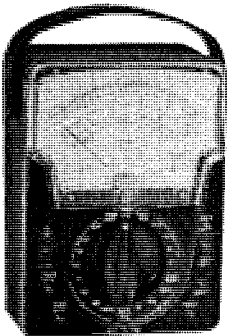
MODEL  
310-C



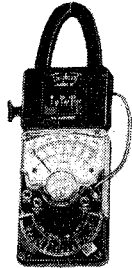
MODEL  
100



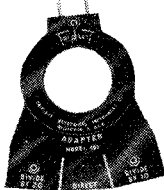
MODEL 10



MODEL  
630-L  
TYPE 2



MODEL 101



## Volt-Ohm-Milliammeter

1. One selector switch. 2. 20,000 ohms per volt DC sensitivity. 3. Shirt pocket size VOM with provision for attaching AC clamp-on ammeter.

Self-shielded for checking in strong magnetic fields.

Rugged, high torque, bar-ring instrument.

Unbreakable plastic meter window.

Standard sensitivity 20,000 ohms per volt DC, and 5,000 ohms per volt AC.

Spring-backed instrument jewels for ruggedness.

Accuracy 3% DC, 4% AC.

### RANGES

DC Volts: 0-3-12-60-300-1,200 (at 20,000 ohms

## Volt-Ohm-Milliammeter

New 310-C is the same as Model 310, above, (except 600 volt ranges replace 1200 volt ranges of model 310) plus the following features:

1. Fully enclosed lever range switch.
2. 15,000 Ohms per volt AC (20,000 O/V

## V-O-M AND CLAMP-ON AMMETER SET

Handsomely packaged set includes: Model 310 V-O-M, Model 10 Clamp-on Ammeter Adapter; Model 101 Line Separator; Model 379 Leather Case; Model 311 Leads. (\$67.10 Value Separate Unit Purchase Price.)

## CLAMP-ON ADAPTER

### MODEL 10

#### CHECKS LINE LOADS WITH MODEL

#### 310 OR 310-C

(Also can be used with Model 630, 630-A, 630-NA, 631, 630-PL, 630-APL, 630-NS by means of 611 leads.)

Checks all line loads instantly, accurately, safely — without breaking the circuit or interrupting work. Easy range switching. Six Model 10 Clamp-On Adapter AC Ammeter ranges: 0-6-12-30-60-120-300. Clips around single wire to read A.C. Amperes direct.

### No. 611 LEADS

In addition to use with the Model 310, the No. 10 Adapter also can be used as a Clamp-On Ammeter with any Volt-Ohm-Milliammeter having a 3 AC Volt scale at 5,000 Ohms per Volt, such as Triplett Models 630, 630-A, 630-NA, 630-PL, 630-APL, 630-NS, 631, etc.

### No. 311 LEADS

The Model 10 can be separated from the Model 310 (in the same way as above) by using No. 311 lead attachment. This permits

## LINE SEPARATOR

Plugs into AC outlet to divide instantly two-conductor cords. Increases ammeter sensitivity 10X and 20X. Use up to 30 AC Amperes from 0.3 to 30 in nine steps. Also has provision for Voltmeter prods for voltage measurements.

### RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt.

AC Volts: 0-3-10-50-250-1,000-5,000 at 5,000 ohms/volt.

Decibels: -20 to +11, +21, +35, +49, +61, +75; "O" DB at 1 Mw on 600 ohm line.

DC Microamperes: 0-100 at 120 millivolts.

DC Milliampers: 0-10-100-1,000 at 120 millivolts.

DC Amperes: 0-10 at 120 millivolts.

Ohms: 0-1,000-10,000 (13-130 at center scale).

## MODEL 310

per volt).

AC Volts: 0-3-12-60-300-1,200 (at 5,000 ohms per volt).

Ohms: 0-20,000-200,000. Megohms: 0-2-20.

DC Microamperes: 0-600 at 250 millivolts.

DC Milliampers: 0-6-60-600 at 250 millivolts.

Weight—Approx. 14 oz., complete with batteries.

Case—Molded, fully insulated, 2 3/4" x 4 1/4" x 1 3/8".

### MODEL 310—

Suggested U. S. A. \*User Net.....\$37.50

Complete with leads, battery and instruction manual. Shipping wt. 2 lbs.

## MODEL 310-C

DC same as 310)

3. Reversing switch for DC measurements. Handsize and lightweight, but with the features of a full size V-O-M.

### MODEL 310-C

Suggested U. S. A. \*User Net.....\$44.50

## MODEL 100

MODEL 100, as above, you save \$2.60. Shipping wt. 7 lbs.

Suggested U. S. A. \*User Net.....\$64.50

MODEL 100-C—Same as above but with Model 310-C. Suggested U. S. A. \*User Net \$71.50

## MODEL 10

Used with Adapter 101 to divide instantly two-conductor cords.

A lever securely locks the Model 10 to Model 310 when used in combination. Model 10 can be left attached to Model 310 when the latter tester is used as an AC-DC V-O-M only. The only change is to remove the lead plug from the Model 310 V-O-M jack and insert it in the jack provided in the Model 10 housing.

Case black molded plastic with engraved white markings.

### MODEL 10—

Suggested U.S.A. \*User Net.....\$15.50

This is done by means of a long lead attachment (No. 611) making possible easy readings in difficult locations.

### No. 611 leads—

Suggested U. S. A. \*User Net.....\$2.10

readings in difficult locations.

### No. 311 leads—

Suggested U. S. A. \*User Net.....\$2.10

## MODEL 101

Case, black molded plastic with engraved markings.

### MODEL 101—

Suggested U. S. A. \*User Net.....\$6.00

## MODEL 630-L—TYPE 2

Megohms: 0-1-100 (4,000-400,000 at center scale).

Output V (AC): 0-3-10-50-250-1,000 at 5,000 ohms/volt, jack with condenser in series with AC ranges.

Case: Black molded, fully insulated; 3 1/2" x 5 1/2" x 7 1/2".

Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs.

### MODEL 630-L

Suggested U. S. A. \*User Net.....\$54.50

## Volt-Ohm-Milliammeter

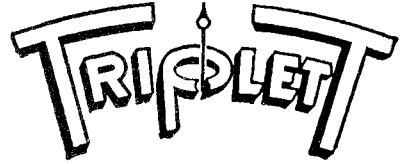
Two low power ohms ranges (X1 and (10). 140 Mv. ohmmeter circuit voltage. Important for semi-conductor circuitry. 2. One selector switch minimizes chance of incorrect settings. 3. Exclusive shielded Bar-Ring Movement. Mercury battery. Wired circuits. Special low power ohmmeter circuit allows semi-conductor testing without destructive overloads.

Leads from .2 ohm to 100 megohms in four ranges.

Accuracy  $\pm 2\%$  on DC,  $\pm 3\%$  on AC.

ALL PRICES ARE SUGGESTED U.S.A. USER NET, SUBJECT TO CHANGE. MODELS SUBJECT TO REVISION.

# TEST EQUIPMENT



## ONE MILLION OHMS/VOLT Volt-Ohm-Milliammeter

MODEL 630-M

- 1,000,000 Ohms per volt D.C. for greater accuracy on high resistance circuits. 20,000 ohms per volt A.C.
- 1ua Suspension Meter Movement. No pivots, bearings, or rolling friction. Extremely rugged. Greater sensitivity and repeatability.
- 61 Ranges, usable with frequencies through 100 KC. Temperature compensated. 1½% DC Accuracy, 3% AC.

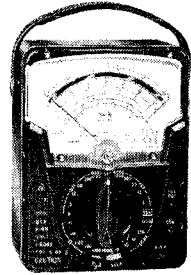
Current Measurements from 20 nanoamperes. Voltage Measurements from 5 mv.

**61 RANGES**

D.C. VOLTS: 0-0.6-3-12-60-300 at 500,000 Ohms/Volt, 0-0.3-1.5-6-30-150 at 1,000,000 Ohms/Volt, 0-1200 at 125,000 Ohms/Volt, 0-600 at 250,000 Ohms/Volt. A.C. VOLTS: 0-3-12-60-300-1200 at 10,000 Ohms/Volt, 0-1.5-6-30-150-600 at 20,000 Ohms/Volt. DB: -20 to +77 in 10 ranges. D.C. MICROAMPERES: 0-1 at 300 M.V.,

0-60-600 at 150 M.V., 0-120 at 300 M.V. D.C. MILLI-AMPERES: 0-6-60-600 at 150 M.V., 0-1.2-12-120-1200 at 300 M.V. D.C. AMPERES: 0-6 at 150 M.V., 0-12 at 300 M.V. OHMS: 0-1K-10K-100K (4.4-44-440 at center scale) MEG-OHMS: 0-1-10-100 (4400-44,000-440,000 Ohms center scale) OUTPUT: Condenser in series with AC Volt ranges.

Suggested U.S.A. User Net Price .....\$199.50



630-M

## Electronic Volt-Ohmmeter

1. Long 7" easy-to-read scale. 2. .5 DCV range for transistor circuits. 3. High stability—meter connected in cathode circuit of 12AU7. ELECTRICAL PROTECTION of meter against burnout. FREQUENCY RANGE—from 15 cps to 3 Megacycles. SEPARATE SCALE on easy-view meter for Peak-to-peak reading. SINGLE UNIT PROBE — with built-in switch for AC/DC/OHMS. 11 MEGOHM INPUT RESISTANCE on all DC Voltage ranges. Line voltage: 115 VAC 50-60 cycles. Ground type plug. Spring-backed instrument jewels for ruggedness.

Accurate within ±3% on AC and DC. Ohms accurate with ±3% of full scale based on DC scale.

**RANGES**

Eight DC Volts Ranges: 0-.5-1.5-5-15-50-150-500-1500. Seven AC RMS Volts Ranges: 0-1.5-5-15-50-150-500-1500. Seven Peak-to-Peak Volts Ranges: 0-4-14-40-140-400-1400-4000. Seven Resistance Ranges: 0-1000-10,000-100,000-i Meg-10 Meg-100 Megohms-1000 Meg-ohms. Frequency Range: 15CPS to 3 MC; (Up to 250 MC with accessory diode probe available extra). Input Impedance: DC Volts

MODEL 850

11 Megohms; AC Volts minimum of .83 Meg-ohms. CASE—Molded black case completely insulated. 7½" x 6¼" x 3¾". Carrying handle also can be used to place the tester at 35° angle for ease in reading. PANEL—Etched aluminum. Shipping wt. 7 lbs.

MODEL 850—Suggested U. S. A. \*User Net Price .....\$79.50  
Auxiliary Diode Probe for frequencies to 25C MC. Pt. T-79A-193 .....\$ 7.50  
High Voltage Probe for DC Voltages to 50 KV Pt. 79B-196 .....\$20.50

## Versatile Volt-Ohm-Milliammeter

1. 70 ranges with 1½% DC accuracy including DC Polarity Reversing Swtich. 2. Overload protection of meter, fused, temperature and frequency compensated. 3 Long (7") Mirror Scale—easily read. 3% AC ACCURACY to 1200 volts; mirror and knife-edge pointer to eliminate parallax; WIRED CIRCUIT (not printed); HIGH FLUX BAR-RING self shielded magnet; DUAL SENSITIVITY provides extra ranges, DC volts at 20,000 and 10,000 ohms per volt, AC at 10,000 and 5,000 ohms per volt. Shatterproof meter window, molded transparent plastic; fully antistat treated.

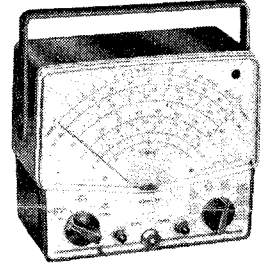
**RANGES**

DC Volts: 0-0.6-3-12-60-300-1200-6000 at 10,000 Ohms per vole. 0-0.3-1.5-6-30-150-600-3000 at 20,-

MODEL 800

000 Ohms per Volt. 0-120 at 60 Microamperes. AC Volts: 0-3-12-60-300-1200-6000 at 5,000 Ohms per Volt. 0-1.5-6-30-150-600-3000 at 10,000 Ohms per Volt. DB: -30 to +70 in 12 ranges. DC Microamperes: 0-60-600 at 120 MV. 0-120 at 240 MV. DC Milliamperes: 0-6-60-600 at 120 MV. 0-1.2-12-120-1200 at 240 MV. DC Amperes: 0-6 at 120 MV. 0-12 at 240 MV. Ohms: 0-1K-10K-100K (4.4-44-440 at center scale). Megohms: 0-1-10-100 (4400-44,000-440,000 Ohms center scale). Output: Condenser in series with AC volt range. CASE—Heavy, molded case completely insulated, 7½" x 6¼" x 3⅞", with an insulated, movable handle, which can also serve as a tester stand. Shipping wt. 7 lbs.

MODEL 800—Suggested U. S. A. \*User Net.....\$89.50



850

## Pocket Volt-Ohm-Milliammeter

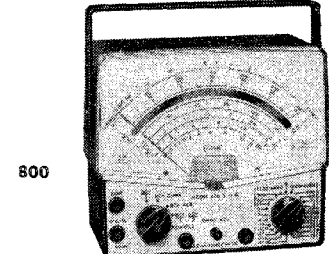
1. One selector switch. 2. Three resistance ranges to 3 megohms. 3. Five volt ranges to 5,000 AC & DC volts. Hand-size — the ideal tester for electrical maintenance. Recessed range knob enables tester to fit in tool kit. AC rectifier pre-calibrated unit for easy replacement.

**RANGES**

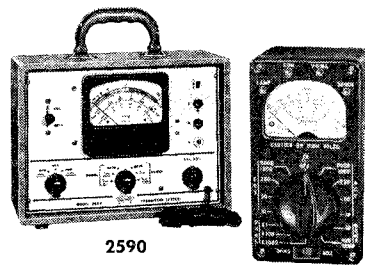
DC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt.

MODEL 666-R

AC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt. Ohms: 0-3,000-300,000. Megohms: 0-3. DC Milliamperes: 0-10-100 at 250 MV. DC Amperes: 0-1 at 250 MV. Output Volts: 0-10-50-250-1,000. CASE—Black molded, streamlined, completely insulated. Handy pocket size, 3⅞" x 5⅞" x 2⅞". MODEL 666-R—Suggested U. S. A. \*User Net.....\$34.50 Complete with leads, alligator clips, batteries and instruction manual. Shipping wt. 3 lbs.



800



2590

666-R

**TESTER STAND**

Metal stand holds Model 630, 630-A, 630-PL, 630-L, 630-PLK, 630-APL, 630-NA, 630-NS, 631 or 630-M tester in approximately a 45° angle; will enable you to make easier readings.

STAND ONLY — Pt. T-255-A-33. Shipping wt. 1 lb. Suggested U.S.A. \*User Net .....\$1.00

## Transistor Tester

1. Tests Beta amplification ICBO, ICEO for both power and signal type transistors. Tests for shorts and leakage. Checks leakage and forward currents on diodes. 2 Simulated operating test conditions. 3. Simple and straightforward operation. No roll chart or special data needed, always up-to-date. A transistor socket and external leads permits

use of Model 2590 with any basing arrangement. Calibrate adjustment control adjusts for full scale calibration after the transistor has been inserted. Accuracy 2%. CASE — Gray leatherette covered case, 11⅝" x 8⅝" x 5⅞". RECESSED PANEL etched heavy gauge aluminum. Shipping wt. 9 lbs. Power — 115 volts, 50-60 cycle AC.

MODEL 2590—Suggested U. S. A. \*User Net

MODEL 259

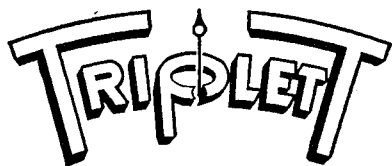
Price .....\$59.

**FIVE SCALES**

- 0-1 MA for Signal Transistor ICEO
- 0-100 MA for Power Transistor ICEO
- 0-500 Microamp for Signal Transistor ICBO
- 0-1 MA for Power Transistor ICBO
- 5-100 Beta Range; also shows on GOOD-?-B; scale.

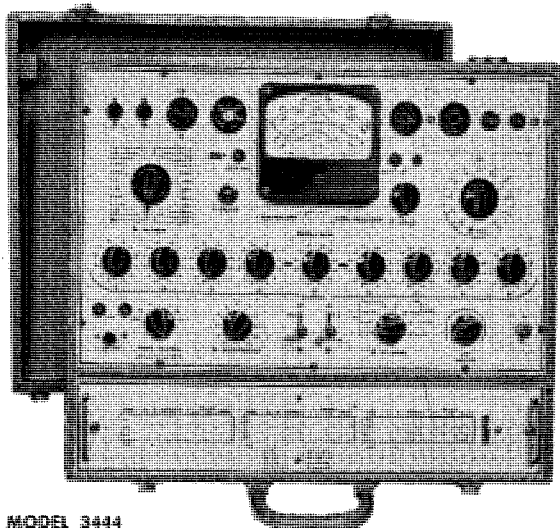
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# TEST EQUIPMENT

## TRUE DYNAMIC MUTUAL CONDUCTANCE TUBE ANALYZER—MODEL 3444



MODEL 3444

The only tube tester under \$1,000 that is simple and fast to operate and 1. Will measure tube characteristics at KNOWN readable potentials. 2. Provides readings to: (a) Plot tube characteristic curves. (b) Measure grid current at known potentials. (c) Compare cut off characteristics of dual tubes. 3. Reads directly in micromhos with a self checking Gm circuit.

This True Dynamic Mutual Conductance Analyzer speedily and accurately solves the most perplexing tube analysis problems in any field.

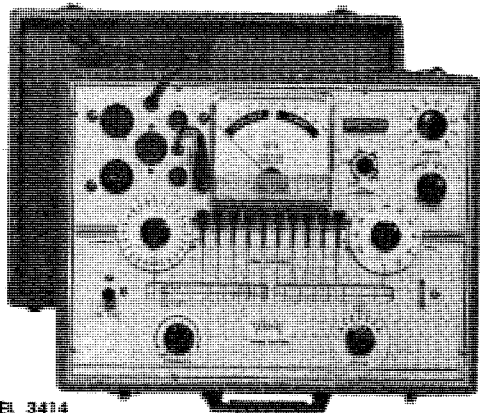
It measures true Gm without any extra compensating factors — using proper value DC electrode potentials, 5 KC-AC signal source and a vacuum tube microammeter (at a very low [33 ohm] plate impedance for best correlation). In addition it offers a combination of unique test advantages never before available in a Portable Analyzer, as follows: CHECKS PLATE current cutoff. CHECKS GAS under actual operating conditions (measures to approximately one UA of gas current). CHECKS RECTIFIERS under load. CHECKS THYRATRON firing voltage and grid current. CHECKS DUAL section tubes with only one lever movement. PROVIDES SHORTS and leakage measurements from 0-10 megohms using a filtered DC supply of 85 volts. PROVIDES cut off measurements on voltage amplifiers. RECESSED SOCKET SAVER (under-the-panel-mounted) are easily removable for replacement. CASE—Wood, gray leatherette covered, 15 $\frac{3}{16}$ " x 18 $\frac{1}{16}$ " x 7 $\frac{3}{4}$ ". Hinged removable lid, sloping panel, compartment for line cord, leads, acorn adapter, and removable roll chart. Chrome hardware including metal protective feet on case side and bottom. Shipping wt. 30 lbs.

MODEL 3444—Suggested U. S. A. \*User Net.....\$349.50

CG ADAPTER may be used in cover or beside Model 3444 to test low power transmitting, industrial, special purpose tubes, etc.

Suggested U. S. A. \*User Net.....\$39.50

## FASTER, FLEXIBLE TUBE TESTER—MODEL 3414



MODEL 3414

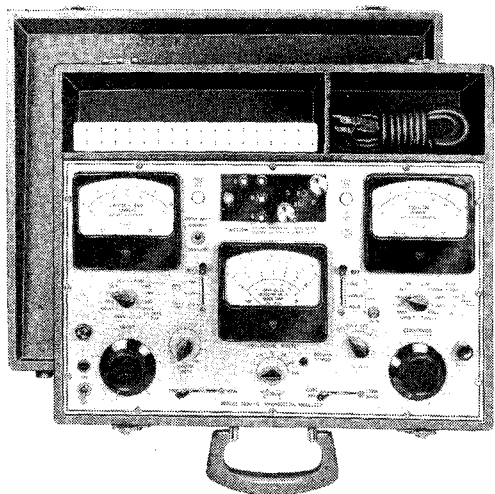
1. Rapid easy testing-setups can be made while tube is heating. 2. Input filament continuity test. 3. Modified circuit for better correlation on Gm. Rejects burned out tubes instantly without waiting for the filaments to heat. NEON INDICATOR SHORTS TEST, new, fast and accurate. Full range filament voltages — 0.65 to 117 in 23 steps. Improved lever switching for complete control of each tube element. Quick-change roll chart. TV picture tube test by means of adapter (available extra, see below) without removing tube from receiver. Large, clear-view meter has three-color GOOD?-BAD scale.

COUNTER-PORTABLE TYPE CASE. Ultra-professional appearance; Wood, dark gray leatherette covered: 15 $\frac{7}{8}$ " x 11 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ ". Hinged removable cover. Chrome hardware and feet. Etched panel. Shipping wt. 17 lbs.

MODEL 3414—Suggested U. S. A. \*User Net.....\$109.50

BV ADAPTER for Picture Tube tests with Models 3414, 3444 and 3423. Net \$7.20\*

## NEW MODEL 3490-A TRANSISTOR ANALYZER FOR COMPLETE TRANSISTOR ANALYSES



NEW! MODEL 3490-A

1. Reads leakage current down to 100 nanoamperes on 6ua full scale meter.
2. Analyzes both power & signal types at specified voltages and currents.
3. Continuous current—up to 30 amp collector—and voltage control for transistor supply electrodes.

Tests DC Beta, AC Beta at 1KC, leakages (Ico, Ieo, Iceo), Alpha, Reach Through Voltage, Saturation Voltage, Floating Potential. The 3490-A's flexibility allows plotting of transistor characteristic curves along with setting up nearly any type of transistor test. Input bias reversing switch gives added versatility.

The ultimate in transistor analysis, Model 3490-A offers among other features: INPUT currents to 3 Amperes — SEPARATE Input and Collector meters (4 $\frac{1}{2}$ " monitor emitter or base and collector continuously — VARIABLE Tetrode Voltage — CONTINUOUS INSTRUMENT COVERAGE, no skips — Transistor tabulation included at no extra cost. Model 3490-A also tests diodes, rectifiers, zener diodes, SCR, etc.

CASE—Wood, gray leatherette covered, 18 $\frac{1}{16}$ " x 15 $\frac{1}{16}$ " x 8" with removable cover, and sloping etched aluminum panel.

### RANGES

Input Current (Emitter or Base) .....0-100-300 ua, 0-1-3-10-30 Ma, 0-1-3-1-3 Amp.  
 Collector Current .....0-300 ua, 0-1-3-10-30 Ma, 0-1-3-1-3-10-30 Amp.  
 Iceo, Ico (Icbo) .....0-6Ma, 0-600 ua, 0-60 ua, 0-6 ua.  
 Collector Voltage .....0-120 V, 0-60 V, 0-30 V, 0-12 V, 0-6 V, 0-3 V, 0-1.2 V.  
 Emitter or Base Voltage .....0-12 V, 0-1.2 V.  
 Tetrode .....0-10 V Calibrated Control.

Shipping wt: 30 lbs.

MODEL 3490-A — Suggested U.S.A. User Net .....\$399.50

## PROBES FOR HIGH VOLTAGE TESTING

MODELS 630, 630-A, and 631  
 Completely insulated polystyrene test probe with guard-type handle. Probe is 11 $\frac{3}{4}$ " long, with 48" hi-voltage wire lead with banana lug at tester end.

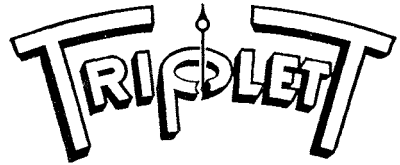
Part T-79-68....0-12,000 D.C. Volts.....\*\$14.50  
 Part T-79-69....0-12,000 A.C. Volts.....\* 14.50  
 Part T-79-70....0-30,000 D.C. Volts.....\* 14.50  
 Part T-79-71....0-30,000 A.C. Volts.....\* 14.50

For Models 630-PL, 630-APL  
 Part T-79-83 . 0-10,000 D.C. Volts.....\*\$14.50  
 Part T-79-165.0-10,000 A.C. Volts.....\* 14.50  
 Part T-79-130.0-25,000 D.C. Volts.....\* 14.50  
 Part T-79-166.0-25,000 A.C. Volts.....\* 14.50

ALL PRICES ARE SUGGESTED U.S.A. USER NET, SUBJECT TO CHANGE, SPECIFICATIONS SUBJECT TO REVISION.



# TEST EQUIPMENT



## Signal Generator

Complete frequency coverage 160 KC to 110 MC fundamental with seven bands (220 MC harmonics). R.F. circuits are double shielded with copper steel shields. Large easily read etched aluminum dial. Cathode follower output provides good stability by acting as a buffer to the oscillator. 400 cycle audio frequency with variable control for 0-100 per cent modulation.

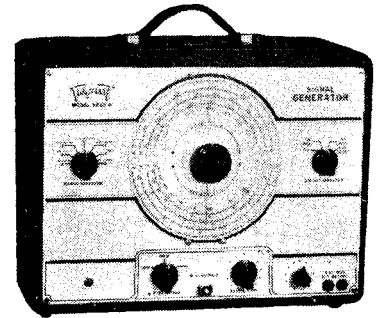
Band A .....	160-370 KC
B .....	360-735 KC
C .....	715-1875 KC

### MODEL 3432-A

D .....	1825-4950 KC
E .....	4.85-13 MC
F .....	12.5-35 MC
G .....	34-110 MC
G (Harmonics) .....	68-220 MC

**CASE**—Metal with black baked enamel suede finish, 15 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ " x 6 $\frac{1}{4}$ ". Black leather strap handle, rubber feet. Shipping wt. 30 lbs.

**MODEL 3432-A**—  
Suggested U. S. A. \*User Net.....\$119.50



3432-A

## Load Check

1. Low cost unit for servicing by looking through line cord. 2. Saves time locating shorts and opens by using only soldering iron and pliers. 3. Only tester of its kind. Helps prevent costly repair comebacks.

Quick way to locate hidden shorts and overloaded circuits.

Double meter indication provides simultaneous check of line voltage and power.

Double range on Watts meter permits one unit to serve from a 5-tube radio to the largest TV set.

**Watts:** DC-AC: 0-500-1,000.

**Volts:** DC-AC: 0-150.

### MODELS 660, 661

**CASE**—Black molded, 2 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " x 6", insulated to protect instrument from ground. Removable black leather strap handle.

**MODEL 660**—  
Suggested U. S. A. \*User Net.....\$39.50  
Designed for radio and Low Wattage Appliances. Appearance and construction same as 660 with watt range 150-300.

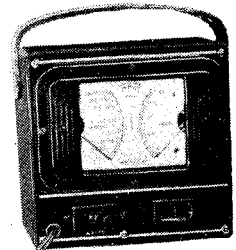
### MODEL 661

**Watts:** DC-AC: 0-150-300.

**olts:** DC-AC: 0-150.

**MODEL 661**—

Suggested U. S. A. \*User Net.....\$39.50  
Shipping wt. 5 lbs. ea.



660, 661

## Appliance Tester

Shows power consumption of industrial equipment, radios, and household appliances under actual operating conditions, DC or AC 25 to 133 cycles. Permits Watts and Volts to be read simultaneously or independently. Shows if voltage remains within limits under operating loads. Assures ample current capacity for momentary

tests on motor starting overloads. Shows faulty power lines.

**Watts:** DC-AC: 0-1,500-3,000.

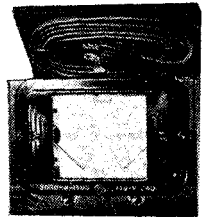
**Volts:** DC-AC: 0-130-260.

**CASE**—Heavy leather and snap button cover and leather handle, 6 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " x 3 $\frac{1}{4}$ ".

**MODEL 2002**—

Suggested U. S. A. \*User Net.....\$49.50

### MODEL 2002



2002

## Leather Carrying Cases

### MODEL 639-N

(For Testers 630, 630-A, 630-PL, 630-APL, 630-NA, 630-NS, 631, 630-T

639-N black cowhide leather carrying case. Center-cover flaps snap back allowing full view of scales. Tester stand is included at no extra cost.

**MODEL 639-N (Case only)**—

\*Net .....\$9.90

### MODEL 639-OS

Black leather case, has built-in stand on back. Flaps open to permit use of tester in case. Compartment for accessories. (As 859-OP illustration).

Suggested U. S. A. \*User Net.....\$12.10

### MODEL 639

Black leather case. For models 630, 630-A, 630-PL, 630-APL, 630-NA, 630-NS and 631 .....\$9.90

### MODEL 639-P

Model 639-P black cowhide leather carrying case lined with  $\frac{3}{8}$ " sponge rubber.

**MODEL 639-P**—

Suggested U. S. A. \*User Net.....\$14.90

### MODEL 629

Leather case for 625-NA, 660, 661, 690-A....\$7.20

### MODEL 859-OP

**Black Leather Carrying Case**, lined with sponge rubber. Flaps open to permit use of tester without removal from case. Model 859-OP. For Models 800 and 850. \*Net.....\$19.50

### MODEL 369

Handsome black cowhide leather carrying case for Model 310.

**MODEL 369**—

Suggested U. S. A. \*User Net.....\$3.20

### MODEL 369-T

Neckstrap Carrying Case for Model 310....\$7.70

### MODEL 379

As above, large enough for 310-10 in combination. Has pocket for 101.....\$6.00

### MODEL 669

Black leather case for 666-R.....\$6.90

### MODEL 669-OS

Black leather case for Model 666-R. Tester can be used in the case. (Similar to 859-OP.)

Case only .....\$7.40



639-N



369



639



859-OP

## 630 SERIES ACCESSORIES

Pt. T-91-430 0-30-60 Amperes (Portable) .....	*\$18.00
Pt. T-91-431 0-60-120 Amperes (Portable) .....	*\$18.00

### EXTERNAL SHUNTS FOR 666-R, 666-HH, 630-PL, 630-APL

Pt. T-91-243 25 Amperes (Plug-in) .....	*\$12.30
Pt. T-91-244 50 Amperes (Portable) .....	*\$13.20
Pt. T-91-191 100 Amperes (Portable) .....	*\$13.20

### EXTERNAL SHUNTS—For 630, 630-A

Pt. T-91-247 30 Amperes (Plug-in) .....	*\$ 9.90
Pt. T-91-248 60 Amperes (Portable) .....	*\$13.20
Pt. T-91-255 120 Amperes (Portable) .....	*\$13.20

### EXTERNAL SHUNTS FOR 631

Pt. T-91-248 60 Amperes (Portable) .....	*\$13.20
Pt. T-91-255 120 Amperes (Portable) .....	*\$13.20

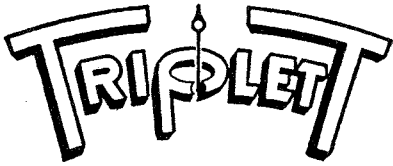
### EXTERNAL SHUNTS FOR 630-NA

Pt. T-91-429 0-15-30 Amperes (Plug-in) .....	*\$13.50
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ALL PRICES ARE SUGGESTED U.S.A. USER NET, SUBJECT TO CHANGE. MODELS SUBJECT TO REVISION.

### REPLACEMENT LEADS

LEADS for Models 630, 630-A, 630-PL, 630-APL, 666-HH, 666-R, 630-NA & 630-NS RUL (T-79-127). \*Net.....\$1.00  
**REPLACEMENT LEAD** for Model 630-T. T-79 \*Net.....\$1.00  
**REPLACEMENT LEADS** for Model 310. T-79A \*Net.....\$1.00  
**AC-DC**—Ohms probe for model 850 Pt. #T-79A lead assembly. U.S.A. \*User net price .....

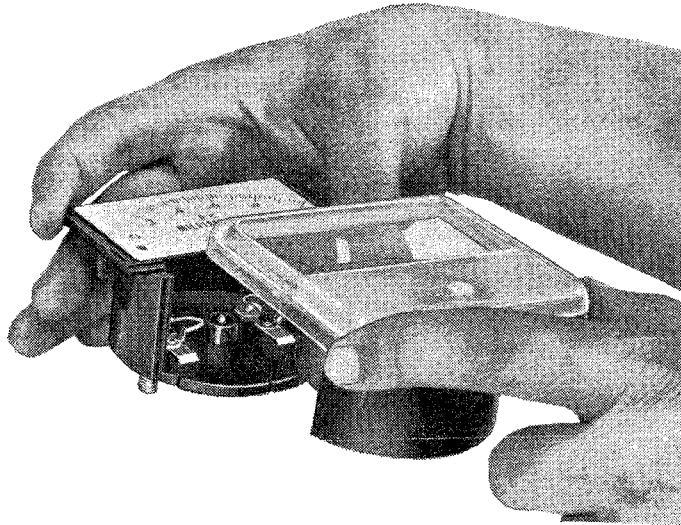


# INSTRUMENTS

## UNIMETERS

An innovation in self-service meters these Select-Your-Range Unimeters consist of two basic meter movements, which can be combined with any one of a number of separate dial-component units for a wide variety of meter ranges. The basic meter movements and the Dial-Component units lock together simply; no soldering, no wiring, no opening of the dust-proof movement is required.

In two sizes, 327-U 3 1/2" rectangular and 420-U 4 1/2" rectangular with mirror scale for greater accuracy in reading. Also in handy kits, both sizes, as below. The triple-purpose kit case with handle provides handy portability; easy protective storage and attractive display.



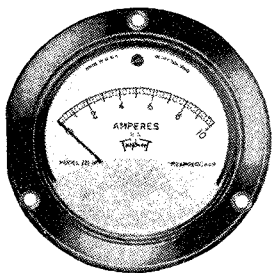
### UNIMETER PRICE LIST — BASIC MOVEMENTS

	Suggested U.S.A. User Net		Suggested U.S.A. User Net
Model 327-U 0-1 DC Milliammeter (50 MV)	\$12.10	Model 420-U 0-1 DC Milliammeter (50 MV)	\$13.20
Model 327-U 0-50 DC Microammeter (250 MV)	17.50	Model 420-U 0-50 DC Microammeter (250 MV)	18.70

### DIAL-COMPONENT UNITS

Suggested U.S.A. User Net Price Each Unit (Specify for use with 327-U or 420-U) .....\$2.75

DC-MA	DC-VM 1000 o/v Film Type	DC-AM	AC-VM Rectifier Type*	DC-UA	DC-MA	DC-VM 1000 o/v Film Type	DC-AM	AC-VM Rectifier Type*	DC-UA
0-1	0-100	0-10	0-1	0-10	0-15	0-250	0-15		0-500
0-5	0-150	0-25	0-5	0-100	0-25	0-300	0-25		
0-10	0-200	0-50	0-10	0-200	0-50	0-500	0-50	* 500 o/v	



### RUGGEDIZED INSTRUMENTS

A complete line of 2 1/2" and 3 1/2" ruggedized and sealed instruments designed to meet government specification MIL-M-10304B.

Triplet ruggedized instruments employ the unique and exclusive bar-ring construction so well adapted to ruggedization, that the addition of spring loaded jewels and an internal rubber mount (both designed for jewel protection) constitute the essential difference between the commercial and ruggedized movements.

The bar-ring construction is inherently self-shielding so that the heavy steel case does not affect instrument calibration nor does mounting in a steel panel of any thickness.

The unusually strong housing consists of a drawn steel case with heavy die cast window bezel. The bezel seals the window to the case with a simple gasket and screws. A tough plastic window is used instead of glass.

Husky gasket-sealed studs are used for electrical connections to provide additional protection over delicate glass sealed types.

Most catalog ranges of DC: MV, Volts, Mic. Ma, Amp and AC rectifier type can be supplied. Regular dials in accordance with MIL-M-10304A are supplied although special dials of all descriptions can be made up for special applications.

### MINIATURE EDGEWISE PANEL INSTRUMENTS

If space on your panel is at a premium here is a miniature meter that will fit into even the most restricted area—yet give you the readability, performance and reliability you expect from the conventional 2 1/2" sizes.

Weighing only four ounces this meter also is of value to the user who has a weight limitation factor on his hands.

**Accuracy**—DC 2% of full scale; AC Rectifier type 5% of full scale.

**Self-Shielded Bar-Ring Magnet**—Not affected by magnetic panels. High torque, exceedingly rugged and accurate.

**Mounting**—Horizontal, zero at left and barrel down is standard.

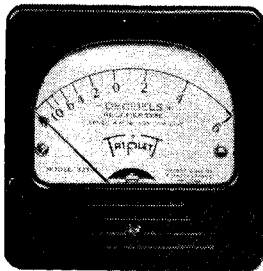
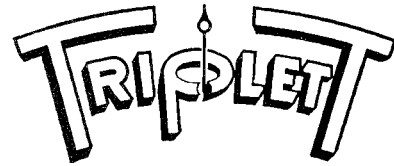
Vertical mounting or other special adaptations in quantity orders.

**Panel Hole Required**—Only 3/16" x 1 1/16".

DC-MA	Suggested U.S.A. User Net	DC-UA	Suggested U.S.A. User Net
0-1	\$10.90	0-50	\$16.40
0-10	10.90	0-100	14.30
0-25	11.30	0-200	12.20
0-50	11.30		
0-100	11.30	<b>DC-AM</b>	
0-150	11.30	0-10	\$11.80
0-200	11.30		
0-300	11.30	<b>AC-VM (Rect. Type)</b>	
0-500	11.30	0-150	\$19.70
		0-300	20.70
<b>DC-VM</b>		<b>VU Meters</b>	
0-10	\$11.80	A or B Scales	\$21.90
0-50	11.80		
0-150	11.80		

ALL PRICES ARE SUGGESTED U.S.A. USER NET, SUBJECT TO CHANGE. MODELS SUBJECT TO REVISION.

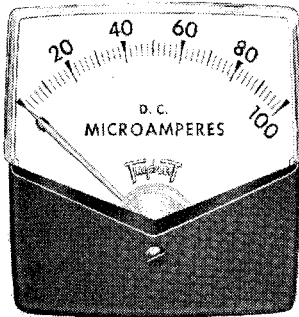
# INSTRUMENTS



DC 221-T, 321-T  
AC 231-S, 331-S

**DC MILLIVOLTMETERS**

Range	Approx. Res.	Approx. "M" Scale Div.	2 1/2" Models		2 1/2" Models		3 1/2" Models		3 1/2" Models		4 1/2" Models	
			221-T	227-T	220-M	221-PL	320-M	321-T	321-PL	327-PL	420	420-M
0-50	6.3	50	\$10.90		\$10.90		\$11.60		\$11.60		\$12.80	\$12.80
0-100	12.5	50	10.90		10.90		11.60		11.60		12.80	12.80
0-150	20	75(30)**	10.90				11.60				12.80	



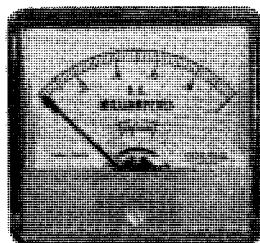
DC 220-M, 320-M, 420-M

**DC VOLTMETERS (1000 Ohms per Volt) — FILM TYPE RESISTORS**

Range	Scale Div.	2 1/2" Models		2 1/2" Models		3 1/2" Models		3 1/2" Models		4 1/2" Models	
		221-T	227-T	220-M	221-PL	321-T	327-T	320-M	321-PL	420-M	420-PL
0-10	50	\$11.80		\$11.80		\$12.30		\$12.30		\$13.50	
0-15	75(30)**	11.80		11.80		12.30		12.30		13.50	
0-25	50	11.80		11.80		12.30		12.30		13.50	
0-50	50	11.80		11.80		12.30		12.30		13.50	
0-100	50	11.80		11.80		12.30		12.30		13.50	
0-150	75(30)**	11.80		11.80		12.30		12.30		13.50	
0-200	40	11.80		11.80		12.30		12.30		13.50	
0-250	50	11.80		11.80		12.30		12.30		13.50	
0-300	60(30)	11.80		11.80		12.30		12.30		13.50	
0-500	50	14.10***		14.10***		13.00		13.00		14.20	
0-750	75(30)**	14.60***		14.60***		13.00		13.00		14.20	
0-1000	50	14.90		14.90		15.50		15.50		16.70	
0-2000	40	15.50		15.50		16.20		16.20		17.40	
0-3000	60(30)**	16.20		16.20		16.80		16.80		18.00	
0-4000	40	16.50		16.50		17.20		17.20		18.40	
0-5000	50	16.80		16.80		17.50		17.50		18.70	

**DC VOLTMETERS (1000 Ohms per Volt) — WIREWOUND RESISTORS**

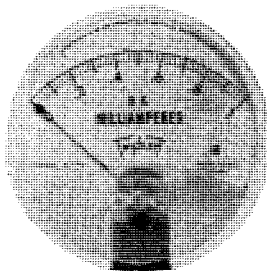
Range	Scale Div.	2 1/2" Models		2 1/2" Models		3 1/2" Models		3 1/2" Models		4 1/2" Model	
		221-T	227-T	220-M	221-PL	321-T	327-T	320-M	321-PL	420-M	420-PL
0-1	50	\$11.80		\$11.80		\$12.30		\$12.30		\$13.50	
0-3	60(30)**	11.80		11.80		12.30		12.30		13.50	
0-5	50	11.80		11.80		12.30		12.30		13.50	



DC 227-PL, 327-PL  
AC 237-PL, 337-PL

**DC MICROAMMETERS**

Range	Approx. Res.	Scale Div.	2 1/2" Models		2 1/2" Models		3 1/2" Models		3 1/2" Models		4 1/2" Model	
			221-T	227-T	220-M	221-PL	321-T	327-T	320-M	321-PL	420-M	420-PL
0-20	5600	40	\$19.40		\$19.40		\$20.10		\$20.10		\$21.30	
0-50	2000	50	16.40		16.40		17.10		17.10		18.30	
0-100	825	50	14.30		14.30		15.00		15.00		16.20	
0-200	360	40	12.20		12.20		12.90		12.90		14.10	
0-500	156	50	11.70		11.70		12.40		12.40		13.60	
50-0-50	825	50	14.30		14.30		15.00		15.00		16.20	
100-0-100	360	50	12.20		12.20		12.90		12.90		14.10	
500-0-500	55	50	10.90		10.90		11.60		11.60		12.80	

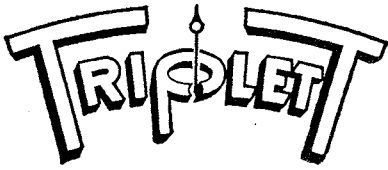


DC 221-PL, 321-PL  
AC 231-PL, 331-PL

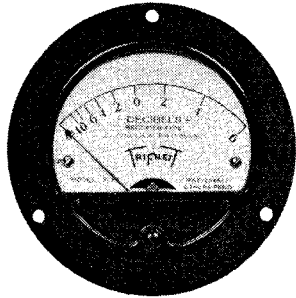
**DC MILLIAMMETERS**

Range	Approx. Res.	Scale Div.	2 1/2" Models		2 1/2" Models		3 1/2" Models		3 1/2" Models		4 1/2" Model	
			221-T	227-T	220-M	221-PL	321-T	327-T	320-M	321-PL	420	420-M
0-1	55	50	\$10.90		\$10.90		\$11.60		\$11.60		\$12.80	\$12.8
0-1.5	30	75(30)**	10.90		10.90		11.60		11.60		12.80	12.8
0-3	14	60(30)**	10.90		10.90		11.60		11.60		12.80	12.8
0-5	8.5	50	10.90		10.90		11.60		11.60		12.80	12.8
0-10	3.1	50	10.90		10.90		11.60		11.60		12.80	12.8
0-15	6.6	75(30)**	10.90		10.90		11.60		11.60		12.80	12.8
0-25	4	50	11.30		11.30		12.00		12.00		13.20	13.2
0-50	2	50	11.30		11.30		12.00		12.00		13.20	13.2
0-75	1.3	75(30)**	11.30		11.30		12.00		12.00		13.20	13.2
0-100	1	50	11.30		11.30		12.00		12.00		13.20	13.2
0-150	0.6	75(30)**	11.30		11.30		12.00		12.00		13.20	13.2
0-200	0.5	40	11.30		11.30		12.00		12.00		13.20	13.2
0-250	0.4	50	11.30		11.30		12.00		12.00		13.20	13.2
0-300	0.33	60(30)**	11.30		11.30		12.00		12.00		13.20	13.2
0-400	0.25	40	11.30		11.30		12.00		12.00		13.20	13.2
0-500	0.2	50	11.30		11.30		12.00		12.00		13.20	13.2
0-750	0.13	75(30)**	11.30		11.30		12.00		12.00		13.20	13.2
0-1000	0.1	50	11.30		11.30		12.00		12.00		13.20	13.2

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# INSTRUMENTS



### DC AMMETERS

Range	Scale Div.	2 1/2" Models 221-T, 227-T	2 1/2" Models 220-M, 221-PL, 227-PL	3 1/2" Models 321-T, 327-T	3 1/2" Models 320-M, 321-PL, 327-PL	4 1/2" Model 420	4 1/2" Models 420-M, 420-PL
0-1	50	\$11.30	\$11.30	\$12.00	\$12.00	\$13.20	\$13.20
0-3	60(30)**	11.30	11.30	12.00	12.00	13.20	13.20
0-5	50	11.80	11.80	12.30	12.30	13.50	13.50
0-10	50	11.80	11.80	12.30	12.30	13.50	13.50
0-15	75(30)**	11.80	11.80	12.30	12.30	13.50	13.50
0-25	50	11.80	11.80	12.30	12.30	13.50	13.50
0-30	60(30)**	11.80	11.80	12.30	12.30	13.50	13.50
0-50	50	11.80	11.80 } 221-PL only	12.30	12.30 } 321-PL only	13.50	13.50

D.C. Ammeters are self-contained up to and including 50 Amperes. Shunts 75 Amperes (50 M.V.) and higher are switch-board type with 5 ft. leads.

### AC VOLTMETERS

Range	Approx. Ohms/Volt	Scale Div.	2 1/2" Models 231-S, 237-S	2 1/2" Models 231-PL, 237-PL	3 1/2" Models 331-S, 337-S	3 1/2" Models 331-PL, 337-PL	4 1/2" Model 430	4 1/2" Model 430-PL
0-1.5	1.33	75(30)**	\$11.40	\$11.40	\$12.10	\$12.10	\$12.80	\$12.80
0-3	3.33	60(30)**	11.40	11.40	12.10	12.10	12.80	12.80
0-5	4	50	11.40	11.40	12.10	12.10	12.80	12.80
0-10	10	50	11.40	11.40	12.10	12.10	12.80	12.80
0-15	16	75(30)**	11.40	11.40	12.10	12.10	12.80	12.80
0-25	20	50	11.40	11.40	12.10	12.10	12.80	12.80
0-50	50	50	11.40	11.40	12.10	12.10	12.80	12.80
0-100	91	50	11.40	11.40	12.10	12.10	12.80	12.80
0-150	125	75(30)**	12.50	12.50	13.20	13.20	13.80	13.80
0-250	144	50	13.10	13.10	13.80	13.80	14.40	14.40
0-300	144	60(30)**	13.60	13.60	14.30	14.30	15.00	15.00
0-500*	125	50	17.70	17.70	18.40	18.40	19.10	19.10
0-750*	125	75(30)**	20.50	20.50	21.20	21.20	21.90	21.90
0-1000*	125	50	22.10	22.10	22.80	22.80	23.50	23.50

These A.C. Voltmeters are for use on frequencies from 25 to 133 cycles. \*Supplied with external resistor boxes at prices shown above. All other instruments are self-contained. Double-range Voltmeters are available on special order. Prices on request.

### AC AMMETERS

Range	Approx. Res.	Scale Div.	2 1/2" Models 231-S, 237-S	2 1/2" Models 231-PL, 237-PL	3 1/2" Models 331-S, 337-S	3 1/2" Models 331-PL, 337-PL	4 1/2" Model 430	4 1/2" Model 430-PL
1-1	.29	50	\$11.40	\$11.40	\$12.10	\$12.10	\$12.80	\$12.80
1-2	.19	40	11.40	11.40	12.10	12.10	12.80	12.80
1-3	.03	60(30)**	11.40	11.40	12.10	12.10	12.80	12.80
1-5	.015	50	11.40	11.40	12.10	12.10	12.80	12.80
1-10	.005	50	11.40	11.40	12.10	12.10	12.80	12.80
1-15	.002	75(30)**	11.40	11.40	12.10	12.10	12.80	12.80
1-25	.001	50	11.40	11.40	12.10	12.10	12.80	12.80
1-30	.001	60(30)**	11.40	11.40	12.10	12.10	12.80	12.80
1-50	.0005	50	11.40	11.40	12.10	12.10	12.80	12.80
1-75	.0003	75			13.30		14.50	

### AC MILLIAMMETERS

Range	Approx. Res.	Scale Div.	2 1/2" Models 231-S, 237-S	2 1/2" Models 231-PL, 237-PL	3 1/2" Models 331-S, 337-S	3 1/2" Models 331-PL, 337-PL	4 1/2" Model 430	4 1/2" Model 430-PL
10	3800	50	\$11.40	\$11.40	\$12.10	\$12.10	\$12.80	\$12.80
15	1600	75(30)**	11.40	11.40	12.10	12.10	12.80	12.80
25	460	50	11.40	11.40	12.10	12.10	12.80	12.80
50	115	50	11.40	11.40	12.10	12.10	12.80	12.80
100	35	50	11.40	11.40	12.10	12.10	12.80	12.80
200	12	40	11.40	11.40	12.10	12.10	12.80	12.80
250	3.8	50	11.40	11.40	12.10	12.10	12.80	12.80
500	1.2	50	11.40	11.40	12.10	12.10	12.80	12.80

### THERMO AMMETERS (R.F.)

Range	Approx. Res.	Scale Div.	2 1/2" Models 241-T, 247-T	3 1/2" Models 341-T, 347-T	3 1/2" Models 341-PL, 347-PL	4 1/2" Model 440	4 1/2" Model 440-PL
5 Amps	.93	50	\$12.10	\$12.80	\$12.80	\$14.00	\$14.00
1 Amps	.35	50	12.10	12.80	12.80	14.00	14.00
.5 Amps	.21	75(30)	12.10	12.80	12.80	14.00	14.00
.15 Amps	.13	50	12.10	12.80	12.80	14.00	14.00
.1 Amps	.06	50	12.10	12.80	12.80	14.00	14.00
.0 Amps	.03	50	12.10	12.80	12.80	14.00	14.00

Internal couples are normally furnished at prices shown. If external couples are required, please specify on order, adding \$6.10 net to price of instrument shown above. External couples only less meter, with leads, \$7.30 net each.

\*\*Scale divisions for 2-inch Models in parentheses.

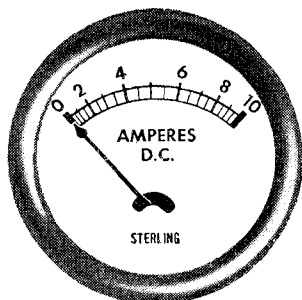
\*\*\*Supplies with external resistors.

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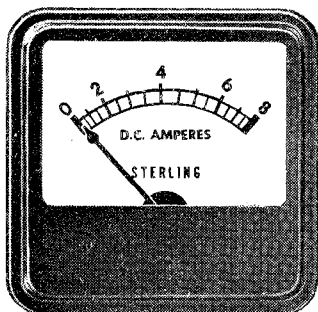
**MODEL 95**

1-15/16" clear plexiglas face. Fits mounting hole 1-27/32" x 25/32".



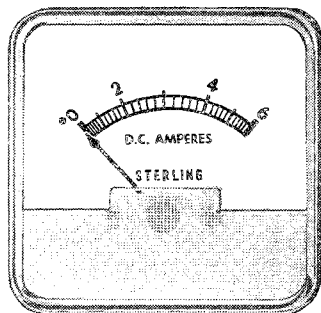
**MODEL 80**

2-5/32" dia. flange, flush case. Fits mounting hole 2-1/32" dia. Black enamel finish.



**MODEL 75**

2-1/4" square flange, fits mounting hole 2-1/32" dia. Black enamel finish.



**MODEL 55**

2-1/8" clear plastic face. Fits mounting hole 2-1/32" dia.

All Sterling meters have rugged, time-proven linear-power movement. Calibration accuracy is within 5%. Back clamp mounting is provided.



# STERLING PANEL METERS

## PRICE LIST

D.C. AMMETERS							
Range	Approximate Ohms Resist.	Model 55 Part No.	Model 95 Part No.	NET PRICE	Model 75 Part No.	Model 80 Part No.	NET PRICE
0-1	.02 Max.	55-855	95-855	\$2.05	75-855	80-855	\$1.80
0-3	.02 Max.	55-856	95-856	2.05	75-856	80-856	1.80
0-6	.02 Max.	55-857	95-857	2.05	75-857	80-857	1.80
0-8	.02 Max.	55-928	95-928	2.05	75-928	80-928	1.80
0-10	.02 Max.	55-858	95-858	2.05	75-858	80-858	1.80
0-15	.02 Max.	55-864	95-864	2.05	75-864	80-864	1.80
0-25	.02 Max.	55-865		2.05	75-865	80-865	1.80
0-50	.02 Max.	55-866		2.65	75-866	80-866	2.40
3-0-3	.02 Max.	55-860	95-860	2.05	75-860	80-860	1.80
10-0-10	.02 Max.	55-862	95-862	2.05	75-862	80-862	1.80
20-0-20	.02 Max.	55-863		2.05	75-863	80-863	1.80
30-0-30	.02 Max.	55-867		2.05	75-867	80-867	1.80
50-0-50	.02 Max.	55-925		2.85	75-925	80-925	2.55

D.C. VOLTMETERS							
Range		Model 55 Part No.	Model 95 Part No.	NET PRICE	Model 75 Part No.	Model 80 Part No.	NET PRICE
0-1	105	55-801	95-801	\$2.05	75-801	80-801	\$1.80
0-3	520	55-802	95-802	2.05	75-802	80-802	1.80
0-5	945	55-804	95-804	2.05	75-804	80-804	1.80
0-10	1925	55-807	95-807	2.05	75-807	80-807	1.80
0-15	3425	55-808	95-808	2.05	75-808	80-808	1.80
0-25	4825	55-809	95-809	2.05	75-809	80-809	1.80
0-50	10,000	55-811	95-811	2.05	75-811	80-811	1.80
0-100	20,000	55-813	95-813	2.35	75-813	80-813	2.10
0-150	30,000	55-815	95-815	2.55	75-815	80-815	2.25
0-300	100,000	55-817		3.30	75-817	80-817	3.00
0-500	160,000	55-818		3.85	75-818	80-818	3.60

D.C. MILLIAMMETERS							
Range		Model 55 Part No.	Model 95 Part No.	NET PRICE	Model 75 Part No.	Model 80 Part No.	NET PRICE
0-1	1000	55-834	95-834	\$3.85	75-834	80-834	\$3.60
0-2	500	55-835	95-835	2.95	75-835	80-835	2.70
0-5	125	55-836	95-836	2.55	75-836	80-836	2.25
0-10	28	55-837	95-837	2.40	75-837	80-837	2.10
0-15	12	55-838	95-838	2.05	75-838	80-838	1.80
0-25	4.5	55-839	95-839	2.05	75-839	80-839	1.80
0-50	1.3	55-840	95-840	2.05	75-840	80-840	1.80
0-100	.37	55-841	95-841	2.05	75-841	80-841	1.80
0-150	.14	55-842	95-842	2.05	75-842	80-842	1.80
0-200	.09	55-843	95-843	2.05	75-843	80-843	1.80
0-300	.04	55-844	95-844	2.05	75-844	80-844	1.80
0-400	.03	55-845	95-845	2.05	75-845	80-845	1.80
0-500	.02	55-848	95-848	2.05	75-848	80-848	1.80

A.C. VOLTMETERS							
Range		Model 55 Part No.	Model 95 Part No.	NET PRICE	Model 75 Part No.	Model 80 Part No.	NET PRICE
0-5	28	55-871		\$3.15	75-871	80-871	\$2.85
0-10	104	55-872		3.15	75-872	80-872	2.85
0-15	210	55-873		3.15	75-873	80-873	2.85
0-25	1750	55-910		3.15	75-910	80-910	2.85
0-50	2750	55-879		3.15	75-879	80-879	2.85
0-150	11,500	55-874		3.90	75-874	80-874	3.60
0-300	19,400	55-875		4.35	75-875	80-875	4.05
0-500	34,400	55-913		4.95	75-913	80-913	4.65

A.C. AMMETERS							
Range		Model 55 Part No.	Model 95 Part No.	NET PRICE	Model 75 Part No.	Model 80 Part No.	NET PRICE
0-1	.7	55-886		\$3.15	75-886	80-886	\$2.85
0-3	.09	55-887		3.15	75-887	80-887	2.85
0-5	.04	55-888		3.15	75-888	80-888	2.85
0-10	.02	55-889		3.15	75-889	80-889	2.85
0-15	.02	55-917		3.15	75-917	80-917	2.85
0-30	.02	55-892		3.30	75-892	80-892	3.00

A.C. MILLIAMMETERS							
Range		Model 55 Part No.	Model 95 Part No.	NET PRICE	Model 75 Part No.	Model 80 Part No.	NET PRICE
0-100	104	55-882		\$3.15	75-882	80-882	\$2.85
0-250	16	55-883		3.15	75-883	80-883	2.85
0-500	3	55-884		3.15	75-884	80-884	2.85

For meters with special scales, ranges or construction, contact the factory or local Sterling representative.

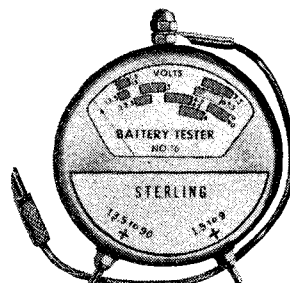
## POCKET METER BATTERY TESTERS

No. 10 Dual A and B for Hearing Aids. Has 2-0-2 and 50-0-50 scales.....	Net Price \$3.30
No. 13 Transistor Hearing Aid tester. Has 0-7 volt scale.....	Net Price \$3.00
No. 24 Ammeter 0-35 amp. for No. 6 dry cells. Scale has 1 amp. divisions.....	Net Price \$2.25
No. 34 Voltmeter for "hot-shot" batteries. 0-10 volt scale with 1/5 volt divisions.....	Net Price \$2.40
No. 16 General voltmeter. Has green color zones for batteries from 1.5 to 90 volts.....	Net Price \$4.05
No. 44 Voltammeter. 0-35 amp. scale, 1 amp. divisions, 0-10 volt scale, 1/5 volt divisions.....	Net Price \$2.76

SEND FOR CATALOGS OF OUR COMPLETE LINE OF POCKET METERS AND PORTABLE BATTERY TESTERS.

THE **STERLING** MANUFACTURING COMPANY

CLEVELAND, OHIO 44113



NO. 16 GENERAL TESTER



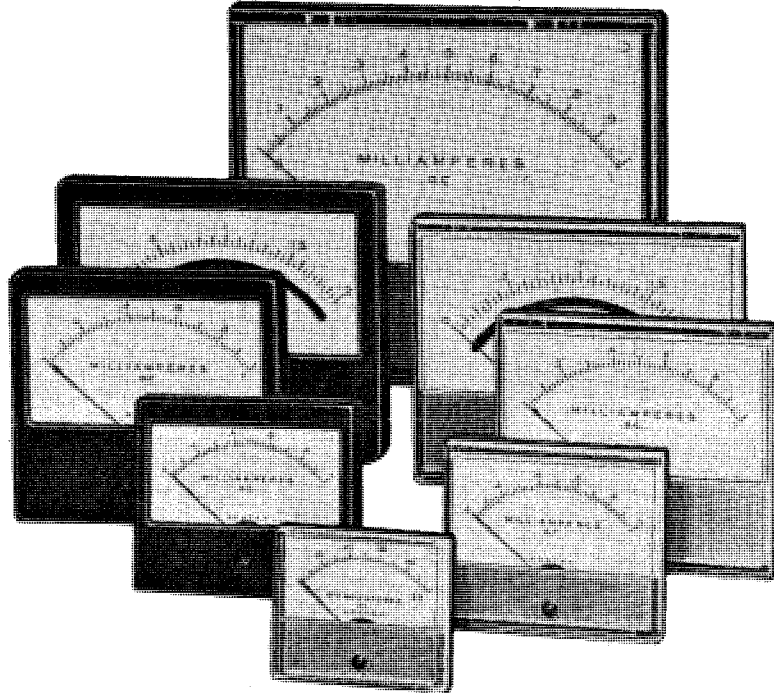
# WESTON INSTRUMENTS

## 1900 PANEL INSTRUMENT SERIES

### GENERAL

The 1900 Series is an integrated line of a-c and d-c panel instruments, providing a carefully selected choice of sizes, case styles, accuracies, pointers, scales and ranges. Particular attention has been paid to designing instruments that will present an overall appearance of harmony, even when random sizes are mounted side by side. Mounting bezels provide three types of mounting—recess, flush and conventional.

One of the many features of this new Weston series is the method of construction which provides quick interchangeability of fronts and easy access for adjustment or service, if ever required. From their spring-backed jewels to their unique fastening clips, the 1900 Series incorporate the fine workmanship and quality that has always been associated with Weston.



### SPECIFICATIONS

2½" SIZE	Function & Mechanism	Accuracy (Full scale value)	Scale Length (100° arc)	Pointer	Type Scale	Case Front
Model 1921	D-C CORMAG®	2%	2.3"	Lance	Plain	Plastic
Model 1922	Rect. CORMAG®	3%**	2.3"	Lance	Plain	Plastic
Model 1924	Iron Vane	2%	2.3"	Lance	Plain	Plastic
3½" SIZE						
Model 1931	D-C CORMAG®	2%	2.7"	Lance	Plain	Plastic/Bakelite
Model 1932	Rect. CORMAG®	3%**	2.7"	Lance	Plain	Plastic/Bakelite
Model 1934	Iron Vane	2%	2.7"	Lance	Plain	Plastic/Bakelite
Model 1936	D-C Ext. Mag.	2%	2.7"	Lance	Plain	Plastic/Bakelite
Model 1938	Thermo. Ext. Mag.	2%	2.7"	Lance	Plain	Plastic/Bakelite
4½" SIZE						
Model 1941	D-C CORMAG®	2%*	3.9"	Lance	Plain	Plastic/Bakelite
Model 1942	Rect. CORMAG®	2%**	3.9"	Lance	Plain	Plastic/Bakelite
Model 1944	Iron Vane	2%	3.9"	Lance	Plain	Plastic/Bakelite
Model 1946	D-C Ext. Mag.	1%	3.9"	Knife-edge	Mirrored	Plastic/Bakelite
Model 1948	Thermo. Ext. Mag.	2%	3.9"	Lance	Plain	Plastic/Bakelite
5½" SIZE						
Model 1951	D-C CORMAG®	2%*	4.7"	Lance	Plain	Plastic/Bakelite
Model 1952	Rect. CORMAG®	2%**	4.7"	Lance	Plain	Plastic/Bakelite
Model 1954	Iron Vane	2%	4.7"	Lance	Plain	Plastic/Bakelite
Model 1956	D-C Ext. Mag.	1%	4.7"	Knife-edge	Mirrored	Plastic/Bakelite
Model 1958	Thermo. Ext. Mag.	2%	4.7"	Lance	Plain	Plastic/Bakelite
7½" SIZE						
Model 1971	D-C CORMAG®	1%†	7.2"	Lance	Plain	Plastic
Model 1972	Rect. CORMAG®	2%††	7.2"	Lance	Plain	Plastic
Model 1976	D-C Ext. Mag.	1%†	7.2"	Lance	Plain	Plastic
Model 1977	Rect. Ext. Mag.	2%††	7.2"	Lance	Plain	Plastic

\*1% when knife-edge pointer and mirrored scale is specified.

\*\*on sine wave 60 cycle source at normal room temperature of 25 C.

†½% with knife-edge pointer and mirrored scale on special order ONLY.

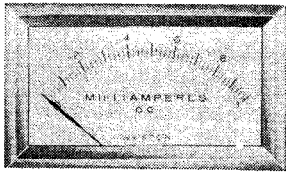
††on sine wave 60 cycle source at normal room temperature; 1½% can be supplied on special order.

NOTE: If Models 1924, 34, 36, 44, 46, 54, 56 and 76 are used on steel panels, order should specify panel thickness to assure proper adjustment.

**PRICE SUBJECT TO CHANGE WITHOUT NOTICE**

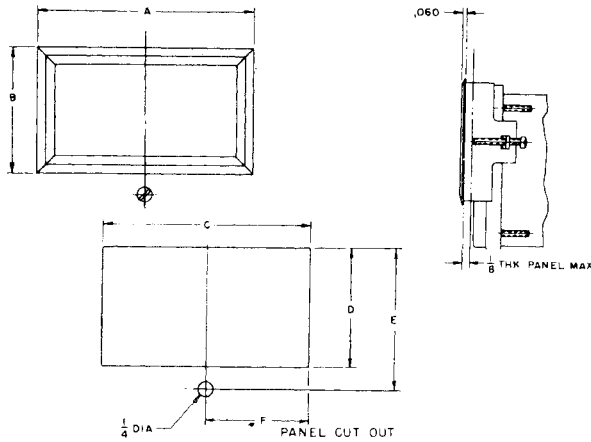
# WESTON INSTRUMENTS

## THREE TYPES OF MOUNTINGS

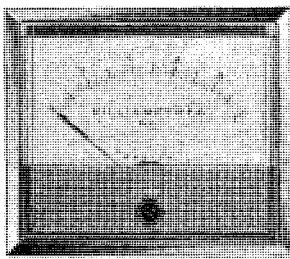


### RECESS (Plastic front only)

Only the scale is visible since meter is mounted behind the panel... half bezel fits into window.

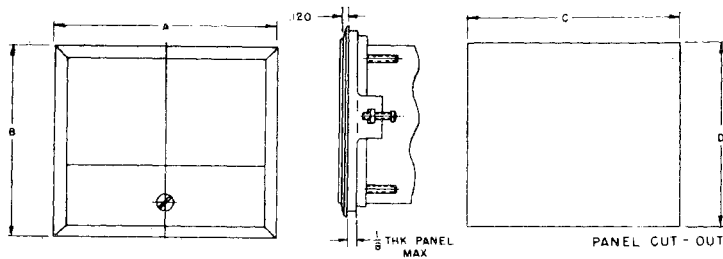


MODEL	A	B	C	D	E	F
1921 1922 1924	3.120	1.720	3.000	$1\frac{19}{32}$	2.070	$1\frac{1}{2}$
1931 1932 1934 1936 1938	3.860	2.265	$3\frac{23}{32}$	$2\frac{5}{32}$	2.550	$1\frac{25}{64}$
1941 1942 1944 1946 1948	4.960	2.900	$4\frac{13}{16}$	$2\frac{3}{4}$	3.215	$2\frac{13}{32}$
1951 1952 1954 1956 1958	6.060	3.300	$5\frac{7}{8}$	$3\frac{5}{32}$	3.950	$2\frac{15}{16}$

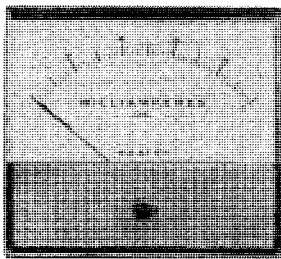


### FLUSH (Plastic front only)

Full Bezel permits mounting flush with panel through rectangular cutout.

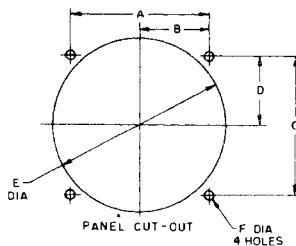


MODEL	A	B	C	D
1921 1922 1924	3.050	2.620	$2\frac{31}{32}$	$2\frac{17}{32}$
1931 1932 1934 1936 1938	3.830	3.320	$3\frac{11}{16}$	$3\frac{3}{16}$
1941 1942 1944 1946 1948	5.000	4.550	$4\frac{25}{32}$	$4\frac{11}{32}$

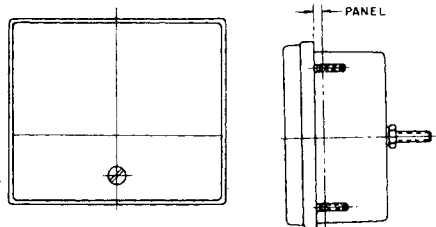


### CONVENTIONAL

Use same dimensions, whether you choose a meter with taut band or pivot and jewel movement.



MODEL	A	B	C	D	E	F
1921 1922 1924	1.880	.940	1.880	.940	2.220 DIA	$1\frac{12}{16}$
1931 1932 1934 1936 1938	2.250	1.125	2.250	1.125	2.820 DIA	$1\frac{12}{16}$
1941 1942 1944 1946 1948	4.000	2.000	3.560	2.020	2.820 DIA	$1\frac{15}{16}$
1951 1952 1954 1956 1958	5.250	2.625	3.000	2.150	2.820 DIA	$1\frac{15}{16}$
1971 1972	6.000	3.000	4.500	3.500	3.560 DIA	$1\frac{15}{16}$



## WESTON 1900 T SERIES WITH TAUT BAND MECHANISMS

Available in Bakelite or static-free clear plastic cases in sizes from  $3\frac{1}{2}$ " through  $7\frac{1}{2}$ ".

Taut-Band instruments are slightly higher in price than the 1900 Series with conventional pivot and jewel movements, but are completely interchangeable.

Taut-Band mechanisms are free from friction and inertia. They offer outstanding sensitivity, reliability and uniformity from zero to full scale.

Your distributor can provide complete information on Weston 1900 T Series with Taut Band Mechanisms.

**PRICE SUBJECT TO CHANGE WITHOUT NOTICE**



# WESTON INSTRUMENTS

## 1900 STOCK PANEL INSTRUMENT SERIES

### D-C (Cormag) — MODELS 1921/1931/1941/1951/1971

	Ranges					Scale Divisions					Nominal Resist. Ohms					P R I C E S					
	2 1/2" M-1921	3 1/2" M-1931	4 1/2" M-1941	5 1/2" M-1951	7 1/2" M-1971	2 1/2" M-1921	3 1/2" M-1931	4 1/2" M-1941	5 1/2" M-1951	7 1/2" M-1971	2 1/2" M-1921	3 1/2" M-1931	4 1/2" M-1941	5 1/2" M-1951	7 1/2" M-1971	2 1/2" M-1921	3 1/2" M-1931	4 1/2" M-1941	5 1/2" M-1951	7 1/2" M-1971	
<b>ua</b>																					
50	x				x	50				100	4800				2500	5160	\$18.60	\$19.10	\$20.10	\$30.40	—
100	x				x	50				100	1225				2500	4640	17.40	17.90	18.80	28.70	\$45.20
200	x				x	40				100	600				850	1700	16.60	17.10	18.10	27.20	—
500	x				x	50				100	240				240	935	—	16.10	17.10	—	—
<b>ma*</b>																					
1	x				x	50				100	88				115	93	14.60	15.10	16.10	24.30	40.30
1.5					x					150						93	—	—	—	—	—
2	x				x	40				100	45				16	69	—	—	16.10	24.30	—
3					x					150						33.5	—	—	—	—	—
10	x				x	50				100	2.5				2.7	3.36	14.60	15.10	16.10	24.30	—
20	x				x	40				100	2.2				2.7	1	—	15.10	16.10	24.30	—
30					x					150						1	—	—	—	—	—
50	x				x	50				100	2.0				2	1	14.60	15.10	16.10	25.20	—
100	x				x	50				100	1.0				1	.5	14.60	15.10	16.10	24.30	—
200	x				x	40				100	0.5				0.5	.25	—	15.10	16.10	24.30	—
500	x				x	50				100	0.2				0.2	.1	—	15.10	16.10	24.30	—
<b>amps**</b>																					
1	x				x	50				100							14.60	15.10	16.10	25.20	—
1.5					x					150							—	—	—	—	—
2	x				x	40				100							14.60	15.10	16.10	25.20	—
3					x					150							—	—	—	—	—
5	x				x	50				100							14.60	15.10	16.10	25.20	—
10	x				x	50				100							14.60	15.10	16.10	25.20	—
20	x				†	40				100							14.60	15.10	16.10	25.20	—
30	x				†	60				100							14.60	15.10	16.10	25.20	—
<b>volts</b>																					
1					x					100							—	—	—	—	—
1.5					x					150							—	—	—	—	—
2	x				x	40				100							15.40	15.90	16.90	25.20	—
3					x					150							—	—	—	—	—
5	x				x	50				100							15.40	15.90	16.90	25.20	—
10	x				x	50				100							15.40	15.90	16.90	25.20	—
15	x				x	75				150							15.40	15.90	16.90	25.20	—
30	x				x	60				150							—	15.90	16.90	25.20	—
50	x				x	50				100							15.40	15.90	16.90	25.20	—
80					x					80							—	—	—	—	—
100	x				x	50				100							15.40	15.90	16.90	25.20	—
150	x				x	75				150							15.40	15.90	16.90	25.20	—
200	x				x	40				100							—	15.90	16.90	25.20	—
300	x				x	60				150							15.40	15.90	16.90	25.20	—
500	x				x	50				100							15.40	15.90	16.90	25.20	—

Approx. MV Drop

50

Ohms Per Volt  
1000

\*NOTE: Range of 50 ma and up are shunted and have a drop of approximately 50 mv on Model 1971 and 100 mv on Models 1921, 1931, 1941 and 1951.

\*\*For ranges above 30 amps use a 50 mv instrument, with required external shunt.

†For ranges above 10 amps use external shunts.

### D-C (External Magnet) — MODELS 1936/1946/1956/1976

	Ranges				Scale Divisions				Nominal Resist. Ohms				P R I C E S			
	3 1/2" M-1936	4 1/2" M-1946	5 1/2" M-1956	7 1/2" M-1976	3 1/2" M-1936	4 1/2" M-1946	5 1/2" M-1956	7 1/2" M-1976	3 1/2" M-1936	4 1/2" M-1946	5 1/2" M-1956	7 1/2" M-1976	3 1/2" M-1936	4 1/2" M-1946	5 1/2" M-1956	7 1/2" M-1976
<b>ua</b>																
20	x		x*		40				5400				—	—	—	—
30				x				150					—	—	—	—
50	x		x	x	50			100	2180				—	\$30.50	\$35.40	\$56.40
100	x		x	x	50			100	870				—	29.80	—	—
200	x		x	x	40			100	550				\$26.40	—	—	—
500	x		x		50				120				—	—	—	—

\*2% accuracy only.

PRICE SUBJECT TO CHANGE WITHOUT NOTICE

# WESTON INSTRUMENTS

## 1900 STOCK PANEL INSTRUMENT SERIES

### RECTIFIER TYPE A-C (Cormag) — MODELS 1922/32/42/52/72

	Ranges					Scale Divisions					Nominal Resist. Ohms					P R I C E S			
	2 1/2" M-1922	3 1/2" M-1932	4 1/2" M-1942	5 1/2" M-1952	7 1/2" M-1972	2 1/2" M-1922	3 1/2" M-1932	4 1/2" M-1942	5 1/2" M-1952	7 1/2" M-1972	2 1/2" M-1922	3 1/2" M-1932	4 1/2" M-1942	5 1/2" M-1952	7 1/2" M-1972	2 1/2" M-1922	3 1/2" M-1932	4 1/2" M-1942	5 1/2" M-1952
<b>ua</b>																			
100	x															\$22.50	—	—	—
200	x				x					100						22.50	—	—	—
500	x				x					100						22.50	—	—	—
<b>ma</b>																			
1	x				x					100						19.30	\$19.80	—	—
2	x									100						19.30	—	—	—
5	x				x					100						—	—	—	—
<b>volts</b>																			
3	x															24.60	20.70	\$21.70	\$25.60
7.5	x															24.60	20.70	21.70	25.60
15	x				x					150						24.60	20.70	21.70	25.60
30	x				x					150						24.60	20.70	21.70	25.60
75	x				x					150						24.60	20.70	21.70	25.60
150	x				x					150						24.60	20.70	21.70	25.60
300	x				x					150						24.60	—	21.70	25.60
500	x				x					100						24.60	—	21.70	25.60

Ohms Per Volt  
1000

### A-C (Iron Vane) — MODELS 1924/1934/1944/1954

	Ranges					Scale Divisions					Approx. Resist. Ohms					P R I C E S			
	2 1/2" M-1924	3 1/2" M-1934	4 1/2" M-1944	5 1/2" M-1954	2 1/2" M-1924	3 1/2" M-1934	4 1/2" M-1944	5 1/2" M-1954	2 1/2" M-1924	3 1/2" M-1934	4 1/2" M-1944	5 1/2" M-1954	2 1/2" M-1924	3 1/2" M-1934	4 1/2" M-1944	5 1/2" M-1954	2 1/2" M-1924	3 1/2" M-1934	4 1/2" M-1944
<b>ma†</b>																			
10		x														\$19.10	\$19.50	—	\$26.60
20		x														19.10	—	\$20.50	26.60
50		x														19.10	19.50	20.50	26.60
100		x														19.10	19.50	—	26.60
200		x														—	—	20.50	—
500		x														19.10	19.50	20.50	26.60
<b>amps*</b>																			
1		x														19.10	19.50	20.50	26.60
2		x														19.10	19.50	—	—
5		x														19.10	19.50	20.50	26.60
10		x														19.10	19.50	20.50	—
20		x														19.10	19.50	20.50	26.60
30		x														19.10	—	20.50	—
<b>volts**</b>																			
3		x														20.00	20.50	21.50	27.60
7.5		x														20.00	20.50	21.50	—
15		x														20.00	—	21.50	27.60
30		x														20.00	—	21.50	27.60
75		x														20.00	—	—	27.60
150		x														20.00	20.50	21.50	27.60
300		x														20.00	20.50	21.50	27.60
500		x														20.00	20.50	21.50	27.60

†Frequency: 25 to 500 cycles.

\*Power consumption: 5 ampere range at 5 amperes, 0.45 watts; at 60 cycles, 0.45 volt-amperes.  
Frequency: 25 to 500 cycles.

\*\*Power consumption: 150 volt range at 115 volts, 1.15 watts, at 60 cycles, 1.15 volt-amperes.  
Frequency: adjusted for use on frequencies of 25 to 125 cycles.

**PRICE SUBJECT TO CHANGE WITHOUT NOTICE**

# WESTON INSTRUMENTS

## 201/301 PANEL INSTRUMENT SERIES

### MODELS 201/301 D-C VOLTMETERS—1000 OHMS PER VOLT

Range	Scale Div.		Price	
	201	301	201	301
1	20	50	\$16.90	\$18.10
1.5	30	75	16.90	14.90
3	30	60	13.90	14.90
5	25	50	13.90	14.90
8	40	40	16.90	18.10
10	20	50	13.90	14.90
15	30	75	13.90	14.90
30	30	60	13.90	14.90
50	25	50	13.90	14.90
80	40	40	16.90	18.10
100	20	50	13.90	14.90
150	30	75	13.90	14.90
200	40	40	14.40	15.40
250	25	—	14.40	—
300	30	60	14.40	15.40
500	25	50	14.90	15.40
800	—	40	—	17.90
1KV	—	50	—	19.80

### MODELS 201/301—D-C MILLIAMMETERS

Range	Scale Div.		Approx. Resis. Ohms		Price	
	201	301	201	301	201	301
1	20	50	100	88	13.40	14.40
1.5	30	75	40	88	16.30	14.40
2	40	40	40	45	16.30	14.40
3	30	60	40	45	16.30	14.40
5	25	50	6	8	13.40	14.40
10	20	50	2.5	2.5	13.40	14.40
15	30	75	2.5	2.5	13.40	14.40
20	40	40	2.5	2.5	13.40	14.40
30	30	60	2.5	2.5	13.40	14.40
50	25	50	2	2	13.40	14.40
100	20	50	1	1	13.40	14.40
150	30	75	0.66	0.66	13.40	14.40
200	40	40	0.5	0.5	16.30	14.40
300	30	60	0.33	0.33	16.30	14.40
800	40	40	0.12	0.2	13.40	14.40
500	25	50	0.2	0.12	16.30	14.40
1000	20	50	0.05	0.05	16.30	17.50
1-0-1	40	40	40	45	13.40	14.40
10-0-10	—	50	—	2.5	—	14.40
50-0-50	50	50	2	2	16.30	14.40
100-0-100	40	40	1	1	13.40	14.40

### MODELS 201/301—D-C AMMETERS

Range	Scale Div.		Price	
	201	301	201	301
1	20	50	\$13.40	\$14.40
1.5	30	75	13.40	14.40
2	40	40	16.30	14.40
3	30	60	13.40	14.40
5	25	50	13.40	14.40
10	20	50	13.40	14.40
15	30	75	14.40	14.40
20	20	40	14.40	15.40
30	30	60	14.40	15.40
50	25	50	17.50	15.40
5-0-5	—	50	—	17.50
10-0-10	—	40	—	14.40
15-0-15	—	60	—	18.70
20-0-20	—	40	—	18.70
30-0-30	—	60	—	15.40
50-0-50	—	50	—	15.40

### MODELS 201/301—206\*/306\* D-C MICROAMMETERS

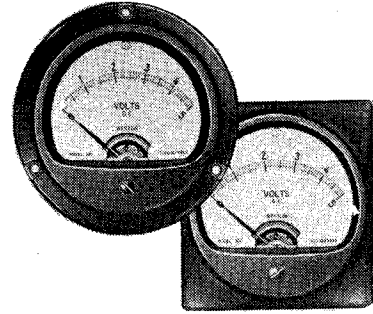
Range	Scale Div.		Approx. Resis.		Price	
	206	306	206	306	206	306
10	20	50	—	3800	\$ —	\$36.80
20	40	40	—	1480	—	30.90
30	30	60	—	1480	—	22.50
50	25	50	4150	1175	19.30	23.40
100	20	50	870	660	16.40	26.10
200	40	40	600	600	13.90	14.90
500	25	50	160	230	—	14.90
10-0-10	—	—	—	5500	—	23.70
25-0-25	—	50	4150	—	16.40	20.30
50-0-50	—	20	50	870	—	17.30
100-0-100	—	40	40	600	—	13.40
500-0-500	—	20	50	100	—	13.40

\*External magnet type, unshielded

### MODELS 202/302 RECTIFIER TYPE A-C VOLTMETERS

Range	1000 ohms per volt		2000 ohms per volt	
	202	302	202	302
3	—	60	\$24.00	\$20.70
5	—	50	24.00	20.70
10	—	50	24.00	20.70
15	—	75	24.00	20.70
30	—	60	24.00	20.70
50	—	50	24.00	20.70
100	—	50	24.00	20.70
150	—	75	24.00	20.70
300	—	60	24.00	21.30

- 2½" and 3½" Sizes
- 2% Accuracy Full Scale
- Spring Back Jewels
- Long Term Stability
- Self Shielded Mechanism
- Cases Sealed Against Dust
- Minimum Power Consumption
- Minimum Response Time
- Note: Specify Round or Square Case



### MODELS 202/302 RECTIFIER TYPE A-C MILLIAMMETERS

Range	Scale Div.		Approx. Resis.		Price	
	202	302	202-302	202	302	
1	25	50	470	\$24.00	\$20.70	
2	40	40	270	24.00	20.70	
5	25	50	150	24.00	20.70	
0.5	25	50	1030	24.00	25.20	

### MODELS 202/302 RECTIFIER TYPE A-C MICROAMMETERS

Range	Scale Div.		Approx. Resis.		Price	
	202	302	202-302	202	302	
100	20	50	3400	\$28.50	\$24.40	
200	40	40	2400	27.00	28.20	
300	30	60	2000	27.00	28.20	
500	25	50	1030	24.00	20.70	

### MODELS 204/304—A-C VOLTMETERS—25-125 CYCLES

Range	Scale Div.	OHMS/V		Price	
		204	304	204	304
1.5	30	1.5	3	\$20.80	\$18.10
3	30	15	15	20.80	18.10
5	50	26	26	17.10	18.10
8	40	—	81	—	18.10
10	50	100	100	17.10	18.10
15	30	250	250	20.80	18.10
30	30	790	790	20.80	18.10
50	50	2124	2124	20.80	18.10
80	40	5712	5712	20.80	18.10
100	50	—	10065	—	18.10
130	26	13065	13065	21.40	18.50
150	30	20295	20295	17.60	18.50
250	25	56060	56060	22.60	23.70
300	30	81550	81550	19.10	20.10
500	50	131550	131550	26.10	21.50

### MODELS 204/304—A-C AMMETERS—25-500 CYCLES

Range	Amps Scale		Scale Div.		Approx. Resis.		Price	
	204	304	204	304	204	304	204	304
1	1	1	50	50	0.130	0.130	\$16.60	\$17.60
1.5	—	1.5	—	30	—	0.555	—	17.60
2	2	2	40	40	0.026	0.026	16.60	17.60
3	3	3	30	30	0.013	0.013	16.60	17.60
5	5	5	50	50	0.005	0.005	16.60	17.60
5 Amps.*	—	100	—	50	—	0.005	—	17.60
5 Amps.*	—	200	—	40	—	0.005	—	17.60
5 Amps.*	—	300	—	30	—	0.005	—	17.60
10	10	10	50	50	0.0014	0.0014	16.60	17.60
15	15	15	30	30	0.0015	0.0015	16.60	17.60
20	20	20	40	40	0.0005	0.0005	16.60	17.60
30	30	30	30	30	0.0004	0.0004	16.60	17.60
50	50	50	50	50	0.0002	0.0002	16.60	17.60

\*For use with Current Transformer. Above prices do not include Transformer.

### MODELS 204/304—A-C MILLIAMMETERS

Range	Scale Div.		Approx. Resis.		Price	
	204	304	204	304	204	304
15	30	30	4.50	.54	\$20.00	\$21.40
50	50	50	.34	.34	20.20	17.60
100	50	50	8.5	8.5	20.20	17.60
500	50	50	0.42	0.42	16.60	17.60

### MODELS 208/308—THERMO-AMMETERS

Range	Scale Div.		Price	
	208	308	208	308
1	20	50	\$34.40	\$37.10
1.5	30	—	34.40	—
2	40	—	34.40	—
3	30	60	34.40	37.10

### MODELS 208/308—THERMO-MILLIAMMETERS

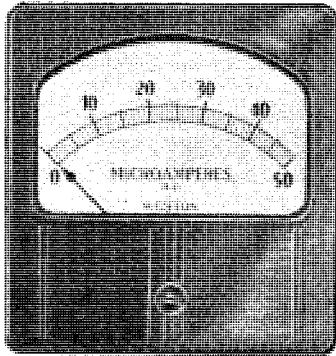
Range	Scale Div.		Approx. Resis.		Price	
	208	308	208	308	208	308
† 10	—	—	50	85	—	\$64.50
† 50	—	—	50	5	—	64.50
100	20	50	5.2	8	39.20	33.20
200	—	—	40	2.7	—	33.20

†Vacuum Thermocouple Type.

PRICE SUBJECT TO CHANGE WITHOUT NOTICE

# WESTON INSTRUMENTS

## 741-744 PANEL INSTRUMENT GROUP



### 741/744 PANEL INSTRUMENTS

These instruments are regularly supplied in flush, black Bakelite cases which can be mounted on panels up to 7/8" thick. The adjustable mounting arrangement is invisible from the front of the panel. Illumination feature available if required.

Rated Accuracy: 1% of full scale value.

Overall Dimensions: 4" x 4.25" (101.6 x 107.9 mm)

Scale: 3.52" (90 mm)

Model 741: Permanent Magnet Moving Coil Type

Model 744: Movable Iron Type

### MODEL 741 D-C VOLTMETERS (1000 ohms/volt)

Range	Scale Div.	Price
10	50	\$42.10
30	60	42.10
50	50	42.10
150	75	43.50
300	60	46.25

### MODEL 741 D-C AMMETERS

Range	Scale Div.	Price
1	50	\$42.10
5	50	42.10
10	50	42.10
25	50	42.10
50	50	42.10

### MODEL 741 D-C MILLIAMMETERS

Range	Scale Div.	Approx. Resistance Ohms	Price
1	60	16.3	\$42.10
10	50	2.5	42.10
25	50	2.4	42.10
50	50	2	42.10
100	50	1	42.10
200	40	0.5	42.10
300	60	0.33	42.10
500	50	0.2	42.10

### MODEL 741 D-C MICROAMMETERS

Range	Scale Div.	Approx. Resistance Ohms	Price
30	60	1850	\$58.80
50	50	870	57.20
100	50	550	56.05

200	40	320	44.65
500	50	60	44.65
50-0-50		550	56.05

### MODEL 744 A-C VOLTMETERS (25-125 Cycles)

Range	Scale Div.	Approx. Resistance Ohms	Price
10	50	33	\$48.40
15	75	98	48.40
30	60	362	48.40
130	65	7880	49.80
150	75	9100	49.80
*300	60	18200	57.90
*500	—	—	69.40

\*Furnished with Exterior Resistor Type 51

### MODEL 744 A-C AMMETERS (25-500 Cycles)

Range	Scale Div.	Approx. Resistance Ohms	Price
1	50	1.12	\$48.40
3	60	0.112	48.40
5	50	0.0275	48.40
10	50	0.0135	48.40
15	75	0.0068	48.40
20	40	0.0026	48.40
30	60	0.0020	48.40
50	50	0.00043	48.40

### MODEL 744 A-C MILLIAMMETERS (25-500 Cycles)

Range	Scale Div.	Approx. Resistance Ohms	Price
250	50	10.2	\$48.40

## PORTABLE INSTRUMENTS

### MATCHED A-C AND D-C PORTABLE INSTRUMENTS

#### MODEL 433—A-C INSTRUMENTS

Scale Length 4.04"—Accuracy within 3/4 of 1% — Movable Iron Type — Shielded Case Size 5 1/4" x 5 1/4" x 3 1/4" — Weight 2 1/2 lbs. — Hand Calibrated Mirror Scales — Bakelite Case with Carrying Strap.

Note: These instruments are calibrated for use in a horizontal position.

#### A-C VOLTMETERS

Made with single, double and triple ranges. For use on frequencies from 25 to 125 cycles.

Range	Price
10, 15, 150, 250	\$ 94.25
10/5, 20/10, 30/15	95.75
450/300/150	112.25
600/300/150	112.25
750/300/150	112.25

#### A-C MILLIAMMETERS

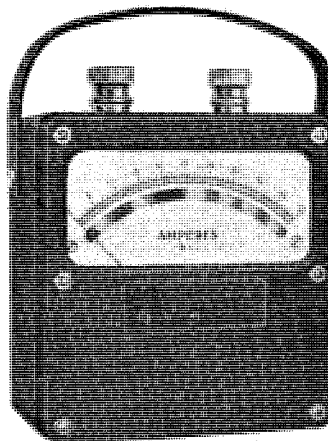
Made in single and double ranges only, for use on frequencies from 25 to 500 cycles.

Range	Price
15, 30, 150, 500	\$ 85.75
300/150	100.25

#### A-C AMMETERS

Made in single, double and triple ranges for use on frequencies from 25 to 500 cycles. All instruments have two binding posts; double and triple range instruments are provided with a range selector switch.

Range	Price
1, 3, 5, 10	\$ 89.25
15, 30, 50	89.25
2/1, 5/2.5, 10/5	102.25
3/1.5/0.75, 5/2.5/1, 10/5/1	140.25
20/5/2, 30/7.5/3, 50/20/5	140.25



### MODEL 432—D-C AND SINGLE PHASE A-C WATTMETERS

Double voltage and single or double current ranges, self-contained up to 300 volts and 50 amperes, frequencies from 25 to 125 cycles.

Electrodynamometer Type

Accuracy 1/2 of 1%... Scale Length 4.04"

Case Size 5 1/4" x 5 1/4" x 3 1/4".....Wt. 3 1/4 lbs.

Normal Volts	Normal Amps	Price
150/75	1	\$192.25
Double Current Ranges		
300/150	5/2.5	\$192.25

### MODEL 931—D-C INSTRUMENTS

Scale Length 4.04"—Accuracy within 1/2 of 1% Core Magnet Moving Coil Type. Case Size: 5 1/4" x 5 1/4" x 3 1/4" — Weight 2 lbs. — Hand Calibrated Mirror Scales — Bakelite Case with Carrying Strap.

Note: These instruments are calibrated for use in a horizontal position.

#### D-C VOLTMETERS

Range	1,000 Ohms Per Volt	5,000 Ohms Per Volt
3, 15, 50	\$ 87.25	\$ 98.75
300/150/3	101.25	112.75
750/300/150	101.25	112.75

#### D-C AMMETERS

Range	Price
3, 5, 15, 50	\$ 89.00
30/15/3	101.50
50/20/5	101.50

Self-contained up to 50 amperes inclusive, but can be supplied with external 50 mv shunts and 5 ft. leads.

#### D-C MILLIAMMETERS

Range	Price
15, 150	\$ 85.50
1500/150/15	98.75
15/1.5/.15	110.50

Single range, Milliammeters with ranges above can be supplied with external 50 mv shunts and 30 ma are shunted and have a drop of 50 mv ±5%.

#### D-C MICROAMMETERS

Range	High Resistance Res. Ohms	Price	Low Resistance Res. Ohms	Price
30	2300	\$110.50	490	\$112.75
100	2000	98.75	60	110.50
200	600	94.00	15	98.75

PRICE SUBJECT TO CHANGE WITHOUT NOTICE

# WESTON INSTRUMENTS

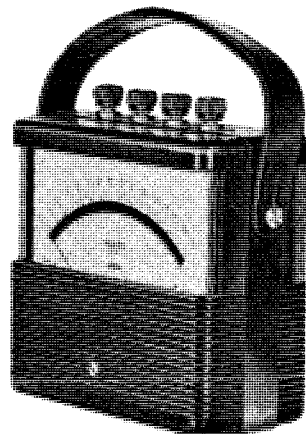
## PORTABLE INSTRUMENTS

901-904 GROUP 1/4-1/2% ACCURACY

Size: 7 1/2" x 7 1/4" x 3 5/8" Scale Length: 5 1/2"  
**D-C 901, 1/4% Accuracy, Self Shielded Permanent Magnet Moving Coil Type**

**A-C 904, 1/2% Accuracy, Movable Iron Type**

These modern style instruments are used for general testing and for checking other meters in daily use in industry where easy reading and high shielding are desired. Long 5 1/2" hand calibrated mirror scales combined with knife-edge pointers eliminate reading errors. Leather carrying cases are available, specify instrument model and range—Price \$24.50.



Model 901

**D-C VOLTMETER (7 RANGE)—Model 901**

Range (Volts)	Price
750/300/150/75/30/15/3	\$182.25

**D-C AMMETER—Model 901**

Range (Amperes)	Price
50 mv/20/5/2	\$162.25

**D-C MILLIAMMETERS (7 RANGE)—Model 901**

Range (Ma)	Approx. Res. Ohms	Price
1000/500/200/100/50/20/10	.049/.099/.244/.475/.9/1.88/2.5	\$172.25
100/50/20/10/5/2/1	1.49/2.96/7.28/14.1/26.4/52.5/60	172.25

**A-C VOLTMETER—Model 904**

Range (Volts)	Approx. Res. Ohms	Price
750/300/150/75/30/15/7.5/3**	117,500/18,400/5180/1145/182/46/11.1/1.76	\$247.50

†Other frequency ranges available. Prices on request.  
 \*Frequency 25-125 cps.  
 \*\*Frequency 50-125 cps, accuracy 1/2%; 125-450 cps, accuracy 1%.

**A-C MILLIAMMETERS—Model 904**

Range (Ma)	Approx. Res. Ohms	Price
150/75	16/64	\$176.50
300/150*	4/16	176.50

\*Also stocked for 25-1000 cycles at \$191.50.

**A-C AMMETERS—Model 904**

Range (Amperes)	Price
200/100/50/20/10/5/2**	\$222.50

(Frequency 25 to 1000 cycles)

50/20/10/5/2/1	215.50
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\*\*Frequency is 50-450 cps.

**D-C AND SINGLE PHASE A-C WATTMETERS—Model 905**

(Frequency 25-60 cycles)

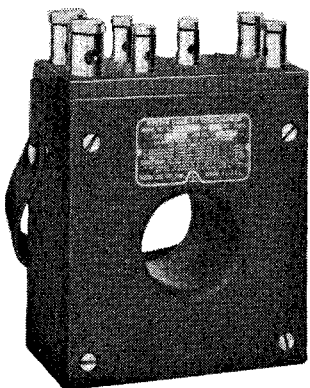
Normal	Volts	Max.	Amperes		High Range	Watts	Low Range	Price
			Normal	Max.				
200/100		300/150	25	50	5 KW	2.5 KW	\$197.50	
			5	10	1 KW	.5 KW	197.50	
			10/5	20/10	2/1 KW	1/5 KW	212.50	
			5/2.5	10/5	1000/500	500/250	212.50	

## CURRENT TRANSFORMERS

Model 461

Size: 7.97" x 6.63" x 2.75" Weight: Type 1—8 lbs.; Type 2—8.4 lbs. Core Opening: 2.12"

Models 461 are used with A-C instruments as multipliers. Four self-contained primary ranges are brought out to binding posts. A secondary short circuiting switch is provided. Black bakelite case.



Range (Amps)	Type*	Price	Range (Amps)	Type*	Price
800/400/200/100/50/20/10 Pri. to 5 Sec.	1	\$117.25	1000/500/250/100/50/25/10 Pri. to 5 Sec.	2	\$147.25
800/400/200/100/50/20/10 Pri. to 5 Sec.	2	147.25	500/250/100/50/25/10/5/2.5/1/0.5 Pri. to 5 Sec.	5	157.25
1000/500/250/100/50/25/10 Pri. to 5 Sec.	1	147.25			

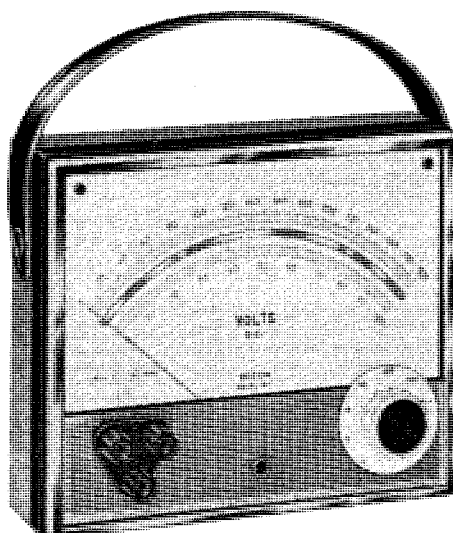
\*Type 1—Primarily used for Ammeter applications.  
 Type 2—Primarily used for Wattmeter applications.  
 Type 5—Similar to Type 2 except for additional ranges.

**PRICE SUBJECT TO CHANGE WITHOUT NOTICE**

# WESTON INSTRUMENTS

## 911/912 PORTABLE/PANEL INSTRUMENTS

Newly designed Weston Portable/Panel instruments now provide a combination of features never before offered in portable test equipment. Equally valuable in shop or field, these units feature high accuracy, long-scale length and modern styling. And, these instruments are designed for . . . Panel or switchboard mounting without special adaptors or attachments! Simply remove meter from case and mount on panel . . . all hardware is supplied. The compact steel case may be attached behind panel when mechanical protection is required.



Model 911/912

### SPECIFICATIONS

- ACCURACY**— $\pm 1\%$  of full scale value on d-c voltmeters and milliammeters ( $\pm 2\%$  of full scale value on 300 and 1000 volts d-c).  
 $\pm 2\%$  of full scale value on rectifier type a-c voltmeters 10 through 300 volts.  
 $\pm 3\%$  of full scale value on rectifier type a-c voltmeters for 1000 volt range and 3 volt range above mid-scale.
- COMPACT CASE**—Modern designed instrument front of clear durable plastic provides unlimited natural illumination which, coupled with knife-edge pointers and mirror scale, provide unexcelled readability. The instrument is cased in heavy duty, grey finished steel. Handle can be swung under instrument so that it may be tilted for easy reading. Size:  $7\frac{1}{2}'' \times 6\frac{1}{2}'' \times 2\frac{3}{8}''$ .
- COMPONENTS**—Weston VAMISTOR® precision metal film resistors and other long-life components are used.  
 Adjustable resistors provide for easy calibration, if required.
- BINDING POSTS**—Screw type with captive heads can use all types of leads. Triangular base allows greater torque when securing leads. Wide  $\frac{3}{4}''$  spacing permits use of plug type leads. Cross hole located so fine wire is not cut.
- SCALE**—Large 7.2" mirror back with knife-edge pointer.
- MECHANISM**—CORMAG® self-shielding, with spring-backed jewels.
- RANGE SWITCH**—Large, sure-grip knob.
- SIZE**— $7\frac{1}{2}'' \times 6\frac{1}{2}'' \times 2\frac{3}{8}''$ .

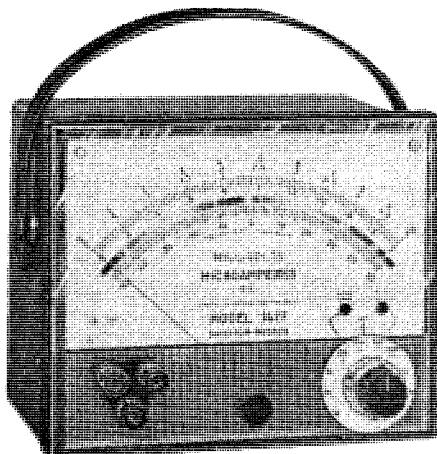
### RANGES AND PRICES

Model 911 D-C VOLTmeter (20,000 ohms per volt)	
1000/300/100/30/10/3/1 Volts	Price \$68.50
Model 911 D-C AMMETER	
10/3/1 amps., 300/100/30/10 ma	Price \$68.50
Model 911 D-C MILLIAMMETER	
100/30/10/3/1/3/1 milliamperes	Price \$68.50
Model 912 A-C VOLTmeter (5,000 ohms per volt)	
1000/300/100/30/10/3 Volts	Price \$78.50

## WESTON D-C MILLIVOLT/MICROAMMETER

### D-C MILLIVOLT/MICROAMMETER—Model 1477

Size:  $7\frac{1}{2}'' \times 6\frac{1}{2}'' \times 4\frac{3}{8}''$  Weight:  $5\frac{1}{2}$  lbs. Scale Length: 7.2"



A portable test instrument designed to measure potentials and currents in the low-level millivolt and microampere ranges. No energy is drawn from the input circuit during steady-state operation. Only with an initial input application is there a small current taken during the transient period prior to steady state indication.

#### D-C Input Ranges

Millivolts	1/2/5/10/20/50/ 100/200/500/1000
Microamperes	10/20/50/100/200/500/1000

#### D-C Output

(Rear Terminals) ..... 1 MA DC for full scale input  
 (into a load up to 5000 ohms)

**Power Requirements** ..... 120 volts AC, 5 or 60 cycles, 19 watts

#### Accuracy

Panel Indicator	$\pm 1\%$ of full scale value on ranges of 2-1000 MV and 20-1000 $\mu$ A
(Both Scales)	$\pm 2\%$ of full scale value on ranges of 1 MV and 10 $\mu$ A
1 MA Output	$\pm 0.25\%$ on ranges of 5-1000 MV and 50-1000 $\mu$ A
	$\pm 0.5\%$ on ranges of 1-2 MV and 10-20 $\mu$ A

**Operating Position** ..... Vertical

**Price** ..... \$446.25

**PRICE SUBJECT TO CHANGE WITHOUT NOTICE**

# WESTON INSTRUMENTS

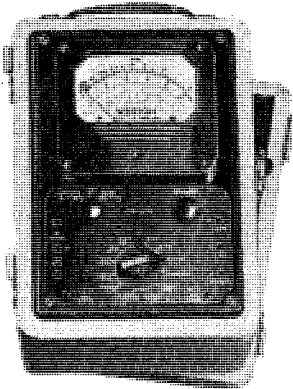
## SUPER-SENSITIVE ANALYZER MODEL 779

ACCURACY: A-C within 3%; D-C within 2% to 250 volts; 3% on 1,000 volt range.

Size: 6 $\frac{3}{8}$ " x 9 $\frac{1}{8}$ " x 4 $\frac{7}{8}$ " (162 x 232 x 124 mm)

Approx. Wt.: 6 lbs. (2.72 kgs.)

A compact 26 range ultra-sensitive analyzer with five d-c voltage ranges at a sensitivity of either 1,000 or 20,000 ohms per volt. A-C temperature compensated; precision resistors throughout. Supplied in a rugged solid oak case with a removable cover and convenient carrying handle. Test leads are provided.



Model 779 Type 1B

Price .....\$194.25

### RANGES

Volts		Current		Decibels	Ohms
D-C	A-C	D-C Only			
2.5	2.5	.1 Ma	- 14 to + 2*	0-3000	
10	10	1 Ma	- 2 to + 14*	0-30,000	
50	50	10 Ma	+ 12 to + 28*	0-300,000	
250	250	50 Ma	+ 26 to + 42†	0-30 Meg	
1000	1000	250 Ma	+ 38 to + 54††		
		1 Amp	(6 milliwatts,		
		10 Amp	500 ohms, zero level)		

\*Substantially flat to 10,000 cycles.

†Substantially flat to 3,000 cycles. ††Substantially flat to 1,000 cycles.

## MODEL 799 INSULATION TESTER

ACCURACY: Within  $\frac{1}{8}$ " of scale length.

SCALE: 2.375" (60.3 mm)

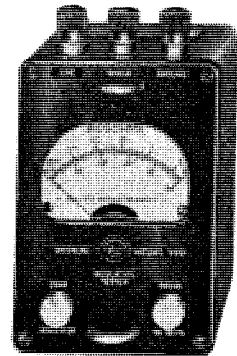
Size: 3 $\frac{3}{8}$ " x 5 $\frac{1}{4}$ " x 5" (86 x 133 x 127 mm)

Approx. Wt.: 3.8 lbs. (1.7 kgs.)

For leakage measurements up to 10,000 megohms at low voltage at a maximum test potential 50 volts. Test leads, tubes, batteries and oak case are supplied.

RANGES: 0-10,000 megohms (Logarithmic scale)

Price.....\$108.75



Model 799

## MARK II ANALYZER

The new thin-line Mark II is a highly sensitive and extremely rugged volt-ohm-milliammeter designed for a wide range of accurate test measurements in the electronic field.

Famous CORMAG® mechanism protects the instrument against false readings due to magnetic disturbances. Electrostatic shielding assures

accurate measurements at high d-c voltages. Fuses in the low ohmmeter circuits prevent burnout if voltages are mistakenly applied. Interchangeable parts eliminate all need for parts selection in the event replacements are ever necessary. The breakproof case will withstand dropping and thus eliminate the major source of repair and maintenance costs.

### FEATURES

- Modern Thin-Line Design
- Spring Back Jewels for Maximum Shock Resistance
- Fused Resistance Ranges
- Transit Switch Position to Dampen Movement During Transportation
- Fully Insulated Crack-proof Case
- Single Selector Knob for all Functions and Ranges
- Wide Angle Scale for Maximum Visibility
- Precision Components—No Parts Selection Required
- Single Board Etched Wiring Circuit for Easy Maintenance
- Static Shielded for Accurate High Voltage Measurement
- 4-Way Combination Tilt Stand and Protective Cover Available

### SPECIFICATIONS

Accuracy: 2%, d-c; 3%, a-c.

Scale Length: 4.63"

Ranges:

D-C Volts: 1.6, 8, 40, 160, 400, 800, 4000 ... at 20,000 ohms/volt.

A-C Volts: 1.6, 8, 40, 160, 400, 1600 ... at 1,000 ohms/volt.

DB Range: -15 db to +54 db (in six ranges).

D-C Amperes: 8

D-C Milliampers: 1.6, 8, 80, 800.

D-C Microamperes: 80.

Ohms Range	Center Scale	Full Scale
R x 1	25	1,000
R x 10	250	10,000
R x 100	2,500	100,000
R x 1,000	25,000	1 megohms
R x 10,000	250,000	10 megohms

Case: Black impact resistant plastic, with carrying strap.

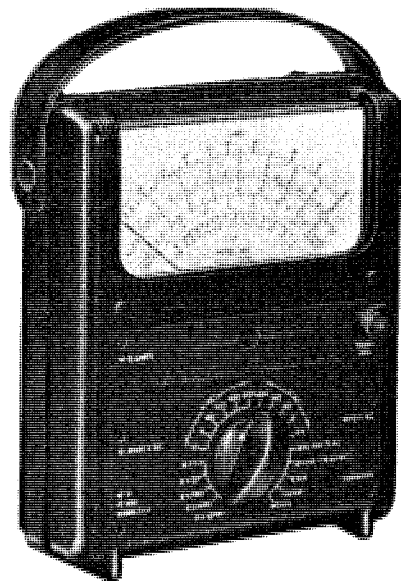
Panel: Black impact resistant plastic with engraved white markings.

Size: 6.25" x 7.50" x 2.25".

Approx. Weight: 2.5 lbs.

Ohms: Four decade ranges: 1K to 10 meg full scale; 25 ohms to 250K center scale

High Voltage Probes: High voltage probes are available for measuring high voltages up to 20 kv at 50 microamperes or less. Probes have multiplier resistors encased in insulated handles. Multipliers are rated with a flash voltage of 30 kv.



Model 980 Mark II

Price.....\$53.50

Combination protective front cover and tilt stand .....\$5.50

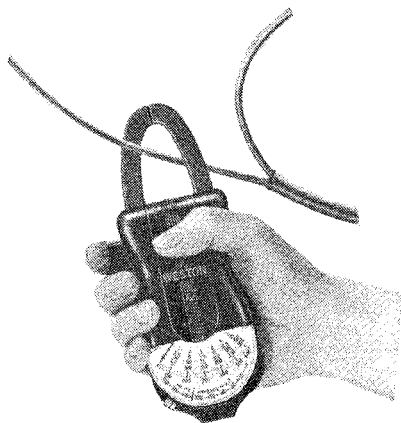
Eveready leather carrying case—Model 9959—Part No. 249350.....\$9.75

PRICE SUBJECT TO CHANGE WITHOUT NOTICE



# WESTON INSTRUMENTS

## Model 749 Miniature Clamp Volt-Ammeter



Light weight and rugged pocket-size instrument for quick easy servicing. Has self-shielded core magnet mechanism with spring backed jewels, and shatter-proof Plexiglas window. Only one scale for all ranges and functions. Jaws take up to 1" round, or 1 1/4" x 3/8" rectangular conductors. Furnished with test leads in scuff proof case.

Plug-In Adapter available for making both current and voltage measurements... has female receptacles on both sides for plugging in load without disturbing circuit being tested... convenient for lead insertion for voltage checks... serves as 10 to 1 divider for low current measurements.

RATED ACCURACY: (Model 749)  $\pm 3\%$  full scale deflection.

RANGES: Current 300/150/60/30/15/6 amperes a-c.

Voltage 600/300/150 volts a-c.

Model 749—\$51.50 complete      Plug-In Adapter—\$5.25

## Model 633 Clamp Volt-Ammeter and Clamp- Ammeter



Model 633 Type VA-1

	Price
Model 633 Type VA-1 (Incl. Potential Leads)—1000/250/ 100/25/10 amperes a-c 700/350/175 volts a-c.....	\$141.50
Model 633 Type A-3—2000/1000/500/250/100/50 amperes a-c .....	133.50
Model 9958, 50 foot Extension Cable, Plug & Receptacle for Model 633 Type A-3 .....	79.25
Leather Carrying Case (Model 633 Types VA-1, A-3) .....	13.50
Leather Carrying Case (Model 9958—Cable, Plug and Receptacle) .....	22.50

NOTE—Model 633 instruments may be used for continuous duty up to 500 amperes.

### Approximate Dimensions and Weights

Model 633 Types VA-1, A-3 .....	13 3/8" x 4 3/8" x 2 1/2" 3 1/4 lbs.
Leather Carrying Case (Types VA-1, A-3) .....	14 1/2" x 5 1/2" x 3 3/8" 2 1/4 lbs.
Model 9958, 50 Foot Extension Cable, Plug & Receptacle .....	4 1/4 lbs.
Leather Carrying Case (Model 9958—Cable, Plug & Receptacle) .....	14" x 8 1/2" x 3 3/4" 4 1/4 lbs.

## Foot-Candle Meters — Model 614

Size: 7 3/8" x 3 3/8" x 2 1/4"      Scale Length: 2.36"  
Weight: 1 lb. 13 ozs.

This unit is ideal for general commercial lighting surveys where wide ranges of light values exist. Completely self-contained, no outside power or batteries being required. Available for checking two different light situations.

†VISCOR filtered, 0-60/120/600 foot-candles, for visual correction for color .....

Price \$133.25

†VISCOR and Cosine correction filtered, 0-100/250/500 foot-candles for visual correction for color and direction correction.

Price \$136.25



Model 614

## Sightmeters—Model 703

Size: 4 3/8" x 2 5/8" x 1 1/4"      Scale Length: 1.57"  
Weight: 10 ounces

This pocket sized meter is ideal for checking illumination levels at work stations. It is available for checking three different light situations. Leather case available.....

Price \$3.00

Unfiltered, Type 3A, 0-75 foot-candles. ....

Price \$48.50

†VISCOR filtered, Type 6A, 0-75 foot-candles for visual correction for color .....

Price \$60.50

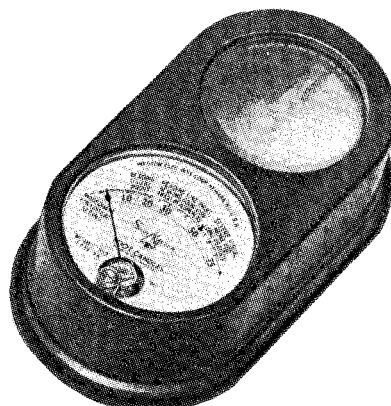
†VISCOR and Cosine correction filters Type 7, 0-100 foot-candles for visual correction for color and direction correction.

Price \$63.75

Model 9924 Multiplier Disc fits Type 3A and Type 6A and multiplies scale readings by 10 .....

Price \$1.75

†VISCOR—A registered trademark.



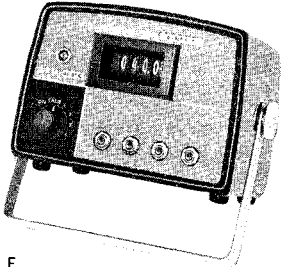
Model 703

PRICE SUBJECT TO CHANGE WITHOUT NOTICE


**DIGITEC**®

# DIGITAL TEST EQUIPMENT

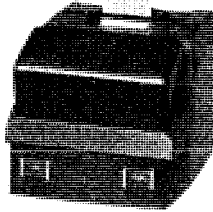
## DIGITAL THERMOMETER



- \*3 Base Models
- \*59.0° F. to 122.0° F.
- \*000.0° C to 100.0° C
- \*Any Specified 40° F or 20° C Span
- \*15 Interchangeable Thermistor Probes

From **\$345.00**

## DIGITAL PRINTER



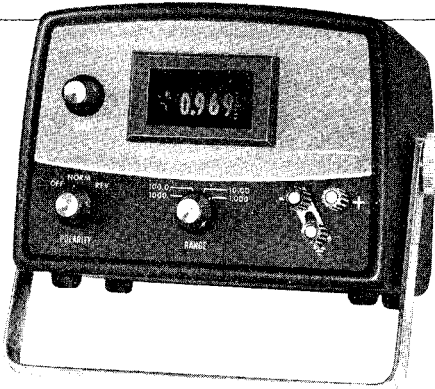
- \*BCD 1-2-4-8 Parallel Input (+6V or +12V)
- \*Prints 2 Banks of 4 Columns
- \*Automatic Negative Sign Print
- \*48 Line/Minute Print Rate
- \*For use with any Coded Output DigiTec
- \*Time, Identification and Serializing Accessories Available

From **\$750.00**

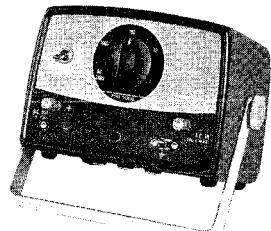
## THE PROVEN LOW COST HIGH ACCURACY DVM

- \*36 Models with F.S. Ranges from 1 V to 1000 V DC
- \*Millivolt F.S. Ranges from 10.00 MV to 100.0 MV
- \*Reliable Silicon Transistor Circuit
- \*Floating or Grounded Input
- \*Rack and Flange Mounts Available
- \*0.1% to 0.25% F.S. Accuracy
- \*Specific Variations to Your OEM Requirements

From **\$310.00**



## AC-DC CONVERTER



- \*4 Ranges—1, 10, 100, 1000 V
- \*0.3% Accuracy
- \*50 CPS to 20 KC
- \*.05% Linearity
- \*Silicon Solid State Circuitry
- \*Rack and Flange Mounts Available

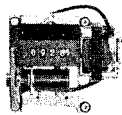
From **\$285.00**

## MODULAR DIGITAL READOUT SYSTEMS

Two Compact MODULES Provide "BUILT-IN" DIGITAL READOUT for Your Equipment.

- \*Read Voltage, Current, Temp., Speed or other Transduced Parameters.
- \*Single or Multi-Range
- \*Linear or Special Functions
- \*"1000", "2000" or "4000" Digit FS Display
- \*Specific Variations to your OEM Requirements.

From **\$235.00**



## ...features

**LOW COST.** Outstanding performance is provided in a low cost instrument providing digital readout.

**ACCURACY.** Warranted accuracy is maintained for all internal contributing factors and the listed external conditions.

(1) Ambient Temperature—60° to 115° F.

(2) Power Source—105 to 125 V—50 to 60 CPS.

**READING AMBIGUITY.** There is no ambiguity or reading (even for small changes) and no allowance need be made. Bi-directional voltage variations are followed without distracting backtracking. Input voltage drift can be continuously observed.

**RESOLUTION AND REPEATABILITY.** The instrument can be easily read and is sensitive to small voltage changes. For short term observation, under stabilized ambient conditions, unit will repeat and is easily read to .05% or less. Thus, for many applications, the instrument can be used to a comparative accuracy of .05% full scale.

**CALIBRATION EASE.** High input impedance permits direct calibration with Standard Cell.

Under normal usage, recalibration is required only at 6 month intervals.

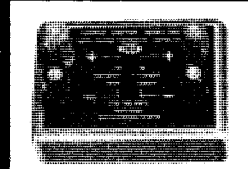
**RELIABILITY.** High reliability is achieved by a silicon transistor amplifier and the absence of stepping switches and relays. Normal overloads or incorrect polarity will not damage instrument.

**READING SPEED.** Instrument comes to reading balance quickly and without annoying creep. Average reading time is approximately 2 seconds.

**INPUT.** A 3-terminal color coded input group is furnished whereby choice is provided for grounded or floating input. A jumper link is furnished so that either negative or positive side of the input can be grounded.

**DECIMAL POINT.** Decimal points are illuminated by a single, long-life easy-to-replace bulb. The decimal point shifts with range selector.

**OTHER USES.** By use of compatible transducers, the DigiTec can be used to display readings of current, pressure, speed, position, flow, angle or any parameter. Current adaptors are available to provide readings of from .1  $\mu$  A to 2 AMP.



**READING RETENTION.** A jack is located on the rear of the case to permit holding of a displayed voltage by means of an external switch. Suitable switches complete with cord and plug are available as optional accessories.

**CARRYING HANDLE.** For the portable models, the convenient carrying handle also serves to set the viewing angle for optimum readability.

**Certificate of Accuracy** furnished with each instrument (traceable to NBS)

**UNITED SYSTEMS CORPORATION**  
Dayton 3, Ohio

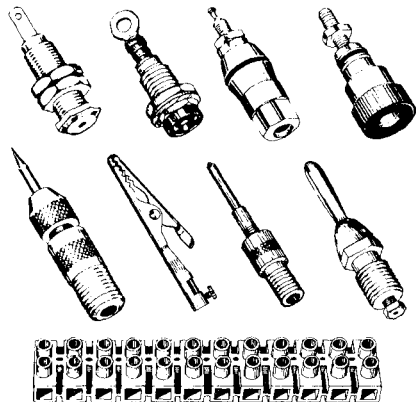
Stocking Reps throughout United States, Canada, England and France



**WORKMAN** *Electronic*  
SARASOTA, FLORIDA PRODUCTS, INC.

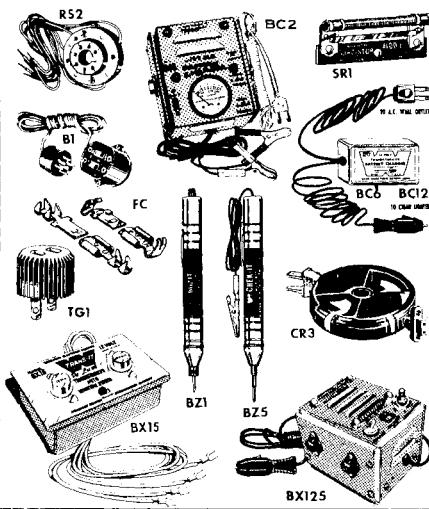
**REPLACEMENT COMPONENTS**

**TEST ACCESSORIES**



MODEL	DESCRIPTION	LIST	DLR.
300	Phone Plug, 2 cond. scr.	.80	.48
300-M	Phone Plug, metal handle	1.15	.69
301	Phone Plug, 2 cond. sold.	.75	.45
301-M	Phone Plug, metal handle	1.10	.66
302	Phone Plug, 3 cond. sold.	1.15	.69
302-M	Phone Plug, metal handle	1.40	.84
307	Phone Plug, min. 2 cond.	2for 1.40	.84
311-2	Phone Jack, sub-min. cl.	2for .90	.54
313-2	Phone Jack, sub-min. open	2for .80	.48
336	Phone Jack, 2 cond., open	.40	.27
337	Phone Jack, 2 cond., closed	.50	.30
338	Phone Jack, 3 cond., open	.60	.36
339	Phone Jack, 3 cond., closed	.85	.51
740	Alligator Clip, solder type	2for .24	.14
741	Alligator Clip, screw type	2for .24	.14
742	Alligator Clip, solder type	2for .60	.36
743	All. Clip, insul. screw type	2for .60	.36
744	All. Clip, solderless, scr.	2for .60	.36
745	All. Clip, fully insulated	2for 1.80	1.08
801	Phone Tip, solder type	2for .20	.12
802	Tip Plug, hvy. duty, solder	2for .40	.24
805	Tip Plug, solderless, lg.	2for .45	.27
806	Tip Plug, force fit, lg.	2for .45	.27
807	Tip Plug, solderless, sm.	2for .45	.27
808	Tip Plug, force fit, sm.	2for .50	.30
810	Phone Tip Jack, non-insul.	2for .45	.27
812	Banana Plug, solderless	2for .65	.39
813	Banana Jack, non-insul.	2for .45	.27
814	Banana Plug, midget, thrd.	2for .85	.51
815	Banana Plug, thrd. shank	2for .80	.48
819	Banana Plug, thrd. hole	2for .65	.39
821	Banana Plug, 6-32 thrd.	2for .65	.39
840	Banana Plug, insul. midget	2for 1.00	.60
842	Phone Tip Jack, insul. 7/16"	2for .65	.39
843	Phone Tip Jack, insul. 1/2"	2for .75	.45
845	Banana Jack, insulated	2for .60	.36
848	Combination, insul. jack	2for .65	.39
852	Banana Plug, insul. screw	2for .75	.45
853	Banana Plug, insul. sd'less	2for .85	.51
855	Lg. Tip Plug, insul. sd'less	2for .80	.48
856	Sm. Tip Plug, insul. sd'less	2for .80	.48
857	Tip plug, insul. hvy. duty	2for .60	.36
860	Banana Plug, insul. flex.	2for 1.20	.72
862	Banana Plug, stack, flex.	2for 1.30	.78
864	Banana Plug, insul. long	2for 1.46	.88
866	Needle Tip and chuck	2for .64	.40
868	Needle Tip and chuck, ins.	2for .80	.48
870	Spade Lug, insulated	2for .50	.30
876	Binding Post, wrap-around	2for 1.65	.99
878	Binding Post, 5 way grd.	2for 1.00	.60
879	Binding Post, fully insul.	2for 1.00	.60
880	Binding Post, lock-wsh'r	2for .80	.48
881	Binding Post, smooth hd.	2for 1.00	.60
883	Nylon Tip Jack, wrap ar'd	2for 1.10	.66
884	Nylon Tip Jack, spade trm.	2for 1.80	1.08
885	Nylon Tip Jack, feed thru	2for 1.60	.96
886	All nylon Tip Jack, wrap	2for 1.10	.66
887	All nylon Tip Jack, spade	2for 1.30	.78
888	All nylon Tip Jack, feed	2for 1.60	.96
894	Test Prod., 3/16" opening	2for 1.30	.78
895	Test Prod., 1/4" opening	2for 1.30	.78
897	Tip Prod., hvy. duty 3/16"	2for 1.20	.72
898	Tip Prod., hvy. duty 1/4"	2for 1.30	.78
900-6	Push button 6 term. blk.	1.75	1.05
901	Needle tip and chuck 3/16"	2for 1.50	.90
902	Needle tip and chuck 1/4"	2for 1.90	.86
903	Test Prod., sm. tip 1/4"	2for 1.60	.96
905	Flex. Terminal Block	4.00	2.40

**SERVICE AIDS**



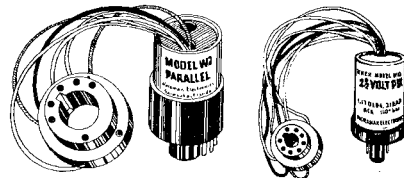
MODEL	DESCRIPTION	LIST	DLR.
BC2	Battery Charger, 6 Amps.	—	20.79
DC6	Battery Charger 6 volt	3.98	2.80
BC12	Battery Charger 12 volt	3.98	2.80
BX14	Trans-It Ign. Sys. 12 volt	23.25	16.27
BX14A	Trans-It Ign. Sys. 6 volt	23.25	16.27
BX15	Trans-It DeLuxe 12 volt	25.75	18.00
BX15A	Trans-It DeLuxe 6 volt	25.75	18.00
BX100K	Transverter Kit	—	23.95
BX125	Transverter	—	29.95
BZ1	Buzit	14.50	8.70
BZ5	Chek-It Circuit Tester	2.49	1.49
CCL	Mounting Clips	.55	.33
CCS	Mounting Clips	.55	.33
CR1	Reel-It Cheater Cord	2.25	1.35
CR2	Reel-It Cheater Cord ext.	2.25	1.35
CR3	Reel-It A. C. ext. cord	1.95	1.17
D1	Conv. Stand. to Button	2.63	1.58
D2	Conv. Standard to Shell	2.63	1.58
D3	Conv. Shell to Button	2.63	1.58
D4	Conv. Button to Shell	2.63	1.58
D5	Conv. 23EP4 to Syl. 8YP4	2.63	1.58
D18	Adapter Plug	.95	.57
DS-7	Fuse Adaptors	1.25	.75
DS-8	Alignment tool 8"x3/16"	1.25	.75
DS-12	Alignment tool 12"x1/8"	1.40	.85
DS-14	Alignment tool 14"x3/16"	1.65	1.00
FC	Faston Connectors	.75	.45
FCN5	Fuse Adaptors	.70	.42
GE12	G. E. No. 12 Lamp	.25	.15
HP	Handi Plug	.25	.15
NT	Hypodermic Needle	.70	.42
PO1	Precision Oiler	1.10	.66
PO2	Precision Graphiter	1.10	.66
PO3	Precision Greaser	1.10	.66
PS10A	Powered Iron Cores Kit	1.60	.96
RS1	110° Button Socket	1.00	.60
RS2	110° Shell Socket	1.00	.60
RS3	Standard Socket	1.00	.60
SO1	Printed Circuit Solder	.56	.34
SO2	Silver Solder	.56	.34
SO3	Ribbon Solder	.42	.25
SR1	Surgistor, 300 watt	2.10	1.26
SR2	Surgistor, 250-400w-50Ω	3.20	1.92
SR5	RCA#973913-1, #106542	4.00	2.40
SR7	Motrola#6K749855	4.00	2.40
SR8	Motrola#6K753334	4.00	2.40
ST1	Pin Straightener	.85	.51
TG1	Tube Guard	2.00	1.20
TMK	Power Trans. Mtg. Kit	.95	.57
TMM	Mica Collector Insulators	.65	.39
TMS	Dia. Base Trans. Socket	.55	.33
TH4	Touch 'n' Hold	3.25	1.95
WJ1	Wishh Jet	6.25	3.75
X1	Extends Button Base	2.25	1.35
X2	Extends Shell Base	2.25	1.35
X3	Extends Std. Duo-Decal	2.25	1.35
X9	Xtend-Shaft	.30	.18
10V	Boost-A-Volt	10.00	6.00
484	Tuner Shaft	1.00	.60

**CHEMICALS**



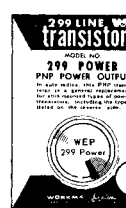
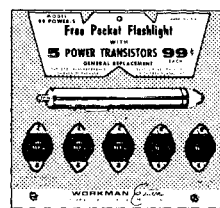
MODEL	DESCRIPTION	LIST	DLR.
H6	"Wishh" 6.oz cleaner	1.65	.96
H6A	"Wishh" Aerosol	2.05	1.22
H14	"Wishh" 16 oz. cleaner	3.25	1.92
H32	"Wishh" cleaner kit	5.42	3.22
S3	Super "Wishh" pocket sz.	1.30	.77
S6	Super "Wishh" 6 oz.	2.00	1.20
S24	Super "Wishh" 24 oz.	5.00	2.99
ET1	Scru-Loos	1.65	.99
SG6	Silicone-Lube	1.25	.77
HC	Speaker Conditioner	.95	.55
HF6	Freez-It 6 oz. Aerosol	2.00	1.22

**SUPER BRIGHTENERS**



MODEL	DESCRIPTION	LIST	DLR.
W2	Standard Parallel	2.65	1.57
W3	Standard Series	2.90	1.77
W4	Standard Isolation	3.70	2.22
W5	110° Button Parallel	3.90	2.34
W6	110° Button Series	3.90	2.34
W7	110° Shell Parallel	3.90	2.34
W8	110° Shell Series	3.90	2.34
W9	Universal Standard	4.15	2.51
W10	110° Button Series 3-1/2v	3.50	2.11
W11	110° Shell Series	3.50	2.11
W12	110° Button Universal	4.50	2.70
P3	Series-Standard Base	1.75	1.05
P5	Standard Parallel	1.50	.90
P7	Standard Universal	2.50	1.50

**POWER TRANSISTORS**



MODEL	DESCRIPTION	LIST	DLR.
99 Power	PNP Output	1.65	.99
99 Power-5	PNP Output	—	.40
199 Power	PNP Output	3.32	1.99
299 Power	PNP output	4.70	2.82
Power 12	PNP output	3.60	2.16
Power 25	PNP output	4.20	2.52
Power 40	PNP output	4.75	2.85
Power 60	PNP output	6.00	3.60
Power 80	PNP output	7.25	4.35
2N278	PNP output	8.20	4.92

FOR A COMPLETE LISTING OF EXACT REPLACEMENT COILS ASK YOUR JOBBER FOR OUR COIL CROSS REFERENCE.

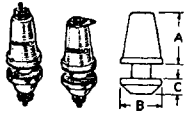
WORKMAN PART NUMBERS FOR COILS, FUSING DEVICES, WIREWOUND AND SPECIAL PURPOSE RESISTORS ARE LISTED IN HOWARD SAM'S PHOTOFACTS AND COUNTER FACTS.

# Birnbach

FEEDTHRU • STEATITE PILLARS • CORRUGATED CERAMIC • STANDOFF INSULATORS



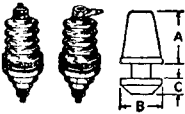
### BIRNBACH FEEDTHRU INSULATORS



Made of highly vitrified, low absorption porcelain smoothly glazed to prevent accumulation of dust or dirt. Maximum strength is achieved by the proper proportions and flat mounting surfaces. Long insulating sleeves on the lower part of the insulator contribute much to their performance on high voltages. Brass nickel plated hardware.

Cat. No.	Height	Std. Pkg.	Dimensions		Mounting Hole	Hardware
	A		B	C		
458	5/8"	50	11/16"	3/4"	5/16"	6-32
478	1"	25	13/16"	7/16"	5/16"	10-32
478J	1"	25	13/16"	5/16"	7/16"	No. 403 Jack
4125	1 1/4"	25	1 3/8"	3/4"	7/16"	10-32
4125J	1 1/4"	25	1 3/8"	3/4"	7/16"	No. 403 Jack
4234	2 3/8"	10	2"	1"	1/4"	1/4-20
4175	2 3/8"	10	1 1/4"	3/4"	3/8"	1/4-20
4175J	2 3/8"	10	1 1/4"	3/4"	3/8"	No. 394 Jack

### CORRUGATED FEEDTHRU INSULATORS



The six new corrugated type feedthru insulators have more than twice the leakage path of the straight type because of increased surface of the corrugations and recommends itself where a straight side insulator of equal height is not satisfactory because of its shorter leakage path. Brass nickel plated hardware and cork mounting washers supplied.

Cat. No.	Height	Std. Pkg.	Dimensions		Mounting Hole	Hardware
	A		B	C		
479	1 3/8"	25	1 1/4"	11/16"	9/16"	10-32
479J	1 3/8"	25	1 1/4"	11/16"	9/16"	No. 403 Jack
4276	2 3/8"	10	1 5/8"	1 1/8"	3/4"	1/4-20
4276J	2 3/8"	10	1 5/8"	1 1/8"	3/4"	No. 394 Jack
4452	4 1/2"	5	2 1/2"	1 1/2"	1 1/2"	1/2-20
4452J	4 1/2"	5	2 1/2"	1 1/2"	1 1/2"	No. 394 Jack

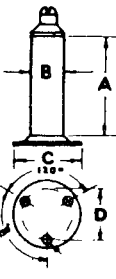
### HIGH VOLTAGE FEEDTHRU INSULATOR



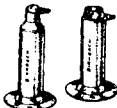
This insulator has been designed to meet the demand for an insulator having high dielectric and mechanical strength. The extra long leakage path is made possible by the corrugations on the top insulator. The bottom sleeve taper from a base dia. of 1-3/16" where the electric stress is greatest.

Cat. No.	Height	Std. Pkg.	Base Dia.	Mounting Hole	Hardware
4233	1 1/8"	10	2"	1 1/4"	1/4-20

### STEATITE PILLARS



Have great tensile strength with extremely low losses at very high frequencies. Tapped on both ends; supplied with nickel plated mounting base and top hardware.



Cat. No.	Height	Std. Pkg.	Dimensions		Base Dia.	D	Hardware
	A		B	C			
450	1"	10	1 1/2"	1 1/8"	1 1/8"	3/8"	6-32
450J	1"	10	1 1/2"	1 1/8"	1 1/8"	3/8"	No. 403 Jack
451	1 1/2"	10	1 3/4"	1 1/4"	1 1/4"	3/8"	6-32
451J	1 1/2"	10	1 3/4"	1 1/4"	1 1/4"	3/8"	No. 403 Jack
452	2 1/2"	10	2 1/4"	1 3/4"	1 3/4"	3/8"	6-32
452J	2 1/2"	10	2 1/4"	1 3/4"	1 3/4"	3/8"	No. 403 Jack
453	2 1/2"	5	2 1/4"	1 3/4"	1-9/16"	1-3/16"	1/4-20
453J	2 1/2"	5	2 1/4"	1 3/4"	1-9/16"	1-3/16"	No. 395 Jack
454	4"	5	3 1/4"	1-9/16"	1-3/16"	1-3/16"	1/4-20
454J	4"	5	3 1/4"	1-9/16"	1-3/16"	1-3/16"	No. 395 Jack

### BIRNBACH METAL BASE INSULATORS



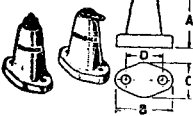
Corrugated surface provides long leakage path. Made of high tensile strength low absorption porcelain fully glazed. Supplied with nickel plated brass screws and nuts. Cadmium plated drawn steel bases.



Cat. No.	Height	Std. Pkg.	Base Dimension		Mtg. Screw	Hardware
	A		B	C	D	
867	1 1/8"	25	1 7/8"	1 1/2"	2 No. 8	10-32
867J	1 1/8"	25	1 7/8"	1 1/2"	2 No. 8	403 Jack
966	1"	10	1 3/8"	1 1/8"	4 No. 10	1/4-20
4176J	2 3/8"	10	1 3/8"	1 1/8"	4 No. 10	395 Jack
4451	4 1/2"	5	2 1/4"	1 3/4"	4 No. 10	1/4-20
4451J	4 1/2"	5	2 1/4"	1 3/4"	4 No. 10	395 Jack

### BIRNBACH STANDOFF INSULATORS

Made of highly vitrified low absorption glazed porcelain. No washers necessary — mounting surface is ground flat for No. 404. No. 966 It is advisable to use cork washers which are available. All brass nickel plated hardware supplied.



Cat. No.	Height	Std. Pkg.	Base Dimension		Mounting Holes	Hardware
	A		B	C	D	
405	5/8"	100	1 1/4"	3/4"	3/8"	6-32
965	5/8"	50	1 1/4"	3/4"	3/8"	8-32
966	1"	50	1 3/8"	7/8"	3/8"	8-32
966J	1"	25	1 3/8"	7/8"	3/8"	No. 403 Jack
866	1 1/2"	25	1 3/8"	7/8"	3/8"	10-32
866J	1 1/2"	25	1 3/8"	7/8"	3/8"	No. 403 Jack
866SJ	1 1/2"	10	1 3/8"	7/8"	3/8"	No. 395 Jack
4275	2 3/8"	10	2 3/8"	2"	1/4"	1/4-20
4275J	2 3/8"	10	2 3/8"	2"	1/4"	No. 399 Jack
4450	4 1/2"	5	3 3/8"	2 1/2"	1/4"	1/4-20
4450J	4 1/2"	5	3 3/8"	2 1/2"	1/4"	No. 399 Jack

### BIRNBACH STEATITE PILLARS

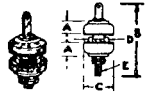
(Less Hardware) JAN-I-8 and JAN-I-10 SPECS.



In many constructions, these unmounted threaded Steatite pillars will facilitate assembly because of the one hole mounting and parallel mounting surfaces. They are made of L5 glazed Steatite with threaded holes on both sides.

Cat. No.	Height	Diam.	Threaded Hole		Std. Pkg.
			H	D	
441	Conforms to Type		All		Std. Pkg.
441B		1/4"	1/4"	3/8"	6-32 100
441A		3/8"	1/4"	3/8"	6-32 100
444A		1/2"	1/4"	3/8"	6-32 100
444A		3/4"	1/4"	3/8"	6-32 100
445A		1"	1/4"	3/8"	6-32 100
442		3/8"	3/4"	3/8"	6-32 100
442A	NSSW0104	1/2"	3/8"	3/8"	6-32 100
443A	NSSW0105	5/8"	3/8"	1/4"	6-32 100
444B	NSSW0106	3/4"	3/8"	1/4"	6-32 100
445B	NSSW0108	1"	3/8"	3/8"	6-32 100
446B	NSSW0110	1 1/4"	3/8"	3/8"	6-32 100
446A	NSSW0112	1 1/2"	3/8"	3/8"	6-32 100
446C	NSSW0116	2"	3/8"	3/8"	6-32 100
443		1/2"	1/2"	3/8"	6-32 100
444		3/4"	1/2"	1/4"	6-32 100
445		1"	1/2"	3/8"	6-32 100
446		1 1/2"	1/2"	3/8"	6-32 100
447		2 1/2"	1/2"	3/8"	6-32 100
440	NSSW0205	5/8"	1/2"	3/8"	8-32 100
440A	NSSW0206	3/4"	1/2"	1/4"	9-32 100
440B	NSSW0208	1"	1/2"	3/8"	8-32 100
440C	NSSW0210	1 1/4"	1/2"	3/8"	8-32 100
440D	NSSW0212	1 1/2"	1/2"	3/8"	8-32 100
440E	NSSW0216	2"	1/2"	3/8"	8-32 100
440F	NSSW0220	2 1/2"	1/2"	3/8"	8-32 100
444C		3/4"	3/4"	1/4"	10-32 100
445C	NSSW0308	1"	3/4"	3/8"	10-32 100
445D	NSSW0310	1 1/4"	3/4"	3/8"	10-32 100
445E	NSSW0312	1 1/2"	3/4"	3/8"	10-32 100
445F	NSSW0316	2"	3/4"	3/8"	10-32 100
445G	NSSW0320	2 1/2"	3/4"	3/8"	10-32 100
448		2 1/2"	3/4"	3/4"	1/4-20 50
449		4"	3/4"	3/4"	1/4-20 50
447B	NSSW0412	1 1/2"	1"	1/2"	1/4-20 50
447D	NSSW0420	2 1/2"	1"	5/8"	1/4-20 50
447E	NSSW0424	3"	1"	5/8"	1/4-20 50

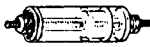
### STEATITE BUTTONS



This specially designed Steatite button is intended for use to simplify wiring and to be used as a binding post or a binding post insulator. Attention is called to the uniqueness of the design which prevents either section of the insulator from turning in respect to the special screw. The specially designed screw locks both sections.

Cat. No.	Dimensions					Std. Pkg.
	A	B	C	D	E	
457-Button	5/16"	1 3/8"	3/4"	1/2"	1/2"	25
						6-32

### "LUCITE" FEEDTHRU INSULATORS



These feedthru insulators are ideal for bringing high frequency leads thru a panel. They are made of genuine Dupont Lucite. Because of its low loss at high frequency, it is well adapted to insulated elements of high frequency circuits. The 1/2" dia. insulators have brass nickel plated 6-32 hardware and the 3/4" dia. insulators, 10-32 hardware.

Cat. No.	Height Above Panel	Insulator Dia.	Mounting Hole	Bottom Height	Std. Pkg.
377	1/4"	1/2"	5/16"	1/4"	25
378	1/2"	1/2"	5/16"	1/4"	25
379	1/2"	3/4"	5/16"	1/4"	25
475	1 1/2"	3/4"	7/16"	1/2"	25
476	2"	3/4"	7/16"	1/2"	25

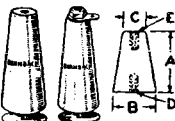
### BIRNBACH LEADIN INSULATORS



Each cone is 2 3/4" high and made of low absorption, highly vitrified glazed porcelain. The Nos. 4237 and 4238 Leadin Insulators have sufficient insulating bushings to insulate the rod that goes through the wall. In addition, 2 bushings are included, 1/4" and 1/2" long, allowing complete insulation of the threaded rod of any length in multiples of 1/4". They come complete with brass nickel plated hardware and lead and cork washers to permit a water-tight seal.

Cat. No.	Description	Std. Pkg.
4235	10" Rod	10
4236	15" Rod	10
4237	10" Rod with bushings	10
4238	15" Rod with bushings	10

### BIRNBACH CONE STANDOFF INSULATORS



Made of low absorption high tensile strength Steatite with a smooth glaze. All heights except the No. 430 are available with a Jack or a threaded hole top. Available in a white glaze and are complete with screws, metal and cork washers.

Cat. No.	Height	Std. Pkg.	Base Dimensions		Threaded Holes	Mtg. Hole
	A		B	C	D	E
430	5"	100	3/8"	3/8"	6-32	6-32
431	1"	50	3/8"	3/8"	8-32	8-32
431J	1"	50	3/8"	3/8"	8-32	No. 403 Jack
432	1 1/2"	50	3/8"	3/8"	10-32	10-32
432J	1 1/2"	50	3/8"	3/8"	10-32	No. 403 Jack
433	2 3/8"	25	1 1/4"	3/4"	1/4-20	1/4-20
433J	2 3/8"	25	1 1/4"	3/4"	1/4-20	No. 395 Jack

# Birnbach

## GLAS-LINE CABLE

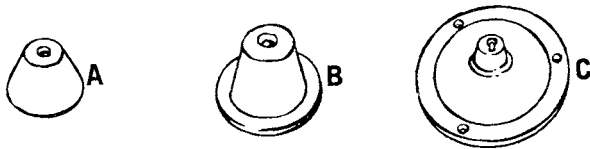
## INSULATORS

ANTENNA • FEED-THRU  
STAND-OFF



### STEATITE FEEDTHRU INSULATOR

Useful in many constructions. Has high dielectric and mechanical strength. They are made of L-5 Glazed Steatite. No hardware is included.



Cat. No.	Figure	Height	Base Diam.	Max. Screw Size	Std. Pkg.
4200	A	7/8"	1 1/4"	10-32	25
4201	A	1 1/8"	1 3/4"	1/4-20	25
4202	B	1 5/8"	2 1/2"	3/8-16	25
4203	C	1"	3 3/8"	8-32	12

### STEATITE FEEDTHRU PANEL BUSHING INSULATORS



Made of L-5 Glazed Steatite. These Feedthrus have male and female (tops and bottoms) for feeding thru chassis, panels, shields, racks or panels. No hardware included. (100 to Std. Package)

Cat. No.	Top Height	Max. Dia.	Panel Hole	Panel Thickness	Max. Screw Sz.
4204	1/8"	1/2"	5/16"	To 1/8"	6-32
4205	3/32"	3/8"	7/16"	To 1/8"	8-32
4206	3/8"	1/2"	1/4"	To 3/16"	6-32
4207	3/8"	3/8"	3/8"	To 3/8"	8-32
4208	3/4"	1 1/8"	3/4"	To 3/8"	10-32
4209	1 5/8"	1 1/4"	1/2"	To 2"	10-32

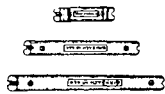
### FISH SPINE BEADS



Made of L-5 Glazed Steatite. Useful for insulating Buss or Heavy Lines. Ball and Socket style interlocks permitting beads to follow bends and curves. Four Beads cover approx. 1" Package of 100 covers 25" of wire. Dimensions: 5/16" O.D. 1/8" I.D. Beads are treated with special Dow Corning treatment to prevent accumulation of surface moisture.

Cat. No.	Std. Pkg.
4215 FISH SPINE BEADS	100

### BIRNBACH FEEDER SPREADERS



They have a cross section of 3/8" x 1/2". Made of highly vitrified, low absorption, high tensile strength porcelain with a smooth white glaze overall.

Cat. No.	Std. Pkg.
462—Spreader, 2" long	25
464—Spreader, 4" long	25
469—Spreader, 6" long	25

### BIRNBACH STEATITE AIRPLANE INSULATORS



A very small compression type Steatite Insulator with small wind resistance. Fully glazed. It is 1 1/2" in length; 17/32" in diameter; 3/4" line spacing.

Cat. No.	Std. Pkg.
463—Steatite Airplane Insulators	25

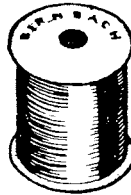
### BIRNBACH AIRPLANE INSULATORS



They are used on mobile and aircraft and also with guy wire on TV installations. They are shaped for the least air resistance and have very high tensile strength, and low loss. Nos. 473 and 474 are made of white glazed low absorption porcelain. No. 472 is made of wet process glazed brown.

Cat. No.	Std. Pkg.
472—2 1/4" (brown)	25
473—2" (white)	100
474—1 1/2" (white)	100

### NEW FROM BIRNBACH INSULATED GLAS-LINE CABLE



Provides complete isolation of any antenna system where support must be obtained from metallic objects such as towers, windmills, etc.

**NON-INDUCTIVE • NON-CONDUCTING • NON-ABSORBING • NO SAG • NO ROT • NO SHRINK • FLEXIBLE • USE FOR DIRECTIONAL ARRAYS, BEAMS, RHOMBIC SYSTEMS, ETC.**

This Birnbach non-metallic guy wire is not to be handled as regular wire. Do not twist around itself for solid joint; it must be knotted firmly in place (use bow line knot) — use coupling devices such as our Nos. 472, 473 or 474 insulators. Must not be abraded by constant friction — will wear and break line; avoid tight turns. An open thimble should be used to couple the Birnbach "Glas-Line" cable to an eye-bolt at mast or tree. Glass fibers conform to Mil 1140 Spec. and plastic jacket conforms to Mil-I-631C Spec.

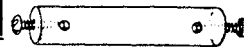
\*The breaking strength indicated is applicable when "Glas-Line" cable is properly used.

DESCRIPTION: Fiberglass insulation with PVC insulation overall. Color code per indicated tensile strength.

Cat. No.	Put-Up	*Tensile Strength	Color	Nom. O.D.
GL 1	100', 500', 1000', 2500'	500 lbs.	Green	.125"
GL 2	100', 500', 1000', 2500'	1000 lbs.	Gray	.2187"
GL 3	100', 500', 1000', 2500'	2500 lbs.	White	.3125"

For greater strength — doubling or tripling the cable will double or triple the tensile strength.

### LUCITE SPREADERS



They are made of Dupont Lucite rod which has a very low loss at radio frequency. It is water clear and has very low water absorption. The holes are drilled to take a No. 12 wire. A screw at end of the spreader locks the wire in position.

Cat. No.	Wire Spacing	Std. Pkg.
436	2"	25
437	4"	25
438	6"	25

### BIRNBACH ANTENNA INSULATORS



These antenna insulators have exceptionally low moisture absorption. The leakage path is long and the cross section is small and is consistent with the strength required. Smooth white glaze overall prevents the accumulation of dirt or ice.

Cat. No.	Std. Pkg.
468—4 1/2" long Center Insulator	10
668—4 1/2" long	25
470—7" long	10
471—12" long	5

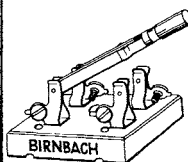
### BEEHIVE STANDOFF



Base measures 2-3/16" diam. with 3 holes on 1-15/16" circle for No. 6 screws. Height of base 1 1/2". Complete with 10-32 brass screw and nuts. No. 766J has a No. 403 Jack. Available in white glaze.

Cat. No.	Std. Pkg.
766—Standoff Insulator, 10-32 Screws	10
766J—Jack Type with No. 403 Jack	10

### BIRNBACH KNIFE SWITCHES



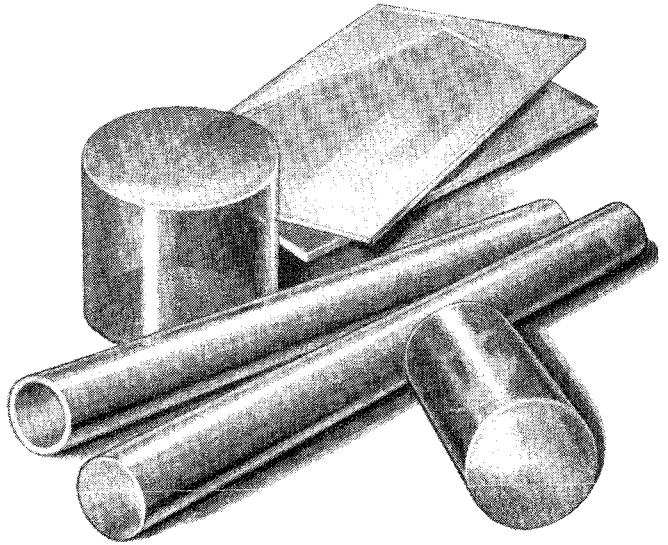
Made of special nickel plated spring brass on a rugged base. Screw terminals located conveniently for easy connections in circuit. Two mounting holes.

Cat. No.	Descrip.	Base	Std. Pkg.
6100	SPST	Por.	25
6101	SPDT	Bake.	20
6103	DPST	Por.	10
6104	DPDT	Bake.	10
6105	TPDT	Por.	10

# JB<sup>®</sup> Polystyrene

## ROD TUBING SHEET

For radio and electronic applications, because of its very low loss factor at ultra high frequencies, Polystyrene is the ideal material for insulators, coil forms, shields, etc. It has excellent arc resistance, is non-tracking and has splendid insulating properties. Because its water absorption is practically zero it has excellent dimensional stability.



### POLYSTYRENE ROD – Transparent

AVAILABLE IN 12" OR 48" LENGTHS

Catalog Number	Diameter	Net Price	
		12" lgth.	48" lgth.
JB-100	1/8"	\$ .03	\$ .12
JB-101	3/16"	.07	.28
JB-102	1/4"	.12	.48
JB-103	5/16"	.18	.72
JB-104	3/8"	.26	1.04
JB-106	1/2"	.48	1.92
JB-107	5/8"	.72	2.88
JB-108	3/4"	1.00	4.00
JB-109	7/8"	1.42	5.68
JB-110	1"	1.90	7.60
JB-111	1 1/8"	2.50	10.00
JB-112	1 1/4"	3.00	12.00
JB-113	1 3/8"	3.60	14.40
JB-114	1 1/2"	4.30	17.20
JB-116	1 3/4"	6.00	24.00
JB-118	2"	7.50	30.00

### POLYSTYRENE TUBING – Satin Finish

AVAILABLE IN 12" OR 48" LENGTHS

Catalog Number	O.D.	I.D.	Net Price	
			12" lgth.	48" lgth.
JB-201	1/4"	1/8"	\$ .10	\$ .40
JB-202	5/16"	3/16"	.14	.56
JB-203	3/8"	1/4"	.18	.72
JB-205	1/2"	3/8"	.26	1.04
JB-206	5/8"	1/2"	.32	1.28
JB-207	3/4"	5/8"	.40	1.60
JB-208	1"	7/8"	.56	2.24
JB-220	1 1/2"	1 1/4"	1.50	6.00
JB-222	2"	1 3/4"	2.20	8.80

### POLYSTYRENE SHEET\*

Catalog Number	Thickness	Sheet Size	Net Price
JB-125	1/16"	12" x 12"	\$ 4.15
JB-126	3/32"	12" x 12"	4.80
JB-127	1/8"	12" x 12"	5.50
JB-128	3/16"	12" x 12"	7.15
JB-129	1/4"	12" x 12"	8.15
JB-245	1/16"	12" x 24"	7.80
JB-246	3/32"	12" x 24"	9.15
JB-247	1/8"	12" x 24"	10.50
JB-248	3/16"	12" x 24"	13.15
JB-249	1/4"	12" x 24"	15.65
JB-315	1/32"	24" x 24"	9.65
JB-301	1/16"	24" x 24"	11.15
JB-302	3/32"	24" x 24"	13.00
JB-303	1/8"	24" x 24"	14.80
JB-304	3/16"	24" x 24"	18.75
JB-305	1/4"	24" x 24"	23.00
JB-316	5/16"	24" x 24"	27.65
JB-309	3/8"	24" x 24"	31.25
JB-311	1/2"	24" x 24"	38.65
JB-317	5/8"	24" x 24"	50.00
JB-318	3/4"	24" x 24"	69.25
JB-319	1"	24" x 24"	94.15

\*Sheets are all crystal clear with smooth surfaces fully protected against abrasion by masking paper on both sides.

JULIUS BLUM & CO., INC., CARLSTADT, NEW JERSEY





# Service Accessories

INTERNATIONAL RESISTANCE COMPANY

**VINYL ELECTRICAL TAPES** for fast, safe, one-hand insulating. Has everything technicians, servicemen and hobbyists want.

- Meets MIL-I-7789A
- 2 to 18 times stronger than any other tapes
- UL approved for a single wrap
- Provides a tight insulated plastic seal that resists abrasion, water, acids and alkalis
- Adheres readily to all shapes
- Excellent for insulating tools



**NEW ALL-WEATHER TAPE — TYPE 104** for heavy duty outside or inside service when applying at temperatures below 40°F. Ideal for telephone and electric utilities, TV antenna installation and other applications requiring dependable service at extreme temperatures.



**GENERAL PURPOSE TAPE — TYPE 103** for use under less adverse conditions for TV servicing, routine maintenance, insulation and wire splicing, and industrial plant maintenance of electrical equipment.

### SIZES — TYPE 104 and TYPE 103

3/8" wide by 20 feet long\*

3/4" wide by 20 feet long\*

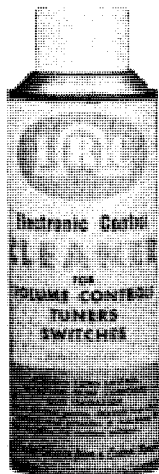
3/8" wide by 36 yards long\*

3/4" wide by 66 feet long\*\*

**TAPE-AND-TEAR DISPENSER.** Seal and insulate in one fast movement. Save tape and time. Sturdy dispenser keeps tape clean and prevents stretch. Cutting blade is shielded. Holds 66 feet of 3/4" tape.

\* Type 103 only.

\*\* Types 103 and 104



**ELECTRONIC CONTROL CLEANER.** IRC's Electronic Control Cleaner provides positive, long-lasting protection against damaging corrosion and oxidation. Sprayed on volume controls, tuners, switches and other sensitive components, it quickly removes dirt and clogging gum . . . deposits a non-drying film that lubricates contact surfaces.



INTERNATIONAL RESISTANCE COMPANY

Distributor Division  
Philadelphia, Pa. 19108



**whatever electronic products  
you require...**



**...you'll find it  
faster in  
this catalog...**

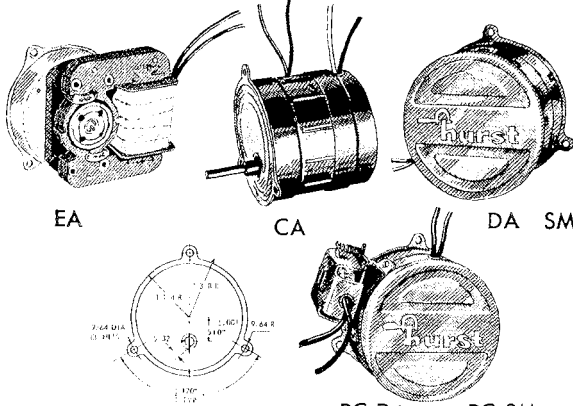
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of electronic  
products  
sold through  
distributors**



## Small Size, Low Cost Motors for Continuous Timing Applications Beyond the Capacity of Standard Clock Motors

Hurst Synchronous Motors were developed to fill the repeatedly expressed need for a timing unit of larger capacity than clock motors, at a practical low cost, light in weight and compact in size. In this middle area of size and price, Hurst motors provide outstanding quality and performance.

### Hurst HEAVY DUTY Synchronous Motors



Mounting Dimensions, all motors except PC Series

PC-DA AR-DA PC-SM AR-SM

**150 INCH-OUNCE (EA Series — open frame)** shaded pole. Completely accurate clockwise rotation. An extremely cool running timing motor with same gear units specified above. Torque, 150 inch-ounce at 1 RPM. Dimensions, 3¼" long x 2⅝" wide x 1⅝" high. Output shaft ⅝" dia. x 1" long flattened. [Exception: 3600 RPM speed has ⅜" output shaft x 1" long flattened. Shipping Wt., 1 lb. 3 oz.]

**OUTPUT SPEEDS:** 1, 2, 4, 6, 8, 10, 12, 20, 30, 60 and 120 RPM. 3600 RPM.

EA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 7.75	7.36	6.98	6.20	5.43
3600 RPM Only	\$ 5.20	4.94	4.68	4.16	3.64

**120 INCH-OUNCE REVERSIBLE. (DA Series)** instantly reversible (with SPDT switching). Completely accurate both clockwise and counter-clockwise. 100g shock resistance. Vibration resistant, accurate synchronization of 10-55 cps at .065" excursion. Good magnetic shielding. Torque, 120 inch-ounce at 1 rpm. Case dimensions, 2½" dia. x 1¾". Output shaft ⅝" dia. x 1" long flattened. Shipping Wt., 1 lb. 1 oz.

**OUTPUT SPEEDS:** 1, 2, 4, 6, 8, 10, 12, 20, 30, 60 and 120 RPM.

DA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 12.70	12.07	11.43	10.16	8.89

(Price includes capacitor)

**POSITIVE CLUTCH DA SERIES.** Basic DA motor with Positive Clutch and Instantaneous Brake. Starts in 10 milliseconds — stops 60 rpm shaft in 6"; 1 rpm, ⅙". Shipping Wt., 1 lb. 5 oz.

**OUTPUT SPEEDS:** 1, 2, 4, 6, 8, 10, 12, 20, 30, 60 and 120 RPM.

PC-DA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 17.55	16.67	15.80	14.04	12.29

(Price includes capacitor)

**POSITIVE CLUTCH SM SERIES.** Basic SM motor with Positive Clutch and Instantaneous Brake. Starts in 10 milliseconds — stops 60 rpm shaft in 6"; 1 rpm, ⅙". Shipping Wt., 1 lb. 4 oz.

**OUTPUT SPEEDS:** ½, 1, 2, 3, 4, 5, 6, 10, 15, 30 and 60 RPM.

PC-SM	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 15.53	14.75	13.98	12.42	10.87

Rugged synchronous motors for continuous duty applications. In a wide choice of output speeds for alarm systems, extra-large clocks, displays, railroad signaling equipment, process controls, code signal devices, time switches, program instruments, aircraft training devices, etc. Engineered for tough jobs requiring accurate timing. Will not overheat during continuous duty or in a stalled position. Gear trains are constructed to withstand considerably more than the motor's rated capacity. Mounting can be made in any plane with assurance of trouble-free service. Specifications common to all Hurst motors: Operating temperature, 40° to 105° C. Power required, 5 watts, (E series 10 watts) 95-130 volts AC, 60 cycles. Shaft, stainless steel ⅝" dia. x 1" long flattened. Finest quality bronze bearings. Hardened steel pinions and wheel shafts. Brass gears lubricated for lifetime service. Completely enclosed cases, nickel plated. Mounting, three ⅝" dia. holes spaced 120°. Torque equals 1 RPM rating divided by speed.

**100 INCH-OUNCE REVERSIBLE. (CA Series)** Instantly reversible (with SPDT switching). Completely accurate both clockwise and counter-clockwise. 1200 rpm rotor speed for quiet performance. Torque, 100 inch-ounce at 1 rpm. Case dimensions, 2½" dia. x 2⅝". Output shaft ⅝" dia. x 1" long flattened. Shipping Wt., 1 lb. 2 oz. Most versatile and economical motor in its field!

**OUTPUT SPEEDS:** ½, 1, 1½, 2, 2½, 3, 4, 5, 6, 8, 10, 12, 15, 16, 20, 24, 25, 30, 32, 33½, 40, 48, 50, 60, 64, 80, 100, 120, 150, 160, 200, 240, 400, 600, 800 and 1000 RPM.

CA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 10.88	10.34	9.79	8.70	7.62

(Price includes capacitor)

**40 INCH-OUNCE UNIDIRECTIONAL. (SM Series)** Shaded pole. Clockwise rotation. Instant start at full torque at 40 inch-ounce at 1 rpm. 100g shock resistance. Vibration resistant, accurate synchronization at 10-55 cps at .065" excursion. Case dimensions, 2½" dia. x 1¾". Output shaft ⅝" dia. x 1" long flattened. Shipping Wt., 1 lb.

**OUTPUT SPEEDS:** ½, 1, 2, 3, 4, 5, 6, 10, 15, 30 and 60 RPM.

SM	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 10.68	10.15	9.61	8.54	7.48

**100 INCH-OUNCE REVERSIBLE (AR-DA Series) or 40 INCH-OUNCE UNIDIRECTIONAL (AR-SM Series)** Each is an Automatic Reset motor when a return spring is attached to the output shaft. When clutch is de-energized the shaft is free for manual or automatic reset. Note: The clutch mechanism is lubricated and completely enclosed. AR Series is designed for heavy applications and will easily handle full torque on model SM or DA (either directional rotation). Physical size and appearance same as PC Series. Accurate within ⅓ second at 1 RPM and more accurate at higher speeds. Max. error in seconds .5625. Case dimensions, 2½" dia. x 2⅝". Clutch actuator

¾" height x 1⅝" width. Output shaft ⅝" dia. x 1" long flattened. Mounting same as standard motor shown in sketch. Shipping Wt., 1 lb. 6 oz.

**OUTPUT SPEEDS:** 1, 4, 6, 10, 30 and 60 RPM.

AR-DA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 20.70	19.67	18.63	16.56	14.49

AR-SM	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	\$ 18.70	17.77	16.83	14.96	13.09

# hurst MANUFACTURING CORP. — PRINCETON, INDIANA

# SLO-SYN<sup>®</sup> Synchronous Motors

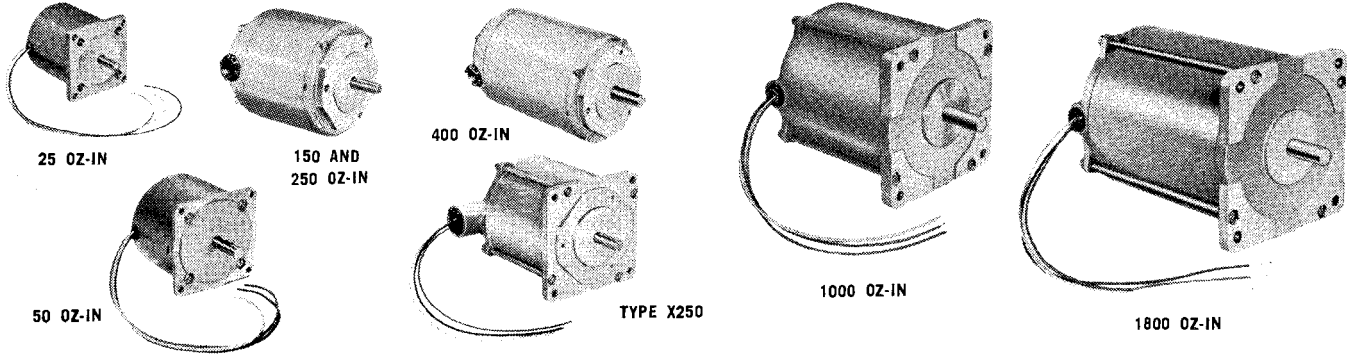
● INSTANT STARTING, STOPPING, REVERSING

● 72 RPM SHAFT SPEED WITHOUT GEARS

● CAN BE USED AS D-C STEPPING MOTORS

A SLO-SYN Synchronous Motor is a permanent magnet type a-c motor having instant start, stop and reverse characteristics and a basic shaft speed of 72 RPM with 60 cycles applied. Adaptable for use as a d-c stepping motor or incremental positioning device that can be stepped 200 times per revolution of the motor shaft. Compact and economical, has almost negligible overshoot, no ratchets or detents. A single-pole,

three-position switch can give complete forward, reverse and "off" control because the motor has three leads only. Starts or stops in less than 0.025 second or approximately 1.5 cycles. No need for mechanical or electrical braking; stops in less than 5° of motor shaft rotation. Starting and operating currents are nearly identical; no excessive inrush current when motor is turned on. All types have lubricated-for-life bearings.

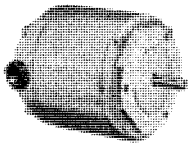


## RATINGS AND SPECIFICATIONS FOR A-C APPLICATIONS

TYPE	MAXIMUM AMPERES	TORQUE (Oz-In)	MAXIMUM MOMENT OF INERTIA OF A RIGIDLY ATTACHED LOAD (Lb-In <sup>2</sup> )	PHASE-SHIFTING COMPONENTS*				APPROXIMATE MOTOR WEIGHT (POUNDS)	
				RESISTOR	RESISTOR PART NUMBER	CAPACITOR	CAPACITOR PART NUMBER	NET	SHIPPING
120 Volts, 50/60 Cycles, 1 Phase, 72 RPM at 60 Cycles									
SS25	0.1	25	0.25	500 ohm ±5%, 5 watt	R-SS25	0.75 mfd ±6%, 330 VAC	C-SS25	1¼	1½
SS50	0.3	50	0.5	250 ohm ±5%, 25 watt	R-SS50/150	2.6 mfd ±6%, 330 VAC	C-SS50	3	3½
SS50M†	0.3	50	0.5	250 ohm ±5%, 25 watt	R-SS50M/150M	2.6 mfd ±6%, 330 VAC	C-SS50M	3	3½
SS150	0.4	150	1.5	250 ohm ±5%, 25 watt	R-SS50/150	3.75 mfd ±6%, 330 VAC	C-SS150	6½	8
SS150M	0.4	150	1.5	250 ohm ±5%, 25 watt	R-SS50M/150M	3.75 mfd ±6%, 330 VAC	C-SS150M	6½	8
SS250	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	6½	8
SS250M†	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250M	6.5 mfd ±6%, 330 VAC	C-SS250M	6½	8
X250‡	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	7¾	9
SS400	0.6	400	4.5	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	12¼	13¾
X1000‡§	3.0	1000	9	65 ohm ±5%, 160 watt	R-X1000	30 mfd ±5%, 330 VAC	C-X1000	31	33
SS1800§	4.0	1800	16	40 ohm ±5%, 300 watt	R-SS1800	60 mfd ±6%, 330 VAC	C-SS1800	45	50
240 Volts, 50/60 Cycles, 1 Phase, 72 RPM at 60 Cycles									
SS25‡	0.2	50	0.5	1000 ohm ±5%, 10 watt	R-SS25	0.67 mfd ±6%, 660 VAC	C-SS25	3	3½
SS152	0.2	150	1.5	1000 ohm ±5%, 25 watt	R-SS152	1.0 mfd ±6%, 660 VAC	C-SS152	6½	8
SS252	0.3	250	3	750 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	6½	8
X252‡	0.3	250	3	750 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	7¾	9
SS402	0.3	400	4.5	750 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	12¼	13¾
X1002‡§	1.5	1000	9	250 ohm ±5%, 200 watt	R-X1002	8 mfd ±6%, 660 VAC	C-X1002	31	33
SS1802	2.0	1800	16	130 ohm ±5%, 320 watt	R-SS1802	15 mfd ±6%, 660 VAC	C-SS1802	45	50

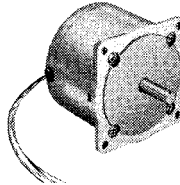
\*External resistor and capacitor must be ordered separately. †Militarized. ‡Explosion-proof. §For 60 cycle operation only.

### BIFILAR TYPES



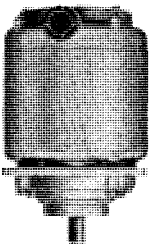
Used for d-c stepping where use of push-pull circuitry and center-tapped power supply is not possible or where increased torque at high stepping speeds is required.

### FOUR-LEAD TYPES



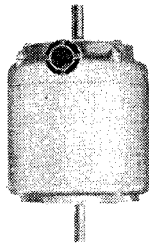
Designed to provide flexibility needed for use with equipment requiring isolated windings with no common connection.

### PLANETARY GEAR TYPES



Basic 50 and 150 oz-in types and type X250 available with planetary gear assemblies in speeds of 16.6, 3.32, 0.665, 0.133 or 0.027 rpm; 16.6 rpm available in other 250 and on 400 oz-in types.

### DOUBLE END TYPES



Three-lead, bifilar and four-lead types with output shaft at each end of motor available in all listed torque ratings. 50, 150 and 250 oz-in types available also with planetary gear assemblies in 16.6, 3.32, 0.665, 0.133 or 0.027 rpm speeds.



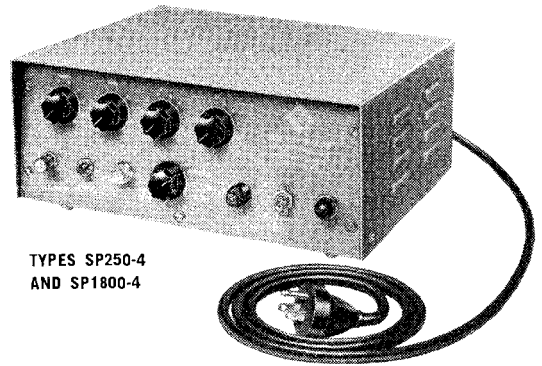
THE SUPERIOR ELECTRIC COMPANY

Bristol, Connecticut, U.S.A.

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 2100, 4000 AND 5600

**SLO-SYN® PRESET INDEXERS**

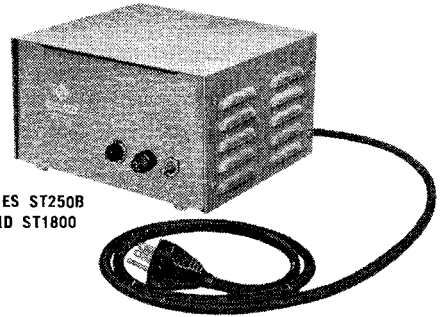
SLO-SYN Preset Indexers of the SP250 and SP1800 Series are used for control of indexing operations in applications using appropriate bifilar SLO-SYN Synchronous Motors for positioning. Automatically provide the correct switching sequence needed to drive a SLO-SYN motor the required number of 1.8° steps. Have provisions for actuating external equipment needed to perform related operations. Models available to control indexing movements up to 99,999 steps with SLO-SYN Motors in torque ratings from 25 to 1800 ounce-inches. Speed adjustable from 4 steps per second up to maximum possible with motor used. Either manual or automatic cycling possible.



TYPES SP250-4 AND SP1800-4

**SLO-SYN® TRANSLATORS**

SLO-SYN Translator types ST250B and ST1800 are pulse-to-step converters designed for use with appropriate bifilar SLO-SYN Synchronous Motors connected for incremental stepping. Convert low level signal pulses or square waves from an external source into the correct four-step switching sequence needed to drive a SLO-SYN Motor at 200 steps per revolution (1.8° per step). Used in programmed positioning, indexing and indicating operations.

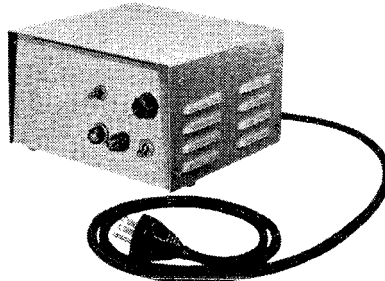


TYPES ST250B AND ST1800

**SLO-SYN®**

**ADJUSTABLE SPEED DRIVES**

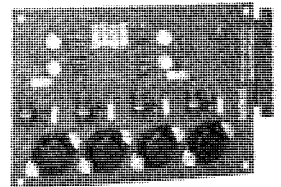
SLO-SYN Adjustable Speed Drive types ST250B-1015 and ST1800-1004 are essentially SLO-SYN Translators which include a built-in oscillator to supply triggering signals. Oscillator frequency adjustable to vary speed from 4 steps per second to maximum permissible with motor used.



TYPES ST250B-1015 AND ST1800-1004

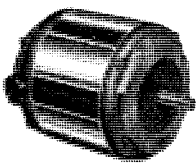
**SLO-SYN® TRANSLATOR MODULES**

SLO-SYN Translator Module types STM250 and STM250V are plug-in printed circuit boards with logic capabilities for stepping a SLO-SYN Motor in one direction. Suitable power supply required to operate. Type STM250V incorporates a built-in oscillator.

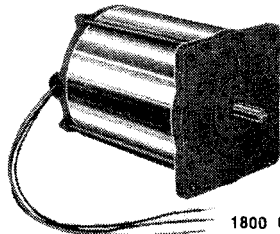


TYPES STM250 AND STM250V

**SLO-SYN® SYNCHRONOUS MOTORS FOR SPECIAL APPLICATIONS**



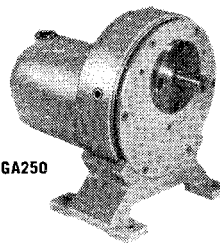
150 AND 250 OZ-IN



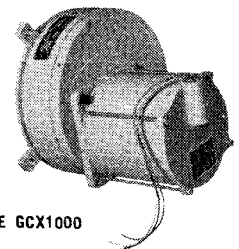
1800 OZ-IN

Basic SLO-SYN Synchronous Motors designed for special environments. Have same external construction, dimensions and electrical ratings as standard motors except that the steel parts are nickel-plated and the aluminum parts are anodized. High Vacuum types operate in vacuums to 10<sup>-8</sup> Torr.; High Temperature types rated for temperatures to 130°C; High Radiation types withstand radiation dosage of 3,000 megarads. All three types available in 50, 150, 250, 400, 1000 and 1800 oz-in torque ratings; High Vacuum types in 25 oz-in also.

**SLO-SYN® HIGH TORQUE GEARMOTORS**



TYPE GA250



TYPE GCX1000

Consist of a single- or double-reduction, parallel-shaft gearbox driven by a SLO-SYN Synchronous Motor. Available in speeds from 0.5 to 36 rpm, in torque ratings from 25 to 1600 lb.-in. Start, stop and reverse instantly and need only a single-pole, three-position switch for complete forward, reverse and "off" control. Speed reduction accomplished through a spur gear train completely enclosed in an aluminum housing. Can be stalled without overheating or damage to motors or gear trains. Face or foot mounting possible.

FOR MORE DETAILED INFORMATION about ratings, specifications and technical data on SLO-SYN motors and control equipment, request the complete SLO-SYN literature file including d-c stepping information.



# AUTOTRON

# Photoelectric Controls

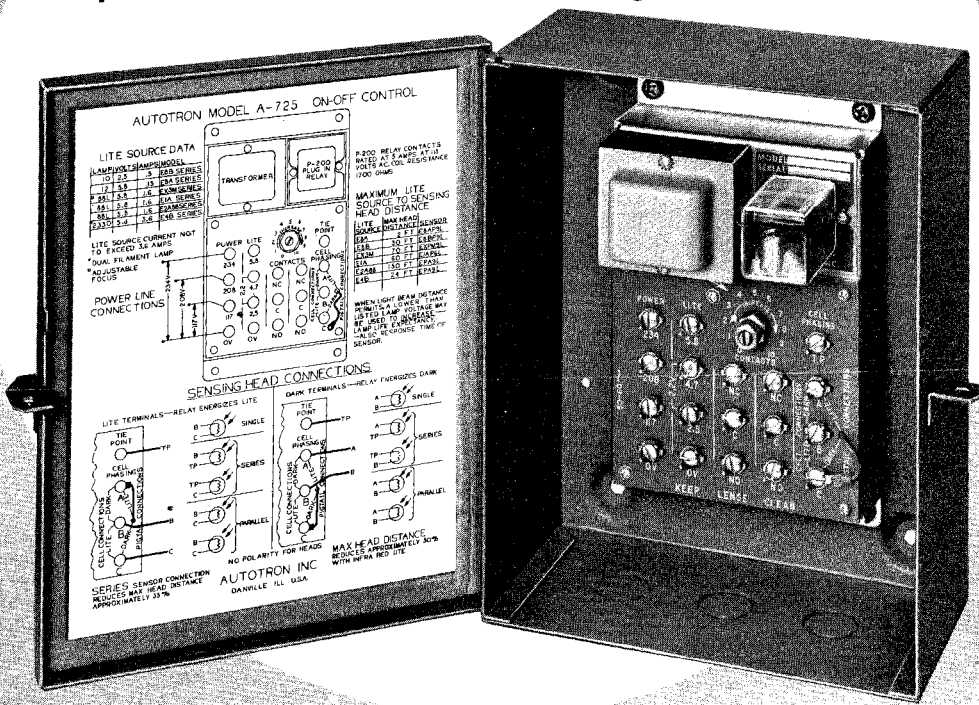
AUTOTRON, INC Danville, Illinois

Page 1

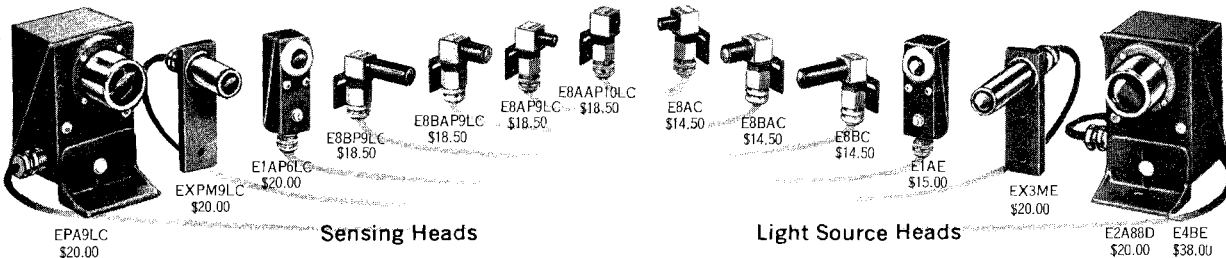
## A725 ON/OFF Control and A750 Timing Control

Thousands of Control Uses

- Tension
- Registration
- Inspection
- Weighing
- Sorting
- Measuring
- Counting
- Die Protection
- Smoke Detection
- Jam-up
- Packaging
- Processing
- Spraying
- Traffic
- Conveyor
- Cut-off
- Limit
- Timing



Choice of 7 standard sensing heads and 7 standard light source heads in any combination



### Features of A725 and A750

- One connection changes from LIGHT- to DARK-energized operation (or vice versa).
- 5.8, 4.7, 3.3, 2.5, 2.2 and 1.1 Light Source Voltages makes available minimum suitable voltage or maximum lamp life and maximum speed of sensing cell response.
- Rugged, 5-amp DPDT Plug-in Relay.
  - a. Plug-in mounting permits replacement in seconds without special skill or tools
  - b. Transparent enclosure protects against dust, physical injury and tampering.
- Rectified output current for positive and QUIET operation of control relay.
- Lead cells and transistors replace tubes.
- Transistors protected from transient voltages.
- Lead Cells are exceptionally well shielded from extraneous light.
- All circuit components are securely mounted on modern circuit board.
- All contacts of the DPDT Relay wired to large, crew type terminals.
- Operate at ambient temperatures to 115°F.
- In JIC enclosures at \$12.50 extra.
- Operate from 234, 208 and 117 V, 50-60 c.
- Mounting bracket and cord grip are standard.
- Unfinished with cord assembly potted inside housing, without mounting bracket at no extra charge when specified.

### A725 ON/OFF Control

**FAST ACTING** - .025 sec. light time and .025 sec. dark time minimum.  
**SENSITIVE** - Adjustment has shaft lock.  
**Power Consumption, 15 watts.**  
 Energizes LIGHT connected to LIGHT terminals.  
 Energized DARK connected to DARK terminal.  
**A725 ON/OFF Control less heads.....\$69.50**

### A750 Timing Control

1 to 12 seconds adjustable time delay with 1% repeat accuracy. Time delay adjustment has shaft lock.  
 Energizes LIGHT and times out DARK connected to LIGHT terminal. Recycle time is almost instant (.015 sec. max.) and is independent of light level on the sensing cell. Timing control is voltage regulated and variation in timing between 100 and 130 volts is negligible.  
 Energizes DARK and times out LIGHT connected to DARK terminal. Recycle time is 50 milliseconds min. depending on light intensity on the sensing cell. For minimum recycle time reduce light intensity to minimum operating value.  
**A750 Timing Control less heads.....Net \$88.00**  
 † Use of infrared filters reduces maximum distance between heads approximately 50% (see page 3).

Model Numbers			max. ft. between heads†	NET per set
Control	Sensing Head	Light Source		
A725	E8AAP10LC	E8AC	2	\$102.50#
A725	E8AP9LC	E8AC	2	\$102.50#
A725	E8BAP9LC	E8BAC	15	\$102.50#
A725	E8BP9LC	E8BC	30	\$102.50#
A725	EXPM9LC	EX3ME	70	\$109.50
A725	E1AP6LC	E1AE	60	\$104.50
A725	EPA9LC	E2A88E	150	\$109.50
A725	EPA9LC	E4BE	24	\$127.50
A750	E8AAP10LC	E8AC	1	\$121.00#
A750	E8AP9LC	E8AC	1	\$121.00#
A750	E8BAP9LC	E8BAC	7.5	\$121.00#
A750	E8BP9LC	E8BC	15	\$121.00#
A750	EXPM9LC	EX3ME	35	\$128.00
A750	E1AP6LC	E1AE	30	\$123.00
A750	EPA9LC	E2A88E	75	\$128.00
A750	EPA9LC	E4BE	12	\$146.00

### DIMENSIONS

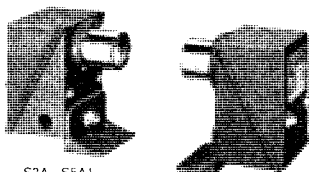
- A725, A750—8-3/8 x 4-1/4 x 10-3/8
- E8BA9LC, E8BAC—15/16 x 1-7/8 x 1-3/8
- E8BP9LC, E8BC—15/16 x 2-21/32 x 1-3/8
- E8AAP10LC, E1AE—1-7/16 x 1-3/8
- E8AP9LC, E8AC—15/16 x 1-9/16 x 1-3/8
- E1AP6LC, E1AE—1-7/16 x 1-3/8 x 3-5/8
- EXPM9LC—1-1/2 x 3-3/4 x 4-3/4
- EX3ME—1-1/2 x 5-1/4 x 4-3/4
- EPA9LC, E2A88D, E4BE—3-15/16 x 5-5/16 x 5-1/4

# AUTOTRON

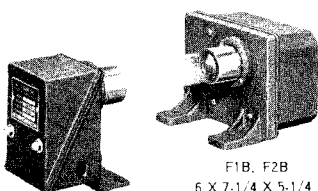
## Self-Contained Photoelectric ON/OFF Controls and Light Sources



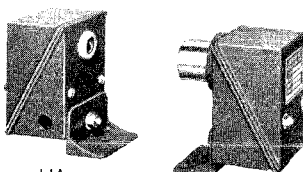
S1A, S4A1 3 3/4 X 4 X 5-1/4 L1A



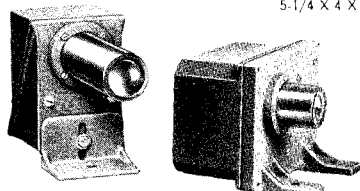
S2A, S5A1 5-1/4 X 4 X 5-1/4 L2A



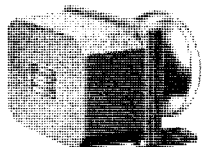
F1B, F2B 6 X 7-1/4 X 5-1/4 L2A



L1A A579 5-1/4 X 4 X 5-1/4



L3A L4 8 X 4 X 5-1/4 6 X 7-1/4 X 5-1/4



L6 6 X 7-1/4 X 5-1/4

### FEATURES and NOTES

**R—Built-in SAFETY Relay** (contacts SPDT rated 5 amps, at 115 VAC)

**In Control:** Energizes when power comes on; de-energizes when tube filament burns out or power goes off.

**In Light Source:** Energizes when light comes on; de-energizes when lamp fails or power goes off.

**Y—Built-in Light Beam Intensity Adjustment.**

\*Available with built-in heating element at \$7.50 extra.

**DARK Energized**—Plate relay energizes when light beam is interrupted; de-energizes when the light beam is restored, when a tube filament fails or any tube loses emission.

**LIGHT Energized**—Plate relay energizes when light beam is restored; de-energizes when light beam is interrupted, when tube filament fails or any tube loses emission.

**Specified minimum dark and light time** are based on the specified minimum foot-candles.

Each self-contained unit is complete for operation direct from electric service. The illustrations show controls and light sources in matched pairs but any combination can be used if the light source provides enough light to operate the control at the installed distance.

### S Series ON-OFF Controls

Rugged, industrial Photoelectric Controls, moderately sensitive, factory adjusted for use where object interrupts light beam 100% Minimum dark time, .06 second; minimum light time, .06 seconds.

Plate Relay Contacts, SPDT, rated 8 amperes at 115 VAC non-inductive load.

Splashproof cast aluminum case with adjustable bracket; tapped for 1/2" conduit.

Power consumption 10 watts.

S1A and S4A1 have 3/4" lens mounted in flexible neoprene—require 20 foot-candles minimum light.

S2A and S5A1 have 1 1/2" lens—require 10 foot-candles minimum light.

Energized		50-60 cycles volts	Net Each
Dark	Light		
S1A	S4A1	115/230	\$38.75
S1AR	S4A1R	115 or 230 (specify)	50.75
S2A	S5A1	115/230	45.00
S2AR	S5A1R	115 or 230 (specify)	57.00

### F Series ON/OFF Controls

"Fail Safe", sensitive, high speed. Widely used where "safe" relay action is required in case of tube failure, where light change is limited, and where photo-tube dark time or light time is short. Special, quick response DC circuit permits speeds to 1200 operations (cycles) per minute. Sensitivity adjustment inside case inhibits tampering. Shaftlock secures setting.

Minimum light, 5 foot-candles. Minimum phototube dark time, .025 second; minimum phototube light time, .025 second.

Plate Relay: Contacts DPDT, rated 8 amps at 115 VAC, non-inductive load. Splashproof cast aluminum case tapped for 1/2" conduit. Rigid mounting feet. Lens dia. 1 1/2". 115/230 v., 50-60 cycles. Power 20 watts.

Energized		For 115/230 v., 50-60 Cycles Description	Net Each
Dark	Light		
*F2B	*F1B	Photoelectric Control	\$67.50
*F2BR	*F1BR	Above with R feature	79.50

### A579 Transistor ON-OFF Control

Fast Acting, rugged industrial construction. Photoelectric Control.

.025 second light time; .025 second dark time (minimums).

Rugged, 8-ampere DPDT plug-in relay with transparent plastic enclosure.

No tubes. Cad Cell and Transistors replace tubes. Transistors protected from transient voltage. Cad Cell exceptionally well shielded from extraneous light by long lens tube and carefully designed mounting arrangement.

All components are securely mounted on modern printed circuit board. All contacts of the 8-ampere DPDT Relay are wired to large, easily accessible screw type terminals, separated by high barriers.

Splashproof cast aluminum case with adjustable mounting bracket; tapped for 3/4" conduit. Power consumption; 5 watts. Maximum ambient operating temperature 115°F.

Relay de-energizing time delay easily added by user; instructions included with control. Requires 5 foot-candles minimum light. Operates from 115 or 230 v (specify) 50-60 cycles. Power consumption, 5 watts.

**A579 LIGHT-ENERGIZED Transistor ON/OFF Photoelectric Control**.....NET each \$58.00

### L1A Light Source

Has 3/4" lens mounted in flexible Neoprene. Splashproof cast aluminum case tapped for 1/2" conduit. Adjustable mounting bracket.

Model	L1A	L1AY	L1AR	L1ARY
Net each	\$18.50	\$23.50	\$30.50	\$35.50

### L2A Light Source

Has 1 1/2" lens mounted in a brass lens tube. Splashproof cast aluminum case tapped for 1/2" conduit. Adjustable mounting bracket.

Model No.	L2A	L2AY	L2AR	L2ARY
Net each	\$21.80	\$26.80	\$33.80	\$38.80

### L4 Light Source

Has prefocused, two-filament lamp, extra low voltage connection and 1 1/2" OD straight fixed beam. The prefocused lamps permit replacement with minimum change in the light beam. The dual filaments provide protection against shutdowns—when one filament fails the other lights up and a signal light in the housing comes on indicating that the lamp should be replaced as soon as convenient. Splashproof cast aluminum case with rigid mounting feet, taped for 1/2" conduit.

**L4 Light Source** Net each \$49.50

### L6 Hi Intensity Light Source

Has high intensity spot beam for extremely adverse conditions such as steam, vapor, fog, heavy rainfall, etc. The #4515 sealed-beam spot lamp is swivel-mounted for directional adjustment of the beam. Lamp life expectancy; 3000 hours at normal voltage, 10000 hours at low voltage. See footcandle rating in table below. Gasket sealed cast aluminum case tapped for 1/2" conduit. 115/230 V, 50-60 C.

**L6 Light Source**..... Net each \$36.00

Model No.	FOOT CANDLES				Lens Dia-meter	NET each	Ship wt lbs.
	20 DISTANCE IN FEET	10	5	2			
L1A	8	12	15	18	3/4	\$18.50	2.5
L2A	13	20	30	45	1 1/2	21.80	2.5
L4	N7	12	4	6	1 1/2	49.50	8
	L2	4	6	12			
L6	N30	42	57	85		36.00	7
	L18	25	31	40			

### L3A Light Source

Has 1 1/2" lens with light beam adjustment from a minimum focal length of 4 3/4" and corresponding focal size of 5/16 x 1/4" to a straight light beam of 1 1/2" O.D. Light out put at twice the focal distance exceeds 30 foot-candles.

Increasing the focal length increases the focal size. For example at 6" focal length the focal size is 1/2 x 3/8" and at 12" focal length the focal size is 1 1/2" (straight light beam).

Model No.	L3A	L3AY	L3AR	L3ARY
Net each	\$29.30	\$34.30	\$41.30	\$46.30

### Control and Light Source Sets

(practically any light source can be used with any control)

MODEL NUMBERS energized		max. ft. between lenses	Min. Dark Time	Min. Light Time	Net per Set
DARK	LIGHT				
S1A-L1A	S4A1-L1A	8	.06	.06	\$57.25
S2A-L1A	S5A1-L1A	12	.06	.06	63.50
S2A-L2A	S5A1-L2A	20	.06	.06	66.80
S2A-L4	S5A1-L4	L 4	.06	.06	94.50
F2B-L1A	F1B-L1A	15	.025	.025	86.00
F2B-L2A	F1B-L2A	30	.025	.025	89.30
F2B-L4	F1B-L4	L 6	.025	.025	117.00
—	A579-L1A	15	.025	.025	76.50
	A579-L2A	30	.025	.025	79.80
—	A579-L4	L 6	.025	.025	107.50



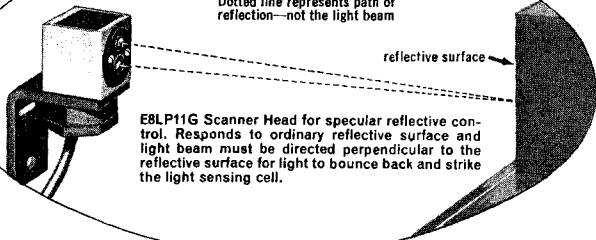
# AUTOTRON

## Miniature Photoelectric Scanner Heads and Controls

Page 3

### E8LP11G Scanner Head

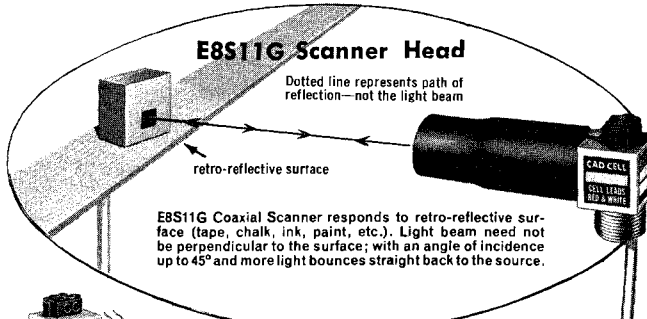
Dotted line represents path of reflection—not the light beam



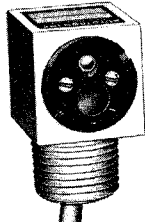
E8LP11G Scanner Head for specular reflective control. Responds to ordinary reflective surface and light beam must be directed perpendicular to the reflective surface for light to bounce back and strike the light sensing cell.

### E8S11G Scanner Head

Dotted line represents path of reflection—not the light beam



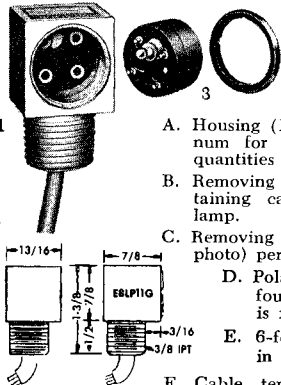
E8S11G Coaxial Scanner responds to retro-reflective surface (tape, chalk, ink, paint, etc.). Light beam need not be perpendicular to the surface; with an angle of incidence up to 45° and more light bounces straight back to the source.



### E8LP11G Miniature Scanner Head

For high speed scanning service in minimum space. E8LP11G Scanner Head combines the fast acting cadmium selenide cell and the light source lamp in a single miniature housing (approximately 3/8 inch in all three dimensions plus 3/8" male pipe thread connection. See dimensional diagram below.)

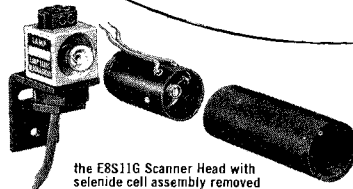
The light sensing element is a fast response, cadmium selenide cell. The lamp has a built-in lens. An infrared filter helps protect against ambient light. The lamp rating is 2.5 volts at .5 amperes—life expectancy up to 75,000 hours depending on operating voltage.



### Unique Design—Rugged Construction

- Housing (1) is precision machined from bar aluminum for ruggedness and stability. In production quantities can be furnished in specified colors.
- Removing a ring nut (2) releases capsule (3) containing cadmium selenide cell and light source lamp.
- Removing two screws from capsule (not visible in photo) permits replacement of cell and lamp.
- Polarized design assures correct position on four spring loaded contacts (4) when capsule is inserted in the head.
- 6-foot cable is factory-connected to terminals in housing.
- Cable, terminal connections and contact base are encapsulated in the housing with epoxy resin.

E8LP11G Scanner Head including mounting bracket, also 6-foot factory-connected cable with cable grip and seal for connecting to 800 control. ....\$28.75



### E8S11G Coaxial Scanner Head

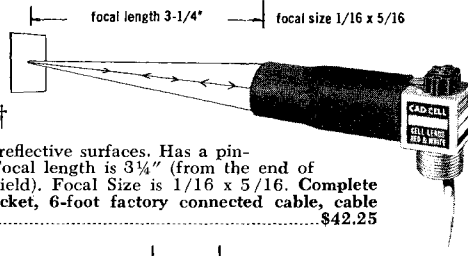
For use with retro-reflective tape or other retro-reflective material. May be used with a retro-reflective mirror when it acts as a sort of limit switch or for detecting or identifying objects with retro-reflective markings, code marks, labels, etc.

The light beam does not need to be perpendicular to the retro-reflective surface; beams at angles of 45 and more bounce straight back to the source.

E8S11G Scanner Head† with mounting bracket, 6-foot factory connected cable, cable grip and seal for connection to the control.....\$38.75

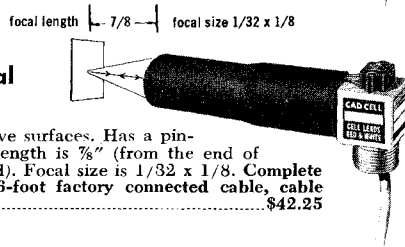
### E8S11G-6A Coaxial Scanner Head†

For use with retro-reflective surfaces. Has a pin-point type beam. Focal length is 3 1/4" (from the end of Neoprene Light Shield). Focal size is 1/16 x 5/16. Complete with mounting bracket, 6-foot factory connected cable, cable grip and seal. ....\$42.25



### E8S11G-4A Coaxial Scanner Head†

For use with retro-reflective surfaces. Has a pin-point light beam. Focal length is 7/8" (from the end of the Neoprene Light Shield). Focal size is 1/32 x 1/8. Complete with mounting bracket, 6-foot factory connected cable, cable seal and grip. ....\$42.25



### Standard Control/Scanner Head Combinations

†Control	†Scanner	Distance	Price
800	E8LP11G	17 in.	96.25
800	E8S11G	60 in.	106.25
800	E8S11G-6A	*3 1/4 in.	109.75
800	E8S11G-4A	*7/8 in.	109.75

†For 115 or 230 volts (specify) 50-60 Cycles AC.

\*focal length

## AUTOTRON 800 Sensitive Transistor Photoelectric Control†

for use with E8LP11G and E8S11G Scanner Heads and other remote cad cell heads where extra sensitivity is needed.

### FEATURES

Chatter free relay operation—due to square wave signal sent to relay coil.

The latest silicon transistors assure extreme temperature stability not obtainable with ordinary transistors.

FAST ACTING—.025 second light time; .025 second dark time, minimum.

EXTREMELY SENSITIVE—Sensitivity adjustment has shaft lock.

Rugged 5-ampere DPDT Relay, plug-in mounted with "see thru" plastic cover.

A. Cover protects against foreign matter, physical injury and tampering.

B. Plug-in mounting permits replacement in seconds without tools or special skill.

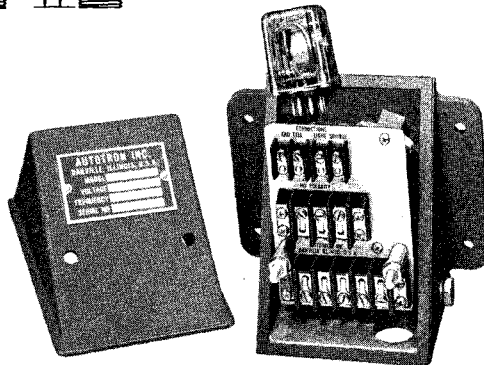
Transistors are protected from transient voltage.

All Circuit components are securely mounted on a modern circuit board.

All contacts of the DPDT relay wired to large, easily accessible, screw type terminals. Splashproof cast aluminum case tapped for 3/8" conduit.

Power consumption, 5 watts. Shipping weight 2 1/2 pounds.

Model 800 ON/OFF Control†.....\$67.50

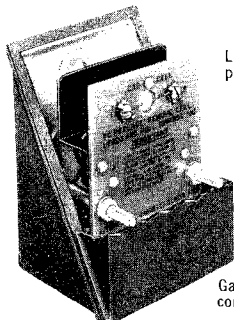
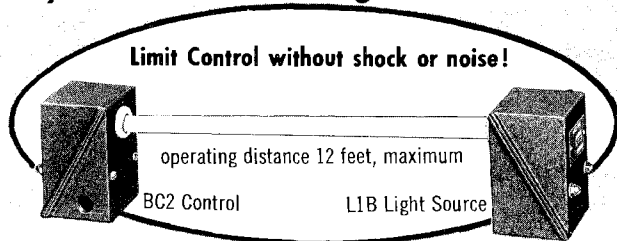


Model 800 Control



# AUTOTRON Photoelectric Controls

## BC2/L1B LIGHT-energized Limit Switch

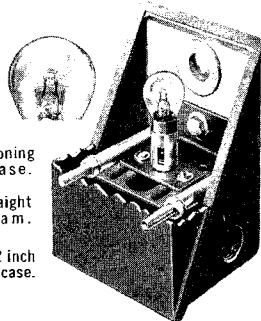


Light shield provides unusual protection against ambient light

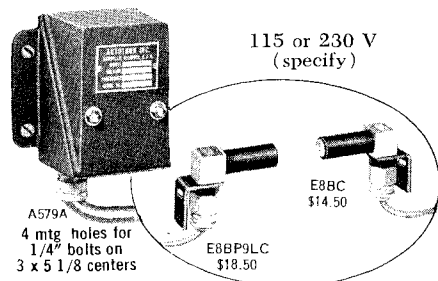
3-way adjustment for positioning lamp without moving case.

Lamp easily focused for a straight beam or a pinpoint beam.

Gasket sealed cast aluminum case tapped for 1/2 inch conduit. Three mounting holes in bottom of case.



## A650 Control Pak (Transistor ON/OFF Control)



115 or 230 V (specify)

A579A 4 mtg holes for 1/4" bolts on 3 x 5 1/8 centers

E8BP9C \$18.50

E88C \$14.50

A579A Control, E8BP9C Photo Cell Sensing Head and E88C Light Source Head, with 6-foot cable to each head. Max. distance between heads, 12 feet. Minimum light time, .025 second; Minimum dark time, .025 second. LIGHT-energized. Rugged, 5-ampere plug-in DPDT Relay with transparent cover. Cad Cell and transistors instead of tubes. Transistors protected from transient voltage. Cad Cell exceptionally well shielded from extraneous light.

All circuit components securely mounted on a modern printed circuit board.

All contacts of the DPDT Relay wired to large easily accessible screw type terminals with high barriers.

Splash-proof, cast aluminum case, tapped for 3/4" conduit.

Power consumption—5 watts.

Time delay easily added by user.

**AUTOTRON A650 Control Pak Net each \$87.80** (includes A579A ON-OFF Control with E8BP9C and E88C Remote Heads and connecting cables.

**P-204 Infrared Filter Assembly Net 3.45**

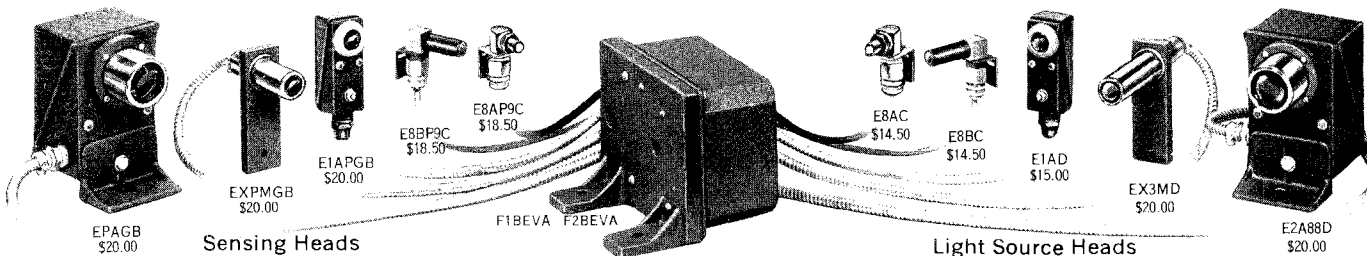
## BC2 Light-energized Limit Switch

The photosensing element is a cad cell. Relay energizes when light is on cell. 3/4" lens mounted in flexible Neoprene. Minimum dark time .06 second; minimum light time .06 second. Contacts SPDT, 2-amps at 115 VAC, non-inductive. Relay is protected by plastic enclosure. Power consumption, 0.5 watts. For 115 v. 50-60 cycle operation only. BC2 Photoelectric Limit Switch.....\$24.75

## L1B Light Source

3/4" lens mounted in flexible silicone rubber. Low operating voltage extends lamp life to 5000 hours, approx. High voltage tap for extremely dirty applications. Mounting adjustment permits focusing lamp for a straight beam or a pinpoint beam. Mounting adjustment permits alignment of lamp without moving case. For 115/230 v, 50-60 cycle operation. L1B Light Source.....Net \$18.50

## F Series Photoelectric ON/OFF Controls with Remote Sensing and Light Source Heads



EPAGB \$20.00

Sensing Heads

EXPMGB \$20.00

E1APGB \$20.00

E8BP9C \$18.50

E8AP9C \$18.50

F1BEVA F2BEVA

E8AC \$14.50

E8BC \$14.50

E1AD \$15.00

EX3MD \$20.00

E2A88D \$20.00

Light Source Heads

F Series ON/OFF Controls have a special quick response DC circuit which permits speeds to 1200 operations per minute. Sensitivity adjustment inside case inhibits tampering. Shaft lock secures setting.

Plate Relay: Contacts DPDT, rated 8 amps at 115 VAC, non-inductive load. Splashproof cast aluminum case, tapped for 1/2" conduit. Power consumption, 20 watts.

**DIMENSIONS**

F1BEVA, F2BEVA 6 x 7-1/4 x 5-1/4  
 EPAGA, E2A88D 5-1/4 x 4 x 5-1/4  
 EXPMGA, EX3MD 3-3/4 x 1-1/2 x 4-3/4  
 E8BP9C, E88C 2-3/4 x 7/8 x 1-1/8  
 E8AP9C E8AC 2 x 7/8 x 1-1/8

Model Number	Max. ft. between heads	Min. dark time	Min. light time	Price	With R Feature		Ship. Wt. lbs.
					Model Number	Price	
<b>LIGHT ENERGIZED F Series Controls with Sensing and Light Source Heads (115/230 V, 50-60 C)</b>							
F1BEVA-EPAGA-E2A88D	30	.025	.025	\$117.50	F1BEVAR-EPAGA-E2A88D	\$129.50	12
F1BEVA-E1APGA-E1AD	5	.025	.025	112.50	F1BEVAR-E1APGA-E1AD	124.50	9
F1BEVA-EXPMGA-EX3MD	focused	.025	.025	117.50	F1BEVAR-EXPMGA-EX3MD	129.50	9
F1B4EVE-E8AP9C-E8AC	1 1/2	.05	.025	110.50	F1B4EVER-E8AP9C-E8AC	122.50	9
F1B4EVF-E8BP9C-E8BC	12	.025	.025	110.50	F1B4EVFR-E8BP9C-E8BC	122.50	9
<b>DARK ENERGIZED F Series Controls with Sensing and Light Source Heads (115/230 V, 50-60 C)</b>							
F2BEVA-EPAGA-E2A88D	30	.025	.025	117.50	F2BEVAR-EPAGA-E2A88D	129.50	12
F2BEVA-E1APGA-E1AD	5	.025	.025	112.50	F2BEVAR-E1APGA-E1AD	124.50	9
F2BEVA-EXPMGA-EX3MD	focused	.025	.025	117.50	F2BEVAR-EXPMGA-EX3MD	129.50	9
F2B4EVE-E8AP9C-E8AC	1 1/2	.05	.025	110.50	F2B4EVER-E8AP9C-E8AC	122.50	9
F2B4EVF-E8BP9C-E8BC	12	.025	.025	110.50	F2B4EVFR-E8BP9C-E8BC	122.50	9

Models F1BEVA and F2BEVA have connections for operating remote sensing and remote light source heads.

The Sensing and Light Source Heads are listed in "matched" pairs. However, either light source may be used with either sensing head

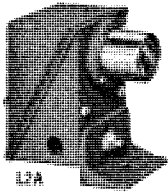
provided the light source has sufficient foot candle output at the installed distance.

Each AUTOTRON Remote Sensing Head and Light Source Head is equipped with 6-foot connecting cable.

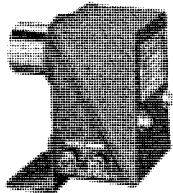
# AUTOTRON Photoelectric Controls

## Self-Contained Photoelectric Timing Controls (for Light Sources see preceding page)

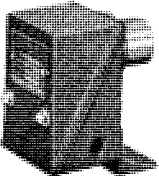
For applications requiring delayed plate relay response to light change, such as conveyor jam-up, spraying, processing, etc.



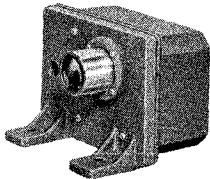
L2A  
5-1/4 x 4 x 5-1/4



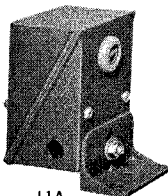
T1A  
5-1/4 x 4 x 5-1/4



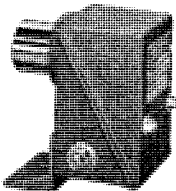
L2A



T2B, T3A, T5A  
6 x 7-1/4 x 5-1/4



L1A  
3-3/4 x 4 x 5-1/4



A579P  
5-1/4 x 4 x 5-1/4

### T1A Photoelectric Timing Control

Relay energizes DARK—unit times out DARK. Time delay with shaft lock adjustment from 1 to 10 seconds. Repeat accuracy 4%. Minimum light, 40 foot-candles. Plate relay: Contacts SPDT, rated 8 amps at 115 v. AC, non-inductive load. Splashproof aluminum case, tapped for 1/2" conduit. Adjustable mounting bracket. Lens dia. 1 1/2". Power consumption, 10 watts. 115/230 v., 50-60 cycles.  
**T1A Photoelectric Timing Control. Net each \$57.50**

### T2B, T3A and T5A Timing Controls

Plate Relay: Contacts DPDT, rated 8 amps at 115 v. AC, non-inductive load. Time delay adjustment has shaft lock. Splashproof cast aluminum case tapped for 1/2" conduit. Lens diameter 1 1/2". 115/230 v., 50-60 cycles. Power consumption 20 watts.

### T2B Photoelectric Timing Control

Relay energizes LIGHT—unit times out with DARK. Repeat accuracy 3%. Minimum light 20 foot-candles.

Timing Ranges (specify)	Min. Light Time
No. 1 1. to 3. sec.	.2 sec.
No. 2 2.5 to 8. sec.	.4 sec.
No. 3 4. to 15. sec.	.8 sec.

**T2B Photoelectric Timing Control. Net each \$72.50**  
**T2BR—Above with Safety Relay. Net each \$84.50**

### T3A Photoelectric Timing Control

Relay energizes LIGHT—unit times out with LIGHT. Timing accuracy, 2%. Minimum light 10 foot candles.

T3A and T5A Timing Ranges (specify)			
No. 0.1 .03 to 3. sec.	No. 1. .6 to 15. sec.		
No. 0.2 .06 to 3. sec.	No. 2. 1. to 25. sec.		
No. 0.5 .1 to 6. sec.	No. 2.5 1.5 to 50		
No. 3. 30. to 300.			

**T3A Photoelectric Timing Control. Net each \$72.50**  
**T3AR—Above with Safety Relay. Net each \$84.50**

### T5A Photoelectric Timing Control

Relay energizes DARK—unit times out with DARK. Timing accuracy 2%. Minimum light, 10 foot candles. Timing ranges—same as T3A (specify).

**T5A Photoelectric Timing Control. Net each \$82.50**  
**T5AR—Above with Safety Relay. Net each \$94.50**

### A579P Transistor Timing Control.

Photoelectric—Relay energizes LIGHT—unit times out with DARK. Cad Cell and Transistors replace tubes. Plug-in plate relay, with plastic dust cover; Contacts DPDT, rated 8 amps at 115 VAC, non-inductive load. Time delay adjustment has shaft lock. Splashproof cast aluminum case with adjustable mounting bracket, tapped for 3/4" conduit. Repeat accuracy 4%. Power consumption, 5 watts. 115 or 230v (specify) 50-60 cycles. Adjustable timing ranges (No. .4: .1 to 5 sec. (specify) No. 2. :1. to 20 sec.)

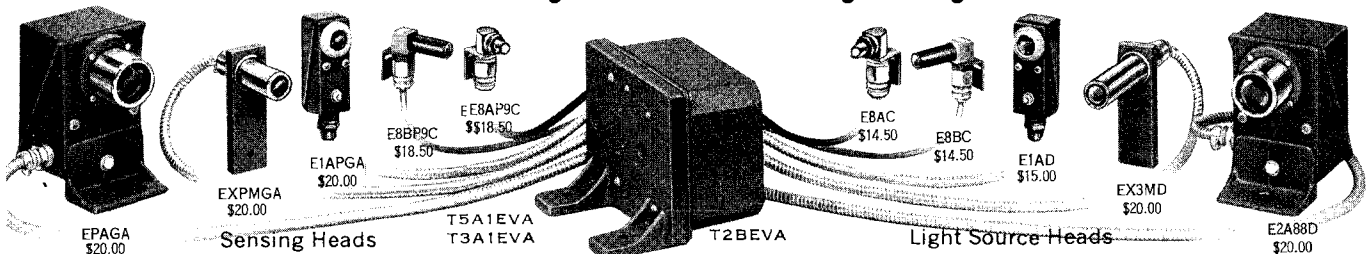
**A579P Timing Control. Net each \$67.00**

### Control and Light Source Sets

(practically any Light Source can be used with any Control)

Model Numbers	max. ft. between lenses	Min. dark time	Min. light time	Price per set.
T1A-L1A	5 ft	—	.5	\$76.00
T1A-L2A	10 ft	—	.5	79.30
T3A-L1A	12 ft	.005	—	91.00
T3A-L2A	20 ft	.005	—	94.30
T5A-L1A	12 ft	—	.005	101.00
T5A-L2A	20 ft	—	.005	104.30
T2B-L1A	8 ft	—	.4	91.00
T2B-L2A	13 ft	—	.4	94.30
A579P-L1A	15 ft	—	.5	85.50
A579P-L2A	30 ft	—	.5	88.80

## T Series Photoelectric Timing Controls with Sensing and Light Source Heads



T Series Controls are built for heavy Duty Industrial Service. Plate Relay Contacts: DPDT, Silver Cadmium Oxide, rated 8 amps at 115 VAC, non-inductive load.

Time Delay adjustment with shaftlock, inside case.

Timing Ranges same as self-contained models, page 2. H Feature available with all models—to order add Suffix "H" to Model Number and \$7.50 to price.

The Sensing and Light Source Heads are listed in matched pairs for convenience. Other combinations are practical when required.

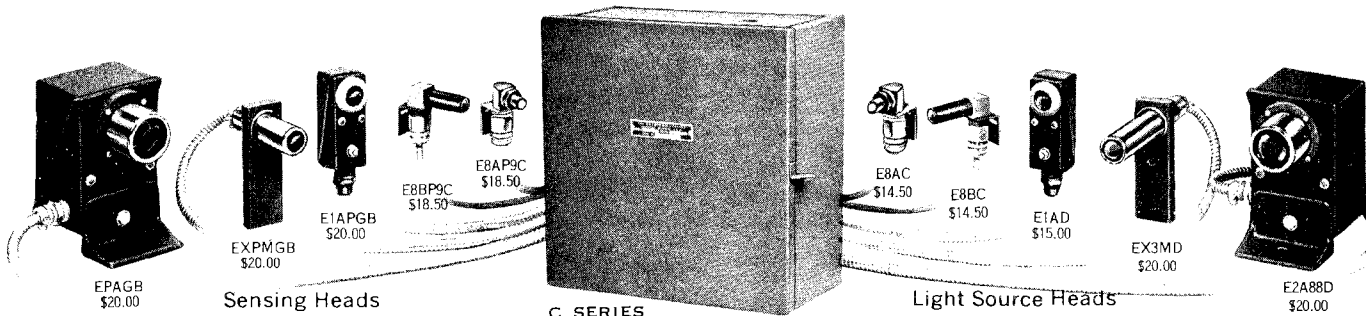
#### DIMENSIONS

A579A	6 1/4 x 3-1/2 x 5-1/2
A725, A750	8-3/8 x 4-1/4 x 10-3/8
T5A1EVA, T3A1EVA, T2BEVA	6 x 7-1/4 x 5-1/4
EPAGA, E2A88D	5-1/4 x 4 x 5-1/4
EXPMGA, EX3MD	3-3/4 x 1-1/2 x 4-3/4
E8BP9C, E8BC	2-3/4 x 7/8 x 1-1/8
E8AP9C, E8AC	2 x 7/8 x 1-1/8

Model Number	Sensing Head	Light Source	Max. Ft. Between Heads	Min. Dark Time	Min. Light Time	Price	With R Feature			Ship. Wt. Lbs.	
							Control	Sensing Head	Light Source		Price
<b>DARK-ENERGIZED—ENERGIZE DELAY (115/230 V, 50-60 C)</b>											
T5A1EVA-EPAGA-E2A88D			23	delay	.005	\$132.50	T5A1ERVA-EPAGA-E2A88D			\$144.50	11
T5A1EVA-E1APGA-E1AD			5	delay	.005	127.50	T5A1ERVA-E1APGA-E1AD			139.50	9
T5A1EVA-EXPMGA-EX3MD			5	delay	.005	132.50	T5A1ERVA-EXPMGA-EX3MD			144.50	9
T5A4EVE-E8AP9C-E8AC			1.2	delay	.01	125.50	T5A4ERVA-E8AP9C-E8AC			137.50	9
T5A4EVF-E8BP9C-E8BC			5	delay	.005	125.50	T5A4ERVF-E8BP9C-E8BC			137.50	9
<b>LIGHT-ENERGIZED—ENERGIZE DELAY (115/230 V, 50-60 C)</b>											
T3A1EVA-EPAGA-E2A88D			23	.005	delay	\$132.50	T3A1ERVA-EPAGA-E2A88D			\$144.50	11
T3A1EVA-E1APGA-E1AD			5	.005	delay	127.50	T3A1ERVA-E1APGA-E1AD			139.50	9
T3A1EVA-EXPMGA-EX3MD			5	.005	delay	132.50	T3A1ERVA-EXPMGA-EX3MD			144.50	9
T3A4EVE-E8AP9C-E8AC			1.2	.05	delay	125.50	T3A4ERVA-E8AP9C-E8AC			137.50	9
T3A4EVF-E8BP9C-E8BC			5	.025	delay	125.50	T3A4ERVF-E8BP9C-E8BC			137.50	9
<b>LIGHT-ENERGIZED—DE-ENERGIZE DELAY (115/230 V, 50-60 C)</b>											
T2BEVA-EPAGA-E2A88D			16	delay		\$122.50	T2BERVA-EPAGA-E2A88D			\$134.50	11
T2BEVA-E1APGA-E1AD			3	delay	See	117.50	T2BERVA-E1APGA-E1AD			129.50	9
T2BEVA-EXPMGA-EX3MD			3	delay	Chart	122.50	T2BERVA-EXPMGA-EX3MD			134.50	9

# AUTOTRON Photoelectric Controls

## C-Series Impulse Actuated Photoelectric Timing Controls



C Series Controls are triggered (ENERGIZED) by electric impulses. De-Energizing is controlled by adjustable time delay—the relay remains energized through the timing period for which the control is set. DARK-energized Controls time out with LIGHT; LIGHT-energized Controls time out with DARK.

When the "ENERGIZING" light change occurs *before the timing period expires* the relay remains energized through another complete timing period.

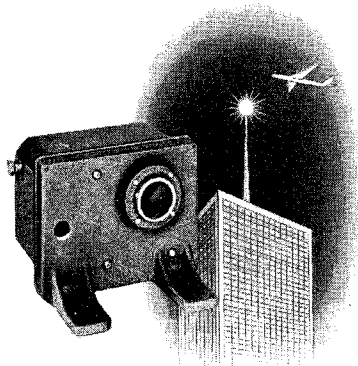
Quick "Light Change" is required. Objects should travel at near 60 feet per minute (unless specified). Timing repeat accuracy, 1%. Power consumption, 20 watts.

Plate Relay: SPDT contacts rated 15 ampere at 115 VAC, non-inductive load.

Timing Range Numbers	0.6	1	2	3
Timing Range in Seconds	.05 to .5	0.1 to 1.0	0.5 to 5.0	1.0 to 10.0

Model Number	Max. Ft. Between Heads	Min. Dark Time	Min. Light Time	Price	Ship. Wt. Lbs.
<b>DARK-ENERGIZED — DE-ENERGIZE Delay (115/230 V, 50-60 C)</b>					
C3V EPAGB-E2A88D	13	.00001	.001	\$197.00	19
C3V E1APGB-E1AD	10	.00001	.001	192.00	16
C3V EXPMGB-EX3MD	10	.00001	.001	197.00	17
C3403V E8AP9C-E8AC	1½	.00001	.001	190.00	16
C3403V E8BP9C-E8BC	4	.00001	.001	190.00	16
<b>LIGHT-ENERGIZED — DE-ENERGIZE Delay (115/230 V, 50-60 C)</b>					
C4V EPAGB-E2A88D	13	.001	.00001	\$197.00	19
C4V E1APGB-E1AD	10	.001	.00001	192.00	16
C4V EXPMGB-EX3MD	10	.001	.00001	197.00	17
C4403V E8AP9C-E8AC	1½	.001	.00001	190.00	16
C4403V E8BP9C-E8BC	4	.001	.00001	190.00	16

### A2BX Solar ON/OFF Control



Automatically turns lights "ON" at preset light value—and turns lights "OFF" when light exceeds preset value.

DPDT Control Relay energizes when light exceeds intensity for which control is set; de-energizes when light falls below the preset level.

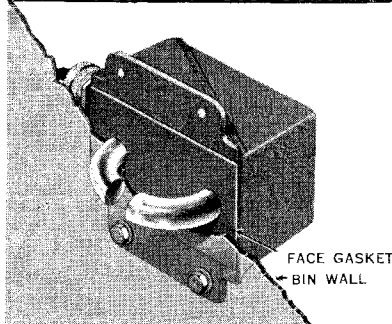
In case of tube failure the relay de-energizes; providing same control action as when light falls below preset level.

Dual Time Delays prevent operation by either momentary light flashes or shadows. Modern, simple circuitry uses one rugged, premium type power tube. Light intensity adjustment from outside of housing. Gasket-sealed cast aluminum housing, tapped for ½" conduit. For 115/230 v, 50-60 c. Available with three adjustment ranges:

No. A2BX-2; 1 to 5 fc for street lighting, parking lots  
No. A2BX-5; 15 to 50 fc for signs, parking lots  
No. A2BX-1; 20 to 150 fc for obstruction or tower lights

**A2BX Solar Control (all models) Net \$76.95**

### Tubeless Bin Level Control

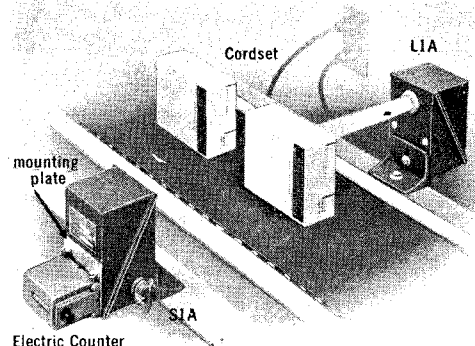


Tubeless Photoelectric actuation — unaffected by pressure of material in the bin. Only rigid, non-moving Lucite probes project into the bin. Cast aluminum, gasket-sealed housing mounts to bin wall as shown. Removal of cover makes all parts accessible. Dust-covered plug-in DPDT 8-ampere relay provides ON/OFF control for either high or low bin level. All wiring connections brought out of case in 3-foot oil proof cable. For 115/230V, 50-60 C.

**A700 Bin Level Control . . . . Net each \$68.00**

(Includes 3-foot cable, face gasket and mounting template)

### AUTOTRON Counting Eye



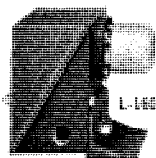
Counts anything—Automatically—without touching the object. Each object must interrupt the light beam .06 second or more. Space between objects must permit restoration of the light beam .06 second or more. Max. distance between lenses, 8 feet.

Counting Eye Components

S1A Photoelectric Control (see page 1)	\$38.75
L1A Light Source (see page 1)	18.50
Cordset: two 6-foot rubber covered cords with plugs and attachment clamps	2.50
Plate and hardware for mounting counter (4 mounting holes on 3-15/16 x 1-23/64" centers)	1.50
CE-600AS602 Electric Counter (6-digit, knob reset)	\$22.40

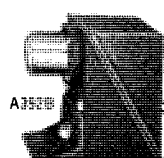
**A-138 Counting Eye 115 v., 50-60 c . . . Net each \$90.00**  
(includes above items wired ready to plug in.)

### Photoelectric Controls with Infrared Light Beams



For burglar alarms, safety applications, etc. Controls and Light Sources are designed for use in pairs as listed.

CONTROL No.	Net Each	LIGHT SOURCE No.	Net Each	Max. ft. between lenses	CONTACTS combination	Rating: amps.	Ship. wt. lbs.
A392B	\$52.50	L-160	\$30.65	15	SPDT	8	5½
A435	83.50	L-148	46.50	50	DPDT	10	14

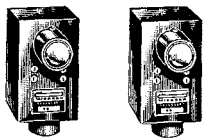


The Wholesaler Recommended Equipment. Easy to Stock, Easy to Install.

**INDUSTRIAL FOTOLECTRIC CONTROLS**

Each Unit Packaged With Easy-to-Follow Installation Instructions.  
Engineering Bulletins on All Units Mailed Upon Request.

**FOR GENERAL INDUSTRIAL APPLICATIONS**



**Series 33 Lt. Sources**  
**Model 23 Photocell**

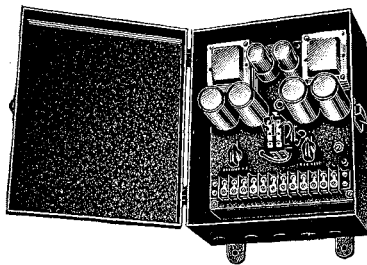
Model 33 Series Light Sources are available in different units for distances listed below, each operating in conjunction with Photo-cells (Model 23 Series) as designated. Light Source and Photocell heads operate in pairs. Each pair is set supervising by an Amplifier chosen for the task to be performed. The Light Source and Photocell heads are heavy duty solid cast metal size 3" x 3" x 4 1/2" plus lens. Equipped with 1/2" conduit fitting. For 110/120 v. 50/60 cy. ac.

**FOR CROSS-OVER BEAM**, for supervision of small objects (under 2" square) at high speed. Distances shown are from lens to point of supervision. (Moisture-proofed units.)

Model	Max. Distance	Each
33-3 Light Source— 3 inches		\$25.05
33-6 Light Source— 6 inches		25.05
33-9 Light Source— 9 inches		25.05
33-12 Light Source—12 inches		25.05
23-3 Photocell. Use with Model 33-3 Light Source		28.05
23 Photocell for use with Models 33-6, 9 and 12 Light Sources		28.05

**FOR DIRECTIONAL BEAM**, for supervising objects over 2" square. Distances shown cover area of supervision between units.

Model	Max. Distance	Each
33-10 Light Source— 1 to 10 ft.		\$19.50
23-10 Photocell		28.05
Moisture-proofed on order, slightly higher		
33-25 Light Source—10 to 25 ft.		30.00
33-25 Photocell (Moisture-proofed)		32.10

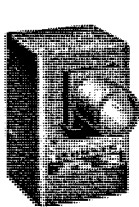


**MODEL 63 SERIES AMPLIFIERS**

For fine precision at high speeds. Specially engineered to operate in conjunction with the above Model 33 Series Light Sources with Model 23 Photocells. All models, 9 1/4" x 1 1/2" x 5". For 110/120 v. 50/60 cy. ac.

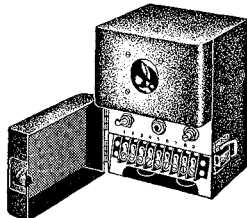
Model 63 Series Amplifiers are well engineered, highest quality units, widely used. The relay will operate up to 650 times a minute under normal conditions. Will operate also from light sources such as bright daylight, artificial lights, radiant energy, etc. These characteristics are basic standards in all Amplifiers of this Series.

Model 63, as described above	Each \$117.00
Model 63-A, equipped with Time Delay Circuit giving delay from 0 to 45 seconds	Each 134.10
Model 63-B, has added amplification to operate on less active change of light	Each 141.30
Model 63-C, same as Model 63, but operates with "on" light	Each 117.00
Model 64 Amplifier. Operates up to 450 times a minute	Each 67.35



**TWO-UNIT SET for Indoor Use**

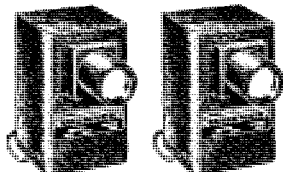
Light Source



Amplifier

This Amplifier unit includes Photo-Cell, Relay and Components. Efficient for distances from a few inches to 75 ft., where Relay is not required to operate in excess of 400 times a minute, such as: Counting, sorting large objects; limit switches; start, stop operations; opening doors, etc.

Model 62 R & L "Two-Unit Set".....Per Set \$82.50



Light Source and Amplifier Identical in Appearance

Model 107 R & L, Dark-Energized Two-Unit Set.....Per Set \$79.00

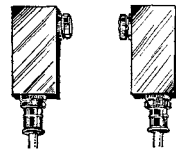
**"DARK-ENERGIZED" SET Operates When Photocell is Dark**

Amplifier includes components to operate as a Two-Unit Set. Light Beam up to 15' supervises 2-inch objects up to 400 times p/m. Dark-Energized photocell unit is designed for installations that require supervisory control when the light beam is absent from the photocell.

**"MINIATURE" FOTOLECTRIC HEADS**

Vertical Light Source  
Model M-36

Vertical Photocell  
Model M-26



For Horizontal Installation, order Models M-37 and M-27

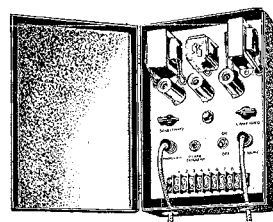
Size 1 1/4" x 2 1/2" x 3/4", for space limitations, yet unsurpassed for precision control at any desired speed. Units are expertly machined out of solid aluminum blocks for indestructible one-piece construction. Equipped with 6' cable with positive prong-type connectors, screw-band tightening collar. For 110/120 v., 50/60 cy. ac.

Model M-36 Vertical Light Source	.....	\$24.96
Model M-26 Vertical Photo-cell Receiver	.....	28.31
Model M-37 Horizontal Light Source	.....	24.96
Model M-27 Horizontal Photo-cell Receiver	.....	28.31

**MODEL 66 SERIES AMPLIFIERS**

For Use With Miniature Heads

Maximum speed ratings can be regulated on each unit provided that light falling upon photocell will have an "on-period" that equals the "off-period," provided conductor wires to photocell have zero (0) capacity. This insures positive, accurate performance. For 110/120 v. 50/60 cy. ac.



Model 67 Amplifier for applications where fine detection at high speeds is not a factor or Relay is not required to operate in excess of 450 times per minute.....Each \$69.90

Model 66 Amplifier, operates up to 900 counts a minute. Double-pole, double-throw relay with contact rating 110 v. 60 cy. ac., 10 amp. non-inductive and 5 amp. inductive. Has light beam intensity control. Each \$131.10

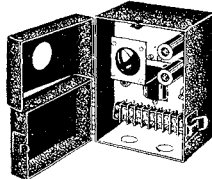
Model 66-A Amplifier, designed for use with ultra high speed electronic decade counters. Accurate counts of light beam interruption or variation of intensity up to 10,000 counts per minute. Output pulses up to 50 volts dc. regulated by the sensitivity control.....Each \$138.60

Model 66-T Amplifier, same as Model 66 with a Time Delay circuit incorporated to give regulated time delay from 0 to 45 seconds. Efficient for synchronizing operations.....Each \$155.40

**FOR INDOOR SMOKE DETECTION**

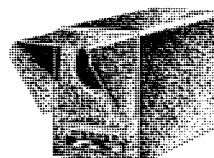
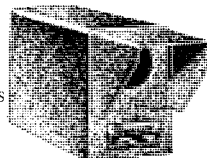
**SERIES 200 TWO-UNIT SETS.** Choose either set according to distance to be supervised. Both sets are designed to detect smoke substantially before heat releases automatic sprinklers. Sets activate whatever remote alarm the user installs. Units should be installed high above floor traffic and several feet from walls; usually suspended from ceiling.

Each set comprises—Light Source unit and unit combining Photocell, Amplifier, Relay. Model 201 Photocell-Amplifier unit has split door, top section removable. All units are 7 inches high. For 110/120 v. 50/60 cy. ac.



Model 201, Two Unit Set Supervises distance up to 75 feet.

Model 202 Two-Unit Set Supervises Distances from 75 to 500 feet.



Model 201, Two Unit Smoke Detector Set For supervising a distance up to 75 feet.....\$112.50

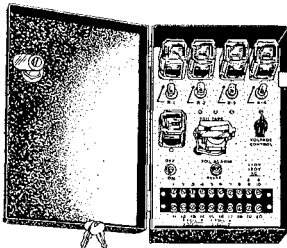
Model 202, Two Unit Smoke Detector Set For supervising a distance from 75 to 500 feet.....142.50

Prices slightly higher West of Rockies

The Wholesaler Recommended Equipment. Easy to Stock, Easy to Install.

**WORNER BURGLAR ALARM SYSTEMS**

Each Unit Packaged With Easy-to-Follow Installation Instructions.  
Engineering Bulletins on All Units Mailed Upon Request.



Model 9000-S Master Control Panel

**MODEL 9000 SERIES**—the Master Control System. Consists of Model 9000-S Master Control Panel and can supervise ONE to FOUR Fotolectric (detection) Sets. Contains Relays which energize alarm circuits. Control Panel installed remotely. Size: 7" x 10 1/4" x 4 3/8". For 110-120 v. 50/60 cy. ac.

On a separate circuit, the Master Control Panel will also supervise foil tape, door traps and window switch systems. Both circuits operate independently and simultaneously. Sounds continuous alarm (until reset) when either of these detection circuits is opened or wiring of Fotolectric system is tampered with. Prevents false alarms should power fail or drop momentarily and resets automatically when power is restored. Also operates with any type electrical devices employed by professional burglar alarm companies.

Illustration shows FOUR Relay units plugged in to show plug-in location of 1, 2, 3 or 4 Relays as needed; one Relay for each Fotolectric (detection) Set used. Model 9000-S Master Control Panel list priced "less Relays," as ONE Relay is automatically supplied with each Model No. 9000 series Fotolectric Set ordered.

Model 9000-S Master Control Panel.....Each, \$66.00

Model	Range	Fotolectric Set	Per Set
9100	100 ft.	Master Tresp. Trap	\$105.15
9150	150 ft.	Master Tresp. Trap	120.30
9075	75 ft.	Master Tresp. Trap	123.60
9250	250 ft.	Master Tresp. Trap	130.80
9500	500 ft.	Master Tresp. Trap	146.25

**FOTOLECTRIC SETS**

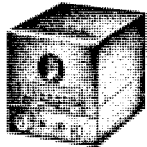
Consist of LIGHT SOURCE and PHOTOCCELL units ordered in sets according to distance to be covered and by Model Number as shown for each Series.

All Light Sources project infra-red (invisible) light beams.

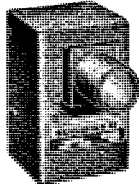
Sets for 100 and 150 ft. ranges are for indoor use. Sets for 75, 250 and 500 ft. ranges are weatherproof, for both indoor and outdoor use.

Sets for 75, 150, 250 and 500 ft. ranges have unwanted light rejector for maximum day-light efficiency.

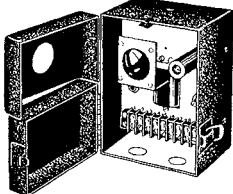
Cases of similar design house different components for the tasks listed.



For 100 Ft. Ranges Light Sources and Photocell Receivers have matching cases.



For 150-Ft. Range Light Source



For 150-Ft. Range Photo-cell Receiver

**MODEL 7000 SERIES**

comprises (Light Source and Amplifier) Fotolectric Sets that operate in conjunction with burglar alarm companies' central control equipment. Does not interfere with operation of foil tapes or window traps. For 110/120 v. 50/60 cy. a.c. For 24 v. 60 cy. use Worner Step-Down Transformer.

Model	Range	Fotolectric Set	Per Set
7100	100 ft.	Central Cont. Tresp. Trap	\$105.15
7150	150 ft.	Central Cont. Tresp. Trap	120.30
7075	75 ft.	Central Cont. Tresp. Trap	123.60
7250	250 ft.	Central Cont. Tresp. Trap	130.80
7500	500 ft.	Central Cont. Tresp. Trap	146.25

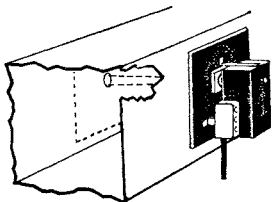
**MODEL 5000 SERIES**

is a TWO-PIECE set comprising No. 5000 series Fotolectric sets. For 100 ft. and 150 ft. ranges for interior use only where a single beam is ample protection. Not intended for use with foil systems, etc. Photocell Receivers of both ranges combine relay and amplifier components. On-off switch, phone jack to test plate current, sensitivity control. Lock. Alarm can be turned off or trespass trap reset only by the possessor of the key. For 110/120 v. 50/60 cy. ac.

Model	Range	Fotolectric Set	Per Set
5100	100 ft.	Single Beam Tresp. Trap	\$105.15
5150	150 ft.	Single Beam Tresp. Trap	120.30

**FIRE PROTECTION**

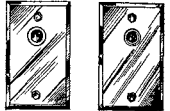
Institutions, schools, hospitals, hotels, etc., where fire originating in or drawn into ventilating or air conditioning ducts is fan driven to a succession of uncontrollable outbreaks throughout building. The Worner Fan Motor Stop installed on air duct minimizes this hazard by early detection, automatic stopping of fan and signaling of alarm. Meets requirements of National Board of Fire Underwriters and listed by Underwriters Laboratories. Write for Bulletin 650.



Light beam projected across duct detects smoke or flame.

**"MINIATURE" BURGLAR ALARM**

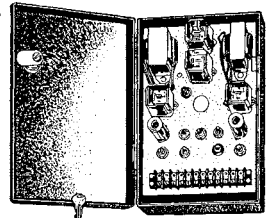
**"In-Wall" Concealment**



Light Source and Photo-cell Receiver units concealed in light-switch type face plates. Projects invisible light beam ranging up to 35 feet (indoors). Standard size wall plates concealing Fotolectric detection units are high finish stainless steel. Light bulb rated 2000 hours. For guaranteed efficiency Fotolectric sets must be used only with specially engineered amplifiers listed below.

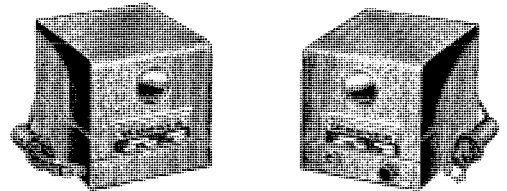
Model 81 "In-Wall" Light Source, each .....\$21.18  
Model 82 "In-Wall" Photocell Receiver, each ..... 22.92

**Amplifiers for above Fotolectric Sets**



Two specially engineered units. Circuits with no-voltage control relay prevent false alarms due to line voltage irregularities and will sound alarm if tampered with. Standard alarm continuous, regulated warning signal "special" upon order. For 110/120 v., 60 cy. a.c.

Model 86-1 is a single channel Amplifier Panel that will amplify current flow of one Fotolectric Set. each \$115.50  
Model 86-2 is a dual channel Amplifier Panel that will amplify current flow of two Fotolectric Sets, guarding separate area. Will also supervise one Fotolectric Set, providing for future addition of a second Fotolectric Set. each \$178.50



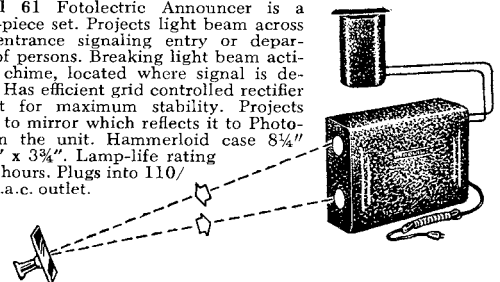
**THE TWO-UNIT WORNER WATCHMAN**

Exciter Lamp is equipped with removable infra-red filter. Provides invisible light beam ranging up to 50 ft. The Photocell Receiver combines Photocell and electrical components. Equipped with toggle switch for either continuous alarm or to sound only while light beam is broken. Extraneous light rejector maintains daylight range. Two-piece case construction enables removal of cover without unmounting. Identical cases 5" x 5" x 5 1/2" welded steel, mahogany hammerloid finish. For indoor use; 110-120V. 60 cycle A.C.

Model 4000 Two Unit Watchman .....per set \$63.00

**THE ELECTRONIC RECEPTIONIST**

Model 61 Fotolectric Announcer is a three-piece set. Projects light beam across any entrance signaling entry or departure of persons. Breaking light beam activates chime, located where signal is desired. Has efficient grid controlled rectifier circuit for maximum stability. Projects beam to mirror which reflects it to Photocell in the unit. Hammerloid case 8 3/4" x 6 1/2" x 3 3/4". Lamp-life rating 1000 hours. Plugs into 110/120 v.a.c. outlet.



Model 61 Fotolectric Announcer.....Per Set \$40.50  
Model 61-T. Fully transistorized. Size: 7 3/4" x 5 3/4" x 3 3/4". Operates 6-volt Chime. Plugs into 110/120 v.a.c. outlet Per Set \$40.50

Prices slightly higher West of Rockies

THE OLDEST MANUFACTURER OF CADMIUM SULPHIDE AND CADMIUM SELENIDE PHOTO CONDUCTORS

NOW OVER 50 STANDARD TYPES . .



Cl. Cell #	Sensitive Material	Enclosure (inches)	Pk. Spectral Response, A	Light Resistance <sup>1</sup>	Voltage Rating (Max.)	Power <sup>2</sup> (MW)
CL503	CdSe	.5x.5	7350	7.2K	250	500-250 <sup>2</sup>
CL504	CdSe	.5x.5	6900	1.5K	250	500-250 <sup>2</sup>
CL504L	CdSe	.5x.5	6900	0.25K	60	500-250 <sup>2</sup>
CL505	CdS	.5x.5	5500	9K	250	500-250 <sup>2</sup>
CL505L	CdS	.5x.5	5500	1.5K	60	500-250 <sup>2</sup>
CL507	CdS	.5x.5	6150	7.2K	250	500-250 <sup>2</sup>
CL602 <sup>3</sup>	CdS	.25x.5	5150	1M	300	75
CL603 <sup>3</sup>	CdSe	.25x.5	7350	133K	300	75
CL603A <sup>3</sup>	CdSe	.25x.5	7350	75K	300	75
CL603AL	CdSe	.25x.5	7350	3.5K	60	75
CL604 <sup>3</sup>	CdSe	.25x.5	6900	30K	300	75
CL604L	CdSe	.25x.5	6900	1.5K	60	75
CL605	CdS	.25x.5	5500	166K	300	75
CL605L	CdS	.25x.5	5500	7.5K	60	75
CL607 <sup>3</sup>	CdS	.25x.5	6150	133K	300	75
CL702	CdS	.36x.18	5150	1M	300	125
CL702L	CdS	.36x.18	5150	20K	60	125
CL703	CdSe	.36x.18	7350	133K	300	125
CL703A	CdSe	.36x.18	7350	67K	300	125
CL703L	CdSe	.36x.18	7350	2.7K	60	125
CL704	CdSe	.36x.18	6900	30K	300	125
CL704L	CdSe	.36x.18	6900	.6K	60	125
CL705	CdS	.36x.18	5500	166K	300	125
CL705L	CdS	.36x.18	5500	3.3K	60	125
CL707	CdS	.36x.18	6150	133K	300	125
CL707L	CdS	.36x.18	6150	2.7K	60	125
CL802	CdS	1.25x.28	5150	10.0K	300	2000-500 <sup>2</sup>
CL803	CdSe	1.25x.28	7350	1.4K	300	2000-500 <sup>2</sup>
CL804	CdSe	1.25x.28	6900	.6K	300	2000-500 <sup>2</sup>
CL805	CdS	1.25x.28	5500	1.7K	300	2000-500 <sup>2</sup>
CL807	CdS	1.25x.28	6150	1.4K	300	2000-500 <sup>2</sup>
CL902	CdS	.21x.15	5150	1M	250	50
CL902N	CdS	.21x.15	5150	500K	75	50
CL903	CdSe	.21x.15	7350	133K	250	50
CL903A	CdSe	.21x.15	7350	67K	250	50
CL903N	CdSe	.21x.15	7350	66K	75	50
CL904	CdSe	.21x.15	6900	30K	250	50
CL904N	CdSe	.21x.15	6900	15K	75	50
CL905	CdS	.21x.15	5500	166K	250	50
CL905N	CdS	.21x.15	5500	83K	75	50
CL907	CdS	.21x.15	6150	133K	250	50
CL907N	CdS	.21x.15	6150	66K	75	50

TO-5 Case

TO-18 Case

DUAL ELEMENT CELLS

CL703/2	CdSe	.36x.18	7350A	50K	300	75-125
CL703L/2	CdSe	.36x.18	7350A	6.5K	60	75-125
CL704/2	CdSe	.36x.18	6900A	17K	300	75-125
CL704L/2	CdSe	.36x.18	6900A	1.5K	60	75-125
CL705/2	CdS	.36x.18	5500A	166K	300	75-125
CL705L/2	CdS	.36x.18	5500A	7.5K	60	75-125

each element

HIGH SPEED "CHOPPER" CELLS

(Response Times: Rise <0.4msec, Fall <3.0msec)

CL703C	CdSe	.36 TO-5	7350A	50K	250	125
CL703CL	CdSe	.36 TO-5	7350A	2.3K	60	125
CL903C	CdSe	.21x.15	7350A	50K	250	50

Additional technical data available on request

Operating temperature, all types, -50 to +75° C.

<sup>1</sup>Average DC resistance (±33%) measured at 2 foot-candles, 2870° K. and 25° C ambient

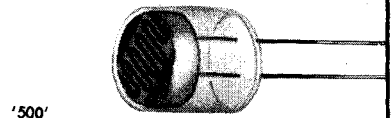
<sup>2</sup>With and without heat sink. <sup>3</sup>Designed to replace "400" Series end-view types.

<sup>4</sup>At 25° C ambient; derated linearly to zero at 75° C. <sup>5</sup>S denotes side view cell.

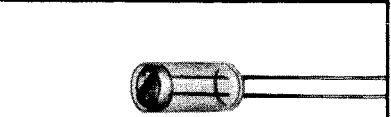
Clairex Photoconductive Cells . . . light-controlled resistors offering a wide variety of response characteristics and packaging, together with stable and closely controlled parameters . . . suitable for most design applications. New sixteen page design manual free on request.

BOTH METAL AND GLASS PACKAGES

ALL PHOTOS ACTUAL SIZE



'500'



'600'



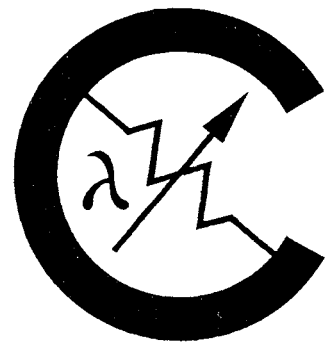
'700'



'800'



'900'



Foreign: Sylvan Ginsbury, Ltd. Phone: 212 LO 4-7585  
8 West 40th St., New York 18, N. Y.

PHOTOCONDUCTIVE CELLS . . .

THE "LIGHT" TOUCH . . . IN AUTOMATION AND CONTROL

NEW YORK 1, N. Y.

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THE COMPLETE LINE OF

**DIALCO**<sup>®</sup>**INDICATOR LIGHTS**Foremost Manufacturer of Indicator Lights  
DIALIGHT CORPORATION • BROOKLYN, N. Y. 11237

(Illustrations are approx. actual size)

**DATALITES<sup>®</sup> — Ultra-Miniature Indicator Lights**Mounts in  $\frac{3}{8}$ " Clearance HoleWith DIALCO'S Plug-in Lamp Cartridges  
or with Permanent Lamps (built-in)Designed for the computer-  
automation industries

Datalites are made in 2 basic styles: *Lampholders* with DIALCO'S own plug-in *replaceable Lamp Cartridges*, or with *Built-in Neon Lamps*. Shown above: Lampholder No. 7538 which accommodates either the No. 38- or the No. 39- cartridges. A similar, slightly longer Lampholder — No. 7545 — accommodates the No. 45- cartridges. Single units mount in  $\frac{3}{8}$ " clearance hole. Also available — *twin-lamp* assemblies which mount in  $\frac{3}{8}$ " clearance hole... New long-life lamps are used in the plug-in cartridges. At most voltages, and for several current ratings, you may now specify 50,000 hour incandescent lamps. At higher voltages, where neon lamps may be used, 25,000 hour *minimum* may be attained with built-in resistors.

The T- $\frac{1}{4}$ " INCANDESCENT LAMPS used in DIALCO Lamp Cartridges can be supplied in a wide range of voltages, including:

Voltage	Amperes	Hourly Rating
1.35	0.06	500
2.7	0.06	500
6 $\Delta$	0.04	1000
6 $\Delta$	0.20	1000
6.3	0.20	3000
10 $\Delta$	0.014	6000+
10 $\Delta$	0.04	
14	0.08	750
18	0.04	1000
28	0.04	1000

Should not be used with translucent lenses.

Since there are three 6 volt lamps and two 10 volt lamps, when ordering it is necessary to specify voltage and ampere rating from chart above; e.g. 39-604-1471, 39-6-1471, 39-6.3-1471, 39-10-1431, 39-1004-1431.

**NEON CARTRIDGE Catalog Numbers—with NE-2E Lamps**

LENS COLOR (Transparent)	STOVEPIPE (Without built-in resistor)	LONG CYL. (With built-in resistor)	STOVEPIPE (With built-in resistor)	LONG CYL. (With built-in resistor)
Red	38-931	38-1531	45-56K-931	45-56K-1531

NOTE: To designate a unit with the NE-2H High Brightness lamp, add H to the Catalog Number; e.g., 38H-931... 45H-22K-931... 45H-33K-931.

**INCANDESCENT CARTRIDGE Catalog Numbers**

LENS COLOR (Translucent)	SHORT CYL. (Translucent)	STOVEPIPE (Translucent)	LONG CYL. (Translucent)	FLAT (Translucent)
Red	39-6-1471	39-6-971	39-6-1571	39-6-371

For transparent lenses, change next to last digit to 3; e.g., 39-6-1431. For *Volts*, change mid digit (-6-) per lamp chart above; e.g., 39-28-1471.

**LENS COLOR:** The final figure in Catalogue Number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below... Example: 39-6-1476 (Light Yellow).  
Red — 1... Green — 2... Yellow (Amber) — 3... Blue — 4  
White Trans. — 5... Light Yellow — 6... Clear (Colorless) — 7.

**DATALITES with PERMANENT LAMPS**

**Built-in (not replaceable):** Neon Lamps NE-2E or NE-2H (high brightness) and required current-limiting resistor... Units mount in  $\frac{3}{8}$ " clearance hole from back of panel; two terminals; fully insulated; 5 lens colors; conform to applicable Mil. Specs... Shown: No. 249-7841-931 with built-in resistor... Available—shorter unit, without resistor, No. 249-7840-931... (For units with high brightness lamp, add H to Cat. No.; Example: 249-7841H-931)



No. 7538-1471

**"Data Cap" Indicator Lights**  
Mount in  $\frac{3}{8}$ " Clearance Hole

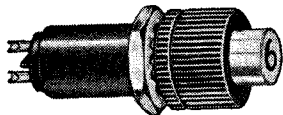
Series No. 250. Accommodates DIALCO'S own Lamp Cartridges — Short Cylindrical Incandescent, or Long Cylindrical Neon with or without built-in resistor.

**Features:** (1) A rotatable read-out Lens Cap Assembly with a cylindrical lens displaying a hot-stamped legend (see below) (2) A Lampholder similar to No. 7538 shown at left... (3) Accommodates a clear (colorless) Lamp Cartridge without a legend.

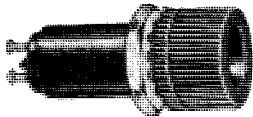
**Advantages:** If lamp fails, the Lamp Cartridge may be quickly replaced from front of panel. Since the Cartridge requires no hot-stamping, down time and costs are kept at a minimum... The Lens Cap is of the screw-on type. It is spring-mounted and rotatable, thus facilitating alignment of the legend after installation of the assembly. Choice of 7 lens colors; solder cup, turret, or Amp "53" terminals.

**HOT STAMPED LEGENDS**  
(Digits, Letters or Symbols)

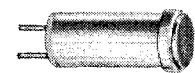
SHORT and LONG CYLINDRICAL lenses can be hot-stamped with one to three digits of standard size, as follows:  
1 DIGIT,  $\frac{1}{64}$ " high (14 pt. type) ...  
2 DIGITS,  $\frac{1}{64}$ " high (14 pt. type) ...  
3 DIGITS,  $\frac{5}{64}$ " high (12 pt. type) ...  
These standard sizes of Legends will be provided in a uniform manner per order — i.e., the size of type will be determined by the longest legend indicated in each individual order.  
Standard—BLACK letters; but white, red, green, or blue letters can be supplied to order... Available—colored legends on black or gray lenses.



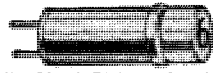
No. 7538 Lampholder complete with 39-6-1471 Lamp Cartridge



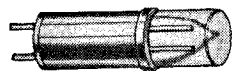
No. 8738 Lampholder with turret terminals



No. 39-6-371 Lamp Cartridge (flat, incandescent)



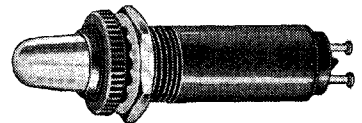
No. 39-6-1471 Lamp Cartridge (short cylind., incandescent)

No. 38-1531 (without resistor)  
No. 45-56K-1531 (with resistor)No. 38-931 (without resistor)  
No. 45-56K-931 (with resistor)**HOT STAMPED LEGENDS**

Short and Long Cylindrical lenses can be hot-stamped with one to three digits of standard size, as follows:

1 DIGIT,  $\frac{1}{64}$ " high (14 pt. type)  
2 DIGITS,  $\frac{1}{64}$ " high (10 pt. type)  
3 DIGITS,  $\frac{5}{64}$ " high (8 pt. type)

These standard sizes of Legends will be provided in a uniform manner per order — i.e., the size of type will be determined by the longest legend indicated in each individual order.

No. 249-7841-931  
with built-in resistor**MULTIPLE INDICATORS in a Compact "Package"**

Ready to install in a minimum of space

For Data-Processing Equipment, Computers, and Automation Applications  
A Complete "Data Matrix" and "Data Strip" Manufacturing Service

To expedite installation of multiple-indicators, let DIALCO perform the following manufacturing services for you:

- Fabricate a "Data Matrix" or "Data Strip" panel to your specifications... Punch the necessary holes therein for DIALCO Lamp Holders and your fuses, switches, screws, etc.
- Mount the required number of Lamp Holders on the panel for vertical or horizontal reading...

Lamp Holders can be spaced on any center-to-center measuring from 7/16" up. (1/2" center-to-center spacing is standard, as shown on typical configurations illustrated)... There is no basic or stock item; we can supply from 2 to 40 Lamp Holders on a panel or strip.

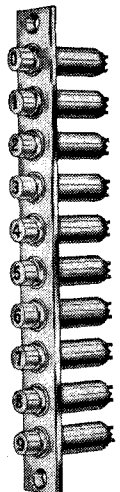
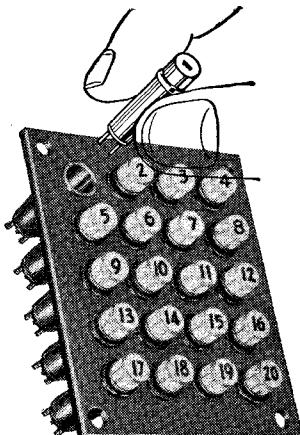
- Insert required Lamp Cartridge into Lamp Holders.
- Hot Stamp or engrave legends on lenses (see above).

Lamp holders accommodate DIALCO'S Neon or Incandescent Lamp Cartridges (see above)... Each Lamp Holder has 2 Solder Cup terminals and is completely insulated (without the use of insulating shoulder washers); Turret, or AMP "53" Terminals can also be furnished.

**MATERIALS AND FINISHES:** Lamp Holder housing, panel or strip, and cartridge sleeve are aluminum with clear anodized finish... Option: black anodized finish or to specifications.

◀ "DATA MATRIX" No. DM-7538-20 (Approx. 1/2 actual size) "DATA STRIP" No. DSV-7538-10 ▶

For Complete Data, Request Catalog L-160E.



THE COMPLETE LINE OF

# INDICATOR LIGHTS



Foremost Manufacturer of Indicator Lights

DIALIGHT CORPORATION • BROOKLYN, N. Y. 11237

(Illustrations are approx. actual size)

When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact).

## Sub-Miniature Indicator Lights for NEON Lamps

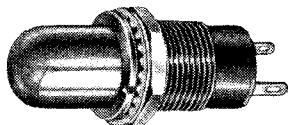
NE-2D (regular)  
NE-2J (high brightness)

TWO TERMINALS — FULLY INSULATED . . . Meet or exceed environmental and operational requirements of MIL-L-6723 and MIL-L-3661.

For FRONT of Panel Insertion in 15/32" Clearance Hole

### With Built-in Resistor

(A patented DIALCO feature—  
U.S. Pat No. 2,421,321)



Conform to MS25257

Accommodates a T-2 Neon Glow Lamp: NE-2D (MS25252) for 105-125 Volts A.C. or D.C.; for Catalog Numbers see below . . . NE-2J (High Brightness) for 110-125 Volts A.C. only; for Catalog Numbers, see Catalog L-178

DIALCO Cat. No. WITHOUT LAMP	MS No. WITHOUT LAMP*	MS No. WITH LAMP* MS25252-NE-2D	LENS COLOR
137-8836-933 ■	MS25257-2	MS25257-1	Aviation Yellow
137-8836-931 ■	MS25257-4	MS25257-3	Identification Red
137-8836-937 ■	MS25257-6	MS25257-5	Clear (Colorless)

■ With patented built-in resistor: 62K ± 10%.

\*MARKING: The Part No. marked on the assembly is the Part No. for the complete assembly less lamp.

Also: Similar Series not covered by MS25257: For NE-2D lamp, with standard 62K built-in resistor . . . For NE-2J (high brightness) lamp, with standard 22K built-in resistor. See Catalog L-178.

The LIGHT SOURCE: Tiny Neon Glow Lamps NE-2D or NE-2J

Recommended resistor values:

For NE-2D at 105-125 volts A.C. or D.C.

Bright light—62,000 ohms . . . . . Long life—100,000 ohms

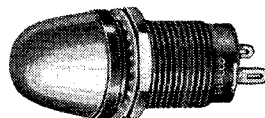
For NE-2J (High Brightness) at 110-125 volts (A.C. only)

Bright light—22,000 ohms . . . . . Long life—33,000 ohms



For Front of Panel Mtg. in 15/32" Clearance Hole

ASSEMBLIES WITHOUT BUILT-IN RESISTOR		
LENS SHAPE	LENS FINISH	CATALOG NO.
Stovepipe	Transparent	137-8536-931
Cylindrical	Transparent	137-8536-1531



### Without Built-in Resistor

The Series listed above is similar to the Series shown at the left, except that it has no built-in resistor or anti-rotation tab.

LENS COLOR	WATER-TIGHT ASSEMBLIES — Front Mtg. in 15/32" Clearance Hole		
	WITH BUILT-IN RESISTOR ACCOMMODATE NE-2D LAMP*	WITH BUILT-IN RESISTOR ACCOMMODATE NE-2J LAMP**	WITHOUT BUILT-IN RESISTOR
Red	181-8836-931	181-8836H-931	181-8536-931
Yellow (Amber)	181-8836-933	181-8836H-933	181-8536-933
White Translucent	181-8836-935	181-8836H-935	181-8536-935
Light Yellow	181-8836-936	181-8836H-936	181-8536-936
Clear (Colorless)	181-8836-937	181-8836H-937	181-8536-937

\*62K standard

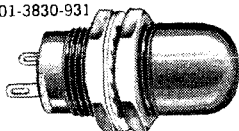
\*\*22K standard

## Sub-Miniature Indicator Lights for T-1 3/4 Bulbs

MIDGET FLANGED BASE INCANDESCENT



101-3830-931



Mounts from Front or Back of Panel in a 1 1/2" Clearance Hole.

CAT. NO. with STOVEPIPE LENS		
LENS FINISH	Front or Back Mtg. in 1 1/2" hole	Front Mtg. in 1 7/32" hole
Transparent	101-3830-931	101-5030-931
Translucent	101-3830-971	101-5030-971

CAT. NO. with CYLINDRICAL LENS		
LENS FINISH	Front or Back Mtg. in 1 1/2" hole	Front Mtg. in 1 7/32" hole
Transparent	140-3830-1431	140-5030-1431
Translucent	140-3830-1471	140-5030-1471

Water-tight Series (not illust.) also available:

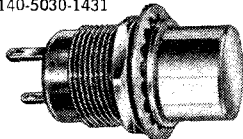
Front Mtg. in 15/32" Clearance Hole

WATER-TIGHT ASSEMBLIES		
LENS SHAPE	LENS FINISH	CATALOG NO.
Stovepipe	Transparent	101-8430W-931
	Translucent	101-8430W-971
Cylindrical	Transparent	140-8430W-1431
	Translucent	140-8430W-1471

LENS COLOR:

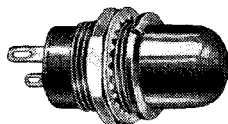
See code at bottom right.

140-5030-1431



Mounts from Front of Panel in a 1 1/2" Clearance Hole.

Front of Panel Insertion: Requires a single 15/32" Clearance Hole



Anti-rotation Tab on face of flange prevents rotation of unit while nut is being tightened.

DIALCO Catalog No.	MS No. WITHOUT LAMP*	CAP COLOR
162-8430-933	MS25256-2	Aviation Yellow
162-8430-932	MS25256-4	Aviation Green
162-8430-931	MS25256-6	Identification Red
162-8430-937	MS25256-8	Aviation White
162-8430-975	MS25256-10	Translucent White
162-8430-934	MS25256-12	Aviation Blue

\*MARKING: The Part No. marked on the assembly is the Part No. for the complete assembly less lamp.

Note: The inclusion of MS25237-327 lamp in MS25256 series of assemblies, formerly designated by the use of odd numbered suffixes -1 through -11 inclusive, is now superseded by the use of suffix -327 (28 volts at .04 amp) or -328 (6 volts at .20 amp) after the even numbered dash number.

Examples: MS25256-2-327; MS25256-10-328.

### Sub-Sub-Miniatures

New . . . Series 252-9951-971



Conforms to Drawing MS25446 . . . Requires only .193" Panel Mounting Clearance Hole . . . For complete data, refer to Catalog L-168A.

Two Terminals — Fully Insulated

Meet or exceed environmental and operational requirements of MIL-L-6723 and MIL-L-3661.

### RUGGED CONSTRUCTION

Lamp, socket, and all connections are completely insulated from the bushing and panel to which it is attached. The use of phenolic material for military specification grade assures permanent isolation from ground.

These assemblies are solidly made to withstand usual vibration and corrosion resistance tests.

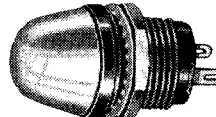
Order Complete with Lamp. Specify Lamp Number.

MANUFACTURER'S RATINGS				
LAMP No.	MILITARY No.	VOLTS	AMPS	LIFE HOURS
331 *	—	1.35	.06	500
338 *	—	2.7	.06	500
328	MS25237	6.0	.20	1000
345	—	6.0	.04	1000
344 *	—	10.0	.015	50000
367 *	—	10.0	.04	20000
349	—	6.3	.20	3000
330	—	14.0	.08	750
327	MS25237	28.0	.04	1000
380 *	—	6.3	.04	50000
381	—	6.3	.20	50000
382	—	14.0	.08	50000

\*Low candlepower types. Useful in special situations only.

### New WATER-TIGHT Series

Series No. 177-8430-971 is designed to be water-tight, oil-tight, and dust-tight on face of panel. Mounts from front of panel in 15/32" clearance hole. Two 1/16" thick neoprene retained "O" rings assure absolute seal. Stovepipe lens; choice of 7 colors.



### DIMMERS — MECHANICAL or POLAROID

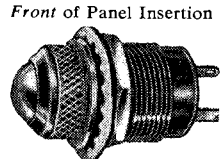
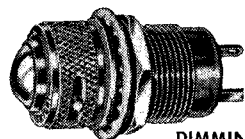
Illustrated: Units for Front of Panel Insertion; require a 17/32" clearance hole. Units for Back of Panel Insertion require a 15/32" clearance hole.

#### CATALOGUE NUMBERS

(Back insert.) (Front insert.)

	Lens, unfrosted	Lens, unfrosted
Semi-blackout	109-3830-131	109-5030-131
Blackout	108-3830-131	108-5030-131
Polaroid	112-3830-131	112-5030-131
NON-DIMMING	111-3830-131	111-5030-131

For "Lens, backfrosted," change series numbers ending in -131 to -111. For "Lens, frosted all over," change series numbers ending in -131 to -121.



NON-DIMMIP

LENS COLOR: The final figure in Catalogue Number indicates that the lens has RED color. When color other than red is desired, change this digit a figure from the listing below. Note that white lenses are translucent a are always furnished unfrosted (For example: 111-3830-135).

Red — 1 . . . Green — 2 . . . Yellow (Amber) — 3 . . . Blue — 4 . . . White Trans. — 5 . . . Light Yellow — 6 . . . Clear (Colorless) — 7 . . .

THE COMPLETE LINE OF



# INDICATOR LIGHTS

Foremost Manufacturer of Indicator Lights  
DIALIGHT CORPORATION • BROOKLYN, N. Y. 11237

(Illustrations are approx. actual size)

When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact).

## ASSEMBLIES with BUILT-IN RESISTORS (U. S. Patent No. 2,421,321)

### For the T-3¼ NEON GLOW LAMP FOR VOLTAGES UP TO 250

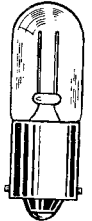
For operation on 105-125V. or 210-250V. . . The required resistor is an integral part of the unit — BUILT IN. Also, simple external resistors for all higher voltages.

Assemblies Conform to All Applicable Military Specifications.

BUILT-IN RESISTOR VALUES for the NE-51 TYPE GLOW LAMPS (Values in ohms)

VOLTS	NE-51		VOLTS	New NE-51H (high brightness)	
	Applied to terminals			Applied to terminals	
	105-125 AC-DC	210-250 AC-DC	110-125 AC	210-250 AC-DC	
BRIGHT LIGHT	■ 56,000	■ 180,000	BRIGHT LIGHT	■ 22,000	■ 68,000
LONG LAMP LIFE	100,000	270,000	LONG LAMP LIFE	33,000	100,000

■ Standard values of patented built-in resistors. (Other values optional).



NE-51 or NE-51H (High Brightness)

External resistors will be furnished which will permit use of these pilot lights on voltages higher than 250 volts.

**NOTE:** To designate a unit for use with the High Brightness NE-51H lamp, add H to the Catalog Number.  
Example: 52408H-991

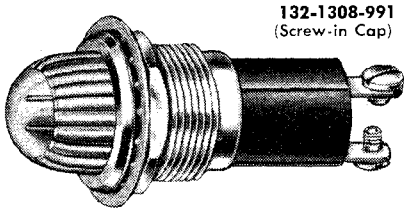
75 W., 125V.



**PROPER CHOICE OF LAMP AND BUILT-IN RESISTOR VALUES:** The NE-51 glow lamp types are shown with resistor tables. Lamps are the standard NE-51 and the new NE-51H. The high brightness lamp may be operated at about three times the level of current that may be applied to the standard lamp and it will produce more than eight times as much light.

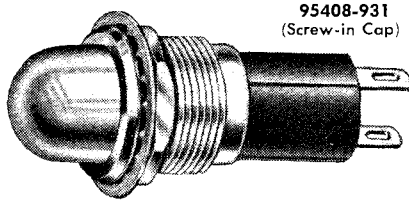
\* The NE-51H Neon Glow Lamp is not recommended for use on DC circuits under 160 V.

### For Mounting in 11/16" Clearance Hole (For Front of Panel Insertion)



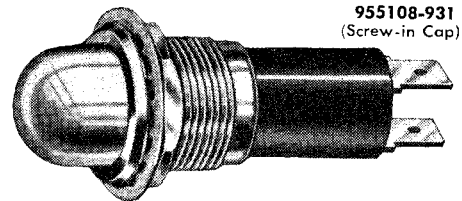
132-1308-991  
(Screw-in Cap)

With SCREW TERMINALS



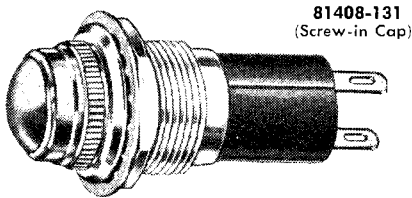
95408-931  
(Screw-in Cap)

With SOLDERING TERMINALS

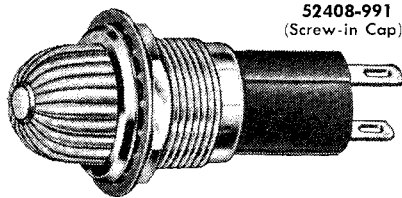


955108-931  
(Screw-in Cap)

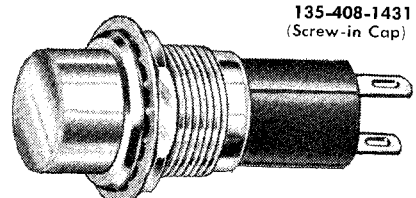
With QUICK-CONNECT TERMINALS



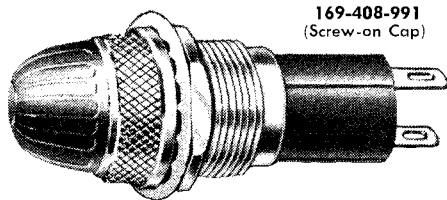
81408-131  
(Screw-in Cap)



52408-991  
(Screw-in Cap)



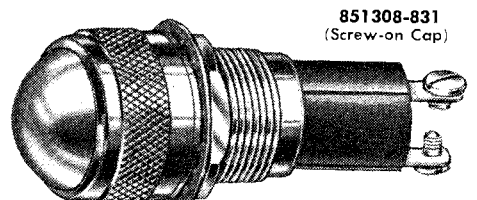
135-408-1431  
(Screw-in Cap)



169-408-991  
(Screw-on Cap)

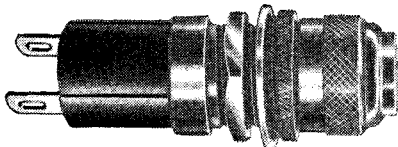
**LENS COLOR:** The final figure in the Catalog Number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note: White lenses are translucent and are always furnished unfrosted. (For example: 37408-335).

Red—1; Yellow (Amber)—3;  
White Translucent—5;  
Light Yellow—6; Clear (Colorless)—7.



851308-831  
(Screw-on Cap)

### 9/16" Assemblies mount from BACK of panel only



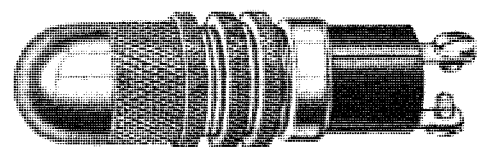
37408-XP15-331  
(Screw-on Cap)

With optional hardware

Assemblies which mount in a 9/16" clearance hole are useful where close center-to-center spacing is required.

Standard Hardware consists of 3 knurled rings . . . Optional Hardware consists of 1 ring, 1 lockwasher, and 1 mounting nut . . . Specify hardware desired.

For details, refer to Catalog L-161E.



With standard hardware

171308-931  
(Screw-on Cap)

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

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Foremost Manufacturer of Indicator Lights

DIALIGHT CORPORATION

BROOKLYN, N. Y. 11237

(Illustrations are approx. actual size)

## ASSEMBLIES for T-3 1/4 INCANDESCENT LAMP

2 to 55V.  
(No Higher)

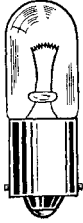
For details, refer to Catalog L-161E.

With Miniature Bayonet Base

Conform to All Applicable Military Specifications



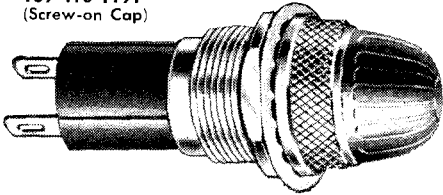
75W., 125V.



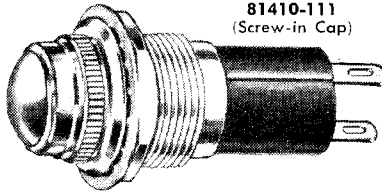
For Mounting in 11/16" Clearance Hole

For Front of Panel Insertion

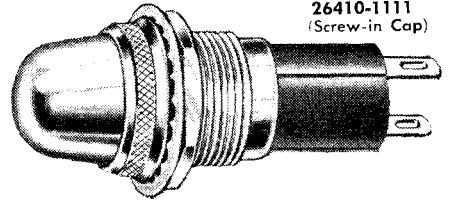
169-410-1191  
(Screw-on Cap)



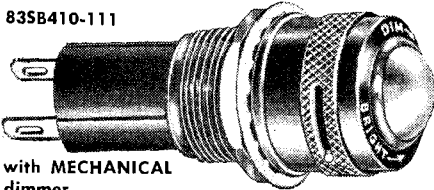
81410-111  
(Screw-in Cap)



26410-1111  
(Screw-in Cap)



835B410-111



with MECHANICAL dimmer

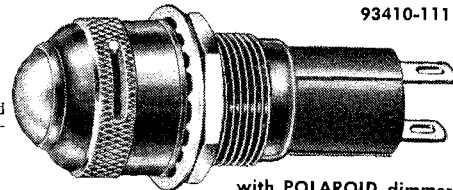
### Mechanical and Polaroid Dimmers

Mount in 11/16" clearance hole

Any of the Dialco mechanical dimmers can be supplied either for "Complete Blackout" or for "Semi-Blackout". Typical Catalogue Numbers are as follows:

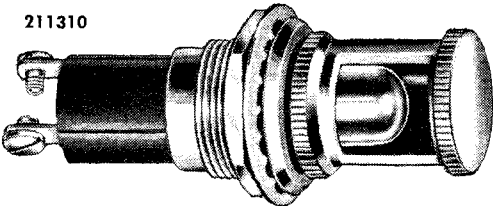
- 838410-111 ("Complete Blackout")
- 835B410-111 ("Semi-Blackout")

93410-1111



with POLAROID dimmer

211310

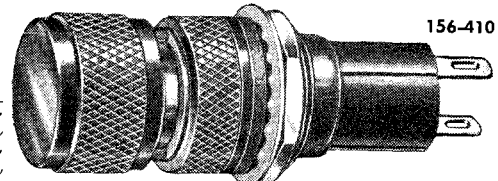


PUSH-IN CAP with opening 1/2" x 1/2"  
Typical Assembly. Other Catalog Nos. are assigned to cover other optional features.

### Assemblies with Light Shield Caps

Mount in 11/16" clearance hole

Complete Series available with the following Push-in Caps: With ONE opening 3/32" x 1/2", 3/16" x 1/2", 3/16" x 9/16", 1/2" x 1/2" . . . With TWO openings 1/2" x 1/2" . . . Also Screw-in Cap with opening 3/16" x 1/2", and Friction-Fit Cap with opening 1/8" x 1/2".



156-410

PUSH-PULL CAP  
Variable Opening—from 0" to 1/4" x 3/8"

(Screw-on Cap)



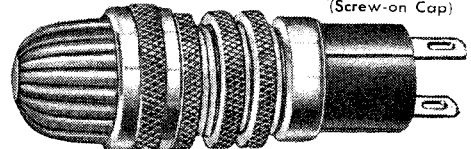
with standard hardware:  
171310-931

with optional hardware:  
171310-XP15-931

### For Mounting in 9/16" Clearance Hole

(from BACK of panel)

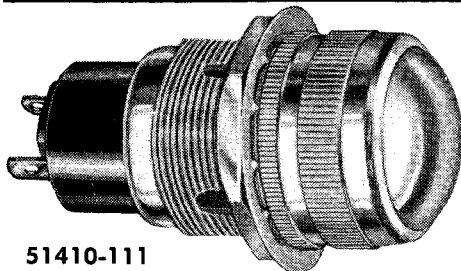
Standard Hardware consists of 3 knurled rings . . . Optional Hardware consists of 1 ring, 1 lockwasher, and 1 mounting nut . . . Specify hardware desired.



with standard hardware:  
70410-1191

(Screw-on Cap)

with optional hardware:  
70410-XP10-1191

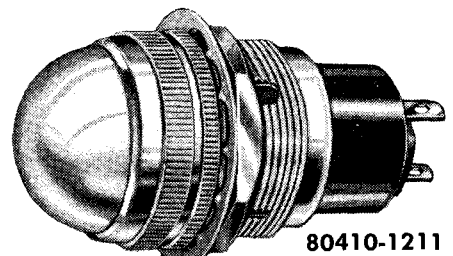


51410-111  
(With Convex Lens)

### For Mounting in 1" Clearance Hole

Complete Series available with Screw-on Caps (as illustrated), Friction-Fit Caps, or Bayonet Caps. Choice of 9 Lens Types: Flat, Dome, Stovepipe, Faceted, Torpedo Faceted, Torpedo, Large Torpedo, Small Convex, Large Convex. 7 Lens Colors (see below).

GLASS LENSES: Plastic lenses are not recommended for use with lamps rated over 2 watts.



80410-1211  
(With Dome Lens)

LENS COLOR: The final figure in the above numbers indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted. (For example: 80410-1235.)

Red—1; Green—2; Yellow (Amber)—3; Blue—4; White Translucent—5; Light Yellow—6; Clear (Colorless)—7.

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

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**DIALCO**<sup>®</sup>**INDICATOR LIGHTS**

Foremost Manufacturer of Indicator Lights

DIALIGHT CORPORATION

BROOKLYN, N. Y. 11237

(Illustrations are approx. actual size)



75W., 125V.

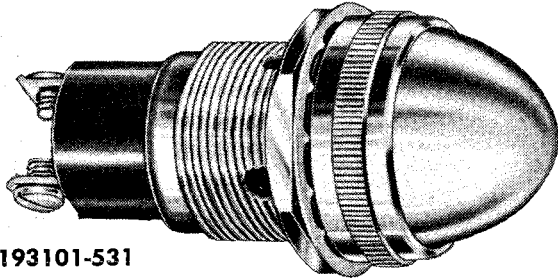
**ASSEMBLIES for INCANDESCENT LAMPS**

(with double contact bayonet base or candelabra screw base)

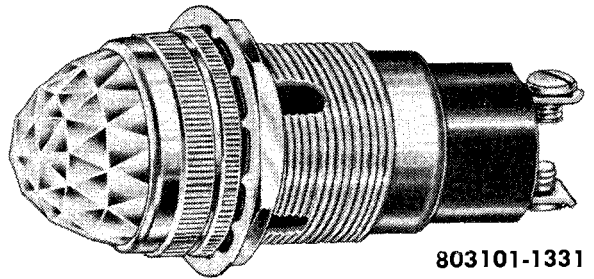
Range of Voltages at 6 watts . . . G-6 Double Contact Bayonet Base Lamps: 32 V. max.

S-6 Double Contact Bayonet Base Lamps, or Candelabra Screw Base Lamps:

6, 12, 24, 32, 48, 70-80, 125, 130, 135, and 145 volts.

For details, refer  
to Catalog L-161E.**193101-531**

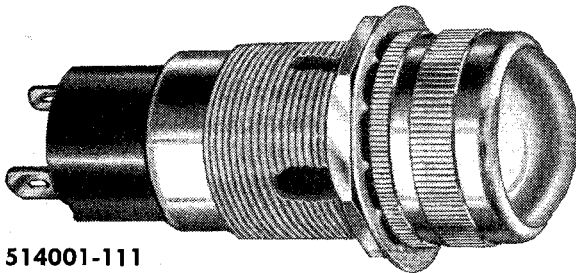
Assembly with Screw-on Cap, Large Torpedo Lens, and Screw Terminals in protruding position.

**803101-1331**

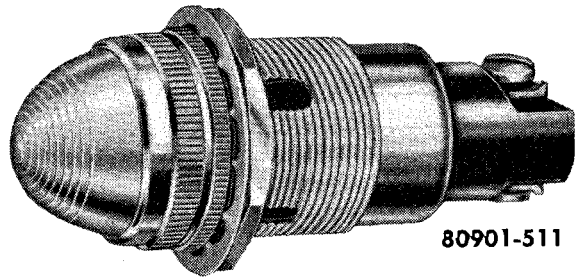
Assembly with Screw-on Cap, Torpedo Faceted Lens, and Screw Terminals in protruding position.

For  
Mounting  
in 1"  
Clearance  
Hole

•  
Typical  
assemblies  
for use with  
S-6 bulb with  
candelabra  
screw base

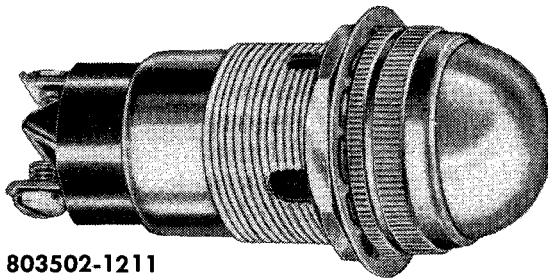
**514001-111**

Assembly with Screw-on Cap, Convex Lens, and Soldering Terminals. Similar units available with Quick Connect Terminals.

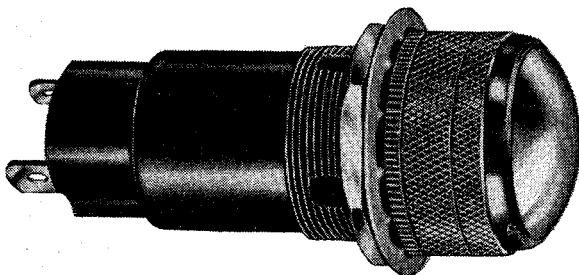
**80901-511**

Assembly with Screw-on Cap, Torpedo Lens, and Screw Terminals in side position. Similar units available with screw terminals in protruding position (see above).

Typical  
assembly  
for use with  
S-6 double contact  
bayonet base  
incandescent  
lamps

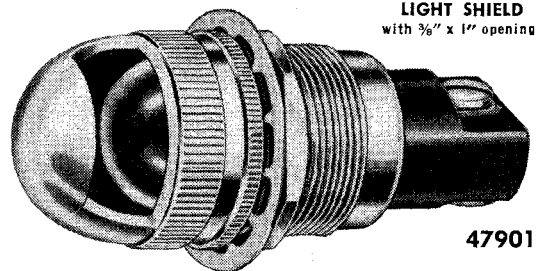
**803502-1211**

Assembly with Screw-on Cap, Dome Lens, and Screw Terminals. Terminals may be specified as fixed type or moveable type.

**DIMMERS and LIGHT SHIELDS****71B4001-111** Mechanical Dimmer

Typical  
assemblies  
for use with  
S-6 bulb with  
candelabra  
screw base

Shown are typical assemblies in a most extensive Series available only from DIALCO.

**784001-111** Polaroid Dimmer**LIGHT SHIELD**  
with 3/8" x 1" opening**47901**

**LENS COLOR:** The final figure in the above numbers indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted. (For example: 80901-535).

Red—1; Green—2; Yellow (Amber)—3; Blue—4; White Translucent—5; Light Yellow—6; Clear (Colorless)—7.

**ORDER COMPLETE WITH LAMPS** so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.



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Foremost Manufacturer of Indicator Lights

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(Illustrations of indicator lights are approx. actual size)



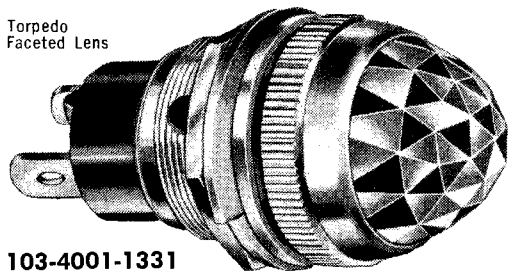
## OIL-TIGHT INDICATOR LIGHTS

OIL-TIGHT • WATER-TIGHT • DUST-TIGHT

WITH RETAINED  
"O" RING SEAL  
CONSTRUCTION

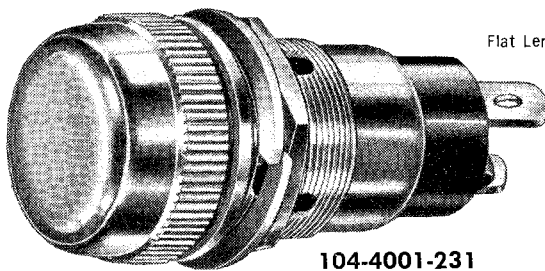
For HEAVY DUTY  
INDUSTRIAL  
APPLICATIONS

Torpedo  
Faceted Lens



103-4001-1331

Flat Lens



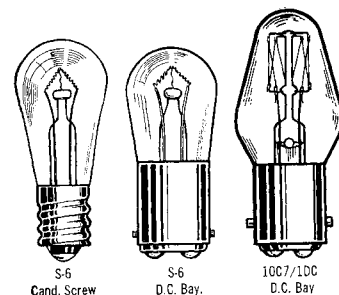
104-4001-231

Mount in 1" Clearance Hole

Rugged, designed for severe vibration conditions. Features include: One-piece solid brass mounting bushing... Three retained oil-proof elastomer seals (1 gasket and 2 "O" Rings)... Solid brass knurled lens holder with gasketed lens... High impact phenolic insulation... Rugged terminals—soldering or binding screw type... An Oil-Tight Adaptor Set (Cat. No. 1316-L) is available for mounting any 1" assembly in a 1 3/16" clearance hole.

Five lens types available: Torpedo, Torpedo Faceted, Dome, Stovepipe, or Flat lens. The flat lens can be used with discs inserted behind the lens to display a legend... 7 lens colors are available see bottom of Page 1016.

For complete details, refer to  
Catalog L-200C.



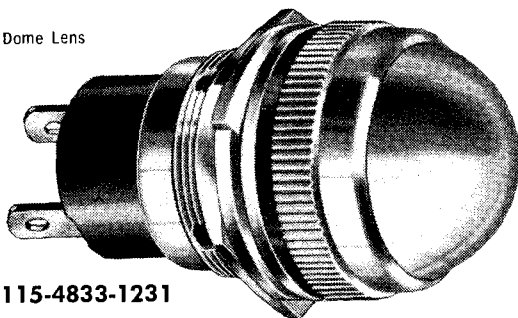
S-6  
Cand. Screw

S-6  
D.C. Bay

10C7/10C  
D.C. Bay

3 types of Incandescent Lamps may be used: Especially recommended is the 10C7/10C lamp which is designed to WITHSTAND SEVERE VIBRATION and SHOCK. (Lamps shown approx. 2/3 actual size).

Dome Lens



115-4833-1231

For S-6 incandescent lamps with intermediate screw base.

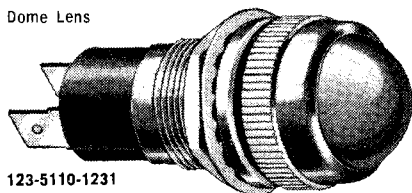
In this Series the larger base and socket offer adequate electrical clearance for 250 Volts. Large lens area provides stronger illumination and—with flat lens—more legible legend presentation. Also available with binding screw

## ASSEMBLIES for T-3 1/4 INCANDESCENT or NEON LAMPS

With Miniature Bayonet Base

For Mounting in 11/16" Clearance Hole

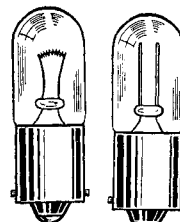
Dome Lens



123-5110-1231

In these Oil-Tight Indicator Lights, a high degree of resistance to shock and vibration is achieved by the use of the rugged Neon lamps on 120 and 240 V; and by choosing low voltage Incandescent lamps with short filaments, such as No. 44 or No. 1866 for circuits powered by transformers stepping down to 6.3 V.

Exclusive Features: Assemblies for use with NE-51 Neon Glow Lamps have "built-in" resistors—an exclusive Dialco feature (U.S. Pat. No. 2,421,321). Options include: binding screw, soldering or quick connect terminals. 7 lens colors are available; see bottom of page 1015 for method of specifying color.



Incand.

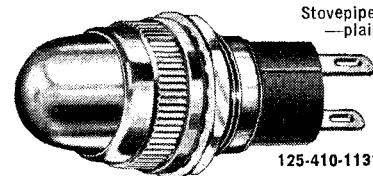
Neon

NE-51  
NE-51H  
(High Bright.)

Also available with NE-51H  
(high brightness) Neon Lamps

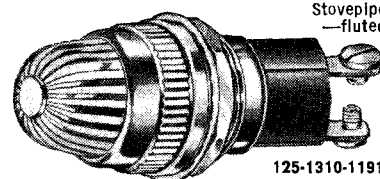
Assemblies listed in the chart below may also be ordered for use with the NE-51H (High Brightness) Neon Glow Lamp on 110-125 V AC or 210-250 V AC-DC circuits. See page 1014 for lamp data and chart of resistor values.

When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact)



Stovepipe  
—plain

125-410-1131



Stovepipe  
—fluted

125-1310-1191

Assemblies for the T-3 1/4 INCANDESCENT LAMP

GLASS LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals (105-125 V.)	CATALOG NO. with SOLDERING terminals (105-125 V.)	CATALOG NO. with QUICK CONNECT terminals
DOME	unfrosted	123-1310-1231	123-410-1231	123-5110-1231
	back frosted	123-1310-1211	123-410-1211	123-5110-1211
STOVEPIPE	unfrosted	125-1310-1131	125-410-1131	125-5110-1131
	back frosted	125-1310-1111	125-410-1111	125-5110-1111
	inside fluted	125-1310-1191	125-410-1191	125-5110-1191

Assemblies with Built-in Resistor for the NE-51 NEON GLOW LAMP\*\*

LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals (105-125 V.)	CATALOG NO. with SOLDERING terminals (105-125 V.)	CATALOG NO. with QUICK CONNECT terminals (105-125 V.)	CATALOG NO. with SCREW terminals (210-250 V.)	CATALOG NO. with SOLDERING terminals (210-250 V.)	CATALOG NO. with QUICK CONNECT terminals (210-250 V.)
DOME (glass)	unfrosted	123-1308-8231	123-408-8231	123-5108-8231	123-9308-8231	123-9408-8231	123-8308-8231
	not matted	123-1308-831	123-408-831	123-5108-831	123-9308-831	123-9408-831	123-8308-831
DOME (plastic)	matted	123-1308-841	123-408-841	123-5108-841	123-9308-841	123-9408-841	123-8308-841
	unfrosted	125-1308-1131	125-408-1131	125-5108-1131	125-9308-1131	125-9408-1131	125-8308-1131
STOVEPIPE (glass)	inside fluted	125-1308-1191	125-408-1191	125-5108-1191	125-9308-1191	125-9408-1191	125-8308-1191
	unfrosted	125-1308-931	125-408-931	125-5108-931	125-9308-931	125-9408-931	125-8308-931
STOVEPIPE (plastic)	inside fluted	125-1308-991	125-408-991	125-5108-991	125-9308-991	125-9408-991	125-8308-991
	unfrosted	125-1308-911	125-408-911	125-5108-911	125-9308-911	125-9408-911	125-8308-911

\*\*For assemblies to accommodate the NE-51H High Brightness Lamp, add H to the Catalog Number. Example: 123-1308H-831

THE COMPLETE LINE OF

**DIALCO**<sup>®</sup>**INDICATOR LIGHTS**Foremost Manufacturer of Indicator Lights  
DIALIGHT CORPORATION • BROOKLYN, N. Y. 11237

(Illustrations are approx. actual size)

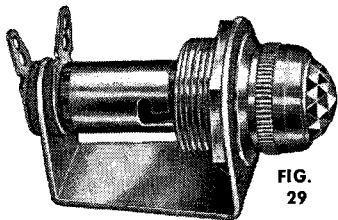
**A SELECTION OF OPEN TYPES****For T-3/4 Low Voltage Incandescent Lamps**Typical assemblies for bayonet base lamp.  
Available also for screw base type. See listing below.Min. Screw  
Base  
(2-48V.)

FIG. 29

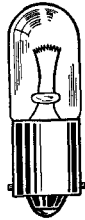
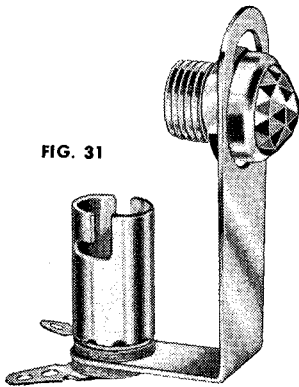
Min. Bayonet  
Base  
(2-65V.)

FIG. 31

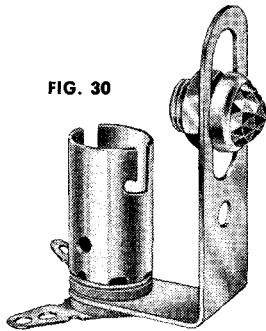


FIG. 30

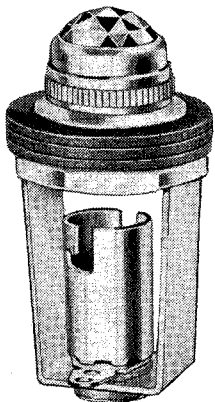


FIG. 32

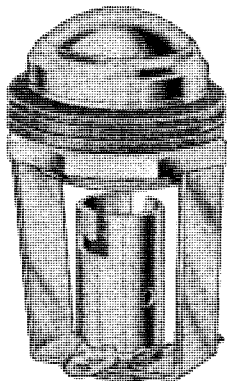


FIG. 33

**CATALOGUE NUMBERS****Assemblies for T-3/4 miniature bayonet base lamps**

No. 810B-431	Faceted	1/2" lens.	For 11/16" mounting hole.	Fig. 29
No. 710U-431	Faceted	1/2" lens.	For 7/16" mounting hole.	Fig. 31
No. 755U-431	Faceted	11/32" lens.	For 9/32" mounting hole.	Fig. 30
No. 857B-431	Faceted	1/2" lens.	For 11/16" mounting hole.	Fig. 32
No. 67B-111	Convex	3/4" lens.	For 13/16" mounting hole.	Fig. 33

**Assemblies for T-3/4 miniature screw base lamps**

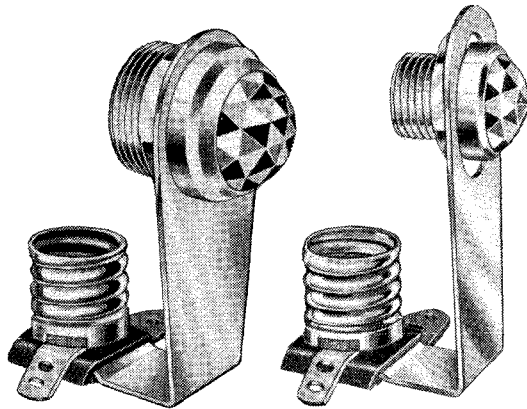
No. 810M-431	Faceted	1/2" lens.	For 11/16" mounting hole.	Fig. 29
No. 510-431	Faceted	1/2" lens.	For 7/16" mounting hole.	Fig. 31
No. 555-431	Faceted	11/32" lens.	For 9/32" mounting hole.	Fig. 30
No. 855-431	Faceted	1/2" lens.	For 11/16" mounting hole.	Fig. 32
No. 66M-111	Convex	3/4" lens.	For 13/16" mounting hole.	Fig. 33

**LENS COLOR:** The final figure in the catalogue number indicates that lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrsted.

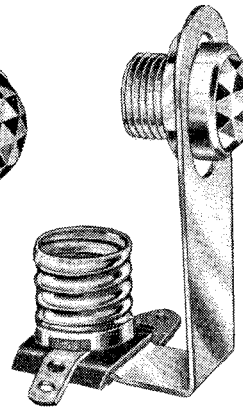
Red-1	Green-2	Yellow (Amber)-3	Blue-4
White Translucent-5	Light Yellow-6	Clear (Colorless)-7	

**For Candelabra Screw Base Lamps**

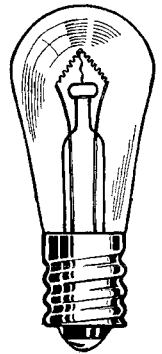
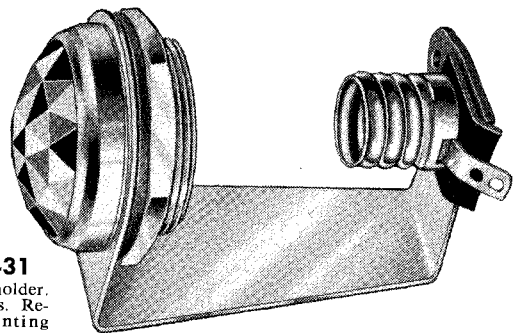
75W., 125V.



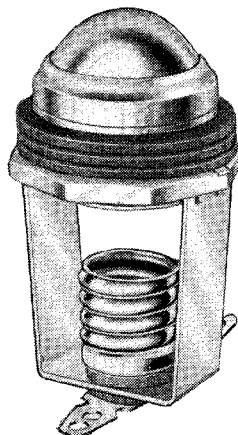
25-18-15-431

Tamper-proof lens holder.  
5/8" Faceted Lens. Requires  
11/16" mounting clearance hole.

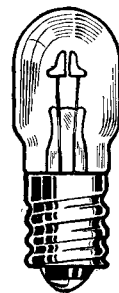
10-18-14-431

With elongated slot. 1/2"  
Faceted Lens. Requires 7/16"  
mounting clearance hole.G-6  
(6 to  
145 V.)

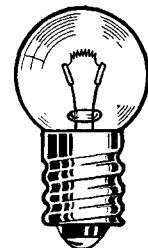
31-18-16-431

Friction-fit lens holder.  
1" Faceted Lens. Re-  
quires 1" mounting  
clearance hole.

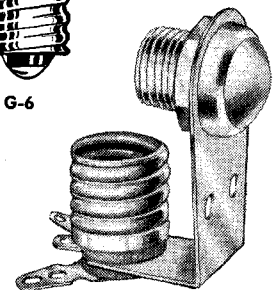
67BN-831

**For NE-45 Neon Glow  
Lamps (105-125 V.)**Friction-fit lens holder. 3/4" Plastic  
Dome Lens. Requires 13/16" mounting  
clearance hole.For details,  
refer to Catalog L-161E.

NE-45



G-6



610-121

**For G-6 Low Voltage Lamps  
(up to 32 V., no higher)**Tamper-proof lens holder. 1/2"  
Convex Lens. Requires 7/16"  
mounting clearance hole.**ORDER COMPLETE WITH LAMPS**  
so that you will be assured of receiving  
the pilot lights and correct lamps at  
one time, ready for immediate use.



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Foremost Manufacturer of Indicator Lights

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## Lens Holders with Lenses for Panel Mounting

For details, refer to Catalog L-161E.

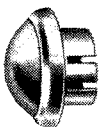
### FRICITION FIT PUSH-IN TYPES



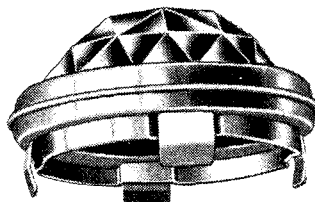
**4004-431**  
9/32" hole  
1/4" shank



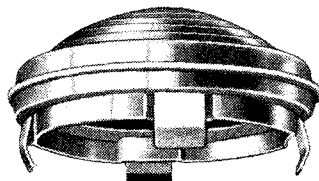
**6004-631**  
9/32" hole  
1/4" shank



**38003-631**  
3/8" mtg. hole  
3/16" shank  
Options: 1/8", 3/32"

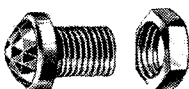


**34-431 GLASS LENS**



**34-841 PLASTIC LENS**

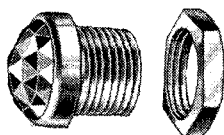
These Holders snap into a 1 3/8" hole



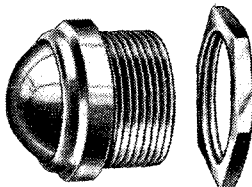
**5006-431**  
9/32"-32 thread  
3/8" shank  
(option 1/4")



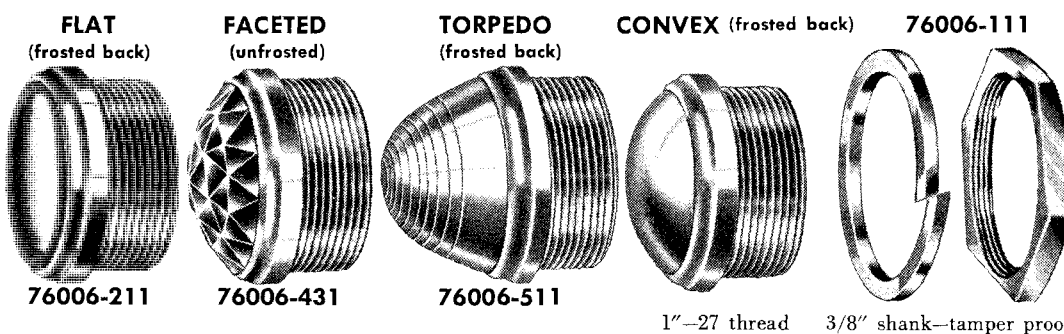
**7005-631**  
3/8"-24 thread  
5/16" shank



**10006-431**  
7/16"-27 thread  
3/8" shank  
(options: 1/4", 5/8")



**25006-111**  
1 1/16"-27 thread  
3/8" shank  
(option 1/4")



**FLAT**  
(frosted back)

**FACETED**  
(unfrosted)

**TORPEDO**  
(frosted back)

**CONVEX** (frosted back)

**76006-111**

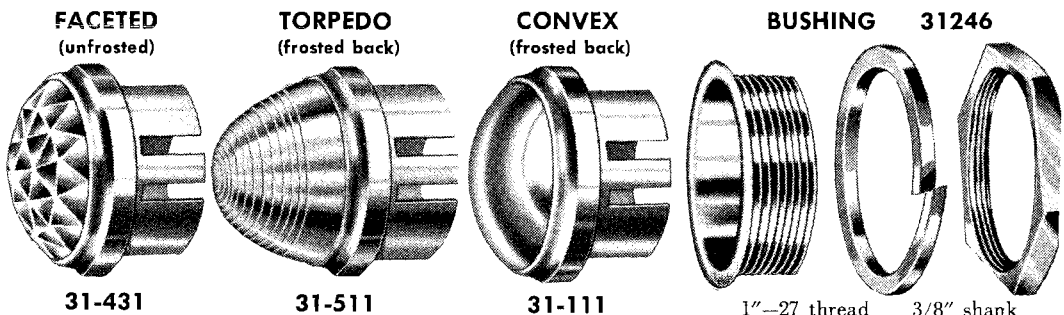
**76006-211**

**76006-431**

**76006-511**

1"-27 thread 3/8" shank—tamper proof

Mount in 1" clearance hole



**FACETED**  
(unfrosted)

**TORPEDO**  
(frosted back)

**CONVEX**  
(frosted back)

**BUSHING**

**31246**

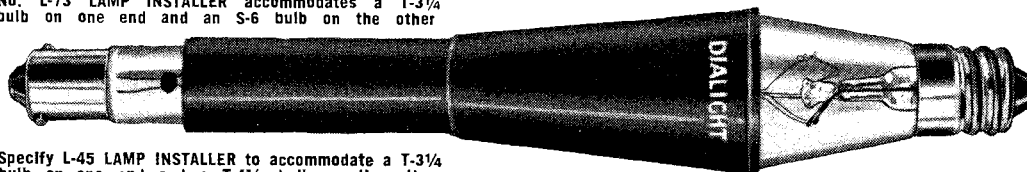
**31-431**

**31-511**

**31-111**

1"-27 thread 3/8" shank

No. L-73 LAMP INSTALLER accommodates a T-3/4 bulb on one end and an S-6 bulb on the other



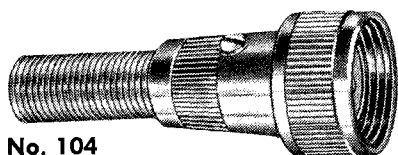
Specify L-45 LAMP INSTALLER to accommodate a T-3/4 bulb on one end and a T-4 1/2 bulb on the other.

## CONNECTORS FOR SINGLE CONDUCTOR CABLE

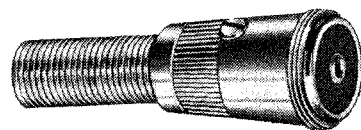
For Microphones, Speakers, Pick-ups, Jacks (using cable shield for second conductor). Female Cable Connector, Catalog No. 104. This unit has a spring protector to prevent sharp bending of cable. It solders to cable sheath, and is secured by a set screw. Catalog No. 101 has the same general characteristics, but is a male connector.

Male Chassis Connectors . . . No. 50. Shell grounds to panel, or may be insulated by washers. Fits a 3/8"-24 threaded hole, or may be secured by nut. No. 50P is similar to No. 50, but is designed to force fit in hole in panel. Does not require a nut to fit in place. No. 51 Connector has a sprung center contact which grounds before cable connection is broken, preventing open circuit howls.

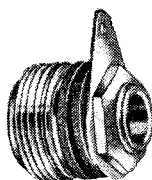
Cap and Chain, Catalog No. 103. To protect unused male connectors. Chain secured by screw prevents loss when removed to make connection.



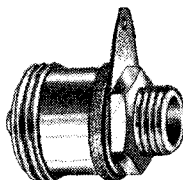
**No. 104**



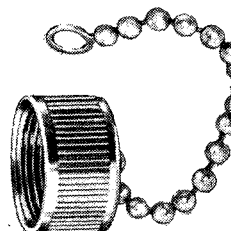
**No. 101**



**No. 50**



**No. 51**



**No. 103**



# LAMPHOLDERS

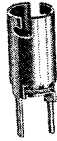
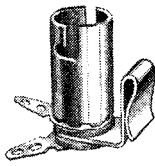
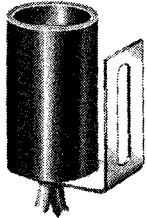
# PILOT LIGHT SOCKETS SPECIAL ASSEMBLIES

## MINIATURE BAYONET

3-00 SERIES

2-00 SERIES

7-00 SERIES



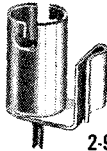
3-05

2-15

7-01

7-35  
For P.C.  
Boards.

2-00-1 SERIES\*



2-90-1

2-40-1

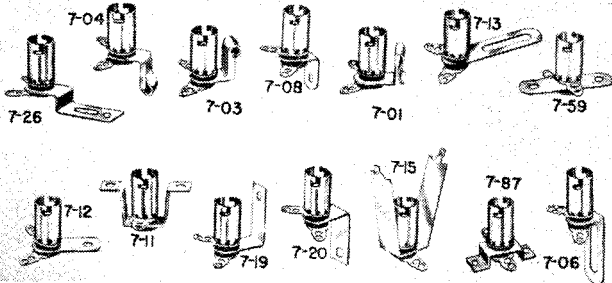
See Figure 2 for typical mountings. See Figure 1 for typical mountings.

\*Sockets can be supplied with one lead or one terminal for use in grounded circuits.

Example: To specify grounded socket 7-01 becomes 7-01-1, 2-15 becomes 2-15-1, etc.

Brackets are applicable to Series 2-00, 5-00, 6-00, 7-00, 10-00, and 17-00.

(Figure 1)



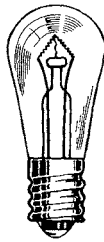
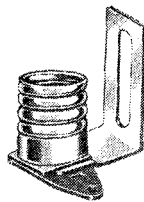
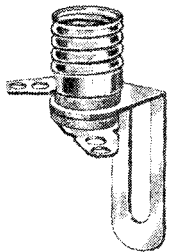
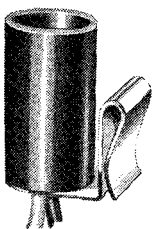
ALL SOCKETS ILLUSTRATED ABOVE HAVE 2 TERMINALS. EXAMPLE: If bracket attached to 7-12 is required with series mentioned, specify: 2-12, 5-12, 6-12, 7-12, 10-12, 17-12.

## CANDELABRA SCREW

4-00 SERIES

6-00 SERIES

18-00 SERIES



4-45

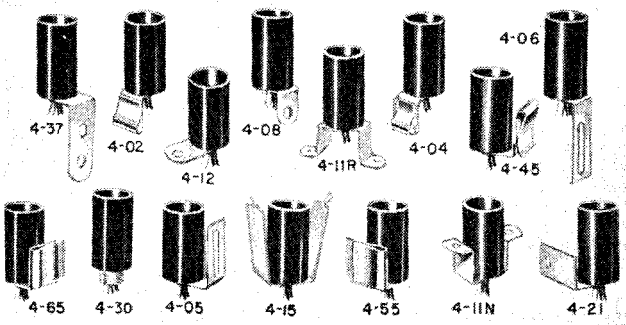
6-06

18-79

S-6  
7C7-120V  
10C7-120V

-00 SERIES — CAND. SCREW • 3-00 SERIES — MIN. BAY. Brackets are applicable to both series.

(Figure 2)



When 3-00 Series Min. Bay. is required, specify 3-37, 3-02, etc.

## MIDGET SCREW

16-00 SERIES  
SOLDER TERM.

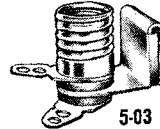
16-200 SERIES  
WIRE LEADS



16-08

## MINIATURE SCREW

5-00 SERIES  
SOLDER TERMINALS  
or WIRE LEADS



5-03

See Figure 1 for typical mountings.

## MIDGET GROOVED

25-200 SERIES  
WIRE LEADS

25-00 SERIES  
SOLDERING  
TERMINALS



25-212-1

Used in data processing and automation fields with Lens-End Lamp Nos. 253, 253X, and 261. Send for Data Sheet No. 25.



No. 7M-16

MULTIPLE ASSEMBLIES can be made to your specifications.

## WEDGE BASE

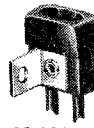
23-00 SERIES

23-200 SERIES

24-00 SERIES



23-24



23-223



24-07A



# 159-6V  
# 161-12V  
# 158-12V  
# 259-6.3V

23-00 SERIES — Molded housing, terminals.  
23-200 SERIES — Molded housing with wire leads.  
24-00 SERIES — Wafer type terminals.

## CANDELABRA BAYONET

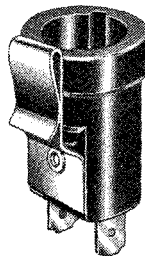
DOUBLE CONTACT

SINGLE CONTACT

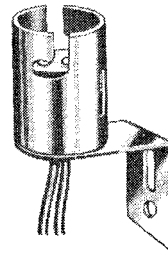
57-00 SERIES

12-200 SERIES

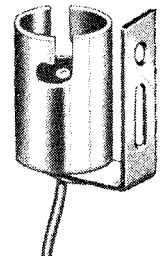
11-200 SERIES



57-45



12-272



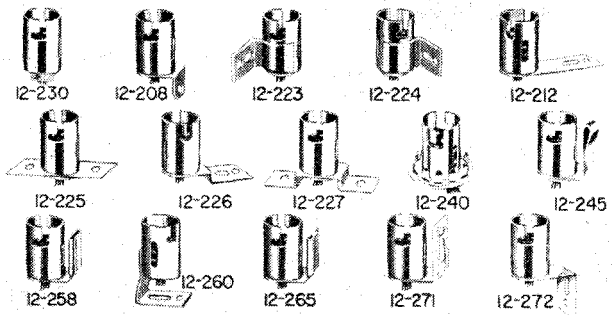
11-271

See Figure 3 for typical mountings.

12-200 SERIES — DOUBLE CONTACT CAND. BAY.

11-200 SERIES — SINGLE CONTACT CAND. BAY.

(Fig. 3)



Mounting Brackets shown above can also be used with 11-200 and 12-00 Series. If the bracket attached to 12-272 is required, specify 11-272 for 11-200 Series, or 12-72 for 12-00 Series.

# LEECRAFT MANUFACTURING CO., Inc.

Long Island City 1, N. Y.



# INDICATOR LIGHTS

## NEON PILOT LIGHTS and SPECIAL ASSEMBLIES



### TINEON INDICATOR LIGHTS

- Long life High Brightness Neon Lamps
- Press fit into 5/16" hole
- Rated 110-250V
- Nylon housing in colors (white standard)
- Speed nut furnished
- Plastic lens in colors
- Legends
- Built-in Resistor
- Insulated Leads.



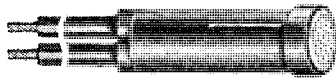
**3600 SERIES**  
(with built-in resistor)

No. 36N2311-6

#### STANDARD 3600 SERIES — 110-125 VOLTS\*

Nylon Housing Color	Lens Color			
	Red	Amber	White	Clear
Black	36N1311-6	36N1313-6	36N1315-6	36N1317-6
White	36N2311-6	36N2313-6	36N2315-6	36N2317-6
Red	36N3311-6	36N3313-6	36N3315-6	36N3317-6
Yellow	36N6311-6	36N6313-6	36N6315-6	36N6317-6
Gray	36N7311-6	36N7313-6	36N7315-6	36N7317-6

\*If 210-250 V. is required, add H after second digit in catalog number. Example: 36HN3311-6



**4100 SERIES**  
(less resistor)

No. 41N1315-6

#### STANDARD 4100 SERIES

Nylon Housing Color	Lens Color			
	Red	Amber	White	Clear
Black	41N1311-6	41N1313-6	41N1315-6	41N1317-6
White	41N2311-6	41N2313-6	41N2315-6	41N2317-6
Red	41N3311-6	41N3313-6	41N3315-6	41N3317-6
Yellow	41N6311-6	41N6313-6	41N6315-6	41N6317-6
Gray	41N7311-6	41N7313-6	41N7315-6	41N7317-6

#### with ALUMINUM BEZEL

All Tineons may be furnished with aluminum bezel. Please specify when ordering.

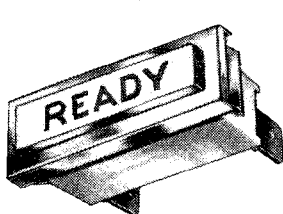


No. 36EN2111-6 (Hi-Hat red lens)  
With aluminum bezel

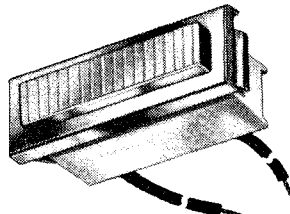
### RECTANGULAR INDICATOR LIGHTS

Equipped with long life high brightness neon lamps, these pilot lights have decorative chrome bezels, and are furnished with insulated wire leads or male tab terminals. High-heat plastic lenses are available in a choice of transparent and translucent colors.

BRAND NAMES, TRADE MARKS and appropriate legends can be clearly hot-stamped on the lens. Series 3100 (wire leads) and 3100T (tabs) are rated 110-125V. Series 3100H (wire leads) and 3100 HT (tabs) are rated 210-250V. UL and CSA listed and approved.



No. 31-2115TL



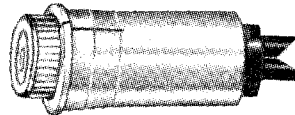
No. 31-2111-6

Lens Color	3100 Series	3100H Series	3100T Series	3100HT Series
	Wire Leads	Wire Leads	.250 Tabs	.250 Tabs
Red	31-2111-6	31H2111-6	31-2111T	31H2111T
Amber	31-2113-6	31H2113-6	31-2113T	31H2113T
Clear	31-2117-6	31H2117-6	31-2117T	31H2117T
White (Translucent)	31-2115-6	31H2115-6	31-2115T	31H2115T

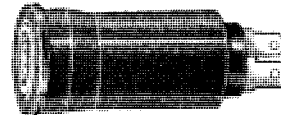
Write for catalog. Prototype samples available on request.

### SNAPLITE INDICATOR LIGHTS

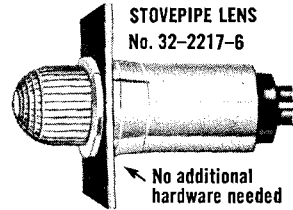
SNAPLITES contain long life neon lamps of the high brightness types. Within the housing are resistors chosen to suit the applied circuit voltage and to provide the required lamp life so that replacement of the lamp will be unnecessary during the life of the equipment.



CYLINDRICAL LENS — No. 32-2111-6



FLUSH LENS — No. 32-1315T



STOVEPIPE LENS  
No. 32-2217-6

No additional hardware needed

**FEATURES:** Snaps into place in 1/2" hole with no additional hardware... Wide variety of Lens and Housing colors... Incandescent-like brightness... Tab or Solde Terminals; or Wire Leads.

**HOUSING COLORS:** The standard housing color is white as indicated by the third digit in the Catalog Number. When color other than white is desired, change this digit to a number from the listing below:

Black—1, White—2, Red—3, Green—4, Blue—5, Yellow—6, Gray—Example: 32-5111-6 (Blue housing).

#### CHROME RINGS

These units are also available with chrome rings for those applications where a decorative ring, or bezel, is desired instead of a specific housing color.

#### HOW TO ORDER SNAPLITES WITH RINGS:

For Hole Size .500 to .513: Add letter "R" after Series Number in place of the dash (—)... Example: 32-2111-6 with Ring becomes 32R2111-6

For Hole Size .514 to .519: Add letters "CR" after Series Number in place of the dash (—)... Example: 35-2131T with Ring becomes 35CR2131T

**LAMPS and RESISTORS:** Standard units contain high brightness Nec lamps and appropriate resistors for long life. A variety of other lamp and/or resistors can be supplied.

**LEGENDS:** Can be hot-stamped on the face of the lens.

Leecraft Series	Volts	Terminations
3200	110-125	insulated wire leads
3500	210-250	insulated wire leads
3200T	110-125	.187 tab terminals
3500T	210-250	.187 tab terminals



1/3W, 125V  
1/3W, 250V

#### CATALOG NUMBERS with CYLINDRICAL LENS

Lens Color	3200 Series	3500 Series	3200T Series	3500T Series
	Wire Leads	Wire Leads	.187 Tabs	.187 Tabs
Red	32-2111-6	35-2111-6	32-2111T	35-2111T
Amber	32-2113-6	35-2113-6	32-2113T	35-2113T
Clear	32-2117-6	35-2117-6	32-2117T	35-2117T
White (Translucent)	32-2115-6	35-2115-6	32-2115T	35-2115T

#### CATALOG NUMBERS with FLUSH LENS

Lens Color	3200 Series	3500 Series	3200T Series	3500T Series
	Wire Leads	Wire Leads	.187 Tabs	.187 Tabs
Red	32-2311-6	35-2311-6	32-2311T	35-2311T
Amber	32-2313-6	35-2313-6	32-2313T	35-2313T
Clear	32-2317-6	35-2317-6	32-2317T	35-2317T
White (Translucent)	32-2315-6	35-2315-6	32-2315T	35-2315T

#### CATALOG NUMBERS with STOVEPIPE LENS

Lens Color	3200 Series	3500 Series	3200T Series	3500T Series
	Wire Leads	Wire Leads	.187 Tabs	.187 Tabs
Red	32-2211-6	35-2211-6	32-2211T	35-2211T
Amber	32-2213-6	35-2213-6	32-2213T	35-2213T
Clear	32-2217-6	35-2217-6	32-2217T	35-2217T
White (Translucent)	32-2215-6	35-2215-6	32-2215T	35-2215T

# LEECRAFT MANUFACTURING CO., Inc.

Long Island City 1, N. Y.



# INDICATOR LIGHTS

## "DELUXE MOLDED" Series MINIATURE BAYONET BASE INDICATOR LIGHTS

Polished chrome finish (MIL units are black nickel plated), molded Glandys housing give fine appearance, assure dependability. All "DELUXE MOLDED" units have Drake's E-Z Tie flange for quick assembly with Drake No. 32 wrench. Install lamps and mount units from front of panel up to 3/8" thick, in 1/8" dia. mounting hole on 1/2" centers. Units with built-in 1/4 watt series resistors take neon lamps.

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)

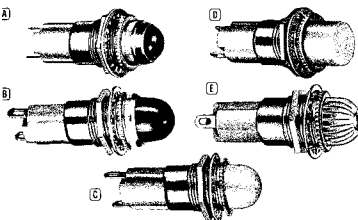


Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
A	5200-222-101		1/2"	1 1/2"	1 1/2"	Solder	5.91	\$ .82	\$ .76	
B	5200-222-101		1/2"	1 1/2"	1 1/2"	Solder	1.12	1.01	.99	
C	5200-222-204		1/2"	1 1/2"	1 1/2"	Solder	.78	.78	.65	
D	5200-222-604		1/2"	1 1/2"	1 1/2"	Solder	.78	.70	.65	
B*	5200-226-101	LN76-1C14	1/2"	1 1/2"	1 1/2"	Solder	1.25	1.12	1.04	
C*	5200-226-101	LN76-1C18	1/2"	1 1/2"	1 1/2"	Solder	1.47	1.32	1.22	
E	5200-229-101	LN62-PR2	1/2"	1 1/2"	1 1/2"	Solder	1.19	1.07	.99	
C*	5200-229-101	LN62-PR2	1/2"	1 1/2"	1 1/2"	Solder	.99	.90	.83	
E	5200-229-103		1/2"	1 1/2"	1 1/2"	Solder	22K	1.02	.92	.85
F	5200-232-103		1/2"	1 1/2"	1 1/2"	Solder	22K	.93	.84	.78
G	5200-232-103		1/2"	1 1/2"	1 1/2"	Solder	22K	.93	.84	.78
H	5200-242-103		1/2"	1 1/2"	1 1/2"	Solder	100K	1.02	.92	.85
I	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
J	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
K	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
L	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
M	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
N	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
O	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
P	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
Q	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
R	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
S	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
T	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
U	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
V	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
W	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
X	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
Y	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78
Z	5200-242-323		1/2"	1 1/2"	1 1/2"	Solder	100K	.93	.84	.78

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

EM PRICES ON REQUEST \* UNITS CAN BE ORDERED WITH LAMP INSTALLED \* SPECIFY LENS COLOR

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
F	5200-222-350		1/2"	1 1/2"	1 1/2"	Solder	22K	\$1.07	\$ .96	\$ .89
G	5200-222-350		1/2"	1 1/2"	1 1/2"	Solder	22K	1.19	1.07	.98

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Mechanical Dimmer Lens Assembly, Type 5207 for Complete Blackout, Type 5208 for Partial Blackout  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
G	5200-248-101	LN76-1C17	1/2"	1 1/2"	1 1/2"	Solder	100K	\$2.15	\$1.94	\$1.79
H	5200-248-101	LN76-1C17	1/2"	1 1/2"	1 1/2"	Solder	100K	2.28	2.10	1.94
I	5200-248-101	LN76-1C18	1/2"	1 1/2"	1 1/2"	Solder	100K	2.15	1.94	1.79
J	5200-248-101	LN76-1C18	1/2"	1 1/2"	1 1/2"	Solder	100K	2.28	2.10	1.94

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
G	5200-248-101	LN76-1C17	1/2"	1 1/2"	1 1/2"	Solder	100K	\$2.15	\$1.94	\$1.79
H	5200-248-101	LN76-1C17	1/2"	1 1/2"	1 1/2"	Solder	100K	2.28	2.10	1.94
I	5200-248-101	LN76-1C18	1/2"	1 1/2"	1 1/2"	Solder	100K	2.15	1.94	1.79
J	5200-248-101	LN76-1C18	1/2"	1 1/2"	1 1/2"	Solder	100K	2.28	2.10	1.94

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Mechanical Dimmer Lens Assembly, Type 5207 for Complete Blackout, Type 5208 for Partial Blackout  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
G	5200-248-101	LN76-1C17	1/2"	1 1/2"	1 1/2"	Solder	100K	\$2.15	\$1.94	\$1.79
H	5200-248-101	LN76-1C17	1/2"	1 1/2"	1 1/2"	Solder	100K	2.28	2.10	1.94
I	5200-248-101	LN76-1C18	1/2"	1 1/2"	1 1/2"	Solder	100K	2.15	1.94	1.79
J	5200-248-101	LN76-1C18	1/2"	1 1/2"	1 1/2"	Solder	100K	2.28	2.10	1.94

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of			
								1-9	10-24	25-99	
A	121-7-204		3/8"	1 1/2"	1 1/2"	Solder	7.65	\$ .76	\$ .69	\$ .63	
B*	121-7-804		3/8"	1 1/2"	1 1/2"	Solder	7.65	.76	.69	.63	
C	121-7-844		3/8"	1 1/2"	1 1/2"	Solder	7.65	.88	.79	.73	
A	121-14-204		3/8"	1 1/2"	1 1/2"	Solder	14	1.46	.77	.70	.64
B*	121-14-804		3/8"	1 1/2"	1 1/2"	Solder	14	1.46	.77	.70	.64
C	121-14-844		3/8"	1 1/2"	1 1/2"	Solder	14	1.65	.89	.80	.74
A	121-28-204		3/8"	1 1/2"	1 1/2"	Solder	28	3.55	1.28	1.13	.86
B*	121-28-804		3/8"	1 1/2"	1 1/2"	Solder	28	3.55	1.28	1.13	.86
C	121-28-844		3/8"	1 1/2"	1 1/2"	Solder	28	3.55	1.49	1.26	1.06

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
C	5131-038-303	LN73-1C12	3/8"	1 1/2"	1 1/2"	Solder	62K	\$1.09	\$ .98	\$ .91
D	5131-038-303	LN73-1C12	3/8"	1 1/2"	1 1/2"	Solder	62K	1.09	.98	.91
E	5131-038-344	LN73-1C11	3/8"	1 1/2"	1 1/2"	Solder	62K	1.49	1.34	1.24
F	5131-038-344	LN73-1C11	3/8"	1 1/2"	1 1/2"	Solder	62K	1.89	1.71	1.58
G	5131-032-101	LN74-1C13	3/8"	1 1/2"	1 1/2"	Solder	62K	1.89	1.71	1.58
H	5131-032-101	LN74-1C13	3/8"	1 1/2"	1 1/2"	Solder	62K	1.89	1.71	1.58

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
H	128-101		3/8"	1 1/2"	1 1/2"	Solder	1.07	\$ .96	\$ .89	
J	128-824		3/8"	1 1/2"	1 1/2"	Solder	.92	.89	.76	
K	127-101		3/8"	1 1/2"	1 1/2"	Solder	1.16	.99	.72	

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
H	128-101		3/8"	1 1/2"	1 1/2"	Solder	1.07	\$ .96	\$ .89	
J	128-824		3/8"	1 1/2"	1 1/2"	Solder	.92	.89	.76	
K	127-101		3/8"	1 1/2"	1 1/2"	Solder	1.16	.99	.72	

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
H	128-101		3/8"	1 1/2"	1 1/2"	Solder	1.07	\$ .96	\$ .89	
J	128-824		3/8"	1 1/2"	1 1/2"	Solder	.92	.89	.76	
K	127-101		3/8"	1 1/2"	1 1/2"	Solder	1.16	.99	.72	

EM DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

## "DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment  
Other features are same as those of units listed above.

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-In Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
H	128-101		3/8"	1 1/2"	1 1/2"	Solder	1.07	\$ .96	\$ .89	
J	128-824		3/8"							



# INDICATOR LIGHTS

## "ECONOGL" NEON GLOW INDICATOR LIGHTS

Excellent for LOW COST 115V applications or as D.C. circuit components. Available with or without series resistors. Mount from front of panel. Equipped with 2" wire leads. Plain macrodome also available; substitute lens code 303 for 323 when ordering.

Fig. No.	Drake Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
A	116-322 or 303 116-403 R116-322 or 303 R116-403	1/2"	1 1/2"	1 1/2"	100K	3/16"	1/8"	1"	\$ .23	\$ .20	\$ .19
B	117-323 or 303 117-403 R117-323 or 303 R117-403	all numbers	1 1/2"	1 1/2"	100K	3/16"	1/8"	1"	.20	.24	.24

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"  
For HI-BRIGHTNESS Lamps, prefix Drake Number with letter "H". \* No Resistor \*\* With Resistor

## "MINEON" NEON GLOW INDICATOR LIGHTS

Similar to "ECONOGL" types, except mounted in black anodized aluminum body with solder lugs or turret terminals. Drake E-Z-Tite facing nut, and No. 20 wrench, make assembly fast.

Fig. No.	Drake Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
C	118-323	5/8"	1 1/2"	1 1/2"	100K	3/16"	1/8"	1"	\$ .55	\$ .57	\$ .57
D	118-404	5/8"	1 1/2"	1 1/2"	100K	3/16"	1/8"	1"	.55	.57	.57
E	R118-323	5/8"	1 1/2"	1 1/2"	100K	3/16"	1/8"	1"	1.04	.94	.87
F	R118-404	5/8"	1 1/2"	1 1/2"	100K	3/16"	1/8"	1"	1.04	.94	.87

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"  
For HI-BRIGHTNESS Lamps, prefix Drake Number with letter "H".

## DRAKE STOCKING DISTRIBUTORS INSURE BETTER SERVICE

You can purchase most items for immediate delivery and for the same price you would pay the factory.



## "POSTLITE" INDICATOR LIGHTS

Unique all polystyrene neon indicator light with built-in series resistor. Extremely decorative.

Fig. No.	Drake Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Lamp	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
F	105	1/2"	1 1/2"	1 1/2"	100K	Hi-Brite	1/8"	1"	\$ .68	\$ .61	\$ .57
G	105-025 (H-Brite)	1/2"	1 1/2"	1 1/2"	22K	Hi-Brite	1/8"	1"	.45	.42	.42



## "FLUSHLITE" INDICATOR LIGHTS

"One-of-a-kind" neon unit—all nylon with built-in series resistor. Exceptional appearance.

Fig. No.	Drake Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Lamp	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
H	119	1 1/2" x 1 1/4"	1 1/2"	1 1/2"	100K	NESH	1/8"	1"	\$ .30	\$ .45	\$ .42
I	119-023 (H-Brite)	1 1/2" x 1 1/4"	1 1/2"	1 1/2"	22K	NESH	1/8"	1"	.50	.45	.42

OEM PRICES ON REQUEST \* UNITS CAN BE ORDERED WITH LAMP INSTALLED \* SPECIFY LENS COLOR



# INDICATOR LIGHTS

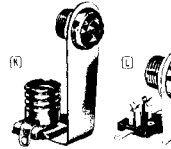
## "MINISPACE" 5/16" Lens MONEY SAVER INDICATOR LIGHTS

For practical economy. Lamp replacement from behind panel. Cadmium plated lens holder has Drake E-Z-Tite knurl, for fast assembly with Drake No. 14 wrench.



Fig. No.	Drake Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Bulb Size	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
											1-9	10-24	25-99
J	2-113	5/16"	Min. Screw	1"	1"	1"	G-3/32"	3/16"	1/8"	1"	\$ .18	\$ .17	\$ .16
K	98-103	5/16"	Min. Bay.	1"	1"	1"	G-3/32"	3/16"	1/8"	1"	.19	.17	.16
L	3005-11-113	5/16"	Min. Bay.	1"	1"	1"	G-3/32"	3/16"	1/8"	1"	.19	.17	.16
M	3005-27-113	5/16"	Min. Wedge	1"	1"	1"	T-3/32"	3/16"	1/8"	1"	.19	.17	.15

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"



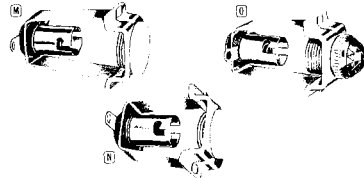
## MONEY SAVER INDICATOR LIGHTS—1/2" Lens

Popular low cost units. Lamps replaced from behind panel. Nickel plated lens holder.

Fig. No.	Drake Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Bulb Size	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
											1-9	10-24	25-99
N	10-113	1/2"	Min. Screw	1"	1"	1"	T-3/32"	3/16"	1/8"	1"	\$ .23	\$ .20	\$ .19
O	105-113	1/2"	Min. Bay.	1"	1"	1"	G-3/32"	3/16"	1/8"	1"	.23	.22	.23
P	106-113	1/2"	Min. Bay.	1"	1"	1"	G-3/32"	3/16"	1/8"	1"	.24	.22	.20
Q	107-113	1/2"	Min. Bay.	1"	1"	1"	T-3/32"	3/16"	1/8"	1"	.24	.22	.20
R	3010-27-113	1/2"	Min. Wedge	1"	1"	1"	T-3/32"	3/16"	1/8"	1"	.24	.22	.20

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"  
Drake No. 10C-113 is UL and CSA Listed.

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)



## MONEY SAVER MINIATURE BAYONET BASE INDICATOR LIGHTS

Available with attached 1/4 watt series resistor. NESH Hi-Brightness neon lamp. Specify 100 resistor for NESH lamp. Lamps replaced from behind panel. No. 54 has nickel plated lens holder with Drake E-Z-Tite knurl for Drake No. 24 wrench.

Fig. No.	Drake Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of			
										1-9	10-24	25-99	
S	25-204	5/16"	Min. Screw	1"	1"	1"	3/16"	1/8"	1"	\$ .21	\$ .19	\$ .17	
T	N252-IL-503	5/16"	Min. Bay.	1"	1"	1"	3/16"	1/8"	1"	.43	.39	.36	
U	53-304	5/16"	Min. Bay.	1"	1"	1"	3/16"	1/8"	1"	.21	.19	.17	
V	N252-IL-223	5/16"	Min. Bay.	1"	1"	1"	22K	3/16"	1/8"	1"	.43	.39	.36
W	54-113	5/16"	Min. Bayonet	1"	1"	1"	3/16"	1/8"	1"	.31	.28	.26	
X	N254-IL-103	5/16"	Min. Bayonet	1"	1"	1"	22K	3/16"	1/8"	1"	.53	.47	.44

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"  
N252, N253, N254 are UL and CSA Listed.

OEM PRICES ON REQUEST \* UNITS CAN BE ORDERED WITH LAMP INSTALLED \* SPECIFY LENS COLOR

# INDICATOR LIGHTS

## MONEY SAVER INDICATOR LIGHTS

HORIZONTAL MOUNTING  
Plastic lens. Lamps replaced from front of panel. Nickel plated lens holder. Rated at 2 watts.

Fig. No.	Drake Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
A	20-113	1/2"	Min. Bay.	1"	1"	1"	1"	1"	\$ .34	\$ .31	\$ .28
B	205-113	1/2"	Min. Screw	1"	1"	1"	1"	1"	.24	.21	.22
C	21C-104	1/2"	Min. Bay.	1"	1"	1"	1"	1"	.37	.34	.32

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"

## MONEY SAVER INDICATOR LIGHTS

FOR EASY PANEL THICKNESS ADJUSTMENT  
Supplied with three fiber spacing washers. Sturdy built. Plastic lens. Nickel plated lens holder. Lamps replaced from front of panel. Rated at 2 watts.

Fig. No.	Drake Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
C	50-113	1/2"	Min. Bay.	1"	1"	1"	1"	1"	\$ .45	\$ .41	\$ .38
D	51-304	1/2"	Min. Bay.	1"	1"	1"	1"	1"	.38	.34	.32

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"

## "STANDARD" INDICATOR LIGHTS

FRONT LAMP REPLACEMENT  
Smallest diameter units with front lamp replacement for 120 V incandescent lamps. Polished chrome friction lamp holder.

Fig. No.	Drake Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
E	60-101	3/8"	Min. Bay.	1"	1"	1"	1"	1"	\$ .82	\$ .74	\$ .68
F	A460N-IL-100	3/8"	Min. Bay.	1"	1"	1"	1"	1"	.82	.74	.69
G	A461N-IL-203	3/8"	Min. Bay.	1"	1"	1"	1"	1"	.80	.72	.66

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"  
A460N-IL-100 and A461N-IL-203 are UL and CSA Listed.

## MONEY SAVER INDICATOR LIGHT

SLIP-FIT BEZEL FOR EASY INSTALLATION  
Lamps may be replaced from front or rear of panel. Polished chrome friction lens holder.

Fig. No.	Drake Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of		
									1-9	10-24	25-99
G	75-110	1"	Cond. Screw	1"	1"	1"	1"	1"	\$ .92	\$ .83	\$ .76

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"

## DRAKE E-Z-TITE WRENCHES

Special Socket Wrenches to fit specially knurled mounting bushing nuts or nuts. Speeds up mounting of units. Number of required wrench given in unit descriptions.

Fig. No.	Drake Number	Size Dia.	Net Each
A	651-14	3/8"	\$1.50
B	651-15	1/2"	2.00
C	651-24	3/4"	2.00
D	652-22	1"	3.00



# INDICATOR LIGHTS

## "STANDARD" INDICATOR LIGHTS

Practical, good-looking—polished chrome plated lens holder. Special feature: easy front replacement of pop-forward lamps. Snap-in lens assembly. Mount from front of panels up to 3/4" thick, in 1" dia. hole on 1 1/2" centers.



Fig. No.	Drake Number	Mil Style Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Lamps	Net Each Lots Of		
								1-9	10-24	25-99
L	B147AL-ISE-110	1"	1"	Cond. Screw	1"	2 1/2"	656 or 10C7	\$1.33	\$1.20	\$1.11
M	B147AL-ISE-410	1"	1"	Cond. Screw	1"	2 1/2"	656 or 10C7	1.35	1.22	1.13

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"

## "TITELITE"

## OIL-WATER-DUST PROOF INDICATOR LIGHTS

Neoprene gaskets seal out oil, water, dust, dirt. Ruggedly made for severe duty. Polished chrome plated screw-on lens holder (MIL types, black nickel plated); octagon nut for easier mounting. Pop-forward lamp on screw base units, easily replaced from front of panel. Mount from front or rear of panels up to 3/4" thick, in 1" dia. hole on 1 1/2" centers. No. 5205-233 has built-in 1/4 watt series resistor for NESH lamp. Mounts from front or rear of panels up to 3/4" thick, in 1 1/2" dia. hole on 1 1/2" centers.

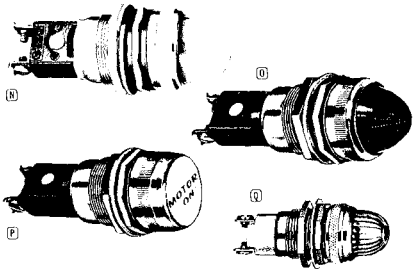


Fig. No.	Drake Number	Mil Style Number	Lens Dia.	Base	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Net Each Lots Of		
								1-9	10-24	25-99
N	B9795-IRE-305	1"	1"	D.C. Cond. Bay.	1 1/2"	1 1/2"	1"	\$1.74	\$1.57	\$1.43
O	B9795-IRE-410	1"	1"	D.C. Cond. Bay.	1 1/2"	1 1/2"	1"	1.74	1.57	1.45
P	B9795-IRE-550	1"	1"	D.C. Cond. Bay.	1 1/2"	1 1/2"	1"	1.74	1.57	1.45
Q	B1479L-IRE-205	1"	1"	Cond. Screw	1 1/2"	1 1/2"	1"	1.88	1.69	1.57
R	B1479L-IRE-410	1"	1"	Cond. Screw	1 1/2"	1 1/2"	1"	1.88	1.68	1.55
S	B1479L-IRE-430	1"	1"	Cond. Screw	1 1/2"	1 1/2"	1"	1.88	1.68	1.55
T	B1479L-IRE-550	1"	1"	Cond. Screw	1 1/2"	1 1/2"	1"	1.95	1.76	1.63
U	5205-233-301	1"	1"	Min. Bayonet	1 1/2"	1 1/2"	22K	1.63	1.39	1.32
V	5205-233-320	1"	1"	Min. Bayonet	1 1/2"	1 1/2"	22K	1.58	1.42	1.32

LENS DESCRIPTION CODE (last three Drake Number digits). See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"

## CADELABRA SCREW BASE INSTRUMENT LIGHT

For 120V, 636 lamp. Nickel plated friction hole. Mounts from front or rear of panels up to 3/4" thick, in 1



MINIATURE LIGHTING SPECIALISTS

# "NEW M L I T E"

SUB-MIDGET INDICATOR LIGHT

HERE'S MAXIMUM EFFICIENCY IN MINIMUM SIZE— WITH THE ADVANTAGES OF NEW LONG-LIFE INCANDESCENT LAMPS!

"GEMLITES" combine practicality, convenience, economy for all kinds of instruments, control panels and other applications. Specially DRAKE-designed to fill growing needs for soundly constructed extra-small units, for low voltage operation and convenient lamp replacement. For rapid installation in round holes, they have E-Z Tie flanges—use No. 12 wrench.

**SPECIFICATIONS** . . . Mounts in 3/16" diameter "D" hole from front of panel . . . Maximum panel thickness: 7/16" . . . Minimum center-to-center spacing: 1 1/16" . . . Secured with hexagon nut . . . Nickel plated brass hardware, black body . . . Lens: translucent Butyrate . . . COLORS: AMBER, BLUE, COLORLESS, GREEN, RED and YELLOW . . . Phenolic insulation . . . Torret type solder lugs . . . Torque: 20 lb. inch . . . BUILT TO PERFORM AS PRESCRIBED IN MIL-I-3661A.

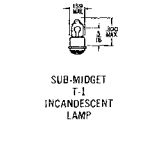
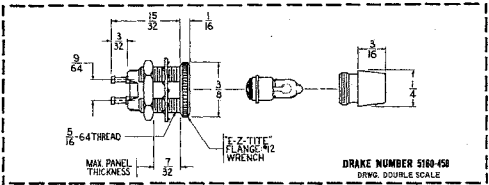


"GEMLITE" 5169-459  
S/7 Carat Diamond Ring  
Courtesy of C. D. Pozzoci, Jewelers  
Est. 1837—Chicago

PHOTOS ACTUAL SIZE

Drake Number	Net Each	Lots Of
	1-7	10-24 25-99
*5169-458-004	\$1.75	\$1.13
*5169-459-044	1.84	1.46 1.53

\*Imprinted Lenses see photo.



- FEATURES . . .**
- Houses new 60,000 hour, 5 V., 300 milliwatt lamp.
  - Only 3/16" long—3 3/16" maximum diameter (0.09 cubic inches).
  - Flat on thread means easy economical mounting in 3/16" diameter "D" hole.
  - 180° Visibility.
  - Replaceable lamp from front of panel.
  - Flat face lens for READOUT applications.

**LAMP DATA**

Lamp No.	Design Voltage	Design Current amp.	Average Life Hr.	Candle Power c.p.
682	5.0	.06	60M	059
685	5.0	.06	60M	048
714	5.0	.075	16M	080
718	5.0	.115	16M	132

DEM PRICES ON REQUEST \* UNITS CAN BE ORDERED WITH LAMP INSTALLED \* SPECIFY LENS COLOR



MINIATURE LIGHTING SPECIALISTS

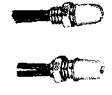
# "ANEWR OLITE"

MILITARY INDICATOR LIGHT

ANOTHER SUB-MIDGET INDICATOR LIGHT— THIS ONE BUILT TO MILITARY DRAWING MS25446

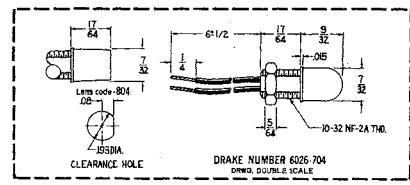
DRAKE'S "ASTROLITE" was aptly named because its primary use is in missile work, but has other instrumentation applications as well. The built-in 60,000 hour incandescent lamp affords maximum life in an Indicator Light built to meet Military Standard MIL-L-6723—particularly useful where space is at a premium.

- FEATURES . . .**
- Per Military Standard Drawing MS25446.
  - Micro-miniature unit (0.028 Cubic Inches).
  - Built-in long life T-1 incandescent lamp—60,000 hours life.
  - Built-in Teflon insulated lead wires.
  - 180° Visibility.
  - Flat on thread for "D" hole easy economical mounting.
  - Optional flat face lens for READOUT applications.



"ASTROLITES" 6026-704  
6026-704  
6026-704

PHOTOS ACTUAL SIZE



**SPECIFICATIONS . . .**

Mounts in 0.191" diameter "D" hole. Maximum panel thickness 3/16". Minimum center-to-center spacing: 1 1/16". Secured with hexagon nut. Nut chromated zinc over brass. Body: Stainless Steel. Lens: Translucent Butyrate. COLORS: AMBER, BLUE, COLORLESS, GREEN, RED, YELLOW and WHITE. Termination: Two 26 ga. stranded Teflon Insulated 6" Lead Wires. Lamp potted in with epoxy resin. Net weight per thousand: 5 lbs. Test Voltage: 500AC to ground. Maximum operating voltages: 6 V. Design current: 0.06 amps. at 5 volts.

**MILITARY TABLE**

DRAKE NUMBER *With Macrolens Lens	COLOR OR Diffusing Lens	MILITARY STYLE NUMBER	Net Each Lots Of		
			1-9	10-24	25-99
6026-704	Blue	MS 25446-2	\$2.56	\$2.66	\$2.46
6026-704	Green	MS 25446-3	2.96	2.66	2.46
6026-704	Red	MS 25446-4	2.96	2.66	2.46
6026-704	White	MS 25446-5	2.96	2.66	2.46
6026-704	Yellow	MS 25446-6	2.96	2.66	2.46
Non-Diffusing Lens					
6026-703	Colorless	MS 25446-6	2.96	2.66	2.46

DEM PRICES ON REQUEST \* UNITS CAN BE ORDERED WITH LAMP INSTALLED \* SPECIFY LENS COLOR

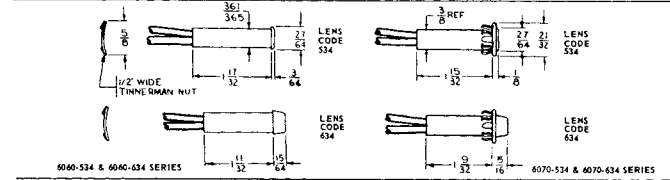
## NEON "GLO-LITES"



### THE NEW LOOK IN NEON INDICATOR LIGHTS

SAVE MONEY WITH ONE-PIECE NYLON BODY and LENS

"Glo-Lites" are best suited for use in appliances . . . instruments . . . specialties . . . and other products where line voltage is available. Positive quality factors are many.



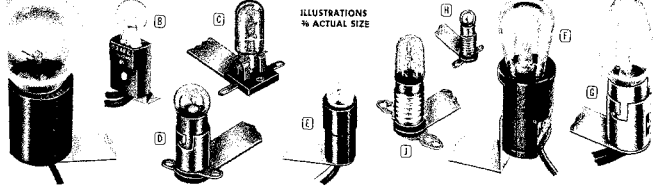
DRAKE NUMBER TINNERMAN NUT			DRAKE NUMBER PLUG-IN			Circuit Voltage (AC) †	Built-In Resistance (ohms)
Fluor. Glass	Cylindrical (Capacitor)	Net Each Lots Of	Fluor. Glass	Cylindrical (Capacitor)	Net Each Lots Of		
4060-534	4060-534	1.9 16-24 25-99	4070-534	4070-534	1.9 10-24 25-99	—	None*
4060-534	4060-534	1.38 1.34 1.32	4070-534	4070-534	1.42 1.28 1.32	—	None*
4060-534	4060-534	1.46 1.42 1.38	4070-534	4070-534	1.50 1.45 1.41	125	25K

\*External series resistance required which will limit current to 60ma. †Starting Voltages: NE2E lamp: AC 65V, DC 90 V. NE2H lamp (with bulb preceding part No.) AC 150V, DC 135V.

Choose between red, white or amber colors and between flash or tapered cylindrical lens styles — both are translucent and signal lines on the inside.

### A FEW DRAKE LAMP HOLDERS

- Ask for additional information about these and other styles:
- A. No. A1700 Intermediate Screw Base with Phenolic Housing
  - B. No. 1900 Miniature 2-Pin Base with Phenolic Housing
  - C. No. 4272 "WEDGE-GRIP" Miniature Wedge Base
  - D. No. 4080 Miniature Bayonet Base
  - E. No. N200 Miniature Bayonet Base with Nylon Housing
  - F. No. B1400 Candlelike Screw Base with Phenolic Housing
  - G. No. A1100 Double Contact Bayonet Base
  - H. No. 2100 Midsize Screw Base
  - J. No. 100 Miniature Screw Base



M PRICES ON REQUEST \* UNITS CAN BE ORDERED WITH LAMP INSTALLED \* SPECIFY LENS COLOR

## DRAKE LENSES & LENS SHAPES



Fig. No.	Drake Number	Lens	Shank	Shank	Shank	Net Each	Lots Of	Fig. No.	Drake Number	Shank	Shank	Shank	Net Each	Lots Of
			d.o.	d.o.	d.o.	1.53 1.52 1.51 1.50 1.49	1.53 1.52 1.51 1.50 1.49			d.o.	d.o.	d.o.	1.53 1.52 1.51 1.50 1.49	1.53 1.52 1.51 1.50 1.49
A	0155-110	3/16"	218	Solid	1/8"	\$4.05	\$4.05	G	31-119	1/8"	373/377	3/16"	\$1.12	\$1.11
B	0155-110	3/16"	218	Solid	1/8"	.80	.80	H	20-119	1/8"	373/377	3/16"	.80	.80
C	31-113	3/16"	270/282	1/8"	1/8"	.87	.86	J	16-113	3/16"	1/8"	1/8"	.14	.12
D	31-151	3/16"	324/330	1/8"	1/8"	.10	.10	K	16-113	3/16"	1/8"	1/8"	.14	.13
E	14L-119	3/16"	31/2-32 1/16"	1/8"	1/8"	.12	.11	L	39-309-119	1/8"	1/8"	1/8"	.23	.20
F	14L-119	3/16"	31/2-32 1/16"	1/8"	1/8"	.12	.11	M	102A-920	1/8"	487/488	3/16"	.27	.24



Fig. No.	Drake Number	Lens	Shank	Shank	Shank	Net Each	Lots Of	Fig. No.	Drake Number	Shank	Shank	Shank	Net Each	Lots Of
			d.o.	d.o.	d.o.	\$1.23 \$1.21 \$1.10	\$1.23 \$1.21 \$1.10			d.o.	d.o.	d.o.	\$1.47 \$1.43 \$1.38	\$1.47 \$1.43 \$1.38
N	25-578-110	1/8"	1/8"-27 Thd.	1/8"	1/8"	\$1.23	\$1.21	R	2555-528-928	1/8"	1/8"-27 Thd.	1/8"	\$1.47	\$1.43
O	259-528-988	1/8"	1/8"-27 Thd.	1/8"	1/8"	.12	.11	S	63A-9-104	1/8"	1/8"	1/8"	.45	.41
P	259-528-988	1/8"	1/8"-27 Thd.	1/8"	1/8"	.12	.11	T	688-111	1/8"	685/681	1/8"	.61	.58
Q	259-528-984	1/8"	1/8"-27 Thd.	1/8"	1/8"	.12	.11	U	688-110	1/8"	685/681	1/8"	.61	.58



Fig. No.	Drake Number	Lens	Shank	Shank	Shank	Net Each	Lots Of	Fig. No.	Drake Number	Shank	Shank	Shank	Net Each	Lots Of
			d.o.	d.o.	d.o.	\$1.51 \$1.48 \$1.42	\$1.51 \$1.48 \$1.42			d.o.	d.o.	d.o.	\$1.51 \$1.48 \$1.42	\$1.51 \$1.48 \$1.42
V	6026-710	1/8"	1/8"-27 Thd.	1/8"	1/8"	\$1.51	\$1.48	X	750-110	1/8"	887/888	3/16"	\$4.07	\$3.38
W	750-110	1/8"	1/8"-27 Thd.	1/8"	1/8"	.82	.81	Y	750-209	1/8"	887/888	3/16"	.82	.81
						.82	.81	Z	750-431	1/8"	887/888	3/16"	.82	.81
						.82	.81	AA	750A-0-104	1/8"	1/8"-27 Thd.	1/8"	.82	.81
						.82	.81	BB	750A-0-110	1/8"	1/8"-27 Thd.	1/8"	.82	.81
						.82	.81	CC	750A-0-209	1/8"	1/8"-27 Thd.	1/8"	.82	.81

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)

### A FEW FEATURES ABOUT DRAKE PRODUCTS

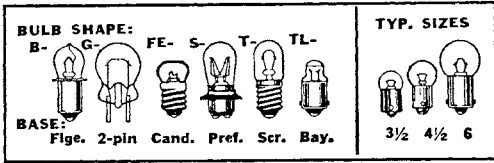
- RELIABILITY . . .**
- DRAKE'S primary business, for more than three decades, has been the design and production of Miniature Lighting components. This long experience assures you of the most advanced design, the most practical and serviceable construction, and the most expert manufacturer. Here are just a few typical DRAKE "plus" features:
1. Seamless drawn bayonet shells. Will not open up as lockless shells do.
  2. All resin impregnated fibre insulation, "Vulcofid".
  3. Brass center contact rivets.
  4. Molded phenolic or nylon shell housings.
  5. Coil springs for center contact support that do not take a set.
  6. Guaranteed to meet specifications as listed.
  7. All steel parts protected with a suitable noncorrosive finish, such as cadmium.
  8. 100% test of all units rated at 115 volts breakdown. This outstanding quality has been a major factor in satisfying the thousands of customers, including the "giants" as well as smaller manufacturers, whom we have supplied for many years. And you'll find DRAKE'S traditional "Personalized Service" an added asset of inestimable value.





# MINIATURE LAMPS

## PANEL, PILOT, AND FLASHLIGHT LAMPS



Lamp No.	Bulb	Base§	Design		Net Price*	
			Volts	Amps.	Each	Box 10
PR2•	B-3½	S.C. min. flanged	2.38	0.50	\$0.20	\$1.22
PR3•	B-3½	S.C. min. flanged	3.57	.50	.20	1.22
PR4•	B-3½	S.C. min. flanged	2.33	.27	.20	1.22
PR6•	B-3½	S.C. min. flanged	2.47	.30	.20	1.22
PR7	B-3½	S.C. min. flanged	3.7	.30	.25	1.52
PR12•	B-3½	S.C. min. flanged	5.95	.50	.20	1.22
PR13	B-3½	S.C. min. flanged	4.75	.50	.20	1.22
6	S-8	D.C. bayonet	6.4	3.00	.35	2.10
8	S-8	D.C. bayonet	8.0	2.20	.35	2.10
10	G-3½	Min. two-pin	2.5	.50	.26	1.59
13	G-3½	Min. screw	3.7	.30	.17	1.04
14•	G-3½	Min. screw	2.47	.30	.17	1.04
27	G-4½	Min. screw	4.9	.30	.20	1.22
31	G-4½	Min. screw	6.15	.30	.22	1.33
39	T-3¼	Min. bayonet	6.3	.36	.35	1.99
40•	T-3¼	Min. screw	6.3	.15	.14	.85
41•	T-3¼	Min. screw	2.5	.50	.22	1.34
42•	T-3¼	Min. screw	3.2	.35	.27	1.67
43•	T-3¼	Min. bayonet	2.5	.50	.22	1.34
44•	T-3¼	Min. bayonet	6.3	.25	.14	.85
45•	T-3¼	Min. bayonet	3.2	.35	.18	1.12
46•	T-3¼	Min. screw	6.3	.25	.14	.85
47•	T-3¼	Min. bayonet	6.3	.15	.14	.85
48•	T-3¼	Min. screw	2.0	.06	.22	1.34
49•	T-3¼	Min. bayonet	2.0	.06	.18	1.12
50	G-3½	Min. screw	7.5	.22	.15	.92
51•	G-3½	Min. bayonet	7.5	.22	.13	.82
53•	G-3½	Min. bayonet	14.4	.12	.13	.82
55•	G-4½	Min. bayonet	7.0	.41	.13	.82
57•	G-4½	Min. bayonet	14.0	.24	.13	.82
57X•	G-4½	Min. bayonet	14	.24	.17	1.05
67•	G-6	S.C. bayonet	13.5	.59	.17	1.05
67K	G-6	Candelabra screw	13.5	.41	.44	2.65
71K	G-6	Candelabra screw	22	.18	.35	1.99
112	TL-3	Min. screw	1.2	.22	.17	1.04
123	G-3½	Min. screw	1.25	.30	.17	1.04
131	G-3½	Min. screw	1.3	.10	.18	1.12
136	G-4½	Min. screw	1.25	.60	.20	1.22
159	T-3¼	Wedge	6.3	.15	.22	1.33
222•	TL-3	Min. screw	2.25	.25	.17	1.04
223•	FE-3¾	Min. screw	2.25	.25	.20	1.22
224	TL-2¾	Special 1½-turn thd.	2.15	.22	.20	1.22
233	G-3½	Min. screw	2.33	.27	.20	1.22
243	TL-3	Min. screw	2.33	.27	.20	1.22
259	T-3¼	Wedge	6.3	.25	.20	1.22
263X	G-3½	Min. screw	2.65	.30	.27	1.67
313•	T-3¼	Min. bayonet	28	.17	.31	1.87
327•	T-1¾	S.C. midget flanged	28	.04	.72	4.37
328•	T-1¾	S.C. midget flanged	6	.20	.56	3.42
331	T-1¾	S.C. midget flanged	1.35	.06	.87	5.29
338	T-1¾	S.C. midget flanged	2.7	.06	.87	5.29
345	T-1¾	S.C. midget flanged	6	.04	1.50	9.25
363	G-4½	Min. bayonet	14	.20	.22	1.33

Lamp No.	Bulb	Base§	Design		Net Price*	
			Volts	Amps.	Each	Box 10
401	G-4½	Min. screw, flasher	1.25	.22	.35	1.99
405	G-4½	Min. screw, flasher	6.5	.50	.27	1.67
406	G-4½	Min. screw, flasher	2.6	.30	.22	1.33
407	G-4½	Min. screw, flasher	4.9	.30	.20	1.22
425	G-4½	Min. screw	5	.50	.20	1.22
428	G-4½	Min. screw	12.5	.25	.17	1.04
431R†	G-4½	Min. bayonet	14	.25	.27	1.67
432	G-4½	Min. screw	18	.25	.22	1.33
432G‡	G-4½	Min. screw	18	.25	.35	1.99
432R†	G-4½	Min. screw	18	.25	.27	1.67
433	G-4½	Min. bayonet	18	.25	.27	1.67
502	G-4½	Min. screw	5.1	.15	.17	1.04
509K	G-6	Candelabra screw	24	.18	.27	1.67
605	G-4½	Min. screw	6.15	.50	.20	1.22
965	T-4½	Min. screw	9.84	.50	.25	1.53
1000	RP-11	D.C. bayonet	6.2	3.87	1.14	6.95
1034•	S-8	D.C. indexing	12.8	1.80	.34	2.10
1154•	S-8	(2-pos. taillight)	14	.51		
		D.C. indexing	6.4	2.63	.39	2.36
		(2-pos. taillight)	7.0	.75		
1224K	G-6	Candelabra screw	32	.16	.54	3.30
1240	G-16½	D.C. prefocus	32	3.5	1.90	11.60
1404	G-6	S.C. bayonet	10	.09	.49	2.98
1408	T-3¼	Min. bayonet	10	.13	.27	1.67
1446	G-3½	Min. screw	12	.20	.25	1.53
1447	G-3½	Min. screw	8	.15	.20	1.22
1449	G-3½	Min. screw	14	.20	.16	.99
1458	G-5	Min. bayonet	20	.25	.27	1.67
1474	T-3	Min. screw	14	.17	.35	2.14
1476	T-3	Min. screw	18	.17	.44	2.65
1477	T-3	Min. screw	24	.17	.54	3.30
1488	T-3¼	Min. screw	14	.20	.25	1.53
1488	T-3¼	Min. bayonet	14	.15	.27	1.67
1490•	T-3¼	Min. bayonet	3.2	.16	.18	1.12
1491	G-8	D.C. bayonet	2.4	.80	.49	2.98
1493	S-8	D.C. bayonet	6.5	2.75	1.05	6.42
1630	S-8	D.C. prefocus	6.5	2.75	1.40	8.55
1651	S-8	S.C. bayonet	5	.60	.65	3.98
1724	S-11	D.C. bayonet	6.2	4.50	.87	5.29
1763	S-11	S.C. prefocus	6.1	4.10	1.20	7.60
1767	T-1¾	Midget screw	2.5	.20	.65	3.98
1768	T-1¾	Midget screw	6	.20	.90	5.50
1769	T-1¾	Midget screw	2.5	.20	.87	5.29
1775	T-1¾	Midget screw	6.3	.075	.87	5.29
1809	T-3¼	Min. bayonet	2	.06	.54	3.30
1813	T-3¼	Min. bayonet	14.4	.10	.25	1.58
1815•	T-3¼	Min. bayonet	14	.20	.20	1.22
1819•	T-3¼	Min. bayonet	28	.04	.36	2.18
1822	T-3¼	Min. bayonet	36	.10	.60	3.67
1828	T-3¼	Min. bayonet	37.5	.05	.65	3.98
1829•	T-3¼	Min. bayonet	28	.07	.35	2.14
1835	T-3¼	Min. bayonet	55	.05	.65	3.98
1847•	T-3¼	Min. bayonet	6.3	.15	.18	1.12
1850	T-3¼	Min. bayonet	5	.09	.25	1.53
1855	T-4½	Min. bayonet	6.3	.80	.35	1.99
1866	T-3¾	Min. bayonet	6.3	.25	.22	1.33
1881	T-3¾	Min. bayonet	15.5	.24	.18	1.12
1891•	T-3¾	Min. bayonet	14	.24	.16	1.00
1892	T-3¾	Min. bayonet	14.4	.12	.25	1.53
1898	T-3¾	Min. bayonet	14	.33	.35	2.14

†Outside coated red. ‡Outside coated green. §S.C. indicates single contact; D.C., double contact; Min., miniature. •Popular Types. \*FE included where applicable.

### NEON INDICATING GLOW LAMPS

Gaseous-discharge type for use as indicators. Average useful life, 25,000 hours AC; Types NE-17, 45, 48, 57, 58, 7,500 hours; Types NE-30, 34, 56, 79, 10,000 hours; Type NE-51, 15,000 hours. DC is approximately 60% of AC values. Ambient Temperature: Not to exceed 300°F.

Lamp No.	Nom. Watts	Volts (Circ.)	Bulb (Clear)	Base	Res.Ω Ohms	Net Each*
A1B	1/25	110-125	T-2	Wire term.	200K	\$0.14
A1Cπ	1/10	110-125	T-2	Wire term.	68K	.14
NE-2 (A1A)	1/17	110-125	T-2	Wire term.	150K	.10
NE-2A (A2A)	1/25	110-125	T-2	Wire term.	200K	.10
NE-2D (C7A)	1/15	110-125	T-2φ	SC Mid.Fig.	110K	.82
NE-2E (A9A)	1/15	110-125	T-2φ	Wire term.	100K	.10
NE-2H (C2A)π	1/4	110-125	T-2φ	Wire term.	30K	.12
NE-2J (C9A)π	1/4	110-125	T-2φ	SC Mid.Fig.	30K	.82
NE-2M (K2A)	1/17	110-125	T-2φ	Wire term.	150K	.34
NE-2P (K3A)π	1/4	110-125	T-2φ	Wire term.	33K	.34
NE-2V (A2B)	1/15	110-125	T-2	Wire term.	100K	.14
NE-17 (B5A)	1/4	110-125	T-4½	DC Bay.	30K	.90
NE-30 (J5A)	1	110-125	S-11	Med. Scr.#	None	1.20
NE-32 (L5A)	1	110-125	G-10	DC Bay.	7.5K	1.20
NE-34 (R2A)	2	110-125	S-14	Med. Scr.	None	1.85
NE-40 (6A)	3	110-125	S-14	Med. Scr.	None	2.70
NE-45 (B7A)	1/4	110-125	T-4½	Cand. Scr.	None	.85
NE-48 (B9A)	1/4	110-125	T-4½	DC Bay.	30K	.70
NE-51 (B1A)	1/25	110-125	T-3¼	Min. Bay.	200K	.21
NE-51H (B2A)π	1/7	110-125	T-3¼	Min. Bay.	47K	.23
NE-56 (J9A)	1	220-250	S-11	Med. Scr.#	None	1.25
NE-57 (F3A)	1/4	110-125	T-4½	Cand. Scr.#	None	.99
NE-58 (F4A)	1/2	220-250	T-4½	Cand. Scr.	None	.95
NE-79 (R1A)	1	110-125	S-7	DC Bay.	7.5K	1.34
NE-84 (K1A)π	1/4	110-125	T-2φ	Tel. slide	30K	.64

### AC-DC ARGON INDICATOR LAMPS

Lamp No.	Nom. Watts	Volts (Circ.)	Bulb (Clear)	Base	Res.Ω Ohms	Net Each*
AR-1 (W1A)	2	110-125	S-14	Med. Scr.	None	\$1.90
AR-3 (J2A)π	1/4	110-125	T-4½	Cand. Scr.	None	.85
AR-4 (J3A)π	1/4	110-125	T-4½	DC Bay.	15K	.75
AR-9 (K4A)	1/25	110-125	T-2	Wire term.	200K	.20

¶Lamps with screw base have proper ballast built-in. Those with bayonet base or wire terminals do not have them, but are to be supplied and attached by user. Resistance shown for normal operation at indicated circuit volts. φFormed tip bulb. πUse 135 v. minimum for satisfactory DC operation. θRound end bulb. #Center electrode connected to base shell. \*FET included.

### CIRCUIT COMPONENT NEON LAMPS

For use as voltage indicators, regulators, switching, etc. All ratings below are DC; all bulb types are T-2 except: NE-51S, NE-67 (T-4½). All have parallel-lobed electrodes (W-11), except NE-16, fireman's hat electrode (P-3). Ambient Temperature: -00° F +165° F, limit.

No. Lamp	Volts DC Starting	Operating Volts DC	DC Ma	Base	Net Each
NE-2ASΔ	60-90	55°	.03	Wire term.	\$0.2
NE-2L	65-85	50°	0.3	Wire term.	.1
NE-2SΔ	60-90	40-74	0.3	Wire term.	.2
NE-23	60-90	59°	0.3	Wire term.	.1
NE-68A	60-90	52-65	0.3	Wire term.	.4
NE-68AΔ	60-90	52-65	0.3	Wire term.	.3
NE-75	60-90	55°	1.4	Wire term.	.5
NE-76Δ	68-76	50-60	0.4	Wire term.	1.0
NE-77ω	Triode	Avg. 85	0.5	Wire term.	.5
NE-80Δ	60-80	50-58	0.1	Wire term.	.6
NE-81Δ	64-80	50-60	0.3	Wire term.	.5
NE-83Δ	60-100	65°	10.0	Wire term.	.2
NE-86Δ	55-90	55°	1.5	Wire term.	.1
NE-96	120-150	60-80	0.5	Wire term.	.2
NE-97	110-140	60-80	0.5	Wire term.	.2
NE-3	55-90	55°Δ	0.3	Tel. Slide	.4
NE-4	60-90	59°	0.3	Tel. Slide	.4
NE-5	120-150	60-80	0.5	Tel. Slide	.4
NE-51S	55-90	55°	0.2	Min. Bay.	.3
NE-67	55-90	56°	0.2	Min. Bay.	.3
NE-16	67-87	53-65	1.5	DC Bay.	.7

°Average, after 100 hours burning at rated current. individual lots may vary from average. ΔLeads are tinned. ωAverage greater than indicated value. ωWith 140-180 v. DC on outer electrode, lamp trigger with 140 DC trigger to cathode.



# Eldema INDICATORS FOR INDUSTRY

COMPTON, CALIF. • REPRESENTATIVES IN ALL PRINCIPAL CITIES

(Illustrations are greater actual size)

## C-LITES MINIATURE NEON AND INCANDESCENT LAMP CARTRIDGES

ELDEMA MINIATURE C-LITE CARTRIDGES EASILY INSERTED FROM FRONT OF THE PANEL. NEON TYPES AVAILABLE WITH BUILT-IN RESISTOR. TWO TERMINAL — COMPLETE INSULATION FROM THE PANEL. HIGH IMPACT PLASTIC LENS, CLEAR ANODIZED ALUMINUM CASE, HIGH DIELECTRIC INSULATOR, STAINLESS STEEL TERMINALS. MEETS MIL-L-3661.

### INCANDESCENT C-LITES—TYPE CF



**CF01**  
STOVEPIPE



**CF02**  
FLUSH



**CF03**  
SHORT FLAT

#### LENS COLORS

- ACS — Amber Clear
- ATS — Amber Translucent
- BCS — Blue Clear
- BTS — Blue Translucent
- CCS — Cloudy Clear
- GCS — Green Clear
- GTS — Green Translucent
- RCS — Red Clear
- RTS — Red Translucent
- WCS — Water Clear
- WTS — White Translucent
- YTS — Yellow Translucent

#### LAMP TYPES

LAMP NO.	VOLTS	AMPS (MA)	LIFE HOURS
680	5	60	50,000
1730	6	40	1,000
2114	6	60	3,000
1784	6	200	1,000
2180	6.3	40	50,000
2181	6.3	200	50,000
1869	10	14	20,000
2107	10	40	5,000
1705	14	80	750
2182	14	80	50,000
2102	18	40	1,000
1762	28	40	1,000

TO ORDER — SPECIFY STYLE, COLOR, AND LAMP TYPE. FOR EXAMPLE:  
CF03+RTS-1762

### NEON C-LITES — TYPE CG



**CG01**  
**CG01R**  
STOVEPIPE



**CG04**  
**CG04R**  
LONG FLAT

#### LENS COLORS

- ACS — Amber Clear
- CCS — Cloudy Clear
- RCS — Red Clear
- WCS — Water Clear
- YCS — Yellow Clear

#### LAMP TYPES

CG01 and CG04 — No Resistor  
NE2H — High Brightness  
NE2E — Standard Brightness

CG01R and CG04R — Built-in Resistor  
A1C-47K, High Brightness, 110 VAC  
A1B-150K, Std. Brightness, 90 VDC

TO ORDER — SPECIFY STYLE, COLOR, AND LAMP TYPE. FOR EXAMPLE:  
CG01-ACS-NE2E  
CG04R-RCS-A1B-150K

### NEW SHORT CARTRIDGE



**CG03**  
SHORT FLAT

Uses Short Neon Lamps — A1C High Brightness, A1B Std. Brightness  
Specify As Above — CG03 - ACS - A1B

### CLIP/SOCKET MOUNT



#10905 Spring Steel Clip and 2K Socket for C-Lite  
Mounting in 1/8" Hole.

## D-HOLDERS

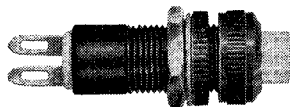
RUGGED BLACK ANODIZED ALUMINUM HOLDER, STEEL HEX NUT AND LOCK WASHER — CADMIUM PLATED AND IRRIDITED, HIGH DI-ELECTRIC INSULATOR. GOLD PLATED SOLDER CUP OR TIN PLATED SOLDER LUG TERMINALS. MEETS MIL-L-3661 SPECIFICATIONS.

### SINGLE LAMPHOLDER

Style DH — Mounts in 3/8" Hole

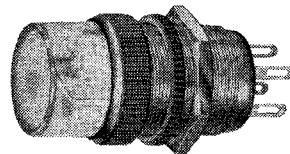


**DHAB-14B, LAMPHOLDER**



**DHKB-15B LAMPHOLDER**  
with CF03 C-Lite Installed  
**DUAL LAMPHOLDER**

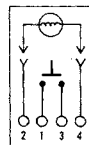
Style DF — Mounts in 3/4" Hole



**DFKB-17WCB, CLEAR LENS,**  
with Clear Anodized Aluminum  
Light Barrier Between Lamps  
**MOMENTARY SWITCH-LITE**  
Style DS — Mounts in 3/8" Hole



**DSA1B SWITCH-LITE, GOLD PLATED TURRET PINS AND CONTACTS. CF03 C-LITE INSTALLED.**



The DSA1B is momentary, normally open switch-lite with separate light circuit. Rated at 1/2 amp load.

## E-LITES PERMANENT NEON LAMP INDICATORS MILITARY TYPE — 25,000 HOUR LIFE — 3/8" MOUNTING



**EG01**



**EG03**

**BLACK ANODIZED ALUMINUM BODY, TIN PLATED TERMINALS**  
**HIGH IMPACT PLASTIC LENS**  
**MEETS MIL-L-3661**  
**OPTIONAL BUILT-IN RESISTOR**

#### STYLE

- EG01 (Dome)
- EG03 (Flat)

#### COLOR

- ACB (Amber)
- CCB (Cloudy)
- RCB (Red)
- WCB (Clear)

#### LAMP/RESISTOR

- NE2E
- NE2E-100K
- NE2H
- NE2H-33K

SPECIFY STYLE - COLOR - LAMP/RESISTOR  
EXAMPLE — EG03-ACB-NE2E-100K

# PILOT LITES FOR ALL APPLICATIONS **Eldema** CORPORATION

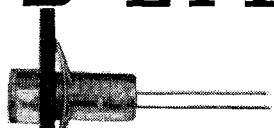
SUBSIDIARY OF GENISCO TECHNOLOGY CORPORATION

## B-LITES COMMERCIAL NEON INDICATORS

PERMANENT CLIP MOUNTING

REQUIRES ONLY 5/16-INCH PANEL HOLE

TYPE  
BG90



TYPE  
BG20



TYPE  
BG03



Types BG90 and BG20 moulded of high impact plastic. Available with attached resistor for 110 volt operation.

STYLE  
BG20 (Dome)  
BG90 (Flat)

COLOR  
AC - Amber  
CC - Cloudy  
RC - Red  
WC - Clear

LAMP  
NE2E - Standard Brightness  
NE2H - High Brightness  
NE2H-33K - For 110 volt

SPECIFY SHAPE - COLOR - LAMP — EXAMPLE: BG90-RC-NE2H

SERIES BG03 — INSULATED LEADS  
BUILT-IN RESISTOR FOR 110 VOLTS

HIGH IMPACT PLASTIC LENS,  
BRIGHT METAL COLLAR, NYLON  
BODY, 6-INCH LEADS.

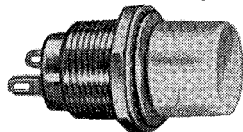
PART NUMBER  
BG03-ACS-NE2H-33K  
BG03-CCS-NE2H-33K  
BG03-RCS-NE2H-33K  
BG03-WCS-NE2H-33K

LENS COLOR  
Amber  
Cloudy  
Red  
Clear

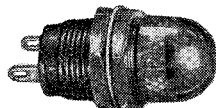
## LAMP HOLDERS FOR REPLACEABLE T-1 3/4 INCANDESCENT LAMPS

### A-SERIES

FRONT MOUNT IN 17/32" HOLE OR REAR MOUNT IN 15/32" HOLE — NICKEL PLATED BRASS BODY AND HARDWARE — PHENOLIC INSULATION — TINNED TERMINALS — PLASTIC LENS



AB112-A22AT



AC111-A21RC

#### HOLDER PART NUMBERS

AB111 Front Mount, Black  
AB112 Front Mount, Bright  
AC111 Rear Mount, Black  
AC112 Rear Mount, Bright

#### DOME LENS

A21AC Amber Clear  
A21AT Amber Translucent  
A21BT Blue Translucent  
A21CC Cloudy Clear  
A21GC Green Clear  
A21GT Green Translucent  
A21RC Red Clear  
A21RT Red Translucent  
A21WC Water Clear  
A21WT White Translucent  
A21YT Yellow Translucent

#### COLOR

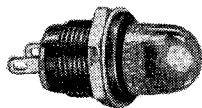
#### FLAT LENS

A22AC  
A22AT  
A22BT  
A22CC  
A22GC  
A22GT  
A22RC  
A22RT  
A22WC  
A22WT  
A22YT

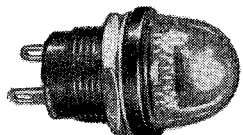
COMPLETELY INSULATED TWO  
TERMINAL UNITS. LENS AND  
LAMP EASILY REPLACED FROM  
FRONT OF THE PANEL.

### M-SERIES

FRONT MOUNT IN 15/32" HOLE — BLACK ANODIZED ALUMINUM BODY — STEEL MOUNTING HARDWARE — PHENOLIC INSULATION — TINNED TERMINALS — HIGH IMPACT PLASTIC LENS



**MA111-M12RC**  
Sub-Miniature  
Holder and Lens



**MA311 - M13RC**  
Watertight Unit  
with Two 1/16" O Rings  
to Seal to Panel Face

#### STANDARD ASSEMBLY

MA111 - M12AC  
MA111 - M12BC  
MA111 - M12GC  
MA111 - M12RC  
MA111 - M12WC  
MA111 - M12WT  
MA111 - M12YT

#### COLOR

Amber Clear  
Blue Clear  
Green Clear  
Red Clear  
Water Clear  
White Translucent  
Yellow Translucent

#### WATERTIGHT ASSEMBLY

MA311 - M13AC  
MA311 - M13BC  
MA311 - M13GC  
MA311 - M13RC  
MA311 - M13WC  
MA311 - M13WT  
MA311 - M13YT

M SERIES UNITS MEET MIL-L-3661 AND MS25256 SPECIFICATIONS AND PART NUMBER

### R-SERIES

REAR MOUNTS IN 3/8" DIAMETER HOLE — 1/8" PANEL — ALUMINUM HOUSING AND MOUNTING NUT — PHENOLIC INSULATION — TINNED TERMINALS — HIGH IMPACT PLASTIC LENS



RLD6B-L09WC

#### HOLDER NUMBER

RLD6B (Black)  
RLD6S (Silver)

#### FRESNEL RING LENS

L09AC Amber  
L09CC Cloudy  
L09GC Green  
L09RC Red  
L09WC Clear

#### SMOOTH FACE LENS

L10AT Amber  
L10BT Blue  
L10GT Green  
L10RT Red  
L10WT White  
L10YT Yellow

NEW SUB-MINIATURE LAMP ASSEMBLY  
.193 PANEL HOLE MOUNT — MEETS MS25446

### J-SERIES

#### ASSEMBLY

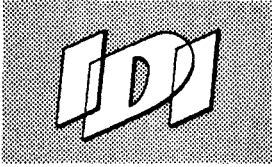
JK511 - J21AT  
JK511 - J21BT  
JK511 - J21GT  
JK511 - J21RT  
JK511 - J21WC  
JK511 - J21WT  
JK511 - J21YT

#### COLOR

Amber (Yellow)  
Blue  
Green  
Red  
Clear  
White  
Light Yellow



5 volt — 60 ma — 100,000 hour lamp  
Stainless steel body and nut  
High strength plastic lens  
Insulated leads



# INDUSTRIAL DEVICES, Inc.

EDGEWATER, NEW JERSEY

## OMNI-GLOW PILOT LIGHT

For use on instrument panels, appliances, switchboards, all electrical and electronic apparatus, OMNI-GLOW will last in excess of 10,000 to 25,000 hours of operating life.

With built-in glow lamp and current limiting resistor, all mechanical spring contacts are eliminated, providing a cost-saving, rugged unit relatively free from failure due to vibration or shock.

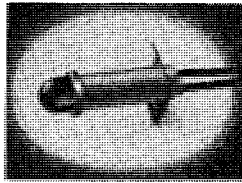
Easy mounting — only a 1/2" hole required for any panel thickness. Instant fastening — speed nut assures permanent shock and vibration-proof attachment.

Drawing less than 1/10 watt at 115 volts, long life, high reliability operation is provided over the 75-150 volt range; can also be used at higher voltage with decreased life.

Nylon body and acrylic lens assembly is 1 3/8" long overall. Lens extends 1/2" in front of panel. Black plastic (105°C) leads are 4 1/2" long, stripped and tinned 1/2".

Four standard models have red (Model #1010A1), clear (Model #1010A2), amber (Model #1010A3), or white translucent (Model #1010A4) lenses.

Furnished complete with lamp and speed nut, OMNI-GLOW is UL approved—CSA Approval No. 13346.



Catalog Number	Description	List Price
1010A*	OMNI-GLOW Pilot Light	\$ .90

\* Note (1) red, (2) clear, (3) amber, (4) white.

## SAFE-T-KLIP

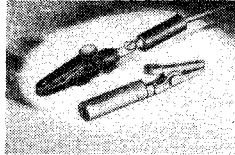
(U. S. Patent 2,754,490)

New convenience and safety are realized through the use of 100% insulation on these test clips. Tough nylon insulation covers the entire clip, including the nose, without the bulkiness of rubber boots or insulating tape. Danger of short circuit due to clips touching each other or other components is eliminated, and test leads may be changed from one connection to another without cutting the power in the equipment.

Available in pairs (one red, one black) SAFE-T-KLIP incorporates a cadmium plated steel alligator clip and provides shock-proof, short-circuit proof operation in excess of 600 volts. Width of the clips is 3/8"; maximum height is 3/4".

Six models are available. The #1410A is for use with a wire lead and provides either a soldered or screw terminal connection. The nylon sleeve is threaded to the clip for easy connection: Overall assembled length is 2 3/4". The #1410B, with overall length of 2 1/2", provides positive clip connection to all standard (.081 dia.) phone-tip test prods. The #1410C has a jack for standard banana plugs and an overall length of 2 3/4".

The 1410D is similar to 1410B except that the entrance hole is modified for Signal Corps. application.

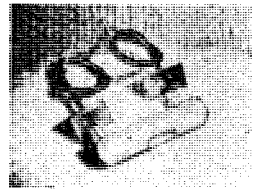


Catalog Number	Description	List Price
1410A	SAFE-T-KLIP for use with lead wire provides screw terminal or solder Color — black (Model No. 1410-A1) Color — red (Model No. 1410-A2)	1.80 pr. .90 ea. .90 ea.
1410B	SAFE-T-KLIP for use with standard .080" test prod Color — black (Model No. 1410-B1) Color — red (Model No. 1410-B2)	1.50 pr. .75 ea. .75 ea.
1410C	SAFE-T-KLIP for use with banana plug Color — black (Model No. 1410-C1) Color — red (Model No. 1410-C2)	1.20 pr. .60 ea. .60 ea.
1410D	SAFE-T-KLIP for Signal Corps use Color — black (Model No. 1410-D1) Color — red (Model No. 1410-D2)	1.40 pr. .70 ea. .70 ea.
1410F	SAFE-T-KLIP with type AGX 5 amp fuse Color — black (Model No. 1410F-E1) Color — red (Model No. 1410F-E2)	2.30 pr. 1.15 ea. 1.15 ea.
1410M	SAFE-T-KLIP Miniature for lead wire Color — black (Model No. 1410M-F1) Color — red (Model No. 1410-F2)	1.20 pr. .60 ea. .60 ea.

## TINY-GLOW PILOT LIGHT

Midget Size. For use on instrument panels, switchboards, electrical and electronic apparatus. Neon lamp draws less than 1 milliampere at 110 volts. Over 25,000 hours of actual service, operates over a wide range, 75 to 250 volts, A.C. or D.C. TINY-GLOW outlasts the equipment that it serves.

Shock and vibration proof, no spring contacts, soldered connections. Requires less back-of-panel space than any other pilot light. Polished chrome plated housing, 3/8" brass mounting studs. Mounts simply and easily with speed nuts on two 1 3/4" holes, 1 7/8" apart. Furnished complete with lamp and speed nuts. Dimensions: 1 1/4" x 3/8" x 3/8".



Catalog Number	Description	List Price
300	TINY GLOW Pilot Light	\$1.25

## MINI-VOLT VOLTMETER

(U.S. Pat. 2,644,134)

MINI-VOLT is an "abuse-proof" voltmeter, sufficiently accurate to indicate a 2 or 3 volt drop on 110 volt line. Virtually burn-out proof, this rugged unit is used by electricians, radio and TV repairmen, refrigerator and air conditioning servicemen, experimentors, lab technicians, handymen.

MINI-VOLT has wide application for all equipment whose proper operation requires correct voltage.

In addition to measuring the exact voltage over the range from 65 to 660 volts, Model #400B is used to identify AC or DC lines, check rectifiers, filter capacitors, chokes; test for blown fuses, grounded components, DC polarity, measure voltage drops with load, and 1001 other uses.

For use on AC (any frequency) or DC, MINI-VOLT, with an impedance of approximately 1/2 megohm, draws negligible current and can therefore provide dependable voltage readings even on circuits used in electronic apparatus.

Will provide a lifetime of service — glow lamp is guaranteed for 25,000 hours of actual operation. Furnished complete with extra-heavy insulated 12-inch flexible test leads and test prods.

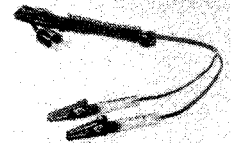
Lightweight impact resistant case and dial panel, thoroughly insulated. So rugged that instrument can be thrown into tool box or dropped to floor without damage. C.S.A. approval #8910.



Catalog Number	Description	List Price
400B	Range 65 to 660 volts	\$3.75

## SAFE-T-KORD Model 1480

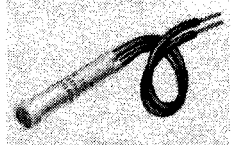
- A safe convenient way to apply line voltage to assemblies and components for test and experimentation.
- Eliminates accidental shocks and shorts to avoid blowing the main fuses.
- Consists of two nylon-insulated Safe-T-Klips, each with type AGX-5 ampere fuse and six foot line cord.
- Fast fuse check possible with see-thru Lexan fuse housing.



Catalog Number	Description	List Price
1310	LINE-VOLT Test Lite (55-550 volts)	\$1.50

## GLO-DOT PILOT LIGHT

Small and attractive pilot light mounts in 3/8" hole with speed nut (provided). Built-in resistor assures long life while strain-relief provides added protection. Entire series UL & CSA approved. 4 1/2" leads, 22 AWG stranded 105°C insulation supplied stripped 1/2". Top ring is .340 dia. by .140" high while length of body under shoulder is 1 3/4" overall.



Catalog Number	Description	List Price
2110A*	GLO-DOT w/(see note) lens	\$ .85

\*Note: (1) red, (2) clear, (3) amber, (4) white

**INDUSTRIAL DEVICES, INC.**

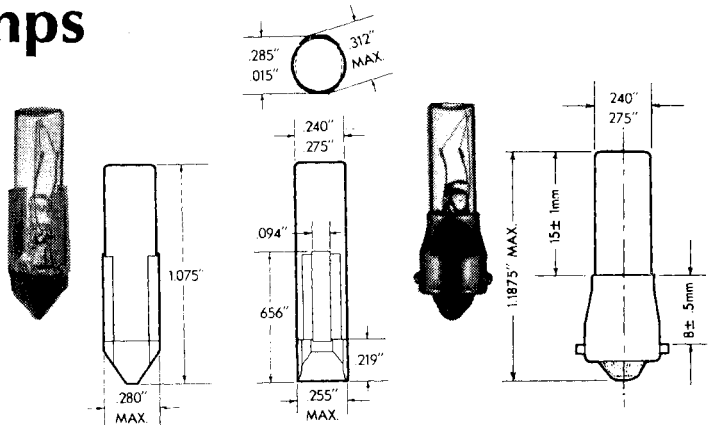
**EDGEWATER, NEW JERSEY**

# SYLVANIA SPEC-MASTER PILOT LIGHTS

## Slide Base Pilot Lamps

(For use with Universal Housings)

- Minimum static life... 5000 hours.
- Rugged flair-stem construction provides highest environmental reliability.
- Established resonance frequencies for each lamp type permits selection of the right lamp for your job.
- Exclusive slide base provides better electrical contact and reduces lamp failure due to extreme shock and vibration.
- SPEC-MASTER line of Pilot Lamps includes the world's smallest, most reliable standard-voltage (120 volts) incandescent lamp. No bulky, expensive transformers required!

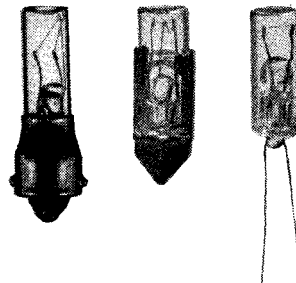


(To Order Use LAMP NO. & MFG. CODE)							
Lamp No.	Mfg. Code	Volts	Avg. Watts	Avg. Current (Amps)	Base	Quantity	Price
6PSB	B0672	6	.8	.140	Slide	1-9 10-99 100-999 1000-Over	\$0.45 \$0.43 \$0.41 *
12PSB	B1272	12	2.0	.170			
24PSB	B2472	24	1.7	.073			
28PSB	B2972	28	1.1	.040			
48PSB	B4872	48	2.5	.053			
60PSB	B6072	60	3.0	.050			
120PSB	B2072	120	3.0	.025			
6MB	B5100	6	.8	.140	Miniature	1-9 10-99 100-999 1000-Over	\$0.45 \$0.43 \$0.41 *
12MB	B5101	12	2.0	.170			
24MB	B5103	24	1.7	.073	Bayonet	1-9 10-99 100-999 1000-Over	\$0.45 \$0.43 \$0.41 *
28MB	B5104	28	1.1	.040			
48MB	B5106	48	2.5	.053			
60MB	B5107	60	3.0	.050			
120MB	B5108	120	3.0	.025			
6PS	B0673	6	.8	.140	Unbased	1-9 10-99 100-999 1000-Over	\$0.38 \$0.36 \$0.33 *
12PS	B1273	12	2.0	.170			
24PS	B2473	24	1.7	.073			
28PS	B2973	28	1.1	.040			
48PS	B4873	48	2.5	.053			
60PS	B6073	60	3.0	.050			
120PS	B2073	120	3.0	.025			

\*Contact Your Distributor

## Miniature Bayonet Base Pilot Lamps

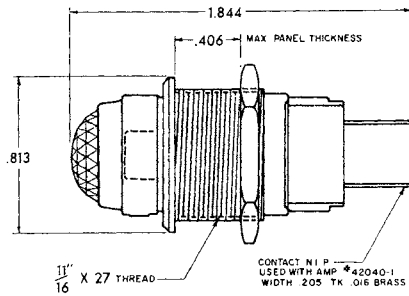
SPEC-MASTER Bayonet Based Pilot Lamps are designed for use where it is economically unfeasible or physically impossible to replace existing housings with the new Slide Base design. These Bayonet Based Lamps offer the same long life and environmental reliability as the Slide Base types. Can replace any conventional T3¼ Miniature Bayonet Miniature Lamp.



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# Universal, Shock-Resistant Housing

SPEC-MASTER HOUSINGS (for use with Slide Based Pilot Lamps). Made of rugged General Purpose Phenolic with nickle-plated contacts. Chrome-plated threaded mounting bushing. Electrical contact can be made with AMP Connector 42040-1 or leads can be soldered through holes in contacts. Length of housing: 1 $\frac{7}{32}$ ". Maximum panel thickness to which housing can be mounted:  $\frac{13}{32}$ ". Meets Military requirements for Dissimilar Metals. UL Approved, 75 Watts at 125 Volts.



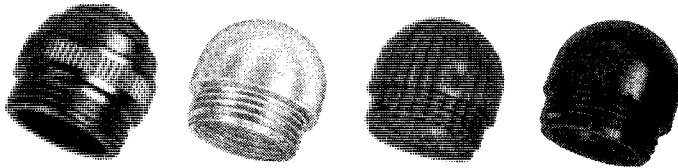
(To Order Use ORDERING DESIGNATION)

(For use with SLIDE BASED PILOT LAMPS)  
Ordering Designation—Housing B0099

Quantity	Price
1-9	\$0.58
10-99	\$0.54
100-999	\$0.50
1000-Over	\$0.49

## SPEC-MASTER Lenses

Made of new high-temperature LEXAN® Thermo-plastic. Operates up to 290°F at 66 psi. Allows a wider angle of visibility with only a 15° loss of signal. Available in four types: Jeweled, Transparent, Fluted, Opaque.



(To Order Use ORDERING DESIGNATION)

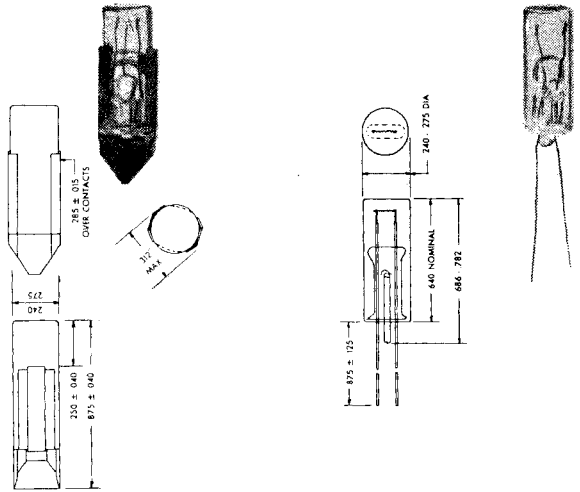
Jeweled		Transparent		Fluted		Opaque		Quantity	Price
Color	Ordering Designation	Color	Ordering Designation	Color	Ordering Designation	Color	Ordering Designation		
Red	JR-B0100	Red	TR-B0110	Red	FR-B0120	Red	OR-B0130	1-9	\$0.14
Green	JG-B0102	Green	TG-B0112	Green	FG-B0122	Green	OG-B0132		
Blue	JB-B0103	Blue	TB-B0113	Blue	FB-B0124	Yellow	OY-B0131	10-99	\$0.13
Amber	JA-B0106	Amber	TA-B0111	Amber	FA-B0126	White	OW-B0133	100-999	\$0.12
		Yellow	TY-B0114	Clear	FC-B0125				
		Clear	TC-B0116						

For complete manual on Pilot and Indicator Lights contact your Distributor or Lighting Division, Dept. 144, Sylvania Electric Products Inc., Salem, Mass.

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# Sylvania Indicator Lamps

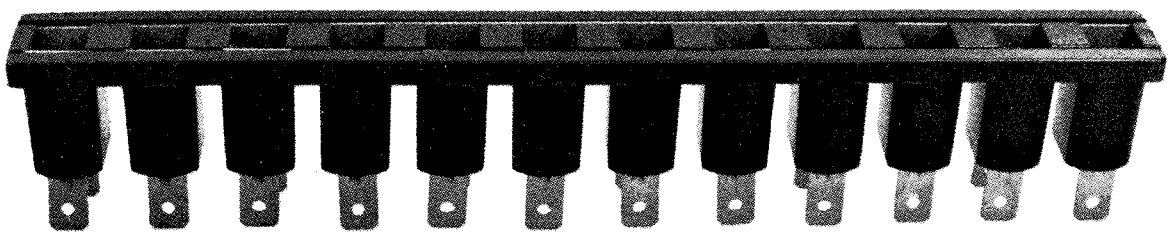
- Life ratings of lamps range from 5000 to 15,000 hours.
- Slide Base and new, ruggedized construction resist extremes of shock and vibration.
- Moulded glass mount gives greater filament stability.
- Flat-Top design for brighter, more positive undistorted signals.
- Working temperature range of base insulator material:  $-70^{\circ}\text{F}$  to  $+375^{\circ}\text{F}$ .
- Dumet lead wire; nickel-iron alloy core; copper sleeve with same coefficient of expansion as glass.
- Nickel-plated contacts comply with Military Standard MS-33586 (Dissimilar Metals).
- Unbased lamps have nominal lead length of  $\frac{7}{8}$ ".
- Used by major computer manufacturers and other leaders in the electronic field.



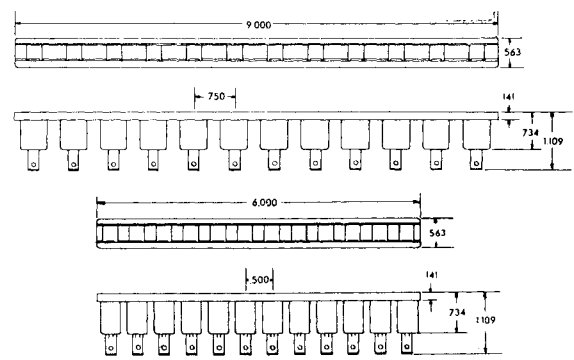
BASED LAMPS							UNBASED LAMPS			
(To Order Use LAMP NO. & MFG. CODE)										
Lamp Number	Mfg. Code	Volts	Current Amps		Quantity	Price Each	Lamp Number	Mfg. Code	Price	
			Avg. Watts	Min. Max.						
4CSB	B0430	4	.068	.015 — .020			4CS	B0432		
4ESB	B0450	4	.16	.035 — .045			4ES	B0452		
5ESB	B0550	5	.20	.035 — .045			5ES	B0551		
6ESB	B0650	6	.24	.035 — .045			6ES	B0652		
10CSB	B1030	10	.18	.015 — .020			10CS	B1031		
10ESB	B1063	10	.40	.035 — .045	1-9	\$0.43	10ES	B1053	\$0.33	
12ESB	B1255	12	.36	.035 — .045	10-99	\$0.41	12ES	B1257	\$0.31	
16CSB	B1630	16	.28	.015 — .020	100-499	\$0.37	16CS	B1632	\$0.27	
16ESB	B1650	16	.64	.035 — .045	500-Over		16ES	B1652		
18ESB	B1860	18	.72	.035 — .045			18ES	B1861		
24ESB	B2455	24	.96	.035 — .045			24ES	B2454		
24CSB	B2490	24	.42	.015 — .020			24CS	B2491		
28ESB	B2900	28	1.12	.035 — .045			28ES	B2905		
					1-9	\$0.65			\$0.58	
					10-99	\$0.61			\$0.54	
					100-499	\$0.55	10AS	B1041	\$0.45	
					500-Over					
					1-9	\$0.49			\$0.39	
					10-99	\$0.44			\$0.36	
48ESB	B4861	48	1.92	.035 — .045	100-499	\$0.38	48ES	B4862	\$0.31	
					500-Over					

Contact Your Distributor

## Strip Sockets\*



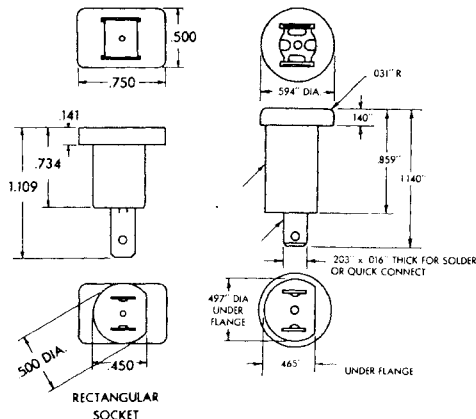
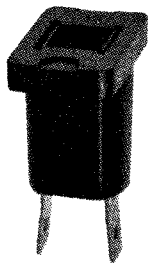
Made of LEXAN®. Twelve sockets on either  $\frac{1}{2}$ " or  $\frac{3}{4}$ " centers. Available with either common ground connection for all sockets or individual ground connection for each socket. Nickel-plated socket contacts, when used with nickel-plated indicator lamps, comply with Military Standard MS-33586 (Dissimilar Metals). Strip of 12 sockets is easily cut to provide any smaller number of sockets. Each strip includes three Tinnerman clips for mounting to a panel. Two clips are recommended for strips of two to five sockets; three clips for five to twelve sockets. If additional clips are required, C10464-012-27 should be used with the  $\frac{3}{4}$ " spacing; C11600-012-27 for  $\frac{1}{2}$ " spacing. A standard AMP receptacle 42040-1 may be used to make electrical connection to the sockets, or leads may be soldered to socket contacts. Receptacles available from AMP, Inc., Harrisburg, Pa.



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# Single Sockets\*

Two types available: rectangular and round. Nickel-plated contacts comply with Military Standard MS-33586. By rotating the rectangular socket in the panel in which it is mounted, the same spacing dimension as the socket strip is maintained, whether it be the 1/2" or 3/4" centers. AMP receptacle 42040-1 may be used with the single socket. One Tinnerman clip, number C10464-012-27, is recommended for each single socket.



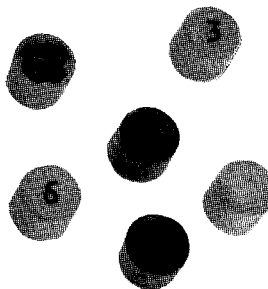
(To Order, Use ORDERING DESIGNATION)				(To Order, Use ORDERING DESIGNATION)			
Product Description	Ordering Designation	Quantity	Prices	Product Description	Ordering Designation	Quantity	Prices
Strip Socket, 1/2" Centers, Common Ground	Strip - B1250	1-9	\$2.65	Single Socket Round	Socket - B0150	1-9	\$0.26
		10-19	\$2.55			10-99	\$0.24
Strip Socket, 3/4" Centers, Common Ground	Strip - B1275	20-49	\$2.35	Single Socket Rectangular	Socket - B0151	100-499	\$0.22
		50-Over	*			500-Over	*
Strip Socket, 1/2" Centers, Individual Contacts	Strip - B3250	1-9	\$2.75	(Tinnerman clips for socket mounting included)			
		10-19	\$2.65	*Contact Your Distributor			
Strip Socket, 3/4" Centers, Individual Contacts	Strip - B3275	20-49	\$2.45				
		50-Over	*				

(Tinnerman clips for socket mounting included)

\*Contact Your Distributor

# Color Caps

Two types of color caps available for coding of circuits: Profax and Pyrex hard glass. The Profax cap should be used with lamps rated below 1.5 watts. Heat generated by lamps of 1.5 watts or higher may discolor caps. A special Pyrex color cap is available for use with lamps above 1.5 watts. The Profax cap is desirable in applications in which aesthetic value and illumination of the cap is important.



(To Order, Use ORDERING DESIGNATION)

PROFAX		PYREX GLASS		Product Description	Quantity	Price
Color	Ordering Designation	Color	Ordering Designation			
				PROFAX COLOR CAPS WITH LEGEND (0-9 or A-Z)	1-9	\$0.07
					10-99	\$0.065
				Only PROFAX caps can be legended. (Profax caps can have 2 numbers or letters stamped on. For the second legend add 1c extra per cap.)	100-499	\$0.06
					500-Over	*
Red	CAP-B8001	Red	CAP-B8071		1-9	\$0.06
Yellow	CAP-B8002	Yellow	CAP-B8072		10-99	\$0.055
White	CAP-B8003	White	CAP-B8073		100-499	\$0.05
Green	CAP-B8004	Green	CAP-B8074	COLOR CAPS, LARGE PROFAX —	500-Over	*
Blue	CAP-B8005	Blue	CAP-B8075	COLOR CAPS, PYREX HARD GLASS		

\*Contact Your Distributor

U.S. Patent 3,082,397

For complete manual on Pilot and Indicator Lights contact your Distributor or Lighting Division, Dept. 144, Sylvania Electric Products Inc., 60 Boston Street, Salem, Mass.

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**GENERAL TELEPHONE & ELECTRONICS GTE**



# Pinlite®

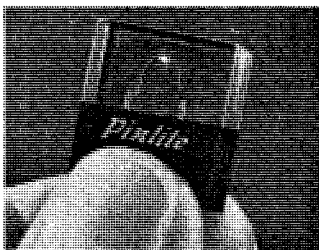
## THE WORLD'S SMALLEST INCANDESCENT LAMP

### PINLITE FEATURES

- Lowest Power Consumption
- Lowest Series "L" & Shunt "C"
- IR and UV Emission
- Smallest Size
- Fastest Response (Audio Range)
- Vibration & Shock Resistant
- Built-in Lens Concentrates Light Beam Up to 10X Normal Intensity

### PINLITE APPLICATIONS

- Transistor Indicators
- Microwave Noise Sources
- Modulated Light Source
- Microwave Bolometers
- Optical Point Sources
- Medical & Industrial Light Probes
- Remote Electronic Attenuators
- Read Out Devices
- Pointer & Meter Scale Illuminators
- Photometric Instrumentation
- Light Actuated Switches
- Telemetry

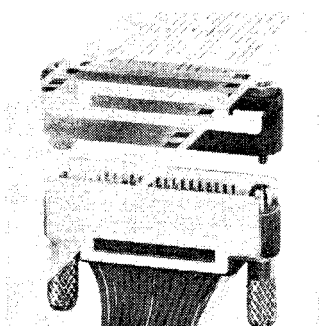


### The "THUMB-THING"... Pinlite Test Component

Here is your opportunity to test the PINLITE without fear of losing or mishandling this incredibly tiny lamp.

The Thumb-Thing consists of a PINLITE embedded in a clear plastic container, together with a micro-miniature battery and a switching arrangement. Provides engineers with a practical, easy-to-handle method of testing PINLITES. Battery is easily removed, exposing two sturdy leads which can be connected to an external power source or test signal.

Model 15 Contains Type 15-15 Pinlite    Model 12 Contains Type L12-12 Pinlite  
Price: \$10.00 each Federal Excise Tax and Battery Included.



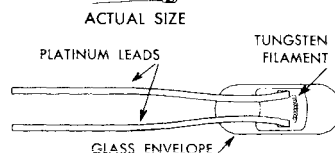
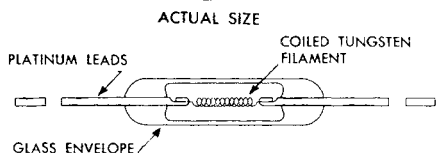
### A Compact Readout Device with up to 32 Individual Light Sources Per Inch

The Pinlite Division is now offering the new Multi-Track Head which can be used in conjunction with perforated tapes, photo sensitive film, or other optical sensing devices to provide a convenient means of relating time sequences and/or controlling intermittent on-off applications.

The Pinlite Multi-Track Head is presently available in two models:

1. The Model 16-1212, featuring 16 independent connected type L12-12 Pinlites spaced on .06 centers.
2. The Model 32-1212, featuring 32 independent connected type L12-12 Pinlites spaced on .03 centers.

### SPECIFICATIONS



AXIAL LEADED STYLE					
10-10	13-7	15-15	15-45	30-30	60-25
1.0	1.35	1.5	1.5	3	6
10	6.00	15	45	30	25
.016	.016	.016	.030	.030	.040
.070	.070	.070	.125	.125	.200
16	38	13.5	4	11	27
100	215	100	33	100	240
4	4	5	10	7	8
25	20	60	220	250	400
750	500	800	1000	1000	1000
3	3	3	5	5	5
3/8	3/8	3/8	3/8	3/8	3/8

Type
Operating Voltage ..... (Volts)
Operating Current ..... (Milliamps)
Diameter ..... (Inches)
Length ..... (Inches)
Cold Resistance ..... (Ohms)
Hot Resistance ..... (Ohms)
Pulse Response* ... (Milliseconds)
Total Light Output (Millilumens)
Life Expectancy ..... (Hours)
Lead Diameter ..... (Mils)
Lead Length ..... (Inches)

LENS STYLE				
L12-3	L12-6	L12-12	L15-30	L15-45
1.25	1.25	1.25	1.5	1.5
3	6	12	30	45
.030	.030	.030	.030	.030
.080	.080	.080	.080	.080
86	35	16	5.5	4
400	200	100	50	33
3	4	5	7	10
5	15	50	160	220
500	750	1000	1000	1000
4	4	4	4	4
3/8	3/8	3/8	3/8	3/8

..... Platinum	..... Lead Material	..... Platinum
..... Tungsten	..... Filament Material	..... Tungsten

\*To 1/2 Brightness.

### PRICES\*

4.75	7.95	4.75	4.00	4.00	4.00	Sample Quantity (1-9)	10.00	6.00	5.00	5.00	5.00
2.50	4.45	2.50	2.00	2.00	2.00	Qty. Prices (5000 - up)	5.25	2.00	1.75	1.75	1.75

\*f.o.b. Shipping Point. All Prices subject to 10% Fed. Ex. Tax. DELIVERY — Most quantities from stock.

### SPECIAL PINLITES AND ASSEMBLIES

With a sound technical background and experience in the production and design of micro-miniature components, Pinlite Division now includes an additional service to you — the design of micro-modules and micro-miniature assemblies. The availability of Pinlites in completed assemblies (to your specifications) eliminates the need for additional and delicate handling procedures and insures 100% usage

of the lamps. This concept of serving express customer needs also extends to Pinlite design. Although the specifications above describe our standard line of Pinlites, it should be understood that with our progressive manufacturing techniques and engineering capabilities, a micro-miniature lamp can be designed to fulfill your specific requirements.

# Pinlite Division

KAY ELECTRIC CO.

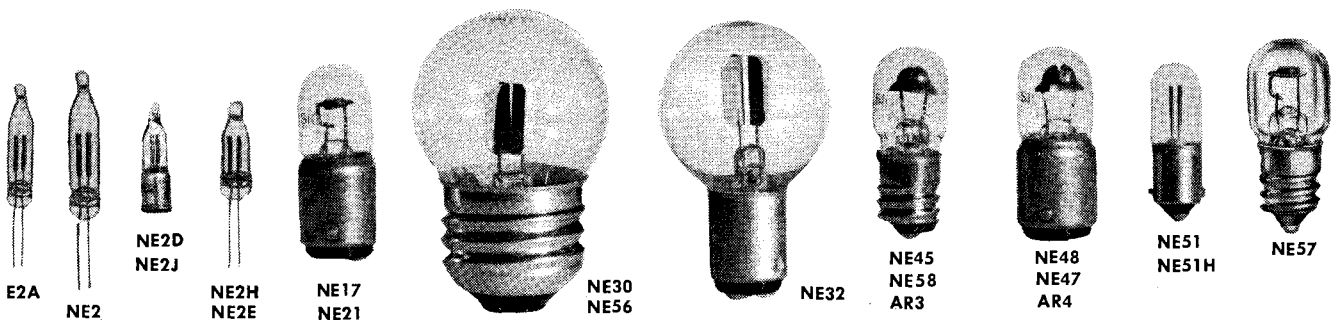
FAIRFIELD, NEW JERSEY 07007

# Signalite

## NEON GLOW LAMPS SPECIFICATIONS

The selection of Signalite glow lamps shown here are those which, in our experience, are in greatest demand and represent the greatest proportion of both OEM and renewal sales. All other NE type lamps and circuit component lamps are available.

DESIGNATION		MECHANICAL DATA				ELECTRICAL DATA						
LAMP NO.	ASA NO.	MAXIMUM OVERALL LENGTH (inches)	BASE	BULB	CIRCUIT VOLTS AC or DC	WATTS NOM.	SERIES RESIST. OHMS	AVERAGE USEFUL LIFE HOURS*	MAX. BREAKDOWN VOLTAGE AC	DC	DESIGN CURRENT MA.	SUGGESTED RETAIL PRICE
NE2	A1A	1 $\frac{1}{6}$ †	1" Wire Terminal	T2	105-125	1/17	150,000 Ex.	25,000	65	90	0.5	\$ .10
NE2A	A2A	2 $\frac{1}{32}$ †	2" Wire Terminal	T2	105-125	1/25	220,000 Ex.	25,000	65	90	0.3	.10
NE2D	C7A	1 $\frac{1}{6}$	S.C. Midget Flange	T2	105-125	1/15	100,000 Ex.	25,000	65	90	0.6	.82
NE2E	A9A	3/4†	2" Wire Terminal	T2	105-125	1/15	100,000 Ex.	25,000	65	90	0.6	.10
NE2H	C2A	3/4†	2" Wire Terminal	T2	105-125**	1/4	30,000 Ex.	25,000	95	135	1.9	.12
NE2J	C9A	1 $\frac{1}{6}$	S.C. Midget Flange	T2	105-125**	1/4	30,000 Ex.	25,000	95	135	1.9	.82
NE17	B5A	1 $\frac{1}{2}$	DC Bayonet	T4 $\frac{1}{2}$	105-125	1/4	30,000 Ex.	7,500	55	75	2.0	.90
NE21	B6A	1 $\frac{1}{2}$	S.C. Bayonet	T4 $\frac{1}{2}$	105-125	1/4	30,000 Ex.	7,500	55	75	2.0	.95
NE30	J5A/J6A	2 $\frac{1}{4}$	Medium Screw	S11	105-125	1	4,800 In.	10,000	60	85	12.0	1.20
NE32	L5A/L6A	2 $\frac{1}{8}$	DC Bayonet	G10	105-125	1	4,800 Ex.	10,000	60	85	12.0	1.20
NE45	B7A	1 $\frac{1}{32}$	Cand. Screw	T4 $\frac{1}{2}$	105-125	1/4	30,000 In.	7,500	65	90	2.0	.85
NE47	B8A	1 $\frac{1}{2}$	S.C. Bayonet	T4 $\frac{1}{2}$	105-125	1/4	30,000 Ex.	7,500	65	90	2.0	.85
NE48	B9A	1 $\frac{1}{2}$	DC Bayonet	T4 $\frac{1}{2}$	105-125	1/4	30,000 Ex.	7,500	65	90	2.0	.70
NE51	B1A	1 $\frac{1}{6}$	Min. Bayonet	T3 $\frac{1}{4}$	105-125	1/25	220,000 Ex.	15,000	65	90	0.3	.21
NE51H	B2A	1 $\frac{1}{6}$	Min. Bayonet	T3 $\frac{1}{4}$	105-125**	1/7	47,000 Ex.	25,000	95	135	1.2	.23
NE56	J9A/L1A	2 $\frac{1}{4}$	Medium Screw	S11	210-250	1	30,000 In.	10,000	60	85	5.0	1.25
NE57	F3A	1 $\frac{1}{32}$	Cand. Screw	T4 $\frac{1}{2}$	105-125	1/4	30,000 In.	7,500	55	75	2.0	.99
NE58	F4A	1 $\frac{1}{32}$	Cand. Screw	T4 $\frac{1}{2}$	210-250	1/2	100,000 In.	7,500	65	90	2.0	.95
AR3	J2A	1 $\frac{1}{32}$	Cand. Screw	T4 $\frac{1}{2}$	105-125	1/4	15,000 In.	***	80	115	3.5	.85
AR4	J3A	1 $\frac{1}{2}$	DC Bayonet	T4 $\frac{1}{2}$	105-125	1/4	15,000 Ex.	***	80	115	3.5	.75



NOTES:

\* Life when operated on AC. For standard-brightness lamps, life on DC is approximately 60% of these values. For high-brightness lamps, life on DC is slightly less than 60%.

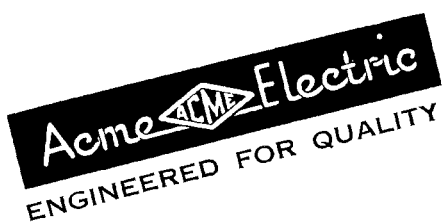
\*\* On DC, use 150 volts, minimum, for satisfactory operation.

† Dimension is for glass parts only.

\*\* Ultraviolet output drops to 50% of initial in 150 hours. Visible light decreases to 50% in 1,000 hours.

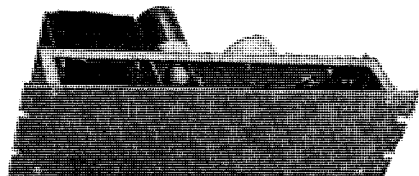
# Signalite INCORPORATED

NEPTUNE, NEW JERSEY



**POWER SUPPLIES**  
**CONSTANT VOLTAGE STABILIZERS**  
**MAGNETIC AMPLIFIERS**  
**VOLTAGE ADJUSTORS**

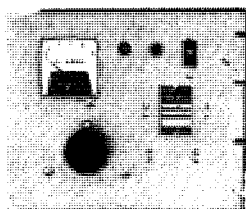
**DC REGULATED POWER SUPPLIES**



Continuous duty magnetic power supplies. No tubes. Output voltage adequately maintained. Rapid recovery from input line variations and/or sudden load changes. Current limited. Units feature constant voltage transformer, resonant capacitor, electrolytic filter, silicon rectifiers, adequate bleeder. Bulletin 174.

100-130 volt, 60 cycles; Less than 1% ripple voltage RMS.

Catalog No.	Watts	Amps	D.C. Volts	Approx. Efficiency
PS-41423	150	6.25	24	76
PS-41424	200	4.15	48	81
PS-41425	250	2.0	125	86
PS-41426	300	2.0	150	86
PS-41427	200	1.0	200	80
PS-41428	250	1.0	250	85



**UNFILTERED, NON REGULATED POWER SUPPLIES**

Sturdily built, economically priced, manual regulation, silicon rectifiers provide full-wave d-c output. Bulletin 174.

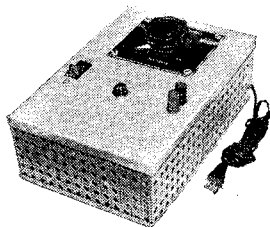
Input 100-120 volts, 60 cycles.

Catalog No.	Watts	D.C. Volts	Amps
PS-39887	300	0-100	3
PS-39888	500	0-100	5
PS-39889	1000	0-100	10
PS-39890	2000	0-100	20

**ADJUSTABLE DC POWER SUPPLIES**  
**Portable or Rack Models**

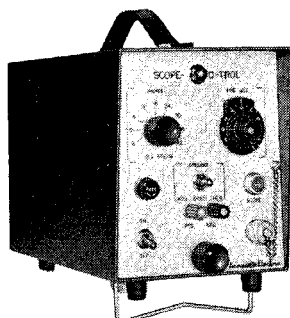
95-130 volts, 60 cycle. Direct current output stabilized and adjustable from 0-45 volts, current outputs 0.25 amp. and 0-5 amps. Voltage regulation approximately 5% between full load and no load.

Available in portable, plug-in model or standard rack type. Bulletin 17.



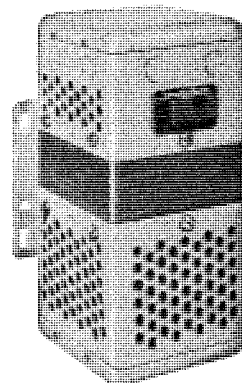
**SCOPE-O-TROL**

Operates from 115 volt, 60 cycle circuit. Regulated output range from 0 to 300 volts d-c, stabilized at any desired setting. Coarse adjustment, 75 volt steps, fine adjustment .25/degree. Less than 1 millivolt ripple RMS. Current limiting and short circuit protection. Bulletin 17.



**CONSTANT VOLTAGE STABILIZERS**

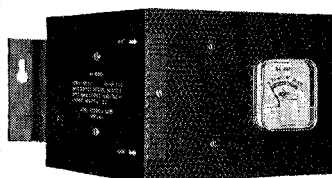
Catalog Number	VA Output Capacity	Input Voltage Range	Output Voltage ±1%
T-31936	15	95-130	120*
T-31937	30	95-130	120*
T-31938	60	95-130	120*
T-31939	120	95-130	120*
T-31940	250	95-130	120*
T-31941	350	95-130	120*
T-31942	500	95-130	120*
T-31943	500	175-235x 190-260x 380-520	120x 240
T-31944	750	95-130	120*
T-31945	750	175-235x 190-260x 380-520	120x 240
T-31946	1000	95-130	120*
T-31947	1000	175-235x 190-260x 380-520	120x 240
T-31948	2000	95-130x 175-235x 190-260	120x 240
T-31949	3000	95-130x 190-260	120*
T-31950	3000	95-130 x 190-260	240*
T-31951	3000	175-235x 190-260x 380-520	240*
T-31952	3000	190-260x 380-520	480*
T-31953	5000	95-130x 190-260	120*
T-31954	5000	95-130x 190-260	240*
T-31955	5000	175-235x 190-260x 380-520	240*
T-31956	5000	190-260x 380-520	480*



\* Indicates that stabilizer has special output tap for rectifier connection. All standard units listed have a voltage correction response time of less than 2 cycles, stabilizing output voltage ±1% under ±15% variation of input voltage.

**MAGNETIC AMPLIFIERS**

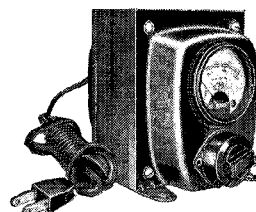
Combine solid state electronic components with magnetic reactors and advanced circuitry. Bias control winding is converted from input line to provide self saturation of core. Independent gain control operates from 0-5 ma signal. Independent potentiometers permit individual adjustment of bias or gain control.



Catalog No.	Watts	Dc Output Volts	Amps	AC Input
MA-42900	5	24	0.21	120
MA-42901	40	80	0.5	120
MA-42902	80	80	1.0	120
MA-42903	125	80	1.6	120
MA-42904	250	80	3.2	120
MA-42905	500	80	6.4	120
MA-42906	500	160	3.2	240
MA-42907	1000	80	12.8	120
MA-42908	1000	160	6.4	240

**MANUAL VOLTAGE ADJUSTORS**

An inexpensive voltage adjustor that increases a low voltage or reduces a high voltage condition to 115 volts. Seven steps of adjustment from 95 to 125 volts input to approximately 115 volts output. Units supplied with integrally mounted tap-switch, cord and plug and plug-in receptacle for outlet connection. Write for Bulletin 091.



**ACME ELECTRIC CORPORATION**  
 Cuba, New York

Canadian Representative: POLYGON SERVICES, Ltd.  
 50 Northline Rd., Toronto 16, Ont.

SAA-3581-2034



# ATR

## PORTABLE – Plug-in Type INVERTERS

Specially Designed for Operating Standard A.C. Dictating Machines, Record Players, Incandescent Lamps, Electric Razors, Electronic Test Equipment, and Other Small Electrical and Electronic Devices from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Planes, Trains, and D.C. Districts.

ATR Portable Inverters are light-weight plug-in units for applications as recommended above. These Inverters feature instant starting, frequency stability, and high efficiency and reliability. Inverters have partial RF filtering which is only suitable for small insensitive type radios. For sensitive radio sets, ATR Universal Inverters, catalog sheet 657U, must be used. The 6 and 12-volt units are equipped with cigarette lighter cord set to plug into dash receptacle; whereas, the other higher input voltage units are equipped with standard two-blade plug-in cord sets. With ATR Inverters the need for special equipment is eliminated. They are designed for quiet, long-life operation. All ATR Models indicated are equipped with ATR plug-in Inverter Vibrators. Models RME and RMF come equipped with a four-point voltage regulator which makes possible the correct output voltage for minimum to maximum loads. The battery current consumption required is normally less than that drawn by one ordinary automobile headlight. The operating efficiency is approximately 75%. To figure battery current consumption see catalog sheet 657U. These Inverters are recommended only for use with loads having power factors in excess of 80% and should be used only for the applications as outlined above and on the reverse side of this sheet. These Portable Inverters are not recommended for tape recorder operation, except as specified in (2) below.



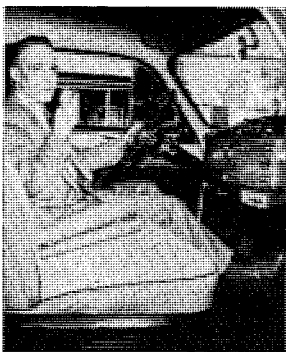
Illustrates ATR Mighty Midget (DME) Model Inverter having Cigarette Lighter Plug Attachment.



Illustrates ATR Medium (RME and RMF) Model Inverter having Four-Point Voltage Regulator and Cigarette Lighter Plug Attachment.

EASY TO INSTALL

EASY TO OPERATE



Illustrates Under-Dash Mounting for ATR Models RME and RMF. See Page 1019 for available accessories.

Ideal for Emergency Lighting Applications for Civil Defense, Red Cross, Rescue Work, etc., Simply Using Extension Cords.

TYPE	INPUT D.C. VOLTS	A.C. OUTPUT 60 CYCLES	OUTPUT WATTAGE Int.	OUTPUT WATTAGE Cont.	SHIPPING WEIGHT	DEALER PRICE
6-DME (1)	6	110 Volts	40	30	5 lbs.	\$18.50
6C-DME (1)	6/12	110	40	30	5	21.25
6-RMF (2)	6	110	80	60	12	36.50
6C-RMF (2)	6/12	110	80	60	12	40.25
12-DME (1)	12	110	50	40	5	18.50
12T-RME (2) (3)	12	110	125	90	12	36.50
*28-RME (2)	28	110	100	80	12	46.50
32-RME (2)	32	110	100	80	12	46.50
110-RME (2)	110	110	150	100	12	43.50
220-RME	220	110	150	100	12	46.50

\* Recommended for 24-Volt Battery Systems.

For Inverters having larger or smaller output capacities, or for operation on other D.C. input voltages, please consult available ATR Inverter catalog sheets.

All models designated above are housed in attractively finished grey-hammerloid metal cabinets. Dimensions of Medium (RME and RMF) Model Inverters, 8 $\frac{3}{8}$ " x 8" x 3 $\frac{3}{4}$ "; shipping weight, 12 lbs. Dimensions of Mighty Midget (DME) Model Inverters, 5 $\frac{1}{4}$ " x 4 $\frac{3}{4}$ " x 2 $\frac{3}{4}$ "; shipping weight, 5 lbs. For correct replacement vibrator, consult Inverter Vibrator Guide.

(1) These Inverters primarily recommended for Edison VP dictating machines. May also be used with Model 200 Soundsciber (with engine of car not running).

(2) Primarily recommended for Dictaphone's Time Master, Gray Audograph and DeJur Stenorette dictating machines, or other similar types. Also, highly recommended for Norelco Tape Recorder Model EL-3516 and Gelo-so Model G255-S.

(3) THIS INVERTER SPECIALLY DESIGNED AND RECOMMENDED. ALSO FOR USE WITH RCA 8 $\frac{1}{2}$ " PORTABLE TV SET OR G.E. 9" PORTABLE TV SET IN AN AUTOMOBILE.

JOBBER'S ATTENTION: See Page 1039 in this ATR Section and Page 598 in Section 1900 for your Catalog Needs!

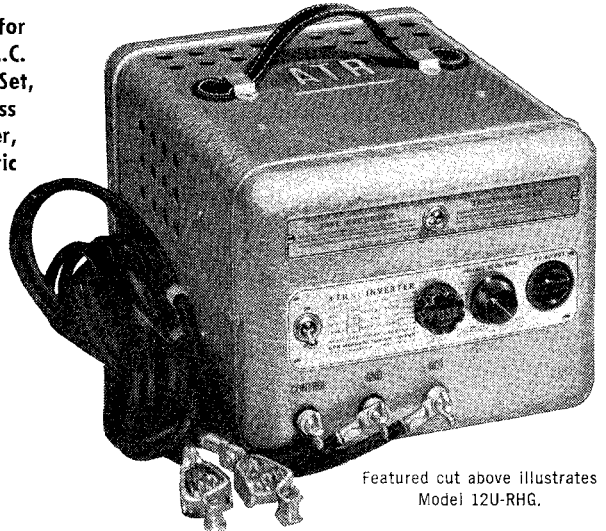


# UNIVERSAL INVERTERS

Specially Designed for Operating Standard A.C. Tape Recorder, Television Set,

Dictating Machine, Radio Set, Ham Gear, Public Address System, Amplifier, Record Player, Electric Razor, Food Mixer, Vacuum Cleaner, Sewing Machine, Business Machine, Electric Drill, Fluorescent and Incandescent Lamp, and Electronic Test Equipment from D.C. Voltages in Automobiles, Buses, Trucks, Boats, Trains, Planes, and D.C. Districts. Ideal for Emergency Lighting Applications for Civil Defense, Red Cross, Rescue Work, etc., Simply Using Extension Cords.

ATR Universal Inverters are actually a combination of 4 Inverter designs in one unit! These Inverters are especially recommended for applications as mentioned above and feature complete RF frequency interference suppression, instant starting, frequency stability, and built-in power factor corrector utilizing a simple toggle switch. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life operation at high efficiency and maximum reliability. All models indicated are equipped with ATR heavy duty plug-in Inverter Vibrators. These Inverters also come equipped with four-point voltage regulator which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. The operating efficiency is in excess of 75%. To figure approximate current consumption from storage battery, divide the rated input wattage of the recorder (or load) being operated by the storage battery voltage and further divide this answer by .75 which will give the actual current consumption based on the actual load and efficiency. The battery current consumption required for a tape recorder is normally less than that drawn by ordinary automobile headlight(s). These Universal Inverters are recommended only for use with loads having power factors in excess of 70%.



Featured cut above illustrates Model 12U-RHG.

ATR Inverters should be used only for the applications as outlined.

"-P" models equipped with cigarette lighter cord set to plug into dash receptacle.

All ATR Universal Inverters are housed in attractively finished grey-hammerloid metal cabinets.

Dimensions of Standard (RSF) Model Universal Inverters, 8½" x 9⅞" x 5¼"; shipping weight 22 lbs.

Dimensions of Heavy Duty (RHG) Model Universal Inverters, 6⅞" x 11¼" x 8½"; shipping weight 27 lbs.

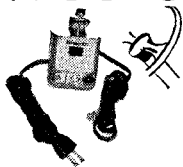
Dimensions of Super Heavy Duty (HSJ) Model Universal Inverters 6½" x 12⅞" x 8½"; shipping weight 37 lbs.

For correct replacement Vibrator, consult Inverter Vibrator Guide.

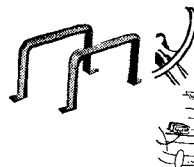
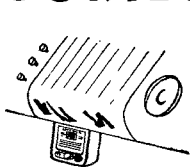
Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Watt.		Shipping Weight	Dealer Price
			Int.	Cont.		
6U-RSF	6	110 Volts	100	80	22 lbs.	\$55.00
6U-RSF-P	6	110	100	80	22	55.00
6U-RHG	6	110	150	125	27	73.00
6U-HSJ	6	110	175	150	37	91.50
12U-RSF	12	110	125	100	22	55.00
12U-RSF-P	12	110	125	100	22	55.00
12U-RHG	12	110	175	150	27	73.00
12U-HSJ	12	110	250	200	37	91.50
*28U-RSF	28	110	125	100	22	66.00
*28U-RHG	28	110	175	150	27	87.50
*28U-HSJ	28	110	250	200	37	103.50
32U-RSF	32	110	150	100	22	66.00
32U-RHG	32	110	200	180	30	77.50
32U-HSJ	32	110	325	225	37	103.50
50U-RSF	50	110	150	100	22	66.00
50U-RHG	50	110	225	200	27	87.50
110U-RSF	110	110	250	150	22	55.00
110AU-RHG	110	110	325	250	27	66.00
110BU-RHG	110	110	450	350	30	77.50
110U-HSJ	110	110	600	400	37	103.50
220U-RSF	220	110	250	150	22	58.25
220U-RHG	220	110	325	250	27	73.00
220U-HSJ	220	110	500	300	37	103.50

\* Recommended for 24 volt battery systems.

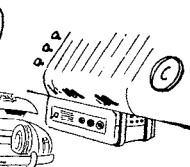
## ACCESSORIES for 6, 12, and 28 Volt D.C. Input Inverters.



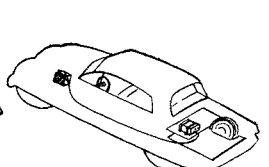
REMOTE CONTROL UNIT — for under-dash mounting permitting installation of Inverter in auto-trunk compartment. Dealer Price \$5.97



MOUNTING BRACKETS — to securely mount Inverter in trunk compartment of car or under-dash, as illustrated. Dealer Price \$3.30 pr.



EXTENSION CABLES — to provide additional cable lengths for installation of Inverter in trunk compartment. Dealer Price \$6.63 pr.



JOBBER ATTENTION: See Page 1039 in this ATR Section and Page 598 in Section 1900 for your Catalog Needs!



# "A" BATTERY ELIMINATORS

## ... FOR DEMONSTRATING AND TESTING AUTO RADIOS

**6 VOLT OR 12 VOLT!  
TRANSISTOR or VIBRATOR OPERATED!  
LOW RIPPLE!!**

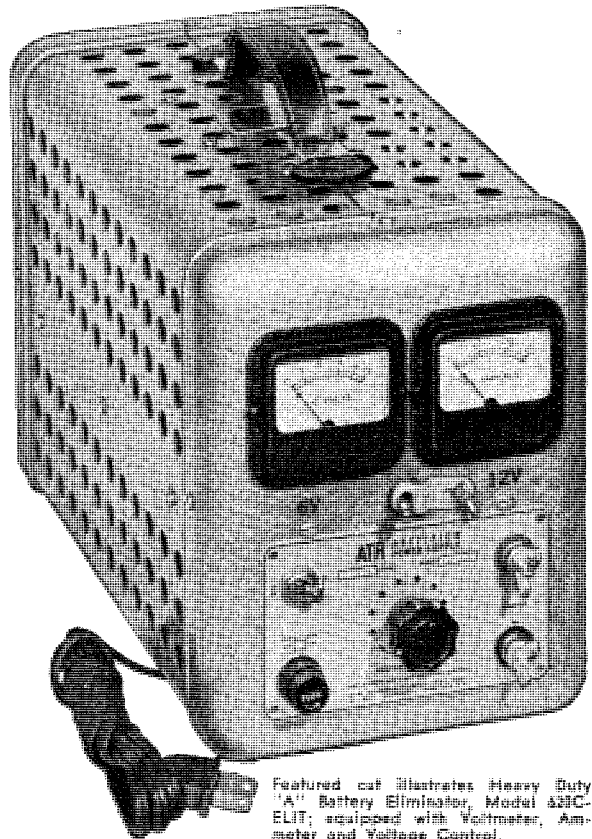
Specially Designed for Testing and Operating Auto Radios and D.C. Electrical Apparatus on Regular A.C. Lines, 105-125 Volts, 50-60 Cycles.

### SUGGESTED USES:

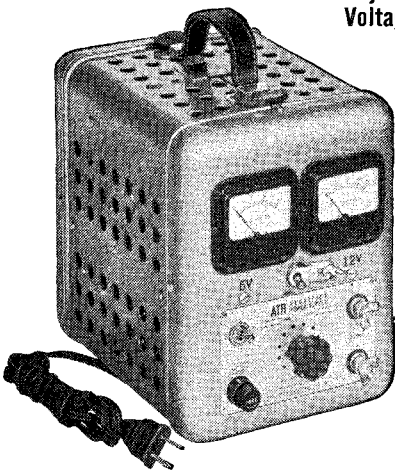
As a power supply for radio sets, aircraft instruments, relays, motors and other electrical and electronic equipments. In the laboratory, for supplying various low D.C. voltages.

Battery Eliminators may be treated as batteries in the sense that they can be connected in series for higher voltages at the same current output per unit or in parallel for the same output voltage per unit at higher currents.

- ✓ Eliminates Storage Batteries and Battery Chargers.
- ✓ Operates the Equipment at Maximum Efficiency at All Times.
- ✓ Delivers Filtered Direct Current at the Correct Voltage for Proper Operation.
- ✓ Minimum Ripple
- ✓ Fully Automatic and Fool-Proof
- ✓ Adjustable Voltage Control



Featured unit illustrates Heavy Duty "A" Battery Eliminator, Model 620C-ELIT; equipped with Voltmeter, Ammeter and Voltage Control.



Illustrates Standard "A" Battery Eliminator, Model 610C-ELIF; equipped with Voltmeter, Ammeter and Voltage Control.

Equipped with Full-Wave Dry Disc Selenium Rectifier, Assuring Noiseless, Interference-Free Operation and Extreme Long Life and Reliability.

TYPE 610C-ELIF—Rated output 6 volts at 10 amperes continuous or 12 volts at 6 amperes continuous. Size  $6\frac{1}{2}$ " x  $9\frac{1}{8}$ " x  $8\frac{1}{2}$ ". Shipping weight, 22 lbs. Code word "SELIT." USER NET PRICE \$55.00

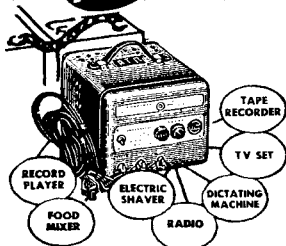
TYPE 620C-ELIT—Rated output 6 volts at 20 amperes continuous or 12 volts at 10 amperes continuous. Uses dual rectifiers. Sizes  $6\frac{1}{2}$ " x  $12\frac{7}{8}$ " x  $8\frac{1}{2}$ ". Shipping weight, 33 lbs. Code word "HELIT." USER NET PRICE \$73.50

Either 6 or 12 volt output obtainable by means of simple output toggle switching arrangement having locking device to prevent accidental switching.

All ATR Eliminators have as standard equipment: On-Off Switch, 8-Position Voltage Control, Meter(s), Fuse Protection, Rubber Mounting Feet, 6-ft. All-Rubber Cord Set and Cabinet of heavy gauge metal having attractive grey-hammerloid finish.

**JOBBERS ATTENTION:** See Page 1039 in this ATR Section and Page 598 in Section 1900 for your Catalog Needs!

**ATR Inverters, Vibrators, "A" Eliminators, etc.**



**ATR DC TO AC UNIVERSAL INVERTERS**

New, universal inverters for operating 110-v., 60 cycle AC equipment from DC voltages in autos, buses, trucks, boats, trains, planes and DC districts. Designed especially for standard 110-volt AC tape recorders, TV sets, radios, PA systems, electric razors, test equipment, etc. Units are carefully engineered and ruggedly constructed to provide long life operation. All feature complete RF interference suppression and exceptional frequency stability. Have operating efficiency in excess of 75%. Four-point voltage regulator corrects output voltage for minimum and maximum loads, and also helps compensate for input voltages lower or higher than normal. Inverters are recommended for use with loads having power factors in excess of 70%. Built-in toggle switch selects most efficient operation for use with TV sets or tape recorders. Inverters are not recommended for use with large motor driven appliances such as refrigerators, washing machines, etc. All have ON-OFF switches. Housed in attractive gray hammerloid metal cabinet with convenient leather carrying strap. Sizes: Standard Model RSF, 8 1/2 x 9 1/2 x 5 1/2"; Heavy-Duty Model RHG 6 1/2 x 11 1/4 x 8 1/2"; Extra-Heavy-Duty Model HJS, 6 1/2 x 12 1/4 x 8 1/2". With battery clips for instant connection to power source. Models with "P" suffix equipped with adapter cord for use in auto cigarette lighter receptacles. \*Recommended for 24 volt battery operation. **Before ordering, check wattage of equipment with which inverter will be used.**

Stock No.	Mfr's Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Watt. Int.	Cont.	Shipping Weight	List Price	Net Price
	6U-RSF	6	110 Volts	100	80	22 lbs.	\$ 82.50	\$ 55.00
	6U-RSF-P	6	110	100	80	22	109.50	55.00
	6U-RHG	6	110	150	125	27	137.25	91.50
	6U-HSJ	6	110	175	150	37	82.50	55.00
	12U-RSF	12	110	125	100	22	82.50	55.00
	12U-RSF-P	12	110	125	100	22	82.50	55.00
	12U-RHG	12	110	175	150	27	109.50	73.00
	12U-HSJ	12	110	250	200	37	131.25	91.50
	* 28U-RSF	28	110	125	100	22	90.00	66.00
	* 28U-RHG	28	110	175	150	27	131.25	87.50
	* 28U-HSJ	28	110	250	200	37	155.25	103.50
	32U-RSF	32	110	150	100	22	99.00	66.00
	32U-RHG	32	110	200	180	30	116.25	77.50
	32U-HSJ	32	110	325	225	37	175.25	103.50
	50U-RSF	50	110	150	100	22	99.00	66.00
	50U-RHG	50	110	225	200	27	131.25	87.50
	110U-RSF	110	110	250	150	27	82.50	55.00
	110AU-RHG	110	110	325	250	27	99.00	68.00
	110BU-RHG	110	110	450	350	30	116.25	77.50
	110U-HSJ	110	110	600	400	37	155.25	103.50
	220U-RSF	220	110	150	100	22	77.37	66.25
	220U-RHG	220	110	325	250	27	109.50	73.00
	220U-HSJ	220	110	500	300	37	155.25	103.50



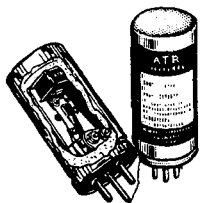
**PORTABLE PLUG-IN TYPE INVERTERS**

SPECIALLY DESIGNED FOR OPERATING STANDARD A. C. DICTATING MACHINES, RECORD PLAYERS, INCANDESCENT LAMPS, ELECTRIC RAZORS, ELECTRONIC TEST EQUIPMENT, AND OTHER SMALL ELECTRICAL AND ELECTRONIC DEVICES FROM D. C. VOLTAGES IN AUTOMOBILES, BUSES, TRUCKS, BOATS, PLANES, TRAINS, AND D. C. DISTRICTS.

Lightweight inverters for operating 110 v. AC equipment from DC voltage sources. Feature excellent frequency stability and high efficiency. 6 and 12-volt units plug into cigarette lighter receptacle of any vehicle; others are equipped with standard 2-prong plugs. All are designed especially for use with dictating machines; record players, electric razors, test equipment, etc. Not recommended for tape recorders and large motor driven appliances such as refrigerators, washing machines, etc. Gray Hammerloid case with leather carrying strap. Sizes: DME, 5 1/4 x 4 1/4 x 2 3/4"; RME and RMF, 8 3/8 x 8 3/8". \*Recommended for 24-volt operation. **Check wattage rating of equipment before ordering. RME/RMF Model Inverters equipped with voltage regulator.**

Stock No.	Mfr's Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Watt. Int.	Cont.	Shipping Weight	List Price	Net Price
	6-DME (1)	6	110 Volts	40	30	5 lbs.	\$27.75	\$18.50
	6C-DME (1)	6/12	110	40	30	5	31.87	21.25
	6-RMF (2)	6	110	80	60	12	54.75	36.50
	6C-RMF (2)	6/12	110	80	60	12	60.37	40.25
	12-DME (1)	12	110	50	40	5	27.75	18.50
	12T-RME (2) (3)	12	110	125	90	12	54.75	36.50
	* 28-RME (2)	28	110	100	80	12	69.75	46.50
	32-RME (2)	32	110	100	80	12	69.75	46.50
	110-RME (2)	110	110	150	100	12	65.25	43.50
	220-RMF	220	110	150	100	12	69.75	46.50

- (1) These Inverters primarily recommended for Edison VP dictating machines. May also be used with Model 200 Sound-scriber (with engine of car not running).
- (2) Primarily recommended for Dictaphone's Time Master, DeJur Stenorette, and Gray Audograph dictating machines or other similar types. Also recommended for use with Norelco tape recorder Model EL-3516 and Geloso Model G 258-S tape Recorder.
- (3) This inverter specially designed and recommended also for use with RCA 8 1/2" portable TV set or G.E. 9" portable TV set in an automobile.



**ATR VIBRATORS**  
FOR ALL AUTO RADIO SETS SINCE 1954 USE ONE OF THE ATR VIBRATORS LISTED BELOW ... ATR VIBRATORS FEATURE

**Ceramic Stack Spacers with Two-Bolt Stack construction.**  
**Instant Starting**—as a result of highly efficient magnetic circuit with formed base for more uniform operation on both high and low voltages.  
**Large Oversize Tungsten Contacts** having Full Wiping Action—for greater reliability and longer life.  
**Perforated Reed of Highest Quality Swedish Spring Steel.**  
**Highest Precision Construction and Workmanship**—Practically all parts used are held to within a tolerance of 0.0005 of inch.  
**Value Plus**—as readily evidenced by the Larger Contacts, Ceramic Spacers and Precision Construction and Workmanship. Available in TEN-PACK.  
**ATR No. 1400 (Bulk), 4-Prong, 6-Volt For All 6-Volt Sets Since 1954**  
**ATR No. 1843 (Bulk), 3-Prong, 12-Volt For All 12-Volt General Motors Since 1954**  
**ATR No. 1843** also used in following automobiles: 1956 Ford (Philco), Lincoln (Bendix), and Mercury (Bendix); 1956 Chrysler (Philco); 1955-57 Packard; 1956-57 Plymouth (Philco); 1956 Studebaker (Philco) and 1957 Mercury (Philco)  
**ATR No. 1840 (Bulk), 4-Prong, 12-Volt For 12 Volt Cars other Than GM Since 1954**  
*Vibrator Prices subject to Excise Taxes, if applicable.*



**ATR ELECTRONIC TUBE PROTECTOR**

A "MUST" FOR EVERY TV HOME! WILL DOUBLE OR TRIPLE THE LIFE OF ALL TYPES OF ELECTRONIC TUBES, INCLUDING TV PICTURE TUBE. Automatic in operation, for use with any electronic equipment having input wattage of 100 to 300 watts. Rugged construction; and enclosed in interior decorator's golden brown hammerloid-finish metal case. Available in two models. Our Floor Model 300 is 4" x 2 3/8" x 2 3/4" and weighs 2 lbs. Has 6 ft. cord set to plug into wall socket. Wall Model 250 is 1-15/16" OD x 3 3/8" in length and plugs directly into wall socket. Shipping weight is 1 lb.  
—Wall Model 250 (115 volt A.C.) . . . . . **Net \$2.63**  
—Floor Model 300 (115 volts A.C.) . . . . . **Net \$3.30**



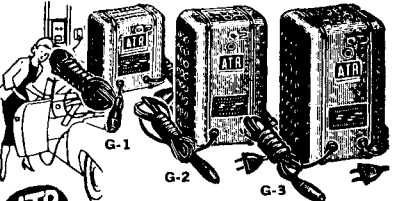
**ATR SHAV-PAKS**

Every man should have this lightweight ATR Inverter in his car for that "Keep Clean-Shaved Look." Will operate standard A.C. Electric Shavers from your CAR or BOAT. Complete with 3 ft. cord set. Plugs into cigarette lighter receptacle. Fuse protected, rugged construction, and attractively housed in grey hammerloid-finish steel case. Size 4" x 2 3/8" x 2 3/8". Shipping weight 2 1/4 lbs.  
**Model 6-SPB (6 volt) . . . . . Net \$8.63**  
**Model 12-SPB (12 volt) . . . . . Net 8.63**



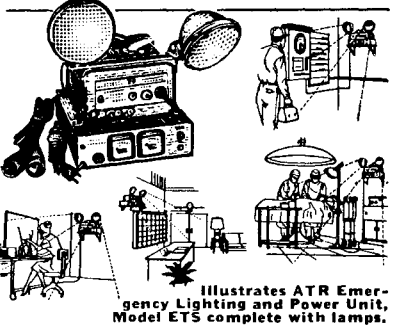
**ATR "A" BATTERY ELIMINATOR**

FOR DEMONSTRATING AND TESTING TRANSISTOR OR VIBRATOR TYPE AUTO RADIOS. Designed for testing D.C. Electrical Apparatus on regular 110 volt A. C. lines. . . . equipped with full-wave dry disc-type rectifier, assuring noiseless, interference-free operation. Fully Automatic and Fool-Proof: has voltmeter, ammeter, and 8-position voltage control. Fuse protected, and housed in heavy gauge grey hammerloid-finish metal case. 6 ft. cord set included. Size: Model 610C-ELIF, 6 1/2" x 9 1/2" x 8 1/2"—shipping weight 22 lbs.; Model 620C-ELIT, 6 1/2" x 12 1/4" x 8 1/2"—shipping weight 33 lbs.  
**IDEAL AS A POWER SUPPLY FOR MODEL RAILROAD TRAINS, RADIO SETS, ELECTRO PLATING OUTFITS, AND OTHER 6 OR 12 VOLT, D.C. EQUIPMENT. MAY ALSO BE USED AS A BATTERY CHARGER.**  
—Model 610C-ELIF (6 volt at 10 amps. or 12 volt at 6 amps.) . . . . . **Net \$55.00**  
—Model 620C-ELIT (6 volt at 20 amps. or 12 volt at 10 amps.) . . . . . **Net \$73.50**



**ATR AUTO PLUG-IN, HOME-TYPE PORTABLE BATTERY CHARGERS**

No installation . . . Just plug into cigarette lighter receptacle! Makes motor starting easy! Keeps your car battery fully charged in your own garage. Operates directly from standard 110 volt A.C. Household Current. Available in three portable sizes for both 6 or 12 volt cars. Light in weight, rugged in construction, economical, and built to last. Each battery charger is housed in grey hammerloid-finish metal case. Complete with cord sets. Size of G1 is 5 1/2" x 4 1/2" x 2 3/4"—shipping weight is 8 lbs.; G2 is 8 1/2" x 5 1/2" x 3 1/2"—shipping weight is 8 lbs.; and G3 is 8 1/2" x 5 1/2" x 5 1/4"—shipping weight is 10 lbs.  
(G-1) . . . . . —Model 612CA4 (4 amp.) **Net \$19.46**  
(G-2) 6 or 12 volt . . . . . —Model 612CA6 (6 amp.) **Net \$22.46**  
(G-3) 6 or 12 volt . . . . . —Model 612CA10 (10 amp.) **Net \$27.71**



**ATR EMERGENCY LIGHTING and POWER UNIT**

Completely Automatic Standby-Power Units Specially Designed to Permit the Instantaneous Continued Operation of Critical Lighting Equipment, PA Systems, Amplifiers, Intercom Systems, Burglar Alarms, Fire Alarms, Synchronous Electric Clocks, Electric Time and Recording Clocks, Incubators, Gas Valves, Telephone and Test Equipment, and Similar Critical Devices in the Event of 115 Volt AC Commercial Power Line Failure. For Use: In Hospitals, Banks, Hotels, Theatres, Factories, Office Buildings, Schools, Homes, and Many Other Areas of Operation.  

Type	*Storage Battery Input	A.C. Output 60 Cycles	Output Wattage Int. Cont.	Net With Lamps
661-ETM	6-volts	110-volts	80	60 \$113.00
662-ETS	6	110	100	80 131.67
663-ETH	6	110	150	125 149.67
1232-ETS	12	110	125	100 131.67
1233-ETH	12	110	175	150 149.67
1234-ETJ	12	110	250	200 168.34

  
For Units Without Lamps Deduct \$14.66 Net





**INSIST on ATR VIBRATORS—Get the Best!!**

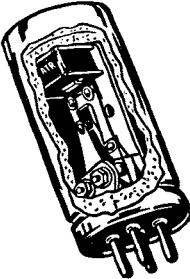
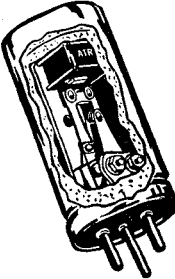



## ATR Replacement Vibrator Specifications

FOR COMPLETE INFORMATION ON AUTO RADIO VIBRATORS FOR AUTOMOBILES MANUFACTURED PRIOR TO AND IN 1954 SEE ATR VIBRATOR MANUAL NO. 554. THIS MANUAL ALSO CONTAINS INFORMATION ON HOUSEHOLD, 2-WAY COMMUNICATION SETS AND:

- VIBRATOR LISTINGS BY RECEIVER NAME AND MODEL NUMBER.
- BUFFER REFERENCE CIRCUITS.
- SUBSTITUTION CHART ON DISCONTINUED VIBRATORS.
- VIBRATOR SPECIFICATIONS.
- VIBRATOR EQUIVALENT CHARTS.
- CROSS REFERENCE LISTINGS.
- AUTO BATTERY GROUND CHARTS
- INSTALLATION NOTES.
- SERVICING PROCEDURE FOR AUTO RADIO VIBRATORS.

**FOR ALL AUTO RADIO SETS SINCE 1954 USE ONE OF THE ATR VIBRATORS LISTED BELOW**

<p>No. 340 (Boxed) No. 1400 (Bulk)</p>  <p>4-Prong 6-Volt For all 6-Volt Sets Since 1954</p>	<p>No. 1343 (Boxed) No. 1843 (Bulk)</p>  <p>3-Prong 12-Volt FOR ALL 12-VOLT GENERAL MOTORS SINCE 1954</p> <p>Plus automobiles shown in box below.</p>	<p>No. 1340 (Boxed) No. 1840 (Bulk)</p>  <p>4-Prong 12-Volt For 12 Volt Cars other Than GM Since 1954</p> <p>Except automobiles shown in box below.</p>
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ATR Type 1343 and 1843 also used in following automobiles:  
1956 Ford (Philco), Lincoln (Bendix), and Mercury (Bendix); 1956 Chrysler (Philco); 1955-57 Packard; 1956-57 Plymouth (Philco); 1956 Studebaker (Philco) and 1957 Mercury (Philco).

**EVERYBODY  
AGREES  
ATR  
AUTO-RADIO  
VIBRATORS  
are  
TOPS**

*Here's why—*

ATR Vibrators, the heart of vibrator-operated power supplies, are proven units of the highest quality engineered to perfection. They are backed by more than thirty-one years of vibrator design and research, development and manufacturing — ATR pioneered in the vibrator field.

All ATR Products incorporate only the best materials and workmanship and are carefully manufactured under rigid engineering inspections and tests making them the finest that can be built.

### ...ATR Vibrators Feature

- ✓ **Ceramic Stack Spacers** with Two-Bolt Stack Construction — for adjustment permanency under any operating condition.
- ✓ **Instant Starting** — as a result of highly efficient magnetic circuit with formed base for more uniform operation on both high and low voltages.
- ✓ **Large Oversize Tungsten Contacts** having Full Wiping Action — for greater reliability and longer life.
- ✓ **Perforated Reed** of Highest Quality Swedish Spring Steel — for uniform flexibility and prevention of reed breakage.
- ✓ **Highest Precision Construction and Workmanship** — Practically all parts used are held to within a tolerance of 0.0005 of inch.
- ✓ **Value Plus** — as readily evidenced by the Larger Contacts, Ceramic Spacers and Precision Construction and Workmanship.

**JOBBER ATTENTION: See Page 1039 in this ATR Section and Page 598 in Section 1900 for your Catalog Needs!**

## Communication Vibrators for SUPER SERVICE

ATR COMMUNICATION VIBRATORS eliminate the problem of short-life call-backs on those tough two-way communication rigs. Yes, Sir! these ATR COMMUNICATION VIBRATORS deliver SUPER SERVICE.

### ATR SUPER HEAVY DUTY VIBRATORS FEATURE:

- Ceramic Stack Spacers
- 1/4" Diameter Power Contacts
- Driver-Type Coil Construction
- Special Reed Hinge and Wiring
- Power Capability Up To 15 Amperes

ATR VIBRATORS are proven units of the highest quality, engineered to perfection. They are backed by more than 33 years of vibrator design and research, development and manufacturing.

ATR pioneered in the vibrator field.



*The World's Finest*  
**Communication**  
**VIBRATORS**

### COMPARISON CHART

MALLORY	C-D/RADIART	ATR STANDARD HEAVY DUTY	DEALER PRICE	ATR SUPER HEAVY DUTY	DEALER PRICE
G1501/G4501	6715	12432	3.27	1348	5.37
G1502/G4502	6721	12433	3.27	1349	5.37
G1601/G859	6301/6326	*1340	2.67	1348	5.37
G1602	6330	*1343	2.67	—	—
G1801	6805	*1525	4.62	*1548	5.37
G1807	6820	*1524	4.62	1574	5.37
1501/4501	5715/5515	6432	3.27	348	5.37
1512	5721	6433	3.27	349	5.37
1513/4513	5725	64325	3.27	3485	5.37
1514	5715/5515	—	—	348	5.37
1601/859	5300/5301	*340	2.67	348	5.37
1701	5722	No Repl.	—	No Repl.	—
1751	5718/5518	—	—	3491	5.37
1752	—	—	—	3485	5.37
1801/4549	5805	*525	4.62	*548	5.10
1807	5820/5620	5241	4.62	574	5.37
1808/4546	5821	*522	4.62	549	5.37
1813/4549	5805	*525	4.62	548	5.10
1852	5820/5620	5241	4.62	574	5.37

\* These Vibrators are of the shunt-coil type; whereas, all other Vibrators listed are of the series-drive type.

All ATR Super Heavy-Duty Communication Vibrators of the series-drive type incorporate eight (8) 1/4" diameter power contacts and two (2) series-drive contacts.

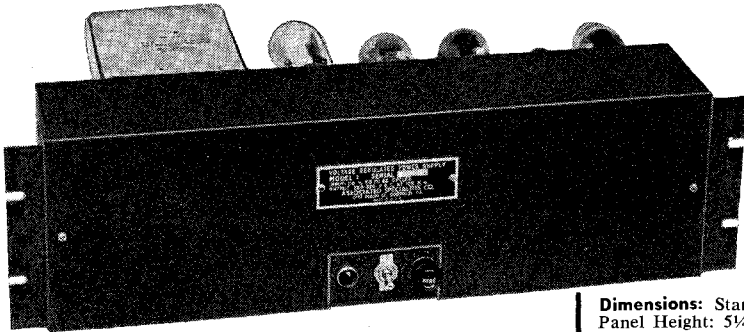
The ATR Standard Heavy Duty Communication Vibrators incorporate 3/16" power contacts.

All ATR 6 and 12-volt Vibrators, as listed, are housed in cans 1 1/2" OD x 2 7/8" in length. Frequency, 115 cycles.

**JOBBER ATTENTION:** See Page 1039 in this ATR Section and Page 598 in Section 1900 for your Catalog Needs!

# Associated Specialties Co.

OREFIELD, PENNSYLVANIA



## ELECTRONICALLY REGULATED D.C. CONSTANT VOLTAGE POWER SUPPLIES

RELAY RACK MOUNTING TYPES

- BK (BLACK RIPPLE FRONT PANEL)
- GR (GRAY RIPPLE FRONT PANEL)

**Input:** 105-125 volts AC. 50-60 cycles.

**Regulation of DC Voltage:** Better than 1% for loads of 0 to 100 ma. and line voltage variations from 105 to 125 volts.

**Isolated Output:** Both positive and negative sides of the output are isolated from ground. Either side may be grounded or the output may be left floating.

**AC Output for Filaments:** An isolated AC voltage of 6.3 volts AC at 3 amperes is available at the output terminal connections.

**Overload Protection:** A fuse mounted on the front panel protects supply against external overloads or internal failure.

**Input and Output Connections:** All input and output connections are made to a single terminal strip conveniently located on the rear of the chassis.

**Dimensions:** Standard 19" relay rack mounting. Panel width: 19 inches; Panel Height: 5 1/4 inches; Depth Behind Panel: 7 1/4 inches.

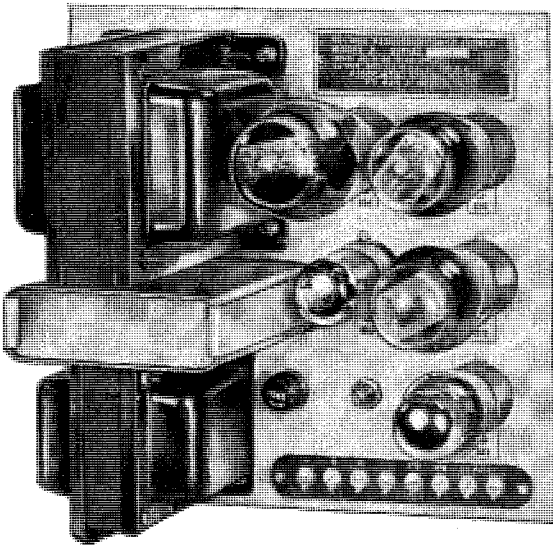
**Cabinet Finish:** Standard Black ripple enamel.

**Controls:** Rear Chassis—DC output voltage control. Front Panel—Pilot light, input power switch, and fuse.

**High Quality Components:** Only components of the highest quality are used in this equipment insuring you years of trouble-free dependable operation.

**Accessibility:** By removing two small screws, the front panel may be removed while the supply stays mounted on a relay track or cabinet. This allows quick and easy inspection.

MODEL	OUTPUT VOLTAGE	RIPPLE
1	200-325 V.D.C.	10 M.V. MAX.
11	75-200 V.D.C.	5 M.V. MAX.



### SUB-CHASSIS MOUNTING

Sub-chassis mounting type regulated power supplies are designed to save space and money. They can be mounted on a chassis along with other components and thereby save space which would be used by a relay rack mounting supply. Savings are made in the size and cost of the cabinet required for a job along with the lower cost of the sub-chassis mounting supplies.

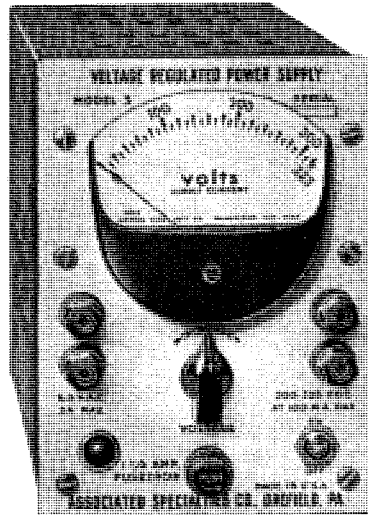
**SAME AS MODEL 1 AND 11 EXCEPT**

**Dimensions:** 9" wide, 8 3/4" long, 4 3/4" high above chassis, 1 3/4" clearance required below chassis. Size of cut-out required, 8 3/4" wide x 8" high. Location of four mounting holes: 8 3/8" wide x 8 1/2" high.

**Chassis Finish:** Aluminum.

**Controls:** DC output voltage control adjustable from the top side of the chassis.

MODEL	OUTPUT VOLTAGE	RIPPLE
2	200-325 V.D.C.	10 M.V. MAX.
12	75-200 V.D.C.	5 M.V. MAX.



### CABINET MOUNTING

An ideal unit for bench work or assembly into equipment.

**SAME AS MODEL 1 AND 11 EXCEPT**

**Input Connections:** A line cord at rear of cabinet.

**Output Connections:** 5 way binding posts.

**Dimensions:** 5" wide, 7" high, 16" deep.

**Panel Finish:** Aluminum.

**Cabinet Finish:** Gray enamel.

**Controls:** D.C. output voltage on front panel.

**Meters:** Output voltage.

MODEL	OUTPUT VOLTAGE	RIPPLE
3	200-325 V.D.C.	10 M.V. MAX.
13	75-200 V.D.C.	5 M.V. MAX.

**MODEL P2 PANEL \$9.00**

Mounts two Model 2 or 12 power supplies side by side in a 19 inch relay rack space 8 3/4" high.

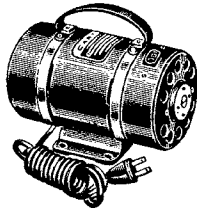
OUTPUT	MOUNTING	SIZE	WEIGHT	COLOR	MODEL	PRICE
200-325 V.D.C., 0-100 M.A. REGULATION LINE BETTER THAN 1% LOAD BETTER THAN 1% RIPPLE 10 MV R.M.S. MAX.	RACK MOUNTED	SEE ABOVE	20 POUNDS	GRAY COVER	1-GR	\$52.50
	RACK MOUNTED	SEE ABOVE	20 POUNDS	BLACK COVER	1-BK	\$52.50
	SUB-CHASSIS MOUNTING	SEE ABOVE	15 POUNDS	ALUMINUM CHASSIS	2	\$49.50
	CABINET	SEE ABOVE	20 POUNDS	GRAY	3	\$69.50
75-200 V.D.C., 0-100 M.A. REGULATION LINE BETTER THAN 1% LOAD BETTER THAN 1% RIPPLE 5 MV R.M.S. MAX.	RACK MOUNTED	SAME AS 1-GR	20 POUNDS	GRAY COVER	11-GR	\$69.50
	RACK MOUNTED	SAME AS 1-BK	20 POUNDS	BLACK COVER	11-BK	\$69.50
	SUB-CHASSIS MOUNTING	SAME AS 2	15 POUNDS	ALUMINUM CHASSIS	12	\$66.50
	CABINET	SAME AS 3	20 POUNDS	GRAY	13	\$78.50

**Carter Motor**

**GENEMOTORS, DC-AC CONVERTERS  
FREQUENCY CHANGERS**

**6 TO 230 VOLT  
INPUT**

Up to 250 watt sine wave output. Available with manual frequency control.



**MARK II SUPER CONVERTERS**  
New, long life design increases brush life and assures dependable service. Standard 100% P.F. models change DC to AC for operating amplifiers, office equipment, test instruments, radios and other high-power-factor equipment. Also available in 70% P.F. models to operate popular tape recorders from DC input. Many other catalog models available promptly from factory stock. A converter can be furnished to operate any tape recorder. Continuous duty. Size: 8 3/4" x 4 3/4" x 5" high. Weight, 13 lbs.

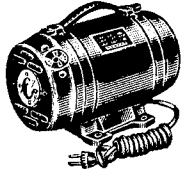
Carter No.	DC Input		Watts, AC at 60 cps, 115 v.	List Price
	Volts	Amps		
D1040CB	115	7	40	\$126.50
D1010CB	115	1.7	100	129.80
D1025CB	115	2.0	150	130.80
B1040CB	12	8	40	116.60
B1010CB	12	15	100	119.90
B1025CB	12	23	150	121.00

**Mark II Heavy Duty Super Converter.** Continuous duty, less filter, 10 1/2" long, 4 1/2" wide, 5" high. Weight, 19 lbs.

D1200CB	115	2.6	200	\$145.20
D1025CB	115	3.2	250	148.20
B1020CB	12	30	200	135.30
B1025CB	12	34	250	135.30

**IDEAL POWER**

For Industrial and Marine Communications. 12 to 250 volt input. 300 to 750 watt output models. Manual frequency control available.



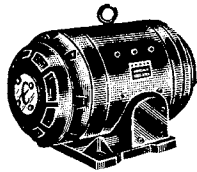
**CUSTOM CONVERTERS**  
Dependable rotary power for operating office business machines, professional tape recorders, railroad, mobile and marine radio and radar equipment. Finest construction. Sealed ball bearings require no lubrication. Long life, continuous duty, high efficiency on all models. Only popular models listed here. For 50-cycle output, add \$5.50 to list prices. All models 100% power factor. Size: 200 watts, 12 3/4" w. x 6 3/4" d. 7 1/4" h.; 210 and 300 w. 11 3/4" w.; 500 watts, 12 3/4" w.; 750 watts, 13 3/4" w.

Carter Number	DC Inp.		List Price	Carter Number	DC Inp.		List Price
	V.	A.			V.	A.	
KS1020C5P	230	1.3†	\$242.00	D1030CP	115	4.6‡	\$209.01
DS1020C5P	115†	2.6†	231.00	E1050CP	24†	33†	240.31
HS1020C5P	64†	5†	234.85	C1050CP	32†	25†	240.31
CS1020C5P	32†	9†	234.85	W1050CP	48†	16†	240.31
BH1021C1P	12†	29†	286.00	D1050CP	115†	7†	236.51
B1030CP	12‡	45‡	209.00	C1075CP	32	32*	270.61
E1030CP	24‡	29‡	209.00	D1075CP	115*	8.8*	270.61
C1030CP	32‡	19‡	209.00	K1075CP	230*	4.4*	281.61

Watts At 115 v. AC, 60 cps: †200 ‡300 †500 ‡750  
\*Equipped with manual frequency control. For frequency control on all other models, add \$82.50 to list prices. Filter available add \$44.00 to list prices.

**HEAVY DUTY  
POWER**

1000 - 1500 and 2000 watt output, 24 to 230 volt input models.



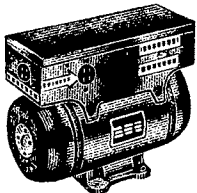
**MONARCH CONVERTERS**  
The Monarch series is ideal for heavy-duty industrial service, marine, mine, crane and railroad communications. Slow speed (1800 rpm.), long life. 4-pole design; ball bearing equipped. **No filter is necessary for most applications.** Size: 19" x 11" x 12" high. Three-phase output available at no extra charge. 24 and 28 v. input available.

Carter Number	DC Input		Watts*	List Price
	Volts	Amps		
J10150M**	28	80	1500	\$704.00
C10150M**	32	60	1500	704.00
W10200M†	48	60	2000	759.00
H10200M†	64	45	2000	759.00
D10200M‡	115	25	2000	759.00
K10200M‡	230	12.5	2000	759.00

†Reduced voltage starters necessary, add \$159.50 to list price  
‡Reduced voltage starters necessary, add \$193.40 to list price  
\*At 115 v. AC, 60 cps.

**OPERATES  
REFRIGERATORS**

and freezers up to 1/6 HP. Has handy AC outlet to run most appliances from DC.

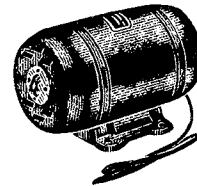


**MARINE REFRIGERATOR-APPLIANCE CONVERTERS**  
Operates standard refrigerators, compressors (up to 1/6 hp only), vacuum cleaners and other appliances from DC; for use aboard commercial and pleasure boats. Converter operates only when power is called for. Input, from 24 to 230 v. DC. Size: 14" x 6 3/4" x 11" high. Net Weight, 65 lbs.

Carter Number	DC Input	List Price
RF24	24 v.	\$493.90
RF28	28 v.	493.90
RF32	32 v.	493.90
RF48	48 v.	493.90
RF64	64 v.	493.90
RF115	115 v.	493.90
RF230	230 v.	493.90

**IDEAL  
POWER**

For operating two-way radio from wide input range. Isolated output.

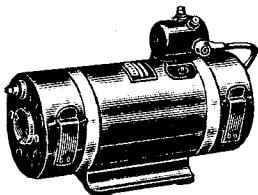


**CARTER CUSTOM DYNAMOTORS**  
For railroad and marine radio-telephone, industrial communications systems, locomotives, telephone emergency standby power, etc. Heavy duty construction. Low rpm speed, small temperature rise assure extra long life. Filter not normally required. Size: 12 3/4" x 6 1/4" x 7 3/4". Weight, 47 lbs.

Carter Number	Input Range	Output Volts	Output Rev.	Amps Trans.	List Price
KS1220P	236-264	12.8	5	18	\$264.00
DS1220P	118-132	12.8	5	18	253.00
HS1220P	67-74	12.8	5	18	253.00
CS1220P	33-37	12.8	3	18	253.00
WS1220P	45-50	12.8	5	18	253.00
DS640P	118-132	6.3	15	40	253.00
HS640P	67-74	6.3	15	40	253.00
CS640P	33-37	6.3	15	40	253.00

**OPERATES  
TWO-WAY RADIO**

From "non-standard" DC input. Common windings.



**CHANGE-A-VOLT DYNAMOTORS**  
Operate 6 volt 2-way radio equipment from 12 volt systems without rewiring. Supplied complete with starting relay and switch, 12 volt fuse block and wiring to directly convert a 12 volt battery to a 6 volt radio supply. B615V delivers 15 amps continuously and 45 amps intermittent. 65% efficiency. Can also serve as battery equalizer when operating low voltage equipment. Size: 11 3/4" x 4 3/4" x 7 1/4" high. Weight, 25 lbs.

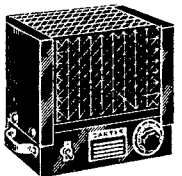
Carter No.	Input*		List Price	Carter No.	Input†		List Price
	Volts	Amps			Volts	Amps	
B615V	12	11.5	\$129.80	E128V	24	6.0	\$129.80
F615V	24	5.7	129.80	J128V	28	5.3	129.80
J615V	28	5.0	129.80	K128V	32	4.6	129.80
C615V	32	4.3	129.80	H5128V	70	2.2	129.80
H5615V	70	2.1	129.80	D128V	115	1.3	129.80
D615V	115	1.2	129.80				

\*Output 6 volts, 15 amps. †Output 12 volts, 8 amps.

	Input	Output	List Price
A121V	6 v. 29 amps	12 v. 12 amps	\$129.80
B 246V	12 v. 17 amps	24 v. 6 amps	129.80

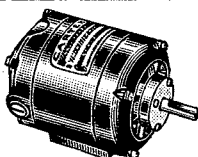
**DELIVERS 60  
CYCLE OUTPUT**

From 25 to 400 cycle input in capacities 20 to 2000 watts. 50 cycle output available.

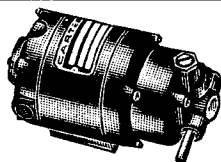


**AC TO AC FREQ. CHANGERS**  
Produces 115 v., 50 or 60 cycle AC output from 25 to 400 cycle input. For operating standard equipment on non-standard frequencies. Standard units are for single phase input and output. Three-phase output available on order. 70% PF models to run tape recorders, optional at no extra cost. For frequency control (meter), add \$44.00 to list price.

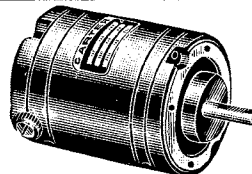
Carter No.	Output Watts	List Price	Carter No.	Output Watts	List Price
FC1020L	20	\$271.70	FC1025CP	250	\$533.50
FC1040L	40	272.80	FC1050CP	500	566.50
FC1060L	60	273.90	FC1075CP	750	599.50
FC1080C	80	348.70	FC1010M	1000	1094.50
FC110C	100	349.80	FC1015M	1500	1144.50
FC1015C	150	350.90	FC1020M	2000	1204.50
FC1020C	200	365.20			



CLASSIC FHP MOTORS



CLASSIC GEAR MOTORS



REGENT MOTORS

**QUALITY "CLASSIC" AC,  
UNIVERSAL AND SHUNT  
MOTORS**

Available from 1 to 1/7 HP. Gearmotors available from 1 to 750 RPM, up to 8 in. lbs. torque con. duty. New Regent Universal motors deliver 1/2 HP at 1000 RPM. Shunt models up to 1/2 HP.

WRITE FOR CATALOGS

# BURGESS BATTERIES



P6



2U6



Hg-9



2



Y15



4FH

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions			Unit Package Quantities	Weight of Unit Package in Pounds	Sugg. Dealer Each	List Price Each
					L	W	H				
<b>BURGESS ACTIVATORS FOR TRANSISTOR CIRCUITS</b>											
NE			1½	Flashlight	¾ (diam.)	1 11/64		6	1/8	\$.08	\$.125
XX9	1900	239	9, 13½	Socket	1 1/32	2 29/32	2 17/32	1	1/8	1.05	1.50
D6	1603	276	9	Snap Type	2 1/16	2	3 3/32	1	1	1.26	1.80
2N6	1602	246	9	Snap Type	1 3/8	1 3/8	2 3/4	1	3/10	1.30	1.85
4D4	1400	274	6	Snap Type	2 17/32	2	7 5/16	1	2 1/2	3.33	4.75
2U6	1604	216	9	Snap Type	1	3 3/64	1 7/8	12	1	.48	.69
A4			6	Flat Contacts	1 1/32	1 3/32	2 11/32	1	1/4	.69	1.00
D6PI	1601	2506	3, 6, 9	Socket	2 19/32	1 7/16	7 27/32	1	1 3/8	1.76	2.50
C6X	1612	2356	9	Snap Type	2 3/16	1 1/32	6 1/16	1	3/8	1.10	1.60
P6	1600	226	9	Snap Type	1	(diam.)	1 15/16	12	1 3/8	.62	.89
D5	26	707	7 1/2	Snap Type	2 3/16	2	2 23/32	1	3/8	1.15	1.65
130	14	635	1 1/2	Flashlight	2 3/64	(diam.)	1 15/16	12	1 3/8	.155	.25
230	13	A100	1 1/2	Flashlight	1 2/64	(diam.)	2 25/64	24	5 1/4	.155	.25
930	15	1015	1 1/2	Flashlight	3 3/64	(diam.)	1 31/32	12	1/2	1.55	.25
M6	1605	266	9	Snap Type	1 13/16	1 13/16	2 1/16	1	2 3/5	1.22	1.75
D6S	1608	2761	9	Socket	2 1/4	1 1/4	7 29/32	1	1 1/8	1.36	1.95
2Z3	1610	243	4 1/2	Snap Type	1 3/8	1 3/8	2 3/4	1	3/10	1.11	1.59
Y6 (YL6)	1606	E177	9	Snap Type	3 3/5	3 3/5	1 9/10	12	1/2	.83	1.20
L6	1611	206	9	Flat Contacts	4 7/64	(diam.)	1 31/32	12	1	.53	.75
2MN6		216	9	Snap Type	1	3 3/64	1 1/8	12	1	.65	.98
PM6		226	9	Snap Type	1	(diam.)	1 15/16	6	5/8	.80	1.19
PM8	1810	228	12	Snap Type	1	(diam.)	2 1/16	1	1/8	.95	1.35
1306	1306	333	4 1/2	Flat Contacts	4 3/64	(diam.)	1 31/32	1	1 oz.	.62	.89

## BURGESS MERCURY ACTIVATORS

Information on additional Mercury Batteries not listed below is available.

Hg-1	E1	1.4	Flat	5/8 (diam.)	2 1/32		4	.13	.42	.65
Hg-1R	E1N	1.35	Flat	5/8 (diam.)	2 1/32		4	.13	.52	.75
Hg-3R	E3	1.35	Flat	1	(diam.)	2 1/32	4	.30	.67	1.05
Hg-4R	E4	1.35	Flat	1 13/64	(diam.)	2 1/32	4	.45	.86	1.35
Hg-9	E9	1.4	Flat	1 17/32	(diam.)	1 31/32	12	.90	.51	.75
Hg-12	E12	1.4	Flat	5/8 (diam.)	2		2	.25	.80	1.15
Hg-12R	E12N	1.35	Flat	5/8 (diam.)	2		2	.25	.82	1.25
Hg-42R	E42N	1.35	Flat	1 11/64	(diam.)	2 3/8	1	.50	1.85	2.75
H113R	E113	4.05	Flat	4 3/64	(diam.)	2 7/32	2	.15	1.93	2.75
H114R	E114	5.4	Flat	4 3/64	(diam.)	1 3/32	2	.15	1.70	2.50
H115R	E115N	6.75	Flat	4 3/64	(diam.)	1 2/64	2	.15	1.70	2.50
H126	E126	8.4	Flat	4 1/64	(diam.)	1 63/64	12	1.00	1.05	1.50
H132R	E132N	2.7	Flat	4 3/64	(diam.)	1 1/16	2	.15	1.05	1.50
H133	E133	4.2	Flat	2 1/32	(diam.)	2	12	1.20	1.05	1.50
H133R	E133N	4.05	Flat	2 1/32	(diam.)	2	2	.20	1.22	1.75
H134R	E134N	5.4	Flat	4 3/64	(diam.)	2 5/8	2	.25	1.60	2.25
H135R	E135N	6.75	Flat	4 3/64	(diam.)	3 3/32	2	.30	2.00	2.95
H136R	E136N	8.1	Flat	4 3/64	(diam.)	3 1/16	2	.35	2.20	3.25
H137R	E137N	9.45	Flat	4 3/64	(diam.)	4 19/32	1	.20	2.76	3.95
H145	E145	7.0	Flat	2 1/32	(diam.)	1 13/64	2	.15	1.55	2.30
H146	E146	8.4	Snap	1	1 9/32	1 7/8	6	.50	1.05	1.50
H152R	E152N	2.7	Flat	3 1/32	(diam.)	1 1/64	2	.075	.82	1.25
H153R	E153N	4.05	Flat	3 1/32	(diam.)	1 45/64	2	.075	1.35	1.95
H162R	E162	2.7	Flat	4 3/64	(diam.)	3 7/64	2	.15	1.05	1.50
H163	E163	4.2	Flat	2 1/32	(diam.)	1 5/16	2	.15	1.05	1.50
H163R	E163N	4.05	Flat	2 1/32	(diam.)	1 5/16	2	.15	1.25	1.75
H164	E164	5.6	Flat	2 1/32	(diam.)	1 3/4	12	.80	1.25	1.75
H164R	E164N	5.4	Flat	2 1/32	(diam.)	1 3/4	2	.20	1.35	1.95
H165	E165	7.0	Flat	2 1/32	(diam.)	2 13/64	2	.20	1.60	2.25
H165R	E165N	6.75	Flat	2 1/32	(diam.)	2 13/64	2	.20	1.70	2.50
H177	E177	9.8	Snap	3 5/64	(diam.)	1 29/32	12	.30	1.22	1.75
H233	E233	4.2	Flat	1 1/64	(diam.)	1 31/32	1	.20	1.90	2.75
Hg-312	E312	1.4	Flat	3/16	(diam.)	3/4	6	.024	.24	.35
Hg-400	E400	1.4	Flat	2 3/64	(diam.)	3/64	6	.024	.24	.35
Hg-400R	E400N	1.35	Flat	2 3/64	(diam.)	3/64	6	.024	.35	.50
Hg-401	E401	1.4	Flat	2 3/64	(diam.)	1 1/8	3	.09	.35	.50
Hg-401R	E401N	1.35	Flat	2 3/64	(diam.)	1 1/8	2	.05	.42	.60
Hg-450R	E450	1.35	Flat	2 3/64	(diam.)	3/16	4	.01	.52	.75
Hg-502R	E502	1.35	Flat	1 17/32	(diam.)	1 31/32	2	.16	.70	1.00
Hg-520	E520	1.40	Flat	1 1/2	(diam.)	9/32	6	.024	.17	.25
Hg-575	.....	1.4	Flat	2 3/64	(diam.)	1/8	6	.05	.24	.34
Hg-601R	E601	1.35	Flat	5/8	(diam.)	1 3/4	2	.16	.83	1.30
Hg-625	E625	1.4	Flat	5/8	(diam.)	1/4	4	.05	.35	.50
Hg-625R	E625N	1.35	Flat	5/8	(diam.)	1/4	4	.05	.42	.60
Hg-630	E630	1.4	Flat	5/8	(diam.)	1/4	4	.05	.35	.50
Hg-630R	E630N	1.35	Flat	5/8	(diam.)	1/4	4	.05	.42	.65
Hg-640	E640	1.4	Flat	5/8	(diam.)	1/16	4	.15	.35	.50
Hg-640R	E640N	1.35	Flat	5/8	(diam.)	1/16	4	.15	.42	.60
Hg-675	E675	1.4	Flat	2 3/64	(diam.)	13/64	6	.022	.26	.40
302157	.....	1.35	Socket	2 1/16	1 1/16	4 3/16	1	.844	10.35	15.50

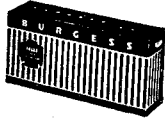
# BURGESS BATTERIES

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions			Unit Pkg.	Wgt. Unit	Sugg. Dealer	List Price Each
					L	W	H	Quant.	Pkg. in Lbs.	Each	
<b>BURGESS SEALED RECHARGEABLE NICKEL CADMIUM CELLS AND BATTERIES</b>											
Information on additional Nickel Cadmium Batteries not listed below is available.											
CD1			1.25		.460 (diam.)	.225		1		\$ 1.16	\$ 1.66
CD2			1.25		.610 (diam.)	.236		1		.81	1.16
CD8			1.25		.984 (diam.)	.232		1		.90	1.29
*CD8L		*(L indicates types with solder lugs on terminals).	1.25		.984 (diam.)	.257		1		.99	1.41
CD3			1.25		.984 (diam.)	.275		1		.97	1.38
*CD3L			1.25		.984 (diam.)	.300		1		1.05	1.50
CD4			1.25		.984 (diam.)	.350		1		.95	1.36
*CD4L			1.25		.984 (diam.)	.375		1		1.21	1.73
CD5			1.25		1.700 (diam.)	.300		1		1.47	2.10
*CD5L			1.25		1.700 (diam.)	.325		1		1.60	2.29
CD6(AA)			1.25		.560 (diam.)	1.950		1		1.93	2.75
*CD6L(AA)			1.25		.560 (diam.)	2.275		1		2.20	3.15
CD9			1.25		.550 (diam.)	3.680		1		3.01	4.30
CD7(D)			1.25		1.310 (diam.)	2.425		1		3.50	5.00
*CD7L(D)		1.25		1.310 (diam.)	2.775		1		3.75	5.35	
CD10(D)		1.25		1.300 (diam.)	2.425		1		6.50	9.25	
*CD10L(D)		1.25		1.300 (diam.)	2.775		1		6.82	9.75	
CD11(D)		1.25		1.300 (diam.)	2.425		1		4.53	6.50	
CD12 (short C)		1.25		.876 (diam.)	1.672		1		3.05	4.35	
CD12L(short C)		1.25		.876 (dia.)	1.672+L		1		3.12	4.45	
CD13 (half D)		1.25		1.273 (diam.)	1.440		1		4.67	6.65	
CD13L(half D)		1.25		1.273 (dia.)	1.440+L		1		4.81	6.90	
CD14		1.25		1.01 (diam.)	1.945		1		3.40	4.85	
CD21		6		1.065 (diam.)	1.525		1		5.95	8.50	
CD22		6		1.065 (diam.)	2.650		1		5.90	8.43	
CD23		6		1.800 (diam.)	1.725		1		10.15	14.50	
CD24		9.6		1.065 (diam.)	3.200		1		9.74	13.90	
CD25		9.6		1.065 (diam.)	1.975		1		9.58	13.68	
*CD25L		9.6		1.065 (diam.)	3.200		1		9.48	13.54	
CD26		9.6		1.800 (diam.)	2.575		1		15.85	22.50	
CD27		12		1.065 (diam.)	2.925		1		12.04	17.20	
CD28		12		1.065 (diam.)	3.600		1		11.95	17.08	
CD29		12		1.800 (diam.)	3.100		1		19.50	27.95	
CD30		6		1 1/2 1 1/2 3 1/16			1		19.96	28.53	
CD31		6		3 1/16 1 1/32 3 5/8			1		23.79	34.00	
CD100		1.25		1.36 .75 3.36			1		7.21	10.30	
CD101		1.25		1.36 1.36 2.40			1		7.14	10.20	
CD102		1.25		1.36 1.36 3.36			1		8.26	11.80	
CD103S		1.25		1.57 .92 4.01			1		12.40	17.71	
CD104		1.25		1.67 1.93 3.13			1		12.42	17.75	
CD105		1.25		1.67 1.93 3.65			1		13.19	18.95	
CD106S		1.25		1.57 1.48 4.01			1		14.10	20.18	
CD107		1.25		1.67 1.93 4.25			1		12.32	17.60	
CD108		1.25		1.05 3.56 4.90			1		15.19	21.65	
CD109		1.25		1.34 3.56 4.90			1		18.79	26.80	
CD110		1.25		1.66 3.56 4.90			1		21.96	31.35	
CD111		1.25		1.97 3.56 4.90			1		29.54	42.10	
<b>BURGESS PORTABLE RADIO "A"</b>											
Z4	2	724	6	Flat Contacts	1 1/16	1 1/16	2 1/32	1	1/5	.87	1.25
F3	3	736	4 1/2	Socket	4	1 1/16	4 1/8	1	1	1.05	1.50
4F	4	742	1 1/2	Socket	2 5/8	2 5/8	4 3/32	1	1 3/5	1.15	1.65
F4PI	6	744	6	Socket	2 3/32	2 3/32	4 1/8	1	1 1/2	1.15	1.65
G3	7	746	4 1/2	Socket	4 1/16	1 7/8	4 1/16	1	1 1/5	1.26	1.80
B5	8	713	7 1/2	Socket	3 29/32	7/8	2 29/32	1	1/2	2.07	2.95
C5	9	717	7 1/2	Socket	2 1/32	1 15/16	3 1/32	6	4 3/4	1.23	1.75
T5	10	W360	7 1/2	Socket	2 1/32	2 19/32	3 29/32	3	4	1.32	1.90
2R	13	950	1 1/2	Flashlight	1 21/64 (diam.)		2 3/4	48	11	.13	.20
2D	18	720	1 1/2	Socket	2 1/16	1 3/32	2 1/32	1	3/5	1.02	1.45
D3	19	726	4 1/2	Socket	3 7/8	1 1/16	2 1/16	1	3/4	1.05	1.50
21R	20	964	1 1/2	Flashlight	1 21/64 (diam.)		4 1/8	1	3/5	.32	.45
<b>BURGESS PORTABLE RADIO "B" BATTERIES</b>											
P45	211P	477	67 1/2	Snap Type	1 29/32	1	5 3/32	6	3 3/4	2.70	3.85
XX45	200	467	67 1/2	Snap Type	2 3/4	1 11/32	3 3/64	1	3/4	2.70	3.85
XX30	201	455	45	Snap Type	2 1/32	3/32	3 29/32	1	1/2	2.27	3.25
M30	202	482	45	Socket	3 1/16	1 3/4	5 1/2	1	2	2.97	4.25
K45	203	457	67 1/2	Snap Type	2 1/16	1 1/16	2 1/4	1	1/2	2.70	3.85
XX50	212	437	75	Snap Type	1 27/32	1 1/16	6 1/16	1	9/10	3.15	4.50
U30	213	415	45	Snap Type	1 3/32	1 3/32	3 1/32	1	1/8	1.75	2.50
P60	214	479	90	Snap Type	1 29/32	1	7 1/32	1	4/5	2.97	4.25
U10	208	411	15	Flat Contact	1	3/64	1 1/16	1	1 oz.	.81	1.15
U15	215	412	22 1/2	Flat Contact	1	39/64	1 1/32	1	1 oz.	1.05	1.50
U20	210	413	30	Flat Contact	1	39/64	2 1/32	1	2 ozs.	1.23	1.75
UX45	217	416	67 1/2	Snap Type	1 1/32	3/32	3 1/32	1	1/4	2.07	2.95
N60X	216	495	90	Snap Type	1 7/8	1 11/32	7 1/8	1	1	3.47	4.95
D30		487	45	Socket	5 1/16	2 1/32	7 5/16	1	4 1/2	3.84	5.50
V45	200	468	67 1/2	Snap Type	2 3/4	1 1/32	3 3/64	6	4 1/2	2.77	3.95
V60			90	Snap Type	3 23/32	1 3/32	3 1/16	1	1-3/10	3.15	4.50



(Continued on next page)

# BURGESS BATTERIES



F6A60



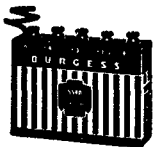
F2BP



XX30PI



5308



5540



5360

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions			Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	List Price Each
					L	W	H				
<b>BURGESS PORTABLE RADIO "A &amp; B" BATTERIES</b>											
G6B60	400	752	9A, 90B	Recessed Plug	13 <sup>29</sup> / <sub>32</sub>	2 <sup>13</sup> / <sub>16</sub>	4 <sup>21</sup> / <sub>32</sub>	1	6 <sup>3</sup> / <sub>10</sub>	\$5.78	\$8.25
F6A60	401	753	7 <sup>1</sup> / <sub>2</sub> , 9A, 90B	Socket	9 <sup>9</sup> / <sub>16</sub>	2 <sup>27</sup> / <sub>32</sub>	4 <sup>3</sup> / <sub>16</sub>	1	5 <sup>5</sup> / <sub>8</sub>	5.43	7.75
T5Z50	403	755	6, 7 <sup>1</sup> / <sub>2</sub> A, 75B	Socket	8 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	1	3 <sup>1</sup> / <sub>2</sub>	5.08	7.25
T5Z50P	431	785	7 <sup>1</sup> / <sub>2</sub> A, 75B	Recessed Plug	8 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	1	3 <sup>1</sup> / <sub>2</sub>	4.83	6.90
F6A60P	406	757	9A, 90B	Recessed Plug	9 <sup>9</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>	4 <sup>11</sup> / <sub>32</sub>	1	5 <sup>3</sup> / <sub>10</sub>	5.57	7.95
T6Z60	405	756	7 <sup>1</sup> / <sub>2</sub> , 9A, 90B	Socket	8 <sup>15</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	3 <sup>13</sup> / <sub>16</sub>	1	4 <sup>3</sup> / <sub>10</sub>	4.87	6.95
T6Z60P	428	727	9A, 90B	Recessed Plug	8 <sup>15</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	3 <sup>13</sup> / <sub>16</sub>	1	4 <sup>3</sup> / <sub>10</sub>	5.22	7.45
4TZ60	425	729	1 <sup>1</sup> / <sub>2</sub> A, 90B	Socket	7 <sup>9</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	1	3 <sup>3</sup> / <sub>8</sub>	4.38	6.25
<b>BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR BATTERIES ("A" TYPES)</b>											
5R	...	...	1 <sup>1</sup> / <sub>2</sub>	Flashlight	4 <sup>9</sup> / <sub>64</sub> (diam.)	2 <sup>13</sup> / <sub>64</sub>		12	3 <sup>4</sup> / <sub>8</sub>	.24	.36
8R	23	960P	1 <sup>1</sup> / <sub>2</sub>	Socket	1 <sup>3</sup> / <sub>32</sub> (diam.)	3 <sup>1</sup> / <sub>16</sub>		1	1 <sup>1</sup> / <sub>4</sub>	.77	1.10
9R	...	1015E	1 <sup>1</sup> / <sub>2</sub>	Flashlight	3 <sup>3</sup> / <sub>64</sub> (diam.)	1 <sup>6</sup> / <sub>64</sub>		12	1 <sup>1</sup> / <sub>2</sub>	.12	.17
37	...	...	1 <sup>1</sup> / <sub>2</sub>	Flashlight	1 <sup>1</sup> / <sub>16</sub> (diam.)	6 <sup>1</sup> / <sub>8</sub>		1	3 <sup>1</sup> / <sub>8</sub>	.65	.98
2F	11	W353	1 <sup>1</sup> / <sub>2</sub>	Socket	2 <sup>13</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>8</sub>	1	3 <sup>1</sup> / <sub>4</sub>	.87	1.25
2Z	...	1016E	1 <sup>1</sup> / <sub>2</sub>	Flashlight	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>32</sub>	1 <sup>6</sup> / <sub>64</sub>	1	1 oz.	.32	.45
2FBP	700	W354	1 <sup>1</sup> / <sub>2</sub>	Binding Post	2 <sup>21</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>32</sub>	5	3 <sup>1</sup> / <sub>2</sub>	.79	1.15
F2BP	701	W352	3	Binding Post	2 <sup>21</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>32</sub>	5	4	.94	1.35
F4BP	915	510S	6	Binding Post	2 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	4	1	1 <sup>1</sup> / <sub>2</sub>	.83	1.25
2F2H	703	W356	3	Binding Post	2 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>8</sub>	5	7	1.33	1.90
422	704	750	3	Brass Straps	1 <sup>11</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>16</sub>	1	2 ozs.	.57	.85
432	705	751	4 <sup>1</sup> / <sub>2</sub>	Brass Straps	1 <sup>31</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>4</sub>	1	3 ozs.	.66	1.00
532	706	703	4 <sup>1</sup> / <sub>2</sub>	Brass Straps	2 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>16</sub>	2 <sup>2</sup> / <sub>32</sub>	1	3 <sup>1</sup> / <sub>10</sub>	1.00	1.50
44	...	...	1 <sup>1</sup> / <sub>2</sub>	Binding Post	1 <sup>2</sup> / <sub>32</sub> (diam.)	4 <sup>3</sup> / <sub>32</sub>		1	7 <sup>1</sup> / <sub>8</sub>	1.75	2.61
2BBP	...	...	1 <sup>1</sup> / <sub>2</sub>	Binding Post	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>16</sub>	1	1 <sup>1</sup> / <sub>4</sub>	1.16	1.65
B2BP	...	...	3	Binding Post	1 <sup>3</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>16</sub>	1	1 <sup>1</sup> / <sub>4</sub>	.94	1.40
2F2BP	...	...	3	Binding Post	5 <sup>3</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>16</sub>	4 <sup>3</sup> / <sub>32</sub>	1	1 <sup>1</sup> / <sub>4</sub>	2.23	3.20
F4X	...	...	6	Binding Post	5 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>32</sub>	4 <sup>1</sup> / <sub>8</sub>	1	1 <sup>3</sup> / <sub>4</sub>	2.65	3.79
2FA	1	718	6	Socket	4	2 <sup>1</sup> / <sub>16</sub>	5 <sup>3</sup> / <sub>16</sub>	1	2 <sup>1</sup> / <sub>2</sub>	2.87	4.10
6F	5	743	1 <sup>1</sup> / <sub>2</sub>	Socket	4 <sup>3</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	1	2 <sup>1</sup> / <sub>2</sub>	2.28	3.25
8F	17	741	1 <sup>1</sup> / <sub>2</sub>	Socket	3 <sup>29</sup> / <sub>32</sub>	2 <sup>2</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>2</sub>	1	3	2.42	3.45
<b>BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR BATTERIES ("B" TYPES)</b>											
U10	208	411	15	Flat Contact	1	3 <sup>3</sup> / <sub>64</sub>	1 <sup>1</sup> / <sub>16</sub>	1	1 oz.	.81	1.15
U15	215	412	22 <sup>1</sup> / <sub>2</sub>	Flat Contact	1	3 <sup>3</sup> / <sub>64</sub>	1 <sup>3</sup> / <sub>32</sub>	1	1 oz.	1.05	1.50
U20	210	413	30	Flat Contact	1	3 <sup>3</sup> / <sub>64</sub>	2 <sup>1</sup> / <sub>32</sub>	1	2 ozs.	1.23	1.75
W30	...	...	45	Binding Post	3	1 <sup>1</sup> / <sub>4</sub>	3 <sup>29</sup> / <sub>32</sub>	1	3 <sup>1</sup> / <sub>8</sub>	2.11	3.15
XX15	...	425P	22 <sup>1</sup> / <sub>2</sub>	Socket	1 <sup>11</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>8</sub>	1	1 <sup>1</sup> / <sub>2</sub>	1.37	1.95
XX22	...	433P	33	Socket	2 <sup>1</sup> / <sub>32</sub>	3 <sup>1</sup> / <sub>64</sub>	3 <sup>1</sup> / <sub>8</sub>	1	1 <sup>1</sup> / <sub>2</sub>	1.92	2.75
XX30PI	...	455P	45	Socket	2 <sup>1</sup> / <sub>32</sub>	3 <sup>1</sup> / <sub>32</sub>	4 <sup>1</sup> / <sub>32</sub>	1	1 <sup>1</sup> / <sub>2</sub>	2.27	3.25
Y10	220	504	15	Flat Contact	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>64</sub>	1	1 oz.	.81	1.15
Y15	221	505	22 <sup>1</sup> / <sub>2</sub>	Flat Contact	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>32</sub>	1	1 oz.	1.05	1.50
Y20	223	506	30	Flat Contact	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	1	1 oz.	1.30	1.85
Y20S	222	507	30	Flat Contact	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>16</sub>	1	1 oz.	1.30	1.85
Z30NX	711	W350	45	Binding Post	3 <sup>1</sup> / <sub>32</sub>	1 <sup>7</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>32</sub>	5	7 <sup>1</sup> / <sub>2</sub>	2.69	3.85
U200	722	493	300	Pin Jacks	2 <sup>3</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	1	1	8.37	11.95
Z30T	...	...	45	Socket	3	2 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>8</sub>	1	1 <sup>3</sup> / <sub>10</sub>	2.62	3.75
W30BPX	...	W358	45	Binding Post	3	1 <sup>1</sup> / <sub>4</sub>	3 <sup>29</sup> / <sub>32</sub>	1	3 <sup>1</sup> / <sub>8</sub>	2.69	3.85
Z30BP	...	W351	45	Binding Post	3 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>32</sub>	3 <sup>1</sup> / <sub>8</sub>	1	1 <sup>3</sup> / <sub>8</sub>	5.87	8.25
Z96P (9968)	...	...	144	Binding Post	2 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>16</sub>	1	3 <sup>1</sup> / <sub>4</sub>	18.25	26.00
5156PI	721	768	22 <sup>1</sup> / <sub>2</sub>	Socket	4 <sup>3</sup> / <sub>64</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>64</sub>	1	1 <sup>3</sup> / <sub>8</sub>	3.84	5.50
A60	...	...	90	Socket	4 <sup>1</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>2</sub>	1	3 <sup>1</sup> / <sub>2</sub>	5.55	7.95
W20PI	...	...	30	Socket	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>32</sub>	1	1 <sup>1</sup> / <sub>2</sub>	1.65	2.47
XX69	227	W361	103 <sup>1</sup> / <sub>2</sub>	Flashlight	1 <sup>11</sup> / <sub>32</sub>	1 <sup>11</sup> / <sub>32</sub>	11 <sup>29</sup> / <sub>32</sub>	1	1	4.86	6.95
Z30	205	738	45	Socket	3	2 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	2	2 <sup>3</sup> / <sub>4</sub>	2.76	3.95
A30	206	W359	45	Socket	3 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	4 <sup>3</sup> / <sub>16</sub>	2	3 <sup>1</sup> / <sub>2</sub>	2.69	3.85
B30	207	484	45	Socket	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>32</sub>	5 <sup>3</sup> / <sub>16</sub>	2	4 <sup>1</sup> / <sub>2</sub>	3.47	4.95
4156	710	763	22 <sup>1</sup> / <sub>2</sub>	Binding Post	3 <sup>1</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>8</sub>	2 <sup>29</sup> / <sub>32</sub>	1	1	1.61	2.35
5156SC	708	778	22 <sup>1</sup> / <sub>2</sub>	Spring Clip	4 <sup>1</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>3</sup> / <sub>4</sub>	5	8	3.84	5.50
5308	709	762S	45	Binding Post	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>8</sub>	1	2 <sup>1</sup> / <sub>2</sub>	3.05	4.35
K10	224	417	15	Flat Contact	1 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>32</sub>	1	2 ozs.	1.16	1.65
K15	225	420	22 <sup>1</sup> / <sub>2</sub>	Flat Contact	1 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>8</sub>	2 <sup>2</sup> / <sub>32</sub>	1	2 ozs.	1.23	1.75
K20	226	430	30	Flat Contact	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>16</sub>	2 <sup>2</sup> / <sub>32</sub>	1	3 ozs.	1.51	2.15
<b>BURGESS INDUSTRIAL AND ELECTRONIC "C" BATTERIES</b>											
2370PI	718	771	4 <sup>1</sup> / <sub>2</sub>	Socket	4 <sup>1</sup> / <sub>64</sub>	1 <sup>2</sup> / <sub>64</sub>	2 <sup>9</sup> / <sub>64</sub>	5	3 <sup>3</sup> / <sub>5</sub>	1.93	2.75
2370	712	761T	4 <sup>1</sup> / <sub>2</sub>	Binding Post	3 <sup>1</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	5	3 <sup>7</sup> / <sub>10</sub>	1.76	2.50
5540	713	773	7 <sup>1</sup> / <sub>2</sub>	Bndg Post Neg	4	7 <sup>1</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>4</sub>	5	1 <sup>9</sup> / <sub>10</sub>	1.65	2.35
5360	714	781	4 <sup>1</sup> / <sub>2</sub>	Binding Post	2 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>32</sub>	6	1 <sup>1</sup> / <sub>2</sub>	.99	1.40
W5BP	...	W362	7 <sup>1</sup> / <sub>2</sub>	Binding Post	2 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>4</sub>	6	4 <sup>1</sup> / <sub>5</sub>	1.64	2.35
A38PX	...	...	4 <sup>1</sup> / <sub>2</sub>	Binding Post	1 <sup>1</sup> / <sub>32</sub>	2 <sup>2</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>4</sub>	1	1 <sup>1</sup> / <sub>4</sub>	1.76	2.50
A8BP	...	...	12	Binding Post	2 <sup>25</sup> / <sub>32</sub>	1 <sup>2</sup> / <sub>64</sub>	2 <sup>1</sup> / <sub>32</sub>	1	1 <sup>1</sup> / <sub>2</sub>	4.17	6.22
2156	702	766	22 <sup>1</sup> / <sub>2</sub>	Spring Clips	6 <sup>21</sup> / <sub>32</sub>	4 <sup>1</sup> / <sub>16</sub>	2 <sup>2</sup> / <sub>32</sub>	6	17 <sup>1</sup> / <sub>2</sub>	4.87	6.95
<b>BURGESS FARM RADIO "A", "B", AND "A" &amp; "B" BATTERIES</b>											
20F2(PI)	720	X-125	3	Socket	11 <sup>1</sup> / <sub>2</sub>	4	6 <sup>1</sup> / <sub>8</sub>	1	13 <sup>9</sup> / <sub>10</sub>	7.70	11.00
20F	719	740	1 <sup>1</sup> / <sub>2</sub>	Socket	7 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	1	6 <sup>1</sup> / <sub>5</sub>	7.65	10.95
21308PI or SC	727 or 715	W364P or F	45	Socket or Spring Clip	8 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>32</sub>	7 <sup>1</sup> / <sub>32</sub>	1	12 <sup>2</sup> / <sub>5</sub>	6.45	9.20
10308PI or SC	726 or 716	W363P or F	45	Socket or Spring Clip	8 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>32</sub>	7 <sup>1</sup> / <sub>16</sub>	1	12	5.36	7.65
2308PI or SC	717 or 723	W365P or F	45	Socket or Spring Clip	8 <sup>3</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>32</sub>	7 <sup>1</sup> / <sub>4</sub>	1	7 <sup>4</sup> / <sub>5</sub>	4.58	6.55
17GD60	413	759	1 <sup>1</sup> / <sub>2</sub> A, 90B	Socket	15 <sup>1</sup> / <sub>16</sub>	4 <sup>3</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>16</sub>	1	19	7.95	10.65
S6D60	415	776	7 <sup>1</sup> / <sub>2</sub> A, 90B	Socket	9 <sup>7</sup> / <sub>8</sub>	4<					



# BURGESS BATTERIES

BURGESS Number	NEDA Numbers	Other	Volts	Terminal Type	Overall Dimensions			Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	List Price Each
					L	W	H				
<b>BURGESS FLASHLIGHT AND LANTERN BATTERIES</b>											
2 (24V)	13	950	1½	Flashlight	1 <sup>21</sup> / <sub>64</sub> (diam.)	2 <sup>3</sup> / <sub>8</sub>	48	10 <sup>1</sup> / <sub>2</sub>	.13		\$.20
2 (50 Bulk)	13	950	1½	Flashlight	1 <sup>21</sup> / <sub>64</sub> (diam.)	2 <sup>3</sup> / <sub>8</sub>	50	10 <sup>1</sup> / <sub>2</sub>	.13		.20
210 (24V)	-----	1050	1½	Flashlight	1 <sup>21</sup> / <sub>64</sub> (diam.)	2 <sup>3</sup> / <sub>8</sub>	48	11	.155		.25
210 (50 Bulk)	-----	1050	1½	Flashlight	1 <sup>21</sup> / <sub>64</sub> (diam.)	2 <sup>3</sup> / <sub>8</sub>	50	10 <sup>3</sup> / <sub>4</sub>	.155		.25
2MB (12 Pack)	-----	-----	1½	Flashlight	1 <sup>21</sup> / <sub>64</sub> (diam.)	2 <sup>3</sup> / <sub>8</sub>	216	46	.13		.20
1	14	935	1½	Flashlight	6 <sup>3</sup> / <sub>64</sub> (diam.)	1 <sup>11</sup> / <sub>16</sub>	24	2 <sup>5</sup> / <sub>8</sub>	.13		.20
Z	15	915	1½	Flashlight	3 <sup>5</sup> / <sub>64</sub> (diam.)	1 <sup>1</sup> / <sub>32</sub>	12	½	.095		.15
7	24	912	1½	Flashlight	1 <sup>3</sup> / <sub>32</sub> (diam.)	1 <sup>3</sup> / <sub>4</sub>	12	¼	.095		.15
N (Bare)	910	904	1½	Flashlight	7 <sup>1</sup> / <sub>16</sub> (diam.)	1 <sup>1</sup> / <sub>64</sub>	12	1 <sup>1</sup> / <sub>8</sub>	.08		.125
F4H Ind.	908	509	6	Spring	2 <sup>5</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>8</sub>	25	36 <sup>1</sup> / <sub>10</sub>	.83	1.25
F4M (Metal)	908	509	6	Spring	2 <sup>5</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>8</sub>	12	19	.83	1.25
F4BP	915	510S	6	Binding Post	2 <sup>5</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>8</sub>	4	1	1 <sup>2</sup> / <sub>5</sub>	.83	1.25
TW1	918	731	6	Binding Post	5 <sup>5</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>16</sub>	1	3 <sup>1</sup> / <sub>5</sub>	1.96	2.95
TW2	926	-----	12	Binding Post	5 <sup>5</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>16</sub>	1	3 <sup>1</sup> / <sub>5</sub>	1.96	2.95



TW1

<b>BURGESS IGNITION - TELEPHONE AND PROTECTIVE SYSTEM BATTERIES</b>											
* Battery also available with spring clip terminals						** Battery also available with screw terminals					
4FH	900	735	1½	Screw Terminal	2 <sup>5</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>8</sub>	4	12	16	.84	1.25
4F2H	901	W357	3	Spring Clip	3 <sup>29</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>32</sub>	1	2 <sup>3</sup> / <sub>5</sub>	1.57	2.25
4F4H	902	706	6	Binding Post	8 <sup>5</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>16</sub>	1	6 <sup>1</sup> / <sub>5</sub>	3.34	4.98
4F5H	903	715	7½	Binding Post	7 <sup>3</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>16</sub>	1	7 <sup>2</sup> / <sub>5</sub>	4.86	7.25
4F6H	904	716	9	Binding Post	8 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>16</sub>	1	9	5.53	8.25
*6 Ign.	905	6 Ign.	1½	Screw Terminal	2½ (diam.)	6%	6%	12	21 <sup>3</sup> / <sub>10</sub>	.84	1.25
**6 Tel.	906	6 Gl.	1½	Spring Clip	2½ (diam.)	6%	6%	12	24 <sup>3</sup> / <sub>5</sub>	.84	1.25
6 Ind.	911	6 Ind.	1½	Screw Terminal	2½ (diam.)	6%	6%	12	25	.90	1.35
S461	907	1461	6	Binding Post	10 <sup>1</sup> / <sub>2</sub>	2¾	7 <sup>1</sup> / <sub>32</sub>	6	53 <sup>1</sup> / <sub>2</sub>	3.34	4.98



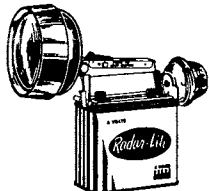
No. 6 Ignition

<b>BURGESS PHOTO-FLASH BATTERIES</b>											
120	...	835	1½	Flashlight	1 (diam.)	1 <sup>1</sup> / <sub>16</sub>	24	2¼	.16		.25
220	...	850	1½	Flashlight	1 <sup>1</sup> / <sub>32</sub> (diam.)	2 <sup>25</sup> / <sub>64</sub>	12	2½	.16		.25
920	...	815	1½	Flashlight	3 <sup>5</sup> / <sub>64</sub> (diam.)	1 <sup>1</sup> / <sub>32</sub>	24	1	.13		.20
U15	215	412	22½	Flat Contact	3 <sup>1</sup> / <sub>32</sub>	9 <sup>1</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>32</sub>	1	1 oz.	1.05	1.50
Y10	220	504	15	Flat Contact	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	1 <sup>23</sup> / <sub>64</sub>	1	1 oz.	.81	1.15
Y15	221	505	22½	Flat Contact	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	1	1 oz.	1.05	1.50
U10	208	411	15	Flat Contact	1	3 <sup>3</sup> / <sub>64</sub>	1 <sup>1</sup> / <sub>16</sub>	1	1 oz.	.81	1.15
U20	210	413	30	Flat Contact	1	3 <sup>3</sup> / <sub>64</sub>	2 <sup>1</sup> / <sub>32</sub>	1	2 ozs.	1.23	1.75
XX150	...	489	225	Pin Jacks	4¼	2 <sup>5</sup> / <sub>8</sub>	4¼	1	2½	6.96	9.95
U160	...	491	240	Flat Contact	2 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>32</sub>	1	¾	5.56	7.95
N150	...	492	225	Pin Jacks	3 <sup>3</sup> / <sub>16</sub>	2¾	4¾	1	2½	6.96	9.95
U320	...	497	510	Flat Contact	2 <sup>1</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>16</sub>	1	1½	11.16	15.95
K30P-K	...	45	45	Battery & Bulb				1	¾	1.67	2.50



220

<b>BURGESS ALKALINE BATTERIES</b>											
AL-1	814	E93	1½	Flat Contact	6 <sup>3</sup> / <sub>64</sub> (diam.)	1 <sup>1</sup> / <sub>16</sub>	6	1	.51		.75
AL-133	1306	333	4½	Flat Contact	2 <sup>1</sup> / <sub>32</sub> (diam.)	2	12	1	.70		1.00
AL-2	...	E95	1½	Flat Contact	1 <sup>2</sup> / <sub>64</sub> (diam.)	2 <sup>1</sup> / <sub>32</sub>	24	8	.65		.95
AL-7	...	...	1½	Flat Contact	1 <sup>1</sup> / <sub>32</sub> (diam.)	1¾	12	¼	.31		.45
AL-9	815	E91	1½	Flat Contact	1 <sup>1</sup> / <sub>32</sub> (diam.)	1 <sup>3</sup> / <sub>32</sub>	12	1	.33		.50
AL-N	910	E90	1½	Flat Contact	2 <sup>5</sup> / <sub>64</sub> (diam.)	1½	3	1 oz.	.24		.35



TW3

<b>BURGESS RADAR LIGHTS</b> NOTICE: All Radar Lights are packed in individual cartons complete with battery.											
BURGESS Number	Description	Unit Pkg. Quant.	Wt. of Un. Pkg. in Lbs.	Sugg. Dealer Ea. Complete	LIST PRICE EACH						
					Head Only	Battery	Complete				
TW3	Radar-Lite Spot-Flasher (Lamp 4546, 407)	1	5 <sup>1</sup> / <sub>10</sub>	\$8.41	\$10.20	\$2.95	\$13.15				
TW4	Radar-Lite Spot-Without Flasher (Lamp 4546)	1	4¾	6.76	7.75	2.95	10.70				
TW7	Radar-Lamp Chrome-Finish (Lamp 1651)	1	4½	5.86	6.50	2.95	9.45				
TW8	Radar-Lamp Copper-Finish (Lamp 1651)	1	4½	5.86	6.50	2.95	9.45				
TW9	Radar Bearcat Focusing Lantern (Lamp 425 or 502)	1	4½	4.67	4.50	2.95	7.45				
TW11	Radar-Lite (Bulb Reflector Model) (Lamp 425)	1	4¾	5.68	6.20	2.95	9.15				
TW12	12 Volt Radar-Lite (Uses TW2 Battery) (Lamp 965)	1	5	6.88	8.20	2.95	11.15				
TW4E	Power Failure Operated Lantern (Spot Beam) (Lamp 4546)	1	6	13.61	17.50	2.95	20.45				
TW6E	Power Failure Operated Lantern (Flood Beam) (Lamp 4512)	1	6	13.61	17.50	2.95	20.45				
TW34	Radar-Flash (Lamp 407)	1	4	4.49	3.95	2.95	6.90				



TW7

<b>BURGESS RADAR-MATE and FLASHLIGHTS (less batteries)</b>											
BURGESS Number	Description	Unit Pkg. Quant.	Wt. of Un. Pkg. in Lbs.	Sugg. Dealer Each	List Price Each						
						(Batteries not included)					
JR1	4½ Volt Radar-Mate Lantern. Uses 3 No. 2 (Size D) batteries (Lamp PR3)	6	7½	\$3.32	\$4.98						
161	Magnet Flashlight—2 Cell Prefocused (Lamp PR2 or PR4)	6	3	1.33	1.99						
163	Tuffy-Plastic Flashlight—2 Cell Prefocused (Lamp PR2 or PR4)	6	1½	.69	.99						
257	Satellite Torch—2 Cell Junior Prefocused (Lamp PR2 or PR4)	3	1	1.17	1.75						
357	Satellite Torch—2 Cell Prefocused (Lamp PR2 or PR4)	6	2¾	1.30	1.95						
263	2 Cell Magnet-Tough Plastic Industrial Flashlight (Lamp PR2)	6	2½	1.33	1.99						
453	2 Cell Industrial—Safety Light (Lamp PR2)	1	½	3.33	5.00						
563	Penlight (AAA size) (Lamp 224)	12	1½	.82	1.25						
663	Penlight (Heavy Duty AA size) (Lamp 222)	12	1½	.82	1.25						
763	Snap-Lite Pocket Light (AAA size) (Lamp 224)	12	1½	.82	1.25						



357

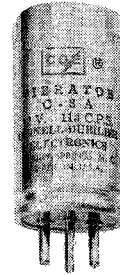
# Vibrators



## AUTO RADIO & SPECIAL PURPOSE VIBRATORS

Class  
250 • 00

These CDE replacement vibrators are designed to give long life and excellent performance in auto radios and special purpose applications. Construction features the exclusive CDE "Seal-Vent" design which seals the vibrator against contamination on the shelf and permits the unit to breath in service. Design also insures quick starting and smooth operation as well as perfect contact alignment. Vibrators listed cover the vast majority of replacement applications. In cases where the units listed do not cover the unit to be replaced, the information given on this page should permit use of a standard replacement vibrator with simple socket change and rewiring.



CDE Type	Voltage	Freq. (cps)	Max. Load Amps	Plug Base	Circuit Diagram	Size (Inches—DxL)	List Price*	Net Price*
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**INTERRUPTER TYPES**

5301	6	115	6	4	A-1	1½ x 2¾	\$ 4.84	\$ 2.96
5335	6	115	6	4	F-1	1½ x 2¾	5.04	3.08
5560	6	60	5	4	A-2	1½ x 3½	9.34	5.72
6301	12	115	4	4	A-1	1½ x 2¾	4.84	2.96
6330	12	115	4	3 Spcl.	DA	1½ x 2¾	4.84	2.96
6371	12	115	4	4	A-1	1½ x 2¾	4.85	2.97
6372	12	115	4	4	D-2	1½ x 2¾	4.85	2.97
6514	12	180	3	4	A-1	1½ x 2¾	10.78	6.60
5300-32	32	115	1.4	4	A-1	1½ x 3½	7.32	4.50

**SYNCHRONOUS TYPES**

5426	6	115	6	5	P-1	1½ x 3½	7.92	4.84
5454	6	115	6	5 Rev.	AD-1	1½ x 2¾	8.80	5.38
5830	6	115	10	4 Spcl.	AB-1	1½ x 2¾	7.95	4.87
5831	6	115	10	6	V-4	1½ x 2¾	7.95	4.87

**UNIVERSAL REPLACEMENT TYPES**

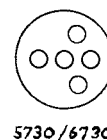
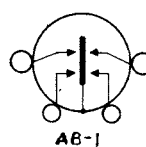
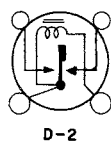
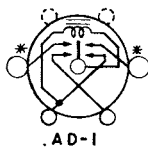
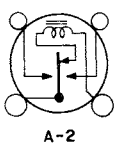
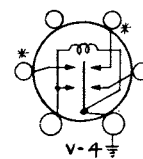
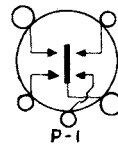
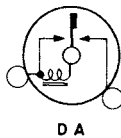
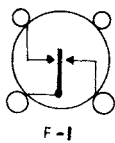
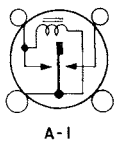
C1A	6	115	6	4	A-1	1½ x 2¾	2.41	1.47
C3A	12	115	4	3 Spcl.	DA	1½ x 2¾	2.51	1.53
C4A	12	115	4	4	A-1	1½ x 2¾	2.51	1.53

**VIBRATORS FOR FOREIGN CAR RADIOS**

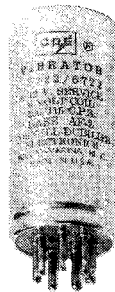
CDE Type	Voltage	Blaupunkt Part No.	Plug Base	List Price*	Net Price*
5730	6	SM0702-01Z	5 Special	\$ 6.35	\$ 3.89
6730	12	SM0702-02Z	5 Special	6.35	3.89

\* Prices include 8% Federal Excise Tax

**CIRCUIT DIAGRAMS**



Class  
250 • 00



**COMMUNICATIONS VIBRATORS**

Recent design improvements in CDE's replacement communications vibrator line have more than doubled in life expectancy of these units. The new communications vibrator offer extremely long life and excellent performance in the most demanding applications. Replacements are listed for most of the two way radio and citizens band equipment in service. More detailed replacement information is contained in the CDE Vibrator Replacement Guide to be issued shortly. Current ratings listed are maximum continuous ratings. Transmitting ratings are approximately 4 times these based on one minute transmit and four minutes receive. Information contained in the listing should permit replacement of all communications vibrator types with only a few requiring socket and wiring changes.

CDE Type	Voltage	Freq. (cps)	Max. Load Amps	Plug Base	Circuit Diagram	Size D x L	List Price*	Net Price*
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**INTERRUPTER TYPES**

5715	6	115	9	4	A-3	1½ x 2⅞	\$6.53	\$3.99
5718	6	115	10	6	Y-2	1½ x 2⅞	7.46	4.56
5721	6	115	10	6	Y-3	1½ x 2⅞	7.10	4.34
5722/6722	6	100	6	7	AF-2	1½ x 2⅞	9.88	6.04
5725	6	115	9	5 Rev.	HZ-1	1½ x 2⅞	7.10	4.34
5821	6	115	10	6	V-2	1½ x 2⅞	7.92	4.84
6715	12	115	5	4	A-4	1½ x 2⅞	8.80	5.35
6718	12	115	6	6	Y-1	1½ x 2⅞	7.46	4.56
5722/6722	12	100	4	7	AF-2	1½ x 2⅞	9.88	6.04
6725	12	115	5	5 Rev.	HZ-2	1½ x 2⅞	7.10	4.34
6715S	12	115	5	4	A-3	1½ x 2⅞	7.10	4.34

**SYNCHRONOUS TYPES**

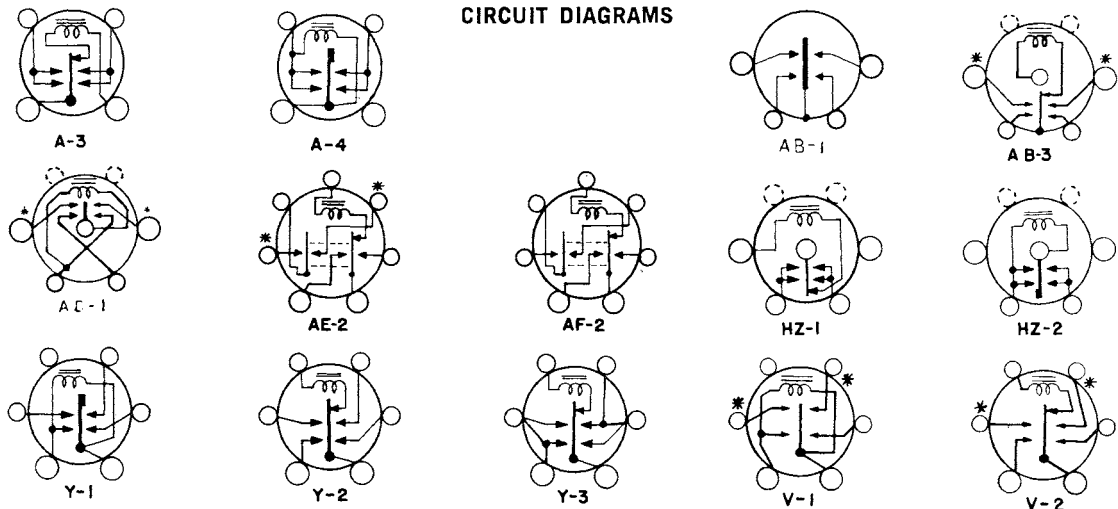
5805	6	115	10	5 Rev.	AD-1	1½ x 2⅞	8.80	5.38
5820	6	115	6	5 Rev.	AB-3	1½ x 2⅞	10.02	6.14
5822	6	100	6	7	AE-2	1½ x 2⅞	9.34	5.72
6805	12	115	5	5 Rev.	AD-1	1½ x 2⅞	8.80	5.38
6820	12	115	5	4 Spl.	AB-1	1½ x 2⅞	10.02	6.14
6821	12	115	5	6	V-1	1½ x 2⅞	7.92	4.84
6822	12	100	4	7	AE-2	1½ x 2⅞	9.34	5.72

**VIBRATORS FOR FOREIGN CITIZENS BAND EQUIPMENT**

CDE Type	Replacement Data	List Price*	Net Price*
6566	Japanese C.B. equipment. Vibrator NISSIN 12Z-1A rated 12v, 60 cps, 4 amp, 6 pin special socket 1½" x 2⅞"	\$10.90	\$6.54
5821	Replaces West German CACO C-602-6. See listing above for ratings and details.	7.92	4.84

\* Prices Include 8% Federal Excise Tax

**CIRCUIT DIAGRAMS**



# Vibrators



## HEAVY DUTY VIBRATORS

Class  
250 • 00

These heavy duty vibrators are replacements for popular units used in inverter power supplies. Units listed cover the vast majority of requirements. If replacement is required for an obso-

lete vibrator (not listed), the Cornell-Dubilier Vibrator Department, Fuquay-Varina, N. C., will provide a replacement recommendation on request.

### STANDARD SERIES

Vibrator	Voltage	Frequency	*D.C. Amps.	Base	Type	Size	List Price	Net Price
6VB6H	6	60 ± 2	15	HB	Horiz. Single	2 5/32 x 5 1/16 x 2 1/16	\$14.20	\$ 8.52
6VD6H	6	60 ± 2	30	HE	Horiz. Tandem	2 23/32 x 5 15/16 x 3 3/8	24.70	14.82
6VL6H	6	60 ± 1/2	12	HA	Vert. Single	1 31/32 Dia. x 4 1/16	14.20	8.52
6VL10	6	100 ± 3	10	HA	Vert. Single	1 31/32 Dia. x 4 1/16	12.90	7.74
12VB6H	12	60 ± 2	10	HB	Horiz. Single	2 5/32 x 5 1/16 x 2 1/16	14.20	8.52
12VD6H	12	60 ± 1/2	20	HE	Horiz. Tandem	2 23/32 x 5 15/16 x 3 3/8	24.70	14.82
12VL6H	12	60 ± 1/2	9	HA	Vert. Single	1 31/32 Dia. x 4 1/16	14.20	8.52
12VL10	12	100 ± 3	8	HA	Vert. Single	1 31/32 Dia. x 4 1/16	12.90	7.74
28VB6H	28	60 ± 2	8	HB	Horiz. Single	2 5/32 x 5 1/16 x 2 1/16	14.20	8.52
28VD6H	28	60 ± 1/2	15	HE	Horiz. Tandem	2 23/32 x 5 15/16 x 3 3/8	24.70	14.82
28VL6	28	60 ± 2	7	HA	Vert. Single	1 31/32 Dia. x 4 1/16	12.90	7.74
28VL10	28	100 ± 3	6	HA	Vert. Single	1 31/32 Dia. x 4 1/16	12.90	7.74
32VB6H	32	60 ± 1/2	6	HB	Horiz. Single	2 5/32 x 5 1/16 x 2 1/16	14.20	8.52
32VD6H	32	60 ± 1/2	12	HE	Horiz. Tandem	2 23/32 x 5 15/16 x 3 3/8	24.70	14.82
32VL6H	32	60 ± 1/2	6	HA	Vert. Single	1 31/32 Dia. x 4 1/16	14.20	8.52
32VL10	32	100 ± 3	5	HA	Vert. Single	1 31/32 Dia. x 4 1/16	12.90	7.74
110VB6H	110	60 ± 1/2	3	HB	Horiz. Single	2 5/32 x 5 1/16 x 2 1/16	14.20	8.52
110VC6H	110	60 ± 1/2	6	HE	Horiz. Tandem	2 23/32 x 5 15/16 x 3 3/8	24.70	14.82
110VL6H	110	60 ± 1	3	HA	Vert. Single	1 31/32 Dia. x 4 1/16	14.20	8.52

### POPULAR OLD TYPES (Not directly replaceable by Standardized Series)

Vibrator	Voltage	Frequency	*D.C. Amps.	Base	Type	Size	List Price	Net Price
427	6	60 ± 2	12	HF	Vert. Single	2 3/16 Dia. x 4 11/16	\$12.90	\$ 7.74
490	6	60 ± 3	25	HL	Horiz. Tandem	2 23/32 x 5 15/16 x 3 3/8	24.70	14.82
491	6	60 ± 2	20	HL	Horiz. Tandem	2 5/32 x 5 3/8 x 3 7/16	24.70	14.82
1315H	110	60 ± 1/2	3	HH	Horiz. Single	2 5/32 x 5 1/16 x 2 1/16	15.25	9.15

### SMALL VIBRATORS USED IN POWERCON® INVERTERS

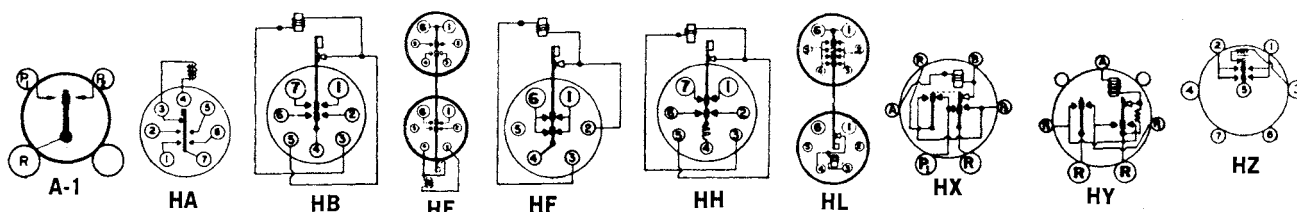
Vibrator	Voltage	Frequency	*D.C. Amps.	Base	Type	Size	List Price	Net Price
2522	110	60 ± 3	5	HX	Vert. ARV	1 1/2 Dia. x 2 7/8	\$ 9.10	\$ 5.46
2529	6	60 ± 5	5	None	Wire-in	1 x 1 x 2 3/8	4.40	2.64
2530	12	60 ± 5	3	None	Wire-in	1 x 1 x 2 3/8	4.40	2.64
2531	6	60 ± 3	10	A-1	Vert. ARV	1 1/2 Dia. x 2 7/8	8.10	4.86
2532	12	60 ± 3	5	A-1	Vert. ARV	1 1/2 Dia. x 2 7/8	8.10	4.86
2533	110	60 ± 5	6	None	Wire-in	1 x 1 x 3/8	4.40	2.64
2563	6	60 ± 3	15	HZ	Vert. ARV	1 1/2 Dia. x 2 7/8	10.90	6.54
2564	28	60 ± 3	5	HZ	Vert. ARV	1 1/2 Dia. x 2 7/8	10.90	6.54
2565	110	60 ± 3	8	HY	Vert. ARV	1 1/2 Dia. x 2 7/8	10.90	6.54
6565	12	60 ± 3	8	A-3	Vert. ARV	1 1/2 Dia. x 2 7/8	10.90	6.54
6567	12	60 ± 3	8	None	Wire Leads	1 1/2 Dia. x 2 7/8	10.90	6.54

### POPULAR OLD TYPES (Directly replaceable by Standardized Series)

Old	New	Old	New	Old	New
2989	32VB6H	3079	110VC6H	3103	6VB6H
3047	12VD6H	3087	12VB6H	4123	6VD6H

\*D.C. Ampere rating is based upon measurement made with a D.C. ammeter in primary lead. Circuit must be properly designed for load being handled. Technical advice is available through CDE Vibrator Department, Fuquay Varina, N. C.

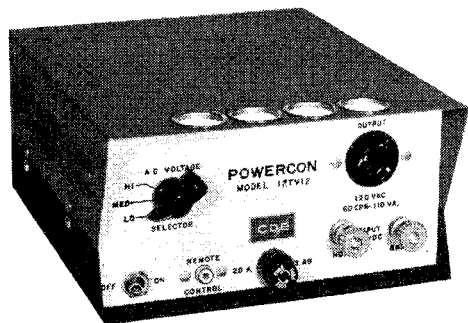
### CIRCUIT DIAGRAMS



POWERCON®

Class  
251 • 00

## 1965 MODEL POWERCON® INVERTERS



12TV12 illustrates the modern styling of the 1965 POWERCON® inverter line.

These 1965 model POWERCON® inverter power supplies are being introduced throughout the summer and early fall of 1964. They feature all new designs and attractive styling to provide the ultimate in inverter power supplies for providing AC power in autos, trucks, aircraft and boats. Units are ideal for operating a wide variety of electronic entertainment devices as well as small appliances and lighting equipment.

The first model in the new line, the 12TV12 illustrated, has met with enthusiastic acceptance. This model is intended for operation of portable TV sets as well as other household appliances within the rating. Other models in the 1965 POWERCON® line will feature the same attractive styling as the 12TV12. The combination of attractive design and superior power supply design features makes the 1965 POWERCON® Line the outstanding buy in mobile, aircraft and marine power supplies.

Models are available with either square wave or sine wave outputs. Square wave models have stable 110v AC output under various loads due to built in capacity and conservative ratings. Intermittent loads will not damage the unit. Intermittent ratings listed are for loads with 70-100% power factor. Square wave units feature superior filtering and solid mechanical and electrical design to give hash-free output for interference free TV, FM and shortwave reception.

The sine-wave units have added reactors and capacitors to provide true sine-wave power — indistinguishable from commercial power. These units are recommended for electronic equipment where optimum performance is required. The sine-wave units control output voltage between 110 and 120v AC with up to 15% input variation. Units feature automatic load regulation for heavy or light loads. Sine-Wave units will operate inductive loads as low as 25% power factor without power factor correction as long as the wattage rating is not exceeded and the inrush VA does not exceed the intermittent ratings.

In the event the outstanding 1965 model POWERCON® inverter may not yet be available in your area, satisfactory performance will be obtained from the listing of current models on the following two pages.

CDE Type	Typical Applications	Replacement Vibrators	Input VDC	Watts		Overall Dimension Deep x W x High	Shipping Weight Approx. lbs.	Net Price
				Continu-ous	Inter-mittent			
12SP2A	Electric Shavers. NOTE: Intermittent duty only.	None	12	None	20	3 $\frac{3}{8}$ x 2 $\frac{7}{8}$ x 2 $\frac{3}{4}$	2	\$ 8.69
12A4	Test gear, small dictating machines, shavers, phonographs.	6567	12	40	50	6 $\frac{1}{4}$ x 4 $\frac{1}{8}$ x 3 $\frac{3}{8}$	6	16.29
12A6	CB gear, larger dictating machines, small amplifiers.	6567	12	60	75	6 $\frac{1}{4}$ x 4 $\frac{1}{8}$ x 3 $\frac{3}{8}$	12	30.89
12B8	Smallest portable TV, small tape recorders, stereo amplifiers.	6565	12	80	100	8 $\frac{3}{4}$ x 7 $\frac{5}{8}$ x 3 $\frac{7}{8}$	12	32.29
12B10	Office machines, calculators, typewriters, adders.	12VB6H	12	100	125	8 $\frac{3}{4}$ x 7 $\frac{5}{8}$ x 3 $\frac{7}{8}$	14	46.59
12DSW10	SINE-WAVE, just like utility power, any PF load.	12VB6H	12	100	125	10 $\frac{5}{8}$ x 9 $\frac{7}{8}$ x 5 $\frac{1}{2}$	22	69.95
12TV12	TV, special for portable TV, also for radios, phonographs.	12VB6H	12	120	140	8 $\frac{3}{4}$ x 7 $\frac{5}{8}$ x 3 $\frac{7}{8}$	16	29.95
12D15	Small induction soldering guns, all office machines.	12VD6H	12	150	175	10 $\frac{5}{8}$ x 9 $\frac{7}{8}$ x 5 $\frac{1}{2}$	26	61.79
12D22	Multi-use, ideal for camp trailer, small tools, CB, TV.	12VD6H	12	220	250	10 $\frac{5}{8}$ x 9 $\frac{7}{8}$ x 5 $\frac{1}{2}$	31	77.59
12ESW25	SINE-WAVE, SSB, large PA systems, 100 watt amplifiers.	12VD6H	12	250	300	12 $\frac{1}{4}$ x 9 $\frac{7}{8}$ x 5 $\frac{1}{2}$	31	98.89
28D15	Aircraft, marine, trucks, other systems using 24 VDC.	28VB6H	28	150	175	10 $\frac{5}{8}$ x 9 $\frac{7}{8}$ x 5 $\frac{1}{2}$	26	77.95
110B10	110 VDC input units used for emergency power, for AC applications where commercial DC available; apartments, larger boats, and merchant vessels. The 110F40 is the largest unit and is dual RFI filtered.	110VB6H	110	100	150	8 $\frac{3}{4}$ x 7 $\frac{5}{8}$ x 3 $\frac{7}{8}$	11	38.95
110B15		110VB6H	110	150	200	8 $\frac{3}{4}$ x 7 $\frac{5}{8}$ x 3 $\frac{7}{8}$	13	48.95
110D25		110VB6H	110	250	325	10 $\frac{5}{8}$ x 9 $\frac{7}{8}$ x 5 $\frac{1}{2}$	26	57.95
110F40		110VC6H	110	400	600	14 $\frac{1}{8}$ x 11 $\frac{1}{4}$ x 6 $\frac{1}{4}$	49	102.95
12TP3	SOLID-STATE, TRANSISTORIZED!!!!	None	12	30	30	5 $\frac{7}{8}$ x 3 $\frac{3}{4}$ x 1 $\frac{1}{2}$	2	40.00

(Accessories on following page)

# Power Supplies

## ACCESSORY KITS FOR 1965 MODEL POWERCON® INVERTERS

Class  
251 • 00

These accessory kits are designed for use with the new 1965 model POWERCON® inverter power supplies. They provide

maximum flexibility in mounting and control of the units. The following types of accessory kits are available:

### REMOTE CONTROL UNITS

Consist of under dash or post mounting control head with switch, pilot light and AC outlet. Uses 4 wire cable from control socket.

### MOUNTING KITS

Heavy flanged plate for bulkhead or floor mounting. Supplied with hardware and instructions.

### FUSE KITS

Provides maximum protection to power supply. Hot cable fuse block for 2" cartridge fuse should be used with short heavy cable for remote installations. Last two digits of type number indicate ampere rating of fuse.

### LEAD KITS

Two cables with heavy lugs to fit under the battery clamp screw or starter solenoid. First two digits of type number designate gauge of cable and last two digits, cable length.

For Powercon® Model	Mounting Kits		Lead Kits		Remote Control Kits		Fuse Kits	
	Type	Net Price	Type	Net Price	Type	Net Price	Type	Net Price
12A4	None	—	LK-1016	\$6.15	RK-112	\$6.60	FK-220	\$2.10
12A6	None	—	LK-1016	6.15	RK-112	6.60	FK-220	2.10
12B8	MK-3544-4	\$3.30	LK-1016	6.15	RK-112	6.60	FK-220	2.10
12B10	MK-3544-4	3.30	LK-816	7.80	RK-112	6.60	FK-220	2.10
12D15	MK-3544-5	3.60	LK-816	7.80	RK-112	6.60	FK-240	2.70
12D22	MK-3544-5	3.60	LK-616	12.30	RK-112	6.60	FK-240	2.70
28D15	MK-3544-5	3.60	LK-1016	6.15	RK-112	6.60	FK-220	2.10
12TV12	MK-3544-5	3.60	LK-1016	6.15	RK-112	6.60	FK-220	2.10
12DSW10	MK-3544-5	3.60	LK-816	7.80	RK-112	6.60	FK-220	2.10
12ESW25	MK-3544-5	3.60	LK-616	12.30	RK-112	6.60	FK-250	2.70

## PORTAPOWER® PORTABLE INVERTER & CHARGER

Class  
251 • 00

Models  
12SC14, 12PP14

The model 12SC14 is a combination battery charger and inverter. The unit may be ordered separately or as the model 12PP14 complete with carrying case and provision for battery. This portability makes this the unit ideal for camping, small boats, or other uses. When AC power is available the unit may be used for battery charging. When used with 12 volt battery, the unit produces 140 watts continuous (170 watts intermittent) of 115 volt, 60 cycle square wave power. Replacement vibrator is 12VL6H. Over-all dimensions of the 12SC14 are 15½" x 11" x 5¾" and approximate shipping weight is 19 pounds. Over-all dimensions of the 12PP14 are 14" x 10" x 9½" and weight, less battery, is 24 pounds.



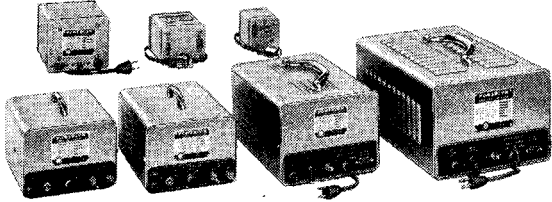
12SC14



12PP14

Model	Description	Net Price
12PP14	Includes inverter 12SC14, carrying case A-2734 and lead kit LK-1401	\$79.95
12SC14	Includes inverter and charging cord A-2599	69.95
AK-127	Accessory kit includes carrying case A-2734 and lead kit LK-1401	10.00
LK-1016	Lead kit includes two 16 foot #10 leads for use with 12SC14 when not in case	6.15

**POWERCON®** Class 251 • 00



**CURRENT MODEL POWERCON® INVERTERS**

These current production model POWERCON® inverter power supplies will be superseded by the new 1965 models described previously. Ample stocks of the current models are available however and the unit can probably be obtained through late 1964 and early 1965. These current model POWERCON® inverters have the same high quality as the 1965 models but lack the styling of the new line. The choice of models in current production is quite wide permitting selection of ratings for any application. As stocks are depleted, selection should be made from the 1965 model listing.

**REGULAR POWERCONS — SQUARE-WAVE OUTPUT**

Model No.	Input (Nominal)		Output (Nominal) Volt-Amperes		CLASS	List Price	Suggested Resale
	Volts DC	Amps	Continuous	Intermittent			
6SP2	6	5.0	20	20	SP	\$ 11.85	\$ 7.90
6L6	6	15.0	60	80	L	47.05	31.35
6S8	6	20.0	80	100	S	59.65	39.75
6H10	6	25.0	100	125	H	68.85	45.90
6SH15	6	38.0	150	175	SH	95.40	63.60
6/12D6	6 or 12	14.0 or 7.0	60	75	L	52.05	34.70
12SP2	12	2.5	20	20	SP	11.85	7.90
12L8-1	12	10.0	80	100	L	47.05	31.35
12S10	12	12.5	100	125	S	71.20	47.45
12H15	12	20.0	150	175	H	95.65	63.75
12SH22	12	29.0	225	250	SH	118.60	79.05
28S10	28	5.0	100	125	S	88.50	59.00
28H15	28	7.5	150	175	H	113.65	75.75
28SH22	28	11.0	225	250	SH	150.75	100.50
32S12	32	5.0	100	125	S	88.50	59.00
32H18	32	7.5	180	200	H	113.65	75.75
32SH22	32	10.0	225	275	SH	150.75	100.50
110L10	110	1.1	100	150	L	56.65	37.25
110S15	110	1.7	150	200	S	71.55	47.70
110H25	110	2.8	250	325	H	85.65	57.10
110H35	110	4.0	350	450	H	133.65	89.10
110SH40	110	4.5	400	600	SH	141.15	94.10
220S15	220	0.85	150	200	S	82.50	55.00
220H25	220	1.4	250	325	H	125.10	83.40
220SH40	220	2.2	400	600	SH	175.95	117.30

**SINE-WAVE OUTPUT — WITH VOLTAGE REGULATION**

6SW8	6	20.0	80	100	H	102.90	68.60
6SW15	6	40.0	150	175	SH	126.20	84.15
12SW10	12	12.5	100	125	H	114.75	76.50
12SW25	12	33.0	250	300	SH	135.40	90.25
28SW25	28	14.0	250	300	SH	179.40	119.60
110SW15	110	1.7	150	200	H	126.25	84.15
110SW25	110	3.0	250	300	SH	179.40	119.60

**BATTERY ELIMINATOR POWERCONS**

Model No.	Input Volts	Output Volts	Class	List Price	Suggested Resale
110B6	110	6A-12 VDC 10A- 6 VDC	H	\$ 75.75	\$50.50
110B12	110	10A-12 VDC 20A- 6 VDC	H	100.95	67.30

**DC INPUT TO HIGH-VOLTAGE DC OUTPUT, FILTERED**

Model No.	Input (Nominal)		Output (Nominal)		List Price	Suggested Resale
	Volts DC	Amps	Volts DC	Volt-Amps (Cont.)		
12TP3*	12	3.0	300	30	\$59.95	\$40.00
12TP12*	12	12.0	500	120	79.95	53.35

\* Have taps at one-half rated voltage.

**POWERCON ACCESSORIES**

Model No.	Description	List Price	Suggested Resale
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**LEAD KITS**

LK 605	DUAL #6 — 5 ft.	\$ 8.05	\$ 5.37
LK 612	DUAL #6 — 12 ft.	14.85	9.90
LK 616	DUAL #6 — 16 ft.	18.45	12.30
LK 805	DUAL #8 — 5 ft.	5.60	3.75
LK 812	DUAL #8 — 12 ft.	9.60	6.45
LK 816	DUAL #8 — 16 ft.	11.70	7.80
LK 1005	DUAL #10 — 5 ft.	4.70	3.15
LK 1012	DUAL #10 — 12 ft.	7.65	5.10
LK 1015	DUAL #10 — 15 ft.	9.25	6.15
LK 1016	DUAL #10 — 16 ft.	9.25	6.15

**MOUNTING KITS**

MK 3544-1	FOR L & S CASES	4.95	3.30
MK 3544-2	FOR H CASE ONLY	5.40	3.60
MK 3544-3	FOR SH CASE ONLY	6.75	4.50

**REMOTE CONTROL KITS**

(For 6 and 12 Volt Models in L, S, H and SH Case)

RK 105	5 ft. Extension Cable	8.10	5.40
RK 112	12 ft. Extension Cable	9.90	6.60
RK 116	16 ft. Extension Cable	10.80	7.20

**MASTER FUSE KITS (2 inch Cartridge)**

FK 220	20 Ampere	3.15	2.10
FK 230	30	3.15	2.10
FK 240	40	4.05	2.70
FK 250	50	4.05	2.70
FK 260	60	4.05	2.70

All models are housed in cases of similar design and appearance. The class designations signify approximate size and weight as follows:

- SP — Shaver Pack — 2½ x 2½ x 3¾ ..... 2 lbs
- L — Lightweight — 5½ x 6¼ x 8 ..... 12 lbs
- S — Standard — 5½ x 6¼ x 9 ..... 14 lbs
- H — Heavy — 6½ x 7½ x 11 ..... 20 lbs
- SH — Super Heavy — 8 x 9½ x 13 ..... 35 lbs



# PLASTICON POWER SUPPLIES

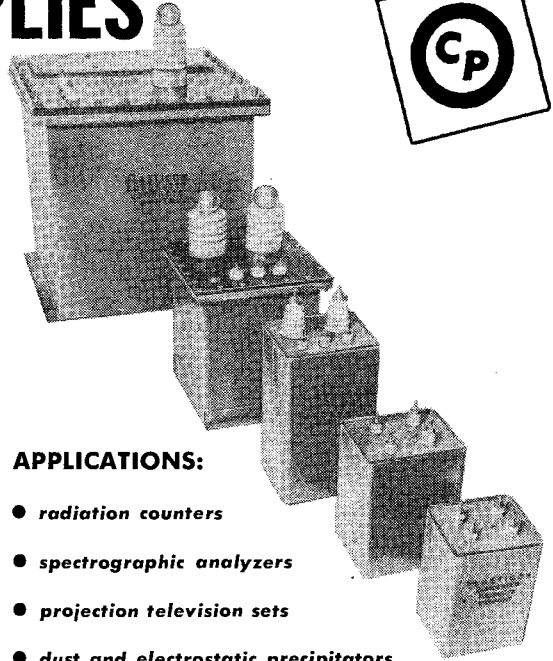


## HI VOLT POWER SUPPLIES

These hermetically-sealed, self-contained power supplies are designed for Hi Voltage low current DC for many applications. Our exclusive engineering techniques and oil-filled construction assure smaller, lighter, more reliable units.

### HI VOLT POWER SUPPLIES FEATURE —

- Hermetically sealed oil filled construction to assure small size and light weight.
- Variable output voltage when the input voltage is supplied through an auto transformer to assure flexibility.
- High quality components safely rated and carefully assembled to assure reliability.
- Neutral case which may also be made either positive or negative to assure safety.



### APPLICATIONS:

- radiation counters
- spectrographic analyzers
- projection television sets
- dust and electrostatic precipitators
- oscilloscopes
- display tubes

### STANDARD POWER SUPPLIES

Model No.	Output Voltage KVDC	Rated Output Current Ma.	Max. Output Current Ma.	% Ripple At Rated Current	Circuit	Case Size	Weight Pounds
PS2-2M60	2	2.0	5.0	1.5	Half Wave	3 3/4 x 3 1/4 x 5 1/2" Hi.	4.5
PS5-3M60	5	3.0	3.75	.6	Half Wave	3 3/4 x 4 1/4 x 6"	9.0
PS5-5M60	5	5.0	5.75	.8	Half Wave	3 3/4 x 4 1/4 x 6"	9.0
PS10-1M60V	0-12	1.0	1.75	2.0	Full Wave Doubler	3 3/4 x 4 1/4 x 8"	11.5
PS10-5M60V	0-10	5.0	5.25	3.0	Full Wave Doubler	3 3/4 x 4 1/4 x 8"	11.5
PS15-1M60V	0-15	1.0	1.75	2.0	Full Wave Doubler	3 3/4 x 4 1/4 x 8"	12.0
PS15-5M60V	0-15	5.0	5.25	3.0	Full Wave Doubler	3 3/4 x 4 1/4 x 9"	12.0
PS30-1M60V	0-30	1.0	1.5	3.0	Full Wave Doubler	7 x 7 x 7 3/4"	25.0
PS50-2M60VT	0-50	2.0	4.0	1.5	Full Wave Tripler	12 1/2 x 12 1/2 x 12 1/2"	80.0

#### NOTES:

1. The case can be made either positive or negative.
2. The PS50 Supply has a separate accessible compartment for the rectifier tubes.
3. Hi Volt Supplies are rated at 118 V AC input, 60 cycles.
4. Hi Volt Supplies for 400 cycle operation are also available for aircraft use — built to military specifications.
5. Hi Volt Supplies are engineered for various applications. Send us your requirements.

## NEW! SUB-MINIATURE SOLID-STATE POWER SUPPLIES

Model No.	Output Voltage KVDC	Rated Output Current MA.	Max. Output Current MA.	% Ripple At Rated Current	Circuit	Case Dimensions	Approx. Weight Pounds
PST2-2M60	0-2.	2.	3.00	0.5	Half Wave	3 3/4 x 2 1/4 x 3 1/2" Hi	2.5
PST5-2M60	0-5.	2.	3.00	0.5	Full Wave Doubler	3 3/4 x 2 1/4 x 3 1/2" Hi	2.5
PST10-1M60	0-10.	1.	1.75	1.0	Full Wave Doubler	3 3/4 x 3 1/4 x 4" Hi	4.5
PST15-1M60	0-15.	1.	1.75	1.0	Full Wave Doubler	4 1/4 x 3 3/4 x 5 1/2" Hi	8.5
PST20-1M60	0-20.	1.	1.75	1.0	Full Wave Doubler	4 1/4 x 3 3/4 x 5 1/2" Hi	8.5

#### NOTES:

1. The case is neutral — Output has reversible polarity.
2. Input rated @ 115 V AC  $\pm 5\%$  from 60 to 400 cycle operation.
3. Case is standard CP70 Type Container.
4. Finish on all units consists of Zinc Chromate Primer & Secondary Coat of Grey Lacquer.
5. Terminals are Ceramic Solder Seal Type with No. 8-32 Threaded Studs except Model PST15-1M60 which has No. 10-32 Threaded Studs on output terminals.
6. Units can be mounted in any position.

CONDENSER PRODUCTS has designed and built high voltage D.C. power supplies for:

- Airborne Equipment
- Shipboard Installation
- 380 to 1,000 CPS Applications
- High voltage output from 1 to 50 KV with current ratings up to 50 ma.
- and many other varied applications
- Let CONDENSER PRODUCTS engineers solve your high voltage power supply problems.

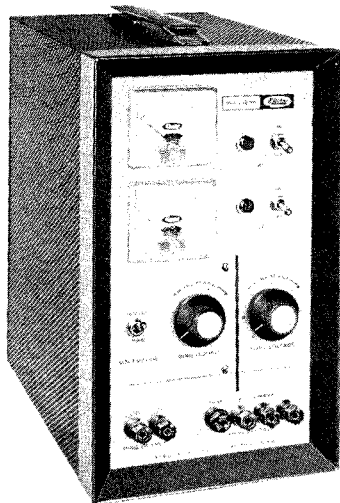


# Condenser Products Company

See Sect. 1500 for Capacitors

#### MANUFACTURERS

- Glassmike Capacitors
- Plasticon Capacitors
- HiVolt Power Supplies
- Pulse Forming Networks



"RB-500" Regulated DC Power Supply **\$395**

# Regulated 500 Volt, 250 MA Supply under \$400!

Compare with others . . .

**High Voltage Output:** 0-500VDC, 0-250MA

**Regulation:** 0.03% (or 0.015V, whichever is greater) for combined line (102-125V) and load (no-load to full-load) variations.

**Ripple:** 5MV, RMS, maximum.

**Bias Output:** 0-150 volts.

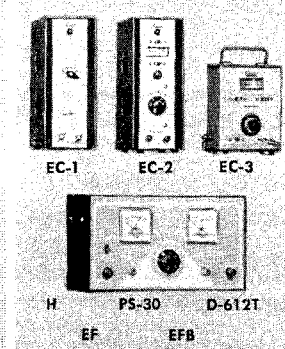
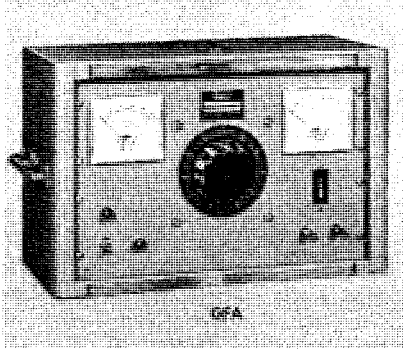
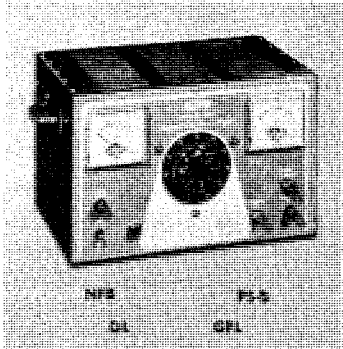
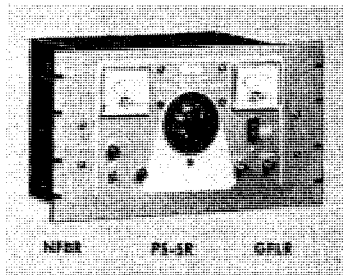
**Filament Outputs:** Two 6.3V, 5 amps, for series (12.6V@5A) or parallel (6.3V@10A) operation.

**Meters:** 0-500/0-150V, 0-250MA.

**Size:** 12 x 8 x 14 in.

**Weight:** 32 lbs. net.

**REGULATED & SEMI-REGULATED DC POWER SUPPLIES**



Output, filtering for every need, from \$27.50 . . . guaranteed performance, long service life

Model	Voltage Output	Amperage Output	Load Regulation (V/A)	Maximum Ripple (%)	Meters	DC Impedance (ohms)	Size (HxWxD) (inches)	Weight (lbs. net)	Price (net)
EC-1	12 (adjustable)	0-5	1.4 (0-5A)	0.5	—	1.4 (0-5A)	10½ x 4¾ x 6½	10	\$ 29.95
H	12 (adjustable) 6 (adjustable)	0-10 0-20	0.23 (3-10A) 0.15 (3-20A)	5 5	0-20V, 0-30A	0.23 (3-10A) 0.15 (3-20A)	7 x 12 x 8½	29	99.50
PS-30	12 (adjustable)	0-30	2.7 (6-30A)	1	0-20V, 0-50A	0.27 (0-30A)	9¾ x 16¾ x 13	56	198.00
EC-2	0-16	0-5	1.8 (0-5A)	0.5	0-20V/10A	1.8 (0-5A)	10¾ x 4¾ x 6½	9	39.95
D612T	0-16 0-8	0-10 0-10	0.44 (3-10A) 0.3 (3-10A)	} 0.5@ 5A, { } 2 @10A {	0-20V, 0-10A	0.44 (3-10A) 0.3 (3-10A)	7 x 12 x 8½	20	69.95
EC-3	0-24 (0-7 bias)	0-100MA	—		0.2	0-24V/100MA	—	6¾ x 5 x 3½	3
PS-3A	0-25	0-200MA	.02%	0.5MV	0-25V/100MA/200 MA	.05	6¾ x 5 x 6	3½	99.50
EF	0-28 0-14	0-5 0-5	0.9 (1-5A) 0.6 (1-5A)	1 1	0-50V, 0-6A	0.9 (1-5A) 0.6 (1-5A)	7 x 12 x 8½	21	110.00
EFBR	0-32 0-16	0-4 0-8	1.25 (0-4A) 1.0 (0-8A)	0.1 0.1	0-40/20V, 0-10A	1.25 (0-4A) 1.0 (0-8A)	8¾ x 19 x 8½	34	160.00
EFB	0-32 0-16	0-4 0-8	1.25 (0-4A) 1.0 (0-8A)	0.1 0.1	0-40/20V, 0-10A	1.25 (0-4A) 1.0 (0-8A)	7 x 12 x 8½	31	140.00
NFBR	0-32	0-15	0.3 (0-15A)	0.75	0-50V, 0-20A	0.3 (0-15A)	10½ x 19 x 14¼	82	275.00
NFB	0-32	0-15	0.3 (0-15A)	0.75	0-50V, 0-20A	0.3 (0-15A)	9¾ x 14¼ x 14¼	71	250.00
PS-5R	0-55	0-10	0.8 (0-10A)	0.5	0-75V, 0-10A	0.8 (0-10A)	10½ x 19 x 14¼	71	275.00
PS-5	0-55	0-10	0.8 (0-10A)	0.5	0-75V, 0-10A	0.8 (0-10A)	9¾ x 14¼ x 14¼	60	250.00
GL	0-125	0-5	1.5 (0-5A)	5.0	0-150V, 0-5A	1.5 (0-5A)	9¾ x 14¼ x 14¼	65	255.00
GFLR	0-125	0-5	1.5 (0-5A)	0.5	0-150V, 0-5A	1.5 (0-5A)	10½ x 19 x 14¼	79	297.00
GFL	0-125	0-5	1.5 (0-5A)	0.5	0-150V, 0-5A	1.5 (0-5A)	9¾ x 14¼ x 14¼	75	275.00
GFA	0-125	0-10	1.6 (0-10A)	1.0	0-150V, 0-10A	1.6 (0-10A)	14¾ x 22 x 15¾	150	575.00

Stocked at Your Electronic Distributor. Write for Full-line Catalog. Prices subject to change without notice.



**ELECTRO PRODUCTS LABORATORIES, Inc. Chicago (Niles), Illinois 60641**

Since 1936 — Pioneers in Low Voltage Power Supplies

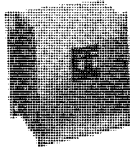
**SILICON POWER RECTIFIER**



For transistor circuits & electronic equipment  
**MODEL 692F**

**INPUT:** 115 volts AC 60 cycles, 1 phase  
**OUTPUT:** 0-30 Volts DC, 0-10 Amperes D.C. continuous duty  
**REGULATION:** No load to full load 15%  
**RIPPLE:** Less than 0.5% RMS  
**METERS:** 2% Accuracy  
**PRICE: \$145.00 NET**  
\*Also available in 5 Amperes  
**PRICE: \$95.00 NET**

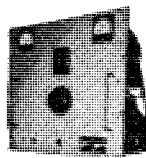
**INDUSTRIAL POWER UNITS**



**MODEL A10**

**INPUT:** 115 or 230 AC Volts, 60 cycles—Single Phase.  
**DC OUTPUT:** 115 Volts DC 125 Watts  
**APPLICATION:** Power sources for operating DC Motors, Relays, Solenoids, Magnetic Chucks.  
**DIMENSIONS:** 11" H x 9" W x 6 1/2" D  
**PRICE \$63.00 NET**  
Also available 250 watts \$84.00

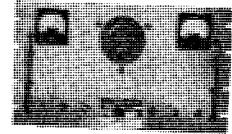
**SILICON INDUSTRIAL POWER UNIT**



**MODEL #G30-40F**

**INPUT:** 115 Volts AC, 60 cycles, single phase.  
**OUTPUT:** 0-32 Volts DC, 0-40 Amperes DC, continuous duty  
**RIPPLE:** 1% RMS  
**DIMENSIONS:** 12 1/4" H x 19" W x 13" D  
**REGULATION:** D.C.V. at full load: 32 minimum D.C.V. at 1/2 load: 35 maximum  
**PRICE: \$385.00**

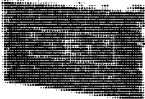
**SILICON POWER RECTIFIER**



**MODEL G30.10FR**

**INPUT:** 115 Volts AC, 60 Cycles, Single Phase  
**OUTPUT:** 0-30 Volts DC, 0-10 Amperes, continuous duty  
**CONTROL:** Continuously variable over entire range  
**REGULATION:** 6% No Load to Full Load  
**RIPPLE:** 0.2% RMS  
**METERS:** 2% Accuracy  
**DIMENSIONS:** 19"Wx13"Dx10 1/2"H  
**PRICE: \$185.00 NET**

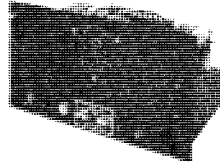
**SILICON RACK MOUNT SUPPLY**



**MODEL #GX30-10**

**INPUT:** 115 Volts AC 60 Cycles, Single Phase  
**OUTPUT:** 30 Volts DC 0-10 Amperes Continuous Duty  
**REGULATION:** 10% No Load to Full Load  
**RIPPLE:** Below 0.5% RMS  
**DIMENSIONS:** 8 3/4" H x 19" W x 10" D  
**PRICE: \$137.50 NET**

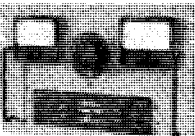
**SELENIUM POWER SUPPLY**



**MODEL G48-6FM**

**INPUT:** 115 Volts AC 60 Cycles—Single Phase  
**OUTPUT:** 0-48 Volts DC, 0-6 Amperes  
**CONTROL:** Continuously variable over entire range  
**RIPPLE:** 1% RMS  
**DIMENSIONS:** 19" W x 13" D x 10 1/2" H, Fits RETMA, Western Electric racks  
**PRICE: \$190.00 NET**

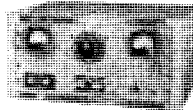
**AIRCRAFT BATTERY ELIMINATOR**



**MODEL #G101F**

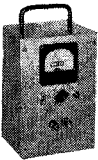
**INPUT:** 115 Volts AC 60 cycles, single phase  
**OUTPUT:** 0-30 Volts DC, 0-20 Amperes, continuous duty  
**RIPPLE:** 0.5% RMS  
Unique overload device prevents needle slam and shows overload condition  
**REGULATION:** D.C.V. at full load: 30 D.C.V. at 1/10 load: 35  
**METERS:** 2% Accuracy  
**PRICE: \$200.00 NET**  
May be used for Rack or Bench

**SILICON POWER SUPPLY**



**MODEL #GS 14-15F**

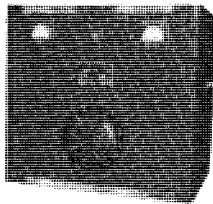
**INPUT:** 115 Volts AC, 1 Phase, 60 cycles  
**OUTPUT:** 0-14 Volts DC, 0-15 Amperes, continuous duty  
**RIPPLE:** Less than 1% RMS  
**METER ACCURACY:** 2%  
**DIMENSIONS:** 9" H x 17 1/2" W x 9" D  
**PRICE: \$125.00 NET**



**Silicon Controlled Automatic Battery Charger**

110 VAC, 12 VDC — Price \$49.00

**SILICON GENERAL PURPOSE RECTIFIER**



**MODEL G-115**

**INPUT:** 115 Volts AC 60 cycles, 1 Phase  
**OUTPUT:** 0-32 Volts DC, 0-50 Amperes DC, Continuous duty variable over entire range  
**RIPPLE:** 1% RMS  
**DIMENSIONS:** 22"H x 19"W x 15"D  
**PRICE: \$475.00 NET**

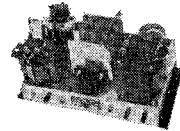
**DC POWER SUPPLY**



**MODEL G94F**

**INPUT:** 115 Volts AC 60 cycles, 1 Phase DC  
**OUTPUT:** 0-300 Volts DC Continuous Variable 0-1 Amperes.  
**RIPPLE:** 100 MV RMS  
**DIMENSIONS:** Rack 8 3/4" H x 19" L x 9 1/2" D  
**CABINET:** 10 1/2"Hx22"Lx12"D  
**PRICE: \$240.00**  
Also available 2 AMP \$325

**SILICON POWER SUPPLY**



**MODEL GX30-20**

**INPUT:** 115 Volts, 1 Phase, 60 cycles  
**OUTPUT:** 0-34, Volts, DC 0-20 Amperes, continuous duty  
**REGULATION:** No load to full load: 18%  
**RIPPLE:** Below 1%  
Silicon Rectifiers, High Efficiency  
**DIMENSIONS:** 10" x 17" x 3"  
**PRICE: \$185.00 NET**

**SELENIUM POWER SUPPLY**

**MODEL GX 30-3**

**INPUT:** 115 Volts AC 60 cycles, single phase  
**OUTPUT:** 30 Volts DC, 0-5 Amperes, DC Continuous Duty  
**REGULATION:** 12% No Load to Full Load  
**RIPPLE:** Below 1% RMS  
**DIMENSIONS:** 5" W x 13 1/2" L x Overall Height 10"  
**PRICE: \$75.00 NET**

**HIGH CURRENT POWER SUPPLIES**

MODEL G 300 Output 300A, 24-30V, Saturable Reactor .....\$ Inquire  
MODEL G 500 Output 500A, 24-30V, Saturable Reactor .....\$ Inquire  
MODEL G 1000 Output 1000A, 24-30V, Saturable Reactor .....\$ Inquire

**LOW COST MODELS**

MODEL 28-1: 1A, 28VDC .....\$ 24.00  
MODEL 28-2: 2A, 28VDC .....\$ 48.00  
MODEL 28-15: 15A, 28VDC .....\$165.00  
MODEL 115-2(nf): 2A, 115VDC .....\$ 65.00  
MODEL 115-5(nf): 5A, 115VDC .....\$138.00  
MODEL 115-5: 5A, 115VDC .....\$224.00  
MODEL 115-10(nf): 10A, 115VDC .....\$195.00  
MODEL 115-10: 10A, 115VDC .....\$354.00

**HIGH VOLTAGE D.C. POWER SUPPLIES .0-125 VDC**

**1% ripple, good regulation**  
MODEL GP 125-3: Output 3A, 0-125V, Powerstat. Meters .....\$225.00  
MODEL GP 125-3: Output 5A, 0-125V, Powerstat. Meters .....\$275.00  
MODEL GP 125-10: Output 10A, 0-125V, Powerstat. Meters .....\$375.00  
MODEL GP 125-20: Output 20A, 0-125V, Powerstat. Meters .....\$495.00  
MODEL GP 60-6: Output 6A, 0-60V, Powerstat. Meters .....\$225.00  
MODEL GP 60-12: Output 12A, 0-60V, Powerstat. Meters .....\$320.00

**3φ MODELS**

MODEL GP 125-40: Output 40A, 0-125V, Powerstat. Meters .....\$ Inquire  
MODEL GP 125-80: Output: 80A, 0-125V, Powerstat. Meters .....\$ Inquire

MODEL GP 125-125: Output 125A, 0-125V, Powerstat. Meters .....\$ Inquire  
MODEL GP 250-15: Output 15A, 0-250V, Powerstat. Meters .....\$ Inquire  
MODEL GP 250-25: Output 25A, 0-250V, Powerstat. Meters .....\$ Inquire  
MODEL GP 250-40: Output 40A, 0-250V, Powerstat. Meters .....\$ Inquire  
MODEL GP 250-75: Output 75A, 0-250V, Powerstat. Meters .....\$ Inquire  
MODEL GP 500-5: Output 5A, 0-500V, Powerstat. Meters .....\$ Inquire  
MODEL GP 500-10: Output 10A, 0-500V, Powerstat. Meters .....\$ Inquire  
MODEL GP 500-25: Output 25A, 0-500V, Powerstat. Meters .....\$ Inquire  
MODEL GP 500-35: Output 35A, 0-500V, Powerstat. Meters .....\$ Inquire

**MAGNETIC AMPLIFIER POWER SUPPLIES**

MODEL GM 20-32, Output 20A, 24-30V, 5% reg .....\$ Inquire  
MODEL GM 25-32, Output 25A, 24-30V, 5% reg .....\$ Inquire  
MODEL GM 30-32, Output 30A, 24-30V, 5% reg .....\$ Inquire

**12 VOLT POWER SUPPLIES**

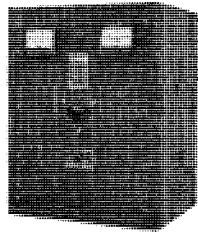
MODEL GS 12-1, Output 1A, 12V .....\$ Inquire  
MODEL GS 12-5, Output 5A, 12V .....\$ Inquire  
MODEL GS 10-12, Output 10A, 12V .....\$ Inquire  
MODEL GS 12-15, Output 15A, 12V .....\$ Inquire

See Components In Section 4800

**GATES**  
ELECTRONIC CO., INC.  
BRONX NEW YORK

**SILICON PDWER RECTIFIER**

**Model G50-50R**



**INPUT:** 220 Volts AC, 60 cycles, 3 phase

**OUTPUT:** 0-50 volts DC, 0-50 amperes continuous duty

**RIPPLE:** 0.5% RMS

**REGULATION:** No Load to Full Load 8%

**METERS:** 2% Accuracy

Also available in 100 Amp.

**SILICON INDUSTRIAL POWER UNIT**

**Model G30-100**

**INPUT:** 220 Volts AC, 60 cycles, 3 phase

**OUTPUT:** 0-30 Volts DC, 0-100 amperes continuous duty

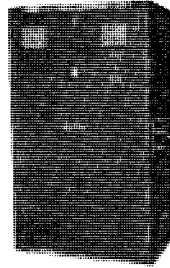
**RIPPLE:** 4% RMS

**REGULATION:** 5-8% 1/10th load to full load with constant input and at maximum output voltage setting

**METERS:** 2% Accuracy

**SILICON AIRCRAFT BATTERY ELIMINATOR**

**Model G30-200**



**INPUT:** 220 Volts AC, 60 cycles, 3 phase

**OUTPUT:** 0-30 Volts DC, 0-200 amperes continuous duty also avail. 300A

**RIPPLE:** 4% RMS

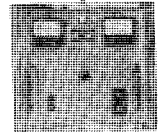
**REGULATION:** 5-8% 1/10th load to full load with constant input and maximum output voltage setting

**METERS:** 2% Accuracy

Also available in 300 Amps

**SILICON REGULATED POWER SUPPLY**

**Model G530-40M**



**INPUT:** 115 Volts AC, 60 cycles, 1 phase

**OUTPUT:** 5-30 Volts DC, 0-40 amperes

**RIPPLE:** 1% RMS

**REGULATION:** ±1% from no load to full load

**METERS:** 2% Accuracy

**PRICE:** \$790.00

**SILICON POWER SUPPLY**

**Model GX24-1**

**INPUT:** 115 Volts AC, 60 cycles, 1 phase

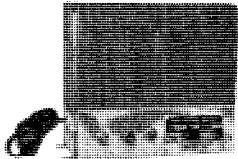
**OUTPUT:** 24 Volts DC, 0-1 ampere DC, continuous duty

**RIPPLE:** 0.4% RMS

**REGULATION:** 10% no load to full load

**PRICE:** \$50.00

Also available in 2 Amps



**PORTABLE SILICON BATTERY CHARGER**

**Model G612-20**

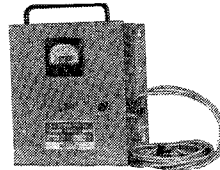
**INPUT:** 115 volts AC, 60 cycles, 1 phase

**OUTPUT:** 6/12 Volts DC, 20 amperes continuous duty

**METER:** Amp. meter 2% Accuracy

**DIMENSIONS:** 11"H x 9"W x 6 1/2"D

**PRICE:** \$45.00



**BENCH PLATING RECTIFIER**

**Model G10-8**

**INPUT:** 115 Volts, 50-60 cycles, 1 phase

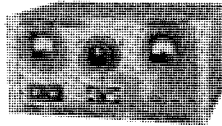
**OUTPUT:** 10 amperes, 0-8 Volts DC

**RECTIFIER:** Full wave selenium rectifier

**VOLTAGE CONTROL:** Powerstat

**METERS:** 2% Accuracy volt meter, amp. meter

**PRICE:** \$75.00



**BENCH PLATING RECTIFIER**

**Model G30-8**

**INPUT:** 115 Volts, 50-60 cycles, 1 phase

**OUTPUT:** 30 amperes, 0-8 Volts DC

**RECTIFIER:** Full wave selenium rectifier

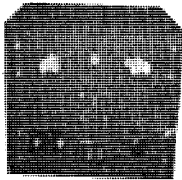
**VOLTAGE CONTROL:** Powerstat

**METERS:** 2% Accuracy, volt meter, amp. meter

**PRICE:** \$115.00

**BENCH PLATING RECTIFIER**

**Model G50-8**



**INPUT:** 115 volts, 50-60 cycles, 1 phase

**OUTPUT:** 50 amperes, 0-8 Volts DC

**RECTIFIER:** Full wave selenium rectifier

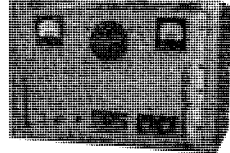
**VOLTAGE CONTROL:** Powerstat

**METER:** 2% Accuracy, volt meter, amp. meter

**PRICE:** \$175.00

**BENCH PLATING RECTIFIER**

**Model G100-8**



**INPUT:** 115 Volts, 50-60 cycles, 1 phase

**OUTPUT:** 100 amperes, 0-8 Volts DC

**RECTIFIER:** Full wave selenium rectifier

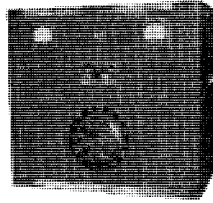
**VOLTAGE CONTROL:** Powerstat

**METERS:** 2% Accuracy, volt meter, amp. meter

**PRICE:** \$275.00

**BENCH PLATING RECTIFIER**

**Model G200-6**



**INPUT:** 115 Volts, 50-60 cycles, 1 phase

**OUTPUT:** 200 amperes, 0-6 Volts DC

**RECTIFIER:** Full wave selenium rectifier

**COOLING:** Fan

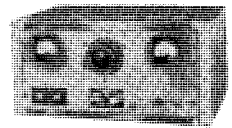
**VOLTAGE CONTROL:** Powerstat

**METERS:** 2% Accuracy, volt meter, amp. meter

**PRICE:** \$395.00

**BENCH PLATING RECTIFIER**

**Model G50-15**



**INPUT:** 115 Volts, 50-60 cycles, 1 phase

**OUTPUT:** 50 amperes, 0-15 Volts DC

**RECTIFIER:** Full wave selenium rectifier

**VOLTAGE CONTRL:** Powerstat

**METERS:** 2% Accuracy, volt meter, amp. meter

**PRICE:** \$210.00

**ECONOMY RANGE D.C. POWER SUPPLIES**

**1% ripple, good regulation**

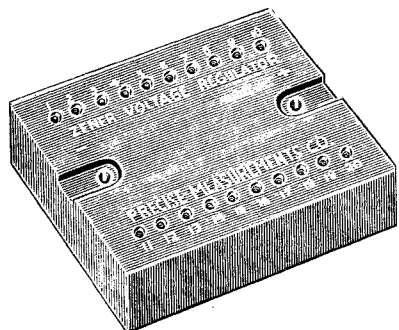
MODEL GT 12-15:	Output 0-12V,	15A	.....	\$122
MODEL GT 12-25:	Output 0-12V,	25A	.....	\$124
MADEL GT 12-100:	Output 0-12V,	100A	.....	\$286
MODEL GT 14-20:	Output 0-14V,	20A	.....	\$113
MODEL GT 14-30:	Output 0-14V,	30A	.....	\$276
MODEL GT 14-40:	Output 0-14V,	40A	.....	\$231
MODEL GT 16-5:	Output 0-16V,	5A	.....	\$129
MODEL GT 16-10:	Output 0-16V,	10A	.....	\$133
MODEL GT 16-25:	Output 0-16V,	25A	.....	\$180
MODEL GT 28-5:	Output 0-28V,	5A	.....	\$111
MODEL GT 28-12:	Output 0-28V,	12A	.....	\$145
MODEL GT 28-24:	Output 0-28V,	24A	.....	\$273
MODEL GT 32-5:	Output 0-32V,	5A	.....	\$178
MODEL GT 32-5:	Output 0-32V,	5A	.....	\$168
MODEL GT 32-12:	Output 0-32V,	12A	.....	\$109
MODEL GT 32-15:	Output 0-32V,	15A	.....	\$194
MODEL GT 32-24:	Output 0-32V,	24A	.....	\$162
MODEL GT 32-30:	Output 0-32V,	30A	.....	\$354
MODEL GT 32-50:	Output 0-32V,	50A	.....	\$297

MODEL GT 32-60:	Output 0-32V,	60A	.....	\$561
MODEL GT 48-5:	Output 0-48V,	5A	.....	\$138
MODEL GT 48-10:	Output 0-48V,	10A	.....	\$164
MODEL GT 130-2:	Output 0-130V,	2A	.....	\$124
MODEL GT 130-5:	Output 0-130V,	5A	.....	\$223
MODEL GT 120-5:	Output 0-120V,	5A	.....	\$277
MODEL GT 130-10:	Output 0-130V,	10A	.....	\$286
MODEL GT 200-10:	Output 0-220V,	10A	.....	\$382
MODEL GT 80-5:	Output 0-80V,	5A	.....	\$220
MODEL GT 80-10:	Output 0-80V,	10A	.....	\$275
MODEL GT 80-20:	Output 0-80V,	20A	.....	\$450
MODEL GT 80-50:	Output 0-80V,	50A	.....	\$1550
MODEL GT 80-100:	Output 0-80V,	100A	.....	\$1950

**GATES**  
ELECTRONIC CO. INC.  
BRONX NEW YORK

# HIGH VOLTAGE ZENER REGULATORS

## REGULATE UP TO 20,000 VOLTS



Simply connect in parallel\* with any high voltage power supply and automatically obtain both line and load voltage regulation as well as ripple reduction. Nominal current rating is .5 to 1 Ma. for better than 1% stabilization. Power supplies with up to 5 Ma. (maximum) may be regulated. Can be wired in series for higher voltage service (five 4,000 volt types to regulate a 20,000 Volt power supply). Twenty built in taps included, each provides a regulated voltage. Ideal for photomultiplier tubes. Use as a high voltage reference in conjunction with regulator amplifier circuitry.

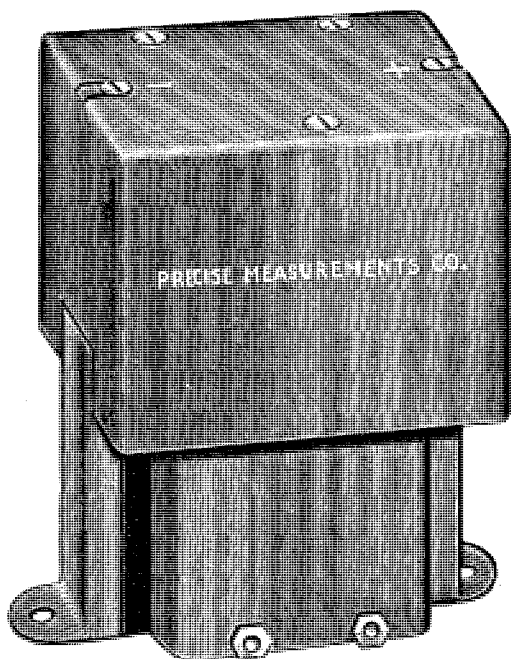
MODEL	TOTAL VOLTAGE	VOLTS AT EACH TAP	PRICE
ZA-1K	1,000 Volts	50 Volts	\$50.00
ZA-2K	2,000 Volts	100 Volts	55.00
ZA-3K	3,000 Volts	100 & 200	60.00
ZA-4K	4,000 Volts	200	70.00

\*If necessary, insert a series resistor to limit zener current to under 5 Ma.

*Now Available...*

# MOLDED ROCK PACKAGED POWER SUPPLIES

## NEW LOW COST UNITS



### COMPLETELY SOLID STATE

Model	Output Voltage	Price
15-0-15	15-0-15 Volts	\$ 50.00
30-0-30	30-0-30 Volts	50.00
05-KV-5MA	500 Volts DC	50.00
1-KV-5MA	1-KV-DC	60.00
2-KV-5MA	2-KV-DC	70.00
3-KV-5MA	3-KV-DC	80.00
5-KV-5MA	5-KV-DC	95.00
7.5-KV-5MA	7.5-KV-DC	110.00
10-KV-5MA	10-KV-DC	125.00
15-KV-5MA	15-KV-DC	140.00
20-KV-5MA	20-KV-DC	235.00
30-KV-5MA	30-KV-DC	300.00

Makes your DC voltage problems easy. Just wire in the two input and output connections and you are ready to operate. New patent applied for features, greatly improve reliability. Service if it should ever be required is a matter of minutes to unscrew the old top and replace with a new element. Newly designed H.V. transformer has special insulation for trouble-free performance. Output is completely isolated and either post may be grounded or operated as a floating supply. DC is filtered for 5% or less ripple. Output may be varied from full ratings down to zero by simply inserting a small Variac in input. All units rated for 5 Ma. current. Power packs 7.5 KV and higher have slightly modified construction. 115 volt, 60 cycle input. Use with above Zener Regulators to obtain 1% line and load regulation.

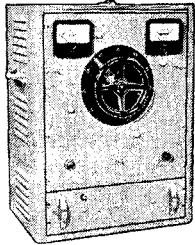
## INDUSTRIAL INSTRUMENTS, INC.

### PRECISE MEASUREMENTS COMPANY

CEDAR GROVE, NEW JERSEY

# PRECISE MEASUREMENTS COMPANY

## heavy duty... POWER SUPPLIES

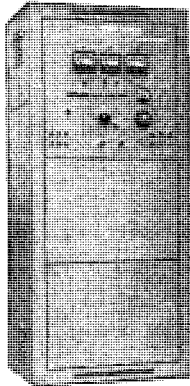


Standard ripple 5% or less. .01% to 1% available. All power supplies have automatic overload cutout control circuits. Regulated models available on special order.

These industrial type power supplies are built for service and efficiency. All are of the transformer type and employ husky components that have been selected for their power handling capacity. Controls are arranged so that operation is greatly simplified and a number of safety features are built in for maximum protection of personnel and equipment. Output is continuously variable from zero to full rated value. Polarity reversing models (as illustrated) can be had at additional cost.

Model	Voltage	Current	Price
F-100V	0-100	10 Amp	\$650.00
F-500V	0-500	3 Amp	800.00
F-600I	0-1000	2 Amp	975.00
F-600Z	0-2000	1 Amp	985.00
F-6003-AI	0-3000	100 MA	375.00
F-6003-AV	0-3000	500 MA	550.00
F-6003-AK	0-3000	1 Amp	1100.00
F-6005-AI-H	0-5000	100 MA	550.00
F-6005-AV	0-5000	500 MA	775.00
F-6005-AIK	0-5000	1 Amp	1200.00
F-6010-AI	0-10,000	100 MA	800.00
F-6010-AV	0-10,000	500 MA	3000.00
F-6020-A05	0-20,000	50 MA	975.00
F-6030-A3	0-30,000	300 MA	5000.00
F-6050-T	0-50,000	1/2 MA	600.00
F-6100-T	0-100,000	1 MA	1100.00

### 3 $\phi$ HEAVY DUTY POWER SUPPLIES

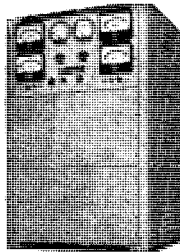


For use in applications where high voltages at extra high currents are required. Either fixed or fully variable types are available. Automatic circuits protect against over-current conditions, turning off main power in a split second. Used for Plasma research, Electron beam furnaces, plate power and condenser charging.

Model	Voltage	Current Amps	Price
A 1-A	0 to 100	100	\$ 2,000.00
A 1-B	0 to 100	1000	12,500.00
A 10A	0 to 1,000	5	2,500.00
A 10B	0 to 1,000	10	3,700.00
A 30A	0 to 3,000	5	4,500.00
A 31	0 to 3,000	10	6,750.00
A 32	0 to 3,000	20	7,850.00
A 50	0 to 5,000	5	5,900.00
A 51	0 to 5,000	10	8,350.00
A 72	0 to 7,500	10	9,250.00
A 100	0 to 10,000	5	10,250.00
A 110	0 to 10,000	10	14,575.00
A 200	0 to 20,000	5	16,450.00
A 300	0 to 30,000	5	19,200.00
A 500	0 to 50,000	5	27,500.00

### CONSTANT CURRENT POWER SUPPLIES

Designed for application where output current must remain constant regardless of loading resistance changes. Used for magnet fields, plating applications, gaseous lamps. Dependable magnetic current stabilizer has no moving parts, no tubes, no transistors to replace. Simply set current to desired level, no balancing or other adjustments needed. Ideal for lamp operation since operating state ionizing voltage in no way affects lamp current. Standard hum level 5%. Lower hum levels available on order.



Model	Max. Voltage	Current	Price
C-25-100	25 V.	100 Amp.	\$ 980.00
C-70-70	70 V.	70 Amp.	1,700.00
C-500-10	500 V.	10 Amp.	1,700.00
C-Dual 500-10	500 or 1000 V.	10 or 20 Amp.	2,750.00
C-1000-5	1000 V.	5 Amp.	3,000.00
C-3000-1	3000 V.	1 Amp.	2,500.00
C-5000-1	5000 V.	1 Amp.	3,450.00
C-10K-5H	10 KV.	500 Ma.	3,850.00

Dual 500 V - 500 V,  
10 Ampere Power  
Supply. — Illus-  
trated

## PORTABLE HIGH VOLTAGE DC POWER SUPPLIES



New Mirror Scale Instrument Illustrated

One of the most popular power supplies on the market. Completely redesigned for greater ruggedness and convenience of operation. Widely used for powering electronic equipment and for routine breakdown and insulation testing. Output voltage is well filtered D.C. which is adjustable with convenient front panel control. Input is 115 Volt, 60 cycle A.C. Larger 6" precision 1% mirror scale movement available on order. Regulated models offer closely stabilized output voltage regardless of line or load changes.

Model	Max. Voltage	R.F. OSC. Regulated 100 Microamps	Trans. Type	
			1 MA. Unregulated	5 MA.
6000-1	1,000		\$160.00	\$200.00
6000	2,500	145.00	175.00	225.00
6005	5,000	150.00	200.00	250.00
6010	10,000	155.00	225.00	275.00
6015	15,000	160.00	250.00	300.00
6025	25,000	215.00	275.00	350.00

Note. Regulated power supplies are of the radio frequency type and adjust from approximately 20% to full rated voltage. The 1 and 5 milliamper types are transformer operated and have a range of zero to full voltage output. These are recommended for industrial service applications.

Mirror Scale Higher Accuracy Meter. Recommended for more exact calibration or test purposes. Add \$50.00 to any meter equipped power supply.

For additional built-in current meter (both meters are 3 inch size), including automatic meter protector circuit, add \$50.00 to any power supply.

# INDUSTRIAL INSTRUMENTS, INC.

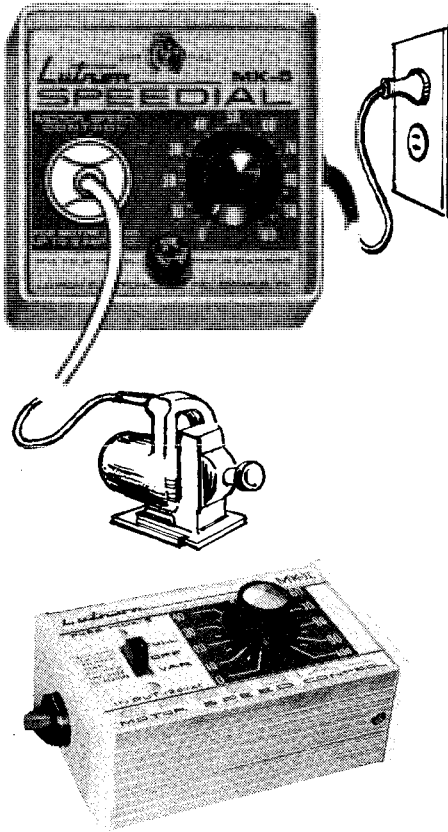
## PRECISE MEASUREMENTS COMPANY

CEDAR GROVE, NEW JERSEY



# LUTRON Motor Speed & Lighting Controls

INTERNATIONAL RESISTANCE COMPANY



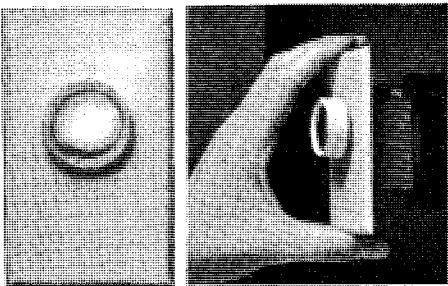
**SPEEDIAL MOTOR SPEED CONTROLS** Varies the speed of hand tools from zero to full speed with no loss of torque. Electric tool operations are faster, surer and more precise. Just dial the proper speed for the job, for any material, any tool. Eliminates "dance and bounce." Easily saves its cost in drill bits and saw blades. For use on Universal (AC-DC) and D.C. series motors only. Can also be used for clutches and brakes requiring variable D.C. voltage.

- In Factory or Laboratory — controls mixers, variable speed drives and winding machines
- Electric Drills — for plastics, wood, steel and concrete
- Electric Saws — for plastics, steel or wood
- Electric Sanders — coarse and fine finish.
- Electric Screwdrivers

## HEAVY DUTY INDUSTRIAL MODELS

Model	Max. Amps	50-60 cps Input Volts	Max. Output RMS Volts DC	Weight
MK-5	5	120	90	2.0
MK-10	10	120	90	2.0
MK-15	15	120	90	2.3
MK-250-5	5	208-250	180	2.0
MK-250-10	10	208-250	180	2.0
MK-250-15	15	208-250	180	2.3

**MARK II HOBBYIST** A handy, inexpensive motor speed control for home, workshop and light duty use. Perfect for hand tools and for blenders and mixers on slow speed. Will control sewing machines or slow down drill for car buffing. Mark II can be used on tools and motors up to 5 amp. name plate rating.



**ELECTRONIC LIGHT CONTROLS** Continuous dimming controls for residential, commercial and industrial use. A popular accessory for hi-fi and TV rooms. Quickly and easily installed in the same manner as an ordinary switch, they fit standard depth wall boxes. For single or multi-ganged installation.

**MODEL D-6P** Incandescent only. 600 watts. Push-on, push-off. Fits single wall box.

**MODEL D-63P** Incandescent only. 600 watts. 3-way, push-on, push-off. Fits single wall box.

**MODEL FD-600\*** Fluorescent and incandescent. 600 watts. Control both, together or separately. Up to 12 fluorescent lamps. Fits single wall box.

**MODEL D-600P** UL listed. Incandescent only. 600 watts. Push-on, push-off. Fits single wall box.

**MODEL D-600** UL listed. Incandescent only. 600 watts. Fits single wall box. Deluxe unit for residential and commercial use. 5 year guarantee.

**MODEL D-1000** Incandescent only. 1000 watts. Fits single wall box. Conservatively rated. For residential and commercial use.

## OTHER POPULAR MODELS

**MODEL D-6** 600 watts. Incandescent  
**MODEL D-1800** 1800 watts. Incandescent  
**MODEL D-3600** 3600 watts. Incandescent

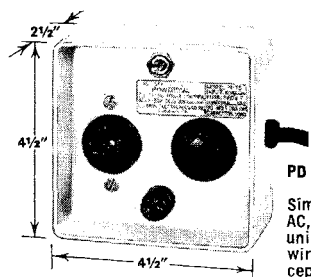
**MODEL FD-900** 18 Fluorescent Lamps\*  
**MODEL FD-1800** 36 Fluorescent Lamps\*  
**MODEL FD-3600** 72 Fluorescent Lamps\*



# LUTRON Industrial Powerdials

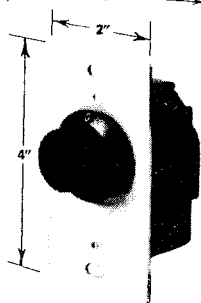


INTERNATIONAL RESISTANCE COMPANY

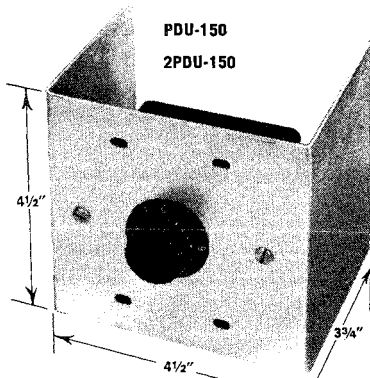


PD

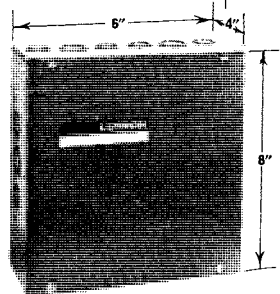
Simply switch to AC, DC or off. All units have fuse, 3 wire cord and receptacle.



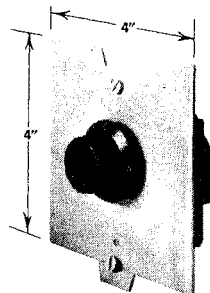
PDU-50  
2PDU-50



PDU-150  
2PDU-150



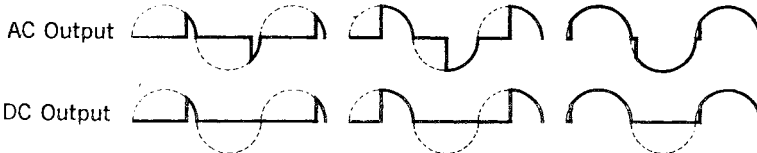
PDU-300  
2PDU-300



PDU-75  
2PDU-75  
PDU-100  
2PDU-100

Solid state power control replaces variable auto-transformers in majority of jobs. Only 1/10 the weight and 1/2 the size of conventional controls. No brushes to wear or burn out.

### TYPICAL WAVEFORMS



SCR Firing Angle 45° (low output) 90° (medium output) 170° (high output)

### POWERDIAL WILL CONTROL

- Universal Motors\*
- Soldering Irons
- Shaded Pole Motors\*
- Temperature
- Permanent Split Capacitor Motors\*
- Electric Punches and Actuators
- Lamps • Voltage • Current
- Electric Heating Elements
- Solenoids and Brakes • Electroplaters

\* For fan and other light loads

### PD SERIES

MODEL	RMS. AMPS. AC OUT	RMS. AMPS. DC OUT	AC INPUT VOLTS	AC OUTPUT VOLTS	RMS. - DC OUTPUT VOLTS	WEIGHT LB.
PD-50	0-5	0-5	120	0-120	0-85	2.0
PD-75	0-7.5	0-7.5	120	0-120	0-85	2.0
PD-100	0-10	0-7.5	120	0-120	0-85	2.3
PD-150	0-15	0-10	120	0-120	0-85	2.6
PD-250	0-25	0-15	120	0-120	0-85	3.3
2PD-50	0-5	0-5	240	0-240	0-170	2.0
2PD-75	0-7.5	0-7.5	240	0-240	0-170	2.0
2PD-100	0-10	0-7.5	240	0-240	0-170	2.3
2PD-150	0-15	0-10	240	0-240	0-170	2.6
2PD-250	0-25	0-15	240	0-240	0-170	3.3

### PDU SERIES

PDU Series is suitable for panel mounting.

May be wired for AC or DC output. Two wire connection.

MODEL	RMS. AMPS. AC	RMS. AMPS. DC	AC INPUT VOLTS	AC OUTPUT VOLTS	RMS. - DC OUTPUT VOLTS	WEIGHT LB.
PDU-50	0-5	0-5	120	0-120	0-85	.25
PDU-75	0-7.5	0-7.5	120	0-120	0-85	.34
PDU-100	0-10	0-7.5	120	0-120	0-85	.53
PDU-150	0-15	0-10	120	0-120	0-85	1.0
PDU-300	0-30	0-20	120	0-120	0-85	6.0
2PDU-50	0-5	0-5	240	0-240	0-170	.25
2PDU-75	0-7.5	0-7.5	240	0-240	0-170	.34
2PDU-100	0-15	0-7.5	240	0-240	0-170	.53
2PDU-150	0-15	0-10	240	0-240	0-170	1.0
2PDU-300	0-30	0-20	240	0-240	0-170	6.0



INTERNATIONAL RESISTANCE COMPANY

Distributor Division • Philadelphia, Pa. 19108

# MALLORY BATTERIES

## MANGANESE ALKALINE BATTERIES

Mallory Number	Volts	Use	Wt., Oz.	Net Each
Mn1300	1.5	All Purpose "D"	5 3/4	65c
Mn1306	4.5	Transistor radio	1 1/8	70c
Mn1400	1.5	All Purpose "C"	2 1/8	51c
Mn1500	1.5	All Purpose "AA"	.82	33c
Mn2400	1.5	All Purpose "AAA"	.4	31c
Mn9100	1.5	All Purpose "N"	.34	24c

## MERCURY BATTERIES

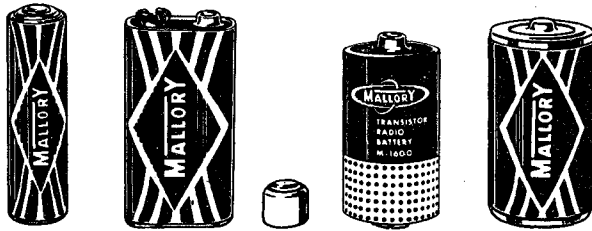
Flat terminals, unless otherwise noted.

Mallory Number	Volts	Cap. MAH	Use	Size, inches L. x W. x H.	Wt., Oz.	Net Each
RM1	1.4	1000	Electronic	3/8 dia. x 2 1/2	0.75	\$0.42
RM1R	1.35	1000	Electronic	3/8 dia. x 2 1/2	0.75	.52
RM1RT†	1.35	1000	Electronic	3/8 dia. x 2 1/2	0.75	.57
RM1RT2†	1.35	1000	Electronic	3/8 dia. x 2 1/2	0.75	.62
RM3R	1.35	2200	Electronic	1 dia. x 2 1/2	0.93	.67
RM4R	1.35	3400	Electronic	1.2 dia. x 2 1/2	1.6	.86
RM4RT†	1.35	3400	Electronic	1.2 dia. x 2 1/2	1.6	.91
RM4Z	1.4	2400	Electronic	1.2 dia. x 1 1/2	1.2	.58
RM12	1.4	3600	Electronic	3/8 dia. x 2	2.0	.80
RM12R	1.35	3600	Electronic	3/8 dia. x 2	2.0	.82
RM12RT†	1.35	3600	Electronic	3/8 dia. x 2	2.0	.87
RM12RT2†	1.35	3600	Electronic	3/8 dia. x 2	2.0	.92
RM24	1.4	1000	Radio	0.4 dia. x 1 3/4	0.5	.42
RM42	1.4	14000	Electronic	1.2 dia. x 2 3/8	5.9	1.70
RM42R	1.35	14000	Electronic	1.2 dia. x 2 3/8	5.9	1.85
RM42RT†	1.35	14000	Electronic	1.2 dia. x 2 3/8	5.9	1.90
RM42RT2†	1.35	14000	Electronic	1.2 dia. x 2 3/8	5.9	1.95
RM312	1.4	36	Electronic	5/8 dia. x 9/16	0.01	.24
RM400	1.4	80	Electronic	29/64 dia. x 3/4	0.04	.24
RM400R	1.35	80	Electronic	29/64 dia. x 3/4	0.04	.35
RM400RT2†	1.35	80	Electronic	29/64 dia. x 3/4	0.04	.45
RM401	1.35	800	Electronic	29/64 dia. x 1 1/8	0.4	.35
RM401R	1.35	800	Electronic	29/64 dia. x 1 1/8	0.4	.42
RM411	14	160	Electronic	1 x 1 7/8 x 1 1/4	1	2.00
RM412	22.4	160	Electronic	1 x 1 7/8 x 1 1/4	1	2.62
RM413	28	160	Electronic	1 x 1 7/8 x 2 1/2	1.5	3.25
RM415*	42	160	Electronic	1 x 1 7/8 x 3 1/2	2.5	5.10
RM450R	1.35	350	Electronic	1 1/2 dia. x 1 1/8	0.18	.52
RM502R	1.35	2400	Electronic	1 1/2 dia. x 1 3/4	1.05	.70
RM520	1.4	130	Electronic	1 1/2 dia. x 1 1/8	0.07	.17
RM575	1.4	100	Radio	.455 dia. x .129	0.01	.24
RM601R	1.35	1800	Electronic	3/8 dia. x 1 1/2	1.2	.83
RM625	1.4	250	Electronic	3/8 dia. x 1 1/4	0.15	.35
RM625R	1.35	250	Electronic	3/8 dia. x 1 1/4	0.15	.42
RM625RT†	1.35	250	Electronic	3/8 dia. x 1 1/4	0.15	.47
RM625RT2†	1.35	250	Electronic	3/8 dia. x 1 1/4	0.15	.52
RM630	1.4	250	Electronic	3/8 dia. x 1 1/4	0.17	.35
RM630R	1.35	250	Electronic	3/8 dia. x 1 1/4	0.17	.42
RM640	1.4	500	Electronic	3/8 dia. x 7/16	0.38	.35
RM640R	1.35	500	Electronic	3/8 dia. x 7/16	0.38	.42
RM640RT2†	1.35	500	Electronic	3/8 dia. x 7/16	0.38	.52
RM675	1.4	160	Electronic	29/64 dia. x 15/16	0.07	.26
TR113R	4.05	250	Electronic	2 1/2 dia. x 1 15/16	0.45	1.93
TR114R	5.4	250	Electronic	2 1/2 dia. x 1 11/16	0.59	1.70
TR114RT2†	5.4	250	Electronic	2 1/2 dia. x 1 11/16	0.59	1.80
TR115	7.0	250	Dictating	2 1/2 dia. x 1 11/16	0.73	1.54
TR115R	6.75	250	Electronic	2 1/2 dia. x 1 11/16	0.73	1.70
TR126	8.4	600	Radio	3/4 dia. x 1 15/16	1.6	1.05
TR132	2.8	1000	Paging	2 1/2 dia. x 1 15/16	1	.85
TR132R	2.7	1000	Electronic	2 1/2 dia. x 1 15/16	1	1.05
TR133	4.2	1000	Radio, Pag.	2 1/2 dia. x 2	1.4	1.05
TR133R	4.05	1000	Radio, Pag.	2 1/2 dia. x 2	1.4	1.22
TR134	5.6	1000	Electronic	2 1/2 dia. x 2 3/4	1.9	1.35
TR134R	5.4	1000	Electronic	2 1/2 dia. x 2 3/4	1.9	1.60
TR134RT2†	5.6	1000	Electronic	2 1/2 dia. x 2 3/4	1.9	1.45
TR135	7.0	1000	Electronic	2 1/2 dia. x 3 1/4	2.4	1.70
TR135R	6.75	1000	Electronic	2 1/2 dia. x 3 1/4	2.4	2.00
TR136	8.4	1000	Electronic	2 1/2 dia. x 3 3/4	2.9	2.00
TR136R	8.1	1000	Electronic	2 1/2 dia. x 3 3/4	2.9	2.20
TR137	9.8	1000	Electronic	2 1/2 dia. x 4	3.4	2.40
TR137R	9.45	1000	Electronic	2 1/2 dia. x 4	3.4	2.76
TR145	7	250	Electronic	2 1/2 dia. x 1 15/16	0.58	1.55
TR145*	8.4	350	Radio	1 x 1 7/8 x 1 1/8	1.6	1.05
TR152	2.8	350	Electronic	1 1/2 dia. x 1 1/8	0.42	.75
TR152R	2.7	350	Electronic	1 1/2 dia. x 1 1/8	0.42	.82
TR153	4.2	350	Electronic	1 1/2 dia. x 1 11/16	0.6	1.05
TR153R	4.05	350	Electronic	1 1/2 dia. x 1 11/16	0.6	1.35
TR162R	2.7	500	Electronic	1 1/2 dia. x 3/8	0.58	1.05
TR163	4.2	500	TV tuner	1 1/2 dia. x 1 1/8	0.87	1.05
TR163R	4.05	500	Electronic	1 1/2 dia. x 1 1/8	0.87	1.22
TR164	5.6	500	Radio	2 1/2 dia. x 1 1/4	1.16	1.25
TR164R	5.40	500	Electronic	2 1/2 dia. x 1 1/4	1.16	1.35
TR165	7	500	TV tuner	2 1/2 dia. x 2 3/8	1.45	1.60
TR165R	6.75	500	Electronic	2 1/2 dia. x 2 3/8	1.45	1.70
TR169	12.6	500	Electronic	2 1/2 dia. x 3 3/8	2.88	3.50
TR175	7	350	Radio	1 1/2 dia. x 1 1/8	1	1.05
TR177*	9.8	250	Radio	3/8 dia. x 1 13/16	1	1.22
TR233	4.2	2200	Radio	1 1/4 dia. x 1 11/16	3	1.90
TR233R	4.05	2200	Electronic	1 1/4 dia. x 1 11/16	3	2.00
TR234	5.6	2200	Electronic	1 1/4 dia. x 2 1/8	3.88	2.20
TR234R	5.6	2200	Electronic	1 1/4 dia. x 2 1/8	3.88	2.62
TR235R	6.75	2200	Electronic	1 1/4 dia. x 3 1/4	4.63	2.93
TR236R	8.10	2200	Electronic	1 1/4 dia. x 3 3/4	4.76	3.64
TR286*	8.4	750	Radio	1 dia. x 1 1/8	1.6	1.35
TR289*	12.6	750	CB radio	1 dia. x 2 1/4	3.6	2.05
ZM9	1.4	2400	Radio	1/2 dia. x 1 1/8	1	.51

\*Snap terminals. †1 tab, 1 flat terminal. ‡2 tab terminals.

## MERCURY VOLTAGE REFERENCE BATTERY

Mallory No. 303113—Eight outputs, 0-10.80 v. in 1.35 v. steps. Size: 6 1/2" x 2 3/4" x 1". In lined leatherette case with 4 complete technical information. Net Each. **\$25.80**



## MERCURY POWER-PAK BATTERIES

Mallory Number	Volts	Cap. MAH	Use	Terminals	Net Each
302157	1.35	28,000	Radiation eqpt.	Socket	\$10.35
302250	9.45	250	Radiation eqpt.	Tabs	2.45
302351	5.4	2,200	Fire alarm	Flat	3.60
302358	10.8	250	Radiation eqpt.	Leads	3.48
302362	16.2	250	Radiation eqpt.	Leads	4.75
302435	6.75	250	Radiation eqpt.	Flat	2.80
302462	97.2	1,000	Transmitter "B"	Leads	32.34
302465	47.25	1,000	Geophysical	Leads	19.20
302478	9.8	2,400	Recorder	Flat	5.80
302479	6.75	2,200	Test equipment	Posts	5.10
302579	29.7	250	Test equipment	Leads	10.85
302580	27	3,400	Electronic	Socket	26.40
302642	7.0	2,400	Fire alarm	Flat	4.25
302651	1.35	14,000	Electronic	Leads	3.90
302702	2.7	2,200	Geophysical	Leads	3.22
302904	5.4	3,400	Meter	Leads	5.80
302905	6.75	3,400	Test equipment	Leads	6.95
302907	9.45	3,400	Electronic	Leads	9.30
302908	10.8	3,400	Radiation eqpt.	Leads	10.30
303145	8.4	3,600	Depth finder	Snap	6.25
303219	9.8	175	Electronic	Flat	1.79
303314	16.8	2,400	Transceiver	Leads	9.90

## • PHOTO BATTERIES

For flashguns, electronic flash, photocells, meters, Wink-lites®, etc. Mercury type with flat terminals except as otherwise noted.

Mallory Number	Volts	Wt., Oz.	Net Each	Mallory Number	Volts	Wt., Oz.	Net Each
PX1	1.35	0.6	\$0.51	PX21*†	4.5	1.5	\$ 0.75
PX4	5.6	3.2	1.35	PX450	1.35	0.3	.51
PX6	8.1	4.0	2.75	PF489†	225	37	6.96
PX13	1.35	0.6	.35	PF491†	240	13	5.56
PX14	2.7	1.3	.75	PF492†	225	40	6.96
PX16*	1.5	5.3	.75	PF497†	510	26	11.16
PX18	46.2	6.0	3.50	PX625	1.4	0.15	.42
PX19*	4.5	1.5	.82	PX640	1.35	0.38	.42

\*Manganese battery. †Zinc-carbon battery. ‡Snap terminals. @Polaroid Corp. trademark.

## ZINC-CARBON BATTERIES

Mallory No.	Volts	Use	T*	Size, inches L. x W. x H.	Wt., Oz.	Net Each
M4	1.5	Radio "A"	a	2 1/4 x 2 1/4 x 4 1/8	20	\$1.15
M9	7.5	Radio "A"	a	2 7/8 x 1 15/16 x 3 1/2	31	1.23
M13F	1.5	Flashlight "D"	b	1 1/2 dia. x 2 1/2	3.3	.13
M13P	1.5	Photo "D"	b	1 1/2 dia. x 2 1/2	3.3	.16
M13R	1.5	Radio "D"	b	1 1/2 dia. x 2 1/2	3.3	.155
M13X	1.5	Industrial "D"	b	1 1/2 dia. x 2 1/2	3.3	.155
M14F	1.5	Flashlight "C"	b	1 1/2 dia. x 1 11/16	1.5	.13
M14P	1.5	Photo "C"	b	1 1/2 dia. x 1 11/16	1.5	.16
M14R	1.5	Radio "C"	b	1 1/2 dia. x 1 11/16	1.5	.155
M15F	1.5	"AA" penlight	b	3/4 dia. x 1 3/4	0.5	.13
M15P	1.5	Photo "AA"	b	3/4 dia. x 1 3/4	0.5	.16
M15R	1.5	Radio penlight	b	3/4 dia. x 1 3/4	0.5	.155
M20	1.5	Radio "A"	b	1 3/8 dia. x 4 1/4	6	.32
M24F	1.5	Junior penlight	b	1 1/2 dia. x 1 3/4	0.3	.095
M200	67.5	Radio "B"	c	2 1/4 x 1 3/8 x 3 45/64	12	2.70
M208	15	Electronic "B"	b	1 1/2 x 3/8 x 1 3/4	0.8	.81
M210	30	Electronic "B"	b	1 1/2 x 3/8 x 2 1/4	1.4	1.23
M211P	67.5	Radio "B"	c	1 3/4 x 3/8 x 5 1/8	8.5	2.70
M215	22.5	Radio "B"	b	1 1/2 x 3/8 x 2 1/4	1.5	1.05
M504	15	Electronic "B"	b	3/8 x 1 1/2 x 1 3/4	0.6	.81
M505	22.5	Electronic "B"	b	3/8 x 1 1/2 x 2 1/4	0.	



# HIGH VOLTAGE POWER PACKS



## COMPACT "M" SERIES 2 TO 75 KVDC

The "M" series Power Packs are a completely new design. Long life and a small package directed the use of the latest techniques and advanced materials. Many features have been incorporated with the highest quality materials, at the same time maintaining economy of cost.

Standard input voltage is 118 at frequencies from 50 to 500 cycles per second inclusive. Available also are input voltages of 220, 230 and 240 volts from 50 to 500 cycles per second inclusive. For 220 volts suffix the desired part number with "X", 230 volts "Y" and 240 Volts "Z". All units may be modified for other input voltages.

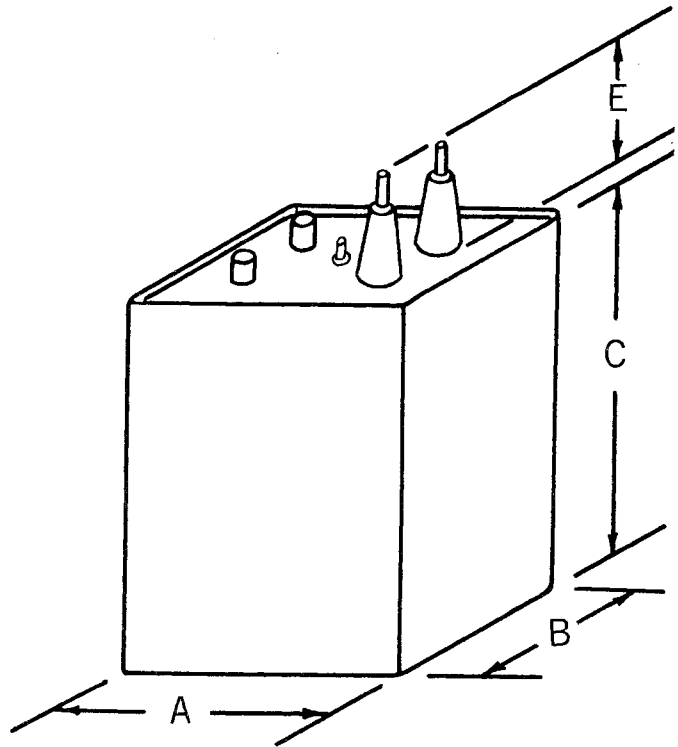
The output is filtered DC and standard potentials and current ratings are listed below. All units can be modified for any required potential and current below the values specified in the listing. The output potential can be varied from zero to the rated voltage and load by means of a variable auto transformer at the primary.

Ripple is 1% RMS or 2.75% peak to peak at rated current and voltage.

Design life is 40,000 hours at 35°C and 5,000 hours at 85°C.

Case finish is light blue gray lacquer per MIL-L-7178.

All units except the 75 KV, have two output terminals isolated from the container, permitting either terminal to be operated at ground or an intermediate point between them can be tied to ground. The 75 KV unit has a single high voltage terminal for the output. The Power Pack is normally furnished to deliver a positive output potential relative to ground. If a negative output is desired it can be shipped as such from the factory upon request. The polarity can be easily reversed as required by opening the top access port and reversing the selenium rectifier board. The remaining output terminal at low potential is left ungrounded so that the lead current be monitored if required.



PART NUMBER	KV RANGE	MAX. MA.	DIMENSIONS				MOUNTING AREA		WEIGHT LBS.
			A	B	C	E	L	W	
HV20-152M	0-2	1.5	3 $\frac{3}{4}$	1 $\frac{3}{4}$	3	$\frac{3}{8}$	1 $\frac{3}{4}$	5 $\frac{1}{4}$	1 LB.
HV50-152M	0-5	1.5	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{8}$	$\frac{5}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$	2 LBS.
HV100-152M	0-10	1.5	3 $\frac{3}{4}$	3 $\frac{3}{16}$	4 $\frac{1}{2}$	1 $\frac{1}{16}$	3 $\frac{3}{16}$	5 $\frac{1}{4}$	4 LBS.
HV150-152M	0-15	1.5	3 $\frac{3}{4}$	3 $\frac{3}{16}$	5 $\frac{1}{2}$	1 $\frac{1}{16}$	3 $\frac{3}{16}$	5 $\frac{1}{4}$	5 LBS.
HV200-152M	0-20	1.5	3 $\frac{3}{4}$	4 $\frac{1}{16}$	5 $\frac{7}{8}$	2 $\frac{1}{8}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	9 LBS.
HV300-152M	0-30	1.5	3 $\frac{3}{4}$	4 $\frac{1}{16}$	7 $\frac{1}{2}$	3 $\frac{1}{4}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	11 LBS.
HV500-152M	0-50	1.5	4 $\frac{1}{16}$	6	8 $\frac{1}{2}$	4 $\frac{1}{16}$	6	6 $\frac{1}{4}$	18 LBS.
HV750-152M	0-75	1.5	5 $\frac{7}{8}$	7 $\frac{3}{8}$	12 $\frac{3}{16}$	7 $\frac{1}{2}$	7 $\frac{3}{8}$	7 $\frac{1}{4}$	26 LBS.
HV20-502M	0-2	5	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{8}$	$\frac{3}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$	2 LBS.
HV50-502M	0-5	5	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{4}$	$\frac{5}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$	3 LBS.
HV100-502M	0-10	5	3 $\frac{3}{4}$	4 $\frac{1}{16}$	5 $\frac{7}{8}$	1 $\frac{1}{16}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	8 LBS.
HV150-502M	0-15	5	3 $\frac{3}{4}$	4 $\frac{1}{16}$	6 $\frac{1}{8}$	1 $\frac{1}{16}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	9 LBS.
HV200-502M	0-20	5	3 $\frac{3}{4}$	4 $\frac{1}{16}$	8	2 $\frac{1}{8}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	12 LBS.
HV300-502M	0-30	5	4 $\frac{1}{16}$	6	8 $\frac{1}{2}$	3 $\frac{1}{4}$	6	6 $\frac{1}{4}$	18 LBS.
HV500-502M	0-50	5	5 $\frac{7}{8}$	7 $\frac{3}{8}$	12 $\frac{3}{16}$	4 $\frac{1}{16}$	7 $\frac{3}{8}$	7 $\frac{1}{4}$	26 LBS.
HV750-502M	0-75	5	11 $\frac{1}{8}$	14 $\frac{1}{16}$	16 $\frac{1}{4}$	7 $\frac{1}{2}$	14 $\frac{1}{16}$	11 $\frac{1}{8}$	124 LBS.
HV10-103M	0-1	10	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{8}$	$\frac{3}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$	2 LBS.
HV25-103M	0-2.5	10	3 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{4}$	$\frac{5}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$	3 LBS.
HV50-103M	0-5	10	3 $\frac{3}{4}$	4 $\frac{1}{16}$	5 $\frac{7}{8}$	$\frac{5}{8}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	8 LBS.
HV100-103M	0-10	10	3 $\frac{3}{4}$	4 $\frac{1}{16}$	8	1 $\frac{1}{16}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	12 LBS.
HV150-103M	0-15	10	4 $\frac{1}{16}$	6	8 $\frac{1}{2}$	1 $\frac{1}{16}$	6	6 $\frac{1}{4}$	18 LBS.
HV250-103M	0-25	10	5 $\frac{7}{8}$	7 $\frac{3}{8}$	12 $\frac{3}{16}$	3 $\frac{1}{4}$	7 $\frac{3}{8}$	7 $\frac{1}{4}$	26 LBS.
HV375-103M	0-37.5	10	11 $\frac{1}{8}$	14 $\frac{1}{16}$	16 $\frac{1}{4}$	4 $\frac{1}{16}$	14 $\frac{1}{16}$	11 $\frac{1}{8}$	124 LBS.

SURFACE AREA REQUIRED FOR MOUNTING INCLUDING AREA REQUIRED FOR FOOTED BRACKETS

SEE SECTION 1500, PAGES 486-488

## HIGH & LOW VOLTAGE CAPACITORS

*Plastic Capacitors, Inc.*

CHICAGO 14, ILLINOIS  
Cable Address: PLASCAPINC, Chicago

# RCA BATTERIES

RADIO • FLASHLIGHT  
FARM • TRANSISTOR  
INDUSTRIAL • PHOTO FLASH

JULY 1, 1964

## PORTABLE "A" TYPES



Type	Distr. Resale Price Ea.*	List Price Ea.*	Volts	Suggested Current Range Ma.	Max. Dimensions Inches			Standard Package		NEDA* Type No.	Replaces		
					L.	W. or Overall Dia.	Ht.	Units	Lbs. (Appr.)		Eveready	Burgess	Mallory
VS004	1.15	1.65	1½	0-1000	2½	2½	3 <sup>3</sup> / <sub>32</sub>	12	17	4	742	4F	M4
VS009	1.16	1.65	6	0-250	2½	2½	3 <sup>3</sup> / <sub>32</sub>	12	17	6	744	F4P1	M6
VS034A♦	.13	.20	1½	0-25	—	5/16	1 <sup>1</sup> / <sub>32</sub>	144	5.3	815	915	1	M15F
VS035A♦	.13	.20	1½	0-80	—	1½	1½	240	24	814	935	1	M14F
VS036♦	.13	.20	1½	0-150	—	1½	2½	192	37.5	813	950	2 or 2R	M13M or F
VS065	1.23	1.75	7½	0-70	2½	1½	3½	12	7.8	9	717	C5	M9
VS067	1.05	1.50	4½	0-250	3½	1½	4½	6	5.9	3	736	F3	M3
VS068♦	.87	1.25	6	0-25	1½	1½	2½	6	1	2	724	Z4	M2
VS069	1.02	1.45	1½	0-300	2½	1½	3½	6	3	18	720	2D	M18
VS070	.77	1.10	1½	0-250	—	1½	4½	6	2.3	23	960P	8R	M23
VS072	1.05	1.50	4½	0-150	4½	1½	2½	3	2.1	19	726	D3	M19
VS129	2.07	2.95	7½	0-50	3½	2½	2½	6	2.5	8	713	B5	M8
VS141	.88	1.25	1½	0-500	2½	1½	4½	6	4.5	11	W353	2F	M11
VS236♦	.32	.45	1½	0-300	—	1½	4½	48	18	20	964	21R	M20
VS315A	1.15	1.65	7½	0-80	2½	2½	2½	6	4.7	26	707	D5	M26
VS734♦	.16	.25	1.5	0-25	—	¾	1 <sup>1</sup> / <sub>32</sub>	144	6	—	815	920	M15F
VS735♦	.16	.25	1.5	0-80	—	1½	1½	72	7	—	835	120	—
VS736♦	.16	.25	1.5	0-150	—	1½	2½	72	13	—	850	220	—

\* Available on special order only. ♦ National Electronic Distributors Association. ♦ Flashlight-type terminals.  
▲ 2 snap-fasteners. \* Optional.

## PORTABLE "B" TYPES



VS012	3.47	4.95	45	0-70	3½	2½	5½	6	19.3	207	484	B30	M207
VS013	2.97	4.25	45	0-40	3½	1½	5½	6	12.6	202	482	M30	M202
VS014	2.69	3.85	45	0-40	3½	2¼	4½	5	9.5	206	W359	A30	M206
VS015	2.76	3.95	22½, 45	0-25	3	2½	4½	5	6.5	205	738	Z30	M205
VS016A	2.70	3.85	67½	0-10	2½	1½	3½	12	10	200	467	XX45	M200
VS055A	2.25	3.25	45	0-10	2½	1	3½	12	6.7	201	455	XX30	M201
VS082A	2.70	3.85	67½	0-6	2½	1½	2½	12	6.4	203	457	K45	M203
VS084♦	1.05	1.50	22½	0-2.5	1½	¾	2	12	1.1	215	412	U15	M215 or RM412
VS086A	1.75	2.50	45	0-4	1½	¾	3½	12	2	213	415	U30	M213 or RM415
VS090A	3.15	4.50	90	0-10	3½	1½	3½	12	13	204	490	N60	M204
VS125A	2.77	3.95	67½	0-10	2½	1½	3½	12	10.0	200	468	V45	M-200
VS217A	3.15	4.50	75	0-10	1½	1½	6½	12	12.6	212	437	XX50	M212
VS218A	2.70	3.85	67½	0-8	1½	1	5½	12	6.4	211P	477	P45M	M211P
VS219A	2.97	4.25	90	0-8	1½	1½	7½	12	9.1	214	479	P60	M214
VS316A	3.47	4.95	90	0-10	1½	1½	7¼	6	6.5	216	495	N60X	M216
VS318A	2.07	2.95	67½	0-3	1½	1	3½	6	1.5	217	416	UX45	M217

\* National Electronic Distributors Association. ♦ Flashlight-type terminals.  
▲ 2 snap-fasteners. \* Optional.

## PORTABLE "A-B" TYPES



Type	Distr. Resale Price Ea.*	List Price Ea.*	A		B		Suggested Current Range Ma.	Max. Dimensions Inches	Standard Package	NEDA* Type No.	Replaces				
			Volts	Capacity	Volts	Capacity					Eveready	Mallory			
VS019	5.43	7.75	7½, 9	90	0-50	12-15	9½	2½	4½	1	5.1	401	753	F6A60	M401
VS047	5.78	8.25	9	90	0-50	12-15	14½	2½	4½	1	6.6	400	752	G6B60	M400
VS050	5.08	7.25	6, 7½	75	0-50	0-12	8½	2½	3½	1	3.8	403	755	T5Z50	M403
VS057W	4.87	6.95	7½, 9	90	0-50	8-12	8	2½	3½	1	3.1	405	756	T6Z60	M405
VS058	5.57	7.95	9	90	0-50	12-15	9½	2½	4½	1	5.2	406	757	F6A60P	M406
VS059	5.22	7.45	9	90	0-50	8-12	8	2½	3½	1	3.3	428	727	T6Z60P	M428
VS060	4.83	6.90	7½	75	0-50	0-12	8½	3½	2½	1	3	431	785	T5Z50P	M431
VS064	4.38	6.25	1½	90	0-300	10-14	3½	2½	7½	1	2.8	425	729	4T260	M425

## TYPES FOR TRANSISTOR APPLICATIONS



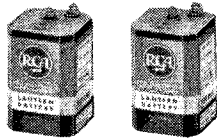
VS143♦▲	.42	.65	1.4	0-100	—	0.625	0.650	40	2	1100	E1	Hg1	RM1R
VS144♦▲	.80	1.15	1.4	0-250	—	0.640	1.968	10	1¼	1101	E12	Hg12	RM12R
VS145♦▲	.24	.35	1.4	0-7	—	0.455	0.135	60	½	1106	E400	Hg400	RM400R
VS147♦▲	.35	.50	1.4	0-20	—	0.615	0.238	40	½	1104	E630	Hg630	RM630
VS148♦▲	.85	1.25	2.8	0-100	—	0.662	1.315	10	¾	1200	E132	H132	TR132R
VS149♦▲	1.05	1.50	4.2	0-100	—	0.662	1.965	24	2.3	1304	E133	H133	TR133
VS150♦▲	.35	.50	1.4	0-50	—	0.625	0.440	20	¾	1105	E640	Hg640	RM640
VS163♦▲	1.05	1.50	4.2	0-50	—	0.662	1.327	10	¾	1305	E163	H163	TR163
VS164♦▲	1.25	1.75	5.6	0-50	—	0.662	1.767	10	1	1404	E164	H164	TR164
VS165♦▲	1.59	2.25	7	0-50	—	0.662	2.217	10	1	1500	E165	H165	TR165R
VS300A	.62	.89	9	0-9	—	1	1½	36	4.5	1600	E26	P6M	M1600
VS301	1.76	2.50	3, 6, 9	0-150	8	2½	1½	6	8	1601	2506	D6P1	M1601
VS304	1.05	1.50	9, 13½	0-10	1½	1½	2½	12	2.3	1900	E239	XX9	M1900
VS305	1.30	1.85	9	0-15	1½	1½	2½	12	3.8	1602	246	2N6	M1602
VS306	1.26	1.80	9	0-30	—	2½	2½	6	5.6	1603	276	D6	M1603
VS309A▲	1.22	1.75	9.8	0-10	2½	2½	3½	24	1	1606	E177	H177	TR177
VS312A	1.05	1.50	8.4	0-30	—	¾	2	12	1¼	1604	E146	H146	TR146
VS313♦▲	.51	.75	1.4	0-200	—	0.550	1.968	36	7	1103	E9	930	ZM9
VS322	1.22	1.75	9	0-20	1½	1½	2½	12	5.5	1605	266	M6	M1605
VS323	.48	.69	9	0-8	1½	1½	1½	72	5.9	1604	216	2U6	M1604
VS324	1.19	1.70	4½	0-40	1½	1½	2½	12	3.5	1610	243	—	M1610
VS327♦	.53	.75	9	0-7	—	¼	2	12	1	1611	206	H126	M1611
VS328♦▲	1.05	1.50	8.4	0-50	—	¾	2	24	2	1611	E126	H126	TR126
VS329	1.05	1.50	12	0-9	—	1	2½	12	1.7	1810	228	—	TR829
VS332	.53	.75	4.5	0-12	—	0.662	1.965	12	9	1306	333	AL-133	MN1306
VS334♦	.155	.25	1½	0-25	—	¾	1½	144	5.2	15	1015	930	M15R
VS335♦	.155	.25	1½	0-80	—	1½	1½	72	7	14	635	130	M14R
VS336♦	.155	.25	1½	0-150	—	1½	2½	192	40	13	A100	230	M13R
VS337	1.93	2.75	4½	0-200	2½	1½	8½	12	34	1303	2731	—	—
VS338	.71	1.00	6	0-25	1½	¾	4½	6	2	1403	2713	—	—
VS339	1.05	1.50	9	0-20	1½	¾	4½	6	1.8	1613	2709	—	—
VS400A	1.90	2.75	4.2	0-60	—	1½	1½	10	2.5	1300	E233	H233	TR233R
VS401♦▲	.35	.50	1.4	0-50	—	0.460	1.130	24	1	1102	E401	Hg401	RM401
VS675A	.26	.40	1.4	0-5	—	0.455	0.210	60	.5	—	E675	RM675	Hg-675

\* National Electronic Distributors Association. ♦ Flashlight Type Terminals. ▲ Mercury Types.  
\* Optional.

# RCA BATTERIES

**RADIO • FLASHLIGHT**  
**FARM • TRANSISTOR**  
**INDUSTRIAL • PHOTO FLASH**

## LANTERN TYPES



Type	Distr. Resale Price Ea.*	List Price Ea.*	Volts	Suggested Current Range Ma.	Max. Dimensions Inches			Standard Package		NEDA• Type No.	Replaces		
					L.	W. or Overall Dia.	Ht.	Units	Lbs. (Appr.)		Eveready	Burgess	Mallory
VS034A♦	.13	.20	1½	0-25	—	¾	1¾	144	5.3	815	915	Z	M15F
VS035A♦	.13	.20	1½	0-80	—	1½	1¾	240	24	814	935	I	M14F
VS036♦	.13	.20	1½	0-150	—	1½	2¼	192	37.5	813	950	2R	M13F
VS040C	.85	1.29	6	0-250	2½	2½	4¼	12	17	908	509	F4H	M908
VS040S	.85	1.29	6	0-250	2½	2½	4¾	12	18	915	510S	F4BP	M915
VS073	.08	.125	1½	0-20	—	0.445	1.180	96	1½	910	904	N	M910F
VS074	.095	.15	1½	0-20	—	¾	1¾	120	2.5	24	912	7	M24F
VS138	1.45	2.05	3	0-1000	3¾	2¼	5¼	5	13.5	901	W357	4F2H	M901
VS317	1.96	2.95	6	0-500	5½	2¾	4¼	6	20	918	731	TW1	M918

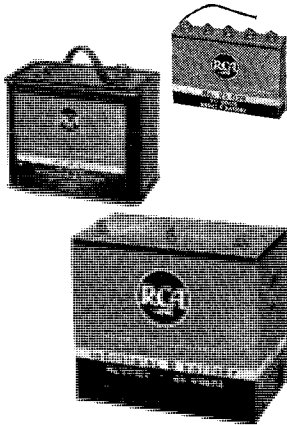
## FARM TYPES



Type	A		B		A		B		L	W. or Overall Dia.	Ht.	Units	Lbs. (Appr.)	NEDA• Type No.	Eveready	Burgess	Mallory
	7.95	10.65	1½	90	0-300	8-12	15¼	4½									
VS119	10.47	14.95	7½	9	90	0-50	10-12	7¾	4¾	9¾	3	45.6	415	776	S6D60	M415	

♦ National Electronic Distributors Association.  
 \* Optional.

## INDUSTRIAL and SPECIAL-PURPOSE TYPES



Type	A		B		C		Volts	Suggested Current Range Ma.	Max. Dimensions Inches			Standard Package		NEDA• Type No.	Replaces		
	.84	1.25	1½	—	—	—			—	2½ <th>2½ <th>6¾ <th>12 <th>26 <th>906 <th>6GL <th>— <th>M906</th> </th></th></th></th></th></th></th>	2½ <th>6¾ <th>12 <th>26 <th>906 <th>6GL <th>— <th>M906</th> </th></th></th></th></th></th>	6¾ <th>12 <th>26 <th>906 <th>6GL <th>— <th>M906</th> </th></th></th></th></th>	12 <th>26 <th>906 <th>6GL <th>— <th>M906</th> </th></th></th></th>		26 <th>906 <th>6GL <th>— <th>M906</th> </th></th></th>	906 <th>6GL <th>— <th>M906</th> </th></th>	6GL <th>— <th>M906</th> </th>
VS006C	.84	1.25	1½	—	—	0-1500	—	2½	2½	6¾	12	25	905	6 IGN.	6 IGN.	M905	
VS006S	.84	1.25	1½	—	—	0-1500	—	2½	2½	6¾	12	25	905	6 IGN.	6 IGN.	M905	
VS028	.99	1.40	—	—	—	0-50	—	27	2¾	3	10	3.6	714	781	5350	M714	
VS029§	1.65	2.35	—	—	—	0-50	—	3¾	2¾	3	10	6	713	773	5540	M713	
VS039	3.34	4.98	6	—	—	0-1500	—	10¾	2¾	7¾	4	38	907	1461	S461	M907	
VS040C	.83	1.25	6	—	—	0-250	2½	2½	2½	4¾	12	17	908	509	F4H	M908	
VS040S	.83	1.25	6	—	—	0-250	2½	2½	2½	4¾	12	18	915	510S	F4BP	M915	
VS070	.77	1.10	1½	—	—	0-250	—	1½	¾	1½	6	2.3	23	960P	8R	M23	
VS083♦	.81	1.15	—	15	—	0-2.5	1½	¾	¾	1½	6	0.5	208	411	U10	M208	
VS084♦	1.05	1.50	—	22½	—	0-2.5	1½	¾	¾	2	12	1.1	215	412	U15	M215	
VS085♦	1.23	1.75	—	30	—	0-2.5	1½	¾	¾	2½	12	1.4	210	413	U20	M210	
VS093	8.37	11.95	—	300	—	0-2.5	2½	2½	2¾	3¾	3	3.7	722	493	U200	—	
VS100	.94	1.35	3	—	—	0-250	2½	2½	1½	4¾	5	4	701	W352	F2BP	M701	
VS101	.87	1.25	1½	—	—	0-500	2½	2½	1½	4¾	5	4	700	W354	2FBP	M700	
VS102	1.61	2.35	—	22½	—	0-40	3½	2¾	3¼	5	4	710	763	4156	M710		
VS103	4.01	5.98	6	—	—	0-1000	8¾	2¼	6¾	4	26	902	706	4F4H	M902		
VS106	.84	1.25	1½	—	—	0-1000	2½	2½	4¾	12	18	900	735	4FH	M900		
VS112	3.05	4.35	—	22½, 45	—	0-50	4¾	2¼	5¾	5	15.3	709	W376	5308	M709		
VS114	2.69	3.85	—	22½, 45	—	0-20	3½	1¾	4¾	5	5	711	W350	Z30NC	M711		
VS127W	5.36	7.65	—	22½, 45	—	0-250	8¾	4¾	7¾	4	44	724	W363F	10308SC	M716		
VS130	1.76	2.50	—	—	—	0-150	4¾	1¾	3½	5	4.5	712	761T	2370ST	M712		
VS131	3.84	5.50	—	—	—	0-50	4	2¼	3¼	4	6.5	708	778	5156SC	M708		
VS133	1.00	1.50	4½	—	—	0-50	2½	2¾	3¼	10	3	706	703	532	M706		
VS134	.65	.95	3	—	—	0-25	1½	¾	2¾	10	1	704	750	422	M704		
VS136*	1.33	1.90	3	—	—	0-500	2½	2½	4¾	5	7.5	703	W355	2F2H	—		
VS138	1.57	2.25	3	—	—	0-1000	3¾	2¼	5¾	5	13.5	901	W357	4F2H	M901		
VS139	4.86	7.25	7½	—	—	0-1000	7¼	4¼	6¾	4	31½	903	715	4F5H	M903		
VS140*	5.53	8.25	9	—	—	0-1000	8¾	4¼	6¾	4	37	904	716	4F6H	M904		
VS142*	.74	1.10	4½	—	—	0-25	1¾	¾	2¾	10	1.5	705	751	432	M705		
VS157W*	6.45	9.20	—	22½, 45	—	0-300	8¾	4¾	7½	4	51	715	W354F	21308SC	—		
VS317	1.96	2.95	6	—	—	0-500	5½	2¾	4¼	6	20	918	731	TW1	M918		

§ 5-Screw terminals and 1 pigtail.  
 \* Available on special order only.

♦ National Electronic Distributors Association.  
 \* Optional.

♦ Flashlight-type terminals.

## PHOTO FLASH



VS704	.81	1.15	15	0-1.5	¾	1¾	1¾	12	0.37	220	504	Y10	M504
VS705	1.05	1.50	22½	0-1.5	¾	1¾	1¾	12	0.5	221	505	Y15	M505
VS734♦	.16	.25	1½	0-25	—	¾	1¾	144	6	—	815	920	—
VS735♦	.16	.25	1½	0-80	—	1½	1¾	72	7	—	835	120	—
VS736♦	.16	.25	1½	0-150	—	1½	2¼	72	13	—	850	220	—

♦ Flashlight-type terminals.

♦ National Electronic Distributors Association.

\* Optional.

## ALKALINE TYPES



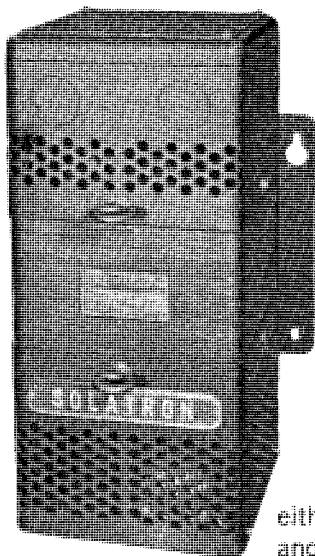
VS1073	.24	.35	1½	0-150	—	0.470	1.130	72	2	910	904	AL-N	Mn9100
VS1074	.31	.45	1½	0-200	—	0.40	1.735	12	1¼	—	—	—	Mn2400
VS1149♦	.70	1.00	4½	0-100	—	0.662	1.965	24	2	1306	333	AL-133	Mn1306
VS1334	.33	.50	1½	0-300	—	0.550	1.960	48	2.8	815	E91	AL-9	Mn150C
VS1335	.51	.75	1½	0-500	—	1½	2	24	4	814	E93	AL-1	Mn140C
VS1336	.65	.95	1½	0-1000	—	1¾	2¾	72	25	813	E95	AL-2	Mn130C

♦ Alkaline types specially designed for transistor radios.

\* Optional.



In Canada: Sola-Basic Products Ltd.,  
377 Evans Avenue, Toronto 18, Ontario



New "static" line-and-load regulator  
is insensitive to frequency

# The Solatron<sup>®</sup> Line Voltage Regulator

*fast... effective...*

## *economical voltage control*

The new Solatron regulator operates on a different principle than the popular Sola CV transformer. And — it should not be confused with the Sola CV since the new Solatron offers fast, effective corrective action for voltage fluctuation in **line and load**. It is **not** sensitive to frequency, and is adaptable to both wye and delta 3-phase installations. It is also considerably smaller and lighter than other regulators of equal capacity.

Output is held within  $\pm 1\%$  for input variations of

either  $\pm 10\%$  or  $\pm 20\%$ . It is maintenance-free and has no moving parts. Available in the following KVA ratings (1-phase): 1, 2, 3, 5,  $7\frac{1}{2}$ , 10, 15, 25,  $33\frac{1}{3}$ ,  $37\frac{1}{2}$ . Voltage ratings: 120-240-480; 208Y/120 and 410Y/240 (3-phase installations use 3 units, may be either delta or wye connected).

The new Solatron is available for 50- or 60-cycle operation. Special Solatrons for 400-cycle applications are also available — as are electronic component models.

For more information, write to the Sola Electric Company or ask your distributor for Sola Bulletin VR-200.

1. **No Moving Parts, Maintenance Free.**
2. **Adjustable Output Voltage:** Voltage may be adjusted to 10% of rated voltage and retain full regulation at any output setting.
3. **Fast Response:** 90% correction in less than 5 cycles; Complete correction in 10 cycles.
4. **Frequency Insensitive:** Normal design range for 60-cycle units is 47-70 CPS.
5. **98% Efficiency:** At rated load and rated output voltage.
6. **Low Harmonic Content:** No harmful waveform distortion. Units furnishing less than 1% total harmonic content are optional.
7. **Power Factor, Load, or Frequency:** Can be varied individually or simultaneously without affecting the output voltage level.
8. **Easy to Service:** Control circuit is on removable end plate, can be serviced or replaced without disturbing power connections.
9. **Ultra Compact:** Smaller and lighter than other standard regulators. Less than 17 pounds per KVA, less than 6 x 6 x 6 inches per KVA. All power windings on one magnetic core.

SECTION 4000

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Model	D.C. Volts & Amps Ripple & Regulation	Price Fig.*
T9V50A	.0 to 9VDC @ 50Amp	\$171... 7
T12V10A	.0 to 12VDC @ 10Amp/Inf up to 18A	45... 2
T12V10ACE	.0 to 12VDC @ 10Amp/.1% Rip @ 2A	54... 2
T12V15ARM	.0 to 12VDC @ 15Amp/1% Rip ±5% Reg	198... 3
T12V20A	.0 to 12VDC @ 20Amp/Inf. up to 30Amp	100... 3
T12V25ACE	.0 to 12VDC @ 25Amp/1% Rip @ 10A	153... 4
T12V50A	.0 to 12VDC @ 50Amp	198... 7
T12V100A	.0 to 12VDC @ 100Amp	279... 6
T12V200AP	.0 to 12VDC @ 200Amp/4% Rip/480Mv	441... 6
T14V20ACE	.0 to 14VDC @ 20Amp/1% Rip @ 8Amp	108... 3
T14V30ARM	.0 to 14VDC @ 30Amp/1% Rip ±5% Reg	354... 5
T14V40ARC	.0 to 14VDC @ 40Amp/0.1% Rip/14Mv Max	396... 5
T14V40ACE	.0 to 14VDC @ 40Amp/1% Rip at 15Amp	270... 6
T16V5ACE	.0 to 16VDC @ 5Amp/0.5% Rip	50... 2
T16V10ACC	.0 to 16VDC @ 10Amp/0.5% Rip. at 5Amps	69... 2
QT816V	.0 to 8VDC @ 8A & 0 to 16VDC @ 5A, Rip .01%	69... 2
T16V20A	.0 to 16 VDC @ 20Amp	126... 3
T16V25ACE	.0 to 16VDC @ 25Amp/1% Rip @ 10A	171... 3
T16V50A	.0 to 16VDC @ 50Amp/Full Wave Rect.	210... 5
T30V10ACE	.0 to 30VDC @ 10Amp/1% Rip at 5Amp	139... 3
T32V5A	.0 to 32VDC @ 5Amp	57... 2
T32V5ACE	.0 to 32VDC @ 5Amp/0.5% Rip/160Mv	79... 3
T32V5ARC	.0 to 32VDC @ 5Amp/.05% Rip/14Mv	135... 3
T32V12A	.0 to 32VDC @ 12Amp	105... 3
T32V12ACC	.0 to 32VDC @ 12Amp/0.5% Rip/160Mv	180... 5
T28V12ARC	.0 to 28VDC @ 12Amp/.05% Rip/14Mv	225... 5
T32V15ARM	.0 to 32VDC @ 15Amp/1% Rip ±5% Reg	234... 5

Model	D.C. Volts & Amps Ripple & Regulation	Price Fig.*
T30V20ACE	.0 to 30VDC @ 20Amp/1% Rip at 8A	\$180... 3
T32V24A	.0 to 32VDC @ 24Amps	174... 5
T32V24ACC	.0 to 32VDC @ 24Amp/0.5% Rip/160Mv	234... 5
T28V30ARC	.0 to 28VDC @ 30Amp/.05% Rip/14Mv	486... 5
T32V30ARM	.0 to 32VDC @ 30Amp/1% Rip ±5% Reg	369... 5
T32V50A	.0 to 32VDC @ 50Amp	360... 6
T32V50ACC	.0 to 32VDC @ 50Amp/1% Rip/320Mv	430... 6
T30V100AP	.0 to 30VDC @ 100Amp/4% Rip/1.2V	696... 6
T30V200AP	.0 to 30VDC @ 200Amp/4% Rip/1.2V	898... 8
T32V60ARM	.0 to 32VDC @ 60Amp/1% Rip ±5% Reg	666... 6
T48V5ACE	.0 to 48VDC @ 5Amp/0.5% Rip/240Mv	119... 4
T48V10ACC	.0 to 48VDC @ 10Amp/0.5% Rip/240Mv	175... 4
T48V10ARM	.0 to 48VDC @ 10Amp/1% Rip ±5% Reg	333... 5
T60V5ACE	.0 to 60VDC @ 5Amp/0.5% Rip/300Mv	171... 4
T60V10ARM	.0 to 60VDC @ 10Amp/1% Rip ±5% Reg	369... 5
T60V10ACC	.0 to 60VDC @ 10Amp/0.5% Rip/300Mv	297... 5
T90V10ARM	.0 to 90VDC @ 10Amp/1% Rip ±5% Reg	399... 6
T130V2ACC	.0 to 130VDC @ 2Amp/1% Rip/1.3V	183... 5
T120V5ACE	.0 to 120VDC @ 5Amp/1% Rip/1.20V	270... 5
T130V10ACC	.0 to 130VDC @ 10Amp/1% Rip/1.3V	439... 6
T150V10ARM	.0 to 150VDC @ 10Amp/1% Rip ±5% Reg	570... 6
T220V10A	.0 to 220VDC @ 10Amp	395... 6
T220V10ACC	.0 to 220VDC @ 10Amp/1% Rip/2.2V	486... 6
T300V1ACC	.0 to 300VDC @ 1Amp/0.03% Rip/90Mv	234... 5
T300V2ACC	.0 to 300VDC @ 2Amp/0.03% Rip/90Mv	351... 5

\* Size: Fig 1, 4Hx5Wx6D; Fig 2, 5Hx9Wx6D; Fig 3, 7Hx6½Wx12D; Fig 4, 9Hx 15Wx7D; Fig 5, 10½Hx22Wx15D; Fig 6, 19Hx22Wx15D; Fig 7, 14½Hx14Wx 10D; Fig 8, 37Hx22Wx18D

**MAGNETIC REGULATED (MR) or TRANSISTORIZED REGULATED (Q)**

Model	D.C. Volts & Amps Ripple & Regulation	Price Fig.*
MRT12V50ACC	.0 to 12V @ 50A/Rip ±1% Reg 10/12V	\$459... 5
MRT32V25ACC	.0 to 32V @ 25A/Rip ±1% Reg 24/28V	396... 5
MRT32V50ACC	.0 to 32V @ 50A/Rip ±1% Reg 24/28V	639... 6
MRT28V100AP	.0 to 28V @ 100A/Rip ±1% Reg 24/28V	891... 7
QT2.5V/25AR*	.0.2 to 2.5V @ 250Ma/Rip 0.1%, Reg 1% @ 50Ma	36... 1
QT14V1A*	.0 to 14V @ 1Amp (Non-Regulated)	18... 1
QT30V/300AR*	.0 to 30V @ 300Ma Rip 50Mv/Reg ±200Mv/Sp	36... 1
QF12V/5A	.12VDC ±5% V @ 500Ma/Rip 1%/Reg ±2%/Sp	65... 2
QT30V4AR	.1 to 30V @ 4A/Rip 10Mv Reg ±1V Short-Pruf	148... 3
QF25V2.5A	.25V @ 2.5A/Rip & Reg ±0.5% & Short-Pruf	135... 3
QM6V4AP	.6V @ 4A • Regulation 0.5% &	153... 3
QM10V4AP	.10V @ 4A • LINE & LOAD REG 1 &	153... 3
QM12V4AP	.12V @ 4A • RIPPLE 0.5% &	153... 3
QM153AP	.15V @ 3A • REMOTE CONTROL &	153... 3
QM18V3AP	.18V @ 3A • SENSING &	153... 3

Model	D.C. Volts & Amps Ripple & Regulation	Price Fig.*
QM24V2.5AP	.24V @ 2.5A • PROGRAMMING &	\$153... 3
QM28V2.5AP	.28V @ 2.5A • NON-DERATING &	133... 3
QM32V2AP	.32V @ 2.5A • FORCED AIR &	153... 3
QM36V1.75AP	.36V @ 1.75A • COOLED 1 &	153... 3
QM40V1.5AP	.40V @ 1.5A • QTY PRICED	153... 3
VOLTABIAC/DC	.0-16VAC & DC @ 2A & 0-130VAC @ 2A	78... 2
VOLTABIAC/DC	.0-16VAC & DC @ 10A & 0-130VAC @ 3.5A	136... 2
VOLTABIAC/DC	.0-50VAC @ 5A; 0-40VDC @ 5A & 0-140VAC @ 7.5A	164... 3
VOLTABXAC/DC	.0-25VAC @ 10A; 0-50VDC @ 5A & 0-120VAC @ 10A	189... 3
VOLTAB-AC/DC6	.0-36VAC & DC @ 6A & AC, 10A	39... 2
VOLTAB-AC/DC15	.0-36VAC & DC @ 12A & AC, 10A	68... 2
VOLTAB-AC/DC25	.0-36VAC & DC @ 24A & AC, 10A	117... 3
HIV-TAB2.5K	.0-2500VDC @ 5Ma/Rip Max 2%	60... 2
HIV-TAB5K	.0-5000VDC @ 5Ma/Rip Max 2%	84... 2
HIV-TAB10K	.0-10,000VDC @ 5Ma/Rip Max 2%	99... 2

**LO-PRICED BASIC D.C. SUPPLIES — BUILT, VENTILATED ENCLOSURE OR CABINET!**

Model	Description	Price	Model	Description	Price	Model	Description	Price
B6.3V30ACC	.6.3VDC @ 30A/1% Rip	\$120	B28V5A	.28VDC @ 5Amp	\$48	B28V50ARM	.28VDC @ 50A/1% Rip ±5% Reg	\$42
B12V12ARC	.12VDC @ 12A/Rip 1Mv/.01%	200	B28V5ACC	.28VDC @ 5A/Rip 1%	60	B28V100A/P	.28VDC @ 100Amp/Rip 4%	43
B12V15ARM	.12VDC @ 15A/1% Rip ±5% Reg	190	B28V5ARC	.28VDC @ 5A/Rip 3Mv	108	B115V2.5A	.115VDC @ 2.5A	8
B12V24A	.12VDC @ 24Amp	126	B28V12A	.28VDC @ 12Amp	94	B115V5A	.115VDC @ 5A	14
B12V24ACC	.12VDC @ 24A/1% Rip	164	B28V12ACC	.28VDC @ 12A/Rip 1%	149	B115V5ACC	.115VDC @ 5A/1% Rip	23
B12V50A	.12VDC @ 50Amp	153	B28V24A	.28VDC @ 24Amp	135	B115V10A	.115VDC @ 10A	20
B12V50ACC	.12VDC @ 50A/Rip 1%	243	B28V24ACC	.28VDC @ 24A/1% Rip	209	B115V10ACC	.115VDC @ 10A/1% Rip	36
B24V30ARM	.24VDC @ 30A/Rip 1%/Reg ±5%	333	B28V30ARM	.28VDC @ 30A/1% Rip ±5% Reg	333	B220V5A	.220VDC @ 5A	27
B28V1ACC	.28VDC @ 1A/0.5% Rip	26	B28V50A	.28VDC @ 50Amp	225	B220V5ACC	.220VDC @ 5Amp/1% Rip	34
B28V2ARC	.28VDC @ 2A/Rip 10Mv/.05%	50	B28V50ACC	.28VDC @ 50Amp/1% Rip	315	B220V10A \$360; B220V10ACC \$459; B440V5A \$369		39

**LO-PRICED RELAY-PAKS SIZES FROM 12 TO 220VDC!**

Model	Description	Price	Model	Description	Price	Model	Description	Price
B12VER	.12-16V @ 2A	\$10	B24VJR	24-28V @ 6A	\$32	B48VJR	48-56V @ 6A	\$42
B12VGR	.12-16V @ 4A	22	B24VLR	24-28V @ 12A	57	B60VAR	60-68V @ 1A	\$1
B12VNR	.12V @ 24A	60	B36VAR	24-28V @ 1A	18	B60VER	60-68V @ 2A	\$1
B24VAR	.24V @ 1A	10	B48VAR	48-56V @ 1A	24	B80VAR	80-90V @ 1A	\$1
B24VER	.24-28V @ 2A	17	B48VER	48-56V @ 2A	36	B115VAR	.115V @ 1A	\$1

**TRANSISTORIZED INVERTERS, CONVERTERS & DC TO DC SUPPLIES!**

Model	Description	Price	Model	Description	Price
Q225L	Converter 12VDC to 115VAC/SQW @ 225 Watts	\$40	CQ250A	Converter 6VDC to 250 & 125VDC @ 150Ma	\$5
BQ200L	Converter & 4A Batty Chgr 12VDC to 115 VAC @ 225W	\$80	CQ500B	Converter 12VDC to 500 & 250 VDC @ 200Ma	\$5
CQ12A	Inverter 6VDC to 12VDC @ 4Amps	\$45	CQ600B	Converter 12VDC to 600 & 300VDC @ 200Ma	\$5
CQ500N	Inverter 28VDC to 500 & 250VDC @ 200Ma	\$69	CQ50L	Converter 2 VDC to 115VAC/SQW @ 50Watts	\$5

**BATTERY CHARGERS for NICKEL CADMIUM, LEAD, SILVER, ALKALI. STANDBY, AUTOMATIC SENSING TO .06V (ABC)**

Model	Description	Price	Model	Description	Price
NBC2V	"NICAD" ADJ/Up to 20 Cells @ up to 20Ma	\$ 6	ABC14V3AR	up to 14V @ 3Amp & Adj 30Ma/Float	\$3
NBC10V	"NICAD" ADJ/Up to 75 Cells @ up to 40Ma	\$10	ABC14V50AR	up to 14V @ 50Amp & Adj to 15A/Float	\$5
NBC30V	"NICAD" ADJ/Up to 25 Cells @ up to 500Ma	\$28	ABC24V3AR	up to 24V @ 3Amp & Adj to 800Ma/Float	\$1
BC612VT5A	.6 & 12V up to 5A Charge & Trickle	\$26	ABC30V8AR	up to 30V @ 8Amp & Adj to 1Amp/Float	\$1
BC612VT35A	.6 & 12V up to 35A Charge & Trickle	\$90	ABC38V30AR	up to 38V @ 30Amp & Adj 10Amp/Float	\$3
BC12/24VT5A	.12 & 24V up to 5A Charge & Trickle	\$40	ABC12V70AR	up to 12V @ 70Amp & Adj to 10A/Float	\$2

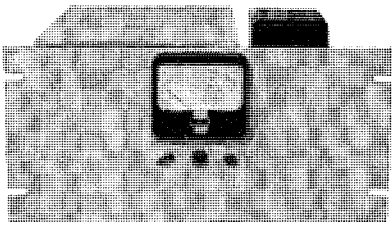
Other Types & Sizes Battery Chargers Available! We Custom Build To Your Battery Specs!





**HIGH VOLTAGE  
RF TYPE - DC**

**POWER SUPPLIES**



**MODEL  
RG-30**

**CONTINUOUSLY  
VARIABLE  
15-30 KV  
REGULATED  
DC POWER SUPPLY  
WITH  
REGULATED FOCUS  
VOLTAGE TAP**

A continuous duty DC supply with highly filtered outputs and regulations against line load and drift better than 0.5% at 1 ma. Ripple less than .005%. A variable focus tap 4-6 KV for use with flying spot tubes. 19" wide x 8 3/4" high x 13" deep.

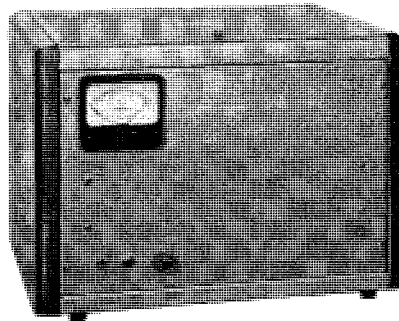
With HV meter \$375. Net Less meter \$325. Net

**MODEL RG-30-1** — Same as RG-30 except regulations against line, load and drift less than 0.1% at 1 ma. 19" wide x 8 3/4" high x 15" deep.

With HV meter \$450. Net Less meter \$400. Net

**MODEL RG-40** is a 20-40 KV unit with focus tape designed for use with 5AZP4 projection tube. In wide use in projection television systems. Same specifications as RG-30 except .7 ma. at 40 KV. 19" wide x 10 1/2" high x 13" deep.

With HV meter \$375. Net Less meter \$325. Net



**MODEL  
LAB-30PN**

**DC POWER SUPPLY  
REVERSIBLE  
POLARITY  
CONTINUOUSLY  
VARIABLE  
1 TO 30 KV**

Regulated DC Power Supply with regulations of 0.5% at 2 milliamperes. Polarity reversible from front panel.

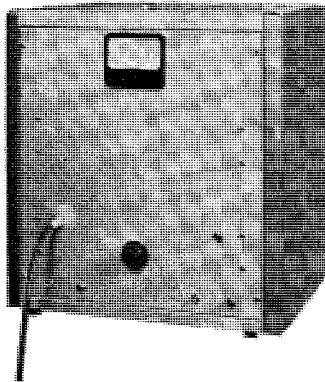
Standard Rack Model — 19" wide x 12" high x 13" deep.  
Standard Bench Model — 21" wide x 14" high x 15" deep.

With HV meter \$645. Net Less meter \$595. Net

**MODEL LAB-30** is a positive polarity output regulated High Voltage DC Power Supply with same electrical characteristics and dimensions as the LAB-30PN. Available in either positive or negative polarity.

With meter \$545. Net Less meter \$495. Net

**SPECIAL MODELS up to 5 ma. output AVAILABLE**



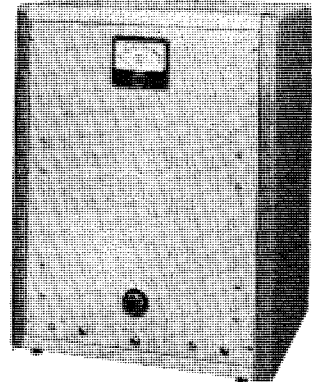
**MODEL  
LAB-60PN**

**REVERSIBLE POLARITY  
CONTINUOUSLY VARIABLE  
0-60 KV DC REGULATED  
POWER SUPPLY**

Current output 1 ma. at 60 KV 2 ma. may be drawn from 50 KV down. Regulations — no load to full load 0.5% at 1 ma. 21 3/4" wide x 22 3/4" high x 18" deep. Dimensions in cabinet: 22 3/4" high x 21" wide x 18" deep.

**LAB-60PN** — Reversible polarity — either positive or negative output controlled through switch on front panel. \$820 Net

**LAB-60** — Same as above not reversible. Specify polarity when ordering. \$765 Net



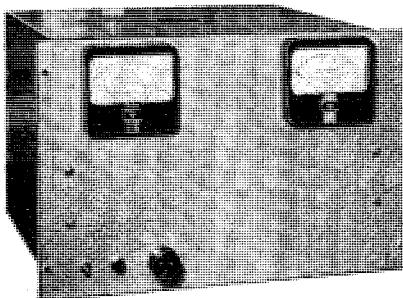
**MODEL  
LAB-90**

**0-90 KV REGULATED  
DC POWER SUPPLY**

Continuously variable 0 to 90 KV DC Power Supply. Output current .7 ma. at 90 KV. 1 ma. at 80 KV. 2 ma. from 40 KV down. Voltage regulations better than 0.5% throughout entire range. Dimensions in cabinet: 28" high x 21 3/4" wide x 18" deep.

**LAB-90** — Complete with HV meter \$900 Net  
Specify polarity output — positive or negative.

**MODEL LAB-90C** — Same as above except automatic overload cut-out and reset button provided. Adjustable sensitivity. .5 ma. to 2.5 ma. \$950 Net

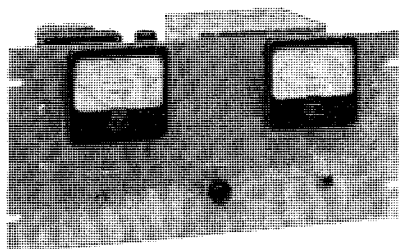


**MODEL  
LAB-20**

**CONTINUOUSLY  
VARIABLE  
0-20 KV  
REGULATED  
RF TYPE DC  
POWER SUPPLY**

Current output: 4 ma. @ 20 KV; 10 ma. from 10 KV down. Regulations against line, load and drift, better than 0.5% at 1 ma. Ripple .005%. 19" W x 12 1/4" H x 15" D.

Complete with HV and current meters. \$525 Net



**MODEL  
LAB-10**

**CONTINUOUSLY  
VARIABLE  
1-15 KV  
REGULATED  
DC SUPPLY**

Output current 2 ma. Regulations line and load better than .5%. Input: 117 V 60 cycles. Complete with HV and current meters. 19" W x 8 3/4" H x 13" D. \$275 Net

**MODEL LAB-10PN** — Same specifications as above except reversible polarity \$375 Net



**HIGH VOLTAGE CO., INC.**

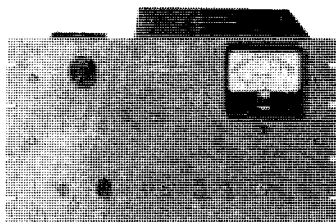
**BRONX 69, N. Y.**



# HIGH VOLTAGE RF TYPE DC

# POWER SUPPLIES

## 1-15 KV UNREGULATED

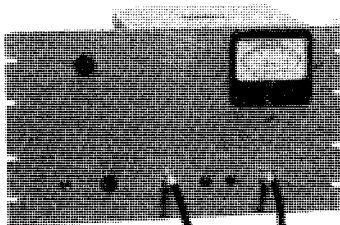


### MODEL PN-15

**FLOATING REVERSIBLE POLARITY  
CONTINUOUSLY VARIABLE DC  
POWER SUPPLY**

The high voltage output available through Alden HV connectors on front panel. Reversible and floating secondary — either positive or negative can be grounded or left floating. Current output 2 ma. at 15 KV. Voltage continuously variable through knob on front panel. Input: 117 V 60 cycles. Dimensions 10½" high x 19" wide x 13" deep. Complete with meter ..... **\$250 net**

## 0-30 KV UNREGULATED



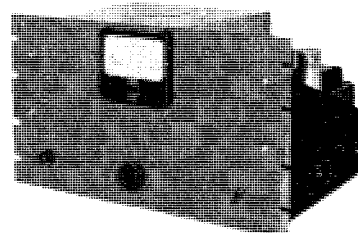
### MODEL PN-30

**REVERSIBLE POLARITY  
0-30 KV DC POWER SUPPLY**

Continuously variable—reversible 0-30 KV unregulated. Current output approx. 2 ma. at 20 KV. 1 ma. at 30 KV. Ripple less than 0.1%. Input: 117 V 60 cycles. 19" W x 10½" H x 13" D.

With HV meter ..... **\$275 net**

## 12-40 KV UNREGULATED

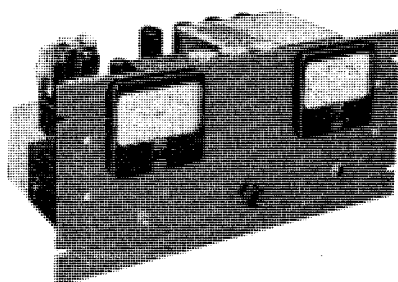


### MODEL 2040

A highly filtered, rugged supply ideal for precipitators, spot knocking, electrostatic flocking and spraying and insulation breakdown testing and anode supply for cathode ray tube. Voltage range variable 12 to above 40 KV. Current output 1 ma. at 30 KV. Input: 117 V-60 cycles. 19"W x 12¼"H x 13"D.

With HV meter ..... **\$215 net**

## RF TYPE REGULATED DC

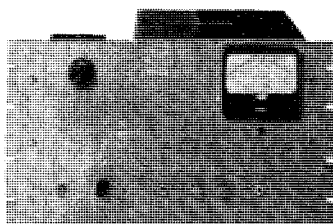


### CONTINUOUSLY VARIABLE

Output current 2 ma. Input: 117 V 60 cycles. Regulated against line and load better than 0.5%. Complete with current and volt meters. Dimensions: Panel height 8¾", width 19", depth 13".

2-6 KV — Model RG-5 ..... **\$250 net**  
5-12 KV — Model RG-10 ..... **260 net**  
10-18 KV — Model RG-15 ..... **275 net**

## 0-15 KV UNREGULATED



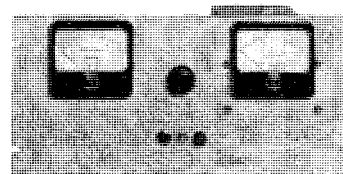
### MODEL PNT-15

**CONTINUOUSLY VARIABLE DC 2 MA.  
POWER SUPPLY**

**PLASTIC HOLE DETECTOR** designed to detect holes in plastic sheet during manufacture. Thyatron detector circuit rings alarm to indicate hole when detected. Voltage continuously variable through knob on front panel. Input: 117V 60 cycles. Dimensions: 10½" H x 19" W x 13" D.

Complete with HV meter and sensitivity control. **\$350 net**

## UNREGULATED 0-60 KV SOLID STATE



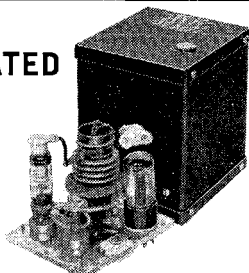
### MODEL ST-60

**CONTINUOUSLY VARIABLE 0-60 KV  
DC POWER SUPPLY**

Continuously variable from 0-60 KV; 250 microamps @ 50 KV; 1 ma. @ 20 KV. Input: 117 V 60 cycles. 19"W x 8¾"H x 12"D. Complete with HV and current meters. **\$350 net**

## 5 KV UNREGULATED

### MODEL 4575



**5 KV — 1 ma. DC POWER SUPPLY**

For an output voltage of 5 KV DC at 1 milliampere, the low voltage input requirement is 250 V at 50 milliamperes. By varying the DC input the output voltage can be varied from approx. 1 KV to 7½ KV. Dimensions: 5¾" high x 5" deep x 4¼" wide. In completely enclosed metal housing ..... **\$32.50 net**

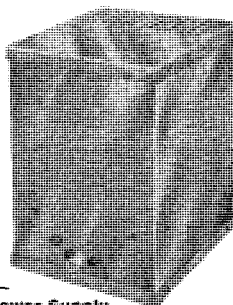
**MODEL 4575-2** — same as above with 2 ma. output at 5 KV ..... **\$42.50 net**

**MODEL 4575PN** — Reversible polarity. High voltage secondary floating or can be grounded. 1 ma. at 5 KV **\$42.50 net**

**MODEL 4575-2PN**—Reversible polarity. 2 ma. at 5 KV ..... **\$52.50 net**

## 7½-12 KV UNREGULATED

### MODEL 7512



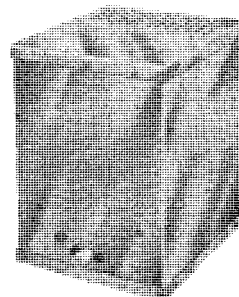
**7½-12KV —  
1 ma. DC Power Supply**

Voltage output of approx. 7.5 to 12 KV. 1 ma. of current may be drawn throughout the voltage range. To obtain an output voltage of 7.5 KV at 1 ma., low voltage input requirement is 300 V DC at 50 ma. By varying the DC input, the output voltage can be increased. Maximum input voltage of 425 V at 100 ma. will give an output of 12 KV at 1 ma. 5¾" W., 8¼" H., 6¾" D.

**\$42.50 net**

## 10-20 KV UNREGULATED

### MODEL 7516



**10- 20 KV —  
.5 ma.  
DC POWER  
SUPPLY**

Voltage output of approx. 10 to 20 KV. To obtain output voltage of 10 KV at 1 ma., low voltage input requirement is 300 V DC at 50 ma. Maximum input voltage of 425 V at 100 ma. will give an output of 20 KV at .5 ma. 5¾"W x 8¼"H x 6¾"D. **\$48.50 net**



**HIGH VOLTAGE CO., INC.**

**BRONX 69, N. Y.**





A DIVISION OF  
BASIC PRODUCTS CORPORATION

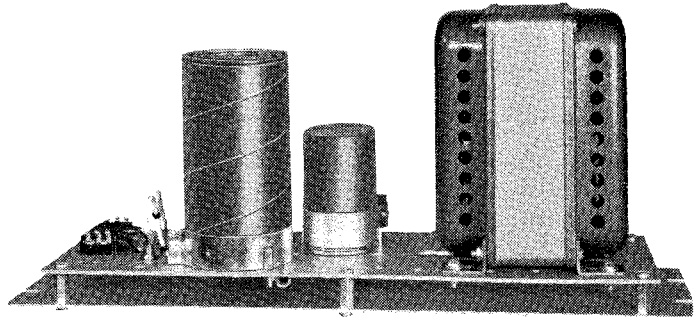


In Canada: Sola Basic Products Ltd.,  
377 Evans Avenue, Toronto 18, Ontario

# Sola CVDC Power Supplies

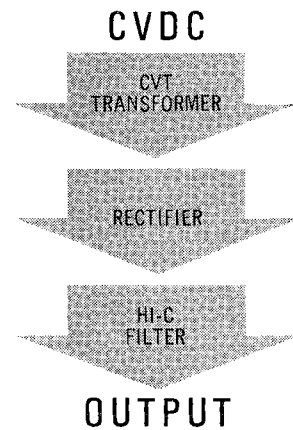
*FAST, RELIABLE VOLTAGE REGULATION FROM A LOW-COST SOURCE*

CVDC circuitry is so trim and simple that it can offer the utmost in performance and reliability. The constant-voltage transformer (originated by Sola) offers inherent current-limiting action that allows utilization of efficient, economical semiconductor rectifiers with low forward voltage drop. CVDC has these specific advantages:



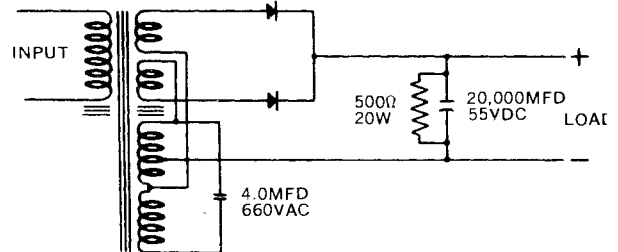
Constant-voltage Sola transformer provides  $\pm 1\%$  regulation for line-voltage variations as great as  $\pm 15\%$ , serves as the heart of CVDC power supplies for voltage-sensitive equipment.

1. Fast, dependable line-voltage regulation: within  $\pm 1\%$  for fluctuations of  $\pm 15\%$ ; voltage will return to regulation envelope in approximately 50 milliseconds.
2. Load regulation: from  $\frac{1}{2}\%$  to  $8\%$ , one half to full load.
3. Automatic current limiting: short circuit protection; withstands load faults; high overloads cannot damage power supply or equipment components.
4. High efficiency: upwards of  $75\%$ ; low input-power requirements.
5. Simplified operation: no adjustments or maintenance; continuous duty.
6. Convection cooling.
7. Ripple:  $1\%$  rms maximum.
8. Ambient operating temperature:  $40^\circ\text{C}$  maximum.



Fixed output for fixed, intermittent, variable, or pulse loads.  
All inputs 100-130 volts, 60 cps.

Catalog No.	Volts Out	Amps.	VA	Load Regulation		Panel Ht.*	Price
				20% F.L.	50% F.L.		
281513-1	6	10	60	9	7	3½	\$150.00
281514-1	12	5	60	7	5	3½	115.00
281845	12	15	180	7	5	5¼	195.00
281515-1	18	5	90	5	4	3½	120.00
281024-1	26	4	144	5	4	5¼	145.00
281203	24	15	360	5	4	8¾	250.00
28626	28	8	224	6	4	5¼	180.00
281048	48	4	192	3.5	2.5	5¼	135.00
281561	48	10	480	4	2	5¼	185.00
281125	125	2	250	2.5	1.5	5¼	145.00
281150	150	2	300	2	1.5	5¼	145.00
281200	200	1	200	3	2	5¼	140.00
281250	250	1	250	3	2	5¼	150.00



Typical schematic diagram for Sola CVDC power supply.

\*All supplies furnished with panel for 19" rack mounting.

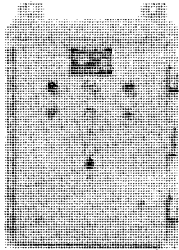
# STABILINE® automatic VOLTAGE REGULATORS

- THE MOST EXTENSIVE LINE OF AUTOMATIC VOLTAGE REGULATORS
- RATED OUTPUTS FROM 0.25 TO 100 KVA

STABILINE Automatic Voltage Regulators deliver a constant output voltage regardless of variations in input voltage or changes in load current. They are conservatively rated, ruggedly built precision products offered in a wide range of types and ratings. Submit specifications of electrical ratings desired.

## DC Regulator Control

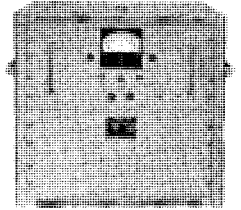
Provides automatically regulated d-c voltage adjustable from 25 to 100% of maximum with an input variation of  $\pm 10\%$  in a-c line voltage at 50/60 cycles. Accuracy is  $\pm 1\%$  of 100% voltage setting. Designed for use with a motor-driven POWERSTAT Variable Transformer and associated d-c components supplied by the user. Supply can be from either a single-phase full-wave or a 3-phase full-wave unfiltered source. Error detection requires either 1 milliamperes, 300 kilohms or 10 milliamperes, 15 kilohms supplied from the 1-c output.



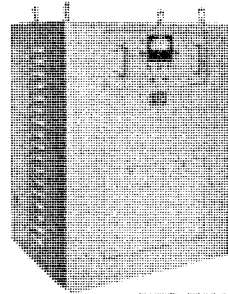
TYPE CB5001

## EMT series

Electro Mechanical Transistorized types in ratings from 2 to 100 KVA. Control circuit is completely transistorized. Speed of response sufficiently fast for most applications.



TYPE EMT4115



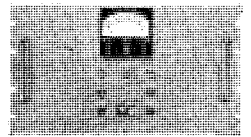
TYPE EMS42100

## EMS series

Electro Mechanical Transistorized types for single or three phase with ratings from 25 to 275 KVA. Several types available with individual line control for greater application flexibility.

## EMK series

Electro Mechanical high speed, high accuracy assemblies in ratings of 2.5/5.0 KVA. Accuracy  $\pm 1.0\%$  of nominal output voltage.



TYPE EMK4105R

### RATINGS AND SPECIFICATIONS

#### EMT SERIES

NOMINAL OUTPUT VOLTAGE	INPUT VOLTAGE RANGE ††	OUTPUT VOLTAGE (adjustable)	MAXIMUM OUTPUT AMPERES	RATED OUTPUT KVA	CORRECTION RATE (sec./volt)	TYPE
For 50/60 Cycle, Single Phase Operation						
115	99-115	110-120	52	6.0	.12	EMT10228
	95-135	110-120	17.5	2.0	.075	EMT4102†
	95-135	110-120	52	6.0	.075	EMT4106CS
	105-125	110-120	104	12.0	.15	EMT4112B* S
	95-135	110-120	130	15.0	.125	EMT4115
120	108-137	110-120	35	4.2	.1	EMT4104†
						EMT4104U††
						EMT4104UT††
230†	195-255	220-240	32.5	7.5	.083	EMT4207
						EMT10138
						EMT4228B
240†	228-256	220-240	35	8.4	.1	EMT4104†
						EMT4104U††
						EMT4104UT††
460	400-520	440-480	15	6.6	.041	EMT4407
						EMT4418
For 50/60 Cycle, Three Phase Operation						
230†	195-255	220-240	25	10.0	.083	EMT6210Y
			38	15.0	.083	EMT6215Y
			50	20.0	.083	EMT6220Y
			71.3	45.0	.25	EMT6245Y
			175	70.0	.25	EMT6270D
460	400-520	440-480	18	12.5	.041	EMT6412Y
			22	17.5	.041	EMT6417Y
			33	25.0	.041	EMT6425Y
			66	50.0	.125	EMT6450Y
			100	75.0	.125	EMT6475Y
460	420-500	440-480	131	100.0	.188	EMT64100Y

#### EMS SERIES

NOMINAL OUTPUT VOLTAGE	INPUT VOLTAGE RANGE ††	OUTPUT VOLTAGE (adjustable)	MAXIMUM OUTPUT AMPERES	RATED OUTPUT KVA	CORRECTION RATE (sec./volt)	TYPE
For 60 Cycle, Single Phase, 2 Wire, Single Control Operation						
115	103.5-126.5	110-120	833	100	.65	EMS41100
230	218.5-241.5	220-240	435	100	.22	EMS42100
For 50/60 Cycle, Single Phase, 3 Wire, Individual Line Control Operation						
240/120	204-276/102-138	230-250/115-125	104	25	.06/.03	EMS44225
	204-276/102-138	230-250/115-125	250	60	.06/.03	EMS44260
	228-252/114-126	220-240/110-120	417	100	.21/.10	EMS442100††
For 50/60 Cycle, Three Phase, Single Control Operation						
230†	203-257	220-240	339	135	.28	EMS62135Y†
460	445-495	440-480	230	180	.30	EMS64180Y
			347	275	.30	EMS64275Y
For 50/60 Cycle, Three Phase, Individual Line Control Operation						
208/120	177-239/102-138	191-217/115-125	250	90	.08/.14	EMS16290Y
	165-233/95-135	191-217/115-125	525	190	.22/.37	EMS162190Y††

#### EMK SERIES

NOMINAL OUTPUT VOLTAGE	INPUT VOLTAGE RANGE ††	OUTPUT VOLTAGE (adjustable)	MAXIMUM OUTPUT AMPERES	RATED OUTPUT KVA	CORRECTION RATE (sec./volt)	TYPE
For 50/60 Cycle, Single Phase Operation						
115	95-135	110-120	21.5	2.5	.02	EMK4105†
	105-125	110-120	43	5.0	.04	

See Footnotes on Facing Page



THE SUPERIOR ELECTRIC COMPANY

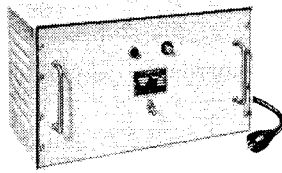
Bristol, Connecticut, U.S.A.

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 2100, 3500 AND 5600

# STABILINE® automatic VOLTAGE REGULATORS

## IE series

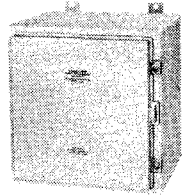
Instantaneous Electronic types have no moving parts. Hold output voltage to within  $\pm 0.1\%$  for wide line variations, within  $\pm 0.15\%$  for any load current change or power factor change from .5 lagging to unity.



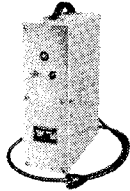
TYPE IE5101

## All-boost Marine

Electro Mechanical Transistorized type EMT10228 is fully enclosed in a weatherproof cabinet. Well suited for marine or industrial applications where equipment must withstand effects of dust and moisture. Has 6 KVA rated output.



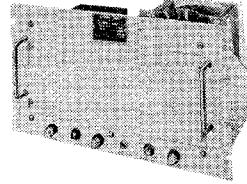
TYPE EMT10228



TYPE IET51002

## IET series

Instantaneous Electronic Transistorized types in ratings from 0.25 to 1.0 KVA. Output voltage remains within a 0.5 volt bandwidth for any and all variations in line voltage, load current and load power factor.



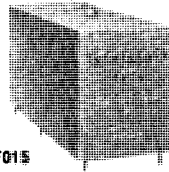
TYPE EM4108MCR

## Militarized

Standard Instantaneous Electronic, Electro Mechanical and Electro Mechanical Transistorized types that meet requirements of applicable military specifications. Type EMTH41007MH is  $3\frac{1}{2} \times 6 \times 4\frac{1}{2}$ "; others fit standard 19" relay rack.

## MR series

Provide the constant RMS voltage required to maintain proper tube filament temperature. Response time will not exceed 0.6 second under most adverse line or load changes.



TYPE MR6F015

## 400 cycle

Instantaneous Electronic types in ratings of 1.0 and 5.0 KVA. Maximum waveform distortion is 3.5% under all input line and most load conditions. Other 400 cycle types listed under MR Series and Militarized types.



TYPE IEH5101R

### RATINGS AND SPECIFICATIONS

IE SERIES						MR SERIES											
NOMINAL OUTPUT VOLTAGE	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE (adjustable)	MAX. OUTPUT AMPS.	RATED OUTPUT KVA	TYPE	NOMINAL OUTPUT VOLTAGE	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE (adjustable)	FREQUENCY (cycles)	LOAD RANGE IN AMPERES	RATED OUTPUT	TYPE					
For 60 ± 10% Cycle Operation						For 400 ± 5% Cycle Operation											
115	95-135	110-120	2.2	0.25	IE51002†	6.3	120V. RMS ± 10%	6.0-6.5	60 ± 10%	8-25	150 VA	MR6F015					
			4.5	0.5	IE51005†	6.3	120V. RMS ± 10%	6.0-6.5	400 ± 5%	2.5-8.2	50 VA	MR6F015					
			8.5	1.0	IE51011	<b>IEH 400 CYCLE TYPES</b>						NOMINAL OUTPUT VOLTAGE	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE (adjustable)	MAX. OUTPUT AMPS.	RATED OUTPUT KVA	TYPE
			22	2.5	IE51021							115	95-130	110-120	8.5	1.0	IEH5101R
			43.5	5.0	IE51051										43.5	5.0	IEH5105†
87	10.0	IE5110	For 400 ± 5% Cycle, Single Phase Operation						<b>MILITARIZED TYPES IE5101MR AND IEH5101MR</b>								
230	195-255	220-240	1.1	0.25	IE52002†	120	105-135	115-125	8.3	1.0	IE5101MR						
			2.2	0.5	IE52005†	For 400 ± 5% Cycle, Single Phase Operation						<b>MILITARIZED TYPES EM4108MCR AND EMTH41007MH</b>					
			4.5	1.0	IE52011	120	105-135	115-125	8.3	1.0	IEH5101MR						
			11	2.5	IE52021	For 45-60 Cycle, Single Phase Operation						For 380-420 Cycle, Single Phase Operation					
			22	5.0	IE52051	120	105-135††	115-125	66.6	8.0	0.1	EM4108MCR					
43.5	10.0	IE5210	115	103.5-126.5	115	6	0.69	0.23	EMTH41007MH								
For 60 ± 5% Cycle Operation						For 45-60 Cycle, Single Phase Operation											
115	95-135	110-120	4.5	0.5	IE51005†	For 45-60 Cycle, Single Phase Operation						<b>MILITARIZED TYPES EM4108MCR AND EMTH41007MH</b>					
			8.5	1.0	IE51011	120	105-135††	115-125	66.6	8.0	0.1	EM4108MCR					
			43.5	5.0	IE51051	For 45-60 Cycle, Single Phase Operation						For 380-420 Cycle, Single Phase Operation					
			87	10.0	IE5110	120	105-135††	115-125	66.6	8.0	0.1	EM4108MCR					
230	195-255	220-240	2.2	0.5	IE52005†	For 45-60 Cycle, Single Phase Operation						For 380-420 Cycle, Single Phase Operation					
			4.5	1.0	IE52011	120	105-135††	115-125	66.6	8.0	0.1	EM4108MCR					
			11	2.5	IE52021	For 45-60 Cycle, Single Phase Operation						For 380-420 Cycle, Single Phase Operation					
			22	5.0	IE52051	120	105-135††	115-125	66.6	8.0	0.1	EM4108MCR					
			43.5	10.0	IE5210	120	105-135††	115-125	66.6	8.0	0.1	EM4108MCR					

**FOOTNOTES**

(all charts)  
 †Also available as rack models (suffix R when ordering). ††For 60 cycle operation only.  
 \*Can also be operated on an input range of 95 to 135 volts with a rating of 52.0 amperes, 6.0 KVA and a correction rate of .075 seconds per volt.  
 ‡Also available as rack (suffix R when ordering) or wall mounted (suffix W when ordering) models.  
 †Units can be converted for 208 volt operation by simple tap changes. Input and output voltage ranges change in proportion.  
 †††At nominal output. Shifts proportionally with output voltage setting.

FOR MORE DETAILED INFORMATION about ratings, specifications and technical data on STABILINE automatic voltage regulators, request either the complete STABILINE literature file or individual bulletins describing the series that meet your particular requirements.





# FLASHLIGHTS, LANTERNS and BATTERIES

the world's most trusted brand for over 50 years!

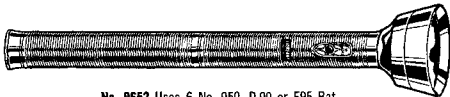
ALL PRICES WITHOUT BATTERIES.

## "CAPTAIN" FLASHLIGHTS ... Classic Design

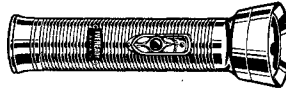
- Heavy-Duty Copper/Nickel/Chrome/Plated Steel
- Exclusive 3-Way Lock Switch and Flasher
- End-Loading ... Ring Hanger



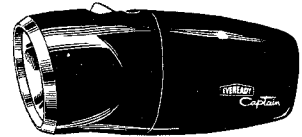
No. 9851 Magnet Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp.



No. 9652 Uses 6 No. 950, D-99 or E95 Batteries, No. PR18 Lamp. Also available: No. 9352—Uses 3 No. 950, D-99 or E95 Batteries, No. PR3 Lamp.



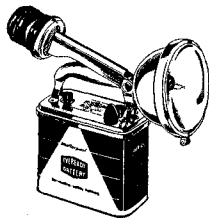
No. 9251 Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Also available: No. 9351—Uses 3 No. 950, D-99 or E-95 Batteries, No. PR3 Lamp and No. 9231—Uses 2 No. 935 or E93 Batteries, No. PR4 Lamp.



No. 3300 Rechargeable Flashlight—Twice the Light of standard 2-Cell Flashlights ... never needs batteries! Uses rechargeable battery, No. PR3 Lamp.

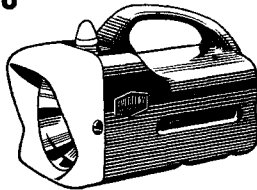
	No. 3300	No. 9231	No. 9251	No. 9351	No. 9352	No. 9652	No. 9951
List Each	\$14.95	\$2.19	\$2.19	\$2.49	\$3.95	\$5.95	\$2.49
Sugg. Dealer	9.96	1.46	1.46	1.66	2.64	3.81	1.66

## WEATHERPROOF LANTERNS



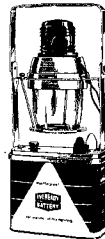
No. 100 "Big Jim" Lantern w/flasher. Uses 1 No. 731 Battery, No. 4546 Lamp, No. 407 Signal Lamp.

No. 101 Same without flasher.



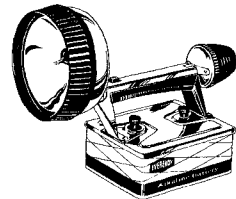
No. 108 All American Lantern. "Cordahide" polyethylene construction. Uses 1 No. 509 Battery, No. PR13 Lamp.

No. 68 Display—Contains 3 No. 108 All American Lanterns in Colors (white, red, black).



No. 105 "Big Jim" Camp and Emergency Lantern. Uses 1 No. 731 Battery, No. PR13 Lamp, No. 407 Signal Lamp.

No. 106 Same without flasher.



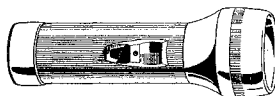
No. 150 "Captain" Stainless Steel Lantern. Uses 1 No. 520 Alkaline Battery and No. 4618 1-ampere Lamp for Double Brilliance, Longer Service, No. 407 Signal Lamp.

No. 151 Same without flasher.

	No. 68	No. 100	No. 101	No. 105	No. 106	No. 108	No. 150	No. 151
List Each	\$11.37	\$10.75	\$8.00	\$10.75	\$8.20	\$3.79	\$14.00	\$12.00
Sugg. Dealer	7.59	6.45	4.80	6.45	4.92	2.53	8.39	7.19

## "CORDAHIDE" polyethylene FLASHLIGHTS—

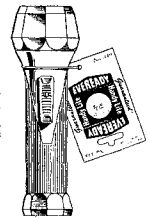
Insulated, Withstand Abuse, Resists Oils, Greases, Most Chemicals.



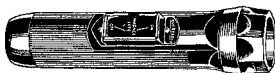
No. 6251 "Hercules" Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Also available: No. 62 Display—containing 6 No. 6251 Lites.



No. 330 Utility Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available individually boxed (No. 330) or in display of 6 (No. 67).



No. 349 Handy Lite. Uses 2 No. 935 or E-93 Batteries, No. PR4 Lamp. Available in assortment of 6 (No. 49) in colors.



No. 337 Magnet Utility Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available individually boxed (No. 337) or in display of 12 (No. 51) in Colors.

	No. 49	No. 51	No. 62	No. 67	No. 330	No. 337	No. 6251
List Each	\$5.94	\$16.68	\$7.74	\$5.94	\$0.99	\$1.39	\$1.29
Sugg. Dealer	4.14	11.16	4.50	4.14	0.70	0.94	0.90

## INDUSTRIAL and SPECIAL PURPOSE LITES



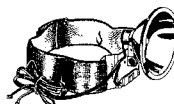
### Industrial Flashlights

No. 1251—2 Cell, No. PR6 Lamp. No. 1351—3 Cell, No. PR7 Lamp. Uses Nos. 950, 1050, D99 or E95 Batteries. Will not shatter crack or dent.



### Safety Flashlights

No. 1259—2 Cell, No. PR6 Lamp. No. 1359—3 Cell, No. PR7 Lamp. Uses Nos. 950, 1050, D99 or E95 Batteries. Approved by U.S. Bureau of Mines, Listed by Underwriters' Laboratories, Inc.



No. 3452 Head-Lite. Uses 1 No. 510S Battery and No. PR13 Lamp. Rainproof pouch also available (No. 1348).



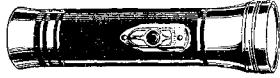
### Torch Lite

No. 213—3" wand. No. 215—5" wand. Uses 2 No. 950, D99 or E95 Batteries and No. PR2 Lamp.

	No. 213	No. 215	No. 1251	No. 1259	No. 1348	No. 1351	No. 1359	No. 3452
List Each	\$1.49	\$1.59	\$2.89	\$4.15	\$0.69	\$3.29	\$4.35	\$3.29
Sugg. Dealer	.99	1.05	1.93	2.74	0.46	2.19	2.89	2.14



## HEAVY-GUAGE, CHROME-PLATED METAL FLASHLIGHTS

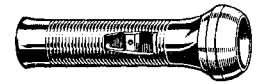


**America's Standard**  
No. 2251 All-Purpose Flashlight—2 Cell, No. PR2 Lamp. No. 2351—3 Cell, No. PR3 Lamp. Use Nos. 950, D-99 or E95 Batteries. Available individually boxed.



### Magnet Lites

No. 5MF Magnet Lite—2 Cell, No. PR2 Lamp. No. 7MF—3 Cell, No. PR3 Lamp. Use Nos. 950, D-99 or E95 Batteries. Available individually boxed. No. 5MF available in display of 6 with Selling Tags (No. 65MF) or display of 6 with Counter Card (No. 14).



No. 350 "Highlander II" Lite—Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available in No. 27-A Display—containing 7 No. 350 Lites.



### Leader Lites

No. 326 Leader Lite—Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available in Display No. 16 (containing 12 No. 326 Lites) or with Selling Tags—No. 260 (containing 12 No. 326 Lites).



### All American

No. 319 All American Lites—Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available in Counter Display of 14 Lites (No. 130B). Also available No. 339—Uses 2 No. 935 or E93 Batteries, No. PR4 Lamp. Display No. 39C contains 6 No. 339 Lites with Selling Tags.

	No. 5MF	No. 6-5MF	No. 7MF	No. 14	No. 16	No. 39C	No. 130B	No. 260	No. 2251	No. 2351
List Each	\$1.99	\$11.94	\$2.49	\$11.94	\$11.88	\$7.14	\$16.66	\$11.88	\$1.95	\$2.35
Sugg. Dealer	1.33	7.98	1.66	7.98	7.56	4.68	9.84	7.56	1.30	1.57

## MINIATURE FLASHLIGHTS



No. 115 "Little Jim" Pocket Lite—Uses 1 No. 915 or E91 Battery, No. 112 Lamp. Available in Counter Display of 12 (No. 15).

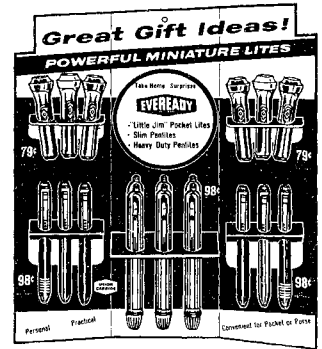


No. 230 Heavy-Duty Penlite. Uses 2 No. 915 or E91 Batteries and No. 222 Lamp. Available individually boxed or in Counter Display of 12 (No. 23).



No. 212 Slim Penlite. Uses 2 No. 912 or E92 Batteries and No. 224 Lamp. Available individually boxed or in Counter Display of 12 (No. 21-C).

	No. 15	No. 21-C	No. 23	No. 167	No. 212	No. 230
List Each	\$9.48	\$11.76	\$11.76	\$16.50	\$0.98	\$0.98
Sugg. Dealer	6.30	7.80	7.80	10.95	0.67	0.67



No. 167 Display-combination miniature lite assortment contains: 6 each of Slim and Heavy Duty Penlites and 6 "Little Jim" Pocket Lites.

# EVEREADY® BATTERIES with POWER TO SPARE

(See complete line listing for prices)

## POPULAR FLASHLIGHT BATTERIES



No. 915  
Size AA



No. 935  
Size C



No. 950  
Size D



No. D99  
Heavy-Duty  
Size D

## ENERGIZERS FOR TRANSISTOR RADIOS and other electronic applications



No. 206  
9 Volts



No. 216  
9 Volts



No. 226  
9 Volts



No. 333  
4 1/2 Volts



No. 1035  
Size C  
1 1/2 Volts



No. 1D15  
Size AA  
1 1/2 Volts

## SUPER POWER ALKALINE BATTERIES

for radios, cameras, toys, flashlights, and high drain applications, rechargeable TV



No. E90  
Size N  
1 1/2 Volts



No. E91  
Size AA  
1 1/2 Volts



No. 563  
4 1/2 Volts



No. E93  
Size C  
1 1/2 Volts



No. E94  
Size 1/2 D  
1 1/2 Volts



No. E92  
Size AAA  
1 1/2 Volts



No. 523  
4 1/2 Volts



No. 561  
15 Volts



No. E95  
Size D  
1 1/2 Volts

COMPLETE LINE SPECIFICATIONS



MERCURY BATTERIES



No. E9  
1.4 Volts



No. E146X  
8.4 Volts



No. E133  
4.2 Volts

SEALED NICKEL CADMIUM RECHARGEABLE BATTERIES



No. N24  
1.25 Volts



No. N46  
1.25 Volts



No. N57  
1.25 Volts

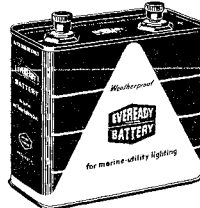


No. N73  
1.25 Volts

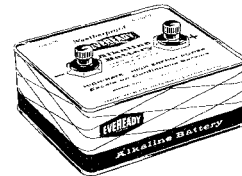
LANTERN BATTERIES



No. 509 — Spring  
No. 510S — Screws  
No. 510F — Fahnestock  
6 Volts



No. 731  
6 Volts



No. 520  
6 Volts  
Alkaline

OTHER BATTERIES



No. 6 "Ignitor"  
1½ Volts



"HOT SHOT"  
No. 1461 6 Volts  
No. 1462 6 Volts  
No. 1463 12 Volts  
No. 1562 7½ Volts  
No. 1662 9 Volts



EMERGENCY LIGHTING  
No. 715 7½ Volts  
No. 706 6 Volts  
No. 716 9 Volts

"Eveready" Battery Number	NEDA Number	Overall Dimensions in inches			Terminals & Voltages	Battery Weight		Unit Pkg. Quan.	Sugg. Dealer Each	List Price Each	Major Use
		L	W	H		lbs.	ozs.				
E1	1100	0.625	Diam. x 0.650		Flat Contacts—, +1.40	0.43	4	0.42	0.65	Meters, Instruments, Signal Lights, Miniature Radios	
E1N		0.625	Diam. x 0.650		Flat Contacts—, +1.35	0.43	4	0.52	0.75		
E3		0.985	Diam. x 0.660		Flat Contacts—, +1.35	0.93	4	0.67	1.05		
E4		1.195	Diam. x 0.660		Flat Contacts—, +1.35	1.6	4	0.86	1.35		
EPX-4		0.662	Diam. x 1.965		Flat Contacts—, +5.40	1.16	1	1.35	1.95		
No. 6 "Ignitor" Gen. Purpose	905	2%	Diam. x 6%		**Screw—, +1½	2	2	1	0.84	1.25	Ignition, Lighting
No. 6 "Gray Label" Telephone	906	2%	Diam. x 6%		***Fahnestock—, +1½	2	2	1	0.84	1.25	Telephone
No. 6 Railroad & Industrial	911	2%	Diam. x 6%		**Screw—, +1½	2	2	1	0.90	1.35	Ignition, Telephone
EPX-6		0.662	Diam. x 4.090		Flat Contacts—, +4.05, +8.1	1.6	1	2.75	3.95	Camera Transistor Applications	
E9	1103	0.550	Diam. x 1.968		Flat Contacts—, +1.40	1.05	4	0.51	0.75		
E9N		0.550	Diam. x 1.968		Flat Contacts—, +1.40	1.05	2	0.60	0.85		
E12	1101	0.640	Diam. x 1.968		Flat Contacts—, +1.40	1.4	2	0.80	1.15		
E12N		0.640	Diam. x 1.968		Flat Contacts—, +1.35	1.4	2	0.83	1.20		
EPX-13		0.610	Diam. x 0.233		Flat Contacts—, +1.35	15	6	0.35	0.50		
EPX-14		0.655	Diam. x 0.614		Flat Contacts—, +2.7	0.3	1	0.75	1.10		
N22		0.457	Diam. x 0.217		Flat Contacts—, +1.25	0.04	1	1.05	1.50		
N22T		0.457	Diam. x 0.222		Solder Tabs—, +1.25	0.04	1	1.10	1.60		
N24		0.610	Diam. x 0.235		Flat Contacts—, +1.25	0.12	1	0.70	1.00		
N24T		0.610	Diam. x 0.240		Solder Tabs—, +1.25	0.12	1	0.75	1.10		
N26		0.992	Diam. x 0.252		Flat Contacts—, +1.25	0.32	1	0.75	1.10		
N26T		0.992	Diam. x 0.272		Solder Tabs—, +1.25	0.32	1	0.84	1.20		
N28		0.992	Diam. x 0.272		Flat Contacts—, +1.25	0.4	1	0.78	1.15		
N28T		0.992	Diam. x 0.292		Solder Tabs—, +1.25	0.4	1	0.87	1.25		
N32		0.992	Diam. x 0.350		Flat Contacts—, +1.25	0.45	1	0.83	1.20		
N32T		0.992	Diam. x 0.370		Solder Tabs—, +1.25	0.45	1	0.91	1.30		
N33		0.992	Diam. x 0.358		Flat Contacts—, +1.25	0.46	1	0.98	1.40		
N33T		0.992	Diam. x 0.378		Solder Tabs—, +1.25	0.46	1	1.05	1.50		
N36		1.697	Diam. x 0.300		Flat Contacts—, +1.25	1.17	1	1.47	2.10		
N36T		1.697	Diam. x 0.320		Solder Tabs—, +1.25	1.17	1	1.54	2.20		
N38		1.355	Diam. x 0.394		Flat Contacts—, +1.25	1.0	1	1.75	2.50		
N38T		1.355	Diam. x 0.414		Solder Tabs—, +1.25	1.0	1	1.82	2.60		
N39		1.984	Diam. x 0.394		Flat Contacts—, +1.25	2.0	1	2.66	3.80		
N40		1.984	Diam. x 0.394		Flat Contacts—, +1.25	2.0	1	2.80	4.00		
N40T		1.984	Diam. x 0.414		Solder Tabs—, +1.25	2.0	1	2.87	4.10		
N41		1.984	Diam. x 0.719		Flat Contacts—, +1.25	3.3	1	4.69	6.70		
N41T		1.984	Diam. x 0.739		Solder Tabs—, +1.25	3.3	1	4.76	6.80		

\*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping.

\*\*Equipped with screw terminals unless Fahnestock spring terminals are specified.

\*\*\*Equipped with Fahnestock spring terminals unless screw terminals are specified.

△Furnished with Fahnestock spring terminals. If socket terminals required, specify W-363P, W-364P, W365P.

†Flashlight types.

††Shipped from factory only.

‡N53 also available with 1.750" height

‡‡N53T also available with 1.755" height



COMPLETE LINE SPECIFICATIONS



"Eveready" Battery Number	NEDA Number	Overall Dimensions in inches			Terminals & Voltages	Battery Weight		Unit Pkg. Quan.	Sugg. Dealer Each	List Price Each	Major Use
		L	W	H		lbs.	ozs.				
S41		0.455	Diam.	x 0.165	Flat Contacts, +1.5	0.06	6	0.27	0.40	Instruments, Hobby, Transistor Applications, Miscellaneous	
E42		1-9/32	Diam.	x 2.390	Flat Contacts, +1.40	5.85	1	1.64	2.50		
E42N		1-9/32	Diam.	x 2.390	Flat Contacts, +1.35	5.85	1	1.85	2.75		
N43		1.984	Diam.	x 0.989	Flat Contacts, +1.25	5.0	1	5.70	8.15		
N43T		1.984	Diam.	x 1.009	Solder Tabs, +1.25	5.0	1	5.78	8.25		
N45		0.563	Diam.	x 1.969	Solder Tabs, +1.25	0.8	1	2.10	3.00		
N46		0.563	Diam.	x 1.969	Flat Contacts, +1.25	0.8	1	1.93	2.75		
N52		1.031	Diam.	x 1.969	Solder Tabs, +1.25	1.4	1	3.17	4.55		
N53		0.90	Diam.	x 1.684	Flat Contact, Tab +1.25	1.7	1	2.58	3.60		
N53T		0.90	Diam.	x 1.689	Solder Tabs, +1.25	1.7	1	2.63	3.70		
N54		9/16	Diam.	x 3-35/64	Flat Contacts, +1.25	2.3	1	4.12	5.90		
N54T		1.031	Diam.	x 1.979	Tab, Tab +1.25	2.3	1	4.17	6.00		
N56		1.344	Diam.	x 2.406	Flat Contacts, +1.25	5.0	1	4.12	5.90		
N56T		1.344	Diam.	x 2.416	Solder Tabs, +1.25	5.0	1	4.17	6.00		
N57		1.344	Diam.	x 2.406	Flat Contacts, +1.25	5.4	1	5.64	8.05		
N57T		1.344	Diam.	x 2.416	Solder Tabs, +1.25	5.4	1	5.69	8.15		
N66		1.050	Diam.	x 1.830	Solder Tabs, +6	2.2	1	4.72	6.75		
N67		1-33/64	x 1-33/64	x 4-13/64	Wire Leads, +6	8.3	1	18.46	26.40		
N69		1-4/64	x 1-1/64	x 4-1/32	Nut & Stud, +1.25	4.1	1				
N70		3/8	x 1-9/16	x 4-1/32	Wire Leads, +6	12	1	29.62	42.30		
N71		1-41/64	x 23/32	x 2-17/32	Nut & Stud, +1.25	6.8	1				
N72		1-41/64	x 23/32	x 4-1/32	Nut & Stud, +1.25	9.5	1				
N73		1-25/64	x 1-25/64	x 2-17/32	Nut & Stud; Tab, +1.25	6.0	1	6.05	8.65		
N74		1-25/64	x 1-25/64	x 3/2	Nut & Stud; Tab, +1.25	9.2	1	7.12	10.15		
N75		2-1/16	x 1-23/32	x 3-7/32	Nut & Stud, +1.25	13.4	1	9.35	13.35		
N76		2-1/64	x 1-23/32	x 3/4	Nut & Stud, +1.25	15.7	1	10.21	14.60		
S78		0.455	Diam.	x 0.200	Flat Contacts, +1.50	0.08	6	0.30	0.45		
N77		2-1/64	x 1-23/32	x 4-9/32	Nut & Stud, +1.25	1	1	11.17	15.95		
N78		1-41/64	x 1-9/16	x 4-1/32	Nut & Stud, +1.25	14.7	1	11.96	17.10		
N79		3-39/64	x 1-5/64	x 4-31/32	Nut & Stud, +1.25	12	1	13.79	19.70		
N81		3-39/64	x 1-13/32	x 4-31/32	Nut & Stud, +1.25	2 2.9	1	16.78	23.95		
N-82		3-3/64	x 1-15/64	x 4-63/64	Nut & Stud, +1.25	11	1	21.57	30.75		
N83		3-39/64	x 1-23/32	x 4-31/32	Nut & Stud, +1.25	2 9.6	1	19.90	28.45		
N85		3-39/64	x 2-1/32	x 4/21-32	Nut & Stud, +1.25	3 1.6	1	22.94	32.75		
E90	910	0.470	Diam.	x 1.130	Flat Contacts, +1.5	0.35	3	0.24	0.35		
E91	15	9/16	Diam.	x 1-31/32	Flat Contacts, +1.5	0.75	12	0.325	0.50		
E92		0.4	Diam.	x 1.735	Flat Contacts, +1.5	0.4	12	0.31	0.45		
E93	14	1-1/32	Diam.	x 1-15/16	Flat Contacts, +1.5	2.0	12	0.39	0.60		
E94	927	1-11/32	Diam.	x 1-7/32	Flat Contacts, +1 1/2	1.8	12	0.325	0.50		
E95		1-11/32	Diam.	x 2-13/32	Flat Contacts, +1 1/2	4.1	12	0.49	0.75		
E97S		1-11/32	Diam.	x 5-7/32	Ins. Screw, +1 1/2	9	12	0.73	1.10		
†D99		1-11/32	Diam.	x 2-13/32	Flat Contacts, +1 1/2	3.3	48	0.155	0.25		
E113		0.660	Diam.	x 0.845	Flat Contacts, +4.05	0.45	1	1.94	2.85		
E114		0.660	Diam.	x 1.080	Flat Contacts, +5.40	0.59	1	1.74	2.55		
E115		0.660	Diam.	x 1.40	Flat Contacts, +7	0.73	1	1.56	2.25		
E115N		0.660	Diam.	x 1.40	Flat Contacts, +6.75	0.73	1	1.74	2.55		
E126	1611	0.724	Diam.	x 2	Flat Contacts, +8.4	1.65	1	1.05	1.50		
E132	1200	0.662	Diam.	x 1.315	Flat Contacts, +2.80	0.9	2	0.84	1.25		
E132N		0.66	Diam.	x 1.315	Flat Contacts, +2.70	0.9	2	1.05	1.50		
E133	1304	0.662	Diam.	x 1.965	Flat Contacts, +4.2	1.4	2	1.05	1.50		
E133N	1304	0.665	Diam.	x 1.965	Flat Contacts, +4.05	1.4	2	1.23	1.80		
E134		0.662	Diam.	x 2.620	Flat Contacts, +5.60	1.9	2	1.39	2.00		
E134N		0.662	Diam.	x 2.620	Flat Contacts, +5.40	1.9	2	1.61	2.30		
E135		0.662	Diam.	x 3.275	Flat Contacts, +6.75	2.4	1	1.74	2.55		
E135N		0.662	Diam.	x 3.275	Flat Contacts, +6.75	2.4	1	2.06	2.95		
E136		0.662	Diam.	x 3.930	Flat Contacts, +8.40	2.9	1	2.06	2.95		
E136N		0.662	Diam.	x 3.930	Flat Contacts, +8.10	2.9	1	2.27	3.35		
E137		0.662	Diam.	x 4.585	Flat Contacts, +9.80	3.1	1	2.50	3.60		
E137N		0.662	Diam.	x 4.585	Flat Contacts, +9.45	3.1	1	2.80	4.00		
E145		21/32	Diam.	x 1-3/16	Flat Contacts, +7	0.7	1	1.63	2.35		
E146X	1604	1-1/32	x 3/8	x 2	Min. Snap, +8.40	1.6	6	1.05	1.50		
E152		0.485	Diam.	x 1.140	Flat Contacts, +2.80	0.42	1	0.75	1.10		
E152N		0.485	Diam.	x 1.140	Flat Contacts, +2.70	0.42	1	0.83	1.20		
E153		0.485	Diam.	x 1.708	Flat Contacts, +4.2	0.4	1	0.95	1.40		
E153N		0.485	Diam.	x 1.708	Flat Contacts, +4.05	0.4	1	1.39	2.00		
E162		0.662	Diam.	x 0.887	Flat Contacts, +2.70	0.58	1	0.87	1.30		
E163		0.662	Diam.	x 1.327	Flat Contacts, +4.20	0.87	2	1.05	1.50		
E163N		0.662	Diam.	x 1.327	Flat Contacts, +4.05	0.87	2	1.10	1.60		
E164		0.662	Diam.	x 1.767	Flat Contacts, +5.6	1.16	2	1.25	1.75		
E164N		0.662	Diam.	x 1.767	Flat Contacts, +5.4	1.16	2	1.32	1.95		
E165		0.662	Diam.	x 2-7/32	Flat Contacts, +7.00	1.45	2	1.61	2.30		
E165N		0.662	Diam.	x 2-7/32	Flat Contacts, +6.75	1.45	2	1.66	2.45		
E169		0.662	Diam.	x 3-63/64	Flat Contacts, +12.6	4.2	1	3.50	4.95		
E175		1/2	Diam.	x 1-3/32	Flat Contacts, +7.0	1.0	10	1.05	1.50		
E177	1606	35/64	Diam.	x 1-29/32	Min. Snap, +9.8	0.67	1	1.25	1.75		
206	1611	3/4	Diam.	x 2	Flat Contacts						
216	1604	1-1/32	x 21/32	x 1-29/32	Neg. Recessed, +9	1.2	1	0.53	0.75		
226	1600	1	Diam.	x 1-15/16	Min Snap, +9	1.3	12	0.48	0.69		
228		1	Diam.	x 2-7/16	Snap Type, +9	2.0	6	0.62	0.89		
E233	1300	1-1/64	Diam.	x 1-31/32	Snap Type, +12	2.3	1	1.05	1.50		
E233N		1-1/64	Diam.	x 1-31/32	Flat Contacts, +4.2	3.0	1	1.93	2.80		
E234		1-1/64	Diam.	x 2-5/8	Flat Contacts, +4.05	3.0	1	2.06	2.95		
E234N		1-1/64	Diam.	x 2-5/8	Flat Contacts, +5.60	3.88	1	2.27	3.35		
E234N		1-1/64	Diam.	x 2-5/8	Flat Contacts, +5.4	3.88	1	2.66	3.80		
E235N		1.015	Diam.	x 3-1/4	Flat Contacts, +6.75	4.85	1	2.93	4.50		
E236N		1.015	Diam.	x 3-7/8	Flat Contacts, +8.1	5.82	1	3.64	5.50		
238	1900	1-21/64	x 1-13/32	x 2-11/16	Sockets, -9, -13 1/2	5	1	1.05	1.50		
243	1610	1-13/32	x 1-11/32	x 2-3/4	Min. Snap, +4 1/2	4.5	1	1.19	1.70		
246	1602	1-13/32	x 1-11/32	x 2 3/4	Min. Snap, +9	4.5	1	1.30	1.85		
266	1605	1-13/16	x 1-13/16	x 2-7/16	Snap Type, +9	7	1	1.22	1.75		
274	1400	2-9/16	x 2-1/32	x 7-29/32	Snap Type, +6	2	1	3.33	4.75		
276	1603	2-9/16	x 2-1/32	x 3-5/32	Snap Type, +9	15	1	1.26	1.80		
E286		1.0	Diam.	x 1-15/16	Snap Type, +8.4	2.6	6	1.35	1.95		
E289		1.0	Diam.	x 2-13/32	Snap Type, +12.6	3.6	6	2.05	2.95		
E312		0.310	Diam.	x 0.140	Flat Contacts, +1.40	0.02	6	0.24	0.35		
333	1306	0.662	Diam.	x 1.965	Flat Contacts, +4.5	0.9	1	0.62	0.89		
W-350	711	3-1/32	x 1 1/8	x 4-11/32	Ins. Screw, +22 1/2, +45	14.5	1	2.69	3.85		
W-351		3/8	x 2 1/4	x 3-1/16	Screw, +22 1/2, +45	5.5	1	5.87	8.25		
W-352	701	2-21/32	x 1-11/32	x 4-9/16	Ins. Screw, +3	12.5	1	0.94	1.35		
W-353	11	2-19/32	x 1 3/8	x 4 1/4	Socket, +1 1/2	12.5	1	0.87	1.25		
W-356		2 3/8	x 2 5/8	x 4-9/16	Ins. Screw, +3	6	1	1.33	1.90		
W-357	901	3/8	x 2-11/16	x 5-13/16	Fahnestock, +3	12	1	1.57	2.25		
W-358		2-15/16	x 1-3/16	x 4 1/8	Ins. Screw, +45	8.75	1	2.69	3.85		
W-359	206	3-9/16	x 2 1/4	x 4 1/2	Socket, +45	11.8	1	2.69	3.85		
W-361	227	1-11/32	x 1-11/32	x 11-23/32	Flat Contacts, +103 1/2	1	1	4.86	6.95		
W-362		2-15/16	x 1 1/16	x 1 3/4	Screw, +4 1/2, -7 1/2	1.5	1	1.64	2.35		
Δ W363F	*	8-1/32	x 4-1/16	x 7-5/8	Fahnestock, +22 1/2, +45	11	1	5.87	8.25		

\*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping.  
 †Flashlight types.  
 ††Shipped from factory only.  
 \*\*Equipped with screw terminals unless Fahnestock spring terminals are specified.  
 \*\*\*Equipped with Fahnestock spring terminals unless screw terminals are specified.  
 Δ Furnished with Fahnestock spring terminals. If socket terminals required, specify W-363P, W-364P, W365P.

## COMPLETE LINE SPECIFICATIONS



"Eveready" Battery Number	NEDA Number	Overall Dimensions in inches			Terminals & Voltages	Battery Weight		Unit Pkg. Quan.	Sugg. Dealer Each	List Price Each	Major Use
		L	W	H		lbs.	ozs.				
W364F	*	8-1/8 x 3-7/16 x 1-11/16			Fahnestock—, +22½, +45	11	14	1	6.45	9.20	Heavy Duty Radio "B" Industrial "B"
W-365F	723	8-1/16 x 2-15/16 x 7/8			Fahnestock—, +22½, +45	7	7.5	1	4.58	6.55	
W-366	407	9-1/32 x 2-1/32 x 4-23/32			Socket—"A", +1½ "A", —"B", +63 "B"	4	4	1	6.65	9.50	Portable Radio "A-B"
W-367	408	9/8 x 2 3/4 x 4-7/16			Socket—"A", +7/2 "A", —"B", +63 "B"	4	5	1	6.65	9.50	Portable Radio "A-B"
W-368	*	9-1/32 x 2-23/32 x 3-9/16			Recessed Plug—"A", +6 "A", —"B", +75 "B"	4	4	1	8.05	11.50	Portable Radio "A-B"
W-369	410	9-15/16 x 2-¼ x 4-23/32			Socket—"A", +1½ "A", —"B", +90 "B"	4	5	1	5.95	8.50	Portable Radio "A-B"
W-371		1-5/32 x 1-5/32 x 2-9/16			Socket (including plug)—, +3		2.2	1	0.73	1.10	Model Ignition
E400	1106	0.455 Diam. x 0.135			Flat Contacts—, +1.40		0.04	6	0.24	0.35	Transistor Applications
E400N		0.455 Diam. x 0.135			Flat Contacts—, +1.35		0.04	6	0.29	0.45	Transistor Applications
E401	1102	0.470 Diam. x 1.130			Flat Contacts—, +1.40		0.4	3	0.35	0.50	Transistor Applications
E401N		0.470 Diam. x 1.130			Flat Contacts—, +1.35		0.4	1	0.42	0.60	Transistor Applications
411	208	1-1/32 x 5/8 x 1-29/64			Flat Contacts—, +15		0.8	1	0.81	1.15	Pocket Radio "B", Instruments
412	215	1-1/32 x 5/8 x 2			Flat Contacts—, +22½		1.2	1	1.05	1.50	Pocket Radio "B", Instruments
413	210	1-1/32 x 5/8 x 2-9/16			Flat Contacts—, +30		1.4	1	1.23	1.75	Pocket Radio "B", Instruments
415	213	1-3/64 x 3/8 x 3-11/16			Min. Snap—, +45		2.5	1	1.75	2.50	Pocket Radio "B"
416	217	1-21/64 x 63/64 x 3/2			Min. Snap—, +67½		4	1	2.07	2.95	Portable Radio "B"
417	224	1-5/16 x 31/32 x 1-9/16			Flat Contacts—, +15		1.8	1	1.16	1.65	Pocket Radio "B", Instruments
420	225	1-5/16 x 31/32 x 2-3/16			Flat Contacts—, +22½		2.5	1	1.23	1.75	Pocket Radio "B", Instruments
425P	*	1-23/64 x 1-1/32 x 3-15/16			Socket—, +22½		4.1	1	1.37	1.95	Instruments
430	*	1-5/16 x 1 x 2-13/16			Flat Contacts—, +30		3.2	1	1.51	2.15	Pocket Radio "B", Instruments
430P		1-23/64 x 1-1/32 x 3-11/32			Socket—, +30		3.2	1	1.51	2.15	Instruments
433P		2-21/32 x 1-1/64 x 3-1/16			Socket—, +33		6	1	1.92	2.75	Instruments
437	212	1-15/16 x 1-15/32 x 6-15/32			Snap Type—, +75		14.8	1	3.15	4.50	Portable Radio "B"
E450		0.455 Diam. x 0.570			Flat Contacts—, +1.35		0.18	4	0.52	0.75	Instruments
455	*	2-21/32 x 1 x 3-11/16			Snap Type—, +45		7.8	1	2.27	3.25	Portable Radio "B"
455P		2-21/32 x 1-1/64 x 3-29/32			Socket—, +45		8.6	1	2.27	3.25	Instruments
457	209	2-13/16 x 1 1/8 x 2 1/2			Snap Type—, +67½		1.4	1	2.70	3.85	Portable Radio "B"
460K		1-29/64 x 1-3/8 x 2.344			Flat Contacts—, +45		5.3	6	1.67	2.50	Photoflash
467	200	2-13/16 x 1 1/8 x 3-45/64			Snap Type—, +67½		12	1	2.70	3.85	Portable Radio "B"
468	200	2-13/16 x 1-3/8 x 3-45/64			Snap Type—, +67-1/2		12	1	2.77	3.95	Radio Electronic
477	211	1-29/32 x 63/64 x 5-7/16			Snap Type—, +67½		8.6	1	2.70	3.85	Portable Radio "B"
479	214	1-31/32 x 1-1/32 x 7-15/32			Snap Type—, +90		12	1	2.97	4.25	Portable Radio "B"
482	202	3-19/32 x 1-27/32 x 5 1/2			Socket—, +45		15	1	2.97	4.25	Portable Radio "B"
484	207	3-31/32 x 2-17/32 x 5-5/16			Socket—, +45		3	2	3.47	4.95	Fluorescent Lantern
487		5/8 x 2-1/16 x 7/4			Socket—, +22½, +45		4	2	3.84	5.50	Farm Radio "B"
489		4-11/32 x 2-11/16 x 4-3/16			Socket—, +225		2	12	6.96	9.95	Electronic Photoflash
490	204	3-23/32 x 1 1/2 x 3-45/64			Snap Type—, +90		15	1	3.15	4.50	Portable Radio "B"
491		2-19/32 x 1-5/16 x 4 1/2			Flat Recessed & Socket—, +240		8	1	5.56	7.95	Electronic Photoflash
492		3-9/16 x 2-29/32 x 4-29/32			Socket—, +180, +225		2	8	6.96	9.95	Electronic Photoflash
493	722	2-11/16 x 2-7/32 x 3-29/32			Pinjacks—, +300		14.5	1	8.37	11.95	Geiger Counter
495	*	1-15/16 x 1-15/32 x 7/8			Snap Type—, +90		1	1	3.47	4.95	Portable Radio "B"
497		3 x 1-19/32 x 5/8			Flat Recessed—, +180, +510		1	10	11.16	15.95	Electronic Photoflash
E502		0.550 Diam. x 1.968			Flat Contacts—, +1.35		1.05	2	0.70	1.00	Transistor Applications
504	220	5/8 x 19/32 x 1 1/8			Flat Contacts—, +15		0.6	1	0.81	1.15	Pocket Radio "B", Instruments
505	221	5/8 x 19/32 x 1-63/64			Flat Contacts—, +22½		0.8	1	1.05	1.50	Pocket Radio "B", Instruments
506	223	1-13/64 x 5/8 x 1-27/64			Flat Contacts—, +30		0.9	1	1.30	1.85	Pocket Radio "B", Instruments
507	222	5/8 x 19/32 x 2.005			Flat Contacts—, +30		0.9	1	1.30	1.85	Pocket Radio "B", Instruments
509	908	2 5/8 x 2 3/4 x 4-13/32			Coil Springs—, +6		1	1	0.85	1.29	Lanterns
510F	917	2 5/8 x 2 5/8 x 4-13/32			Fahnestock—, +6		1	1	0.85	1.29	Miscellaneous
510S	*	2 5/8 x 2 5/8 x 4 3/8			Plastic Knurl—, +6		1	7	0.85	1.29	Miscellaneous
515	*	35/64 Diam. x 1-31/32			Flat Contacts—, +1.5		0.5	24	0.095	0.15	Flashlights, Toys
520	930	5-17/32 x 4-21/32 x 2-21/32			Ins. Screw—, +6		2	8	3.31	4.95	Lanterns, Electronics
E520		0.495 Diam. x 0.236			Flat Contacts—, +1.4		0.07	6	0.17	0.25	Transistor Applications
523		0.602 Diam. x 1.965			Flat Contacts—, +4.5		1.1	1	0.70	1.00	Transistor Radio
531		0.662 Diam. x 2.290			Snap Type—, +4.5		1.25	1	0.82	1.25	Photographic
560		2-21/32 x 1-17/32 x 7-5/32			Socket—, +7½		1	10	4.33	6.50	Portable Television
561		8-5/16 x 2-13/16 x 5-7/8			Socket—, +15		6	1	10.62	15.95	Portable Television
563		1-23/63 Diam. x 7-5/32			Flat Contacts—, +4.5		15	3	2.76	4.15	
564		8-5/16 x 2-13/16 x 5/8			Socket—, +13.5		5.8	1	9.94	14.95	
E601		0.627 Diam. x 1.40			Flat Contact—, +1.35		1.22	1	0.83	1.30	Instruments
621		2-9/16 Diam. x 13			Screw—, +3		4	10	2.80	4.25	Fishing Buoy
E625		0.615 Diam. x 0.238			Flat Contacts—, +1.4		0.14	4	0.35	0.50	Transistor Applications
E625N		0.615 Diam. x 0.238			Flat Contacts—, +1.35		0.14	4	0.42	0.60	Transistor Applications
E630	1104	0.615 Diam. x 0.238			Flat Contacts—, +1.40		0.17	4	0.35	0.50	Transistor Applications
E630N		0.615 Diam. x 0.238			Flat Contacts—, +1.35		0.17	4	0.42	0.65	Transistor Applications
E640	1105	0.625 Diam. x 0.440			Flat Contacts—, +1.40		0.17	4	0.35	0.50	Transistor Applications
E640N		0.625 Diam. x 0.440			Flat Contacts—, +1.35		0.38	4	0.42	0.60	Transistor Applications
E675		0.455 Diam. x 0.210			Flat Contacts—, +1.40		0.07	6	0.26	0.40	Instruments
702		2-17/32 x 3/8 x 3/4			Socket—, +4½		5	1	1.92	2.75	Shot Firing
703	*	2-7/16 x 27/32 x 3-1/16			Spring—, +4½		5	1	1.50	1.50	Instruments
704		2-11/16 x 1-11/32 x 4 3/8			Socket—, +8		11.8	1	2.08	2.95	Shot Firing
706	902	8-5/16 x 2-13/16 x 6-7/16			Ins. Screw—, +6		5	14	4.01	5.98	Ignition, Emergency Lighting
707	26	2-9/16 x 2-1/32 x 2-13/16			Snap Type—, +7½		12	1	1.15	1.65	Portable Radio "A"
708		2 5/8 x 2 3/4 x 4-13/16			Socket—, +22½		1	1	4.38	6.25	Shot Firing
711		2 5/8 x 1-5/16 x 4 1/8			Plastic Knurl—, +1.5		12	1	0.79	1.15	
713	8	3-29/32 x 33/64 x 2-27/32			Socket—, +7½		6.3	1	2.07	2.95	Portable Radio "A"
714		3-31/32 x 1-11/32 x 3 1/2			Screw—, +4½		14.5	1	1.57	2.25	Telephone Test Sets
715	903	7/4 x 4-1/16 x 6-7/16			Ins. Screw—, +7½		7	10	4.86	7.25	Ignition, Emergency Lighting
716	*	8-37/64 x 1-1/16 x 6-7/16			Ins. Screw—, +9		8	8	5.53	8.25	Ignition, Emergency Lighting
717	9	2-5/32 x 1-15/16 x 3-1/32			Socket—, +7½		8	6	1.23	1.75	Portable Radio "A"
718	1	3-29/32 x 2 3/4 x 5-7/16			Socket—, +6		2	4	2.87	4.10	Portable Radio "A"
720	18	2-25/32 x 1-13/32 x 3-1/32			Socket—, +1½		6.5	1	1.02	1.45	Portable Radio "A"
724	2	1-7/32 x 1-7/32 x 2-11/32			Flat Contacts—, +6		2.5	1	0.87	1.25	Portable Radio "A"
726	19	4-3/32 x 1-7/16 x 2-15/16			Socket—, +4½		10.5	1	1.05	1.50	Portable Radio "A"
727	428	8 7/8 x 2 1/8 x 3-25/32			Recessed Plug—"A", +9 "A", —"B", +90 "B"		2	14	5.22	7.45	Portable Radio "A-B"
729	*	3-27/32 x 2-7/32 x 7-13/16			Socket—"A", +1½ "A", —"B", +90 "B"		2	7	4.38	6.25	Portable Radio "A-B"
731	918	5-11/32 x 2-27/32 x 4-15/16			Ins. Screw—, +6		3	4	1.96	2.95	Lantern
732		5-11/32 x 2-27/32 x 4-15/16			Ins. Screw—, +12		3	4	1.96	2.95	
735	900	2 5/8 x 2 3/4 x 4 3/8			Screw—, +1½		1	7	1.25	1.25	Model Ignition "Glo-Plug"
736	3	3-15/16 x 1-5/16 x 4-3/32			Socket—, +4½		1	1	1.05	1.50	Portable Radio "A"
738	205	3 x 2-5/16 x 4 1/8			Socket—, +22½, +45		1	3	2.76	3.95	Portable Radio "B"
740	719	4-19/32 x 3 3/8 x 7 3/4			Socket—, +1½		6	1	7.65	10.95	Farm Radio "A"
741	17	3 3/8 x 2-11/16 x 5 3/8			Socket—, +1½		2	10	2.42	3.45	Portable Radio "A"

\*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping.

\*Equipped with screw terminals unless Fahnestock spring terminals are specified.

\*Equipped with Fahnestock spring terminals unless screw terminals are specified.

†Furnished with Fahnestock spring terminals. If socket terminals required, specify W-363P, W-364P, W365P.

†Flashlight types.

††Shipped from factory only.



COMPLETE LINE SPECIFICATIONS



"Eveready" Battery Number	NEDA Number	Overall Dimensions in inches L W H	Terminals & Voltages	Battery Weight lbs. ozs.	Unit Pkg. Qn.	Sugg. Dealer Each	List Price Each	Major Use
742	4	2 5/8 x 2 5/8 x 3-27/32	Socket—, +1 1/2	1 6	1	1.15	1.65	Portable Radio "A"
†743	5	3-13/16 x 2 5/8 x 4-1/32	Socket—, +1 1/2	1 15	1	2.28	3.25	Portable Radio "A"
744	*	2 5/8 x 2 5/8 x 3-27/32	Socket—, +6	1 6	1	1.15	1.65	Portable Radio "A"
746	7	3-15/16 x 1-5/16 x 4-21/32	Socket—, +4 1/2	1 3	1	1.26	1.80	Portable Radio "A"
750	*	1-11/32 x 1 1/16 x 2-21/32	Spring—, +3	2	1	0.65	0.95	Instruments
751	705	2 x 1 1/16 x 2-21/32	Spring—, +4 1/2	3	1	0.74	1.10	Instruments
752	400	14-1/16 x 2-11/16 x 4-1/16	Recessed Plug— "A", +9 "A", —"B", +90 "B"	6 2	1	5.78	8.25	Portable Radio "A-B"
752W	*	14-1/16 x 2-11/16 x 4-1/16	Recessed Plug— "A", +9 "A", —"B", +90 "B"	6 8	1	6.48	9.25	Portable Radio "A-B"
753	401	9-7/32 x 2-23/32 x 4-5/16	Socket— "A", +7 1/2 "A", +1 1/2 —"B", +90 "B"	4 12	1	5.43	7.75	Portable Radio "A-B"
754	402	10-15/32 x 3/4 x 4	Socket— "A", +7 1/2 "A", +9 —"B", +90 "B"	6 1	1	6.62	9.45	Portable Radio "A-B"
755	403	8-9/16 x 3/4 x 2-7/16	Socket— "A", +6 "A", +7 1/2 —"B", +75 "B"	3 9	1	5.08	7.25	Portable Radio "A-B"
756	*	8 7/8 x 2 5/8 x 3-25/32	Socket— "A", +7 1/2 "A", +9 —"B", +90 "B"	2 14	1	4.87	6.95	Portable Radio "A-B"
757	406	9-7/82 x 2-28/82 x 4-7/82	Recessed Plug— "A", +9 "A", —"B", +90 "B"	4 12	1	5.57	7.95	Portable Radio "A-B"
759	*	15-11/16 x 4-1/82 x 6-15/16	Socket— "A", +1 1/2 "A", —"B", +90 "B"	16 4	1	7.95	10.65	Farm Radio "A-B"
761T	712	4-1/16 x 1-15/82 x 3/2	Screw—, +1 1/2, +3, +4 1/2	14	1	1.76	2.50	Telephone Test Sets
762S	709	4-3/32 x 2-9/16 x 5-7/16	Plastic Knurl—, +22 1/2, +45	2 12	1	3.05	4.35	Instruments
763	710	3 1/2 x 2-9/32 x 2-15/16	Screw—, +22 1/2	14	1	1.61	2.35	Instruments
766T	*	6 3/4 x 4 3/8 x 3-15/16	Fahnestock—, +16 1/2, +18, +19 1/2, +21, +22 1/2	4 10	1	4.87	6.95	Switchboard Testing Radio "C"
771	*	3-29/32 x 1 3/8 x 3-1/16	Socket—, +3, +4 1/2	13	1	1.93	2.75	Radio "C"
773	*	3-29/32 x 7/8 x 3 1/8	5 Screw; 1 wire—, +1 1/2 —3, +4 1/2, +6, +7 1/2	9	1	1.65	2.35	Radio "C"
776	*	7-27/82 x 4 1/8 x 9 3/8	Socket & Recessed Plug—"A", +7 1/2 "A", +9 "A", —"B", +90 "B"	14 12	1	10.47	14.95	Home Receiver "A-B"
778	*	4 1/8 x 2-17/32 x 3-7/16	Fahnestock—, +16 1/2, +18, +19 1/2, +21, +22 1/2	1 8	1	3.84	5.50	Instruments
781	*	2-15/32 x 55/64 x 3	Iastic Knurl—, +4 1/2	5	1	0.99	1.40	Instruments
785	431	8 3/8 x 3 3/8 x 2 1/4	Socket—"A", +7 1/2 "A", —"B", +75 "B"	2 12	1	4.83	6.90	Portable Radio "A-B"
789	*	5-9/82 x 1-7/16 x 3/4	Flat—, +3	1 1.5	1	2.21	3.25	Finger Print Camera
799	8-5/32 x 4 1/4 x 8-19/32	Fahnestock—, +22 1/2, +45, +49 1/2	13 5	1	9.45	13.50	Camera Cranking	
812	13/32 Diam. x 1-3/4	Flat Contacts—, +5	0.3	12	0.13	0.20	Photoflash	
815	9/16 Diam. x 1-31/32	Flat Contacts—, +1 1/2	0.6	24	0.16	0.25	Photoflash	
835	1-1/32 Diam. x 1-15/16	Flat Contacts—, +1 1/2	1.4	24	0.16	0.25	Photoflash	
850	1-11/32 Diam. x 2-13/32	Flat Contacts—, +1 1/2	3.3	12	0.16	0.25	Photoflash	
†904	910	0.445 Diam. x 1.180	Flat Contacts—, +1 1/2	0.22	6	0.08	0.125	Flashlight, Novelties
†912	24	19/32 Diam. x 1 3/4	Flat Contacts—, +1 1/2	0.3	12	0.095	0.15	Flashlight, Toys
†915	9/16 Diam. x 1-31/32	Flat Contacts—, +1 1/2	0.6	24	0.13	0.20	Flashlight, Toys	
†935	814	1-1/32 Diam. x 1-15/16	Flat Contacts—, +1 1/2	1.4	24	0.13	0.20	Flashlight, Toys
†950	813	1-11/32 Diam. x 2-13/32	Flat Contacts—, +1 1/2	3	48	0.13	0.20	Flashlight, Toys
960P	23	1-11/32 Diam. x 4-1/16	Socket—, +1 1/2	5	1	0.77	1.10	Portable Radio "A"
964	20	1-11/32 Diam. x 4-3/16	Flat Contacts—, +1 1/2	5.9	12	0.32	0.45	Portable Radio "A"
1007	6-13/32 x 3-7/32 x 3 3/8	Socket—, +10	3 13	1	42.00	50.00	Portable Tools	
1015	15	9/16 Diam. x 1-31/32	Flat Contacts—, +1 1/2	0.6	24	0.155	0.25	Transistor Portable
1035	14	1-1/32 Diam. x 1-15/16	Flat Contacts—, +1.5	1.4	12	0.155	0.25	Portable Radio "A", Transistor
1050	1-11/32 Diam. x 2-13/32	Flat Contacts—, +1 1/2	3.3	48	0.155	0.25	Portable Radio "A", Transistor	
Formerly A100	1-11/32 Diam. x 2-13/32	Flat Contacts—, +1 1/2	—	—	—	—	—	Ind. Flash.
1052P	1-1/8 Diam. 3-29/32	Socket—, +1.5	4	1	0.67	1.25	Instrument	
1461	907	10-13/32 x 2-25/32 x 7-9/32	Plastic Knurl—, +6	9 9	1	3.34	4.98	Ignition, Fence Controllers
1462	5 3/8 x 5 3/8 x 7 1/4	Plastic Knurl—, +6	9 7	1	4.01	5.98	Ignition, Fence Controllers	
1463	922	10-13/32 x 2-25/32 x 7-9/32	Plastic Knurl—, +12	7 8	1	4.01	5.98	Toy Cars
1562	*	7-15/16 x 5 x 7 1/2	Plastic Knurl—, +7 1/2	11 10	1	4.86	7.25	Ignition, Searchlights
1662	913	7-27/32 x 5-9/32 x 7-9/32	Plastic Knurl—, +9	14 11	1	5.53	8.25	Ignition, Searchlights
2314	2400	1-21/64 x 1-1/32 x 2 5/8	Socket—, +12, +21	3	1	1.58	2.25	Transistor Portable
2356N	1612	2-3/16 x 1-5/32 x 6 1/4	Snap Type—, +9	1 1	1	1.10	1.60	Transistor Radio
2506	1601	8 x 2-13/16 x 1-9/16	Socket—, +3, +6, +9	8 8	1	1.76	2.50	Transistor Portable
2709N	1613	1-13/32 x 47/64 x 4-11/16	Snap Type—, +9	4.5	1	1.05	1.50	Transistor Portable
2713N	1403	1-13/32 x 47/64 x 4-11/16	Min. Snap—, +6	4	1	0.71	1.00	Transistor Portable
2731N	1303	2-13/16 x 1 3/8 x 8-11/32	Socket—, +12	2 11	1	1.93	2.75	Transistor Radio
2744N	920	2-21/32 x 2-21/32 x 3 3/4	Socket—, +6	1 14	1	0.79	1.19	Safety Flasher, Miscellaneous
2745N	924	2-21/32 x 2-21/32 x 4-7/16	Coil Springs—, +6	1 14	1	0.79	1.19	Safety Flasher, Lantern
2746N	925	2-21/32 x 2-21/32 x 4 3/8	Screw—, +6	1 14	1	0.79	1.19	Lighting, Miscellaneous
2761N	1608	2-9/32 x 1 1/4 x 7-31/32	Socket—, +9	1 9	1	1.58	2.25	Transistor Portable
2762N	1609	2-13/16 x 1 3/8 x 8-11/32	Socket—, +9	2 11	1	1.93	2.75	Transistor Radio
2780N	923	5-11/32 x 2-27/32 x 4-5/32	Socket—, +12	3 8	1	2.37	3.40	Safety Flasher, Miscellaneous
E302157	2 1/2 x 1 3/8 x 4 1/4	Socket—, +1.35	13.5	1	10.35	15.50	Radiation Equipment	
E302250	11/16 Diam. x 1-29/32	Tab—, +9.45	1.0	1	2.45	3.75	Radiation Equipment	
E302351	1-1/16 Diam. x 2 3/8	Flat Contact—, +5.40	4.5	1	3.61	5.50	Fire Alarm	
E302358	3/8 Diam. x 2-5/32	Wire Leads—, +10.3	0.87	1	3.48	5.45	Radiation Equipment	
E302362	23/32 Diam. x 3-5/32	Wire Leads—, +16.2	1.13	1	4.75	7.40	Radiation Equipment	
E302435	11/16 Diam. x 1 1/2	Flat Contacts—, +6.75	0.75	1	2.80	4.40	Radiation Equipment	
E302462	2-13/16 x 1-17/32 x 6 3/8	Wire Leads—, +97.2	2	1	32.34	49.75	Transmitter "B"	
E302465	2-3/16 Diam. x 3 3/4	Wire Leads—, +47.25	1	1	19.20	30.00	Geophysical	
E302478	1-9/32 Diam. x 3 3/8	Flat Contacts—, +9.8	9.0	1	5.77	8.80	Wire Recorder	
E302497	1-1/16 Diam. x 4 1/8	Screw—, +6.75	6.0	1	5.10	8.00	Test Equipment	
E302579	1-13/32 x 3/4 x 3-3/16	Wire Leads—, +29.7	5.0	1	10.85	16.70	Test Equipment	
E302580	2-23/32 x 2-23/32 x 3-29/32	Socket—, +27.0	2 6.0	1	26.74	40.00	Instrument	
E302642	1-9/32 Diam. x 2 5/8	Flat Contacts—, +7.00	5.0	1	4.25	6.50	Instrument	
E302651	1-5/16 Diam. x 2-7/16	Spec. Leads—, 1.35	6.14	1	3.90	5.75	Instrument	
E302702	1 1/2 Diam. x 1 5/8	Wire Leads—, +2.70	2.0	1	3.21	4.80	Geophysical	
E302904	1-11/32 Diam. x 3-31/32	Wire Leads—, +5.40	6.0	1	5.82	8.75	Meter	
E302905	1-11/32 Diam. x 3-19/32	Wire Leads—, +6.75	9.0	1	7.02	10.50	Test Equipment	
E302907	1-5/16 Diam. x 4 7/8	Wire Leads—, +9.45	11.6	1	9.24	13.95	Instruments	
E302908	1-11/32 Diam. x 5-9/16	Wire Leads—, +10.8	12.0	1	10.24	15.00	Radiation Equipment	
E303219	1/2 Diam. x 1-9/16	Flat Contacts—, +9.8	1 6.0	1	2.80	4.20	Auto Radio Converter (FM)	
E303314	2.850 x 1.284 x 2.774	Recessed Flat Contacts—, +16.8	13.0	1	9.55	14.33	Communication Equipment	

\*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping. †Flashlight types.  
 \*\*Equipped with screw terminals unless Fahnestock spring terminals are specified. ††Shipped from factory only.  
 \*\*\*Equipped with Fahnestock spring terminals unless screw terminals are specified.  
 △Furnished with Fahnestock spring terminals. If socket terminals required, specify W-363P, W-364P, W365P.  
 •Designates number changes only, see 1035 for 635, and 1150 for 1050.

# Terado DC-AC Inverters, Chargers, Relays, Voltage Adjusters

## 60 CYCLE INVERTERS

Change battery current to 110 volt, 60 cycle AC. Frequency stable within 1/2 cycle, with change in load and input voltage.

### DUAL CONTINENTAL

(Transistorized, 600 watts)  
Converts 12 v. D.C. to 110 v., 60 cycle 550 to 600 watts. Complete with battery cables and remote control with variable A.C. output. Filtered for tape recorders. Frequency stable within 1/2 cycle with changing input voltage and load. Size 10 3/4" w. x 13" d. x 6" h. Shpg. Wt. 60 lbs.  
Terado No. 50202—Net Each .....\$279.77

**CONTINENTAL (Transistorized, 300 watts)**  
Same features as DUAL above, but has capacity of 275 to 300 watts. Size 10 3/4" x 6" x 6". Shpg. Wt. 30 lbs.  
Terado No. 50191—Net Each .....\$139.13

**ATLAS (Transistorized, 200 watts)**  
Same features as CONTINENTAL above, but has capacity of 175 to 200 watts. Size 10 3/4" x 6" x 6". Shpg. Wt. 21 lbs.  
Terado No. 50200—Net Each .....\$104.13

**TITAN (Transistorized, 175 watts)**  
Same features as ATLAS above, less remote control, but with on-off switch and A.C. receptacle in case. Capacity 150 to 175 watts. Size 10 3/4" x 6" x 6". Shpg. Wt. 20 lbs.  
Terado No. 50201—Net Each .....\$91.41

### SUPREME

Converts 12 v. DC to AC; power output, 175-200 watts, filtered. Remote control has variable AC output switch and signal light indicating proper AC output voltage. Steel case. Size: 10 3/4" w. x 6" d. x 6" h. Shpg. Wt., 25 lbs.  
Terado No. 50153—Net Each .....\$77.00

### RECORDER

150-175 watt version of SUPREME, less remote control. Plugs into cigarette lighter. Hi-low voltage selector switch to maintain proper output voltage. Filtered. Size: 10 3/4" w. x 6" d. x 6" h. Shpg. Wt., 21 lbs.  
Terado No. 50175—Net Each .....\$69.69

**GALAXY (Transistorized, 175 watts)**  
Converts 12 v. DC to 110 v. AC, 140-175 watts filtered. Adjustable voltage and frequency. Ideal where frequency is not critical. Size: 10 3/4" w. x 6" d. x 6" h. Shpg. Wt. 9 1/2 lbs.  
Terado No. 50205—Net Each .....\$32.97

### CHIEF

Operates tape recorders, power tools, dictation machines, mixers, blenders, etc. Direct connection to battery. Front AC receptacle. Toggle switch output control. Ventilated steel case. Size: 3 3/4" w. x 6 1/2" d. x 4" h. Shpg. Wt., 3 lbs.  
Terado No. 50137—Voltage input, 6 v. AC Power Output, 75-100 watts. Net .....\$49.00  
Terado No. 50138—Voltage input, 12 v. AC Power Output, 100-125 watts. Net .....\$49.00

### AUTOMATIC

Operates automatically from 6 or 12 v. DC without vibrator charge or switching (6 v., 55-75 watts; 12 v., 85-110 watts). Easy installation into cigarette lighter. For dictation machines, radios, tape recorders, phonographs, heating pads, etc. Steel case. Seal brown baked enamel. Size: 3 1/2" w. x 6 3/4" d. x 4 1/4" h. Shpg. Wt., 3 lbs.  
Terado No. 50134—Net Each .....\$40.58

### SUPER

Single input version of AUTOMATIC. Size: 3 3/4" w. x 6 3/4" d. x 4" h. Shpg. Wt., 3 lbs.  
Terado No. 50126—Voltage input, 6 v. AC Power Output, 60-75 watts. Net .....\$34.98  
Terado No. 50127—Voltage input, 12 v. AC Power Output, 75-100 watts. Net .....\$34.98

### MASTER

Operates some dictation machines and tape recorders, radios and phonographs, emergency lighting, etc. Easy to install into cigarette lighter. Steel case. Seal brown baked enamel. Size: 3 3/4" w. x 6 3/4" d. x 4" h. Shpg. Wt., 6 lbs.  
Terado No. 50122—Voltage input, 12 v. AC Power Output, 60-75 watts. Net .....\$29.06

### ELECTRAL

Glove compartment size inverter, available in 6 v. or 12 v. input. Easy installation into cigarette lighter. Vinyl coated steel case with leatherette appearance. Size: 3" w. x 2 1/4" d. x 5 1/2" h. Shpg. Wt., 3 lbs.  
Terado No. 50167—Voltage input, 12 v. AC Power Output, 42-52 watts. Net .....\$18.87

### SENIOR

Operates radios, lights, phonographs and small tape recorders. Available in 6 v. or 12 v. input. Simple to install into cigarette lighter. Aluminum case. Seal brown baked enamel. Size: 2 1/2" w. x 1 1/2" d. x 2 1/4" h. Shipping Weight, 3 lbs.  
Terado No. 50115—Voltage input, 6 v. AC Power Output, 35-40 watts. Net .....\$16.77  
Terado No. 50116—Voltage input, 12 v. AC Power Output, 40-50 watts. Net .....\$16.77

### DYNAMO

Permits operating AC radios on 12 v. DC battery source, such as cars or boats. Can also operate electric shavers. Plugs into cigar lighter. Includes generator condenser and ignition suppressor. Power output, 25-30 watts. Size: 2" x 2" x 3 3/4". Shpg. Wt., 2 lbs.  
Terado No. 50196—For 12 v. batteries only. Net Each .....\$9.05

### AUTO SHAVER

Operates all electric shavers. Available in 6 v. or 12 v. input. Plugs into cigarette lighter. Polyethylene non-breakable case. Size: 3 3/4" w. x 2 1/4" d. x 4 1/4" h. Shpg. Wt., 1 1/2 lbs.  
Terado No. 50105—Voltage input, 12 v. AC Power Output, 15-20 watts. Net Each .....\$9.31

## BATTERY CHARGERS

Electronically engineered full wave silicon rectifier chargers. Miniaturization with full power charge rate.

### DYN-A-MITE

Baked seal brown paint over aluminum case. Charge rate 1 amp, both 6 and 12 volts. Size: 1 3/4" x 1 3/4" x 3 1/4". Wt., 1 lb.  
Terado No. 50186—Net Each .....\$5.90

### TINY GIANT

Copper clad steel case. Charge rate 1 1/2 amps, both 6 and 12 volts. Warning buzzer for improper connection. Size: 2-1/16" x 3" x 5 1/2". Weight, 1 1/2 lbs.  
Terado No. 50185—Net Each .....\$7.66

### LEADER

Copper clad steel case. Charge rate 3 amps, 12 volts only. Warning buzzer for improper connection. Size: 2 1/4" x 3" x 5 1/2". Weight, 2 lbs.  
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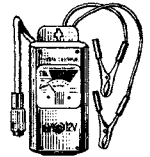
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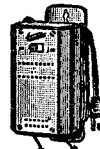
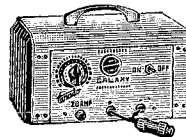
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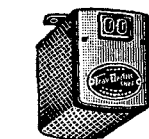


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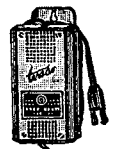


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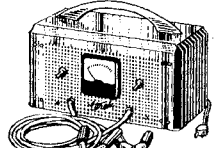


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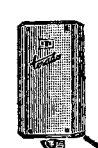


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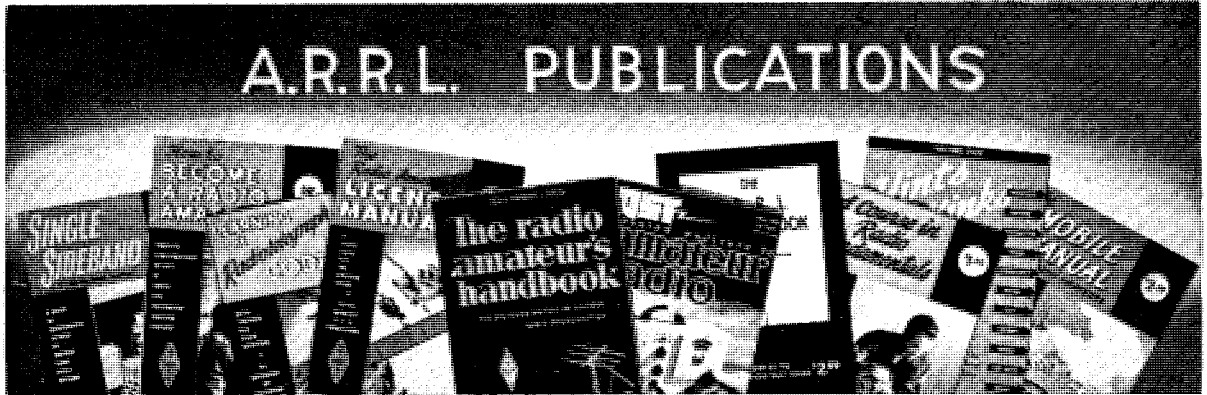


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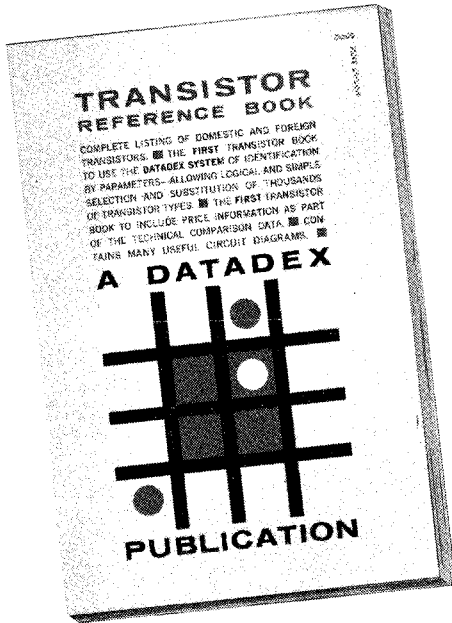
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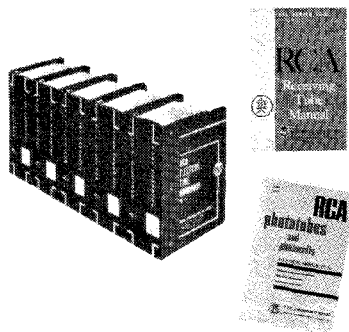
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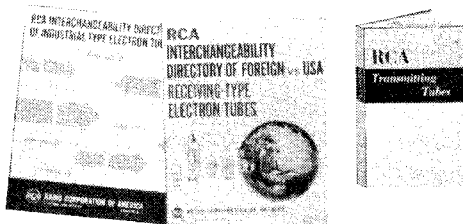
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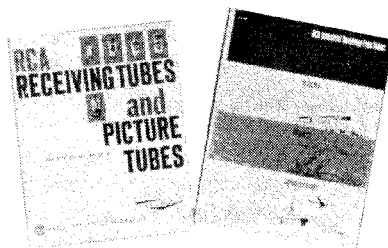
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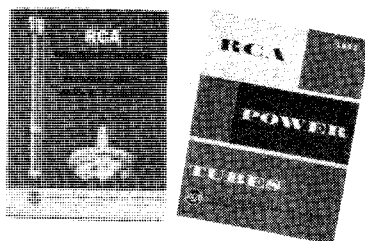
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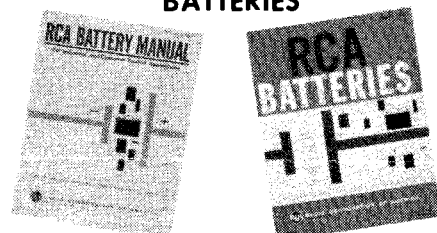


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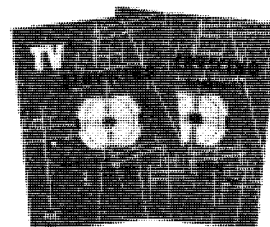
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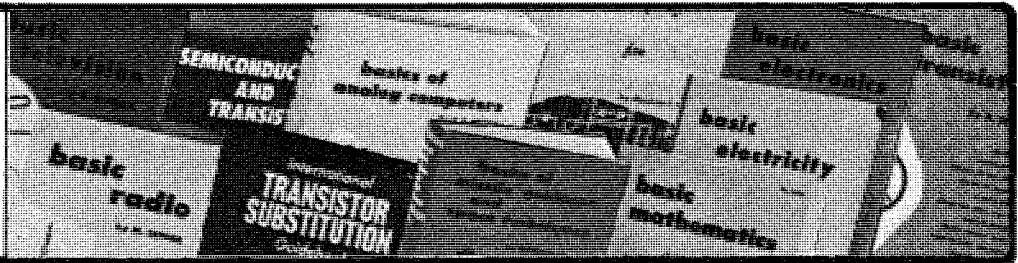
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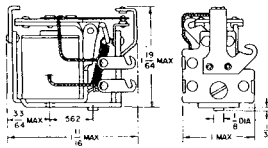
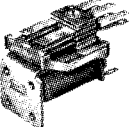
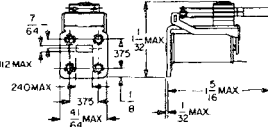
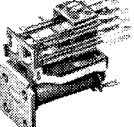
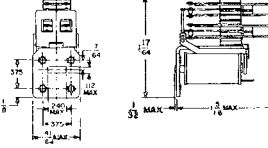

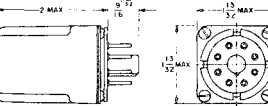
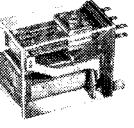
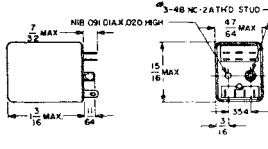
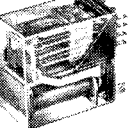
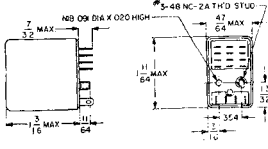

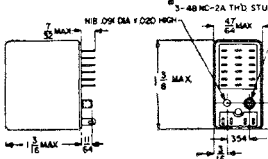




# ALLIED CONTROL

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## GENERAL PURPOSE RELAYS


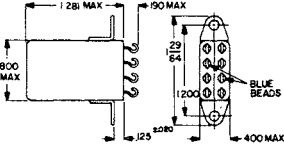

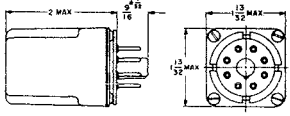
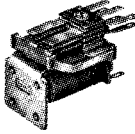
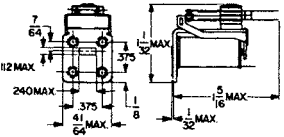
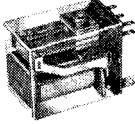
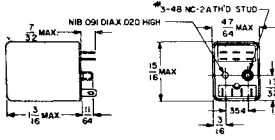

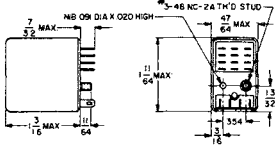
	RELAY TYPE	COIL VOLTAGE OR CURRENT	CONTACTS FORMS	CONTACTS AMPS	COIL POWER AT 25°C	COIL RESIST. OHMS	NET PRICE	OUTLINE DRAWING	DESCRIPTION
	AS-3A	115v a-c	SPDT	5	3.5 va	850	\$4.70		Compact design, single hole mounting, terminal board on the front and contacts on top for easy inspection. <b>Terminals:</b> .078 x .107 hook <b>Weight:</b> 2.0 ounces max. <b>Mounting:</b> (1) 6-32 NC-2B tapped hole 7-32 deep
	AS-3D	26.5v d-c	SPDT	5	1.3 w	528	4.60		
	TAT-2C	6v d-c	DPDT	2	700 mw	52	\$3.08		Subminiature with the performance of a miniature plus extra long life <b>Terminals:</b> Elongated holes .080 x .040 <b>Weight:</b> 0.70 ounces max. <b>Mounting:</b> (4) 4-48 NF-2B tapped holes
	TAT-2C	12v d-c	DPDT	2	700 mw	185	3.08		
	TAT-2C	24v d-c	DPDT	2	700 mw	700	3.08		
	TAT-2C	48v d-c	DPDT	2	700 mw	2500	3.08		
	TAT-2C	115v d-c	DPDT	2	700 mw	15000	4.55		
	TAT-4C	6v d-c	4PDT	2	700 mw	52	\$3.48		Subminiature with the performance of a miniature plus extra long life <b>Terminals:</b> Elongated holes .080 x .040 <b>Weight:</b> 0.75 ounces max. <b>Mounting:</b> (4) 4-48 NF-2B tapped holes
	TAT-4C	12v d-c	4PDT	2	700 mw	185	3.48		
	TAT-4C	24v d-c	4PDT	2	700 mw	700	3.48		
	TAT-4C	48v d-c	4PDT	2	700 mw	2500	3.48		
	TAT-4C	115v d-c	4PDT	2	700 mw	15000	4.95		
	TFMDO-2C	6v d-c	DPDT	5	700 mw	52	\$6.02		Enclosed in a transparent polycarbonate cover and rigidly secured to base. <b>Enclosure:</b> Dust cover <b>Weight:</b> 2.5 ounces <b>Socket:</b> Any std. RETMA or EIA octal
	TFMDO-2C	12v d-c	DPDT	5	700 mw	185	6.02		
	TFMDO-2C	24v d-c	DPDT	5	700 mw	700	6.02		
	TFMDO-2C	115v d-c	DPDT	5	700 mw	15000	7.49		
	TF154-2C	6v d-c	DPDT	5	700 mw	52	\$3.52		Features no internal wiring, contact arms extended to form combination solder and plug-in terminals <b>Terminals:</b> Elongated holes .080 x .040 <b>Enclosure:</b> Dust cover <b>Weight:</b> 0.80 ounces max. <b>Socket:</b> Allied type 30055-1
	TF154-2C	12v d-c	DPDT	5	700 mw	185	3.52		
	TF154-2C	24v d-c	DPDT	5	700 mw	700	3.52		
	TF154-2C	48v d-c	DPDT	5	700 mw	2500	3.52		
	TF154-2C	115v d-c	DPDT	5	700 mw	15000	4.99		
	TF154-4C	6v d-c	4PDT	5	700 mw	52	\$4.02		Features no internal wiring, contact arms extended to form combination solder and plug-in terminals <b>Terminals:</b> Elongated holes .080 x .040 <b>Enclosure:</b> Dust cover <b>Weight:</b> 0.95 ounces max. <b>Socket:</b> Allied type 30055-2
	TF154-4C	12v d-c	4PDT	5	700 mw	185	4.02		
	TF154-4C	24v d-c	4PDT	5	700 mw	700	4.02		
	TF154-4C	48v d-c	4PDT	5	700 mw	2500	4.02		
	TF154-4C	115v d-c	4PDT	5	700 mw	15000	5.49		
	TF154-6C	6v d-c	6PDT	5	1.5 w	25	\$5.25		Features no internal wiring, contact arms extended to form combination solder and plug-in terminals <b>Terminals:</b> Elongated holes .080 x .040 <b>Enclosure:</b> Dust cover <b>Weight:</b> 1.0 ounces max. <b>Socket:</b> Allied type 30055-20
	TF154-6C	12v d-c	6PDT	5	1.5 w	90	5.25		
	TF154-6C	24v d-c	6PDT	5	1.5 w	430	5.25		
	TF154-6C	48v d-c	6PDT	5	1.5 w	1550	5.25		
	TF154-6C	115v d-c	6PDT	5	1.5 w	9000	6.15		



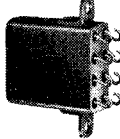
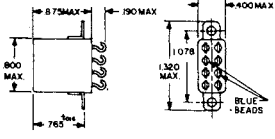
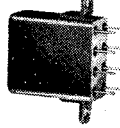
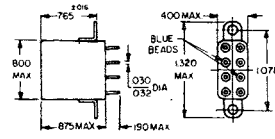
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ALLIED CONTROL COMPANY INC., NEW YORK, NEW YORK

## SENSITIVE and PLATE CIRCUIT RELAYS

	RELAY TYPE	COIL VOLTAGE OR CURRENT	CONTACTS FORMS	CONTACTS AMPS	COIL POWER AT 25°C	COIL RESIST. OHMS	NET PRICE	OUTLINE DRAWING	DESCRIPTION
	JSH-3D	3.2 ma d-c	SPDT	2	25 mw	2500	\$14.60		Vibration: 15g to 2000 cps Shock: 50g operational Operate: 15 milliseconds Release: 10 milliseconds Temp: -65°C to +125°C Weight: 1.1 ounces max. Mounting: (2) 0.125 dia. holes
	JSH-3D	2.2 ma d-c	SPDT	2	25 mw	5000	14.60		
	JSH-3D	1.6 ma d-c	SPDT	2	25 mw	10000	16.50		
	JSH-6D	4.0 ma d-c	DPDT	2	40 mw	2500	15.50		
	JSH-6D	2.8 ma d-c	DPDT	2	40 mw	5000	15.50		
	JSH-6D	2.0 ma d-c	DPDT	2	40 mw	10000	17.50		
	TFMDO-2C	9.5 ma d-c	DPDT	5	220 mw	2500	\$6.33		Inclosed in a transparent polycarbonate cover and rigidly secured to base. Enclosure: Dust cover Weight: 2.5 ounces max. Socket: Any std. RETMA or EIA octal
	TFMDO-2C	7.0 ma d-c	DPDT	5	250 mw	5000	6.83		
	TFMDO-2C	5.5 ma d-c	DPDT	5	300 mw	10000	7.23		
	TFT-2C	9.5 ma d-c	DPDT	5	220 mw	2500	\$3.49		Subminiature with small size moving parts resulting in quick release and exceptional contact rating. Terminals: Elongated holes .080 x .040 Weight: 0.70 ounces max. Mounting: (4) 4-48NF 2B tapped holes
	TFT-2C	7.0 ma d-c	DPDT	5	250 mw	5000	3.99		
	TFT-2C	5.5 ma d-c	DPDT	5	300 mw	10000	4.39		
	TS154-2C	5.8 ma d-c	DPDT	1	85 mw	2500	\$3.73		Features no internal wiring. Contact arms extend to form combination solder and plug in terminals. Terminals: Elongated holes .080 x .040 Enclosure: Dust cover Weight: 0.80 ounces max. Socket: Allied type 30055-1
	TS154-2C	4.1 ma d-c	DPDT	1	85 mw	5000	4.23		
	TS154-2C	3.1 ma d-c	DPDT	1	85 mw	10000	4.63		
	TS154-4C	8.4 ma d-c	4PDT	1	175 mw	2500	\$4.17		Features no internal wiring. Contact arms extend to form combination solder and plug in terminals. Terminals: Elongated holes .080 x .040 Enclosure: Dust cover Weight: 0.95 ounces max. Socket: Allied type 30055-2
	TS154-4C	6.2 ma d-c	4PDT	1	175 mw	5000	4.67		
	TS154-4C	4.5 ma d-c	4PDT	1	175 mw	10000	5.07		

## SUBMINIATURE TYPE RELAYS

	KHJ-6D	6v d-c	DPDT	2	1.5 w	39	\$12.64		Vibration: 20g to 2000 cps Shock: 100g operational Operate: 5 milliseconds Release: 3 milliseconds Temp: -65°C to +125°C Weight: 0.5 ounces max. Mounting: (2) 0.120 dia. holes
	KHJ-6D	12v d-c	DPDT	2	1.5 w	147	12.64		
	KHJ-6D	26.5v d-c	DPDT	2	1.5 w	612	12.64		
	KHJ-6D	48v d-c	DPDT	2	1.5 w	2370	13.64		
	KHJ-6D	115v d-c	DPDT	2	1.5 w	10000	15.34		
	KHJO-6D	26.5v d-c	DPDT	2	1.5 w	612	\$12.64		Vibration: 20g to 2000 cps Shock: 100g operational Operate: 5 milliseconds Release: 3 milliseconds Temp: -65°C to +125°C Weight: 0.5 ounces max. Mounting: (2) 0.120 dia. holes Socket: Armet type HRC-1 or equiv.



# ALLIED CONTROL

ALLIED CONTROL COMPANY INC., NEW YORK, NEW YORK

## POWER RELAYS

	RELAY TYPE	COIL VOLTAGE OR CURRENT	CONTACTS FORMS	AMPS	COIL POWER AT 25°C	COIL RESIST. OHMS	NET PRICE	OUTLINE DRAWING	DESCRIPTION
	BO-6A	6v a-c	DPDT	15	5.0 va	1.07	\$5.50		Compact, rugged design with contacts and terminals, readily accessible on top of relay Terminals: .096 diameter holes, tin dipped Weight: 5.5 ounces max. Mounting: (4) 6-32 elastic stop nuts
	BO-6A	24v a-c	DPDT	15	5.0 va	17	5.50		
	BO-6A	115v a-c	DPDT	15	5.0 va	445	5.50		
	BO-6A	220v a-c	DPDT	15	5.0 va	1700	5.62		
	BO-6D	6.3v d-c	DPDT	15	2.5 w	14.2	5.05		
	BO-6D	13.2v d-c	DPDT	15	2.5 w	70	5.05		
	BO-6D	26.5v d-c	DPDT	15	2.5 w	230	5.05		
	BO-6D	115v d-c	DPDT	15	2.5 w	5000	5.60		
	BOHRO-6A	115v a-c	DPDT	15	5.0 va	445	\$11.33		Vibration: 10-55 cps at .062" double amplitude Shock: 30g operational Temp: -55°C to +71.5°C Weight: 9.5 ounces max. Socket: Any std. RETMA or EIA octal
	BOHRO-6D	26.5v d-c	DPDT	15	2.5 w	230	10.88		
	CNA-13A	115v a-c	SPST NO DB	25	10.5 va	145	\$8.00		Heavy duty, compact relay with double break contact construction eliminating pigtails Terminals: Coil (1 & 2) 3-32 dia. holes Contacts (3 & 4) 10-32 screw type Weight: 9.5 ounces max. Mounting: (4) 6-32 elastic stop nuts
	CNAS-13A	115v a-c	SPST NO DB	50	10.5 va	145	10.00		
	PO-9A	24v a-c	3PDT	15	10.5 va	8.0	\$6.40		Low cost, compact, multi pole Terminals: .079 x .164 hook, tin dipped Weight: 7.5 ounces max. Mounting: (4) 6-32 tapped holes
	PO-9A	115v a-c	3PDT	15	10.5 va	145.0	6.40		
	PO-9D	13.2v d-c	3PDT	15	2.5 w	70	6.00		
	PO-9D	24.0v d-c	3PDT	15	2.5 w	230	6.00		
	PO-9D	115.0v d-c	3PDT	15	2.5 w	5000	6.42		
	PO-12A	115v a-c	4PDT	15	10.5 va	145	\$7.16		Low cost, compact, multi pole Terminals: .079 x .164 hook, tin dipped Weight: 8.0 ounces max. Mounting: (4) 6-32 tapped holes
	PO-12D	13.2v d-c	4PDT	15	2.5 w	70	6.60		
	PO-12D	24.0v d-c	4PDT	15	2.5 w	230	6.60		

## SUBMINIATURE TYPE RELAYS

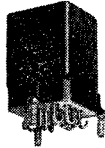
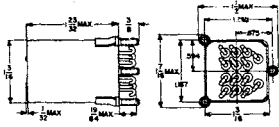
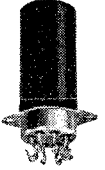
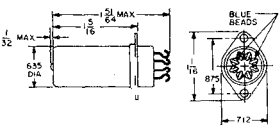

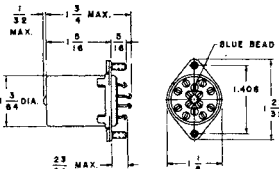

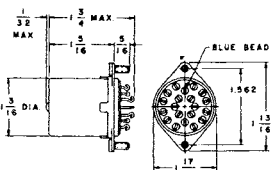

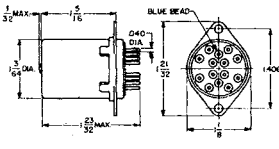
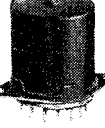
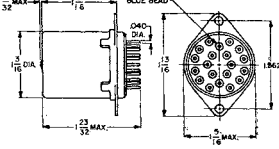

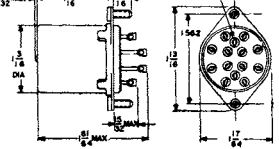
	KHY-6D	6v d-c	DPDT	2	1.5 w	34	\$12.64		Vibration: 20g to 2000 cps Shock: 50g operational Operate: 5 milliseconds Release: 3 milliseconds Temp: -65°C to +125°C Weight: 0.5 ounces max. Mounting: (4) 0.096 dia. holes
	KHY-6D	12v d-c	DPDT	2	1.5 w	155	12.64		
	KHY-6D	26.5v d-c	DPDT	2	1.5 w	615	12.64		
	KHY-6D	48v d-c	DPDT	2	1.5 w	1920	13.64		
	KHY-6D	115v d-c	DPDT	2	1.5 w	8120	15.34		
	KHYO-6D	26.5v d-c	DPDT	2	1.5 w	615	\$12.64		Vibration: 20g to 2000 cps Shock: 50g operational Operate: 5 milliseconds Release: 3 milliseconds Temp: -65°C to +125°C Weight: 0.5 ounces max. Mounting: (4) 0.096 dia. holes Socket: Armlet type HRK-1 or equiv.



# ALLIED CONTROL

ALLIED CONTROL COMPANY INC., NEW YORK, NEW YORK

## MINIATURE TYPE RELAYS


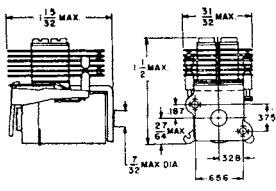
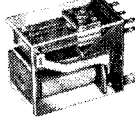
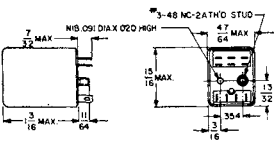

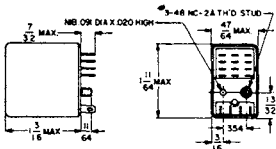

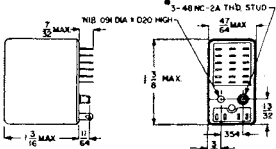
	COIL VOLTAGE OR TYPE	COIL CURRENT	CONTACTS FORMS	CONTACTS AMPS	COIL POWER AT 25°C	COIL RESIST. OHMS	NET PRICE	OUTLINE DRAWING	DESCRIPTION
<b>CH</b>									
	CH-12D	26.5v d-c	4PDT	10	4.0 w	180	\$30.00		<b>Vibration:</b> 20g to 2000 cps <b>Shock:</b> 50g operational <b>Operate:</b> 15 milliseconds <b>Release:</b> 10 milliseconds <b>Temp:</b> -65°C to +125°C <b>Weight:</b> 5.0 ounces max. <b>Mounting:</b> (3) 6-32 NC-2A thd. studs
<b>MH-6</b>									
	MH-6D	26.5v d-c	DPDT	5	1.75 w	400	\$14.25		<b>Vibration:</b> 15g to 1000 cps <b>Shock:</b> 50g operational <b>Operate:</b> 8 milliseconds <b>Release:</b> 5 milliseconds <b>Temp. MH:</b> -55°C to +85°C <b>MHB:</b> -65°C to +125°C <b>Weight:</b> 2.0 ounces max. <b>Mounting:</b> (2) 0.125 dia. holes
	MHB-6D	26.5v d-c	DPDT	5	1.25 w	325	14.25		
<b>MH-12</b>									
	MH-12D	26.5v d-c	4PDT	5	2.5 w	300	\$20.90		<b>Vibration:</b> 15g to 1000 cps <b>Shock:</b> 50g operational <b>Operate:</b> 10 milliseconds <b>Release:</b> 5 milliseconds <b>Temp. MH:</b> -55°C to +85°C <b>MHB:</b> -65°C to +125°C <b>Weight:</b> 3.0 ounces max. <b>Mounting:</b> (2) 6-32 NC-2A thd. studs
	MHB-12D	26.5v d-c	4PDT	5	3.0 w	250	20.90		
<b>MH-18</b>									
	MH-18D	26.5v d-c	6PDT	5	3.0 w	240	\$23.75		<b>Vibration:</b> 15g to 1000 cps <b>Shock:</b> 50g operational <b>Operate:</b> 10 milliseconds <b>Release:</b> 5 milliseconds <b>Temp. MH:</b> -55°C to +85°C <b>MHB:</b> -65°C to +125°C <b>Weight:</b> 4.2 ounces max. <b>Mounting:</b> (2) 6-32 NC-2A thd. studs
	MHB-18D	26.5v d-c	6PDT	5	3.5 w	200	23.75		
<b>MHUO-12</b>									
	MHUO-12D	26.5v d-c	4PDT	5	2.5 w	300	\$20.90		<b>Vibration:</b> 15g to 1000 cps <b>Shock:</b> 50g operational <b>Operate:</b> 10 milliseconds <b>Release:</b> 5 milliseconds <b>Temp:</b> -55°C to +85°C <b>Weight:</b> 3.0 ounces max. <b>Mounting:</b> (2) 0.156 dia. holes <b>Socket:</b> Allied type 16188-1
<b>MHUO-18</b>									
	MHUO-18D	26.5v d-c	6PDT	5	3.0 w	240	\$23.75		<b>Vibration:</b> 15g to 1000 cps <b>Shock:</b> 50g operational <b>Operate:</b> 10 milliseconds <b>Release:</b> 5 milliseconds <b>Temp:</b> -55°C to +85°C <b>Weight:</b> 4.2 ounces max. <b>Mounting:</b> (2) 0.152 dia. holes <b>Socket:</b> Allied type 16189-1
<b>MHY</b>									
	MHY-12D	26.5v d-c	4PDT	10	3.5 w	200	\$25.41		<b>Vibration:</b> 20g to 500 cps <b>Shock:</b> 50g operational <b>Operate:</b> 10 milliseconds <b>Release:</b> 5 milliseconds <b>Temp:</b> -65°C to +125°C <b>Weight:</b> 4.2 ounces max. <b>Mounting:</b> (2) #6-32 NC-2A thd. studs




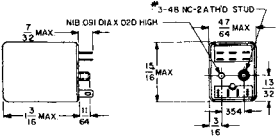
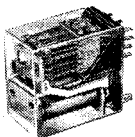
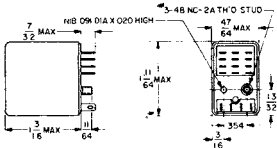
# ALLIED CONTROL

ALLIED CONTROL COMPANY INC., NEW YORK, NEW YORK

## TELEPHONE TYPE RELAYS

RELAY TYPE	COIL VOLTAGE OR CURRENT	CONTACTS		COIL POWER AT 25°C	COIL RESIST. OHMS	NET PRICE	OUTLINE DRAWING	DESCRIPTION
		FORMS	AMPS					
<b>SK</b> 	SK-4C 24v d-c	4PDT	2	1.5 w	425	\$4.60		Miniature size for front of panel wiring with an efficient metal to metal hinge. <b>Terminals:</b> elongated holes .062 x .125 <b>Weight:</b> 2.5 ounces max. <b>Mounting:</b> (2) 4-40 NC-2B thd.
<b>T154-2C</b> 	T154-2C 6v d-c T154-2C 12v d-c T154-2C 24v d-c T154-2C 48v d-c T154-2C 115v d-c	DPDT	2	700 mw 700 mw 700 mw 700 mw 700 mw	52 185 700 2500 15000	\$3.42 3.42 3.42 3.42 4.89		Features no internal wiring, contact arms extended to form combination solder and plug-in terminals. <b>Terminals:</b> Elongated holes .080 x .040 <b>Enclosure:</b> Dust cover <b>Weight:</b> 0.80 ounces max. <b>Socket:</b> Allied type 30055-1
<b>T154-4C</b> 	T154-4C 6v d-c T154-4C 12v d-c T154-4C 24v d-c T154-4C 48v d-c T154-4C 115v d-c	4PDT	2	700 mw 700 mw 700 mw 700 mw 700 mw	52 185 700 2500 15000	\$3.82 3.82 3.82 3.82 5.29		Features no internal wiring, contact arms extended to form combination solder and plug-in terminals. <b>Terminals:</b> Elongated holes .080 x .040 <b>Enclosure:</b> Dust cover <b>Weight:</b> 0.95 ounces max. <b>Socket:</b> Allied type 30055-2
<b>T154-6C</b> 	T154-6C 6v d-c T154-6C 12v d-c T154-6C 24v d-c T154-6C 48v d-c T154-6C 115v d-c	6PDT	2	1.5 w 1.5 w 1.5 w 1.5 w 1.5 w	25 90 430 1550 9000	\$4.95 4.95 4.95 4.95 5.85		Features no internal wiring, contact arms extended to form combination solder and plug-in terminals. <b>Terminals:</b> Elongated holes .080 x .040 <b>Enclosure:</b> Dust cover <b>Weight:</b> 1.0 ounces max. <b>Socket:</b> Allied type 30055-20

## BIFURCATED CONTACTS

RELAY TYPE	COIL VOLTAGE OR CURRENT	CONTACTS		COIL POWER AT 25°C	COIL RESIST. OHMS	NET PRICE	OUTLINE DRAWING	DESCRIPTION
		FORMS	AMPS					
<b>T-163-2C</b> 	T-163-2C 6v d-c T-163-2C 12v d-c T-163-2C 24v d-c T-163-2C 48v d-c T-163-2C 115v d-c	DPDT	2	700 mw 700 mw 700 mw 700 mw 700 mw	52 185 700 2500 15000	\$3.80 3.80 3.80 3.80 5.27		Same as T-154-2C except for bifurcated contacts and gold plated terminals and contacts for longer shelf life
<b>T-163-4C</b> 	T-163-4C 6v d-c T-163-4C 12v d-c T-163-4C 24v d-c T-163-4C 48v d-c T-163-4C 115v d-c	4PDT	2	700 mw 700 mw 700 mw 700 mw 700 mw	52 185 700 2500 15000	\$4.33 4.33 4.33 4.33 5.80		Same as T-154-4C except for bifurcated contacts and gold plated terminals and contacts for longer shelf life

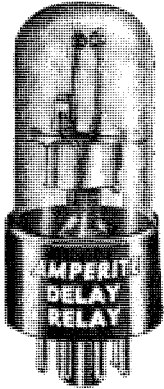


THERMOSTATIC

**AMPERITE**

DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT



STANDARD

## AMPERITE THERMOSTATIC DELAY RELAYS

Amperite Thermostatic Delay Relays are actuated by a heater . . . can therefore be used on A.C., D.C., or pulsating current. Being hermetically sealed, Amperite Relays are not affected by altitude, moisture, or other atmospheric conditions. **REPLACED AS EASILY AS A RADIO TUBE.**

**CIRCUITS SPST:** Available only — normally open or normally closed.

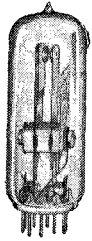
**HEATER VOLTAGES AVAILABLE:** 2.5, 5.0, 6.3, 12.6, 26, 50, 115V.  
For 220V use a 6500 ohm-5 watt resistor in series with 115V heater.

**HEATER WATTAGE:** Standard and Miniature Relays—all voltages—2w prox. All heaters may be operated continuously. Heaters will not be damaged by a 50% voltage overload for duration of 1 hour or less.

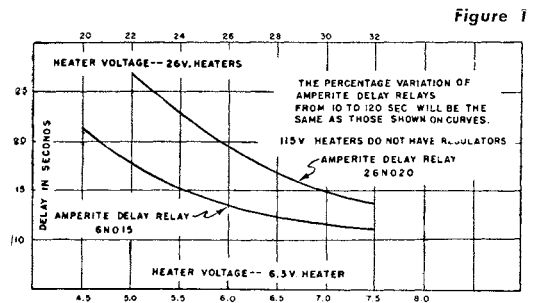
### VARIATION OF DELAY WITH HEATER VOLTAGE

FIGURE 1 — Effect of change in heater voltage on delay in seconds. Only low voltage heaters (2.5 to 26 V.) incorporate heater voltage regulations as shown in this diagram.

For 22 to 30 V. supply: We recommend Amperite Delay Relays with 26 V. heaters for airplanes and similar power supplies. These heaters are regulated for battery variation of 22 to 30 V. as shown in this diagram.



MINIATURE



### CONTACT RATING

	Delay	Contact Rating Non-Inductive	DC Voltage Breakdown	
			Contact-to-Contact	Heater-to-Contact
STANDARD RELAYS	2 to 10 Sec.	115V — 3a AC	250V	500V
	15 to 180 Sec.	115V — 3a AC	800V	800V
		220V — 1a AC	800V	800V
MINIATURE RELAYS	2 to 10 Sec.	115V — 2a AC	250V	500V
	15 to 180 Sec.	115V — 2a AC	800V	800V
		220V — 1a AC	800V	800V
FLASHERS		— 1/2a AC	250V	500V

**AMBIENT TEMPERATURES:** Relays are compensated for temperatures of  $-55^{\circ}$  to  $+80^{\circ}$ C. (Relays can be operated from  $-80^{\circ}$ C to  $+125^{\circ}$ C without damage). Ambient temperature tolerances depend on type. Low voltage heaters 26V or less have better ambient compensation than relays with 115V heaters. If the relays are actually to be used over ambients of  $-55^{\circ}$ C to  $+80^{\circ}$ C it is advisable to have each relay tested at the factory over the ambient. A nominal charge is made for this service.

**DELAYS AVAILABLE:** From 2 to 180 seconds. Relays can be used in series to obtain longer delays. The delay of any individual relay can be increased up to 50% by using a resistor in series with the heater. Relays with short delays such as 2 to 5 seconds can be increased 100%.

**CONTACT DROP:**  $-0.1V$  — Prox. at 1A.

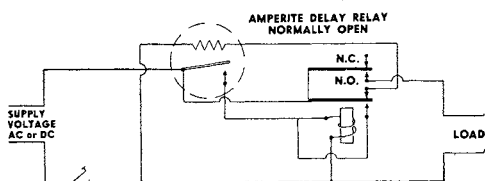
**LIFE** of any individual relay will depend on the service the contacts are subjected to. With a 115 V. — 2A A.C. non inductive load the contacts will withstand at least 250,000 operations. **SHELF LIFE** of Amperite Delay Relays is over 10 years.

**INDUCTIVE A.C. LOADS:** When breaking an inductive A.C. load, use a condenser of .01 to .1 mfd across contacts. In some cases, putting a 20,000 ohm, 5w. resistor across the contacts reduces the arcing considerably.

**Relay Contacts should not be used on voltages above 220V.**

**INSTANTANEOUS RECYCLE:** This can be obtained by using a normally open Amperite Delay Relay in conjunction with a DPDT Magnetic Relay as shown at left. If normally closed is required — use a normally open Amperite Delay Relay — and use the NC contacts on the magnetic relay. Choose the Amperite Delay Relay for the voltage required and the delay required (e.g. — 115N030 — would be used on 115 volt supply — for a 30 second delay).

**LONG RECYCLE RELAYS:** are also available. For example, Amperite Delay Relay 115N07T has a delay in closing of 3 to 8 seconds. After heater is disconnected, contacts will remain closed for 30 seconds minimum. Write us about your requirements.



**THERMOSTATIC**

**AMPERITE**

**DELAY RELAYS**

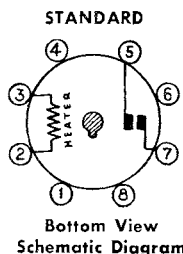
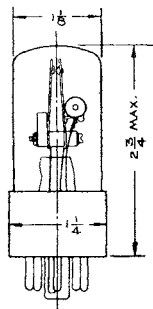
GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT



**BREAKING D.C. CURRENT:** When Relay contacts open D.C. Current above 50 volts, a condenser with a resistor in series with the condenser must be connected across the contacts. The following condenser values are approximate.

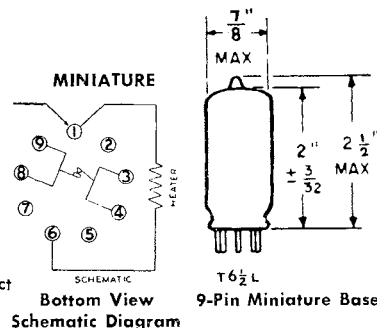
	50 V. D.C.	115 V. D.C.	230 V. D.C.
0 to .5 Amp.	None	.1 MF	.25 MF
.5 to 1.5 Amps.	"	.25 "	.25 "
1.5 to 3 Amps.	.25 MF	1 "	.5 "

**SPECIFICATIONS:**



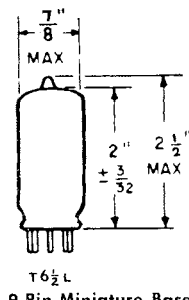
Bottom View Schematic Diagram

**Base Wiring:**  
Standard Radio Octal:  
Prongs 2-3-heater;  
Prongs 5-7-contacts.



Bottom View Schematic Diagram

**Base Wiring:**  
9-Pin Miniature:  
Prongs 1-6 heater;  
Prongs 3-4, 1 contact;  
Prongs 8-9, 2nd contact



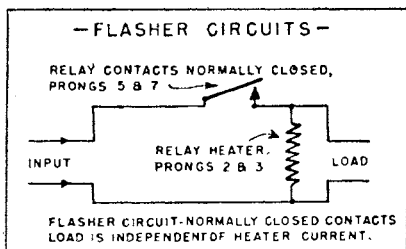
9-Pin Miniature Base

Standard Octal Base

**STANDARD AND MINIATURE TYPES OF AMPERITE DELAY RELAYS AND FLASHERS... Net \$2.40 each**  
**STANDARD RELAYS:** Available in 2 to 180 Seconds Delay. **MINIATURE RELAYS:** Available in 2 to 120 Seconds Delay.  
Types shown in Bold type in the chart below are more popular relays and are more readily available.

MINIATURE TYPES: Designated by letter T (e.g. 6N05T)

Delay-Seconds	Tolerance-Seconds at 20°C	NORMALLY OPEN CONTACTS						NORMALLY CLOSED CONTACTS							
		HEATER VOLTAGES						HEATER VOLTAGES							
		2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	50 V.	115 V.	2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	50 V.	115 V.
2	± 1½	2N02	5N02	6N02	12N02	26N02	50N02	115N02	2C2	5C2	6C2	12C2	26C2	50C2	115C2
3	± 1½	2N03	5N03	<b>6N03</b>	12N03	<b>26N03</b>	50N03	<b>115N03</b>	2C3	5C3	<b>6C3</b>	12C3	<b>26C3</b>	50C3	<b>115C3</b>
5	± 2½	2N05	5N05	<b>6N05</b>	12N05	<b>26N05</b>	50N05	<b>115N05</b>	2C5	5C5	<b>6C5</b>	12C5	<b>26C5</b>	50C5	<b>115C5</b>
8	± 3	2N08	5N08	<b>6N08</b>	12N08	<b>26N08</b>	50N08	<b>115N08</b>	2C8	5C8	<b>6C8</b>	12C8	<b>26C8</b>	50C8	<b>115C8</b>
10	± 4	2N010	5N010	<b>6N010</b>	12N010	<b>26N010</b>	50N010	<b>115N010</b>	2C10	5C10	<b>6C10</b>	12C10	<b>26C10</b>	50C10	<b>115C10</b>
15	± 4	2N015	5N015	<b>6N015</b>	12N015	<b>26N015</b>	50N015	<b>115N015</b>	2C15	5C15	<b>6C15</b>	12C15	<b>26C15</b>	50C15	<b>115C15</b>
20	± 5	2N020	5N020	<b>6N020</b>	12N020	<b>26N020</b>	50N020	<b>115N020</b>	2C20	5C20	<b>6C20</b>	12C20	<b>26C20</b>	50C20	<b>115C20</b>
30	±10	<b>2N030</b>	<b>5N030</b>	<b>6N030</b>	<b>12N030</b>	<b>26N030</b>	50N030	<b>115N030</b>	2C30	5C30	<b>6C30</b>	12C30	<b>26C30</b>	50C30	<b>115C30</b>
45	±10	2N045	5N045	<b>6N045</b>	12N045	<b>26N045</b>	50N045	<b>115N045</b>	2C45	5C45	<b>6C45</b>	12C45	<b>26C45</b>	50C45	<b>115C45</b>
60	±15	<b>2N060</b>	5N060	<b>6N060</b>	12N060	<b>26N060</b>	50N060	<b>115N060</b>	2C60	5C60	<b>6C60</b>	12C60	<b>26C60</b>	50C60	<b>115C60</b>
75	±15	2N075	5N075	<b>6N075</b>	12N075	<b>26N075</b>	50N075	<b>115N075</b>	2C75	5C75	<b>6C75</b>	12C75	<b>26C75</b>	50C75	<b>115C75</b>
90	±20	2N090	5N090	<b>6N090</b>	12N090	<b>26N090</b>	50N090	<b>115N090</b>	2C90	5C90	<b>6C90</b>	12C90	<b>26C90</b>	50C90	<b>115C90</b>
120	±35	2N0120	5N0120	<b>6N0120</b>	12N0120	<b>26N0120</b>	50N0120	<b>115N0120</b>	2C120	5C120	<b>6C120</b>	12C120	<b>26C120</b>	50C120	<b>115C120</b>
150	±35	2N0150	5N0150	<b>6N0150</b>	12N0150	<b>26N0150</b>	50N0150	<b>115N0150</b>	2C150	5C150	<b>6C150</b>	12C150	<b>26C150</b>	50C150	<b>115C150</b>
180	±45	2N0180	5N0180	<b>6N0180</b>	12N0180	<b>26N0180</b>	50N0180	<b>115N0180</b>	2C180	5C180	<b>6C180</b>	12C180	<b>26C180</b>	50C180	<b>115C180</b>



Flashers operate approximately 1/3 on, 2/3 off. The percentage time on can be increased by reducing the voltage of the heater.

Flashers available only in quantities of 12 or less. Cannot be supplied in production quantities.

Normally closed flashers are standard, and are indicated by the letter "F". The number following letter "F" denotes flashes per minute. For example, 6F30 flasher, has 6.3V heater, normally closed 30 FPM with a ± 1. flashes per minute tolerance. A 6F30T, would be the same type but in 9-pin miniature. Flashers are available from 30 to 90 Flashes per minute with tolerances as shown in the chart below:

FLASHERS have contact rating of 1/2a 115V AC, non-inductive.

Tol.	FPM - 20°C	Standard Flashers Available		
10 ± 5		6F10	26F10	115F10
30 ± 15		6F30	26F30	115F30
45 ± 15		6F45	26F45	115F45
60 ± 20		6F60	26F60	115F60
75 ± 20		6F75	26F75	
90 ± 25		6F90	26F90	



# DOW-KEY DK60 SERIES COAXIAL RELAYS

4 VERSATILE MODELS, AC or DC OPERATION  
UHF, N, BNC, TNC or C CONNECTORS

**r.f. SPECIFICATIONS:**

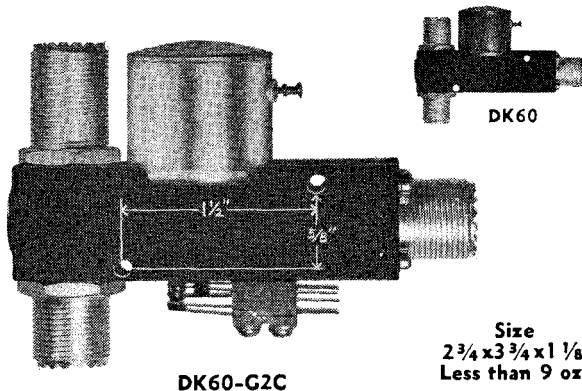
**Low VSWR:** Less than 1.15:1 from 0 to 500 mc — **Low Losses:** Pure silver contacts. All other parts used in crucial positions are plated with fine silver. (Gold plating available at extra cost, special order.) — **Low Cross-Talk:** (greater than 80 db) in DK60-G and DK60-G2C through the use of a patented "isolated connector" arrangement which opens the disconnected conductor and simultaneously provides an electrostatic shield between it and the rest of the circuit. — **High Power Rating:** (a) one kilowatt through straight connectors, (b) to 10 watts through "isolated connector" — excellent for video switching.

**MECHANICAL SPECIFICATIONS:**

**High Contact Pressures:** Long-Life Expectancy greater than one million operations. — **Continuous Duty:** Teflon feed-through terminals used on coil to provide connection ease. — **Small, Compact:** Only 2 3/4" x 3 3/4" x 1 1/2". — **Light-weight:** Less than 9 ounces.

**ELECTRICAL SPECIFICATIONS:**

**Wide variety of coil voltages:** 6, 12, 24, 28, 32, 48, 110, 220 D.C. volts at 2.0 watts; 6, 12, 24, 110, 220 A.C. Volts at 6 volt-amps 50-60 cps. (special voltage or resistances available on request.) — **Less than 50 degrees C temperature rise above ambient:** Maximum ambient temperature is 75 degrees C. Auxiliary contacts available for power control — DPDT at 5a, 100 v a.c. on DK60-2C and DK60-G2C.



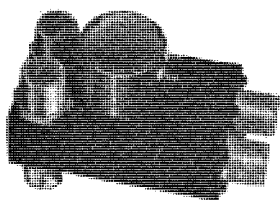
DK60-G2C

Size  
2 3/4 x 3 3/4 x 1 1/2  
Less than 9 oz.

**UNCONDITIONAL GUARANTEE**  
(We will repair if faulty within 1 year)

**STANDARD RELAYS, WITH  
TYPE UHF CONNECTORS, INCLUDE:**

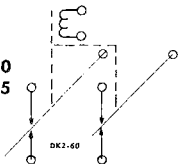
- **DK60** — SPDT r.f. switch each \$12.45
- **DK60-G** — SPDT r.f. switch with special "isolated" connector in de energized position each \$13.70
- **DK60-2C** — SPDT r.f. switch with DPDT auxiliary contacts each \$14.35
- **DK60-G2C** — SPDT r.f. switch with DPDT auxiliary contacts and special "isolated" connector in de-energized position each \$15.65



## DK2-60 DPDT Switch

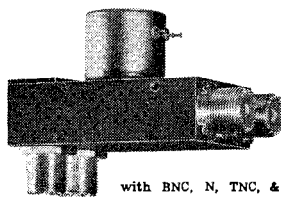
DK2-60 \$19.00  
DK2-60-2C \$20.95

available with BNC  
N, TNC, & C at  
slightly higher cost.



**Specifications:** Similar to DK60 series except — size: 2 3/4" x 3 3/4" x 1 3/4". Weight — less than 12 ounces.

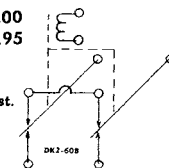
DK2-60 DPDT r.f. switch — for switching two coaxial lines simultaneously.



## DK2-60B r.f. By Pass Switch

DK2-60-B \$19.00  
DK2-60B-2C \$20.95

with DPDT  
aux contacts



with BNC, N, TNC, & C at slightly higher cost.

DK2-60B r.f. Bypass switch. Ideal for switching in and out a power amplifier between an exciter and an antenna.

# DK61 SERIES INDUSTRIAL AND MILITARY APPLICATIONS!

A compact, superb new DOW-KEY relay specifically designed, thoroughly tested and proven, for the rugged requirements of industrial and military application.

**R. F. SPECIFICATIONS:**

**Low VSWR:** Less than 1.10:1 from 0 to 400 mc. Less than 1.20:1 from 0 to 1000 mc. Contact material available for low and high power levels. — **Cross-Talk:** Greater than 40 db @ 400 mc. — **Power Rating:** 100 watts. — **Connectors Available:** Connectors shown are std., available in BNC, TNC, and other miniature connectors.

**ELECTRICAL SPECIFICATIONS:**

**Coil Voltages:** 6, 12, 24, 28, 48, 110 or 220 V DC at less than 3.0 watts — **Operating Time:** Less than 15 ms. Auxiliary SPDT or DPDT contacts available for power control rated at 3 a at 150 V DC.

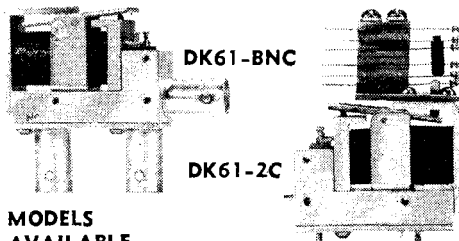
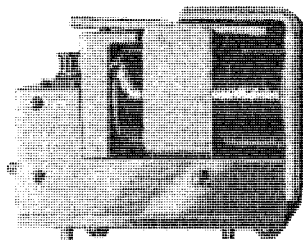
**ENVIRONMENTAL AND MECHANICAL SPECIFICATIONS:**

**Operating Temperature Range:** -65 degrees C. to 125 degrees C. — **Duty Cycle:** Continuous. — **Life Expectancy:** Greater than 500,000. — **Vibration:** Withstands vibration tests in accordance with MIL-STD-202B, test condition B. — **Finish:** Silver Plated per Mil Spec QQ-S-365 and cadmium plated per QQ-P-416 to withstand salt spray and humidity tests. — **Weight:** less than 4 ounces.

**COAXIAL CONNECTORS:** Write for catalog sheet on coaxial connectors and adapters from UHF, to BNC and UHF to Phono Series, etc.

Manufactured by DOW-KEY COMPANY, Thief River Falls, Minnesota

DK61  
Actual Size  
11/16" x 1-3/16"  
x 1-9/16"



**MODELS  
AVAILABLE**

- DK61: With Dow-Key solder type connectors ----- \$25.50
  - DK61-BNC: BNC Connectors ----- \$26.50
  - DK61-TNC: TNC Connectors ----- \$26.50
- Available with SPDT (add 1c to model No.) and DPDT (add 2c to model No.) auxiliary contacts.

# DK67 SERIES

The Dow-Key DK67 series are adaptable, high performance coaxial relays. The relays can be obtained with non-shorting, shorting, or resistor terminated contacts and four different connector configurations.

**Coil Ratings:** Available in 6, 12, 24, 28, 32, 48, 110 and 220 A.C. and D.C. Power consumption D.C. — 2 watts; A.C. — 6VA.

**R.F. Ratings:** 100 watts power rating to 2000 mc.

**VSWR:** Less than 1.3:1 @ 2000 mc; Less than 1.1:1 @ 400 mc.

**Isolation:** Greater than 40 db @ 2000 mc and greater than 60 db @ 400 mc in DK67 with shorting contacts.

**Contacts:** 3/32 fine silver are standard; other types available per request.

**Life Expectancy:** Over 500,000 cycles at rated load when operated at a rate of less than 2 cycles per second.

**Operating Time:** Less than 15 milliseconds D.C. types. Less than 25 milliseconds A.C. types.

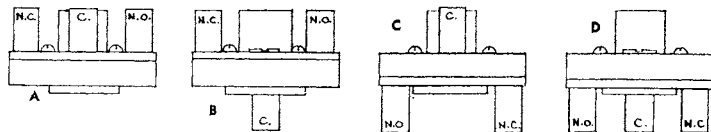
**Operating Temperature Range:** -65° C to +85° C.

**R.F. Connectors:** BNC or TNC.  
**Finish:** Silver per MIL-QQ-S-365, Cadmium per MIL-QQ-P-416.

**Salt Spray:** MIL-STD-202, 48 hr. test condition B.

**Humidity:** MIL-STD-202, 10 day.

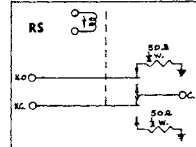
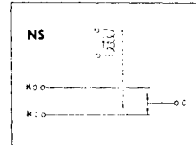
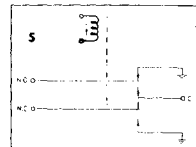
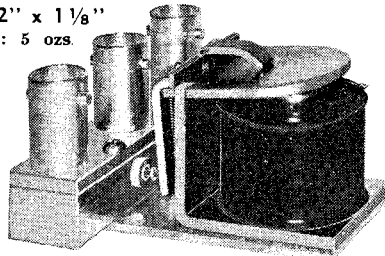
**Vibration:** Type I per MIL-STD-167.



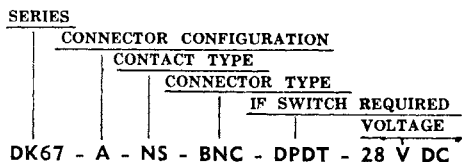
**Size:** 2 1/4" x 2" x 1 1/8"  
**Weight:** 5 ozs.

**Connector Configurations**

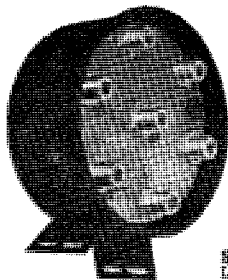
**CONTACT TYPES**



**ORDER SPECIFICATIONS and DESIGNATION:**



Available with DPDT auxiliary switches. Net each \$18.50 (additional for models with auxiliary switches or resistor terminated.)



## DK71

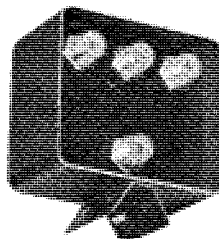
FOR REMOTE SELECTION OF r.f. SOURCES

### SINGLE POLE, SIX THROW MULTI-POSITION SWITCH

**Specifications:**

Low VSWR: Less than 1.1:1 at 100 mc — Cross-talk: greater than 45 db at 100 mc — High power rating: 1 kw — Coaxial connectors: UHF is standard, but available also with N, BNC, TNC and C at slightly higher cost — 50 ohm impedance — weatherproof — continuous duty, over 1,000,000 operations — size 5 3/4" x 2 3/4" — weight 3 pounds — available in all standard A.C. and D.C. operating voltages.

**DK71**  
with UHF Connector  
**\$4950**



## DOW-KEY DK72

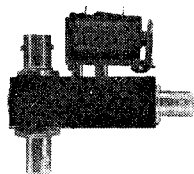
### SINGLE POLE THREE THROW COAXIAL SWITCH

SIZE: 4" x 3 1/2" x 2 3/8"; Wt.: 1 lb., 8 oz.

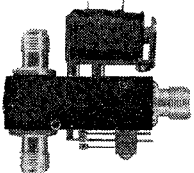
Weatherproof coaxial relay for remote switching of r.f. sources. Designed for mounting on mast and remote switching up to 3 antennas. Not a rotating or stepping switch. Simplify installation, save money by running one cable instead of several to your antenna array.

See your dealer for catalog sheet and complete specifications, or write.

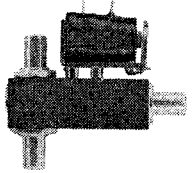
**MODEL DK72 with UHF Connectors** — \$22.95  
**With type N, BNC, TNC or C Connectors** — \$26.95



DK77-BNC



DK77-TNC-1C



DK77-PH

Size 2 1/8 x 2 3/8

## DK77 Series

### SPDT RELAYS

Miniature, low-cost series of 50 ohm SPDT coaxial relays available with phono, TNC and BNC coaxial connectors — with high performance characteristics.

Frequency range 0 to 1000 mc. Power rating to 250 watts.

VSWR less than 1.1:1 at 500 mc. Isolation greater than 30 db at 500 mc.

Insertion loss less than .03 db at 500 mc.

Life expectancy over 1,000,000 operations.

Models with 1C in mfrs. type have SPDT auxiliary switches rated at 5 amp at 110 VAC resistive.

Wt. — less than 3.5 ozs.

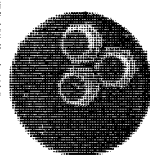
Comply with MIL-5541, AN-C-170 and MIL-S-5002.

**PRICING**

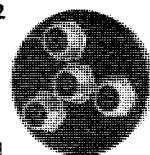
DK77-BNC, TNC, or PH **Net Each \$7.90**

DK77-BNC-1C, TNC-1C, or PH-1C (with external SPDT switch) **\$9.00**

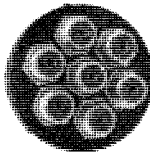
## DK78 SERIES



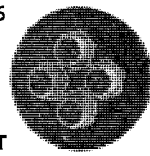
DK78-2



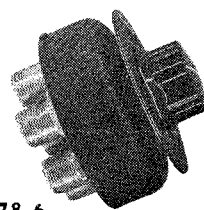
DK78-3



DK78-6



DK78-T



DK78-6

### DOW-KEY NEW MANUAL COAXIAL SWITCHES

Dow-Key Company's new manual series of coaxial switches with excellent R.F. characteristics (not wafer switches). R.F. Rating, 1 KW. VSWR less than 1.05:1 at 150 mc. Isolation greater than 50 db at 500 mc and greater than 80 db at 30 mc. With dial plate and knob. Wt. — 10 ozs. Size — 3" dia. x 1-1/8" deep.

**Net Each**  
Model DK78-2, single pole double throw — \$12.75  
Model DK78-3, single pole three throw — \$12.75  
Model DK78-6, single pole six throw — \$15.75  
Model DK78-T, transfer-crossover switch — \$15.75

Available also with BNC, TNC, and N connectors at slightly higher cost.

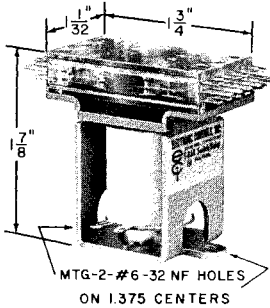
DOW-KEY products available at your local distributor or write:

**Manufactured by DOW-KEY COMPANY, Thief River Falls, Minnesota**



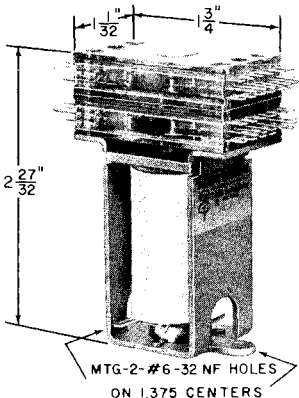
# T-BAR® RELAYS

SWITCH MORE CIRCUITS IN LESS SPACE...CONTROL UP TO 36 CIRCUITS SIMULTANEOUSLY



**SERIES 801 12 poles, single wafer**

COIL CHARACTERISTICS				Operate & Release Times	Weight Oz.	Net** 1-24
Voltage* VDC	Resistance Ohms	Current Amps	Watts @ Nom. Volts			
6	11.9	0.504	3.01	Maximum operate time 30 milliseconds; less, for "A" form contacts or fewer poles.	4.5	\$14.39
12	49.1	0.244	2.96		4.5	14.39
24	193	0.124	2.98		4.5	13.09
28	2.58	0.109	3.03		4.5	13.09
48	778	0.062	2.98		4.5	14.39
110	3963	0.028	3.05		4.5	13.09



**SERIES 801 24 poles, double wafer**

6	11.09	0.541	3.24	Maximum operate time 30 milliseconds; less, for "A" form contacts or fewer poles.	5	\$25.89
12	45	0.267	3.19		5	25.89
24	174	0.138	3.32		5	23.54
28	227	0.123	3.44		5	23.54
48	674	0.071	3.41		5	25.89
110	3450	0.032	3.54		5	23.54

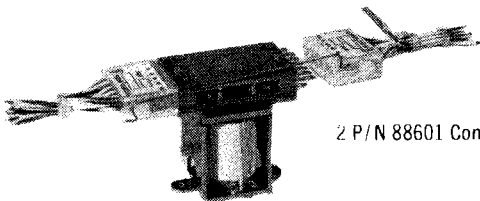
**SERIES 801 36 poles, triple wafer**

6	7	0.857	5.06	Maximum operate time 30 milliseconds; less, for "A" form contacts or fewer poles.	5.5	\$34.89
12	28	0.429	5.16		5.5	34.89
24	111	0.216	5.15		5.5	31.72
28	150	0.187	5.23		5.5	31.72
48	438	0.110	5.26		5.5	34.89
110	2355	0.047	5.18		5.5	31.72

\*Minimum pull in voltage 80% of Nominal at 20°C

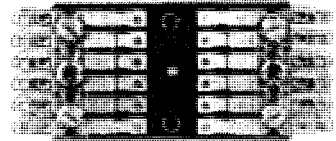
\*\*These prices refer only to "C" form variations.

**Ordering Information:** Specify series number, followed by dash; then number of poles plus the form letter and coil voltage. (For example, a 36-pole relay, double throw, with 24 volt coil is 801-36C24.)



2 P/N 88601 Connector, illustrated, contacts are snap-in.

T-Bar Switches are also available in toggle, momentary and lighted pushbutton variety.



## GENERAL FEATURES

### CONTACT RATINGS:

Non inductive.  
135w, 3 amps make & break  
150w, 5 amps carry

### CONTACT MATERIAL:

Gold-bonded fine silver (others available on special order)

### CONTACT FORMS AVAILABLE:

"A" single throw N.O.  
"B" single throw N.C.  
"C" double throw

### CONTACT LIFE (in cycles):

Mechanical—Min. 5,000,000  
Electrical—From a minimum of 1,000,000 at 100 mills to a minimum of 100,000 at 3 amps, 135w resistive.

### COIL VOLTAGES:

Standard—24, 28 and 110 VDC  
6, 12 and 48 VDC or 110 VAC  
also available at additional cost.

Others—consult factory

### OPERATE & RELEASE TIMES:

Both vary with number of poles and contact form.  
See table for standard values; consult factory for others.

### DIELECTRIC:

Terminal-to-Case: 1000 VAC @ std. sea level and 20°C  
Terminal-to-Terminal: 750 VAC @ std. sea level and 20°C

### TEMPERATURE RANGE:

−55°C to +85°C

### TERMINALS:

Solder tab (standard) which also mates with 18-pin T-Bar connector P/N 88601. (See photograph)

### DUST-TIGHT CONTACT ENCLOSURE

Patent Pending



electronic controls, inc., Wilton, Conn.

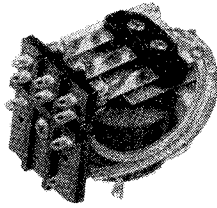
# GLOBE RELAYS

## MIDGET SERIES

### TYPE "W" MIDGET GENERAL PURPOSE

This relay offers high reliability at a minimum cost. The silver cadmium-oxide contacts are mounted on beryllium copper blades.\*\* There is good contact wiping action. This unit operates well in ambient temperatures up to 125° C.  
\*\* Fine silver contacts for 5 amp applications.

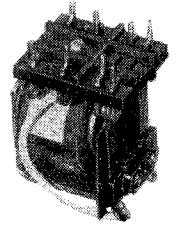
- CONTACTS:** 5 amps @ 24 VDC or 115 VAC, 10 amps @ 24 VDC or 115 VAC. Arrangement 1, 2 or 3 PDT.  
**COIL:** D-C applications up thru 120 VDC, A-C applications up thru 230 VAC.  
**MOUNTING:** One 6-32 screw and keying boss to prevent turning.



### TYPE "WP" MIDGET PRINTED CIRCUIT

Relay is identical to the "W" type using the same integrally moulded parts. The terminals are designed for direct mounting into printed circuit boards. They will fit into .050 inch diameter holes and project 1/2 inch beyond an 1/8 inch thick circuit board. Base plate area on the board is only 1.070 x .890 inches. Dimensional artwork for hole configuration is available.

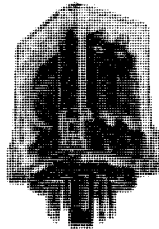
- CONTACTS:** 5 amps @ 24 VDC or 115 VAC, 10 amps @ 24 VDC or 115 VAC. Arrangement 1, 2 or 3 PDT.  
**COIL:** D-C applications up thru 120 VDC, A-C applications up thru 120 VAC.  
**MOUNTING:** Soldered into printed circuit boards.



### TYPE "WC" MIDGET GENERAL PURPOSE WITH DUSTITE ENCLOSURE

Relay is identical to type "W." However, the unit provides a clear dust-proof polystyrene case on Octal type plug-in base. Operating temperatures up to 85° C ambient. Variation of base or a hermetically sealed can, can be provided on request. This unit comes in standard Globe wiring. For special wiring to meet existing installations specify "WZ" wiring.

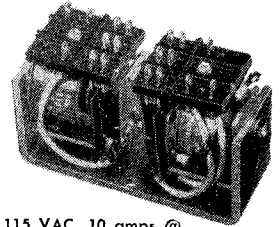
- CONTACTS:** 5 amps @ 24 VDC or 115 VAC, 10 amps @ 24 VDC or 115 VAC. Arrangement 1, 2 or 3 PDT.  
**COIL:** D-C applications up thru 120 VDC, A-C applications up thru 230 VAC.  
**MOUNTING:** Octal plug-in.



### TYPE "WL" MIDGET LATCHING

This latching relay may be had with either coil to operate at any specified voltage. It is designed that either coil may be used to operate the contacts into a latched position. The other coil will latch or unlatch the contacts into the opposite position.

- CONTACTS:** 5 amps @ 24 VDC or 115 VAC, 10 amps @ 24 VDC or 115 VAC.  
**COIL:** D-C applications up thru 120 VDC, A-C applications up thru 230 VAC on either coil.  
**MOUNTING:** 2 holes for #6 screws in center of frame.



### PRICES (SUBJECT TO CHANGE)

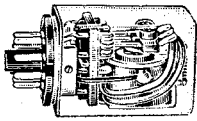
Voltage	Current	Coil D-C Resistance	5 Ampere Contacts				10 Ampere Contacts			
			"W," "WP" Open		"WC" Dustite		"W," "WP" Open		"WC" Dustite	
			Part No.	Price(Net)	Part No.	Price(Net)	Part No.	Price(Net)	Part No.	Price(Net)
PLATE	9 to 30MA	2,500 Ω	1W1	\$3.50	1WC1	\$5.50	1W20	\$3.75	1WC20	\$5.80
			2W1	4.20	2WC1	6.60	2W20	4.45	2WC20	6.75
			3W1	4.90	3WC1	8.10	3W20	5.95	3WC20	8.55
PLATE	7 to 20MA	5,000 Ω	1W2	3.95	1WC2	5.95	1W21	4.20	1WC21	6.25
			2W2	4.60	2WC2	7.00	2W21	4.85	2WC21	7.15
			3W2	5.45	3WC2	8.45	3W21	5.70	3WC21	8.90
PLATE	4 to 14MA	10,000 Ω	1W3	4.35	1WC3	6.35	1W22	4.60	1WC22	6.65
			2W3	5.00	2WC3	7.40	2W22	5.25	2WC22	7.55
			3W3	5.85	3WC3	8.85	3W22	6.10	3WC22	9.30
6V. D-C	200MA	30 Ω	1W4	3.05	1WC4	5.10	1W23	3.50	1WC23	5.55
			2W4	3.35	2WC4	5.65	2W23	3.80	2WC23	6.10
			3W4	3.75	3WC4	6.95	3W23	4.40	3WC23	7.60
12V. D-C	120MA	100 Ω	1W5	3.05	1WC5	5.10	1W24	3.50	1WC24	5.55
			2W5	3.35	2WC5	5.65	2W24	3.80	2WC24	6.10
			3W5	3.75	3WC5	6.95	3W24	4.40	3WC24	7.60
24V. D-C	53MA	450 Ω	1W6	3.05	1WC6	5.10	1W25	3.50	1WC25	5.55
			2W6	3.35	2WC6	5.65	2W25	3.80	2WC25	6.10
			3W6	3.75	3WC6	6.95	3W25	4.40	3WC25	7.60
115V. D-C	15MA	8,000 Ω	1W7	3.55	1WC7	5.65	1W26	4.00	1WC26	6.05
			2W7	3.85	2WC7	6.15	2W26	4.30	2WC26	6.60
			3W7	4.55	3WC7	7.45	3W26	5.20	3WC26	8.40
6V. A-C	400MA	5 Ω	1W8	3.05	1WC8	5.15	1W27	3.50	1WC27	5.60
			2W8	3.55	2WC8	5.75	2W27	4.00	2WC27	6.40
			3W8	4.05	3WC8	7.05	3W27	4.70	3WC27	7.70
12V. A-C	150MA	20 Ω	1W9	3.05	1WC9	5.15	1W28	3.50	1WC28	5.60
			2W9	3.55	2WC9	5.75	2W28	4.00	2WC28	6.40
			3W9	4.05	3WC9	7.05	3W28	4.70	3WC28	7.70
24V. A-C	120MA	70 Ω	1W10	3.05	1WC10	5.15	1W29	3.50	1WC29	5.60
			2W10	3.55	2WC10	5.75	2W29	4.00	2WC29	6.40
			3W10	4.05	3WC10	7.05	3W29	4.70	3WC29	7.70
115V. A-C	25MA	1,500 Ω	1W11	3.05	1WC11	5.15	1W30	3.50	1WC30	5.60
			2W11	3.55	2WC11	5.75	2W30	4.00	2WC30	6.40
			3W11	4.05	3WC11	7.05	3W30	4.70	3WC30	7.70
230V. A-C	8MA	8,000 Ω	1W12	3.55	1WC12	5.75	1W31	4.00	1WC31	6.10
			2W12	4.05	2WC12	6.25	2W31	4.50	2WC31	6.90
			3W12	4.25	3WC12	7.55	3W31	5.20	3WC31	8.20

globe electrical mfg. co.  gardena, california

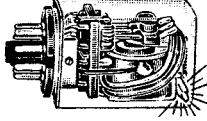
Write for technical information and complete catalog of Globe Relays.

# GUARDIAN RELAYS

## ENCLOSED PLUG-IN AC-DC RELAYS



Type 1210 and 1215



Type 1210-N

Type 1210—Small size relay in Lucite enclosure for efficient, dust-free, and trouble-free operation. This transparent, lightweight LEXAN<sup>®</sup> case has high impact strength, unaffected by weather and is resistant to temperatures of 200° F. Relay is powerful and economical. Available with 8 pin octal plug for DPDT and 11 pin for 3 PDT. Contacts rated for 8 amperes, 60 cycles, 115 v. AC non-inductive. Type 1210-N—Plug-in relay utilizes a miniature neon lamp connected across coil terminals. The lamp lights each time the coil is energized, or indicates a circuit fault when lamp is "dark." Ideal for detecting circuit faults in relay banks, mass relay arrangements, or where relays are visibly located at intermediate switching points of the circuitry. Precludes the use of circuit testers. Available with 8 pin octal plug for DPDT and 11 pin for 3 PDT. Contact rated 10 amperes at 115 v. AC, 60 c., non-inductive load. Size 1210 and 1210-N: 2<sup>3</sup>/<sub>32</sub>" x 1<sup>3</sup>/<sub>16</sub>" x 1<sup>3</sup>/<sub>16</sub>". Shpg. Wt. 3.5 oz. †Registered DuPont trademark.

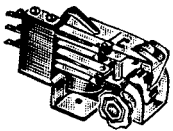
### ENCLOSED PLUG-IN RELAYS—AC-DC

Guardian Number	Volts	Cont. Comb.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250 up
1210-N-G115	115AC	DPDT	\$6.75	\$6.08	\$5.74	\$5.40	\$4.73
1210-N-GC115	115AC	3PDT	8.00	7.20	6.80	6.40	5.60
1210-G6	6AC	DPDT	6.00	5.40	5.10	4.80	4.20
1210-GC6	6AC	3PDT	7.50	6.75	6.38	6.00	5.25
1210-G24	24AC	DPDT	6.98	5.40	5.10	4.80	4.20
1210-GC24	24AC	3PDT	7.50	6.75	6.38	6.00	5.25
1210-G115	115AC	DPDT	6.00	5.40	5.10	4.80	4.20
1210-GC115	115AC	3PDT	7.50	6.75	6.38	6.00	5.25
1210-G230	230AC	DPDT	6.25	5.63	5.31	5.00	4.38
1210-GC230	230AC	3PDT	7.75	6.98	6.59	6.20	5.43
1215-G6	6DC	DPDT	6.00	5.40	5.10	4.80	4.20
1215-GC6	6DC	3PDT	7.50	6.75	6.38	6.00	5.25
1215-G12	12DC	DPDT	6.00	5.40	5.10	4.80	4.20
1215-GC12	12DC	3PDT	7.50	6.75	6.38	6.00	5.25
1215-G24	24DC	DPDT	6.00	5.40	5.10	4.80	4.20
1215-GC24	24DC	3PDT	7.50	6.75	6.38	6.00	5.25
1215-G110	110DC	DPDT	6.50	5.85	5.53	5.20	4.55
1215-GC110	110DC	3PDT	8.00	7.20	6.80	6.40	5.60

### ENCLOSED PLATE CIRCUIT PLUG-IN RELAYS—DC

Guardian Number	Coil Res.	Comb. Cont.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250 up
1215-G2.5	2500	DPDT	\$6.20	\$5.58	\$5.27	\$4.96	\$4.34
1215-GC2.5	2500	3PDT	7.25	6.53	6.16	5.80	5.08
1215-G5	5000	DPDT	6.30	5.67	5.36	5.04	4.41
1215-GC5	5000	3PDT	7.50	6.75	6.38	6.00	5.25
1215-G10	10000	DPDT	6.50	5.85	5.53	5.20	4.55
1215-GC10	10000	3PDT	7.75	6.98	6.59	6.20	5.43

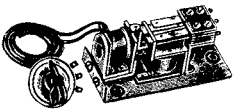
## IMPULSE RACHET RELAYS—AC



Type 670—For on/off control of lighting, motors, appliances and speaker applications, among others. Highly reliable operation over 1,000,000 steps. Each impulse (up to 10 steps per second) reverses contact. Contact arrangements of SPDT and DPDT; ratings to 12½ amps resistive load at 115 v., 60 cycles. Intermitent duty coil with voltage of 115 v. AC, 60 cycles. Size, 3" x 1<sup>3</sup>/<sub>16</sub>" x 2<sup>1</sup>/<sub>16</sub>". Shipping Weight, 7.5 ounces.

Guardian Number	Cont. Comb.	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250 up
670-C115	SPDT	\$6.50	\$5.85	\$5.53	\$5.20	\$4.55
670-G115	DPDT	7.00	6.30	5.95	5.60	4.90

## DC ELECTRICAL RESET OVERLOAD RELAY



Type X-300-ER—Applicable for use in industrial panel installation, for remote protection of machines and replacing fuses. Provides precise protection from current surges and continuous overloads. Remote panel installation of the control potentiometer simplifies adjustment of relay to operate on any current value from 250 to 750 milliamperes.

Auxiliary for pilot light indication of "overload" or "clear" position. Reset relay can be operated from any point convenient to operator. Insulation between coil and ground rated at 3,000 volts. Size, 4<sup>3</sup>/<sub>16</sub>" x 2" x 1<sup>1</sup>/<sub>16</sub>".

Guardian Number	Shipping Weight	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250 up
X-300-ER	13 oz.	\$9.50	\$8.55	\$8.08	\$7.60	\$6.65

## ENGINEER'S SWITCH KIT

Indispensable to those who design, build or test electrical controls. Contains large assortment of switch blades, contacts, separators, adapters, fish paper, bushings, etc.

Engineer's Switch Kit—Net Ea. \$10.95



## MEDIUM POWER AC-DC RELAYS

Type 1200—Rated at 10 amps, 60 cycles, 115 v. non-inductive load. Heavy solder lug type terminals molded in phenolic block, with barriers for over-surface insulation, built to meet U/L specifications. Applicable to automation, communications, remote control, selectors, switching devices and experimental uses. Size, 1<sup>5</sup>/<sub>16</sub>" x 1" x 1<sup>1</sup>/<sub>16</sub>". Shipping Weight, 2.5 oz.



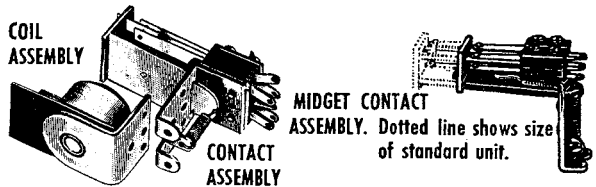
### 60 CYCLES—AC COILS

Guardian Number	Volts	Cont. Comp.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250 up
1200-G6	6	DPDT	\$3.75	\$3.38	\$3.19	\$3.00	\$2.63
1200-GC6	6	3PDT	4.25	3.83	3.61	3.40	2.98
1200-G24	24	DPDT	3.75	3.38	3.19	3.00	2.63
1200-GC24	24	3PDT	4.25	3.83	3.61	3.40	2.98
1200-C115	115	SPDT	3.50	3.15	2.98	2.80	2.45
1200-G115	115	DPDT	3.75	3.38	3.19	3.00	2.63
1200-GC115	115	3PDT	4.25	3.83	3.61	3.40	2.98
1200-G230	230	DPDT	4.00	3.60	3.40	3.20	2.80
1200-GC230	230	3PDT	4.50	4.05	3.83	3.60	3.15

### DC COILS

Guardian Number	Volts	Cont. Comp.	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250 up
1205-G6	6	DPDT	\$3.40	\$3.06	\$2.89	\$2.72	\$2.38
1205-GC6	6	3PDT	3.85	3.47	3.27	3.08	2.70
1205-G12	12	DPDT	3.40	3.06	2.89	2.72	2.38
1205-GC12	12	3PDT	3.85	3.47	3.27	3.08	2.70
1205-C24	24	SPDT	3.20	2.88	2.72	2.56	2.24
1205-G24	24	DPDT	3.40	3.06	2.89	2.72	2.38
1205-GC24	24	3PDT	3.85	3.47	3.27	3.08	2.70
1205-G110	110	DPDT	3.75	3.38	3.19	3.00	2.63
1205-GC110	110	3PDT	4.25	3.83	3.61	3.40	2.98

## SERIES 200 RELAY WITH COMPLETELY INTERCHANGEABLE COIL AND CONTACT ASSEMBLIES



The coil assembly consists of the coil and field piece; the contact assembly consists of switch blades, armature, return spring and mounting bracket. The Guardian Midget Contact Assembly is interchangeable with the standard Series 200 coil assembly. Available with SPDT, DPDT or 4PDT contact switch assemblies, each interchangeable with all AC or DC coils.

### SERIES 200 RELAY

Guardian Number	Volts	Coil	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250 up
200-6A	6	AC	\$1.75	\$1.58	\$1.49	\$1.40	\$1.23
200-12A	12	AC	1.75	1.58	1.49	1.40	1.23
200-24A	24	AC	1.75	1.58	1.49	1.40	1.23
200-115A	115	AC	2.05	1.85	1.74	1.64	1.44
200-230A	230	AC	2.70	2.43	2.30	2.16	1.89
200-6D	6	DC	1.90	1.71	1.62	1.52	1.33
200-12D	12	DC	1.90	1.71	1.62	1.52	1.33
200-24D	24	DC	1.90	1.71	1.62	1.52	1.33
200-32D	32	DC	1.90	1.71	1.62	1.52	1.33
200-110D	110	DC	2.50	2.25	2.13	2.00	1.75
200-5,000D	.....	†	2.20	1.98	1.87	1.76	1.54
200-10,000D	.....	†	2.50	2.25	2.13	2.00	1.75

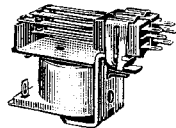
†Plate

### CONTACT SWITCH ASSEMBLIES

Guardian Number	Type	*	Cont. Comb.	Net Each, Lots of				
				1-24	25-49	50-99	100-249	250 up
200-1	Standard	8	SPDT	\$1.50	\$1.35	\$1.28	\$1.20	\$1.05
200-2	Standard	8	DPDT	2.00	1.80	1.70	1.60	1.40
200-4	Standard	12.5	DPDT	2.25	2.03	1.91	1.80	1.57
200-5	Standard	8	4PDT	3.50	3.15	2.98	2.80	2.45
200-M1	Midget	10	SPDT	1.40	1.26	1.19	1.12	.98
200-M2	Midget	10	DPDT	1.75	1.58	1.49	1.40	1.23
200-M5	Midget	8	4PDT	2.85	2.57	2.42	2.28	2.00

\*Contact Amps.

### NEW SERIES 900 10-AMP RELAY



Underwriters' Laboratories Listed (115 VAC)  
 • Designed with reduced number of parts for long, trouble-free service  
 • Has keyed and locked ladders  
 Dependable, low cost, DPDT relay featuring new, trouble-free design that incorporates a minimum of parts. Contacts all rated 10 amps, 115 VAC resistive load. Has molded switches, one-piece mounting clip and return spring; molded bobbin and coil cover. Average shipping weight 6 oz.

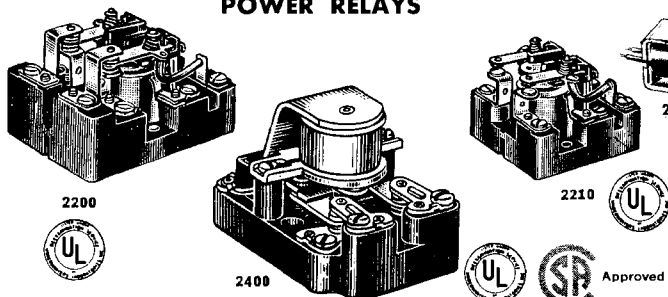
Guardian No.	Coil Voltage	QUANTITIES		
		1-9	10-24	25-49
900-2C-24A	24 AC	\$1.75	\$1.66	\$1.49
900-2C-115A	115 AC	1.75	1.66	1.49
900-2C-230A	230 AC	1.75	1.66	1.49
905-2C-6D	6 DC	1.75	1.66	1.49
905-2C-12D	12 DC	1.75	1.66	1.49
905-2C-24D	24 DC	1.75	1.66	1.49

UL approved CSA approved

Further savings are available when Series 900 relays are purchased in bulk packs of 50 units. Relays are supplied nested in new, convenient "form fitted" assembly line trays . . . one package of 50—\$70.00; 2 and up—\$61.50 ea.

# GUARDIAN RELAYS

## POWER RELAYS



### SERIES 2200 AND 2210—25 AMPS

2200 (DPDT) and 2210 (DPST-NO) power relays have 25 ampere contacts and interchangeable coil assemblies for either relay. See list below. Replaceable contact switch parts (see lists) available for Series 2200 only. Mounting: 2 holes, 1.96" dia. holes on 1 7/8" centers. Size: 2200—3 3/8" l. x 2 1/2" w. x 2 3/16" h. Shpg. Wt., 11 oz.; 2210—2 1/2" l. x 2 1/2" w. x 2 3/16" h. Shpg. Wt., 10 oz.

Guardian Number	Volts AC	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250 up
2200-UDPDT-6	6	\$4.25	\$5.63	\$5.31	\$5.00	\$4.38
2200-UDPDT-24	24	6.25	5.63	5.31	5.00	4.38
2200-UDPDT-115	115	6.25	5.63	5.31	5.00	4.38
2200-UDPDT-230	230	6.75	6.08	5.74	5.40	4.73
2210-UDPST-NO-6	6	5.25	4.73	4.46	4.20	3.68
2210-UDPST-NO-24	24	5.25	4.73	4.46	4.20	3.68
2210-UDPST-NO-115	115	5.25	4.73	4.46	4.20	3.68
2210-UDPST-NO-230	230	5.60	5.04	4.76	4.48	3.92

### REPLACEMENT COILS FOR EITHER RELAY

Guardian Number	Volts AC	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250 up
2200-6A	6	\$2.25	\$2.03	\$1.91	\$1.80	\$1.58
2200-24A	24	2.25	2.03	1.91	1.80	1.58
2200-115A	115	2.25	2.03	1.91	1.80	1.58
2200-230A	230	2.50	2.25	2.13	2.00	1.75

### REPLACEMENT CONTACT SWITCH PARTS

For Series 2200 only. No solder required. Includes one NO and one NC contact bracket, moving blade and terminal. "Right" or "Left" determined by viewing relay from armature hinge end with contacts up.

Guardian Number	Type	Net Each, Lots of				
		1-24	25-49	50-99	100-249	250 up
CS-2200	Left	\$1.85	\$1.67	\$1.57	\$1.48	\$1.30
CS-2200	Right	1.85	1.67	1.57	1.48	1.30

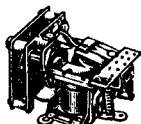
### SERIES 2400 AC AND 2405 DC—15 AMPS

Both series have standard DPDT contacts rated for 15 amps non-inductive or 1 hp at 115/230 v., 60 cycles. Inverted coil construction protects armature and contacts to insure long life, reliable operation. Screw type terminals easily accessible for top or bottom connections. Armature extension permits manual circuit testing. Mounting: Two 1.96" dia. holes on 1 7/8" centers. Size, 3 3/8" x 2 1/2" x 2 3/16". Shipping Weight, 8 oz.

Guardian Number	Volts AC	Amps	Net Each, Lots of				
			1-24	25-49	50-99	100-249	250 up
2400-UDPDT-6	6*	15	\$5.75	\$5.18	\$4.89	\$4.60	\$4.03
2400-UDPDT-24	24*	15	5.75	5.18	4.89	4.60	4.03
2400-UDPDT-115	115*	15	5.75	5.18	4.89	4.60	4.03
2400-UDPDT-230	230*	15	6.00	5.40	5.10	4.80	4.20
2405-UDPDT-6	6†	15	5.75	5.18	4.89	4.60	4.03
2405-UDPDT-12	12†	15	5.75	5.18	4.89	4.60	4.03
2405-UDPDT-24	24†	15	5.75	5.18	4.89	4.60	4.03
2405-UDPDT-110	110†	15	6.25	5.63	5.31	5.00	4.38
2400-SPDT-AUX Aux. Swch	.....	10	1.35	1.22	1.15	1.08	.95

\*AC. †DC.

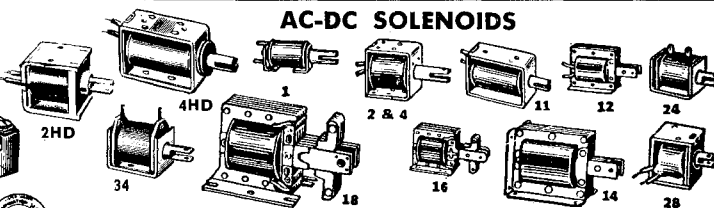
## ELECTRICAL RESET STEPPER M.E.R.



**Type M.E.R.**—A direct drive (steps on energization) electrical reset stepper with positive mechanical reset interlock actuated by the reset magnet and unlocked on the first energization of the step magnet. This device assures positive reset on as short a pulse as one-hundredth of a second or even from its own selection contacts. Unit is capable of counting in groups up to 21, then resetting automatically. By interconnecting two or more Steppers, count can be increased to any desired total counting by tens or by any other convenient multiple. Unit can be used to control a sequence of operation and then automatically reset to the initial or starting position. Maximum steps per second, 20, 24 points; 22 active contacts. Coil, 115 v. AC; will operate satisfactorily at 15% below or 10% above this voltage. Stepping coil rated 30 VA, 18 w.; reset coil rated 9 VA, 7 w. Size, 3 1/4" lg. x 2 3/8" w. x 3 1/4" h. Shpg. Wt., 1 1/2 oz.

Guardian Number	Net Each, Lots of				
	1-24	25-49	50-99	100-249	250 up
MER-115	\$15.00	\$13.50	\$12.75	\$12.00	\$10.50

## AC-DC SOLENOIDS



Available in both intermittent and continuous duty types. Intermittent types should not be energized for more than 5 consecutive minutes, or be permitted to rise more than 85°C. above 24°C. ambient rating without giving sufficient time to cool between operation cycles. Continuous duty types are designed so they will not rise more than 85°C. above the 24°C. ambient temperature rating when operated at rated load. Plunger has slotted end with 1/8" diameter hole for coupling. In chart, (I) indicates intermittent duty type, (C) indicates continuous duty type.

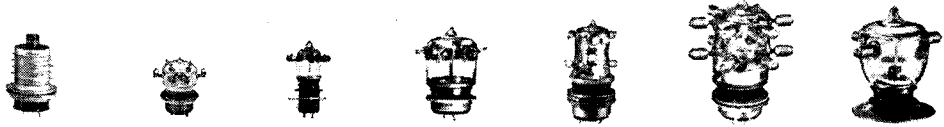
AC NO.	V.	*	Ohms	Lift Oz.†	Net Each, Lots of				
					1-24	25-49	50-99	100-249	250 up
1A1	115A	I	300	8	\$3.00	\$2.70	\$2.55	\$2.40	\$2.10
1A1	115A	C	675	3	3.00	2.70	2.55	2.40	2.10
2	115A	I	60	27	3.50	3.15	2.98	2.80	2.45
2	115A	C	39	10.5	3.50	3.15	2.98	2.80	2.45
2HD	115A	I	113	19	8.25	7.43	6.81	6.60	5.78
4	115A	I	37	24	4.00	3.60	3.40	3.20	2.80
4	115A	C	133	6	4.00	3.60	3.40	3.20	2.80
11	24A	I	5.1	20	3.00	2.70	2.55	2.40	2.10
11	24A	C	12	8	3.00	2.70	2.55	2.40	2.10
11	115A	I	125	20	3.00	2.70	2.55	2.40	2.10
11	115A	C	300	8	3.00	2.70	2.55	2.40	2.10
12	115A	I	100	32	4.25	3.83	3.61	3.40	2.98
12	115A	C	150	22	4.25	3.83	3.61	3.40	2.98
14	115A	I	11	110	5.75	5.18	4.89	4.60	4.03
14	115A	C	18	66	5.75	5.18	4.89	4.60	4.03
16	115A	I	41	96	3.50	3.15	2.98	2.80	2.45
16	115A	C	85	55	3.50	3.15	2.98	2.80	2.45
16	230A	I	200	96	3.75	3.38	3.19	3.00	2.63
16	230A	C	350	55	3.75	3.38	3.19	3.00	2.63
18	115A	I	8.8	304	4.75	4.28	4.04	3.80	3.33
18	115A	C	19.7	145	4.75	4.28	4.04	3.80	3.33
18	230A	I	45	304	5.00	4.50	4.25	4.00	3.50
18	230A	C	78	145	5.00	4.50	4.25	4.00	3.50
24	115A	I	310	19	3.25	2.93	2.76	2.60	2.28
24	115A	C	500	12	3.25	2.93	2.76	2.60	2.28
28	24A	I	7.5	35	3.00	2.70	2.55	2.40	2.10
28	24A	C	17.4	20	3.00	2.70	2.55	2.40	2.10
28	115A	I	220	35	3.25	2.93	2.76	2.60	2.28
28	115A	C	400	20	3.25	2.93	2.76	2.60	2.28
34	115A	I	400	16	2.20	1.98	1.87	1.76	1.54
34	115A	C	865	9	2.20	1.98	1.87	1.76	1.54

DC NO.	V.	*	Ohms	Lift Oz.†	Net Each, Lots of				
					1-24	25-49	50-99	100-249	250 up
1A1	24D	I	42.6	5	\$2.75	\$2.48	\$2.34	\$2.20	\$1.93
1A1	24D	C	74.4	2	2.75	2.48	2.34	2.20	1.93
1A1	115D	I	803	5	3.25	2.93	2.76	2.60	2.28
1A1	115D	C	2070	2	3.25	2.93	2.76	2.60	2.28
2HD	24D	I	1.2	120	8.50	7.65	7.22	6.80	5.95
2HD	24D	C	4	66	8.50	7.65	7.22	6.80	5.95
4	24D	I	15	57	4.00	3.60	3.40	3.20	2.80
4	24D	C	50	20	4.00	3.60	3.40	3.20	2.80
4	115D	I	346	57	4.25	3.83	3.61	3.40	2.98
4	115D	C	1210	20	4.25	3.83	3.61	3.40	2.98
4HD	24D	I	15	156	6.10	5.49	5.19	4.88	4.27
4HD	24D	C	50	86	6.10	5.49	5.19	4.88	4.27
4HD	110D	I	330	156	6.10	5.49	5.19	4.88	4.27
4HD	110D	C	1200	86	6.10	5.49	5.19	4.88	4.27
11	6D	I	2	39	3.00	2.70	2.55	2.40	2.10
11	6D	C	5	21	3.00	2.70	2.55	2.40	2.10
11	24D	I	32	39	3.00	2.70	2.55	2.40	2.10
11	24D	C	72	21	3.00	2.70	2.55	2.40	2.10
22	6D	I	4.7	24	2.80	2.52	2.38	2.24	1.96
22	6D	C	9	13	2.80	2.52	2.38	2.24	1.96
22	24D	I	60	24	2.80	2.52	2.38	2.24	1.96
22	24D	C	144	13	2.80	2.52	2.38	2.24	1.96
28	6D	I	3.3	41	2.80	2.52	2.38	2.24	1.96
28	6D	C	7.7	35	2.80	2.52	2.38	2.24	1.96
28	12D	I	13	41	2.80	2.52	2.38	2.24	1.96
28	12D	C	27	35	2.80	2.52	2.38	2.24	1.96
28	24D	I	50	41	2.80	2.52	2.38	2.24	1.96
28	24D	C	104	35	2.80	2.52	2.38	2.24	1.96
34	6D	I	4.3	21	2.20	1.98	1.87	1.76	1.54
34	6D	C	9.1	8.5	2.20	1.98	1.87	1.76	1.54
34	24D	I	66	21	2.20	1.98	1.87	1.76	1.54
34	24D	C	145	8.5	2.20	1.98	1.87	1.76	1.54

\*Duty. †Max.; obtained during cold operation when plunger is down.

Type	Adj. Stroke	Inter.	Cont.	Size, Inches		Shpg. Wt., Oz.
				L.	X W. X H.	
1A1	AC	1/8" - 1/2"	1/8" - 3/8"	1 3/4	x 1 1/2 x 1 1/2	4.5
1A1	DC	1/8" - 3/8"	1/8" - 1/4"	1 3/4	x 1 1/2 x 1 1/2	4.5
2	AC	1/8" - 7/8"	1/8" - 7/8"	1 1/2	x 1 1/2 x 1 1/2	10
2HD	AC	1/8" - 9/8"	1/8" - 9/8"	1 3/2	x 1 1/2 x 1 1/2	13
2HD	DC	1/8" - 3/4"	1/8" - 9/8"	1 1/2	x 1 1/2 x 1 1/2	13
4	AC	1/8" - 1"	1/8" - 1/2"	2	x 1 1/2 x 1 1/2	14.5
4	DC	1/8" - 1"	1/8" - 7/8"	2	x 1 1/2 x 1 1/2	14.5
4HD	DC	1/8" - 3/4"	1/8" - 3/4"	2 1/4	x 1 1/2 x 1 1/2	15
11	AC	1/8" - 1"	1/8" - 1"	1 3/4	x 1 1/2 x 1 1/2	7.5
11	DC	1/8" - 7/8"	1/8" - 9/8"	1 3/4	x 1 1/2 x 1 1/2	7.5
12	AC	1/8" - 1"	1/8" - 7/8"	1 5/8	x 1 1/2 x 1 1/2	6
14	AC	1/8" - 1 1/2"	1/8" - 1 1/2"	2 1/4	x 1 1/2 x 2 1/2	19
16	AC	1/8" - 3/4"	1/8" - 9/8"	1 3/8	x 1 1/2 x 1 1/2	7.5
18	AC	1/8" - 1"	1/8" - 1"			

# Jennings VACUUM TRANSFER AND COAXIAL RELAYS

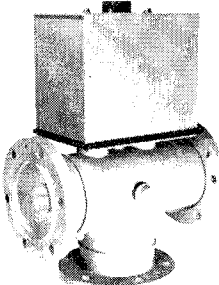
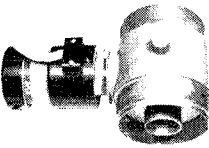
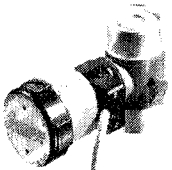
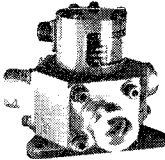


## Vacuum Transfer Relays

Jennings Type	RA Series	RB7B	RB1	RB2A	RB3	RB4	RE6B
Contact arrangement	1, 2, 3 & 4PDT	2PDT	SPDT	2PDT	2PDT	4PDT	SPDT
Rated operating voltage— dc or 60 cycle 16 mc	300 v pk	7 kv pk 3 kv pk	12 kv pk 8 kv pk	20 kv pk 10 kv pk	12 kv pk 8 kv pk	20 kv pk 10 kv pk	25 kv pk 12 kv pk
Test voltage—60 cycle peak	2000 v pk	9 kv pk	18 kv pk	25 kv pk	15 kv pk	25 kv pk	30 kv pk
Continuous current—rms amps— 60 cycle	30 amps	14 amps	15 amps	20 amps	30 amps	20 amps	25 amps
2.5 mc		9 amps	10 amps	12 amps	10 amps	10 amps	13 amps
16 mc		4 amps	6 amps	6 amps	6 amps	6 amps	8 amps
Contact resistance	.01 ohms max.	.01 ohms max.	.012 ohms max.	.01 ohms max.	.01 ohms max.	.01 ohms max.	.01 ohms max.
Contact capacitance	17 mmfd max.	1 mmfd nom.	0.5 mmfd nom.	1 mmfd nom.	1 mmfd nom.	1 mmfd nom.	1 mmfd nom.
Capacitance to ground	11 mmfd nom.	2 mmfd nom.	1.5 mmfd nom.	2.5 mmfd nom.	2.5 mmfd nom.	2.5 mmfd nom.	2.5 mmfd nom.
Operate times	25 msec max.	15 msec max.	18 ms max.	20 ms max.	20 ms max.	45 ms max.	25 ms max.
Release times	10 msec max.	5 msec max.	5 ms max.	10 ms max.	8 ms max.	10 ms max.	10 ms max.
DC actuating coil—resistance—10% voltage	225 ohms 26.5 vdc	265 ohms 26.5 vdc	265 ohms 26.5 vdc	225 ohms 26.5 vdc	120 ohms 26.5 vdc	131 ohms 26.5 vdc	120 ohms 26.5 vdc
Shock	30G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms	30G-11 ms
Vibration	20G to 2000 cps	10G to 2000 cps	5G to 2000 cps	5G to 2000 cps	5G to 2000 cps	5G to 2000 cps	10G to 500 cps

NOTE: Most of the rf voltage and current ratings can be increased approx. 30% by the use of special heavy duty terminals.

## Vacuum Coaxial Relays

FOR 50 OHM 3/8 LINES	MECHANICAL CHARACTERISTICS	ELECTRICAL CHARACTERISTICS
 <p>RC21</p>	<p><b>TYPE RC21 SPDT LATCHING VACUUM RELAY</b></p> <p>Size: 3 1/8 inch</p> <p>Fittings: "EIA," Swivel Flange type</p> <p>Inner Connector: Anchor type, "EIA" Bullet to Jennings spring type.</p> <p>Configuration "T": May be installed in place of "EIA" 50 ohm standard elbow without modification of existing coaxial line.</p> <p>Actuation: Electro-mechanical latching type. Momentary energize to open/close. 26.5 or 115 V DC. May be obtained with 24 VDC bi-stable electro-mechanical actuator. Optional manual actuation is available with the bi-stable actuator. Also available for 115 V AC operation, self de-energizing.</p> <p>Indicator: Auxiliary Contacts 2PDT (two each)</p> <p>Transfer time: Less than 50 millisecond.</p> <p>Weight: 18 lbs. (approx.)</p>	<p>Impedance: 50 ohms</p> <p>Frequency: (0-600 mc)—Crosstalk—VSWR</p> <p>200 mc —47.12 db—1.03</p> <p>225 mc —46.1 db—1.04</p> <p>250 mc —45.0 db—1.05</p> <p>300 mc —43.6 db—1.05</p> <p>400 mc —41.2 db—1.06</p> <p>500 mc —39.2 db—1.07</p> <p>600 mc —37.5 db—1.09</p> <p>Power Rating: 20 kw average at 600 mc. 3 megawatt pk. (special order)</p> <p>Insertion Loss: 0.01 db max.</p>
 <p>RC10</p>	<p><b>TYPE RC10 SPST LATCHING VACUUM RELAY</b></p> <p>Size: 3 1/8 inch</p> <p>A SPST latching relay for use at frequencies up to 100 mc. Simple fittings are available that permit assembling multiple units in crossbar networks in a minimum of space. As an example a 4 x 5 (4 inputs, 5 outputs) network can be assembled occupying less than 9 cu. ft. of space.</p>	<p>Characteristic Impedance: 50 ohms</p> <p>Power Rating: 50 kw average to 60 mc</p> <p>Frequency Range: 0 to 100 mc</p> <p>VSWR: 1.02 max. at 30 mc; 1.05 max. at 60 mc</p> <p>Crosstalk: Greater than 60 db isolation at 60 mc</p> <p>Actuating Voltage: 26.5 V DC</p> <p>Actuator: Latching type</p> <p>Position Indicators: DPDT Auxiliary Contacts</p>
<p>FOR 50 OHM 1/2 LINES</p>  <p>RC5</p>	<p><b>TYPE RC5 SPST LATCHING VACUUM RELAY</b></p> <p>Size: 1 1/8 inch</p> <p>A SPST latching relay for use at frequencies up to 100 mc. The RC 5 relay has been designed to provide an extremely flexible means of remotely switching coaxial lines. Simple fittings are available for assembly of multiple units in crossbar networks in a minimum of space.</p>	<p>Characteristic Impedance: 50 ohms</p> <p>Power Rating: 25 kw cw average at 30 mc</p> <p>Frequency Range: 0 to 100 mc</p> <p>VSWR: 1.02 max. at 30 mc; 1.05 max. at 60 mc</p> <p>Crosstalk: Greater than 60 db isolation at 30 mc</p> <p>Actuation: Intermittent duty latching type electrical/manual</p> <p>Actuating Voltage: 26.5 V DC</p> <p>Position Indicators: DPDT Auxiliary Contacts</p>
 <p>RC43</p>	<p><b>RC40 SERIES VACUUM COAXIAL RELAYS</b></p> <p>These are SPDT relays for use at frequencies up to 600 mc. The RC40 series utilizes type RB1 transfer relays in specially designed and compensated housings. Three different sizes are available to accommodate a variety of standard coaxial connectors. Housings are available with the following connectors: BNC, TNC, N, UHF, C, SC, and LC.</p>	<p><b>MODEL RC43</b></p> <p>Characteristic impedance: 50 ohms</p> <p>Power Rating: 15 kw peak, 1 kw average at 600 mc, 3 kw average at 30 mc</p> <p>Frequency Range: 0 to 600 mc</p> <p>VSWR: 1.05: 1 max.</p> <p>Crosstalk: Greater than 30 db isolation at 400 mc</p> <p>Insertion Loss: 0.05 db max.</p> <p>Actuating Voltage: 26.5 or 100 V DC</p> <p>Height: 3 1/4 inches</p>

JENNINGS RADIO MANUFACTURING CORPORATION • SAN JOSE, CALIF.

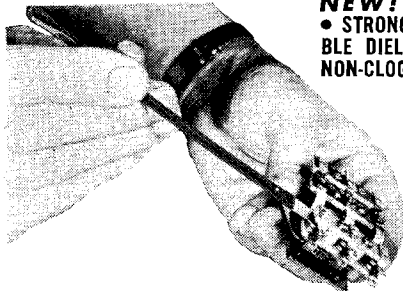


JONARD  
INDUSTRY  
CORP.



# NEW PRECISION RELAY AND ELECTRONIC TOOLS

## DIACRON DIAMOND SPATULA



**NEW! EXCLUSIVE ADVANTAGES!**  
 • STRONG ABRASIVE POWER • FLEXIBLE DIELECTRIC • LONG LASTING • NON-CLOGGING.

Consists of abrasive Diamond particles - Developed for any type contacts: Silver, Platinum, Gold, Palladium, Tungsten, Molybdenum - Length 5 5/8" - Diamond coated face 1" x 1/4" - Nylon Shaft - Three types to meet every application: Type 200 (coarse) for Industrial Relays - Type 300 (medium) for Intermediate and Telephone relays - Type 400 (fine) for Sensitive Relays.

## CONTACT BURNISHER-CLEANER

K-234 Set of 3 Individual Spatulas and Kits packaged in Rigid Plastic Boxes.

Type No.	Description	Price
# 200	Shaft Green	\$ 4.95
# 300	Shaft Red	\$ 4.95
# 400	Shaft Blue	\$ 4.95
K-234	Kit 3 asst'd.	\$14.85
K-222	Kit 3 #200	\$14.85
K-333	Kit 3 #300	\$14.85
K-444	Kit 3 #400	\$14.85



## NEW! 15 PIECE RELAY SERVICING TOOL KIT

Precision-made and professionally-designed group of new tools for adjusting and maintaining relays, contactors, switches, controls, and other components for the telecommunication and electronic industries.

2 Spring Adjusters, Tension & Thickness Gauges, Duck Bill Plier, Screw Driver, Tweezer, Mirror, 4-way Tool, Brush, Armature & Stop Benders, Contact Spray, Contact Burnisher.

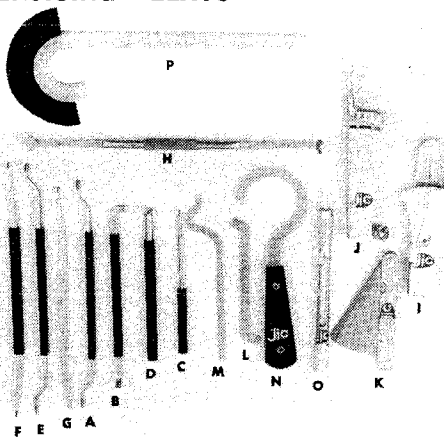
KIT K-55 \$29.90



## J.I.C. TRIGGA-SNIP

Ingenuously-designed wire cutting instrument for removing components in awkward positions. The TRIGGA-SNIP continues to hold the wire that has been cut. This feature is useful when cutting wires in deep chassis. M-105 .....\$4.75

## SPECIAL TOOLS FOR ADJUSTING AND SERVICING RELAYS



### SPRING ADJUSTERS

(A) SA-2	General type, chisel-edged. L. 7" slot W. .023"	\$2.48
(B) SA-6A	Cross & Lengthwise slots. Slot W. .025"	\$2.45
(C) SA-7	For Miniature Relays. Slot W. .015"	\$ .99
(D) SA-8	For Heavy type springs, Round Head. Slot W. .075"	\$1.98
(E) SA-16	Double-ended, Lengthwise slot. L. 8" Slot W. .030"	\$2.40
(F) SA-17	For all types relays. L. 8" Slot W. .025"	\$2.95
(G) SA-20	For closely-set spring relays. Slot W. .020" & .015"	\$3.50

### ADJUSTMENT DROP WRENCHES. Bent one side, 8" Long 3 TYPES

(H) Sizes 3/16" 1/4" 1/2" Same size both ends .....\$2.95 ea.

### GAUGES

(I) G-50	Tension Gauge 0-50 GRAMS Calibrated front & back.....	\$6.95
(J) GP-50	Preset Tension Ga., 0-50 grams, for Precision reading.....	\$8.45
(K) T-720N	Thickness Ga., 26 blades. L. 3" W. 1/2" .0015" to .025".....	\$3.90
(L) AB-21	Armature Arm Bender, Slot 3/4".....	\$1.30
(M) SB-22	Armature Stop Bender, Slot W. .035".....	\$1.48
(N) BC-23	Bank Cleaner, Diam. 1 1/2" Length 6".....	\$2.95
(O) FW-24	4-way Tool (Phillips & Standard screw driver) Hex 1/4" & 3/8".....	\$1.95
(P) HB-75	Curved Hair Brush for cleaning selector switches.....	\$2.35
(Q) WB-65	Nickel-Silver Wire Brush for cleaning relays & others.....	\$1.75

Other Types and Sizes Available on Special Request.

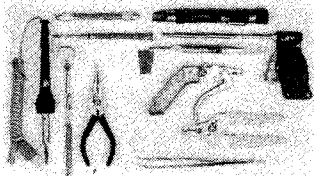
## KONTACT 60 NEW FORMULA CONTACT CLEANING SPRAY



For contacts, switches, controls, tuners, all Electronic Equipment. Leaves anti-corrosion film and long-lasting lubricant. Gives excellent results without dismounting equipment. Free extension tube for fine spray in hard-to-reach areas.

No. K-60 .....\$2.45

## 12 PIECE SERVO TOOL KIT

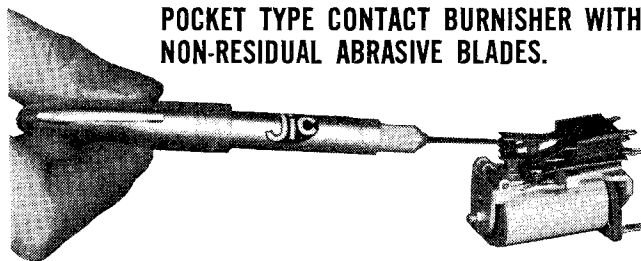


Carefully selected precision tools for servicing complex Instruments & Equipment.

Wire Cutter, 25-Watt Soldering Iron, Microscope 40x50x60, Chain Nose Plier, Inspection Mirror, Tweezer, Swivel Screw Driver, Wire Stripper, Pin Vise, Pocket Burnisher & 12 Blades, Locking Plier.

KIT #K-50 .....\$29.50

## POCKET TYPE CONTACT BURNISHER WITH NON-RESIDUAL ABRASIVE BLADES.



Pen with 12 blades #RB6 P-6 .....\$3.90  
 Pen with 12 blades #RB4 P-4 .....\$3.90

### REPLACEMENT BLADES

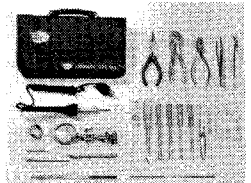
No.	Width	Length	Thickness	Pkg. 25	Pkg. 100
RB6	3/16"	1 3/4"	.007"	\$3.75	\$12.50
RB4	1/4"	1 1/4"	.007"	\$3.75	\$12.50

## 20 PIECE PRECISION TOOL SET

Specifically Designed for Electronic Assembly Service and Repair. Comes in durable leatherette Zipper Case.

K-600 .....\$24.75

1 Diagonal Cutting Nipper 4 1/2"	1 Pin Vise	1 Magnifying Glass
1 15-Watt Soldering Iron	2 Tweezers	1 Miniature driver .020"
1 Pen-type Contact Burnisher with 12 replacement blades	1 Aligner	1 Miniature driver .050"
1 Round Nose Pliers 4 1/2"	1 Chisel	2 Nut Drivers 1/4" - 3/8"
1 Midget Wrench 5/8"	1 Screw Driver	2 Needle Files
	1 Solder Core	1 Phillips Driver



WRITE FOR COMPLETE CATALOG OF J.I.C. PRECISION TOOLS  
 JONARD INDUSTRIES CORP., PRECISION TOOLS DIV., BRONX 63, N. Y.



# PICK-A-RELAY CHART

Quick-Finding Selection Guide for Immediate Delivery, Stock Relays

COIL	CONTACT ARR'NG'M'NT	ENCLOSURE	CONTACT RATING, amps (at 28 VDC/115 VAC)									
			1	2	3	5	10	15	20	25	30	
<b>VOLTAGE ACTUATED A.C.</b> 6, 12, 24, 115, 230 Volts (See catalog for CURRENT operation ranges)	1PDT	OPEN	51C			261C						
		DUST COVER	321									
		DUST COVER PLUG-IN	5D1C			26D1C						
	2PDT	OPEN				262C			} or: 1.5 KW RF			
		DUST COVER PLUG-IN	26D2C						26L			
		HERM. SEALED	26S01			26S20						
	3PDT	OPEN				263C			} or: 1.5 KW RF			
		DUST COVER PLUG-IN	26D3C			253C						
	4PDT	HERM. SEALED	SM004F Coil: 115 VAC 47-440 cps only									
	<b>VOLTAGE ACTUATED D.C.</b> 6, 12, 24, 110 Volts (See catalog for CURRENT operation ranges)	1PDT	OPEN				261C					
			DUST COVER PLUG-IN	26D1C						} 15 amps @ 115 VAC; 6 amps @ 28 VDC		
		2PDT	OPEN				AS or ES			} or: 1.5 KW RF		
DUST COVER PLUG-IN			26D2C						26L			
HERM. SEALED			KX1			} 1 amp @ 115 VAC, case not grounded						
3PDT		OPEN				263C			} or: 1.5 KW RF			
		DUST COVER PLUG-IN	26D3C			253C						
4PDT		OPEN	A, E, or M			264C						
		HERM. SEALED	KX4			} 1 amp @ 115 VAC, case not grounded						
<b>CURRENT ACTUATED Sensitive D.C.</b> (See catalog for CURRENT and VOLTAGE operation ranges)		1PDT	OPEN	51C			} except model 51CB44D: 1 amp					
	DUST COVER		310									
	DUST COVER PLUG-IN		5D1C			} except model 5D1CB44D: 1 amp						
	2PDT	OPEN	52C									
		DUST COVER PLUG-IN	5D2C									
	3PDT	HERM. SEALED	T									
		DUST COVER PLUG-IN	5D3C									
	4PDT	OPEN	54C									



**KURMAN** INSTRUMENTS CORP., BROOKLYN, N. Y. 11222

# MAGNECRAFT RELAYS

The relays you can rely on

## 310 different Relay Models

Immediate Delivery from STOCKING DISTRIBUTORS

MAGNECRAFT ELECTRIC CO., Chicago, Ill. 60630

All prices and specifications effective August 1, 1964 and subject to change without notice.

All prices are NET for 1 to 9 Relays except Mercury-Wetted Contact and Dry Reed Relay prices are NET for 1 to 24.

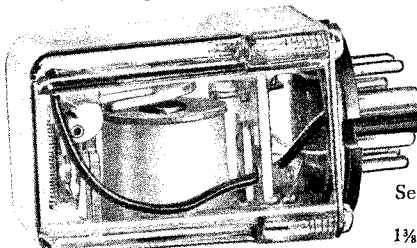
All contact ratings based on 115 VAC or 32 VDC, non-inductive load.

Voltage operated relays pull in at 85% of nominal voltage.

**ORDER BY CATALOG NUMBER.** Labels on MAGNECRAFT STOCK RELAY CARTONS carry Catalog Number, contact combination and rating; coil voltage or current.

All enclosed relays are identified by catalog number and wiring diagram.

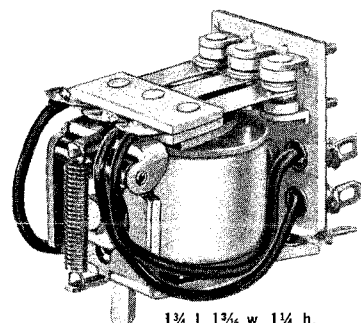
**NOTE.** Order MAGNECRAFT STOCK RELAYS from STOCKING DISTRIBUTORS. Their stocks are supplemented by complete stocks maintained at the MAGNECRAFT plant in Chicago.



**Class 88CP**  
Small AC-DC Plug-in Relay with "see-thru" plastic cover

See wiring diagrams at lower left  
1 1/8 x 1 1/8 x 2 1/8 h\*

Enc. 40-279 polystyrene dust cover housing Class 88 all purpose relay with 8- or 11-pin standard octal plug. Silver alloy contacts, 10 ampere rating. Weight, 3 ounces.



**Class 88**  
Small AC-DC General Purpose Relay.

Open Type Relay. Has 10 ampere silver alloy contacts. Tinned solder terminals, spaced for easy wiring. One #6-32 tapped mounting hole with locating boss. Weight, 2 ounces.

1 1/4 l, 1 1/8 w, 1 1/4 h.

**The General Purpose Relay with Telephone Type Reliability**

The MAGNECRAFT 88 Relay is an abrupt departure in clapper type relay design. Dimensionally interchangeable with relays made by others the 88 has been developed to provide Telephone Type Relay reliability at general purpose relay prices.

Unique in relays of this type MAGNECRAFT 88 Relays have rugged, precision-built hinge-pin armature bearings with over-size bearing surfaces—the same construction used in the finest telephone type relays for lowest friction and maximum contact effectiveness with stabilized adjustment over long life.

Glass insulation provides great dielectric strength unaffected by humidity and temperature changes.

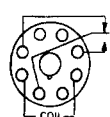
Molded Nylon bobbins with ruggedized coil terminal inserts eliminate possibility of shorts.

Built-in contact wipe with riveted contacts further advance reliability through long life.

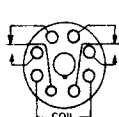
The many refinements, plus MAGNECRAFT Quality Control and Inspection Standards give you hidden values beyond price—unseen values that keep making friends through years of dependable service.

When you inspect and compare you will soon see that many MAGNECRAFT 88 extra values are not hidden.

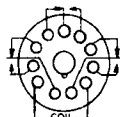
Wiring diagrams for Class 88 Plug-in Mounted Relays



WD-1 SPDT, 8-pin



WD-2 DPDT, 8-pin



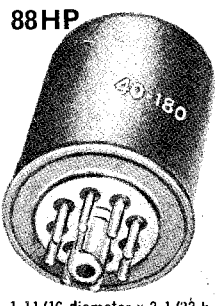
WD-3 3PDT, 11-pin

h\* is overall dimension above socket WD is abbreviation for Wiring Diagram  
†Voltage operated relays pull in at 85% of nominal voltage.

	COIL			10 ampere silver alloy contacts				
	volt. or current	res. ohms	nominal power	Stock Part No.	NET	Stock Part No.	Plug NET	
alternating current voltage actuated								
SPDT †WD-1	6VAC	—	3 VA	W88AX1	3.35	W88AOPX1	8-pin	5.50
	12VAC			W88AX2	3.35	W88ACPX2		5.50
	24VAC			W88AX3	3.40	W88ACPX3		5.55
	115VAC			W88AX4	3.55	W88ACPX4		5.70
DPDT WD-2	6VAC	—	3 VA	W88AX5	3.95	W88ACPX5	8-pin	6.24
	12VAC			W88AX6	3.95	W88ACPX6		6.24
	24VAC			W88AX7	4.00	W88ACPX7		6.29
	115VAC			W88AX8	4.15	W88ACPX8		6.44
	230VAC	W88AX32	4.60	W88ACPX32	6.99			
3PDT WD-3	6VAC	—	3 VA	W88AX9	4.35	W88ACPX9	11-pin	7.66
	12VAC			W88AX10	4.35	W88ACPX10		7.66
	24VAC			W88AX11	4.40	W88ACPX11		7.81
	115VAC			W88AX12	4.55	W88ACPX12		7.96
	230VAC	W88AX36	5.00	W88ACPX36	8.51			
direct current voltage actuated								
SPDT †WD-1	6VDC	25	1.5W	W88X2	3.20	W88CPX1	8-pin	5.35
	12VDC	100		W88X3	3.20	W88CPX2		5.35
	24VDC	400		W88X4	3.25	W88CPX3		5.40
	110VDC	8000		W88X5	3.80	W88CPX4		5.95
DPDT WD-2	6VDC	25	1.5W	W88X6	3.55	W88CPX5	8-pin	5.84
	12VDC	100		W88X7	3.55	W88CPX6		5.84
	24VDC	400		W88X8	3.60	W88CPX7		5.89
	110VDC	8000		W88X9	4.15	W88CPX8		6.44
3PDT WD-3	6VDC	25	1.5W	W88X10	3.95	W88CPX9	11-pin	7.21
	12VDC	100		W88X11	3.95	W88CPX10		7.21
	24VDC	400		W88X12	4.00	W88CPX11		7.26
	110VDC	8000		W88X13	4.55	W88CPX12		7.81
DC current actuated for plate circuit operation								
SPDT †WD-1	7.2 MA	2500	125MW	W88X14	3.75	W88CPX13	8-pin	5.90
	5.0 MA	5000		W88X15	3.85	W88CPX14		6.00
	3.6 MA	10000		W88X16	4.25	W88CPX15		6.40
DPDT WD-2	10 MA	2500	250MW	W88X17	4.01	W88CPX16	8-pin	6.30
	7.2 MA	5000		W88X18	4.11	W88CPX17		6.40
	5 MA	10000		W88X19	4.51	W88CPX18		6.80
3PDT WD-3	12.3 MA	2500	375MW	W88X20	4.44	W88CPX19	11-pin	7.70
	8.7 MA	5000		W88X21	4.54	W88CPX20		7.80
	6.1 MA	10000		W88X22	4.94	W88CPX21		8.20

**Class 88 HP—Hermetically Sealed Enclosure Plug-in Mounted—10 Amps.—AC and DC**

40-180 enclosure, hermetically sealed, housing Class 88 high reliability relay (see above) with standard 8-pin octal plug. Silver alloy contacts, 10 ampere rating. Weight 5 ounces.



contacts 10 amps.	†voltage	res. ohms	nom. power	Stock Part No.	Price 1 to 9
alternating current voltage actuated					
DPDT WD-2	6VAC	—	3VA	W88HPX-21	8.59
	12VAC			W88HPX-22	8.59
	24VAC			W88HPX-23	8.64
	115VAC			W88HPX-24	8.79
direct current voltage actuated					
DPDT WD-2	6VDC	25	1.5W	W88HPX-32	8.19
	12VDC	100		W88HPX-33	8.19
	24VDC	400		W88HPX-34	8.24
	110VDC	8000		W88HPX-35	9.29

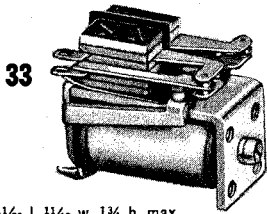
1-11/16 diameter x 2-1/32 h.

# Telephone Type

# MAGNECRAFT RELAYS

Page 2

## Sub-miniature—DC—3 amps.



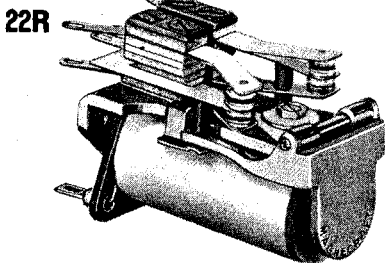
1 1/2 l, 1 1/16 w, 1 3/4 h. max.

Class 33 midget sub-miniature; the smallest telephone type MAGNECRAFT Relay and one of the smallest telephone type relays on the market. Class 33 is also the fastest operating and inherently more shock resistant and vibration resistant. Long life, reliability and accuracy fit Class 33 relays for a wide range of small space requirements. They are extensively used for aircraft, computer and mobile applications where small size, light weight and resistance to shock and vibration are essential.

Palladium contacts; 3 ampere rating. Four 4-40 tapped mounting holes on 3/8 x 3/8 centers. Weight, 1 ounce.

contacts	voltage	res.	nominal	Stock	NET
3 amps	DC	ohms	power	Part No.	
DPDT	6VDC	17		W33X237	4.87
	12VDC	75		W33X238	4.87
	24VDC	280	2.0W	W33X239	4.92
	110VDC	6500		W33X240	5.50
4PDT	6VDC	17		W33X241	6.58
	12VDC	75		W33X242	6.58
	24VDC	280	2.0W	W33X243	6.63
	110VDC	6500		W33X244	7.23

## Small—Power—AC-DC—10 amps.



2 1/4 l, 1 1/2 w, 1 3/4 high, max.

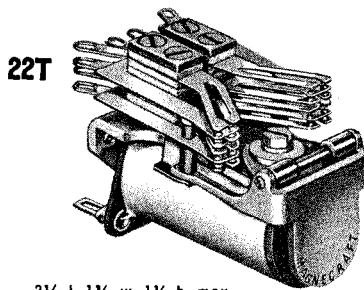
Class 22R small size, high reliability, long life relay with heavy duty 10 ampere silver alloy contacts and same pin type armature hinge as Class 66AR.

All mounting and wiring at heel end. Tinned solder terminals with easy-to-wire spacing. Two #6-32 tapped mounting holes on 3/4 centers. Weight, 5 ounces.

contacts	voltage	res.	nominal	Stock	NET
10 amps.		ohms	power	Part No.	
DPDT	6VAC			W22ARX38	6.25
	24VAC			W22ARX39	6.25
	115VAC		5VA	W22ARX40	6.30
DPDT	6VDC	20		W22RX67	6.00
	12VDC	88	2.5W	W22RX68	6.00
	24VDC	225		W22RX69	6.05
	110VDC	5000		W22RX70	6.63
4PDT	6VDC	20		W22RX71	8.79
	12VDC	80	2.5W	W22RX72	8.79
	24VDC	225		W22RX73	8.84
	110VDC	5000		W22RX74	9.42

NOTE—Voltage actuated relays pull in at 85% of nominal voltage.

## Small—AC-DC—Twin Contacts



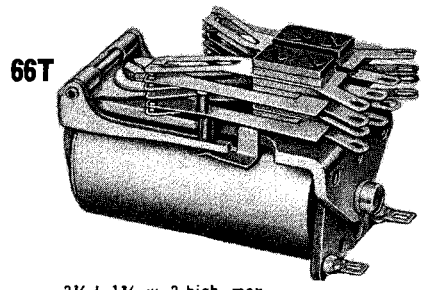
2 1/4 l, 1 1/2 w, 1 3/4 h, max.

Class 22T—miniature long form relay with accuracy reliability and long life equal and sometimes superior to larger relays. A unique, pin type armature hinge of heavy duty design and precision construction assures stabilized adjustment through millions of operations. Twin Palladium contacts with long, flexible bifurcated contact springs assure the ultimate in switching reliability.

Twin Palladium contacts, 4 ampere rating. All mounting and wiring at heel end. Tinned solder terminals with easy-to-wire spacing. Two #6-32 tapped mounting holes on 3/4 centers. Weight, 5 ounces.

contacts	volt. or	res.	nominal	Stock	NET
4 amps.	current	ohms	power	Part No.	
alternating current voltage actuated					
DPDT	115VAC		5VA	W22ATX12	5.94
direct current voltage actuated					
4PDT	6VDC	20	2.0W	W22TX267	8.44
	12VDC	80	2.0W	W22TX268	8.44
	24VDC	375	1.5W	W22TX269	8.49
	110VDC	8000	1.5W	W22TX270	9.97
6PDT	6VDC	12		W22TX271	11.87
	12VDC	50	3.0W	W22TX272	11.87
	24VDC	250		W22TX273	11.92
	110VDC	5000		W22TX274	12.91
DC current actuated for plate circuit operation					
SPDT	4.5 MA	5000		W22TX276	5.91
	6.0 MA	2700	100MW	W22TX277	5.24
	3.2 MA	10000		W22TX278	6.18
DPDT	4.5 MA	10000	200MW	W22TX275	6.93

## Medium—AC-DC—Twin Contacts



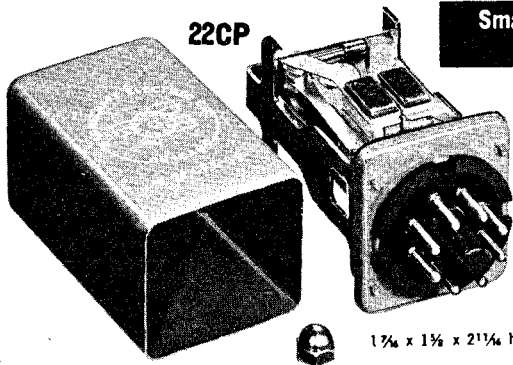
2 1/4 l, 1 1/2 w, 2 high, max.

Class 66T—similar to 22T except has larger coil for greater sensitivity and/or effective switching of more circuits. A unique, pin type armature hinge of heavy duty design and precision construction assures stabilized adjustment through millions of operations. Twin Palladium contacts with long flexible bifurcated contact springs assure the ultimate in switching reliability.

Twin Palladium contacts, 4 ampere rating. All mounting and wiring at heel end. Tinned solder terminals with easy-to-wire spacing. Two #6-32 tapped mounting holes on 3/4 centers. Weight, 5 ounces.

contacts	volt. or	res.	nominal	Stock	NET
4 amps.	current	ohms	power	Part No.	
alternating current voltage actuated					
4PDT	115VAC		6VA	W66ATX2	7.72
direct current voltage actuated					
4PDT	6VDC	30		W66TX23	7.59
	12VDC	135	1.0W	W66TX24	7.59
	24VDC	540		W66TX25	7.64
	8PDT	6VDC	20		W66TX29
12VDC		85		W66TX30	13.21
24VDC		250	2.0W	W66TX31	13.26
110VDC		5750		W66TX32	13.84
DC current actuated for plate circuit operation					
4PDT	5.3 MA	11000	300MW	W66TX26	8.96
6PDT	6.75 MA	11000	500MW	W66TX27	12.64
8PDT	8.5 MA	11000	800MW	W66TX28	14.25

## 22CP



1 7/8 x 1 x 2 1/4 h\*

## Small—AC-DC—Plug-in with removable dust cover

40-284 enclosure with removable dust cover housing Class 22 relay with 8- or 11-pin standard octal plug. Internal bracket supports cover and protects relay. One screw holds cover in place. Silver alloy contacts, 5 ampere rating. Weight, 6 ounces.

contacts	voltage	res.	nominal	Stock	NET
5 amps.		ohms	power	Part No.	
alternating current voltage actuated					
DPDT	115VAC		5VA	W22CPX60	10.23
direct current voltage actuated					
SPDT	6VDC	20	2.0W	W22CPX44	8.73
	12VDC	80	2.0W	W22CPX45	8.73
	24VDC	375	1.5W	W22CPX46	8.78
	110VDC	8000	1.5W	W22CPX47	10.02
DPDT	6VDC	20	2.0W	W22CPX48	9.85
	12VDC	80	2.0W	W22CPX49	9.85
	24VDC	375	1.5W	W22CPX50	9.90
	110VDC	8000	1.5W	W22CPX51	11.14

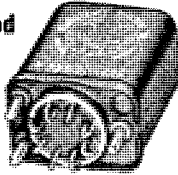
contacts	volt. or	res.	nominal	Stock	NET
5 amps.	current	ohms	power	Part No.	
direct current voltage actuated					
3PDT	6VDC	20	2.0W	W22CPX52	11.87
	12VDC	80	2.0W	W22CPX53	11.87
	24VDC	375	1.5W	W22CPX54	11.92
	110VDC	8000	1.5W	W22CPX55	13.16
DC current actuated for plate circuit operation					
SPDT	4.5 MA	5000		W22CPX57	9.36
	6.0 MA	2700	100MW	W22CPX58	9.02
	3.2 MA	10000		W22CPX59	10.02
DPDT	4.5 MA	10000	200MW	W22CPX56	11.14

# MAGNECRAFT RELAYS

Hermetically Sealed

Page 3

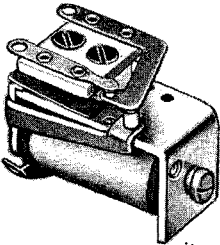
**Hermetically Sealed**  
**Sub-miniature**  
**DC 5 amps.**  
**33HS**



1/2 x 1 1/2 x 1 1/4 h\*

40-157 enclosure, hermetically sealed, housing Class 33 miniature relay with 8- or 14-pin high compression, glass insulated, solder terminal header. Silver alloy contacts, 5-ampere rating. Three 4-40 tapped mounting holes on 1/2 x 1 centers. Weight, 3 ounces.

contacts	voltage	res.	nominal	Stock	NET
5 amps.	DC	ohms	power	Part No.	
DPDT †WD-8	6VDC	17		W33HSX177	13.21
	12VDC	75		W33HSX178	13.21
	24VDC	280	2.0W	W33HSX179	13.26
	110VDC	6500		W33HSX180	13.87
4PDT WD-9	6VDC	17		W33HSX181	16.65
	12VDC	75		W33HSX182	16.65
	24VDC	280	2.0W	W33HSX183	16.70
	110VDC	6500		W33HSX184	17.36



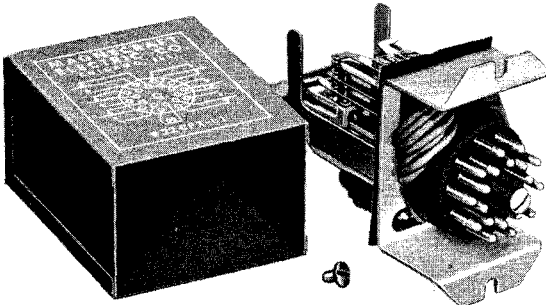
**Class 33F**  
**RF Switching**  
**Subminiature**

Class 33 telephone type relay designed especially for lowest capacitance between springs and minimum losses at high frequencies.

Suitable for antenna change-over switching. Contact springs have ceramic insulation. Contacts are Palladium, 2 ampere rating.

Tinned solder terminals. Four #4-40 tapped mounting holes on 3/8 x 3/8 centers. Weight, 1 ounce. 1 1/2 l, 1 1/8 w, 1 1/8 h.

contacts	voltage	res.	nominal	Stock	NET
2 amps.		ohms	power	Part No.	
SPDT	6VDC	28		W33FX20	4.06
	12VDC	100	1.5W	W33FX21	4.11
	24VDC	500		W33FX22	4.16
	110VDC	6500		W33FX23	4.69

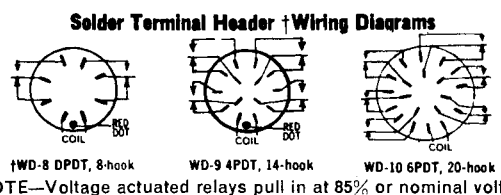
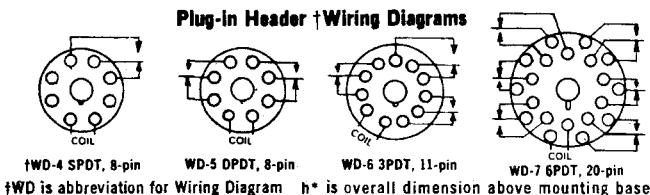


**22 CP**  
**Small—DC—Plug-in**  
**with**  
**removable dust cover**

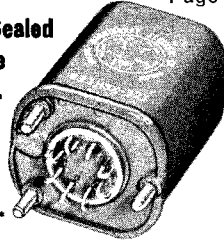
1 1/8 x 2 1/8 x 3 1/2 h\*

45-176 removable dust cover with Class 22 relay and 20-pin octal plug. Hold-down bracket permits mounting in any position. Internal bracket supports cover. One screw holds cover. Rubber gasket seals out dust. Silver alloy contacts, 5 ampere rating. Hold down bracket has two mounting holes for 6-32 screws on 2 1/8 centers. Weight, 8 ounces.

contacts	voltage	res.	nominal	Stock	NET
5 amps.		ohms	power	Part No.	
6PDT WD-7	6VDC	12		W22CPX61	16.72
	12VDC	50	3.0W	W22CPX62	16.72
	24VDC	225		W22CPX63	16.77
	110VDC	5000		W22CPX64	17.35



**Hermetically Sealed**  
**Miniature**  
**DC 5 amps.**  
**11HS**



1 1/8 x 1 3/4 x 2 1/4 h\*

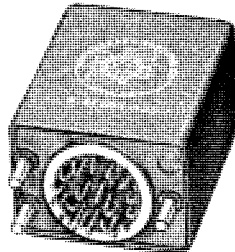
40-102 enclosure, hermetically sealed, housing Class 11 miniature relay with 14-pin, high compression, glass insulated solder terminal header. Silver alloy contacts, 5 ampere rating. Three #6-32 NC-2 threaded mounting studs on 1 1/8 x 1 3/8 centers. Weight, 6 ounces.

contacts	volt. or current	res.	nominal	Stock	NET
5 amps.		ohms	power	Part No.	
4PDT WD-9	6VDC	25		W11HSX321	15.92
	12VDC	100		W11HSX322	15.97
	24VDC	400	1.5W	W11HSX323	15.97
	110VDC	9000		W11HSX324	17.06

DC current actuated for plate circuit operation

contacts	voltage	res.	nominal	Stock	NET
5 amps.		ohms	power	Part No.	
DPDT WD-8	5 MA	10000	250MW	W11HSX325	13.70

**Hermetically Sealed**  
**Miniature**  
**DC**  
**5 amps.**  
**11HS**



1 1/8 x 1 3/4 x 2 1/4 h\*

40-188 enclosure, hermetically sealed, housing Class 11 miniature relay with 20-pin high compression glass insulated solder terminal header. Silver alloy contacts, 5 ampere rating. Three #6-32 NC-2 threaded mounting studs on 1/2 x 1 1/2 centers. Weight, 6 ounces.

contacts	voltage	res.	nominal	Stock	NET
5 amps.		ohms	power	Part No.	
6PDT WD-10	6VDC	13		W11HSX326	19.91
	12VDC	56		W11HSX327	19.91
	24VDC	280	2.5W	W11HSX328	19.96
	110VDC	5000		W11HSX329	20.18

**Hermetically Sealed**  
**small**  
**AC-DC**  
**5 amps.**



22HS

1 1/8 x 1 3/8 x 2 1/4 h\*

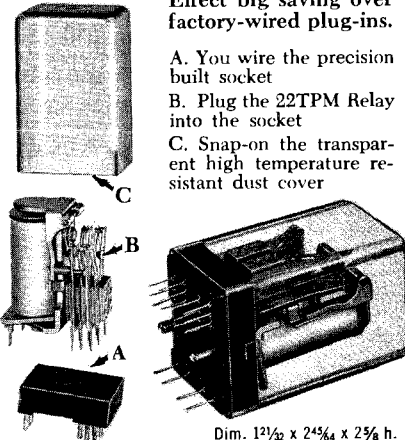
40-158 enclosure, hermetically sealed, housing Class 22 relay with 14-pin glass insulated solder terminal header. Silver alloy contacts, 5 ampere rating. Three #6-32 threaded mounting studs on 1 1/8 x 1 3/8 centers. Weight, 7 ounces.

contacts	voltage	res.	nominal	Stock	NET
5 amps.		ohms	power	Part No.	
4PDT WD-9	115VAC	500	5VA	W22HSX32	17.30
	6VDC	20	2.0W	W22HSX144	17.00
	12VDC	80	2.0W	W22HSX145	17.00
4PDT WD-9	24VDC	375	1.5W	W22HSX146	17.05
	110VDC	8000	1.5W	W22HSX147	18.03

alternating current voltage actuated

contacts	voltage	res.	nominal	Stock	NET
5 amps.		ohms	power	Part No.	
4PDT WD-9	115VAC	500	5VA	W22HSX32	17.30
	6VDC	20	2.0W	W22HSX144	17.00
4PDT WD-9	12VDC	80	2.0W	W22HSX145	17.00
	24VDC	375	1.5W	W22HSX146	17.05
	110VDC	8000	1.5W	W22HSX147	18.03

**22TPM Direct Plug-in Assemblies**  
**with Twin Contacts Snap-on Cover**



Effect big saving over factory-wired plug-ins.

- A. You wire the precision built socket
- B. Plug the 22TPM Relay into the socket
- C. Snap-on the transparent high temperature resistant dust cover

Class 22TPM direct Plug-in assemblies give you all the plug-in advantages with savings, compactness and convenience not obtainable with factory-wired plug-ins. These stock assemblies have twin palladium contacts rated 4 amps at 115 VAC or 32 VDC non-inductive load. Part Numbers and prices include complete assembly—socket with screws, 22TPM Relay and snap-on dust cover.

Contacts	Voltage	Res.	Nom.	Stock	Price
4 amps		Ohms	Power	Part No.	1 to 9
DPDT	115VAC	—	5VA	W22ATPMX-1	\$ 8.35
4PDT	115VAC			W22ATPMX-2	11.52
DPDT	24VDC	500	1.5W	W22TPMX-1	8.10
4PDT	24VDC			500	W22TPMX-2

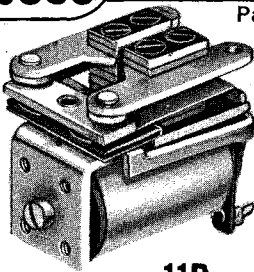
# Power—Latching Special Purpose

# MAGNECRAFT RELAYS

## Miniature Power DC 50 amps SPST-NO-DB

Class 11D miniature telephone type relay with heavy brass contact arms and large 50-ampere silver alloy, single pole, single throw, normally open, double break contacts. The Class 11 is a small size relay with big relay reliability, accuracy and long life.

Solder terminals, spaced for easy wiring. Four 4-40 tapped mounting holes on  $\frac{3}{16}$  centers. Weight, 3 ounces.



11D

1 $\frac{1}{2}$  l, 1 $\frac{1}{4}$  w  
1 $\frac{1}{2}$  h.

contacts	voltage	res. ohms	nominal power	Stock Part No.	NET
50 amps. SPST	6VDC	25		W11DX38	5.39
NO	12VDC	100	1.5W	W11DX39	5.45
double	24VDC	400		W11DX40	5.45
break	110VDC	9000		W11DX41	6.08

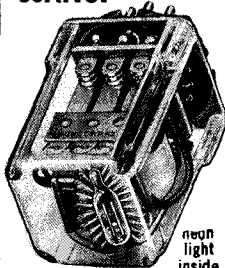
## Small AC 10 amp. plug-in relay with neon "ON" light

Enc. 40-279 polystyrene dust cover with 8- or 11-pin standard octal plug housing Class 88 high reliability relay (see page 1) with built-in neon circuit indicator light. Indicator light comes on when coil is energized.

- Eliminates need for expensive pilot lamp assemblies
- Saves panel space
- Circuit condition can be seen at a glance

Silver alloy contacts, 10 ampere rating. Weight, 3 ounces.

88ANCP



1 $\frac{1}{2}$  x 1 $\frac{1}{2}$  x 2 $\frac{1}{2}$  h\*

contacts	wiring diagrams	volt. AC	nominal power	Stock Part No.	NET
10 amps. SPDT	WD-1*	115		W88ANCPX-1	6.64
DPDT	WD-2*	115	3VA	W88ANCPX-2	7.29
3PDT	WD-3*	115		W88ANCPX-3	8.81

\*See page 1.

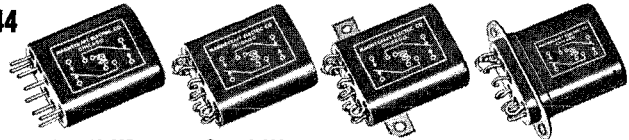
## Micro-Miniature Rotary Relays

MAGNECRAFT Class 44 Rotary Relays have been developed to provide increased reliability in the crystal can size. Here are a few of many areas in which improvement has been made:

1. Frame and header assembly of rugged bridge-type construction—assures greatly increased resistance to distortion from shock, vibration and temperature—to military specification requirements
2. Balanced armature—minimizes the effect of gravity, shock and vibration on operating reliability.
3. Hinge design—oversize, instrument type bearings at BOTH ends.
  - a. Minimizes friction for increased sensitivity and greater contact pressure.
  - b. Increases operating reliability and life.
4. The latest and finest developments in high temperature insulation.
5. Hermetically sealed in inert gas for maximum protection against severe ambient conditions.

Contact combination: Double Pole, Double Throw  
Contact rating: 2 amperes at 28 VDC or 115 VAC, non-inductive.  
Operate Time: 5 milliseconds maximum with nominal voltage  
Release Time: 5 milliseconds maximum.

44



Enc. 40-227  
plug-in header  
no bracket

Enc. 40-222  
solder terminals  
no bracket

Enc. 40-224  
solder terminals  
side bracket

Enc. 40-234  
solder terminals  
flange bracket

Case - .875 x .797 x .359

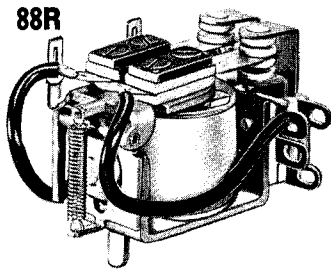


Standard wiring diagram for Class 44 Relays

DC voltage	res. ohms	nominal power	Stock Part No.	NET	Stock Part No.	NET
		<b>Enc. 40-227</b>		<b>Enc. 40-222</b>		
6.5	34		W44HPX-34	17.60	W44HSX-103	17.60
11	92		W44HPX-35	17.60	W44HSX-104	17.60
26.5	552	1.2W	W44HPX-36	17.60	W44HSX-105	17.60
38.5	1278		W44HPX-37	18.00	W44HSX-106	18.00
76	5000		W44HPX-38	19.90	W44HSX-107	19.90
		<b>Enc. 40-224</b>		<b>Enc. 40-234</b>		
6.5	34		W44HSX 108	17.95	W44HSX-113	17.95
11	92		W44HSX 109	17.95	W44HSX-114	17.95
26.5	552	1.2W	W44HSX-110	17.95	W44HSX-115	17.95
38.5	1278		W44HSX-111	18.35	W44HSX-116	18.35
76	5000		W44HSX-112	20.25	W44HSX-117	20.25

## Small—Power—AC-DC—15 amps.

88R



1 $\frac{1}{2}$  l, 1 $\frac{1}{2}$  w, 1 $\frac{1}{2}$  high

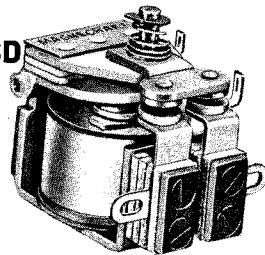
Class 88R extra quality, high reliability clapper type relay with 15 ampere heavy duty silver alloy contacts for industrial control applications. Has the exclusive quality features of Class 88 relays described on page one. Tinned solder terminals. One #6-32 tapped mounting hole and locating boss. Weight 3 ounces.

contacts	voltage	res. ohms	nominal power	Stock Part No.	NET
15 amps. DPDT	6VAC	—		W88ARX1	5.97
	12VAC	—	3VA	W88ARX2	5.97
	24VAC	—		W88ARX3	6.02
	115VAC	—		W88ARX4	6.17
DPDT	6VDC	25		W88RX1	5.90
	12VDC	100	1.5W	W88RX2	5.90
	24VDC	400		W88RX3	5.95
	110VDC	8000		W88RX4	6.40

NOTE—Voltage actuated relays pull in at 85% of nominal voltage.

## Power - AC and DC - 50 amps.

88D



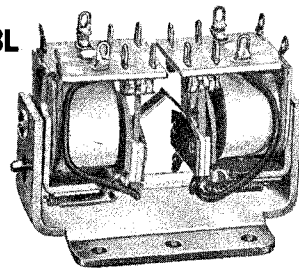
1-13/16 x 1-1/4 (less soldering tabs) x 1-7/16 high

The popular high reliability Class 88 Relay (see page 1) specially designed with 50-ampere SPST, Double Break, Normally Open contacts. Developed especially for switching heavy current in minimum space reliably and economically. Unique contact structure provides positive wiping action. One 6-32 tapped mounting hole and locating boss. Weight, 3 ounces.

contacts	voltage	res. ohms	nominal power	Stock Part No.	NET
50 amperes SPST	24VAC	—		W88ADX-1	5.15
	115VAC	—	3VA	W88ADX-2	5.25
	230VAC	—		W88ADX-3	5.70
Double Break, Normally Open	6VDC	25		W88DX-1	4.65
	12VDC	100	1.5W	W88DX-2	4.65
	24VDC	400		W88DX-3	4.70
	110VDC	8000		W88DX-4	5.94

## Latch-In - AC and DC - Small

88L



2-11/16 max. x 1 $\frac{1}{4}$  x 1-15/16 high max.

Two class 88 relays (see page 1) with interlocking latch-in levers mounted on a common base. Each armature latches when pulled in. Energizing one armature releases (resets) the other. Each relay is complete with independent operating coil. Contacts are silver alloy, 10 ampere rating. Relay coils are designed for continuous duty operation. Weight 6 $\frac{1}{2}$  ounces.

contacts	voltage	res. ohms	nominal power	Stock Part No.	NET
10 amps. 4PDT	6VAC	—		W88ALX-2	10.60
	24VAC	—	6VA	W88ALX-3	10.60
	115VAC	—	prox	W88ALX-4	10.60
6PDT	6VAC	—		W88ALX-5	12.80
	24VAC	—	6VA	W88ALX-6	12.80
	115VAC	—	prox.	W88ALX-7	12.80
4PDT	6VDC	12		W88LX-1	9.65
	12VDC	50		W88LX-2	9.65
	24VDC	200	3W	W88LX-3	9.65
	110VDC	4000		W88LX-4	10.85
6PDT	6VDC	12		W88LX-5	11.75
	12VDC	50		W88LX-6	11.75
	24VDC	200	3W	W88LX-7	11.75
	110VDC	4000		W88LX-8	12.95



# MAGNECRAFT RELAYS

## Mercury-Wetted and Dry Reed

### 132MPC and 133MPC Mercury-Wetted Contact Relays in MPC Package

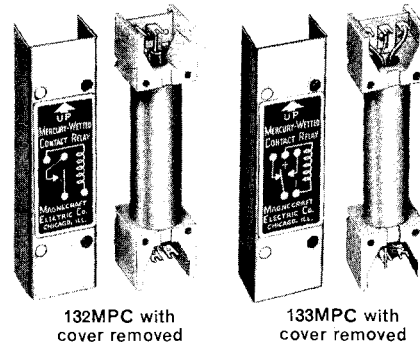
#### 132 and 133MPC Specifications

**Operate Time:** 2 ms. average.  
**Release Time:** 2 ms. average.  
**Operating Position:** Upright—not more than 30° from vertical.  
**Nominal Power:** 500 milliwatts.  
**Life Expectancy:** 1 Billion cycles.  
**Contacts:** Mercury-wetted.  
**Contact Load Rating:** 50 VA at 3.0 amps. max., or 400V max. non-inductive. Switches from 50VA to extremely minute current and voltage reliably.  
**Contact Resistance:** 25 milliohms max.; less than 10% change in contact resistance through life.  
**Maintenance:** No change in adjustment after the relay is made. May be stored indefinitely without deterioration.  
**Ambient Temperature:** -37.8°F to +200°F.

132MPC SPST-NO				
Stock Part No.	COIL			Price 1 to 24
	MA	Volts	Ohms	
W132MPCX-1	140	—	30	5.83
W132MPCX-2	85	6VDC	70	
W132MPCX-3	48	12VDC	250	
W132MPCX-4	24	24VDC	1000	
W132MPCX-5	12	48VDC	4000	
W132MPCX-6	9	—	7000	

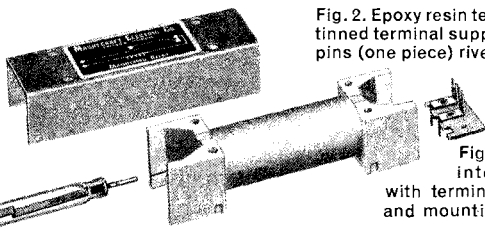
  

133MPC SPDT Form C				
single side stable*				
Stock Part No.	COIL			Price 1 to 24
	MA	Volts	Ohms	
W133MPCX-1	140	—	30	7.65
W133MPCX-2	85	6VDC	70	
W133MPCX-3	48	12VDC	250	
W133MPCX-4	24	24VDC	1000	
W133MPCX-5	12	48VDC	4000	
W133MPCX-6	9	—	7000	



#### MPC Modular Package (see Mercury-Wetted Relays above and Dry Reed Relays below)

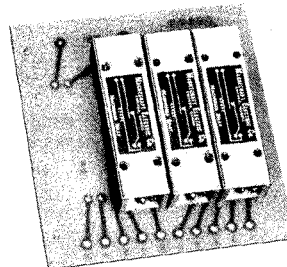
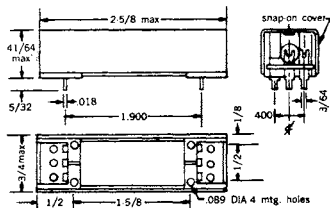
**Fig. 3.** Snap-on steel cover—combines mechanical protection and magnetic shielding, also prevents interaction.



**Fig. 2.** Epoxy resin terminal board with tinned terminal supports and terminal pins (one piece) riveted into mortised position.

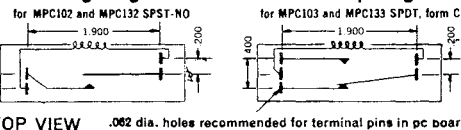
**Fig. 1.** Nylon bobbin intergrally molded with terminal board support and mounting base.

**Fig. 4.** The switch mechanism, hermetically sealed with an atmosphere of inert gas in a glass capsule—protected for life from dust, moisture, contamination and tampering.



MPC Packaged Relays provide quick plug-in assembly to circuit boards.

#### Wiring Diagrams and Terminal Pin Spacings



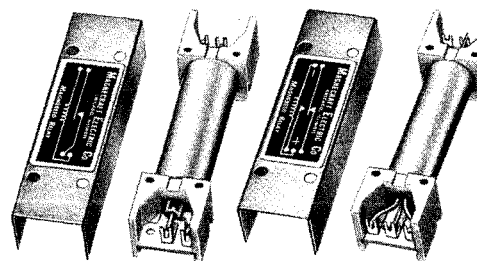
### Class 102MPC and 103MPC Dry Reed Relays in MPC package

#### Class 102MPC SPST-NO

**Contact Combination:** SPST-NO.  
**Operate Time:** 3 ms. average **Release:** 1/2 ms. average.  
**Nominal Power:** 500 milliwatts.  
**Contacts:** Gold—rated 15 VA at 1 amp., max. or 250 VAC max. non-inductive load.  
**Life Expectancy:** 20 million cycles at maximum rating.  
 100 million cycles at 1/2 maximum rating.  
 200 million cycles at low load (1/10 amp. at 12V).

Stock Part No.	COIL			Price 1 to 24
	MA	Volts	Ohms	
W102MPCX-5	140	11—	30	3.29
W102MPCX-6	85	6VDC	70	
W102MPCX-7	48	12VDC	250	
W102MPCX-8	24	24VDC	1000	
W102MPCX-9	12	48VDC	4000	
W102MPCX-10	9	—	7000	

*Operates in any position.*



102MPC with cover removed

103MPC with cover removed

#### Class 103MPC SPDT Form C (Single Side Stable)

**Contact Combination:** SPDT, Form C, single side stable\*  
**Operate Time:** 2 ms. average.  
**Release Time:** 1/2 ms. average.  
**Contact Bounce:** 4 ms. max. on release (normally closed contact).  
**Nominal Power:** 500 milliwatts.  
**Contacts:** Gold—rated 10 VA at 0.5 amp. max. or 250 VAC max.; non-inductive load.  
**Life Expectancy:**  
 25 million cycles at maximum rating.  
 50 million cycles at 1/2 maximum rating.  
 100 million cycles at low load (1/10 amp. at 12V).

Stock Part No.	COIL			Price 1 to 24
	MA	Volts	Ohms	
W103MPCX-1	140	—	30	5.83
W103MPCX-2	85	6	70	
W103MPCX-3	48	12	250	
W103MPCX-4	24	24	1000	
W103MPCX-5	12	48	4000	
W103MPCX-6	9	—	7000	

*Operates in any position.*

\***Single Side Stable**—Armature contact releases from the operated position when coil current falls below the drop out value.

#### Class 101EP Axial Lead Relays



For specifications see Class 101-SPST-NO-Open Style on opposite page.

#### Class 101EP-SPST-NO

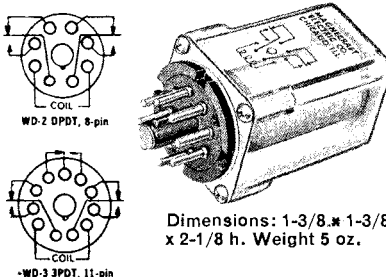
COIL			Nom Pwr	Stock Part No.	Price 1 to 24
MA	Volts	Ohms			
—	6VDC	65	600 MW	W101EPX-5	3.62
—	12VDC	225		W101EPX-6	3.62
—	24VDC	1000		W101EPX-7	4.24
8	—	5000		W101EPX-8	4.68

†Voltage operated relays pull in at 85% of nominal voltage

#### 103CP Dry Reed Relay Plug-in Assemblies with Plastic Dust Cover

Each assembly includes two or three Class 103SPDT Dry Reed Relays (for specifications see Class 103 on opposite page) with plug-in mounting in polystyrene dust cover.

contacts	direct current		res. ohms	catalog number	Price 1 to 24
	current	Volts			
DPDT WD-2	—	6V	75	W103CPX-7	12.92
	—	12V	300	W103CPX-8	12.95
	8MA	24V	1000	W103CPX-9	13.01
3PDT WD-3	—	—	5000	W103CPX-10	13.57
	—	6V	40	W103CPX-11	16.77
	—	12V	150	W103CPX-12	16.83
	—	24V	650	W103CPX-13	16.95
	10MA	—	5000	W103CPX-14	17.50





# Encapsulated Dry Reed

# MAGNECRAFT RELAYS

These Dry Reed Relays by MAGNECRAFT have pre-adjusted GOLD contacts completely protected from dust, contamination and tampering by hermetic sealing in an atmosphere of inert gas, inside a glass capsule. The isolated switching contacts are actuated by a coil around the glass capsule.

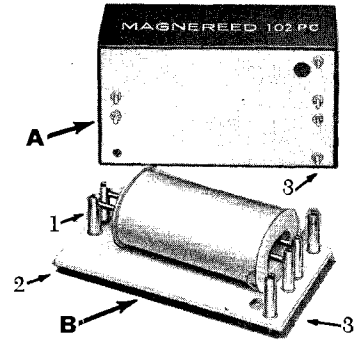
MAGNEREED Relays bridge the gap between electromechanical relays and complex, costly solid state switching devices through stabilized contact resistance; high speed positive switching; sensitive operation; and adaptability to complex logic circuits plus ability to better withstand over-voltage transients and higher ambient temperatures.

## Encapsulated MAGNEREED Relay Assemblies with Printed Circuit "plug-in" terminal pins. (see hand with circuit board at lower left)

Illustration "A" at right shows the "plug-in" terminal pins of an Encapsulated MAGNEREED assembly. Illustration "B" shows the relay on the epoxy mounting board before encapsulation. The rugged terminal posts (1) extend through the mounting board (2) to form the terminal pins (3).

The leads from the capsule are soldered to the rigid terminal posts with the capsule and coil in position; stresses created when leads are bent that transmit to contacts inside the capsule are completely avoided.

Encapsulation eliminates breakage, protects coil, leads and terminals against mechanical injury and atmospheric change; provides fast and economical circuit board mounting.



### Class 101 SPST-NO

Operate Time: 1 ms average  
Release Time: 1/2 ms average  
Contacts: Gold, rated 12VA at .25 amp. max. or 100VAC max. non-inductive  
Life Expectancy:  
5 million cycles at max. rating  
20 million cycles at 1/2 max. rating.  
Operates in any position  
Capacitance between contacts:  
.3 mmf\*\*

### 101 SPST-NO open type

Nom. Power 600MW  
Overall length, 1-1/2, bobbin 7/8  
O.D. 7/16. Weight 1 oz.

COILS—DC		Stock Part No.	Price 1 to 24
MA	†volts ohms		
46MA	6V 100	W101X-1	3.29
30MA	12V 250	W101X-2	3.29
20MA	24V 500	W101X-3	3.85
9MA	— 2500	W101X-4	4.25



### 101PC SPST-NO (45-321)

Nom. Power 600MW  
1-1/2 x 1/2 x 9/16 h.  
weight 2 oz.

COILS—DC		Stock Part No.	Price 1 to 24
MA	†volts ohms		
—	6V 65	W101PCX-5	5.11
—	12V 250	W101PCX-6	5.16
—	24V 1000	W101PCX-7	5.26
8MA	— 5000	W101PCX-8	5.68



### 101PC DPST-NO (45-322)

Nom. Power 900MW  
1-1/2 x 11/16 x 9/16 h.  
weight 3 oz.

COILS—DC		Stock Part No.	Price 1 to 24
MA	†volts ohms		
—	6V 40	W101PCX-9	7.15
—	12V 150	W101PCX-10	7.18
—	24V 650	W101PCX-11	7.24
8MA	— 5000	W101PCX-12	7.69



### Class 104 SPDT

Operate Time: 1 ms average  
Release Time: 1 ms average  
Contacts: Gold, rated 3VA at 0.25 amp. max. or 28V max. non-induct.  
Contact Bounce:  
0.5 ms max. N.O. contacts  
2.0 ms max. N.C. contacts  
Life expectancy: 10 million cycles at rated load  
Operates in any position.

Send for complete 50-page Engineering Catalog 165

### 104PC SPDT (45-332)

Nom. Power 600MW  
1-1/2 x 1/2 x 9/16 h.  
weight 2 oz.

—	6V 65	W104PCX-7	10.07
—	12V 225	W104PCX-8	10.12
—	24V 1000	W104PCX-9	10.22
8	— 5000	W104PCX-10	10.64



### 104PC DPDT (45-333)

Nom. Power 900MW  
1-1/2 x 11/16 x 9/16 h.  
weight 3 oz.

—	6V 40	W104PCX-3	14.59
—	12V 150	W104PCX-4	14.62
—	24V 650	W104PCX-5	14.68
8	— 5000	W104PCX-6	15.13



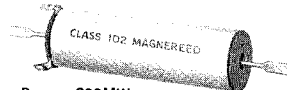
### Class 102 SPST-NO

Operate Time: 3 ms average  
Release Time: 1/2 ms average  
Contacts: Gold, rated 15VA at 1 amp. max. or 250VAC max. non-inductive  
Life Expectancy:  
20 million cycles at max. rating  
100 million cycles at 1/2 max. rating.  
Operates in any position  
Capacitance between contacts:  
.9 mmf\*\*

### 102 SPST-NO open type

Nom. Power 300MW  
Overall length, 3-1/4; bobbin 2-1/16  
O.D. 1/2 weight 2 oz.

32MA	6V 100	W102X-1	2.57
23MA	12V 200	W102X-2	2.57
14.5MA	24V 500	W102X-3	2.57
7.5MA	— 2000	W102X-4	2.70
4.6MA	— 5000	W102X-5	3.25



### 102PC SPST-NO (45-324)

Nom. Power 400MW  
2-1/4 x 21/32 x 5/8 h.  
weight 3 oz.

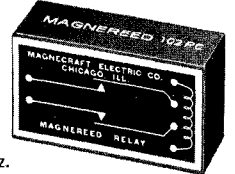
—	6V 100	W102PCX-1	4.77
—	12V 400	W102PCX-2	4.83
—	24V 1500	W102PCX-3	4.87
6.5MA	— 5000	W102PCX-4	5.32



### 102PC DPST-NO (45-326)

Nom. Power 700MW  
2-1/4 x 1-1/4 x 3/4 h.  
weight 4 oz.

—	6V 50	W102PCX-5	6.22
—	12V 200	W102PCX-6	6.28
—	24V 800	W102PCX-7	6.33
9MA	— 5000	W102PCX-8	6.78



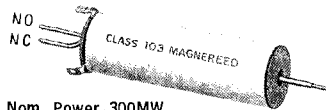
### Class 103 SPDT

Contact Combination: SPDT form C, break before make (single side stable)  
Operate Time: 2 ms average  
Release Time: 1/2 ms average  
Contacts: Gold, rated 10VA at 1 amp. or 250VAC max., non-inductive.  
Contact Bounce: 4 ms average on release (normally closed contact)  
Life Expectancy:  
25 million cycles at max. rating.  
50 million cycles at 1/2 max. rating.  
100 million cycles at low load.  
Capacitance betw. contacts: .8 mmf\*\*

### 103 SPDT open type

Nom. Power 300MW  
Overall length, 3-1/2; bobbin 2-1/8  
O.D. 1/2 weight 2 oz.

32MA	6V 100	W103X-8	4.54
23MA	12V 200	W103X-9	4.75
14.5MA	24V 500	W103X-10	5.22
7.5MA	— 2000	W103X-11	5.66
4.6MA	— 5000	W103X-12	5.79



### 103PC SPDT (45-325)

Nom. Power 400MW  
2-1/4 x 21/32 x 5/8 h.  
weight 3 oz.

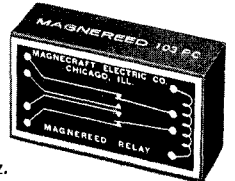
—	6V 100	W103PCX-1	7.22
—	12V 400	W103PCX-2	7.27
—	24V 1500	W103PCX-3	7.32
6.5MA	— 5000	W103PCX-4	7.76



### 103PC DPDT (45-327)

Nom. Power 700MW  
2-1/4 x 1-1/4 x 3/4 h.  
weight 4 oz.

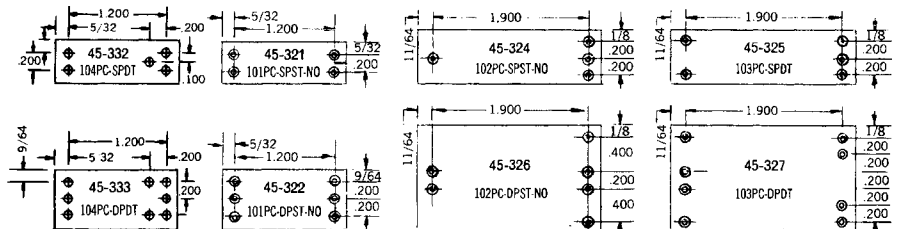
—	6V 50	W103PCX-5	10.77
—	12V 200	W103PCX-6	10.79
—	24V 800	W103PCX-7	10.84
9MA	— 5000	W103PCX-8	11.31



\*\*nominal value for open style reed relays  
†Voltage operated relays pull in at 85% of nominal voltage.

Terminal Pin Spacings for the 8 Printed Circuit Encapsulated Dry Reed Assemblies shown above. Numbers in diagrams correspond to numbers shown in headings.

All Terminal Pins are .040 diameter and 1/8 inch long.



# MAGNECRAFT RELAYS

Page 7

## Air Dashpot Time Delay

Operate Time Delay adjustable 0.2 to 30 sec.

### Class 110 Air Dashpot Time Delay Relays

The new MAGNECRAFT Class 110 Relay has been developed to provide, in a small, inexpensive Time Delay Relay, the high reliability and the great life users have learned to expect from MAGNECRAFT Relays.

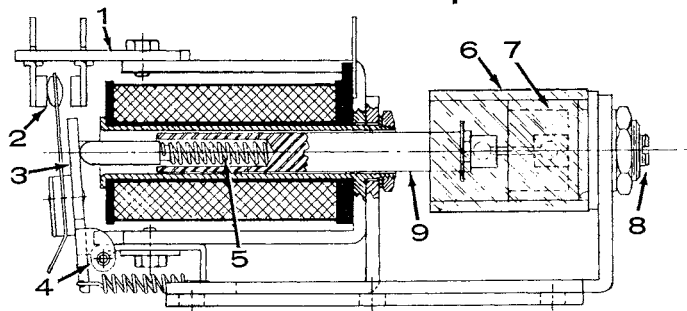
In this unique development, proven high reliability relay contacts and switching mechanism are merged with a precision-built air dashpot timer. The result is a masterpiece of simplicity and a minimum number of moving parts that sets new standards of compactness and long life reliability.

The Air Dashpot Timer is built of non-aging inert materials to provide the last word in reliability through long life. The cylinder is tempered glass, precision ground to dimensions and polished for lowest friction. The precision fitted piston is of dimensionally stable, low friction graphite. All metal parts are corrosion resistant.

The Solenoid Assembly is unique; a new patent-applied-for invention. When the operating coil is energized the Solenoid pulls out the dashpot piston at the rate for which the timing adjustment is set. Through the timing period, the relay contacts remain in the de-energized (normal) position, completely free from any tendency to make premature or faltering contact.

At the end of the timing period (when the Dashpot piston travel is complete) the Solenoid Plunger **instantaneously** completes the magnetic circuit which **snaps** in the Relay Contacts and **holds** them under full magnetic power until the coil is de-energized.

When the coil is de-energized relay contact dropout is **instantaneous and positive**; the Solenoid Plunger Spring helps the relay release spring snap the contacts to the de-energized position.



1. Terminal Board.
2. Heavy Duty Relay Contacts have built-in contact wipe.
3. Ruggedized relay armature.
4. Pin type armature hinge. The same precision built hinge used in the finest telephone type relays.
5. Compression Spring—Compresses when solenoid pulls out dashpot piston; when coil is de-energized, helps snap contacts to normal position and returns piston to start position.
6. Air Dashpot Cylinder—Specially treated

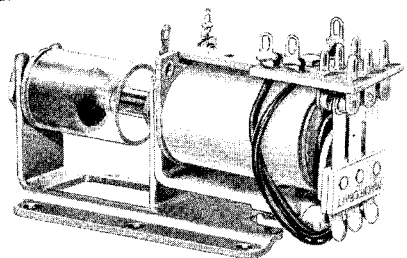
7. Graphite Piston—Controls travel of solenoid plunger through setting of timing adjustment.
8. Timing adjustment screw—Provides stepless adjustment from 0.2 to 30 seconds.
9. Solenoid Plunger—When coil is energized the plunger pulls out dashpot piston; at end of travel the plunger **instantaneously** completes magnetic circuit that pulls in contacts and maintains full contact pressure until coil is de-energized.

#### Some of the Features

1. High Reliability through long life:
  - a. Proven high reliability relay contacts and switching mechanism.
  - b. Precision-built Air Dashpot of inert, non-aging, low friction materials.
  - c. Solenoid assembly completes magnetic circuit **instantaneously** for positive switching action; protects contacts from chattering and frying.
  - d. All metal parts protected from corrosion.
  - e. Extreme simplicity — few moving parts; none subjected to distortion.
2. 0.2 to 30 seconds Timing Adjustment

3. Instantaneous release. Air Dashpot reaches "start" position within 0.2 second.
4. Operates in any position. Timing should be set in installed position.
5. Timing Repeat Accuracy  $\pm 10\%$ .
6. Temperature Range,  $-65$  to  $+165^\circ\text{F}$ .
7. AC and DC operation. AC models rectified for DC reliability from AC service.
8. Low Power Consumption. DC, 4 watts; AC, 7 volt amperes.

#### Open—solder terminals

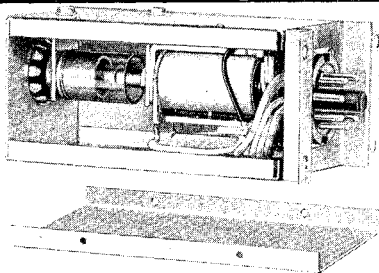


Has solder terminals. Six mounting holes: two holes 6-32 thread, located diagonally, spaced 1-3/16 x 2-1/8; two holes .156 dia., located diagonally, spaced 1-3/16 x 2-1/8; two holes .156 dia., spaced 1-3/16. Dimensions: 3-13/16 long, 1-15/16 high, 1-7/16 wide. Weight; 6 ounces.

Stock Part No.	Voltage	Res. Ohms	Time Delay	Contacts Comb.	Price
W110X-9	24VDC	100	0.2 to 30	DPDT 10	17.75
W110X-10	110VDC	2500	30	WD-2	18.34
W110AX-9	115VAC*	—	Sec.	amps.	20.91

\*AC models rectified for DC reliability from AC service.

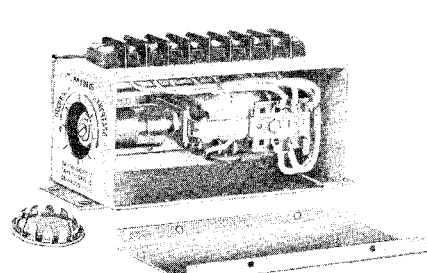
#### with 40-347 Plug-in Cover



Phenolic octal plug base with hold down bracket and heavy duty metal enclosure with snap-on cover which permits quick access to relay. Snap-on cap provides access to timing screw. Permanently identified with wiring diagram, contact combination, contact rating, part number and coil operating voltage. Hold down bracket has four mounting holes, .177 diameter on 1-1/2 x 2-5/8 centers. Dimensions: 3-1/32 x 2-5/32 x 4-5/8. Weight, 15 ounces.

Stock Part No.	Voltage	Res. Ohms	Time Delay	Contacts Comb.	Price
W110CPX-10	24VDC	100	0.2 to 30	DPDT 10	26.78
W110CPX-11	110VDC	2500	30	WD-2	27.44
W110ACPX-9	115VAC*	—	Sec.	amps.	29.79

#### with 40-348 Dust Cover



Heavy duty metal enclosure with snap-on cover which permits quick access to relay. Snap-on cap provides access to timing screw. Has molded phenolic barrier screw type terminal block. Permanently identified with wiring diagram, contact combination, contact rating, part number and coil operating voltage. Four mounting holes, .177 diameter on 4-5/8 x 1-1/8 centers. Dimensions: 5 x 2-3/8 x 2-17/32. Weight, 15 ounces.

Stock Part No.	Voltage	Res. Ohms	Time Delay	Contacts Comb.	Price
W110CSX-1	24VDC	100	0.2 to 30	DPDT 10	28.50
W110CSX-2	110VDC	2500	30	WD-2	29.20
W110ACSX-1	115VAC*	—	Sec.	amps.	30.00

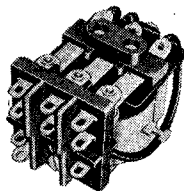
NOTE—Voltage actuated relays pull in at 85% of nominal voltage.



# LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

## GENERAL PURPOSE RELAYS



### MINIATURE OPEN TYPE (SERIES MK)

Open type relay in standard contact arrangements up to 3PDT. 5 or 10 amp contact rating. Voltages up to 230 volts, A.C. or D.C. Factory adjusted to pull in at 75% max. of nominal voltage D.C. and 80% max. of nominal voltage A.C. Designed to pass 1,000 volt A.C. Hipot test between all elements.

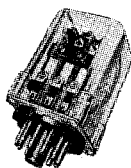


AC	5 amp contact rating	6, 12, 24, 115V	220V
MK1A	SPDT	\$3.10	\$3.55
MK2A	DPDT	3.75	4.15
MK3A	3PDT	4.15	4.55

PLATE CIRCUIT RELAYS	5 amp. open type				
	2500Ω	5000Ω	10,000Ω	20,000Ω	
MKC-1	SPDT	\$3.15	\$3.25	\$3.80	\$4.05
MKC-2	DPDT	3.65	3.80	4.30	4.55
MKC-3	3PDT	4.10	4.20	4.75	5.00

DC	5 amp contact rating	6, 12, 24V	110V
MK1D	SPDT	\$3.05	\$3.45
MK2D	DPDT	3.40	3.85
MK3D	3PDT	3.85	4.25

All models available in 10 amps. DIMENSIONS: 1-11/16 × 1-3/16 × 29/32



### MINIATURE PLUG-IN (SERIES MKP)

Plug-in type relay, same factory tested, quality features as above. Will operate continuously in ambient temperature ranges of 45° to 75°C. for D.C. coils and -45° to 55°C. for A.C. coils. Metal or clear butyrate dust cover.

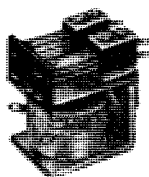


AC	5 amp contact rating	6, 12, 24, 115V	220V
MKP1A	SPDT	\$5.45	\$5.90
MKP2A	DPDT	6.05	6.45
MKP3A	3PDT	7.50	7.95

PLATE CIRCUIT RELAYS	5 amp. enclosed type				
	2500Ω	5000Ω	10,000Ω	20,000Ω	
MKF-1	SPDT	\$5.90	\$6.00	\$6.40	\$6.65
MKF-2	DPDT	6.30	6.40	6.80	7.10
MKF-3	3PDT	7.75	7.90	8.40	8.65

DC	5 amp contact rating	6, 12, 24V	110V
MKP1D	SPDT	\$5.40	\$5.85
MKP2D	DPDT	6.00	6.40
MKP3D	3PDT	7.45	7.90

All models available in 10 amps. DIMENSIONS: 2-1/4 × 1-5/8 × 1-3/8



### MINIATURE MULTIPLE LEAF (SERIES MW)

A small, versatile relay available in a variety of contact configurations consisting of forms A, B, C or D. (make before break), up to a maximum of 12 springs. Coils can be supplied for operation on D.C. or A.C. 60 cps. Operation on 400 cps. source is available with self-contained rectifiers on relays with covers.

AC	10 amp contact rating	6, 12, 24, 115V		220V
		MW1A	SPDT	\$2.70
MW2A	DPDT	3.30	3.75	
MW3A	3PDT	3.80	4.20	
MW14A	4PDT	4.60	5.05	

DC	10 amp contact rating	6, 12, 24V		110V
		MW1D	SPDT	\$2.60
MW2D	DPDT	3.25	3.65	
MW3D	3PDT	3.75	4.15	
MW14D	4PDT	4.55	5.00	

DIMENSIONS: 1-17/32 × 1-21/32 × 1-0

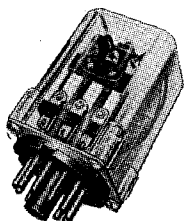
### MINIATURE MULTIPLE LEAF PLUG-IN (SERIES MWP)

Plug-in type relay, same factory tested, quality features as above. Will operate continuously in ambient temperature ranges of 45° to 75°C. for D.C. Coils and -45° to 55°C. for A.C. Coils. Metal or clear butyrate dust cover.

AC	10 amp contact rating	6, 12, 24, 115V	220V
MWP1A	SPDT	\$5.25	\$5.65
MWP2A	DPDT	5.80	6.25
MWP3A	3PDT	7.35	7.75
MWP14A	4PDT	9.05	9.45

DC	10 amp contact rating	6, 12, 24, 115V	220V
MWP1D	SPDT	\$5.20	\$5.55
MWP2D	DPDT	5.75	6.20
MWP3D	3PDT	7.30	7.60
MWP14D	4PDT	8.95	9.40

All models available in 10 amps. DIMENSIONS: 3-13/64 x 1-15/16 x 1-5/16.



### SPOTLIGHT RELAYS (SERIES A)

High quality, general purpose plug-in relay with built-in circuit indicator lamp. Available in colored cases for circuit identification and in metal can. Saves panel space, reduces costly labor.

AC	5 amp contact rating	6, 12, 24, 115V		220V
		A-1A	SPDT	\$6.40
A-2A	DPDT	7.00	7.40	
A-3A	3PDT	8.45	8.85	

DC	5 amp contact rating	6, 12, 24V		110V
		A-1D	SPDT	\$6.35
A-2D	SPDT	6.95	7.35	
A-3D	3PDT	8.40	8.80	

All models available in 10 amps. DIMENSIONS: 2-1/4 × 1-3/8 × 1-3/8

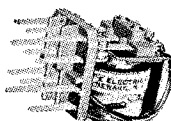


# LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

## GENERAL PURPOSE RELAYS

### PRINTED CIRCUIT or TAPER TAB (SERIES MKT)



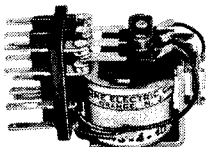
Printed circuit type relay incorporating coil, frame and load contacts of standard Series MK. Connector lugs fit standard amp terminal #41355. Series MKTE is the MKT with plastic dust cover. Available with studs for chassis mount or taper tab connectors. Price same as MKTR below.



	5 amp contact rating	6, 12, 24, 115V	220V
AC	MKT1A SPDT	\$3.25	\$3.65
	MKT2A DPDT	3.95	4.35
	MKT3A 3PDT	4.10	4.50
		6, 12, 24V	110V
DC	MKT1D SPDT	3.20	\$3.60
	MKT2D DPDT	3.60	4.05
	MKT3D 3PDT	4.10	4.50

All models available in 10 amps.  
DIMENSIONS: 2-1/32 × 1-7/32 × 29/32

### QUICK CONNECT TERMINAL RELAY (SERIES MKA)



Quick connect terminal type miniature relay incorporating coil, frame and load contacts of the standard Series MK. The connector lugs fit standard .110" quick connect terminals.

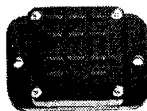
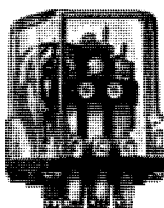


	5 amp contact rating	6, 12, 24, 115V	220V
AC	MKA1A SPDT	\$3.25	\$3.65
	MKA2A DPDT	3.95	4.35
	MKA3A 3PDT	4.40	4.85
DC	MKA1D SPDT	\$3.20	\$3.60
	MKA2D DPDT	3.60	4.05
	MKA3D 3PDT	4.10	4.50

All models available in 10 amps. DIMENSIONS: 29/32 × 1-3/16 × 1-11/16

## New!

### MINIATURE PLUG-IN LOW PROFILE LOW COST (SERIES MKTR)



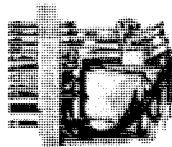
Despite its compact size this new totally enclosed, low cost, low profile miniature relay has not compromised the high quality of its progenitor the Series MK open relay. The low mounting profile (dust cover included) has been made possible by incorporating the frame of the relay with the connector-header. Thus a certain basic hardware has been eliminated resulting in important size reduction. Versatility is also assured since the standard terminals can be used with Amp snap-on connectors, printed circuits, or plug-in receptacles. Also available with studs for chassis mounting. Termination can be used for soldered connections. The plug-in-receptacle is true 10 ampere construction. Lugs can be used for either solder or snap-on connections.

	5 amp contact rating	6, 12, 24, 115V	220V
AC	MKTR1A SPDT	\$4.25	\$4.65
	MKTR2A DPDT	4.95	5.35
	MKTR3A 3PDT	5.40	5.85
		6, 12, 24V	110V
DC	MKTR1D SPDT	\$4.20	\$4.60
	MKTR2D DPDT	4.60	5.05
	MKTR3D 3PDT	5.10	5.50

AVAILABLE 3 WAYS: Plate circuit relay. Spotlight relay (with or without colored dust cover). Hermetic seal or any combination.  
DIMENSIONS: 1-3/16 × 1-3/8 × 1-3/8.

92-67 RECEPTACLE .30 net.

### MINIATURE 4-POLE RELAY (SERIES JA)



The series JA is a high quality, miniature 4PDT relay for AC or DC operation. The JA relay features nylon dust cover, gold flashed fine silver contacts rated at 3 amps. This imported relay features exceptional quality and rugged design to meet the most exacting requirements. It is excellent for computers, logic systems and data processing. Standard configuration features solder terminals and 3-48, 23/64" mounting stud. Can be used with our 92-50 socket (50c each).

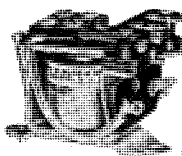
	Voltage	Resistance	Nominal Power	Price
DC	6 VDC	40 OHMS	800 MW	\$4.10
	12 VDC	160 OHMS	800 MW	4.10
	24 VDC	650 OHMS	800 MW	4.10
	48 VDC	2500 OHMS	800 MW	4.20
	90 VDC	10000 OHMS	800 MW	4.40
	110 VDC	10000 OHMS	800 MW	4.40
AC	6 VAC	10.5 OHMS	1.1 VA	\$4.40
	12 VAC	43 OHMS	1.1 VA	4.40
	24 VAC	160 OHMS	1.1 VA	4.40
	115 VAC	3900 OHMS	1.1 VA	4.40



# LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

## GENERAL PURPOSE RELAYS



### MEDIUM POWER RELAY OPEN TYPE (SERIES LR)

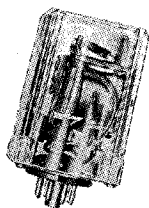
Open type, heavy-duty type relay designed for many applications. Standard fine silver contacts rated at 10

AC		10 amp contact rating		6, 12, 24, 115V	220V
LR1A	SPDT	\$4.00	\$4.20		
LR2A	DPDT	4.85	5.05		
LR12A	SPDT-DB	5.05	5.25		

amperes, optional Silver Cadmium load contacts rated at 15 amps. Ambient temperature operating range, continuous duty: A.C., -45° to 55°C.; D.C., -45° to 75°C.

DC		10 amp contact rating		6, 12, 24V	110V
LR1D	SPDT	\$4.65	\$5.10		
LR2D	DPDT	5.05	5.45		
LR12D	SPDT-DB	4.85	5.05		

DIMENSIONS: 2-3/8 × 1-1/2 × 1-21/32



### MEDIUM POWER RELAY PLUG-IN TYPE (SERIES LRP)

This relay is available in either metal or plastic enclosures, equipped with a standard octal plug in header

AC		10 amp contact rating		6, 12, 24, 115V	220V
LRP1A	SPDT	\$7.00	\$7.10		
LRP2A	DPDT	8.20	8.50		
LRP12A	SPDT-DB	8.80	9.00		

for single and double pole types. Eleven pin headers are also available. The standard LRP plastic enclosure is a clear hi-impact butyrate, colors are available at no extra charge. Female sockets for 8 and 11 pin headers are also available.

DC		10 amp contact rating		6, 12, 24V	110V
LRP1D	SPDT	\$6.80	\$7.00		
LRP2D	DPDT	8.00	8.40		
LRP12D	SPDT-DB	8.70	8.80		

DIMENSIONS: 3-1/8 × 1-15/16 × 1-15/16



### HEAVY DUTY RELAY OPEN TYPE (SERIES LG)

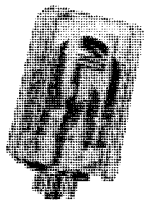
Open type relay, specifically designed for extremely heavy-duty applications. Standard Fine Silver load contacts are rated at 15 amps. with optional Silver Cad-

AC		10 amp contact rating		6, 12, 24, 115V	220V
LG1A	SPDT	\$4.30	\$4.50		
LG2A	DPDT	4.85	5.05		
LG3A	3PDT	5.40	5.60		

mium Oxide contacts where larger inrush loads are encountered. Loads are rated at 115/60 non-inductive. All load contacts are factory gold-flashed to prevent contact oxidation prior to use.

DC		10 amp contact rating		6, 12, 24V	110V
LG1D	SPDT	\$4.20	\$4.40		
LG2D	DPDT	4.75	4.95		
LG3D	3PDT	5.30	5.60		

DIMENSIONS: 1-1/2 × 2-3/8 × 13/16



### HEAVY DUTY RELAY PLUG-IN TYPE (SERIES LGP)

Plug-in type relay, with same quality features as above. Also available in either metal or clear butyrate enclos-

AC		10 amp contact rating		6, 12, 24, 115V	220V
LGP1A	SPDT	\$7.30	\$7.50		
LGP2A	DPDT	7.85	8.05		
LGP3A	3PDT	8.40	8.60		

ure. Ambient temperature operating range, continuous duty; A.C., -45° to 55°C.; D.C., -45° to 75°C.

DC		10 amp contact rating		6, 12, 24V	110V
LGP1D	SPDT	\$7.20	\$7.40		
LGP2D	DPDT	7.75	8.05		
LGP3D	3PDT	8.40	8.60		



### NEW! HEAVY DUTY POWER RELAYS (SERIES ST)

A 25 amp. power relay ideally suited for starting motors up to 1 hp, elevator controls, and many other applications which require high current or high voltage switching with maximum dependability. One piece molded base, sturdy two-hole mounting. Top removable coil.

Available with one or two auxiliary 5 ampere contacts.

AC		25 amp contact rating		6, 12, 24, 115V	220V
ST2A	DPDT	\$6.55	\$6.85		
ST3A	(1. aux. con.)	8.55	8.85		
ST14A	(2. aux. con.)	10.05	10.35		
		6, 12, 24VDC		110VDC	
DC		25 amp contact rating		6, 12, 24VDC	110VDC
ST2D	DPDT	\$6.55	\$6.85		
ST3D	(1. aux. con.)	8.55	8.85		
ST14D	(2. aux. con.)	10.05	10.35		

DIMENSIONS: 2-5/16 × 3-1/8 × 2-1/2



# LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

## GENERAL PURPOSE RELAYS



### HEAVY DUTY POWER RELAYS (SERIES STM)

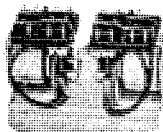
Same quality features as Series ST, but assembled on a compact base.

AC		220V	
25 amp contact rating		6, 12, 24, 115V	220V
STM1A	SPDT	\$4.25	\$4.75
STM4A	SPDT NO	3.90	4.40
STM5A	DPST NO	4.65	5.15
STM7A	SPST NC	3.90	4.40
STM10A	SPST NO DB	4.15	4.65

DC		110V	
25 amp contact rating		6, 12, 24, 110V	110V
STM1D	SPDT	\$4.25	
STM4D	SPDT NO	3.90	
STM5D	DPST NO	4.65	
STM7D	SPST NC	3.90	
STM10D	SPST NO DB	4.15	

DIMENSIONS: 2-1/2 X 2-5/16 X 2-1/16.

## MECHANICAL LATCH RELAYS



### OPEN TYPE (SERIES RL)

Open type for use where a sustained relay closure is required, and current drain of a relay coil is to be eliminated. Incorporates two coils, one to close load con-

tacts, the other to reset them. Requires only momentary electrical contact to operate or release. Provides positive mechanical latch, eliminating chatter during sustained relay closure.

AC		220V	
5 amp contact rating		6, 12, 24, 115V	220V
RL1A	SPDT	\$7.15	\$8.00
RL2A	DPDT	8.25	9.00
RL3A	3PDT	9.15	9.95
RL14A	4PDT	10.45	11.30
RL15A	5PDT	11.45	12.30
RL16A	6PDT	12.55	13.35

DC		110V	
5 amp contact rating		6, 12, 24V	110V
RL1D	SPDT	\$6.50	\$7.75
RL2D	DPDT	7.50	8.75
RL3D	3PDT	8.50	9.75
RL14D	4PDT	9.50	10.75
RL15D	5PDT	10.50	11.75
RL16D	6PDT	11.50	12.75

Available in 10 amp contact rating. DIMENSIONS: 2-11/16 X 1-3/4 X 1-3/4



### PLUG-IN TYPE (SERIES RLP)

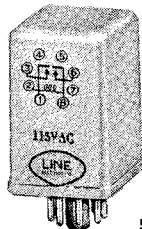
Plug-in type, same factory-tested quality features as above. Available in clear butyrate enclosure up to 5PDT.

AC		220V	
5 amp contact rating		6, 12, 24, 115V	220V
RLP1A	SPDT	\$9.40	\$10.25
RLP2A	DPDT	10.50	11.30
RLP3A	3PDT	14.75	15.60
RLP14A	4PDT	16.15	17.00
RLP15A	5PDT	17.25	18.00

DC		110V	
5 amp contact rating		6, 12, 24V	110V
RLP1D	SPDT	\$8.75	\$10.05
RLP2D	DPDT	9.85	11.15
RLP3D	3PDT	14.10	15.40
RLP14D	4PDT	15.55	16.80
RLP15D	5PDT	16.65	17.90

All models available 3PDT, 4PDT, 5PDT, and in 10 amp contact rating.

## HERMETICALLY SEALED RELAYS



### PLUG-IN TYPE (SERIES HKP)

The Series HKP relay incorporates the basic MK frame into hermetically sealed plug-in configuration. All units are thoroughly vacuum baked and out-gassed and back filled with nitrogen before sealing. The HK series will fit any standard octal based receptacle and is in the classification of a general purpose relay.

PLATE CIRCUIT RELAYS 5 Amp				
	2500Ω	5000Ω	10,000Ω	20,000Ω
HKF1 SPDT	\$8.90	\$9.00	\$9.40	\$9.65
HKF2 DPDT	9.30	9.40	9.80	10.10
HKF3 3PDT	10.75	10.90	11.40	11.65

AC		220V	
5 amp contact rating		6, 12, 24, 115V	220V
HKP1A	SPDT	\$8.45	\$8.90
HKP2A	DPDT	9.05	9.45
HKP3A	3PDT	10.50	10.95

DC		110V	
5 amp contact rating		6, 12, 24V	110V
HK 1D	SPDT	\$8.40	\$8.85
HK 2D	DPDT	9.00	9.40
HK 3D	3PDT	10.45	10.90

AC		110V	
10 amp contact rating		6, 12, 24, 115V	220V
HKH1A	SPDT	\$8.50	\$8.95
HKH2A	DPDT	9.15	9.55
HKH3A	3PDT	10.60	11.10

DC		110V	
10 amp contact rating		6, 12, 24V	110V
HKH1D	SPDT	\$8.45	\$8.90
HKH2D	DPDT	9.10	9.50
HKH3D	3PDT	10.60	10.95

DIMENSIONS: 2-1/16 x 1-21/32 x 1-7/16



# LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

## TIME DELAY RELAYS

### PLUG-IN TYPE (SERIES TRP)

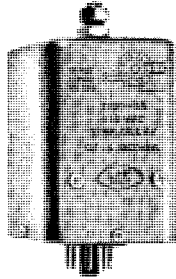
The series TRP Time Delay Relay provides a pre-set delay between the closing of one set of contacts and the subsequent operation of a set of SPDT load contacts.

The series TRP initiates from a sustained switch closure to L1 and L2. The unit resets instantaneously when this circuit is opened; ready for another timing operation.

The series TRP is available in two operational options:

**Type "A"**—If sustained closure is interrupted during time cycle, unit will not reset. When closure is again made, timing will continue to give originally selected time delay.

**Type "B"**—If sustained closure is interrupted during time cycle, unit will instantaneously reset.



Information Required When Ordering  
Time Cycle selected from chart.

\$16.50  
List

### SPECIFICATIONS

Plug in only using standard 8 pin octal receptacle.

TIME CYCLES		
Model	Minimum Setting	Maximum Setting
TRP-5	0.1 sec.	5 seconds
TRP-10	0.1 sec.	10 seconds
TRP-15	0.1 sec.	15 seconds
TRP-30	0.1 sec.	30 seconds
TRP-60	0.1 sec.	60 seconds

Note: Time Cycles exceeding 60 seconds available, contact factory for details.

Voltages 115/60 only.

Load Contacts SPDT rated at 5 amps., non-inductive — Note: 10 amps available, contact factory.

DIMENSIONS: 4-15/32 x 2-3/8 x 2-3/8

## REED RELAYS - 5 STANDARD TYPES

In computer, data processing and guidance system development, design engineers are enthusiastically applying dry reed relays in place of switching diodes. The reasons: miniature profile—life expectancy exceeding 100,000,000 operations—less heat generated compared with switching diodes—3 millisecond operating time and very high resistance in the open contact stage.

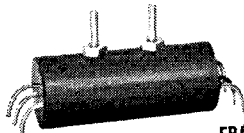
To efficiently serve the growing demand for dry reed relays in these and other applications, Line Electric now stocks these 5 standard types for immediate delivery in prototype quantities.



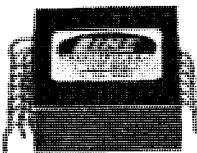
FR



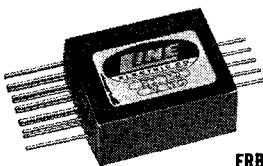
FRP



FRA



FT



FRB

### Open Coil Type—Series FR

6 VDC & 12 VDC & 24 VDC. 6 Contact Arrangements

FR1-SPDT, \$ 5.50 ea. FR4-SPST NO, \$3.30 ea.  
FR2-2PDT, \$ 9.00 ea. FR5-2PST NO, \$4.50 ea.  
FR3-3PDT, \$12.75 ea. FR6-3PST NO, \$5.50 ea.

### Plug-In Type—Series FRP

6 VDC & 12 VDC & 24 VDC. 6 Contact Arrangements

FRP1-SPDT, \$ 8.50 ea. FRP4-SPST NO, \$6.00 ea.  
FRP2-2PDT, \$12.00 ea. FRP5-2PST NO, \$7.50 ea.  
FRP3-3PDT, \$16.00 ea. FRP6-3PST NO, \$8.50 ea.

### Lug Mount Type—Series FRA

6 VDC & 12 VDC & 24 VDC. 2 Contact Arrangements

FRA1-SPDT, \$7.50 ea. FRA4-SPST NO, \$4.50 ea.

### Printed Circuit Type—Series FT

6 VDC & 12 VDC & 24 VDC. 6 Contact Arrangements

FT1-SPDT, \$ 8.25 ea. FT4-SPST NO, \$5.25 ea.  
FT2-2PDT, \$12.00 ea. FT5-2PST NO, \$6.50 ea.  
FT3-3PDT, \$15.75 ea. FT6-3PST NO, \$8.50 ea.

### Encapsulated Type—Series FRB

6 VDC & 12 VDC & 24 VDC. 6 Contact Arrangements

FRB1-SPDT, \$ 7.00 ea. FRB4-SPST NO, \$4.50 ea.  
FRB2-2PDT, \$10.50 ea. FRB5-2PST NO, \$6.00 ea.  
FRB3-3PDT, \$14.50 ea. FRB6-3PST NO, \$7.00 ea.

### SPECIFICATIONS

**CONTACT RATING**  
10 volt-amperes resistive  
3 watts D.C. resistive

**MAXIMUM CURRENT**  
0.5 amperes

**DIELECTRIC STRENGTH**  
250 volts  
60 cps R.M.S.

**MAXIMUM VOLTAGE**  
110 volts

**LIFE EXPECTANCY**  
Rated load - - -  
1 x 10<sup>6</sup> operations  
Dry circuit - - -  
100 x 10<sup>6</sup> operations

**OPERATE TIME**  
3 milliseconds  
maximum, including  
bounce

**CONTACT RESISTANCE**  
50 milliohms

**INSULATION RESISTANCE**  
1000 megohms  
minimum

**RELEASE TIME**  
5 milliseconds  
maximum, including  
bounce





# LINE ELECTRIC COMPANY

RELAYS • BUZZERS • FOOT SWITCHES

## MINIATURE TELEPHONE RELAYS



(SERIES GT)

Fast acting miniature telephone type relay. Highly versatile, supplied in contact arrangements up to 6PDT,

and in a variety of styles including open, dust cover, and hermetically sealed. Factory will supply enclosure details.

AC

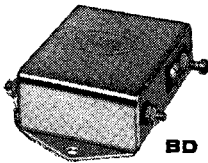
	6, 12, 24V	115V
GT1A SPDT	\$5.55	\$5.95
GT2A DPDT	6.50	6.75
GT3A 3PDT	7.00	7.45
GT14A 4PDT	7.40	7.85
GT15A 5PDT	8.10	8.50
GT16A 6PDT	8.80	9.30

DC

	6, 12, 24V	110V
GT1D SPDT	\$3.55	\$4.00
GT2D DPDT	4.50	4.75
GT3D 3PDT	5.00	5.45
GT14D 4PDT	5.40	5.85
GT15D 5PDT	6.10	6.50
GT16D 6PDT	6.80	7.30

DIMENSIONS: Max. 1-9/16 x 17/32 x 3/4

## BUZZERS D.C. - A.C.



### VARIABLE SOUND AND PITCH D.C. - A.C.

The series BD buzzers are designed for use in offices, plants, etc., where quality, good appearance and dependable operation is demanded. Three sizes of buzzers are available, each size varying in tone and volume of sound. However, the volume of sound and pitch of each size buzzer can be varied by means of double, locking adjustments. The three sizes of buzzers are equipped with phosphor bronze springs and pure hard-drawn silver contacts. They are bug and dust-proof with tight-fitting polished chrome covers.

Model No.	6-8VDC	12VDC	24VDC	48VDC
BD-0	\$3.25	\$3.50	\$3.75	\$5.25
BD-1	3.15	3.25	3.40	4.80
BD-2	3.25	3.50	3.75	5.20

(BD-0 Low tone, BD-1 Medium tone, BD-2 Loud tone)

Hermetic Seal

BDH	8.50	9.00	9.50	10.00
-----	------	------	------	-------

DIMENSIONS: BD0—1-5/8 x 1-1/8 x 1-1/2  
BD1—2-1/8 x 2 x 11/16  
BD2—2-7/8 x 2-1/2 x 1  
BDH—1-9/16 x 3-13/16 x 2-13/16



BDH



MD



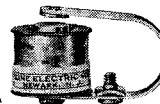
MB

### AC BUZZERS

Available for 6, 12, 24, 115, 220, and 440 volts A.C. 60 cps operation, these buzzers are ideally suited for paging, warning, starting and dismissal signals. These buzzers are a non-contact type therefore suitable for continuous duty, providing a clear, penetrating signal.



MC

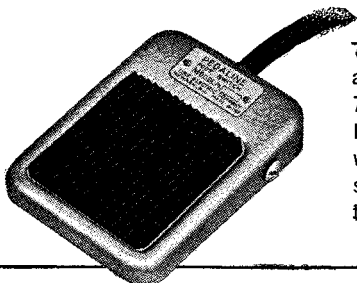


MA

6, 12, 24, 115 VAC/60 cy 220VAC/60 cy

MA	\$2.25	\$2.80
MB	2.50	3.05
MC	3.15	3.70
MD	1.60	2.40
MCH		
Hermetic Seal	10.00	11.00

## PEDALINE FOOT SWITCH



The Pedaline is a compact light weight foot operated switch. The single switch type weighs only 7 ounces; the double switch type 7½ ounces. Baked on light gray hammertone enamel finish with black foot pad. Available with a single pole snap action switch or two single pole double throw switches which operate in sequence.

#PL1 single switch only	\$3.15
#PL-1C single switch w/line cord	\$4.45
#PL5 double switch	\$4.80
#PL-5C double switch w/line cord	\$5.65

DIMENSIONS: 3-1/2 x 2-5/8 x 1

**LINE ELECTRIC CO.** Orange, New Jersey  
Division of Industrial Timer Corporation

IN CANADA: Sperry Gyroscope Ottawa Ltd. • Ottawa, Ontario



# MILWAUKEE RELAYS, INC.

CEDARBURG, WIS.

SECTION 4500

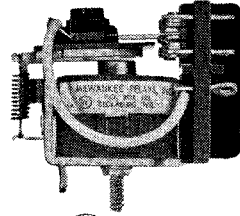
## Standard Relays Stocked by Leading Industrial Distributors

Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100U/101U Series AC</b>						
SPDT	5A	6VAC	5.3	2.0VA	3.00	3.05
		12VAC	21		3.00	3.05
		24VAC	82		3.00	3.05
		48VAC	354		3.05	3.10
		115VAC	2,250		3.05	3.10
230VAC	9,100	3.35	3.40			
DPDT	5A	6VAC	4.7	2.2VA	3.50	3.75
		12VAC	19		3.50	3.75
		24VAC	74		3.50	3.75
		48VAC	280		3.60	3.80
		115VAC	1,800		3.60	3.80
230VAC	6,800	3.90	4.10			
3PDT	5A	6VAC	4.7	2.2VA	3.90	4.05
		12VAC	19		3.90	4.05
		24VAC	74		3.90	4.05
		48VAC	280		3.95	4.10
		115VAC	1,800		3.95	4.10
230VAC	6,800	4.25	4.10			

Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100ML/101ML Series AC</b>						
4PDT	5A	6VAC	1.8	3VA	10.20	10.30
		12VAC	7.5		10.20	10.30
		24VAC	32		10.20	10.30
		115VAC	1,000		10.20	10.30
		230VAC	4,100		11.10	11.20
6PDT	5A	6VAC	1.8	3VA	12.30	12.50
		12VAC	7.5		12.30	12.50
		24VAC	32		12.30	12.50
		115VAC	1,000		12.30	12.50
		230VAC	4,100		13.30	13.50

Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100 Series AC</b>						
SPDT	5A	6VAC	5.3	2.0VA	2.95	3.00
		12VAC	21		2.95	3.00
		24VAC	82		2.95	3.00
		48VAC	354		3.00	3.05
		115VAC	2,250		3.00	3.05
230VAC	9,100	3.30	3.35			
DPDT	5A	6VAC	4.7	2.2VA	3.40	3.60
		12VAC	19		3.40	3.60
		24VAC	74		3.40	3.60
		48VAC	280		3.50	3.65
		115VAC	1,800		3.50	3.65
230VAC	6,800	3.80	3.95			
3PDT	5A	6VAC	4.7	2.2VA	3.80	4.00
		12VAC	19		3.80	4.00
		24VAC	74		3.80	4.00
		48VAC	280		3.85	4.05
		115VAC	1,800		3.85	4.05
230VAC	6,800	4.15	4.35			

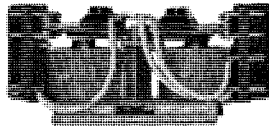
Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100D/100F Series AC</b>						
SPST-NC	8A	24VAC	55	3.2VA	3.00	
SPST-NO-DM	10A	6VAC	3	3.2VA	3.55	
SPST-NO-DM	10A	24VAC	55	3.2VA	3.55	
SPST-NO-DM	10A	115VAC	1,350	3.2VA	3.55	
SPDT	8A	6VAC	3	3.2VA	3.25	
		12VAC	14		3.25	
		24VAC	55		3.25	
		115VAC	1,350		3.25	
		230VAC	5,300		3.45	
DPDT	8A	6VAC	3	3.2VA	4.60	
		12VAC	14		4.60	
		24VAC	55		4.60	
		115VAC	1,350		4.60	
		230VAC	5,300		4.85	
3PDT	8A	6VAC	3	3.2VA	5.40	
		12VAC	14		5.40	
		24VAC	55		5.40	
		115VAC	1,350		5.40	
		230VAC	5,300		6.00	



UL File No. E37066  
CSA File 20690

### 100U/101U Series

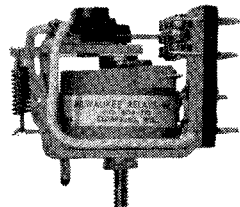
Small general purpose relay with molded phenolic barriers for U/L and CSA listings. All AC and DC models carry U/L and CSA label. 100U: 1/8" dia., silver cadmium oxide contacts, gold flashed, 5 amps. 101U: 3/16" dia., silver cadmium oxide contacts, gold flashed, 10 amps. Mounting: 6-32 stud and self-locking locator tab.



**NEW!**

### 100ML/101ML Series

Magnetic Latching relay, operates on momentary impulse or continuous duty. Magnetic latching principle provides exceptionally long life. UL and CSA listings applied for. Mounting: Two 3/32" dia. holes on 1 1/8" centers.

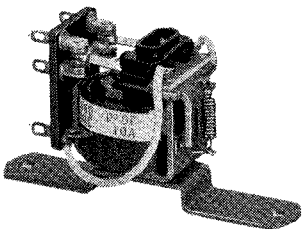


### 100 Series

Low cost, general purpose relay, designed for long, trouble-free life. 1/8" dia., silver cadmium oxide, gold flashed contacts, rated 5 amp. 3/16" dia., silver cadmium oxide, gold flashed contacts, rated 10 amp. Mounting: 6-32 mounting stud and self-locking locator tab.

### 100D/100F Series

Medium duty power relay, 100D mounted on two 3/32" dia. holes on 2 3/8" centers. 100F mounted on two 1/2" dia. holes on 2 1/4" centers. Contacts: 3/16" dia. silver cadmium oxide, gold flashed, rated 8 amps.



Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100U/101U Series DC</b>						
SPDT	5A	6VDC	32	1.2W	2.95	3.00
		12VDC	130		2.95	3.00
		24VDC	490		2.95	3.00
		48VDC	1,800		3.00	3.05
		110VDC	10,000		3.45	3.50
DPDT	5A	6VDC	32	1.2W	3.30	3.40
		12VDC	130		3.30	3.40
		24VDC	490		3.30	3.40
		48VDC	1,800		3.40	3.50
		110VDC	10,000		3.85	3.85
3PDT	5A	6VDC	32	1.2W	3.60	3.75
		12VDC	130		3.60	3.75
		24VDC	490		3.60	3.75
		48VDC	1,800		3.65	3.80
		110VDC	10,000		4.10	4.25

Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100ML/101ML Series DC</b>						
4PDT	5A	6VDC	21	2W	9.25	9.45
		12VDC	82		9.25	9.45
		24VDC	280		9.25	9.45
		110VDC	6,800		10.45	10.65
6PDT	5A	6VDC	21	2W	11.25	11.55
		12VDC	82		11.25	11.55
		24VDC	280		11.25	11.55
		110VDC	6,800		12.35	12.75

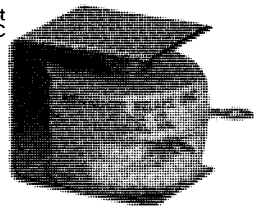
Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100D/100F Series DC</b>						
SPDT	5A	6VDC	32	1.2W	2.85	2.90
		12VDC	130		2.85	2.90
		24VDC	490		2.85	2.90
		48VDC	1,800		2.90	2.95
		110VDC	10,000		3.35	3.40
DPDT	5A	6VDC	32	1.2W	3.20	3.40
		12VDC	130		3.20	3.40
		24VDC	490		3.20	3.40
		48VDC	1,800		3.30	3.50
		110VDC	10,000		3.75	3.95
3PDT	5A	6VDC	32	1.2W	3.60	3.80
		12VDC	130		3.60	3.80
		24VDC	490		3.60	3.80
		48VDC	1,800		3.70	3.90
		110VDC	10,000		4.10	4.30

Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>100 Series DC</b>						
SPST-NO-DM	10A	6VDC	24	1.5W	3.20	
		12VDC	96		3.20	
		24VDC	360		3.20	
SPDT	8A	6VDC	24	1.5W	3.00	
		12VDC	96		3.00	
		24VDC	360		3.00	
		110VDC	8,000		3.50	
DPDT	8A	6VDC	24	1.5W	4.35	
		12VDC	96		4.35	
		24VDC	360		4.35	
		110VDC	8,000		4.80	
3PDT	8A	6VDC	24	1.5W	5.05	
		12VDC	96		5.05	
		24VDC	360		5.05	
		110VDC	8,000		5.70	

Contact Poles	Ratg in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	10 amps. other data identical	
					NET	NET
<b>BZ BUZZER AC</b>						
		6VAC	8	3.0VA	1.70	
		12VAC	32		1.70	
		24VAC	130		1.70	
		115VAC	4,500		1.70	

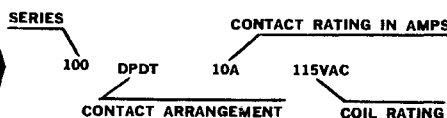
### BZ BUZZER

Continuous or intermittent duty buzzer. Operates on AC voltage 50/60 cycle. Mounting: No. 6-32 tapped core



**NEW!**

KEY TO DESCRIPTIVE DATA ON MILWAUKEE RELAY LABELS



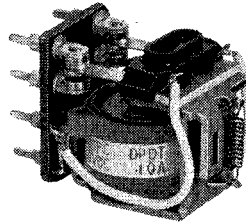
#### CONTACT DESCRIPTION

S — Single; D — Double; P — Pole; T — Throw; N — Normally; O — Open; C — Closed; B — Break; M — Make. Relay contacts are rated at 115VAC, 60 cycle, non-inductive load.

Complete data, Engineering Sheets and the "A" Bulletin, listing our entire line of relays, can be obtained from leading distributors.

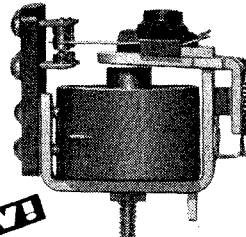
SECTION 4500

**Milwaukee Relays**



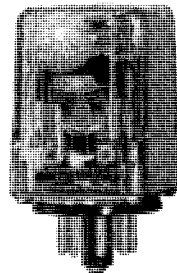
**100PC/100PCT Series**

Printed circuit mounted relay. Printed circuit tabs accept .110 Quick Connects. 5 amp and 10 amp contacts. DC sensitivity 125 MW per movable pole.



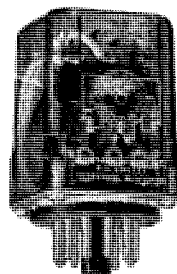
**100RF Series**

Antenna switching relay. Designed for 300 ohm line. 1/8" dia. contacts, silver cadmium oxide, gold flashed. 5 amps. Mounting: 6-32 mounting stud and self locking locator tab.



**105A Series**

General purpose plug-in relay. Clear buturate dust cover. With built-in bulb indicator. Bulb is in parallel with the relay coil and indicates voltage or current available in power circuit. 3/16" dia., silver cadmium oxide contacts, gold flashed, 10 amp. Mountings: Standard 8 and 11 pin plugs.



**105 Series**

General purpose plug-in relay. Light transparent blue buturate dust cover. Available with B-3 hold-down spring for special mountings. 1/8" dia. silver cadmium oxide contacts, gold flashed. 5 amps., 3/16" dia. silver cadmium oxide contacts, gold flashed, 10 amps. Mountings: Standards 8 and 11 pin plugs.

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>100 PC Series AC</b>						
SPDT	5A	6VAC	5.3	2.0VA	3.05	3.10
		12VAC	21		3.05	3.10
		24VAC	82		3.05	3.10
		48VAC	354		3.10	3.15
		115VAC	2,250		3.10	3.15
		230VAC	9,100	3.40	3.45	
DPDT	5A	6VAC	4.7	2.2VA	3.60	3.70
		12VAC	19		3.60	3.70
		24VAC	74		3.60	3.70
		48VAC	280		3.70	3.75
		115VAC	1,800		3.70	3.75
		230VAC	6,800	4.10	4.05	
3PDT	5A	6VAC	4.7	2.2VA	4.10	4.20
		12VAC	19		4.10	4.20
		24VAC	74		4.10	4.20
		48VAC	280		4.15	4.25
		115VAC	1,800		4.15	4.25
		230VAC	6,800	4.45	4.60	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>100 PC Series DC</b>						
SPDT	5A	6VDC	32	1.2W	2.95	3.00
		12VDC	130		2.95	3.00
		24VDC	490		2.95	3.00
		48VDC	1,800		3.00	3.05
		110VDC	10,000		3.45	3.50
DPDT	5A	6VDC	32	1.2W	3.40	3.50
		12VDC	130		3.40	3.50
		24VDC	490		3.40	3.50
		48VDC	1,800		3.45	3.55
		110VDC	10,000		3.90	4.00
3PDT	5A	6VDC	32	1.2W	3.90	4.00
		12VDC	130		3.90	4.00
		24VDC	490		3.90	4.00
		48VDC	1,800		3.95	4.05
		110VDC	10,000		4.40	4.50

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>100PCT Series DC</b>						
SPDT	5A	7.2MA	2.5K	125MW	3.20	
		5MA	5K		3.30	
		3.6MA	10K		3.90	
DPDT	5A	10MA	2.5K	250MW	3.25	
		7.2MA	5K		3.35	
		5MA	10K		3.95	
3PDT	5A	12.3MA	2.5K	375MW	3.40	
		8.7MA	5K		3.50	
		6.1MA	10K		4.10	

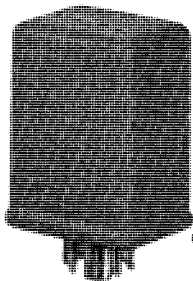
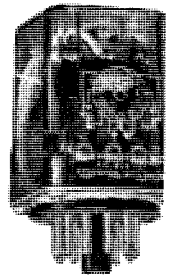
Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>100RF Series DC</b>						
DPDT	5A	6VDC	32	1.2W	3.15	
		12VDC	130		3.15	
<b>105A Series DC</b>						
DPDT	10A	6VDC	32	1.2W	6.60	
		12VDC	130		6.60	
		24VDC	490		6.60	
		48VDC	1,800		6.70	
		110VDC	10,000		7.10	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>105 Series DC</b>						
SPDT	5A	6VDC	32	1.2W	4.95	5.05
		12VDC	130		4.95	5.05
		24VDC	490		4.95	5.05
		48VDC	1,800		5.00	5.10
		110VDC	10,000		5.45	5.55
DPDT	5A	6VDC	32	1.2W	5.60	5.70
		12VDC	130		5.60	5.70
		24VDC	490		5.60	5.70
		48VDC	1,800		5.65	5.75
		110VDC	10,000		6.10	6.20
3PDT	5A	6VDC	32	1.2W	6.00	6.15
		12VDC	130		6.00	6.15
		24VDC	490		6.00	6.15
		48VDC	1,800		6.05	6.20
		110VDC	10,000		6.50	6.65

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>105T Series DC</b>						
SPDT	5A	7.2MA	2.5K	125MW	5.35	
		5MA	5K		5.50	
		3.6MA	10K		6.00	
DPDT	5A	10MA	2.5K	250MW	5.90	
		7.2MA	5K		6.00	
		5MA	10K		6.30	
3PDT	5A	12.3MA	2.5K	375MW	7.00	
		8.7MA	5K		7.10	
		6.1MA	10K		7.75	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>105MC Series</b>						
SPDT	5A	6VDC	32	1.2W	6.75	6.85
		12VDC	130		6.75	6.85
		24VDC	490		6.75	6.85
		48VDC	1,800		6.80	6.90
		110VDC	10,000		7.05	7.15
DPDT	5A	6VDC	32	1.2W	7.40	7.50
		12VDC	130		7.40	7.50
		24VDC	490		7.40	7.50
		48VDC	1,800		7.45	7.55
		110VDC	10,000		7.70	7.80
3PDT	5A	6VDC	32	1.2W	7.90	8.00
		12VDC	130		7.90	8.00
		24VDC	490		7.90	8.00
		48VDC	1,800		7.95	8.10
		110VDC	10,000		8.20	8.30

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>105T Series</b>						
General purpose plate circuit relays. Sensitivity 125MW single pole; 250MW double pole; 375MW three pole. Light transparent blue buturate dust cover. 1/8" dia., silver cadmium oxide, gold flashed contacts; rated 5 amps. Mountings: Standard 8 and 11 pin plugs.						

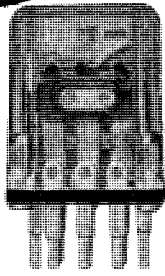


**105MC Series**

Hermetically sealed plug-in relay. SPDT and DPDT relay furnished with 8 pin octal header. 3PDT furnished with 11 pin header. Contacts: 1/8" dia. silver cadmium oxide rated 5 amp. 3/16" dia. silver cadmium oxide rated 10 amp. Color: Grey

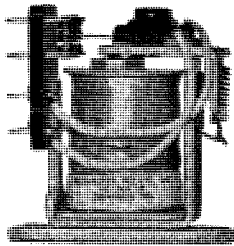
**Milwaukee Relays**

**NEW!**



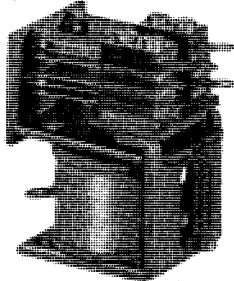
**105PC/105PCT Series**

Printed circuit mounted relay with dust cover. Printed circuit tabs accept .110 Quick Connects. Available with complete termination to 3PDT, 5 amp and 10 amp contacts. DC sensitivity 125 MW per movable pole.



**110/110T Series**

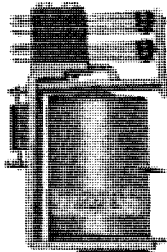
Long coil, tall frame, general purpose relay. Available to 3PDT, 5 amp contacts. DC sensitivity 100 MW per movable pole. Mounting: Two No. 6-32 topped holes on 1/4" centers.



**200/201 Series**

Tinned, pierced solder terminals. 200: 1/8" dia., silver cadmium oxide, gold flashed contact, rated 5 amp. 201: 3/16" dia., silver cadmium oxide, gold flashed contacts, rated 10 amp. Mounting: No. 8-32 tapped core and locating boss.

**NEW!**



**210T Series**

Sensitive plate circuit relay. 115 milliwatts for single pole, 125 milliwatts for 2 pole, 275 milliwatts for 4 pole. 3/16" dia., silver cadmium oxide, gold flashed contacts, rated 5 amp. Mounting: No. 8-32 tapped core and locating boss.

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>105PC Series AC</b>						
SPDT	5A	6VAC	5.3	2.0VA	3.85	3.95
		12VAC	21		3.85	3.95
		24VAC	82		3.85	3.95
		115VAC	2,250		3.85	3.95
		230VAC	9,100	4.20	4.30	
DPDT	5A	6VAC	4.7	2.2VA	4.15	4.35
		12VAC	19		4.15	4.35
		24VAC	74		4.15	4.35
		115VAC	7,800		4.15	4.35
		230VAC	6,800	4.25	4.55	
3PDT	5A	6VAC	4.7	2.2VA	4.55	4.85
		12VAC	19		4.55	4.85
		24VAC	74		4.55	4.85
		115VAC	1,800		4.55	4.85
		230VAC	6,800	4.95	5.25	

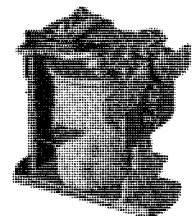
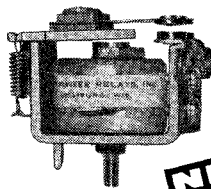
Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>110 Series AC</b>						
SPDT	5A	6VAC	2.2	2.9VA	3.60	
		12VAC	7.8		3.60	
		24VAC	32		3.60	
		115VAC	750		3.60	
		230VAC	2,900	3.80		
DPDT	5A	6VAC	2.2	2.2VA	4.55	
		12VAC	7.8		4.55	
		24VAC	32		4.55	
		115VAC	750		4.55	
		230VAC	2,900	4.75		
3PDT	5A	6VAC	2.2	2.2VA	5.05	
		12VAC	7.8		5.05	
		24VAC	32		5.05	
		115VAC	750		5.05	
		230VAC	2,900	5.25		

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>120 Series AC</b>						
SPDT	15A	6VAC	3	3.2VA	4.20	
		12VAC	14		4.20	
		24VAC	55		4.20	
		115VAC	1,350		4.20	
		230VAC	5,300	4.65		
SPST-NO-DM	20A	6VAC	3	3.2VA	4.00	
		12VAC	14		4.00	
		24VAC	55		4.00	
		115VAC	1,350		4.00	
		230VAC	5,300	4.20		

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>130 Series AC</b>						
SPDT	25A	6VAC	1.5	4.5VA	4.35	
		12VAC	6		4.35	
		24VAC	25		4.35	
		115VAC	600		4.35	
		230VAC	2,500	4.75		
SPST-NO-DM	35A	6VAC	1.5	4.5VA	4.25	
		12VAC	6		4.25	
		24VAC	25		4.25	
		115VAC	600		4.25	
		230VAC	2,500	4.65		

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>200 Series AC</b>						
DPDT	5A	6VAC	1.7	6VA	3.00	3.10
		12VAC	6.75		3.00	3.10
		24VAC	24		3.00	3.10
		115VAC	720		3.00	3.10
		230VAC	2,950	3.20	3.55	
3PDT	5A	6VAC	1.7	6VA	3.20	3.35
		12VAC	6.75		3.20	3.35
		24VAC	24		3.20	3.35
		115VAC	720		3.20	3.35
		230VAC	2,950	3.40	3.70	
4PDT	5A	6VAC	1.7	6VA	3.45	3.60
		12VAC	6.75		3.45	3.60
		24VAC	24		3.45	3.60
		115VAC	720		3.45	3.60
		230VAC	2,950	3.65	4.00	

**120 Series**  
Rugged, small size, medium duty power relay. Available as SPDT or SPST-NO-DM contact configuration. 1/4" dia., silver cadmium, gold flashed contacts, rated 15 amp SPDT, 20 amp DM configuration. Terminals: combination .250 quick connect and solder hole.



**130 Series**  
Rugged, small size, heavy duty power relay. Available as SPDT or SPST-NO-DM contact configuration. SPDT: 1/4" dia., silver cadmium oxide, gold flashed contacts, rated 25 amp. SPST-NO-DM: 3/8" dia., silver cadmium, gold flashed contacts, rated 35 amp. Terminals: combination .250 quick connect and solder hole.

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>105PC Series DC</b>						
SPDT	5A	6VDC	32	1.2W	3.80	3.90
		12VDC	130		3.80	3.90
		24VDC	490		3.80	3.90
		110VDC	10,000		4.20	4.30
DPDT	5A	6VDC	32	1.2W	4.10	4.30
		12VDC	130		4.10	4.30
		24VDC	490		4.10	4.30
		110VDC	10,000		4.40	4.60
3PDT	5A	6VDC	32	1.2W	4.30	4.70
		12VDC	130		4.30	4.70
		24VDC	490		4.30	4.70
		110VDC	10,000		4.80	5.00

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>105PCT Series DC</b>						
SPDT	5A	7.2MA	2.5K	125MW	3.95	
		5MA	5K		4.05	
		3.6MA	10K		4.45	
DPDT	5A	10MA	2.5K	250MW	4.35	
		7.2MA	5K		4.45	
		5MA	10K		4.95	
3PDT	5A	12.3MA	2.5K	375MW	4.75	
		8.7MA	5K		4.85	
		6.1MA	10K		5.35	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>110 Series DC</b>						
SPDJ	5A	6VDC	36	1.1W	3.40	
		12VDC	140		3.40	
		24VDC	600		3.40	
		110VDC	9,500		3.40	
DPDT	5A	6VDC	36	1.2W	4.40	
		12VDC	140		4.40	
		24VDC	600		4.40	
		110VDC	9,500		5.45	
3PDT	5A	6VDC	36	1.2W	4.95	
		12VDC	140		4.95	
		24VDC	600		4.95	
		110VDC	9,500		5.65	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>110T Series DC</b>						
SPDT	5A	6.3MA	2.5K	100MW	3.50	
		4.5MA	5K		3.85	
		3.2MA	10K		4.75	
DPDT	5A	9MA	2.5K	200MW	3.80	
		6.3MA	5K		4.15	
		4.5MA	10K		5.05	
3PDT	5A	11.0MA	2.5K	300MW	4.20	
		7.8MA	5K		4.55	
		5.5MA	10K		5.45	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>120 Series DC</b>						
SPDT	15A	6VDC	24	1.5W	4.05	
		12VDC	96		4.05	
		24VDC	360		4.05	
		110VDC	8,000		4.75	
SPST-NO-DM	20A	6VDC	24	1.5M	4.00	
		12VDC	96		4.00	
		24VDC	360		4.00	
		110VDC	8,000		4.50	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>130 Series DC</b>						
SPDT	25A	6VDC	18	2W	4.35	
		12VDC	72		4.35	
		24VDC	288		4.35	
		110VDC	6,050		4.95	
SPST-NO-DM	35A	6VDC	18	2W	4.25	
		12VDC	72		4.25	
		24VDC	288		4.25	
		110VDC	6,050		4.85	

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>200 Series DC</b>						
DPDT	5A	6VDC	18	2W	2.70	2.80
		12VDC	72		2.70	2.80
		24VDC	285		2.70	2.80
		110VDC	6,050		3.40	3.55
3PDT	5A	6VDC	18	2W	2.95	3.05
		12VDC	72		2.95	3.05
		24VDC	285		2.95	3.05
		110VDC	6,050		3.65	3.75
4PDT	5A	6VDC	18	2W	3.80	3.90
		12VDC	72		3.80	3.90
		24VDC	285		3.80	3.90
		110VDC	6,050		4.50	4.60

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET
<b>210T Series DC</b>						
SPDT	5A	6.8MA	2,500	115MW	3.30	
		4.8MA	5,000		3.45	
		3.4MA	10,000		3.95	
DPDT	5A	7MA	2,500	125MW	3.85	
		5MA	5,000		4.25	
		3.53MA	10,000		5.25	
4PDT	5A	10.5MA	2,500	275MW	5.45	
		7.4MA	5,000		5.60	
		5.25MA	10,000		6.00	

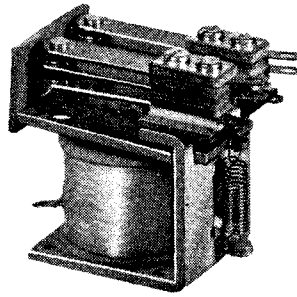
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SECTION 4500



Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET	
<b>220 Series AC</b>							
SPDT	15A	6VAC	1.7	6VA	3.20	3.20	
		12VAC	6.75				3.20
		24VAC	24				3.20
		115VAC	720				3.20
		230VAC	2,950				3.40
DPDT	15A	6VAC	1.7	6VA	4.05	4.05	
		12VAC	6.75				4.05
		24VAC	24				4.05
		115VAC	720				4.05
		230VAC	2,950				4.25
4PDT	15A	6VAC	1.7	6VA	6.45	6.45	
		12VAC	6.75				6.45
		24VAC	24				6.45
		115VAC	720				6.45
		230VAC	2,950				6.65

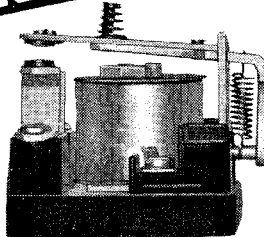
Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET	
<b>900 Series AC</b>							
SPST-NO	25A	24VAC	12	9.5VA	4.00		
SPST-NO-DM	25A	6VAC	.85	9.5VA	4.10	4.10	
		12VAC	3.2				4.10
		24VAC	12				4.10
		115VAC	290				4.10
		230VAC	1,200				4.45
SPDT	25A	6VAC	.85	9.5VA	4.30	4.30	
		12VAC	3.2				4.30
		24VAC	12				4.30
		115VAC	290				4.30
		230VAC	1,200				4.70
DPST-NO	25A	6VAC	.85	9.5VA	4.85	4.85	
		12VAC	3.2				4.85
		24VAC	12				4.85
		115VAC	290				4.85
		230VAC	1,200				5.30
DPDT	25A	6VAC	.85	9.5VA	6.40	6.40	
		12VAC	3.2				6.40
		24VAC	12				6.40
		115VAC	290				6.40
		230VAC	1,200				6.90



220 Series

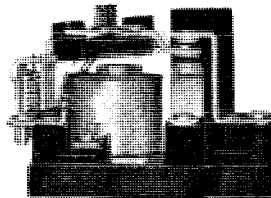
Multiple contact, medium duty power relay. Long movable contact arms. 1/4" dia., silver cadmium oxide, gold flashed contacts, rated 15 amp. Mounting: 8-32 tapped core with locating boss.

**NEW!**



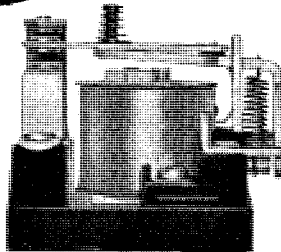
900 SERIES (DM)

**NEW!**



900 SERIES (DPDT)

**NEW!**



900 SERIES (SPDT)

900 Series (New)

Heavy duty power relay. UL and CSA listings applied for. Contacts 3/16" dia., silver cadmium oxide gold flashed. Screw type terminals. Mounting: Two 3/16" dia. holes on 1 7/8" centers.

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET	
<b>220 Series DC</b>							
SPDT	15A	6VDC	18	2W	3.20	3.20	
		12VDC	72				3.20
		24VDC	285				3.20
		110VDC	6,050				3.45
		6VDC	18				2W
12VDC	72	4.05					
24VDC	285	4.05					
110VDC	2,050	4.50					
6VDC	18	2W	6.40				
12VDC	72			6.40			
24VDC	285			6.40			
110VDC	6,050			6.90			

Contact Poles	Rating in Amps	Coil Voltage or Current	Resistance in Ohms	Nominal Power	NET	NET	
<b>900 Series DC</b>							
SPST-NO-DM	25A	24VDC	12	9.5VA	4.10	4.10	
SPDT	25A	6VDC	.85	9.5VA	4.30	4.30	
		12VDC	3.2				4.30
		24VDC	12				4.30
		110VDC	6,050				4.90
		6VDC	18				2W
12VDC	72	4.85					
24VDC	290	4.85					
110VDC	6,050	5.45					
6VDC	18	2W	6.40				
12VDC	72			6.40			
24VDC	290			6.40			
110VDC	6,050			7.00			

MOUNTINGS

MOUNTING VARIATIONS FOR 100 SERIES

MOUNTINGS

OTHER SPECIAL BASE ADAPATIONS AVAILABLE

B CASE

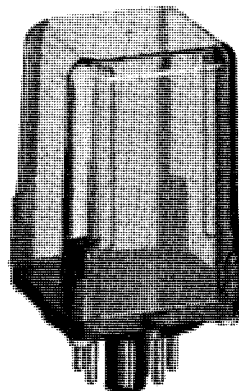
Light blue tinted Butyra case, furnished with oct type plug, 8 or 11 pin a four screws.

- B8 — 8 Pin Plug & Case .....Net.
- N11 — 11 Pin Plug & Case .....Net.

N CASE

Nylon case, furnished w octal type plug, 8 or 11 p and four screws.

- N8 — 8 Pin Plug & Case .....Net.
- N11 — 11 Pin Plug & Case .....Net.



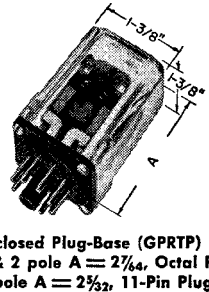
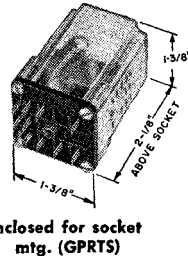
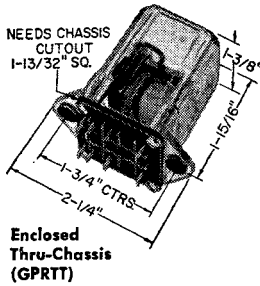
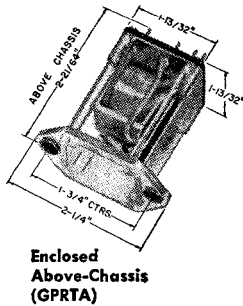
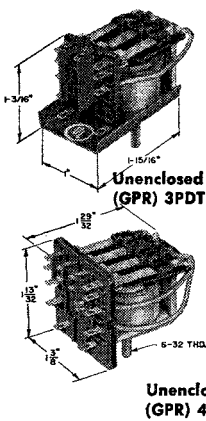
COMPLETE ENGINEERING SPECIFICATIONS ON EACH RELAY ARE AVAILABLE FROM YOUR DISTRIBUTOR.

# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r.f. chokes



## MODEL GPR GENERAL PURPOSE RELAYS



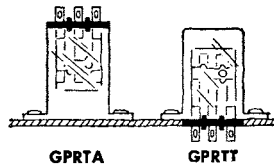
Enclosed Above-Chassis (GPRTA)

Enclosed Thru-Chassis (GPRTT)

Enclosed for socket mtg. (GPRTS)

Enclosed Plug-Base (GPRTP)  
1 & 2 pole A = 2 7/16", Octal Plug  
3 pole A = 2 5/16", 11-Pin Plug

Unenclosed (GPR) 4PDT



GPRTA

GPRTT

Includes Indicator, Plate, Thyatron and Latching Versions in Unenclosed and Enclosed Types

Simple, rugged, low cost relays handling substantial power for small size. Uncomplicated design provides unusual flexibility for making and changing connections and mounting. Stock includes relays in versatile enclosures, some with indicator light, also plate, thyatron and latching versions. Wide commercial and industrial use where economy and versatility are important.

**Basic (Unenclosed) Relay:** All connections terminate on barrier-type terminal panel on combination solder—quick-connect

(push-on) lugs which accept AMP 110 female connectors. The terminal panel is conveniently incorporated into printed circuit boards. Fixed contacts are integral inlay on terminal itself. Normally furnished with a 6-32 x 1/2" mounting stud and non-turn boss (or lug for 4-pole relays). A 6-32 threaded hole is optional. Unenclosed relays can also be mounted by plugging their panels into Ohmite SOGPR sockets. See "Socket" following.

**Contact Ratings:** Two ratings—fine silver contacts, 5 amps at 115 VAC or 32 VDC; silver-cadmium contacts, 10 amps.

**Insulation:** Tested at 1500 VAC.

**Coil Wattage:** 1.4 watts DC operation; 160 watts (2.0 volt-amps) AC except 2.4 watts (3.70 volt-amps) for 4-pole AC and AC latching relays.

**ENCLOSED RELAYS (GPRTA-, GPRTT-, GPRTS-, GPRTP-).** Four types of clear plastic enclosures as follows:

**Chassis Mounting Types:** "GPRTA"—("Terminals-Above-Chassis" type) has terminal panel opposite to mounting flange; "GPRTT"—("Terminals-Through-Chassis" type) has terminal panel on same end as mounting flange, requires chassis cutout; "GPRTS" type (Terminals for Socket Use) is similar to GPRTT but has no mounting flanges. It is intended strictly for plug-in mounting in Ohmite socket "SOGPR" (see "Socket" below).

**Plug Base Type:** "GPRTP"—employs octal plug for 1 and 2 pole relays; 11-pin plug for 3-pole. The octal plug base is integral with relay for rigidity—is designed with recessed pins which meet UL spacing requirements (150V).

(Continued on next page)

### STOCK GPR RELAYS\*

#### 5 AMP CONTACTS

#### 10 AMP CONTACTS

Contacts	COIL DATA		Unenclosed GPR		Enclosed Above Chassis GPRTA†		Enclosed Thru-Chassis GPRTT†		Enclosure for SOGPR Socket GPRTS†		Enclosed Plug Base GPRTP†		Indicator Plug Base GPRTP	
	Volts	Amps	Ohms	Net \$	Net \$	Net \$	Net \$	Net \$	Net \$	Net \$	Net \$	Net \$	Net \$	Net \$
SPDT	6VAC	.334	4.2	-3T 3.19	-3T 5.19	-3T 5.19	-3T 5.19	-3T 5.19	-3T 5.43	-203T 3.23	-203T 5.52	-291T 7.11		
DPDT	6VAC	.334	4.2	-6T 3.84	-6T 5.84	-6T 5.84	-6T 5.84	-6T 6.03	-206T 3.93	-206T 6.22	-291T 7.11			
3PDT	6VAC	.334	4.2	-9T 4.24	-9T 8.74	-9T 8.74	-9T 8.74	-9T 7.48	-209T 4.38	-209T 7.77	-291T 7.11			
4PDT	6VAC	.650	2.5	-40ST 4.99				-40ST 7.90	-433T 5.13	-433T 8.19	-291T 7.11			
SPDT	12VAC	.167	17	-12T 3.19	-12T 5.19	-12T 5.19	-12T 5.19	-12T 5.43	-212T 3.23	-212T 5.52	-292T 7.11			
DPDT	12VAC	.167	17	-15T 3.84	-15T 5.84	-15T 5.84	-15T 5.84	-15T 6.03	-215T 3.93	-215T 6.22	-292T 7.11			
3PDT	12VAC	.167	17	-18T 4.24	-18T 8.74	-18T 8.74	-18T 8.74	-18T 7.48	-218T 4.38	-218T 7.77	-292T 7.11			
4PDT	12VAC	.309	10	-40ST 4.99				-40ST 7.90	-437T 5.16	-437T 8.19	-292T 7.11			
SPDT	24VAC	.084	65	-21T 3.19	-21T 5.19	-21T 5.19	-21T 5.19	-21T 5.43	-221T 3.23	-221T 5.52	-293T 7.11			
DPDT	24VAC	.084	65	-24T 3.84	-24T 5.84	-24T 5.84	-24T 5.84	-24T 6.03	-224T 3.93	-224T 6.22	-293T 7.11			
3PDT	24VAC	.084	65	-27T 4.24	-27T 8.74	-27T 8.74	-27T 8.74	-27T 7.48	-227T 4.38	-227T 7.77	-293T 7.11			
4PDT	24VAC	.155	40	-40ST 4.99				-40ST 7.90	-437T 5.13	-437T 8.19	-293T 7.11			
SPDT	115VAC	.0174	1600	-30T 3.19	-30T 5.19	-30T 5.19	-30T 5.19	-30T 5.43	-230T 3.23	-230T 5.52	-294T 7.11			
DPDT	115VAC	.0174	1600	-33T 3.84	-33T 5.84	-33T 5.84	-33T 5.84	-33T 6.03	-233T 3.93	-233T 6.22	-294T 7.11			
3PDT	115VAC	.0174	1600	-36T 4.24	-36T 8.74	-36T 8.74	-36T 8.74	-36T 7.48	-236T 4.38	-236T 7.77	-294T 7.11			
4PDT	115VAC	.0325	1000	-412T 4.99				-412T 7.90	-442T 5.13	-442T 8.19	-294T 7.11			
SPDT	230VAC	.0087	7000	-39T 3.58	-39T 5.58	-39T 5.58	-39T 5.58	-39T 5.82	-239T 3.62	-239T 5.91	-295T 7.50			
DPDT	230VAC	.0087	7000	-42T 4.23	-42T 8.23	-42T 8.23	-42T 8.23	-42T 8.42	-242T 4.32	-242T 6.61	-295T 7.50			
3PDT	230VAC	.0087	7000	-45T 4.83	-45T 7.13	-45T 7.13	-45T 7.13	-45T 7.87	-245T 4.77	-245T 7.33	-295T 7.50			
4PDT	230VAC	.0147	4000	-415T 5.38				-415T 8.28	-445T 5.52	-445T 8.58	-295T 7.50			
SPDT	6VDC	.23	26	-48T 3.04	-48T 5.04	-48T 5.04	-48T 5.04	-48T 5.38	-248T 3.08	-248T 5.47	-296T 7.08			
DPDT	6VDC	.23	26	-51T 3.39	-51T 5.39	-51T 5.39	-51T 5.39	-51T 5.98	-251T 3.48	-251T 6.17	-296T 7.08			
3PDT	6VDC	.23	26	-54T 3.84	-54T 6.34	-54T 6.34	-54T 6.34	-54T 7.43	-254T 3.98	-254T 7.72	-296T 7.08			
4PDT	6VDC	.23	26	-418T 4.70				-418T 7.81	-448T 4.94	-448T 7.90	-296T 7.08			
SPDT	12VDC	.114	105	-57T 3.04	-57T 5.04	-57T 5.04	-57T 5.04	-57T 5.38	-257T 3.08	-257T 5.47	-297T 7.08			
DPDT	12VDC	.114	105	-60T 3.39	-60T 5.39	-60T 5.39	-60T 5.39	-60T 5.98	-260T 3.48	-260T 6.17	-297T 7.08			
3PDT	12VDC	.114	105	-63T 3.84	-63T 6.34	-63T 6.34	-63T 6.34	-63T 7.43	-263T 3.98	-263T 7.72	-297T 7.08			
4PDT	12VDC	.114	105	-421T 4.70				-421T 7.81	-451T 4.94	-451T 7.90	-297T 7.08			
SPDT	24VDC	.060	400	-66T 3.04	-66T 5.04	-66T 5.04	-66T 5.04	-66T 5.38	-266T 3.08	-266T 5.47	-298T 7.06			
DPDT	24VDC	.060	400	-69T 3.39	-69T 5.39	-69T 5.39	-69T 5.39	-69T 5.98	-269T 3.48	-269T 6.17	-298T 7.06			
3PDT	24VDC	.060	400	-72T 3.84	-72T 8.34	-72T 8.34	-72T 8.34	-72T 7.43	-272T 3.98	-272T 7.72	-298T 7.06			
4PDT	24VDC	.060	400	-424T 4.70				-424T 7.81	-454T 4.94	-454T 7.90	-298T 7.06			
SPDT	110VDC	.0110	10,000	-75T 3.63	-75T 5.63	-75T 5.63	-75T 5.63	-75T 5.97	-275T 3.67	-275T 6.06	-299T 7.65			
DPDT	110VDC	.0110	10,000	-78T 3.98	-78T 5.98	-78T 5.98	-78T 5.98	-78T 6.37	-278T 4.07	-278T 8.76	-299T 7.65			
3PDT	110VDC	.0110	10,000	-81T 4.43	-81T 6.93	-81T 6.93	-81T 6.93	-81T 8.02	-281T 4.57	-281T 9.31	-299T 7.65			
4PDT	110VDC	.0110	10,000	-427T 5.33				-427T 8.20	-457T 5.43	-457T 8.49	-299T 7.65			
	Approx. weight			2.5 oz.	3.0 oz.	3.0 oz.	3.0 oz.	3.5 oz.	2.5 oz.	3.5 oz.	3.5 oz.			

\*Column heads carry symbols to indicate UL or CSA (Canadian Standards Association) approval. A color tint in column indicates relay carries UL stamp; a grey tint indicates that relay is recognized under UL "components program" and does not carry UL stamp. See explanation in "UL and CSA Approval."  
†4-Pole GPRTS relays are not covered by CSA.

†GPRTA and GPRTT types as listed by UL, differ slightly from the stock versions above and consequently, are made to order. These UL versions have a "U" added to the catalog number, such as "GPRTAU." These units will carry the UL stamp. They also have CSA approval and will carry the CSA stamp.



# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r. f. chokes



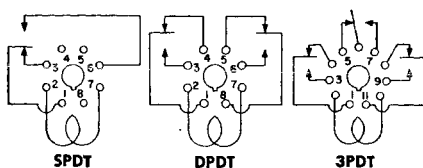
## MODEL GPR GENERAL PURPOSE RELAYS

**Socket (SOGPR):** Unique socket fits the terminal panels of all GPR relays and provides over-the-surface spacing to meet UL requirements for 150 volts. Requires chassis cut-out to mount. Hold down springs (see illustration) for unenclosed and enclosed relays, are provided with each socket but are not required except under conditions of vibration or shock. Socket solder terminals will also accept AMP 110 quick-connectors. See socket listings.

**Indicator Relay:** Incorporates light bulb to indicate energized condition of coil. Stocked only in GPRTP enclosures described in preceding. Neon bulb furnished with coil ratings 70 volts and above; incandescent bulbs for coil ratings below 70 volts.

**Plate Relays:** Feature same physical construction as standard general purpose relays but are adjusted for greater sensitivity and can be used as electronic circuit controls, i.e., in the plate circuits of standard vacuum tubes.

**Thyratron Plate Relay:** Designed specifically for plate circuit of thyratron tubes 2050 and 2D21 with 115 VAC supply (see diagram). Also suitable for operation in series with silicon controlled rectifiers from a 115 VAC supply. Ready to work, no capacitors or adjustments required, no chatter. Available unenclosed and in most GPR enclosures.

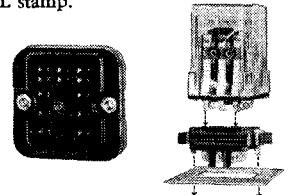


Plug wiring schemes for plug base (GPRTP) relays

**Latching Relay:** Consists of two GPR relays with armatures linked so that the n.o. contacts of one are mechanically latched in closed position when, and after, this relay is energized. When 2nd relay is energized, first relay restores and latches 2nd. Permits switching of twice the number of circuits and holding without coil current. Unenclosed type "GPRLE". Enclosed type "GPRLETP" in clear plastic case with Jones plug P-324-SB fitting S-324-AB socket.

**UL & CSA Approval:** Column heads in the stock tables carry the UL (Underwriter's Laboratories) or CSA symbol (Canadian Standards Association) where such approval has been granted. The columns marked with a UL symbol are grey tinted and these relays are subject to UL Reexamination service. GPRX and GPRLEX relays in the grey areas carry the UL stamp. GPRTSX, GPRTPX, and GPRLETPX relays in the grey areas are recognized under the "UL components program." The acceptability of

such relays by UL depends upon their combination with other equipment such as sockets, etc., and therefore they do not carry the UL stamp.



### SOCKETS FOR GPR AND GPRTS RELAYS

For up to 3PDT: 1 1/4" square, requires 1 1/2" x 1 1/2" cutout. 2 holes (for No. 6 screws) on 1 1/8" centers.

Stock No. SOGPR-9.....Net 1-24 \$1.03

For 4-pole models, 2" square, requires 1 1/2" x 1 1/2" cutout, 2 holes (for No. 6 screws) on 1 1/8" centers.

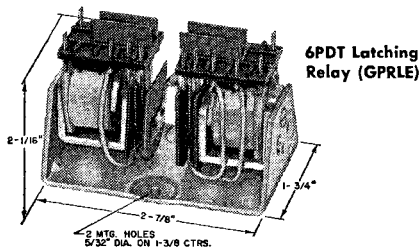
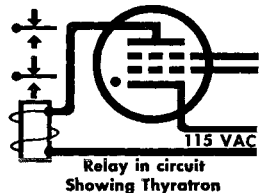
Stock No. SOGPR-12.....Net 1-24 \$1.18

### STOCK "GPR" PLATE CIRCUIT RELAYS — 5 AMP CONTACTS

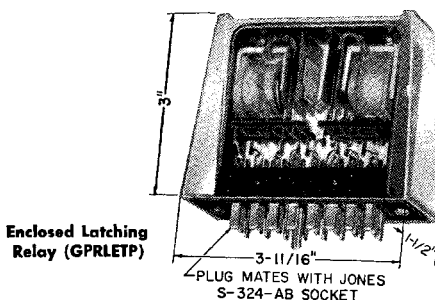
Contacts	COIL DATA		Unenclosed GPR	Net \$ 1-24	Enclosed Above-Chassis GPRTA	Net \$ 1-24	Enclosed Thru-Chassis GPRTT	Net \$ 1-24	Enclosed for SOGPR Socket GPRTS	Net \$ 1-24	Enclosed Plug-Base GPRTP	Net \$ 1-24
	Ohms	Pull-in max.										
SPDT	2500	7.2	-82T	3.62	-82T	5.52	-82T	5.52			-82T	5.86
DPDT	2500	10	-83T	4.15	-83T	5.67	-83T	5.67			-83T	6.26
3PDT	2500	12.3	-84T	4.75	-84T	6.62	-84T	6.62			-84T	7.71
4PDT	2500	15.0	-463T	5.61					-463T	8.52		
SPDT	5000	5	-85T	3.72	-85T	5.62	-85T	5.62			-85T	5.96
DPDT	5000	7.2	-86T	4.25	-86T	5.77	-86T	5.77			-86T	6.36
3PDT	5000	8.7	-87T	4.85	-87T	6.72	-87T	6.72			-87T	7.81
4PDT	5000	11	-466T	5.72					-466T	8.63		
SPDT	10,000	3.6	-88T	4.12	-88T	6.02	-88T	6.02			-88T	6.36
DPDT	10,000	5	-89T	4.65	-89T	6.17	-89T	6.17			-89T	6.76
3PDT	10,000	6.1	-90T	5.25	-90T	7.12	-90T	7.12			-90T	8.21
4PDT	10,000	7.5	-469T	6.11					-469T	9.02		
Approx. weight			2.5 oz.		3.0 oz.		3.0 oz.		3.0 oz.		3.5 oz.	

### STOCK GPR THYRATRON RELAYS

Contacts	5 AMP CONTACTS				10 AMP CONTACTS			
	Unenclosed GPR	Net \$ 1-24	Enclosed Above-Chassis GPRTA	Net \$ 1-24	Unenclosed GPR	Net \$ 1-24	Enclosed Above-Chassis GPRTA	Net \$ 1-24
SPDT	-191T	3.35	-191T	5.35	-391T	3.39	-391T	5.68
DPDT	-192T	4.00	-192T	6.00	-392T	4.09	-392T	6.38
3PDT	-193T	4.40	-193T	6.90	-393T	4.54	-393T	7.93
4PDT	-473T	5.15			-483T	5.29		
GPRTSX					GPRTPX			
-473T		8.06	-473T		8.06	-483T		8.35



6PDT Latching Relay (GPRLE)



Enclosed Latching Relay (GPRLETP)

### STOCK "GPR" LATCHING RELAYS — 5 AMP CONTACTS

Total Contacts	COIL DATA—(Each Coil)			Unenclosed GPRLE†	Net \$ 1-24	Enclosed Plug-Base GPRLETP†	Net \$ 1-24	
	Volts	Amps.	Ohms					
4PDT	6VAC	.650	2.5	GPRLEX-1T	10.47	GPRLETPX-1T	16.47	
6PDT	6VAC	.650	2.5	GPRLEX-2T	12.57	GPRLETPX-2T	19.57	
4PDT	12VAC	.309	10.0	GPRLEX-3T	10.47	GPRLETPX-3T	16.47	
6PDT	12VAC	.309	10.0	GPRLEX-4T	12.57	GPRLETPX-4T	19.57	
4PDT	24VAC	.155	40.0	GPRLEX-5T	10.47	GPRLETPX-5T	16.47	
6PDT	24VAC	.155	40.0	GPRLEX-6T	12.57	GPRLETPX-6T	19.57	
4PDT	115VAC	.0325	1000	GPRLEX-7T	10.47	GPRLETPX-7T	16.47	
6PDT	115VAC	.0325	1000	GPRLEX-8T	12.57	GPRLETPX-8T	19.57	
4PDT	230VAC	.0147	4000	GPRLEX-9T	11.25	GPRLETPX-9T	17.21	
6PDT	230VAC	.0147	4000	GPRLEX-10T	13.35	GPRLETPX-10T	20.31	
4PDT	6VDC	.23	26	GPRLEX-11T	9.42	GPRLETPX-11T	15.41	
6PDT	6VDC	.23	26	GPRLEX-12T	11.42	GPRLETPX-12T	18.41	
4PDT	12VDC	.114	105	GPRLEX-13T	9.42	GPRLETPX-13T	15.41	
6PDT	12VDC	.114	105	GPRLEX-14T	11.42	GPRLETPX-14T	18.41	
4PDT	24VDC	.060	400	GPRLEX-15T	9.42	GPRLETPX-15T	15.41	
6PDT	24VDC	.060	400	GPRLEX-16T	11.42	GPRLETPX-16T	18.41	
4PDT	110VDC	.0110	10,000	GPRLEX-17T	10.60	GPRLETPX-17T	16.60	
6PDT	110VDC	.0110	10,000	GPRLEX-18T	12.60	GPRLETPX-18T	18.60	
Approx. weight					7.0 oz.		11.3 oz.	

†See paragraph, "UL & CSA Approval."

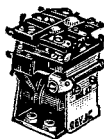


# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r.f. chokes



## ALL-PURPOSE RELAYS (Also see Model GPR Relays)



### MODEL DO RELAY AC or DC OPERATION

Ideal for mobile equipment applications where severe shock and vibration are encountered. Coil drain: 3-watts DC, 6 watts 60 cycle AC. Contact ratings: 10 amps. at 115 v. AC; 32 volt DC non-inductive load. Insulation tested at 1500 v. AC. Size, (4 pole) 2 3/4 x 2 1/2 x 1 1/16"; (3 pole) 2 1/4 x 1 1/8 x 1 1/16".

Stock No.	Type	Coil Data		Net 1-24	Stock No.	Type	Coil Data		Net 1-24
		V.A.C.	Amps.				V.D.C.	Amps.	
DOX-50T	3PDT	6	2.33	8.65	DOX-145T	3PDT	6	4.87	7.47
DOX-183T	4PDT	6	2.33	9.85	DOX-186T	4PDT	6	4.87	8.65
DOX-49T	3PDT	12	1.28	8.65	DOX-51T	3PDT	12	2.31	7.47
DOX-184T	4PDT	12	1.28	9.85	DOX-102T	4PDT	12	2.31	8.65
DOX-181T	3PDT	24	.57	8.65	DOX-141T	3PDT	24	1.05	7.47
DOX-185T	4PDT	24	.57	9.85	DOX-137T	4PDT	24	1.05	8.65
DOX-226T	1DPST*	115	.110	8.78	DOX-93T	3PDT	110	.022	8.07
DOUX-34T	1DPST*	115	.110	9.74	DOX-187T	4PDT	110	.022	9.25
DOX-227T	1DPST*	115	.110	7.88	DOX-182T	3PDT	220	.014	8.75
DOX-28T	1DPST*	115	.110	9.02	DOX-188T	4PDT	220	.014	9.93
DOX-46T	3PDT	115	.110	8.65					
DOUX-30T	3PDT	115	.110	9.83					
DOX-228T	1DPST*	115	.110	8.80					
DOX-31T	1DPST*	115	.110	9.98					
DOX-53T	4PDT	115	.110	9.85					
DOUX-33T	4PDT	115	.110	11.03					
DOX-61T	3PDT	230	.070	9.05					
DOX-130T	4PDT	230	.070	10.25					

† Normally open  
† AC Voltage is 60 cycle  
\* Double Break Contacts — 20 Amp.  
† Listed by UL.



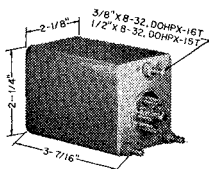
### MODEL DOS RELAY AC or DC OPERATION

Quality, general-purpose relays originally designed to meet rigorous aircraft specs. Extremely compact yet rugged. Coil drain: 2.5 watts DC, 3 watts at 60 cycles AC. Contact ratings: DP, 15 amps. at 115 v. AC or 32 v. DC non-inductive load; SP, 25 amps. Molded phenolic insulation; tested at 1500 v. AC. 1 1/2 x 1 1/8 x 1 1/2".

Stock No.	Type	Coil Data		Net 1-24	Stock No.	Type	Coil Data		Net 1-24
		V.A.C.	Amps.				V.D.C.	Amps.	
DOSX-229T	1SPST*	6	.890	4.84	DOSX-158T	DPDT	6	.550	4.96
DOSX-230T	1DPST	6	.890	4.94	DOSX-66T	DPDT	12	.210	4.96
DOSX-30T	1DPST	6	.890	5.46	DOSX-9T	DPDT	24	1.05	4.96
DOSX-16T	DPDT	12	4.00	5.46	DOSX-237T	1DPST*	110	.022	4.99
DOSX-231T	1SPST*	24	2.69	4.84	DOSX-238T	1DPST*	110	.022	5.09
DOSX-232T	1DPST	24	2.69	4.94	OOSX-59T	DPDT	110	.022	5.56
DOSX-162T	DPDT	24	2.69	5.46	OOSX-177T	DPDT	220	.013	6.14
DOSX-233T	1SPST*	115	.043	4.84					
DOSUX-34T	1DPST	115	.043	4.94					
DOSUX-31T	1DPST*	115	.043	6.13					
DOSX-7T	DPDT	115	.043	5.46					
DOSUX-33T	1DPST*	115	.043	6.64					
DOSX-235T	1DPST*	230	.030	5.24					
DOSX-236T	1DPST	230	.030	5.34					
DOSX-12T	DPDT	230	.030	5.86					

† Normally open  
† AC Voltage is 60 cycle  
\* Double Break Contacts — 25 Amp.  
† Listed by UL.

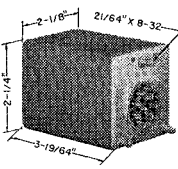
### DO RELAYS IN HERMETIC ENCLOSURES



DOHPX-16T, 3PDT, 11 Prongs  
DOHPX-15T, 4PDT, 20 Prongs

Stock DO relays with 115 volt coil in hermetically sealed metal enclosures, filled with dry nitrogen. Both 3 and 4-pole DO relays are supplied in these enclosures with plug (DOHPX-) or solder terminal (DOHX-) connectors as illustrated.

Weights: 3-pole hermetic relay approx. 14 oz.; 4-pole approx. 15 oz.

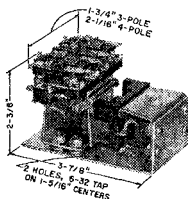


DOHX-22T, 3PDT, 14 Terminals  
DOHX-23T, 4PDT, 14 Terminals

#### 10 AMP. CONTACTS

Stock No.	Type	Coil Data		Net 1-24
		Volts	Amps.	
DOHPX-16T	3PDT	115VAC	.110	21.95
DOHPX-15T	4PDT	115VAC	.110	27.95
DOHX-22T	3PDT	115VAC	.110	21.31
DOHX-23T	4PDT	115VAC	.110	22.90

### MODEL DO LATCHING RELAY (DOLEX-)



Consists of Model DO relay and a "reset magnet" with both armatures mechanically latched so that the normally open contacts of the relay remain closed when the relay energizing voltage is removed. The relay releases to normal position when the reset coil is pulsed. Permits "holding" of circuits without continuous coil current. Coils of stock units (both relays and reset coils) are 115VAC. Available with 3 or 4-pole relays. Weights: 3-pole—16.5 oz.; 4-pole—17 oz.

DOLEX-3T, 3PDT\*  
DOLEX-5T, 4PDT

#### 10 AMP. CONTACTS

Stock No.	Type	Coil Data†		Net 1-24
		Volts	Amps.	
DOLEX-3T	3PDT	115VAC	.110	15.17
DOLEX-5T	4PDT	115VAC	.110	16.37

† Coil data applies to relay part of latching assembly. Reset magnet operates on 115VAC, 60 cycle also.

### MODEL DOSY RELAY FOR PLATE CIRCUIT OPERATION

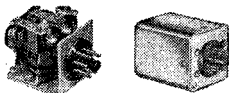
The high operating sensitivity makes the DOSY relay adaptable to a wide range of electronic control circuits, such as plate circuit controls, etc.

The insulation is of high grade, molded phenolic material. At 115 v. AC or 32 v. DC, non-inductive load, Model DOSY relay has a contact rating of 15 amperes.

There are two DPDT types, one having 10,000 ohms coil resistance (maximum in-line current of 8 ma. DC); the other having 5,000 ohms coil resistance. Dimensions are same as for Model DOS next column.

Stock No.	Type	Coil Data		Net Each 1-24
		D.C. Ohms	Max. Pull-in Current	
DOSYX-67T	DPDT	10,000	8 MA	6.09
DOSYX-68T	DPDT	5,000	11 MA	6.09
DOSYX-69T	SPDT	10,000	5 MA	5.62
DOSYX-70T	SPDT	5,000	7 MA	5.62

### MODEL DOS PLUG-IN & ENCL. TYPES

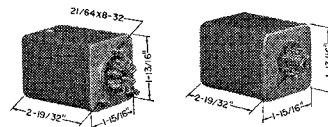


DOSPX-1T    DOSEPX-5T

Model DOS, DPDT relay with standard octal plug base, unenclosed or enclosed types. Enclosed dust-proof type has drawn aluminum cover. Overall dimensions, exclusive of plug: DOSPX-1T—1 1/2 x 2 x 1 1/8"; DOSEPX-5T—2 1/4 x 2 1/2 x 2 1/8". Contacts—15 amps. Similar to DOSX-7T shown under "DOS Relays" above.

Stock No.	Type	Coil		Net 1-24
		V.A.C.	Amps.	
DOSPX-1T Unenclosed	DPDT	115	.043	7.26
DOSEPX-5T Enclosed	DPDT	115	.043	8.30

### DOS RELAYS IN HERMETIC ENCLOSURES



Hermetic Enclosures with 8 Terminals  
DOSH-39T, 115VDC  
DOSH-40T, 115VAC

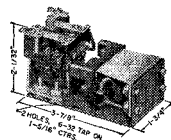
Hermetic Enclosures with Octal Plugs  
DOSHPX-46T, 115VDC  
DOSHPX-47T, 115VAC

Hermetically Sealed non-removable enclosures, filled with dry nitrogen, are also available to provide protection under adverse ambient conditions. DOS relays with 115 volt AC or DC coils are provided in these enclosures with either octal plug (DOSHPX-) or solder-terminal (DOSH-) connectors as illustrated. Weights: 8 oz. each approx.

#### 15 AMP. CONTACTS

Stock No.	Type	Coil Data		Net 1-24
		Volts	Amps.	
DOSH-40T	DPDT	115VAC	.043	13.58
DOSHPX-47T	DPDT	115VAC	.043	13.66
DOSH-39T	DPDT	110VDC	.022	13.68
DOSHPX-46T	DPDT	110VDC	.022	13.76

### MODEL DOS LATCHING RELAY (DOSLEX-)



DOSLEX-1T

Consists of Model DOS relay and a "reset magnet" with both armatures mechanically latched so that the normally open contacts of the relay remain closed when the relay energizing voltage is removed. The relay releases to normal position when the reset coil is pulsed. Permits "holding" of circuits without continuous coil current. Coils of stock units (both relay and reset magnet) are 115VAC. Weight: 14.2 oz.

#### 15 AMP. CONTACTS

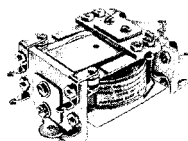
Stock No.	Type	Coil Data†		Net 1-24
		Volts	Amps.	
DOSLEX-1T	DPDT	115VAC	.043	11.98

† Coil data applies to relay part of latching assembly. Reset magnet operates on 115VAC, 60 cycle also.



# PHILLIPS-ADVANCE CONTROL CO.

## JOLIET, ILLINOIS



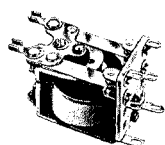
### ANTENNA TYPES

**AH SERIES** A changeover relay designed specifically for RF operation. The small size of this relay makes it ideal for use in compact sets where the load does not exceed 1/2 KW. Low-cost handling of RF energy is assured by the Steatite insulation used throughout, and by adequate spacing between contacts. Units are fast and positive in action, and will operate in any position.

**Dimensions:** H. 1 7/8", W. 1 3/8", L. 2 3/4".

**Mounting Data:** 2 tapped holes; 6-32 NC-2; 2" centers.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
AH/2C/6VD	16	DPDT	10	11.75
AH/2C/12VD	63	DPDT	10	11.75
AH/2C/24VD	250	DPDT	10	11.75
AH/2C/115VA	450	DPDT	10	13.00
AH/2C1C/115VA	450	DPDT & SPDT	10	14.25 (aux)



### ANTENNA TYPES

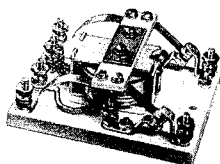
**AM SERIES** Space-saving "transmit-receive" antenna relays for many different low-power RF applications. They fill the need for 300-ohm circuit switching in mobile, marine, aircraft, television, communication and fixed-station service. Conically-shaped silver contacts assure low resistance paths for either "receive" or "transmit" positions.

**Dimensions:** H. 1-9/16", W. 15/16", L. 1-15/16".

**Mounting Data:** Relay supplied with single 6-32 NC-2 mounting stud with hex nut.

**Weight:** 2 oz.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
AM/2C/6VA	4	DPDT	2	4.70
AM/2C/115VA	1600	DPDT	2	5.05
AM/2C/6VD	25	DPDT	2	4.20
AM/2C/12VD	100	DPDT	2	4.20
AM/2C/24VD	250	DPDT	2	4.20



### ANTENNA TYPE

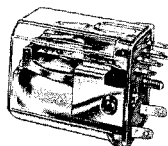
**AT SERIES** For heavy-duty RF transmitter antenna changeover applications. Primarily designed for fixed-station usage, with a conservative 1-kilowatt RF rating. Insulated with ceramic Steatite. Excellent wiping action of contacts assures flow of most minute currents for receiving positions. High efficiency. Available with auxiliary single-pole, normally open contacts.

**Dimensions:** H. 1-11/16", W. 2-13/16", L. 3-9/16".

**Mounting Data:** 4 holes .157 dia.; clearance for 6-32 screws.

**Weight:** 12.6 oz.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
AT/2C/115VA	450	DPDT	10	13.20



### MINIATURE TELEPHONE TYPES

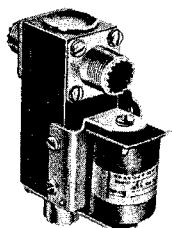
**AZ SERIES** Accepted in almost all branches of electrical and electronic engineering, the AZ Series incorporates the advantages of microminiaturization with long life characteristics. Their low cost makes them suitable for such applications as medium power switching, as well as tape head, microphone, and other low level switching applications.

Special contact materials and other voltage ranges available on special order. All AZ relays come with a clear plastic dust cover.

TYPE (DPDT)	COIL RES. (OHMS)	OPERATING VOLT RANGE	PULL IN POWER (NOMINAL)	NET
AZ420-15-4	52	3-10 VDC	75MW	3.15
AZ420-1011-4	185	5.5-18 VDC	70MW	3.15
AZ420-08-4	600	9.5-32 VDC	75MW	3.15
AZ420-70-4	700	11.5-36 VDC	85MW	3.15
AZ420-07-4	1000	12.5-46 VDC	75MW	3.15
AZ420-56-4	2500	19.5-65 VDC	80MW	3.2C
AZ420-035-4	15000	52.5-165VDC	85MW	5.4C
TYPE (4PDT)				
AZ421-15-1	52	4.5-10 VDC	170MW	3.5C
AZ421-1011-1	185	8-19 VDC	165MW	3.5C
AZ421-08-1	600	15-32 VDC	195MW	3.5C
AZ421-70-1	700	17-36 VDC	205MW	3.5C
AZ421-07-1	1000	19-46 VDC	195MW	3.5C
AZ421-56-1	2500	30-65 VDC	170MW	3.8C
AZ421-035-1	15000	75-165VDC	200MW	5.6C

### ACCESSORIES

TYPE		NET
ST140-U1	Two pole socket	0.39
ST140-1	Retaining spring (2C)	0.05
ST140-2	Grounding clip (2C and 4C)	0.03
ST141-U1	Four pole socket	0.62
ST141-1	Retaining spring (4C)	0.08



### COAXIAL TYPES

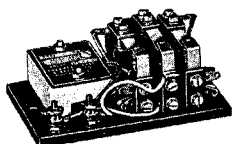
**CB SERIES** Unsurpassed for meeting problems of coaxial cable switching. Designed for performance on 52-ohm coaxial lines. Low standing-wave ratios permit usage on frequencies up to 300 megacycles. Units operate equally well in any position. The CB/1000 is a kit for converting CB/1C to CB/1C2C contact arrangement. All types CB, with exception of CB/1C2C/115VA(N), supplied with SO-239 connectors. CB/1C2C/115VA(N) supplied with "N" connectors.

**Dimensions:** H. 1 7/8", W. 3 3/4", L. 3 3/4".

**Mounting Data:** 2 tapped holes 6-32 NC-2; 1 3/8" centers.

**Weight:** 11.1 oz.

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
CB/1C/6VD	18	SPDT	5	20.0
CB/1C/12VD	70	SPDT	5	20.0
CB/1C/24VD	280	SPDT	5	20.0
CB/1C/115VA	280	SPDT	5	21.0
CB/1C2C/6VD	18	SPDT (int)	5	23.6
		DPDT (aux)		
CB/1C2C/12VD	70	SPDT (int)	5	23.6
		DPDT (aux)		
CB/1C2C/24VD	280	SPDT (int)	5	23.6
		DPDT (aux)		
CB/1C2C/115VA	280	SPDT (int)	5	24.1
		DPDT (aux)		
CB1000		DPDT	5	5.1
CB/1C2C/115VA (N)	280	SPDT (int)	5	24.1
		DPDT (aux)		



### TIME DELAY TYPES

**DB & DM SERIES** With their adjustable time-delay range, these relays excellent for use in preheating tube-filaments; for specialized lighting circuits, photographic controls, protection applications, etc. DB provides time-delay before break. DM provides delay before make. Both series utilize bi-metal thermal units which can be adjusted for delays from 5 to 60 seconds. Cooling of the thermal units for proper re-cycling requires 8 to 10 times the delay period.

**Dimensions:** H. 1 3/8", W. 2 5/8", L. 3 3/4".

**Mounting Data:** 2 holes .152 dia.; 3 3/4" centers.

**Weight:** 7.8 oz.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
DB/2C/115VA	450	DPDT	15	13
DM/2C/115VA	450	DPDT	15	14

## PHILLIPS-ADVANCE CONTROL CO.

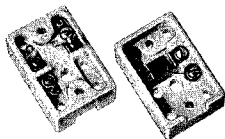
## TIME DELAY TYPES

**DT SERIES** Efficient, low-cost units used in conjunction with various relays for delayed making or breaking of controlled circuits. Applicable wherever a time delay of 5 to 60 seconds is needed. Units are adjustable with a range of 8 to 20 cycles per minute. Operating on the bi-metal thermal principle, these types are housed in unglazed porcelain, and are obtainable with either normally-open or normally-closed contacts.

**Dimensions:** H.  $1\frac{1}{4}$ " W.  $1\frac{1}{4}$ " L.  $1\frac{5}{8}$ ".

**Mounting Data:** 2 holes .154 dia. for 6-32 NC-2 screws;  $1\frac{1}{4}$ " centers.

**Weight:** 1.4 oz.



TYPE	COIL VOLT	CONTACTS FORM	RATING (AMPS)	NET
DT/1A/115VA	115VAC	SPST-NO	2	2.75
DT/1B/115VA	115VAC	SPST-NC	2	2.75

## GENERAL PURPOSE RELAYS

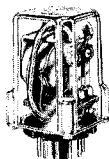
**GH SERIES—GHA—GHP** Low-cost continuous-duty general purpose relay. Contacts rated at 5 amps resistive load. Available as an open relay (GHA) or with a dustite plastic enclosure (GHP). Enclosed types with SPDT and DPDT contacts have 8 pin octal plug-in bases while the 3PDT types use 11 pin plug-in bases. Open relays supplied with axial type solder lugs. UL (Underwriters Laboratories) approval granted on types GHA1C and GHA2C.

**Dimensions:** Open Style— $1\frac{1}{4}$ " x  $1\frac{1}{4}$ " x  $1\frac{1}{4}$ "  
Enclosed Style— $1\frac{1}{2}$ " x  $1\frac{1}{2}$ " x  $2\frac{1}{8}$ ".



GHA

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
GHA/1C/6VA	4	SPDT	5	3.05
GHA/1C/12VA	16	SPDT	5	3.05
GHA/1C/24VA	63	SPDT	5	3.05
GHA/1C/115VA	1600	SPDT	5	3.05
GHA/1C/220VA	5000	SPDT	5	3.55
GHA/1C/6VD	25	SPDT	5	3.05
GHA/1C/12VD	100	SPDT	5	3.05
GHA/1C/24VD	400	SPDT	5	3.05
GHA/1C/110VD	8000	SPDT	5	3.55
GHA/2C/6VA	4	DPDT	5	3.55
GHA/2C/12VA	16	DPDT	5	3.55
GHA/2C/24VA	63	DPDT	5	3.55
GHA/2C/115VA	1600	DPDT	5	3.55
GHA/2C/220VA	5000	DPDT	5	4.05
GHA/2C/6VD	25	DPDT	5	3.35
GHA/2C/12VD	100	DPDT	5	3.35
GHA/2C/24VD	400	DPDT	5	3.35
GHA/2C/110VD	8000	DPDT	5	3.85
GHA/3C/6VA	4	3PDT	5	4.05
GHA/3C/12VA	16	3PDT	5	4.05
GHA/3C/24VA	63	3PDT	5	4.05
GHA/3C/115VA	1600	3PDT	5	4.05



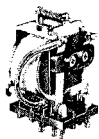
GHP

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
GHA/3C/220VA	5000	3PDT	5	4.55
GHA/3C/6VD	25	3PDT	5	3.75
GHA/3C/12VD	100	3PDT	5	3.75
GHA/3C/24VD	400	3PDT	5	3.75
GHA/3C/110VD	8000	3PDT	5	4.25
GHP/1C/6VA	4	SPDT	5	5.10
GHP/1C/12VA	16	SPDT	5	5.10
GHP/1C/24VA	63	SPDT	5	5.10
GHP/1C/115VA	1600	SPDT	5	5.10
GHP/1C/6VD	25	SPDT	5	5.15
GHP/1C/12VD	100	SPDT	5	5.15
GHP/1C/24VD	400	SPDT	5	5.15
GHP/1C/110VD	8000	SPDT	5	5.65
GHP/2C/6VA	4	DPDT	5	5.75
GHP/2C/12VA	16	DPDT	5	5.75
GHP/2C/24VA	63	DPDT	5	5.75
GHP/2C/115VA	1600	DPDT	5	5.75
GHP/2C/220VA	5000	DPDT	5	6.25
GHP/2C/6VD	25	DPDT	5	5.65
GHP/2C/12VD	100	DPDT	5	5.65
GHP/2C/24VD	400	DPDT	5	5.65
GHP/2C/110VD	8000	DPDT	5	6.15
GHP/3C/6VA	4	3PDT	5	7.05
GHP/3C/24VA	63	3PDT	5	7.05
GHP/3C/115VA	1600	3PDT	5	7.05
GHP/3C/220VA	5000	3PDT	5	7.55
GHP/3C/6VD	25	3PDT	5	6.95
GHP/3C/12VD	100	3PDT	5	6.95
GHP/3C/24VD	400	3PDT	5	6.95
GHP/3C/110VD	8000	3PDT	5	7.45

## GENERAL PURPOSE RELAYS

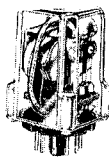
**GHB—GHH** Similar in size and mounting to the GHA and GHP types shown above with contacts rated at 10 amps resistive. GHB is open style with axial leads and GHH utilizes plastic enclosure and plug-in base. UL approval granted on types GHB/1C and GHB/2C.

**Dimensions:** Open Style— $1\frac{1}{4}$ " x  $1\frac{1}{4}$ " x  $1\frac{1}{4}$ "  
Enclosed Style— $1\frac{1}{2}$ " x  $1\frac{1}{2}$ " x  $2\frac{1}{8}$ ".



GHB

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
GHB/1C/6VA	4	SPDT	10	3.50
GHB/1C/24VA	63	SPDT	10	3.50
GHB/1C/115VA	1600	SPDT	10	3.50
GHB/1C/6VD	25	SPDT	10	3.50
GHB/1C/12VD	100	SPDT	10	3.50
GHB/1C/24VD	400	SPDT	10	3.50
GHB/2C/6VA	4	DPDT	10	4.05
GHB/2C/24VA	63	DPDT	10	4.05
GHB/2C/115VA	1600	DPDT	10	4.05



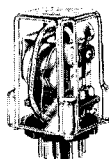
GHH

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
GHB/2C/6VD	25	DPDT	10	3.80
GHB/2C/12VD	100	DPDT	10	3.80
GHB/2C/24VD	400	DPDT	10	3.80
GHB/3C/6VA	4	3PDT	10	4.60
GHB/3C/24VA	63	3PDT	10	4.60
GHB/3C/115VA	1600	3PDT	10	4.60
GHB/3C/6VD	25	3PDT	10	4.40
GHB/3C/12VD	100	3PDT	10	4.40
GHB/3C/24VD	400	3PDT	10	4.40
GHH/2C/24VA	63	DPDT	10	6.05
GHH/2C/115VA	1600	DPDT	10	6.05
GHH/2C/24VD	400	DPDT	10	5.75
GHH/3C/115VA	1600	3PDT	10	7.25
GHH/3C/24VD	400	3PDT	10	7.25

## GENERAL PURPOSE RELAYS

**GHE** A plate circuit current operated unit having extremely good sensitivity. Standard GHE enclosed in dustite plastic enclosure and mounts with either an 8 pin or 11 pin plug-in base. Nominal power of 130 milliwatts per 1C (single pole) is required.

**Dimensions:**  $1\frac{1}{2}$ " x  $1\frac{1}{2}$ " x  $2\frac{1}{8}$ ".



TYPE	COIL RESISTANCE (OHMS)	COIL CURRENT	CONTACTS FORM	RATING (AMPS)	NET
GHE/1C/2500D	2500	7.2 MA	SPDT	5	5.40
GHE/1C/5000D	5000	5.0 MA	SPDT	5	5.85
GHE/1C/10000D	10000	3.6 MA	SPDT	5	6.25
GHE/2C/2500D	2500	10.0 MA	DPDT	5	6.15
GHE/2C/5000D	5000	7.2 MA	DPDT	5	6.25
GHE/2C/10000D	10000	5.0 MA	DPDT	5	6.65
GHE/3C/2500D	2500	11.8 MA	3PDT	5	7.60
GHE/3C/5000D	5000	8.3 MA	3PDT	5	7.70
GHE/3C/10000D	10000	5.8 MA	3PDT	5	8.10

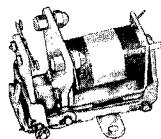
## HIGH VOLTAGE TYPES

**HV SERIES** Applicable where "standard" design high voltage units occupy too much space. Contact assembly mounted on Steatite to insure high insulation and low energy loss. Will break up to 5000 volts RMS at 200 milliamperes current. Available in SPDT (double break-double make DM-DB) contact arrangement.

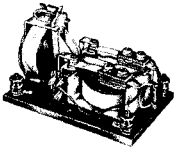
**Dimensions:**  $1\frac{1}{2}$ " x  $2\frac{1}{2}$ " x  $3\frac{1}{8}$ ".

**Mounting data:** 2 holes  $\frac{3}{16}$ " diameter on  $1\frac{1}{4}$ " centers.

TYPE	COIL RESISTANCE	CONTACTS	NET
HV/1Z/24VD	120 Ohms	SPDT DB-DM	17.65
HV/1Z/110VD	3000 Ohms	SPDT DB-DM	18.25



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LATCHING TYPES

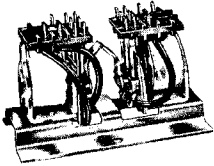
**LE SERIES** The LE Series relays are employed in industrial and power control applications where it is desirable to eliminate continuous use of current consumption by the duty coil.

The latching mechanism in these relays is positive, and assures consistent performance. The units are assembled on a heavy bakelite base.

**Dimensions:** H. 2 3/8", W. 2 1/2", L. 3 3/8".

**Mounting Data:** 2 holes .162 dia.; clearance for 6-32 NC-2 screws; 2" centers.

TYPE	COIL RESISTANCE	CONTACTS	NET
LE/2C/115VA	160 ohms	DPDT 15 amps	12.00
LE/2C/24VD	100 ohms	DPDT 15 amps	11.65

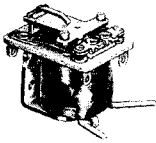


LATCHING TYPES

**LGA SERIES** Used in industrial and power control applications where it is desirable to eliminate continuous use of current consumption by the duty coil. Latching mechanism is positive and assures consistent performance. Both operate and reset coils are electrically operated.

**Dimensions:** 1 3/4" x 1 3/8" x 3 1/2".  
Two 6-32 mounting holes on 1 3/8" centers.

TYPE	COIL RESISTANCE (BOTH COILS) (OHMS)	FORM	CONTACTS RATING (AMPS)	NET
LGA/4C/24VA	40	4PDT	5	10.45
LGA/4C/115VA	1000	4PDT	5	10.45
LGA/4C/6VD	16	4PDT	5	9.35
LGA/4C/12VD	63	4PDT	5	9.35
LGA/4C/24VD	250	4PDT	5	9.35
LGA/4C/110VD	5000	4PDT	5	10.55
LGA/6C/24VA	40	6PDT	5	12.50
LGA/6C/115VA	1000	6PDT	5	12.50
LGA/6C/6VD	16	6PDT	5	11.40
LGA/6C/12VD	63	6PDT	5	11.40
LGA/6C/24VD	250	6PDT	5	11.40
LGA/6C/110VD	5000	6PDT	5	12.60



SPECIAL PURPOSE TYPES

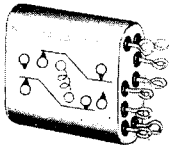
**MK SERIES** Ultra-small and feather-light, these direct current devices require less than 1/2 cubic inch mounting space. All switching is entirely above ground... insulated material is silicone glass. Beryllium copper armature hinges assure stable performance under vibration and shock.

**Dimensions:** H. 3/16", W. 1/16", L. 3/16".

**Mounting Data:** Relay supplied with single 2-56 NC-2 machine screw.

**Weight:** 11 grams.

TYPE	COIL RESISTANCE	CONTACTS RATING (AMPS)	NET
MK/1C/6VD	50	SPDT 1	4.95
MK/1C/12VD	200	SPDT 1	4.95
MK/1C/24VD	800	SPDT 1	4.95
MK/2C/6VD	30	DPDT 1	5.95
MK/2C/12VD	120	DPDT 1	5.95
MK/2C/24VD	500	DPDT 1	5.95
MK/2C/5000D	5000	DPDT 1	6.95



MICRO-MINIATURE CRYSTAL CAN TYPES

**MV SERIES** Hermetically sealed rotary action DPDT (2 Form C) DC relay for severe military and industrial applications. All units are designed to meet requirements of MIL-R-5757 D. Occupies 1/4 cubic inch. Contains new spring leaf contact blades which insure longer life with rapid heat dissipation. This Series, except MV7033, is available from stock with wide variety of terminal and mounting arrangements (see ordering information). MV7033 meets requirements of USAF Specification MS24250-6 (USAF) and is available from stock with solder hooks and special side angle mounting brackets only.

ORDERING INFORMATION

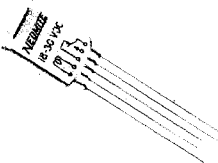
All relays listed here except MV7033 are available with any of the following terminal and mounting arrangement combinations.

TERMINAL ARRANGEMENT	CODE	MOUNTING ARRANGEMENT	CODE
Solder-Hook	Code 1	Side Studs	Code 1
Plug-in Pin	Code 2		
3" Leads	Code 3	Top Studs	Code 2
	(add .35)		
		2 Hole Bracket	Code 3
		Plain Can Plug-in	Code 4
		4 Hole Bracket	Code 5
		Side Angle Brackets	Code 6
		Flange Bracket	Code 7

EXAMPLES:

- Solder-hook terminals with side angle mounting bracket with 12 volt DC coil MV/2C/120D-16 Price: 13.50
- 3" leads, top studs with 110 volt DC coil MV/2C/5000D-3: Price: 13.90 + .35 for 3" leads = 14.25

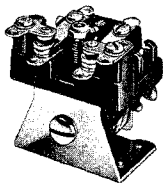
TYPE	RESISTANCE (OHMS)	PULL-IN CURRENT MAX. (MA)	COIL NOMINAL VOLTAGE (VDC)	NET
MV/2C/30D	30	85	6	13.50
MV/2C/120D	120	44	12	13.50
MV/2C/600D	600	21	26	13.50
MV/2C/1000D	1000	16	35	13.50
MV/2C/2500D	2500	10	55	13.60
MV/2C/5000D	5000	7	78	13.90
MV1/2C/10000D	10000	5	110	14.5
MV7033	600	21	26.5	13.5



NEOMITE MICRO-MINIATURE TYPES

**NM SERIES** Hermetically sealed SPDT (form C) DC relay for missiles, aircraft, control equipment and printed circuits. Occupying only 0.04 of a cubic inch, it is ideal where space is at a minimum and long life is important. Contact resistance is extraordinarily low, making it invaluable in dry circuit switching. Available from stock with a screw down mounting bracket or a bend-over-tab mounting bracket for printed circuit board use.

TYPE	RESISTANCE (OHMS)	PULL-IN CURRENT MAX. (MA)	COIL NOMINAL VOLTAGE (VDC)	NET
NM/1C/50	50	44	4	21.00
NM/1C/200	200	22	8	21.00
NM/1C/500	500	14	12	21.00
NM/1C/1K	1000	10	16	21.00
NM/1C/2K	2000	7	24	21.00
6B 346000 Two hole Bracket				1.00
6B 347000 Tab Bracket				1.00



POWER TRANSFER TYPES

**PG SERIES** A continuous duty general purpose relay, available in AC or DC with DPDT (2C) and SPDT-DB (1Z) contact arrangements. Excellent for general industrial power control circuits and withstand vibration and shock because of special armature and frame design. 30 amp contact rating is achieved on the PG/1Z by including a jumper between blades, effecting a single pole design.

**Dimensions:** H. 1 7/8", W. 1 3/8", L. 1 1/2".

**Mounting Data:** 4 tapped holes 6-32 NC-2; 1/2" x 1-5/16" centers.

**Weight:** 4.4 oz.

TYPE	COIL RESISTANCE (OHMS)	CONTACTS RATING (AMPS)	NET
PG/2C/6VA	1.4	DPDT 15	7
PG/2C/24VA	25	DPDT 15	7
PG/2C/115VA	400	DPDT 15	7
PG/2C/220VA	1600	DPDT 15	7
PG/2C/6VD	16	DPDT 15	6
PG/2C/12VD	63	DPDT 15	6
PG/2C/24VD	250	DPDT 15	6
PG/1Z/6VD	16	SPDT 30	8
PG/1Z/115VA	400	SPDT 30	10

## PHILLIPS-ADVANCE CONTROL CO.

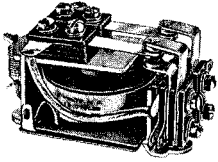
## POWER TYPES

**PC SERIES** Compact and positive-acting relays for either AC or DC. Used in air conditioning and lighting systems, small motor starting, transformers, garage door openers—wherever dependable circuit switching is necessary. Contacts rated at 15 Amps resistive, 5 Amps inductive at 115VAC or 26.5 VDC.

**Dimensions:** H. 1 1/8", W. 1 5/8", L. 2 5/8"—1 & 2 hole.  
H. 1 1/8", W. 2 1/4", L. 3 1/4"—3 & 4 hole.

**Mounting Data:** 2 tapped holes 6-32 NC-2; 2" centers.

**Weight:** 8 oz.



TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
PC/3C/12VD	63	3PDT	15	8.45
PC/3C/24VD	250	3PDT	15	8.45
PC/3C/110VD	4000	3PDT	15	8.95
PC/4C/6VA	1.6	4PDT	15	10.95
PC/4C/24VA	16	4PDT	15	10.95
PC/4C/115VA	450	4PDT	15	10.95
PC/4C/220VA	1600	4PDT	15	12.45
PC/4C/6VD	16	4PDT	15	10.95
PC/4C/12VD	63	4PDT	15	10.95
PC/4C/24VD	250	4PDT	15	10.95
PC/4C/110VD	4000	4PDT	15	11.45

Note: PC/3C and PC/4C not available in 12 volts AC.

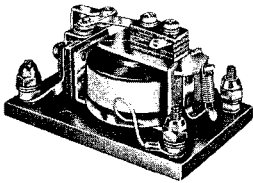
## POWER TYPES

**PV SERIES** Very heavy-duty power-transfer relays—excellent for motor starting, lighting circuits and numerous applications where heavy double make contacts are needed. "T" blade is equipped with two 3/8" silver-cadmium oxide contacts, with ample contact gap. These contacts minimize pitting and burning under heavy non-inductive or inductive loads.

**Dimensions:** H. 1 1/8", W. 2 1/4", L. 3 1/4".

**Mounting Data:** 2 holes .169 dia. clearance for 8-32 NC-2 screws, 1 1/8" centers.

**Weight:** 6.8 oz.



TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
PC/1C/6VA	1.6	SPDT	15	3.95
PC/1C/12VA	4	SPDT	15	3.95
PC/1C/24VA	16	SPDT	15	3.95
PC/1C/115VA	450	SPDT	15	3.95
PC/1C/220VA	1600	SPDT	15	4.95
PC/1C/6VD	16	SPDT	15	3.95
PC/1C/12VD	63	SPDT	15	3.95
PC/1C/24VD	250	SPDT	15	3.95
PC/1C/110VD	4000	SPDT	15	4.45
PC/2C/6VA	1.6	DPDT	15	5.95
PC/2C/12VA	4	DPDT	15	5.95
PC/2C/24VA	16	DPDT	15	5.95
PC/2C/115VA	450	DPDT	15	5.95
PC/2C/220VA	1600	DPDT	15	6.95
PC/2C/6VD	16	DPDT	15	5.95
PC/2C/12VD	63	DPDT	15	5.95
PC/2C/24VD	250	DPDT	15	5.95
PC/2C/110VD	4000	DPDT	15	6.55
PC/3C/6VA	1.6	3PDT	15	8.45
PC/3C/24VA	16	3PDT	15	8.45
PC/3C/115VA	450	3PDT	15	8.45
PC/3C/220VA	1600	3PDT	15	9.65
PC/3C/6VD	16	3PDT	15	8.45

## SENSITIVE TYPES

**SV SERIES** For use in any DC circuit restricted to a few thousandths of a watt power consumption.

Transparent, molded plastic cover guards against dust or dirt reaching the contacts or other working parts.

Adjustments are quickly made with the vernier screws which vary relay sensitivity from the 5-milliwatt factory setting. Both the two stationary contacts and the spring tension can be accurately and permanently set—yet easily changed.

**Dimensions:** H. 1 1/2", W. 2", L. 2 3/4".

**Mounting Data:** 2 holes .52 dia.

**Weight:** 6.5 oz.



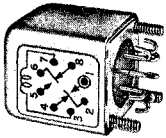
TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	RATING (AMPS)	NET
PV/1X/6VD	16	SPST-NO	30	7.35
PV/1X/115VA	450	SPST-NO	30	7.70
PV/1Z/6VD	16	SPDT	30	8.55
PV/1Z/115VA	450	SPDT	30	8.70

## MINIATURE ROTARY TYPE

**VGS SERIES** Miniature sealed rotary action DPDT (2 form C) relay for missile and aircraft use. A more sensitive version of its forerunner, the VG. VGS occupies less than a cubic inch of space and withstands 15 G's to 2000 cycles vibration, utilizing only 125 milliwatts of power at 25 degrees C. Contacts rated at 5 amps resistive at 115 VAC or 26.5 VDC. Contact material is silver magnesium nickel alloy, gold flashed.

TYPE	COIL RESISTANCE (OHMS)	COIL CURRENT (MA)	CONTACTS FORM	RATING (AMPS)	NET
SV/1C/005D	.005	1000	SPDT	1	7.95
SV/1C/1000D	1000	2.25	SPDT	1	8.25
SV/1C/1600D	1600	1.80	SPDT	1	8.40
SV/1C/2200D	2200	1.50	SPDT	1	8.40
SV/1C/3500D	3500	1.20	SPDT	1	8.40
SV/1C/5500D	5500	0.95	SPDT	1	8.75
SV/1C/8700D	8700	0.75	SPDT	1	9.40
SV/1C/10000D	10000	0.70	SPDT	1	9.40
SV/1C/14000D	14000	0.60	SPDT	1	10.10
SV/1C/20000D	20000	0.50	SPDT	1	11.10
SV/1C/30000D	30000	0.40	SPDT	1	11.85
SV/1C/40000D	40000	0.35	SPDT	1	13.30

TYPE	COIL RESISTANCE (OHMS)	NET
VGS/2C/2000D	2000	22.50

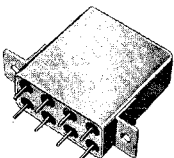


## HIGH SHOCK AND VIBRATION CRYSTAL CAN RELAY

**VR SERIES** A 0.2 inch grid-spaced hermetically sealed relay, designed to meet the requirements of Military Specification MIL-R-5757D. Will withstand 35 G's vibration and 100 G's shock. The standard catalog item has a pull-in power of 250 milliwatts at 25 degrees C, and a nominal operating power of 1.25 watts. The double-pole double-throw contacts are of silver magnesium nickel, gold plated and have a rating of 3 amperes resistive at 28 volts DC or 115 volts AC.

TYPE	COIL RESISTANCE (OHMS)	NET
VR/2C/125D-31	125	13.00
VR/2C/125D-34	125	13.00
VR/2C/675D-10	675	13.00
VR/2C/675D-11	675	13.00
VR/2C/675D-12	675	13.00
VR/2C/675D-13	675	13.00
VR/2C/675D-14	675	13.00
VR/2C/675D-20	675	13.00
VR/2C/675D-24	675	13.00
VR/2C/675D-33	675	13.00
VR/2C/675D-34	675	13.00
VR/2C/1500D-24	1500	13.00
VR/2C/2450D-14	2450	13.10
VR/2C/2450D-24	2450	13.10
VR/2C/9100D-24	9100	14.00
VR/2C/9100D-31	9100	14.00

TYPE	COIL RESISTANCE (OHMS)	NET
VR/2C/35D-10	35	13.00
VR/2C/35D-24	35	13.00
VR/2C/125D-10	125	13.00
VR/2C/125D-12	125	13.00
VR/2C/125D-13	125	13.00
VR/2C/125D-14	125	13.00
VR/2C/125D-24	125	13.00



## PHILLIPS-ADVANCE CONTROL CO.

## LONG FRAME TELEPHONE TYPES

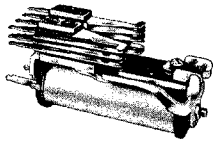
**TYPE 2** Dependable and versatile, the Type 2 is the "workhorse" of relays. It operates millions of times with reliability and requires little attention during its long life. An unusually large number of variations in contact assemblies, contact materials, coils, adjustments, and mounting arrangements are available.

**On special order:**

**Operating Voltage:** Up to 750 volts DC. Up to 440 volts AC, 60 cycles.

**Resistance:** Up to 50,000 ohms, single or double wound.

**Standard Contacts:** 18 ga. palladium, rated 3 amps, 150W. resistive.



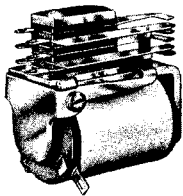
Type	Coil Voltage	Contact Arrange.	Coil Res. (Ohms)	Operate Curr. (Amps)	Operate Time (Sec.)	Net
2DC-6-2C	6	DPDT	50	.048	.030	7.20
2DC-6-6C	6	6PDT	50	.090	.065	11.20
2DC-24-2C	24	DPDT	600	.015	.025	7.50
2DC-24-6C	24	6PDT	600	.024	.050	11.50
2DC-48-4C	48	4PDT	2,000	.011	.040	7.70
2DC-48-6C	48	6PDT	2,000	.013	.050	11.70
2DC-115-1C	115	SPDT	3,600	.0045	.010	7.00
2DC-115-3C	115	3PDT	3,600	.008	.015	9.25
2DC-230-2C	230	DPDT	10,000	.004	.010	8.80
2DC-230-4C	230	4PDT	10,000	.006	.050	10.80

Type	Coil Voltage	Contact Arrange.	Coil Res. (Ohms)	Curr. Drain (Amps-DC)	Pick-up Volt. (AC)	Net
2AC-6-C	6	SPDT	0.2	1	4.5	7.10
2AC-6-4C	6	4PDT	0.2	1	4.5	8.60
2AC-24-2C	24	DPDT	4	.24	21	7.55
2AC-24-4C	24	4PDT	4	.24	21	8.60
2AC-115-1C	115	SPDT	100	.08	100	7.50
2AC-115-3C	115	3PDT	100	.08	100	9.70

## SHORT FRAME TELEPHONE TYPES

**TYPE 4** Relays constructed on the same general design of compact assembly and possess similar specifications. The heelpiece, armature and coil core are made of annealed magnetic iron, with the heelpiece acting as a return path for the magnetic circuit. The armature is pivoted on long-life bearings to insure constant pick-up and drop-out adjustment. Standard relays are supplied with solder terminals for contact springs and coils.

**Standard Contacts:** 18 ga. palladium, rated 3 amps, 150W. resistive.



TYPE	CONTACT ARRANGE.	COIL RES. OHMS	NET
4CDC-6-2C	DPDT	30	5.30
4CDC-12-2C	DPDT	75	5.30
4CDC-24-2C	DPDT	425	5.30
4CDC-115-2C	DPDT	6500	5.80
4CDC-6-4C	4PDT	30	7.05
4CDC-12-4C	4PDT	75	7.05
4CDC-24-4C	4PDT	425	7.05
4CDC-115-4C	4PDT	6500	7.65
4CDC-12-6C	6PDT	75	8.60
4CDC-24-6C	6PDT	425	8.65
4CDC-115-6C	6PDT	6500	9.20

## MEDIUM FRAME TELEPHONE TYPES

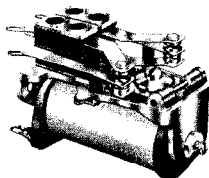
**TYPE 8** Small versatile multi-contact telephone type relays. Available with many variations in coils, contact assemblies, contact ratings, adjustments, terminal arrangements and mountings for a variety of applications. Standard contact blades are made of spring temper nickel silver, designed to give true independent twin contact operation. For special applications, other materials and configurations are used for contact blades.

**Coil Characteristics:**

**Operating Voltage:** Up to 300 volts D. C., 115 volts A. C., 60 or 400 cycles.

**Resistance:** Up to 21,000 ohms. Single or double wound.

**Standard Contacts:** Twin palladium, rated 4 amps, 175W. resistive.



TYPE (DC)	COIL RES. (OHMS)	OPERATE CURR. (AMPS)	WATTS	OPERATE TIME (SEC.)	NET
8DC-12-4C	100	.072	.518	.022	8.25
8DC-12-6C	100	.100	1.0	.030	11.30
8DC-24-4C	300	.046	.635	.020	8.25
8DC-24-6C	300	.064	1.23	.025	11.30
8DC-115-4C	8000	.010	.80	.023	9.80
8DC-115-6C	8000	.012	1.15	.023	12.15

TYPE (AC)	COIL RES. (OHMS)	CURR. DRAIN (AMPS)	PICK-UP VOLT. (60 CY.)	NET
8AC-115-2C	400	.075	95	6.30
8AC-115-4C	400	.075	95	8.90

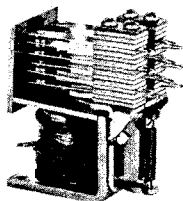
## GENERAL PURPOSE TYPES

**TYPE 12** Low cost general purpose relay with multiple contacts. Used widely in commercial applications such as industrial controls, communications equipment, and automatic vending machines. On special order available in resistances up to 12,000 ohms. AC or DC, 230 volts, maximum. Coil dissipation, 3 watts maximum.

**Dimensions:** H. 2 $\frac{3}{8}$ "; L. 1 $\frac{7}{32}$ "; W. 1".

**Mounting:** Single stud, four mounting holes.

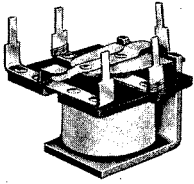
**Standard Contacts:**  $\frac{3}{16}$ " silver.



TYPE	COIL VOLTAGE (DC)	CONTACT ARRANGE.	RATING (AMPS)	NET
12DC-6-2C-10	6	DPDT	10	2.30
12DC-12-2C-10	12	DPDT	10	2.40
12DC-24-2C-10	24	DPDT	10	2.50
12DC-115-2C-10	115	DPDT	10	2.80
12DC-6-3C-10	6	3PDT	10	3.00
12DC-12-3C-10	12	3PDT	10	3.10
12DC-24-3C-10	24	3PDT	10	3.15
12DC-115-3C-10	115	3PDT	10	3.50
12DC-6-4C-10	6	4PDT	10	3.00
12DC-12-4C-10	12	4PDT	10	3.10
12DC-24-4C-10	24	4PDT	10	3.15
12DC-115-4C-10	115	4PDT	10	3.50
12DC-6-6C-10	6	6PDT	10	3.50
12DC-12-6C-10	12	6PDT	10	3.60
12DC-24-6C-10	24	6PDT	10	3.65
12DC-115-6C-10	115	6PDT	10	4.00

TYPE	COIL VOLTAGE (AC)	CONTACT ARRANGE.	RATING (AMPS)	NET
12AC-6-2C-10	6	DPDT	10	2.40
12AC-12-2C-10	12	DPDT	10	2.50
12AC-24-2C-10	24	DPDT	10	2.50
12AC-115-2C-10	115	DPDT	10	2.70
12AC-6-3C-10	6	3PDT	10	2.70
12AC-12-3C-10	12	3PDT	10	2.80
12AC-24-3C-10	24	3PDT	10	2.90
12AC-115-3C-10	115	3PDT	10	3.10
12AC-6-4C-10	6	4PDT	10	3.10
12AC-12-4C-10	12	4PDT	10	3.10
12AC-24-4C-10	24	4PDT	10	3.20
12AC-115-4C-10	115	4PDT	10	3.40
12AC-6-6C-10	6	6PDT	10	3.60
12AC-12-6C-10	12	6PDT	10	3.60
12AC-24-6C-10	24	6PDT	10	3.70
12AC-115-6C-10	115	6PDT	10	3.90

PHILLIPS-ADVANCE CONTROL CO.

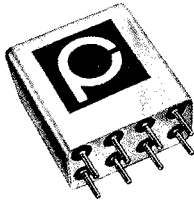


GENERAL PURPOSE TYPES

**TYPE 15** A small economical unit designed for printed circuit or screw mounting. 200 milliwatts nominal operating power. Available form 1C only.  
**Dimensions:** H. 0.781"; L. 1 1/4"; W. 1".  
**Mounting:** Single 1/8" tapped hole.

TYPE	COIL VOLTAGE	COIL RES.	CONTACT RATING (AMPS)	NET
15-6-1C	6	85	1	1.50
15-12-1C	12	300	1	1.50
15-24-1C	24	1100	1	1.50

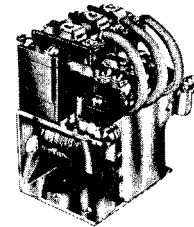
MICRO-MINIATURE TYPES



**TYPE 30** Phillips micro-miniature Type 30 provides rugged, dependable performance from a compact, hermetically sealed relay. It is ideal for applications involving computer systems, missile or aircraft control circuits, communications equipment and general electronic circuitry.  
 Quality controlled production and precision components assembled and tested under dust-free, super clean manufacturing conditions assures you that the Phillips micro-miniature Type 30 will uphold the high quality standards of your products. Conforms to MIL-5757 D. Meets the following low level requirements: 30 microvolts open circuit voltage; 10 microamperes contact current.

Type	Mounting	Res.	Volt. Nom.	Net
30-01G	Solder Header with 2 Mounting Brackets	675	26.5	7.25
30-02G	Solder Header with Side Bracket	675	26.5	7.25
30-04G	Solder Header with 2 Side Studs	675	26.5	7.25
30-05G	Solder Header with 2 Top Studs	675	26.5	7.25
30-07G	Plug In—Plain Can	675	26.5	7.25

POWER TYPES



**TYPE 33B** Designed and constructed with a variety of features which contribute to the sensitivity and longevity of this relay. Contacts and terminals are mounted on molded phenolic blocks with integral barriers. Moveable contact blades are made of spring temper phosphor bronze for high conductivity and long life. Adjusting screws on each blade permit close adjustment in the factory for contact gap, over-travel, and pressure. Armature pivots on machined phosphor bronze bearing pins and pivot holes are precision reamed. Adjustment of the armature and yoke assembly allows proper alignment between the armature and pole face. Four 6-32 N. C. tapped mounting holes in the base allow easy mounting on chassis or bracket.

**Coil Characteristics:**

**Operating Voltage:** Up to 300 volts D. C. Up to 450 volts A. C., 60 cycles.

**Resistance:** Up to 12,000 ohms.

**Operating Current:** 0.007 amps D. C., minimum.

**Operating Time:** 0.010 seconds, minimum.

**Contact Assembly:** All forms A, B, or C plus double makes, breaks and transfers. Code No. 13 or 14 silver contacts, standard. Other contacts available.

\*Stock numbers are coded—

Relay Type 33B—AC or DC—nominal voltage 24—

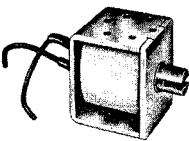
Contact assembly 5C—contacts Code 14

A type 33B Relay for 24 volt DC operation with a 4C contact assembly using Code number 14 contacts.

Type (DC)	Coil Res. (Ohms)	Operate Curr. (Amps)	Operate Watts	Operate Time (Sec.)	Contact Arr.	Net	Type (AC)	Coil No.	Coil Res. (Ohm —DC)	Curr. Drain (Amps)	Pick-up 60 Cy.	Contact Arr.	Net
33BDC-6-3C-14	18	.185	.62	.019	3PDT	6.60	33BAC-6-3C-14	33CA3F	1	.720	4.5	3PDT	6.60
33BDC-6-5C-14	18	.225	.91	.025	5PDT	8.10	33BAC-6-5C-14	33CA3F	1	.720	4.5	5PDT	8.10
33BDC-24-3C-14	250	.064	1.02	.025	3PDT	6.60	33BAC-24-3C-14	33CA3K	9	.390	21	3PDT	6.60
33BDC-24-5C-14	250	.070	1.22	.029	5PDT	8.10	33BAC-24-5C-14	33CA3K	9	.390	21	5PDT	8.10
33BDC-230-3C-14	10,000	.010	1.0	.014	3PDT	8.60	33BAC-115-3C-14	33CA3Q	215	.070	100	3PDT	9.10
33BDC-230-5C-14	10,000	.011	1.21	.016	5PDT	10.10	33BAC-115-5C-14	33CA3Q	215	.070	100	5PDT	10.60

SOLENOIDS

**TYPES 38, 39, 40, 41, 42, 51.** Solid frame solenoids using high-grade steel in all parts of the magnetic circuit. Carefully controlled annealing, after all machining operations are completed, assures maximum efficiency. The frame is dovetailed and staked to the end plate, adding mechanical strength and increasing the performance of the magnetic circuit. Plungers and plunger stops, which are made of annealed and specially processed steel, are available in three standard types for specific operating requirements. Type 51 is a laminated frame solenoid and has been designed and engineered to meet all of the requirements of the highest quality A. C. solenoid. Special production techniques and rigid quality control combine to provide a highly efficient unit. The frame is composed of silicon steel laminations securely riveted to a steel frame. Pole faces are precision ground and equipped with copper shading rings. Silicon steel laminations are also used for the plunger.



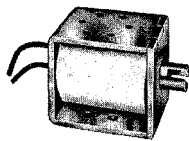
DC SOLENOIDS

TYPE 38

AC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
38C06DC-AY	6	6	4.50	—	—	—	—
38C12DC-AY	12	21	4.50	382512DC-AY	12	6	4.50
38C24DC-AY	24	66	4.50	382524DC-AY	24	21	4.50
38C48DC-AY	48	300	4.50	382548DC-AY	48	66	4.50
38C115DC-AY	115	1500	4.50	3825115DC-AY	115	400	4.50

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
38C0660-AX	6	0.75	4.50	—	—	—	—
38C1260-AX	12	2.5	4.50	38251260-AX	12	0.75	4.50
38C2460-AX	24	10	4.50	38252460-AX	24	2.5	4.50
38C11560-AX	115	135	4.50	382511560-AX	115	50	4.50
38C23060-AX	230	470	4.50	382523060-AX	230	135	4.50



DC SOLENOIDS

TYPE 39

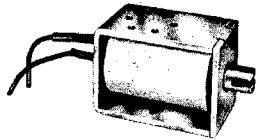
AC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
39C06DC-AY	6	4	5.10	—	—	—	—
39C12DC-AY	12	10	5.10	392512DC-AY	12	4	5.10
39C24DC-AY	24	60	5.10	392524DC-AY	24	10	5.10
39C48DC-AY	48	250	5.10	392548DC-AY	48	60	5.10
39C115DC-AY	115	1600	5.10	3925115DC-AY	115	300	5.10

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
39C0660-AX	6	.4	5.10	—	—	—	—
39C1260-AX	12	1.5	5.10	39251260-AX	12	.4	5.10
39C2460-AX	24	7	5.10	39252460-AX	24	1.5	5.10
39C11560-AX	115	105	5.10	392511560-AX	115	30	5.10
39C23060-AX	230	400	5.10	392523060-AX	230	105	5.10

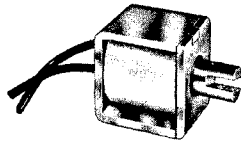


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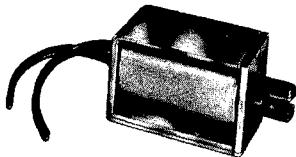
DC SOLENOIDS				TYPE 40			
CONTINUOUS DUTY		25% INTERMITTENT DUTY		CONTINUOUS DUTY		25% INTERMITTENT DUTY	
Type	Coil	Coil	Coil	Type	Coil	Coil	Coil
Volts.	Res.	Net	Net	Volts.	Res.	Net	Net
40C06DC-AY	6	3.6	6.00	—	—	—	—
40C12DC-AY	12	12	6.00	402512DC-AY	12	3.6	6.00
40C24DC-AY	24	47.5	6.00	402524DC-AY	24	12	6.00
40C48DC-AY	48	225	6.00	402548DC-AY	48	47.5	6.00
40C115DC-AY	115	1570	6.00	4025115DC-AY	115	417	6.00

AC SOLENOIDS				TYPE 40			
CONTINUOUS DUTY		25% INTERMITTENT DUTY		CONTINUOUS DUTY		25% INTERMITTENT DUTY	
Type	Coil	Coil	Coil	Type	Coil	Coil	Coil
Volts.	Res.	Net	Net	Volts.	Res.	Net	Net
40C0660-AX	6	0.8	6.00	—	—	—	—
40C1260-AX	12	1.5	6.00	40251260-AX	12	0.8	6.00
40C2460-AX	24	8.8	6.00	40252460-AX	24	1.5	6.00
40C11560-AX	115	84	6.00	402511560-AX	115	25	6.00
40C23060-AX	230	417	6.00	402523060-AX	230	84	6.00



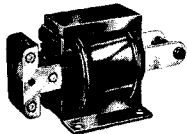
DC SOLENOIDS				TYPE 41			
CONTINUOUS DUTY		25% INTERMITTENT DUTY		CONTINUOUS DUTY		25% INTERMITTENT DUTY	
Type	Coil	Coil	Coil	Type	Coil	Coil	Coil
Volts.	Res.	Net	Net	Volts.	Res.	Net	Net
41C06DC-AU	6	12	4.10	—	—	—	—
41C12DC-AU	12	60	4.10	412512DC-AU	12	12	4.10
41C24DC-AU	24	200	4.10	412524DC-AU	24	60	4.10
41C48DC-AU	48	830	4.10	412548DC-AU	48	200	4.10
41C115DC-AU	115	4500	4.10	4125115DC-AU	115	1400	4.10

AC SOLENOIDS				TYPE 41			
CONTINUOUS DUTY		25% INTERMITTENT DUTY		CONTINUOUS DUTY		25% INTERMITTENT DUTY	
Type	Coil	Coil	Coil	Type	Coil	Coil	Coil
Volts.	Res.	Net	Net	Volts.	Res.	Net	Net
41C0660-AX	6	1	4.10	—	—	—	—
41C1260-AX	12	10	4.10	41251260-AX	12	1	4.10
41C2460-AX	24	45	4.10	41252460-AX	24	10	4.10
41C11560-AX	115	740	4.10	412511560-AX	115	230	4.10
41C23060-AX	230	2700	4.10	412523060-AX	230	740	4.10



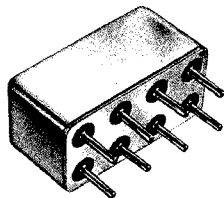
DC SOLENOIDS				TYPE 42			
CONTINUOUS DUTY		25% INTERMITTENT DUTY		CONTINUOUS DUTY		25% INTERMITTENT DUTY	
Type	Coil	Coil	Coil	Type	Coil	Coil	Coil
Volts.	Res.	Net	Net	Volts.	Res.	Net	Net
42C06DC-AU	6	8	4.50	—	—	—	—
42C12DC-AU	12	30	4.50	422512DC-AU	12	8	4.50
42C24DC-AU	24	115	4.50	422524DC-AU	24	30	4.50
42C48DC-AU	48	420	4.50	422548DC-AU	48	115	4.50
42C115DC-AU	115	2300	4.50	4225115DC-AU	115	675	4.50

AC SOLENOIDS				TYPE 42			
CONTINUOUS DUTY		25% INTERMITTENT DUTY		CONTINUOUS DUTY		25% INTERMITTENT DUTY	
Type	Coil	Coil	Coil	Type	Coil	Coil	Coil
Volts.	Res.	Net	Net	Volts.	Res.	Net	Net
42C0660-AX	6	1	4.50	—	—	—	—
42C1260-AX	12	3.5	4.50	42251260-AX	12	1	4.50
42C2460-AX	24	30	4.50	42252460-AX	24	3.5	4.50
42C11560-AX	115	370	4.50	422511560-AX	115	125	4.50
42C23060-AX	230	1100	4.50	422523060-AX	230	370	4.50



TYPE 51				AC SOLENOIDS			
CONTINUOUS DUTY		25% INTERMITTENT DUTY		CONTINUOUS DUTY		25% INTERMITTENT DUTY	
Type	Coil	Coil	Coil	Type	Coil	Coil	Coil
Volts.	Res.	Net	Net	Volts.	Res.	Net	Net
51C11560	115	30	7.20	512511560	115	15	7.20
51C23060	230	150	7.20	512523060	230	65	7.20
51C46060	460	650	7.20	512546060	460	285	7.20

MICRO-MINIATURE HALF SIZE TYPES

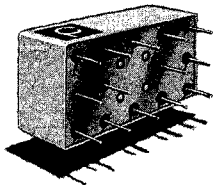


**TYPE 62** A unique half-size microminiature relay having these eleven specific advantages: (1) diagonally mounted coil allows larger coil for greater sensitivity; (2) uniquely designed armature assures maximum sensitivity and magnetic uniformity; (3) massive pole pieces provide higher heat dissipation; (4) contacts of gold-flashed silver magnesium nickel for high temperature stability and low level performance; (5) single coil design provides greater reliability; (6) single stamping forms integral return spring and back stop. Fewer parts, greater dependability; (7) Welded, spade type coil terminations; (8) greater rigidity thru unitized, welded construction; (9) designed for optimum magnetic characteristics; (10) balanced armature provides higher resistance to vibration and shock; (11) sensitivity level below 200 milliwatts.

Dimensions: H. 0.400"; L. 0.390"; W. 0.800".

Type	Res.	Contacts	Volt.	Style	Net
62-01-G	700	DPDT	26.5	Solder Header with 2 Mounting Brackets	14.25
62-07-G	700	DPDT	26.5	Plug In—Plain Can	14.25

MICRO-MINIATURE 4 POLE—HALF SIZE TYPES



**TYPE 64** The Type 64 embodies engineering advances truly unique among today's four-pole, double throw relays—twice the versatility of conventional 2PDT's, half the size of conventional 4PDT's, with no sacrifice in performance. Designed specifically to meet aero-space needs, the Type 64 features all-welded construction and "Thermo-Dri" nitrogen backfilling to assure contamination-free operation. Symmetrical circuitry simplifies wiring. Available in various coil resistances and all popular header styles. Meets MIL-R-5757/12A.

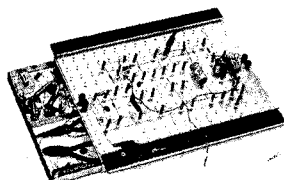
Type	Res.	Contacts	Voltage	Style	Net
64-01-H	500	4PDT	26.5	Solder Header with Mounting Brackets	24.50
64-07-H	500	4PDT	26.5	Plug In—Plain Can	24.50

SENSITIVE MICRO-MINIATURE TYPES



**TYPE 80** A 40 milliwatt micro-miniature relay using latest manufacturing techniques, including back-filling with "Thermo-Dri" nitrogen and precise adjustments to obtain an operate time of less than 10 milliseconds. This unit meets all requirements of military specifications, MIL-R-5757/13A. Vibration, 20 G's through 2000 CPS. Shock, 65 G's for 1 millisecond. Operating temperature range, -65 C to +125 C.

Type	Res. (Ohms)	Contact Rating (Amps)	Voltage	Style	Net
80-01-S	5000	3	26.5	Solder Header with Mounting Brackets	13.00
80-07-S	5000	3	26.5	Plug In—Plain Can	13.00



**CIRCUIT DESIGNERS' BREADBOARD** The latest advance in circuit breadboard design... the ideal electronic workbench for schools and industry. Circuit diagrams may be drawn on schematic transferal board and viewed from above thru transparent work surface. 14K gold plated spring connectors assure perfect electrical contacts, instantly and without solder. Features: sturdy aluminum frame on rubber cushions; binding posts, 100 spring connectors included; solid 1/4" Plexiglas circuit panel; built-in ground rail for alligator clips; partitioned drawer for tools and parts; slide-out schematic board doubles as cover; includes Ohms Law, color code, symbol charts. Size, 14" by 17". Weight, 4 3/4 pounds. Net, \$34.95

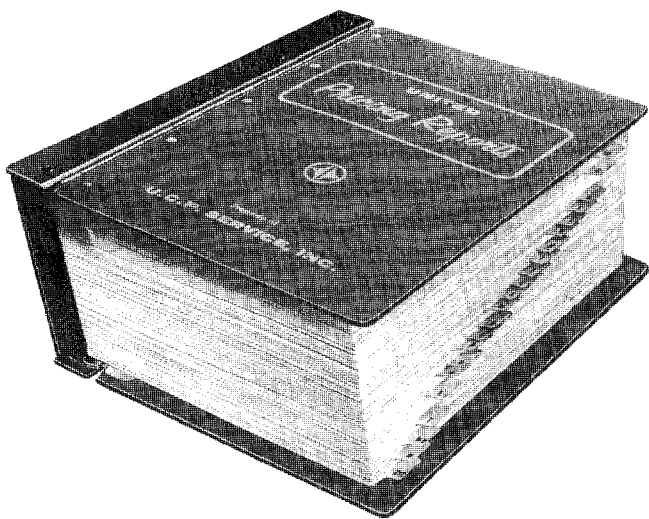
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# POTTER & BRUMFIELD

# Quality RELAYS

eem File System Sec. 4500  
Electronic engineers master

FILE-O-MATIC Sec. 23

**STOCK CATALOG 100**  
ISSUED AUGUST 1964

IN STOCK AT LEADING ELECTRONIC PARTS DISTRIBUTORS

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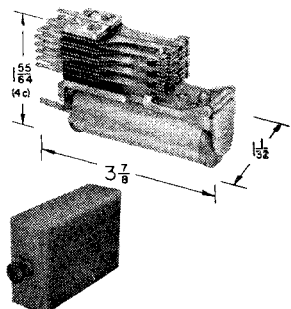
See Ordering Instructions, Page 8

**KEY TO SUFFIXES**

SUFFIX	STANDS FOR	EXAMPLE	SUFFIX	STANDS FOR	EXAMPLE
A	— Alternating Current	BS17A	N	— Neon Light	KRP11AN
D	— Direct Current	BS17D	P	— Enclosed in Plastic Dust Cover	MG11DP
DD	— DC in a sealed "D" can	MH23DD	R	— With Built-in Rectifier	MH17AMR
G	— Silver Cad.-Oxide Contacts	KRP5AG	S	— Sealed in can	PW5DS, SM5DS
L	— Plate Circuit	SM5L	T	— Sealed in "T" can	MG11DT
M	— Sealed in "M" can	MH17DM	Y	— U/L Listed	AB11AY

**BS SERIES** Long coil telephone type. Suited for computer and automatic test equipment applications requiring large numbers of poles. Tinned, pierced solder type terminals for rear panel wiring. Mounting: Two No. 8-32 NC 2B tapped holes on 3/8" centers. Contact arms: Bifurcated with 1/16" dia. twin palladium contacts. Weight: Approximately 9 ozs.

**BS DUST COVER** Two sizes of sheet metal enclosures. Small size for BS relays up to 6 Form C (6PDT, BS23), measures: H: 2 1/16", W: 1 1/4", L: 3 7/8" exclusive 3/8" knob; weight: 6.5 ozs. Medium size for up to 10 Form C, measures: H: 2 3/4", other dimensions same as small size; weight: 7 ozs.  
35D188, Small size NET \$1.80  
35D189, Medium size NET \$1.80

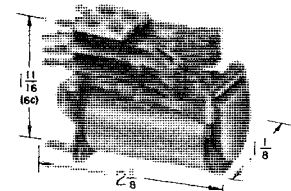


**TELEPHONE TYPE RELAYS**

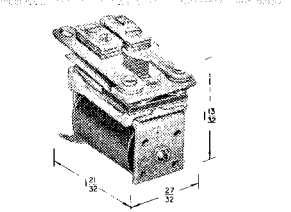
TYPE	COILS			CONTACTS		NET
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
BS17A	115V	71	17.9VA	4PDT	4	\$ 9.00
BS17D	24V	1,000	576MW	4PDT	4	7.40
BS17L	110V	6,500	1.8W	4PDT	4	8.00
BS17L	5.5MA	10,000	300MW	4PDT	4	8.00
BS23A	115V	71	17.9VA	6PDT	4	10.50
BS23D	24V	1,000	576MW	6PDT	4	8.95
BS23D	110V	6,500	1.8W	6PDT	4	9.50
BS23L	7.6MA	10,000	600MW	6PDT	4	9.50

**SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING**

**LS SERIES** Short springs and light weight armature provide fast action without sacrificing reliability and long life. Stainless steel hinge bearing designed to give 100 million operations. Tinned, pierced solder type terminals. Mounting: Two No. 6-32 tapped holes on 3/8" centers. Bifurcated contact arms with 1/16" dia. twin palladium contacts. Weight: Approximately 7 ozs.



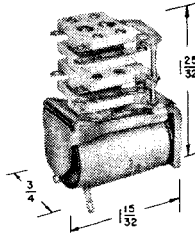
**MB SERIES** Miniature DC contactor. Designed for very high current applications. Extra rugged construction insures long life. Handles 150 ampere surges for 0.3 sec. Contact arms: Stationary, heavy brass, 1/4" dia. silver contacts pierced solder terminals. Movable, 1/2" x 1 1/16" silver bar contact. Mounting: Four No. 3-48 tapped holes on 3/8" x 3/8" centers. Weight: 2 ozs.



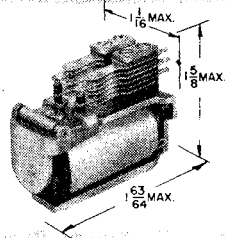
POTTER & BRUMFIELD DIVISION AMERICAN MACHINE & FOUNDRY COMPANY  
PRINCETON, INDIANA

# Potter & Brumfield Relays

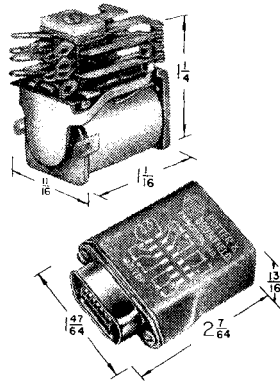
**MC SERIES** Built with ceramic contact spaces for RF switching to minimize losses at high frequencies. Intercontact capacitance 1.5 mmfd. max. Tinned, pierced solder type terminals. Mounting: Four No. 3-48 tapped holes on  $\frac{3}{16}$ " x  $\frac{3}{16}$ " centers. Contacts:  $\frac{3}{32}$ " dia. palladium. Weight: 2 ozs.



**MF SERIES** Unusually low coil temperature rise is an inherent feature of this efficient AC miniature telephone type relay. The rise does not exceed 20°C for a 4 Form C relay with continuous operation at 115V AC 50/60 cycles @ 25°C. The MF is economical since even a large number in an enclosed chassis require no costly cooling, and less costly circuit components, such as transformers, can normally be used. Sensitivity: 2.3VA (4 Form C). Two mountings: Two 6-32 tapped holes on  $\frac{3}{16}$ " centers; four 4-40 tapped holes on  $\frac{3}{16}$ " x  $\frac{3}{16}$ " centers. Weight: 3 ozs. maximum.

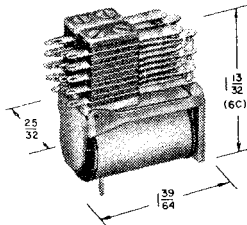


**MG SERIES** Sub-miniature telephone type relay for aircraft, computer and other applications requiring good shock and vibration characteristics. Furnished open, sealed or in nylon dust cover. Mounting: Open model has four No. 3-48 tapped holes on  $\frac{3}{16}$ " x  $\frac{3}{16}$ " centers. Sealed model has three No. 4-40 threaded studs on 1" x  $\frac{1}{2}$ " centers. Dust cover model has plug-in header that fits Amphenol receptacle No. 57-20140 or similar. Contacts:  $\frac{3}{32}$ " dia. silver. Weight: Open 1.2 ozs.; Dust cover 2.0 ozs.; Sealed 2.75 ozs.

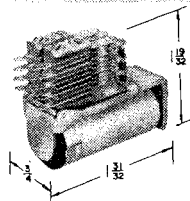


## MH SERIES MINIATURE TYPE

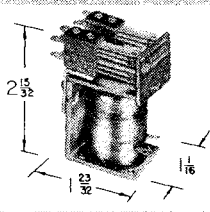
Ideal for miniature program applications where space and weight are factors. Mounting: Open model, MH11L, one No. 6-32 threaded stud  $1\frac{1}{2}$ " long plus locating boss. All other open models have four No. 3-48 holes on  $\frac{3}{16}$ " x  $\frac{3}{16}$ " centers. Sealed models, M enclosures, three 6-32 NC 2 threaded studs on  $1\frac{1}{2}$ " x  $\frac{1}{2}$ " centers. D enclosures, three 6-32 threaded studs on  $1\frac{1}{4}$ " x  $1\frac{1}{4}$ " centers. All sealed models have hook end solder terminals. All models have  $\frac{1}{16}$ " dia. gold-flashed silver contacts. Weight: Open models 2½ oz. max. Sealed models 5 ozs. max.



**ML SERIES** A small telephone type relay having excellent sensitivity with outstanding switching capabilities. Ideal for transistorized computer networks, telephone systems and battery powered communications equipment. Single contact arms have  $\frac{1}{16}$ " dia. gold-flashed silver contacts rated at 3 amps for 100,000 operations. Pierced solder terminals. Mounting: Four 3-48 holes on  $\frac{3}{16}$ " centers. Weight: 2.5 ozs.



**GB SERIES** (See GA series for similar voltage actuated relays.) Sensitivity 115 milliwatts for single pole and 275 milliwatts for 4 pole. Medium cost, high quality relay. Pull-in is not adjustable. Mounting: No. 8-32 tapped core and locating boss. Contacts:  $\frac{3}{16}$ " dia. silver. Weight: Approximately 5 ozs.



## TELEPHONE TYPE RELAYS

TYPE	COILS			CONTACTS		SUGG. LIST PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
MCSA	6V	2.5	4.6VA	SPDT	1	5 5.00
MCSA	115V	800	4.6VA	SPDT	1	5.00
MC5D	12V	96	1.6W	SPDT	1	4.40
MC5D	24V	365	1.6W	SPDT	1	4.40
MC11A	115V	800	4.6VA	DPDT	1	6.90
MC11D	12V	96	1.6W	DPDT	1	6.35
MC11D	24V	365	1.6W	DPDT	1	6.35
MC11D	110V	6,200	1.6W	DPDT	1	6.85

MF11AM†	24V	44.2	1.5VA	DPDT	5	12.25
MF11AM†	115V	886	1.5VA	DPDT	5	12.25
MF17A	6V	2.5	2.3VA	4PDT	5	9.25
MF17A	24V	33.7	2.3VA	4PDT	5	9.25
MF17A	115V	580	2.3VA	4PDT	5	9.25

MG11D	6V	23	1.6W	DPDT	2	5.20
MG1D	12V	90	1.6W	DPDT	2	5.20
MG11D	24V	365	1.6W	DPDT	2	5.20
MG11D	110V	7,560	1.6W	DPDT	2	5.65
MG11DT	24V	365	1.6W	DPDT	2	10.50
MG17D	6V	23	1.6W	4PDT	2	6.95
MG17D	12V	90	1.6W	4PDT	2	6.95
MG17D	24V	365	1.6W	4PDT	2	6.95
MG17D	110V	7,560	1.6W	4PDT	2	7.40
MG17DPS	6V	23	1.6W	4PDT	2	11.55
MG17DPS	12V	90	1.6W	4PDT	2	11.55
MG17DPS	24V	365	1.6W	4PDT	2	11.55
MG17DPS	110V	7,560	1.6W	4PDT	2	12.15
MG17DT	24V	365	1.6W	4PDT	2	12.60
MG17DT	110V	7,560	1.6W	4PDT	2	13.20

MH11L	4.5MA	10,000	200MW	DPDT	3	5.45
MH11LM†	4.5MA	10,000	200MW	DPDT	3	9.20
MH17D	6V	23	1.6W	4PDT	5	5.45
MH17D	12V	96	1.6W	4PDT	5	5.45
MH17D	24V	365	1.6W	4PDT	5	5.45
MH17DM†	6V	23	1.6W	4PDT	5	11.00
MH17DM†	12V	96	1.6W	4PDT	5	11.00
MH17DM†	24V	365	1.6W	4PDT	5	11.00
MH17AM†	115V	6,200	2VA	4PDT	5	17.95
MH23D	6V	13.3	2.5W	6PDT	5	6.85
MH23D	12V	62.3	2.5W	6PDT	5	6.85
MH23D	24V	245	2.5W	6PDT	5	6.85
MH23D	110V	5,000	2.5W	6PDT	5	7.30
MH23DD†	12V	62.3	2.5W	6PDT	5	14.60
MH23DD†	24V	245	2.5W	6PDT	5	14.60
MH23DD†	110V	5,000	2.5W	6PDT	5	15.15

ML11D	4.0MA	2,500	40MW	DPDT	3	6.05
ML11D	2.83MA	5,000	40MW	DPDT	3	6.20
ML11D	2.0MA	10,000	40MW	DPDT	3	6.50
ML17D	5.65MA	2,500	80MW	4PDT	3	7.20
ML17D	4.0MA	5,000	80MW	4PDT	3	7.35
ML17D	2.83VA	10,000	80MW	4PDT	3	7.65
ML23D	6.93MA	2,500	120MW	6PDT	3	8.15
ML23D	4.9MA	5,000	120MW	6PDT	3	8.30
ML23D	3.46MA	10,000	120MW	6PDT	3	8.60

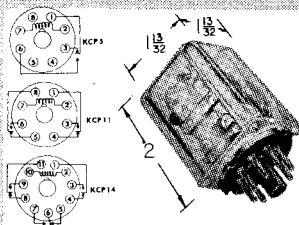
## PLATE CIRCUIT and SENSITIVE RELAYS

GB5D	6.8MA	2,500	115MW	SPDT	5	3.45
GB5D	4.8MA	5,000	115MW	SPDT	5	3.60
GB5D	3.4MA	10,000	115MW	SPDT	5	4.10
GB11D	7MA	2,500	125MW	DPDT	5	4.85
GB11D	5MA	5,000	125MW	DPDT	5	4.95
GB11D	3.53MA	10,000	125MW	DPDT	5	5.50
GB17D	10.5MA	2,500	275MW	4PDT	5	5.80
GB17D	7.4MA	5,000	275MW	4PDT	5	5.95
GB17D	5.25MA	10,000	275MW	4PDT	5	6.40

# Potter & Brumfield Relays

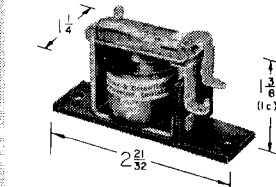
## PLATE CIRCUIT and SENSITIVE RELAYS

**KCP SERIES** Low cost plate circuit relay enclosed in clear cellulose acetate cover. Sensitivity 125 mw single pole; 250 mw double pole; 375 mw three pole. Mounting: Standard octal plug-in type. Eight pin for KCP5 and KCP11. Eleven pin for KCP14. Contacts:  $\frac{1}{8}$ " dia. gold-flashed silver. Weight: Approximately 3 ozs. Use KCP-KRP hold down spring when vibration, inverted or horizontal mounting are factors (see page 10).



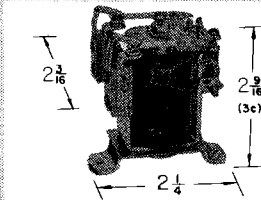
TYPE	COILS			CONTACTS		SUGG. LIST PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
KCP5§	7.2MA	2,500	125MW	SPDT	2	\$ 5.90
KCP5§	5MA	5,000	125MW	SPDT	2	6.00
KCP5§	3.6MA	10,000	125MW	SPDT	2	6.40
KCP11§	10MA	2,500	250MW	DPDT	2	6.30
KCP11§	7.2MA	5,000	250MW	DPDT	2	6.40
KCP11§	5MA	10,000	250MW	DPDT	2	6.80
KCP14§	12.3MA	2,500	375MW	3PDT	2	7.75
KCP14§	8.7MA	5,000	375MW	3PDT	2	7.85
KCP14§	6.1MA	10,000	375MW	3PDT	2	8.25

**LB SERIES** Designed for top performance, long life at an unusually low cost. Each coil is wound with a given coil resistance and factory adjusted to operate on minimum current requirements. Mounting: Two  $\frac{3}{16}$ " dia. holes on  $2\frac{1}{2}$ " centers. Contacts:  $\frac{3}{8}$ " dia. silver. Weight: Approximately 2 ozs.



LB5	9MA	2,500	200MW	SPDT	5	2.45
LB5	6.3MA	5,000	200MW	SPDT	5	2.65
LB5	4.5MA	10,000	200MW	SPDT	5	2.85

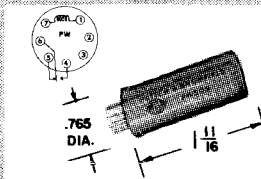
**LM SERIES** (See KL for similar voltage actuated relays.) Sensitivity 100 milliwatts for single pole and 200 milliwatts for double pole. Medium cost, high quality relay with  $\frac{3}{32}$ " dia. silver contacts. Pull-in adjustable by tail spring adjusting screw. Mounting: Two No. 6-32 tapped holes on  $1\frac{1}{4}$ " centers. Weight: Approximately 5 ozs. DC Coils only.



LM5	6.3MA	2,500	100MW	SPDT	5	3.90
LM5	4.5MA	5,000	100MW	SPDT	5	4.10
LM5	3.2MA	10,000	100MW	SPDT	5	4.40
LM11	9MA	2,500	200MW	DPDT	5	5.55
LM11	6.3MA	5,000	200MW	DPDT	5	5.75
LM11	4.5MA	10,000	200MW	DPDT	5	6.30

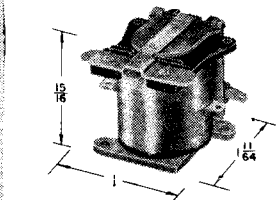
SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING

**PW SERIES** (In both voltage and current actuated models.) Sensitivity 40 mw for current actuated models, 180 mw for voltage actuated models. Precision, light weight, hermetically sealed relay for aircraft and missile applications. Will withstand 10G vibration to 500 cps. Mounting: Standard 7-pin miniature tube base. Weight: Approx. 1 oz.



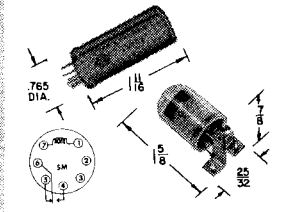
PW5DS†	6V	202	180MW	SPDT	1	10.25
PW5DS†	12V	810	180MW	SPDT	1	10.25
PW5DS†	24V	3,240	180MW	SPDT	1	10.25
PW5LS‡	2.8MA	5,000	40MW	SPDT	1	10.60
PW5LS‡	2.0MA	10,000	40MW	SPDT	1	11.00

**RS SERIES** (In both voltage and current actuated models.) 60 mw. sensitivity. Low-cost, small, light weight, sensitive relay for radio-sonde, light dimmer and model applications. Mounting: Two No. 4-40 tapped holes on diagonal  $\frac{3}{8}$ " x  $\frac{3}{8}$ " centers. Contacts: Bar palladium. Weight:  $1\frac{1}{2}$  ozs.



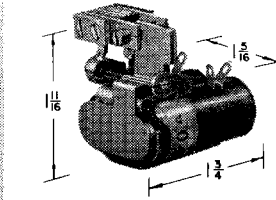
RS5D	6V	335	110MW	SPDT	2	2.60
RS5D	12V	1,350	110MW	SPDT	2	2.75
RS5D	5MA	2,500	60MW	SPDT	2	2.85
RS5D	3.5MA	5,000	60MW	SPDT	2	3.15
RS5D	2.5MA	10,000	60MW	SPDT	2	3.60

**SM SERIES** (In both voltage and current actuated models.) Sensitivity 75 mw for current actuated models. Medium cost, light weight, dust covered (right) or hermetically sealed (left) relay for light contact loads found in computers, model airplanes and similar applications. Extremely long mechanical life because of reed armature. Mounting: Sealed, standard 7-pin miniature tube socket; dust cover, two  $\frac{3}{32}$ " dia. holes on  $1\frac{1}{32}$ " centers. Contacts: Stationary silver; movable rhodium. Weight: 1 oz. max.



SM5D S†	6V	80	500MW	SPDT	.25	6.25
SM5D S†	12V	360	500MW	SPDT	.25	6.25
SM5D S†	24V	900	500MW	SPDT	.25	6.25
SM5L S‡	2.7MA	10,000	75MW	SPDT	.25	5.95
SM5L S‡	3.9MA	5,000	75MW	SPDT	.25	6.55
SM5L S‡	2.7MA	10,000	75MW	SPDT	.25	7.00

**SS SERIES** Ultra sensitive precision relay. 10 mw sensitivity. Dual series-connected coils with balanced armature on needle-point bearings for all low energy circuits such as instruments and bridge balancing. May also be used as a differential relay by connecting the two coils in separate circuits. Mounting: Two No. 6-32 tapped holes on  $2\frac{3}{32}$ " centers. Contacts:  $\frac{1}{8}$ " dia. silver. Weight: Approx.  $3\frac{1}{2}$  ozs.



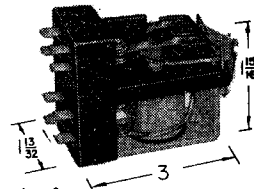
SS5D	1MA	10,000	10MW	SPDT	2	12.60
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†Sealed Relay  
‡Enclosed Relay

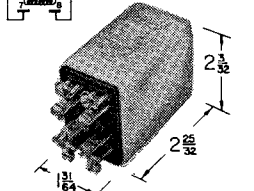
See ordering information on page 8.

# Potter & Brumfield Relays

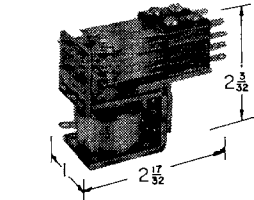
**AB SERIES** For appliance and general purpose applications where rugged construction, long life and quiet operation are required. All equipped with terminals to fit snap-on connectors and may also be applied to printed circuits using dip soldering. Snap-on screw adaptors packed with each relay. All AC models carry U/L and CSA® labels. Mounting: Two No. 8-32 tapped holes, on 1 1/4" centers. Weight: Approx. 5 ozs. Silver contacts.



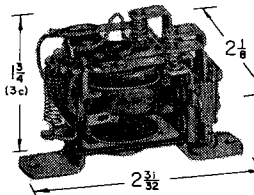
**ABC SERIES** Medium duty power relay with dust cover. For small motors, industrial control and similar applications. All equipped with terminals to fit snap-on connectors and may also be applied to printed circuits using dip soldering. Snap-on screw adaptors packed with each relay. All AC models carry U/L and CSA® labels. Mounting: One No. 8-32 threaded stud 3/8" long and locating tab on 1/16" centers. Contacts: 1/4" dia. silver. Weight: Approx. 7 ozs.



**GF SERIES** Medium duty power relay for industrial control applications. Long contact arms have 1/4" dia. silver contacts rated at 10 amps at 115V AC or 28V DC resistive. Contacts have excellent wipe or self-cleaning action. Tinned, pierced solder terminals. Mounting: 8-32 tapped core with locating boss. Weight: 4.75 ozs. (See GA series for similar voltage actuated relays.)

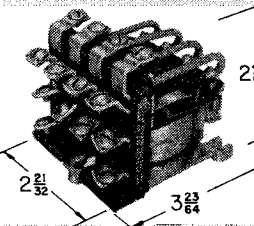


**MR SERIES** A medium duty power relay that can handle small motors, transmitters, and general purpose applications. Mounting: Two 5/16" dia. holes on 3/4" centers for MR3 and 11, 2 3/4" centers for MR2, 5 and 14. Contacts: 1/2" dia. silver. Weight: 4 ozs.



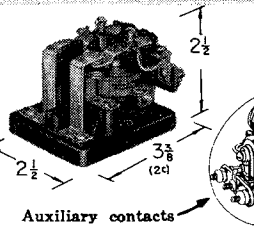
MS/MR Metal dust cover similar to PM/PR shown below. 3 5/8" x 2 3/8" x 2 1/8". Weight: 7.5 ozs.  
35D130 fits MS/MR NET \$1.90

**PM SERIES** A compact heavy duty 4PDT power relay for polyphase and heavy duty switching applications. Screw terminals. Has 1/4" silver-cadmium-oxide contacts rated at 25 amps at 115V, 25 amps at 230V, 50/60 cycle resistive AC, 1 HP per movable arm at 120V, or 240V. AC single phase, U/L and CSA® listed, except 440V. Mounts by one front key-hole and two rear channel slots for 8-32 screws on 2" x 2 1/2" triangular centers. Weight: 14 ozs.

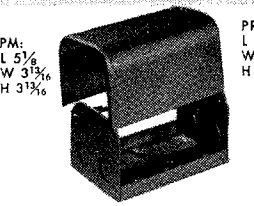


9PM1 Adapter plates for mounting PM on PR mounting holes. Box of 10 Net \$1.50  
For metal enclosure see below.

**PR SERIES** Heavy duty relay for industrial control applications requiring long life and fast action. Heavy duty screw type terminals. All AC and DC models except PR11AL5 carry U/L labels. Only AC models except PR11AL5 carry CSA® labels also. Mounting: Two 3/16" dia. holes on 1 1/4" centers. Weight: 11 ozs. max. Contacts: 3/16" dia. silver. Enclosure: See "PR" cover. The PR11AL5 relay is equipped with 3/16" dia. silver SPDT auxiliary contacts rated at 5 amps.



**PM and PR DUST COVERS** These dust covers have a sheet metal base with knockouts for 1/2" dia. conduit and an aluminum cover fitted with two screws. Finished in gray baked enamel. Mounting: Three No. 10 holes on 1 7/8" x 4 3/8" centers. Approx. weight: 1 lb.



35D227 Metal cover for PM only NET \$3.00  
35D013 Metal cover for PR only NET \$3.00

## POWER TYPE RELAYS

TYPE	COILS			CONTACTS		SUGG. LIST PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
AB11AY	6V	1.3	6.4VA	DPDT	10	55.30
AB11AY	24V	23	6.4VA	DPDT	10	5.30
AB11AY	115V	510	6.4VA	DPDT	10	5.30
AB11AY	230V	2,050	6.4VA	DPDT	10	5.70
AB11D	12V	72	2.0W	DPDT	10	5.20
AB11D	24V	288	2.0W	DPDT	10	5.20
AB11D	110V	6,050	2.0W	DPDT	10	5.70
ABC11AYs	6V	1.3	6.4VA	DPDT	10	6.40
ABC11AYs	24V	23	6.4VA	DPDT	10	6.40
ABC11AYs	115V	275	6.4VA	DPDT	10	6.40
ABC11AYs	230V	2,050	6.4VA	DPDT	10	6.80
ABC11Ds	6V	18	2.0W	DPDT	10	6.30
ABC11Ds	12V	72	2.0W	DPDT	10	6.30
ABC11Ds	24V	288	2.0W	DPDT	10	6.30
ABC11Ds	110V	6,050	2.0W	DPDT	10	6.80
GF17A	6V	1.7	6VA	4PDT	10	6.65
GF17A	12V	6.8	6VA	4PDT	10	6.45
GF17A	24V	24	6VA	4PDT	10	6.65
GF17A	115V	690	6VA	4PDT	10	6.65
GF17A	230V	2,950	6VA	4PDT	10	7.05
GF17D	6V	18	2.0W	4PDT	10	6.65
GF17D	12V	72	2.0W	4PDT	10	6.65
GF17D	24V	288	2.0W	4PDT	10	6.65
GF17D	110V	6,050	2.0W	4PDT	10	7.10
MR3A	6V	2.75	3.25VA	SPST-NO-DB	10	3.85
MR3A	24V	50	3.25VA	SPST-NO-DB	10	3.85
MR3A	115V	1,250	3.25VA	SPST-NO-DB	10	3.85
MR3D	6V	24	1.6W	SPST-NO-DB	10	3.50
MR3D	12V	96	1.6W	SPST-NO-DB	10	3.50
MR3D	24V	360	1.6W	SPST-NO-DB	10	3.50
MR5A	6V	2.75	3.25VA	SPDT	8	3.45
MR5A	12V	13.25	3.25VA	SPDT	8	3.45
MR5A	24V	50	3.25VA	SPDT	8	3.45
MR5A	115V	1,250	3.25VA	SPDT	8	3.45
MR5A	230V	4,600	3.25VA	SPDT	8	3.85
MR5D	6V	24	1.6W	SPDT	8	3.20
MR5D	12V	96	1.6W	SPDT	8	3.20
MR5D	24V	360	1.6W	SPDT	8	3.20
MR5D	110V	8,000	1.6W	SPDT	8	3.70
MR11A	6V	2.75	3.25VA	DPDT	8	4.85
MR11A	12V	13.25	3.25VA	DPDT	8	4.85
MR11A	24V	50	3.25VA	DPDT	8	4.85
MR11A	115V	1,250	3.25VA	DPDT	8	4.85
MR11A	230V	4,600	3.25VA	DPDT	8	5.25
MR11D	6V	24	1.6W	DPDT	8	4.60
MR11D	12V	96	1.6W	DPDT	8	4.60
MR11D	24V	360	1.6W	DPDT	8	4.60
MR11D	110V	8,000	1.6W	DPDT	8	5.10
MR14A	6V	2.75	3.25VA	3PDT	8	5.80
MR14A	12V	13.25	3.25VA	3PDT	8	5.80
MR14A	24V	50	3.25VA	3PDT	8	5.80
MR14A	115V	1,250	3.25VA	3PDT	8	5.80
MR14A	230V	4,600	3.25VA	3PDT	8	6.20
MR14D	6V	24	1.6W	3PDT	8	5.45
MR14D	12V	96	1.6W	3PDT	8	5.45
MR14D	24V	360	1.6W	3PDT	8	5.45
MR14D	110V	8,000	1.6W	3PDT	8	5.95
PM17AY	6V	.37	14VA	4PDT	25	12.35
PM17AY	12V	1.4	14VA	4PDT	25	12.35
PM17AY	24V	5.0	14VA	4PDT	25	12.35
PM17AY	115V	120	14VA	4PDT	25	12.35
PM17AY	230V	2,817	14VA	4PDT	25	12.75
PM17A	440V	1,790	14VA	4PDT	25	13.60
PR1AY	24V	12	9.8VA	SPST-NO-DB	25	4.05
PR3AY	6V	0.86	9.8VA	SPST-NO-DB	25	4.15
PR3AY	12V	3.2	9.8VA	SPST-NO-DB	25	4.15
PR3AY	24V	12	9.8VA	SPST-NO-DB	25	4.15
PR3AY	115V	290	9.8VA	SPST-NO-DB	25	4.15
PR3AY	230V	1,200	9.8VA	SPST-NO-DB	25	4.50
PR3DY	6V	18	2.0W	SPST-NO-DB	25	4.15
PR3DY	12V	71	2.0W	SPST-NO-DB	25	4.15
PR3DY	24V	288	2.0W	SPST-NO-DB	25	4.15
PR3DY	110V	6,050	2.0W	SPST-NO-DB	25	4.75
PR5AY	6V	0.86	9.8VA	SPDT	25	4.35
PR5AY	12V	3.2	9.8VA	SPDT	25	4.35
PR5AY	24V	12	9.8VA	SPDT	25	4.35
PR5AY	115V	290	9.8VA	SPDT	25	4.35
PR5AY	230V	1,200	9.8VA	SPDT	25	4.75
PR5DY	6V	18	2.0W	SPDT	25	4.35
PR5DY	12V	71	2.0W	SPDT	25	4.35
PR5DY	24V	288	2.0W	SPDT	25	4.35
PR5DY	110V	6,050	2.0W	SPDT	25	4.95
PR7AY	6V	0.86	9.8VA	DPST	25	4.90
PR7AY	12V	3.2	9.8VA	DPST	25	4.90
PR7AY	24V	12	9.8VA	DPST	25	4.90
PR7AY	115V	290	9.8VA	DPST	25	4.90
PR7AY	230V	1,200	9.8VA	DPST	25	5.35
PR7DY	6V	18	2.0W	DPST	25	4.90
PR7DY	12V	71	2.0W	DPST	25	4.90
PR7DY	24V	288	2.0W	DPST	25	4.90
PR7DY	110V	6,050	2.0W	DPST	25	5.50
PR11AY	6V	0.86	9.8VA	DPDT	25	6.45
PR11AY	12V	3.2	9.8VA	DPDT	25	6.45
PR11AY	24V	12	9.8VA	DPDT	25	6.45
PR11AY	115V	290	9.8VA	DPDT	25	6.45
PR11AY	230V	1,200	9.8VA	DPDT	25	6.95
PR11AY	440V	4,500	9.8VA	DPDT	25	7.80
PR11AL5	6V	0.86	9.8VA	DPDT	20	8.15
PR11AL5	12V	3.2	9.8VA	DPDT	20	8.15
PR11AL5	24V	12	9.8VA	DPDT	20	8.15
PR11AL5	115V	290	9.8VA	DPDT	20	8.15
PR11AL5	230V	1,200	9.8VA	DPDT	20	8.55
PR11DY	6V	18	2.0W	DPDT	25	6.45
PR11DY	12V	71	2.0W	DPDT	25	6.45
PR11DY	24V	288	2.0W	DPDT	25	6.45
PR11DY	110V	6,050	2.0W	DPDT	25	7.05

\*Canadian Standards Association

§Enclosed Relay

See ordering information on page 8.

# SOLID STATE TIME DELAY RELAYS

Excellent operational characteristics mark this economical P&B series of reliable solid state time delay relays. Includes models for AC or DC operation. All relays provide a time delay on operate either with knob adjustment for the entire time range, or as a fixed value timer optionally adjustable by an external resistor. Available with an internal DPDT relay or as a separate timing unit for use with P&B relays listed under "Notes."

### WIDE TIME DELAY RANGE

Type	Outline Drawing	Time Delay in Seconds	Input Voltage	Notes	Sugg. List Price
CDB-38-70003	Fig. 1	0.1 to 10	115V AC	1	43.80
CDB-38-70005	Fig. 1	1.8 to 180	115V AC	1	43.80
CDD-38-30003	Fig. 1	0.1 to 10	24V DC	1	41.55
CDD-38-30005	Fig. 1	1.8 to 180	24V DC	1	41.55
CDB-21-70003	Fig. 2	0.1 to 10	115V AC	2	38.70
CDB-21-70001	Fig. 2	1.8 to 180	115V AC	2	38.70
CDD-21-30003	Fig. 3	0.1 to 10	24V DC	3	38.35
CDD-21-30001	Fig. 3	1.8 to 180	24V DC	3	38.35
CDH-31-30005	Fig. 4	180 (note 5)	24V DC	4 & 5	38.90

### CD TIME DELAY RELAYS

are distinguished by

- Accurate Time Delay Values
- Excellent Repeatability
- Fast Reset Time
- Wide Time Delay Range

### SPECIFICATIONS:

Timing Accuracy:  $\pm 10\%$   
 Repeatability:  $\pm 2\%$   
 Fast Reset Time: 60 milliseconds  
 Ambient Operating Temperature:  $-40^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$   
 Duty: Continuous  
 Enclosures: Rugged plastic

### NOTES

1. Has internal relay with DPDT contacts rated at 10 amperes, 115V AC.
2. Use with Potter & Brumfield relay KRP11AG—115V AC or KRP14AG—115V AC (see page 10). One set of normally open contacts on KRP relay must be connected to the time delay unit.
3. Use with Potter & Brumfield KRP5DG—24V DC, KRP11DG—24V DC or KRP14DG—24V DC relay (see page 10).
4. Use with Potter & Brumfield KHP17D11—24V DC relay (see page 9).
5. As supplied, this unit has a fixed time delay of 180 seconds. Connect external  $\frac{1}{2}$  watt resistor between terminals 9 and 12 to reduce time delay period. The following are approximate values of required resistors:

### RESISTOR

- 2.7 meg ohms
- 1.3 meg ohms
- 680 K ohms
- 270 K ohms
- 68 K ohms
- short circuit

### TIME DELAY

- 120 seconds
- 90 seconds
- 60 seconds
- 30 seconds
- 10 seconds
- 1.8 seconds

### CHOOSE FROM THESE TYPES

**Fig. 1**  
 Knob-adjustable with self-contained DPDT relay.  
 CDB-38-70003    CDD-38-30003  
 CDB-38-70005    CDD-38-30005  
 1 3/4" x 2 1/2" x 3 3/4" high, weight: 7 ozs.

**Fig. 2**  
 Knob-adjustable with external relay.  
 CDB-21-70003    CDD-21-30003  
 CDB-21-70001    CDD-21-30001  
 1 1/2" sq. x 2 1/2" high, weight: 3 1/2 ozs.

**Fig. 4**  
 Adjustable to provide fixed time delay by external resistor (not furnished); use with external relay.  
 CDH-31-30005  
 1 1/2" x 1 1/2" x 1 1/2", weight: 1 1/2 ozs.



DEPENDABILITY • LONGEVITY • HIGH SPEED

# Mercury-Wetted Contact Relays



AVAILABLE IN THESE SERIES:

**JML**-SENSITIVE, FORM C NON-BRIDGING      single-side-stable  
bi-stable  
chopper

**JMP**-POLARIZED FORM D BRIDGING      single-side-stable  
bi-stable  
chopper

**JM**-BRIDGING FORM D

1 CAPSULE	SPDT	single coil
2 CAPSULES	DPDT	dual coil
3 CAPSULES	3PDT	single coil
4 CAPSULES	4PDT	single coil

Rare long life, high speed, and unvarying dependability—all are the result of the basic component of these relays: a hermetically sealed glass capsule. It contains the contact arrangement and a small reservoir of mercury sealed under a high pressure hydrogen atmosphere. A film of mercury is renewed for every operation—that's why you can think in terms of billions of operations without contact bounce, pits or welds.

**TWO TYPES OF CAPSULES**

The capsule used in JML relays has a SPDT, break-before-make (Form C), non-bridging contact arrangement. Each capsule used in JMP, and JM1 to JM4 relays has a SPDT, make-before-break, (form D), bridging contact arrangement. Both JML and JMP series achieve a high rate of sensitivity by factory-adjusted magnet biasing.

**Single-Side-Stable:** The relay will release (open its normally open contacts) when the coil current is reduced to less than must release value.

**Bi-Stable:** The armature remains in the last operated position until opposite polarity is applied.

**Chopper:** Approximately equal dwell exists on the normally open and closed contacts when the coil is driven by 60 cps sine waves.

**QUALITY SPECIFICATIONS**

**CONTACT RATINGS:**

JML: 500V max., and 2 amps max., 100 VA max.\*  
JMP and JM1 to JM4: 500V max., and 5 amps max., 250 VA max.\*

\*With contact protection unless low level current is applied. Details of simple circuit consisting of resistor and capacitor in series are packed with each relay.

**SENSITIVITY:**

Minimum sensitivities are  
JML: 27.3 ampere turns  
JMP: 70 ampere turns  
JM1: 190 ampere turns  
JM2 and 3: 250 ampere turns  
JM4: 260 ampere turns

**TIMING:**

JML: 200 operations per sec.  
JMP and JM1: 100 operations per sec.  
JM2, 3 and 4: 60 operations per sec.

**SHOCK RESISTANCE:**

All series: 30G for 11 milliseconds, non-operating. Vibrations up to 10G, 10-500 cps.

**TEMPERATURES:**

All series: -39°C (mercury freezes), 107°C internal (potting compound softens).

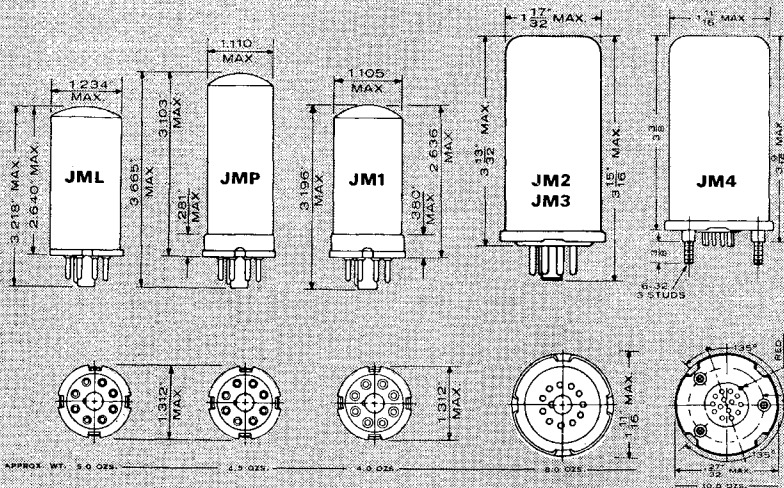
**TERMINATIONS:**

All series: Octal style plugs, except figures 23, 32, and 42 (Hook Solder), figure 41 (14-pin miniature plug).

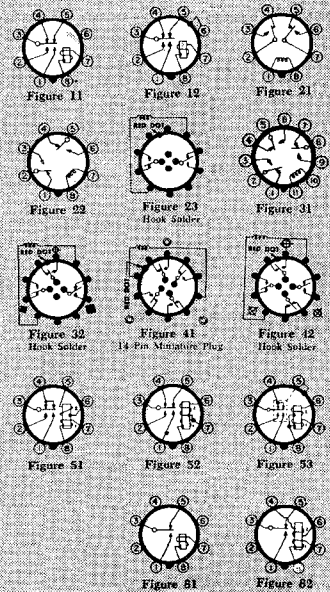
**ENCLOSURES:**

Five steel case sizes, one each for JML, JMP, JM1, JM2 and JM3, and JM4. Required mounting position: Vertical.

**OUTLINE DIMENSIONS**



**TERMINATIONS**



AVAILABLE FROM STOCK FOR FAST DELIVERY

**JML** Sensitive

**JMP** Polarized

**JM1** Single Capsule

**JM2** 2 Capsules

**JM3** 3 Capsules

**JM4** 4 Capsules

SERIES			COIL CHARACTERISTICS				NET PRICE
Capsule	Coil	Terminal Fig. No.	RESISTANCE (Ohms ±10%)	SOAK* ma DC	MUST OPERATE ma DC	MUST RELEASE ma DC	
<b>SINGLE-SIDE-STABLE</b>							
JML	1061	81	40	36.0	9.75	1.68	\$11.60
JML	1110	81	350	13.1	3.56	0.61	11.60
JML	1160	81	1000	8.1	2.21	0.38	11.60
JML	1190	81	2500	4.0	1.43	0.17	12.40
JML	1200	81	4000	3.4	1.25	0.25	12.40
JML	1260	81	25000	1.9	0.52	0.09	12.40
JML	1440	82	(1) 4000 (2) 800	2.7	0.86 11.60	0.10	13.60
<b>BI-STABLE</b>							
JML	5160	81	1000		+1.24	-1.24	12.10
JML	5200	81	4000		-0.53	-0.53	12.40
JML	5430	82	(1) 1100 (2) 1100		+1.76	-1.76	13.60
<b>CHOPPER</b>							
JML	8130	81	600		Voltage RMS 60cps 6.3V		12.10
<b>SINGLE-SIDE-STABLE</b>							
JMP	1081	11	90	46.25	16.0	1.3	15.20
JMP	1160	11	1000	16.2	5.60	0.40	15.20
JMP	1200	11	4000	8.55	2.96	0.24	16.30
JMP	1260	11	25000	3.77	1.32	0.15	16.30
JMP	1340	52	(1) 700 (2) 3300	33.80	14.20 5.70	2.80	17.25
JMP	1470	53	(1) 1020 (2) 970	25.2	14.0 16.0	6.0	18.95
<b>BI-STABLE</b>							
JMP	5200	11	4000		+1.5	-1.5	16.30
JMP	5340	52	(1) 700 (2) 3300		+6.0 +2.4	-6.0 -2.4	17.75
<b>CHOPPER</b>							
JMP	8120	12	500		Voltage RMS 60cps 6.3V		15.70
JMP	8200	12	4000		18.5V		16.80
JMP	8240	11	11000		117.0V with 12000 ohm (±5%) 1/2 watt resistor in series with coil		16.80

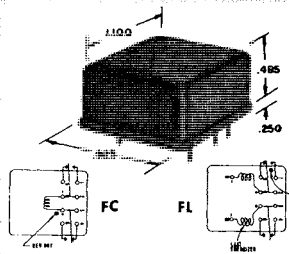
\*Current to be applied to the coil winding for at least 2 seconds just prior to current flow tests.

SERIES			COIL CHARACTERISTICS				NET PRICE
Capsule	Coil	Terminal Fig. No.*	RESISTANCE (Ohms ±10%)	MUST OPERATE Current ma DC	MUST OPERATE Voltage DC @ 25°C	MAX. VOLTAGE (at 35°C.)	
<b>SPDT Single Coil</b>							
JM1	106	12	40	67.7	2.98	9.0	14.05
JM1	109	12	130	38.8	5.55	16.1	14.05
JM1	112	11	500	20.1	11.10	31.6	14.05
JM1	114	11	700	20.0	15.40	37.4	14.05
JM1	114	12	700	20.0	15.40	37.4	14.05
JM1	118	11	2500	10.1	27.80	70.7	14.30
JM1	119	11	4000	8.1	35.60	89.5	8.15
JM1	119	12	4000	8.1	35.60	89.5	14.80
JM1	120	11	7000	6.0	46.20	117.0	14.80
JM1	121	11	11000	5.0	60.50	148.0	14.80
JM1	123	11	25000	3.6	99.00	224.0	14.80
<b>SPDT Dual Coil</b>							
JM1	405	51	(1) 700 (2) 3300	(1) 32.0 (2) 12.3		(1) 37.4 (2) 81.0	16.20
<b>DPDT Single Coil</b>							
JM2	104	22	50	110.0	6.04	12.25	22.80
JM2	106	22	140	66.5	10.00	20.5	22.90
JM2	109	22	315	44.0	15.30	30.7	22.80
JM2	110	22	500	34.8	19.20	38.7	22.80
JM2	111	22	700	30.5	23.50	45.8	22.80
JM2	112	22	1250	22.1	30.40	61.2	22.80
JM2	112	23	1250	22.1	30.40	61.2	22.80
JM2	115	21	5000	11.3	62.10	122.0	22.80
JM2	115	22	5000	11.3	62.10	122.0	22.80
JM2	115	23	5000	11.3	62.10	122.0	22.80
<b>3PDT Single Coil</b>							
JM3	109	31	315	44.0	15.30	30.7	29.50
JM3	110	31	500	34.8	19.20	38.7	29.50
JM3	111	31	700	30.5	23.50	45.8	29.50
JM3	112	31	1250	22.1	30.40	61.2	29.50
JM3	115	31	5000	11.3	62.10	122.0	29.50
JM3	115	32	5000	11.3	62.10	122.0	29.50
<b>4PDT Single Coil</b>							
JM4	106	41	65	100.0	7.15	15.1	38.00
JM4	110	41	390	42.0	18.00	37.0	38.00
JM4	110	42	390	42.0	18.00	37.0	38.00
JM4	112	41	700	35.4	27.20	49.5	38.00
JM4	114	41	1400	23.0	35.40	70.0	38.00
JM4	114	42	1400	23.0	35.40	70.0	38.00
JM4	117	41	4000	15.6	68.50	118.0	38.00
JM4	117	42	4000	15.6	68.50	118.0	38.00
JM4	118	41	6500	10.5	75.00	151.0	38.00
JM4	118	42	6500	10.5	75.00	151.0	38.00
JM4	119	41	10000	8.6	94.30	187.0	38.00
JM4	119	42	10000	8.6	94.30	187.0	38.00

\*Octal style plugs, except Fig. 23, 32, 42 (Hook Solder), Fig. 41 (14-Pin miniature plug).

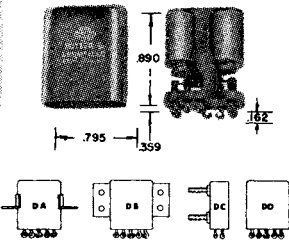
# Potter & Brumfield High Performance Relays

**FC SERIES** Conventional micro-miniature relay lies flat on printed circuit board. Withstands 100g shock, 400g linear acceleration, 30g vibration to 2000 cps. Ambient temperature range: -65° to +125°C. Hermetically sealed. Bifurcated contacts. Plugs in on .2" grid. Meets applicable sect. MIL-R-5757D, and MSFC SPEC-339. Weight: .75 ozs.



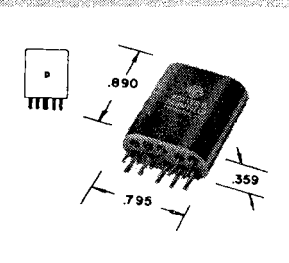
**FL SERIES** Dual-coil latching relay has same specs as above, except operates by pulsing each coil alternately (observing coil polarity); or connecting the coils in series from a reversing (polarized) source. Remains latched without coil power.

**SC SERIES** Micro-miniature permanent magnet relay for low power, high shock/vibration applications. 100g shock, 30g vibration to 2000cps with no contact openings. Ambient temperature range: -65°C. to +125°C. Features single coil action and conforms to standard micro-miniature coil operation except polarized connections because of magnetic circuit. Positive terminal marked with red dot. Mounting: SC11D<sup>o</sup>, SCG11D --DA, --DB, DC and DD correspond to similarly designed SL mountings. Weight: ¼ oz.



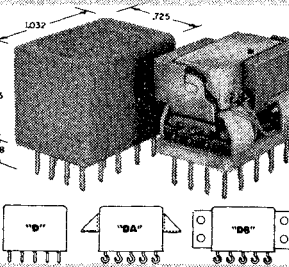
\*Cinch No. 54A20730 and Armel No. HRK-1, 8-pin receptacles available from distributors for plug-in applications.

**SL SERIES** Dual coil micro-miniature magnetic latching relay with same shock/vibration, resistance and ambient temperature range as SC. Coils may be connected in series for polar operation. Mounting: SL11D<sup>o</sup> for plug-in applications; --DA has shoulder flangers with two .104" x .136" holes on a 1.062" center; --DB has a welded bracket with four .125" dia. holes on 1.062" x .281" centers; --DC has two No. 4-40 NC 2A threaded studs on .488" x .220" diagonal centers; --DD has plain case with hook end solder terminals. SCG-SLG11D have plug-in terminals on .2" grid.



\*Viking No. P/N VB10/3DV 1 10-pin receptacles available from distributors for plug-in applications.

**TL SERIES** High performance 4PDT micro-miniature magnetic latching relay for severe environments. Encapsulated and hermetically sealed coils within hermetically sealed relay case can't contaminate contacts by out-gassing. Strong permanent magnetic forces keep contacts locked in desired position when relay is de-energized. Approx. 0.5ms transfer time. Temperature range: -65°C to 125°C. Meets or exceeds applicable sections MIL-R-5757D and MSFC-SPEC-339. Weight: Approx. 1¼ ozs. Mountings: D = plain case, plug-in header; DA = shoulder bracket .300" from base, hook-end solder; DB = flat plate, .593" wide x 1.60" long, 4-.125" dia. holes on .281" x 1.30" centers, hook-end solder.



TYPE Hermetically Sealed	COILS			CONTACTS		SUGG. LIST PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrange- ment	Rate* in Amps	
FC11D	6V	60	.65W	DPDT	3	\$ 16.00
FC11D	12V	210	.65W	DPDT	3	16.00
FC11D	24V	900	.65W	DPDT	3	16.00
FL11D	6V	67.5	.65W	DPDT	3	18.00
FL11D	12V	230	.65W	DPDT	3	18.00
FL11D	24V	1,000	.65W	DPDT	3	18.00
SC11D	6V	35	1W	DPDT	3	15.75
SC11D	12V	135	1W	DPDT	3	15.75
SC11D	24V	550	1W	DPDT	3	15.75
SC11DA	6V	35	1W	DPDT	3	15.75
SC11DA	12V	135	1W	DPDT	3	15.75
SC11DA	24V	550	1W	DPDT	3	15.75
SC11DB	6V	35	1W	DPDT	3	15.75
SC11DB	12V	135	1W	DPDT	3	15.75
SC11DB	24V	550	1W	DPDT	3	15.75
SC11DC	24V	550	1W	DPDT	3	15.75
SC11DD	24V	550	1W	DPDT	3	15.75
SCG11D	24V	550	1W	DPDT	3	15.75
SL11D	6V	40	1W	DPDT	3	17.25
SL11D	12V	160	1W	DPDT	3	17.25
SL11D	24V	630	1W	DPDT	3	17.25
SL11DA	6V	40	1W	DPDT	3	17.25
SL11DA	12V	160	1W	DPDT	3	17.25
SL11DA	24V	630	1W	DPDT	3	17.25
SL11DB	6V	40	1W	DPDT	3	17.25
SL11DB	12V	160	1W	DPDT	3	17.25
SL11DB	24V	630	1W	DPDT	3	17.25
SL11DC	24V	630	1W	DPDT	3	17.25
SL11DD	24V	630	1W	DPDT	3	17.25
SLG11D	24V	630	1W	DPDT	3	17.25
TL17D	24V	600	1W	4PDT	3	25.00
TL17DA	24V	600	1W	4PDT	3	25.00
TL17DB	24V	600	1W	4PDT	3	25.00

\* @28VDC

## ORDERING INSTRUCTIONS — File-O-Matic Sec. 23

All relay contacts are rated at 115 volt-60 cycle, non inductive load.

When ordering specify relay type and coil voltage or resistance.

Example: PR5AY, 115 Volts AC, 60 cycles or LB5, 2500 ohms resistance.

To operate 110V DC relays on 220V DC use a 5 watt wire-wound

resistor of a value approximately the relay coil resistance in series with the relay coil.

**CONTACT LEGEND:** S-Single; D-Double; P-Pole; T-Throw; N-Normally; O-Open; C-Closed; B-Break; M-Make.

Prices and Specifications subject to change without notice. For latest prices refer to United Pricing Service.



# POTTER & BRUMFIELD

Specialists in RELAYS for a third of a century

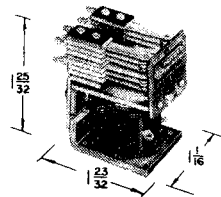
Three modern plants in the United States are devoted solely to engineering and producing electromagnetic relays. Manufacturing methods, processes and equipment are constantly re-evaluated and kept current with every technical advance. Augmenting P&B's own facilities are the vast research and financial resources of our parent organization, American Machine & Foundry Company.

# GENERAL PURPOSE RELAYS Potter & Brumfield Relays

**GA SERIES** Low cost, all purpose, multiple contact, voltage switching relay. Used for many industrial control applications. Tinned, pierced solder type terminals. Contacts:  $\frac{3}{16}$ " dia. silver, designed for maximum self-cleaning action. Mounting: No. 8-32 tapped core with locating boss. Weight:  $3\frac{1}{2}$  ozs.

See GF series for similar relays having 10 amp ratings.

**SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING**

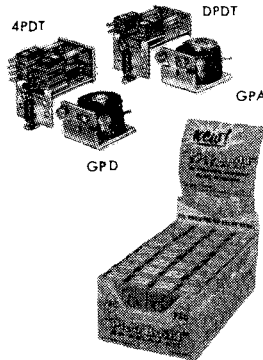


**GP SERIES** Separate AC and DC coils to match with 2PDT or 4PDT switches. AC coils (GPA) available in 6, 12, 24, 115 and 230 volts. DC coils (GPD) available in 6, 12, 24 and 110 volts; current coils; 2,500 5,000 and 10,000 ohms. Contacts:  $\frac{3}{16}$ " dia. silver.

GP11 Switch Assembly DPDT 5 amps \$1.70  
GP17 Switch Assembly 4PDT 5 amps 2.95

**GP-100** A complete kit of GP Series coils and switches consisting of the following: AC coils: Two 6 V., two 12 V., four 24 V., six 115 V., two 230 V. DC coils: Two 6 V., two 12 V., two 24 V., four 110 V. Also: two 2,500 and four 10,000 ohm coils; eighteen DPDT switch assemblies. Fourteen 4PDT switch assemblies. The complete kit is ideal for experimenters, school and industrial laboratories.

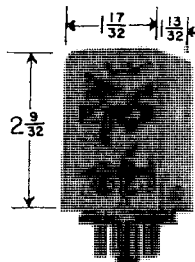
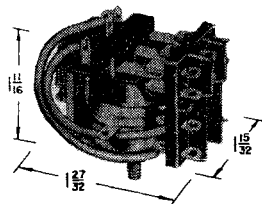
NET \$133.65



**KA and KAP SERIES** Small, low cost, highly efficient general purpose relays for handling light power loads such as small motors, solenoids and other relays, and general automation work. All KA models carry U/L labels. Only AC models are CSA\* listed. KAP relays with "Y" suffix bear CSA\* seal and have U/L component listing. Mechanical life expectancy: 10 million operations. Duty: continuous. Contacts: Movable,  $\frac{1}{8}$ " dia. gold-flashed silver; stationary,  $\frac{3}{32}$ " dia. wide silver overlay.

The KA is the open version of this series. Mounting: One No. 6-32 threaded stud and locating tab on  $\frac{7}{16}$ " centers. Weight: 2 ozs. The KAP is the enclosed model and is protected by a clear, high impact plastic dust cover. Terminals: 8 or 11-pin plug. Weight: 3 ozs.

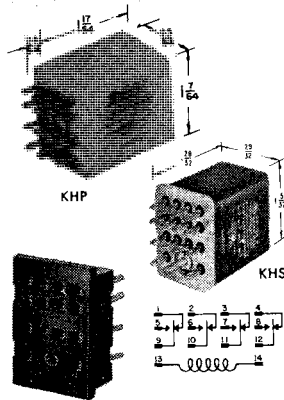
"G" suffix indicates silver-cadmium-oxide contacts on movables rated 10 amps.



**KHP and KHS SERIES** Small, rugged, 4PDT, available for AC or DC operation. KHP has Nylon dust cover; KHS is hermetically sealed in metal enclosure. These relays are designed to meet the exacting requirements of data processing, computer and process control applications. Contacts are  $\frac{3}{32}$ " gold-flashed silver and are rated 3 amps @ 30V DC or 115V AC resistive for 100,000 operations. "12" suffix indicates silver-cadmium-oxide contacts. Mounting: Solder terminals with a 3-48 stud  $2\frac{3}{64}$ " long. Adaptable to sockets (below) with printed circuit or solder lug terminals. Weights without sockets: KHP  $1\frac{1}{8}$  ozs; KHS  $1\frac{5}{8}$  ozs.

KHP hold down spring (similar to KCP-KRP, page 10)  
9KH3 50 per box, weight 3 ozs. Net \$5.00

9KH1 Solder terminal sockets and retainers, Single \$0.60 Box of 10 Net \$6.00  
9KH2 Printed circuit terminal sockets, Single \$0.60 Box of 10 Net \$6.00  
Weight per box: 4 ozs.



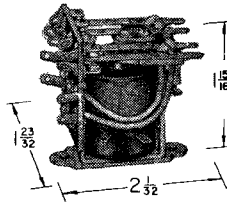
TYPE	COILS			CONTACTS		SUGG. LIST PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
GA11A	6V	1.7	6VA	DPDT	5	\$ 3.35
GA11A	12V	6.8	6VA	DPDT	5	3.35
GA11A	24V	24	6VA	DPDT	5	3.35
GA11A	115V	690	6VA	DPDT	5	3.35
GA11D	6V	18	2.0W	DPDT	5	3.35
GA11D	12V	72	2.0W	DPDT	5	3.35
GA11D	24V	288	2.0W	DPDT	5	3.35
GA11D	110V	6,050	2.0W	DPDT	5	3.80
GA14A	24V	24	6VA	3PDT	5	4.05
GA14A	115V	690	6VA	3PDT	5	4.05
GA14D	24V	288	2.0W	3PDT	5	4.05
GA17A	6V	1.7	6VA	4PDT	5	4.85
GA17A	12V	6.8	6VA	4PDT	5	4.85
GA17A	24V	24	6VA	4PDT	5	4.85
GA17A	115V	690	6VA	4PDT	5	4.85
GA17A	230V	2,950	6VA	4PDT	5	5.25
GA17D	6V	18	2.0W	4PDT	5	4.85
GA17D	12V	72	2.0W	4PDT	5	4.85
GA17D	24V	288	2.0W	4PDT	5	4.85
GA17D	110V	6,050	2.0W	4PDT	5	5.30
GPA	6V	1.7	6VA	None		1.65
GPA	12V	6.8	6VA	None		1.65
GPA	24V	24	6VA	None		1.65
GPA	115V	690	6VA	None		1.65
GPA	230V	2,950	6VA	None		2.10
GPD	-	2,500	-	None		1.50
GPD	-	5,000	-	None		1.75
GPD	-	10,000	-	None		2.10
GPD	6V	-	2.0W	None		2.10
GPD	12V	-	2.0W	None		2.10
GPD	24V	-	2.0W	None		2.10
GPD	110V	-	2.0W	None		3.15
KASAY	6V	5.1	2VA	5PDT	5	3.20
KASAY	12V	21	2VA	5PDT	5	3.20
KASAY	24V	75	2VA	5PDT	5	3.20
KASAY	115V	2,250	2VA	5PDT	5	3.20
KASAY	230V	9,110	2VA	5PDT	5	3.60
KASAG	6V	5.1	2VA	5PDT	10	3.25
KASAG	12V	21	2VA	5PDT	10	3.25
KASAG	24V	75	2VA	5PDT	10	3.25
KASAG	115V	2,250	2VA	5PDT	10	3.25
KASAG	230V	9,110	2VA	5PDT	10	3.65
KASDY	6V	32.1	1.2W	5PDT	5	3.35
KASDY	12V	120	1.2W	5PDT	5	3.35
KASDY	24V	472	1.2W	5PDT	5	3.35
KASDY	110V	10,000	1.2W	5PDT	5	3.65
KASDG	6V	32.1	1.2W	5PDT	10	3.10
KASDG	12V	120	1.2W	5PDT	10	3.10
KASDG	24V	472	1.2W	5PDT	10	3.10
KASDG	110V	10,000	1.2W	5PDT	10	3.70
KAI1AY	6V	5.1	2VA	DPDT	5	3.85
KAI1AY	12V	21	2VA	DPDT	5	3.85
KAI1AY	24V	75	2VA	DPDT	5	3.85
KAI1AY	115V	2,250	2VA	DPDT	5	3.85
KAI1AY	230V	9,110	2VA	DPDT	5	4.25
KAI1AG	6V	5.1	2VA	DPDT	10	3.95
KAI1AG	12V	21	2VA	DPDT	10	3.95
KAI1AG	24V	75	2VA	DPDT	10	3.95
KAI1AG	115V	2,250	2VA	DPDT	10	3.95
KAI1AG	230V	9,110	2VA	DPDT	10	4.35
KAI1DY	6V	32.1	1.2W	5PDT	5	3.40
KAI1DY	12V	120	1.2W	5PDT	5	3.40
KAI1DY	24V	472	1.2W	5PDT	5	3.40
KAI1DY	110V	10,000	1.2W	5PDT	5	4.00
KAI1DG	6V	32.1	1.2W	5PDT	10	3.50
KAI1DG	12V	120	1.2W	5PDT	10	3.50
KAI1DG	24V	472	1.2W	5PDT	10	3.50
KAI1DG	110V	10,000	1.2W	5PDT	10	4.10
KAI4AY	6V	5.1	2VA	3PDT	5	4.25
KAI4AY	12V	21	2VA	3PDT	5	4.25
KAI4AY	24V	75	2VA	3PDT	5	4.25
KAI4AY	115V	2,250	2VA	3PDT	5	4.25
KAI4AY	230V	9,110	2VA	3PDT	5	4.65
KAI4AG	6V	5.1	2VA	3PDT	10	4.40
KAI4AG	12V	21	2VA	3PDT	10	4.40
KAI4AG	24V	75	2VA	3PDT	10	4.40
KAI4AG	115V	2,250	2VA	3PDT	10	4.40
KAI4AG	230V	9,110	2VA	3PDT	10	4.80
KAI4DY	6V	32.1	1.2W	3PDT	5	4.45
KAI4DY	12V	120	1.2W	3PDT	5	4.45
KAI4DY	24V	472	1.2W	3PDT	5	4.45
KAI4DY	110V	10,000	1.2W	3PDT	5	4.60
KAP5AG	24V	75	2VA	5PDT	10	5.50
KAP5AG	115V	2,250	2VA	5PDT	10	5.50
KAP5DG	24V	472	1.2W	5PDT	5	6.05
KAP5DG	110V	10,000	1.2W	5PDT	5	6.05
KAP11AY	24V	75	2VA	DPDT	5	6.05
KAP11AY	115V	2,250	2VA	DPDT	5	6.05
KAP11AY	230V	9,110	2VA	DPDT	5	6.45
KAP11AG	6V	5.1	2VA	DPDT	10	6.15
KAP11AG	24V	75	2VA	DPDT	10	6.15
KAP11AG	115V	2,250	2VA	DPDT	10	6.15
KAP11DG	24V	472	1.2W	DPDT	10	6.70
KAP11DG	110V	10,000	1.2W	DPDT	10	6.70
KAP11DY	12V	120	1.2W	DPDT	5	6.00
KAP11DY	24V	472	1.2W	DPDT	5	6.00
KAP11DY	110V	10,000	1.2W	DPDT	5	6.60
KAP14AY	24V	75	2VA	3PDT	5	7.50
KAP14AY	115V	2,250	2VA	3PDT	5	7.50
KAP14AY	230V	9,110	2VA	3PDT	5	7.90
KAP14AG	24V	75	2VA	3PDT	10	7.65
KAP14AG	115V	2,250	2VA	3PDT	10	7.65
KAP14DG	24V	472	1.2W	3PDT	10	7.60
KAP14DG	110V	10,000	1.2W	3PDT	10	8.20
KAP14DY	12V	120	1.2W	3PDT	5	7.45
KAP14DY	24V	472	1.2W	3PDT	5	7.45
KAP14DY	110V	10,000	1.2W	3PDT	5	8.05
KHP17A11	6V	10.5	1.2VA	4PDT	3	5.85
KHP17A11	12V	43	1.2VA	4PDT	3	5.85
KHP17A11	24V	160	1.2VA	4PDT	3	5.85
KHP17A11	115V	3,900	1.2VA	4PDT	3	6.25
KHS17D11	6V	40	900MW	4PDT	3	4.80
KHS17D11	12V	160	900MW	4PDT	3	4.80
KHS17D11	24V	650	900MW	4PDT	3	4.95
KHS17D11	48V	2,600	900MW	4PDT	3	5.00
KHS17D11	90V	9,000	900MW	4PDT	3	5.60
KHS17D11	110V	11,000	900MW	4PDT	3	5.60
KHS17D11	110V	11,000	900MW	4PDT	3	5.75
KHS17A11	6V	10.5	1.2VA	4PDT	3	10.60
KHS17A11	12V	43	1.2VA	4PDT	3	10.60
KHS17A11	24V	160	1.2VA	4PDT	3	10.60
KHS17A11	115V	3,900	1.2VA	4PDT	3	11.00
KHS17D11	6V	40	900MW	4PDT	3	7.75
KHS17D11	12V	160	900MW	4PDT	3	7.75
KHS17D11	24V	650	900MW	4PDT	3	7.75
KHS17D11	110V	11,000	900MW	4PDT	3	8.55

\*Canadian Standards Association

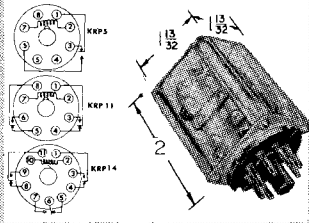
See ordering information on page 8.

# Potter & Brumfield Relays

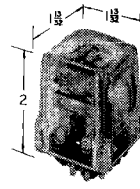
**KL SERIES** Multiple contact relay. Varied contact combinations and high dielectric phenolic insulation affords extreme versatility and utility. Widely used in such applications as industrial controls, elevator controls, communications equipment and electronic measuring devices. Mounting: All models—Two No. 6-32 tapped holes on 1 3/16" centers. Contacts: 1/8" dia. gold-flashed silver. Weight: 5 ozs.



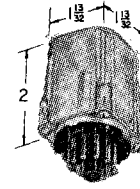
**KRP SERIES** Versatile, multi-contact arrangement. Enclosed in a clear cellulose acetate dust cover. Standard 8-pin octal-type plug for KRP5 and KRP11, 11-pin for KRP14. Weight: Approx. 3 ozs. Contacts: 5 amp, 3/16" dia. silver cadmium-oxide. See KCP-KRP hold down spring for special mounting applications. See KRP indicator lamp relay for current monitoring applications.



**KRP-N INDICATOR LAMP RELAY** A general purpose relay incorporating a lamp to indicate current or voltage availability in power circuit. Contacts: 3/16" dia. silver cadmium-oxide. Enclosure: Clear cellulose acetate dust cover. Mounting: Standard octal plug. Weight: Approx. 3 ozs. See KCP-KRP Hold Down Spring for special mountings.

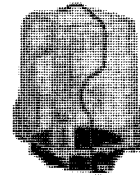


**"P" - CASE** A clear cellulose acetate case for mounting rectifiers, capacitors, resistors or a combination of these. Available with octal-type plug with 8 or 11-pins. Comes complete with four screws. Weight: .5 ozs. each. See KCP-KRP Hold Down Spring for special mounting applications.



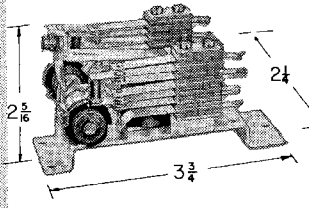
35D070 Case (8-pin plug) NET \$ .55  
35D072 Case (11-pin plug) NET \$ .70

**KCP-KRP HOLD DOWN SPRING** Designed to insure secure mounting of relay in any position. Fits all KCP or KRP plug-in relays. Durable stainless steel spring can be moved aside for relay removal or installation. Mounting: Two 3/32" dia. holes on 1 3/16" centers; will accommodate machine screws or rivets. Available in quantities of 50 per box. Weight: 3 ozs. per box.

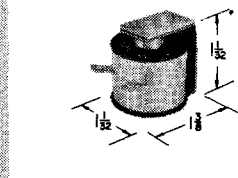


9-KR-15 NET \$5.00

**AP SERIES RATCHET, IMPULSE** A reliable compact unit for applications requiring on-off or reversing action on alternate operations. Positive ratchet operation at all speeds on impulses as short as 60 ms. Intermittent operation only. Mounting: Three 3/32" dia. holes on 3 3/8" x 1/4" triangular centers. Contacts: 3/16" dia. silver. Weight: 7 ozs.



**BU BUZZER** AC operated coil with a spring steel armature which buzzes when coil is energized. Used extensively in test equipment, laboratories and a host of other applications where a small light weight, dependable buzzer is required. Weight: 1 1/2 ozs. Mounting: No. 6-32 tapped core.



## GENERAL PURPOSE RELAYS

TYPE	COILS			CONTACTS		SUGG. LIST PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
KL5A	115V	760	2.9VA	SPDT	5	3.85
KL5D	12V	140	1.1W	SPDT	5	3.60
KL5D	24V	600	1.1W	SPDT	5	3.60
KL11A	12V	7.8	2.9VA	DPDT	5	4.80
KL11A	24V	33	2.9VA	DPDT	5	4.80
KL11A	115V	760	2.9VA	DPDT	5	4.80
KL14A	24V	33	2.9VA	3PDT	5	5.35
KL14A	115V	760	2.9VA	3PDT	5	5.35
KL14D	24V	600	1.1W	3PDT	5	5.15
KL14D	110V	10,000	1.1W	3PDT	5	5.75
KL17A	6V	2.25	2.9VA	4PDT	5	6.30
KL17A	24V	33	2.9VA	4PDT	5	6.30
KL17A	115V	760	2.9VA	4PDT	5	6.30
KL17D	12V	140	1.1W	4PDT	5	6.00
KL17D	24V	600	1.1W	4PDT	5	6.00
KL17D	110V	10,000	1.1W	4PDT	5	6.60
KRP5AS	6V	5.1	2VA	SPDT	5	5.45
KRP5AS	24V	75	2VA	SPDT	5	5.45
KRP5AS	115V	2,250	2VA	SPDT	5	5.45
KRP5AGS	6V	5.1	2VA	SPDT	10	5.55
KRP5AGS	24V	75	2VA	SPDT	10	5.55
KRP5AGS	115V	2,250	2VA	SPDT	10	5.55
KRP5DS	6V	32.1	1.2W	SPDT	5	5.40
KRP5DS	12V	120	1.2W	SPDT	5	5.40
KRP5DS	24V	472	1.2W	SPDT	5	5.40
KRP5DS	110V	10,000	1.2W	SPDT	5	6.00
KRP5DGS	6V	32.1	1.2W	SPDT	10	5.50
KRP5DGS	12V	120	1.2W	SPDT	10	5.50
KRP5DGS	24V	472	1.2W	SPDT	10	5.50
KRP5DGS	110V	10,000	1.2W	SPDT	10	6.10
KRP11AS	6V	5.1	2VA	DPDT	5	6.05
KRP11AS	12V	21	2VA	DPDT	5	6.05
KRP11AS	24V	75	2VA	DPDT	5	6.05
KRP11AS	115V	2,250	2VA	DPDT	5	6.05
KRP11AS	230V	9,110	2VA	DPDT	5	6.45
KRP11AGS	6V	5.1	2VA	DPDT	10	6.25
KRP11AGS	12V	21	2VA	DPDT	10	6.25
KRP11AGS	24V	75	2VA	DPDT	10	6.25
KRP11AGS	115V	2,250	2VA	DPDT	10	6.25
KRP11AGS	230V	9,100	2VA	DPDT	10	6.65
KRP11DS	6V	32.1	1.2W	DPDT	5	6.00
KRP11DS	12V	120	1.2W	DPDT	5	6.00
KRP11DS	24V	472	1.2W	DPDT	5	6.00
KRP11DS	110V	10,000	1.2W	DPDT	5	6.60
KRP11DGS	6V	32.1	1.2W	DPDT	10	6.20
KRP11DGS	12V	120	1.2W	DPDT	10	6.20
KRP11DGS	24V	472	1.2W	DPDT	10	6.20
KRP11DGS	110V	10,000	1.2W	DPDT	10	6.80
KRP14AS	6V	5.1	2VA	3PDT	5	7.50
KRP14AS	12V	21	2VA	3PDT	5	7.50
KRP14AS	24V	75	2VA	3PDT	5	7.50
KRP14AS	115V	2,250	2VA	3PDT	5	7.50
KRP14AS	230V	9,110	2VA	3PDT	5	7.90
KRP14AGS	6V	5.1	2VA	3PDT	10	7.80
KRP14AGS	12V	21	2VA	3PDT	10	7.80
KRP14AGS	24V	75	2VA	3PDT	10	7.80
KRP14AGS	115V	2,250	2VA	3PDT	10	7.80
KRP14AGS	230V	9,100	2VA	3PDT	10	8.20
KRP14DS	6V	32.1	1.2W	3PDT	5	7.45
KRP14DS	12V	120	1.2W	3PDT	5	7.45
KRP14DS	24V	472	1.2W	3PDT	5	7.45
KRP14DS	110V	10,000	1.2W	3PDT	5	8.05
KRP14DGS	6V	32.1	1.2W	3PDT	10	7.75
KRP14DGS	12V	120	1.2W	3PDT	10	7.75
KRP14DGS	24V	472	1.2W	3PDT	10	7.75
KRP14DGS	110V	10,000	1.2W	3PDT	10	8.35
KRP14AN	6V	5.1	2VA	DPDT	10	7.15
KRP14AN	12V	21	2VA	DPDT	10	7.15
KRP14AN	24V	75	2VA	DPDT	10	7.15
KRP14AN	115V	2,250	2VA	DPDT	10	7.15
KRP14AN	230V	9,110	2VA	DPDT	10	7.55
KRP14DN	6V	32.1	1.2W	DPDT	10	7.10
KRP14DN	12V	120	1.2W	DPDT	10	7.10
KRP14DN	24V	472	1.2W	DPDT	10	7.10
KRP14DN	110V	10,000	1.2W	DPDT	10	7.70
KRP14AN	6V	5.1	2VA	3PDT	10	8.70
KRP14AN	12V	21	2VA	3PDT	10	8.70
KRP14AN	24V	75	2VA	3PDT	10	8.70
KRP14AN	115V	2,250	2VA	3PDT	10	8.70
KRP14AN	230V	9,110	2VA	3PDT	10	9.10

## SPECIAL PURPOSE RELAYS

AP11A	6V	0.6	18.5VA	DPDT	5	8.70
AP11A	12V	2.28	18.5VA	DPDT	5	8.70
AP11A	24V	8.8	18.5VA	DPDT	5	8.70
AP11A	115V	240	18.5VA	DPDT	5	8.70
AP11A	230V	900	18.5VA	DPDT	5	9.15
AP11D	6V	4.0	9.0W	DPDT	5	8.70
AP11D	24V	65	9.0W	DPDT	5	8.70
AP11D	110V	1,350	9.0W	DPDT	5	9.35
AP17A	24V	8.8	18.5VA	4PDT	5	10.50
AP17A	115V	240	18.5VA	4PDT	5	10.50
AP17D	12V	15.5	9.0W	4PDT	5	10.50
AP17D	24V	65	9.0W	4PDT	5	10.50
AP17D	110V	1,350	9.0W	4PDT	5	11.15
BU	6V	2.75	4.6VA			1.70
BU	12V	13.25	4.6VA			1.70
BU	24V	50	4.6VA			1.70
BU	115V	1,250	4.6VA			1.70

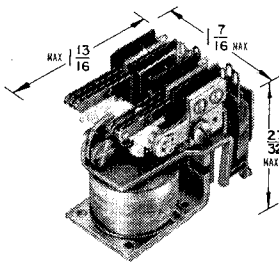
\$Enclosed Relay

See ordering information on page 8.

# Potter & Brumfield Relays

## SPECIAL PURPOSE RELAYS

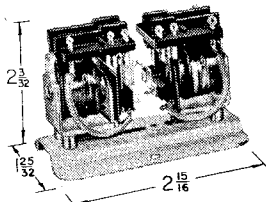
**GM SERIES** Unusually versatile switching makes this impulse/sequencing relay especially suitable for single coil latching. The 2 Form C contact arrangement is switched alternately by cam action during drop-out of the armature. It can also be furnished with additional 2 Form C auxiliary contacts (designated by "L"). AC version operates on a 50% coil duty cycle (5 Min. max.). Mounting: 8-32 tapped core with locating boss. Weights: With aux. contacts 4 1/4 ozs. Without aux. contacts 4 ozs.



TYPE	COILS			CONTACTS		SUGG LIST PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
GM11A	24V	16	9.4VA	DPDT	3	\$ 7.15
GM11A	115V	425	9.4VA	DPDT	3	7.15
GM11AL11	24V	16	9.4VA	DPDT/DPDT	3	10.20
GM11AL11	115V	425	9.4VA	DPDT/DPDT	3	10.20
GM11D	12V	36	4W	DPDT	3	6.90
GM11D	24V	144	4W	DPDT	3	6.90
GM11D	110V	3025	4W	DPDT	3	7.35
GM11DL11	12V	36	4W	DPDT/DPDT	3	10.00
GM11DL11	24V	144	4W	DPDT/DPDT	3	10.00
GM11DL11	110V	3025	4W	DPDT/DPDT	3	10.45

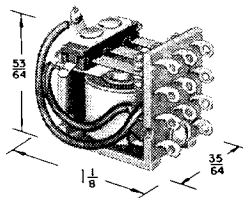
### KB SERIES LATCHING RELAY

Both release and trip coils must be for the same voltage. One coil operates relay to set latch and other coil releases it. Ideal for memory work and overload applications. Operates on momentary impulse to either coil. Mounting: Two 3/32" dia. holes on 1 3/8" centers. Weight: 6 ozs. Contacts: 1/8" dia. silver rated 5 amps; "G" suffix indicates silver cadmium-oxide contacts on movables rated 10 amps. AC relays with 5 amp. contacts carry U/L and CSA\* labels.



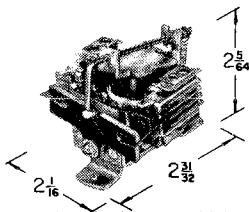
KB17AY	6V	2.3	5VA	4PDT	5	10.50
KB17AY	12V	10	5VA	4PDT	5	10.50
KB17AY	24V	42	5VA	4PDT	5	10.50
KB17AY	115V	1,030	5VA	4PDT	5	10.50
KB17AY	230V	4,100	5VA	4PDT	5	11.30
KB17AG	6V	2.3	5VA	4PDT	10	10.60
KB17AG	12V	10	5VA	4PDT	10	10.60
KB17AG	24V	42	5VA	4PDT	10	10.60
KB17AG	115V	1,030	5VA	4PDT	10	10.60
KB17AG	230V	4,100	5VA	4PDT	10	11.40
KB17D	6V	13.1	2.7W	4PDT	5	9.45
KB17D	12V	52.0	2.7W	4PDT	5	9.45
KB17D	24V	230	2.7W	4PDT	5	9.45
KB17D	110V	4,560	2.7W	4PDT	5	10.65
KB17DG	6V	13.1	2.7W	4PDT	10	9.65
KB17DG	12V	52.0	2.7W	4PDT	10	9.65
KB17DG	24V	230	2.7W	4PDT	10	9.65
KB17DG	110V	4,560	2.7W	4PDT	10	10.85
KB23AY	24V	27	7.8VA	6PDT	5	12.60
KB23AY	115V	700	7.8VA	6PDT	5	12.60
KB23AG	24V	27	7.8VA	6PDT	10	12.80
KB23AG	115V	700	7.8VA	6PDT	10	12.80
KB23D	24V	230	2.7W	6PDT	5	11.45
KB23DG	24V	230	2.7W	6PDT	10	11.75
KB23DG	110V	4,560	2.7W	6PDT	10	12.95

**KM SERIES** Subminiature relay for applications requiring unusually small relays with up to 3-poles. 3/32" dia. silver contacts. Withstands 30g mechanical shock and .06" excursion 10 to 55 cps mechanical vibration. Used extensively in small business machines, alarm systems, automatic toys and communications systems. Mounting: One 2-56 tapped core and locating half-punch. Solder terminals. Weight: .58 ozs.



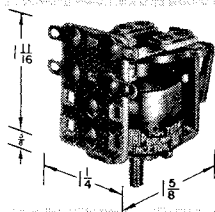
KM5D	6V	36	1.1W	SPDT	2	3.35
KM5D	12V	144	1.1W	SPDT	2	3.35
KM5D	24V	500	1.1W	SPDT	2	3.35
KM11D	6V	36	1.1W	DPDT	2	3.70
KM11D	12V	144	1.1W	DPDT	2	3.70
KM11D	24V	500	1.1W	DPDT	2	3.70
KM14D	6V	36	1.1W	3PDT	2	4.25
KM14D	12V	144	1.1W	3PDT	2	4.25
KM14D	24V	500	1.1W	3PDT	2	4.25

**PC SERIES** Single coil impulse latching relay for on-off and current reversal switching on alternate pulses. Operates on 30 millisecond pulses to the coil. Mounting: Two 3/32" dia. holes on 2 3/4" centers. Weight: 5 ozs. Contacts: 1/8" dia. gold-flashed silver cadmium-oxide.



PC11A	6V	0.6	18.5VA	DPDT	7.5	5.50
PC11A	12V	2.28	18.5VA	DPDT	7.5	5.50
PC11A	24V	8.8	18.5VA	DPDT	7.5	5.50
PC11A	115V	240	18.5VA	DPDT	7.5	5.50
PC11D	6V	4.0	9.0W	DPDT	7.5	5.35
PC11D	12V	15.5	9.0W	DPDT	7.5	5.35
PC11D	24V	65.0	9.0W	DPDT	7.5	5.35
PC17A	24V	8.8	18.5VA	4PDT	7.5	7.60
PC17A	115V	240	18.5VA	4PDT	7.5	7.60
PC17D	24V	65	9.0W	4PDT	7.5	7.45

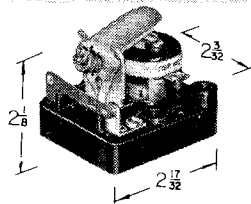
**KT SERIES ANTENNA SWITCHING RELAY** Glass base insulation for minimum RF loss to switch 300 ohm line. Mounting: One No. 6-32 threaded stud. Contacts: 1/8" dia. gold-flashed silver. Weight: 1 1/2" ozs.



KT11A	6V	5.1	2VA	DPDT	5	3.70
KT11A	115V	2,250	2VA	DPDT	5	3.70
KT11D	6V	32.1	1.2W	DPDT	5	3.70
KT11D	12V	120	1.2W	DPDT	5	3.70

### MS SERIES MOTOR STARTING RELAYS

For starting capacitor start, induction-run motors. Operates on back EMF of start winding. Armature gap can be altered to change pull-in. Meets all U/L spacing requirements. Mounting: Two 3/32" dia. holes on 1 3/16" centers. Contacts: 3/4 HP, 3/32" dia. fine silver, 3 HP, 3/32" dia. silver cadmium. Weight: 5 ozs. max. MS/MR Metal dust cover similar to PM/PR shown on page 4. 3 3/8" x 2 3/8" x 2 19/32". Weight: 7.5 ozs. 35D130 fits MS/MR NET \$1.90

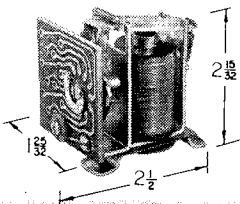


MS2AY	115V	530	5.9VA	SPST-NC	3/4HP	3.55
MS2AY	230V	2,100	5.9VA	SPST-NC	3/4HP	3.95
MS4AY	115V	530	5.9VA	SPST-NC-DB	3HP	4.15
MS4AY	230V	2,100	5.9VA	SPST-NC-DB	3HP	4.55

**SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING**

### SA SERIES STEPPING SWITCH

A twelve position stepping relay with printed circuit strips to switch currents up to 250 milliamps. Armature-driven pawl operates a ratchet wheel to drive the movable contact in steps of 30 degrees over 12 positions. Used widely for audio-level switching in TV remote control units, scoreboards and process controls. Mounting: Two 6-32 holes on 1 3/16" centers. Weight: 4 ozs.



SA-1N-12A	115V	140	20VA	12-steps	.25	6.60
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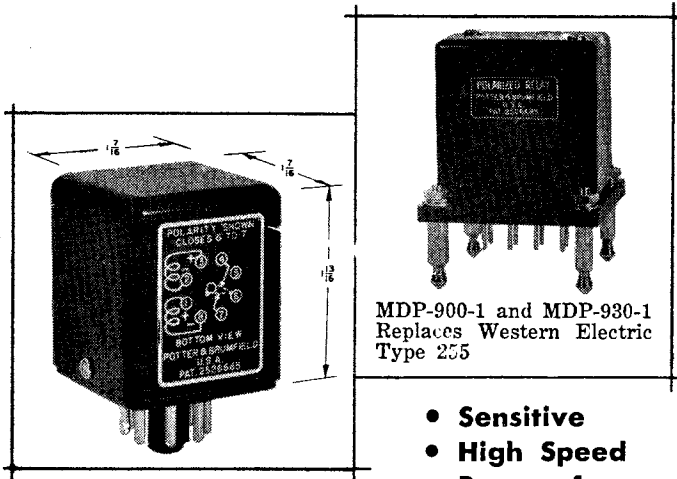
## POTTER & BRUMFIELD

IS A MEMBER OF THE NATIONAL ASSOCIATION OF RELAY MANUFACTURERS



\*Canadian Standards Association





MDP-900-1 and MDP-930-1  
Replaces Western Electric  
Type 255

- Sensitive
- High Speed
- Bounce-free

**For Bi-Stable or Center-Stable Operation**

Small size, ultra-sensitivity and high speed switching together with efficient, bounce-free contact action characterize P&B MDP polarized relays. Their operation depends on both the magnitude and direction of the coil current. Two types of contact arrangements provide the following action when the coils are de-energized: *Bi-stable* — armature remains in its last energized position; *Center-stable* — armature remains in center-off position with contacts open. Silver contacts. Temperatures: -60°C to +85°C. Measuring only 1 1/16" sq. by 1 1/16" high (seated), MDP relays are equipped with a plastic dust cover and 8 or 12-pin plugs. Weight: 4 1/4 ozs.

Types MDP-900-1 and MDP-930-1 (with extra long life contacts) will directly replace Western Electric Type 255 relays. 2-11/16" square x 3-3/4" overall height. Weight: 10 ozs.

37B536 Hold-down Bracket to adapt MDP relays to Barber-Colman socket. Box of 10 Net \$2.50

**NEW!**  
**SMALL  
POLARIZED RELAYS**

TYPE	COILS		CONTACTS		Sugg. List Price
	Pull-In Resistance Current In MA	Pull-In Power In Ohms Each Coil*	Arrangement	Rate In Amps Resistive	
<b>Center-stable:</b> MDP-306-5	1.5	250 (4)	562	1 Form C .005-.5A† 5-150V	31.80
<b>Bi-stable:</b> MDP-300-1	1.5	150 (2)	338	1 Form C .01-.1A† 25-150V	21.30
MDP-900-1	2.0	150 (2)	600	1 Form C .01-.1A† 25-150V	27.60
MDP-930-1	2.4	150 (2)	863	1 Form C .01-.5A† 25-150V	28.15
MDP-1300-1	1.4	150 (2)	294	1 Form C .01-.1A† 25-150V	21.30
MDP-1300-8	0.28	4000 (2)	314	1 Form C .01-.1A† 25-150V	21.30
<b>Center-stable:</b> MDP-1001	1.75	12 (1)	36.8	1 Form C 3 @ 28 VDC	24.35
MDP-1004	0.49	130 (1)	31.2	1 Form C 3 @ 28 VDC	24.35
MDP-1006	0.32	330 (1)	33.8	1 Form C 3 @ 28 VDC	24.35
MDP-1007	0.27	480 (1)	35.0	1 Form C 3 @ 28 VDC	24.35
MDP-1008	0.23	900 (1)	47.6	1 Form C 3 @ 28 VDC	24.35
MDP-1009	0.18	1460 (1)	47.3	1 Form C 3 @ 28 VDC	24.35
MDP-1011	0.10	3500 (1)	35.0	1 Form C 3 @ 28 VDC	24.35
MDP-1013	0.067	7200 (1)	32.3	1 Form C 3 @ 28 VDC	24.35
MDP-2001	3.50	6 (2)	73.5	1 Form C 3 @ 28 VDC	24.35
MDP-2008	0.46	360 (2)	76.2	1 Form C 3 @ 28 VDC	24.35
MDP-2009	0.32	1000 (2)	102.0	1 Form C 3 @ 28 VDC	24.35
MDP-2011	0.17	2300 (2)	66.5	1 Form C 3 @ 28 VDC	24.35
MDP-2101	5.30	6 (2)	169	1 Form C 3 @ 28 VDC	24.35
MDP-2107	0.80	240 (2)	154	1 Form C 3 @ 28 VDC	24.35
MDP-2112	0.22	3300 (2)	160	1 Form C 3 @ 28 VDC	24.35

\*Number of coils shown in ( ) parenthesis. †With suitable arc suppression

**FACILITIES**

**ENGINEERING CAPABILITIES**

P&B's large staff of specialists concentrate exclusively on the design engineering aspects of electro-mechanical relays. During nearly a third of a century, they have created many original and basic designs which have earned wide acceptance throughout the world. Our engineering capabilities are wholly devoted to a continual search for new designs and the improvement of existing relays. Chances are, our engineers can help you solve your relay problems and perhaps suggest cost-saving hook-up and mounting methods compatible with modern production techniques.

**PRODUCTION FACILITIES**

Manufacturing facilities include three factories in the United States and one in Canada. More than 150,000 square feet of space is devoted exclusively to the production of high quality relays for commercial and military needs. Shop staffs apply their skills equally well in large production runs or in turning out limited quantities of custom-designed relays.

**TESTING AND QUALITY CONTROL**

A completely equipped Test Department is maintained for prototype as well as specific, customer-required testing. Our scope of testing capabilities includes vibration, acceleration, shock, humidity, atmospheric pressure, life-under-load, reliability, contact resistance and others. Certification of test results will be supplied upon request. A complete Standards Room is maintained to keep all test equipment in meticulous calibration. More than 100 employees comprise our Quality Control group. Government inspection is under the cognizance of the United States Navy.

**DIVISION OF AM & F**

Potter & Brumfield Division of American Machine & Foundry Company, with headquarters at Princeton, Indiana, enjoys the distinction of being an important segment of a large, strong, widely-diversified, and financially responsible company which serves all America at work, at play, and in Defense.

**SEE PAGE 5 FOR RELIABLE  
TIME DELAY RELAYS**

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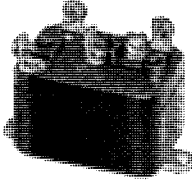
Serving Major Markets Since 1921

# RBM CONTROLS

DIVISION OF ESSEX WIRE CORPORATION  
Logansport, Indiana

## TYPE 84

APPROX. OVERALL DIMENSIONS  
2 3/8" x 1 5/8" x 1 1/2"  
TOTALLY ENCLOSED  
SCREW TERMINALS  
OPERATES ANY POSITION



### SINGLE POLE NORMALLY OPEN

Part Number	Coil Voltage (60 Cy.)	Price	*Contact Rating 125/250 V. A.C.	
			Inductive	Resistive
84-901	6	2.85	8 AMP. CONTINUOUS 25 AMP. INRUSH	16 AMP. CONTINUOUS
84-902	24	2.90		
84-903	115/120	3.05		
84-904	230/240	3.35		

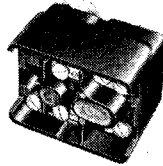
### SINGLE POLE DOUBLE THROW

Part Number	Coil Voltage (60 Cy.)	Price	*Contact Rating 125/250 V. A.C.	
			Inductive	Resistive
84-905	6	3.00	8 AMP. CONTINUOUS 18 AMP. INRUSH	12 AMP. CONTINUOUS
84-906	24	3.20		
84-907	115/120	3.35		
84-908	230/240	3.59		

\*See Type 84D—For D.C. Contact Rating.

## TYPE 129

APPROX. OVERALL DIMENSIONS  
2 3/8" x 1 7/8" x 1 7/8"  
TOTALLY ENCLOSED  
SCREW TERMINALS  
OPERATES ANY POSITION



### SINGLE POLE NORMALLY OPEN

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating 250 V. A.C. MAX.	
			Inductive	Resistive
129-901	6	3.89	18 AMP. CONTINUOUS 1 H.P.—125 V. 2 H.P.—250 V.	18 AMP. CONTINUOUS
129-902	24	3.94		
129-903	115/120	4.05		
129-904	208/230	4.14		

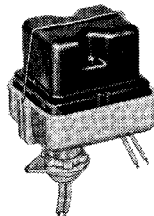
### SINGLE POLE DOUBLE THROW (ISOLATED TERMINALS)†

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating 250 V. A.C. MAX.	
			Inductive	Resistive
129-905	6	4.32	18 AMP. CONTINUOUS 1 H.P.—125 V. 2 H.P.—250 V.	18 AMP. CONTINUOUS
129-906	24	4.37		
129-907	115/120	4.50		
129-908	208/230	4.59		

†All Contact Terminals Must Be Wired Same Polarity.

## TYPE 129AR

ADD-A-RELAY  
APPROX. OVERALL DIMENSIONS  
3 5/8" x 2 5/8" x 3 3/8"  
MOUNTS IN 1/2" KNOCK-OUT  
OPERATES ANY POSITION  
MEETS STANDARD CODE REQUIREMENTS



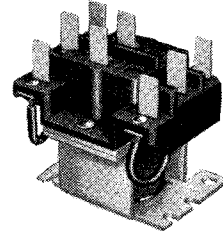
SINGLE POLE NORMALLY OPEN  
UNDERWRITERS LABORATORIES WHITE CARD LISTED  
File E 12139D 184N13.13 July 17, 1963.

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating 250 V. A.C. MAX.	
			Inductive	Resistive
129AR-901	24	6.64	18 AMP. CONTINUOUS 1 H.P.—125 V. 2 H.P.—250 V.	18 AMP. CONTINUOUS
129AR-902	115/120	6.94		
129AR-903	208/230	7.25		

Aluminum Die-Cast Base and Bushing • Locknuts and Position Locking Washer Included • Color Coded 8" Load Wires • High Impact Phenolic Enclosure

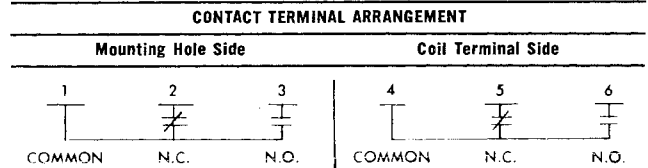
## TYPE 91

APPROX. OVERALL DIMENSIONS  
2 1/8" x 1 7/8" x 2 3/8"



QUICK-CONNECT TERMINALS  
ENCLOSED CONTACTS  
OPERATES ANY POSITION  
SOLENOID ACTION

### TWO POLE DOUBLE THROW

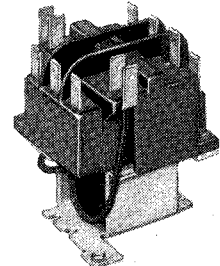


Part Number	Coil Voltage (60 Cy.)	Price	Circuit Rating Terminals		Power Rating (A)	
			1-2-3	4-5-6	Inductive	Resistive
91-901	24	5.14	(A)	(A)	12 AMP. CONT. 60 AMP. INRUSH 125 V. A.C.	15 AMP. 277 V. A.C. MAX.
91-902	115/120	5.37				
91-903	208/230/240	5.57				
91-904	24	4.94				
91-905	115/120	5.17	(A)	(B)	6 AMP. CONT. 35 AMP. INRUSH 250 V. A.C.	*Pilot Rating (B)
91-906	208/230/240	5.37	(B)	(B)		
91-907	24	4.84			125 V.A.	3 AMP.
91-908	115/120	5.07			1/10 H.P.	277 V. A.C. MAX.
91-909	208/230/240	5.27			125/250 V. A.C.	

Quick-Connect Wiring Terminals Included.  
\*See Type 91D—For D.C. Contact Rating.

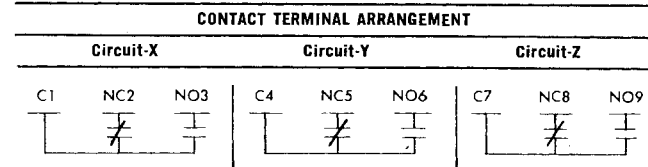
## TYPE 92

APPROX. OVERALL DIMENSIONS  
2 3/8" x 2 3/8" x 2 3/4"



QUICK-CONNECT TERMINALS  
ENCLOSED CONTACTS  
OPERATES ANY POSITION  
SOLENOID ACTION  
MANUAL OPERATING BUTTON

### THREE POLE DOUBLE THROW



Part Number	Coil Voltage (60 Cy.)	Price	Circuit Rating			Power Rating (A)	
			X	Y	Z	Inductive	Resistive
92-901	24	5.87	(A)	(A)	(A)	20 AMP. CONT. 100 AMP. INRUSH 125 V. A.C.	25 AMP. 277 V. A.C. MAX.
92-902	115/120	6.07					
92-903	208/230/240	6.24					
92-904	24	5.79					
92-905	115/120	5.99	(A)	(B)	(A)	10 AMP. CONT. 50 AMP. INRUSH 250 V. A.C.	*Pilot Rating (B)
92-906	208/230/240	6.14	(B)	(A)	(B)		
92-907	24	5.70				125 V.A.	3 AMP.
92-908	115/120	5.90				1/10 H.P.	277 V. A.C. MAX.
92-909	208/230/240	6.05	(B)	(B)	(B)	125/250 V. A.C.	
92-910	24	5.64					
92-911	115/120	5.84					
92-912	208/230/240	5.99					

Quick-Connect Wiring Terminals Included.  
\*See Type 92D—For D.C. Contact Rating.



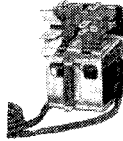
# A. C. GENERAL REPLACEMENT RELAYS

The design flexibility of this relay permits many combinations of pole forms (N.O., N.C. & D.T.); number of poles (1 to 6); contact ratings (3, 6 & 15 amperes); coil and contact termination (solder, quick-connect and lead wire) and front or rear mounting.

Relays listed offer wide latitude of circuit application combining power and control circuit ratings. In addition, the relays listed serve as a replacement for over 400 RBM custom designed relays for high volume industrial applications. (Consult your RBM distributor for replacement recommendations).

## TYPE 987

TWO POLE DOUBLE THROW



APPROX. OVERALL DIMENSIONS  
2 3/8" x 1" x 2"

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (Non-Inductive) 125/250 V. A.C.	
			Left Hand Stack	Right Hand Stack
			987-901	6
987-902	24	4.10		
987-903	115/120	4.20		
987-904	230/240	4.44		

TWO POLE DOUBLE THROW



APPROX. OVERALL DIMENSIONS  
2 1/8" x 1" x 2"

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (Non-Inductive) 125/250 V. A.C.	
			Left Hand Stack	Right Hand Stack
			987-905	6
987-906	24	4.22		
987-907	115/120	4.35		
987-908	230/240	4.55		

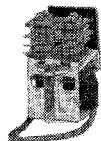
THREE POLE DOUBLE THROW



APPROX. OVERALL DIMENSIONS  
2 3/8" x 1" x 2"

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (Non-Inductive) 125/250 V. A.C.	
			Left Hand Stack	Right Hand Stack
			987-909	6
987-910	24	4.66		
987-911	115/120	4.79		
987-912	230/240	4.99		

FOUR POLE DOUBLE THROW



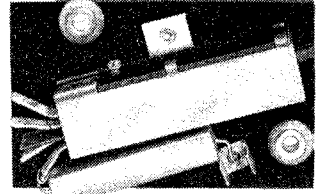
APPROX. OVERALL DIMENSIONS  
2 3/8" x 1" x 2"

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (Non-Inductive) 125/250 V. A.C.	
			Left Hand Stack	Right Hand Stack
			987-913	6
987-914	24	5.22		
987-915	115/120	5.35		
987-916	230/240	5.55		

ALL RELAYS HAVE 9" COIL LEAD WIRES  
FEMALE QUICK-CONNECT WIRING TERMINALS INCLUDED  
MOUNTING BRACKET INCLUDED TO PERMIT FRONT OR REAR MOUNTING

# A. C. TIME DELAY RELAYS

TYPE 59  
THERMAL



After Energization • After De-Energization • Thermal & Rectifier/Capacitor Types • Fixed Timing Cycle • Not Instantaneous Reset • Pilot Duty and Horsepower Ratings • Operates Any Position

APPROX. OVERALL DIMENSIONS  
3 3/8" x 2 1/8" x 7/8"

AMBIENT COMPENSATED  
QUICK-CONNECT TERMINALS  
RESILIENT MOUNTING

SINGLE POLE NORMALLY OPEN

TIME DELAY TO CLOSE—AFTER ENERGIZATION—APPROX. 30 SECS.

Part Number	Operating		Price	Contact Rating
	Voltage	Watts		
59-901	24	3.0	3.42	3 AMP. 125/250 V. A.C. PILOT DUTY
59-902	115/120	7.0	4.12	
59-903	230/240	10.0	4.12	

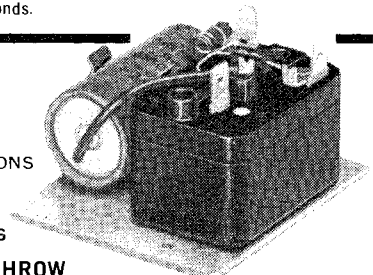
SINGLE POLE NORMALLY CLOSED

TIME DELAY TO OPEN—AFTER ENERGIZATION—APPROX. 30 SECS.

Part Number	Operating		Price	Contact Rating
	Voltage	Watts		
59-904	24	3.0	3.42	3 AMP. 125/250 V. A.C. PILOT DUTY
59-905	115/120	7.0	4.12	
59-906	230/240	10.0	4.12	

Quick-Connect Wiring Terminals Included.  
Reset Time Approximately 60 seconds.

TYPE 84T  
RECTIFIER/CAPACITOR



APPROX. OVERALL DIMENSIONS  
2 5/8" x 2 1/4" x 1 1/2"

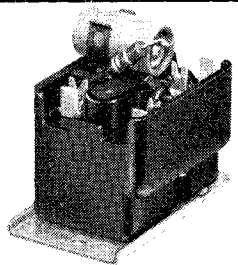
TOTALLY ENCLOSED RELAY  
QUICK-CONNECT TERMINALS

SINGLE POLE DOUBLE THROW

Part Number	Contact Action		Coil Voltage (60 Cy.)	Time Delay in Secs. ±25%	Price	Contact Rating (A.C.) Inductive
	†Delay After Coil Energized	Delay After Coil De-Energized				
84TE-901	X	—	24	1	7.57	3 AMP. 125 V. 1.5 AMP. 250 V. CONTINUOUS
84TE-902	X	—	115/120	2	7.57	
84TE-903	X	—	230/240	2	7.57	
84TD-901	—	X	24	1	7.57	
84TD-902	—	X	115/120	2	7.57	
84TD-903	—	X	230/240	2	7.57	

Quick-Connect Wiring Terminals Included.  
†Reset Time Approximately 4 Seconds. (For Capacitor Discharge).

TYPE 129T  
RECTIFIER/CAPACITOR



APPROX. OVERALL DIMENSIONS  
3 1/8" x 2" x 3"

TOTALLY ENCLOSED RELAY  
QUICK-CONNECT TERMINALS  
NON-POSITIONAL MOUNTING

SINGLE POLE NORMALLY OPEN

TIME DELAY TO OPEN—AFTER DE-ENERGIZATION—2 SECONDS ±25%

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating 250 V. A.C. Max.	
			Inductive	Resistive
129TD-901	115/120	8.57	18 AMP. CONTINUOUS	18 AMP. CONTINUOUS
129TD-902	230/240	8.57	1 H.P.—125 V. 2 H.P.—250 V.	

Quick-Connect Wiring Terminals Included.



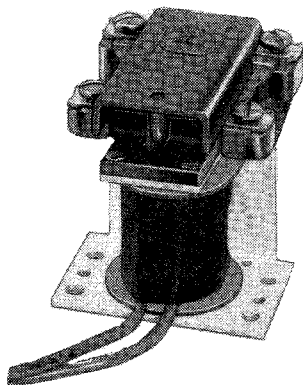
# A. C. POWER CONTACTORS

## TYPE 75

18 AMP.—230 V.

APPROX. OVERALL DIMENSIONS  
2 1/2" x 2 1/8" x 2 1/4"

SCREW POWER TERMINALS  
NO. 8 SOLID WIRE MAX.  
COIL LEAD WIRE TERMINATION  
PROTECTIVE CONTACT COVER



### TWO POLE NORMALLY OPEN

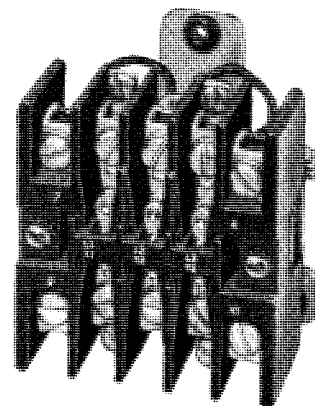
Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (A.C.)	
			Inductive	Resistive
75-901	24	4.59	1 H.P. Per Pole 115/230 V.	25 AMP. 240 V. Per Pole
75-902	115/120	4.59	2 Pole Rating 2 H.P.—230 V.	
75-903	230/240	4.59	18 AMP. Cont. 230 V.	

## TYPE 85

25 AMP.—250 V.  
12.5 AMP.—600 V.

APPROX. OVERALL DIMENSIONS  
3 1/2" x 2 7/8" x 2 5/8"

SCREW TERMINALS—NO. 6  
SOLID WIRE MAX. • DOUBLE  
BREAK "NO-KISS" CONTACT  
ACTION • AUXILIARY WIRING  
TERMINALS • STRAIGHT-THRU  
WIRING • HI-DIELECTRIC ARC  
RESISTANT MOLDED CONTACT  
BLOCK & CARRIER •  
RESILIENT MOUNTING



### THREE POLE NORMALLY OPEN

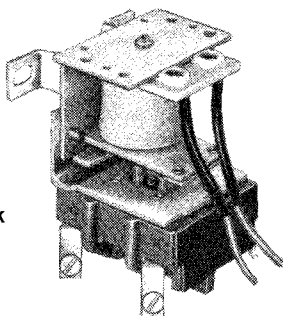
Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (A.C.) Inductive	
			250 V.	600 V.
85-901	24	10.80	25 AMP. CONT. 150 AMP. INRUSH	12.5 AMP. CONT. 75 AMP. INRUSH
85-902	120	10.80		
85-903	208/230	10.80		

## TYPE 80

25 AMP.—250 V.

APPROX. OVERALL DIMENSIONS  
3 1/8" x 2 5/8" x 2 7/8"

SCREW POWER TERMINALS—  
NO. 8 SOLID WIRE MAX. • COIL LEAD  
WIRE TERMINATION • DOUBLE BREAK  
"NO-KISS" CONTACT ACTION •  
HI-DIELECTRIC ARC RESISTANT  
MOLDED CONTACT BLOCK  
AND CARRIER



### TWO POLE NORMALLY OPEN

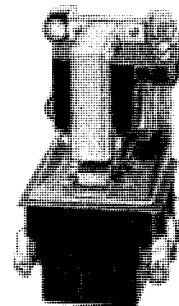
Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (A.C.) Inductive
80-901	24	7.27	25 AMP. CONTINUOUS 150 AMP. INRUSH 250 V. MAX.
80-902	120	7.27	
80-903	208	7.27	
80-904	240	7.27	

## TYPE S30

30 AMP.—250 V.  
15 AMP.—600 V.

APPROX. OVERALL DIMENSIONS  
3 7/8" x 2 3/8" x 2 1/2"

SCREW POWER TERMINALS  
NO. 8 SOLID WIRE MAX.  
SOLENOID ACTUATED • ENCLOSED  
CONTACTS • DOUBLE BREAK "NO-KISS"  
CONTACT ACTION • CAST ALUMINUM  
BASE • RESILIENT MOUNTING •  
LAMINATED "C" MAGNET & SELF  
ALIGNING "T" ARMATURE • HIGH  
DI-ELECTRIC ARC RESISTANCE  
MOLDED CONTACT BLOCK & CARRIER •  
EPOXY-CLAD MAGNET COIL.



### THREE POLE NORMALLY OPEN

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (A.C.) Inductive		
			Voltage	Continuous	Inrush
S30-901	24	11.55	250	30 AMP.	180 AMP.
S30-902	115	11.55			
S30-903	230	11.55	600	15 AMP.	90 AMP.

## TYPE S40

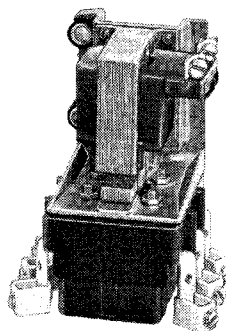
40 AMP.  
250 V. MAX.

APPROX. OVERALL DIMENSIONS  
3 7/8" x 2 3/4" x 2 1/2"

PRESSURE CONNECTOR POWER TERMINALS  
NO. 6 SOLID WIRE MAX.

### THREE POLE NORMALLY OPEN

Part Number	Coil Voltage (60 Cy.)	Price	Contact Rating (A.C.) Inductive
S40-901	24	13.10	40 AMP. CONTINUOUS 200 AMP. INRUSH 250 V. MAX.
S40-902	115	13.10	
S40-903	230	13.10	





# A. C. INDUSTRIAL CONTACTORS 15 TO 50 AMPERE—600 VOLT

Unique design permits common base, coil & magnet for contactor ratings from 15 to 50 amperes • Double break "no-kiss" contact action • Replaceable contacts & coil • Epoxy sealed molded magnet coil housing • Laminated corrosion resistant E-Type magnet & self-aligning armature • Hi-dielectric arc resistant molded contact block & carrier • 50/60 cycle magnet coil • Resilient mounting.

## TYPE C15

15 AMP.—600 V.

APPROX. OVERALL DIMENSIONS  
3 5/8" x 2 3/4" x 3 3/8"

PRESSURE CONNECTOR  
POWER TERMINALS  
NO. 10 SOLID WIRE MAX.

FOUR POLE NORMALLY OPEN\*



Part Number	Coil Voltage (50/60 Cy.)	Price	Contact Rating (A.C.)		
			Horsepower		
			Voltage	Single Phase	Three Phase
C15-901	24	19.80	110	1	1 1/2
C15-902	110	19.80	220	1 1/2	2
C15-903	220	19.80	600	1 1/2	2
			Resistive		
C15-904	440	19.80	15 AMP. 600 V. Max. (Per Pole)		

\*All contacts can be converted to normally closed with screw driver. No special parts required. See below.

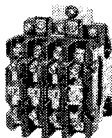
## TYPE C30

30 AMP.—600 V.

APPROX. OVERALL DIMENSIONS  
3 5/8" x 2 3/4" x 3 3/8"

PRESSURE CONNECTOR  
POWER TERMINALS  
NO. 6 SOLID WIRE MAX.

THREE POLE NORMALLY OPEN  
(WITH 15 AMP. AUXILIARY NORMALLY OPEN \*CONTACT)



Part Number	Coil Voltage (50/60 Cy.)	Price	Main Contact Rating (A.C.)		
			Horsepower		
			Voltage	Single Phase	Three Phase
C30-901	24	24.30	110	2	3
C30-902	110	24.30	220	3	7 1/2
C30-903	220	24.30	600	5	10
			Resistive		
C30-904	440	24.30	30 AMP.—600 V. (Per Pole)		

\*Auxiliary pole can be converted to normally closed with screw driver. No special parts required. See below.

## TYPE C50R

50 AMP.—480 V.  
RESISTIVE ONLY

APPROX. OVERALL DIMENSIONS  
3 5/8" x 2 3/4" x 3 3/8"

PRESSURE CONNECTOR  
POWER TERMINALS  
NO. 6 STRANDED WIRE MAX.

FOUR POLE NORMALLY OPEN



Part Number	Coil Voltage (50/60 Cy.)	Price	Contact Rating (A.C.)
C50R-901	24	26.00	RESISTIVE ONLY FOR ELECTRIC HEATING 50 AMP. 480 VOLT MAX.
C50R-902	110	26.00	
C50R-903	220	26.00	
C50R-904	440	26.00	

## UNIVERSAL ENCLOSURE

APPROX. OVERALL DIMENSIONS  
8 5/8" x 5 3/4" x 4 3/8"

Part No.	Price
UE-901	6.00



This heavy gauge enclosure has tapped holes (with identification template) to permit mounting of all power relays and contactors listed below.

ENCLOSURE WILL ACCOMMODATE FOLLOWING TYPES—129, 75, 80, 85, S30, S40, C15, C30 & C50R.

Two Type C contactors mounted side by side on common steel base • Resilient mounting • Hardened steel mechanical interlock prevents simultaneous closing of both contactors • No cross-phase wiring • Suitable for motor reversing & transformer tap changing application.

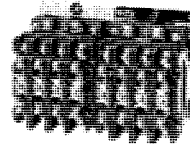
## TYPE CR15

15 AMP.—600 V.

APPROX. OVERALL DIMENSIONS  
3 5/8" x 5 3/8" x 3 3/8"

PRESSURE CONNECTOR  
POWER TERMINALS  
NO. 10 SOLID WIRE MAX.

FOUR POLE NORMALLY OPEN\*  
(EACH CONTACTOR)



Part Number	Coil Voltage (50/60 Cy.)	Price	Contact Rating (A.C.)		
			Horsepower		
			Voltage	Single Phase	Three Phase
CR15-901	110	43.20	110	1	1 1/2
CR15-902	220	43.20	220	1 1/2	2
CR15-903	440	43.20	600	1 1/2	2

\*All contacts can be converted to normally closed with screw driver. No extra parts required. See below.

## TYPE CR30

30 AMP.—600 V.

APPROX. OVERALL DIMENSIONS  
3 5/8" x 5 3/8" x 3 3/8"

PRESSURE CONNECTOR  
POWER TERMINALS  
NO. 6 STRANDED WIRE MAX.

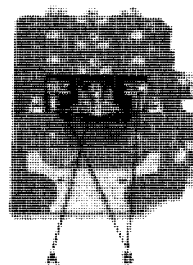
THREE POLE NORMALLY OPEN  
(EACH CONTACTOR HAS 15 AMP. AUXILIARY NORMALLY OPEN \*CONTACT)



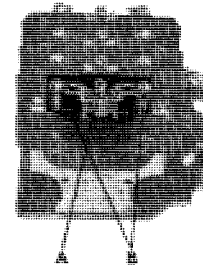
Part Number	Coil Voltage (50/60 Cy.)	Price	Contact Rating (A.C.)		
			Horsepower		
			Voltage	Single Phase	Three Phase
CR30-901	110	52.10	110	2	3
CR30-902	220	52.10	220	3	7 1/2
CR30-903	440	52.10	600	5	10

\*Auxiliary contact can be converted to normally closed with screwdriver. No special parts required. See below.

## 15 AMPERE CONTACT CONVERSION NORMALLY OPEN TO NORMALLY CLOSED



Normally Open  
Fig. 1

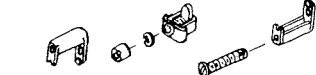


Normally Closed  
Fig. 2

All 15 ampere contact assemblies on RBM standard type C contactors are normally open. To convert to normally closed—

- Remove movable contact assembly and lock washer by backing off terminal nut "A".
- Loosen screws "B" and remove stationary contact assemblies.
- Invert movable contact assembly, and replace on contactor with flat "I" spring resting on contact block. Contacts facing out.

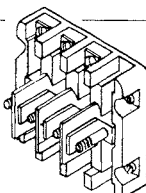
- Remove screws "B" from, and reinsert into opposite end of, stationary contact assembly. Re-install stationary contact assemblies; holding contacts in alignment with movable contacts while tightening screws.



CONTACT ASSEMBLIES  
Figure 1

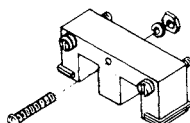
For Contactor Type	Use Contact Assembly		
	Part No.	Price	Replaces
C15, CR15*	CA-901	5.76	45997-3 45997-4
C30, CR30*	CA-902	7.80	45997-5
C50R	CA-903	10.40	45997-22
†109153 †109453	CA-904	9.66	45997-16 45997-20

\*Reversing type—2 sets required.  
†Not standard catalog items.



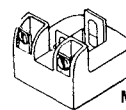
CONTACT BLOCK & CARRIER  
Figure 2

4 Pole		5 Pole	
Part Number	Price	Part Number	Price
RP-902	6.92	RP-903	7.82



ARMATURE & MAGNET  
Figure 3

Part Number	Price
RP-901	4.28



TYPE C REPLACEMENT PARTS

MAGNET COILS  
Figure 4

Voltage (50/60 Cy.)	*Standard			Special		
	Part Number	Price	Replaces	Part Number	Price	Replaces
24	MC-901	4.68	45225-5	MC-911	4.82	45225-35
110	MC-902	4.68	45225-1	MC-912	4.82	45225-31
220	MC-903	4.68	45225-2	MC-913	4.82	45225-32
440	MC-904	4.68	45225-3	MC-914	4.82	45225-33
550	MC-905	4.68	45225-4	MC-915	4.82	45225-34

\*Do not substitute standard for special coils or vice versa.

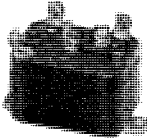


SECTION 4500

D. C. GENERAL PURPOSE RELAYS 24 VOLTS—MAX.

TYPE 84D

APPROX. OVERALL DIMENSIONS  
2 3/8" x 1 5/8" x 1 1/2"  
TOTALLY ENCLOSED  
SCREW TERMINALS  
OPERATES ANY POSITION

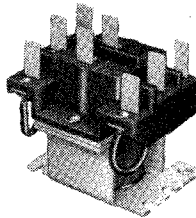


SINGLE POLE DOUBLE THROW

Part Number	Coil Voltage (D.C.)	Price	Contact Rating (D.C.)	
			Inductive	
			Voltage	Current
84D-901	6	3.05	6	3 AMP.
84D-902	12	3.05	12	3 AMP.
84D-903	24	3.05	24	1.5 AMP.

TYPE 91D

APPROX. OVERALL DIMENSIONS  
2 1/8" x 1 7/8" x 2 3/8"  
QUICK-CONNECT TERMINALS  
ENCLOSED CONTACTS  
OPERATES ANY POSITION  
SOLENOID ACTION



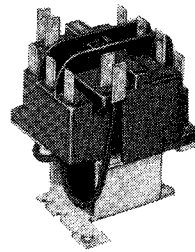
TWO POLE DOUBLE THROW

Part Number	Coil Voltage (D.C.)	Price	Contact Rating (D.C.)	
			Inductive	
			Voltage	Current
91D-901	6	4.84	6	3 AMP.
91D-902	12	4.84	12	3 AMP.
91D-903	24	4.84	24	1.5 AMP.

Quick-connect wiring terminals included.

TYPE 92D

APPROX. OVERALL DIMENSIONS  
2 3/8" x 2 3/8" x 2 3/4"  
QUICK-CONNECT TERMINALS  
ENCLOSED CONTACTS  
OPERATES ANY POSITION  
SOLENOID ACTION  
MANUAL "TEST" BUTTON



THREE POLE DOUBLE THROW

Part Number	Coil Voltage (D.C.)	Price	Contact Rating (D.C.)	
			Inductive	
			Voltage	Current
92D-901	6	5.84	6	3 AMP.
92D-902	12	5.84	12	3 AMP.
92D-903	24	5.84	24	1.5 AMP.

Quick-connect wiring terminals included.

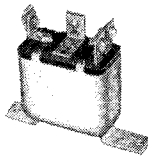
D. C. POWER CONTACTORS 32 VOLTS MAX.

TYPE 60

15 AMP.—6 V.  
7.5 AMP.—32 V.

APPROX. OVERALL DIMENSIONS  
2 7/8" x 1 1/8" x 2 5/8"

METAL ENCLOSURE  
SCREW TERMINALS



SINGLE POLE NORMALLY OPEN

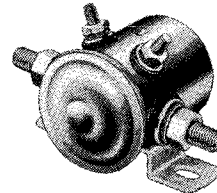
Part Number	Coil Voltage (D.C.)	Price	Contact Rating D.C.	
			Inductive	
			Voltage	Current
60-901	6	2.70	6	15 AMP.
60-902	12	2.70	12	15 AMP.
60-903	24	2.70	24	7.5 AMP.
60-904	32	2.70	32	7.5 AMP.

TYPE 70

Drawn steel dust proof enclosure • Copper stud power & coil terminals  
• Double break rotating disk movable contact • Isolated coil terminals  
• Solenoid actuated.

Suggested mounting—cap down.

APPROX. OVERALL DIMENSIONS  
2 1/2" x 3 1/2" x 2 1/2"  
TERMINAL NUTS AND LOCK WASHERS INCLUDED.

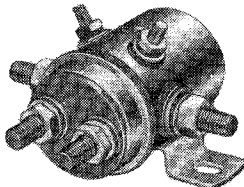


CONTACT RATING

Voltage (D.C.)	D.C. INDUCTIVE LOAD		COPPER OR SILVER CONTACTS	
	Normally Open		Normally Closed	
	Continuous	Inrush	Continuous	Inrush
6	80 AMP.	300 AMP.	60 AMP.	100 AMP.
12	80 AMP.	150 AMP.	60 AMP.	60 AMP.
24	50 AMP.	50 AMP.	30 AMP.	30 AMP.
32	50 AMP.	50 AMP.	30 AMP.	30 AMP.

TYPE 70

APPROX. OVERALL DIMENSIONS  
3 3/8" x 3 3/8" x 2 1/2"  
TERMINAL NUTS AND LOCK WASHERS INCLUDED.



SINGLE POLE DOUBLE THROW

Part Number	Contact Material	Coil Voltage (D.C.)	Price
70-909	SILVER	6	9.54
70-910		12	9.54
70-911		24	9.54
70-912		32	9.54

SINGLE POLE NORMALLY OPEN

Part Number	Contact Material	Coil Voltage (D.C.)	Price
70-901	COPPER	6	3.74
70-902		12	3.74
70-903		24	3.74
70-904		32	3.74
70-905	SILVER	6	5.97
70-906		12	5.97
70-907		24	5.97
70-908		32	5.97

D. C. WIRE CONTACT RELAYS

TYPE 81

COMPUTERS • BUSINESS MACHINES • OFFICE EQUIPMENT  
DURABLE—200,000,000 OPERATIONS  
FAST—6 MILLISECONDS OPERATE TIME

APPROX. OVERALL DIMENSIONS  
2" x 5/8" x 2 1/8"

CONTACT PERFORMANCE \*GUIDE  
RESISTIVE LOAD—NO ARC SUPPRESSION—48 V. D.C.

ELECTRICAL LIFE

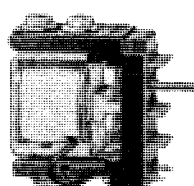
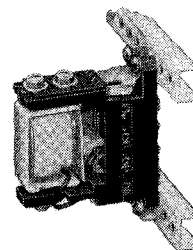
Contact Load (Amperes)	0.025	0.100	0.500	1.0	3.0
Number of Operations (Millions)	200	100	20	5	Carry Only. No Make or Break.

\*Based on tests with relay operating rate 30 per second. Consult factory for life expectancy for inductive loads—with or without arc suppression, giving contact loads, frequency of operation and "on time" ratio.

FOUR POLE DOUBLE THROW

Part Number	D.C. Operating Voltage		Price
	Nominal	Pick-Up	
81-901	24	18	8.42
81-902	48	36	8.42
81-903	115	87	8.42

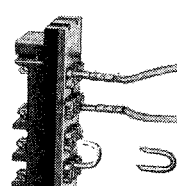
†Includes terminal block, mounting straps, wiring jumpers and terminals.



Relay



Strap



Terminal Block

Wiring Jumpers and Terminals



# MINIATURE DIRECT CURRENT SENSITIVE RELAYS

1PDT—40 MW; 2PDT—125 MW; 3PDT—200 MW; COIL RESISTANCE—15,000 OHMS MAX. — ISOLATED CONTACTS — PROTECTIVE COVERS—MOLDED COMBINATION COIL BOBBIN AND TERMINAL BLOCK (HIDIELECTRIC WITH MINIMUM MOISTURE ABSORPTION) OPEN & PLUG-IN TYPES. MINUS 55 TO PLUS 85°C OPERATING AMBIENT.

ELECTRICAL LIFE			Mechanical Life (No Load)	Operating Time (Incl. Bounce)	Vibration	Shock
Non-Inductive Load	0.5 AMP.	1.0 AMP.	100,000,000 at 180 Operations Per Minute	20 MILLI-SECONDS	2G 10-55 CYCLES	2G OPERATE 10G NON-OPERATE
Number Operations	1,000,000	300,000				

## SINGLE POLE DOUBLE THROW

Contact Rating	Coil Power	
2 AMP. NON-INDUCTIVE 28 V. D.C.—115 V. A.C.	MINIMUM REQUIRED	0.040 WATTS
	MAXIMUM CAPACITY	1.5 WATTS

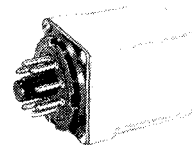
### TYPE MS25 SOLDER TERMINALS

APPROX. OVERALL DIMENSIONS  
1 5/8" x 1 1/2" x 1 3/8"



### TYPE MS25P PLUG-IN OCTAL BASE

APPROX. OVERALL DIMENSIONS  
2" x 1 3/8" x 1 3/8"



Part Number	D.C. MAGNET COIL At 25°C			Price
	Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	
MS25-901	6 V.	4.5 V.	510	3.25
MS25-902	12 V.	9.0 V.	2025	3.38
MS25-903	24 V.	18.0 V.	8100	3.84
MS25-904	3.7 MA.	2.8 MA.	5000	3.56
MS25-905	2.7 MA.	2.0 MA.	10000	4.10
MS25-906	2.1 MA.	1.6 MA.	15000	5.05

\*Nominal Drop-out Approximately 35% of Pick-up †Nominal ±10%.

Part Number	D.C. MAGNET COIL At 25°C			Price
	Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	
MS25P-901	6 V.	4.5 V.	510	5.76
MSP25-902	12 V.	9.0 V.	2025	5.90
MSP25-903	24 V.	18.0 V.	8100	6.37
MS25P-904	3.7 MA.	2.8 MA.	5000	6.00
MS25P-905	2.7 MA.	2.0 MA.	10000	6.40
MS25P-906	2.1 MA.	1.6 MA.	15000	7.35

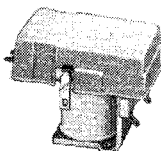
\*Nominal Drop-out Approximately 35% of Pick-up †Nominal ±10%.

## TWO POLE DOUBLE THROW

Contact Rating	Coil Power	
2 AMP. NON-INDUCTIVE 28 V. D.C.—115 V. A.C.	MINIMUM REQUIRED	0.125 WATTS
	MAXIMUM CAPACITY	1.5 WATTS

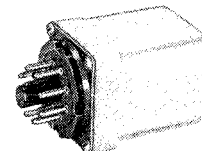
### TYPE MS50 SOLDER TERMINALS

APPROX. OVERALL DIMENSIONS  
1 5/8" x 1 1/8" x 1 3/8"



### TYPE MS50P PLUG-IN OCTAL BASE

APPROX. OVERALL DIMENSIONS  
2" x 1 3/8" x 1 3/8"



Part Number	D.C. MAGNET COIL At 25°C			Price
	Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	
MS50-901	6 V.	4.5 V.	160	4.10
MS50-902	12 V.	9.0 V.	650	4.15
MS50-903	24 V.	18.0 V.	2600	4.20
MS50-904	6.7 MA.	5.0 MA.	5000	4.38
MS50-905	4.7 MA.	3.5 MA.	10000	4.92
MS50-906	3.9 MA.	2.9 MA.	15000	5.87

\*Nominal Drop-out Approximately 35% of Pick-up †Nominal ±10%.

Part Number	D.C. MAGNET COIL At 25°C			Price
	Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	
MS50P-901	6 V.	4.5 V.	160	6.14
MS50P-902	12 V.	9.0 V.	650	6.19
MS50P-903	24 V.	18.0 V.	2600	6.30
MS50P-904	6.7 MA.	5.0 MA.	5000	6.40
MS50P-905	4.7 MA.	3.5 MA.	10000	6.80
MS50P-906	3.9 MA.	2.9 MA.	15000	8.25

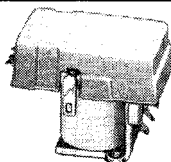
\*Nominal Drop-out Approximately 35% of Pick-up †Nominal ±10%.

## THREE POLE DOUBLE THROW

Contact Rating	Coil Power	
2 AMP. NON-INDUCTIVE 28 V. D.C.—115 V. A.C.	MINIMUM REQUIRED	0.200 WATTS
	MAXIMUM CAPACITY	1.5 WATTS

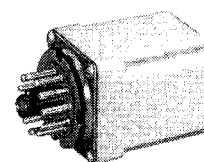
### TYPE MS50 SOLDER TERMINALS

APPROX. OVERALL DIMENSIONS  
1 5/8" x 1 1/8" x 1 3/8"



### TYPE MS50P PLUG-IN ELEVEN-PIN BASE

APPROX. OVERALL DIMENSIONS  
2" x 1 3/8" x 1 3/8"



Part Number	D.C. MAGNET COIL At 25°C			Price
	Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	
MS50-921	6 V.	4.5 V.	100	5.00
MS50-922	12 V.	9.0 V.	400	5.03
MS50-923	24 V.	18.0 V.	1600	5.08
MS50-924	8.5 MA.	6.4 MA.	5000	5.29
MS50-925	6.0 MA.	4.5 MA.	10000	5.82
MS50-926	4.9 MA.	3.7 MA.	15000	6.77

\*Nominal Drop-out Approximately 35% of Pick-up †Nominal ±10%.

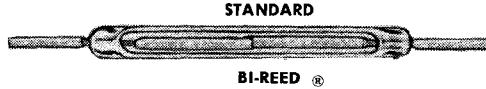
Part Number	D.C. MAGNET COIL At 25°C			Price
	Nominal Voltage or Current	*Max. Pick-up Voltage or Current	†Resistance in Ohms	
MS50P-921	6 V.	4.5 V.	100	7.35
MS50P-922	12 V.	9.0 V.	400	7.38
MS50P-923	24 V.	18.0 V.	1600	7.43
MS50P-924	8.5 MA.	6.4 MA.	5000	7.85
MS50P-925	6.0 MA.	4.5 MA.	10000	8.25
MS50P-926	4.9 MA.	3.7 MA.	15000	9.15

\*Nominal Drop-out Approximately 35% of Pick-up †Nominal ±10%.





# GLASS REED SWITCHES



CONTACT FORM	SINGLE POLE NORMALLY OPEN (BI-REED)						SINGLE POLE DOUBLE THROW (TRI-REED)			
	MINIATURE			STANDARD			MINIATURE			
PART NUMBER	BRM-901 (Gold Alloy Contacts)		BRM-902 (Rhodium Plated Contacts)		BRS-901 (Gold Alloy Contacts)		TRM-901 (Gold Alloy Contacts)			
PRICE	1.25		1.35		1.25		6.50			
NON-INDUCTIVE CONTACT RATING	Make and Break	12 VA. A.C.—4 WATTS D.C. 1/8 AMP. MAXIMUM UP TO 250 VOLTS		15 VA. A.C.—5 WATTS D.C. 1/4 AMP. MAXIMUM UP TO 250 VOLTS		15 VA. A.C.—5 WATTS D.C. 1.0 AMP. MAXIMUM UP TO 250 VOLTS		15 VA. A.C.—5 WATTS D.C. 1/4 AMP. MAXIMUM UP TO 125 V. A.C. OR 32 V. D.C.		
	No Make or Break	1.0 AMP. 250 V.		1.0 AMP. 250 V.		5 AMP. 250 V.		1 AMP. 125 V. A.C. OR 32 V. D.C.		
CONTACT LIFE Based on 10 Ohm Miss Test	Resistive Load (D.C.)	10 MICRO-AMP @ 10 MILLI-VOLTS	1/8 AMP. @ 32 VOLTS	10 MICRO-AMP. @ 10 MILLI-VOLTS	1/8 AMP. @ 32 VOLTS	10 MICRO-AMP. @ 10 MILLI-VOLTS	1/8 AMP. @ 32 VOLTS	10 MICRO-AMP. @ 10 MILLI-VOLTS	1/8 AMP. @ 32 VOLTS	
	Number Operations	100,000,000	5,000,000	100,000,000	10,000,000	200,000,000	125,000,000	100,000,000	10,000,000	
APPROXIMATE OVERALL DIMENSIONS	Over Leads	1.5"		Glass Length	0.75"		Glass Diameter	0.100"		
		1.5"			0.75"			0.100"		
Weight	0.315 GRAMS			2.5 Grams			0.295 Grams			
MINIMUM BREAKDOWN VOLTAGE (60 Cy. R.M.S.)	250 V.			500 V.			250 V.			
MINIMUM INSULATION RESISTANCE (Megohms)	500 K.			500 K.			100 K.			
INITIAL CONTACT RESISTANCE (Milliohms Max.)	150		150		50		150			
MAXIMUM OPERATE TIME (Milliseconds)	Pull-In Including Bounce		Release		Pull-In (Incl. Bounce)		Release		Pull-In (Incl. Bounce)	
	1.0		0.5		1.0		0.5		1.0	
*AMPERE-TURNS TO OPERATE	Pull-In		Drop Out		Pull-In		Drop Out		Pull-In	
	Nominal	Minimum	50% OF P.U.		Nominal	Minimum	30% OF P.U.		Nominal	Minimum
	35 ± 15	20	50% OF P.U.		100±20	60	30% OF P.U.		50±15	35
NOMINAL COIL POWER	0.335 WATTS			0.360 WATTS			0.335 WATTS			
VIBRATION	15G—2000 C.P.S.			20G—750 C.P.S.			15G—2000 C.P.S.			
SHOCK (JAN S-44)	50G (MIN.)			40G (MIN.)			50G (MIN.)			
AMBIENT TEMPERATURE RANGE	-55° TO +85°C			-55° TO +85°C			-55° TO +85°C.			
STANDARD TEST COIL SPECIFICATIONS See Fig. 1	Wire Size	#44			#36			#44		
	Number Turns	10,000			10,000			10,000		
	Tube I.D.	0.150"			0.210"			0.150"		
	Tube O.D.	0.200"			0.375"			0.200"		
	Tube Length	0.75"			1.75"			0.75"		

\*To correlate operate specifications—use standard test circuit. (Fig. 2)

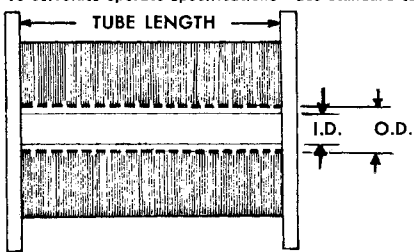


FIG. 1  
STANDARD TEST COIL

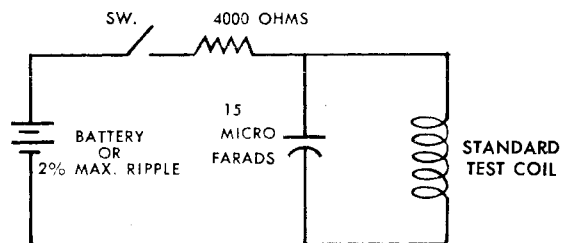


FIG. 2  
STANDARD TEST CIRCUIT



# REED-PAK STANDARD GLASS REED RELAYS

## NORMALLY OPEN



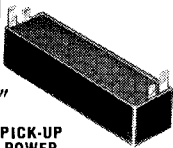
**CONTACT RESISTANCE (Initial):** 50 MILLIOHMS (Max.); **INSULATION RESISTANCE:** 10K MEGOHMS (Min.); **VIBRATION:** 20G—750 C.P.S. (Min.) COIL ENERGIZED OR DE-ENERGIZED; **SHOCK:** 40G (Min.) JAN S-44.

MAGNETICALLY SHIELDED

Contact Rating (Non-Inductive)		Contact Life (Based On 10 Ohm Miss Test)			Operate Sensitivity				Operate Time—Milliseconds					
Make and Break	15 VA. A.C.—5 Watts D.C. 1 Amp. Max. Up to 250 Volts	Resistive Load (D.C.)	10 Micro-Amp. @ 10 Milli-Volts	1/8 Amp. @ 32 Volts	Contact Form	1PNO	2PNO	4PNO	6PNO	Pull-In (Incl. Bounce)	1PNO	2PNO	4PNO	6PNO
No Make or Break	5.0 Amp. 250 Volts	Number Operations	200,000,000	125,000,000	Milliwatts (Nominal)	125	250	400	680	Release	0.5 (Max.)			

### TYPE BRSR1

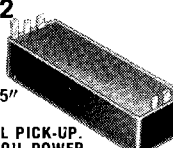
SPNO  
APPROX. OVERALL DIMENSIONS  
2.55" x .675" x .625"  
(PLUS LEADS)



125MW.—NOMINAL PICK-UP  
1.0 WATT MAX. COIL POWER

### TYPE BRSR2

2PNO  
APPROX. OVERALL DIMENSIONS  
2.55" x .925" x .625"  
(PLUS LEADS)



250 MW.—NOMINAL PICK-UP  
1.25 WATTS MAX. COIL POWER

### TYPE BRSR4

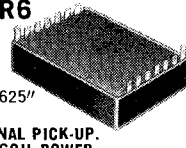
4PNO  
APPROX. OVERALL DIMENSIONS  
2.55" x 1.4" x .625"  
(PLUS LEADS)



400 MW.—NOMINAL PICK-UP  
1.65 WATTS MAX. COIL POWER

### TYPE BRSR6

6PNO  
APPROX. OVERALL DIMENSIONS  
2.55" x 1.87" x .625"  
(PLUS LEADS)



680 MW.—NOMINAL PICK-UP  
2.0 WATTS MAX. COIL POWER

## NORMALLY OPEN



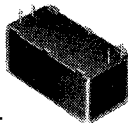
**CONTACT RESISTANCE (Initial):** 150 MILLIOHMS (Max.); **INSULATION RESISTANCE:** 10K MEGOHMS (Min.); **VIBRATION:** 15G-2000 C.P.S. (Min.) COIL ENERGIZED OR DE-ENERGIZED; **SHOCK:** 50G (Min.) JAN S-44.

MAGNETICALLY SHIELDED

Contact Rating (Non-Inductive)		Contact Life (Based On 10 Ohm Miss Test)			Operate Sensitivity				Operate Time—Milliseconds					
Make and Break	12 VA. A.C.—4 WATTS D.C. 1/8 Amp. Max. Up to 250 Volt	Resistive Load (D.C.)	10 Micro Amp. @ 10 Milli-Volt	1/8 Amp. @ 32 Volt	Contact Form	1PNO	2PNO	4PNO		Pull-In (Incl. Bounce)	1PNO	2PNO	4PNO	
No Make Or Break	1.0 Amp. 250 Volt	Number Operations	100,000,000	5,000,000	Milliwatts (Nominal)	100	150	300		Release	0.5 (Max.)			

### TYPE BRMR1

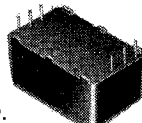
SPNO  
APPROX. OVERALL DIMENSIONS  
1.14" x .56" x .54"  
(PLUS LEADS)



100 MW.—NOMINAL PICK-UP  
1.0 WATT MAX. COIL POWER

### TYPE BRMR2

2PNO  
APPROX. OVERALL DIMENSIONS  
1.14" x .73" x .54"  
(PLUS LEADS)



150 MW.—NOMINAL PICK-UP  
1.5 WATTS MAX. COIL POWER

### TYPE BRMR4

4PNO  
APPROX. OVERALL DIMENSIONS  
1.14" x 1.0" x .54"  
(PLUS LEADS)



300 MW.—NOMINAL PICK-UP  
3.0 WATTS MAX. COIL POWER

## DOUBLE THROW



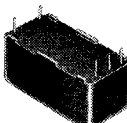
**CONTACT RESISTANCE (Initial):** 150 MILLIOHMS (Max.); **INSULATION RESISTANCE:** 10K MEGOHMS (Min.); **VIBRATION:** 15G-2000 C.P.S. (Min.) COIL ENERGIZED OR DE-ENERGIZED; **SHOCK:** 50G (Min.) JAN S-44.

MAGNETICALLY SHIELDED. NON-POLARIZED... FGMR C CONTACT IN ONE CAPSULE... POSITIVE BREAK BEFORE MAKE

Contact Rating (Non-Inductive)		Contact Life (Based On 10 Ohm Miss Test)			Operate Sensitivity				Operate Time—Milliseconds					
Make and Break	15 VA. A.C.—5 Watts D.C. 1/4 Amp. Max. Up to 125 V. A.C.—32 V. D.C.	Resistive Load (D.C.)	10 Micro-Amp. @ 10 Milli-Volts	1/4 Amp. @ 32 Volts	Contact Form	1PDT	2PDT			Pull-In (Incl. Bounce)	1PDT	2PDT		
No Make or Break	1.0 Amp. 125 V. A.C. or 32 V. D.C.	Number Operations	100,000,000	10,000,000	Milliwatts (Nominal)	150	250			Release	0.5 (Max.)			

### TYPE TRMR1

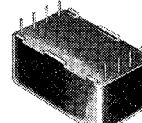
SPDT  
APPROX. OVERALL DIMENSIONS  
1.14" x .56" x .54" (PLUS LEADS)



150 MW.—NOMINAL PICK-UP  
1.0 WATT MAX. COIL POWER

### TYPE TRMR2

2PDT  
APPROX. OVERALL DIMENSIONS  
1.14" x .73" x .54" (PLUS LEADS)



250 MW.—NOMINAL PICK-UP  
1.5 WATTS MAX. COIL POWER

## SPECIFICATIONS

D.C. Magnet Coil at 25°C						
Part Number	Nominal Voltage	Max. Pick-up Voltage	Minimum Drop-out Voltage	Max. Pick-up Current	†Resistance in Ohms	Price
<b>SINGLE POLE</b>						
BRSR1-901	6 V.	4.5 V.	0.55 V.	43.0 MA.	115	4.95
BRSR1-902	12 V.	9.0 V.	1.10 V.	22.5 MA.	445	5.00
BRSR1-903	28 V.	18.0 V.	2.50 V.	7.8 MA.	2550	5.05
<b>TWO POLE</b>						
BRSR2-901	6 V.	4.5 V.	0.51 V.	86.5 MA.	58	6.30
BRSR2-902	12 V.	9.0 V.	1.00 V.	45.0 MA.	220	6.35
BRSR2-903	28 V.	18.0 V.	2.10 V.	13.3 MA.	1500	6.40
<b>FOUR POLE</b>						
BRSR4-901	6 V.	4.5 V.	0.50 V.	107.0 MA.	47	9.30
BRSR4-902	12 V.	9.0 V.	0.95 V.	58.0 MA.	172	9.35
BRSR4-903	28 V.	18.0 V.	2.00 V.	22.8 MA.	877	9.40
<b>SIX POLE</b>						
BRSR6-901	6 V.	4.5 V.	0.48 V.	204.0 MA.	24	12.30
BRSR6-902	12 V.	9.0 V.	0.95 V.	83.0 MA.	113	12.35
BRSR6-903	28 V.	18.0 V.	2.00 V.	34.2 MA.	580	12.40

†Nominal ±10%.

D.C. Magnet Coil at 25°C						
Part Number	Nominal Voltage	Max. Pick-up Voltage	Minimum Drop-out Voltage	Max. Pick-up Current	†Resistance in Ohms	Price
<b>SINGLE POLE</b>						
BRMR1-901	6 V.	3.25 V.	0.8 V.	27.0 MA.	105	6.82
BRMR1-902	12 V.	6.5 V.	1.0 V.	15.5 MA.	420	6.88
BRMR1-903	28 V.	15.2 V.	2.5 V.	6.5 MA.	2350	7.01
<b>TWO POLE</b>						
BRMR2-901	6 V.	3.25 V.	0.8 V.	46.5 MA.	70	9.54
BRMR2-902	12 V.	6.5 V.	1.0 V.	25.2 MA.	280	9.58
BRMR2-903	28 V.	15.2 V.	2.5 V.	9.8 MA.	1540	9.65
<b>FOUR POLE</b>						
BRMR4-901	6 V.	3.25 V.	0.8 V.	93.0 MA.	35	15.00
BRMR4-902	12 V.	6.5 V.	1.0 V.	46.5 MA.	140	15.05
BRMR4-903	28 V.	15.2 V.	2.5 V.	19.7 MA.	770	15.10
<b>SINGLE POLE</b>						
TRMR1-901	6 V.	4 V.	1.5 V.	42 MA.	105	15.00
TRMR1-902	12 V.	8 V.	3 V.	21 MA.	420	15.05
TRMR1-903	28 V.	19 V.	6 V.	8 MA.	2350	15.10
<b>TWO POLE</b>						
TRMR2-901	6 V.	4 V.	1.5 V.	64 MA.	70	20.00
TRMR2-902	12 V.	8 V.	3 V.	32 MA.	280	20.05
TRMR2-903	28 V.	19 V.	6 V.	12 MA.	1540	20.10

†Nominal ±10%



A. C. CONTROLS ENGINEERING DESIGN AND APPLICATION DATA

Type	Magnet Coil Rating (Volt Amperes)			Operation in % of Nom. Coil Voltage		Breakdown Voltage All Terminals—60 Cy. RMS			Contact Material		**Electrical Life		**Mechanical Life		Maximum Operating Ambient Degrees Fahrenheit
	Inrush	Sealed		Pick-up	*Max. Safe Operate	Opposite Polarity	Open Contacts Same Polarity	To Ground	Power Rating	Pilot Rating	Oper. At Rated Load	Cper. Per Min.	Oper. At No Load	Oper. Per Min.	
		Nom.	Max.												
59	No Magnet Coil			85%	110%	1500	1000	1500	.....	Fine Silver	100,000	1	1,000,000	1	140
75	16	10	12	85%	110%	1500	1000	1500	Silver Alloy	.....	†100,000	6	1,000,000	60	140
80	27	15.6	17	85%	110%	1500	1500	1500	Silver Alloy	.....	†100,000	3	500,000	10	105
84	4	2.8	3	85%	110%	1500	1000	1500	Silver Alloy	.....	100,000	6	1,000,000	60	140
84T	9	2.8	3	85%	110%	1500	1000	1500	Silver Alloy	*Gold Alloy	100,000	6	1,000,000	60	140
85	90	19	23	85%	110%	2200	2200	2200	Silver Alloy	.....	†100,000	3	500,000	10	105
91	22	8	10	85%	110%	1500	1000	1500	Fine Silver	*Gold Alloy	†100,000	6	750,000	60	130
92	24	8.9	12	85%	110%	1500	1000	1500	Fine Silver	*Gold Alloy	†100,000	6	750,000	60	130
129	10	4.5	5	85%	110%	1500	1000	1500	Silver Alloy	.....	†100,000	3	500,000	10	105
129AR	10	4.5	5	85%	110%	1500	1000	1500	Silver Alloy	.....	†100,000	3	500,000	10	105
129T	10	4.5	5	85%	110%	1500	1000	1500	Silver Alloy	.....	†100,000	3	500,000	10	105
987	9	5.5	6.5	85%	110%	1500	1000	1500	Fine Silver	*Gold Alloy	100,000	6	1,000,000	60	140
C	90	18	21	85%	110%	2200	2200	2200	Silver Alloy	.....	†100,000	3	1,000,000	10	105
CR	90	18	21	85%	110%	2200	2200	2200	Silver Alloy	.....	†100,000	3	1,000,000	10	105
S	50	14.5	17	85%	110%	2200	2200	2200	Silver Alloy	.....	†100,000	3	500,000	10	105

\*Magnet coils designed for continuous duty. Do not operate at rate higher than indicated under Mechanical Life.

\*\*Based on steady state test under laboratory environmental conditions. Consult factory if application involves unusual load, speed of operation, off-on ratio, environmental or operating conditions. Electric life substantially greater when operated below rated load.

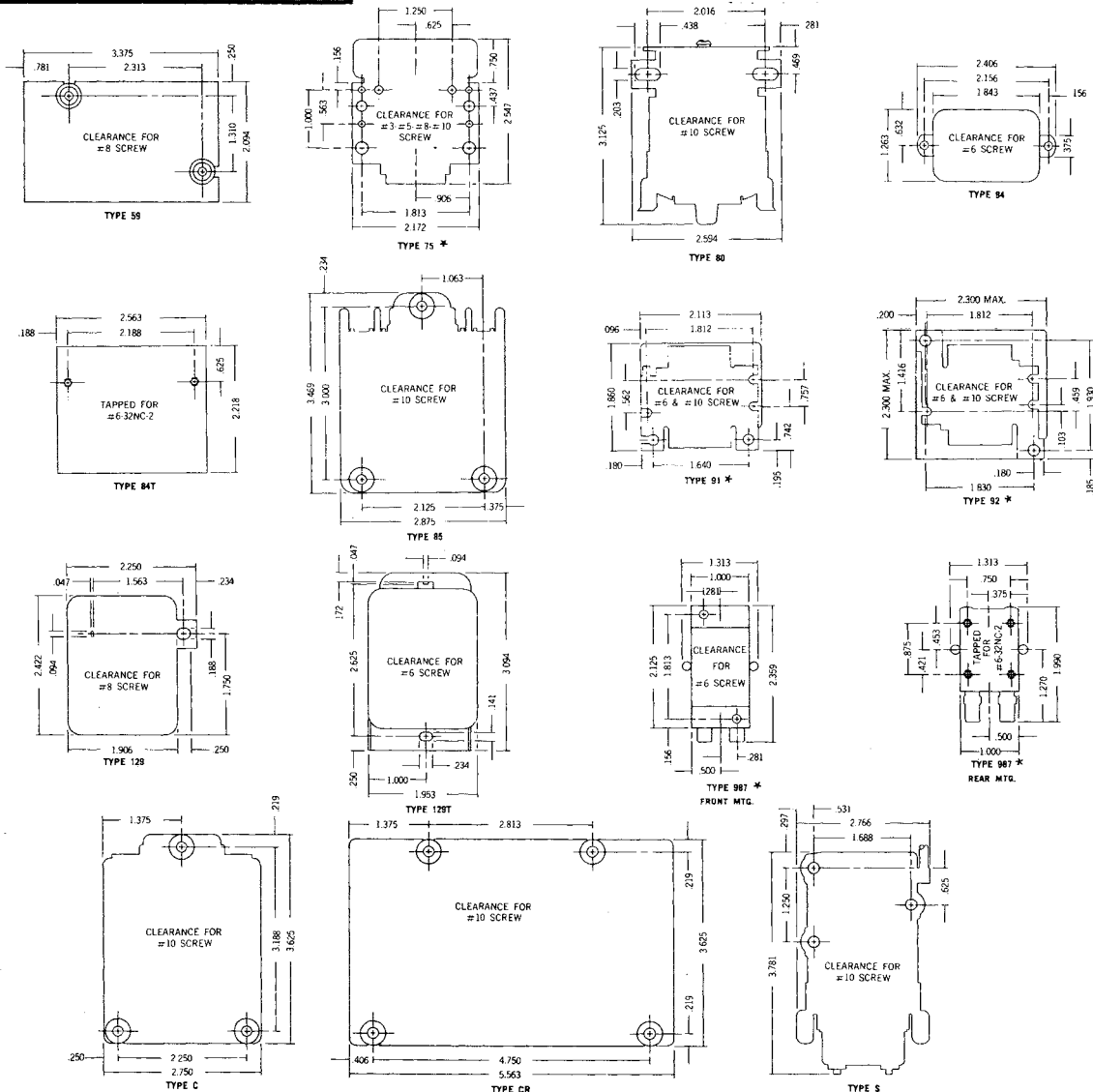
†Load tests—making inrush ratings (0.4 to 0.5 P.F.)—breaking 125% continuous rating (0.65 to 0.8 P.F.).

\*Cross-bar contacts

**MOUNTING DIMENSIONS**

DIMENSIONS ARE APPROX. CONSULT FACTORY FOR EXACT DIMENSIONS

\*ASTERISK DENOTES BOTTOM VIEW—ALL OTHERS TOP VIEW





D. C. CONTROLS ENGINEERING DESIGN AND APPLICATION DATA

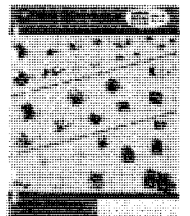
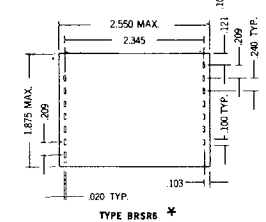
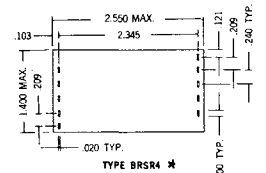
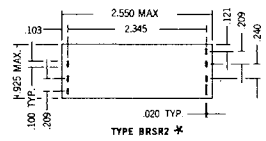
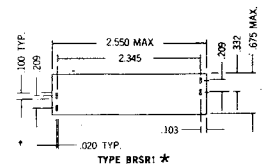
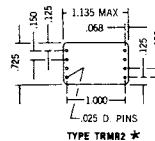
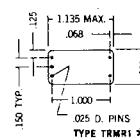
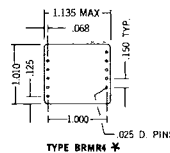
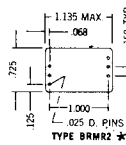
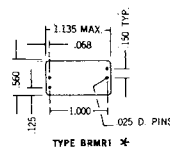
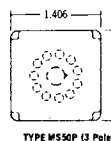
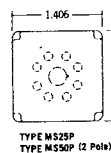
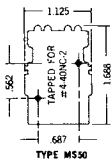
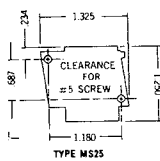
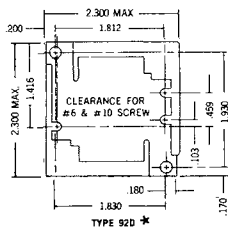
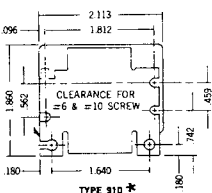
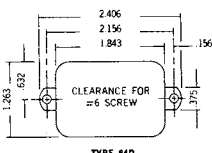
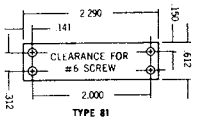
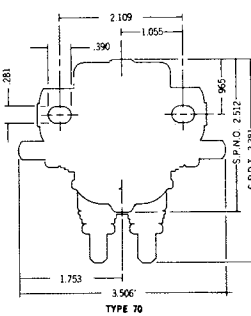
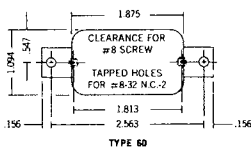
Type	Magnet Coil Rating (Watts)	Operation in % of Nom. Coil Rating		Breakdown Voltage All Terminals—60 Cy. RMS			Contact Material		**Electrical Life		**Mechanical Life		Maximum Operating Ambient Degrees Fahrenheit
		Pick up	*Max. Safe Operate	Opposite Polarity	Open Contacts Same Polarity	To Ground	Power Rating	Pilot Rating	Oper. At Rated Load	Oper. Per Min.	Oper. At No Load	Cner. Per Min.	
60	2	75%	110%	1000	1000	1000	Fine Silver Copper Silver	.....	100,000	4	250,000	4	122
70	9	75%	110%	500	500	500	.....	.....	100,000	4	250,000	4	122
81	4	75%	110%	1250	750	1250	.....	Eutectic Alloy (Silver Copper)	1,000,000	1800	200,000,000	1800	122
84D	3	75%	110%	1500	1000	1500	.....	Silver Alloy	100,000	6	1,000,000	60	140
91D	6.5	75%	110%	1500	1000	1500	.....	+Gold Alloy	100,000	6	750,000	60	140
92D	7	75%	110%	1500	1000	1500	.....	+Gold Alloy	100,000	6	750,000	60	140
BMR	Switch Only—No Magnet Coil			500	250	250	.....	Gold Alloy <sub>1</sub> or Rhodium Gold Alloy	5,000,000	60	2,000,000,000	7200	185
BRMR1	0.100	60%	110%	500	250	500	.....	Gold Alloy	2,000,000	60	2,000,000,000	7200	185
BRMR2	0.150	60%	110%	500	250	500	.....	Gold Alloy	2,000,000	60	2,000,000,000	7200	185
BRMR4	0.300	60%	110%	500	250	500	.....	Gold Alloy	2,000,000	60	2,000,000,000	7200	185
BRS	Switch Only—No Magnet Coil			500	500	500	.....	Gold Alloy	20,000,000	60	2,000,000,000	7200	185
BRSR1	0.125	75%	110%	500	500	500	.....	Gold Alloy	20,000,000	60	2,000,000,000	7200	185
BRSR2	0.250	75%	110%	500	500	500	.....	Gold Alloy	20,000,000	60	2,000,000,000	7200	185
BRSR4	0.400	75%	110%	500	500	500	.....	Gold Alloy	20,000,000	60	2,000,000,000	7200	185
BRSR6	0.680	75%	110%	500	500	500	.....	Gold Alloy	20,000,000	60	2,000,000,000	7200	185
MS25-MS25P	Current Sensitive			1000	1000	1000	.....	+Gold Alloy	100,000	60	100,000,000	180	185
MS50-MS50P (2 Pole)	Current Sensitive			1000	1000	1000	.....	+Gold Alloy	100,000	60	100,000,000	180	185
MS50-MS50P (3 Pole)	Current Sensitive			1000	1000	1000	.....	+Gold Alloy	100,000	60	100,000,000	180	185
TRM	Switch Only—No Magnet Coil			500	250	500	.....	Gold Alloy	2,000,000	60	2,000,000,000	7200	185
TRMR1	0.150	70%	110%	500	250	500	.....	Gold Alloy	2,000,000	60	2,000,000,000	7200	185
TRMR2	0.250	70%	110%	500	250	500	.....	Gold Alloy	2,000,000	60	2,000,000,000	7200	185

\*Magnet coils designed for continuous duty. Do not operate at rate higher than indicated under Mechanical Life.

\*\*Based on steady state test under laboratory environmental conditions. Consult factory if application involves unusual load, speed of operation, off-on ratio, environmental or operating conditions. Electrical life substantially greater when operated below rated load.

**MOUNTING DIMENSIONS**

DIMENSIONS ARE APPROX. CONSULT FACTORY FOR EXACT DIMENSIONS  
\*ASTERISK DENOTES BOTTOM VIEW—ALL OTHERS TOP VIEW



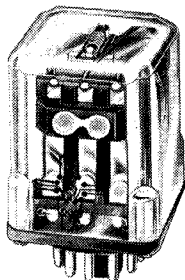
Write for the RBM Controls complete engineering and design application data catalog SC-1.



# SCHRACK RELAYS

## SENSITIVE RELAY — CMD SERIES

In this series there are eleven types in three classifications.

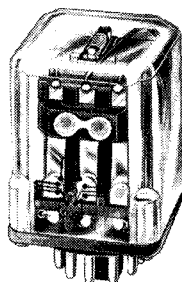


No.	Coil	List Price
CMD-5D	600Ω	\$4.95
CMD-5D	2400Ω	4.95
CMD-5D	9600Ω	5.20
CMD-11D	450Ω	6.10
CMD-11D	1890Ω	6.10
CMD-11D	7300Ω	6.10
CMD-5A	540Ω	5.00
CMD-5A	234Ω	4.75
CMD-5A	1000Ω	4.75
CMD-5A	3850Ω	4.75
CMD-5A	6900Ω	5.30

1. D.C. Relays with one form C contact Type CMD 5D—base wiring; Pull-in sensitivity 40 mw; Coil Rating 60 mw; Coil Windings—600 ohm, 2400 ohm, 9600 ohm
2. D.C. Relays with two form C contacts Type CMD 11D—base wiring; Pull-in sensitivity 60 mw; Coil Rating 80 mw; Coil Windings—450 ohm, 1890 ohm, 7300 ohm
3. A.C. Relays with one form C contact Type CMD 5A—base wiring; Pull-in sensitivity 80 MVA; Coil Rating 120 MVA; Coil Windings—540 ohm, 234 ohm, 1000 ohm, 3850 ohm and 6900 ohm

Contact ratings are 2 amps at 115 VAC.  
Contact points are gold-flashed silver.

## CAD SERIES

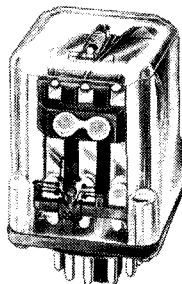


Contacts	10 Amp. Rating		
	SPDT	DPDT	3PDT
Relay Type	CAD5A10	CAD11A10	CAD14A10
6 volts a.c.			
12 volts a.c.	\$4.95	\$5.55	\$6.75
24 volts a.c.			
115 volts a.c.			
230 volts a.c.	\$5.50	\$5.95	\$7.15
Relay Type	CAD5D10	CAD11D10	CAD14D10
6 volts d.c.			
12 volts d.c.	\$4.95	\$5.55	\$6.75
24 volts d.c.			
110 volts d.c.	\$5.50	\$5.95	\$7.15

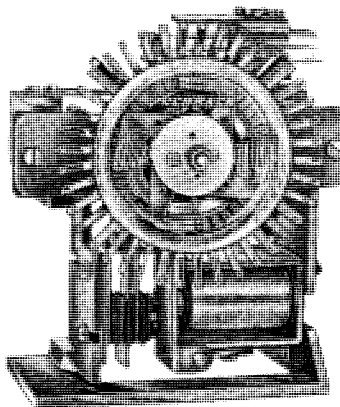
Same basic design as CA series; however, with clear plastic dust cover and octal-type plug-in base. Case is secured firmly to base by 4 "upset" plastic studs. Contact carrier plate is self-centering. Contact carrier is made of "KERIPOLE," a polyester material with glass fibre filling.

## CSD SERIES

A plate circuit relay, similar to the CAD Type; however with increased sensitivity (125 MW per movable arm).



Contacts	2 Amp. Rating		
	SPDT	DPDT	3PDT
Relay Type	CSD5	CSD11	CSD14
2500 ohms	\$5.20	\$5.60	\$6.80
5000 ohms	\$5.30	\$5.70	\$6.90
10,000 ohms	\$5.70	\$6.10	\$7.30



## ROTARY STEPPING SWITCH TYPE RT

The SCHRACK Rotary Stepping Switch is a combination of three reliable components:

1. Standard Relay with 1 Form C heavy-duty contact.
2. Ratchet driven Rotary Switch consisting of four banks of twelve or ten points each with sliding bifurcated wipers.
3. Ratchet driven Stepping Relay with two cams which actuate one Form C contact each.

**GENERAL CONSTRUCTION** The Schrack Rotary Stepping Switches have a highly efficient magnetic circuit and a driving mechanism designed for maximum operating safety. All components are mounted on a rigid die-cast light metal frame, and contacts permanently molded in a sturdy melamine plastic.

**ROTARY SWITCH** terminals are arranged in a circular pattern with four groups of twelve points each. An alternate version with 4 x 10 points is available for applications requiring decimal counting. Each group occupies a quadrant of the circle and contains a common bus which is connected to the twelve or ten insulated points in sequence by means of a sliding wiper as the switch is operated.

The sliding contacts are four bifurcated spring phosphor bronze wipers. The wiper contact assemblies are insulated electrically from each other and the wipers are of the non-bridging type.

**CONTACT RATING** The contacts of the rotary switch bank are capable of carrying .5 amps on a steady state basis and of interrupting .1 amps at 110 volts DC with a resistive load or .2 amps at 115 volts AC.

TYPE RT 304 — 4 x 12 Contact Points  
TYPE RT 404 — 4 x 10 Contact Points

Voltage	Driving Coil	Code No.	Price
12 Volts d.c.	17 ohms	RT 304-012	\$19.00
24 Volts d.c.	57 ohms	RT 304-024	\$19.00
48 Volts d.c.	280 ohms	RT 304-048	\$19.00
110 Volts d.c.	1290 ohms	RT 304-110	\$19.00

Same specifications and prices apply to Type RT 404.

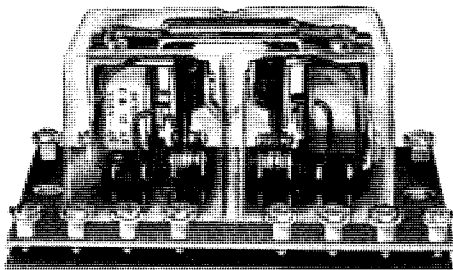
SEND FOR DISCOUNT SCHEDULE  
FOR FURTHER INFORMATION ASK FOR CATALOG

# SCHRACK ELECTRICAL SALES CORPORATION

NEW YORK, N. Y.

# SCHRACK RELAYS

## TYPE CBT LATCHING RELAY



### SPECIFICATIONS

A dual coil mechanical latching relay. Each relay operates on a momentary impulse on either coil and is held in the set position until released by an impulse on the other coil. Both coils must be for the same voltage and are continuously rated.

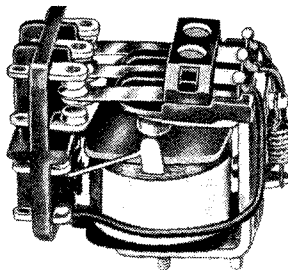
Contact rating: 10 amps. (Based on 600 operations per hour at 115 volts AC 60 cy. resistive load).

May be operated continuously at 1000 cycles per hour.

The CBT relays have a transparent dust cover and a sturdy base plate of insulating material. Screw-type terminals are provided for all contact and coil connections.

COIL			CONTACTS		
Voltage (Volts)	Resistance (Ohms)	Nominal Power	Arrangement	10 Amp. Rating	
				Type	Price
6 AC	2.9	5.5VA	4PDT	CBT17A10	\$10.60
12	10.5	5.5	4PDT		
24	42	5.5	4PDT		
115	1130	5.5	4PDT		
230	4100	5.5	4PDT	CBT17D10	9.65
6 DC	14	2.7W	4PDT		
12	54	2.7	4PDT		
24	220	2.7	4PDT		
110	4500	2.7	4PDT	CBT23A10	12.80
6 AC	2.9	5.5VA	6PDT		
12	10.5	5.5	6PDT		
24	42	5.5	6PDT		
115	1130	5.5	6PDT	CBT23D10	11.75
230	4100	5.5	6PDT		
6 DC	14	2.7W	6PDT		
12	54	2.7	6PDT		
24	220	2.7	6PDT	11.75	11.75
110	4500	2.7	6PDT		

## OPEN RELAY TYPE CA



Contacts	10 Amp. Rating		
	SPDT	DPDT	3PDT
Relay Type	CA5A10	CA11A10	CA14A10
6 volts a.c.	\$2.75	\$3.20	\$3.90
12 volts a.c.			
24 volts a.c.			
115 volts a.c.	\$3.15	\$3.60	\$4.30
230 volts a.c.			
Relay Type			
6 volts d.c.	\$2.75	\$3.20	\$3.85
12 volts d.c.			
24 volts d.c.			
110 volts d.c.	\$3.15	\$3.60	\$4.25

A robust and dependable open-type relay, with pierced solder lug terminals. Contact rating: 5 amps or 10 amps; according to contact material. Standard coils available: 6, 12, 24, 115, 230 volts a.c.; 6, 12, 24, 110 volts d.c.

Standard versions include 1, 2, or 3 Form C contacts. **Optional:** solder lugs for printed circuit boards or taper tabs for AMP-Connectors. All relays are available with AMP contacts.

## MINIATURE RELAY TYPE RK

A small and reliable, fast-acting open-type relay for a wide field of applications, including telephone equipment. May be fitted with a maximum of 18 contact springs (6 Form C or any other combination not exceeding 6 movable arms). A.C. and D.C. coils are available, using approximately 400 mW (500 mVA) per movable arm.



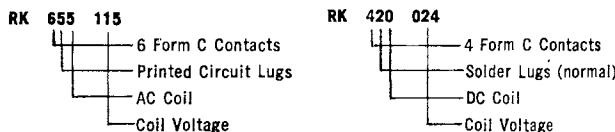
### CONTACT RATING

Fine Silver Contacts are rated at 2 amp. max., or 115 volts max. A.C. Special contacts (Palladium, gold/nickel etc.) are available on request. Standard fine silver contacts are gold flashed to prevent corrosion. Twin contacts also available on request. Contact pressure (standard figures) approx. 15-18 grams.

### COIL DATA FOR SOME TYPICAL RELAYS

RELAY TYPE	CONTACTS	COIL VOLTAGE	OHMS	APPROX. OPERATE VOLTAGE
RK 420 024	4 Form C	24 v. d. c.	350	19.2 volts
RK 425 024		24 v. d. c.	80	19.2 "
RK 420 110	6 Form C	110 v. d. c.	7000	88 "
RK 425 115		115 v. d. c.	2320	92 "
RK 620 024		24 v. d. c.	245	19.2 "
RK 625 024		24 v. d. c.	67	19.2 "
RK 620 110	110 v. d. c.	5000	88 "	
RK 625 115		115 v. d. c.	1460	92 "

The Code Numbers of the RK Relays consist of a 6 digit combination which is composed as follows:



List prices subject to usual discount.

TYPE	LIST PRICE	TYPE	LIST PRICE
RK 425 024 a.c.	\$4.30	RK 420 024 d.c.	\$4.17
RK 455 024 a.c.	4.47	RK 450 024 d.c.	4.34
RK 425 115 a.c.	4.75	RK 420 110 d.c.	4.84
RK 455 115 a.c.	4.91	RK 450 110 d.c.	5.01
RK 625 024 a.c.	5.05	RK 620 024 d.c.	4.88
RK 655 024 a.c.	5.30	RK 650 024 d.c.	5.14
RK 625 115 a.c.	5.48	RK 620 110 d.c.	5.65
RK 655 115 a.c.	5.73	RK 650 110 d.c.	5.90

For Further Information ask for New Catalog

SEND FOR DISCOUNT SCHEDULES  
FOR FURTHER INFORMATION ASK FOR CATALOG

**SCHRACK ELECTRICAL SALES CORPORATION**

NEW YORK, N. Y.



## RESISTORS

## ±1% PRECISION ® CARBOFILM AND ® CARBOMOLD RESISTORS

## CARBOFILM PRECISION RESISTORS



Precision deposited carbon resistors designed for circuits calling for the accuracy and stability of wire-wound resistors with the marked economy of carbon resistors. The exclusive Aeroglaze conformal coating offers mechanical protection superior to any other coating eliminating the need for special tubes, sleeves and jackets. Aeroglaze coating will meet all moisture requirements of MIL-R-10509B. Carbofilm resistors offer outstanding stability, low voltage coefficient, low capacitance and inductance in high frequency applications.

## CARBOFILM CHARACTERISTICS

**TESTING:** All Tests conducted in accordance with MIL-R-10509B requirements.

**TEMPERATURE COEFFICIENT:** Approximately 200 ppm per degree C in the lower resistance ranges and not exceeding 500 ppm per degree C in the highest values specified by MIL-R-10509B.

**MOISTURE RESISTANCE:** Will meet or surpass the requirements of MIL-R-10509B.

**LOAD LIFE:** When tested for more than 1,000 hours at full load operation in 40°C ambient temperature, maximum changes are less than 1% with an average change of less than 0.5%.

**TEMPERATURE CYCLING:** After 5 complete temperature cycles there is an average change of 0.21% with a maximum change of less than 0.5%.

**SHORT TIME OVERLOAD:** When subjected to 2.5 times the rated working voltage, but not exceeding 2 times the maximum rated voltage for 5 seconds, changes are less than 0.25% with an average change of 0.13%.

**LOW TEMPERATURE OPERATION:** Maximum changes are less than 1%.

**ACCURACY:** Guaranteed tolerance of plus/minus 1% at 25°C. (77°F.)

**AGING:** Due to manufacturing process and control, changes attributed to aging are negligible. The average change in resistance for self-aging is approximately 0.2% per year.

**VOLTAGE COEFFICIENT:** Does not exceed .002% per volt.

## CARBOMOLD PRECISION RESISTORS



A superior molded carbon-deposited resistor manufactured under the most exacting quality control standards and specifications assuring excellent performance under the most adverse operating conditions. Resistors are encapsulated in a strong reinforced moisture and heat resistant plastic for added stability, precision and reliability. Rated for full load operation at 70°C and linearly derated to zero load at 150°C. Will meet or exceed insulation resistance requirements of MIL-R-10509D.

## CARBOMOLD CHARACTERISTICS

**TESTING:** All tests conducted in accordance with MIL-R-10509C requirements.

**TEMPERATURE COEFFICIENT:** Extends from approximately 200 ppm per degree C in the lower resistance ranges to and not exceeding 500 ppm per degree C at the highest values specified by MIL-R-10509D.

**MOISTURE RESISTANCE:** Will meet or surpass the requirements of MIL-R-10509D.

**LOAD LIFE:** When tested for more than 1000 hours at full load operation in 70°C ambient temperature, maximum changes less than 1% with an average change of less than 0.5%.

**TEMPERATURE CYCLING:** After 5 complete temperature cycles there is an average change of 0.21% with a maximum change of less than 0.5%.

**SHORT TIME OVERLOAD:** When subjected to 2.5 times the rated working voltage, but not exceeding 2 times the maximum rated voltage for 5 seconds, changes are less than 0.25% with an average change of 0.13%.

**LOW TEMPERATURE OPERATION:** Maximum changes are less than 1%.

**ACCURACY:** Guaranteed tolerance of plus/minus 1% at 25°C.

**AGING:** Average change in resistance for self-aging, approximately 0.2% in a year.

**VOLTAGE COEFFICIENT:** Does not exceed .002% per volt.

For full technical information request Bulletin NPJ-115-16 Rev.

## CARBOFILM

TYPE	SIZES	STD. MIN. OHMS	STD. MAX. MEGOHMS	Availability		MIL-R-10509B Max DC Voltage	Equiv. to MIL-R-10509B			MARKING
				Comm. Value	MIL-BELL Value		Type	Char.	Tol.	
CPSX $\frac{1}{2}$	.203 x $\frac{1}{32}$	10	2.2	✓	✓	350	RN20	X	1%	RN20 Number
CPX $\frac{1}{2}$	.260 x $\frac{3}{32}$	2,210,000	5.0	✓		350	----	--	---	Type, Value, Tolerance
CPLX $\frac{1}{2}$	.260 x 1	5,100,000	7.5	✓		500	----	--	---	Type, Value, Tolerance
*CPX 1	.328 x $\frac{1}{16}$	10	15	✓	✓	500	RN25	X	1%	Type, Value, Tolerance and RN25 Number
**CPX 2	.328 x $2\frac{1}{16}$	50	100†	✓		750	RN30	X	1%	Type, Value, Tolerance and RN30 Number

† Only stock value above 50 megohms is 100 megohms furnished in ±2% tolerance.

\* Values from 10.1 meg to 15 meg will be furnished at ±2% only.

\*\* Values from 30.1 meg to 100 meg will be furnished at ±2% only.

## CARBOMOLD

## Carbomold Stocked in Mil-Bell Values Only

TYPE	SIZES	STD. MIN. OHMS	STD. MAX. MEGOHMS	MIL-R-10509D Max. DC Volt.	Equiv. to MIL-R-10509D			MARKING
					Type	Char.	Tol.	
CPM- $\frac{1}{8}$	.140 x .395	10	1.0	250	RN60	B	F	RN60 Number
CPM- $\frac{1}{4}$	.220 x .590	10	2.0	300	RN65	B	F	RN65 Number
CPM $\frac{1}{2}$	.250 x .745	10	2.49	350	RN70	B	F	Type, Value, Tolerance, RN70 Number
CPM-1	.375 x $1\frac{1}{4}$	10	5.11	500	RN75	B	F	Type, Value, Tolerance, RN75 Number
CPM-2	.375 x $2\frac{1}{2}$	30	10.0	750	RN80	B	F	Type, Value, Tolerance, RN80 Number





# RESISTORS

**±1% PRECISION® CARBOFILM AND® CARBOMOLD RESISTORS**

**AEROGLAZE® CARBOFILM ± 1% RESISTORS MIL-BELL VALUES\*\***

**COMMERCIAL STOCK VALUES ±1% TOLERANCE**

OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	MEG-OHMS	MEG-OHMS	MEG-OHMS	Net Price*
10.0	36	82	300	820	2950	7000	20,000	62,000	220,000	650,000	2.0	6.2	27.0				
11.0	39	85	330	850	3000	7450	22,000	65,000	225,000	680,000	2.2	6.5	30.0				
12.0	40	89.5	350	900	3300	7500	22,500	68,000	240,000	700,000	2.225	6.8	33.0				
12.5	43	90	360	910	3500	8000	24,000	70,000	250,000	750,000	2.4	7.0	36.0				
13.0	44.5	91	390	1000	3600	8200	25,000	75,000	270,000	800,000	2.5	7.5	39.0				
14.5	45	99.5	400	1100	3900	8500	27,000	80,000	300,000	820,000	2.7	8.0	43.0				
15.0	47	100	430	1200	4000	8950	30,000	82,000	330,000	850,000	3.0	8.2	47.0				
16.0	50	110	450	1250	4300	9000	33,000	85,000	350,000	900,000	3.3	8.5	50.0				
17.5	51	120	470	1300	4450	9100	35,000	90,000	360,000	910,000	3.5	9.0	100.0†				
18.0	55	130	500	1450	4500	9950	36,000	91,000	390,000		3.6	9.1					
20.0	56	150	510	1500	4700	10,000	39,000	100,000	400,000	MEGOHMS	3.9	10.0					
22.0	59.5	160	550	1600	5000	11,000	40,000	110,000	430,000		4.0	12.0					
22.5	60	175	560	1750	5100	12,000	43,000	120,000	450,000	1.0	4.3	12.5					
24.0	62	180	600	1800	5500	12,500	45,000	125,000	470,000	1.1	4.5	13.0					
25.0	65	200	620	2000	5600	13,000	47,000	130,000	500,000	1.2	4.7	15.0					
27.0	68	220	650	2200	5950	13,500	50,000	150,000	510,000	1.25	5.0	16.0					
29.5	70	225	680	2250	6000	15,000	51,000	160,000	550,000	1.3	5.1	18.0					
30.0	74.5	240	700	2400	6200	16,000	55,000	175,000	560,000	1.5	5.5	20.0					
33.0	75	250	750	2500	6500	17,500	56,000	180,000	600,000	1.6	5.6	22.0					
35	80	270	800	2700	6800	18,000	60,000	200,000	620,000	1.8	6.0	25.0					

\*Only stock value above 50 megohms is 100 megohms furnished in ±2% tolerance.

\*All new production will be furnished at ± 2% only for values in these ranges.

**MIL-BELL STOCK VALUES ±1% TOLERANCE**

**CARBOMOLD ± 1% RESISTORS MIL-BELL VALUES ONLY**

OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	MEG-OHMS	MEG-OHMS	MEG-OHMS	Net Price*
10.0	23.2	53.6	124	287	665	1540	3570	8250	19100	44200	102000	237000	549000	1.13	2.61	6.04		
10.2	23.7	54.9	127	294	681	1580	3650	8450	19600	45300	105000	243000	562000	1.15	2.67	6.19		
10.5	24.3	56.2	130	301	698	1620	3740	8660	20000	46400	107000	249000	576000	1.18	2.74	6.34		
10.7	24.9	57.6	133	309	715	1650	3830	8870	20500	47500	110000	255000	590000	1.21	2.80	6.49		
11.0	25.5	59.0	137	316	732	1690	3920	9090	21000	48700	113000	261000	604000	1.24	2.87	6.65		
11.3	26.1	60.4	140	324	750	1740	4020	9310	21500	49900	115000	267000	619000	1.27	2.94	6.81		
11.5	26.7	61.9	143	332	768	1780	4120	9530	22100	51100	118000	274000	634000	1.30	3.01	6.98		
11.8	27.4	63.4	147	340	787	1820	4220	9760	22600	52300	121000	280000	649000	1.33	3.09	7.15		
12.1	28.0	64.9	150	348	806	1870	4320	10000	23200	53600	124000	287000	665000	1.37	3.16	7.32		
12.4	28.7	66.5	154	357	825	1910	4420	10200	23700	54900	127000	294000	681000	1.40	3.24	7.50		
12.7	29.4	68.1	158	365	845	1960	4530	10500	24300	56200	130000	301000	698000	1.43	3.32	7.68		
13.0	30.1	69.8	162	374	866	2000	4640	10700	24900	57600	133000	309000	715000	1.47	3.40	7.87		
13.3	30.9	71.5	165	383	887	2050	4750	11000	25500	59000	137000	316000	732000	1.50	3.48	8.06		
13.7	31.6	73.2	169	392	909	2100	4870	11300	26100	60400	140000	324000	750000	1.54	3.57	8.25		
14.0	32.4	75.0	174	402	931	2150	4990	11500	26700	61900	143000	332000	768000	1.58	3.65	8.45		
14.3	33.2	76.8	178	412	953	2210	5110	11800	27400	63400	147000	340000	787000	1.62	3.74	8.66		
14.7	34.0	78.7	182	422	976	2260	5230	12100	28000	64900	150000	348000	806000	1.65	3.83	8.87		
15.0	34.8	80.6	187	432	1000	2320	5360	12400	28700	66500	154000	357000	825000	1.69	3.92	9.09		
15.4	35.7	82.5	191	442	1020	2370	5490	12700	29400	68100	158000	365000	845000	1.74	4.02	9.31		
15.8	36.5	84.5	196	453	1050	2430	5620	13000	30100	69800	162000	374000	866000	1.78	4.12	9.53		
16.2	37.4	86.6	200	464	1070	2490	5760	13300	30900	71500	165000	383000	887000	1.82	4.22	9.76		
16.5	38.3	88.7	205	475	1100	2550	5900	13700	31600	73200	169000	392000	909000	1.87	4.32	10.0		
16.9	39.2	90.9	210	487	1130	2610	6040	14000	32400	75000	174000	402000	931000	1.91	4.42			
17.4	40.2	93.1	215	499	1150	2670	6190	14300	33200	76800	178000	412000	953000	1.96	4.53			
17.8	41.2	95.3	221	511	1180	2740	6340	14700	34000	78700	182000	422000	976000	2.00	4.64			
18.2	42.2	97.6	226	523	1210	2800	6490	15000	34800	80600	187000	432000		2.05	4.75			
18.7	43.2	100	232	536	1240	2870	6650	15400	35700	82500	191000	442000		2.10	4.87			
19.1	44.2	102	237	549	1270	2940	6810	15800	36500	84500	196000	453000	MEGOHMS	2.15	4.99			
19.6	45.3	105	243	562	1300	3010	6980	16200	37400	86600	200000	464000		2.21	5.11			
20.0	46.4	107	249	576	1330	3090	7150	16500	38300	88700	205000	475000		2.26	5.23			
20.5	47.5	110	255	590	1370	3160	7320	16900	39200	90900	210000	487000	1.00	2.32	5.36			
21.0	48.7	113	261	604	1400	3240	7500	17400	40200	93100	215000	499000	1.02	2.37	5.49			
21.5	49.9	115	267	619	1430	3320	7680	17800	41200	95300	221000	511000	1.05	2.43	5.62			
22.1	51.1	118	274	634	1470	3400	7870	18200	42200	97600	226000	523000	1.07	2.49	5.76			
22.6	52.3	121	280	649	1500	3480	8060	18700	43200	100000	232000	536000	1.10	2.55	5.90			

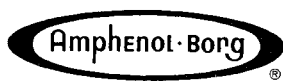
\*\*Prices listed are for MIL-BELL values only. For commercial standard values listed in catalog IDC 563 add 10% to the above prices in the appropriate columns. For prices on any values other than MIL-BELL or catalog commercial standard values contact your authorized Aerovox Industrial Distributor.

**PACKAGING:**

**Commercial Stock Values**—Small quantities packaged individually in sealed plastic tubes. Also available in larger quantities, protected by paper sleeves and packed in bulk.

**Mil Bell Stock Values**—Small quantities packaged individually in sealed plastic tubes. Also available in larger quantities packed in bulk.

**\*Request OEM Price in quantities of 25-49, 50-99, 100-249, 250-499 and 500-999**

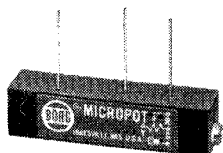


# TRIMMERS, POTENTIOMETERS, DIALS AND MOTORS



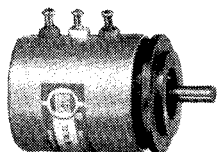
## MICROPOT® TRIMMING POTENTIOMETERS

Borg produces 10 complete series of Micropot trimmers—from subminiature square trimmers to standard sizes. Borg trimmers are offered in general purpose, humidity-proof, high temperature, or humidity-and-high-temperature models, in a wide choice of resistance ranges and end terminals. Borg trimmers have a 40-turn adjustment screw for an extremely fine degree of selectivity. Wire-wound resistance elements are up to 50% longer than competitive types.



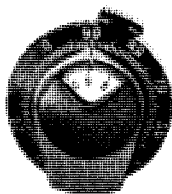
## MICROPOT® CARBON TRIMMERS

Borg's Micropot carbon trimmers provide infinite resolution with a wide range of resistance values.



## MICROPOT® PRECISION POTENTIOMETERS

Borg offers a complete line of Micropot potentiometers for precision application—military and commercial—ranging from ½-inch to 3-inches. They are available in single-turn or multi-turn models with high resolution and a wide range of resistance values.



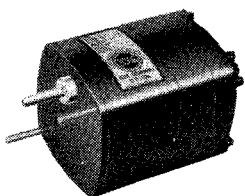
## MICRODIAL® CONCENTRIC DIALS

Engineers consider the Borg Microdial line the most comprehensive in the industry. Concentric scale Microdials are available in three basic series. Each features epicyclic gearing to eliminate ambiguity, and large numerals for high readability. Each dial is available with or without brake. Most Microdial models are offered in a choice of color combinations for coding.



## MICRODIAL® DIGITAL DIALS

Borg's digital Microdial line includes three, four, or five digit models. The 1300 Series has optional 10, 100, or 1000 turns. The 10-turn 1330 Microdial has internal illumination, convex lens, and is available with or without brake. Borg dials offer 1000:1 indexing accuracy, and are virtually free from accidental setting changes.

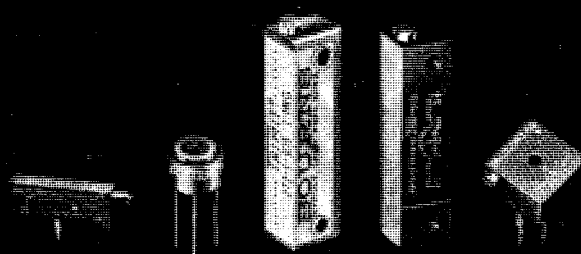


## SUB-FRACTIONAL MOTORS

Borg's line of sub-fractional h.p. motors includes synchronous, induction, or low inertia types, in two or four pole models. Borg motors speed/torque ratios meet the most exacting requirements of instruments, controls, and related products.

**AMPHENOL-BORG Distributor Division** / Amphenol-Borg Electronics Corporation

BROADVIEW, ILLINOIS



# BOURNS TRIMPOT<sup>®</sup> POTENTIOMETERS

THE INDUSTRY'S LARGEST SELECTION OF ADJUSTMENT POTENTIOMETERS

33 Standard Models / 4 Terminal Types / 3 Mounting Styles

Military ■ Industrial ■ Commercial ■ Wirewound ■ RESISTON<sup>®</sup> Carbon

Rectangular ■ Square ■ Precision Rotary ■ Humidity-Proof ■ High-Temperature ■ Special-Purpose

## Only Bourns TRIMPOT Potentiometers Give You All Of These Outstanding Features

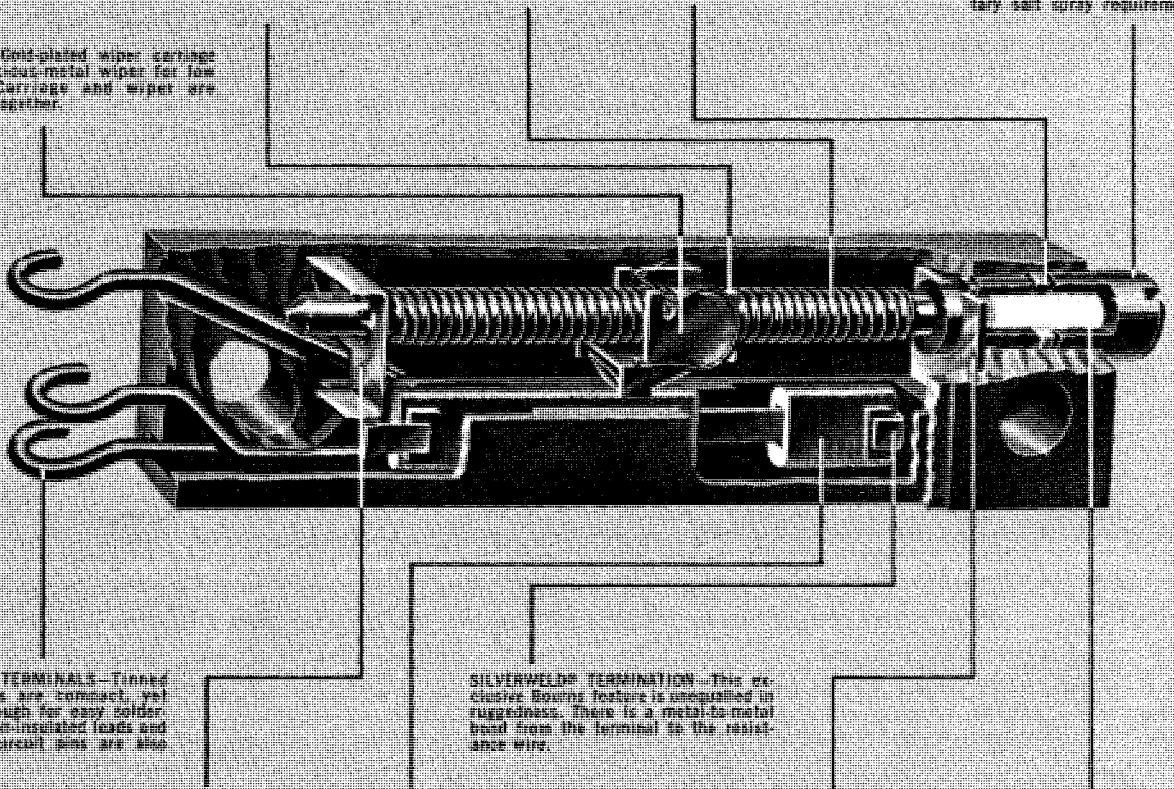
**SPRINGS**—Carriage spring provides positive no-slip performance during rotation plus a reliable idling feature at mechanical limits of travel.

**LEADSCREW**—Stainless steel leadscrew is corrosion-resistant.

**O-RING**—Silicone rubber O-ring seals potentiometer against humidity, withstands high temperature.

**SHAFT HEAD**—Stainless steel with machined slot for screwdriver adjustment. Meets military salt spray requirements.

**WIPER**—Gold-plated wiper carriage and precision metal wiper for low noise. Carriage and wiper are welded together.



**SOLDER TERMINALS**—Tinned terminals are compact, yet large enough for easy soldering. Teflon-insulated leads and printed circuit pins are also available.

**SILVERWELD<sup>®</sup> TERMINATION**—This exclusive Bourns feature is unequalled in ruggedness. There is a metal-to-metal bond from the terminal to the resistance wire.

**PICK-OFF**—Precision metal, positive-contact pick-off assures wiper continuity.

**ELEMENT**—Special ceramic element used for maximum reliability is precision wound with low-temperature-coefficient resistance wire.

**SHAFT RETAINER**—Shaft is locked in place for top performance under extreme shock, vibration and acceleration.

**SHAFT INSULATOR**—High dielectric strength, ceramic insulator isolates shaft head from internal circuits.

This cutaway of Model 224 shows the typical high quality to be found in all Bourns TRIMPOT potentiometers, although some features may vary from model to model.

Turn Page for Complete Listing →

**FOR BOURNS<sup>®</sup> PRECISION POTENTIOMETERS, SEE PAGES 1166, 1167**

# BOURNS TRIMPOT™ ADJUSTMENT POTENTIOMETERS

Description	Name	Model	Resistance (Ohms)③	Terminals ①	End Setting (%)	Tolerance (%)⑤	Power Rating (Watt)	Max. Operating Temp. (°C)	Adj. Turns	Humidity Proof⑦ (Mil Spec)	Size (Inches)			Standard Resistances (Ohms)	Price②			
											H	W	L		1	9	10-24	25-49
<b>HUMIDITY-PROOF</b> GENERAL PURPOSE RESISTOR CARBON ELEMENT		TRIMPOT	235	20K to 1 Meg	L*,S*,P	0-1.0	±20	0.25	125	22	Yes	23/64	19/64	1-11/32	20K-1 Meg	7.02	6.50	5.85
GENERAL PURPOSE WIREWOUND		TRIMPOT	236	10 to 1K 2K to 50K 100K	L*,S*,P L*	0-0.2 0-0.1 0-5.0	±10	0.80	135	25	Yes	23/64	19/64	1-11/32	10-10K 20K-25K 50K 100K	7.02 8.64 9.18 11.34	6.50 8.00 8.50 10.50	5.85 7.20 7.65 9.45
MICRO-MINIATURE HIGH TEMPERATURE WIREWOUND		TRIMPOT	3000	50 to 20K	P	0-0.1	±10	0.50	175	15	Yes	5/16	5/32	3/4	50-10K 20K	9.72 10.80	9.00 10.00	8.10 9.00
HIGH TEMPERATURE RESISTOR CARBON ELEMENT		TRIMPOT	3001	20K to 1 Meg	P	0-1.0	±20	0.20	150	15	Yes	5/16	5/32	3/4	20K-1 Meg	9.18	8.50	7.65
SUB-MINIATURE HIGH TEMPERATURE WIREWOUND		TRIMPOT	220	10 to 30K	L*,W*	0-0.1	±10	1.00	175	15	Yes	5/16	3/16	1	10-10K 20K-30K	8.64 10.26	8.00 9.50	7.20 8.55
HIGH TEMPERATURE WIREWOUND		TRIMPOT	224	10-1K 2K to 50K 100K	L*,S*,P	0-0.2 0-0.1 0-5.0	±5	1.00	175	22	Yes	5/16	3/16	1-1/4	10-10K 20K-25K 50K 100K	7.02 8.64 9.18 11.34	6.50 8.00 8.50 10.50	5.85 7.20 7.65 9.45
ULTRA-RELIABLE HIGH TEMPERATURE WIREWOUND		TRIMPOT	224-500	100-1K 2K to 20K	L, P	0-0.2 0-0.1	±5	0.50	150	22	Yes	5/16	3/16	1-1/4	100-10K 20K	27.00 30.00	13.50 15.00	12.15 13.50
HIGH TEMPERATURE RESISTOR CARBON ELEMENT		TRIMPOT	3051	20K to 1 Meg	L*,S*,P	0-1.0	±20	0.25	150	22	Yes	5/16	3/16	1-1/4	20K-1 Meg	7.02	6.50	5.85
HIGH TEMPERATURE PALIRIUM ELEMENT		TRIMPOT	3052	100K to 1 Meg	L*, P	0-0.1	±10	1.00	175	25	Yes	5/16	3/16	1-1/4	100K-1 Meg	5.94	5.50	4.95
HIGH TEMPERATURE PALIRIUM ELEMENT		TRIMPOT	3053	2 to 10 20 to 100	P L*,P	1-15	±10	0.50	175	25	Yes	5/16	3/16	1-1/4	(L) 20-100 (P) 2.5 10-100	5.94 2.5 5.94	5.50 9.18 5.50	4.95 8.50 4.95
HIGH TEMPERATURE WIREWOUND		TRIMPOT	3010	10 to 1K 2K to 50K 100K	L*, P	0-0.2 0-0.1 0-5.0	±5	1.00	175	25	Yes	5/16	9/32	1-1/4	10-10K 20K-25K 50K 100K	7.02 8.64 9.18 11.34	6.50 8.00 8.50 10.50	5.85 7.20 7.65 9.45
HIGH TEMPERATURE RESISTOR CARBON ELEMENT		TRIMPOT	3011	20K to 1 Meg	L*, P	0-1.0	±20	0.25	150	22	Yes	5/16	9/32	1-1/4	20K-1 Meg	7.02	6.50	5.85
HIGH TEMPERATURE PALIRIUM ELEMENT		TRIMPOT	3012	100K to 1 Meg	L*, P	0-0.1	±10	1.00	175	25	Yes	5/16	9/32	1-1/4	100K-1 Meg	5.94	5.50	4.95
MICRO-MINIATURE WIREWOUND		BOURNS	3280	10 to 50K	L, P, W	0-0.1	±5	1.00	175	25	Yes	13/64	3/8	3/8	10-10K 20K-25K 50K	7.56 9.18 9.72	7.00 8.50 9.00	6.30 7.65 8.10
MICRO-MINIATURE RESISTOR CARBON ELEMENT		BOURNS	3281	20K to 1 Meg	L, P, W	0-1.0	±20	0.5	150	25	Yes	13/64	3/8	3/8	20K-1 Meg	7.56	7.00	6.30
SUB-MINIATURE HIGH TEMPERATURE WIREWOUND		TRIMPOT	3250	10 to 50K	L P, W	0-0.1	±5	1.00	175	25	Yes	3/16 7/32	1/2 1/2	1/2 1/2	10-10K 20K-25K 50K 10-10K 20K-25K 50K	6.71 7.56 10.01 7.23 7.97 10.53	6.22 7.00 9.27 6.69 7.38 9.75	5.60 6.30 8.34 6.02 6.64 8.78
SQUARE HIGH TEMPERATURE RESISTOR CARBON ELEMENT		TRIMPOT	3251	20K to 1 Meg	L P, W	1.0	±20	0.50	150	25	Yes	3/16 7/32	1/2 1/2	1/2 1/2	20K-1 Meg	7.83	7.25	6.53

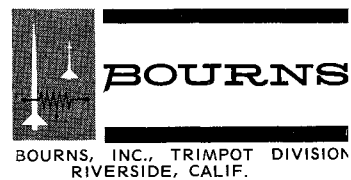
FOR BOURNS® PRECISION POTENTIOMETERS, SEE PAGES 1166, 1167

# LARGEST SELECTION, LONGEST RECORD OF RELIABILITY

Description	Name	Model	Resistance (Ohms) ③	Terminals ①	Setting End (%)	Tolerance (%) ④	Power Rating (Watt)	Max. Operating Temp. (°C)	Adj. Turns	Humidity Proof ⑤ (Mil Spec)	Size (Inches)			Standard Resistances (Ohms)	Price ②			
											H	W	L		1	9	10-24	25-49
<b>UNSEALED</b>																		
GENERAL PURPOSE WIREWOUND		TRIMPOT ⑥	200 10 to 50K 100K	L*, S*, P L*	0-0.7 ⑦ 0-5.0	±10	0.25	105	25	Steady State Only	5/16	1/4	1-1/4	10-10K 20K-25K 50K 100K	4.86 6.48 7.56 9.18	4.50 6.00 7.00 8.50	4.05 5.40 6.30 7.65	
GENERAL PURPOSE RESISTON CARBON ELEMENT		TRIMPOT	215 20K to 1 Meg	L*, S*, P	0-1.0	±20	0.25	125	22	Steady State Only	5/16	1/4	1-1/4	20K-1 Meg	4.86	4.50	4.05	
HIGH TEMPERATURE WIREWOUND		TRIMPOT	260 10 to 1K 2K to 50K 100K	L*, S*, P L*	0-0.2 ⑦ 0-0.1 0-5.0	±10	1.00	175	25	Steady State Only	5/16	1/4	1-1/4	10-10K 20K-25K 50K 100K	5.94 7.56 8.10 9.72	5.50 7.00 7.50 9.00	4.95 6.30 6.75 8.10	
<b>SINGLE-TURN</b>																		
MICRO-MINIATURE HIGH TEMPERATURE HUMIDITY-PROOF WIREWOUND		BOURNS ⑧	3300 10 to 20K	P S	0-1.0	±5	0.50	175	1	Yes	5/16 dia. x 3/16 5/16 dia. x 15/32			10-10K 20K-25K 10-10K 20K	5.94 7.56 8.91 10.53	5.50 7.00 8.25 9.75	4.95 6.30 7.43 8.78	
MICRO-MINIATURE HIGH TEMPERATURE HUMIDITY-PROOF RESISTON CARBON ELEMENT		BOURNS	3301 10K to 1 Meg	P S	0-1.0	±20	0.25	150	300°	Yes	5/16 dia. x 3/16 5/16 dia. x 15/32			10K-1 Meg 10K-1 Meg	5.94 8.91	5.50 8.25	4.95 7.43	
SUB-MINIATURE SINGLE-TURN WIREWOUND		BOURNS	3367 10 to 20K	P S	0-1.0	±5	0.50	105	1	Steady State Only	1/2 dia. x 15/64 1/2 dia. x 15/32			10-20K 10-20K	4.86 5.67	4.50 5.25	4.05 4.73	
SUB-MINIATURE SINGLE-TURN RESISTON CARBON ELEMENT		BOURNS	3368 20K to 1 Meg	P S	0-1.0	±20	0.25	105	1	Steady State Only	1/2 dia. x 15/64 1/2 dia. x 15/32			20K-1 Meg 20K-1 Meg	5.94 6.75	5.50 6.25	4.95 5.63	
<b>COMMERCIAL</b>																		
COMMERCIAL WIREWOUND		TRIMIT ⑨	271 273 275	L* S* P	0-2.0	±10	0.25	85	25	No	5/16	1/4	1-1/4	50-10K 20K	3.18 4.32	2.95 4.00	2.65 3.60	
COMMERCIAL RESISTALOY CARBON ELEMENT		TRIMIT	272 274 276	L* S* P	0-7.5	±20	0.20	85	25	No	5/16	1/4	1-1/4	20K-1 Meg	3.78	3.50	3.15	
COMMERCIAL WIREWOUND		E-Z-TRIM ⑩	3067 100 to 20K	S, P	0-2.0	±10	0.50	85	15	No	23/64	9/32	1	100-20K	1.85	1.71	1.54	
COMMERCIAL CARBON ELEMENT		E-Z-TRIM	3068 20K to 1 Meg	S, P	0-5.0	±20	0.20	85	15	No	23/64	9/32	1	20K-1 Meg	1.85	1.71	1.54	
<b>SPECIAL-PURPOSE</b>																		
HIGH-POWER (2-WATT) HIGH TEMPERATURE WIREWOUND		TRIMPOT	207 100 to 100K	L*	0-0.2 ⑦	±10	2.00	175	25	No ⑪	13/16	9/32	1-1/4	100-50K 100K	10.26 11.88	9.50 11.00	8.55 9.90	
HIGH-POWER (3 1/2-WATT) HUMIDITY-PROOF		TRIMPOT	3020 100 to 50K	L*	0-0.1 ⑦	±5	3.75	200	25	Yes	21/64	1/4	1-1/4	100-10K 20K-25K 50K	14.04 15.66 16.20	13.00 14.50 15.00	11.70 13.05 13.50	
DUAL-ELEMENT WIREWOUND		TWINPOT ⑫	209 10 to 1K 2K to 50K	L*	0-0.2 ⑦ 0-0.1	±10	0.25 (each element)	105	25	No ⑪	5/16	1/2	1-1/4	10-10K 20K-25K 50K	12.96 14.58 16.20	12.00 13.50 15.00	10.80 12.15 13.50	
HIGH-POWER (15-WATT) HIGH TEMPERATURE WIREWOUND		TRIMPOT	3030 10 to 10K	L	0-5.0	±10	15	265	25	No	1.5/64	33/64	1-17/64	10-10K	12.96	12.00	10.80	
RADIATION PROOF WIREWOUND		TRIMPOT	3040 500 to 20K	W	0-1.0	±10	5.00	350	17	No	3/8	9/64	1-1/4	500-20K	27.00	25.00	22.50	

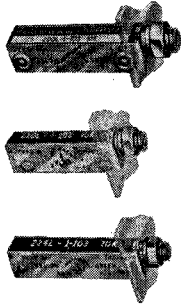
- ① Key to terminal types:  
L = Insulated stranded leads.  
S = Solder lugs (includes panel mounting bushing on Models 3367S, 3368S, 3300S & 3301S only).  
P = Printed circuit pins.  
W = Uninsulated wires (edge mounting 3250, 3251, 3280 & 3281).
- ② Franchised local distributors quote factory prices through 500 pieces. Contact factory for prices in higher quantities.
- ③ The following resistances are standard if they fall within the limits listed: Wirewound—10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K, 25K, 50K, 100K, RESISTON, RESISTALOY—10K, 20K, 50K, 100K, 200K, 500K, 750K, 1 Meg, PALIRIUM—2, 5, 10, 20, 50, 100, 100K, 200K, 500K, 750K, 1 Meg. Other resistances available on special order.
- ④ Or 0 to 0.5 ohms, whichever is greater.
- ⑤ Or 0 to 1.0 ohms, whichever is greater.

- ⑥ Closer tolerances available on request, except commercial models.
- ⑦ All models are sealed against sand and dust.
- ⑧ Humidity-proof version available on special order. Contact factory for part number, price and delivery.
- ⑨ BOURNS, TRIMPOT, TWINPOT, TRIMIT, E-Z-TRIM, RESISTALOY, RESISTON, PALIRIUM, SILVERWELD, KNOBPOT are registered trademarks of Bourns, Inc. Other products made by Bourns, Inc., are identified by trademarks which include: TRIMISTOR, TRIMM, MIL-E-TRIM, CARBOLON, PANLTRIM, MILISEAL, RESISTRON, CLOCKPOT. Bourns, Inc., is the owner of rights under the following listed United States Letters Patents relating to certain of its adjustment potentiometers: 2,706,230 / 2,777,926 / 2,805,307 / 2,831,949 / 2,873,337 / 2,882,375 / 2,922,976 / 2,935,716 / 2,945,198 / 2,946,975 / 2,952,625 / 2,983,718 / 3,010,092 / 3,018,458 / 2,958,569. Other patents pending. Certain Bourns products are under issued and pending foreign patents.
- ⑩ End setting varies from 1 to 15% to account for lead resistance.
- ⑪ 1963 BOURNS, INC. \*Panel-mount units available. See next page.



**FOR BOURNS® PRECISION POTENTIOMETERS, SEE PAGES 1166, 1167**

# BOURNS TRIMPOT® PANEL-MOUNTING UNITS AND MOUNTING HARDWARE

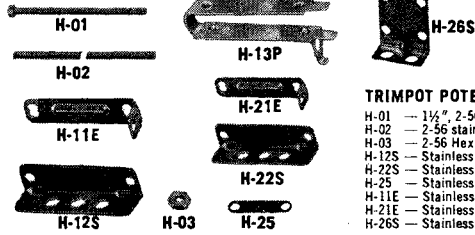


### PANEL MOUNTING

\*Models so designated are available with the added convenience of panel mounting. Unique design permits quick factory conversion of "off-the-shelf" units. Clip brackets, mounting brackets and mounting screws are available for other mounting requirements.

add to price  
of basic unit

209	2.16	2.00	1.80
All others	.81	.75	.68

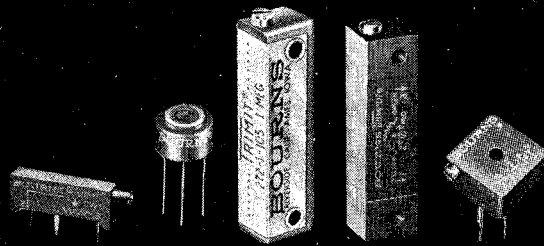


### TRIMPOT POTENTIOMETER MOUNTING HARDWARE

- H-01 — 1½" 2-56 machine screw
- H-02 — 2-56 stainless steel rod stock
- H-03 — 2-56 Hex nut, stainless steel for use on H-01 and H-02
- H-12S — Stainless steel side bracket for models with 1" mounting centers
- H-22S — Stainless steel side bracket for models with ¾" mounting centers
- H-25 — Stainless steel stacking straps for models with 0.520" mounting centers
- H-11E — Stainless steel end bracket for models with 1" mounting centers
- H-21E — Stainless steel end bracket for models with ¾" mounting centers
- H-26S — Stainless steel side bracket for models with 0.520" mounting centers

IMMEDIATE DELIVERY, TECHNICAL SERVICE—UNITS STOCKED THROUGHOUT THE WORLD

# BOURNS TRIMPOT®



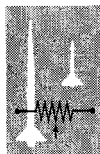
# POTENTIOMETERS

THE INDUSTRY'S  
LARGEST SELECTION OF  
ADJUSTMENT POTENTIOMETERS

33 Standard Models / 4 Terminal Types / 3 Mounting Styles

- Military ■ Industrial ■ Commercial ■ Wirewound
- RESISTON® Carbon ■ Rectangular ■ Square ■ Precision Rotary
- Humidity-Proof ■ High-Temperature ■ Special-Purpose

If it's TRIMPOT®, it's BOURNS



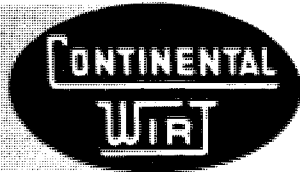
**BOURNS**

BOURNS, INC., TRIMPOT DIVISION  
RIVERSIDE, CALIF.

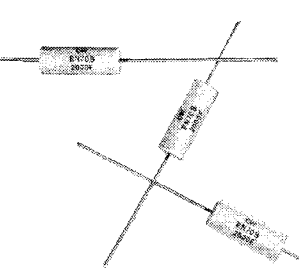
**FOR BOURNS® PRECISION POTENTIOMETERS, SEE PAGES 1166, 1167**



**Precision Film Resistors, Composition Resistors,  
Potentiometers, Spark Suppressors  
and Switches**

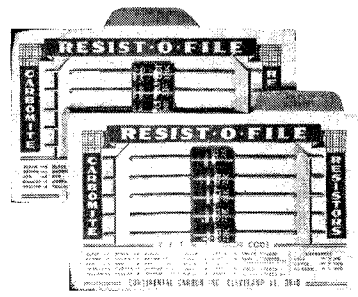


**There's long life and superior performance behind every C-W component  
—meeting highest quality and reliability standards at a moderate cost.**



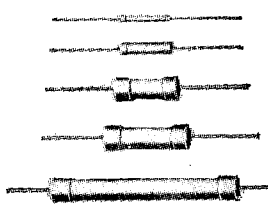
**Molded Deposited Carbon Precision Film Resistors**

C-W molded carbon film resistors are designed and manufactured to meet or exceed performance requirements of MIL-R-10509E. Available: 1/8 W. thru 1 W.; 10 ohms thru 50 megohms. Request Bulletin 2023.



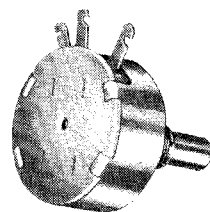
**Carbomite Resistors**

Insulated fixed composition resistors for replacement and service applications, 1/4 thru 2 watts. Available as Type "M" packaged in bulk. Also, Type "MR" consisting of five Type "M" resistors of one resistance value and tolerance mounted on one 3x5 index card, ten cards per package. File drawers and storage cabinets for Type "MR" resistors available. Request Bulletin 2047



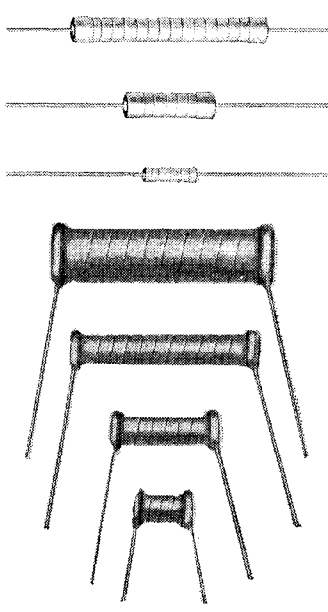
**Coated Deposited Carbon Precision Film Resistors**

C-W coated deposited carbon film resistors — while being designed and manufactured to meet or exceed characteristic "X" requirements of MIL-R-10509, are more modestly priced than molded resistors. Available: 1/8 W. thru 2 W; 10 ohms thru 100 megohms. Request Bulletin 2045.



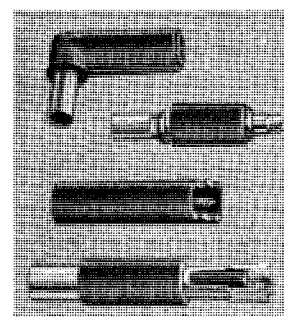
**Wire-Wound Controls**

Available from 3/4" O.D., 2 watt trimmer control thru 5 watt phenolic housed controls. Available with conventional single or dual element for "L" pad and similar applications. Shafts, bushings, mounting hardware and other features available to meet your specific requirements. Request Bulletins 2009 and 2055.



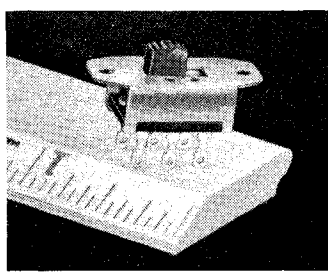
**Nobeloy and Nobelette Metal Film Precision Resistors**

For applications where fine precision and good stability must be complemented with low extremes in resistance range, or, low noise characteristics, at a moderate cost. Metallic resistance element deposited on low loss ceramic core, is protected by rugged vitreous enamel coating. Available: 1/2 W. thru 5 W.; less than 1 ohm thru 15 megohms. Request Bulletin 302.



**Automotive and Oil Burner Spark Suppressors**

For suppression of radio and television noise interference due to ignition spark discharge at plugs and high tension distributor; and due to ignition discharge action of oil burner igniting coil. Complete line of resistive type suppressors. Request Bulletin 125.



**Slide Switches**

Full line of slide switches in current ratings from .5 amp thru 10.0 amps; one pole thru 4 poles; 2 position thru 4 position; detent action or spring return. Also midget "swidget" where space is limited. Request Bulletins 2039 and 2054 for full technical details.

Your C-W distributor can supply prices, and bulletins mentioned above — also details on the convenient RESIST-O-FILE stocking plan for composition resistors.



**CONTINENTAL-WIRT ELECTRONICS CORP.**  
Philadelphia, Pa. 19144



# Prize Crop of Precision Potentiometers

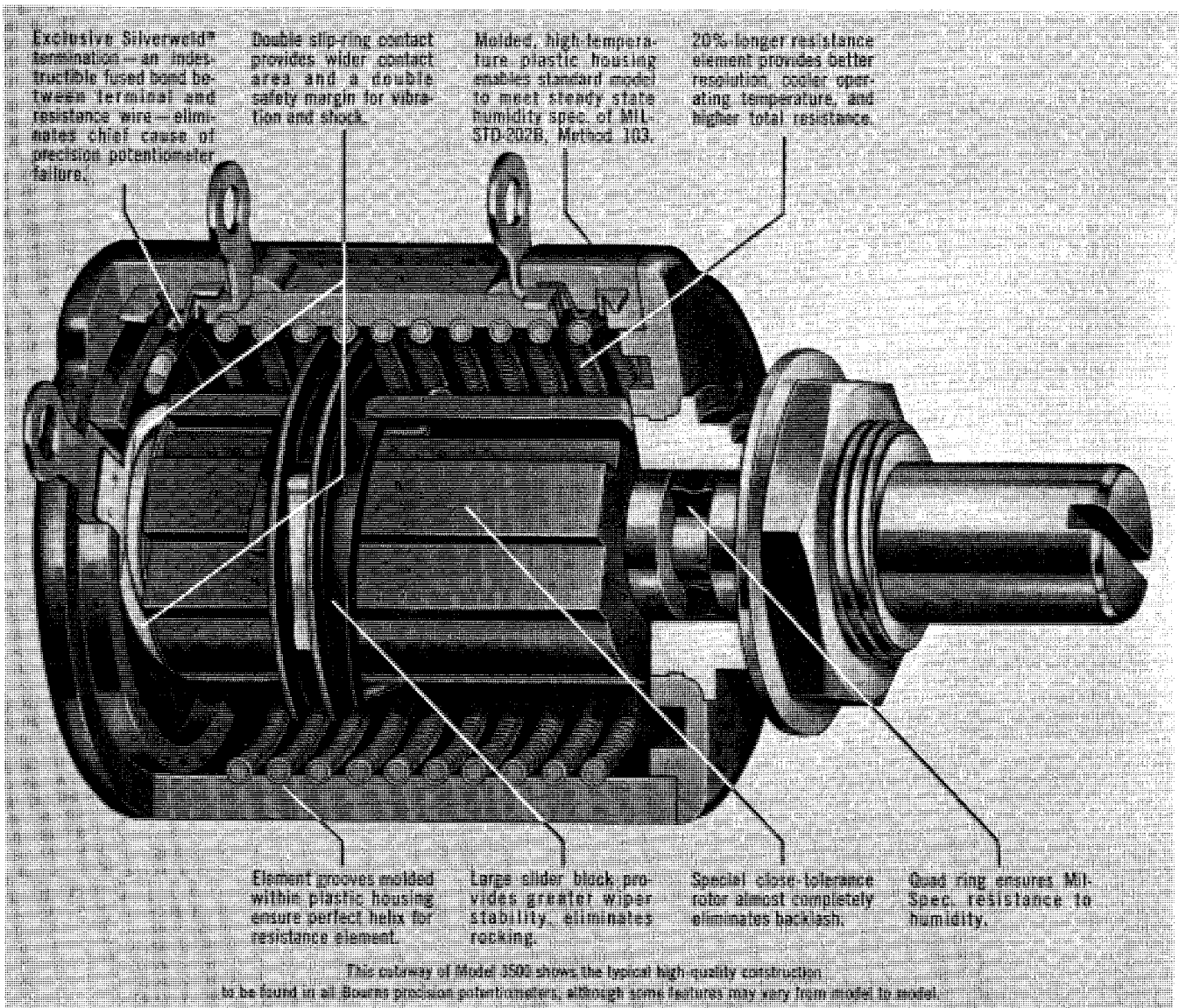
With smaller housings, higher resistances, better linearity, finer resolution, and higher operating temperatures than any other line.

Now you can obtain a 25 to 40% increase in total resistance together with standard linearity as low as 0.2% and resolution as fine as 0.01% — in a potentiometer that's shorter than any competitive unit. Our 10-turn Model 3500, for example, is just 1" long, a full 1/2" shorter than units available elsewhere. The secret: new design techniques including a thin-wall molded plastic case and reduced helix pitch that let us put a 20%-longer resistance element in a shorter package. The new case also improves heat dissipation, thus increasing power-handling ability and raising the maximum operating temperature 20°C above most poten-

tiometers available elsewhere. Sealed against humidity, these units exceed steady-state requirements, and most can even be specified to meet MIL-STD-202B, Method 106 (cycling humidity). Reliability is further enhanced by the virtually indestructible Bourns Silverweld® termination.

Units are individually inspected and subjected to the stringent double-check of the Bourns Reliability Assurance Program. Prices are competitive and delivery is immediate. Write today for complete technical data.

Don't MIL-SPECulate — SPECify Bourns!



**FOR BOURNS® ADJUSTMENT POTENTIOMETERS, SEE PAGES 1161-1164**

SECTION 4700



	MODEL NUMBER	BODY DIAMETER (inches)	BODY LENGTH (inches)	NUMBER TURNS	TR RANGE (ohms)	STD. TR TOL. (%)	STD. LINEARITY (%)	POWER (watts)	HUMIDITY PROOF (mil spec)
<b>BUSHING MOUNT</b>	3400	1 <sup>13</sup> / <sub>16</sub>	1.75	10	100-500K	±3	±0.25	5.0 @ 40°C	steady state
	3500	7/8	1.00	10	100-500K	±3	±0.20	2.0 @ 70°C	steady state*
	3510	7/8	0.549	3	50- 50K	±3	±0.30	1.0 @ 70°C	steady state*
	3520	7/8	0.678	5	50- 75K	±3	±0.30	1.5 @ 70°C	steady state*
	3530	7/8	0.487	1	50- 50K	±3	±0.50	1.0 @ 70°C	steady state*
	3700	1/2	1.00	10	100-250K	±5	±0.25	1.0 @ 70°C	steady state*
<b>LOW COST, BUSHING MOUNT</b>	3507	7/8	1.125	10	100-100K	±5	±0.50	2.0 @ 25°C	steady state
	3707	1/2	1.00	10	100- 50K	±10	±1	1.0 @ 40°C	steady state
<b>SERVO MOUNT</b>	3550	7/8	1.58	10	100- 50K	±3	±0.20	2.5 @ 70°C	steady state*
	3560	7/8	1.046	3	50-100K	±3	±0.25	1.5 @ 70°C	steady state*
	3570	7/8	1.187	5	50-250K	±3	±0.25	2.0 @ 70°C	steady state*
	3580	7/8	0.606	1	100- 50K	±3	±0.50	1.0 @ 70°C	steady state*
	3750	1/2	1.187	10	100-250K	±5	±0.25	1.0 @ 70°C	steady state*
<b>KNOBPOT®</b>	3600	3/4	1.00	10	100-250K	±5	±0.50#	1.5 @ 25°C	steady state
	3640	1 1/4	1.5	10	500-500K	±3	±0.10#	2.5 @ 25°C	steady state

\*Method 106 cycling humidity optional. #Standard dial accuracy, including linearity

**KNOBPOT® POTENTIOMETERS**



Model 3600

Precision potentiometer, clock readout dial and knob in a single, compact package. Mounts in front of panel. See specs above.



Model 3640

KNOBPOT Sr. Potentiometer—similar to Model 3600, but more accurate and slightly larger. See specs above.

**KNOBPOT POTENTIOMETER ACCESSORIES**



COLORED PLASTIC SNAP RINGS available in red, yellow, blue, green and white per MIL-STD-595.



STANDARD MIL-SPEC 1"-DIA. SLIP-OVER KNOBS of plastic, available in MIL-SPEC red, yellow, blue, green, black, gray. Available for Model 3600 only.



STAINLESS STEEL SKIRTS (for use without brake) to add high-polish glamour.



STAINLESS STEEL LOCKING BRAKE with plastic handles for Model 3600 snaps easily into place between potentiometer and panel. All-plastic friction brake easily slips over Model 3640.



STAINLESS-STEEL, PANEL-RECESSED MOUNTING BRACKET permits recessio of dial for special panel requirements

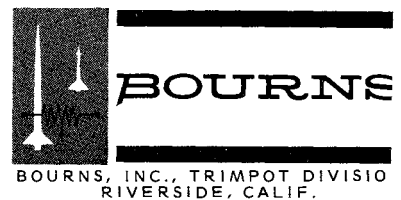
**TURNS-COUNTING DIALS**



Easy-to-read vernier dials requiring only 1" of panel space are available for all Bourns precision potentiometers (except KNOBPOT units, which incorporate their own readout). Easily mounted—no extra panel holes needed; can be set to less than .1% of total travel. Locking device (optional) positively prevents shift in setting. Anodized finish, black or clear.

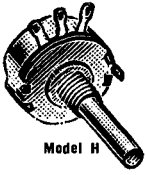


NEW 10-TURN H-351 SERIES TURNS-COUNTING DIAL measures only 1/2" dia. by 3/8" long, fits 1/8" or 3/32" diameter shafts. Features unique clock-face readout for higher readability; has continuous, full-gear engagement. Extremely simple to install. Available with or without slip-over lock.



Centralab.

# Controls, Attenuators



Model H

### HOT-MOLDED CARBON POTENTIOMETERS

Offer greatly increased high voltage stability due to wide clearance between bushing and collector track. Free from contamination of dirt due to elevated resistance track. Exceptionally long noise-free operation.

### MODEL 12 (2-WATT) HOT MOLDED POTENTIOMETERS

Centralab RV4 Style Hot Molded Composition Potentiometers are manufactured to meet the requirements of MIL-R-94B. These "HOT MOLDED" Potentiometers offer greatly increased high voltage stability due to wide clearance between bushing and collector track; greater freedom from contamination from dirt due to elevated resistance track and exceptionally long noise-free operation. Completely enclosed construction permits encapsulation or potting without affecting operation. CERTIFIED TEST DATA AND LOT IDENTIFICATION AVAILABLE UPON REQUEST.

### MODEL—HMP, HMS, HML (RV4 STYLE)

Molded composition resistance element; Rated 2.25 watts @ 70°C, 500 volts. Tolerance ±10% (except (\*) which are ±20%) 1½" diameter, ¾" deep; mechanical rotation 312±3°.

### HML SERIES

Shaft ¼" diameter, full round, stainless steel, screwdriver slot for locking bushing, ¾" long from mtg. surface. Bushing ¾"-32 NEF-2A thd., nickel plated brass, ½" long locking type. Shipping wt. 4 oz. Linear taper on all units.

Ohms	Catalog No.	MIL Desig.	Ohms	Catalog No.	MIL Desig.
50	HML-50	500A	35K	HML-35K	353A
100	HML-100	101A	50K	HML-50K	503A
150	HML-150	151A	75K	HML-75K	753A
250	HML-250	251A	100K	HML-100K	104A
350	HML-350	351A	150K	HML-150K	
500	HML-500	501A	250K	HML-250K	
750	HML-750	751A	350K	HML-350K	
1000	HML-1000	102A	500K	HML-500K	*
1500	HML-1500	152A	750K	HML-750K	*
2500	HML-2500	252A	1 MEG	HML-1 MEG	*
3500	HML-3500	352A	1.5 MEG	HML-1.5 MEG	*
5000	HML-5000	502A	2 MEG	HML-2 MEG	*
7500	HML-7500	752A	2.5 MEG	HML-2.5 MEG	*
10K	HML-10K	103A	3.5 MEG	HML-3.5 MEG	*
15K	HML-15K	153A	5 MEG	HML-5 MEG	*
25K	HML-25K	253A			

### HML SERIES—INDUSTRIAL NET PRICES

Net Each, Lots of				
1-9	10-24	25-49	50-99	100-249
\$2.55	\$2.30	\$2.13	\$1.92	\$1.35

### HMP SERIES

Shaft ¼" diameter, full round, stainless steel with screwdriver slot, ¾" long from mounting surface. Bushing ¾"-32 NEF-2A thd. nickel plated brass, ½" long. Linear taper on all units.

Ohms	Catalog No.	MIL Desig.	Ohms	Catalog No.	MIL Desig.
50	HMP-50	500A	25K	HMP-25K	253A
100	HMP-100	101A	50K	HMP-50K	503A
150	HMP-150	151A	75K	HMP-75K	753A
250	HMP-250	251A	100K	HMP-100K	104A
350	HMP-350	351A	150K	HMP-150K	
500	HMP-500	501A	250K	HMP-250K	
750	HMP-750	751A	350K	HMP-350K	
1000	HMP-1000	102A	500K	HMP-500K	*
1500	HMP-1500	152A	750K	HMP-750K	*
2500	HMP-2500	252A	1 MEG	HMP-1 MEG	*
3500	HMP-3500	352A	1.5 MEG	HMP-1.5 MEG	*
5000	HMP-5000	502A	2 MEG	HMP-2 MEG	*
7500	HMP-7500	752A	2.5 MEG	HMP-2.5 MEG	*
10K	HMP-10K	103A	3.5 MEG	HMP-3.5 MEG	*
15K	HMP-15K	153A	5 MEG	HMP-5 MEG	*

### HMS SERIES

Shaft ¼" diameter, full round, slotted stainless steel, 2½" long from mtg. surface. Bushing ¾"-32 NEF-2A thd. nickel plated brass, ¾" long, includes mtg. nut and lockwasher. Linear taper on all units.

Ohms	Catalog No.	MIL Designation	Ohms	Catalog No.	MIL Designation
50	HMS-50	RV4NAYS500A	35K	HMS-35K	353A
100	HMS-100	101A	50K	HMS-50K	503A
150	HMS-150	151A	75K	HMS-75K	753A
250	HMS-250	251A	100K	HMS-100K	104A
350	HMS-350	351A	150K	HMS-150K	
500	HMS-500	501A	250K	HMS-250K	
750	HMS-750	751A	350K	HMS-350K	
1000	HMS-1000	102A	500K	HMS-500K	*
1500	HMS-1500	152A	750K	HMS-750K	*
2500	HMS-2500	252A	1 MEG	HMS-1 MEG	*
3500	HMS-3500	352A	1.5 MEG	HMS-1.5 MEG	*
5000	HMS-5000	502A	2 MEG	HMS-2 MEG	*
7500	HMS-7500	752A	2.5 MEG	HMS-2.5 MEG	*
10K	HMS-10K	103A	3.5 MEG	HMS-3.5 MEG	*
15K	HMS-15K	153A	5 MEG	HMS-5 MEG	*
25K	HMS-25K	253A			

### HMP & HMS SERIES—INDUSTRIAL NET PRICES

Net Each, Lots of				
1-9	10-24	25-49	50-99	100-249
\$1.95	\$1.76	\$1.63	\$1.47	\$1.20

### ¼-WATT COMPOSITION MODEL N

Composition potentiometer rated ¼ watt. Plain round shaft 2½" long FMS. Tolerance ±10%. Only ½" dia. x ½" d. behind panel. Bushing ¾"-32 NEF-2A thread x ¾" long.

CRL Number	Resis., Ohms	Taper	CRL Number	Resis., Ohms	Taper
NCP9-501-U	500	C-1	NCP9-104-U	100K	C-1
NCP9-102-U	1000	C-1	NCP9-104-A	100K	C-2
NCP9-252-U	2500	C-1	NCP9-254-U	250K	C-1
NCP9-502-U	5000	C-1	NCP9-254-A	250K	C-2
NCP9-103-U	10K	C-1	NCP9-504-U	500K	C-1
NCP9-103-B	10K	C-3	NCP9-504-A	500K	C-2
NCP9-253-U	25K	C-1	NCP9-105-M*	1 meg.	C-1
NCP9-253-B	25K	C-3	NCP9-105-R*	1 meg.	C-2
NCP9-503-U	50K	C-1	NCP9-255-M*	2.5 meg.	C-1
NCP9-503-B	50K	C-3			

\*Tolerance, ±20%.

### MIL-R-94B STYLE RV6

### ½-WATT COMPOSITION MODEL P

Composition ½-watt potentiometer meets MIL-R-94B specifications, Style RV6. Complete sealed shaft and case. Slotted shaft ¾" long FMS. Tolerance, ±10%. Only ½" dia. x ½" d. behind panel. Bushing ¾"-32 NEF-2A thread x ¾" long.

CRL Number	Resis., Ohms	Taper	CRL Number	Resis., Ohms	Taper
PNST-501-U	500	C-1	PNST-503-U	50K	C-1
PNST-102-U	1000	C-1	PNST-104-U	100K	C-1
PNST-252-U	2500	C-1	PNST-254-U	250K	C-1
5000	C-1	PNST-504-U	500K	C-1	
PNST-103-U	10K	C-1	PNST-105-M*	1 meg.	C-1
PNST-253-U	25K	C-1	PNST-255-M*	2.5 meg.	C-1

\*Tolerance, ±20%.

### COMPOSITION TRIMMER MODEL T

Composition trimmer potentiometer rated ½ watt with special U-shaped shaft. Extremely resistant to shock, vibration and acceleration. Tolerance, ±20%. Mounts by threaded stud through center of unit. Only ½" dia. x ½" d.

CRL Number	Resis., Ohms	Taper	CRL Number	Resis., Ohms	Taper
TMXO-501-M	500	C-1	TMXO-503-M	50K	C-1
TMXO-102-M	1000	C-1	TMXO-104-M	100K	C-1
TMXO-252-M	2500	C-1	TMXO-254-M	250K	C-1
5000	C-1	TMXO-504-M	500K	C-1	
TMXO-103-M	10K	C-1	TMXO-105-M	1 meg.	C-1
TMXO-253-M	25K	C-1	TMXO-255-M	2.5 meg.	C-1

### INDUSTRIAL NET PRICES

All Values CRL Type	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
NCP Potentiometers	\$2.10	\$1.89	\$1.75	\$1.66	\$1.58
PNS Potentiometers	5.10	4.59	4.25	4.04	3.83
TMX Trimmer Pots	2.10	1.89	1.75	1.66	1.58

### 1/10 WATT CONTROLS

Designed for transistorized hearing aids, miniature radios and similar applications. Model B16 Miniature: Can be reduced to ¾" dia. by removing knob; with knob is ¾". Plain type is stud mounted, using two 1-72NF-2thd. x .140" studs on .427" centers. Switch type is bracket mounted. Model SM Subminiature: Measures ½" with knob, reduced to .502" without knob. Mount is standard 0-80NF-2A thd. x .334" long brass studs on .285" centers. Switch type only. Tolerance: ±20% except Types B16-124, B16-127, B16-128, B16-224, and B16-228, ±30%.

### MINIATURE TYPE B16 SERIES

CRL No.		Max. Ohms	Taper	CRL No.		Max. Ohms	Taper
Plain	Switch			Plain	Switch		
B16-107		500	C1	B16-119		50K	C1
B16-109		1000	C1	B16-121		100K	C1
B16-111		2500	C1	B16-123		250K	C1
B16-112	B16-212	2500	C2	B16-118	B16-218	½ meg.	C2
B16-113		5000	C1	B16-120	B16-220	1 meg.	C2
B16-114	B16-214	5000	C2	B16-122	B16-222	2 meg.	C2
B16-115		10000	C1	B16-124	B16-224	3 meg.	C2
B16-116	B16-216	10000	C2	B16-127		5 meg.	C1
B16-117	B16-217	25000	C2	B16-128	B16-228	5 meg.	C2
B16-125		25000	C1				

### SUBMINIATURE TYPE SM SERIES

CRL No.	Max. Ohms	Taper	CRL No.	Max. Ohms	Taper
SM2-252-S	2500	C2	SM2-103-S	10000	C2
SM2-502-S	5000	C2	SM2-253-S	25000	C2

### INDUSTRIAL NET PRICES

All Models Type	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
B16-107 thru -128	\$1.50	\$1.35	\$1.25	\$1.19	\$1.13
B16-212 thru -228	2.40	2.16	2.00	1.90	1.80
SM	3.75	3.38	3.13	2.97	2.82

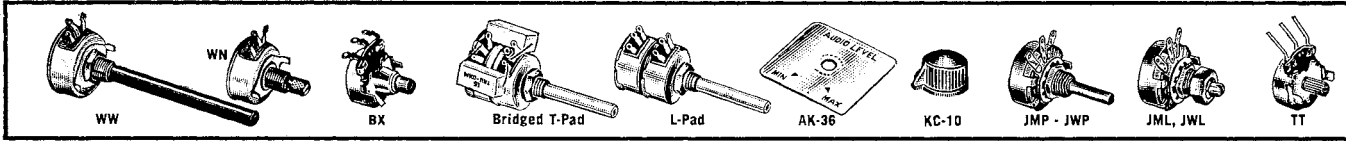
### ADASHAFT® SHAFTS, COUPLERS, EXTENSIONS

CRL No.	Description	Net Per Package of 5, Lots of				
		1-9	10-24	25-49	50-99	100-249
AK-1	¾" lg. fingertip knurl sd slot	\$0.90	\$0.81	\$0.75	\$0.71	\$0.68
AK-2	1¾" lg., .078" w. slot	.90	.81	.75	.71	.68
AK-7	3" lg., full lgth. flat	.90	.81	.75	.71	.68
AK-9	¼" dia., full rd., 3¼" lg.	.90	.81	.75	.71	.68
AK-10	10" lg., flat 216" x 4¼"	.90	.81	.75	.71	.68
AK-11	Univ., 4" lg.	.90	.81	.75	.71	.68
AK-16	Cplr: two ¼" or ½" to a ¾" shift.	.90	.81	.75	.71	.68
AK-19	Insul. 2¼" lg.	.90	.81	.75	.71	.68
AK-21	Shft. ext., 4" lg., ¼" dia., .218" flat	.90	.81	.75	.71	.68
AK-22	Shft. ext., 4" lg., ¼" dia., .154" flat	.90	.81	.75	.71	.68
AK-23	Shft. ext., 4" lg., ¼" dia., .172" flat	.90	.81	.75	.71	.68
AK-24	½" lg., ¼" dia., full round	.90	.81	.75	.71	.68
AK-25	½" lg., ¼" dia., .218" flat	.90	.81	.75	.71	.68
AK-26	Auto adptr. bshg. ¾"-32 to ¾"-28, 1¼" lg.; nuts & lockwasher	.45*	.41*	.38*	.36*	.34*
AK-28	Auto adptr. bshg. ¾"-32 to ½"-28, 2¼" lg.; nuts & lockwasher	.45*	.41*	.38*	.36*	.34*
AK-29	2¼" lg., .235" dia., full rd.	.90	.81	.75	.71	.68
AK-30	Ground lug	.45†	.41†	.38†	.36†	.34†
AK-31	Adptr. bshg., ¾"-32 thrd.; extends to 1"	.45*	.41*	.38*	.36*	.34*
AK-33	.187" dia. aluminum double grooved shaft	.90	.81	.75	.71	.68
AK-37	Phenolic ¾"-32 adptr. bush adjusts to 1"	.45*	.41*	.38*	.36*	.34*
AK-38	Twist-Tab Mtg. Plate	.90	.81	.75	.71	.68
AK-39	PC Mtg. Brkt.	.45*	.41*	.38*	.36*	.34*

\*Net each. †Per package of 12.

Centralab.

# Quality Controls



## WIRE-WOUND CONTROLS 5-WATT WIRE-WOUND CONTROLS

Packs 5-watt capacity into a 2-watt size unit; linear taper, 1 3/4" diam. x 3/8" deep. Model WW has full round aluminum shaft 1/2" dia. x 3" long. Model WN has fingertip knurled, slotted shaft 1/2" diam. x 3/4" long. Breakdown, 900 v. AC rms to ground. Specify by using WN or WW as prefix. Shipping Weight, 4 oz.

Ohms	CRL No. WW- or WN-	Ohms	CRL No. WWS- or WNW-	Ohms	CRL No. WW- or WN-	Ohms	CRL No. WWS- or WNW-
1	010	25	250	400	401	7500	752
2	020	30	300	500	501	10K	103
3	030	40	400	750	751	15K	153
4	040	50	500	1000	102	20K	203
5	050	60	600	1500	152	25K	253
6	060	75	750	2000	202	30K	303
8	080	100	101	2500	252	40K	403
10	100	200	201	3000	302	50K	503
15	150	250	251	4000	402	75K	753
20	200	300	301	5000	502	100K	104

### INDUSTRIAL NET PRICES

Values	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
1 thru 15K	\$1.14	\$1.03	\$0.95	\$0.91	\$0.86
20K, 25K, 30K	1.50	1.35	1.25	1.19	1.13
40K, 50K	1.80	1.62	1.50	1.43	1.36
75K, 100K	2.46	2.22	2.05	1.95	1.88

## L-PAD, T-PAD, AND STEREO ATTENUATORS

Constant impedance L-pads and bridged T-pads provide optimum sound reproduction quality without altering frequency response. Rated 20 watts, audio; 5 watts DC and sine-wave. Breakdown, 900 volts AC rms to ground. Anti-backlash design with force-fit shaft interlock to prevent relative motion between contact springs of front and rear units; assures smooth attenuation in either direction without deterioration. Full round brass shaft, 1/2" dia. x 1 1/2" lg. from mounting surface. Bushing 3/8" lg. x 3/8"-32 thread with nut and lockwasher; can be extended up to 1" adding AK-31 or AK-37 adapter bushing. Size: 1 1/2" dia. x 1 1/4" behind panel. Complete with AK-36 brushed gold-anodized dial plate and KC-10 black pointer knob with set screw.

### L-PAD ATTENUATORS

Controls audio level of speakers in PA, intercom and hi-fi sound systems. Shipping Weight, 5 oz.

CRL No.	Imped. Ohms	CRL No.	Imped. Ohms	CRL No.	Imped. Ohms
WL-4	4	WL-500	500	WL-1250	1250
WL-8	8	WL-600	600	WL-2000	2000
WL-16	16	WL-1000	1000	WL-2500	2500

Any Model—Net Each, Lots of 1-9, \$2.97; 10-24, \$2.67; 25-49, \$2.48; 50-99, \$2.36; 100-249, \$2.23.

### BRIDGED T-PAD ATTENUATORS

Speaker audio level control and sound mixer control for mixers and other circuits requiring constant impedance between input and output circuits. Shipping Weight, 7 oz.

CRL No.	Imped. Ohms	CRL No.	Imped. Ohms	CRL No.	Imped. Ohms
WDT-4	4	WDT-16	16	WDT-600	600
WDT-8	8	WDT-500	500		

Any Model—Net Each, Lots of 1-9, \$3.57; 10-24, \$3.21; 25-49, \$2.98; 50-99, \$2.83; 100-249, \$2.68.

### STEREO ATTENUATORS

Designed for installation in standard junction or switch boxes where a conventional four-section L-Pad will not fit. Rated at 10 watts, audio; 5 watts, DC. Same basic construction and appearance as L-Pads. Shipping Weight, 5 oz.

CRL No.	Used with*	Net Each, Lots of				
		1-9	10-24	25-49	50-99	100-249
WST-200	4-ohm speaker	\$2.97	\$2.67	\$2.48	\$2.36	\$2.23
WST-400	8-ohm speaker	2.97	2.67	2.48	2.36	2.23
WST-800	16-ohm speaker	2.97	2.67	2.48	2.36	2.23

\*Can also be used as conventional twin wire-wound controls, linear taper—10% tolerance, 20, 40, and 80 ohms respectively.

### ACCESSORIES

CRL No.	Description	Net Each
KC-10	Pkge 5 black set-screw pointer knobs	\$0.90
AK-34	4 1/2" x 2 3/4" brushed gold wall-plate	.90
AK-35	4 1/2" x 2 3/4" brushed aluminum wall-plate	.90
AK-36	2" x 2" brushed gold dial-plate; pkge. of 5	1.44

## MIL-R-94B STYLE RV1

### 1/5-WATT COMPOSITION CONTROLS

Meet MIL-R-94B requirements. Element completely enclosed, permitting further sealing or encapsulation. Linear taper. Rated 1/5 watt at 70°C; derate to 0 watt at 120°C. Resistance tolerance, ±10%. Breakdown, 900 volts AC rms to ground at atmospheric pressure. Only 3/8" dia. Model JMP: Stainless steel, screwdriver-slotted shaft 1/2" dia. x 3/8" lg. from mounting surface. Left side locating lug. Mechanical rotation, 260° ±3°. Bushing, 1/4"-32 NEF-2A threaded x 1/4" lg. from mounting surface; with mounting nut and lockwasher. Model JML: Same as above, except shaft is 1/2" long from mounting surface and bushing is 3/8" lg. from mounting surface with shaft-locking nut supplied.

Ohms	Stock Values Model JMP		Stock Values Model JML	
	CRL No.	MIL-R-94B Number	CRL No.	MIL-R-94B Number
500	JMP-501	RV1NAXSD501A	JML-501	RV1LAXSB501A
1000	JMP-102	RV1NAXSD102A	JML-102	RV1LAXSB102A
1500	JMP-152		JML-152	
2500	JMP-252	RV1NAXSD252A	JML-252	RV1LAXSB252A
5000	JMP-502	RV1NAXSD502A	JML-502	RV1LAXSB502A
7500	JMP-752		JML-752	
10K	JMP-103	RV1NAXSD103A	JML-103	RV1LAXSB103A
15K	JMP-153*	RV1NAXSD153A		
25K	JMP-253	RV1NAXSD253A	JML-253	RV1LAXSB253A
50K	JMP-503	RV1NAXSD503A	JML-503	RV1LAXSB503A
100K	JMP-104	RV1NAXSD104A	JML-104	RV1LAXSB104A
250K	JMP-254	RV1NAXSD254A	JML-254	RV1LAXSB254A
500K	JMP-504	RV1NAXSD504A	JML-504	RV1LAXSB504A
500K	JMP2-504*	RV1NAXSD504C		
1 meg.	JMP-105	RV1NAXSD105A	JML-105	RV1LAXSB105A
2500K	JMP-255		JML-255	

\*Audio taper C2.

## MODELS JMP AND JML INDUSTRIAL NET PRICES

All Values CRL Type	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
JMP	\$4.20	\$3.78	\$3.15	\$2.52	\$2.27
JML	4.50	4.05	3.38	2.70	2.43

NOTE: Items requiring certified test data and government source inspection are special; price and information supplied upon request.

## COMPOSITION SNAP-TITE\* CONTROLS

For hidden or rear TV controls, rated 1/2 watt. Installs simply: Push into mounting hole, tu until locating lugs fit in holes provided; may be used where no locating lugs are needed. Breakdown, 900 v. AC rms to ground. Size: 3/8" diam. x 3/8" deep. 1/4" diam. molded plast shaft 1/2" long, knurled and slotted. Linear (C1) taper. \*Trademark.

CRL No.	Ohms	Net Each, Lots of				
		1-9	10-24	25-49	50-99	100-249
BX-10	5K	51c	46c	43c	41c	39c
BX-31	50K	51c	46c	43c	41c	39c
BX-40	100K	51c	46c	43c	41c	39c
BX-46	200K	51c	46c	43c	41c	39c
BX-59	500K	51c	46c	43c	41c	39c
BX-69	1 meg.	51c	46c	43c	41c	39c
BX-742	1.5 meg.	51c	46c	43c	41c	39c
BX-75	2 meg.	51c	46c	43c	41c	39c
BX-83	2.5 meg.	51c	46c	43c	41c	39c
BX-84	3 meg.	51c	46c	43c	41c	39c

## TYPE "TT" TWIST TAB CONTROLS

For rear service adjust TV controls and other shock hazard uses. U/L Approved. Phenolic sh 3/8" lg. from mounting surface, knurled full length; screwdriver slot on either end. Composit element rated 1/2 watt; 3/8" dia. x 3/8" d. Breakdown, 900 v. AC rms to ground. Includes polyethylene shaft extension. Shipping Weight, 2 oz.

CRL No.	Ohms	CRL No.	Ohms	CRL No.	Ohms	CRL No.	Ohms
TT-4	500	TT-31	50K	TT-66	750K	TT-86	4 meg
TT-411	750	TT-35	75K	TT-69	1 meg.	TT-87	5 meg
TT-511	1500	TT-40	100K	TT-70*	1 meg.	TT-90	7 1/2 meg
TT-8	3000	TT-46	200K	TT-742	1 1/2 meg.		
TT-10	5000	TT-50	250K	TT-75	2 meg.		
TT-14	10K	TT-59	500K	TT-89	2 1/2 meg.		

\*C2 taper; all others, C1.

## INDUSTRIAL NET PRICES

All Values CRL Type	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
TT Controls	60c	54c	50c	48c	45c

## MINIATURE WIRE-WOUND 1 1/2-WATT CONTROLS

Rugged quality for military and industrial uses. Meet MIL-R-19A specifications. Conservativ rated 1 1/2 watts at 40°C; derate to 0 watt at 125°C. Breakdown, 900 volts AC rms atmospheric pressure. Enclosed resistance element permits further sealing or encapsulat Resistance tolerance, ±5%. Linear taper. Left side locating lug. Mechanical rotation, 2 ±3°. Only 3/8" dia. With mounting nut and lockwasher. Model JWP: Plain type with stainl steel, screwdriver slotted shaft 1/2" dia. x 3/8" lg. from mounting surface. Bushing, 1/4" NEF-2A threaded x 1/4" long. Model JWL: Same, but shaft is 3/8" lg. from mounting surface bushing is 3/8" lg. with shaft locking nut supplied.

Ohms	Model JWP CRL No.	Model JWL CRL No.	Net Each, Lots of				
			1-9	10-24	25-49	50-99	100-24
50	JWP-500	JWL-500	\$6.00	\$5.40	\$4.50	\$3.60	\$3.24
100	JWP-101	JWL-101	6.00	5.40	4.50	3.60	3.24
200	JWP-201	JWL-201	6.00	5.40	4.50	3.60	3.24
300	JWP-301	JWL-301	6.00	5.40	4.50	3.60	3.24
500	JWP-501	JWL-501	6.00	5.40	4.50	3.60	3.24
750	JWP-751	JWL-751	6.00	5.40	4.50	3.60	3.24
1000	JWP-102	JWL-102	6.00	5.40	4.50	3.60	3.24
1500	JWP-152	JWL-152	6.00	5.40	4.50	3.60	3.24
2000	JWP-202	JWL-202	6.00	5.40	4.50	3.60	3.24
2500	JWP-252	JWL-252	6.00	5.40	4.50	3.60	3.24
3000	JWP-302	JWL-302	6.00	5.40	4.50	3.60	3.24
4000	JWP-402	JWL-402	6.00	5.40	4.50	3.60	3.24
5000	JWP-502	JWL-502	6.00	5.40	4.50	3.60	3.24
7500	JWP-752	JWL-752	6.00	5.40	4.50	3.60	3.24
10K	JWP-103	JWL-103	6.00	5.40	4.50	3.60	3.24
15K	JWP-153	JWL-153	8.40	7.56	6.30	5.04	4.50
20K	JWP-203	JWL-203	8.40	7.56	6.30	5.04	4.50
25K	JWP-253	JWL-253	8.40	7.56	6.30	5.04	4.50
30K	JWP-303	JWL-303	10.11	9.10	7.59	6.07	5.40

## KNOBBS FOR SERIES JM AND JW

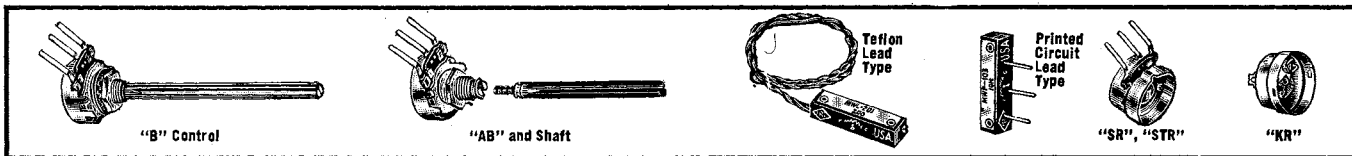
Knobs have pointer, are 1 1/4" dia. Specify color desired: KC-3, black; KC-4, white; KC-5, re

KC Knob	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
	18c	17c	15c	15c	14c

Centralab.

# Composition Controls

## UNIVERSAL AND ADASHAFT® CONTROLS



### MODEL "B" SWITCH-TYPE CONTROLS

Universal DPST switch type units. Switch rating: 3A., 125V. AC.

CRL No.	Max. Ohms	Taper	Use For
B-60-S	½ meg.	C2	SPST, DPST or 3-wire
B-70-S	1 meg.	C2	SPST, DPST or 3-wire

### SINGLE TAPPED "BT" AND "ABT" CONTROLS

Ohms	Taper	Tap	Type B CRL No.	Type AB CRL No.	Ohms	Taper	Tap	Type B CRL No.	Type AB CRL No.
50,000	C-11	25K	BT-33	ABT-33	½ meg.	C-17	50K†	BT-62	ABT-62
100,000	C-11	50K	BT-39	ABT-39	1 meg.	C-11	500K	BT-71	ABT-71
200,000	C-11	100K	BT-47	ABT-47	1 meg.	C-12	200K	BT-72	ABT-72
250,000	C-11	125K	BT-53	ABT-53	1 meg.	C-13	300K	BT-73	ABT-73
250,000	C-12	50K	BT-54	ABT-54	1 meg.	C-16	500K*	BT-74	ABT-74
250,000	C-13	75K	BT-55	ABT-55	1 meg.	C-17	100K	BT-7417	ABT-7417
250,000	C-16	125K*	BT-56	ABT-56	2 meg.	C-11	1 meg.	BT-78	ABT-78
350,000	C-12	70K	BT-57	ABT-57	2 meg.	C-12	400K	BT-79	ABT-79
½ meg.	C-11	250K	BT-65	ABT-65	2 meg.	C-13	600K	BT-80	ABT-80
½ meg.	C-12	100K	BT-66	ABT-66	2 meg.	C-15	200K	BT-81	ABT-81
½ meg.	C-13	150K	BT-67	ABT-67	2 meg.	C-16	1 meg.*	BT-82	ABT-82
½ meg.	C-15	50K†	BT-63	ABT-63	3 meg.	C-15	300K†	BT-8515	ABT-8515
½ meg.	C-16	250K*	BT-64	ABT-64	3 meg.	C-17	300K†	BT-8517	ABT-8517

\*62½% rotation. †50% rotation. ‡37½% rotation.

### TYPE "KR" FASTATCH® SWITCHES

For Model B, AB, SR and FASTATCH II controls.

CRL No.	Use	Amps	Net Each, Lots of				
			1-9	10-24	25-49	50-99	100-249
KR-1	SPST	3	42c	38c	35c	34c	32c
KR-2	DPST	5	51c	46c	43c	41c	39c
KR-3	DP*	15#	51c	46c	43c	41c	39c
KR-6	SPST†	15#	66c	60c	55c	53c	50c
KR-7	DPST	15#	66c	60c	55c	53c	50c
KR-8	SPST**	5	60c	54c	50c	48c	45c

\*One pole "off," one "on," can be used for SPDT. †With dummy lug. #10 v. DC switches; all others 125 v. AC. \*\*Push-pull.

### DESCRIPTION OF TAPERS

C-1—Linear; uniform resistance change from either end. C-2—Semi-log. (audio) 10% center. C-3—Right hand semi-log. Reversed. C-4—Mod. log. 40% center. C-7—Symet. straight line; slow change. C-11—Tapped 50% rotation, 50% resis. C-12—Tapped 37½% rotation, 20% resis. C-13—Tapped 50% rotation, 30% resistance. C-14—Tapped 62% rotation, 30% resistance. C-15—Tapped 50% rotation, 10% resistance. C-16—Tapped 62% rotation, 50% resistance. C-17—Tapped 37½% rotation, 10% resistance.

### DUAL TAPPED "BT" AND "ABT" CONTROLS

Ohms	Taps	Type B CRL No.	Type AB CRL No.
15,000	5K and 10K	BT-154	ABT-154
250,000	50K and 125K	BT-155	ABT-155
250,000	41K and 82K	BT-156	ABT-156
½ meg.	82K and 165K	BT-159	ABT-159
½ meg.	100K and 250K	BT-160	ABT-160
1 meg.	165K and 330K	BT-164	ABT-164
1 meg.	200K and 500K	BT-165	ABT-165
1.5 meg.	250K and 500K	BT-167	ABT-167
2 meg.	250K and 500K	BT-174	ABT-174
2.5 meg.	400K and 1 meg.	BT-175	ABT-175
3 meg.	300K and 625K	BT-176	ABT-176
3.3 meg.	330K and 1650K	BT-180	ABT-180

### INDUSTRIAL NET PRICES

All Values Type	Net Each, Lots of			
	1-9	10-24	25-49	50-99
B Plain	\$1.02	\$0.92	\$0.85	\$0.81
AB Plain	.84	.76	.70	.67
B Switch	1.44	1.30	1.20	1.14
BT Tapped	1.35	1.22	1.13	1.07
ABT Tapped	1.26	1.14	1.05	1.00
KR-5 Sw. Shield*	.72	.65	.60	.57

Priced per package of 5; for use with switch type units only, where AC shielding is needed r specified by U/L.

### "SR" AND "STR" ADD-ON CONTROLS

Map-on rear units provide ganged twin controls for stereo applications. Added to "B" or "AB" controls. Convert to switch type by using snap-on "KR" Fastatch® switches.

### TYPE SR

CRL No.	Ohms	Taper	CRL No.	Ohms	Taper
SR-4	500	C-1	SR-59	500K	C-1
SR-6	2000	C-1	SR-60	500K	C-2
SR-13	7500	C-1	SR-613	500K	C-3
SR-26	25K	C-1	SR-58	500K	C-4
SR-25	25K	C-2	SR-617	500K	C-7
SR-31	50K	C-1	SR-69	1 meg.	C-1
SR-32	50K	C-2	SR-70	1 meg.	C-2
SR-323	50K	C-3	SR-68	1 meg.	C-5
SR-40	100K	C-1	SR-75	2 meg.	C-1
SR-41	100K	C-2	SR-76	2 meg.	C-2
SR-42	100K	C-3	SR-84	3 meg.	C-1
SR-50	250K	C-1	SR-85	3 meg.	C-2
SR-51	250K	C-2	SR-87	5 meg.	C-1
SR-513	250K	C-3	SR-88	5 meg.	C-2

### TYPE STR TAPPED

CRL No.	Ohms	Taper, Tap	CRL No.	Ohms	Taper, Tap
STR-63	250K	C-11, 125K	STR-82	2 meg.	C-16, 1 meg.
STR-86	250K	C-16, 125K	STR-159	500K	82K & 165K
STR-95	500K	C-11, 250K	STR-160	500K	100K & 250K
STR-66	500K	C-12, 100K	STR-167	1.5 meg.	250K & 500K
STR-64	500K	C-16, 250K	STR-174	2 meg.	250K & 500K
STR-71	1 meg.	C-11, 500K	STR-175	2 meg.	400K & 1 meg.
STR-74	1 meg.	C-16, 500K	STR-180	3.3 meg.	330K & 1650K

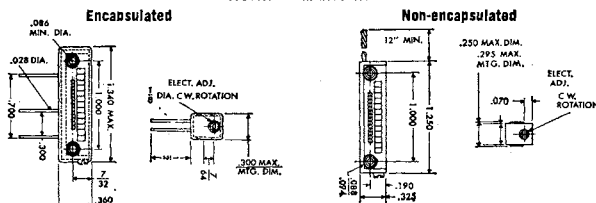
### INDUSTRIAL NET PRICES

All Values Type	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
SR "Add-ons"	\$1.14	\$1.03	\$0.95	\$0.91	\$0.86
STR Tapped	1.14	1.03	.95	.91	.86

### MODEL 7 MINIATURE LINEAR MOTION VARIABLE RESISTORS

Unique design of contact arm, wiper carriage and constant torque adjustment screw result in electrically stable, smooth, noise-free unit. Capable of operating under the most severe commercial or military requirements. Assembled under a microscope. Custom adjusted to guarantee no contact bounce when subjected to vibration test of 20-2000 cps at 10G for 10 minutes in each of three planes. Constant quality vigilance from raw stock to final testing guarantees reliability under adverse environments. Reliability in excess of the highest current military specifications, MIL-STD-202A and MIL-R-94B. Used since 1956 for airborne guidance and other military applications. Now available for a wide range of commercial uses.

### PHYSICAL DIMENSIONS



### GENERAL FEATURES

Insulation resistance: 5000 meg. min. at 500 v. DC at 25° C and less than 50% RH. Dielectric Strength: 1000 v. rms at sea level at 3.4" Hg, 350 v. rms at 50,000 feet for 1 minute. Step Strength: 15 in.-oz. Temperature Cycling: No discontinuity or permanent resistance change of more than 5%, -55° C to 85° C. Method 102, Condition A. No. of Turns: 25, screw adjustment. Volume: .11 cu. in. component density. Weight: 16 oz. average, including three 12" leads.

CRL Type	Description	Terminals	Resistance Range	Max. End Resis.	Power Watts	Max. Oper. Temp.	Tol.	Size, Inches H. x W. x L.
GCL	Gen. Purpose Composition	Teflon**	10K ohms-2.5 meg.	1% of total at 50° C	0.25	+125° C	±20%	¾x ¼x 1¼
GCP	Gen. Purpose Composition	P-C leads	10K ohms-2.5 meg.	1% of total at 50° C	0.25	+125° C	±20%	¾x ¼x 1¼
GWL	Gen. Purpose Wire-wound	Teflon**	10-20K ohms	1% of total at 50° C	0.25	+125° C	±10%	¾x ¼x 1¼
GWP	Gen. Purpose Wire-wound	P-C leads	10-20K ohms	1% of total at 50° C	0.25	+125° C	±10%	¾x ¼x 1¼
MWL*	High Temp. Wire-wound	Teflon**	10-20K ohms	1% of total at 70° C	1	+175° C	±10%	¾x ¼x 1½
MWP*	High Temp. Wire-wound	P-C leads	10-20K ohms	1% of total at 70° C	1	+175° C	±10%	¾x ¼x 1½

\*Encapsulated humidity-proof types. \*\*Registered Dupont Trademark.

### TYPE GCL, GCP GENERAL PURPOSE COMPOSITION UNITS

Type GCL: Has stranded teflon leads. Type GCP: Has printed circuit leads.

Centralab No. Leads	Teflon P-C	Resis., Ohms	Net Each, Lots of				
			1-9	10-24	25-49	50-99	100-249
GCL-103	GCP-103	10K	\$4.86	\$4.50	\$4.05	\$3.85	\$3.60
GCL-203	GCP-203	20K	4.86	4.50	4.05	3.85	3.60
GCL-503	GCP-503	50K	4.86	4.50	4.05	3.85	3.60
GCL-104	GCP-104	100K	4.86	4.50	4.05	3.85	3.60
GCL-204	GCP-204	200K	4.86	4.50	4.05	3.85	3.60
GCL-504	GCP-504	500K	4.86	4.50	4.05	3.85	3.60
GCL-105	GCP-105	1 meg.	4.66	4.50	4.05	3.85	3.60
GCL-255	GCP-255	2.5 meg.	4.86	4.50	4.05	3.85	3.60

### TYPE GWL, GWP GENERAL PURPOSE WIRE-WOUND UNITS

CRL No.	Ohms	Taper	CRL No.	Ohms	Taper
GWL-100	GWP-100	10	\$4.86	\$4.50	\$4.05
GWL-200	GWP-200	20	4.86	4.50	4.05
GWL-500	GWP-500	50	4.86	4.50	4.05
GWL-101	GWP-101	100	4.86	4.50	4.05
GWL-201	GWP-201	200	4.86	4.50	4.05
GWL-501	GWP-501	500	4.86	4.50	4.05
GWL-102	GWP-102	1000	4.86	4.50	4.05
GWL-202	GWP-202	2000	4.86	4.50	4.05
GWL-502	GWP-502	5000	4.86	4.50	4.05
GWL-103	GWP-103	10K	4.86	4.50	4.05
GWL-203	GWP-203	20K	6.48	6.00	5.40

### TYPE MWL, MWP GENERAL PURPOSE WIRE-WOUND UNITS

CRL No.	Ohms	Taper	CRL No.	Ohms	Taper
MWL-100	MWP-100	10	\$7.56	\$7.00	\$6.30
MWL-200	MWP-200	20	7.56	7.00	6.30
MWL-500	MWP-500	50	7.56	7.00	6.30
MWL-101	MWP-101	100	7.56	7.00	6.30
MWL-201	MWP-201	200	7.56	7.00	6.30
MWL-501	MWP-501	500	7.56	7.00	6.30
MWL-102	MWP-102	1000	7.56	7.00	6.30
MWL-202	MWP-202	2000	7.56	7.00	6.30
MWL-502	MWP-502	5000	7.56	7.00	6.30
MWL-103	MWP-103	10K	7.56	7.00	6.30
MWL-203	MWP-203	20K	9.18	8.50	7.65

Centralab.

# Controls and Accessories



## FASTATCH® II PLAIN TYPE CONTROLS

Complete exact replacement control coverage for dual concentric single or tandem twins. Snap together assembly, with snap in, permanent locking shafts. Controls are carbon, 1/2 watt, 3/8" dia. Rear control 3/8" deep. Front control 3/8" deep, bushing mtd. 3/4" x 3/8-32 thd. Supplied with mtg. nut and universal terminals replacing printed circuit, wire-wrap and hole type terminals. Shafts and switches not included. Anti-backlash construction on duals and twins. CRL Fastatch® II Dual Controls—Front or rear unit plain. Net Each ..... 90c

Number preceding dash (-) indicates taper. Number after dash (-) indicates number of ohms in resistance.

CRL No.		CRL No.		CRL No.	
Front Unit	Rear Unit	Front Unit	Rear Unit	Front Unit	Rear Unit
F1-100	R1-100	F5-10K	R5-10K	F1-1MEG	R1-1MEG
F1-200		F1-15K		F2-1MEG	R2-1MEG
F1-300		F1-25K	R1-25K	F3-1MEG	R3-1MEG
F1-500	R1-500	F2-25K	R2-25K	F7-1MEG	R7-1MEG
F4-500		F1-50K	R1-50K	F1-1.5MEG	R1-1.5MEG
F3-500		F2-50K	R2-50K	F1-2MEG	R1-2MEG
F1-750		F3-50K	R3-50K	F2-2MEG	R2-2MEG
F5-750	R5-750	F1-75K	R1-75K	F3-2MEG	R3-2MEG
F1-1000	R1-1000	F1-100K	R1-100K	F7-2MEG	R7-2MEG
F5-1000	R5-1000	F2-100K	R2-100K	F1-2.5MEG	R1-2.5MEG
F1-1500	R1-1500	F3-100K	R3-100K	F1-3MEG	R1-3MEG
F5-1500	R5-1500	F1-150K	R1-150K	F2-3MEG	R2-3MEG
F1-2500	R1-2500	F1-200K	R1-200K	F3-3MEG	R3-3MEG
F2-2500		F1-250K	R1-250K	F1-4MEG	
F5-2500	R5-2500	F2-250K	R2-250K	F1-5MEG	R1-5MEG
F1-5000	R1-5000	F3-250K	R3-250K	F2-5MEG	R2-5MEG
F2-5000	R2-5000	F1-500K	R1-500K	F3-5MEG	R3-5MEG
F5-5000		F2-500K	R2-500K	F1-7.5MEG	R1-7.5MEG
F1-7500	R1-7500	F3-500K	R3-500K	F1-10MEG	R1-10MEG
F1-10K	R1-10K	F7-500K	R7-500K		
F2-10K	R2-10K	F1-750K	R1-750K		

CRL FASTATCH® II Single Tape Controls—Net Each ..... \$1.26

CRL No.			CRL No.		
Front Unit	Rear Unit	Tap	Front Unit	Rear Unit	Tap
F51-750		500	F11-1MEG	R11-1MEG	500K
	R14-7500	2500		R12-1MEG	200K
F51-2000	R16-10K	1500	F14-1MEG	R14-1MEG	300K
F52-2500	R14-25K	625	F16-1MEG	R16-1MEG	500K
F51-30K	R14-50K	20K	F17-1MEG	R17-1MEG	100K
F53-30K	R14-50K	10K	F11-2MEG	R11-2MEG	1 meg.
F11-250K	R11-250K	125K	F12-2MEG	R12-2MEG	400K
F14-250K	R14-250K	75K	F14-2MEG	R14-2MEG	600K
F16-250K	R16-250K	125K	F16-2MEG	R16-2MEG	1 meg.
F11-500K	R11-500K	250K	F17-2MEG	R17-2MEG	20K
F12-500K	R12-500K	100K	F16-3MEG	R16-3MEG	1.5 meg.
F14-500K	R14-500K	150K	F54-3MEG	R54-3MEG	900K
F16-500K	R16-500K	250K			
F17-500K	R17-500K	50K			

CRL Fastatch® II Dual Tap Controls—Net Each ..... \$1.26

Front Unit	Rear Unit	Taps, Ohms
F80-2000		2500 and 5000
F55-15K		5K and 10K
F56-500K	R56-900K	100K and 250K
F55-1MEG	R55-1MEG	350K and 620K
F56-1MEG	R56-1MEG	200K and 500K
F57-1.5MEG	R57-1.5MEG	250K and 500K
F56-2MEG	R56-2MEG	400K and 1 meg.
F58-2MEG	R58-2MEG	250K and 500K
F59-3.3MEG	R59-3.3MEG	330K and 1650K

## MODELS "B" AND "AB" CONTROLS

Model B and AB controls are rated at 1/2 watt. Size: 3/8" diameter, 3/8" deep. Breakdown: 900 v. AC rms to ground. Mounting: 3/8" long 3/8-32 thread bushing; equipped with mounting nut. Any model converts easily to switch type by merely snapping on "KR" switch. Model B Shaft: 1/2" dia. x 3/8" long from mtg. surface. Universal fluted knurled type; fits split knurl, shallow flat, deep flat, slotted, or rtd. applications. Model AB Shaft: Patented stub, screwdriver slot shaft 3/8" from mtg. surface. May be extended by adding AK shafts (on another page). Type KR switches may be snapped on B & AB controls. Shpg. Wt., 3 oz.

### B AND AB CONTROLS—INDUSTRIAL NET PRICES

	Net each, Lots of				
	1-9	10-24	25-49	50-99	100-249
B plain	\$1.02	\$ .82	\$ .65	\$ .51	\$ .37
AB plain	.84	.76	.70	.61	.43

Ohms	Taper	Specify No. B- or AB-	Ohms	Taper	Specify No. B- or AB-	Ohms	Taper	Specify No. B- or AB-	Ohms	Taper	Specify No. B- or AB-
100	C-1	1	10,000	C-4	18	100,000	C-1	40	1 meg.	C-5	68
200	C-1	2	10,000	C-5	17	100,000	C-2	41	1 meg.	C-7	67
500	C-1	4	10,000	C-6	5	150,000	C-1	43	1.5 meg.	C-1	74
750	C-5	415	15,000	C-5	19	150,000	C-2	44	2 meg.	C-1	72
1,000	C-1	5	15,000	C-6	20	200,000	C-1	46	2 meg.	C-2	76
1,000	C-5	505	20,000	C-1	22	250,000	C-1	50	2 meg.	C-5	77
1,500	C-5	515	20,000	C-5	23	250,000	C-2	51	2.5 meg.	C-1	83
2,000	C-1	6	20,000	C-6	24	250,000	C-1	52	3 meg.	C-1	84
2,500	C-1	7	25,000	C-1	25	500,000	C-1	59	3 meg.	C-2	85
2,500	C-2	702	25,000	C-2	25	500,000	C-2	60	3 meg.	C-5	855
2,500	C-5	705	25,000	C-4	29	500,000	C-3	613	4 meg.	C-1	86
3,000	C-1	8	25,000	C-5	27	500,000	C-4	58	4 meg.	C-2	87
4,000	C-1	9	25,000	C-6	28	500,000	C-5	51	5 meg.	C-1	862
5,000	C-1	10	50,000	C-1	31	500,000	C-6	616	5 meg.	C-2	88
5,000	C-2	11	50,000	C-2	32	500,000	C-7	617	5 meg.	C-7	89
5,000	C-5	12	50,000	C-5	34	750,000	C-1	66	7.5 meg.	C-1	90
7,500	C-1	13	75,000	C-1	35	1 meg.	C-1	69	10 meg.	C-1	90
10,000	C-1	14	75,000	C-5	36	1 meg.	C-2	70			
10,000	C-2	15	75,000	C-5	35	1 meg.	C-4	744			

## FASTATCH® II SHAFTS

Front (sleeve): FFS—Flattened and slotted; FS—Double slot; FK—Knurled; FU—Universal, flatted and slotted.

Any Model—Net Each ..... 27c											
CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.
FFS008	.5	FFS106	1.375	FFS204	2.250	FFS304	3.250	FFS109	1.562	FFS113	1.812
FFS009	.562	FFS107	1.437	FFS205	2.312	FFS305	3.375	FFS114	1.812	FFS118	2.000
FFS010	.625	FFS108	1.5	FFS206	2.375	FFS306	3.500	FFS202	2.250	FFS204	2.250
FFS011	.687	FFS109	1.562	FFS207	2.437	FFS307	3.625	FFS208	2.500	FFS212	2.750
FFS012	.750	FFS110	1.625	FFS208	2.500	FFS308	3.750	FFS210	2.500	FFS214	2.750
FFS013	.812	FFS111	1.687	FFS209	2.562	FFS309	3.875	FFS212	2.750	FFS216	3.125
FFS014	.875	FFS112	1.75	FFS210	2.625	FFS310	4.000	FFS214	3.000	FFS218	3.375
FFS015	.937	FFS113	1.812	FFS211	2.687	FFS311	4.125	FFS216	3.250	FFS220	3.625
FFS100	1.000	FFS114	1.875	FFS212	2.750	FFS312	4.250	FFS218	3.500	FFS222	3.875
FFS101	1.062	FFS115	1.937	FFS213	2.812	FFS313	4.375	FFS220	3.750	FFS224	4.125
FFS102	1.125	FFS200	2.000	FFS214	2.875	FFS314	4.500	FFS222	4.000	FFS228	4.500
FFS103	1.187	FFS201	2.062	FFS215	2.937	FFS315	4.625	FFS224	4.250	FFS232	5.000
FFS104	1.250	FFS202	2.125	FFS216	3.000	FFS316	4.750	FFS226	4.500	FFS236	5.000
FFS105	1.312	FFS203	2.187	FFS217	3.062	FFS317	4.875	FFS228	4.750	FFS240	5.500

Rear (inner shaft): RFS—Flatted and slotted; RK—Knurled; RP—Push-Pull, flatted & slotted, .187" dia.; RS008—500" long, slot 3/8" deep, 3/4" wide (used for recessed inner shaft); RPU—Push-Pull, universal, flatted & slotted, .187" dia.; RU—Universal, Single Controls (solid shaft); SS—Slotted, .25" dia., steel; SN—Same as SS, nylon; SK—Slotted and knurled, .25" dia., steel; SFS—Flatted and slotted, .187" dia., steel; SU—Universal, steel. Tandem Twin (solid shaft, .187" dia.): TU—Universal, steel; TFS—Flatted and slotted.

Any Model—Net Each ..... 27c											
No. RFS	Lgth. In.	No. RFS	Lgth. In.	No. RFS	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.
014	.875	112	.750	210	2.625	RFS311	3.687	RK203	2.187	RP213	2.812
015	.937	113	1.812	211	2.687	RFS314	3.875	RK205	2.312	RP215	2.937
100	1.000	114	1.875	212	2.750	RFS400	4.000	RK206	2.375	RP408	4.500
101	1.062	115	1.937	213	2.812	RFS404	4.250	RK207	2.437	RP413	4.812
102	1.125	200	2.000	214	2.875	RFS407	4.437	RP111	1.687	SFS212	2.75
103	1.187	201	2.062	215	2.937	RFS413	4.812	RP113	1.812	SK010	625
104	1.250	202	2.125	300	3.000	RK012	.750	RP114	1.875	SK014	.625
105	1.312	203	2.187	301	3.062	RK014	.875	RP200	2.000	SN104	1.250
106	1.375	204	2.250	302	3.125	RK100	1.000	RP202	2.125	SS006	.375
107	1.437	205	2.312	303	3.187	RK104	1.250	RP204	2.250	SS008	.500
108	1.500	206	2.375	304	3.250	RK106	1.375	RP205	2.312	SU204	2.250
109	1.562	207	2.437	306	3.375	RK109	1.562	RP207	2.437	SU308	3.500
110	1.625	208	2.500	307	3.437	RK110	1.625	RP209	2.562	SU500	5.000
111	1.687	209	2.562	309	3.562	RK114	1.875	RP211	2.687	TU304	3.250
										TFS212	2.750

## PUSH-PULL, PUSH-PUSH SWITCH CONTROLS

Switch type controls for radio, TV and hi-fi applications. Rated 1/2 watt, breakdown 900 v. AC rms to ground. Switch rated 3 amps, 125 v. AC; SPST type. Size 1/8" dia. x 3/8" deep, push-pull type; 3/8" deep, push-pull type. Mount using 3/8" lg. x 3/8-32 threaded bushing with mounting nut except Fastatch types RPL and RPS.

ADASHAFT® TYPE				UNIVERSAL SHAFT			
Any Model ..... \$1.50				Any Model ..... Net Each \$1.77			
Resis., Ohms	Taper	Push-Pull	Push-Push	Resis., Ohms	Taper	Push-Pull	Push-Push
2500	C2	APL-702	APS-51	2500	C2	BPL-702	BPS-51
250K	C2	APL-50	APS-51	250K	C2	BPL-59	BPS-51
500K	C1	APL-50	APS-51	500K	C1	BPL-60	BPS-51
500K	C2	APL-60	APS-51	500K	C2	BPL-60	BPS-51
500K	*	APL-91	APS-51	500K	*	BPL-91	BPS-51
500K	+	APL-64	APS-51	500K	+	BPL-64	BPS-51
500K	±	APL-159	APS-51	500K	±	BPL-159	BPS-51
1 meg.	C2						



PRODUCTS OF  
**THE HOUSE OF RESISTORS**



**RESISTORS · CONTROLS**  
**RESISTANCE DEVICES**

**FIELD-ASSEMBLED CONTROLS**

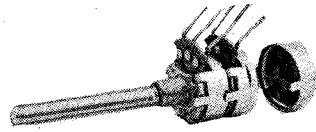
**SERIES DA**

A complete line of field-assembled dual controls (operating on a single-shaft) for all those audio requirements — Hi-Fi, Stereo, sound systems, and all others requiring a practical, profitable means of making up the exact combinations required. Offers a wide choice of panel and rear units, plus ON/OFF switches and a virtually unlimited variety of shaft configurations. Use the Series DA to meet customer requirements.

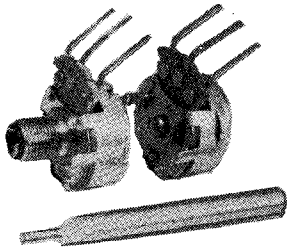
**UNI-TITE**

The advanced concept in dual concentric universal control replacement. Fast! Simple! Sure! The first and only unit ever offered that provides completely trouble-free assembly. Just 50 panel units, 49 rear units, 5 switches and an assortment of shafts enables you to make up any combination to replace over 2000 TV dual concentric controls.

Uni-Tite controls are supplementary to the RTV controls, providing every replacement unit you'll ever need — the most complete line in the industry.



UNI-TITE — RTV



SERIES DA

**CODE DESIGNATIONS**

EXAMPLE:  $\frac{P}{\text{Panel Unit}} - \frac{500}{\text{Ohms}} - \frac{S}{\text{Taper}}$

EXAMPLE:  $\frac{F}{\text{Flat}} \frac{P}{\text{Panel}} - \frac{1}{\text{Inches}} \frac{13}{\text{Sixteenths}} = \text{Flatted Panel Shaft } 1\frac{13}{16}'' \text{ long from mounting surface of control.}$

**SERIES DA**

**FIELD-ASSEMBLED  
DUAL CONTROLS**

PANEL UNITS (PLAIN)	REAR UNITS (PLAIN) (cont.)
DA-1K-S	R-100K-S
DA-2K-S	R-150K-S
DA-5K-S	R-200K-S
DA-10K-S	R-250K-S
DA-10K-V	R-250K-Z
DA-25K-S	R-300K-S
DA-50K-S	R-350K-Z
DA-100K-S	R-500K-S
DA-100K-Z	R-500K-Z
DA-250K-S	R-750K-S
DA-250K-Z	R-1 Meg-S
DA-500K-S	R-1 Meg-Z
DA-500K-Z	R-1 Meg-V
DA-1 Meg-S	R-1.5 Meg-S
DA-1 Meg-Z	R-2 Meg-S
DA-2 Meg-S	R-2.5 Meg-S
DA-2 Meg-Z	R-3 Meg-S
DA-3 Meg-S	R-5 Meg-S
DA-3 Meg-Z	R-5 Meg-Z
DA-5 Meg-S	R-5 Meg-V
DA-5 Meg-Z	R-7.5 Meg-Z

REAR UNITS (PLAIN)	(TAPPED)
RF-750	RF-750
RF-2.5K	RF1-250K
RF-250K	RF-330K
R-1000-S	RF-500K
R-1000-V	RF1-500K
R-1500-S	RF2-500K
R-2000-S	RF-1 Meg.
R-2000-V	RF1-1 Meg.
R-3000-V	RF2-1 Meg.
R-5000-S	RF-1.5 Meg.
R-7500-S	RF-2 Meg.
R-10K-S	RF1-2 Meg.
R-10K-V	RF-2 Meg.
R-25K-S	RF1-2 Meg.
R-50K-S	RF-3 Meg.
R-75K-S	

**UNI-TITE FIELD-ASSEMBLED CONCENTRIC DUAL CONTROLS**

PANEL UNITS (PLAIN)	REAR UNITS (PLAIN)	PANEL SHAFTS (FLATTED)	PANEL SHAFTS (ROUND) (cont)	REAR SHAFTS (FLATTED) (cont)
P-500-S	R-1000-S	FP-013	CSP-214	FR-210
P-750-S	R-1000-V	FP-014	(1/8" Cut-Out)	FR-211
P-750-V	R-1500-S	FP-015	CP-013	FR-213
P-1000-S	R-2000-S	FP-101	CP-014	FR-215
P-1000-V	R-2000-V	FP-104	CP-015	FR-3
P-1500-S	R-3000-V	FP-106	CP-102	FR-302
P-1500-V	R-5000-S	FP-107	CP-104	FR-304
P-2500-S	R-7500-S	FP-109	CP-105	FR-307
P-3000-V	R-10K-S	FP-110	CP-106	FR-309
P-5000-V	R-10K-V	FP-111	CP-107	FR-313
P-10K-S	R-25K-S	FP-112	CP-108	FR-4
P-10K-V	R-50K-S	FP-113	CP-109	FR-404
P-11.5K-V	R-75K-S	FP-115	CP-110	FR-407
P-15K-S	R-100K-S	FP-2	CP-112	FR-409
P-25K-S	R-150K-S	FP-201	CP-113	(KNURLED)
P-25K-Z	R-200K-S	FP-203	CP-114	KR-012
P-50K-S	R-250K-S	FP-205	CP-2	KR-014
P-50K-Z	R-250K-Z	FP-206	CP-202	KR-015
P-75K-S	R-300K-S	FP-207	CP-204	KR-105
P-100K-S	R-350K-Z	FP-209	CP-206	KR-106
P-150K-S	R-500K-S	FP-212	CP-208	KR-108
P-200K-S	R-500K-Z	FP-213	CP-210	KR-112
P-250K-S	R-750K-S	FP-305	CP-212	KR-114
P-250K-Z	R-1 Meg-S	FP-306	CP-3	KR-2
P-350K-Z	R-1 Meg-Z	FP-4	CP-304	KR-312
P-500K-S	R-1 Meg-V	(KNURLED)	CP-306	
P-500K-Z	R-1.5 Meg-S	KP-013	CP-309	(1/8" Cut-Out)
P-500K-V	R-2 Meg-S	KP-014	CP-401	CSR-014
P-750K-S	R-2.5 Meg-S	KP-101		CSR-1
P-1 Meg-S	R-3 Meg-S	KP-102		CSR-102
P-1 Meg-Z	R-5 Meg-S	KP-104		CSR-106
P-1 Meg-V	R-5 Meg-Z	KP-105		CSR-108
P-1.5 Meg-S	R-5 Meg-V	KP-108		CSR-110
P-2 Meg-S	R-5 Meg-Z	KP-111		CSR-112
P-2 Meg-V	R-7.5 Meg-Z	KP-112		CSR-115
P-3 Meg-S	(TAPPED)	KP-114		CSR-201
P-3 Meg-Z	RF-750	KP-308		CSR-203
P-4 Meg-S	RF-2.5K	(ROUND)		CSR-205
P-5 Meg-S	RF-250K	RP-101		CSR-206
P-5 Meg-Z	RF1-250K	RP-105		CSR-208
P-5 Meg-V	RF-330K	RP-209		CSR-211
(TAPPED)	RF-500K	(1/8" Cut-Out)		CSR-212
PF-750	RF1-500K	CSP-012		CSR-214
PF1-750	RF2-500K	CSP-015		CSR-3
PF-1000	RF-1 Meg.	RF-1 Meg.		CSR-301
PF-2.5K	RF1-1 Meg.	RF2-1 Meg.		CSR-307
PF-250K	RF-1.5 Meg.	RF-1.5 Meg.		CSR-308
PF-500K	RF-2 Meg.	RF-2 Meg.		
PF-1 Meg.	RF1-2 Meg.	RF1-2 Meg.		
PF-2 Meg.	RF-3 Meg.	RF-3 Meg.		
PF1-2 Meg.				



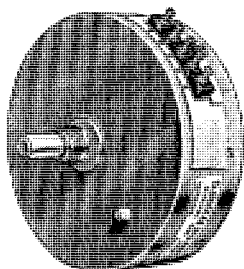
PRODUCTS OF  
**THE HOUSE OF RESISTORS®**



**RESISTORS - CONTROLS**  
**RESISTANCE DEVICES**

### SERIES 54-48JA

3" Dia. Vari/Phase Single Turn Potentiometer

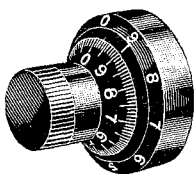


Permits external phasing of electrical rotation to mechanical rotation. Ultra precise unit for professional use. Exclusive Clarostat design eliminates bulky, hard-to-adjust clamping rings. Anodized aluminum housings for minimum weight. Widely used in aircraft instrumentation.

Stock Values	Resolution 100/Total Turns
250,000	.03%
100,000	.031%
50,000	.040%
10,000	.061%
1,000	.083%

### CLARODIALS

Ten-Turn Concentric Scale Dials

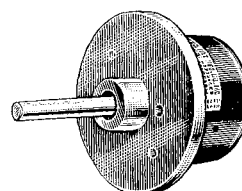


Calibrated dials designed for multi-turn potentiometers up to 10 turns or other rotary devices. CLARODIALS require only one inch of panel space. The knob attaches directly to the shaft, and the body of the dial is mounted rigidly to the panel. As a result, accurate readings with a ratio 1000:1 for ten turns are provided with zero backlash and no reading error. CLARODIALS are made of anodized aluminum for years of attractive use. Mounting requirements are 1/4" shaft and 3/8"-32 NEF-2A bushing. Adapters for 1/8" dia. shafts are available.

Cat. No.	Description
411	Commercial 10 turn, black anodize 1/4" shaft, no lock
412	Commercial 10 turn, black anodize 1/4" shaft, with lock
461	Commercial 10 turn, clear anodize 1/4" shaft, no lock
462	Commercial 10 turn, clear anodize 1/4" shaft, with lock

### SERIES SC42-970 SINE-COSINE

Single-Turn Potentiometer



Used in radar, computer and servomechanisms, or any application requiring two output voltages accurately proportioned to the sine and cosine rotation angle. Due to functional use, units are designed and built for exceptionally long rotational life.

### SPECIFICATIONS

FUNCTION: Sine-Cosine.

TOTAL RESISTANCE: 16,000  $\Omega \pm 10\%$ .

POWER RATING: 2.46 watts @ 40°C.

(198 volts R.M.S.)

ROTATION: (Eff., Elec., Mech) 360° (Cont.)

MAXIMUM SPEED

RECOMMENDED: 30 RPM (20 gm. contact pressure)

EXPECTED LIFE: 500,000 Cycles.

RESOLUTION: 0.14% maximum of peak to peak voltage.

CONFORMITY: Standard,  $\pm 1\%$  peak to peak voltage.

(Available,  $\pm 1/2\%$  peak to peak voltage.

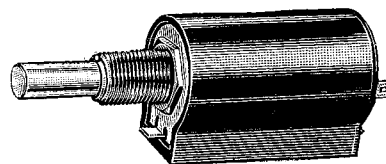
Not stocked — must be ordered special price and information on request.)

SHAFT TORQUE: 1 oz. in.

WEIGHT: 6 oz.

### SERIES 62JA

Commercial Multi-turn Potentiometer



A 10-turn potentiometer offering electrical operating characteristics comparable to units costing far more. Designed specifically for the industrial instrumentation market, the Series 62JA has the inherent advantages of far greater resolution in trimming, better instrument control and settings for all types of electronic equipment. Brief specifications include: 7/8" diameter, 1 1/8" deep behind panel, bushing and shaft or split-locking bushing with screwdriver slot, 2 watts @ 25°C, derated to zero @ 85°C, 1000 to 100K ohms standard — others available, absolute linearity of  $\pm 0.25\%$  standard, closer on order.

Stock Values	Resolu- tion %	Stock Values	Resolu- tion %
100,000	.012	10,000	.024
50,000	.013	5,000	.026
30,000	.016	2,000	.029
20,000	.019	1,000	.030

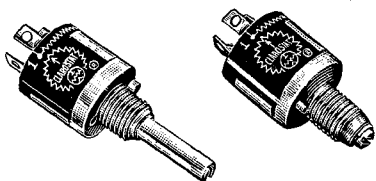
PRODUCTS OF  
THE HOUSE OF RESISTORS



RESISTORS - CONTROLS  
RESISTANCE DEVICES

### SERIES 57M & 57EJ

#### 1/2" Single Turn Potentiometers

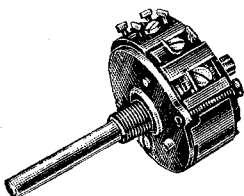


High performance potentiometer packaged in a 1/2" diameter housing. Quality construction throughout. Available in two models; Series 57M rated at 1.5 watts at 40°C and Series 57EJ rated at 2 watts at 70°C. The high-temperature Series 57EJ features glass-sealed terminals. Both units are corrosion resistant.

SERIES	SERIES	Resolution	
57M & 57M9	57EJA & 57EJB	100/Total	
Stock Values	Stock Values	Turns	Resistance Ohms
50 Ω	50 Ω	0.16%	50,000
100 Ω	100 Ω	0.19%	20,000
200 Ω	200 Ω	0.26%	10,000
500 Ω	500 Ω	0.30%	5,000
1000 Ω	1000 Ω	0.35%	1,000
5000 Ω	5000 Ω	0.45%	500
10,000 Ω	10,000 Ω	0.58%	200
20,000 Ω	20,000 Ω	0.70%	100
50,000 Ω	50,000 Ω	0.91%	50

### SERIES 42-900

#### High Versatility Single-Turn Potentiometer



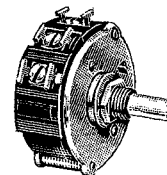
Used and approved by the millions in all types of applications ranging from ultra-critical military systems to ultra-dependable hard-working industrial equipment. Extra tap affords greater electrical versatility. Shaft extension through rear of unit permits addition of switching or other functions actuated by single shaft.

Stock Values	***Terminal Linearity	Resolution 100/Total Turns	Temp. Coefficient of Wire
100,000	±0.25%	.053%	±.00002 Ω/Ω/°C
50,000	±0.25%	.056%	±.00002 Ω/Ω/°C
20,000	±0.25%	.105%	±.00002 Ω/Ω/°C
10,000	±0.25%	.125%	±.00002 Ω/Ω/°C
5,000	±0.25%	.167%	±.00002 Ω/Ω/°C
2,500	±0.25%	.148%	±.00002 Ω/Ω/°C
1,000	±0.25%	.191%	±.00002 Ω/Ω/°C
500	±0.50%	.174%	.00017 Ω/Ω/°C
100	±0.50%	.351%	.00017 Ω/Ω/°C
50	±0.50%	.435%	.00017 Ω/Ω/°C

\*\*\*Terminal Linearity: The maximum deviation of the actual output characteristic from a straight reference line extending between zero and the total applied voltage over the actual effective rotation.

### SERIES 42JA

#### Single Turn Potentiometer



All the same fine qualities and performance tolerances of the Series 42-900, with the exception of the additional tap, and shaft extension. The ideal unit for extra-dependable potentiometer requirements.

Stock Values	***Absolute Linearity	Resolution 100/Total Turns	Temp. Coefficient of Wire
100,000	±0.5%	.051%	±.00002 Ω/Ω/°C
50,000	±0.5%	.074%	±.00002 Ω/Ω/°C
20,000	±0.5%	.10%	±.00002 Ω/Ω/°C
10,000	±0.5%	.12%	±.00002 Ω/Ω/°C
5,000	±0.5%	.17%	±.00002 Ω/Ω/°C
2,500	±0.5%	.14%	±.00002 Ω/Ω/°C
1,000	±0.5%	.19%	±.00002 Ω/Ω/°C
500	±0.5%	.18%	.00017 Ω/Ω/°C
100	±1.0%	.28%	.00017 Ω/Ω/°C
50	±1.0%	.35%	.00017 Ω/Ω/°C

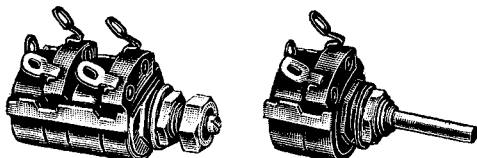
\*\*\*Absolute Linearity: The maximum deviation of the actual output characteristic from a straight reference line extending between zero and the total applied voltage over the theoretical effective rotation.

## MINIATURIZED POTENTIOMETERS

Consistent with miniaturization in Military and Commercial equipment, such as; Guided Missiles, Aircraft Electronics, Mobile Radio and Radar, Computers, Range Finders, Pocket Radios and Hearing Aids; Clarostat offers miniaturized composition element Series 48M and wire-wound

Series 49M Potentiometers, and a Rotary Selector Switch designated as Series BHM to meet the switching requirements of the above mentioned and other applications.

### SERIES 48M — 0.2 WATT COMPOSITION ELEMENT



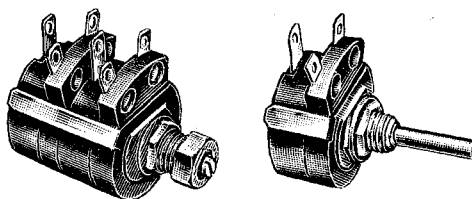
Available in single or dual, standard or shaft locking bushing. Standard bushing potentiometers have 1/4" x 32 NEF-2A x 1/4" long bushing and 1/8" dia. x 1/2" long shaft beyond bushing.

Shaft locking bushing potentiometers have 1/4" x 32 NEF-2A x 3/8" long bushing and 1/8" dia. x 1/4" long screwdriver slotted shaft.

All potentiometers furnished with mounting nut 1/16" thick x 3/16" across flats, and one internal tooth lockwasher. Potentiometers with split locking bushings furnished with jam nut also.

<b>Insulation:</b>	Breakdown test between terminals and ground for 1 minute 1000v.a.c.; 350v.a.c. @ 3.4" Hg.
<b>Resistance Range (Ohms):</b>	Linear 200 to 5 Meg. Tapered 1500 to 2.5 Meg.
<b>Resistance Tolerance:</b>	Linear ±10%. Above 100,000 ohms ±20%. Tapered ±20% all values.
<b>Tapers:</b>	Linear Left hand — 10% resistance at 50% rotation. "Z"
<b>Mechanical and Electrical Rotation:</b>	300° ±3°
<b>Effective Rotation:</b>	300° ±3°
<b>Torque (oz.-in.):</b>	0.5 to 6
<b>Dual Construction:</b>	Available

### SERIES 49M — 1.5 WATT WIRE-WOUND



Available in single or dual, standard or shaft locking bushing. Standard bushing potentiometers have 1/4" x 32 NEF-2A x 1/4" long bushing and 1/8" dia. x 1/2" long shaft beyond bushing.

Shaft locking bushing potentiometers have 1/4" x 32 NEF-2A x 3/8" long bushing and 1/8" dia. x 1/4" long screwdriver slotted shaft. All potentiometers furnished with mounting nut 1/16" thick x 3/16" across flats, and one internal tooth lock-washer. Potentiometers with shaft locking bushings furnished with jam nut also.

Fabricated in accordance with MIL-R-19

<b>Insulation:</b>	Breakdown test between terminals and ground for 1 minute. 1000v.a.c.; 500v.a.c. @ 3.4" Hg.
<b>Resistance Range (Ohms):</b>	Linear 1 to 20,000
<b>Resistance Tolerance:</b>	Linear ±5% Tapered Linear only
<b>Mechanical and Electrical Rotation:</b>	300° ±3°
<b>Effective Rotation:</b>	300° ±3°
<b>Torque (oz.-in.):</b>	0.3 to 6
<b>Dual Construction:</b>	Available

PRODUCTS OF

**THE HOUSE OF RESISTORS**



**CLAROSTAT**

**RESISTORS • CONTROLS**  
**RESISTANCE DEVICES**

## MILITARY POTENTIOMETERS

ITEMS IN STOCK FOR IMMEDIATE DELIVERY

### RA10 per MIL-R-19 1 WATT WIRE-WOUND POTENTIOMETERS — Commercial Equivalent — Series 49M

RA10NASD150A RA10NASD250A RA10NASD500A RA10NASD750A RA10NASD101A RA10NASD151A RA10NASD201A RA10NASD251A RA10NASD351A RA10NASD501A RA10NASD751A RA10NASD102A	RA10NASD152A RA10NASD202A RA10NASD252A RA10NASL150A RA10NASL250A RA10NASL500A RA10NASL750A RA10NASL101A RA10NASL151A RA10NASL201A RA10NASL251A RA10NASL351A	RA10NASL501A RA10NASL751A RA10NASL102A RA10NASL152A RA10NASL202A RA10NASL252A RA10LASD150A RA10LASD250A RA10LASD500A RA10LASD750A RA10LASD101A RA10LASD151A	RA10LASD201A RA10LASD251A RA10LASB351A RA10LASB501A RA10LASB751A RA10LASD102A RA10LASD152A RA10LASD202A RA10LASD252A RA10LASM150A RA10LASM250A RA10LASM500A	RA10LASM750A RA10LASM101A RA10LASM151A RA10LASM201A RA10LASM251A RA10LASM351A RA10LASM501A RA10LASM751A RA10LASM102A RA10LASM152A RA10LASM202A RA10LASM252A
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### RA20 per MIL-R-19 2 WATT WIRE-WOUND POTENTIOMETERS — Commercial Equivalent — Series 43M

RA20NASA3R0A RA20NASA6R0A RA20NASA8R0A RA20NASA100A RA20NASA150A RA20NASA200A RA20NASA250A RA20NASA350A RA20NASA500A RA20NASA750A RA20NASA101A RA20NASA151A RA20NASA201A RA20NASA251A RA20NASA351A RA20NASA501A RA20NASA751A RA20NASA102A RA20NASA152A RA20NASA202A RA20NASA252A	RA20NASA352A RA20NASA502A RA20NASA752A RA20NASA103A RA20NASA153A RA20NASD3R0A RA20NASD6R0A RA20NASD8R0A RA20NASD100A RA20NASD150A RA20NASD200A RA20NASD250A RA20NASD350A RA20NASD500A RA20NASD750A RA20NASD101A RA20NASD151A RA20NASD201A RA20NASD251A RA20NASD351A RA20NASD501A	RA20NASD751A RA20NASD102A RA20NASD152A RA20NASD202A RA20NASD252A RA20NASD352A RA20NASD502A RA20NASD752A RA20NASD103A RA20NASD153A RA20LASB3R0A RA20LASB6R0A RA20LASB8R0A RA20LASB100A RA20LASB150A RA20LASB200A RA20LASB250A RA20LASB350A RA20LASB500A RA20LASB750A RA20LASB101A	RA20LASB151A RA20LASB201A RA20LASB251A RA20LASB351A RA20LASB501A RA20LASB751A RA20LASB102A RA20LASB152A RA20LASB202A RA20LASB252A RA20LASB352A RA20LASB502A RA20LASB752A RA20LASB103A RA20LASB153A RA20LASD3R0A RA20LASD6R0A RA20LASD8R0A RA20LASD100A RA20LASD150A RA20LASD200A	RA20LASD250A RA20LASD350A RA20LASD500A RA20LASD750A RA20LASD101A RA20LASD151A RA20LASD201A RA20LASD251A RA20LASD351A RA20LASD501A RA20LASD751A RA20LASD102A RA20LASD152A RA20LASD202A RA20LASD352A RA20LASD502A RA20LASD752A RA20LASD103A RA20LASD153A
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### RA30 per MIL-R-19 4 WATT WIRE-WOUND POTENTIOMETERS — Commercial Equivalent — Series 58M

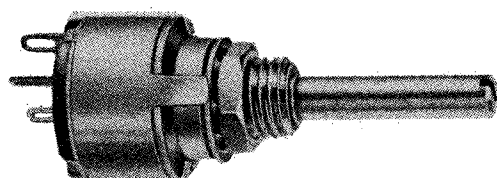
RA30NASA3R0A RA30NASA6R0A RA30NASA8R0A RA30NASA100A RA30NASA150A RA30NASA200A RA30NASA250A RA30NASA350A RA30NASA500A RA30NASA750A RA30NASA101A RA30NASA151A RA30NASA201A RA30NASA251A RA30NASA351A RA30NASA501A RA30NASA751A	RA30NASA102A RA30NASA152A RA30NASA202A RA30NASA252A RA30NASA352A RA30NASA502A RA30NASA752A RA30NASA103A RA30NASA153A RA30NASA203A RA30NASA253A RA30NASD3R0A RA30NASD6R0A RA30NASD8R0A RA30NASD100A RA30NASD150A RA30NASD200A	RA30NASD250A RA30NASD350A RA30NASD500A RA30NASD750A RA30NASD101A RA30NASD151A RA30NASD201A RA30NASD251A RA30NASD351A RA30NASD501A RA30NASD751A RA30NASD102A RA30NASD152A RA30NASD202A RA30NASD252A RA30NASD352A RA30NASD502A	RA30NASD752A RA30NASD103A RA30NASD153A RA30NASD203A RA30NASD253A RA30LASB3R0A RA30LASB6R0A RA30LASB8R0A RA30LASB100A RA30LASB150A RA30LASB200A RA30LASB250A RA30LASB350A RA30LASB500A RA30LASB750A RA30LASB101A RA30LASB151A	RA30LASB201A RA30LASB251A RA30LASB351A RA30LASB501A RA30LASB751A RA30LASB102A RA30LASB152A RA30LASB202A RA30LASB252A RA30LASB352A RA30LASB502A RA30LASB752A RA30LASB103A RA30LASB153A RA30LASD253A
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### RV4 per MIL-R-94 2 WATT CARBON POTENTIOMETERS — Commercial Equivalent — Series 53M

RV4NAYSB101A RV4NAYSB251A RV4NAYSB501A RV4NAYSB102A RV4NAYSB252A RV4NAYSB502A RV4NAYSB103A RV4NAYSB253A RV4NAYSB503A RV4NAYSB104A RV4NAYSB254A RV4NAYSB504A RV4NAYSB105A RV4NAYSB255B RV4NAYSB505B RV4NAYS500A RV4NAYS101A RV4NAYS151A RV4NAYS251A RV4NAYS351A RV4NAYS501A RV4NAYS751A	RV4NAYS102A RV4NAYS152A RV4NAYS252A RV4NAYS352A RV4NAYS502A RV4NAYS752A RV4NAYS103A RV4NAYS153A RV4NAYS253A RV4NAYS353A RV4NAYS503A RV4NAYS753A RV4NAYS104A RV4NAYS154A RV4NAYS254A RV4NAYS354A RV4NAYS504A RV4NAYS754A RV4NAYS105A RV4NAYS155B RV4NAYS205B RV4NAYS255B	RV4NAYS355B RV4NAYS505B RV4NAYSK101A RV4NAYSK251A RV4NAYSK501A RV4NAYSK102A RV4NAYSK252A RV4NAYSK502A RV4NAYSK103A RV4NAYSK253A RV4NAYSK503A RV4NAYSK104A RV4NAYSK254A RV4NAYSK504A RV4NAYSK105A RV4NAYSK255B RV4NAYSK505B RV4LAYS500A RV4LAYS101A RV4LAYS151A RV4LAYS104A RV4LAYS351A	RV4LAYS501A RV4LAYS751A RV4LAYS102A RV4LAYS152A RV4LAYS252A RV4LAYS352A RV4LAYS502A RV4LAYS752A RV4LAYS103A RV4LAYS153A RV4LAYS253A RV4LAYS353A RV4LAYS503A RV4LAYS753A RV4LAYS104A RV4LAYS154A RV4LAYS254A RV4LAYS354A RV4LAYS504A RV4LAYS754A RV4LAYS105A RV4LAYS155B	RV4LAYS205B RV4LAYS255B RV4LAYS505B RV4LAYS101A RV4LAYS151A RV4LAYS201A RV4LAYS251A RV4LAYS301A RV4LAYS351A RV4LAYS401A RV4LAYS451A RV4LAYS501A RV4LAYS551A RV4LAYS601A RV4LAYS651A RV4LAYS701A RV4LAYS751A RV4LAYS801A RV4LAYS851A RV4LAYS901A RV4LAYS951A
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### RV6 per MIL-R-94 0.5 WATT CARBON POTENTIOMETERS — Commercial Equivalent — Series 63M

RV6NAYS101A RV6NAYS251A RV6NAYS501A RV6NAYS102A RV6NAYS252A RV6NAYS502A RV6NAYS103A RV6NAYS153A RV6NAYS253A RV6NAYS503A RV6NAYS104A	RV6NAYS154A RV6NAYS254A RV6NAYS504A RV6NAYS105A RV6LAYS101A RV6LAYS251A RV6LAYS501A RV6LAYS102A RV6LAYS252A RV6LAYS502A RV6LAYS103A	RV6LAYS153A RV6LAYS253A RV6LAYS503A RV6LAYS104A RV6LAYS154A RV6LAYS254A RV6LAYS504A RV6LAYS105A
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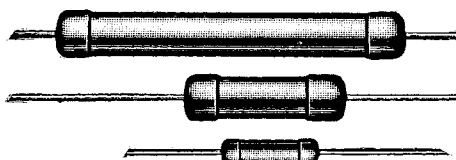




**"FIXTOHM"**

**PRECISION RESISTORS**

± 1% TOLERANCE



<p><b>SERIES CVF</b> MIL Style RN20X <b>1/2 WATT</b></p>	<p>50 ohms to 2 megohms. Values other than military decade values on page at right add 10% to List Price. *Values outside the above range price and delivery information on request.</p>
<p><b>SERIES CVC</b> MIL Style RN25X <b>1 WATT</b></p>	<p>100 ohms to 4.99 megohms. Values other than military decade values on page at right add 10% to List Price. *Values outside the above range price and delivery information on request.</p>
<p><b>SERIES CVD</b> MIL Style RN30X <b>2 WATT</b></p>	<p>200 ohms to 10 megohms. Values other than military decade values on page at right add 10% to List Price. *Values outside the above range price and delivery information on request.</p>
<p><b>SERIES CML</b> MIL Style RN60B <b>1/8 WATT</b> (MOLDED BODY)</p>	<p>50 ohms to 5 megohms. Values other than military decade values on page at right add 10% to List Price. *Values outside the above range price and delivery information on request.</p>
<p><b>SERIES CMH</b> MIL Style RN65B <b>1/4 WATT</b> (MOLDED BODY)</p>	<p>50 ohms to 5 megohms. Values other than military decade values on page at right add 10% to List Price. *Values outside the above range price and delivery information on request.</p>
<p><b>SERIES CMF</b> MIL Style RN70B <b>1/2 WATT</b> (MOLDED BODY)</p>	<p>50 ohms to 2.2 megohms. Values other than military decade values on page at right add 10% to List Price. *Values outside the above range price and delivery information on request.</p>
<p><b>SERIES CMD</b> MIL Style RN80B <b>2 WATT</b> (MOLDED BODY)</p>	<p>200 ohms to 10 megohms. Values other than military decade values on page at right add 10% to List Price. *Values outside the above range price and delivery information on request.</p>

Resistance tolerances available from 1/2 to 10%.  
Hermetically sealed resistors available on special order.  
Also available—Series CEL 1/8 watt and Series CEH 1/4 watt.  
Prices and information on request.

**MILITARY DECADE VALUES**

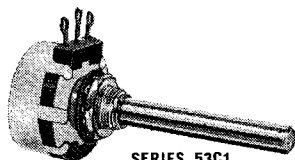
10.0	13.3	17.8	23.7	31.6	42.2	56.2	75.0
10.2	13.7	18.2	24.3	32.4	43.2	57.6	76.8
10.5	14.0	18.7	24.9	33.2	44.2	59.0	78.7
10.7	14.3	19.1	25.5	34.0	45.3	60.4	80.6
11.0	14.7	19.6	26.1	34.8	46.4	61.9	82.5
11.3	15.0	20.0	26.7	35.7	47.5	63.4	84.5
11.5	15.4	20.5	27.4	36.5	48.7	64.9	86.6
11.8	15.8	21.0	28.0	37.4	49.9	66.5	88.7
12.1	16.2	21.5	28.7	38.3	51.1	68.1	90.9
12.4	16.5	22.1	29.4	39.2	52.3	69.8	93.1
12.7	16.9	22.5	30.1	40.2	53.6	71.5	95.3
13.0	17.4	23.2	30.9	41.2	54.9	73.2	97.6

Other values may be found by using proper decade multiplier.



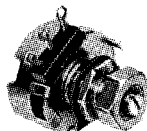
**SERIES 53 — 2 WATT**

**MOLDED COMPOSITION ELEMENT POTENTIOMETERS**



**SERIES 53C1**

**SERIES 53C2**



**SERIES 53C3**

A 2-watt molded composition element potentiometer totally enclosed and sealed against moisture and other environmental factors. Meets the need for a high quality resistance device incorporating high-stability under extreme climatic and operational conditions. For use in critical applications, such as, test equipment, military requirements, computers, servo systems and industrial metering devices.

1 1/16" diameter and 9/16" deep, wiper assembly of one piece construction; carbon to carbon contact insures exceptionally low noise level; brass nickel plated, gold plated terminals. Electrical tolerances are plus/minus 10% for all values up to 1 meg. 1 meg. and above plus/minus 20%.

Fabricated in accordance with MIL-R-94 Style RV4.

Items not listed are special, prices and information supplied upon request.

The C1 designation indicates a 1 1/8" round shaft beyond bushing; 3/8" long bushing with 3/8-32-NEF-2 thread. The C2 designation is a 1/8" screwdriver slotted shaft with a 1/2" split locking bushing. The C3 designation is a 3/8" round shaft FMS, 3/8" long bushing with 3/8-32-NEF-2 thread.

**TAPERED POTENTIOMETERS**

"Z" TAPER	REVERSED "Z" TAPER
53C1-100K-Z	53C1-10K-RZ
53C1-250K-Z	53C1-25K-RZ
53C1-500K-Z	53C1-50K-RZ
53C1-1 Meg-Z	
53C1-2.5 Meg-Z	

**DUAL POTENTIOMETERS**

Cat. No.	Cat. No.
D53C1-10K-S	D53C1-100K-S
D53C1-25K-S	D53C1-250K-S
D53C1-50K-S	D53C1-500K-S
	D53C1-1 Meg-S

Cat. No.	Cat. No.	Cat. No.	Res. Ohms	Taper
53C1-50-S	53C2-50-S	53C3-50-S	50	S
53C1-100-S	53C2-100-S	53C3-100-S	100	S
53C1-150-S	53C2-150-S	53C3-150-S	150	S
53C1-250-S	53C2-250-S	53C3-250-S	250	S
53C1-350-S	53C2-350-S	53C3-350-S	350	S
53C1-500-S	53C2-500-S	53C3-500-S	500	S
53C1-750-S	53C2-750-S	53C3-750-S	750	S
53C1-1000-S	53C2-1000-S	53C3-1000-S	1000	S
53C1-1500-S	53C2-1500-S	53C3-1500-S	1500	S
53C1-2000-S	53C2-2000-S	53C3-2000-S	2000	S
53C1-2500-S	53C2-2500-S	53C3-2500-S	2500	S
53C1-3500-S	53C2-3500-S	53C3-3500-S	3500	S
53C1-5000-S	53C2-5000-S	53C3-5000-S	5000	S
53C1-7500-S	53C2-7500-S	53C3-7500-S	7500	S
53C1-10K-S	53C2-10K-S	53C3-10K-S	10K	S
53C1-15K-S	53C2-15K-S	53C3-15K-S	15K	S
53C1-20K-S	53C2-20K-S	53C3-20K-S	20K	S
53C1-25K-S	53C2-25K-S	53C3-25K-S	25K	S
53C1-35K-S	53C2-35K-S	53C3-35K-S	35K	S
53C1-50K-S	53C2-50K-S	53C3-50K-S	50K	S
53C1-75K-S	53C2-75K-S	53C3-75K-S	75K	S
53C1-100K-S	53C2-100K-S	53C3-100K-S	100K	S
53C1-150K-S	53C2-150K-S	53C3-150K-S	150K	S
53C1-200K-S	53C2-200K-S	53C3-200K-S	200K	S
53C1-250K-S	53C2-250K-S	53C3-250K-S	250K	S
53C1-350K-S	53C2-350K-S	53C3-350K-S	350K	S
53C1-500K-S	53C2-500K-S	53C3-500K-S	500K	S
53C1-750K-S	53C2-750K-S	53C3-750K-S	750K	S
53C1-1 Meg-S	53C2-1 Meg-S	53C3-1 Meg-S	1 Meg	S
53C1-1.5 Meg-S	53C2-1.5 Meg-S	53C3-1.5 Meg-S	1.5 Meg	S
53C1-2 Meg-S	53C2-2 Meg-S	53C3-2 Meg-S	2 Meg	S
53C1-2.5 Meg-S	53C2-2.5 Meg-S	53C3-2.5 Meg-S	2.5 Meg	S
53C1-3 Meg-S	53C2-3 Meg-S	53C3-3 Meg-S	3 Meg	S
53C1-3.5 Meg-S	53C2-3.5 Meg-S	53C3-3.5 Meg-S	3.5 Meg	S
53C1-4 Meg-S	53C2-4 Meg-S	53C3-4 Meg-S	4 Meg	S
53C1-5 Meg-S	53C2-5 Meg-S	53C3-5 Meg-S	5 Meg	S
53C1-7.5 Meg-S	53C2-7.5 Meg-S	53C3-7.5 Meg-S	7.5 Meg	S
53C1-10 Meg-S	53C2-10 Meg-S	53C3-10 Meg-S	10 Meg	S

Standard Packing — Individual Carton.

Field-attached switches are available for the Series 53. The switch is easily and quickly installed on the control, taking less than a minute to install.

Cat. No.	Description
53-12	SPST — 5A-125V. A.C.
53-20	DPST — 3A-125V. A.C.
53-21	(Mod.) DPST — 3A-125V. A.C./D.C.

**SERIES "43C1" and "43C2" 2-WATT CONTROLS**

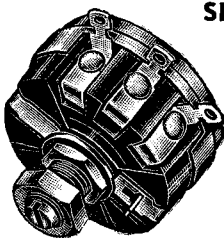
Electrical tolerance is plus/minus 5% for all ohmage. Independent linearity is to plus/minus 2%. All controls rated 2 watts.

43C1 Cat. No.	43C2 Cat. No.	Res. Ohms	43C1 Cat. No.	43C2 Cat. No.	Res. Ohms	43C1 Cat. No.	43C2 Cat. No.	Res. Ohms	43C1 Cat. No.	43C2 Cat. No.	Res. Ohms
43C1-5	43C2-5	5	43C1-100	43C2-100	100	43C1-1500	43C2-1500	1500	43C1-15K	43C2-15K	15K
43C1-10	43C2-10	10	43C1-150	43C2-150	150	43C1-2000	43C2-2000	2000	43C1-20K	43C2-20K	20K
43C1-20	43C2-20	20	43C1-200	43C2-200	200	43C1-2500	43C2-2500	2500	43C1-25K	43C2-25K	25K
43C1-25	43C2-25	25	43C1-300	43C2-300	300	43C1-3000	43C2-3000	3000	43C1-30K	43C2-30K	30K
43C1-30	43C2-30	30	43C1-400	43C2-400	400	43C1-4000	43C2-4000	4000	43C1-40K	43C2-40K	40K
43C1-40	43C2-40	40	43C1-500	43C2-500	500	43C1-5000	43C2-5000	5000	43C1-50K	43C2-50K	50K
43C1-50	43C2-50	50	43C1-750	43C2-750	750	43C1-7500	43C2-7500	7500			
43C1-75	43C2-75	75	43C1-1000	43C2-1000	1000	43C1-10K	43C2-10K	10K			

**NET PRICES**

43C1-5 to 43C1-10K ..... \$1.35	43C1-30K to 43C1-50K ..... \$2.01	43C2-15K to 43C2-25K ..... \$2.55
43C1-15K to 43C1-25K ..... 1.80	43C2-5 to 43C2-10K ..... 2.25	43C2-30K to 43C2-50K ..... 3.00

**SERIES 58C1 AND 58C2 3-WATT CONTROLS**



Electrical tolerance is plus/minus 5% for all ohmage. Independent linearity is to plus/minus 1%. All controls rated 3 watts.

58C1 Cat. No.	58C2 Cat. No.	Res. Ohms	58C1 Cat. No.	58C2 Cat. No.	Res. Ohms
58C1-1	58C2-1	1	58C1-500	58C2-500	500
58C1-2	58C2-2	2	58C1-750	58C2-750	750
58C1-4	58C2-4	4	58C1-1000	58C2-1000	1000
58C1-6	58C2-6	6	58C1-1500	58C2-1500	1500
58C1-10	58C2-10	10	58C1-2000	58C2-2000	2000
58C1-15	58C2-15	15	58C1-2500	58C2-2500	2500
58C1-20	58C2-20	20	58C1-3000	58C2-3000	3000
58C1-25	58C2-25	25	58C1-5000	58C2-5000	5000
58C1-30	58C2-30	30	58C1-7500	58C2-7500	7500
58C1-40	58C2-40	40	58C1-10K	58C2-10K	10K
58C1-50	58C2-50	50	58C1-15K	58C2-15K	15K
58C1-60	58C2-60	60	58C1-20K	58C2-20K	20K
58C1-75	58C2-75	75	58C1-25K	58C2-25K	25K
58C1-100	58C2-100	100	58C1-30K	58C2-30K	30K
58C1-200	58C2-200	200	58C1-40K	58C2-40K	40K
58C1-300	58C2-300	300	58C1-50K	58C2-50K	50K
58C1-400	58C2-400	400			

**NET PRICES**

58C1-1 to 58C1-10K ..... \$1.35	58C2-1 to 58C2-10K ..... \$2.25
58C1-15K to 58C1-25K ..... 1.80	58C2-15K to 58C2-25K ..... 2.55
58C1-30K to 58C1-50K ..... 2.01	58C2-30K to 58C2-50K ..... 3.00

**SERIES "10C1" and "10C2" 4-WATT CONTROLS**

Electrical tolerance is plus/minus 5% for all ohmage. Independent linearity to plus/minus 1%. All controls rated 4 watts.

1 to 50K ohms available on special order. Prices and information on request.

10C1 Cat. No.	10C2 Cat. No.	Res. Ohms
10C1-75K	10C2-75K	75K
10C1-100K	10C2-100K	100K

**Net Prices**

10C1 ..... 2.75	10C2 ..... 3.60
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PRODUCTS OF  
**THE HOUSE OF RESISTORS**



**RESISTORS • CONTROLS**  
**RESISTANCE DEVICES**

**"GREENOHM V"™ VITREOUS-ENAMEL RESISTORS**

Based on years of research and engineering development, these vitreous-enamel wire-wound power resistors offer superlative performance and life as proved by countless tests. "Greenohm V" resistors provide all the outstanding quality which made Clarostat "Greenohm"™ cement-coated units famous, plus a glass-smooth vitreous-enamel coating in a handsome bluish-green for maximum eye appeal. Made to MIL-R-26C specifications.

- Fixed and adjustable
- 5-watt to 200 watt sizes
- ± 5% tolerance, 50 ohms and over. ± 10% tolerance, 49.9 ohms and under. ± 10% for adjustable.

**"GREENOHM V"™ FIXED RESISTORS (VITREOUS ENAMEL)**

**5-WATT SERIES VPR-5-F**

Core: 1" x 5/16"

Terminals, wire lead and lug

Resistance Ohms				
1	30	350	1250	7000
1.5	35	400	1500	7500
2	40	450	1750	8000
3	50	500	2000	9000
4	75	600	2250	10K
5	100	700	2500	12.5K
7.5	125	750	3000	15K
10	150	800	3500	17.5K
12	200	900	4000	20K
15	225	1000	4500	22.5K
20	250	1100	5000	25K
25	300	1200	6000	

**NET PRICES:**

1 to 1K	\$0.51
1100 to 5K	.54
6K to 10K	.57
12.5K to 15K	.60
17.5K to 20K	.63
22.5K to 25K	.66

**10-WATT SERIES VPR-10-F**

Core: 1 3/4" x 5/16"

Terminals, wire lead and lug

Resistance Ohms				
0.4	30	500	3000	13.5K
1	35	600	3500	14.3K
1.2	40	700	4000	15K
1.3	50	750	4500	16K
1.5	75	800	5000	17.5K
2	100	900	6000	18K
3	125	1000	7000	20K
4	150	1100	7500	22.5K
5	200	1200	8000	25K
7.5	225	1250	8500	30K
10	250	1500	9000	35K
12	300	1750	10K	40K
15	350	2000	11K	45K
20	400	2250	12K	50K
25	450	2500	12.5K	

Standard Packaging — 10 per Carton

**NET PRICES:**

0.4 to 1K	\$0.57
1100 to 5K	.60
6K to 10K	.69
11K to 20K	.78
22.5K to 25K	.81
30K to 50K	.90

**100-WATT SERIES VK-100-N**

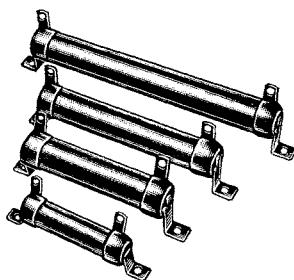
Core: 6 1/2" x 3/4"

Lug terminals — Mtg. bracket furnished

Resistance Ohms				
1	50	750	7500	50K
2	75	1000	10K	60K
3	100	1500	15K	75K
4	125	2000	20K	100K
5	150	2500	25K	
10	250	3000	30K	
25	500	5000	40K	

**NET PRICES:**

1 to 3	\$2.22
4 to 1K	1.59
1500 to 5K	1.68
7500 to 10K	1.80
15K to 20K	1.98
25K to 40K	2.13
50K to 60K	2.22
75K	2.43
100K	2.73



**20-WATT SERIES VPR-20-H**

Core: 2" x 7/16"

Terminals, wire lead and lug

Resistance Ohms				
0.4	350	1850	7500	55K
0.6	400	2000	8000	60K
0.8	500	2250	9000	65K
5	850	2400	10K	70K
10	700	2500	12.5K	75K
25	750	2750	15K	80K
50	800	3000	20K	85K
75	850	3500	25K	90K
100	1000	4000	30K	95K
150	1200	4500	35K	100K
200	1250	5000	40K	
250	1500	6000	45K	
300	1750	7000	50K	

Standard Packaging — 5 per Carton

**NET PRICES:**

0.4 to 1K	\$0.66
1200 to 5K	.69
6K to 10K	.81
12.5K to 20K	.84
25K to 40K	.99
45K to 60K	1.14
65K to 80K	1.35
85K to 100K	1.56

**160-WATT SERIES VK-160-W**

Core: 8 1/2" x 1 1/8"

Lug terminals — Mtg. bracket furnished

Resistance Ohms				
1	50	750	7500	50K
2	75	1000	10K	60K
3	100	1500	15K	75K
4	125	2000	20K	100K
5	150	2500	25K	
10	250	3000	30K	
25	500	5000	40K	

**NET PRICES:**

1 to 5	\$3.18
10 to 1K	2.28
1500 to 5K	2.31
7500 to 10K	2.52
15K to 20K	2.70
25K to 40K	2.79
50K to 60K	2.88
75K	3.06
100K	3.24

**25-WATT SERIES VP-25-K**

Core: 2" x 9/16"

Lug terminals — Mtg. bracket furnished

Resistance Ohms				
1	50	800	5000	30K
2	75	1000	6000	35K
3	100	1500	7500	40K
4	150	2000	10K	50K
5	200	2500	12K	60K
10	250	3000	15K	70K
15	500	3500	20K	80K
25	750	4000	25K	100K

Standard Packing — Individually Boxed

**NET PRICES:**

1 to 1K	\$0.72
1500 to 10K	.75
6K to 10K	.84
12K to 20K	.90
25K to 40K	1.02
50K to 60K	1.20
70K to 80K	1.41
100K	1.62

**50-WATT SERIES VP-50-K**

Core: 4" x 9/16"

Lug terminals — Mtg. bracket furnished

Resistance Ohms				
1	75	1000	8000	75K
2	100	1500	10K	100K
3	150	2000	12K	125K
4	200	2500	15K	150K
5	250	3000	20K	175K
10	500	4000	25K	200K
25	750	5000	35K	225K
50	800	7500	50K	250K

Standard Packaging — Individually Boxed

**NET PRICES:**

1	\$1.53
2 to 1K	1.11
1500 to 5K	1.14
7500 to 10K	1.26
12K to 20K	1.38
25K to 35K	1.53
50K	1.71
75K	1.95
100K	2.13
125K	2.55
150K	2.70
175K	2.79
200K	2.88
225K	3.24
250K	3.24

**200-WATT SERIES VK-200-W**

Core: 10 1/2" x 1 1/8"

Lug terminals — Mtg. bracket furnished

Resistance Ohms				
1	50	1000	10K	60K
2	75	1500	15K	75K
3	100	2000	20K	100K
4	150	2500	25K	
5	250	3000	30K	
10	500	5000	40K	
25	750	7500	50K	

**NET PRICES:**

1 to 5	\$3.42
10 to 1K	2.46
1500 to 5K	2.52
7500 to 10K	2.70
15K to 20K	2.88
25K to 40K	2.97
50K to 60K	3.06
75K	3.24
100K	3.45



**"GREENOHM V"™ ADJUSTABLE RESISTORS ( VITREOUS ENAMEL )**

**10-WATT SERIES VP-10-FA**

Core: 1 3/4" x 5/16"

Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	25	350	1500	5000
2	50	400	2000	6000
3	75	500	2250	7000
5	100	600	2500	7500
7.5	150	750	3000	8000
10	200	800	3500	8500
15	250	1000	4000	9000
20	300	1250	4500	10K

**NET PRICES:**

1 to 1K	\$1.14
1250 to 5K	1.17
6000 to 10K	1.26

Standard Packing — 10 per Carton

**25-WATT SERIES VP-25-KA**

Core: 2" x 9/16"

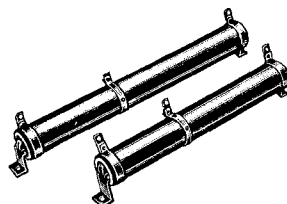
Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	50	750	3500	9000
2	75	800	4000	10K
3	100	1000	4500	12K
5	150	1250	5000	15K
7.5	200	1500	6000	20K
10	250	2000	7000	25K
15	300	2250	7200	
20	400	2500	7500	
25	500	3000	8000	

**NET PRICES:**

1 to 1K	\$1.29
1250 to 5K	1.32
6K to 10K	1.41
12K to 20K	1.47
25K	1.59

Standard Packing — Individually Boxed



**50-WATT SERIES VP-50-KA**

Core: 4" x 9/16"

Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	150	1500	7000	30K
2	200	2000	7200	40K
3	250	2250	7500	50K
4	300	2500	8000	60K
5	400	3000	9000	80K
10	500	3500	10K	100K
25	750	4000	12K	
50	800	4500	15K	
75	1000	5000	20K	
100	1250	6000	25K	

**NET PRICES:**

1 ohm	\$2.10
2 to 1K	1.68
1250 to 5K	1.71
6K to 10K	1.80
12K to 20K	1.92
25K to 40K	2.10
50K to 60K	2.28
80K	2.52
100K	2.70

Standard Packing — Individually Boxed

**75-WATT SERIES VP-75-KA**

Core: 6" x 9/16"

Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	200	2000	7200	35K
2	250	2250	7500	40K
3	300	2500	8000	45K
4	400	3000	9000	50K
5	500	3500	10K	60K
10	750	4000	12K	80K
15	800	4500	15K	100K
25	1000	5000	20K	
50	1250	6000	25K	
100	1500	7000	30K	

**NET PRICES**

1 to 2	\$2.37
3 to 1K	1.86
1250 to 5K	1.92
6000 to 10K	2.01
12K to 20K	2.13
25K to 40K	2.31
45K to 60K	2.52
80K	2.76
100K	2.91

Standard Packaging — Individually Boxed

**100-WATT SERIES VK-100-NA**

Core: 6 1/2" x 3/4"

Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

**NET PRICES:**

1 to 3	\$3.00
4 to 1K	2.37
1500 to 5K	2.43
10K	2.55
15K to 20K	2.70
25K to 40K	2.88
50K	3.00
75K	3.12
100K	3.27

Standard Packing — Individually Boxed

**160-WATT SERIES VK-160-WA**

Core: 8 1/2" x 1 1/8"

Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

**NET PRICES:**

1 to 5	\$4.05
10 to 1K	3.15
1500 to 5K	3.18
10K	3.39
15K to 20K	3.57
25K to 40K	3.66
60K	3.75
75K	3.93
100K	4.14

Standard Packing — Individually Boxed

**200-WATT SERIES VK-200-WA**

Core: 10 1/2" x 1 1/8"

Lug terminals — Mtg. brackets furnished

Resistance Ohms				
1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

**NET PRICES:**

1 to 5	\$4.32
10 to 1K	3.33
1500 to 5K	3.42
10K	3.57
15K to 20K	3.75
25K to 40K	3.84
50K	3.96
75K	4.14
100K	4.32

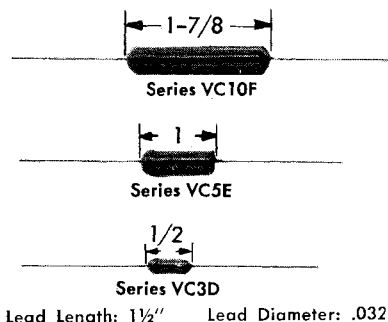
Standard Packing — Individually Boxed





**AXIAL LEAD VITREOUS RESISTORS**

Available in three sizes 3, 5 and 10 watts, Series VC3D, VC5E and VC10F. Axial lead resistors are particularly adapted to printed circuit, terminal board, and point-to-point wiring applications. These resistors save considerable space because of the elimination of mounting brackets and terminal lugs. Standard resistance tolerance is  $\pm 5\%$  for 1 ohm and higher and tolerance below 1 ohm is  $\pm 10\%$ . Attractively packaged in a newly designed carton particularly adapted to this new axial lead resistor, beautifully finished with Clarostat's new vitreous shade of teal green.



SERIES VC3D					
RESISTANCE OHMS					
1	20	200	750	2.25K	8K
1.5	25	225	800	2.5K	9K
2	30	250	900	3K	10K
3	35	300	1K	3.5K	K
4	40	350	1.1K	4K	K
5	50	400	1.2K	4.5K	K
7.5	75	450	1.25K	5K	K
10	100	500	1.5K	6K	K
12	125	600	1.75K	7K	K
15	150	700	2K	7.5K	K

Net Prices	
1	to 1K ..... \$ .51
1.1K	to 5K ..... .54
6K	to 10K ..... .95

Standard Packing—10 per Carton.

SERIES VC5E					
RESISTANCE OHMS					
1	20	200	750	2.25K	8K
1.5	25	225	800	2.5K	9K
2	30	250	900	3K	10K
3	35	300	1K	3.5K	12.5K
4	40	350	1.1K	4K	15K
5	50	400	1.2K	4.5K	17.5K
7.5	75	450	1.25K	5K	18K
10	100	500	1.5K	6K	20K
12	125	600	1.75K	7K	22.5K
15	150	700	2K	7.5K	25K

Net Prices	
1	to 1K ..... \$ .54
1.1K	to 5K ..... .57
6K	to 10K ..... .60
12.5K	to 20K ..... .72
22.5K	to 25K ..... .75

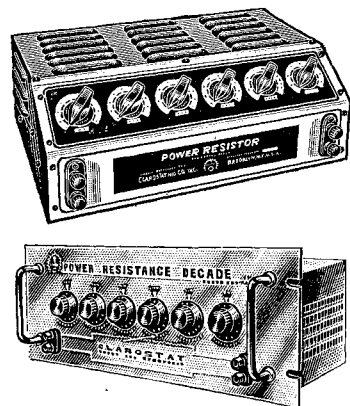
Standard Packing—10 per Carton.

SERIES VC10F						
RESISTANCE OHMS						
1	20	200	750	2.25K	8K	17.5K
1.5	25	225	800	2.5K	8.5K	18K
2	30	250	900	3K	9K	20K
3	35	300	1K	3.5K	10K	22.5K
4	40	350	1.1K	4K	11K	25K
5	50	400	1.2K	4.5K	12K	30K
7.5	75	450	1.25K	5K	12.5K	35K
10	100	500	1.3K	6K	13.5K	40K
12	125	600	1.75K	7K	15K	45K
15	150	700	2K	7.5K	16K	50K

Net Prices	
1	to 1K ..... \$ .60
1.1K	to 5K ..... .63
6K	to 10K ..... .72
11K	to 20K ..... .81
22.5K	to 40K ..... .84
45K	to 50K ..... .96

Standard Packing—10 per Carton.



**POWER RESISTOR DECADE BOX**

The Resistance Decade Box, Model 240-C for bench use—Model 250 for rack mounting, provides any resistance from 1 to 999,999 ohms for working circuits at the flip of a switch. Six front-panel dials enable selection in 1 ohm increments, the total value being read directly from the dial. Each decade has a power rating of 225 watts maximum, 1,000 VDC or 660 VAC maximum.

Resistance changing switches are of the type that prevent a resistance breakdown between steps, thus protecting delicate meters and measuring instruments in the circuit. Knobs indicate the resistance

value being used at a glance.

Clarostat GREENOHM Power Resistors are used throughout. These components are wire-wound power resistors on ceramic tubes and coated with an exclusive Clarostat inorganic cold-setting cement, providing the most rugged, long-lasting, trouble-free power resistor available. The resistors are mounted in rigid metal supports.

Overall length: 240C: 13" long x 8 1/2" deep x 5 3/4" high, weight 11 1/2 lbs. 250: 19" long x 13 3/4" deep x 7" high (fits in standard 19" relay rack), weight 18 1/2 lbs.

**SUGGESTED USES:** Resistance determination, Load Resistance, Meter Multiplier, Calibrating Meters, Providing any desired ohmage as a universal power resistor.

Decade No.	1	2	3	4	5	6
Max. Current Rating (amps)	5	1.5	.5	.15	0.5	.005
Resistance Tolerance	5%	2%	2%	2%	2%	2%

**NET PRICE:** Model 240C \$110.00, Model 250 \$150.00

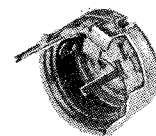
**SERIES U39**

**UNIVERSAL "HUMDINGER" CONTROL  
2W. WIRE WOUND**

Series U39 is a shaftless potentiometer with the contact arm grounded to the housing. The design of terminals and mounting tabs, meets the following requirements: Above chassis mounting, as a potentiometer or rheostat; printed circuit mounting, as a potentiometer or rheostat. The terminal layout meets the popular industry standards. A fiber adapter plate is furnished with each control. Series U39 is ideally suited for radio and television requirements, as well as many industrial applications. Resistance tolerance  $\pm 20\%$ . Linear only.

Cat. No.	Total Res. Ohms	Min. Ohms	Cat. No.	Total Res. Ohms	Min. Ohms
U39-1.5	1.5	—	U39-700	700	—
U39-5	5	—	U39-700-200	700	200
U39-8	8	—	U39-800	800	—
U39-15	15	—	U39-800-50	800	50
U39-50	50	—	U39-1000	1000	—
U39-75	75	—	U39-1000-100	1000	100
U39-100	100	—	U39-1500	1500	—
U39-125	125	—	U39-2000	2000	—
U39-150	150	—	U39-2000-100	2000	100
U39-175	175	—	U39-3000	3000	—
U39-200	200	—	U39-3000-700	3000	700
U39-300	300	—	U39-4000	4000	—
U39-500	500	—	U39-4000-350	4000	350
U39-500-100	500	100	U39-4000-1000	4000	1000
U39-600	600	—	U39-5000	5000	—
U39-650	650	—			

**NET PRICE \$36** Standard Packing — 10 per carton.

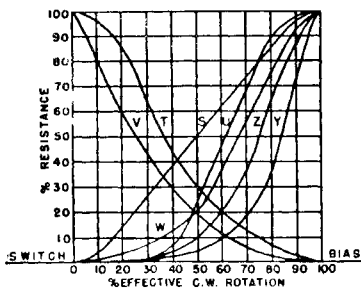


**SERIES U39**





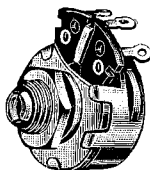
**COMPOSITION-ELEMENT CONTROLS**



**Graph Explanation:**  
 Taper S—Straight or uniform resistance change with rotation.  
 Taper T—Right-hand 30% resistance at 50% of C.C.W. rotation.  
 Taper U—Left-hand 1% resistance at 33 1/3% of C.W. rotation.  
 Taper V—Right-hand 20% resistance at 50% of C.C.W. rotation.  
 Taper W—Left-hand 20% resistance at 50% of C.W. rotation.  
 Taper Z—Left-hand (Log. audio) 10% resistance at 50% of C.W. rotation.  
 Taper Y—Left-hand 5% resistance at 50% of C.W. rotation.

**SERIES "A47" 1/2-WATT CONTROLS**

Composition-element controls in the popular 15/16" dia. size. Series "A47" controls are field-assembled with the selected "Pick-A-Shaft" and "Ad-A-Switch". These controls are also available with factory-assembled shafts at no extra charge, by omitting prefix "A" from catalog number and designating the type shaft desired when ordering. Example: 47-100K-S with FKS-1/4 shaft.



**SERIES A47 (INDUSTRIAL) SERIES 47**

CAT No.	OHMS	TAPER	CAT No.	OHMS	TAPER
A47-500-S	500	S	A47-75K-V	75K	V
A47-750-S	750	S	A47-100K-S	100K	S
A47-1000-S	1000	S	A47-100K-Z	100K	Z
A47-1500-S	1500	S	A47-150K-S	150K	S
A47-2000-S	2000	S	A47-200K-S	200K	S
A47-2500-S	2500	S	A47-250K-S	250K	S
A47-3000-S	3000	S	A47-250K-Z	250K	Z
A47-4000-S	4000	S	A47-300K-S	300K	S
A47-5000-S	5000	S	A47-500K-S	500K	S
A47-7500-S	7500	S	A47-500K-Z	500K	Z
A47-10K-S	10K	S	A47-750K-S	750K	S
A47-10K-V	10K	V	A47-750K-Z	750K	Z
A47-10K-W	10K	W	A47-1 Meg-S	1 Meg.	S
A47-10K-Z	10K	Z	A47-1.5 Meg-S	1.5 Meg.	S
A47-15K-S	15K	S	A47-2 Meg-S	2 Meg.	S
A47-15K-V	15K	V	A47-2.5 Meg-S	2.5 Meg.	S
A47-15K-W	15K	W	A47-3 Meg-S	3 Meg.	S
A47-20K-S	20K	S	A47-3 Meg-Z	3 Meg.	Z
A47-25K-S	25K	S	A47-4 Meg-S	4 Meg.	S
A47-25K-W	25K	W	A47-4 Meg-Z	4 Meg.	Z
A47-25K-V	25K	V	A47-5 Meg-S	5 Meg.	S
A47-30K-S	30K	S	A47-5 Meg-S	5 Meg.	S
A47-40K-S	40K	S	A47-7.5 Meg-S	7.5 Meg.	S
A47-50K-S	50K	S	A47-10 Meg-S	10 Meg.	S
A47-50K-W	50K	W			
A47-50K-Z	50K	Z			
A47-75K-S	75K	S			

NET PRICE \$9.33 Standard Packing—10 per Carton.

**SERIES "AD47" 1/2-WATT DUAL CONTROLS**

These are the same as "A47" except that they are dual controls.

Cat. No.	Panel	Taper	Rear	Taper
AD47-50-S	50K	S	50K	S
AD47-100K-S	100K	S	100K	S
AD47-250K-S	250K	S	250K	S
AD47-250K-Z	250K	Z	250K	Z
AD47-500K-Z	500K	Z	500K	Z
AD47-1 Meg-S	1 Meg.	S	1 Meg.	S
AD47-1 Meg-Z	1 Meg.	Z	1 Meg.	Z
AD47-2 Meg-S	2 Meg.	S	2 Meg.	S
AD47-2 Meg-V	2 Meg.	V	2 Meg.	V
AD47-5 Meg-S	5 Meg.	S	5 Meg.	S

NET PRICE \$2.25 Standard Packing—Individual Carton.

**SERIES "C47S" 1/2-WATT CONTROLS WITH PUSH-PULL SWITCH**

Cat. No.	Cat. No.
C47S-1000-V	C47S-750K-Z
C47S-2500-V	C47S-1MEG-S
C47S-250K-S	C47S-1MEG-Z
C47S-250K-Z	C47S-2MEG-S
C47S-500K-S	C47S-2MEG-Z
C47S-500K-Z	C47S-3MEG-Z
C47S-750K-S	

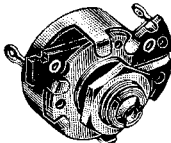
Net Price \$1.53 Standard Packing—10 per Carton.

**SERIES "C47SF" (TAPPED)**

Cat. No.	Tap
C47SF-500K	Tap 250K
C47SF1-500K	Tap 150K
C47SF-1MEG	Tap 500K
C47SF1-1MEG	Tap 250K
C47SF-2MEG	Tap 1MEG
C47SF-3MEG	Tap 1.5MEG

Net Price \$1.95 Standard Packing—10 per Carton.

**SERIES "A47F"**



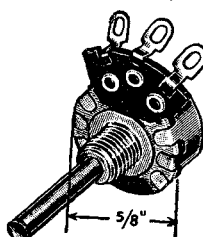
**SERIES A47F (INDUSTRIAL) SERIES 47F**

Series "A47F" controls are field-assembled with the selected "Pick-A-Shaft" and "Ad-A-Switch". "A47F" controls have taps 1, 2, 3 located at 40%, 50% and 60% of electrical position. These controls are also available with factory-assembled shafts at no extra charge, by omitting prefix "A" from catalog number and designating the type of shaft desired when ordering. Example: 47F-200K with FS-3 shaft.

Cat. No.	Res. Ohms.	Tap No. 1 30%	Tap No. 2 50%	Tap No. 3 70%
A47F-15K	15K	5K		
A47F-50K	50K		25K	
A47F-200K	200K			100K
A47F-250K	250K			50K
A47F1-250K	250K		125K	
A47F2-250K	250K	60K		125K
A47F-350K	350K	75K		
A47F1-350K	350K		75K	
A47F-500K	500K			100K
A47F1-500K	500K	25K		200K
A47F2-500K	500K			200K
A47F3-500K	500K		100K	
A47F4-500K	500K		50K	
A47F5-500K	500K		250K	
A47F6-500K	500K	100K		300K
A47F-1 Meg.	1 Meg.	250K		
A47F1-1 Meg.	1 Meg.			200K
A47F2-1 Meg.	1 Meg.		50K	
A47F3-1 Meg.	1 Meg.		100K	
A47F4-1 Meg.	1 Meg.		225K	
A47F5-1 Meg.	1 Meg.		500K	
A47F-1.5 Meg.	1.5 Meg.	250K		500K
A47F-2 Meg.	2 Meg.	20K		
A47F1-2 Meg.	2 Meg.	5000		
A47F2-2 Meg.	2 Meg.	15K		
A47F3-2 Meg.	2 Meg.		1 Meg.	
A47F4-2 Meg.	2 Meg.		200K	
A47F5-2 Meg.	2 Meg.		400K	
A47F6-2 Meg.	2 Meg.		500K	
A47F7-2 Meg.	2 Meg.	250K		1 Meg.
A47F-2.5 Meg.	2.5 Meg.	250K		500K
A47F-3 Meg.	3 Meg.		250K	

NET PRICE \$1.35. Standard Packing—10 per Carton. \*Reg. U.S. Pat. Off.

**SERIES 44 — 0.02 WATT CONTROLS**



Composition Element Controls rated at 0.2 watt, designed specifically for miniaturized applications such as transistorized circuits, pocket radios, hearing aids, etc. Stocked controls have ClaroStat "W" taper (20% log audio). Other tapers available on special order. Series 44 is without switch, while Series 44S has factory-attached 0.5 am. 25 v.d.c. DPST switch. Other ohmages available on special order. 200 ohms to 5 meg. linear; 1500 to 2.5 meg. tapered. Also available on special order, controls with 0.5 a. 25 v.d.c. SPST switch. Items not listed are special. Prices and information on request.

Without Switch Cat. No.		With SPST Switch Cat. No.	
44-500-W	44-50K-W	44S-500-W	44S-50K-W
44-1K-W	44-100K-W	44S-1K-W	44S-100K-W
44-5K-W	44-250K-W	44S-5K-W	44S-250K-W
44-10K-W	44-500K-W	44S-10K-W	44S-500K-W
44-15K-W	44-1 Meg-W	44S-15K-W	44S-1 Meg-W
44-25K-W		44S-25K-W	

LIST PRICE \$2.55 Standard Packing—10 Per Carton

**SERIES B47 1/2-WATT TAB-MOUNT**

Composition element controls designed for radio and TV applications, where bushingless controls are required. Phenolic shaft insures insulation if control is used on a "hot" chassis. Items not listed are special, for which information and prices will be supplied on request.

Cat. No.	Cat. No.	Cat. No.	Cat. No.
B47-500-S	B47-10K-S	B47-250K-S	B47-1.5 Meg-S
B47-750-S	B47-25K-S	B47-300K-Z	B47-2 Meg-S
B47-1500-S	B47-50K-S	B47-500K-S	B47-2.5 Meg-S
B47-2500-S	B47-100K-S	B47-500K-Z	B47-3 Meg-S
B47-3000-S	B47-150K-S	B47-1 Meg-S	B47-5 Meg-S
B47-5000-S	B47-200K-S	B47-1 Meg-Z	B47-5 Meg-S
			B47-7.5 Meg-S

NET PRICE \$6.60 Standard Packing—10 per Carton.

**SERIES B47S 1/2-WATT TAB MOUNT WITH SWITCH**

Cat. No.	Cat. No.
B47S-2500-Z	B47S-1 Meg-S
B47S-250K-S	B47S-1 Meg-Z
B47S-250K-Z	B47S-2 Meg-S
B47S-500K-S	B47S-2 Meg-Z
B47S-500K-Z	

Net Price \$1.20 Standard Packing—10 per Carton.

PRODUCTS OF  
**THE HOUSE OF RESISTORS**



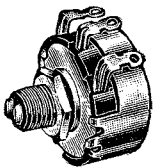
**RESISTORS • CONTROLS**  
**RESISTANCE DEVICES**

## WIRE-WOUND CONTROLS

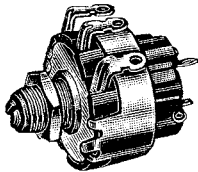
These are "Pick-A-Shaft"\* controls which take any one of 12 shafts listed on page R-24 including High Voltage Coupler and insulated shaft. Your choice of any one of the 12 shafts listed (this does not include insulated shaft) with each control. Tolerances of these controls are in accordance with EIA standards. Overall resistance

tolerance of plus/minus 10% for all values. All controls are linear. Available with factory-assembled shafts at no extra charge, by omitting the prefix "A" from the catalog number and designating the type of shaft desired when ordering. Example: 43-500 with FKS-1/4 shaft, or 43S-10K with FS-3 shaft and SPST switch.

### SERIES "A43" and "A43S" 2-WATT CONTROLS



SERIES A43  
(INDUSTRIAL)  
SERIES 43



SERIES A43S  
(INDUSTRIAL)  
SERIES 43S

"A43" is without switch, while "A43S" has factory-attached SPST switch. When ordering "A43S" controls, specify type of switch. Controls with other than SPST switch are special. Prices and information on request.

Without Switch Cat. No.	With SPST Switch Cat. No.	Res. Ohms	Without Switch Cat. No.	With SPST Switch Cat. No.	Res. Ohms
A43-5	A43S-5	5	A43-1,000	A43S-1,000	1,000
A43-10	A43S-10	10	A43-1,500	A43S-1,500	1,500
A43-20	A43S-20	20	A43-2,000	A43S-2,000	2,000
A43-25	A43S-25	25	A43-2,500	A43S-2,500	2,500
A43-30	A43S-30	30	A43-3,000	A43S-3,000	3,000
A43-40	A43S-40	40	A43-4,000	A43S-4,000	4,000
A43-50	A43S-50	50	A43-5,000	A43S-5,000	5,000
A43-75	A43S-75	75	A43-7,500	A43S-7,500	7,500
A43-100	A43S-100	100	A43-10K	A43S-10K	10K
A43-150	A43S-150	150	A43-15K		
A43-200	A43S-200	200	A43-20K		
A43-300	A43S-300	300	A43-25K		
A43-400	A43S-400	400	A43-30K		
A43-500	A43S-500	500	A43-40K		
A43-750	A43S-750	750	A43-50K		

Standard Packing: 10 per Carton.

**NET PRICES: (Without Switch)**  
 5 to 10KΩ ..... \$ .93  
 15K to 25KΩ ..... 1.20  
 30K to 50KΩ ..... 1.62  
**(With Switch)**  
 5 to 10KΩ ..... \$1.47

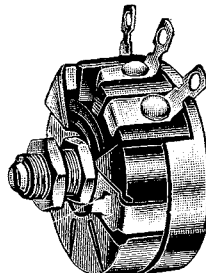
### SERIES "A58" and "A58S" 3- WATT CONTROLS

"A58" is without switch, while "A58S" has factory-attached SPST switch. Available with factory-assembled shafts, at no extra charge, by omitting prefix "A" from catalog number, and designating type of shaft desired when ordering. Example: 58-50K with KSS-3 shaft, or 58S-25K with RS-3 shaft and SPST switch. Controls with other than SPST switch are special. Prices and information on request.

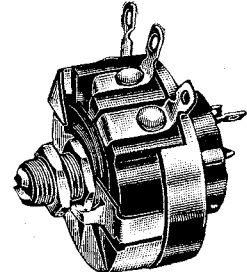
Without Switch Cat. No.	Res. Ohms	Without Switch Cat. No.	Res. Ohms
A58-1	1	A58-7,500	7,500
A58-2	2	A58-10K	10K
A58-4	4	A58-15K	15K
A58-6	6	A58-20K	20K
A58-10	10	A58-25K	25K
A58-15	15	A58-30K	30K
A58-20	20	A58-40K	40K
A58-25	25	A58-50K	50K
A58-30	30		
A58-40	40		
A58-50	50		
A58-60	60		
A58-75	75		
A58-100	100		
A58-200	200		
A58-300	300		
A58-400	400		
A58-500	500		
A58-750	750		
A58-1,000	1,000		
A58-1,500	1,500		
A58-2,000	2,000		
A58-2,500	2,500		
A58-3,000	3,000		
A58-4,000	4,000		
A58-5,000	5,000		

**NET PRICES:**  
 1 to 10KΩ ..... \$ .93  
 15K to 25KΩ ..... 1.20  
 30K to 50KΩ ..... 1.62

With SPST Switch Cat. No.	Res. Ohms
A58S-1	1
A58S-2	2
A58S-4	4
A58S-6	6
A58S-10	10
A58S-15	15
A58S-20	20
A58S-25	25
A58S-30	30
A58S-40	40



SERIES A58  
(INDUSTRIAL)  
SERIES 58



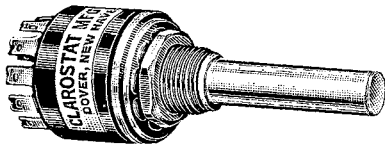
SERIES A58S  
(INDUSTRIAL)  
SERIES 58S

With SPST Switch Cat. No.	Res. Ohms	Without Switch Cat. No.	Res. Ohms
A58S-50	50	A58S-2,000	2,000
A58S-60	60	A58S-2,500	2,500
A58S-75	75	A58S-3,000	3,000
A58S-100	100	A58S-4,000	4,000
A58S-200	200	A58S-5,000	5,000
A58S-300	300	A58S-7,500	7,500
A58S-400	400	A58S-10K	10K
A58S-500	500	A58S-15K	15K
A58S-750	750	A58S-20K	20K
A58S-1,000	1,000	A58S-25K	25K
A58S-1,500	1,500		
A58S-30K	30K		
A58S-40K	40K		
A58S-50K	50K		

**NET PRICES:**  
 1 to 10KΩ ..... \$1.47  
 15K to 25KΩ ..... 1.71  
 30K to 50KΩ ..... 2.16

Standard Packing: 10 per Carton.

### SERIES BHM ROTARY SWITCHES



Series BHM switches are rated at 50 ma. at 300 V. a.c. or d.c., and 500 ma. at 30 V. a.c. or d.c. All moving parts and contact mechanism are totally enclosed, and the switch assembly is sealed for protection from dust and atmospheric conditions. They are particularly adapted to portable radios, receivers and transmitters, X-ray and medical instruments, calculating machines and computers.

**Current:** 50 Milliamps. at 300 volts a.c. or d.c.  
**Rating:** 500 Milliamps. at 30 volts a.c. or d.c.  
**Protection:** All moving parts and contact mechanisms are totally enclosed and switch is sealed, which protects it from dust and atmospheric conditions.

**Shaft:** 1/4" diameter round 1" beyond bushing.  
**Finish:** Nickel Plating.  
**Bushing:** 3/8" x 32 NEF-2 Thread. 3/8" Long.  
**Torque:** 30 to 50 oz. in.

BHM-SP12P-S	Single Pole 12 Positions — Shorting
BHM-SP12P-NS	Single Pole 12 Positions — Non Shorting
BHM-2P6P-S	2 Pole 6 Positions — Shorting
BHM-2P6P-NS	2 Pole 6 Positions — Non-Shorting
BHM-3P4P-S	3 Pole 4 Positions — Shorting
BHM-3P4P-NS	3 Pole 4 Positions — Non-Shorting
BHM-4P3P-S	4 Pole 3 Positions — Shorting
BHM-4P3P-NS	4 Pole 3 Positions — Non-Shorting

Meets or exceeds test paragraph 4.5.3 thru 4.5.13 of MIL-S-3786.



**SHAFTS FOR "PICK-A-SHAFT"™ CONTROLS**

For use with all Clarostat "Pick-A-Shaft"™ controls, either carbon or wire-wound. Your choice of shaft furnish with each control.

- 
- (1) SS- $\frac{3}{8}$ " length—(Male) to take female fitting.
  - (2) RS-2 — Round shaft, 2" long.
  - (3) RS- $\frac{3}{16}$ " — Round shaft  $\frac{3}{16}$ " dia., 3" long.
  - (4) KSS-3—Knurled, split shaft, 3" long.
  - (5) RS-5—Round shaft, 5" long.
  - (6) FS-5—Flatted, 5" long.
  - (7) KSS-5—Knurled, split shaft, 5" long.
  - (8) FS-3 — Flatted shaft, 3" long.
  - (9) RS-3 — Round shaft, 3" long.
  - (10) DFS- $\frac{1}{2}$ "—Double flatted Philco Type,  $\frac{1}{2}$ " long.
  - (11) FKS- $\frac{1}{4}$ "—Fine knurled slotted shaft,  $\frac{1}{4}$ " long.
  - (12) KFS-3—Knurled flatted shaft, 3" long.
  - (13) FKS- $\frac{1}{2}$ "—Fine knurled slotted shaft,  $\frac{1}{2}$ " long.
- Net Price, Each Shaft \$0.33



U.S. PAT. 2,642,506

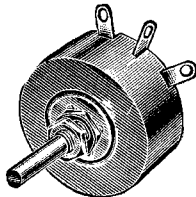
**SERIES "SWE" SWITCHES FOR "AD-A-SWITCH"™ CONTROLS**

For use with "A47" and "A47F" controls. Underwriters' Laboratories Inc. approved.

Cat. No.	Wiring	Net Price
SWE-12	S.P.S.T. — Single Pole Single Throw, 5A.-125V. A.C.	\$0.45
SWE-13	S.P.S.T. — Single Pole Single Throw, 15A.-10V. D.C.	.66
SWE-20	D.P.S.T. — Double Pole Single Throw, 3A.-125V. A.C.	.51
SWE-21	Mod. D.P.S.T. one pole on, one off or with Jumper S.P.D.T., 3A.-125V. A.C.-D.C.	.51
SWE-23	D.P.S.T., 15A.-10V. D.C.	.66

(Mod. DPST has one pole "on", one pole "off" or with Jumper it is SPDT.)

Standard Packing: 10 per Carton.



**POWER RHEOSTATS**

Clarostat Power Rheostats maintain their full power rating at settings as low as one-third rotation without excessive temperature rise. Standard overall resistance tolerance plus/minus 10%. Closer tolerances are available upon special order.

AN Types (aircraft type) are basically the same units mechanically and electrically except that they are encased in a metal housing (versus ceramic). Terminals are screw type lugs to prevent corrosion. Approved under MIL-R-6749.

Units mount through a single hole, a locking pin is provided for rear panel mounting.

**SERIES 25 — 25-WATT**

Cat. No.	Total Res. Ohms	Net Price
25-1	1	\$3.87
25-2	2	3.42
25-3	3	3.42
25-6	6	3.42
25-8	8	3.42
25-10	10	3.42
25-15	15	3.42
25-25	25	3.42
25-35	35	3.42
25-50	50	3.42
25-75	75	3.42
25-100	100	3.42
25-125	125	3.42
25-175	175	3.42
25-250	250	3.42
25-350	350	3.42
25-500	500	3.42
25-750	750	3.42
25-1,000	1,000	3.87
25-1,500	1,500	3.87
25-2,500	2,500	3.87
25-3,500	3,500	4.08
25-5,000	5,000	4.29

**SERIES 50 — 50-WATT**

Cat. No.	Total Res. Ohms	Net Price
50-0.5	0.5	\$4.25
50-1	1	4.25
50-2	2	4.25
50-4	4	3.87
50-6	6	3.87
50-8	8	3.87
50-12	12	3.87
50-16	16	3.87
50-22	22	3.87
50-35	35	3.87
50-50	50	3.87
50-80	80	3.87
50-125	125	3.87
50-150	150	3.87
50-225	225	3.87
50-300	300	3.87
50-500	500	3.87
50-800	800	4.08
50-1,000	1,000	4.08
50-1,600	1,600	4.08
50-2,500	2,500	4.08
50-3,500	3,500	4.29
50-5,000	5,000	4.29
50-8,000	8,000	5.16
50-10K	10K	5.16

**AN-3155-25\*\* — 25 WATTS**

Cat. No.	Total Res. Ohms	Net Price
AN-3155-25-10	10	\$4.80
AN-3155-25-11	11	4.80
AN-3155-25-15	15	4.80
AN-3155-25-25	25	4.80
AN-3155-25-50	50	4.80
AN-3155-25-75	75	4.80
AN-3155-25-100	100	4.80
AN-3155-25-200	200	5.61

**AN-3155-50\*\* — 50 WATTS**

Cat. No.	Total Res. Ohms	Net Price
AN-3155-50-5	5	5.61
AN-3155-50-8	8	5.61
AN-3155-50-10	10	5.61
AN-3155-50-25	25	5.46
AN-3155-50-30	30	5.46
AN-3155-50-50	50	5.46
AN-3155-50-75	75	5.46
AN-3155-50-100	100	5.46
AN-3155-50-150	150	6.12
AN-3155-50-200	200	6.12

Prices include AN-3220 — 2 knob

Standard Packing: Individual Carton.

\*\*25 and 50 watt Power Rheostats when encased in metal housing are derated 50%.

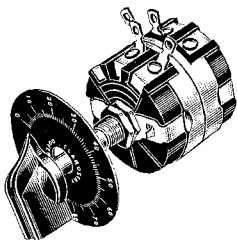


## SOUND-SYSTEM CONTROLS

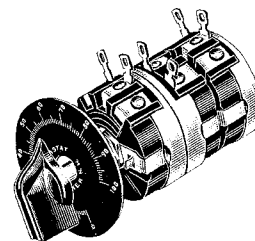
For proper control of volume and tone alike, Clarostat offers a choice of several controls, such as L- and T-pads, output attenuators, and individual-speaker volume controls as used for drive-in theatre instal-

lations. These are not ordinary radio controls but rather sound-system controls designed and built for critical requirements.

### CONSTANT-IMPEDANCE CONTROLS



Self-compensating volume controls known as L-pads and T-pads for use in sound systems. Rated at 2½ watts DC, but will handle up to 10 watts audio. Continuous range from 0.5 to 30 decibels attenuation in 90% rotation. Last 10% affords infinite attenuation. With Clarostat constant-impedance L-pads and T-pads the input and output impedances of associated circuits can be kept within the limits of a constant required value. Knob and dial plate furnished with each control.



U. S. Pat. 2,434,248

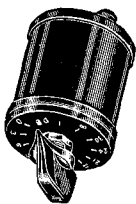
CIT	CIL	Res. Ohms	CIT	CIL	Res. Ohms
Cat. No.	Cat. No.		Cat. No.	Cat. No.	
CIT-4	CIL-4	4	CIT-500	CIL-500	500
CIT-6	CIL-6	6	CIT-600	CIL-600	600
CIT-8	CIL-8	8	CIT-1,000	CIL-1,000	1,000
CIT-15	CIL-15	15	CIT-2,000	CIL-2,000	2,000
CIT-50	CIL-50	50	CIT-3,000	CIL-3,000	3,000
CIT-100	CIL-100	100		CIL-4,000	4,000
CIT-200	CIL-200	200		CIL-5,000	5,000
CIT-250	CIL-250	250			

CIT—NET PRICE \$3.13

CIL—NET PRICE \$2.79

Standard Packing: Individual Carton.

### CONSTANT IMPEDANCE OUTPUT ATTENUATORS



Series "CIB" rated at 10 watts, but will handle up to 30 watts in audio circuit. Linear attenuation provided in 3 decibel steps up to 24db, then 30db followed by infinity. Equipped with dial plate and bar knob. One-hole mounting, ⅝" bushing diameter, 1" shaft. This control has been developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss. Recommended as an output level control for power amplifiers, or as an input attenuator for individual or for a group of speakers in a public address system.

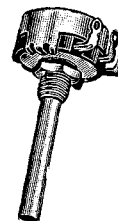
Cat. No.	Res. Ohms	Cat. No.	Res. Ohms
CIB-6	6	CIB-200	200
CIB-8	8	CIB-250	250
CIB-15	15	CIB-500	500
CIB-50	50	CIB-600	600

NET PRICE \$7.70

Standard Packing: Individual Carton.

### SPECIAL DRIVE-IN THEATRE L-PAD

To meet the needs of theater sound systems, more especially those of drive-in theaters, a special 8 ohm L-Pad is now available, containing two separate windings of 5 ohms and 40 ohms. Also 50 ohm linear rheostat and 35 ohm tapered rheostat, as listed. Units have ¾-32 bushing ¾" long, and 1½" round shaft.



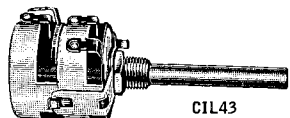
Cat. No. CM8727-1 8 ohm L-Pad  
Net Price \$1.80

## SPACE-SAVER CONSTANT-IMPEDANCE ATTENUATORS

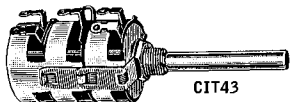
Characterized by reduced depth and diameter, these attenuators are ideal for use in remote control of speakers since they are small enough to be installed in standard electrical boxes in the home, office, stockroom, etc.

These controls are rated 2 watts D.C., but will handle up to 4 watts of audio, depending upon the type signal being handled. (As the frequency becomes constant, wattage reduces to 2 watts or the same as the D.C. rating).

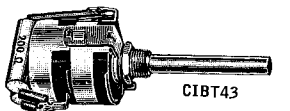
- Attenuation range of 0 to 30 db over 90% of rotation, 60 db in remaining 10% of rotation. Attenuation will increase approximately linearly to 30 db with counter-clockwise rotation.
- Insertion loss less than 0.5 db.
- Input impedance within plus/ minus 20%.
- The CIT43 and CIBT43 (Bridged T Pad) have constant input and output impedances, while the CIL43 has constant impedance in the input only.
- Shafts and bushings are insulated from the circuit elements.
- Pads have ⅝-32 x ⅝" long bushing.
- ¼" dia. round shafts 1½" long beyond bushing.
- All pads supplied with bar knob and dial plates, as shown above.
- Dia. 1½". Depth of body from mounting surface: CIL43 — 1½"; CIT43 — 1"; CIBT43 — 1½".



CIT43



CIT43



CIBT43

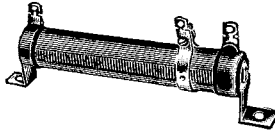
Cat. No.	Cat. No.	Cat. No.	Impedance
CIL43 (L-Pad)	CIT43 (T-Pad)	CIBT43 (Bridged T-Pad)	
CIL43-4	CIT43-4	CIBT43-4	4 ohms
CIL43-6	CIT43-6	CIBT43-6	6 ohms
CIL43-8	CIT43-8	CIBT43-8	8 ohms
CIL43-15	CIT43-15	CIBT43-15	15 ohms
CIL43-50	CIT43-50	CIBT43-50	50 ohms
CIL43-100	CIT43-100	CIBT43-100	100 ohms
CIL43-200	CIT43-200	CIBT43-200	200 ohms
CIL43-250	CIT43-250	CIBT43-250	250 ohms
CIL43-500	CIT43-500	CIBT43-500	500 ohms
		CIBT43-600	600 ohms

NET PRICE CIL43 \$2.79 NET PRICE CIT43 \$3.13

NET PRICE CIBT43 \$3.63  
Standard Packing — Individual Carton



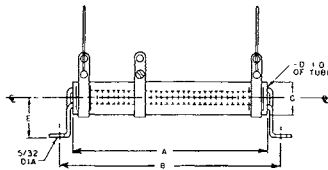
# "GREENOHM"\* WIRE-WOUND RESISTORS



**FIXED TYPES** Wire-wound resistors for most rugged applications. Will withstand tremendous overloads and temperature changes without altering resistance values or appearance. Wire windings on high grade ceramic tubing and coated with special inorganic cement. In accordance with EIA standards, overall tolerances are  $\pm 5\%$  for resistors of 50 ohms and higher. For resistors of 49.9 ohms and lower, overall tolerances are  $\pm 10\%$ .

**ADJUSTABLE TYPES** Same electrically and mechanically as Fixed types, but incorporating sliding band or bands for tapping any desired resistance values. Slider band tightened by means of screw. In accordance with EIA standards, overall tolerances are  $\pm 10\%$ .

## DIMENSIONS BY TYPES



SERIES	WATTS	A	B	C	D	E
PR-5-F	5	1	1 $\frac{1}{16}$	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{16}$
PR-10-F	10	1 $\frac{3}{4}$	2 $\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{16}$
PR-10-FA	10	1 $\frac{3}{4}$	2 $\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{16}$
PR-20-K	20	2	2 $\frac{1}{2}$	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{3}{16}$
P-25-K	25	2 $\frac{1}{2}$	3	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{3}{16}$
P-25-KA	25	2 $\frac{1}{2}$	3	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{3}{16}$

## FIXED RESISTORS

### 5-WATT SERIES PR-5-F

These resistors conform to EIA specification for type RRW-125 and 128.

Ohms	Ohms	Ohms	Ohms
1	75	800	5,000
2	100	900	6,000
3	125	1,000	7,000
4	150	1,100	7,500
5	200	1,200	8,000
7.5	225	1,250	8,500
10	250	1,500	9,000
12	300	1,750	10K
15	350	2,000	
20	400	2,250	
25	450	2,500	
30	500	3,000	
35	600	3,500	
40	700	4,000	
50	750	4,500	

**NET PRICE \$0.33**  
Standard Packing — 10 per Carton.  
Mounting brackets supplied at extra cost.

### 25-WATT SERIES P-25-K

Ohms	Ohms	Ohms	Ohms
1	750	10K	
2	800	12K	
3	1,000	15K	
5	1,250	20K	
7.5	1,500	25K	
10	2,000	30K	
15	2,250	35K	
20	2,500	40K	
25	3,000	45K	
50	3,500	50K	
75	4,000	60K	
100	4,500	70K	
150	5,000	75K	
200	6,000	80K	
250	7,000	85K	
300	7,500	90K	
400	8,000	100K	
500	9,000		

**NET PRICES:**

1 ohm to 5,000	\$0.51
6,000 to 15K ohms	.57
20K to 50K ohms	.66
60K ohms	.75
70K ohms	.84
75K ohms	.87
80K ohms	.90
85K ohms	.99
90K ohms	1.05
100K ohms	1.17

Mounting brackets at no extra cost.  
Standard Packing — Individually Boxed.

### 10-WATT SERIES PR-10-F

These resistors conform to military specifications for type RW29, and EIA type RRW-126 and 129.

Ohms	Ohms	Ohms	Ohms
1	200	2,000	14.5K
2	225	2,250	15K
3	250	2,500	16K
4	300	3,000	17.5K
5	350	3,500	18K
7.5	400	4,000	20K
10	450	4,500	22.5K
12	500	5,000	25K
15	600	6,000	30K
20	700	7,000	35K
25	750	7,500	40K
30	800	8,000	50K
35	900	8,500	
40	1,000	9,000	
50	1,100	10K	
75	1,200	11K	
100	1,250	12K	
125	1,500	12.5K	
150	1,750	13.5K	

**NET PRICE \$0.36**

Mounting brackets supplied at extra cost.  
Standard Packing — 10 per Carton.

### 20-WATT SERIES PR-20-K

These resistors conform to EIA specifications for type RRW-127.

Ohms	Ohms	Ohms	Ohms
5	850	7,000	70K
10	1,000	7,500	75K
25	1,200	8,000	80K
50	1,250	9,000	85K
75	1,500	10K	90K
100	1,750	12.5K	95K
150	1,850	15K	100K
200	2,000	20K	
250	2,250	25K	
300	2,500	30K	
350	2,750	35K	
400	3,000	40K	
500	3,500	45K	
650	4,000	50K	
700	4,500	55K	
750	5,000	60K	
800	6,000	65K	

**NET PRICES:**

5 ohms to 15K ohms	\$0.42
20K to 50K ohms	.57
55K to 100K ohms	.72

Mounting brackets supplied at extra cost.  
Standard Packing — 5 per Carton.

## ADJUSTABLE RESISTORS

These resistors conform to military specification for type RW-29 and EIA specification for type RRW-226.

### 10-WATT SERIES PR-10-FA

Res.	Res.	Res.	Res.
1	75	750	4,000
2	100	800	4,500
3	150	1,000	5,000
5	200	1,250	6,000
7.5	250	1,500	7,000
10	300	2,000	7,500
15	350	2,250	8,000
20	400	2,500	8,500
25	500	3,000	9,000
50	600	3,500	10K

**NET PRICE \$0.57**

Above adjustable resistors supplied with mounting brackets at no extra cost. Extra slider bands — 30¢ each. Standard Packing — individually boxed.

### 25-WATT SERIES P-25-KA

Res.	Res.	Res.	Res.
1	75	1,000	5,000
2	100	1,250	6,000
3	150	1,500	7,000
5	200	2,000	7,500
7.5	250	2,250	8,000
10	300	2,500	9,000
15	400	3,000	10K
20	500	3,500	12K
25	750	4,000	15K
50	800	4,500	20K
			25K
			50K

**NET PRICES:**

1 ohm to 5,000 ohms	\$0.63
6,000 to 15K ohms	.72
20K to 25K ohms	.84
50K ohms	.99

# CORNING GLASS TIN OXIDE FILM RESISTORS

Fuse a tin oxide coating into the pure surface of freshly drawn glass, cut a helix in the coating, attach leads and you have a simple, rugged, exceptionally reliable CORNING® resistor. Physically, the perfect matching of the thermal expansions of resistive film and substrate eliminates stressing of the film during sudden overloads and thermal shocking. Continuous process and quality monitoring combine with these high quality inorganic materials to produce resistors with low TC guarantees

from ±0.010% to ±0.050% depending on type. Noise levels are typically less than 0.1 uv/v. High frequency characteristics assure non-inductive performance above 280 ohms.

**Corning manufactures precision, general purpose and power resistors to meet your circuit function, environment and duty cycle requirements. Their performance and economic advantages will add value to your equipment.**

	TYPE AND MIL SPEC	MODEL/MIL MODEL	RESISTANCE (ohms)	WATTAGE	TOLERANCE
<b>C</b>	General purpose, low-cost film type. Prices and sizes comparable to carbon composition type, but with film resistor performance characteristics MIL-R-22684A (Navy)	C07/RL07AD	51 to 150K	¼ @ 70°C	2%, 5%
		C20/RL20AD	10 to 470K	½ @ 70°C	2%, 5%
		C32/RL32AD	10 to 1 meg.	1 @ 70°C	2%, 5%
		C42S/RL42AD	10 to 1.5 meg.	2 @ 70°C	2%, 5%
<b>NA</b>	Especially designed for MIL-R-10509E, Characteristic D applications. Precise and predictable performance with surprising economy for military and space equipment.	NA55D/RN55D	51 to 150K	⅛ @ 70°C	1%
		NA60D/RN60D	10 to 249K	¼ @ 70°C	1%
		NA65D/RN65D	10 to 500K	½ @ 70°C	1%
		NA70D/RN70D	51 to 1 Meg.	¾ @ 70°C	1%
<b>N-20</b>	Proven stability in 40,000 hrs. testing. Uninsulated. MIL-R-10509B. Char. X.	N12	100 to 133K	¼ @ 70°C	1, 2, and 5%
		N20/RN20	10 to 500K	½ @ 70°C	1, 2, and 5%
		N25/RN25	10 to 1.5 meg.	1 @ 70°C	1, 2, and 5%
		N30/RN30	30 to 4.2 meg.	2 @ 70°C	1, 2, and 5%
<b>LPI</b>	Low power resistors with exceptional frequency characteristics and glass stability. New LPI-10 in a substantially smaller package. Construction assures desired performance for rugged environmental duty.	LPI-2	9 to 1.5 Meg	2 @ 70°C	5%, 10%
		LPI-3	9 to 40K	3 @ 70°C	5%, 10%
		LPI-4	16 to 90K	4 @ 70°C	5%, 10%
		LPI-5	19 to 110K	5 @ 70°C	5%, 10%
		LPI-7	24 to 110K	7 @ 70°C	5%, 10%
		LPI-10	24 to 90K	10 @ 40°C	5%, 10%
		<b>S</b>	Fixed-film type for high-temperature operation. Silicone baked lacquer. MIL-R-11804D. Char. P.	S20/RD60P	10 to 500K
S25/RD65P	10 to 1.54 meg.			1 2	1, 2, 5, 10%
S30/RD70P	30.1 to 4.22 meg.			2 4	1, 2, 5, 10%
<b>R</b>	Power type, essentially noninductive in high-frequency operations. MIL-R-11804D.			R31/RD31P	10 to 70K
		R33/RD33P	19.6 to 150K	13 @ 25°C	2, 5, 10%
		R35/RD35P	19.6 to 301K	25 @ 25°C	2, 5, 10%
		R37/RD37P	19.6 to 500K	55 @ 25°C	2, 5, 10%
		R39/RD39P	30.1 to 1 meg.	115 @ 25°C	2, 5, 10%

## STANDARD VALUES\*

NA, N, S, R, RESISTORS 1, 2, and 5% Tolerances												C RESISTORS		
1%	2%	5%	1%	2%	5%	1%	2%	5%	1%	2%	5%	±2% & ±5%	±10%†	
1.00	1.00	1.00	1.78	1.78	1.78	3.16	3.16	3.16	5.62	5.62	5.62	10	10	
1.02			1.82			3.24			5.76			11	—	
1.05	1.05		1.87	1.87		3.32	3.32		5.90	5.90		12	12	
1.07			1.91			3.40			6.04			13	—	
1.10	1.10	1.10	1.96	1.96	1.96	3.48	3.48	3.48	6.19	6.19	6.19	15	15	
1.13			2.00			3.57			6.34			16	—	
1.15	1.15		2.05	2.05		3.65	3.65		6.49	6.49		18	18	
1.18			2.10			3.74			6.65			20	—	
1.21	1.21	1.21	2.15	2.15	2.15	3.83	3.83	3.83	6.81	6.81	6.81	22	22	
1.24			2.21			3.92			6.98			24	—	
1.27	1.27		2.26	2.26		4.02	4.02		7.15	7.15		27	27	
1.30			2.32			4.12			7.32			30	—	
1.33	1.33	1.33	2.37	2.37	2.37	4.22	4.22	4.22	7.50	7.50	7.50	33	33	
1.37			2.43			4.32			7.68			36	—	
1.40	1.40		2.49	2.49		4.42	4.42		7.87	7.87		39	39	
1.43			2.55			4.53			8.06			43	—	
1.47	1.47	1.47	2.61	2.61	2.61	4.64	4.64	4.64	8.25	8.25	8.25	47	47	
1.50			2.67			4.75			8.45			51	—	
1.54	1.54		2.74	2.74		4.87	4.87		8.66	8.66		56	56	
1.58			2.80			4.99			8.87			62	—	
1.62	1.62	1.62	2.87	2.87	2.87	5.11	5.11	5.11	9.09	9.09	9.09	68	68	
1.65			2.94			5.23			9.31			75	—	
1.69	1.69		3.01	3.01		5.36	5.36		9.53	9.53		82	82	
1.74			3.09			5.49			9.76			91	—	

\*Standard resistance values are obtained from the decade table by multiplying by multiples of 10. As an example, 1.33 can represent 13.3 ohms, 133 ohms, 1.33k, 13.3k, 133k, 1.33 megohm

\*Values not listed are considered non-standard. †C42 only.

See our complete line of fixed glass capacitors in Section 1500. For more technical data or for fast delivery on top-reliability CORNING resistors, call your CORNING distributor, or contact us directly.

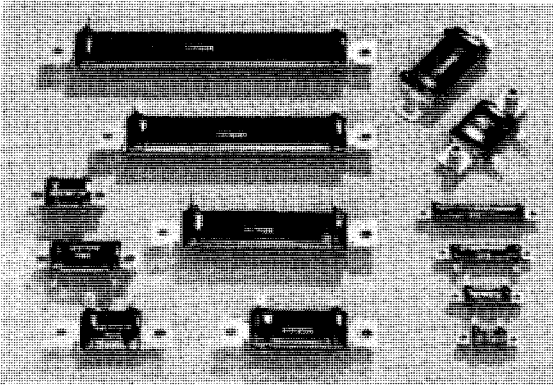
**CORNING**  
**ELECTRONICS**  
A DIVISION OF CORNING GLASS WORKS  
RALEIGH, N.C.



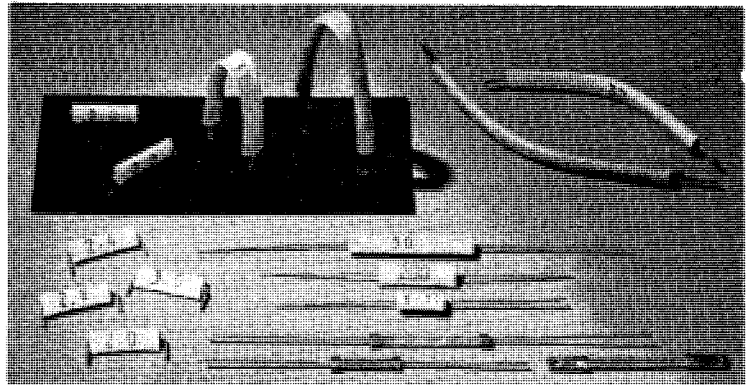
# LECTROHM

INCORPORATED

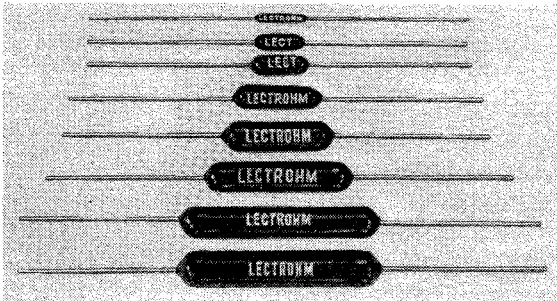
CHICAGO, ILLINOIS



OVALS

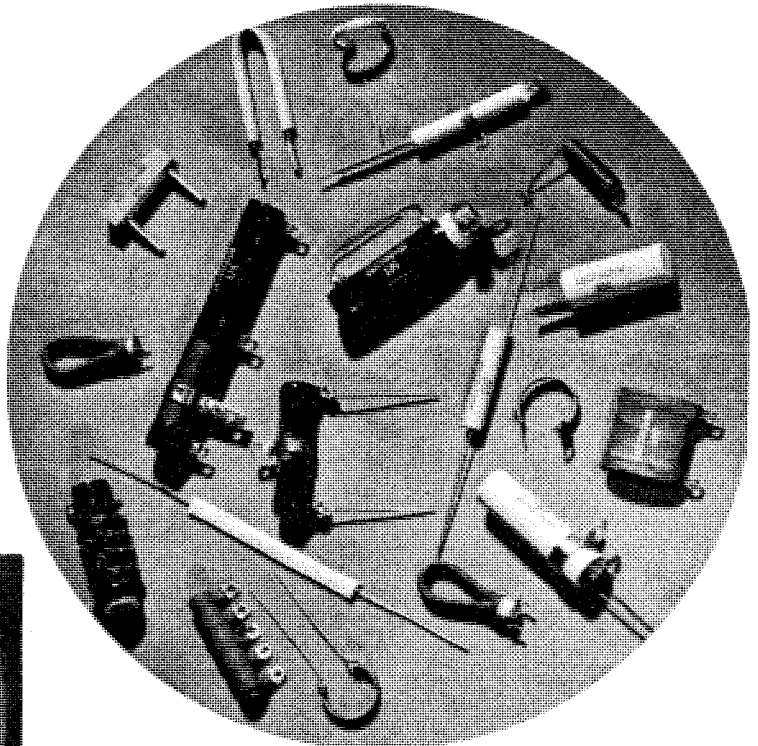


FLEXIBLES

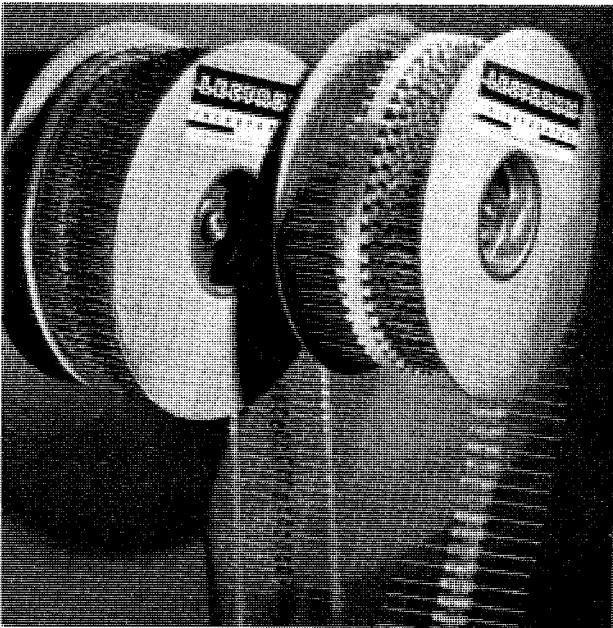


AXIALS

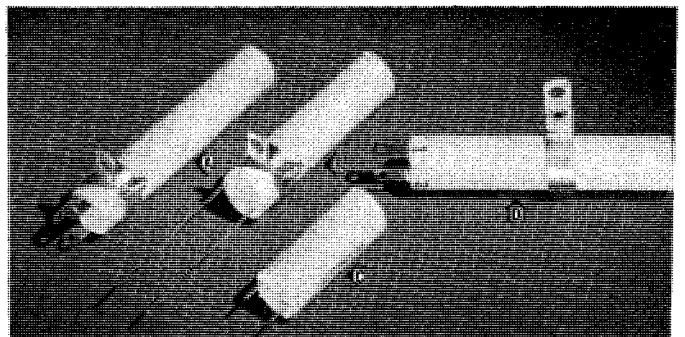
LECTROHM, while manufacturing the standard vitreous line, is also producing whole new groups of types, each designed to solve a special problem. Miniaturization and printed circuit restrictions in space and ventilation no longer are complicated by conventional power resistor size standards. New coating materials and winding methods developed by LECTROHM permit an infinite variety of configurations yet retain operating and life characteristics expected of the finest grade vitreous enameled types. LECTROHM engineers will fit the resistor size and shape to your design.



Some of the many "Special" LECTROHM Resistors



TAPED RESISTORS FOR AUTOMATION



UPRIGHTS A SOLDER LUG TYPE. B PIGTAIL TYPE. C PRINTED CIRCUIT. D HORIZONTAL MOUNTING BRACKET

# LECTROHM

INCORPORATED • CHICAGO, ILLINOIS

## VITREOUS ENAMELED RESISTORS

### Fixed Wire-Wound Types

C5 SERIES — 5 WATT					
DIMENSIONS		TERMINALS			
..... 3/16 x 3/16 x 1"		..... Pigtail type leads 1 1/2"			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-33; Centers 2 3/4"		..... 100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	2240	\$.45	600	91	\$.45
2	1580	.45	700	84	.45
3	1290	.45	750	81	.45
4	1110	.45	800	79	.45
5	1000	.45	900	74	.45
10	707	.45	1000	70	.48
15	575	.45	1100	67	.48
20	500	.45	1200	64	.48
25	447	.45	1250	63	.48
30	408	.45	1500	57	.48
35	374	.45	1750	53	.48
40	346	.45	2000	50	.48
50	316	.45	2250	47	.48
75	258	.45	2500	44	.48
100	222	.45	3000	41	.48
125	200	.45	4000	35	.48
150	182	.45	4500	33	.48
200	158	.45	5000	31	.48
225	149	.45	6000	29	.51
250	141	.45	7000	27	.51
300	129	.45	7500	26	.51
350	119	.45	8000	25	.51
400	111	.45	9000	23	.51
500	100	.45	10000	22	.51

C10 SERIES — 10 WATT					
DIMENSIONS		TERMINALS			
..... 3/16 x 3/16 x 1 3/4"		..... Pigtail type leads 1 1/2"			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-33; Centers 2 3/4"		..... 50,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	3150	\$.48	1500	79	\$.54
2	2230	.48	1750	74	.54
3	1825	.48	2000	69	.54
5	1415	.48	2250	64	.54
7.5	1155	.48	2500	61	.54
10	1000	.48	3000	58	.54
15	815	.48	3500	53	.54
20	707	.48	4000	50	.54
25	630	.48	4500	47	.54
50	447	.48	5000	44	.54
75	365	.48	6000	41	.60
100	315	.48	7000	38	.60
150	258	.48	7500	36	.60
200	223	.48	8000	35	.60
225	212	.48	8500	34	.60
250	200	.48	9000	33	.60
300	182	.48	10000	32	.60
350	169	.48	12000	29	.66
400	158	.48	12500	28	.66
450	150	.48	13500	27	.66
500	141	.48	15000	25	.66
600	129	.48	16000	25	.66
700	119	.48	17500	24	.66
750	115	.48	18000	23	.66
800	111	.48	20000	22	.66
900	105	.48	22500	21	.72
1000	100	.48	25000	20	.72
1100	95	.54	30000	18	.81
1200	91	.54	40000	15	.81
1250	89	.54	45000	15	.81
			50000	14	.81

C20 or E20 SERIES — 20 WATT					
DIMENSIONS		TERMINALS			
..... 3/16 x 3/16 x 2"		..... Pigtail type leads 1 1/2"			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-33; Centers 2 3/4"		..... 100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	2000	\$.63	2500	89	\$.66
10	1414	.63	3000	81	.66
15	1153	.63	4000	70	.66
20	1000	.63	5000	63	.66
25	894	.63	6000	57	.72
40	707	.63	7000	53	.72
50	633	.63	7500	51	.72
60	574	.63	8000	50	.72
75	517	.63	10000	45	.72
100	448	.63	12500	40	.78
125	400	.63	15000	36	.78
150	365	.63	20000	32	.78
200	316	.63	25000	28	.90
250	283	.63	30000	26	.90
300	258	.63	35000	24	.90
350	238	.63	40000	22	.90
400	223	.63	45000	21	1.05
500	200	.63	50000	20	1.05
600	182	.63	55000	18	1.05
700	169	.63	60000	16	1.05
750	163	.63	65000	15	1.20
800	158	.63	70000	14	1.20
1000	141	.63	75000	13	1.20
1100	134	.66	80000	12	1.20
1250	126	.66	90000	11	1.38
1500	115	.66	95000	10.5	1.38
2000	100	.66	100000	10	1.38

E25 SERIES — 25 WATT					
DIMENSIONS		TERMINALS			
..... 3/16 x 3/16 x 2"		..... Solder lug type			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-33; Centers 2 3/4"		..... 100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	5000	\$.66	2500	100	\$.75
3	2890	.66	3000	91	.75
5	2240	.66	3500	84	.75
10	1580	.66	4000	79	.75
15	1290	.66	5000	71	.75
25	1000	.66	6000	64	.75
50	707	.66	7500	57	.75
75	575	.66	10000	50	.75
100	500	.66	12000	46	.75
150	400	.66	15000	41	.78
200	353	.66	20000	35	.78
250	316	.66	25000	32	.90
300	288	.66	30000	29	.90
400	250	.66	35000	27	1.02
500	224	.66	40000	25	1.02
750	182	.66	50000	20	1.20
1000	158	.66	60000	16	1.20
1250	141	.69	70000	14	1.38
1500	129	.69	80000	12	1.38
2000	112	.69	100000	10	1.38

E50 SERIES — 50 WATT					
DIMENSIONS		TERMINALS			
..... 3/16 x 3/16 x 4"		..... Solder lug type			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-33; Centers 4 3/4"		..... 250,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	3165	\$1.08	8000	79	\$1.26
10	2230	1.08	10000	71	1.26
25	1414	1.08	12000	65	1.38
50	1000	1.08	12500	63	1.38
100	707	1.08	15000	57	1.38
200	500	1.08	20000	50	1.38
250	440	1.08	25000	45	1.53
500	300	1.08	30000	41	1.53
750	250	1.08	40000	35	1.53
1000	215	1.08	50000	32	1.71
1500	180	1.14	60000	29	1.71
2000	155	1.14	75000	26	1.92
2500	140	1.14	100000	19	2.10
3000	125	1.14	125000	15	2.22
4000	110	1.14	150000	13	2.31
5000	100	1.14	175000	11	2.40
6000	90	1.26	200000	9	2.49
7000	85	1.26	225000	8	2.79
7500	80	1.26	250000	7	2.79

E75 SERIES — 75 WATT					
DIMENSIONS		TERMINALS			
..... 3/16 x 3/16 x 6"		..... Solder lug type			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-33; Centers 6 3/4"		..... 100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	8650	\$1.32	2500	171	\$1.38
2	6120	1.32	3000	160	1.38
3	5010	1.32	4000	135	1.38
4	4340	1.32	5000	121	1.38
5	3870	1.32	6000	111	1.50
10	2740	1.32	7500	100	1.50
25	1730	1.32	8000	96	1.50
50	1220	1.32	10000	86	1.50
100	865	1.32	12000	80	1.62
150	705	1.32	12500	78	1.62
200	610	1.32	15000	70	1.62
250	550	1.32	20000	61	1.62
300	500	1.32	25000	55	1.83
400	430	1.32	30000	50	1.83
500	385	1.32	35000	46	1.83
750	318	1.32	40000	43	1.83
800	305	1.32	45000	41	1.95
1000	270	1.32	50000	39	1.95
1500	225	1.38	75000	31	2.13
2000	192	1.38	100000	27	2.37

E100 SERIES — 100 WATT					
DIMENSIONS		TERMINALS			
..... 3/4 x 1/2 x 6 1/2"		..... Solder lug type			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-34; Centers 7 3/4"		..... 100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	10000	\$1.59	2000	222	\$1.68
2	7070	1.59	2500	200	1.68
3	5770	1.59	3000	181	1.68
4	5000	1.59	5000	141	1.68
5	4470	1.59	7500	114	1.80
10	3160	1.59	10000	100	1.80
25	2000	1.59	15000	81	1.98
50	1414	1.59	20000	70	1.98
75	1153	1.59	25000	63	2.10
100	1000	1.59	30000	58	2.10
150	816	1.59	40000	50	2.10
250	632	1.59	50000	45	2.22
500	447	1.59	60000	41	2.22
750	365	1.59	75000	36	2.37
1000	316	1.59	100000	32	2.52
1500	257	1.68			

E160 SERIES — 160 WATT					
DIMENSIONS		TERMINALS			
..... 1 1/8 x 3/4 x 8 1/2"		..... Solder lug type			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-35; Centers 9 3/4"		..... 100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	12650	\$2.75	3500	215	\$2.01
2	8940	2.75	4000	200	2.01
3	7300	2.75	4500	185	2.01
4	6320	2.75	5000	180	2.01
5	5660	2.75	7500	145	2.16
10	4000	1.98	10000	125	2.16
25	2530	1.98	15000	105	2.34
50	1788	1.98	20000	90	2.34
75	1460	1.98	25000	80	2.40
100	1260	1.98	30000	73	2.40
200	900	1.98	35000	68	2.40
500	570	1.98	40000	64	2.40
1000	400	1.98	50000	57	2.49
1500	330	2.01	60000	52	2.49
2000	280	2.01	70000	48	2.64
2500	250	2.01	80000	45	2.82
3000	230	2.01	100000	40	2.82

E200 SERIES — 200 WATT					
DIMENSIONS		TERMINALS			
..... 1 1/8 x 3/4 x 10 1/2"		..... Solder lug type			
MOUNTING BRACKET		MAXIMUM RESISTANCE			
..... B-35; Centers 11 3/4"		..... 100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	14140	\$3.00	3500	240	\$2.16
2	10000	3.00	4000	225	2.16

# LECTROHM

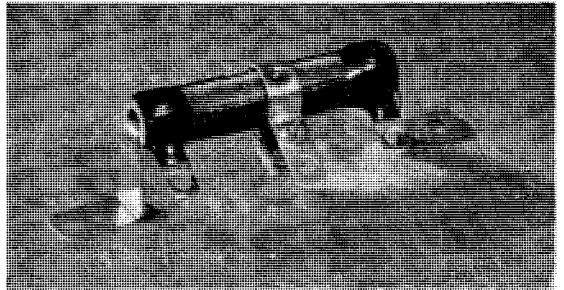
INCORPORATED

CHICAGO, ILLINOIS

## VITREOUS ENAMELED RESISTORS FIXED AND ADJUSTABLE WIRE-WOUND TYPES

Years ahead in manufacturing techniques, LECTROHM Resistors offer absolutely top quality at consistently lower prices. New winding methods and improved enameling processes are the result of continuing research.

Your wire-wound resistor requirements, whether in small or large quantities, are given immediate attention. Large factory stocks of standard types are maintained for your convenience. Special types to fit particular applications are provided quickly and at low cost.



### Adjustable Wire-Wound Types

D10 SERIES — 10 WATT					
DIMENSIONS		$\frac{3}{8}$ x $\frac{3}{8}$ x $1\frac{3}{4}$ "			
MOUNTING BRACKET		B-32; Centers $2\frac{3}{4}$ "			
TERMINALS		Solder lug type			
MAXIMUM RESISTANCE		10,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	3150	\$ .96	750	115	\$ .96
2	2230	.96	800	111	.96
3	1825	.96	1000	100	.96
5	1415	.96	1250	89	1.02
7.5	1155	.96	1500	79	1.02
10	1000	.96	2000	69	1.02
15	815	.96	2250	64	1.02
20	707	.96	2500	61	1.02
25	630	.96	3000	58	1.02
50	447	.96	3500	53	1.02
75	365	.96	4000	50	1.02
100	315	.96	4500	47	1.02
150	258	.96	5000	45	1.02
200	223	.96	6000	41	1.08
250	200	.96	7000	38	1.08
300	182	.96	7500	36	1.08
350	169	.96	8000	35	1.08
400	158	.96	8500	34	1.08
500	141	.96	9000	33	1.08
600	129	.96	10000	31	1.08

D25 SERIES — 25 WATT					
DIMENSIONS		$\frac{1}{2}$ x $\frac{3}{8}$ x 2"			
MOUNTING BRACKET		B-33; Centers $2\frac{3}{4}$ "			
TERMINALS		Solder lug type			
MAXIMUM RESISTANCE		25,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
1	5000	\$1.23	1250	141	\$1.26
2	3535	1.23	1500	129	1.26
3	2890	1.23	2000	112	1.26
5	2240	1.23	2500	100	1.26
7.5	1825	1.23	3000	91	1.26
10	1580	1.23	3500	84	1.26
15	1290	1.23	4000	79	1.26
20	1117	1.23	4500	74	1.26
25	1000	1.23	5000	71	1.26
50	707	1.23	6000	64	1.32
75	575	1.23	7000	60	1.32
100	500	1.23	7500	57	1.32
150	400	1.23	8000	55	1.32
200	353	1.23	8500	54	1.32
250	316	1.23	9000	52	1.32
300	288	1.23	10000	50	1.32
400	250	1.23	12000	46	1.38
500	224	1.23	15000	41	1.38
750	182	1.23	20000	35	1.38
300	177	1.23	25000	32	1.50
1000	158	1.23			

D50 SERIES — 50 WATT					
DIMENSIONS		$\frac{3}{8}$ x $\frac{3}{8}$ x 4"			
MOUNTING BRACKET		B-33; Centers $4\frac{3}{4}$ "			
TERMINALS		Solder lug type			
MAXIMUM RESISTANCE		100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	3160	\$1.56	3000	129	\$1.62
10	2230	1.56	4000	112	1.62
25	1410	1.56	5000	100	1.62
50	1000	1.56	7500	81	1.74
75	816	1.56	10000	70	1.74
100	707	1.56	12000	64	1.86
150	577	1.56	15000	57	1.86
200	500	1.56	20000	50	1.86
250	447	1.56	25000	44	2.04
300	408	1.56	30000	41	2.04
400	354	1.56	40000	35	2.04
500	316	1.56	50000	32	2.16
750	258	1.56	60000	29	2.16
1000	224	1.56	75000	26	2.43
1500	182	1.62	80000	24	2.43
2000	158	1.62	100000	19	2.58
2500	141	1.62			

D75 SERIES — 75 WATT					
DIMENSIONS		$\frac{3}{8}$ x $\frac{3}{8}$ x 6"			
MOUNTING BRACKET		B-33; Centers $6\frac{3}{4}$ "			
TERMINALS		Solder lug type			
MAXIMUM RESISTANCE		100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	3870	\$1.80	3500	146	\$1.86
10	2740	1.80	5000	121	1.86
15	2236	1.80	7500	100	1.98
25	1730	1.80	10000	86	1.98
50	1220	1.80	15000	70	2.10
100	865	1.80	20000	61	2.34
250	550	1.80	25000	55	2.34
300	500	1.80	30000	50	2.34
400	430	1.80	40000	43	2.34
500	385	1.80	50000	39	2.40
750	318	1.80	60000	35	2.40
1000	270	1.80	75000	31	2.64
1500	225	1.86	80000	30	2.64
2000	192	1.86	100000	27	2.85
2500	171	1.86			

D100 SERIES — 100 WATT					
DIMENSIONS		$\frac{3}{4}$ x $\frac{1}{2}$ x $6\frac{1}{2}$ "			
MOUNTING BRACKET		B-34; Centers $7\frac{3}{8}$ "			
TERMINALS		Solder lug type			
MAXIMUM RESISTANCE		100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	4470	\$2.37	2500	200	\$2.43
10	3162	2.37	3000	180	2.43
25	2000	2.37	5000	140	2.43
50	1414	2.37	7500	115	2.55
75	1155	2.37	10000	100	2.55
100	1000	2.37	15000	80	2.70
150	815	2.37	20000	70	2.70
250	632	2.37	25000	63	2.88
500	447	2.37	30000	58	2.88
750	365	2.37	40000	50	2.88
1000	315	2.37	50000	45	3.00
1250	280	2.43	60000	41	3.00
1500	250	2.43	75000	36	3.12
2000	220	2.43	100000	32	3.27

D160 SERIES — 160 WATT					
DIMENSIONS		$1\frac{1}{8}$ x $\frac{3}{4}$ x $8\frac{1}{2}$ "			
MOUNTING BRACKET		B-35; Centers $9\frac{3}{8}$ "			
TERMINALS		Solder lug type			
MAXIMUM RESISTANCE		100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	5660	\$3.51	4500	185	\$2.76
10	4000	2.73	5000	180	2.76
25	2530	2.73	7500	145	2.94
50	1788	2.73	10000	125	2.94
75	1460	2.73	15000	105	3.09
100	1260	2.73	20000	90	3.09
200	900	2.73	25000	80	3.18
500	570	2.73	30000	73	3.18
1000	400	2.73	35000	68	3.18
1500	330	2.76	40000	64	3.18
2000	280	2.76	50000	57	3.24
2500	250	2.76	60000	52	3.24
3000	230	2.76	70000	48	3.42
3500	215	2.76	80000	45	3.60
4000	200	2.76	100000	40	3.60

D200 SERIES — 200 WATT					
DIMENSIONS		$1\frac{1}{8}$ x $\frac{3}{4}$ x $10\frac{1}{2}$ "			
MOUNTING BRACKET		B-35; Centers $11\frac{3}{8}$ "			
TERMINALS		Solder lug type			
MAXIMUM RESISTANCE		100,000 ohms			
Res. Ohms	Max. M.A.	Net Price	Res. Ohms	Max. M.A.	Net Price
5	6310	\$3.75	4500	210	\$2.94
10	4470	2.88	5000	200	2.94
25	2830	2.88	7500	165	3.12
50	2000	2.88	10000	140	3.12
75	1635	2.88	15000	115	3.24
100	1400	2.88	20000	100	3.24
250	900	2.88	25000	90	3.30
500	630	2.88	30000	82	3.30
1000	450	2.88	35000	76	3.30
1500	365	2.94	40000	71	3.30
2000	315	2.94	50000	63	3.42
2500	280	2.94	60000	58	3.57
3000	260	2.94	75000	52	3.57
3500	240	2.94	100000	45	3.75
4000	225	2.94			

Order by series number and resistance required.



# HARDWICK, STOCK BLUE RIBBON RESISTORS

## HINDLE

Wirewound Flat Core for Individual and Stack Mounting

■ Standard tolerance is  $\pm 5\%$ . Closer tolerance available on order.

■ In resistors with values below 10 ohms a special through-bracket construction may be used for greater mechanical strength.

■ When stack mounted these resistors should be derated.

<b>10 WATT</b>					
Type ¼ BRS-53B Mounting Centers 1" Avg. Wt. 0.0083 lbs.					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B348	1	.20	B357	250	3.16
B349	2	.14	B358	500	2.23
B350	5	.10	B359	1000	1.41
B351	10	.081	B360	1500	1.00
B352	15	.063	B361	2500	.82
B353	25	.045	B362	5000	.63
B354	50	.044	B363	10000	.32
B355	100	.032	B364	15000	.26
B356	150	.026			

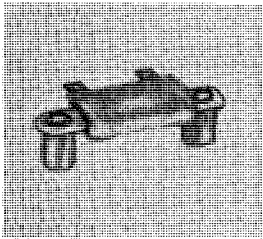
<b>15 WATT</b>					
Type 1 BRS-53B Mounting Centers 1½" Avg. Wt. 0.010 lbs.					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B399	1	3.87	B409	500	.17
B400	2	2.73	B410	1000	.12
B401	5	1.73	B411	1500	.10
B402	10	1.22	B412	2500	.078
B403	15	1.00	B413	5000	.055
B404	25	.78	B414	10000	.039
B405	50	.55	B415	15000	.032
B406	100	.39	B416	20000	.027
B407	150	.32	B417	25000	.025
B408	250	.25			

<b>20 WATT</b>					
Type 2 BRS-53B Mounting Centers 2½" Avg. Wt. 0.017 lbs.					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B448	1	4.47	B458	500	.20
B449	2	3.16	B459	1000	.14
B450	5	2.00	B460	1500	.12
B451	10	1.41	B461	2500	.089
B452	15	1.16	B462	5000	.063
B453	25	.89	B463	10000	.045
B454	50	.63	B464	15000	.036
B455	100	.45	B465	20000	.032
B456	150	.36	B466	25000	.028
B457	250	.28	B467	50000	.020

<b>20 WATT</b>					
Type 1 BRM-37 Mounting Centers 1½" Avg. Wt. 0.029 lbs.					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B501	5	2.00	B508	250	.28
B502	10	1.41	B509	500	.20
B503	15	1.16	B510	1000	.14
B504	25	.89	B511	1500	.12
B505	50	.63	B512	2500	.089
B506	100	.45	B513	5000	.063
B507	150	.36	B514	8000	.050

<b>30 WATT</b>					
Type 1½ BRM-37 Mounting Centers 1½" Avg. Wt. 0.035 lbs.					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B550	5	2.46	B558	500	.25
B551	10	1.73	B559	1000	.17
B552	15	1.42	B560	1500	.14
B553	25	1.10	B561	2500	.11
B554	50	.77	B562	5000	.076
B555	100	.55	B563	10000	.049
B556	150	.45	B564	15000	.045
B557	250	.35			

<b>30 WATT</b>					
Type 1½ BR-37 Mounting Centers 2" Avg. Wt. 0.045 lbs. Military Size RW20					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B100	1.0	5.47	B107	150	.45
B100A	1.2	5.40	B107A	180	.41
B100B	1.5	4.47	B107B	200	.39
B100C	1.8	4.10	B107C	240	.35
B100D	2.0	3.88	B108	250	.35
B100E	2.4	3.53	B108A	300	.32
B100F	3.0	3.16	B108B	360	.28
B100G	3.6	2.88	B108C	430	.26
B100H	4.3	2.64	B109	500	.25
B101	5.0	2.45	B109A	510	.24
B101A	5.1	2.43	B109B	620	.22
B101B	6.2	2.20	B109C	750	.20
B101C	7.5	2.00	B109D	910	.18
B101D	9.1	1.82	B110	1000	.17
B102	10	1.73	B110A	1200	.16
B102A	12	1.58	B111	1500	.14
B103	15	1.42	B111A	1800	.13
B103A	18	1.29	B111B	2000	.12
B103B	20	1.22	B111C	2400	.11
B104	25	1.10	B112	2500	.11
B104A	30	1.00	B112A	3000	.10
B104B	36	.91	B112B	3600	.091
B104C	43	.83	B112C	4300	.083
B105	50	.77	B113	5000	.077
B105A	62	.69	B113A	5100	.076
B105B	75	.63	B113B	6200	.069
B105C	91	.57	B113C	7500	.063
B106	100	.55	B114	10000	.055
B106A	120	.50			



**HARDWICK-HINDLE PRODUCTS**

HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.



# STOCK BLUE RIBBON RESISTORS

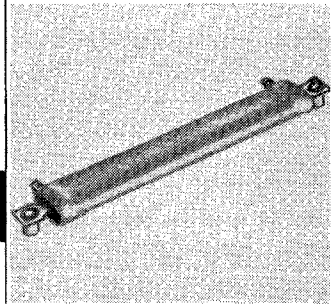


40 WATT			Type 2 BR-37 Mounting Centers 2 3/4" Avg. Wt. 0.060 lbs. Military Size RW21		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B200	1.0	6.32	B207	150	.52
B200A	1.2	5.78	B207A	180	.47
B200B	1.5	5.16	B207B	200	.45
B200C	1.8	4.70	B207C	240	.41
B200D	2.0	4.47	B208	250	.40
B200E	2.4	4.08	B208A	300	.37
B200F	3.0	3.65	B208B	360	.33
B200G	3.6	3.33	B208C	430	.31
B200H	4.3	3.05	B209	500	.28
B201	5.0	2.83	B209A	510	.28
B201A	5.1	2.80	B209B	620	.25
B201B	6.2	2.54	B209C	750	.23
B201C	7.5	2.31	B209D	910	.21
B201D	9.1	2.10	B210	1000	.20
B202	10	2.00	B210A	1200	.18
B202A	12	1.83	B211	1500	.16
B203	15	1.63	B211A	1800	.15
B203A	18	1.49	B211B	2000	.14
B203B	20	1.41	B211C	2400	.13
B204	25	1.26	B212	2500	.13
B204A	30	1.16	B212A	3000	.12
B204B	36	1.05	B212B	3600	.11
B204C	43	.96	B212C	4300	.10
B205	50	.89	B213	5000	.089
B205A	62	.80	B213A	5100	.088
B205B	75	.73	B213B	6200	.080
B205C	91	.66	B213C	7500	.073
B206	100	.63	B214	10000	.063
B206A	120	.58	B215	15000	.051

55 WATT			Type 3 1/2 BR-37 Mounting Centers 4 1/4" Avg. Wt. 0.10 lbs. Military Size RW22		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B300	1.0	.48	B307C	240	7.42
B300A	1.2	.47	B308	250	6.77
B300B	1.5	.43	B308A	300	6.05
B300C	1.8	.39	B308B	360	5.53
B300D	2.0	.36	B308C	430	5.24
B300E	2.4	.33	B309	500	4.78
B300F	3.0	.33	B309A	510	4.28
B300G	3.6	.30	B309B	620	3.91
B300H	4.3	.27	B309C	750	3.58
B301	5.0	.25	B309D	910	3.32
B301A	5.1	.23	B310	1000	3.29
B301B	6.2	.21	B310A	1200	2.98
B301C	7.5	.19	B311	1500	2.72
B301D	9.1	.18	B311A	1800	2.45
B302	10	.17	B311B	2000	2.34
B302A	12	.15	B311C	2400	2.14
B303	15	.15	B312	2500	1.92
B303A	18	.14	B312A	3000	1.75
B303B	20	.12	B312B	3600	1.66
B304	25	.11	B312C	4300	1.48
B304A	30	.10	B313	5000	1.35
B304B	36	.094	B313A	6200	1.23
B304C	43	.086	B313B	7500	1.13
B305	50	.078	B313C	9100	1.05
B305A	62	.074	B314	10000	.94
B305B	75	.068	B314A	12000	.86
B305C	91	.061	B315	15000	.78
B306	100	.055	B315A	18000	.74
B306A	120	.052	B315B	20000	.68
B307	150	.048	B315C	24000	.61
B307A	180	.047	B316	25000	.55
B307B	200	.042	B316A	30000	.52

65 WATT			Type 4 1/4 BR-37 Mounting Centers 5 1/2" Avg. Wt. 0.14 lbs. Military Size RW23		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B649	1.0	8.06	B657	250	.51
B649A	1.2	7.35	B657A	300	.46
B649B	1.5	6.58	B657B	360	.42
B649C	1.8	6.01	B657C	430	.39
B649D	2.0	5.70	B658	500	.36
B649E	2.4	5.20	B658A	510	.36
B649F	3.0	4.66	B658B	620	.32
B649G	3.6	4.25	B658C	750	.29
B649H	4.3	3.88	B658D	910	.27
B650	5.0	3.61	B659	1000	.25
B650A	5.1	3.57	B659A	1200	.23
B650B	6.2	3.24	B660	1500	.21
B650C	7.5	2.94	B660A	1800	.19
B650D	9.1	2.67	B660B	2000	.18
B651	10	2.55	B660C	2400	.16
B651A	12	2.32	B661	2500	.16
B652	15	2.08	B661A	3000	.15
B652A	18	1.90	B661B	3600	.13
B652B	20	1.79	B661C	4300	.12
B652C	24	1.64	B662	5000	.11
B653	25	1.61	B662A	5100	.11
B653A	30	1.47	B662B	6200	.10
B653B	36	1.34	B662C	7500	.093
B653C	43	1.23	B662D	9100	.084
B654	50	1.14	B663	10000	.081
B654A	62	1.02	B663A	12000	.074
B654B	75	.93	B664	15000	.066
B654C	91	.84	B664A	18000	.060
B655	100	.81	B664B	20000	.057
B655A	120	.74	B664C	24000	.052
B656	150	.66	B665	25000	.051
B656A	180	.60	B665A	30000	.046
B656B	200	.57	B665B	36000	.042
B656C	240	.52	B666	50000	.030*

75 WATT			Type 6 BR-37 Mounting Centers 6 3/4" Avg. Wt. 0.17 lbs. Military Size RW24		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
B600	1.0	8.66	B607C	240	.56
B600A	1.2	7.91	B608	250	.55
B600B	1.5	7.07	B608A	300	.50
B600C	1.8	6.46	B608B	360	.46
B600D	2.0	6.13	B608C	430	.42
B600E	2.4	5.60	B609	500	.39
B600F	3.0	5.00	B609A	620	.35
B600G	3.6	4.57	B609B	750	.31
B600H	4.3	4.18	B609C	910	.29
B601	5.0	3.87	B610	1000	.27
B601A	5.1	3.84	B610A	1200	.25
B601B	6.2	3.49	B611	1500	.22
B601C	7.5	3.16	B611A	1800	.20
B601D	9.1	2.87	B611B	2000	.19
B602	10	2.74	B611C	2400	.18
B602A	12	2.49	B612	2500	.17
B603	15	2.24	B612A	3000	.15
B603A	18	2.03	B612B	3600	.14
B603B	20	1.93	B612C	4300	.13
B603C	24	1.77	B613	5000	.12
B604	25	1.73	B613A	6200	.11
B604A	30	1.58	B613B	7500	.10
B604B	36	1.44	B613C	9100	.091
B604C	43	1.32	B614	10000	.086
B605	50	1.22	B614A	12000	.079
B605A	51	1.21	B615	15000	.070
B605B	62	1.10	B615A	18000	.065
B605C	75	1.00	B615B	20000	.061
B605D	91	.91	B615C	24000	.056
B606	100	.86	B616	25000	.055
B606A	120	.79	B616A	30000	.050
B607	150	.71	B616B	36000	.046
B607A	180	.65	B617	50000	.033*
B607B	200	.61			


**HARDWICK-HINDLE PRODUCTS**

HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.

**MEMCOR**



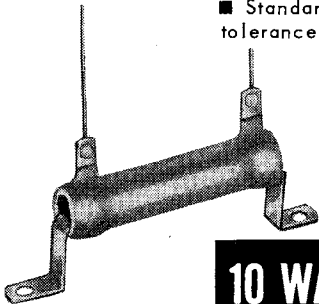
# HARDWICK, HINDLE

# STOCK TAB TYPE FIXED RESISTORS

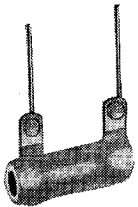
Sizes: 5 Watts to 200 Watts. 1 Ohm to 100,000 Ohms

■ Features of this widely-used type of resistor, built "better than need be" by Hardwick, Hindle, are welded tabs (lugs) solidly anchored to withstand vibration and hot tin-dipped for easy soldering; shock-absorbing mounting brackets; multi-layer vitreous enamel coating which locks the uniformly-wound resistance wire in position and also locks out moisture; high-temperature stability and compatible coefficient of expansion which prevents crazing and cracking.

■ Standard tolerance is  $\pm 5\%$ . Closer tolerance on special orders.



10 WATT					
Type 1 1/2-34 Core: 1 3/4" long x 1/8" o.d. Mounting Centers 2 1/8" to 2 3/16" * Std. mtg. bkt. 5247-1 Avg. Wt. 0.02 lbs. Military Size RW29					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
A101	1.0	3.16	A112	200	.22
A101A	1.2	2.88	A112A	240	.20
A101B	1.5	2.58	A113	250	.20
A101C	1.8	2.35	A113A	300	.18
A101D	2.0	2.24	A113B	360	.17
A101E	2.4	2.03	A114	400	.16
A102	3.0	1.83	A114A	430	.15
A102A	3.6	1.66	A115	500	.14
A102B	4.3	1.52	A115A	510	.14
A103	5.0	1.41	A115B	620	.13
A103A	5.1	1.39	A116	750	.12
A103B	6.2	1.27	A116A	910	.11
A104	7.5	1.16	A117	1000	.10
A104A	9.1	1.05	A117A	1200	.091
A105	10	1.00	A118	1250	.089
A105A	12	.91	A119	1500	.081
A106	15	.82	A119A	1800	.075
A106A	18	.74	A120	2000	.071
A106B	20	.71	A120A	2400	.064
A106C	24	.65	A121	2500	.063
A107	25	.63	A122	3000	.057
A107A	30	.58	A122A	3600	.053
A107B	36	.53	A123	4000	.050
A107C	43	.48	A123A	4300	.048
A108	50	.45	A124	5000	.045
A108A	51	.45	A124A	5100	.045
A108B	62	.40	A125	7500	.036
A109	75	.37	A126	10000	.032
A109A	91	.33	A127	12500	.028
A110	100	.32	A128	15000	.026
A110A	120	.29	A129	20000	.022
A111	150	.26	A130	25000	.020
A111A	180	.24			



5 WATT					
Type 12-34 Core: 1" long x 3/16" o.d. Avg. Wt. 0.15 lbs.					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
A1	1	2.23	A16	750	.082
A2	3	1.29	A17	1000	.070
A3	5	1.00	A18	1250	.063
A4	7.5	.81	A19	1500	.057
A5	10	.71	A20	2000	.050
A6	15	.58	A21	2500	.045
A7	25	.45	A22	3000	.041
A8	50	.32	A23	4000	.035
A9	75	.26	A24	5000	.032
A10	100	.22	A25	7500	.026
A11	150	.18	A26	10000	.022
A12	200	.16	A27	12500	.020
A13	250	.14	A28	15000	.018
A14	400	.11	A29	20000	.016
A15	500	.10	A30	25000	.014

20 WATT					
Type 2H-34 Core: 2" long x 1/4" o.d. Mounting Centers 2 1/8" to 2 3/16" * Std. mtg. bkt. 5247-2 Avg. Wt. 0.03 lbs. Military Size RW32					
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
A200	1.0	4.47	A209	250	.28
A200A	1.2	4.08	A209A	300	.26
A200B	1.5	3.64	A209B	360	.24
A200C	1.8	3.33	A210	400	.22
A200D	2.0	3.16	A210A	430	.22
A200E	2.4	2.89	A211	500	.20
A200F	3.0	2.58	A211A	510	.20
A200G	3.6	2.35	A211B	620	.18
A200H	4.3	2.15	A212	750	.16
A201	5.0	2.00	A212A	910	.15
A201A	5.1	1.98	A213	1000	.14
A201B	6.2	1.79	A213A	1200	.13
A201C	7.5	1.63	A214	1250	.12
A201D	9.1	1.48	A215	1500	.12
A202	10	1.41	A215A	1800	.11
A202A	12	1.29	A216	2000	.10
A202B	15	1.15	A216A	2400	.091
A202C	18	1.05	A217	2500	.089
A202D	20	1.00	A218	3000	.081
A202E	24	.91	A218A	3600	.075
A203	25	.89	A219	4000	.070
A203A	30	.82	A219A	4300	.068
A203B	36	.75	A220	5000	.063
A203C	43	.68	A220A	5100	.062
A204	50	.63	A221	6000	.057
A204A	51	.62	A221A	6200	.057
A204B	62	.57	A222	7500	.051
A205	75	.52	A222A	9100	.047
A205A	91	.47	A223	10000	.045
A206	100	.45	A224	12500	.040
A206A	120	.44	A225	15000	.036
A207	150	.36	A226	25000	.028
A207A	180	.33	A227	35000	.024
A208	200	.32	A228	40000	.022
A208A	240	.29	A229	50000	.020

**HARDWICK-HINDLE PRODUCTS**

HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.



# STOCK TAB TYPE FIXED RESISTORS



## 25 WATT

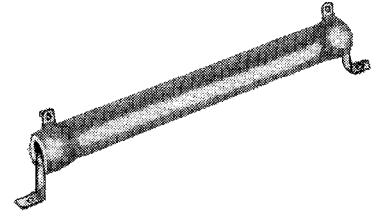
Type 2 JX-35  
Core: 2" long x 3/8" o.d.  
Mounting Centers  
2 3/4" to 2 3/4"  
Std. mtg. bkt. 5247-2  
Avg. Wt. 0.05 lbs.

STOCK NO.	OHMS	MAX. AMPS.
1001	5	2.24
1002	10	1.58
1003	25	1.00
1004	50	.71
1005	75	.58
1006	100	.50
1007	150	.41
1008	200	.35
1009	250	.32
1010	500	.22
1011	750	.18
1012	1000	.16
1013	1500	.13
1014	2000	.12
1015	2500	.10
1016	3000	.091
1017	3500	.084
1018	4000	.079
1019	5000	.070
1020	6000	.064
1021	7500	.057
1022	10000	.050
1023	12000	.046
1024	15000	.041
1025	20000	.035
1026	25000	.032

## 50 WATT

Type 4 JX-35  
Core: 4" long x 1/2" o.d.  
Mounting Centers  
4 1/2" to 4 1/2"  
Std. mtg. bkt. 5247-2  
Avg. wt. 0.15 lbs.

STOCK NO.	OHMS	MAX. AMPS.
2000	1	7.07
2001	5	3.16
2002	10	2.23
2003	25	1.41
2004	50	1.00
2005	75	.82
2006	100	.71
2007	150	.58
2008	200	.50
2009	250	.45
2010	500	.32
2011	750	.26
2012	1000	.22
2013	1500	.18
2014	2000	.16
2015	2500	.14
2016	3000	.13
2017	4000	.11
2018	5000	.10
2019	7500	.081
2020	10000	.071
2021	12000	.064
2022	15000	.057
2023	20000	.050
2024	25000	.045
2025	35000	.038
2026	50000	.032



### TO ORDER:

**Stock items:** Specify stock number, type, ohms and quantity.

**Mounting brackets:** Specify bracket catalog number separately if required. Furnished only on request.

### STANDARD PACKAGING:

25 watt and larger sizes packed 1 unit per box.

## 100 WATT

Type 6 1/2 L-35  
Core: 6 1/2" long x 3/4" o.d.  
Mounting Centers  
7 1/4" to 7 3/4"  
Std. mtg. bkt. 5247-3  
Avg. Wt. 0.35 lbs.

STOCK NO.	OHMS	MAX. AMPS.
3000	1	10.00
3001	3	5.77
3002	5	4.47
3003	10	3.16
3004	25	2.00
3005	50	1.41
3006	75	1.15
3007	100	1.00
3008	250	.63
3009	500	.45
3010	1000	.32
3011	1500	.26
3012	2000	.22
3013	2500	.20
3014	3000	.18
3015	4000	.16
3016	5000	.14
3017	7500	.12
3018	10000	.10
3019	15000	.081
3020	20000	.071
3021	25000	.063
3022	30000	.058
3023	35000	.054
3024	40000	.050
3025	50000	.045
3026	60000	.041
3027	75000	.036

## 160 WATT

Type 8 1/2 FX-57  
Core: 8 1/2" long x 1 1/4" o.d.  
Mounting Centers  
9 1/4" to 9 3/4"  
Std. mtg. bkt. 5247-4  
Avg. Wt. 0.53 lbs.

STOCK NO.	OHMS	MAX. AMPS.
4001	5	5.66
4002	10	4.00
4003	25	2.53
4004	50	1.79
4005	75	1.46
4006	100	1.26
4007	150	1.03
4008	250	.80
4009	500	.57
4010	750	.46
4011	1000	.40
4012	1500	.33
4013	2000	.28
4014	2500	.25
4015	3000	.23
4016	5000	.18
4017	7500	.15
4018	10000	.13
4019	15000	.10
4020	20000	.089
4021	25000	.080
4022	30000	.073
4023	40000	.063
4024	50000	.057
4025	75000	.046
4026	100000	.040

## 200 WATT

Type 10 1/2 FX-57  
Core: 10 1/2" long x 1 1/4" o.d.  
Mounting Centers  
11 1/4" to 11 3/4"  
Std. mtg. bkt. 5247-4  
Avg. Wt. 0.65 lbs.

STOCK NO.	OHMS	MAX. AMPS.
5001	5	6.32
5002	10	4.47
5003	25	2.83
5004	50	2.00
5005	75	1.64
5006	100	1.41
5007	150	1.15
5008	250	.89
5009	500	.63
5010	750	.52
5011	1000	.45
5012	1500	.37
5013	2000	.32
5014	2500	.28
5015	3000	.26
5016	5000	.20
5017	7500	.16
5018	10000	.14
5019	15000	.12
5020	20000	.10
5021	25000	.089
5022	30000	.082
5023	40000	.071
5024	50000	.063
5025	75000	.052
5026	100000	.045

**HARDWICK-HINDLE PRODUCTS**

HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.

**MEMCOR**





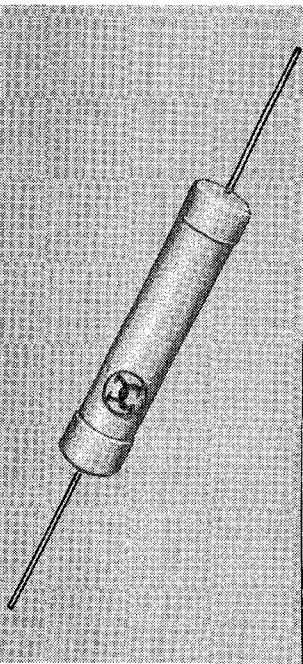
# HARDWICK, HINDLE

# STOCK AXIAL LEAD RESISTORS

Gray Vitreous Enameled Fixed Type

These lightweight resistors are designed for mounting by their leads. Special care is taken to provide every element required for making stable trouble-free connections.

■ Stock tolerance is ± 5%. Closer tolerance is available at additional cost.



3 WATT			Type 1/2 GA-46 1/2" long max. x 1/4" o.d. max. Avg. Wt. 0.003 lbs. Military Size RW59		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
701	1.0	1.73	721	200	.12
701A	1.2	1.58	722	225	.12
702	1.5	1.41	723	250	.11
702A	1.8	1.29	724	300	.10
703	2.0	1.22	725	350	.093
703A	2.4	1.12	726	400	.087
704	3.0	1.00	726A	430	.083
704A	3.6	.91	727	450	.082
705	4.0	.86	728	500	.078
705A	4.3	.83	729	600	.071
706	5.0	.78	729A	620	.069
706A	5.1	.77	730	700	.065
706B	6.2	.69	731	750	.063
707	7.5	.63	732	800	.061
707A	9.1	.57	732A	820	.060
708	10	.55	733	900	.058
709	12	.50	734	1000	.055
710	15	.45	735	1100	.052
710A	18	.41	736	1200	.050
711	20	.39	737	1250	.049
711A	24	.35	738	1500	.045
712	25	.35	739	1750	.041
713	30	.32	740	2000	.039
714	35	.29	741	2250	.036
714A	36	.28	742	2500	.035
715	40	.27	743	3000	.032
715A	43	.26	744	3500	.029
716	50	.25	745	4000	.027
716A	51	.24	746	4500	.026
716B	62	.22	747	5000	.025
717	75	.20	748	6000	.022
717A	91	.18	749	7000	.020
718	100	.17	750	7500	.020
718A	120	.16	751	8000	.019
719	125	.16	752	9000	.018
720	150	.14	753	10000	.017
720A	180	.13			

5 WATT			Type 1 WA-46 1" long max. x 1/2" o.d. max. Avg. Wt. 0.007 lbs. Military Size RW57		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
801	1.0	2.23	826A	430	.11
801A	1.2	2.03	827	450	.10
802	1.5	1.82	828	500	.10
802A	1.8	1.66	829	600	.091
803	2.0	1.58	829A	620	.090
803A	2.4	1.44	830	700	.084
804	3.0	1.29	831	750	.081
804A	3.6	1.17	832	800	.079
805	4.0	1.12	833	900	.074
805A	4.3	1.06	834	1000	.070
806	5.0	1.00	835	1100	.067
806A	6.2	.90	836	1200	.064
807	7.5	.81	837	1250	.063
807A	9.1	.74	838	1500	.057
808	10	.71	839	1750	.053
809	12	.65	840	2000	.050
810	15	.58	841	2250	.047
810A	18	.53	841A	2400	.045
811	20	.50	842	2500	.045
812	25	.45	843	3000	.041
813	30	.41	844	3500	.037
814	35	.38	845	4000	.035
815	40	.35	846	4500	.033
815A	43	.34	847	5000	.032
816	50	.32	848	6000	.029
816A	62	.28	849	7000	.027
817	75	.26	850	7500	.026
817A	91	.23	851	8000	.025
818	100	.22	852	9000	.024
819	125	.20	853	10000	.022
820	150	.18	854	12500	.020
820A	180	.17	855	15000	.018
821	200	.16	856	17500	.017
822	225	.15	857	18000	.017
823	250	.14	858	20000	.016
824	300	.13			
825	350	.12	859	22500	.015
826	400	.11	860	25000	.014

10 WATT			Type 1 1/4 ZA-46 1 1/4" long max. x 1/2" o.d. max. Avg. Wt. 0.013 lbs. Military Size RW58		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
901	1.0	3.16	930	700	.12
901A	1.2	2.88	931	750	.12
902	1.5	2.58	932	800	.11
902A	1.8	2.35	933	900	.11
903	2.0	2.24	934	1000	.10
903A	2.4	2.03	935	1100	.095
904	3.0	1.83	936	1200	.091
904A	3.6	1.66	937	1250	.089
905	4.0	1.58	938	1500	.081
905A	4.3	1.52	939	1750	.075
906	5.0	1.41	940	2000	.071
906A	5.1	1.39	941	2250	.066
906B	6.2	1.27	941A	2400	.064
907	7.5	1.16	942	2500	.063
907A	9.1	1.05	943	3000	.057
908	10	1.00	944	3500	.053
909	12	.91	945	4000	.050
910	15	.82	945A	4300	.048
910A	18	.74	946	4500	.047
911	20	.71	947	5000	.045
912	25	.63	948	6000	.041
913	30	.58	948A	6200	.040

10 WATT			Type 1 1/4 ZA-46 1 1/4" long max. x 1/2" o.d. max. Avg. Wt. 0.013 lbs. Military Size RW58		
STOCK NO.	OHMS	MAX. AMPS.	STOCK NO.	OHMS	MAX. AMPS.
914	35	.54	949	7000	.038
915	40	.50	950	7500	.036
915A	43	.48	951	8000	.035
916	50	.45	952	8500	.034
916A	62	.40	953	9000	.033
917	75	.37	954	10000	.032
917A	91	.33	955	11000	.030
918	100	.32	956	12000	.029
919	125	.28	957	12500	.028
920	150	.26	958	13500	.027
920A	180	.24	959	15000	.026
921	200	.22	960	16000	.025
922	225	.22	961	17500	.024
923	250	.20	962	18000	.023
924	300	.18	963	20000	.022
925	350	.17	964	22500	.021
926	400	.16	965	25000	.020
926A	430	.15	966	30000	.018
927	450	.15	967	35000	.017
928	500	.14	968	40000	.016
929	600	.13	969	45000	.015
929A	620	.13	970	50000	.014

**HARDWICK-HINDLE PRODUCTS**  
HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.



# STOCK TAB TYPE ADJUSTABLE RESISTORS

Size Range: 10 to 200 Watts. 1 Ohm to 100'000 Ohms



**10 WATT**  
Type 1 1/4 Z 37  
Core: 1 3/4" long x 3/8" o.d.  
Mounting Centers  
2 1/4" to 2 1/2"  
Std. mtg. bkts. 5247-1  
Avg. Wt. 0.02 lbs.  
Adj. band 50E  
Military Size RX29

STOCK NO.	OHMS	MAX. AMPS.
C10	1	3.16
C11	3	1.83
C12	5	1.41
C13	7.5	1.16
C14	10	1.00
C15	25	.82
C16	50	.63
C17	75	.45
C18	100	.32
C19	150	.26
C20	200	.22
C21	250	.20
C22	400	.16
C23	500	.14
C24	750	.12
C25	1000	.10
C26	1250	.089
C27	1500	.081
C28	2000	.071
C29	2500	.063
C30	3000	.057
C31	4000	.050
C32	5000	.045
C33	7500	.036
C34	10000	.032

**25 WATT**  
Type 2 JX 35  
Core: 2" long x 3/8" o.d.  
Mounting Centers  
2 1/2" to 2 3/4"  
Std. mtg. bkts. 5247-2  
Avg. Wt. 0.06 lbs.  
Adj. band 50EA

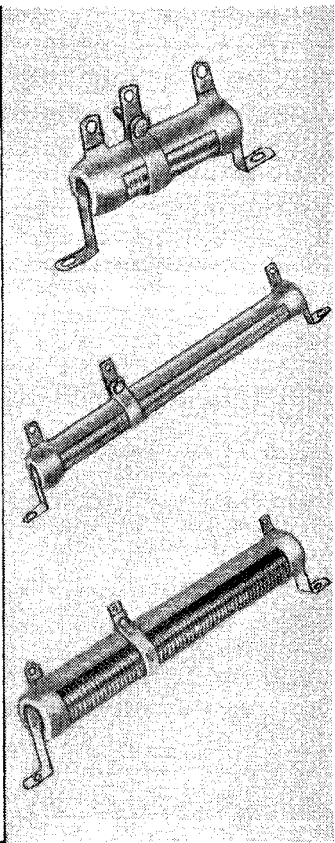
STOCK NO.	OHMS	MAX. AMPS.
6001	1	5.00
6002	2	3.54
6003	3	2.88
6004	5	2.24
6005	10	1.58
6006	20	1.12
6007	25	1.00
6008	50	.71
6009	75	.58
6010	100	.50
6011	200	.35
6012	300	.29
6013	400	.25
6014	500	.22
6015	750	.18
6016	800	.17
6017	1000	.16
6018	1250	.14
6019	1500	.13
6020	2000	.12
6021	2500	.10
6022	3000	.091
6023	3500	.084
6024	4000	.079
6025	5000	.070
6026	6000	.064
6027	7000	.060
6028	8000	.055
6029	10000	.050
6030	15000	.041
6031	20000	.035
6032	25000	.032

**50 WATT**  
Type 4 JX 35  
Core: 4" long x 3/8" o.d.  
Mounting Centers  
4 1/2" to 4 3/4"  
Std. mtg. bkt. 5247-2  
Avg. Wt. 0.13 lbs.  
Adj. band 50EA

STOCK NO.	OHMS	MAX. AMPS.
7001	5	3.16
7002	10	2.23
7003	25	1.41
7004	50	1.00
7005	75	.82
7006	100	.71
7007	200	.50
7008	250	.45
7009	300	.41
7010	400	.35
7011	500	.32
7012	750	.26
7013	800	.25
7014	1000	.22
7015	1500	.18
7016	2000	.16
7017	2500	.14
7018	3000	.13
7019	4000	.11
7020	5000	.10
7021	6000	.091
7022	7000	.084
7023	7500	.081
7024	8000	.079
7025	9000	.074
7026	10000	.071
7027	12000	.064
7028	15000	.057
7029	20000	.050
7030	25000	.045
7031	30000	.041
7032	40000	.035
7033	50000	.032

**75 WATT**  
Type 6 JX 35  
Core: 6" long x 3/8" o.d.  
Mounting Centers  
6 1/2" to 6 3/4"  
Std. mtg. bkt. 5247-2  
Avg. Wt. 0.17 lbs.  
Adj. band 50EA

STOCK NO.	OHMS	MAX. AMPS.
8001	5	3.87
8002	10	2.74
8003	15	2.24
8004	25	1.73
8005	50	1.22
8006	100	.86
8007	200	.61
8008	300	.50
8009	400	.43
8010	500	.39
8011	750	.32
8012	1000	.27
8013	1500	.22
8014	2000	.19
8015	2500	.17
8016	3000	.16
8017	4000	.14
8018	5000	.12
8019	6000	.11
8020	7000	.10
8021	7500	.10
8022	10000	.086
8023	15000	.070
8024	20000	.061
8025	25000	.054
8026	30000	.050
8027	40000	.043
8028	50000	.039
8029	60000	.036
8030	80000	.033
8031	100000	.027



**100 WATT**  
Type 6 1/2 L-35  
Core: 6 1/2" long x 3/8" o.d.  
Mounting Centers  
7 1/4" to 7 3/4"  
Std. mtg. bkt. 5247-3  
Avg. Wt. 0.42 lbs.  
Adj. band 50EA

STOCK NO.	OHMS	MAX. AMPS.
9001	5	4.47
9002	10	3.16
9003	25	2.00
9004	50	1.41
9005	100	1.00
9006	250	.63
9007	500	.45
9008	1000	.32
9009	1500	.26
9010	2500	.20
9011	5000	.14
9012	10000	.10
9013	15000	.081
9014	20000	.071
9015	25000	.063
9016	30000	.058
9017	40000	.050
9018	50000	.045
9019	75000	.036
9020	100000	.032

**160 WATT**  
Type 8 1/2 FX 57  
Core: 8 1/2" long x 1 1/8" o.d.  
Mounting Centers  
9 1/4" to 9 3/4"  
Std. mtg. bkt. 5247-4  
Avg. Wt. 0.58 lbs.  
Adj. band 50E

STOCK NO.	OHMS	MAX. AMPS.
9030	5	5.66
9031	10	4.00
9032	25	2.53
9033	50	1.79
9034	100	1.26
9035	250	.80
9036	500	.57
9037	1000	.40
9038	1500	.33
9039	2500	.25
9040	5000	.18
9041	10000	.13
9042	15000	.10
9043	20000	.089
9044	25000	.080
9045	30000	.073
9046	40000	.063
9047	50000	.057
9048	75000	.046
9049	100000	.040

**200 WATT**  
Type 10 1/2 FX 57  
Core: 10 1/2" long x 1 1/8" o.d.  
Mounting Centers  
11 1/4" to 11 3/4"  
Std. mtg. bkt. 5247-4  
Avg. Wt. 0.70 lbs.  
Adj. band 50E

STOCK NO.	OHMS	MAX. AMPS.
9060	5	6.32
9061	10	4.47
9062	25	2.83
9063	50	2.00
9064	100	1.41
9065	250	.89
9066	500	.63
9067	1000	.45
9068	2500	.28
9069	5000	.20
9070	10000	.14
9071	15000	.12
9072	20000	.10
9073	25000	.089
9074	30000	.082
9075	40000	.071
9076	50000	.063
9077	75000	.052
9078	100000	.045

"Gray Line" resistors are especially useful in laboratories for experimental work, circuit design, etc.

The wattage rating given here (and the tolerance of  $\pm 10\%$ ) is for the entire resistor, without adjustable band. Never exceed the maximum current rating through any portion of the resistor.

**TO ORDER**

**Stock items:** Specify stock number, type, ohms, word adjustable and quantity.

**Mounting Brackets:** Specify bracket catalog number separately, if required. Furnished on request only.

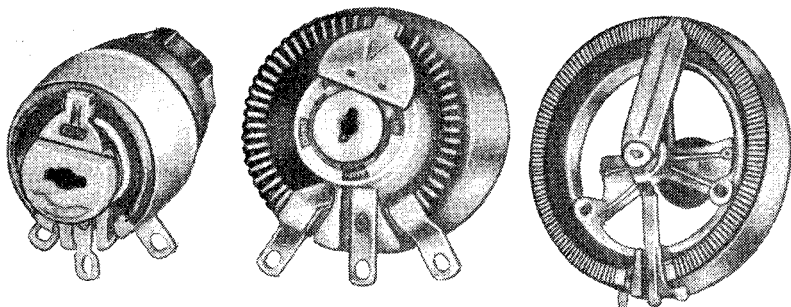
**STANDARD PACKAGING:** Ten watt size packed 10 units per box. Larger sizes packed one unit per box.

**HARDWICK-HINDLE PRODUCTS** MEMCOR/COMPONENTS DIVISION  
 HUNTINGTON, INDIANA MODEL ENGINEERING and MANUFACTURING CORP. **MEMCOR**



# HARDWICK, HINDLE

# STOCK RHEOSTATS POTENTIOMETERS



## Type H-12 1/2 (12 1/2 WATT)

CODE: H-12 1/2-R-1/8 \_\_\_\_\_ (Ohms) \_\_\_\_\_ (Max. Amps) \_\_\_\_\_ (Approx. No. of Steps)

Diameters: Base 7/8", Shaft 1/8"  
Military Size RP06

Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps
0101	1.0	3.53	32	0115	100	.35	98
0102	1.5	2.90	32	0116	125	.32	130
0103	2.0	2.50	32	0117	150	.29	145
0104	2.5	2.24	32	0118	175	.27	137
0105	3.0	2.04	45	0119	200	.25	150
0106	4.0	1.58	58	0120	250	.22	155
0107	4.0	1.44	55	0121	350	.19	170
0108	8.0	1.25	55	0122	500	.16	200
0109	10.0	1.12	48	0123	750	.13	230
0110	15	.91	60	0124	1000	.11	235
0111	25	.71	72	0125	1500	.091	270
0112	35	.60	90	0126	2500	.071	300
0113	50	.50	90	0127	3500	.060	358
0114	75	.41	98	0128	5000	.050	402

## Type H-25 (25 WATT)

## Type H-50 (50 WATT)

## Type H-75 (75 WATT)

## Type H-100 (100 WATT)

## Type H-150 (150 WATT)

CODE: H-25-F-1/4 \_\_\_\_\_ (Ohms) CODE: H-50-F-1/4 \_\_\_\_\_ (Ohms) CODE: H-75-F-1/4 \_\_\_\_\_ (Ohms) CODE: H-100-F-1/4 \_\_\_\_\_ (Ohms) CODE: H-150-F-1/4 \_\_\_\_\_ (Ohms)

Diameters: Base 1 1/4", Shaft 1/4"  
Military Size RP10

Diameters: Base 2 3/8", Shaft 1/4"  
Military Size RP15

Diameters: Base 2 3/4", Shaft 1/4"  
Military Size RP20

Diameters: Base 3 3/8", Shaft 1/4"  
Military Size RP25

Diameters: Base 4", Shaft 1/4"  
Military Size RP30

U.L. listed for series use.

U.L. listed for series and potentiometer use.

U.L. listed for series and potentiometer use.

U.L. listed for series and potentiometer use.

U.L. listed for series and potentiometer use.

Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps
0201	0.50	7.06	29	0301	0.50	10.0	25	0401	0.50	14.2	30	0501	0.50	17.30	26				
0202	0.75	5.77	29	0302	0.75	8.16	25	0402	0.75	11.6	30	0502	0.75	14.10	30				
0203	1.0	5.00	29	0303	1.0	7.06	52	0403	1.0	10.0	30	0503	1.00	12.25	40				
0204	1.5	4.08	29	0304	1.5	5.77	52	0404	1.5	8.16	30	0504	1.5	10.00	37				
0205	2.5	3.16	45	0305	2.5	4.48	52	0405	2.5	6.34	54	0505	2.5	7.75	39				
0206	5.0	2.24	53	0306	5.0	3.16	52	0406	5.0	4.48	54	0506	5.0	5.48	79				
0207	7.5	1.82	53	0307	7.5	2.58	82	0407	7.5	3.66	54	0507	7.5	4.47	75				
0208	10	1.58	53	0308	10	2.24	98	0408	10	3.16	54	0508	10	3.88	77				
0209	15	1.29	85	0309	15	1.82	98	0409	15	2.58	112	0509	15	3.16	151				
0210	25	1.00	100	0310	25	1.41	98	0410	25	2.00	100	0510	25	2.45	151				
0211	50	.706	100	0311	50	1.00	129	0411	50	1.42	127	0511	50	1.73	192				
0212	75	.577	116	0312	75	.816	153	0412	75	1.16	151	0512	75	1.41	224				
0213	100	.500	120	0313	100	.706	157	0413	100	1.00	160	0513	100	1.22	204				
0214	150	.408	148	0314	150	.577	187	0414	150	.816	190	0514	150	1.00	200				
0215	250	.316	170	0315	250	.448	258	0415	250	.634	250	0515	250	.775	252				
0216	500	.224	200	0316	500	.316	308	0416	500	.448	302	0516	500	.548	362				
0217	750	.182	295	0317	750	.258	294	0417	750	.366	303	0517	750	.447	378				
0218	1000	.158	320	0318	1000	.224	390	0418	1000	.316	317	0518	1000	.388	398				
0219	1500	.129	380	0319	1500	.182	364	0419	1500	.258	375	0519	1500	.316	483				
0220	2500	.100	390	0320	2500	.141	485	0420	2500	.200	494	0520	2500	.245	635				
0221	3500	.084	333	0321	5000	.100	480	0421	5000	.141	610	0521	5000	.173	790				
0222	5000	.070	494	0322	7500	.082	740	0422	7500	.115	700	0522	7500	.141	940				
				0323	10000	.070	750	0423	10000	.100	740	0523	10000	.122	1020				

## Type H-225 (225 WATT)

## Type H-300 (300 WATT)

## Type H-500 (500 WATT)

## Type H-750 (750 WATT)

## Type H-1000 (1000 WATT)

CODE: H-225-F-1 1/4 \_\_\_\_\_ (Ohms) CODE: H-300-F-1 1/4 \_\_\_\_\_ (Ohms) CODE: H-500-F-1 1/4 \_\_\_\_\_ (Ohms) CODE: H-750-F-1 1/4 \_\_\_\_\_ (Ohms) CODE: H-1000-F-1 1/4 \_\_\_\_\_ (Ohms)

Diameters: Base 5", Shaft 3/8"  
Military Size RP35

Diameters: Base 6", Shaft 3/8"  
Military Size RP40

Diameters: Base 8", Shaft 3/8"  
Military Size RP45

Diameters: Base 10", Shaft 3/8"  
Military Size RP50

Diameters: Base 12", Shaft 3/8"  
Military Size RP55

Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps	Stock No.	Ohms	Max. Amps	Approx. No. of Steps
0530	1	15.00	55	0601	1	17.32	49	0701	1	22.3	70	0801	1	27.4	85	0901	1	31.60	81
0531	1.5	12.30	55	0602	1.5	14.15	47	0702	1.5	18.2	64	0802	1.5	22.3	85	0902	1.5	25.80	84
0532	2	10.40	55	0603	2	12.24	49	0703	2	15.8	88	0803	2	19.4	81	0903	2	22.40	109
0533	2.5	9.30	55	0604	2.5	10.95	70	0704	2.5	14.1	67	0804	2.5	17.3	87	0904	2.5	20.00	105
0534	3	8.66	55	0605	3	10.00	73	0705	3	12.9	95	0805	3	15.8	83	0905	3	18.30	113
0535	4	7.50	55	0606	4	8.66	70	0706	4	11.2	96	0806	4	13.6	87	0906	4	15.80	106
0536	5	6.71	55	0607	5	7.75	66	0707	5	10.0	96	0807	5	12.2	122	0907	5	14.10	155
0537	7.5	5.49	115	0608	7.5	6.32	71	0708	7.5	8.17	98	0808	7.5	10.0	129	0908	7.5	11.50	105
0538	10	4.74	115	0609	10	5.48	136	0709	8	7.90	97	0809	8	9.65	122	0909	8	11.20	105
0539	15	3.87	115	0610	15	4.47	144	0710	10	7.07	105	0810	10	8.65	121	0910	10	10.00	105
0540	25	3.00	115	0611	25	3.46	145	0711	12.5	6.30	103	0811	12.5	7.75	120	0911	12.5	8.95	165
0541	50	2.12	256	0612	50	2.45	245	0712	15	5.77	202	0812	15	7.07	127	0912	15	8.16	156
0542	75	1.73	306	0613	75	2.00	310	0713	16	5.60	192	0813	16	6.82	120	0913	16	7.90	166
0543	100	1.50	315	0614	100	1.73	327	0714	25	4.47	195	0814	25	5.47	210	0914	25	6.33	160
0544	150	1.22	385	0615	150	1.41	394	0715	40	3.54	205	0815	50	3.87	238	0915	50	4.47	331
0545	200	1.06	357	0616	200	1.22	420	0716	50	3.16	200	0816	75	3.19	250	0916	75	3.65	303
0546	250	.950	350	0617	250	1.09	525	0717	75	2.58	395	0817	100	2.74	265	0917	100	3.16	320
0547	300	.866	335	0618	300	1.00	420	0718	80	2.52	425	0818	150	2.23	500	0918	150	2.58	306
0548	400	.750	344	0619	400	.866	440	0719	100	2.24	425	0819	200	1.94	840	0919	200	2.39	350
0549	500	.671	450	0620	500	.775	440	0720	125	2.00	450	0820	250	1.73	470	0920	225	2.11	585
0550	700	.567	495	0621	700	.655	502	0721	150	1.82	544	0821	300	1.58	500	0921	250	2.00	640
0551	750	.549	533	0622	750	.633	540	0722	250	1.41	570	0822	400	1.37	472	0922	300	1.83	605
0552	900	.500	500	0623	900	.578	521	0723	325	1.24	515	0823	500	1.22	565	0923	400	1.58	640
0553	1000	.474	555	0624	1000	.548	580	0724	500	1.00	620	0824	600	1.12	677	0924	500	1.41	635
0554	1200	.433	526	0625	1200	.500	690	0725	750	.817	740	0825	750	1.00	670	0925	750	1.15	820
0555	1500	.387	630	0626	1500	.449	680	0726	1000	.707	780	0826	1000	.665	715	0926	1000	1.00	862
0556	1750	.358	620	0627	1750	.414	634	0727	1500	.577	940	0827	1500	.707	840	0927	1500	.816	1030
0557	2500	.300	670	0628	2500	.346	862	0728	2000	.500	986	0828	2000	.547	1085	0928	2500	.633	1300

# HARDWICK-HINDLE PRODUCTS

HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.



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you require...**



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this catalog...**

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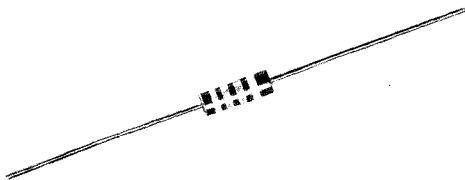




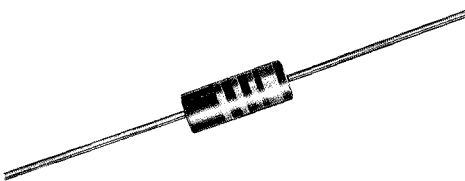
# INSULATED CARBON COMPOSITION & WIREWOUND RESISTORS

INTERNATIONAL RESISTANCE COMPANY

**FIXED COMPOSITION RESISTORS.** IRC's unique design of 1/2- and 1-watt resistors mean better performance and reliability. 50% more molding around the resistance element assures greater moisture protection. The working element is a layer of carbon thermally bonded to an inert glass filament for better resistance and temperature characteristics. Ribbed, shoulder leads are deeply imbedded in the molding to prevent twist or pull-out and act as heat sinks to conduct heat away for cooler operation and longer field life.



**VERSATILE WIREWOUND RESISTORS.** Type BWH is a new molded wirewound resistor that can be used as a direct replacement for composition resistors at about half the price. In one size (RC32) it covers 3 different wattage requirements and provides substantial cost savings over 1 and 2 watt fixed composition units, and space saving over 2 watt RC42 size units. The BWH has the stability, reliability and long life of a wirewound unit. It meets all the performance requirements of MIL-R-11.



IRC TYPE	SR $\frac{1}{4}$	GBT $\frac{1}{2}$	GBT 1	SR 2	BWH
MIL Style	RC07	RC20	RC32	RC42	—
MIL Characteristic	GF	GF	GF	GF	—
Rating	1/4w @ 70° amb.	1/2w @ 70° amb.	1w @ 70° amb.	2w @ 70° amb.	1/2w @ 137° amb. 1w @ 115° amb. 2w @ 70° amb.
Minimum Resistance	10 ohms	2.7 ohms	10 ohms	10 ohms	0.24 ohm
Maximum Resistance	1 meg	22 meg	22 meg	22 meg	1,000 ohms
Rated Voltage	250V	350V	500V	500V	—
Dimensions—					
Body size	.250" x .090" dia.	.390" x .140" dia.	.562" x .225" dia.	1 1/16" x 5/16" dia.	.562" x .225" dia.
Lead size	1 1/2" x .025" dia.	1 1/2" x .031" dia.	1 1/2" x .040" dia.	1 1/2" x 3/64" dia.	1 1/2" x .040" dia.

**STANDARD STOCK VALUES.** 10% and 5% tolerance. 10% in bold type.

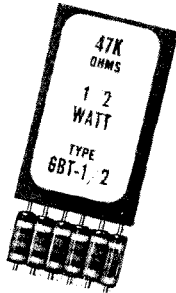
All values available in 5%. Values are indicated on each resistor by EIA color code.

0.24	1.1	5.1	24	110	510	2,400	11K	51K	240K	1.1 meg.	5.1 meg.
<b>0.27</b>	<b>1.2</b>	<b>5.6</b>	<b>27</b>	<b>120</b>	<b>560</b>	<b>2,700</b>	<b>12K</b>	<b>56K</b>	<b>270K</b>	<b>1.2 meg.</b>	<b>5.6 meg.</b>
0.30	1.3	6.2	30	130	620	3,000	13K	62K	300K	1.3 meg.	6.2 meg.
<b>0.33</b>	<b>1.5</b>	<b>6.8</b>	<b>33</b>	<b>150</b>	<b>680</b>	<b>3,300</b>	<b>15K</b>	<b>68K</b>	<b>330K</b>	<b>1.5 meg.</b>	<b>6.8 meg.</b>
0.36	1.6	7.5	36	160	750	3,600	16K	75K	360K	1.6 meg.	7.5 meg.
<b>0.39</b>	<b>1.8</b>	<b>8.2</b>	<b>39</b>	<b>180</b>	<b>820</b>	<b>3,900</b>	<b>18K</b>	<b>82K</b>	<b>390K</b>	<b>1.8 meg.</b>	<b>8.2 meg.</b>
0.43	2.0	9.1	43	200	910	4,300	20K	91K	430K	2.0 meg.	9.1 meg.
<b>0.47</b>	<b>2.2</b>	<b>10</b>	<b>47</b>	<b>220</b>	<b>1,000</b>	<b>4,700</b>	<b>22K</b>	<b>100K</b>	<b>470K</b>	<b>2.2 meg.</b>	<b>10.0 meg.</b>
0.51	2.4	11	51	240	1,100	5,100	24K	110K	510K	2.4 meg.	11.0 meg.
<b>0.56</b>	<b>2.7</b>	<b>12</b>	<b>56</b>	<b>270</b>	<b>1,200</b>	<b>5,600</b>	<b>27K</b>	<b>120K</b>	<b>560K</b>	<b>2.7 meg.</b>	<b>12.0 meg.</b>
0.62	3.0	13	62	300	1,300	6,200	30K	130K	620K	3.0 meg.	13.0 meg.
<b>0.68</b>	<b>3.3</b>	<b>15</b>	<b>68</b>	<b>330</b>	<b>1,500</b>	<b>6,800</b>	<b>33K</b>	<b>150K</b>	<b>680K</b>	<b>3.3 meg.</b>	<b>15.0 meg.</b>
0.75	3.6	16	75	360	1,600	7,500	36K	160K	750K	3.6 meg.	16.0 meg.
<b>0.82</b>	<b>3.9</b>	<b>18</b>	<b>82</b>	<b>390</b>	<b>1,800</b>	<b>8,200</b>	<b>39K</b>	<b>180K</b>	<b>820K</b>	<b>3.9 meg.</b>	<b>18.0 meg.</b>
0.91	4.3	20	91	430	2,000	9,100	43K	200K	910K	4.3 meg.	20.0 meg.
<b>1.0</b>	<b>4.7</b>	<b>22</b>	<b>100</b>	<b>470</b>	<b>2,200</b>	<b>10K</b>	<b>47K</b>	<b>220K</b>	<b>1.0 meg.</b>	<b>4.7 meg.</b>	<b>22.0 meg.</b>

# RESISTOR KITS & ASSORTMENTS



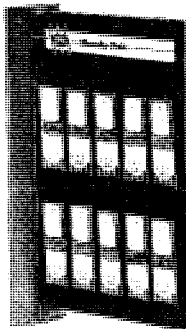
INTERNATIONAL RESISTANCE COMPANY



**HANDY-PAKS.** The neatest, most compact resistor package available, and it's exclusive from IRC. Slimline plastic sleeve keeps leads straight and in place.

- Easier to identify—Type, resistance value and power rating on every Handy-Pak. Resistor color code is easily seen through the plastic.
- Handier to use—Opens at either end. Simply slide package out of plastic sleeve . . . withdraw the required number of resistors and slide the package into the sleeve.
- Quicker to find—Handy-Paks can be indexed by power rating and resistance. Resistors are always visible for inventory.

**3 TYPES AVAILABLE . . .**  $\frac{1}{2}$  watt contains 6 GBT $\frac{1}{2}$  carbon composition resistors; 1 watt package contains 4 GBT1 resistors and the 2 watt Handy-Pak contains 3 SR2 resistors.



**RESIST-O-PANEL.** Unique swing panel attaches to wall; measures only 7" x 12 $\frac{1}{4}$ ". All-metal construction with slots to hold Handy-Paks. Supplied with 10 Handy-Paks of most popular values, and slots on back for 10 additional. Included FREE with either of two popular assortments.

**ASSORTMENT # 64**

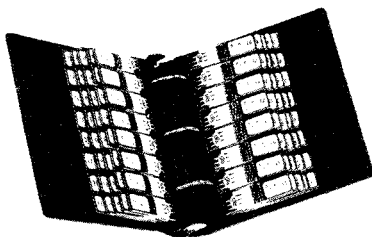
60 GBT $\frac{1}{2}$   $\frac{1}{2}$ -watt resistors  
(10% tolerance)  
6 each of 10 values

**ASSORTMENT # 68**

40 GBT1 1-watt resistors  
(10% tolerance)  
4 each of 10 values

**ASSORTMENT # 80**

30 SR2 2-watt resistors (10% tolerance), 3 each of 10 values



**RESIST-O-PEDIA.** Attractive, hardback binder with 3-ring "tab" inserts to hold Handy-Paks. Saves searching . . . speeds servicing. Resistors always visible. Resist-O-Pedia FREE with any of 2 assortments.

**ASSORTMENT # 44**

462 GBT $\frac{1}{2}$   $\frac{1}{2}$ -watt resistors  
(10% tolerance)  
6 each of the 77 10% values  
from 10 ohms to 22 megohms

**ASSORTMENT # 48**

308 GBT1 1-watt resistors  
(10% tolerance)  
4 each of the 77 10% values  
from 10 ohms to 22 megohms



**RESIST-O-CADDY.** Ideal for in-home servicing. Plastic pouch folds to 6 $\frac{3}{4}$ " x 3 $\frac{7}{8}$ " x 1 $\frac{1}{2}$ " . . . fits easily in tube caddy or tool chest. Individual pockets keep Handy-Paks secure and orderly.

Accurate inventory is always visible. Resist-O-Caddy FREE with either of these two popular assortments:

**ASSORTMENT # 41**

120 GBT $\frac{1}{2}$   $\frac{1}{2}$ -watt resistors  
(10% tolerance)  
6 each of 20 values

ohms:	47	150	1,000	2,200	10K	27K	100K	270K	1.0 meg	4.7 meg
	100	470	1,500	4,700	22K	47K	270K	470K	2.2 meg	10 meg

**ASSORTMENT # 45**

80 GBT1 1-watt resistors  
(10% tolerance)  
4 each of 20 values



# RESISTOR KITS & ASSORTMENTS

INTERNATIONAL RESISTANCE COMPANY



**RESIST-O-CHEST.** A convenient, sturdy file of Handy-Paks in 6 popular assortments. Metal separators keep Handy-Paks in order at your fingertips. Reference data on inside of lid. Available FREE with any of these 6 fast-moving assortments.

**ASSORTMENT # 42**

204 GBT 1/2-watt resistors (10% tolerance)  
6 each of 34 values

ohms:	47	470	2,700	8,200	27K	56K	220K
	100	1,000	3,300	10K	33K	68K	270K
	150	1,500	4,700	15K	39K	100K	330K
	220	2,200	6,800	22K	47K	150K	470K

**ASSORTMENT # 46**

136 GBT1 1-watt resistors (10% tolerance)  
4 each of 34 values

1.0 meg	4.7 meg
1.5 meg	10 meg
2.2 meg	—
3.3 meg	—

**ASSORTMENT # 43**

462 GBT 1/2-watt resistors (10% tolerance)  
6 each of 77 values

**ASSORTMENT # 47**

308 GBT1 1-watt resistors (10% tolerance)  
4 each of 77 values

**ASSORTMENT # 50A**

231 SR2 2-watt resistors (10% tolerance), 3 each of 77 values

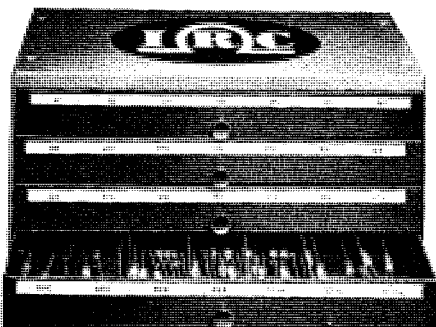
ohms:	10	56	330	1,800	10K	56K	330K	1.8 meg	10 meg
	12	68	390	2,200	12K	68K	390K	2.2 meg	12 meg
	15	82	470	2,700	15K	82K	470K	2.7 meg	15 meg
	18	100	560	3,300	18K	100K	560K	3.3 meg	18 meg
	22	120	680	3,900	22K	120K	680K	3.9 meg	22 meg
	27	150	820	4,700	27K	150K	820K	4.7 meg	—
	33	180	1,000	5,600	33K	180K	1.0 meg	5.6 meg	—
	39	220	1,200	6,800	39K	220K	1.2 meg	6.8 meg	—
	47	270	1,500	8,200	47K	270K	1.5 meg	8.2 meg	—

**ASSORTMENT # 49A**

102 SR2 2-watt resistors (10% tolerance), 3 each of 34 values

ohms:	47	470	2,700	8,200	27K	56K	220K	1.0 meg	4.7 meg
	100	1,000	3,300	10K	33K	68K	270K	1.5 meg	10 meg
	150	1,500	4,700	15K	39K	100K	330K	2.2 meg	—
	220	2,200	6,800	22K	47K	150K	470K	3.3 meg	—

**RESIST-O-CABINET.** A practical way to give any shop a professional appearance. Sturdy metal Resist-O-Cabinets are FREE with any of four balanced assortments. Designed for stacking, and for tidy stocks of many small parts. Resist-O-Cabinets have four non-spill drawers and 28 compartments. Overall size is 5 3/8" x 5 15/16" x 10 7/8". Blue and silver finish.



**1/2 WATT ASSORTMENT # 4A**  
150 GBT 1/2-Watt Resistors

QUANTITY	RANGE
3	47 ohms
4	100 ohms
3	220 ohms
3	270 ohms
4	470 ohms
8	1,000 ohms
4	1,500 ohms
4	2,200 ohms
4	2,700 ohms
5	3,300 ohms
7	4,700 ohms
7	10K ohms
5	22K ohms
5	27K ohms
5	33K ohms
8	47K ohms
4	56K ohms
4	68K ohms
8	100K ohms
7	220K ohms
8	270K ohms
5	330K ohms
8	470K ohms
8	1.0 meg.
7	2.2 meg.
4	3.3 meg.
5	4.7 meg.
3	10.0 meg.

**1 WATT ASSORTMENT # 5A**  
125 GBT1 1-Watt Resistors

QUANTITY	RANGE
3	47 ohms
3	100 ohms
3	150 ohms
3	220 ohms
3	270 ohms
3	470 ohms
7	1,000 ohms
3	1,500 ohms
5	2,200 ohms
3	2,700 ohms
3	3,300 ohms
5	4,700 ohms
7	10K ohms
3	15K ohms
5	22K ohms
7	27K ohms
4	33K ohms
4	39K ohms
7	47K ohms
4	56K ohms
4	68K ohms
4	82K ohms
4	100K ohms
4	150K ohms
3	220K ohms
7	270K ohms
7	330K ohms
7	470K ohms
7	1.0 meg.
7	2.2 meg.
3	4.7 meg.

**2 WATT ASSORTMENT # 3A**  
120 BWH and SR2 2-Watt Resistors

QUANTITY	RANGE
2	47 ohms
2	100 ohms
1	15 ohms
2	22 ohms
1	27 ohms
1	33 ohms
1	39 ohms
3	47 ohms
2	68 ohms
3	82 ohms
4	100 ohms
3	150 ohms
3	220 ohms
3	270 ohms
4	330 ohms
5	1,000 ohms
4	1,500 ohms
4	2,200 ohms
4	3,300 ohms
3	3,900 ohms
4	4,700 ohms
5	6,800 ohms
7	8,200 ohms
7	10K ohms
5	15K ohms
7	22K ohms
4	27K ohms
7	47K ohms
5	100K ohms
3	220K ohms
3	470K ohms
4	1.0 meg.

**COMB. ASSORTMENT # 6A**  
139 Insulated Resistors and Type DCF Precision Film Resistors

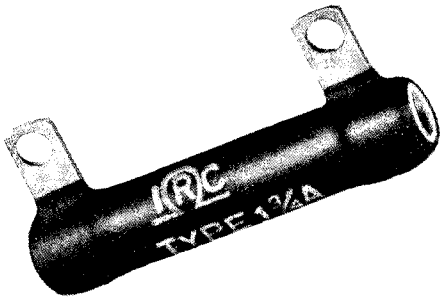
RANGE	1/2 Watt	1 Watt	2 Watt	DCF
47 ohms	2	1	1	—
100 ohms	2	1	1	—
150 ohms	2	1	—	—
220 ohms	2	1	—	—
270 ohms	2	1	—	—
470 ohms	2	1	—	—
1,000 ohms	4	4	—	1
1,500 ohms	2	1	—	—
2,200 ohms	2	1	—	—
2,700 ohms	2	1	—	—
3,300 ohms	2	2	—	—
4,700 ohms	3	1	—	—
10K ohms	3	4	1	1
15K ohms	2	2	—	—
22K ohms	2	2	1	—
27K ohms	2	4	—	—
33K ohms	2	1	—	—
39K ohms	2	1	—	—
47K ohms	4	3	1	—
56K ohms	2	2	—	—
68K ohms	4	3	—	—
82K ohms	4	4	—	1
100K ohms	2	2	—	—
150K ohms	4	2	—	—
220K ohms	3	1	—	—
270K ohms	4	2	—	—
330K ohms	4	3	—	—
470K ohms	4	3	—	—
1.0 meg.	4	4	—	1
2.2 meg.	3	3	—	—
4.7 meg.	2	1	—	—
5.0 meg.	—	—	—	1



# POWER RESISTORS



INTERNATIONAL RESISTANCE COMPANY



**RESISTEG COATED POWER RESISTORS** need no derating. They operate at full rated power even at high resistance values. Other features include heat resistant terminals for easy soldering, ceramic cores that withstand shock and are impervious to moisture, heavy windings that handle overloads without burnout, and standard size spring loaded push-in brackets for easy mounting.

## FIXED TYPES

**TYPE 1A**—5-8 watts. Resisteg coating. Core Size: 1" long by  $\frac{5}{16}$ " dia. Terminals: 13A. Tolerance:  $\pm 5\%$ . Mounting hardware included: none. Standard package: 5.

Ohms	1	1.5	2	3	4	5	7.5	10	12	15
20	200	750	2250	8000						
25	225	800	2500	9000						
30	250	900	3000	10K						
35	300	1000	3500	12.5K						
40	350	1100	4000	15K						
50	400	1200	4500	17.5K*						
75	450	1250	5000	20K*						
100	500	1500	6000	22.5K*						
125	600	1750	7000	25K*						
150	700	2000	7500							

\* No. 1 Terminal.

**TYPE 1 1/4 A**—10-12 watts. Resisteg coating. Core Size:  $1\frac{1}{4}$ " long x  $\frac{5}{16}$ " dia. Terminals: 13A. Tolerance:  $\pm 5\%$ . Mounting hardware included: none. Standard package: 5.

Ohms	1	1.5	2	3	4	5	7.5	10	12	15	20	25
30	350	1250	7000	17.5K								
35	400	1500	7500	18K								
40	450	1750	8000	20K								
50	500	2000	8500	22.5K								
75	600	2250	9000	25K								
100	700	2500	10K	30K								
125	750	3000	11K	35K								
150	800	3500	12K	40K								
200	900	4000	12.5K	45K								
225	1000	4500	13.5K	50K								
250	1100	5000	15K									
300	1200	6000	16K									

**TYPE 2C**—20 watts. Resisteg coating. Core size: 2" long x  $\frac{7}{16}$ " dia. Terminals: 13A. Tolerance:  $\pm 5\%$ . Mounting hardware included: none. Standard package: 5.

Ohms	1	1.5	2	3	4	5	10	25	50	75	100
150	800	2750	10K	55K							
200	900	3000	12.5K	60K							
250	1000	3500	15K	65K							
300	1200	4000	20K	70K							
350	1250	4500	25K	75K							
400	1500	5000	30K	80K							
500	1750	6000	35K	85K*							
650	2000	7000	40K	90K*							
700	2250	7500	45K	95K*							
750	2500	8000	50K	100K*							
9000											

\* No. 1 Terminal.

**TYPE 2D**—25 watts. Resisteg coating. Core size: 2" long x  $\frac{7}{16}$ " dia. Terminals: 12A. Tolerance:  $\pm 5\%$ . Mounting hardware included: Z-1 brackets. Standard package: 1.

Ohms	1	2	3	4	5	10	15
25	500	3000	12K	50K			
50	750	3500	15K	60K			
75	800	4000	20K	70K			
100	1000	5000	25K	80K			
150	1500	6000	30K	100K			
200	2000	7500	35K				
250	2500	10K	40K				

**TYPE 4D**—50 watts. Resisteg coating. Core size: 4" long x  $\frac{7}{16}$ " dia. Terminals: 12A. Tolerance:  $\pm 5\%$ . Mounting hardware included: Z-1 bracket. Standard package: 1.

Ohms	1	2	3	4	5	10	25
50	750	4000	20K	150K			
75	800	5000	25K	175K			
100	1000	7500	35K	200K			
150	1500	8000	50K	250K			
200	2000	10K	75K				
250	2500	12K	100K				
500	3000	15K	125K				

**TYPE 6 1/2 E**—100 watts. Resisteg coating. Core size:  $6\frac{1}{2}$ " long x  $\frac{3}{4}$ " dia. Terminals: 12A. Tolerance:  $\pm 5\%$ . Mounting hardware included: Z-2 bracket. Standard package: 1.

Ohms	1	2	3	4	5	10
25	250	2500	20K	75K		
50	500	3000	25K	100K		
75	750	5000	30K			
100	1000	7500	40K			
125	1500	10K	50K			
150	2000	15K	60K			

**TYPE 8 1/2 H**—160-175 watts. Resisteg coating. Core size:  $8\frac{1}{2}$ " long x  $1\frac{1}{8}$ " dia. Terminals: 4A. Tolerance:  $\pm 5\%$ . Mounting hardware included: Z-3 brackets. Standard package: 1.

Ohms	1	2	3	4	5	10
25	250	2500	20K	75K		
50	500	3000	25K	100K		
75	750	5000	30K			
100	1000	7500	40K			
125	1500	10K	50K			
150	2000	15K	60K			

**TYPE 10 1/2 H**—200-225 watts. Resisteg coating. Core size:  $10\frac{1}{2}$ " long x  $1\frac{1}{8}$ " dia. Terminals: 4A. Tolerance:  $\pm 5\%$ . Mounting hardware included: Z-3 brackets. Standard package: 1.

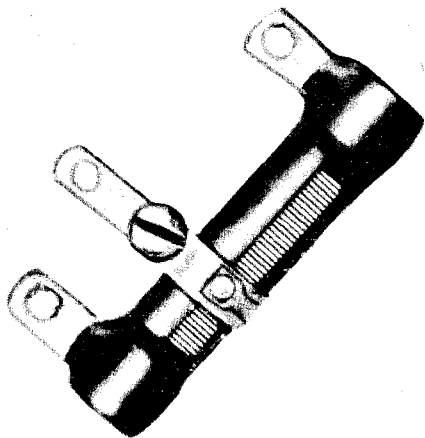
Ohms	1	2	3	4	5	10
25	250	2000	10K	40K		
50	500	2500	15K	50K		
75	750	3000	20K	60K		
100	1000	5000	25K	75K		
150	1500	7500	30K	100K		



# POWER RESISTORS

INTERNATIONAL RESISTANCE COMPANY

## ADJUSTABLE TYPES



**TYPE 1 3/4AA**—10-12 watts. Core size: 1 3/4" long x 3/16" dia. Terminals: 12A. One adjustable band; type A. Tolerance: ±10%. Standard package: 1. Mounting hardware included: Z-0 brackets.

Ohms					
1	20	250	800	3000	7500
2	25	300	1000	3500	8000
3	50	350	1250	4000	8500
5	75	400	1500	4500	9000
7.5	100	500	2000	5000	10K
10	150	600	2250	6000	
15	200	750	2500	7000	

**TYPE 2DA**—25 watts. Core size: 2" long x 1/16" dia. Terminals: 12A. One adjustable band; type X-2. Tolerance: ±10%. Mounting hardware included: Z-1 bracket. Standard package: 1.

Ohms					
1	20	250	1250	4000	9000
2	25	300	1500	4500	10K
3	50	400	2000	5000	12K
5	75	500	2250	6000	15K
7.5	100	750	2500	7000	20K
10	150	800	3000	7500	25K
15	200	1000	3500	8000	

**TYPE 4DA**—50 watts. Core size: 4" long x 3/16" dia. Terminals: 12A. One adjustable band. Tolerance: ±10%. Mounting hardware included: Z-2 brackets. Standard package: 1.

Ohms					
1	75	750	3000	7500	25K
2	100	800	3500	8000	30K
3	150	1000	4000	9000	40K
4	200	1250	4500	10K	50K
5	250	1500	5000	12K	60K
10	300	2000	6000	15K	80K
25	400	2250	7000	20K	100K
50	500	2500			

**TYPE 5EA**—75 watts. Core size: 5" long x 3/8" dia. Terminals: 12A. One adjustable band. Tolerance: ±10%. Mounting hardware included: Z-2 brackets. Standard package: 1.

Ohms					
1	5	100	1500	15K	40K
2	10	250	2500	20K	50K
3	25	500	5000	25K	75K
4	50	1000	10K	30K	100K

**TYPE 6 1/2EA**—100 watts. Core size: 6 1/2" long x 3/8" dia. Terminals: 12A. One adjustable band. Tolerance: ±10%. Mounting hardware included: Z-2 brackets. Standard package: 1.

Ohms					
1	5	100	1500	15K	40K
2	10	250	2500	20K	50K
3	25	500	5000	25K	75K
4	50	1000	10K	30K	100K

**TYPE 8 1/2HA**—160-175 watts. Core size: 8 1/2" long x 1 1/8" dia. Terminals: 4A. One adjustable band. Tolerance: ±10%. Mounting hardware included: Z-3 brackets. Standard package: 1.

Ohms					
1	5	100	1500	15K	40K
2	10	250	2500	20K	50K
3	25	500	5000	25K	75K
4	50	1000	10K	30K	100K

**TYPE 10 1/2HA**—200-225 watts. Core size: 10 1/2" long x 1 1/8" dia. Terminals: 4A. One adjustable band. Tolerance: ±10%. Mounting hardware included: Z-3 brackets. Standard package: 1.

Ohms					
1	5	100	1500	15K	40K
2	10	250	2500	20K	50K
3	25	500	5000	25K	75K
4	50	1000	10K	30K	100K

## MILITARY TYPES

### STANDARD MILITARY VALUES

1.0*	1.6*	2.7*	3.6*	5.0	7.1
1.1*	1.8*	2.8	3.9*	5.1*	7.5*
1.2*	2.0*	3.0*	4.0	5.6*	8.0
1.3*	2.2*	3.1	4.3*	6.2*	8.2*
1.4	2.4*	3.3*	4.5	6.3	9.0
1.5*	2.5	3.5	4.7*	6.8*	9.1*

\*New values. For other decades multiply by .10, 10, 100, 1000, etc.

MIL Type	Military Characteristic		Military Range—Ohms		MIL Type	Military Characteristic		Military Range—Ohms	
			*Min.	*Max.				*Min.	*Max.
RW 29	G	V	1.0	5600	RW 47	G	V	1.0	20K
RW 30	G	V	1.0	2400	RW 55	G	V	.10	5.1K
RW 31	G	V	1.0	10K	RW 56	G	V	.10	9.1K
RW 32	G	V	1.0	10K	RW 57	G	V	.10	3.6K
RW 33	G	V	1.0	18K	RW 58	G	V	.10	8.2K
RW 35	G	V	1.0	18K	RW 59	G	V	.10	9.10
RW 36	G	V	1.0	20K	RW 67	G	V	.10	3.6K
RW 37	G	V	1.0	20K	RW 68	G	V	.10	8.2K
RW 38	G	V	1.0	20K	RW 69	G	V	.10	9.10

\*In many instances other MIL VALUES are available on special order.

# POWER RESISTORS



INTERNATIONAL RESISTANCE COMPANY

## PW5 AND PW10 AXIAL LEAD POWER WIREWOUND RESISTORS.

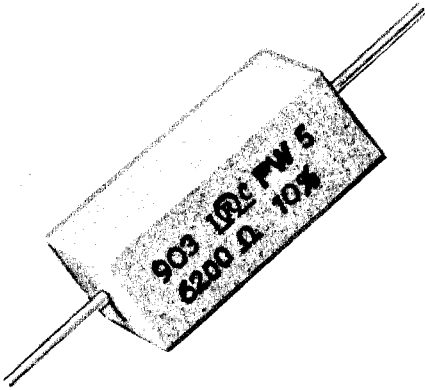
For 5 and 10 watt application, these popular resistors are compact to save space and feature superior solderability. Sealed in a ceramic case. Standard tolerance is 10%.

PW5 available from 1 to 6,000 ohms. PW10 available from 1 to 25K ohms. See stock list.

**POPULAR ASSORTMENT #20A** PW10 resistors is available for handy bench stock. On plastic covered card with hole for hanging.

### STANDARD STOCK VALUES (PW10)

ohms:	1	10	50	200	600	1000	2250	4000	8000	12.5K
	2	15	75	250	700	1200	2500	4500	8200	15K
	3	20	100	300	750	1250	3000	5000	8500	20K
	4	25	120	350	800	1500	3300	6000	9000	25K
	5	30	125	400	820	1750	3500	7000	10K	—
	7.5	40	150	500	900	2000	3900	7500	12K	—



**MULTI-RANGE POWER RESISTORS.** Up to 47 values from a single resistor 5 multi-range resistors give complete 10 watt coverage . . . 200 values from 1/2 to 50,000 ohms. No delays for a particular value, and you don't tie up inventory with odd values. Ideal for in-home servicing and weekend shop work.

Four-wire wound elements are sealed in a steatite housing. It's simple to solder a basic interconnection for the required value, and cut off unused terminals. Connection diagrams included.

### 5 TYPES COVER 200 VALUES

**TYPE MR1.** 0.5 through 15 ohms. 1, 2, 4, 8 ohm elements. 10 watts 47 values.

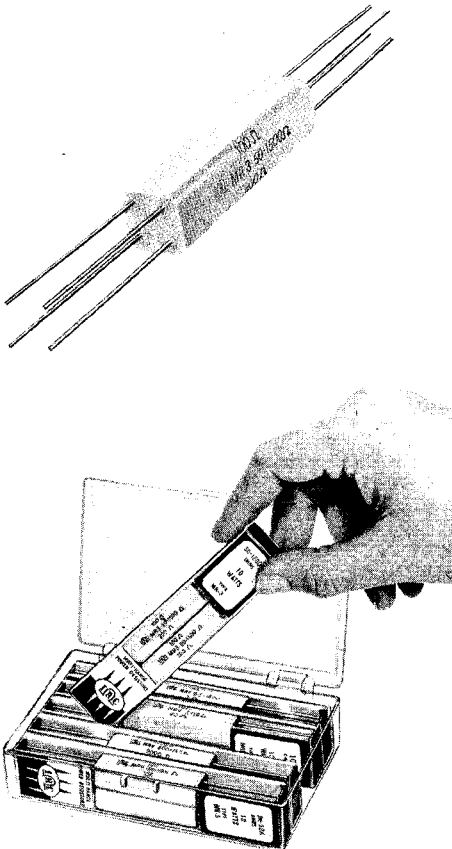
**TYPE MR2.** 5 through 150 ohms. 10, 20, 40, 80 ohm elements. 10 watts 47 values.

**TYPE MR3.** 50 through 1,500 ohms. 100, 200, 400, 800 ohm elements 10 watts. 47 values.

**TYPE MR4.** 500 through 15K ohms. 1K, 2K, 4K, 8K ohm elements 10 watts. 47 values.

**TYPE MR5.** 3K through 50K ohms. 10K, 10K, 15K, 15K ohm elements 10 watts. 12 values.

**MULTI-RANGE KIT #55.** Complete 10 watt power resistor coverage that fits in the palm of your hand. Rigid clear plastic case holds 5 Handy-Pak 2 of each type MR resistor. With these 10 versatile resistors you have finger-tip coverage of 200 values from 1/2 to 50,000 ohms. Fits easily in tool case or tube caddy.





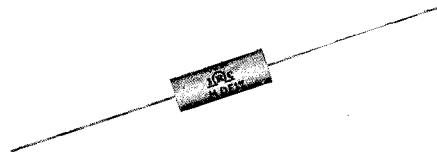
# PRECISION RESISTORS

INTERNATIONAL RESISTANCE COMPANY

**DEPOSITED CARBON PRECISIONS** are available in  $\frac{1}{2}$ , 1 and 2 watt sizes. The wide range of values, 1% tolerance, economy, low voltage coefficient, excellent frequency characteristics, predictable temperature, high voltage rating, low noise level, and small size make IRC deposited carbon resistors ideal for application in advanced electronic equipment and critical TV circuits.



**MOLDED DEPOSITED CARBON RESISTORS** are designed for high reliability, stable performance, low voltage coefficient, low capacitive and inductive impedance in high frequency applications. In miniature  $\frac{1}{8}$ ,  $\frac{1}{4}$ , and  $\frac{1}{2}$  watt sizes, plus 1 and 2 watt types.



Standard tolerance is 1%. (2% tolerance on high range units.) The housing gives complete protection, and offers better heat dissipating qualities. This results in improved load life and maximum moisture protection.

## STANDARD STOCK VALUES—TYPES DCC, DCF, DCH and MDC

One decade of stock values is as follows:

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10.0	12.1	14.7	17.8	21.5	26.1	31.6	38.3	46.4	56.2	68.1	82.5	
10.2	12.4	15.0	18.2	22.1	26.7	32.4	39.2	47.5	57.6	69.8	84.5	
10.5	12.7	15.4	18.7	22.6	27.4	33.2	40.2	48.7	59.0	71.5	86.6	
10.7	13.0	15.8	19.1	23.2	28.0	34.0	41.2	49.9	60.4	73.2	88.7	
11.0	13.3	16.2	19.6	23.7	28.7	34.8	42.2	51.1	61.9	75.0	90.9	
11.3	13.7	16.5	20.0	24.3	29.4	35.7	43.2	52.3	63.4	76.8	93.1	
11.5	14.0	16.9	20.5	24.9	30.1	36.5	44.2	53.6	64.9	78.7	95.3	
11.8	14.3	17.4	21.0	25.5	30.9	37.4	45.3	54.9	66.5	80.6	97.6	

Higher stock values may be determined by multiplying by 10, 100, 1000, etc., up to maximum stated for type.

## STANDARD STOCK VALUES

IRC TYPE	MIL TYPE	MINIMUM STOCK VALUE	MAXIMUM STOCK VALUE	IRC TYPE	MIL TYPE	MINIMUM STOCK VALUE	MAXIMUM STOCK VALUE
DCC	RN20X	10 ohms	2.0 meg.	DCH	RN30X	46.4 ohms	10.0 meg.
DCF	RN25X	20 ohms	5.1 meg.	MDC	RN70D	10 ohms	2.49 meg.

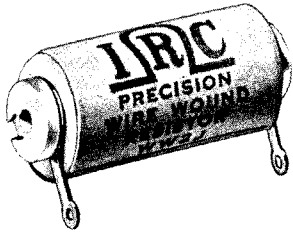
## ION-STOCK VALUES

IRC TYPE	MIL TYPE	MINIMUM VALUE	MAXIMUM VALUE	IRC TYPE	MIL TYPE	MINIMUM VALUE	MAXIMUM VALUE
DCC	RN20X	10 ohms	25.0 meg.	MDB	RN65D	10 ohms	5.0 meg.
DCF	RN25X	10 ohms	50.0 meg.	MDC	RN70D	10 ohms	25.0 meg.
DCH	RN30X	15 ohms	100.0 meg.	MDF	RN75B	10 ohms	50.0 meg.
MDA	RN60D	10 ohms	5.0 meg.	MDH	RN80B	15 ohms	100.0 meg.

# PRECISION RESISTORS



INTERNATIONAL RESISTANCE COMPANY



**WIREWOUND PRECISION RESISTORS.** For accuracy in critical applications, IRC Precision Wire Wound resistors are produced to exacting standards of reliability. IRC's winding technique prevents shorted turns or strains in the winding, and special insulation gives excellent protection from humidity. Positive electrical connections and easy soldering.

## RADIAL LUG TYPE

IRC TYPE NO.	WW2J	WW3J	WW4J	WW5J	WW8J	WW11J
MIL-R-93A Style	RB19	RB16	RB17	RB18	RB15	RB16
Rating in Watts 65°C. Ambient	2	.50	1	1	.50	.50
Maximum Volts	2000	400	700	1000	250	500
No. of Sections	8	2	4	4	1	2
Maximum Resistance .0015 Diameter Wire	4.0 Meg.	0.3 Meg.	0.75 Meg.	1.7 Meg.	0.29 Meg.	0.4 Meg.
Maximum Resistance .0009 Diameter Wire	20.0 Meg.	1.6 Meg.	4.0 Meg.	7.5 Meg.	1.5 Meg.	2.0 Meg.
Minimum Resistance (ohms)						
± 0.05% Tolerance	25	25	25	25	25	25
± 0.1 % Tolerance	10	10	10	10	10	10
± 0.25% Tolerance	5	5	5	5	5	5
± 0.50% Tolerance	1	1	1	1	1	1
± 1.0 % Tolerance	0.1	0.1	0.1	0.1	0.5	0.1

## RADIAL LEAD TYPE

IRC TYPE NO.	WW3J	WW4J	WW8J	WW10J	WW11J	WW20J	WW21J	WW22J (Center Tapped)	WW23J	WW24J (Center Tapped)
Rating in Watts 65°C. Ambient	.50	1	.50	.25	.50	.25	.25	.25†	.50	.50†
Maximum Volts	400	700	250	150	500	150	300	150†	300	400†
No. of Sections	2	4	1	1	2	1	2	2	2	4
Maximum Resistance .0015 Diameter Wire	0.3 Meg.	0.75 Meg.	0.29 Meg.	40K	0.4 Meg.	35K	70K	35K†	225K	350K†
Maximum Resistance .0009 Diameter Wire	1.6 Meg.	4.0 Meg.	1.5 Meg.	0.215 Meg.	2.0 Meg.	150K	500K	250K†	1.5 Meg.	1.5 Meg.†
Minimum Resistance (ohms)										
± 0.05% Tolerance	25	25	25	200	25	250	200	200†	25	25 †
± 0.10% Tolerance	10	10	10	150	10	200	150	150†	10	10 †
± 0.25% Tolerance	5	5	5	75	5	100	75	75†	5	5 †
± 0.5 % Tolerance	1	1	1	50	1	75	50	50†	1	1 †
± 1.0 % Tolerance	0.1	0.1	0.5	10	0.1	10	10	10†	0.5	0.1†

†signifies per tap section

## STANDARD STOCK TYPES and VALUES

### TYPE WW2J with lugs—1% Tolerance

600K Ohms	1.0 Megohm
750K Ohms	1.5 Megohms
900K Ohms	2.0 Megohms
	2.5 Megohms

### TYPE WW3J with lugs—1% Tolerance

0.1 Ohm	1,500 Ohms	30K Ohms
0.2 Ohm	2,000 Ohms	35K Ohms
0.5 Ohm	2,500 Ohms	40K Ohms
1.0 Ohm	3,000 Ohms	50K Ohms
5 Ohms	3,500 Ohms	60K Ohms
10 Ohms	4,000 Ohms	75K Ohms
25 Ohms	5,000 Ohms	100K Ohms
50 Ohms	7,500 Ohms	125K Ohms
100 Ohms	10K Ohms	150K Ohms
200 Ohms	12.5K Ohms	175K Ohms
250 Ohms	15K Ohms	200K Ohms
300 Ohms	20K Ohms	225K Ohms
500 Ohms	22.5K Ohms	
1,000 Ohms	25K Ohms	

### TYPE WW4J with lugs—1% Tolerance

0.1 Ohm	2,000 Ohms	40K Ohms
0.2 Ohm	2,500 Ohms	50K Ohms
0.5 Ohm	3,000 Ohms	60K Ohms
1.0 Ohm	3,500 Ohms	75K Ohms
5 Ohms	4,000 Ohms	100K Ohms
10 Ohms	5,000 Ohms	125K Ohms
25 Ohms	7,500 Ohms	150K Ohms
50 Ohms	10K Ohms	175K Ohms
100 Ohms	12.5K Ohms	200K Ohms
200 Ohms	15K Ohms	225K Ohms
250 Ohms	20K Ohms	250K Ohms
300 Ohms	22.5K Ohms	300K Ohms
500 Ohms	25K Ohms	400K Ohms
1,000 Ohms	30K Ohms	500K Ohms
1,500 Ohms	35K Ohms	

### TYPE WW5J with lugs—1% Tolerance

600K Ohms	900K Ohms
750K Ohms	1.0 Megohm

### TYPE WW10J with leads—1% Tolerance

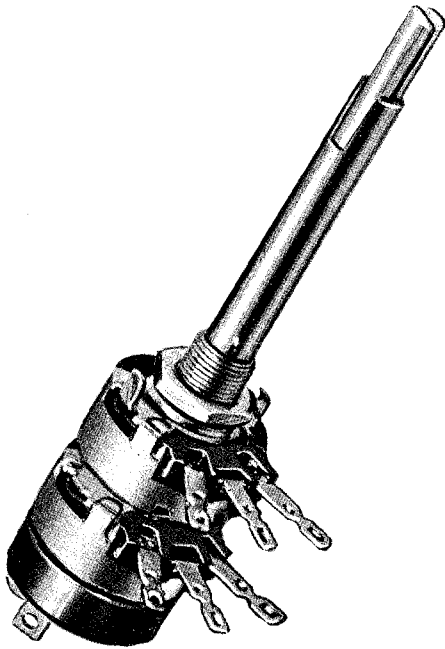
10 Ohms	2,000 Ohms	20K Ohm
25 Ohms	2,500 Ohms	25K Ohm
50 Ohms	3,000 Ohms	30K Ohm
100 Ohms	3,500 Ohms	40K Ohm
200 Ohms	4,000 Ohms	50K Ohm
250 Ohms	5,000 Ohms	60K Ohm
300 Ohms	7,500 Ohms	75K Ohm
500 Ohms	10K Ohms	100K Ohm
1,000 Ohms	12.5K Ohms	
1,500 Ohms	15K Ohms	

Special Resistance Tolerances  
Standard tolerances ± 1%. Other tolerance: subject to minimum values shown on specification charts, are available on special order for all WWJ types, as follows:  
0.5% 0.25% 0.2% 0.1% 0.05%



# TYPE Q & TYPE 4W CONCENTRIKITS

INTERNATIONAL RESISTANCE COMPANY



IRC offers the broadest replacement coverage in the industry with its Type Q,  $\frac{1}{2}$  watt carbon controls and Type 4W, 4 watt wirewound controls in CONCENTRIKIT form. With the CONCENTRIKIT replacement system, an extremely broad range of electrical and mechanical variations are available as factory assembled controls or as selected control parts for easy field assembly.

Available in CONCENTRIKIT are many types of single controls, ganged multi-section controls, concentric dual controls with combinations of carbon and wirewound sections, and specially matched controls for stereo.

Some of the mechanical variations possible include bushing mountings, tab mountings, printed circuit mountings and printed circuit terminals. A wide choice of shafts, rotary and axially-operated power switches and special tone switches can be selected from CONCENTRIKIT for almost any application.

For more data, write for Catalog S649.



## DEALER STOCKS

**No. 90.** A comprehensive basic selection of CONCENTRIKIT parts provides broad replacement coverage of radio, TV, auto and hi-fi controls. Features the outstanding versatility of the industry's most proven and most widely used replacement system. Includes handsome metal cabinet with 12 "see thru" plastic drawers.

**No. 92.** A greatly expanded selection of CONCENTRIKIT parts. Covers in depth controls for ADMIRAL-DUMONT-EMERSON-GE-MAGNAVOX-MOTOROLA-MUNTZ-PHILCO-RCA-SILVERTONE-SYLVANIA-TRUETONE-WESTINGHOUSE-ZENITH and 170 other manufacturers. Stock is housed in handsome 12 drawer metal cabinet with "see thru" plastic drawers.

**No. 91 CONVERSION STOCK.** Conversion Stock No. 91 supplies you with all the items necessary to convert Dealer Stock No. 90 to the broader coverage of Dealer Stock No. 92.

For more information on the above items, write for Catalog S658.

SNAPTROL



INTERNATIONAL RESISTANCE COMPANY



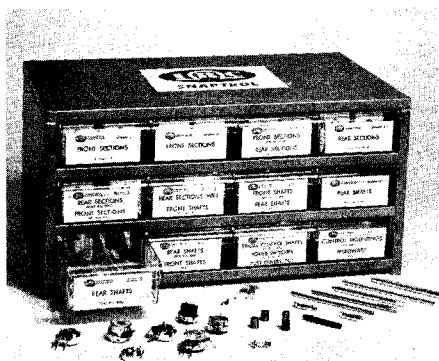
IRC's SNAPTROL replacement system provides great versatility, easy assembly and snap together convenience. With fewer basic components, SNAPTROL gives you broader replacement coverage than any other section-type exact duplicate control system on the market today.

Without cutting or modifications, factory assembled sections quickly and easily snap together to make ganged multiple section and concentric dual controls. A broad variety of carbon and wirewound front and rear sections are available, as well as matched front and rear sections for stereo.

Both universal and exact duplicate shafts snap into the control sections. Rotary and axially-operated power switches snap-on single or concentric controls. Mounting configurations include bushings, tab mountings and printed circuit brackets. Printed circuit terminals are supplied on all carbon sections for universal use.

Carbon sections are rated at  $\frac{1}{2}$  watt. Wirewound sections are rated at 5 watts (linear tapers).

For more data, write for Catalog S605.



### DEALER STOCKS

**No. 87.** Features a broad selection of components of IRC's new SNAPTROL replacement system—the fast, snap-together method of replacing controls. Includes many outstanding features unique to the system. Housed in handsome metal cabinet with 12 "see thru" plastic drawers.

**No. 89.** Includes an expanded selection of SNAPTROL components. Covers greatest variety of control mounting and proven switch types. Broad replacement coverage of ADMIRAL-DUMONT-EMERSON-GE-MAGNAVOX-MOTOROLA-MUNTZ-PHILCO-RCA-SILVERTONE-SYLVANIA-TRUETONE-WESTINGHOUSE-ZENITH—and 170 other manufacturers. Housed in handsome metal cabinet with 12 "see thru" plastic drawers.

**No. 88 CONVERSION STOCK.** Conversion Stock No. 88 supplies you with all the items necessary to convert Dealer Stock No. 87 to the broad coverage of Dealer Stock No. 89.

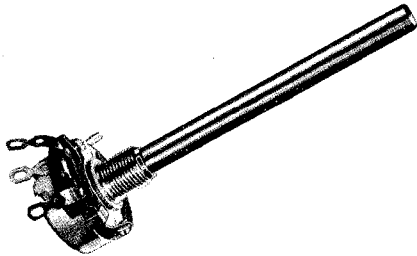
For more information on above items, write for Catalog S657.





# INDUSTRIAL CONTROLS

INTERNATIONAL RESISTANCE COMPANY



**TYPES PQ, RQ, RQL and M.** High quality  $\frac{1}{2}$  watt controls. Resistance tolerance is  $\pm 10\%$ .

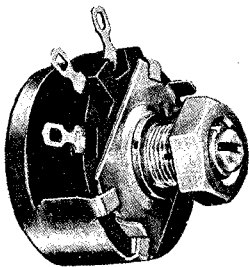
Type PQ has full round  $\frac{1}{4}$ " shaft, 3" FMS. In 33 stock values.

Type RQ has  $\frac{1}{4}$ " screw-driver slotted shaft,  $\frac{1}{2}$ " FMS. Supplied in 33 values.

Type RQL has  $\frac{1}{4}$ " screw-driver slotted shaft and lock type bushing.  $\frac{1}{2}$ " FMS. 26 stock values.

Type M Multi-section is a rear section which can be added to PQ, RQ or RQL for dual, triple or quadruple controls. Supplied in 25 stock values.

For more data, write for Catalog S649.



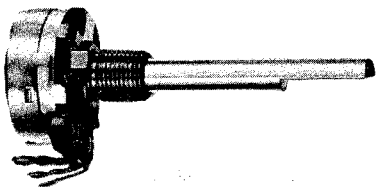
**TYPES WP, WPRL and WM.** Husky 4 watt controls with heavily tinned terminals for easy soldering.  $\pm 10\%$  resistance tolerance.

Type WP has  $\frac{1}{4}$ " full round shaft, 3" FMS. Available in 36 stock values.

Type WPRL has  $\frac{1}{4}$ " screw-driver slotted shaft and lock type bushing.  $\frac{1}{2}$ " FMS. In 36 values.

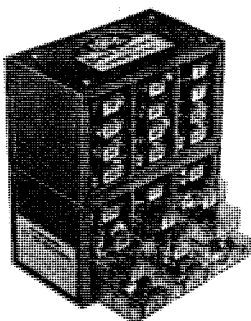
Type WM Multi-section is a rear section which mates to WP and WPRL for dual, triple or quadruple controls. Supplied in a wide assortment of values.

For more data, write for Catalog S649.



**SERIES 45.**  $\frac{1}{2}$  watt controls with resistance tolerance of  $\pm 20\%$ . Available as snap-together sections, shafts and power switches to provide up to 12,631,500 different controls for virtually every application. Twenty shaft styles cover the majority of commercial and industrial needs.

For more data, write for Catalog S605.

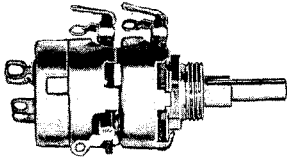


**ENGINEERING LAB STOCKS.** Series 45,  $\frac{1}{2}$  watt controls to meet more than 12 million requirements. Two IRC engineering lab stocks include snap-together sections, control shafts, switches and dust covers. Ideal for building breadboards and prototypes. Grey metal cabinets stack or hang. Clear plastic drawers are labeled and separated for easy inventory and stock control.

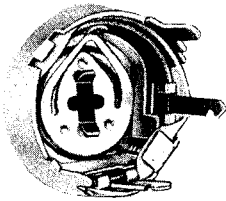
# SPECIAL CONTROLS



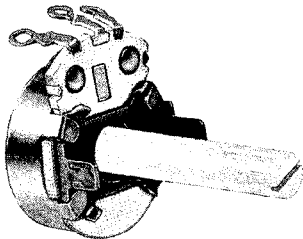
INTERNATIONAL RESISTANCE COMPANY



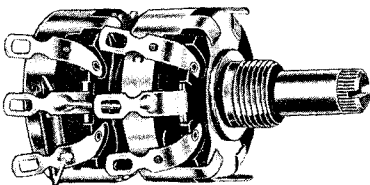
**AUTO RADIO CONTROLS** for 265 different makes and models. IRC's line of exact duplicate controls includes 127 individual types for every popular auto radio. Faster servicing results from these top-quality controls because of IRC's strict adherence to manufacturer's specifications. For more data, write for Catalog S525.



**BUZZ AND BIAS CONTROLS** for hum balance, centering, holding, locking and other TV uses. These miniature controls are available in two types, both designed for screw-driver adjustment. Type 110 in 17 values from 1.5 to 3,000 ohms. Type 112 supplied in 23 values from 50 to 10,000 ohms. For more data, write for Catalog S655.



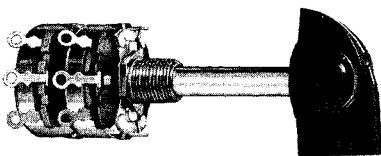
**TV HEIGHT CONTROLS** for reliable operation in TV and other B + applications such as AGC, noise gate, focus, fringe lock and sync. 1 watt rating.  $\frac{15}{16}$ " diameter. Nylon slotted and knurled shaft can easily be modified. Tab mount design with rear adjustment. In six values from 2.0 megohms to 7.5 megohms.  $\pm 30\%$  tolerance. Type HLC. For more data, write for Catalog S655.



**TV ATTENUATORS** for on-the-spot adjustment of signal input to TV set. In most cases it corrects or reduces adjacent channel interference, back ground picture on weaker stations, poor definition, picture and sound breakover. Type QJ-3 is widely used in service work to duplicate fringe area signals when near strong local station.



**LOUDNESS CONTROLS** that are continuously compensated to boost low and highs as volume is decreased. Maintains depth and brilliance even at a whisper level. The LC-2 can easily be wired into most audio circuit. Uses types 76-1, 76-2 or 76-4 switches.



**L AND T PAD CONTROLS** with constant impedance for use in sound systems and for speaker controls. Both types handle up to 15 watts of audio power (5 watts DC). L pad provides constant input impedance. Constant input/output impedances provided by the T pad. Knob and dial plate included. L and T pads available in 4, 8, 15, and 500 ohm. For more data, write for Catalog S656.

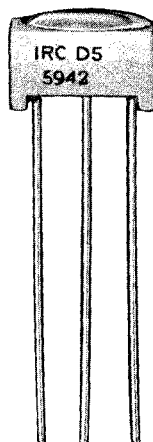
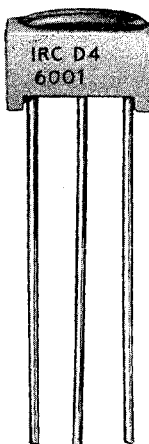


# DUAL DIODES & FUSE RESISTORS

INTERNATIONAL RESISTANCE COMPANY

**DUAL DIODES.** Universal selenium dual diodes for horizontal phase detectors and remote control in TV receivers. Also used in radio control devices for model planes, and other circuits. Available in four basic types.

## TYPE D4 COMMON CATHODE



MANUFACTURER	PART NO.	MANUFACTURER	PART NO.
Admiral	93B5-6	Muntz	SR004
	93C26-7, 9	Olympic	RF5465
Airline	66X21	Packard Bell	72053
	296V004H01	Philco	34-8034
Coronado	66X21		34-8037-1, 2
Curtis Mathes	9LR2-S	RCA	1107832-7, 9
Emerson	817074	Silvertone	86-9-1
Federal	K1615		624-0007
GE	6GC1	Sylvania	624-0006
	ET16X10		624-0007
	WT16X7		13-85943-1, 2
	K115J510-1, 2	Tel Rad	TRC-P4
	K117J460-1, 2	Travler	SR6
Hallicrafters	27C226		SR13
	027-300-226	Truetone	66X21
Hoffman	10031	Wells-Gardner	66X21
	744002	Westinghouse	296V004H01
International Rectifier	DD04	Zenith	103-20
Motorola	48C751656		103-32
	48K741255		

## TYPE D5 SERIES CONNECTED

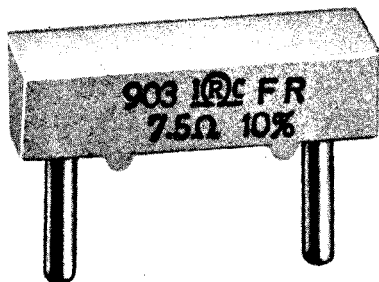
MANUFACTURER	PART NO.	MANUFACTURER	PART NO.
Admiral	93A5-2	Olympic	RF5794
	93B5-3, 4, 5	Packard Bell	72030
Airline	SR15		B-45-110
Coronado	SR15	Silvertone	B-48-110
Citizenship Radio	34-8037		86-3-1
Emerson	817062		86-4-1A
Federal	K1616	Sonora	SR15
GE	6GD1	Sylvania	13-93889
	WT16X9	Tel Rad	TRC-55
	118J966-1	Travler	SR10
International Rectifier	DD05		SR15
Magnavox	530045-1, 2, 3	Truetone	SR10, 15
Motorola	48B742698	Webcor	65P113
	48K741752		65P124-1
	48K754153	Zenith	633977

## TYPE D6 COMMON ANODE

MANUFACTURER	PART NO.	MANUFACTURER	PART NO.
GE	66X1	International Rectifier	DD06
	WT16X8	Motorola	48K751724
	118J966-2	Packard Bell	72036

## TYPE D7 SPECIAL MOTOROLA SIX CELL DIODE

For Motorola Part No. 48C65831A02

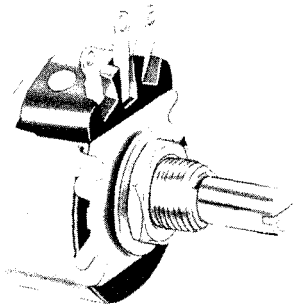


**FUSE RESISTORS.** This special resistor functions as a resistor under normal conditions, and as a fuse under overload conditions. It is used extensively as a surge-limiting resistor in voltage doubler circuits of TV receivers. Installation of an IRC Type FR fuse resistor in a TV set will prevent overloading of more valuable components and possible fire due to a short circuit. The compact, modern design of IRC fuse resistor measures only  $1\frac{25}{64}$ " x  $1\frac{1}{32}$ " x  $\frac{3}{8}$ ". This unit is completely insulated in a rectangular ceramic case, and equipped with plug-in terminals. FR5.0—5 ohms, FR5.6—5.6 ohms, FR7.5—7.5 ohms.

# MILITARY CONTROLS, 3-WATT INDUSTRIAL CONTROLS, ROTARY SELECTOR SWITCHES



INTERNATIONAL RESISTANCE COMPANY

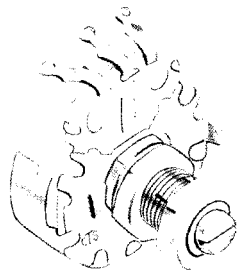


## MILITARY VARIABLE RESISTORS

### WIREWOUND VARIABLE RESISTORS MEET MIL-R-19A

RA20 (Type 252) 2 watt wire wound in 15 resistance values. 2 shaft styles, plain and locking bushings.

RA30 (Type 25) 4 watt wire wound in 15 resistance values. 2 shaft styles, plain and locking bushings.



### COMPOSITION VARIABLE RESISTORS MEET MIL-R-94B

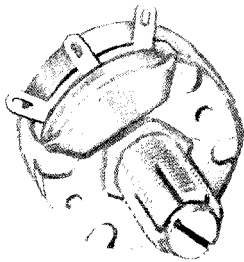
RV2 (Type 90) 1 watt composition resistors in 14 resistance values. 2 shaft styles, plain and locking bushings.

RV4 (Type 96) 2 watt composition resistors in 16 resistance values. 2 shaft styles, plain and locking bushings.

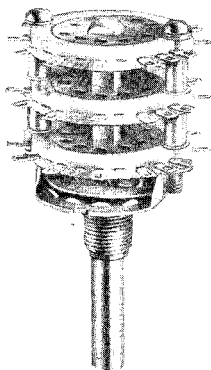
RV5 (Type 65) 1/2 watt miniature composition resistors in 13 resistance values. 2 shaft styles, plain and locking bushings.

RV6 (Type 300) 1/2 watt miniature composition resistors in 14 resistance values. 2 shaft styles, plain and locking bushings.

For stock values, write for Catalog S004.



**3-WATT INDUSTRIAL CONTROLS.** Types 321S and 321LT. Completely enclosed construction features: a carbon-ceramic element, excellent heat sink, long life and low noise characteristics and a large safety factor. Available from 250 ohms through 2.5 megohms. For more data, write for Catalog S631.



**ROTARY SELECTOR SWITCHES** with unique one-piece molded wafer for high reliability and constant uniformity that eliminates drift.

- Compact 1 1/16" size design allows more circuitry per unit of depth behind panel and closer stacking.
- Superior insulation of molded glass alkyd material.
- 1000% more silver than used by most commercial switches.
- Molded stator will not break or crush during ordinary handling, or if dropped.

Available as assembled switches or as wafers and shaft-detent assemblies. For more data, write for Catalog S607.



# MALLORY CONTROLS

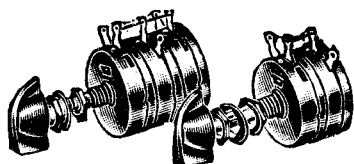
## FIVE-WATT SUBMINIATURE CONTROLS



Rated at full 5 watts at 35° C. Only 3/4" in diameter. Linear Taper; mechanical rotation 305° ± 5°; electrical rotation 275° ± 5°. Resistance tolerance, ± 10%; voltage breakdown, 900 v. AC rms at sea level. Standard 3/8"-32 x 3/8" bushing with locating lug. Shaft, 1/4" dia. x 2" F.M.S. Furnished with mounting nut and washer.

Mallory Number	Resistance, Ohms	Net Each
VW1	1	\$1.33
VW2	2	1.33
VW3	3	1.33
VW5	5	1.33
VW6	6	1.33
VW8	8	1.33
VW10	10	1.33
VW15	15	1.33
VW20	20	1.33
VW25	25	1.33
VW30	30	1.33
VW40	40	1.33
VW50	50	1.33
VW60	60	1.33
VW75	75	1.33
VW100	100	1.33
VW200	200	1.33
VW250	250	1.33
VW300	300	1.33
VW400	400	1.33
VW500	500	1.33
VW600	600	1.33
VW750	750	1.33
VW1K	1000	1.33
VW1P5K	1500	1.44
VW2K	2000	1.44
VW2P5K	2500	1.44
VW3K	3000	1.44
VW4K	4000	1.44
VW5K	5000	1.44
VW7P5K	7500	1.50
VW10K	10000	1.50
VW15K	15000	1.50
VW20K	20000	1.50
VW25K	25000	1.60

## AUDIO ATTENUATORS



"T" PAD "L" PAD

For controlling levels of audio circuits. Cup Dia.: T, L, LA and LL pads, 1 1/2"; RT, RL and RR, 1 3/8". Bushing: T and L, 3/8"-32 x 3/8"; LA, LL, RT, RL and RR, 3/8"-32 x 1" bushing. Shaft: T and L, 1/4" dia. x 2", grooved; others, 1/4" dia. x 1 1/2" round. With knob, nut, washer and dial.

"T" Pad Attenuators—Net Each... **\$354**

Mallory No.	Ohms Imped.	Mallory No.	Ohms Imped.
T2	2	T200	200
T4	4	T250	250
T6	6	T500	500
T8	8	T600	600
T15	15	T1000	1000
T50	50	T2000	2000
T100	100	T3000	3000

"L" Pad Attenuators—Net Each... **\$273**

"LA" Pad Attenuators—Net Ea... **\$2.85**

L2	2	L200	200
L4	4	L250	250
L6	6	L500	500
L8	8	L600	600
L8A	8	L1000	1000
L15	15	L2000	2000
L16A	16	L3000	3000
L50	50	L4000	4000
L100	100		

Tandem LL Pads—Case length, 5/70 2 3/4". Net Each... **\$570**

LL8	8	LL50	50
LL16	16		

## AUDIO ATTENUATORS (CONT'D)

"RT" Pad Attenuators—Net Each... **\$333**

Mallory No.	Ohms Imped.	Mallory No.	Ohms Imped.
RT4	4	RT50	50
RT8	8	RT250	250
RT16	16	RT500	500

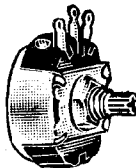
"RL" Pad Attenuators—Net Each... **\$252**

RL4	4	RL50	50
RL8	8	RL250	250
RL16	16	RL500	500

"RR50" Dual Tandem Stereo Control Dual 59 ohms. Net Each... **\$2.10**

## TYPE R WIRE-WOUND POTS

For replacement of TV controls requiring 3 watt unit. Also for V-divider and bias applications. High quality, dust-proof, 1 1/2" overall dia. 900 v. insulation. No. 4 taper. Thumb knurled, screw-driver slotted stub shaft. Bushing, 3/8". One Pal-nut with each control.



Mallory No.	Ohms	Net Each	Mallory No.	Ohms	Net Each
R2L	2	\$0.93	R50CT†	50	\$1.32
R3L	3	.93	R100L	100	.93
R5L	5	.93	R250L	250	.93
R6L	6	.93	R500L	500	.93
R8L	8	.93	R750L	750	.93
R10L	10	.93	R1000L	1000	.93
R10CT†	10	1.32	R1500L	1500	.93
R15L	15	.93	R2500L	2500	.93
R20L	20	.93	R3000L	3000	.93
R20CT†	20	1.32	R5000L	5000	.93
R25L	25	.93	R7500L	7500	1.08
R30L	30	.93	R10ML	10000	1.08
R30CT†	30	1.32	R15ML	15000	1.08
R50L	50	.93	R20ML	20000	1.08

†Center-tapped Controls

## SWITCHES FOR TYPE R POTS

Mall. No.	Description	Net
US30	Single Pole, Single Throw	42c
US32	Double Pole, Single Throw	54c

## TWO-WATT WIRE-WOUND POTENTIOMETERS

1 1/2" diameter variable resistor that will dissipate 2 watts over the entire element for continuous operation. For use in test and special instruments, bias control and bridge circuits. Linear taper only. Contact arm is grounded. Total rotation 280°; effective electrical rotation 255°. Provided with short shaft, milled screwdriver slot. Will take standard knobs. Furnished with hex nut. Shipping Weight, 4 oz.

## POTENTIOMETERS

Mallory No.	Ohms Resis.	Carrying Capacity In Amps	Net Each
C6P	6	.58	\$1.08
C10P	10	.45	1.08
C15P	15	.37	1.08
C20P	20	.32	1.08
C30P	30	.26	1.08
C40P	40	.22	1.08
C50P	50	.2	1.08
C100P	100	.14	1.08
C200P	200	.1	1.08
C400P	400	.07	1.08
C1MP	1K	.045	1.20
C3MP	3K	.025	1.20
C5MP	5K	.02	1.47
C6MP	6K	.018	1.47
C10MP	10K	.014	1.47
C15MP	15K	.011	1.47

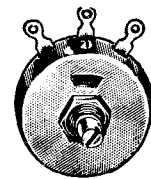
## RHEOSTATS\*

Mallory No.	Ohms Resis.	Carrying Capacity In Amps	Net Each
C6R	6	.58	93c
C10R	10	.45	93c
C15R	15	.37	93c
C20R	20	.32	93c
C30R	30	.26	93c
C40R	40	.22	93c
C50R	50	.2	93c
C100R	100	.14	93c

\*"Open" or "off" position counter-clockwise.

## FOUR-WATT WIRE-WOUND POTENTIOMETERS, RHEOSTATS

Used on bias control and voltage dividers; also for replacement of positioning, hold, focus and other controls of TV sets. Rugged. Rheostats feature "off" position (no connection) type of construction. Insulated contact arm. Pots have three, rheostats have two terminals. Total rotation 275° ± 5%. effective electrical rotation 275° ± 5%. No. 4 linear taper. Voltage breakdown 1000 v. DC. One control (with hex nut) to carton.



## POTENTIOMETERS

Mallory Number	Ohms Resis.	Capacity In Amps	Net Each
M1PK	1	2.00	\$1.35
M3PK	3	1.15	1.35
M6PK	6	.82	1.35
M10PK	10	.63	1.35
M15PK	15	.52	1.35
M20PK	20	.45	1.35
M25PK	25	.40	1.35
M30PK	30	.37	1.35
M40PK	40	.32	1.35
M50PK	50	.28	1.35
M60PK	60	.26	1.35
M75PK	75	.23	1.35
M100PK	100	.20	1.35
M200PK	200	.14	1.35
M300PK	300	.116	1.35
M400PK	400	.10	1.35
M500PK	500	.09	1.35
M600PK	600	.082	1.35
M1MPK	1K	.063	1.35
M1.5MPK	1.5K	.052	1.35
M2MPK	2K	.045	1.35
M2.5MPK	2.5K	.04	1.35
M3MPK	3K	.037	1.35
M4MPK	4K	.032	1.35
M5MPK	5K	.028	1.35
M10MPK	10K	.02	1.35
M15MPK	15K	.016	1.47
M20MPK	20K	.014	1.47
M25MPK	25K	.013	1.47
M50MPK	50K	.009	1.74
M70MPK	70K	.0075	1.74
M75MPK	75K	.0073	2.46
M100MPK	100K	.0063	2.46

## CENTER-TAPPED POTENTIOMETERS

MT10PK	10	.63	\$1.32
MT20PK	20	.45	1.32
MT30PK	30	.37	1.32

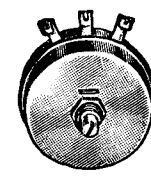
## RHEOSTATS\*

M05RK	0.5	2.80	93c
M1RK	1	2.00	93c
M2RK	2	1.40	93c
M3RK	3	1.15	93c
M4RK	4	1.00	93c
M6RK	6	.82	93c
M10RK	10	.63	93c
M15RK	15	.52	93c
M20RK	20	.45	93c
M25RK	25	.40	93c
M30RK	30	.37	93c
M40RK	40	.32	93c
M50RK	50	.28	93c
M60RK	60	.26	93c
M75RK	75	.23	93c
M100RK	100	.20	93c

\*\*"Open" or "Off" position counter-clockwise

## SEVEN-WATT WIRE-WOUND POTENTIOMETERS

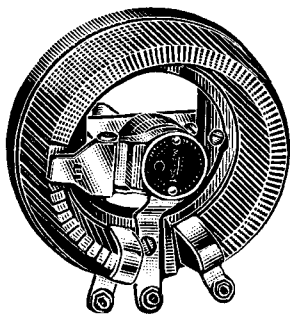
Suitable for precision instruments such as resistance bridges and where a control of medium currents or voltages is required. Supplied with grounded contact arm. 307° total rotation; 295° effective electrical rotation. Will dissipate 7 watts. Provided with short shaft, milled screw-driver slot for easy adjustment. Will take standard knobs. Hex nut furnished. No. 4 taper.



Mallory Number	Ohms Resis.	Capacity In Amps	Net Each
E5MP	5K	.042	\$2.76
E10MP	10K	.03	2.94
E20MP	20K	.021	3.00
E25MP	25K	.019	3.09
E50MP	50K	.0135	3.15
E75MP	75K	.011	3.24
E100MP	100K	.0095	3.30
E125MP	125K	.0085	3.30
E150MP	150K	.0078	3.36

# MALLORY

# POWER RHEOSTATS



Mallory power rheostats (Type K) utilize vitreous enamel construction for maximum environmental protection. All current-carrying parts are electrically insulated by dimensionally stable ceramic. Type K rheostats have been tested to 5,000 volts, without breakdown between electrical and mechanical components. U/L voltage ratings are as follows: 25K, 50K, 75K, 100K and 150K—300 volts; 225K, 300K and 500K—600 volts.

The contact mechanism features the patented spring-hinge arm. This spring loaded assembly ensures constant and correct pressure on the rheostat windings. An added advantage is that the high-purity graphite block may be removed easily for cleaning, or, if necessary, for replacement.

Type K rheostats are furnished in a standard linear taper and with all mounting hardware, dial plate and knob. Special two- and three-section tapers are available on special order. All values shown are for continuous operation in free air.

### TYPE 25K 25 WATTS

1 1/8" O.D. 295° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
25K1P	1	5.000	28	\$4.40
25K2P	2	3.540	28	3.90
25K3P	3	2.880	53	3.90
25K4P	6	2.040	51	3.90
25K8P	8	1.770	56	3.90
25K10P	10	1.580	54	3.90
25K15P	15	1.290	88	3.90
25K25P	25	1.000	117	3.90
25K35P	35	.845	129	3.90
25K50P	50	.707	149	3.90
25K75P	75	.575	174	3.90
25K100P	100	.500	184	3.90
25K125P	125	.447	187	3.90
25K175P	175	.378	178	3.90
25K250P	250	.316	200	3.90
25K350P	350	.267	227	3.90
25K500P	500	.222	256	3.90
25K750P	750	.182	303	3.90
25K1000P	1000	.155	318	4.40
25K1500P	1500	.129	310	4.40
25K2500P	2500	.100	405	4.40
25K3500P	3500	.084	432	4.66
25K5000P	5000	.070	471	4.66

### TYPE 100K 100 WATTS

3 3/8" O.D. 300° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
100K.5P	.5	14.20	30	\$7.30
100K1P	1	10.00	40	7.30
100K2P	2	7.07	42	7.30
100K3P	3	5.77	56	7.30
100K5P	5	4.47	59	7.30
100K7.5P	7.5	3.65	96	6.80
100K10P	10	3.16	101	6.80
100K16P	16	2.50	128	6.80
100K25P	25	2.00	160	6.80
100K50P	50	1.41	200	6.80
100K75P	75	1.15	240	6.80
100K100P	100	1.00	250	6.80
100K200P	200	.71	315	6.80
100K300P	300	.58	302	6.80
100K400P	400	.50	316	6.80
100K500P	500	.45	342	6.80
100K750P	750	.37	406	6.80
100K1000P	1000	.32	435	7.30
100K1500P	1500	.26	520	7.30
100K2000P	2000	.22	544	7.30
100K2500P	2500	.20	535	7.30
100K5000P	5000	.14	692	7.80
100K7500P	7500	.12	820	8.30
100K10000P	10000	.10	840	8.80

### TYPE 300K 300 WATTS

6 1/8" O.D. 315° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
300K1P	1	17.30	48	\$14.53
300K2P	2	12.25	60	14.53
300K3P	3	10.00	64	14.53
300K4P	4	8.66	80	14.53
300K5P	5	7.75	80	14.53
300K7.5P	7.5	6.32	100	14.53
300K10P	10	5.48	139	14.53
300K15P	15	4.47	128	14.53
300K25P	25	3.46	182	14.53
300K50P	50	2.45	228	14.53
300K75P	75	2.00	271	14.53
300K100P	100	1.73	287	14.53
300K150P	150	1.41	338	14.53
300K200P	200	1.22	361	14.53
300K300P	300	1.00	427	14.53
300K400P	400	.87	460	14.53
300K700P	700	.66	555	14.53
300K900P	900	.58	564	14.53
300K1200P	1200	.50	605	14.53
300K1500P	1500	.45	755	14.53
300K1750P	1750	.41	691	14.53
300K2500P	2500	.35	785	14.53

### TYPE 50K 50 WATTS

2 13/16" O.D. 300° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
50K.5P	.5	10.00	25	\$4.89
50K1P	1	7.07	37	4.89
50K2P	2	5.00	42	4.89
50K4P	4	3.54	66	4.40
50K6P	6	2.89	79	4.40
50K8P	8	2.50	84	4.40
50K12P	12	2.04	100	4.40
50K16P	16	1.76	106	4.49
50K22P	22	1.50	145	4.40
50K35P	35	1.19	145	4.40
50K50P	50	1.00	163	4.40
50K80P	80	.79	210	4.40
50K125P	125	.63	204	4.40
50K150P	150	.58	244	4.40
50K225P	225	.47	298	4.40
50K300P	300	.41	268	4.40
50K500P	500	.32	205	4.40
50K800P	800	.25	363	4.66
50K1000P	1000	.22	354	4.66
50K1600P	1600	.176	449	4.66
50K2500P	2500	.14	455	4.66
50K3500P	3500	.12	500	4.89
50K5000P	5000	.10	550	4.89
50K8000P	8000	.08	690	4.89
50K10000P	10000	.07	870	4.89

### TYPE 150K 150 WATTS

4 1/2" O.D. 305° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
150K.5P	.5	17.30	31	\$9.28
150K1P	1	12.30	38	9.28
150K2P	2	8.66	51	9.28
150K3P	3	7.07	73	9.28
150K5P	5	5.48	77	9.28
150K7.5P	7.5	4.47	70	9.28
150K10P	10	3.87	145	8.80
150K15P	15	3.16	138	8.80
150K25P	25	2.45	142	8.80
150K35P	35	2.07	198	8.80
150K50P	50	1.73	182	8.80
150K75P	75	1.41	218	8.80
150K100P	100	1.22	229	8.80
150K150P	150	1.00	276	8.80
150K200P	200	.87	289	8.80
150K250P	250	.77	360	8.80
150K350P	350	.66	350	8.80
150K500P	500	.55	400	8.80
150K750P	750	.45	460	9.28
150K1250P	1250	.35	490	9.28
150K1800P	1800	.290	555	9.80
150K2250P	2250	.26	547	9.80
150K3000P	3000	.22	729	9.80
150K4500P	4500	.18	689	10.27
150K7500P	7500	.14	930	10.76
150K10000P	10000	.12	980	11.73

### TYPE 500K 500 WATTS

8" O.D. 325° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
500K1P	1	22.40	73	\$20.99
500K2P	2	15.80	68	20.99
500K3P	3	12.90	91	20.99
500K4P	4	11.20	96	20.99
500K5P	5	10.00	127	20.99
500K7.5P	7.5	8.16	134	20.99
500K10P	10	7.07	169	20.99
500K15P	15	5.79	180	20.99
500K25P	25	4.47	230	20.99
500K50P	50	3.16	285	20.99
500K75P	75	2.58	342	20.99
500K100P	100	2.24	362	20.99
500K150P	150	1.82	430	20.99
500K200P	200	1.58	452	20.99
500K250P	250	1.41	563	20.99
500K350P	350	1.20	630	20.99
500K500P	500	1.00	708	20.99
500K750P	750	.82	670	20.99
500K1MP	1000	.71	705	20.99
500K1500P	1500	.58	862	20.99
500K2500P	2500	.45	975	20.99

### TYPE 75K 75 WATTS

2 3/8" O.D. 300° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
75K.5P	.5	12.20	26	\$6.61
75K1P	1	8.66	35	6.61
75K2P	2	6.12	42	6.61
75K4P	4	4.34	64	6.09
75K6P	6	3.54	77	6.09
75K8P	8	3.06	81	6.09
75K12P	12	2.50	97	6.09
75K25P	25	1.73	126	6.09
75K50P	50	1.22	159	6.09
75K75P	75	1.00	188	6.09
75K100P	100	.87	200	6.09
75K200P	200	.61	249	6.09
75K250P	250	.55	252	6.09
75K350P	350	.46	277	6.09
75K500P	500	.39	312	6.09
75K750P	750	.32	330	6.61
75K1MP	1000	.27	365	6.61
75K1500P	1500	.22	407	6.61
75K2500P	2500	.17	428	6.61
75K5MP	5000	.12	550	7.08
75K8MP	8000	.10	670	7.60
75K10MP	10000	.09	660	7.60

### TYPE 225K 225 WATTS

5" O.D. 310° angle of rotation.

Mallory No.	Ohms	Max. Amps	Steps	Net Each
225K1P	1	15.00	52	\$13.40
225K2P	2	10.60	69	13.40
225K3P	3	8.66	73	13.40
225K4P	4	7.50	91	13.40
225K5P	5	6.71	91	13.40
225K7.5P	7.5	5.48	96	13.40
225K10P	10	4.74	101	13.40
225K15P	15	3.87	147	13.40
225K25P	25	3.00	192	13.40
225K50P	50	2.12	242	13.40
225K75P	75	1.73	290	13.40
225K100P	100	1.50	304	13.40
225K150P	150	1.22	364	13.40
225K200P	200	1.06	382	13.40
225K350P	350	.80	421	13.40
225K500P	500	.67	475	13.40
225K750P	750	.55	577	13.40
225K1MP	1000	.47	605	13.40
225K1500P	1500	.39	715	13.40
225K2500P	2500	.30	660	13.40

### TYPE "K" RHEOSTAT ACCESSORIES

(Not Illustrated)

Mallory No.	Description	Dia.	Net Each
365-1	Bar knob	2 1/4"	\$6.02
366-1	Bar knob	1 1/2"	.15
367-1	Knurled rd. knob	1 1/2"	.21
368-1	Knurled rd. knob	1 1/4"	.20
364	368 w/pointer	1 1/4"	.09
363-1†	Handwheel*	3 1/2"	.49
362-1	Handwheel*	3 1/2"	.03
362-2	Handwheel**	3 1/2"	.70
361	Finger grip*	1 3/8"	.70
361-1	Finger grip**	1 3/8"	.55
360	Finger grip*	1 3/8"	.99
360-1	Finger grip**	1 3/8"	.89
359†	Finger grip*	2 3/8"	.64
359-1†	Finger grip**	2 3/8"	.50
369	Dial plate, 0-100	.....	.85
370	Dial plate, 0-100	.....	.21
391	Dial plate, vol.	.....	.21

\*With pointer. \*\*Without pointer. †3/8" hole dia., others, 1/4".



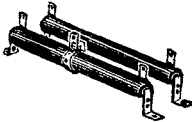
# MALLORY RESISTORS

## TYPE HJ (FIXED) AND AV (ADJUSTABLE)

Vitreous enamel-coated, wire-wound resistors. Furnished with complete hardware except HHJ, 1HJ and 2HJ which have wire leads.

To Order: Use type number followed by resistance value (i.e., HHJ4000).

Tolerance: =5% except (\*), =10%.



### FIXED VITREOUS TYPES

#### 5-WATT TYPE HHJ

Ohms	Net Each	Ohms	Net Each	Ohms	Net Each	Ohms	Net Each
1*	\$0.46	50	\$0.46	750	\$0.50	4500	\$0.50
1.5*	.46	75	.46	800	.50	5000	.50
2*	.46	100	.46	900	.50	6000	.53
3*	.46	125	.46	1000	.50	7000	.53
4*	.46	150	.46	1100	.50	7500	.53
5*	.46	200	.46	1200	.50	8000	.53
7.5*	.46	225	.46	1250	.50	9000	.53
10*	.46	250	.46	1500	.50	10,000	.53
12	.46	300	.46	1750	.50	12,500	.57
15	.46	350	.50	2000	.50	15,000	.57
20	.46	400	.50	2250	.50	20,000	.61
25	.46	450	.50	2500	.50	25,000	.63
30	.46	500	.50	3000	.50		
35	.46	600	.50	3500	.50		
40	.46	700	.50	4000	.50		

#### 10-WATT TYPE 1HJ

1*	\$0.51	150	\$0.51	1500	\$0.53	11,000	\$0.71
2*	.51	200	.51	1750	.53	12,000	.71
3*	.51	225	.51	2000	.53	12,500	.71
4*	.51	250	.51	2250	.53	13,500	.71
5*	.51	300	.51	2500	.53	14,300	.71
7.5*	.51	350	.51	3000	.53	15,000	.71
10*	.51	400	.51	3500	.53	16,000	.71
12	.51	450	.51	4000	.53	17,500	.71
15	.51	500	.51	4500	.53	18,000	.71
20	.51	600	.51	5000	.53	20,000	.71
25	.51	700	.51	6000	.63	22,500	.75
30	.51	750	.51	7000	.63	25,000	.75
35	.51	800	.51	7500	.63	30,000	.75
40	.51	900	.51	8000	.63	35,000	.75
50	.51	1000	.51	8200	.63	40,000	.75
75	.51	1100	.53	8500	.63	45,000	.83
100	.51	1200	.53	9000	.63	50,000	.83
125	.51	1250	.53	10,000	.63		

#### 20-WATT TYPE 2HJ

5	\$0.61	300	\$0.61	2500	\$0.63	12,500	\$0.77
10	.61	400	.61	2750	.75	15,000	.77
15	.61	500	.61	3000	.75	20,000	.77
25	.61	750	.61	3500	.75	25,000	.77
50	.61	1000	.61	4000	.75	30,000	.77
75	.61	1250	.61	4500	.75	35,000	.90
100	.61	1500	.61	5000	.75	40,000	.90
150	.61	1750	.63	6000	.75	50,000	.90
200	.61	2000	.63	7500	.75	75,000	1.31
250	.61	2250	.63	10,000	.75	100,000	1.34

#### 25-WATT TYPE 2.5HJ

1	\$0.65	75	\$0.65	2000	\$0.68	12,500	\$0.81
2	.65	100	.65	2500	.68	15,000	.81
3	.65	150	.65	3000	.78	20,000	.81
5	.65	200	.65	3500	.78	25,000	.81
7.5	.65	250	.65	4000	.78	30,000	.94
10*	.65	500	.65	5000	.78	40,000	.94
15	.65	750	.65	6000	.78	50,000	1.09
25	.65	1000	.65	7500	.78	75,000	1.28
50	.65	1500	.65	10,000	.78	100,000	1.47

#### 50-WATT TYPE 5HJ

10	\$0.99	750	\$0.99	7500	\$1.11	30,000	\$1.39
25	.99	1000	.99	10,000	1.11	40,000	1.39
50	.99	1500	1.02	12,500	1.21	50,000	1.55
100	.99	2000	1.02	15,000	1.21	75,000	1.77
250	.99	2500	1.02	20,000	1.21	100,000	1.92
500	.99	5000	1.02	25,000	1.39		

#### 75-WATT TYPE 7.5HJ

10	\$1.17	750	\$1.17	7500	\$1.30	30,000	\$1.57
25	1.17	1000	1.17	10,000	1.30	40,000	1.57
50	1.17	1500	1.22	12,500	1.40	50,000	1.75
100	1.17	2000	1.22	15,000	1.40	75,000	1.99
250	1.17	2500	1.22	20,000	1.40	100,000	2.12
500	1.17	5000	1.22	25,000	1.57		

#### 100-WATT TYPE 10HJ

25	\$1.38	750	\$1.38	7500	\$1.56	40,000	\$1.92
50	1.38	1000	1.38	10,000	1.56	50,000	1.99
100	1.38	1500	1.44	15,000	1.69	75,000	2.20
150	1.38	2000	1.44	20,000	1.69	100,000	2.46
250	1.38	2500	1.44	25,000	1.92		
500	1.38	5000	1.44	30,000	1.92		

#### 160-WATT TYPE 16HJ

25	\$2.05	750	\$2.05	7500	\$2.28	40,000	\$2.52
50	2.05	1000	2.05	10,000	2.28	50,000	2.60
100	2.05	1500	2.09	15,000	2.44	75,000	2.77
150	2.05	2000	2.09	20,000	2.44	100,000	2.93
250	2.05	2500	2.09	25,000	2.52		
500	2.05	5000	2.09	30,000	2.52		

\*Tolerance = 10%; all others = 5%.

### 200-WATT TYPE 20HJ (FIXED)

Ohms	Net Each	Ohms	Net Each	Ohms	Net Each	Ohms	Net Each
25	\$2.21	750	\$2.21	5000	\$2.28	50,000	\$2.77
50	2.21	1000	2.21	7500	2.44	75,000	2.93
75	2.21	1500	2.28	10,000	2.44	100,000	3.11
100	2.21	2000	2.28	20,000	2.60		
250	2.21	2500	2.28	30,000	2.68		
500	2.21	3000	2.28	40,000	2.68		

### ADJUSTABLE VITREOUS TYPES

#### 10-WATT TYPE 1AV

1	\$1.00	75	\$1.00	750	\$1.00	4000	\$1.06
2	1.00	100	1.00	800	1.00	4500	1.06
3	1.00	150	1.00	1000	1.00	5000	1.06
5	1.00	200	1.00	1250	1.06	6000	1.14
7.5	1.00	250	1.00	1500	1.06	7000	1.14
10	1.00	300	1.00	2000	1.06	7500	1.14
15	1.00	350	1.00	2250	1.06	8000	1.14
20	1.00	400	1.00	2500	1.06	8500	1.14
25	1.00	500	1.00	3000	1.06	9000	1.14
50	1.00	600	1.00	3500	1.06	10,000	1.14

#### 25-WATT TYPE 2AV

1	\$1.57	100	\$1.16	1000	\$1.16	5000	\$1.19
3	1.57	150	1.16	1250	1.19	6000	1.28
5	1.16	200	1.16	1500	1.19	7500	1.28
10	1.16	250	1.16	2000	1.19	10,000	1.28
15	1.16	300	1.16	2500	1.19	12,000	1.32
25	1.16	400	1.16	3000	1.19	15,000	1.32
50	1.16	500	1.16	3500	1.19	20,000	1.32
75	1.16	750	1.16	4000	1.19	25,000	1.45

#### 50-WATT TYPE 5AV

5	\$1.51	200	\$1.51	2000	\$1.54	15,000	\$1.72
10	1.51	250	1.51	2500	1.54	20,000	1.72
25	1.51	400	1.51	3000	1.54	25,000	1.90
50	1.51	500	1.51	4000	1.54	30,000	1.90
75	1.51	750	1.51	5000	1.54	40,000	1.90
100	1.51	1000	1.51	7500	1.62	50,000	1.99
150	1.51	1500	1.54	10,000	1.62		

#### 75-WATT TYPE 7.5AV

5	\$1.69	200	\$1.69	2000	\$1.74	15,000	\$1.92
10	1.69	250	1.69	2500	1.74	20,000	1.92
25	1.69	400	1.69	3000	1.74	25,000	2.09
50	1.69	500	1.69	4000	1.74	30,000	2.09
75	1.69	750	1.69	5000	1.74	40,000	2.09
100	1.69	1000	1.69	7500	1.81	50,000	2.27
150	1.69	1500	1.74	10,000	1.81		

#### 100-WATT TYPE 10AV

50	\$1.95	2500	\$2.01	10,000	\$2.13	35,000	\$2.49
100	1.95	3000	2.01	15,000	2.26	40,000	2.49
500	1.95	4000	2.01	20,000	2.26	50,000	2.57
1000	1.95	5000	2.01	25,000	2.49	75,000	2.81
2000	2.01	7500	2.13	30,000	2.49	100,000	3.01

#### 160-WATT TYPE 16AV

50	\$2.85	2500	\$2.88	10,000	\$3.07	35,000	\$3.31
100	2.85	3000	2.88	15,000	3.24	40,000	3.31
500	2.85	4000	2.88	20,000	3.24	50,000	3.40
1000	2.85	5000	2.88	25,000	3.31	75,000	3.56
2000	2.88	7500	3.07	30,000	3.31	100,000	3.72

#### 200-WATT TYPE 20AV

50	\$3.19	1500	\$3.26	10,000	\$3.44	50,000	\$3.91
100	3.19	2000	3.26	20,000	3.62	75,000	4.09
500	3.19	2500	3.26	25,000	3.81	100,000	4.29
1000	3.19	5000	3.26	30,000	3.81		

### RESISTOR TUBE SIZES

Type	Dia. x L.	Type	Dia. x L.
HHJ	5/8" x 1"	20HJ	1 1/8" x 1 1/2"
1HJ	5/8" x 1 1/4"	1AV	5/8" x 1 1/4"
2HJ	5/8" x 2"	2AV	5/8" x 2"
2.5HJ	5/8" x 2"	5AV	5/8" x 4"
5HJ	5/8" x 4"	7.5AV	5/8" x 6"
7.5HJ	5/8" x 6"	10AV	3/4" x 6 1/2"
10HJ	3/4" x 6 1/2"	16AV	1 1/8" x 8 1/2"
16HJ	1 1/8" x 8 1/2"	20AV	1 1/8" x 10 1/2"

### MOUNTING FEET

No.	Fits Type	Net
30V	5-watt, 10-watt	3c
31V	20, 25, 50	

**OHMITE**resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r.f. chokes**VITREOUS ENAMELED RHEOSTATS**

Twelve sizes in wirewound, vitreous enameled rheostats are stocked by Ohmite distributors all over the country and at the Ohmite factory. This selection, the most extensive available to industry, covers ratings that meet the major portion of design, production and emergency needs. Ratings of 7½, 12½, 25, 50, 75, 100, 150, 225, 300, 500, 750 and 1000 watts are standard.

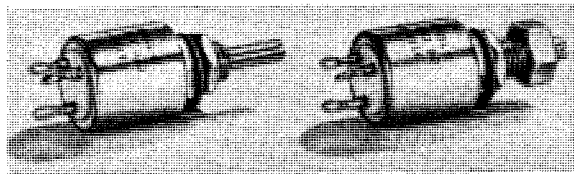
**FEATURES OF CONSTRUCTION:** Ohmite rheostats are designed to produce permanently smooth, close control. The construction is all ceramic and metal; there is nothing to smoke, char, shrink, or shift. All models have insulated shafts with provision to keep the rheostat from turning on the panel. The resistance wire is wound over a solid ceramic core. Each turn is a separate resistance step and is locked against shifting by vitreous enamel. The core and base are also bonded by vitreous enamel. The pivoted universal-action-mounted contact brush is of copper-graphite or silver-graphite on the heavier current rheostats. It rides upon a large flat surface and assures perfect contact without wear on the wire. Pressure at the contact and at the center lead are independent. Ohmite Rheostat Models H, J, G, K, L, P, and N, all marked Series A, are listed under the Underwriters' Laboratories Reexamination Service.

**RATING:** The current carrying capacities shown in the tables are for use in *free air*; when units are enclosed, these currents should be reduced possibly as much as 30% to 50%, depending upon the degree of ventilation. The rated current will cause the rheostat to dissipate its rated wattage when the full resistance is in the circuit.

**MODEL "C" — MINIATURE RHEOSTAT**

In this era of miniaturization and transistorization, the Model C enlarges the horizons of designers by providing greater design flexibility. In addition to its small size, its versatile solder terminals will also plug into common transistor sockets or circuit boards. It is stocked with both standard and locking type bushings.

Actual Size

**MODEL "C" — 7½ WATT\*  
Standard & Locking Bushings**

Diameter .515" max. — Depth behind panel 7/8" — Shaft 1/8" diameter, slotted for both types; Std. shaft accommodates knob — Rotation 300° — Mounting for panels up to 1/8" by means of 1/4"-32 bushing and hex nut — Non-turn lug requires 1/8" hole 1/4" below center of shaft — No. 5151 knob recommended — Solder terminals will fit EIA type TS-E3R100 transistor socket — Wt. 0.27 oz.

Ohms	Amps.	Standard Shaft		Locking Shaft	
		Stock No.	Net 1-4	Stock No.	Net 1-4
10	.86	4908	\$12.43	4948	\$14.32
15	.71	4909	11.00	4949	12.89
25	.55	4910	11.00	4950	12.89
35	.46	4911	11.00	4951	12.89
50	.39	4912	11.00	4952	12.89
75	.32	4913	11.00	4953	12.89
100	.27	4914	11.00	4954	12.89
150	.22	4915	11.00	4955	12.89
200	.19	4916	11.00	4956	12.89
250	.17	4917	11.00	4957	12.89
350	.15	4918	11.00	4958	12.89
500	.12	4919	11.00	4959	12.89
750	.10	4920	11.00	4960	12.89
1000	.086	4921	12.43	4961	14.32
1500	.071	4922	12.43	4962	14.32
2500	.055	4923	12.43	4963	14.32
3500	.046	4924	13.00	4964	14.89
5000	.039	4925	13.00	4965	14.89

\*Rating on metal panel.  
3-Pin Socket for Model C Rheostat: Stock No. 6595, Net 1-4, \$4.22

**MODEL "E" — 12.5 WATT\***

Unenclosed and Enclosed

Diameter 7/8" — Depth behind panel 1 1/8" — Shaft 1/8" Diameter. Rotation 300° — Mounting for panels up to 1/8" by means of 1/4"-32 Bushing and Hex. Nut — Non-turn lug requires 1/8" hole 1/4" below center of shaft — Stock No. 5151 Knob Recommended.  
Enclosure including terminals 1 3/8" long by 1 1/4" diameter.

Total Ohms	Max. Amps.	Unenclosed		Enclosed	
		Stock No.	Net 1-4	Stock No.	Net 1-4
1	3.53	0101	\$4.63	W0101	\$6.31
2	2.50	0102	4.63	W0102	6.31
2.5	2.24	0102A	4.63	W0102A	6.31
3	2.04	0103	4.63	W0103	6.31
5	1.58	0103A	4.63	W0103A	6.31
6	1.44	0104	4.63	W0104	6.31
8	1.25	0105	4.63	W0105	6.31
10	1.12	0106	4.63	W0106	6.31
15	.91	0107	4.11	W0107	5.79
25	.71	0108	4.11	W0108	5.79
35	.60	0109	4.11	W0109	5.79
50	.50	0110	4.11	W0110	5.79
75	.41	0111	4.11	W0111	5.79
100	.35	0112	4.11	W0112	5.79
125	.32	0113	4.11	W0113	5.79
150	.29	0113A	4.11	W0113A	5.79
175	.27	0114	4.11	W0114	5.79
200	.25	0114A	4.11	W0114A	5.79
250	.22	0115	4.11	W0115	5.79
350	.19	0116	4.11	W0116	5.79
500	.16	0117	4.11	W0117	5.79
750	.13	0118	4.11	W0118	5.79
1,000	.11	0119	4.63	W0119	6.31
1,500	.091	0120	4.63	W0120	6.31
2,500	.071	0121	4.63	W0121	6.31
3,500	.060	0122	4.90	W0122	6.58
5,000	.050	0123	4.90	W0123	6.58
7,500	.041	4190†	5.06	W4190†	6.74
10,000	.035	4191†	5.06	W4191†	6.74
12,500	.031	4192†	5.50	W4192†	7.18
15,000	.029	4193†	5.50	W4193†	7.18

†Silicone-ceramic coating, 350 V. max. \*Rating on metal panel.

**MODEL "H", Series A — 25 WATT**

Diameter 1 3/8" — Depth behind panel 1 3/8" — Shaft 1/4" diameter. Rotation 300° — Mounting for panels up to 1/4" by means of 3/8"-32 Bushing and Hex. Nut — Non-turn lug requires 3/8" hole 1/2" below center of shaft — Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0140	1	5.000	\$4.63	0154	250	.316	\$4.11
0141	2	3.540	4.63	0155	350	.267	4.11
0142	3	2.880	4.63	0156	500	.222	4.11
0143	6	2.040	4.63	0157	750	.182	4.11
0144	8	1.770	4.63	0158	1,000	.155	4.63
0145	10	1.580	4.63	0159	1,500	.129	4.63
0146	15	1.290	4.11	0160	2,500	.100	4.63
0147	25	1.000	4.11	0161	3,500	.084	4.90
0148	35	.845	4.11	0162	5,000	.070	4.90
0149	50	.707	4.11	4200†	7,500	.058	5.06
0150	75	.575	4.11	4201†	10,000	.050	5.06
0151	100	.500	4.11	4202†	15,000	.040	5.50
0152	125	.445	4.11	4203†	20,000	.035	6.16
0153	175	.375	4.11	4204†	25,000	.032	6.82

†Silicone-ceramic coating, 500 V. max. Not listed UL Ser. A.

**MODEL "J", Series A — 50 WATT**

Diameter 2 3/8" — Depth behind panel 1 3/8" — Shaft 1/4" Diameter. Rotation 300° — Mounting for panels up to 1/4" by means of 3/8"-32 Bushing and Hex Nut — Non-turn lug requires 3/8" hole 1/2" below center of shaft — Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0308	0.5	10.000	\$5.15	0324	500	.316	\$4.63
0309	1	7.070	5.15	0325	800	.250	4.90
0310	2	5.000	5.15	0326	1,000	.224	4.90
0311	4	3.530	5.15	0327	1,600	.176	4.90
0312	6	2.880	5.15	0328	2,500	.141	4.90
0313	8	2.500	4.63	0329	3,500	.119	5.15
0314	12	2.040	4.63	0330	5,000	.100	5.15
0315	16	1.760	4.63	0331	8,000	.079	5.15
0316	22	1.500	4.63	0332	10,000	.070	5.15
0317	35	1.190	4.63	4210†	15,000	.058	5.83
0318	50	1.000	4.63	4211†	20,000	.050	6.60
0319	80	.790	4.63	4212†	25,000	.045	7.26
0320	125	.630	4.63	4213†	30,000	.041	8.03
0321	150	.575	4.63	4214†	40,000	.035	9.35
0322	225	.470	4.63	4215†	50,000	.032	10.23
0323	300	.408	4.63				

†Silicone-ceramic coating, 750 V. max. Not listed UL Ser. A.

**OHMITE**resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r. f. chokes**VITREOUS ENAMELED RHEOSTATS****MODEL "G" — 75 WATT**Diameter 2 3/4" — Depth behind panel 1 3/4" — Shaft 1/4" Diameter.  
Rotation 300° — Mounting for panels up to 1/4" by means of 3/8"-32  
Bushing and Hex. Nut — Non-turn lug requires 5/8" hole 1/2" below  
center of shaft — Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
1100	0.5	12.300	\$6.97	1112	200	.612	\$6.41
1101	1	8.660	6.97	1113	300	.500	6.41
1102	2	6.120	6.97	1114	400	.433	6.41
1103	3	5.000	6.97	1115	500	.388	6.41
1104	5	3.880	6.97	1116	750	.316	6.97
1105	7.5	3.160	6.97	1117	1,000	.274	6.97
1106	10	2.740	6.97	1118	1,500	.224	6.97
1107	16	2.170	6.41	1119	2,000	.194	6.97
1108	25	1.730	6.41	1120	2,500	.173	6.97
1109	50	1.230	6.41	1121	5,000	.123	7.45
1110	75	1.000	6.41	1122	7,500	.100	8.00
1111	100	.866	6.41	1123	10,000	.087	8.00

**MODEL "K", Series A — 100 WATT**Diameter 3 1/8" — Depth behind panel 1 3/4" — Shaft 1/4" Diameter.  
Rotation 300° — Mounting for panels up to 1/4" by means of 3/8"-32  
Bushing and Hex. Nut — Non-turn lug requires 5/8" hole 1/2" below  
center of shaft — Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0440	0.5	14.100	\$7.72	0452	200	.707	\$7.21
0441	1	10.000	7.72	0453	300	.575	7.21
0442	2	7.070	7.72	0454	400	.500	7.21
0443	3	5.750	7.72	0455	500	.447	7.21
0444	5	4.470	7.72	0456	750	.365	7.21
0445	7.5	3.650	7.72	0457	1,000	.316	7.72
0446	10	3.160	7.72	0458	1,500	.258	7.72
0447	16	2.500	7.21	0459	2,000	.224	7.72
0448	25	2.000	7.21	0460	2,500	.200	7.72
0449	50	1.410	7.21	0461	5,000	.141	8.24
0450	75	1.150	7.21	0462	7,500	.115	8.76
0451	100	1.000	7.21	0463	10,000	.100	9.26

**MODEL "L", Series A — 150 WATT**Diameter 4" — Depth behind panel 2" — Shaft 1/4" Diameter. Rotation  
300° — Mounting for panels up to 1/4", 3/8"-32 Bushing and  
Hex. Nut or two 10-32 x 3/4" flat head screws, mounting centers  
7/8" each side of center of shaft on line perpendicular to center termi-  
nal. — Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0524	0.5	17.300	\$9.78	0537	150	1.000	\$ 9.26
0525	1	12.300	9.78	0538	200	.865	9.26
0526	2	8.650	9.78	0539	250	.775	9.26
0527	3	7.070	9.78	0540	350	.655	9.26
0528	5	5.480	9.78	0541	500	.548	9.26
0529	7.5	4.470	9.78	0542	750	.447	9.78
0530	10	3.880	9.78	0543	1,250	.346	9.78
0531	15	3.613	9.78	0544	1,800	.288	10.30
0532	25	2.450	9.26	0545	2,250	.259	10.30
0533	35	2.070	9.26	0546	3,000	.224	10.30
0534	50	1.735	9.26	0547	4,500	.182	10.81
0535	75	1.415	9.26	0548	7,500	.141	11.33
0536	100	1.225	9.26	0549	10,000	.122	12.35

**MODEL "P" — 225 WATT**Diameter 5" — Depth behind panel 2 1/2" — Shaft 3/8" Diameter.  
Rotation 310° — Mounting for panels up to 1 1/4", two 1/4"-20 x  
1 1/2" flat head screws, mounting centers 7/8" each side of center of  
shaft on center line of cross-bar. — Stock No. 5105 Knob Recom'd.  
Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1250	1	15.000	\$14.11	1261	100	1.500	\$14.11
1251	2	10.600	14.11	1262	150	1.220	14.11
1252	3	8.660	14.11	1263	200	1.060	14.11
1253	4	7.500	14.11	1264	300	.866	14.11
1254	5	6.710	14.11	1265	400	.750	14.11
1255	7.5	5.490	14.11	1266	700	.567	14.11
1256	10	4.740	14.11	1267	900	.500	14.11
1257	15	3.870	14.11	1268	1,200	.433	14.11
1258	25	3.000	14.11	1269	1,500	.387	14.11
1259	50	2.120	14.11	1270	1,750	.358	14.11
1260	75	1.730	14.11	1270A	2,000	.336	14.11
				1271	2,500	.300	14.11

**MODEL "N", Series A — 300 WATT**Diameter 6" — Depth behind panel 2 3/8" — Shaft 3/8" Diameter.  
Rotation 320° — Mounting for panels up to 1 1/4", two 1/4"-20 x  
1 1/2" flat head screws, mounting centers 1 1/8" each side of center of  
shaft on center line of cross-bar. — Stock No. 5105 Knob Recom'd.  
Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
0650	1	17.320	\$15.29	0661	100	1.730	\$15.29
0651	2	12.240	15.29	0662	150	1.410	15.29
0652	3	10.000	15.29	0663	200	1.220	15.29
0653	4	8.660	15.29	0664	300	1.000	15.29
0654	5	7.750	15.29	0665	400	.866	15.29
0655	7.5	6.320	15.29	0666	700	.655	15.29
0656	10	5.480	15.29	0667	900	.578	15.29
0657	15	4.470	15.29	0668	1,200	.500	15.29
0658	25	3.460	15.29	0669	1,500	.447	15.29
0659	50	2.450	15.29	0670	1,750	.414	15.29
0660	75	2.000	15.29	0670A	2,000	.387	15.29
				0671	2,500	.346	15.29

**MODEL "R" — 500 WATT**Diameter 8" — Depth behind panel 2 1/2" — Shaft 3/8" Diameter.  
Rotation 325° — Mounting for panels up to 1 1/4", two 1/4"-20 x 1 1/2"  
flat head screws, mounting centers 1 1/2" each side of center of  
shaft on center line of cross-bar. — Stock No. 5105 Knob Recom'd.  
Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
0849	1.0	22.300	\$22.09	0872	50	3.160	\$22.09
0850	1.5	18.200	22.09	0861	80	2.520	22.09
0851	2	15.800	22.09	0862	125	2.000	22.09
0852	2.5	14.100	22.09	0863	175	1.690	22.09
0853	3	12.900	22.09	0864	250	1.410	22.09
0854	4	11.200	22.09	0865	325	1.240	22.09
0855	5	10.000	22.09	0866	500	1.000	22.09
0856	8	7.900	22.09	0867	750	.817	22.09
0857	12.5	6.300	22.09	0868	1,000	.707	22.09
0858	16	5.600	22.09	0869	1,500	.577	22.09
0859	25	4.470	22.09	0870	2,000	.500	22.09
0860	40	3.540	22.09	0871	2,500	.447	22.09

**MODEL "T" — 750 WATT**Diameter 10" — Depth behind panel 3" — Shaft 3/8" Diameter.  
Rotation 330° — Mounting for panels up to 1 1/4", two 1/4"-20 x  
1 1/2" flat head screws, mounting centers 1 1/8" each side of center of  
shaft on center line of cross-bar. — Stock No. 5105 Knob Recom'd.  
Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1300	1	27.400	\$31.20	1312	50	3.870	\$31.20
1301	1.5	22.300	31.20	1313	80	3.060	31.20
1302	2	19.400	31.20	1314	100	2.740	31.20
1303	2.5	17.300	31.20	1315	160	2.170	31.20
1304	3	15.800	31.20	1316	200	1.940	31.20
1305	4	13.600	31.20	1317	300	1.580	31.20
1306	5	12.200	31.20	1318	400	1.370	31.20
1307	8	9.650	31.20	1319	600	1.117	31.20
1308	10	8.650	31.20	1320	750	1.000	31.20
1309	12.5	7.750	31.20	1321	1,200	.791	31.20
1310	16	6.820	31.20	1322	1,800	.646	31.20
1311	25	5.470	31.20	1322A	2,000	.610	31.20
				1323	2,500	.547	31.20

**MODEL "U" — 1000 WATT**Diameter 12" — Depth behind panel 3" — Shaft 3/8" Diameter.  
Rotation 335° — Mounting for panels up to 1 1/4", two 1/4"-20 x  
1 1/2" flat head screws, mounting centers 3" each side of center of  
shaft on center line of cross-bar. — Stock No. 5105 Knob Recom'd.  
Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1450	1	31.600	\$36.45	1462	50	4.470	\$36.45
1451	1.5	25.800	36.45	1463	75	3.650	36.45
1452	2	22.400	36.45	1464	100	3.160	36.45
1453	2.5	20.000	36.45	1465	175	2.390	36.45
1454	3	18.300	36.45	1466	225	2.110	36.45
1455	4	15.800	36.45	1467	300	1.830	36.45
1456	5	14.100	36.45	1468	400	1.580	36.45
1457	8	11.200	36.45	1469	500	1.410	36.45
1458	10	10.000	36.45	1470	750	1.150	36.45
1459	12.5	8.950	36.45	1471	1,000	1.000	36.45
1460	16	7.900	36.45	1472	1,500	.816	36.45
1461	25	6.330	36.45	1473	2,500	.633	36.45

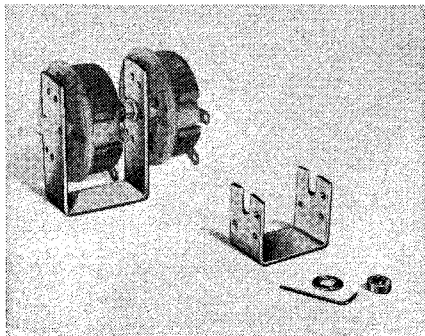
CATALOG 50 LISTS ALL RHEOSTATS TO MEET MILITARY SPECIFICATION MIL-R-22B

# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r. f. chokes



## RHEOSTAT TANDEM COUPLING KITS



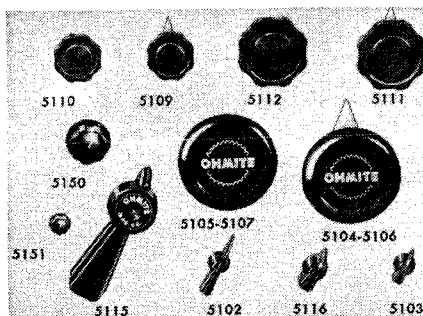
Inexpensive kits assemble standard Ohmite Model G, H, J, K, L or E (miniature) rheostats. Each kit consists of a steel "U" frame, a coupling with set screw, mica washer, Allen wrench and assembly instructions. Rheostat shafts are joined by the coupling which is fastened to the shaft of the rear unit. Projections on the coupling fit a recess in the rear hub of the front unit. Stock No. 6533 kit, mounts Model G, K or L units but accommodates Models H or J in the rear position. Stock No. 6532 unit mounts Models H or J but accommodates Models G, K or L in the rear position. Stock No. 6591 kit assembles only Model E (miniature) rheostats.

Stock No. 6532 — Max Panel 1/8" ..... Net Each (1-4) \$2.01  
Stock No. 6533 — Max Panel 5/32" ..... Net Each (1-4) 2.51  
Stock No. 6591 — Max Panel 1/16" ..... Net Each (1-4) 2.01

## BLACK BAKELITE KNOBS

Stock No.	Description	Knob Dia.	Hole Dia.	Net Ea. 1-2
5102	Bar Knob, 2 1/4" long		1/4"	\$ .50
5103	Bar Knob, 1 1/4" long		1/4"	.21
5104	Handwheel with Pointer	3 1/4"	3/8"	1.38
5105	Handwheel without Pointer	3 1/4"	3/8"	1.16
5106	Handwheel with Pointer	3 1/4"	3/8"	1.38
5107	Handwheel without Pointer	3 1/4"	3/8"	1.16
5109	Finger-Grip with Pointer	1 5/8"	1/4"	.89
5110	Finger-Grip without Pointer	1 5/8"	1/4"	.82
5111	Finger-Grip with Pointer	2 5/8"	1/4"	1.32
5112	Finger-Grip without Pointer	2 5/8"	1/4"	1.21
*5115	Bar Knob, 4 3/4" long		3/8"	3.00
5116	Bar Knob, 1 1/2" long		3/8"	.50
5150	Skirted Finger-Grip	1 1/2"	1/4"	.29
5151	Finger-Grip	3/4"	1/4"	.29
5152A	Like 5104 but shorter pointer	3 1/4"	3/8"	1.60

\*Requires pin and tapped hole in shaft.



## MOLDED COMPOSITION POTENTIOMETERS, 1/2 and 2 WATTS

Used in commercial and military electronic applications where high quality and dependable performance are important. Type AB, 1 1/2" dia., is rated 2 watts at 70°C ambient and is available with 7/8" slotted shaft (CMU), 2" unslotted shaft (CU, CA, CB, CCU dual unit) and locking type slotted shaft (CLU). Type AS, a miniature unit 1/2" dia. rated 1/2 watt,

is available with locking type shaft (Style AS) or 7/8" slotted shaft for knob control (Style ASM).

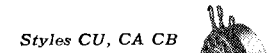
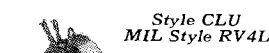
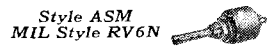
Because of their molded composition elements, these units outlast and outperform film type units. Noise level is exceedingly low. Single control Type AB units extend 5/8" behind panel; dual con-

trol 1 1/4". Type AS miniature unit extends 1 1/16" behind panel. An SPST switch for single Type AB units is available. Units are dust and splash proof, fungus and corrosion resistant and meet the latest requirements of MIL-R-94. Styles CMU, CLU, Styles AS and ASM conform respectively to MIL-R-94 Styles RV4N, RV4L, RV6L, and RV6N.

## STOCK "POTS" — MIL Units are Stamped with MIL and Commercial Designations

Resistance Ohms Except As Noted Tol. ±10% except ±20%	TYPE AB (1 1/2" Dia.)								TYPE AS (1/2" Dia.)					
	Single Unit 7/8" Shaft		Single Unit 2" Shaft			Locking		Dual	Miniature Locking		Miniature 7/8" Shaft			
	Style CMU Linear	MIL Designation	Style CU Linear	Style CA CW log	Style CB CCW log	Style CLU Linear	MIL Designation	Style CCU Linear	Style AS Linear	MIL Designation	Style ASM Linear	MIL Designation		
50	CMU5001	500A	CU5001			CLU5001	500A		AS3601	101A	ASM6661	101A		
100	CMU1011	101A	CU1011			CLU1011	101A							
150	CMU1511	151A	CU1511			CLU1511	151A							
250	CMU2511	251A	CU2511			CLU2511	251A		AS3602	251A	ASM6662	251A		
350	CMU3511	351A	CU3511			CLU3511	351A							
500	CMU5011	501A	CU5011			CLU5011	501A	Resistance Shown is for Each Unit	AS3603	501A	ASM6663	501A		
750	CMU7511	751A	CU7511			CLU7511	751A		AS3604	102A	ASM6664	102A		
1,000	CMU1021	102A	CU1021			CLU1021	102A		AS3605	252A	ASM6665	252A		
1,500	CMU1521	152A	CU1521			CLU1521	152A							
2,500	CMU2521	252A	CU2521			CLU2521	252A							
3,500	CMU3521	352A	CU3521			CLU3521	352A							
5,000	CMU5021	502A	CU5021			CLU5021	502A		AS3606	502A	ASM6666	502A		
7,500	CMU7521	752A	CU7521			CLU7521	752A							
10,000	CMU1031	103A	CU1031		CB1031	CLU1031	103A	CCU1031	AS3607	103A	ASM6667	103A		
15,000	CMU1531	153A	CU1531			CLU1531	153A							
25,000	CMU2531	253A	CU2531		CB2531	CLU2531	253A	CCU2531	AS3608	253A	ASM6668	253A		
35,000	CMU3531	353A	CU3531			CLU3531	353A							
50,000	CMU5031	503A	CU5031		CB5031	CLU5031	503A	CCU5031	AS3609	503A	ASM6669	503A		
75,000	CMU7531	753A	CU7531			CLU7531	753A							
.1 meg.	CMU1041	104A	CU1041	CA1041		CLU1041	104A	CCU1041	AS3610	104A	ASM6670	104A		
.15 meg.*	CMU1541	154A	CU1541			CLU1541	154A							
.25 meg.*	CMU2541	254A	CU2541	CA2541		CLU2541	254A	CCU2541	AS3611	254A	ASM6671	254A		
.35 meg.*	CMU3541	354A	CU3541			CLU3541	354A							
.5 meg.*	CMU5041	504A	CU5041	CA5041		CLU5041	504A	CCU5041	AS3612	504A	ASM6672	504A		
.75 meg.*	CMU7542	754B	CU7542			CLU7542	754B							
1.0 meg.*	CMU1052	105B	CU1052	CA1052		CLU1052	105B	CCU1052	AS3613	105B	ASM6673	105B		
1.5 meg.*	CMU1552	155B	CU1552			CLU1552	155B							
2.0 meg.*	CMU2052	205B	CU2052			CLU2052	205B		AS3684	205B	ASM6674	205B		
2.5 meg.*	CMU2552	255B	CU2552	CA2552		CLU2552	255B		AS3614	255B	ASM6675	255B		
3.5 meg.*	CMU3552	355B	CU3552			CLU3552	355B							
5.0 meg.*	CMU5052	505B	CU5052			CLU5052	505B		AS3615	505B	ASM6676	505B		
Weight	.064 lb.		.084 lb.			.070 lb.		.123 lb.	.017 lb.		.017 lb.			
et Price 1-89	\$1.95		\$1.95	\$2.25	\$2.25	\$2.55		\$5.85	\$5.10		\$5.10			

Switch CS-1 (Unmounted) for CMU, CU, CA, CB, CLU ..... Net \$ .66



# OHMITE

resistors · rheostats · tap switches · relays  
variable transformers · tantalum capacitors  
semiconductor diodes · r. f. chokes



## OHMITE VITREOUS ENAMELED FIXED AND DIVIDOHM® RESISTORS

**10 WATT SIZE RESISTOR**  
Core: 1 3/8" x 1/8" — Mounting Centers 2 1/8"

Res. Ohms	Max. Amps.	Fixed Resist.		Adj. Resist.	
		Stock No.	Net 1-9	Stock No.	Net 1-9
.51	4.43	3723	\$.57		
1.0	3.16	3730	.57	1001	\$1.14
1.5	2.57	3734	.57		
2	2.24			1002	1.14
2.2	2.13	3738	.57		
3	1.83			1003	1.14
3.3	1.74	3742	.57		
4.7	1.46	3746	.57		
5	1.41			1004	1.14
6.8	1.21	3750	.57		
7.5	1.16			1005	1.14
10	1.00	3754	.57	1006	1.14
12	.91	3756	.57		
15	.82	3758	.57	1007	1.14
18	.74	3760	.57		
20	.71			1008	1.14
22	.67	3762	.57		
25	.63			1009	1.14
27	.61	3764	.57		
33	.55	3766	.57		
39	.51	3768	.57		
47	.46	3770	.57		
50	.45			1010	1.14
56	.42	3772	.57		
68	.38	3774	.57		
75	.37			1011	1.14
82	.35	3776	.57		
100	.32	3778	.57	1012	1.14
120	.29	3780	.57		
150	.26	3782	.57	1013	1.14
180	.24	3784	.57		
200	.22			1014	1.14
220	.21	3786	.57		
250	.20			1015	1.14
270	.19	3788	.57		
300	.18			1016	1.14
330	.17	3790	.57	1017	1.14
350	.17			1018	1.14
390	.16	3792	.57		
400	.16			1019	1.14
470	.15	3794	.57		
500	.14			1020	1.14
560	.13	3796	.57		
600	.13			1021	1.14
680	.12	3798	.57	1022	1.14
750	.12			1023	1.14
800	.11	3800	.57		
820	.11	3802	.57		
1,000	.10	3804	.61	1024	1.18
1,200	.091			1025	1.18
1,250	.089				
1,500	.081	3806	.61		
1,800	.075	3808	.61	1026	1.18
2,000	.071			1027	1.18
2,200	.067	3810	.61	1028	1.18
2,250	.066				
2,500	.063			1029	1.18
2,700	.062	3812	.61		
3,000	.057			1030	1.18
3,300	.055	3814	.61		
3,500	.053			1031	1.18
3,900	.051	3816	.61	1032	1.18
4,000	.050			1033	1.18
4,500	.047	3818	.61		
4,700	.046			1034	1.27
5,000	.045	3820	.70		
5,600	.042			1035	1.27
6,000	.041	3822	.70	1036	1.27
6,800	.038			1037	1.27
7,000	.038				
7,500	.036			1038	1.27
8,000	.035	3824	.70	1039	1.27
8,200	.035			1040	1.27
8,500	.034				
9,000	.033	3826	.70		
10,000	.032	3828	.79		
12,000	.029	3830	.79		
15,000	.026	3832	.79		
18,000	.023	3834	.83		
22,000	.021	3836	.83		
27,000	.019	3838	.83		
33,000	.017	3840	.83		
39,000	.016	3842	.93		
47,000	.015	3843	.93		
51,000	.014				

### ADJUSTABLE LUGS

Bakelite Knob			Screw Driver Type		
Res. Dia.	Stock No.	Net 1-9	Res. Dia.	Stock No.	Net 1-9
3/16"	0359	\$0.31	5/16"	1058	\$0.14
3/8"	1959	.31	9/16"	0358	.14
1 1/8"	2159	.40	3/4"	1958	.14
			1 1/8"	2158	.23

**25 WATT SIZE RESISTOR**  
Core: 2" x 1/8" — Mounting Centers 2 1/4"

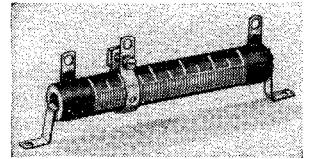
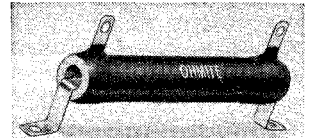
Res. Ohms	Max. Amps.	Fixed Resist.		Adj. Resist.	
		Stock No.	Net 1-9	Stock No.	Net 1-9
1	5.00	0200J	\$0.72	0360	\$1.29
2	3.54	0200K	.72	0360B	1.29
3	2.88	0200L	.72	0361	1.29
5	2.24	0200A	.72	0362	1.29
7.5	1.82			0362B	1.29
10	1.58	0200B	.72	0363	1.29
15	1.29	0200R	.72	0364	1.29
20	1.12			0364B	1.29
25	1.00	0200C	.72	0365	1.29
50	.71	0200D	.72	0366	1.29
75	.58	0200E	.72	0367	1.29
100	.50	0200F	.72	0368	1.29
150	.41	0200G	.72	0369	1.29
200	.35	0200H	.72	0370	1.29
250	.32	0201	.72	0371	1.29
300	.29			0371B	1.29
400	.25			0371C	1.29
500	.22	0202	.72	0372	1.29
750	.18	0203	.72	0373	1.29
800	.17	0204	.72	0374	1.29
1,000	.16	0205	.72	0375	1.29
1,250	.14			0375B	1.32
1,500	.13	0206	.75	0376	1.32
2,000	.12	0207	.75	0377	1.32
2,250	.11			0377B	1.32
2,500	.10	0208	.75	0378	1.32
3,000	.091	0209	.75	0379	1.32
3,500	.084	0210	.75	0380	1.32
4,000	.079	0211	.75	0381	1.32
4,500	.074			0381B	1.32
5,000	.070	0212	.75	0382	1.32
6,000	.064	0213	.85	0383	1.42
7,000	.060			0383B	1.42
7,500	.057	0214	.85	0384	1.42
8,000	.055			0384B	1.42
9,000	.052			0384C	1.42
10,000	.050	0215	.85	0385	1.42
12,000	.042	0216	.90	0386	1.47
15,000	.036	0217	.90	0387	1.47
20,000	.031	0218	.90	0388	1.47
25,000	.028	0219	1.04	0389	1.61
40,000	.022	0222	1.04		
50,000	.020	0224	1.21		
100,000	.010	0229	1.64		

### 50 WATT SIZE RESISTOR

Core: 4" x 3/8" — Mounting Centers 4 3/4"

Res. Ohms	Max. Amps.	Fixed Resist.		Adj. Resist.	
		Stock No.	Net 1-9	Stock No.	Net 1-9
5	3.16	0400A	\$1.11	0560	\$1.68
10	2.23	0400B	1.11	0561	1.68
25	1.41	0400C	1.11	0562	1.68
50	1.00	0400D	1.11	0563	1.68
75	.82	0400E	1.11	0564	1.68
100	.71	0400F	1.11	0565	1.68
150	.58	0400G	1.11	0566	1.68
200	.50	0400H	1.11	0567	1.68
250	.45	0401	1.11	0568	1.68
300	.41			0568B	1.68
400	.35			0568C	1.68
500	.32	0402	1.11	0569	1.68
750	.26	0403	1.11	0570	1.68
1,000	.22	0405	1.11	0572	1.68
1,250	.20			0572B	1.71
1,500	.18	0406	1.14	0573	1.71
2,000	.16	0407	1.14	0574	1.71
2,500	.14	0408	1.14	0575	1.71
3,000	.13	0409	1.14	0576	1.71
3,500	.12			0576B	1.71
4,000	.11	0410	1.14	0577	1.71
4,500	.10			0577B	1.71
5,000	.10	0411	1.14	0578	1.71
6,000	.091			0578B	1.80
7,000	.084			0578C	1.80
7,500	.081	0412	1.23	0579	1.80
8,000	.079	0413	1.23	0580	1.80
9,000	.074			0580B	1.80
10,000	.071	0414	1.23	0581	1.80
12,000	.064	0415	1.35	0582	1.92
15,000	.057	0416	1.35	0583	1.92
20,000	.050	0417	1.35	0584	1.92
25,000	.045	0418	1.54	0585	2.11
30,000	.036			0586	2.11
35,000	.032	0419	1.54		
40,000	.029			0587	2.11
50,000	.026	0420	1.72	0588	2.29
60,000	.024			0589	2.29
75,000	.021	0421	1.97		
80,000	.021			0590	2.54
100,000	.018	0422	2.13	0591	2.70

These all-welded construction resistors have welded high-strength alloy terminals. For perfect electrical connection, the resistance wire is welded to the terminal. Units are wire-wound on ceramic cores and protected by Ohmite Vitreous Enamel. Furnished with mounting brackets and on DIVID-OHM with one adjustable lug.



### 75 WATT SIZE — Dividohm

Core: 6" x 1/8" — Mounting Centers 6 3/4"

Res. Ohms	Max. Amps.	Adjustable Res.		Stock No.	Res. Ohms	Max. Amps.	Adjustable Res.		Stock No.
		Res.	Max.				Res.	Max.	
5	3.87	0769	5,000	.12	0783	6,000	.11	0783B	
10	2.74	0770	7,000	.10	0783C	7,500	.10	0784	
15	2.24	0771	8,000	.096	0784B	8,000	.096	0784B	
25	1.73	0772	9,000	.091	0784C	9,000	.091	0784C	
50	1.22	0773	10,000	.086	0785	10,000	.086	0785	
100	.86	0774	12,000	.079	0785B	15,000	.070	0786	
200	.61	0774B	20,000	.061	0787	25,000	.054	0788	
250	.55	0775	30,000	.050	0789	35,000	.046	0790	
300	.50	0775B	40,000	.043	0791	45,000	.035	0792	
400	.43	0775C	50,000	.033	0793	60,000	.030	0794	
500	.39	0776	80,000	.026	0795	100,000	.023	0796	
750	.32	0777							
1,000	.27	0778							
1,250	.24	0778B							
1,500	.22	0779							
2,000	.19	0780							
2,500	.17	0781							
3,000	.16	0781B							
3,500	.15	0782							
4,000	.14	0782B							

Net (1-9), 5 thru 1,000 ohms ..... \$1.87  
 Net (1-9), 1,250 thru 5,000 ohms ..... 1.92  
 Net (1-9), 6,000 thru 10,000 ohms ..... 2.01  
 Net (1-9), 12,000 thru 20,000 ohms ..... 2.13  
 Net (1-9), 25,000 thru 40,000 ohms ..... 2.32  
 Net (1-9), 45,000 thru 60,000 ohms ..... 2.52  
 Net (1-9), 80,000 ohms ..... 2.78  
 Net (1-9), 100,000 ohms ..... 2.93

### 100 WATT SIZE RESISTOR

Core: 6 1/2" x 3/8" — Mounting Centers 7 3/4"

Res. Ohms	Max. Amps.	Fixed Resist.		Adj. Resist.	
		Stock No.	Net 1-9	Stock No.	Net 1-9

# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r.f. chokes



## FIXED AND DIVIDOHM® RESISTORS (CONT.)

### 160 WATT SIZE RESISTOR

Core: 8 1/2" x 1 1/4" - Mounting Centers 9 3/4"

Res. Ohms	Max. Amps.	Fixed Resist.		Adj. Resist.	
		Stock No.	Net 1-9	Stock No.	Net 1-9
5	5.66	0700A	\$3.19	1156	\$4.07
10	4.00	0700B	2.28	1157	3.16
25	2.53	0701	2.28	1158	3.16
50	1.79	0702	2.28	1159	3.16
75	1.46	0703	2.28		
100	1.26	0704	2.28	1160	3.16
150	1.03	0705	2.28		
250	.80	0706	2.28	1160B	3.16
500	.57	0707	2.28	1161	3.16
750	.46	0708	2.28		
1,000	.40	0709	2.28	1162	3.16
1,500	.33	0710	2.32	1162B	3.20
2,000	.28	0711	2.32		
2,500	.25	0712	2.32	1163	3.20
3,000	.23	0713	2.32		
5,000	.18	0714	2.32	1164	3.20
7,500	.15	0715	2.53		
10,000	.13	0716	2.53	1165	3.41
15,000	.10	0717	2.71	1166	3.59
20,000	.089	0718	2.71	1167	3.59
25,000	.080	0719	2.80	1168	3.68
30,000	.073	0720	2.80	1169	3.68
40,000	.063	0721	2.80	1170	3.68
50,000	.057	0722	2.89	1171	3.77
60,000	.051	0723	2.89		
75,000	.046	0724	3.08	1172	3.96
100,000	.040	0725	3.26	1173	4.14

### 200 WATT SIZE RESISTOR

Core: 10 1/2" x 1 1/4" - Mounting Centers 11 3/4"

Res. Ohms	Max. Amps.	Fixed Resist.		Adj. Resist.	
		Stock No.	Net 1-9	Stock No.	Net 1-9
5	6.32	0900A	\$3.44	1356	\$4.32
10	4.47	0900B	2.46	1357	3.34
25	2.83	0901	2.46	1358	3.34
50	2.00	0902	2.46	1359	3.34
75	1.64	0903	2.46		
100	1.41	0904	2.46	1360	3.34
150	1.15	0905	2.46		
250	.89	0906	2.46	1360B	3.34
500	.63	0907	2.46	1361	3.34
750	.52	0908	2.46		
1,000	.45	0909	2.46	1362	3.34
1,500	.37	0910	2.53	1362B	3.41
2,000	.32	0911	2.53		
2,500	.28	0912	2.53	1363	3.41
3,000	.258	0913	2.53		
5,000	.20	0914	2.53	1364	3.41
7,500	.16	0915	2.71		
10,000	.14	0916	2.71	1365	3.59
15,000	.12	0917	2.89	1366	3.77
20,000	.10	0918	2.89	1367	3.77
25,000	.089	0919	2.98	1368	3.86
30,000	.082	0920	2.98	1369	3.86
40,000	.071	0921	2.98	1370	3.86
50,000	.063	0922	3.08	1371	3.96
60,000	.058	0923	3.08		
75,000	.052	0924	3.26	1372	4.14
100,000	.045	0925	3.46	1373	4.34

### 8 Watt—1" x 5/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
1	2.83	200	.20	2,250	.059
1.5	2.30	225	.18	2,500	.056
2	2.00	250	.17	3,000	.051
3	1.63	300	.16	3,500	.047
4	1.41	350	.15	4,000	.044
5	1.26	400	.14	4,500	.042
7.5	1.00	450	.13	5,000	.040
10	.89	500	.12	6,000	.036
12	.81	600	.11	7,000	.033
15	.73	700	.11	7,500	.032
20	.63	750	.10	8,000	.031
25	.56	800	.10	9,000	.029
30	.51	900	.094	10,000	.028
35	.47	1,000	.089	12,500	.025
40	.44	1,100	.085	15,000	.023
50	.40	1,200	.081	17,500	.021
75	.32	1,250	.080	20,000	.020
100	.28	1,500	.073	22,500	.018
125	.25	1,750	.067	25,000	.017
150	.23	2,000	.063		
Net (1-9), 1 thru 1,000 ohms ..... \$0.52					
Net (1-9), 1,100 thru 5,000 ohms ..... .55					
Net (1-9), 6,000 thru 10,000 ohms ..... .58					
Net (1-9), 12,500 thru 20,000 ohms ..... .58					
Net (1-9), 22,500 and 25,000 ohms ..... .65					

## Popular OHMITE "BROWN DEVIL"® RESISTORS



### 3 Watt—7/16" x .20" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
1.0	1.73	24	.35	510	.077
1.1	1.65	27	.33	560	.073
1.2	1.58	30	.32	620	.070
1.3	1.52	33	.30	680	.067
1.5	1.41	36	.29	750	.063
1.6	1.37	39	.28	820	.060
1.8	1.29	43	.26	910	.057
2.0	1.22	47	.25	1,000	.055
2.2	1.17	51	.24	1,100	.052
2.4	1.12	56	.23	1,200	.050
2.7	1.05	62	.22	1,300	.048
3.0	1.00	68	.21	1,500	.045
3.3	.95	75	.20	1,600	.043
3.6	.91	82	.19	1,800	.042
3.9	.88	91	.18	2,000	.039
4.3	.83	100	.17	2,200	.037
4.7	.80	110	.16	2,400	.035
5.1	.77	120	.16	2,700	.033
5.6	.73	130	.15	3,000	.032
6.2	.69	150	.14	3,300	.030
6.8	.66	160	.14	3,600	.029
7.5	.63	180	.13	3,900	.028
8.2	.60	200	.12	4,300	.026
9.1	.57	220	.12	4,700	.025
10	.55	240	.11	5,100	.024
11	.52	270	.11	5,600	.023
12	.50	300	.10	6,200	.022
13	.48	330	.095	6,800	.021
15	.45	360	.091	7,500	.020
16	.43	390	.088	8,200	.019
18	.42	430	.083	9,100	.018
20	.39	470	.080	10,000	.017
22	.37				

Net (1-9), 1 thru 1,000 ohms ..... \$0.49  
 Net (1-9), 1,100 thru 4,700 ohms ..... .52  
 Net (1-9), 5,100 thru 10,000 ohms ..... .55

### 5 1/4 Watt—5/8" x 1/4" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
1.0	2.29	30	.42	820	.080
1.1	2.19	33	.40	910	.076
1.2	2.09	36	.38	1,000	.072
1.3	2.01	39	.37	1,100	.069
1.5	1.87	43	.35	1,200	.066
1.6	1.81	47	.33	1,300	.064
1.8	1.71	51	.32	1,500	.059
2.0	1.62	56	.31	1,600	.057
2.2	1.54	62	.29	1,800	.054
2.4	1.48	68	.28	2,000	.051
2.7	1.39	75	.27	2,200	.049
3.0	1.32	82	.25	2,400	.047
3.3	1.24	91	.24	2,700	.044
3.6	1.21	100	.23	3,000	.042
3.9	1.16	110	.22	3,300	.040
4.3	1.10	120	.21	3,600	.038
4.7	1.06	130	.20	3,900	.037
5.1	1.01	150	.19	4,300	.035
5.6	.97	160	.18	4,700	.033
6.2	.92	180	.17	5,100	.032
6.8	.88	200	.16	5,600	.031
7.5	.84	220	.16	6,200	.029
8.2	.80	240	.15	6,800	.028
9.1	.76	270	.14	7,500	.027
10	.72	300	.13	8,200	.025
11	.69	330	.12	9,100	.024
12	.66	360	.12	10,000	.023
13	.64	390	.12	11,000	.022
15	.59	430	.11	12,000	.021
16	.57	470	.11	13,000	.020
18	.54	510	.10	15,000	.019
20	.51	560	.097	16,000	.018
22	.49	620	.092	18,000	.017
24	.47	680	.088	20,000	.016
27	.44	750	.084		

Net (1-9), 1 thru 1,000 ohms ..... \$0.52  
 Net (1-9), 1,100 thru 4,700 ohms ..... .55  
 Net (1-9), 5,100 thru 10,000 ohms ..... .58  
 Net (1-9), 11,000 thru 20,000 ohms ..... .65

High quality, small size, wire-wound resistors ideal for voltage dropping, bias units, bleeders, etc. They're extra-sturdy, all-ceramic, vitreous enameled. These all-welded construction units have welded high-strength alloy terminals. For perfect electrical connection, the resistance wire is welded to the terminal. They give time-proved protection against shock, vibration, heat and humidity. Their long record of continuous trouble-free service—their wide use in all climates of the world—prove their complete reliability and economy. All units can be conveniently mounted by means of their 1 1/2" tinned wire leads. Standard resistance tolerance is ±5%.

### 12 Watt—1 3/4" x 5/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
0.5	4.90	300	.20	6,000	.044
1	3.46	350	.18	7,000	.041
1.5	2.82	400	.17	7,500	.040
2	2.45	450	.16	8,000	.038
3	2.00	500	.15	8,500	.037
4	1.73	600	.14	9,000	.036
5	1.54	700	.13	10,000	.035
7.5	1.26	750	.12	11,000	.033
10	1.09	800	.12	12,000	.031
12	1.00	900	.11	12,500	.031
15	.89	1,000	.11	13,500	.029
20	.77	1,100	.10	15,000	.028
25	.69	1,200	.10	16,000	.027
30	.63	1,250	.097	17,500	.026
35	.58	1,500	.089	18,000	.025
40	.54	1,750	.082	20,000	.024
50	.49	2,000	.077	22,500	.023
75	.40	2,250	.073	25,000	.022
100	.34	2,500	.069	30,000	.020
125	.31	3,000	.063	35,000	.018
150	.28	3,500	.058	40,000	.017
200	.24	4,000	.054	45,000	.016
225	.23	4,500	.051	50,000	.015
250	.22	5,000	.049		

Net (1-9), 0.5 thru 1,000 ohms ..... \$0.57  
 Net (1-9), 1,100 thru 5,000 ohms ..... .61  
 Net (1-9), 6,000 thru 10,000 ohms ..... .70  
 Net (1-9), 11,000 thru 20,000 ohms ..... .79  
 Net (1-9), 22,500 thru 40,000 ohms ..... .83  
 Net (1-9), 45,000 and 50,000 ohms ..... .93

### 20 Watt—2" x 7/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
0.5	6.32	800	.15	10,000	.043
1.0	4.47	850	.15	12,500	.035
2.0	3.16	1,000	.14	15,000	.032
3.0	2.58	1,200	.13	20,000	.027
4.0	2.24	1,250	.12	25,000	.024
5	2.00	1,500	.12	30,000	.022
10	1.41	1,750	.11	35,000	.021
25	.89	2,000	.10	40,000	.019
50	.63	2,250	.094	45,000	.018
75	.52	2,500	.089	50,000	.017
100	.45	2,750	.085	55,000	.016
150	.36	3,000	.081	60,000	.016
200	.32	3,500	.075	65,000	.015
250	.28	4,000	.070	70,000	.014
300	.26	4,500	.066		

# OHMITE

resistors • rheostats • tap switches • relays  
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## OHMITE Series 99 Resistors

### SERIES 99 MOLDED VITREOUS AXIAL LEAD RESISTORS



All welded resistors with 1000 v. AC insulation. They meet general requirements of specification MIL-R-263 for RW57, RW58, RW59, RW67, RW68 and RW69. Chip and break resistant, uniformly molded white vitreous enamel protects against moisture, salt spray and immersion. Vitrified markings resist high temperatures, solvents and abrasion. Can be mounted on component clips. **Tolerance:** ± 5%, standard. **Size:** 1.5-watt, 0.422" lg. x 0.125" dia.; 2-watt, 0.375" lg. x 0.188" dia.; 3-watt, 0.547" lg. x 0.203" dia.; 5-watt, 0.938" lg. x 0.203" dia.; 11-watt, 1.781" lg. x 0.312" dia. Tinned leads 1½" lg., #20 AWG except 1-watt, #24 AWG.

#### STYLE 995-1A 1.5-WATT AND STYLE 995-2A 2-WATT

Ohms	Stock Number		Ohms	Stock Number	
	1.5 Watts	2 Watts		1.5 Watts	2 Watts
1.0	4030	3860	75	4087	3918
1.1	4031	3861	82	4089	3920
1.2	4032	3862	91	4091	3922
1.3	4033	3863	100	4092	3923
1.5	4034	3864	110	4093	3924
1.6	4035	3865	120	4094	3925
1.8	4036	3866	130	4095	3926
2.0	4037	3867	150	4096	3927
2.2	4038	3868	160	4097	3928
2.4	4039	3869	180	4098	3929
2.7	4041	3871	200	4099	3930
3.0	4042	3872	220	4100	3931
3.3	4043	3873	240	4101	3932
3.6	4044	3874	250	4102	3933
3.9	4045	3875	270	4103	3934
4.0	4046	3876	300	4104	3935
4.3	4047	3877	330	4105	3936
4.7	4048	3878	350	4105A	3937
5.0	4049	3879	360	4106	3938
5.1	4050	3880	390	4107	3939
5.6	4051	3881	400	4108	3940
6.2	4053	3883	430	4109	3941
6.8	4054	3884	450	4109A	3942
7.5	4056	3886	470	4110	3943
8.2	4058	3888	500	4111	3944
9.1	4060	3890	510	4112	3945
10	4061	3891	560	4113	3946
11	4062	3892	600	4114	3947
12	4063	3893	620	4115	3948
13	4064	3894	680	4116	3949
15	4065	3895	700	4117	3950
16	4066	3896	750	4118	3951
18	4067	3897	800	4119	3952
20	4068	3898	820	4120	3953
22	4069	3899	900	4121	3954
24	4070	3900	910	4122	3955
25	4071	3901	1000	4123	3956
27	4072	3902	1100	4124	3957
30	4073	3903	1200	4125	3958
33	4074	3904	1300	4126	3959
35	4074A	3905	1400	4126A	3960
36	4075	3906	1500	4127	3961
39	4076	3907	1600	4128	3962
40	4077	3908	1800	4129	3963
43	4078	3909	2000	4130	3964
47	4079	3910	2200	4131	3965
50	4080	3911	2400	4132	3966
51	4081	3912	2500	4133	3967
56	4082	3913	2700	4134	3968
62	4084	3915	3000	4135	3969
68	4085	3916			

Values Ohms*	Style 995-1A 1.5 Watt				Style 995-2A 2-Watt			
	1-9	10-24	25-99	100-249	1-9	10-24	25-99	100-249
1-1000	62c	53c	43c	37c	60c	51c	42c	36c
1100-3000	66c	56c	46c	40c	64c	54c	45c	38c

#### STYLE 995-10A 11-WATT

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1.0	4730	10	4761	82	4789	800	4814
1.1	4731	11	4762	91	4791	620	4815
1.2	4732	12	4763	100	4792	680	4816
1.3	4733	13	4764	110	4793	700	4817
1.5	4734	15	4765	120	4794	750	4818
1.6	4735	16	4766	130	4795	800	4819
1.8	4736	18	4767	150	4796	820	4820
2.0	4737	20	4768	160	4797	900	4821
2.2	4738	22	4769	180	4798	910	4822
2.4	4739	24	4770	200	4799	1000	4823
2.7	4741	25	4771	220	4800	1100	4824
3.0	4742	27	4772	240	4801	1200	4825
3.3	4743	30	4773	250	4802	1300	4826
3.6	4744	33	4774	270	4803	1400	4826A
3.9	4745	35	4774A	300	4804	1500	4827
4.0	4746	36	4775	330	4805	1600	4828
4.3	4747	39	4776	350	4805A	1800	4829
4.7	4748	40	4777	360	4806	2000	4830
5.0	4749	43	4778	390	4807	2200	4831
5.1	4750	47	4779	400	4808	2400	4832
5.6	4751	50	4780	430	4809	2500	4833
6.2	4753	51	4781	450	4809A	2700	4834
6.8	4754	56	4782	470	4810	3000	4835
7.5	4756	62	4784	500	4811	3300	4836
8.2	4758	68	4785	510	4812	3500	4836A
9.1	4760	75	4787	560	4813	3600	4837

\*Restricted to those values shown in the table of stock numbers.

#### STYLE 995-3A 3-WATT AND STYLE 995-5B 5-WATT

Ohms	Stock number		Ohms	Stock Number	
	3 Watts	5 Watts		3 Watts	5 Watts
1.0	4330	4530	330	4405	4605
1.1	4331	4531	350	4405A	4605A
1.2	4332	4532	360	4406	4606
1.3	4333	4533	390	4407	4607
1.5	4334	4534	400	4408	4608
1.6	4335	4535	430	4409	4609
1.8	4336	4536	450	4409A	4609A
2.0	4337	4537	470	4410	4610
2.2	4338	4538	500	4411	4611
2.4	4339	4539	510	4412	4612
2.7	4341	4541	560	4413	4613
3.0	4342	4542	600	4414	4614
3.3	4343	4543	620	4415	4615
3.6	4344	4544	680	4416	4616
3.9	4345	4545	700	4417	4617
4.0	4346	4546	750	4418	4618
4.3	4347	4547	800	4419	4619
4.7	4348	4548	820	4420	4620
5.0	4349	4549	900	4421	4621
5.1	4350	4550	910	4422	4622
5.6	4351	4551	1000	4423	4623
6.2	4353	4553	1100	4424	4624
6.8	4354	4554	1200	4425	4625
7.5	4356	4556	1300	4426	4626
8.2	4358	4558	1400	4426A	4626A
9.1	4360	4560	1500	4427	4627
10	4361	4561	1600	4428	4628
11	4362	4562	1800	4429	4629
12	4363	4563	2000	4430	4630
13	4364	4564	2200	4431	4631
15	4365	4565	2400	4432	4632
16	4366	4566	2500	4433	4633
18	4367	4567	2700	4434	4634
20	4368	4568	3000	4435	4635
22	4369	4569	3300	4436	4636
24	4370	4570	3500	4436A	4636A
25	4371	4571	3600	4437	4637
27	4372	4572	3900	4438	4638
30	4373	4573	4000	4439	4639
33	4374	4574	4300	4440	4640
35	4374A	4574A	4500	4440A	4640A
36	4375	4575	4700	4441	4641
39	4376	4576	5000	4442	4642
40	4377	4577	5100	4443	4643
43	4378	4578	5600	4444	4644
47	4379	4579	6000	4445	4645
50	4380	4580	6200	4446	4646
51	4381	4581	6800	4447	4647
56	4382	4582	7000	4448	4648
62	4384	4584	7500	4449	4649
68	4385	4585	8000	4450	4650
75	4387	4587	8200	4451	4651
82	4389	4589	9000	4452	4652
91	4391	4591	9100	4453	4653
100	4392	4592	10,000	4454	4654
110	4393	4593	11,000		4655
120	4394	4594	12,000		4656
130	4395	4595	13,000		4657
150	4396	4596	14,000		4657A
160	4397	4597	15,000		4658
180	4398	4598	16,000		4659
200	4399	4599	17,000		4659B
220	4400	4600	18,000		4660
240	4401	4601	20,000		4661
250	4402	4602	22,000		4662
270	4403	4603	24,000		4663
300	4404	4604	25,000		4664

Values Ohms*	Style 995-3A 3-Watt				Style 995-5B 5-Watt			
	1-9	10-24	25-99	100-249	1-9	10-24	25-99	100-249
1-1000	59c	50c	41c	35c	62c	53c	43c	37c
1100-5000	62c	53c	43c	37c	66c	56c	46c	40c
5100-10,000	66c	56c	46c	40c	70c	60c	49c	42c
11,000-20,000					78c	66c	55c	47c
22,000-25,000					82c	70c	57c	49c

#### STYLE 995-10A 11-WATT (CONTINUED)

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
3900	4838	7000	4848	15,000	4858	35,000	4874A
4000	4839	7500	4849	16,000	4859A	36,000	4868
4300	4840	8000	4850	17,000	4859C	39,000	4869
4500	4840A	8200	4851	18,000	4860	40,000	4870
4700	4841	9000	4852	20,000	4861	43,000	4871
5000	4842	9100	4853	22,000	4862	45,000	4871A
5100	4843	10,000	4854	24,000	4863	47,000	4872
5600	4844	11,000	4855A	25,000	4864	50,000	4873
6000	4845	12,000	4856	27,000	4865	51,000	4874
6200	4846	13,000	4857	30,000	4866		
6800	4847	14,000	4857B	33,000	4867		

Values Ohms*	Net Each, Lots of			
	1-9	10-24	25-99	100-249
1-1000	\$0.68	\$0.58	\$0.48	\$0.41
1100-5000	.73	.62	.51	.44
5100-10,000	.84	.71	.59	.50
11,000-20,000	.95	.81	.67	.57

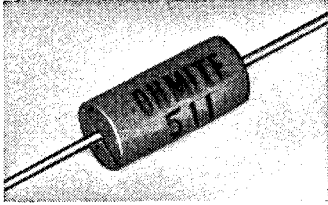


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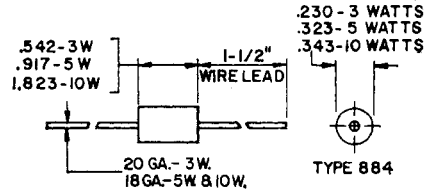
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## RITEOHM® TYPE 884 MOLDED WIREWOUND RESISTORS ± 1% TOLERANCE



These precision power resistors are furnished from stock in power ratings of 3, 5 and 10 watts depending upon resistance. Single layer wound on ceramic core, Type 884 units feature a pressure-molded jacket of tough, resilient, silicone-ceramic material. Negligible inductance at audio frequencies. Temperature coefficient of resistance is  $0 \pm 20 \text{ppm}/^\circ\text{C}$ . Values shown are selected from MIL Standard MS90169, MIL-R-10509 and Bell Tel. Labs.



3 WATT		3 WATT (Cont.)		3 WATT (Cont.)		3 WATT (Cont.)		3 WATT (Cont.)		3 WATT (Cont.)		5 WATT (Cont.)	
Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts
.100	.547	3.40	3.19	16.9	7.12	84.5	15.9	422	35.6	2100	79.4	10,500*	170
.121	.602	3.48	3.23	17.4	7.22	86.6	16.1	432	36.1	2150	80.3	10,700*	170
.150	.670	3.57	3.27	17.8	7.30	88.7	16.3	442	36.4	2210	81.4	11,000*	170
.182	.739	3.65	3.31	18.2	7.39	90.9	16.5	453	36.9	2260	82.3	11,300*	170
.200	.774	3.74	3.35	18.7	7.49	93.1	16.7	464	37.3	2320	83.4	11,500*	170
.221	.814	3.83	3.39	19.1	7.57	95.3	16.9	475	37.7	2370	84.3	11,800*	170
.240	.864	3.92	3.43	19.6	7.66	97.6	17.1	487	38.2	2430	85.4	12,100*	170
.274	.906	4.02	3.47	20.0	7.74	100	17.3	499	38.7	2490	86.4	12,400*	170
.332	.998	4.12	3.51	20.5	7.84	102	17.5	511	39.1	2550	87.4	12,700*	170
.392	1.08	4.22	3.56	21.0	7.94	105	17.7	523	39.6	2610	88.4	13,000*	170
.475	1.19	4.32	3.60	21.5	8.03	107	17.9	536	40.1	2670	89.5	13,300*	170
.499	1.22	4.42	3.64	22.1	8.14	110	18.2	549	40.6	2740	90.6	13,700*	170
.562	1.30	4.53	3.69	22.6	8.23	113	18.4	562	41.0	2800	91.6	14,000*	170
.681	1.43	4.64	3.73	23.2	8.34	115	18.6	576	41.6	2870	92.8	14,300*	170
.750	1.50	4.75	3.77	23.7	8.43	118	18.8	590	42.0	2940	93.9	14,700*	170
.825	1.57	4.87	3.82	24.3	8.54	121	19.1	604	42.5	3010	95.0	15,000*	170
1.00	1.73	4.99	3.87	24.9	8.64	124	19.3	619	43.1	3090	96.2	15,400*	170
1.02	1.75	5.11	3.91	25.5	8.74	127	19.5	634	43.6	3160	97.4	15,800*	170
1.05	1.77	5.23	3.96	26.1	8.84	130	19.7	649	44.1	3240	98.6	16,200*	170
1.07	1.79	5.36	4.01	26.7	8.95	133	20.0	665	44.6	3320	99.8	16,500*	170
1.10	1.82	5.49	4.06	27.4	9.06	137	20.3	681	45.2	3400	101	16,900*	170
1.13	1.84	5.62	4.10	28.0	9.16	140	20.5	698	45.7	3480	102	17,400*	170
1.15	1.86	5.76	4.16	28.7	9.28	143	20.7	715	46.3	3570	103	17,800*	170
1.18	1.88	5.90	4.20	29.4	9.39	147	21.0	732	46.8	3650	105	18,200*	170
1.21	1.91	6.04	4.25	30.1	9.50	150	21.2	750	47.4	3740	106	18,700*	170
1.24	1.93	6.19	4.31	30.9	9.62	154	21.5	768	48.0	3830	107	19,100*	170
1.27	1.95	6.34	4.36	31.6	9.74	158	21.8	787	48.6	3920	108	19,600*	170
1.30	1.97	6.49	4.41	32.4	9.86	162	22.0	806	49.2	4020	110	20,000*	170
1.33	2.00	6.65	4.46	33.2	9.98	165	22.2	825	49.7	4120	111	20,500*	170
1.37	2.03	6.81	4.52	34.0	10.1	169	22.5	845	50.4	4220	112	21,000*	170
1.40	2.05	6.98	4.57	34.8	10.2	174	22.8	866	51.0	4320	114	21,500*	170
1.43	2.07	7.15	4.63	35.7	10.3	178	23.1	887	51.6	4420	115	22,100*	170
1.47	2.10	7.32	4.68	36.5	10.5	182	23.4	909	52.2	4530	117	22,600*	170
1.50	2.12	7.50	4.74	37.4	10.6	187	23.7	931	52.8	4640	118	23,200*	170
1.54	2.15	7.68	4.80	38.3	10.7	191	23.9	953	53.4	4750	119	23,800*	170
1.58	2.18	7.87	4.86	39.2	10.8	196	24.2	976	54.1	4870	121	24,400*	170
1.62	2.20	8.06	4.92	40.2	11.0	200	24.5	1000	54.7	4990	122	25,000*	170
1.65	2.22	8.25	4.97	41.2	11.1	205	24.8	1020	55.3	5110	124	25,600*	170
1.69	2.25	8.45	5.04	42.2	11.2	210	25.1	1050	56.1	5230	125	26,200*	170
1.74	2.28	8.66	5.10	43.2	11.4	215	25.4	1070	56.6	5360	127	26,800*	170
1.78	2.31	8.87	5.16	44.2	11.5	221	25.7	1100	57.4	5490	128	27,400*	170
1.82	2.34	9.09	5.22	45.3	11.7	226	26.0	1130	58.2	5620	130	28,000*	170
1.87	2.37	9.31	5.28	46.4	11.8	232	26.4	1150	58.7	5760	131	28,700*	170
1.91	2.39	9.53	5.34	47.5	11.9	237	26.7	1180	59.5	5900	133	29,400*	170
1.96	2.42	9.76	5.41	48.7	12.1	243	27.0	1210	60.2	6040	134	30,100*	170
2.00	2.45	10.0	5.47	49.9	12.2	249	27.3	1240	61.0	6190	136	30,900*	170
2.05	2.48	10.2	5.53	51.1	12.4	255	27.7	1270	61.7	6340	138	31,700*	170
2.10	2.51	10.5	5.61	52.4	12.5	261	28.0	1300	62.4	6490	140	32,500*	170
2.15	2.54	10.7	5.66	53.6	12.7	267	28.3	1330	63.2	6650	141	33,300*	170
2.21	2.57	11.0	5.74	54.9	12.8	274	28.7	1370	64.1	6810	143	34,200*	170
2.26	2.60	11.3	5.82	56.2	13.0	280	29.0	1400	64.8	6980	145	35,100*	170
2.32	2.64	11.5	5.87	57.6	13.1	287	29.3	1430	65.5	7,150	146	36,000*	170
2.37	2.67	11.8	5.95	59.0	13.3	294	29.7	1470	66.4	7,320	148	36,900*	170
2.43	2.70	12.1	6.02	60.4	13.4	301	30.0	1500	67.0	7,500	150	37,800*	170
2.49	2.73	12.4	6.10	61.9	13.6	309	30.4	1540	68.0	7,680	152	38,700*	170
2.55	2.77	12.7	6.17	63.4	13.8	316	30.8	1580	68.8	7,870	154	39,600*	170
2.61	2.80	13.0	6.24	64.9	13.9	324	31.2	1620	69.7	8,060	155	40,500*	170
2.67	2.83	13.3	6.32	66.5	14.1	332	31.6	1650	70.3	8,250	157	41,400*	170
2.74	2.87	13.7	6.41	68.1	14.3	340	31.9	1690	71.2	8,450	159	42,300*	170
2.80	2.90	14.0	6.48	69.8	14.5	348	32.3	1740	72.2	8,650	161	43,200*	170
2.87	2.93	14.3	6.55	71.5	14.6	357	32.7	1780	73.0	8,870	163	44,100*	170
2.94	2.97	14.7	6.64	73.2	14.8	365	33.1	1820	73.9	9,090	165	45,000*	170
3.01	3.00	15.0	6.70	75.0	15.0	374	33.5	1870	74.9	9,310	167	45,900*	170
3.09	3.04	15.4	6.80	76.8	15.2	383	33.9	1910	75.7	9,530	169	46,800*	170
3.16	3.08	15.8	6.89	78.7	15.4	392	34.3	1960	76.6	9,760*	170	47,700*	170
3.24	3.12	16.2	6.97	80.6	15.5	402	34.7	2000	77.4	10,000*	170	48,600*	170
3.32	3.16	16.5	7.03	82.5	15.7	412	35.1	2050	78.4	10,200*	170	49,500*	170

### TYPE 884 NET PRICES

.10 thru .99 ohms .....Net 1-24 \$1.98	15,001 thru 20K ohms .....Net 1-24 .88	100,001 thru 125K ohms .....Net 1-24 1.33
1.0 thru 1K ohms .....Net 1-24 .71	20,001 thru 40K ohms .....Net 1-24 .93	125,001 thru 150K ohms .....Net 1-24 1.45
1,001 thru 5K ohms .....Net 1-24 .78	40,001 thru 55K ohms .....Net 1-24 1.00	150,001 thru 175K ohms .....Net 1-24 1.59
5,001 thru 10K ohms .....Net 1-24 .82	55,001 thru 75K ohms .....Net 1-24 1.10	175,001 thru 200K ohms .....Net 1-24 1.73
10,001 thru 15K ohms .....Net 1-24 .84	75,001 thru 100K ohms .....Net 1-24 1.21	

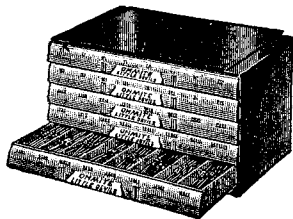
Resistance values marked \* are derated in wattage because of maximum voltage gradient considerations. Even with these voltage limitations, however, the wattage ratings are still adequate for most precision applications. However, where wattage requirements dictate, the same value shown in a derated area for either the 3 or 5 watt sizes can be supplied in the next higher wattage as the case may be.

# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r. f. chokes



## LITTLE DEVIL® RESISTOR ASSORTMENTS FOR SERVICE USE

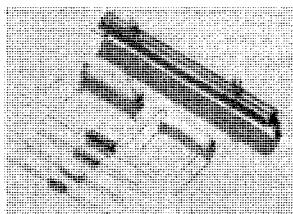


Servicemen's assortments of 150 Ohmite "Little Devil," 1/4-watt or 1/2-watt, or 125, 1-watt or 2-watt insulated composition resistors, in the 40 values (10 ohms to 10 megohms) most frequently used by servicemen. CAB-4 has 37 resistance values. The assortment is offered at the price of the resistors alone—the cabinet is furnished without extra cost! Cabinet is only 9" long, 4 3/4" high, and 5 1/4" deep.

sortment is offered at the price of the resistors alone—the cabinet is furnished without extra cost! Cabinet is only 9" long, 4 3/4" high, and 5 1/4" deep.

Assortment	Stock No.	Quantity of Resistors	Wattages	Net Price
SERVICE	CAB-4	150	1/4 watt	\$19.50
±10% tolerance (40 resistance values)	CAB-10	150	1/2 watt	18.00
	CAB-2	125	1 watt	22.50
	CAB-3	125	2 watt	30.00

## OHMITE R.F. PLATE CHOKES



This series of seven Ohmite single layer wound solenoid radio frequency plate chokes covers the entire frequency range of 3 to 520 megacycles. The four highest frequency chokes are wound on low power factor plastic cores while the other three units are wound on steatite tubes. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

the other three units are wound on steatite tubes. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

Stock Number	Operating Range Megacycles	Microhenries	Core Dimensions	Net Each 1-9
Z-7	3 to 20 Mc.	84.0	5" x 9/16"	\$1.37
Z-14	7 to 35 Mc.	44.6	2" x 1/16"	.68
Z-28	20 to 60 Mc.	21.0	1 3/8" x 1/16"	.57
Z-50	35 to 110 Mc.	7.0	3/4" x 1/32"	.46
Z-144	80 to 200 Mc.	1.8	3/4" x 1/16"	.43
Z-235	160 to 350 Mc.	0.84	3/4" x 1/16"	.43
Z-460	320 to 520 Mc.	0.20	1/2" x 1/32"	.43

Non-magnetic Brackets Furnished with Z-7. The Z-14 and Z-28 are rated at 600 ma. All others 1000 ma.

## NEW OHM'S LAW CALCULATOR

Redesigned! This new, improved version of the famous Ohmite Ohm's Law Calculator — popular the world over with servicemen, engineers and students — now has scales for solving parallel resistance problems, AND a standard slide rule. More useful than ever! With one setting of the scale the calculator gives the answer to any Ohm's Law problem—reading directly in ohms, volts, amperes, and watts. Three of the new scales on the back provide a quick, one-setting means of solving parallel resistance problems. The slide rule scales will multiply, divide, find squares, and square roots.



Ohm's Law Calculator (Cardboard) ..... Net Price \$0.25

Ohm's Law Calculator (Plastic) ..... Net Price 1.50

## LITTLE DEVIL COLOR CODER



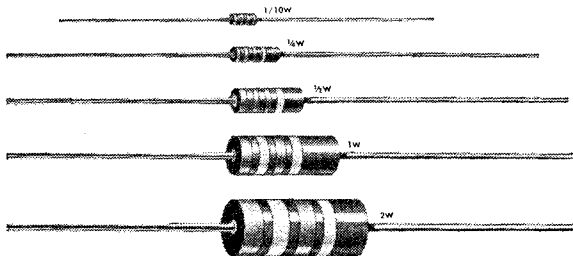
Here is a handy little device that makes it easy to determine the resistance and tolerance

values of EIA color coded composition resistors. Just turn the color wheels until the color corresponds to the color band on the resistor and read the resistance value directly in ohms in the windows.

Little Devil Color Coder... Net Price \$ .10

## OHMITE LITTLE DEVIL RESISTORS

MOLDED COMPOSITION TYPE



on Tally Tape

Now Includes MIL-R-11 Types

Ohmite's famous molded composition resistors, in the 1/4, 1/2, 1 and 2-watt sizes, conform respectively to Styles RC07, RC20, RC32 and RC42 of MIL-R-11E and meet all the requirements of this military specification.

Little Devils have molded insulation except for the 1/10 watt size which is coated with insulating material. Features: Great stability low noise level, low voltage coefficient, high insulation breakdown voltage and rapid heat dissipation. They may be used at full rated wattage at 70°C (158°F) ambient temperature.

Available from stock in the standard EIA resistance values in the tolerances and resistance ranges shown in the price table below. Ratings for maximum continuous RMS voltage drop are high: 15 volts for 1/10 watt units, 250 volts for 1/4 watt, 350 volts for 1/2 watt 500 volts for 1 watt and 750 volts for 2 watt units.

### STANDARD EIA VALUES

Figures in large, bold type are ±10% EIA values. All values listed are ±5% values. Price table lists the various "Little Devil" sizes and indicates the tolerances and resistance ranges in which they are supplied.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs.	Megs.
1.0	9.1	82	680	5600	47000	0.36	3.0
1.1	10	91	750	6200	51000	0.39	3.3
1.2	11	100	820	6800	56000	0.43	3.6
1.3	12	110	910	7500	62000	0.47	3.9
1.5	13	120	1000	8200	68000	0.51	4.3
1.6	15	130	1100	9100	75000	0.56	4.7
1.8	16	150	1200	10000	82000	0.62	5.1
2.0	18	160	1300	11000	91000	0.68	5.6
2.2	20	180	1500	12000		0.75	6.2
2.4	22	200	1600	13000		Megs.	6.8
2.7	24	220	1800	15000	0.1	0.91	7.5
3.0	27	240	2000	16000	0.11	1.0	8.2
3.3	30	270	2200	18000	0.12	1.1	9.1
3.6	33	300	2400	20000	0.13	1.2	10.0
3.9	36	330	2700	22000	0.15	1.3	11.0
4.3	39	360	3000	24000	0.16	1.5	12.0
4.7	43	390	3300	27000	0.18	1.6	13.0
5.1	47	430	3600	30000	0.20	1.8	15.0
5.6	51	470	3900	33000	0.22	2.0	16.0
6.2	56	510	4300	36000	0.24	2.2	18.0
6.8	62	560	4700	39000	0.27	2.4	20.0
7.5	68	620	5100	43000	0.30	2.7	22.0
8.2	75				0.33		

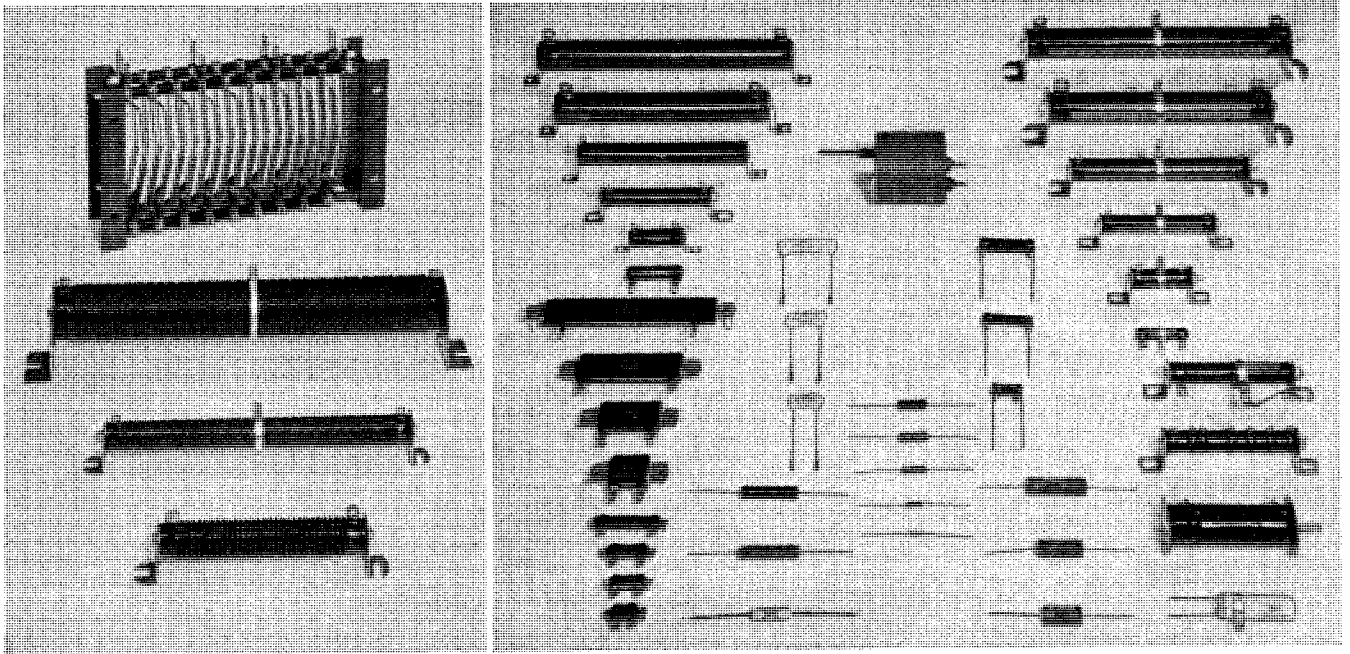
### PRICES, RESISTANCE RANGES, DIMENSIONS

Size Watts	Size		Resistance Range From Thru	MIL Type	±5%		±10%	
	Lgth.	Dia.			Net 1-4	Net 5-49	Net 1-4	Net 5-49
1/10	.140"	.067"	10 ohms 1.0 meg	—	—	—	24c LIDVS	20c LIDV
1/4	1/4"	.090"	2.7 ohms 24 ohms	RC 07*	29c LIDED	24c LIDED	14c LIDSM	12c LIDS'
			27 ohms 22 megs	RC 07	26c LIDED	22c LIDED	13c LIDSM	11c LIDS
1/2	3/8"	3/64"	1 ohm 2.4 ohms	RC 20*	26c LIDFA	22c LIDFA	13c LIDL0	11c LIDL1
			2.7 ohms 22 megs		24c LIDFA	20c LIDFA	12c LIDL0	10c LIDL
1	3/16"	7/32"	2.7 ohms 22 megs	RC 32	36c LIDBU	30c LIDBU	18c LIDME	15c LIDN
2	1/16"	5/16"	10 ohms 22 megs	RC 42	48c LIDOC	40c LIDOC	24c LIDH1	20c LIDI

\*Minimum resistance under MIL-R-11E is 2.7 ohms.

Leads 1 1/2" lc

# MILWAUKEE "Fire-tested" RESISTORS



**TUBULAR—Round Wire:** Vitreous Enamel—Fixed and Adjustable—5 thru 1500 Watts. Taps and non-inductive winding available.

**TUBULAR—Ribwound:** Vitreous Enamel—Fixed and Adjustable—35 thru 2000 Watts. Taps and non-inductive winding available.

**OVAL:** Vitreous Enamel—Fixed and Adjustable—10 thru 75 Watts. Taps and non-inductive winding available.

**AXIAL LEADS:** Vitreous Enamel—Fixed only—1 thru 30 Watts. Non-inductive winding available.

**"W" SERIES:** Silicone Coat—Fixed only—5 thru 30 Watts. Taps and non-inductive winding available.

**"BATHTUB":** Ceramic Case—Fixed only—4 thru 20 Watts.

**"ENCAPSULATED":** (in Ceramic Core)—Fixed only—5 thru 100 Watts.

**"TOPSIDE":** Ceramic Outer Tube—Fixed only—10 thru 25 Watts.

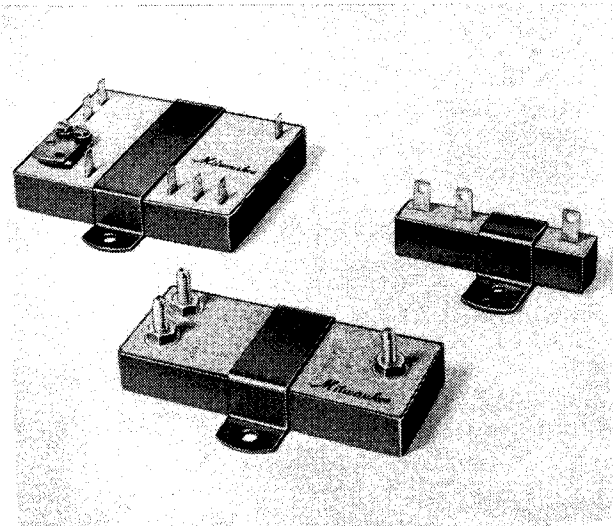
**STRIP:** Cement and Sand or Silicone Coat—Fixed—2 thru 30 Watts. Taps available.

**FUSE RESISTORS:** Strip Type—Cement and Sand Coat 4.7 thru 150 Ohms. Patented no-flame construction.

**HEAVY-DUTY GRID RESISTORS:** For Motor Control, Non-inductive Load Banks, Welders, etc.

**RHEOSTATS:** Heavy-duty push-pull type.

ALSO MIL-R-26C and NAVY TYPE 15109A RESISTORS



## Heat-Sink Type Resistors with Potted Winding in Metal Casing

### 25 watts and up

Heavy duty resistors with the resistance winding imbedded in a high grade potting compound. The resistors are especially useful where extremely heavy-duty operation is required and where one or more resistors are desired in one case. Ratings start at 25 watts. The resistors can be furnished with quick-connect terminals, standard tabs, or studs.

# MILWAUKEE RESISTOR COMPANY

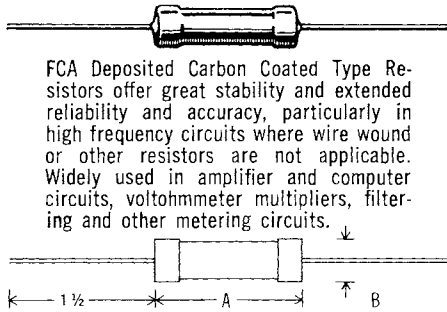
Milwaukee, Wisconsin

# PENN

**RESISTOR CORP.** designs and produces Fixed Film and Precision Power Wire Wound Resistors to deliver total performance under all operating conditions. Each step of manufacture, from the selection of materials through final testing and inspection, contributes to PENN's consistent delivery of the most quality, reliability and stability for the price. Whatever your application, it will pay you to contact PENN. Write, or call 215-855-9516.

## FIXED FILM FCA

## ELECTRICAL & MECHANICAL DIMENSIONS

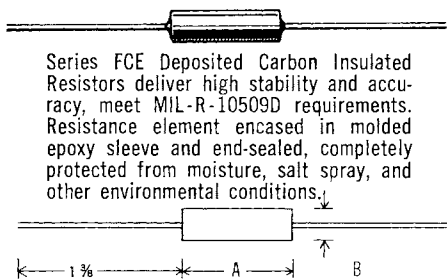


FCA Deposited Carbon Coated Type Resistors offer great stability and extended reliability and accuracy, particularly in high frequency circuits where wire wound or other resistors are not applicable. Widely used in amplifier and computer circuits, voltohmmeter multipliers, filtering and other metering circuits.

TYPE	WATTS @ 70°C	W.V. D.C.	RESISTANCE		DIMENSIONS	
			MIN.	MAX.	"A"	"B"
FCA05	1/8	250	2.7	1 M	5/16" ± 1/16"	3/32" + 1/16" - 1/32"
FCA10	1/4	300	2.7	2 M	3/8" ± 1/16"	1 1/4" + 1/16" - 1/32"
FCA15	1/2	350	2.7	5 M	5/8" ± 1/16"	1 1/4" + 1/16" - 1/32"
FCA25	1	500	2.7	10 M	1 1/16" ± 1/16"	1 3/4" + 1/16" - 1/32"
FCA30	2	750	5	50 M	2 1/16" ± 1/16"	1 3/4" + 1/16" - 1/32"

## FIXED FILM FCE

## ELECTRICAL & MECHANICAL DIMENSIONS

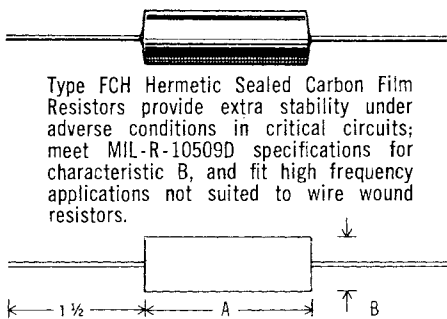


Series FCE Deposited Carbon Insulated Resistors deliver high stability and accuracy, meet MIL-R-10509D requirements. Resistance element encased in molded epoxy sleeve and end-sealed, completely protected from moisture, salt spray, and other environmental conditions.

TYPE	WATTS @ 70°C	W.V. D.C.	RESISTANCE		DIMENSIONS	
			MIN.	MAX.	"A" ± .031"	"B" ± .015"
FCE05	1/8	250	2.7	1 M	.375"	.140"
FCE10	1/4	300	2.7	2 M	.531"	.203"
FCE15	1/2	350	2.7	5 M	.750"	.203"
FCE25	1	500	2.7	10 M	1.062"	.375"
FCE30	2	750	5	50 M	2.187"	.375"

## HERMETIC SEALED FCH

## ELECTRICAL & MECHANICAL DIMENSIONS



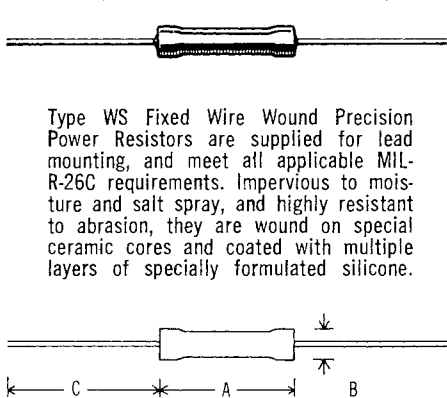
Type FCH Hermetic Sealed Carbon Film Resistors provide extra stability under adverse conditions in critical circuits; meet MIL-R-10509D specifications for characteristic B, and fit high frequency applications not suited to wire wound resistors.

TYPE	WATTS @ 70°C	W.V. D.C.	RESISTANCE		DIMENSIONS	
			MIN.	MAX.	"A"	"B"
FCH05	1/8	250	10	1 M	3/8" + 1/16" - 1/32"	1/8" + .040 - .011
FCH10	1/4	300	10	2 M	5/8" + 1/16" - 1/32"	3/16" + 1/16" - 1/32"
FCH15	1/2	350	10	2.37 M	3/4" ± 1/16"	1/4" + 1/16" - 1/32"
FCH25	1	500	50	10 M	1 1/16" ± 1/16"	3/8" + 1/16" - 1/32"
FCH30	2	750	100	20 M	2 3/16" ± 1/16"	3/8" + 1/16" - 1/32"

Leads: #22 AWG Tinned Copper on 1/8 watt, #2 AWG on others.

## WIRE WOUND WS

## ELECTRICAL & MECHANICAL DIMENSIONS



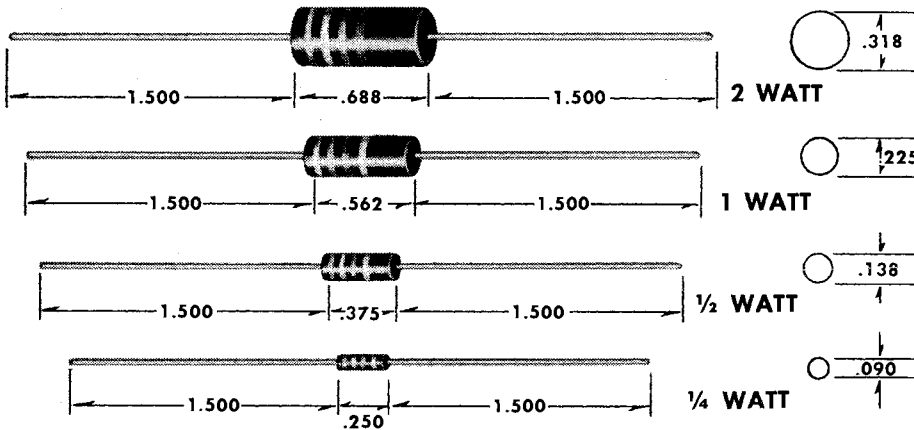
Type WS Fixed Wire Wound Precision Power Resistors are supplied for lead mounting, and meet all applicable MIL-R-26C requirements. Impervious to moisture and salt spray, and highly resistant to abrasion, they are wound on special ceramic cores and coated with multiple layers of specially formulated silicone.

TYPE	WATTS @ 25°C	W.V. D.C.	RESISTANCE RANGE	DIMENSIONS		
				"A"	"B"	"C"
WS15	1/2	20	0.5 Ω to 5 K	1 3/32" ± 1/32"	3/32" ± 1/64"	#24-1 1/2"
WS25	1	35	0.5 Ω to 20 K	1 1/32" ± 1/32"	3/32" ± 1/32"	#24-1 1/2"
WS30	2	100	0.5 Ω to 25 K	1 3/16" ± 1/16"	3/16" ± 1/32"	#20-1 1/2"
WS35	2.5	100	0.5 Ω to 10 K	1 1/2" ± 1/16"	3/16" ± 1/32"	#20-1 1/2"
WS40	3	130	0.5 Ω to 30 K	5/8" ± 1/16"	1/4" ± 1/32"	#18-2"
WS50	5	250	0.5 Ω to 50 K	7/8" ± 1/16"	3/16" ± 1/32"	#18-2"
WS70	7	350	0.5 Ω to 75 K	1 1/32" ± 1/16"	3/16" ± 1/32"	#18-2"
WS100	10	650	0.5 Ω to 250 K	1 2 3/32" ± 1/16"	3/8" ± 1/32"	#18-2"



# STACKPOLE

**FIXED  
COMPOSITION  
RESISTORS**



Stackpole Coldite 70+ Resistors offer superior performance in terms of load life, moisture resistance, shelf life, and other important characteristics. Available in 1/4, 1/2, 1, and 2 watt insulated types in resistance values with 5%, 10% and 20% tolerances as shown below.

**EASIEST SOLDERING**

is assured thanks to an exclusive extra solder coating applied after the usual tin dipping. Leads of Stackpole Coldite 70+ Resistors solder readily by any method—dip or iron—stay tarnish free even after months in storage. And, their baked-on color codes resist solvent scrubbing operations... maintain uniform, attractive appearance.

**269 STANDARD VALUES FOR MODERN CIRCUITRY**

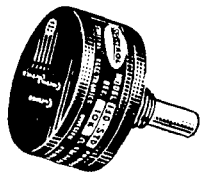
±20%	±10%	±5%	±20%	±10%	±5%	±20%	±10%	±5%	±20%	±10%	±5%	
10	10	10		390	390	15000	15000	15000			560000	560000
		11			430			16000				620000
	12	12	470	470	470		18000	18000	680000	680000	680000	680000
		13			510			20000			750000	750000
15	15	15		560	560	22000	22000	22000		820000	820000	820000
		16			620			24000			910000	910000
	18	18	680	680	680		27000	27000	1.0 Meg	1.0 Meg	1.0 Meg	1.0 Meg
		20			750			30000			1.1 Meg	1.1 Meg
22	22	22		820	820	33000	33000	33000		1.2 Meg	1.2 Meg	1.2 Meg
		24			910			36000			1.3 Meg	1.3 Meg
	27	27	1000	1000	1000		39000	39000	1.5 Meg	1.5 Meg	1.5 Meg	1.5 Meg
		30			1100			43000			1.6 Meg	1.6 Meg
33	33	33		1200	1200	47000	47000	47000		1.8 Meg	1.8 Meg	1.8 Meg
		36			1300			51000			2.0 Meg	2.0 Meg
	39	39	1500	1500	1500		56000	56000	2.2 Meg	2.2 Meg	2.2 Meg	2.2 Meg
		43			1600			62000			2.4 Meg	2.4 Meg
47	47	47		1800	1800	68000	68000	68000		2.7 Meg	2.7 Meg	2.7 Meg
		51			2000			75000			3.0 Meg	3.0 Meg
	56	56	2200	2200	2200		82000	82000	3.3 Meg	3.3 Meg	3.3 Meg	3.3 Meg
		62			2400			91000			3.6 Meg	3.6 Meg
68	68	68		2700	2700	100000	100000	100000		3.9 Meg	3.9 Meg	3.9 Meg
		75			3000			110000			4.3 Meg	4.3 Meg
	82	82	3300	3300	3300		120000	120000	4.7 Meg	4.7 Meg	4.7 Meg	4.7 Meg
		91			3600			130000			5.1 Meg	5.1 Meg
100	100	100		3900	3900	150000	150000	150000		5.6 Meg	5.6 Meg	5.6 Meg
		110			4300			160000			6.2 Meg	6.2 Meg
	120	120	4700	4700	4700		180000	180000	6.8 Meg	6.8 Meg	6.8 Meg	6.8 Meg
		130			5100			200000			7.5 Meg	7.5 Meg
150	150	150		5600	5600	220000	220000	220000		8.2 Meg	8.2 Meg	8.2 Meg
		160			6200			240000			9.1 Meg	9.1 Meg
	180	180	6800	6800	6800		270000	270000	10.0 Meg	10.0 Meg	10.0 Meg	10.0 Meg
		200			7500			300000			11.0 Meg	11.0 Meg
220	220	220		8200	8200	330000	330000	330000		12.0 Meg	12.0 Meg	12.0 Meg
		240			9100			360000			13.0 Meg	13.0 Meg
	270	270	10000	10000	10000		390000	390000	15.0 Meg	15.0 Meg	15.0 Meg	15.0 Meg
		300			11000			430000			16.0 Meg	16.0 Meg
330	330	330		12000	12000	470000	470000	470000		18.0 Meg	18.0 Meg	18.0 Meg
		360			13000			510000			20.0 Meg	20.0 Meg
									22.0 Meg	22.0 Meg	22.0 Meg	22.0 Meg

AVAILABLE THROUGH LEADING INDUSTRIAL ELECTRONIC PARTS DISTRIBUTORS

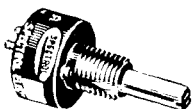
Electronic Components Div., STACKPOLE CARBON COMPANY, Kane, Pa.

**SPECTROL****PRECISION POTENTIOMETERS**

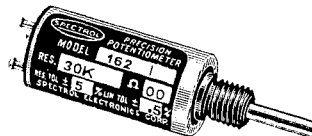
Call Your Nearest Spectrol Distributor for off-the-shelf Delivery



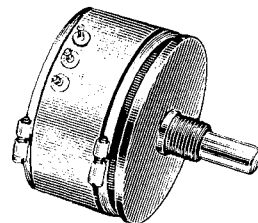
**MODEL 130**  
1 $\frac{5}{16}$ " Diam.



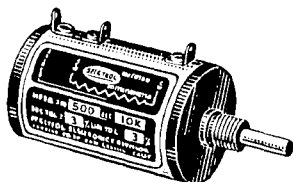
**MODEL 140**  
 $\frac{1}{2}$ " Diam.



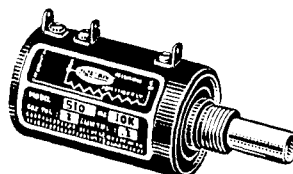
**MODEL 162**  
 $\frac{1}{2}$ " Diam.



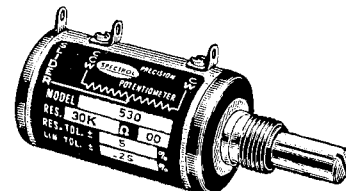
**MODEL 230**  
1 $\frac{3}{4}$ " Diam.



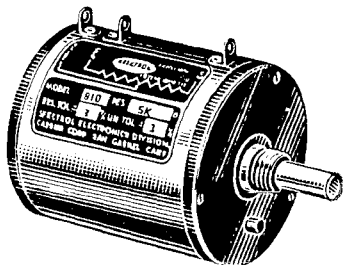
**MODEL 500**  
 $\frac{7}{8}$ " Diam.



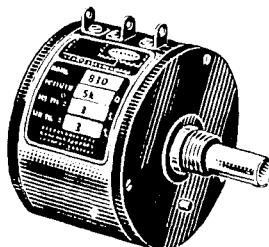
**MODEL 510**  
 $\frac{7}{8}$ " Diam.



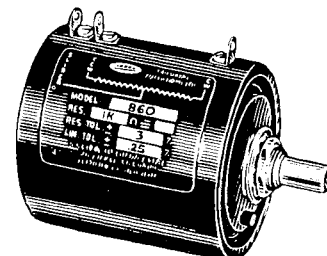
**MODEL 530**  
 $\frac{7}{8}$ " Diam.



**MODEL 810**  
1 $\frac{13}{16}$ " Diam.



**MODEL 830**  
1 $\frac{13}{16}$ " Diam.



**MODEL 860**  
1 $\frac{13}{16}$ " Diam.

Model	Diameter (inches)	Turns	Standard Resistance Range (ohms)	Standard Linearity Tolerance (%)	Standard Electrical Rotation (degrees)	Power Rating (watts)	Max. Starting Torque (in./oz.)	Max. Weight (oz.)	Standard Operating Temperature (degrees C)	Approx. Base Price (1-9)
130	1.312	1	100-30K	0.5	352	2.75	1.0	1.5	-55 to +105	\$ 9.00
140	0.500	1	50-70K	1.0	325	2.0	2.0	0.15	-55 to +150	\$10.00
162	0.500	10	100-50K	0.5	3600	1.0	0.8	1.0	-55 to +125	\$10.00
230	1.750	1	100-50K	0.3	354	3.0	1.0	3.0	-55 to +105	\$15.00
500	0.875	10	100-100K	0.25	3600	3.0	0.5	1.0	-55 to +125	\$15.00
510	0.875	10	100-100K	0.25	3600	3.0	0.5	1.5	-55 to +105	\$10.00
530	0.875	10	500-100K	0.25	3600	3.0	0.5	1.5	-55 to +105	\$ 7.00
810	1.812	10	25-300K	0.25	3600	8.0	1.75	4.5	-55 to +105	\$12.00
830	1.812	3	100-50K	0.25	1080	3.0	1.75	3.0	-55 to +105	\$10.00
860	1.812	10	25-400K	0.25	3600	8.0	1.75	4.5	-55 to +105	\$10.00

**SPECTROL****ELECTRONICS CORPORATION**

SAN GABRIEL, CALIFORNIA  
PLAINVIEW, L.I., NEW YORK  
BRAMPTON (TORONTO), ONTARIO, CANADA

**SPECTROL****TRIMMING POTENTIOMETERS**

Stocked at your local distributors for immediate off-the-shelf delivery

ALL UNITS SHOWN ACTUAL SIZE

**MODEL 42 Rectangular-Military**

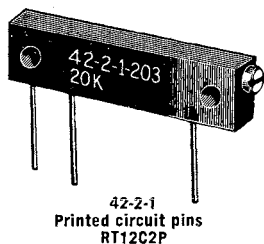
Meets MIL-R-27208

**Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 100K  
Resistance Tolerance  $\pm 5.0\%$  ( $\pm 1\%$  available)  
Power Rating 1.0 watt at 70°C

**Mechanical Specifications**

Number of Turns 25  $\pm$  2  
Operating Temperature Range  $-65^\circ\text{C}$  to  $+175^\circ\text{C}$   
Case Dimensions .190 x .320 x 1.250  
Weight 4.3 grams max.  
Price in 1-9 Quantities \$6.45 (42-x-1)  
\$6.95 (RT12C2 L or P)

**MODEL 44 Rectangular-Military**

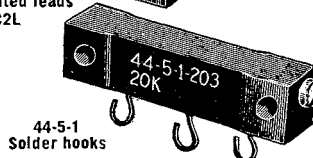
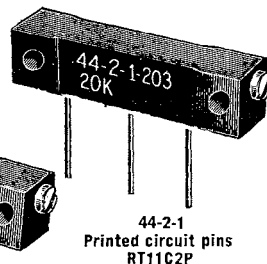
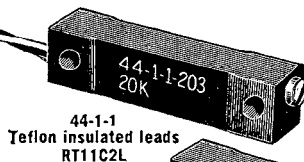
Meets MIL-27208

**Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 100K  
Resistance Tolerance  $\pm 5.0\%$  ( $\pm 1\%$  available)  
Power Rating 1.0 watt at 70°C

**Mechanical Specifications**

Number of Turns 25  $\pm$  2  
Operating Temperature Range  $-65^\circ\text{C}$  to  $+175^\circ\text{C}$   
Case Dimensions .280 x .312 x 1.250  
Weight 4.5 grams max.  
Price in 1-9 Quantities \$5.95 (44-x-1)  
\$6.45 (RT11C2 L or P)

**MODEL 46 Rectangular-Military**

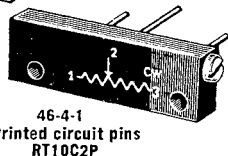
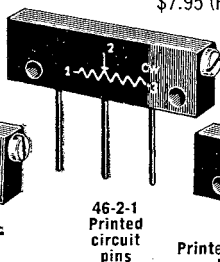
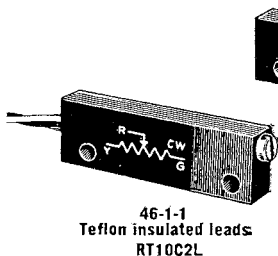
Meets MIL-R-27208

**Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 50K  
Resistance Tolerance  $\pm 5.0\%$  ( $\pm 1\%$  available)  
Power Rating 1.0 watt at 70°C

**Mechanical Specifications**

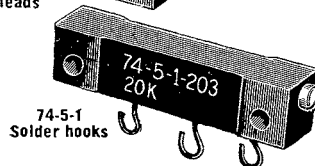
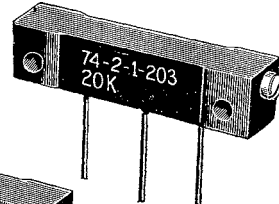
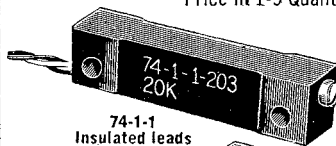
Number of Turns 15  $\pm$  2  
Operating Temperature Range  $-65^\circ\text{C}$  to  $+175^\circ\text{C}$   
Case Dimensions .185 x .315 x 1.000  
Weight 3.6 grams max.  
Price in 1-9 Quantities \$7.45 (46-x-1)  
\$7.95 (RT 10C2 L or P)

**MODEL 74 Rectangular-Industrial****Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 100K  
Resistance Tolerance  $\pm 10\%$   
Power Rating 1.0 watt at 70°C

**Mechanical Specifications**

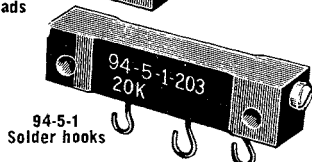
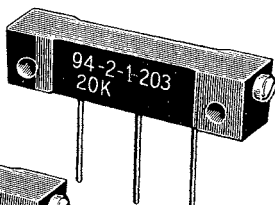
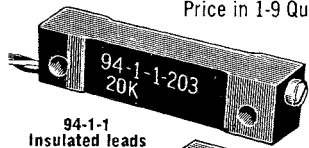
Number of Turns 22  $\pm$  5  
Operating Temperature Range  $-65^\circ\text{C}$  to  $+175^\circ\text{C}$   
Case Dimensions .280 x .312 x 1.250  
Weight 4.5 grams max.  
Price in 1-9 Quantities \$4.80

**MODEL 94 Rectangular-Industrial****Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 20K  
Resistance Tolerance  $\pm 10\%$   
Power Rating 0.5 Watt at 50°C

**Mechanical Specifications**

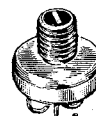
Number of Turns 22  $\pm$  5  
Operating Temperature Range  $-65^\circ\text{C}$  to  $+105^\circ\text{C}$   
Case Dimensions .280 x .312 x 1.250  
Weight 4.5 grams max.  
Price in 1-9 Quantities \$3.15

**MODEL 84 Round-Military/Industrial****Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 100K  
Resistance Tolerance  $\pm 5.0\%$  ( $\pm 1\%$  available)  
Power Rating 1.5 watt @ 50°C

**Mechanical Specifications**

Number of Turns 1  
Rotation 320° min. between stops (continuous rotation available)  
Operating Temperature Range  $-65^\circ\text{C}$  to  $+175^\circ\text{C}$   
Case Dimensions 0.500" diameter x 0.170" height  
Price in 1-9 Quantities \$3.95 (84-3-8)



3/16" Printed circuit pins



**SPECTROL****TRIMMING POTENTIOMETERS**

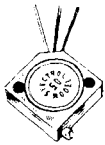
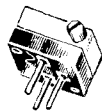
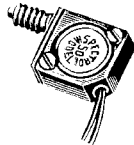
Stocked at your local distributors for immediate off-the-shelf delivery

**MODEL 50 Square-Military****Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 50K  
 Resistance Tolerance  $\pm 5.0\%$  ( $\pm 1.0\%$  available)  
 Power Rating 1.0 watt at 50 $^{\circ}$ C

**Mechanical Specifications**

Number of Turns 25  $\pm$  2  
 Rotation Continuous  
 Operating Temperature Range -65 $^{\circ}$ C to +150 $^{\circ}$ C  
 Case Dimensions  $\frac{3}{8}$ " x  $\frac{3}{8}$ " x  $\frac{3}{8}$ " (50-1-1)  
 Weight 1.75 grams  
 Price in 1-9 Quantities \$7.50 (50-1-1)

50-1-1  
Teflon  
insulated  
leads50-3-1  
Printed  
circuit  
pins, 180 $^{\circ}$ 50-4-1  
Printed  
circuit pins,  
base50-1-1P  
Panel mt.**MODEL 55 Square-Military**

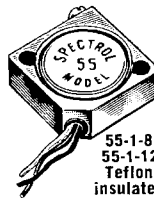
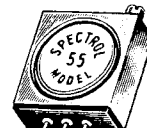
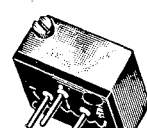
Meets MIL-R-27208

**Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 50K  
 Resistance Tolerance  $\pm 5.0\%$  ( $\pm 1.0\%$  available)  
 Power Rating 1.5 watts at 70 $^{\circ}$ C

**Mechanical Specifications**

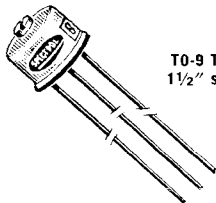
Number of Turns 25 nominal (42 available)  
 Rotation Stops, clutch standard  
 (continuous rotation available)  
 Operating Temperature Range -65 $^{\circ}$ C to +150 $^{\circ}$ C  
 Case Dimensions  $\frac{1}{2}$ " x  $\frac{1}{2}$ " x  $\frac{3}{8}$ " (55-1-8)  
 Weight 2.5 grams  
 Price in 1-9 Quantities \$6.35 (55-1-8)  
 \$6.85 (RT22C2L)

55-1-8  
55-1-12  
Teflon  
insulated  
leads  
RT22C2L55-3-8  
55-3-12  
PC pins 180 $^{\circ}$ 55-4-8  
55-4-12  
PC pins, base  
RT22C2P55-1-8-XXP  
55-1-8XXXP  
Panel mt.**MODEL 80 Round-Military****Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 50K  
 Resistance Tolerance  $\pm 5.0\%$  ( $\pm 1\%$  available)  
 Power Rating 1.0 watt at 50 $^{\circ}$ C

**Mechanical Specifications**

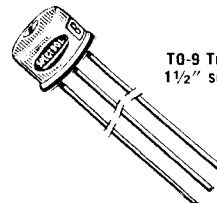
Number of Turns 1  
 Rotation 320 $^{\circ}$  between stops  
 (continuous rotation or  
 stops/clutch available)  
 Operating Temperature Range -65 $^{\circ}$ C to +105 $^{\circ}$ C  
 Case Dimensions .345" diameter to .241" height  
 Price in 1-9 Quantities \$6.00

80-3-4  
TO-9 Transistor Type  
1 1/2" solid wire leads**MODEL 82 Round-Industrial****Electrical Specifications**

Standard Resistance Range 50 $\Omega$  to 10K  
 Resistance Tolerance  $\pm 10\%$   
 Power Rating 0.5 watt at 50 $^{\circ}$ C

**Mechanical Specifications**

Number of Turns 1  
 Rotation 320 $^{\circ}$  between fixed stops  
 (stops/clutch available)  
 Operating Temperature Range -65 $^{\circ}$ C to +105 $^{\circ}$ C  
 Case Dimensions .345" diameter to .241" height  
 Price in 1-9 Quantities \$4.00

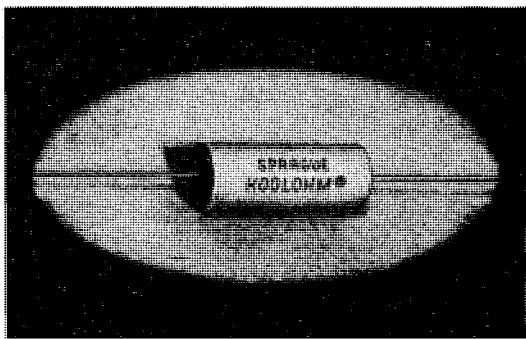
82-3-8  
TO-9 Transistor Type  
1 1/2" solid wire leads**SPECTROL****SPECTROL  
ELECTRONICS  
CORPORATION**

MANUFACTURERS OF  
 PRECISION POTENTIOMETERS  
 TRIMMING POTENTIOMETERS  
 TURNS-COUNTING DIALS

San Gabriel, California  
 Plainview, L.I., New York  
 Brampton (Toronto) Ontario, Canada

# SPRAGUE RESISTORS

## KOOLOHM® AXIAL-LEAD WIREWOUND RESISTORS FOR INDUSTRIAL APPLICATIONS



Types 450E, 452E, 454E, 456E and 458E are Standard Resistors. Types 451E, 453E, 455E, 457E and 459E are Non-Inductive Resistors

- Insulated-Shell Design for Easy Mounting
- Feature Improved Internal Construction in Which Windings and Leads are Welded to End-Cap for Superior Mechanical Strength
- Ceramic-Insulated Wire is Space Wound and Cemented, to Prevent Turn-to-Turn Shorting. Permits Higher Resistance Values in a Given Size Than in Conventional Resistors
- Non-Porous Tubular Ceramic Shells Sealed With High Temperature Silicone Cement
- Unexcelled Insulation and Mechanical Protection. Can be Mounted in Direct Contact With Chassis
- Call Your Sprague Industrial Distributor for Quantity Prices.
- For Complete Technical Details, Refer to Latest Issue of Sprague Engineering Bulletin 7300

Ohms	Type 450E 3 WATTS 1/4" x 3/16"		Type 452E 5 WATTS 1/4" x 1"		Type 454E 7 WATTS 1 1/2" x 1 3/16"		Type 456E 10 WATTS 1 1/2" x 1 2 1/2"		Type 458E 14 WATTS 1 1/2" x 1 2 1/2"	
	Cat. No.		Cat. No.		Cat. No.		Cat. No.		Cat. No.	
1	450E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	452E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	454E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	456E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	458E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices
1.5	450E1R55		452E1R55		454E1R55		456E1R55		458E1R55	
2	450E2R05		452E2R05		454E2R05		456E2R05		458E2R05	
3	450E3R05		452E3R05		454E3R05		456E3R05		458E3R05	
4	450E4R05		452E4R05		454E4R05		456E4R05		458E4R05	
5	450E5R05		452E5R05		454E5R05		456E5R05		458E5R05	
7.5	450E7R55		452E7R55		454E7R55		456E7R55		458E7R55	
10	450E1005		452E1005		454E1005		456E1005		458E1005	
12	450E1205		452E1205		454E1205		456E1205		458E1205	
15	450E1505		452E1505		454E1505		456E1505		458E1505	
18	450E1805		---		---		---		---	
20	450E2005		452E2005		454E2005		456E2005		458E2005	
22	450E2205		---		---		---		---	
25	450E2505		452E2505		454E2505		456E2505		458E2505	
27	450E2705		---		---		---		---	
30	450E3005		452E3005		454E3005		456E3005		458E3005	
33	450E3305		---		---		---		---	
35	---		452E3505		454E3505		456E3505		458E3505	
39	450E3905	---	---	---	---					
40	450E4005	452E4005	454E4005	456E4005	458E4005					
47	450E4705	---	---	---	---					
50	450E5005	452E5005	454E5005	456E5005	458E5005					
56	450E5605	---	---	---	---					
68	450E6805	---	---	---	---					
75	450E7505	452E7505	454E7505	456E7505	458E7505					
82	450E8205	---	---	---	---					
100	450E1015	452E1015	454E1015	456E1015	458E1015					
120	450E1215	452E1215	454E1215	456E1215	458E1215					
150	450E1515	452E1515	454E1515	456E1515	458E1515					
180	450E1815	---	---	---	---					

# SPRAGUE RESISTORS

## KOOLOHM AXIAL-LEAD WIREWOUND RESISTORS, continued

Ohms	Type 450E 3 WATTS 1/4" x 9/16"		Type 452E 5 WATTS 1/4" x 1"		Type 454E 7 WATTS 1 1/32" x 1 1/16"		Type 456E 10 WATTS 1 1/32" x 1 29/32"		Type 458E 14 WATTS 1 1/32" x 1 29/32"	
	Cat. No.		Cat. No.		Cat. No.		Cat. No.		Cat. No.	
200	450E2015	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	452E2015	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	454E2015	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	456E2015	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	458E2015	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
220	450E2215		452E2215		454E2215		456E2215		458E2215	
250	450E2515		452E2515		454E2515		456E2515		458E2515	
270	450E2715		452E3015		454E3015		456E3015		458E3015	
300	450E3015		452E3515		454E3515		456E3515		458E3515	
330	450E3315		452E4015		454E4015		456E4015		458E4015	
350	450E3915		452E4515		454E4515		456E4515		458E4515	
390	450E3915		452E5015		454E5015		456E5015		458E5015	
400	450E4015		452E6015		454E6015		456E6015		458E6015	
450	450E4715		452E7015		454E7015		456E7015		458E7015	
470	450E5015		452E7515		454E7515		456E7515		458E7515	
500	450E5615		452E8015		454E8015		456E8015		458E8015	
560	450E6015		452E9015		454E9015		456E9015		458E9015	
600	450E6815		452E1025		454E1025		456E1025		458E1025	
680	450E7015		452E1125		454E1125		456E1125		458E1125	
700	450E7015		452E1225		454E1225		456E1225		458E1225	
750	450E8015		452E1425		454E1425		456E1425		458E1425	
800	450E8215		452E1525		454E1525		456E1525		458E1525	
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1200	450E1425		452E3025		454E3025		456E3025		458E3025	
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1800	450E1825		452E4025		454E4025		456E4025		458E4025	
2000	450E2025		452E4525		454E4525		456E4525		458E4525	
2200	450E2225		452E5025		454E5025		456E5025		458E5025	
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2700	450E2725		452E7025		454E7025		456E7025		458E7025	
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3300	450E3325		452E8025		454E8025		456E8025		458E8025	
3500	450E3925		452E9025		454E9025		456E9025		458E9025	
3900	450E4025		452E1035		454E1025		456E1035		458E1035	
4000	450E4025		452E1235		454E1135		456E1135		458E1135	
4500	450E4725		452E1435		454E1235		456E1235		458E1125	
4700	450E5025		452E1535		454E1435		456E1435		458E1435	
5000	450E5025		452E1835		454E1535		456E1535		458E1535	
5600	450E5625		452E2035		454E1635		456E1635		458E1635	
6000	450E6025		452E2035		454E1835		456E1835		458E1835	
6800	450E6825		452E2035		454E2035		456E2035		458E2035	
7000	450E7525		452E2035		454E2235		456E2235		458E2035	
7500	450E8025		452E2035		454E2535		456E2535		458E2035	
8000	450E8225		452E2035		454E3035		456E3035		458E2035	
8200	450E8225		452E2035		454E3335		456E3335		458E2035	
9000	450E9025		452E2035		454E4035		456E4035		458E2035	
10000	450E1035		452E2035		454E4535		456E4535		458E2035	
11000	450E1035		452E2035		454E5035		456E5035		458E2035	
12000	450E1035		452E2035		454E5035		456E5035		458E2035	
14000	450E1035		452E2035		454E5035		456E5035		458E2035	
15000	450E1035		452E2035		454E5035		456E5035		458E2035	
16000	450E1035		452E2035		454E5035		456E5035		458E2035	
18000	450E1035		452E2035		454E5035		456E5035		458E2035	
20000	450E1035		452E2035		454E5035		456E5035		458E2035	
22000	450E1035		452E2035		454E5035		456E5035		458E2035	
25000	450E1035		452E2035		454E5035		456E5035		458E2035	
30000	450E1035		452E2035		454E5035		456E5035		458E2035	
35000	450E1035		452E2035		454E5035		456E5035		458E2035	
40000	450E1035		452E2035		454E5035		456E5035		458E2035	
45000	450E1035		452E2035		454E5035		456E5035		458E2035	
50000	450E1035		452E2035		454E5035		456E5035		458E2035	
60000	450E1035		452E2035		454E5035		456E5035		458E2035	
70000	450E1035		452E2035		454E5035		456E5035		458E2035	

# SPRAGUE RESISTORS

## NON-INDUCTIVE KOOLOHM AXIAL-LEAD WIREWOUND RESISTORS

Ohms	Type 451E 3 WATTS 1/4" x 3/16"		Type 453E 5 WATTS 1/4" x 1"		Type 455E 7 WATTS 1 1/2" x 1 3/16"		Type 457E 10 WATTS 1 1/2" x 1 29/32"		Type 459E 14 WATTS 1 3/32" x 1 29/32"	
	Cat. No.		Cat. No.		Cat. No.		Cat. No.		Cat. No.	
1	451E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	453E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	455E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	457E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES	459E1R05	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES
1.5	451E1R55		453E1R55		455E1R55		457E1R55		459E1R55	
2	451E2R05		453E2R05		455E2R05		457E2R05		459E2R05	
3	451E3R05		453E3R05		455E3R05		457E3R05		459E3R05	
4	451E4R05		453E4R05		455E4R05		457E4R05		459E4R05	
5	451E5R05		453E5R05		455E5R05		457E5R05		459E5R05	
7.5	451E7R55		453E7R55		455E7R55		457E7R55		459E7R55	
10	451E1005		453E1005		455E1005		457E1005		459E1005	
12	451E1205		453E1205		455E1205		457E1205		459E1205	
15	451E1505		453E1505		455E1505		457E1505		459E1505	
18	451E1805		---		---		---		---	
20	451E2005		453E2005		455E2005		457E2005		459E2005	
22	451E2205		---		---		---		---	
25	451E2505		453E2505		455E2505		457E2505		459E2505	
27	451E2705		---		---		---		---	
30	451E3005		453E3005		455E3005		457E3005		459E3005	
33	451E3305		---		---		---		---	
35	451E3505		453E3505		455E3505		457E3505		459E3505	
39	451E3905		---		---		---		---	
40	451E4005		453E4005		455E4005		457E4005		459E4005	
47	451E4705		---		---		---		---	
50	451E5005		453E5005		455E5005		457E5005		459E5005	
56	451E5605		---		---		---		---	
68	451E6805		---		---		---		---	
75	451E7505		453E7505		455E7505		457E7505		459E7505	
82	451E8205		---		---		---		---	
100	451E1015		453E1015		455E1015		457E1015		459E1015	
120	451E1215		453E1215		455E1215		457E1215		459E1215	
150	451E1515		453E1515		455E1515		457E1515		459E1515	
180	451E1815		---		---		---		---	
200	451E2015		453E2015		455E2015		457E2015		459E2015	
220	451E2215		453E2215		455E2215		457E2215		459E2215	
250	451E2515		453E2515		455E2515		457E2515		459E2515	
270	451E2715		---		---		---		---	
300	451E3015		453E3015		455E3015		457E3015		459E3015	
330	451E3315		---		---		---		---	
350	451E3515		453E3515		455E3515		457E3515		459E3515	
390	451E3915		---		---		---		---	
400	451E4015		453E4015		455E4015		457E4015		459E4015	
450	451E4515		453E4515		---		---		---	
470	451E4715		---		---		---		---	
500	451E5015		453E5015		455E5015		457E5015		459E5015	
560	451E5615		---		---		---		---	
600	451E6015		453E6015		455E6015		457E6015		459E6015	
680	451E6815		---		---		---		---	
700	451E7015		453E7015		455E7015		457E7015		459E7015	
750	451E7515		453E7515		455E7515		457E7515		459E7515	
800	451E8015		453E8015		455E8015		457E8015		459E8015	
820	451E8215		---		---		---		---	
900	451E9015		453E9015		455E9015		457E9015		459E9015	
1000	451E1025		453E1025		455E1025		457E1025		459E1025	
1100	---		453E1125		455E1125		457E1125		459E1125	
1200	451E1225		453E1225		455E1225		457E1225		459E1225	
1400	451E1425		453E1425		455E1425		457E1425		459E1425	
1500	451E1525		453E1525		455E1525		457E1525		459E1525	
1800	451E1825		453E1825		455E1825		457E1825		459E1825	
2000	451E2025		453E2025		455E2025		457E2025		459E2025	
2200	---		453E2225		455E2225		457E2225		459E2225	
2500	---		453E2525		455E2525		457E2525		459E2525	
3000	---		453E3025		455E3025		457E3025		459E3025	
3300	---		---		455E3325		457E3325		459E3325	
3500	---		453E3525		455E3525		457E3525		459E3525	
3900	---		---		455E3925		457E3925		459E3925	
4000	---		453E4025		455E4025		457E4025		459E4025	
4500	---		---		455E4525		457E4525		459E4525	
5000	---		---		455E5025		457E5025		459E5025	
6000	---		---		---		457E6025		459E6025	
7000	---		---		---		457E7025		459E7025	
7500	---		---		---		457E7525		459E7525	
8000	---		---		---		457E8025		459E8025	
9000	---		---		---		457E9025		459E9025	
10000	---		---		---		457E1035		459E1035	

# SPRAGUE RESISTORS

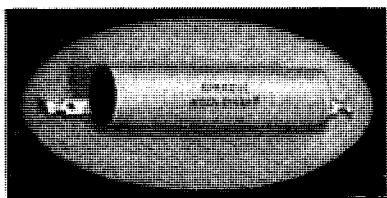
## TYPE RW55, RW56 KOOLOHM® RESISTORS

● Axial-Lead Koolohm Resistors to Military Specification MIL-R-26C, Characteristics V and G

● See Your Sprague Industrial Distributor for Quantity Prices

Ohms	Type RW55 7 WATTS 1 1/2" x 1 7/8"		Type RW56 14 WATTS 1 3/4" x 2"		Ohms	Type RW55 7 WATTS 1 1/2" x 1 7/8"		Type RW56 14 WATTS 1 3/4" x 2"		Ohms	Type RW55 7 WATTS 1 1/2" x 1 7/8"		Type RW56 14 WATTS 1 3/4" x 2"	
	Cat. No.		Cat. No.			Cat. No.		Cat. No.			Cat. No.		Cat. No.	
1.0	RW55V1R0	Call Your Sprague Industrial Distributor for Quantity Prices	RW56V1R0	Call Your Sprague Industrial Distributor for Quantity Prices	33	RW55V330	Call Your Sprague Industrial Distributor for Quantity Prices	RW56V330	Call Your Sprague Industrial Distributor for Quantity Prices	680	RW55V681	Call Your Sprague Industrial Distributor for Quantity Prices	RW56V681	Call Your Sprague Industrial Distributor for Quantity Prices
1.1	RW55V1R1		36		RW55V360	750		RW55V751		RW56V751				
1.3	RW55V1R3		39		RW55V390	820		RW55V821		RW56V821				
1.5	RW55V1R5		43		RW55V430	910		RW55V911		RW56V911				
1.6	RW55V1R6		47		RW55V470	1000		RW55V102		RW56V102				
1.8	RW55V1R8		51		RW55V510	1100		RW55V112		RW56V112				
2.0	RW55V2R0		56		RW55V560	1200		RW55V122		RW56V122				
2.2	RW55V2R2		62		RW55V620	1300		RW55V132		RW56V132				
2.4	RW55V2R4		68		RW55V680	1500		RW55V152		RW56V152				
2.7	RW55V2R7		75		RW55V750	1600		RW55V162		RW56V162				
3.0	RW55V3R0		82		RW55V820	1800		RW55V182		RW56V182				
3.3	RW55V3R3		91		RW55V910	2000		RW55V202		RW56V202				
3.6	RW55V3R6		100		RW55V101	2200		RW55V222		RW56V222				
3.9	RW55V3R9		110		RW55V111	2400		RW55V242		RW56V242				
4.3	RW55V4R3		120		RW55V121	2700		RW55V272		RW56V272				
4.7	RW55V4R7		130		RW55V131	3000		RW55V302		RW56V302				
5.1	RW55V5R1	150	RW55V151	3300	RW55V332	RW56V332								
5.6	RW55V5R6	160	RW55V161	3600	RW55V362	RW56V362								
6.2	RW55V6R2	180	RW55V181	3900	RW55V392	RW56V392								
6.8	RW55V6R8	200	RW55V201	4300	RW55V432	RW56V432								
7.5	RW55V7R5	220	RW55V221	4700	RW55V472	RW56V472								
8.2	RW55V8R2	240	RW55V241	5100	RW55V512	RW56V512								
9.1	RW55V9R1	270	RW55V271	5600	RW55V562	RW56V562								
10	RW55V100	300	RW55V301	6200	RW55V622	RW56V622								
11	RW55V110	330	RW55V331	6800	RW55V682	RW56V682								
12	RW55V120	360	RW55V361	7500	RW55V752	RW56V752								
13	RW55V130	390	RW55V391	8200	RW55V822	RW56V822								
15	RW55V150	430	RW55V431	9100	RW55V912	RW56V912								
16	RW55V160	470	RW55V471	10000	_____	RW56V103								
18	RW55V180	510	RW55V511	11000	_____	RW56V113								
20	RW55V200	560	RW55V561	12000	_____	RW56V123								
22	RW55V220	620	RW55V621	13000	_____	RW56V133								
24	RW55V240			15000	_____	RW56V153								
27	RW55V270			16000	_____	RW56V163								
30	RW55V300													

## Commercial Tab-Terminal KOOLOHM® Wirewound Resistors



● These Resistors Are Also Available in 5 and 10 Watt Ratings, Axial-Lead Style. See Latest Issue of Sprague Catalog C-616

Ohms	Type 25KT 25 Watts		Type 50KT 50 Watts		Type 120KT 120 Watts	
	Cat. No.		Cat. No.		Cat. No.	
<b>TYPE KT STANDARD RESISTORS</b>						
5	25KT5R05	Call Your Sprague Industrial Distributor for Current Prices	50KT5R05	Call Your Sprague Industrial Distributor for Current Prices	120KT5R05	Call Your Sprague Industrial Distributor for Current Prices
10	25KT1005		50KT1005		120KT1005	
25	25KT2505		50KT2505		120KT2505	
50	25KT5005		50KT5005		120KT5005	
75	25KT7505		50KT7505		120KT7505	
100	25KT1015		50KT1015		120KT1015	
150	25KT1515		50KT1515		120KT1515	
200	25KT2015		50KT2015		120KT2015	
250	25KT2515		50KT2515		120KT2515	
390	_____		50KT3915		120KT3915	
500	25KT5015		50KT5015		120KT5015	
600	25KT6015		50KT6015		120KT6015	
750	25KT7515		50KT7515		120KT7515	
1000	25KT1025		50KT1025		120KT1025	
1500	25KT1525		50KT1525		120KT1525	
2000	25KT2025		50KT2025		120KT2025	
2500	25KT2525	50KT2525	120KT2525			
3000	25KT3025	50KT3025	120KT3025			
4000	25KT4025	50KT4025	_____			
5000	25KT5025	50KT5025	_____			
7500	25KT7525	50KT7525	120KT5025			
10000	25KT1035	50KT1035	120KT7525			
12000	25KT1235	50KT1235	120KT1035			
15000	25KT1535	50KT1535	120KT1235			
20000	25KT2035	50KT2035	120KT1535			

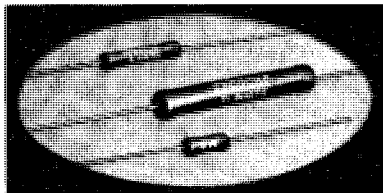
Ohms	Type 25NIT 25NIT Watts		Type 50NIT 50NIT Watts		Type 120NIT 120NIT Watts	
	Cat. No.		Cat. No.		Cat. No.	

TYPE KT STANDARD RESISTORS, continued						
25000	25KT2535	Call Your Sprague Industrial Distributor for Prices	50KT2535	Call Your Sprague Industrial Distributor for Prices	120KT2535	Call Your Sprague Industrial Distributor for Prices
40000	25KT4035		50KT5035		120KT5035	
50000	25KT5035		50KT7535		120KT7535	
75000	25KT7535		50KT1045		120KT1045	
100000	25KT1045					

TYPE NIT NON-INDUCTIVE RESISTORS						
5	25NIT5R05	Call Your Sprague Industrial Distributor for Prices	50NIT5R05	Call Your Sprague Industrial Distributor for Prices	120NIT5R05	Call Your Sprague Industrial Distributor for Prices
10	25NIT1005		50NIT1005		120NIT1005	
25	25NIT2505		50NIT2505		120NIT2505	
50	25NIT5005		50NIT5005		120NIT5005	
75	25NIT7505		50NIT7505		120NIT7505	
100	25NIT1015		50NIT1015		120NIT1015	
150	25NIT1515		50NIT1515		120NIT1515	
200	25NIT2015		50NIT2015		120NIT2015	
250	25NIT2515		50NIT2515		120NIT2515	
390	_____		50NIT3915		120NIT3915	
500	25NIT5015		50NIT5015		120NIT5015	
600	25NIT6015		50NIT6015		120NIT6015	
750	25NIT7515		50NIT7515		120NIT7515	
1000	25NIT1025		50NIT1025		120NIT1025	
1500	25NIT1525		50NIT1525		120NIT1525	
2000	25NIT2025		50NIT2025		120NIT2025	
2500	25NIT2525	50NIT2525	120NIT2525			
3000	25NIT3025	50NIT3025	120NIT3025			
4000	25NIT4025	50NIT4025	_____			
5000	25NIT5025	50NIT5025	_____			
7500	25NIT7525	50NIT7525	120NIT5025			
10000	25NIT1035	50NIT1035	120NIT7525			
12000	25NIT1235	50NIT1235	120NIT1035			
15000	25NIT1535	50NIT1535	120NIT1235			
20000	25NIT2035	50NIT2035	120NIT1535			

# SPRAGUE RESISTORS

## BLUE JACKET® INDUSTRIAL WIREWOUND RESISTORS



- Improved Miniified Resistors Designed for Thorough Reliability and Stability Under Extreme Operating Conditions
- Matched Coefficient of Expansion Allows Uniform Expansion of Vitreous Enamel Coating, Ceramic Base, and End Caps, Eliminating Cracking, Cracks, and Protects From Fumes and Humidity
- Windings and Leads Welded to End-Caps for Superior Mechanical Strength
- For 2BJ, 3BJ, 5BJ and 10BJ Commercial or Service Equivalents to These Resistors, Refer to the Latest issue of Sprague Catalog C-616
- See Your Sprague Industrial Distributor for Quantity Prices

Ohms	Type 239E, 1 WATT 1/8" x 3/8"		Type 240E, 2 WATTS 3/16" x 3/8"		Type 242E, 3 WATTS 1/4" x 1/2"		Type 243E, 5 WATTS 3/4" x 1/2"		Type 244E, 7 WATTS 3/8" x 1"		Type 247E, 10 WATTS 3/8" x 1 1/4"	
	Cat. No.		Cat. No.		Cat. No.		Cat. No.		Cat. No.		Cat. No.	
1	239E1R05		240E1R05		242E1R05		243E1R05		244E1R05		247E1R05	
1.2	239E1R25											
1.5	239E1R55		240E1R55		242E1R55		243E1R55		244E1R55		247E1R55	
1.8	239E1R85											
2	239E2R05		240E2R05		242E2R05		243E2R05		244E2R05		247E2R05	
2.2	239E2R25											
2.7	239E2R7											
3	239E3R05		240E3R05		242E3R05		243E3R05		244E3R05		247E3R05	
3.3	239E3R35											
3.9	239E3R95											
4	239E4R05		240E4R05		242E4R05		243E4R05		244E4R05		247E4R05	
4.7	239E4R75											
5	239E5R05		240E5R05		242E5R05		243E5R05		244E5R05		247E5R05	
5.6	239E5R65											
6.8	239E6R85											
7.5	239E7R55		240E7R55		242E7R55		243E7R55		244E7R55		247E7R55	
8.2	239E8R25											
10	239E1005		240E1005		242E1005		243E1005		244E1005		247E1005	
12	239E1205		240E1205		242E1205		243E1205		244E1205		247E1205	
15	239E1505		240E1505		242E1505		243E1505		244E1505		247E1505	
18	239E1805		240E1805		242E1805							
20	239E2005		240E2005		242E2005		243E2005		244E2005		247E2005	
22	239E2205		240E2205		242E2205							
25	239E2505		240E2505		242E2505		243E2505		244E2505		247E2505	
27	239E2705		240E2705		242E2705							
30	239E3005		240E3005		242E3005		243E3005		244E3005		247E3005	
33	239E3305		240E3305		242E3305							
35												
39	239E3905		240E3905		242E3905		243E3905		244E3905		247E3905	
40	239E4005		240E4005		242E4005		243E4005		244E4005		247E4005	
47	239E4705		240E4705		242E4705							
50	239E5005		240E5005		242E5005		243E5005		244E5005		247E5005	
56	239E5605		240E5605		242E5605							
68	239E6805		240E6805		242E6805							
75	239E7505		240E7505		242E7505		243E7505		244E7505		247E7505	
82	239E8205		240E8205		242E8205							
100	239E1015		240E1015		242E1015		243E1015		244E1015		247E1015	
120	239E1215		240E1215		242E1215		243E1215		244E1215		247E1215	
150	239E1515		240E1515		242E1515		243E1515		244E1515		247E1515	
180	239E1815		240E1815		242E1815							
200	239E2015		240E2015		242E2015		243E2015		244E2015		247E2015	
220	239E2215		240E2215		242E2215		243E2215		244E2215		247E2215	
250	239E2515		240E2515		242E2515		243E2515		244E2515		247E2515	
270	239E2715		240E2715		242E2715							
300	239E3015		240E3015		242E3015		243E3015		244E3015		247E3015	
330	239E3315		240E3315		242E3315							
350												
390	239E3915		240E3915		242E3915		243E3915		244E3915		247E3915	
400	239E4015		240E4015		242E4015		243E4015		244E4015		247E4015	
450												
470	239E4715		240E4715		242E4715		243E4715		244E4715		247E4715	
500	239E5015		240E5015		242E5015		243E5015		244E5015		247E5015	
560	239E5615		240E5615		242E5615							
600	239E6015		240E6015		242E6015		243E6015		244E6015		247E6015	
680	239E6815		240E6815		242E6815							
700	239E7015		240E7015		242E7015							
750												
800	239E8015		240E8015		242E8015		243E8015		244E8015		247E8015	
820	239E8215		240E8215		242E8215							
900	239E9015		240E9015		242E9015		243E9015		244E9015		247E9015	
1000	239E1025		240E1025		242E1025		243E1025		244E1025		247E1025	
1100												
1200	239E1225		240E1225		242E1225		243E1225		244E1225		247E1225	
1400	239E1425		240E1425		242E1425		243E1425		244E1425		247E1425	
1500	239E1525		240E1525		242E1525		243E1525		244E1525		247E1525	
1800	239E1825		240E1825		242E1825		243E1825		244E1825		247E1825	
2000	239E2025		240E2025		242E2025		243E2025		244E2025		247E2025	
2200	239E2225		240E2225		242E2225		243E2225		244E2225		247E2225	
2500	239E2525		240E2525		242E2525		243E2525		244E2525		247E2525	
2700												
3000							243E3025		244E3025		247E3025	
3300							243E3525		244E3325		247E3325	
3500							243E3525		244E3525		247E3525	
3900							243E4025		244E3925		247E3925	
4000							243E4525		244E4025		247E4025	
4500									244E4525		247E4525	
4700												
5000							243E5025		244E5025		247E5025	
5600												
6000							243E6025		244E6025		247E6025	
6800												
7000							243E7025		244E7025		247E7025	
7500							243E7525		244E7525		247E7525	
8000							243E8025		244E8025		247E8025	
8200												

# SPRAGUE RESISTORS

## BLUE JACKET INDUSTRIAL WIREWOUND RESISTORS, continued

Ohms	Type 239E, 1 WATT $\frac{1}{8}'' \times \frac{3}{8}''$		Type 240E, 2 WATTS $\frac{3}{16}'' \times \frac{3}{8}''$		Type 242E, 3 WATTS $\frac{1}{32}'' \times \frac{1}{32}''$		Type 243E, 5 WATTS $\frac{1}{32}'' \times \frac{1}{16}''$		Type 244E, 7 WATTS $\frac{5}{16}'' \times 1''$		Type 247E, 10 WATTS $\frac{5}{16}'' \times 1\frac{1}{4}''$	
	Cat. No.	Call Your Sprague Industrial Distributor for Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor for Quantity Prices
9000									242E9025			
10000					242E1035		243E1035		244E1035		247E1035	
11000									244E1135		247E1135	
12000									244E1235		247E1235	
14000									244E1435		247E1435	
15000							243E1535		244E1535		247E1535	
16000									244E1635		247E1635	
17000									244E1735			
18000							243E1835		244E1835		247E1835	
20000							243E2035		244E2035		247E2035	
22000							243E2235		244E2235		247E2235	
25000							243E2535		244E2535		247E2535	
30000							243E3035		244E3035		247E3035	
35000											247E3535	
40000											247E4035	
45000											247E4535	
50000											247E5035	

## TYPE RW57, RW58, RW59 BLUE JACKET® WIREWOUND RESISTORS

• This Series of Blue Jacket Wirewound Resistors Meet All Performance Characteristics of Military Specification MIL R-26C, Characteristics V and G

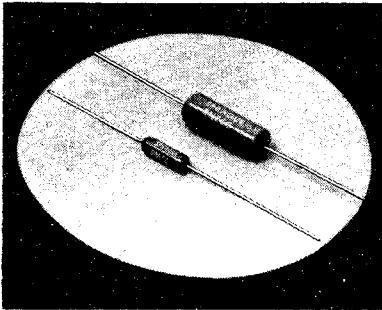
• Contact Your Sprague Industrial Distributor for Quantity Price

Ohms	Type RW59 3 WATTS $\frac{3}{16}'' \times \frac{1}{2}''$		Type RW57 6.5 WATTS $\frac{5}{16}'' \times 1''$		Type RW58 11 WATTS $\frac{1}{32}'' \times 1\frac{1}{8}''$		Ohms	Type RW59 3 WATTS $\frac{3}{16}'' \times \frac{1}{2}''$		Type RW57 6.5 WATTS $\frac{5}{16}'' \times 1''$		Type RW58 11 WATTS $\frac{1}{32}'' \times 1\frac{1}{8}''$	
	Cat. No.	Call Your Sprague Industrial Distributor For Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor For Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor For Current Quantity Prices		Cat. No.	Call Your Sprague Industrial Distributor For Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor For Current Quantity Prices	Cat. No.	Call Your Sprague Industrial Distributor For Current Quantity Prices
1.0	RW59V1R0				RW57V1R0			RW58V1R0				150	
1.1	RW59V1R1		RW57V1R1		RW58V1R1		160	RW59V161		RW57V161		RW58V161	
1.2	RW59V1R2		RW57V1R2		RW58V1R2		180	RW59V181		RW57V181		RW58V181	
1.3	RW59V1R3		RW57V1R3		RW58V1R3		200	RW59V201		RW57V201		RW58V201	
1.5	RW59V1R5		RW57V1R5		RW58V1R5		220	RW59V221		RW57V221		RW58V221	
1.6	RW59V1R6		RW57V1R6		RW58V1R6		240	RW59V241		RW57V241		RW58V241	
1.8	RW59V1R8		RW57V1R8		RW58V1R8		270	RW59V271		RW57V271		RW58V271	
2.0	RW59V2R0		RW57V2R0		RW58V2R0		300	RW59V301		RW57V301		RW58V301	
2.2	RW59V2R2		RW57V2R2		RW58V2R2		330	RW59V331		RW57V331		RW58V331	
2.4	RW59V2R4		RW57V2R4		RW58V2R4		360	RW59V361		RW57V361		RW58V361	
2.7	RW59V2R7		RW57V2R7		RW58V2R7		390	RW59V391		RW57V391		RW58V391	
3.0	RW59V3R0		RW57V3R0		RW58V3R0		430	RW59V431		RW57V431		RW58V431	
3.3	RW59V3R3		RW57V3R3		RW58V3R3		470	RW59V471		RW57V471		RW58V471	
3.6	RW59V3R6		RW57V3R6		RW58V3R6		510	RW59V511		RW57V511		RW58V511	
3.9	RW59V3R9		RW57V3R9		RW58V3R9		560	RW59V561		RW57V561		RW58V561	
4.3	RW59V4R3		RW57V4R3		RW58V4R3		620	RW59V621		RW57V621		RW58V621	
4.7	RW59V4R7		RW57V4R7		RW58V4R7		680	RW59V681		RW57V681		RW58V681	
5.1	RW59V5R1		RW57V5R1		RW58V5R1		750	RW59V751		RW57V751		RW58V751	
5.6	RW59V5R6		RW57V5R6		RW58V5R6		820	RW59V821		RW57V821		RW58V821	
6.2	RW59V6R2		RW57V6R2		RW58V6R2		910	RW59V911		RW57V911		RW58V911	
6.8	RW59V6R8		RW57V6R8		RW58V6R8		1000	RW59V102		RW57V102		RW58V102	
7.5	RW59V7R5		RW57V7R5		RW58V7R5		1100	RW59V112		RW57V112		RW58V112	
8.2	RW59V8R2		RW57V8R2		RW58V8R2		1200	RW59V122		RW57V122		RW58V122	
9.1	RW59V9R1		RW57V9R1		RW58V9R1		1300	RW59V132		RW57V132		RW58V132	
10	RW59V100		RW57V100		RW58V100		1500	RW59V152		RW57V152		RW58V152	
11	RW59V110		RW57V110		RW58V110		1600	RW59V162		RW57V162		RW58V162	
12	RW59V120		RW57V120		RW58V120		1800	RW59V182		RW57V182		RW58V182	
13	RW59V130		RW57V130		RW58V130		2000	RW59V202		RW57V202		RW58V202	
15	RW59V150		RW57V150		RW58V150		2200			RW57V222		RW58V222	
16	RW59V160		RW57V160		RW58V160		2400			RW57V242		RW58V242	
18	RW59V180		RW57V180		RW58V180		2700			RW57V272		RW58V272	
20	RW59V200		RW57V200		RW58V200		3000			RW57V302		RW58V302	
22	RW59V220		RW57V220		RW58V220		3300			RW57V332		RW58V332	
24	RW59V240		RW57V240		RW58V240		3600			RW57V362		RW58V362	
27	RW59V270		RW57V270		RW58V270		3900			RW57V392		RW58V392	
30	RW59V300		RW57V300		RW58V300		4300			RW57V432		RW58V432	
33	RW59V330		RW57V330		RW58V330		4700			RW57V472		RW58V472	
36	RW59V360		RW57V360		RW58V360		5100			RW57V512		RW58V512	
39	RW59V390		RW57V390		RW58V390		5600			RW57V562		RW58V562	
43	RW59V430		RW57V430		RW58V430		6200			RW57V622		RW58V622	
47	RW59V470		RW57V470		RW58V470		6800			RW57V682		RW58V682	
51	RW59V510		RW57V510		RW58V510		7500			RW57V752		RW58V752	
56	RW59V560		RW57V560		RW58V560		8200			RW57V822		RW58V822	
62	RW59V620		RW57V620		RW58V620		9100					RW58V912	
68	RW59V680		RW57V680		RW58V680		10,000					RW58V103	
75	RW59V750		RW57V750		RW58V750		11,000					RW58V113	
82	RW59V820		RW57V820		RW58V820		12,000					RW58V123	
91	RW59V910		RW57V910		RW58V910		13,000					RW58V133	
100	RW59V1011		RW57V1011		RW58V1011		15,000					RW58V153	
110	RW59V1111		RW57V1111		RW58V1111		16,000					RW58V163	
120	RW59V1211		RW57V1211		RW58V1211		18,000					RW58V183	
130	RW59V1311		RW57V1311		RW58V1311		20,000					RW58V203	



# SPRAGUE RESISTORS

## FILMISTOR® METAL-FILM RESISTORS



- Filmistor® C Series Resistors are Ideal for Circuits Requiring High Accuracy, Reliability, and Stability with Low Temperature Coefficients.
- Physical Size of Types RN55 and RN60 is Compatible With Those of Other Resistors, Capacitors, and Diodes for "Cordwood" Packaging.
- Designed to Meet the Stringent Performance Requirements of Spec. MIL-R-10509-D.
- Low Self-inductance, Low Distributed Capacitance. Equal or Surpass the Characteristics of Precision Wirewound Resistors, Yet Are Smaller in Size.
- Metallic Resistive Film is Firmly Bonded to Special Ceramic Core, Automatically Spiralled to Desired Resistance Value.
- Tough Molded Shell Provides Protection Against Mechanical Damage as Well as Catastrophic Failures From Electrolysis Caused by Moisture Penetration.
- Standard Resistance Tolerance,  $\pm 1\%$
- For Complete Technical Data, Refer to Latest Issue of Engineering Bulletin 7025
- Call Your Sprague Industrial Distributor For Quantity Prices.

### STANDARD RESISTANCE VALUES (Ohms)

49.9	147	432	1.27 K	3.74 K	10.7 K	30.9 K	88.7 K	255 K	750 K
51.1	150	442	1.30 K	3.83 K	11.0 K	31.6 K	90.9 K	261 K	768 K
52.3	154	453	1.33 K	3.92 K	11.3 K	32.4 K	93.1 K	267 K	787 K
53.6	158	464	1.37 K	4.02 K	11.5 K	33.2 K	95.3 K	274 K	806 K
54.9	162	475	1.40 K	4.12 K	11.8 K	34.0 K	97.6 K	280 K	825 K
56.2	165	487	1.43 K	4.22 K	12.1 K	34.8 K	100 K	287 K	845 K
57.6	169	499	1.47 K	4.32 K	12.4 K	35.7 K	102 K	294 K	866 K
59.0	174	511	1.50 K	4.42 K	12.7 K	36.5 K	105 K	301 K	887 K
60.4	178	523	1.54 K	4.53 K	13.0 K	37.4 K	107 K	309 K	909 K
61.9	182	536	1.58 K	4.64 K	13.3 K	38.3 K	110 K	316 K	931 K
63.4	187	549	1.62 K	4.75 K	13.7 K	39.2 K	113 K	324 K	953 K
64.9	191	562	1.65 K	4.87 K	14.0 K	40.2 K	115 K	332 K	976 K
66.5	196	576	1.69 K	4.99 K	14.3 K	41.2 K	118 K	340 K	1.00 meg.
68.1	200	590	1.74 K	5.11 K	14.7 K	42.2 K	121 K	348 K	1.02 meg.
69.8	205	604	1.78 K	5.23 K	15.0 K	43.2 K	124 K	357 K	1.05 meg.
71.5	210	619	1.82 K	5.36 K	15.4 K	44.2 K	127 K	365 K	1.07 meg.
73.2	215	634	1.87 K	5.49 K	15.8 K	45.3 K	130 K	374 K	1.10 meg.
75.0	221	649	1.91 K	5.62 K	16.2 K	46.4 K	133 K	383 K	1.13 meg.
76.8	226	665	1.96 K	5.76 K	16.5 K	47.5 K	137 K	392 K	1.15 meg.
78.7	232	681	2.00 K	5.90 K	16.9 K	48.7 K	140 K	402 K	1.18 meg.
80.6	237	698	2.05 K	6.04 K	17.4 K	49.9 K	143 K	412 K	1.21 meg.
82.5	243	715	2.10 K	6.19 K	17.8 K	51.1 K	147 K	422 K	1.24 meg.
84.5	249	732	2.15 K	6.34 K	18.2 K	52.3 K	150 K	432 K	1.27 meg.
86.6	255	750	2.21 K	6.49 K	18.7 K	53.6 K	154 K	442 K	1.30 meg.
88.7	261	768	2.26 K	6.65 K	19.1 K	54.9 K	158 K	453 K	1.33 meg.
90.9	267	787	2.32 K	6.81 K	19.6 K	56.2 K	162 K	464 K	1.37 meg.
93.1	274	806	2.37 K	6.98 K	20.0 K	57.6 K	165 K	475 K	1.40 meg.
95.3	280	825	2.43 K	7.15 K	20.5 K	59.0 K	169 K	487 K	1.43 meg.
97.6	287	845	2.49 K	7.32 K	21.0 K	60.4 K	174 K	499 K	1.47 meg.
100	294	866	2.55 K	7.50 K	21.5 K	61.9 K	178 K	511 K	1.50 meg.
102	301	887	2.61 K	7.68 K	22.1 K	63.4 K	182 K	523 K	1.54 mee.
105	309	909	2.67 K	7.87 K	22.6 K	64.9 K	187 K	536 K	1.58 meg.
107	316	931	2.74 K	8.06 K	23.2 K	66.5 K	191 K	549 K	1.62 meg.
110	324	953	2.80 K	8.25 K	23.7 K	68.1 K	196 K	562 K	1.65 meg.
113	332	976	2.87 K	8.45 K	24.3 K	69.8 K	200 K	576 K	1.69 meg.
115	340	1.0 K	2.94 K	8.66 K	24.9 K	71.5 K	205 K	590 K	1.74 meg.
118	348	1.02 K	3.01 K	8.87 K	25.5 K	73.2 K	210 K	604 K	1.78 meg.
121	357	1.05 K	3.09 K	9.09 K	26.1 K	75.0 K	215 K	619 K	1.82 meg.
124	365	1.07 K	3.16 K	9.31 K	26.7 K	76.8 K	221 K	634 K	1.87 meg.
127	374	1.10 K	3.24 K	9.53 K	27.4 K	78.7 K	226 K	649 K	1.91 meg.
130	383	1.13 K	3.32 K	9.76 K	28.0 K	80.6 K	232 K	665 K	1.96 meg.
133	392	1.15 K	3.40 K	10.00 K	28.7 K	82.5 K	237 K	681 K	2.00 meg.
137	402	1.18 K	3.48 K	10.2 K	29.4 K	84.5 K	243 K	698 K	
140	412	1.21 K	3.57 K	10.5 K	30.1 K	86.6 K	249 K	715 K	
143	422	1.24 K	3.65 K					732 K	

### 1/10 WATT METAL FILM TYPE 416E/RN55C

.095" Dia. x .250" Long  
49.9 ohms thru .1 meg.

### 1/8 WATT METAL FILM TYPE 418E/RN60C

.135" Dia. x .400" Long  
49.9 ohms thru 499 K

### 1/4 WATT METAL FILM TYPE 419E/RN65C

.200" Dia. x .600" Long  
49.9 ohms thru 1 meg.

### 1/2 WATT METAL FILM TYPE 420E/RN70C

.250" x Dia. .750" Long  
49.9 ohms thru 1 meg.

### 1 WATT METAL FILM TYPE 421E/RN75C

.375" Dia. x 1.062" Long  
49.9 ohms thru 2 meg.



# VICTORY ENGINEERING CORPORATION

SPRINGFIELD, NEW JERSEY

## THERMISTORS • VARISTORS

### VECO DESIGNER'S KITS

A variety of Thermistors or Varistors to simplify the selection of the proper unit to use. Each kit contains schematics and technical characteristics.

KD25	13 THERMISTOR DISKS	\$10.50
KP50	6 THERMISTOR PROBES	14.50
KR75	8 THERMISTOR RODS	8.75
KTB1	8 THERMISTOR BEADS	19.50
KW125	12 THERMISTOR WASHERS	13.50
	(6 TYPES WITH MTG. KIT)	
KV1001	9 VARISTOR DISKS	7.50

### PRODUCT



### RELIABILITY

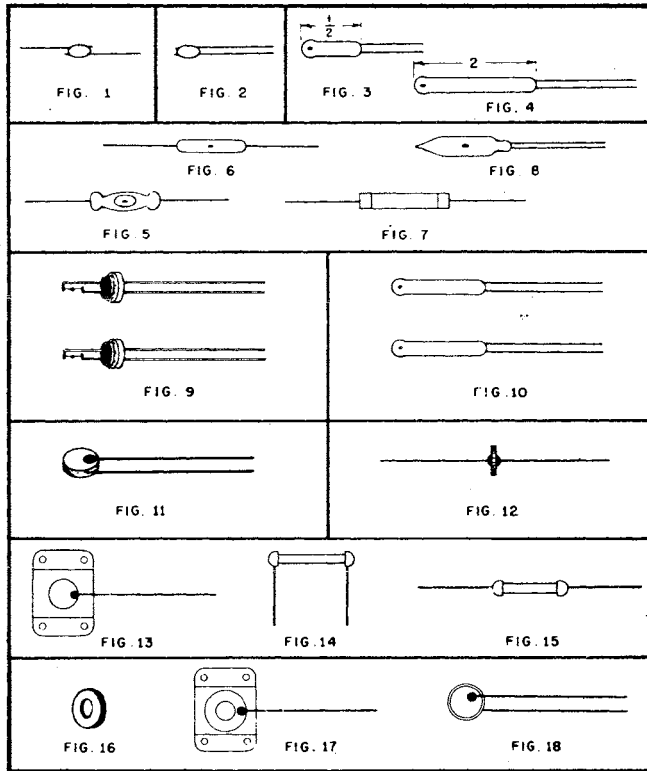
### VECO TECHNICAL LITERATURE

- V 42 ..... Price \$1.00  
VECO Thermistor-Varistor Data Book: Contains historical background, technical data, typical circuits, curves, and a complete bibliography.
- V 1133 ..... Price \$2.00  
VECO Thermistor Circuit Applications and Characteristics: A "must" for designing and developing circuits requiring the use of VECO Thermistors. Described, step by step, are schematics covering zero-power, voltage-current, and current time applications using VECO Thermistors.
- V 1166 ..... Price \$1.00  
The Theory concerning VECO Thermistor type hypsometers: A treatise concerning the use of VECO Thermistors to measure altitude by means of pressure. (VECO thermistors act as transducers, converting pressure measurement to an electrical resistance output.)

### VECO EXPERIMENTER'S KITS

Each kit includes forms showing typical circuitry and specific characteristics of units in kit.  
M168 Experimentors' Kit, 7 assorted units for \$ 5.00 net, ppd.  
M168A Experimentors' Kit, 10 assorted units for \$10.00 net, ppd.

VECO Number	Resistance @ 25°C (Ohms)	Net Price	Fig.
<b>BEAD THERMISTORS</b>			
.043" Dia. $\frac{1}{16}$ " Min. Leads			
21A2	100 $\pm$ 20%	\$ 3.00	2
25A5	500 $\pm$ 20%	2.40	2
32A12	2,000 $\pm$ 20%	1.95	2
51A2	100,000 $\pm$ 15%	1.95	2
65A5	5 MEG $\pm$ 20%	3.30	2
.014" Dia. $\frac{1}{8}$ " Min. Leads			
32A5	2,000 $\pm$ 25%	3.00	1
32A48	2,000 $\pm$ 25%	2.60	1
34A2	3,500 $\pm$ 15%	4.20	1
51A30	100,000 $\pm$ 25%	3.20	1
61A9	1 MEG $\pm$ 25%	3.90	1
.010" Dia. $\frac{1}{4}$ " Min. Leads			
31A7	1,000 $\pm$ 25%	5.70	1
32A50	2,000 $\pm$ 25%	5.70	1
41A5	10,000 $\pm$ 25%	5.40	1
51A22	100,000 $\pm$ 25%	5.50	1
61A5	1 MEG $\pm$ 25%	6.40	1
.005" Dia. $\frac{1}{4}$ " Min. Leads			
31A401C	1,000 $\pm$ 25%	20.00	1
32A401C	2,000 $\pm$ 25%	20.00	1
51A401C	100,000 $\pm$ 25%	20.00	1
<b>GLASS PROBE THERMISTORS</b>			
13A13	30 $\pm$ 20%	4.00	4
22A31	200 $\pm$ 20%	3.00	4
32A11	2,000 $\pm$ 20%	1.95	3
45A11	50,000 $\pm$ 20%	2.25	3
72A10	15 MEG $\pm$ 20%	3.80	4
<b>GLASS ROD &amp; BULB THERMISTORS</b>			
32A3	2,000 $\pm$ 25%	4.20	5
37A1	7,000 $\pm$ 20%	3.60	6
44A1	35,000 $\pm$ 25%	1.90	7
45B2	50,000 $\pm$ 40%	2.25	7
46A2	60,500 $\pm$ 29%	2.25	7
<b>MATCHED THERMISTORS</b>			
A33	2,000 $\pm$ 25%	15.00	9
A59	100,000 $\pm$ 15%	7.00	10
A60	2,000 $\pm$ 20%	7.00	10
<b>RDD THERMISTORS .05" Dia.</b>			
41S2	10,000 $\pm$ 10%	1.35	14
51R2	100,000 $\pm$ 10%	1.35	14
<b>ROD THERMISTORS .110" Dia.</b>			
33S1	3,150 $\pm$ 10%	1.10	15
36S1	6,300 $\pm$ 10%	1.10	15
41R1	10,000 $\pm$ 10%	1.10	15
45R1	50,000 $\pm$ 10%	1.10	15
51R1	100,000 $\pm$ 10%	1.10	15
<b>ROD THERMISTORS .172" Dia.</b>			
32S2	2,000 $\pm$ 10%	1.20	15
35S3	5,000 $\pm$ 10%	1.20	15
42R5	20,000 $\pm$ 10%	1.20	15
43R6	30,000 $\pm$ 10%	1.20	15
45R9	50,000 $\pm$ 10%	1.20	15



VECO VARISTORS				
VECO Number	Exponent n	V $\pm$ 30% @ 5 ma, D.C.	Net Price	Fig.
023L9	3	6V	1.00	18
063L9	3	10V	1.00	18
114L2	4	15V	1.00	18
124L1	4	25V	1.00	18
124L2	4	35V	1.00	18
134L1	4	50V	1.00	18
155L3	5	75V	1.00	18
175L1	5	100V	1.00	18
195L1	5	120V	1.00	18

This listing represents a small portion of the many thermistors and varistors available. See your jobber for complete information.

VECO Number	Resistance @ 25°C (Ohms)	Net Price	Fig.
<b>DISC THERMISTORS .1" Dia.</b>			
25E2	500 $\pm$ 10%	.80	11
31E2	1,000 $\pm$ 10%	.80	11
33D7	3,000 $\pm$ 10%	.80	11
35D2	5,000 $\pm$ 10%	.80	11
41D2	10,000 $\pm$ 10%	.80	11
<b>DISK THERMISTORS .2" Dia.</b>			
21E23	100 $\pm$ 10%	.80	11
23E16	300 $\pm$ 10%	.80	11
31D10	1,000 $\pm$ 10%	.80	11
33D16	3,000 $\pm$ 10%	.80	11
35D6	5,000 $\pm$ 10%	.80	11
<b>DISK THERMISTORS .3" Dia.</b>			
15E4	50 $\pm$ 10%	.80	11
21E21	100 $\pm$ 10%	.85	11
25D5	500 $\pm$ 10%	.85	11
31D32	1,000 $\pm$ 10%	.80	11
33D10	3,000 $\pm$ 10%	.80	11
<b>DISK THERMISTORS .4" Dia.</b>			
13E3	25 $\pm$ 10%	.85	11
21E2	100 $\pm$ 10%	.85	11
23D18	300 $\pm$ 10%	.85	11
31D3	1,000 $\pm$ 10%	.85	11
32D12	2,000 $\pm$ 10%	.85	11
<b>DISK THERMISTORS .5" Dia.</b>			
12E2	20 $\pm$ 10%	.85	11
15E3	50 $\pm$ 10%	.85	11
21E22	100 $\pm$ 10%	.85	11
25D4	500 $\pm$ 10%	.85	11
31D33	1,000 $\pm$ 10%	.85	11
<b>DISK THERMISTORS .7" Dia.</b>			
11E2	10 $\pm$ 10%	.85	11
13E19	30 $\pm$ 10%	.85	11
18D2	75 $\pm$ 10%	.85	11
21D2	100 $\pm$ 10%	.85	11
23D34	300 $\pm$ 10%	.85	11
<b>DISK THERMISTORS 1.0" Dia.</b>			
05E1	5 $\pm$ 10%	1.20	11
11E1	10 $\pm$ 10%	1.20	11
15D1	50 $\pm$ 10%	1.20	11
21D5	100 $\pm$ 10%	1.20	11
22D10	200 $\pm$ 10%	1.20	11
<b>WASHER THERMISTORS .2" Dia.</b>			
22X1	150 $\pm$ 10%	1.15	16
31W1	1,100 $\pm$ 10%	1.15	16
<b>WASHER THERMISTORS .7" Dia.</b>			
11X1	10 $\pm$ 10%	1.05	16
12X10	15 $\pm$ 10%	1.05	16
21W1	100 $\pm$ 10%	1.05	16
22W6	200 $\pm$ 10%	1.05	16
32Y3	1,800 $\pm$ 10%	1.05	16
<b>MOUNTING ACCESSORIES</b>			
A816	Mtg. Kit	1.25	
A819	Packing Gland	4.00	
A828	Mtg. Kit w/Bracket	1.75	

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

### THERMISTORS

THERMAL CONDUCTIVITY CELLS • COMBUSTION ANALYZERS • MATCHED THERMISTORS • THERMISTOR HYPODERMIC NEEDLES

ELECTRONIC CONTROLS • HYPSONETERS

### VARISTORS

CHOPPERETTES • TEMPERATURE SENSING DEVICES



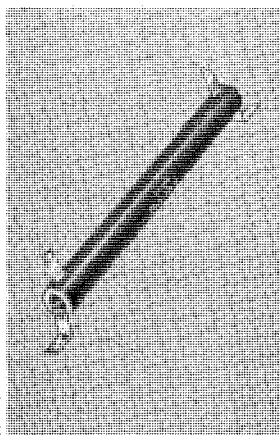
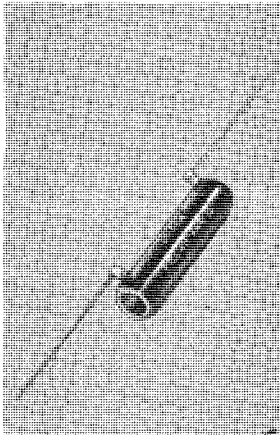
# VITREOUS ENAMELED FIXED RESISTORS

Fixed wire wound, vitreous enameled resistors. Stock resistance values range from 1 $\Omega$  thru 250,000  $\Omega$ . Standard tolerance of  $\pm 5\%$ . Closer resistance tolerances available on order.

The sturdy terminals are hot-tinned for soldering ease, and the holes in the terminal are of suitable size to accommodate screws.

Values of resistance listed are in stock for immediate delivery. Special resistance values or terminal dimensions are given prompt attention and Tru-Ohm's famous delivery is assured.

<b>5 WATT</b>			Type FR-5 Terminal - #10 Type FRL-5 Terminal - #107			<b>10 WATT</b>			Type FR-10 Terminal - #10 Type FRL-10 Terminal - #107			<b>20 WATT</b>			Type FR-20 Terminal - #10 Type FRL-20 Terminal - #107		
Core Size: 5/16" x 3/16" x 1"						Core Size: 5/16" x 3/16" x 1-3/4"						Core Size: 7/16" x 1/4" x 2"					
Weight: .012 lbs.						Weight: .019 lbs.						Weight: .033 lbs.					
Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	2,230	2.2	750	81	61	1	3,160	3.1	1,200	91	109	1	4,480	4.4	2,400	91	218
1.5	1,820	2.7	800	79	63	1.5	2,580	3.8	1,250	89	111	1.5	2,580	7.7	2,500	89	222
2	1,580	3.2	900	74	67	2	2,230	4.4	1,500	82	123	5	2,000	10	2,750	85	234
3	1,290	3.9	1,000	71	71	3	1,820	5.4	1,750	76	133	10	1,410	14	3,000	81	243
4	1,120	4.5	1,100	67	74	4	1,580	6.3	2,000	71	142	15	1,150	17	3,500	75	262
5	1,000	5.0	1,200	64	77	5	1,410	7.0	2,250	67	151	25	895	22	4,000	70	280
7.5	816	6.1	1,250	63	79	7.5	1,150	8.6	2,500	63	158	50	633	31	4,500	67	301
10	707	7.1	1,500	58	87	10	1,000	10	3,000	57	171	75	516	39	5,000	63	315
12	646	7.8	1,750	53	93	12	914	11	3,500	53	185	100	447	44	6,000	57	342
15	576	8.6	2,000	50	100	15	816	12	4,000	50	200	150	365	54	7,000	53	371
20	500	10	2,250	47	106	20	707	14	4,500	47	212	175	338	59	7,500	51	382
25	447	11	2,500	45	112	25	631	16	5,000	45	225	200	316	63	8,000	50	400
30	409	12	3,000	41	123	30	577	17	6,000	41	246	250	283	71	10,000	44	440
35	378	13	3,500	38	133	35	535	19	7,000	38	266	300	258	77	12,500	36	450
40	353	14	4,000	35	140	40	500	20	7,500	36	270	350	239	84	15,000	31	465
50	316	16	4,500	33	149	50	447	22	8,000	35	280	400	223	89	20,000	27	520
75	258	19	5,000	32	160	75	365	27	8,500	34	289	500	200	100	25,000	24	600
100	223	22	6,000	29	174	100	316	31	9,000	33	297	650	175	114	30,000	22	660
125	200	25	7,000	27	189	125	283	35	10,000	32	316	700	169	118	35,000	21	735
150	182	27	7,500	26	195	150	254	38	11,000	30	332	750	164	123	40,000	19	760
200	158	32	8,000	25	200	200	223	44	12,000	29	346	800	158	126	45,000	18	810
225	149	33	9,000	23	207	225	211	47	12,500	28	353	850	154	131	50,000	17	850
250	141	35	10,000	22	220	250	200	50	13,500	27	365	1,000	141	141	55,000	16	880
300	129	39	12,500	20	250	300	182	54	15,000	26	385	1,200	129	155	60,000	15	900
350	119	42	15,000	18	275	350	169	59	16,000	25	400	1,250	126	157	65,000	15	970
400	112	45	17,500	17	295	400	158	63	17,500	24	417	1,500	115	172	70,000	14	980
450	105	47	20,000	16	320	450	149	67	18,000	23	434	1,750	107	187	75,000	13	990
500	100	50	22,500	14	360	500	141	70	20,000	22	454	1,850	104	192	80,000	12	990
600	91	55	25,000	13	390	600	129	77	22,500	21	472	2,000	100	200	85,000	11	990
700	84	59				700	120	84	25,000	20	500	2,250	94	211	90,000	10.5	990
						750	115	86	30,000	18	540				95,000	10	990
						800	112	89	35,000	17	595				100,000	10	990
						900	105	94	40,000	16	638						
						1,000	100	100	45,000	15	668						
						1,100	95	104	50,000	14	707						



<b>25 WATT</b>			Type FR-25 Terminal - #12			<b>50 WATT</b>			Type FR-50 Terminal - #12			<b>75 WATT</b>			Type FR-75 Terminal - #12		
Core Size: 9/16" x 5/16" x 2"						Core Size: 9/16" x 5/16" x 4"						Core Size: 9/16" x 5/16" x 6"					
Weight: .051 lbs.						Weight: .082 lbs.						Weight: .140 lbs.					
Mounting Centers - 2-3/4"						Mounting Centers - 4-3/4"						Mounting Centers - 6-3/4"					
With Brackets - P-3747						With Brackets - P-3747						With Brackets - P-3747					
Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	5,000	5.0	1,500	129	193	1	7,070	7	4,000	111	444	1	8,660	8	2,500	173	432
2	3,535	7.0	2,000	111	222	2	5,000	10	5,000	100	500	2	6,120	12	3,000	158	474
3	2,885	8.6	2,500	100	250	3	4,070	12	6,000	91	545	3	5,000	15	4,000	137	548
4	2,500	10	3,000	91	273	4	3,535	14	7,500	81	608	4	4,330	17	5,000	122	610
5	2,236	11	3,500	84	294	5	3,160	15	8,000	79	632	5	3,875	19	6,000	111	666
10	1,580	15	4,000	79	316	10	2,236	22	10,000	70	700	10	2,740	27	7,500	100	750
15	1,291	19	5,000	70	350	25	1,414	35	12,000	64	768	25	1,732	43	8,000	96	769
25	1,000	25	6,000	64	384	50	1,000	50	12,500	63	787	50	1,225	61	10,000	86	860
50	707	35	7,500	57	427	75	816	61	15,000	57	855	100	866	86	12,000	79	948
75	577	43	10,000	50	500	100	707	70	20,000	50	1,000	150	707	106	12,500	77	962
100	500	50	12,000	42	505	150	577	86	25,000	44	1,090	200	612	122	15,000	70	1,050
150	408	61	15,000	36	540	200	500	100	30,000	37	1,100	250	548	137	20,000	61	1,220
200	353	70	20,000	31	620	250	447	111	35,000	32	1,120	300	500	150	25,000	49	1,225
250	316	79	25,000	28	700	300	408	122	40,000	29	1,140	400	433	173	30,000	42	1,260
300	289	86	30,000	26	780	400	353	141	50,000	26	1,300	500	387	193	35,000	36	1,270
400	250	100	35,000	24	840	500	316	158	75,000	21	1,575	750	316	237	40,000	32	1,280
500	223	111	40,000	22	880	750	258	193	100,000	18	1,800	800	306	242	45,000	29	1,310
750	182	136	50,000	20	950	800	250	200	125,000	16	1,950	1,000	274	274	50,000	26	1,320
800	177	141	60,000	16	960	1,000	223	223	150,000	13	1,950	1,500	223	334	75,000	18	1,340
850	171	145	70,000	15	960	1,500	182	273	175,000	11	1,950	2,000	193	386	100,000	13	1,360
1,000	158	158	80,000	12	990	2,000	158	316	200,000	10	1,950						
1,250	141	176	100,000	10	990	2,500	141	350	225,000	9	1,950						
						3,000	129	384	250,000	8	1,950						

**TRU-OHM PRODUCTS**

HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.



# VITREOUS ENAMELED FIXED RESISTORS

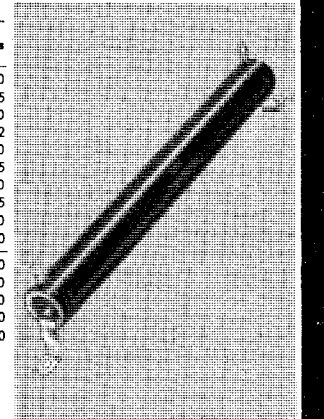


100 WATT						160 WATT						200 WATT					
Type FR-100 Terminal #12						Type FR-160 Terminal #14						Type FR-200 Terminal #14					
Core Size: 3/4" x 1/2" x 6-1/2" Weight: .200 lbs. Mounting Centers: 7-3/8" With #P-3689 Brackets						Core Size: 1-1/8" x 3/4" x 8-1/2" Weight: .445 lbs. Mounting Centers: 9-3/8" With #P-4898 Brackets						Core Size: 1-1/8" x 3/4" x 10-1/2" Weight: .740 lbs. Mounting Centers: 11-3/8" With #P-4898 Brackets					
Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	10,000	10	3,000	181	543	1	12,650	12	3,000	231	693	1	14,140	14	4,000	225	900
2	7,070	14	3,500	170	595	2	8,940	18	3,500	215	753	2	10,000	20	4,500	210	945
3	5,770	17	4,000	160	640	3	7,300	21	4,000	200	800	3	8,162	24	5,000	200	1,000
4	5,000	20	4,500	150	675	4	6,320	25	4,500	185	832	4	7,070	28	7,500	163	1,222
5	4,470	22	5,000	141	705	5	5,650	28	5,000	179	895	5	6,325	31	10,000	14	1,410
10	3,160	31	7,500	115	864	10	4,000	40	7,500	15	1,070	10	4,470	44	15,000	12	1,725
25	2,000	50	10,000	100	1,000	15	3,265	49	10,000	13	1,230	25	2,828	70	20,000	10	2,000
50	1,414	70	15,000	81	1,215	25	2,525	63	15,000	10	1,570	50	2,000	100	25,000	089	2,225
75	1,150	86	20,000	70	1,400	50	1,786	89	20,000	089	1,780	75	1,635	122	30,000	082	2,460
100	1,000	100	25,000	60	1,500	75	1,460	109	25,000	08	2,000	100	1,414	141	35,000	075	2,640
125	895	112	30,000	57	1,720	100	1,265	126	30,000	73	2,090	150	1,152	173	40,000	070	2,830
150	816	122	40,000	50	2,000	150	1,033	155	35,000	67	2,370	250	895	224	50,000	063	3,150
250	630	157	50,000	45	2,250	200	894	178	40,000	63	2,540	500	632	316	60,000	058	3,480
500	447	223	60,000	40	2,400	250	800	200	50,000	57	2,800	750	516	387	75,000	052	3,900
750	365	274	70,000	38	2,400	500	565	282	60,000	52	3,080	1,000	447	447	100,000	045	4,490
1,000	316	316	75,000	32	2,400	750	461	346	75,000	46	3,470	1,500	365	547			
1,250	285	356	100,000	28	2,400	1,000	400	400	100,000	40	4,000	2,000	316	632			
1,500	259	388				1,500	326	489				2,500	283	707			
2,000	224	448				2,000	282	564				3,000	259	776			
2,500	200	500				2,500	252	630				3,500	240	840			

Wattage rating in free air - thru 60,000 Ω

Wattage rating in free air - All values listed

Wattage rating in free air - All values listed



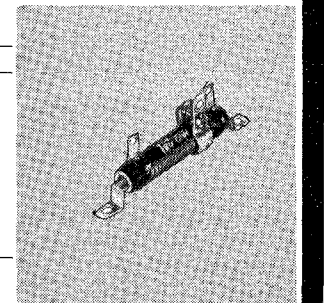
# VITREOUS ENAMELED ADJUSTABLE RESISTORS

These resistors are used in applications where it is necessary to make adjustment in resistance periodically; where intermediate values of resistance are required; or when provided with more than one adjustable lug as multiple tap resistors.

The wattage rating between the adjustable band and either end terminal is proportional to the distance between the terminal and the band and should be considered when figuring any maximum section wattage dissipation.

Type AR-10

10 WATT					
Core Size: 5/16" x 3/16" x 1-3/4" Weight: .019 lbs. Mounting Centers - 2-3/16" With Bracket #P-4989 Standard Lug #10					
Catalog No.	Ohms	Milliamps	Catalog No.	Ohms	Milliamps
AR-10	1	3,160	AR-10	750	115
AR-10	2	2,230	AR-10	800	112
AR-10	3	1,820	AR-10	1,000	100
AR-10	5	1,410	AR-10	1,250	89
AR-10	7.5	1,150	AR-10	1,500	82
AR-10	10	1,000	AR-10	2,000	71
AR-10	15	816	AR-10	2,250	67
AR-10	20	707	AR-10	2,500	63
AR-10	25	631	AR-10	3,000	57
AR-10	50	447	AR-10	3,500	53
AR-10	75	365	AR-10	4,000	50
AR-10	100	316	AR-10	4,500	47
AR-10	150	254	AR-10	5,000	45
AR-10	200	223	AR-10	6,000	41
AR-10	250	200	AR-10	7,000	38
AR-10	300	182	AR-10	7,500	36
AR-10	350	169	AR-10	8,000	35
AR-10	400	158	AR-10	8,500	34
AR-10	500	141	AR-10	9,000	33
AR-10	600	129	AR-10	10,000	32



**TRU-OHM PRODUCTS**  
HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION  
MODEL ENGINEERING and MANUFACTURING CORP.





# VITREOUS ENAMELED ADJUSTABLE RESISTORS

Type AR-25

Type AR-50

Type AR-75

## 25 WATT

## 50 WATT

## 75 WATT

Core Size: 9/16" x 5/16" x 2"  
Mounting Centers - 2-3/4"  
With Bracket #P-3747  
Standard Lug #12

Weight:  
.057 lbs.

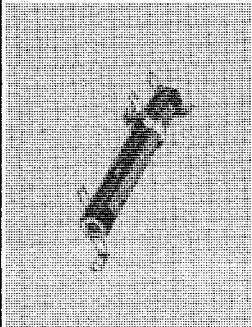
Core Size: 9/16" x 5/16" x 4"  
Mounting Centers - 4-3/4"  
With Bracket #P-3747  
Standard Lug #12

Weight:  
.096 lbs.

Core Size: 9/16" x 5/16" x 6"  
Mounting Centers - 6-3/4"  
With Bracket #P-3747  
Standard Lug #12

Weight:  
.150 lbs.

Type AR-25			Type AR-25			Type AR-50			Type AR-50			Type AR-75			Type AR-75		
Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-25	1	5,000	AR-25	4,500	74	AR-50	1	7,070	AR-50	7,000	84	AR-75	1	8,660	AR-75	7,000	103
AR-25	2	3,535	AR-25	5,000	70	AR-50	2	5,000	AR-50	7,200	83	AR-75	2	6,120	AR-75	7,200	102
AR-25	3	2,885	AR-25	6,000	64	AR-50	3	4,070	AR-50	7,500	81	AR-75	3	5,000	AR-75	7,500	100
AR-25	5	2,236	AR-25	7,000	60	AR-50	4	3,535	AR-50	8,000	79	AR-75	4	4,330	AR-75	8,000	96
AR-25	7.5	1,825	AR-25	7,200	59	AR-50	5	3,160	AR-50	9,000	74	AR-75	5	3,875	AR-75	9,000	91
AR-25	10	1,580	AR-25	7,500	57	AR-50	10	2,236	AR-50	10,000	70	AR-75	10	2,740	AR-75	10,000	86
AR-25	15	1,291	AR-25	8,000	55	AR-50	25	1,414	AR-50	12,000	64	AR-75	15	2,236	AR-75	12,000	79
AR-25	20	1,117	AR-25	9,000	52	AR-50	50	1,000	AR-50	15,000	57	AR-75	25	1,732	AR-75	15,000	70
AR-25	25	1,000	AR-25	10,000	50	AR-50	75	816	AR-50	20,000	50	AR-75	50	1,225	AR-75	20,000	61
AR-25	50	707	AR-25	12,000	42	AR-50	100	707	AR-50	25,000	45	AR-75	75	1,000	AR-75	25,000	54
AR-25	75	577	AR-25	15,000	36	AR-50	150	577	AR-50	30,000	36	AR-75	100	866	AR-75	30,000	50
AR-25	100	500	AR-25	20,000	31	AR-50	200	500	AR-50	40,000	29	AR-75	200	612	AR-75	35,000	46
AR-25	150	408	AR-25	25,000	28	AR-50	250	447	AR-50	50,000	26	AR-75	250	548	AR-75	40,000	42
AR-25	200	353				AR-50	300	408	AR-50	60,000	24	AR-75	300	500	AR-75	45,000	35
AR-25	250	316				AR-50	400	353	AR-50	75,000	22	AR-75	400	433	AR-75	50,000	33
AR-25	300	289				AR-50	500	316	AR-50	80,000	21	AR-75	500	387	AR-75	60,000	29
AR-25	400	250				AR-50	750	258	AR-50	100,000	18	AR-75	750	316	AR-75	70,000	27
AR-25	500	223				AR-50	800	250				AR-75	800	306	AR-75	80,000	25
AR-25	750	182				AR-50	1,000	223				AR-75	1,000	274	AR-75	100,000	22
AR-25	800	177				AR-50	1,250	200				AR-75	1,250	244			
AR-25	850	171				AR-50	1,500	182				AR-75	1,500	223			
AR-25	1,000	158				AR-50	2,000	158				AR-75	2,000	193			
AR-25	1,250	141				AR-50	2,250	149				AR-75	2,250	182			
AR-25	1,500	129				AR-50	2,500	141				AR-75	2,500	173			
AR-25	2,000	120				AR-50	3,000	129				AR-75	3,000	158			
AR-25	2,250	105				AR-50	3,500	119				AR-75	3,500	146			
AR-25	2,500	100				AR-50	4,000	111				AR-75	4,000	137			
AR-25	3,000	91				AR-50	4,500	105				AR-75	4,500	129			
AR-25	3,500	84				AR-50	5,000	100				AR-75	5,000	122			
AR-25	4,000	79				AR-50	6,000	91				AR-75	6,000	111			



Type AR-100

Type AR-160

Type AR-200

## 100 WATT

## 160 WATT

## 200 WATT

Core Size: 3/4" x 1/2" x 6-1/2"  
Mounting Centers - 7-3/8"  
With Brackets #P-3689  
Standard Lug #12

Weight:  
.200 lbs.

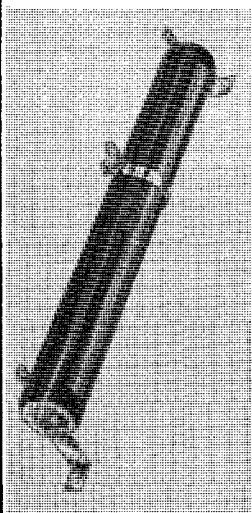
Core Size: 1-1/8" x 3/4" x 8-1/2"  
Mounting Centers - 9-3/8"  
With Brackets #P-4898  
Standard Lug #14

Weight:  
.460 lbs.

Core Size: 1-1/8" x 3/4" x 10-1/2"  
Mounting Centers - 11-3/8"  
With Brackets #P-4898  
Standard Lug #14

Weight:  
.670 lbs.

Type AR-100			Type AR-100			Type AR-160			Type AR-160			Type AR-200			Type AR-200		
Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-100	1	10,000	AR-100	5,000	141	AR-160	1	12,650	AR-160	4,500	185	AR-200	1	14,140	AR-200	7,500	163
AR-100	2	7,070	AR-100	6,000	129	AR-160	2	8,940	AR-160	5,000	179	AR-200	2	10,000	AR-200	10,000	141
AR-100	3	5,770	AR-100	7,500	115	AR-160	3	7,300	AR-160	7,500	146	AR-200	3	8,162	AR-200	15,000	115
AR-100	4	5,000	AR-100	10,000	100	AR-160	4	6,320	AR-160	10,000	126	AR-200	4	7,070	AR-200	20,000	100
AR-100	5	4,470	AR-100	15,000	81	AR-160	5	5,650	AR-160	15,000	104	AR-200	5	6,325	AR-200	25,000	89
AR-100	10	3,160	AR-100	20,000	70	AR-160	10	4,000	AR-160	20,000	89	AR-200	10	4,470	AR-200	30,000	82
AR-100	25	2,000	AR-100	25,000	62	AR-160	15	3,265	AR-160	25,000	80	AR-200	25	2,828	AR-200	40,000	71
AR-100	50	1,414	AR-100	30,000	57	AR-160	25	2,525	AR-160	30,000	72	AR-200	50	2,000	AR-200	50,000	62
AR-100	100	1,000	AR-100	40,000	49	AR-160	50	1,786	AR-160	40,000	62	AR-200	100	1,414	AR-200	60,000	57
AR-100	200	707	AR-100	50,000	44	AR-160	100	1,265	AR-160	50,000	56	AR-200	250	895	AR-200	75,000	52
AR-100	250	630	AR-100	60,000	24	AR-160	200	894	AR-160	60,000	52	AR-200	500	632	AR-200	100,000	45
AR-100	400	500	AR-100	75,000	30	AR-160	250	800	AR-160	75,000	46	AR-200	1,000	447			
AR-100	500	447	AR-100	100,000	28	AR-160	500	565	AR-160	80,000	44	AR-200	1,500	365			
AR-100	750	365				AR-160	1,000	400	AR-160	100,000	40	AR-200	2,000	316			
AR-100	1,000	316				AR-160	1,500	326				AR-200	2,500	283			
AR-100	1,500	259				AR-160	2,000	282				AR-200	3,000	255			
AR-100	2,000	224				AR-160	2,500	252				AR-200	3,500	210			
AR-100	2,500	200				AR-160	3,000	231				AR-200	4,000	225			
AR-100	3,000	181				AR-160	3,500	215				AR-200	4,500	210			
AR-100	4,000	160				AR-160	4,000	200				AR-200	5,000	200			



**TRU-OHM PRODUCTS**  
HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.



# VITREOUS ENAMELED FIXED RESISTORS

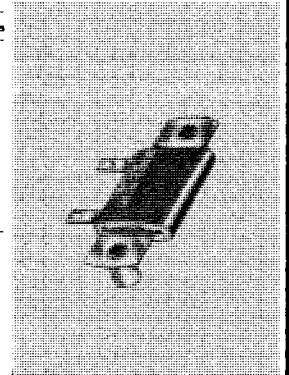


## Midget Oval Type MOR-Series

These units are very desirable for applications where the size of components must be kept to a minimum. Integral mounting brackets are supplied as standard and are designed for stack mounting

of the resistors. Three standard sizes are available. Ratings are based on metal panel mounting, on plate 10" x 10" x .040".

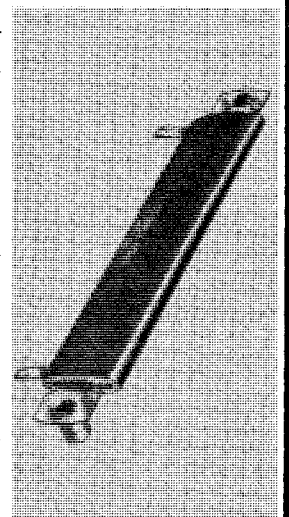
Type MOR-10				Type MOR-15				Type MOR-20			
10 WATT				15 WATT				20 WATT			
Core: 3/8" x 3/4"				Core: 3/8" x 1"				Core: 3/8" x 2"			
Ohms	Max. Amps	Ohms	Max. Amps	Ohms	Max. Amps	Ohms	Max. Amps	Ohms	Max. Amps	Ohms	Max. Amps
1	3.16	600	0.13	1	3.91	2,000	0.087	1	4.47	2,000	0.10
2	2.24	750	0.12	2	2.73	2,500	0.077	2	3.16	2,500	0.09
5	1.41	1,000	0.10	5	1.73	3,000	0.072	5	2.00	3,000	0.081
7.5	1.15	1,250	0.089	10	1.23	3,500	0.065	10	1.41	3,500	0.075
10	1.00	1,500	0.081	15	1.00	4,000	0.059	15	1.16	4,000	0.070
15	0.82	1,750	0.075	25	0.77	5,000	0.054	25	0.89	5,000	0.063
20	0.70	2,000	0.071	40	0.61	6,000	0.050	40	0.71	6,000	0.058
25	0.63	2,500	0.063	50	0.54	7,500	0.044	50	0.63	7,500	0.052
30	0.57	3,000	0.057	75	0.44	10,000	0.038	75	0.52	10,000	0.044
40	0.50	4,000	0.050	100	0.38	12,500	0.034	100	0.45	12,500	0.040
50	0.46	5,000	0.045	150	0.31	15,000	0.032	150	0.36	15,000	0.036
75	0.36	6,000	0.041	200	0.27	20,000	0.028	200	0.32	20,000	0.032
100	0.32	7,000	0.038	250	0.24	25,000	0.024	250	0.28	25,000	0.028
125	0.28	7,500	0.036	300	0.22			300	0.26	30,000	0.026
150	0.26	10,000	0.032	400	0.18			400	0.22	35,000	0.024
200	0.22	12,500	0.208	500	0.17			500	0.20	40,000	0.022
250	0.20	15,000	0.026	750	0.14			800	0.16	50,000	0.020
300	0.18			1,000	0.12			1,000	0.14		
400	0.16			1,250	0.11			1,250	0.12		
500	0.14			1,500	0.10			1,500	0.11		



## Oval Type OR-Series

This line of oval resistors was designed particularly for applications where the available space is limited.

Type OR-30			Type OR-40			Type OR-55			Type OR-65			Type OR-75		
30 WATT			40 WATT			55 WATT			65 WATT			75 WATT		
Core: 5/16" x 1" x 1-1/4" Weight: .055 lbs.			Core: 5/16" x 1" x 2" Weight: .075 lbs.			Core: 5/16" x 1" x 3-1/2" Weight: .130 lbs.			Core: 5/16" x 1" x 4-3/4" Weight: .160 lbs.			Core: 5/16" x 1" x 6" Weight: .195 lbs.		
Ohms	Max. Volts	Max. Amps.	Ohms	Max. Volts	Max. Amps.	Ohms	Max. Volts	Max. Amps.	Ohms	Max. Volts	Max. Amps.	Ohms	Max. Volts	Max. Amps.
1	5.4	5.480	1	6.3	6.330	1	7.4	7.410	1	8	8.060	1	8.6	8.660
3	9.4	3.160	3	10	3.645	3	12	4.280	3	14	4.655	3	15	5.000
5	12	2.455	5	14	2.830	5	16	3.318	5	18	3.605	5	19	3.875
10	17	1.732	10	20	2.000	10	23	2.345	10	25	2.550	10	27	2.740
15	21	1.414	15	24	1.637	15	28	1.917	15	31	2.080	15	33	2.236
25	27	1.097	25	31	1.265	25	37	1.482	25	40	1.612	25	43	1.732
50	38	.775	50	44	.895	50	52	1.050	50	57	1.140	50	61	1.225
100	54	.548	100	63	.633	100	74	.741	100	80	.805	100	86	.866
150	67	.447	150	77	.516	150	90	.605	150	98	.658	150	106	.707
200	77	.387	200	89	.447	200	104	.524	200	114	.570	200	118	.591
250	86	.346	250	100	.400	250	117	.469	250	127	.510	250	137	.548
400	109	.274	400	126	.316	400	148	.370	400	161	.403	400	173	.432
500	122	.245	500	141	.282	500	165	.331	500	180	.360	500	193	.387
750	150	.200	750	173	.231	750	203	.271	750	220	.294	750	237	.316
1,000	173	.173	1,000	200	.200	1,000	234	.234	1,000	255	.255	1,000	274	.274
1,250	193	.155	1,250	223	.179	1,250	259	.207	1,250	285	.228	1,250	306	.245
1,500	211	.141	1,500	244	.163	1,500	286	.191	1,500	312	.208	1,500	334	.223
2,000	244	.122	2,000	282	.141	2,000	332	.166	2,000	360	.180	2,000	386	.193
2,500	272	.109	2,500	315	.126	2,500	370	.148	2,500	402	.161	2,500	432	.173
3,000	300	.100	3,000	345	.115	3,000	405	.135	3,000	444	.147	3,000	474	.158
3,500	322	.092	3,500	374	.107	3,500	437	.125	3,500	475	.136	3,500	510	.146
4,000	344	.086	4,000	400	.100	4,000	469	.117	4,000	508	.127	4,000	548	.137
5,000	385	.077	5,000	445	.089	5,000	525	.105	5,000	570	.114	5,000	611	.122
7,500	526	.057	7,500	547	.073	7,500	638	.085	7,500	698	.093	7,500	750	.100
10,000	610	.049	10,000	630	.063	10,000	740	.074	10,000	800	.080	10,000	860	.086
			15,000	765	.051	15,000	900	.060	15,000	975	.065	15,000	1,050	.070
			20,000	1,000	.039	20,000	1,040	.052	20,000	1,140	.057	20,000	1,220	.061
			25,000	1,140	.035	25,000	1,150	.046	25,000	1,275	.051	25,000	1,350	.054
						30,000	1,260	.042	30,000	1,380	.046	30,000	1,500	.050
									35,000	1,505	.043	35,000	1,610	.046
									40,000	1,600	.040	40,000	1,720	.043
									50,000	1,800	.036	50,000	1,900	.038



**TRU-OHM PRODUCTS**  
HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.



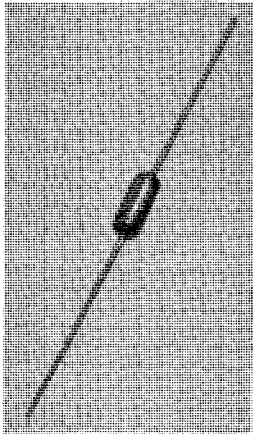


# VITREOUS ENAMELED RESISTORS

## Axial Lead Val-Type

The cores are of a high grade ceramic material to which are affixed lead and cup assemblies of low expansion alloys. After winding, the units are coated with high temperature vitreous enamel which makes them resistant to humidity. This type unit is capable of continuous operation at 340°C.

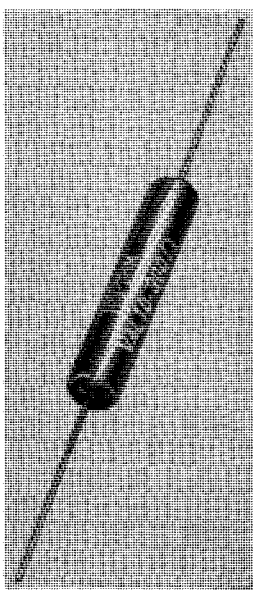
This type resistor lends itself to applications where size is a factor in the design and miniaturization of equipment. They are capable of dissipating power equal to their larger counterpart tab type terminal resistors, but because of the axial lead construction they require less space for mounting.



WATTS	DIAMETER "D"	LENGTH "L"	LENGTH "A" ± 1/16*	LEAD SIZE A.W.G.**	MIN. RES.	RES. MAX.
3	1/4	9/16	1-1/2	#20	0.1 Ω	10,000 Ω
5	11/32	1-1/16	1-1/2	#19	0.4 Ω	25,000 Ω
10	3/8	1-27/32	1-1/2	#19	0.75 Ω	50,000 Ω

\*Lengths shown are standard and can be supplied up to 2-1/2 inches long.

\*\*Sizes shown are standard and can be supplied with #18, #19, or #20 A.W.G.



VAL-3						VAL-5						VAL-10					
3 WATT						5 WATT						10 WATT					
Core: 1/4" x 9/16"			Weight: .002 lbs.			Core: 11/32" x 1-1/16"			Weight: .006 lbs.			Core: 3/8" x 1-27/32"			Weight: .014 lbs.		
Ohms	Amps	Volts	Ohms	Amps	Volts	Ohms	Amps	Volts	Ohms	Amps	Volts	Ohms	Amps	Volts	Ohms	Amps	Volts
1	1.73	1.73	750	.063	47.4	1	2.23	2.23	750	.082	61.5	1.0	3.16	3.16	2,250	.066	149
1.5	1.41	2.12	800	.061	49.0	1.5	1.82	2.74	800	.078	63.0	1.5	2.57	3.86	2,500	.063	158
2	1.22	2.45	900	.058	52.0	2	1.58	3.16	900	.074	67.0	2.0	2.24	4.47	3,000	.057	173
3	1.00	3.00	1,000	.055	54.8	3	1.29	3.87	1,000	.070	70.0	3.0	1.83	5.47	3,500	.053	187
4	.87	3.46	1,100	.052	57.4	4	1.12	4.47	1,100	.067	74.0	4.0	1.58	6.33	4,000	.050	200
5	.77	3.87	1,200	.050	60.0	5	1.00	5.00	1,200	.064	77.0	5.0	1.41	7.07	4,500	.047	212
7.5	.63	4.74	1,250	.049	61.1	7.5	.81	6.12	1,250	.063	79.0	7.5	1.16	8.65	5,000	.045	223
10	.55	5.48	1,500	.045	67.0	10	.71	7.07	1,500	.057	86.0	10	1.00	10.0	6,000	.041	245
12	.50	6.00	1,750	.041	72.3	12	.64	7.74	1,750	.053	93.0	12	.91	10.9	7,000	.038	265
15	.45	6.70	2,000	.039	77.4	15	.58	8.66	2,000	.050	100	15	.82	12.2	7,500	.036	274
20	.39	7.74	2,250	.037	82.3	20	.50	10.0	2,250	.047	106	20	.71	14.1	8,000	.035	283
25	.35	8.66	2,500	.035	86.6	25	.45	11.2	2,500	.045	112	25	.63	15.8	8,500	.034	291
30	.32	9.50	3,000	.032	95.0	30	.41	12.3	3,000	.041	123	30	.58	17.3	9,000	.033	300
35	.29	10.2	3,500	.029	103	35	.38	13.3	3,500	.037	132	35	.53	18.7	10,000	.032	316
40	.27	11.0	4,000	.027	110	40	.35	14.0	4,000	.035	141	40	.50	20.0	11,000	.030	332
50	.25	12.2	4,500	.026	116	50	.32	16.0	4,500	.033	149	50	.45	22.4	12,000	.029	346
75	.20	15.0	5,000	.025	122	75	.25	19.5	5,000	.032	156	75	.37	27.4	12,500	.028	353
100	.17	17.3	6,000	.022	134	100	.22	22.0	6,000	.029	172	100	.32	31.6	13,500	.027	367
125	.16	19.4	7,000	.020	145	125	.20	25.0	7,000	.027	189	125	.28	35.4	15,000	.026	387
150	.14	21.2	7,500	.020	150	150	.18	27.0	7,500	.026	195	150	.26	38.7	16,000	.025	400
200	.13	24.5	8,000	.019	155	200	.16	32.0	8,000	.025	200	200	.22	44.7	17,500	.024	418
225	.12	26.0	9,000	.018	163	225	.15	33.8	9,000	.024	212	225	.21	47.4	18,000	.023	424
250	.11	27.4	10,000	.017	172	250	.14	35.0	10,000	.022	220	250	.20	50.0	20,000	.022	447
300	.10	30.0				300	.13	39.0	12,500	.020	250	300	.18	54.7	22,500	.021	474
350	.093	32.4				350	.12	42.0	15,000	.018	270	350	.17	59.1	25,000	.020	500
400	.087	34.6				400	.11	44.0	17,500	.017	295	400	.16	63.2	30,000	.018	548
450	.082	36.7				450	.10	45.0	18,000	.017	302	450	.15	66.8	35,000	.017	591
500	.077	38.7				500	.10	50.0	20,000	.016	320	500	.14	70.7	40,000	.016	632
600	.071	42.4				600	.09	54.0	22,500	.015	335	600	.13	77.4	45,000	.015	670
700	.065	45.8				700	.085	60.0	25,000	.014	350	700	.12	83.6	50,000	.014	707
												750	.11	86.6			
												800	.11	89.4			
												900	.11	94.8			
												1,000	.10	100			
												1,100	.095	104			
												1,200	.091	109			
												1,250	.090	113			
												1,500	.081	122			
												1,750	.075	132			
												2,000	.071	142			

5

**TRU-OHM PRODUCTS**

HUNTINGTON, INDIANA

MEMCOR/COMPONENTS DIVISION

MODEL ENGINEERING and MANUFACTURING CORP.





# VITREOUS ENAMELED POWER RHEOSTATS

All Values Listed are in Stock for Immediate Shipment.



Type R-12½-12½ Watts

CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS
600	1	3.53	27	611	100	.35	102
601	2	2.50	38	612	125	.32	102
602	3	2.04	36	613	175	.27	112
603	6	1.44	45	614	250	.22	124
604	8	1.25	49	615	350	.19	150
605	10	1.12	42	616	500	.16	164
606	15	.91	49	617	750	.13	188
607	25	.71	65	618	1000	.11	198
608	35	.60	72	619	1500	.091	235
609	50	.50	81	620	2500	.071	260
610	75	.41	98	621	3500	.060	285
				622	5000	.050	315

Type R-75-75 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
300	0.5	12.300	27	312	200	.612	180
301	1	8.660	18	313	300	.500	227
302	2	6.120	30	314	400	.433	232
303	3	5.000	30	315	500	.398	250
304	5	3.880	45	316	750	.316	260
305	7.5	3.160	47	317	1,000	.274	290
306	10	2.740	50	318	1,500	.224	350
307	16	2.170	87	319	2,000	.194	380
308	25	1.730	92	320	2,500	.173	425
309	50	1.230	118	321	5,000	.123	630
310	75	1.000	135	322	7,500	.100	715
311	100	.866		323	10,000	.087	820

Type R-25-25 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
100	1	5.000	26	112	125	.445	145
101	2	3.540	28	113	175	.375	153
102	3	2.880	44	114	250	.316	170
103	6	2.040	50	115	350	.267	180
104	8	1.770	54	116	500	.222	215
105	10	1.580	60	117	750	.182	230
106	15	1.290	78	118	1000	.155	270
107	25	1.000	80	119	1500	.129	325
108	35	.845	100	120	2500	.100	410
109	50	.707	105	121	3500	.084	440
110	75	.575	120	122	5000	.070	480
111	100	.500	140				

Type R-100-100 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
400	0.5	14.100	30	412	200	.707	190
401	1	10.000	20	413	300	.575	260
402	2	7.070	32	414	400	.500	262
403	3	5.750	32	415	500	.447	270
404	5	4.470	50	416	750	.365	280
405	7.5	3.650	52	417	1,000	.316	316
406	10	3.160	58	418	1,500	.258	370
407	16	2.500	97	419	2,000	.224	420
408	25	2.000	105	420	2,500	.200	460
409	50	1.410	140	421	5,000	.141	650
410	75	1.150	155	422	7,500	.115	740
411	100	1.000	168	423	10,000	.100	850

Type R-50-50 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
200	0.5	10.000	22	213	150	.574	175
201	1	7.070	36	214	225	.470	215
202	2	5.000	38	215	300	.408	225
203	4	3.540	38	216	500	.316	295
204	6	2.880	75	217	800	.250	360
205	8	2.500	70	218	1000	.223	375
206	12	2.040	80	219	1600	.176	465
207	16	1.760	90	220	2500	.141	560
208	22	1.500	95	221	3500	.119	585
209	35	1.190	120	222	5000	.100	600
210	50	1.000	120	223	8000	.079	710
211	80	.790	135	224	10,000	.070	720
212	125	.630	185				

Type R-150-150 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
500	0.5	17.300	28	513	150	1.000	230
501	1	12.300	37	514	200	.865	242
502	2	8.650	38	515	250	.775	250
503	3	7.070	67	516	350	.655	280
504	5	5.480	68	517	500	.548	330
505	7.5	4.470	71	518	750	.447	370
506	10	3.880	70	519	1,250	.346	460
507	15	3.163	138	520	1,800	.288	550
508	25	2.450	140	521	2,250	.259	570
509	35	2.070	133	522	3,000	.224	600
510	50	1.735	160	523	4,500	.182	680
511	75	1.415	185	524	7,500	.141	980
512	100	1.225	190	525	10,000	.122	990

Type R-300-300 Watts

CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS
700	1	17.32	50	706	10	5.48	76	712	150	1.41	272	718	1,200	.50	446
701	2	12.24	50	707	15	4.47	130	713	200	1.22	251	719	1,500	.45	460
702	3	10.00	71	708	25	3.47	88	714	300	1.00	300	720	1,750	.41	500
703	4	8.66	65	709	50	2.45	225	715	400	.87	290	721	2,500	.35	508
704	5	7.75	61	710	75	2.00	315	716	700	.66	450				
705	7.5	6.32	80	711	100	1.73	258	717	900	.58	470				

Type R-225-225 Watts

Stock Cat. No.	Ohms	Max Amps*	Approx. No. of Steps
4001	1	15.00	55
4002	1.5	12.30	55
4003	2	10.60	55
4004	2.5	9.50	55
4005	3	8.66	55
4006	4	7.50	55
4007	5	6.71	55
4008	7.5	5.49	115
4009	10	4.74	115
4010	15	3.87	115
4011	25	3.00	115
4012	50	2.12	256
4013	75	1.73	306
4014	100	1.50	315
4015	150	1.22	385
4016	200	1.06	357
4017	250	.950	350
4018	300	.866	335
4019	400	.750	344
4020	500	.671	450
4021	700	.567	495
4022	750	.549	533
4023	900	.500	500
4024	1000	.474	555
4025	1200	.433	526
4026	1500	.387	630
4027	1750	.358	620
4028	2500	.300	670

Type R-500-500 Watts

Stock Cat. No.	Ohms	Max Amps*	Approx. No. of Steps
4101	1	22.3	70
4102	1.5	18.2	64
4103	2	15.8	68
4104	2.5	12.9	67
4105	3	12.1	65
4106	4	11.2	96
4107	5	10.0	96
4108	7.5	8.17	98
4109	8	7.90	97
4110	10	7.07	105
4111	12.5	6.30	103
4112	15	5.77	202
4113	16	5.60	192
4114	25	4.47	195
4115	40	3.54	205
4116	50	3.16	200
4117	75	2.58	395
4118	80	2.52	425
4119	100	2.24	450
4120	125	2.00	505
4121	150	1.82	544
4122	175	1.69	500
4123	250	1.41	570
4124	325	1.24	515
4125	500	1.00	620
4126	750	.817	740
4127	1000	.707	780
4128	1500	.577	940
4129	2000	.500	986
4130	2500	.447	940

Type R-750-750 Watts

Stock Cat. No.	Ohms	Max Amps*	Approx. No. of Steps
4201	1	27.4	85
4202	1.5	22.3	85
4203	2	19.4	81
4204	2.5	17.3	87
4205	3	15.8	83
4206	4	13.6	87
4207	5	12.2	122
4208	7.5	10.0	129
4209	8	9.65	122
4210	10	8.65	121
4211	12.5	7.75	120
4212	15	7.07	127
4213	16	6.82	120
4214	25	5.47	210
4215	50	3.87	238
4216	75	3.19	250
4217	80	3.06	266
4218	100	2.74	265
4219	150	2.23	500
4220	160	2.17	485
4221	200	1.94	472
4222	250	1.73	470
4223	300	1.58	500
4224	400	1.22	472
4225	500	1.00	565
4226	600	1.17	677
4227	750	1.00	670
4228	1000	.865	715
4229	1200	.791	860
4230	1500	.707	840
4231	1800	.646	1020
4232	2500	.547	1085

Type R-1000-1000 Watts

Stock Cat. No.	Ohms	Max Amps*	Approx. No. of Steps
4301	1	31.60	81
4302	1.5	25.80	84
4303	2	22.40	109
4304	2.5	20.00	105
4305	3	18.30	113
4306	4	15.80	106
4307	5	14.10	155
4308	7.5	11.50	105
4309	8	11.20	105
4310	10	10.00	105
4311	12.5	8.95	165
4312	15	8.16	156
4313	16	7.90	166
4314	25	6.33	140
4315	50	4.47	331
4316	75	3.65	303
4317	100	3.16	320
4318	150	2.58	506
4319	175	2.39	550
4320	225	2.11	585
4321	250	2.00	640
4322	300	1.83	605
4323	400	1.58	640
4324	500	1.41	635
4325	750	1.15	820



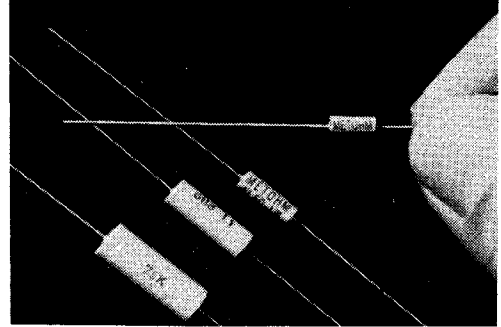
# WARD LEONARD

**Metohm<sup>®</sup> RESISTORS**  
Metal Film Precision Type

THE STANDARD OF QUALITY FOR MILITARY AND INDUSTRIAL PURPOSES

**FEATURES**

- High stability and reliability
- Designed to exceed MIL-R-10509E
- Close resistance tolerance
- Wide range of resistance values
- Stock or made-to-order types
- 1/10, 1/8, 1/4 and 1/2 watt sizes



In critical space-age electronic circuitry, METOHM metal film precision resistors guarantee high reliability, high stability, close accuracy, low TC and miniature size. Metohms are precision made under "white-room" conditions in the industry's most modern plant.

MIL SPECS. — All Metohm precision resistors are designed to exceed MIL-R-10509E char. C, D and E.

POWER RATING — is based on full rated load in an ambient of 125°C.

WELDABLE LEADS — gold plated Dumet leads and nickel "270" leads are available for weldable applications.

STOCK METOHMS — RN55, 60, 65 and 70 Metohm resistors, char .C, TC Code T2 (±50PPM) are stocked in MIL standard values listed below. Standard tolerance is ±1%.

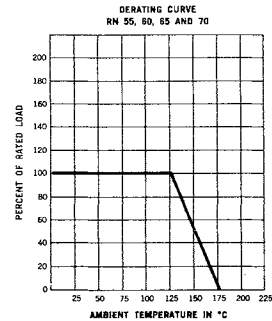
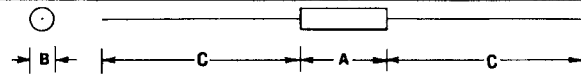
MADE-TO-ORDER TYPES — see data in accompanying tables for non-stock resistors available in production order quantities.

CONFORMAL COATED TYPES — also available in 1/20, 1/10, 1/8, 1/4 and 1/2 w. sizes. Durable solvent resistant coating allows smaller size. Ideal for micro module circuitry where space is at a premium.

**RATINGS AND SIZES — METOHM Metal Film Precision Resistors**

METOHM Type	MIL Type	Watt Rating†	Resistance Values		Max. Voltage Rating (Continuous)	Standard Resistance Tolerance	Temperature Coefficient	A Length	B Diameter	C Axial Lead	
			Max. Ohms	Min. Ohms						Length	Diameter
WL 55	RN 55	1/10	20	301K	200v	1%*	**	.260 ± .010	.120 + .005 - .015	1½ ± ¼	.025 ± .002 (#22 AWG)
WL 60	RN 60	1/8	20	500K	250v	1%*	**	.406 ± .015	.130 ± .015	1½ ± ¼	.025 ± .002 (#22 AWG)
WL 65	RN 65	1/4	20	1.3 meg.	300v	1%*	**	.594 ± .015	.203 ± .015	1½ ± ¼	.025 ± .002 (#22 AWG)
WL 70	RN 70	1/2	20	1.5 meg.	350v	1%*	**	.719 ± .020	.261 ± .020	1½ ± ¼	.032 ± .002 (#20 AWG)

† Based on 125°C ambient and maximum operating temperature of 175°C  
\* Closer tolerances to order. See MIL Resistance Tolerance table below.  
\*\* See Temperature Coefficient Code Table below.



**RESISTANCE TOLERANCE**

MIL Designation	Tolerance
F	± 1%
D	± 0.5%
C	± 0.25%
B	± 0.1%
—	± 0.05%

**TEMPERATURE COEFFICIENT CODE**

T.C. Code**	MIL Char.	Temperature Coefficient Range***	Temperature Range
T-0	D	±100 PPM/°C	-55°C to +175°C
T-2	C	± 50 PPM/°C	-55°C to +175°C
T-3	—	0 to + 100 PPM/°C	-55°C to +175°C
T-4	—	0 to - 100 PPM/°C	-55°C to +175°C
T-5	—	± 25 PPM/°C	+25°C to +145°C
T-6	—	0 to + 50 PPM/°C	-55°C to +175°C
T-7	—	0 to - 50 PPM/°C	-55°C to +175°C
T-8	—	(± 35 PPM/°C)	-55°C to + 25°C
T-8	—	(± 25 PPM/°C)	+25°C to +175°C
T-9	E	± 25 PPM/°C	-55°C to +175°C

\*\* For other temperature coefficients consult Home Office for price.  
\*\*\* Parts per Million Per Degree Centigrade (100 PPM equals 0.01%)

**MIL STANDARD RESISTANCE VALUES FOR STOCK METOHM RESISTORS**

30.1	43.2	61.9	88.7	127	182	261	374	536	768	1100	1580	2260	3240	4640	6810	9760	14.0K	20.0K	28.7K	41.2K	59.0K	84.5K	121K	174K	249K	357K	511K	732K
30.9	44.2	63.4	90.9	130	187	267	383	549	787	1130	1620	2320	3320	4750	6980	10.0K	14.3K	20.5K	29.4K	42.2K	60.4K	86.6K	124K	178K	255K	365K	523K	750K
31.6	45.3	64.9	93.1	133	191	274	392	562	806	1150	1650	2370	3400	4870	7150	10.2K	14.7K	21.0K	30.1K	43.2K	61.9K	88.7K	127K	182K	261K	374K	536K	768K
32.4	46.4	66.5	95.3	137	196	280	402	576	825	1180	1690	2430	3480	4990	7320	10.5K	15.0K	21.5K	30.9K	44.2K	63.4K	90.9K	130K	187K	267K	383K	549K	787K
33.2	47.5	68.1	97.6	140	200	287	412	590	845	1210	1740	2490	3570	5110	7500	10.7K	15.4K	22.1K	31.6K	45.3K	64.9K	93.1K	133K	191K	274K	392K	562K	806K
34.0	48.7	69.8	100	143	205	294	422	604	866	1240	1780	2550	3650	5230	7680	11.0K	15.8K	22.6K	32.4K	46.4K	66.5K	95.3K	137K	196K	280K	402K	576K	825K
34.8	49.9	71.5	102	147	210	301	432	619	887	1270	1820	2610	3740	5360	7870	11.3K	16.2K	23.2K	33.2K	47.5K	68.1K	97.6K	140K	200K	287K	412K	590K	845K
35.7	51.1	73.2	105	150	215	309	442	634	909	1300	1870	2670	3830	5490	8060	11.5K	16.5K	23.7K	34.0K	48.7K	69.8K	100K	143K	205K	294K	422K	604K	866K
36.5	52.3	75.0	107	154	221	316	453	649	931	1330	1910	2740	3920	5620	8250	11.8K	16.9K	24.3K	34.8K	49.9K	71.5K	102K	147K	210K	301K	432K	619K	887K
37.4	53.6	76.8	110	158	226	324	464	665	953	1370	1960	2800	4020	5760	8450	12.1K	17.4K	24.9K	35.7K	51.1K	73.2K	105K	150K	215K	309K	442K	634K	909K
38.3	54.9	78.7	113	162	232	332	475	681	976	1400	2000	2870	4120	5900	8660	12.4K	17.8K	25.5K	36.5K	52.3K	75.0K	107K	154K	221K	316K	453K	649K	931K
39.2	56.2	80.6	115	165	237	340	487	698	1000	1430	2050	2940	4220	6040	8870	12.7K	18.2K	26.1K	37.4K	53.6K	76.8K	110K	158K	226K	324K	464K	665K	953K
40.2	57.6	82.5	118	169	243	348	499	715	1020	1470	2100	3010	4320	6190	9090	13.0K	18.7K	26.7K	38.3K	54.9K	78.7K	113K	162K	232K	332K	475K	681K	976K
41.2	59.0	84.5	121	174	249	357	511	732	1050	1500	2150	3090	4420	6340	9310	13.3K	19.1K	27.4K	39.2K	56.2K	80.6K	115K	165K	237K	340K	487K	698K	1 Meg.
42.2	60.4	86.6	124	178	255	365	523	750	1070	1540	2210	3160	4530	6490	9530	13.7K	19.6K	28.0K	40.2K	57.6K	82.5K	118K	169K	243K	348K	499K	715K	1.5 Meg.

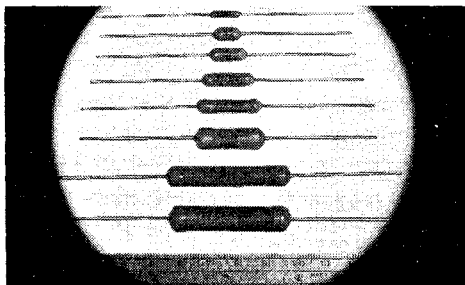


# WARD LEONARD

## Axiom<sup>®</sup> RESISTORS Vitreous Enamel Wire-Wound Power Type

### AXIOHM FEATURES

- Vitrohm enamel construction
- Space saving design
- 5 stock sizes; 8 made-to-order sizes
- Wide range of resistance values
- Standard tolerance  $\pm 5\%$



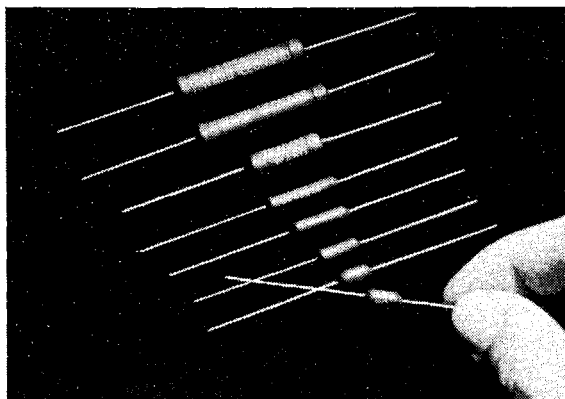
Axiom, the miniaturized, space-saving power resistor line is designed for automation, printed circuits and advanced miniaturization use. Recommended for electronic and industrial use where high O.L. capacity and high stability are a "must". Four stock sizes and seven made-to-order sizes. Order by Stock Type and Ohms.

1 WATT #24 B & S GAGE WIRE  
2, 3, 4 AND 5 WATT #20 B & S GAGE WIRE  
7, 10 AND 12.5 WATT #18 B & S GAGE WIRE  
HOT TIN DIPPED



1 WATT		TYPE 1X		2 WATTS		TYPE 2X		3 WATTS		TYPE 3X		5 WATTS			TYPE 5XM		10 WATTS		TYPE 10XM		
Dims. A = $\frac{1}{32}$ ; B = $\frac{3}{32}$		Dims. A = $\frac{3}{8}$ ; B = $\frac{3}{16}$		Dims. A = $\frac{1}{2}$ ; B = $\frac{3}{16}$		Dims. A = $\frac{1}{2}$ ; B = $\frac{3}{16}$		Dims. A = $\frac{1}{2}$ ; B = $\frac{3}{16}$		Dims. A = $\frac{1}{2}$ ; B = $\frac{3}{16}$		Dims. A = $\frac{1}{16}$ ; B = $\frac{3}{16}$			Dims. A = $\frac{1}{4}$ ; B = $\frac{3}{16}$		Dims. A = $\frac{1}{4}$ ; B = $\frac{3}{16}$		Dims. A = $\frac{1}{4}$ ; B = $\frac{3}{16}$		
Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.	Ohms	m.a.
1	1000	220	68	1	1414	180	105	1	1732	470	80	1	2230	200	158	2500	45	1	3160	1200	91
1.5	817	240	64	1.5	1155	200	100	1.5	1414	500	77	1.5	1820	220	151	2700	43	1.5	2580	1250	89
2	707	250	63	2	1000	220	95	2	1225	560	73	2	1580	225	148	3000	40	2	2235	1500	81
3	577	270	61	3	816	240	91	3	1000	600	71	3	1290	250	141	3300	39	3	1825	1750	75
4	500	300	57	4	707	250	89	4	866	680	66	4	1117	270	136	3500	37	4	1580	2000	70
5	447	330	55	5	632	270	86	5	775	700	66	5	1000	300	129	3900	36	5	1415	2250	66
7.5	361	360	53	7.5	517	300	82	7.5	632	750	63	7.5	811	330	123	4000	35	7.5	1155	2500	63
10	316	390	51	10	447	330	78	10	548	800	61	10	790	350	119	4500	33	10	1000	3000	58
11	302	430	48	11	426	360	75	12	500	820	60	12	577	390	113	4700	32	12	913	3500	53
12	289	470	46	12	408	390	72	15	447	900	58	15	644	400	112	5000	31	15	815	4000	50
13	277	510	45	13	392	430	68	18	408	1000	55	18	707	450	105	5600	30	20	707	4500	47
15	258	560	42	15	365	470	65	20	387	1100	52	20	500	470	103	6000	28	25	630	5000	45
16	250	620	40	16	354	510	63	22	369	1200	50	22	477	500	100	6800	27	30	577	6000	41
18	236	680	37	18	333	560	60	25	346	1250	49	25	450	560	94	7000	26	35	534	7000	38
20	224	750	36	20	316	620	57	27	333	1500	45	27	430	600	91	7500	25	40	500	7500	36
22	213	820	35	22	302	680	54	30	316	1750	41	30	408	680	86	8000	25	50	450	8000	35
24	204	910	33	24	289	750	52	33	301	1800	40	33	389	700	84	8200	24	75	365	8500	34
27	192	1000	32	27	272	820	49	35	293	2000	39	35	378	750	81	9000	23	100	316	9000	33
30	182	1100	30	30	258	910	47	40	274	2250	37	40	358	800	79	10000	22	125	283	10000	32
33	174	1200	28	33	246	1000	45	47	252	2500	35	47	353	820	78	11000	21	150	258	11000	30
36	167	1300	27	36	235	1100	43	50	245	2700	33	50	326	900	74	12000	20	200	224	12000	29
39	160	1500	26	39	228	1200	41	56	231	3000	32	56	316	1000	70	12500	20	225	211	12500	28
43	153	1600	25	43	216	1300	39	68	210	3300	30	68	299	1100	67	13500	19	250	200	13500	27
47	146	1800	24	47	206	1500	37	75	200	3500	29	75	277	1200	64	15000	18	300	182	15000	25.5
51	140	2000	22	51	198	1600	35	82	191	3900	28	82	247	1500	57	17500	17	400	158	17500	24
56	134	2200	21	56	189	1800	33	100	173	4000	27	100	223	1750	53	18000	17	450	149	18000	23
62	127	2400	20	62	179	2000	32	120	158	4500	26	120	204	1800	52	20000	16	500	142	20000	22
68	121	2500	20	68	172	2200	30	125	155	4700	25	125	200	2000	50	22000	15	600	129	22500	21
75	115	2700	19	75	163	2400	29	150	141	5000	25	150	182	2200	48	25000	14	700	120	25000	20
82	110	3000	18	82	156	2500	28	180	129	5600	23	180	167	2250	47	27000	13	750	115	30000	18
91	105	3300	17	91	148	2700	27	200	122	6000	22	200	153	2500	45	30000	12	800	112	35000	17
100	100	3900	16	100	141	3000	26	220	117	6800	21	220	142	2800	42	35000	11	900	105	40000	16
110	95	4300	15	110	135	3300	25	225	115	8000	20	225	132	3000	40	40000	10	1000	100	45000	15
120	91	4700	15	120	129	3900	23	250	110	8200	19	250	122	3300	38	45000	9	1100	95	50000	14
130	87	5100	14	130	124	4300	22	270	105	9000	18	270	112	3500	36	50000	8				
150	82	5600	13	150	116	4700	21	300	100	10000	17	300	100								
160	79	6200	13	160	112	5100	20	330	95												
180	75	6800	12					350	93												
200	71	7500	12					390	88												
								400	87												
								450	82												

Order by Type Number and Resistance Value.

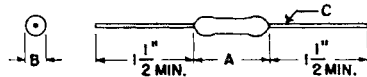


### S-COAT RESISTORS Silicone Precision Power Type

S-Coat resistor line represents the latest advance in silicone coated wire-wound power resistor design. S-Coat resistors are precision-made for precision applications requiring characteristics such as low TC, close tolerance, no noise, low drift, high O.L. capacity, vibration resistant and zero voltage coefficient. Order by Type Designation, Ohms and Accuracy if other than  $\pm 1\%$ .

### S-COAT FEATURES

- Low TC:  $\pm 20\text{PPM}$
- Close accuracy:  $\pm 1\%$  standard, to  $\pm 0.1\%$  special
- 1000 volt dielectric—"V" block test
- Wide resistance ranges
- 8 space-saving sizes



### RATINGS and SIZES

Standard Tolerance  $\pm 1\%$

Watts	Type	MIL-R-26C Type	Minimum Ohms				Max. Ohms	Dimensions (in inches)		
			1%	.5%	.25%	.1%		A $\pm \frac{1}{16}$	B max.	C B&S ga.
1	1S	.....	.1	.1	2.5	5	12K	$\frac{3}{16}$	$\frac{1}{8}$	#24
1	1SX	.....	.2	.2	2.5	5	10K	$\frac{3}{16}$	$\frac{1}{32}$	#20
1.5	1.5S	.....	.2	.2	2.5	5	15K	$\frac{3}{16}$	$\frac{1}{8}$	#24
2	2SX	.....	.2	.2	2.5	5	10K	$\frac{3}{16}$	$\frac{1}{32}$	#20
3	3SX	RW69V	.1	.1	2.5	5	18K	$\frac{1}{2}$	$\frac{1}{32}$	#20
3.25	3.2S	.....	.1	.1	2.5	5	25K	$\frac{5}{8}$	$\frac{1}{32}$	#20
3.3	3S	.....	.1	.1	2.5	5	25K	$\frac{3}{16}$	$\frac{1}{4}$	#20
3.5	3.5S	.....	.1	.1	2.5	5	50K	$\frac{7}{8}$	$\frac{1}{32}$	#20
4	4SX	.....	.1	.1	2.5	5	31K	$\frac{1}{16}$	$\frac{1}{32}$	#20
4.5	4S	.....	.1	.1	2.5	5	40K	$\frac{1}{16}$	$\frac{1}{32}$	#18
5	5SX	.....	.1	.1	2.5	5	40K	$\frac{7}{8}$	$\frac{1}{32}$	#20
7	7SX	RW67V	.1	.1	2.5	5	80K	$\frac{1}{16}$	$\frac{1}{32}$	#18
8	7S	.....	.1	.1	2.5	5	125K	$\frac{1}{4}$	$\frac{1}{32}$	#18
10	10SX	.....	.1	.1	2.5	5	135K	$\frac{1}{16}$	$\frac{1}{32}$	#18
12.5	12/5SX	.....	.1	.1	2.5	5	200K	$\frac{1}{16}$	$\frac{1}{32}$	#18
13	13S	.....	.1	.1	2.5	5	250K	$\frac{1}{16}$	$\frac{1}{32}$	#18



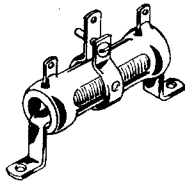
# WARD LEONARD

## Vitrohm® RESISTORS

Vitreous Enamel Wire-Wound Power Type



Types 5F, 10F, and 20F. Furnished with wire terminal leads. Brackets supplied on request.



Types 10A, 25A, 50A, 80A, 100A, 160A, 200A. Furnished with mounting brackets and one adjustable band.

Vitrohm fixed and adjustable power type resistors from 5 to 200 watts are designed and produced for high reliability. All cores, terminals and vitreous enamels are manufactured by W/L to guarantee top quality.

### 5 WATT • TYPE 5F

Size—1" x 3/16"

Ohms	m.a.	Ohms	m.a.	Ohms	m.a.
1	2230	100	223	1200	64
1.5	1820	125	200	1250	63
2	1580	150	182	1500	57
3	1290	200	158	1750	53
4	1117	225	148	2000	50
5	1000	250	141	2250	47
7.5	811	300	129	2500	45
10	707	350	119	3000	40
12	644	400	112	3500	37
15	577	450	105	4000	35
20	500	500	100	4500	33
25	450	600	91	5000	31
30	408	700	84	6000	28
35	378	750	81	7000	26
40	353	800	79	7500	25
45	316	900	74	8000	25
75	257	1000	70	9000	23
		1100	67	10000	22

### 10 WATT

Size—1 3/4" x 5/16" Mtg. Centers—2 1/8"

Type 10F—Fixed			Type 10A—Adj.		
Fixed Ohms	Adj. Ohms	m.a.	Fixed Ohms	Adj. Ohms	m.a.
1	1	3160	1200		91
1.5		2580	1250	1250	89
2	2	2235	1500	1500	81
3	3	1825	1750		75
4		1580	2000	2000	70
5	5	1415	2250		66
7.5	7.5	1155	2500	2500	63
10	10	1000	3000	3000	58
12		913	3500	3500	53
15	15	815	4000	4000	50
20	20	707	4500	4500	47
25	25	630	5000	5000	45
30		577	6000	6000	41
35	35	534	7000	7000	38
40		500	7500	7500	36
50	50	450	8000	8000	35
75	75	365	8500	8500	34
100	100	316	9000	9000	33
125		283	10000	10000	32
150	150	258	11000		30
200	200	224	12000		29
225		211	12500		28
250	250	200	13500		27
300	300	182	15000		25.5
350	350	169	16000		25
400	400	158	17500		24
450		149	18000		23
500	500	142	20000		22
600	600	129	22500		21
700		120	25000		20
750	750	115	30000		18
800	800	112	35000		17
900		105	40000		16
1000	1000	100	45000		15
1100		95	50000		14

### 20 WATT • TYPE 20F

Size—2" x 3/8" Mtg. Centers—2 5/8"

Ohms	m.a.	Ohms	m.a.	Ohms	m.a.
1	4480	850	153	10000	45
3	2580	1000	141	12500	40
5	2000	1200	130	15000	36
10	1410	1250	125	20000	32
15	1150	1500	115	25000	28
25	900	1750	107	30000	26
50	630	1850	104	35000	24
75	517	2000	100	40000	22
100	450	2250	94	45000	21
150	365	2400	91	50000	20
175	340	2500	90	55000	18
200	320	2750	85	60000	16
250	285	3000	81	65000	15
300	258	3500	76	70000	14
350	240	4000	70	75000	13
400	224	4500	67	80000	12
500	200	5000	63	85000	11.5
650	175	6000	57	90000	11
700	169	7000	53	95000	10.5
750	163	7500	51	100000	10
800	155	8000	50		

### 25 WATT

Type 25F—Fixed Type 25A—Adj.  
Size—2" x 3/8" Mtg. Centers—2 5/8"

Fixed			Adj.			Fixed			Adj.		
Ohms	Ohms	m.a.	Ohms	Ohms	m.a.	Ohms	Ohms	m.a.	Ohms	Ohms	m.a.
1	1	5000				2500	2500	100			
2	2	3535				3000	3000	90			
3	3	2890				3500	3500	85			
4		2500				4000	4000	80			
5	5	2230				4500	4500	74			
		7.5 1825				5000	5000	70			
10	10	1580				6000	6000	65			
15	15	1290				7000	7000	60			
		20 1115				7500	7500	58			
25	25	1000				8000	8000	56			
50	50	710				8500	8500	54			
75	75	580				9000	9000	52			
100	100	500				10000	10000	50			
150	150	410				12000	12000	46			
200	200	354				15000	15000	41			
250	250	315				20000	20000	34			
300	300	289				25000	25000	32			
400	400	250				30000		29			
500	500	224				35000		27			
750	750	182				40000		25			
800	800	177				50000		20			
850	850	170				60000		17			
1000	1000	158				70000		14			
1250	1250	140				75000		13			
1500	1500	129				80000		12			
2000	2000	112				100000		10			
		2250 105									

### 50 WATT

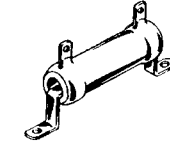
Type 50F—Fixed Type 50A—Adj.  
Size—4 1/2" x 3/4" Mtg. Centers—5 1/4"

Fixed			Adj.			Fixed			Adj.		
Ohms	Ohms	m.a.	Ohms	Ohms	m.a.	Ohms	Ohms	m.a.	Ohms	Ohms	m.a.
1	1	7070				5000	5000	100			
2	2	5000				6000	6000	91			
3	3	4080				7000	7000	85			
4	4	3535				7500	7500	82			
5	5	3160				8000	8000	79			
10	10	2235				9000	9000	75			
25	25	1415				10000	10000	71			
50	50	1000				12000	12000	65			
75	75	815				12500		63			
100	100	707				15000	15000	58			
150	150	575				20000	20000	50			
200	200	500				25000	25000	45			
250	250	445				30000	30000	41			
300	300	408				35000		38			
400	400	353				40000	40000	35			
500	500	316				45000		33			
750	750	258				50000	50000	32			
800	800	250				60000	60000	29			
1000	1000	224				75000	75000	23			
		1250 200				80000		21			
1500	1500	180				100000	100000	17			
2000	2000	160				125000		14			
		2250 150				150000		12			
2500	2500	141				175000		10			
3000	3000	130				200000		9			
		3500 120				225000		8			
4000	4000	110				250000		7			
		4500 105									

### 80 WATTS • TYPE 80A

Size—6 1/2" x 3/4" Mtg. Centers—7 1/4"

Ohms m.a.			Ohms m.a.			Ohms m.a.		
1	8940	750	325	7500	103			
2	6320	800	316	8000	100			
3	5160	1000	282	9000	94			
4	4470	1250	253	10000	89			
5	4000	1500	231	15000	73			
10	2830	2000	200	20000	63			
15	2310	2250	188	25000	57			
25	1790	2500	178	30000	51			
50	1260	3000	161	35000	48			
75	1030	3500	151	40000	45			
100	894	4000	141	45000	41			
200	632	4500	133	50000	40			
250	565	5000	126	60000	36			
300	515	6000	115	70000	33			
400	447	7000	107	80000	31			
500	400			100000	28			



### 100 WATT

Type 100F—Fixed Type 100A—Adj.  
Size—6 1/2" x 1 1/8" Mtg. Centers—7 1/4"

Fixed			Adj.			Fixed			Adj.		
Ohms	Ohms	m.a.	Ohms	Ohms	m.a.	Ohms	Ohms	m.a.	Ohms	Ohms	m.a.
1	1	10000				2000	2000	225			
2	2	7070				2500	2500	200			
3	3	5770				3000	3000	180			
4	4	5000				3500		170			
5	5	4470				4000	4000	158			
10	10	3160				4500	4500	150			
25	25	2000				5000	5000	141			
50	50	1410				6000		130			
75	75	1150				7500	7500	115			
100	100	1000				10000	10000	100			
125		895				15000	15000	80			
150		815				20000	20000	70			
		200 707				25000	25000	63			
250	250	630				30000	30000	58			
		400 500				35000		54			
500	500	44									



# WARD LEONARD

## Vitrohm RESISTORS

Vitreous Enamel Wire-Wound Power Type

**20 WATTS • TYPE 20S**

2" Long—Mtg. Centers 2 3/16"  
Width 3/16"

Ohms m.a.	Ohms m.a.
1 4480	1500 115
3 2580	2000 100
5 2000	2500 90
10 1410	3000 81
15 1150	3500 76
25 900	4000 70
50 630	5000 63
100 450	7500 51
150 365	10000 45
200 320	15000 36
250 285	20000 32
400 224	25000 28
500 200	30000 26
750 163	35000 24
1000 141	40000 22
1250 125	50000 20



The 20 watt Ministrip resistor is smaller in size than the standard Strip-ohms. They may be stacked by using 1/32" washers.

**30 WATTS • TYPE 30S**

1 3/4" Long—Mtg. Centers 2"

Ohms m.a.	Ohms m.a.
1 5480	500 244
3 3160	750 200
5 2450	1000 173
10 1730	1250 154
15 1420	1500 142
25 1095	2000 122
50 774	2500 109
100 547	3000 100
150 447	3500 92
200 387	4000 86
250 346	5000 77
400 273	

### STRIPOHMS

Order by Type Number and Resistance Value

#### features

- 6 space-saving sizes
- low mounting brackets
- strong flattened cores
- suitable for multiple stacking
- Vitrohm construction

Vitreous enameled wire-wound resistors built on a strong refractory core, and provided with low mounting brackets. Particularly suited for applications where space is limited. Specially adapted to stacking for networks.

**40 WATTS • TYPE 40S**

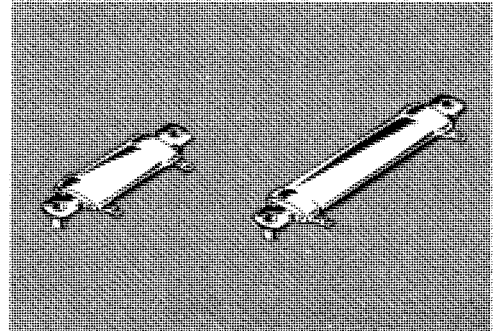
2" Long—Mtg. Centers 2 3/4"

Ohms m.a.	Ohms m.a.
1 6320	750 230
3 3650	1000 200
5 2830	1250 180
10 2000	1500 163
15 1630	2000 141
25 1270	2500 126
50 894	3000 114
100 632	3500 106
150 510	4000 100
200 447	5000 88
250 400	7500 73
400 315	10000 63
500 283	15000 51

**55 WATTS • TYPE 55S**

3 1/2" Long—Mtg. Centers 4 1/4"

Ohms m.a.	Ohms m.a.
1 7420	1250 209
3 4280	1500 191
5 3320	2000 165
10 2350	2500 148
15 1910	3000 135
25 1480	3500 129
50 1050	4000 117
100 741	5000 104
150 604	7500 84
200 522	10000 74
250 469	15000 60
400 370	20000 52
500 331	25000 47
750 270	30000 42
1000 234	



**65 WATTS • TYPE 65S**

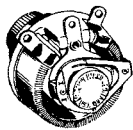
4 3/4" Long—Mtg. Centers 5 1/2"

Ohms m.a.	Ohms m.a.
1 8060	1500 208
3 4650	2000 180
5 3610	2500 161
10 2550	3000 146
15 2080	3500 136
25 1610	4000 127
50 1140	5000 114
100 806	7500 92
150 658	10000 80
200 570	15000 65
250 509	20000 57
400 403	25000 51
500 360	30000 46
750 294	35000 43
1000 254	40000 40
1250 228	50000 36

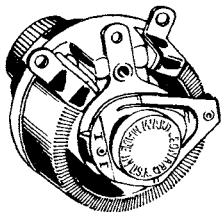
**75 WATTS TYPE 75S**

6" Long—Mtg. Centers 6 3/4"

Ohms m.a.	Ohms m.a.
1 8660	2500 173
3 5000	3000 158
5 3870	3500 146
10 2740	4000 137
15 2235	5000 122
25 1730	7500 100
50 1220	10000 87
100 866	15000 71
150 707	20000 61
200 612	25000 55
250 550	30000 50
400 433	35000 46
500 387	40000 43
750 315	50000 37
1000 274	60000 35
1250 245	75000 32
1500 224	100000 30
2000 193	150000 28



TYPE 25R



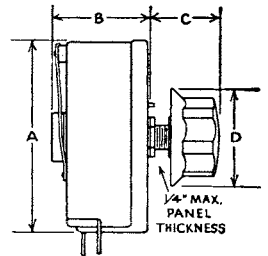
TYPE 50R

## Vitrohm® RING RHEOSTATS

Ward Leonard Ring Rheostats are especially suited for use in electronic and electrical circuits where gradual and positive resistance change is essential. Balanced contact arms, self-lubricating metal graphite contact shoes, and no backlash in the drive shaft combine to assure uniform contact pressure and smooth operation.

Standard shaft length for back-of-board mounting on 1/4" panel.

Standard Resistance Tolerance ±10%.



Ohms	25 WATTS	
	Current M.A.	Approx. No. of Steps
1	5000	32
2	3540	32
3	2880	51
4	*	*
6	2040	85
8	1770	95
10	1580	95
15	1280	102
25	1000	102
35	840	102
50	707	97
75	574	129
100	500	162
150	407	190
250	316	200
350	267	220
500	223	245
750	181	282
1000	158	315
1500	128	369
2500	100	388
3500	84	388
5000	70	595
7500	*	*
10000	*	*

TYPE 25R

Ohms	50 WATTS	
	Current M.A.	Approx. No. of Steps
1	7070	45
2	5000	56
3	*	*
4	3540	56
6	2880	94
8	2500	94
10	2230	94
15	1810	113
25	1415	144
35	1190	144
50	1000	180
75	812	144
100	707	216
150	574	252
200	447	245
300	374	288
400	316	324
500	256	373
750	223	390
1000	181	396
1500	141	547
2000	119	547
3000	100	786
4000	81	905
5000	70	947

TYPE 50R

Ohms	100 WATTS	
	Current M.A.	Approx. No. of Steps
1	10000	30
2	7070	56
3	5740	66
5	4470	56
7.5	3640	66
10	3160	104
15	2560	113
25	2000	144
50	1415	180
75	1150	180
100	1000	216
200	707	252
300	574	252
400	500	252
500	447	324
750	364	396
1000	316	410
2000	223	410
3000	200	410
5000	141	685
7500	115	820
10000	100	820

TYPE 100R

Ohms	150 WATTS	
	Current M.A.	Approx. No. of Steps
1	12240	39
1.5	8660	39
2	7070	70
2.5	5470	73
3	4470	70
4	3870	70
5	3160	120
7.5	2440	152
10	1730	190
15	1415	228
25	1224	228
35	866	265
50	707	303
75	612	342
100	547	342
150	447	418
200	387	432
300	273	575
500	244	456
750	173	865
1000	141	1000
1500	122	1000

TYPE 150R

Ohms	300 WATTS	
	Current m.a.	Approx. No. of Steps
1	17,320	40
1.5	14,142	58
2	12,247	78
2.5	10,954	78
3	10,000	73
4	8,660	78
5	7,745	78
7.5	6,324	148
10	5,477	154
15	4,472	147
25	4,464	155
35	2,927	231
50	2,449	267
75	2,000	308
100	1,732	326
150	1,414	270
200	1,224	308
300	1,000	340
500	.774	455
750	.632	514
1000	.547	578
1500	.447	675
2500	.346	720

TYPE 300R

# REPLACEMENT COMPONENTS

**WORKMAN**  
SARASOTA, FLORIDA



## GLOBAL RESISTORS

### THERMISTORS



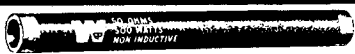
MODEL	DESCRIPTION	LIST	DLR.
FR .49	.49 at 3 amps.	1.60	.96
FR1.3	1.3Ω cold	1.00	.60
FR1M	600KΩ hot 1 MegΩ cold	1.75	1.05
FR2	Replaces filament res'trs 3.00	1.80	
FR3.5	3.5Ω cold	1.00	.60
FR3.8	3.8Ω cold	1.00	.60
FR4.5	4.5Ω cold	1.00	.60
FR5-8	5-8Ω at 450ma	1.65	.99
FR6	6Ω Hot-600ma	1.65	.99
FR9	9Ω Hot-600ma	1.65	.99
FR10	10Ω cold	1.00	.60
FR11	11Ω Hot-600ma	2.50	1.50
FR11P	11Ω-450ma 9. 2Ω-600ma	1.65	.99
FR12.9	12.9Ω cold	1.00	.60
FR13	13Ω cold	1.00	.60
FR19	19Ω Hot - 600ma	1.50	.90
FR19-3	As above 3 pk. with Stone	2.00	
FR19A	19Ω Hot - 600ma	2.20	1.32
FR31	31Ω Hot - 300ma	1.90	1.14
FR35	35Ω Hot - 600ma	1.90	1.14
FR43	43Ω Hot - 600ma	2.50	1.50
FR50	50Ω Hot - 150ma	1.60	.96
FR041	75Ω Hot - 300ma	2.20	1.32
FR051	20Ω Hot - 600ma	1.50	.90
FR051-2	As above - 2 in pack	2.50	1.50
FR051-3	As above 3 pk. with Stone	2.00	
FR052	10.5Ω at 125 volts	3.20	1.92
FR054	35Ω Hot -600ma	3.20	1.92
FR088	14KΩ at 140 volts	3.20	1.92
FR100	100Ω Hot-150ma	1.60	.96
FR191	120Ω cold	1.60	.96
FR291	79Ω cold - .47Ω hot	1.20	.72
FR5K	500KΩ at 25° C	1.50	.90
FRT 1	100Ω hot to 20Ω hot	1.85	1.11
FRT 1-2	As above - 2 in pack	3.00	1.80
GM	1/5 Watt ±20% 40 vals.	.65	.39

## AUTO RADIO RESISTORS



MODEL	DESCRIPTION	LIST	DLR.
WT22	0.22Ω - 5 Watt	.48	.29
WT27	0.27Ω - 5 Watt	.48	.29
WT33	0.33Ω - 5 Watt	.48	.29
WT47	0.47Ω - 5 Watt	.48	.29
WT51	0.51Ω - 5 watt	.48	.29
WT56	5.6Ω - 5 Watt	.48	.29
WT66	0.66Ω - 5 Watt	.48	.29
WT82	0.82Ω - 5 Watt	.48	.29
7W	1800Ω - 7 Watt	.38	.23
FT2.8	2.8Ω cold	.65	.39
FT3.3	3.3Ω cold	.65	.39
FT4.5	4.5Ω cold	.65	.39
FT7.5	7.5Ω cold	.65	.39
FT10	10Ω cold	.65	.39
FT28	28Ω cold	.65	.39
FT35	35Ω cold	.65	.39
FT150	150Ω cold	1.30	.78
GD1	For 6V. in 12V. systems	5.50	3.30
GD2	2.5, 4, or 6 amp loads	3.30	1.98
GD3	5 to 6 amp loads	2.50	1.50
GD4	7 to 8 amp loads	2.50	1.50

## Non Inductive DUMMY LOADS



MODEL	DESCRIPTION	User's Net	Size
DL10W	10 Watt	3.80	2-1/2" x 3/4"
DL25W	25 Watt	4.80	5" x 3/4"
DL75W	75 Watt	9.75	8" x 1"
DL100W	100 Watt	13.70	12" x 1"
DL500W	500 Watt	46.20	18" x 2"
DLSP-50	150 Watt	26.25	13-1/2" x 1"

## FUSED RESISTORS



MODEL	DESCRIPTION	LIST	DLR.
F4.7	4.7Ω - 5 Watts	.55	.33
F5	5Ω - 5 Watts	.55	.33
F5.6	5.6Ω - 5 Watts	.55	.33
F6	6Ω - 5 Watts -	.55	.33
F7	7.5Ω - 3 amperes	.72	.43
F80	7.5Ω - 3 amperes	.55	.33
F9	9Ω - 5 Watts	.55	.33
F10	10Ω - 5 Watts	.55	.33
F10-45	4.5Ω - 10 Watts	.75	.45
F18	18Ω - 5 Watts	.55	.33
F22	22Ω - 5 Watts	.55	.33
F47	47Ω - 5 Watts	.55	.33
F100	100Ω - 5 Watts	.55	.33
F150	150Ω - 5 Watts	.55	.33
F12A	150Ω - 0.12 amperes	.55	.33
FRK	Kit of 10 Resistors	5.00	3.00
FZ4.7	4.7Ω - 3 amperes	.36	.22
FZ5.6	5.6Ω - 3 amperes	.36	.22
FZ7.5	7.5Ω - 3 amperes	.36	.22
FZ9	9Ω - 3 amperes	.36	.22
FZ4.7-5	Pk. of 5, 4.7Ω-3 amps	1.60	.99
FZ5.6-5	Pk. of 5, 5.6Ω-3 amps	1.60	.99
FZ7.5-5	Pk. of 5, 7.5Ω-3 amps	1.60	.99
FZ9-5	Pk. of 5, 9Ω-3 amps	1.60	.99
FB1	Universal replacement	2.00	1.20
F28	No. AWG 28 Wire, 5 pcs.	.25	.16
F15-7.5	7.5Ω - 15 Watts	.96	.58
F7-5	5Ω - 7 Watts	.72	.43

## CIRCUIT BREAKERS

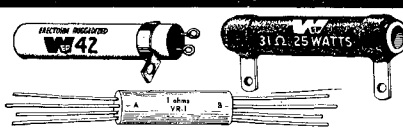
F0.65A	Admiral	1.35	.81
F0.8A	Admiral	1.35	.81
F1.0A	Warwick	1.35	.81
F1.0A-B	Sylvania	1.35	.81
F1.5A	Warwick	1.35	.81
F1.6A	Zenith	1.35	.81
F1.625A	Sylvania	1.35	.81
F1.65A	Motorola	1.35	.81
F1.75A	RCA	1.35	.81
F1.75A-B	Travler	1.35	.81
F1.8A	Warwick	1.35	.81
F1.8A-B	Revere	1.35	.81
F2.0A	Westinghouse	1.35	.81
F2.0A-B	Revere	1.35	.81
F2.0A-C	Motorola	1.35	.81
F2.1A	Warwick, Silvertone	1.35	.81
F2.2A	Admiral	1.35	.81
F2.2A-B	Motorola	1.35	.81
F2.25A	Curtis Mathes, Wells G.	1.35	.81
F2.3A	General Electric	1.35	.81
F2.32A	Sylvania	1.35	.81
F2.5A	Beckwith, Dominion, Fleetwood, Warwick, Montgomery Ward, Silvertone, Wells G.	1.35	.81
F2.5A-B	Zenith	1.35	.81
F2.75A	Silvertone, Warwick	1.35	.81
F2.75A-B	Motorola	1.35	.81
F2.75A-C	Motorola	1.35	.81
F2.75A-D	Philco	1.35	.81
F2.75A-E	Admiral, G. E., RCA, Magnavox, Olympic, Philco	1.35	.81
F2.75A-F	Zenith	1.35	.81
F2.75A-G	Sylvania	1.35	.81
F3.0A	Magnavox	1.35	.81
F3.0A-B	Motorola	1.35	.81
F3.0A-C	Motorola	1.35	.81
F3.0A-D	Magnavox, Zenith	1.35	.81
F3.0A-E	Magnavox, Philco, RCA	1.35	.81
F3.1A	Curtis Mathes, Emerson, G. E., Magnavox, Muntz, RCA, Sylvania, Travler, Warwick, Wells Gardner	1.35	.81
F3.2A	Admiral	1.35	.81
F3.25A	Zenith	1.35	.81
F3.25A-B	Motorola	1.35	.81
F3.5A	Motorola	1.35	.81
F3.75A	Packard Bell	1.35	.81
F3.78A	Motorola	1.35	.81
F3.9A	Andrea	1.35	.81
F4.0A	Emerson, Philco	1.35	.81
F4.0A-B	Motorola	1.35	.81
F4.5A	Motorola	1.35	.81
F7.0A	Packard Bell	1.35	.81
F2A	Universal	1.35	.81

## CHEMICAL FUSES



MODEL	DESCRIPTION	LIST	DLR.
200-10	RCA #945309-1	.85	.51
KF-200	RCA #105041	1.00	.60
LC-200	For "C" type (limited cur.)	1.00	.60
1200-1	Emerson #808236	.75	.45
500-1	RCA, Emerson, Olympic	.75	.45
400-1	RCA #945392-2	.80	.48
3-1	RCA #045392-3	.63	.38
BL-5	Pk. of 5 chem. Fuses	3.95	2.37

## WIREWOUND RESISTORS



MODEL	DESCRIPTION	LIST	DLR.
6W-B	6W Bendohms, 34 values	.49	.30
6WB-34	6W Bend. 34vals. on card	16.60	9.95
148	4Ω - 25 watt	.85	.51
151	5Ω - 30 watt	.95	.57
MO1	59Ω - 25 watt	.85	.51
E10	10Ω watt - 8 values	1.40	.84
30W	30W - 18 values	1.60	.96
25W	31Ω or 2250Ω - 25 watt	.85	.51
25W-3	3 pk. Dropping 41, 51, 59	2.50	1.50
25W-DR	3-25W - 42 values	1.10	.66
VR1	10W 48 values, .5 to 15Ω	1.10	.66
VR2	10W 48 vals. - 5 to 15Ω	1.10	.66
VR3	10W 48 vals. -50 to 1500Ω	1.10	.66
VR4	10W 48 vals. -500 to 15KΩ	1.10	.66
VR5	10W 12 vals. -3K to 50KΩ	1.10	.66
WR-50	5-15W 50 values Each	.55	.33
WR-50C	Card of 50 values	27.50	16.50
WS	2W 21 vals. - .22 to 10.Ω	.36	.22

## SQUARE OHMS



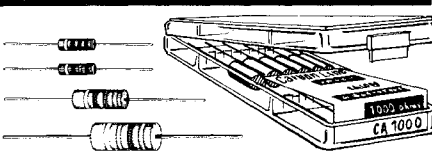
MODEL	DESCRIPTION	LIST	DLR.
5W-SQ	5W 69 Values 1-6KΩ	.36	.22
10W-SQ	10W 85 Values 1-25KΩ	.40	.24
15W-SQ	15W 87 Values 1-35KΩ	.50	.30
20W-SQ	20W 87 Values 1-35KΩ	.65	.39
25W-SQ	25W 121 Values 1-50KΩ	.75	.45

## CARBON BAR RESISTORS



MODEL	DESCRIPTION	LIST	DLR.
2M	2 meg - 4 watts	1.10	.66
2L	2 meg - 4 watts	1.50	.90
1W	2.2Ω, 3.3Ω, 4.4Ω, 5.5Ω kit	1.10	.66
1W2	2.2Ω -4 resistors 1 watt	1.10	.66
1W3	3.3Ω -4 resistors 1 watt	1.10	.66
1W4	4.4Ω -4 resistors 1 watt	1.10	.66
1W5	5.5Ω -4 resistors 1 watt	1.10	.66

## CARBON RESISTORS



MODEL	DESCRIPTION	LIST	DLR.
CA	1/2W ± 10% 77 vals. bulk	.20	.12
CB	1W ± 10% 77 vals. bulk	.30	.18
CC	2W ± 10% 77 vals. bulk	.40	.24
CE	1W ± 5% 153 vals. bulk	.40	.24
CA-6	1/2W ± 10% 77 vals. 6 pk.	.70	.42
CB-4	1W ± 10% 77 vals. 4 pk.	.80	.48
CC-3	2W ± 10% 77 vals. 3 pk.	.85	.51

PRICES SUBJECT TO CHANGE WITHOUT NOTICE. FOR A COMPLETE LISTING OF EXACT REPLACEMENT COILS ASK YOUR JOBBER FOR OUR COIL CROSS REFERENCE.

WORKMAN PART NUMBERS FOR COILS, FUSING DEVICES, WIREWOUND AND SPECIAL PURPOSE RESISTORS ARE LISTED IN HOWARD SAM'S PHOTOFACTS AND COUNTER FACTS.



# Amperex Semiconductors

(See Notes Below)				(See Notes Below)				(See Notes Below)				(See Notes Below)				(See Notes Below)			
TYPE NO.	(1)	(2)	(3)	TYPE NO.	(1)	(2)	(3)	TYPE NO.	(1)	(2)	(3)	TYPE NO.	(1)	(2)	(3)	TYPE NO.	(1)	(2)	(3)
A130	P	Si	T	R BZZ12	AJ	Si	Z	R PADT40	AD	Ge	T	1N3944	GB	Ge	D	R 2N1516	PA	Ge	T
A132	P	Si	T	R BZZ13	AJ	Si	Z	PADT50	AD	Ge	T	1N4095	A	Si	Z	R 2N1517	PA	Ge	T
A301	P	Si	T	BZZ14	AJ	Si	Z	PADT51	—	Ge	T	R 2N279	A	Ge	T	2N1613	P	Si	T
A306	P	Si	T	BZZ15	AJ	Si	Z	PADT60	AD	Ge	T	R 2N280	A	Ge	T	2N1613 (USA)	P	Si	T
A307	P	Si	T	BZZ16	AJ	Si	Z	RPY14	—	CS	P	R 2N281	A	Ge	T	2N1666/OC28	A	Ge	T
A310	P	Si	T	BZZ17	AJ	Si	Z	RPY17	—	CS	P	R 2N282	A	Ge	T	2N1667/OC29	A	Ge	T
A311	P	Si	T	BZZ18	AJ	Si	Z	RPY18	—	CS	P	R 2N284	A	Ge	T	2N1668/OC35	A	Ge	T
A344	P	Si	T	BZZ19	AJ	Si	Z	RPY19	—	CS	P	R 2N284A	A	Ge	T	2N1669/OC36	A	Ge	T
A345	P	Si	T	H4A	—	Si	V	RPY20	—	CS	P	R 2N404	A	Ge	T	2N1711	P	Si	T
A346	P	Si	T	ME209	PE	Si	T	RPY27	—	CS	P	2N404A	A	Ge	T	2N1773	—	Si	S
A569	PE	Si	T	ME213	P	Si	T	S100	A	Si	R	2N497	P	Si	T	2N1844	—	Si	S
A570	PE	Si	T	ME213A	PE	Si	T	S262	PC	Ge	D	2N497 (JAN)	P	Si	T	2N1846	—	Si	S
A1379	A	Si	T	ME214	PE	Si	T	1N34	PC	Ge	D	2N498	P	Si	T	2N1848	—	Si	S
A1380	A	Si	T	ME216	P	Si	T	1N34A	PC	Ge	D	2N498 (JAN)	P	Si	T	2N1849	—	Si	S
A1381	P	Si	T	ME217	P	Si	T	1N38	PC	Ge	D	2N656	P	Si	T	2N1889	P	Si	T
A1383	A	Ge	T	ME501	P	Si	T	1N38A	PC	Ge	D	2N656 (JAN)	P	Si	T	2N1890	—	Si	S
A1390	—	Si	V	ME503	P	Si	T	1N54	PC	Ge	D	2N657	P	Si	T	2N1893	P	Si	T
R AC107	A	Ge	T	ME504	P	Si	T	1N54A	PC	Ge	D	2N657 (JAN)	P	Si	T	2N1911	—	Si	S
AC107M	A	Ge	T	ME900	P	Si	T	1N58	PC	Ge	D	2N657A	P	Si	T	2N1913	—	Si	S
AC172	UL	Ge	T	ME900A	P	Si	T	1N58A	PC	Ge	D	2N683	—	Si	S	2N1915	—	Si	S
ASY26	A	Ge	T	ME901	P	Si	T	1N60	PC	Ge	D	2N685	—	Si	S	2N1916	—	Si	S
ASY27	A	Ge	T	ME901A	P	Si	T	1N63	PC	Ge	D	2N687	—	Si	S	2N1972	—	Si	S
ASY28	A	Ge	T	R OA5	GB	Ge	D	1N67A	PC	Ge	D	2N688	—	Si	S	2N1973	—	Si	S
ASY29	A	Ge	T	R OA7	GB	Ge	D	1N68A	PC	Ge	D	2N696	P	Si	T	2N1974	—	Si	S
BA114	A	Si	D	R OA9	GB	Ge	D	1N87	PC	Ge	D	2N696 (JAN)	P	Si	T	2N1975	—	Si	S
R BCY10	A	Si	T	R OA31	J	Si	R	1N87A	PC	Ge	D	2N697	P	Si	T	2N1983	—	Si	S
R BCY11	A	Si	T	OA200	A	Si	D	1N88	PC	Ge	D	2N697 (JAN)	P	Si	T	2N1984	—	Si	S
R BCY12	A	Si	T	OA202	A	Si	D	1N89	PC	Ge	D	2N698	P	Si	T	2N1985	—	Si	S
BCY30	A	Si	T	OAP12	A	Ge	P	1N90	PC	Ge	D	2N699	P	Si	T	2N1986	—	Si	S
BCY31	A	Si	T	R OA2200	AJ	Si	Z	1N95	PC	Ge	D	2N706	PE	Si	T	2N1987	—	Si	S
BCY32	A	Si	T	R OA2201	AJ	Si	Z	1N99	PC	Ge	D	2N706 (JAN)	PE	Si	T	2N1990	—	Si	S
BCY33	A	Si	T	R OA2202	AJ	Si	Z	1N116	PC	Ge	D	2N708	PE	Si	T	2N2084	—	Si	S
BCY34	A	Si	T	R OA2203	AJ	Si	Z	1N117	PC	Ge	D	R 2N711	PA	Ge	T	USN2N2084	—	Si	S
R BCZ10	A	Si	T	R OA2204	AJ	Si	Z	1N119	PC	Ge	D	2N743	—	Si	T	R 2N2089	PA	Ge	T
R BCZ11	A	Si	T	R OA2205	AJ	Si	Z	1N120	PC	Ge	D	2N744	—	Si	T	R 2N2092	PA	Ge	T
R BCZ12	A	Si	T	R OA2206	AJ	Si	Z	1N126	PC	Ge	D	2N753	P	Si	T	2N2207	—	Si	T
BY100	DJ	Si	R	R OA2207	AJ	Si	Z	1N126A	PC	Ge	D	2N783	P	Si	T	2N2428	UL	Ge	T
BY110	DD	Si	R	R OA2208	AJ	Si	Z	1N128	PC	Ge	D	2N834	P	Si	T	2N2429	UL	Ge	T
BY15/16	DD	Si	R	R OA2209	AJ	Si	Z	1N191	PC	Ge	D	2N835	P	Si	T	2N2430	UL	Ge	T
BY20/21	DD	Si	R	R OA2210	AJ	Si	Z	1N192	PC	Ge	D	2N914	—	Si	T	2N2431	UL	Ge	T
BY22/23	DD	Si	R	R OA2211	AJ	Si	Z	1N198	PC	Ge	D	2N929	P	Si	T	2N2431 MP	UL	Ge	T
BY24/25	DD	Si	R	R OA2212	AJ	Si	Z	1N270	GB	Ge	D	2N929A	P	Si	T	2N2483	P	Si	T
BY67/68	DD	Si	R	R OA2213	AJ	Si	Z	1N277	GB	Ge	D	2N930	P	Si	T	2N2484	P	Si	T
BY73/74	DD	Si	R	R OC22	A	Ge	T	1N295	PC	Ge	D	2N930A	P	Si	T	2N2494	PA	Ge	T
BY75/76	DD	Si	R	R OC23	A	Ge	T	1N456	A	Si	D	2N957	P	Si	T	2N2495	PA	Ge	T
BY77/78	DD	Si	R	R OC24	A	Ge	T	1N457	A	Si	D	2N987	PA	Ge	T	2N2496	PA	Ge	T
BY93/94	DD	Si	R	OC26	A	Ge	T	1N458	A	Si	D	2N987 MIL	PA	Ge	T	2N2509	P	Si	T
BY95/96	DD	Si	R	R OC30	A	Ge	T	1N459	A	Si	D	2N990	PA	Ge	T	2N2510	P	Si	T
BYZ10/16	DD	Si	R	R OC44	A	Ge	T	1N461	A	Si	D	2N993	PA	Ge	T	2N2511	P	Si	T
BYZ11/19	DD	Si	R	R OC45	A	Ge	T	1N462	A	Si	D	2N1066	PA	Ge	T	2N2512	PA	Ge	T
BYZ12/18	DD	Si	R	OC58	A	Ge	T	1N463	A	Si	D	2N1224	PA	Ge	T	2N2569	PE	Si	T
BYZ13/19	DD	Si	R	OC59	A	Ge	T	1N464	A	Si	D	USA2N1224	PA	Ge	T	2N2570	PE	Si	T
BYZ14/15	DD	Si	R	OC60	A	Ge	T	1N476	PC	Ge	D	2N1225	PA	Ge	T	2N2586	P	Si	T
BZY56	AJ	Si	Z	OC71N	A	Ge	T	1N477	PC	Ge	D	USA2N1225	PA	Ge	T	R 2N2617	A	Si	T
BZY57	AJ	Si	Z	R OC74	A	Ge	T	1N478	PC	Ge	D	2N1226	PA	Ge	T	2N2654	PA	Ge	T
BZY58	AJ	Si	Z	OC75N	A	Ge	T	1N479	PC	Ge	D	2N1302	A	Ge	T	2N2671	PA	Ge	T
BZY59	AJ	Si	Z	R OC79	A	Ge	T	1N480	PC	Ge	D	2N1303	A	Ge	T	2N2672	PA	Ge	T
BZY60	AJ	Si	Z	R OC80	A	Ge	T	1N490	PC	Ge	D	2N1304	A	Ge	T	2N2706	UL	Ge	T
BZY61	AJ	Si	Z	OCP70	A	Ge	P	1N541	PC	Ge	D	2N1305	A	Ge	T	2N2706 MP	UL	Ge	T
BZY62	AJ	Si	Z	OCP71	A	Ge	P	1N542	PC	Ge	D	2N1306	A	Ge	T	2N2707	UL	Ge	T
BZY63	AJ	Si	Z	—	—	—	—	1N616	PC	Ge	D	2N1307	A	Ge	T	2N2786	PA	Ge	T
BZY64	AJ	Si	Z	R ORP11	—	CS	P	1N617	PC	Ge	D	2N1308	A	Ge	T	2N2786A	PA	Ge	T
BZY65	AJ	Si	Z	R ORP30	—	CS	P	1N618	PC	Ge	D	2N1309	A	Ge	T	2N2835	A	Ge	T
BZY66	AJ	Si	Z	ORP50	—	CS	P	1N698	GB	Ge	D	2N1314	A	Ge	T	2N2836	A	Ge	T
BZY67	AJ	Si	Z	ORP60	—	CS	P	1N3121	GB	Ge	D	2N1395	PA	Ge	T	2N3074	PA	Ge	T
BZY68	AJ	Si	Z	ORP61	—	CS	P	1N3122	GB	Ge	D	2N1396	PA	Ge	T	2N3075	PA	Ge	T
BZY69	AJ	Si	Z	ORP62	—	CS	P	1N3182	A	Si	D	2N1397	PA	Ge	T	2N3077	P	Si	T
R BZZ10	AJ	Si	Z	ORP63	—	CS	P	1N3483	GB	Ge	D	R 2N1420	P	Si	T	2N3078	P	Si	T
R BZZ11	AJ	Si	Z	R ORP90	—	CS	P	1N3484	GB	Ge	D	R 2N1515	PA	Ge	T	2N3399	M	Ge	T
																61SV	—	—	P

R—For Replacement—not for new design.

**Note: (1)** A—alloy  
P—planar  
E—epitaxial  
DJ—diffused junction  
GB—gold bonded  
J—junction

PA—PADT  
UL—ULT  
M—Mesa  
PC—point contact  
DD—double diffused

**Note: (2)** Si—Silicon  
Ge—Germanium  
CS—Cadmium sulfide  
PbS—Lead sulfite

**Note: (3)** T—transistor  
D—diode S—SCR  
Z—zener diode  
P—photosensitive device  
R—rectifier  
V—varactor diode

The following is a brief cross-index list of Amperex and other type numbers.

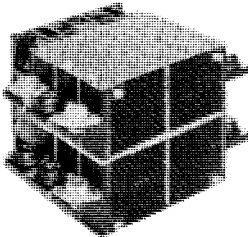
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AC126	see	2N2429	OC76	see	2N284
AC127	see	2N2430	OC77	see	2N284A
AC127/132	see	2N2707	OC169	see	2N1515
AC128	see	2N2431	OC170	see	2N1516
AC132	see	2N2706	OC171	see	2N1517
AF102	see	2N2494	OC201	see	2N2617
AF114	see	2N2089	PADT35	see	2N2207
AF115	see	2N2089	PADT20	superseded by	2N2089
AF116	see	2N2092	PADT21	superseded by	2N2089
AF117	see	2N2092	PADT22	superseded by	2N2092
BCZ11	see	2N2617	PADT23	superseded by	2N2092
OC26	see	2N1314	PADT24	superseded by	2N2092
OC28	see	2N1666	PADT25	superseded by	2N2091 or 2N2084
OC29	see	2N1667	PADT26	superseded by	2N2089 or 2N2084
OC35	see	2N1668	PADT27	superseded by	2N2092
OC36	see	2N1669	PADT28	superseded by	2N2494
OC70	see	2N279	PADT30	superseded by	2N2494
OC71	see	2N280	PADT31	superseded by	2N2090 or 2N2084
OC72	see	2N281			



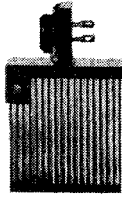
**ASTRO DYNAMICS, INC.**

**HEAT SINKS**

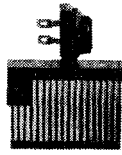
**forced convection**



2401-12B



2401



2402

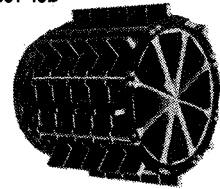


2403

The Models 2401, 2402, and 2403 utilize a light compact integrated blower, which maintains the transistor shelves at minimum temperature even under conditions of high heat load. This modern highly efficient concept is achieved by means of a revolutionary production method which permits the attachment of many fins to a base, giving a large surface area for cooling. Banks of four, eight, twelve or sixteen heat sinks may be provided with each sink electrically insulated from the other.

PRICES START AT \$1.50

2601-40B



PRICES START AT \$5.10

The 2601 Series employs the same unique design of the 2401. Within a relatively small physical area, up to 64 sinks may be mounted to one fan, insulated electrically, separated physically, with each mounted component completely accessible for servicing, replacement, or experimental monitoring.

**natural convection**



2501



2502

The 2501, 2502, and 2503 Heat Sinks, as a result of the patented "T" construction, have unusually large surface areas providing the same dissipation as commercial units twice the size. They are designed to be used where the maximum dissipation is needed in the smallest physical area. A variety of semi-conductor hole patterns, lengths, and mounting kits are available on request.



2503

PHYSICAL SPECIFICATIONS	2501	2502	2503
Overall Dimensions	4 x 3 x 1 1/16	4 x 3 x 1 1/4	5 1/8 x 3 x 1 1/4
Weight	.3 lbs.	.4 lbs	.56 lbs.
Surface Area	62 sq. in.	100 sq. in.	127 sq. in.

PRICES START AT \$1.04



2504



2505

The 2504, 2505, 2506, 2510, 2513, 2515, and 2518 are designed to answer the need of versatile, inexpensive, highly efficient heat sinks. They incorporate a number of design features including universal transistor hole patterns. More efficient than their commercial counterparts, the low selling prices of these units make it unnecessary and undesirable to utilize standard commercial units or design your own units. These models are also available in a variety of lengths and hole patterns.

PRICES START AT \$.65



2506



2510



2515

PHYSICAL SPECIFICATIONS	2504	2505	2506
Overall dimensions in inches	1 1/16 x 4 x 3	1 1/4 x 4 x 3	1 1/4 x 5 1/8 x 3
Weight lbs.	.254	.377	.465
Surface area sq. in.	54.8	85.8	117.2

PHYSICAL SPECIFICATIONS	2510	2513	2515	2518
Overall dimensions in inches	1 1/16 x 2 7/8 x 3	1 1/4 x 5 1/8 x 3	1 1/4 x 4 x 3	2 x 6 1/4 x 3
Weight lbs.	.195	.493	.35	.800
Surface area sq. in.	32.8	102	74.6	163



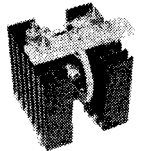
2507

The Model 2507 Heat Sink is designed to be used in systems where the efficient operation of high power components demands a superior system of free convection cooling. It is ideally suited for use with high power silicon rectifiers with a mounting surface wide enough to fit all of the larger semiconductor devices. The mounted components remain completely accessible for wiring, monitoring, or replacement.

The versatility and high thermal efficiency of the 2509 heat sink stack simplifies the majority of problems in circuit design and component packaging.

Units are available, assembled or unassembled, to suit the customers needs.

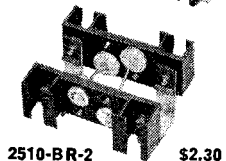
PRICES START AT \$3.00



2509



2510-BR-1 \$1.30



2510-BR-2 \$2.30

The 2510-BR bridge assembly provides high thermal efficiency in a new compact inexpensive package. The flexibility of various components and mounting hardware permit a wide selection of assembly combinations. The special fin design optimizes the effect of the heat transfer coefficient available in free convection flow.



2701...\$.65



2702...\$.70



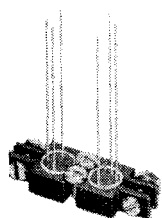
2703...\$.70



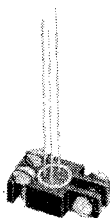
2704...\$.70

This new series of small, light natural convection heat sinks provide the maximum ratio of heat dissipation to volume occupied. Their configuration a major improvement over conventional designs, — the fins are designed to permit optimum free air flow and minimum conduction losses.

Model 2700 heat sinks will accommodate both the TO-5 and the TO-9 transistor cases. Mounting holes for other transistors are also made to customer specifications.



2802...\$.85



2801...\$.65

The Model 2800 series heat sinks provide a combination of effective heat dissipation with easy, secure mounting in a compact space.

Unlike conventional transistor mounting clips which cannot function adequately as heat sinks, the Model 2800 series effectively conduct heat from the transistor by providing sufficiently large surface contact with the chassis or other metallic mounting area.

Both Model 2801 (1 transistor heat sink) and Model 2802 (2 transistor heat sink) are designed to accommodate TO-5 and TO-9 transistor cases, but mounting holes for other sizes are available to customer specifications.

2201 \$1.12



2901



2902



Although the Model 2201 retains the proven reliability of the "gear" design, it has by virtue of its angled fins, increased the area which can be used in natural convection. This additional area results in an efficiency increase of approximately 10% without increasing the overall size of the Heat Sink.

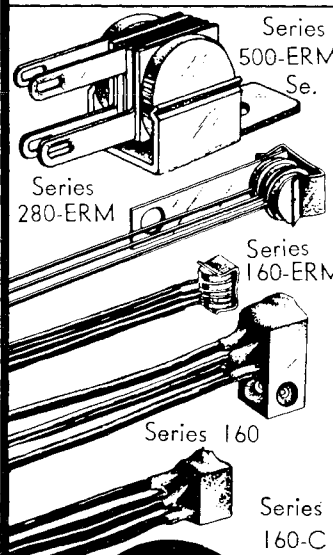
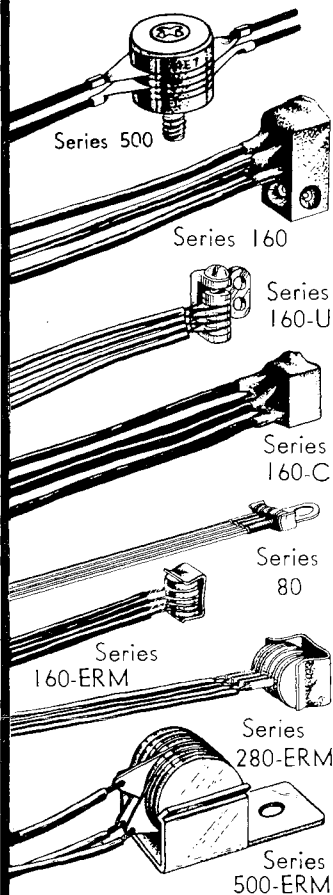
The 2900 series heat sinks were designed to be used either as natural convection heat dissipators or with forced air in very compact assemblies. These units are easily mounted and extremely well suited for very high packing densities. In particular, they are suited for circuit board applications. The 2900 series heat sinks are manufactured of copper with a black ebanol surface finish.

Physical dimensions: 2901 9/16 x 1 13/16 dia.  
2902 1 x 1 1/16 x 1 1/2

# CONANT *Miniature Metallic Rectifiers*

**STANDARD  
SINCE 1933**

Illustrations  
approx. actual size



## CONANT MINIATURE METALLIC RECTIFIERS

All Conant rectifiers are manufactured to the highest quality standards from individually tested and graded cells. Copper oxide cells are produced by the exclusive Conant Process and have 24K gold contacts applied in high vacuum.

The Conant Complete Color Code permits identification of rectifier type by color and physical form. Only basic standard rectifier types are listed below. Many other standard catalog items are available and we are prepared to produce special items to meet customers' special requirements.

### COPPER OXIDE TYPES WITH INSULATED LEAD WIRES

TYPE	CIRCUIT	CELL SIZE	ACTIVE AREA	INPUT	OUTPUT	MOUNTING	FINISH	PRICE
M	1	.500"	.125 sq. in.	5V	100 ma.	6-32 stud	Lacquer	\$2.10
TH	Series 2	"	"	"	75 ma.	"	"	1.86
HS	500 3	"	"	"	50 ma.	"	"	1.53
T	4	"	"	"	100 ma.	"	"	1.53
H	5	"	"	"	50 ma.	"	"	1.20
B	1	.166"	.012 sq. in.	"	10 ma.	#2 screw	Solid fill	2.10
BTH	Series 2	"	"	"	7 ma.	"	"	1.86
BHS	160 3	"	"	"	5 ma.	"	"	1.53
BT	4	"	"	"	10 ma.	"	"	1.53
BH	5	"	"	"	5 ma.	"	"	1.20
B-U	1	"	"	"	10 ma.	#2 screw	"	1.98
BTH-U	2	"	"	"	7 "	"	"	1.74
BHS-U	Series 3	"	"	"	5 "	"	"	1.41
BT-U	160-U 4	"	"	"	10 "	"	"	1.41
BH-U	5	"	"	"	5 "	"	"	1.08
B-C	1	"	"	"	10 ma.	Fuse clip	"	2.10
BTH-C	Series 2	"	"	"	7 ma.	"	"	1.86
BHS-C	160-C 3	"	"	"	5 ma.	"	"	1.53
BT-C	4	"	"	"	10 ma.	"	"	1.53
BH-C	5	"	"	"	5 ma.	"	"	1.20
A	1	.080"	.0012 sq. in.	5V	1 ma.	#2 screw	Bonded vinyl	2.10
ATH	Series 2	.080"	.0012 sq. in.	"	1 ma.	#2 screw	Bonded vinyl	1.86
AHS	80 3	.080"	.0012 sq. in.	"	500 ua.	#2 screw	Bonded vinyl	1.53
AT	4	.080"	.0012 sq. in.	"	500 ua.	#2 screw	Bonded vinyl	1.53
AH	5	.080"	.0012 sq. in.	"	500 ua.	#2 screw	Bonded vinyl	1.20
B-ERM*	1	"	"	"	10 ma.	Leads	Lacquer	1.59
BTH-ERM*	Series 2	"	"	"	7 ma.	"	"	1.35
BHS-ERM*	160- 3	"	"	"	5 ma.	"	"	1.05
BT-ERM*	ERM 4	"	"	"	10 ma.	"	"	1.05
BH-ERM*	5	"	"	"	5 ma.	"	"	.75
I-ERM*	1	.280"	.035 sq. in.	"	30 ma.	"	"	1.59
ITH-ERM*	Series 2	"	"	"	20 ma.	"	"	1.35
IHS-ERM*	280 3	"	"	"	15 ma.	"	"	1.05
IT-ERM*	ERM 4	"	"	"	30 ma.	"	"	1.05
IH-ERM*	5	"	"	"	15 ma.	"	"	.75
M-ERM*	1	.500"	.123 sq. in.	"	100 ma.	#6 screw	"	1.59
TH-ERM*	Series 2	"	"	"	75 ma.	"	"	1.35
HS-ERM*	500 3	"	"	"	50 ma.	"	"	1.05
T-ERM*	ERM 4	"	"	"	100 ma.	"	"	1.05
H-ERM*	5	"	"	"	50 ma.	"	"	.75

### SELENIUM TYPES, wire leads or lugs as shown

TYPE	CIRCUIT	CELL SIZE	ACTIVE AREA	INPUT	OUTPUT	MOUNTING	FINISH	PRICE
SeM-ERM*	Series 1	.500"	.15 sq. in.	25V	60 ma.	#6 screw	Lacquer	\$1.23
SeTH-ERM*	500 2	"	"	"	40 ma.	"	"	1.08
SeHS-ERM*	ERM 3	"	"	"	30 ma.	"	"	.87
SeT-ERM*	Se. 4	"	"	"	60 ma.	"	"	.87
SeH-ERM*	5	"	"	"	30 ma.	"	"	.66
SeI*	1	.280"	.06 sq. in.	"	20 ma.	Bracketterminal	"	.66
SeITH*	Series 2	"	"	"	15 ma.	"	"	.60
SeIHS*	280 3	"	"	"	10 ma.	"	"	.51
SeIT*	ERM 4	"	"	"	20 ma.	"	"	.51
SeIH*	5	"	"	"	10 ma.	"	"	.42
SeB-ERM*	1	.166"	.02 sq. in.	"	10 ma.	Leads	"	.87
SeBTH-ERM*	Series 2	"	"	"	7 ma.	"	"	.81
SeBHS-ERM*	160 3	"	"	"	5 ma.	"	"	.69
SeBT-ERM*	ERM 4	"	"	"	10 ma.	"	"	.69
SeBH-ERM*	5	"	"	"	5 ma.	"	"	.57
SeB	1	"	"	"	10 ma.	#2 screw	Solid fill	1.38
SeBTH	Series 2	"	"	"	7 ma.	"	"	1.32
SeBHS	160 3	"	"	"	5 ma.	"	"	1.17
SeBT	4	"	"	"	10 ma.	"	"	1.17
SeBH	5	"	"	"	5 ma.	"	"	1.02
SeB-C	1	"	"	"	10 ma.	Fuse clip	"	1.38
SeBTH-C	Series 2	"	"	"	7 ma.	"	"	1.32
Se-BHS-C	160-C 3	"	"	"	5 ma.	"	"	1.17
SeBT-C	4	"	"	"	10 ma.	"	"	1.17
SeBH-C	5	"	"	"	5 ma.	"	"	1.02

\*Resilient structure (U. S. Pat. No. 2,656,493) maintains optimum stack pressure independent of temperature changes, as well as providing the lowest price and smallest size.

**CONANT LABORATORIES**

**Lincoln, Nebraska**

**SILICON RECTIFIERS**

**FULL WAVE BRIDGE**

Type	AC Input Volts up to	Volts up to DC Output	Max. Amps Self Cooled	Max. Amps fan Cooled	User Net Price
Center-Tap	18-0-18	16	40	80	\$ 13.00
Center-Tap	36-0-36	32	40	80	\$ 18.00
Center-Tap	72-0-72	64	50	100	\$ 33.00
Center-Tap	140-0-140	125	50	100	\$ 43.50
Center-Tap	18-0-18	16	100	200	\$ 29.50
Center-Tap	36-0-36	32	100	200	\$ 33.50
Center-Tap	72-0-72	64	100	200	\$ 36.50
Center-Tap	140-0-140	125	100	200	\$ 43.00
Center-Tap	18-0-18	16	200	400	\$ 40.00
Center-Tap	36-0-36	32	200	400	\$ 54.00
Center-Tap	72-0-72	64	200	400	\$ 55.00
Center-Tap	140-0-140	125	200	400	\$ 70.00
Center-Tap	36-0-36	32	400	800	\$ 90.00
1φ Bridge	140	125	1	—	\$ 5.50
1φ Bridge	280	250	1	—	\$ 5.75
1φ Bridge	140	125	2	—	\$ 8.50
1φ Bridge	280	250	2	—	\$ 10.50
1φ Bridge	36	32	6	12	\$ 15.50
1φ Bridge	140	125	6	12	\$ 27.50
1φ Bridge	280	250	6	12	\$ 36.50
1φ Bridge	36	32	10	20	\$ 20.50
1φ Bridge	140	125	10	20	\$ 35.50
1φ Bridge	280	250	10	20	\$ 43.50
1φ Bridge	36	32	20	40	\$ 23.50
1φ Bridge	140	125	20	40	\$ 39.50
1φ Bridge	280	250	20	40	\$ 47.50
1φ Bridge	36	32	50	100	\$ 30.00
1φ Bridge	72	64	50	100	\$ 34.00

Type	AC Input Volts up to	Volts up to DC Output	Max. Amps Self Cooled	Max. Amps fan Cooled	User Net Price
1φ Bridge	140	125	50	100	\$ 64.00
1φ Bridge	280	250	50	100	\$ 95.00
1φ Bridge	36	32	70	140	\$ 35.00
1φ Bridge	72	64	70	140	\$ 45.00
1φ Bridge	140	125	70	140	\$ 70.00
1φ Bridge	280	250	70	140	\$110.00
1φ Bridge	36	32	40	80	\$ 28.00
1φ Bridge	72	64	40	80	\$ 33.00
1φ Bridge	140	125	40	80	\$ 58.00
1φ Bridge	280	250	40	80	\$ 85.00
1φ Bridge	36	32	100	200	\$ 55.00
1φ Bridge	72	64	100	200	\$ 61.00
1φ Bridge	140	125	100	200	\$ 80.00
1φ Bridge	280	250	100	200	\$135.00
1φ Bridge	36	32	200	400	\$ 95.00
1φ Bridge	72	64	200	400	\$105.00
1φ Bridge	140	125	200	400	\$160.00
1φ Bridge	280	250	200	400	\$240.00
1φ Bridge	72	64	400	800	\$250.00
1φ Bridge	28	250	400	800	\$545.00
1φ Bridge	36	48	75	150	\$ 55.00
1φ Bridge	72	96	95	150	\$ 80.00
1φ Bridge	105	144	75	150	\$110.00
1φ Bridge	140	188	75	150	\$165.00
1φ Bridge	220	220	75	150	\$205.00
1φ Bridge	220	220	100	200	\$225.00
1φ Bridge	220	220	200	400	\$270.00
1φ Bridge	220	220	400	800	\$340.00

**SELENIUM RECTIFIERS**

**FULL WAVE, HIGH DENSITY, SMALL SIZE**

Max. Amps.	18v In 14v Out	36v In 28v Out	54v In 42v Out	130v In 100v Out
1/2	\$ .75	\$ 1.15	\$ 2.05	\$ 3.45
1	.85	1.75	2.75	7.25
2	1.75	2.35	3.75	8.75
3	2.25	3.45	5.25	12.75
4	3.15	5.75	8.25	21.75
6	3.65	7.30	9.75	29.00
10	5.85	11.45	14.75	36.00

Max. Amps.	18v In 14v Out	36v In 28v Out	54v In 42v Out	130v In 100v Out
12	\$ 7.75	\$14.00	\$19.00	\$40.00
15	8.00	17.00	23.00	51.00
20	11.00	20.00	33.00	66.00
24	14.00	28.00	39.00	73.00
30	18.00	35.00	50.00	—
36	19.00	43.00	—	—

**PANEL METERS**

3 1/2" RECTANGULAR. ACCURACY ±2% FULL SCALE. COMPENSATED FOR STEEL PANEL MOUNTING

**DC AMMETERS**

0-50 μA	\$13.50
0-50 MA	5.50
0-1 A	10.25
0-5 A	10.25

**DC AMMETERS (Cont'd.)**

0-10 A	\$10.25
0-25 A	10.25
0-50 A	10.25
0-100 A	10.25

**DC AMMETERS (Cont'd.)**

0-200 A	\$10.25
<b>DC VOLTMETERS</b>	
0-25 VDC	10.25
0-50 VDC	10.25

**TRANSFORMERS**

\* Primary 115 vac 60C, tapped to deliver 36, 38 and 40 vac. \*\* Provide two 18v secondary windings. (taps 9, 18, 27, 36 V.) Primary tapped for 100, 105, 110, and 115 V on 12, 24, 30, and 50 amp models. \*\*\* Center tapped secondary.

36, 38 and 40 VOLTS*			36V. CENTER TAPPED**			56V. CENTER TAPPED***		
MODEL NO.	AMPS	PRICE	MODEL NO.	AMPS	PRICE	MODEL NO.	AMPS	PRICE
GT 36-2	2	6.00	XF 36-1	1	4.75	AM 56-2	2	7.50
GT 36-5	5	7.60	XF 36-2	2	6.45	AH 56-4	4	11.50
GT 36-8	8	13.00	XF 36-4	4	7.75	AH 56-6	6	21.50
GT 36-10	10	14.75	XF 36-8	8	14.10	AH 56-12	12	29.00
GT 36-12	12	15.00	XF 36-12	12	15.50	SEC 165, 160, 150, 125V @ 5A \$ 50.		
GT 36-15	15	21.50	XF 36-24	24	34.05	SEC 165, 160, 150, 125V @10A \$ 80.		
GT 36-20	20	28.50	XF 36-30	30	42.50	SEC 330, 320, 300, 250V @ 5A \$ 70.		
GT 36-30	30	41.00	XF 36-50	50	56.75	SEC 330, 320, 300, 250C @10A \$115.		
GT 36-50	50	55.00						

**CHOKES**

MODEL NO.	AMPS	HY	OHMS	PRICE	MODEL NO.	AMPS	HY	OHMS	PRICE
GH-1	1	.1	1.5	4.75	GH-15	15	.006	.01	14.75
GH-2	2	.04	.9	5.50	GH-20	20	.004	.05	15.00
GH-4	4	.07	.6	6.45	GH-24	24	.004	.025	25.00
GH-5	5	.03	.02	6.60	GH-30	30	.003	.01	35.00
GH-8	8	.03	.3	11.00	GH-50	50	.001	.001	43.00
GH-10	10	.015	.05	12.50	GH-100	100	.0005	.005	53.00
GH-12	12	.01	.1	14.20					

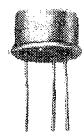


# SERVICE-DESIGNED ENTERTAINMENT SEMICONDUCTORS

## UNIVERSAL REPLACEMENT TRANSISTORS



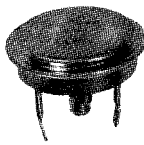
GE-1



GE-2, GE-5, GE-8



GE-3



GE-4



GE-6



GE-7



GE-9



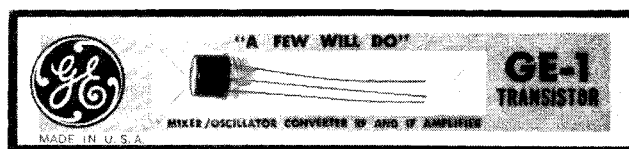
GE-10

Highly dependable low-cost transistors especially designed as general replacements for most types of transistors used in Radio and TV Sets and other home entertainment devices. The nine transistors listed cover the vast majority of applications that a radio or TV serviceman will encounter. They permit a service shop to reduce to a minimum the number of different types of transistors that it must stock. Average weight: 2 oz.

Catalog No.	Outline Drawing	Use	Application	List Price
GE-1	B	PNP	Mixer/Oscillator Converter • RF and IF Amplifier	\$2.10
GE-2	B	PNP	AF Amplifier	2.00
GE-3	C	PNP	AF Power Amplifier	3.75
GE-4	D	PNP	AF High Power Amplifier	7.40
GE-5	B	NPN	Mixer/Oscillator Converter • RF and AF Amplifier	2.75
GE-6	A	NPN	Mixer/Oscillator Converter • RF Amplifier	2.90
GE-7	A	NPN	IF Amplifier	2.65
GE-8	B	NPN	AF Amplifier	2.00
GE-9	*B	PNP	Mixer/Oscillator Converter • RF and IF Amplifier	2.00
GE-10	E	NPN	AF Amplifier-Driver-Output	1.95

\* GE-9 Smaller size than GE-1 (GE-9 .209 diameter — GE-1 .335 diameter)

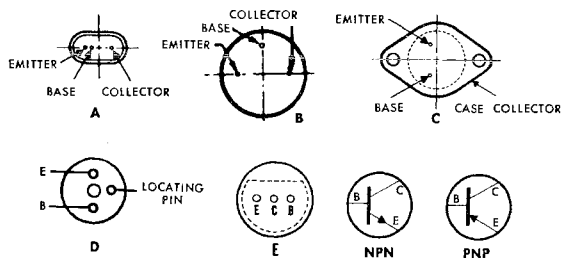
**EACH TRANSISTOR IS SKIN PACKAGED WITH INTERCHANGEABILITY ON BACK OF CARD**



FRONT

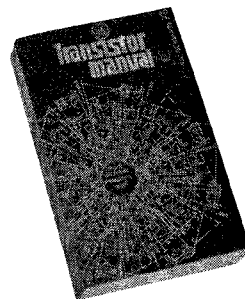
P N P TYPE GE-1 INTERCHANGEABLE WITH THE FOLLOWING										
2N111	2N139	2N271	2N412	2N415A	2N485	2N109	GT-761	2S45	2S452	
2N131A	2N140	2N271A	2N413	2N416	2N486	2N110	GT-761R	2S52	SYL-1536	
2N112	2N218	2N273	2N413A	2N417	2N614	2N111	GT-762R	2S53	SYL-1537	
2N112A	2N219	2N274	2N414	2N481	2N616	2N1266	GT-765	2SA37	SYL-1583	
2N113	2N247	2N489	2N414A	2N482	2N617	GT-759R	CK-760	2SA38	SYL-1608	
2N135	2N252	2N410	2N414B	2N483	2N1107	GT-760	CK-766	2SA39	SYL-1621	
2N136	2N257	2N411	2N415	2N484	2N1108	GT-760R	2S30	2SA49		

BACK



### TRANSISTOR MANUAL

19 fact-filled chapters containing transistor theory, specifications, characteristics, and applications. Valuable information needed by every engineer, hobbyist, experimenter. Price \$2.00.



### NEW G.E. GE-504 UNIVERSAL RECTIFIER

A silicon rectifier with a 45-amp surge rating. Recommended as a replacement for all selenium, germanium and silicon rectifiers used in TV receivers. The 45-amp surge rating eliminates the need for the surge limiting resistors normally required when silicon rectifiers are used. PIV is 400 volts; max.  $I_{DC}$ , 750 ma. Shipping weight: 2 oz. List Price \$2.00



### G.E. SILICON AND GERMANIUM RECTIFIERS

These top hat, hermetically sealed rectifiers are designed for general-purpose applications requiring maximum economy.

Type	PIV	Max IDC	List Price	Type	PIV	Max IDC	List Price
1N91	100	150	\$1.20	1N1695	400	600	1.1
1N1692	100	600	.75	1N1696	500	600	1.2
1N1693	200	600	.80	1N1697	600	600	1.5
1N1694	300	600	.95				

### G.E. CRYSTAL DIODES

Type	Description	Average Forward Current (ma)	Peak Reverse Voltage (volts)	List Price
1N34AS	General Purpose	50	75	\$0.60
1N60	Video Detector	50	30	.85
1N28A	Silicon UHF Mixer	—	5	1.45
1N295	50 MC Detector	—	50	.55

### G.E. VAC-U-SEL® DOUBLE DIODES

Miniature double diodes for TV horizontal phase detector, replacement and other applications.  $\frac{7}{16}$  x  $\frac{9}{16}$  x  $\frac{3}{16}$ ". Shipping weight: 2 oz.

Type No.	Ifwd	Imr	Description	Max. Case Temp.	List Price
6GC1	1.1 @ 2.5V	4 @ 20V	Common cathode	85°C	\$0.99
6GD1	1.1 @ 2.5V	4 @ 20V	Series connected	85°C	.99
6GX1	1.1 @ 2.5V	4 @ 20V	Common anode	85°C	.99

### G.E. SELENIUM RECTIFIERS FOR COLOR TV SETS

Cat. No.	Type	List Price
GECR-1	Focus Rect.	\$4.85
GECR-2	Boosted Boost	2.25
GECR-3	Convergence	1.60

### G.E. SEMICONDUCTOR REPLACEMENT KIT

Model K-915A convenient kit covers a majority of entertainment-type semiconductor replacement needs — an ideal a: for radio and TV servicemen. Contains 22 units of service designed semiconductors including 7 universal transistor 3 silicon rectifiers, 6 crystal diodes, 5 dual diodes, and power transistor. Units are housed in a sturdy cabinet wit 15 clearly labeled drawers. Every unit always within har reach. Cabinet size,  $8\frac{1}{2}$  x  $12\frac{1}{8}$  x 9". Shipping weight: 4 lb List Price \$38.83.



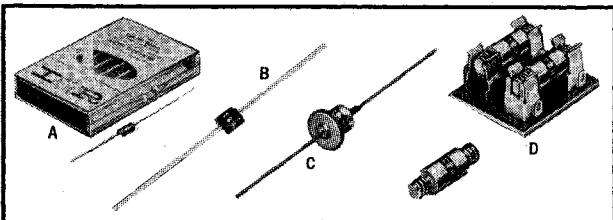
# INTERNATIONAL RECTIFIER

EL SEGUNDO, CALIFORNIA

## RADIO—TV—AUDIO RECTIFIERS AND DIODES

Rectifier Stacks & Solar Power Paks

SEMICONDUCTORS



**"5A" SERIES SILICON RECTIFIERS** FIG. A

The Universal combines high power capability (to 1000 ma) and peak surge current capacity to 50 amps (about 10 times standard units) in a rugged miniaturized package. It will replace virtually any rectifier, selenium or silicon, in all circuits drawing up to 1000 ma dc, including TV, radio, hi-fi systems, filament supplies and motor control. Type 5A4D is recommended for radio, TV and other systems not equipped with a power transformer. For color TV, citizens band radios and similar systems equipped with transformer, the Type 5A6D is recommended.

Cat. No.	Packaging	Dealer Net
5A4-D	10 per Box	.69 ea.*
5A4D-C	Indiv. Carded	.71 ea.
5A4D-95	Plastic Kit, cont. 5	3.45 per kit
5A6-D	10 per Box	.79 ea.
5A6D-C	Indiv. Carded	.89 ea.

**RATINGS @ 40°C**

Type No.	Peak Reverse Voltage	RMS Input Volts**	DC Output Current, ma	Max. Surge Current, Amps
5A4-D	400	140	1000	50
5A6-D	600	210	1000	50

For industrial high reliability types and lower and higher rated devices in this series, see Industrial section. \*\*Capacitive load

**"10D" SERIES SILICON RECTIFIERS** FIG. B

Full Rated 1,000 ma @ 25°C subminiature silicon rectifiers. Incorporate completely new diffusion and encapsulation techniques to provide higher current ratings for their size than any device in the field. Pure silver leads assure easy soldering and increased heat dissipation.

Cat. No.	Packaging	Distrib. Std. Pack	Dealer Net
804	10 per box	Multiples of 10 pc.	.69 ea.
806	10 per box	Multiples of 10 pc.	.72 ea.

**RATINGS @ 50°C**

Type No.	Peak Reverse Voltage	RMS Input Volts**	DC Output Current, ma	Max. Surge Current, Amps
804	400	140	1000	50
806	600	210	1000	50

For industrial high reliability types and lower and higher rated devices in this series, see Industrial section. \*\*Capacitive load

**SD-500 SILICON "TOPHAT" RECTIFIER** FIG. C

Cut your rectifier stock and cut your callbacks with the premium quality SD-500 kit . . . the hermetically sealed replacement rectifier that is specifically designed for speedy installation in radio-TV, hi-fi, intercoms, phonographs, and other audio and control circuits. It WIRELESS IN . . . to directly replace axial lead units or CLIPS IN . . . a 10-second conversion permits plug-in into existing clip-type sockets (kit contains all needed parts). Where high humidity or other severe environmental conditions are encountered, the hermetically sealed SD-500 provides real protection, and long, dependable operation.

RATED @ 400 and 600 PIV, 750 MA resistive and 650 MA capacitive load on D.C. output.

Cat. No.	Packaging	Dealer Net
SD500	10 per box	.75 ea.
SD500-C	Indiv. Carded	.84 ea.
SD500-92	Kit of 2 Rectif. with Conv. Hdwe.	1.58 per kit
SD500-95	Kit of 5 Rectif. with Conv. Hdwe.	3.90 per kit
SD600	10 per box	.87 ea.*
SD600-C	Indiv. Carded	.98 ea.

\*in lots of 10

**"PLUG IN" ALL-CIRCUIT SILICON RECTIFIER** FIG. D

Ruggedized silicon diffused junction "plug-in" rectifiers may be rapidly snapped into radio-TV, motor control, audio-amplifier, industrial power supply and other circuits utilizing clip-type rectifier holders.

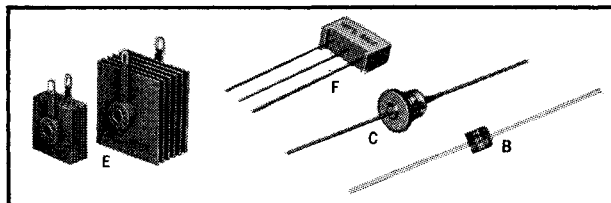
Cat. No.	Packaging	Dealer Net
1MA4	10 per box	.79 ea.*
5MA4-D	10 per box	.92 ea.
5MA4D-C	Indiv. Carded	1.14 ea.
5MA4D-95	Plastic Box of 5	5.00 per box
5MA4D-K	Kit of 2 rect. with holder	2.43 per kit

\*in lots of 10

Cat. No.	Peak Reverse Voltage	RMS Input Volts	DC Output Ma @ 50°C		Max. Surge Current, Amps
			Res.	Cap.	
1MA4	400	140	350	250	2
5MA4-D	400	140	1000	800	50

\*For capacitive load use one-half of value shown. Figure indicated is for resistive and inductive loads.

\*\*Current rating shown is for resistive and inductive load at 50°C. For capacitive load use 80% of value.



**SELENIUM RECTIFIER STACKS** FIG. E

Combine reliability with economy and small size

Compact, high density types designed for long life and reliability in radio, TV, record players, amplifiers and experimental applications. Output ratings from 50 ma to 650 ma at 130 volts RMS input. Economy, stable characteristics, and negligible leakage and aging of selenium provides long, economical rectifier operation. Replacement type rectifiers are individually boxed and are furnished with mounting bracket and hardware.

Cat. No.	Replaces Old	DC Output Current, Ma	Max. RMS Volts	Dimensions, Nom. Plate Size (Inch)	Max. Mounting Dim. (Inch)	Distr. Std. Pack	Dealer Net	
							1-9	10 & up
E075L	T065/075	to 75	130	0.67 x 0.67	2 1/2	10	.59	.44
E150L	T075/150	75-150	130	1 x 1	3/4	10	.74	.62
E300L	T200/300	150-300	130	1.25 x 1.25	1 1/4	10	1.10	.92
E500L	T450/500	400-500	130	1.5 x 1.5	1 1/2	10	1.22	1.02
E650L	T550/650	500-650	130	2 x 2	2	10	2.08	1.73

**SELENIUM DUAL DIODES** FIG. F

Dual diodes are for TV Phase Detector Circuits. These diodes are of superior quality and packaged for easy identification. Connecting diagram and complete interchangeability table is supplied with each unit.

**DUAL DIODES**

Cat. No.	Type	Equivalent to			Packaging	Dir. Net
		GE	IRC	IT&T		
DD04	Com. Cathode	6GC1	D4	K1615	Carded	.49 ea.
DD04-C					Blister Pk.	.55 ea.
DD05	Ser. Connect.	6GD1	D5	K1616	Carded	.49 ea.
DD05-C					Blister Pk.	.55 ea.
DD06	Com. Anode	6GX1	D6	K1617	Carded	.49 ea.
DD07	Com. Anode		D7		Carded	1.25 ea.

**1/2 TO 1 AMP RATED TOP HAT RECTIFIERS** FIG. C

These low power general purpose silicon rectifier cells are of the highest quality. In all cases, they exceed Jecid number, military specifications and may be used to replace over 100 specific 1N types. These popular case styles are listed below.

Cat. No.	Peak Reverse Voltage Volts	RMS Input Voltage Volts	Cont. DC Voltage Volts	Rectified DC Output Current (M.A.)		Max. Surge Current (1 cycle) Amps	Max. Voltage Drop Volts	Max. Leakage Current (MA.) Full Cycle Average	Net Price
				@ 50°C	@ 100°C				
10B1	100	70	100	1800	—	40	1.10	0.05	.56
10B2	200	140	200	1800	—	40	1.10	0.05	.60
10B3	300	210	300	1800	—	40	1.10	0.05	.77
10B4	400	280	400	1800	—	40	1.10	0.05	.98
10B5	500	350	500	1800	—	40	1.10	0.05	1.13
10B6	600	420	600	1800	—	40	1.10	0.05	1.35
10B8	800	560	800	1800	—	40	1.10	0.02	2.43
10B10	1000	700	1000	1800	—	40	1.10	0.02	3.15
SD-91	100	70	100	550	300	10	1.5	1.0	.53
SD-92	200	140	200	550	300	15	1.5	1.0	.63
SD-93	300	210	300	550	300	10	1.5	1.0	.73
SD-94	400	280	400	550	300	10	1.5	0.80	.89
SD-95	500	350	500	550	300	10	1.5	0.65	.99
SD-96	600	420	500	550	300	10	1.5	0.65	1.08
SD-91A	100	70	100	750	500	15	1.3	0.5	.59
SD-92A	200	140	200	750	500	15	1.3	0.5	.68
SD-93A	300	210	300	750	500	15	1.3	0.5	.85
SD-94A	400	280	400	750	500	15	1.3	0.4	.96
SD-95A	500	350	500	750	400	15	1.3	0.3	1.06
SD-96A	600	420	500	750	400	15	1.3	0.3	1.16

**SUBMINIATURE ENCAPSULATED 10D SERIES**  
1,000 MA @ 50°C — 200 to 1,000 Volts PRV FIG. B

Cat. No.	Jedec No.	Peak Reverse Voltage	RMS Input Voltage*	DC Output Current MA**	Max. Surge Amp	Net Price
10D2	IN2069,A	200	140	1000	50	.50
10D3		300	210	1000	50	.55
10D4	IN2070,A	400	280	1000	50	.68
10D5		500	350	1000	50	.78
10D6		600	420	1000	50	.87
10D8	IN2071,A	800	560	1000	50	2.00
10D10		1000	700	1000	50	2.45

**TRANSISTOR RADIO SOLAR PACKS**

I.R.'s Transistor Radio Solar Packs are available in two of the most popular voltage ratings: 4.5 volts and 9 volts. Both types are designed to feed a constant charge to the batteries while the Solar Packs are supplying the radio with its power. Both types are housed in a handsome plastic case which protects the solar cells from damage.



Part No.	Nominal DC Output Volt MA	Operating Temp.	Approx. Dimensions inches	List Price
SP5G26C	4.5 26	28°C	3" x 1 1/4" x 3/8"	9.95
SP9G113C	9.0 13	28°C	3" x 1 1/4" x 3/8"	9.95

Light Intensity: 100 MW/CM2 of sunlight or tungsten equivalent

ITEMS LISTED ARE IR COMMERCIAL PRODUCTS ONLY—FOR COMPLETE DATA ON ENTIRE LINE OF INDUSTRIAL, MILITARY & COMMERCIAL PRODUCTS, CONTACT THE FACTORY

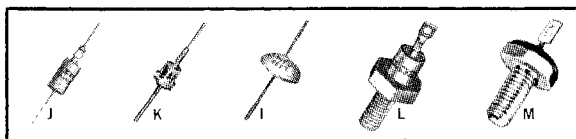
# INTERNATIONAL RECTIFIER

EL SEGUNDO, CALIFORNIA

## ZENER DIODES — ALL-PURPOSE TRANSISTORS, SCR'S

### Battery Charger Stacks

SEMICONDUCTORS



### IR COMMERCIAL ZENER DIODES

The Zener diodes listed are a "commercial version" of the JEDEC—military types. Their performance is comparable for practically all commercial application where environmental temperature extremes do not prevail. All devices listed are selected to plus and minus 10% tolerances. Five percent tolerance values are available on special order at an additional charge of 50c per unit.

### 1 WATT ZENER VOLTAGE REGULATORS FIG. L, K

Cat. No.	Nom. Voltage (EZ)	Test Current (IT) MA	Net Price	
			1-9	10-99
Z-1100	3.9	50	1.90	1.60
Z-1102	4.7	40	1.90	1.60
Z-1104	5.6	35	1.90	1.60
Z-1106	6.8	30	1.90	1.60
Z-1108	8.2	25	1.90	1.60
Z-1110	10	20	1.90	1.60
Z-1112	12	15	1.90	1.60
Z-1114	15	13	1.90	1.60
Z-1116	18	10	1.90	1.60
Z-1118	22	9	1.90	1.60
Z-1120	27	7	1.90	1.60
Z-1122	33	5	1.90	1.60
Z-1124	39	5	1.90	1.60
Z-1126	47	5	1.90	1.60
Z-1128	56	5	1.90	1.60
Z-1130	68	5	1.90	1.60
Z-1132	82	5	1.90	1.60
Z-1134	100	5	1.90	1.60
Z-1136	120	5	2.25	1.85
Z-1138	150	5	2.25	1.85
Z-1140	180	5	2.25	1.85

### 10 WATT ZENER VOLTAGE REGULATORS FIG. L, M

Cat. No.	Nom. Voltage (EZ)	Test Current (IT) MA	Net Price	
			1-9	10-99
Z-1300	3.9	500	3.50	2.95
Z-1302	4.7	400	3.50	2.95
Z-1304	5.6	350	2.90	2.45
Z-1306	6.8	300	2.90	2.45
Z-1308	8.2	250	2.90	2.45
Z-1310	10.0	200	2.90	2.45
Z-1312	12	170	2.90	2.45
Z-1314	15	140	2.90	2.45
Z-1316	18	110	2.90	2.45
Z-1318	22	90	2.90	2.45
Z-1320	27	70	2.90	2.45
Z-1322	33	60	2.90	2.45
Z-1324	39	50	2.90	2.45
Z-1326	47	45	2.90	2.45
Z-1328	56	35	2.90	2.45
Z-1330	68	30	2.90	2.45
Z-1332	82	25	2.90	2.45
Z-1334	100	20	2.90	2.45
Z-1336	120	15	2.90	2.45
Z-1338	150	15	2.90	2.45
Z-1340	180	10	4.00	3.40

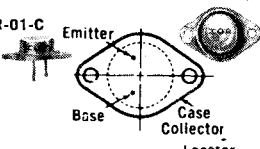
### GENERAL PURPOSE TRANSISTORS

The transistors listed on this page are designed as entertainment types and universal replacements for over 700 JEDEC and house number types. They are also ideal for commercial applications, experimental and hobby projects. Handy cross-reference and substitution guide is available at no charge (request Form #JD-61).

#### PNP Audio High Power Transistor TR-01-C

TO-3 (Diamond) Case. Audio Frequency power transistor for automobile radio and amplifier output stages.

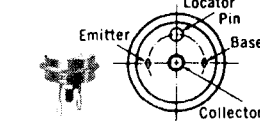
Cat. No. TR01-C \$3.75 List, Net \$2.25



#### PNP Medium Power TR-02-C

TO-3 (Diamond) case. Power transistor for use in commercial, experimental and hobby applications as a switch, replacement of relay amplifier, etc.

Cat. No. TR-02-C List \$1.65, Net \$ .99



#### PNP Audio High Power TR-03-C

TO-36 (Doorknob) case. Audio frequency power transistor for automobile radio and amplifier output stages.

Cat. No. TR03-C List \$5.50, Net \$3.50

### PNP TRANSISTORS

#### PNP Audio Amplifier TR-04-C

A general purpose PNP type audio transistor for all voltage supplies of 6 volts or less.

Cat. No. TR04-C List \$1.10, Net \$ .66

#### PNP Audio Amplifier TR-05-C

A general purpose PNP type audio transistor for all applications with voltage supplies of 12 volts or less.

Cat. No. TR05-C List \$1.65, Net \$ .99

#### PNP Universal RF TR-06-C

A general purpose RF transistor for use in mixer-oscillator, converter and RF amplifier circuits.

Cat. No. TR06-C List \$2.00, Net \$1.20

#### PNP Universal IF TR-07-C

IF Transistor. PNP type for use in IF amplifier stages in radios, etc.

Cat. No. TR07-C List \$1.65, Net \$ .99

### NPN TRANSISTORS

#### NPN Universal RF TR-08-C

A general purpose NPN type RF transistor for use in mixer-oscillator, converter and RF amplifier circuits.

Cat. No. TR08-C List \$2.00, Net \$1.20

#### NPN Audio Amplifier TR-09-C

A general purpose NPN type audio transistor for radios, amplifiers, etc.

Cat. No. TR09-C List \$2.00, Net \$1.20

#### NPN Universal IF TR-10-C

IF transistor. NPN type for use in IF amplifier stages in radios, etc.

Cat. No. TR10-C List \$2.00, Net \$1.20

### SILICON CONTROLLED RECTIFIERS

#### Silicon Controlled Rectifier SCR-01

Rating: 5 Amp; 50 PIV. (Max. Input Voltage 35V AC. RMS)

Similar to JEDEC Type 2N1771. Solid state switch for low voltage controls replacement of relay, battery charging, operation of timing circuits such as flashers, remote switching etc. Max. operating temperature 185°F.

Cat. No. SCR-01 \$3.90 Net

#### Silicon Controlled Rectifier SCR-02

Rating: 5 Amp; 200 PIV. (Max. Input Voltage 140V AC. RMS)

Similar to JEDEC Type 2N1774. For light dimmers, home appliance speed controls and solid state switching, including remote controls. Max. operating temperature 185°F.

Cat. No. SCR-02 \$5.75 Net

#### Silicon Controlled Rectifier SCR-03

Rating: 16 Amp; 50 PIV. (Max. Input Voltage 35V AC. RMS)

Similar to JEDEC Type 2N682. Solid state switch for battery chargers, relay replacement, timing device, remote power switching etc. Max. operating temperature 185°F.

Cat. No. SCR-03 \$5.75 Net

#### Silicon Controlled Rectifier SCR-04

Rating: 16 Amp; 200 PIV. (Max. Input Voltage 140V AC. RMS)

Similar to JEDEC Type 2N685. For motor speed controls oven controls, high power lamp dimmers, remote control of power circuits, etc. Max. operating temperature 185°F.

Cat. No. SCR-04 \$7.50 Net

#### Unijunction Transistor

Rating: 400 MW. 30V Max. Provides accurate timing and triggering for SCR (Silicon Controlled Rectifier) circuits.

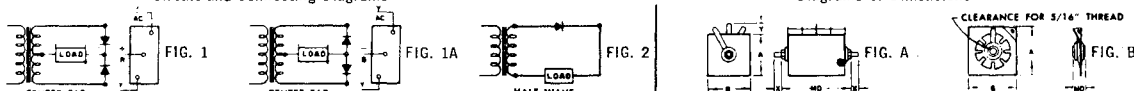
Cat. No. 2N2160 \$1.49 Net

### SELENIUM BATTERY CHARGER RECTIFIER

Type JD 4346B is the most universal rectifier for commercial "fast chargers" as used in service stations. It fits most models without circuit or mechanical modifications. Single plate rectifiers are used for replacement of low-current chargers such as used at home, as "trickle" type in garages and for constant current models. By using single plates of proper size, any current rating and circuit configuration (e.g. center tap, bridge, etc.) may be assembled.

Cat. No.	Output		Max. Input AC Volts	Circuit Connecting Diag. Fig.	Dimensions							Net Price
	DC Volt	DC Amp			Fig.	A	B	MO	X	Y	Stud	
JD4346B*	6-12	30-100**	16.5-0-16.5	1A	A	6	5	4 1/2	3/4	1 1/2	3/8-16	19.03
JD4346D	6-12	30-100**	16.5-0-16.5	1	A	6	5	4 1/2	3/4	1 1/2	3/8-16	19.03
JD116K	6-12	2 (Note A)	16.5-0-16.5	1 or 2	B	3	3	1 1/2	—	—	—	1.75
JD117K	6-12	3 (Note A)	16.5-0-16.5	1 or 2	B	4	4	1 1/2	—	—	—	2.34
JD241K	6-12	6 (Note A)	16.5-0-16.5	1 or 2	B	6	5	1 1/2	—	—	—	3.35
JD240K	6-12	9 (Note A)	16.5-0-16.5	1 or 2	B	7 1/2	6 1/2	1 1/2	—	—	—	4.91

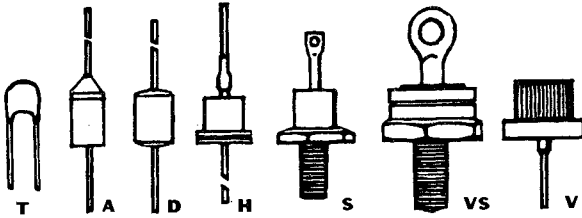
\*Most popular type. \*\*30 without fan—100 with fan rated @ 800 LFM. Note A: Ratings shown for half wave. Two plates in center-tap circuit have twice this rating.



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# MALLORY SILICON RECTIFIERS

## DIFFUSED JUNCTION SILICON RECTIFIERS



### LOW CURRENT TYPES

25° C

Mallory Type	Fig.	PRV Volts	Max. DC Amps	ICV Surge Amps	Max. Oper. Temp.	Net Each, Lots	
						1-99	100-999
1N2090	T	50	.75	15	100° C	\$0.46	\$0.34
1N2091	T	100	.75	15	100° C	.48	.36
1N2092	T	200	.75	15	100° C	.50	.38
1N2093	T	300	.75	15	100° C	.52	.40
1N2094	T	400	.75	15	100° C	.54	.42
1N2095	T	500	.75	15	100° C	.56	.44
1N2096	T	600	.75	15	100° C	.58	.46
A50	A	50	.75	15	100° C	.48	.36
A100	A	100	.75	15	100° C	.50	.38
1N2069	A	200	.75	15	100° C	.52	.40
A300	A	300	.75	15	100° C	.54	.42
1N2070	A	400	.75	15	100° C	.56	.44
A500	A	500	.75	15	100° C	.58	.46
1N2071	A	600	.75	15	100° C	.60	.48
1N3193	D	200	.75	40	100° C	.52	.40
1N3194	D	400	.75	40	100° C	.54	.42
1N3195	D	600	.75	40	100° C	.56	.44
1N1487	H	100	.75	15	140° C	.50	.38
1N1488	H	200	.75	15	140° C	.52	.40
1N1489	H	300	.75	15	140° C	.54	.42
1N1490	H	400	.75	15	140° C	.56	.44
1N1491	H	500	.75	15	140° C	.58	.46
1N1492	H	600	.75	15	140° C	.60	.48
1N1763	H	400	.75	.....	150° C	.58	.46
1N1764	H	500	.75	.....	150° C	.60	.48

50° C

1N1100	H	100	.75	15	165° C	\$0.52	\$0.34
1N1101	H	200	.75	15	165° C	.62	.41
1N1102	H	300	.75	15	165° C	.65	.43
1N1103	H	400	.75	15	165° C	.80	.53
1N1104	H	500	.75	15	165° C	.91	.64
1N1105	H	600	.75	15	165° C	2.91	1.94
1N1692	H	100	.6	20	115° C	.50	.33
1N1693	H	200	.6	20	115° C	.58	.38
1N1694	H	300	.6	20	115° C	.62	.41
1N1695	H	400	.6	20	115° C	.77	.51
1N1696	H	500	.6	20	115° C	.88	.58
1N1697	H	600	.6	20	115° C	1.15	.76

100° C

1N440	H	100	.3	15	150° C	\$0.71	\$0.47
1N441	H	200	.3	15	150° C	.76	.50
1N442	H	300	.3	15	150° C	1.09	.70
1N443	H	400	.3	15	150° C	1.11	.72
1N444	H	500	.3	15	150° C	1.11	.72
1N445	H	600	.3	15	150° C	1.60	1.00
1N440B	H	100	.5	15	165° C	.71	.46
1N441B	H	200	.5	15	165° C	.76	.50
1N442B	H	300	.5	15	165° C	.86	.54
1N443B	H	400	.5	15	165° C	1.09	.70
1N444B	H	500	.5	15	165° C	1.11	.72
1N445B	H	600	.5	15	165° C	1.60	1.00
1N599	H	50	.4	10	150° C	.46	.30
1N600	H	100	.4	10	150° C	.52	.34
1N601	H	150	.4	10	150° C	.53	.34
1N602	H	200	.4	10	150° C	.53	.34
1N603	H	300	.4	10	150° C	.62	.41
1N604	H	400	.4	10	150° C	.65	.44
1N605	H	500	.4	10	150° C	.80	.50
1N606	H	600	.4	10	150° C	.89	.55
1N599A	H	50	.4	10	150° C	1.18	.78
1N600A	H	100	.4	10	150° C	.92	.61
1N601A	H	150	.4	10	150° C	1.04	.69
1N602A	H	200	.4	10	150° C	1.07	.71
1N603A	H	300	.4	10	150° C	1.31	.83
1N604A	H	400	.4	10	150° C	1.61	1.07
1N605A	H	500	.4	10	150° C	1.76	1.17
1N606A	H	600	.4	10	150° C	2.36	1.57
1N2858	H	50	.5	40	125° C	.40	.26
1N2859	H	100	.5	40	125° C	.45	.30
1N2860	H	200	.5	40	125° C	.48	.33
1N2861	H	300	.5	40	125° C	.56	.37
1N2862	H	400	.5	40	125° C	.66	.44
1N2863	H	500	.5	40	125° C	.73	.48
1N2864	H	600	.5	40	125° C	.92	.62

150° C

1N536	H	50	.25	15	165° C	\$0.44	\$0.29
1N537	H	100	.25	15	165° C	.49	.32
1N538	H	200	.25	15	165° C	.52	.34
1N539	H	300	.25	15	165° C	.58	.39
1N540	H	400	.25	15	165° C	.67	.44
1N1095	H	500	.25	15	165° C	.75	.50
1N1096	H	600	.25	15	165° C	1.13	.75

### MEDIUM CURRENT TYPES

25° C

Mallory Type	Fig.	PRV Volts	Max. DC Amps	ICV Surge Amps	Max. Oper. Temp.	Net Each, Lots	
						1-99	100-999
1N1115	S	100	1.5	15	170° C	\$1.08	\$0.72
1N1116	S	200	1.5	15	170° C	1.20	.80
1N1117	S	300	1.5	15	170° C	1.52	1.02
1N1118	S	400	1.5	15	170° C	1.79	1.20
1N1119	S	500	1.5	15	155° C	1.84	1.26
1N1120	S	600	1.5	15	155° C	2.76	1.84
S50	S	50	3	25	150° C	2.00	1.34
S100	S	100	3	25	150° C	2.14	1.43
1N1124	S	200	3	25	150° C	2.43	1.62
1N1124A	S	200	3.3	25	150° C	2.43	1.62
1N1125	S	300	3	25	150° C	2.84	1.89
1N1126	S	400	3	25	150° C	4.64	3.09
1N1126A	S	400	3.3	25	150° C	4.64	3.09
1N1127	S	500	3	25	150° C	6.75	5.55
1N1128	S	600	3	25	150° C	8.31	6.79
1N1128A	S	600	3.3	25	150° C	8.31	6.79
1N1537	S	50	1.6	16	175° C	1.74	1.09
1N1538	S	100	1.6	16	175° C	2.24	1.49
1N1539	S	150	1.6	16	175° C	2.31	1.54
1N1540	S	200	1.6	16	175° C	2.54	1.69
1N1541	S	300	1.6	16	175° C	2.99	1.99
1N1542	S	400	1.6	16	175° C	3.96	2.64
1N1543	S	500	1.6	16	175° C	5.16	3.44
1N1544	S	600	1.6	16	175° C	6.29	4.19
1N3569	S	100	3.5	35	165° C	1.48	.98
1N3570	S	200	3.5	35	165° C	1.79	1.19
1N3571	S	300	3.5	35	165° C	2.31	1.54
1N3572	S	400	3.5	35	165° C	2.84	1.89
1N3573	S	500	3.5	35	165° C	4.24	2.84
1N3574	S	600	3.5	35	165° C	6.14	4.09

100° C

1N607	S	50	.8	3	150° C	\$1.11	\$0.74
1N607A	S	50	.8	3	150° C	1.23	.82
1N608	S	100	.8	3	150° C	1.17	.78
1N608A	S	100	.8	3	150° C	1.23	.82
1N609	S	150	.8	3	150° C	1.11	.74
1N609A	S	150	.8	3	150° C	1.17	.78
1N610	S	200	.8	3	150° C	1.11	.74
1N610A	S	200	.8	3	150° C	1.17	.78
1N611	S	300	.8	3	150° C	1.15	.76
1N611A	S	300	.8	3	150° C	1.23	.82
1N612	S	400	.8	3	150° C	1.94	1.29
1N612A	S	400	.8	3	150° C	2.13	1.42
1N613	S	500	.8	3	150° C	1.94	1.29
1N613A	S	500	.8	3	150° C	2.13	1.42
1N614	S	600	.8	3	150° C	2.79	1.86
1N614A	S	600	.8	3	150° C	3.06	2.04

150° C

1N253	S	95	1.0	20	175° C	\$1.04	\$0.69
1N254	S	190	.4	10	175° C	1.23	.82
1N255	S	380	.4	10	175° C	1.95	1.31
1N256	S	570	.2	5	175° C	2.69	1.79
1N332	S	400	.4	10	175° C	1.94	1.29
1N333	S	400	.2	5	175° C	1.94	1.29
1N334	S	300	.4	10	175° C	1.56	1.04
1N335	S	300	.2	5	175° C	1.56	1.04
1N336	S	200	.4	10	175° C	1.23	.82
1N337	S	200	.2	5	175° C	1.23	.82
1N339	S	100	.4	10	175° C	1.17	.78
1N340	S	100	.2	5	175° C	1.17	.78
1N341	S	400	.4	10	175° C	1.94	1.29
1N342	S	400	.2	5	175° C	1.94	1.29
1N343	S	300	.4	10	175° C	1.56	1.04
1N344	S	300	.2	5	175° C	1.56	1.04
1N345	S	200	.4	10	175° C	1.23	.82
1N346	S	200	.2	5	175° C	1.23	.82
1N348	S	100	.4	10	175° C	1.17	.78
1N349	S	100	.2	5	175° C	1.17	.78

### HIGH CURRENT TYPES 150° C

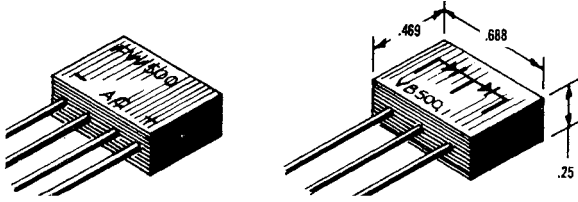
1N3208	VS	50	15	250	175° C	\$1.15	\$0.79
1N3209	VS	100	15	250	175° C	1.30	.89
1N3210	VS	200	15	250	175° C	1.75	1.19
1N3211	VS	300	15	250	175° C	2.40	1.60
1N3212	VS	400	15	250	175° C	3.50	2.33
1N3213	VS	500	15	250	175° C	4.20	2.80
1N3214	VS	600	15	250	175° C	6.30	4.17
1N3491	V	50	18	300	175° C	1.68	1.11
1N3492	V	100	18	300	175° C	1.83	1.21
1N3493	V	200	18	300	175° C	2.33	1.55
1N3494	V	300	18	300	175° C	3.00	2.00
1N3495	V	400	18	300	175° C	3.67	2.45
V500	V	500	18	300	175° C	4.50	3.00
V600	V	600	18	300	175° C	5.25	3.50
1N3659	V	50	25	400	175° C	1.32	.88
1N3660	V	100	25	400	175° C	1.47	.98
1N3661	V	200	25	400	175° C	1.94	1.29
1N3662	V	300	25	400	175° C	2.69</	



# MALLORY SILICON RECTIFIERS

## PRE-PACKAGED RECTIFIER CIRCUITS

Mallory pre-packaged rectifier circuits are available in three basic styles: voltage doubler, full-wave rectifier, and full-wave bridge rectifier. Supplied in pre-formed molded case (.688" L x .469" H x .25" T) with 1½" (min.) leads. Pel-Cel® rectifiers are mounted on heat sinks before encapsulation. Individual cells are rated at 750 ma @ 25° C (full-wave circuits rated 1.5 amps @ 25° C).



Mallory No.	PRV	Max. DC Amps @ 25° C*	1 Cyc. Surge (Amps)	Max. Op. Temp.	Net Each, Lots of	
					1-99	100-999
<b>VOLTAGE DOUBLER</b>						
VB50	50	.75	15	100° C	\$.93	\$.75
VB100	100	.75	15	100° C	.97	.78
VB200	200	.75	15	100° C	1.08	.86
VB300	300	.75	15	100° C	1.20	.95
VB400	400	.75	15	100° C	1.21	.96
VB500	500	.75	15	100° C	1.35	1.08
VB600	600	.75	15	100° C	1.45	1.15

Mallory No.	PRV	Max. DC Amps @ 25° C*	1 Cyc. Surge (Amps)	Max. Op. Temp.	Net Each, Lots of	
					1-99	100-999
<b>FULL-WAVE, CENTER TAP NEGATIVE</b>						
CTN50	50	1.5	15	100° C	\$.93	\$.75
CTN100	100	1.5	15	100° C	.97	.78
CTN200	200	1.5	15	100° C	1.08	.86
CTN300	300	1.5	15	100° C	1.20	.95
CTN400	400	1.5	15	100° C	1.21	.96
CTN500	500	1.5	15	100° C	1.35	1.08
CTN600	600	1.5	15	100° C	1.45	1.15

Mallory No.	PRV	Max. DC Amps @ 25° C*	1 Cyc. Surge (Amps)	Max. Op. Temp.	Net Each, Lots of	
					1-99	100-999
<b>FULL-WAVE, CENTER TAP POSITIVE</b>						
CTP50	50	1.5	15	100° C	.93	.75
CTP100	100	1.5	15	100° C	.97	.78
CTP200	200	1.5	15	100° C	1.08	.86
CTP300	300	1.5	15	100° C	1.20	.95
CTP400	400	1.5	15	100° C	1.21	.96
CTP500	500	1.5	15	100° C	1.35	1.08
CTP600	600	1.5	15	100° C	1.45	1.15

Mallory No.	PRV	Max. DC Amps @ 25° C*	1 Cyc. Surge (Amps)	Max. Op. Temp.	Net Each, Lots of	
					1-99	100-999
<b>FULL-WAVE BRIDGE</b>						
FW50	50	1.5	15	100° C	1.82	1.40
FW100	100	1.5	15	100° C	1.86	1.43
FW200	200	1.5	15	100° C	2.04	1.57
FW300	300	1.5	15	100° C	2.26	1.74
FW400	400	1.5	15	100° C	2.35	1.81
FW500	500	1.5	15	100° C	2.53	1.95
FW600	600	1.5	15	100° C	2.65	2.04

\*Rating shown for package.

## REPLACEMENT SELENIUM RECTIFIERS SINGLE-PLATE ASSEMBLIES

Mallory Number †	AC Input Volts RMS **		Approximate DC Output*								Approximate Overall Dimensions In Inches L. W. T.	Replacement In Mallory (No. of Assemblies Per Unit)	Net Each
			Full-Wave Center Tap ‡				Full-Wave Bridge ‡						
			Design #	Max. #	Res.-Ind. Load DC Volts	Cap.-Btry. Load DC* Amps.	Res.-Ind. Load DC Volts	Cap.-Btry. Load DC* Amps.	Res.-Ind. Load DC Volts	Cap.-Btry. Load DC* Amps.			
K30L	28	30	10.5	5.7	14.5	4.6	21	5.7	29	4.6	3 x 3 x ¼	12SAC5 (2) 6SAC4 (2) 6SAC6 (2) 12RS5 (2) 12RS6D (4) 12RS6DF (4)	\$1.50
K26N	24	26	9	11.0	12.5	8.8	18	11.0	25	8.8	4 x 4 x ¼	6SAC10 (2)	1.87
K26W	24	26	9	34.0	12.5	28.0	18	34.0	25	28.0	6 x 7 x ¼	6RS25 (2)	3.56
K27WT	24	26	8	34.0	12.5	28.0	18	34.0	25	28.0	6½ x 7½ x ½	6RS25-1 (2)	8.56
R26T	24	26	9	10.0	12.5	8.0	18	10.0	12.5	8.0	5 x 6 x ¼	6SAC20 (2) 12RS14D (2) 12SAC10D (2)	3.23

\*DC current ratings based on conduction cooling—plates not more than ½" from cabinet wall or other large area member.

\*\*Reduces by 55% for ½-wave capacitive and battery load.

†In center-tap, full-wave circuits, AC voltages shown are for full transformer secondary.

†One insulated and eyeleted cell per plate assembly; R26T has two.

‡Two plate assemblies per circuit for full-wave center tap, four per circuit for full wave bridge except R26T has one per circuit center tap, one and two for bridge.

## MAGNESIUM-COPPER SULFIDE RECTIFIERS

Mallory magnesium-copper sulfide rectifiers are assembled in stacks under extreme pressure for maximum resistance to physical and thermal shock. They contain no temperature sensitive films and may be operated continuously over a very wide temperature range from -90° to +265° F. Unlike other rectifiers, MgCuS types will "self-heal" after exposure to overvoltage surges. MgCuS rectifiers are ideal for electroplating and other heavy-duty industrial applica-

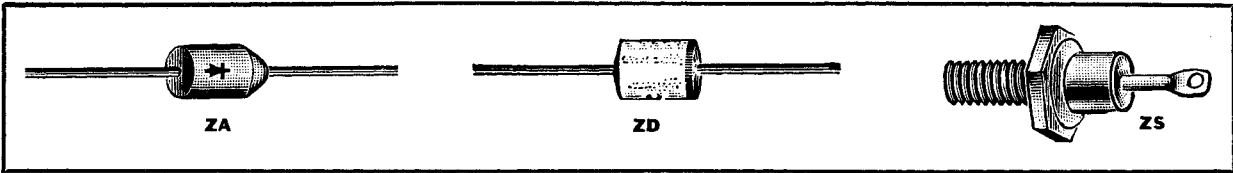
tions where reliability is mandatory and operating conditions are severe. They are also widely used where momentary or inadvertent short circuits are to be expected such as in battery chargers, model railroads, and model automobile courses. Types shown are available from stock. Hundreds of other ratings and mounting arrangements are available on special order. MgCuS stacks should always be mounted so that the individual plates are vertical.

Mallory No.	Max. VAC		VDC			Max. DC Amps. †		Size, Inches			Net Each
	No Load	Full Load	Ind.	Resis.	Cap.	Cont.	Int.	L	W	H	
	1B4R	3.6	3.2	1.5	1.7	2.5	1.5	5.0	1	¾	
1B8R	7.2	6.4	3.1	3.4	5.1	1.5	5.0	1½	¾	7/8	5.49
1B12R	10.8	9.7	4.8	5.2	7.8	1.3	5.0	1¾	¾	7/8	6.54
1B12L5	10.8	9.7	4.5	5.0	7.6	4.5	15.0	2½	2½	2½	10.08
1B12CLJ	10.8	9.8	4.6	5.1	7.7	3.2	24.0	2¾	1¼	1½	16.17
1B12C3	10.8	9.7	4.5	5.0	7.6	4.5	24.0	2¾	1¾	2½	14.76
1B12C5	10.8	9.7	4.5	5.0	7.6	5.3	24.0	3.0	2½	2½	11.79
F16C3	14.4	13.0	6.1	6.8	10.2	3.9	24.0	3.0	1¾	2½	16.17
1F16CB7M	14.4	12.8	5.9	6.6	9.9	6.0	24.0	3.0	2½	3¾	19.71
1S16CB7	14.4	12.8	5.9	6.6	9.9	6.0	24.0	3¾	2½	3.0	18.84
1S16B7	14.4	12.8	5.8	6.5	9.8	8.3	24.0	5½	2½	3.0	19.17
1S16B9	14.4	12.7	5.7	6.4	9.7	11.6	24.0	5½	3½	4¼	24.84
F20C7	18.0	16.2	7.6	8.4	12.6	4.8	24.0	4¾	2½	3¾	19.38
1S24C7J	21.6	19.4	9.0	10.1	15.1	4.0	24.0	4¾	2½	3¾	23.25
1S24B9	21.6	19.1	8.5	9.6	14.4	11.0	24.0	7½	3½	4¼	32.97
1S28C7J	25.2	22.7	10.7	11.7	17.8	4.3	24.0	6.0	2½	3.0	26.25

Mounting Prefix: IB = Insulated Bolt; F = Grounded Foot; IF = Insulated Foot; IS = Insulated Stud. P suffix designates reverse polarity stacking. Center terminal is DC positive. J suffix designates universal construction with loose mounting feet for foot, bolt or stud mounting replacement.

†To determine AC Amps: Multiply the DC amps by the following factors: Inductive load by 1.1; resistive load by 1.2; capacitive load by 1.4.

# MALLORY ZENER DIODES



Diffused silicon junction zener diodes in two power ratings (1 and 10 watts) and three standard case styles. Offer low thermal resistance and excellent forward characteristics. Exceed military requirements. Rugged cell construction for exceptional surge handling capability. **Tolerance:** No suffix (1N3016),  $\pm 20\%$ ; suffix A (1N3016A),  $\pm 10\%$ ; suffix B (1N3016B),  $\pm 5\%$ .

### • TYPE ZA

High temperature regulator meets commercial, industrial, computer and home instrument requirements. Transfer molded for moisture-resistant, high strength package. Non-conductive, eliminating need for insulating sleeves. Low forward voltage drop and high temperature operation. **Power Dissipation:** 1 watt. **Size:** .220" dia. x .375" l., max.; leads 1/4" lg., minimum.

### TYPE ZD

EIA standard DO-13, flangeless hermetically-sealed package. **Power Dissipation:** 1 watt. **Temperature Range:**  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$ , operating and storage. **Size:** .235" dia. x .357" l., max.; leads 1.4" lg., minimum.

### TYPE ZS

Series 1N2970 thru 1N3015 EIA standard DO-4, all-welded package for heavy-duty stud mounting. Very low thermal resistance characteristics. **Power Dissipation:** 10 watts. **Temperature Range:**  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$ . **Polarity:** Cathode to stud as listed. Anode to stud available on special order, add suffix R (example: 1N2970R, 1N2970RA, etc.); same price. **Size:** 1/4" hex x 3/8" h. from base; #10-32 NF threaded stud 1/4" lg. HDO-4 hardware kit supplied.

Nom. Zener (Vz) Volts	Type ZA Cold Case			Type ZD DO-13 Case			Type ZS DO-4 Case		
	Mall. No.	IzT Ma	Net Ea.*	Mall. No.	IzT Ma	Net Ea.*	Mall. No.	IzT Ma	Net Ea.*
6.8	ZA6.8	37	\$0.99	1N3016	37	\$1.95	1N2970	370	\$3.71
	ZA6.8A	37	1.12	1N3016A	37	2.25	1N2970A	370	4.58
	ZA6.8B	37	1.60	1N3016B	37	3.23	1N2970B	370	5.93
7.5	ZA7.5	34	.99	1N3017	34	1.95	1N2971	335	3.71
	ZA7.5A	34	1.12	1N3017A	34	2.25	1N2971A	335	4.58
	ZA7.5B	34	1.60	1N3017B	34	3.23	1N2971B	335	5.93
8.2	ZA8.2	31	.99	1N3018	31	1.95	1N2972	305	3.71
	ZA8.2A	31	1.12	1N3018A	31	2.25	1N2972A	305	4.58
	ZA8.2B	31	1.60	1N3018B	31	3.23	1N2972B	305	5.93
9.1	ZA9.1	28	.99	1N3019	28	1.95	1N2973	275	3.71
	ZA9.1A	28	1.12	1N3019A	28	2.25	1N2973A	275	4.58
	ZA9.1B	28	1.60	1N3019B	28	3.23	1N2973B	275	5.93
10	ZA10	25	.99	1N3020	25	1.95	1N2974	250	3.71
	ZA10A	25	1.12	1N3020A	25	2.25	1N2974A	250	4.58
	ZA10B	25	1.60	1N3020B	25	3.23	1N2974B	250	5.93
11	ZA11	23	.99	1N3021	23	1.95	1N2975	230	3.71
	ZA11A	23	1.12	1N3021A	23	2.25	1N2975A	230	4.58
	ZA11B	23	1.60	1N3021B	23	3.23	1N2975B	230	5.93
12	ZA12	21	.99	1N3022	21	1.95	1N2976	210	3.71
	ZA12A	21	1.12	1N3022A	21	2.25	1N2976A	210	4.58
	ZA12B	21	1.60	1N3022B	21	3.23	1N2976B	210	5.93
13	ZA13	19	.99	1N3023	19	1.95	1N2977	190	3.71
	ZA13A	19	1.12	1N3023A	19	2.25	1N2977A	190	4.58
	ZA13B	19	1.60	1N3023B	19	3.23	1N2977B	190	5.93
15	ZA15	17	.99	1N3024	17	1.95	1N2979	170	3.71
	ZA15A	17	1.12	1N3024A	17	2.25	1N2979A	170	4.58
	ZA15B	17	1.60	1N3024B	17	3.23	1N2979B	170	5.93
16	ZA16	15.5	.99	1N3025	15.5	1.95	1N2980	155	3.71
	ZA16A	15.5	1.12	1N3025A	15.5	2.25	1N2980A	155	4.58
	ZA16B	15.5	1.60	1N3025B	15.5	3.23	1N2980B	155	5.93
18	ZA18	14	.99	1N3026	14	1.95	1N2982	140	3.71
	ZA18A	14	1.12	1N3026A	14	2.25	1N2982A	140	4.58
	ZA18B	14	1.60	1N3026B	14	3.23	1N2982B	140	5.93
20	ZA20	12.5	.99	1N3027	12.5	1.95	1N2984	125	3.71
	ZA20A	12.5	1.12	1N3027A	12.5	2.25	1N2984A	125	4.58
	ZA20B	12.5	1.60	1N3027B	12.5	3.23	1N2984B	125	5.93
22	ZA22	11.5	.99	1N3028	11.5	1.95	1N2985	115	3.71
	ZA22A	11.5	1.12	1N3028A	11.5	2.25	1N2985A	115	4.58
	ZA22B	11.5	1.60	1N3028B	11.5	3.23	1N2985B	115	5.93
24	ZA24	10.5	.99	1N3029	10.5	1.95	1N2986	105	3.71
	ZA24A	10.5	1.12	1N3029A	10.5	2.25	1N2986A	105	4.58
	ZA24B	10.5	1.60	1N3029B	10.5	3.23	1N2986B	105	5.93
27	ZA27	9.5	.99	1N3030	9.5	1.95	1N2988	95	3.71
	ZA27A	9.5	1.12	1N3030A	9.5	2.25	1N2988A	95	4.58
	ZA27B	9.5	1.60	1N3030B	9.5	3.23	1N2988B	95	5.93
30	ZA30	8.5	1.10	1N3031	8.5	2.21	1N2989	85	3.71
	ZA30A	8.5	1.52	1N3031A	8.5	3.11	1N2989A	85	4.58
	ZA30B	8.5	2.03	1N3031B	8.5	4.09	1N2989B	85	5.93
33	ZA33	7.5	1.10	1N3032	7.5	2.21	1N2990	75	3.71
	ZA33A	7.5	1.52	1N3032A	7.5	3.11	1N2990A	75	4.58
	ZA33B	7.5	2.03	1N3032B	7.5	4.09	1N2990B	75	5.93
36	ZA36	7.0	1.10	1N3033	7.0	2.21	1N2991	70	3.71
	ZA36A	7.0	1.52	1N3033A	7.0	3.11	1N2991A	70	4.58
	ZA36B	7.0	2.03	1N3033B	7.0	4.09	1N2991B	70	5.93
39	ZA39	6.5	1.10	1N3034	6.5	2.21	1N2992	65	3.71
	ZA39A	6.5	1.52	1N3034A	6.5	3.11	1N2992A	65	4.58
	ZA39B	6.5	2.03	1N3034B	6.5	4.09	1N2992B	65	5.93

Nom. Zener (Vz) Volts	Type ZA Cold Case			Type ZD DO-13 Case			Type ZS DO-4 Case		
	Mall. No.	IzT Ma	Net Ea.*	Mall. No.	IzT Ma	Net Ea.*	Mall. No.	IzT Ma	Net Ea.*
43	ZA43	6.0	\$1.10	1N3035	6.0	\$2.21	1N2993	60	\$3.71
	ZA43A	6.0	1.52	1N3035A	6.0	3.11	1N2993A	60	4.58
	ZA43B	6.0	2.03	1N3035B	6.0	4.09	1N2993B	60	5.93
47	ZA47	5.5	1.10	1N3036	5.5	2.21	1N2995	55	3.71
	ZA47A	5.5	1.52	1N3036A	5.5	3.11	1N2995A	55	4.58
	ZA47B	5.5	2.03	1N3036B	5.5	4.09	1N2995B	55	5.93
51	ZA51	5.0	1.10	1N3037	5.0	2.21	1N2997	50	3.71
	ZA51A	5.0	1.52	1N3037A	5.0	3.11	1N2997A	50	4.58
	ZA51B	5.0	2.03	1N3037B	5.0	4.09	1N2997B	50	5.93
56	ZA56	4.5	1.10	1N3038	4.5	2.21	1N2999	45	3.71
	ZA56A	4.5	1.52	1N3038A	4.5	3.11	1N2999A	45	4.58
	ZA56B	4.5	2.03	1N3038B	4.5	4.09	1N2999B	45	5.93
62	ZA62	4.0	1.10	1N3039	4.0	2.21	1N3000	40	3.71
	ZA62A	4.0	1.52	1N3039A	4.0	3.11	1N3000A	40	4.58
	ZA62B	4.0	2.03	1N3039B	4.0	4.09	1N3000B	40	5.93
68	ZA68	3.7	1.10	1N3045	3.7	2.21	1N3001	37	3.71
	ZA68A	3.7	1.52	1N3045A	3.7	3.11	1N3001A	37	4.58
	ZA68B	3.7	2.03	1N3045B	3.7	4.09	1N3001B	37	5.93
75	ZA75	3.3	1.10	1N3041	3.3	2.21	1N3002	33	3.71
	ZA75A	3.3	1.52	1N3041A	3.3	3.11	1N3002A	33	4.58
	ZA75B	3.3	2.03	1N3041B	3.3	4.09	1N3002B	33	5.93
82	ZA82	3.0	1.10	1N3042	3.0	2.21	1N3003	30	3.71
	ZA82A	3.0	1.52	1N3042A	3.0	3.11	1N3003A	30	4.58
	ZA82B	3.0	2.03	1N3042B	3.0	4.09	1N3003B	30	5.93
91	ZA91	2.8	1.10	1N3043	2.8	2.21	1N3004	28	3.71
	ZA91A	2.8	1.52	1N3043A	2.8	3.11	1N3004A	28	4.58
	ZA91B	2.8	2.03	1N3043B	2.8	4.09	1N3004B	28	5.93
100	ZA100	2.5	1.10	1N3044	2.5	2.21	1N3005	25	3.71
	ZA100A	2.5	1.52	1N3044A	2.5	3.11	1N3005A	25	4.58
	ZA100B	2.5	2.03	1N3044B	2.5	4.09	1N3005B	25	5.93
110	ZA110	2.3	1.22	1N3045	2.3	2.40	1N3007	23	4.13
	ZA110A	2.3	1.79	1N3045A	2.3	3.56	1N3007A	23	4.58
	ZA110B	2.3	2.74	1N3045B	2.3	5.36	1N3007B	23	5.93
120	ZA120	2.0	1.22	1N3046	2.0	2.40	1N3008	20	4.13
	ZA120A	2.0	1.79	1N3046A	2.0	3.56	1N3008A	20	4.58
	ZA120B	2.0	2.74	1N3046B	2.0	5.36	1N3008B	20	5.93
130	ZA130	1.9	1.22	1N3047	1.9	2.40	1N3009	19	4.13
	ZA130A	1.9	1.79	1N3047A	1.9	3.56	1N3009A	19	4.58
	ZA130B	1.9	2.74	1N3047B	1.9	5.36	1N3009B	19	5.93
150	ZA150	1.7	1.22	1N3048	1.7	2.40	1N3011	17	4.13
	ZA150A	1.7	1.79	1N3048A	1.7	3.56	1N3011A	17	4.58
	ZA150B	1.7	2.74	1N3048B	1.7	5.36	1N3011B	17	5.93
160	ZA160	1.6	1.22	1N3049	1.6	2.40	1N3012	16	4.13
	ZA160A	1.6	1.79	1N3049A	1.6	3.56	1N3012A	16	4.58
	ZA160B	1.6	2.74	1N3049B	1.6	5.36	1N3012B	16	5.93
180	ZA180	1.4	1.22	1N3050	1.4	2.40	1N3014	14	4.13
	ZA180A	1.4	1.79	1N3050A	1.4	3.56	1N3014A	14	4.58
	ZA180B	1.4	2.74	1N3050B	1.4	5.36	1N3014B	14	5.93
200	ZA200	1.2	1.22	1N3051	1.2	2.40	1N3015	12	4.13
	ZA200A	1.2	1.79	1N3051A	1.2	3.56	1N3015A	12	4.58
	ZA200B	1.2	2.74	1N3051B	1.2	5.36	1N3015B	12	5.93

# OHMITE

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## DIODES, GERMANIUM AND SILICON LOW POWER

A wide choice of popular characteristics in low power germanium and silicon diodes is available immediately from Ohmite stock. Both the germanium and silicon types are supplied in the subminiature, hermetically sealed glass envelope (see diagram). The silicon envelope is light-shielded.

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**GERMANIUM DIODES**—Ohmite supplies the gold-bonded variety. Power rating is 80 mw at 20°C except where otherwise indicated. Operating temperature range is -65°C to +90°C.

**SILICON DIODES**—Employ either the alloy or diffusion method of junction formation. Power rating is 400 milliwatts at 20°C except where otherwise indicated. Operating temperature range is -65°C to +150°C.

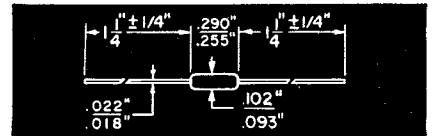
Hundreds of other diodes are available on ten day delivery (request Ohmite bulletin 802). Request Catalog 801 for germanium diodes and Catalog 804 for silicon diodes.



SILICON DIODE



GERMANIUM DIODE



### STOCK GERMANIUM DIODES

Stock No.	PIV	Max. Rev. $\mu$ a at 25°C	Min. Fwd. ma at 1V	Net 1/99
1N34	75	500 @ 50V	5	\$.29
1N34A	75	500 @ 50V	5	.29
1N35⑦	75	500 @ 50V	5	1.42
1N38	125	500 @ 100V	5	.68
1N38A	125	500 @ 100V	5	.68
1N38B	125	500 @ 100V	5	.68
1N39	220	600 @ 200V	5	1.53
1N39A	250	65 @ 100V	5	1.65
1N39B	200	600 @ 200V	5	1.53
1N43	75	800 @ 50V	5	.41
1N44	145	1000 @ 50V	5	.56
1N47	145	500 @ 100V	5	.50
1N48	85	800 @ 50V	5	.30
1N51	75	1500 @ 50V	5	.30
1N54	75	100 @ 50V	5	.50
1N54A	75	100 @ 50V	5	.50
1N55	170	500 @ 150V	5	.95
1N55A	170	500 @ 150V	5	.95
1N56	50	300 @ 30V	15	.38
1N56A	50	300 @ 30V	15	.38
1N58	125	600 @ 100V	5	.69
1N58A	125	600 @ 100V	5	.69
1N60①	25	20 @ 10V	5	.39
1N60A①	25	20 @ 10V	5	.39
1N63	125	50 @ 50V	5	.81
1N64①	25	25 @ 10V	50	.27
1N64A①	25	25 @ 10V	50	.27
1N65	110	200 @ 50V	5	.43
1N66	75	800 @ 50V	5	.36
1N67	100	50 @ 50V	5	.55
1N67A	100	50 @ 50V	5	.55
1N68A	130	625 @ 100V	5	.63
1N69	75	500 @ 50V	5	.34
1N69A	75	500 @ 50V	5	.34
1N70	125	300 @ 50V	5	.43
1N70A	125	300 @ 50V	5	.43
1N87	25	30 @ 1.5V	1*	.39
1N87A	25	30 @ 1.5V	1*	.39
1N90	75	500 @ 50V	5	.32
1N95	75	500 @ 50V	5	.40
1N96	75	500 @ 50V	40	.53
1N96A	75	500 @ 50V	40	.53
1N97	100	100 @ 50V	20	.55
1N98	100	100 @ 50V	40	.43
1N98A	100	100 @ 50V	40	.43
1N99	100	50 @ 50V	20	.45
1N99A	100	50 @ 50V	20	.45
1N100	100	50 @ 50V	40	.46
1N100A	100	50 @ 50V	40	.46
1N116	75	100 @ 50V	5	.48
1N118	75	100 @ 50V	40	.55

### STOCK SILICON DIODES

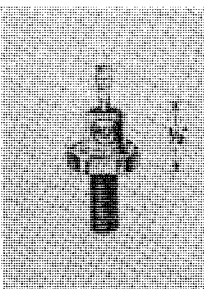
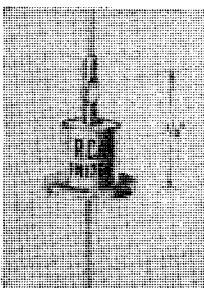
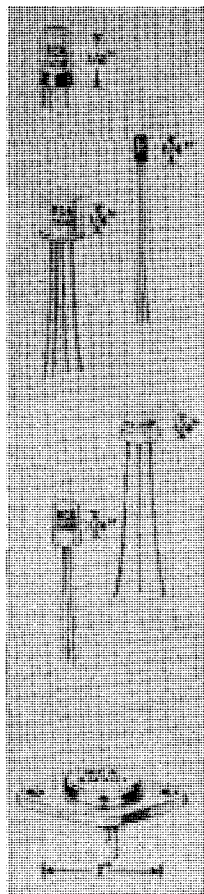
Stock No.	PIV	Max. Rev. $\mu$ a at 25°C	Min. Fwd. ma at 1V	Net 1/99
1N126	75	300 @ 50V	5	\$.39
1N126A	75	300 @ 50V	5	.39
JAN-1N126A	75	750 @ 50V	5	.43
1N127A	125	200 @ 50V	5	.80
JAN-1N127A	125	200 @ 50V	5	.88
1N128	50	10 @ 10V	3	.43
JAN-1N128	50	10 @ 10V	3	.47
1N135	75	850 @ 50V	5	.29
1N144	50	200 @ 20V	100	.35
1N191③	90	25 @ 10V④	5	.46
1N192③	90	250 @ 50V⑤	5	.51
1N198	100	250 @ 50V⑥	5	.40
1N270	100	100 @ 50V	200⑧	.45
JAN-1N270	100	100 @ 50V	200⑧	.50
1N273	40	20 @ 20V	100	.46
1N276	100	100 @ 50V	40	.39
JAN-1N276⑤	100	100 @ 50V	40	.43
1N277	125	250 @ 50V⑥	100	.53
JAN-1N277	125	250 @ 50V⑥	100	.58
1N279	50	200 @ 20V	100	.43
1N281	75	500 @ 50V	100	.46
JAN-1N281	75	500 @ 50V	100	.51
1N294	75	10 @ 10V	5	.31
1N295①	25	200 @ 10V	5	.32
1N295A①	25	200 @ 10V	5	.32
1N298	90	200 @ 40V	40	.43
1N305	75	20 @ 50V	100†	2.34
1N497	30	20 @ 20V	120†	.41
1N498	50	25 @ 40V	120†	.45
1N616	40	150 @ 30V	10	.25
1N695⑤	35	20 @ 10V⑥	100	1.35
1N774	75	150 @ 50V	100	.58
OMC26	50	150 @ 50V	200③	.45
OMC28	50	25 @ 50V	200④	.45
OMC37	150	200 @ 10V	200⑧	.58
OMC550	30	100 @ 10V	500⑧	.25
OMC635	75	4 @ 10V	100	.54
OMC646	150	4 @ 10V	200⑧	.82
OMC678	75	75 @ 50V	50	.41
OMC688	100	75 @ 50V	100	.63
OMC769④	50	25 @ 50V	200⑧	2.03
OMC1133④	150	25 @ 50V	100	1.02
OMC1137②	75	150 @ 50V	200⑧	.54
1N456	35	.025 @ 25V	40	\$.37
1N456A	35	.025 @ 25V	100	.37
1N457	75	.025 @ 60V	20	.45
1N457A	70	.025 @ 60V	100	.45
1N458	150	.025 @ 125V	7	.51
1N458A	150	.025 @ 125V	100	.51
1N459	220	.025 @ 175V	3	.66
1N459A	220	.025 @ 175V	100	.66
1N461	35	.5 @ 25V	15	.35
1N462	80	.5 @ 60V	5	.38
1N462A	80	.5 @ 60V	100	.38
1N463	220	.5 @ 175V	1	.46
1N464	150	.5 @ 125V	3	.72
1N482‡	45	.25 @ 30V	100	.59
1N482A‡	45	.025 @ 30V	100	.65
1N482B‡	45	.025 @ 30V	100	.65
1N483‡	90	.25 @ 60V	100	.67
1N483A	90	.025 @ 60V	100	.68
1N483B	90	.025 @ 60V	100	.69
1N484‡	160	.25 @ 125V	100	.71
1N484A	160	.025 @ 125V	100	.79
1N484B	150	.025 @ 125V	100	.79
1N485‡	230	.25 @ 175V	100	.79
1N485A	230	.025 @ 175V	100	1.06
1N485B	230	.025 @ 175V	100	1.06
1N486‡	280	.25 @ 225V	100	1.25
1N486A	280	.05 @ 225V	100	1.54
1N486B	280	.05 @ 225V	100	1.71
1N487‡	375	.25 @ 300V	100	2.50
1N487A	375	.10 @ 300V	100	2.75
1N488‡	460	.25 @ 380V	100	2.50
1N488A	460	.10 @ 380V	100	2.95
1N645	260	.2 @ 225V	400	1.50
1N645A#	260	.2 @ 225V	400	1.65
1N646#	375	.2 @ 300V	400	1.65
1N647#	500	.2 @ 400V	400	1.80
1N648#	600	.2 @ 500V	400	2.55
1N649#	720	.2 @ 600V	400	3.30

①Video Detector Test ②0.2  $\mu$ sec. ③0.5  $\mu$ sec. ④0.4  $\mu$ sec. ⑤0.3  $\mu$ sec. ⑥75°C ⑦Consists of two matched diodes shipped as a pair with the forward current at 1 volt of the lower resistance diode within 10% of the current of the higher resistance diode. ⑧Duty cycle must be adjusted in testing at these high forward currents so that average power dissipated does not exceed 80 mw. ⑨55°C ⑩0.6  $\mu$ sec. \*At 0.25 volts. †At 0.8 volts. ‡At 1.1 volts. #600 mw.



# SEMICONDUCTOR PRODUCTS

AUG., 1964



RCA Equipment Manufacturers Price			RCA Equipment Manufacturers Price			RCA Equipment Manufacturers Price		
Type	1-99	100-999	Type	1-99	100-999	Type	1-99	100-999
<b>TRANSISTORS, THYRISTORS, GERMANIUM DIODES &amp; TUNNEL DIODES</b>								
1N2326	.50	.33	2N442	2.31	1.54	2N1184A	2.81	1.87
1N3128	6.35	4.24	2N443	2.39	1.60	USA2N1184A	4.04	2.70
1N3129	7.59	5.06	2N578	.99	.66	2N1184B	4.13	2.75
1N3130	8.17	5.45	2N579	1.57	1.05	USA2N1184B	5.36	3.58
1N3847	4.95	3.30	2N580	2.06	1.38	2N1213	4.54	3.03
1N3848	4.95	3.30	2N581	.50	.33	2N1214	4.54	3.03
1N3849	4.95	3.30	2N582	.91	.61	2N1215	4.54	3.03
1N3850	4.95	3.30	2N583	.83	.55	2N1216	2.97	1.98
1N3851	4.95	3.30	2N584	3.22	2.15	2N1224	1.24	.83
1N3852	6.35	4.24	2N585	.99	.66	USA2N1224	1.40	.94
1N3853	5.94	3.96	2N586	1.73	1.16	2N1225	1.40	.94
1N3854	7.59	5.06	2N591	.53	.35	USA2N1225	1.57	1.05
1N3855	8.17	5.45	(For New Equip. Design, Use Type 2N1637)			2N1226	1.49	.99
1N3856	8.17	5.45	2N641	1.37	.91	2N1300	.91	.61
1N3857	8.58	5.72	(For New Equip. Design, Use Type 2N1638)			2N1301	1.07	.72
1N3858	6.52	4.35	2N642	1.40	.94	2N1302	.50	.33
1N3859	8.17	5.45	(For New Equip. Design, Use Type 2N1639)			USN2N1302	.51	.34
1N3860	10.73	7.15	2N643*	1.40	.94	2N1303	.50	.33
1N3861	6.19	4.13	(For New Equip. Use 2N960)			USN2N1303	.51	.34
1N3862	7.67	5.12	2N644*	1.65	1.10	2N1304	.61	.41
1N3863	9.41	6.27	(For New Equip. Use 2N960)			USN2N1304	.64	.43
2N104	1.65	1.10	2N645*	2.64	1.76	2N1305	.63	.42
2N109	.59	.40	(For New Equip. Use 2N960)			USN2N1305	.64	.43
2N139	1.16	.77	2N646*	1.82	1.21	2N1306	.79	.53
2N140	1.24	.83	(For New Equip. Use 2N960)			USN2N1306	.86	.57
2N173	3.75	2.50	2N647	1.07	.72	2N1307	.79	.53
2N174	4.01	2.67	2N649	.86	.57	USN2N1307	.86	.57
JAN2N174	4.77	3.18	2N697	2.06	1.38	2N1308	1.11	.74
2N175	1.63	1.09	2N699	2.64	1.76	USN2N1308	1.19	.79
2N176	1.88	1.25	2N705	1.98	1.32	2N1309	1.07	.72
2N215	1.73	1.16	2N706	.99	.66	USN2N1309	1.19	.79
2N217	.56	.37	USA2N706	2.23	1.49	2N1319	1.65	1.10
2N218	1.16	.77	2N706A	1.19	.79	2N1358	4.59	3.06
2N219	1.24	.83	2N708	1.32	.88	USA2N1358	6.25	4.17
2N220	1.52	1.01	2N709	2.48	1.65	2N1384	2.06	1.38
JAN2N220	2.06	1.38	2N710	1.73	1.16	2N1395	1.49	.99
2N270	.83	.55	2N711	1.16	.77	2N1396	1.65	1.10
2N274	1.24	.83	2N718A	2.15	1.43	2N1397	2.15	1.43
USA2N274	2.48	1.65	2N720A	3.30	2.20	2N1412	5.76	3.84
2N277	2.72	1.82	2N794*	1.49	.99	USN2N1412	6.52	4.32
2N278	3.10	2.07	(For New Equip. Use 2N1300)			2N1450*	2.06	1.38
2N307	1.49	.99	2N796*	1.98	1.32	2N1479	2.64	1.76
2N351	2.03	1.35	(For New Equip. Use 2N730)			USA2N1479	3.47	2.31
2N357	6.53	4.36	2N796	2.89	1.93	2N1480	2.97	1.98
2N370	.81	.54	2N796	2.89	1.93	USA2N1480	3.80	2.53
2N371	.79	.53	2N828	1.32	.88	2N1481	3.30	2.20
2N372	.79	.53	2N834	3.05	2.04	USA2N1481	4.13	2.75
2N373	1.24	.83	2N914	1.57	1.05	USA2N1482	4.95	3.30
(For New Equipment Design, Use Type 2N1638)			2N934	6.60	4.40	2N1483	3.63	2.42
2N374	1.32	.88	2N955	4.31	2.87	USA2N1483	5.28	3.52
(For New Equipment Design, Use Type 2N1639)			2N955A	4.82	3.21	2N1484	4.62	3.08
2N376	2.10	1.40	2N960	.96	.64	USA2N1484	6.27	4.18
2N384	1.65	1.10	2N961	.91	.61	2N1485	5.45	3.63
JAN2N348	3.30	2.20	2N962	.86	.57	USA2N1485	7.10	4.73
2N388	.59	.40	2N963	.83	.55	2N1486	8.42	5.61
JAN2N388	.61	.41	2N964	.99	.66	USA2N1486	10.07	6.71
2N388A	1.09	.73	2N965	.94	.63	2N1487	5.94	3.96
2N395	.66	.44	2N966	.89	.59	USA2N1487	8.00	5.34
2N396	.61	.41	2N967	.87	.58	2N1488	6.60	4.40
3N396A	.61	.41	2N1010	2.89	1.93	USA2N1488	8.66	5.78
2N397	1.34	.89	2N1023	2.72	1.82	2N1489	9.08	6.05
2N398	1.12	.75	2N1066	1.98	1.32	USA2N1489	11.14	7.43
USN2N398	1.16	.77	2N1067	20.95	13.95	2N1490	10.73	7.15
2N398A	1.12	.75	2N1068	21.95	14.65	USA2N1490	12.79	8.53
2N398B	1.16	.77	2N1069	49.90	33.30	2N1491	4.13	2.75
2N404	.41	.28	2N1070	64.95	43.30	2N1492	6.60	4.40
JAN2N404	.50	.33	2N1090	1.11	.74	2N1493	9.90	6.60
2N404A	.58	.39	2N1091	1.40	.94	2N1511	8.25	5.50
3907/2N404	1.07	.72	2N1092	10.75	7.15	USA2N1511	10.31	6.88
2N405	.36	.24	2N1099	4.31	2.87	2N1512	9.90	6.60
2N406	.33	.22	2N1100	5.02	3.34	USA2N1512	11.96	7.98
2N407	.41	.28	2N1169	1.98	1.32	2N1513	12.40	8.25
2N408	.38	.25	2N1170	3.71	2.48	USA2N1513	14.44	9.63
2N409	.43	.29	2N1177	.83	.55	2N1514	16.50	11.00
2N410	.40	.26	2N1178	.81	.54	USA2N1514	18.56	12.38
2N411	.46	.31	2N1179	.81	.54	2N1524	.40	.26
2N412	.43	.29	2N1180	.68	.45	2N1525	.43	.29
2N414	.41	.28	2N1183	1.82	1.21	2N1526	.43	.29
2N441	2.23	1.49	USA2N1183	2.64	1.76	2N1527	.46	.31
			2N1183A	2.31	1.54	2N1605	1.24	.83
			USA2N1183A	3.30	2.20	2N1605A	1.50	1.00
			2N1183B	2.89	1.93	2N1613	2.15	1.43
			USA2N1183B	3.88	2.59	2N1631	.53	.35
			2N1184	2.48	1.65	2N1632	.50	.33
			USA2N1184	3.71	2.48	(For Types 2N1633, 2N1634, New Equip. Design, Use Type 2N1638)		

Prices shown do not include any state or local taxes. All prices are subject to change or withdrawal without notice.

\*See price schedule for new equipment types.



# SEMICONDUCTOR PRODUCTS

Type	RCA Equipment Manufacturers Price	
	1-99	100-999
2N1635	1.32	.88
2N1636	1.32	.88
(For Types 2N1635, 2N1636, New Equip. Design, Use Type 2N1639)		
2N1637	.59	.40
2N1638	.53	.35
2N1639	.56	.37
2N1683	1.65	1.10
2N1700	2.23	1.49
2N1701	2.97	1.98
2N1702	5.53	3.69
2N1703	7.43	4.95
2N1708	3.30	2.20
2N1711	2.81	1.87
2N1768	8.25	5.50
2N1769	10.73	7.15
2N1853	1.32	.88
USN2N1853	1.32	.88
2N1854	1.65	1.10
USN2N1854	1.65	1.10
2N1893	3.30	2.20
2N1905	4.13	2.75
2N1906	6.60	4.40
2N2015	11.55	7.70
2N2016	14.85	9.90
2N2102	3.30	2.20
2N2147	2.06	1.38
2N2148	1.24	.83
2N2205	1.24	.83
2N2206	3.71	2.48
2N2208	1.98	1.32
2N2210	10.13	6.75
2N2270	1.82	1.21
2N2273	2.31	1.54
USA2N2273M	2.31	1.54
2N2304	4.29	2.86
2N2305	6.44	4.29
2N2338	8.66	5.78
2N2339	4.95	3.30
2N2405	4.13	2.75
2N2475	5.94	3.96
2N2476	2.89	1.93
2N2477	3.30	2.20
2N2482	6.19	4.13
2N2594	2.48	1.65
2N2613	.54	.36
2N2614	.50	.33
2N2631	33.00	22.00
2N2708	7.84	5.23
2N2857	24.75	16.50
2N2869/2N301	1.52	1.01
2N2870/2N301A	3.71	2.48
2N2873	2.89	1.93
2N2876	49.50	33.00
2N2895	3.30	2.20
2N2896	4.95	3.30
2N2897	2.06	1.38
2N2898	5.36	3.58
2N2899	7.43	4.95
2N2900	2.64	1.76
2N2938	2.15	1.43
2N2953	.50	.33
2N3053/40053	1.24	.83
2N3054	2.48	1.65
2N3055	4.95	3.30
2N3118	4.95	3.30
2N3119	5.36	3.58
40022	.83	.55
40050	1.12	.75
40051	1.29	.86
40053*	1.24	.83
40054	14.00	9.35
40055	16.00	10.65
40056	18.00	12.00
40057	20.00	13.20
40058	9.90	6.60
40059	8.66	5.78
40060	9.90	6.60
40061	8.66	5.78
40062	9.90	6.60
40063	8.66	5.78
40064	9.90	6.60
40065	8.66	5.78
40066	35.00	23.30
40067	50.00	33.35
40068	57.00	38.00
40069	70.00	46.65
40070	120.00	79.85
40076	100.00	66.65
40077	24.75	16.50
40078	7.00	4.70
40079	480.00	320.00
40080	1.65	1.10
40081	3.30	2.20
40082	16.50	11.00
40084	1.40	.94

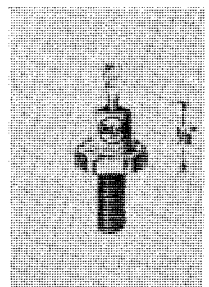
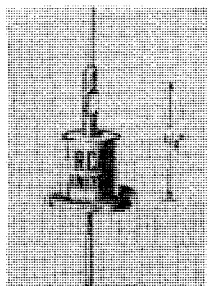
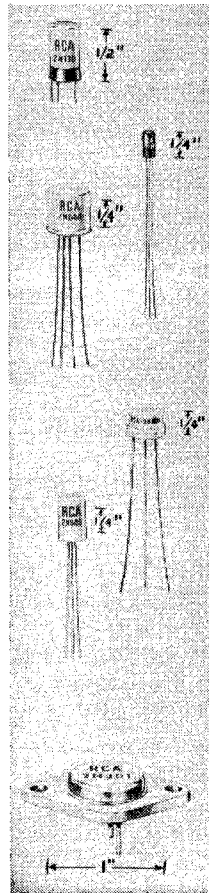
Type	RCA Equipment Manufacturers Price	
<b>MEMORY PLANES</b>		
N7097-1	160.00	
N7165-1	65.00	
N7166-1	75.00	
N7190-1	175.00	
N7412-1	225.00	

Type	1-99	100-999
<b>SILICON RECTIFIERS</b>		
1N248C;RC	1.82	1.21
USA1N249B	3.30	2.20
1N294C;RC	2.31	1.54
USA1N250B	4.54	3.03
1N250C;RC	3.30	2.20
1N440B	.73	.48
1N441B	.76	.51
1N442B	.87	.58
1N443B	1.09	.73
1N444B	1.24	.83
1N445B	1.60	1.07
1N536	.45	.30
1N537	.50	.33
1N538	.53	.35
JAN1N538	.91	.61
1N539	.59	.40
1N540	.68	.45
JAN1N540	1.22	.81
1N547	.96	.64
JAN1N547	1.45	.97
1N1095	.86	.58
USA1N1183	3.30	2.20
1N1183A;RA	2.56	1.71
USA1N1184	3.75	2.50
1N1184A;RA	3.22	2.15
USA1N1185	5.10	3.40
USA1N1186	6.45	4.30
1N1186A;RA	4.70	3.14
USA1N1187	9.75	6.50
1N1187;A;R;RA	7.01	4.68
USA1N1188	11.63	7.75
1N1188;A;R;RA	8.66	5.78
USA1N1189	13.12	8.75
1N1189;A;R;RA	10.31	6.88
USA1N1190	16.12	10.75
1N1190;A;R;RA	12.38	8.25
1N1195A;RA	5.36	3.58
1N1196A;RA	6.60	4.40
1N1197A;RA	8.25	5.50
1N1198A;RA	9.90	6.60
1N1199A;RA	1.24	.83
USA1N1199	2.06	1.38
1N1200A;RA	1.40	.94
USA1N1200	2.72	1.82
USA1N1201	3.30	2.20
1N1202A;RA	2.72	1.82
USA1N1202	3.96	2.64
1N1203A;RA	4.13	2.75
USA1N1203	5.12	3.41
1N1204A;RA	5.12	3.41
USA1N1204	6.27	4.18
1N1205A;RA	6.19	4.13
USA1N1205	7.43	4.95
1N1206A;RA	7.43	4.95
USA1N1206	8.66	5.78
1N1341B;RB	1.16	.77
1N1342B;RB	1.32	.88
1N1343B;RB	1.65	1.10
1N1344B;RB	2.48	1.65
1N1345B;RB	3.71	2.48
1N1346B;RB	4.54	3.03
1N1347B;RB	4.95	3.30
1N1348B;RB	6.19	4.13
1N1612 ;R	1.07	.72
1N1613 ;R	1.24	.83
1N1614 ;R	1.90	1.27
1N1615 ;R	4.13	2.75
1N1616 ;R	6.02	4.02
1N1763	.41	.28
1N1764	.58	.39
USA1N2135A	7.84	5.23
1N2858	.36	.24
1N2859	.38	.25
1N2860	.40	.26
1N2861	.43	.29
1N2862	.61	.41
1N2863	.66	.44
1N2864	.83	.55
1N3193	.38	.25
1N3194	.41	.28
1N3195	.66	.44
1N3196	.91	.61
1N3253	.91	.61
1N3254	.45	.30
1N3255	.69	.46
1N3256	.94	.63
1N3563	1.65	1.10
1N3754	.31	.21
1N3755	.33	.22
1N3756	.35	.23
40108 ;R	.99	.66
40109 ;R	1.16	.77

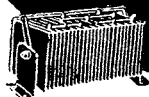
Type	RCA Equipment Manufacturers Price	
Type	1-99	100-999
40110 ;R	1.57	1.05
40111 ;R	2.15	1.43
40112 ;R	2.48	1.65
40113 ;R	3.14	2.09
40114 ;R	3.71	2.48
40115 ;R	10.75	7.15
40116 ;R	14.05	9.35
40208 ;R	1.32	.88
40209 ;R	1.40	.94
40210 ;R	1.90	1.27
40211 ;R	2.39	1.60
40212 ;R	2.89	1.93
402.3 ;R	3.80	2.53
40214 ;R	4.21	2.81

Type	1-29	30 & Up
<b>SILICON RECTIFIER ASSEMBLIES</b>		
CR101	5.75	5.30
CR102	7.20	6.60
CR103	8.15	7.50
CR104	9.60	8.80
CR105	10.55	9.70
CR106	12.00	11.00
CR107	12.95	11.90
CR108	13.90	12.75
CR109	15.35	14.10
CR110	16.30	14.95
CR201	3.10	2.85
CR203	4.80	4.40
CR204	5.75	5.30
CR206	6.95	6.40
CR208	8.40	7.70
CR210	10.10	9.25
CR212	12.00	11.00
CR301	28.00	25.60
CR302	44.00	40.40
CR303	60.00	55.00
CR304	76.00	69.60
CR305	92.00	84.40
CR306	108.00	99.00
CR307	124.00	113.60
CR311	32.00	29.40
CR312	48.00	44.00
CR313	64.00	58.60
CR314	80.00	73.40
CR315	96.00	89.90
CR316	112.00	106.40
CR317	132.00	121.00
CR321	36.00	33.00
CR322	56.00	51.40
CR323	76.00	69.60
CR324	96.00	88.00
CR325	116.00	106.40
CR331	42.00	38.50
CR332	62.00	56.90
CR333	82.00	75.10
CR334	104.00	95.40
CR335	126.00	115.50
CR341	52.00	47.60
CR342	74.00	67.90
CR343	100.00	91.60
CR344	130.00	119.10
CR351	50.00	55.00
CR352	82.00	75.10
CR353	110.00	100.90
CR354	140.00	128.40

Type	1-99	100-999
<b>SILICON CONTROLLED RECTIFIERS</b>		
2N681	8.60	5.70
2N682	9.40	6.25
2N683	10.50	7.00
2N684	12.70	8.45
2N685	14.85	9.90
2N686	18.00	12.00
2N687	20.95	14.00
2N688	26.25	17.50
2N689	31.85	21.25
2N1770	5.36	3.58
2N1771	5.78	3.85
2N1772	7.43	4.95
2N1773	9.49	6.33
2N1774	11.96	7.98
2N1775	14.03	9.35
2N1776	16.09	10.73
2N1777	20.65	13.75
2N1778	24.75	16.50
2N1842A	7.75	5.15
2N1843A	8.50	5.65
2N1844A	9.40	6.25
2N1845A	11.45	7.65
2N1846A	13.50	9.00
2N1847A	16.10	10.75
2N1848A	18.75	12.50
2N1849A	23.60	15.75
2N1850A	27.00	18.00
2N3228	1.62	1.08
40216	48.00	32.00
40230	4.95	3.30



\*See price schedule for new equipment types.

**DIRECTRON**

## Industrial Selenium Rectifiers, Transformers, Chokes and Power Supplies

### FULL WAVE BRIDGE RECTIFIERS, SINGLE PHASE, RESISTIVE-INDUCTIVE LOADS

ALL PRICES SHOWN ARE USER NET PRICES

Max. Amps.	18v. in— 14v. out		36v. in— 28v. out		54v. in— 42v. out		130v. in— 100v. out	
	No.	Price	No.	Price	No.	Price	No.	Price
1/2	A 18	\$ 1.05	A 36	\$ 1.50	A 54	\$ 2.50	A 130	\$ 5.00
1	B 18	1.20	B 36	2.20	B 54	3.20	B 130	8.00
2	C 18	2.10	C 36	3.00	C 54	4.50	C 130	10.00
3	D 18	2.70	D 36	4.00	D 54	6.00	D 130	14.00
4	E 18	3.60	E 36	7.50	E 54	10.00	E 130	24.00
6	F 18	4.50	F 36	9.00	F 54	12.00	F 130	32.00
10	G 18	6.60	G 36	12.00	G 54	18.00	G 130	39.00
12	H 18	8.20	H 36	16.00	H 54	22.00	H 130	44.00
15	J 18	10.50	J 36	20.00	J 54	27.00	J 130	54.00
20	K 18	12.50	K 36	25.00	K 54	36.00	K 130	77.00
24	L 18	15.00	L 36	30.00	L 54	42.00	L 130	82.00
30	M 18	19.10	M 36	37.00	M 54	55.00		
36	P 18	24.00	P 36	48.00				
50	R 18	30.00	R 36	60.00				



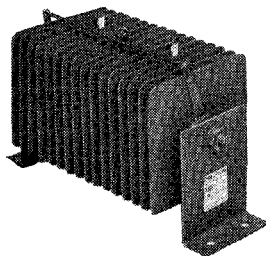
C36

220 v. Single Phase available . . . up to 1000 amps.

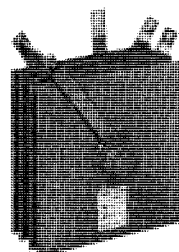
HALF-WAVE, CENTER-TAP, DOUBLER,

TRIPLER or 3-PHASE

Quotations on request



E130



F18

## 24 HOUR SERVICE

### on Custom Built Stacks

SEE OUR AD UNDER "TRANSFORMERS" IN SECTION 5600 FOR RECTIFIER TRANSFORMERS AND HIGH CURRENT CHOKES

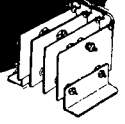
Mfd. by **SANFORD MILLER CORP.**

BROOKLYN 6, N. Y.

# SILICON POWER RECTIFIERS

## HY-A-SIL

High - Ampere - Silicon



### FEATURES

- High operating temperature, 190°C (Up to 120°C ambient)
- High operating voltage (Up to 600 p.i.v.)
- High efficiency (99% compared to about 75% for selenium)
- Excellent regulation (4% compared to about 15% for selenium)

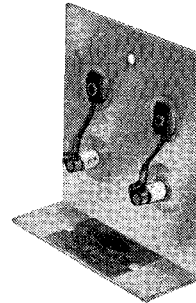
Stock No.	Type	AC Input Volts up to	DC Output Volts up to	Max. Amps Self Cooled	Max. Amps Fan Cooled	Size And Weight	User Net Price
SI-CT-A	Center-Tap	18-0-18	16	40	80	B	\$ 15.00
SI-CT-B	Center-Tap	36-0-36	32	40	80	B	20.00
SL-CT-A	Center-Tap	18-0-18	16	50	100	B	17.50
SL-CT-B	Center-Tap	36-0-36	32	50	100	B	22.50
SL-CT-D	Center-Tap	72-0-72	64	50	100	B	36.00
SL-CT-F	Center-Tap	140-0-140	125	50	100	B	44.00
SK-CT-A	Center-Tap	18-0-18	16	100	200	C	30.00
SK-CT-B	Center-Tap	36-0-36	32	100	200	C	34.00
SK-CT-D	Center-Tap	72-0-72	64	100	200	C	37.00
SK-CT-F	Center-Tap	140-0-140	125	100	200	C	48.00
SM-CT-A	Center-Tap	18-0-18	16	200	400	D	45.00
SM-CT-B	Center-Tap	36-0-36	32	200	400	D	60.00
SM-CT-D	Center-Tap	72-0-72	64	200	400	D	62.00
SM-CT-F	Center-Tap	140-0-140	125	200	400	D	76.00
SO-CT-B	Center-Tap	36-0-36	32	400	800	E	100.00
SA-BR-D	1φ Bridge	140	125	1	*	—	9.00
SA-BR-F	1φ Bridge	280	250	1	*	—	10.50
SC-BR-D	1φ Bridge	140	125	2	*	—	10.50
SC-BR-F	1φ Bridge	280	250	2	*	—	12.00
SD-BR-A	1φ Bridge	36	32	6	12	F	18.00
SD-BR-D	1φ Bridge	140	125	6	12	F	30.00
SD-BR-F	1φ Bridge	280	250	6	12	F	39.00
SE-BR-A	1φ Bridge	36	32	10	20	G	21.00
SE-BR-D	1φ Bridge	140	125	10	20	G	36.00
SE-BR-F	1φ Bridge	280	250	10	20	G	44.00
SF-BR-A	1φ Bridge	36	32	20	40	H	24.00
SF-BR-D	1φ Bridge	140	125	20	40	H	40.00
SF-BR-F	1φ Bridge	280	250	20	40	H	48.00
SI-BR-A	1φ Bridge	36	32	40	80	J	30.00
SI-BR-B	1φ Bridge	72	64	40	80	J	36.00
SI-BR-D	1φ Bridge	140	125	40	80	J	53.00
SI-BR-F	1φ Bridge	280	250	40	80	J	95.00
SL-BR-A	1φ Bridge	36	32	50	100	J	33.00
SL-BR-B	1φ Bridge	72	64	50	100	J	39.00
SL-BR-D	1φ Bridge	140	125	50	100	J	70.00
SL-BR-F	1φ Bridge	280	250	50	100	J	110.00
SG-BR-A	1φ Bridge	36	32	70	140	J	40.00
SG-BR-B	1φ Bridge	72	64	70	140	J	50.00
SG-BR-D	1φ Bridge	140	125	70	140	J	80.00
SG-BR-F	1φ Bridge	280	250	70	140	J	130.00
SK-BR-A	1φ Bridge	36	32	100	200	K	60.00
SK-BR-B	1φ Bridge	72	64	100	200	K	68.00
SK-BR-D	1φ Bridge	140	125	100	200	K	90.00
SK-BR-F	1φ Bridge	280	250	100	200	K	150.00
SM-BR-A	1φ Bridge	36	32	200	400	L	100.00
SM-BR-B	1φ Bridge	72	64	200	400	L	120.00
SM-BR-D	1φ Bridge	140	125	200	400	L	180.00
SM-BR-F	1φ Bridge	280	250	200	400	L	260.00
SO-BR-B	1φ Bridge	72	64	400	800	M	270.00
SO-BR-F	1φ Bridge	280	250	400	800	M	480.00
SL-PH-A	3φ Bridge	36	48	75	150	N	60.00
SL-PH-B	3φ Bridge	72	96	75	150	N	85.00
SL-PH-C	3φ Bridge	105	144	75	150	N	120.00
SL-PH-D	3φ Bridge	140	188	75	150	N	180.00
SL-PH-E	3φ Bridge	220	290	75	150	M	220.00
SK-PH-E	3φ Bridge	220	290	100	200	M	240.00
SM-PH-E	3φ Bridge	220	290	200	400	M	300.00
SO-PH-E	3φ Bridge	220	290	400	800	M	375.00

All above ratings based on 30°C ambient. Fan-cooled ratings based on air velocity of 1000 linear ft/minute. For resistive or inductive loads, as rated. For capacitive or battery loads, derate amperage 20%. Doublers, triplers, 3 phase half wave and 3 phase center-tap also available. Custom-built stacks, 24 hour service.

#### DIMENSIONS WITH BRACKETS

Size	Length	Height	Width	Weight
B	3"	6"	5"	12 oz.
C	3"	6"	6"	1 lb.
D	4"	8"	7"	2 lbs.
E	4"	9"	8"	6 lbs.
F	6"	5"	5"	13½ lbs.
G	6"	6"	5"	1½ lbs.
H	6"	6"	6"	2 lbs.
J	6"	6"	5"	1½ lbs.
K	7"	8"	7"	4 lbs.
L	8"	9"	8"	6 lbs.
M	8"	11"	10"	6 lbs.
N	8"	6"	5"	4 lbs.

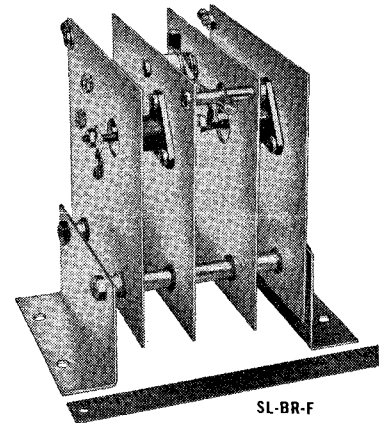
\*Not suitable for fan-cooling



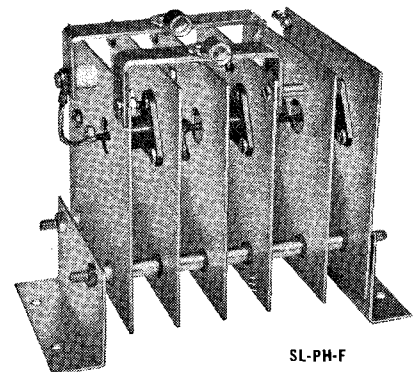
SC-BR-F



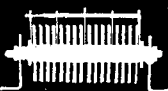
SA-BR-D



SL-BR-F



SL-PH-F

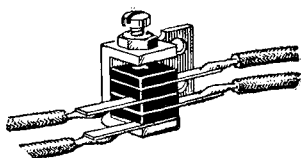


## Mfd. by SANFORD MILLER CORP.

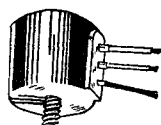
BROOKLYN 6, N. Y.



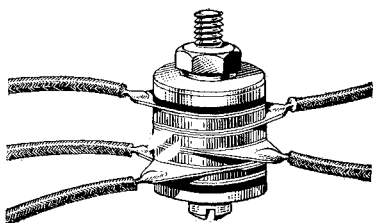
# SCHAUER INSTRUMENT RECTIFIERS



TYPE A4A



TYPE BP2B



TYPE C4A

Schauer copper oxide rectifiers for instrument and other uses are processed and individually tested to meet the requirements of the user. Versatile processing techniques make possible variations in characteristics for special or unusual applications. Each rectifier is rated conservatively for long life and dependable operation. Lead lengths to customer specifications.

"A" SIZE CELLS have good frequency response above the audio range and can be used at higher frequencies. Recommended for meter applications needing 1MA or less for operation. Can be used for other applications requiring up to 5MA.

"B" SIZE CELLS (encapsulated) are for meter, relay and other applications requiring 1MA up to their maximum rating. Recommended for commercial and low audio frequency operation.

"C" SIZE CELLS are for general applications requiring larger output currents, and operation of meters, relays and other apparatus. Special process cells for varistor applications.

Write, wire or telephone for complete information. We welcome your inquiries concerning any special rectification problem. Schauer has been manufacturing high quality, dry-disc rectifiers since 1930.

**NOTE:** The Schauer Manufacturing Corp. is the exclusive manufacturer of replacement Westinghouse copper oxide rectifiers

Max. Cont. Rating			Circuit Diagram Fig.	Cell Dia. Inches	No. of Cells	Leads	Mounting Screw Size	DIMENSIONS*					Type
D.C. M.A.	D.C. Volts	Max. RMS Volts						(Dia.) A	B	C	D	E	
3	6.0		2	3/16 sq.	2	3	Hole for 2-56		3/8	1/4	3/16		A2C
5	3.0	5.0	3	3/16 sq.	4	4	Hole for 2-56		3/8	1/4	3/16		A4A
13	3.0		1	1/16	1	2	6-32	3/16			7/16	3/32	BP1C
13	6.0		4	1/16	2	3	6-32	3/16			1/2	3/16	BP2B
26	1.5	2.5	2	1/16	2	3	6-32	3/16			1/2	3/16	BP2C
26	3.0	5.0	3	1/16	4	5	6-32	3/16			23/32	3/16	BP4A
32	3.0		1	3/4	1	0	10-32	3/4			11/16	3/16	C1C
32	6.0		2	3/4	2	0	10-32	3/4			3/4	3/16	C2C
32	9.0		1	3/4	3	0	10-32	3/4			7/8	1/4	C3C
64	3.0	5.0	3	3/4	4	5	10-32	3/4			31/32	3/16	C4A

## CIRCUIT DIAGRAMS

FIG. 1 HALF WAVE



FIG. 2 DOUBLER

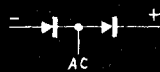


FIG. 3 FULL WAVE BRIDGE

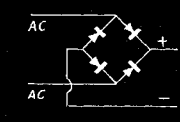
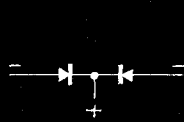
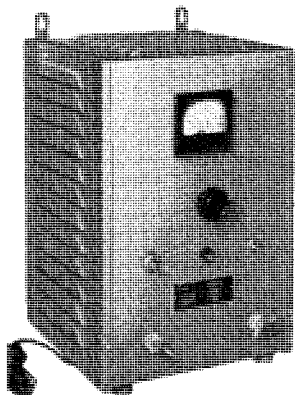
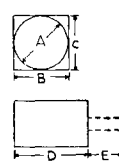


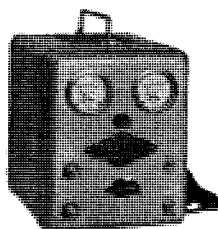
FIG. 4 FULL WAVE CENTER TAP



\*Dimensions



MODEL SA-48006



MODEL AR 5612

## SCHAUER ADJUSTABLE 6 VOLT and 12 VOLT BATTERY ELIMINATORS

**MODEL SA-48006** — 6 volt and 12 volt adjustable battery eliminator for AM and FM 2-way and marine radios. A.C. input: 115 volts, 60 cycle, single-phase. D.C. output: either 6 volts D.C. up to a maximum of 48 amperes; or 12 volts D.C. up to a maximum of 24 amperes. To maintain required voltage output under various load conditions, a dial-type tap switch provides adjustment from less than 1 ampere up to maximum rated output. Case is 10" wide x 9 1/2" deep x 15" high, arranged for either bench or wall mounting.

**MODEL AR 5612** — 6 volt and 12 volt adjustable battery eliminator for servicing auto radios. Output adjustable by rugged, silver contact tap switch. Low range output: 7 1/2 volts at 12 amps., continuous; 20 amps., intermittent. High range: 15 volts at 6 amps., continuous; 11 amps., intermittent. Housed in sturdy steel case 7 1/2" wide x 9 1/2" deep x 9" high.

Semiconductor Division

**SCHAUER MANUFACTURING CORP. • CINCINNATI, OHIO**

# SCHAUER SEMICONDUCTORS

## HEAVY DUTY ½ WATT ZENER DIODES

A 10 watt Silicon Junction in a ½ watt package for maximum surge capacity and stability. 25 watt-ms surge from 1.0 to 10ms.

Cool operation for maximum reliability and freedom from temperature drift and thermal fatigue. (Rated for a 100°C. junction temperature at maximum current.)

Mass-produced on automatic equipment for lowest cost and maximum similarity.

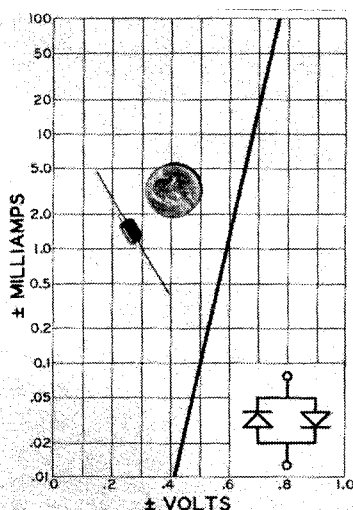
### ELECTRICAL CHARACTERISTICS

Schauer Type No. 10% Tolerance (Note 1)	Nominal Zener Voltage $V_Z$ @ $I_{ZT} = 20$ ma $T_A = 25^\circ\text{C}$ .	Dynamic Impedance $Z_D$ @ $I_{ZT} = 20$ ma		Maximum Recommended Zener Current $I_{ZM}$	Typical Temperature Coefficient of Voltage %/°C.	Price 1-99 10% Tol.
		Max.	Typical			
SZ 2.4	2.4 Volts	40 Ohms	14 Ohms	210 ma	-.054	\$.81
SZ 2.7	2.7	40	16	185	-.055	.81
SZ 3.0	3.0	40	17	170	-.055	.64
SZ 3.3	3.3	40	17	150	-.054	.64
SZ 3.6	3.6	40	18	140	-.050	.64
SZ 3.9	3.9	40	17	130	-.045	.64
SZ 4.3	4.3	30	17	120	-.037	.64
SZ 4.7	4.7	30	12	110	-.029	.64
SZ 5.1	5.1	20	10	100	-.019	.64
SZ 5.6	5.6	20	6	90	-.009	.64
SZ 6.2	6.2	10	2	80	+.018	.64
SZ 6.8	6.8	10	1.5	75	+.035	.64
SZ 7.5	7.5	10	1.5	70	+.044	.64
SZ 8.2	8.2	10	2	60	+.049	.64
SZ 9.1	9.1	10	4	55	+.053	.81
SZ 10.00	10.00	10	6	50	+.055	.81

NOTE 1. Add suffix "A" for 5% tolerance (i.e., SZ4.7A) for  $4.7 \pm 5\%$  volts.

NOTE 2. Series strings to close voltage tolerances available at low prices.

NOTE 3. Temperature compensated high voltage assemblies available.



SV1 Silicon Varistor as compared in size to 25¢ piece. Chart shows its I vs E characteristics over four decades.

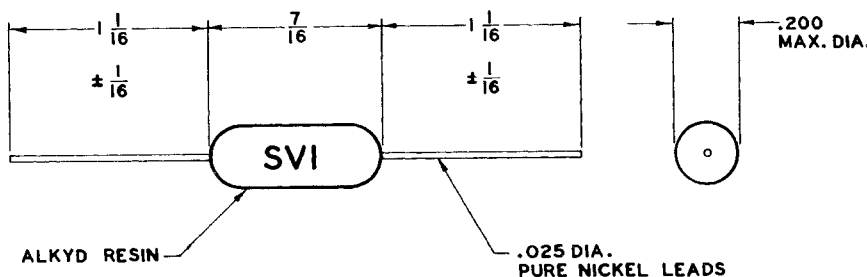
NOTE: Prices subject to change without notice.

### SCHAUER SV1 SILICON VARISTOR

SV1 Varistor consists of matched silicon junctions connected in parallel and oppositely poled. This voltage variable resistance goes through four decades of current for a half volt change in signal and makes possible its use as a single component to convert linear AC or DC information into logarithmic information following the curve  $I_{ma} = e^{26(E-.59)}$  between the range  $I = .02$  ma to 200 ma.

ELECTRICAL CHARACTERISTICS — Test limits: 50 microamperes max. at .2V D.C., 22 milliamperes min. at 1.0V D.C. Dissipation: ¾ watt at 25°C, ¼ watt at 100°C. Maximum ½ cycle surge current, 25 amps. peak.

SV1 is encapsulated with an alkyd molding compound. An inner epoxy seal, for leakage paths, and high pressure molding assure reliable performance in all environments. Prices, 1-99: \$0.45 each.



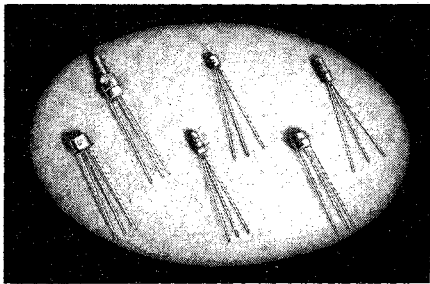
Dimensions of SV1 Varistor. Also applies to Schauer ½ watt Zener Diodes. Zener cathode terminal is marked by red dot.

Semiconductor Division

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# SPRAGUE TRANSISTORS

## GERMANIUM AND SILICON TRANSISTORS



- Sprague Transistors are Produced by Advanced Equipment and the Latest Manufacturing Techniques.
- Excellent Design Flexibility and Electrical Properties Meet the Most Rigid Performance and Reliability Standards.
- Highest Quality and Outstanding Economy.
- For Complete Technical Data, Refer to Latest Issue of the Applicable Engineering Bulletin.
- Call your Sprague Industrial Distributor for current quantity prices.

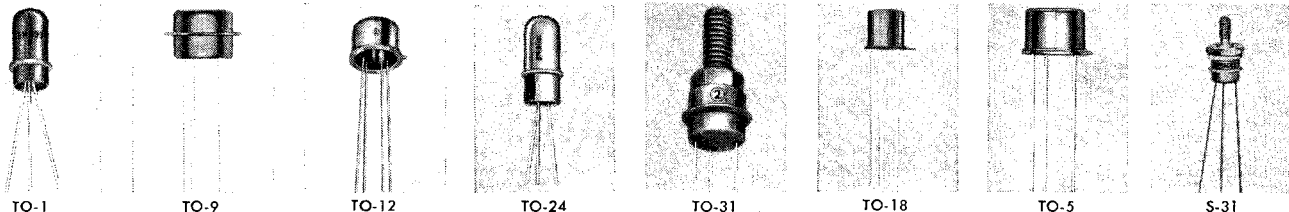
Type Number	Case Size	Description	Type Number	Case Size	Description	Type Number	Case Size	Description
2N128	TO-24	Ge Switch SBT	2N1301	TO-5	Ge Switch ECDC	USA-2N2219	TO-5	NPN Si Switch SEPT®
JAN-2N128	TO-24	Ge Switch SBT	2N1411	TO-24	Ge Switch MAT	2N2220	TO-18	NPN Si Switch SEPT
2N240	TO-24	Ge Switch SBT	USA-2N1411	TO-24	Ge Switch MAT	2N2221	TO-18	NPN Si Switch SEPT
JAN-2N240	TO-24	Ge Switch SBT	2N1427	TO-24	Ge Switch MAT	2N2222	TO-18	NPN Si Switch SEPT
2N344	TO-24	Ge Ampl. SBT	2N1429	TO-5	Si Switch SPAT	USA-2N2222	TO-18	NPN Si Switch SEPT
2N345	TO-24	Ge Ampl. SBT	2N1499A	TO-9	Ge Switch ECDC	2N2274	TO-18	Si Chopper SPAT
2N346	TO-24	Ge Ampl. SBT	USA-2N1499A	TO-9	Ge Switch ECDC	2N2275	TO-18	Si Matched Pair SPAT
2N393	TO-24	Ge Switch MAT*	2N1499B	TO-9	Ge Switch ECDC	2N2276	TO-18	Si Chopper SPAT
USA-2N393	TO-24	Ge Switch MAT	2N1500	TO-9	Ge Switch MADT	2N2277	TO-18	Si Matched Pair SPAT
JAN-2N393	TO-24	Ge Switch MAT	USA-2N1500	TO-9	Ge Switch MADT	2N2278	TO-18	Si Chopper SPAT
2N495	TO-1	Si Switch SPAT*	2N1676	TO-5	Si Chopper SPAT	2N2279	TO-18	Si Matched Pair SPAT
†2N495/18	TO-18	Si Switch SPAT	2N1677	TO-5	Si Chopper SPAT	2N2280	TO-18	Si Chopper SPAT
2N496	TO-1	Si Switch SPAT	2N1683	TO-5	ECDC Switch	2N2281	TO-18	Si Matched Pair SPAT
††2N496/18	TO-18	Si Switch SPAT	2N1726	TO-9	MADT Communication	2N2360	TO-12	Ge Amplifier MADT
2N499	TO-1	Ge Amplifier MADT*	2N1727	TO-9	MADT Communication	2N2361	TO-12	Ge Amplifier MADT
USA-2N499	TO-1	Ge Amplifier MADT	2N1728	TO-9	MADT Communication	2N2362	TO-12	Ge Amplifier MADT
2N499A	TO-1	Ge Amplifier MADT	2N1742	TO-9	MADT Communication	2N2377	TO-18	Si Amplifier SPAT
USA-2N499A	TO-1	Ge Amplifier MADT	2N1743	TO-9	MADT Communication	2N2378	TO-18	Si Switch SPAT
2N501	TO-1	Ge Switch MADT	2N1744	TO-9	MADT Communication	2N2398	TO-12	Ge Amplifier MADT
2N501A	TO-1	Ge Switch MADT	2N1745	TO-9	MADT Amplifier	2N2399	TO-12	Ge Amplifier MADT
USA-2N501A	TO-1	Ge Switch MADT	2N1746	TO-9	MADT Amplifier	2N2400	TO-18	Ge Switch ECDC
JAN-2N501A	TO-1	Ge Switch MADT	2N1747	TO-9	MADT Amplifier	2N2401	TO-18	Ge Switch ECDC
2N502	TO-9	Ge Ampl. MADT	2N1748	TO-9	MADT Amplifier	2N2402	TO-18	Ge Switch ECDC
2N502A	TO-9	Ge Ampl. MADT	2N1748A	TO-9	MADT Amplifier	2N2451	TO-24	Ge Switch MAT
USA-2N502A	TO-9	Ge Ampl. MADT	2N1749	TO-9	MADT Amplifier	2N2487	TO-18	Ge Switch MADT
2N502B	TO-9	Ge Ampl. MADT	2N1752	TO-9	MADT Amplifier	2N2488	TO-18	Ge Switch MADT
USA-2N502B	TO-9	Ge Ampl. MADT	2N1754	TO-9	ECDC Switch	2N2489	TO-18	Ge Switch MADT
2N503	TO-9	Ge Ampl. MADT	2N1785	TO-9	MADT Amplifier	2N2537	TO-5	NPN Si Switch SEPT
2N504	TO-1	Ge Ampl. MADT	2N1786	TO-9	MADT Amplifier	2N2538	TO-5	NPN Si Switch SEPT
2N588	TO-1	Ge Ampl. MADT	2N1787	TO-9	MADT Amplifier	2N2539	TO-18	NPN Si Switch SEPT
2N768	TO-18	Ge Switch ECDC®	2N1788	TO-9	MADT Amplifier	2N2540	TO-18	NPN Si Switch SEPT
2N769	TO-18	Ge Switch ECDC	2N1789	TO-9	MADT Communication	2N2787	TO-5	NPN Si Switch SEPT
2N779A	TO-18	Ge Switch MADT	2N1790	TO-9	MADT Communication	2N2788	TO-5	NPN Si Switch SEPT
2N794	TO-18	Ge Switch ECDC	2N1864	TO-9	MADT Communication	2N2789	TO-5	NPN Si Switch SEPT
2N795	TO-18	Ge Switch ECDC	2N1865	TO-9	MADT Communication	2N2790	TO-18	NPN Si Switch SEPT
2N796	TO-18	Ge Switch ECDC	2N1866	TO-9	MADT Communication	2N2791	TO-18	NPN Si Switch SEPT
2N846A	TO-18	Ge Switch ECDC	2N1867	TO-9	MADT Communication	2N2792	TO-18	NPN Si Switch SEPT
2N858	TO-18	Si Switch SPAT	2N1868	TO-9	MADT Communication	2N2795	TO-18	Ge Switch ECDC
2N859	TO-18	Si Switch SPAT	2N2048	TO-9	ECDC Switch	2N2796	TO-18	Ge Switch ECDC
2N860	TO-18	Si Switch SPAT	2N2048A	TO-9	ECDC Switch	2N2797	TO-18	Ge Switch ECDC
2N861	TO-18	Si Switch SPAT	2N2095	TO-31	Ge Amplifier ECDC	2N2798	TO-18	Ge Switch ECDC
2N862	TO-18	Si Switch SPAT	2N2096	TO-31	Ge Core Driver ECDC	2N2799	TO-9	Ge Switch ECDC
2N863	TO-18	Si Switch SPAT	2N2097	TO-31	Ge Core Driver ECDC	2N2942	TO-9	Ge Switch ECDC
2N864	TO-18	Si Switch SPAT	2N2098	TO-9	Ge Amplifier ECDC	2N2943	TO-9	Ge Switch ECDC
2N865	TO-18	Si Switch SPAT	2N2099	TO-9	Ge Core Driver ECDC	2N2958	TO-5	NPN Si Switch SEPT
2N976	TO-18	Ge Switch ECDC	2N2100	TO-9	Ge Core Driver ECDC	2N2959	TO-5	NPN Si Switch SEPT
2N979	TO-18	Ge Switch MADT	2N2162	TO-5	Si Chopper SPAT	2N2962	S-31	ECDC VHF Pwr. Ampl.
2N980	TO-18	Ge Switch MADT	2N2163	TO-5	Si Chopper SPAT	2N2963	S-31	ECDC VHF Amplifier
2N982	TO-18	Ge Switch MADT	2N2164	TO-5	Si Chopper SPAT	2N2964	S-31	ECDC VHF Pwr. Ampl.
2N983	TO-18	Ge Switch MADT	2N2165	TO-5	Si Chopper SPAT	2N2965	S-31	ECDC VHF Pwr. Ampl.
2N984	TO-18	Ge Switch MADT	2N2166	TO-5	Si Chopper SPAT	2N2968	TO-5	Si Symmetrical SPAT
2N1118	TO-5	Si Ampl. SPAT	2N2167	TO-5	Si Chopper SPAT	2N2969	TO-18	Si Symmetrical SPAT
SA-2N1118	TO-5	Si Ampl. SPAT	2N2168	TO-9	Ge Switch MADT	2N2970	TO-5	Si Symmetrical SPAT
AN-2N1118	TO-5	Si Ampl. SPAT	2N2169	TO-9	Ge Switch MADT	2N2971	TO-18	Si Symmetrical SPAT
2N1118A	TO-5	Si Ampl. SPAT	2N2170	TO-9	Ge Switch MADT	2N3.15	TO-18	NPN Si Switch SEPT
2N1119	TO-5	Si Switch SPAT	2N2185	TO-18	Si Chopper SPAT	2N3116	TO-18	NPN Si Switch SEPT
SA-2N1119	TO-5	Si Switch SPAT	2N2186	TO-18	Si Matched Pair SPAT	2N3117	TO-18	Si Switch SPAT
AN-2N1119	TO-5	Si Switch SPAT	2N2187	TO-18	Si Matched Pair SPAT	2N3318	TO-18	Si Switch SPAT
2N1122	TO-24	Ge Switch MAT	2N2217	TO-5	NPN Si Switch SEPT	2N3319	TO-18	Si Switch SPAT
2N1122A	TO-24	Ge Switch MAT	2N2218	TO-5	NPN Si Switch SEPT	2N3320	TO-18	Ge Switch MADT
2N1300	TO-5	Ge Switch ECDC	2N2219	TO-5	NPN Si Switch SEPT	2N3321	TO-18	Ge Switch MADT
						2N3322	TO-18	Ge Switch MADT

†Electrically interchangeable with 2N495 but in TO-18 case.

††Electrically interchangeable with 2N496 but in TO-18 case.

\*Trademark of Philco Corp.

®Trademark of Sprague Electric Co.



TECHNICAL APPARATUS BUILDERS

"TABTRON" "SILTAB" RECTIFIERS  
Engineered for Industry  
Since 1945!

FOR ALL YOUR DC RECTIFIER REQUIREMENTS  
"TECHNICAL APPARATUS BUILDERS" mfr. Power Rectifiers to your specs. From one amp up to and above 1000 amps, convection or fan cooled, single or 3 phase. "NEMA" & MIL Specs.

SILTAB

SILTAB® SILICON BRIDGE RECTIFIER FINNED STACKS Up to 125°C & CONVECTION COOLED

DC AMP	SINGLE PHASE			FULL WAVE BRIDGE			SINGLE PHASE			CENTER TAP	
	36VAC 32VDC	72V 62V	140V 125V	280V 250V	540V 500V	840V 750V	1120 1000	1400 1250	2800 2500	36V.C.T. 16VDC	72V.C.T. 32VDC
1.2	\$ 2.45	\$ 2.90	\$ 3.75	\$ 5.75	\$ 9.60	\$ 14.30	\$ 24.15	\$ 30.00	\$ 59.75	\$ 1.80	\$ 2.15
2	3.75	4.60	5.15	6.90	13.90	22.75	42.85	48.75	97.00	2.70	3.45
3	4.45	5.45	6.00	9.90	19.75	32.45	89.00	99.45	188.00	3.15	4.15
6	6.60	8.90	11.90	13.60	25.45	41.60	129.75	161.90	336.00	4.00	6.00
12	7.75	12.90	19.45	33.15	42.15	51.30	FAST REPLACEMENT DELIVERIES ON VICKERS - KOTRON - FEDERAL - CHATHAM - G. E. - WESTINGHOUSE - MALLORY - I.R.C. - S.C.A. - R. R. - I. T. T. - B. L. & Others! OTHER SIZE & TYPES AVAILABLE. SPECIFY YOUR NEEDS!				
18	8.15	13.75	20.00	38.00	50.60	63.90					
24	10.90	15.75	21.60	43.90	77.75	90.75					
35	13.60	20.30	30.90	81.45	117.90	135.15					
50	21.90	27.75	63.75	108.00	139.45	188.30					
70	25.75	44.15	72.00	126.00	153.15	201.45					
160	30.60	57.45	81.00	144.90	189.90	252.60					
240	60.00	80.00	153.90	243.75	333.30	399.00					

"SURGTAB"® DIODE TRANSIENT PEAK VOLTAGE CLIPPER CLAMP!

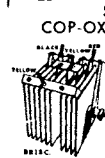
MFRGR. TYPE	VOLTS		USER NET	MFRGR. TYPE	VOLTS		USER NET	MFRGR. TYPE	VOLTS		USER NET	MFRGR. TYPE	VOLTS		USER NET
	RMS	PEAK			RMS	PEAK			RMS	PEAK			RMS	PEAK	
SB18	18	27	\$ .50	SB54	54	76	\$ .70	SB150	150	215	\$ 1.00	SB250	250	340	\$ 1.30
SB22	22	31	.50	SB70	70	100	.80	SB180	180	260	1.05	SB266	266	380	1.45
SB26	26	37	.50	SB75	75	108	.80	SB200	200	290	1.15	SB300	300	430	1.60
SB40	40	58	.60	SB100	100	145	.80	SB210	210	300	1.15	SP320	320	460	3.00
SB50	50	71	.70	SB125	125	180	.90	SB225	225	320	1.30	SP630	630	900	6.15

Other sizes & types available. Send data for correct type & size "Surgtab" clipper for diode protection from input & output transients!

SELENIUM "TEKSEL" RECTIFIER STACKS — ALL TYPES! SIZES & CURRENT CONVECTION COOLED RATINGS!

D.C. AMP	FWB		FWB		FWB		FWB		FWB		FWB		FWB		FWB		F.W.C.T. 26V.C.T.
	18VAC 14VDC	36VAC 28VDC	54VAC 42VDC	72VAC 58VDC	100VAC 80VDC	144VAC 118VDC	266VAC 217VDC	36VAC 26V.C.T.	130VAC 160VDC	234VAC 282VDC	420VAC 460VDC						
0.5	\$ 1.00	\$ 1.45	\$ 2.30	\$ 3.85	\$ 4.90	\$ 5.45	\$ 9.75	\$ 1.30	\$ 4.90	\$ 17.90	\$ 33.75	\$ 63.20	\$ 63.20				
1	1.40	2.15	3.00	4.90	7.15	8.00	15.75	1.75	7.45	21.75	39.90	66.90	66.90				
2	2.00	2.90	4.45	6.25	9.30	12.45	19.45	2.15	9.90	33.15	62.15	99.75	99.75				
3	2.60	3.90	5.75	8.60	13.00	17.25	27.30	3.00	12.90	46.90	81.75	108.60	108.60				
4	3.50	6.15	9.60	10.90	16.75	21.90	47.60	Query	16.60	62.45	116.00	197.45	197.45				
6	4.40	8.30	11.45	14.00	21.90	25.15	63.45	3.75	18.45	66.60	132.15	212.60	212.60				
10	6.35	10.75	17.60	18.15	29.00	33.60	75.15	4.30	26.60	86.75	166.00	266.00	266.00				
12	8.00	11.45	21.95	25.60	41.75	47.75	86.75	6.00	33.45	106.90	206.90	306.90	306.90				
15	10.30	12.90	22.75	32.75	48.90	52.60	106.90	7.00	40.30	126.90	246.90	366.90	366.90				
20	12.45	20.45	24.30	40.90	69.60	75.90	152.00	8.00	47.20	146.90	286.90	426.90	426.90				
24	14.75	29.15	35.00	48.30	80.90	90.00	162.30	10.30	54.10	166.90	326.90	486.90	486.90				
30	19.00	36.30	53.60	66.45	117.30	125.75	249.60	14.90	61.00	186.90	376.90	556.90	556.90				
36	23.75	47.15	69.30	81.00	132.00	153.90	299.45	16.45	67.90	206.90	416.90	616.90	616.90				
50	33.45	63.75	121.50	108.75	172.45	207.60	398.90	Query									

We Can Supply Any Type & Make Rectifier — 24 Hour Delivery



SELENIUM-SILICON-GERMANIUM  
ALL GOV'T TYPES LOW PRICES!  
24-HOUR SERVICE ON REPLACEMENT  
We can supply exact equals on all makes and types of rectifiers — size, type current to your specifications.

"TABTRAN" RECTIFIER TRANSFORMERS — F.W.B., C.T. & H.W. — ISOLATED PRI. & SECD!

Part No.	User Net	Primary 50-500Cps	Sec. Volts		Sec. Amps		Approximate Dimensions						Mtg/H	Lbs.
			Series	Parallel	Series	Parallel	L	W	H	ML	MW			
TR4000R	\$ 3.00	115	2x16(32v)	0-16v	1	2	2 3/4	2	2 1/2	3 1/8	—	#10	1.5	
36 Volts (A) Series = 0-3-6-9-12-15-18-27-30-33-36 Volts (A) Parallel 0-9-15-18V x Two (2) Secondaries														
TR4001	4.15	115	Two Sec'ds	0-9-15-18	1	2	3	2	2 1/2	2 1/2	1 3/4	#10	1.8	
TR4002	5.90	115	0-9-15-18	0-9-15-18	2	4	3	3 1/8	2 1/2	2 1/2	2 1/2	#10	3.3	
TR4003	8.00	115	See (A)	0-9-15-18	5	10	4 1/8	3 1/2	3 1/2	3 1/2	2 1/2	#10	6.3	
TR4005	15.15	115	ABOVE	0-9-15-18	12	24	4 1/2	5 3/8	3 3/4	3 3/4	3 1/2	#10	13	
TR4006	27.00	115	"	0-9-15-18	25	50	5 1/4	6 1/4	4 3/8	4 3/8	4 1/2	1/4	20	
TR4007	60.00	115&230	"	0-9-15-18	50	100	9 1/2	8 1/2	7 3/8	7 3/8	6	3/8	62	
TR4008	108.00	115&230	"	0-9-15-18	100	200	8 3/8	12 1/2	7 1/8	7 1/8	9	3/8	112	
TR3607	43.00	115&230	0-9-18	0-9-18	50	100	6 1/2	7 3/4	5 3/8	5 3/8	5 1/8	1/4	40	
TR3608	85.00	115&230	27-36v	0-9-18	100	200	7 3/8	8 1/8	6 3/8	6 3/4	5 3/8	1/4	62	
56 VOLTS 0-14-28-42-56V = 56V.C.T. or Parallel = 28V.C.T. @ 2x Current														
TR5602	\$ 7.25	115		0-14-28	2	4	3 7/8	3 3/4	3 3/8	3 3/8	—	#10	6	
TR5604	11.25	115		0-14-28	4	8	4 1/4	3 3/4	3 3/4	3 3/4	3	#10	12	
TR5606	18.00	115		0-14-28	6	12	5 3/8	4 1/4	4 3/8	4 3/8	2 7/8	#10	18	
TR5608	22.00	105,115,125	0-14	0-14-28	8	16	5 3/8	5	4 3/8	4 3/8	3 3/8	#10	22	
TR5612	27.00	105,115,125	42	0-14-28	12	24	6 1/2	5 1/2	5 3/8	5 3/8	3 3/8	#10	27	
TR5625	45.00	105,115,125	56	0-14-28	25	50	6 1/2	7 1/8	5 3/8	5 3/8	5 1/8	1/4	45	
TR5650	85.00	115/230		0-14-28	50	100	7 3/8	7 1/4	6 3/8	6 3/4	4 7/8	3/8	85	
TR561C	125.00	115/230		0-14-28	100	200	7 3/8	11	6 3/8	6 3/4	8 1/8	3/8	125	
160 VOLTS 0-40-80-120-160V = 160V.C.T. or Parallel = 80V.C.T. @ 2x Current														
TR16002	\$ 14.50	115			2	4	4 3/8	4 3/8	4	3 3/4	3 3/8	#10	11	
TR16004	26.00	105-115-125	0-40 and	0-40	4	8	6 1/2	5	5 3/8	5 3/4	3 3/4	#10	19	
TR16008	41.00	105-115-125	80-120-160	and 80	4	8	6 1/2	6 3/8	5 3/8	5 3/4	4 7/8	1/4	36	
TR16012	55.00	115-230			12	24	7 3/8	6 1/2	6 3/8	6 3/4	3 7/8	1/4	40	

CHOKES	NET	(M/Hy)	AMP	OHM	L	W	H	ML	MW	Mtg/H	Lbs.
CR6001	\$ 2.70	100	1	1.4	2 3/4	2	2 3/8	3 1/8	—	#8	1.1
CR6002	4.50	100	2	0.67	3 3/4	2 3/4	3 3/8	3 3/8	2	#10	3.1
CR6007	5.45	10	4	0.1	3 3/8	2 1/2	2 1/2	2 1/2	2 1/2	#10	4
CR6003	8.70	70	6	0.6	4 1/8	3 3/4	3 3/4	3 3/4	3 3/4	#10	9
CR6008	5.45	10	10	0.1	3 3/8	2 1/2	2 1/2	2 1/2	2 1/2	#10	3
CR6004	12.30	15	12	0.1	4 1/8	3 3/8	3 3/8	3 3/8	2 7/8	#10	7.1
CR6005	18.00	5	24	.025	4 1/2	4 3/8	3 3/4	3 3/4	3 3/8	#10	11
CR6006	30.00	1	50	.001	6 3/4	5 1/2	5 7/8	4 1/2	4 1/2	1/4	30
CR6009	34.00	0.5	100	.005	6 1/2	6 1/2	5 3/8	4 1/2	4 1/8	3/8	32
CR6010	50.00	0.3	200	.0025	7 3/8	7	6 3/8	6 3/4	4 1/8	3/8	45

"TABTRAN" ISOLATION AND CONTROL TRANSFORMERS \* \* \* \* \* ENCLOSED POWER TYPE ELECTRO-STATIC-SHIELDED  
PRIMARY 115/230V & Secondary 115/230V 1φ 60 CYS. — ALSO 230/460V SPECIFY (ADD LETTER D = DTPP)

TPP050/50W	\$11.00	TPP150/150W	\$17.00	TPP750/750W	\$40.00
TPP075/75W	13.00	TPP250/250W	22.00	TPP1000/1000W	49.00
TPP100/100W	14.00	TPP500/500W	32.00	TPP2000/2KW	73.00

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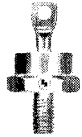
## DELIVERY

Delivery is often dependent on availability of raw materials. Check with your distributor for delivery information at the time you place your order.



# TUNG-SOL

## SILICON POWER RECTIFIERS



**MEDIUM  
CURRENT TYPES  
JEDEC DO-5 OUTLINE**

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
1N248	50	10	5	200
1N249	100	10	5	200
1N250	200	10	5	200
1N248A-1N248B	50	20	5	350
1N249A-1N249B	100	20	5	350
1N250A-1N250B	200	20	5	350

Type	PRV V	$I_o$ @ 140°C. case A	$I_{L_o}$ mA	$i_S$ A
1N1183	50	35	10	500
1N1184	100	35	10	500
1N1185	150	35	10	500
1N1186	200	35	10	500
1N1187	300	35	10	500
1N1188	400	35	10	500
1N1189	500	35	10	500
1N1190	600	35	10	500

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
1N1191	50	18	5	250
1N1192	100	18	5	250
1N1193	150	18	5	250
1N1194	200	18	5	250
1N1195	300	18	5	250
1N1196	400	18	5	250
1N1197	500	18	5	250
1N1198	600	18	5	250

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
1N2154	50	25	5.0	350
1N2155	100	25	4.5	350
1N2156	200	25	4.0	350
1N2157	300	25	3.5	350
1N2158	400	25	3.0	350
1N2159	500	25	2.5	350
1N2160	600	25	2.0	350

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
1N3208	50	15	10	250
1N3209	100	15	10	250
1N3210	200	15	10	250
1N3211	300	15	10	250
1N3212	400	15	10	250
1N3213	500	15	10	250
1N3214	600	15	10	250

Type	PRV V	$I_o$ @ 140°C. case A	$I_{L_o}$ mA	$i_S$ A
1N4136	200	50	16	750
1N4137	400	50	12	750
1N4138	600	50	8	750

\*Reverse power rated types exhibiting controlled avalanche characteristics.  
 $i_S$  — Peak one-cycle surge current, under same conditions as  $I_o$  rating. ( $\mu A$  = Microamperes)  
 $I_o$  — Max. rectified avg. DC output current, resistive or inductive load, 60 cps sine wave input.  
 $I_{L_o}$  — Max. avg. reverse current measured over full sine wave cycle with max. rated reverse voltage and forward current applied.

Full field technical consultation or complete up-to-date listings on all Tung-Sol products are available through: Atlanta, Ga.; Columbus, Ohio; Culver City, Calif.; Dallas, Texas; Denver, Colo.; Detroit, Mich.; Melrose Park, Ill.; Newark, N.J.; Seattle, Wash. IN CAN-ADA: Abbey Electronics, Toronto, Ont.; Canadian Electronics Ltd., Edmonton, Alta.

Tung-Sol silicon power rectifiers offer distinct advantages over similar competitive types. Exclusive design features combine with Tung-Sol's historically rigid quality control to assure designers unmatched operational reliability. Wide interchangeability permits specification of these outstanding components for most commercial and military applications

■ All the types shown are available in reverse polarity which may be ordered by the addition of the suffix 'R' to the indicated type number.

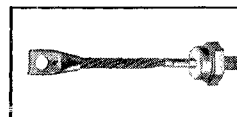


**MEDIUM  
CURRENT TYPES  
JEDEC DO-21 OUTLINE**

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
1N3491	50	18	10	300
1N3492	100	18	10	300
1N3493	200	18	8	300
1N3494	300	18	6	300
1N3495	400	18	4	300

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
1N3659	50	25	5	400
1N3660	100	25	4.5	400
1N3661	200	25	4.0	400
1N3662	300	25	3.5	400
1N3663	400	25	3.0	400
1N3664	500	25	2.5	400
1N3665	600	25	2.0	400

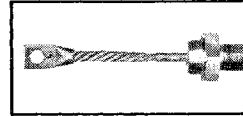
Type	PRV V	$I_o$ @ 140°C. case A	$I_{L_o}$ mA	$i_S$ A
PZ140B*	200	25	4.0	400
PZ140D*	400	25	3.0	400
PZ140F*	600	25	2.0	400
PZ140H*	800	25	2.0	400



**HIGH  
CURRENT TYPES  
JEDEC DO-8 OUTLINE**

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
1N1396	50	70	15	1500
1N1397	100	70	15	1500
1N1398	150	70	15	1500
1N1399	200	70	15	1500
1N1400	300	70	15	1500
1N1401	400	70	15	1500
1N1402	500	70	15	1500
1N1403	600	70	15	1500

Type	PRV V	$I_o$ @ 150°C. case A	$I_{L_o}$ mA	$i_S$ A
CH119Z	50	125	15	4000
CH119A	100	125	15	4000
CH119AZ	150	125	15	4000
CH119B	200	125	15	4000
CH119C	300	125	15	4000
CH119D	400	125	15	4000
CH119E	500	125	15	4000
CH119F	600	125	15	4000



**HIGH  
CURRENT TYPES  
JEDEC DO-9 OUTLINE**

Type	PRV V	$I_o$ @ 130°C. case A	$I_{L_o}$ mA	$i_S$ A
CS131Z	50	250	16	4000
CS131A	100	250	16	4000
CS131AZ	150	250	16	4000
CS131B	200	250	16	4000
CS131C	300	250	16	4000
CS131D	400	250	16	4000
CS131E	500	250	15	4000
CS131F	600	250	12.5	4000

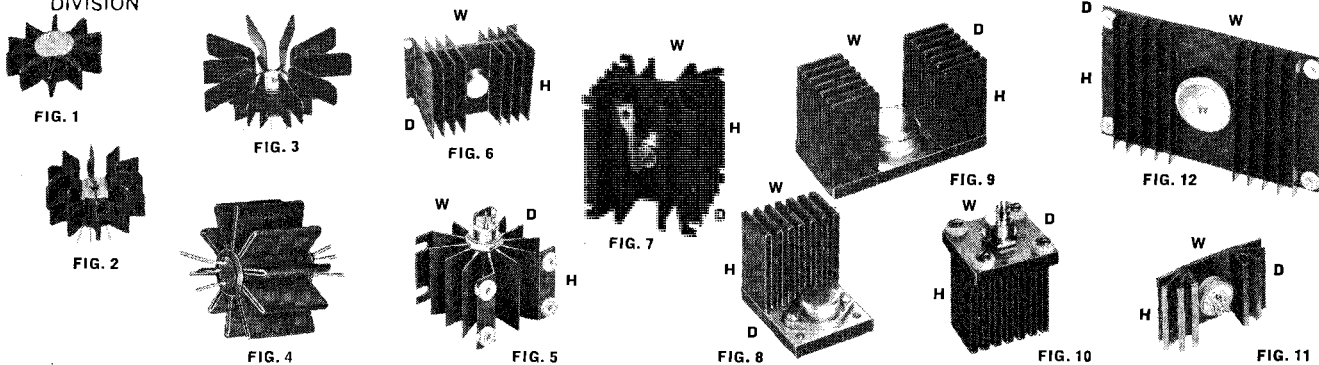


# TUNG-SOL

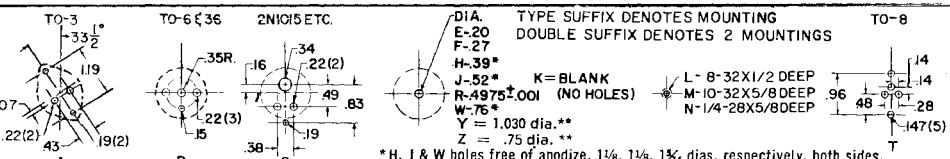
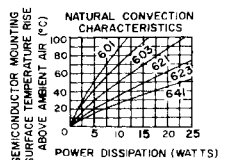
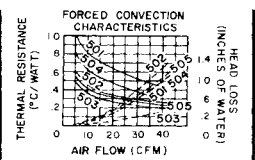
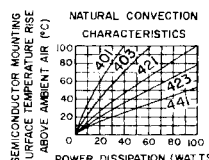
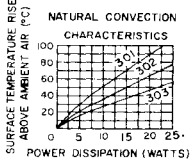
TUNG-SOL ELECTRIC INC., NEWARK, N. J. 0710



# WAKEFIELD ENGINEERING INC. A COMPLETE LINE OF SEMICONDUCTOR COOLERS



Type	Rise (°C) For 1 Watt	Nat Conv 250 Ft /Min	Fits JEDEC Case Styles
201	66	27	TO 18, 24, 28 (222 accepts 2 cases)
203	56	19	
222	56	19	
205	61	24	TO 5, 9, 11, 12, 16 (224 accepts 2 cases)
207	49	17	
209	34	10	
224	49	17	
211	56	20	TO 8
213	44	13	
215	31	8	



Type	Fig	Dia.	Lgth.	Fits Case Dia.	1-49	50-499	500-999	1,000 4,999
NF 201	1	.64	.19	.161/.195	0.27	0.21	0.16	0.11
NF 203	2	.64	.38	.161/.195	0.29	0.22	0.17	0.12
NF 205	1	.72	.19	.275/.335	0.27	0.21	0.16	0.11
NF 207	2	.72	.38	.275/.335	0.29	0.22	0.17	0.12
NF 209	3	1.26	.44	.275/.335	0.34	0.29	0.23	0.18
NF 211	1	.82	.19	.444/.524	0.27	0.21	0.16	0.11
NF 213	2	.82	.38	.444/.524	0.29	0.22	0.17	0.12
NF 215	3	1.38	.44	.444/.524	0.34	0.29	0.23	0.18
NF 222	4	.64	.38	.161/.195	0.38	0.30	0.24	0.19
NF 224	4	.72	.44	.275/.335	0.38	0.30	0.24	0.19

Type	Fig.	H	W	D	1-49	50-99	100-249	250-499
NC403C	6	3.00	4.81	1.25	2.10	1.70	1.35	1.15
NC403F	6	3.00	4.81	1.25	2.10	1.70	1.35	1.15
NC403K	6	3.00	4.81	1.25	1.80	1.45	1.15	0.95
NC421A	6	3.00	4.81	2.63	3.05	2.75	2.30	2.10
NC421B	6	3.00	4.81	2.63	3.05	2.75	2.30	2.10
NC421C	6	3.00	4.81	2.63	3.05	2.75	2.30	2.10
NC421H	6	3.00	4.81	2.63	3.05	2.75	2.30	2.10
NC421J	6	3.00	4.81	2.63	3.05	2.75	2.30	2.10
NC421K	6	3.00	4.81	2.63	2.75	2.50	2.10	1.90
NC423A	6	5.50	4.81	2.63	4.15	3.55	3.00	2.80
NC423B	6	5.50	4.81	2.63	4.15	3.55	3.00	2.80
NC423C	6	5.50	4.81	2.63	4.15	3.55	3.00	2.80
NC423H	6	5.50	4.81	2.63	4.15	3.55	3.00	2.80
NC423J	6	5.50	4.81	2.63	4.15	3.55	3.00	2.80
NC423W	6	5.50	4.81	2.63	4.15	3.55	3.00	2.80
NC423K	6	5.50	4.81	2.63	3.85	3.30	2.80	2.60
NC441H	7	5.50	4.75	4.50	5.75	4.95	4.25	3.95
NC441J	7	5.50	4.75	4.50	5.75	4.95	4.25	3.95
NC441W	7	5.50	4.75	4.50	5.75	4.95	4.25	3.95
NC441K	7	5.50	4.75	4.50	5.45	4.70	4.05	3.75
FC501A	8	1.75	1.75	2.25	5.10	4.55	4.25	4.00
FC501B	8	1.75	1.75	2.25	4.95	4.40	4.10	3.85
FC501K	8	1.75	1.75	2.25	4.60	4.10	3.85	3.60
FC502A	9	1.75	3.50	1.75	7.30	6.55	6.15	5.70
FC502B	9	1.75	3.50	1.75	7.15	6.40	6.00	5.55
FC502K	9	1.75	3.50	1.75	6.80	6.10	5.75	5.30
FC503A	9	1.75	3.50	3.50	12.20	10.95	10.25	9.50
FC503B	9	1.75	3.50	3.50	12.05	10.80	10.10	9.35
FC503K	9	1.75	3.50	3.50	11.70	10.50	9.85	9.10
FC504K	10	1.75	1.75	1.75	4.20	3.80	3.50	3.35
FC505K	10	1.75	1.75	2.00	6.10	5.35	5.00	4.75
NC601T	11	1.25	2.24	.56	1.40	1.15	0.90	0.75
NC601K	11	1.25	2.24	.56	1.10	0.90	0.70	0.55
NC603T	11	2.00	2.24	.56	1.50	1.20	0.95	0.80
NC603K	11	2.00	2.24	.56	1.20	0.95	0.75	0.60
NC621A	12	1.50	4.81	.46	1.65	1.35	1.10	0.95
NC621B	12	1.50	4.81	.46	1.65	1.35	1.10	0.95
NC621K	12	1.50	4.81	.46	1.35	1.10	0.90	0.75
NC623A	12	3.00	4.81	.46	1.80	1.50	1.20	1.05
NC623B	12	3.00	4.81	.46	1.80	1.50	1.20	1.05
NC623K	12	3.00	4.81	.46	1.50	1.25	1.00	0.85
NC641A	11	3.00	4.12	1.00	1.95	1.60	1.30	1.10
NC641B	11	3.00	4.12	1.00	1.95	1.60	1.30	1.10
NC641K	11	3.00	4.12	1.00	1.65	1.35	1.10	0.90

Series 200 INSTALLATION TOOLS: #160 for Models 201, 3, 5, 7, 9, 22, 24.....\$1.00 EA. #161 for Models 211, 13, 15.....\$1.00 EA.

Type	Fig.	H	W	D	1-49	50-99	100-249	250-499
NC301L	5	.75	2.00	2.00	1.55	1.30	1.05	0.90
NC301M	5	.75	2.00	2.00	1.55	1.30	1.05	0.90
NC301N	5	.75	2.00	2.00	1.55	1.30	1.05	0.90
NC301R	5	.75	2.00	2.00	1.55	1.30	1.05	0.90
NC301RR	5	.75	2.00	2.00	1.85	1.55	1.25	1.10
NC301K	5	.75	2.00	2.00	1.25	1.05	0.85	0.70
NC302L	5	1.50	2.00	2.00	1.65	1.40	1.15	1.00
NC302M	5	1.50	2.00	2.00	1.65	1.40	1.15	1.00
NC302N	5	1.50	2.00	2.00	1.65	1.40	1.15	1.00
NC302R	5	1.50	2.00	2.00	1.65	1.40	1.15	1.00
NC302K	5	1.50	2.00	2.00	1.35	1.15	0.95	0.80
NC302MM	5	1.50	2.00	2.00	1.95	1.65	1.35	1.20
NC302NN	5	1.50	2.00	2.00	1.95	1.65	1.35	1.20
NC302RR	5	1.50	2.00	2.00	1.95	1.65	1.35	1.20
NC303L	5	3.00	2.00	2.00	1.90	1.60	1.30	1.15
NC303M	5	3.00	2.00	2.00	1.90	1.60	1.30	1.15
NC303N	5	3.00	2.00	2.00	1.90	1.60	1.30	1.15
NC303R	5	3.00	2.00	2.00	1.90	1.60	1.30	1.15
NC303K	5	3.00	2.00	2.00	1.60	1.35	1.10	0.95
NC303MM	5	3.00	2.00	2.00	2.20	1.85	1.50	1.35
NC303NN	5	3.00	2.00	2.00	2.20	1.85	1.50	1.35
NC303RR	5	3.00	2.00	2.00	2.20	1.85	1.50	1.35
NC401A	6	1.50	4.81	1.25	1.90	1.55	1.30	1.10
NC401B	6	1.50	4.81	1.25	1.90	1.55	1.30	1.10
NC401E	6	1.50	4.81	1.25	1.90	1.55	1.30	1.10
NC401F	6	1.50	4.81	1.25	1.90	1.55	1.30	1.10
NC401K	6	1.50	4.81	1.25	1.60	1.30	1.10	0.90
NC403A	6	3.00	4.81	1.25	2.10	1.70	1.35	1.15
NC403B	6	3.00	4.81	1.25	2.10	1.70	1.35	1.15

### TEFLON INSULATORS

Type	For Heat Sink Type	No. Req'd.	Price
101	501	3 Pr.	.07 Pr.
101	502, 503, 504, 505	4 Pr.	.07 Pr.
103	301	2	.05 Ea.
103	302, 303	4	.05 Ea.
103	401	3	.05 Ea.
103	403, 421, 423	4	.05 Ea.
103	621, 623, 641	4	.05 Ea.
105	441, 1244, 1245, 1541	4	.20 Ea.
107	301	2	.20 Ea.
(New high voltage version of 103)	302, 303	4	.20 Ea.
	401	3	.20 Ea.
	403, 421, 423	4	.20 Ea.
	621, 623, 641	4	.20 Ea.

### THERMAL JOINT COMPOUND

Improved thermal conductance from semiconductor to cooler may be obtained by applying a light coating of WAKEFIELD Thermal Joint Compound on the mounting surface. This Compound has a thermal conductivity approximately four times that of silicone grease.



Type	Quantity	Price
120	2 oz.	1.95
128	8 oz.	5.10
1280	5 lbs.	30.00





**WAKEFIELD Delta-T KING SIZE HEAT SINKS for High Power Rectifiers and SCRs.**

WAKEFIELD Series GN and WN Natural Convection Heat Sinks are used in systems requiring high reliability such as telephone power supplies, mine equipment rectifiers, etc. These units replace forced convection flat plate techniques, which eliminate fans and the reliability problem introduced. A radial fin design is used to decrease conductor path length and thereby increase fin efficiency.

HEAT SINK Model No.	Hex Size of SCR or Rectifier	Wattage Dissipated for stud rise above ambient of 70°C
GN-1157-5	1 1/4"	100
GN-1251-5.5	1 1/4"	140
WN-1244-5	1 1/4"	100
WN-1245-6	1 1/4"	140
WN-1541-6	1 3/4"	190
WN-1541-9	1 3/4"	230

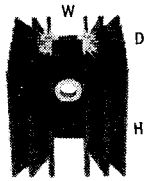
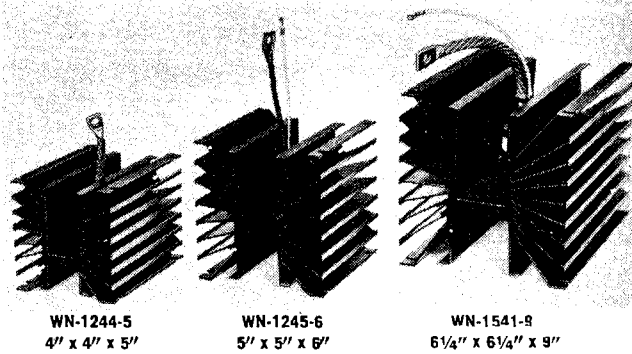


Fig. 13

Masked areas on one end and four 1/4-20 tapped holes on each end permit mounting and electrical connection.

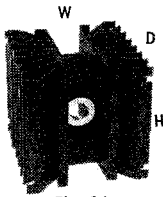
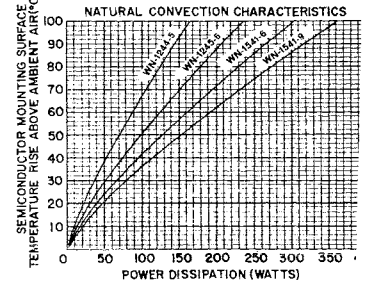
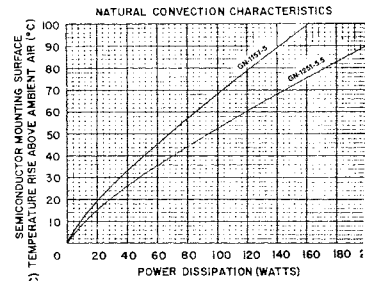


Fig. 14

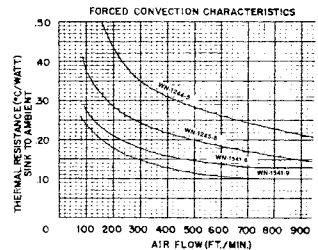
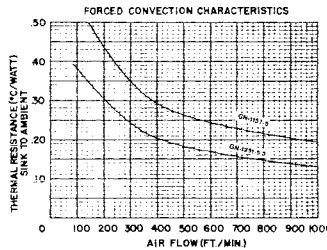
A masked area on the semiconductor mounting surface permits bussing. Sinks may be electrically isolated from mounting with Type 105 insulators.

Type	Fig.	H	W	D	PRICE			
					1-24	25-49	50-99	100-199
GN-1157-5-H	13	5.00	4.125	4.125	5.55	4.75	4.20	3.75
GN-1157-5-J	13	5.00	4.125	4.125	5.55	4.75	4.20	3.75
GN-1157-5-K	13	5.00	4.125	4.125	5.20	4.45	3.95	3.55
GN-1251-5.5-W	13	5.50	5.00	5.00	7.00	6.00	5.30	4.75
GN-1251-5.5-K	13	5.50	5.00	5.00	6.65	5.70	5.00	4.55
WN-1244-5-H	14	5.00	4.00	4.00	4.85	4.15	3.70	3.30
WN-1244-5-J	14	5.00	4.00	4.00	4.85	4.15	3.70	3.30
WN-1244-5-K	14	5.00	4.00	4.00	4.50	3.85	3.40	3.10
WN-1245-6-W	14	6.00	5.00	5.00	6.15	5.25	4.65	4.15
WN-1245-6-K	14	6.00	5.00	5.00	5.80	4.95	4.40	3.95
WN-1541-6-Z	14	6.00	6.25	6.25	9.55	8.20	7.25	6.50
WN-1541-6-Y	14	6.00	6.25	6.25	9.55	8.20	7.25	6.50
WN-1541-6-K	14	6.00	6.25	6.25	9.00	7.75	6.85	6.15
WN-1541-9-Z	14	9.00	6.25	6.25	13.40	11.50	10.20	9.20
WN-1541-9-Y	14	9.00	6.25	6.25	13.40	11.50	10.20	9.20
WN-1541-9-K	14	9.00	6.25	6.25	13.10	11.25	9.90	8.90

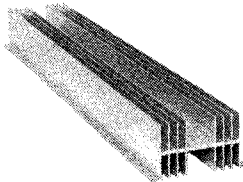


**SERIES GN and WN HEAT SINKS with FORCED CONVECTION**

If high ambient temperatures or unusually high power dissipations mandate thermal impedances lower than those obtainable by natural convection, forced air may be used. The flow velocity can be quite low permitting use of low speed, quiet, reliable fans, because the surface area of these sinks is so much greater than the flat plates formerly recommended for large rectifiers and SCRs.



**EXTRUSION**

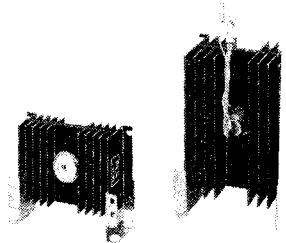


Type	EXTRUSION IN 3 FT. LENGTHS (±1/4")		NET EA. PER 3 FT. LENGTH		
	For Cooler Type	W Dpth.	1-4	5-9	10-25
300	NC-301-303	2.00 2.00	6.00	5.00	4.50
400	NC-401-403	4.81 1.25	7.75	6.50	5.75
420	NC-421-423	4.81 2.63	12.75	11.00	9.50
440	NC-441	4.75 4.50	20.50	17.50	15.50
600	NC-601-603	2.24 .56	3.25	2.75	2.50
620	NC-621-623	4.81 .46	5.75	5.00	4.25
640	NC-641	4.12 1.00	7.50	6.50	5.75
1157	GN-1157-5	4.12 4.12	25.50	22.00	19.25
1251	GN-1251-5.5	5.00 5.00	32.25	27.75	24.50
1244	WN-1244-5	4.00 4.00	25.50	22.00	19.25
1245	WN-1245-6	5.00 5.00	32.50	28.00	24.50
1541	WN-1541-6 & 9	6.25 6.25	51.00	43.75	38.75

**VERTICAL MOUNTING BRACKETS**

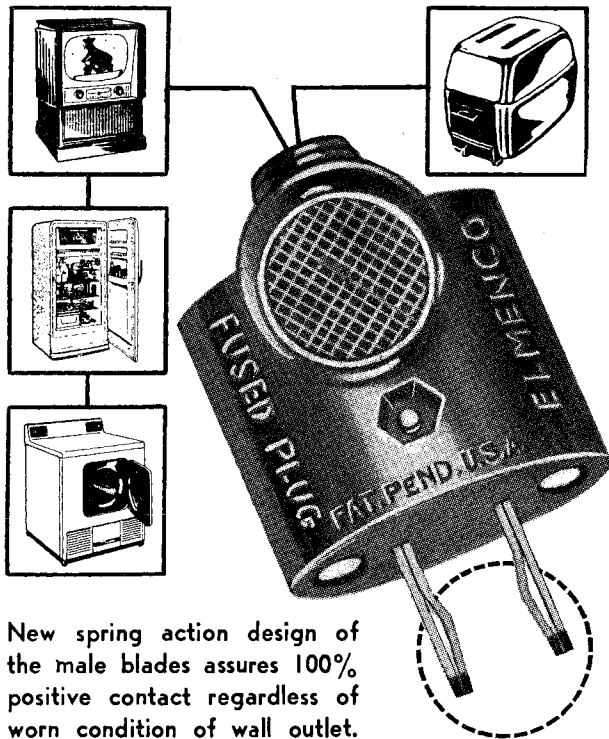
Meet vibration of MIL 202B. For NC-401 and 403 use #111, for NC-421 and 423 use #113. Two brackets required per sink. To insulate, use #103 or #107.

Type	Prices	
	1-49	100-499
111	0.15	0.12
113	0.18	0.15



**WAKEFIELD ENGINEERING, INC.**  
WAKEFIELD, MASS.

*Announcing an important NEW Feature*



New spring action design of the male blades assures 100% positive contact regardless of worn condition of wall outlet.

OF THE  
**ELMENCO**  
*Fused Plug*  
**Spring**  
**Action**  
 For  
**POSITIVE CONTACT**  
 plus  
**Impact Resistant Cover**



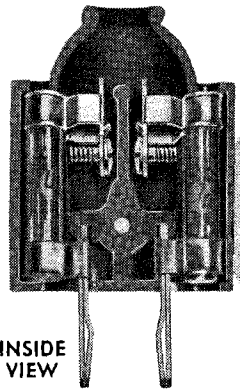
LIST PRICE **75¢** LESS FUSES

**OFFERS COMPLETE PROTECTION  
 AGAINST CURRENT SURGES & SHORT CIRCUITS  
 PROTECTS ELECTRICAL APPLIANCES!**

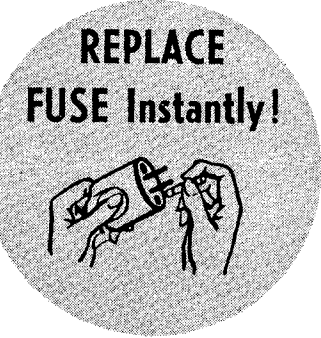


Conveniently Packed 10 to a Box In Colorful Self-merchandising displays. Easy to handle for resale

The Elmenco Fused Plug is like any standard plug, is light in weight, but easier to handle because of finger grips. However, it contains 2 small fuses which provide complete protection against damage to the appliance and to the main line. The blown fuse is easy to remove and simple to replace. Fits any standard wall outlet.



INSIDE VIEW

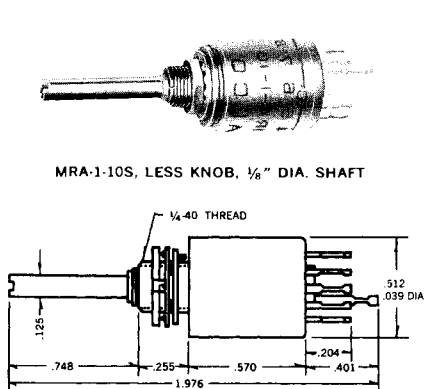


Fuses are replaced instantly without need of opening plug. Can be used with standard 3AG and 3AB glass tubular fuses up to 20 amps.

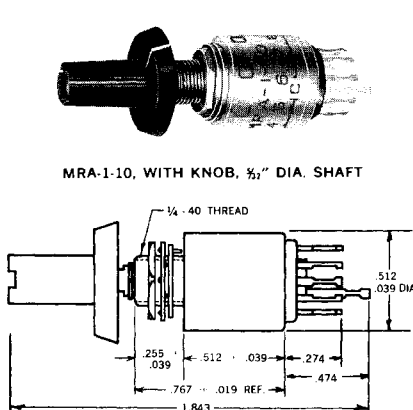
**ARCO electronics inc.** NEW YORK, N. Y.  
 BRANCHES: Dallas 7, Texas, Los Angeles 35, California

# ALCOSWITCH MANUFACTURED TO MEET HIGH STANDARDS OF QUALITY AND MINIATURIZATION REQUIREMENTS

## ADJUSTABLE-STOP ROTARY PUSH BUTTON



MRA-1-10S, LESS KNOB, 1/8" DIA. SHAFT



MRA-1-10, WITH KNOB, 1/32" DIA. SHAFT

First, new ultra-miniature rotary switches with the invaluable feature of an adjustable-stop. Ideal for installations where size and space limitations are a factor including applications in aircraft, computers, and all types of electronic equipment. The only one of its kind, the adjustable-stop miniature rotary switch has these additional features • non-shorting • 36° spacing • up to 4 poles on single deck.

### SPECIFICATIONS

**Current Rating:**  
500 ma @ 125 VAC.  
**Initial Contact Resistance:**  
Below 20 milliohm at 2-4 VDC and at rated current.  
**Insulating Resistance:**  
Over 100 megohms between terminals and case ground (when measured with a megger of 500 VDC at room temp.)  
**Voltage Breakdown:**  
1000 VAC between terminals and case ground for a duration of one minute.  
**Life Cycle:**  
Over 10,000 switching operations at the rate of 15 to 20 full rotations per minute at the rated current.

**Contacts and Terminals:**  
Solid silver.  
**Bushing Size:**  
1/4 - 40.  
**Shaft:**  
See Below  
**Humidity: Models MRA-S Only (1/4" shaft)**  
Tested at a temperature of 40°C and relative humidity of 90-95% for 10 hours. Resistance between terminals and case ground will be more than 10 megohms.  
**Stop Guide Strain: Models MRA-S Only**  
The stop guide which limits rotation shall not be subjected to a force of not more than 2 Kg-cm.

### INDUSTRIAL NET PRICE SCHEDULES

#### LESS KNOB — 1/8" DIA. SHAFT

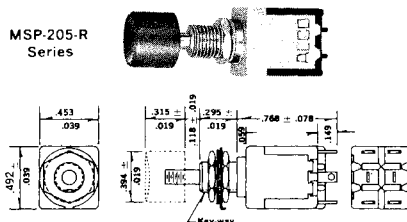
MODEL	USABLE	One-24	25-99	100-499	500-999
MRA-1-10S	2-10 pos.	3.85	2.57	2.31	1.925
MRA-2-5S	2- 5 pos.	3.85	2.57	2.31	1.925
MRA-3-3S	2- 3 pos.	3.85	2.57	2.31	1.925
*MSRA-4-2S	2 pos.	3.85	2.57	2.31	1.925

\*Fixed

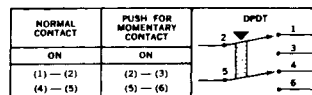
#### WITH KNOB — 1/32" DIA. SHAFT

MODEL	USABLE	One-24	25-99	100-499	500-999
MRA-1-10	2-10 pos.	3.85	2.57	2.31	1.925
MRA-2-5	2- 5 pos.	3.85	2.57	2.31	1.925
MRA-3-3	2- 3 pos.	3.85	2.57	2.31	1.925
*MSRA-4-2	2 pos.	3.85	2.57	2.31	1.925

\*Fixed



High current capacity in this new compact momentary push button switch designed for reliable control in aviation, military and industrial "miniature" requirements. Contact pressure is greatest at point of make and break. An audible click is produced by the snap-action mechanism. Available only as DPDT, usable as either a Normally Open or Normally Closed switch.



### SPECIFICATIONS

**Current Rating:**  
5 amperes, 115 volts  
**Initial Contact Resistance:**  
Below 10 milliohms at 2-4 VDC 1 amp  
**Insulating Resistance:**  
Over 100 megohms between terminals and case ground (when measured with a megger of 500VDC.)  
**Voltage Breakdown:**  
1000 VAC between terminals and case ground for a duration of one minute.  
**Life Cycle:**  
Well over 20,000 on-off switching actions at rated current.  
**Contacts and Terminals:**  
Solid Silver  
**Case Material:**  
Black phenolic resin  
**Bushing Size:**  
1/4"-40

MODEL	COLOR	ONE-24	25-99	100-499	500-999
MSP-205R *	(RED-BLACK)	2.85	1.90	1.71	1.42
C-12 BUTTON	(RED-BLACK)	.05	.036	.03	.027

\*One red or black button supplied — state color

### DIMENSIONED DRAWINGS

ENGINEERS: If dimensions or specifications are critical, obtain drawings from ALCOSWITCH, Lawrence, Mass.

ALCOSWITCHES are high-quality, reliable units, which have been proved by laboratory tests.

24-HOUR DELIVERY FROM STOCK

### AUXILIARY PUSH BUTTONS

The MSP-205 series push button ALCOSWITCHES are normally supplied with black buttons and are also available in red when requested. Additional push buttons can also be obtained. When ordering state choice of color, special markings, i. e. letters, numerals, symbols which are available for quantity users above 5000 pieces.

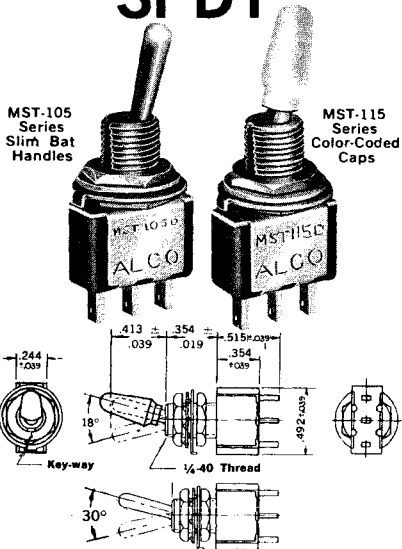
# ALCOSWITCH

LAWRENCE MASS.

# ALCOSWITCH

MANUFACTURED TO MEET  
HIGH STANDARDS OF QUALITY

## SPDT



Ultra-miniaturized **ALCOSWITCH** has an exceptionally high current capacity in a tiny case. The 1/4" thin toggle switch can be mounted in extremely close areas for aircraft and electrical equipment. Over 80,000 on-off operations. Solid silver contacts and terminals. Simple one-hole mounting.

### SPECIFICATIONS

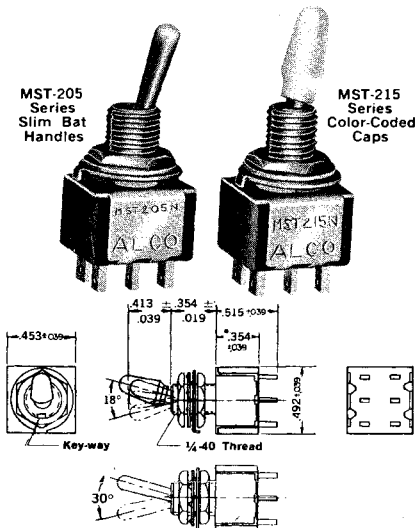
- Insulating Resistance:**  
Over 1000 megohms @ 500 VDC.
- Voltage Breakdown:**  
Over 1000 volts @ 60 cycles.
- Life Cycle:**  
Well over 80,000 on-off actions.
- Moisture Resistance:**  
Over 8 megohms after 48 hours at 40°C, and humidity of 95%.
- Heat Resistance:**  
One Hour @ 140°C.
- Case Material:**  
Black phenolic resin.
- Contacts:**  
Solid silver.
- Bushing Size:**  
Standard 1/4.40, usable up to 1/4" panel thickness.

### INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	One- 25-	100-	500-
	24	99	499 999
MST-115D On-None-On	1.65	1.12	.99 .83
MST-105D On-None-On	1.65	1.12	.99 .83
MST-105E On-Off-On	1.95	1.33	1.17 .975
MST-105F On-None-(On)	1.95	1.33	1.17 .975
MST-105G (On)-Off-(On)	1.95	1.33	1.17 .975
MST-105H On-Off-(On)	1.95	1.33	1.17 .975

(On) (Off) Indicates Momentary Positions

## DPDT



Combines high capacity, ultra-miniature size and long life with **ALCOSWITCH** precision. Rated at 5 amperes @ 115 VAC. Contacts and terminals are of solid silver. 1/2" sq. case size makes it ideal for miniature equipment with critical applications and rear panel space limitations.

### SPECIFICATIONS

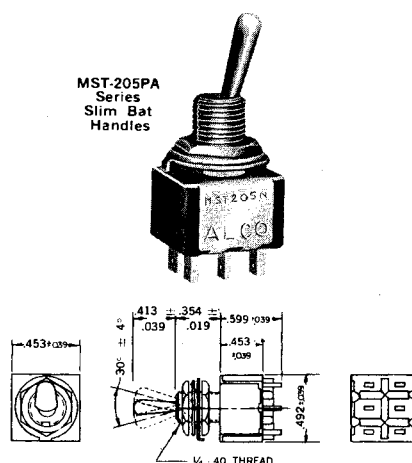
- Insulating Resistance:**  
Over 1000 megohms @ 500 VDC.
- Voltage Breakdown:**  
Over 1000 volts @ 60 cycles.
- Life Cycle:**  
Well over 80,000 on-off actions.
- Moisture Resistance:**  
Over 8 megohms after 48 hours at 40°C, and humidity of 95%.
- Heat Resistance:**  
One Hour @ 140°C.
- Case Material:**  
Black phenolic resin.
- Contacts:**  
Solid silver.
- Bushing Size:**  
Standard 1/4.40, usable up to 1/4" panel thickness.

### INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	One- 25-	100-	500-
	24	99	499 999
MST-215N On-None-On	2.15	1.43	1.29 1.08
MST-205N On-None-On	2.15	1.43	1.29 1.08
MST-205P On-Off-On	2.55	1.72	1.53 1.28
MST-205R On-None-(On)	2.55	1.72	1.53 1.28
MST-205S (On)-Off-(On)	2.55	1.72	1.53 1.28
MST-205T On-Off-(On)	2.55	1.72	1.53 1.28

(On) (Off) Indicates Momentary Positions

## SPECIAL

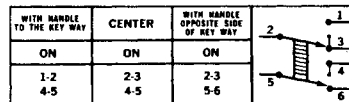


### DPDT ON-ON-ON

New ON-ON-ON toggle switch made for applications where the Center-ON position is desired. The DPDT is designed to have "ON" positions at opposite sides of the lever throw with the Center-ON operational when either circuit is used. 5 amperes @ 115 VAC. Ultra-miniature size is only 1/2".

### SPECIFICATIONS

- Initial Contact Resistance:**  
Below 20 milliohms at 2-4 VDC, 1 amp.
- Insulating Resistance:**  
Over 1000 megohms between terminals and case ground @ 500 VDC.
- Voltage Breakdown:**  
1000 VAC between terminals and case ground for a duration of one minute.
- Life Cycle:**  
Well over 15,000 on-off switching actions at rated current.

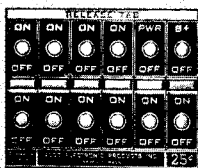


### INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	One- 25-	100-	500-
	24	99	499 999
MST-205PA On On On	2.85	1.90	1.71 1.42

## ALCOSWITCH

### ALUMINUM FOIL SWITCH PLATES

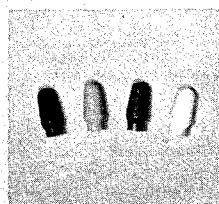


Pressure sensitive "on-off" plates for **ALCOSWITCHES** and other miniature switches having 1/4" bushing; and for standard switches requiring 1/2" hole.

MODEL DESCRIPTION	One- 50-	100-
	.49	99 Over
SP-1 Miniature type	25c	20c 18c
SP-2 Standard type	25c	20c 18c

### COLOR-CODED CAPS

Caps will fit only MST-115D, MST-215N, MST-315D, MST-415N series switches.



The revolutionary feature of color-coded plastic caps for toggle switches has already proved to be an invaluable aid in aircraft installations and hazardous applications. Caps are removable from handle, and are normally supplied in white, but are also available in optional colors of red, blue, black.

MODEL DESCRIPTION	One- 25-	100-	500-
	24	99	499 999
C-11 (White, Red, Blue, Black)	.04	.028	.025 .022

LAWRENCE  
MASS.

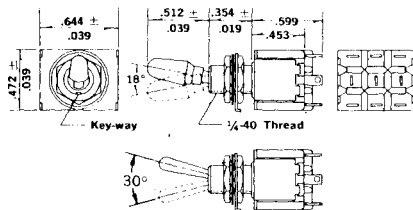
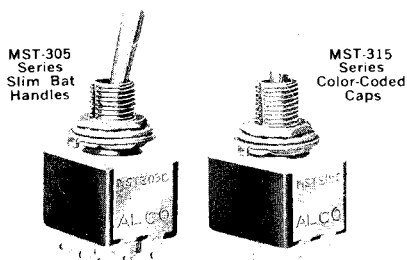
# ALCOSWITCH

CABLE  
ADDRESS:  
ALTRONICS

# ALCOSWITCH

MANUFACTURED TO MEET  
MINIATURIZATION REQUIREMENTS

## 3PDT



Features one-piece body construction for ultra-miniature space requirements. Has unusually high current rating, and is capable of handling multiple circuits simultaneously. Has high voltage barriers between terminals and contacts firmly anchored to base.

### SPECIFICATIONS

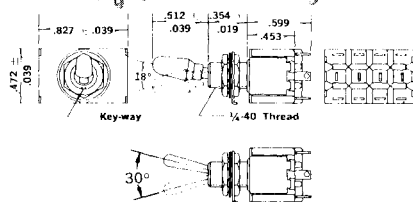
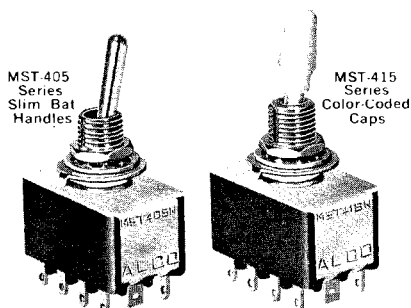
- Initial Contact Resistance:**  
Below 20 milliohms at 2-4 VDC, 1 amp.
- Insulating Resistance:**  
Over 1000 megohms between terminals and case ground @ 500 VDC.
- Voltage Breakdown:**  
1000 VAC between terminals and case ground for a duration of one minute.
- Life Cycle:**  
Well over 25,000 on-off switching actions at rated current.
- Contacts and Terminals:**  
Solid silver.
- Case Material:**  
Black phenolic resin.
- Bushing Size:**  
Standard 1/4-40 • Nut, 1/8" across flats

### INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	One-25-	100-	500-
	24	99	499 999
MST 305D On-None-On	3.85	2.57	2.31 1.925
MST 315D On-None-On	3.85	2.57	2.31 1.925

ALCOSWITCH

## 4PDT



The world's first 4-Pole toggle switch with a one-piece miniaturized body construction. Includes high voltage barriers, solid silver terminals and contacts. Can be easily mounted in compact aircraft and electronic equipment.

### SPECIFICATIONS

- Initial Contact Resistance:**  
Below 20 milliohms at 2-4 VDC, 1 amp.
- Insulating Resistance:**  
Over 1000 megohms between terminals and case ground @ 500 VDC.
- Voltage Breakdown:**  
1000 VAC between terminals and case ground for a duration of one minute.
- Life Cycle:**  
Well over 25,000 on-off switching actions at rated current.
- Contacts and Terminals:**  
Solid silver.
- Case Material:**  
Black phenolic resin.
- Bushing Size:**  
Standard 1/4-40 • Nut, 1/8" across flats

### INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	One-25-	100-	500-
	24	99	499 999
MST 405N On-None-On	4.85	3.29	2.96 2.55
MST 415N On-None-On	4.85	3.29	2.96 2.55

ALCOSWITCH

## ALCOSWITCH

With the coming of the space age, weight, size, precision, stability, and difficult operating conditions place a mighty "squeeze" on electronic design. Along with miniature circuit components, engineers have to fit switches into exceedingly small areas. Today, new materials, new manufacturing techniques, new components and new switches enter into the final engineering product requiring miniaturization.

As a result, modern ALCOSWITCHES have been created to reduce size and weight to a minimum and bear little physical resemblance to the older switches designed during the 1930's and 1940's. These ALCOSWITCHES are the new shape of miniature switching devices, not of the future, but what is currently available in quantity for laboratory testing and production use.

### SPDT AND DPDT SERIES

A new ALCOSWITCH SERIES of high quality ultra-miniature toggle switches is ideally suited for limited space requirements. Conservatively rated at 5 amperes @ 115 VAC.

### 3PDT AND 4PDT SERIES

The feature of the one-piece body construction is to ultra-miniaturize the case size and still be consistent with good engineering specifications. In the switch mechanism, the toggle is linked directly to the movable contact member, providing positive make and break. The switch is designed to obtain positive detent action for improved "operator feel". Solid silver contacts and terminals are well-spaced for clearance, easy wiring, and good soldering ability.

### SPECIAL ON-ON-ON

This unique switching arrangement is completely enclosed in a compact black phenolic housing, and in certain applications takes the place of a 3-position rotary switch. Features a slim miniature bat handle, solid silver contacts and terminals.

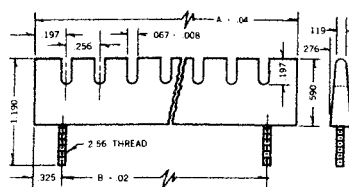
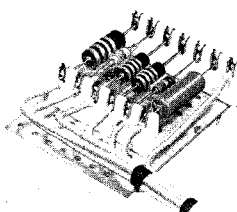
**ENGINEERS:** If dimensions or specifications are critical, obtain drawings from ALCOSWITCH, Lawrence, Mass.

24-HOUR  
DELIVERY  
FROM STOCK

## NEW CERAMIC TERMINAL STRIPS

Ceramic base terminal strips have copperplate inserts that are silverplated and tinned for good soldering ability. Bond between metal and ceramic is not just an adhesion, but "fired" to prevent metal from falling off.

MODEL	TERMINALS	One-9	10-99	100 Over
MEP-2	2	36¢	24¢	21¢
MEP-4	4	45¢	30¢	25¢
MEP-6	6	60¢	40¢	34¢
MEP-8	8	75¢	50¢	42¢
MEP-10	10	87¢	58¢	49¢
MEP-12	12	99¢	66¢	56¢



MODEL NO.	SLOTS	"A"	"B"
MEP-2	2	.650	—
MEP-4	4	1.161	.512
MEP-6	6	1.673	1.024
MEP-8	8	2.185	1.535
MEP-10	10	2.697	2.047
MEP-12	12	3.209	2.560

# ALCOSWITCH

LAWRENCE  
MASS.

# Birnbach

## ARROW H & H SWITCHES

TOGGLE • PUSH BUTTON • ROTARY • KNIFE • POWER • SLIDE



**1 MOMENTARY CONTACT PUSH BUTTON**  
Solder lugs; laminated type. Has 9/16" slotted sleeve, 15/32-32 TPI Complete with hex and knurled nut; nickel plated; all accept snap on button. Supplied less insulating button.

**QUICK MAKE AND BREAK**

Cat. No.	Descrip.	Type	Current Rating
6184	..SPST	Normally Closed (On)	.3 amps
6184A	..SPST	Normally Open (Off)	.3 amps
6185	..SPDT	Normally Closed (On)	.1 amp
6185	..SPDT	Normally Open (Off)	.1 amp
6186	..2 Circ.	Normally Closed (On)	.1 amp
6231A	..DPST	Normally Closed (On)	.1 amp
6231	..DPST	Normally Open (Off)	.1 amp
6231B	..DPDT	Normally Closed (On)	.1 amp
6232	..Button only	red or black	

**SLOW MAKE AND BREAK**

Cat. No.	Descrip.	Type	Current Rating
6180	..SPST	Normally Closed (On)	.1 amp
6230	..SPST	Normally Open (Off)	.1 amp
6224	..2 Circ.	Normally Closed (On)	.1 amp

**3 INTERMEDIATE SIZE TOGGLE-BAT**

Molded phenolic base; back connected silver plated solder lug contacts; supplied with hex nut and knurled nut. SPDT rated at 1 amp-250V, 6 amps-125 volts AC-DC; others rated at 3 amps-250V, 6 amps-125V AC-DC.

**Std. Pkg. 25**

Cat. No.	Description	Type	Action
6280	..SPST		POSITIVE
6280A	..SPST	MOM.	NORM. OFF
6281	..SPDT		POSITIVE
6281A	..SPDT		MOMENTARY
6284	..2 CIRC.		POSITIVE
6282	..DPST		POSITIVE
6282A	..DPST	MOM.	NORM. OFF
6283	..DPDT		POSITIVE
6283A	..DPDT		MOMENTARY

**2 THREE POSITION—CENTER OFF**  
Rated 3 amps-250 V, 6 amps-125 V AC-DC

Cat. No.	Description	Type
6261	..SPDT	
6262	..2 CIRC	
6263	..DPDT	

**2 BAKELITE MOLDED MOMENTARY CONTACT SWITCHES**  
Same as above except momentary. SPST Normally Off. 3 A., 250 V. UL approved. Rated 6 A., 125 V.

Cat. No.	Description	Shank Length
6240	..SPST	.35"
6241	..SPDT	.35"
6242	..DPDT	.35"

**4 MOMENTARY PUSH BUTTON**

Molded momentary, solder lugs. Rated 1 A., 125 V. With 9/16" shank, normally OFF—push to make. Nickel plated. UL approved.

Cat. No.	Descrip.	Std. Pkg.
6233	..SPST	25
6234	..SPDT	25
6235	..DPST	25
6236	..DPDT	25

**6 MIDGET SIZE TOGGLE POS. ACTION**  
SPST Rated 3 Amps—250 Volts, 6 amps—125 Volts. Others Rated 1 Amp—250 Volts, 6 amps—125 Volts. Molded Phenolic base. 15/32—32 x 15/32" long slotted sleeve, Nickel finish; solder lugs.

Cat. No.	Description	Type
6244	..SPST	Ball Handle
6244A	..SPST	Bat Handle
6244B	..SPDT	Ball Handle
6244C	..SPDT	Bat Handle
6244D	..2 circ.	Ball Handle
6244E	..2 circ.	Bat Handle

**16 ROTARY SWITCHES**

**CANOPY TYPE—ROTO LOCK**

Laminated phenolic sections—solder lugs; sleeve 11/32" diam. 32 threads per inch; nickel finish; Rotary switches supplied with two hex nuts; roto lock key types have 15/32" diam. 32 threads per inch; key removable in off position only on SPST and DPST—key removable in both positions on all others. SPST rated at 3 amps-250 V AC-DC, others rated at 1 amp-250 V, 3 amps-125 volts AC-DC.

Cat. No.	Description	Std. Pkg.
6110	..SPST	12
6111	..SPDT	12
6112	..DPST	12
6113	..DPDT	12
6114	..Key—Rem. Off Pos.	100
6115	..Key—Rem. Both Pos.	100

**Canopy type rotary**

Cat. No.	Description	Std. Pkg.
6210	..SPST	1 1/2"
6211	..SPST	1"
6212	..SPDT	1"
6213	..SPDT	1"
6214	..DPST	1"
6215	..DPST	1"
6216	..DPDT	1"
6217	..DPDT	1"

**BALL HANDLE TOGGLE SWITCHES 10 POSITIVE ACTION**

UL approved. Ball lever switches nickel plated; laminated type; ring and mounting nuts.

Cat. No.	Descrip.	Shank Length	Current Rating
6200	..SPST	15/32"	.3 amps
6201	..SPST	3/4"	.3 amps
6202	..SPDT	15/32"	.3 amps
6202A	..2 Circ.	15/32"	.3 amps
6203	..SPDT	3/4"	.3 amps
6204	..DPST	15/32"	.3 amps
6205	..DPST	3/4"	.3 amps
6206	..DPDT	15/32"	.3 amps
6207	..DPDT	3/4"	.3 amps

**BAT HANDLE TOGGLE SWITCHES 11 POSITIVE ACTION**

UL approved. Laminated type. Nickel plated finish; supplied with ring and mounting nuts. 15/32" shank; solder terminals; SPST rated at 3 amps 250V AC-DC, others rated at 1 amp 250V, 3 amps 125V AC-DC. Std. Pkg. 25.

Cat. No.	Description	Current Rating
6220	..SPST	.3 amps
6221	..SPDT	.3 amps
6221A	..2 Circ.	.3 amps
6222	..DPST	.3 amps
6223	..DPDT	.3 amps

**BAT HANDLE MOMENTARY ACTION 11**  
UL approved. Laminated type. Nickel plated finish; supplied with ring and mounting nuts. 15/32" shank; solder terminals; SPST rated at 3 amps 250V AC-DC, others rated at 1 amp 250V, 3 amps 125V AC-DC. Std. Pkg. 25.

Cat. No.	Description	Type
6190	..SPST	Normally Closed (On)
6191	..SPST	Normally Open (Off)
6192	..SPDT	Normally Closed (On)
6193	..DPST	Normally Closed (On)
6194	..DPST	Normally Open (Off)
6195	..DPDT	Normally Closed (On)

**ST TYPE PER SPEC. JAN-S-23 12**  
Std. Pkg. 25

Bat handle, back connected, silver plated solder lug contacts; slotted sleeve. Supplied with two hex nuts. Molded phenolic base; 15/32-32 x 15/32" long, nickel finish. They meet, where applicable. All Jan-S-23 and Mil-S-8745 Specs.

Cat. No.	Aws No.	Description
6250	..ST-12A	..SPST
6251	..ST-12D	..SPDT
6251C	..ST-12C	..SPST
6251V	..ST-12V	..2 Circ.
6252	..ST-22K	..DPST
6252M	..ST-22M	..DPST
6253	..ST-22N	..DPDT

Cur. rate 125V 6A, 250V 3A, Std. Pkg. 25.

6270*	..ST-42A	..SPST
6271*	..ST-42D	..SPDT
6249*	..ST-42E	..SPDT
6272**	..ST-52K	..DPST
6273**	..ST-52N	..DPDT
6274**	..ST-52P	..DPDT

\*Cur. rate 125V 15A, 250V 6A.  
\*\*Cur. rate 125V 25A, 250V 9A.  
Std. Pkg. 25.

**STANDARD DUTY MOM. PUSH BUTTON 13**  
Molded phenolic base; 15/32-32x7/16" long slotted sleeve; nickel finish; screw terminals; complete with two hex nuts. All accept snap on button; supplied less insulating button. Cur. rate 125V 12A, 250V 6A.

Cat. No.	Description	Type
6238	..SPST	Normally Closed
6238B	..SPDT	Normally Closed (on)
6238C	..2 Circ.**	Normally Closed (on)
6226	..DPST*	Normally Open (off)
6238D	..DPST*	Normally Closed (on)

\*1 H.P. 250 V.A.C.-D.C.  
\*\*Cur. rating 1/2.

**STANDARD DUTY TOGGLE SWITCHES 14**  
Molded phenolic base; 15/32-32 x 7/16" long slotted sleeve; nickel finish; screw terminals; complete with one hex nut, one knurled nut.

Cat. No.	Description	Current Rating
6225A	..SPST	12 amps
6225B	..SPDT	12 amps
6225C	..2 Circ.	6 amps
6225	..DPST*	12 amps

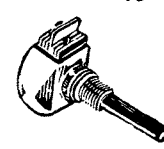
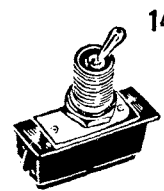
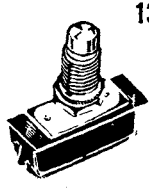
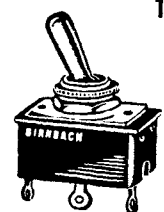
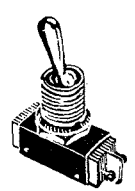
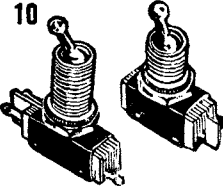
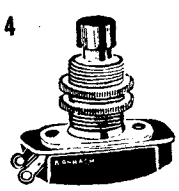
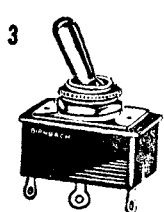
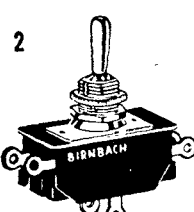
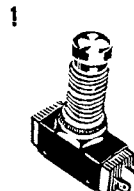
\*1 HP 250 V. Std. Pkg. 10.

**EXTRA HEAVY DUTY POWER SWITCHES 15 3 POSITION—POSITIVE CENTER OFF**

Molded phenolic base; screw terminals; slotted sleeve 3/4-32; nickel finish; with two hex nuts. Rated at 5 Amps—250 V, 10 Amps—125 V.

Cat. No.	Description	Circuit
6227	..DPDT	3/4 H.P. 250 V.A.C.-D.C.
6228	..3PDT	1/2 H.P. 115/230 V.A.C. 3 phase
6229	..4PDT	1/2 H.P. 115/230 V.A.C. 2 phase

Std. Pkg. 10.







# Birnbach

## CUTLER-HAMMER SWITCHES



### ONE HOLE MOUNTING TOGGLE SWITCHES

Approved Under MIL-S-3950A Spec.

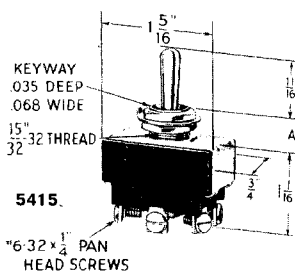
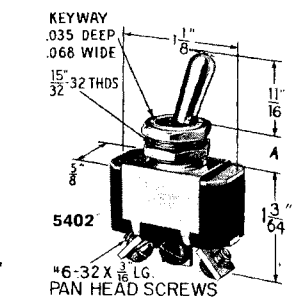
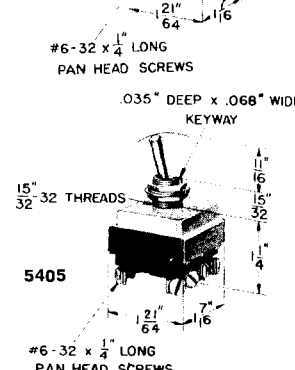
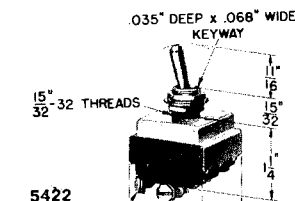
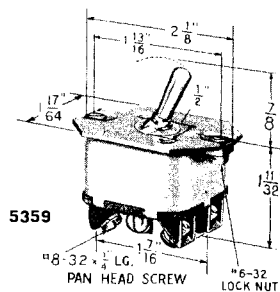
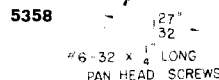
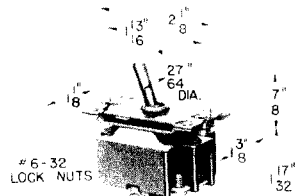
These switches are lever sealed with special silicone rubber between lever and bushing which will retain flexibility and reliability against sand, dust, water and other environmental conditions. They are unaffected by ozone or sunlight and do not absorb oil or water, meeting 15 ft. water submersion test. Pliability or firmness not affected by extremes in temperature, high or low. Terminals plated.

Rating: Current Capacity (amps.)  
 Nom. Ratings 10 amps. 115 V. AC  
 20 amps. 28 V. DC

#### One Pole per MS 35058 — Sealed Lever (Screw Terminal)

Birnbach No.	C-H	"MS" No.	Type	Circuit	Net Ea.
5358-21	8800K16	MS35058-21	SPDT	On-Off-On	2.01
5358-22	8801K22	MS35058-22	SPST	On-None-Off	1.68
5358-23	8810K15	MS35058-23	SPDT	On-None-On	2.04
5358-24	8801K23	MS35058-24	SPST	On-Off-None	1.68
5358-25	8813K18	MS35058-25	SPST	On-Mom. Off-None	1.86
5358-26	8804K13	MS35058-26	SPDT	On-None-Mom. On	2.19
5358-27	8812K14	MS35058-27	SPDT	Mom. On-Off-Mom. On	2.19
5358-28	8811K18	MS35058-28	SPST	None-Off-Mom. On	1.86
5358-29	8813K17	MS35058-29	SPST	On-None-Mom. Off	1.86
5358-30	8811K17	MS35058-30	SPST	Off-None-Mom. On	1.86
5358-31	8809K16	MS35058-31	SPDT	On-Off-Mom. On	2.19

Std. Pkge. 10



Nom. Rating per Pole:  
 10 amps. 115 V. AC  
 20 amps. 28 V. DC

#### Two Pole per MS 35059A Sealed Lever — (Screw Terminal)

Birnbach No.	C-H	"MS" No.	Type	Circuit	Net Ea.
5359-21	8820K16	MS35059-21	DPDT	On-Off-On	2.70
5359-22	8822K20	MS35059-22	DPST	On-None-Off	2.25
5359-23	8824K14	MS35059-23	DPDT	On-None-On	2.70
5359-24	8822K21	MS35059-24	DPST	On-Off-None	2.25
5359-25	8828K12	MS35059-25	DPDT	On-Mom. Off-None	2.70
5359-26	8830K13	MS35059-26	DPDT	On-None-Mom. Off	2.97
5359-27	8834K5	MS35059-27	DPDT	Mom. On-Off-Mom. On	2.94
5359-28	8826K14	MS35059-28	DPST	None-Off-Mom. On	2.70
5359-29	8828K13	MS35059-29	DPST	On-None-Mom. Off	2.70
5359-30	8826K15	MS35059-30	DPST	Off-None-Mom. On	2.70
5359-31	8832K6	MS35059-31	DPDT	On-Off-Mom. On	2.94

Std. Pkge. 10

MS and AN types use internal sand and dust toggle seals. MS25098 and MS25100 series call for solder terminals only. MS types to MIL-S-3950A (recommended) have internal toggle seals to meet 15 ft. water submersion test. For heavy duty switches, MIL-S-3950A (-21 and higher) in MS25061, MS35058 and MS35059 series call for screw terminals only. These terminals are prepared for soldering and can be soldered when screw is removed.

Nom. Rating per Pole:  
 10 amps. 115 V. AC  
 20 amps. 28 V. DC

#### Four Pole—Sealed Lever — Screw Terminals Per MIL-S-3950A—Series MS25068

Birnbach No.	C-H	"MS" No.	Type	Circuit	Net Ea.
5422-1	7662K5	MS25068-1	4PDT	On-Off-On	6.18
5424-3	7664K3	MS25068-3	4PDT	On-None-On	6.18
5430-5	7670K4	MS25068-5	4PDT	On-Off-Mom. On	7.44
5432-7	7672K4	MS25068-7	4PDT	Mom. On-Off-Mom. On	7.44
5340-10	7674K4	MS25068-10	4PDT	On-None-Mom. On	7.44
5420-11	7660K9	MS25068-11	4PST	On-Off-None	4.95
5426-12	7666K7	MS25068-12	4PST	None-Off-Mom. On	6.69
5428-13	7668K5	MS25068-13	4PST	On-Mom. Off-None	6.69
<b>HEAVY DUTY</b>					
5422-21	7662K7	MS25068-21	4PDT	On-Off-On	6.18
5424-23	7664K5	MS25068-23	4PDT	On-None-On	6.18
5420-24	7660K13	MS25068-24	4PST	On-Off-None	4.95
5428-25	7668K7	MS25068-25	4PST	On-Mom. Off-None	6.69
5434-26	7674K5	MS25068-26	4PDT	On-None-Mom. On	7.44
5432-27	7672K5	MS25068-27	4PDT	Mom. On-Off-Mom. On	7.44
5426-28	7666K9	MS25068-28	4PST	On-Off-Mom. On	6.69
5430-31	7670K6	MS25068-31	4PDT	On-Off-Mom. On	7.44

Std. Pkge. 12

Nom. Rating per Pole:  
 15 amps. 115 V. AC  
 25 amps. 28 V. DC

#### Double Pole Per MIL-S-3950A Spec. — Sealed Lever Switch — Flush Mounted

Birnbach No.	C-H	"MS" No.	Type	Circuit	Net Ea.
5405-21	8700K15	MS25103-21	DPDT	On-Off-On	4.98
5405-23	8710K15	MS25103-23	DPDT	On-None-On	4.98
5405-24	8716K7	MS25103-24	DPST	On-Off-None	4.14
5405-25	8717K5	MS25103-25	DPST	On-Mom. Off-None	4.89
5405-26	8715K15	MS25103-26	DPDT	On-None-Mom. On	5.37
5405-27	8712K15	MS25103-27	DPDT	Mom. On-Off-Mom. On	5.37
5405-28	8718K5	MS25103-28	DPST	None-Off-Mom. On	4.86
5405-31	8709K15	MS25103-31	DPDT	On-Off-Mom. On	5.37

Std. Pkge. 10

Nom. Rating per Pole:  
 20 amps. 115 V. AC  
 25 amps. 28 V. DC

#### Three Pole—Flush Mounting (Screw Terminals)—Per MIL-S-3950A—Sealed Lever

Birnbach No.	C-H	"MS" No.	Type	Circuit	Net Ea.
5402	8742K10	MS25105-21	3PDT	On-Off-On	4.59
5400	8740K12	MS25105-24	3PST	On-None-Off	3.84
5401	8744K10	MS25105-23	3PDT	On-None-On	4.59

Std. Pkge. 12

Nom. Rating per Pole:  
 10 amps. 115 V. AC  
 20 amps. 28 V. DC

#### Four Pole—Flush Mounting—Sealed Lever per MIL-S-6745—(Screw Terminals)

Birnbach No.	C-H	"AN" No.	Type	Circuit	Net Ea.
5415	8880K5	AN3227-1	4PDT	On-Off-On	6.18
5410	8882K5	AN3227-2	4PST	On-None-Off	4.95
5413	8884K5	AN3227-3	4PDT	On-None-On	6.18
5418	8887K5	AN3227-5	4PDT	On-Off-Mom. On	7.44
5417	8888K5	AN3227-7	4PDT	Mom. On-Off-Mom. On	7.44
5412	8886K5	AN3227-8	4PST	Off-None-Mom. On	6.69
5412A	8882K6	AN3227-9	4PST	On-Off-None	4.95
5412B	8886K6	AN3227-10	4PST	None-Off-Mom. On	6.69

Std. Pkge. 12

# Birnbach

## CUTLER - HAMMER SWITCHES



### POSITIVE ACTION SWITCHES

Especially designed for aircraft, missile and electronic applications. Made in two types—one with lever seals, the other environment sealed. Lever seal is bonded to the bushing and lever—will withstand a 15 ft. head of water, or between 6.5 to 7 lbs. per sq. inch. The environment sealed switches have seals under each contact and also a seal between switch base and the shell and are designed to pass a glycol temp. cycling test submerged for 20,000 operations per minute. The contact wiping action keeps contacts clean and smooth. Superior design, smooth operation. Screw terminals are tin-dipped to facilitate soldering if required.

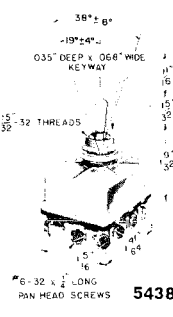
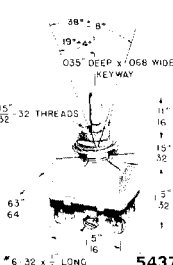
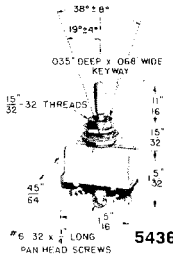
#### Current Rating, All Switches

Current Capacity  
(Amps. per Pole)  
28 V. D-C

Current Capacity  
(Amps. per Pole)  
115 V. — 400 cycles A-C

Current Capacity  
(Amps. per Pole)  
115 V. — 60 cycles A-C

#### One Pole—Environment Sealed—Per MIL-S-8834 Specification



Birnbach No.	C-H	"MS" No.	Type	Circuit	Net Ea.
5436-21	8836K1	MS25306-21	SPDT	On-Off-On	6.93
5436-22	8836K9	MS25306-22	SPST	On-None-Off	6.42
5436-23	8836K4	MS25306-23	SPDT	On-None-On	6.93
5436-24	8836K6	MS25306-24	SPST	On-Off-None	6.42
5436-25	8836K8	MS25306-25	SPST	On-Mom. Off-None	6.93
5436-26	8836K5	MS25306-26	SPDT	On-None-Mom. On	7.44
5436-27	8836K2	MS25306-27	SPDT	Mom. On-Off-Mom. On	7.44
5436-28	8836K7	MS25306-28	SPST	None-Off-Mom. On	6.93
5436-29	8836K10	MS25306-29	SPST	On-None-Mom. Off	6.93
5436-30	8836K11	MS25306-30	SPST	Off-None-Mom. On	6.93
5436-31	8836K3	MS25306-31	SPDT	On-Off-Mom. On	7.44

Std. Pkg. 10

#### Environment Sealed—Two Pole

5437-21	8837K1	MS25307-21	DPDT	On-Off-On	11.94
5437-22	8837K9	MS25307-22	DPST	On-None-Off	10.92
5437-23	8837K4	MS25307-23	DPDT	On-None-On	11.94
5437-24	8837K6	MS25307-24	DPST	On-Off-None	10.92
5437-25	8837K8	MS25307-25	DPST	On-Mom. Off-None	11.94
5437-26	8837K5	MS25307-26	DPDT	On-None-Mom. On	12.93
5437-27	8837K2	MS25307-27	DPDT	Mom. On-Off-Mom. On	12.93
5437-28	8837K7	MS25307-28	DPST	None-Off-Mom. On	11.94
5437-29	8837K10	MS25307-29	DPST	On-None-Mom. Off	11.94
5437-30	8837K11	MS25307-30	DPST	Off-None-Mom. On	11.94
5437-31	8837K3	MS25307-31	DPDT	On-Off-Mom. On	12.93

Std. Pkg. 10

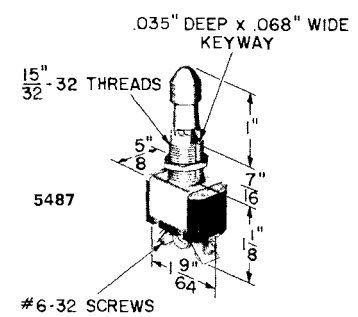
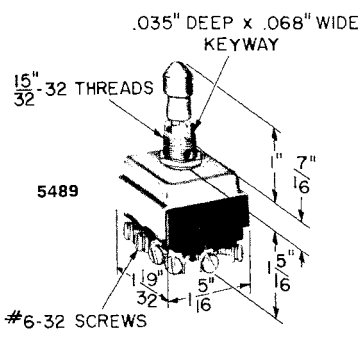
#### FOUR POLE

5438-21	8838K1	MS25308-21	4PDT	On-Off-On	28.80
5438-22	8838K9	MS25308-22	4PST	On-None-Off	28.80
5438-23	8838K4	MS25308-23	4PDT	On-None-On	28.80
5438-24	8838K6	MS25308-24	4PST	On-Off-None	27.54
5438-25	8838K8	MS25308-25	4PST	On-Mom. Off-None	28.80
5438-26	8838K5	MS25308-26	4PDT	On-None-Mom. On	31.02
5438-27	8838K2	MS25308-27	4PDT	Mom. On-Off-Mom. On	31.02
5438-28	8838K7	MS25308-28	4PST	None-Off-Mom. On	28.80
5438-29	8838K10	MS25308-29	4PST	On-None-Mom. Off	28.80
5438-30	8838K11	MS25308-30	4PST	Off-None-Mom. On	28.80
5438-31	8838K3	MS25308-31	4PDT	On-Off-Mom. On	31.02

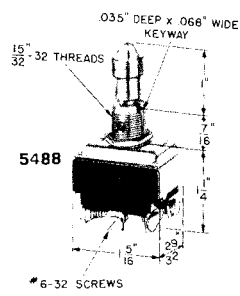
Std. Pkg. 10

#### Lever Lock Switches—One, Two, Four Pole—Sealed Lever—MS 25125-6-7 Series— Per MIL-S-3950A

This series incorporates a lever lock mechanism designed to prevent accidental operation, thereby eliminating need for switch guards. The assembly of 2 die cast caps and a retaining clip spring assembled after the switch is mounted makes possible the locking feature. Switch is locked into position by the lever falling in position into deep slots in die cast caps. To operate switch from locked position the lever must be pulled straight out and moved to desired position.



Nominal Rating per Pole  
10 amps. 115V. AC  
20 amps. 28V. DC



MS No.	Part No.	Type	Symbol	Net Ea.
5487-1	8857K39	MS25125-1	SPDT On → Off → On	4.59
5487-2	8857K40	MS25125-2	SPDT On → Off → On	4.59
5487-3	8857K41	MS25125-3	SPDT On Off → On	4.59
5487-4	8857K45	MS25125-4	SPDT On None → On	4.59
5487-5	8857K42	MS25125-5	SPDT On → Off On	4.59
5487-6	8857K46	MS25125-6	SPDT On → Off On*	4.77
5487-7	8857K43	MS25125-7	SPDT On → Off → On	4.59
5487-8	8857K44	MS25125-8	SPDT On → None → On	4.59
5487-9	8857K49	MS25125-9	SPST On → Off None	4.26

Std. Pkg. 10

#### TWO POLE

5488-1	8858K39	MS25126-1	DPDT On → Off → On	5.28
5488-2	8858K40	MS25126-1	DPDT On → Off → On	5.28
5488-3	8858K41	MS21126-3	DPDT On Off → On	5.28
5488-4	8858K45	MS25126-4	DPDT On None → On	5.28
5488-5	8858K42	MS25126-5	DPDT On → Off On	5.28
5488-6	8858K46	MS25126-6	DPDT On → Off On*	5.52
5488-7	8858K43	MS25126-7	DPDT On → Off → On	5.28
5488-8	8858K44	MS25126-8	DPDT On → None → On	5.28
5488-9	8858K49	MS25126-9	DPST On → Off None	4.80

Std. Pkg. 10

#### Lever Lock Switches—Four Pole—Per MIL-S-3950A

5489-1	8859K39	MS25127-1	4PDT On → Off → On	8.73
5489-2	8859K40	MS25127-2	4PDT On → Off → On	8.73
5489-3	8859K41	MS25127-3	4PDT On Off → On	8.73
5489-4	8859K45	MS25127-4	4PDT On None → On	8.73
5489-5	8859K42	MS25127-5	4PDT On → Off On	8.73
5489-6	8859K46	MS25127-6	4PDT On → Off On*	10.02
5489-7	8859K43	MS25127-7	4PDT On → Off → On	8.73
5489-8	8859K44	MS25127-8	4PDT On → None → On	8.73
5489-9	8859K49	MS25127-9	4PST On → Off None	7.53

Std. Pkg. 10

Arrow indicates direction of movement against which lever is locked.

\*Momentary Contact

# Birnbach

# CUTLER - HAMMER SWITCHES



Complete line of Cutler-Hammer quality switches available from our warehouse stocks. Includes commercial, industrial, aircraft and Gov't spec.

### LIGHT DUTY TOGGLE SWITCHES

### STANDARD DUTY TOGGLE SWITCHES

#### 1 BACK CONNECTED LUG TERMINALS

Quick make-break; bakelite; small, compact size AC-DC UL approved

Cat. No.	C-H No.	Descrip.	Shank	Current 125V	Rating 250V
5300	8280K16	SPST	.15/32"	6 amps	3 amps
5301	8381K8	SPST	.15/32"	6 amps	3 amps
5302	8282K14	SPDT	.15/32"	3 amps	1 amp
5303	8284K14	2 circ	.15/32"	3 amps	1 amp
5304	8360K7	DPST	.15/32"	6 amps	3 amps
5305	8370K7	DPST	.15/32"	6 amps	3 amps
5306	8363K7	DPST	.15/32"	6 amps	3 amps
5307	8373K7	DPDT	.15/32"	6 amps	3 amps

STD. PKG. 25

#### 2 SIDE CONNECTED SCREW TERMINALS

Cat. No.	C-H No.	Descrip.	Shank	Current 125V	Rating 250V
5308	8295K8	SPST	.15/32"	6 amps	3 amps
5309	8396K8	SPST	.15/32"	6 amps	3 amps
5310	8297K8	SPDT	.15/32"	3 amps	1 amp
5311	8372K7	DPST	.15/32"	6 amps	3 amps
5312	8365K7	DPDT	.15/32"	6 amps	3 amps
5313	8375K7	DPDT	.15/32"	6 amps	3 amps

STD. PKG. 25

#### 3 SIX INCH LONG WIRE LEADS

Cat. No.	C-H No.	Descrip.	Shank	Current 125V	Rating 250V
5335	8290K16	SPST	.15/32"	6 amps	3 amps
5336	8391K8	SPST	.15/32"	6 amps	3 amps

STD. PKG. 25

#### 4 PUSH BUTTON MOMENTARY SWITCHES

Door operated switches, used wherever it is desired to control current by opening or closing of refrigerated doors, telephone booths, closets, vaults, etc. AC-DC. UL approved; 15/32" shank; rated at .75 AMP, 125 volts—75 AMPS, 250 volts.

Cat. No.	C-H No.	Description	Terminals
5337	8411K4	SP norm. open	lug
5338	8411K3	SP norm. open	screw
5339	8411K8	SP norm. closed	lug
5340	8411K7	SP norm. closed	screw

STD. PKG. 25

#### 8. 9 HEAVY DUTY TOGGLE SWITCHES

Quick make—quick break; 15/32" shank (No. 8680 11/32" shank); AC-DC, UL approved; bakelite case; screw terminals.

Cat. No.	C-H No.	Descrip.	Current 125V	Rating 250V
5341	@7321K3	SPST	12 amps	6 amps
5342	@7320K3	DPST	12 amps	6 amps
5343	*7361K5	SPST	15 amps	10 amps
5344	*7360K8	DPST	15 amps	10 amps
5345	**7402K4	DPST	20 amps	10 amps
5346	8680K1	DPDT	10 amps	5 amps
5347	8690K2	DPDT	15 amps	10 amps
@ 1 HP—125/250V		* 1 1/2 HP—125/250V		
* 1 1/2 HP—125V, 2 HP—250V				

STD. PKG. 12

#### A MULTI-POLE, MULTI-POSITION, ROTARY SWITCHES

Nos. 7260 thru 7266 and Nos. 7271 thru 7276

#### B PUSHBUTTON OPERATED AIRCRAFT SWITCHES

Nos. 8911K525, 8874, 8875

#### 5 BACK CONNECTED LUG TERMINALS

Slow make and break; bakelite; AC rated for longer life, greater capacity. 15 amps. 125 volts—10 amps. 250 volts.

Cat. No.	C-H No.	Description	Shank
5314	7501K13	SPST	.15/32"
5315	7505K4	SPDT	.15/32"
5316	7561K4	DPST	.15/32"
5317	7565K5	DPDT	.15/32"
5318	7611K2	3PST	.15/32"
5319	7615K2	3PDT	.15/32"

STD. PKG. 25

#### 6 BACK CONNECTED SCREW TERMINALS

Cat. No.	C-H No.	Description	Shank
5320	7500K14	SPST	.15/32"
5321	7504K4	SPDT	.15/32"
5322	7560K5	DPST	.15/32"
5323	7564K6	DPDT	.15/32"
5324	7610K2	3PST	.15/32"
5325	7614K2	3PDT	.15/32"

STD. PKG. 25

#### 4 PUSH BUTTON SWITCHES PUSH TO MAKE—PUSH TO BREAK

Push-push switches; AC-DC. UL approved, bakelite case; rated 6 amps. 125V—3 amps. 250V. Pushing the button once closes the contacts; pushing it again opens the contacts. 11/16" shank.

Cat. No.	C-H No.	Description	Terminals
5326	7206K4	SPST	lug
5327	7208K4	SPST	screw
5328	7207K1	SPST	wire

STD. PKG. 25

#### 5 CENTER OFF STANDARD DUTY TOGGLE SWITCHES BACK CONNECTED LUG TERMINALS

Cat. No.	C-H No.	Description	Shank
5329	7503K13	SPDT	.15/32"
5330	7563K4	DPDT	.15/32"
5331	7613K2	3PDT	.15/32"

STD. PKG. 25

#### 7 BACK CONNECTED SCREW TERMINALS

Cat. No.	C-H No.	Description	Shank
5332	7502K13	SPDT	.15/32"
5333	7562K4	DPDT	.15/32"
5334	7612K2	3PDT	.15/32"

STD. PKG. 12

#### C MISCELLANEOUS AIRCRAFT SWITCHES

Pistol grip trigger movement switches Nos. 8895, 8896, 8897

#### D LEVER EXTENSIONS and ATTACHABLE TIPS

To meet requirements for luminous identification on switches and circuit breakers these tips snap over the standard levers and are held in place by a cup shaped spring member. Nos. 24-1939, 24-1939-2, 24-1997, 24-1997-2, 24-1164, 24-1164-2, 24-1164-3.

#### E AIRCRAFT SWITCH GUARDS

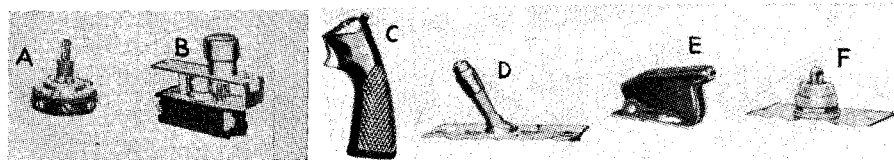
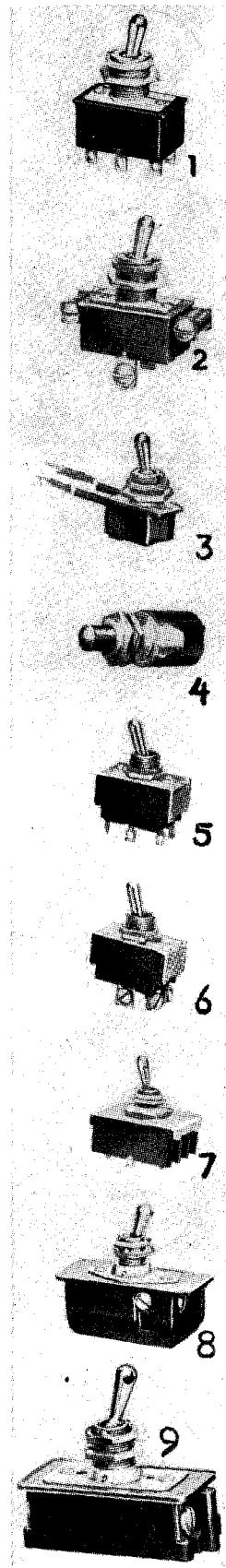
IT IS USED TO PREVENT INADVERTENT OPERATION OF THE LEVER

#### BOOTS FOR WATER and DUST RESISTANT APPLICATIONS

Gray silastic flexible designed to obstruct water and dust from entering switch interior. Remains flexible at minus 67°F. with stand exposure to sunlight without deterioration. For all applications. Advise which Specific Switch guard is to be used.

#### F BUSHING SEAL No. 32-341

ADDITIONAL CUTLER-HAMMER EQUIPMENT AVAILABLE



All Prices Subject to Change or Withdrawal without Notice.

# Birnbach

C-H • MURRAY • CONTINENTAL • WIRT  
MISCELLANEOUS SWITCHES



## POSITIVE ACTION MINIATURE MILITARY SWITCHES

"As Small As A Dime"

Especially designed for aircraft, missile and electronic application

**EXTREMELY COMPACT** — highly reliable power or dry circuit switch, usable as a pre-set switch in aircraft recognition systems, for walkie-talkies, electronic instruments and communication systems.

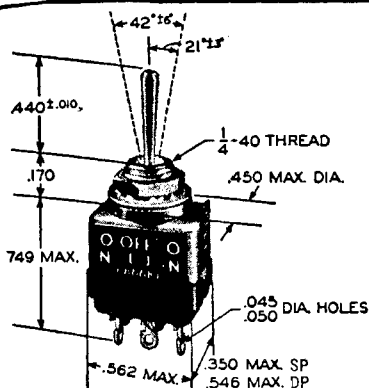
**NEW DESIGN** — Toggle is linked directly with movable contact member, insuring positive make and break.

**NEW TOGGLE LEVER SEAL** — Protects switch enclosure under adverse environmental conditions; includes panel bushing seal.

**NEW GOLD PLATED CONTACTS** — Open and close with wiping action, for good contact even on low energy circuits. Contact bounce is extremely low.

**NEW SUPERIOR MATERIAL**—In molded parts, provides higher arc-tracking resistance and excellent recovery voltage.

**NEW POSITIVE DETENT ACTION**—For improved operator "feel."



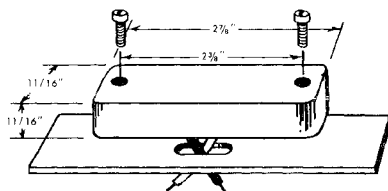
### BUILT TO MIL-S-8834 SPECS

Cat. No.	C-H No.	Type	CIRCUIT			Net Ea.
			Up Position	Center Position	Down Position	
5480K1	8866K1	SPDT	On	Off	On	\$6.06
5480K2	8866K2	SPDT	Mom.-On	Off	Mom.-On	6.84
5480K3	8866K3	SPDT	On	Off	Mom.-On	6.84
5480K4	8866K4	SPDT	On	None	On	6.06
5480K5	8866K5	SPST	On	Off	None	6.06
5480K6	8866K6	SPST	None	Off	Mom.-On	6.84
5480K7	8866K7	SPST	None	None	Off	6.06
5480K8	8866K8	SPDT	None	On	Mom.-On	6.84
5481K1	8867K1	DPDT	On	Off	On	7.56
5481K2	8867K2	DPDT	Mom.-On	Off	Mom.-On	8.82
5481K3	8867K3	DPDT	On	Off	Mom.-On	8.82
5481K4	8867K4	DPDT	On	None	On	7.56
5481K5	8867K5	DPST	On	Off	None	7.56
5481K6	8867K6	DPST	None	Off	Mom.-On	8.82
5481K7	8867K7	DPST	On	None	Off	7.56
5481K8	8867K8	DPDT	None	On	Mom.-On	8.82

Ratings: 2 Amps., 28 V. DC; 1 Amp., 50 V. DC; 2 Amps., 115 V. AC.

## MAGNETIC PROXIMITY SWITCHES

Precision, fast-acting devices, adaptable to sequential control functions on machine tools, packaging, material handling and equipment or for similar industrial devices. Rugged construction, encapsulated to assure freedom from contamination by cutting oils, dust, powder, metal chips, etc., this series will operate up to hundreds of millions of cycles at temperature ranges from -30°C to +105°C. Switches will actuate when brought into proximity with ferrous metals or other magnetic materials. Operating sensitivity in nom. 1/8" make, 1/2" break. No mechanical linkage is required for operation. Typical actuators include rotating cams, wheels and indexing tables, reciprocating arms, push rods, die sets, jaws and assembly line objects such as food and beverage cans, stampings and components. Speed (max.): 200 cycles/sec., repeatability within .005". Switch elements are hermetically sealed in glass, then unit is potted in epoxy resin. Case is special rubber and plastic compounding which is impervious to oil, water, gas and all common solvents.



**COUNTING — POSITION LIMITING — SEQUENCE CONTROL HERMETICALLY SEALED—MOUNTS IN ANY POSITION—NO MECHANICAL LINKAGE NECESSARY.**

### MAGNETIC PROXIMITY SWITCHES

Typical actuators include rotating objects, swinging objects, reciprocating objects, assembly line objects, vehicles.

ELECTRICAL (Max. Contact Ratings)	RESISTIVE LOAD		INDUCTIVE LOAD	
	No. 5499 -128, -138	No. 5499 -139	No. 5499 -128, -138	No. 5499 -139
Amps	.5	2	.1	1
Volts AC or DC	125	125	125	125
Watts	15	50	5	15

Birnbach Cat. No.	MS No.	Type	UL APPROVED			
			Less than Std. pkg	10 Lots Ea. Switch	25 Lots Ea. Switch	50 Lots Ea. Switch
5499-128	PD-128	SPST Norm. open	Net 14.50	13.05	10.88	9.70
5499-138	PD-138	SPDT	Net 20.50	18.45	15.38	13.75
5499-139	PD-139	SPST, Norm. open (high load)	Net 17.50	15.75	13.13	11.75

## BIRNBACH CONTINENTAL- WIRT SLIDE SWITCHES

### UL APPROVED

NEW "SWIDGET"—occupies 1/3rd the cubic volume of a conventional slide switch with the same circuitry. Overall mounting areas is 1/2" standard DPDT slide switch. Quality switch, ideal for compact applications.

### Three & Four Position Slide Switches with Detent

6294	SW729	SP3 Pos.	.5	.5	.29
6295	SW728	DP3 Pos.	.5	.5	.30
6295A	SW628	DP3 Pos.	6.0	1.0	.54
*6295F	SW738*	DP4 Pos.	.5	.5	.60

Std. Pkg. 25



Cat. No.	Cont.- Wirt No.	Type	125V AC-DC		Net Ea.
			Rating	Std. Pkg. 25	
6248M	SW126	DPDT	.5 amp.		.36

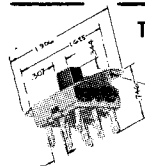
For use in wide varieties of applications and electron fields.

### Three and Four Pole Slide Switches with Detent

Easy wiring, compact, all poles in the same plane

6298	SW769	3PDT	.5	.5	.54
6299	SW742	4PDT	.5	.5	.66

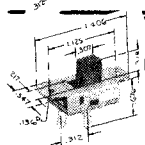
\*6299 width of switch 1.005", short terminals—distance from mounting surface to terminal tip .595"  
Std. Pkg. 25



### Spring Return Slide Switches

Birnbach No.	Cont. Wirt No.	Type	Rating at 125 V Circuit		Net Ea.
			DC Amps	AC Amps	
*62455	SW731	SPST	.5	.5	.24
*62456	SW732	SPDT	.5	.5	.29

Std. Pkg. 25



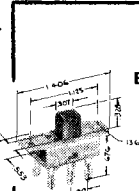
6239 Slide Switch Shield .06

### Slide Switches with Standard Detent

#### UL APPROVED

Birnbach No.	Cont.- Wirt No.	Type	Rating at 125 V Circuit		Net Ea.
			DC Amps	AC Amps	
6245	SW724	SPST	.75	.75	.11
6246	SW724	SPDT	.75	.75	.12
6247	SW725	DPST	.5	.5	.15
6248	SW726	DPDT	.5	.5	.18
6290	SW623	SPST	6.0	1.0	.14
6291	SW624	SPDT	6.0	1.0	.15
6292	SW625	DPST	6.0	1.0	.24
6293	SW626	DPDT	6.0	1.0	.27

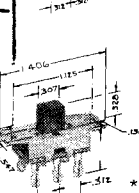
Std. Pkg. 25



### Slide Switches with Detent — Center Off

*6296	SW734	SPDT	.5	.5	.29
*6297	SW736	DPDT	.5	.5	.30

\*Not UL Appr. Std. Pkg. 25



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**Thank you!**

  
**The**  
RADIO-ELECTRONIC  
**MASTER**

# BUSS Fuses

## FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

*for Protection of TV, Radios, Instruments and Electronic Equipment*

### FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.



Formerly called 8AG.  
Dimension  $\frac{1}{4}$  x 1 inch, Glass tube.

Provide high speed action necessary to protect sensitive instruments.

Listed by Underwriters' Laboratories Inc.

Test specification—carry 100%, open at 200% in 5 seconds.

Voltage	Symbol	Amperes	List Price
250 or less	AGX	$\frac{1}{2}$ 500	\$1.46
"	AGX	$\frac{1}{2}$ 200	.61
"	AGX	$\frac{1}{2}$ 100	.55
"	AGX	$\frac{1}{2}$ 32	.48
250 or less	AGX	$\frac{1}{4}$ 16	.30
"	AGX	$\frac{1}{4}$ 10, $\frac{1}{8}$ , $\frac{3}{16}$ , $\frac{2}{10}$	.22
"	AGX	$\frac{1}{4}$ , $\frac{3}{8}$ , $\frac{1}{10}$ , $\frac{1}{2}$ or $\frac{3}{4}$	.14
"	AGX	1	.088
"	MKB	$\frac{1}{16}$ or $\frac{1}{8}$	.48
125 or less	AGX	$\frac{1}{2}$ or 2	.088



Formerly called 8AG.  
Dimension  $\frac{1}{4}$  x 1 inch, Glass tube.

Test specification—carry 110%, open at 135% within 1 hour.

125 volt sizes are listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
125 or less	AGX	3, or 4	\$0.088
"	AGX	5	.056
32 or less	AGX	8, 10, 15 or 20	.056
"	AGX	25 or 30	.066

**MJB & MJW FUSES NOW CALLED AGX**

### BUSS GLASS TUBE FUSES, $\frac{1}{4}$ x $1\frac{1}{4}$ inch



Formerly called 3AG

Test specification—carry 110%, open at 135% within 1 hour.

Listed by Underwriters' Laboratories Inc. for 250 volts or less.

Symbol	Amperes	List Price	Symbol	Amperes	List Price
AGC	$\frac{1}{2}$ 500	\$1.46	AGC	$\frac{1}{2}$ 175	\$0.22
AGC	$\frac{1}{2}$ 200	.61	AGC	$\frac{1}{2}$ 16, $\frac{2}{10}$	.22
AGC	$\frac{1}{2}$ 100	.55	AGC	$\frac{1}{4}$ , $\frac{3}{10}$ , $\frac{3}{8}$	.14
AGC	$\frac{1}{2}$ 32	.48	AGC	$\frac{1}{4}$ 45, $\frac{1}{10}$ , $\frac{1}{2}$ , $\frac{3}{4}$	.14
AGC	$\frac{1}{2}$ 16	.22	AGC	1, $1\frac{1}{4}$ , $1\frac{1}{2}$ , 2	.088
AGC	$\frac{1}{2}$ 8	.22	MGB	$\frac{1}{16}$ or $\frac{1}{8}$	.48
AGC	$\frac{1}{2}$ 4	.22	AGC	3	.078
AGC	$\frac{1}{2}$ 2	.22	MTH	4, 5 or 6	.113



Formerly called 3AG

Test specification—carry 110%, open at 135% within 1 hour.

Voltage	Symbol	Amperes	List Price
125 or less	GLH	8 or 10	\$0.17
32 or less	AGC	4	.078
"	AGC	5, 6, $7\frac{1}{2}$ , 8, 10 or 15	.056
"	AGC	20	.05
"	AGC	25 or 30	.066

20 ampere size is an SFE 20 fuse.

Sizes larger than 30 ampere are not recommended as clips or fuse holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use MDL Fuse-tron dual-element fuses.

**MBW & MBB FUSES NOW CALLED AGC**

### BUSS PIG-TAIL FUSES

$\frac{1}{4}$  x  $1\frac{1}{4}$  inch Glass tube fuse with  $1\frac{1}{2}$  inch leads of No. 20 tinned copper wire.

Test specifications—carry 110%, open at 135% within 1 hour. Listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
250 or less	GJV	$\frac{1}{16}$	\$0.38
"	GJV	$\frac{1}{8}$	.28
"	GJV	$\frac{1}{4}$ , $\frac{3}{10}$ , $\frac{3}{8}$ , $\frac{1}{2}$ or $\frac{3}{4}$	.22
"	GJV	1, $1\frac{1}{2}$ , 2 or 3	.17
"	GJV	4, 5 or 6	.18



### FUSETRON FUSES, $\frac{1}{4}$ x $1\frac{1}{4}$ inch



**DUAL-ELEMENT SLOW BLOWING TYPE**

Stop needless blows from starting currents or surges. Fuse link operates only on very high overloads or short-circuits. Thermal cutout functions on low overloads—cannot operate quickly at any load, so long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% within 1 hour.

Approximate blowing time: at 200% load MDL 25 sec. MDX 12 sec.  
at 300% " " 8 " " 3 "  
at 500% " " 3 " "  $\frac{1}{2}$  "

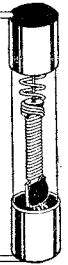
125 and 250 volt sizes listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
250 or less	MDL	$\frac{1}{100}$ or $\frac{1}{32}$	\$0.41
250 or less	MDL	$\frac{1}{16}$ , $\frac{1}{10}$ , $\frac{1}{8}$ , $1\frac{1}{2}$ , $1\frac{1}{10}$ , $1\frac{7}{10}$ , $1\frac{1}{100}$ , $\frac{3}{16}$ , $\frac{2}{10}$ , $\frac{1}{4}$ , $\frac{3}{10}$ , $\frac{3}{8}$ , $\frac{1}{10}$ , $\frac{1}{2}$ , $\frac{9}{10}$ , $\frac{1}{10}$ , $\frac{3}{4}$ , $\frac{8}{10}$ or 1	.30
"	MDX	$1\frac{1}{4}$ , $1\frac{1}{2}$ , $1\frac{6}{10}$ or 2	.33
125 or less	MDL	$1\frac{1}{10}$ , $1\frac{1}{4}$ , $1\frac{1}{2}$ , $1\frac{9}{10}$ or 2	.28
"	MDL	$2\frac{1}{2}$ or $2\frac{8}{10}$	.22
"	MDX	3, $3\frac{3}{10}$ , 4 or 5	.22
"	MDX	$6\frac{1}{4}$ or 7	.25
32 or less	MDL	3, $3\frac{3}{10}$ , 4, 5, $6\frac{1}{4}$ , 8, 10, 15, 20, 25 or 30	.22

### FUSETRON PIG-TAIL FUSES

Leads are No. 20 tinned wire  $1\frac{1}{2}$  inch long. Listed by Underwriters' Laboratories Inc. Test specifications and performance, MDV  $\frac{1}{100}$  to  $2\frac{8}{10}$  amps. same as MDL fuses. 3 to 7 amps. same as MDX fuses.

Voltage	Symbol	Amperes	List Price
250 or less	MDV	$\frac{1}{100}$ or $\frac{1}{32}$	\$0.50
"	MDV	$\frac{1}{16}$ , $\frac{1}{10}$ , $\frac{1}{8}$ , $1\frac{1}{10}$ , $1\frac{7}{10}$ , $1\frac{1}{100}$ , $\frac{3}{16}$ , $\frac{2}{10}$ , $\frac{1}{4}$ , $\frac{3}{10}$ , $\frac{3}{8}$ , $\frac{1}{10}$ , $\frac{1}{2}$ , $\frac{9}{10}$ , $\frac{1}{4}$ , $\frac{8}{10}$ or 1	.37
125 or less	MDV	$1\frac{1}{4}$ , $1\frac{1}{2}$ , $1\frac{9}{10}$ or 2	.35
"	MDV	$2\frac{1}{2}$ , $2\frac{8}{10}$ , 3, $3\frac{3}{10}$ , 4, 5, $6\frac{1}{4}$ or 7	.30



### BUSS INDICATING FUSES, $\frac{1}{4}$ x $1\frac{1}{4}$ inch



Fibre Tube. Silverplated indicating pin extends from end of fuse when fuse is blown.

This pin can also be used to actuate a signal by using fuses in BUSS HKA Fuseholders or BUSS Signal Fuse Blocks. GLD fuses in sizes larger than 5 ampere have dual tube construction. They can be used in BUSS Signal Fuse Blocks but not in HKA Fuseholders.

125 volt sizes listed by Underwriters' Laboratories Inc.

Test specifications—carry 110%, open at 135% in one hour or less.

Voltage	Symbol	Amperes	List Price
125 or less	GLD	$\frac{3}{4}$	\$0.66
"	GLD	1, 2, 3, or 5	.50
32 or less	GLD	8, 10, 12 or 15	.70

### GBA FUSES

GBA fuses are the same as BUSS GLD fuses EXCEPT that the indicating pin is RED. This results in a more vivid indication of an open fuse when the fuses are used in BUSS HLD fuseholders.

GBA fuses have same electrical and physical characteristics as BUSS GLD fuses. They are made in the same ampere sizes up to 5 ampere, and are also priced the same.

To specify; give symbol GBA and ampere.

**BUSSMANN MFG. DIVISION McGraw-Edison Co. St. Louis 7, Mo.**

# BUSS Fuses

## FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

### FUSETRON FIBRE TUBE FUSES

1 3/32 x 1 1/2 inch



Dual-Element — Slow Blowing Type. Avoid needless blows from starting currents or surges. Have fuse link that operates only on very high overloads or short-circuits, and thermal cutout on low overloads. Thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is provided against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% within 1 hour.  
Approximate blowing time: at 200% load 25 seconds,  
at 300% load 8 seconds,  
at 500% load 5 seconds.

Voltage	Symbol	Amperes	List Price
125 and 250	FNM	1/10, 1/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10, 1, 1 1/8, 1 1/4, 1 1/2, 1 3/4, 1 7/8, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6 1/4, 7, 8, 9 or 10	.37
125 or less	FNM	12 or 15	.37
32 or less	FNM	20, 25 or 30	.37

#### SIGNAL OR VISUAL INDICATING TYPE

FNA are Fusetron fuses with silverplated indicating pin that extends from fuse when fuse blows. Pin can also be used to actuate a signal by using fuse in BUSS Signal Fuse Block. Fuses in sizes larger than 10 ampere have a dual tube construction. They can be used in BUSS Signal fuse blocks but not in the HPC-C fuseholder.

Voltage	Symbol	Amperes	List Price
250 or less	FNA	1/10, 1/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10	\$0.688
125 or less	FNA	1, 1 1/8, 1 1/4, 1 1/2, 1 3/4, 1 7/8, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/4, 7, 8, 10	.688
"	FNA	12 or 15	.758
32 or less	FNA	20, 25 or 30	.758

### BUSS FUSES 600 Volt. UL Listed. 1 3/32 x 1 3/8 inch.

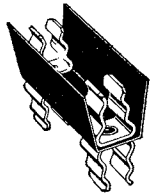
Fibre tube. For protection of control circuits or wherever a fuse with "quick-blowing" characteristics is desirable. Listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
600 or less	BBS	1/10, 3/4 or 8/10	\$0.24
600 or less	BBS	1, 2, 3, 4 or 5	.22

Fuseholder for BBS fuses. Use HPC-L fuseholder or No. 3845 single pole, side barrier porcelain fuse block. Only BBS fuses (or others with exact same dimensions) will fit these holders. This assures replacement of proper size fuse.

### BUSS Insulated TWIN-CLIPS

For 1/4 inch FUSES.



Make it easy to replace blown pigtail fuses without cutting or unsoldering pigtails. Just snap Twin-Clips on blown fuse and insert ordinary or Fusetron fuse of same amperage as blown fuse.

Strong spring clip pressure assures good contact.

No. 3434 BUSS Insulated Twin Clips One pair \$0.21

### HIGH INTERRUPTING CAPACITY FUSES



1 3/32 x 1 1/2 inch

Glass fibre melamine tube with sand filler surrounding a silver fuse element. For use on circuits capable of delivering currents as high as 100,000 amperes at voltages of 600 or less. AC only.

Test specification—carry 110%, open at 135% in 1 hour or less.

Voltage	Symbol	Amperes	List Price
600 or less	KTK	1/10, 1/8, 2/10, 1/4, 3/10, 1/2, 3/4, 1, 1 1/2, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30	\$1.33

### BUSS GLASS TUBE FUSES



9/32 x 1 1/4 inch

Formerly called 4 AG.

Test specifications — carry 110%, open at 135% within 1 hour except 35 and 40 ampere which open at 300% in 2 to 4 seconds when tested in a standard 30 ampere test circuit.

Voltage	Symbol	Amperes	List Price
250 or less	AGS	1/16	\$0.46
	AGS	3/8	.32
	AGS	1/4, or 1/2	.16
	AGS	1, 2, 2 1/2 or 3	.14
32 or less	AGS	5, 10, 15, 20, 25, 30	.13
	AGS	35, 40 or 50	.14

### BUSS HIGH VOLTAGE FUSES



HVA and HVB



HVJ and HVL

Designed for protection of circuits up to 20 KW on DC and 30 KVA on AC.

Test specification—carry 110%, open at 135% within 1 hour.

Voltage	Symbol	Amperes	Diameter of caps inches	Length inches	List Price
1000 or less	HVA	3/8, 1/2, 3/4, 1, 1 1/2, 2	1 3/32	3	\$0.30
2500 or less	HVB	1/2, 3/4, 1, 1 1/2 or 2	1 3/32	4 1/2	.39
5000 or less	HVJ	1/2, 3/4, 1, 1 1/2, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30, 35, 40, 50	1 3/16	5	.74
10000 or less	HVL	1/2, 3/4, 1, 1 1/2 or 2	1 3/16	10	1.47

### 1 3/32 x 1 1/2 inch INDICATING FUSES

Has silver plated indicating pin that extends from fuse when open — gives visual indication or can actuate signal.

Voltage	Symbol	Amperes	List Price
250 or less	MIC	1, 2, 3, 5, 10 or 15	\$0.61
32 or less	MIC	20, 25 or 30	.61

250 volt sizes listed by Underwriters' Laboratories Inc.

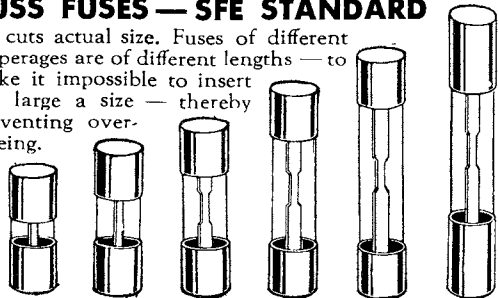
Fuses made in accordance with Military Specifications.

Red button on indicating pin extends from end of fuse when fuse opens.

Voltage	Symbol	Amperes	List Price
250 or less	MIN	1, 2, 3, 5, 10 or 15	\$0.53
125 or less	MIN	20, 25 or 30	.53

### BUSS FUSES — SFE STANDARD

All cuts actual size. Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fusing.



SFE 4 SFE 6 SFE 7 1/2 & SFE 9 SFE 14 SFE 20 SFE 30

Glass tube — diameter 1/4 inch. Length as per table below. Test specification—carry 110%, open at 135% within 1 hour.

Listed by Underwriters' Laboratories Inc. Made according to specifications of Society of Automotive Engineers.

Voltage	Symbol & Amperes	Length Inches	Pounds per 100	List Price
32 or less	SFE 4	3/8	.73	\$0.063
"	SFE 6	3/4	.75	.063
"	SFE 7 1/2	7/8	.80	.056
"	SFE 9	7/8	.80	.056
"	SFE 14	1 1/16	.82	.05
"	SFE 20	1 1/4	.87	.05
"	SFE 30	1 1/16	1.60	.066

BUSSMANN MFG. DIVISION McGraw-Edison Co. St. Louis 7, Mo.



# BUSS Fuses

## FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

*for Protection of TV, Radios, Instruments and Electronic Equipment*

### BUSS GRASSHOPPER FUSES

Give a visible signal or activate an alarm circuit when blown. Color coded to indicate type and amperage.



Symbol	Amps	Volts	Color Code	List Price
35A	1 1/3	90 or less	White	\$0.36
35B	1 1/3	90 or less	White	.36
35B	2	90 or less	Orange	.36
35C	2	90 or less	Orange	.36
35D	1 1/3	90 or less	White	.72
35E	3	90 or less	White	.39
35F	1/2	90 or less	Red	.36
35G	3	90 or less	Blue	.36
35H	5	90 or less	Green	.36
35R	1 3/4	90 or less	Yellow	.46
35T	6 5/100	90 or less	Tan	.53
35J	1/2	160 or less	Red	.53
35K	1 1/3	160 or less	White	.72
35L	2	160 or less	Orange	.72
35M	3	160 or less	Blue	.66
35N	5	160 or less	Green	.66
35P	3/4	160 or less	Tan	.46
35S	1/4	160 or less	Pink	.53

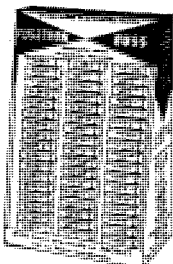
### BUSS FUSE TV Service Kit Assortment

Contains 101 of the most popular fuses — 20 slide-cover boxes — and five pairs of BUSS No. 4121 Twin Clips for use in replacing blown pigtail fuses. All packed in a clear plastic box.



List Price \$20.19

### BUSS ELECTRONIC FUSE ASSORTMENTS



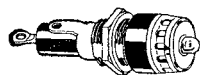
... with handy inventory feature

Helps serviceman have fuse he needs right in front of him... no delay in work to find a fuse. Keeps all the fuse stock normally needed for complete servicing of TV sets in smallest possible space.

Each 5-in box has its own shelf... Size and type of fuse shown on label at back of shelf... when shelf is empty label shows what fuses need to be immediately reordered.

- No. 255 Full-Service Electronic Fuse Assortment (255 fuses — 30 different sizes) \$40.81
- No. 130 Special Electronic Fuse Assortment (130 fuses — 26 different sizes) \$20.61

### PANEL MOUNTED VISUAL INDICATING FUSEHOLDER for 1/4 x 1 1/4 inch GBA Fuse (or GLD fuse)



Has transparent, bayonet type knob



that permits indicating pin of open fuse to be readily seen. Gives positive identification of open circuit even if power is off.

Vibration cannot cause failure because terminals are held mechanically and by solder.

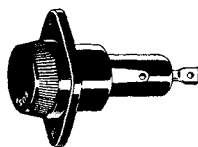
Neoprene washer and steel locking nut furnished with each holder.

Body is molded phenolic, can be used on panels up to 5/16 inch thick.

Normal current carrying capacity; 30 ampere.

- HLD takes any size GBA fuse (or GLD fuse)..... \$0.62
- No. 5487 Knob Only — will fit HKP holder, makes it visual indicating when used with GBA fuse..... .26

### PANEL MOUNTED HOLDERS for 1 3/32 x 1 1/2 inch Fuses



Screw type knob. Molded phenolic body. Holder attached to panel by screws or rivets. Strong coil spring provides contact pressure on ends of fuse. Normal current carrying capacity 30 amperes. Listed by Underwriters' Laboratories for 15

ampere rating for any voltage up to 250.

HPC (for FNM and KTK fuses) ..... List Price \$0.84

HPC-C (Same as above, but has transparent knob) ..... List Price \$1.05

### HPC-L Holder for 1 3/32 x 1 3/8 inch Fuses.

Like HPC Holder. Has Underwriters' Laboratories approved listing for 5 ampere rating and any voltage up to 600.

HPC-L (for BBS fuses) ..... List Price \$0.84

### PANEL MOUNTED HOLDERS for 1/4 inch Fuses



Can be used on panels up to 5/16 inch thick.



Bayonet type knob. No

screw driver is needed.

Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen.

Vibration will not cause failure of terminals as they are designed to stand severe service.

Neoprene washer and steel locking nut furnished with each holder.

Wire hole in terminals; .115 inch.

Normal current carrying capacity; 30 amperes.

Listed by Underwriters' Laboratories Inc.

List Price

HJM for 1/4 x 1 inch fuses (AGX, SFE 14) \$0.54

HJM-CC (Same as HJM but projects shorter distance behind panel)..... .54

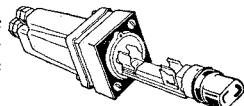
HKP for 1/4 x 1 1/4 inch fuses (ABC, AGC, SFE20, MDL, MDX, MTH) .54

HKP-CC (Same as HKP but projects shorter distance behind panel)..... .54

### PANEL MOUNTED, LAMP INDICATING FUSEHOLDERS for 1/4 x 1 1/4 and 1 3/32 x 1 1/2 inch fuses

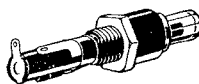
Made to Military Specifications.

Available as single or two pole units. Transparent knob permits neon indicating light to be readily seen. Body of molded alkyd.



Type	Pole	Fuse Size Inches	Circuit Voltage	Max. Amp. Rating	List Prices
HGB-C	Single	1/4 x 1 1/4	90 to 250	30	Prices
HGA-C	Two	1/4 x 1 1/4	90 to 250	30	on
HGC	Single	1 3/32 x 1 1/2	90 to 500	30	Request

### LAMP INDICATING FUSEHOLDERS



For panel mounting 1/4 x 1 and 1/4 x 1 1/4 inch fuses. Bayonet type knob. Molded phenolic body. Strong coil spring provides contact pressure at ends of fuse. Transparent

knob permits indicating light to be readily seen.

Type	Fuse Size Inches	Circuit Voltage	Max. Amp. Rating	Type Lamp	List Price
HKL	1/4 x 1 1/4	90 to 300	20	Neon	\$2.26
HKL-X	1/4 x 1 1/4	90 to 300	20	Neon	2.26
HKR	1/4 x 1 1/4	22 to 33	20	Incand.	3.69
HKX	1/4 x 1 1/4	22 to 33	20	Incand.	3.69
HKT	1/4 x 1 1/4	13 to 22	20	Incand.	3.69
HKU	1/4 x 1 1/4	4 to 6	20	Incand.	3.69
HJL	1/4 x 1	90 to 300	20	Neon	2.26

BUSSMANN MFG. DIVISION McGraw-Edison Co. St. Louis 7, Mo.

# BUSS Fuses

## FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

*for Protection of TV, Radios, Instruments and Electronic Equipment*

### TRON PIGTAIL FUSES

**Sub-miniature — hermetically sealed**

Tron fuses can easily be incorporated into miniaturized devices or components without sacrifice of space. Designed for installation in high shock and vibration ambients.

They may be potted or encapsulated. Are self-protecting and operate without exterior flash or venting.

Available in ratings from 1/20 to 5 amperes — for use on circuits of 125 volts or less where available fault current is not over 50 amperes. Color coded to indicate ampere rating.

Made with 1 1/2 inch axial pigtails or with 1 inch right angle pigtails of No. 24 tinned copper wire.

Test specifications —

Characteristic A — Carry 100% load, open within 10 seconds at 200% load.

Characteristic B — Carry 100% load, open within 10 seconds at 150% load.

### GFA TRON Fuses



Body size only .145 x .300 inches

Symbol & Amperes	Test Specification	Color Code One End Other End	*Approximate Resistance in Ohms	List Price
GFA 1/20	A	Yellow - Yellow	20.0	\$1.89
GFA 1/16	A	Brown - Brown	9.0	1.89
GFA 1/10	A	Red - Red	4.0	1.89
GFA 1/8	A	Orange - Orange	3.0	1.89
GFA 15/100	B	Red - Yellow	2.1	1.89
GFA 2/10	B	Red - Blue	1.8	1.89
GFA 1/4	B	Red - Purple	0.9	1.89
GFA 3/10	A	Green - Green	0.7	1.89
GFA 1/10	A	Blue - Blue	0.48	1.89
GFA 1/2	B	Orange - Green	0.35	1.89
GFA 5/10	B	Orange - Blue	0.25	1.89
GFA 3/4	B	Orange - Purple	0.22	1.89
GFA 1	B	Yellow - Green	0.17	1.89
GFA 1 1/2	B	Yellow - Purple	0.12	1.89
GFA 2	B	Green - Blue	0.07	1.89
GFA 3	B	Blue - Purple	0.05	1.89
GFA 4	B	Purple - Brown	0.040	1.89
GFA 5	B	Brown - Black	0.035	1.89

### GLN and GLX TRON Fuses



Body size only .140 x .300 inches

Symbol & Amperes	Test Specification	Color Code One End Other End	*Approximate Resistance in Ohms	List Price
GLN 1/20	A	Yellow - Yellow	20.0	\$1.46
GLN 1/16	A	Brown - Brown	9.0	1.46
GLN 1/10	A	Red - Red	4.0	1.46
GLN 1/8	A	Orange - Orange	3.0	1.46
GLN 3/10	A	Green - Green	0.7	1.46
GLN 1/10	A	Blue - Blue	0.48	1.46
GLX 15/100	B	Red - Yellow	2.1	1.89
GLX 2/10	B	Red - Blue	1.8	1.89
GLX 1/4	B	Red - Purple	0.9	1.89
GLX 1/2	B	Orange - Green	0.35	1.89
GLX 3/10	B	Orange - Blue	0.25	1.89
GLX 3/4	B	Orange - Purple	0.22	1.89
GLX 1	B	Yellow - Green	0.17	1.89
GLX 1 1/2	B	Yellow - Purple	0.12	1.89
GLX 2	B	Green - Blue	0.07	1.89
GLX 3	B	Blue - Purple	0.05	1.89
GLX 4	B	Purple - Brown	0.040	1.89
GLX 5	B	Brown - Black	0.035	1.89

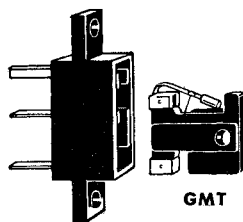
\*Cold resistance obtained on Wheatstone Bridge. Other ratings are available with a nominal test charge. Approximate Unit weight 0.33 grams. Shipping weight 0.116lbs. per 100.

### BUSS GMT Fuses — HLT Fuseholders

Signal Indicating

Alarm Activating

For multiple circuit apparatus where space is at a premium



HLT

GMT

GMT fuses and HLT fuseholders permit multiple mounting of fuses in limited space, for protection of communication equipment, bus-

ness machines, computers, control circuits or any equipment operating at 300 volts or less.

Holders take panel mounting space of only 1/4 inch horizontal by 1 15/32 inches vertical.

Fuses give visual indication when blown by release of a spring indicator. The spring carries a colored plastic flag, in a different color for each fuse ampere rating.

The indicator spring when released makes contact with an alarm terminal in the fuseholder, which can be connected to activate a signal circuit.

Blown fuses are readily replaced without use of insulated tools. When mounted on minimum centers, removal of fuse is easy by use of a wire hook.

### BUSS GMT Fuses

Available Ratings and Color Code

300 volts or less

Test specification — carry 100% for 10 minutes; open at 150% within 5 minutes.

Symbol & Amperes	Color of Indicator	Symbol & Amperes	Color of Indicator
GMT 18/100	YELLOW	GMT 1 1/2	WHITE
GMT 1/4	VIOLET	GMT 2	ORANGE
GMT 1/2	RED	GMT 3	BLUE
GMT 65/100	BLACK	GMT 5	GREEN
GMT 3/4	BROWN	GMT 7 1/2	BLACK-WHITE
GMT 1	GRAY	GMT 10	RED-WHITE

Symbol (All Sizes)

List Price \$0.62

### BUSS HLT Fuseholders

BUSS HLT fuseholders take all sizes of GMT fuses.

HLT

List Price \$0.66

### GMW Fuse and HWA Fuseholder

Sub-miniature fuseholder combination

Body size only .270 x .250 inches

Offering a light weight, space-saving protective device for space-tight applications in multiple circuit apparatus. GMW fuse has transparent window for visual inspection of element. Fuse may be used alone for mounting into printed circuit boards.

HWA holder can be panel mounted easily — or soldered on printed circuit boards.

AF knob for holder makes holder water-proof from front of panel.

Test specifications — carry 100%, open at 200% within 10 seconds or less.

Interrupting rating — 300 ampere at 125 volts

Symbol

GMW

GMW

HWA

AF

1/200, 1/100, 1/64, 1/32 and 1/16

1/10, 2/10, 1/4, 3/10, 4/10, 1/2, 5/10,

3/4, 1, 1 1/2, 2, 3, 4, and 5

fuseholder takes all sizes of GMW fuses

knob for HWA fuseholder

List Price

\$1.05

.81

.103

.12

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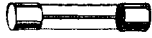
# BUSS Fuses

## FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

*for Protection of TV, Radios, Instruments and Electronic Equipment*

### BUSS MINIATURE GLASS TUBE FUSES

5 mm x 20 mm (.197 x .769 inches)

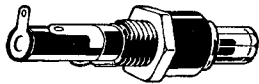


Designed for protection of miniaturized circuits or equipment. Commonly used in equipment of foreign make.

Test specifications — Carry 100% load indefinitely.  
Open at 200% load within 10 seconds.

Voltage	Symbol	Amperes	List Price
125 volts or less if available fault current is not over 50 amps.	GMA	1/8	\$0.45
	GMA	1/4, 1/2, or 7/10	.34
	GMA	1, 1 1/10, 1 1/2, or 2	.28
	GMA	3, 4, 5, 6, or 10	.28

GJU fuses now called GMA.



### HKA SERIES

Lamp Indicating, Signal Activating holders for 1/4 x 1 1/4 inch BUSS type GLD fuses

Used on circuits of 125 volts or less. Flashes a light, rings a bell, trips a relay or gives other signals to tell you when and where a fuse blows.

Symbol	List Price
HKA for 1/4 x 1 1/4 inch GLD fuses, 3/4 to 5 amps.	\$4.94

GLD fuses listed under Indicating fuses.

### IN-THE-LINE HOLDERS for 1/4 inch fuses

For mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — and a contact pressure spring.



Holders can also be mounted in panel up to 5/16 inch thick by means of a No. 9969 Spring nut (Nut not furnished). Flat area on holder permits locking against rotation. Normal current carrying capacity: 15 amperes. Maximum Voltage: 250.

Contacts designed to take different size wire. For 18 to 22 wire add "-A" to symbol. For 14 to 16 wire add "-B" to symbol. (Example HHJ-A).

Symbol	Fuse Size Inches	List Price
HHJ	1/4 x 1 1/4	\$0.26
HHI	1/4 x 1 or 1 1/16	.26
HHH	1/4 x 7/8	.26
HIG	1/4 x 3/4	.26
HIF	1/4 x 5/8	.26

### SERIES HD and HA

These holders are the same in all details and dimensions as the HH and HI series — EXCEPT that the holding ears in the bayonet knob are of molded phenolic instead of being of metal.

Symbol	Fuse Size Inches	List Price
HDJ	1/4 x 1 1/4	\$0.21
HDI	1/4 x 1 or 1 1/16	.21
HDH	1/4 x 7/8	.21
HAG	1/4 x 3/4	.21
HAF	1/4 x 5/8	.21

No. 9969 Spring nut for panel mounting above holders .038

### FUSETRON and BUSS MATCHED FUSES and FUSEHOLDERS



Safeguard against use of wrong size and type of fuse. FUSETRON Type N are "slow-blowing" fuses for use where harmless surges or starting currents might cause ordinary fuses to open needlessly. Use in Type HN fuseholder.

BUSS Type C are "quick-blowing" fuses for fast interruption of fault current. Use in Type HC fuseholder. Listed by Underwriters' Laboratories Inc.

FUSETRON FUSE	FUSEHOLDER	List Price
Symbol & Amperes	Symbol & Range	
N 1/100		\$0.43
N 1/32		.43
N 1/16		.309
N 1/10		.309
N 15/100		.309
N 2/10		.309
N 1/4		.309
N 3/10		.309
N 1/10	HN	
N 1/2	0 to 3/10	\$0.22
N 1/2	HN	
N 1/2	3/10 to 1/2	.22
N 5/10		.309
N 7/10		.309
N 3/4	HN	
N 3/4	1/2 to 3/4	.22
N 8/10		.309
N 1		.309
N 1 1/4	HN	
N 1 1/4	3/4 to 1 1/4	.22
N 1 5/10	HN	
N 1 3/4	1 3/10 to 1 3/4	.22
N 2	HN	
N 2 1/2	1 3/4 to 2 1/2	.22
N 2 5/10		.27
N 3 3/10		.27
N 3 1/2	HN	
N 3 1/2	2 1/2 to 3 1/2	.22
N 4	HN	
N 5	3 1/2 to 5	.22
N 6 1/4	HN	
N 7	5 to 7	.22

BUSS FUSE	FUSEHOLDER	List Price
Symbol & Amperes	Symbol & Range	
C 1/32		\$0.46
C 1/16		.30
C 1/8		.23
C 3/16		.23
C 1/4		.18
C 3/10		.18
C 3/8		.18
C 1/2	HN	
C 1/2	3/10 to 1/2	.22
C 3/4	HN	
C 3/4	HC 1/2 to 3/4	.22
C 1	HC	
C 1 1/4	3/4 to 1 1/4	.22
C 1 1/2	HC	
C 1 3/4	1 1/4 to 1 3/4	.22
C 2	HC	
C 2 1/2	1 3/4 to 2 1/2	.22
C 3	HC	
C 3 1/2	2 1/2 to 3 1/2	.22
C 4	HC	
C 5	3 5/10 to 5	.22
C 6	HC	
C 7	5 to 7	.22
C 8	HC	
C 10	7 to 10	.22

BUSSMANN MFG. DIVISION McGraw-Edison Co. St. Louis 7, Mo.

# BUSS Fuses

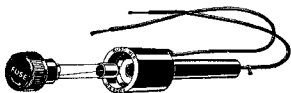
## FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

### BUSS In-the-Line or Panel Mounted FUSE and HOLDER COMBINATIONS

For voltages up to 300

Safeguards against use of wrong type and size of fuse. Fuse and knob are in one piece — when fuse opens, entire fuse-knob assembly is replaced.



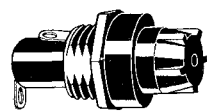
Fuseholder can be mounted in-the-line — or panel mounted for which a snap-in steel clip is available for mounting on any panel  $\frac{1}{32}$  to  $\frac{1}{16}$  inch thick.

Holders come with 6 inch leads of No. 18 solid copper insulated wire, unless specified otherwise.

HLR holder safeguards against use of wrong type of fuse — takes all ampere sizes of GLR and GMF fuses..... \$0.23

HLQ holder is size limiting type and are made in 6 fuse ranges. Takes either GLQ or GMQ fuses up to the largest ampere size marked in holder ..... .26

### SPACE SAVER Panel Mounted FUSEHOLDER For $\frac{1}{4}$ x $1\frac{1}{4}$ inch fuses or $\frac{3}{32}$ x $1\frac{1}{4}$ inch fuses



A compact, space saver fuseholder only  $1\frac{3}{8}$  inches long — extends just  $2\frac{3}{4}$  inches behind front of panel.

Takes  $\frac{1}{4}$  x  $1\frac{1}{4}$  inch fuses and can easily be converted to take  $\frac{3}{32}$  x  $1\frac{1}{4}$  inch fuses simply by changing the screw type knob.

Knob is designed for easy gripping even with gloves.

Fuseholder is of molded phenolic and will withstand sever vibration, shock and other environmental conditions.

Neoprene washer and zinc plated, chromate dipped steel fastening nut furnished with each holder.

Normal current carrying capacity; 30 amperes for any voltage up to 250.

Symbol List Price  
HLF for  $\frac{1}{4}$  x  $1\frac{1}{4}$  inch fuses..... \$0.54  
HCL for  $\frac{3}{32}$  x  $1\frac{1}{4}$  inch fuses..... .54

### BUSS Add-On Fuse Blocks for $1\frac{3}{32}$ x $1\frac{1}{2}$ inch Fuses

Single-pole fuseblock and separate end barrier assemble into unit of one or more poles. Units lock together. New poles can be added to either end of existing block. Made of molded phenolic. Marking strips to identify each circuit available.

Type	Description	List Price
3742	End-Barrier Only	\$0.172
3743	One-Pole Block Only	1.20
	Marking Strip in 50 inch length	.578

When ordering, specify number of end barriers and one-pole blocks desired. Only one end barrier needed for each assembled fuse block of any number of poles.

### BUSS STANDARD FUSE BLOCKS

Available from 1 to 12 poles. Have laminated black phenolic base. Clips of strong spring, Albaloy plated, highly resistant to corrosion with great gripping strength. Types 3823 and 3828 have solder terminals firmly seated in small base. Type 3833 has screw terminals on full base that provides ample insulation around terminals.

Cat. No.	Type	Base Dim.	No. Poles	List Each
<b>For <math>\frac{1}{4}</math> x <math>1\frac{1}{4}</math>" Fuses</b>				
3823-1		$\frac{1}{2}$ x $1\frac{3}{8}$	1	\$0.23
3823-2		$1\frac{1}{8}$ x $1\frac{3}{8}$	2	.46
3823-3		$1\frac{3}{4}$ x $1\frac{3}{8}$	3	.69
3823-4		$2\frac{3}{8}$ x $1\frac{3}{8}$	4	.92
3823-5		3 x $1\frac{3}{8}$	5	1.15
3823-6		$3\frac{5}{8}$ x $1\frac{3}{8}$	6	1.38
3823-7		$4\frac{1}{4}$ x $1\frac{3}{8}$	7	1.61
3823-8		$4\frac{7}{8}$ x $1\frac{3}{8}$	8	1.84
3823-9		$5\frac{1}{2}$ x $1\frac{3}{8}$	9	2.07
3823-10		$6\frac{1}{8}$ x $1\frac{3}{8}$	10	2.30
3823-11		$6\frac{3}{4}$ x $1\frac{3}{8}$	11	2.53
3823-12		$7\frac{3}{8}$ x $1\frac{3}{8}$	12	2.76

<b>For <math>\frac{1}{4}</math> x 1" Fuses</b>				
3828-1		$\frac{1}{2}$ x $1\frac{3}{8}$	1	\$0.23
3828-2		$1\frac{1}{8}$ x $1\frac{3}{8}$	2	.46
3828-3		$1\frac{3}{4}$ x $1\frac{3}{8}$	3	.69
3828-4		$2\frac{3}{8}$ x $1\frac{3}{8}$	4	.92
3828-5		3 x $1\frac{3}{8}$	5	1.15
3828-6		$3\frac{5}{8}$ x $1\frac{3}{8}$	6	1.38
3828-7		$4\frac{1}{4}$ x $1\frac{3}{8}$	7	1.61
3828-8		$4\frac{7}{8}$ x $1\frac{3}{8}$	8	1.84
3828-9		$5\frac{1}{2}$ x $1\frac{3}{8}$	9	2.07
3828-10		$6\frac{1}{8}$ x $1\frac{3}{8}$	10	2.30
3828-11		$6\frac{3}{4}$ x $1\frac{3}{8}$	11	2.53
3828-12		$7\frac{3}{8}$ x $1\frac{3}{8}$	12	2.76

<b>For <math>\frac{1}{4}</math> x <math>1\frac{1}{4}</math>" Fuses</b>				
3833-1		$2\frac{5}{32}$ x $2\frac{3}{8}$	1	\$0.49
3833-2		$1\frac{11}{16}$ x $2\frac{3}{8}$	2	.98
3833-3		$2\frac{1}{2}$ x $2\frac{3}{8}$	3	1.47
3833-4		$3\frac{1}{3}$ x $2\frac{3}{8}$	4	1.96
3833-5		$4\frac{1}{16}$ x $2\frac{3}{8}$	5	2.45
3833-6		$5\frac{1}{16}$ x $2\frac{3}{8}$	6	2.94
3833-7		$6\frac{7}{32}$ x $2\frac{3}{8}$	7	3.43
3833-8		$7\frac{1}{8}$ x $2\frac{3}{8}$	8	3.92
3833-9		$8\frac{1}{32}$ x $2\frac{3}{8}$	9	4.41
3833-10		$8\frac{15}{16}$ x $2\frac{3}{8}$	10	4.90
3833-11		$9\frac{27}{32}$ x $2\frac{3}{8}$	11	5.39
3833-12		$10\frac{3}{4}$ x $2\frac{3}{8}$	12	5.88

### Other standard and special fuses, fuse blocks, fuse clips and fuse holders

If the fuses, fuse blocks, fuse clips and holders shown do not fit your requirements ask for information on other types.

Fuses and fuse mountings to meet JAN and Military

specifications also are available.

If you have a special problem in protection send description or sketch giving number of circuits, type of fuse, terminals, etc., desired. We welcome such inquiries.

BUSSMANN MFG. DIVISION McGraw-Edison Co. St. Louis 7, Mo.

## BUSS LIMITRON FUSES

### For Protection of Semi-Conductor Rectifiers

These BUSS Limitron fuses are especially designed for the protection of semi-conductor rectifiers. They provide extremely fast opening on overload and fault currents, with a high degree of restriction of the let-thru current.

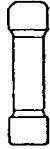
If each diode is protected by a BUSS Limitron fuse, the fuse will open very quickly when the current drawn exceeds the rating of the diode.

Thus when a short-circuit occurs in a diode the fuse

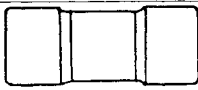
opens and takes that diode out of the circuit. This protects other good diodes in the rectifier which might otherwise be damaged.

For time-current characteristic charts ask for BUSS Limitron fuse bulletin HLS.

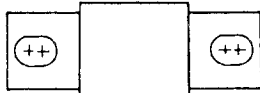
Test specification for all types of BUSS rectifier fuses — carry 100% of rating; open at 1000 seconds on overloads between 120% and 180% of rating; open within 1 second at 250% of rating.



1 3/32" x 1 1/2"



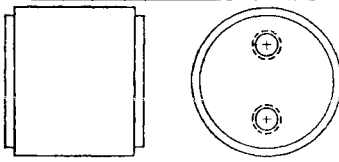
1 3/16" x 2"



c to c 2 3/16" — 1 29/32"



c to c 2 7/16"



2" x 1 7/8" — c to c 1"

Symbol & Ampere	Volts	Price Each
KAA 1	130	\$0.80
KAA 2	"	.80
KAA 3	"	.80
KAA 4	"	.80
KAA 5	"	.80
KAA 6	"	.80
KAA 7	"	.80
KAA 8	"	.80
KAA 9	"	.80
KAA 10	"	.80
KAA 12	"	.80
KAA 15	"	.80
KAA 20	"	.80
KAA 25	"	.80
KAA 30	"	.80

KAH 35	130	\$1.97
KAH 40	"	1.97
KAH 45	"	1.97
KAH 50	"	1.97
KAH 60	"	1.97

KAA 70	130	\$3.85
KAA 80	"	3.85
KAA 100	"	3.85
KAA 150	"	3.85
KAA 200	"	3.85
KAA 225	"	3.85
KAA 250	"	3.85
KAA 300	"	3.85
KAA 350	"	3.85
KAA 400	"	3.85

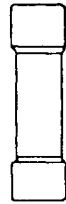
KAA 450	130	\$12.50
KAA 500	"	12.50
KAA 600	"	12.50
KAA 650	"	12.50
KAA 800	"	12.50
KAA 1000	"	12.50

KAA 1200	130	\$14.10
KAA 1500	"	14.10
KAA 2000	"	14.10

Symbol & Ampere	Volts	Price Each
KAC 1	600	\$1.20
KAC 2	"	1.20
KAC 3	"	1.20
KAC 4	"	1.20
KAC 5	"	1.20
KAC 6	"	1.20
KAC 7	"	1.20
KAC 8	"	1.20
KAC 9	"	1.20
KAC 10	"	1.20
KAC 12	"	1.20
KAC 15	"	1.20
KAC 17 1/2	"	1.20
KAC 20	"	1.20
KAC 25	"	1.20
KAC 30	"	1.20
KAC 35	"	4.60
KAC 40	"	4.60
KAC 45	"	4.60
KAC 50	"	4.60

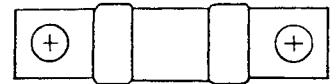
Symbol & Ampere	Volts	Price Each
KAC 60	600	\$ 4.60
KAC 70	"	7.00
KAC 80	"	7.00
KAC 90	"	7.00
KAC 100	"	7.00
KAC 110	"	9.00
KAC 125	"	9.00
KAC 150	"	9.00
KAC 175	"	9.00
KAC 200	"	9.00
KAC 225	"	14.00
KAC 250	"	14.00
KAC 300	"	14.00
KAC 350	"	14.00
KAC 400	"	14.00
KAC 425	"	16.00
KAC 450	"	16.00
KAC 500	"	16.00
KAC 600	"	16.00
KAC 800	"	16.00

Symbol & Ampere	Volts	Price Each
KAB 1	250	\$0.95
KAB 2	"	.95
KAB 3	"	.95
KAB 4	"	.95
KAB 5	"	.95
KAB 6	"	.95
KAB 7	"	.95
KAB 8	"	.95
KAB 9	"	.95
KAB 10	"	.95
KAB 12	"	.95
KAB 15	"	.95
KAB 17 1/2	"	.95
KAB 20	"	.95
KAB 25	"	.95
KAB 30	"	.95



9/16" x 2"

KAB 35	250	\$3.75
KAB 40	"	3.75
KAB 45	"	3.75
KAB 50	"	3.75
KAB 60	"	3.75



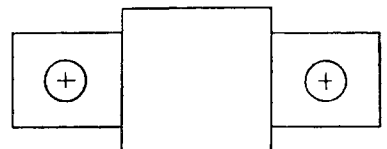
c to c 2 7/16"

KAB 70	250	\$5.80
KAB 80	"	5.80
KAB 90	"	5.80
KAB 100	"	5.80
KAB 150	"	5.80
KAB 175	"	5.80
KAB 200	"	5.80



c to c 2 3/8"

KAB 225	250	\$7.50
KAB 250	"	7.50
KAB 300	"	7.50
KAB 350	"	7.50
KAB 400	"	7.50
KAB 500	"	7.50
KAB 600	"	7.50
KAB 800	"	21.50

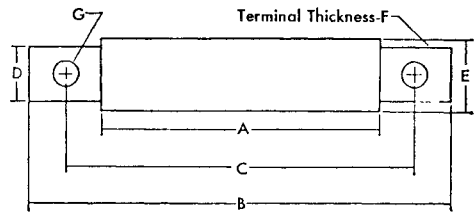


c to c 2 25/32"

KAJ 35	600	\$2.20
KAJ 40	"	2.20
KAJ 45	"	2.20
KAJ 50	"	2.20
KAJ 60	"	2.20



5/8" x 3"

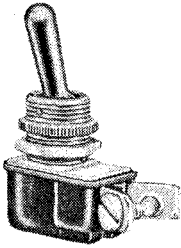


Ampere Rating	A	B	C	D	E	F	G
0-30	1 7/8	2 7/8	2 1/2	1 3/32	9/16	1/16	1/4
35-60	2 27/32	4 3/8	3 5/8	1 1/2	13/16	3/32	9/32
65-100	3	5	4	3/4	1	1/8	13/32
110-200	3	5 1/2	4 3/8	1 1/8	1 1/2	3/16	13/32
225-400	3	6 1/4	4 3/4	1 5/8	2	1/4	9/16
425-800	3 1/16	6 1/2	4 3/4	2	2 1/2	1/4	9/16

BUSSMANN MFG. DIVISION McGraw-Edison Co. St. Louis 7, Mo.

# Carling

PUSH • SLIDE • TOGGLE •  
ROTARY • TRIGGER • TIPPETTE SWITCHES



## SINGLE POLE

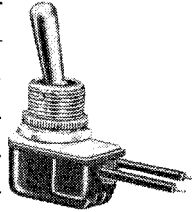
Screw Terminals 15/32". Threaded Bushing, 15/32". Dia. Ball Toggle 3/8" long. Bat Toggle 11/16" long. U.L. Appd.

Catalog No.	Rating	Toggle
110-S-73	6A.-125V.	Bat
110-S-23	6A.-125V.	Ball
160-S-73	10A.-125V.	Bat

### WIRE LEADS

Catalog No.	Rating	Toggle
111-16-73	6A.-125V.	Bat

6" Leads Stripped 1/2" 105C. TFF. Wire.

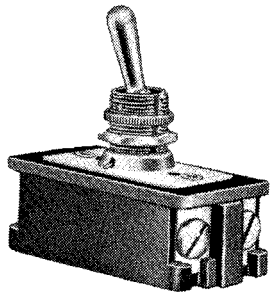


## SINGLE POLE — DOUBLE POLE

SOLDER LUGS 15/32"

Threaded Bushing 15/32" Dia. Bat Toggle 11/16" long. U.L. Appd. All Have 250V. Ratings.

Catalog No.	Action	Rating
110-73	SP - ST	6A. - 125V.
112-73	SP - DT	3A. - 125V.
216-73	DP - ST	3A. - 125V.
316-73	DP - DT	3A. - 125V.
2BB62-73	SP - DT	6A. - 125V.
2BK62-73	DP - ST	6A. - 125V.
2BL62-73	DP - DT	6A. - 125V.
160-73	SP - ST	10A. - 125V.



## SINGLE POLE DOUBLE POLE

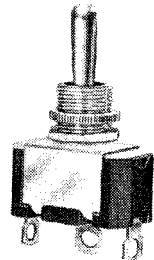
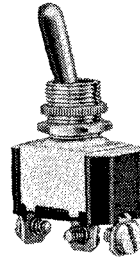
Heavy Duty AC-DC Type. 15/32" Bushing, 11/16" Bat Toggle. All Have Horsepower Ratings.

Catalog No.	RATINGS		Action
	125V.	250V.	
DA284*	16A.	8A.	SP - ST
DK284*	16A.	8A.	DP - ST
EA204**	20A.	10A.	SP - ST
EK204**	20A.	10A.	DP - ST

\*1 H.P. 125-250V. rating.

\*\*1 1/2 H.P. 125-250V. rating.

## SINGLE POLE



SCREW TERMINALS OR SOLDER LUGS.

Rated 15 Amps.\* 125V. 10 Amps. 250VAC. 3/4 HP. 125-250V. AC. except SPST is 1 HP. Rated 15/32" Dia. Threaded Bushing 15/32" Dia. Threaded Bushing 15/32" long. 11/16" Bat Toggle. U.L. Appd. Heavy Duty.

\*Applicable to low voltage D.C. requirements.

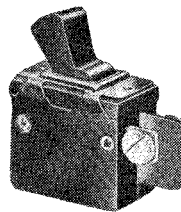
Catalog No.	Terminals	Action
2FA54-73	Screw	SP - ST
2FB54-73	Screw	SP - DT
2FC54-73	Screw	SP - DT, Center Off
2FA53-73	Lugs	SP - ST
2FB53-73	Lugs	SP - DT
2FA53-73	Lugs	SP - DT, Center Off

## MOMENTARY ACTION

Same Specifications as above  
Except SPST. 3/4HP. Rated.

SCREW TERMINALS

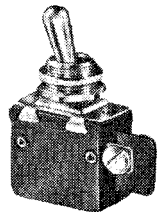
Catalog No.	ACTION		
	Up	Center	Down
<b>SINGLE POLE SINGLE THROW</b>			
6FA54-73	Off	None	Mom. On
6FA58-73	On	None	Mom. Off
<b>SINGLE POLE DOUBLE THROW</b>			
6FB54-73	On	None	Mom. Off
6FC54-73	Mom. On	Off	Mom. On
6FC58-73	On	Off	Mom. On



## SINGLE POLE

20 AMP.

20 Amp. 125V.  
10 Amp. 250V.  
AC-DC

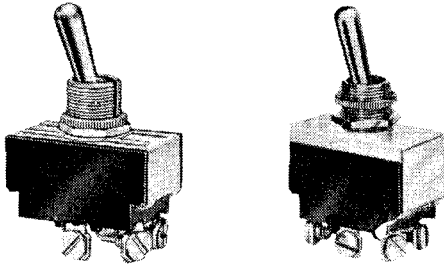


Catalog No.	Terminals	Toggle
600-C	Screw	Nickel-Bat
600-20		Plastic

**Carling ELECTRIC, INC. WEST HARTFORD 10, CONN.**

# Carling PUSH • SLIDE • TOGGLE • ROTARY • TRIGGER • TIPPETTE SWITCHES

## DOUBLE POLE



SCREW TERMINALS OR SOLDER LUGS

Rated 15 Amps.\* 125V 10 Amps. 250V. AC. 3/4HP. 125-250V. AC. Threaded Bushing 15/32" Dia. Threaded Bushing 15/32" long. 11/16" Bat Toggle. U.L. Appd. Heavy Duty.

\*Applicable to low voltage D.C. requirements.

Catalog No.	Terminals	Action
2GK54-73	Screw	DP - ST
2GL54-73	Screw	DP - DT
2GM54-73	Screw	DP - DT, Center Off
2GK50-73	Lugs	DP - ST
2GL50-73	Lugs	DP - DT
2GM50-73	Lugs	DP - DT, Center Off

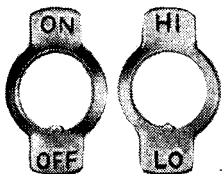
## MOMENTARY ACTION

Same Specifications As Above.

SCREW TERMINALS

Catalog No.	ACTION		
	Up	Center	Down
	DOUBLE POLE		SINGLE THROW
6GK5E-73	Off	None	Mom. On
6GK5S-73	On	None	Mom. Off
	DOUBLE POLE		DOUBLE THROW
6GL5E-73	On	None	Mom. On
6GM5S-73	Mom. On	Off	Mom. On
6GM5E-73	On	Off	Mom. On

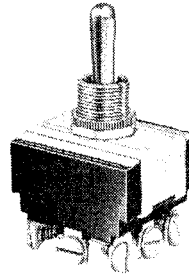
## INDICATOR PLATES NICKEL PLATED



Catalog No.	Indication
YO1	ON - OFF
YO2	HI - LO

An extensive variety of indications and plate styles available for use with Carling Switches. Also a complete line of Hardware and Switch Accessories available.

## THREE POLE SCREW TERMINALS



Rated 17 Amps.\* 125V. AC. 12 Amps. 250V. AC. 1 HP. 1-2-3 Phase 120-600V. AC. 15/32" Dia. Bushing 15/32" long. 11/16" Bat Toggle.

\*Applicable to low voltage D.C. requirements.

Catalog No.	Action
HK274-73	3P - ST
HL274-73	3P - DT
HM274-73	3P - DT, Center Off

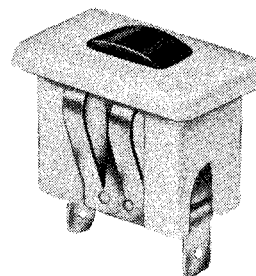
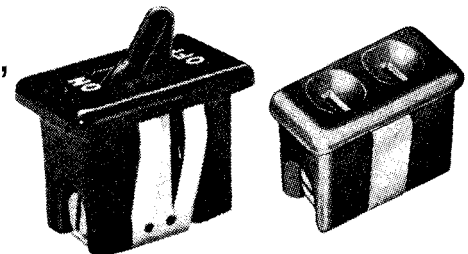
The Four Pole Switch has the same physical appearance as the Three Pole Switch pictured above. Only dimensional difference is in the width when the Fourth pole is added.

## FOUR POLE SCREW TERMINALS

Rating 15A. 125V. 10A. 250V. AC. 15/32" Dia. Bushing 15/32" long. 11/16" Bat Toggle. Heavy Duty.

Catalog No.	Action
1K254-13	4P - ST
1L254-73	4P - DT
1M254-73	4P - DT, Center Off

## "SNAP-IN" LINE



Catalog No.	Type	Rating
215-BL	Switch	20 Amp 125V. A.C. 10 Amp 250V. A.C.
215-WH		1/2 H.P. 125-250V. A.C.
222-BL-RC 222-WH-RC	Pilot Light	110-250V.
220-BL 220-WH	Outlet	15 Amp 125V. 10 Amp 250V.

**Carling ELECTRIC, INC. WEST HARTFORD 10, CONN.**



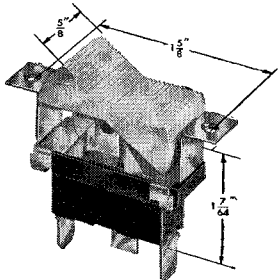
# Carling PUSH • SLIDE • TOGGLE • ROTARY • TRIGGER • TIPPETTE SWITCHES

## SWITCHES-TIPPETTE\* LIGHTED-TIPPETTE

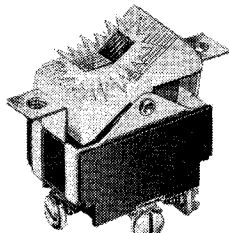
\*Tippette is a Carling Trademark

### TIL Series

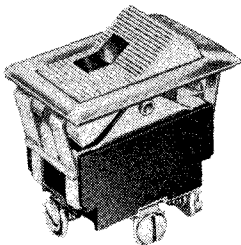
CATALOG NUMBERS NOMINAL RATINGS						OPERATION AND CIRCUIT CHARACTERISTICS				
RATING		6 AMP—125V A.C.			3 AMP—250V A.C.			Position #1	Position #2 (CENTER)	Position #3
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	SINGLE POLE SINGLE THROW				
TILA60	TILA61	TILA62	TILA63	TILA64	TILA65	On	None	Off		
TILA6A	TILA6B	TILA6C	TILA6D	TILA6E	TILA6F	Off	None	Mom. On		
TILA6L	TILA6M	TILA6Q	TILA6R	TILA6S	TILA6T	On	None	Mom. Off		
RATING						OPERATION AND CIRCUIT CHARACTERISTICS				
RATING		15 AMP—125V A.C.**			10 AMP—250V A.C.			Position #1	Position #2 (CENTER)	Position #3
		¾ H.P. 125-250V. A.C.						SINGLE POLE SINGLE THROW		
TILB60	TILB61	TILB62	TILB63	TILB64	TILB65	On	None	On		
TILB6A	TILB6B	TILB6C	TILB6D	TILB6E	TILB6F	On	None	Mom. On		
TILC60	TILC61	TILC62	TILC63	TILC64	TILC65	On	Off	On		
TILC6A	TILC6B	TILC6C	TILC6D	TILC6E	TILC6F	On	Off	Mom. On		
TILC6L	TILC6M	TILC6Q	TILC6R	TILC6S	TILC6T	Mom. On	Off	Mom. On		



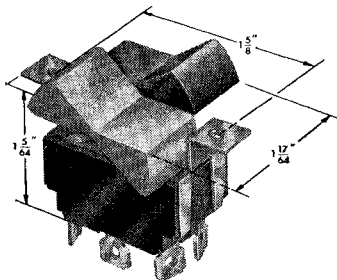
TILA61



LTILA64



LTIL SERIES W/  
SNAP-IN BRACKET



TIG SERIES W/  
DOUBLE ACTUATORS

### TIG Series (With ONE Tippette Lever)

CATALOG NUMBERS NOMINAL RATINGS						OPERATION AND CIRCUIT CHARACTERISTICS				
RATING		6 AMP—125V A.C.			3 AMP—250V A.C.			Position #1	Position #2 (CENTER)	Position #3
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	DOUBLE POLE SINGLE THROW				
TIGK60	TIGK61	TIGK62	TIGK63	TIGK64	TIGK65	On	None	Off		
TIGK6A	TIGK6B	TIGK6C	TIGK6D	TIGK6E	TIGK6F	Off	None	Mom. On		
TIGK6L	TIGK6M	TIGK6Q	TIGK6R	TIGK6S	TIGK6T	On	None	Mom. Off		
RATING						OPERATION AND CIRCUIT CHARACTERISTICS				
RATING		15 AMP—125V A.C.			10 AMP—250 V.A.C.			Position #1	Position #2 (CENTER)	Position #3
		¾ H.P. 125-250V. A.C.						DOUBLE POLE SINGLE THROW		
TIGL60	TIGL61	TIGL62	TIGL63	TIGL64	TIGL65	On	None	On		
TIGL6A	TIGL6B	TIGL6C	TIGL6D	TIGL6E	TIGL6F	On	None	Mom. On		
TIGM60	TIGM61	TIGM62	TIGM63	TIGM64	TIGM65	On	Off	On		
TIGM6A	TIGM6B	TIGM6C	TIGM6D	TIGM6E	TIGM6F	On	Off	Mom. On		
TIGM6L	TIGM6M	TIGM6Q	TIGM6R	TIGM6S	TIGM6T	Mom. On	Off	Mom. On		

\*\*These switches are applicable to low voltage D.C. requirements. Available in 3 and 4 Pole Series. For Lighted Tippette add Prefix "L" to above numbers.

- Actuator - Suffix # — 1L 5/8" Long Lined (Standard)  
 — 1C 5/8" Cross Serrated  
 — 1S 5/8" Smooth  
 — 2L 5/16" Long Narrow  
 — 2S 5/16" Short Narrow s/ears  
 — 3L Offset 5/8" Long Lined  
 — 3C Offset 5/8" Cross Serrated  
 — 3S Offset 5/8" Smooth

For Double Actuator Add "D" to end of above number.  
 For Double Actuator with interlock, Add "DI" to end of above number.  
 Standard Colors are WHITE, -WH and BLACK, -BL, Other colors available upon request.

Imprinting on Actuators may be had upon request.  
**Brackets** — In addition to the illustrations shown, we offer a variety of brackets — offset, flat, angled, open ear, snap-in, etc. Specials can be made upon request. Snap-in style is designed for panel thickness of approximately .040" to .100". For mounting information and dimensions consult factory. This model bracket is available on single,

double and three pole Tippettes — Single pole lighted Tippettes.  
**Wire Lead Enclosures** — W10 This Snap-On enclosure is available in the double pole, Tippette and single pole Lighted Tippette series. It is designed to protect and provide safer insulation for normally exposed lead connections.

### LIGHTED TIPPETTE FEATURES

**Actuators, Brackets & Accessories** — Available in the same styles as listed in the Tippette Series. Lenses are Red, Amber, Clear and White. Special variations and colors available.

Lamp Characteristics		Incandescent	
Neon (Standard)			
120*-240 Volts	.02 Amps	6 Volts	.02 Amps
		12 Volts	.08 Amps
		24 - 28 Volts	.04 Amps


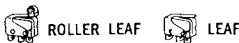








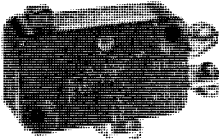









\*Available with "High Brightness" in 120.

# Carling ELECTRIC, INC. WEST HARTFORD 10, CONN.

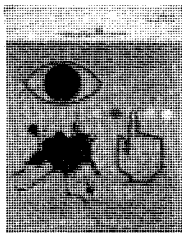


# OVER 60,000 OFF-THE-SHELF ANSWERS

ALWAYS AVAILABLE FOR IMMEDIATE DELIVERY

Basic Switches	DESCRIPTION	MODEL NUMBER	LIST PRICES
<b>SUB-SUBMINIATURE T type</b>  Exceptionally high current capacity in tiny case. Only 1/2" x 1/4" x 3/8" yet UL listed at 7.5 amps, 125/250 VAC. Also rated at 7.5 amps, 30 VDC resistive, 3 amps, 30 VDC inductive. Mounts side-by-side, four switches to the inch. ACTUATORS  ROLLER LEAF  LEAF 	SPDT solder terminals SPDT solder terminals, U.L. leaf actuator roller leaf actuator	T3 T12 A5-71** A5-73**	1-9 2.00 2.00 .20 .50
<b>SUBMINIATURE E4 type</b>  Ideal for compact electrical and electronic equipment. Low movement differential and operating force gives precision control in critical applications. Can be stacked and gang mounted. Meets MIL Specs. MS-25085 and is UL listed at 5 amps, 125/250 VAC. Also handles 4 amps, 30 VDC resistive, 2.5 amps, 30 VDC inductive. Size: 2 3/4" x 1/4" x 2 3/4". ACTUATORS  TOGGLE  PUSHBUTTON  LEAF  ROLLER LEAF 	SPDT, solder terminals SPDT, turret terminals DPDT maintained toggle switch, 1/2" bushing TPDT maintained toggle switch, 1/2" bushing DPDT maintained toggle switch, 1/4" bushing SPDT maintained toggle switch, 1/4" bushing DPDT momentary push-button switch, 1/2" bushing DPDT push-on, push-off, push-button switch, 1/2" bushing leaf actuator roller leaf actuator	E4-103 E4-110 A3-32-103* A3-33-103* A3-41-103* A3-42-103* A4-86-103* A4-87-103* A5-9** A5-10**	1.50 1.50 5.70 7.80 5.70 3.49 6.10 7.40 .20 .50
<b>MINIATURE F type</b>  Low cost precision switch that meets military specs and is UL listed. Rugged design—positive over-travel stop protects mechanism from damaging over-actuation. Easy to mount. Size: 1 3/2" x 1 3/2" x 3/8". Rating: 10 amps 125/250 VAC / 28 VDC resistive, 6 amps, 30 VDC inductive. ACTUATORS  LEAF  ROLLER LEAF 	SPDT basic switch, screw terminals, U.L. MS-15253-1 roller leaf actuator leaf actuator	F2-13 A5-47** A5-49**	1.00 .40 .20
<b>2-CIRCUIT S type</b>  Combines high capacity, small size and long life with extreme precision. Rated at 10,000,000 operations at full load, tested to 30,000,000. Good for power circuits as well as precision control applications. Meets military specs. Several models UL listed. Reset model maintains circuit until reset button actuated; can be used as inexpensive two-way limit switch. Size: 1 1/2" x 1/2" x 1/2". Rating: 10 amps, 125/250 VAC. 30 VDC inductive. ACTUATORS  ROLLER LEVER  PUSHBUTTON  EXTENDED LEAF  ROLLER LEAF 	SPDT, end solder terminals SPDT, (reset) end solder terminals SPDT, end screw terminals SPDT, (reset) end screw terminals SPDT, side solder terminals roller lever actuator push-button switch, solder terminals 1/2" bushing push-button switch, detachable plastic button red plastic button for A4-25-1 black plastic button for A4-25-1 1" dia. push-button actuator roller leaf actuator extended leaf actuator	S1-4 S1-304 S2-4 S2-304 S3-4 A2-2** A4-1/S1-4* N.P. A4-25-1/S1-4* 1109-SA11-1* 1109-SA11-2 A4-102** A5-5** A5-7**	1.40 1.65 1.50 1.75 1.47 .80 2.40 3.32 .60 .60 3.50 .40 .50

\*Designates actuator assembled with switch. \*\*Order these actuators separately. Assemble on switch when mounting.  
 NOTE: ALL SWITCHES MOMENTARY CONTACT UNLESS OTHERWISE NOTED



ASK FOR CATALOG No. 100 from your distributor. Contains short-form specification details, engineering drawings, descriptions and suggested application data. The above illustrations are only a few of the more popular items in the over 60,000 switches and indicators manufactured by Control Switch Division. For facts on the many others available, ask for Catalog 100.

**CONTROLS COMPANY OF AMERICA**  
 CONTROL SWITCH DIVISION  
 Folcroft, Pa.

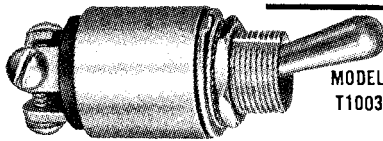
to your switching problems . . . **CONTROLS COMPANY**  **OF AMERICA**  
CONTROL SWITCH DIVISION  
Folcroft, Pa.

## AT YOUR CONTROL SWITCH DISTRIBUTOR

### Toggle Switches

*Space-Saving  
Cylindrical Types*

Exceptionally rugged, cam-roller Hetherington Toggle Switches positively cannot be teased off contact. Cylindrical anodized aluminum cases reduce size by 25% over conventional rectangular switches. Firmly anchored terminals separated by heavy insulation barrier. All are 2-position, snap-action.



MODEL  
T1003



MODEL  
T2104

MODEL  
T2150



MODEL  
T3103

CIRCUIT	RATINGS (Resistive Loads)		MTG. HOLE DIA.	SPECIAL FEATURES	LIST PRICES
	28v. dc.	115v. ac.			
SPDT	20 amps.	10 amps.	1 $\frac{1}{32}$ "	Designed to MIL-S-6745 specs.	3.22
2-circuit	10 amps.	5 amps.	1/4"	Designed to JAN-S-23, Amend. 3.	3.94
DPDT	1 amp.	1 amp.	1/4"	Miniaturized	5.32
SPDT	5 amps.	2 1/2 amps.	1/4"	Anodized aluminum case	4.06

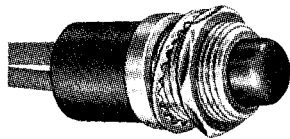
### Pushbutton Switches

*Snap-Action,  
Momentary Contact*

The exclusive Hetherington snap-action mechanism reduces arcing and contact wear...provides far greater current capacity than the small sizes of these switches would indicate. Mechanism enclosed in dust and moisture-resistant anodized aluminum housings (phenolic in B2001 & B2002). 1-piece terminals and contacts firmly anchored to bases. Many types meet JAN and MIL Specs for aviation and military requirements.

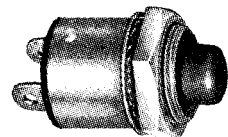
Features and dimensions are subject to change based on engineering refinements. If dimensions or specifications are critical, obtain drawings from Control Switch engineering department.

<sup>o</sup> Inspected by Underwriters' Laboratories, Inc.



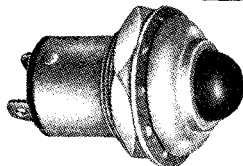
MODEL  
B2001

MODEL  
B2002

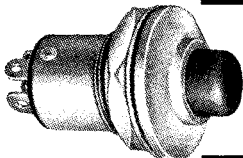


MODEL  
C1006

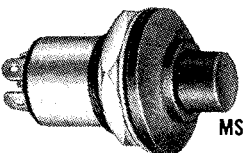
MODEL  
C2006



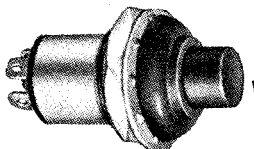
MODEL  
C100U4



MODEL  
C200P3



MODEL  
MS25089-3C

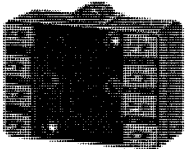
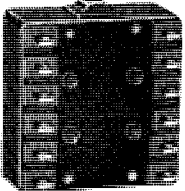



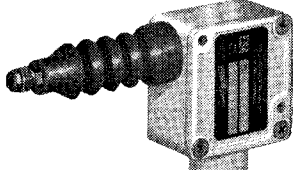
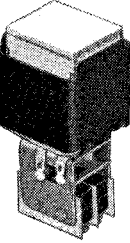


MODEL  
W103UB6

SPST (N.O.)	---	8 amps. <sup>o</sup>	1/2"	Phenolic body	2.09
SPST (N.C.)	---	---	---		
SPST (N.O.)	17 amps.	15 amps. <sup>o</sup>	1/2"	Anodized aluminum cases	3.01
2-circuit	10 amps.	---	---		
SPST (N.O.)	17 amps.	15 amps. <sup>o</sup>	5/8"	Anodized aluminum cases & mounting flanges	3.76
2-circuit	10 amps.	15 amps. <sup>o</sup>	5/8"	Anodized aluminum cases & mounting flanges	4.36
2-circuit	10 amps.	---	5/8"	Conforms to MS25089-3C (MIL-S-6743), Black flange.	3.80
2-circuit	10 amps.	---	5/8"	Black flange.	5.43

More Switches on the Next Page

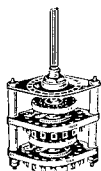
**MORE PRECISION SNAP-ACTION SWITCHES**

BASIC SWITCH SERIES	DESCRIPTION	MODEL NUMBER	LIST PRICES				
<p><b>DOUBLE POLE D type</b></p>  <p><b>Multi-Circuit</b> High capacity basic switches permit simultaneous switching of multiple circuits and precision control of three phase motors. Military and UL listed models available. Reset model maintains circuit until reset button is actuated. Can be used as inexpensive two-way limit switches. Sizes: D type, 1 1/4" x 1 1/2" x 7/8"—K type, 1 1/4" x .491" x 1 1/8".</p> <p><b>TRIPLE POLE K type</b></p>  <p><b>ACTUATORS</b></p>  <p>ROLLER LEVER</p>  <p>EXTENDED LEAF</p>  <p>PUSHBUTTON</p>	<p>DPDT, side solder terminals</p> <p>DPDT, (reset) side solder terminals</p> <p>TPDT, side solder terminals</p> <p>Actuators for Type D &amp; K Basic Switches</p> <p>Roller lever</p> <p>Push-button, 1/2" bushing</p> <p>Push-button, w/o detachable plastic button, 1/2" bushing</p> <p>Red plastic button for A4-24-1</p> <p>Black plastic button for A4-24-1</p> <p>1" dia. push-button</p> <p>Extended leaf</p>	<p>4-Circuit</p> <p>D8-4</p> <p>D8-304 N.P.</p> <p>6-Circuit</p> <p>K3-4</p> <p>A2-5**</p> <p>A4-2**</p> <p>A4-24-1**</p> <p>1109-SA11-1</p> <p>1109-SA11-2</p> <p>A4-102**</p> <p>A5-18**</p>	1-9	<p>9.60</p> <p>6.25</p> <p>6.75</p> <p>7.45</p> <p>1.05</p> <p>2.00</p> <p>1.71</p> <p>.60</p> <p>.60</p> <p>3.50</p> <p>.75</p>			
	<p><b>LIMIT SWITCHES ES4 type</b></p>  <p>Especially designed for machine control, automation circuitry and sequencing operation. Aluminum diecast housing protects switch from damage, dirt and corrosion, simplifies mounting on equipment. Some models available with neoprene boot on plunger for protection from dirt, oil and metal chips. Impulse models eliminate need for one-way dogs, complicated relays and timers. As plunger is depressed, switch completes electrical circuit during pre-set section of travel ("ON" period), but does not make circuit on return stroke. Case size: 2" (plus plunger length) x 1 1/2" x 2 3/8". Rating: 10 amps, 125/250 VAC. Circuit: SPNO.</p>	<p>STANDARD ACTION</p> <p>Red 1 3/4" push-button</p> <p>Neoprene boot plunger</p> <p>IMPULSE ACTION</p> <p>Red 1 3/4" push-button</p> <p>Neoprene boot plunger</p> <p>Replacement basic switch for ES4 Series</p>	<p>ES4-N</p> <p>ES4-J</p> <p>ES4-K</p> <p>ES4-NM1</p> <p>ES4-NM2</p> <p>ES4-NM3</p> <p>ES4-NM4</p> <p>ES4-JM3</p> <p>ES4-KM1</p> <p>ES4-KM2</p> <p>ES4-KM3</p> <p>ES4-KM4</p> <p>ES4-KM6</p> <p>S1-25</p>	<p>OVER-TRAVEL</p> <p>3/16"</p> <p>3/16"</p> <p>3/16"</p> <p>1/4"</p> <p>3/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p>	<p>"ON" PERIOD</p> <p>1/8"</p> <p>1/8"</p> <p>1/8"</p> <p>1/4"</p> <p>3/8"</p> <p>1/8"</p> <p>3/8"</p> <p>1/4"</p> <p>3/8"</p> <p>1/4"</p> <p>3/8"</p> <p>3/8"</p> <p>3/8"</p> <p>3/8"</p>	1-19	<p>8.50</p> <p>9.80</p> <p>9.50</p> <p>9.50</p> <p>9.50</p> <p>9.50</p> <p>10.80</p> <p>10.50</p> <p>10.50</p> <p>10.50</p> <p>10.50</p> <p>10.50</p> <p>10.50</p> <p>1.75</p>
		<p><b>LIGHTED PUSH-BUTTON PANEL SWITCHES</b></p> <p><b>C6 type</b></p>  <p>Combine lighting, legend, and electrical control in one compact unit. Save panel space, simplify operation. Units can be stacked or mounted individually on control panels or consoles. Plastic push-button is available in colors, can be hot-stamped with words or symbols, button size 3/4" x 1". Light is provided by two separate 6- or 28-volt lamps wired in parallel. Switching component is DPDT, rated at 5 amps, 125 VAC or 4 amps, 30 VDC, resistive each pole. Either alternate action (push-on, push-off) or momentary action is available. Unit is also available without switch for use as pilot light. Two lamps included with each unit. Solid plastic or two-piece plastic button with clear slip-in insert for legend.</p> <p><b>NEW M-SERIES</b> Mounts without hardware. Switch modules snap on. See description on Control Switch Division page in Section 3900—Indicator Lights.</p>	<p>Momentary, w/2 clear 6V lamps</p> <p>Momentary, w/2 clear 28V lamps</p> <p>Push-push, w/2 clear 6V lamps</p> <p>Push-push, w/2 clear 28V lamps</p> <p>Pilot light, w/2 clear 6V lamps</p> <p>Pilot light, w/2 clear 28V lamps</p> <p>Solid blue button</p> <p>2/pc. blue button</p> <p>Solid green button</p> <p>2/pc. green button</p> <p>Solid red button</p> <p>2/pc. red button</p> <p>Solid white button</p> <p>2/pc. white button</p> <p>Solid yellow button</p> <p>2/pc. yellow button</p> <p>Mounting barrier (use one more barrier than number of units ganged)</p>	<p>C6-52-22</p> <p>C6-56-22</p> <p>C6-53-22</p> <p>C6-57-22</p> <p>C6-50-22</p> <p>C6-54-22</p> <p>1117-229-BB</p> <p>1117-SA19-11-B</p> <p>1117-229-GG</p> <p>1117-SA19-11-G</p> <p>1117-229-RR</p> <p>1117-SA19-11-R</p> <p>1117-229-WW</p> <p>1117-SA19-11-W</p> <p>1117-229-YY</p> <p>1117-SA19-11-Y</p> <p>1117-SA-19-4</p>	1-24	<p>9.60</p> <p>10.40</p> <p>11.70</p> <p>12.50</p> <p>5.25</p> <p>6.05</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.50</p> <p>.75</p>	

\*\*Order these actuators separately. Assemble on switch when mounting.  
 NOTE: ALL SWITCHES MOMENTARY CONTACT UNLESS OTHERWISE NOTED

Centralab

## Miniature Switches, Parts



JV-9000 Series

## SERIES PA-2000 1 1/2" DIAMETER CERAMIC SWITCHES

Insulated with L-533 steatite, only 1 1/2" dia. (3/4" smaller than standard switches). Same ratings as larger switches. Features maximum voltage flashover, high O, low loss steatite body; minimum inter-circuit capacity; insulated front-back clips. Metal parts, except clips and contacts, cadmium plated; withstand 25-hour salt spray test. Rated: 2.75 amps, 15 v. DC; 230 ma, 115 v. AC, make-break resistive load. Breakdown, 1500 v. AC rms between critical parts. One-piece shaft for accurate indexing. Adjustable stop or continuous rotation mtg. using single hole with locating lug. Bushing 3/16"-32 thread, 3/8" long. Shaft, full round 3/16" dia. x 2 1/4" long from mtg. surface. With mtg. nut, lockwasher and knob. Shpg. Wt., 3 oz. per section.

For switches to meet military specifications, write for prices and information.

## SERIES PA-1000 1 1/2" DIAMETER PHENOLIC SWITCHES

Insulated with type PBE laminated phenolic per MIL-3115-B. Same size as PA-2000 ceramic switches. Rated: 2 amps, 15 v. DC, 150 ma, 110 v. AC. Breakdown, 1000 v. AC. Positive, adjustable stop or continuous rotation, 30 or 60 detents available. Withstand 25-hour salt spray test. With knob. Shpg. Wt., 3 oz. per section. Military specifications available as above.

## MINIATURE ROTARY SWITCHES

No. Sect.	Total Poles	PA-2000 Ceramic			PA-1000 Phenolic		
		CRL No.	Non-Shgt.	Total Pos.	CRL No.	Non-Shgt.	Total Pos.
1	1	2000	2001	2-12	1000	1001	2-11
1	2	2002	2003	2-6	1002	1003	2-5
1	2	2004	2005	2-12	1004	1005	2-11
1	3	2006	2007	2-5	1006	1007	2-3
1	3	2008	2009	2-12	1008	1009	2-11
1	4				1010	1011	2
2	4	2010	2011	2-6	1012	1013	2-5
4	4	2012	2013	2-12	1014	1015	2-11
1	5	2014	2015	2-3			
1	6	2016	2017	2-12	1016	1017	2-11
2	6	2018	2019	2			
2	6	2020	2021	2-5	1018	1019	2-3
2	6	2022	2023	2-6	1020	1021	2-5
2	6	2024	2025	2-12	1022	1023	2-11
4	8				1024	1025	2
4	8	2026	2027	2-6	1026	1027	2-5
4	8	2028	2029	2-5			
3	12				1028	1029	2
2	10	2030	2031	2-3			
5	10	2032	2033	2-6	1030	1031	2-5
2	12	2034	2035	2			
6	12	2036	2037	2-6	1032	1033	2-5
3	15	2038	2039	2-3			
3	18	2040	2041	2			

## SPECIAL CIRCUIT AND 60° INDEXING SWITCHES

No. Sect.	Indexing	CRL No. PA-		Total Pos.	
		Non-Shgt.	Shgt.		
1	1	2052†	2-10	1034*	2-10
1	1	2042‡	2-10	1040†	2-10
2	2	2048§	2-12		
2	2	2050§	4		
2	2	2043¶	2-6	1035††	2-6
2	2	2045¶¶	2-6	1037††	2-6

\*All shorted to common in full CCW, progressively opened and dropped with CW rotation. †All open in full CCW, progressively picked up and shorted to common with CW rotation. ‡Silver clips and contacts. §For switching dual lines. ¶60° indexing; 1 1/2" spacing between sections.

## SEPARATE SECTIONS

For use with 30° index assemblies No. PA-300, PA-301 and PA-302, except Nos. PA-17, PA-20 and PA-45, for use with 60° Index assemblies PA-304 and PA-305.

No. Poles	Indexing	PA-2000 Ceramic			PA-1000 Phenolic		
		CRL No. PA-	Non-Shgt.	Total Pos.	CRL No. PA-	Non-Shgt.	Total Pos.
1	30°	0	1	2-12	30	31	2-11
2	30°	2	3	2-6	32	33	2-5
3	30°	4	5	2-5	34	35	2-3
4	30°	6	7	2-3	36	37	2
5	30°	8	9	2			
6	30°	6	7	2			
1	30°	10*	19*	2-5	38*	39*	2-5
2	30°	11**	4	2-11	40**	41**	2-11
1	30°	12**		2-10	43*		2-10
1	30°	13*		2-10	49††		2-10
1	60°	20	17	2-6		45	2-6

\*Unused contacts one side of common connected and shorted out. \*\*All unused contacts connected and shorted out. †Active contacts shorted to common in full CCW, progressively opened and dropped with CW rotation. ††Active contacts open in full CCW, progressively picked up and shorted to common with CW rotation.

## SERIES JV-9000 HEAVY-DUTY POWER SWITCHES

Rotary power switch insulated with Grade L-533 steatite. Rated: 9 amps, 110v. AC; 30 amps, 5 v. DC; 15 ma, 2500 v. AC. Breakdown, 3000 v. AC rms between critical parts. Coin silver contacts; 20° indexing adjustable stop. Mtg. bushing 3/8"-32 thread, 3/4" long. Section Size 2 3/4" dia. Shipping Wt., 6 oz. per section.

## SERIES JV-9000 ROTARY SWITCHES

CRL Number	Poles to Section		No. Sections	No. Poles	No. Positions
	Shorting	Non-Shorting			
JV-9000	JV-9001	1	1	1	2-17
JV-9002	JV-9003	3	1	3	2-5
JV-9004	JV-9005	1	2	2	2-17
JV-9006	JV-9007	3	2	6	2-5
JV-9008	JV-9009	1	3	3	2-17
JV-9010	JV-9011	3	3	3	2-5
JV-9012	JV-9013	1	4	4	2-17
JV-9014	JV-9015	3	4	12	2-5
JV-9016	JV-9017	1	5	5	2-17
JV-9018	JV-9019	3	5	15	2-5
JV-9020	JV-9021	1	6	6	2-17
JV-9022	JV-9023	2	1	2	2-8
JV-9024	JV-9025	2	2	4	2-8
JV-9026	JV-9027	2	3	6	2-8
JV-9028	JV-9029	2	4	8	2-8

## SERIES JV-9000 SEPARATE SECTIONS

CRL Number	Number Poles		Number Positions
	Shorting	Non-Shorting	
JV-8	JVN-8	1	2-17
JV-9	JVN-9	3	2-5
JV-10	JVN-10	2	2-8
JV-18*	JVN-18*	1	2-18

\*Rotor has 17 fingers making contact with 17 contacts on stator, leaving one contact open. By cutting off unwanted fingers this section can be adapted to special circuits, e.g., one off, nine progressively shorting positions.

## SILVER CLIPS AND CONTACTS

CRL Number		Index	No. of Poles	No. of Positions
Shorting	Non-Shorting			
PA-16	PA-21	30	1	2-12
PA-14	PA-23	30	2	2-6
	PA-24	30	4	2

## INDUSTRIAL NET PRICES

## SERIES PA-2000 CERAMIC

CRL No. PA-	Shtg.	Non-Shtg.	Net Each, Lots of					
			1-4	5-9	10-24	25-49	50-99	100-249
2000	2001	\$2.37	\$1.98	\$1.78	\$1.59	\$1.58	\$1.42	
2002	2003	2.37	1.98	1.78	1.59	1.58	1.42	
2004	2005	3.39	2.83	2.55	2.42	2.26	2.03	
2006	2007	2.37	1.98	1.78	1.59	1.58	1.42	
2008	2009	4.32	3.60	3.24	3.08	2.88	2.59	
2010	2011	3.39	2.83	2.55	2.42	2.26	2.03	
2012	2013	5.19	4.33	3.90	3.71	3.46	3.11	
2014	2015	2.37	1.98	1.78	1.59	1.58	1.42	
2016	2017	5.21	5.18	4.66	4.43	4.14	3.73	
2018	2019	2.37	1.98	1.78	1.59	1.58	1.42	
2020	2021	3.39	2.83	2.55	2.42	2.26	2.03	
2022	2023	4.32	3.60	3.24	3.08	2.88	2.59	
2024	2025	7.20	6.00	5.40	5.13	4.80	4.32	
2026	2027	5.19	4.33	3.90	3.71	3.46	3.11	
2028	2029	4.32	3.60	3.24	3.08	2.88	2.59	
2030	2031	3.39	2.83	2.55	2.42	2.26	2.03	
2032	2033	6.21	5.18	4.66	4.43	4.14	3.73	
2034	2035	3.39	2.83	2.55	2.42	2.26	2.03	
2036	2037	7.20	6.00	5.40	5.13	4.80	4.32	
2038	2039	4.68	3.90	3.51	3.33	3.12	2.81	
2040	2041	4.68	3.90	3.51	3.33	3.12	2.81	
2042		2.16	1.80	1.62	1.54	1.44	1.30	
2048	2049	4.68	3.90	3.51	3.33	3.12	2.81	
2050		2.37	1.98	1.78	1.69	1.58	1.42	
2052		2.16	1.80	1.62	1.54	1.44	1.30	
2043	2045	2.16	1.80	1.62	1.54	1.44	1.30	
0	1	1.20	1.00	.90	.86	.80	.72	
2	3	1.20	1.00	.90	.86	.80	.72	
4	5	1.20	1.00	.90	.86	.80	.72	
6	7	1.20	1.00	.90	.86	.80	.72	
8	9	1.20	1.00	.90	.86	.80	.72	
10	19	1.20	1.00	.90	.86	.80	.72	
11	18	1.20	1.00	.90	.86	.80	.72	
12		1.20	1.00	.90	.86	.80	.72	
13		1.20	1.00	.90	.86	.80	.72	
20	17	1.20	1.00	.90	.86	.80	.72	
14	23	1.98	1.65	1.49	1.42	1.32	1.19	
15	24	1.98	1.65	1.49	1.42	1.32	1.19	
16	21	1.98	1.65	1.49	1.42	1.32	1.19	

## SERIES PA-1000 PHENOLIC

CRL No.	Indexing	No. of Poles	Net Each, Lots of					
			1-4	5-9	10-24	25-49	50-99	100-249
1000	1001	\$1.80	\$1.50	\$1.35	\$1.28	\$1.20	\$1.08	
1002	1003	1.80	1.50	1.35	1.28	1.20	1.08	
1004	1005	2.58	2.15	1.94	1.84	1.72	1.55	
1006	1007	1.80	1.50	1.35	1.28	1.20	1.08	
1008	1009	3.24	2.70	2.43	2.31	2.16	1.94	
1010	1011	1.80	1.50	1.35	1.28	1.20	1.08	
1012	1013	2.58	2.15	1.94	1.84	1.72	1.55	
1014	1015	3.61	3.18	2.86	2.72	2.54	2.29	
1016	1017	4.47	3.73	3.36	3.19	2.98	2.68	
1018	1019	2.58	2.15	1.94	1.84	1.72	1.55	
1020	1021	3.24	2.70	2.43	2.31	2.16	1.94	
1022	1023	5.04	4.20	3.78	3.59	3.36	3.02	
1024	1025	2.58	2.15	1.94	1.84	1.72	1.55	
1026	1027	3.61	3.18	2.86	2.72	2.54	2.29	
1028	1029	3.24	2.70	2.43	2.31	2.16	1.94	
1030	1031	4.47	3.73	3.36	3.19	2.98	2.68	
1032	1033	5.04	4.20	3.78	3.59	3.36	3.02	
1034		1.80	1.50	1.35	1.28	1.20	1.08	
1035		1.80	1.50	1.35	1.28	1.20	1.08	
1037		2.58	2.15	1.94	1.84	1.72	1.55	
1040		1.80	1.50	1.35	1.28	1.20	1.08	
30	31	.87	.73	.66	.63	.58	.52	
32	33	.87	.73	.66	.63	.58	.52	
34	35	.87	.73	.66	.63	.58	.52	
36	37	.87	.73	.66	.63	.58	.52	
38	39	.87	.73	.66	.63	.58	.52	
40	41	.87	.73	.66	.63	.58	.52	
43		.87	.73	.66	.63	.58	.52	
45		.87	.73	.66	.63	.58	.52	
49		.87	.73	.66	.63	.58	.52	

## SEPARATE INDEX ASSEMBLIES

Index assemblies for series PA-1000 and PA-2000 interchangeable.  
CRL No. PA-300 Assembly—Contains PA-300 (30°) index, P-120 pointer knob, adjustable stop plate, two 3/4" spacers, two 3/8" spacers, four 3/8" spacers, 2 1/2" tie bolts, nuts, lockwashers and fiber spacer washers. Rear shaft length 2". Use with 1 to 3 sections.

CRL No. PA-301 Assembly—Contains PA-301 index (30°), P-120 pointer knob, adjustable stop plate, two 3/4" spacers, two 3/8" spacers, ten 3/8" spacers, four 3/8" spacers, 5" tie bolts and hardware. Rear shaft length 4". Use with 4 to 6 sections.

CRL No. PA-302 Assembly—Contains PA-302 (30°) index, P-120 pointer knob, adjustable stop plate, four 3/4" spacers, two 3/8" spacers, sixteen 3/8" spacers, eight 3/8" spacers, 7" tie bolts and hardware. Rear shaft

Centralab.

# Rotary, Lever Switches

## SERIES 2500 1 3/8" DIAMETER ROTARY SWITCHES

Made of highest quality (grade L-533) Steatite insulation. Meet critical requirements of RF circuit applications. Bushing 3/8"-32 thread 3/8" long. Shaft 1 1/8" long, 1/8" full round. Sections 1 3/8" dia. Positive index 30° with adjustable stop. Index assemblies and hardware are identical and interchangeable with those of the 1400 Series. Switches include pointer knob, nut and lockwasher. Rated: 2.75 amps. 15 v. DC; 230 ma, 115 v. AC. Breakdown, 1500 v. AC between critical parts. Shipping Weight, 5 oz. per section.

## SERIES 1400 1 1/8" DIAMETER ROTARY SWITCHES

Extremely compact design. Mounting bushings 3/8"-32 thread, 3/8" long. Shafts 1 1/8" from end of bushing; 1/8" full round. Sections 1 1/8" dia. Positive 30° index with adjustable stop. With mounting nut, lockwasher and pointer knob. Index assemblies and hardware are identical and interchangeable with those of 2500 series. Rated: 2.75 amps at 15 v. DC; 230 ma at 115 v. AC. Breakdown, 1000 v. AC rms. Shipping Weight, 4 oz. per section.

### COMPLETE ROTARY SWITCHES

Ceramic Types		No. Sections	No. Poles	No. Positions	Phenolic Types	
CRL Number	CRL Number				CRL Number	CRL Number
2500	2501	1	1	2-6	1400	1401
2502	2503	1	1	2-11	1402	1403
2504	2505	1	2	2-5	1404	1405
2510	2511	2	2	2-6	1410	1411
2512	2513	2	2	2-11	1412	1413
2506	2507	1	3	2-3	1406	1407
2520	2521	3	3	2-6	1420	1421
2522	2523	3	3	2-11	1422	1423
		1	4	2	1408	1409
2514	2515	2	4	2-5	1414	1415
		4	4	2-6	1426	1427
		4	4	2-11	1428	1429
2516	2517	2	6	2-3	1416	1417
2524	2525	3	6	2-5	1424	1425
		2	8	2	1418	1419
		4	8	2-5	1430	1431

### SEPARATE SECTIONS

Deluxe Types: .187" rotor slot, use P-270, P-271, P-272 indexes.

Ceramic Types		No. Poles	No. Positions	Phenolic Types	
CRL Number	CRL Number			CRL Number	CRL Number
TD	XD	1	2-6	AD	HD
UD	YD	1	2-11	BD	JD
RD	RD	2	2-5	CD	KD
SD	SSD	3	2-3	DD	LD
VD	ZD	4	2	ED	MD
		4	2-3	EED	BBB
		1	2-5	FD**	AAD**
GGD*	FFD*	1	2-11	GD†	CCD*
PISD‡		1	2-10	PD‡	
NSD and PSD				ND and PD	
QSD			Resistance Decade†	QD	
			Capacitance Decade		

\*All unused contacts connected and shorted out. †19 contacts, open in full CW, progressively picked up and shorted to common with CCW rotation. ‡Combine for resistance decade switch. \*\*Unused contacts one side of common connected and shorted out.

### SEPARATE INDEX ASSEMBLIES

Deluxe Type: 1-piece shaft .187" thick flat; use deluxe 1400 or 2500 Series sections. Units include index, pointer knob and hardware for complete assembly.

CRL No. P-270—For 1-3 sections; 2" rear shaft.  
CRL No. P-271—For 3-5 sections; 4" rear shaft.  
CRL No. P-272—For 5-10 sections; 8" rear shaft.

### INDUSTRIAL NET PRICES

CRL Model Number	Net Each, Lots of				
	1-4	5-9	10-24	25-49	50-99 100-249
2500 thru 2507	\$2.82	\$2.35	\$2.12	\$2.01	\$1.88 \$1.69
2510 thru 2517	4.02	3.35	3.02	2.87	2.68 2.41
2520 thru 2525	5.16	4.30	3.87	3.68	3.44 3.10
All Sections	1.35	1.13	1.02	.97	.90 .81

### PHENOLIC SWITCHES, SECTIONS

	\$2.52	\$2.10	\$1.88	\$1.80	\$1.68	\$1.51
1400 thru 1409	\$2.52	\$2.10	\$1.88	\$1.80	\$1.68	\$1.51
1410 thru 1419	3.06	2.55	2.30	2.19	2.04	1.84
1420 thru 1425	3.90	3.25	2.93	2.78	2.60	2.34
1426 thru 1431	4.50	3.75	3.38	3.21	3.00	2.70
AD, BD, CD, OD, ED	1.05	.88	.79	.75	.70	.63
HD, JD, KO, LO, MO	1.05	.88	.79	.75	.70	.63
EED and BBB	1.35	1.13	1.02	.97	.90	.81
FD, GD, PID, ND, PD	1.05	.88	.79	.75	.70	.63
QD, AAD, CCD	1.05	.88	.79	.75	.70	.63

### INDEX ASSEMBLIES

	\$1.65	\$1.38	\$1.24	\$1.18	\$1.10	\$0.99
P-270	\$1.65	\$1.38	\$1.24	\$1.18	\$1.10	\$0.99
P-271	2.10	1.75	1.58	1.50	1.40	1.26
P-272	2.85	2.38	2.14	2.03	1.90	1.71

## STEATITE HAM SWITCHES

Heavy-duty Grade L-533 steatite insulation for ham applications. Available in 60° and 90° index. All metal parts except clips and contacts are cadmium plated steel; all units have phenolic shaft through switch sections. Positive index with adjustable stop; 60° units have 2-6 active positions; 90° units, 2-4. Single hole mounting; 3/8"-32 thread bushing 3/8" long. Shaft 1/8" dia., 2 1/4" long, full round. Rated: 250 milliamps at 115 v. AC; 5 milliamps at 1500 v. AC; 1.75 amps at 24 v. DC, will handle 15 watts; for tubes operating at voltages up to 1 kv and inputs to 150 watts. Unit complete includes mounting nut, lockwasher, pointer knob, and dial plate. Shipping Weight, 4 oz. per section.

### NON-SHORTING HAM SWITCHES

CRL Number	90° No. Poles*	Net Each, Lots of						
		1-4	5-9	10-24	25-49	50-99 100-249		
2542	2550	1	\$2.37	\$1.98	\$1.78	\$1.69	\$1.58	\$1.42
2543	2551	2	3.36	2.80	2.52	2.39	2.24	2.02
2544	2552	3	4.32	3.60	3.24	3.08	2.88	2.59
2545	2553	4	5.34	4.45	4.01	3.81	3.56	3.21
2546	2554	5	6.30	5.25	4.73	4.49	4.20	3.78
XKD†	ZDD†	1	1.20	1.00	.90	.86	.80	.72

\*One pole per section. †Separate sections; use with "P" Series index assemblies.

## ROTARY ACTION FLAT SWITCHES

Laminated phenolic insulation. Rated: 5.5 amps, 6 v. DC; 230 ma, 110 v. AC. Breakdown, 1000 v. AC rms. Bushing 3/8"-32 thread, 3/8" long. Shaft 1/8" dia., 2 1/4" long. Shipping Weight, 3 oz.

CRL No.	No. Poles	No. Pos.	Net Each, Lots of					
			1-4	5-9	10-24	25-49	50-99	100-249
1448†	6	3	\$2.37	\$1.98	\$1.78	\$1.69	\$1.58	\$1.42
1449†	6	3	2.37	1.98	1.78	1.69	1.58	1.42
1450†	4	2	1.65	1.38	1.24	1.18	1.10	.99
1451†	4	2	1.98	1.65	1.19	1.42	1.32	1.19
1488‡	6	3	3.60	3.00	2.70	2.57	2.40	2.16
1489§	6	3	3.60	3.00	2.70	2.57	2.40	2.16

\*Positive index. †Non-shorting. ‡Spring return. §Combination positive and spring return index.

## GENERAL PURPOSE SWITCHES

Laminated phenolic insulation. Rated: 1.75 amps, 24 v. DC; 230 ma, 115 v. AC. Breakdown, 1000 v. AC rms. Bushing 3/8"-32 thread, 3/8" long except 1484, 1/8". Positive index unless otherwise noted.

CRL No.	No. Poles	No. Pos.	Net Each, Lots of					
			1-4	5-9	10-24	25-49	50-99	100-249
1460	1	2	\$1.08	\$0.90	\$0.81	\$0.77	\$0.72	\$0.65
1461	1	3	1.08	.90	.81	.77	.72	.65
1462	2	2	1.08	.90	.81	.77	.72	.65
1463*	1	2	1.08	.90	.81	.77	.72	.65
1464**	2	2	1.08	.90	.81	.77	.72	.65
1465‡	1	4‡	1.80	1.50	1.35	1.28	1.20	1.08
1472*	2	3	1.08	.90	.81	.77	.72	.65
1473	2	3	1.08	.90	.81	.77	.72	.65
1483§	1	3	.75	.63	.57	.54	.50	.45
1484#	1	3	.90	.75	.68	.65	.60	.54
1486*	2	3	1.08	.90	.81	.77	.72	.65

\*Non-shorting; all others shorting. †Spring return indexing. ‡3 active with AC-DPST line switch. §Remote speaker switch. #Remote auto radio speaker switch. \*Remote stereo speaker switch.

## ECONOMY LEVER ACTION SWITCHES

### REPLACES PA-7000 SERIES

New nylon rotor design results in low cost for use singly or in groups. Have positive and/or spring return index design with shorting or non-shorting contacts. High quality laminated phenolic insulation, clips and contacts silver plated brass. Two hole type mounting bracket supplied with 6-32 tap holes. Dimensions of single switch 1 1/8" high x 3/8" wide x 1 1/2" deep behind panel. Supplies with knob and mounting hardware. Rated 2.75 amps at 15 VDC, 230 mA at 115 VAC. Shipping Weight 4 oz.

CRL No.	Shorting	Non-Shorting	No. Poles	No. Pos.	Index
1452		1454	2	3	Positive
1453		1455	2	3	Sp. Ret.
1456		1467	2	3	Pos. & Spr.
1456		1457	4	2	Sp. Ret.
1459		1458	4	2	Positive

Mounting Plates for Lever Switches—Type A made of .035" die cut steel, black crackle finish. Provides 3/4" spacing between switches. Type B for use in electrical outlet boxes. Satin chrome steel with mounting holes 3/16" between centers. Shpg. Wt., 4 oz.

CRL No.	Type	No. Switches	Size, Inches	CRL No.	Type	No. Switches	Size, Inches
P-1755	A	1	3 1/4 x 2 3/8	P-1759	A	5	3 1/4 x 2 3/8
P-1756	A	2	1 1/2 x 2 3/8	P-221	B	2	2 1/4 x 4 1/4
P-1757	A	3	2 1/4 x 2 3/8	P-222	B	1	2 1/4 x 4 1/4
P-1758	A	4	3 x 2 3/8				

### INDUSTRIAL NET PRICES

CRL Number	Net Each, Lots of					
	1-4	5-9	10-24	25-49	50-99 100-249	
1452/4	\$1.26	\$1.05	\$ .95	\$ .90	\$ .84	\$ .76
1453/5	1.26	1.05	.95	.90	.84	.76
1456/7	1.26	1.05	.95	.90	.84	.76
1457/7	1.44	1.20	1.08	1.03	.96	.86
1459/8	1.44	1.20	1.08	1.03	.96	.86
Type A Plates	.30	.25	.23	.22	.20	.18
Type B Plates	.63	.53	.48	.46	.42	.38

### SEPARATE INDEX ASSEMBLIES

Deluxe 90° and 60° Types: 2-piece shaft with phenolic rear, metal front; for high voltage operation; use XDD section for 90°; use ZDD section for 60°.

CRL No. 90°	CRL No. 60°	Rear Shaft	Suggested No. Sections
P-278	P-273	2"	1 to 2
P-279	P-274	4 1/2"	3 to 4
P-280	P-275	7"	5 to 8

CRL Number Index Assembly	Net Each, Lots of					
	1-4	5-9	10-24	25-49	50-99 100-249	
P-273 and P-278	\$1.38	\$1.15	\$1.04	\$0.99	\$0.92	\$0.83
P-274 and P-279	1.74	1.45	1.31	1.25	1.16	1.04
P-275 and P-280	2.16	1.80	1.62	1.54	1.44	1.40

## DUAL SPEAKER SWITCH KIT

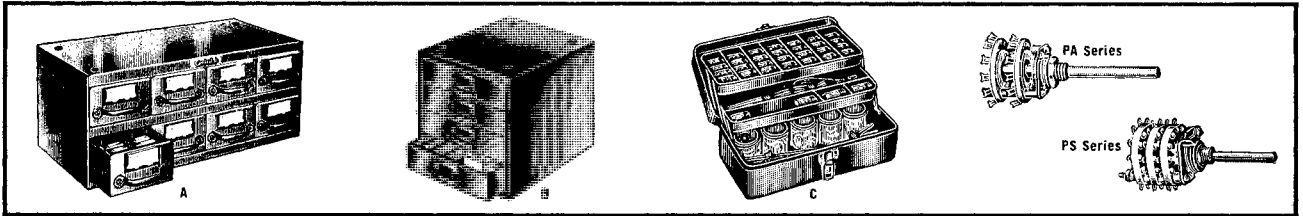
(Not Illustrated). Primarily designed for rear seat auto radio speaker applications. It is adaptable, however, to many commercial applications. Contains: 1484 switch, P-216 bracket-dial plate, P-401 knob, two self-tapping metal screws and instruction sheet.

CRL No. PK-300—  
Net Each \_\_\_\_\_ \$1.05



Centralab.

# Switches, Hardware and Kits



## MIL-S-3786A STYLE SRO3 MINIATURE CERAMIC SWITCHES

Designed to meet MIL-S-3786A. Insulated with Grade L-533 steatite, Dow Corning 200 silicone treated against surface moisture. Breakdown, 1000 v. AC rms between critical parts. Coin silver clips and contacts; hot tin-dipped terminals. Adjustable stops or continuous rotation on 30° index. Ceramic sections 1 1/2" dia. x .125" th. Single hole mounting with locating lug at 1/2" radius. Bushing, 3/8"-32NEF-2A threaded, 3/4" lg. from mtg. surface. Shaft 1/2" dia. full round, 2 1/4" lg. from mtg. surface. With nut, lockwasher and P-120 pointer knob. Ratings: 450 ma at 115v. AC; 8 amps, 6 v. DC; 5.5 amps, 12 v. DC (make-break resistive load).

### SERIES PA-6000 SWITCHES

CRL Number		Poles to Section	No. Sections	No. Poles	No. Positions
Shorting	Non-Short.				
PA-6000	PA-6001	1	1	1	2-11
PA-6002	PA-6003	2	1	2	2-5
PA-6004	PA-6005	1	2	2	2-11
PA-6006	PA-6007	3	1	3	2-3
PA-6010*	PA-6011*	4	2	4	2-5
PA-6012	PA-6013	2	1	2	2-3
PA-6018	PA-6019	2	2	4	2-3
PA-6024*	PA-6025*	4	2	8	2

\*Fixed, 2-position stop.

### SEPARATE INDEX ASSEMBLY

CRL No. PA-600—Used with PA-60, PA-70 or PA-80 separate sections to assemble special units of 1 to 4 sections; 30° indexing. Rear shaft 2" long.

### SEPARATE SECTIONS, 30° INDEXING

Used with PA-600 index assembly. Hot solder-dipped terminals. Coin silver clips and contacts. Sections 1 1/2" dia. Phenolic types rated 1000 v. AC rms breakdown between critical parts. Phenolic units .062" thick; others .125" thick.

Total Poles	No. Pos.	Phenolic Secs.		Mycalex Secs.		Ceramic Secs.	
		Short-ing	Non-Short	Short-ing	Non-Short	Short-ing	Non-Short
1	2-11	PA-60	PA-61	PA-70	PA-71	PA-80	PA-81
2	2-5	PA-62	PA-63	PA-72	PA-73	PA-82	PA-83
3	2-3	PA-64	PA-65	PA-74	PA-75	PA-84	PA-85
4	2	PA-66	PA-67	PA-76	PA-77	PA-86	PA-87

### INDUSTRIAL NET PRICES

CRL Number	Net Each, Lots of					
	1-4	5-9	10-24	25-49	50-99	100-249
PA-6000 thru PA-6003	\$3.39	\$2.83	\$2.55	\$2.42	\$2.26	\$2.03
PA-6004 and PA-6005	5.19	4.33	3.90	3.71	3.46	3.11
PA-6006 thru PA-6011	3.39	2.83	2.55	2.42	2.26	2.03
PA-6012 thru PA-6025	5.19	4.33	3.90	3.71	3.46	3.11
PA-600	1.50	1.25	1.13	1.07	1.00	.90
PA-60 thru PA-67	1.35	1.13	1.02	.97	.90	.81
PA-70 thru PA-77	1.98	1.65	1.49	1.42	1.32	1.19
PA-80 thru PA-87	.98	1.65	1.49	1.42	1.32	1.19

NOTE: Items requiring certified test data and government source inspection are special. Prices and information supplied on request.

## 18 AND 24 POSITION SWITCHES

Laminated phenolic insulation, type PBE per MIL-P-3115B. Voltage breakdown between critical parts 1000 v. AC rms. Bushing 3/8" thd., 3/4" lg. Shaft 1/2" dia., 2 1/4" lg. from mtg. surface. Rated 5.5 amps, 6 v. DC; 2.75 amps, 15 v. DC; 1.75 amps, 24 v. DC; 230 ma, 115 v. AC, rms. Shpg. Wt., 4 oz. per section. PA-3000 Series—18-position. Provides accurate crisp indexing in both single and multiple-section versions through the use of new hill-and-dale index. Sections 2 1/4" w. x 2 3/8" h. x 1/4" thick. Positive 20° indexing. Adjustable stops or continuous rotation. PA-4000 Series—24-position. Sections 1 1/2" w. x 2 3/8" h. x 1/4" thick.

CRL No. PA-	No. Pos.	Net Each, Lots of							
		1-4	5-9	10-24	25-49	50-99	100-249		
3000	3001	1	2-17	\$2.04	\$1.70	\$1.53	\$1.45	\$1.36	\$1.22
3002	3003	2	2-17	2.94	2.45	2.21	2.09	1.96	1.76
3004	3005	3	2-17	3.84	3.20	2.88	2.74	2.56	2.30
3006	3007	4	2-17	4.68	3.90	3.51	3.33	3.12	2.81
4000	4001	1	2-23	2.15	1.80	1.62	1.54	1.44	1.30
4002	4003	2	2-23	3.18	2.65	2.39	2.27	2.12	1.91
4004	4005	3	2-23	4.17	3.48	3.13	2.97	2.78	2.50
4006	4007	4	2-23	4.98	4.15	3.74	3.55	3.32	2.99

\*Number of poles and number of sections.

## SERIES PS 1/4" SUBMINIATURE ROTARY SWITCHES

Deluxe, ceramic insulated rotary switches that are ultra-small. Weigh less than 1 oz. each, yet have the same electrical ratings as switches much heavier and larger. Ideally suited for band switching, transistor circuits, aircraft instruments, etc. Insulation is Dow-Corning 200 Silicone treated L-533 steatite; resistance exceeds 10,000 megohms. Size: Ceramic sections 1/4" thick spaced 1/4" apart with ceramic spacing; spacing between front plate and first section, 3/8". All hardware except clips, contacts, and index spring are of cadmium plated steel. Mounting: Single hole with optional locating lug on 3/8" radius. Bushing, 1/2-32 thread, 1/2" long. Shaft 1/4" dia. x 1 1/2" long. Rated: Make and break, resistance load 3.5 amps at 6 volts DC, 160 milliamperes at 110 v. AC. Index: Positive 30°; fixed stop.

CRL Number		Total Poles	No. of Positions	Poles Per Sec.	No. of Sections
Shorting	Non-Shorting				
PS-100	PS-101	1	11	1	1
PS-102	PS-103	2	11	1	2
PS-104	PS-105	3	5	2	1
PS-106	PS-107	3	11	1	3
PS-108	PS-109	2	3	3	1
PS-110	PS-111	4	5	2	2
PS-112	PS-113	4	2	4	1
PS-114	PS-115	6	5	2	3
PS-116	PS-117	6	3	2	2
PS-118	PS-119	8	2	4	2
PS-120	PS-121	9	3	3	3
PS-122	PS-123	12	2	4	3

### SERIES PS (CONTINUED) SEPARATE SECTIONS

Ceramic*		Phenolic†		Total Poles	No. Pos.	Fixed Stop Indexing
CRL No.	CRL No.	CRL No.	CRL No.			
Short.	Non-Short.	Short.	Non-Short.			
PS-20	PS-21	PS-40	PS-41	1	1	
PS-22	PS-23	PS-42	PS-43	2	5	Use P-501 thru P-511
PS-24	PS-25	PS-44	PS-45	3	3	
PS-26	PS-27	PS-46	PS-47	4	2	

Breakdown Voltage: †1500 v. AC rms; †1000 v. AC rms.

### SEPARATE INDEX ASSEMBLIES

Designed for maximum of three sections. Includes: Index and shaft assembly; P-106 knob; six 3/8" spacers; two 1/4" spacers; two 1/8" spacers; two 3/16" spacers; two 1/8" tie bolts; nuts, lockwashers, washers; and 16 plastic spacer washers.

CRL Number	No. of Positions	CRL Number	No. of Positions
P-501	2	P-507	8
P-502	3	P-508	9
P-503	4	P-509	10
P-504	5	P-510	11
P-505	6	P-511	Continuous Rotation
P-506	7		

### INDUSTRIAL NET PRICES

CRL Number	Non-Short.	Net Each, Lots of					
		1-4	5-9	10-24	25-49	50-99	100-249
PS-100	PS-101	\$4.80	\$4.00	\$3.60	\$3.42	\$3.20	\$2.88
PS-102	PS-103	6.00	5.00	4.50	4.28	4.00	3.60
PS-104	PS-105	4.80	4.00	3.50	3.42	3.20	2.88
PS-106	PS-107	7.20	6.00	5.40	5.13	4.80	4.32
PS-108	PS-109	4.80	4.00	3.50	3.42	3.20	2.88
PS-110	PS-111	6.00	5.00	4.50	4.28	4.00	3.60
PS-112	PS-113	4.80	4.00	3.50	3.42	3.20	2.88
PS-114	PS-115	7.20	6.00	5.40	5.13	4.80	4.32
PS-116	PS-117	6.00	5.00	4.50	4.28	4.00	3.60
PS-118	PS-119	6.00	5.00	4.50	4.28	4.00	3.60
PS-120	PS-121	7.20	6.00	5.40	5.13	4.80	4.32
PS-122	PS-123	7.20	6.00	5.40	5.13	4.80	4.32
PS-20 thru PS-27		2.10	1.75	1.58	1.50	1.40	1.26
PS-40 thru PS-47		1.68	1.40	1.26	1.20	1.12	1.01
P-501 thru P-511		1.95	1.63	1.47	1.40	1.30	1.17

## PACKAGED SWITCH HARDWARE

### FOR 1400 AND 2500 SERIES SWITCHES

CRL No.	Description	Pkg. 100	CRL No.	Description	Pkg. 100
P-124	1/2" metal spacer	\$1.80	P-145	7" screw	\$ 8.40
P-125	3/8" metal spacer	1.80	P-146	9" screw	12.00
P-126	1/2" metal spacer	1.80	P-147	Nut	1.80
P-127	3/8" metal spacer	1.80	P-148	Lockwasher	1.80
P-128	1" metal spacer	1.80	P-177	Phenol. spacer wshr.	1.80
P-135	1" screw	1.80	P-181	1/4" steatite spacer	4.80
P-137	1 1/2" screw	1.80	P-187	3/8" steatite spacer	4.80
P-138	2" screw	4.80	P-188	3/4" steatite spacer	4.80
P-139	2 1/2" screw	4.80	P-189	3/4" steatite spacer	4.80
P-149	4 1/2" screw	8.40	P-190	3/4" steatite spacer	4.80
P-143	5" screw	8.40	P-192	1 1/2" steatite spacer	8.40

### FOR PA-6000 SERIES MILITARY SWITCHES

P-395	Min. MIL spacer	\$8.40	P-397	Min. MIL lockwasher	\$1.80
P-396	Min. MIL nut	1.80	P-398	MIL spacer washer	1.80

### FOR PS-100 SERIES SUBMINIATURE SWITCHES

P-515	1 1/8" screw	\$8.40	P-520	1/4" steatite spacer	\$1.80
P-516	Nut	1.80	P-521	3/8" steatite spacer	1.80
P-517	Lockwasher	1.80	P-522	3/4" steatite spacer	1.80
P-518	Flat washer	1.80	P-523	3/4" steatite spacer	1.80
P-519	Spacer washer	1.80	P-524	3/4" steatite spacer	1.80

### FOR PA-1000 & PA-2000 SERIES MINIATURE SWITCHES

CRL No.	Description	Pkg. 100	CRL No.	Description	Pkg. 100
P-319	Min. stop plate	\$4.80	P-348	3/8" steatite spacer	\$ 8.40
P-325	1/4" steatite spacer	4.80	P-350	5/8" steatite spacer	4.80
P-326	3/8" steatite spacer	4.80	P-352	1 1/8" steatite spacer	4.80
P-328	1/2" steatite spacer	4.80	P-362	1" screw	1.80
P-329	3/8" steatite spacer	4.80	P-370	2" screw	4.80
P-330	3/8" steatite spacer	4.80	P-374	2 1/2" screw	4.80
P-332	3/8" steatite spacer	4.80	P-382	4" screw	8.40
P-334	3/8" steatite spacer	4.80	P-384	5" screw	8.40
P-336	3/8" steatite spacer	4.80	P-388	7" screw	12.00
P-340	3/8" steatite spacer	4.80	P-390	Nut	1.80
P-342	1/4" steatite spacer	4.80	P-392	Lockwasher	1.80
P-344	3/8" steatite spacer	4.80	P-394	Phen. spacer washer	1.80

## CENTRALAB SWITCH KITS

### STANDARD KITS (FIG. A)

Convenient, ready source of stock sections, indexes and hardware. Packed in heavy gauge steel, 8-drawer Equipto cabinet, 23 1/2" w. x 9 1/2" h. x 12" d. with blue, baked enamel finish.

**CRL No. SWK-810 Kit**—PA-1000 series miniature phenolic parts: 106 pieces of 1 1/2" dia. phenolic sections, 32 index assemblies with spacers, nuts, washers, knobs and dial plates. Makes up to 32 regular or special switches. Net Each.....\$162.00

**CRL No. SWK-820 Kit**—PA-2000 series miniature ceramic parts: 102 pieces of 1 1/2" dia. steatite sections, 32 index assemblies with spacers, washers, nuts, knobs and dial plates. Makes up to 32 regular or special switches. Net Each.....\$192.00

### JUNIOR SIZE SWITCH KITS (FIG. B)

Packed in attractive light blue and gray 4-drawer steel cabinets 10" x 11 1/2" x 10". With balanced stock of index assemblies and separate sections for every application.

**CRL No. SWK-410 Kit**—PA-1000 series miniature phenolic parts: 48 phenolic 1 1/2" dia. sections, 13 index assemblies and hardware for making 13 phenolic regular or special switches. Net Each.....\$67.00

**CRL No. SWK-420 Kit**—PA-2000 series miniature ceramic parts: 52 ceramic 1 1/2" dia. switch sections, 13 complete index assemblies and hardware for making 13 ceramic regular or special switches. Net Each.....\$87.40

### CUSTOM SWITCH KIT (FIG. C)

Contains parts and tools necessary for any prototype designer to construct the special switch he needs. Packed in metal cabinet, set up and ready to use. Makes 25 four-section miniature rotary phenolic or ceramic switches with factory precision. Contact nibbling tool can cut any contact arrangement you need.

**CRL No. PK-20-S Kit**—Complete. Net Each.....\$125.00

# CUTLER-HAMMER SWITCHES

See your local C-H representative for prices and accessory information.



## "Commercial Application"

### ONE HOLE MOUNTING

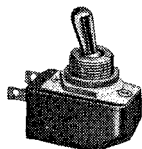
#### QUICK MAKE, QUICK BREAK A-C, D-C SWITCHES

##### UTILITY TYPE

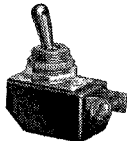
They have a quick make and quick break over center arrangement on the movable contact which permits exceptionally fast contact action minimizing pitting and erosion of the contact surfaces.

Available with screw terminals, solder lug terminals or with 6" lead wires stripped 3/4". Bushing dia. 15/32". Available with bushing lengths of 1/4", 11/32", 15/32", 3/4" and 1" — 3/4" and 1" bushings furnished with ball type lever only.

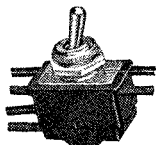
Parts visible when switch is mounted are bright nickel plated.



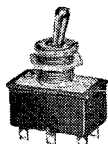
Cat. No. 8383



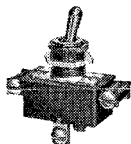
Cat. No. 8396



Cat. Nos. 8364, 8374



Cat. Nos. 8363, 8373



Cat. Nos. 8365, 8375

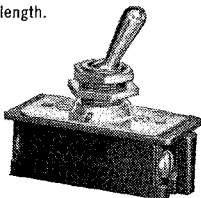
Nominal Ratings (Amps.)		Poles and Throws	Catalog Numbers		
250 V. A-c, D-c	125 V. A-c, D-c		Screw Terminals	Solder Lug Terminals	Wire Lead Terminals
1	3	SPDT (3 Way)	8297	8282	8292
3	....	SPST	8295	8280	8290
3	....	DPST	8362	8360	8361
3	....	DPDT	8365	8363	8364
3	6	SPST	8396	8381	8391
3	6	DPST	8372	8370	8371
3	6	DPDT	8375	8373	8374

When ordering, specify (1) catalog number and (2) bushing length.

### HEAVY DUTY TYPE

Screw terminals or plug-in terminals (connection made by plugging wire into switch body) are available. Plug-in type switches have 3/32" square hole to accept #14, 16 or 18 ga., stranded, tin dipped wire leads skinned 1/32".

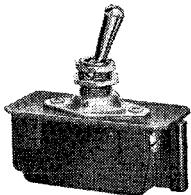
Bushing dia. 15/32". Available with 11/32" or 15/32" bushing length.



Cat. Nos. 7320, 7321, 7322



Rear view of 7343 showing holes for plug-in wire leads.



Cat. No. 7402

Nominal Ratings (Amperes)		Max Hp Ratings (250 V.)		Poles and Throws	Catalog Numbers	
250 V. A-c, D-c	125 V. A-c, D-c	A-c	D-c		Screw Terminals	Plug-in Terminals
5	....	....	....	DPDT	8680	....
5	10	1/2	1/2	w/o Center Off	....	7347
5	10	1/2	1/2	SPST	....	7343
8	16	1	1	DPST	....	7343
8	16	1	1	SPST	7321	....
10	15	1	1/2	DPST	7320	7443
10	15	1	1/2	DPST	....	7354
10	15	1	1 1/2	SPST	7361	....
10	15	1	1 1/2	DPST	7360	....
10	15	....	....	DPDT	....	....
20	..	2	2	w/o Center Off	8690	....
20	....	2	2	SPST	7403	....
20	....	2	2	DPST	7402	....

When ordering, specify (1) catalog number and (2) bushing length.

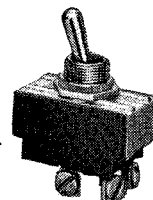
### SLOW MAKE, SLOW BREAK A-C ONLY SWITCHES

#### 3-6, 10-15 AMP. A-c LINE

Features include: heavy duty independent springs for positive contact pressure, solid silver to silver contacts and strong substantial terminal construction.

Bushing dia. 15/32". Bushing length 15/32" on all single pole switches. Double pole switches available with 11/32" or 15/32" bushings.

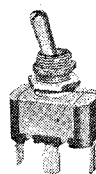
Available with screw, solder lug or spade type terminals.



Cat. No. 7560



Cat. Nos. 7503, 7505



Cat. No. 7511



Cat. No. 7500

Circuit Arrangement				Throws	Catalog Number	
Keyway on "C" Side of Switch					Single Pole	Double Pole
<b>3 AMP.—250 V. A-C, 6 AMP.—125 V. A-C</b>						
ON	OFF	ON	DT	7581	7591	
ON	OFF	ON*	DT	7586	7596	
ON*	OFF	ON*	DT	7587	7597	
ON	NONE	ON	DT	7582	7592	
ON	NONE	ON*	DT	7585	7595	
ON	NONE	OFF	ST	7580	7590	
ON	NONE	OFF*	ST	7584	7594	
OFF	NONE	ON*	ST	7583	7593	
<b>10 AMP.—250 V. A-C, 1/2 MAX. H.P.—250 V. A-C</b>						
ON	OFF	ON*	DT	7508	7568	
ON*	OFF	ON*	DT	7509	7569	
ON	NONE	ON*	DT	7510	7570	
ON	NONE	OFF*	ST	7507	7567	
OFF	NONE	ON*	ST	7506	7566	
<b>10 AMP.—250 V. A-C, 15 AMP.—125 V. A-C, 3/4 MAX. H.P.—250 V. A-C</b>						
ON	OFF	ON	DT	7502†	7562†	
ON	NONE	ON	DT	7504†	7564†	
ON	NONE	OFF	ST	7500†	7560†	

\*Momentary contact

†Screw terminals. For solder lug or spade type terminals add one (1) to mode number. Example: 7502 is screw type — for same switch with solder lugs or spades order 7503.

When ordering, specify (1) catalog number, (2) type of terminals and (3) bushing length.

### SLIDE BUTTON SWITCHES

#### FLUSH MOUNTING

SPST and SPDT, flush mounting slide switches. Mounting centers — 2 3/16" — 8303, 1 1/2" — 8746 and 8477, 1 1/8" on all others.

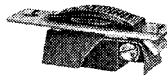
Operating buttons are red plastic on 8476-77, black phenolic on all others.



Cat. Nos. 8476 and 8477



Cat. No. 8631



Cat. No. 8303



Cat. No. 8486

Ampere Rating		Maximum Hp Ratings A-c Only		Poles and Throw	Circuit Arrangement			Catalog Numbers			
A-c	A-c	A-c	A-c		A	B	C	Screw Term.	Spade Term.	Solder Lug Term.	Plug-In Term.
125 V.	250 V.	125 V.	250 V.	SPST	On	None	Off	....	....	....	8476
6*	3*	....	....	SPST	On	None	Off	8303	....	....	....
7	3	....	1/4	SPST	On	None	Off	....	8486	....	8486
7	3	....	1/4	SPDT	On	Off	On	....	8487	....	8487
7	3	....	1/4	SPDT	On	None	On	....	8488	....	8488
10	5	....	1/2	SPST	On	None	Off	....	....	....	8477

\*A-c and d-c rating.

When ordering, specify (1) catalog number and (2) type of terminals.

CUTLER-HAMMER, Inc., Milwaukee, Wis.

Most C-H switches are available with optional features for special applications. See your local Sales Office or Distributor for complete accessory and optional feature listings.

See your local C-H representative for prices and accessory information.

# CUTLER-HAMMER SWITCHES



## "Commercial Application"

### ONE HOLE MOUNTING — Cont'd

#### SLOW MAKE, SLOW BREAK—A-C ONLY SWITCHES 10-15 AMP, LINE — THREE OR FOUR POLE

Bushing dia.  $1\frac{5}{32}$ ". Bushing length —  $1\frac{5}{32}$ " (7610 and 7615 also available with  $1\frac{1}{32}$ " bushing).

Ratings — Three pole switches — 10 amp. — 250 V. A-c, 15 Amp. — 125 V. A-c, 1 hp poly-phase — 115-575 V. A-c. Four pole switches — 10 Amp. — 250 V. A-c,  $\frac{1}{2}$  hp — 230 V. A-c.



Cat. Nos. 7693, 7695



Cat. Nos. 7610, 7616

Circuit Arrangement			Throws	Catalog Number				
A	B	C		Three Pole			Four Pole	
Keyway on "C" Side of Switch				Screw Terminals	Solder Lug Terminals	Spade Terminals	Screw Terminals	Solder Lug Terminals
ON	OFF	ON	DT	7612	7613	7613	7692	7693
ON*	OFF	ON	DT	7617	7617	7617	7697	7698
ON	NONE	ON	DT	7614	7615	7615	7694	7695
ON*	NONE	ON	DT	7618	....	7618	....	....
ON	NONE	OFF	ST	7610	7611	7611	7690	7691
ON*	NONE	OFF	ST	7616	....	7616	....	....
ON*	NONE	OFF	ST	....	....	....	7696	7697

\*Momentary contact. When ordering, specify (1) catalog number, (2) type of terminals and (3) bushing length.

### ROCKETTE SWITCHES — A-C ONLY

#### 3-6, 10-15 AMP., A-C LINE

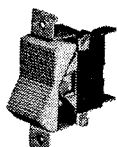
Rockers can be furnished on special order in any color to harmonize with the appliance color. Standard color of rocker is white.

Switches are flush mounting.

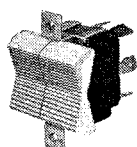
Spade terminals available in sizes .250", .205" and .187".



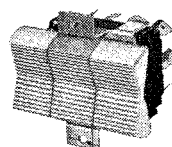
Cat. No's. 8326, 8329



Cat. No's. 8134 & 8144



Double actuator, double pole. Cat. No's. 8133 and 8143



Triple actuator, four pole. Cat. No's. 8131 and 8141

Circuit Arrangement			Poles and Throws	Number of Rockers	Catalog Numbers	
A	B	C			3 Amp. 250 V. A-c 6 Amp. 125 V. A-c	10 Amp. 250 V. A-c 15 Amp. 125 V. A-c $\frac{1}{2}$ Hp. 250 V. A-c
ON	OFF	ON	SPDT	One	8134	8144
ON*	OFF	ON*	SPDT	One	8136	8146
ON	NONE	OFF	SPST	One	8134	8144
ON	NONE	OFF	SPST	One	8326	8329 $\Delta$
ON*	NONE	OFF	SPST	One	8135	8145
ON	OFF	ON	DPDT	One	8132	8142
ON	OFF	ON	DPDT	Two	8133	8143
ON*	OFF	ON*	DPDT	One	8138	8148
ON	NONE	OFF	DPST	One	8132	8132
ON	NONE	OFF	DPST	Two	8133	8133
ON*	NONE	OFF	DPST	One	8137	8147
ON	OFF	ON	4PDT	Two	8130	8140
ON	OFF	ON	4PDT	Three	8131	8141
ON	NONE	OFF	4PST	Two	8130	8140
ON	NONE	OFF	4PST	Three	8131	8141

\*Momentary contact.  $\Delta$ Rated  $\frac{1}{2}$  hp — 250 V. A-c. Both 8326 and 8329 are nest mounted. When ordering, specify (1) catalog number, (2) width of spade terminals and (3) poles and throws.

### PUSHBUTTON SWITCHES

#### ONE HOLE MOUNTING—A-C, D-C AND A-C ONLY TYPES

Bushing dia.  $1\frac{5}{32}$ ". Bushing length; 8411— $\frac{1}{4}$ ", 7190 and 7196— $\frac{1}{2}$ ", all others  $1\frac{1}{16}$ ".

All switches are momentary contact type except 7208 and 7206 which are push push type.

8442 and 8444 available with standard  $1\frac{1}{32}$ " button or with short  $\frac{1}{4}$ " button.



Cat. No. 7207

Ratings (Amperes)		Poles and Throws	Contacts	Catalog Numbers			
125 V.	250 V.			Screw Term.	Solder Lug Term.	Spade Term.	Wire Leads
<b>A-C, D-C SWITCHES</b>							
.075	.025	SPST	N.O. or N. C.	8411	8411	8411*	....
6	3	SPST	N. O.	7196	7190	....	7193
6	3	SPST	N. O., N. C.	7208	7206	....	7207
<b>A-C ONLY SWITCHES</b>							
6	3	SPST	N. O.	8442	....	8442 $\Delta$	..
15	10	SPST	N. O.	8444	....	8444 $\Delta$	....
15 $\dagger$	10 $\dagger$	SPDT	N. O., N. C.	8446	....	8446	....

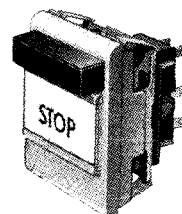
\*Spade terminals available on N. C. types only.  $\dagger$ Applies to N. O. circuit only. Rated 10 A. @ 125 V. and 5 A. @ 250 V. on N. C. circuit.  $\Delta$ Available with angle or flat type spade terminals. When ordering, specify (1) catalog number, (2) type of terminals, (3) N. O. or N. C. operation and (4) button extension (if variable).

### ILLUMINATED COMPUTER TYPE

Switches are of the snap in variety requiring a panel opening of  $1\frac{1}{8}$ " high by  $1\frac{2}{16}$ " wide (add  $1\frac{1}{2}$ " to width per switch for ganged installation).

Indicating lamp unit (8457K2) is a 10 V. bulb. Other voltage bulbs on special order.

Tab type (.110") terminals for solder or spade connection.



Cat. Nos. 8455 & 8456K2

Nominal Ratings (Amperes)		Poles and Throws	Operation	Catalog Number	
250 V. A-c, D-c	125 V. A-c, D-c			Silver Contacts	Gold Pltd. Silver Contacts
3	5	DPDT	Maintained Contact—N.O.	8455K2	8456K2*
3	5	DPDT	Momentary Contact—N.O.	8455K3	8456K3*
....	....	.....	Lamp unit only	8457K2	.....

\*Switches having gold plated silver contacts are rated at 5 millivolts — 25 microamps or dry circuit applications. When ordering, specify (1) catalog number.

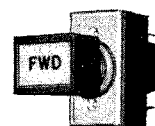
### ILLUMINATED PUSHBUTTON TYPE

SPST momentary action.

Available with removable lamp or with an integral non-removable type lamp. Removable lamp types supplied with 14 V. bulbs. Integral lamp types furnished with 28 V. bulbs.

Tab type (.110") terminals for solder or spade connection.

One hole mounting — bushing dia.  $1\frac{5}{32}$ ", bushing length  $\frac{1}{4}$ ". Rated 3 Amp. — 250 V. A-c, 6 Amp. — 125 V. A-c.



Unit with Legend Plate and Cap Assembly.

Contacts	Removable Lamp Type	Integral Lamp Type	Terminals
N. O.	8452K6	8452K4	.110 tab or solder lug
N. C.	8453K6	8453K5	.110 tab or solder lug
Lamp Only	8454K7	8454K5	.110 tab or solder lug

When ordering, specify (1) catalog number.



See your local C-H representative for prices and accessory information.

**CUTLER-HAMMER SWITCHES**



**"Military Application"**

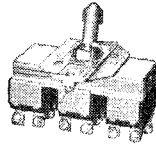
**FLUSH MOUNTING—Cont'd  
LEVER LOCK TYPE**

This line of switches is identical to the standard flush mounting types as listed on the previous page except that they have, in addition to the standard features, a lever lock design which permits the lever to be locked into position. The operating lever must be pulled upward before it can be moved from a locked position.

All switches have screw type terminals.  
Nominal Rating — 10 Amp. — 115 V. A-c, 20 Amp. — 28 V. D-c. For specific ratings for various loads and voltages see your C-H representative.  
Max. weight 0.14 - 0.24 lb.



Cat. No. 8271



Cat. No. 8863

They also are available in standard lever models or lever lock types. The lever lock switches have an integral bushing design which permits the operating lever to be locked into position. In order to move the lever from a locked position it must be pulled upward.

Nominal Rating — 25 Amp. — 28 V. D-c, 115 V. A-c on resistive loads. Max weight 0.1 - 0.2 lb. Bushing dia. 15/32". Bushing length 19/32".

**CURRENT RATINGS FOR ALL SWITCHES (Amperes per pole)**

28 Volts D-c			115 V. 400 Cy A-c			115 V. 60 Cy A-c		
Lamp Load	Resistive	Inductive	Lamp Load	Resistive	Inductive	Lamp Load	Resistive	Inductive
7	25	15	7	25	15	7	20	15

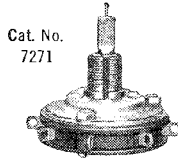
Circuit Arrangement			Throw	Catalog Numbers		
A	B	C		Single Pole	Double Pole	Six Pole
C-H Insignia on "A" side of switch. Circuit is made on side opposite throw of lever.						
ON	←OFF	ON	DT	8272	8772	8863-K-3
ON	OFF	←ON	DT	8276	8776	K-7
ON	←OFF	ON*	DT	8273	8773	....
ON	←OFF→	ON	DT	8270	8770	K-1
ON→	←OFF	←ON	DT	....	8778	K-9
ON→	←OFF→	←ON	DT	8275	8775	K-6
ON	NONE	←OFF	ST	8271	8771	K-2
ON	NONE	←OFF	ST	8277	8777	K-8
ON	NONE	←OFF	ST	8274	8774	K-5
NONE	OFF→	ON△	ST	....	8771	....

\*Momentary contact. △ Indicates location where terminals are omitted.  
→ Indicates direction of movement against which lever is locked.  
When ordering, specify (1) catalog number.

**ROTARY SELECTOR SWITCH**

The C-H single or multi wafer selector switch is designed for applications where a large number of circuits must be controlled in consecutive steps. Switches have an indexing action which gives a positive "feel" as the shaft is rotated. Switches can be furnished with from 1 to 6 wafers with each wafer having 8 positions — 7 "on" and 1 "off". A total of 42 circuits can be controlled by one 6 wafer switch.

Nominal Rating — 5 Amp. — 28 V. D-c, 115 V. A-c  
For specific ratings for various loads and voltages see your C-H representative. One hole mounting. Bushing length — 15/32". Bushing dia. 15/32". Flatted shaft has 1/2" extension.



Cat. No. 7271



Cat. No. 53-635

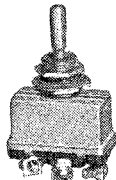
Number of Wafers	Catalog Number			
	Screw Terminals	Max. Wt.—Lbs.	Solder Lug Terminals	Max. Wt.—Lbs.
One	7260	0.28	....	....
One	7261	0.16	7271	0.16
Two	7262	0.26	7272	0.21
Three	7263	0.32	7273	0.26
Four	7264	0.38	7274	0.31
Five	7265	0.45	7275	0.36
Six	7266	0.51	7276	0.41

When ordering, specify (1) catalog number.

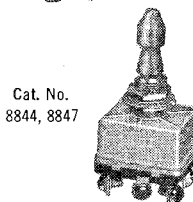
**POSITIVE ACTION  
ONE HOLE MOUNTING**

The operating mechanism employed in the C-H line of "positive action" switches has a direct coupling arrangement between the operating lever and moving contacts which permit positive breaking action and still allows the contacts to move independently of the operating lever. The switching action takes place in less than 1° of movement on the operating lever. Once the contact movement is started the motion cannot be stopped until the switching is completed.

Switches are available with either the lever seal or environment seal. Both feature a silicone rubber seal bonded to the bushing and operating lever.



Cat. No. 8836, 8840



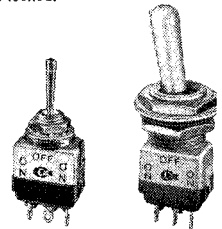
Cat. No. 8844, 8847

\*Momentary contact. When ordering, specify (1) catalog number.  
→ Indicates direction of movement against which lever is locked.

**MINIATURE**

These switches combine all of the construction and operating features of the standard size positive action switches plus ultra miniature size and light weight.

Nominal Rating — Wet Circuit, 4 Amp. — 28 V. D-c, Dry Circuit, 25 Micro Amp. — 5 Milli V. or less. For specific ratings for various loads and voltages see your C-H representative. Total weight — 5.0 - 6.5 grams. Bushing dia. 1/4" for .440" lever and 15/32" for .667" lever switches. Gold plated solder lug terminals.



Cat. No. 8866

Cat. No. 8868

Circuit Arrangement			Catalog Numbers			
A	B	C	Single Pole		Double Pole	
Keyway on "C" side of switch. Circuit is made on side opposite throw of lever.			.440" Lever	.687" Lever	.440" Lever	.687" Lever
ON	OFF	ON	8866-K-1	8868-K-1	8867-K-1	8869-K-1
ON	OFF	ON*	K-3	K-3	K-3	K-3
ON*	OFF	ON*	K-2	K-2	K-2	K-2
ON	OFF	NONE	K-5	K-5	K-5	K-5
ON	NONE	ON	K-4	K-4	K-4	K-4
ON	NONE	OFF	K-7	K-7	K-7	K-7
NONE	ON	ON*	K-8	K-8	K-8	K-8
NONE	OFF	ON*	K-6	K-6	K-6	K-6

\*Momentary contact. When ordering, specify (1) catalog number.

The switches listed on these pages represent only a small fraction of the total number of small motor and appliance switches manufactured by C-H. Contact your local Sales Office or Distributor for more complete listings.

**CUTLER-HAMMER, Inc  
Milwaukee, WI**

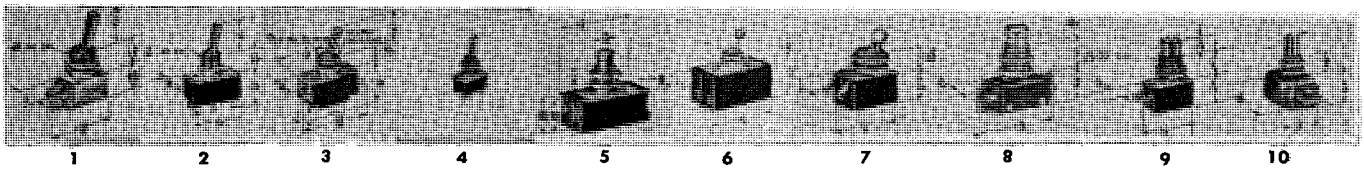


**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**ARROW H & H SWITCHES**

PUSH-BUTTON, TOGGLE, ROTARY, POWER



**1 BALL LEVER TOGGLE SWITCHES**

**1 POSITIVE ACTION — 3 AMP.**  
UL approved. Laminated bakelite base. Nickel plated. Ring and mounting nuts.  
**15/32" SLEEVE LENGTH**

DABURN No.	Description	Current 125V	Rating 250V
5200	SPST		3 Amp.
5202	SPDT	3 Amp.	1 Amp.
5202A	2 circ	3 Amp.	1 Amp.
5204	DPST	3 Amp.	1 Amp.
5206	DPDT	3 Amp.	1 Amp.

**3/4" SLEEVE LENGTH — 3 AMP.**

5201	SPST	3 Amp.	
5203	SPDT	3 Amp.	1 Amp.
5205	DPST	3 Amp.	1 Amp.
5207	DPDT	3 Amp.	1 Amp.

Std. Pkg. 25

**1 BAT LEVER TOGGLE SWITCHES**

**1 POSITIVE ACTION — 3 AMP.**  
UL approved. Laminated, nickel finish.  
**15/32" SLEEVE LENGTH**

DABURN No.	Description	Current 125V	Rating 250V
5220	SPST		3 Amp.
5221	SPDT	3 Amp.	1 Amp.
5221A	2 circ.	3 Amp.	1 Amp.
5222	DPST	3 Amp.	1 Amp.
5223	DPDT	3 Amp.	1 Amp.

Std. Pkg. 25

**1 BAT LEVER TOGGLE SWITCHES**

**1 MOMENTARY ACTION — 3 AMP.**  
UL approved. Laminated type, nickel plated finish. Supplied with ring and mounting nut; solder term. SPST rated at 3 Amp.-250V, AC-DC. Others: 1 Amp.-250V, 3 Amp.-125V AC-DC.

**15/32" SLEEVE LENGTH**

DABURN No.	Description	Type	Action
5190	SPST		Normally closed (on)
5191	SPST		Normally open (off)
5192	SPDT		Normally closed (on)
5193	DPST		Normally closed (on)
5194	DPST		Normally open (off)
5195	DPDT		Normally closed (on)

Std. Pkg. 25

**2 INTERMEDIATE SIZE TOGGLE SWITCHES**

**2 BAT HANDLE**  
IL approved. Molded phenolic base. Back connected older lugs silver plated. SPST 1 Amp.-250V, 6 Amp.-25V AC-DC. Others: 3 Amp.-250V, 6 Amp.-125V AC-DC.

**15/32" SLEEVE LENGTH — 6 AMP.**

DABURN No.	Description	Type	Action
5280	SPST		Positive
5280A	SPST		Mom.-Norm. Off
5281	SPDT		Positive
5281A	SPDT		Momentary
5284	2 circ.		Positive
5282	DPST		Positive
5282A	DPST		Mom.-Norm. Off
5283	DPDT		Positive
5283A	DPDT		Momentary

Std. Pkg. 25

**3 THREE POSITION — CENTER OFF**

**3 Amp.-250V; 6 Amp.-125V AC-DC**

DABURN No.	Description	Type
5261	SPDT	—
5262	2 circ.	—
5263	DPDT	—

Std. Pkg. 25

**4 NEW COMPACT TOGGLE SWITCH**

**4 BAT LEVER**  
UL approved. 1 Amp.-250V, 3 Amp.-125V AC-DC. Molded bakelite case, nickel finish. Suitable for missile, aircraft, electronic application. Solder lugs.  
**15/32" SLEEVE LENGTH — 3 AMP.**

DABURN No.	Description	L	W	H
5130	SPST	1 1/8"	4 3/4"	1 3/16"
5131	SPDT	1 1/8"	4 3/4"	1 3/16"
5232	DPST	1 1/8"	4 3/4"	1 3/16"
5133	DPDT	1 1/8"	4 3/4"	1 3/16"

Std. Pkg. 25

**3 MOMENTARY CONTACT SWITCHES**

UL approved. SPST normally off. 3 Amp.-250V, 6 Amp.-125V.

**BAT HANDLE 15/32" SLEEVE LENGTH**

DABURN No.	Description	Std. Pkg.
5241	SPST	25
5240	SPDT	25
5242	DPDT	25

**5 STANDARD DUTY TOGGLE SWITCHES**

**5 BAT HANDLE**  
Quick Make and Break

Molded phenolic base 15/32 x 7/16" long slotted sleeve; Nickel finish; screw term. Complete with two hex nuts. Accept snap-on button; supplied less ins. button. 125V-12 Amp., 250V-6 Amp.

**15/32" SLEEVE LENGTH — 12 AMP.**

DABURN No.	Descr.	Type
5238	SPST	Norm. Closed (on)
5238B	SPDT	Norm. Closed (on)
5238C	2 circ.**	Norm. Closed (on)
5226	DPST*	Norm. Open (off)
5238D	DPST*	Norm. Closed (on)

Std. Pkg. 10  
\*\*Current Rating 1/2  
\*1 H.P. 250/V AC-DC

**6 EXTRA HEAVY DUTY POWER SWITCHES**

**3 POSITION — POSITIVE — CENTER OFF**  
UL approved. Molded base, screw terminals, slotted sleeve 3/4-32, nickel finish. Supplied with two hex nuts.

DABURN No.	Descr.	Circuit
5227	DPDT	3/4 H.P. 250V AC-DC
5228	3PDT	1/2 H.P. 115/230V AC 3 Phase
5229	4PDT	1/2 H.P. 115/230V AC 2 Phase

Std. Pkg. 10

**7 MIDGET SIZE TOGGLE SWITCHES**

**POSITIVE ACTION**  
UL approved. SPST 3 Amp.-250V., 6 Amp.-125V. Others rated 1 Amp.-250V., 6 Amp.-125V. Molded phenolic base. Nickel finish; solder lugs.

DABURN No.	Description	Type
5244	SPST	Ball Handle
5244A	SPST	Bat Handle
5244B	SPDT	Bat Handle
5244C	SPDT	Bat Handle
5244D	2 circ.	Ball Handle
5244E	2 circ.	Bat Handle

**8 MOMENTARY PUSH BUTTON SWITCHES**

UL approved, laminated type. 15/32 x 9/16" slotted sleeve, nickel finish. Complete with hex and knurled nut. Nickel plated. All except snap-on button. Supplied less ins. button (order separately No. 5132). SPST 3 Amp.-250V AC-DC. Others: 1 Amp.-250V., 3 Amp.-125V AC-DC.

**Quick Make and Break**

DABURN No.	Descr.	Type
5184	SPST	Norm. Closed (on)
5184A	SPST	Norm. Open (off)
5185A	SPDT	Norm. Closed (on)
5185	SPDT	Norm. Open (off)
5186	2 circ.	Norm. Closed (on)
5231A	DPST	Norm. Closed (on)
5231	DPST	Norm Open (off)
5131B	DPDT	Norm. Closed (on)

Std. Pkg. 25

**Slow Make and Break**

5180	SPST	Norm. Closed (on)
5230	SPST	Norm. Open (off)
5224	2 circ.	Norm. Closed (on)

Std. Pkg. 25

**9 MOMENTARY PUSH BUTTON SWITCHES**

UL approved. Molded phenolic base, solder lugs, normally off — push to make. Nickel plated. Supplied with nuts. 1 Amp.-125V.

DABURN No.	Description	Std. Pkg.
5233	SPST	25
5234	SPDT	25
5235	DPST	25
5236	DPDT	25

**10 ROTARY SWITCHES CANOPY TYPE**

UL approved. Laminated type, solder lugs, 11/32-32 x 15/32" sleeve, nickel plated. Supplied with hex and dress nut. Key type has key removable in off position only on SPST and DPST — Key removable in both positions on all others. SPST 3 Amp.-250V AC-DC. Others: 1 Amp.-250V, 3 Amp.-125V AC-DC.

**ROTARY TYPE 1 1/8" SHAFT**

DABURN No.	Description	Shank 1 1/8" Shaft
5210		SPST
5212		SPDT
5214		DPST
5216		DPDT

**KEY TYPE**

5110	SPST
5111	SPDT
5112	DPST
5113	DPDT

Std. Pkg. 12

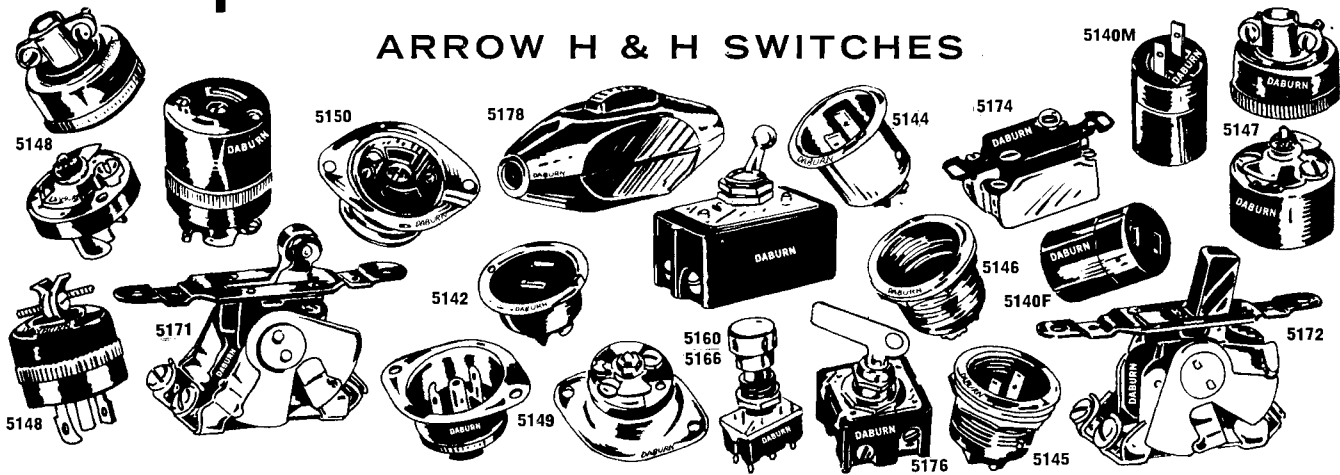
**SWITCH ACCESSORIES**

DABURN No.	Description	Std. Pkg.
5208	—Name Plate—On-Off— Fits 15/32" Sleeve .....	100
5208A	—Name Plate—On-Off— Fits 15/32" Sleeve .....	100
5132	—Snap Button (Red or Black).....	100
5114	—Key—Rem. Off Position .....	100
5115	—Key—Rem. Both Positions .....	100

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**  
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**ARROW H & H SWITCHES**



**DOUBLE ACTION COMPACT  
PUSH-PUSH SHALLOW  
QUICK MAKE AND BREAK**

5/16" sleeve diameter, 3 amp., UL approved. Molded phenolic base. Complete with hex and knurled nut; nickel plated. All accept snap button; supplied less insulating button (#5132). (Order separately, red or black.) 1 amp., 250V 3 amp. 125V AC-DC. Solder lug terminals with double wiping blades.

Daburn No.	De-scrip.	Sleeve	Width	Lgth.	Hgt.
5160	SPST	9/16"	41/64"	1-1/32"	13/16"
5161	SPDT	9/16"	41/64"	1-1/32"	13/16"
5162	DPST	9/16"	41/64"	1-1/32"	13/16"
5163	DPDT	9/16"	41/64"	1-1/32"	13/16"

Std. Pkg. 25

**MOMENTARY ACTION COMPACT  
PUSH SWITCH  
QUICK MAKE AND BREAK**

1/2" Sleeve Diameter — 3 Amp.

UL approved. Molded base. Complete with hex and knurled nut; nickel plated. All accept snap button; supplied less insulating button (#5132). (Order separately, red or black.) Solder lug terminals with double wiping blades.

Daburn No.	De-scrip.	Sleeve	Width	Lgth.	Hgt.
*5166	SPST	9/16"	41/64"	1-1/32"	13/16"
5167	SPDT	9/16"	41/64"	1-1/32"	13/16"
*5168	DPST	9/16"	41/64"	1-1/32"	13/16"
5169	DPDT	9/16"	41/64"	1-1/32"	13/16"

\*SPST and DPST — normally off.  
Std. Pkg. 25

**HEAVY DUTY SWITCHES  
TOGGLE TYPE 30 AMP**

UL approved. 30 Amp, 250 Volts, AC-DC, 2HP, 115V-230V AC; 1 HP, 460V AC. Used on machine tools, pumps, food machines, sanders, grinders, etc.

DABURN No.	Description	Std. Pkg.
5171	DPST	5
5172	DPST	5

**METAL PUSH BUTTON TYPE  
NORMALLY OPEN — 20 AMP**

UL approved. 20 Amp.-250V, 2 HP 230V AC, 2 HP 250V DC. Used on floor sander, foot switch etc.

DABURN No.	Description	Std. Pkg.
5174	DPST	5

**ROTO-LOCK SWITCH  
20 AMP.**

UL approved. 20 Amp., 120V, 240V AC. 1 1/2 HP — 120V AC 2 HP — 120V AC  
Key removable in off position only.

DABURN No.	Description	Sleeve	Std. Pkg.
5176	DPST	9/16"	5
5176K0	Key only for above		5

**FEED-THRU CORD SWITCH  
10 AMP.**

UL approved, sliding lever, black case. 10 Amp.-125V, 5 Amp.-250V. Cord hole — 3/16".

DABURN No.	Description	Std. Pkg.
5178	SP	6

**FEED-THRU CORD SWITCH  
15 AMP.**

UL approved for appliance use only. 10 Amp-250V, 15 Amp.-125V.

DABURN No.	Description	Std. Pkg.
5179	DP (3rd Wire Gd.)	5

**CORD CONNECTORS  
10 AMP.**

Complete brown bakelite cord connector. 10 Amp.-250 Volts, end opening for wire size up to 3/8" O.D.

DABURN No.	Description	Std. Pkg.
5140	Complete	10
5140F	Female Part Only	10
5140M	Male Part Only	10

**DABURN H & H RECEPTACLES  
10 AMP.**

**SHORT FEMALE FLUSH RECEPTACLE**  
UL approved. 10 Amp.-250 Volts AC.

DABURN No.	Description	Std. Pkg.
5143	Lock Nut Mounting	5
5142	2 Screw Mounting	5

**RECESSED MALE RECEPTACLE  
10 AMP.**

DABURN No.	Description	Std. Pkg.
5144	2 Screw Mounting	5
5145	Lock Nut Mounting	5

**RECESSED FEMALE RECEPTACLE  
10 AMP.**

DABURN No.	Description	Std. Pkg.
5146	Lock Nut Mounting	5

**COMPACT RECEPTACLES —  
TURN TO LOCK**

**3 WIRE GROUNDING TYPE  
FEMALE CONNECTOR — 15 AMP.-125 VOLT**  
Brass metal casings, corrosion resistant finish. Black bakelite.

DABURN No.	Description	Std. Pkg.
5147	Female Connector	5

**MALE CONNECTOR  
15 AMP.-125 VOLT**

DABURN No.	Description	Std. Pkg.
5148	Male Connector	5

**MALE RECEPTACLES  
MALE RECEPTACLES  
15 AMP.-125 VOLT**

DABURN No.	Description	Std. Pkg.
5149	Male Receptacle	5

**FEMALE RECEPTACLE  
15 AMP.-125 VOLT**

DABURN No.	Description	Std. Pkg.
5150	Female Receptacle	5





**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**CUTLER-HAMMER SWITCHES**

COMMERCIAL, INDUSTRIAL, AIRCRAFT AND GOVERNMENT SPEC SWITCHES  
AVAILABLE FROM OUR COMPLETE WAREHOUSE STOCKS.



**STANDARD DUTY — TOGGLE SWITCHES**

**BACK CONNECTED LUG TERMINALS**

UL approved. Slow make and break. AC rated for long life and greater capacity. 15/32 shank length. Bakelite case 15 Amp.-125 Volt, 10 Amp.-250 Volt.

DABURN No.	CH No.	Description	Net Ea.
4314	7501K13	SPST	\$.69
4315	7505K4	SPDT	.81
4316	7561K4	DPST	1.05
4317	7565K5	DPDT	1.26
4318	7611K2	3PST	2.19
4319	7615K2	3PDT	2.70

Std. Pkg. 25

**BACK CONNECTED SCREW TERMINALS**

DABURN No.	CH No.	Description	Net Ea.
4320	7500K14	SPST	\$.81
4321	7504K4	SPDT	.96
4322	7560K5	DPST	1.26
4323	7564K6	DPDT	1.56
4324	7610K2	3PST	2.55
4325	7614K2	3PDT	3.24

Std. Pkg. 25

**CENTER OFF STANDARD DUTY SWITCHES**

**BACK CONNECTED LUG TERMINALS**

DABURN No.	CH No.	Description	Net Ea.
4329	7503K13	SPDT	\$.81
4330	7563K4	DPDT	1.26
4331	7613K2	3PDT	2.70

Std. Pkg. 25

**ACK CONNECTED SCREW TERMINALS**

DABURN No.	CH No.	Description	Net Ea.
4332	7502K13	SPDT	\$.96
4333	7562K4	DPDT	1.56
4334	7612K2	3PDT	3.24

Std. Pkg. 25

**LIGHT DUTY — TOGGLE SWITCHES**

**BACK CONNECTED LUG TERMINALS**

UL approved. Quick make-Quick break. Bakelite case. Small compact. 15/32" shank length.

DABURN No.	C-H No.	Descr.	Current Rating 125V	Rating 250V	Net Ea.
4300	8280K16	SPST	3 amp		\$.69
4301	8381K8	SPST	6 amp	3 amp	.81
4302	8282K14	SPDT	3 amp	1 amp	.87
4303	8284K14	2 circ.	3 amp	1 amp	.93
4304	8360K7	DPST	3 amp		1.26
4305	8370K7	DPST	6 amp	3 amp	1.38
4306	8363K7	DPDT	3 amp		1.44
4307	8373K7	DPDT	6 amp	3 amp	1.56

Std. Pkg. 25

**SIDE CONNECTED SCREW TERMINALS**

DABURN No.	C-H No.	Descr.	Current Rating 125V	Rating 250V	Net Ea.
4308	8295K8	SPST	3 amp		\$.84
4309	8396K8	SPST	6 amp	3 amp	.96
4310	8297K8	SPDT	3 amp	1 amp	1.11
4311	8372K7	DPST	6 amp	3 amp	1.65
4312	8365K7	DPDT	3 amp		1.89
4313	8375K7	DPDT	6 amp	3 amp	2.01

Std. Pkg. 25

**WIRE LEADS — SIX INCH LONG**

DABURN No.	C-H No.	Descr.	Current Rating 125V	Rating 250V	Net Ea.
4335	8290K16	SPST	3 amp		\$.84
4336	8391K8	SPST	6 amp	3 amp	.96

**PUSH BUTTON SWITCHES  
PUSH TO MAKE — PUSH TO BREAK**

UL approved AC-DC. Bakelite case. Pushing the button once closes the contacts; pushing it again opens the contacts. 11/16" shank.

DABURN No.	C-H No.	Descr.	Term.	Net Ea.
4326	7206K4	SPST	Lug	\$.96
4327	7208K4	SPST	Screw	1.08
4328	7207K4	SPST	Wire	1.08

Std. Pkg. 25

**HEAVY DUTY — TOGGLE SWITCHES**

UL approved. Quick make-quick break. Bakelite case, screw term. 15/32" shank (except #4346 11/32" shank).

Daburn No.	C-H No.	Descr.	Current Rating 125V	Rating 250V	Net Ea.
4341	@7321K3	SPST	12 amp	6 amp	\$1.32
4342	@7320K3	DPST	12 amp	6 amp	1.32
4343	*7361K5	SPST	15 amp	10 amp	2.31
4344	*7360K8	DPST	15 amp	10 amp	2.31
4345	**7402K4	DPST		20 amp	3.24
4346	8680K1	DPDT	10 amp	5 amp	4.29
4347	8690K2	DPDT	15 amp	10 amp	5.16

@ 1 HP—125/250V. \* 1 1/2 HP—125/250V  
\*\* 1 1/2 HP—125V, 2 HP—250V  
Std. Pkg. 12

**PUSH BUTTON MOMENTARY SWITCHES**

UL approved. 15/32" shank AC-DC. Rated at 3/4 Amp.-125V, 1/4 Amp.-250V. Door operated switches.

Daburn No.	C-H No.	Description	Term.	Net Ea.
4337	8411K4	SP norm open	Lug	\$.48
4338	8411K3	SP norm open	Screw	.54
4339	8411K8	SP norm closed	Lug	.36
4340	8411K7	SP norm closed	Screw	.39

Std. Pkg. 25

Additional numbers in Cutler-Hammer Equip. Available.

**(A) MISCELLANEOUS AIRCRAFT**

Pistol grip trigger movement switches C-H numbers 8895, 8896, 8897.

**(B) AIRCRAFT SWITCH GUARDS**

Used to prevent inadvertent operation of the lever.

**(C) BUSHING SEAL NO. 32-341**

Boots for water and dust applicators.

**(D) LEVER EXTENSIONS AND ATTACHABLE TIPS**

Tips snap over standard levers and are held in place by a cup shaped spring member.

**(E) MANUAL TYPE CURRENT BREAKERS**

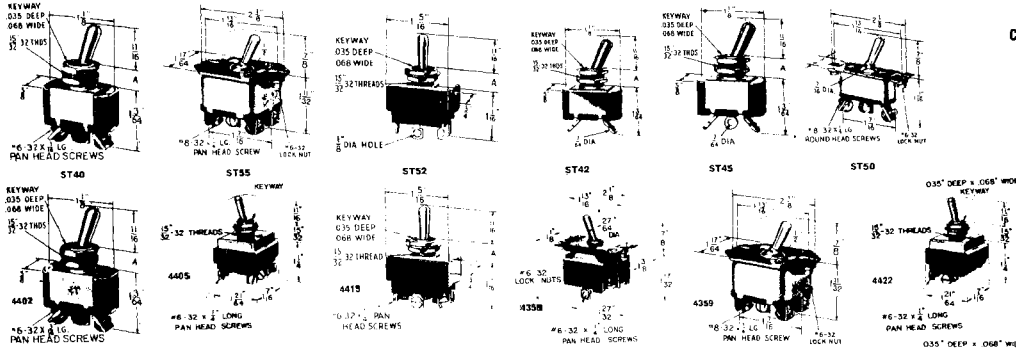
**(F) ROTARY SWITCHES per MIL-S-6807 spec**

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**  
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**CUTLER HAMMER SWITCHES**

The Following Switches Conform to JAN-S-23, MIL-S-3950A, MIL-S-6745



- CIRCUIT IDENT. NO. CIRCUIT**
- 1 On-Off-On
  - 2 On-None-Off
  - 3 On-None-On
  - 4 On-Off-None
  - 5 On-On-None
  - 6 On-None-Off (Mom.)
  - 7 Off-Off-On (Mom.)
  - 8 Off-None-On (Mom.)
  - 9 On (Mom.) Off-On (Mom.)
  - 10 On-None-On (Mom.)
  - 11 On-Off (Mom.)-None
  - 12 On (Mom.)-On-None
  - 13 None-Off-On (Mom.)

**ST-40 SERIES**  
Single Pole with Screws  
All ST-40 Series equipped with sealed lever.  
Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	JAN-S-23 No.	MIL-S-6745 No.	Type	Circuit Code No.	Net Ea.
4360	8801K13	ST40A	AN3021-2	SPST	2	\$1.68
4361	8813K12	ST40B	AN3021-9	SPST	6	1.86
4362	8811K12	ST40C	AN3021-8	SPST	10	1.86
4363	8810K12	ST40D	AN3021-3	SPDT	3	2.04
4364	8800K13	ST40E	AN3021-1	SPDT	1	2.04
4365	8804K12	ST40F	—	SPDT	10	2.19
4366	8812K13	ST40G	AN3021-7	SPDT	9	2.19
4367	8809K13	ST40H	AN3021-5	SPDT	7	2.19

**ST-42 SERIES**  
Single Pole with Solder Lugs  
Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	JAN-S-23 No.	MIL-S-6745 No.	Type	Circuit Code No.	Net Ea.
4370	8803K6	ST42A	—	SPST	2	1.26
4371	8819K5	ST42B	—	SPST	6	1.38
4372	8817K5	ST42C	—	SPST	10	1.38
4373	8816K5	ST42D	—	SPDT	3	1.47
4374	8802K6	ST42E	—	SPDT	1	1.47
4375	8805K6	ST42F	—	SPDT	10	1.62
4376	8818K5	ST42G	—	SPDT	9	1.62
4377	8815K6	ST42H	—	SPDT	7	1.62

**ST-45 SERIES**  
Per JAN-S-23 and MIL-S-6745  
Single Pole  
Nom. Rating Per Pole: 15 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	JAN-S-23 No.	MIL-S-6745 No.	Type	Circuit Code No.	Net Ea.
4440	8201K6	ST45A	AN3022-2	SPST	2	1.95
4441	8213K6	ST45B	AN3022-9	SPST	6	2.16
4442	8211K7	ST45C	AN3022-8	SPST	10	2.16
4443	8210K7	ST45D	AN3022-3	SPDT	3	2.37
4444	8200K7	ST45E	AN3022-1	SPDT	1	2.37
4445	8215K4	ST45F	AN3022-11	SPDT	10	2.55
4446	8212K6	ST45G	AN3022-7	SPDT	9	2.55
4447	8209K6	ST45H	AN3022-5	SPDT	7	2.55

**ST-50 SERIES PER JAN-S-23**  
2 Pole with Screw Terminals  
Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	JAN-S-23 No.	MIL-S-6745 No.	Type	Circuit Code No.	Net Ea.
4380	8822K8	ST50K	AN3027-2	*DPST	2	\$2.25
4381	8828K5	ST50L	—	DPST	6	2.70
4382	8826K5	ST50M	—	DPST	10	2.70
4383	8824K8	ST50N	AN3027-3	*DPDT	3	2.70
4384	8820K10	ST50P	AN3027-1	*DPDT	1	2.70
4385	8830K5	ST50R	—	DPDT	10	2.94
4386	8834K4	ST50S	AN3027-7	*DPDT	9	2.94
4387	8832K4	ST50T	AN3027-8	*DPDT	7	2.94

\*Equipped with sealed lever per MIL-S-6745. Std. Pkg. 10

**ST-52 SERIES PER JAN-S-23**  
2 Pole with Solder Lugs  
Nom. Rating Per Pole: 10 Amp., 115V AC, 20 Amp.-28V DC.

DABURN No.	CH	JAN-S-23 No.	MIL-S-6745 No.	Type	Circuit Code No.	Net Ea.
4390	8823K5	ST52K	—	DPST	2	1.50
4391	8829K5	ST52L	—	DPST	6	1.68
4391A	8827K5	ST52M	—	DPST	10	1.68
4392	8825K5	ST52N	—	DPDT	3	1.68
4393	8821K5	ST52P	—	DPDT	1	1.68
4394	8831K5	ST52R	—	DPDT	10	1.95
4395	8835K3	ST52S	—	DPDT	9	1.95
4396	8833K3	ST52T	—	DPDT	7	1.95

**ONE HOLE MOUNTING**  
**TOGGLE SWITCHES**  
Approved Under MIL-S-3950A Spec  
Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC.  
Temperature Range: -85°F to +250°F

**ONE POLE**  
Per MS 35050—Sealed Lever  
(Screw Terminal)

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4358-21	8800K16	MS35058-21	SPDT	1	\$2.01
4358-22	8801K22	MS35058-22	SPST	2	1.68
4358-23	8810K15	MS35058-23	SPDT	3	2.04
4358-24	8801K23	MS35058-24	SPST	4	1.68
4358-25	8813K18	MS35058-25	SPST	11	1.86
4358-26	8804K13	MS35058-26	SPDT	10	2.19
4358-27	8812K14	MS35058-27	SPDT	9	2.19
4358-28	8811K18	MS35058-28	SPST	13	1.86
4358-29	8813K17	MS35058-29	SPST	6	1.86
4358-30	8811K17	MS35058-30	SPST	8	1.86
4358-31	8809K16	MS35058-31	SPDT	7	2.19

Std. Pkg. 10

**2 POLE**  
Per MS 35059A Sealed Lever  
(Screw Terminal)  
Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4359-21	8820K16	MS35029-21	DPDT	1	2.70
4359-22	8822K20	MS35029-22	DPST	2	2.25
4359-23	8824K14	MS35029-23	DPDT	3	2.70
4359-24	8822K21	MS35029-24	DPST	4	2.25
4359-25	8828K12	MS35029-25	DPDT	11	2.70
4359-26	8830K13	MS35029-26	DPDT	10	2.97
4359-27	8834K5	MS35029-27	DPDT	9	2.94
4359-28	8826K14	MS35029-28	DPST	13	2.70
4359-29	8828K13	MS35029-29	DPST	6	2.70
4359-30	8826K15	MS35029-30	DPST	8	2.70
4359-31	8823K6	MS35029-31	DPDT	7	2.94

Std. Pkg. 10

**ST-55 SERIES**  
Per JAN-S-23 and MIL-S-6745  
2 POLE  
All ST-55 Switches have sealed levers.

Nom. Rating Per Pole: 20 Amp., 115V AC, 25 Amp., 28V DC.

DABURN No.	CH	JAN-S-23 No.	MIL-S-6745 No.	Type	Circuit Code No.	Net Ea.
4450	8701K14	ST55K	AN3023-2	DPST	2	4.11
4451	8713K14	ST55L	AN3023-9	DPST	6	4.50
4452	8711K14	ST55M	AN3023-8	DPST	10	4.50
4453	8710K14	ST55N	AN3023-3	DPDT	3	4.92
4454	8700K14	ST55P	AN3023-1	DPDT	1	4.92
4455	8715K14	ST55R	AN3023-10	DPDT	10	5.34
4456	8712K14	ST55S	AN3023-7	DPDT	9	5.34
4457	8709K14	ST55T	AN3023-5	DPDT	7	5.34
4458	8708K14	ST55U	AN3023-6	*DPDT	7	5.43

\*Equipped with added jumper across terminals to control one circuit. Std. Pkg. 10

**4 POLE**  
Sealed Lever—Screw Terminals  
Per MIL-S-3950A—Series MS 25068  
Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4422-1	7662K5	MS25068-1	4PDT	1	\$6.18
4424-3	7664K3	MS25068-3	4PDT	3	6.18
4430-5	7670K4	MS25068-5	4PDT	7	7.44
4432-7	7672K4	MS25068-7	4PDT	9	7.44
4440-10	7674K4	MS25068-10	4PDT	10	7.44
4420-11	7660K9	MS25068-11	4PST	4	4.95
4426-12	7666K7	MS25068-12	4PST	13	6.69
4428-13	7668K5	MS25068-13	4PST	11	6.69

**HEAVY DUTY**

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4422-21	7662K7	MS25068-21	4PDT	1	6.18
4424-23	7664K5	MS25068-23	4PDT	3	6.18
4424-24	7669K13	MS25068-24	4PST	4	4.95
4424-25	7668K7	MS25068-25	4PST	11	6.69
4424-26	7674K5	MS25068-26	4PDT	10	7.44
4424-27	7672K5	MS25068-27	4PDT	9	7.44
4424-28	7666K9	MS25068-28	4PST	7	6.69
4424-31	7670K6	MS25068-31	4PDT	7	7.44

Std. Pkg. 10

**2 POLE**  
Per MIL-S-3950—Sealed Lever  
Flush Mounted  
Nom. Rating Per Pole: 15 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4405-21	8700K15	MS25103-21	DPDT	1	5.23
4405-23	8710K15	MS25103-23	DPDT	3	5.23
4405-24	8716K7	MS25103-24	DPST	4	5.23
4405-25	8717K5	MS25103-25	DPST	11	8.52
4405-26	8715K15	MS25103-26	DPDT	10	5.94
4405-27	8712K15	MS25103-27	DPDT	9	5.94
4405-28	8718K5	MS25103-28	DPST	13	5.94
4405-31	8709K15	MS25103-31	DPDT	7	5.94

Std. Pkg. 10

**3 POLE**  
Per MIL-S-3950A—Sealed Lever  
Flush Mounted  
Nom. Rating Per Pole: 15 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4402	8742K10	MS25105-21	3PDT	1	4.59
4400	8740K12	MS25105-24	3PST	2	3.84
4401	8744K10	MS25105-23	3PDT	3	4.59

Std. Pkg. 10

**4 POLE**  
Per MIL-S-6745—Sealed Lever  
Flush Mounted  
Nom. Rating Per Pole: 10 Amp.-115V AC, 20 Amp.-28V DC.

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4415	8880K5	AN3227-1	4PDT	1	6.18
4410	8882K5	AN3227-2	4PST	2	4.95
4413	8884K5	AN3227-3	4PDT	3	6.18
4418	8887K5	AN3227-5	4PDT	7	7.44
4417	8888K5	AN3227-7	4PDT	9	7.44
4412	8886K5	AN3227-8	4PST	8	6.69
4412A	8882K6	AN3227-9	4PST	4	4.95
4412B	8886K6	AN3227-10	4PST	13	6.69

Std. Pkg. 10



**DABURN ELECTRONICS & CABLE CORP.**  
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**CUTLER HAMMER POSITIVE ACTION SWITCHES**

**CONTINENTAL-WIRT SLIDE SWITCHES**

**1 POLE PER MIL-S-8834 ENVIRONMENT SEALED**

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4436-21	8836K1	MS25306-21	SPDT	1	\$6.93
4436-22	8836K9	MS25306-22	SPST	2	6.42
4436-23	8836K4	MS25306-23	SPDT	3	6.93
4436-24	8836K6	MS25306-24	SPST	4	6.42
4436-25	8836K8	MS25306-25	SPST	11	6.93
4436-26	8836K5	MS25306-26	SPDT	10	7.44
4436-27	8836K2	MS25306-27	SPDT	9	7.44
4436-28	8836K7	MS25306-28	SPST	13	6.93
4436-29	8836K10	MS25306-29	SPST	6	6.93
4436-30	8836K11	MS25306-30	SPST	8	6.93
4436-31	8836K3	MS25306-31	SPDT	7	7.44
Std. Pkg. 10					

**2 POLE PER MIL-S-8834 ENVIRONMENT SEALED**

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4437-21	8837K1	MS25307-21	DPDT	1	\$11.94
4437-22	8837K9	MS25307-22	DPST	2	10.92
4437-23	8837K4	MS25307-23	DPDT	3	11.94
4437-24	8837K6	MS25307-24	DPST	4	10.92
4437-25	8837K8	MS25307-25	DPST	11	11.94
4437-26	8837K5	MS25307-26	DPDT	10	12.93
4437-27	8837K2	MS25307-27	DPDT	9	12.93
4437-28	8837K7	MS25307-28	DPST	13	11.94
4437-29	8837K10	MS25307-29	DPST	6	11.94
4437-30	8837K11	MS25307-30	DPST	8	11.94
4437-31	8837K3	MS25307-31	DPDT	7	12.93
Std. Pkg. 10					

**4 POLE PER MIL-S-8834 ENVIRONMENT SEALED**

DABURN No.	CH	MS No.	Type	Circuit Code No.	Net Ea.
4438-21	8838K1	MS25308-21	4PDT	1	\$28.80
4438-22	8838K9	MS25308-22	4PST	2	28.80
4438-23	8838K4	MS25308-23	4PDT	3	28.80
4438-24	8838K6	MS25308-24	4PST	4	27.54
4438-25	8838K8	MS25308-25	4PST	11	28.80
4438-26	8838K5	MS25308-26	4PDT	10	31.02
4438-27	8838K2	MS25308-27	4PDT	9	31.02
4438-28	8838K7	MS25308-28	4PST	13	28.80
4438-29	8838K10	MS25308-29	4PST	6	28.80
4438-30	8838K11	MS25308-30	4PST	8	28.80
4438-31	8838K3	MS25308-31	4PDT	7	31.02
Std. Pkg. 10					

**MURRAY MAGNETIC PROXIMITY SWITCH**  
For Counting • Position Limiting  
Sequence Control Mounts in Any Position

Precision, fast acting, suitable to sequential control functions on machine tools, packaging, material handling and similar industrial devices.  
Strong, encapsulated, assures freedom from contamination by cutting oils, dust, powder, chips, etc. Operates up to hundreds of millions of cycles — temperature range —30°C to +105°C.  
Switch actuates when brought into proximity with ferrous metals or other magnetic materials. No mechanical linkage necessary for operation. Operating sensitivity in nom. 1/8" make, 1/2" break. Switch elements sealed in glass, unit is potted in epoxy resin. Case is impervious to oil, water, gas, all common solvents.

Typical actuators include indexing tables, cams, wheels, push rods, die sets, line objects such as ood and beverage cans, components, parts, vehicles, rotating and swinging objects, etc.

1/4" H x 1/4" D x 2 7/8" W

DABURN No.	Type	Less than Std. Pkg.	10 Lots Ea. Sw.	25 Lots Ea. Sw.	50 Lots Ea. Sw.
499-128	SPST Norm. Open	\$14.50	\$13.05	\$10.88	\$ 9.70
499-138	SPDT	20.50	18.45	15.38	13.75
499-139	SPST Norm. Open (Hi-Load)	17.50	15.75	13.13	11.75

Electrical Rating)	Resistive Load		Inductive Load	
	—128,—138	—139	—128,—138	—139
mps	.5	.2	.1	.1
olt AC or DC	125	125	125	125
atts	15	50	5	15

**LEVER LOCK SWITCHES PER MIL-S-3950A**

**ONE POLE**

Nom. Rating Per Pole: 10 Amp., 115V AC, 20 Amp., 28V DC.

DABURN No.	C-H	"MS" No.	Type	Net Ea.
4487-1	8857K39	MS25125-1	SPDT	\$4.59
4487-2	8857K40	MS25125-2	SPDT	4.59
4487-3	8857K41	MS25125-3	SPDT	4.59
4487-4	8857K45	MS25125-4	SPDT	4.59
4487-5	8857K42	MS25125-5	SPDT	4.59
4487-6	8857K46	MS25125-6	*SPDT	4.77
4487-7	8857K43	MS25125-7	DPDT	4.59
4487-8	8857K44	MS25125-8	SPDT	4.59
4487-9	8857K49	MS25125-9	SPST	4.26
* Momentary Contact Std. Pkg. 10				

**2 POLE — LEVER LOCK PER MIL-S-3950A**

DABURN No.	C-H	"MS" No.	Type	Net Ea.
4488-1	8858K39	MS25126-1	DPDT	\$5.28
4488-2	8858K40	MS25126-2	DPDT	5.28
4488-3	8858K41	MS25126-3	DPDT	5.28
4488-4	8858K45	MS25126-4	DPDT	5.28
4488-5	8858K42	MS25126-5	DPDT	5.28
4488-6	8858K46	MS25126-6	*DPDT	5.52
4488-7	8858K43	MS25126-7	DPDT	5.28
4488-8	8858K44	MS25126-8	DPDT	5.28
4488-9	8858K49	MS25126-9	DPST	4.80
Std. Pkg. 10				

**4 POLE — LEVER LOCK PER MIL-S-3950A**

DABURN No.	C-H	"MS" No.	Type	Net Ea.
4489-1	8859K39	MS25127-1	4PDT	\$8.73
4489-2	8859K40	MS25127-2	4PDT	8.73
4489-3	8859K41	MS25127-3	4PDT	8.73
4489-4	8859K45	MS25127-4	4PDT	8.73
4489-5	8859K42	MS25127-5	4PDT	8.73
4489-6	8859K46	MS25127-6	*4PDT	10.02
4489-7	8859K43	MS25127-7	4PDT	8.73
4489-8	8859K44	MS25127-8	4PDT	8.73
4489-9	8859K49	MS25127-9	4PST	7.53
* Momentary Contact. Std. Pkg. 10				

**MINIATURE MILITARY SWITCHES**

**"As Small As A Dime" Built To MIL-S-8834 Specs**

Designed for aircraft, missile, electronic application it is extremely compact, highly reliable, power or dry circuit switch, usable as a pre-set switch in aircraft recognition systems, walkie-talkies, instrument and communication systems. Toggle lever seal and panel bushing seal for adverse environmental conditions. Gold plated contacts.

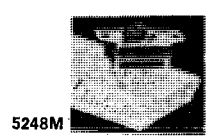
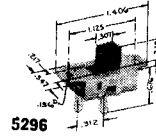
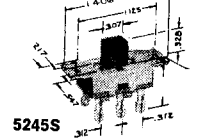
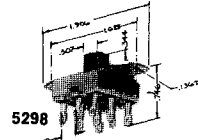
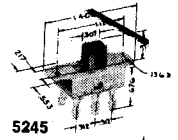
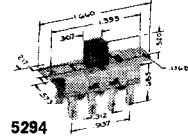
**RATINGS:** 3 amps., 28V DC; 1 amp., 50V DC  
2 amps., 115V AC  
**WEIGHT:** Single pole 5.0 grams, Double pole 6.5 grams

**SINGLE POLE**

DABURN No.	C-H	Type	Circuit	Net Ea.
4480K1	8866K1	SPDT	on-off-on	\$6.00
4480K2	8866K2	SPDT	Mom. on-off-Mom. on	6.84
4480K3	8866K3	SPDT	on-off-Mom. on	6.84
4480K4	8866K4	SPDT	on-none-on	6.00
4480K5	8866K5	SPST	on-off-none	6.00
4480K6	8866K6	SPST	None-off-Mom. on	6.84
4480K7	8866K7	SPST	on-none-off	6.00
4480K8	8866K8	SPST	None-on-Mom. off	6.84

**DOUBLE POLE**

DABURN No.	C-H	Type	Circuit	Net Ea.
4481K1	8867K1	DPDT	on-off-on	7.53
4481K2	8867K2	DPDT	Mom. on-off-Mom. on	8.76
4481K3	8867K3	DPDT	on-off-Mom. on	8.76
4481K4	8867K4	DPDT	on-none-on	7.53
4481K5	8867K5	DPST	on-off-none	7.53
4481K6	8867K6	DPST	none-off-Mom. on	8.76
4481K7	8867K7	DPST	on-none-off	7.53
4481K8	8867K8	DPDT	none-on-Mom. on	8.76
Std. Pkg. 10				



**New "Swidget" Miniature Slide Switch**  
Mounting area is 1/2 of standard DPDT slide. Suitable for compact applications. UL approved.

DABURN No.	Type	Rating 125V AC-DC	Net Ea.	Std. Pkg.
5248M	DPDT	5 Amp.	\$.36	25

**UL APPROVED SLIDE SWITCH STANDARD DETENT**

General purpose switch for hi-fi equipment, instruments, etc. Black phenolic buttons, steel cadmium plated housing.

DABURN No.	Type	Rating DC Amp.	Circuit AC Amp.	Net Ea.
5245	SPST	.75	.75	\$.11
5246	SPDT	.75	.75	.12
5247	DPST	.5	.5	.15
5248	DPDT	.5	.5	.18
5290	SPST	6.0	1.0	.14
5291	SPDT	6.0	1.0	.15
5292	DPST	6.0	1.0	.24
5293	DPDT	6.0	1.0	.27
Std. Pkg. 25				

**SLIDE SWITCHES WITH DETENT CENTER OFF**

5296	SPDT	.5	.5	\$.29
*5297	DPDT	.5	.5	.30
Std. Pkg. 25				

**3 AND 4 POSITION SLIDE SWITCH WITH DETENT**

5294	SP 3 Pos.	.5	.5	\$.29
5295	DP 3 Pos.	.5	.5	.30
5295A	DP 3 Pos.	6.0	1.0	.54
5295F	DP 4 Pos.	.5	.5	.60
Std. Pkg. 25				

**3 AND 4 POLE SLIDE SWITCH WITH DETENT ALL POLES IN SAME PLANE**

5298	3 PDT	.5	.5	.54
5299*	4PDT	.5	.5	.66
*5299 — width of switch 1.005", short terminals. Distance from mounting surface to terminal tip .595". Std. Pkg. 25				

**SLIDE SWITCH — SPRING RETURN**

5245S	SPST	.5	.5	\$.24
5246S	SPDT	.5	.5	.29
Std. Pkg. 25				

**SLIDE SWITCH SHIELD Suitable for Electrostatic Shielding**

Terminal protection. Shield is steel cadmium plated with fibre insulation.

5249	Std. Pkg. 25	\$.10
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\* Not UL Approved.

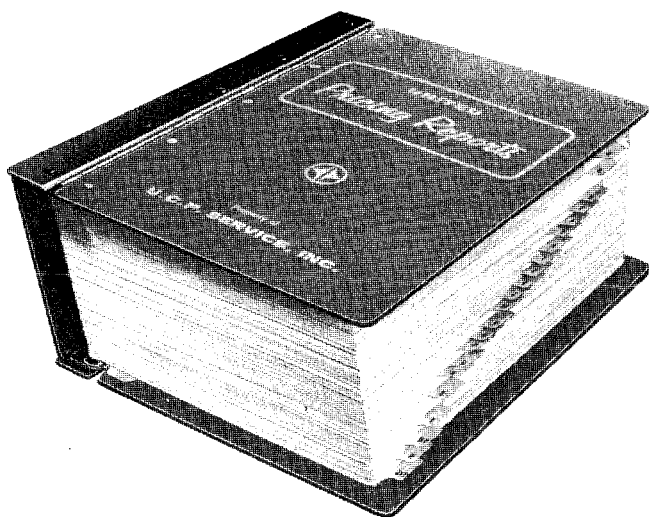
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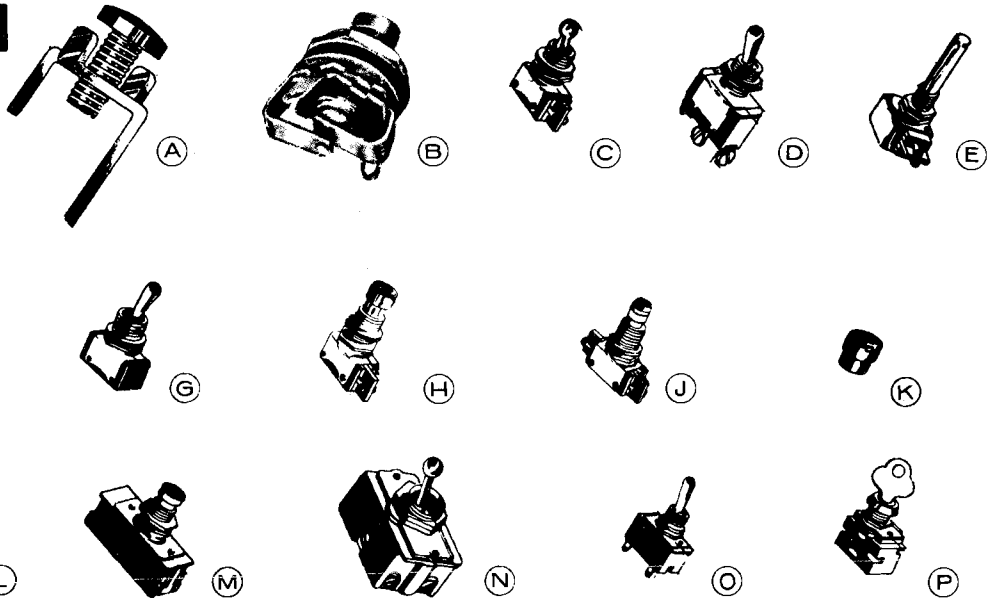
## DELIVERY

Delivery is often dependent on availability of raw materials. Check with your distributor for delivery information at the time you place your order.



# ELECTROCRAFT COMPONENTS

## SWITCHES



Cat. No. 33-900	Net \$ .13
Cat. No. 33-901	Net \$ .13
Cat. No. 33-902	Net \$ .13
Cat. No. 33-903	Net \$ .14
Cat. No. 33-930	Net \$ .24
Cat. No. 33-931	Net \$ .32
Cat. No. 33-932	Net \$ .38
Cat. No. 33-934	Net \$ .45
Cat. No. 33-935	Net \$ .51
Cat. No. 33-936	Net \$ .58
Cat. No. 33-937	Net \$ .65

33-930-BU	2 Terminal	\$20.40/C
33-931-BU	3 Terminal	\$28.20/C
33-932-BU	4 Terminal	\$34.20/C
33-934-BU	5 Terminal	\$40.20/C
33-935-BU	6 Terminal	\$46.20/C
33-936-BU	7 Terminal	\$52.20/C
33-937-BU	8 Terminal	\$58.80/C

(A) **TERMINAL LUGS AND SCREWS**—Designed for heavy duty terminal strips. Brass hot tinned lugs with screw inserted.  
Cat. No. 33-940-BU Net \$ 5.40/C

### PUSH-BUTTON SWITCHES

All styles are momentary (non-locking) design, and are made with long-wearing nickel silver springs, carefully adjusted. Insulation is high grade phenolic.

**STANDARD SMALL PUSH BUTTON SWITCHES**—Can also be supplied

with silver contacts for 3 amp, 115/V, AC rating (on special orders in production quantities). Single "make"; black button.  
Cat. No. 34-000 Net \$ .57  
Cat. No. 34-000-BU Net \$51.66/C

Single "make"; red button.	
Cat. No. 34-002	Net \$ .57
Cat. No. 34-002-BU	Net \$51.66/C
Single "break"; black button.	
Cat. No. 34-004	Net \$ .57
Cat. No. 34-004-BU	Net \$51.66/C
Single "break"; red button.	
Cat. No. 34-006	Net \$ .57
Cat. No. 34-006-BU	Net \$51.66/C
Single "break-make"; black button.	
Cat. No. 34-008	Net \$ .63
Cat. No. 34-008-BU	Net \$57.51/C
Single "break-make"; red button.	
Cat. No. 34-010	Net \$ .63
Cat. No. 34-010-BU	Net \$57.51/C

### (B) MIN. PUSH BUTTON SWITCHES

—Made of the same materials and to the same specifications as standard small switches listed above. Single "make"; black button.

Cat. No. 34-020	Net \$ .57
Cat. No. 34-020-BU	Net \$51.66/C
Single "make"; red button.	
Cat. No. 34-022	Net \$ .57
Cat. No. 34-022-BU	Net \$51.66/C
Single "break"; black button.	

Cat. No. 34-024	Net \$ .57
Cat. No. 34-024-BU	Net \$51.66/C
Single "break-make"; black button.	
Cat. No. 34-026	Net \$ .63
Cat. No. 34-026-BU	Net \$57.51/C

### STRAIGHT FRAME PUSH BUTTON SWITCHES

— Fine silver contacts with minimum resistance rated at 3 amp, 115/V, AC, non-inductive load. Standard push button is black. Single "make-break".  
Cat. No. 34-032 Net \$ .75  
Cat. No. 34-032-BU Net \$69.00/C

Double "make".	
Cat. No. 34-034	Net \$ .82
Cat. No. 34-034-BU	Net \$75.00/C

Double "break".	
Cat. No. 34-036	Net \$ .82
Cat. No. 34-036-BU	Net \$75.00/C

Double "break-make".	
Cat. No. 34-038	Net \$ .97
Cat. No. 34-038-BU	Net \$90.00/C

### ARROW-HART SWITCHES

These switches, made by A. H. & H. for GC Electrocraft, are UL approved. The threaded sleeves are slotted to positively prevent turning of switch if used in keyed hole.

### (C) BALL HANDLE TOGGLE SWITCH—

Light duty; SPST types rated 3 amps, 250/V; all others 1 amp, 250/V, 3 amps, 125/V, AC-DC. SPST — 1/2" Shank.

Cat. No. 34-050	Net \$ .75
SPST — 1" Shank.	
Cat. No. 34-052	Net \$ .90
SPDT — 1/2" Shank.	
Cat. No. 34-054	Net \$ .93
SPDT — 1" Shank.	
Cat. No. 34-056	Net \$1.15
DPST — 1/2" Shank.	
Cat. No. 34-058	Net \$1.32
DPST — 1" Shank.	
Cat. No. 34-060	Net \$1.50
DPDT — 1/2" Shank.	

Cat. No. 34-062	Net \$1.50
DPDT — 1" Shank.	

Cat. No. 34-064	Net \$1.65
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### (D) MEDIUM DUTY, NEUTRAL CENTER TOGGLE SWITCH—

Rating 10 amps 250/V; 15 amps 125/V; 3/4 horse-power.

SPDT — 1/2" Shank.	
Cat. No. 34-066	Net \$1.02
DPDT — 1/2" Shank.	
Cat. No. 34-068	Net \$1.57

### (E) ROTARY SWITCH—

Laminated insulation; rating — SPST models, 3 amps, 25/V; all others 1 amp, 250/V-3 amps, 125/V, AC-DC.

SPST — 3/8" Shank.	
Cat. No. 34-070	Net \$ .93
SPST — 1" Shank.	
Cat. No. 34-072	Net \$1.12

SPDT — 3/8" Shank.	
Cat. No. 34-074	Net \$1.12

SPDT — 1" Shank.	
Cat. No. 34-076	Net \$1.20

DPST — 1" Shank.	
Cat. No. 34-078	Net \$1.62

DPDT — 3/8" Shank.	
Cat. No. 34-080	Net \$1.68

DPDT — 1" Shank.	
Cat. No. 34-082	Net \$1.68

### ON-OFF PLATE—

Fits all switches except slide and small canopy type.  
Cat. No. 30-084 Net \$ .08

Cat. No. 34-110	Net \$ 4.95
3 PDT.	

Cat. No. 34-112	Net \$ 7.60
4 PDT.	

Cat. No. 34-114	Net \$10.11
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### (F) BAT HANDLE TOGGLE SWITCH—

Light duty, laminated phenolic insulation. Rating SPST types, 3 amps, 250/V; all others 1 amp, 250/V — 3 amps, 125/V, AC-DC.

SPST — 1/2" Shank.	
Cat. No. 34-086	Net \$ .75

SPDT — 1/2" Shank.	
Cat. No. 34-088	Net \$ .93

DPST — 1/2" Shank.	
Cat. No. 34-090	Net \$1.32

DPDT — 1/2" Shank.	
Cat. No. 34-092	Net \$1.50

### (G) WIRE LEAD TOGGLE SWITCH—

Same switch as series listed above but with 6" wire leads.

SPST — 1/2" Shank.	
Cat. No. 34-094	Net \$ .97

SPST — 3/8" Shank.	
Cat. No. 34-096	Net \$ .97

### (H) PUSH "ON" — PUSH "OFF" SWITCH—

Laminated phenolic insulation; rating 3 amps, 250/V; 6 amps, 125/V, AC-DC. SPST.

Cat. No. 34-098	Net \$1.32
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### (J) PUSH BUTTON, MOMENTARY SWITCH—

2-circuit type; one circuit is normally "on" — the other is "off". Laminated phenolic insulation, rated at 1 amp, 125/V. Solder terminals.

Cat. No. 34-100	Net \$1.02
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(K) Red plastic push button for above switch.

Black plastic push button for above switch.

Cat. No. 34-102	Net \$ .27
Cat. No. 34-104	Net \$ .27

### (L) MEDIUM DUTY TOGGLE SWITCH—

Quick, make and break design, rating 6 amp, 250/V; 12 amp, 125/V; 12 amps, 125/V; 1 HP. DPST.

Cat. No. 34-106	Net \$1.38
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### (M) HEAVY DUTY PUSH BUTTON SWITCH: MOMENTARY ACTION —

Molded plastic housing; rating 8 amps, 25/V; 16 amps, 125-250V; 1 HP. Push button switch.

Cat. No. 34-108	Net \$2.05
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### (N) HEAVY DUTY TOGGLE SWITCH—

240/V AC; transmitters, etc. Rating SPDT model 10 amps, 250/V; 15 amps, 125/V; other two types 5 amps, 250/V; 10 amps, 125/V.

Cat. No. 34-110	Net \$ 4.95
3 PDT.	

Cat. No. 34-112	Net \$ 7.60
4 PDT.	

Cat. No. 34-114	Net \$10.11
-----------------	-------------

### (D) DELUXE TOGGLE SWITCH—

1000/V rms — 60 cycle is desired. Rating SPDT model, 1 amp, 250/V; 6 amps, 125/V. All others 3 amp, 250/V; 6 amp, 125/V.

SPST — 1/2" Shank.	
Cat. No. 34-120	Net \$1.30

SPDT — 1/2" Shank.	
Cat. No. 34-122	Net \$1.47

DPST — 1/2" Shank.	
Cat. No. 34-124	Net \$1.83

DPDT — 1/2" Shank.	
Cat. No. 34-126	Net \$1.98

### (P) LOCK SWITCH—

Removable key; sleeve length 2 3/8"; rating 3 amps, 250/V; 6 amps, 125/V.

With key removable in open position only.

Cat. No. 34-150	Net \$2.17
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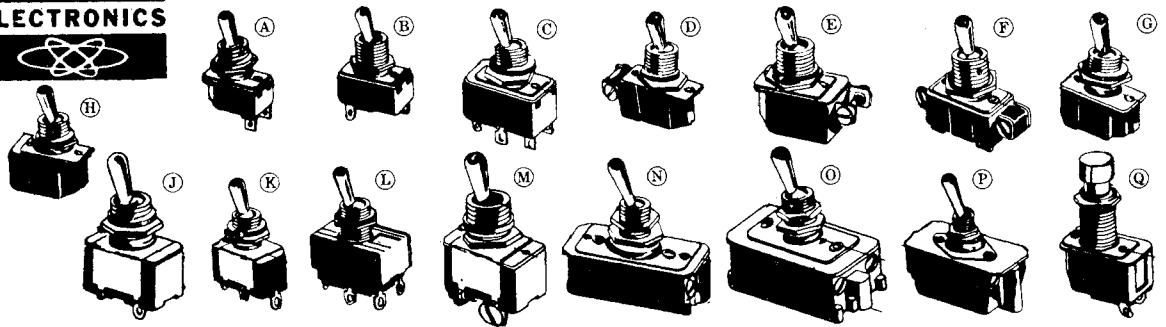
Cat. No. 34-152	Net \$2.17
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Cat. No. 34-154	Net \$ .22
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# ELECTROCRAFT COMPONENTS

SWITCHES • CABLE CLAMPS



These switches, made by Cutler Hammer Inc., for GC-Electrocraft, are all single hole mounting, UL Approved and supplied with threaded shank  $\frac{1}{2}$ " long. Shanks are milled with keyway to prevent any possible turning when used with a keyed hole in the panel.

**(A) LIGHT DUTY, SMALL SIZE TOGGLE SWITCH**—rating 3 amps, 250/V.  
 Cat. No. 34-180 SPST Net \$ .75  
 Cat. No. 34-182 DPST Net 1.32  
 Cat. No. 34-184 DPDT Net 1.50

**(B) "THREE WAY" AND "TWO CIRCUIT" SWITCH**—Three way switch handles 2 circuits with common line; 3 terminals, with one terminal "common". Two circuit model 4 terminals, with no connections between circuits.  
 Cat. No. 34-186 SPDT (3-way) Net \$ .93  
 Cat. No. 34-188 DPST (2-circuit) Net \$1.13

**(C) MEDIUM DUTY TOGGLE SWITCH**—solder lug connections: 3 amp, 250/V; 6 amp, 125/V, AC-DC.  
 Cat. No. 34-190 DPST Net \$1.45  
 Cat. No. 34-192 DPDT Net \$1.62

**(D) LIGHT DUTY TOGGLE SWITCH**—screw terminals, rating 3 amp, 250/V AC-DC.  
 Cat. No. 34-194 SPST Net \$ .90  
 Cat. No. 34-196 DPST (2 pos. no "off") Net \$1.72  
 Cat. No. 34-198 DPDT (2 pos. w/ off) Net \$2.07

**(E) MEDIUM DUTY TOGGLE SWITCH**—rating 6 amp, 125/V; 3 amp, 250/V.  
 Cat. No. 34-200 SPST Net \$1.02  
 Cat. No. 34-202 DPDT (2 pos. w/ "off") Net \$1.95

**(F) LIGHT DUTY, 3-WAY SWITCH**—rating 1 amp, 250/V; 3 amps, 125/V.  
 Cat. No. 34-204 SPDT Net \$1.17

**(G) LIGHT DUTY, WIRE LEAD SWITCH**—rating 3 amps, 250/V, AC-DC.  
 Cat. No. 34-206 SPST .90

**(H) MEDIUM DUTY WIRE LEAD SWITCH**—rating 6 amp, 125/V; 3 amp, 250/V.  
 Cat. No. 34-208 SPST Net \$1.02

**(J) MEDIUM-HEAVY DUTY TOGGLE SWITCH**—rating 10 amp, 250/V, 15 amp, 125/V and  $\frac{3}{4}$  HP.  
 Cat. No. 34-210 SPST Net \$ .75  
 Cat. No. 34-212 DPST (2 pos. on-off) Net \$1.15

**(K) MEDIUM-HEAVY DUTY TOGGLE SWITCH**—rating 10 amp, 250/V; 15 amp, 125/V and 1 HP.  
 Cat. No. 34-214 SPDT (2 pos. no "off") Net \$ .87

Cat. No. 34-216 3 PST (2 pos. on-off) Net \$2.25  
 Cat. No. 34-218 3 PDT (no "off" pos.) Net \$2.77

**(L) MEDIUM-STD DUTY TOGGLE SWITCH**—Designed for applications where rugged bat handle switch is required.  
 Cat. No. 34-220 DPDT lug (2 pos. w/ "off") Net \$1.32

Cat. No. 34-222 DPST screw (2 pos. on-off) Net \$1.32  
 Cat. No. 34-224 DPDT screw (2 pos. w/ "off") Net \$1.62  
 Cat. No. 34-226 DPDT lug (3 pos. center off) Net \$1.32

**(M) MEDIUM-HEAVY DUTY TOGGLE SWITCH**—Designed for applications where rugged bat handle switch is required.  
 Cat. No. 34-228 SPST screw (on-off) Net \$ .87  
 Cat. No. 34-230 SPDT screw (no "off pos.") Net \$1.02

Cat. No. 34-232 3 PST screw (2 pos. on-off) Net \$2.62  
 Cat. No. 34-234 3 PDT screw (2 pos. w/ "off") Net \$3.30  
 Cat. No. 34-236 SPDT (3 pos. center off) Net \$ .87  
 Cat. No. 34-238 3 PDT (3 pos. center off) Net \$2.77  
 Cat. No. 34-240 3 PDT (3 pos. center off) Net \$3.30

**(N) MEDIUM-HEAVY DUTY TOGGLE SWITCH**—rating 6 amp, 250/V; 12 amp, 125/V, 1 HP.  
 Cat. No. 34-242 SPST Net \$1.38  
 Cat. No. 34-244 DPST Net \$1.38

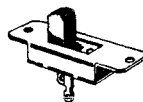
**(O) HEAVY DUTY TOGGLE SWITCH**—rating 10 amp, 250/V; 15 amp, 125/V,  $\frac{1}{2}$  HP.  
 Cat. No. 34-246 SPST Net \$2.33  
 Cat. No. 34-248 DPST Net \$2.33

**(P) EXTRA-HEAVY DUTY TOGGLE SWITCH**—rating 20 amps, 250/V,  $\frac{1}{2}$  HP, 125/250 V.  
 Cat. No. 34-250 DPST Net \$3.30

**(Q) PUSH BUTTON, ON-PUSH-OFF SWITCHES**—rating 3 amp, 250/V; 6 amp, 125/V;  $\frac{1}{8}$ " shank length, single pole, single throw type.  
 Cat. No. 34-252 SPST with lug terminal Net \$1.20  
 Cat. No. 34-254 SPST with screw terminal Net \$1.15  
 Cat. No. 34-256 SPST with wire leads Net \$1.15

## MISCELLANEOUS SMALL SWITCHES

The switches listed below are widely used on electronic equipment, automotive applications and small electrical appliances.



**SLIDE SWITCHES**—UL approved for 1,  $\frac{1}{2}$  amp, 125/V. Mount with 2 screws #6 or rivets  $\frac{1}{8}$ " with  $\frac{1}{8}$ " spacing.  
 1 amp.  
 Cat. No. 34-160 SPDT Net \$ .18  
 $\frac{1}{2}$  amp.  
 Cat. No. 34-162 DPDT Net \$ .22



**ROTARY CANOPY SWITCH**—With wire leads and  $\frac{1}{8}$ " shank length. Rating 3 amp, 125/V, 1 amp, 250/V. Mounts in  $\frac{3}{8}$ " hole.  
 Cat. No. 34-166 Net \$ .32



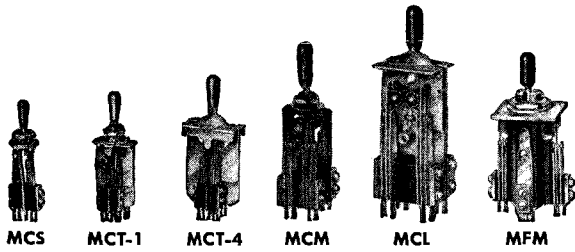
GC INDUSTRIAL CATALOG



SEND FOR FREE

INDUSTRIAL CATALOG FR-65-I ON ALL GC ELECTRONICS INDUSTRIAL PRODUCTS TODAY.

A complete line of LEVER SWITCHES by GENERAL CONTROL COMPANY



Type	Amps.*	High	Wide	Long**
MCS	1 or 3	7/8"	7/8"	2-1/16"
MCT-1	1 or 3	1 1/4"	7/8"	2-5/16"
MCT-4	1 or 3	1 1/2"	7/8"	2-17/32"
MCM	5	1 1/2"	1 1/4"	2-25/32"
MCL	10	1 3/4"	1 3/4"	3-15/16"
MFM	5	1 3/4"	1 3/4"	3"

\*125 volts, 60 cycles, non-inductive.  
\*\*From back panel to end of terminals.

Write for data Sheet CLRM

LEVER OPERATION

Symbol	Lock (Stays pull)	Non-lock Spring return	Three-Position	Two-Position	Half Throw	Two-Position	Full Throw
Designation	MCS	S1	*S2	S3	*S4	*S5	
	MCT1 MCT4	T1	*T2	T3	*T4	*T5	
	MCM	M1	*M2	M3	*M4	*M5	M6
	MCL	L1	*L2	L3	*L4	*L5	

\*Lock and non-lock positions may be reversed. To reverse designate as RS2, RM4, RL5, etc.



MFM

SPECIAL MCM LEVER

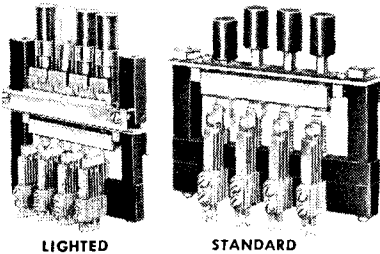
(A) waterproof lever  
\$4.05 EACH, LBT

DESCRIPTION	LOCK	NON-LOCK	FOUR-POSITION
SYMBOL			
OPERATION			
OPERATION NO.	M8	M9	M10
	M11	M12	

CONTACTS

FRAME TYPES AND PRICES	CONTACT FORMS	CIRCUIT										
		A	B	C	D	E	F	G	H	O	No Contacts	
MCS \$ 1.65	MCS 1 amp.	0.50	0.50	0.60	—	—	0.60	—	0.60	—	—	—
	MCS 3 amp.	.60	.60	.72	—	—	.72	—	.72	—	—	—
MCT-4 \$ 1.95	MCT-4 1 amp.	.50	.50	.60	0.75	0.85	.60	—	.60	—	—	—
	MCT-4 3 amp.	.60	.60	.72	.90	1.02	.72	—	.72	—	—	—
MCT-1 \$ 2.45	MCT-1 1 amp.	.50	.50	.60	.75	.85	.60	—	.60	—	—	—
	MCT-1 3 amp.	.60	.60	.72	.90	1.02	.72	—	.72	—	—	—
MCM \$ 3.65	MCM 5 amp.	.75	.75	.90	1.15	1.45	.90	0.90	.90	—	—	—
MFM \$16.80	MFM 5 amp.	.75	.75	.90	1.15	1.45	.90	.90	.90	—	—	—
MCL \$ 4.90	MCL 10 amp.	1.15	1.15	1.30	1.60	2.45	1.30	1.30	1.30	—	—	—

PUSH-BUTTON SWITCHES by GENERAL CONTROL COMPANY



LIGHTED STANDARD

BUTTONS	SPS-LPS FRAME PRICES — 5/8" or 3/4" Button Centers															
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
B12 SPS	\$10.90	\$12.85	\$15.00	\$17.65	\$20.30	\$22.95	\$25.60	\$28.25	\$31.15	\$34.05	\$36.95	\$39.85	\$42.75	\$45.65	\$48.55	
B12 LPS	19.35	24.10	28.90	34.55	40.20	45.85	51.50	57.15	64.05	70.20	77.75	82.50	88.65	94.80	100.95	
B13 SPS	9.95	11.90	13.85	16.50	19.15	21.80	24.45	27.10	29.75	32.45	35.55	38.45	41.35	44.25	47.15	
B13 LPS	18.40	23.15	27.75	33.40	39.05	44.70	50.35	56.00	62.90	69.05	76.60	81.35	87.50	93.65	99.80	
B14 SPS	9.40	10.60	12.00	13.90	15.80	17.70	19.60	21.50	23.65	25.80	27.95	30.10	32.25	34.40	36.55	
B14 LPS	17.85	21.65	25.90	30.80	35.70	40.60	45.50	50.40	56.60	62.20	67.80	73.00	78.40	83.80	89.20	
B15 SPS	8.45	9.65	10.85	12.75	14.65	16.55	18.45	20.35	22.25	24.40	26.55	28.70	30.85	33.00	35.15	
B15 LPS	16.90	20.90	24.75	29.65	34.55	39.45	44.35	49.25	55.40	60.80	66.20	71.60	77.00	82.40	87.80	
B16 SPS	7.45	8.40	9.35	11.20	13.05	14.90	16.75	18.60	20.45	22.50	24.60	26.70	28.80	30.90	33.00	
B16 LPS	15.90	19.65	23.25	28.10	32.95	37.80	42.65	47.50	53.60	58.90	64.25	69.60	74.95	80.30	85.65	
B17 SPS	8.40	9.35	10.50	12.35	14.20	16.05	17.90	19.75	21.85	23.90	26.20	28.10	30.20	32.30	34.40	
B17 LPS	16.85	20.60	24.40	29.25	34.10	38.95	43.80	48.65	55.00	60.30	65.65	71.00	76.35	81.70	87.05	
B18 SPS	10.55	13.05	15.55	18.95	22.35	25.75	29.15	32.55	35.95	39.55	43.20	46.85	50.50	54.15	57.80	
B18 LPS	19.00	24.30	29.45	35.85	42.25	48.65	55.05	61.45	69.10	75.95	82.85	89.75	96.65	103.55	110.45	
B19 SPS	11.50	14.00	16.70	20.10	23.50	26.90	30.30	33.70	37.35	40.95	44.85	48.25	51.90	55.55	59.20	
B19 LPS	19.95	25.25	30.60	37.00	43.40	49.80	56.20	62.60	70.50	77.35	84.25	91.15	98.05	104.95	111.85	

Note: Additional frame operations available. Contact General Control.

OPERATIONS

B12 POSITIVE LOCK-IN LOCK-OUT

Only one button can be depressed at a time. The Momentary Release button must be actuated to release any previously depressed button before any other button can be actuated.

B13 ACCUMULATIVE LOCK

Buttons pushed in remain locked in position until released by pushing reset button.

B14 NO-TWO-INTERLOCK

Only one button can be pushed in at one time, and releases any other button.

B15 LOCK-RELEASE

Any button pushed in releases any previously pushed in button.

B16 NON-LOCK

Has no locking action; returns to normal position on release of finger pressure.

B17 NON-LOCK, NO-TWO-OPERATIVE

The same as B16 except that no two buttons can be operated simultaneously.

B18 PUSH-LOCK, PUSH-RELEASE

Any button depressed remains locked in until that button is depressed again.

B19 PUSH-LOCK, PUSH-RELEASE, (WITH LOCK-OUT)

This is the same as B18 except that only one button can be depressed at a time.

CONTACTS

CONTACT FORMS	A	B	C	D	H
1 amp silver	.50	.50	.60	.80	.60
3 amps paladium alloy	.60	.60	.72	.95	.72
Direction of Throw					

Ratings at 125 volts A. C. n.i. \* In place of a "D" contact we can offer a "C" contact adjusted to provide make before break operation.

WRITE FOR DATA SHEET SLRM

ORDERING INFORMATION

1. Frame Type SPS4 \$12.00	2. Operation B14 —	3. Contacts A-C-2A-2C .60+.72+1.20+1.44	4. Contact Location TOP Mounted	5. Rating 3 amps.	6. Button Centers 5/8" = \$15.96
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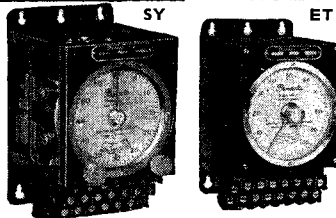
"Footrol" FOOT SWITCHES

"Promatic" TIMERS

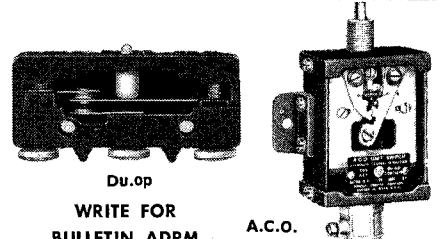
LIMIT SWITCHES



MA — \$5.60 MI — \$11.95 MC — \$7.95



WRITE FOR BULLETIN SERM



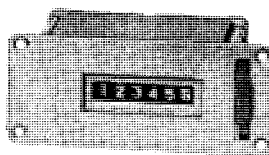
WRITE FOR BULLETIN ADRM A.C.O.

GENERAL CONTROL COMPANY  
BOSTON, MASSACHUSETTS

\*ALL PRICES SUBJECT TO 1962 DISCOUNT SCHEDULE



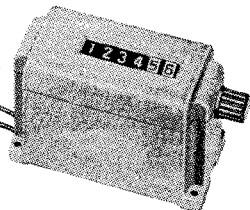
# ELECTRIC COUNTERS & ACTUATORS



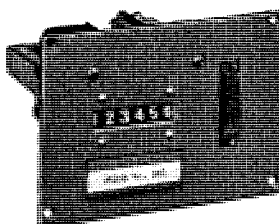
**CE-600B Panelmount**

PIC Electric Counters are actuated by electric impulses (12 to 150 AC or 12 to 220 DC) which may come from any suitable switch, relay, photoelectric unit or other circuit breaking device. Counters rated for 1000 counts per minute (cpm) require .030 second minimum closed period and .030 second minimum open period for each count. Counters rated at 600 cpm require .040 second minimum closed period and .060 second minimum open period for each count. Models are available for 12 to 230 v. AC and DC. Send for literature or write us for prices and deliveries.

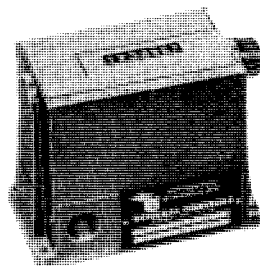
Also available in coin counting models.



**CE-600A Basemount**



**CE-800B Panelmount**



**CE-800C Standard, CE-800A Dustproof**

## CE-600 COUNTERS TO 999,999, WITH RESET

Count life of 50 million; 1000 cpm (with suitable actuation); seven watts power consumption. Built-in rectification provides reliable operation on all AC voltages to 150 v. Quiet operation; no AC hum when energized. Continuous duty coils and balanced armature. White figures on black wheels are easy to read; die cast, dust resistant enclosure. No. CE600AS602, 1.668" w. x 3.5" d. x 2.5" h.; No. CE600BS602, 4.4375" x 1.875" panel x 2.6875" d.; No. CE600BK602, 5.5" x 2.125" panel x 2.812" d. Models listed are for 115 v. AC, 60 cps.

**CE-600AS602** Basemount with knob reset. 1 to 9 Net ..... **\$22.40**

**CE-600BS602** Panelmount with knob reset. 1 to 9 Net ..... **24.00**

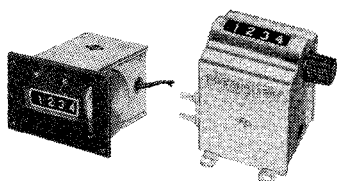
**CE-600BK602** Panelmount with key reset. 1 to 9 Net ..... **33.00**

## MERCURY COUNTERS TO 9,999, WITH RESET

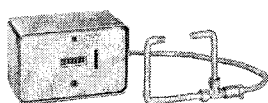
For laboratory use and industrial service where duty is moderate. Estimated life six million counts. Counting rate 600 cpm, higher with electronic actuation. Has white figures on black wheels. Coils consume three watts. Tamper-proof metal enclosure has plastic window. Size: Basemount model, 2 1/4" x 1 3/8" x 2 3/8" h.; panelmount model, 2 3/16" x 1 1/16" panel x 2 3/4" d. For 115 v. AC, 60 cps.

**CE-40AS402** Basemount. 1 to 9 Net ..... **\$15.25**

**CE-40BS402** Panelmount. 1 to 9 Net ..... **15.95**



## CE 650 PHOTOELECTRIC COUNTER WITH REMOTE PHOTO HEADS



High speed 6 digit counter. A matched component package. Photoelectric actuation keyed to counter response thru transistorized amplifier. Operates reliably at high speeds (up to 2400 cpm). 50,000,000 count life. Photo heads furnished assembled and wired.

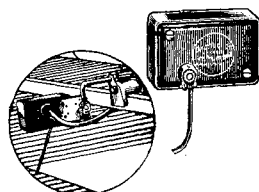
Min. light time .0125 sec.; min. dark time .0125 sec.; min. speed of object thru beam 1.86 inches/sec. Prices on request.

## CE 605 REMOTE DATA READOUT COUNTER MANUAL RESET - 4 OR 5 DIGITS

Building block of system. Eliminates human error, reduces cost of manually reading and recording. Transmits counter reading electrically and visually. External circuits used to transmit accumulated totals in binary international or digital form. Manual reset knob or non-reset available. Max. speed 1000 counts per minute. Pulse 50 milliseconds, 50% on, 50% off. Low power consumption. 3/8" high numerals. Prices on request.



## SENSITIVE ACTUATOR ES-41



Widely used on folding machines. Requires only 3/4 in.-oz. torque. Arm motion: 24° min., 59° max. reciprocal; 10° to 45° overthrow. Arm position adjustable, easily shortened or bent. Rated speed, 300 cpm. SPST contacts rated 2 amps; 120 v. AC. Body size, 2 1/2" x 1 1/8" x 1 1/8" d. Furnished with straight spring steel arm 2 1/8" long.

**ES-41** Actuator. 1 to 9 Net **\$8.40**

## CE-800 SUPER-WIZARD COUNTER TO 999,999, WITH RESET

Has 200 million count life; 1000 cpm (with suitable actuation); only five watts power consumption. Built-in rectification provides top reliability from all AC voltages to 230 v. Continuous duty coils and balanced armatures for dependability. Large, white-on-black figures are easy to read. Standard enclosure has tamper-proof, die cast aluminum housing with staked window of unbreakable plastic; separate wiring compartment with independent cover is tapped for conduit. Dustproof enclosure has same housing with dustproof gasket seal and cement sealed window. Size: Standard and dustproof models, 3.12" w. x 5.94" l. x 4.69" h.; panelmount model, 5.19" x 3.50" panel x 4.39" d. Models listed are for 115 v. AC, 60 cps.

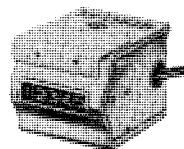
**CE-800CS602** Std. enclosure, knob reset. 1 to 9 Net ..... **\$43.00**

**CE-800AS602** Dustproof enclosure, knob reset. 1 to 9 Net ..... **47.25**

**CE-800BS602** Panelmount, knob reset. 1 to 9 Net ..... **41.50**

## MERCURY COUNTERS TO 99,999, NO RESET

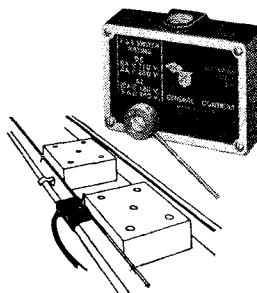
Counts to 99,999 and then repeats. Widely used in vending machines and similar applications where duty is moderate. Estimated life, three million counts. Counting rate, 600 cpm. Coil consumes three watts. Has white figures on black wheels. Tamper-proof metal enclosure with plastic window. Size: Basemount model, 2 1/4" x 1 3/8" x 2 3/8" h.; panelmount model, 1 3/8" x 2 3/8" x 1 1/8" h. For 120 v. AC, 60 cps operation.



**CE-40BN502** Basemount. 1 to 9 Net ..... **\$7.75**

**CE-40AN502** Panelmount. 1 to 9 Net ..... **8.35**

## HEAVY DUTY ACTUATOR ES-5



Arm has spring return. For operation by boxes, cans, packages, etc. Minimum torque of 3 oz.-in. Arm motion: 31° min., 65° max., reciprocal; 10° to 42° overthrow. Arm position adjustable. Rated speed 300 cpm. SPST contacts rated 10 amps, 120 v. AC. Size: 3 1/8" x 2 1/8" x 1 1/2". Furnished with lever as shown in upper illustration.

**ES-5** Actuator. 1 to 9 Net. **\$9.85**

## CE-620 ELECTRIC RESET ELECTRIC COUNTER

Developed to provide remote reset through manually, mechanically, electrically or electronically operated contacts. The CE620 includes a 6 digit CE600 electric counter with electrically operated reset mechanism mounted on a subpanel. Available with push button reset built into panel or with terminals provided for connecting remote contactor furnished by user. Also available in 7 digit and coin counting models.

**CE-620BA602** Remote reset 120v 60 cy. 60 cy. 1 to 9 Net ..... **\$67.00**

**CE-602BB602** Pushbutton reset 120v 60 cy. 1 to 9 Net ..... **72.00**

Dimensions, overall 6" wide, 4" high, by 1/8" deep.





25 YEARS OF INTEGRITY IN MANUFACTURING.....

J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

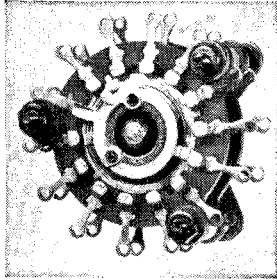
LAMINATED ROTARY SWITCHES, INSTRUMENT AND TESTER TYPE

- 14- and 20-Position
- Single and Multi-Deck, Military or Commercial

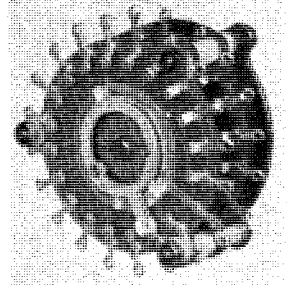
**• USES** — J-B-T Instrument-type Rotary Selector Switches are extensively used in quality test equipment, portable instruments, inspection setups, military or civilian avionics wherever trouble-free, dependable performance is of major importance. Available as a 14- or 20-position in laminated construction shown here or molded types described on opposite page—the design gives extra contacts in minimum space. One to six decks.

**• FEATURES**

**Reliability** — Rigid, 3-post deck suspension, instead of the usual 2; all current carrying parts are brass or phosphor bronze, silver flashed and then heavily plated with fine silver to meet 100 hour salt spray test; ball bearing action, beryllium-copper balanced spring (SS-14); leaf type (SS-20), and sharp detent assure positive indexing. Springs are replaceable without disturbing soldered connections. Laminated plastic decks and rotors are selected for maximum mechanical and dielectric strength. Insulation resistance above 50,000 megohms.



SS-14-2 Laminated



SS-20-2 Laminated

**Low Contact Loss** — Double-grip collector arms, and large-area contacts, silver to silver, result in an average contact resistance of .007 ohms or less.

**Ample Dielectric (Conservatively Rated)** — Carries 1 amp, 125 volts VAC, inductive load; maximum momentary capacity (not make-and-break), 5 amp, AC or DC; maximum voltage between contacts 1500 volts AC, R.M.S.; between decks and ground, 2000 volts AC, R.M.S.

**Military or Commercial Variations** — The following are typical of switches supplied on special order at extra cost: (a) laminated plastic, Type PBE-P per Spec. MIL-P-3115B; (b) fungus-proofing by vacuum impregnation of rotors, decks, spacers, and ceramic spacers using approved fungicides; (c) hot tin dip on contact surfaces to be soldered; (d) 14 or 20 live positions, no off (add suffix F, as SS-14-2F or SS-20-1F); (e) common position in non-standard location. For description of SS-14 materials, finishes, and government-quality features, see Print SK-42, Rev. B and Print SK-116 Rev. A for SS-20.

**BASIC 14-POSITION (SS-14):** 13 circuits and "off" per deck in 2" circle for compactness, angular indexing 25°43'. 1 3/4" Bar Knob (KN-14) supplied only on individually boxed units—not on bulk orders unless specified. **Collector arm** normally placed directly opposite to flat of shaft so that knob pointer points to live contact. **Contact lugs** and common lugs positioned as shown below, 13 contacts per deck. **One to six decks;** for each additional deck (or gang) add 5/16" to depth. **Continuous rotation type** supplied unless otherwise specified. **Adjustable Stop** normally is supplied on standard cataloged switches. **Fixed Stops** can be supplied on quantity orders at moderate cost. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

**BASIC 20-POSITION (SS-20):** 19 Circuits and "off" per deck in 2-23/32" circle for compactness, angular indexing 18°. 2" Bar Knob (KN-16) supplied on individually boxed units—not on bulk orders unless specified. **Collector arm** normally placed directly opposite to flat of shaft so that knob pointer points to live contact. **Contact lugs** and common lugs positioned as shown below, 19 live positions per deck, standard. **One to six decks;** for each additional deck or gang add 5/16" to depth. **Continuous rotation type** supplied unless otherwise specified. **Panel locator** positioned as shown; can be modified on bulk orders.

**COMBINATIONS IN SS-14 AND SS-20 SERIES:** Besides the military and commercial variations listed above, shorting and non-shorting decks can be assembled on the same switch shaft. Reference to the sketch below will be helpful in numbering decks and contacts when ordering non-standard assemblies. Specialized requirements for stainless steel shafts, no flats or double-flats on shaft, longer projections beyond bushing, and other variations can also be supplied, with necessarily longer delivery time and additional cost.

LAMINATED SWITCHES, SS-14 TYPE  
14-POSITION, 25°43' INDEXING

Pos. Per Circ.	Circ. (Poles) Per Deck	Decks or Gangs	Short Non-Shorting	Standard Model	Max. (d) Depth Behind Panel	Boxed Incl. Knob
14	1	1	N-S	SS-14-1	2 7/32"	\$2.30
5 (a)	2	1	N-S	SS-14-1A (b)	2 7/32"	2.45
14	1	1	S	SS-14-1S (b)	2 7/32"	2.35
14	1	1	C-S	SS-14-1CS (c) (b)	2 7/32"	2.80
14	1	2	N-S	SS-14-2	1 5/32"	2.90
5 (a)	2	2	N-S	SS-14-2A (b)	1 5/32"	3.20
14	1	2	S	SS-14-2S (b)	1 5/32"	3.00
14	1	2	C-S	SS-14-2CS (c) (b)	1 5/32"	3.95
14	1	3	N-S	SS-14-3	1 7/16"	3.50
14	1	3	S	SS-14-3S (b)	1 7/16"	3.85
14	1	4	N-S	SS-14-4	1 23/32"	4.40
14	1	6	N-S	SS-14-6	2 13/32"	6.30

LAMINATED SWITCHES, SS-20 TYPE  
20-POSITION, 18° INDEXING

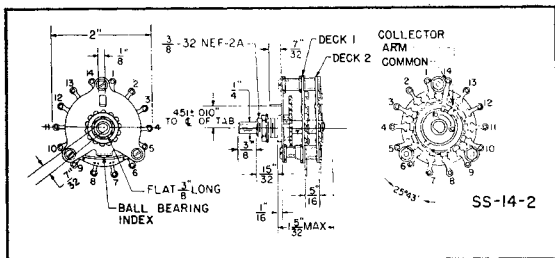
Pos. Per Circ.	Circ. (Poles) Per Deck	Decks or Gangs	Short Non-Shorting	Standard Model	Max. (d) Depth Behind Panel	Boxed Incl. Knob
20	1	1	N-S	SS-20-1	2 3/32"	\$4.00
6 (e)	2	1	N-S	SS-20-1A (b)	2 3/32"	4.15
20	1	1	S	SS-20-1S (b)	2 3/32"	4.05
20	1	2	N-S	SS-20-2	1 13/32"	4.75
20	1	2	S	SS-20-2S (b)	1 13/32"	4.85
20	1	3	N-S	SS-20-3	1 11/32"	5.85
20	1	4	N-S	SS-20-4	1 29/32"	7.10
20	1	6	N-S	SS-20-6	2 13/32"	9.40

- (a) 5 positions include 4 "live" and 1 "off".
  - (b) Standard items, but not regularly stocked; check with your electronic parts distributor.
  - (c) Complete shorting—all contacts shorted except one in use.
  - (d) When SS-14 adjustable stops are used, increase switch length behind panel by 3/32"; decrease effective bushing length by 3/32".
  - (e) 6 positions include 5 "live" and 1 "off".
- Non-Shorting**—Break before make. **Shorting**—Make before break.

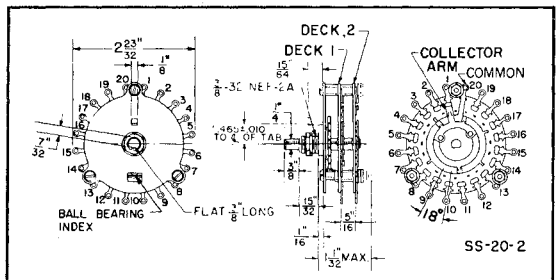
ETCHED DIAL PLATES FOR ROTARY SWITCHES

For SS-14, MS-14, MS-14B, MAS-14, MAS-14B, SS-20, MS-20, or MS-20B Series. Dull black finish—with raised bright metal numerals, 2 3/4" diameter.

- EP-13 off thru 13 ..... \$0.23
- EP-14 1 thru 14 ..... .23
- EP-19 off thru 19 ..... .23
- EP-20 1 thru 20 ..... .23



**NOTE:** Minor revisions in dimensioning of panel locator tab, length of threaded bushing, and overall depth have been made in this edition, and include drawings on opposite page.



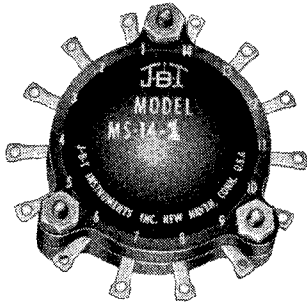
.....25 YEARS OF INTEGRITY IN MANUFACTURING

J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

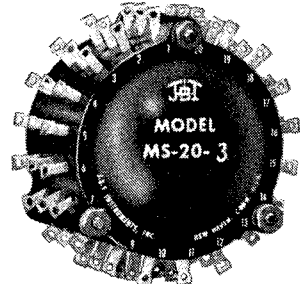


MOLDED ROTARY SWITCHES, INSTRUMENT AND TESTER TYPE

- 14- AND 20-POSITION • STANDARD OR BONDED RUGGEDIZED TYPES • SHORTING AND NON-SHORTING
- All moving contacts enclosed—minimizes dirt and corrosion; 3-post deck suspension for rigidity; double-grip collector arms for positive contact; and rectangular drive shaft for precision indexing.



MS-14-1 Molded



MS-20-3 Molded

- Interchangeable, electrically and mechanically, with SS-14 and SS-20 laminated switches.

• **FEATURES AND USES:** These switches have values as stated for laminated switches on opposite page. Besides fully enclosing all moving parts, the molded switches differ in the design of the detent mechanism, but both types provide rigid 3-post construction and positive indexing. Test results are available on request covering certain procedures of MILE-5272A on insulation resistance; high and low temperature and temperature shock; humidity; altitude; salt spray; vibration; fungus resistance; rain; sand and dust; explosion; shock; and endurance values. (Ratings for MS-20-6DTS Types differ somewhat.

\*\*\* BONDED RUGGEDIZED TYPES—As indicated in the tables, all molded rotary switches may be ordered with bonded construction as MS-14B or MS-20B types using cured laminations for ruggedization, shockproofing and further enclosure. Add cost of 35¢ per deck to catalog price of basic switch. Thus, 2-deck switch is MS-14B-2 at \$3.80. Bonding adds approximately 1/64" per deck.

**BASIC 14-POSITION MOLDED (MS-14):** 13 circuits and "off" per deck in 2 3/32" circle for compactness.

**BASIC 20-POSITION MOLDED (MS-20):** 19 circuits and "off" per deck in 2 5/8" circle.

Molded end cover regularly supplied. 1 1/2" Bar knob (KN-14) included with individually boxed MS-14 units, 2" Bar knob (KN-16) with MS-20 units, but not on bulk orders unless specified. Collector arm placed directly opposite to flat of shaft, so that knob pointer points to live contact. Common or "off" contact lug is rounded and bent down for ready identification. Extra decks add 1/32" per deck to depth; for 7 decks and over, add 1/16" for shaft support and 1/32" per deck for bonding. Continuous rotation type supplied. Permanent stop (MPS types) with pre-set fixed stops are available on special orders. Adjustable stop (MAS type) available only on MS-14 Series. Panel locator available at extra cost on quantity orders when specified. On MS-14-4, MS-14-6, MS-20-4 and MS-20-6, extra hex nut and longer screw can be supplied for inverting supporting screw nearest common, thus converting into panel locator. Complete dimensions: for MS-14, MAS-14, MPS-14 switches, 1 to 6 decks, request Print SK-111 Rev. D; for 7 decks and over, SK-112 Rev. C. For MS-20 and MPS-20, 1 to 6 decks, request Print SK-113 Rev. D; for 7 decks and over SK-114 Rev. C.

MOLDED SWITCHES, MS-14 TYPE  
14-POSITION, 25° 43' INDEXING

Pos. Per Circ.	Circ. (Poles) Per Deck	Decks or Gangs	Shorting Non-Shorting	STANDARD TYPE			BONDED-RUGGEDIZED		
				Standard Model	Max. Depth Behind Panel	Boxed Incl. Knob	Bonded Model	Max. Depth Behind Panel	Boxed Incl. Knob
14	1	1	N-S	MS-14-1	2 3/32"	\$2.45	MS-14B-1	7/8"	\$2.80
14	1	1	S	MS-14-1S	2 3/32"	2.50	MS-14B-1S	7/8"	2.85
14	1	2	N-S	MS-14-2	1 3/32"	3.10	MS-14B-2	1 1/8"	3.80
14	1	2	S	MS-14-2S*	1 3/32"	3.20	MS-14B-2S*	1 1/8"	3.90
14	1	3	N-S	MS-14-3	1 1/32"	3.75	MS-14B-3	1 1/32"	4.80
14	1	4	N-S	MS-14-4	1 23/32"	4.85	MS-14B-4	1 23/32"	6.25
14	1	6	N-S	MS-14-6	2 13/32"	7.05	MS-14B-6	2 1/2"	9.15

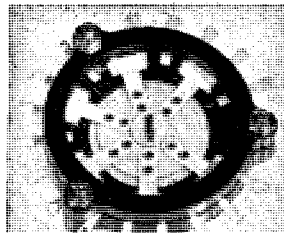
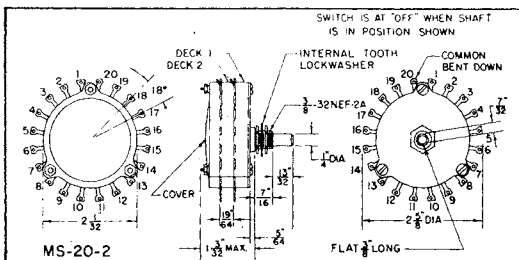
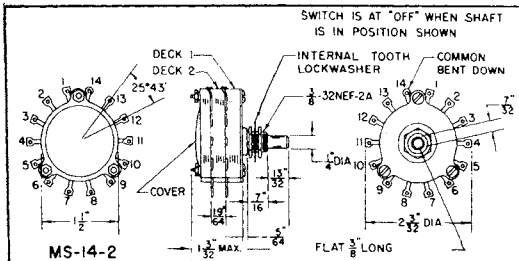
MOLDED SWITCHES, MS-20 TYPE  
20-POSITION, 18° INDEXING

20	1	1	N-S	STANDARD TYPE			BONDED-RUGGEDIZED		
				Standard Model	Max. Depth Behind Panel	Boxed Incl. Knob	Bonded Model	Max. Depth Behind Panel	Boxed Incl. Knob
20	1	1	N-S	MS-20-1	2 1/32"	\$3.10	MS-20B-1	7/8"	\$3.45
20	1	1	N-S	MS-20-1-6DT	2 1/32"	3.90	MS-20B-1-6DT	7/8"	4.25
20	1	1	S	MS-20-1-6DTS	2 1/32"	4.00	MS-20B-1-6DTS	7/8"	4.35
20	1	1	S	MS-20-1S	2 1/32"	3.15	MS-20B-1S	7/8"	3.50
20	1	2	N-S	MS-20-2	1 3/32"	3.90	MS-20B-2	1 1/8"	4.60
20	1	2	N-S	MS-20-2-6DT	1 3/32"	5.50	MS-20B-2-6DT	1 1/8"	6.20
20	1	2	S	MS-20-2S*	1 3/32"	4.00	MS-20B-2S*	1 1/8"	4.70
20	1	3	N-S	MS-20-3	1 13/32"	5.00	MS-20B-3	1 13/32"	6.05
20	1	4	N-S	MS-20-4	1 23/32"	6.20	MS-20B-4	1 23/32"	7.60
20	1	6	N-S	MS-20-6	2 13/32"	8.60	MS-20B-6	2 1/2"	10.70

ADJUSTABLE STOP MOLDED SWITCHES, MAS-14 TYPE

14	1	1	N-S	STANDARD TYPE			BONDED-RUGGEDIZED		
				Standard Model	Max. Depth Behind Panel	Boxed Incl. Knob	Bonded Model	Max. Depth Behind Panel	Boxed Incl. Knob
14	1	1	N-S	MAS-14-1	3 1/2"	\$3.10	MAS-14B-1	1"	\$3.45
14	1	1	S	MAS-14-1S	3 1/2"	3.20	MAS-14B-1S	1"	3.55
14	1	2	N-S	MAS-14-2	1 7/32"	3.80	MAS-14B-2	1 1/4"	4.50
14	1	2	S	MAS-14-2S*	1 7/32"	3.95	MAS-14B-2S*	1 1/4"	4.65
14	1	3	N-S	MAS-14-3	1 11/32"	4.60	MAS-14B-3	1 11/32"	5.65
14	1	4	N-S	MAS-14-4	1 23/32"	5.70	MAS-14B-4	1 15/16"	7.10
14	1	6	N-S	MAS-14-6	2 17/32"	8.00	MAS-14B-6	2 1/32"	10.10

**IMPORTANT:** Enclosed adjustable stop mechanism of MAS-14 type increases switch length by 1/32" behind panel; decreases effective bushing length by 1/32"; and shortens shaft extending from bushing by 1/32". Rings RI-23 and RI-24 are supplied. For more than 6 decks, request prices. \*Standard items, but not regularly stocked; check with your electronic parts distributor. **Non-Shorting**—Break before make. **Shorting**—Make before break.



6-POLE DOUBLE-THROW PER DECK—1 OR 2 DECK

**6-Pole Double-Throw (DT Series).** Double-throw switch of 6 circuits per deck through two positions (throw) becomes easy with this unique rotary-type molded switch. It is fully enclosed and similar appearance to other molded MS-20 switches. (Illustration shows protective cover cut away.) Circuit arrangement is designated on the metal front of switch. Quality features include .007 ohm aver contact resistance; heavy, fine-silver plating; 100-hour salt spray test; double-grip collector arm. Made in non-shorting (break before make) or shorting (make before break) 2 5/8" max. diam one deck 2 1/2" behind panel; two deck, 1 3/32" behind panel. DTS Shorting Types are rated 1500 volts R.M.S. between contacts and 1000 volts R.M.S. between contacts and ground.

PRACTICAL NEW IDEA: RING-CONTACT SWITCH

Use the unique J-B-T ring-type (suffix R) molded switch to avoid the possibility cold-soldered joints and the cost of assembling jumper wires when adjacent external contacts are to be joined. An integral ring holds all the contacts on a deck together and can be snipped where wanted. This feature adds 1/32" o.d. to the MS-14 or MS-models. Additional cost is nominal; for example, 2-deck MS-14R-2 is \$3.65 catalog price. Ask for Print SK-88 Rev. C on 14-position and SK-89 Rev. C on 20-position.

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1964

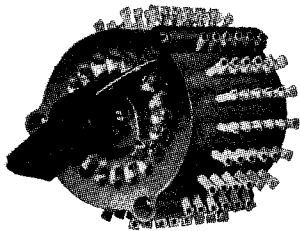


25 YEARS OF INTEGRITY IN MANUFACTURING.....

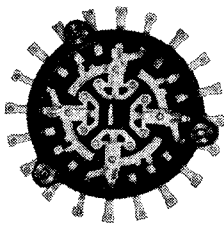
J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

NEW MULTI-POLE MOLDED ROTARY SWITCHES, SERIES 20M.

- Superior Molded Material
- All Models Bonded & Ruggedized
- Panel Seal Available



Front View Showing Panel Locator which is Normally at 3 o'clock Position.



Rear View with Back Cover Cut Away to Show 4-Pole Construction with 4 Live Switching Contacts.

Although the new 20M-Series is 1/4" longer behind the panel than the 20-position molded switches described on the preceding page, the two styles are otherwise interchangeable in dimensions. Providing 19 live positions and off, the 20M-offers these additional features:

1. **Increased Versatility of Circuitry**—up to and including four poles per deck;
2. **Upgraded Insulation Resistance and Dielectric Qualities**—by use of melamine stators and rotors (or other MIL-M-14 molded materials when specially ordered);
3. **Built-in Panel Locator or Non-Turn Device;**
4. **Extended Switch Life**—new contact design with rotor brushes of phosphor bronze heavily silver-plated;
5. **Bonded and Ruggedized Construction;**
6. **Radial Alignment of Multi-Pole Contact Surfaces**—by means of newly-designed double-ball detent with diaphragm-type springs.

**VARIATIONS OF 20M.**—Please request SK-142 for full dimensions and circuit diagrams. Besides the condensed listing in the accompanying table, various combinations of **shorting and non-shorting contacts** for each deck may be made. Fixed stops are built-in but may be provided for single-pole switches when specially ordered. **Over six decks** can be supplied for a reasonable number of poles; extra decks add 5/16" per deck and 5/16" per switch for rear support SU-3. **Ring-contact** (suffix R) may be specially ordered.

**PANEL SEAL PS20M-SERIES**—Sealed shaft and bushing meet the requirements of MIL-S-3785A for sealing. For details ask for SK-143. The seal (prefix PS) adds \$1.75 per switch to catalog price.

**SPECIFICATIONS AND TEST DATA**—Available on request.

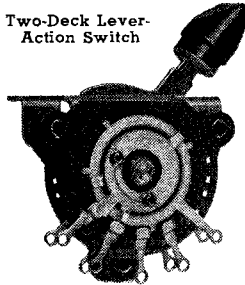
No. of Decks	Depth Behind Panel	Poles Per Deck	Model Number	Circuitry Per Pole	Rotation-Positions*	Boxed Incl. Knob
1	1-3/16	1	20M-1201N	19 live, 1 off	Continuous	\$3.75
		1	20M-1191N	19 live, no off	1 thru 19	3.75
		2	20M-2101N	9 live, 1 off	20 thru 9	4.15
		2	20M-3051N	4 live, 1 off	20 thru 4	4.50
2	1 1/2	1	20M-1202N	19 live, 1 off	Continuous	5.00
		2	20M-2102N	9 live, 1 off	20 thru 9	5.80
		3	20M-3052N	4 live, 1 off	20 thru 4	6.50
		4	20M-4052N	4 live, 1 off	20 thru 4	7.20
3	1-13/16	1	20M-1203N	19 live, 1 off	Continuous	6.25
		2	20M-2103N	9 live, 1 off	20 thru 9	7.45
		3	20M-3053N	4 live, 1 off	20 thru 4	8.50
		4	20M-4053N	4 live, 1 off	20 thru 4	9.55
4	2-2/16	1	20M-1204N	19 live, 1 off	Continuous	7.70
		2	20M-2104N	9 live, 1 off	20 thru 9	9.30
		3	20M-3054N	4 live, 1 off	20 thru 4	10.70
		4	20M-4054N	4 live, 1 off	20 thru 4	12.10
6	2-13/16	1	20M-1206N	19 live, 1 off	Continuous	10.80
		2	20M-2106N	9 live, 1 off	20 thru 9	13.20

\* See MS-20 drawing on preceding page for location of positions.

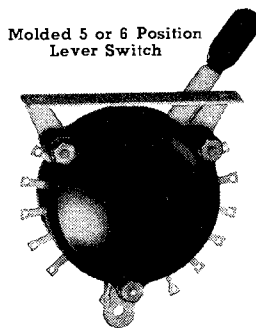
- Notes: (1) NON-shortening (N) type — (break-before-make) — is shown. For shorting type (S), add \$.05 per pole per deck to catalog price. Example: 3 pole, 3 deck 20M-3053S is \$8.95.
- (2) Switch with all live positions per pole or less than maximum live positions can be provided by fixed stops.
- (3) **Panel Seal** is available including shaft seal within bushing. Use suffix PS. Example: PS20M-1203N. See Print SK-143.

LEVER ACTION SWITCHES — 6, 5, 4, 3, and 2-Position — LAMINATED, MOLDED, & SUB-MINIATURE

**LAMINATED 3- AND 4-POSITION, POSITIVE INDEXING.** These lever switches are derived from the J-B-T SS-14 instrument-type rotaries. Specified for tube checkers, inspection equipment, communications systems, control consoles, and other uses where quality is important. 4-position types are interchangeable with 3-position except in length of throw—mounting holes for both, 1 5/8" between centers. Individually-boxed switches come with mounting hardware and KN-17 knob as illustrated; bulk shipments, without knobs. **SINGLE DECK**—spacing between centers: recommended, 3/4"; minimum, 9/16". **TWO DECK**—spacing: recommended, 15/16"; minimum, 13/16". 3/8" between decks matches TV twinlead wires. **SPRING RETURN TYPE**—single deck. 3-position switches may be ordered with spring return. Lever returns to position 1, giving momentary action at position 9 and 10. For dimensions, ask for marking SK-138.



SS-14-1L4F-2

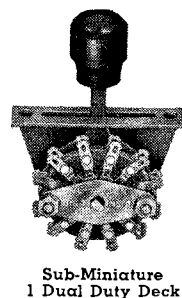


**MOLDED 5- and 6-POSITION, POSITIVE-INDEXING.** 5 or 6 live positions, two circuits per deck, in enclosed lustrous black molded construction; adapted from the MS-20 series with electrical characteristics as shown on previous page. These models can simplify circuitry for sound systems, control, inspection, test, experimental, and hobby purposes. Individually-boxed switches come with KN-20 threaded black molded knob; bulk shipments, without knobs. For mounting data see SK-64, Rev. H on 5-position and SK-119, Rev. B on 6-position.

MS-20-1L5A-1, 5-position, 2-circuit (1 deck)	\$3.25
MS-20-1L6A-1, 6-position, 2-circuits (1 deck)	3.50

Positions Per Circuit	Circ. (Poles) Per Deck	Decks or Gangs	Short-Non-Short	Stand.* Contact Pos.	Model	Boxed Incl. Knob
no "off"	1	1	N-S	A	SS-14-1L3	\$1.00
no "off"	2	1	N-S	B	SS-14-1L3A	1.15
no "off"	1	1	S	A	SS-14-1L3S	1.05
no "off"	1	1	N-S	A	SS-14-1L3R†	1.15
no "off"	1	1	S	A	SS-14-1L3S-R†	1.20
no "off"	1	2	N-S	A	SS-14-1L3-2	1.70
& "off"	1	1	N-S	C	SS-14-1L4	1.10
no "off"	1	1	N-S	D	SS-14-1L4F	1.10
no "off"	1	2	N-S	D	SS-14-1L4F-2	1.90
& "off"	1	1	S	C	SS-14-1L4S	1.15

†—common at 12, contacts at 9, 10, 11; B—common at 9, 10, contacts 6, 7, 8, 12, 13 14; C—common and off at 12, contacts at 9, 10, 11; D—common at 12, contacts at 8, 9, 10, 11. —Spring Return.



Sub-Miniature 1 Dual Duty Deck

2 AND 3 POSITION, 1 TO 4 DECKS, 2 TO 8 POLES PER DECK.

**SUB-MINIATURE LEVER SWITCHES**—Derived from the high-performance sub-miniature switches described on the next page, the VL-7000 and the VL-5000 positive indexing series and the VSRL-7000 and VSRL-5000 spring return types provide excellence in lever switches. MIL materials throughout; crisp 30° indexing. Max. depth behind panel 1.250"; panel slot .962" x 0.62"; other details to SK-139, Rev. A and Catalog SM-32C. Typical switches are:

VL-71031N, single-pole, 3-position, one-deck, non-shorting	\$4.80
VSRL-71031N, same as above, with spring return to center position from either side	5.80
VL-71032N, single-pole, 3-position, two-deck, non-shorting	7.05

LEVER KNOBS

KN-17, black pointed with metal insert	\$0.19
KN-18, walnut, same as KN-17	0.06
KN-19, black, round, flat-type, push-on	0.06
KN-20, black, threaded, for MS-20-IL	0.14

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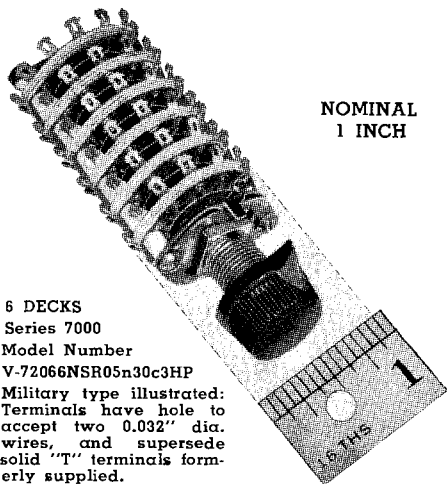
.....25 YEARS OF INTEGRITY IN MANUFACTURING

J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

SUB-MINIATURE SWITCHES

**New!** SUB-MINIATURE SWITCHES—TO ALL PERFORMANCE LEVELS OF MIL-S-3786A, TYPE SR05; ALSO NON-MILITARY X AND V VERSIONS.

SERIES 7000, FULL 12 LIVE SWITCHING CONTACTS PER DECK; SERIES 5000, UP TO 8 POLES PER DUAL-DUTY DECK.



6 DECKS  
Series 7000  
Model Number  
V-72066NSR05n30c3HP

Military type illustrated: Terminals have hole to accept two 0.032" dia. wires, and supersede solid "T" terminals formerly supplied.

- Precision built for Low-Current Usage where Size, Weight, Reliability are Important
- Unusual Versatility—More Contacts per Deck
- Accelerated Snap-Action Detent
- MIL Materials Throughout for Military & Non-Military Applications

**CAUTION**—MIL-S-3786A, a sophisticated specification, spells out more than one performance level in each of several categories, such as Temperature-Life, Vibration, and Shock, with each level designated by its own symbol. Only J-B-T SR05 Switches meet the highest (and all other) levels.

• **USES**—For test equipment, airborne and transistorized equipment, geophysical apparatus, and other miniaturized electrical and electronic devices. **TWO BASIC SERIES**—Full 12 live switching contacts per deck are available in **Series 7000** using a patented wafer design feature where rotor contacts are on the front, and switching contacts are on the rear of the same deck. 1 to 4 poles per deck 1 to 6 decks, standard.

Up to 8 poles per dual-duty deck are available in **Series 5000** which has up to 12 contacts including common on the front, and up to 12 contacts including common on the rear of the same deck. 1 to 4 poles on each side of dual-duty decks; 1 to 4 decks, standard. **THREE ROTARY TYPES**—Both Basic Series are made in 3 types: **MILITARY STYLE SR05**, numbered for specific performance levels of MIL-S-3786A; **V TYPE**, of similar construction to SR05, but not ordinarily subjected to full military test procedures; and **X TYPE**, using the same materials as V type switches, but intended as replacements for previous models or as original components for non-military devices where requirements are similarly exacting.

**LEVER SERIES (L Types)**—Made as VL-7000 or VL-5000 Series, 1 to 4 decks. Illustrated on preceding page. **KNOBS**—Supplied with individually boxed switches on V and X types; not supplied on SR05 because separate military specification applies.

**DIFFERENCES BETWEEN SR05 MILITARY, V, and X**—Switches other than X types use extra rugged index mechanisms and rotor construction.

ITEM	X-7000 X-5000	V-7000 V-5000	MIL-S-3786A V-7000 SR05 V-5000 SR05
Terminals	Hole-type not bent	Hole-type not bent	Hole-type; may be bent at 75° ±15°
Shaft	1/8" dia.	1/4" dia.	1/4" dia. only
Bushing	1/4" .32NEF-2A, 1/4" long	3/8" .32NEF-2A, 3/8" long	3/8" .32NEF-2A, 3/8" long
Rear Bridge	Black Identification	Red Identification	Stainless steel, full number
Non-Turn Device	Normally supplied	Normally supplied	Supplied - Spec. require

**FOR ADDITIONAL MODELS AND FULL SPECIFICATIONS, ASK FOR BULLETINS SM-32C AND LAYOUT SHEETS WITH CONTACT ARRANGEMENTS. ALSO, TO AID IN VISUALIZING CIRCUIT CONFIGURATIONS, J-B-T'S NEW 3-D SWITCH RESOLVER IS AVAILABLE ON REQUEST.**

MOST FREQUENTLY ORDERED MODELS

DECKS	Circ. (Poles) per Deck	Pos. per Pole	Shorting, Non-Shorting	SHAFT DIA.	V-TYPE OR X-TYPE		SR05-TYPE		
					Model	Price	Model	Price	
ONE DECK	1	12	N-S	1/4"	V-71121N	\$4.90	V-71121N-SR05*	\$5.25	
	1	12	S	1/4"	V-71121S	4.90	V-71121S-SR05*	5.25	
	1	12	N-S	1/8"	X-71121N	4.70	—	—	
	1	12	S	1/8"	X-71121S	4.70	—	—	
DUAL DECK	2	6	N-S	1/4"	V-72061N	5.00	V-72061N-SR05*	5.35	
	4	3	N-S	1/4"	V-74031N	5.20	V-74031N-SR05*	5.50	
	ONE DUAL DECK	2	11	N-S	1/4"	V-52111N	5.25	V-52111N-SR05*	5.60
	2	11	S	1/4"	V-52111S	5.25	V-52111S-SR05*	5.60	
DUTY DECK	4	5	N-S	1/4"	V-54051N	5.35	V-54051N-SR05*	5.70	
	4	5	S	1/4"	V-54051S	5.35	V-54051S-SR05*	5.70	
	8	2	N-S	1/4"	V-58021N	5.55	V-58021N-SR05*	5.90	
	TWO DECKS	1	12	N-S	1/4"	V-71122N	6.75	V-71122N-SR05*	7.20
ONE DECK	1	12	S	1/4"	V-71122S	6.75	V-71122S-SR05*	7.20	
	1	12	N-S	1/8"	X-71122N	6.45	—	—	
	2	6	N-S	1/4"	V-72062N	6.95	V-72062N-SR05*	7.40	
	4	3	N-S	1/4"	V-74032N	7.40	V-74032N-SR05*	7.90	
TWO DUAL DECKS	2	11	N-S	1/4"	V-52112N	8.10	V-52112N-SR05*	8.65	
	2	11	N-S	1/8"	X-52112N	7.75	—	—	
THREE DECKS	1	12	N-S	1/4"	V-71123N	8.85	V-71123N-SR05*	9.45	
	2	6	N-S	1/4"	V-72063N	9.15	V-72063N-SR05*	9.70	
	4	3	N-S	1/4"	V-74033N	9.85	V-74033N-SR05*	10.45	
	FOUR DECKS	1	12	N-S	1/4"	V-71124N	11.95	V-71124N-SR05*	12.70
1		12	N-S	1/8"	X-71124N	11.40	—	—	
SIX DECKS	1	12	N-S	1/4"	V-71126N	16.05	V-71126N-SR05*	17.10	
	ONE DECK	4	3	N-S	—	VL-74031N	\$5.15	Levers not in Specs.	
DECK	2	3	N-S	—	VL-72031N	5.05	" " " "		
LEVER	8	2	N-S	—	VL-58021N	5.35	" " " "		

\* Typical MIL-S-3786A complete number is V-71121N-SR05N30C3HP, unless specifically ordered otherwise. Temperature-Life Characteristic C also will meet Characteristic A or B requirements; Vibration Grade Symbol 3 will also meet Symbol 1 or 2 requirements. Shock Type H for High Impact does not automatically cover Type M, Medium Impact, which can be supplied upon order.

SPECIFICATIONS & TEST DATA ON SR05 MILITARY STYLE

**NOTE:** Most of the values shown here are given in the Specification and do not indicate the extent to which the test results of J-B-T switches were more favorable.

**Current-carrying capacity:** 5 amps at standard ambient conditions.

**Current-breaking capacity:** 750 MA at 30 VDC; 300 MA at 120 VDC; 1 AMP at 115 VA Non-Inductive.

**Initial Contact Resistance:** .005 ohms max.

**Contact Resistance:** To MIL-STD-202B-Method 307, which requires Initial—10 milliohm After Moisture Resistance Test—15 milliohms; After Life Test—20 milliohms.

**Materials:** Terminals (double-wiping): gold-plated 90% silver alloy. Rotor Contact: 90% Silver Alloy. Shaft & Frame: Stainless steel, passivated.

**Insulation:** Wafer, glass epoxy laminate to MIL-P-18177C Type GEB, NEMA G-11; Rotor ceramic to MIL-I-10A, Grade L-623.

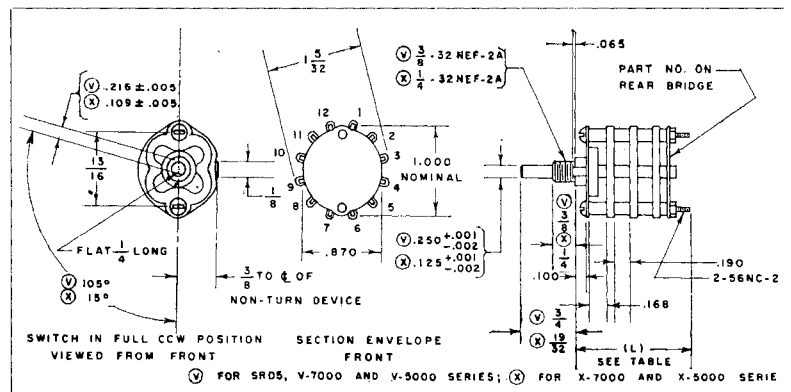
**Life Rotational;** Temperature-Life Characteristic C, 25,000 rotational cycles at 10 cps. Temperature —65°C to +125°C; 25,000 cycles at 70,000°.

**Vibration:** Grade 3 of Table III MIL-S-3786A 10 to 2000 cps. Tested in accordance with MIL-STD-202B, Method 204, Test Condition B.

**SHOCK:** Shock type H, High Impact per Table IV, MIL-S-3786A. Tested in accordance with MIL-STD 202B, Method 207. Mating contact did not open for more than 5 mil seconds; for Shock type M, Medium Impact, not more than 10 microseconds.

MAXIMUM DEPTH (L) BEHIND PANEL, INCHES

	1-Deck	2-Decks	3-Decks	4-Decks	5-Decks	6-Deck
Series V-7000-SR05 or X-7000	0.640	0.918	1.196	1.474	1.752	2.030
Series V-5000-SR05 or X-5000	0.640	0.918	1.196	1.474	—	—



PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1964



25 YEARS OF INTEGRITY IN MANUFACTURING.....

J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

**TOGGLE SWITCHES — HEAVY DUTY — SINGLE-, DOUBLE-, & 4-POLE — GOVERNMENT QUALITY**

Series MS25068, MS35058, and MS35059 to MIL-S-3950A; Series ST40A-H, ST42A-H, ST50K-T, ST52K-T to JAN-S-23, MIL-S-21195A (Ships), or DDAX Drawings

**OVER 130 MODELS FOR USES WHERE DEPENDABILITY COUNTS**

• ALL HEAVY DUTY MS and AN models use solid coin silver contacts and rocker arms, exclusive in J-B-T construction, to add overload protection and keep contact resistance under .005 ohms. These and other features more than pay for themselves in trouble-free operation whether in normal use or exceptional environments.

**MIL-S-3950A SERIES** — Single-pole MS35058 with suffix -21 and above, and double-pole MS35059 types with suffix -21 and above are recommended when maximum reliability is required. Temperature, endurance, and altitude requirements exceed earlier MS types (suffix -1 to -19), AN3021 and AN3027 switches to MIL-S-6745, and ST styles to JAN-S-23 and MIL-S-21195A (Ships). All MS switches contain a silicone rubber bushing seal to meet sand and dust and 15-foot head of water submersion tests.

**NOMINAL RATINGS:** 20 Amp. at 125 VAC, 10 Amp. at 250 VAC.

SINGLE AND DOUBLE POLE HEAVY DUTY WITH LEVER SEAL		MIL-S-3950A Model No.			
		1	2-9	10-29	30-99
<b>SPST — 2 term.</b>					
On-X-Off	MS35058-22	\$2.06	\$1.85	\$1.24	\$1.01
On-Off-X	MS35058-24	2.14	1.71	1.28	1.05
On-Off*-X	MS35058-25	2.44	1.95	1.46	1.20
X-Off-On*	MS35058-28	2.45	1.96	1.47	1.20
On-X-Off*	MS35058-29	2.35	1.88	1.41	1.15
Off-X-On*	MS35058-30	2.35	1.88	1.41	1.15

<b>SPDT — 3 term.</b>					
On-Off-On	MS35058-21	2.44	1.95	1.46	1.20
On-X-On	MS35058-23	2.44	1.95	1.46	1.20
On-X-On*	MS35058-26	2.63	2.10	1.58	1.29
On*-Off-On*	MS25058-27	2.63	2.10	1.58	1.29
On-Off-On*	MS35058-31	2.68	2.14	1.61	1.31

<b>DPST — 4 term.</b>					
On-X-Off	MS35059-22	2.68	1.85	1.70	1.33
On-Off-X	MS35059-24	2.68	1.85	1.70	1.33
On-Off*-X	MS35059-25	3.54	2.44	2.23	1.77
X-Off-On*	MS35059-28	3.54	2.29	2.09	1.66
On-X-Off*	MS35059-29	3.32	2.29	2.09	1.66
Off-X-On*	MS35059-30	3.11	2.15	1.96	1.55

<b>DPDT — 6 term.</b>					
On-Off-On	MS35059-21	3.11	2.15	1.96	1.55
On-X-On	MS35059-23	3.11	2.15	1.96	1.55
On-X-On*	MS35059-26	3.54	2.44	2.23	1.77
On*-Off-On*	MS35059-27	3.54	2.44	2.23	1.77
On-Off-On*	MS35059-31	3.54	2.44	2.23	1.77

**SINGLE AND DOUBLE POLE HEAVY DUTY**

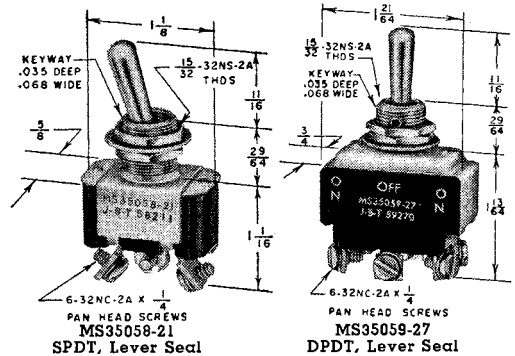
JAN-S-23 Model No.		1	2-9	10-29	30-99
<b>SPST — 2 term.</b>					
On-X-Off	ST40A	\$1.68	\$1.34	\$1.01	\$.87
On-X-Off*	ST40B	1.88	1.50	1.13	.97
Off-X-On*	ST40C	1.88	1.50	1.13	.97

<b>SPDT — 3 term.</b>					
On-X-On	ST40D	2.02	1.62	1.21	1.04
On-Off-On	ST40E	2.02	1.62	1.21	1.04
On-X-On*	ST40F	2.22	1.78	1.33	1.14
On*-Off-On*	ST40G	2.22	1.78	1.33	1.14
On-Off-On*	ST40H	2.22	1.78	1.33	1.14

<b>SPST — 2 term.</b>					
On-X-Off	ST42A	1.58	1.26	.95	.76
On-X-Off*	ST42B	1.76	1.41	1.06	.84
Off-X-On*	ST42C	1.76	1.41	1.06	.84

Ask for Bulletin TS-6D for Full Technical Data

Note: X No Position \* Momentary Position



SINGLE AND DOUBLE POLE HEAVY DUTY (Cont'd.)

<b>SPDT — 3 term.</b>					
On-X-On	ST42D	\$1.87	\$1.50	\$1.12	\$.90
On-Off-On	ST42E	1.87	1.50	1.12	.90
On-X-On*	ST42F	2.09	1.67	1.25	1.00
On*-Off-On*	ST42G	2.09	1.67	1.25	1.00
On-Off-On*	ST42H	2.09	1.67	1.25	1.00

<b>DPST — 4 term.</b>					
On-X-Off	ST50K	2.12	1.70	1.27	1.06
On-X-Off*	ST50L	2.49	1.99	1.49	1.25
Off-X-On*	ST50M	2.49	1.99	1.49	1.25

<b>DPDT — 6 term.</b>					
On-X-On	ST50N	2.49	1.99	1.49	1.25
On-Off-On	ST50P	2.49	1.99	1.49	1.25
On-X-On*	ST50R	2.83	2.26	1.70	1.42
On*-Off-On*	ST50S	2.83	2.26	1.70	1.42
On-Off-On*	ST50T	2.83	2.26	1.70	1.42

<b>DPST — 4 term.</b>					
On-X-Off	ST52K	1.93	1.54	1.16	.97
On-X-Off*	ST52L	2.16	1.73	1.30	1.08
Off-X-On*	ST52M	2.16	1.73	1.30	1.08

<b>DPDT — 6 term.</b>					
On-X-On	ST52N	2.16	1.73	1.30	1.08
On-Off-On	ST52P	2.16	1.73	1.30	1.08
On-X-On*	ST52R	2.51	2.01	1.51	1.26
On*-Off-On*	ST52S	2.51	2.01	1.51	1.26
On-Off-On*	ST52T	2.51	2.01	1.51	1.26

**OUTSTANDING 4-POLE SERIES**

• There is no mistaking the light brown color and silver printing of these distinctive J-B-T 4-pole heavy-duty switches. The superior molded body, chosen after extensive tests, features high arc resistance and low shrinkage. As a result the switches exceed the rigorous electrical endurance requirements of MS-25068.

Equally important, the internal construction uses rocker arms and contacts made of solid coin silver (not clad or brazed). The 8 models listed here have silicone rubber bushing seals and solderable 6-32 screw terminals, the same as other heavy-duty MS switches.

**4-POLE HEAVY DUTY WITH LEVER SEAL**

MIL-S-3950A	Model No.	1	2-9	10-29	30-99
<b>4PST — 8 term.</b>					
On-Off-X	MS25068-24	\$5.25	\$4.20	\$3.31	\$2.78
On-Off*-X	MS25068-25	6.20	4.96	3.91	3.29
X-Off-On*	MS25068-28	6.20	4.96	3.91	3.29

<b>4PDT — 12 term.</b>					
On-Off-On	MS25068-21	6.10	4.88	3.84	3.23
On-X-On	MS25068-23	6.20	4.96	3.72	3.10
On-X-On*	MS25068-26	6.58	5.26	4.15	3.49
On*-Off-On*	MS25068-27	6.58	5.26	4.15	3.49
On-Off-On*	MS25068-31	6.58	5.26	4.15	3.49

Note: X No Position \* Momentary Position

**AN, MS, AND ST MODEL NUMBERS WITH SIMILAR CIRCUITRY**

SCREW TERMINAL			SOLDER LUG			SCREW TERMINAL			SOLDER LUG		
MIL-S-3950A See Notes A & B	JAN-S-23 & MIL-S-21195A	MIL-S-6745 See Note A	MIL-S-3950 See Notes A & B	JAN-S-23 & MIL-S-21195A (Ships)	MIL-S-3950 See Note A	MIL-S-3950A See Notes A & B	JAN-S-23 & MIL-S-21195A	MIL-S-6745 See Note A	MIL-S-3950 See Notes A & B	JAN-S-23 & MIL-S-21195A (Ships)	MIL-S-3950 See Note A
<b>SPST</b>						<b>DPST</b>					
MS35058-22	ST40A	AN3021-2	#	ST42A	MS35058-9	MS35059-22	ST50K	AN3027-2	#	ST52K	MS35059-9
MS35058-29	ST40B	AN3021-9	#	ST42B	MS35058-10	MS35059-29§	ST50L	AN3027-4§	#	ST52L	MS35059-10§
MS35058-30	ST40C	AN3021-8	#	ST42C	MS35058-11	MS35059-30§	ST50M	AN3027-5§	#	ST52M	MS35059-11§
MS35058-24	#	AN3021-10	MS35058-1	#	MS35058-12	MS35059-24	#	AN3027-9	MS35059-1	#	MS35059-12
MS35058-28	#	AN3021-11	MS35058-2	#	MS35058-13	MS35059-28	#	AN3027-11	MS35059-2	#	MS35059-13
MS35058-25	#	AN3021-12	MS35058-3	#	MS35058-14	MS35059-25§	#	AN3027-10§	MS35059-3§	#	MS35059-14§
<b>SPDT</b>						<b>DPDT</b>					
MS35058-23	ST40D	AN3021-3	MS35058-4	ST42D	MS35058-15	MS35059-23	ST50N	AN3027-3	MS35059-4	ST52N	MS35059-15
MS35058-21	ST40E	AN3021-1	MS35058-5	ST42E	MS35058-16	MS35059-21	ST50P	AN3027-1	MS35059-5	ST52P	MS35059-16
MS35058-26	ST40F	#	MS35058-6	ST42F	MS35058-17	MS35059-26§	ST50R	AN3027-6§	MS35059-6§	ST52R	MS35059-17§
MS35058-27	ST40G	AN3021-7	MS35058-7	ST42G	MS35058-18	MS35059-27	ST50S	AN3027-7§	MS35059-7§	ST52S	MS35059-18§
MS35058-31	ST40H	AN3021-5	MS35058-8	ST42H	MS35058-19	MS35059-31§	ST50T§	AN3027-8§	MS35059-8§	ST52T§	MS35059-19§
#	#	AN3021-6†	#	#	#	#	#	#	#	#	#

# Not included in this specification.

† AN3021-6 same as AN3021-5 with jumper.

§ Same dimensions as MS35059-27.

NOTE A: MS and AN types use internal sand and dust toggle seal and other high performance features involving extra cost over ST types. MS types to MIL-S-3950A have internal toggle seal to meet 15 ft. water submersion test. MIL-S-3950 models are superseded by MIL-S-3950A models.

NOTE B: For heavy duty switches in the MS25068, MS35058, and MS35059 Series, MIL-S-3950A calls for SCREW TERMINALS ONLY. These terminals have SOLDERABLE FINISH and may be soldered after removal of screw.

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1964



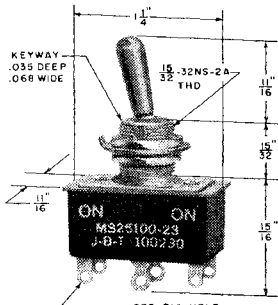


.....25 YEARS OF INTEGRITY IN MANUFACTURING

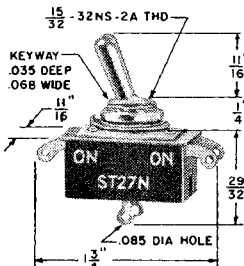
J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.

**TOGGLE SWITCHES — MEDIUM DUTY — SINGLE & DOUBLE POLE — GOVERNMENT QUALITY**

**Series MS25098 and MS25100 to MIL-S-3950A; Series ST12-27 to JAN-S-23, MIL-S-21195A(Ships), or DDAX Drawings.**



**MS25100-23 DPDT Rear Conn. Lever Seal**



**ST27N, DPDT Side and Rear Conn. 1/4" Bushing**

● **MEDIUM DUTY** describes the current-carrying capacity—nominally 6 amp. at 125 VAC, 3 amp. at 250 VAC—rather than the life characteristics. Self-wiping heavily silver-plated double-grip contacts provide exceptional reliability. Typical uses: instruments, data processing, and communications circuits.

**NEW DESIGN FOR MS25098 & MS25100**—Significant internal changes now provide fast break, wide gap, and increased insulation values, to surpass the severe endurance tests of MIL-S-3950A. For example, after 20,000 cycles of operation at 65,000' altitude with resistive load of 5 amps. at 125 VDC, contact resistance was well within the permissible limits. This development is especially important for the double-throw models MS25098-23 and MS25100-23. All MS medium-duty models contain: (a) silicone rubber bushing seal for sand, dust, and 15-foot head of water submersion tests, and (b) case-to-terminal sealing.

**SIZE AND TERMINALS**—Whether MS series to latest MIL-S-3950A, or ST series to prior Specifications JAN-S-23, MIL-S-21195A(Ships), or DDAX drawings, all have solder terminals. Bushings are 1/8" (except as noted †).

**SINGLE AND DOUBLE POLE MEDIUM DUTY WITH LEVER SEAL**

MIL-S-3950A	Model No.	1	2-9	10-29	30-99
<b>SPST-2 term.</b>					
On-X-Off	MS25098-22	\$2.30	\$1.38	\$1.10	\$1.04
On-X-Off*	MS25098-29	2.96	1.78	1.42	1.33
Off-X-On*	MS25098-30	2.96	1.78	1.42	1.33
<b>SPDT-3 term.</b>					
On-X-On	MS25098-23	2.64	1.58	1.27	1.19
<b>DPST-4 term.</b>					
On-X-Off	MS25100-22	3.30	1.98	1.58	1.49
On-X-Off*	MS25100-29	3.84	2.30	1.84	1.73
Off-X-On*	MS25100-30	3.84	2.30	1.84	1.73
<b>DPDT-6 term.</b>					
On-X-On	MS25100-23	3.58	2.15	1.72	1.60

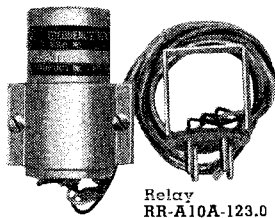
NOTES TO TABLES: X No position; \* Momentary position; † Bushing 1/4" high; ‡ Side connected terminals. Ask for Bulletin TS-6D concerning additional models and full technical data.

**SINGLE AND DOUBLE POLE MEDIUM DUTY**

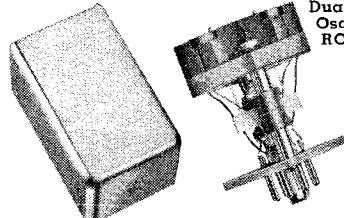
JAN-S-23	Model No.	1	2-9	10-29	30-99
<b>SPST-2 term.</b>					
On-X-Off	ST12A	\$1.52	\$ .91	\$ .73	\$ .68
On-X-Off*	ST12B	1.73	1.04	.83	.78
Off-X-On*	ST12C	1.73	1.04	.83	.78
On-X-Off	ST13A†	1.52	.91	.73	.68
On-X-Off	ST16A‡	1.52	.91	.73	.68
On-X-Off*	ST16B‡	1.73	1.04	.83	.78
Off-X-On*	ST16C‡	1.73	1.04	.83	.78
On-X-Off	ST17A†‡	1.52	.91	.73	.68
<b>SPDT-3 term.</b>					
On-X-On	ST120	1.73	1.04	.83	.71
On-X-On	ST130†	1.73	1.04	.83	.71
On-X-On	ST16D†	1.73	1.04	.83	.71
On-X-On	ST17D†‡	1.73	1.04	.83	.71
<b>DPST-4 term.</b>					
On-X-Off	ST22K	2.06	1.26	1.01	.9
On-X-Off*	ST22L	2.26	1.38	1.11	1.0
Off-X-On*	ST22M	2.26	1.38	1.11	1.0
On-X-Off	ST23K†	2.06	1.26	1.01	.9
On-X-Off	ST26K‡	2.06	1.26	1.01	.9
On-X-Off*	ST26L‡	2.26	1.38	1.11	1.0
Off-X-On*	ST26M‡	2.26	1.38	1.11	1.0
On-X-Off	ST27K†‡	2.06	1.26	1.01	.9
<b>DPDT-6 term.</b>					
On-X-On	ST22N	2.26	1.38	1.11	1.1
On-X-On	ST23N†	2.26	1.38	1.11	1.1
On-X-On	ST26N‡	2.26	1.38	1.11	1.1
On-X-On	ST27N†‡	2.26	1.38	1.11	1.1

**RELAYS & OSCILLATOR CONTROLS**

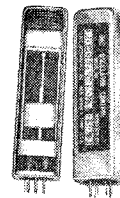
**FREQUENCY-SENSITIVE RESONANT REED RELAYS AND OSCILLATOR CONTROLS**



Relay RR-A10A-123.0

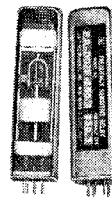


Dual-Reed Oscillator Control RO-B10B-188.0



Single-Reed Oscillator Control RO-D62E-250.3

Relay RR-002E-250.3



Applications: selective-calling mobile communication equipment, remote data transmission, and simultaneous or sequential coding and decoding. For further data ask for Bulletins 162R and D664. RR-A11 and RR-A10 types frequency sensitive electro-mechanical relays (decoders) are highly stable control devices. They intermittently make and break contacts when a signal of the same frequency as the tuned reed is received. Although the reed has a high Q, the bandwidth at which the relay responds will be proportional to the input signal level. Type RR-A10 with clamp is recommended for mobile uses. RO-B Oscillator Controls (sometimes known as tone generators or

encoders) are dual-reed units internally shock mounted and of sea construction. These units control the frequency of oscillation in vacu tube or transistor oscillator circuits. The RO-B Type oscillator control is recommended where accurate and stable AC signals are required. RR-D Types are internally shock mounted resonant reed relays. They are square, sealed, plug-in units with 7 pin miniature plug. RO-D Types are single reed, internally shock mounted oscillator control for applications where space saving is of importance. Dimensions of these units are identical to RR-D relays and are plug-in types of 7-pin miniature.

**TYPICAL REED RELAY AND OSCILLATOR CONTROL SPECIFICATIONS**

Model	Enclosure	Mounting & Connections	Frequency Range CPS	DC Coil Resistance (Standard)	Accuracy to	Change per °C —40° to +100°C	Individual Boxed
RR-A-10A-Reed Relay	1" round x 2" long	Clamp & Harness* 4 Pin Fits Cinch Socket #9804	67 to 600	200 ohms	±0.3%	±0.005 %	\$15.00
RR-A11A-Reed Relay	1" round x 2" long	Plug In 4 Pin Fits Cinch Socket # 9804	67 to 600	200 ohms	±0.3%	±0.005 %	14.50
RR-D02E-Reed Relay	2 3/32" sq. x 3 3/32" lg sealed	7 Pin Miniature Plug In	67 to 1600	600 ohms	±0.1%	±0.0025%	19.00
RO-B10B-Oscillator Control†	1 3/4" sq x 2 1/16" long sealed	Octal Plug In	67 to 600	2200 ohms/coil	±0.1%	±0.003 %	26.00
RO-D62E-Oscillator Control	2 3/32" sq. x 3 3/32" lg sealed	7 Pin Miniature Plug In	67 to 1600	600 ohms	±0.1%	±0.0025%	18.00

\* Supplied with 2-piece clamp and 4-wire cable terminated in a 4-pin base. \*\* Specify frequency with order. † Dual reed construction.

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1964

**J-B-T INSTRUMENTS, INC.**  
NEW HAVEN, CONN. 06508

Electrical Instruments, Testers,  
Switches and Other Components

For other J-B-T Products  
see Sec. 29C

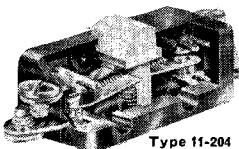




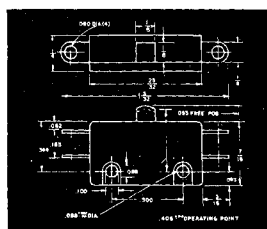
# LICON® PRECISION SNAP-ACTION SWITCHES

## LICON® "DOUBLE-BREAK" ACTION

A unique approach to the concept of double-break switching is the common denominator in a wide line of Licon miniature switches that speak for themselves . . . well over 20 million times. The Licon difference is in design and materials. Dual non-stressed blades and low-rate simple coil springs put life in the snap action. Double-break contacts increase the interrupting ability by providing eight surfaces and two gaps to boost capacity and life. Long-stroke wiping keeps the action alive, "cleans" contacts every actuation, minimizes chances of contact weld.



Type 11-204



Type 16-104

Lever, roller lever, push button and toggle actuators available.

## TYPE 16 SUB-MINIATURE SWITCHES

### CHARACTERISTICS

Electrical Rating:  
U.L. Listed: 10 amps at 125/250 V a-c 30 V d-c ratings (at S.L.):  
SPNO or SPNC Res. .15 amps  
SPNO or SPNC Ind. .10 amps  
SPDT  
(ext. common) Res. .15 amp  
SPDT  
(ext. common) Ind. .75 amps  
SPDT  
(int. common) Res. .75 amps  
SPDT  
(int. common) Ind. .5 amps  
Pretravel . . . . .050 Max.  
Overtravel . . . . .012 Min.  
Operating Force . . . . .5 Oz. ± 3 Oz.  
Release Force . . . . .2 Oz. Min.  
Movement Diff. . . . .020 ± .005



Type 16-104  
Solder End Terminals (Also available with Screw End Terminals as Type 16-204)



Type 16-404  
Solder Bottom Terminals (Also available with Taper Tabs as Type 16-504)



Type 16-304  
Solder Side Terminals



Type 16-114  
Reset Action

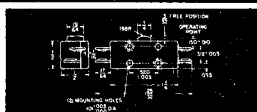
## TYPE 11 GENERAL PURPOSE SWITCHES



Type 11-104 End Solder Terminals



Type 11-204 Screw Terminals



Type 11-104

**CHARACTERISTICS**  
Contact Arrangement . . . . . SPDT  
Electrical Rating:  
U.L. Listed: 10 amps at 125/250 V a-c 30 V d-c ratings:  
SPNO or SPNC Res. . . . .15 amps  
SPNO or SPNC Ind. . . . .10 amps  
Pretravel . . . . .050 Max.  
Overtravel . . . . .015 Min.  
Movement Diff. . . . .020 ± .005  
Operating Force . . . . .8 ± 3 Oz.  
Release Force . . . . .4 Oz. Min.



Type 11-114 Reset Model



Type 11-304 Side Solder Terminals

Lever, roller lever, push button and toggle actuators available.

## TYPE 22 DOUBLE-POLE DOUBLE-THROW SWITCHES



Type 22-104 Solder End Terminals



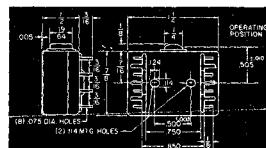
Type 22-114 Reset/Solder End Terminals

Type 22-304 Solder Side Terminals



### CHARACTERISTICS

Pretravel . . . . .060 Max.  
Overtravel . . . . .015 Min.  
Move. Diff. . . . .028 ± .007  
Oper. Force . . . . .17 ± 5 Oz.  
Release Force . . . . .4 Oz. Min.  
Prob. Mech. Life . . . . .10,000,000 Oper.  
Prob. Elect. Life . . . . .750,000 Ops.  
Ambient Temp. Range . . . . .-100°F. to 275°F.  
U.L. Listed: 10 amps at 125/250 V a-c 30 V d-c ratings:  
DPNO or DPNC Res. . . . .15 amps  
DPNO or DPNC Ind. . . . .10 amps



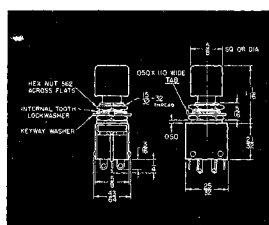
Type 22-304

Lever, roller lever, push button and toggle actuators available.

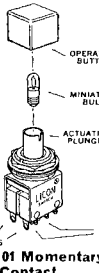
## TYPE 01 LIGHTED PUSHBUTTON SWITCHES

### CHARACTERISTICS

Operating Force  
1 Pole 14 ± 4 Oz. 3 Lb. Max.  
2 Pole 14 ± 4 Oz. 3 Lb. Max.  
Pretravel .062 Max. .062 Max.  
Overtravel .012 Min. .012 Min.  
Movement +.005  
Differential .020-.010  
Electrical Rating  
Single Circuit: 10 Amps, 250 V a-c  
10 Amps, 30 V d-c, IND.  
Two Circuit: 10 Amps, 250 V a-c  
7 Amps, 30 V d-c, IND.



Type 01 Momentary Contact



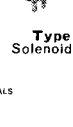
Type 01 Momentary Contact



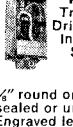
Type 01 Indicator Units



Type 01 Maintained Contact



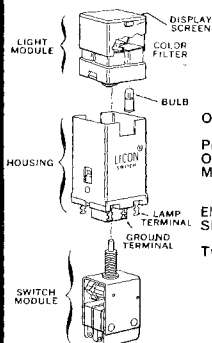
Type 01 Solenoid Held



Type 01 Transistor Driven Neon Indicator/Switch

1/8" round or square button, Sealed or unsealed available. Engraved legend optional.

## TYPE 04 LIGHTED PUSHBUTTON SWITCHES



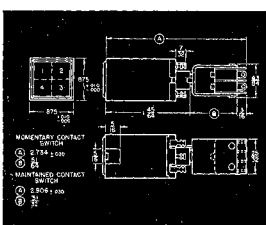
Type 04 Indicator/Switch



Insertable Legends

### CHARACTERISTICS

Maintained Contact . . . . .60 Oz. Max.  
Momentary Contact . . . . .96 Oz. Max.  
Operating Force . . . . .005 Min.  
Pretravel . . . . .012 Min.  
Overtravel . . . . .012 Min.  
Movement . . . . .020 ± .005  
Differential . . . . .-010  
Electrical Rating . . . . .Each Switch  
Single Circuit: 10 Amps, 125/250 V a-c  
10 Amps, 30 V d-c, IND.  
Two Circuit: 16 Amps, 125/250 V a-c  
7 Amps, 30 V d-c, IND.



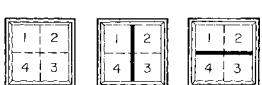
Type 04 Indicator/Switch



Type 04 Indicator



Type 04 Solenoid Held



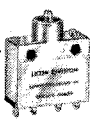
Three Display Screen Styles

## TYPE 65 ENVIRONMENT-FREE SUB-MINIATURE SWITCHES

### CHARACTERISTICS

**SINGLE CIRCUIT RATINGS**  
Amps, 125/250 V a-c  
Amps, 30 V d-c, Ind.  
Amps, 30 V d-c, Res.  
**DOUBLE CIRCUIT**  
Amps, 125/250 V a-c  
Amps, 30 V d-c, Ind.

**Type 65-201 Pin Plunger**  
Pretravel, .045 Max.  
Overtravel, .012 Min.  
Operating Force 1.5 ± .5 Lb.  
Release Force, 8 Oz. Min.  
Move. Differential, .020 ± .010



Type 65-201

### Type 65-301 Roller-Lever

Pretravel, .10 Max.  
Overtravel, .025 Min.  
Operating Force, 16 Oz. Max.  
Release Force, 5 Oz. Min.  
Move. Differential, .058 Max.



Type 65-301

### Type 65-401 Overtravel Plunger

Pretravel, .070 Max.  
Overtravel, .187 Min.  
Operating Force, 2.25 Lbs. Max.  
Release Force, 10 Oz. Min.  
Full Overtravel Force, 5 Lb. Max.



Type 65-401

## TYPE 63 ENVIRONMENT-FREE SWITCHES

### Type 63-26306 Plunger Actuated CHARACTERISTICS

Operating Force, 9 ± Lbs.  
Full Overtravel Force . . . . .30 Lbs. Max.  
Release Force, 4 Lbs. Min.  
Pretravel . . . . .040 Max.  
Diff. Travel . . . . .030 Max.  
Overtravel . . . . .250 Min.  
Current Capacity . . . . .@28 V d-c  
4 amp res., 4 amp motor  
2 amp ind.



### Licon Catalog Available On Request

If this listing does not describe the switches you require, detailed data is shown in the new Licon catalog. Copy available on request.



# LICON®

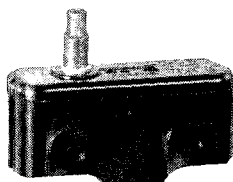
DIVISION ILLINOIS TOOL WORKS INC.  
CHICAGO, ILLINOIS

# LICON® SWITCHES not only meet standards... they set them!

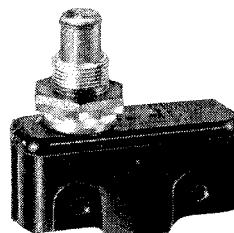
## TYPE 10 BASIC SWITCHES



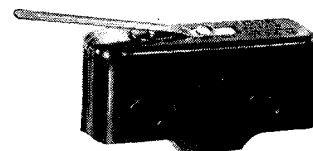
Type 10-122  
Basic Switch



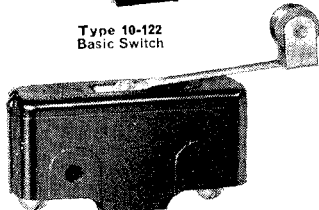
Type 10-222  
Overtravel Plunger



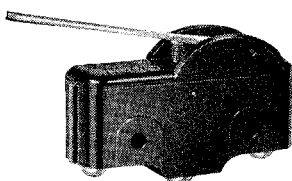
Type 10-322  
Panel Mounting



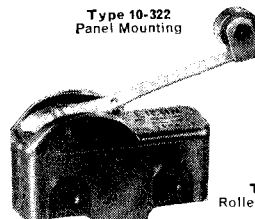
Type 10-422  
Leaf Spring Actuator



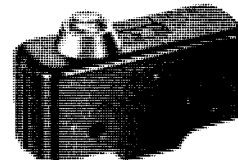
Type 10-522  
Roller Leaf Actuator



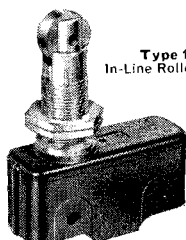
Type 10-622  
Hinge-Type Lever



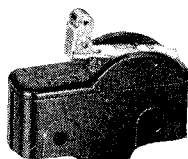
Type 10-722  
Roller Lever Actuator



Type 10-822  
Cam Actuation



Type 10-922  
In-Line Roller Actuator

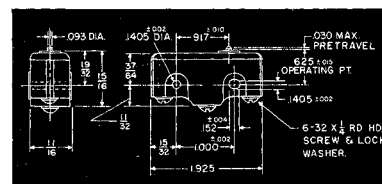


Type 10-72237  
One Way Actuator

### CHARACTERISTICS

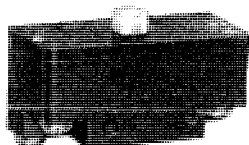
Electrical Rating 15A, 125/250 V a-c,  
460 V a-c  
15A Res 5A Ind. 5A motor, 30 V d-c  
UL APPROVED CSA APPROVED

Splash-proof sealing against moisture, dirt, dust and other harmful elements can be provided for most models. Preloaded reverse action actuator available.

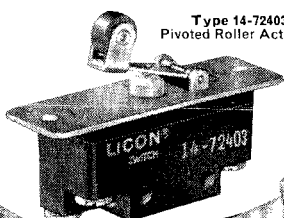


Type 10-122

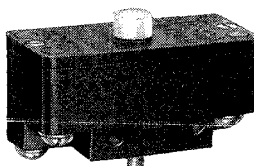
## TYPE 14 HEAVY DUTY BASIC SWITCHES



Type 14-124  
Basic Switch

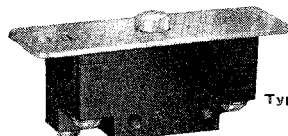


Type 14-72403  
Pivoted Roller Actuator

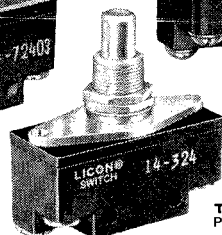


Type 14-1241  
Maintained Contact, Reset.

Movement differential available from .101" to over .040". 100 gram to 2 lb. operation force available. Terminals available with a No. 6 screw and cup washer, No. 6 screw and lockwasher or No. 8 screw with these same fastener choices. Custom terminal designs available. Auxiliary mounting plate available for panel mount.



Type 14-12403  
Auxiliary Mounting Plate



Type 14-324  
Panel Mount

### ELECTRICAL RATING

Volts	A.C.		D.C.	
	Steady	In-Rush	D.T.	S.T.
30	20	80	10	25
110	20	80	.5	2.0
220	20	80	.2	.5
440	15	50		
600	5	10		

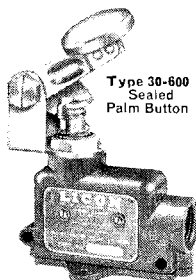
UL APPROVED



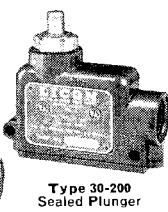
Type 14-124

## TYPE 30 INDUSTRIAL ENCLOSED SWITCHES

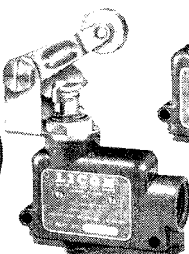
### SEALED SWITCHES for environment applications



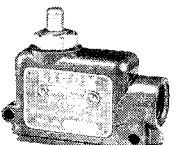
Type 30-600  
Sealed Palm Button



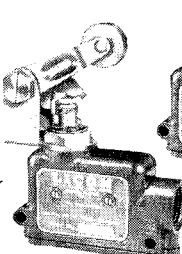
Type 30-200  
Sealed Plunger



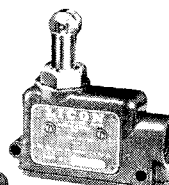
Type 30-400  
Sealed Roller Arm



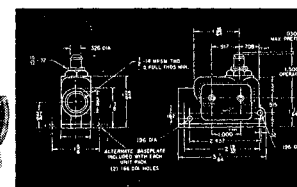
Type 30-100  
Overtravel Plunger



Type 30-500  
Roller Plunger



Type 30-300  
Roller Arm



Type 30-200 Sealed

### CHARACTERISTICS

ELECTRICAL RATING: 15 Amps, 125 V a-c, 460 V a-c; 1/2 Amp, 125 V d-c; 1/4 A 250 V d-c  
UL APPROVED CSA APPROVED

### UNSEALED SWITCHES for general purpose applications

# FOR FACTS AND FOLLOW-THROUGH... CALL YOUR LICON DISTRIBUTOR



He is equipped to serve you promptly and efficient. There is an authorized Licon Distributor in your area that can provide immediate delivery of standard Licon switches from a complete stock. His inventory saves you storage space and added expense, his nearness saves you time. For fast, efficient service review your needs with your Licon Distributor salesman.

# LINEMASTER

AMERICA'S FOOT SWITCH LEADER

LINEMASTER

## HERCULES HEAVY DUTY



FOOT SWITCH  
LINE

- Rugged
- Cast Iron Enclosure
- Safety-Guarded

Finish:  
Machine Grey Enamel  
Wt.: 7 lbs. 2 oz.  
Size: 8-7/16" x 4-5/16" x 4-1/2"

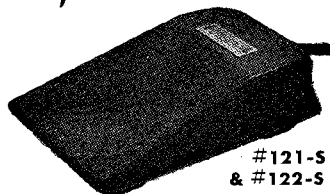
Interior steel parts are cadmium plated or otherwise treated to resist corrosion. All terminals face up for easy wiring upon unfastening cover guard. Casing has 3/4 inch threaded hole for conduit pipe. Pedal position trip point is minutely adjustable. Two and three stage switches have distinct "FEEL" between stages. Special circuit combinations can be supplied in addition to those listed below.

Class—Voltage Rating	Contact Type	Single Stage			2-Stage SP DT	3-Stage SP-DT
		SP DT	DP DT	TP DT		
Water Tight NEMA Type 4 125-480 V. AC 20 amps	Maintained	571-DW	572-DW	573-DW	574-DW	575-DW
	Momentary	531-SW	532-SW	533-SW	534-SW	535-SW

Explosion-Proof Class I Group C & D Class II Group E, F & G NEMA Type 7 125-480 V. AC-20 amps	Contact Type	Single Stage			2-Stage SP DT	3-Stage SP-DT
		SP DT	DP DT	TP DT		
	Maintained	581-DX	582-DX	583-DX	584-DX	585-DX
	Momentary	541-SX	542-SX	543-SX	544-SX	545-SX

Tip-Toe Control for Tip-Top Production!

## LINEMASTER, Jr. FOOT SWITCH



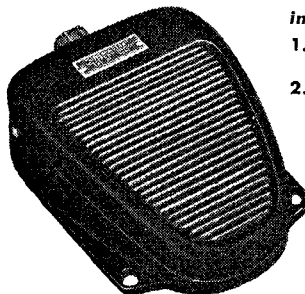
Lightweight, sensitive... ideal for women workers! Needs only a touch of the toe, while heel remains comfortably on the floor.

Aluminum housing, black crackle finish. Weight 1 lb. 5 1/2" long, 3/4" wide, 1 1/4" high. Rated at 15 amps., 115 volts A.C.; 15 amps., 250 volts A.C. Can be wired to operate as single pole, normally open; single pole, normally closed; or single pole double throw. Momentary Contact only. #122-S—Rated at 20 amps., 115-250 volts A.C.

#121-S  
& #122-S

The LINEMASTER

## CLIPPER SWITCH



in two models:

1. **Momentary contact**  
(press to start—release to stop)
2. **Maintained contact**  
(press to start—press to release)

Rugged Momentary Contact Clipper has proved invaluable to product engineers and machine operators. Maintained Contact Clipper is now available for heavy duty applications. Molded nylon actuating cams; rugged cast iron housings, sponge rubber skid pads. Weight: 2 1/2 lbs. Size: 4 1/2" x 3 1/2" x 1 1/2".

#632-S—AC Rating: 20-A, 125-250V, Momentary Contact, Single Pole, Double Throw.

#634-S—AC Rating: 10-A, 125-250V, Momentary Contact, Double Pole, Double Throw.

#632-D—AC Rating: 20-A, 125-250V, Maintained Contact, Single Pole, Double Throw.

#634-D—AC Rating: 10-A, 125-250V, Maintained Contact, Double Pole, Double Throw.

The LINEMASTER

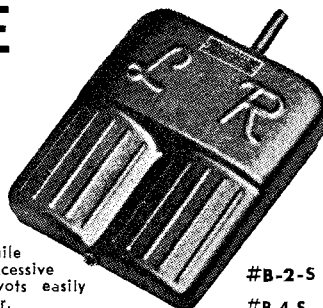
## EXECUTIVE

Two Switches in  
One • "On-Center"  
Mechanical Interlock!

This handsome switch is fool-proof and easy-to-operate! Selective circuits and guaranteed interlock eliminate possibility of accidentally tripping both circuits simultaneously, while low, wide casing saves excessive leg movement—foot pivots easily from one side to the other. Easy to wire—remove only one screw and switch is ready. Either interior (or both) may be wired as normally open or normally closed—single pole—double throw.

Heavy steel housing, baked hammertone grey finish. Wt., 14 oz., 4 3/8" long, 4" wide, 1 1/4" high. Each interior rated at 15 amps at 125-250 volts A.C.

The B-4-S has a DPDT circuit on each side and is rated at 10 amps 125 VAC, 5 amps 250 VAC.



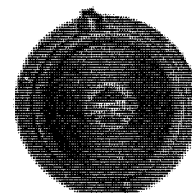
#B-2-S

#B-4-S

The LINEMASTER

## CADET

the "little giant" in  
foot switches that  
operates from any angle



#HB-2

Small, only 1 1/8" high, 3 5/8" in diameter... Lightweight, just 11 oz. including cordset... Rugged, with heavy steel housing and unbreakable plastic actuating cap, the Cadet is an extremely compact foot switch that will give years of service in hundreds of different applications. It is well designed with an attractive grey hammertone effect casing, maroon cap and non-skid sponge rubber base for perfect positioning. The slightest pressure on the actuating cap from any angle puts the switch in operation. The operator has better control of work resulting in better production. Single pole, double throw, momentary contact only. Wired normally open. Rating 5A at 110V and 250V. Furnished with heavy duty 6 ft. 18-25V black rubber cordset, series plug and molded strain relief grommet.

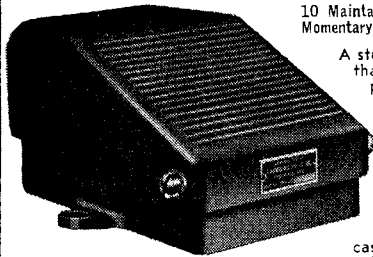
MANY OTHER STANDARD MODELS ARE AVAILABLE—WRITE FOR CATALOG

**"When awkward jobs hold you up—a LINEMASTER FOOT SWITCH is your third hand!"**

# LINEMASTER

PRECISION-BUILT • DEPENDABLE • RUGGED • ECONOMICAL • OVER 1000 APPLICATIONS

## LINEMASTER "SENIOR" 4000 SERIES



10 Maintained and  
Momentary Contact Models

A sturdy industrial-type switch that operates with light pressure from foot or knee, leaving both hands free for work. Economical and built to give years of trouble-free service — fully enclosed and hooded for protection against dirt and chips, with additional heavy spring and cast stop under cover casting, to relieve pressure and strain on spring inside switch proper.

Heavy-duty cast iron housing; black crackle enamel finish. 7" long, 4" wide, 3/4" high. Weight, 5 1/4 lbs.

MAINTAINED CONTACT MODELS: Press to start—press to stop.  
MOMENTARY CONTACT MODELS: Press to start—release to stop.

ELECTRICAL CHARACTERISTICS						MAINTAINED CONTACT	MOMENTARY CONTACT
Descrip.	AC	DC	Volts	Horse-power	Ph.	Cat. No.	Cat. No.
D-P	20	20	125	1	1		
S-T	20	20	250	1	1	4141-D	4141-S
D-P	10	10	125	1/2	1		
D-T	5	5	250	1/2	1	4142-D	4142-S
S-P	15	15	125	1/2	1		
D-T	10	10	250	1/2	1	4143-D	4143-S
D-P	15		115	1	1		
S-T	15		230	2	1	4151-D	4151-S
	5		575	2	1		
Three Pole	15		115-230	2	3		
	5		575	2	3	4351-D	4351-S

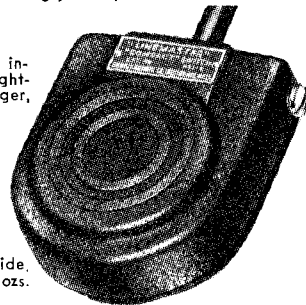
Safety guard available for all above models.

## The LINEMASTER COMPACT

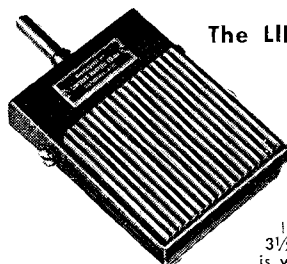
Amazingly versatile—amazingly low-priced!

Small, lightweight — and instantly responsive to the slightest pressure of foot, finger, knee or elbow! Substantially built to insure long life, with an actuating mechanism superior to any other on the market today.

Available in a wide variety of wiring plans. Strong steel housing, black crackle finish. 2 3/4" long, 2 1/2" wide, 7/8" high. Weight, 6 1/2 ozs. Momentary contact only.



Cat. No.	DESCRIPTION	RATING
491-S	Single Pole, Double Throw A.C. only	10A at 115V 10A at 230V
491-SC	SPDT, Wired N.O. with 6 ft. cord and 2 prong series plug. A.C. only.	10A at 125V 1/2HP at 115V
491-S Twin	Two 491-S switches mounted on a twin base	10A at 115V 1/2HP at 115V
492-S	Single Pole, Double Throw A.C. only	20A at 115V 20A at 230V
493-S	Single Pole, Single Throw A.C. only, double break	10A at 115V 5A at 230V
494-S	2 interiors so arranged as to simulate D-P-D-T	10A at 115V 5A at 230V
496-S	Foto with cord & light, Single Pole, Double Throw A.C.	20A at 115V 20A at 230V



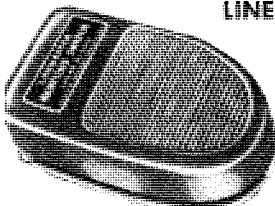
## The LINEMASTER TREADLITE

Trim, small, lightweight, instantaneous!

**MODEL T-51-S** — Accurate control in a modern, minute, treadle switch! Single pole, double throw, momentary contact interior, that can be wired open or closed. Rubber base pad and rubber-ribbed treadle, formed steel casing with black crackle finish. Interior rated at 7 amps., 110 volts and 250 volts A.C. Weight 7 ozs.; 3 1/2" long, 2 5/8" wide, 1" high (model T-51-S is wired with 6' cord and series plugs.)

**MODEL T-51-D** — Rocker type maintained contact action.

**MODEL T-52-S** — ONE treadle activates TWO switching operations! A partial downward stroke opens or closes one circuit; added pressure actuates the second circuit. Both interiors, as well as exterior, meet specifications for single-switching Model T-51-S.



## LINEMASTER "NAUTILUS" FOOT SWITCH

waterproof • dustproof  
oilproof • rustproof

A truly great development by Linemaster. The Nautilus is waterproof, dustproof, oilproof, rustproof. Rugged Aluminum casting for long life. Piston type actuator sealed with "O" ring. Electrical interior "well" sealed with "O" ring.

Size: 8" x 4" x 2 1/4" Wt.: 2 lbs., 8 1/2 ozs.

Cat. No. WP541-S 20 Amp. 125-250 VAC SPDT momentary

Cat. No. WP541-D 12 Amp. 125 VAC SPDT maintained

## The LINEMASTER LEKTRO-LOK SWITCH

Small, sensitive,  
automatically safe

Particularly ideal  
for transmission  
equipment!

Mechanical interlock allows only one circuit to function at a time—and you can depend on it! LEKTRO-LOK operates on the teeter-totter system, with selective circuits. Pressure on one side actuates one circuit, release of pressure automatically returns switch to normal "off" position. Pressure on the other side is required before second switch is actuated, independent of first. Yet LEKTRO-LOK requires only a single cord—eliminates costly harness assemblies! Rugged stamped metal housing, black crackle finish. Weight, 10 ozs. 5" long, 2 3/4" wide, 1 1/4" high. Single pole, double throw. Rating (A.C. only) 15 amps at 125 volts, 15 amps at 250 volts.

The L-4-S has a DPDT circuit on each side and is rated at 10 amps 125 VAC, 5 amps 250 VAC.



#L-2-S

#L-4-S

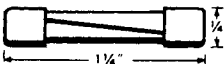
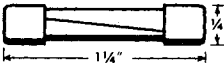
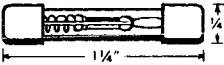
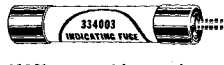
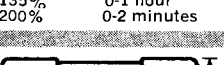
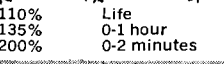


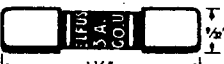
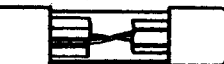
# LINEMASTER SWITCH CORPORATION

WOODSTOCK, CONNECTICUT

LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.

LITTELFUSE

Percentage of rating	Blow Time	Description	Amperes	Optional Resale Price Per Box of 5 Less than Std. Pkg.	Per 100 Fuses Std. Pkg. of 100 Fuses or More
		<b>3AG Fuses (42 volts or less) 311(000) Series</b> Quick to medium blowing fuses. Designed with straight type element positioned to center of fuse.	4 amp. 5, 6, 7½, 10, 15 amp. (Note: For 3AG 20 amp. now obsolete, use SFE 20A) 25, 30 amp.	.24/5 .17/5	3.90/c 2.80/c
110% 135% 200%	Life 0-1 hour 0-2 minutes			.20/5	3.30/c
		<b>3AG Fuses (250 volts or less) 312(000)</b> Quick acting fuses for low time lag applications. 312(000) Series approved by Underwriters' Laboratories.	1/100 amp. 1/32 amp. 1/6, 1/10, 3/6, 1/8, 15/100, .175, 2/10 amp. 1/4, 3/10, 3/8, 1/2, 5/10, 3/4 amp. 1, 1¼, 1½, 1¾, 2, 2½ amp. 3 amp. 4, 5, 6 amp. 8 amp. at 125 volts	1.65/5 1.44/5 .66/5 .42/5 .27/5 .24/5 .34/5 .51/5	27.50/c 24.00/c 11.00/c 7.00/c 4.40/c 3.90/c 5.65/c 8.50/c
110% 135% 200%	Life 0-1 hour 0-2 minutes			1.14/5 .84/5 .66/5 .51/5 .54/5 .69/5	19.00/c 14.00/c 11.00/c 8.50/c 8.50/c 11.50/c
		<b>318(000) Series</b> Available under this series with 1½" No. 20 tinned copper wire leads in comparable amperages as shown. Series approved by Underwriters' Laboratories through 3 amps.	1/100, 1/6 amp. 1/8, 15/100, 2/10, 3/8 amp. 1/4, 3/8, 1/2, 3/4 amp. 1, 1½, 2, 2½, 3 amp. 4, 5, 6 amp. 8 amp.	1.23/5	20.50/c
110% 135% 200%	Life 0-1 hour 60 sec. max. 5 sec. min.	<b>3AG Slo-Blo Fuses (125 volts or less) 313(000)</b> Slow blow fuses with high time lag to withstand heavy current surges. Blows quickly on shorts. 313(000) series approved by Underwriters' Laboratories through 5 amperes.	1/100, 1/32 amp. 1/6, 1/10, 1/8, 15/100, .175, 3/6, 3/10, 1/4, 3/10, 3/8, 1/2, 5/10, 3/4, 1 amp. 1 amp. 1½, 1¾, 1½, 1¾, 2 amp. 2½, 2¾, 3, 3½, 4, 5 amp. 6¼, 7, 8, 10, 15, 20, 25, 30 amps. at 32 volts	.90/5 .84/5 .66/5 .66/5	15.00/c 14.00/c 11.00/c
		<b>315(000) Series</b> Available under this series with 1½" No. 20 tinned copper wire leads in comparable amperages as shown. Series approved by Underwriters' Laboratories through 3.2 amps.	1/100, 1/32 amp. 1/6, 1/10, 1/8, 15/100, 3/6, 2/10, 1/4, 3/10, 3/8, 1/2, 5/10, 3/4, 1 amp. 1½, 1¾, 1½, 1¾, 2 amp. 2½, 2¾, 3, 3½, 4, 5 amp.	1.50/5 1.11/5 1.05/5 .90/5	25.00/c 18.50/c 17.50/c 15.00/c
		<b>3AG Indicating Fuses (125 volts or less) 334(000) Series</b> Medium acting fuses. Pin "pops out" when fuse is blown providing visual indication or the pin can strike a bus bar actuating an audible alarm circuit or a light-alarm circuit.	¾ amp. 1, 1½, 2, 3, 4, 5 amp. 6, 8, 10, 12, 15, 20 amp.	2.00/5 1.50/5 2.10/5	33.00/c 25.00/c 35.00/c
110% 135% 200%	4 hour min. 1 hour max. Length 1¼", Dia. ¼"			.60/5 .57/5 .54/5 .57/5 .66/5	10.00/c 9.50/c 9.00/c 9.50/c 11.00/c
		<b>3AB Fuses (250 volts or less) (steatite) 314(000) Series</b> Medium time lag steatite enclosed arc quenching powder filled fuses. Approved by Underwriters' Laboratories through 15 amperes.	1/8, 1/4, 3/8, 1/2, 3/4 amp. 1, 2, 3 amp. 5, 6, 7, 8, 10 amp. 12, 15, 20, 25 amp. 30 amp.	.39/5 .42/5	6.50/c 7.00/c
110% 135% 200%	Life 0-1 hour 0-2 minutes	<b>4AG Aircraft Fuses (32 volts or less) (anti-vibration) 411(000) Series</b> Medium to slow fuses especially developed for aircraft use. Designed to withstand vibration, shock, fatigue and repeated off and on circuit operating conditions encountered in aircraft operation.	10, 15, 20, 25, 30 amp. 35, 40 amp.		
		<b>4AG Aircraft Fuses (250 volts or less) (anti-vibration) 412(000) Series</b> Quick acting fuses—for low time lag applications. Developed for aircraft use. Designed to withstand shock and fatigue and afford maximum protection.	1/6 amp. 1/8, 15/100 amp. 1/4, 1/2 amp. 1, 1½, 2, 2½, 3 amp. 5, 8 amp.	1.38/5 .96/5 .48/5 .39/5	23.00/c 16.00/c 8.00/c 6.50/c
110% 135% 200%	Life 0-1 hour 0-2 minutes				
		<b>4AG Slo-Blo Fuses (250 volts or less) 413(000) Series</b> High time lag fuses for extra protection against sustained overloads. Designed to meet aircraft vibration test requirements. Spring-and-link element construction takes up thermal expansion and contraction and eliminates cyclic fatigue, crystallization and resulting fracture of link.	1/6, 1/10, 3/8, 15/100, 2/10, 1/4, 3/10, 4/10, 1/2, 5/10, 3/4, 5/10, 1, 1¼, 1½, 1¾, 2 2½, 3, 3½ 4, 5, 6¼, 8, 10, 15, 20, 25, 30 at 32 volts	1.17/5 .90/5	19.50/c 15.00/c
110% 135% 200%	Life 0-1 hour 60 sec. max. 5 sec. min.				
		<b>4AB Fuses (250 volts or less) (steatite) 414(000) Series</b> Medium lag, steatite-enclosed, shatterproof fuses. Spring and link construction under 5 amperes. Mechanical depolarization, non-crystallizing features incorporated into ratings over 5 amperes.	1, 2, 3 amp. 5, 6, 8, 10, 15, 20 at 125 volts 25, 30 at 32 volts 35, 40 at 32 volts	.87/5 .81/5 .81/5 .87/5	14.50/c 13.50/c 13.50/c 14.50/c
110% 135% 200%	Life 0-1 hour 0-2 minutes				
		<b>5AG Aircraft Fuses (32 volts or less) 511(000) Series</b> Medium to slow fuses for general aircraft applications. Design incorporates anti-vibration type element, twisted to 90° angle and mechanically depolarized construction.	10, 15, 20, 25, 30 amp. 35, 40, 50, 60 amp.	.51/5 .54/5	8.50/c 9.00/c
110% 135% 200%	Life 0-1 hour 0-2 minutes				

# LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.

# LITTELFUSE

Percentage of rating	Blow Time	Description	Amperes	Optional Resale Price	
				Per Box of 5 Less than Std. Pkg.	Per 100 Fuses Std. Pkg. of 100 Fuses or More
110% 135% 200%	4 hour min. 1 hour max. 10 sec. max. Length 1½", Dia. 1½"	<b>5AG Quick Acting Fuses (250 volts or less) 512(000) Series</b> Low time lag fuses where a larger and more rugged construction is desirable. Built with diagonally aligned fuse elements which assure accurate blowing even when the fuse element is expanded by heat.	1, 2, 3, 4 amp. 5, 8 amp.	.54/5 .51/5	9.00/c 8.50/c
110% 135% 200%	Life 0-1 hour 60 sec. max. 5 sec. min.	<b>5AG Slo-Blo Fuses (250 volts or less) 513(000) Series</b> High time lag fuses. Designed to withstand heavy current surges while affording maximum protection against shorts and damaging overloads.	½, 1, 2 amp. 3 amp 5, 10, 15, 20 amp. at 32 volts 25, 30 amp. at 32 volts	1.50/5 1.17/5 1.17/5 1.32/5	25.00/c 19.50/c 19.50/c 22.00/c
110% 135% 200%	Life 0-1 hour 0-2 minutes	<b>5AB Aircraft Fuses (250 volts or less) 514(000) Series</b> Medium time lag, bakelite enclosed, shatterproof fuses. Spring-link construction under 5 amperes. Mechanical depolarization, non-crystallizing features incorporated in ratings over 5 amperes. Recommended for applications where excessive shock and vibration are encountered.	1, 2, 3, 3½ amp. 5, 6, 6¼, 7, 8, 10, 15, 20, 25, 30 amp. at 32 volts 35, 40 amp. at 32 volts	.99/5 .93/5 .99/5	16.50/c 15.60/c 16.50/c
100% 150%	Life 0-10 sec.	<b>8AG Instrument Fuses (250 volts or less) 361(000) Series</b> Designed for high speed action to insure maximum protection of delicate electrical equipment.	½ amp. ½ amp. ½ amp. ½ amp. ¼ amp. ¼, ½, ¾, 1 amp. 1, 1½, 2, 3, 4, 5 20 amp. at 32 volts	4.38/5 1.83/5 1.65/5 1.44/5 .90/5 .66/5 .42/5 .30/5	73.00/c 30.50/c 27.50/c 24.00/c 15.00/c 11.00/c 7.00/c 5.00/c
110% 135% 200%	Life 0-1 hour 0-2 minutes	<b>8AG Fuses (250 volts or less) 362(000) Series</b> Medium time lag fuses for applications where size is a factor because of space limitation or the need to differentiate physically between two fuses in close proximity. Designed to standard N.E.C. blowing specifications. Approved by Underwriters' Laboratories.	½ amp. ¼, ¾, 1, ½, ¾ amp. 1 amp. 1½, 2, 3 amp. at 125 volts 5, 6, 8, 10, 12, 15, 20 amp. at 125 volts 25, 30 amp.	.57/5 .42/5 .26/5 .26/5 .17/5 .20/5	9.50/c 7.00/c 4.40/c 4.40/c 2.80/c 3.30/c

### LIMITED CURRENT FUSES & HOLDERS

A new approach to circuit protection completely eliminating the possibility of overfusing circuits. This has been accomplished by a combination of three different fuse lengths and seven different widths of bayonet locking tabs on the fuse caps.

The Limited Current Fuse Holder is designed to accept only the size, amperage, range and type (regular or slo blo) in its amperage range. The fuse locks into the holder by means of a bayonet lock which permits easy and quick insertion and removal of fuses.

110% 135% 200%	Life 0-1 hour 0-2 minutes	<b>Limited Current LC fuses 250V type C 332(000) Series</b> Quick acting—low time lag fuses, incorporating design features which adapt easily to television and similar applications.	½ amp. ½ amp. ½, ¾ amp. ¼, ½, ¾, 1, 1½, 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20 amp. at 125 volts 25, 30 amp.	1.38/5 .90/5 .69/5 .54/5 .30/5 .39/5 .39/5 .57/5 .60/5	23.00/c 15.00/c 11.50/c 9.00/c 5.00/c 6.50/c 6.50/c 9.50/c 10.00/c
110% 135% 200%	Life 0-1 hour 60 sec. max. 5 sec. min.	<b>Limited current LC Slo Blo fuses 125V type N 333(000) Series</b> Slo Blo fuses for high time lag applications. Construction incorporates design features similar to 332(000) series.	½ amp. ½ amp. ¼, ½, ¾, 1, 1½, 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20 amp. at 125 volts 25, 30 amp.	1.29/5 .93/5 .84/5 .81/5 .81/5	21.50/c 15.45/c 14.00/c 13.50/c 13.50/c

#### Limited Current Fuse Holders 346(000) Series

Catalog Number	Type	Amperage Range	Opt. Less Than Std.	Net Price Std. Pkg. of 100	Catalog Number	Type	Amperage Range	Opt. Less Than Std.	Net Price Std. Pkg. of 100
346001	Regular	(C ½-¾)	.13 ea.	\$.11 ea.	346008	Slo-Blo	(N ½-¾)	.13 ea.	\$.11 ea.
346002	Regular	(Over C ¾-1)	.13	.11	346009	Slo-Blo	(Over N ¾-1)	.13	.11
346003	Regular	(Over C 1-1½)	.13	.11	346010	Slo-Blo	(Over N 1-1½)	.13	.11
346004	Regular	(Over C 1½-2)	.13	.11	346011	Slo-Blo	(Over N 2-2½)	.13	.11
346005	Regular	(Over C 2-2½)	.13	.11	346016	Slo-Blo	(Over N 2½-3)	.13	.11
346006	Regular	(Over C 3-4)	.13	.11	346017	Slo-Blo	(Over N 3-4)	.13	.11
346007	Regular	(Over C 4-5)	.13	.11	346018	Slo-Blo	(Over N 4-5)	.13	.11
346012	Regular	(Over C 5-7)	.13	.11	346019	Slo-Blo	(Over N 5-7)	.13	.11
346013	Regular	(Over C 7-10)	.13	.11	346020	Slo-Blo	(Over N 7-10)	.13	.11

# LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.

# LITTELFUSE

### MICROFUSE

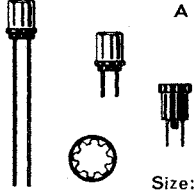
A completely different development in circuit protection for subminiature applications.

The PIGTAIL VARIETY (278000 series) is especially adaptable for soldered connections in minimum space.

The PLUG-IN VARIETY (272000 series) is designed for use with the No. 281001 sub-miniature fuse holder which is easily mounted to chassis or printed circuit board.

The SUB-MINIATURE FUSE HOLDER #281001 allows fast simple fuse replacement, will handle continuous currents up to 5 amps at 125V or less.

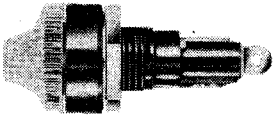
Size: 1/4" Dia. x 1 1/2". Available from 1/500 amp. through 5 amps. Maximum voltages—125V. Blowing Specifications: Series 272000—278000. 110% Life; 200% 0-10 Seconds.



LITTELFUSE

Amperes	Optional Resale Price	
	Per Box of 5 Less than Std. Pkg.	Per 100 Fuses Std. Pkg. of 100 Fuses or More
0 through .031 amp.	5.15/5	86.00/c
.050A through 5 amp.	4.29/5	71.00/c
281001 plug-in holder	.26 each	.22 each

### 3AG INDICATING FUSE POST



Catalog Number	Voltage Range	Net Resale Price	
		Less than Std. Pkg.	Std. Pkg. of 100
344006	2 1/2-7V	\$2.21 ea.	\$1.84 ea.
344012	7-16V	2.21 ea.	1.84 ea.
344024	16-32V	2.21 ea.	1.84 ea.
344125	100-125V	1.35 ea.	1.13 ea.
344250	200-250V	1.35 ea.	1.13 ea.

### PHYSICAL CHARACTERISTICS

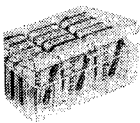
High temperature styrene knob (amber with incandescent bulbs—2 1/2 thru 32 volts—and clear with high degree vacuum neon bulbs 90-250 volts). Maximum current rating 20 amperes. Size: Overall Length 2 3/4"; front of Panel 1 3/8"; back of Panel 1 1/2"; mounting hole 5/8" Dia.; flat on one side.

Style	Catalog Number	Fuse Size	Description	Physical Size fuse	Mounting Hole Dia.	Overall Length	Back of Panel	Net Resale Price Less than Std. Pkg.	Std. Pkg. of 100
	341001	3AG	Screwdriver Slot Knob	1 1/4 x 1 1/4 Dia.	.505D	2 1/2	1 3/32	.43 ea.	.36 ea.
	371001	8AG	Screwdriver Slot Knob	1 x 1/4 Dia.	.505D	2 1/2	1 3/32	.43 ea.	.36 ea.
	342001	3AG	Finger Operated Knob	1 1/4 x 1 1/4 Dia.	.505D	2 1/2	1 3/32	.43 ea.	.36 ea.
	372001	8AG	Finger Operated Knob	1 x 1/4 Dia.	.505D	2 1/2	1 3/32	.43 ea.	.36 ea.
	342014		Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	2 3/4	1 1/2	.32 ea.	.27 ea.
	342022		Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	1 5/8	1 1/4	.37 ea.	.31 ea.
	342004		Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	1 1/4	1 1/4	.37 ea.	.31 ea.
	342012	3AG	Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	2 1/2	1 1/2	.32 ea.	.27 ea.
	442001	4AG	Fuse extractor post	1 1/4 x 3/2 Dia.	.635D	2 3/2	2 1/4	.96 ea.	.80 ea.
	570001	5AG	Finger operated knob—flange Mount	1 1/2 x 1 1/2 Dia.	.865D	2 3/2	1 1/2	1.29 ea.	1.08 ea.

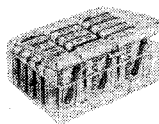
### FUSE CADDY Part 094037

### LC FUSE CADDY Part 094041

A handy fuse kit for instant accessibility—correct fuse at your fingertips every time. 18 individual compartments. Fuse caddy comes with 75 fuses, 15 different types, plus 3 spare compartments.



3AG 1/4A	3AG 5A	N 1/4 LC
3AG 1/2A	3AG 1/4A SB	N 1 LC
3AG 1A	3AG 1/2A SB	N 1 1/2 LC
3AG 2A	8AG 1/4	C 2 1/2 LC
3AG 3A	8AG 1/2	
Net Resale Price \$6.97 ea.		



A handy all inclusive LC (Limited Current) Fuse Caddy for servicemen's tube caddy. One call is all. 18 individual compartments. LC Fuse Caddy comes with 75 fuses; 15 different types plus three spare compartments.

Net Resale Price \$9.40 ea.

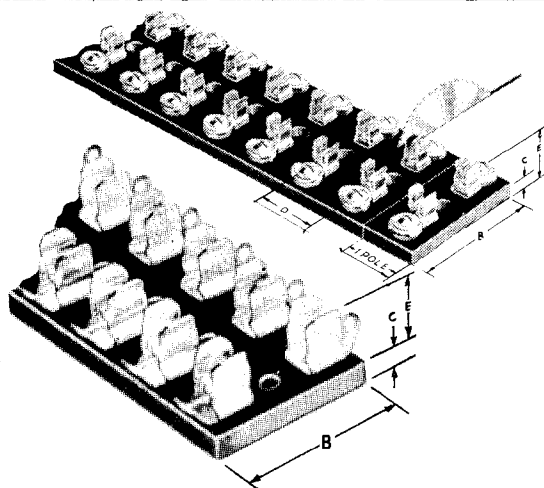


# LITTELFUSE

DES PLAINES, ILLINOIS, U.S.A.

# LITTELFUSE

## FUSE MOUNTING PANELS



**MOUNTINGS WITH SOLDER TERMINALS—TYPE "S"** Phosphor-Bronze, bright-dipped finish Lug Clips are firmly anchored to black Bakelite base—have non-turning anchors. For 8AG (387000 series) and 3AG (357000 series) fuses.

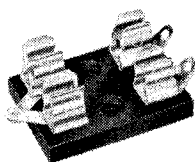
**MOUNTINGS WITH SCREW TERMINALS—TYPE "T"** Spaced to U/L requirements for equipment circuit protection. Nickel plated brass screw terminals, nickel plated fuse clips. For 3AG(356000 series), 4AG(456000 series) and 5AG(556000 series) fuses.

Open type fuse panels, stocked in 12-pole units as shown—we cut them to 2, 3, 4 or more poles as ordered, or you may cut them in your plant ( $\frac{1}{8}$ " allowance for saw cut).

Cat. No.	Fuse Type	Mtg. Type	Dim. "B"	Dim. "C"	Dim. "D"	Dim. "E"	Each less than 100	Each over 100
387001	8AG	S	$1\frac{3}{8}$	$\frac{3}{16}$	$\frac{5}{8}$	$2\frac{1}{32}$	.14	.12
357001	3AG	S	$1\frac{1}{8}$	$\frac{3}{16}$	$\frac{5}{8}$	$2\frac{1}{32}$	.14	.12
356001	3AG	T	$2\frac{3}{8}$	$\frac{7}{32}$	$2\frac{9}{32}$	$1\frac{1}{16}$	.29	.25
456001	4AG	T	$2\frac{3}{8}$	$\frac{7}{32}$	$2\frac{9}{32}$	$1\frac{1}{16}$	.37	.31
556001	5AG	T	$2\frac{3}{4}$	$\frac{9}{32}$	$3\frac{1}{32}$	$1\frac{1}{32}$	.43	.36

Note: Above are single pole mountings. Prices and delivery by quotation for multiple pole types.

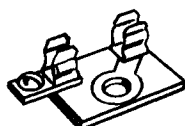
## RECTIFIER MOUNTINGS



Mountings custom designed for Sarkes Tarzian silicon rectifiers series M500 and L1250. Mountings designed to your specifications are available upon request. Let our engineers assist you.

Cat. No.		Each less than 100	Each over 100
099062	1 pole	.14 each	.12 each
099063	2 poles	.28 each	.23 each

## METER BACK MOUNTING Cat. No. 383002 (1059)—



Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base,  $1\frac{1}{2}$ " x  $1\frac{1}{8}$ ". Length over screw terminal,  $1\frac{1}{2}$ ".

Net Resale Price	
Less than Std. Pkg.	Std. Pkg. of 10
.264 ea.	.22 ea.

## STANDARD FUSE CLIPS

For the exacting performance often required in the electronics communications, radio, television, aircraft and marine equipment industries, we recommend our beryllium copper fuse clip. Beryllium copper clips have lower contact resistance and higher conductivity than ordinary fuse clips. They are silver plated, a finish well suited to fuse applications.

### FUSE CLIPS (Phosphor Bronze Bright Nickel Plated)



Ears



Earless



Lug

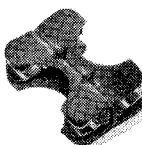
Net Resale Price Less than Std. Pkg. of 100 ea. Std. Pkg. of 100 ea.

3AG Fuse Clip	101001	.018	.015
3AG Fuse Clip (Earless)	101002	.018	.015
3AG Solder Terminal Clip			
Bright dip	101003	.026	.022
4AG Fuse Clip	103001	.0336	.028
4AG Fuse Clip (Earless)	104002	.0336	.028
5AG Fuse Clip	105001	.0432	.036
5AG Fuse Clip (Earless)	105002	.0432	.036
$\frac{3}{16}$ " Dia. Fuse Clip	107001	.066	.055
$\frac{3}{16}$ " Dia. Fuse Clip (Earless)	107002	.066	.055
$\frac{1}{8}$ " Dia. Fuse Clip	109001	.156	.130
$\frac{1}{8}$ " Dia. Fuse Clip (Earless)	109002	.156	.130

### FUSE CLIPS (Beryllium Copper Silver Plated)

3AG Fuse Clip	121001	.0432	.036
3AG Fuse Clip (Earless)	121002	.0432	.036
3AG Solder Terminal Clip			
Clip	121004	.09	.075
4AG Fuse Clip	123001	.066	.055
4AG Fuse Clip (Earless)	123002	.066	.055
5AG Fuse Clip	125001	.102	.085
5AG Fuse Clip (Earless)	125002	.102	.085
$\frac{3}{16}$ " Dia. Fuse Clip	127001	.198	.165
$\frac{3}{16}$ " Dia. Fuse Clip (Earless)	127002	.198	.165
$\frac{1}{8}$ " Dia. Fuse Clip	129001	.486	.405
$\frac{1}{8}$ " Dia. Fuse Clip (Earless)	129002	.486	.405

## SNAP-ON MOUNTINGS



Time saver for pigtail replacement. Snap on blown pigtail, then use regular fuse in other side. No soldering. This Snap-On mounting has a cut out on both sides which makes the fuse accessible for replacement on both sides. They are available in bulk, on display cards of 24, or in handy merchandising plastic boxes of ten.

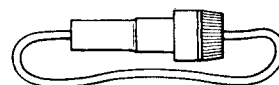
Net Resale Price

	No.	Less than Std. Pkg.	Std. Pkg.
Card of 24	No. 094024	\$4.54 ea.	\$3.78 ea
Box of 10	No. 094025	1.89 ea.	1.58 ea
Bulk	No. 350130	.92/5	14.00/4

## IN-LINE FUSE RETAINER Assortment 094020

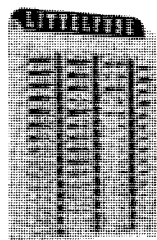


comes complete with 8-inch loop of wire and fuse inserted under spring tension. Assortment consists of 6 SFE 14 units, 3 SFE 9 and 3 SFE 20.



Net Resale Price \$4.94 ea.

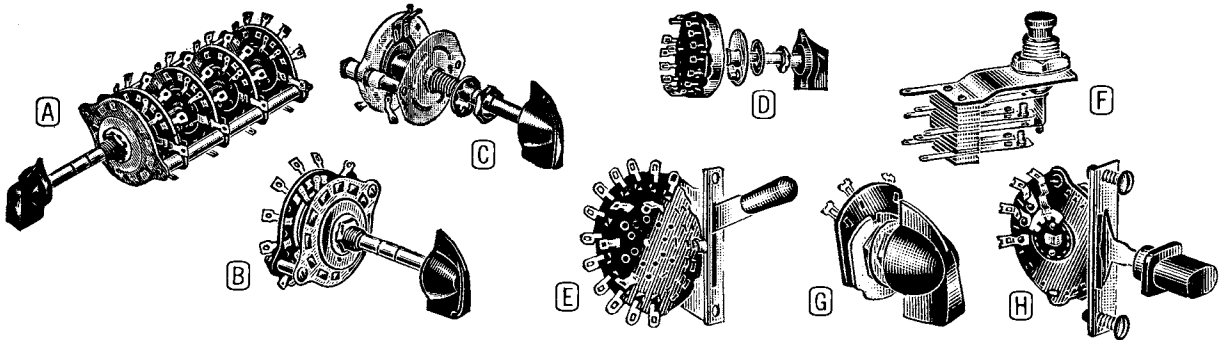
## FUSEMASTER 094047



Versatile clear plastic fuse wall rack with 60 individual compartments for 60 different fuse types. Index inventory control card, pressure sensitive blank inventory labels for easy index adjustment; and an assortment of 100 popular fuses are packaged as a package under Fusemaster Assortment 094047.

Net Resale Price \$10.72 ea.

# MALLORY SWITCHES



### PHENOLIC WAFER ROTARY SWITCHES (FIG. A)

MIL grade phenolic wafers with self-cleaning silver-plated contacts. Adjustable stops, 30° Index. Max. O.D., 1 3/4"; 3/8"-32 x 3/8" bushing; 3/4" dia. x 2" shaft grooved for cutting. Space between index and #1 wafer, 1/2"; spacing between other wafers, 1". Ratings: .6 amp at 300 v. DC, 8 amps at 60 v. DC, 1 amp at 300 v. AC, 10 amps at 6 v. AC; max. non-breaking resistive load, 10 amps; breakdown, 1000 v. DC or AC. With hex nut, lockwasher and 366-1 knob.

Mallory Number	Non-Shorting Type	No. of Circuits Per Section	No. of Circuits Per Switch	No. of Positions	No. of Sections or Gangs	Net Each
1211L	1311L	1	1	2 to 11	1	\$2-10
1215L*	1315L*	2	2	2 to 5	1	2-10
1213L*	1313L*	3	3	2 to 3	1	2-10
1212L*	1312L*	4	4	2 to 2	1	2-10
1221L	1321L	1	2	2 to 11	2	2-58
1225L*	1325L*	2	4	2 to 5	2	2-58
1223L*	1323L*	3	6	2 to 3	2	2-58
1222L*	1322L*	4	8	2 to 2	2	2-58
1231L	1331L	1	3	2 to 11	3	3-24
1235L*	1335L*	2	6	2 to 5	3	3-24
1241L	1341L	1	4	2 to 11	4	3-81
1245L*	1345L*	2	8	2 to 5	4	3-81
1251L	1351L	1	5	2 to 11	5	4-11
1256L	1356L	2	10	2 to 6	6	4-53
1261L	1361L	1	6	2 to 11	5	4-83
1266L	1366L	2	12	2 to 6	6	5-52

\*These switches are provided with an "off" position which is in addition to the number of positions listed in the fifth column.

### 24 POSITION TAP SWITCH (FIG. B)

Ratings same as 12/1300 Series. Continuous rotation, 15° Index. With nut, washer, 366-1 knob and 394 dial. **Mallory No. 13124L Switch—Net Each \$276**

### 5 POSITION HAMSWITCH® (FIG. B)

For measuring up to five circuits on single meter. Same ratings as 12/1300 Series plus conservative 1000 v. AC rms or 1500 v. DC rating, 60° Index; adjustable stop. **Mallory No. 151L Hamswitch—Net Each \$270**

### CIRCUIT OPENING SWITCH (FIG. B)

For meter switching or inserting resistors, capacitors, etc. Ratings same as 12/1300 Series. Adjustable stop; 30° Index. **Mallory No. 1400L Circuit Opening Switch—Net Each \$468**

### DECADE SWITCHES (FIG. B)

Requires only four resistors or capacitors for full decade. Ratings same as 12/1300 Series. 36° Indexing. **Mallory No. 153L Capacitor Decade Switch—Net Each \$270**  
**Mallory No. 154L Resistor Decade Switch—Net Each \$2-94**

### CERAMIC WAFER SWITCHES (FIG. C)

MIL grade ceramic wafers for RF switching. Non-shorting. Indexes: 170/180 Series, 30°; 160 Series, 90°. Bushing, shaft and wafer spacing same as on 12/1300 Series. Ratings: 5 amps, 300 v. AC or DC; 6 amps, 6 v. AC or DC (160 Series 1000 v. DC and up to 100 watts). Series 170/180 breakdown, 500 v. AC or DC. Max. non-breaking resistive load, 5 amps. With nut, washer and 366-1 knob.

Mallory No.	No. of Sections	Circuits	Spacing Between Sections	Contacts Per Circuit	Net Each
161C	1	1	1 1/8"	4	\$2-16
162C	2	2	1 1/8"	4	3-06
163C	3	3	1 1/8"	4	3-98
164C	4	4	1 1/8"	4	4-86
165C	5	5	1 1/8"	4	5-76

Mallory No.	Number of Gangs	Number of Circuits Per Gang	Number of Positions	Net Each
172C	1	1	2 to 11	\$2-37
173C*	1	2	2 to 5	2-37
174C*	1	3	2 to 3	2-37
176C	2	1	2 to 11	3-39
177C*	2	2	2 to 5	3-39
178C*	2	3	2 to 3	3-39
180C	3	1	2 to 11	4-32
181C*	3	2	2 to 5	4-32

\*Has additional "off" switch preceding numbered positions.

### SINGLE SECTION ROTARY SWITCHES (FIG. D)

Multi-purpose phenolic switches. Index: 1 1/4" dia., 30°; 1 1/8" dia., 20°. Ratings: .125 amp, 300 v. DC; 3 amps, 6 v. DC; 2 amp, 300 v. AC; 5 amps, 6 v. AC; breakdown 500 v. AC or DC; max. non-breaking resistive load, 5 amps. Bushing, 3/8"-32 x 3/8"; shaft, 3/4" x 2". With nut, lockwasher and 366-1 knob.

Shorting Type	Non-Shorting Type	No. of Circuits	No. of Positions	Dia. of Base	Adjustable Stop	Net Each
3115J	3215J	1	5	1 1/4"	No	\$1-02
31112J	32112J	1	12	1 1/4"	No	1-02
3122J	3222J	2	2	1 1/4"	No	1-02
3123J	3223J	2	3	1 1/4"	No	1-02
3126J	3226J	2	6	1 1/4"	No	1-02
3134J	3234J	3	4	1 1/4"	No	1-05
3142J	3242J	4	2	1 1/4"	No	1-05
3143J	3243J	4	3	1 1/4"	No	1-05
31117J	32117J	1	2 to 17	1 1/8"	Yes	1-56
3129J	3229J	2	2 to 9	1 1/8"	Yes	1-56
3136J	3236J	3	2 to 6	1 1/8"	Yes	1-65
3163J	3263J	6	2 to 3	1 1/8"	Yes	1-65

### ANTENNA SWITCH (FIG. D)

For switching two separate TV or FM antennas on single set. Dia., 1 1/4". With bracket, self-tapping screws, all hardware and 366-1 knob. **Mallory No. 3122TV Antenna Switch—Net Each \$131**

### LEVER ACTION SWITCHES (FIG. E)

Phenolic wafers for audio systems. Positive indexing. Mtg.: 5000 Series, elongated holes on 3/16" ctrs.; 6000 Series, rd. holes on 1/8" ctrs. Multiple mtg. spacing, 3/4". Ratings: .125 amp, 300 v. DC; 3 amps, 6 v. DC; 2 amp, 300 v. AC; 5 amps, 6 v. AC; breakdown, 500 v. AC or DC. With two #6-32 screws, nuts and knob.

Shorting Type	Non-Shorting Type	No. of Poles or Circuits	No. of Positions or Contacts	Net Each
5124	5224	2	4	\$1-38
6142	6242	4	2	1-20
6143	6243	4	3	1-20

### PUSHBUTTON SWITCHES (FIG. F)

Non-locking for test panels, etc., in eight circuits. Silver contacts on alloy springs. Breakdown, 500 v. DC. Bushing, 3/8"-32 x 3/8". Integral phenolic knob. With nut and washer.

Mallory No.	Circuit Arrangement	Net Each
1011	SPST—Make	\$0-69
1012	SPST—Break	.69
1013	SPDT	.78
1014	DPST—Make 2	.87
1015	DPST—Break 2	.87
1016	DPDT	1-05
1017	DP—Make 2, Break 1	1-05
1018	DPDT—Make before break	1-44

### GENERAL PURPOSE AND LEVER ACTION SWITCHES

Miniature phenolic switches. Series 4M, 5M for tone control, radio-phone, etc.; Series 6M for audio switching. Series 4M and 5M with nut, washer and 366-1 knob; 6M with GS5149 knob and two #6-30 screws. Suffixes: D, has AC line switch; K, knurled shaft (others 1/4" dia. rd.); S, spring return; U, spring return and positive index.

### GENERAL PURPOSE ROTARY SWITCHES (FIG. G)

Shorting Type	Non-Shorting Type	Circuits Per Section	No. of Sections	No. of Positions	Net Each
4M1114D		1	1	4	\$1-80
	4M2412S	4	1	2	1-44
5M1112		1	1	2	1-08
5M1113		1	1	3	1-08
5M1113K		1	1	3	1-08
5M1213		2	1	3	1-08
	5M2213S	2	1	2	1-08
	42L2212S	2	1	2	1-08

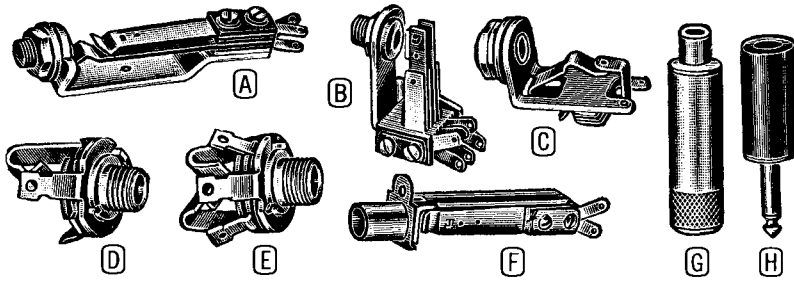
### MINIATURE PHENOLIC LEVER ACTION SWITCHES (FIG. H)

Shorting Type	Non-Shorting Type	Circuits Per Section	No. of Sections	No. of Positions	Net Each
6M1213	6M2213	2	1	3	\$1-26
6M1213S	6M2213S	2	1	3	1-26
6M1213U	6M2213U	2	1	3	1-26
6M1412S	6M2412S	4	1	2	1-44
	6M2412	4	1	2	1-26



# MALLYORY JACKS, PLUGS, HARDWARE

## JACKS, AND PLUGS



### PHONE JACKS

Four configurations meet a wide range of applications. Circuit arrangements shown in chart. Supplied with nut and washer. Bushing  $\frac{3}{8}$ "-32 x  $\frac{3}{8}$ ". Nickel-plated alloy springs, silver contacts, cadmium-plated frames.

Long Fr. (Fig. A)		Junior (Fig. B)		Infant and Midget (Fig. C)		Schem.
Mal. No.	Net Ea.	Mal. No.	Net Ea.	Mal. No.	Net Ea.	
1	45c	701	45c	A-1	33c	[Schematic diagrams for phone jacks]
2	57c	702	51c	A-2	48c	
2A	57c	702A	57c	A-2A	57c	
2B	57c	702B	57c			
3	60c	703	60c			
3B	60c	703B	60c	A-3A	66c	
		703A	60c			
		703C	60c			
		704	69c			
4A	75c	704A	69c			
4B	75c	704B	69c			
5	90c	705	75c			
6	1.05					

### COMPACT JACKS (FIGS. D AND E)

JJ-033 and JJ-034 meet all requirements of JAN-J-641.

Mallyory Number	No. Cond.	Circuit Type	Net Each
LA1	2	Open	36c
LA2	2	Closed	42c
LA2A	3	Closed	48c
SC-1A	2	Open	36c
JJ-034	2	Open	39c
SCA-2B	3	Open	42c
JJ-033	3	Open	48c

### GROUNDING JACK

For aircraft grounds and similar applications.

Mallyory No. GJ-1—Net Each... **36c**

### TELEPHONE JACKS (FIG. F)

For close strip mounting in switchboards; plain round bushing. Mounts by screw through mounting plate.

Mallyory No. XP1—Open circuit type. Net Each... **63c**

Mallyory No. XP2B—Three circuit microphone type. Net Each... **75c**

Mallyory No. XP3B—Single circuit, make before break type. Net Each... **90c**

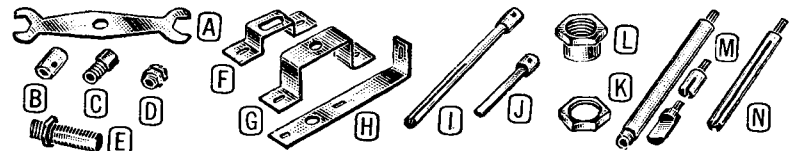
### EXTENSION JACKS (FIG. G)

Mallyory No.	Circuit	Shell	Net Each
100	2-way	Fiber	\$1.08
100N	2-way	1-piece nickel	1.08
100A	2-way	2-piece nickel, built-in clamp	1.50

### PHONE PLUGS (FIG. H)

Mal. No.	Circuit	Shell	Net Each
55		Adapts mike con. to stand. jack	\$0.30
75	2-way	Phenolic tie-cord anchor, shielded	.45
75A	2-way	Nickel, 2-piece, tie-cord anchor, built-in cble. clip	1.05
75N	2-way	Nickel, tie-cord anchor, shielded	.66
76	3-way	Phenolic	.90
76A	3-way	Nickel, 2-piece, built-in cble. clip	1.17
85	2-way	Miniature phone plug, shielded	.36

## CONTROL AND SWITCH HARDWARE



### VOLUME CONTROL NUT WRENCH

Mal. No.	Fig.	Description	Net Ea.
178	A	For $\frac{1}{2}$ " and $\frac{3}{8}$ " hex nuts	51c

### COUPLERS, BUSHINGS

EC240	B	Univ. coupling and reducer	43c
EB247	C	Univ. extension bushing	13c
UB241	D	Univ. bushing and nut	12c
EB158	E	$\frac{1}{4}$ " dble. flat. bushg.	32c
EB214	E	$\frac{1}{2}$ " flattened bushing	75c

### CONTROL AND SWITCH WASHERS

Mal. No.	Description	Pkg. 10
203	Extruded fiber; $\frac{3}{8}$ " O.D., $\frac{3}{8}$ " I.D.	18c
212	Flat phenolic; $\frac{3}{8}$ " O.D., $\frac{3}{8}$ " I.D.	10c
225	Nickel finish metal, $\frac{3}{8}$ " I.D.*	21c
226	Nickel finish metal, $\frac{1}{4}$ " I.D.*	21c
227	Cadmium plated lock washer	9c

\* $\frac{3}{8}$ " O.D.  $1\frac{1}{4}$ " O.D.  $2\frac{3}{4}$ " I.D.

### ADJUSTABLE MOUNTING BRACKETS

Mal. No.	Fig.	Description	Net Ea.
RB248	F	$1\frac{3}{4}$ " mounting centers	5c
RB249	G	$2\frac{1}{2}$ " mounting centers	5c
RB254	H	Universal	5c

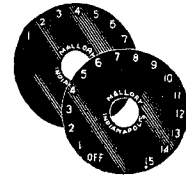
### UNIVERSAL EXTENSION SHAFTS

Mal. No.	Fig.	Description	Net Ea.
RS242	I	$4\frac{1}{2}$ " long, $\frac{1}{8}$ " dia., $\frac{1}{16}$ " flat	57c
RS243	I	$4\frac{1}{2}$ " long, $\frac{3}{16}$ " dia., $\frac{1}{16}$ " flat	57c
RS244	I	$4\frac{1}{2}$ " long, $\frac{1}{4}$ " dia., $\frac{1}{16}$ " flat	57c
RS245	J	$2\frac{1}{2}$ " long, $\frac{3}{16}$ " dia., $\frac{1}{16}$ " slot	81c

### HEX NUTS

Mal. No.	Fig.	Description	Net
232	K	$\frac{7}{16}$ " hex, $\frac{3}{8}$ "-32	1c
255	L	$\frac{1}{2}$ " panel shoulder	8c
A11260-12	L	$\frac{1}{2}$ " panel shoulder	8c
A11260-2	L	$\frac{3}{4}$ " panel shoulder	8c

## DIAL PLATES

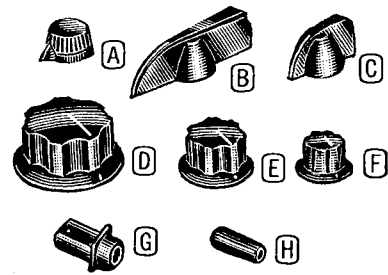


Aluminum dial plates with figures etched on solid black background.  $1\frac{3}{4}$ " dia.,  $\frac{1}{16}$ " hole, figures  $\frac{1}{4}$ " high. .020" thick.

Mallyory No. -20° Spacing	Mallyory No. -30° Spacing	Marking	Net Each
453	372	1 to 2	12c
454	373	1 to 3	12c
455	374	1 to 4	12c
456	375	1 to 5	12c
457	376	1 to 6	12c
458	377	1 to 7	12c
459	378	1 to 8	12c
460	379	1 to 9	12c
461	380	1 to 10	12c
462	381	1 to 11	12c
463	382	1 to 12	12c
464		1 to 13	12c
465		1 to 14	12c
466		1 to 15	12c
467		1 to 16	12c
468		1 to 17	12c
472		1 to 18	12c
473	383	Off 1 to 2	12c
474	384	Off 1 to 3	12c
475	385	Off 1 to 4	12c
476	386	Off 1 to 5	12c
477	387	Off 1 to 6	12c
478	388	Off 1 to 7	12c
479	388	Off 1 to 8	12c
480	389	Off 1 to 9	12c
481		Off 1 to 10	12c
482		Off 1 to 11	12c
483		Off 1 to 12	12c
484		Off 1 to 13	12c
485		Off 1 to 14	12c
486		Off 1 to 15	12c
		Off 1 to 16	12c
		Off 1 to 17	12c
		Off 1 to 18	12c
	394*	Off 1 to 2	12c
	Special 487†	1 to 5	12c
	Special 488†	1 to 4	12c
	Special		

Spacing between numerals: \*15°, †60°, †90°.

## SWITCH AND CONTROL KNOBS



Mallyory Number	Fig.	Description	Net Ea.
364	A	$1\frac{1}{8}$ " dia. black; point-er, $\frac{1}{2}$ " shaft	9c
365-1	B	$2\frac{3}{4}$ " blk bar; $\frac{1}{4}$ " sht	21c
366-1	C	$1\frac{3}{4}$ " blk bar; $\frac{1}{4}$ " sht	15c
366-R-1	C	$1\frac{3}{4}$ " red bar; $\frac{1}{4}$ " sht	15c
367-1	D	$1\frac{1}{2}$ " black; $\frac{1}{4}$ " shaft	20c
368-1	E	$1\frac{1}{2}$ " dia. blk; $\frac{1}{4}$ " shaft	20c
1910K	F	$\frac{3}{8}$ " black; $\frac{1}{4}$ " shaft	20c
GS5149A	G	$\frac{3}{8}$ " x $1\frac{1}{8}$ " for lever switches; black	10c
LK171-1	H	$\frac{5}{16}$ " dia. x $\frac{3}{8}$ " thd. for lever switch; black	10c

### SHAFT EXTENSIONS

Mallyory No. DS-36 (Fig. M)— $\frac{1}{4}$ " dia. x  $2\frac{1}{8}$ " round for U, UT, UDT and TA controls. With one knurled and slotted, and one flattened shaft end knob adapters. Net Each... **33c**  
 Mallyory No. DS-37 (Fig. N)— $\frac{1}{4}$ " dia. x  $2\frac{1}{2}$ " double slotted for use with U, UT, UDT and TA controls. Net Each... **33c**

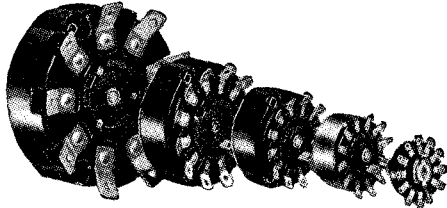


# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r. f. chokes



## POWER TAP SWITCHES NON-SHORTING TYPE



Each switch is a non-shorting, single pole, rotary, multi-position unit, but switches can be ordered assembled 2 or 3 in tandem (2 maximum, for Model 111) to form multipole assemblies. All ceramic insulation, large, solid silver-to-silver contacts, and "slow-break" action especially designed for alternating current use establish new standards of dependability and performance. Switch shafts are electrically "dead"—insulated by strong ceramic hubs. Contacts and mechanism are entirely enclosed and protected (except for the Model 111).

### MODEL 111 TAP SWITCH

Alternating Current Rating 10 Amps. 150 Volts — Diameter 1 3/4" — Shaft Diameter 1/4" — Standard Mounting: For 1/4" panel maximum, by means of 3/8"-32 threaded bushing and hex. nut.

Depth Behind Panel		Single Unit		2 in Tandem	
		1 1/8"		2 3/4"	
No. of Taps	Total Rotation	Stock Number	*Net 1-4	Stock Number	*Net 1-2
11	300°	111-11	\$4.78	111-11-T2	\$12.86
10	270°	111-10	4.66	111-10-T2	12.62
9	240°	111-9	4.54	111-9-T2	12.38
8	210°	111-8	4.42	111-8-T2	12.14
7	180°	111-7	4.30	111-7-T2	11.90
6	150°	111-6	4.18	111-6-T2	11.66
5	120°	111-5	4.06	111-5-T2	11.42
4	90°	111-4	3.94	111-4-T2	11.18
3	60°	111-3	3.82	111-3-T2	10.94
2	30°	111-2	3.70	111-2-T2	10.70
Recommended Knobs		Stock No. 5150 or 5116		Stock No. 5109 or 5110	

\*Without Knob.

### MODEL 212 TAP SWITCH

Alternating Current Rating 15 Amps. 150 Volts — Diameter 2 1/4" — Shaft Diameter 1/4" — Standard Mounting: For 1/4" panel maximum, by means of 3/8"-32 threaded bushing and hex. nut. Tandem Mounting: For 1/4" panel maximum, three No. 10-32 flat-head machine screws 3/8" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		1 3/4"		4 3/16"		6 3/16"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	212-12	\$ 9.04	212-12-T2	\$21.38	212-12-T3	\$32.12
11	300°	212-11	8.86	212-11-T2	21.02	212-11-T3	31.58
10	270°	212-10	8.68	212-10-T2	20.66	212-10-T3	31.04
9	240°	212-9	8.50	212-9-T2	20.30	212-9-T3	30.50
8	210°	212-8	8.32	212-8-T2	19.94	212-8-T3	29.96
7	180°	212-7	8.14	212-7-T2	19.58	212-7-T3	29.42
6	150°	212-6	7.96	212-6-T2	19.22	212-6-T3	28.88
5	120°	212-5	7.78	212-5-T2	18.86	212-5-T3	28.34
4	90°	212-4	7.60	212-4-T2	18.50	212-4-T3	27.80
3	60°	212-3	7.42	212-3-T2	18.14	212-3-T3	27.26
2	30°	212-2	7.24	212-2-T2	17.78	212-2-T3	26.72
Recommended Knobs		Stock No. 5150 or 5116		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

\*Without Knob.

### MODEL 312 TAP SWITCH

Alternating Current Rating 25 Amps. 300 Volts, 150 V. A.C. between taps — Diameter 3 1/8" — Shaft Diameter 1/4" — Standard Mounting: For 1/4" panel maximum, three No. 10-32 flat-head machine screws 3/8" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		2 1/4"		4 5/8"		7"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	312-12	\$11.62	312-12-T2	\$27.24	312-12-T3	\$41.46
11	300°	312-11	11.44	312-11-T2	27.28	312-11-T3	40.92
10	270°	312-10	11.26	312-10-T2	26.92	312-10-T3	40.38
9	240°	312-9	11.08	312-9-T2	26.56	312-9-T3	39.84
8	210°	312-8	10.90	312-8-T2	26.20	312-8-T3	39.30
7	180°	312-7	10.72	312-7-T2	25.84	312-7-T3	38.76
6	150°	312-6	10.54	312-6-T2	25.48	312-6-T3	38.22
5	120°	312-5	10.36	312-5-T2	25.12	312-5-T3	37.68
4	90°	312-4	10.18	312-4-T2	24.76	312-4-T3	37.14
3	60°	312-3	10.00	312-3-T2	24.40	312-3-T3	36.60
2	30°	312-2	9.82	312-2-T2	24.04	312-2-T3	36.06
Recommended Knobs		Stock No. 5109 or 5110		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

\*Without Knob.

### MODEL 412 TAP SWITCH

Alternating Current Rating 50 Amps. 300 Volts, 150 V. A.C. between taps — Diameter 4 1/8" — Shaft Diameter 1/4" — Standard Mounting: For 1/4" panel maximum three No. 10-32 flat-head machine screws 3/8" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		2 7/16"		5 1/2"		7 5/8"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	412-12	\$15.46	412-12-T2	\$35.32	412-12-T3	\$52.98
11	300°	412-11	15.20	412-11-T2	34.80	412-11-T3	52.20
10	270°	412-10	14.94	412-10-T2	34.28	412-10-T3	51.42
9	240°	412-9	14.68	412-9-T2	33.76	412-9-T3	50.64
8	210°	412-8	14.42	412-8-T2	33.24	412-8-T3	49.86
7	180°	412-7	14.16	412-7-T2	32.72	412-7-T3	49.08
6	150°	412-6	13.90	412-6-T2	32.20	412-6-T3	48.30
5	120°	412-5	13.64	412-5-T2	31.68	412-5-T3	47.52
4	90°	412-4	13.38	412-4-T2	31.16	412-4-T3	46.74
3	60°	412-3	13.12	412-3-T2	30.64	412-3-T3	45.96
2	30°	412-2	12.86	412-2-T2	30.12	412-2-T3	45.18
Recommended Knobs		Stock No. 5111 or 5112		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

\*Without Knob.

### MODEL 608 TAP SWITCH

Alternating Current Rating 100 Amps. 300 Volts — Diameter 6" — Shaft Diameter 3/8" — Standard Mounting: For 1" panel maximum, three flat-head machine screws 1/4"-20 x 1 1/4".

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		3 5/16"		6 13/16"		10 5/16"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
8	280°	608-8	\$25.54	608-8-T2	\$57.68	608-8-T3	\$85.42
7	240°	608-7	25.20	608-7-T2	57.00	608-7-T3	84.40
6	200°	608-6	24.86	608-6-T2	56.32	608-6-T3	83.38
5	160°	608-5	24.52	608-5-T2	55.64	608-5-T3	82.36
4	120°	608-4	24.18	608-4-T2	54.96	608-4-T3	81.34
3	80°	608-3	23.84	608-3-T2	54.28	608-3-T3	80.32
2	40°	608-2	23.50	608-2-T2	53.60	608-2-T3	79.30
Recommended Knobs		Stock No. 5104 or 5115 or 5105		Stock No. 5104 or 5115 or 5105		Stock No. 5115	

\*Without Knob.





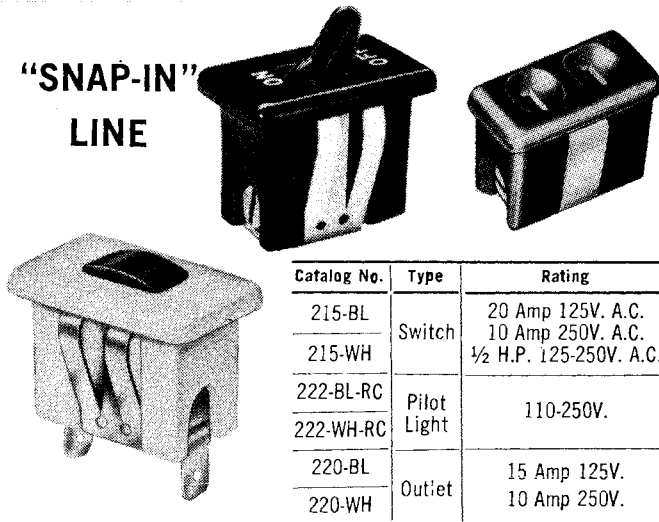
# PACIFIC SWITCH CONTROLS, INC.

# Carling SWITCHES



**Distributor  
for the  
eleven  
Western  
States.**

## "SNAP-IN" LINE



Catalog No.	Type	Rating
215-BL	Switch	20 Amp 125V. A.C. 10 Amp 250V. A.C. ½ H.P. 125-250V. A.C.
215-WH		
222-BL-RC	Pilot Light	110-250V.
222-WH-RC		
220-BL	Outlet	15 Amp 125V. 10 Amp 250V.
220-WH		



## SINGLE POLE



SCREW TERMINALS OR SOLDER LUGS.

Rated 15 Amps.\* 125V. 10 Amps. 250VAC. 3/4 HP. 125-250V. AC. except SPST is 1 HP. Rated 15/32" Dia. Threaded Bushing 15/32" Dia. Threaded Bushing 15/32" long. 11/16" Bat Toggle. U.L. Appd. Heavy Duty.

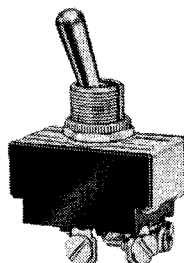
\*Applicable to low voltage D.C. requirements.

Catalog No.	Terminals	Action
2FA54-73	Screw	SP - ST
2FB54-73	Screw	SP - DT
2FC54-73	Screw	SP - DT, Center Off
2FA53-73	Lugs	SP - ST
2FB53-73	Lugs	SP - DT
2FA53-73	Lugs	SP - DT, Center Off

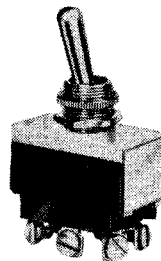
### MOMENTARY ACTION

Same Specifications as above. Except SPST. 3/4HP. Rated. SCREW TERMINALS

Catalog No.	ACTION		
	Up	Center	Down
<b>SINGLE POLE SINGLE THROW</b>			
6FA54-73	Off	None	Mom. On
6FA58-73	On	None	Mom. Off
<b>SINGLE POLE DOUBLE THROW</b>			
6FB54-73	On	None	Mom. Off
6FC54-73	Mom. On	Off	Mom. On
6FC58-73	On	Off	Mom. On



## DOUBLE POLE



SCREW TERMINALS OR SOLDER LUGS

Rated 15 Amps.\* 125V. 10 Amps. 250V. AC. 3/4HP. 125-250V. AC. Threaded Bushing 15/32" Dia. Threaded Bushing 15/32" long. 11/16" Bat Toggle. U.L. Appd. Heavy Duty.

\*Applicable to low voltage D.C. requirements.

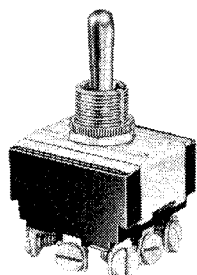
Catalog No.	Terminals	Action
2GK54-73	Screw	DP - ST
2GL54-73	Screw	DP - DT
2GM54-73	Screw	DP - DT, Center Off
2GK50-73	Lugs	DP - ST
2GL50-73	Lugs	DP - DT
2GM50-73	Lugs	DP - DT, Center Off

### MOMENTARY ACTION

Same Specifications As Above. Screw Terminals

Catalog No.	ACTION		
	Up	Center	Down
<b>DOUBLE POLE SINGLE THROW</b>			
6GK5E-73	Off	None	Mom. On
6GK5S-73	On	None	Mom. Off
<b>DOUBLE POLE DOUBLE THROW</b>			
6GL5E-73	On	None	Mom. On
6GM5S-73	Mom. On	Off	Mom. On
6GM5E-73	On	Off	Mom. On

# PACIFIC SWITCH CONTROLS, INC.



## THREE POLE SCREW TERMINALS

Rated 17 Amps.\* 125V. AC. 12 Amps. 250V. AC. 1 HP. 1-2-3 Phase 120-600V. AC. 15/32" Dia. Bushing 15/32" long. 11/16" Bat Toggle.

\*Applicable to low voltage D.C. requirements.

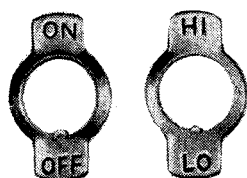
Catalog No.	Action
HK274-73	3P - ST
HL274-73	3P - DT
HM274-73	3P - DT, Center Off

## FOUR POLE — SCREW TERMINALS

The Four Pole Switch has the same physical appearance as the Three Pole Switch pictured above. Only dimensional difference is in the width when the Fourth pole is added.

Rating 15A. 125V. 10A. 250V. AC. 15/32" Dia. Bushing. 15/32" long. 11/16" Bat Toggle. Heavy Duty.

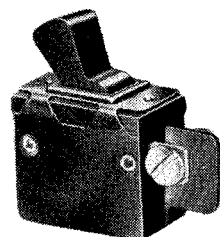
Catalog No.	Action
1K254-13	4P - ST
1L254-73	4P - DT
1M254-73	4P - DT, Center Off



## INDICATOR PLATES NICKEL PLATED

Catalog No.	Indication
YO1	ON - OFF
YO2	HI - LO

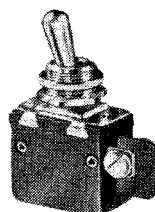
An extensive variety of indications and plate styles available for use with Carling Switches. Also a complete line of Hardware and Switch Accessories available.



## SINGLE POLE

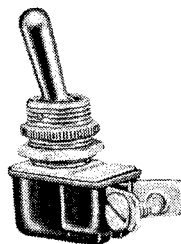
20 AMP.

20 Amp. 125V.  
10 Amp. 250V.  
AC-DC



Catalog No.	Terminals	Toggle
600-C	Screw	Nickel-Bat
600-20		Plastic

# Carling SWITCHES



## SINGLE POLE

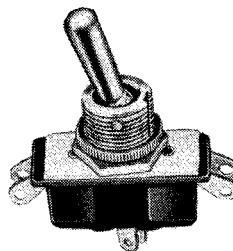
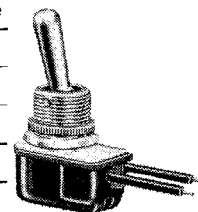
Screw Terminals 15/32". Threaded Bushing, 15/32" Dia. Ball Toggle 3/8" long. Bat Toggle 11/16" long. U.L. Appd.

Catalog No.	Rating	Toggle
110-S-73	6A.-125V.	Bat
110-S-23	6A.-125V.	Ball
160-S-73	10A.-125V.	Bat

## WIRE LEADS

Catalog No.	Rating	Toggle
111-16-73	6A.-125V.	Bat

6" Leads Stripped 1/2" 105C. TFF. Wire.

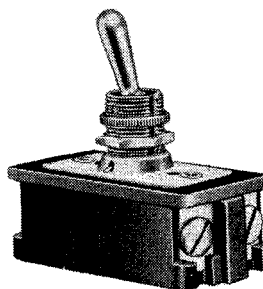


## SINGLE POLE — DOUBLE POLE

SOLDER LUGS 15/32"

Threaded Bushing 15/32" Dia. Bat Toggle 11/16" long. U.L. Appd. All have 250V. Ratings.

Catalog No.	Action	Rating
110-73	SP - ST	6A. - 125V.
112-73	SP - DT	3A. - 125V.
216-73	DP - ST	3A. - 125V.
316-73	DP - DT	3A. - 125V.
2BB62-73	SP - DT	6A. - 125V.
2BK62-73	DP - ST	6A. - 125V.
2BL62-73	DP - DT	6A. - 125V.
160-73	SP - ST	10A. - 125V.



## SINGLE POLE DOUBLE POLE

Heavy Duty AC-DC Type. 15/32" Bushing. 11/16" Bat Toggle. All Have Horsepower Ratings.

Catalog No.	RATINGS		Action
	125V.	250V.	
DA284*	16A.	8A.	SP - ST
DK284*	16A.	8A.	DP - ST
EA204**	20A.	10A.	SP - ST
EK204**	20A.	10A.	DP - ST

\*1 H.P. 125-250V. rating.

\*\*1 1/2 H.P. 125-250V. rating.

PACIFIC SWITCH CONTROLS, INC. N. HOLLYWOOD, CALIFORNIA



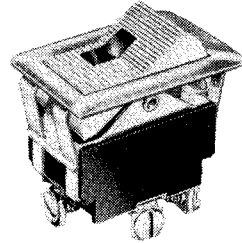
# PACIFIC SWITCH CONTROLS, INC.

# Carling SWITCHES

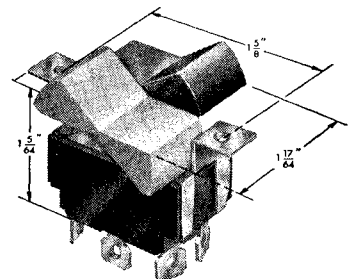
## LIGHTED TIPPETTE SWITCHES

### TIG Series (With ONE Tippette Lever)

CATALOG NUMBERS NOMINAL RATINGS						OPERATION AND CIRCUIT CHARACTERISTICS		
RATING 6 AMP—125V A.C. 3 AMP—250V A.C. ¼ H.P. 125-250V. A.C.						Position #1	Position #2 (CENTER)	Position #3
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	DOUBLE POLE SINGLE THROW		
TIGK60	TIGK61	TIGK62	TIGK63	TIGK64	TIGK65	On	None	Off
TIGK6A	TIGK6B	TIGK6C	TIGK6D	TIGK6E	TIGK6F	Off	None	Mom. On
TIGK6L	TIGK6M	TIGK6Q	TIGK6R	TIGK6S	TIGK6T	On	None	Mom. Off
						DOUBLE POLE DOUBLE THROW		
TIGL60	TIGL61	TIGL62	TIGL63	TIGL64	TIGL65	On	None	On
TIGL6A	TIGL6B	TIGL6C	TIGL6D	TIGL6E	TIGL6F	On	None	Mom. On
TIGM60	TIGM61	TIGM62	TIGM63	TIGM64	TIGM65	On	Off	On
TIGM6A	TIGM6B	TIGM6C	TIGM6D	TIGM6E	TIGM6F	On	Off	Mom. On
TIGM6L	TIGM6M	TIGM6Q	TIGM6R	TIGM6S	TIGM6T	Mom. On	Off	Mom. On
RATING 15 AMP—125V A.C. ** 10 AMP—250 V.A.C. ¼ H.P. 125-250V. A.C.						OPERATION AND CIRCUIT CHARACTERISTICS		
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	Position #1	Position #2 (CENTER)	Position #3
						DOUBLE POLE SINGLE THROW		
TIGK50	TIGK51	TIGK52	TIGK53	TIGK54	TIGK55	On	None	Off
TIGK5A	TIGK5B	TIGK5C	TIGK5D	TIGK5E	TIGK5F	Off	None	Mom. On
TIGK5L	TIGK5M	TIGK5Q	TIGK5R	TIGK5S	TIGK5T	On	None	Mom. Off
						DOUBLE POLE DOUBLE THROW		
TIGL50	TIGL51	TIGL52	TIGL53	TIGL54	TIGL55	On	None	On
TIGL5A	TIGL5B	TIGL5C	TIGL5D	TIGL5E	TIGL5F	On	None	Mom. On
TIGM50	TIGM51	TIGM52	TIGM53	TIGM54	TIGM55	On	Off	On
TIGM5A	TIGM5B	TIGM5C	TIGM5D	TIGM5E	TIGM5F	On	Off	Mom. On
TIGM5L	TIGM5M	TIGM5Q	TIGM5R	TIGM5S	TIGM5T	Mom. On	Off	Mom. On



LTL SERIES W/  
SNAP-IN BRACKET



TIG SERIES W/  
DOUBLE ACTUATORS

\*\*These switches are applicable to low voltage D.C. requirements.  
Available in 3 and 4 Pole Series. For Lighted Tippette add Prefix "L" to above numbers.

**PUSH SWITCHES**  
Maintained Contacts  
or  
Momentary Contacts

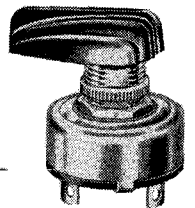
Type: PP-Push, On-Push, Off. Maintained. NO Normally Open. Momentary NC Normally Closed. Momentary. All Have 15/32" Dia. Bushing \*Screw Terminals. Others Have Solder Lugs.

Catalog No.	Rating	Type
110-SP*	6A. 125V.	P.P.
110-PM-OFF	6A. 125V.	N.O.
172*	10A. 250V.	N.O.
170	10A. 250V.	N.C.
16-3P-OFF	3A. 125V.	N.O.
16-3P-ON	3A. 125V.	N.C.

### ROTARY SWITCHES

4 Position Rotary Switch Rated  
4A. 125V. AC. 1A. 125V. DC.

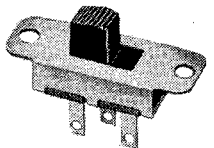
Knob variations and colors available. Up to 8 position rotary switch series available. Consult Factory.



Catalog No.	Position	Action
700-BL	1 - 2 - 3 - 4	Off-On-On-On

### SLIDE SWITCHES

1 1/8" Mounting Centers Single  
Poles Rated 4A 125V. AC.



Catalog No.	Action	Terminals
S60A-BL	SP - ST	Solder Lugs — 13/64" long
S60B-BL	SP - DT	

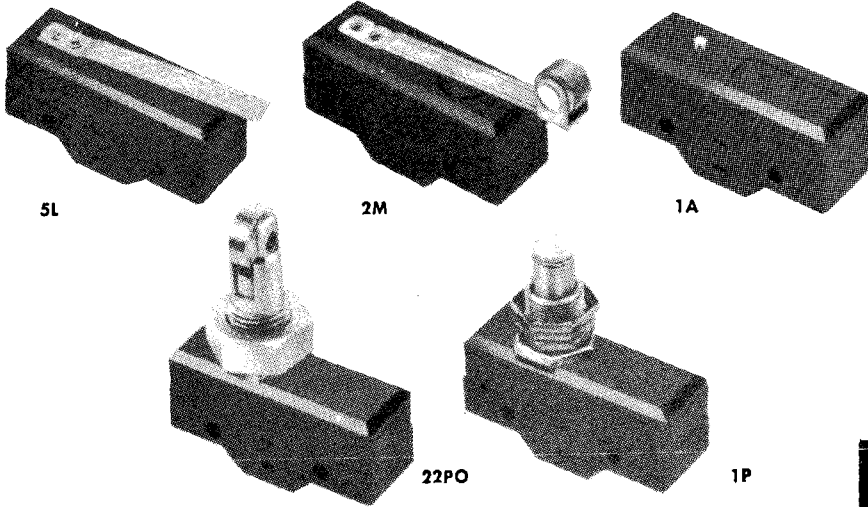
### PUSH BUTTONS

Catalog	Base	Button
90	Black	Ivory
91	Ivory	Black



# PACIFIC SWITCH CONTROLS, INC.

# Acro SWITCHES



### GENERAL PURPOSE MODEL B

**TERMINALS** — "1S" Screw — No. 6-32 x 7/32" binder head screw and cup washer is standard. No. 8-32 can be supplied.

"5S" Screw — Same binder head screw is used with lock washer #034-0030-06.

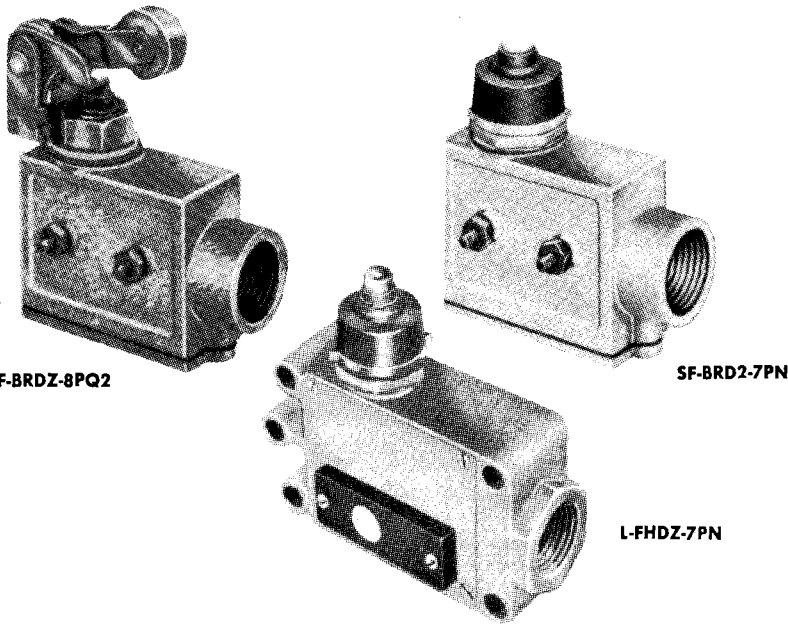
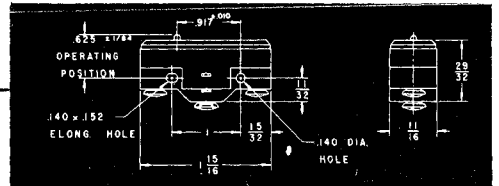
**SOLDER** — Will accept No. 14 wire. No. 4-36 screw is used to mount terminal.

**ELECTRICAL** — 15 amps, 120-240-480 volts A.C. 1/2 amp, 120 VDC, 1/4 amp, 240 VDC. Listed by U.L. and C.S.A.

### HEAVY DUTY GENERAL PURPOSE — MODEL F

**TERMINALS** — same as model B

**ELECTRICAL** — 21 amps, 120-240-480 VAC 1 Hp. 120 VAC, 2 Hp. 240 VAC. Listed by U.L. and C.S.A.



### METAL ENCLOSED — MODEL BH

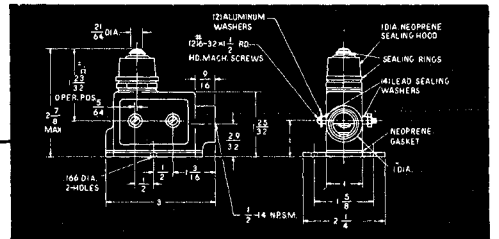
#### SIDE & FLANGE MOUNTING

Each switch is packaged so it can be used for either side or flange mounting. Flanged switch is mounted with #8 screws (not supplied). Side mounted switch has 6-32 x 1 1/2 Rd. Hd. machine screws supplied.

**ELECTRICAL** — The step base screw terminal Model B switch is U.L. listed and rated 15 amps at 120-240-480 VAC, 1/2 amp at 120 VDC and 1/4 amp at 240 VDC. Switch will handle control circuits.

#### INDICATOR LIGHT

Integral Acro-Lite is internally wired to switch and is used to indicate either open or closed position of internal switch. Light can be mounted three places on housing or remotely.



### SUB-MINIATURE MODEL Z

#### ELECTRICAL RATING

- 5 AMP 120-240 VAC
- 3 AMP sea level and 2.5 AMP 50,000 ft. — 30 VDC Inductive
- 4 AMP sea level and 4 AMP 50,000 ft. — 30 VDC Resistive

#### CONTACT GAP

- .010 gap all AC and Low DC Loads
- .020 gap High DC Load

#### MECHANICAL LIFE

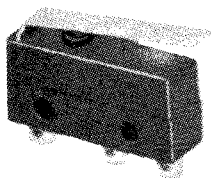
- One million cycles with .010 gap and .005 overtravel

#### TEMPERATURE

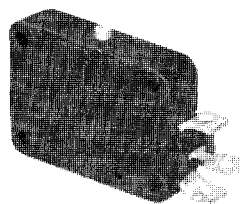
- 190°F . . . standard
- 250°F . . . high temperature

#### TERMINALS

- Post, turret, double turret, baton and tab are available.



ZLD-0036



IMDI-1A

### MINIATURE — MODEL M

**U.L. ELECTRICAL RATING**  
10 AMPS 125-250 VAC

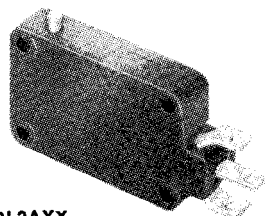
**MECHANICAL LIFE**  
Up to 10 million cycles

#### ENVIRONMENTAL

- Temperature — 90°F to 250°F
- Vibration Resistance to 10 G's
- Shock 50 G's Min.

# PACIFIC SWITCH CONTROLS, INC.

# Acro SWITCHES



ICMDI-2AXX

### MINIATURE — MODEL CM

#### ELECTRICAL RATING

3 AMP 125-250 VAC  
3 AMP 28 VDC

#### U.L. LISTING

3 AMP 125-250 VAC

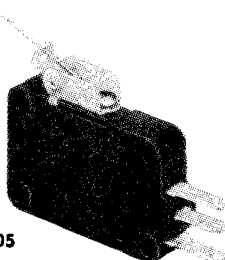
#### ENVIRONMENTAL

Temperature — 90°F to 250°F.  
Vibration Resistance up to 10 G's,  
Shock 50 G's Min.

#### LIGHT OPERATING FORCE

#### MECHANICAL LIFE

Up to 50 million cycles



TMD-0005

### MINIATURE — MODEL TM

#### U.L. ELECTRICAL RATING

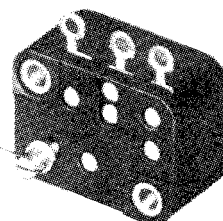
6 AMP 125-250 VAC

#### MECHANICAL LIFE

Up to 50 million

#### TERMINALS

Taper Tab and Faston



JD-0001

### MINIATURE ROTARY

#### ELECTRICAL RATING

5 amp — 120-240 VAC  
U.L. and C.S.A. listed.

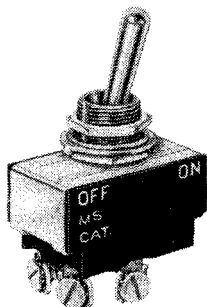
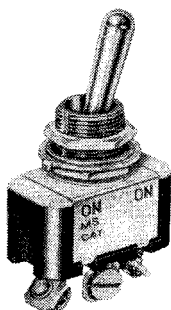
#### MECHANICAL LIFE

Tests indicate one million minimum cycles.

#### ACTUATOR LEVER INSTALLATION

1. Insert .024 inch diameter stainless steel wire thru hole in brass shaft.
2. Bend wire to fit into slot.
3. Twist end of wire around shaft.
4. Crimp ends of slot to lock wire in place.

## MILITARY SWITCHES



### HEAVY DUTY — SINGLE-, DOUBLE-, & 4-POLE — GOVERNMENT QUALITY

OVER 130 MODELS OF MIL (MS), AN, AND JAN (ST) TYPES

• ALL HEAVY DUTY MS and AN models use solid coin silver contacts and rocker arms, exclusive in J-B-T construction, to add overload protection and keep contact resistance under .005 ohms. These and other features more than pay for themselves in trouble-free operation whether in normal use or exceptional environments.

**MIL-S-3950A SERIES** — Single-pole MS35058 with suffix —21 and above, and double-pole MS35059 types with suffix —21 and above are recommended when maximum reliability is required. Temperature, endurance, and altitude requirements exceed earlier MS types (suffix —1 to —19), AN3021 and AN3027 switches to MIL-S-6745, and ST styles to JAN-S-23 and MIL-S-21195A (Ships). All MS switches contain a silicone rubber bushing seal to meet sand and dust and 15-foot head of water submersion tests.

### SINGLE AND DOUBLE POLE HEAVY DUTY WITH LEVER SEAL

#### MIL-S-3950A Model No.

MIL-S-3950A	Model No.
SPST — 2 term.	
On-X-Off	MS35058-22
On-Off-X	MS35058-24
On-Off*-X	MS35058-25
X-Off-On	MS35058-28
On-X-Off*	MS35058-29
Off-X-On*	MS35058-30

SPDT — 3 term.	
On-Off-On	MS35058-21
On-X-On	MS35058-23
On-X-On*	MS35058-26
On*-Off-On*	MS25058-27
On-Off-On*	MS35058-31

DPST — 4 term.	
On-X-Off	MS35059-22
On-Off-X	MS35059-24
On-Off*-X	MS35059-25
X-Off-On*	MS35059-28
On-X-Off*	MS35059-29
Off-X-On*	MS35059-30

DPDT — 6 term.	
On-Off-On	MS35059-21
On-X-On	MS35059-23
On-X-On*	MS35059-26
On*-Off-On*	MS35059-27
On-Off-On*	MS35059-31

### 4-POLE HEAVY DUTY WITH LEVER SEAL

#### MIL-S-3950A Model No.

4PST — 8 term.	
On-Off-X	MS25068-24
On-Off*-X	MS25068-25
X-Off-On*	MS25068-28

4PDT — 12 term.	
On-Off-On	MS25068-21
On-X-On	MS25068-23
On-X-On*	MS25068-26
On*-Off-On*	MS25068-27
On-Off-On*	MS25068-31

Pacific Switch Controls is a California Corporation specializing in distributing electric switches, relays, pilot lights, and related control devices to the electrical and electronic industry.

Being oriented toward manufacturers and distributors, Pacific Switch Controls has available adequate inventory to fully satisfy needs at factory

prices. We also have a switch circuit design and circuit engineering service. Facilities will include a model shop for building prototypes of special switches and switching circuits as needed.

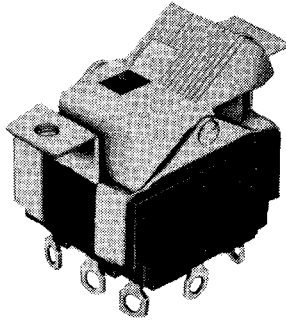
For further information, please contact Shepard Goodman, Vice Pres., at Pacific Switch Controls.

PACIFIC SWITCH CONTROLS, INC. N. HOLLYWOOD, CALIFORNIA

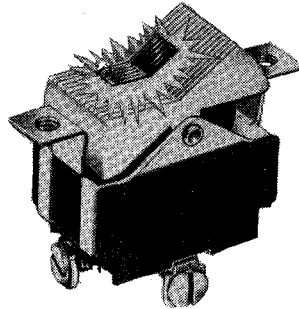
# SoLiCo

## TIPPALITE SWITCHES

PATENTED

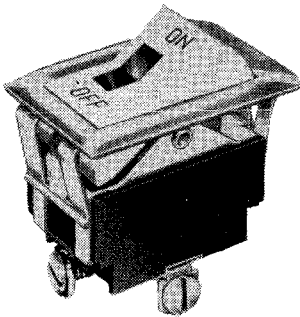


SL 2 SERIES  
WITH SPLIT LENS



SL 1 SERIES

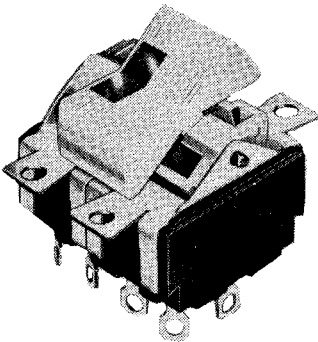
### SINGLE POLE A.C. ONLY



SL 1 SERIES WITH SNAP-IN BRACKET

CATALOG NUMBERS NOMINAL RATINGS						OPERATION AND CIRCUIT CHARACTERISTICS		
RATING 6 AMP — 125 V. A.C. 3 AMP — 250 V. A.C. ¼ H.P. 125 — 250 V. A.C.						Position #1	Position #2 (CENTER)	Position #3
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	SINGLE POLE SINGLE THROW		
SL1A6A	SL1A6B	SL1A6C	SL1A6D	SL1A6E	SL1A6F	On	None	Off
						SINGLE POLE DOUBLE THROW		
SL1B6A	SL1B6B	SL1B6C	SL1B6D	SL1B6E	SL1B6F	On	None	On
SL1C6A	SL1C6B	SL1C6C	SL1C6D	SL1C6E	SL1C6F	On	Off	On
RATING 15 AMP — 125 V. A.C. 10 AMP — 250 V. A.C. ¼ H.P. 125 — 250 V. A.C.						Position #1	Position #2 (CENTER)	Position #3
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	SINGLE POLE SINGLE THROW		
SL1A5A	SL1A5B	SL1A5C	SL1A5D	SL1A5E	SL1A5F	On	None	Off
						SINGLE POLE DOUBLE THROW		
SL1B5A	SL1B5B	SL1B5C	SL1B5D	SL1B5E	SL1B5F	On	None	On
SL1C5A	SL1C5B	SL1C5C	SL1C5D	SL1C5E	SL1C5F	On	Off	On

### DOUBLE POLE A.C. ONLY



SL 3 SERIES

CATALOG NUMBERS NOMINAL RATINGS						OPERATION AND CIRCUIT CHARACTERISTICS		
RATING 6 AMP — 125 V. A.C. 3 AMP — 250 V. A.C. ¼ H.P. 125 — 250 V. A.C.						Position #1	Position #2 (CENTER)	Position #3
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	DOUBLE POLE SINGLE THROW		
SL2A6A	SL2A6B	SL2A6C	SL2A6D	SL2A6E	SL2A6F	On	None	Off
						DOUBLE POLE DOUBLE THROW		
SL2B6A	SL2B6B	SL2B6C	SL2B6D	SL2B6E	SL2B6F	On	None	On
SL2C6A	SL2C6B	SL2C6C	SL2C6D	SL2C6E	SL2C6F	On	Off	On
RATING 15 AMP — 125 V. A.C. 10 AMP — 250 V. A.C. ¼ H.P. 125 — 250 V. A.C.						Position #1	Position #2 (CENTER)	Position #3
SOLDER LUGS	.250 SPADE TERM.	.205 SPADE TERM.	.187 SPADE TERM.	SCREW TERM.	WIRE LEADS	DOUBLE POLE SINGLE THROW		
SL2A5A	SL2A5B	SL2A5C	SL2A5D	SL2A5E	SL2A5F	On	None	Off
						DOUBLE POLE DOUBLE THROW		
SL2B5A	SL2B5B	SL2B5C	SL2B5D	SL2B5E	SL2B5F	On	None	On
SL2C5A	SL2C5B	SL2C5C	SL2C5D	SL2C5E	SL2C5F	On	Off	On

**ACTUATORS**—Suffix: —L 5/8" Long Lined (Standard)  
—C 5/8" Cross Serrated  
—S 5/8" Smooth

Standard Colors Are WHITE, —WH and BLACK, —BL. Other colors available upon request. Imprinting on Actuators may be had upon request.

**WIRE LEAD ENCLOSURE**—W-10. This snap on enclosure is available in the single pole series and is designed to protect and provide safer insulation for exposed leads.

**LAMP CHARACTERISTICS**—

Neon (Standard) — 120*-240 Volts	.02 Amps
Incandescent — 6 Volts	.02 Amps
— 12 Volts	.08 Amps
— 24-28 Volts	.04 Amps

Lenses are RED, AMBER, CLEAR and WHITE. Special variations and colors available.

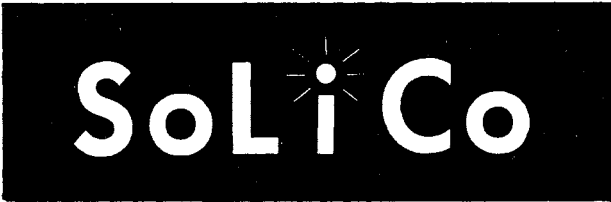
\*Available with "High Brightness" in 120 Volt only.

**ADDITIONAL CIRCUIT CHARACTERISTICS**—

Three pole series (see illustration SL3) available in same circuit styles as listed in tables above. Momentary and progressive circuits also available.

**SORENSEN LIGHTED CONTROLS, INC. WEST HARTFORD, CONNECTICUT**



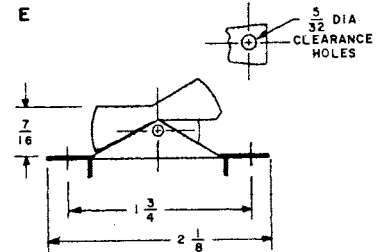
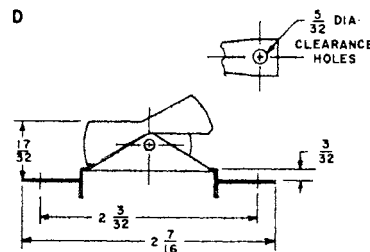
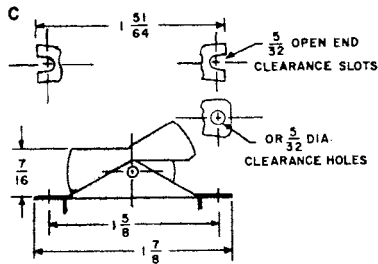
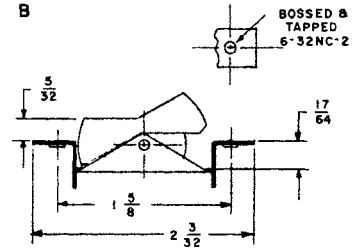
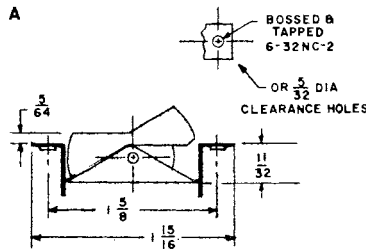


BRACKETS & PILOT LIGHTS

TIPPALITE BRACKETS

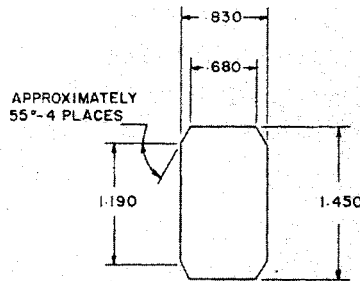
Standard bracket styles for Tippalites are shown below. Various designs and sizes for your specific application can be made to order.

FIGURE	BRACKET DIMENSIONS
A	SL1, SL2, SL3
B	SL1, SL3
C	SL1, SL2, SL3
D	SL1, SL3
E	SL1, SL3

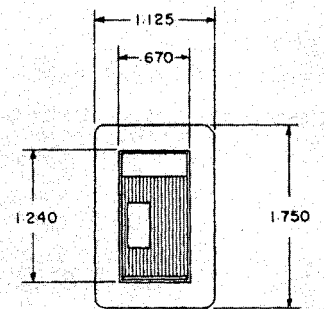


SNAP-IN BRACKET

Snap-in Bracket — Fits SL1 Switch series. Bracket designed for snapping into panel thickness of approximately .040" to .100". Narrow flanged bracket also available —consult factory.



MOUNTING HOLE

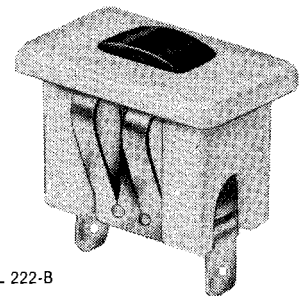


TOP VIEW OF SWITCH & BRACKET

SNAP-IN PILOT LIGHT A.C. or D.C.

CATALOG NUMBERS			ITEM	NOMINAL RATING			
SCREW TERMINALS	WIRE LEADS	TAB TERMINALS					
SL222	SL222-A	SL222-B	Pilot Light	110	250 V. A.C.	D.C.	
For COLOR of CASE			BROWN	WHITE	BLACK	GRAY	RED
Add SUFFIX NO.			—BR	—WH	—BL	—GY	—RD
For COLOR of LENS			RED NYLON	WHITE NYLON	RED CLEAR	COLORLESS	
Add Additional SUFFIX NO.			—NR	—ML	—RC	—CL	

**MOUNTING:** The only provision necessary for mounting these units is a rectangular opening (1 1/2" x 2 1/2") in a .045" to .065" thick panel or base into which the unit can be snapped.



SL 222-B

For additional pilot light and indicator light styles—consult factory.

Standard Flange (Face) on these items 7/8" WIDE.

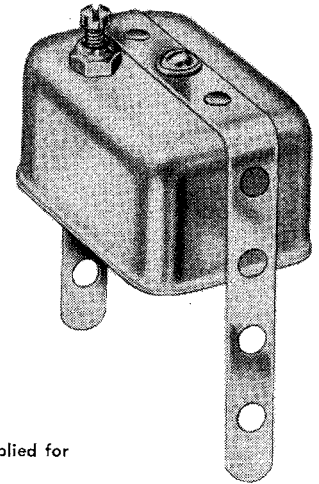
SORENSEN LIGHTED CONTROLS, INC. WEST HARTFORD, CONNECTICUT

# SoLi Co

## MOTOR STARTING SWITCH

### FEATURING . . . . .

- Universal application—only two switches needed to service all single phase, split phase, or capacitor motors of 1/6 to 1/3 hp inclusive.
- Quickly and easily installed—internally, externally, or remote...in any position.
- Simple, but rugged and foolproof.
- Fully enclosed—dust and dirt proof.
- Long, dependable life.
- Dimensions: 1-11/16" long x 1" wide x 1-1/8" deep.
- The Sorenson switch is designed to replace the conventional centrifugal type switch on single phase, split phase, or capacitor motors, ranging from 1/6 to 1/3 hp inclusive, 110/220 volts, 50/60 cycles. The switch will start motors in the above range within any standard rpm rating, even under the heaviest starting loads, plus or minus 15% to 30% voltage variations, according to the design of the motor.



CATALOG Nos.

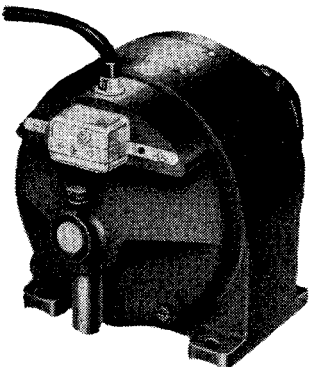
- RM 01620 (1/6 to 1/5 HP)
- RM 02533 (1/4 to 1/3 HP)

Patented No. 2,629,792, others applied for

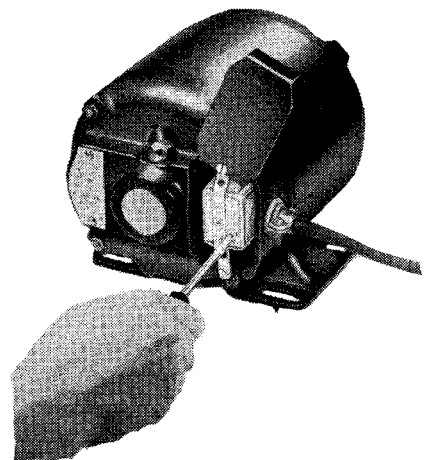
### HOW THE SORENSON SWITCH OPERATES

The switch operates on the magnetic principle. It is simply connected in series with the working winding of any type motor. It operates by the momentum of the starting current, and responds to open the starter winding circuit at the pre-determined rpm rating. No internal adjustment required. An adjusting screw (externally operated) provides a means of universal application of the switch to all motors within the above mentioned hp ratings, under all voltage conditions. Specific instructions for making this adjustment are included with each switch.

### QUICKLY AND EASILY INSTALLED INTERNALLY, EXTERNALLY or REMOTE



The slotted metal strap attached to the switch case provides the means for extremely flexible mounting, internally, externally or remote.

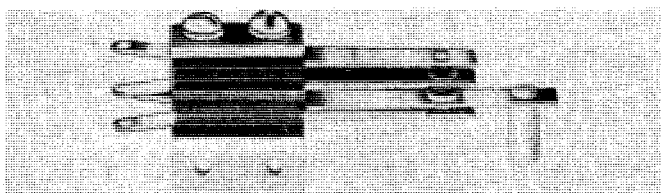
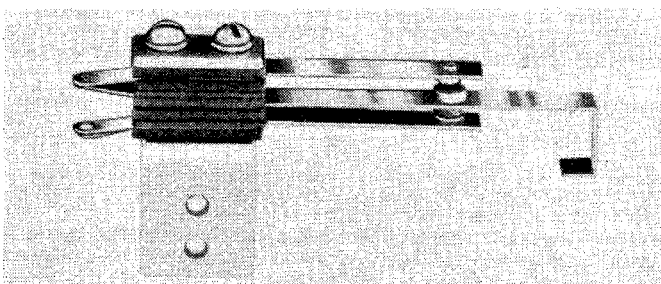
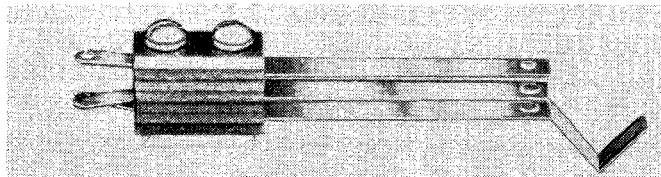
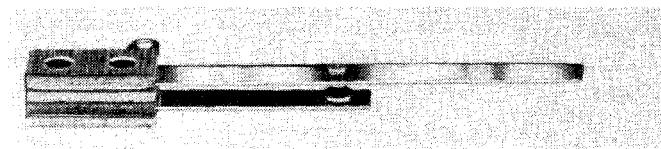
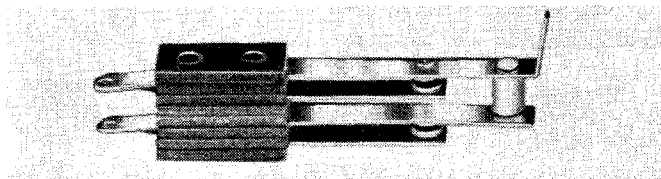
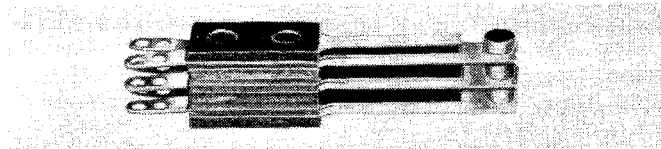
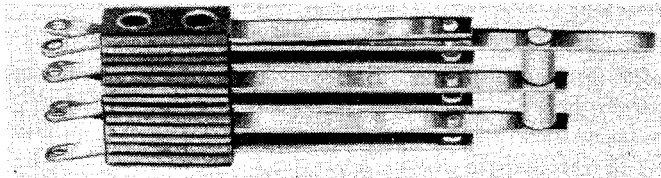


**SORENSON LIGHTED CONTROLS, INC. WEST HARTFORD, CONNECTICUT**

# SoLiCo

## Versatile, low cost STACK SWITCHES TO THE CUSTOMERS' REQUIREMENTS

An unlimited number of switch blade combinations and circuit arrangements, including Push Button types are available. Precision construction and expert factory adjustment to meet your specific needs.



### COMBINATIONS—

Switches with  $\frac{1}{4}$ " and  $\frac{3}{8}$ " mounting centers offered in a variety of combinations, such as those illustrated.

### BLADE MATERIALS—

Phosphorous Bronze is standard. Other materials available upon request.

### BLADE LENGTHS—

Up to  $1\frac{7}{8}$ " max. from center of first hole with  $\frac{1}{4}$ " mounting centers. Up to  $2\frac{5}{8}$ " max. from center of first hole with  $\frac{3}{8}$ " mounting centers.

### CONTACT MATERIALS AND RATINGS—

Fine silver contacts are standard. Contact ratings to users particular application.

### SEPARATORS—

XP Bakelite standard—Military and U/L types available upon request.

### LIFTERS—

Available in nylon and black hard fibre in various lengths and diameters.

### TERMINALS—

Solder lugs are standard. Lug adaptors are also available with both  $\frac{1}{4}$ " and  $\frac{3}{8}$ " mounting centers.

### MOUNTING BRACKET—

Reversible bracket provides either  $\frac{1}{4}$ " or  $\frac{3}{8}$ " mounting. (See illustration)

Send us your complete requirements, so that we can give you a prompt quotation and engineering sample for your specific needs.

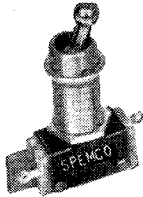
**SORENSEN LIGHTED CONTROLS, INC. WEST HARTFORD, CONNECTICUT**

# SPEMCO H & H SWITCHES

## BALL LEVER TOGGLE SWITCHES

Underwriters' approved, 1 amp. 250 V 3 amp. 125 volts. AC/DC. Laminated bakelite base. Nickel plated finish, except 1120 and 1121.

3 Amp.



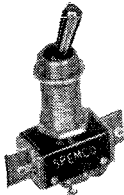
No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
*1120	SPST	1 1/32"	1 3/16"	1/2"	3/64"	.63 ea.
1122	SPDT	1 1/32"	1 3/16"	1/2"	3/64"	.81 ea.
1124	DPST	1 1/32"	1 3/16"	1/2"	3/64"	1.11 ea.
1126	DPDT	1 1/32"	1 3/16"	1/2"	3/64"	1.29 ea.
*1121	SPST	1"	1 3/16"	1/2"	3/64"	.81 ea.
1123	SPDT	1"	1 3/16"	1/2"	3/64"	.96 ea.
1125	DPST	1"	1 3/16"	1/2"	3/64"	1.32 ea.
1127	DPDT	1"	1 3/16"	1/2"	3/64"	1.44 ea.

Sleeve Diameter—1 1/32"  
\*3 amp. 250 V AC/DC.

## BAT LEVER TOGGLE SWITCHES

3 Amp.

Underwriters' approved, 1 amp. 250 V 3 amp. 125 volts. AC/DC. Laminated bakelite base. Nickel plated finish, except 1135 and 1121B



No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
*1135	SPST	1 1/32"	1 3/16"	1/2"	3/64"	.63 ea.
1136	SPDT	1 1/32"	1 3/16"	1/2"	3/64"	.81 ea.
1137	DPST	1 1/32"	1 3/16"	1/2"	3/64"	1.11 ea.
1138	DPDT	1 1/32"	1 3/16"	1/2"	3/64"	1.29 ea.
*1121-B	SPST	1"	1 3/16"	1/2"	3/64"	.81 ea.
1123-B	SPDT	1"	1 3/16"	1/2"	3/64"	.96 ea.
1125-B	DPST	1"	1 3/16"	1/2"	3/64"	1.32 ea.
1127-B	DPDT	1"	1 3/16"	1/2"	3/64"	1.44 ea.

Sleeve Diameter—1 1/32"  
\*3 amp. 250 V AC/DC.

## NEW "COMPACT" SWITCH

3 Amp.



Ideal for aircraft, missile, and electronic applications. Underwriter's approved 1 amp. 250 v., 3 amp. 125 v., AC-DC. Bakelite base. Bright nickel finish.

No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1205	SPST	1 1/32"	1 1/4"	1 1/8"	1 1/16"	.84 ea.
1206	SPDT	1 1/32"	1 1/4"	1 1/8"	1 1/16"	.99 ea.
1207	DPST	1 1/32"	1 1/4"	1 1/8"	1 1/16"	1.23 ea.
1208	DPDT	1 1/32"	1 1/4"	1 1/8"	1 1/16"	1.41 ea.

Sleeve Diameter—1 1/32"

## MOLDED BAKELITE SWITCH, BAT LEVER

U.L. approved for 6 amp. 125 volts, 3 amp. 250 volts. \*Except for 1143 which is rated at 1 amp. 250 volts, 6 amp. 125 volts. All back connected, slotted sleeve.

6 Amp.



No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1142	SPST	1 1/2"	1 1/4"	1 1/8"	1 1/16"	.84 ea.
*1143	SPDT	1 1/2"	1 1/4"	1 1/8"	1 1/16"	.99 ea.
1144	DPST	1 1/2"	1 1/4"	1 1/8"	1 1/16"	1.23 ea.
1145	DPDT	1 1/2"	1 1/4"	1 1/8"	1 1/16"	1.41 ea.

Sleeve Diameter—1 1/2"  
\*1 amp. 250 volts, 6 amp. 125 volts

## BALL LEVER TOGGLE SWITCH

6 Amp.

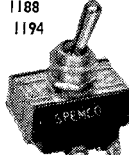


Underwriters' approved 3A 250V, 6A 125V, molded bakelite base. Nickel plated finish. WITH 6" WIRE LEADS

No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1154	SPST	3/8"	7/8"	1/2"	3/16"	.87 ea.

## UTILITY SWITCHES—Toggle Type For AC Uses

1185 15 Amp. 1188 1194



Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, 3/4 H.P. 115V-230V AC.

No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1185	SPST	1 1/32"	1 1/8"	3/4"	1 1/16"	.72 ea.
1186	SPDT	1 1/32"	1 1/8"	3/4"	1 1/16"	.87 ea.
1188	DPST	1 1/32"	1 1/8"	3/4"	1 1/16"	1.14 ea.
1194	DPDT	1 1/32"	1 1/8"	3/4"	1 1/16"	1.38 ea.

Sleeve Diameter—1 1/32"

## MOMENTARY BAT LEVER TOGGLE SWITCHES



Underwriters' approved, 3 amp. 125 volts, laminated bakelite base. Nickel plated finish.

No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
*1166	SPST	1 1/32"	1 3/16"	1/2"	3/64"	1.05 ea.
1167	SPDT	1 1/32"	1 3/16"	1/2"	3/64"	1.14 ea.
*1155	DPST	1 1/32"	1 3/16"	1/2"	3/64"	1.44 ea.
1150	DPDT	1 1/32"	1 3/16"	1/2"	3/64"	1.65 ea.

Sleeve Diameter—1 1/32"  
\*1166 Normally Off \*1155 Normally Off  
\*3 Amp 250V

15 Amp.



Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, 3/4 H.P. 115V-230V AC.

No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
*1196	SPST	1 1/2"	1 1/4"	3/4"	1 1/16"	.93 ea.
*1197	DPST	1 1/2"	1 1/4"	3/4"	1 1/16"	1.50 ea.

\*Normally Off Sleeve Diameter—1 1/2"

## NEUTRAL CENTER MOMENTARY BOTH ENDS

15 Amp.



Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, 3/4 H.P. 115V-230V AC.

No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1193	DPDT	1 1/2"	1 1/4"	3/4"	1 1/16"	1.80 ea.
1195	SPDT	1 1/2"	1 1/4"	3/4"	1 1/16"	1.11 ea.

Sleeve Diameter—1 1/2"

## NEUTRAL CENTER

15 Amp.



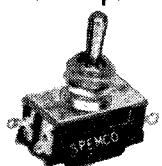
Underwriters' approved, 10 amp. 250 volts AC, 15 amp. 125 volts AC, 3/4 H.P. 115V-230V AC.

No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1187	SPDT	1 1/2"	1 1/4"	3/4"	1 1/16"	.87 ea.
1189	DPDT	1 1/2"	1 1/4"	3/4"	1 1/16"	1.38 ea.

Sleeve Diameter—1 1/2"

## BAT LEVER TOGGLE SWITCH Neutral Center

Underwriters' approved, 6 amp. 125 volts, either AC or DC. A 3 position switch, on-off-on. Black bakelite case.



No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1175	SPDT	1 1/2"	1 1/4"	1 1/8"	1 1/16"	1.53 ea.
1176	DPDT	1 1/2"	1 1/4"	1 1/8"	1 1/16"	1.83 ea.

Sleeve Diameter—1 1/2"

6 Amp.

## PUSH BUTTON DOUBLE ACTION SWITCH



Underwriters' approved, 6 amp. 125 volts. Press lever to make contact, press lever to break contact. Nickel plated finish or snap-on plastic button, in red or black.

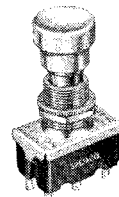
No.	Description	Base Dimensions			Net Price	
		Sleeve	L.	W.		
1156	Nickel Plated	3/8"	1 1/4"	1/2"	9/16"	.90 ea.
1156-A	Red	3/8"	1 1/4"	1/2"	9/16"	1.11 ea.
1156-B	Black	3/8"	1 1/4"	1/2"	9/16"	1.11 ea.

Sleeve Diameter—1 1/2"

## "COMPACT" DOUBLE ACTION (PUSH-PUSH) SWITCH QUICK MAKE AND BREAK ACTION

3 Amp.

Rated at 1 Amp. 250 Volts and 3 Amps. 125 Volts, A.C. and D.C. Solder lug terminals with double wiping blade mechanism.



No.	Description	Base Dimensions			Net Price Each	
		Sleeve	L.	W.		
1215	SPST	3/8"	1 1/2"	1 1/8"	1 1/16"	1.11
1215-B	SPST	3/8"	1 1/2"	1 1/8"	1 1/16"	1.32
1215-R	SPST	3/8"	1 1/2"	1 1/8"	1 1/16"	1.32
1216	SPDT	3/8"	1 1/2"	1 1/8"	1 1/16"	1.26
1216-B	SPDT	3/8"	1 1/2"	1 1/8"	1 1/16"	1.53
1216-R	SPDT	3/8"	1 1/2"	1 1/8"	1 1/16"	1.53
1217	DPST	3/8"	1 1/2"	1 1/8"	1 1/16"	1.62
1217-B	DPST	3/8"	1 1/2"	1 1/8"	1 1/16"	1.77
1217-R	DPST	3/8"	1 1/2"	1 1/8"	1 1/16"	1.77
1218	DPDT	3/8"	1 1/2"	1 1/8"	1 1/16"	1.71
1218-B	DPDT	3/8"	1 1/2"	1 1/8"	1 1/16"	1.92
1218-R	DPDT	3/8"	1 1/2"	1 1/8"	1 1/16"	1.92

Sleeve Diameter—1 1/2"

(B, means black button, R, means Red button and just the number, nickel.)

# SPEMCO H & H SWITCHES

## "COMPACT" MOMENTARY ACTION PUSH SWITCH QUICK MAKE AND BREAK ACTION

3 Amp.

Rated at 1 Amp. 250 Volts  
3 Amps. 125 Volts A.C.-D.C.

Solder lug terminals with double wiping bade mechanism



No.	Description	Sleeve	L.	W.	H.	Net Price Each
*1219	SPST	1/16"	1 1/2"	3/16"	1 3/16"	1.35
*1219-B	SPST	1/16"	1 1/2"	3/16"	1 3/16"	1.56
*1219-R	SPST	1/16"	1 1/2"	3/16"	1 3/16"	1.56
1220	SPDT	1/16"	1 1/2"	3/16"	1 3/16"	1.62
1220-B	SPDT	1/16"	1 1/2"	3/16"	1 3/16"	1.83
1220-R	SPDT	1/16"	1 1/2"	3/16"	1 3/16"	1.83
*1221	DPST	1/16"	1 1/2"	3/16"	1 3/16"	1.89
*1221-B	DPST	1/16"	1 1/2"	3/16"	1 3/16"	2.07
*1221-R	DPST	1/16"	1 1/2"	3/16"	1 3/16"	2.07
1222	DPDT	1/16"	1 1/2"	3/16"	1 3/16"	2.04
1222-B	DPDT	1/16"	1 1/2"	3/16"	1 3/16"	2.19
1222-R	DPDT	1/16"	1 1/2"	3/16"	1 3/16"	2.19

Sleeve Diameter—1 3/32"

(B, means black button, R, means Red button and just the number, nickel.)

\*SPST & DPST—Normally Off.

## MIDGET MOMENTARY PUSH BUTTON SWITCHES

3 Amp.

Underwriters' approved, 3 amp. 120 volts, AC. Molded bakelite base, nickel plated finish.



No.	Description	Sleeve	L.	W.	H.	Net Price
1141	SP Norm. Closed	1/16"	1 1/2"	3/16"	2 3/4"	.54 ea.
1141-A	SP Norm. Open	1/16"	1 1/2"	3/16"	2 3/4"	.54 ea.

Sleeve Diameter—1 3/32"

3 Amp.

Underwriters' approved, 3 Amp. 120v. AC. Nickel plated finish. Molded bakelite base, Single Pole, slow make and slow break with bakelite snap-on button in red or black.



No.	Description	Sleeve	L.	W.	H.	Net Price
1157-A	Open—Red	3/16"	1 1/2"	3/16"	2 3/4"	.93 ea.
1157-B	Open—Black	3/16"	1 1/2"	3/16"	2 3/4"	.93 ea.
1157-C	Closed—Red	3/16"	1 1/2"	3/16"	2 3/4"	.93 ea.
1157-D	Closed—Black	3/16"	1 1/2"	3/16"	2 3/4"	.93 ea.

Sleeve Diameter—1 3/32"

## INTERMEDIATE MOMENTARY PUSH SWITCH

6 Amp.

U.L. approved for 6 amp. 125 volts, 3 amp. 250 volts. \*Except for 1147 which is rated at 1 amp. 250 volts, 6 amp. 125 volts. All back connected, slotted sleeve.



No.	Description	Sleeve	L.	W.	H.	Net Price
*1146	SPST	1/2"	1 1/4"	1 1/16"	1 5/16"	1.41 ea.
*1147	SPDT	1/2"	1 1/4"	1 1/16"	1 5/16"	1.59 ea.
*1148	DPST	1/2"	1 1/4"	1 1/16"	1 5/16"	1.83 ea.
1149	DPDT	1/2"	1 1/4"	1 1/16"	1 5/16"	2.01 ea.

\*1 amp. 250 volts, 6 amp. 125 volts  
\*1146 & 1148 Normally off. Sleeve Diameter—1 3/32"

## MOMENTARY "SLOW-MAKE & BREAK" NORMALLY OFF

15 Amp.

Rated at 10 Amps. 250 Volts  
15 Amps. 125 Volts  
1/4 H.P. 250 V. AC ONLY

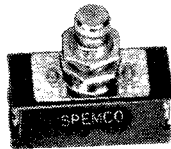


Solder lug, double slotted sleeve, 3/16" travel plus 1/16" overtravel. Operating pressure 6 ozs. increasing to 2 lbs. 6 ozs. when plunger is fully depressed.

No.	Description	Sleeve	L.	W.	H.	Net Price
1225	DPST	1 3/32"	1 3/4"	3/4"	1"	1.71 ea.

## MOMENTARY PUSH BUTTON SWITCH, NORMALLY OFF

16 Amp.



Underwriters' approved, 16 amp. 125 V., 8 amp. 250 V., 1 H.P. 125-250 V. AC-DC.

No.	Description	Sleeve	L.	W.	H.	Net Price
1160	DPST	1 3/32"	1 3/4"	1 3/16"	2 5/32"	1.80 ea.

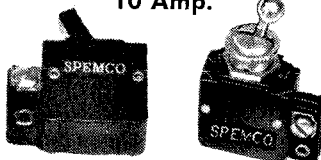
1 Amp.

Two circuit, slow make and slow break, momentary switch. One circuit normally on, the other off, with snap-on plastic button, in red or black. (Pushing the button reverses the contact.) 1 Amp. 125 Volts AC.



No.	Description	Sleeve	L.	W.	H.	Net Price
1158-A	Red	3/16"	1 1/2"	1 3/32"	1 7/32"	1.11 ea.
1158-B	Black	3/16"	1 1/2"	1 3/32"	1 7/32"	1.11 ea.

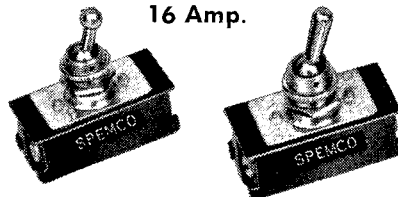
## POWER SWITCHES 10 Amp.



Underwriters' approved, 10 amp. 125 volts. 5 amp. 250 A.C., 3/4 H.P. 250V. A.C. 1/2 H.P. 250V A.C.

No.	Description	Sleeve	L.	W.	H.	Net Price
*1133	SPST	1 1/2"	1 3/4"	1 7/8"	1 5/8"	1.08 ea.
1133-B	Bakelite lever	1 3/16"	1 3/2"	1 3/2"	1 1/16"	.69 ea.

16 Amp.



Underwriters' approved, 16 amp. 125V., 8 amp. 250V. A.C.-D.C.

No.	Description	Sleeve	L.	W.	H.	Net Price
1159	DPST	1 5/8"	1 3/4"	1 3/16"	2 5/8"	1.23 ea.
1159-B	DPST	1 5/8"	1 3/4"	1 3/16"	2 5/8"	1.23 ea.

1159—Ball Lever 1159-B—Bat Lever  
Sleeve Diameter—1 3/32"

## POWER SWITCHES 20 Amp.



Underwriters' approved 20 amp. 125 V., 10 amp. 250 V. 1 1/2 H.P. 125-250 V. AC-DC.

No.	Description	Sleeve	L.	W.	H.	Net Price
1134	DPST	1 5/8"	2"	1"	7/8"	2.07 ea.
1134-B	DPST	1 5/8"	2"	1"	7/8"	2.07 ea.

1134—Ball Lever Sleeve Diameter—1 3/32" 1134-B Bat Lever Sleeve Diameter—1 3/32"

20 Amp.



Fully enclosed tumbler switch, 20 amp. 250V., 1 1/2 H.P. 125V., 2 H.P. 250V.

No.	Description	Sleeve	L.	W.	H.	Net Price
1170-S	DPST	1 1/2"	2 1/4"	1 1/8"	1 3/2"	3.00 ea.

Sleeve Diameter—1 1/2"

20 Amp.

Fully enclosed tumbler switch, 20 amp. 250V., 1 1/2 H.P. 125V., 2 H.P. 250V.



No.	Description	Sleeve	L.	W.	H.	Net Price
1170	DPST	1 1/2"	2 1/4"	1 1/8"	1 3/2"	3.00 ea.

Sleeve Diameter—1 3/32"

## EXTRA HEAVY DUTY SWITCH NEUTRAL CENTER 10 Amp.

Used in heavy current circuits, such as transmitters, power amplifiers, motors, etc. Contacts have fast 'break' which reduces the tendency to arc. Rated at 10 amp. 125 volts, 5 amp. 250 volts, 3/4 HP 250 volts.



No.	Description	Sleeve	L.	W.	H.	Net Price
*1161-A	DPDT	1 1/2"	2"	1 3/8"	1"	4.65 ea.
1161	DPDT	1 1/2"	2"	1 3/8"	1"	4.65 ea.

Straight thru, no off-center\* Sleeve Diameter—3/4"

20 Amp. & 30 Amp.

3-9/32" mounting centers

1161-B	10 Amp. 250 Volts	20 Amp. 125 Volts
1161-C	20 Amp. 250 Volts	30 Amp. 125 Volts



No.	Description	Sleeve	L.	W.	H.	Net Price
1161-B	DPDT	2 1/2"	1 1/2"	1 3/8"	1 3/8"	7.05
1161-C	DPDT	2 7/8"	1 1/2"	1 3/8"	2"	9.45 ea.
*1161-D	DPDT	2 1/2"	1 1/2"	1 3/8"	1 3/8"	7.05 ea.

\*20 Amp. Straight thru-no off center.

10 Amp.

Rated 10 amp. 125 volts, 1/2 HP, 115-230 volts AC. 5 amp. 250 volts.



No.	Description	Sleeve	L.	W.	H.	Net Price
1177	3 PDT	1 3/2"	2 3/4"	2"	1 1/8"	7.05
1178	4 PDT	1 3/2"	2 3/4"	2"	1 1/8"	8.85

Sleeve Diameter—3/4"

# SPEMCO H & H SWITCHES

## THREE & FOUR POLE AC UTILITY SWITCHES



15 amp. 125V., 10 amp. 250V. AC., except Nos. 1200 and 1201 which is 10 amp. 250V. AC.

No.	Description	Sleeve	Base Dimensions			Net Price
			L.	W.	H.	
1198	3PST On-None-Off	1 1/2"	1 1/8"	1 3/16"	1 1/16"	2.40 ea.
1199	3PDT On-Off-On	1 1/2"	1 1/8"	1 3/16"	1 1/16"	3.00 ea.
*1200	4PST On-None-Off	1 1/2"	1 1/8"	1 3/16"	1 1/16"	3.45 ea.
*1201	4PDT On-Off-On	1 1/2"	1 1/8"	1 3/16"	1 1/16"	4.20 ea.

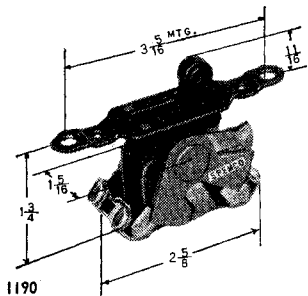
Sleeve Diameter—1 1/2"

\*10 amp. 250 V. A.C.  
\*1/2 H.P. 115-230 V. A.C.

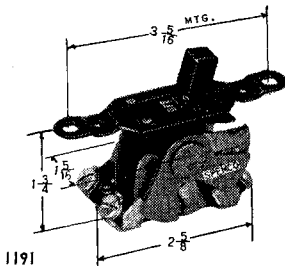
## HEAVY DUTY SWITCHES Toggle Type

Underwriters' approved, 30 amp. 250 volts, AC DC. 2 H.P., 115V-230V AC; 1 H.P., 460V AC. For use on Food Machines, Grinders, Sanders, Machine Tools, Gasoline Pumps, etc.

### Roller Type Lever 30 Amp.

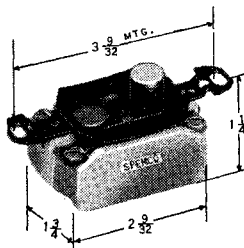


### Square Bakelite Lever 30 Amp.



No.	Description	Net Price
1190	DPST	2.85 ea.
1191	DPST	2.85 ea.

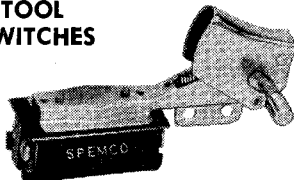
## METAL PUSH BUTTON TYPE NORMALLY OPEN 20 Amp.



No.	Description	Net Price
1192	DPST	2.85 ea.

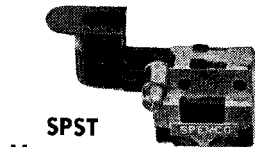
Underwriters' approved, 20 amp. 250 volts, 2 H.P. 230V AC, 2 H.P. 250V DC. For use on Floor Sander, as a foot switch, etc.

## PORTABLE TOOL HANDLE SWITCHES 12 Amp.



Tool handle switch, fully enclosed, normally OFF with locking latches. Rated and approved by the Underwriters' for 6 amp. 250 volts, 12 amp. 125 volts, 1 H.P. 250 volts, 1 3/4" long, 1 3/8" wide, 7/8" high.

No.	Description	Net Price
1168	DPST	2.01 ea.



## SPST Momentary Contact

No.	BASE DIMENSIONS			Net Price
	L.	W.	H.	
1169	1 3/4"	2 1/2"	1 3/4"	1.14 ea.

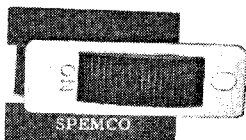
## S. P. MOMENTARY CONTACT 3 Amp.

Pressure lever switch with Holding Latch rated at:  
3 Amp.—125 volts A.C.



No.	BASE DIMENSIONS			Net Price
	L.	W.	H.	
1171	7/8"	3/8"	1 1/8"	.63 ea.

## INDICATING SLIDE LEVER SWITCH 6 Amp.



Rated at 3 Amp.—250 volts 6 Amp.—125 volts

No.	BASE DIMENSIONS			Net Price
	L.	W.	H.	
1174	7/8"	1/2"	1 1/2"	1.26 ea.

## ROTARY CANOPY SWITCH With Fixed Plastic Handle 3 Amp.



Underwriters' approved, 3 amp. 125 volts. 1 amp. 250 volts.

No.	Stem	Wire Lead	Net Price
1179	3/16"	6"	.42 ea.

## ROTARY SWITCHES 3 Amp.



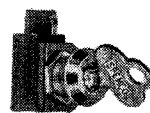
Underwriters' approved, 1 amp. 250 V., 3 amp. 125 V. AC-DC (Except #1128). Nickel plated finish. Laminated bakelite base.

No.	Description	Shaft	Base Dimensions			Net Price
			Sleeve	L.	W.	
*1128	SPST	1 1/8"	3/4"	3/4"	3/4"	.81 ea.
1129	SPDT	1 1/8"	3/8"	3/4"	3/4"	.99 ea.
1130	DPST	1 1/8"	3/8"	3/4"	1 1/16"	1.32 ea.
1131	DPDT	1 1/8"	3/8"	3/4"	1 1/8"	1.62 ea.

\*1128 rated 3 amp. 250 V. AC-DC. 1/2" Sleeve Diameter—1 1/2"

## 3 Amp. ROTO-LOCK SWITCH

Underwriters' Approved, 3 amp. 250 volts. Except #1129-K & 1131-K



No.	Description	Sleeve	Base Dimensions			Net Price
			L.	W.	H.	
1128-K	SPST (With Key)	1 1/2"	1 3/16"	3/4"	1/16"	1.44 ea.

(above key removable in off position only)

1128-KA	Key only for above					.21 ea.
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1128-KE	SPST (With Key)	1 1/2"	1 3/16"	3/4"	1/16"	1.44 ea.
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(above key removable in either position)

*1129-K	SPDT (With Key)	1 1/2"	1 3/16"	1/2"	3/4"	1.56 ea.
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(above key removable in either position)

*1131-K	DPDT (With Key)	1 1/2"	1 3/16"	3/4"	3/4"	2.07 ea.
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(above key removable in either position)

1128-KEA	Key—fits 1128-KE, 1129-K, and 1131-K					.21 ea.
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\*1129-K & 1131-K—U.L. approved, 1 amp. 250 V., 3 amp. 125V., AC-DC. Sleeve Diameter—1 1/2"

## ROTO-LOCK SWITCH 20 Amp.



Underwriters' approved. 20 amp. 120 volts, 240 volts AC.

1 1/2 H.P.—120 volts AC  
2 H.P.—120 volts AC

(with key)  
(above key removable in off position only)

No.	Description	Sleeve	Net Price
1130-K	DPST (With Key)	1 1/2"	2.64 ea.
1130-KA	Key Only for above		.27 ea.

## FEED THROUGH CORD SWITCH 10 Amp.



Underwriters' approved, black bakelite case sliding lever, 10 amp. 125 volts, 5 amp. 250 volts. 5/16" cord hole.

No.	Description	Net Price
1163	SP	1.38 ea.

## FEED THROUGH CORD SWITCH 15 Amp.



1 3/32 (.406) Inch Cord Hole

For Appliance Use Only:

Rated at 10 Amp.—250 volts  
15 Amp.—125 volts

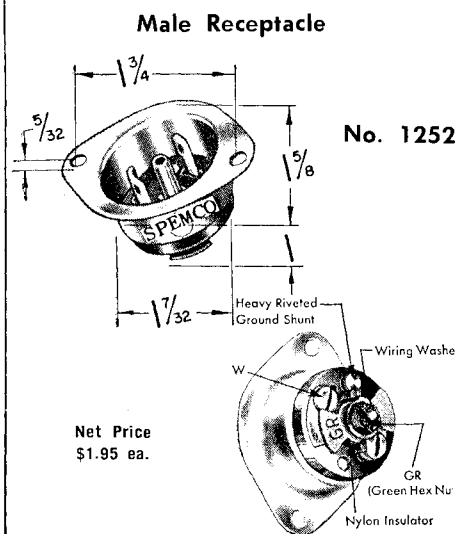
No.	Description	Net Price
1164	DP (with 3rd wire ground)	4.65 ea.

# SPEMCO H & H SWITCHES

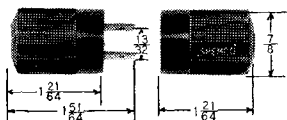
## MILITARY TYPE TOGGLE SWITCHES

Manufactured of materials and in accordance with specification Mil-S-3950  
MS-25098 and MS-35058—Single Pole MS-25100 and MS-35059—Double Pole

MS Part No.	Up Position	Center Position	Down Position	Net Price
MS-25098-22	On	None	Off	\$216.75C
MS-25098-23	On	None	On	233.25C
MS-25100-22	On	None	Off	266.25C
MS-25100-23	On	None	On	283.50C
MS-35058-21	On	Off	On	195.75C
MS-35058-22	On	None	Off	162.75C
MS-35058-23	On	None	On	195.75C
MS-35058-24	On	Off	None	162.75C
MS-35058-25	On	Mom. Off	None	179.25C
MS-35058-26	On	None	Mom. On	212.25C
MS-35058-27	Mom. On	Off	Mom. On	212.25C
MS-35058-28	None	Off	Mom. On	179.25C
MS-35058-29	On	None	Mom. Off	179.25C
MS-35058-30	Off	None	Mom. On	179.25C
MS-35058-31	On	Off	Mom. On	230.25C
MS-35059-21	On	Off	On	261.75C
MS-35059-22	On	None	Off	217.50C
MS-35059-23	On	None	On	261.75C
MS-35059-24	On	Off	None	217.50C
MS-35059-25	On	Mom. Off	None	261.75C
MS-35059-26	On	None	Mom. On	283.50C
MS-35059-27	Mom. On	Off	Mom. On	283.50C
MS-35059-28	None	Off	Mom. On	261.75C
MS-35059-29	On	None	Mom. Off	261.75C
MS-35059-30	Off	None	Mom. On	261.75C
MS-35059-31	On	Off	Mom. On	283.50C



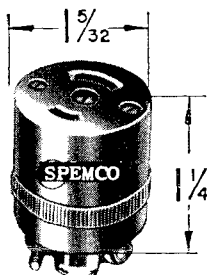
## CORD CONNECTORS 10 Amp.



Brown Bakelite Cord Connector Complete, 7/8" O.D. x 2 1/2" long. 10 amps. 250 volts. End opening for wire size up to 3/8" O.D.

No.	Description	Net Price
1162	Complete	1.86 ea.
1162-F	Female Part	1.02 ea.
1162-M	Male Part	1.02 ea.

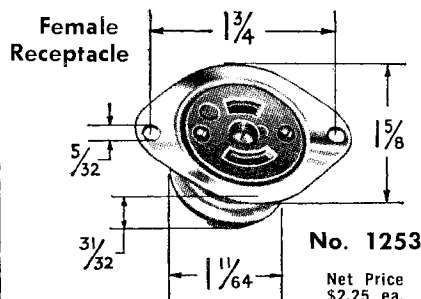
## TURN TO LOCK COMPACT RECEPTACLES 3-WIRE GROUNDING TYPE 15 Amp. 125 Volt



Brass metal casings, finished to resist corrosion. Black bakelite is standard.

### Female Connector No. 1250

Net Price \$2.10 ea.



### Female Receptacle No. 1253

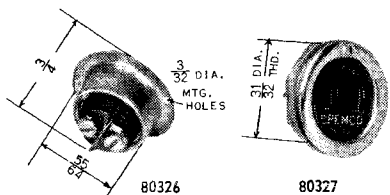
Net Price \$2.25 ea.



## RECEPTACLES

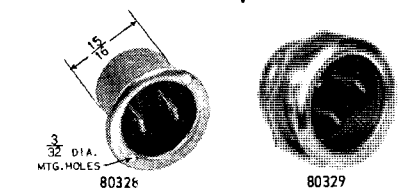
Underwriters' approved, 10 amp. 250 volts AC.

### Short Female Flush Receptacle 10 Amp.



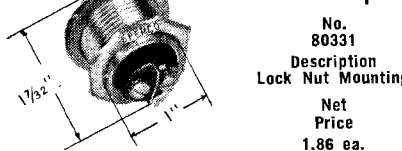
No.	Description	Net Price
80326	2 Screw Mounting	1.14 ea.
80327	Lock Nut Mounting	1.86 ea.

### Recessed Male Receptacle 10 Amp.

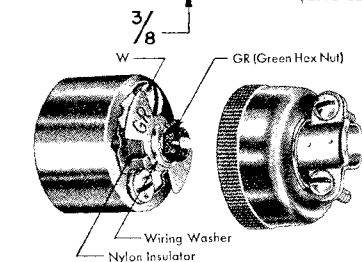


No.	Description	Net Price
80328	2 Screw Mounting	1.32 ea.
80329	Lock Nut Mounting	1.86 ea.

### Recessed Female Receptacle 10 Amp.

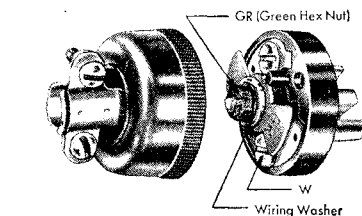
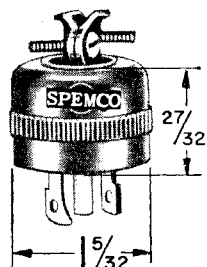


No.	Description	Net Price
80331	Lock Nut Mounting	1.86 ea.



### Male Connector No. 1251

Net Price \$1.65 ea.



## HARDWARE

for 1/8" diameter sleeve.

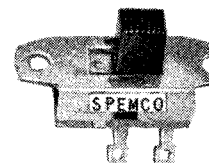
No.	Description	Price
1132-HL	Hi-Lo	.036 ea.
1132	On and Off Plate	.036 ea.
1132-H	Hex Nut	.024 ea.
1132-K	Knurled Nut	.024 ea.
1210	Lockwasher	1.80
1211	Locking Ring	2.40

## PHENOLIC SNAP-ON BUTTON

No.	Color	Net Price
1212-B	Black	.21 e
1212-R	Red	.21 e
1212-W	White	.21 e

All aforementioned switches, connectors and receptacles are manufactured by H&H for Specialti Manufacturing Company.

## SLIDE SWITCHES



No.	Description	Net Price
1180	SPST .75A-125V AC-DC	.156
1181	SPDT .75A-125V AC-DC	.168
1182	DPST .50A-125V AC-DC	.216
1183	DPDT .50V-125V AC-DC	.258



# SPEMCO

## H & H PRECISION SWITCHES



GP3-Z1



GP3-W1



GP3-V1



GP3-U1



GP3-Q1



GP3-T1



GP3-Y1



GP3-X1

### GENERAL PURPOSE PRECISION SWITCHES SPDT

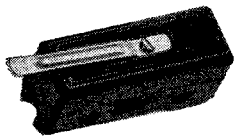
H & H General Purpose Precision Switches feature high electrical rating combined with very low operating force and long life. SPDT units may be wired normally open or normally closed. UL and CSA approved: 15 amp. 480 V AC, 1/2 amp. 125 V DC, 1/4 amp. 250 V DC.

SPEMCO NUMBER Solder Lug	NUMBER Screw Term.	*1 ACTUATOR	OPERATING FORCE	PRETRAVEL	OVERTRAVEL	LIST PRICE	
						Solder Lug	Screw Term.
GP3-Z1	GP3-Z2	Pin Type	9 to 13 oz.	.015" max.	.005" min.	\$155.00 C.	\$165.00 C.
GP3-T1	GP3-T2	Flexible Leaf	5 oz. max.	5/32" max.	Not over 1/16"	170.00 C.	180.00 C.
GP3-Q1	GP3-Q2	Std. Roller Leaf	5 oz. max.	5/32" max.	Not over 1/16"	215.00 C.	220.00 C.
GP3-Y1	GP3-Y2	Rigid Hinge Lever	2 1/2 oz.	3/8" max.	.219" min.	200.00 C.	205.00 C.
GP3-X1	GP3-X2	Std. Roller Lever	3 1/2 oz. max.	9/32" max.	.156" min.	250.00 C.	260.00 C.
GP3-W1	GP3-W2	Short Roller Lever	6 oz. max.	9/64" max.	3/32" min.	250.00 C.	260.00 C.
GP3-V1	GP3-V2	Short Overtravel Button	9 to 13 oz.	1/64" max.	1/16" min.	190.00 C.	195.00 C.
GP3-U1	GP3-U2	Panel Mounted Plunger	9 to 13 oz.	1/64" max.	7/32" min.	345.00 C.	350.00 C.

\*1 Switches are mounted by two .140 inch diameter holes on one inch centers. Discount: 1-9, none; 10-19, 10%; 20-49, 20%; 50-99, 30%.

### HEAVY DUTY PRECISION SWITCHES SPDT

H & H Heavy Duty Precision Switches provide high inrush capacity and retain similar performance and actuating characteristics found in the General Purpose units. SPDT switches can be wired normally open or normally closed. UL and CSA approved: 20 amp. 480 V AC, 10 amp. 125 V AC "L" load, 1/2 amp. 125 V DC, 1/4 amp. 250 V DC, 1 H.P. 120 V AC, 2 H.P. 240 V AC.



HD3-T1



HD3-W1



HD3-V1



HD3-Y1



HD3-U1



HD3-Z1



HD3-Q1



HD3-X1

SPEMCO NUMBER Solder Lug	NUMBER Screw Term.	*1 ACTUATOR	OPERATING FORCE	PRETRAVEL	OVERTRAVEL	LIST PRICE	
						Solder Lug	Screw Term.
HD3-Z1	HD3-Z2	Pin Type	14 to 22 oz.	.050" max.	.010" min.	\$160.00 C.	\$170.00 C.
HD3-T1	HD3-T2	Flexible Leaf	9 oz. max.	11/32" max.	Not over 1/16"	180.00 C.	185.00 C.
HD3-Q1	HD3-Q2	Std. Roller Leaf	9 oz. max.	11/32" max.	Not over 1/16"	225.00 C.	230.00 C.
HD3-Y1	HD3-Y2	Rigid Hinge Lever	2 1/2 oz. max.	5/8" max.	.078" min.	205.00 C.	210.00 C.
HD3-X1	HD3-X2	Std. Roller Lever	2 1/2 oz. max.	15/32" max.	1/16" min.	260.00 C.	265.00 C.
HD3-W1	HD3-W2	Short Roller Lever	6 oz. max.	1/4" max.	1/32" min.	260.00 C.	265.00 C.
HD3-V1	HD3-V2	Short Overtravel Button	14 to 22 oz.	.050" max.	.093" min.	195.00 C.	200.00 C.
HD3-U1	HD3-U2	Panel Mounted Plunger	14 to 22 oz.	.050" max.	.219" min.	355.00 C.	360.00 C.

\*1 Switches are mounted by two .140 inch diameter holes on one inch centers. Discount: 1-9, none; 10-19, 10%; 20-49, 20%; 50-99, 30%.



# SWITCH TO TECH LABS for the Most Versatile Line of Precision Switches & Attenuators

FOUNDED 1935

These switches are representative of the many types produced by TECH LABS meeting applicable Government Specs. Wire or teletype for further information.

TEL: 201 - WI 4-2221

TWX: 201-947-4730

## TAP SWITCHES

### TYPE 3A MINIATURE TAP SWITCH



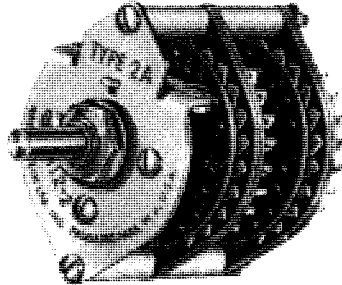
Molded from Diallyl Phthalate

\$3.00 List

#### Specifications

Size: 1" diameter, 1 1/4" with terminals. 1 deck, 1 1/4" long, 1/2" for each additional deck.  
 Rating: 1200 volts rms, 2000 VDC, 5 amps. (carrying) 115 V.  
 Insulating resistance: 100 megohms minimum at 500 volts DC.  
 Life: 1.5—2 million revolutions.  
 Temperature range: -65°C to 100°C.  
 Mounting: single hole.

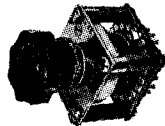
### TYPE 2A & 2M



The Type 2A, a standard control switch for precision instruments and equipments, comes in 2-24 positions and 1-4 poles per deck, with phenolic insulation. The 2M is identical except for Melamine insulation. Both are rated for 3 AMP.

Code "S" denotes "shorting" and "N" "non-shorting".

Type	Code	No.Pos.	No.Decks	Poles/Deck	Price
2A	1S24	24	1	1	\$4.50
2A	4S5	4	1	5	\$6.00
2A	N10-2	10	2	1	\$7.00
2M	1S24	24	1	1	\$5.50
2M	4N3	3	1	4	\$7.00

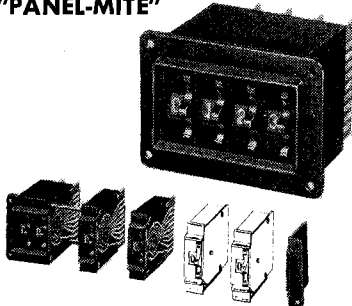


### TYPE 10A TAP SWITCH

A multi-deck switch of small dimensions, 1 1/16" sq. This is a precision switch designed to meet high requirements in smallest possible space. Up to 24 positions, shorting. Price approx. \$10 per deck, plus frame \$5.

## THUMBWHEEL SWITCHES

### "PANEL-MITE"



A compact, molded, printed-circuit wafer switch for limited space and in line read-out. **Modular type for either front or back of panel mounting:** modules 1/2" between center lines, height 2". Single or double pole, 10 position, binary or complementary codes, standard. Other codes available on request.

## CAM SWITCHES



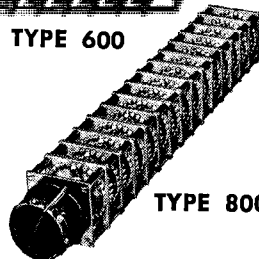
### TYPE 8A CAM SWITCH

A new development of great interest. Small size, long life and great flexibility. Have been made with from one to 30 contact springs. Will carry 3 amp. Standard unit has four contact springs and 10 positions, price \$12.50.

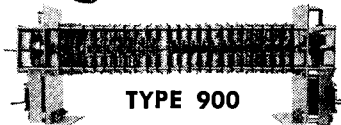
## SQUARE SWITCHES



### TYPE 600



### TYPE 800



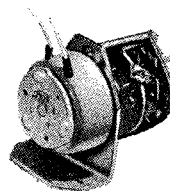
### TYPE 900

These standard rugged control switches are the standby for equipment calling for dependable switches in a hurry. Will meet all standard government specs. All parts carried in stock. An infinite number of combinations possible. Teletype your specs.

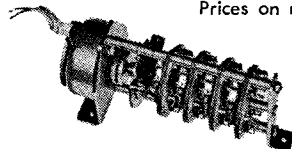
The price of the basic frame is the same for all, viz. \$4.00 each. The type 600 and 800 are priced at \$8.00 per deck plus frame price, and the type 900 switches are \$9.50 per deck plus frame \$4.00.

Type	Size	Rating	Max. Pos.	
			Short.	Non-Short.
600	1 3/4" sq.	5A.	24	12
800	2 1/4" sq.	5A.	32	16
900	2 3/4" sq.	10A.	48	24

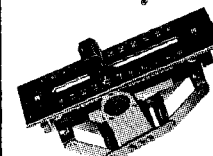
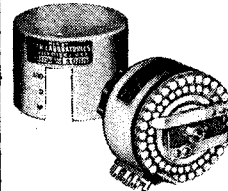
## STEPPING SWITCHES



TECH LABS switches are now standard equipment in missiles as well as in ground controls. Furnished sealed to meet all specs. Write for details. Prices on request.



## ATTENUATORS



A complete line of audio and r.f. attenuators with both manual and REMOTE CONTROL. We will design components to meet your specific requirements, if standard units are inadequate. Please write for catalogue and send us your specs for estimate.

WRITE FOR NEW BULLETINS ON SWITCHES • DECADE RESISTORS • POTENTIOMETERS

# TECH LABORATORIES INC. • Palisades Park, New Jersey

# AMERICAN BEAUTY ELECTRIC SOLDERING IRONS

American Beauty is known throughout the world as the quality-standard for electric soldering tools. Stocked in all models and watt-inputs—plus tips, parts and accessories.

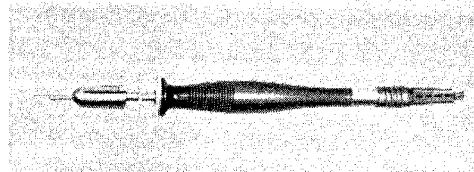
## B-SERIES MINIATURES

Newest advance in truly miniature irons. Precise balance. Cool handle. Long-life, "floating", heating element. Anti-roll baffle. Simple three-piece assembly. Boxed with 6' detachable cord set, 3 assorted tips. Packed 6 to case.

CAT. NO.	TIP DIA.	WATTS	NET WT.	LIST
B-2000-L	1/8"	22½	3 oz.	\$12.00
B-2500-L	3/16"	30	3 oz.	\$12.00

Two-wire cord is standard. For same irons equipped with 3-wire grounding cord and NEMA type plug, add "S3" to CAT. NO. and \$1.00 to list price.

\*Other options available

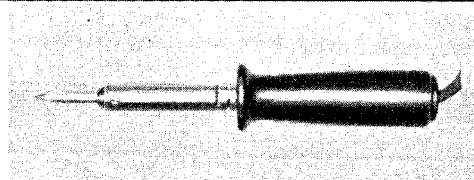


## BANTAMS

Small American Beauty irons in wide range of watt-inputs and tip diameters to cover entire range of fine and medium-fine jobs on electronic and electrical production lines.

CAT. NO.	TIP DIA.	WATTS	NET WT.	LIST
3114	1/4"	60	8 oz.	\$10.40
3118	1/8"	30	6 oz.	7.20
3120	3/16"	30	6½ oz.	7.20
3118-X	1/8"	50	6 oz.	8.00

\*Other models & options available

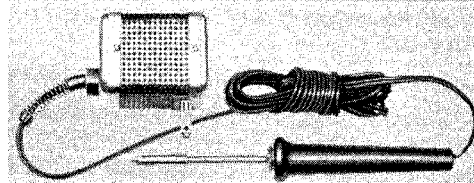


## TRANSFORMER TYPES

Made in two series. Extremely light-weight, hi-heat, slim-casing irons of very small tip-diameter. For use where transformer type irons (providing complete isolation from line voltage) are desirable or necessary.

CAT. NO.	TIP DIA.	WATTS	NET WT.	LIST
T-12	1/16"	17	1 lb. 3 oz.	\$20.00
T-30	1/16"	30	1 lb. 12 oz.	22.00

\*Other options available

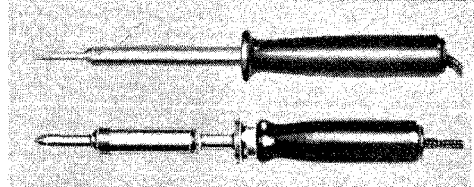


## STANDARD SERIES

Hundreds of thousands of these models of American Beauty irons are on production lines all over the world. Stocked in tip sizes from 1/4" to 1 1/8", input wattages from 60 W to 550 W.

CAT. NO.	TIP DIA.	WATTS	NET WT.	LIST
3125	1/4"	60	7½ oz.	\$ 9.00
3138	3/8"	100	16 oz.	12.10
3158	3/8"	200	28 oz.	14.50
3178	7/8"	300	42 oz.	19.30
3198	1 1/8"	550	60 oz.	24.20

\*Nine models available

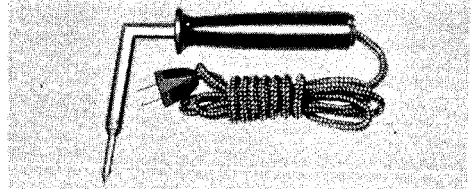


## ANGLE TYPES

Conventional irons but with casings angled for work on hard-to-reach jobs. Balanced. Available in tip-sizes from 1/8" to 3/8" diameter, watt inputs from 30W to 100W.

CAT. NO.	TIP DIA.	WATTS	NET WT.	LIST
3118-A	1/8"	30	6¼ oz.	\$ 8.20
3125-A	1/4"	60	10 oz.	10.20
3138-A	3/8"	100	16 oz.	13.20

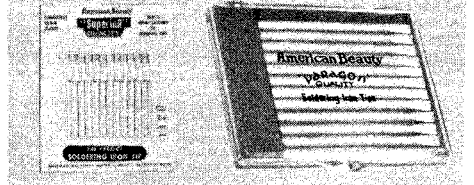
\*Other options available



## SOLDERING TIPS—THREE GRADES

Made of commercially pure copper rod. Shapes and sizes for all AB irons and other makes as well. Three grades: (1) Nickel-Plated. (2) "Superior" Quality—iron-clad working end silver-plated overall. (3) "Paragon" Quality—best

tips made for high-spec. soldering; iron-clad; chrome-plated; pre-tinned; maintenance-free; for extra clean work. (Ask for FREE American Beauty Tip Chart.)

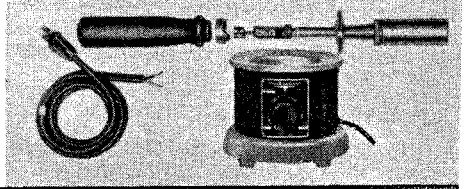


## PARTS AND ACCESSORIES

You can always get original-equipment-quality parts for any American Beauty Soldering Iron—standardized for quick, easy repair. Also: AB cord sets; spooled and bulk heater cord in 250' lengths; branding irons; soldering iron temper-

ature regulating stands; safety guards for same; general-purpose solder pots; melting cups or ladles.

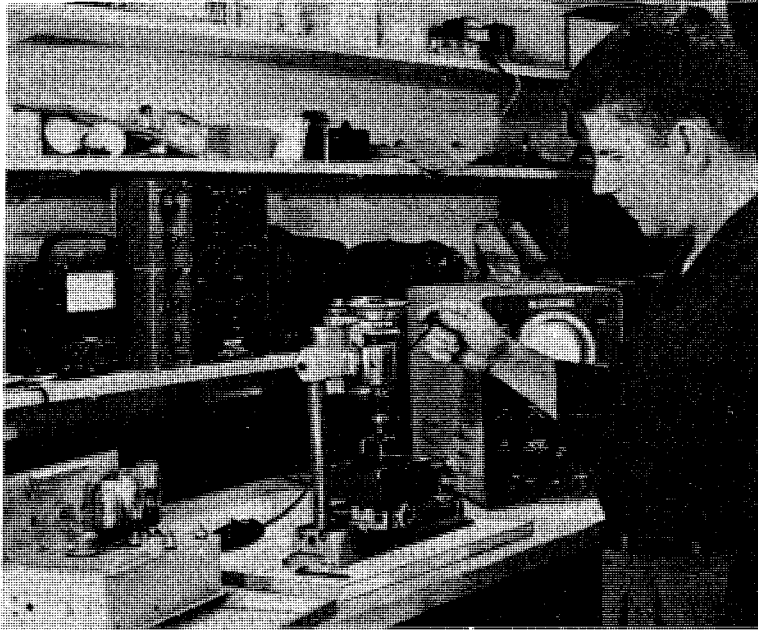
\*Request American Beauty Catalog for complete selection.



\*NEW CATALOG—New American Beauty Catalog is now available. FREE.

INDUSTRIAL DISCOUNT SCHEDULE		
LIST VALUE	DISCOUNT	MULTIPLIER
To \$199.00	30%	.70
\$200.00 to \$999.00	33%	.67
Plus \$1000.00	40%	.60



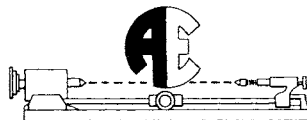


Busy designer/author/inventor Brice Ward uses his UNIMAT to machine printed circuit boards, drill chassis holes, and wind special coils. UNIMAT takes less space than the average oscilloscope.

## A CUSTOM ELECTRONICS WORKSHOP

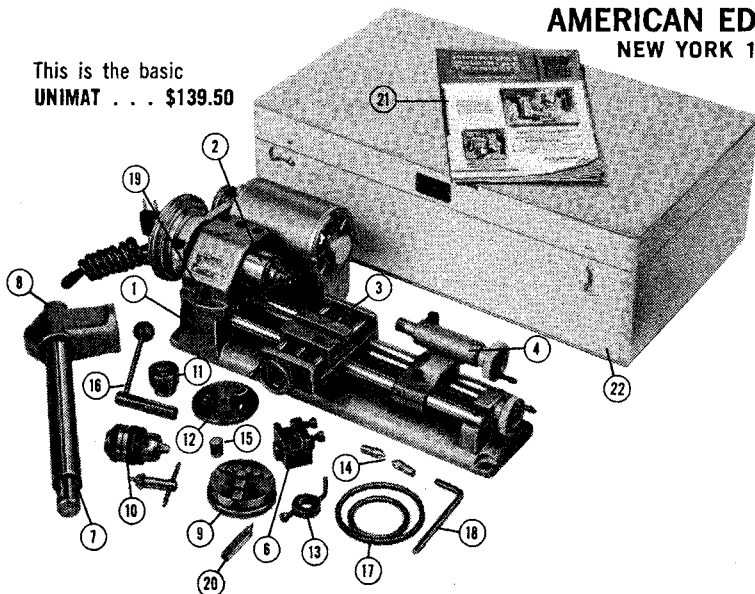
...for Metals • Plastics • Wood • in just 16" of bench space!

With UNIMAT you're always ready to originate or duplicate that one-of-a-kind component that so often holds up a job. UNIMAT's versatility and machine tool precision do away with makeshift improvisation . . . give your breadboards and prototypes that clean, professional look. Nine quick change setups handle metals, plastics, wood with toolmaker precision. UNIMAT turns, drills, bores, mills, threads, cuts gears, grinds, sharpens, saws, files, divides, buffs, polishes. Eleven-speed self-contained motor drive provides the ideal spindle speed for each tool and material. Thousands are now in use by top electronic manufacturers, defense contractors, radio/electronic service firms and advanced hobbyists. ■ Get complete details before you order. The free UNIMAT catalog contains closeups of the various setups, plus a variety of in-use photos. Or, send \$1.00 for the new **MINIATURE MACHINING TECHNIQUES**, a general handbook and operator's manual that is packed with shop tips and tells the UNIMAT story in step-by-step detail, including 180 photographs!



**AMERICAN EDELSTAAL, INC.**  
NEW YORK 13, NEW YORK

This is the basic  
UNIMAT . . . \$139.50































1. Ribbed, cast-iron Lathe Bed
2. Ball Bearing Headstock Spindle
3. Carriage Assembly
4. Tailstock
5. Ball Bearing Idler Pulley (not shown)
6. Tool Post
7. Steel Vertical Column
8. Vertical Column Headstock Adapter
9. 3-Jaw Universal Lathe Chuck
10. Jacobs-type Drill Chuck and Key
11. Grinding Wheel Arbor
12. Face Plate
13. Lathe Dog
14. Dead Centers (two)
15. Slotted Adapter
16. Spindle-feed Hand Lever
17. Set of Drive Belts
18. Allen Wrench
19. Headstock Alignment Pin
20. Roughing Tool Bit
21. 40 Page Instruction Manual
22. Wood Storage Chest

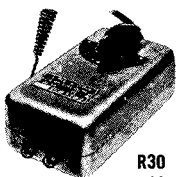
# CAIG LABORATORIES INC.

New Hyde Park, L. I., N. Y.

## ERSA® SOLDERING TOOLS

TECHNICAL DESCRIPTION	ERSA IRON COMPLETE CAT. NO. (Add 'D' to No. for ERSADUR)	WATT-AGE	PRICE WITH		SOLDERING BIT CAT. NO. (Add 'D' to No. for ERSADUR)	BIT FORM	PRICE		SPARE ELEMENT	
			COPPER BIT	ERSADUR BIT*			COP- PER	ERSA- DUR*	CAT. NO.	PRICE
<b>ERSA-MICROTYPE 6 VOLT 8 WATTS-15 WATTS</b> Subminiature soldering iron for pinpoint soldering on miniaturized printed circuits and other micromodulation techniques. Provided with ERSADUR long life bit. Good for 100,000 soldering operations. Built-in solid heater element. Weight under 3 ozs. Length of 8 watt unit 6.3", length of 15 watt unit 9.8". Temp. range 240°C to 380°C. For use with 6 volt transformer or battery, 5 foot cable & banana plugs. Temp. can be regulated with Control Transformer ERSR R30. For more details ask for Bulletin #E-500.	20L/8W (Short Heating Unit)	8		\$9.50					22L/8W (Element & Bit)	\$5.50
	20B/8W (Short Heating Unit)	8		\$9.50					22B/8W (Element & Bit)	\$5.50
	20K/15W (Extra Long Heating Unit)	15		\$9.90					22K/15W (Element & Bit)	\$5.90
	20L/15W (Extra Long Heating Unit)	15		\$9.90					22L/15 (Element & Bit)	\$5.90
<b>ERSA-MINIATURE 6 VOLT 10 WATTS-20 WATTS-30 WATTS</b> Miniature soldering iron for modern electronics—exchangeable heater elements—heating up time 40 sec.—weight under 3 ozs. Length 8"—for use with 6 volt transformer or battery, 5 foot cable & banana plugs—push on copper bits, easily exchanged—soldering temperature can be regulated with the Control Transformer ERSR R30. Temp. range 300°C. to 480°C. For more details ask for Bulletin #E-500.	10/10W	10	\$5.00	\$6.90	12/10 Sloping 1/8" φ		\$0.50	\$2.40	11/10W	\$3.60
	10/20W	20	5.00	6.90	12/20 Sloping 1/8" φ		0.50	2.40	11/20W	3.60
	10/30W	30	5.00	6.90	12/30 Sloping 3/32" φ		0.50	2.40	11/30W	3.60
<b>ERSA MODEL 30 20 WATTS-30 WATTS-40 WATTS</b> For radio, television and electronics—heating up time 2 min.—elements and copper bits easily exchangeable. Tip shank dia. 1/8" for all, 3/4" x 1/2" for S-bit. Bit temperatures 340°C—360°C—390°C. 5 foot cable & plug. 110 volts std. (220 volts special). Weight approx. 7 3/4 ozs. Length 7 3/4". Equipped with hex. shield. For more details ask for Bulletin #E-200.	30K/20W	20	\$5.75	\$7.75	32K/20		\$0.50	\$2.50	31/20W	\$3.75
	30K/30W	30	5.75	7.75	32K/20		0.50	2.50	31/30W	3.75
	30J/30W	30	5.75	7.75	32J/30		0.50	2.50	31/40W	3.75
	30S/30W	30	5.75	7.75	32S/30		0.50	2.50		
	30K/40W	40	5.75	7.75	32K/40		0.50	2.50		
	30J/40W	40	5.75	7.75	32J/40		0.50	2.50		
	30S/40W	40	5.75	7.75	32S/40		0.50	2.50		
<b>ERSA MODEL 80A 80 WATTS</b> For assembly line and repair shops. Equipped with a New Type Element with high quality steel core, maximum heat transfer, longer life. Heating up time 2 1/2 minutes. Tip 3/4" O.D. Bit temperature 440°C (824°F). 5 foot cable and plug. 110 volts standard (220 volts special). Weight approx. 1 lb. Length 11". For more details ask for Bulletin #E-300.	80AJ/80W	80	\$11.35	\$15.05	82J		\$0.85	\$4.55	81A/80W	\$4.3
	80AK/80W	80	11.35	15.05	82K		0.85	4.55		
	80AL/80W	80	11.85		82L		1.35			
	80AH/80W	80	11.85		82H		1.35			
	80AS/80W	80	11.85		82S		1.35			
<b>ERSA MODEL 150A 130 WATTS</b> For assembly line, repair and workshops—equipped with a New Type Element with high quality steel core, maximum heat transfer, longer life. Heating up time 2 1/2 minutes. Tip 3/4" O.D. Bit temperature 470°C (878°F). 5 foot cable and plug. 110 volts standard (220 volts special). Weight approx. 1.2 lbs. Length 11". For more details ask for Bulletin #E-300.	150AJ/130W	130	\$14.10	\$18.80	152J		\$1.10	\$5.80	151A/130W	\$5.7
	150AK/130W	130	14.10	18.80	152K		1.10	5.80		
	150AL/130W	130	15.40		152L		2.45			
	150AH/130W	130	15.40		152H		2.45			
	150AS/130W	130	15.40		152S		2.45			
<b>ERSA ISOTYPE SPECIAL SAFETY INSULATED SOLDERING IRONS 65 WATTS and 90 WATTS</b> For work on Live television and telecommunication installations. Element of non-corrosive special steel, not exchangeable, fixed into housing. Plastic handle. 6 1/2 foot cable—no plug. 110 volts standard (220 volts special). Weight approx. 20 ozs. and 25 ozs. respectively. Length about 11 1/2".	KZ/65W	65	\$22.20		62KZ		\$1.35			
	JZ/65W	65	22.20		62JZ		1.35			
	KZ/90W	90	23.75		82KZ		1.90			
	JZ/90W	90	23.75		82JZ		1.90			

**ERSA CONTROL TRANSFORMER MODELS R30 AND R10**



R30  
R10

Both transformer models have a primary voltage regulator for 110, 125, 150, 220 and 240 volts. The secondary voltage is also variable within the range of 5 to 6.5 volts, thus making it possible to select a temperature range between 240 to 480°C. When not in use, the ERSR iron rests on a special nozzle provided on the transformer. This protects against overheating.

Control Transformer R10 was solely made for use with the ERSR-MINIATURE Iron Model 10W. The R30,

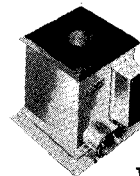
with a greater output, permits universal use of all the various ERSR irons with their different capacities.

Price  
 MODEL R30, rated 30 VA, 5.1# ..... \$25.00  
 MODEL R10, rated 10 VA, 3.5# ..... \$15.00

**T2 SOLDERING BATH**

Rated 240 watts, temp. approx. 600°C. Holds approx. 23 cc, internal dimen. 1 1/8" dia. x 1 1/2". Weight with cord 3 lbs. 5 foot cord and plugs, switch. (Other solder pots available.)

PRICE \$25.00



T2

**'ERSADUR'-DURABLE IRON-CLAD COPPER BITS**

Made of pure electrolytic copper with an iron coating. Soldering surface of bit pre-tinned ready for use. Shaft is chromium plated to prevent baking in. ERSADUR bits in normal use last for more than 100,000 solderings. Ask for Bulletin on ERSADUR.

**AFTER EQUAL SERVICE TIME**



TREATED      UNTREATED



**DESIGN** IN-DUS-TRONIC tools are more streamlined, with slender jaws and fine points, to reach into the tight spots and perform the specific work required of the electronics technician.

**TEST AND INSPECTION** Individually tested for hardness, each tool must maintain highest standards for handle strength and cutting ability. To assure perfect jaw alignment, pliers must cleanly cut single bond paper strips and snip cotton-covered lamp cord without fraying. Each tool is guaranteed against defects in workmanship and materials.

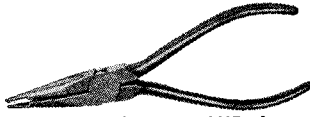
**WORKMANSHIP** IN-DUS-TRONIC tools are hot drop-forged from special analysis alloy steel, machined and finished with the same care and precision which have made world-famous BOKER TREE BRAND Fine Cutlery and surgical instruments for over a century. Individually fitted and adjusted, each is accurately heat-treated by HYDRIZING, which minimizes "carburization" and "decarb". Cutting blades are precision-hardened with electronic controls, and honed by hand for keen edges that retain their sharpness.

Individually Boxed

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**RADIO AND TV NOSE CUTTING PLIERS**

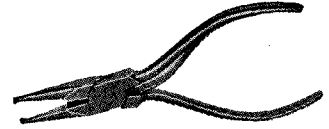
Reaches into tight spots to cut small wires, and to grip at the tips.



NO.	LIST EA.	NO.	LIST EA.
539-4½"	3.95	639-4½"	4.35
539-6"	3.95	639-6"	4.35
939-4½"	4.00	739-4½"	4.45
939-6"	4.00	739-6"	4.45

**TRANSVERSE END CUTTING PLIERS**

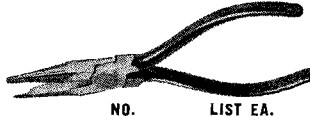
For clean, flush cutting of small wires where ordinary cutters are too bulky.



NO.	LIST EA.	NO.	LIST EA.
532-6"	4.00	632-6"	4.15
932-6"	4.00	732-6"	4.35

**SIDE TIP NOSE CUTTING PLIERS**

Cuts flush at left side of tips. Turn tool over to cut flush at right side.



NO.	LIST EA.	NO.	LIST EA.
5539-4½"	4.20	5639-4½"	4.60
5539-6"	4.20	5639-6"	4.60
9539-4½"	4.25	5739-4½"	4.75
9539-6"	4.25	5739-6"	4.75

**SHORT JAW, LONG HANDLE NOSE CUTTING PLIERS**

Extra long, narrow handles provide maximum reach of the slender jaws to cut and grip.



NO.	LIST EA.	NO.	LIST EA.
579-8"	4.35	679-8"	4.85
979-8"	4.30	779-8"	4.95

**STOCK NUMBER CODE IDENTIFICATION ON PLIERS**

First Digit in Pliers Stock No.

DESCRIPTION OF FINISH

"5"	Polished Head, Standard Gunmetal Finish Handles — i.e.	51-6"
"8"	Polished Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	91-6"
"6"	Fully Nickel and Chrome Plated Head and Handles — i.e.	61-6"
"7"	Nickel and Chrome Plated Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	71-6"

**SHORT CHAIN NEEDLE NOSE PLIERS**

Sturdy, tapered jaws provide more positive grip. Checker-milled tips.



WITH SIDE CUTTERS			
NO.	LIST EA.	NO.	LIST EA.
53-5"	3.30	63-5"	3.75
93-5"	3.30	73-5"	3.85
WITHOUT SIDE CUTTERS			
NO.	LIST EA.	NO.	LIST EA.
530-5"	2.80	630-5"	3.15
930-5"	2.80	730-5"	3.30

**DIAGONAL CUTTING PLIERS**



NO.	LIST EA.	NO.	LIST EA.
51-4½"	2.95	61-4½"	3.40
91-1½"	2.95	71-4½"	3.50
51-5"	3.20	61-5"	3.65
91-5"	3.20	71-5"	3.75
51-5½"	3.45	61-5½"	3.90
91-5½"	3.45	71-5½"	4.00
51-6"	3.60	61-6"	3.75
91-6"	3.60	71-6"	4.15
51-7½"	3.95	61-7½"	4.40
91-7½"	3.95	71-7½"	4.50

**LONG CHAIN NEEDLE NOSE PLIERS**

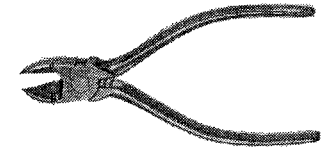
Slender, checker-milled jaws taper to ½" at tips.



WITH SIDE CUTTERS			
NO.	LIST EA.	NO.	LIST EA.
53-6"	3.60	63-6"	4.05
93-6"	3.60	73-6"	4.15
WITHOUT SIDE CUTTERS			
NO.	LIST EA.	NO.	LIST EA.
530-6"	2.85	630-6"	3.20
930-6"	2.85	730-6"	3.35

**WIRE STRIPPING CUTTERS WITH INSULATION CRUSHER**

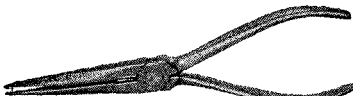
"W" notches slit acetate cellulose and other thin insulations. Notch in blades strips heavier insulation. Grooves in handles crush insulation.



NO.	LIST EA.
517-5½"	4.15
917-1½"	4.20
617-5½"	4.50
717-5½"	4.70

**EXTRA LONG CHAIN NOSE PLIERS**

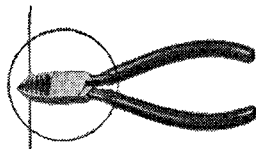
2¾" long jaws add extra reach to checker-milled tips.



WITH SIDE CUTTERS			
NO.	LIST EA.	NO.	LIST EA.
53-7"	4.35	63-7"	4.80
93-7"	4.35	73-7"	4.90
WITHOUT SIDE CUTTERS			
NO.	LIST EA.	NO.	LIST EA.
530-7"	3.25	630-7"	3.60
930-7"	3.25	730-7"	3.75

**"THROAT-HOLD" DIAGONAL PLIERS**

Plastisol inserts back of the blades tightly grip the cut-off end of wire after cut is made, preventing shorts, machine failures, and eye injuries.

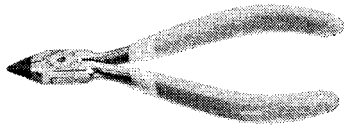


NO.	LIST EA.	NO.	LIST EA.
TH51-4½"	4.50	TH91-5"	4.75
TH91-4½"	4.50	TH51-7½"	5.65
TH51-5"	4.75		

**HEAVY DUTY DIAGONAL CUTTING PLIERS**

NO.	LIST EA.	NO.	LIST EA.
591-7"	3.50	691-7"	4.00
991-7"	3.70	791-7"	4.20





NO. XC1-4" Cushion Grip Handles LIST EA. \$20.60

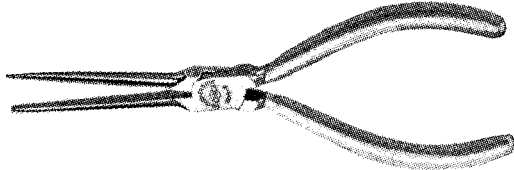
**NEW! INLAID TIP CUTTING PLIERS**

Special high-speed inserts provide diamond-honed cutting edges of extreme hardness, extending service life in continuous cutting of abrasive wires and ribbons of nickel, silver, gold and copper. Will cut and dress medium diameters of Nichrome, Kovar, Dumet, and fine diameters of full hard wires. Special joint assembly assures precise cutting of component leads and wires in confined areas.



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**EXTRA FINE FLAT NOSE PLIERS**  
Flat, very thin, smooth jaws, spring tempered.



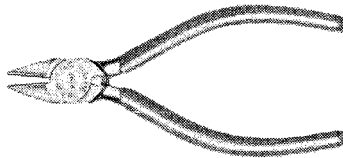
NO.	LIST EA.	NO.	LIST EA.
504-6"	3.70	604-6"	4.10
904-6"	3.70	704-6"	4.10

**WITH STABILIZED TIPS**

NO.	LIST EA.	NO.	LIST EA.
ST504-6"	4.10	ST604-6"	4.45
ST904-6"	4.10	ST704-6"	4.50

**NEEDLE POINT DIAGONAL CUTTING PLIERS**

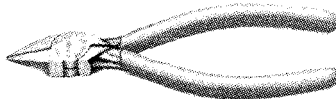
Narrow, pointed nose, semi-flush edges, for close cutting. Lightweight, easy-to-use, in electronics and light assembly. Coil spring keeps jaws open.



NO.	LIST EA.	NO.	LIST EA.
513-5 1/2"	4.40	613-5 1/2"	4.75
913-5 1/2"	4.40	713-5 1/2"	4.95

**THIN, NARROW, POINTED DIAGONAL CUTTING PLIERS**

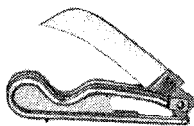
Jaws relief-ground back of blades, to cut in confined areas. Also used for removal of I. F. Cans.



NO.	LIST EA.	NO.	LIST EA.
RA51-5 1/2"	4.75	RA61-5 1/2"	5.30
RA91-5 1/2"	4.75	RA71-5 1/2"	5.30

**WIRE JACK POCKET KNIFE**

Rugged construction, unbreakable spring. Chrome Vanadium steel blade.



NO.	LIST EA.
75-3 3/4"	1.25

**ELECTRICIANS' UTILITY KNIFE**

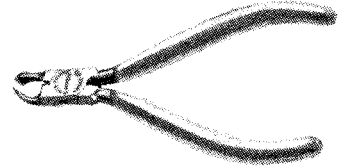
One blade and one self-locking Screwdriver and Insulation Scraper.



NO.	LIST EA.	3 3/4" long
9229	2.50	

**ELECTRONIC DIAGONAL END NIPPERS**

Flush-cutting blades, with extremely fine points, set at 22.5° angle. For very fine subminiature work.



NO.	LIST EA.	NO.	LIST EA.
XA582-4 1/2"	6.25	XA682-4 1/2"	6.50
XA982-4 1/2"	6.25	XA782-4 1/2"	6.60

**ANGLE JAW DIAGONAL NIPPERS**

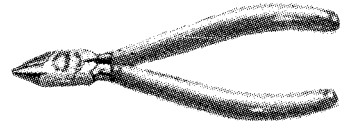


Flush cutting blades set at 22 1/2° angle. Fine, pointed tips for precision work in confined areas.

NO.	LIST EA.
AJ-982-4 1/2"	Polished Head. Cushion-grip Handles. 8.80
AJ-482-4 1/2"	Full Polished Head and Handles. 8.80

**THIN HEAD, FLUSH CUTTING MIDGET DIAGONALS**

Head is ground thinner, narrower. Flush edges.



NO.	LIST EA.	
XA981-4 1/2"	4.20	Pointed jaws
XC981-4 1/2"	3.90	Standard shape jaws, slightly shortened

**THIN, ALLOY STEEL ADJUSTABLE WRENCHES**



Nickel and Chrome Plated		Polished Head, Gunmetal Handles	
NO.	LIST EA.	NO.	LIST EA.
6W-4"	2.68	5W-4"	2.12
6W-6"	2.76	5W-6"	2.20
6W-8"	3.16	5W-8"	2.60
6W-10"	3.90	5W-10"	3.22
6W-12"	5.80	5W-12"	4.90
6W-15"	8.98	5W-15"	7.68
6W-18"	14.80	5W-18"	11.40

Nickel, Chrome-Plated, Cushion-Grip Handles			
NO.	LIST EA.	NO.	LIST EA.
P6W-4"	2.80	P6W-10"	4.62
P6W-6"	2.82	P6W-12"	6.50
P6W-8"	3.70	P6W-15"	9.48

**LOCKING ADJUSTABLE WRENCHES**

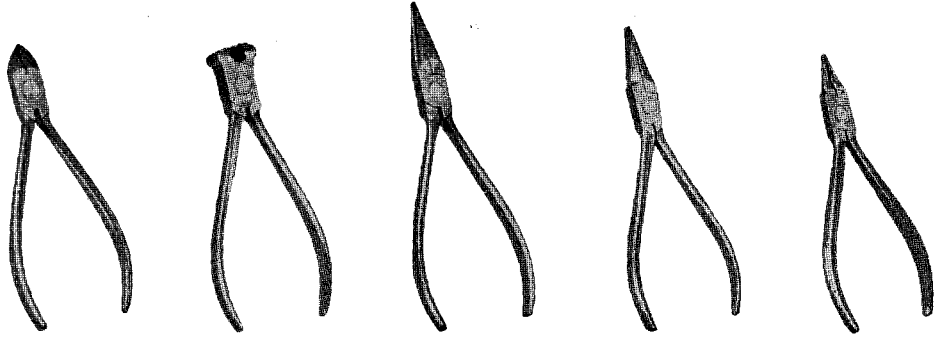
Nickel and Chrome Plated		Nickel Chrome Plated Cushion-Grip Handles	
NO.	LIST EA.	NO.	LIST EA.
L6W-4"	2.68	PL6W-4"	2.80
L6W-6"	2.76	PL6W-6"	2.82
L6W-8"	3.16	PL6W-8"	3.70
L6W-10"	3.90	PL6W-10"	4.60
L6W-12"	5.80	PL6W-12"	6.50

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SECTION 5400



JEWELERS' 4 1/2" PRECISION PLIERS



JEWELERS' PLIERS SETS

Crystal Case, 5" x 7", lined to nest 4 1/2" Pliers.

NO.	CONTENTS	LIST
C63	One ea. 681, 683, 684	11.75
C64	One ea. 681, 683, 684, 6517	14.25
C65	One ea. 681, 682, 683, 684, 865	19.50
C73	One ea. 781, 783, 784	11.85
C93	One ea. 981, 983, 984	10.95
C95	One ea. 981, 982, 983, 984, 985	18.00

POLISHED HEAD, GUN METAL HANDLES

POLISHED HEAD, CUSHION-GRIP HANDLES

FULL NICKEL AND CHROME PLATED

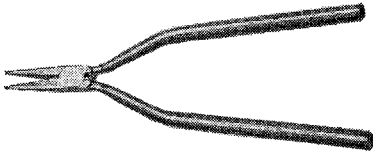
NICKEL, CHROME-PLATED CUSHION-GRIP HANDLES

	Tool No.	List Ea.	Tool No.	List Ea.	Tool No.	List Ea.	Tool No.	List Ea.
Diagonal Cutting Pliers	581	3.25	981	3.25	681	3.50	781	3.60
End Cutting Nippers	582	3.75	982	4.00	682	4.15	782	4.25
*Needle Nose Pliers	583	3.00	983	3.10	683	3.40	783	3.50
*Flat Nose Pliers	584	3.00	984	3.10	684	3.40	784	3.50
*Round Nose Pliers	585	3.00	985	3.10	685	3.40	785	3.50

\*Note: Inside jaws are smooth. Supplied with milled jaws at no extra cost.

PRECISION PLIERS WITH SPRING IN EXTENDED HANDLES

Midget jaws, extra long handles, to reach into deep areas normally inaccessible.

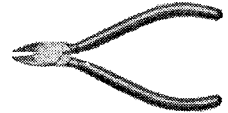


NO.	LIST EA.	DESCRIPTION
L903S-8"	6.25	Extra Fine Needle-Nose Pliers (as 903-4 1/2")
L981S-8"	6.30	Diagonal Cutters
L983S-8"	6.25	Needle-Nose Pliers
L984S-8"	6.25	Flat-Nose Pliers
L781S-8"	6.50	Diagonal Cutters
L783S-8"	6.50	Diagonal Cutters
L784S-8"	6.50	Needle-Nose Pliers
L785S-8"	6.50	Flat-Nose Pliers
L703S-8"	6.50	Extra Fine Needle-Nose Pliers (as 703-4 1/2")

TAPERED JAWS, FLUSH CUTTING DIAGONALS

Midget pliers with sharply tapered jaws and very fine flush cutting edges.

NO.	LIST EA.
A981-4 1/2"	3.75



STANDARD SHAPE JAWS, FLUSH CUTTING DIAGONALS

NO.	LIST EA.
C981-4 1/2"	3.45

SHORT NOSE, FLUSH CUTTING DIAGONALS

NO.	LIST EA.
E981-4 1/2"	3.65

STOCK NUMBER CODE IDENTIFICATION ON PLIERS

First Digit in Pliers Stock No.

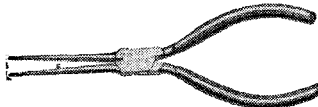
- "5"
- "9"
- "6"
- "7"

DESCRIPTION OF FINISH

Polished Head, Standard Gunmetal Finish Handles — i.e.	51-6"
Polished Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	91-6"
Fully Nickel and Chrome Plated Head and Handles — i.e.	61-6"
Nickel and Chrome Plated Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	71-6"

EXTRA FINE NEEDLE NOSE PLIERS WITH STABILIZED TIPS

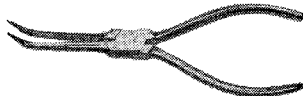
Dowel pin in jaw engages hole in other jaw when closed, stabilizing tips and maintaining perfect alignment.



NO.	LIST EA.	NO.	LIST EA.
ST903-6"	3.75	ST703-6"	4.20

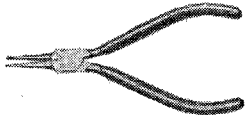
CURVED EXTRA FINE NEEDLE NOSE

NO.	LIST EA.
508-6"	4.05
908-6"	4.10
608-6"	4.40
708-6"	4.60



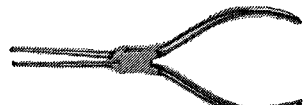
SHORT JAW, EXTRA FINE NEEDLE NOSE PLIERS

NO.	LIST EA.
503-4 1/2"	3.25
903-4 1/2"	3.25
603-4 1/2"	3.60
703-4 1/2"	3.75



EXTRA FINE NEEDLE NOSE PLIERS

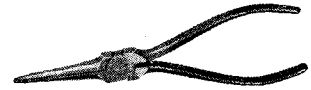
Long, very slim, spring tempered jaws for assembling miniature parts.



NO.	LIST EA.	NO.	LIST EA.
503-6"	3.25	603-6"	3.60
903-6"	3.25	703-6"	3.75

LONG NEEDLE NOSE PLIERS

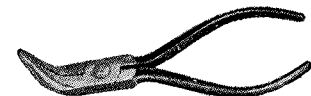
Unusual gripping ability without distortion for such long, slender jaws. Checker-milled at tips.



No.	LIST EA.	No.	LIST EA.
533-6"	3.30	633-6"	3.65
933-6"	3.30	733-6"	3.80

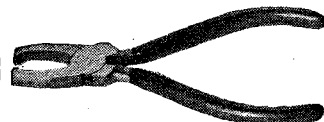
CURVED NEEDLE NOSE PLIERS

NO.	LIST EA.
538-6"	3.65
938-6"	3.65
638-6"	4.00
738-6"	4.15



END CUTTERS AND LEAD-IN STRIPPERS

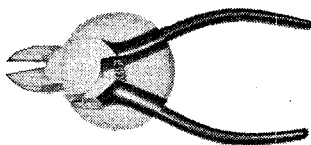
Quickly strips TV transmission cable. Full throat for general purpose cutting.



NO.	LIST EA.	NO.	LIST EA.
902-6"	4.20	702-6"	4.75
602-6"	4.65		

**PLIERS WITH SPRING IN HANDLES**

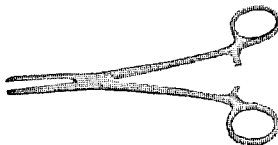
Bauer type coil spring keeps pliers in open position, ready-to-work.



Specify "S" as a Suffix to tool number (i.e., 91S-5")  
Additional List Ea. .30

**HOLDING FORCEPS**

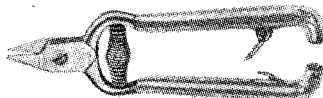
Slender, long-reaching, with ratchet type lock. Acts as third hand, and as heat sink. Box joint, polished stainless spring steel.



NO.	LIST EA.	
HF-5 1/4"	4.80	Straight Pattern
HF-6 1/4"	4.95	Straight pattern
HFC-6 1/4"	5.25	Curved pattern

**ELECTRONIC SNIPS**

Pointed, serrated blades cut wire, filament, sheet metal, insulating materials, plastics, fabrics. Spring keeps blades open, ready-to-work.



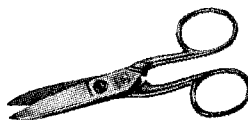
NO.	LIST EA.	
P4-7 1/8"	3.75	Long Blades
P4E-6 1/2"	4.45	Short Blades

**ELECTRICIANS' SNIPS**

Scraper, file on back of blade.

NO.	LIST EA.
709-5"	2.75

Nickel Plated



**SHORT JAW, LONG HANDLE, NEEDLE NOSE PLIERS**



NO.	LIST EA.	NO.	LIST EA.
573-8"	3.35	673-8"	3.75
973-8"	3.35	773-8"	3.85

**SHORT JAW, LONG HANDLE DUCKBILL PLIERS**

No.	LIST EA.	No.	LIST EA.
574-8"	3.30	974-8"	3.30

**ELECTRICIANS' SIDE CUTTING PLIERS**

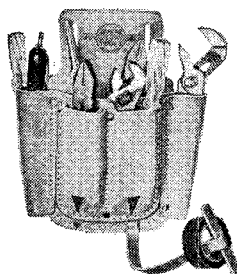


NO.	LIST EA.	NO.	LIST EA.
92-6"	3.40	52-6"	3.25
92-7"	3.80	52-7"	3.75
92-8"	4.15	52-8"	4.10

**LEATHER TOOL HOLSTER**

Five pockets of pliable form-fitting Russet leather. Stitched with 7-cord linen hot waxed thread, locked to solid leather back with steel rivets. Handy tape holder is of leather, not chain, an extra safety insulation feature.

NO.	LIST EA.
99	5.25



**MIDGET "GROOVE-GRIP" PLIERS**

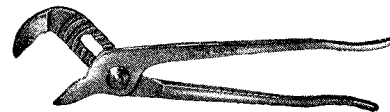
Slender and wiry, indispensable for gripping small nuts and other objects in tight spots.



NO.	LIST EA.
6517-5"	2.40
P6517-5"	2.50

Nickel, Chrome Plated  
Nickel, Chrome Plated,  
Cushion Grips

**"GROOVE-GRIP" 5-ADJUSTMENT PLIERS**



NO.	LIST EA.
6507-6 1/2"	2.80
6507-8"	3.00
6507-10"	3.40
P5507-6 1/2"	2.75
P5507-8"	3.00
P5507-10"	3.25
P5507-14" 7 Adjustment	4.40

Nickel and Chrome Plated  
Polished Head  
Cushion-Grip Handles

**COMBINATION SLIP-JOINT PLIERS**



NO.	LIST EA.
6041-6 1/2"	1.60
6041-8"	1.95
6041-10"	2.80

Nickel and Chrome Plated

**THIN NOSE COMBINATION PLIERS**



NO.	LIST EA.
6042-6 1/2"	1.70

Nickel, Chromed

**BENT THIN NOSE COMBINATION PLIERS**



NO.	LIST EA.
6043-6 1/2"	2.00

Nickel, Chromed

**PROFESSIONAL SLIP-JOINT SIDE CUTTERS**

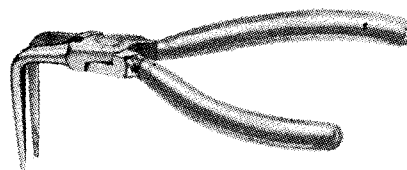
Flat, serrated nose for gripping. Curved inner section to grip round shapes. Keen-cutting knives.



NO.	LIST EA.
6395-7 1/2"	3.95

Nickel, Chromed

**BENT EXTRA FINE NEEDLE NOSE PLIERS**



NO.	LIST EA.
B508-6"	4.05
908-6"	4.10

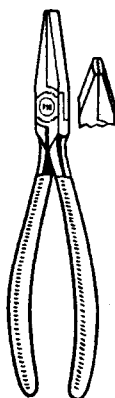
NO.	LIST EA.
P608-6"	4.40
B708-6"	4.60

*Pliers by*

**CHAN NEL LOCK**®

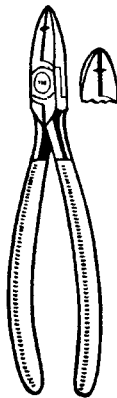
**Specially Designed ELECTRONICS PLIERS**

You'll do hundreds of jobs easier, faster with these Channellock Pliers because they are **specially designed** for all types of electronics work. You'll like the long reach . . . the precision-matched jaws . . . the hand-honed, specially hardened cutting edges . . . the easy-to-handle "feel" of the blue plastic grips. And you'll appreciate the top quality of Channellock Pliers . . . they're forged from high grade steel, properly heat treated. Best of all, because they are specially designed for fine electronics work, these four pliers will satisfy more than 90% of your Service and Repair needs. Ask your Electronics Equipment Supplier for Channellock Electronics Pliers . . . by name.



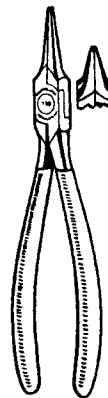
**No. 718G  
FLAT-NOSE  
PLIER**

Watchmaker's precision PLUS a bull-dog grip in hard-to-reach places.



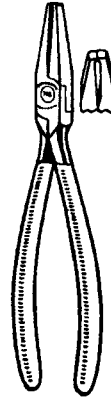
**No. 728G  
DIAGONAL  
CUTTER**

A wire-stripping notch (Patent Pending) that **really works!**



**No. 738G  
ROUND-NOSE  
PLIER**

You can **pick up a human hair** with these precision-machined points.



**No. 748G  
END  
CUTTER**

Fine enough to cut a human hair — sturdy enough to cut 12 gauge copper wire.

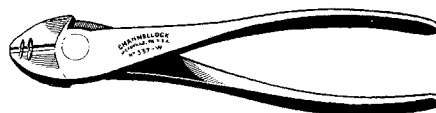
**TONGUE AND GROOVE PLIERS**



The **original** tongue and groove pliers. Patented, non-slip undercut channels. Patented reinforcing rib for extra strength. Dipped plastic grips optional at slight extra cost.

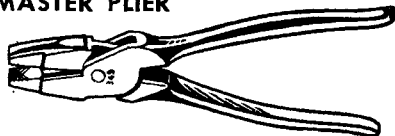
No.	Size	Capacity	No.	Size	Capacity
420	9 1/2"	1 1/2"	430	10"	2"
424	4 1/2"	1/2"	440	12"	2 1/4"
426	6 1/2"	1/8"			

**ELECTRICIAN'S WIRING PLIER**



Triple-use wiring plier: cuts, strips insulation, loops wire. Patented wire stripping notches strip insulation from 14 and 12 gauge wire quickly, cleanly. Length 7". No. 337-W. Dipped plastic grips optional at slight extra cost.

**WIREMASTER PLIER**



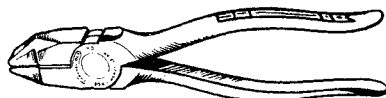
Finest wire-cutting plier ever made. Joint rivet closer to cutting edges, provides 40% more cutting power than standard design pliers. Special enclosed-joint construction holds cutter in perfect alignment for life of plier. Length 9". No. 349. Dipped plastic grips optional at slight extra cost.

**HEATSORB CLAMP**



A specially designed "heat sink" that prevents heat damage to electronic components during soldering. Also a handy, self-gripping "third hand" that holds and retrieves small parts in close work. Length 5". No. 46.

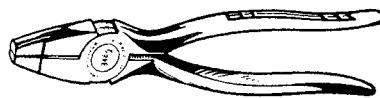
**LINEMEN'S PLIER — Bevel Nose**



Polished steel finish. Knurled grips. Side cutter. Dipped plastic grips optional at slight extra cost.

No.	Size	No.	Size
3046	6"	3048 1/2	8 1/2"
3047	7"		

**LINEMEN'S PLIER — Rounded Nose**



Polished steel finish. Knurled grips. Side cutter. Dipped plastic grips optional at slight extra cost.

No.	Size	No.	Size
346	6"	348 1/2	8 1/2"
347	7"		

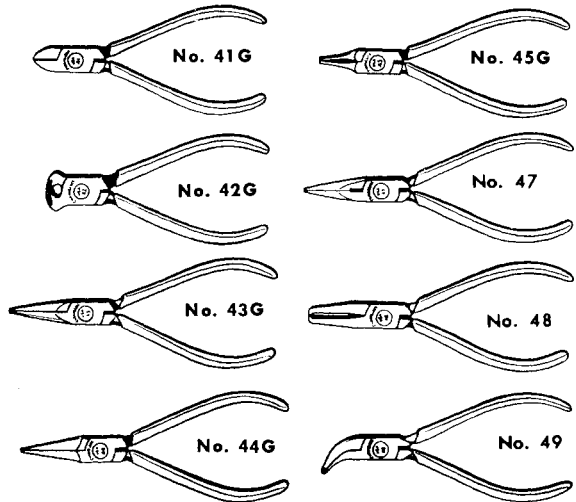
**CHANNELLOCK TOOLS Are Made Only By CHANNELLOCK, INC. • Meadville, Pa.**

# Pliers by CHANNEL LOCK®

## Little Champ PRECISION PLIERS

Finest quality, small pliers specially designed for delicate bench work. Widely used in electronics work, model making, jewelry and watch repair. Drop forged from high grade steel. Precision made and polished to a jeweler's finish. Dipped blue plastic cushion grip handles only. Packed six per carton.

No.	Style	Length
41G	Diagonal Cutter	4 1/4"
41GS	Diagonal Cutter, Coiled Spring	4 1/4"
42G	End Cutting Nipper	4"
43G	Needle Nose, No Side Cutter, Plain Nose	4 3/4"
43GS	Needle Nose, No Side Cutter, Plain Nose, Coiled Spring	4 3/4"
44G	Flat Nose	4 3/4"
45G	Round Nose	4 1/2"
47G	Needle Nose, Side Cutter, Nose Serrations	4 3/4"
47GS	Needle Nose, Side Cutter, Nose Serrations, Coiled Spring	4 3/4"
48G	Transverse End Cutter	4 3/4"
49G	Curved Needle Nose	4 1/2"



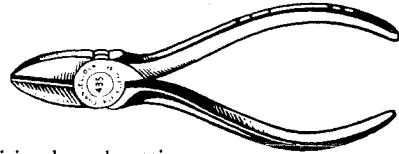
### LONG NOSE PLIER



Point 3/32" round. Polished steel finish. Knurled grips. Dipped plastic grips optional at slight extra cost.

No.	Size	Side-Cutter	No.	Size	Side-Cutter
317 1/2	7 1/2"	With	326	6"	With
3017 1/2	7 1/2"	Without	3026	6"	Without

### DIAGONAL CUTTING PLIER



Precision-honed cutting edges. Polished steel finish. Knurled grips. Dipped plastic grips optional at slight extra cost.

No.	Size	No.	Size
435	5"	437	7"
436	6"		

### ELECTRICIAN'S KNIFE



2 1/2" precision-honed blade. 3" self-locking screwdriver. Unbreakable phenolic handles. Closed length 3 3/4" No. 11.

### SKINNING KNIFE



3" precision-honed blade. Self-locking. Unbreakable phenolic plastic handles. Closed length 4" No. 10.

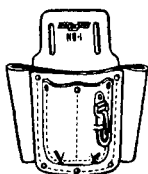
### "SUPERIOR" PLASTIC GRIPS



For maximum hand comfort, durable plastic grips. Light blue color for good visibility, reduces plier loss. Easy to install. Order by desired grip size:

Plier Size	Grip Size	Plier Size	Grip Size
6"	Small	8", 9 1/2", 10"	Large
7"	Medium		

### TOOL HOLSTERS



Highest quality top grain leather. Stress points reinforced with rivets. Convenient knife or wrench snap.

No.	Size	No. of Pockets
1	9 1/4" x 8 1/2"	5
2	9 1/4" x 10 1/2"	5

### ADJUSTABLE WRENCHES



Drop forged of special analysis steel. Chrome plated. Dipped plastic grips optional at slight extra cost.

No.	Size	Capacity	No.	Size	Capacity
804	4"	1/2"	810	10"	1 1/8"
806	6"	3/4"	812	12"	1 13/16"
808	8"	1 1/16"	815	15"	1 11/16"

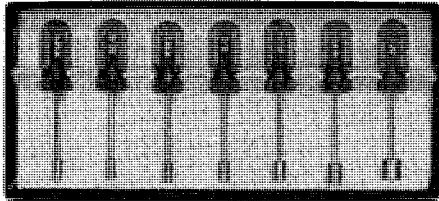
CHANNELLOCK TOOLS Are Made Only By CHANNELLOCK, INC. • Meadville, Pa.



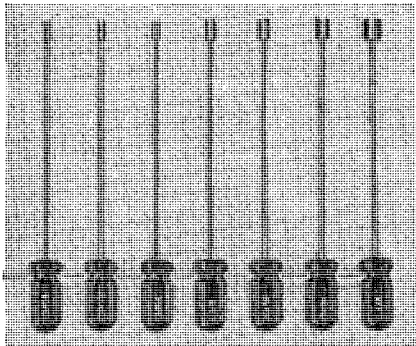
**PROPERLY PROPORTIONED MINIATURE TOOLS**

For precision instrument and model work use Desco "7" Miniature Nut Drivers. Available with Tenite handles, or for use with jewelers' screw driver handles. Also made with 5½" long shanks for those hard-to-get-to places.

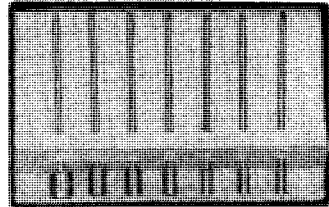
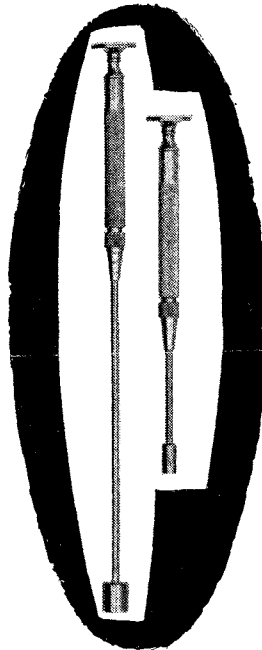
DESCO "7" Sizes across flats  
 $\frac{5}{64}$   $\frac{3}{32}$   $\frac{7}{64}$   $\frac{1}{8}$   $\frac{5}{32}$   $\frac{3}{16}$   $\frac{1}{4}$



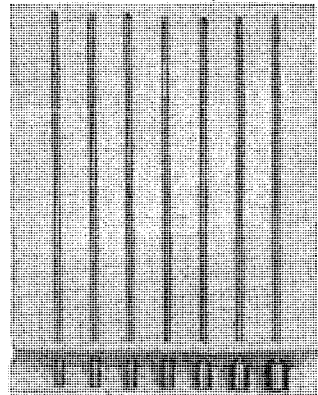
Set HS 7 List \$5.95



Set HL 7 List \$5.95



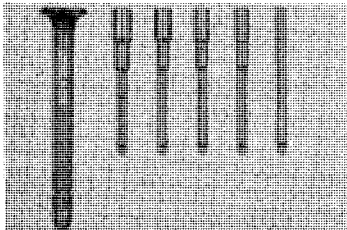
Set JS 7 List \$4.95



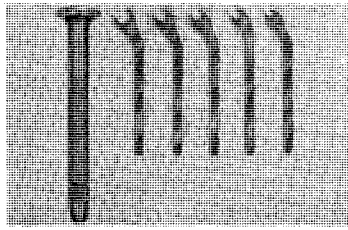
Set JL7 List \$4.95

**NON-MAGNETIC NUT DRIVERS available in HL7 and HS 7 series only. Specify "No-Mag" with the code number — same prices.**

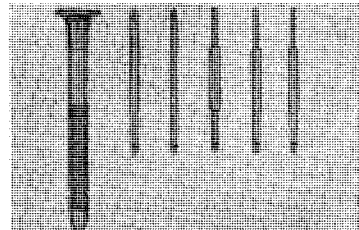
**INTRODUCING THE DESCO "5" Series of Miniature Tools**



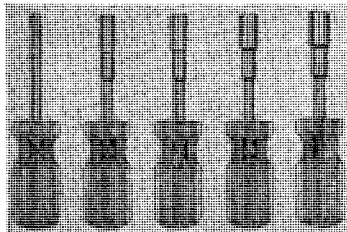
Set JD 5 List \$3.50



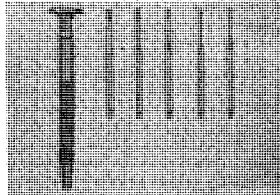
Set EW 5 Steel List \$2.50  
 Set EWN 5 Non-Magnetic List \$2.50  
 A practical miniature end wrench to fit the smallest nuts made  $\frac{5}{64}$   $\frac{3}{32}$   $\frac{7}{64}$   $\frac{1}{8}$   $\frac{5}{32}$ .



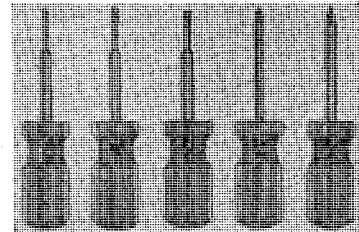
Set PA 5 List \$2.50



Set HD 5 List \$4.50  
 Deeper and more rugged than the "7" Series. Made only in  $\frac{5}{64}$ ,  $\frac{3}{32}$ ,  $\frac{7}{64}$ ,  $\frac{1}{8}$  and  $\frac{5}{32}$ .



Set SS 5 List \$1.98  
 Contains four screw driver blades and a fine scribe.



Set PAH 5 List \$3.50  
 Includes the two smallest Phillips drivers and the three smallest Allen wrenches.

\* T. M.

All of the DESCO "5" and "7" Series are complete as shown.

**DESCO MFG. CO.,**  **GLENDALE, CALIF.**

*Made to last  
under  
constant use*

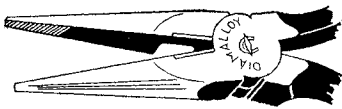
Designed to meet Industrial Users requirements . . . electronically hardened and hand honed cutting edges stay sharp longer . . . remain snug and true on the points . . . firm joints exactly fitted to resist wear. Available with or without coil springs or plastic handles.

Ask your industrial or electronic distributor for Diamalloy Pliers or write for a Diamond Tool catalog.

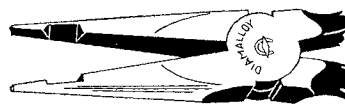
*"There is nothing finer than a DIAMOND"*

# ELECTRONIC PLIERS *by* **DIAMALLOY**

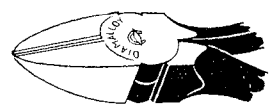
STYLES FOR MANY JOBS . . .



Long Nose Side Cutting Plier—SN54, SN56, SN57.



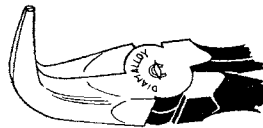
Radio Ignition Long Nose Plier—SC54.



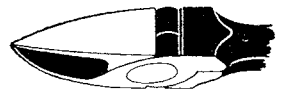
Diagonal Cutting Plier—MS54, S54, S55, S56, S57.



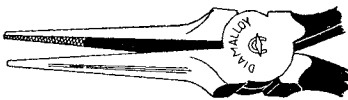
Long Nose Plier—LN54, LN56, LN57.



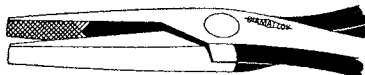
Curved Long Nose Plier—CN54, CN56.



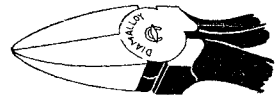
Diagonal Cutting Plier (Flush ground-Tapered Nose)  
—MS54RG, S54RG, S55RG, S56RG, S57RG.



Needle Nose Plier — NN54, NN56, NN57



Long Nose Duck Bill Wiring Plier—DB58.



Wire Stripper Diagonal Plier—ST55.



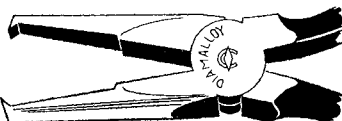
Duck Bill Plier—DN54, DN56.



End Cutting Long Nose Plier—LC56.



Stub Nose Diagonal Plier—MS54SF.



Transverse End Cutting Plier—EC54.



End Cutting Long Nose Plier (Angle Cut)  
—LC56 Angle Cut.



**DIAMOND TOOL** *and Horseshoe Co.*

DULUTH, MINNESOTA • TORONTO, ONTARIO EST. 1908







# Norseman ELECTRONIC TOOLS

### STICKLE-BACK DRILSAWS

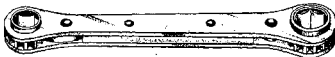
Made in Germany, this tool will drill holes in wood, plaster board, etc. and saw in any direction.



#0-5 x 5/32" dia. ....	\$.98 net
#1-7 x 3/16" dia. ....	1.85 net
#2-10 x 1/4" dia. ....	2.45 net
#3-13 x 5/16" dia. ....	2.95 net
#4-15 x 3/8" dia. ....	3.25 net
#5-13 x 1/2" dia. ....	2.25 net (saw rasp)

### REVERSIBLE RATCHETS

A rugged ratcheting box wrench. No buttons, no levers — just turn it over to reverse the ratchet.

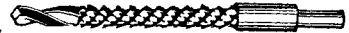


1/4" x 5/16" ..... \$2.35 net	5/8" x 11/16" ..... \$3.90 net
3/8" x 7/16" ..... 2.65 net	5/8" x 3/4" ..... 3.90 net
1/2" x 9/16" ..... 3.60 net	3/4" x 7/8" ..... 4.50 net

### DRILL ROUTERS

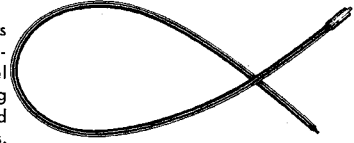
Another "Stickle-back" tool, similar to the Drilsaw, but for use in electric drills.

#318-1 2 3/8" x 1/4" dia. ....	\$1.40 net
#318-2 4 1/2" x 1/4" dia. ....	1.60 net



### TIPPY STICKS

Flexible alignment tools of tenite II with a non-magnetic stainless steel tip. Permits snaking around obstructions and still turn screws and slugs.



ST-186 6" long .....	.40 net
ST-1810 10" long .....	.45 net
ST-1814 14" long .....	.50 net

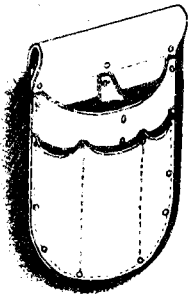
### TRI-TAPS

The original 3-in-1 tool with 6/32", 8/32" and 10/32" taps to clean or cut three of the most common threads used in electronic work.

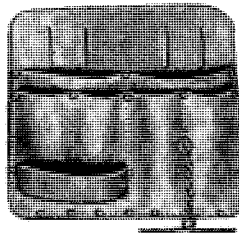


T-3 .....	\$2.25 net	T-4 tap only for HT-24	1.65 net
		HT-24 with replaceable tap.....	\$2.85 net

### TOOL POUCHES



#14 Telephone lineman's pouch of chrome-tanned cowhide. One large separated pocket with three smaller ones in front. Riveted and stitched with linen thread. 6" x 9 1/4" ..... \$4.95 net



Electrician's Pouch. Bark-tanned top grain cowhide, riveted and stitched with linen thread. 7 pockets, loop for hammer, T-chain for roll of tape.  
#17 10" x 9" ..... \$4.95 net

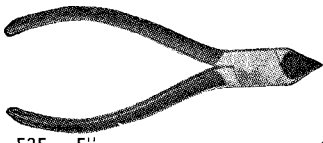
12 OTHER  
POUCHES AVAILABLE



MADE IN ESKILSTUNA, SWEDEN, BY E. A. BERG MFG. CO. LTD. • EST. 1880

Only the best Swedish Charcoal Steel is used in the manufacture of Berg Pliers. Produced under exacting standards of control, they embody the most modern techniques of heat treatment and manufacture. Each plier is carefully engineered and designed to afford the greatest practical utility, lightness and ease of operation; and strength coupled with durability.

Special Electronic Diagonal Cutting Pliers with extra thin cutting edges, pointed nose and BOX JOINT



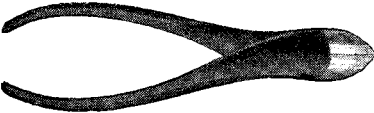
No. 525 - 5" ..... 4.95

ANGLE NOSE Diagonal Cutting Pliers



No. 2528 ..... 6 1/2" 4.25 7 1/2" 4.95

PIANO WIRE Diagonal Cutting Pliers



No. 1528 ..... 4 1/2" 2.95 5 1/2" 3.65 6 1/2" 4.15 7 1/2" 4.65

PIANO WIRE Side Cutting Nippers with replaceable blades



No. 1518 ..... 9" 6.50 10" 7.50  
Extra Blades ..... 9" 2.30 10" 2.55

PIANO WIRE End Cutting Nippers with replaceable blades



No. 1519 - 9" ..... 8.50  
Extra Blades ..... 2.90

PIANO WIRE End Cutting Nippers



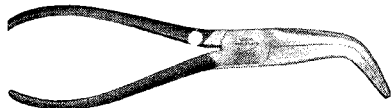
No. 527 ..... 6" 3.50 7" 3.95  
50 OTHER SIZES AND TYPES AVAILABLE

Straight Cutting Pliers with extended jaws



No. 1529 - 6 1/2" ..... 3.95

Special Bent Nose Pliers



No. 2533-B - 8" ..... 4.95

Curved Nose Pliers



No. 1631 - 5 1/2" ..... 3.85

ERIKSON SPECIALIZED TOOL COMPANY, PICO RIVERA, CALIF.

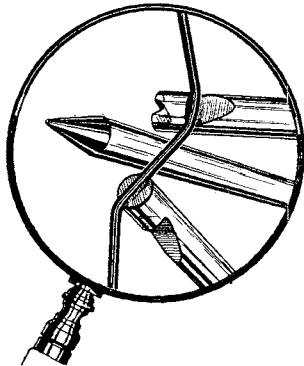


# Norseman ELECTRONIC TOOLS

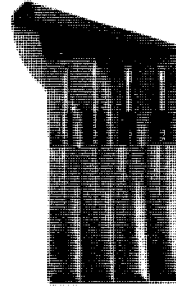
### JIGGLE STICKS

Probes of Lucite, 1 end forked for pushing other end pointed for probing, notched on side for pulling wires.

PR 532-6 5/32" dia. .30 net  
PR 316-8 3/16" dia. .35 net



### NORSEMAN SOLDERING AID KIT



MTSA-4 miniature soldering aid kit with 4 tools M2T, M3T, M4T, M5T in vinyl kit complete .....\$4.35 net

Vinyl plastic kit, packed with 4 Norseman Soldering Aids (TN-22, TN-33, TN-44, TN-55) as illustrated.  
TNSA-4 complete kit .....\$4.35 net

Kit with 4 Norseman Soldering Aids with unbreakable aluminum handles (AL-22, AL-33, AL-44 & AL-55).  
ALSA-4 complete kit .....\$4.35 net

## NORSEMEN SOLDERING AIDS

ERIKSON PICO-CALIF. TN-22

**Red Handle**

TN-22 Tenite II Handle .....7 7/8" Long.....\$ .75 net  
M2T Tenite II Handle .....5 1/4" Long.....\$ .75 net  
AL-22 Aluminum Handle.....7 7/8" Long.....\$ .75 net

ERIKSON PICO-CALIF. TN-44

**Black Handle**

TN-44 Tenite II Handle .....7 1/2" Long.....\$ .90 net  
M4T Tenite II Handle.....5 1/4" Long.....\$ .90 net  
AL-44 Aluminum Handle .....7 1/2" Long.....\$ .90 net

ERIKSON PICO-CALIF. TN-33

**Green Handle**

TN-33 Tenite II Handle .....7 5/8" Long.....\$ .75 net  
M3T Tenite II Handle .....5 1/4" Long.....\$ .75 net  
AL-33 Aluminum Handle .....7 5/8" Long.....\$ .75 net

ERIKSON PICO-CALIF. TN-55

**Blue Handle**

TN-55 Tenite II Handle .....6 3/4" Long.....\$ .90 net  
M5T Tenite II Handle.....5 1/4" Long.....\$ .90 net  
AL-55 Aluminum Handle .....6 3/4" Long.....\$ .90 net

**PLASTIC HANDLES**—(TN-22, TN-33, TN-44, TN-55) (M2T, M3T, M4T, M5T) are of Tenite II, hex and will not roll off the work bench. Shock-proof, practically unbreakable and will stand rough use on industrial production lines.

**METAL HANDLES**—(AL-22, AL-33, AL-44, AL-55) are aluminum alloy 4" x 3/8" hex and won't roll off the work bench. Being metal, are NOT SHOCK-PROOF and hence not recommended for ordinary radio-TV service work, especially on a 'live' unit. However, these handles are practically unbreakable and were designed to take rough use on industrial assembly lines and can be used as PRY BARS in lining up components.

**METAL ENDS**—(separated from each other) non-magnetic stainless steel, to which solder won't adhere. Are firmly seated in handles and are twist-proof.

**FORKED END**—straddles the wire and with a slight twist, grips it for easy unwinding and removal, or guides it into another lug for soldering. Since plastic handles act as insulation, there is no danger of shock when working on sets in operation. 1/8" forks are made especially for use on printed circuits and transistors.

**SPADE END**—is a reamer to clean lug holes of solder.

**CURVED END**—can be used as a scribe for marking chassis. As a circuit tracer when looking for loose connections. As a dial cord stringer. Hook can be bent to a 90 degree angle if desired.

**KNIFE & SCRAPER**—for cutting and repairing printed circuits.

**WIRE BRUSH**—has approx. 200 bristles of stainless wire .0035 in dia. to which solder will not adhere. For use in cleaning connections before soldering, brushing out splattered solder and in repairing printed circuits.

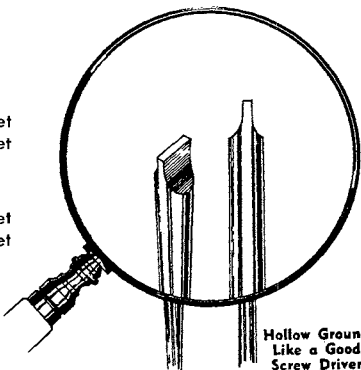
**STAINLESS STEEL WIRE BRUSHES**  
on steel shaft approximately 2" long overall. Can be used in a regular pin vise. **.33 net**  
Packed 25 or 50 per box

### DIDDLE STICKS

Alignment tools —  
Lucite 5/32" dia.  
LU-53210 10" long ...25 net  
LU-53214 14" long ...35 net

Rigid Vinyl 3/16" dia.  
RV-31610 10" long.....25 net  
RV-31614 14" long.....35 net

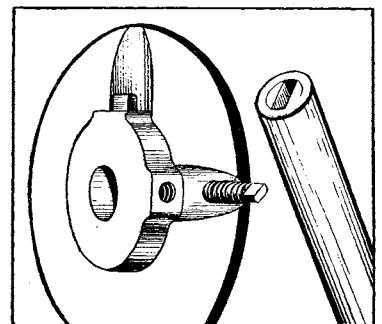
Fibre Glass 1/8" dia.  
FG-1810 10" long....35 net  
FG-1814 14" long....50 net  
FG-1818 18" long....65 net



### SLAB-HEAD DRIVERS

Drivers for SLAB-HEAD screws as used in Delco auto radios, Zenith & Arvin TV and 1956 models of Webcor recorders.

246-P .....\$1.80 net



Clutch Head Screw and Driver

ERIKSON SPECIALIZED TOOL COMPANY, PICO RIVERA, CALIF.



# GC ALIGNMENT TOOLS and Service Aids



**(A) GC DUO-TONGS**—Universal Fuse Pullers . . . They're brand new . . . GC Duo-Tongs, these amazing new nylon fuse pullers will accommodate all kinds and types of fuses, including household screw-in plug type, industrial cartridge fuses up to 3/4" or 100 amp. capacity, as Automotive, Aircraft, Television and Electronic Industries. New GC Duo-Tongs are non-conductive, non-inflammable, and virtually unbreakable thus exceeding all Military Specifications.  
Cat. No. 9356 Net \$ .89

**(B) HEAT SINK**—Protects Transistors and Diodes when Soldering...Lightweight, first quality, firm grip. Aluminum will not stick to solder.  
Cat. No. 9077 Net \$ .36

**(C) NEW 16-OZ. SIZE SPRA-KLEEN**—Works upside down, as well as right-side up! Now servicemen can get to those hard-to-reach places. Stops radio and TV control noise. No need to dis-

mantle the chassis to get at the parts when you use Spra-Kleen. Both cleans and lubricates contacts, controls, relays, switches, and other sliding contact devices in one fast operation.  
Cat. No. 8666-16 Net \$1.95

**(D) GC JIF**—Contact and Control Cleaner . . . Cleans—Lubricates—Long-lasting protection. Jif away noise due to dust, dirt and corrosion on Electronic/Electrical contacts, switches, controls with this NEW siliconized contact-control cleaner. Jif cleans and lubricates plus providing contacts and controls with the longest possible protection. Fast and efficient Jif saves the serviceman time and money in this new three-in-one operation, CLEAN—LUBRICATE—PROTECT. Simply apply and work controls a few times. Jif contains no solvents to harm plastics. Safe, quick, easy to use—Jif will do an excellent job for the serviceman.  
Cat. No. 8670-6 Net \$1.79

**(E) GC RULER AND TUBE PIN STRAIGHTENER**—Unique, double purpose service aid . . . This new GC item will prove to be the serviceman's constant companion. A plastic 6" ruler and a Tube Pin Straightener to accommodate Compactron, Large 7 Pin, 9 and 10 Pin, and 7 Pin Tubes.  
Cat. No. 9135 Net \$ .59

**(F) SHAFT EXTENSION INSULATOR**—Standard TV control—21 Sure-grip ribs . . . Fits all shafts. Cut off worn ends, or to desired length.  
Cat. No. 5150 Net \$ .36

**(G) HI-VOLTAGE GAUGE**—Measures TV Voltage Pulse . . . No current drain during operation. Snaps directly to plate cap of any listed tubes. Push plunger in slowly till neon light glows. Voltage read on calibrated rod.  
Cat. No. 8840 Net \$2.30

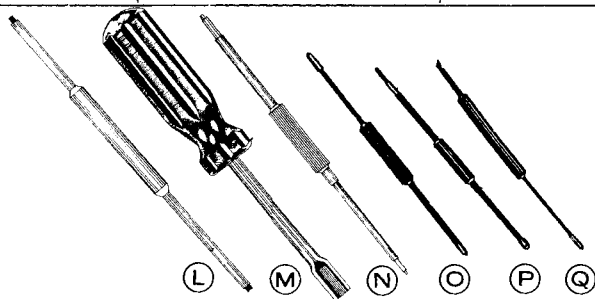
**(H) TWISTMASTER**—Twice the Leverage of the Bare Hand . . . Slips easily on any standard

screwdriver. Insulates against shock, prevents blisters.

Cat. No. 9320 Net \$ .29

**(I) PIGTAILER**—Makes connections quickly and easily...For lengthening pigtails, repairing broken leads, connections, tuners, printed circuits, to hold a part, until solder is applied, or for making solderless connections, for testing and reconnecting, for replacing resistors and condensers. Will wind a pigtail that slips over 18-gauge wire. (Used in most Radio and TV work.)  
Cat. No. 5077 Net \$1.20

**(J) and (K) SOLDERING AID TOOLS**—Won't Stick to Solder...Heat-treated tool steel, chrome-plated, won't stick to solder. Wraps or disconnects wire-wrapped soldered joints quickly. Double ended to ream solder from lug holes as well as for holding or prying parts to be soldered.  
Cat. No. 9075 Straight Net \$ .80  
Cat. No. 9076 Angled Net \$ .80



**(L) CAPACITOR AND TUNER ADJUSTING TOOL**—New adjuster for trimmer capacitors, sealed capacitors, and miniature L. C. Tuners. Made of white Delrin with .050" hex head one end and screwdriver tip on the other end. Overall length of tool is 5 1/8".  
Cat. No. 8605 Net \$ .63

**(M) GC CAPACITOR TAB TWIST TOOL**—For replacing twist lock condensers. This handy Service Aid is easier to use than needle-nose pliers—saves time on service calls and at the bench. The slotted end fits over capacitor tabs; won't slip off. A quick twist locks or unlocks the tabs. 8" long; plastic handle. One of

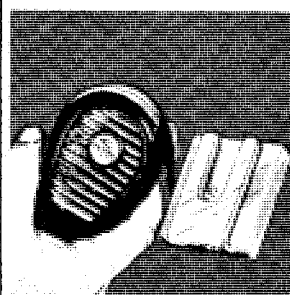
the most useful Service-Designed tools for the bench.  
Cat. No. 9446 Net \$ .89

**(N) GC MAGNAVOX TUNING TOOL**—Head for Magnavox chassis Nos. 201 and 202, Delrin hex wrench alignment tool for Magnavox and other sets. Hex wrench on both ends, one end under-cut so it will reach bottom slugs in iron coils.  
Cat. No. 8284 Net \$ .48

**(O) DOUBLE END HEX CORE ALIGNER**—Adjusts Coil Slugs... General purpose alignment tool as well as a coil slug adjuster. Both ends are .075" Hex, with one end undercut.  
Cat. No. 9300 Net \$ .48

**(P) 3-IN-1 HEX CORE ALIGNER**—Adjusts Coil Slugs . . . For Magnavox sets and others. Hex ends, one .100" with under-cut shaft; other end is .075" and .100".  
Cat. No. 9302 Net \$ .55

**(Q) DOUBLE END ALIGNER**—Adjusts Coil Slugs . . . For coil slugs on Webcor and other sets. One end .075" Hex shaped with under-cut shaft; other is a handy screwdriver.  
Cat. No. 9304 Net \$ .48

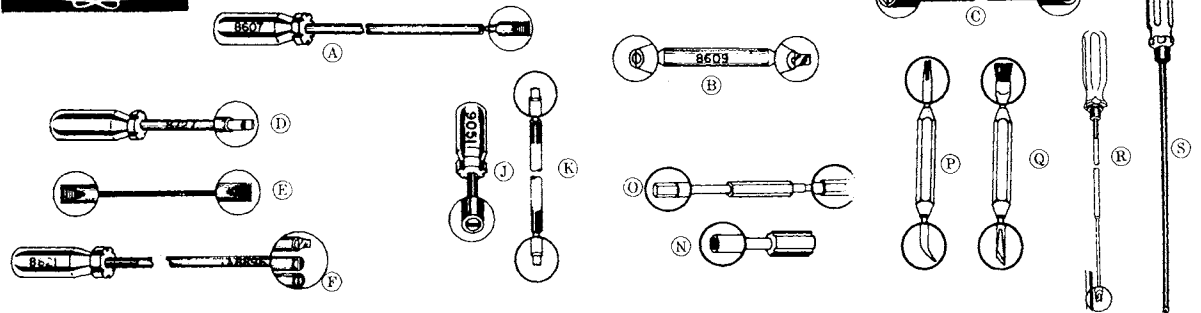


## MAGNETIC MICROPHONE HOLDER

— for Citizens Band and other Mobile Radio units . . . Puts the microphone where you want it . . . when you want it. Here one day, there the next. Move it all you want, yet you know it's always safe. No holes to drill, no brackets to mount. Attach to any steel surface. Capable of holding up to 12 lbs. Clip to Microphone and have ready made magnetic microphone or attach magnet to steel surface and clip phone. Designed to fit most microphones, goes wherever you want it, easily, quickly, conveniently.  
Cat. No. 65-525 Net \$ 99

# GC ALIGNMENT TOOLS . . .

**ELECTRONICS**

**(A) G-C NEW NYLON TV LONG-REACH ALIGNER**—Handy new long-reach TV aligner with insulated metal shaft and nylon tip. 12 $\frac{1}{4}$ " long overall, .195 Shaft Dia.  
Cat. No. 8607 TV Tool Net \$1.60

**(B) G-C ALIGNMENT TOOL**—Handy to align and adjust TV sets, radio sets, etc. Made of clear plastic 5" long x  $\frac{3}{8}$ " dia.  
Cat. No. 8609 Net \$ .63

**(C) G-C TV 2-IN-1 LONG-REACH DUPLEX ALIGNER**—Made of clear, unbreakable plastic material. Ends colored red and blue for size identification. Tips are made of spring steel recessed for easy location of stud.  
Cat. No. 8721 9" long,  $\frac{3}{32}$ " Shaft Dia. Net \$ .78  
8722 7" long,  $\frac{3}{32}$ " Shaft Dia. Net \$ .67

**(D) NEW G-C K-TRAN TELEVISION ALIGNER**—Specially made for K-Tran I.F. Transformer tuner slugs. Precision made of bone fibre.  
Cat. No. 8727 6 $\frac{1}{4}$ " long,  $\frac{3}{32}$ " Tip Dia. Net \$ .65

**(E) TV LONG REACH ALIGNMENT SCREW DRIVERS**—Made of bone fibre, extra thin  $\frac{1}{8}$ " diameter screw drivers for adjustment of TV receivers. Screw drivers tip on both ends—can be re-ground and used over.  
Cat. No. 8728A  $\frac{1}{8}$ "x7" long Net \$ .43  
8728  $\frac{1}{8}$ "x12" long .53  
8729  $\frac{1}{8}$ "x16" long .70

**(F) G-C LONG ARM TV TOOL PLASTIC SHAFT**—New, extra-long-reach alignment tool for Zenith sets and others where adjustments are had to get at. Tool is 18" long overall. 18" long,  $\frac{3}{32}$ " Shaft Dia.  
Cat. No. 8821 TV Tool (Type A) Net 1.00  
8896 TV Tool (Type B) 1.00  
8897 TV Tool (Type C) 1.00

**(J) NEW ZENITH-RCA ALIGNING TOOL WITH HANDLE**—Handle affords a better grip and easier adjustments. Length is 2 $\frac{1}{2}$ " with a 1 $\frac{1}{2}$ " shaft length.  $\frac{3}{32}$ " diameter blade with recessed slot in blade end.  
Cat. No. 9051 Net \$ .58

**(K) NEW G-C STANDARD COIL SLUG TUNER ADJUSTING TOOL**—A new special slug tuning tool especially made for adjusting Standard Tuners, etc. Completely insulated. 7 $\frac{1}{2}$ " long,  $\frac{1}{4}$ " shaft diameter, shaft ends .170 diameter.  
Cat. No. 9087 Net \$ .75

**(N) G-C ADJUSTABLE SHORTY**—Recessed tip TV alignment tool. Adjustable from 1 $\frac{1}{4}$ " to 2" in length, for those hard-to-get-at places.  
Cat. No. 9090 Net \$ .65

**(O) G-C DOUBLE END IRON CORE TOOL**—All nylon hex tool made to fit cores with .125 hex opening. One end of tool undercut so it can reach the bottom slug in coils without turning the top slug.

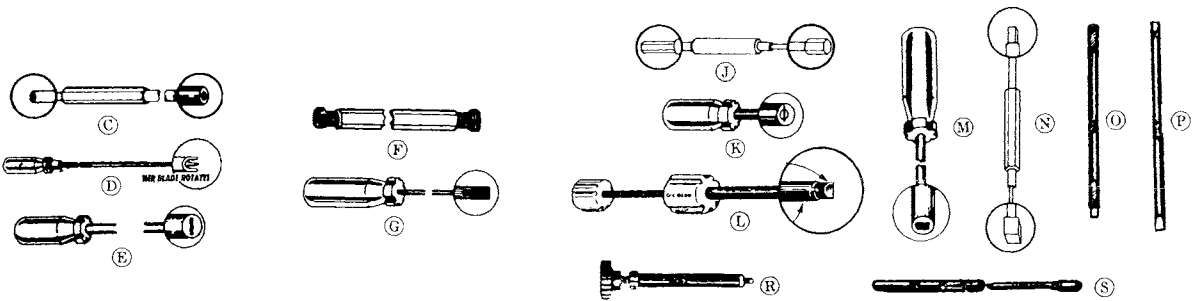
Cat. No. 9091 5" long Net \$ .48  
9091-L 11" long .70

**(P) G-C PRINT-KOTE SOLDER AID PROBE**—Handy, fine point probe specially designed to aid in probing and soldering printed circuits.  
Cat. No. 9093 8" Length Net \$1.00

**(Q) G-C PRINT-KOTE BRUSH AND SCRAPER**—Fine Stainless Steel brush and hardened steel scraper are required to scrape and clean the Silicone Resin from printed circuits.  
Cat. No. 9094 8" Length Net \$ .98

**(R) G-C SLUG RETRIEVER TOOL**—A precision made tool with hardened steel tips made for removing lost TV tuner slugs in Standard Coil tuners. Ends ground to fit standard coils.  
Cat. No. 9096 12" Retriever Net \$2.70  
9097 15" Retriever 3.25

**(S) G-C MINI-HOLD SCREWDRIVERS**—Speeds replacing of phono cartridges. Designed with exclusive "Wedge Action" enabling secure gripping of tiny screws. (Nos. 0, 1, 2, 3 and No. 8 set screws and smaller) Special short length (2 $\frac{7}{8}$ " when in use).  
Cat. No. 9346 3 $\frac{1}{4}$ " long, 2 $\frac{7}{8}$ " in use Net \$2.14  
9347 7" long, 6 $\frac{3}{4}$ " in use 2.40



**(C) G-C RCA TV ALIGNMENT TOOL**—Double end nylon tool with a recessed metal tip on one end and a plastic slot on the other end.  
Cat. No. 9150 6" Length Net \$ .93

**(D) G-C SCREW STARTER SCREW DRIVER**—A handy screw holding screwdriver that will start screws in hard-to-get-at places. Holds the screw securely while it starts it.  
Cat. No. 9148 12" Net \$2.75

**(E) G-C TV AND AUTO RADIO WRENCH**—Special female slotted wrench to remove screws and stud screws from auto radios and backs of TV sets, etc.  
Cat. No. 9211 Net \$1.20

**(F) G-C DUAL NUT STARTER**—New tool that holds and starts hex nuts or hex head screws in hard-to-get-at places. Fits  $\frac{1}{4}$ " and  $\frac{3}{16}$ " hex nuts. Pat. 2664021.  
Cat. No. 9147 Net \$1.85

**(G) G-C FIBREGLASS SCREWDRIVER**—Gives full protection on hot chassis when adjusting high potentials. For close-up hard-to-reach places. Cat. No. 9291 7" Net \$ .85

**(J) G-C NYLON HEX TOOLS**—For the adjustment of iron cores inside mounted chassis, and the tuner adjustment of iron and brass

slugs with hex heads. Has .100" hex and  $\frac{3}{32}$ " handle.  
Cat. No. 9295 11"x.100" Hex Net \$ .63  
9296 11"x.075" Hex .63  
9297 11"x.075" Hex .63

**(K) G-C SHORTY ALIGNMENT TOOL**—A convenient tool for hard-to-get-at places. Has  $\frac{3}{16}$ " shaft, 2" length. Overall length of tool 4".  
Cat. No. 9298 Net \$ .48

**(L) G-C COLOR TV TOOL**—Used on convergence controls and others in color sets. The outer sleeve fits into the O.D. adjusting slot and the inner drive penetrates to the inside slot.  
Cat. No. 9299 Net \$1.45

**(M) G-C RCA WRENCH FOR VHF CHANNEL SELECTOR**—Tool is made to fit square headed set screws in RCA VHF Channel Selector gear assembly without removing chassis.  
Cat. No. 6035 Net \$1.20

**(N) G-C NEW TRANSISTOR I.F. CORE ALIGNMENT TOOL**—One end square .055, opposite end rectangle nib. .047 x .078 to reach bottom slugs in iron cores.  
Cat. No. 9440 11 $\frac{3}{4}$ " long Net \$ .63

**(O) G-C RCA ALIGNING TOOL**—Made of  $\frac{3}{32}$ " Butyrate rod, narrow screwdriver on one end

and screw nib inserted on other end.  
Cat. No. 5003 Net \$ .53

**(P) G-C NO-METAL INSULATING ADJUSTMENT SCREW DRIVER**—Made of black bone fibre. Indispensable for aligning all-wave sets.  
Cat. No. 5004 7" long Net \$ .48  
**LOW-LOSS POLYSTYRENE TYPE**—Ideal for U.H.F. Sets.

**(R) G-C NEUTRALIZING TOOL**—Combination screw driver and  $\frac{3}{16}$ " hex wrench. Approved by U. S. Army Signal Corps.  
Cat. No. 5027 Net \$2.10

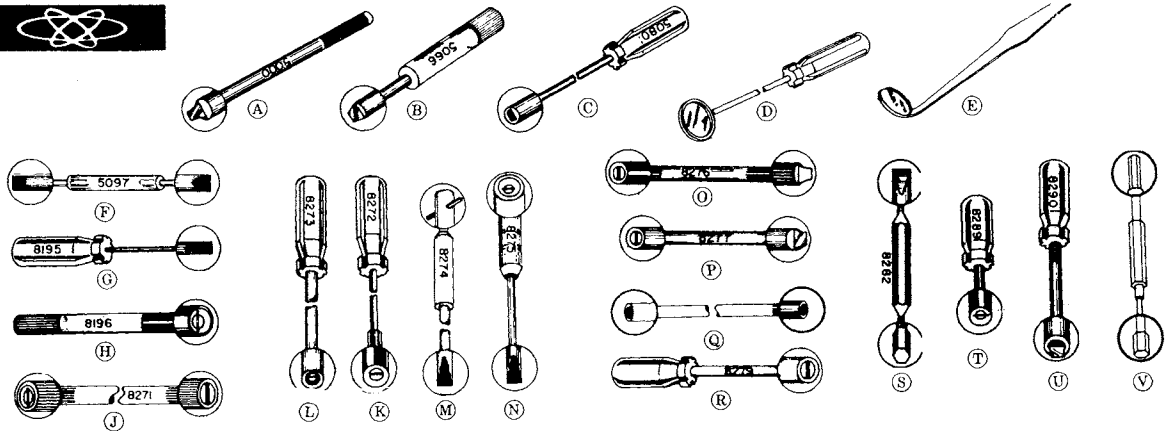
**(S) G-C 4-in-1 ALIGNMENT TOOL**—Consists of screw driver with metal nib,  $\frac{1}{4}$ " hex wrench slotted and  $\frac{3}{16}$ " hex wrench on other end.  
Cat. No. 5014 Net \$1.00

**G-C 5-in-1 ALIGNMENT TOOL**—Consists of screw driver with metal nib,  $\frac{3}{16}$ " hex wrench,  $\frac{1}{4}$ " hex wrench slotted, with metal screw driver on one end.  
Cat. No. 5015 Net \$1.27

**G-C 6-in-1 ALIGNMENT TOOL**—Consists of screw driver with metal nib,  $\frac{3}{16}$ " hex wrench,  $\frac{1}{4}$ " hex side wrench and  $\frac{1}{4}$ " hex end wrench slotted.  
Cat. No. 5016 Net \$1.57

# GC ALIGNMENT TOOLS . . .

**ELECTRONICS**



(A) **G-C ALIGNMENT SCREWDRIVER**—Low inductance metal tip screwdriver made of Butyrate material.  
Cat. No. 5000 1/4" Diameter x 6" Tool  
Net \$ .42

(B) **G-C TV ALIGNMENT TOOL**—Very short, sturdy tool with a fine metal screwdriver blade.  
Cat. No. 5066 2 1/2" long, 3/16" Shaft Dia.  
Net \$ .40

(C) **G-C TV ALIGNING WRENCH**—New tool with 3/8" square socket wrench, 3/32" shaft with insulated handle.  
Cat. No. 5080  
Net \$ .60

(D) **G-C INSPECTION MIRROR**—Handy inspection mirror to inspect parts, coils, wiring, etc. Made of metal shaft with glass mirror and a plastic handle.  
Cat. No. 5090 7 7/8" Inspection Mirror  
Net \$ .42

(E) **G-C NEW ALL-PLASTIC INSPECTION MIRROR**—Use to inspect coils, resistors, sockets, etc. while the chassis is hot. No danger of shorting.  
Cat. No. 5090-P 7 7/8" Plastic Mirror Net \$ .38

(F) **G-C K-TRAN TOOL**—Specially designed for K-tran and I.F. transformers. Butyrate material, screwdriver on both ends.  
Cat. No. 5097 6" long, 3/32" Delrin Tip, 1/8" metal Tip  
Net \$ .78

(G) **G-C TV CHANNEL TUNING TOOL**—Completely insulated, non-metallic tool with long 1/8" narrow blade. Made of bone fibre.  
Cat. No. 8195 7 1/4" long, 1/8" shaft dia.  
Net \$ .72

(H) **G-C TV AND FM TUNING TOOL**—Special short tool with fine recessed screwdriver top for Tele-

vision and FM adjustments. Made of Butyrate. Cat. No. 8196 2 1/2" long, 3/32" shaft dia.  
Net \$ .42

(J) **G-C TV CORE ALIGNER**—For Motorola and other sets using Stackpole or other stud type cores that are not slotted. Milled steel insert on one end, thin screwdriver blade on other end.  
Cat. No. 8271 6" long, 3/32" shaft dia.  
Net \$ .60

(K) **G-C TV I.F. OSCILLATOR ALIGNER**—Specially made for I.F. and oscillator adjustments. Will fit all makes of sets—R.C.A., G.E., Philco, Admiral and others.  
Cat. No. 8272 6 1/2" long, 1/4" tip dia.  
Net \$1.20

(L) **G-C TV ALL-PURPOSE ALIGNER**—Specially made for TV I.F. adjustments. Very thin spring steel tip is recessed so the tool will guide itself over the screws.  
Cat. No. 8273 8" long, 3/32" shaft dia.  
Net \$ .92

(M) **G-C TV LONG REACH ALIGNER**—Specially made for Admiral, Zenith, R.C.A. and other sets for adjustments of nested iron cores that are hard to reach.  
Cat. No. 8274 9" long, 1/8" shaft dia.  
Net \$ .90

(N) **G-C TV ZENITH UNIVERSAL ALIGNER**—Specially designed for Zenith and other sets. Made of bone fibre and plastic handle.  
Cat. No. 8275 5" long, 1/8" shaft dia., 1/4" shaft dia.  
Net \$ .52

(O) **G-C TV DUPLEX ALIGNER**—An all-purpose TV aligner for trimmers and I.F. transformers. Made of Butyrate material with extra thin spring steel tips.  
Cat. No. 8276 6" long, 3/32" shaft dia.  
Net \$ .52

(P) **G-C TV "SHORTY" DUPLEX ALIGNER**—Specially made for trimmer and I.F. transformers where space does not permit the use of a longer tool.  
Cat. No. 8277 2 1/2" long, 3/32" shaft dia.  
Net \$ .52

(Q) **G-C TV TUNING WAND**—Brass insert on end reduces inductance and iron core on other end increases the inductance.  
Cat. No. 8278 6" long, 3/32" shaft dia.  
Net \$ .60

(R) **G-C TV CORE ALIGNER**—Tool has a recessed steel milled slot to fit over the Stackpole and other type stud cores that are not slotted.  
Cat. No. 8279 7 1/2" long, 3/32" shaft dia.  
Net \$ .75

(S) **G-C NEW ZENITH TV WRENCH & ALIGNER**—New nylon plastic molded special tool made specially for Zenith TV sets.  
Cat. No. 8282 5 3/8" long, .100 Dia. Hex Wrench, .109 Screw Driver Dia.  
Net \$ .37

(T) **G-C "SHORTY" TV ALIGNMENT SCREW DRIVER**—Only 2" long overall to adjust hard-to-get-at places under TV tubes, etc.  
Cat. No. 8289 2" long, 3/32" shaft dia.  
Net \$ .60

(U) **G-C UNIVERSAL SCREW DRIVER ALIGNER**—Made of unbreakable flexible clear plastic shaft and an amber plastic handle.  
Cat. No. 8290 7" long, 3/32" shaft dia.  
Net \$ .70

(V) **G-C ZENITH-ADMIRAL NYLON HEX WRENCH**—New nylon hex wrench alignment tool for Zenith, Admiral and other sets.  
Cat. No. 8606 5" wrench, 11" long Net \$ .48  
8606-L 11" wrench, 11" long .63

## GC ALIGNMENT TOOL KITS



**MASTER DELUXE TOOL KIT**—A super-deluxe kit in a superior leatherette roll type case. Contains 25 tools and includes all TV alignment tools except the extra long ones (over 9") which would not fit in the case.  
Cat. No. 8283  
Net \$14.17

**DELUXE ALIGNMENT TOOL KIT**—Case is made of durable leatherette that will give long service. The steel tips are all extra thin and are of the best grade hardened spring steel that will give you service. Kit contains one each of 16 tools you need.  
Cat. No. 8280  
Net \$8.63



**STANDARD ALIGNMENT TOOL KIT**—Made to last and wear—a quality kit. Kit contains 9 essential tools in roll type case.  
Cat. No. 8455  
Net \$4.77



**G-C No. 5040 TOP 12 TOOL KIT**—12 most popular TV alignment tools. Plastic roll-up case.  
Cat. No. 5040  
Net \$7.50



**G-C CONTACT BURNISHING TOOL KIT**—A complete kit for the servicing of relays, switches, etc. where critical contact points must be kept clean for ideal operation conditions.  
Cat. No. 9339  
Net \$ .75



**NEW TINNEMAN NUT REMOVER**—The new G-C Tinnerman Nut Remover is a handy dual purpose tool for removing large or small tinnerman nuts with just a twist. Eliminates fumbling with hard-to-remove nuts.  
Cat. No. 9355  
Net \$ .93



**G-C ILLUMINATED INSPECTION AND SERVICE MIRROR**—A hinge-mounted mirror fastens to a 6" transparent lucite rod which transmits light from a small anodized aluminum flashlight.  
Cat. No. 8725 7/8" Mirror, frame O.D. 1 1/4"  
Net \$2.02



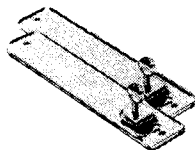
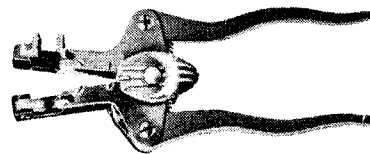
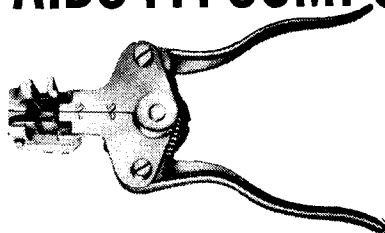
**G-C SPEEDEX SLIM-TYPE SOLDER IRON TIPS**—A new high-heat, turned-down tip made of one-piece copper. Will fit 3/8" irons. Tips 4 1/2" long.  
Cat. No. 8741  
Net \$ .73



**G-C SOLDER IRON TIPS**—Bright plated to resist corrosion. These tips are made of best grade hard-drawn copper.  
Dia. Long  
Cat. No. 724 1/4"x3" Net \$ .50  
725 5/16"x4 1/2" .55  
726 3/8"x4 1/2" .62



# SERVICE AIDS... COMPONENTS



**G-C TV CHASSIS SUPPORT.** Prop chassis to easy working position on your bench or in the home. Simply slip it on the flange of chassis, tighten thumb screws and tilt chassis to position desired.

Cat. No. 9176 Per Pair

**SPEEDEX STANDARD WIRE STRIPPER.** This is the popular inexpensive Speedex model that will work on 90% of all stripping jobs. Blades are inter-changeable, hardened and precision ground to razor sharp edges.

No.	For Sizes Listed Below
733	12 to 20 Wire
733-A	14 to 30 Wire
733-B	10 to 18 Wire
733-C	8 to 10 Wire
733-D	16, 18, 20, 22 Wires
733-E	14, 16, 18 Wires
733-F	10, 12, 14 Wires
733-G	For No. 18 POSJ or Parallel Wire
733-H	For 300 ohm TV and FM twin transmission line
733-I	10, 12, 14, 16, 18, 20, 22 Wire
733-M	10 to 20 Wire
733-N	Straight Cutter Blades

Cat. No. 733

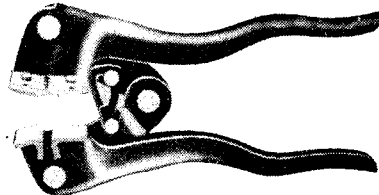
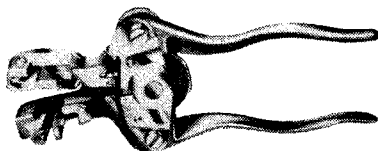
Net \$4.77

**SPEEDEX AUTOMATIC WIRE STRIPPER.** Equipped with "Trig-O-Matic" Stay-Open feature. Stay-Open features keeps wires from being crushed.

No.	For Sizes Listed Below
744	12 to 20 Wire
744-A	14 to 30 Wire
744-B	10 to 18 Wire
744-C	8 to 10 Wire
744-D	16, 18, 20, 22 Wire
744-E	14, 16, 18 Wire
744-F	10, 12, 14 Wire
744-G	For No. 18 POSJ or Parallel Wire
744-H	For 300 ohm TV and FM twin transmission line
744-I	10, 12, 14, 16, 18, 20, 22 Wire
744-M	10 to 20 Wire
744-N	Straight Cutter Blades

Cat. No. 744

Net \$5.93



**SPEEDEX SPEED-O-MATIC WIRE STRIPPER.** Fully automatic delayed return action to prevent crushing fine wires. The Speed-O-Matic combines the features of all Speedex Wire Strippers.

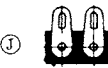
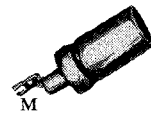
No.	For Sizes Listed Below
766	12 to 20 Wire
766-A	14 to 30 Wire
766-B	10 to 18 Wire
766-C	8 to 10 Wire
766-D	16, 18, 20, 22 Wire
766-E	14, 16, 18 Wire
766-F	10, 12, 14 Wire
766-G	For No. 18 POSJ or Parallel Wire
766-H	For 300 ohm TV and FM twin transmission line
766-I	10, 12, 14, 16, 18, 20, 22 Wire

766-M	10 to 20 Wire
766-N	Straight Cutter Blades
Cat. No. 766	Net \$5.93
<b>SPEEDEX WHIZ WIRE STRIPPER.</b> All new economy model—a perfect all round general use wire stripper. Precision milled, hardened steel cutters.	
Cat. No. 788	3 Hole Blade, Gauges 12 thru 22
	788-B 3 Hole Blade, Gauges 10 thru 16
	788-D 4 Hole Blade, Gauges 14 thru 24
	788-H 300 ohm Blade for T win Lead-In
Cat. No. 788	Net \$3.97

**SPEEDEX WIRE STRIPPER KITS.** Kits complete with Wire Strippers and seven different size blades neatly put up in a special permanent plastic box. Very handy kit for the tool box, home workshop, maintenance and production.

Cat. No. 733-K	Standard Stripper Kit	Net \$10.83
744-K	Automatic Stripper Kit	Net \$13.16
766-K	Speed-O-Matic Stripper Kit	Net \$13.16

## ELECTRONIC COMPONENTS



**(B) G-C SCREW TYPE TERMINAL STRIPS.** Mounted on laminated bakelite strips, rigidly constructed, terminals will not turn and short.

Cat. No.	Contacts	Net \$
1772	2	.09
1772-C (100-1772)		8.10
1773	3	.12
1773-C (100-1773)		10.05
1774	4	.15
1774-C (100-1774)		13.20
1775	5	.20
1775-C (100-1775)		18.67
1776	6	.22
1776-C (100-1776)		20.17
1777	7	.25
1777-C (100-1777)		23.85
1778	8	.30

1778-C (100-1778)	27.00
1779	.33
1779-C (100-1779)	30.00
1780	.37
1780-C (100-1780)	33.45

**G-C STANDARD TERMINAL STRIPS.** Insulation 1/16" Thick, 3/16" Spacing.

(C)	Cat. No.	1 Lug	Net \$
	1781	1	.03
	1781-C	100 No.	2.70
(D)	Cat. No.	2 lugs	Net \$
	1782	2	.03
	1782-C	100 No.	2.70
(E)	Cat. No.	3 lugs	Net \$
	1783	3	.05
	1783-C	100 No.	2.82
(F)	Cat. No.	4 lugs	Net \$
	1784	4	.05
	1784-C	100 No.	3.90
(G)	Cat. No.	5 lugs	Net \$
	1785	5	.07
	1785-C	100 No.	4.50

(H)	Cat. No.	6 lugs	Net \$
	1786	6	.08
	1786-C	100 No.	4.80
(J)	Cat. No.	7 lugs	Net \$
	1787	7	.13
	1787-C	100 No.	\$8.70
(K)	Cat. No.	8 lugs	Net \$
	1788	8	.15
	1788-C	100 No.	9.60

**SPECIAL TERMINALS AVAILABLE IN QUANTITIES. SEND PRINTS FOR QUOTATIONS**

**(M) G-C EXTENSION JACK & CONNECTOR.** Special jack used in extending radio antenna cables and phonograph attachments.  
Cat. No. 1744 Net \$ .10  
1744-C 100 \$8.93

**(N) G-C HIGH VOLTAGE ANTI-CORONA TV SOCKETS.** Eight-prong octal and nine-pin miniature sockets for use in high voltage circuits using the 1B3, 1AX2, 1AX2A, etc.

Cat. No. 9070 8-prong octal Net \$ .53  
9071 9-pin miniature Net \$ .53  
**(O) G-C 9-PIN MINIATURE WAFER SOCKET.** High quality plastic wafer socket, 9-pin type with phosphor bronze contacts. Standard 1/16" mounting centers.  
Cat. No. 1543 9-pin Wafer Sockets Net \$ .12  
1544 9-pin Wafer Socket with Grounding Strap Net \$ .13

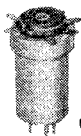
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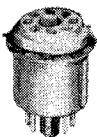




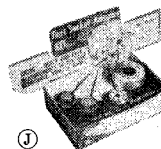
# SERVICE AIDS



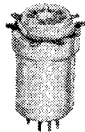
**G-C 7-PIN MINIATURE TEST SOCKET ADAPTER**  
Cat. No. 9247  
Net \$1.65



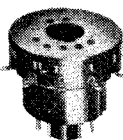
**G-C 8-PIN OCTAL TEST SOCKET ADAPTER**  
Cat. No. 9248  
Net \$1.57



**G-C TEST SOCKET ADAPTER KIT**—This handy kit contains all 4 of G-C's Test Socket Adapters.  
Cat. No. 9250  
Net \$6.98



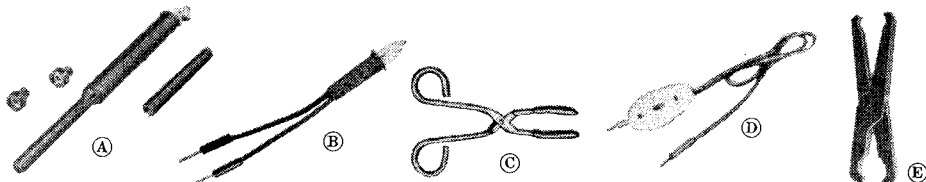
**G-C 9-PIN MINIATURE TEST SOCKET ADAPTER**  
Cat. No. 9249  
Net \$1.87



**G-C DUO-DECAL TV TUBE TEST SOCKET ADAPTER**—Designed for making measurements of voltage, resistance and video from the base of the picture tube. It is inserted between C.R. tube base and its socket.  
Cat. No. 9251  
Net \$1.95



**G-C ANGLE ANODE LEAD**—A better anode lead with special "Ozone Proof" rubber.  
Cat. No. 8637  
Net \$4.42



(A) **G-C CONTROL GUN KIT**—Cleans and lubricates noisy volume controls. Constructed of solid aluminum—will not rust. Complete kit includes Gun, Adapter for extra long shanks, Adapter for 1/2-28 thread, and Auto Adapter for 3/8-28 thread.

Cat. No. 9285  
Uses G-Control Kleener.  
Net \$4.50  
Cat. No. 65-16 16 oz. Bottle  
65-G 1 Gallon  
Net \$1.95  
Net \$9.00

**G-C CONTROL GUN**—Designed to clean and lubricate noisy volume controls in one sure, fast and easy operation. Gun nozzle fits over the control shaft and screws securely over the control base threads.

Cat. No. 9280  
Net \$3.75

**G-C CONTROL GUN ADAPTERS**—Aluminum—won't rust when used with normal electronic chemicals.

Cat. No. 9281 To fit control shafts with 1/2-28 thread. Net \$ .50  
9283 To fit control shafts with 3/8-28 thread. Net \$ .50  
9282 For use on controls with extra long shanks. Net \$ .50

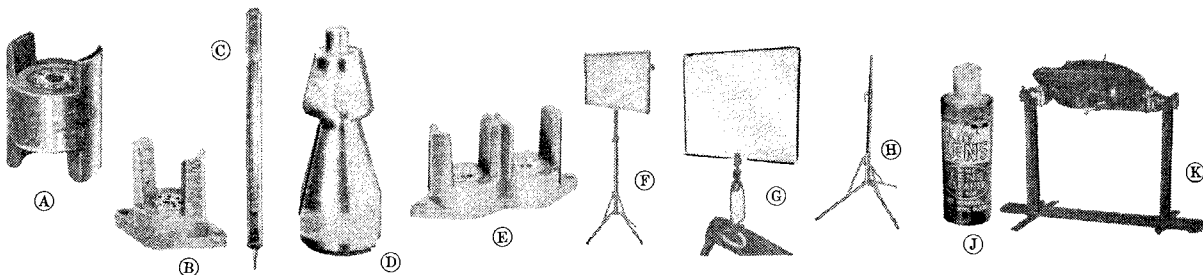
(B) **G-C NE-O-LITE**—A simple, safe, dependable electrical circuit tester—easy to use with a Neon Glow Lamp which varies in light intensity according to voltages. Traces all types of trouble, such as grounded lines, open circuits, short circuits, etc.  
Cat. No. 5100  
Net \$ .45

(C) **G-C TUBE & PARTS EXTRACTOR**—Originally designed by the U. S. Signal Corps. as standard equipment. Skillfully constructed of spring steel, cadmium plated. Has rubber cushion on the prongs.  
Cat. No. 5092  
Net \$ .98

(D) **G-C DANDY LITE TESTER**—Your hand touches the lead to only one side of the line for extra safety. A simple, dependable tester for tracing electrical circuits, grounded lines, shorts, etc.  
Cat. No. 8585  
Net \$ .90

(E) **G-C SPEEDEX FUSE PULLERS**—Inexpensive—non-slip, fuse puller. Safe and handy for cartridge fuses.

Cat. No. 5525 Midget Size—for fuses 1/4" to 1/2" dia. Net \$ .60  
5526 Pocket Size—for fuses 1/2" to 1 1/2" dia. Voltages to 200 amps at 250 volts and 100 amps at 600 volts. Net \$1.30



(A) **G-C DUAL TUBE PIN STRAIGHTENER**—A handy, miniature pin straightener for 7-pin and 9-pin miniature tubes. Accurately machined metal inserts on either end of the tool body, each made of hardened metal to assure accuracy and long life.

Cat. No. 9092  
Net \$1.27

(B) **G-C MINIATURE TUBE PIN STRAIGHTENER**—Precision-constructed steel die, designed for straightening pins on fragile miniature tubes of the 1S5, 6AK5, 9002 variety.

Cat. No. 5191 For 7-pin Min. Tubes Net \$ .75 (red base)  
8105 For 9-pin Jumbo Tubes (blue base) Net \$ .75

(C) **G-C TV "HIGH-VOLT" SAFETY PROBE & TESTER**—A new handy tester for quickly checking TV high voltage circuits. Tester will glow when high voltage is okay.

Cat. No. 8836  
Net \$2.13

(D) **G-C AMO MINIATURE TUBE PULLER**—AMO makes it possible to easily remove or insert miniature tubes such as 6AG5, 50B5, etc. It works on the suction and vacuum principle.

Cat. No. 5093 For 7-Pin Tubes Net \$1.30  
8106 For 9-Pin Tubes Net \$1.30

(E) **G-C DUPLEX TUBE PIN STRAIGHTENER**—The handiest tube pin straightener for both miniature and jumbo miniature tubes of the 7- and 9-pin types.

Cat. No. 8655  
Net \$1.50

(F) **G-C THIRD EYE DELUXE GLASS TV MIRROR**—Here's a deluxe TV service mirror for adjusting and servicing TV sets. It is made with an adjustable and collapsible telescoping stand and 12" x 10" glass mirror that avoids distortion of the image.

Cat. No. 8390 Third Eye Mirror, Stand  
Net \$5.91  
8391 Glass Mirror Only 2.97  
8199 Soft Bag for Mirror 1.30

(G) **G-C TV PORTO MIRROR**—TV service mirror for adjusting rear controls and settings of TV sets. Supplied with a rubber lined spring clamp.

Cat. No. 8198 TV Metal Mirror, Spring Clamp  
Net \$2.83  
8199 Soft Bag for Mirror Net \$1.30

(H) **G-C TELEVISION MIRROR & EXTENSION LAMP COLLAPSIBLE STAND**—Handy metal collapsible and adjustable stand for No. 8391 mirror or for clamping on metal mirrors or extension lamps.

Cat. No. 8392  
Net \$3.30

(J) **G-C KLEER LENS**—A superior lens cleaning fluid packaged in a handy plastic spray type container. This cleaner will make the transparent protection shield in front of the picture tube crystal clear.

Cat. No. 9081 6-oz. Net \$ .75

(K) **G-C "QUICK-RIG RADIO-PHONO CHASSIS REPAIR CRADLE**—Complete 360° rotation to lock

chassis at best working angle. Clamps securely, makeshift setups, all metal.

Cat. No. 5212  
Net \$7.50

**G-C PHONO TURN-TABLE STAND**—Stand raises the turntable about 15 inches above the bench so you can easily look under the mechanism to check it while in operation. Easily adjusted to all sizes and types of phono turntables. Sturdily made of steel.

Cat. No. 5205  
Net \$4.95

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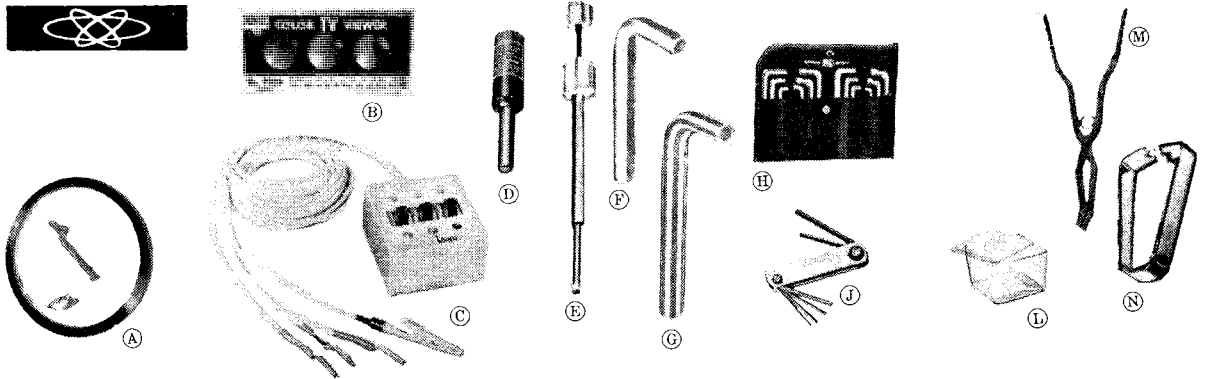
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# SERVICE AIDS



(A) **DEGAUSSING COIL**—For Color TV receivers. The G-C Degaussing Coil serves to demagnetize the magnetic fields set up in the color CRT due to the sensitivity of the tube.  
Cat. No. 9317 Net \$17.97

(B) **NEW G-C COLOR TV VIEWER**—Has three transparent optical filters sealed in permanent plastic. Simplifies phase and matrix adjustments on color TV sets using a saturated color for signal. Makes adjustments possible in the home.  
Cat. No. 9309 Net \$15.50

(C) **G-C COLOR TV TEST BOX**—Test color tubes with black-and-white test equipment. Extra long leads allow test box to be placed in front or rear of set.  
Cat. No. 9318 Net \$5.10

(D) **G-C COLOR TV CHEATER**—A safety device for color TV receiver work. Used when applying Hi-voltage Probe through cheater.  
Cat. No. 9650 Net \$ .75

(E) **COLOR TV TOOL**—Used on convergence controls and others in color sets. The outer sleeve fits into the O.D. adjusting slot and the inner-drive penetrates to the inside slot.  
Cat. No. 9299 Net \$1.45

(F) **G-C HEXAGON KEY WRENCHES KITS and ASSORTMENTS**  
Cat. No. H1600-F Plastic Box of 4 Net \$ .36  
5029 Kit 5 Assorted Wrenches in Leatherette Case. \$ .63

(G) **SPLINE KEY WRENCHES KITS and ASSORTMENTS**  
Cat. No. H1602-F Plastic Box of 4 Net \$ 36  
5070 Kit of 6 Assorted Wrenches in Leatherette Case .80

**INDIVIDUAL WRENCHES**  
Cat. No. 5071 No. 4 Set Screw Net \$ .12  
5071-A No. 5 Set Screw .12  
5072 No. 6 Set Screw .12  
5073 No. 8 Set Screw, No. 4 Cap Screw .12  
5074 No. 10 Set Screw, No. 5-6 Cap Screw .13

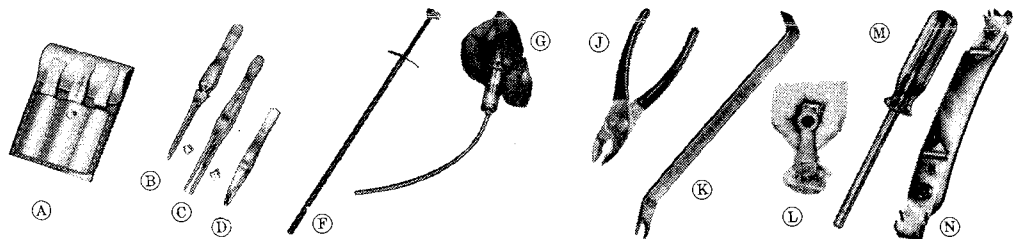
(H) **G-C HEX-KEY AND SPLINE WRENCH KIT**—A complete wrench kit for both hex and spline type screws. Twelve wrenches in an attractive leatherette case.  
Cat. No. 5028 Net \$1.35

(J) **G-C POCKET HEX KEY WRENCH SET**—Seven popular size wrenches. .050 to 3/16" fitted in a steel case-like pocket knife blades.  
Cat. No. 9124 Net \$1.83

(L) **G-C PLASTIC BOXES**—Clear plastic boxes for stocking small parts, screws, nuts, bolts, condensers, resistors, etc.  
Cat. No. 8022 4"x4"x2 1/2" deep Net \$ .40  
8023 4"x4"x8" deep Net \$ .77

(M) **G-C LONG NOSE CLAMP PLIERS**—Like an extra hand. Spring tension keeps the jaws closed unless handles are squeezed.

(N) **G-C TV-RADIO KNOB PULLER**—Simply slip the G-C Puller behind the knob and pull it off. Saves time, the cabinet and the knob.  
Cat. No. 23-954 Net \$ .30



(A) **G-C TWEEZER KIT**—For the shop or laboratory to pick up and examine small parts, start screws and nuts, etc.  
Cat. No. 7950 Net \$2.28

(B) **G-C TWEEZERS**  
Cat. No. 7946 6 1/2" Self-closing tweezers opens when squeezed; serrated, blunt points. Net \$ .78

(C) **G-C TWEEZERS**  
Cat. No. 7947 6 1/2" Heavy-duty type, with slide lock feature; holds wires or parts tight like an extra finger; serrated, blunt points.  
Net \$ .90

(D) **G-C TWEEZERS**  
Cat. No. 7948 4 1/2" Precision tweezers, narrow pointed ends for delicate work. Net \$ .52

(F) **G-C HANDY PICK-UP TOOL**—One of the handiest tools you can have in your home, shop, office or farm. Tool is 15 inches long.  
Cat. No. 5089 Net \$1.15

**G-C TV 3-WAY ANTENNA KLIP**—Buy them by the bag and have clips ready to sell and ready to install on TV sets.  
Cat. No. 9015-X Bag of 10 Net \$1.43

**G-C INTERCHANGEABLE HEX NUT DRIVER KIT**—6 assorted nut drivers in a handy plastic case. Handle is non-flammable amber plastic with a quick change chuck.  
Cat. No. 9206 Net \$3.30

(G) **G-C LONG-REACH TV AND RADIO LUBRICATOR**—For radio and TV controls, bearings, phono motors, etc. Buy them by the pair—one for grease and one for light oil.  
Cat. No. 8690 Net \$ .53

(J) **G-C NO-JOLT TOOL GRIPS**—Modernizes old tools with new safety grip handles. Grease and oil resistant.

Cat. No. 5647 Small No-Jolt Plastic Tool Grips (1 pair) Net \$ .23

5648 Medium No-Jolt Plastic Tool Grips (1 pair) .27

5649 Large No-Jolt Plastic Tool Grips (1 pair) .33

(K) **G-C PRY-UP TUBE LIFTER**—Handy tool for removing tight tubes. Saves the fingers and the tubes.  
Cat. No. 9213 Net \$ .30

(L) **G-C 4-in-1 TUBE GADGET**—Four tools in one. Pure rubber, will not break.  
Cat. No. 9130 Net \$ .92

(M) **G-C NEW TV AND AUTO RADIO WRENCH**—Special female slotted wrench to remove screws and stud screws from auto radios and backs of TV sets, etc.  
Cat. No. 9211 Net \$1.20

(N) **G-C NEW LOW LOSS TV LINE KLIP**—A new all plastic clip with metal ends only. The best for UHF or fringe areas. Made of genuine polyethylene.  
Cat. No. 9055 Net \$ .15  
9055-X Bag of 10 1.47

**6. G-C DUAL SHEET METAL PUNCH**—Punches holes for Tube Sockets and Condensers for hand or power operation. Two punches 7/8" and 1 1/2" for one price.  
Cat. No. 9260 Net \$4.93

**7. G-C DUAL SHEET METAL PUNCH JR.**—Punch neat, clean holes in chassis for tube sockets, condensers and for mounting other components. For 1/2" and 3/4" holes.  
Cat. No. 9261 Net \$4.00

**8. NEW G-C PRECISION 300-DHM TOOL**—This specially designed tool cuts, slots, strips and crimps. Has shock-proof, oil resistant plastic grips.  
Cat. No. 9220 Net \$3.95



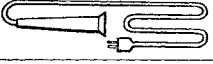
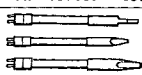
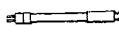
# SOLDERING IRONS

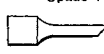

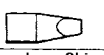
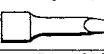
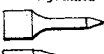
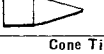
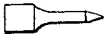
6 to 230 VOLTS 12 to 140 WATTS

A complete line of high quality soldering irons specifically designed for production-line soldering in the electronic, instrument, and communications industries—including irons for soldering miniature and subminiature components. Also ideally suited for intermittent operations such as repair, maintenance, laboratory work, and electronic kit construction. Irons up to 1250 watts are available.

## PENLINE-120 SOLDERING IRONS — 120 VOLTS; 25, 30, 40, AND 45 WATTS — UL LISTED

Lowest cost G-E iron; ideally suited for light to medium production in electronics, communications, and allied industries, for repair and maintenance operations, and by the "do-it-yourself" electronics kit builder. Choice of 30- and 45-watt low-cost, easy-to-change tip and heater assemblies; or 25-, 30-, and 40-watt heater assemblies with 20 different interchangeable ironclad or copper threaded tips.


Description	Cat. No.	List Price Each†	
<b>Handle and Cordset</b>			
	Two-conductor	6D400	\$3.00
	Three-conductor, with NEMA standard plug	6D400G2	4.00
<b>Tip and Heater Assemblies — Ironclad</b>			
	3/16" Chisel Tip 30 watts	6D410	\$4.70
	1/8" Chisel Tip 30 watts	6D411	4.80
	3/8" Chisel Tip 45 watts	6D412	4.90
<b>Heater Assemblies for Threaded Tips</b>			
	25 watts	6D415	\$4.00
	30 watts	6D414	4.00
	40 watts	6D413	4.00


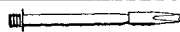


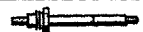

Description	Cat. No.	List Price Each†	
<b>Threaded Tips for Penline-120, Pistol-Grip, Midget, and Lightweight Heater Assemblies</b>			
<b>Spade Tips</b>			
	1/16" Dia—Copper	6D4P1	\$0.50
	1/16" Dia—Ironclad	6D4P2	1.40
	1/8" Dia—Copper	6D4P3	0.50
	1/8" Dia—Ironclad	6D4P4	1.40
<b>Chisel Tips</b>			
	1/16" Dia—Copper	6D4P5	0.50
	1/16" Dia—Ironclad	6D4P6	1.40
	1/8" Dia—Copper	6D4P7	0.50
	1/8" Dia—Ironclad	6D4P8	1.40
	3/16" Dia—Copper	6D4P9	0.50
	3/16" Dia—Ironclad	6D4P10	1.40
	3/8" Dia—Copper	6D4P11	0.50
	3/8" Dia—Ironclad	6D4P12	1.40
<b>Long Chisel Tips</b>			
	3/16" Dia—Copper	6D4P13	0.55
	3/16" Dia—Ironclad	6D4P14	1.50
<b>Pyramid Tips</b>			
	1/8" Dia—Copper	6D4P15	0.50
	1/8" Dia—Ironclad	6D4P16	1.40
	3/8" Dia—Copper	6D4P17	0.50
	3/8" Dia—Ironclad	6D4P18	1.40
<b>Cone Tips</b>			
	1/8" Dia—Copper	6D4P19	0.50
	1/8" Dia—Ironclad	6D4P20	1.40

## LIGHTWEIGHT SOLDERING IRONS — 120 VOLTS; 40 AND 60 WATTS — UL LISTED

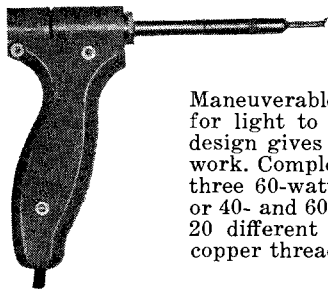


Ideal for light and medium production-line soldering and maintenance and repair operations in electronics and communications industries. Tip and heater assemblies can be changed in seconds.

Description	Cat. No.	List Price Each†	
<b>Complete Iron — Includes handle and 6-foot cordset, and 60-watt tip and heater assembly</b>			
	1/4" Ironclad Chisel Tip	6A273	\$14.20
	3/16" Ironclad Pyramid Tip	6A283	14.20
	3/16" Ironclad Chisel Tip	6A283G23	14.20

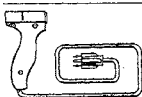
Description	Cat. No.	List Price Each†	
<b>Handle and Cordset</b>			
	Two-conductor	6A273G62	\$7.25
	Three-conductor with NEMA standard plug	6A273G63	8.45
<b>Tip and Heater Assemblies — 60 watts</b>			
	1/4" Ironclad Chisel Tip	6A300	\$6.95
	3/16" Ironclad Pyramid Tip	6A301	6.95
	3/16" Ironclad Chisel Tip	6A301G4	6.95
<b>Heater Assemblies for Threaded Tips (Use Penline-120 Tips listed above)</b>			
	40 watts	6A304	\$6.05
	60 watts	6A301G7	6.70

## PISTOL-GRIP SOLDERING IRONS — 120 VOLTS; 40 AND 60 WATTS



Maneuverable and comfortable, excellent for light to medium production. Unique design gives operator a clear view of the work. Complete versatility with choice of three 60-watt tip and heater assemblies; or 40- and 60-watt heater assemblies with 20 different interchangeable ironclad or copper threaded tips.

Manufacturer's suggested resale price.

Description	Cat. No.	List Price Each†
 Handle and cordset, three-wire with NEMA plug	6A303	\$8.50

Can be used with Lightweight tip and heater assemblies above, or with Lightweight heater assemblies and Penline-120 tips listed above.

MIDGET SOLDERING IRONS — 6 VOLTS; 25 and 45 WATTS (Also tapped transformers) — UL LISTED



A versatile iron for light production in electronics, and communication industries — handles like a pencil, weighs but 1 1/4 oz. Tip renewal is easy and fast — complete tip and heater assembly can be changed in a few seconds. Heat output can be varied from 18 to 45 watts with standard G-E transformers.

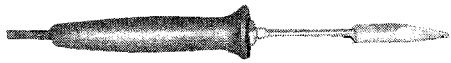
Description	Cat. No.	List Price Each†
<b>Handle and Cord Set</b>		
	For single- and 4-tap transformers	6A203 \$3.65
	For transformer with 3-heat switch	6A203G2 4.15
<b>Tip and Heater Assemblies — All ironclad tips</b>		
	1/4" Chisel Tip 25 watts	6A211 \$4.05
	1/8" Cone Tip 25 watts	6A213 4.05
	3/16" Pyramid Tip 25 watts	6A215 4.05
	3/16" Chisel Tip 25 watts	6A217 4.05
	3/8" Chisel Tip 45 watts	6A211G31 4.60

Description	Cat. No.	List Price Each†
<b>Heater Assembly for Threaded Tips (Use Penline-120 Tips)</b>		
	25 watts	6A221 \$4.05

<b>Transformers for Midget Iron — 115-volt Primary*</b>			
	Single Tap—35 watts	6A362G2	\$6.90
	Four Tap—for 26/29/32/35 watts	6A364G2	9.20
	With Three-heat Switch—18 to 35 watts, for use only with 6A203G2 Handle and Cordset	6A434	17.00

\* Single- and four-tap transformers are available with 240-volt primary in quantities 36 or more. Specify Cat. No. desired and note on order, "except with 240-volt primary".  
† Suitable for use only with Handle and Cordset 6A203G2.

MIGHTY MIDGET SOLDERING IRON — 12 VOLTS; 100 WATTS



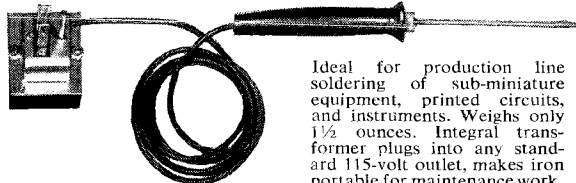
A lightweight iron with high heat capacity for heavy soldering where larger irons, up to 200 watts, prove unwieldy for rapid repetitive soldering, such as production soldering of tuner chassis, tinware, can seams, etc.

<b>Tip and Heater Assembly</b>			
	1/2" Ironclad Chisel Tip	6A211G33	\$4.50

<b>Handle and Cordset — Two-conductor</b>			
		6A210G61	\$8.00

<b>Transformer for Mighty Midget — 115-volt primary</b>			
	Four Tap — for 55/70/85/100 watts	6A364G7	16.00

MINIATURE SOLDERING IRONS — 6 VOLTS; 12 WATTS



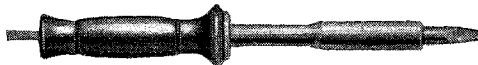
Ideal for production line soldering of sub-miniature equipment, printed circuits, and instruments. Weighs only 1 1/2 ounces. Integral transformer plugs into any standard 115-volt outlet, makes iron portable for maintenance work.

<b>Complete Iron — Includes handle and 6-foot cordset, tip and heater assembly, and transformer</b>			
	1/8" Chisel Tip 3" Shank	6A428G3	\$15.00
	1/8" Chisel Tip 6" Shank	6A428G4	15.00
	1/8" Pyramid Tip 3" Shank	6A428G7	15.00
	1/8" Pyramid Tip 6" Shank	6A428G8	15.00

<b>Complete Iron Less Transformer — Includes handle and 6-foot cordset with terminals, and tip and heater assembly</b>			
	1/8" Chisel Tip 3" Shank	6A428G5	\$9.00
	1/8" Chisel Tip 6" Shank	6A428G6	9.00

<b>Renewal Tip and Heater Assembly</b>			
	1/8" Chisel Tip 3" Shank	6A429G3	\$5.50
	1/8" Chisel Tip 6" Shank	6A429G4	5.50
	1/8" Pyramid Tip 3" Shank	6A429G5	5.50
	1/8" Pyramid Tip 6" Shank	6A429G6	5.50

6A160 SERIES SOLDERING IRONS — 115 VOLTS §, 75 TO 140 WATTS — UL LISTED



Ideal for medium to heavy production, and maintenance and repair operations. Available with any of 12 different tips, calorized or ironclad.

Description	Cat. No.	List Price Each†
<b>Complete Iron Less Tip — Includes 6-foot two-conductor cordset</b>		
	75 Watts	6A161 \$14.95
	100 Watts	6A162 14.95
	110 Watts	6A162G6 14.95
	125 Watts	6A162G3 14.95
	140 Watts	6A162G12 14.95
<b>Renewal Heater — 115 Volts§</b>		
	75 Watts	6A31 \$4.50
	100 Watts	6A32 4.50
	110 Watts	7C342 4.50
	125 Watts	8A88 4.50
	140 Watts	7C474 4.50

<b>Tips — fit all catalog numbers</b>			
	1/4" Short Chisel—Calorized	6D1P1	\$1.00
	1/4" Short Chisel—Ironclad	6D1P2	1.8
	1/4" Long Chisel—Calorized	6D1P3	1.7
	1/4" Long Chisel—Ironclad	6D1P4	3.5
	1/8" Chisel—Ironclad	6D1P5	1.7
	3/8" Chisel—Calorized	6D1P6	1.0
	3/8" Chisel—Ironclad	6D1P7	1.8
	3/16" Chisel—Ironclad	6D1P8	1.8
	3/8" Short Taper Chisel—Ironclad	6D1P9	2.0
	3/8" Long Taper Chisel—Ironclad	6D1P10	2.0
	1/4" Blunt Chisel—Ironclad	6D1P11	2.0
	Long Taper Cone—Ironclad	6D1P12	1.0

§ Also available for 230-volt operation. Order 115-volt Cat. No. desired, and note on order "except for 230-volt operation." No change in price.

† Manufacturer's suggested resale price.



# ELECTRIC SOLDERING IRONS



VOLTAGE RANGE: 6 to 250 OPERATES IDENTICALLY ON A.C. OR D.C., ANY CYCLE  
STANDARD VOLTAGES 110/120, 121/130, 220/250 SPECIFY VOLTAGE ON ORDER

Equipped with flexible 6-ft. approved Neoprene rubber heater cord, which is water-proof, kink-free, and resistant to oil, abrasion and heat. Nickel-chromium replaceable heating elements, insulated with finest mica, protected by rugged outer housing. Replaceable tips.

## PLUG-TIP IRONS



Cat. No.	Watts	Tip Dia.	Ship. Wt.	Net Price	Less Tip
P70	80	3/8"	1 1/8 lbs.	7.35	6.93
P100	100	3/8"	1 1/8 lbs.	8.05	7.56
P125	130	5/8"	1 5/8 lbs.	9.52	8.43
P150	150	3/8"	1 1/2 lbs.	8.82	8.33
P153	175	3/8"	1 1/2 lbs.	9.17	8.68
P151	175	1/2"	1 3/8 lbs.	9.52	8.68
P200	200	5/8"	2 3/8 lbs.	9.94	8.78
P250	250	5/8"	2 3/8 lbs.	11.41	10.25



P300	300	7/8"	3 lbs.	13.51	11.27
P550	550	1 1/8"	4 3/8 lbs.	17.43	13.23

## SUPER-POWERED IRONS

HIGHER SPEED SMALLER TIPS



Cat. No.	Watts	Tip Dia.	Ship. Wt.	Net Price	Less Tip
P114	100	1/4"	1 3/8 lbs.	8.40	8.05
P154	150	3/4"	1 1/2 lbs.	9.17	8.82
P214	200	1/4"	2 1/8 lbs.	10.29	9.94
P238	200	3/8"	2 1/4 lbs.	10.29	9.80
P212	200	1/2"	2 1/4 lbs.	10.29	9.45
P338	300	3/8"	2 3/4 lbs.	14.14	13.65

## HATCHET TYPE IRONS



Perfect Balance  
Less Fatigue  
See What You  
Solder

Cat. No.	Watts	Tip Dia.	Ship. Wt.	Net Price	Less Tip
70H	80	3/8"	1 3/8 lbs.	8.96	8.54
100H	100	3/8"	1 1/2 lbs.	9.73	9.24
150H	150	3/8"	1 3/8 lbs.	10.50	10.01
151H	175	1/2"	1 3/8 lbs.	10.99	10.15
153H	175	3/8"	1 3/8 lbs.	10.85	10.36
200H	200	5/8"	2 1/4 lbs.	11.41	10.25
300H	300	7/8"	3 lbs.	14.70	12.46

## SCREW TIP IRONS



Cat. No.	Watts	Tip Dia.	Ship. Wt.	Net Price	Less Tip
50	50	3/16"	1 lb.	5.60	5.21



60	60	1/2"	1 1/8 lbs.	7.70	7.14
85	90	1/2"	1 1/8 lbs.	8.26	7.70
120	120	5/8"	1 3/8 lbs.	9.10	8.26
130	130	7/8"	1 1/2 lbs.	10.43	9.10
170	175	1"	2 1/4 lbs.	11.55	9.80



225	250	1 1/8"	2 3/4 lbs.	13.65	11.34
350	350	1 3/8"	3 1/2 lbs.	15.96	12.46
500	500	1 5/8"	4 3/8 lbs.	18.20	13.19
700	700	1 3/4"	5 5/8 lbs.	33.11	26.60

## STANT LDER GUNS



ders in seconds. Weight only 8 oz.  
etime tip, cannot bend or wear. Ideal  
intermittent soldering. 120 volts, AC-DC.

del G14 150 watts has 1/4" tip. \$5.70 Net

del G148 150 watts has 1/8" tip. \$5.70 Net

del G14K Kit has Model G14 solder gun cutting  
tip, smoothing tip, core solder, sand-  
paper. \$6.43 Net

## SUPER-PENCIL IRONS

HOT TIP

Weights  
only 2 oz.



COOL HANDLE

Short  
Reach 3"

All the advantages of a Soldering Pencil, but a full-fledged industrial soldering iron with nickel-chromium mica-wound element. Tiny tips outperform irons with larger tips and higher wattages.

Cat. No.	Watts	Tip Dia.	Ship. Wt.	Net Price	Less Tip
25S	25	1/8"	1/2 lb.	4.90	4.70
25S20	20	1/8"	1/2 lb.	4.90	4.70
25S30	30	1/8"	1/2 lb.	4.90	4.70
25S35	35	1/8"	1/2 lb.	4.90	4.70
*25S50	50	1/8"	1/2 lb.	7.01*	5.40
26S	30	3/16"	1/2 lb.	4.97	4.74
26S35	35	3/16"	1/2 lb.	4.97	4.74
26S40	40	3/16"	1/2 lb.	7.12*	5.44
*26S50	50	3/16"	1/2 lb.	7.12*	5.44

FASTEST AND MOST DURABLE PENCIL  
IRON. Weights but 2 oz.

*24S	50	1/4"	1/2 lb.	7.56*	5.63
*24S40	40	1/4"	1/2 lb.	7.56*	5.63
*24S60	60	1/4"	1/2 lb.	7.56*	5.63

## BANTAM HATCHET IRONS

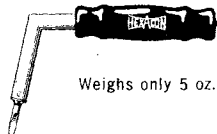
PERFECT BALANCE

FOR INACCESSIBLE PLACES



Weights only 3 oz.

Cat. No.	Watts	Tip Dia.	Ship. Wt.	Net Price	Less Tip
25H	25	1/8"	1/2 lb.	5.95	5.75
25H35	35	1/8"	1/2 lb.	5.95	5.75
*25H50	50	1/8"	1/2 lb.	7.36*	5.75
26H	30	3/16"	1/2 lb.	6.02	5.79
26H35	35	3/16"	1/2 lb.	6.02	5.79
*26H50	50	3/16"	1/2 lb.	7.47*	5.79
24H	50	1/4"	1/2 lb.	7.84*	5.91
24H40	40	1/4"	1/2 lb.	7.84*	5.91
*24H60	60	1/4"	1/2 lb.	7.84*	5.91



Weights only 5 oz.

**30H	60	1/4"	7/8 lb.	6.51	6.19
**30H40	40	1/4"	7/8 lb.	6.51	6.19
**30H50	50	1/4"	7/8 lb.	6.51	6.19
**30H70	70	1/4"	7/8 lb.	6.51	6.19
**30H75	75	1/4"	7/8 lb.	6.51	6.19

\*\*Extra 1/8" tip furnished with each iron.

\*STANDARD EQUIPMENT DUROTHERM NON-STICKING  
LONG-LIFE TIPS.

## HEXACON HORNET Model H10



World's Smallest Industrial Soldering  
Iron for Micro-Electronic Soldering

Cat. No. H10K Kit (H10 Iron, 2 Tips and Sponget).....Net \$6.93

Cat. No. H11K Kit (H11 Iron, 2 Tips and Sponget).....Net \$6.93

Cat. No. H14K Kit (H14 Iron, 2 Tips and Sponget).....Net \$6.93

†Tip Cleaning Sponge in Container

Cat. No. H10 Iron less tip, 12 Watts.....Net \$5.25

Cat. No. H11 Iron less tip, 17 Watts.....Net \$5.25

Cat. No. H14 Iron less tip, 20 Watts.....Net \$5.25

Iron with 3-wire cord and Nema plug available

Cat. No. 91 Package of 12 tip cleaning sponges  
in container.....Net \$2.10

- Smallest Iron — Only 5/8"
- Lowest Wattage — 12 Watts
- Hot tip Gets In and Out Fast
- No Damage to Insulation
- Lightweight • Cool Handle ‡

DUROTHERM NON-FREEZING TIP — 1/32" and 1/16" diameters

XTRADUR LONG-LIFE TIPS — 1/8" diameter

‡Plastic handle, cooled thru ventilated design and stainless steel mirror, reflects heat away from hand.

## PINPOINT SOLDERING IRONS



FOR PINPOINT ACCURACY  
ON PRECISION SOLDERING

Long Reach 4 1/2" (Weigh Only 3 oz.)

Cat. No.	Watts	Tip Dia.	Ship. Wt.	Net Price	Less Tip
P25	25	1/8"	1/2 lb.	4.90	4.70
P2530	30	1/8"	1/2 lb.	4.90	4.70
P2535	35	1/8"	1/2 lb.	4.90	4.70
*P2550	50	1/8"	1/2 lb.	6.31*	4.70
P26	30	3/16"	1/2 lb.	4.97	4.74
P2635	35	3/16"	1/2 lb.	4.97	4.74
P2640	40	3/16"	1/2 lb.	6.42*	4.74
*P2650	50	3/16"	1/2 lb.	6.42*	4.74
*P24	50	1/4"	1/2 lb.	7.21*	5.28
*P2440	40	1/4"	1/2 lb.	7.21*	5.28
*P2460	60	1/4"	1/2 lb.	7.21*	5.28
**P30	60	1/4"	7/8 lb.	5.95	5.63
**P3040	40	1/4"	7/8 lb.	5.95	5.63
**P3050	50	1/4"	7/8 lb.	5.95	5.63
**P3070	70	1/4"	7/8 lb.	5.95	5.63
**P3075	75	1/4"	7/8 lb.	5.95	5.63

\*\*Extra 1/8" tip furnished with each iron.

\*STANDARD EQUIPMENT DUROTHERM NON-STICKING  
LONG-LIFE TIPS.

## CORD AND CORD SETS

### 2 WIRE 18 GAUGE, 2 CONDUCTOR 18/2

Cord Assembled to Iron Cat. No.	Extra Net		Cord and Plug Only Cat. No.	Extra Net	
	No	Charge		No	Charge
*SP2S	No		SP2S	.98	
*PN2S	Extra		PN2S	.98	
SJ2S	Charge		SJ2S	.98	
HD2S	.46		HD2S	1.33	
KSJ2S	2.10		KSJ2S	2.80	
KSV2S	2.10		KSV2S	2.80	
KPN2S	.84		KPN2S	1.54	

\*Standard on INSTRUMENT IRONS

\*\*Standard on LARGE IRONS

### 3 WIRE 18 GAUGE, 3 CONDUCTOR 18/3

Cord Assembled to Iron Cat. No.	Net		Cord and Plug Only Cat. No.	Net	
	No	Charge		No	Charge
*SP3N	.98		SP3N	1.68	
SP3C	.98		SP3C	1.68	
*SJ3N	.98		SJ3N	1.68	
SJ3C	.98		SJ3C	1.68	
HD3N	1.05		HD3N	1.75	
HD3C	1.05		HD3C	1.75	
KSJ3N	2.94		KSJ3N	3.64	
KSV3N	2.94		KSV3N	3.64	



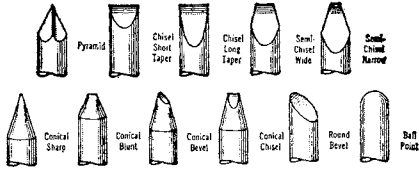
# LONG-LIFE SOLDERING TIPS

## OUTLAST COPPER TIPS UP TO 20 TO 1



**DUROTHERM NON-FREEZING TIPS:** Iron coated and immunized. Absolutely prevents tips from sticking. Minimum loss of heat delivery.

Note: Also available; XTRADUR Iron-coated Pretinned Tips. Multi-coated for extra long wear which immunizes shank of tip from solder, thus preventing adhering of solder, except on working surface of tip—prevents creeping and spilling of solder.

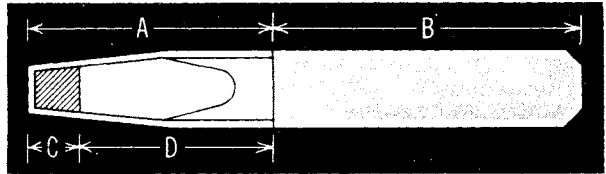


**BASIC TIP SHAPES**

**YOUR SPECIAL TIPS QUOTED ON REQUEST  
FIT ALL MAKES**

### CONSTRUCTION OF DUROTHERM NON-FREEZING TIP — U.S. Pat. No. 3,109,231

- A—Heavy Iron Coating
- B—Scale-Resistant DUROTHERM COATING Bonded to Base Copper
- C—Pretinned Section
- D—Multi-coated and immunized



**LONGEST WEARING AND BEST PERFORMING TIP EVER PRODUCED**

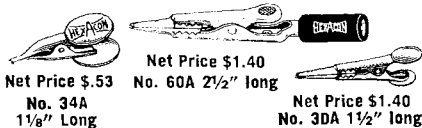
### HEXCLAD, XTRADUR AND DUROTHERM TIPS AVAILABLE IN ALL CATALOG NUMBERS LISTED BELOW

Tip No.	Style of Point	Net Price	Tip No.	Style of Point	Net Price	Tip No.	Style of Point	Net Price	Tip No.	Style of Point	Net Price				
1/8" x 2 1/4"	Fit Iron Nos. 25S, P25, 25H		HT356D	Chisel, M, TT 1/8"	2.00	HT1770	S-chisel, W, TT 1/4"	2.42	HT371D	Semi-chisel, N	3.57				
Tip No.	Style of Point	Net Price	HT685D	Chisel, Lg, TT 1/8"	2.00	HT577D	S-chisel, N, TT 1/4"	2.42	HT1800	Semi-chisel	3.43				
HT2480	Pyramid	\$1.61	HT452D	Conical, TT 1/8"	2.00	HT145D	Chisel, Sh, TT 3/16"	2.42	HT802D	S-chisel, TT 3/8"	3.71				
HT249D	Chisel, short	1.61	HT580D	Conical, TT 3/8"	2.00	HT475D	S-chisel, N, TT 3/8"	2.42	HT766D	Shisel, TT 1/4"	3.71				
HT376D	Chisel, long	1.61	HT473D	Chisel, TT 3/8"	2.00	HT289D	Pyramid, TT 1/8"	2.42	HT539D	Pyramid, 3/8"	3.71				
HT560D	Semi-chisel	1.61	HT130D	Round, bevel	1.93	HT528D	S-chisel, bent	2.42							
HT222D	Conical, blunt	1.61	1/4" x 3" Extra long for P30, 30H												
HT311D	Conical, sharp	1.61	Also for competitive makes												
HT638D	Round, bevel	1.61	HT413D	Pyramid, long	1.68	3/8" x 4" Fit Iron Nos. P100, P150, P238, 100H, 150H; Extra long for P70, 70H; Also other makes									
HT361D	Chisel, TT 1/8"	2.00	HT468D	Chisel, long	1.93	HT566D	Pyramid	2.07	7/8" x 4 3/4" Fit Iron Nos. P300, 300H						
HT693D	R. B., TT 1/8"	2.00	HT299D	Semi-chisel, W	1.93	HT198D	Chisel, short	2.07	HT261D	Chisel, short	5.53				
HT104D	R. B., TT 1/2"	2.00	HT328D	Semi-chisel, N	2.00	HT918D	S-chisel, Sh, M	2.07	HT179D	Semi-chisel, W	5.32				
HT609	Chisel, long	1.61	HT708D	S-chisel, N, Lg	2.00	HT365D	Semi-chisel, thin	2.07	1 1/8" x 5 1/4" Fits No. 500						
HT61D	Semi-chisel	1.61	HT453D	Conical, bevel	2.00	HT370D	S-chisel, Lg, N	2.42	HT262X	Chisel	7.74				
3/8" x 2 1/4" Fit Iron Nos. 26S, P26, 26H			HT234D	Chisel, Lg, TT 1/2"	2.00	HT140D	Semi-chisel, W	2.07	HT229X	Semi-chisel	7.74				
HT251D	Pyramid	1.68	HT487D	Chisel, Lg, TT 1/8"	2.00	HT430D	Round, bevel	2.07	HT233X	Pyramid	7.74				
HT294D	Chisel, short	1.68	HT519D	Chisel, Lg, TT 1/8"	2.00	HT319D	S-chisel, N, TT 1/4"	2.42							
HT195D	Chisel, long	1.68	HT362D	Conical groove	2.21	HT481D	Chisel, N, Sh, TT 1/8"	2.42	<b>SCREW TIPS</b>						
HT207D	Semi-chisel, N	1.68	1/4" x 3 3/4" Extra long for P30, 30H						All Conventional Semi-chisel Types						
HT190D	Semi-chisel, W	1.68	Also for competitive makes					Fits All Makes							
HT214D	Conical, blunt	1.68	HT563D	Pyramid, long	1.93	3/8" x 3 3/4" Fit Iron Nos. P70, 70H; Also fit other makes									
HT281D	Conical, sharp	1.68	HT188D	Chisel, long	1.93	HT254D	Pyramid	2.07	Tip No.	Dia.	Thread	Iron No.	Net	Net	
HT288D	Pyramid, TT 1/8"	1.79	HT382D	Semi-chisel, W	1.93	HT488D	Chisel, short	2.07	HT267X	1/4"	1/4-20	50	1.82	1.40	
HT290D	Chisel, TT 1/8"	1.79	HT626D	Pyramid, TT 1/8"	2.00	HT129D	Semi-chisel, W	2.07	HT268X	1/2"	3/8-18	60	2.35	1.96	
HT548D	S-chisel, N, TT 1/8"	1.79	HT698D	S-chisel, TT 1/8"	2.00	HT510D	Conical, sharp	2.07	and 85						
HT479D	Conical, TT 1/8"	1.79	HT603D	Chisel, Lg, TT 1/8"	2.00	HT309D	Conical, blunt	2.07	HT269X	3/8"	3/8-18	120	2.94	2.56	
HT220D	R.B., TT 1/8"	2.07	HT391D	Semi-chisel, N	2.00	HT464D	Conical, chisel	2.21	HT271X	1"	1/2-13	170	4.87	4.45	
HT392D	Chisel, long	1.68	HT277D	Chisel, Lg, TT 3/8"	2.00	HT581D	S-chisel, N, TT 1/4"	2.42	HT270X	7/8"	1/2-13	130	4.27	3.89	
HT423D	Semi-chisel	1.68	1/4" x 4" Fit Irons P114, P154, P214				HT498D	Chisel, Lg, TT 1/4"	2.42	HT272X	1 1/8"	5/8-11	225	6.48	6.09
1/4" x 2 1/4" Fit Iron Nos. 24S, P24, 24H			HT496D	Chisel, long	2.14	HT291D	S-chisel, W, TT 1/4"	2.42	HT273X	1 3/8"	5/8-11	350	9.10	8.75	
HT325D	Pyramid	1.93	HT494D	Semi-chisel, N	2.14	HT497D	Chisel, Lg, TT 3/8"	2.42	HT274X	1 3/8"	5/8-11	500	12.29	11.90	
HT553D	Chisel, short	1.93	HT495D	Chisel, Lg, TT 3/8"	2.24	1/2" x 4 1/8" Fit Iron Nos. P151, 151H, P212									
HT313D	Semi-chisel, W	1.93	1/4" x 4 1/2" Fit Irons P114, P154, P214				HT257D	Pyramid	3.26	TIPS FOR IRONS Nos. H10 and H11					
HT397D	Semi-chisel, M	1.93	HT258D	Pyramid	2.21	HT293D	Chisel, short	3.26	No.	Dia.	Duotherm Net	Xtradur Net			
HT417D	Semi-chisel, N	1.93	HT259D	Chisel, short	2.21	HT323D	Chisel, short, blunt	3.26	HT866D	1/32"	.84				
HT418D	Conical, blunt	1.93	HT230D	Semi-chisel, W	2.21	HT163D	S-chisel, N	3.26	HT867D	1/16"	.84				
HT102D	Round, bevel	1.93	HT460D	Conical, bevel	2.31	HT194D	Semi-chisel, thin	3.40	HT868D	1/8"	.84				
HT586D	Conical, S-chisel	2.00	3/8" x 4 3/8" Fit Iron Nos. P100, P150, P238, P338, 100H, 150H				HT444D	S-chisel, Lg, Taper	3.50	HT869D	1/4"	.84			
HT691D	Chisel, TT 1/8"	2.17	HT255D	Pyramid	2.07	HT203D	Conical, blunt	3.26	HT864X	1/8"	.63				
HT699D	S-chisel, Lg, TT 1/8"	2.00	HT493D	Chisel, short	2.07	HT446D	S-chisel, Lg, Taper	3.50	HT870X	1/8"	.63				
HT451D	Chisel, L, TT 1/8"	2.00	HT151D	Semi-chisel, W	2.07	HT123D	S-chisel, N, TT 3/8"	3.50	HT871X	1/8"	.63				
HT324D	Chisel, S, TT 1/8"	2.00	HT183D	Semi-chisel, N	2.07	5/8" x 4" Fit Iron Nos. P125, P200, 200H, P250									
HT513D	Conical, TT 1/8"	2.00	HT108D	Conical, sharp	2.07	HT256D	Pyramid	3.43	TIPS FOR IRON No. H14						
HT463D	Chisel, L, TT 3/8"	2.00	HT114D	Conical, blunt, Sm	2.07	HT891D	Chisel, long	3.43	No.	Dia.	Xtradur Net				
HT841D	S-chisel, N, TT 3/8"	2.00	HT240D	Conical, blunt, M	2.07	HT178D	Semi-chisel, W	3.43	HT654X	1/8"	.84				
HT692D	Chisel, L, TT 1/8"	2.17	HT374D	Semi-chisel, W	2.07	5/8" x 4 3/8" Fit Iron Nos.									
HT552D	S-chisel, 3/8" Shank	2.42	HT265D	Pyramid, TT 1/4"	2.42	HT260D	Pyramid	3.43	HT655X	1/8"	.84				
1/4" x 2 3/4" Fit Iron Nos. P30, 30H			HT266D	Chisel, Sh, TT 1/4"	2.42	HT499D	Chisel, long	3.43	HT656X	3/8"	.63				
HT252D	Pyramid	1.93	HT335D	Chisel, Lg, TT 1/4"	2.42				HT657X	3/8"	.84				
HT253D	Chisel, short	1.93							HT658X	1/8"	.63				
HT202D	S-chisel, Wide	1.93							HT659X	1/8"	.63				
HT426D	S-chisel, N	1.93													
HT131D	Conical, sharp	1.93													
HT263D	Pyramid, TT 1/8"	2.00													
HT264D	Chisel, Sh, TT 1/8"	2.00													

CATALOG NOS. shown are for DUROTHERM. For HEXCLAD drop "D"; cost approximately 30% less than DUROTHERM. For XTRADUR substitute "X" for "D"; cost approximately 10% less than DUROTHERM. ABBREVIATIONS: TT, Turned to; S-chis, Semi-chisel; W, Wide; N, Narrow; Lg, Long; Sh, Short; L, Large; M, Medium; Sm, Small; RB, Round Bevel. SAMPLE TIPS for your evaluation. Ask for new Tip Sketch Catalog with detailed sketches of 180 Standard Coated Tips.

### SOLDERING ACCESSORIES

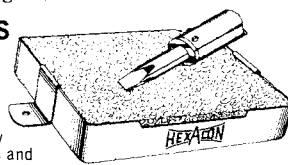
#### HEAT SINKS — Copper Tipped Clips



Protect heat sensitive components such as transistors and diodes from thermal damage.

#### TIP CLEANING SPONGE IN METAL TRAY

Insures reliability of soldered joints and extends tip life. Eliminates contamination. Pure cellulose sponge contains no harmful acids.



#### PRICES

Sponge in Metal Tray #810.....\$1.05 Net  
Sponge only #8101..... .39 Net  
Tray only #8102..... .67 Net

#### ANTI-WICKING TWEEZERS Solid Berillium Copper

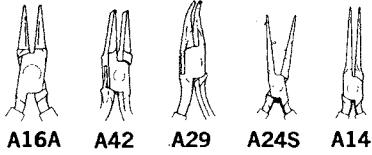
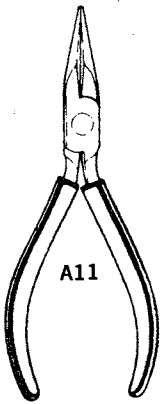
Cat. No.	Gauge	Net Price	Cat. No.	Gauge	Net Price
817	16-18	\$5.25	820N	20*	\$5.25
821	20-22	5.25	822N	22*	5.25
825	24-26	5.25	824N	24*	5.25
830	28-30	5.25	826N	26*	5.25

Prevents harmful effects of excess capillary action of solder along stranded wire beneath insulation. Order tool number by wire size being used. \*\*N\*\* Type Tweezers are made for one gauge wire only (not for a range of sizes). Therefore give better fit on wire for greater efficiency. Shorter tip hole provides for close inspection gap on precision soldering such as called for in current NASI specifications.



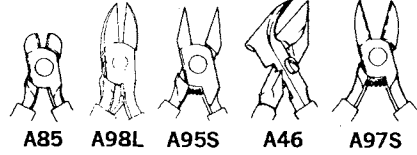
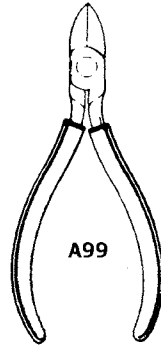
# America's most diversified

## PLIERS



Box-Joint Pliers Available—Keeps blades always in alignment.

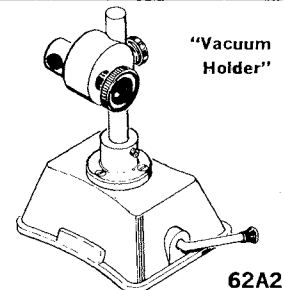
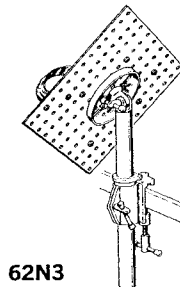
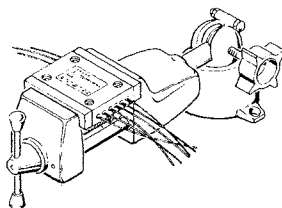
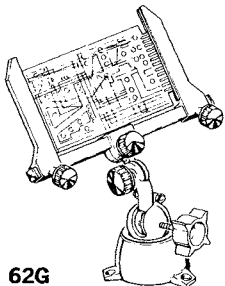
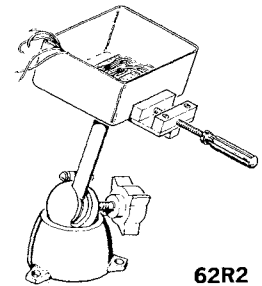
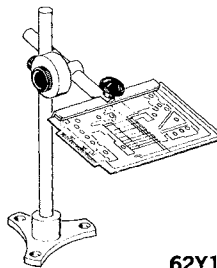
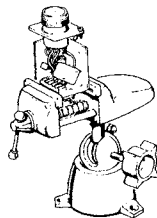
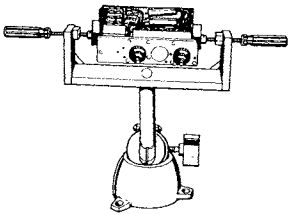
## CUTTERS



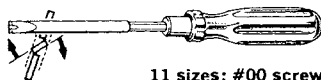
Box-Joint Cutters Available—Stop play in joints, feather touch opening and closing.

Special "Anti-Shock" cutters made to order.

## WORK POSITIONERS

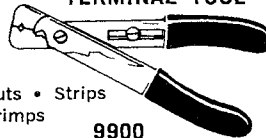


### Magic-Tip SCREWHOLDING SCREWDRIVER



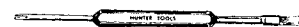
11 sizes: #00 screws to #10; 2½" length to 11¼"

### TERMINAL TOOL



Cuts • Strips  
Crimps

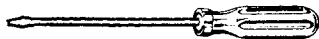
### SOLDERING AIDS



### MICRO MODELS

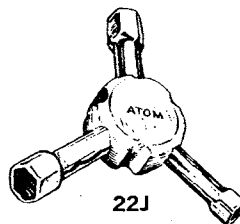


### Dura-Tip SCREWDRIVER



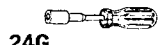
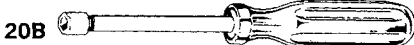
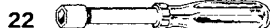
40 models: 2" blades up to 10", square blades available

### ATOM 3-IN-1 NUT DRIVER



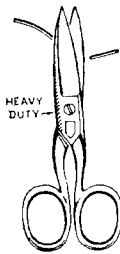
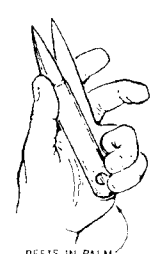

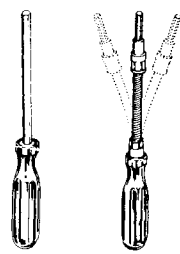
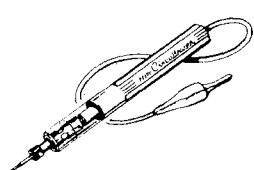
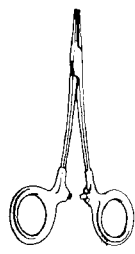


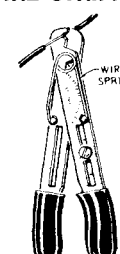
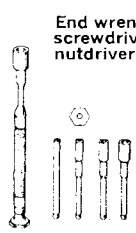
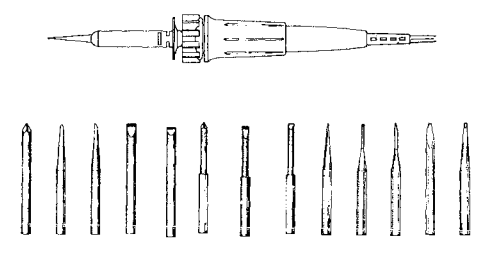


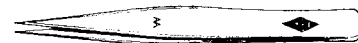



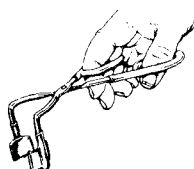
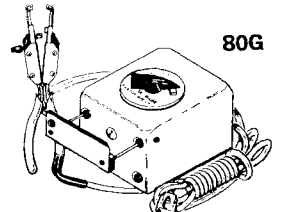
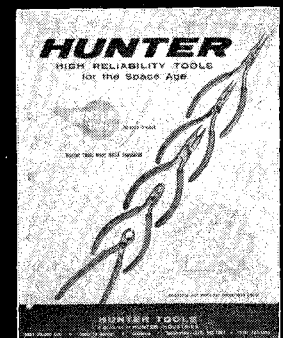

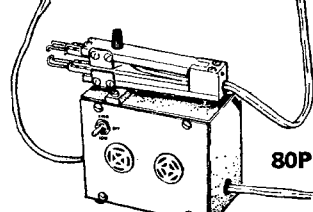
### NUT DRIVERS

Sizes down to #00.



# line of electronic tools!



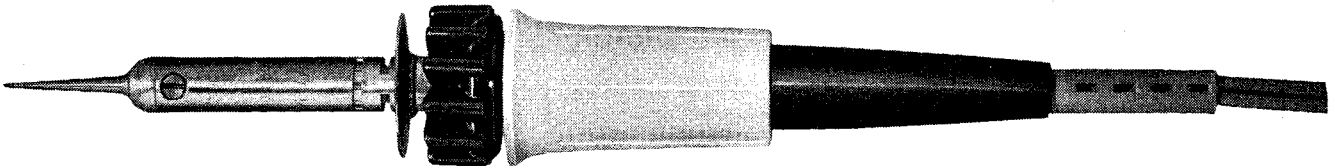
<p><b>SCISSORS</b></p>  <p>HEAVY DUTY</p> <p><b>F15</b></p>	<p><b>SNIPPERS</b></p>  <p>RESTS IN PALM</p> <p><b>F213</b></p>	<p><b>"SMITTY"</b> Hex Socket Key Set</p>  <p><b>1P5</b> 7 Models</p>	<p><b>HEX DRIVERS</b></p>  <p><b>5G, 5T</b> From 1/16" to 3/32"</p>	<p><b>CIRCUITRACER</b></p>  <p><b>54</b> 5 Models</p>
<p><b>SCISSOR-CLAMP</b></p>  <p><b>F35</b></p>	<p><b>TRI-TAP</b></p>  <p><b>47</b> 5 combinations</p>	<p><b>HEAT SINK</b></p>  <p><b>51E</b> 6 Models</p>	<p><b>WIRE STRIPPER</b></p>  <p>WIRE SPRING</p> <p><b>55BB</b> 4 Models</p>	<p><b>SUB-MINIATURE KITS</b></p>  <p>End wrenches, screwdrivers, nutdrivers</p> <p><b>K24R</b></p>
<p><b>SOLDERING IRONS AND TIPS</b></p> 		<p><b>ALL PURPOSE KNIFE</b></p>  <p><b>E20D</b> 4 Models</p>	<p><b>TWEEZERS 100 Models</b></p> <p><b>B3</b> </p> <p><b>CAA</b> </p> <p><b>C46</b> </p> <p><b>B2EF</b> </p> <p><b>B3ME</b> </p>	
<p><b>HOT TUBE PULLERS</b></p>  <p><b>57A</b></p>	<p><b>THERMAL WIRE STRIPPERS</b></p>  <p><b>80G</b></p>		 <p>Send for our complete tool catalog!</p> <p><b>HUNTER TOOLS</b> Santa Fe Springs, California</p>	
<p><b>TENSION TWEEZIE</b></p>  <p><b>56A</b></p>	 <p><b>80P</b></p>			



*Featherlite*  
**SOLDERING PENCILS  
 AND HEAVY-DUTY IRONS**



**"KWIKIE" TYPE 4000**



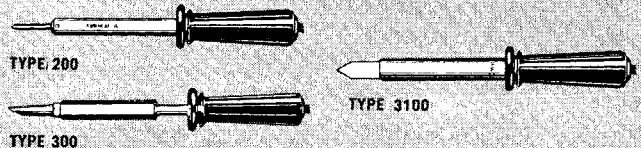
**PENCIL IRONS (Non-thermostatic)**  
**7 STANDARD TEMPERATURES AVAILABLE**

This newest Kwikie provides unexcelled efficiency and economy with its interchangeable plug-in tips, and unparalleled versatility with its standard irons in wattages and temperatures ranging from 10 watts (450°F) through 50 watts (1000°F). This selection permits easy standardization as well as precise temperatures for exacting production requirements without added cost of transformers.

Small, (7") lightweight (1 3/4 oz.) and finely balanced, the new models are provided with a comfortably sized, extra-cool grip of rugged plastic, allowing their use in minimum contamination work areas (no cork). Though designed for prolonged high production precision soldering of miniature components, the Kwikie is small enough for safe fast work in densely packed circuitry with power in reserve. Engineered to melt more solder by comparison with other interchangeable tip type irons of comparable wattage.

All models available with 3 conductor safety-grounded 6' cord sets and irons in 3 smart colors . . . green, white, and black. All irons and temperatures rate at 115V.

**DEPENDABLE PRODUCTION IRONS**



**TYPE 200**  
**TYPE 300**  
**TYPES 200 and 300- THERMOSTATIC MODELS**  
*(Vanatta Automatic Thermostat)*  
 Lightweight and heavy duty irons for high-speed work. Dependable and rugged. Interchangeable tips are easily replaced. Preset to 700°F for intermittent standby or to 800°F for constant high-speed soldering. Can be preset from 275° to 875° for additional charge of \$1.00 each for 1 to 49 irons; 50¢ each for 50 to 99. No extra charge for 100 or more. Temperature creep reduced by the use of special alloys.

**TYPE 3100- TEMPERATURE CONTROLLED MODEL**  
 Rugged, lightweight, and economical general purpose iron for continuous or intermittent soldering. One-piece shell and heating element attached to air-cooled plastic handle by 2 screws for rapid replacement. Temperature allows wattage increase as demand increases. Forged tellurium copper core. Screw type tips easily changed or replaced.

**SPECIFICATIONS**

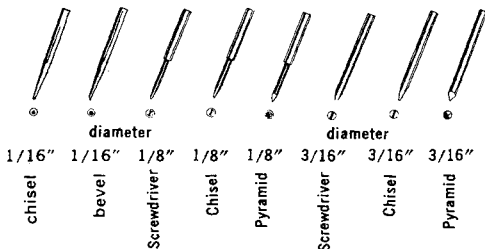
	Model 200	Model 300	Model 3100	Model 4100	Model 4150	Model 4200	Model 4250	Model 4350	Model 4400	Model 4500
Wattage	150	225	225-75	10	15	20	25	35	40	50
Voltage	115-230 AC	115-230 AC	115 AC-DC	100-125 AC-DC	100-125 AC-DC	100-125 AC-DC	100-125 AC-DC	100-125 AC-DC	100-125 AC-DC	100-125 AC-DC
Tip Temperature (Max.)	875°F.	875°F.	850°F.	450°F.	550°F.	650°F.	750°F.	850°F.	950°F.	1000°F.
Heating Time (Max.)	90 sec.	90 sec.	100 sec.	70 sec.	70 sec.	70 sec.	70 sec.	60 sec.	50 sec.	60 sec.
Weight (with tip)	7 1/2 oz.	14 oz.	8 oz.	1 3/4 oz.	1 3/4 oz.	1 3/4 oz.	1 3/4 oz.	1 3/4 oz.	1 3/4 oz.	2 1/4 oz.
Length (with tip)	12 3/4"	13"	12 3/4"	7"	7"	7"	7"	7"	7"	7"
Ship. Weight	1 lb. 2 oz.	1 1/2 lbs.	1 1/2 lbs.	6 oz.	6 oz.	6 oz.	6 oz.	6 oz.	6 oz.	6 oz.
Heater Cord Length	6 ft.	6 ft.	6 ft.	6 ft.	6 ft.	6 ft.	6 ft.	6 ft.	6 ft.	6 ft.

**NEW KWIKIE FEATURE**

Kwikie pencil irons now have a Kwik-Disconnect element which provides complete interchangeability and assures positive electrical contact. Cord/handle assemblies can now be readily converted to 2 or 3 conductor cords, and any one of the 7 different heating elements can be quickly changed to handle new jobs.

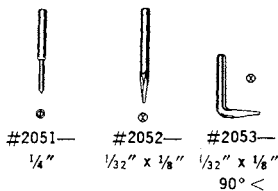
**Interchangeable copper (C), iron clad (K), and iron clad immunized (K-I) tips available for all Kwikie irons.**

*Kwikie* INTERCHANGEABLE TIPS

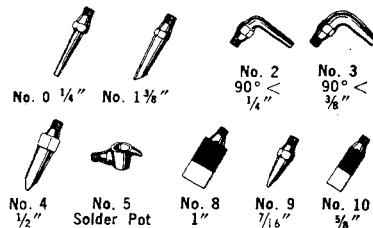


All tips available with 30°, 60° or 90° bends  
 Space limits illustrations of all tip styles

TYPE 200 TIPS



TYPE 300 AND TYPE 3100 INTERCHANGEABLE SCREW TIPS



**#20 ANTIFREEZE COMPOUND**

A lubricant for all soldering iron tips. Prevents sticking, increases conductivity between tip and core.

**K-Lube**

New space-age formula, high temperature lubricant for all pencil iron tips, set screws and threaded tips.



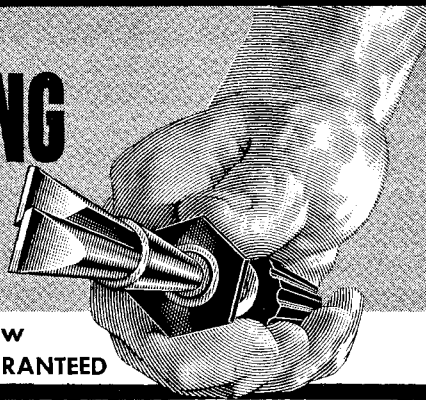
Represented by **HUNTER INDUSTRIES**

Santa Fe Springs, California



# Quick-Wedge® SCREW-HOLDING Screwdrivers

14 Different Sizes Handle  
Every Screwdriving Job!



Hold - Start - Drive the Screw  
AND THEY'RE UNCONDITIONALLY GUARANTEED

- One screwdriver drives many sizes of screws •
- Shockproof, unbreakable Tenite II handle •
- Hollow-ground bit fits any slotted screw •
- Use instead of conventional screwdriver •
- Tough, durable spring steel blades. Positively will not mar screw slot •
- Fast, positive action — easy to use •
- No pressure wedge to wear out •
- Foolproof construction.

**MIDGET SIZES**

1253  
1253A  
1258

No. 1253A and No. 1258A

NO.	BLADE WT. LBS.	DIAM. PER DOZ.	DOZ.	EACH
1253	1/4"	9 oz.	\$15.00	\$1.25
1253A	1/4"	9 oz.	16.80	1.40
1258	1/2"	15 oz.	18.00	1.50
1258A	1/2"	15 oz.	20.00	1.65

Wood Screws, Bolts—No. 0 to No. 4  
Sheet Metal Screws—No. 2 to No. 4

**SMALL SIZES**

1732  
1734  
1736  
1738  
17312

1732	3/32"	1	\$14.40	\$1.20
1734	3/32"	1 1/4	15.00	1.25
1736	3/32"	1 1/2	15.60	1.30
1738	3/32"	1 3/4	16.20	1.35
17312	3/32"	2	18.00	1.50

Wood Screws, Bolts—No. 3 to No. 7  
Sheet Metal Screws—No. 3 to No. 6

**MEDIUM SIZES**

1834  
1836  
1838

1834	3/16"	2	\$20.40	\$1.70
1836	3/16"	2 1/4	21.00	1.75
1838	3/16"	2 1/2	21.60	1.80

Wood Screws, Bolts—No. 6 to No. 12  
Sheet Metal Screws—No. 6 to No. 12

**HEAVY DUTY SIZES**

2354  
2356  
2358  
23514

2354	1/4"	2 3/4	\$21.60	\$1.80
2356	1/4"	3 1/4	22.20	1.85
2358	1/4"	3 3/4	22.80	1.90
23514	1/4"	5	27.00	2.25

Wood Screws, Bolts—No. 8 to No. 24  
Sheet Metal Screws—No. 8 to 1/2"

Prices Effective July 1, 1964



Blade length is indicated by last digit(s) of model number.  
("17312" has a 12" blade — "23514" has a 14" blade)

Quick-Wedge Reg. U.S. Pat. Off.

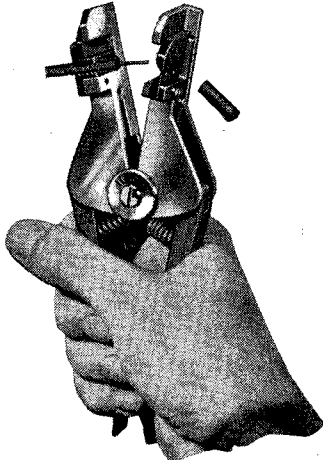
**ELECTRICAL SIZES**

All but No. 1732 (above) available with shockproof, Vinyl covered tubing, 15¢ additional per screwdriver. Specify "E" after number.

**KEDMAN COMPANY • Salt Lake City, Utah**

**IDEAL Stripmaster®**  
2 SECOND "ONE SQUEEZE" OPERATION

Unexcelled for fast assembly work, this 10 oz. stripper can be used all day without fatigue. Exclusive "automatic" feature holds jaws open after stripping to permit removal of wire and to prevent crushing. No nicking, fraying, or cutting of wire ends possible. 7 models for all wire gauges from 8 to 30.



MODELS FOR ALL WIRE GAUGES — FROM 8 TO 30

Catalog No.	Wire Gauge	No. of Holes	List Price	Suggested Resale
45-090	8 to 12	3	\$9.60	\$5.75
45-091	10 to 18	4	9.60	5.75
45-092	10 to 22	6	9.60	5.75
45-093	14 to 22	4	9.60	5.75
*45-095	16 or 18, SP & SPT Slot		9.60	5.75
45-097	16 to 26	6	9.60	5.75
45-098	20 to 30	6	9.60	5.75

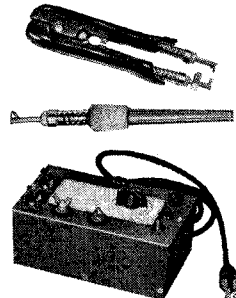
\*Also strips 2 and 3-conductor low-voltage wire used in G.E. and Touchplate remote control wiring systems.

**SWING-GRIP (TM) THERMAL STRIPPER**

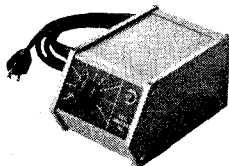


One squeeze automatically melts and removes all thermo-plastic insulations — even Teflon — without nicking or scraping wires. Exclusive one-piece heating element melts insulation all the way around wire without twisting tool. Separate grippers remove insulation. Element doesn't scrape wire or drag-out insulation. Adjustable wire depth-stop. Replaceable heating elements for 30 to 12 AWG wire. Tool is furnished with 16 to 28 ga. element as standard. Use with 45-133, 45-135, or 45-136 Power Units.

**THERMO-STRIP (TM) THERMAL STRIPPERS**



Choice of tools: plier-type Pincer Tool for normal production use; probe-type Single Loop Tool for miniaturized or crowded assemblies. For Pincer Tool, use 45-133 Power Unit only. For single Loop Tool, use 45-133, 45-135, or 45-136 Power Units.



Model 45-133

Model 45-134  
Model 45-135

**POWER UNITS**

Model 45-133 operates on 115v, 60cy current. Has pilot light, thermal over-load protection, and infinitely variable heat control.

Model 45-135 operates on 115v, 60cy current; and Model 45-136 on 230v, 50-60cy current. Both have an 8-step temperature control, pilot light, and thermal over-load protector.

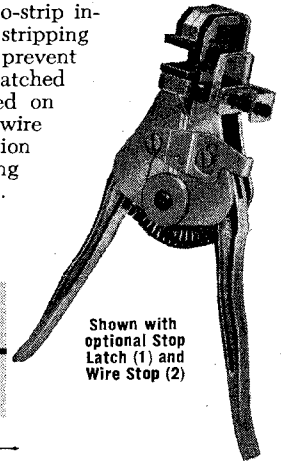
Cat. No.	Item	List Price	Sugg. Resale
45-133	Power Unit, 115v (for 45-140, 45-141, 45-143)	\$75.75	\$45.45
45-135	Power Unit, 115v (for 45-141, 45-143)	58.35	35.00
45-136	Power Unit, 230v (for 45-141, 45-143)	72.50	43.50
45-140	Pincer Tool only	36.15	21.70
45-141	Single Loop Tool only	17.50	10.50
45-143	Swing-Grip Tool only	36.15	21.70

**IDEAL WIRE STRIPPERS**  
FOR ALL TYPES OF THERMO-PLASTIC INSULATIONS... EVEN TOUGH TEFLONS\*

**IDEAL CUSTOM Stripmaster®**  
Patented No. 2,889,728

FOR PRECISION WIRE STRIPPING

Removes Teflon® and other hard-to-strip insulation. New "concentric hole" stripping blades and special design of jaws prevent damage to insulation and wires. Matched sets of blades are precision drilled on watchmaker's equipment to exact wire sizes. Chucking action on insulation guides conductor through stripping hole, preventing nicks and scrapes. 3 models, wire sizes from 10 to 30.

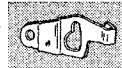


Shown with optional Stop Latch (1) and Wire Stop (2)

EXTRA FEATURES (optional)

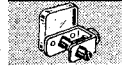
"SHORT-STOP" LATCH

protects wire by limiting stroke to 5/32" — disengages without removal for full 7/8" strip.

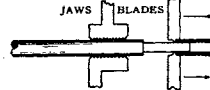


"SEE-THRU" WIRE STOP

assures uniform lengths by adjusting to strip length desired.



Counterbored stripping hole "chucks" insulation



FOR GENERAL PURPOSE STRIPPING OF PLASTIC, FIBRE GLASS AND OTHER HARD-TO-STRIP INSULATIONS

WIRE GAUGE	NO. OF HOLES	CATALOG NO. (without stop latch and wire-stop)	CATALOG NO. (with stop latch and wire-stop)
		List \$28.25 Suggested Resale \$16.95	List \$34.60 Suggested Resale \$20.75
10 to 14	3	45-170	45-180
16 to 26	6	45-171	45-181
26 to 30	3	45-172	45-182

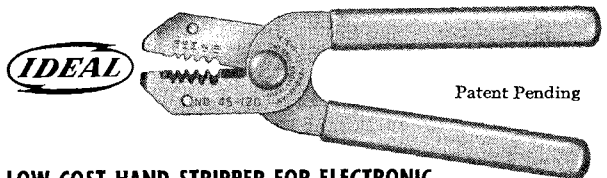
FOR TYPE EE — 1000 VOLT TEFLON\* WIRE

WIRE GAUGE	NO. OF HOLES	CATALOG NO.	CATALOG NO.
10 to 14	3	45-173	45-183
16 to 26	6	45-174	45-184
26 to 30	3	45-175	45-185

FOR TYPE E — 600 VOLT TEFLON\* WIRE

WIRE GAUGE	NO. OF HOLES	CATALOG NO.	CATALOG NO.
10 to 14	3	45-176	45-186
16 to 26	6	45-177	45-187
26 to 30	3	45-178	45-188

\*Reg. Trademark of DuPont



Patent Pending

LOW COST HAND STRIPPER FOR ELECTRONIC AND APPLIANCE PRODUCTION STRIPPING

For quick, easy, clean stripping of wires used in electronic instruments and appliances. Sturdy, compact, constructed of hardened steel for rugged duty and long service. Comfortable plastic grips for sure handling and safety.

	Cat. No.	List	Sugg. Resale
T-5 MODEL, strips 10, 12, 14, 16 and 18 gauge wires	45-120	\$3.25	\$1.95
T-6 MODEL, strips 16, 18, 20, 22, 24 and 26 gauge wires	45-121	\$3.25	\$1.95

IDEAL INDUSTRIES Inc.,

Sycamore, Illinois

# RESISTANCE SOLDERING TOOLS



Because Ideal Thermo-Tip soldering equipment uses the resistance heat principle, you can get more work done faster and safer at lower cost and still achieve higher quality, stronger, more uniform joints. Cold flow is practically impossible. High amperage, low voltage current passes through and heats work only. Burning of nearby parts, or operators, never occurs because heat is concentrated at point of contact. No setup or pre-heating is necessary. Solder adheres instantly all around, making the strongest possible joint.

A wide range of Pencil-Grip attachments are available. You select from double or single metal or carbon electrode styles to fit your soldering needs. A perforated aluminum sleeve dissipates heats and provides exceptionally cool operation. Three different power units provide from 2 to 9 heat variations. All units come equipped with a 5-ft. power cord.

## COMPLETE THERMO-TIP ATTACHMENTS AND POWER UNITS

### DOUBLE METAL ATTACHMENTS



"Pencil" Type attachment with double metal electrodes. "Feed-thru" electrodes, adjustable for length.

**Cat. No. 12-167** with double metal electrodes. List Price \$18.35 ♦ Suggested Resale \$11.00.



### SINGLE METAL ATTACHMENT

Collet chuck holds feed-thru electrode. For smallest work. Complete with ground clamp and lead assembly for jig-soldering.

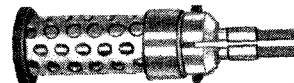
**Cat. No. 12-169** Pencil Grip. List Price \$18.35 ♦ Suggested Resale \$11.00.

**Cat. No. 1-5241** Replacement Electrodes for 12-169, packaged 6 per tube. Shipping wt., 2 oz. List Price \$9.00 ♦ Suggested Resale \$.55.



### FOOT SWITCH **Cat. No. 12-146**

List Price \$11.90 ♦ Suggested Resale \$7.15  
Used to eliminate arcing at point of electrode contact. Also permits the use of electrodes to position or hold work after heat has been applied. Small and convenient to use (3/8" dia. x 1 1/2" high). Wired normally open (with series plug). Rated 5 amps., 115V. Shipping Wt., 12 oz.



### DOUBLE CARBON ATTACHMENTS

Carbons provide more heat than metal tips. Available in two sizes — 1/8" for small work, 3/16" for larger work.

**Cat. No. 12-166** Pencil Grip with 1/8" carbons. List Price \$18.35 ♦ Suggested Resale \$11.00.

**Cat. No. 12-165** Pencil Grip with 3/16" carbons. List Price \$18.35 ♦ Suggested Resale \$11.00.

**Cat. No. 1-4866** 3/16" dia. replacement carbons for 12-165, six per pkg. Shipping wt., 2 oz. List Price \$2.10 ♦ Suggested Resale \$1.25.

**Cat. No. 1-4848** 1/8" dia. replacement carbons for 12-166, six per pkg. Shipping wt., 2 oz. List Price \$1.15 ♦ Suggested Resale \$.70.



### SINGLE CARBON ATTACHMENTS

Collet chuck holds feed-thru carbon. Permits adjustment. Complete with ground-clamp and lead assembly for jig-soldering.

**Cat. No. 12-168** Pistol Grip. List Price \$18.35 ♦ Suggested Resale \$11.00.

**Cat. No. 1-5202** Replacement Carbons 1/8"x3" for 12-168, packaged 6 per tube. Shipping wt., 2 oz. List Price \$3.90 ♦ Suggested Resale \$2.35.

### REPLACEMENT CARBON HOLDERS



**Cat. No. 1-5246** — 3/16" Dia. List Price \$1.15 ♦ Suggested Resale \$.70.



**Cat. No. 1-5247** — 1/8" Dia. List Price \$.60 ♦ Suggested Resale \$.35.

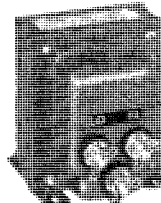
Provides easy replacement of only part attacked by corrosive fluxes. Holders can be used interchangeably with either the 12-165 or 12-166, depending on diameter of carbons desired.

### POWER UNITS



125-Watt Power Unit. **Cat. No. 12-124**  
List Price \$31.85 ♦ Sug. Resale \$19.10

For light production and intermittent work. Selector switch for choice of three heats. Complete with power cord and clip for holding pencil style attachments. 115V — 60 cy.



250-Watt Power Unit. **Cat. No. 12-123**  
List Price \$46.15 ♦ Sug. Resale \$27.70

For heavier production work. Faster. Handles larger components than 12-124. Choice of two heats through "high" and "low" secondary connections. Complete with power cord. 115V — 60 cy.



500-Watt Power Unit  
**Cat. No. 12-163**  
List Price \$76.00  
Suggested Resale \$45.60

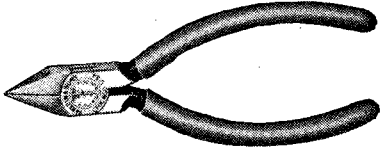
For continuous production work. Widest selection of heats — nine choices through 3-position selector switch plus "high", "medium" and "low" secondary terminals. Complete with power cord and pilot light. 115V — 60 cy.

**IDEAL INDUSTRIES, Inc. Sycamore, Illinois**



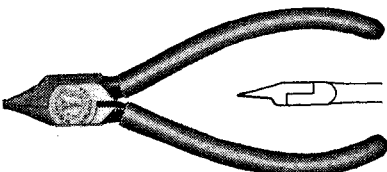
INCORPORATED

**OBLIQUE CUTTING PLIER**  
 Lightweight Pointed Nose  
 Flush Cutting



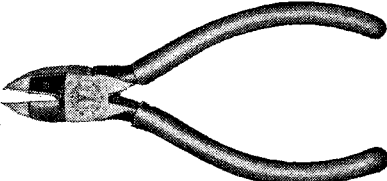
No. D209-4 Red plastisol handles Size 4 1/4 in.  
 No. 209-5 Size 5 in.  
 Available with coil spring

**OBLIQUE CUTTING PLIER**  
 Flush Cutting  
 Handles red plastisol covered



No. D219-4 Size 4 1/4 in.  
 No. D219-5 Size 5 in.  
 Available with coil spring

**OBLIQUE SHEAR CUTTING PLIER**  
 Pat. No. 2,848,810  
 Handles red plastisol covered



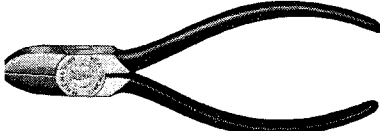
No. D207-5C Size 5 1/2 in.  
 No. 077-K Replacement Blade  
 Supplied with coil spring

**OBLIQUE CUTTING PLIER**  
 Flush Cutting



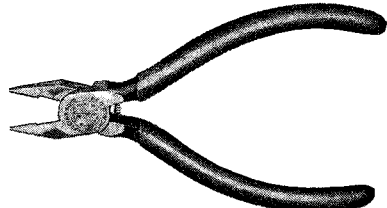
No. 210-5 Size 5 1/2 in.  
 No. 210-6 Size 6 1/8 in.  
 Available with coil spring

**OBLIQUE CUTTING PLIER**



No. 245-5 Size 5 in.  
 Available with coil spring

**HIGH HARDNESS PLIER**  
 For Cutting Nickel Ribbon Wire



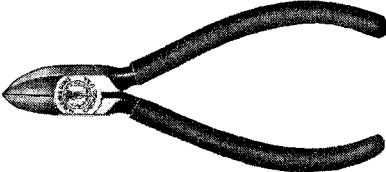
No. D230-4C Size 4 in.  
 Cutting knives have Rockwell hardness C60.  
 Supplied with coil spring. Handles red plastisol covered.

**OBLIQUE CUTTING PLIER**  
 Narrow Nose Available with coil spring



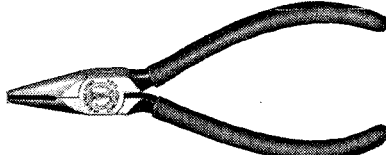
No. 202-5 Size 5 1/2 in.  
 No. 202-6 Size 6 1/8 in.

**OBLIQUE CUTTING PLIER**  
 Handles red plastisol covered



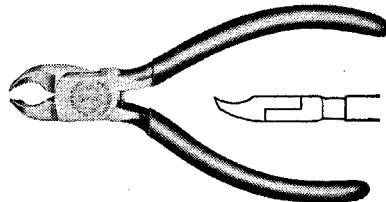
No. D257-4 Size 4 3/8 in.  
 Available with coil spring

**TRANSVERSE END CUTTING PLIER**  
 Semi-Flush Cutting Handles green plastisol covered



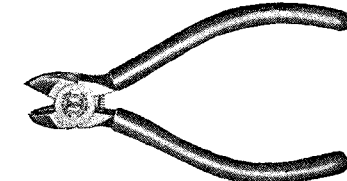
No. D224-4 1/2 Size 4 3/8 in.  
 Available with coil spring

**CUTTER FOR MINIATURE ASSEMBLIES**



Combines desirable characteristics of End Cutter and Diagonal. High hardness blades. Handles yellow plastisol covered. Supplied with coil spring.  
 No. D263-4C Size 4 in.  
 No. D263-5C Size 5 in.

**PRINTED CIRCUIT PLIER**  
 Handles red plastisol covered



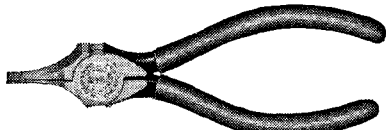
No. D052-C Size 3 1/8 in.  
 Supplied with coil spring

**HIGH LEVERAGE OBLIQUE CUTTING PLIER**



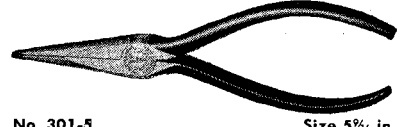
Handles red plastisol covered.  
 No. D228-8 Size 8 in.

**RELAY SPRING ADJUSTING PLIER**  
 Inside jaws smooth  
 Handles yellow plastisol covered



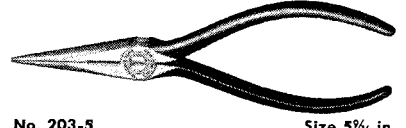
No. D325-5 Size 5 1/4 in.

**LONG NOSE PLIER**



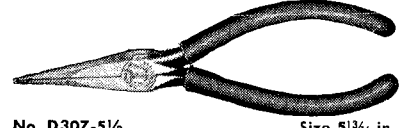
No. 301-5 Size 5 3/8 in.  
 No. 301-6 Size 6 3/8 in.  
 No. 301-7 Size 7 3/8 in.  
 Available with coil spring

**LONG NOSE SIDE CUTTING PLIER**



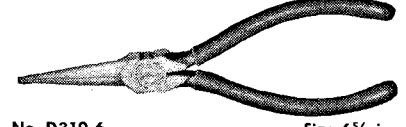
No. 203-5 Size 5 3/8 in.  
 No. 203-6 Size 6 3/8 in.  
 No. 203-7 Size 7 3/8 in.  
 Available with coil spring

**SLIM LONG NOSE PLIER**  
 Handles yellow plastisol covered



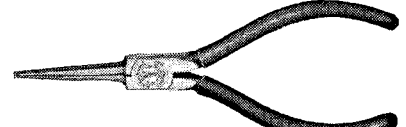
No. D307-5 1/2 Size 5 1/2 in.  
 Available with coil spring  
 No. D221-5 1/2 C with side cutting knives (1/2" point) Size 5 1/2 in.  
 Supplied with coil spring.  
 No. D327-5 1/2 C Size 5 1/2 in.  
 Similar to D307-5 1/2 but inside jaws are smooth. Supplied with coil spring.

**SLIM LONG NOSE PLIER**  
 Handles yellow plastisol covered



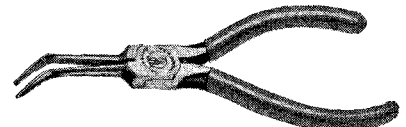
No. D310-6 Size 6 3/8 in.  
 Available with coil spring

**LONG NEEDLE NOSE PLIER**  
 Handles yellow plastisol covered



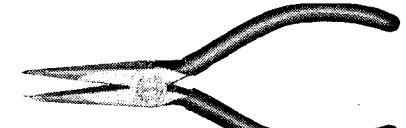
No. D318-5 1/2 Size 5 3/2 in.  
 Available with coil spring  
 No. 328-5 1/2 C Size 5 3/2 in.  
 Similar to D318-5 1/2 but jaws are smooth. Supplied with coil spring.

**CURVED NEEDLE NOSE PLIER**



No. D338-5 1/2 C Size 5 1/2 in.  
 Similar to D318-5 1/2 but nose is curved. Supplied with coil spring.

**END CUTTING TRIMMER PLIER**  
 Handles green plastisol covered

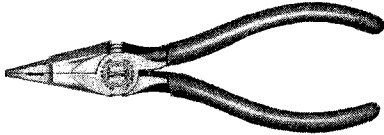


Cutting edges at tip set at 45° angle.  
 No. D211-6C Size 6 1/2 in.  
 Supplied with coil spring



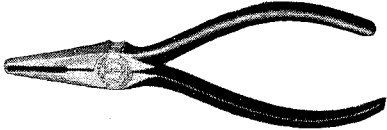
INCORPORATED

**LONG NOSE PLIER, KNIFE AT POINT**



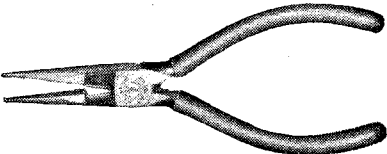
No. D317-6PC Size 6 in.  
 Similar to D301-6P but nose is slimmed down to permit reaching into confined spaces. Supplied with coil spring and yellow plastisol handles.

**TRANSVERSE END CUTTING PLIER**



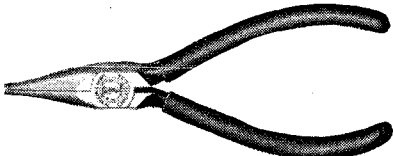
No. 204-6 Size 6 1/4 in.  
 Available with coil spring

**LONG NOSE SHEAR CUTTING PLIER**  
 Pat. No. 2,848,810  
 Handles yellow plastisol covered



No. D208-6C Size 6 5/8 in.  
 078-K Replacement Blade  
 Supplied with coil spring

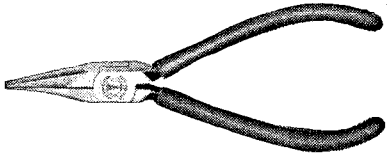
**LONG NOSE PLIER**



Yellow Plastisol Handles  
 No. D321-4 1/2 Size 4 3/4 in.  
 No. D322-4 1/2 Without Knurl  
 Blue Plastisol Handles Size 4 3/4 in.  
 Available with coil spring

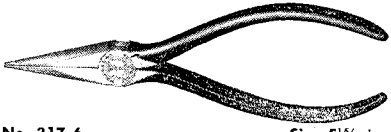
**FLAT NOSE PLIER**

Inside jaws smooth  
 Handles yellow plastisol covered



No. D323-4 1/2 Size 4 3/4 in.  
 Available with coil spring

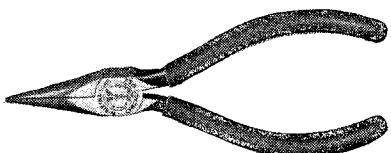
**CHAIN NOSE PLIER**



No. 317-6 Size 5 1/8 in.  
 No. 217-6 with side cutting knives Size 5 1/8 in.

**CHAIN NOSE PLIER**

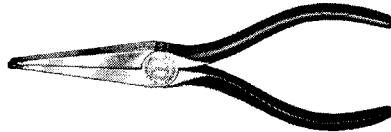
Handles yellow plastisol covered



No. D317-5 Size 5 1/4 in.  
 Available with coil spring

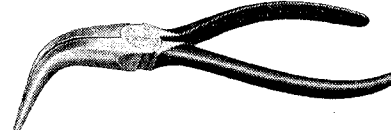
**DUCK BILL PLIER**

Inside jaws smooth



No. 304-6 Size 6 1/2 in.  
 No. 205-6 with side cutting knives Size 6 1/2 in.

**CURVED NOSE PLIER**



No. 302-6 Size 6 1/4 in.

**SIDE CUTTING PLIER**  
 NE Type (Streamlined)



No. 201-5NE Size 5 in.  
 No. 201-6NE Size 6 in.  
 No. 201-7NE Size 7 in.  
 No. 201-8NE Size 8 in.  
 No. 201-9NE Size 9 in.

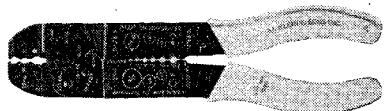
**KLEIN KUT\* HIGH LEVERAGE PLIER**

Pat. No. 2,746,143



No. 213-8NE Size 8 1/2 in.  
 No. 213-9NE Size 9 1/4 in.

**ALL-PURPOSE ELECTRICIAN'S TOOL**



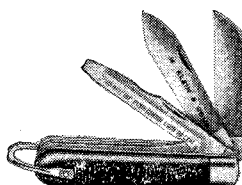
Shears bolts, cuts wire, strips wire, measures stud sizes, gauges wire sizes, crimps terminals. Handles red plastisol covered.  
 No. 1000 Size 7 1/2 in.

**NEW KLEIN PUMP PLIER**



Design permits jaw opening up to 1 3/4 in. Jaws are parallel in every position. Six different jaw positions. Individually packed in plastic bags.  
 No. 512-10 Size 10 in.

**"XELA" 3-BLADE KNIFE**

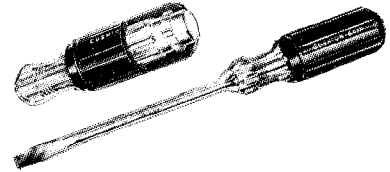


Spearpoint blade, sheepfoot blade and screw-driver blade. Handle special plastic.  
 No. 1550-6 Length Closed 3 3/4 in.

\*Trade Mark

**"CUSTOM" CUSHION-GRIP SCREWDRIVERS**

Patent No. 2871899



Designed for electricians who want something better than the usual commercial screwdriver. Made of alloy steel heat-treated. Chrome-plated finish. Cushion-grip for comfort.

**Heavy-Duty Square Shank**

No. 600-4 Blade 4 x 1/4 in.  
 No. 600-6 Blade 6 x 3/8 in.  
 No. 600-8 Blade 8 x 3/8 in.

**Heavy-Duty Round Shank**

No. 602-3 Blade 3 x 3/8 in.  
 No. 602-4 Blade 4 x 1/4 in.  
 No. 602-6 Blade 6 x 3/8 in.  
 No. 602-8 Blade 8 x 3/8 in.

**Electricians Round Shank**

No. 601-3 Blade 3 x 3/8 in.  
 No. 601-6 Blade 6 x 3/8 in.  
 No. 601-8 Blade 8 x 3/8 in.  
 No. 601-10 Blade 10 x 3/8 in.

**Super-Hard Phillips**

No. 603 #1 point Blade 3 x 3/8 in.  
 No. 603 #2 point Blade 4 x 1/4 in.

**Plastic Handle Screwdriver (without Cushion Grip)**

No. 604-3 Blade 3 x 3/8 in.

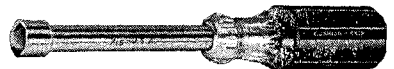
**KLEIN INSULATED SCREWDRIVER**

Shank insulated with an extremely hard plastic highly resistant to cutting, cracking and chipping. Has excellent dielectric properties. Tip is exposed 1/8 in. beyond the plastic.

No. 620-3 Blade 3 x 3/8 in.  
 No. 620-4 Blade 4 x 1/4 in.  
 No. 620-6 Blade 6 x 3/8 in.  
 No. 620-8 Blade 8 x 3/8 in.

**CUSHION-GRIP NUT DRIVER**

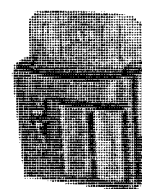
Patent No. 2871899



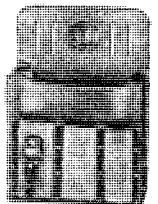
The finest nut driver made. Cushion grip give tremendous turning power. Only nut driver made with shank and hex forged in one piece.

No. 630-3/16 Nut Size 3/16 in.  
 No. 630-1/4 Nut Size 1/4 in.  
 No. 630-5/16 Nut Size 5/16 in.  
 No. 630-1/2 Nut Size 1/2 in.  
 No. 630-11/32 Nut Size 11/32 in.  
 No. 630-3/8 Nut Size 3/8 in.  
 No. 630-7/16 Nut Size 7/16 in.  
 No. 630-1/2 Nut Size 1/2 in.

**KLEIN COMBINATION TOOL POCKETS**



5126



5127

Two of the many leather tool pockets available in the Klein line. See Klein catalog for other pockets.

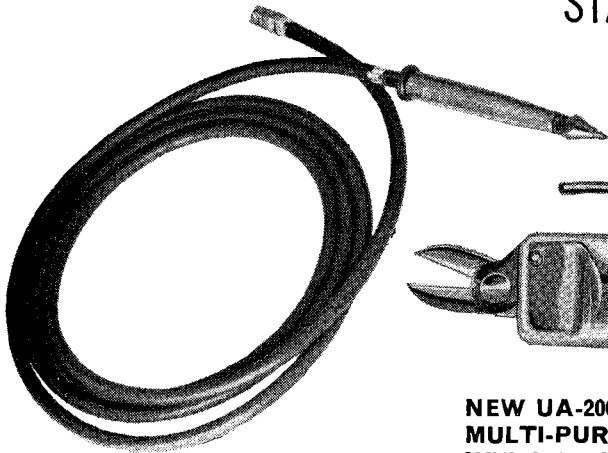
No. 5126 Leather Size 8 1/2 in. high, 6 1/2 in. wide  
 5127 Leather 10 in. high, 7 in. wide



KELSEY-HAYES TOOL DIVISION • ORANGEBURG, S. C.

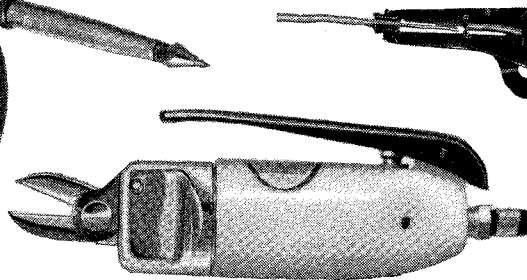


WORLD'S MOST COMPLETE LINE OF STANDARD AND SPECIAL ELECTRONIC PLIERS!



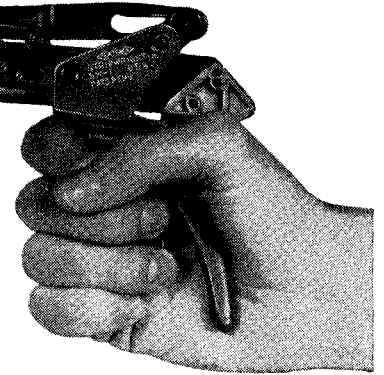
**NEW UA-300 POWER WRITER**

Just as the name implies, the UA-300 Power Writer is a power writing tool. It's a pencil styled, air-activated tool for inscribing, coding, labeling or marking all types of materials such as hard and soft metals, plastics, ceramics and glass.



**NEW UA-200 THE VERSATILE MULTI-PURPOSE POWER CUTTER**  
With Interchangeable Cutting Heads

This latest and most versatile addition to the Utica line of production tools is available with four optional, interchangeable cutting heads. Each head is designed for a specific cutting purpose and all have electronically induction hardened jaws.



**A REVOLUTIONARY NEW WIRE STRIPPER**

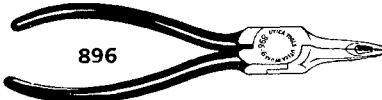
Strip fast and clean! Eliminate nicking! Reduce insulation marking! Handle any wire size from #12 to #26 . . . and do it all with Stripwright® . . . Utica's revolutionary new wire stripper.



31

**No. 31 DUCK BILL WIRING PLIERS**

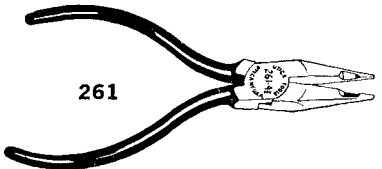
Long reach duck bill pliers. Serrated jaws. Size: 8".



896

**No. 896 RADIO AND IGNITION CUTTING PLIERS**

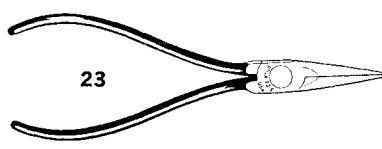
For cutting and forming wire. Center cutter near tip of jaws. Size: 6".



261

**No. 261 SPECIAL SHORT CHAIN NOSE CUTTING PLIERS**

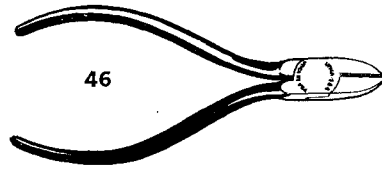
Flush cutter near tip of jaws for close cuts. Size: 4½" (formerly custom tool No. B801).



23

**No. 23 NEW MIDGET SHORT CHAIN NOSE PLIERS**

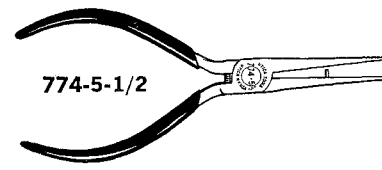
Very thin nose for delicate electronic subminiature assembly. Sizes: 4", 4½", 5".



46

**No. 46 MIDGET DIAGONAL PLIERS**

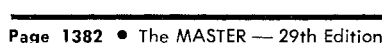
Small, light, sturdy diagonal for work on small electronic assemblies. Size: 4".



774-5-1/2

**No. 774-5-1/2 PICK-UP AND WIRING PLIERS**

Ideal for looping, twisting, bending and picking up finest wires.



1033

**No. 1033 LONG CHAIN NOSE PLIERS**

For general wiring. ¾" nose and deep serrated jaws. Sizes: 6", 7".



25-5

**No. 25-5 BENT CHAIN NOSE PLIERS**

Finely serrated jaws for sensitive circuit wiring. Size: 5".



777

**No. 777 LONG NEEDLE NOSE PLIERS**

Long, spring tempered jaws for very fine work in assembling small electronic apparatus. Size: 6".



776

**No. 776 CURVED LONG NEEDLE NOSE PLIERS**

Fine, spring tempered pliers with bent nose for offset work. Size: 6".



265-5

**No. 265-5 WIRING PLIERS**

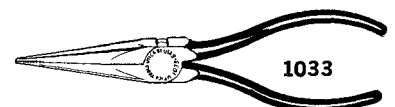
Cutter designed to snap-cut, loop or twist. Size: 5".



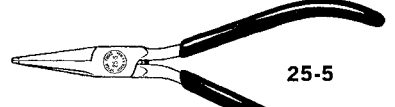
47

**No. 47 MIDGET DIAGONAL PLIERS**

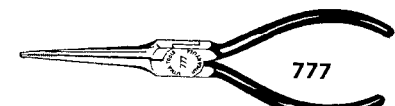
Fine tapered nose for delicate work in confined areas. Flush jaws for close cutting. Size: 4".



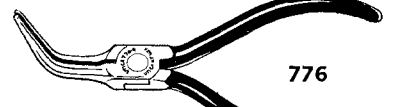
1033



25-5



777



776



265-5



47





# kraeuter

## TOOLS FOR TECHNICIANS

**FOR OVER  
100 YEARS  
THE FINEST IN  
HAND TOOLS**

### KRAEUTER PRECISION AND PROFESSIONAL PLIERS—FULL POLISHED FINISH

Extra fine pliers designed for exacting work. Drop forged from selected tool steel, accurately machined and carefully heat treated. In the hands of skilled radio and electronics technicians, these tools may be depended upon for exceptional service. Pre-

cision and Professional Pliers illustrated show vinyl cushion grips (prefix "CG" with stock number) which are furnished at NO extra cost (factory bonded). Color: G-Green; O-Orange; R-Red; LB-Light Blue; DB-Dark Blue.

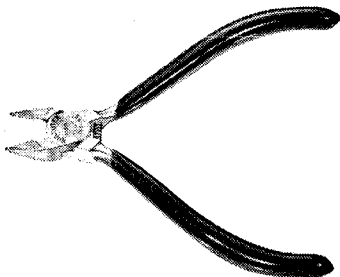
#### KRAEUTER VINYL CUSHION GRIP "CG" HANDLES AT NO EXTRA COST

All the "CG" Kraeuter tools listed on these pages have the Cushion Grips bonded on at the factory... actually become part of the tool. Won't crack, peel or chip. They're brightly colored to help you find them when you need them... easier to hold, easier to use... cushion your hand so you do the job with less effort. Cushion Grips give pliers the "feel" of comfortable, more accurate control. And they come to you at no extra cost.

**BETTER  
FEEL!  
BETTER  
GRIP!**



#### NEW ELECTRONIC COMPONENT ASSEMBLY PLIERS

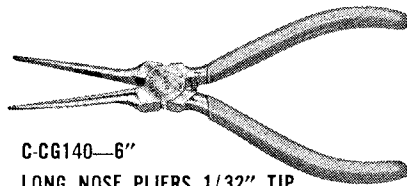


**C-CG101—4½"**

**PRECISION NEEDLE POINT DIAGONAL CUTTING PLIERS (ELECTRONICS) "FOR SOFT WIRE ONLY"**

Needle point designed specifically for fine, exact tip cutting. Flush edge for close square cut. Specially designed cutting edge to facilitate re-sharpening and maintaining of tip cutting alignment. Furnished only with cross coil spring in handle.

4½" LB List ea. 5.00

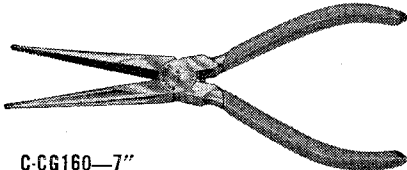


**C-CG140—6"**

**LONG NOSE PLIERS 1/32" TIP (Electronics)**

Fine milled jaws, inside length 2"—tapering to 1/32" at the tip, reach areas inaccessible to other pliers. Furnished only with cross coil spring in handle.

6" LB List ea. 4.50



**C-CG160—7"**

**EXTRA FINE LONG NOSE PLIERS 1/16" POINT (Electronics)**

Extra fine long nose pliers, milled jaws, inside length 2-5/8" tapering to 1/16" at the point. Fine point designed to reach areas inaccessible to other pliers. Furnished only with cross coil spring in handle.

7" LB List ea. 3.80

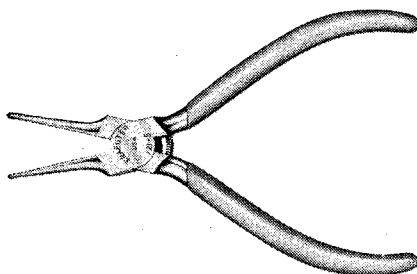
**C-CG121**

(Cross Coil Spring)

**PRECISION SLIM NOSE PLIERS MILLED JAWS—NO CUTTER**

Standard serrated tips. Slim nose 1¼" length permits forming or squeezing wire to component with NO springing tip movement.

5" O List ea. 3.50



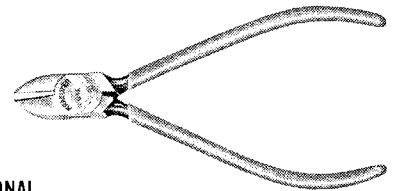
**CG81**

**DIAGONAL CUTTING PLIERS**

4½"

R

List ea. 3.60



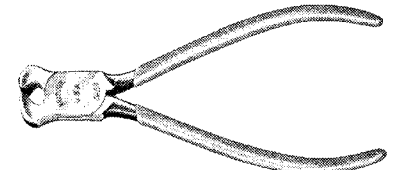
**CG82**

**END CUTTING NIPPERS**

4½"

G

List ea. 4.24



**CG83**

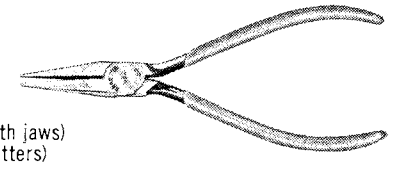
(Smooth jaws) (No cutters)

**CHAIN NOSE PLIERS**

4½"

R

List ea. 3.40



**CG84**

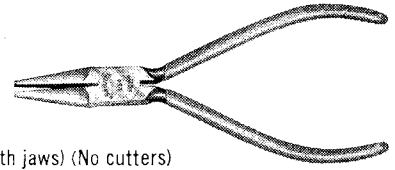
(Smooth jaws) (No cutters)

**FLAT NOSE PLIERS**

4½"

DB

List ea. 3.40



**CG85**

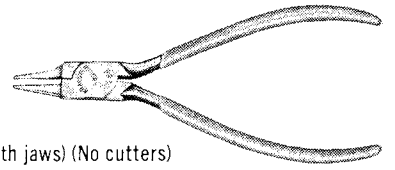
(Smooth jaws) (No cutters)

**ROUND NOSE ROUND JAW PLIERS**

4½"

G

List ea. 3.40



**CG5601**

**NEEDLE POINT DIAGONAL CUTTING PLIERS**

4½"

R

List ea. 4.00

5"

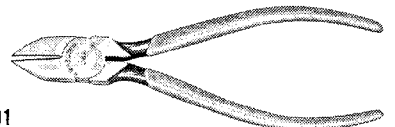
DB

List ea. 4.25

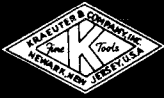
6"

G

List ea. 5.00

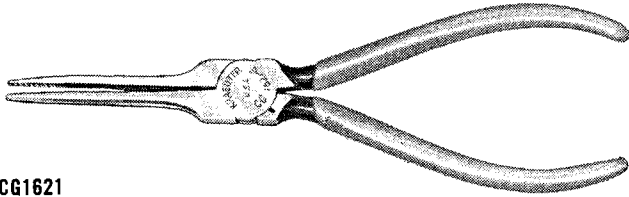


**THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . SEND FOR CATALOG**

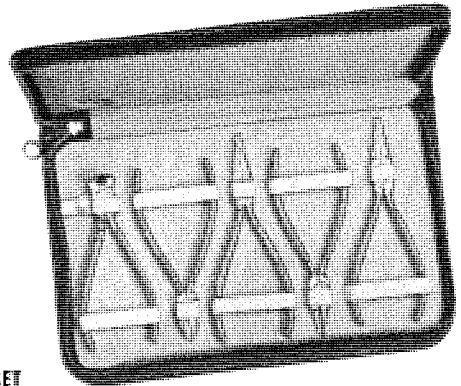


# *Kraeuter* TOOLS FOR TECHNICIANS

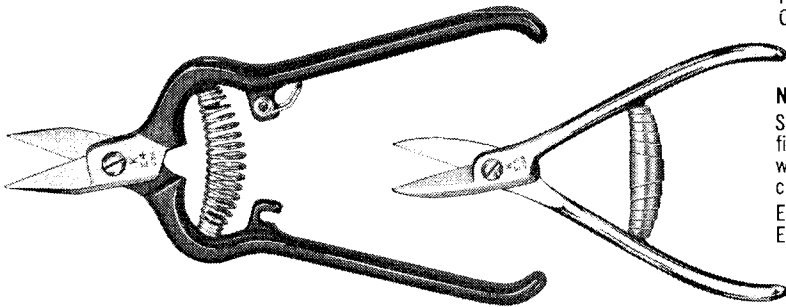
**FOR OVER  
100 YEARS  
THE FINEST IN  
HAND TOOLS**



**CG1621**  
(No Cutters)  
**LONG NEEDLE OR SNIPE NOSE PLIERS**  
Slender milled jaws; inside length 2-3/32" tapering to 1/16" at points.  
6" LB List ea. 3.64



**CG90**  
**PLIER SET**  
Five pliers in black zipper case. Size 5 3/4" x 9 1/4" when closed. One each Nos. CG81, CG82, CG83, CG84 and CG85.  
List ea. 20.00

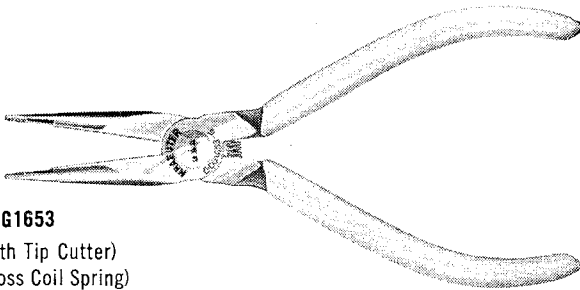


**NEW ELECTRONIC SNIPS**  
Short-bladed electronic snips designed for cutting fine wires and filaments, removing insulation coverings. Eliminates peaks on cut wires and damaging shocks to components. Return spring increases efficiency, reduces hand fatigue.  
E-4 6 1/2" 3/4" Cut List ea. 4.75  
E-5 5" 3/4" Cut List ea. 4.25

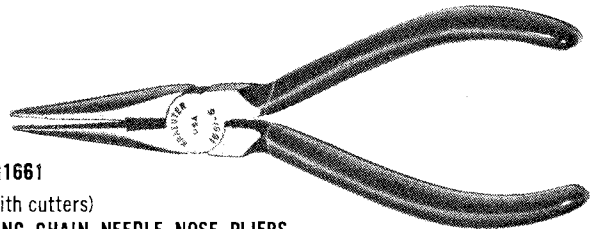
**KRAEUTER INDUSTRIAL PLIERS FULL POLISHED HEADS—VINYL CUSHION GRIP HANDLES**

Designed for use in the Radio and Electronics fields. Hammer forged from high grade tool steel, individually fitted, tempered, adjusted and tested. Furnished with Cushion Grips (factory bonded)

at no extra cost. Colors: G-Green; O-Orange; R-Red; DB-Dark Blue; LB-Light Blue.

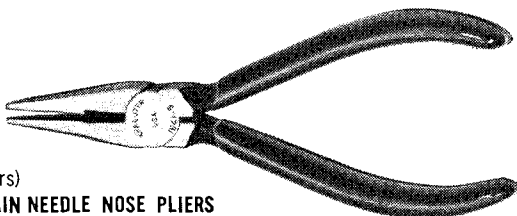


**C-CG1653**  
(With Tip Cutter)  
(Cross Coil Spring)  
**GRIP WIRE AT TIP OF NOSE  
FORM AND CUT (NOT A FLUSH CUTTER)**  
Designed to reach into tight spots and grip or cut small wires. Milled tip.  
5" O List ea. 4.80

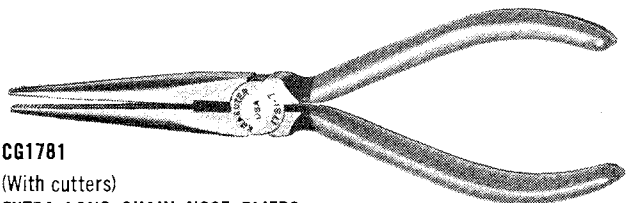


**CG1661**  
(With cutters)  
**LONG CHAIN NEEDLE NOSE PLIERS**  
Radio and TV's most extensively used pliers.  
6" DB List ea. 4.00

**CG1671**  
(No cutters)  
6" G List ea. 3.00



**CG1641**  
(With cutters)  
**SHORT CHAIN NEEDLE NOSE PLIERS**  
Short nose, extra leverage, for open wiring.  
5" R List ea. 3.60



**CG1781**  
(With cutters)  
**EXTRA LONG CHAIN NOSE PLIERS**  
Jaw length reaches 2 3/4", narrow pointed nose.  
7" O List ea. 4.80

**THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . SEND FOR CATALOG**

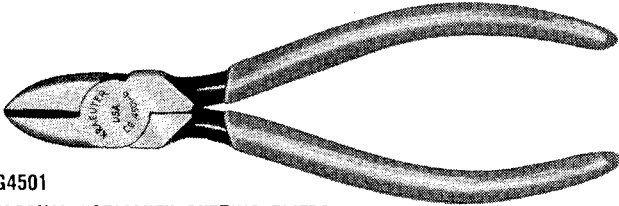


# kraeuter

## TOOLS FOR TECHNICIANS

**FOR OVER  
100 YEARS  
THE FINEST IN  
HAND TOOLS**

### INDUSTRIAL PLIERS

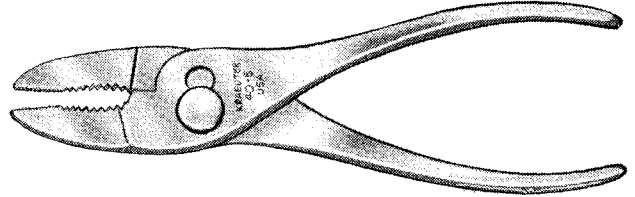


CG4501

#### DIAGONAL "OBLIQUE" CUTTING PLIERS

For close cutting in radio, TV, telephone work.

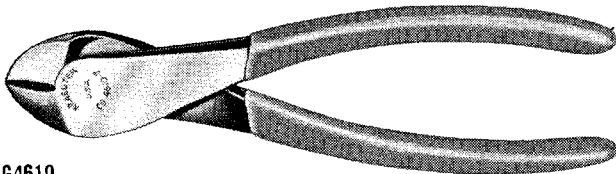
4½"	DB	List ea.
5"	O	3.24
6"	R	3.50
		4.00



#### THIN NOSE COMBINATION PLIERS

Tapered thin jaws for confined areas.

40—6"	Nickel Plated	List ea.	2.20
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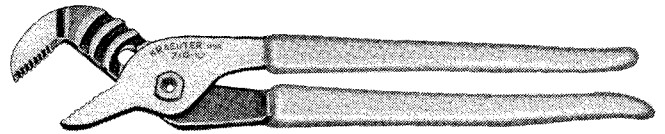


CG4610

#### HEAVY DUTY DIAGONAL CUTTING PLIERS

Added leverage for easier cutting.

7"	G	List ea.	4.00
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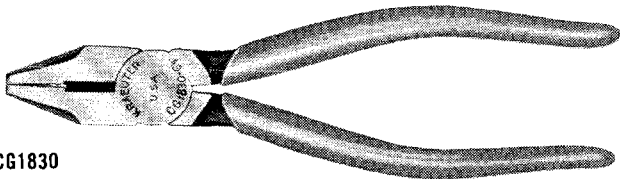


#### TONGUE-N-GROOVE JOINT PLIERS

##### POLISHED FACES—"CG" VINYL CUSHION GRIP HANDLES

Parallel adjustments make these pliers extremely versatile with maximum utility, leverage and strength. Furnished with Cushion Grip handles.

CG707—6½"	G	Max. Jaw Capacity 1"	List ea.	3.00
CG710—10"	R	Max. Jaw Capacity 1½"	3.74	
CG714—14"	O	Max. Jaw Capacity 2-13/16"	4.50	

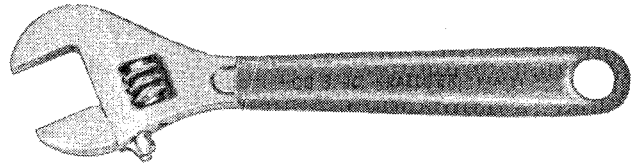


CG1830

#### ELECTRICIAN'S SIDE CUTTING PLIERS

For electric wiring and repair work.

6½"	O	List ea.	3.50
7"	LB	4.00	
8"	DB	4.50	



#### ALLOY STEEL ADJUSTABLE WRENCH

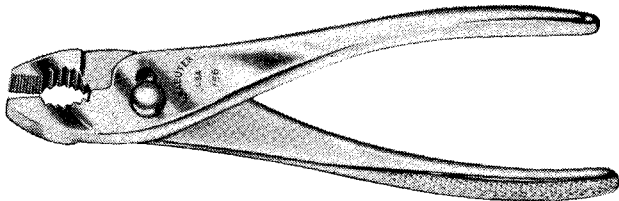
##### THIN PATTERN—SMOOTH—CHROME PLATED

With "CG" VINYL Cushion Grip

CG31—4"	R	List ea.	2.84
CG31—6"	DB	2.84	
CG31—8"	O	3.70	
CG31—10"	G	4.64	
CG31—12"	LB	6.50	
CG31—15"	R	9.50	

### COMBINATION PLIERS

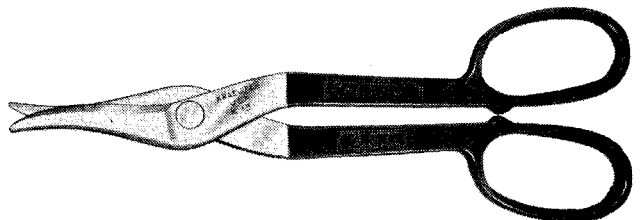
Drop forged from special analysis steel, KRAEUTER slip joint pliers have sharp, milled teeth and notches for better gripping and wire cutting. Knurled handles are shaped to fit the hand comfortably and provide maximum leverage. Studs and nuts are machined from solid bar steel and carefully hardened for longer wear.



#### KRAEUTER "BRITE" LINE

Fine quality slip joint pliers in 2 different finishes.

056—6"	Satin Chrome Plated Finish	List ea.	.98
8"	Satin Chrome Plated Finish	1.24	
156—6"	Chrome Plated Finish	1.40	
8"	Chrome Plated Finish	1.75	
10"	Chrome Plated Finish	2.15	



#### COMBINATION PATTERN SNIP

Cuts straight, curved shapes in metal, etc. Polished Blades, Hard Black Enamelled Handles.

K13—7"	Pocket Size, Cut 2"	List ea.	2.5
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**THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . SEND FOR CATALOG**



Available in 7 lb. reel  
& 1 lb. dispenser carton



**TECHNICAL ADVANTAGES**

Ersin Flux is exclusive to Multicore and will not be found in any other solder. It is a high-grade, water white resin, homogeneously activated.

Ersin Flux has a vigorous fluxing action and possesses the non-corrosive and protective features of the original.

Soldered joints made with Ersin Flux do not corrode, even after prolonged exposure to any degree of humidity. It has been tested under climatic conditions ranging from the Arctic to the tropics.

Ersin Flux reduces the surface tension of molten solder causing it to wet metals rapidly, increasing speed of operation with resultant production economies.

Free from objectionable odors. Non-toxic in use.

Leaves nothing but pure resin on the work after soldering and may be used whenever plain resin is specified.

Complies with all pertinent federal specifications.

**Multicore construction.** 5 separate cores of flux eliminate possibility of no flux in a portion of the wire, which may occur in single cored solder. Guaranteed continuity of the flux stream prevents dry joints, i.e., those having high electrical resistance.

Although there are 5 cores of flux in Multicore, the total percentage of flux to solder is less than many single cored solders.

Very rapid melting results from the multiple core construction, which provides thinner walls of solder, than are found in same gauge single cored solder.

Multicore's unique properties make perfect joints possible on difficult metals and alloys, even if oxidized.

Ability to tin rapidly produces perfect joints with less solder. Greater coverage per pound.

Ersin Multicore Solder is non-toxic in use. Cadmium is completely eliminated. The quantity of antimony is less than government standards allow. There is no danger of harmful effects caused by such impurities.

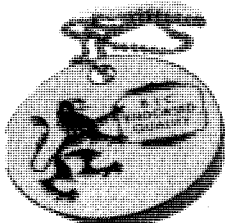
Every package of Ersin Multicore is labelled with the exact tin/lead content. This precise labelling results from Multicore's precise manufacturing methods.

**STANDARD GAUGES  
TIN/LEAD  
ALLOYS**

For the finest wire cored solder—  
SPECIFY ERSIN MULTICORE 5-CORE

ALLOY	14	16	18	20	21	22	S.W.G.
60/40	●	●	●	●	●	●	
50/50	●	●	●				
45/55	●	●	●				
40/60	●	●	●				

MULTICORE tin/lead alloys conform to  
latest Federal Specification QQ-S-571



**SPECIAL ALLOYS**

ONLY from ERSIN  
Multicore—For IMMEDIATE  
OFF-THE-SHELF DELIVERY\*

ALLOY	S.W.G.	CHARACTERISTICS
COMSOL	16-18	High Melting Point—565°F
L.M.P.	16-18-22	Low Melting Point—354°F
63/37	16-18-20	Eutectic—361°F
SAVBIT	14-16-18-20-22	Copper-Loaded—419°F

NOTE: Bit of soldering iron used should always be 108°F above melting point of alloy.

\*ERSIN Multicore's national network of industrial distributors—in 50 states—facilitates prompt off-the-shelf delivery at factory-low prices.

**COPPER-LOADED  
SAVBIT  
ALLOY**

Multicore's SAVBIT Alloy is  
entirely new and different—it  
is patented.

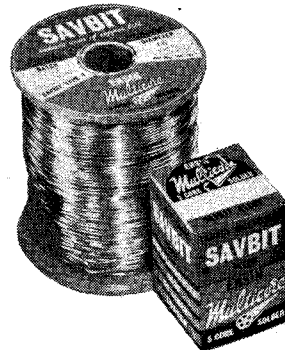
Copper-loaded SAVBIT stops the wear and erosion of copper soldering iron tips . . . increases tip life by 1,000%.

**Characteristics and specifications:**

Savbit Alloy is available in Ersin Multicore 5-Core Solder containing non-corrosive extra fast Ersin flux in 14, 16, 18, 20 and 22 gauge.

Melting point: Virtually the same as standard tin/lead alloys.

Excellent conductivity, tensile and shear strength.



Available in 7 lb. reel  
& 1 lb. dispenser carton

MULTICORE SALES CORPORATION • PORT WASHINGTON, NEW YORK

# COMPARE

- QUALITY
- PRICE
- WARRANTY\*

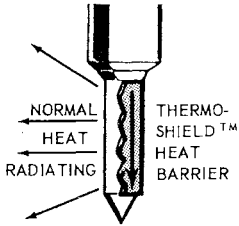
# INSIST ON SIDCO

# SIDCO®

**INTERCHANGEABLE INDUSTRIAL SOLDERING TIPS**  
 Manufactured by Electronic IDEAS Incorporated, Wyncote, Penna.

PATENT NO. 2,997,684 (UL) (CS) MADE IN U.S.A. / Meets Spec. W-S-570a / Choice of major Missile & Industrial Mfrs.

## ANOTHER NEW SIDCO PRODUCT!!

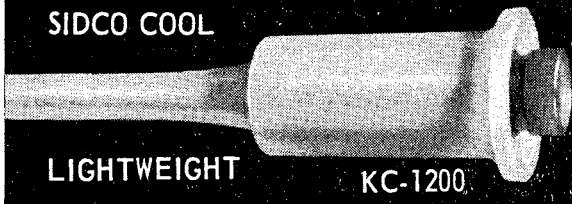


**THERMOSHIELD™** catches the heat normally radiated from the metal body and **SQUEEZES** it out the end thru the tips' working surface. Available on all 50W tips.+ Tests indicate 25% greater soldering efficiency with THERMOSHIELD. **EXTRA BONUS** - No burned insulation in tight spots - only the working surface is hot.

+Add TH to Model No. & .60 to unit price.

## FAMOUS KISS 'N COOL HANDLES

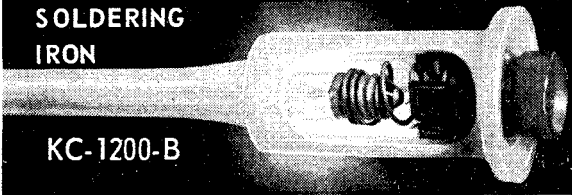
### SIDCO COOL



Special heat stabilized Nylon—will not crack or break (if dropped). Boilable - dust repellent - Patented - self-adjusting spring socket holds tip in perfect contact. Cannot loosen. KC-1200 - \$1.44 complete with cord. Ivory color Standard (also available in other colors on quantity orders).

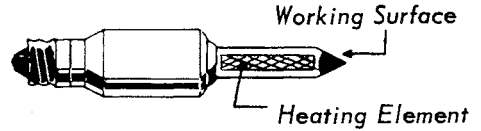
### THE SIDCO "SENTRY"

### THE WORLD'S ONLY INDICATING SOLDERING IRON



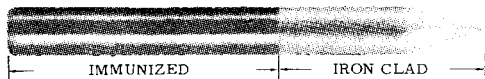
Built-in lamp gauges tip temperature and wattage. Lights brightly on 50W. - dimly on 40W., plus same outstanding features as on standard SIDCO handles. KC-1200B—Cool Pastel Blue—only \$1.98, complete with cord.

Super efficient heat transfer—heating element located right at working surface. Thermal time constant approx. 80 seconds.



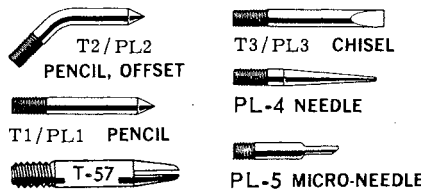
DESCRIPTION	MODEL	Heat Capacity	Heat Trans. Rate	Unit Price (Net)
50 watt, plated steel body tapper for 1/8" tiplet; 1/4" long x 3/8" diam.	50-W-35	3800 Joules	120 watts (with T-1 tiplet)	\$1.98
40 watt, plated steel body tapper for 1/8" tiplet; 1/4" long x 3/8" diam.	40-W-35	3300 Joules	100 watts (with T-1 tiplet)	\$1.20
25 watt, plated steel body tapper for 1/8" tiplet; 1-1/8" long x 5/16" diam.	25-W-35	1750 Joules	60 watts (with T-1 tiplet)	\$1.00
Same as 50W35, except tapper for 3/16" tiplet	50-W-45	4500 Joules	240 watts (with T-57 tiplet)	\$1.98
50 watt chisel tip, premium quality, heavy iron plated, solid copper; 1-5/8" long x 3/8" diam.	50-W-33	3400 Joules	970 watts	\$2.40
50 watt chisel tip, solid iron, plated, 1-5/8" long x 3/8" diam.	50-W-33AR	4300 Joules	80 watts	\$1.60
40 watt pyramid tip, solid iron, plated; 1-1/8" long x 3/8" diam.	40-W-36	3000 Joules	80 watts	\$1.20
25 watt chisel tip, unplated tellurium copper; 1-5/8" long x 5/16" diam.	25-W-33	2500 Joules	450 watts	\$1.00
25 watt pyramid tip, unplated tellurium copper; 1-1/8" long x 5/16" diam.	25-W-36	1400 Joules	450 watts	\$1.00

### TIPS



- Resists freezing and oxidizing.
- Pre-tinned soldering surface.
- Ready to use, no filing or reshaping
- No need to remove from iron during life of tip
- Pyramid, chisel, needle shapes available

SIZE	PRICE
1/8" Dia. x 1 1/4" Length	\$1.44
3/16" Dia. x 2 1/4" Length	1.60
1/4" Dia. x 2 1/4" Length	1.80



### TIPLETS

Chemically Treated - positively will not bind or freeze. Pure copper - pre-tinned. PRICES: 1/8" T-Series .16 each; PL Series, (Iron & Silver plated) will last more than 10 times as long, .48 each.

T-57 - 3/16" Desoldering Tiplet fits 50W45 Tip only—priced at .48

\* We unconditionally guarantee User Satisfaction on all SIDCO Products.

### ALL PRICES SHOWN ARE USERS NET

O. E. M. 's -- contact your distributor for special quantity discounts. Iron Plated Tips available for all makes.

# ORYX

## PRECISION SOLDERING INSTRUMENTS

### FIVE REASONS WHY PRODUCTION MANAGERS CHOOSE ORYX SOLDERING IRONS

#### 1. MINIATURE SIZE

ORYX soldering irons are small and easy to handle as pencils. Their miniature size helps to speed any precision soldering operation. Damage to adjacent components is eliminated. If you can see it, you can solder it with ORYX!

#### 2. FEATHER WEIGHT

A standard, utility-type 100 watt soldering iron weighs about 2 lbs. The so-called pencil-type irons typically weigh between 2 and 6 ounces. ORYX soldering irons, by contrast, weigh as little as 1/4 ounce. This true feather weight virtually eliminates hand fatigue. Workers can turn out many more joints per hour with fewer rejects.

#### 3. HIGH EFFICIENCY

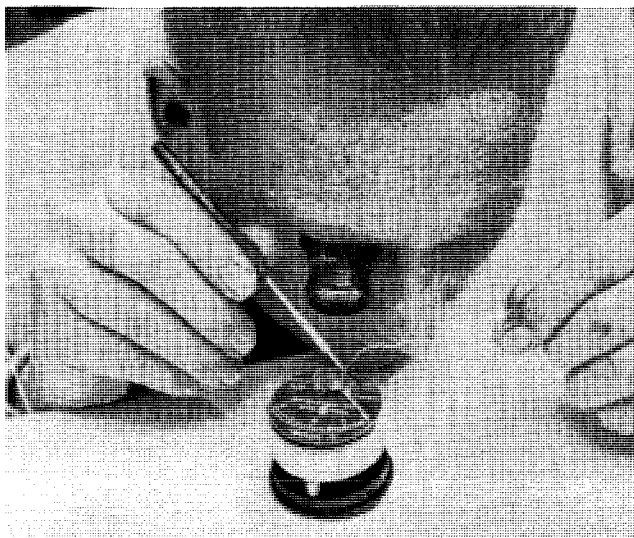
All ORYX soldering irons utilize a unique element-in-the-tip design principle. By generating the heat within the tip, far fewer watts are needed to achieve results comparable to much larger irons. This principle also provides quicker heat recovery because the heat path between element and joint is so very short. The need for large insulating handles is eliminated.

#### 4. SAFETY

ORYX low-voltage irons are polarized, making it possible to directly ground the shaft, tip, and one side of the heating element. This provides a maximum degree of safety, both to the operator and to delicate circuitry. The ORYX line of 115 V. plug-in models includes 3-wire styles whose shafts and tips may be connected to ground for safety.

#### 5. ECONOMY

A standard ORYX low-voltage industrial iron costs less than \$5 in production quantities.



## LOW-VOLTAGE , MINIATURE PRODUCTION SOLDERING IRONS

**MODEL 6**—A precision Oryx soldering tool with fixed 1/4" solid nickel tip. Solders hair-spring movements, semiconductors, rf coils, fine assemblies. Nominal temperature 625° F. Weighs only 1/4 oz. 6-volts, 6-watts.....Net \$5.45 ea.  
(12 or more \$4.95 ea.)



**MODEL 6A**—The most popular Oryx soldering iron. Designed for printed circuit soldering. Weighs only 1/4 oz. Nominal temperature 690° F. Furnished with 3/32" removable B tip. Also takes 3/16" P tip and new long-life V tip. 6-volts, 6-watts... Net \$5.45 ea.  
(12 or more \$4.95 ea.)



**MODEL 9-6**—Similar to model 6A, but greater heat capacity. Weighs 1/4 ounce. Nominal temperature 750° F. Furnished with 3/32" A tip. Also takes B tip. 6-volts, 8.3 watts. Also available for 12 volts (model 9-12) and 24 volts (model 9-24).  
Net \$5.45 ea.  
(12 or more \$4.95 ea.)



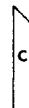
**MODEL 11-6**—Special model for high-temperature solders. Temperature 835° F. Weighs 1/4 oz. Furnished with 3/32" solid nickel D tip. Also takes new 3/32" E tip. Nickel tips provide long life at high temperatures. 6-volts, 10-watts ..... Net \$6.95 ea.  
(12 or more \$6.45 ea.)



**MODEL 5A**—Microcircuit model for joints with negligible heat loads. Weighs only 8 grams. Nominal temperature 600° F. Furnished with 1/4" P tip. Also takes S tip and new T and U gold tips. 6-volts, 5-watts  
Net \$5.45 ea.  
(12 or more \$4.95 ea.)

**MODEL 5-S**—(As shown in photograph). Eyepiece model less than 5" long for precise finger control. Weighs 7 grams. Nominal temperature 575° F. Furnished with 1/4" S tip. Also takes T and U tips. 4.5-volts, 4.5-watts (Use 54204-T tapped transformer for 4.5 vol'ts).....Net \$5.45 ea.  
(12 or more \$4.95 ea.)

**MODEL 12-6**—Standard model for production soldering of radio, TV, radar, telephone, and switchboard assemblies. Weighs 1/2 oz. Nominal temperature 700° F. Furnished with 3/16" C tip. 6-volts, 12-watts. Also available for 12 volts (model 12-12) and 24 volts (model 12-24) ..... Net \$5.45 ea.  
(12 or more \$4.95 ea.)



**MODEL 18-6**—A heavy-duty production iron equal in performance to conventional 80 watt irons. Weighs 3/4 oz. Nominal temperature 800° F. Furnished with 3/16" F tip. Also takes new 3/32" M tip. 6-volts, 18-watts ..... Net \$7.50 ea.  
(12 or more \$7.05 ea.)



**MODEL 25-12**—Heavy-duty, high-temperature iron for large loads. Weighs 1 oz. Develops nominal tip temperature of 1000° F. Furnished with 3/16" G tip with solid nickel end. Also takes H tip. 12-volts, 25-watts ..... Net \$8.00 ea.  
(12 or more \$7.55 ea.)



### REPLACEMENT TIPS for low-voltage soldering irons.

Type	Material	Plating	Diameter	For Model	Net Ea.
A	Copper alloy	Nickel	3/32"	9-6	\$.50
B	Copper alloy	Nickel	3/32"	6A, 9-6	.50
C	Copper alloy	Nickel	3/16"	12-6	.50
D	Solid nickel	—	3/32"	11-6	1.80
E	Solid nickel	—	3/32"	11-6	1.80
F	Copper alloy	Nickel	3/16"	18-6	1.25
G	Solid nickel end	Nickel	3/16"	25-12	1.85
H	Copper alloy	Nickel	1/4"	25-12	2.35

Type	Material	Plating	Diameter	For Model	Net Ea.
M	Solid nickel end	Nickel	3/32"	18-6	\$1.85
N	Copper alloy	Nickel	1/8"	TW-12	1.25
P	Copper alloy	Nickel	1/16"	5A, 6A	.60
S	Copper alloy	Nickel	1/16" (short)	5-S	.60
T	Gold end, copper body	Nickel	1/25"	5A, 6A	2.35
U	Gold end, nickel body	—	1/25"	5A, 6A	2.35
V	Copper alloy	Iron	3/32"	6A, 9-6	1.50
W	Copper alloy	Bare (NASA)	3/32"	6A, 9-6	.45

### ACCESSORIES

**TW-6E REPLACEMENT ASSEMBLY**—Includes element, tip, and bushing (for one TW-6 tweezer arm only).....Net \$5.30 ea.

**ST-6E REPLACEMENT ASSEMBLY**—Includes element, blade, and bushing (for one ST-6 stripper arm only).....Net \$5.30 ea.

**S-1 SOLDERING IRON STAND** .....Net \$1.50 ea.

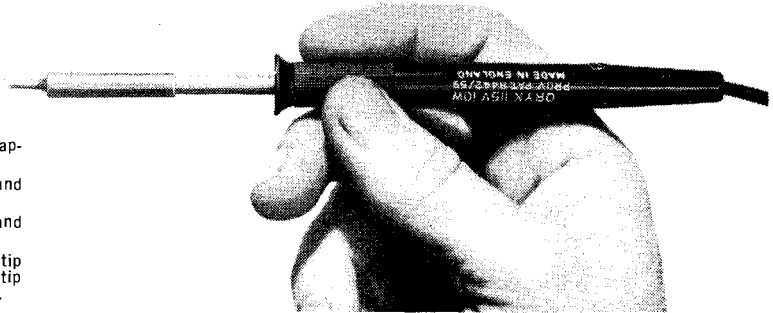
**6-VOLT TRANSFORMER**—Model 54203-6V. Output 6-volts, 18-watts. For use with all 6-volt Oryx tools. Operates on 115 V. AC. With 4 1/2' cord set — ready to plug in. Clip-holder on top for iron .....Net \$5.50 ea.

**12-VOLT TRANSFORMER**—Model 5420-12V. Output 12-volts, 25-watts. For all 12-volt Oryx tools. Operates on 115 V. AC. With 4 1/2' cord set—ready to plug in. Net \$6.45 ea.

**TAPPED TRANSFORMER**—Output 4 1/2 to 6-volts in 1/2 v. steps. For exact temperature control on all ORYX 6-volt tools. Operates on 115 V. AC—ready to plug in. Model 54204-T.....Net \$6.50 ea.

# PLUG-IN 115 V. MINIATURE IRONS

- **NO TRANSFORMER.** Standard models furnished with U/L approved 4½' cord set. Ready to plug in!
- **COMPACT DESIGN** for light production, laboratory, and service use. Irons weigh only 1 oz., plus cord.
- **HEAT QUICKLY** (about 1 minute) to 675° F. (10 W.) and 725° F. (15 W.)
- **REPLACEABLE TIPS.** 10 W. model furnished with 3/32" J tip (also takes K tip). 15 W. model furnished with 3/16" K tip (also takes L, Q, and R tips and solder cups listed below).



MODEL 115-10J*	—Complete with J tip and cord set. Ready to plug in.....	Net \$6.95 ea.	(12 or more \$6.45 ea.)
MODEL 115-15K*	—Complete with K tip and cord set. Ready to plug in.....	Net \$6.95 ea.	(12 or more \$6.45 ea.)
MODEL 115-10X	(no tip)—Complete with cord set. Ready to plug in. Less tip.....	Net \$5.50 ea.	(12 or more \$5.00 ea.)
MODEL 115-15X	(no tip)—Complete with cord set. Ready to plug in. Less tip.....	Net \$5.50 ea.	(12 or more \$5.00 ea.)
MODEL 115-10J-3	—Complete with J tip and 3-wire grounding-type cord. Less plug.....	Net \$6.95 ea.	(12 or more \$6.45 ea.)
MODEL 115-15K-3	—Complete with K tip and 3-wire grounding-type cord. Less plug.....	Net \$6.95 ea.	(12 or more \$6.45 ea.)
MODEL 115-10X-3	(no tip)—With 3-wire grounding-type cord. Less plug and tip.....	Net \$5.50 ea.	(12 or more \$5.00 ea.)
MODEL 115-15X-3	(no tip)—With 3-wire grounding-type cord. Less plug and tip.....	Net \$5.50 ea.	(12 or more \$5.00 ea.)

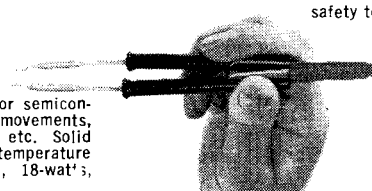
\*Approved by Department of Building and Safety, City of Los Angeles.

## REPLACEMENT TIPS AND ELEMENTS for 115 V. irons. All tips are nickel plated.

Type	Material	Diameter	Use with	Net ea.	Type	Material	Diameter	Use with	Net ea.
J	Copper alloy	3/32"	115-10	\$1.55	R	Solid nickel end	1/8"	115-15	\$1.85
K	Copper alloy	3/16"	115-10, 115-15	1.70	115-10E	Replacement element for model 115-10			3.60
L	Copper alloy	1/4"	115-15	2.25	115-15E	Replacement element for model 115-15			3.60
Q	Solid nickel end	3/32"	115-15	1.85					

## SOLDERING TWEEZERS

Unique tools with heating elements in each arm. Speed soldering time by heating both sides of joint. Tweezer action conducts heat quickly into joint. Low-voltage operation assures safety to circuitry and to operator.



**MODEL TW-6**—Precision model for semiconductors, solid state, hairspring movements, miniature relays, thermostats, etc. Solid nickel 3/32" fixed tips. Nominal temperature 550° F. Weighs 1 oz. 6-volts, 18-wat's, AC or DC.

**MODEL TW-6**, complete with 4½' cord .....Net \$14.95 ea.  
(12 or more \$14.95 ea.)



**MODEL TW-12**  
Heavy duty model for regular production-line soldering of radio, TV, radar, telephone, and switchboard assemblies. Furnished with replaceable 1/8" N tips. Nominal temperature 625° F. Weighs 2 oz. 12-volts, 25-watts, AC or DC.

**MODEL TW-12**, complete with 4½' cord..... Net \$14.95 ea.  
(12 or more \$14.45 ea.)

Spare tip N for model TW-12 ..... Net \$1.25 ea.  
Wire stripper heads for TW-12 (kit of 2 heads and 2 screws). Cat. No. SK-12. Net \$1.35 kit

## THERMAL WIRE STRIPPERS



Reach those hard-to-get-at spots. Miniature tweezer design.

Ideal for repair and prototype work where a bench stripper is unsuitable. Strips Nylon, rubber, PVC, Kel-F, Polystyrene, and similar medium-temperature insulations. Stainless steel stripping heads are abrasive-tumbled to eliminate sharp edges which might damage conductors. Operating temperature 400°F (ST-6) and 550°F. (ST-18). Furnished with 4½' cord.

**MODEL ST-6.** For 6-volts, AC or DC, 12 watts  
**MODEL ST-18.** For 12-volts, AC or DC, 25 watts.  
**EITHER MODEL** .....Net \$14.95 ea.  
(12 or more \$14.45 ea.)

## MINIATURE SOLDER POT

Quick-heating, miniature solder pot for production, service, or laboratory use. Heats to 550°F in just 4 minutes. For tinning wires and component leads; heating waxes and potting compounds. Capacity 2.5 cc. For 115 V. AC or DC.



**SP-115.** With cord set ready to plug in.  
**SP-115-3.** 3-wire grounding model, less plug.  
**EITHER MODEL** .....Net \$14.95 ea.  
60/40 Solder Slugs for above.....Net \$3.30 ea.

## SOLDER CUPS

Solder cups replace tips on Oryx model 18 and 115-15 soldering irons. For tinning wires and component leads. Hold 2.5 cc. Nominal temperature 550-600°F.



**SC-18** (Use with Oryx 18-6 soldering iron.)  
**SC-115** (Use with Oryx 115-15 soldering iron.)  
**EITHER MODEL** .....Net \$2.25 ea.

## TELVAC PRECISION FILES

- FINEST SWISS QUALITY
- VINYL CUSHION FINGER GRIPS

High-quality precision needle files for delicate work. Made in Switzerland to ORYX CO. specifications. Vinyl cushion finger grips reduce fatigue. Available in other lengths and cuts on special order.

Cat. No.	Style	Length	Cut Symbol
1000	Round	4"	○
1100	Round	6¼"	
1001	Square	4"	□
1101	Square	6¼"	
1002	Triangular	4"	△
1102	Triangular	6¼"	
1003	Knife	4"	▽
1103	Knife	6¼"	

Net price ea.—4" styles, \$.59 (10 or more, \$.53)—6¼" styles, \$.72 (10 or more, \$.65)

- 8 STYLES IN 2 SIZES

Cat. No.	Style	Length	Cut Symbol
1004	Equalling	4"	□
1104	Equalling	6¼"	
1005	Oval	4"	○
1105	Oval	6¼"	
1006	Flat	4"	□
1106	Flat	6¼"	
1007	Half round	4"	◐
1107	Half round	6¼"	

8 files in case—4" styles, Cat. No. 2000, \$4.75—6¼" styles, Cat. No. 2100, \$5.75.

**THE ORYX COMPANY**

TARZANA, CALIFORNIA



# Ungar® STANDARD LINE SOLDERING IRON

## New UNGAR HEATING UNITS AND THREAD-ON TIPS for Hi-Speed Repeat Soldering

Ungar's exclusive new development provides these important advantages...

- New thread-on copper tips, iron clad, silver plated or plain copper.
- 100% increase in heat recovery rate.
- 4 times greater heat transfer.
- Positive seal between heating unit and tip.
- New passivated plating reduces barrel oxidation and surface flaking of heating units.



**#4037** Hi-Speed Heating Unit — 850°-900°F. 47½ Watts.  
**#1237** Hi-Speed Heating Unit — 750°-800°F. 37½ Watts

All electrical components are for use on 115 v. AC-DC.



**#PL 111** PENCIL TIP. ¼" x ¾" iron clad, Silver Plated.  
**#111** Plain Copper



**#PL 113** CHISEL TIP. ¼" x ¾" iron clad, Silver Plated.  
**#113** Plain Copper.

**#8001 ANTI-SEIZE.** 2 oz. can New Ungar Anti-Seize guards against "freezing," protects against corrosion and aids heat transfer to tip.



## NEW MICRO-TIPLETS



**#7154** Stepped Pencil, ¼" pencil tip. Iron clad, silver plated. Fits #535, 1235 and 4035.



**#7155** Stepped Chisel, ¼" chisel tip. Iron clad, silver plated. Fits #535, 1235 and 4035.

## UNGAR fast, safe De-Soldering Tips

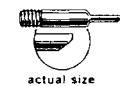
Helps remove components 70% faster. Melts solder on all terminals at once. For use with #4045 Heating Unit.



**#270** UNGAR De-Soldering Kit. Complete, 7 pieces including handle, Heating Unit #4045 and five De-Soldering Tips in metal case.

- #856** 5/8" Cup Tip
- #855** 3/4" Cup Tip
- #854** 1" Cup Tip
- #858** Bar Tip
- New **#862** Offset Slotted Tip
- #857** Slotted Tip
- New **#863** Cube Tip
- New **#861** Triangle Tip

## UNGAR TIPLET Soldering Tips for Heating Units shown below



**#PL 340** Micro-Needle. ¾" x ¾", for microscopic soldering, iron clad, Silver Plated—Actual size.



**#PL 331** Pencil Tip. ¼" x 1", iron clad, Silver Plated.  
**#331** Plain Copper.



**#PL 332** Pencil Offset. ¼" x 1", iron clad, Silver Plated.  
**#332** Plain Copper.



**#PL 333** Chisel, Long Taper. ¼" x 1", iron clad, Silver Plated.  
**#333** Plain Copper.



**#PL 338** Tapered Needle. ¼" x 1¼", iron clad, Silver Plated.



**#PL 833** Chisel, Long Taper. ¾" x 1¾", iron clad, Silver Plated.



**#PL 834** Chisel, Long Taper, Offset. ¾" x 1¾", iron clad, Silver Plated.



**#PL 823** Pyramid, ¾" x 1", iron clad, Silver Plated.  
**#823** Plain Copper.



**#PL 824** Chisel, Long Taper. ¾" x 1", iron clad, Silver Plated.  
**#824** Plain Copper.

800 Series TIPLETS fits Ungar #4045 heating unit only.

## Improved #776 handle

NEW STAINLESS STEEL HEAT DEFLECTOR

NEW OCTAGON GUARD WASHER

NEW "SOFT TOUCH" GRIP

NEW FULL CONTACT SPRING SOCKET. NO TIP WOBBLE

NEW CERAMIC AND GLASS INSULATOR

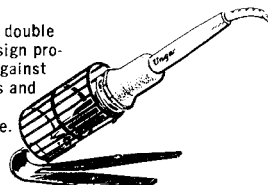
NEW THERMO-STABILIZED PHENOLIC

NEW POLYVINYL INSULATED CORD



## #8000 Soldering Iron Holder

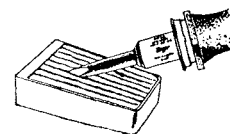
Exclusive Ungar double safety guard design protects operator against accidental burns and 2) protects iron against breakage. Individually boxed



## KLEEN-TIP SPONGE

Removes oxidation, doubles life of tips. #400 with tray.

#455 refill sponges

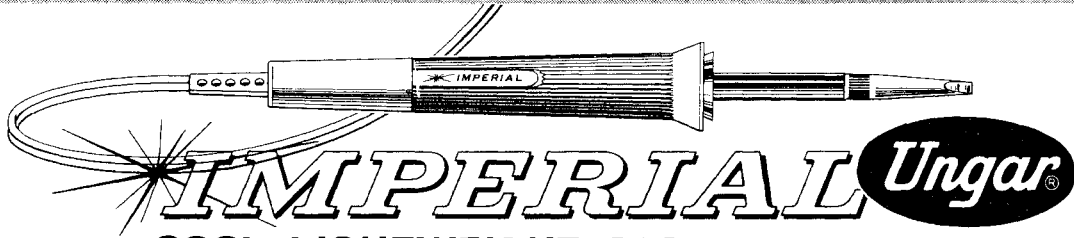


## Ungar Interchangeable Tips... the right tip at the right temperature.

TIP TEMPERATURES	CHISEL TIP LONG TAPER	PYRAMID TIP	CHISEL TIP SHORT TAPER	THREAD-IN HEATING UNITS
850° to 1000° F. #4000 Super Hi-Heat Series 47-1/2 Watt	<b>#4033</b> Tip 1-5/8" long, 1/4" wide. New copper alloy, iron clad, silver plated.	<b>#4036</b> Tip 1-1/8" long, 3/8" diameter. Copper, iron clad, silver plated.	<b>#4039</b> Tip 1-1/8" long, 3/8" diameter. Copper, iron clad, silver plated.	<b>#4035</b> Steel body, nickel plated. For use with 300 Series Tipleets. <b>#4045</b> . For use with 800 Series Tipleets.
750° to 800° F. #1200 Hi-Heat Series 37-1/2 Watt	<b>#1233</b> Tip 1-5/8" long, 1/4" wide. Copper, unplated.	<b>#1236</b> Tip 1-1/8" long, 5/16" diameter. Pure solid Armco iron, silver plated.	<b>#1239</b> Tip 1-1/8" long, 3/8" diameter. Pure solid Armco iron, silver plated.	<b>#1235</b> 37½ watt. Hi-Temperature steel body specially treated for corrosion resistance.
650° to 750° F. #500 Standard Series 23-1/2 Watt	<b>#533</b> Tip 1-5/8" long, 3/16" wide. Copper, unplated.	<b>#536</b> Tip 1-1/8" long, 5/16" diameter. Copper, unplated.	<b>#539</b> Tip 1-1/8" long, 5/16" diameter. Copper, unplated.	<b>#535</b> 23½ watt. Hi-Temperature steel body specially treated for corrosion resistance.

UNGAR ELECTRIC TOOLS  
 HAWTHORNE, CALIFORNIA

# MOST VERSATILE SOLDERING IRON EVER INVENTED



## COOL, LIGHTWEIGHT, EASY-HANDLING

Ungar... developers of the industry's first miniature, low wattage, high temperature, pencil type iron... now brings you the ultimate in time-saving, money-saving soldering irons.

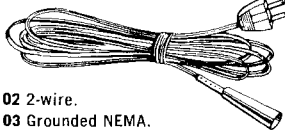


### PERMA COOL COLORED HANDLES



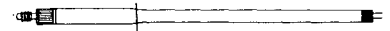
#6100 Turquoise, Beige, Ivory\*

### INTERCHANGEABLE CORD SETS 2-wire or grounded 3-wire



#6102 2-wire.  
#6103 Grounded NEMA.

### NEW 60 WATT



"Long Life" Interchangeable Heat Cartridges.

#6203 60 Watt (850-1050°F temperature range)  
#6200 40 Watt (750-950°F temperature range)  
#6201 30 Watt (650-850°F temperature range)  
#6202 25 Watt (600-800°F temperature range)  
#6206 15 Watt (700-750°F temperature range)

\*NOTE: Designate color for handles and cord sets by adding suffix (-1 for Turquoise; -2 for Beige; -3 for Ivory).

## IMPERIAL MINI-TIP®

### Thread-on soldering tips

All easy-thread tips are completely interchangeable.



#6304 Micro-Chisel, Iron Clad, Gold Plated (24 kt.)  
3/64 x 1/2



#6305 Micro-Spade, Iron Clad, Gold Plated (24 kt.)  
3/64 x 1/2



#6482 Micro-Spade, Stepped, Iron Clad, Gold Plated (24 kt.)  
3/64 x 1/2



#6481 Tapered Screwdriver, Iron Clad, Gold Plated (24 kt.)  
3/4 x 3/32.



#6312 Pencil, Rugged Copper Alloy, 1/8 x 3/4



#6313 Pencil, Iron Clad, Gold Plated (24 kt.) 1/8 x 3/4



#6316 Pencil, Offset, Iron Clad, Gold Plated (24 kt.)



#6318 Long Taper Chisel, Rugged Copper Alloy, 1/8 x 3/4



#6319 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.)  
1/8 x 3/4



#6324 Long Taper Pyramid, Rugged Copper Alloy, 1/8 x 3/4



#6325 Long Taper Pyramid, Iron Clad, Gold Plated (24 kt.)  
1/8 x 3/4



#6331 Screwdriver, Iron Clad, Gold Plated (24 kt.)  
1/8 x 3/4



#6333 Needle, Iron Clad, Gold Plated (24 kt.) 1/8 x 3/4



#6336 Spade, Iron Clad, Gold Plated (24 kt.) 1/8 x 3/4



#6366 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.)  
3/16 x 3/4



#6372 Screwdriver, Iron Clad, Gold Plated (24 kt.)  
3/16 x 3/4



#6390 Screwdriver, Iron Clad, Gold Plated (24 kt.)  
3/16 x 1 1/2



#6424 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.)  
1/4 x 3/4



#6474 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.)  
3/8 x 3/4

## NEW MICRO-TIPS

For use with Imperial 15 watt cartridges only.



#6550 Tapered Screwdriver, Iron Clad, Gold Plated (24 kt.) .040 x .40



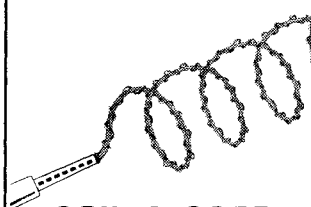
#6551 Stepped Spade, Iron Clad, Gold Plated (24 kt.)  
.050 x .40



#6553 Stepped Chisel, Iron Clad, Gold Plated (24 kt.)  
.050 x .40



#6554 Stepped Pencil, Iron Clad, Gold Plated (25 kt.)  
.050 x .40



### COIL-A-CORD

#7625. Eliminates tangled and twisted cords... Automatically keeps cord coiled and out of the way. Use it with either the standard or grounded Imperial Cord sets... Slips on Easily... Can also be used on many electrical hand tools and appliance cords.

### Specially Designed IMPERIAL HOLDER

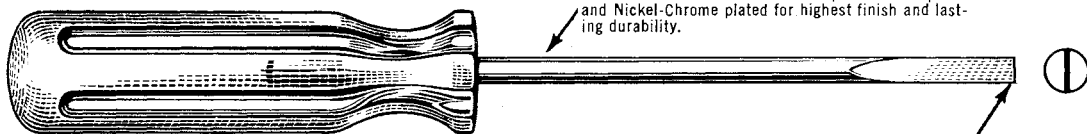
Rugged holder, built especially for the IMPERIAL, protects iron, keeps it safely out of the way. Black with gold cage guard and heat sink. #6800,



Precision Ground, Unconditionally Guaranteed

# SCREW DRIVERS • NUT DRIVERS • HAND TOOLS

- Nickel-Chrome Plated #6150 Steel Blades will not rust or corrode
- Comfordome Slo-Burn S/B® Ambery® Handles are easy on the hands



Chrome Vanadium Steel Blades are precision tempered and Nickel-Chrome plated for highest finish and lasting durability.

Vaco Ambery® S/B® Handles bear the Underwriters' Laboratories Re-examination Service Marker.

Vaco Ambery® Handles are a dense, resilient, thermal plastic material that is break-proof, shock-proof, fire-safe, non-absorbent and therefore impervious to most acids and alkalis.

Blade Tips are precision ground and designed to perfectly fit the screw slot.

### ROUND BLADE



#### 1/8" Cabinet Style—Round Blades

Stock Number	Blade Diameter and Length	Price
A 216-4	1/8"x4"	\$.70
A 216-6	1/8"x6"	.72
A 216-8	1/8"x8"	.78
A 216-10	1/8"x10"	.86

#### 3/16" Cabinet Style—Round Blades

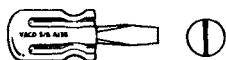
A 316-4	3/16"x4"	.92
A 316-5	3/16"x5"	.98
A 316-6	3/16"x6"	1.02
A 316-8	3/16"x8"	1.08
A 316-10	3/16"x10"	1.18

#### 1/4" General Service—Round Blades

A 416-4	1/4"x4"	1.12
A 416-5	1/4"x5"	1.14
A 416-6	1/4"x6"	1.18
A 416-8	1/4"x8"	1.24
A 416-10	1/4"x10"	1.36

#### 5/16" Heavy Duty—Round Blades

A 516-6	5/16"x6"	1.50
A 516-8	5/16"x8"	1.58
A 516-10	5/16"x10"	1.78



#### Stubbys

A 132	1/4"x1-1/4"	.84
A 135	5/16"x1-3/4"	1.10

### PHILLIPS DRIVERS



Stock Number	Point No.	Blade Diameter and Length	Price
P 01	0	1/8"x2-1/2"	\$.74
P 1	1	3/16"x3"	1.00
P 2	2	1/4"x4"	1.26
P 3	3	5/16"x6"	1.72
P 5 (Stub)	2	1/4"x1-3/4"	1.10
P 6 (Stub)	1	3/16"x1-1/4"	1.00
P 12 (Pocket Clip)	1	1/8"x2-1/2"	.76

### CLUTCH HEAD DRIVERS



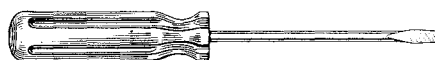
Stock Number	Bit Point Diameter and Blade Length	Price
CH 43	1/8"x3"	\$1.30
CH 54	5/32"x4-1/4"	1.30
CH 64	3/16"x4-1/4"	1.30
CH 86	1/4"x6"	1.72
CH 106	5/16"x6"	2.22
<b>Stub Styles</b>		
CH 51	5/32"x1-1/2"	1.16
CH 61	3/16"x1-1/2"	1.16

### SCREW HOLDING DRIVERS



Stock Number	Blade Diameter and Length	Price
OK 23	1/8"x3"	\$.98
OK 24	1/8"x4"	1.02
OK 26	1/8"x6"	1.08
OK 28	1/8"x8"	1.12
OK 34	3/16"x4"	1.30
OK 36	3/16"x6"	1.36
OK 38	3/16"x8"	1.42

### BULL DRIVERS® FOR EXTRA POWER



A man's size driver for a man's size job. 35% larger handle provides 35% more power and 100% more comfort.

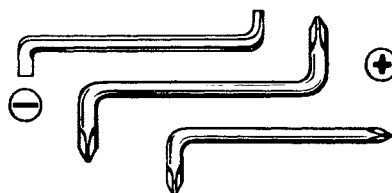
#### Round Blade (Keystone Blade)

Stock Number	Blade Diameter and Length	Price
BD 144	1/4"x4"	\$1.48
BD 146	1/4"x6"	1.58
BD 156	5/16"x6"	1.98
BD 158	5/16"x8"	2.08

#### Phillips Blade

BD 122	#2 Phillips	1.48
BD 133	#3 Phillips	1.98

### OFFSET SCREW DRIVERS



Stock No.	Type	Blade	Price
VO 1	Regular	5/32" x 3"	\$.48
VO 2	Regular	1/4" x 4"	.78
P 120	Phillips	#1 point one end, #2 point other end	.68
P 111	Phillips	#1 point both ends	.54
P 222	Phillips	#2 point both ends	.60

Comfordome Slo-Burn S/B® Handles



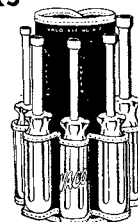
### VACO ALL HOLLOW SHAFT NUT DRIVERS

Available in 24 types and sizes

All Hollow Shafts

Nickel-Chrome Plated #6150 Steel Shafts

Extra Hard Long-Wearing Sockets



**K-7 Self-Standing Kit** ..... \$8.60  
Includes 7 nut drivers (3" shaft lengths) each in own pocket marked for size and color.

### COLOR CODED HANDLES FOR QUICK IDENTIFICATION

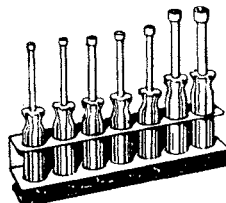
Standard 3" Shaft Lengths					S 14	7/16" 7"	Brown	1.18
Stock No.	Hex Size	Overall Length	Color Key	Price	S 16	1/2" 7"	Orange	1.18
S 6	3/16"	6-5/8"	Black	\$.96				
S 8	1/4"	6-5/8"	Red	.96				
S 10	5/16"	6-5/8"	Yellow	.96				
S 11	11/32"	6-5/8"	Green	.96				
S 12	3/8"	6-5/8"	Blue	.96				

#### ALSO AVAILABLE

Stubby sizes 1/4", 5/16", 3/8"

Odd sizes 7/32", 9/32"

Extra Large sizes 9/16", 5/8"



**5-700 Bench Stand** ..... \$8.00  
All metal for permanent attachment to bench or wall. 7 drivers.

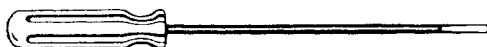
Precision Ground, Unconditionally Guaranteed



# SPECIALTY SCREW DRIVERS • KITS

- Nickel-Chrome Plated # 6150 Steel Blades will not rust or corrode
- Comfordome Slo-Burn S/B® Amberyl® Handles are easy on the hands

## BERYLLIUM COPPER DRIVERS



Round Blade, Non-Spark, Non-Magnetic

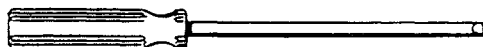
Stock Number	Blade Diameter and Length	Price
VB 26	1/8" x 6"	\$1.34
VB 210	1/8" x 10"	1.48
VB 38	3/16" x 8"	2.36
VB 46	1/4" x 6"	2.94
VB 48	1/4" x 8"	3.24

## INSULATED BLADE SCREW DRIVERS



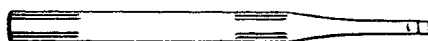
VR 241	1/8" x 4"	.84
VR 261	1/8" x 6"	.96
VR 281	1/8" x 8"	1.00
VR 361	3/16" x 6"	1.12
VR 381	3/16" x 8"	1.16

## NON-METALLIC RADIO AND TV ALIGNERS



	Bone Fiber Blade	Price
AT 55	5/32" x 5"	.74
AT 510	5/32" x 10"	.86

## NON-MAGNETIC METAL TIP RADIO AND TV ALIGNER



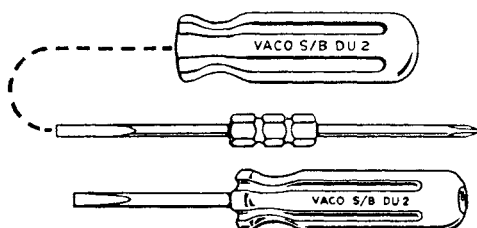
Stock Number	Body Size	Bit Diameter	Capacitance	Price
AT 45	3/8" x 5-1/2"	3/16"	Slight	\$ .60

## NEON LIGHT SCREW DRIVERS



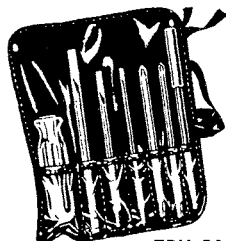
Stock Number	Blade Diameter and Length	Price
AN 44	1/4" x 4"	\$1.78
AN 2 (Pocket Clip)	1/8" x 3"	1.08

## DUPLEX "REVERSIBLE" DRIVERS



Stock Number	Blade Size and Type	Price
DU 2	No. 1 Phillips, One End 3/16" Regular, Other End	\$1.46
DUH 4	No. 2 Phillips, One End 1/4" Regular, Other End	1.76
DUP 12	No. 1 Phillips, One End No. 2 Phillips, Other End	1.94

## VACO RADIO and TV KITS



ZBX 51

### ZBX 51 Screw Driver Kit.....\$5.22

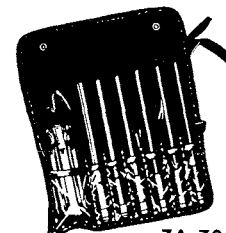
A fine, all-purpose kit of interchangeable regular and Phillips blades that fit same handle. 6" extension makes 10 combinations possible. In durable leatherette bag.



ZSX 61

### ZSX 61 Nut Driver Kit.....\$6.30

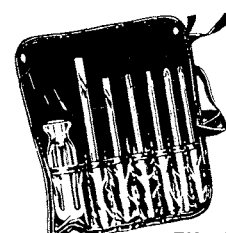
A most versatile and complete hexagon wrench kit for radio, television or any other work requiring speedy nut setting. All sockets are super hard for maximum utility and long life. 6" extension makes 10 blade lengths possible. In handy leatherette tool roll.



ZA 70

### ZA 70 Allen Driver Kit.....\$5.12

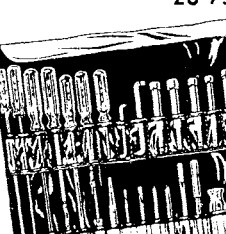
This useful kit consists of 6 hexagon drivers, handle and bag. Will service hexagon recessed opening screws Nos. 4, 5, 6, 8, 10, 1/4", 5/16", and 3/8". Each bit is extra long and may ground back as wear occurs.



ZU 75

### ZU 75 Universal Driver Kit.....\$5.22

Here is a kit that is universal in its applications since it will serve all three types of the most popular screws in use today—regular slotted, Phillips, and clutch head. All popular size blades are included—3/16", and 1/4" for regular slotted screws; No. 1 and No. 2 Phillips; 5/32" x 3/16" clutch head.



TV 27

### 27-Piece TV and Radio Kit.....\$26.42

NO. TV 27 KIT—Contains practically every hand tool necessary for television and radio work, plus extra pockets for pliers and other personal tools according to individual preferences. Contains one each of the following: ZH 1 medium duty handle; ZH 2 heavy duty handle; ZX 56 extension; A 132 1/4" stub; 1/4", 3/16", 1/8" regular bits; No. 1 Phillips and No. 2 Phillips bits; 3/16", 1/4", 5/16", 11/32", 3/8", 7/16" and 1/2" hex. wrenches; AT 45 metal tip aligner; A 116-2 3/32" pocket clip; P 01 #0 Phillips thin blade; OK 24 1/8" screw holding; VR 261 1/8" insulated blade; OK 38 3/16" screw holding; VR 381 3/16" insulated blade; VB 210 1/8" x 10" non-magnetic adjuster; AT 510 5/32" fiber aligner; VO 2 medium offset; VO 1 small offset.



RT 14

### 14-Piece TV and Radio Kit \$11.98

NO. RT 14 KIT—Here's a handy, convenient kit for radio and TV service men. Contains nut drivers, Phillips and regular drivers, plus ZH 2 heavy duty handle and famous Vaco 6" extension which doubles the usefulness of each driver. In durable leatherette tool roll.

**whatever electronic products  
you require...**



**...you'll find it  
faster in  
this catalog...**

**...the world's largest catalog  
of electronic  
products  
sold through  
distributors**



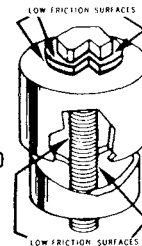


# CHASSIS PUNCHES

## NEW \*"LT" (LOW TORQUE) CHASSIS PUNCHES

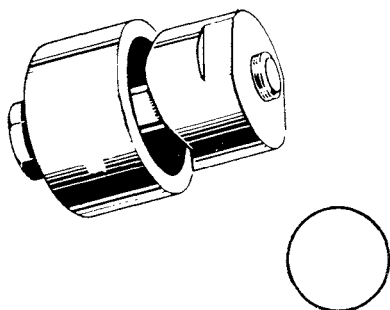
A brand-new electro-coating process (which can't wear off) reduces friction, thus lowers torque. You get a much cleaner hole with much less effort. The Walsco "L.T." Chassis Punch requires no lubrication of any kind and will give perfect service almost indefinitely.

50% LESS  
EFFORT REQUIRED  
THAN  
COMPETITIVE  
PUNCHES



## ROUND CHASSIS PUNCHES

Made of hardened, precision-ground, tool steel. Quick and easy to operate. Saves hours of hard work.

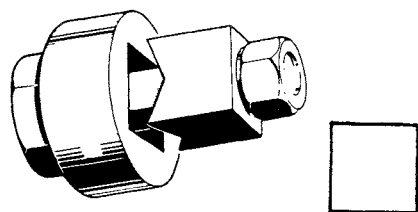


Cat. No.	Punch Size	Pilot Bolt Size	Pilot Hole Drill Size	Net
3050-R	1/2"	1/4	5/16"	\$2.80
3062-R	5/8"	5/16	3/8"	2.63
3069-R	1 1/4"	3/8	7/8"	2.60
3075-R	3/4"	3/8	7/8"	2.60
3087-R	7/8"	3/8	7/8"	2.60
3100-R	1"	3/8	7/8"	2.85
3106-R	1 1/4"	3/8	7/8"	3.00
3112-R	1 1/8"	3/8	7/8"	3.00
3116-R	1 5/32"	3/8	7/8"	3.00
3117-R	1 11/64"	3/8	7/8"	3.00
3119-R	1 3/8"	3/8	7/8"	3.00
3125-R	1 1/4"	3/8	7/8"	3.00
3137-R	1 3/8"	1/2	7/8"	4.17
3150-R	1 1/2"	1/2	7/8"	4.92
3225-R	2 1/4"	3/4	7/8"	9.92

\* LOW TORQUE

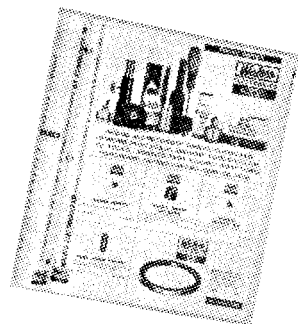
## SQUARE CHASSIS PUNCHES

Very handy for mounting I.F. transformers, or for "nibbling" larger square holes such as may be required for power transformers, tuning condensers, etc. Finest quality steel.



Cat. No.	Punch Size	Pilot Bolt Size	Pilot Hole Drill Size	Net
3062-S	5/8"	3/8	1/2"	\$5.95
3075-S	3/4"	3/8	1/2"	6.50
3087-S	7/8"	3/8	1/2"	6.55
3100-S	1"	3/8	1/2"	8.25

\* LOW TORQUE



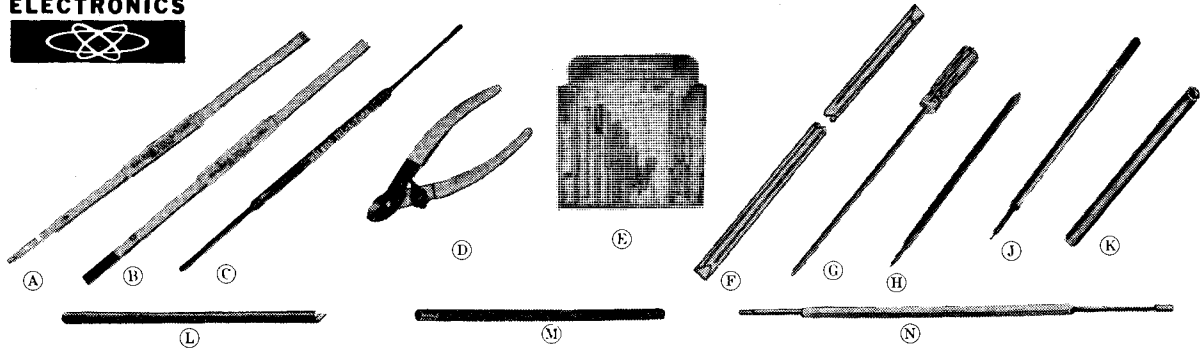
## JUST OFF THE PRESS

The all new Walsco Catalog containing the very latest in Phono Drives, Chassis Punches, service aids, chemicals and hardware.

**SEND FOR YOUR COPY NOW!**



# ALIGNMENT AND SPECIAL TOOLS



(A) I.F. Aligner and also double-ended. One end fits a #4 stud, the other end fits a #6 stud.  
Cat. No. 2586 Tel-A-Turn Tool  
Net \$1.05

(B) An alignment screwdriver with a standard metal tip at one end. The other end has a very thin 1/32" wide metal blade for small can openings.  
Cat. No. 2587 Tel-A-Turn Tool  
Net \$1.05

(C) A double ended Hex Aligner that turns both top and bottom slugs. One end has .100" hex, the other end is .125" hex.  
Cat. No. 2588 Tel-A-Turn Tool  
Net \$1.05

(D) WALSCO STRIP-ER-CLIP. A brand new precision tool with an exclusive safeguard that prevents accidental nicking or cutting while wires are being stripped. Strips and clips all wires ranging from 14 to 26 gauge.  
Cat. No. 595-X  
Net \$1.38

(E) "LUCKY 13" ALIGNMENT TOOL KIT. Carefully selected as the most needed tools, for the Service-Technician in Electronics, TV, Hi-Fi and Printed Circuit Work.  
Cat. No. 582  
Net \$8.73

(F) NEW "SLIM-FIBREGLASS STICKS." New precision made Walsco Slim-Sticks are made of durable fiberglass. Completely non-metallic.  
Cat. No. 2531-X 1/8" Dia. x 12" Long  
Net \$ .42  
2532-X 1/8" Dia x 16" Long .57  
2534-X 3/32" Dia. x 12" Long .48  
2535-X 3/32" Dia. x 16" Long .72

(G) WALSCO "GLAS-STICKS." Precision made machined fiberglass reinforced polyester alignment screwdriver.  
Cat. No. 2537 3/32" Dia., 7" blade  
Net \$ .85  
2538 3/32" Dia., 14" blade 1.15

(H) DUPLEX ALIGNMENT SCREWDRIVER. Large end is 3/32" wide; small end, 3/64" wide. Tip thickness conforms to standard slot dimensions, 7" long.  
Cat. No. 2520  
Net \$ .62

(I) ALIGNMENT TOOL FOR WESTINGHOUSE, ETC. Especially designed to fit Westinghouse and other sets. Very thin tip for small can openings.  
Cat. No. 2541 5 3/4" long  
Net \$ .57

(J) 1/4" HEX I.D. NEUTRALIZING WRENCH. Made of tough, flexible, Lo-loss plastic. If corners wear round, just trim back, 7 1/2" long, 3/8" round O.D.  
Cat. No. 2503  
Net \$ .37

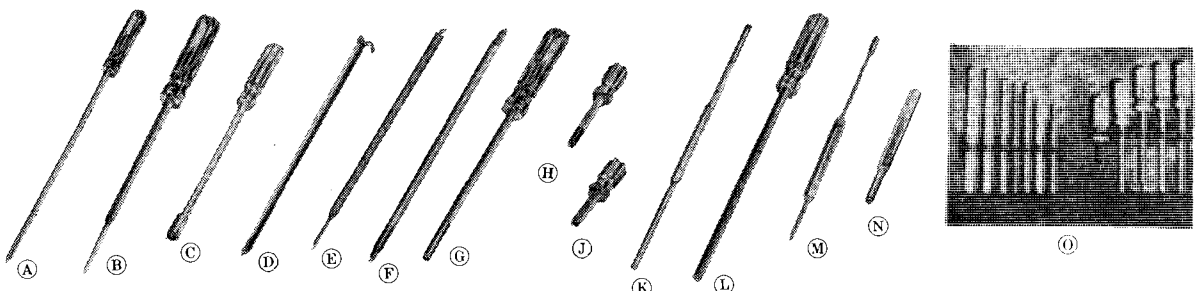
(K) 3/16" HEX I.D. NEUTRALIZING WRENCH. Durable Lo-loss plastic gives long service life. 7 1/2" long, 3/16" O.D.  
Cat. No. 2508  
Net \$ .37

(L) METAL TIP ALIGNMENT SCREWDRIVER. Combines low capacitance desirable in alignment tool with mechanical strength of metal screw-

driver. Plastic handle, 3/32" diameter, 6" long over all.  
Cat. No. 2525  
Net \$ .42

(M) WALSCO TUNING WAND. Rod with one end made of brass, the other loaded with powdered iron—for checking coils.  
Cat. No. 2540  
Net \$ .53

(N) DOUBLE END NYLON HEX IRON CORE TOOLS—For .075", .100" and .125" Cores. Turn both top and bottom coil slugs with this one handy tool. One end under cut for turning bottom slug separately.  
Cat. No. 2542 .125" Hex, 5" long, Hex Handle Net \$ .48  
2543 .100" Hex, 5" long, Hex Handle .48  
2544 .100" Hex, 11" long, knurled 1/4" Handle .63  
2545 .100" Hex, 11" long, thin, 3/32" Handle .63  
2546 .075" Hex, 11" long, knurled 1/4" Handle .63  
2547 .075" Hex, 11" long, thin, 3/32" Handle .63



(A) "THE LONG RANGER." A full 12", slim, completely insulated tuner alignment tool. Features tough, replaceable, molded nylon tip.  
Cat. No. 2523  
Net \$1.60

(B) TURRET TUNER TOOL. A tool for adjusting all sets using "Standard Coil" and similar turret-type tuners.  
Cat. No. 2522  
Net \$ .92

(C) PHILCO TUNER TOOL. A special tool for 1946-48 front-end tuners.  
Cat. No. 2519  
Net \$1.20

(D) WIRE DRESSING & ALIGNMENT TOOL. A handy dual-purpose tool with a thin 3/32" Butyrate handle. One end is a special tool for dressing wires in hard-to-reach places. Other end with a low capacitance metal

screwdriver tip.  
Cat. No. 2512  
Net \$ .45

(E) K-TRAN ALIGNMENT TOOL. This tough, double-use tool is machined at one end to fit the slots on all K-Tran miniature I.F. transformers.  
Cat. No. 2515  
Net \$ .60

(F) "SLUG SAVER" TUNER TOOL. New patented tool for aligning "Standard Coil" front ends. Prevents "loosing" slugs, thru ingenious "step" design.  
Cat. No. 2528 7 1/2" long  
Net \$ .67

(G) SLOTTED STUD DRIVER. An 8 1/4" long precision screwdriver with blade to fit No. 6 studs.  
Cat. No. 2516  
Net \$ .92

(H) I.F. ALIGNER. 2 1/2" long molded high-impact styrene . . . for RCA,

Zenith and others.  
Cat. No. 2527  
Net \$ .58

(I) STUBBY STUD DRIVER. The only screwdriver only 2" long overall. Fits No. 6 studs.  
Cat. No. 2517  
Net \$ .60

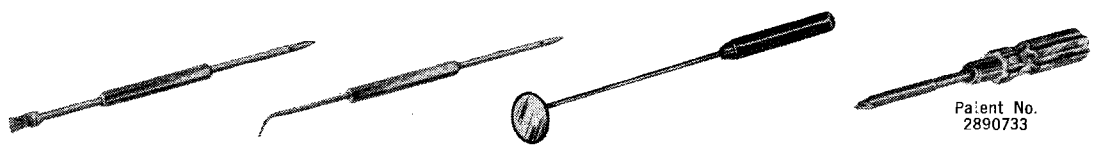
(K) STANDARD ALIGNMENT TOOL. Screwdriver blades are made with extra-thin tempered Swedish steel and are recessed so that they will slide easily over a stud and will not slip off.  
Cat. No. 2519  
Net \$ .67

(L) SLOTTED SCREWDRIVER. Instead of a blade, this tool has a slot to fit No. 6 studs. For many of the older TV sets.  
Cat. No. 2524  
Net \$1.00

(M) DOUBLE ENDER. A 5 1/2" long, molded-nylon tool, with one end to fit hex studs, the other end being a very small screwdriver.  
Cat. No. 2526  
Net \$ .37

(N) I.F. ALIGNER TOOL. Designed for I.F. Alignment of Zenith, RCA and other similar types. Made of molded nylon. 5 1/2" long.  
Cat. No. 2521  
Net \$ .53

(O) WALSCO TV-FM ALIGNMENT TOOL KIT. Kit contains 12 tools. These are all standard Walsco tools and come in a handy leatherette case or wall rack for mounting above work bench.  
Cat. No. 580 Leatherette case.  
Net \$7.20  
581 in wall rack 7.50



## WALSCO SPECIAL TOOLS

**SOLDER-AID TOOL.** Wire brush makes removing of solder a cinch. Forked tool end and brush made of special stainless steel to which solder will not stick.  
Cat. No. 2529 8" long plastic handle  
Net \$1.00

**SOLDER-AID TOOL.** Similar to #2529 but has very thin curved hook in place of brush. Designed for use in delicate printed circuit work.  
Cat. No. 2530 8" long plastic handle  
Net \$1.00

**INSPECTION MIRROR.** High-visibility

polished glass reflection mirror is protected against breakage by a heavy gauge plated metal backing. Has plastic, insulated grip.  
Cat. No. 554  
Net \$ .42

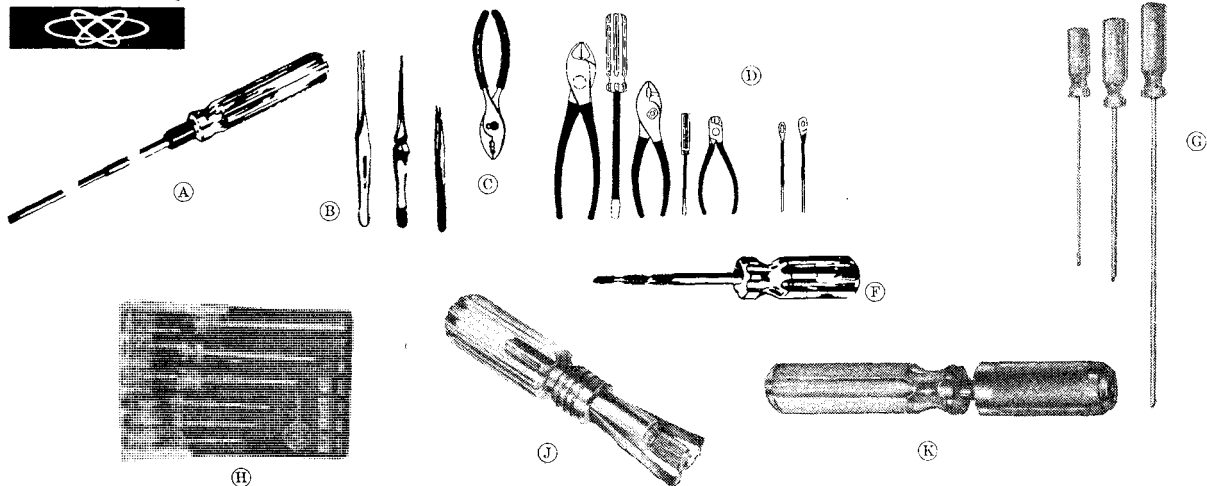
**MINI-HOLD SCREWDRIVERS.** Designed primarily to speed replacing

phono cartridges. Exclusive "wedge-action" securely grips extremely small screws (#1 to #4) "Mini-hold" measures just 2 7/8" when in use!  
Cat. No. 2568 2 7/8" long, "Open" length 3 3/4" Net \$2.14  
2569 7" long 2.40





# ALIGNMENT AND SPECIAL TOOLS



**(A) WALSCO SLUG RETRIEVING & SCREW HOLDING TOOL** — Especially designed for removing "lost" TV Tuner slugs in Standard Coil Tuners. Excellent screw holding tool. End is precision-ground of hardened steel.

Cat. No. 2565 11" Lgh. Net \$2.70 ea.  
 Cat. No. 2566 15" Lgh. Net \$3.25 ea.  
 Cat. No. 2567 19" Lgh. Net \$4.30 ea.

**(B) WALSCO SERVICE TWEEZERS** — For handling small parts in crowded spaces. Walsco Tweezers are indispensable. They are made of forged steel, polished nickel-plated.

Cat. No. 570 Self-Closing Tweezer with cross-over action, 6½" long, serrated, blunt points. Net \$ .78

Cat. No. 571 Heavy-Duty Tweezer with slide-lock feature. 6½" length, serrated, blunt points. Net \$ .90

Cat. No. 572 Precision Tweezer with narrow, pointed ends especially suitable for delicate work. Over-all length 4½". Net \$ .52

Cat. No. 575 Tweezer Kit, made of durable leatherette, containing one each of the above listed tweezers. Net \$2.42

**(C) EASY-ON TOOL GRIP** — Designed for pliers, cutters, diagonals, wire snippers, etc. Made of flexible, elastic plastic. Gives superior insulation and protection against electrical shock.

Cat. No. 521 Small Net \$ .23 per pr.  
 Cat. No. 522 Med. Net \$ .27 per pr.  
 Cat. No. 523 Large Net \$ .33 per pr.

**(D) WALSCO PROTECTO TUBE** — Insulate the handles of your pliers, wire cutters, screwdriver shanks neatly and effectively with Walsco Protecto Tube.

Cat. No. 18K Net \$1.20

**(F) 3-STEP TAP** — Eliminates the need for carrying 3 separate taps and handle. Designed for reaming holes, tapping new holes, etc. Sizes are 6/32, 8/32 and 10/32.

Cat. No. 2574 Net \$3.50

**(G) NON-MAGNETIC BERYLLIUM SCREWDRIVERS** — Ideal for making adjustments near magnetic fields such as in focalizers of TV sets. Does not affect TV picture as a steel tool would.

Cat. No. 2560 ¼" Dia., 9" Overall Length Net \$ .87

Cat. No. 2561 ¼" Dia., 13" Overall Length Net \$ .93

Cat. No. 2562 ¾" Dia., 9" Overall Length Net \$1.48

Cat. No. 2564 ¾" Dia., 13" Overall Length Net \$1.65

**(H) HEX DRIVERS** — Blades are made of high torque, heat treated, alloy steel and are permanently embedded in shock and chip-proof plastic handles.

**(J) TWISTO WIRE STRIPPER** — A low-cost, pocket-size, precision stripper. Operating on an entirely new principle, the Walsco Twisto Wire Stripper permits stripping insulation right up next to a soldered connection, plug or socket.

Cat. No. 592-00 Net \$3.00

Cat. No. 592-03 Replacement Blades \$ .67 per set

**(K) WALSCO KNURL-TITE WRENCH** — Tighten or loosen knurled finish nuts quickly and easily. The knurled nut is slipped into the collet-type pressure jaws. A quarter turn of the handle results in a positive vise-like grip.

Cat. No. 2581 ¾" Dia. nut Net \$4.83

Cat. No. 2582 ½" Dia. nut Net \$4.83



Cat. No. 2583 5/8" Dia. nut Net \$4.83



## FREE CATALOG

Send for the Big New Catalog of the Complete Walsco Line

**Walsco Electronics Co.**  
 Div. GC-Textron Electronics, Inc.  
 Rockford, Ill., U.S.A.





**SPEED-O-MATIC WIRE STRIPPERS**—With fully automatic—delayed-action return that prevents the crushing of fine stranded wires. Completes the stripping operation with one simple squeeze of the handles. Strips all types of wire insulation from #10 to #30 wires by easy exchange of cutter blades.

Cat. No. 594-01 For #8 to #22	Net \$5.93
Cat. No. 594-02 For #10 to #18	5.93
Cat. No. 594-03 For #14 to #30	5.93
Cat. No. 594-04 For #16 to #22	5.93
Extra Blades for Above	set 1.43


**TRIG-O-MATIC WIRE STRIPPERS** — Similar to 594 but has a Trig-O-Matic action that holds jaws open until released. Especially desirable for stripping of fine stranded wire.

Cat. No. 593-01 For #10 to #22	Net \$5.93
Cat. No. 593-02 For #10 to #18	5.93
Cat. No. 593-03 For #14 to #30	5.93
Cat. No. 593-04 For #16 to #22	5.93
Extra Blades for Above	set 1.35




**NEW WALSCO VIBRA-PULL** — The quickest, easiest safest way to pull auto radio vibrators. Exclusive design offers absolute protection against damage to vibrator prongs, sockets and adjacent electronic components.

Cat. No. 566 Net \$1.70



**WALSCO OILETTE** — Filled with high grade Walsco oil. Dispenses accurately one drop at a time. For use on electronic and electrical devices, clocks, office machines, sporting goods, etc.

Cat. No. 986 Net \$ .83  
 Cat. No. 986-22 Refill for Oilette Net \$ .33



**NEW WALSCO CHEM-O-JECTOR** — A new type applicator for lubricants, greases, certain adhesives and many cleaning fluids used in electronics. Uses the "hypodermic" plunger principle, which makes it possible to reach "hard-to-get-at" places.

cat. No. 987 Net \$ .30

# Weller DUAL HEAT Soldering Guns

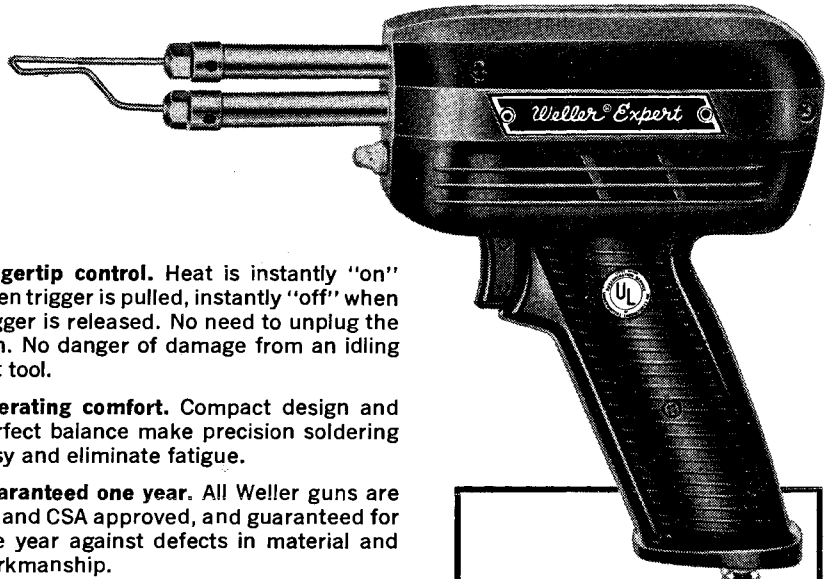
**Dual heat.** All Weller guns offer Dual Heat, an original Weller feature that provides two tip temperatures from the same gun. Two trigger positions permit instant switching to high or low heat, whichever is best suited for the job. The use of low heat prevents damage when soldering near heat-sensitive components and prolongs tip life. High heat is instantly available when needed.

**Instant heat.** Solders in seconds. No waiting for the tip to heat. No wasted current.

**High-Efficiency Tip.** Made of copper for superior heat transfer and optimum soldering results. Slips easily into difficult places.

**Exclusive Tip Grip.** Wiping action of tip fastening nuts eliminates contact resistance and oxidation. This assures full, constant heat.

**Spotlight.** Illuminates the work and eliminates shadows.



**Fingertip control.** Heat is instantly "on" when trigger is pulled, instantly "off" when trigger is released. No need to unplug the gun. No danger of damage from an idling hot tool.

**Operating comfort.** Compact design and perfect balance make precision soldering easy and eliminate fatigue.

**Guaranteed one year.** All Weller guns are UL and CSA approved, and guaranteed for one year against defects in material and workmanship.

## Accessory and Replacement Tips for Weller Dual Heat Guns



### SOLDERING

For gun model 8200—  
Tip 7135N  
For gun model D-440—  
Tip 7135N  
For gun model D-550—  
Tip 7250N



### SMOOTHING

For gun models D-440  
and 8200—Tip 6120  
For gun model D-550—  
Tip 6140



### CUTTING

For gun models D-440  
and 8200—Tip 6110  
For gun model D-550—  
Tip 6130

## 3 Dual Heat Models

MODEL 8200—100/140 watts  
MODEL D-440—145/210 watts  
MODEL D-550—240/325 watts

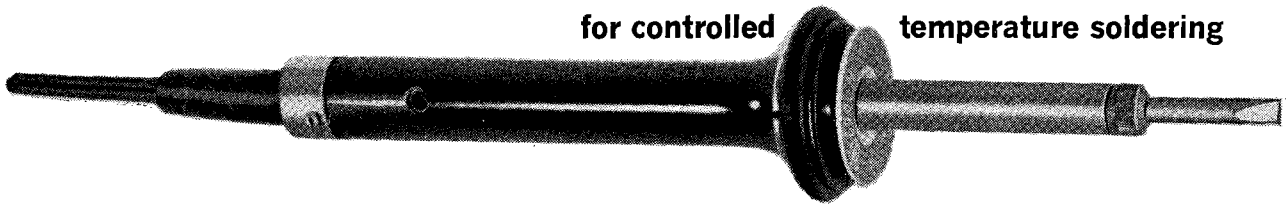
## KITS WITH ACCESSORIES

MODEL 8200PK—Dual heat 100/140 watt gun, 3 soldering tips, tip-changing wrench, flux brush, soldering aid, solder, plastic case.

MODEL D-550PK—Heavy-duty 240/325 watt dual heat gun; soldering, cutting and smoothing tips; tip-changing wrench; solder; plastic case.

# Weller MAGNASTAT® Soldering Irons

for controlled temperature soldering



Only Weller brings you soldering irons with temperature control in the tip. One Magnastat iron with 3 different controlled temperature tips does the work of 3 different irons. And it maintains proper temperature for secure, reliable soldered connections.

- Tip temperature will not vary more than  $\pm 3\%$  when idling.
- A Magnastat iron provides efficient soldering temperature under load and excellent recovery.
- Your choice of 3 different controlled temperatures by interchanging Magnastat tips.
- Weller Magnastat irons do the work of uncontrolled irons that require much higher wattage and weigh twice as much.
- The light weight of a Weller Magnastat iron reduces operator fatigue. Handle remains cool.

Over 90 Magnastat Wellertips are available. Tips come in 3 controlled temperature ranges—600°F, 700°F and 750°F—and in many different shapes.

## STANDARD WELLER MAGNASTAT IRONS

MODEL NO.	WATTS	TIP
TC552 STD	55	5-CIN—750°F
TC602 STD	75	6-EIN—750°F
TC1202 STD	120	12-G4N—750°F

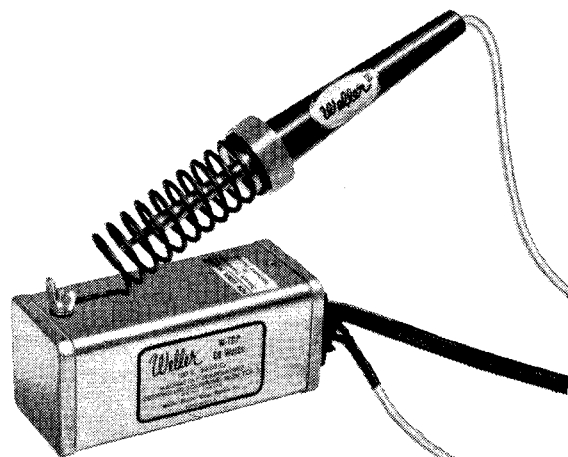
Furnished with standard two-wire cord and tip number designated.

## OTHER COMBINATIONS AND SPECIFICATIONS

MODEL NO.	COMBINATION	WATTS	NET WEIGHT
TC552	No cord	55	3 oz.
TC552-2	2-wire cord	55	6¾ oz.
TC552-3	3-wire cord	55	7½ oz.
TC552-TL3	Twist-lock cord	55	9½ oz.
TC602	No cord	75	3½ oz.
TC602-2	2-wire cord	75	7¼ oz.
TC602-3	3-wire cord	75	8½ oz.
TC602-TL3	Twist-lock cord	75	10½ oz.
TC1202	No cord	120	6 oz.
TC1202-2	2-wire cord	120	9¾ oz.
TC1202-3	3-wire cord	120	10½ oz.
TC1202-TL3	Twist-lock cord	120	12½ oz.

WELLER ELECTRIC CORP., EASTON, PA.

# Weller® PENCIL Soldering Irons



Temperature Controlled "Low Voltage" Soldering Pencil with  $\frac{3}{16}$ " 700°F tip and power unit—MODEL W-TCP

#### SPECIFICATIONS

Wattage	Voltage	Weight with Tip, Less Power Unit and Cord	Overall Length of Iron with Tip	Tip Retainer O. D.
60	120 V.* 50/60 Cycles	1 $\frac{1}{4}$ oz.	7 $\frac{1}{2}$ "	$\frac{5}{16}$ "

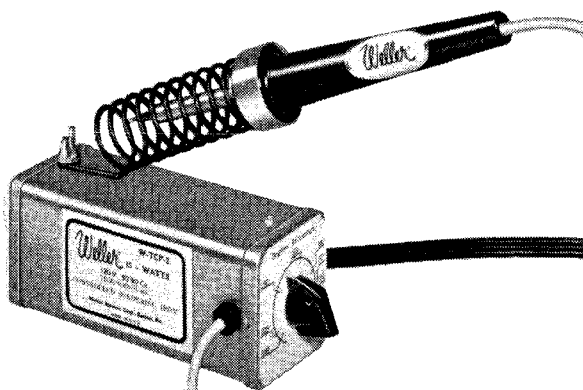
\*220 V., 50/60 Cycles available upon request at same price.

## Temperature Controlled "Low Voltage" Soldering Pencil

For production line and research laboratory use where accurate control of tip temperature is essential to meet rigid soldering specifications. Choice of 3 different tip temperatures from one soldering pencil merely by interchanging 3 different controlled temperature tips.

- Temperature control is in the tip. Choice of 500°F, 600°F and 700°F tip temperatures.
- Extremely small and light in weight. Easy to control.
- Suitable for miniature or general soldering.
- High efficiency and rapid recovery. Packed with plenty of reserve power.
- Low 24 volt operation for component and user protection.
- Isolated for elimination of leakage current.
- Handle of high-impact plastic remains cool.
- Interchangeable tips are premium plated.
- Soldering iron stand attached to power unit.
- Power cord is silicon rubber covered, extremely flexible and easy to maneuver. Doesn't break or burn.

**Interchangeable tips available:**  $\frac{1}{16}$ ",  $\frac{3}{32}$ ",  $\frac{1}{8}$ " and  $\frac{3}{16}$ " screw-driver with choice of 500°F, 600°F and 700°F controlled temperatures.



Continuously Variable Temperature Controlled Soldering Pencil with  $\frac{1}{16}$ " tip and power unit—MODEL W-TCP-2

#### SPECIFICATIONS

Wattage	Voltage	Weight with Tip, Less Power Unit and Cord	Overall Length of Iron with Tip	Tip Retainer O. D.
15	120 V.* 50/60 Cycles	1 $\frac{1}{4}$ oz.	7 $\frac{1}{2}$ "	$\frac{5}{16}$ "

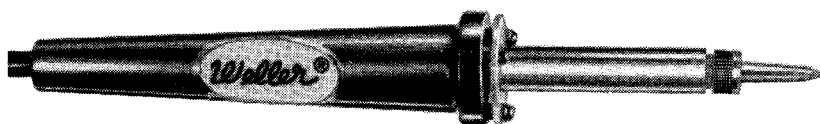
\*220 V., 50/60 Cycles available on request at same price.

## Continuously Variable Temperature Controlled Soldering Pencil with SCR and Thermistor Control Circuit

Has exclusive features found in no other soldering iron. Offers a wide range of controlled tip temperatures via Electronics SCR and Thermistor circuitry, and is designed for low temperature, miniature soldering applications.

- Continuously variable temperature controlled at the tip from 200°F to 450°F.
- Dial the tip temperature that's best suited for the job.
- Extremely small and light in weight.
- Operates at 24 volts from an isolated secondary winding for complete operator and equipment safety.
- Handle of impact resistant plastic remains cool.
- Interchangeable tips are premium plated.
- Soldering iron stand attached to power unit.
- Power cord is silicon rubber covered, extremely flexible and easy to maneuver. Doesn't break or burn.

**Interchangeable tips:**  $\frac{1}{16}$ " screwdriver and  $\frac{1}{32}$ " conical flat. Others available on special request.



## "Industrial Rated" Pencil Soldering Iron

- Low cost 115 volt iron has tip temperature of 860°F with 25 watt input. Ideal for miniature type soldering.
- High efficiency and rapid recovery.
- Does the work of irons that require much higher wattage?

- Lightweight design reduces operator fatigue, provides accurate control.
- Rugged heating element designed for durability, long service.
- Readily replaceable parts. Change your own heating element or cord set.

**Interchangeable tips available:**  $\frac{1}{16}$ ",  $\frac{3}{32}$ " and  $\frac{1}{8}$ " screwdriver. Premium plated for long life.

**WELLER ELECTRIC CORP., EASTON, PA.**

# NATIONALLY ADVERTISED **WEN** HAND POWER TOOLS

## SOLDERING

### all GUN MODEL 450 **NEW**

Long reach, single post, long life rigid copper tip; instant heat, fast cooling; lightweight, perfect balance; pre-focused spotlight.

**No. 45F7** 25-100 watt heat power for printed circuit boards **\$1.30**

**No. 45M7** 100-200 watt power for home wiring, appliances **\$1.30**

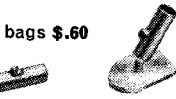
**No. 45A7** 200-450 watt heat power for gutters, plumbing **\$1.30**

**No. 45P7** Flat iron attachment removes wood dents, seals plastic bags **\$.60**

**No. 45S7** Plastic cutting attachment cuts plastic, tile **\$.60**

The new Wen "All" Gun does any soldering job you can think of from delicate kit work and printed circuits to appliance repair to heavy jobs formerly requiring an industrial type soldering iron. Convenient trigger on/off switch, shock resistant black case. A full range of heat power . . . just select the proper tip.

**\$13.95**  
includes heavy duty tip



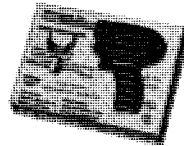
## SOLDERING PISTOL WITH ATR

**MODEL 75**  
**\$4.95**



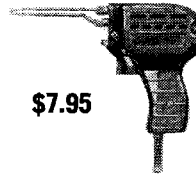
Perfectly sized and balanced for work normally done by a soldering "pencil" yet with plenty of capacity for heavy jobs. Use of a new space-age metal produces heat of 100 watt device from a peak surge rating of 50 watts and a normal draw of only 30 watts. Heavy copper tip permits repeated dressing down for long life. Convenient trigger switch, spotlight, pistol grip with perfect balance. Operates on 110-120 volts, 60 AC.

## MODEL 100 SOLDERING GUN KIT **\$7.95**



All the plus features of the 100 watt Model 100 Soldering Gun in a convenient, colorful book-fold carton. An extra plastic tile cutting tip and rosin solder included.

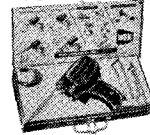
## MODEL 199 "QUICK HOT" SOLDERING GUN



**\$7.95**

Low priced, general purpose. An electronic gun ideal for soldering wires, connection light gauge metals, 130 watts 1½ lbs. wt., has new type Long Nose-Long Life tip. Melts solder in 2½ seconds.

## **\$9.95** MODEL 199K HOME UTILITY KIT



Includes Model 199 Soldering Gun with long-life, long nosed Soldering tip; plastic tile cutting and putty removing tip; flat iron tip for removing dents from wood and sealing plastic bags.

## HEAVY DUTY 200 W. SOLDERING GUN



**MODEL 288**  
**\$9.95**

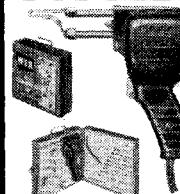
Has modern long-nose, long life tip. Melts solder in less than 5 seconds. Perfect balance. Spotlight and shatter proof case. Transfers more heat volume, yet weighs less than other comparable guns.

## HEAVY DUTY 250 W. SOLDERING GUN



**MODEL 250**  
**\$12.95**

This "quick hot" electronic gun is the standard one of the industry. Greater volume of heat enables it to solder relatively heavy materials, handle production jobs, and do intermittent soldering.



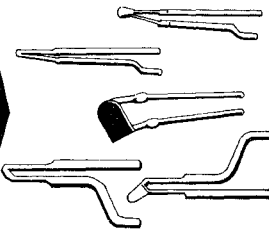
## MODEL 250K KIT **\$15.95**

Includes the famous heavy duty "quick hot" 250 watt soldering gun with feroly tip for heavy soldering, a plastic cutting tip, a flat iron tip for furniture dent removal.

EXTRA  
TIPS  
FOR

**WEN**

SOLDERING  
GUNS



## UNIVERSAL TIPS FOR MODELS 100, 288 AND 250 SOLDERING GUNS

**No. U4**—Universal Tip complete with adapters for light duty **\$.70**

**EXTRA TIPS FOR MODEL 75 PISTOL**  
**No. 75A7** Standard Soldering Tip Assembly **\$1.00**  
**No. 75B7** Fine Point Tip Assembly **\$1.00**

**EXTRA TIPS FOR 100 AND 199 GUNS**  
**No. 19B4** Soldering Tip **\$.50**  
**No. 19C1** Plastic Tile Cutting Tip **\$.60**  
**No. 19F33** Flat Iron Tip (dent removing) **\$.60**

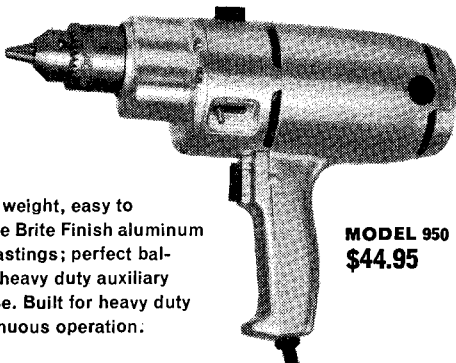
## EXTRA TIPS FOR 288 GUN

**No. 28C4** Soldering Tip **\$.60**  
**No. 28C1** Plastic Tile Cutting Tip **\$.60**  
**No. 19F33** Flat Iron Tip (dent removing) **\$.60**

## EXTRA TIPS FOR 250 GUN

**No. 25A4** Soldering Tip **\$.25**  
**No. 25X20** "Feroly" long-life soldering Tip **\$.50**  
**No. 25C1** Plastic Tile Cutting Tip **\$.50**  
**No. 25F33** Flat Iron Tip (dent removing) **\$.60**

## MULTI-SPEED ALL-DRILL

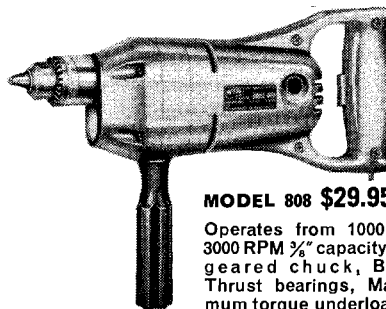


**MODEL 950**  
**\$44.95**

Light weight, easy to handle Brite Finish aluminum die castings; perfect balance heavy duty auxiliary handle. Built for heavy duty continuous operation.

This four-speed range, (plus reversible) drill assures perfect workability in any material—alloy and cold rolled steel, cast iron, brass aluminum, bronze, plastics and masonry. Two-gear reduction speed positions, with lever action gear shift; two-electronic reduced speeds in each gear position; ½" geared Jacobs chuck; tremendous torque, without heat, in low gear position; ample torque in high gear position; 6 amp. ½ HP motor, welded burnout proof armature; safety switch motor reverse; rugged needle and ball thrust spindle bearings; heavy duty gear train; locking trigger switch.

## 2-SPEED POWER DRILL



**MODEL 808** **\$29.95**

Operates from 1000 to 3000 RPM ¾" capacity . . . geared chuck, Ball Thrust bearings, Maximum torque underload.

Drill in steel, masonry . . . sand, polish, drill. Here's the double duty drill that solves all drilling problems for home and professional craftsmen. It has two power takeoffs to handle both heavy duty and light precision jobs. Simply change speeds . . . 3000 RPM for boring into steel, brass, copper, aluminum—even masonry and concrete. Wen accessories come with it . . . allowing you to wax, buff, polish, mix paint—even sharpen knives and tools. Finest stressproof steel cut gears. ¾" Jacobs geared chuck, on-off switch and lock button, lightweight cast aluminum housing.

## TOTER DRILL ACCESSORY KIT



**MODEL 80 K 35** **\$9.95**

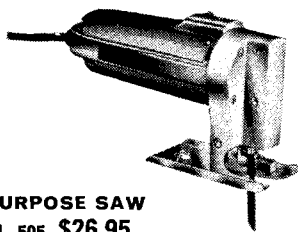
The perfect supplement to your drill: every attachment operates at the correct speed. It buffs, polishes, scratch-brushes, sands, drills, grinds, sharpens, stirs paint—has literally a hundred other uses. Drill holder, included, allows you to have both hands free. A whole workshop in one kit! Components include paint mixer, 3" wire brush, 3" buffing wheel, 3x¾" grinding wheel, 9 drills (1/16 to ¼") in plastic case, 15-5" sandpaper discs, and other extras.

BEST BUY  
**WEN**  
FOR YOUR MONEY

**PRODUCTS INC.**

CHICAGO, ILLINOIS 60631  
ALL TOOLS U.L. AND C.S.A. LISTED.

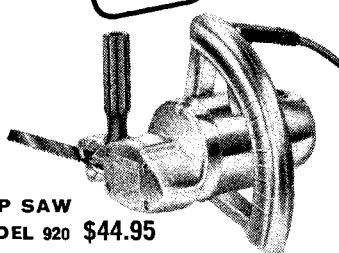
NATIONALLY ADVERTISED **WEN** HAND POWER TOOLS



**ALL PURPOSE SAW**  
**MODEL 505 \$26.95**

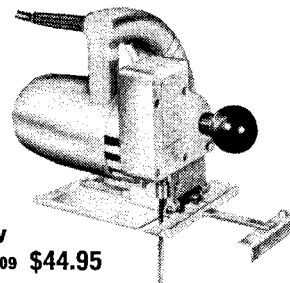
Cuts wood, plastics, metals, composition board, hard rubber and leather. Sawdust-free due to a motor fan air stream blower. Powered by a 115 volt A.C. 1.8 amp motor which delivers 2650 1/2" strokes per minute under load. Saw is 7 1/4" long, 5" high.

**ALL PURPOSE SAW KIT**—includes 505 saw rip guide with circle cutter, 5 extra blades and metal carrying case. **\$29.95**



**ZIPP SAW**  
**MODEL 920 \$44.95**

Specially designed for awkward angles and hard-to-reach cutting jobs. Cuts flush to corner . . . to floor. Tremendously versatile, it comes with seven blade attachments that cut everything from delicate scrollwork to plastics, metals, and 6" logs. 3200 one-inch strokes per minute, 3-wire cord.



**ALL-SAW**  
**MODEL 909 \$44.95**

Heavy duty, precision designed to do the job of several saws. With seven blade attachments, the All-Saw does fancy scrollwork on wood, cuts metal (up to 2" pipe), bakelite, tile, wallboard, asphalt—6-inch logs, you name it. Starts inside cut. 3400 1-inch strokes per minute.

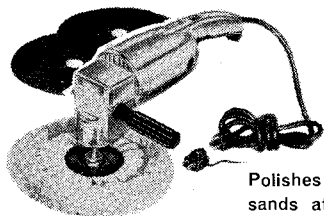
	List Price	Three Price or More
No. 50A34—Blade package containing one each 7-10-18 teeth per inch (for coarse medium and fine cutting).	\$1.20	\$.84
No. 50A35—Blade package containing three blades, all with 7 teeth per inch (coarse).	1.00	.70
No. 50A36—Blade package containing three blades, all with 10 teeth per inch (medium).	1.00	.70
No. 50A37—Blade package containing three blades, all with 18 teeth per inch. (For high speed metal cutting).	1.80	1.26
No. 50K5—Blade package containing one each 7-10-14-18-32 teeth per inch.	2.10	1.47

	List Price	Three Price or More
Extra Blades for the 909 and 920 Saws.		
No. 900—Blade package containing one each—Nos. 91, 92, 93, 94, 95, 96, 97.	\$3.40	\$2.38
No. 901—Blade package containing three blades all with 3 teeth per inch (very fast rough cuts).	1.80	1.26
No. 902—Blade package containing three blades all with 5 teeth per inch (fast rough cuts).	1.50	1.05
No. 903—Blade package containing three blades all with 8 teeth per inch (medium cuts).	1.20	.84
No. 904—Blade package containing three blades all with 14 teeth per inch (fine scroll work).	1.20	.84
No. 905—Blade package containing three No. 95 Knife Blades.	1.20	.84
No. 906—Blade package containing three No. 96 Blades—14 teeth per inch (high speed steel).	1.80	1.26

	List Price	Three Price or More
No. 907—Blade package containing three No. 97 blades—24 teeth per inch (high speed steel—extra fine cuts).	\$1.80	\$1.26
Extra Blades for the 5T1 Saw Table		
No. 50T70—Package of five blades—one of each 5 blades described below.	1.80	1.26
No. 50T71—Package of three blades—14 teeth per inch	1.00	.70
No. 50T72—Package of three blades—10 teeth per inch	1.00	.70
No. 50T73—Package of three blades—8 teeth per inch	1.00	.70
No. 50T74—Package of three knife blades	1.00	.70
No. 50T75—Package of three blades—32 teeth per inch—metal.	1.80	1.26

**EXTRA SAW BLADE ITEMS EXTRA BLADES FOR 505 SAW**

**2-SPEED 7" SANDER/POLISHER**

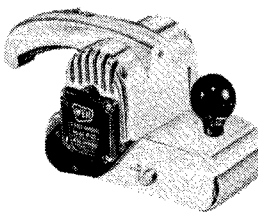


**MODEL 940**  
**\$44.95**

Polishes at 1800 RPM; sands at 3400 RPM. Perfect for any material.

Metal, wood, plastic, fibreglass are no strangers to this remarkable tool. Sands cars, boats, floors, walls, etc. Buffs car, floor, furniture finishes to perfection. Heavy duty construction.

**3" BELT SANDER**

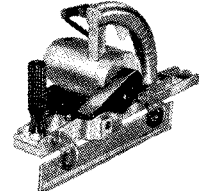


**MODEL 910**  
**\$44.95**

Extra-power 1/2 HP Motor, with oversize needle and oilite bearings, fingertip slide switch, and adjustable knobs.

Tough sanding jobs are now easy with this heavy duty belt sander. Removes paint, finishes rough and worn floors, smooths walls. Ideal for rough and finish work on furniture, framing, boats, metal. Sealed, permanently lubricated gear train.

**ELECTRIC HAND PLANE**



**MODEL 930**  
**\$44.95**

A fully integrated tool, not an attachment.

Ruggedly built for years of precision work. Big 16" shoe eliminates rounding over. Convenient saw grip. Powerful 1/2 HP burnout-proof motor runs cool for hours. Cutting width 2 1/2"; depth adjustable from 0 to 1/8". Exclusive air stream chip ejector. Ideal for surface and flush planing, precise edging and beveling.

**SANDER, SANDING BELT AND SANDER/POLISHER ACCESSORIES**

Model 940 Sander / Polisher Paper Back Sanding Discs—Aluminum Oxide Open Coat 7" x 3/8" Hole.

Part No.	Extra	Grit	Packed to Box	Price per Box
94A57	Extra Fine	120	25	\$ 3.75
94A44	Fine	80	25	5.00
94A43	Medium	50	25	6.50

Fibre Back—Heavy Duty Sanding Discs Aluminum Oxide, Rosin 7" x 3/8" Hole.

Part No.	Extra	Grit	Packed to Box	Price per Box
94A64	Fine	80	25	\$15.00
94A63	Medium	50	25	18.50
94A62	Coarse	36	25	17.50
94A65	Extra Coarse	24	25	17.65

**WOOL POLISHING BONNETS**

Part No.	Description	Price
94A29	7" Washable Bonnet with draw strings, ea.	\$1.60
94A67	5/8" adapter for automotive back plates	\$1.00

**Sanding Belts—Paper Back, Garnet 3" x 18"**

Part No.	Grit	Packed to Box	Price per Box
913	Extra Fine	120	10 \$ 4.80
912	Fine	80	10 4.80

**Sanding Belts—Cloth Back, Heavy Duty, Aluminum Oxide.**

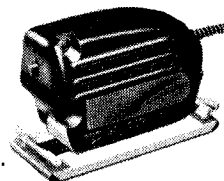
Part No.	Grit	Packed to Box	Price per Box
915	Fine	80	10 \$ 6.20
911	Medium-Fine	60	10 6.20
914	Medium	50	10 6.20

**Model 202 Sander**

Part No.	Description	LIST Price For Ass't
20G78	Sander Package (2 sheets each 6/0—3/0—1/0) Garnet Finishing Paper	\$ .20
30G82	Sandpaper Package (2 sheets each 6/0—3/0—1/0) Aluminum Oxide Paper	.20
20G80	Felt Polishing Cloth	.15
Model 303 Sander		
40G78	Sandpaper Package (5 sheets each 6/0—3/0—1/0) Aluminum Oxide Paper	.60
40G80	Felt Polishing Cloth	.20

**ECONOMY SUPER SANDER/POLISHER**

**MODEL 202**  
**\$13.95**



Straight line action gets into corners, leaves no scratches. 14,400 strokes per minute, with approximately 1/8" throw.

**MODEL 404 \$19.95 — HEAVY DUTY ELECTRIC POWER SANDER KIT**  
Amazing power development drives big sandin pad 3 1/2" x 6 1/2"—20 sq. inches of working area.

**MODEL 303 \$16.95 SUPER POWER ELECTRIC SANDER KIT**  
2 1/2" x 5 1/2" Sanding pad. Unbelievable concentration of power. Covered with unbreakable plastic case, 12 sheets of sandpaper and polishing cloths.



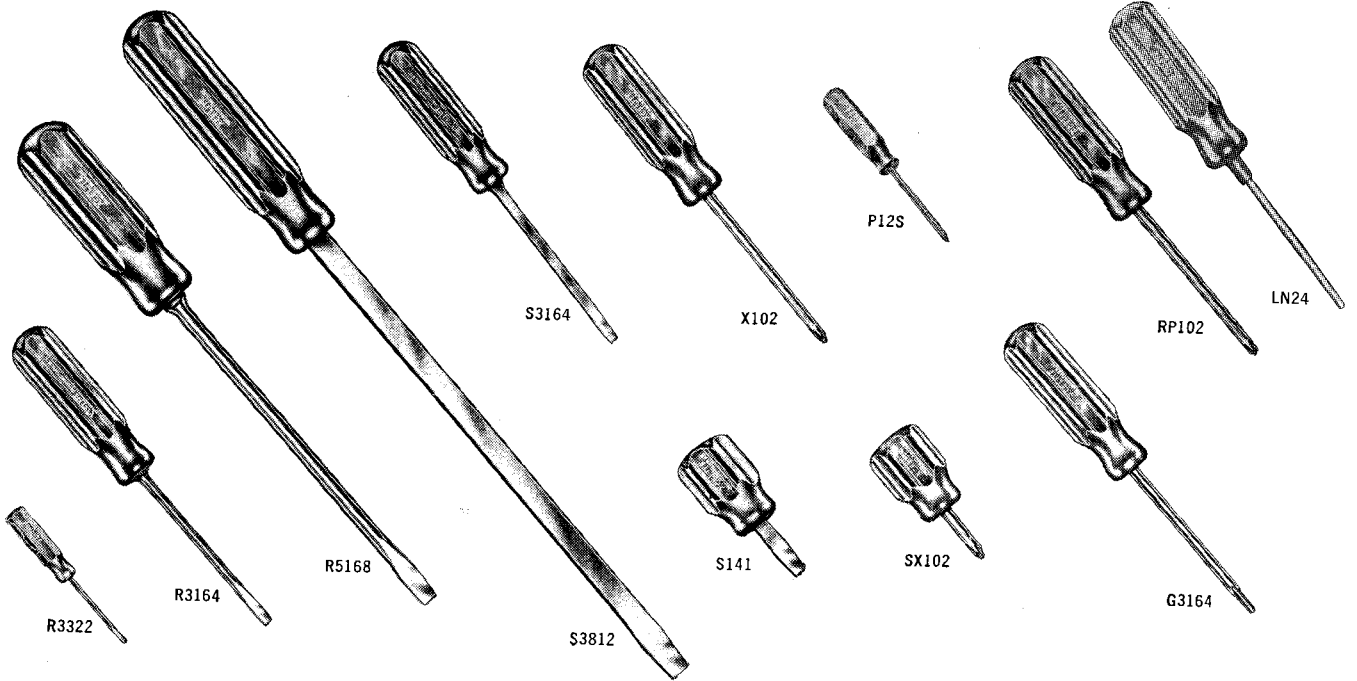
**PRODUCTS INC.**  
CHICAGO, ILLINOIS 60631  
ALL TOOLS U.L. AND C.S.A. LISTED.



# QUALITY PROFESSIONAL TOOLS

## SCREWDRIVERS

SAE 6150 chrome vanadium steel blades. Shockproof, breakproof, plastic (UL) handles.



ROUND BLADE			SQUARE BLADE			PHILLIPS			REED & PRINCE				
Number	Size Blade	Net	Number	Size Blade	Net	Number	Point Size	Size Blade	Net	Number	Point Size	Size Blade	Net
<b>Regular</b>			<b>Regular</b>			<b>Extra Long</b>			<b>Clutch Head</b>				
R182	1/8" x 2"	\$ .37	S3163	3/16" x 3"	\$ .73	X1010	1	3/16" x 10"	\$1.17	RP101	1	3/16" x 3"	\$ .73
R184	1/8" x 4"	.43	S3164	3/16" x 4"	.77	X1020	2	1/4" x 10"	1.30	RP102	2	1/4" x 4"	.93
R186	1/8" x 6"	.47	S3166	3/16" x 6"	.90	<b>Regular</b>			RP103	3	5/16" x 6"	1.23	
R188	1/8" x 8"	.60	S3168	3/16" x 8"	1.00	X100	0	1/8" x 2"	.50	RP104	4	3/8" x 8"	1.57
R1810	1/8" x 10"	.67	S31610	3/16" x 10"	1.10	X101	1	3/16" x 3"	.77	<b>CLUTCH HEAD</b>			
R5323	5/32" x 3"	.50	S142	1/4" x 2"	.83	X108	1	3/16" x 6"	.83	Type G	Tip Size	Size Blade	Net
R5324	5/32" x 4"	.50	S144	1/4" x 4"	.97	X102	2	1/4" x 4"	.97	G3324	3/32"	1/8" x 4"	\$ .80
R5325	5/32" x 5"	.50	S146	1/4" x 6"	1.03	X103	3	5/16" x 6"	1.30	G183	1/8"	3/16" x 3"	.80
R5328	5/32" x 8"	.67	S148	1/4" x 8"	1.13	X104	4	3/8" x 8"	1.63	G5324	5/32"	1/4" x 4"	.90
R3163	3/16" x 3"	.63	S5162	5/16" x 2"	.90	<b>Stubby</b>			G3164	3/16"	1/4" x 4"	.90	
R3164	3/16" x 4"	.70	S5164	5/16" x 4"	1.10	SX101	1	3/16" x 1 3/8"	.70	G146	1/4"	5/16" x 6"	1.17
R3166	3/16" x 6"	.80	S5166	5/16" x 6"	1.17	SX102	2	1/4" x 1 3/8"	.77	G5166	5/16"	3/8" x 6"	1.43
R3168	3/16" x 8"	.93	S5168	5/16" x 8"	1.27	<b>Pocket Clip Style</b>			<b>BERYLLIUM-COPPER</b>				
R31610	3/16" x 10"	1.00	S51610	5/16" x 10"	1.40	P12S	0	1/8" x 2"	.43	<b>Non-sparking. Non-magnetic.</b>			
R142	1/4" x 2"	.77	S51612	5/16" x 12"	1.53	<b>ALLEN TYPE</b>			<b>Higher fatigue resistance than steel.</b>				
R144	1/4" x 4"	.87	S51610	5/16" x 10"	1.40	Number	Hex Size	Blade Length	Net	Number	Size Blade	Net	
R146	1/4" x 6"	.93	S51612	5/16" x 12"	1.53	LN20	.050"	4"	\$ .67	BR186	1/8" x 6"	\$ .83	
R148	1/4" x 8"	1.00	S388	3/8" x 8"	1.53	LN21	1/16"	4"	.67	BR1810	1/8" x 10"	.90	
R1410	1/4" x 10"	1.07	S3812	3/8" x 12"	2.20	LN22	3/64"	4"	.67	BR3168	3/16" x 8"	1.47	
R5164	5/16" x 4"	.97	S3818	3/8" x 18"	2.37	LN23	1/32"	4"	.67	BR146	1/4" x 6"	1.83	
R5166	5/16" x 6"	1.10	S7166	7/16" x 6"	1.80	LN764	3/32"	4"	.67	BR148	1/4" x 8"	1.97	
R5168	5/16" x 8"	1.20	S71612	7/16" x 12"	2.20	LN24	1/8"	4"	.77	<b>Pocket-Clip Style</b>			
<b>Pocket Clip Style</b>			S71618	7/16" x 18"	2.37	LN964	3/64"	4"	.77	BR181	1/8" x 2"	.33	
R3322	3/32" x 2"	.32	S1424	1/4" x 24"	2.00	LN25	5/32"	6"	.77				
R3323	3/32" x 3"	.30	<b>Stubby</b>			LN26	3/16"	6"	.77				
R3324	3/32" x 4"	.30	S3161	3/16" x 1"	.50	LN27	1/32"	6"	.87				
R181	1/8" x 2"	.32	S141	1/4" x 1"	.57	LN28	1/4"	6"	.87				
R183	1/8" x 3"	.30	S5161	5/16" x 1"	.57								
R184 1/2	1/8" x 4"	.30											

SUBJECT TO CHANGE WITHOUT NOTICE



# QUALITY PROFESSIONAL TOOLS

## COMBINATION-REVERSIBLE SCREWDRIVERS

SAE 6150 chrome vanadium steel blades. Shockproof, breakproof, plastic (UL) handles.  
Patented spring holds blades securely. 7/16" hex opening doubles as a nutdriver.

### COMPLETE UNITS

#### Regular Type

CR1—No. 25 handle & RB1 blade	\$1.53
CR2—No. 25 handle & RB2 blade	1.53
CR3—No. 25 handle & RB3 blade	1.53

#### Stubby Type

CS1—No. 26 handle & SB1 blade	1.37
CS2—No. 26 handle & SB2 blade	1.37

### HANDLES ONLY

25—Regular	.67
26—Stubby	.60

### BLADES ONLY

Regular Type	
RB1—No. 1 Phillips & 3/16" Slotted	.87
RB2—No. 2 Phillips & 1/4" Slotted	.87
RB3—No. 3 Phillips & 3/8" Slotted	.87
RB12—No. 1 & No. 2 Phillips	.97

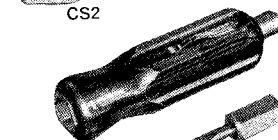
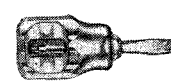
GB1—3/16"G & 5/32"G Clutch	\$ .97
GB2—3/16"G & 1/4"G Clutch	.97
Stubby Type	
SB1—No. 1 Phillips & 3/16" Slotted	.77
SB2—No. 2 Phillips & 1/4" Slotted	.77
GS1—3/16"G & 5/32"G Clutch	.85

### ROLL KIT COMBINATIONS

CK2 with No. 25 combination handle and RB1 and RB2 reversible blades	\$3.00
CK3 Same as CK2, plus RB3 blade	3.87
CK5 Same as CK2, plus RB3, GB1, and GB2 blades	5.80

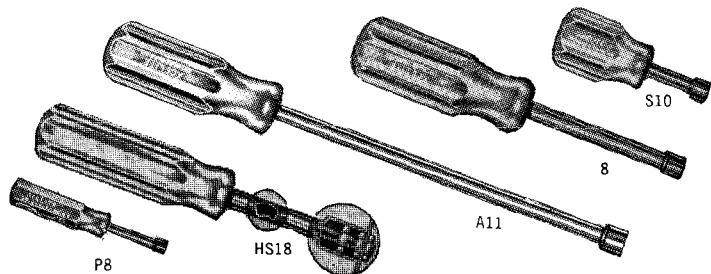
### COMBINATION SCREW AND NUTDRIVER TOOL

600—Handy 4-way tool with pocket clip. 1/4" and 7/16" hex openings. Reversible SB1 blade	Net \$1.53
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## NUTDRIVERS (Color-Coded Handles)

Polished-plated, High Carbon Steel shafts. Shockproof, breakproof, plastic (UL) handles. Precision, cold drawn, case hardened sockets.



## NUTDRIVER SETS

Choice of heavy gage steel stands and racks with large readable size indexes, or pebble-grain carrying case for bench or wall. Color-coded, shockproof, breakproof, plastic (UL) handles. Polished-plated shafts.

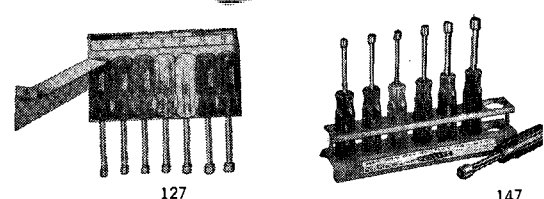
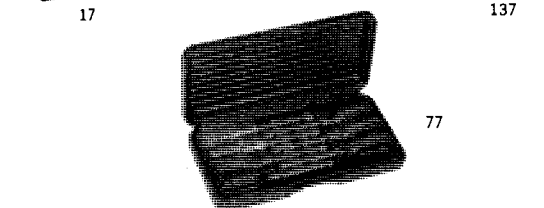
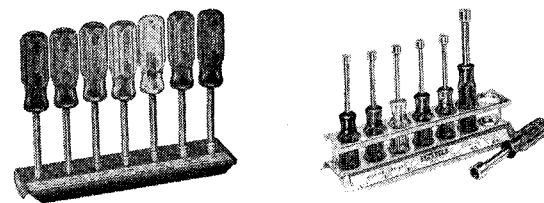
**No. 17 BENCH STAND TYPE** Net \$6.30  
Contains Nos. 6, 8, 10, 11, 12, HS16, and HS18 color-coded drivers.

**No. 77 CARRYING CASE** Net \$6.45  
Contains Nos. 6, 7, 8, 9, 10, 11, and 12 color-coded nutdrivers.

**No. 137 BENCH STAND TYPE** Net \$7.17  
Contains Nos. 6, 8, 10, 11, 12, HS16, and HS18 color-coded nutdrivers.

**No. 127 LOCKABLE WALL RACK TYPE** Net \$6.45  
Contains Nos. 6, 7, 8, 9, 10, 11, and 12 color-coded nutdrivers.

**No. 147 BENCH STAND TYPE (Hollow Shaft)** Net \$7.95  
Contains Nos. HS8, HS9, HS10, HS11, HS12, HS14, and HS16 hollow shaft, color-coded nutdrivers.



### HOLLOW SHAFT

REGULAR (6" Overall Length)		Number	Handle Color	Hex Opening	Net
5	Amber	HS6	Black	3/16"	\$1.03
6	Black	HS7	Brown	7/32"	1.03
7	Brown	HS8	Red	1/4"	1.03
8	Red	HS9	Orange	9/32"	1.03
9	Orange	HS10	Amber	5/16"	1.03
10	Amber	HS11	Green	11/32"	1.03
11	Green	HS12	Blue	3/8"	1.03
12	Blue	HS13	Amber	13/32"	1.05
14	Brown	HS14	Brown	7/16"	1.05
16	Red	HS15	Amber	15/32"	1.08
		HS16	Red	1/2"	1.08
		HS17	Amber	17/32"	1.14
		HS18	Orange	9/16"	1.14
		HS19	Amber	19/32"	1.26
		HS20	Amber	5/8"	1.26
		HS22	Amber	11/16"	1.59
		HS24	Amber	3/4"	1.59

EXTRA LONG (9" Overall Length)		Number	Handle Color	Hex Opening	Net
A6	Black	A7	Brown	7/32"	.97
A7	Brown	A8	Red	1/4"	.97
A8	Red	A9	Orange	9/32"	.97
A9	Orange	A10	Amber	5/32"	.97
A10	Amber	A11	Green	11/32"	.97
A11	Green	A12	Blue	3/8"	.97

STUBBY (3 1/4" Overall Length)		Number	Handle Color	Hex Opening	Net
S6	Black	S8	Red	7/16"	.70
S8	Red	S10	Amber	5/16"	.70
S10	Amber	S11	Green	11/32"	.70
S11	Green	S12	Blue	3/8"	.70

### POCKET CLIP STYLE

P3	Amber	3/32"	.53
P4	Red	1/8"	.53
P5	Amber	5/32"	.53
P6	Black	3/16"	.53
P7	Brown	7/32"	.53
P8	Red	1/4"	.53
P9	Orange	9/32"	.53
P10	Amber	5/16"	.53
P11	Green	11/32"	.53
P12	Blue	3/8"	.53

SUBJECT TO CHANGE WITHOUT NOTICE

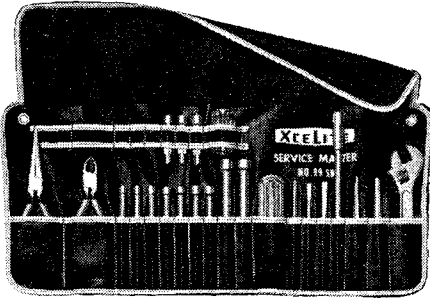




# QUALITY PROFESSIONAL TOOLS

## SERIES "99" SERVICE KITS, BLADES, AND HANDLES

Net



**No. 99SM SERVICE MASTER Net \$22.89**

Contains 52CG long nose cushion grip plier, 55CG 5" diagonal cushion grip plier, 99-3 handle (Stubby) with three nutdrivers (1/4", 3/8", 3/16"), 46C adjustable wrench, 99-1 handle (Regular) with nine interchangeable nutdrivers (99-6 thru 99-16), one Phillips and two slotted screwdrivers, 99-X10 extension shaft, and two chrome-plated reamers.

99SMK, Kit only .....Net \$1.92

**No. 99PR ROLL KIT Net \$8.67**

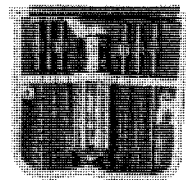
Contains nine nutdrivers (99-6 thru 99-16), 99-81 (Slotted) and 99-82 (Phillips) reversible screwdriver blades, 99-1 handle (Regular).

99K, Kit only .....Net \$ .96

**No. 99JR ROLL KIT Net \$7.50**

Contains seven nutdrivers (99-6 thru 99-12) four screwdriver blades 99-811 and 99-812 (slotted), and 99-821 and 99-822 (Phillips), 99-2 handle (Junior).

99KJR, Kit only .....Net \$ .96



**No. 99LN ROLL KIT Net \$4.47**

Contains six Allen type screwdriver blades (99-21 thru 99-26) and 99-1 handle (Regular).

**No. 99-30 CLEAR PLASTIC POUCH Net \$3.24**

Heat sealed plastic snap case with size numbers on pockets for convenient selecting and storing. Contains six Allen type screwdriver blades (99-21 thru 99-26).



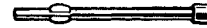
99-1 (1 1/8" x 4 1/8") Regular Handle (for all blades, single-end and reversible) \$ .77



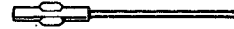
99-2 (1" x 3 1/8") Junior Handle (for single-end blades only) ..... .67



99-3 (1 1/8" x 2") Stubby Handle (for single-end blades only) ..... .60



Nutdriver Blades: 99-6 (3/16"), 99-7 (7/32"), 99-8 (1/4"), 99-9 (9/32"), 99-10 (5/16"), 99-11 (11/32"), 99-12 (3/8") ..... .60  
99-14 (7/16"), 99-16 (1/2") ..... .80



Allen Type Screwdriver Blades: 99-21 (1/16"), 99-22 (5/64"), 99-23 (3/32") 99-764 (7/64"), 99-24 (1/8"), 99-964 (9/64"), 99-25 (5/32"), 99-26 (3/16") .60



99-81 Slotted Screwdriver Reversible Blade (3/16" & 5/32") ..... 1.00

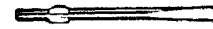


99-82 Phillips Screwdriver Reversible Blade (#1 & #2) ..... 1.00

99-83 Reed & Prince Screwdriver Reversible Blade (3/16" & 5/32") 1.00



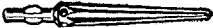
99-84 Clutch "G" Screwdriver Reversible Blade (3/16" & 5/32") ..... 1.00



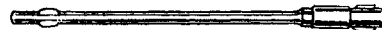
Slotted Screwdriver Blades: 99-811 (3/16"), 99-812 (7/32") ..... .60



Phillips Screwdriver Blades: 99-821 (#1), 99-822 (#2) ..... .60



Reamers: 99-38 (1/8"-3/8") ..... 1.47  
99-39 (1/4"-1/2") ..... 1.83



99-X10 Extension Shaft. Adds 7" reach to single-end blades ..... .97



Stubby Nutdriver Blades: 99-S8, 99-S10, 99-S12 ..... .53

### TERMINAL WRENCHES

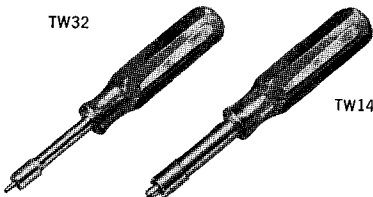
Removes spanner nut on external antenna and earphone jacks of transistor radios. Convenient pocket clip.

No. TW32 (.086" guide pin for 1/4" O.D. spanner nut) .....Net \$ .53

No. TW140 (.140" guide pin for 3/8" O.D. spanner nut) .....Net \$ .53

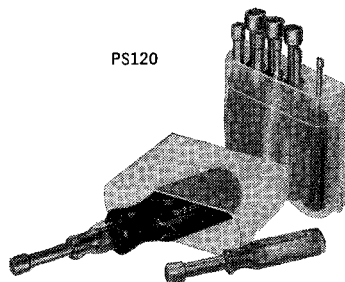
TW32

TW140



### COMPACT, CONVERTIBLE NUTDRIVER AND SCREWDRIVER SETS

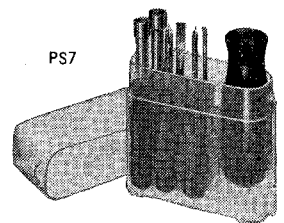
PS120



**No. PS120 NUTDRIVER SET**  
Contains ten color coded nutdrivers (3/32" thru 3/8"), hollow handle, and case. Net \$4.95

Black plastic torque amplifier handle (1" x 3-18") slips over handles of pocket size (3 1/2") nutdrivers and screwdrivers . . . provides larger grip, extends reach and increases driving power to that of standard size tools. See-through plastic case fits pocket, stands upright on bench.

PS7



**No. PS7 NUTDRIVER/SCREWDRIVER SET**  
Contains 2 nutdrivers (1/4" and 5/16"), 2 slot tip screwdrivers (3/16" and 3/32"), 2 Phillips screwdrivers (#0 and #1), hollow handle, and case. Net \$3.15

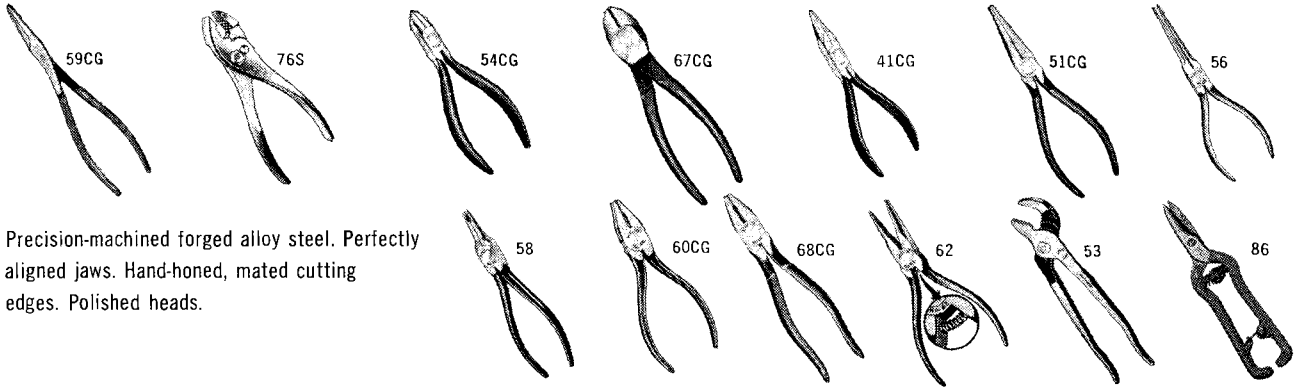
**No. PS88 SCREWDRIVER SET**  
Contains 5 slot tip screwdrivers (3/32", 1/8", 5/32", 3/16", 1/4"), 3 Phillips screwdrivers (#0, #1, #2), hollow handle, and case. Net \$3.75

SUBJECT TO CHANGE WITHOUT NOTICE



# QUALITY PROFESSIONAL TOOLS

## PLIERS

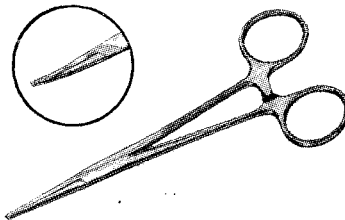


Precision-machined forged alloy steel. Perfectly aligned jaws. Hand-honed, mated cutting edges. Polished heads.

	Net		Net
59CG—CHAIN NOSE ELECTRICIANS PLIER (8")—Cushion Grip.....	\$3.30	51 —LONG NOSE PLIER (6")—With Side Cutters .....	\$ 2.93
75C —COMBINATION SLIP JOINT PLIER (5")—Chrome-Plated.....	1.22	51CG—Cushion Grip .....	3.30
76C —COMBINATION SLIP JOINT PLIER (6")—Chrome-Plated.....	1.22	56 —NEEDLE NOSE PLIER (6") .....	2.70
76S—Satin Finish .....	.71	56CG—Cushion Grip .....	3.00
78C —COMBINATION SLIP JOINT PLIER (8")—Chrome-Plated.....	1.62	58 —RADIO AND TV PLIER (6") .....	3.38
54 —DIAGONAL PLIER (Midget 4").....	2.76	58CG—Cushion Grip .....	3.68
54CG—Cushion Grip .....	3.08	60 —SIDE CUTTING PLIER (6") .....	2.70
55 —DIAGONAL PLIER (5") .....	2.55	60CG—Cushion Grip .....	3.08
55CG—Cushion Grip .....	2.93	68 —SIDE CUTTING PLIER (8") .....	3.30
66 —DIAGONAL PLIER (6") .....	2.93	68CG—Cushion Grip .....	3.68
66CG—Cushion Grip .....	3.30	62 —TRAVERSE CUTTING PLIER (6") .....	3.30
67 —DIAGONAL PLIER (7") .....	3.00	62CG—Cushion Grip .....	3.68
67CG—Cushion Grip .....	3.53	53 —UTILITY PLIER (6")—Forged Rib-Lock .....	1.95
86CG—ELECTRONIC SNIPS (6½")—Cushion Grip.....	2.90	53CG—Cushion Grip .....	2.25
418G—LONG NOSE PLIER (Midget 4")—Without Side Cutters—Cushion Grip .....	2.76	63 —UTILITY PLIER (10")—Forged Rib-Lock .....	2.55
52 —LONG NOSE PLIER (6")—Without Side Cutters .....	2.33	63CG—Cushion Grip .....	3.24
52CG—Cushion Grip .....	2.63		

## SEIZER

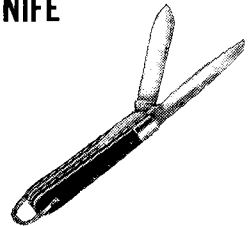
Outreaches, outholds needle nose pliers. Clamps tightly. Holds wires for soldering, retrieves small parts from hard-to-reach places. It's a heat sink. Two-position snap-lock. Stainless steel, box-joint construction. 6" length. Precision machined and tempered.



- 42H Straight Nose .....Net \$4.27
- 43H Curved Nose .....Net 4.42

## No. K22 ELECTRICIAN'S KNIFE

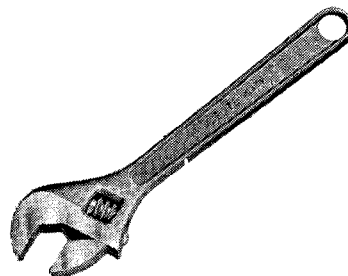
Two blades. One is combination insulation-scraper and screwdriver. Has positive lock when open .....Net \$2.24



## ADJUSTABLE WRENCHES

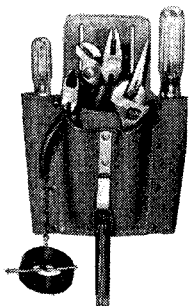
Thin-pattern permits access to close-quarter work. Chrome-plated forged alloy steel. Polished heads.

Plain Handle		Cushion Grip	
No.	Net	No.	Net
44C	\$2.16	44CG	\$2.40
46C	2.16	46CG	2.55
48C	2.48	48CG	2.85
40-10C	3.15	40-10CG	3.68
40-12C	4.65	40-12CG	5.18



## No. 150 TOOL HOLSTER

Has tape holder, knife clip, and 5 tool pockets. Durably made of pliable saddle leather with natural cowhide finish. Features comfortable hip-contoured back, hot-waxed stitching, and brass rivets ....Net \$3.15





# ADC PRODUCTS, INC.

MINNEAPOLIS, MINNESOTA



## "BLUE CHIP" TRANSFORMERS

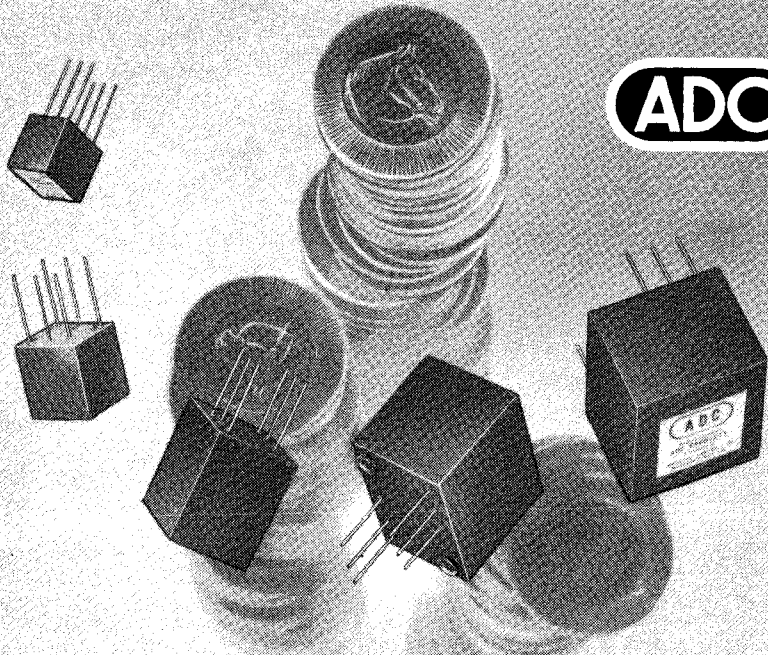
62 TYPES

5 DIFFERENT SIZES

Tiny, plastic cased, Blue Chip transformers for printed circuit applications, are available for a wide choice of power ratings.

Five different sizes, from .10 to 1.2 cubic inches with a total of 62 new ratings are listed below to indicate the available power levels for both voice frequency range and extended frequency operation. These ratings take into account not only power handling capacities at minimum frequencies, but also total harmonic distortion under stated conditions. Within the limits shown on the rating charts, variations in both power and distortion levels are possible depending upon the minimum operating frequency.

Blue Chip transformers meet Mil-T-27A, Grade 5, Class S requirements. These versatile transformers are available from ADC, or through your distributor.



Pin Diameter: .030"  
Pin Length: 1/2"  
Weight: 0.15 oz.

RESPONSE: ± 2 DB 300 to 100,000 CPS.  
DISTORTION: 10% at 30 MW, 300 to 100,000 CPS, except as noted.

Pin Diameter: .030"  
Pin Length: 1/2"  
Weight: 0.4 oz.

RESPONSE: ± 1 DB 200 to 50,000 CPS.  
DISTORTION: 10% at 150 MW, 200 to 50,000 CPS.

Pin Diameter: .030"  
Pin Length: 1/2"  
Weight: 0.9 oz.

RESPONSE: ± 1 DB 200 to 20,000 CPS.  
DISTORTION: 10% at 750 MW, 200 to 20,000 CPS.

Pin Diameter: .030"  
Pin Length: 1/2"  
Weight: 2.5 oz.  
Mounting: 2-4x40 inserts, 0.6"x0.8"

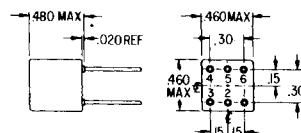
RESPONSE: ± 1 DB 100 to 10,000 CPS.  
DISTORTION: 1.5% at 60 MW, 100 to 10,000 CPS, or 10% at 3.5 W, 200 to 10,000 CPS, except as noted.

Pin Diameter: .030"  
Pin Length: 1/2"  
Weight: 2.5 oz.  
Mounting: 2-4x40 inserts, 0.6"x0.8"

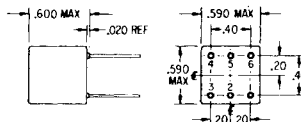
RESPONSE: ± 1 DB 60 to 10,000 CPS.  
DISTORTION: 1% at 250 MW, 60 to 10,000 CPS or 10% at 7.5 W, 200 to 10,000 CPS, except as noted.

CATALOG NUMBER	PRIMARY IMPED.—OHMS	SECONDARY IMPED.—OHMS	PRIMARY-SECONDARY DC RESISTANCE-OHMS		MAX. DC IN PRIM. MA.
324-6A	*100K-CT	1000-CT	3300	70	0
324-6B	25K-CT	1000-CT	2800	150	0
124-6C	10K-CT	10K-CT	1100	1400	1
324-6D	10K-CT	1500-CT	1100	180	1
324-6E	10K-CT	600-CT	1100	75	1
324-6F	4000-CT	10K-CT	440	1400	1.5
324-6G	1000-CT	600-CT	110	75	3
324-6H	1000-CT	4	110	0.5	3
224-6J	600-CT	25K-CT	65	3500	4
124-6K	600-CT	600-CT	65	75	4
324-6L	600-CT	60	65	7	4
324-6M	600-CT	4	65	0.5	4
★Max. power level: 10 mw at 300 cps.					
324-5A	100K-CT	1000-CT	6000	60	0
324-5B	25K-CT	1000-CT	2800	120	0
124-5C	10K-CT	10K-CT	1100	1200	1
324-5D	10K-CT	1500-CT	1100	200	1
324-5E	10K-CT	600-CT	1100	75	1
324-5F	4000-CT	10K-CT	440	1200	1.5
324-5G	1000-CT	600-CT	100	60	3
324-5H	1000-CT	4	100	0.4	3
224-5J	600-CT	25K-CT	65	3500	4
124-5K	600-CT	600-CT	65	75	4
324-5L	600-CT	60	65	7	4
324-5M	600-CT	4	65	0.5	4
★Max. power level: 10 mw at 300 cps.					
324-4B	25K-CT	1000-CT	2800	120	0
124-4C	10K-CT	10K-CT	1100	1200	1
324-4D	10K-CT	1500-CT	1100	180	1
324-4E	10K-CT	600-CT	1100	75	1
324-4F	10K-CT	4	1100	0.5	1
224-4G	4000-CT	10K-CT	440	1200	1.5
324-4H	1500-CT	15	165	2	2.5
324-4I	1000-CT	600-CT	110	75	3
324-4K	1000-CT	4	110	0.5	3
224-4L	600-CT	25K-CT	65	3000	4
124-4M	600-CT	600-CT	65	75	4
324-4N	600-CT	60	65	7	4
324-4P	600-CT	15	65	2	4
324-4Q	600-CT	4	65	0.5	4
224-4R	250	600-CT	30	75	7
★Max. power level: 2.5 w.					
324-3A	10K-CT	10K-CT	800	1100	1
324-3B	10K-CT	600-CT	800	65	1
324-3C	10K-CT	4	800	0.5	1
324-3D	1500-CT	15	110	1.6	2.5
324-3E	1000-CT	600-CT	75	65	3
324-3F	1000-CT	4	75	0.5	3
224-3G	*600-CT	25K-CT	45	2800	4
124-3H	600-CT	600-CT	45	65	4
324-3J	600-CT	60	45	7	4
324-3K	600-CT	15	45	1.6	4
324-3L	600-CT	4	45	0.5	4
224-3M	250	600-CT	20	65	7
★Max. power level: 2.5 w.					
124-2A	*10K-CT	10K-CT	700	900	1
324-2B	*10K-CT	600-CT	700	55	1
324-2C	*10K-CT	4	700	0.4	1
324-2D	1500-CT	15	100	1.5	2.5
324-2E	1000-CT	600-CT	65	55	3
324-2F	1000-CT	4	65	0.4	3
124-2H	600-CT	600-CT	40	55	4
324-2J	600-CT	60	40	6	4
324-2K	600-CT	15	40	1.5	4
324-2L	600-CT	4	40	0.4	4
224-2M	250	600-CT	16	55	7
★Max. power level: 6 w.					

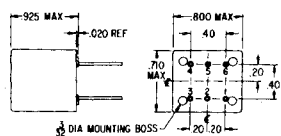
### 6 SIZE CASE DATA



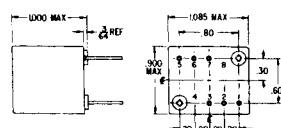
### 5 SIZE CASE DATA



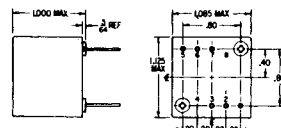
### 4 SIZE CASE DATA



### 3 SIZE CASE DATA



### 2 SIZE CASE DATA



ALL RATINGS BASED UPON MAXIMUM UNBALANCED DC IN PRIMARY AS LISTED

ALL CASED DIMENSIONS ARE MAXIMUM



# ADC PRODUCTS, INC.

MINNEAPOLIS, MINNESOTA

## POWER TRANSFORMERS FOR MILITARY AND INDUSTRIAL APPLICATIONS

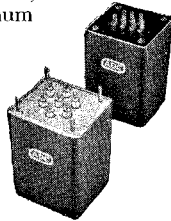
Reliability, minimum size and long life under rugged environmental conditions are prime requisites in today's military electronic equipment. To meet these modern standards, ADC offers a complete line of hermetically sealed power transformers. Designed to meet MIL-T-27A specifications and utilizing MIL cases and mounting dimensions, these units offer our customers a ready source for prototype and produc-

tion applications. All military contractors and commercial electronic engineers with stringent environmental conditions will find these carefully rated units ideally suited. For those applications where hermetic sealing is not necessary, we offer the conservative transformer designs of our hermetically sealed line, in drawn steel cases of MIL size and mounting dimensions with phenolic terminal plates and solder lug terminals.

### POWER TRANSFORMERS—60 Cycle

ADC offers these standard power transformer designs to cover a wide range of requirements for electronic circuit application. They are available in standard MIL case sizes, hermetically sealed to meet all requirements of MIL-T-27A, Grade 4, Class R, life expectancy X. Maximum operating altitude is 10,000 feet.

The same electrical ratings are also available as commercial grade fully enclosed units for non-military applications in the same MIL case sizes. This version is furnished with a phenolic terminal board and heavy duty solder lug terminals. Mounting screws and tapped inserts provide the same mounting centers as MIL-T-27A versions.



### COMBINATION PLATE AND FILAMENT TRANSFORMERS

PRIMARY: 105/115/125 V., 50-60 CPS

Catalog No.	Comm'l Case	Hermetic Seal	Plate Winding AC Volts	Filament Winding DC Ma	DC Volts	Filament Windings Volts/Amps	MIL Case
522A	523A		250-0-250 C Input	20	300	6.3 CT/5 2	FA
522B	523B		300-0-300 C Input	60	310	5 2	HA
						6.3 CT	2
522C	523C		350-0-350 C Input	110	355	5 2	JA
			L Input		265	6.3 CT	4
522D	523D		375-0-375 C Input	150	380	5 3	LA
			L Input		280	6.3 CT	5
522E	523E		385-0-385 C Input	200	360	5 3	
			L Input		280	6.3 CT	5
						6.3 CT	2 MA
522F	523F		500-0-500 L Input	300	400	6.3/5 6	
						6.3 CT	6 NA

### FILAMENT TRANSFORMERS

PRIMARY: 105/115/125 V., 50-60 CPS

Catalog No.	Commercial Case	Hermetic Seal	Sec. Volts	Sec. Amps	Insulation Volts RMS	MIL Case
522FA	523FA		2.5 CT	5.5	3,500	FA
522FB	523FB		2.5 CT	10.0	7,500	GA
522FC	523FC		2.5 CT	15.0	10,000	JA
522FD	523FD		5.0 CT	4	3,500	GA
522FE	523FE		5.0 CT	10	5,000	HA
522FF	523FF		5.0 CT	20	10,000	MA
522FG	523FG		6.3 CT	3.0	2,500	FA
522FH	523FH		6.3 CT	5.5	2,500	GA
522FJ	523FJ		6.3 CT	10	2,500	JB
522FK	523FK		6.3 CT	20	2,500	KA
522FL	523FL		12.6 CT	2	2,500	GA

### POWER TRANSFORMERS—400 Cycle

These items are especially designed for maximum performance in 380 to 1500 CPS applications, with maximum altitude ratings of 50,000 feet. They are hermetically sealed to meet all requirements of MIL-T-27A, Grade 4, Class R. Standard MIL case sizes and construction are used.

### COMBINATION PLATE AND FILAMENT TRANSFORMERS

PRIMARY: 115 V., 380-1500 CPS

Catalog No.	Comm'l Case	Hermetic Seal	Plate Winding AC Volts	Filament Windings DC Ma	Volts / Amps	MIL Case
512A	513A		240-0-240 C Input	20	6.3 CT 1.5	AJ
512B	513B		250-0-250 C Input	40	6.3 CT 2.5	EA
512C	513C		300-0-300 C Input	80	6.3 CT 5	GA
					6.3/5V	2
512D	513D		350-0-350 C Input	150	6.3 CT 4	HA
					6.3/5V	3
512E	513E		450-0-450 C Input	200	6.3 CT 8	JA
					6.3/5V	3

### FILAMENT TRANSFORMERS

PRIMARY: 115 V., 380-1500 CPS

Catalog No.	Commercial Case	Hermetic Seal	Sec. Volts	Sec. Amps	Insulation Volts RMS	MIL Case
512FA	513FA		6.3 CT	1	1,500	AH
512FB	513FB		6.3 CT	3	1,500	AJ
512FC	513FC		6.3 CT	5.5	2,500	EA
512FD	513FD		6.3 CT	10	2,500	FA
512FE	513FE		6.3 CT	20	2,500	GA
512FF	513FF		26 CT	1	2,500	EA
512FG	513FG		26 CT	3	2,500	FA

### MILITARY STANDARD TRANSFORMERS

These Military Standard transformers have been specified by ASEA and are established by the three Military Services and the transformer industry as standards for Military transformer applications. Each item is available as either Grade 1 or Grade 4 (ruggedized) as requested. Tests have been conducted in ADC's environmental laboratory which indicate that these units will meet the requirements of MIL-T-27A, Grade 4, Class R operating temperature; life expectancy X 10,000 hours minimum).



### MILITARY STANDARD POWER TRANSFORMERS

Military Part No.	Catalog No.	Type Designation	Secondary AC Volts	#1 DC Ma	DC Volts	Sec #2 Volts/ Amps	Sec. #3 Volts/ Amps
			200-100-0				
MS-90026	521A	TF 4RX 03HA001	100-200	70	140	6.3/5 2	6.3 3
MS-90027	521B	TF 4RX 03JB002	325-0-325	70	250	6.3/5 2	6.3 4
MS-90028	521C	TF 4RX 03KB006	325-0-325	150	240	6.3 5	5 3
MS-90029	521D	TF 4RX 03LB003	400-0-400	175	290	5 3	6.3 8
MS-90030	521E	TF 4RX 03MB004	450-0-450	250	320	5 3	6.3 8
MS-90031	521F	TF 4RX 02KB001	350-0-350	250	250	--	--
MS-90032	521G	TF 4RX 02LB002	550-0-550	250	400	--	--
MS-90036	521H	TF 4RX 02NB003	800-0-800	250	575	--	--

NOTE: 1. Primaries 105/115/125V., 54-66 CPS.

2. Secondary #1 DC voltage based upon inductive input filter.

3. Max. operating altitude 10,000 ft.

4. These items are also available as Grade 1 components.

### MILITARY STANDARD FILAMENT TRANSFORMERS

Military Part No.	Catalog No.	Type Designation	Secondary Volts	Amps	Insulation Volts RMS
MS-90016	521M	TF 4RX 01EB002	2.5	3.0	2500
MS-90017	521N	TF 4RX 01GB003	2.5	10	2500
MS-90018	521P	TF 4RX 01FB004	5.0	3.0	2500
MS-90019	521Q	TF 4RX 01HB005	5.0	10	2500
MS-90020	521R	TF 4RX 01FB006	6.3	2.0	2500
MS-90021	521S	TF 4RX 01GB007	6.3	5.0	2500
MS-90022	521T	TF 4RX 01JB008	6.3	10	2500
MS-90023	521U	TF 4RX 01KB009	6.3	20	2500
MS-90024	521V	TF 4RX 01JB012	2.5	10	10000
MS-90025	521W	TF 4RX 01KB013	5.0	10	10000

NOTE: 1. Primaries 105/115/125 V., 54-66 CPS.

2. Max. operating altitude 10,000 ft.

3. These items are also available as Grade 1 components.



# ADC PRODUCTS, INC.

MINNEAPOLIS, MINNESOTA

## INDUCTORS FOR MILITARY AND INDUSTRIAL APPLICATIONS

ADC's line of inductors are circuit running mates to ADC's power transformers. They are available hermetically sealed, to meet MIL-T-27A requirements Grade 4, Class R, life expectancy X. For commercial applications, where hermetic

sealing is not necessary, these same ratings are available in MIL cases and mounting dimensions, but with phenolic terminal board and solder lug terminals.

### FOR 50-60 CYCLE POWER SUPPLIES

Catalog No.	Inductance	DC	DC	Insulation	MIL	
Commercial Case	Hermetic Seal	Henries	Current MA	Resistance Ohms	Resistance Ohms	Case
422A	423A	15	20	700	1000	AJ
422B	423B	20	40	475	2500	EB
422C	423C	15	60	230	2500	FA
422D	423D	12	80	175	2500	FA
422E	423E	10	110	175	2500	GA
422F	423F	8	150	100	2500	HA
422G	423G	8	200	85	2500	JA
422H	423H	8	250	85	2500	KB
422J	423J	8	325	55	2500	LA
422K	423K	4	500	30	2500	LA
422L	423L	5/25	250/25	160	2500	KB
422M	423M	5/25	325/30	110	2500	LA



### MILITARY STANDARD INDUCTORS (power)

These Military Standard inductors have been specified by ASES and are established by the three military services and the transformer industry as standards for military inductor applications. They are hermetically sealed to meet all MIL-T-27A requirements Grade 1, Class R, life expectancy X.

Military Part No.	Catalog No.	Type Designation	Inductance Series	Inductance Parallel	DC Resistance Ohms	Insulation Volts RMS
MS90009	421A	TF 1RX 04FA001	16 hy .08 a	4 hy .16 a	1-2 295 3-4 350	2400
MS90010	421B	TF 1RX 04GA002	25 hy .08 a	6.25 hy .16 a	1-2 300 3-4 370	2400
MS90011	421C	TF 1RX 04HA003	40 hy .08 a	10 hy .16 a	1-2 450 3-4 570	2400
MS90013	421D	TF 1RX 04HA005	16 hy .125 a	4 hy .25 a	1-2 145 3-4 185	3800
MS90014	421E	TF 1RX 04JB006	25 hy .125 a	6.25 hy .25 a	1-2 225 3-4 235	3600
MS90037	421F	TF 1RX 04KA007	40 hy .125 a	10 hy .25 a	1-2 240 3-4 295	5900
MS75000	421G	TF 1RX 04LA009	16 hy .20 a	4 hy .40 a	1-2 80 3-4 100	5900
MS75001	421H	TF 1RX 04MA010	25 hy .20 a	6.25 hy .40 a	1-2 90 3-4 120	5900
MS75002	421J	TF 1RX 04NA012	16 hy .315 a	4 hy .63 a	1-2 45 3-4 60	5900
MS75003	421K	TF 1RX 04Y Y013	25 hy .315 a	6.25 hy .63 a	1-2 70 3-4 80	5900

### FOR 380-1500 CYCLE POWER SUPPLIES

Catalog No.	Inductance	DC	DC	Insulation	MIL	
Commercial Case	Hermetic Seal	Henries	Current Ma	Resistance Ohms	Resistance Ohms	Case
422V	423V	2.5	50	175	2500	AH
422W	423W	5	50	350	2500	AJ
422X	423X	2	80	250	2500	AJ
422Y	423Y	2	150	100	2500	EB
422Z	423Z	2	200	100	2500	EA

## NET PRICE LIST (Prices subject to change without notice)

CAT. NO.	NET PRICE	CAT. NO.	NET PRICE	CAT. NO.	NET PRICE	CAT. NO.	NET PRICE	CAT. NO.	NET PRICE
108A	8.25	222C	25.20	324-2F	6.60	419CU thru		422G	9.60
103A	3.15	222D	19.80	324-2J	6.60	DA	8.70	422H	10.20
103B	3.39	222E	19.80	324-2K	6.60	419DC thru		422J	12.90
103C	3.30	222F	17.40	324-2L	6.60	DG	9.00	422K	12.00
104A	8.70	222G	17.40	324-3B	7.50	419DJ	9.75	422L	10.20
104B	9.54	223A	24.90	324-3C	6.90	419DL	10.50	422M	12.90
114A	23.85	223B	24.90	324-3D	6.30	419EA thru	6.75	422V	7.05
114B	19.80	223C	28.20	324-3E	6.90	EN	6.75	422W	6.00
114C	23.85	223D	21.60	324-3F	6.30	419EQ thru	7.50	422X	6.00
114E	23.85	223E	21.60	324-3G	6.30	EY	7.50	422Y	6.90
114F	23.85	223F	18.30	324-3H	6.30	419FA thru	8.25	422Z	7.20
114G	18.00	223G	18.30	324-3K	6.30	FC	8.25	423A	6.60
121A	14.40	224-2M	6.60	324-3L	6.30	419FE	8.70	423B	7.65
121B	14.40	224-3G	7.80	324-4B	7.80	419FG	9.00	423C	8.10
122A	24.30	224-3M	6.30	324-4D	7.20	419FH	9.75	423D	8.10
122B	25.20	224-4G	7.20	324-4E	7.20	419FI thru	7.50	423E	9.15
122C	24.30	224-4L	7.80	324-4F	6.60	419GL thru	7.50	423F	10.20
122D	16.80	224-4R	6.00	324-4G	6.60	419HA thru	8.25	423G	12.00
122E	19.80	224-5F	6.90	324-4H	6.00	419HB thru	8.25	423H	12.90
122F	15.90	224-5J	7.80	324-4I	6.60	419HC thru	8.70	423I	15.90
122G	22.20	224-6F	6.60	324-4K	6.00	419HD thru	9.00	423J	14.70
123A	26.40	224-6J	7.20	324-4L	6.00	419HE thru	9.00	423K	12.90
123B	27.30	308E, F	7.50	324-4M	6.00	419HU	9.75	423L	15.90
123C	26.40	308G, H	9.00	324-5A	8.70	419HW	10.50	423M	15.90
123D	17.40	314A	20.40	324-5B	7.80	419HY	11.25	423V	7.80
123E	21.30	314B	18.00	324-5D	6.90	419KL thru	9.75	423W	7.50
123F	16.80	320A thru F	20.85	324-5E	6.90	LC	9.75	423X	7.50
124-2A	8.10	320Y, Z	20.85	324-5G	6.90	419LE thru	9.75	423Y	8.70
124-2H	7.20	321A thru E	12.90	324-5H	5.70	LJ	10.50	423Z	9.00
124-3A	7.80	322A	11.70	324-5I	5.70	419LL thru	10.50	512A	11.70
124-3H	6.90	322B	16.80	324-6A	7.50	LN	11.25	512B	12.60
124-4C	7.20	322C	15.90	324-6B	7.20	419LQ thru	11.25	512C	17.10
124-4M	6.60	322D	17.40	324-6D	6.60	LS	12.00	512D	18.90
124-5C	6.90	322E	17.40	324-6E	6.60	419LU	12.45	512E	20.55
124-5K	6.90	322F	19.80	324-6G	6.00	419LV	12.90	512FA	9.00
124-6C	6.60	322G	21.00	324-6H	5.40	420A thru H	17.64	512FB	9.60
124-6K	6.00	322H	20.40	324-6I	5.40	421A	11.10	512FC	10.35
208A thru F	7.50	322I	22.80	324-6L	5.40	421B	12.30	512FD	10.80
208G	9.00	322J	22.80	324-6M	5.40	421C	13.20	512FE	12.90
214A	23.70	322K	31.50	408D	6.75	421D	14.10	512FF	10.65
214B	16.20	322L	33.90	419AL thru		421E	14.70	512FG	11.25
214C	23.70	322M	23.70	AW	6.75	421F	20.10	513A	12.60
214H	15.45	322N	21.60	419AY thru		421G	21.30	513B	14.25
214J	16.80	322P	17.10	BE	7.50	421H	24.90	513C	21.45
214L	16.80	323A	13.50	419BG thru		421I	36.90	513D	23.70
220A thru D	20.85	323B	20.70	419BQ thru		421J	36.90	513E	25.65
221A	15.45	323C	17.40	BS	9.00	421K	30.00	513FA	11.25
221B	13.20	323D	21.60	419BU	9.00	422A	5.40	513FB	12.15
222A	22.50	324-2B	7.80	419BW	10.50	422B	6.00	513FC	12.90
222B	22.50	324-2C	7.20	419CE thru		422C	6.45	513FD	13.50
		324-2D	6.60	CS	8.25	422D	6.45	513FE	16.20
		324-2E	7.20			422E	6.90	513FF	13.20
						422F	7.95	513FG	13.80
								521A	22.20
								521B	21.30
								521C	23.70
								521D	26.70
								521E	30.90
								521F	19.80
								521G	24.90
								521H	29.70
								521M	13.80
								521N	14.10
								521P	12.90
								521Q	15.60
								521R	13.20
								521S	15.60
								521T	18.00
								521U	22.05
								521V	21.30
								521W	22.20
								522A	13.50
								522B	15.00
								522C	17.40
								522D	18.30
								522E	26.70
								522F	26.70
								522FA	10.80
								522FB	13.20
								522FC	14.40
								522FD	11.70
								522FE	12.90
								522FF	21.30
								522FG	10.80
								522FH	11.70
								522FI	14.10
								522FK	18.30
								522FL	11.70
								523A	15.90
								523B	19.80
								523C	21.00
								523D	21.60
								523E	32.80
								523F	32.80
								523FA	12.90
								523FB	16.20
								523FC	20.10
								523FD	14.70
								523FE	15.90
								523FF	27.60
								523FG	12.60
								523FH	14.70
								523FI	17.10
								523FK	21.30
								523FL	14.70



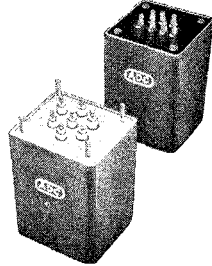
# ADC PRODUCTS, INC.

MINNEAPOLIS, MINNESOTA

## AUDIO TRANSFORMERS FOR MILITARY AND COMMERCIAL APPLICATIONS

ADC offers the following designs to cover a wide range of standard audio applications, from low power transistors through heavy duty output circuits. They are conservatively rated at  $\pm 1/2$  db from 30 to 15,000 cycles at the maximum rated power. Each is designed for minimum insertion loss, is fully impregnated before potting and rated for dependable continuous duty operation.

These audio transformers are available in standard MIL cases, hermetically sealed to meet all requirements of MIL-T-27A. THE SAME RATINGS ARE ALSO AVAILABLE AS COMMERCIAL GRADE COMPONENTS, featuring the lower cost construction of a phenolic terminal board with solder lug terminals in the same drawn MIL cases.



### INPUT TRANSFORMERS Response $\pm 1/2$ db, 30-15,000 cps

Catalog No. Com- Her-mercical Case Seal	Application	Primary Impedance Rating (Ohms)	Secondary Impedance Rating (Ohms)	Max. Level	Hum Reduc-tion	Case Size
222A 223A	Line to Single or Push Pull Grids.	600 <sup>1</sup>	60,000 <sup>1</sup> Split	+ 10 dbm	-65 db	AJ
222B 223B	Low Impedance Line to Grid.	12.5/50/200	80,000	+ 10 dbm	-65 db	AJ
222C 223C	Line and Bridging to Single or Push Pull Grids, 1-4	150/600/15,000	60,000 <sup>1</sup> Split	+ 10 dbm	-65 db	AJ
222D 223D	High Impedance Pickup or Plate to Push Pull Grids.	10,000 (10MA DC)	80,000 <sup>1</sup> Split	+ 22 dbm	-35 db	EA
222E 223E	Push Pull Plates to Push Pull Grids.	20,000 <sup>1</sup> Split	90,000 <sup>1</sup> Split	+ 24 dbm	-35 db	EA

### MILITARY STANDARD AUDIO TRANSFORMERS

These Military Standard audio transformers have been specified by ASES and are established by the three Military Services and the transformer industry as standards for Military transformer applications. Tests have been conducted in ADC's environmental laboratory which indicate that these units will meet the requirements of MIL-T-27A, Grade 1, Class R operating temperature, life expectancy X (10,000 hours minimum).

Cat-alog No.	MIL-T-27A Classification	MIL-T-27A Part No.	Application	Impedance (Ohms)	Oper-ating Level	Pri. DCMA Bal. Unbal.
221A	TF 1RX 15AJ001	MS-90000	Push Pull Plates to Push Pull Grids	Pri. 10,000 CT Sec. 90,000 CT 22,500 CT	15 dbm	-- 10
121A	TF 1RX 16AJ002	MS-90001	Line to Voice Coil	Pri. 600 CT (150) Sec. 4/8/16	2 W	-- --
221B	TF 1RX 10AJ001	MS-90002	Line to Push Pull Grids	Pri. 600 CT (150) Sec. 135,000 CT	15 dbm	-- --
121B	TF 1RX 16AJ001	MS-90003	Line to Line	Pri. 600 CT (150) Sec. 600 CT (150)	15 dbm	-- --
321A	TF 1RX 13AJ001	MS-90004	Plate to Line	Pri. 7600/4800 Sec. 600 CT (150)	2 W	-- 40
321B	TF 1RX 13AJ002	MS-90005	Plate to Voice Coil	Pri. 7600/4800 Sec. 4/8/16	2 W	-- 40
321C	TF 1RX 13AJ003	MS-90006	Push Pull Plates to Line	Pri. 15,000 CT Sec. 600 CT (150)	2 W	-- 10
321D	TF 1RX 13AJ004	MS-90007	Push Pull Plates to Line	Pri. 24,000 CT Sec. 600 CT (150)	1 W	20 1
321E	TF 1RX 13AJ005	MS-90008	Push Pull Plates to Line	Pri. 60,000 CT Sec. 600 CT (150)	.5 W	20 1

### OUTPUT TRANSFORMERS Response $\pm 1/2$ db, 30-15,000 cps (Power Response at Rated Output)

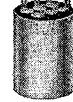
Catalog No. Com-mercical Case Seal	Application	Primary Impedance Rating (Ohms)	Secondary Impedance Rating (Ohms)	Max. Level	Case Size
322A 323A*	Plate to Line	15,000 (10 MA DC)	600/250 (150/62.5) <sup>2</sup>	+ 20 dbm (1 W)	EB
322B <sup>5</sup> 323B <sup>5</sup>	Plate to Voice Coil	5,000 (40 MA DC)	16/8/4	+ 37 dbm (5 W)	FA
322C 323C	Push Pull Plates to Line	20,000 CT	600/250 (150/62.5) <sup>2</sup>	+ 30 dbm (1 W)	EB
322D 323D	Push Pull Plates to Line and Voice Coil	10,000 CT	600 (150) <sup>2</sup>	+ 40 dbm (10 W)	GA
322E 323E <sup>1</sup>	Push Pull Plates to Voice Coil <sup>4</sup>	9,000/2,250 Split <sup>2</sup>	16/8/4	+ 40 dbm (10 W)	GA
322F 323F <sup>1</sup>	Push Pull Plates to Voice Coil <sup>3</sup>	10,000 Split <sup>2</sup>	16/8/4	+ 43 dbm (20 W)	JA
322G 322G <sup>1</sup>	Push Pull Plates to Voice Coil <sup>4</sup>	8,000/1,600 Split <sup>2</sup>	16/8/4	+ 42 dbm (15 W)	JB
322H 323H <sup>1</sup>	Push Pull Plates to Voice Coil <sup>4</sup>	5,000/3,000 Split <sup>2</sup>	16/8/4	+ 43 dbm (20 W)	JA
322J 323J <sup>1</sup>	Push Pull Plates to Voice Coil <sup>4</sup>	6,600/1,650 Split <sup>2</sup>	16/8/4	+ 45 dbm (30 W)	KA
322K 323K <sup>1</sup>	Push Pull Plates to Voice Coil <sup>4</sup>	3,500/700 Split <sup>2</sup>	16/8/4	+ 48 dbm (70 W)	LA
322L 323L <sup>1</sup>	Push Pull Par Plates to Voice Coil	2,500/1,500 Split <sup>2</sup>	16/8/4	+ 49 dbm (80 W)	MA
322M 323M <sup>1</sup>	Push Pull Class A Transistors to Voice Coil	48/16/8 Split <sup>2</sup>	16/8/4	+ 47 dbm (50 W)	KA
322N 323N <sup>1</sup>	Class A Transistor to Voice Coil	10 (1.25a. DC)	16/8/4	+ 38 dbm (7 W)	JB
322P 323P <sup>1</sup>	Push Pull Transistors to Voice Coil	48/32 CT	16/8/4	+ 40 dbm (10 W)	GA

**NOTES:**

- <sup>1</sup>These items are not normally carried in stock.
- <sup>2</sup>"Split" indicates 2 separate, symmetrical windings. Impedances shown are for series connection. Where impedances are shown in parenthesis, they indicate the impedances resulting when windings are connected in parallel.
- <sup>3</sup>Balanced, for Williamson type circuit operation.
- <sup>4</sup>Has primary taps suitable for Screen loading
- <sup>5</sup>Power response  $\pm 1/2$  db, 50-15,000 cps.
- <sup>6</sup>Response is  $\pm 1$  db, 30-15,000 cps.

All of these designs are available on special order with output impedances of other values than shown above.

### MINIATURE AUDIO TRANSFORMERS



2-56 Screws Bottom View

These transformers offer a variety of special design features on a catalog basis for particular circuit and chassis applications. They are available for plug-in and printed circuit applications as well as standard installations. The special cases shown allow the maximum of electrical performance for each type as well as variety and flexibility in mechanical arrangement. All electrical ratings are shown for continuous duty at full specified power levels. Dia.  $3/8$ ", Ht.  $1 1/8$ ", 2-56 Mtg screws on  $11/16$ " centers.

### MINIATURE SERIES

Cat. No.	Type	Application	Primary Impedance (Ohms)	Secondary Impedance (Ohms)	Max. Level	Re-sponse
108A	Impedance	Line to Line	50/250/600	50/250/600	+ 8 dbm	$\pm 1$ db 30-15,00
208A	Input	Line to Single Grid	50/250/600	80,000	+ 10 dbm	$\pm 1$ db 30-15,00
208B	Input	Line to Push Pull Grids	50/250/600	80,000CT	+ 10 dbm	$\pm 1$ db 30-15,00
208C	Input	Low Impedance to Grid	7.5/30	80,000	+ 8 dbm	$\pm 1$ db 30-15,00
208D	Interstage	Plate (O DC) to Push Pull Grids	15,000	60,000CT	+ 10 dbm	$\pm 1$ db 30-10,00
208E	Interstage	Plate (3MA DC) to Push Pull Grids	15,000	60,000CT	+ 10 dbm	$\pm 2$ db 200-10,000
208F	Input	Line to Single Grid	50/250/600	500,000	+ 10 dbm	$\pm 3$ db 200-300
208G	Interstage	Transistor to Transistors (20 MA DC)	10,000 (2500) Split	4000/1000CT	+ 10 dbm	$\pm 2$ db 100-10,000
308E	Output	Plate to Line (O DC)	15,000	50/250/600	+ 10 dbm	$\pm 1$ db 40-15,00
308F	Output	Plate to Line (3MA DC)	15,000	50/250/600	+ 10 dbm	$\pm 2$ db 100-15,000
308G	Output	Push Pull Plates to Line	30,000CT	50/250/6600	+ 10 dbm	$\pm 1$ db 30-15,0
308H	Output	Class B Transistors to Voice Coil	2000/500CT	16/8/4	+ 23 dbm	$\pm 1$ db 100-10,000
408D	Inductor	200 Hy @ 0 DC; 100 Hy @ 2MA DC; 50 Hy @ 4MA DC; 16 Hy @ 10MA DC; 6000 Ohms Resistance				

NOTE: These items are also available, on special request, as plug-in transformers with:

- Mumetal case  $15/16$ " dia. by  $1-5/16$ " high. 35 db shielding.
- Mumetal case plus 1 Mumetal shield  $1-1/16$ " dia. by  $1 1/2$ " high. 65 db shielding.





# ADC PRODUCTS, INC.

MINNEAPOLIS, MINNESOTA

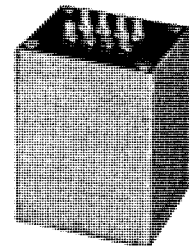
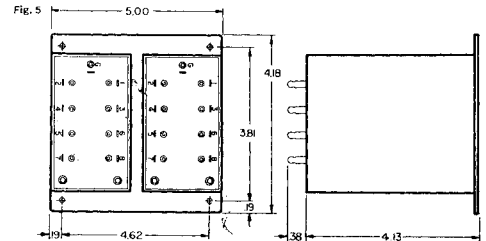
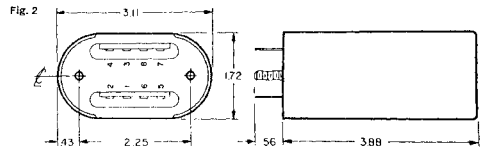
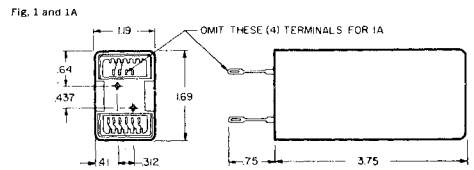
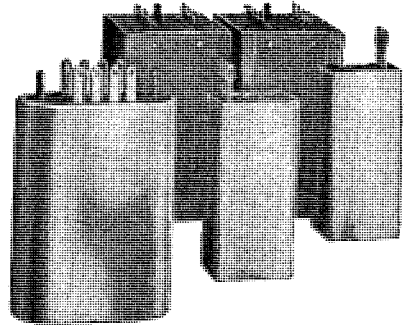
## TELEPHONE COILS

For many years, ADC has been a dependable source of transformers and filters for the telephone and telegraph industry. Recently, we have designed and tooled for additional items in a series of "coils" which are electrically and physically interchangeable with similar components made by Western Electric. These items are listed below with the equivalent Western Electric number. All items in this series can be supplied in MIL cases if desired.

ADC Inductors	W.E. Indr. or Ret.	Fig.	ADC Imped. Trans.	W.E. Repeat Coil	Fig.	ADC Imped. Trans.	W.E. Repeat Coil	Fig.
409BB	149B	2	118A	67E	*	119C	177C	*
409BC	149C	2	113A	91A	5	119D	177D	*
409BD	149D	2	113A	93A	5	112G	189A	1
409E	149E	2	113B	93B	5	112B	189D	1A
409G	149G	2	113F	93F	5	112C	189E	1A
409H	149H	2	113G	93G	5			
409J	149J	2	113H	93H	5			
409K	149K	2	113J	93J	5			
409M	149M	2	109S <sup>1</sup>	94E	2			
409N	149N	2	109T	94F	2			
409P	149P	2	109J	94G	2			
409R	149R	2	109K <sup>1</sup>	93H	2			
405A	152B	*	109V	94K	2			
405H	225A	*	109W	94L	2			
405E	250C	*	109Y	94N	2			
412AC	274C	1A	109Z	94P	2			
412AD	274D	1A	109BB	94S	2			
412AG	274G	1A	109BC	94T	2			
412AH	274H	1A	109BD	94U	2			
412AJ	274J	1A	109BE	94W	2			
412AL	274L	1A	109BF	94Y	2			
412AR	274R	1A	109BG <sup>1</sup>	94AA	2			
412AS	274S	1A	118F	106A	*			
412BB	274AB	1A	118S	119C	*			
412T	307B	1A	118U	119E	*			
412C	307C	1A	109B <sup>1</sup>	120C	2			
412F	307F	1A	109C <sup>1</sup>	120D	2			
412G	307G	1A	109D <sup>1</sup>	120E	2			
412H	307H	1A	109E <sup>1</sup>	120F	2			
412J	307J	1A	109F <sup>1</sup>	120H	2			
412K	307K	1A	109G <sup>1</sup>	120J	2			
412L	307L	1A	109H <sup>1</sup>	120K	2			
412M	307M	1A	109P <sup>1</sup>	120L	2			
412B	307N	1A	109L	146A	*			
412A <sup>1</sup>	307P	1A	109M	146U	*			
412R	307R	1A	119P	170A	*			

ADC Imped. Trans.	W.E. Auto Trans.	Fig.
109A	23A	*
112A <sup>1</sup>	181B	1
112E	181C	1
112H	D166840	1A

<sup>1</sup>These represent most commonly used items and are normally carried in stock.  
<sup>2</sup>Space did not permit outline drawings for all types. Dimensions will be sent on your request.



### ADC REPEATING COILS

104A—Cord Circuit. This repeating coil is designed to have good transmission efficiency for voice frequencies. Low frequency ringing currents are attenuated and circuit will not ring through. Case is heavy steel to eliminate all cross-talk. Core will not saturate at maximum normal current.

104B—Phantom. The 104B Repeating Coil is a 4-winding coil, for use in phantom circuits. The phantom winding (5-6-7-8) is parallel wound. Heavy Formvar wire is used for maximum surge voltage or lightning protection. This coil has good transmission efficiency at both ringing and voice frequencies.

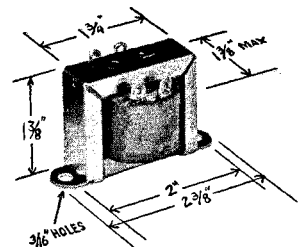
Type	PRI. DCR		SEC. DCR		Case	Screw	Mounting Centers
	1-2	3-4	5-6	7-8			
104A	10.3	16.5	12.5	14.5	2 1/4 x 1 1/16 x 3 3/8 high	(4) 6-32	1 3/8 x 1 3/8
104B	16.5	20	24	24	2 3/8 x 2 3/8 x 3 3/8 high	(4) 8-32	1 7/8 x 2 3/8

### INDUCTION COILS

103A—Induction Coil is a 2-winding coil for local battery telephones.

103B—Anti-Sidetone Induction Coil is similar to 103A, but with an additional winding for anti-sidetone connection.

103C—Anti-Sidetone Induction Coil is designed for common battery telephone use.

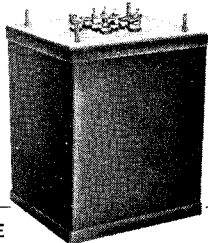




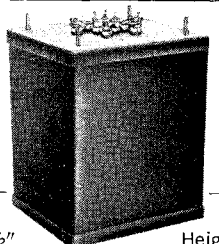
# FREED TRANSFORMER CO., INC.

## BROADCAST QUALITY COMPONENTS

### CASE DIMENSIONS



DC-2B CASE		DC-4A CASE	
Height:	3 1/2"	Height:	3 3/4"
Width:	2 5/8"	Width:	3 1/8"
Depth:	2 1/4"	Depth:	3"
Mtg. Cen.:	2" x 1 3/4"	Mtg. Cen.:	2 1/2" x 2 1/2"
Studs:	4 8-32	Studs:	4 8-32
Knockout:	1 1/2" dia.	Knockout:	2" dia.



DC-2B CASE		DC-4A CASE	
Height:	3 1/2"	Height:	3 3/4"
Width:	2 5/8"	Width:	3 1/8"
Depth:	2 1/4"	Depth:	3"
Mtg. Cen.:	2" x 1 3/4"	Mtg. Cen.:	2 1/2" x 2 1/2"
Studs:	4 8-32	Studs:	4 8-32
Knockout:	1 1/2" dia.	Knockout:	2" dia.

DC-4B CASE	
Same as 4A—4" high	

DC-5B CASE		DC-6A CASE	
Height:	4 1/2"	Height:	4 7/8"
Width:	4 1/8"	Width:	5"
Depth:	3 1/2"	Depth:	4 1/8"
Mtg. Cen.:	3" x 2 3/8"	Mtg. Cen.:	3 3/4" x 3"
Studs:	4 10-32	Studs:	4 10-32
Knockout:	3" dia.	Knockout:	3" dia.

DC-6B CASE		DC-7 CASE	
Height:	6"	Height:	5 3/8"
Width:	5"	Width:	5 1/2"
Depth:	4 1/8"	Depth:	5"
Mtg. Cen.:	3 3/4" x 3"	Mtg. Cen.:	4 3/8" x 3 3/4"
Studs:	4 10-32	Studs:	4 1/4"-20
Knockout:	3" dia.	Knockout:	3" dia.

### INPUT TRANSFORMERS

Frequency Response 20-20,000 C.P.S. ± 1.0 DB

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level DBM	Ratio	Equivalent Shielding D.B.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary						
QGA 1	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	70	0	0	DC-2B
QGA 2	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	90	0	0	DC-2B
QGA 3	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	70	0	0	DC-2B
QGA 4	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	90	0	0	DC-2B
QGA 5	Universal low impedance microphone, pickup or line to single or push-pull grids	U-60	60,000 split	+10	1:31.6	70	0	0	DC-2B
QGA 6	Universal low impedance microphone, pickup or line to single or push-pull grids	U-60	60,000 split	+10	1:31.6	90	0	0	DC-2B

U-60 IMPEDANCES IN OHMS: 2.5, 5, 10, 15, 20, 30, 40, 60

U-500 IMPEDANCES IN OHMS: 50, 125, 200 CT, 250, 330, 500 CT, 125 and 500 ohms can be used for 150 and 600 ohms.

### HYBRID AND REPEAT COILS

Frequency Response 20-20,000 C.P.S. ± 1.0 DB

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level DBM	Ratio	Equivalent Shielding D.B.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary						
QGA 7	Hybrid, Unbalanced 500/600 ohm lines to 600 ohms.	Total Pri 1200/1000 split or 300/250 300/250	600/150 or 500/125 split	+10	1.41:1	70	0	0	DC-2B
QGA 8	Hybrid, Balanced 500/600 ohm lines to 600 ohms. Longitudinal balance	Total Pri 1200/1000 split or 300/250 C.T. 70 DB	600/150 or 500/125 split	+10	1.41:1	70	0	0	DC-2B
QGA 9	Hybrid, Unbalanced 500/600 ohm lines to triode plate. No. D.C. in secondary	Total Pri 1200/1000 split or 300/250 C.T. 12,500	15,000 or 12,500	+10	1:3.54	70	0	0	DC-2B
QGA 10	Hybrid, Balanced 500/600 ohm lines to triode plate. No. D.C. in secondary. Longitudinal balance 70 DB.	Total Pri 1200/1000 split or 300/250 C.T. 12,500	15,000 or 12,500	+10	1:3.54	70	0	0	DC-2B
QGA 11	Repeat coil for low frequency ringing. Longitudinal balance 70 DB.	600/500 split	600/500 split Balanced		1:1	90	0	0	DC-4A

### INTERSTAGE TRANSFORMERS

Frequency Response 20-20,000 C.P.S. ± 10 D.B. \*50-20,000 C.P.S. ± 1.0 D.B.

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level DBM	Ratio	Equivalent Shielding D.B.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary						
QGA 12	Bridging line to single or push-pull grids.	10,000	60,000 split	+10	1:2.45	70	0	0	DC-2B
QGA 13	Single 6C4, 6J5 1/2 6SN7 triode to push-pull grids. Shunt feed.	15,000	60,000 split	+18	1:2	45	0	0	DC-2B
QGA 14*	Single 6C4, 6J5 1/2 6SN7 triode to push-pull grids.	15,000	60,000 split	+18	1:2	45	8	8	DC-2B
QGA 15	Push-pull triode plates to push-pull class A grids.	20,000	45,000 split	+25	1:1.5	30	8	0.5	DC-4A

### HIGH LEVEL OUTPUT TRANSFORMERS

Frequency Response 20-30,000 C.P.S. ± 0.5 DB

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level DBM	Watts	Ratio	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary						
QGA 25	PP5881, 6B4, 6L6, 300A, 275A to Universal 500 ohm line.	5,000 split	U-500	+42	15	3.16:1	70	7	DC-5E
QGA 26	As above to Universal voice coil.	5,000 split	U-16	+42	15	17.7:1	70	7	DC-5E
QGA 27	Push-pull 6V6, 6AQ5, 7C5, 6N7 to Universal 500 ohm line.	8,000 split	U-500	+42	15	4:1	50	5	DC-5E
QGA 28	As above to Universal voice coil.	8,000 split	U-16	+42	5	22.4:1	50	5	DC-5E
QGA 29	P.P. 6F6, 6V6, 6AQ5, 7C5, 7B5, 6AR5, 6K6, 6L6 to Universal 500 ohm line.	10,000 split	U-500	+42	15	4.47:1	40	4	DC-5I
QGA 30	As above to Universal voice coil.	10,000 split	U-16	+42	15	25:1	40	4	DC-5I
QGA 31	P.P. 807, 1614, KT-66, (Williamson Amplifier) to Universal 500 ohm line.	10,000 split	U-500	+45.5	36	4.47:1	60	6	DC-6
QGA 32	As above to Universal voice coil.	10,000 split	U-16	+45.5	36	25:1	60	6	DC-6
QGA 33	P.P. Parallel, 6AS6, 300A to Universal 500 ohm line.	2,500 split	U-500	+45.5	36	2.24:1	100	10	DC-6
QGA 34	As above to Universal voice coil.	2,500 split	U-16	+45.5	36	12.5:1	100	10	DC-6
QGA 35	P.P. 6L6 or P.P. Parallel 6L6 to Universal 500 ohm line.	3,800 split	U-500	+47	50	2.75:1	140	14	DC-6
QGA 36	As above to Universal voice coil.	3,800 split	U-16	+47	50	15.4:1	140	14	DC-6
QGA 37	High level multiple line to Universal voice coil.	U-500	U-16	+42	15	5.6:1	0	0	DC-1
QGA 38	High level multiple line to Universal voice coil.	U-500	U-16	+47	50	5.6:1	0	0	DC-1
QGA 39*	5881 or 6146 Class AB1 to Universal 500 ohm line.	6,600 split	U-500	+45.5	36	3.64:1	70	7	DC-1
QGA 40*	5881 or 6146 Class AB1 to Universal voice coil.	6,600 split	U-16	+45.5	36	20:1	70	7	DC-1
QGA 41	6550 AB1 or 6146 AB2 to Universal 500 ohm line.	5,000 split	U-500	+50	100	3.16:1	140	14	DC-1
QGA 42	6550AB1 or 6146AB2 to Universal voice coil.	5,000 split	U-16	+50	100	17.7:1	140	14	DC-1

\*These units supplied with taps for applying screen feedback U-500 IMPEDANCES IN OHMS: 50, 125, 200, C.T., 250, 330, 500 C.T. U-16 IMPEDANCES IN OHMS: 2, 4, 8, 12, 16.

### LOW LEVEL OUTPUT, MIXING, MATCHING TRANSFORMERS

Frequency Response 20-20,000 C.P.S. ± 1.0 DB \*50-20,000 C.P.S. ± 1.0 DB

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level DBM	Ratio	Equivalent Shielding D.B.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary						
QGA 16	Single plate or bridging line to Universal 500 ohm line. Shunt feed.	15,000	U-500	+18	5.5:1	70	0	0	DC-2B
QGA 17*	Single plate to Universal 500 ohm line.	15,000	U-500	+18	5.5:1	70	8	8	DC-2B
QGA 18	Push-pull triode plates to Universal 500 ohm line.	20,000 C.T.	U-500	+25	6.3:1	70	8	0.5	DC-2B
QGA 19	Mixing, low impedance microphone or line to Universal 500 ohm line.	U-500	U-500	+12	1:1	70	0	0	DC-2B
QGA 20	Line level mixing and matching.	U-500	U-500	+30	1:1	70	0	0	DC-2B
QGA 21	High mu triode photo-cell to Universal 500 ohm line.	100,000	U-500	+12	14.1:1	70	0	0	DC-2B

### DRIVER TRANSFORMERS

Frequency Response 20-20,000 C.P.S. ± 1.0 DB

Catalog No.	Application	Primary Impedance Ohms	Maximum Power Level DBM	Turn Ratio Pri.: 1/2 Sec.	Maximum Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
QGA 23	Push-pull 6J5, etc. to push-pull 2A3's, 6L6's, etc.	20,000 C.T.	+30	3.2:1	8	0.5	DC-2B
QGA 24	Push-pull 2A3, 6B4 to push-pull 809, T2, 40, 4/125A.	5,000 C.T.	+40	3.1:1	50	5	DC-4B

# FREED TRANSFORMER COMPANY, INC.

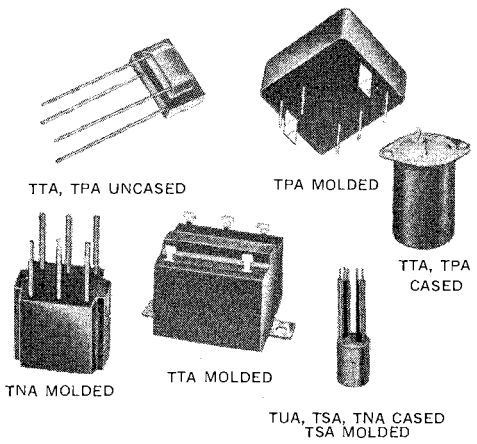
Brooklyn (Ridgewood) 27, N.

# FREED TRANSFORMER CO., INC.

## MINIATURE TRANSISTOR AUDIO TRANSFORMERS

These high quality miniature transformers are high efficiency audio components featuring hermetic sealing for maximum protection against electrolysis and subsequent corrosion of fine wires caused by moisture penetration. The units are constructed in accordance with MIL-T-27A Specifications. Transistor transformers can also be supplied in an open or encapsulated type of construction.

TYPE		TSA			TNA			TPA			TTA			
MAX. POWER		500 MW			1 W			3 W			5 W			
FREQ. RESPONSE		.3 — 15 KC ± 2DB			.2 — 15 KC ± 2 DB			.15 — 15 KC ± 2 DB			.15 — 15 KC ± 2 DB			
SIZE	UNCASED		½ D. x ½ H.			½ D. x ½ H.			¾ x ¾ x ¾			1 ¼ x 1 ¼ x 1 ¼		
	CASED MIL-T-27A-4RX		¾ D. x ½ H.			¾ D. x ½ H.			¾ x ¾ x ¾			1 ¼ x 1 ¼ x 1 ¼		
MOLDED MIL-T-27A-5RX		½ D. x ½ H.			¾ x ¾ x ¾			¾ x ¾ x ¾			1 ¼ x 1 x ¾			
MATCHING IMP.		Cat. No.			Cat. No.			Cat. No.			Cat. No.			
Pri.	Sec.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	
150 (CT)	3.2	28	35	12	28	40	16	30	45	20	15	130	50	
150 (CT)	12	29	35	12	29	40	16	31	45	20	17	130	50	
150 (CT)	50	30	35	12	30	40	16	32	45	20	18	130	50	
300 (CT)	3.2	31	30	8	31	32	14	33	35	16	20	100	35	
300 (CT)	12	32	30	8	32	32	14	34	35	16	21	100	35	
300 (CT)	50	33	30	8	33	32	14	35	35	16	22	100	35	
500 (CT)	500	34	20	6	34	22	10	36	25	12	1	80	25	
600 (SP)	3.2	1	16	6	1	18	8	2	20	10	23	65	25	
600 (SP)	12	2	16	6	2	18	8	3	20	10	24	65	25	
600 (SP)	50	35	16	6	35	18	8	3	20	10	25	65	25	
600 (SP)	600 (SP)	3	16	6	3	18	8	4	20	10	26	65	25	
600 (SP)	1.2K (CT)	22	16	4	22	15	6	27	16	8	7	50	20	
1K (CT)	3.2	36	14	4	36	15	6	38	16	8	19	50	20	
1K (CT)	12	37	14	4	37	15	6	39	16	8	27	50	20	
1K (CT)	50	26	14	4	26	15	6	27	16	8	27	50	20	
1.2K (SP)	3.2	4	12	4	4	14	6	5	16	8	28	40	15	
1.2K (SP)	12	5	12	4	5	14	6	6	16	8	29	40	15	
1.2K (SP)	50	38	12	4	38	14	4	7	16	8	30	40	15	
1.2K (SP)	600 (SP)	6	12	4	6	14	6	8	16	8	31	40	15	
2K (SP)	3.2	7	9	3	7	10	5	10	14	6	32	25	12	
2K (SP)	12	9	9	3	9	10	5	11	14	6	33	25	12	
4K (SP)	3.2	11	6.5	2	11	8	3	13	9	4	34	20	10	
4K (SP)	12	12	6.5	2	12	8	3	14	9	4	35	15	10	
4K (SP)	50	13	6.5	1	13	6	2	15	7	3	36	15	10	
10K (CT)	3.2	14	4	1	14	6	2	16	7	3	37	15	10	
10K (CT)	12	14	4	1	14	6	2	17	7	3	38	15	10	
10K (CT)	50	39	5	1	39	6	2	18	7	3	39	15	10	
10K (SP)	600 (SP)	40	5	1	40	6	2	19	7	3	40	15	10	
10K	10K (SP)	16	5	1	16	5	1.5	20	7	1.8	41	15	10	
20K (CT)	1K	25	2.5	.8	25	3	1	21	5	1.8	16	8	6	
20K (CT)	600 (CT)	41	2.5	.8	41	3	1	22	5	1.8	16	8	6	
25K (CT)	600 (CT)	23	2.5	.8	23	3	1	23	5	1.8	16	8	6	
25K (CT)	1.2K (CT)	21	2.5	.8	21	3	1	24	5	1.8	16	8	6	
50K (CT)	5 (CT)	18	2	.6	18	2.5	1	25	3.5	1	3	5	4	
50K (CT)	500 (CT)	17	2	.6	17	2.5	1	26	3.5	1	3	5	4	
50K (CT)	1.2K (CT)	20	2	.6	20	2.5	1	27	3.5	1	6	5	4	
100K (CT)	1K (CT)	27	2	.6	27	2	.8	28	2	1	14	4	4	
100K (CT)	1.2K (CT)	19	2	.4	19	2	.8	28	2	1	4	4	4	



TYPE		TSA			TNA			TPA			TTA			
MAX. POWER		500 MW			1 W			3 W			5 W			
FREQ. RESPONSE		.3 — 15 KC ± 2DB			.2 — 15 KC ± 2 DB			.15 — 15 KC ± 2 DB			.15 — 15 KC ± 2 DB			
SIZE	UNCASED		½ D. x ½ H.			½ D. x ½ H.			¾ x ¾ x ¾			1 ¼ x 1 ¼ x 1 ¼		
	CASED MIL-T-27A-4RX		¾ D. x ½ H.			¾ D. x ½ H.			¾ x ¾ x ¾			1 ¼ x 1 ¼ x 1 ¼		
MOLDED MIL-T-27A-5RX		½ D. x ½ H.			¾ x ¾ x ¾			¾ x ¾ x ¾			1 ¼ x 1 x ¾			
MATCHING IMP.		Cat. No.			Cat. No.			Cat. No.			Cat. No.			
Pri.	Sec.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	Max. I (MA)	Max. I dc (MA)	Unbal. ½ Pri.	
150 (CT)	3.2	16	15	10	2K (CT)	3.2	28	3.5	2.5					
150 (CT)	12	17	15	10	2K (CT)	12	29	3.5	2.5					
150 (CT)	50	21	15	10	2K (CT)	600	30	3.5	2.5					
300 (CT)	3.2	20	9	7	4K (CT)	3.2	8	3.5	1.5					
300 (CT)	12	19	9	7	4K (CT)	12	9	3.5	1.5					
300 (CT)	50	22	9	7	4K (CT)	600	10	3.5	1.5					
500 (CT)	500	23	9	7	10K (CT)	3.2	7	2	3.5					
600 (CT)	3.2	1	7	5	10K (CT)	12	11	2	1					
600 (CT)	12	1	7	5	10K (CT)	50	12	2	1					
600 (CT)	50	13	7	5	10K (CT)	600	15	2	1					
600 (CT)	600	3	7	5	10K (CT)	1K	18	2	1					
600 (CT)	1.2K	24	7	5	10K (CT)	10K (CT)	31	2	1					
1K (CT)	3.2	4	6	6	20K (CT)	50	32	2	.8					
1K (CT)	12	11	6	6	20K (CT)	600 (CT)	33	2	.8					
1K (CT)	50	14	6	6	25K (CT)	600 (CT)	34	2	.8					
1.2K (CT)	3.2	26	6	6	25K (CT)	1.2K (CT)	35	2	.8					
1.2K (CT)	12	27	6	6	50K (CT)	5 (CT)	36	2	.6					
1.2K (CT)	50	5	6	6	50K (CT)	500 (CT)	37	2	.6					
1.2K (CT)	600	6	6	6	50K (CT)	1.2K (CT)	38	2	.6					

## MINIATURE AUDIO TRANSFORMERS

These high quality, miniature transformers feature hermetically sealing for maximum protection from moisture penetration with subsequent electrolysis and corrosion of fine wires. While primarily intended for non-military equipment, these units are constructed in accordance with MIL-T-27A Specifications.

Frequency response: ± 2DB 30-20,000 CPS \* ± 2DB 200-10,000 CPS.

**CASE DIMENSIONS**

**DM-20 CASE**  
 Height: 1 1/16"  
 Dia.: 1 1/16"  
 Mtg. Cen.: 1 1/8" to 1 1/32"  
 Mtg. 2 holes: 166 x .120  
 Flange Lgth.: 1 1/32"  
 Flange D.: .975"

Catalog No.	Application	MIL Type	Impedance	Level Ohms	Primary	Secondary	Max. Power Level DBM	Ratio	Equivalent Shielding D.B.	Max. Pri. Side Ma.	D.C. Unbal. Ma.	Case Number
PMA 1	Line or microphone to single or push-pull grids.	TF4RX10YY	50/200/500	60,000 C.T.			+8	1:11		0	0	DM-20
PMA 2	Dynamic microphone or speaker voice coil to single or P.P. grid.	TF4RX10YY	4/8	60,000 C.T.			+8	1.86.6		0	0	DM-20
PMA 3	Line or microphone to single or push-pull grids. Magnetically shielded.	TF4RX10YY	50/200/500	60,000 C.T.			+8	1:11	30	0	0	DM-20
PMA 4	Single triode plate to single or push-pull grids.	TF4RX10YY	15,000	60,000 C.T.			+8	1:2		0	0	DM-20
PMA 5*	Single triode plate to push-pull grids.	TF4RX12YY	15,000	60,000 C.T.			+8	1:2		2	2	DM-20
PMA 6	Single triode plate to multiple line.	TF4RX16YY	15,000	50/200/500			+8	5.48:1		0	0	DM-20
PMA 7*	Single triode plate to multiple line.	TF4RX12YY	15,000	50/200/500			+8	5.48:1		2	2	DM-20
PMA 8	Push-pull triode plates to multiple line.	TF4RX12YY	30,000	50/200/500			+8	7.75:1		2	0.25	DM-20
PMA 9	Crystal mike or pickup to multiple line.	TF4RX16YY	60,000 C.T.	50/200/500			+8	11:1		0	0	DM-20
PMA 10	Mixing or matching.	TF4RX16YY	50/200	50/200/500			+8	11.50		0	0	DM-20
PMA 11	Parallel Feed Reactor.	TF4RX20YY	40 hy, 3 ma dc, 3500 ohms d.c. resistance									DM-20
PMA 12	Microphone or line to grid.	TF4RX10YY	50/200/500	60,000 C.T.			+5	1.11		0	0	DM-20
PMA 13	Mixing and matching.	TF4RX16YY	150/600	600 C.T.			+8	1.1		0	0	DM-20
PMA 14	Single triode plate to push-pull grids.	TF4RX15YY	15,000	95,000 Split			+5	1:2.5		0	0	DM-20
PMA 15*	Single triode plate to push-pull grids.	TF4RX15YY	15,000	95,000 Split			15	1:2.5		4	4	DM-20

# FREED TRANSFORMER CO., INC.

## MINIATURE TRANSISTOR TRANSFORMERS

These high quality miniature transformers are high efficiency audio components featuring hermetically sealing for maximum protection against electrolysis and subsequent corrosion of fine wires caused by moisture penetration. The units are constructed in accordance with MIL-T-27A Specifications.

Transistor Transformers can also be supplied in an open or encapsulated type of construction.

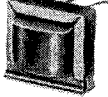
### CASE DIMENSIONS

#### DM-01 CASE

Height: 2"  
Width: 1 1/4"  
Depth: 1 1/2"  
Mtg. Cen.: 1 1/8" x 1 1/8"  
Studs: 4 6-32  
Knockout: 1 3/8" dia.

### UNCASED DIMENSIONS

#### TMO 1 TO 14



Height: 1 3/8"  
Width: 1 1/8"  
Depth: 2 1/8"  
Mtg. Cen.: 1 3/8"  
2 Mtg. Holes: 1/20 dia.  
Flange Lgth: 1 3/8"

#### TMO 15 TO 18

Height: 2 3/8"  
Width: 3/8"  
Depth: 1 3/8"

#### TMO-19

Height: 1 3/8"  
Width: 1 1/8"  
Depth: 1 1/4"  
Mtg. Cen.: 1 3/8"  
2 Mtg. Holes: 3/16" dia.  
Flange Lgth: 2 3/8"

Catalog No.	MIL Type	Impedance Ohms				Frequency Response	Unbalance Primary Current	D.C. Resistance Ohms		Max. Power Output	Case No.
		Pri.	Ct.	Sec.	D.B.			Pri.	Sec.		
TMA 1*	TF4RX16YY	500		500	1	200 to 15,000	0	18	24	250	DM-20
TMA 2*	TF4RX12YY	50K		500	2	300 to 15,000	3	2,200	49	250	DM-20
TMA 3*	TF4RX13YY	50K		6	2	300 to 15,000	3	2,200	55	250	DM-20
TMA 4*	TF4RX12YY	100K		1.2K	3	300 to 15,000	1	2,790	95	100	DM-20
TMA 5*	TF4RX12YY	25K		1.2K	2	200 to 15,000	3	1,740	110	250	DM-20
TMA 6*	TF4RX12YY	50K		1.2K	2	300 to 15,000	3	2,200	106	250	DM-20
TMA 7*	TF4RX17YY	600/150		1.2K	1	200 to 15,000	4	30	95	250	DM-20
TMA 8*	TF4RX12YY	25K		600	2	200 to 15,000	3	1,740	61	250	DM-20
TMA 9*	TF4RX12YY	4K		600/150	1	200 to 15,000	1	274	43	250	DM-20
TMA 10*	TF4RX13YY	2K		3.2	2	200 to 15,000	10	160	28	250	DM-20
TMA 11*	TF4RX13YY	4K		3.2	1	200 to 15,000	1	274	26	250	DM-20
TMA 12*	TF4RX13YY	20K		50	2	300 to 15,000	4	1,340	2.9	250	DM-20
TMA 13*	TF4RX17YY	1K		50	2	300 to 15,000	8	42.6	2.5	250	DM-20
TMA 14*	TF4RX16YY	100K		1K	2	300 to 15,000	0	1,550	16.8	100	DM-20
TMO 15	25K			2	2	300 to 15,000	1	2,215	7.25	40	open
TMO 16	25K			2	2	300 to 15,000	1	2,215	102	40	open
TMO 17	1K			2	2	300 to 15,000	3	93	5.6	60	open
TMO 18	100K			1K	2	300 to 15,000	0	3,000	57.5	100	open
TMA 19*	TF4RX13YY	1K		3.2	2	200 to 15,000	20	38	.19	1000	DM-01

\*When ordering open units specify TMO -- when ordering encapsulated units specify TMC.

## PROFESSIONAL GRADE COMPONENTS

This group of components has been designed for use in high fidelity and professional equipment and for public address service. Freed has developed this series of units employing the latest design techniques and the best commercially available materials. Except for units carrying unbalanced direct current the frequency response is  $\pm 1$  DB from 30 to 15,000 cps. All units feature excellent performance characteristics with minimum size and weight.

All units are vacuum varnished and then potted in compound to insure long life and trouble free performance.

Professional Grade components are supplied cased. Upon request these units can be supplied open or in shelf type construction.

All cased Professional Grade Components supplied with terminals meet "EIA" standards.

Transformers PGA 1 through PGA 10 are supplied in hermetically sealed cases.

### INPUT TRANSFORMERS

Frequency Response 30-15,000 C.P.S.  $\pm 1.0$  DB

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level DBM	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary						
PGA 1	Universal 500 ohm line to single grid.	U-500	50,000	+12	1:10	50	0	0	DM-01
PGA 2	Universal 500 ohm line to push-pull grids.	U-500	60,000 split	+12	1:11	50	0	0	DM-01
PGA 3	Universal 500 ohm line to push-pull grids.	U-500	100,000 split	+12	1:14.1	50	0	0	DM-01
PGA 4	Bridging line to single grid.	10,000	60,000	+12	1:2.45	50	0	0	DM-01
PGA 5	Bridging line to push-pull grids.	10,000	60,000 center tap	+12	1:2.45	50	0	0	DM-01
PGA 6	Low level line matching.	U-500	U-500	+18	1:1	50	0	0	DM-01

### LOW LEVEL OUTPUT AND MIXING TRANSFORMERS

Frequency Response 30-15,000 C.P.S.  $\pm 1.0$  DB

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level DBM	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Case Number
		Primary	Secondary					
PGA 7	Single triode plate to Universal 500 ohm line. Shunt feed.	15,000	U500	+18	5.48:1	0	0	DM-01
PGA 8	Single triode plate to Universal 500 ohm line.	15,000	U500	+18	5.48:1	8	8	DM-01
PGA 9	Push-pull triode plates to Universal 500 ohm	20,000 CT	U500	+30	6.32:1	8	0.5	DM-01
PGA 10	Low level line matching.	U500	U500	+18	1:1	0	0	DM-01

U-500 IMPEDANCES IN OHMS: 50, 125, 200 CT, 250, 330, 500 CT. 125 and 500 ohms can be used for 15 and 600 ohms.

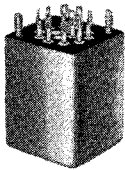
### DRIVER TRANSFORMERS

Frequency Response 30-15,000 C.P.S.  $\pm 1.0$  DB

Catalog No.	Application	Primary Impedance Ohms	Turn Ratio Pri: 1/2 Sec.	Max. Level DBM	Max. Pri. D.C. Per Side Ma.	Max. D.C. Unbalance Ma.	Case Number
PGA 12	Push-pull 6C4, 6SN7 triodes to push-pull 2A3, 6L6 grids.	20,000 C.T.	3.0:1	+30	10	1	DC-1/
PGA 13	Push-pull 2A3, 6B4, 6A5G to push-pull 809, TZ-40, 4/125A	5,000 C.T.	3.2:1	+40	50	5	DC-2

All units supplied with leads.

### CASE DIMENSIONS



#### DM-01 CASE

Height: 2 1/4"  
Width: 1 1/2"  
Depth: 1 1/2"  
Mtg. Cen.: 1 1/8" x 1 1/8"  
Studs: 2 6-32  
Knockout: 1 3/8" dia.

#### DC-1A CASE

Height: 2 1/2"  
Width: 2 3/8"  
Depth: 2 1/8"  
Mtg. Cen.: 1 1/8" x 1 1/4"  
Studs: 4 8-32

#### DC-2A CASE

Height: 3"  
Width: 2 5/8"  
Depth: 2 1/8"  
Mtg. Cen.: 2" x 1 3/8"  
Studs: 4 8-32

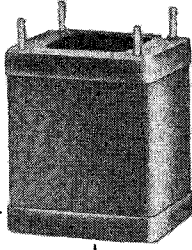
# FREED TRANSFORMER CO., INC.

## PROFESSIONAL GRADE COMPONENTS

### HIGH LEVEL OUTPUT TRANSFORMERS

Frequency Response 30-15,000 C.P.S. ±1.0 DB

#### CASE DIMENSIONS



<b>DC-1A CASE</b> Height: 2½" Width: 2½" Depth: 1½" Mtg. Cen.: 1½"x1¼" Studs: 4 8-32 Knockout: 1¼" dia.	<b>DC-4A CASE</b> Height: 3½" Width: 3½" Depth: 3" Mtg. Cen.: 2½"x2½" Studs: 4 8-32 Knockout: 2"x1¾"
<b>DC-2A CASE</b> Height: 3" Width: 2½" Depth: 2¼" Mtg. Cen.: 2"x1¾" Studs: 4 8-32 Knockout: 1½"x1¾"	<b>DC-5A CASE</b> Height: 3½" Width: 4½" Depth: 3½" Mtg. Cen.: 3½"x2½" Studs: 4 10-32 Knockout: 2½"x2"
<b>DC-2B CASE</b> Height: 3½" Width: 2½" Depth: 2¼" Mtg. Cen.: 2"x1¾" Studs: 4 8-32 Knockout: 1½"x1¾"	<b>DC-6A CASE</b> Height: 4¾" Width: 5" Depth: 4½" Mtg. Cen.: 3½"x3" Studs: 4 10-32 Knockout: 3"x2½"

Catalog No.	Application	Impedance Level Ohms		Maximum Power Level		Ratio	Max. Pri. D.C. Per Side Ma	DC Unbalance Ma	Case Number
		Primary	Secondary	DBM	Watts				
PGA 14	P.P. 6K6, 6AR5, 7B5 Class A to Universal voice coil.	12,000 C.T.	U16	+40	10	27.4:1	40	4	DC-2B
PGA 15	P.P. 6F6 Cl. AB <sub>2</sub> , P.P. 6V6, 6AQ5, 7C5, Cl. AB <sub>1</sub> , 6L6 or 5881 Triode to Universal voice coil.	10,000 C.T.	U16	+43	20	25:1	50	5	DC-4A
PGA 16	P.P. 6L6 Cl. AB <sub>2</sub> , self bias to Universal 500 ohm line.	9,000	U500	+44.8	30	4.23:1	50	5	DC-4A
PGA 17	As above to Universal voice coil.	9,000	U16	+44.8	30	23.7:1	50	5	DC-4A
PGA 18	P.P. 6N7 Cl. B, P.P. 6V6, 6AQ5, 7C5, Cl. AB <sub>1</sub> to Universal voice coil.	8,000 C.T.	U16	+41.8	15	22.3:1	45	5	DC-4A
PGA 19*	P.P. 6L6, fixed bias, Cl. AB <sub>1</sub> , to Universal 500 ohm line.	6,600 C.T.	U500	+44.8	30	3.63:1	70	7	DC-4A
PGA 20	As above to Universal voice coil.	6,600 C.T.	U16	+44.8	30	20.3:1	70	7	DC-4A
PGA 21	P.P. 6L6 Cl. A, P.P. 2A3, 6A5G, 6B4 self bias P.P. Par. 6V6 Cl. AB <sub>1</sub> to Universal voice coil.	5,000 C.T.	U16	+43	20	17.7:1	80	8	DC-4A
PGA 22	P.P. Par 6L6 Cl. AB <sub>1</sub> , self bias P.P. 6L6 Cl. AB <sub>2</sub> fixed bias PP807 Cl. AB <sub>2</sub> to Universal 500 ohm line.	4000 C.T.	U500	+47	50	2.83:1	100	10	DC-5A
PGA 23	As above to Universal voice coil.	4000 C.T.	U16	+47	50	15.8:1	100	10	DC-5A
PGA 24	P.P. 6A5G, 6B4, 2A3, fixed bias Universal voice coil.	3000 C.T.	U16	+41.8	15	13.7:1	75	7.5	DC-4A
PGA 25	P.P. Par. 807 Cl. AB <sub>2</sub> to Universal 500 ohm line.	2100 C.T.	U500	+51.8	150	2.05:1	240	12	DC-6A
PGA 26	P.P. Par 2A3, 6A5G, fixed bias 6B4, 300A Cl. AB <sub>1</sub> , P.P. Par 6L6 Cl. A to Universal 500 ohm line.	1500 C.T.	U500	+44.8	30	1.73:1	180	15	DC-4A
PGA 27	As above to Universal voice coil.	1500 C.T.	U16	+44.8	30	9.7:1	150	15	DC-4A
PGA 28	Matching line to Universal voice coil.	U500	U16	+44.8	30	5.6:1	0	0	DC-4A
PGA 29	Matching line to Universal voice coil.	U500	U16	+47	50	5.6:1	0	0	DC-5A
PGA 30	Matching line to Universal voice coil.	U500	U16	+50	100	5.6:1	0	0	DC-6A

\*Available with taps to apply screen feedback.

#### U-16 IMPEDANCES IN OHMS:

2, 4, 8, 12, 16

#### U-500 IMPEDANCES IN OHMS:

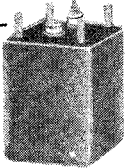
50, 125, 200 C.T., 250, 330, 500 C.T., 125 and 500 ohms can be used for 150 and 600 ohms.

\*PGA 28, 29 & 30 supplied with terminals, all other units with leads.

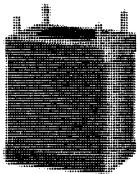
A 70 volts level can be obtained for the following impedances:

- 500 ohms — 10 watts +40 DBM
- 330 ohms — 15 watts +42 DBM
- 250 ohms — 20 watts +43 DBM
- 200 ohms — 25 watts +44 DBM
- 125 ohms — 40 watts +46 DBM
- 50 ohms — 100 watts +50 DBM

#### CASE DIMENSIONS



**DM-01 CASE**  
 Height: 2"  
 Width: 1½"  
 Depth: 1½"  
 Mtg. Cen.: 1½"x1¼"  
 Studs: 4 6-32



#### DC CASE STYLE

**DC-2B**  
 Height: 3½"  
 Width: 2½"  
 Depth: 2¼"  
 Mtg. Cen.: 2"x1¾"  
 Studs: 4 8-32

<b>DC-1A</b> Height: 2½" Width: 2½" Depth: 1½" Mtg. Cen.: 1½"x1¼" Studs: 4 8-32	<b>DC-4A</b> Height: 3½" Width: 3½" Depth: 3" Mtg. Cen.: 2½"x2½" Studs: 4 8-32
<b>DC-2A</b> Height: 3" Width: 2½" Depth: 2¼" Mtg. Cen.: 2"x1¾" Studs: 4 8-32	<b>DC-5A CASE</b> Height: 3½" Width: 4½" Depth: 3½" Mtg. Cen.: 3½"x2½" Studs: 4 10-32
<b>DC-5B</b> Height: 4½" Width: 4½" Depth: 3½" Mtg. Cen.: 3½"x2½" Studs: 4 10-32	

#### FILTER REACTORS

Inductance measured at 50V, 60 cycles with rated direct current in the winding

Catalog No.	Inductance in Henries	Rated Current D.C. Ma.	D.C. Resistance Ohms	Dielectric Test Voltage VRMS	Case Number
PGC 1	40	15	2000	1000	DM-01
PGC 2	12	40	400	1000	DC-1A
PGC 3	8	50	300	1000	DC-1A
PGC 4	20	50	425	2500	DC-2A
PGC 5	10	70	250	2500	DC-2A
PGC 6	6	100	160	2500	DC-2A
PGC 7	6	150	115	2500	DC-2B
PGC 8	10	150	160	2500	DC-4A
PGC 9	5.5	200	95	2500	DC-4A
PGC 10	10	200	150	2500	DC-4A
PGC 11	10	250	135	2500	DC-5B
PGC 12	8	300	95	2500	DC-5B
PGC 13	7	400	60	2500	DC-5B
		<b>PARALLEL FEED</b>	<b>AUDIO CHOKES</b>		
PGC 14	100	10	3500	1000	DM-01
PGC 15	30	50	650	1500	DC-2A
PGC 16	400	1	6000	1000	DM-01

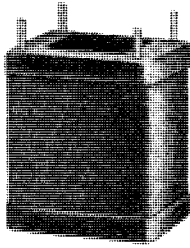
#### SWINGING INPUT REACTORS

Catalog No.	Inductance in Henries*	Rated Current D.C. Ma.	D.C. Resistance Ohms	Dielectric Test Voltage VRMS	Case Number
PGC 17	5-20	150	160	1500	DC-4A
PGC 18	5-20	250	135	1500	DC-5B
PGC 19	3-15	300	95	1500	DC-5B
PGC 20	3-15	400	60	1500	DC-5B

\*Inductance values for 100% and 10% of rated Direct Current.

# FREED TRANSFORMER CO., INC.

## PROFESSIONAL GRADE COMPONENTS



### POWER TRANSFORMERS

ALL PRIMARIES ARE FOR 115V., 50/60 c.p.s.

Temperature rises range from 45° to 50°C.

<b>DC-2B</b>	<b>DC-5B</b>
Height: 3½"	Height: 4½"
Width: 2⅞"	Width: 4⅞"
Depth: 2¼"	Depth: 3½"
Mtg. Cen.: 2"x1½"	Mtg. Cen.: 3⅝"x2⅝"
Studs: 4 8-32	Studs: 4 10-32
<b>DC-4A</b>	<b>DC-6A CASE</b>
Height: 3¾"	Height: 4⅞"
Width: 3⅞"	Width: 5"
Depth: 3"	Depth: 4¼"
Mtg. Cen.: 2½"x2½"	Mtg. Cen.: 3¾"x3"
Studs: 4 8-32	Studs: 4 10-32
<b>DC-5A CASE</b>	<b>DC-7B CASE</b>
Height: 3⅞"	Height: 6¾"
Width: 4⅞"	Width: 5½"
Depth: 3½"	Depth: 5"
Mtg. Cen.: 3⅝"x2⅝"	Mtg. Cen.: 4¾"x3¾"
Studs: 4 10-32	Studs: 4½-20

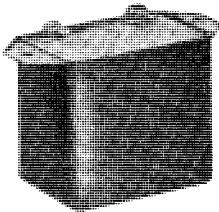
Catalog No.	Py Va	Hi Volt	Choke Input D.C.V. D.C. Ma	Con. Input D.C.V. D.C. Ma.	Bias Tap.	Rectifier	Fil. No. 1	Fil. No. 2	Fil. No. 3	Case No.
PGP 1	15	440V C.T.	Low flux density, hum-bucking. For Pre-amplifier service.	270 15		6X4	6.3VCT @ 0.6A	6.3V @ 0.3A		DC-2B
PGP 2	30	550V C.T.	Low flux density, hum-bucking. For Pre-amplifier service.	310 35		6X4	6.3VCT @ 0.6A	6.3VCT @ 0.9A		DC-4A
PGP 3	45	500V C.T.		270 40		6X4, 5Y3	5/6.3V @ 2A	6.3V @ 2A		DC-4A
PGP 4	57	600V C.T.		330 50		6X4, 5Y3	5/6.3V @ 2A	6.3V @ 2.5A		DC-4A
PGP 5	64	650V C.T.		370 50		6X4, 5Y3	5/6.3V @ 2A	6.3V @ 3A		DC-4A
PGP 6	73	600V C.T.		320 70		6X4, 5Y3	5/5.3V @ 2A	6.3V @ 3A		DC-4A
PGP 7	110	650V C.T.	225 140	330 100		5Y3, 5U4	5V @ 3A	6.3V @ 5A		DC-5B
PGP 8	76	700V C.T.	260 100	385 70		5Y3	5V @ 2A	6.3V @ 2.5A		DC-5A
PGP 9	108	700V C.T.	250 125	370 90		5Y3, 5U4	5V @ 3A	6.3V @ 5A		DC-5B
PGP 10	127	700V C.T.	260 170	350 120		5U4	5V @ 3A	6.3V @ 5A		DC-5B
PGP 11	146	700V C.T.	260 210	350 150		5U4	5V @ 3A	6.3V @ 5A	6.3V @ 1A	DC-6A
PGP 12	207	800V C.T.	295, 280	400 200		5U4, 2-5Y3	5V @ 4A	6.3V @ 6A		DC-6A
PGP 13	225	800V C.T.	295 280	400 200	80	5U4, 2-5Y3	5V @ 4A	6.3V @ 6A	5/6.3V @ 2A	DC-6A
PGP 14	268	840V C.T.	330 350	450 250	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	DC-6A
PGP 15	320	900V C.T.	340 420	490 300	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	DC-7B
PGP 16	127	900V C.T.	360 150			5U4	5V @ 3A	6.3V @ 5A		DC-6A
PGP 17	150	900V C.T.	350 200			5U4	5V @ 3A	6.3V @ 5A		DC-6A
PGP 18	203	1100V C.T.	400 250			5R4GY	5V @ 3A	6.3V @ 5A		DC-6A
PGP 19	248	1100V C.T.	420 300			2-5R4GY	5V @ 4A	6.3V @ 7A		DC-6A
PGP 20	310	1280V C.T.	480 350			2-5R4GY	5V @ 4A	6.3V @ 7A		DC-7B

All units supplied with leads.

## PQC HIGH Q REACTORS

PQC-Reactors are low-priced High Q components designed for use in selective circuits such as wave filters, wave traps, and noise suppressors.

### CASE DIMENSIONS



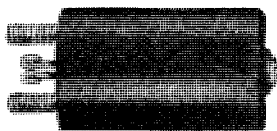
**DM-02 CASE**  
 Height: 1½"  
 Width: 1½"  
 Depth: 1½"  
 Flange L: 2⅝"  
 Mtg. Cen.: 2"

Catalog No.	Application	Rated Ind. in Henries	Q	Tuning Capacitor (MF)	Case Size
PQC 1	60 cps resonant trap	14.00	10	.5	DM-02
PQC 2	400 cps resonant trap	1.58	15	.1	DM-02
PQC 3	1000 cps resonant trap	1.00	20	.025	DM-02
PQC 4	Dynamic noise suppression inductor	2.40	20 @ 4 KC		DM-02
PQC 5	Dynamic noise suppression inductor	2.00	15 @ 4 KC		DM-02
PQC 6	Dynamic noise suppression inductor	1.30	15 @ 4 KC		DM-02
PQC 7	Dynamic noise suppression inductor	.80	15 @ 4 KC		DM-02
PQC 8	Dynamic noise suppression inductor	.60	15 @ 4 KC		DM-02
PQC 9	Dynamic noise suppression inductor	.40	15 @ 4 KC		DM-02

## MINIATURE VARIABLE HIGH FREQUENCY INDUCTORS

- Continuous variation of inductance
- Q practically constant over whole range of variation
- Hermetically sealed
- Inductances other than those listed can be supplied to special order

### CASE DIMENSIONS



**VI-1**  
 Height: 1"  
 Diameter: ¾"  
 2 Studs: 4-40  
 Mtg. Cen.: ⅜"

Catalog No.	Test Freq. (MC)	Inductance		Variations of Q		RDC (Ω) Nominal	Self Res. Freq. (MC) @ L Max.	Max. Non Destruct Current (MA)	Case Size
		Min.	Max.	@ L Min.	@ L Max.				
VHI-1	.1	1.1 MH	1.75 MH	93.5	100.5	.75	2.2	250	VI-1
VHI-2	.1	1.7 MH	2.5 MH	94.5	96.5	1.1	1.9	200	VI-1
VHI-3	.1	2.3 MH	3.7 MH	94.5	97.2	1.4	1.6	200	VI-1
VHI-4	.1	3. MH	4.5 MH	100.7	101.7	1.9	1.4	160	VI-1
VHI-5	.1	4. MH	5.7 MH	107.	108.	2.2	1.3	160	VI-1
VHI-6	.1	5.5 MH	7.5 MH	112.	119.	3.1	1.	130	VI-1
VHI-7	.1	7. MH	10.5 MH	116.	120.5	4.5	.9	100	VI-1
VHI-8	.1	10. MH	15. MH	106.	109.	6.6	.85	80	VI-1
VHI-9	.1	14.5 MH	20.5 MH	101.	101.5	9.2	.6	60	VI-1
VHI-10	.1	20. MH	30. MH	105.	115.	13.7	.55	50	VI-1
VHI-11	1.	9.50 μH	11.0 μH	104.	114.	.24	>10	150	VI-1
VHI-12	1.	14.0 μH	15.6 μH	113.	127.	.29	>10	150	VI-1
VHI-13	1.	24.5 μH	28.0 μH	145.	156.	.37	>10	150	VI-1
VHI-14	1.	47.0 μH	52.0 μH	178.	195.	.46	>10	150	VI-1
VHI-15	.5	71.0 μH	79.5 μH	152.	168.	.56	>10	150	VI-1
VHI-16	.5	94.0 μH	105.0 μH	165.	173.	.64	>10	150	VI-1
VHI-17	.5	145.0 μH	165.0 μH	200.	222.	.75	9.7	150	VI-1
VHI-18	.5	191.0 μH	218.0 μH	204.	229.	.9	9.4	150	VI-1
VHI-19	.5	234.0 μH	265.0 μH	216.	238.	1.0	8.3	150	VI-1
VHI-20	.5	279.0 μH	318.0 μH	219.	236.	1.1	7.	150	VI-1
VHI-21	.5	380.0 μH	416.0 μH	216.	230.	1.3	6.5	150	VI-1
VHI-22	.5	480.0 μH	545.0 μH	220.	237.	1.5	7.	150	VI-1

# FREED TRANSFORMER CO., INC.

## HIGH "Q" REACTORS

QGC—are hermetically sealed, MIL-T-27A, Grade 4, Class R, High Q Reactors for low audio frequency application with an excellent inductance stability with variations of A.C. and D.C. currents, frequencies and temperatures.

### SPECIAL REACTORS:

- (1) with a center tap
- (2) with a split winding
- (3) with inductances other than those listed can be supplied.

**DC-2A CASE**

Height: 3"  
Width: 2 5/8"  
Depth: 2 1/4"  
Mtg. Cen.: 2" x 1 3/4"  
Studs: 4-8-32  
Knockout: 1 1/2" x 1 3/4"

**AJ CASE**

Height: 2 3/8"  
Width: 1 3/8"  
Depth: 1 5/8"  
Mtg. Cen.: 1 3/8" x 1 3/8"  
Studs: 4-6-32

**AH CASE**

Height: 1 3/8"  
Width: 1 3/8"  
Depth: 1 3/8"  
Mtg. Cen.: 1 1/2"  
Studs: 2-6-32

**DM-20 CASE**

Height: 1 1/4"  
Diameter: 1 3/8"  
Flange L: 1 3/4"  
Flange D: 0.975"  
Mtg. Cen.: 1 1/8" x 1 3/8"  
2 Slots: .165" x .120"  
Knockouts: .875"

**DM-30 CASE**

Height: 2 3/8"  
Diameter: 1 3/8"  
Flange L: 1 3/4"  
Flange D: 0.975"  
Mtg. Cen.: 1 1/8" to 1 3/8"  
2 Slots: .165" x .120"  
Knockouts: .875"

**DM-40 CASE**

Height: 2 1/2"  
Diameter: 3/4"  
Pig Tails:

Catalog No.	Ind. H (±2%)	Ω/H Max.	Max. Norm DC*	Max. Norm AC**	Self Res. Freq. ±25%	Case	"Q" Max.	@ Freq.
QGC-1	100						40	250
QGC-2	75						48	280
QGC-3	50	20	85	0.58	F <sub>0</sub> = 22/√LH	DC-2A	51	300
QGC-4	25						53	320
QGC-5	10						58	350
QGC-6	5						59	400
QGC-7	1						60	400
QGC-8	75						32	600
QGC-9	50						37	600
QGC-10	25	55	60	0.5	F <sub>0</sub> = 7.2/√LH	AJ	39	700
QGC-11	10						43	700
QGC-12	5						46	700
QGC-13	1						53	800
QGC-14	50						29.5	500
QGC-15	25						31.5	500
QGC-16	10	70	40	0.25	F <sub>0</sub> = 35/√LH	AH	32	600
QGC-17	5						33	600
QGC-18	1						36	700
QGC-19	10						23	700
QGC-20	7.5						23	730
QGC-21	5	110.	15	0.15	F <sub>0</sub> = 34/√LH	DM-20	24	730
QGC-22	2.5						24	750
QGC-23	1						25	750
QGC-24	.5						25	750
QGC-25	5						23	1500
QGC-26	2.5						23	1550
QGC-27	1						24	1600
QGC-28	.75	250	13	0.11	F <sub>0</sub> = 35/√LH	DM-30	24	1650
QGC-29	.5						24	1700
QGC-30	.2						25	1750
QGC-31	.1						25	1800
QGC-32	2						15	1500
QGC-33	1.5						15	1500
QGC-34	1						15	1800
QGC-35	.75						15	1800
QGC-36	.5						16	2000
QGC-37	.25	500	10	0.04	F <sub>0</sub> = 45/√LH	DM-40	16	2000
QGC-38	.1						16	2000
QGC-39	.075						17	2200
QGC-40	.05						17	2200
QGC-41	.025						17	2500
QGC-42	.01						17	2500

\*Max. Norm. D.C. = I D.C. (MA) √LH } at which the inductance will decrease by 20%.  
 \*\*Max. Norm. A.C. = V/V ~ √LH }

## STANDARD MILITARY TRANSFORMERS

The group comprises audio and power units designed to meet MIL-T-27 A specifications.

The functional characteristics of these transformers were established by the Armed Service Standardization Program. These units are supplied in standard MIL cases.

### CASE DIMENSIONS

**AJ CASE**

Height: 2 3/8"  
Width: 1 3/8"  
Depth: 1 5/8"  
Mtg. Cen.: 1 3/8" x 1 3/8"  
Studs: 4-6-32  
Cut Out: 1 1/8" D

**HA CASE**

Height: 4 1/2"  
Width: 3 1/8"  
Depth: 2 5/8"  
Mtg. Cen.: 2 1/4" x 1 3/4"  
Studs: 4-8-32

**LB CASE**

Height: 4 1/2"  
Width: 4 3/8"  
Depth: 3 1/8"  
Mtg. Cen.: 3 1/8" x 2 1/8"  
Studs: 4-10-32

**JB CASE**

Height: 3 3/8"  
Width: 3 3/8"  
Depth: 3 3/8"  
Mtg. Cen.: 2 1/4" x 2 1/8"  
Studs: 4-8-32

**MB CASE**

Height: 4 1/2"  
Width: 4 1/8"  
Depth: 4"  
Mtg. Cen.: 3 1/8" x 3"  
Studs: 4 1/4-20

**KB CASE**

Height: 4 5/8"  
Width: 3 1/8"  
Depth: 3 3/8"  
Mtg. Cen.: 3 1/4" x 2 1/8"  
Studs: 4-10-32

**NB CASE**

Height: 5 1/2"  
Width: 5 1/8"  
Depth: 4"  
Mtg. Cen.: 4 1/4" x 3 3/8"  
Studs: 4 1/4-20

Transformers meeting MIL-T-27A specifications Grade 1 through 6 with temperature characteristics of Class S, T, or U can be supplied on special order.

Encapsulated units using either Epoxy-Resins or Fosterite can be supplied for Grade 2 and 5. Class U components can be supplied molded in special high temperature Freed resin.

## STANDARD MILITARY AUDIO TRANSFORMERS

Frequency Response 300-10,000 C.P.S. ±2 OB

Catalog No.	Application	Type Designation	Impedance Level in Ohms		Ratio	Max. Power Level DBM	Pri. D.C. Per Side in Ma	Max. D.C. Unbalance	Case
			Primary	Secondary					
MGA 1	Transformer; interstage, single or P.P. plates to single or P.P. grid	TF4RX15AJ	10,000 C.T.	90,000 split and C.T.	1:3 overall	+15	10	10	AJ
MGA 2	Transformer; matching 600 ohm line to voice coil.	TF4RX16AJ	600 split	4, 8, 16	6.12:1 overall	+33	0	0	AJ
MGA 3	Transformer; input, 600 ohm line to single or P.P. grids.	TF4RX10AJ	600 split	135,000 C.T.	1:15	+15	0	0	AJ
MGA 4	Transformer; matching, 600 ohm line to 600 ohm line.	TF4RX16AJ	600 split	600 split	1:1	+15	0	0	AJ
MGA 5	Transformer; output, single plate 7,600 ohm, 4,800 ohm to 600 ohm line.	TF4RX13AJ	7,600 tap @ 4,800	600 split	3.56:1	+33	40	40	AJ
MGA 6	Transformer; output, single plate 7,600 ohm, 4,800 ohm to voice coil.	TF4RX13AJ	7,600 tap @ 4,800	4, 8, 16	21.8:1	+33	40	40	AJ
MGA 7	Transformer; output, single or P.P. plates to 600 ohm line.	TF4RX13AJ	15,000 C.T.	600 split	5:1	+33	10	10	AJ
MGA 8	Transformer; output, P.P. plates to 600 ohm line.	TF4RX13AJ	24,000 C.T.	600 split	6.32:1	+30	10	1	AJ
MGA 9	Transformer; output, P.P. plates to 600-ohm line.	TF4RX13AJ	60,000 C.T.	600 split	10:1	+27	10	1	AJ

## STANDARD MILITARY POWER TRANSFORMERS

Primary 105/115/125V 60~

SINGLE PHASE 400 CPS, AND THREE PHASE 60 AND 400 CPS TRANSFORMERS CAN BE SUPPLIED ON SPECIAL ORDER.

Catalog No.	MIL-T-27 Type Designation	Hi Volt	D.C. Volts	D.C. Amps	Fil. No. 1	Fil. No. 2	Case
MGP 1	TF4RX03HA001	200/100/0/100/200	185	.070	5/6. 3V @ 2A	6. 3V @ 3A	HA
MGP 2	TF4RX03JB002	650 C.T.	260	.070	5/6. 3V @ 2A	6. 3V @ 4A	JB
MGP 3	TF4RX03KB006	650 C.T.	245	.150	6. 3V @ 5A	5V @ 3A	KB
MGP 4	TF4RX03LB003	800 C.T.	318	.175	5V @ 3A	6. 3V @ 8A	LB
MGP 5	TF4RX03MB004	900 C.T.	345	.250	5V @ 3A	6. 3V @ 8A	MB
MGP 6	TF4RX02KB001	700 C.T.	255	.250			KB
MGP 7	TF4RX02LB002	1100 C.T.	419	.250			LB
MGP 8	TF4RX02NB003	1600 C.T.	640	.250			NB

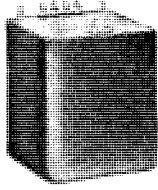
# FREED TRANSFORMER CO., INC.

## STANDARD MILITARY TRANSFORMERS

### STANDARD MILITARY FILAMENT TRANSFORMERS

Primary 105/115/125V 60~

SINGLE PHASE 400 CPS, AND THREE PHASE 60 AND 400 CPS TRANSFORMERS CAN BE SUPPLIED ON SPECIAL ORDER.



<b>EB CASE</b>		<b>FB CASE</b>	
Height: 2 1/8"	Width: 1 3/8"	Height: 2 1/2"	Width: 2 5/8"
Depth: 1 3/8"	Mtg. Cen.: 1 3/8" x 1 1/4"	Depth: 2 1/8"	Mtg. Cen.: 1 1/8" x 1 1/8"
Studs: 4 6-32		Studs: 4 6-32	
<b>GB CASE</b>		<b>HB CASE</b>	
Height: 2 3/8"	Width: 2 3/4"	Height: 3 3/8"	Width: 3 1/4"
Depth: 2 3/8"	Mtg. Cen.: 2 1/8" x 1 3/4"	Depth: 2 5/8"	Mtg. Cen.: 2 1/8" x 1 5/8"
Studs: 4 6-32		Studs: 4 8-32	

Catalog No.	MIL-T-27 Type Designation	Secondary Volts	Secondary Current Amps	Secondary Test Volts RMS	Case
MGF 1	TF4RX01EB002	2.5	3.0	2,500	EB
MGF 2	TF4RX01GB003	2.5	10.0	2,500	GB
MGF 3	TF4RX01FB004	5.0	3.0	2,500	FB
MGF 4	TF4RX01HB005	5.0	10.0	2,500	HB
MGF 5	TF4RX01FB006	6.3	2.0	2,500	FB
MGF 6	TF4RX01GB007	6.3	5.0	2,500	GB
MGF 7	TF4RX01JB008	6.3	10.0	2,500	JB
MGF 8	TF4RX01KB009	6.3	20.0	2,500	KB
MGF 9	TF4RX01JB012	2.5	10.0	10,000	JB
MGF 10	TF4RX01KB013	5.0	10.0	10,000	KB

\*Standard Military Filament and Power Transformers are also available in Grade 4.

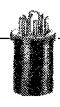
## HERMETICALLY SEALED PULSE TRANSFORMERS

Hermetically sealed Pulse Transformers for use in blocking oscillator, low level interstage coupling, and modulator out put circuits. These components meet MIL-T-27 A specifications. The pulse transformers are designed for maximum power, efficiency, and optimum pulse performance. Balanced coil structures permit series or parallel connection of windings for turn ratios other than unity. Pulse characteristics, voltages and impedance levels will depend upon the interconnections made.


### PULSE TRANSFORMERS

Catalog No.	MIL Type	Blocking Osc.	Inter-Stage Coupling	Low Power Output	Pulse Voltage Kilovolts	Pulse Duration Micro-seconds	Duty Date	No. of Windings	Test Voltage KV. RMS	Characteristic Impedance Ohms	Case No.
MPT-1	TF4RX35YY	✓	✓	✓	0.25/0.25/0.25	0.2-1.0	.004	3	0.7	250	DM-20
MPT-2	TF4RX35YY	✓	✓	✓	0.25/0.25	0.2-1.0	.004	2	0.7	250	DM-20
MPT-3	TF4RX35YY	✓	✓	✓	0.5/0.5/0.5	0.2-1.5	.002	3	1.0	250	DM-18
MPT-4	TF4RX35YY	✓	✓	✓	0.5/0.5	0.2-1.5	.002	2	1.0	250	DM-18
MPT-5	TF4RX35YY	✓	✓	✓	0.5/0.5/0.5	0.5-2.0	.002	3	1.0	500	DM-2C
MPT-6	TF4RX35YY	✓	✓	✓	0.5/0.5	0.5-2.0	.002	2	1.0	500	DM-2C
MPT-7	TF4RX35YY	✓	✓	✓	0.7/0.7/0.7	0.5-1.5	.002	3	1.5	200	DM-18
MPT-8	TF4RX35YY	✓	✓	✓	0.7/0.7	0.5-1.5	.002	2	1.5	200	DM-18
MPT-9	TF4RX35YY	✓	✓	✓	1.0/1.0/1.0	0.7-3.5	.002	3	2.0	200	DM-18
MPT-10	TF4RX35YY	✓	✓	✓	1.0/1.0	0.7-3.5	.002	2	2.0	200	DM-18
MPT-11	TF4RX35YY	✓	✓	✓	1.0/1.0/1.0	1.0-5.0	.002	3	2.0	500	DM-0
MPT-12	TF4RX35YY	✓	✓	✓	0.15/0.15/0.3/0.3	0.2-1.0	.004	4	0.7	700	DM-8


### CASE DIMENSIONS




**DM-8 CASE**  
Height: 1 1/2"  
Width: 1 3/2"  
Flange D.: 1 1/4"



**DM-01 CASE**  
Height: 2"  
Width: 1 1/2"  
Depth: 1 1/2"  
Mtg. Cen.: 1 1/8" x 1 1/8"  
Studs: 4 6-32  
Knockout: 1 1/4 dia.



**DM-20 CASE**  
Height: 1 1/8"  
Diameter: 1 1/8"  
Flange L: 1 1/2"  
Flange D: 0.975"  
Mtg. Cen.: 1 1/8" x 1 3/16"  
2 Holes: .147 wide  
Knockout: .875



**DM-18 CASE**  
Height: 1"  
Width: 2 1/4"  
Depth: 1 1/8"  
Mtg. Cen.: 3/8"  
Studs: 2 6-32

**MM-1**  
Length: 3/4"  
Diameter: 1/2"

**MM-2**  
Length: 23/32"  
Width: 23/32"  
Height: 1/2"

**MM-3**  
Length: 1 1/4"  
Width: 1 1/4"  
Height: 1/2"  
Mtg. Cen.: 1 1/2"  
Mtg. Flange: 1 1/8"

**MM-4**  
Length: 1 13/32"  
Depth: 1 1/4"  
Height: 1 1/4"  
Mtg. Cen.: 2 1/8"  
Mtg. Flange: 2 1/2"

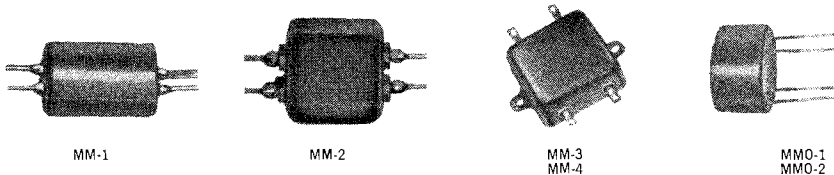
**MOLDED DIMENSIONS**

**MMO-1**  
Diameter: 1 1/8"  
Thickness: 29/64"

**MMO-2**  
Diameter: 1 3/8"  
Thickness: 19/32"

## ULTRA MINIATURE PULSE TRANSFORMERS

- Meet all requirements of MIL-T-27 A.
- Exceedingly small size.
- Negligible weight.
- Encapsulated or hermetically sealed.



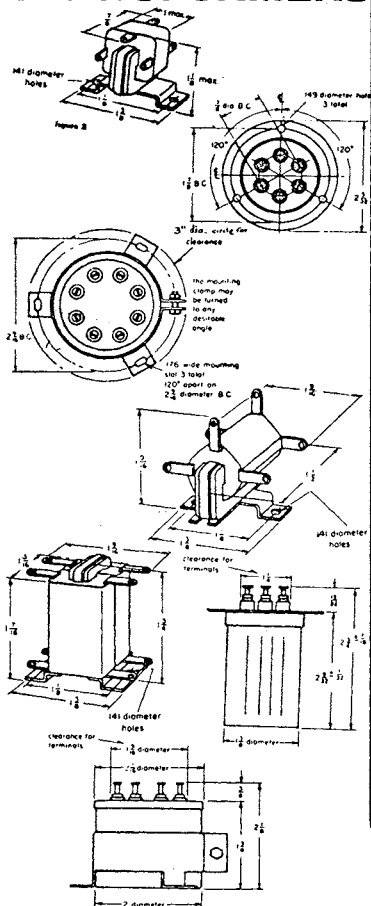
Catalog No.	MIL Type	Application	Pulse Volts	Pulse Width usec	Rise time usec	Inductance		PPS. Mcs	Turns Ratio	Zo ohms	Ca De
						Prin. uhy	Leakage uhy				
EPT-1	TF4RX31YY	Impedance matching & Interstage coupling	20	.07	.03	125	12	2	1:1	200	M
EPT-2	TF4RX31YY		20	.07	.03	150	15	2	2:1	200	M
EPT-3	TF4RX31YY		20	.07	.03	160	15	2	3:1	100	M
EPT-4	TF4RX31YY		20	.07	.03	200	20	2	4:1	100	M
EPT-5	TF4RX31YY		17	.10	.04	200	6	2	4:1	100	M
EPT-6	TF4RX31YY	15	.10	.04	200	5	2	5:1	100	M	
EPT-7	TF4RX31YY	25	.50	.05	1,200	20	1	7:1:1		M	
EPT-8	TF4RX31YY	10	10	.04	12,000	70	.01	5:1		M	
EPT-9	TF4RX31YY	10	5	.04	7,500	22	.01	3:1	100	M	
EPT-11	TF4RX35YY	Blocking oscillator	100	.25	.02	200	2	.012	1:1		M
EPT-12	TF4RX35YY		50	.33	.07	240	2	.002	1:1		M
EPT-13	TF4RX35YY		40	.5	.07	6,000	15		2:1		M
EPT-14	TF4RX35YY		15	6	.1	16,000	15	.0004	1:1.4		M
EPT-15	TF4RX36YY		5	1.5	.25	4,000	300		5:5:1PP	10	M
EPT-16	TF4RX36YY	Current driver	2.5	2.4	.2	2,800	200		3:3:3:1PP	6	M
EPT-17	TF4RX32YY	Current driver	21	1.4	.22	18,000	800	.250	6:1	200	N
EPT-18	TF4RX32YY	Current transformer	10	6	.2	90,000	200	.05	11:1	75	N
EPT-19	TF4RX36YY	Pulse inversion	22	1.7	.25	55,000	300	.05	6:1:1	400	N

When ordering encapsulated units add "M" to the catalog number.



# FREED TRANSFORMER CO., INC.

## PULSE TRANSFORMERS

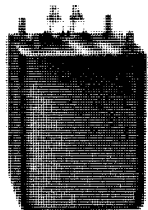


Freed No.	Radiation Laboratory No.	Westinghouse No.	Dimension Figure	GUIDANCE VALUES				Test Voltage (60 Cycle RMS)
				Pulse Voltage (KV)	Pulse Duration (Microseconds)	Maximum Duty Ratio	Load Impedance (Ohms)	
<b>BLOCKING OSCILLATOR, REGENERATIVE DRIVER OR COUPLING TRANSFORMERS</b>								
MPT-13C	132AW2	1P1	1	1.0/1.0/1.0	0.3 to 1.5	0.002	250	1000
MPT-13M	132AW2F	7P1	1					
MPT-13H	132AW2P	4P101	4					
MPT-14C	132BW2	1P2	1	0.5/0.5/0.5/0.15	0.3 to 1.5	0.002	200	1000
MPT-14M	132BW2F	7P2	1					
MPT-14H	132BW2P	4P102	5					
MPT-15C	132DW2	1P3	1	0.5/0.5/0.5	0.1 to 0.5	0.002	300	1000
MPT-15M	132DW2F	7P3	1					
MPT-15H	132DW2P	4P103	4					
MPT-16C	134BW2	1P4	3	2.5/2.5; 2.5/1.25	1 to 2.5	0.002	1500	1500
MPT-16M	134BW2F	7P4	3					
MPT-16H	134BW2P	4P104	5					
MPT-17C	134CW2	1P5	1	2.0/2.0/1.0	1 to 2.5	0.002	1200	1000
MPT-17M	134CW2F	7P5	1					
MPT-17H	134CW2P	4P105	4					
MPT-18C	134EW2	1P6	2	2.0/2.0/1.0	0.3 to 1	0.002	800	750
MPT-18M	134EW2F	7P6	2					
MPT-18H	134EW2P	4P106	4					
MPT-19C	145CW2	1P7	1	0.5/0.5/0.5	1.0 to 5	0.002	500	1000
MPT-19M	145CW2F	7P7	1					
MPT-19H	145CW2P	4P107	4					
MPT-20C	145EW2	1P8	1	1.0/1.0/1.0	1.0 to 5	0.002	800	1000
MPT-20M	145EW2F	7P8	1					
MPT-20H	145EW2P	4P108	4					
MPT-21C	166AW2	1P9	1	1.0/0.67/0.67	1.0 to 5	0.002	800	1000
MPT-21M	166AW2F	7P9	1					
MPT-21H	166AW2P	4P109	4					
MPT-22C	176AW2	1P10	1	2.0/1.0/1.0	1 to 2.5	0.002	1000	1000
MPT-22M	176AW2F	7P10	1					
MPT-22H	176AW2P	4P110	4					
MPT-23C	187AW2	1P11	1	1.0/0.5/0.5	0.5 to 2	0.002	400	1000
MPT-23M	187AW2F	7P11	1					
MPT-23H	187AW2P	4P111	4					
MPT-24C	224AW2	1P12	2	1.0/1.0/1.0/0.3	0.1 to 0.5	0.002	1000	750
MPT-24M	224AW2F	7P12	2					
<b>PULSE TRIGGERING OR CURRENT TRANSFORMERS</b>								
MPT-25C	139DW2	1P13	1	0.25 to 5	0.002	13	1000	1000
MPT-25M	139DW2F	7P13	1					
MPT-25H	139DW2P	4P113	4					
<b>PULSE OUTPUT TRANSFORMERS</b>								
MPT-26C	148CW2	1P14	3	0.2/2.0	0.6 to 3	0.002	1600	1500
MPT-26M	148CW2F	7P14	3	0.4/2.0	0.25 to 1.25	0.002	1000	
MPT-26H	148CW2P	4P114	5	0.4/2.0	0.5 to 2.5	0.002	2000	
MPT-27C	148DW2	1P15	3	0.29/2.0	0.5 to 2.5	0.002	1200	1500
MPT-27M	148DW2F	7P15	3	0.57/2.0	0.2 to 1.0	0.002	800	
MPT-27H	148DW2P	4P115	5	0.57/2.0	0.4 to 2.0	0.002	1500	

C Indicates—varnish impregnated commercial construction.  
 M Indicates—encapsulated or molded construction to MIL-T-27A Grade 5 Class R.  
 H Indicates—hermetically sealed to MIL-T-27A Grade 4 Class R.

### MEET MIL-T-27A SPECIFICATIONS

## HERMETICALLY SEALED FILTER REACTORS



Case	Height	Depth	Width	Mtg. Centers	Studs
AJ	2 3/8"	1 3/8"	1 3/8"	1 3/8" x 1 3/8"	4 6-32
EB	2 1/2"	1 1/8"	1 3/8"	1 3/8" x 1 1/4"	4 6-32
FA	3 1/8"	2 1/8"	2 3/8"	1 3/8" x 1 3/8"	4 6-32
GA	3 1/8"	2 3/8"	2 3/4"	2 1/8" x 1 3/8"	4 6-32
HB	3 3/8"	3 3/8"	2 3/8"	2 1/8" x 1 3/8"	4 8-32
JA	3 3/8"	3 3/8"	4 3/8"	2 3/8" x 2 1/8"	4 8-32
JB	3 3/8"	3 3/8"	3 3/8"	2 3/8" x 2 1/8"	4 8-32
KB	4 3/8"	3 3/8"	3 3/8"	3 x 2 3/8"	4 10-32
LA	5 3/8"	3 1/8"	4 3/8"	3 3/8" x 2 1/8"	4 10-32
LB	4 1/2"	3 1/8"	4 3/8"	3 3/8" x 2 1/8"	4 10-32
MB	4 1/8"	4"	4 1/8"	3 1/8" x 3"	4 1/4"-20



**MC-10 CASE**  
 Height: 1 3/8"  
 Width: 1 1/8"  
 Depth: 1 3/8"  
 Mtg. Cen.: 3/8" x 3/8"  
 Mtg.: 2-4-40 threaded inserts

Catalog No.	MIL Type	Inductance Henry	Rat. Current DC Ma.	OC Res. Ohms	Test Volt Kilovolts	Case No.
MGC 1	TF4RX04AJ	100	10	3,500	1.	AJ
MGC 2	TF4RX04AJ	4	50	230	1.	AJ
MGC 3	TF4RX04EB	10	50	325	1.	EB
MGC 4	TF4RX04FA	20	50	475	1.5	FA
MGC 5	TF4RX04FA	30	50	650	1.5	FA
MGC 6	TF4RX04AJ	3	75	175	1.	AJ
MGC 7	TF4RX04EB	6	75	235	1.5	EB
MGC 8	TF4RX04FA	12	75	265	1.5	FA
MGC 9	TF4RX04EB	3.5	100	145	1.	EB
MGC 10	TF4RX04FA	8	100	180	1.5	FA
MGC 11	TF4RX04GA	12	100	190	2.	GA
MGC 12	TF4RX04EB	2	150	92	1.5	EB
MGC 13	TF4RX04FA	4	150	115	1.5	FA
MGC 14	TF4RX04GA	8	150	125	2.	GA
MGC 15	TF4RX04JB	11	150	120	2.5	JB
MGC 16	TF4RX04FA	2.5	200	70	1.5	FA
MGC 17	TF4RX04GA	4	200	80	2.	GA
MGC 18	TF4RX04HB	7	200	135	2.	HB
MGC 19	TF4RX04JA	10	200	125	2.5	JA
MGC 20	TF4RX04GA	2.5	300	50	2.	GA
MGC 21*	TF4RX04HB	4	300	62	2.5	HB
MGC 22	TF4RX04JB	6	300	85	2.5	JB
MGC 23*	TF4RX04KB	8	300	65	2.5	KB
MGC 24	TF4RX04LA	10	300	100	2.5	LA
MGC 25*	TF4RX04HB	2	400	37	2.5	HB
MGC 26	TF4RX04KB	6	400	60	2.5	KB
MGC 27*	TF4RX04JA	2	500	35	2.5	JA
MGC 28	TF4RX04KB	4	500	45	2.5	KB
MGC 29*	TF4RX04MB	7	500	50	2.5	MB
MGC 30*	TF4RX04LB	2	700	20	2.5	LB
MGC 31*	TF4RX04MB	1.75	1,000	12.5	2.5	MB

\*Not stocked, available on short delivery.  
 Above units available in Grade 4.

# FREED TRANSFORMER CO., INC.

## HERMETICALLY SEALED, MIL-T-27A, GRADE 5, CLASS S FILTER REACTORS

These reactors have a split winding for series or parallel connections.

When using two sections in parallel, double the ldc. Both inductance and resistance are divided by 4.

Catalog No.	Min. Inductance @ ldc (Series Connection)				Max. Rdc	Test Voltage	Case No.
	3.2 H @ Odc	2.1 H @ 25 MA	1.70 H @ 35 MA	1.4 H @ 45 MA			
MGC-32	3.2 H @ Odc	2.1 H @ 25 MA	1.70 H @ 35 MA	1.4 H @ 45 MA	220 Ohms	1000 V	MC-10
MGC-33	1.3 H @ Odc	1.1 H @ 50 MA	0.8 H @ 70 MA	0.5 H @ 90 MA	100 Ohms	1000 V	MC-10
MGC-34	400 MH @ Odc	300 MH @ 100 MA	240 MH @ 130 MA	190 MH @ 160 MA	35 Ohms	1000 V	MC-10
MGC-35	105 MH @ Odc	100 MH @ 200 MA	80 MH @ 250 MA	50 MH @ 300 MA	10 Ohms	1000 V	MC-10
MGC-36	25 MH @ Odc	23.5 MH @ 400 MA	15 MH @ 500 MA	11 MH @ 600 MA	2 Ohms	1000 V	MC-10
MGC-37	5.7 MC @ Odc	4.5 MH @ 0.8 A	3.9 MH @ 1 A	3 MH @ 1.2 A	0.5 Ohms	1000 V	MC-10

## TOROIDAL INDUCTORS

Using the latest developments in the field of magnetic materials and new impregnation and molding techniques the Freed Transformer Co. makes available to the industry the most extensive line of toroidal inductors.

Freed toroids are available in three types of constructions. Open units coated with a special high temperature extremely low loss compound, hermetically sealed in metal cases or molded in special **Freed Epoxy Resin**. Both hermetically sealed and molded units meet the latest military specification MIL-T-27A(graded 1 or 4 and 2 or 5 respectively.) Freed toroidal inductors are supplied with either molypermalloy or carbonyl iron powder cores.

### 1. Temperature Stabilization:

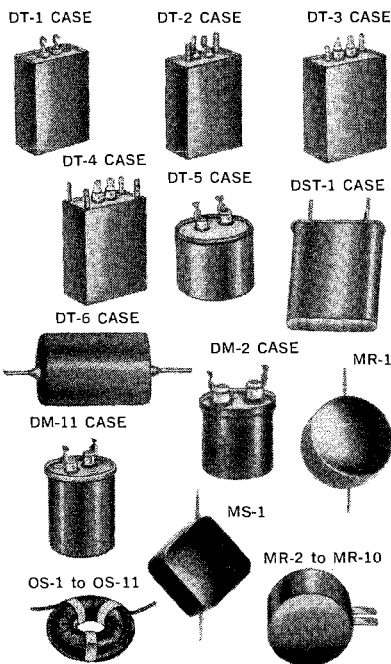
The molypermalloy and carbonyl iron powder cores have a temperature coefficient of inductance. Depending on the degree of temperature stabilization the cores have different temperature coefficients. The degree of stabilization is denoted by a two-letter code.

- SF Non-stabilized cores, ±2½% inductance variations from -55°C to +85°C.
- SN Non-stabilized cores, +2% inductance variations from -55°C to +85°C.
- SE Temperature stabilized cores, +0.1% to -0.4% inductance variations from -1.5°C to +54°C.
- SB Temperature stabilized cores, ±0.1% inductance variations from +13°C to +35°C.
- SD Temperature stabilized cores, ±0.1% inductance variations from -1.5°C to +54°C.
- SW Temperature stabilized cores, ±0.25% inductance variations from -54°C to +85°C.
- SM Temperature stabilized cores, ±.25% -65°C to +125°C.
- SP Temperature stable carbonyl iron cores, ±0.3% inductance variations from -55°C to +85°C.

The temperature (stabilization) coefficient of an inductor will depend upon the nominal inductance value, operating frequency and A.C. voltage across the coil. Under some unfavorable working conditions the temperature coefficient of inductance corresponding to a given stability characteristic may be exceeded.

Toroids with special requirements such as tapped toroids, toroidal transformers, molded and cased units with dimensions other than standard sizes and high temperature toroids can be supplied on request. Our engineering and laboratory facilities are available for consultation, research and development.

### CASED, UNCASED AND MOLDED UNITS



### TOROIDAL INDUCTORS

Type	Ω/H	Max. Norm. ldc	Max. Norm. lac	Max. Norm. Vac	Type	Ω/H	Max. Norm. ldc	Max. Norm. lac	Max. Norm. Vac
TI-1	70	55	73.5	0.46	TI-19	4,500	25	29	0.18
TI-1A	68	75	90.5	0.57	TI-20	2,750	100	*	*
TI-2	160	90	135	0.85	TI-21	1,200	350	*	*
TI-3	600	100	67	0.42	TI-22	5,600	210	*	*
TI-3A	310	150	240	1.5	TI-23	7,000	250	*	*
TI-4	110	55	67	0.42	TI-24	330	15	18	0.11
TI-5	260	28	35	0.22	TI-25	200	20	24	0.15
TI-6	230	75	125	0.80	TI-26	150	25	32	0.20
TI-7	480	40	53	0.33	TI-27	76.5	50	62	0.39
TI-8	1,500	50	80	0.5	TI-28	48.5	50	64	0.40
TI-9	150	200	240	1.5	TI-29	33.5	70	88	0.55
TI-10	430	125	270	1.7	TI-30	28	100	135	0.84
TI-11	30	120	190	1.2	TI-31	19.5	100	136	0.85
TI-12	45	100	160	1	TI-32	48.5	6	14.5	0.09
TI-13	55	140	175	1.1	TI-33	2,150	8	13	0.08
TI-14	580	150	—	—	TI-34	1,700	8	9.5	0.06
TI-15	900	100	—	—	TI-35	4,100	10	18	0.11
TI-16	600	16	21	0.13	TI-36	3,950	10	11	0.07
TI-17	1,200	20	29	0.18	TI-37	23.5	10	32	0.20
TI-18	2,600	30	40	0.25	TI-38	100	4	9.5	0.06

\*TI-20 through TI-23 have a very low voltage coefficient and inductance will change very little with voltage. Because of high frequency application, the maximum voltage is limited rather by breakdown than by saturation.

UNCASED		
Type	O.D.	Hi.
OS-1	5/8"	3/8"
OS-2	7/8"	3/8"
OS-3	1"	3/8"
OS-4	1"	3/8"
OS-5	1 1/8"	5/8"
OS-6	1 3/8"	3/8"
OS-7	1 1/2"	5/8"
OS-8	1 3/4"	1 1/8"
OS-9	2 1/4"	1 1/4"
OS-10	2 3/4"	1 1/4"
OS-11	2 5/8"	1 1/4"
OS-12	3 1/8"	3/8"
OS-13	3 1/2"	1/4"
OS-14	3 3/4"	1/2"

CASE							
Type	Hi.	Dia.	Length	Width	Mtg.	Mtg. Cen.	Cutout
DT-1	1 1/2"		1 1/8"	1/2"	2 4-40 inserts	3/4"	3/8" x 1/2"
DT-2	1 1/4"		1 1/8"	1 3/8"	2 6-32 studs	7/8" x 3/8"	3/8" x 1 1/8"
DT-3	2"		1 23/32"	7/8"	2 6-32 studs	1 1/4" x 3/8"	3/8" x 3/2"
DT-4	3 1/8"		2 3/4"	1 3/8"	4 8-32 studs	2 1/8" x 1 1/8"	3/4" x 3/8"
DT-5	1 3/8"	1 1 3/8"			2 6-32 inserts	1 1/8"	3/8" x 1"
DT-6	5/8"	1/2"			Pig Tails		
DM-2	1"	1 1/8"			2 4-40 inserts	3/8"	3/8" x 7/8"
DM-11	1 1/2"	1 3/8"			2 6-32 inserts	7/8"	3/8" x 7/8"
DST-1	2 3/32"		3/4"	1 1/32"	1/4" long pins	To fit 1/2" crystal socket	

MOLD			
Type	O.D.	Hi.	Clearance Hole Mount
MR-1	7/8"	1 1/32"	Pig Tail
MR-2	1 1/8"	1/2"	No. 4
MR-3	1 3/8"	1/2"	No. 6
MR-3A	1 3/8"	1 1/8"	No. 6
MR-4	1 1/2"	3/4"	No. 8
MR-5	1 5/8"	1"	No. 8
MR-6	2 1/8"	7/8"	No. 8
MR-7	2 3/8"	1 3/8"	No. 10
MR-8	2 1/2"	1 3/8"	No. 1C
MR-9	2 5/8"	1 3/8"	No. 1C
MR-10	2 5/8"	1 3/8"	No. 1C
MR-11	3 1/8"	1 1/4"	Pig Tail
MS-1	2 3/32" x 2 5/32"	1 3/32"	Pig Tail

**FREED TRANSFORMER CO., INC.****LOW FREQUENCY TOROIDAL INDUCTORS**

Freq. Range		100 ~ to 10 KC						200 ~ to 12 KC						Freq. Range	
TYPE		TI-38	TI-32	TI-37	TI-24	TI-25	TI-26	TI-27	TI-28	TI-29	TI-30	TI-31	TYPE		
Temp. Stability		SF	SF	SF	SN	SN	SN	SN	SN	SN	SN	SN	Temp. Stability		
Size	Uncased Case Mold	OS1 DST1 MR1, MS1	OS3 DT1, DM2 MR3	OS5 DT2, DM11 MR4	OS1 DST1 MR1, MS1	OS12 DT1 MR2	OS3 DT1, DM2 MR3	OS5 DT2, DM11 MR4	OS8 DT3, DT5 MR6	OS9 DT4 MR7	OS9 DT4 MR8	OS11 DT4 MR1D	Size	Uncased Case Mold	
	CATALOG NUMBER														
Nominal Inductance													Nominal Inductance		
1	MH				F2400	F2450	F2500	F2550	F2600	F2650	F2700	F2750	1	MH	
2	MH				F2401	F2451	F2501	F2551	F2601	F2651	F2701	F2751	2	MH	
3	MH				F2402	F2452	F2502	F2552	F2602	F2652	F2702	F2752	3	MH	
5	MH	F3550			F2403	F2453	F2503	F2553	F2603	F2653	F2703	F2753	5	MH	
7.5	MH	F3551			F2404	F2454	F2504	F2554	F2604	F2654	F2704	F2754	7.5	MH	
10	MH	F3552			F2405	F2455	F2505	F2555	F2605	F2655	F2705	F2755	10	MH	
15	MH	F3553			F2406	F2456	F2506	F2556	F2606	F2656	F2706	F2756	15	MH	
20	MH	F3554			F2407	F2457	F2507	F2557	F2607	F2657	F2707	F2757	20	MH	
30	MH	F3555			F2408	F2458	F2508	F2558	F2608	F2658	F2708	F2758	30	MH	
50	MH	F3556	F2800	F4000	F2409	F2459	F2509	F2559	F2609	F2659	F2709	F2759	50	MH	
75	MH	F3557	F2801	F4001	F2410	F2460	F2510	F2560	F2610	F2660	F2710	F2760	75	MH	
100	MH	F3558	F2802	F4002	F2411	F2461	F2511	F2561	F2611	F2661	F2711	F2761	100	MH	
150	MH	F3559	F2803	F4003	F2412	F2462	F2512	F2562	F2612	F2662	F2712	F2762	150	MH	
200	MH	F3560	F2804	F4004	F2413	F2463	F2513	F2563	F2613	F2663	F2713	F2763	200	MH	
300	MH	F3561	F2805	F4005	F2414	F2464	F2514	F2564	F2614	F2664	F2714	F2764	300	MH	
400	MH	F3562	F2806	F4006	F2415	F2465	F2515	F2565	F2615	F2665	F2715	F2765	400	MH	
500	MH	F3563	F2807	F4007	F2416	F2466	F2516	F2566	F2616	F2666	F2716	F2766	500	MH	
750	MH	F3564	F2808	F4008	F2417	F2467	F2517	F2567	F2617	F2667	F2717	F2767	750	MH	
1	H	F3565	F2809	F4009	F2418	F2468	F2518	F2568	F2618	F2668	F2718	F2768	1	H	
1.25	H	F3566	F2810	F4010	F2419	F2469	F2519	F2569	F2619	F2669	F2719	F2769	1.25	H	
1.5	H	F3567	F2811	F4011	F2420	F2470	F2520	F2570	F2620	F2670	F2720	F2770	1.5	H	
1.75	H	F3568	F2812	F4012	F2421	F2471	F2521	F2571	F2621	F2671	F2721	F2771	1.75	H	
2	H	F3569	F2813	F4013	F2422	F2472	F2522	F2572	F2622	F2672	F2722	F2772	2	H	
2.25	H	F3570	F2814	F4014		F2473	F2523	F2573	F2623	F2673	F2723	F2773	2.25	H	
2.5	H	F3571	F2815	F4015		F2474	F2524	F2574	F2624	F2674	F2724	F2774	2.5	H	
3	H	F3572	F2816	F4016		F2575	F2525	F2575	F2625	F2675	F2725	F2775	3	H	
3.5	H	F3573	F2817	F4017		F2476	F2526	F2576	F2626	F2676	F2726	F2776	3.5	H	
4	H	F3574	F2818	F4018		F2477	F2527	F2577	F2627	F2677	F2727	F2777	4	H	
4.5	H	F3575	F2819	F4019		F2478	F2528	F2578	F2628	F2678	F2728	F2778	4.5	H	
5	H	F3576	F2820	F4020		F2479	F2529	F2579	F2629	F2679	F2729	F2779	5	H	
7.5	H	F3577	F2821	F4021		F2480	F2530	F2580	F2630	F2680	F2730	F2780	7.5	H	
10	H	F3578	F2822	F4022		F2481	F2531	F2581	F2631	F2681	F2731	F2781	10	H	
15	H		F2823	F4023			F2532	F2582	F2632	F2682	F2732	F2782	15	H	
20	H		F2824	F4024			F2533	F2583	F2633	F2683	F2733	F2783	20	H	
25	H			F4025									25	H	
30	H									F2684	F2734	F2784	30	H	
40	H									F2685	F2735	F2785	40	H	
50	H									F2686	F2736	F2786	50	H	
75	H											F2787	75	H	
100	H											F2788	100	H	

# FREED TRANSFORMER CO., INC.

## LOW FREQUENCY TOROIDAL INDUCTORS

Freq. Range		1 KC to 15 KC										Freq. Range	
TYPE	TI-33	TI-34	TI-16	TI-5	TI-4	TI-1	TI-1A	TI-12	TI-11	TYPE	Temp. Stability		
Temp. Stability	SN	SN	SN	SN, SE SD	SN, SD, SW	SN	SN, SD SW	SN, SD, SW	SN, SD, SW	SN, SD, SW	Temp. Stability		
Uncased Case Mold	OS13 DT6 MR11	OS14 DT6 MR11	OS1 DT1 MR1, MS1	OS3 DT1, DM2, MR3	OS5 DT2, DM11, MR4	OS9 DT3, DT5, MR6	OS9 DT4 MR7	OS9 DT4 MR8	OS11 DT4 MR10	Uncased Case Mold	Temp. Stability		
Nominal Inductance	Catalog Number										Nominal Inductance		
.25 MH	F2850	F2900									.25 MH		
.5 MH	F2851	F2901									.5 MH		
.75 MH	F2852	F2902									.75 MH		
1 MH	F2853	F2903	F2050					F1500	F1655	F1747	1 MH		
1.5 MH	F2854	F2904									1.5 MH		
2 MH	F2855	F2905						F1501	F1656	F1748	2 MH		
2.5 MH	F2856	F2906									2.5 MH		
3 MH	F2857	F2907	F2051					F1502	F1657	F1749	3 MH		
4 MH	F2858	F2908						F1503	F1658	F1750	4 MH		
5 MH	F2859	F2909	F2052	F1700	F850	F800		F1504	F1659	F1751	5 MH		
7.5 MH	F2860	F2910						F1505	F1660		7.5 MH		
10 MH	F2861	F2911	F2053	F1701	F851	F801		F1506	F1661	F1752	10 MH		
12.5 MH	F2862	F2912									12.5 MH		
15 MH	F2863	F2913	F2054	F1702	F852	F802		F1507	F1662	F1753	15 MH		
17.5 MH	F2864	F2914									17.5 MH		
20 MH	F2865	F2915						F1514	F1669	F1760	20 MH		
25 MH	F2866	F2916						F1515	F1670	F1761	25 MH		
30 MH	F2867	F2917	F2055	F1703	F853	F803		F1508	F1663	F1754	30 MH		
50 MH		F2918	F2056	F1704	F854	F804		F1509	F1664	F1755	50 MH		
75 MH		F2919	F2057	F1705	F855	F805		F1510	F1665	F1756	75 MH		
100 MH		F2920	F2058	F1706	F856	F806		F1511	F1666	F1757	100 MH		
150 MH			F2059	F1707	F857	F807		F1512	F1667	F1758	150 MH		
200 MH			F2060	F1708	F858	F808		F1513	F1668	F1759	200 MH		
300 MH			F2061	F1709	F859			F1514	F1669	F1760	300 MH		
400 MH			F2062	F1710	F860			F1515	F1670	F1761	400 MH		
500 MH			F2063	F1711	F861	F809		F1516	F1671	F1762	500 MH		
600 MH				F1712	F862			F1517	F1672		600 MH		
700 MH				F1713	F863						700 MH		
750 MH			F2064			F810		F1518	F1673	F1763	750 MH		
800 MH				F1714	F864						800 MH		
900 MH				F1715	F865						900 MH		
1.0 HY			F2065	F1716	F866	F811		F1519	F1674	F1764	1.0 HY		
1.25 HY			F2066	F1717	F867	F812					1.25 HY		
1.5 HY			F2067	F1718	F868	F813		F1520	F1675	F1765	1.5 HY		
1.75 HY			F2068	F1719	F869	F814					1.75 HY		
2 HY			F2069	F1720	F870	F815		F1521	F1676	F1766	2 HY		
2.25 HY					F871	F816					2.25 HY		
2.5 HY					F872	F817		F1522	F1677	F1767	2.5 HY		
2.75 HY					F873	F818					2.75 HY		
3 HY					F874	F819		F1523	F1678	F1768	3 HY		
3.5 HY					F875	F820		F1524	F1679	F1769	3.5 HY		
4 HY					F876	F821		F1525	F1680	F1770	4 HY		
4.5 HY					F877	F822		F1526	F1681	F1771	4.5 HY		
5 HY					F878	F823		F1527	F1682	F1772	5 HY		
6 HY						F824		F1528	F1683		6 HY		
7 HY						F825		F1529	F1684		7 HY		
7.5 HY										F1773	7.5 HY		
8 HY						F826		F1530	F1685		8 HY		
9 HY						F827		F1531	F1686		9 HY		
10 HY						F828		F1532	F1687	F1774	10 HY		
12 HY								F1533	F1688		12 HY		
15 HY						F829		F1534	F1689	F1775	15 HY		
17 HY								F1535	F1690		17 HY		
20 HY						F830		F1536	F1691	F1776	20 HY		
25 HY								F1537	F1692	F1777	25 HY		
30 HY								F1538	F1693	F1778	30 HY		
40 HY										F1779	40 HY		
50 HY										F1780	50 HY		

## MEDIUM FREQUENCY TOROIDAL INDUCTORS

Freq. Range		10 KC to 50 KC										30 KC to 75 KC				Freq. Range	
TYPE	TI-35	TI-36	TI-17	TI-7	TI-6	TI-2	TI-13	TI-18	TI-8	TI-10	TI-9	TYPE	Temp. Stability				
Temp. Stability	SN	SN	SN	SN	SN, SD SW	SD	SN	SN	SN, SD	SB	SB	Temp. Stability					
Uncased Case Mold	OS13 DT6 MR11	OS14 DT6 MR11	OS1 DT1 MR1, MS1	OS3 DT1, DM2 MR3	OS5 DT2, DM11 MR4	OS6 DT3, DT5 MR5	OS9 DT4 MR8	OS1 DT1 MR1, MS1	OS3 DT1, DM2 MR3	OS7 DT3, DT5 MR5	OS10 DT4 MR9	Uncased Case Mold	Temp. Stability				
Nominal Inductance	Catalog Number										Nominal Inductance						
.1 MH			F2100					F2140	F1821			.1 MH					
.2 MH			F2101					F2141	F1822			.2 MH					
.25 MH	F2950	F3000										.25 MH					
.3 MH			F2102					F2142	F1823			.3 MH					
.4 MH			F2103					F2143	F1824			.4 MH					
.5 MH	F2951	F3001	F2104	F1781				F2144	F1825			.5 MH					
.75 MH	F2952	F3002										.75 MH					
1 MH	F2953	F3003	F2105	F1782	F1726	F1800	F1629	F2145	F1826	F1579	F1554	1 MH					
1.5 MH	F2954	F3004										1.5 MH					
2 MH	F2955	F3005	F2106	F1783	F1727	F1801	F1630	F2146	F1827	F1580	F1555	2 MH					
2.5 MH	F2956	F3006										2.5 MH					
3 MH	F2957	F3007	F2107	F1784	F1728	F1802	F1631	F2147	F1828	F1581	F1556	3 MH					
4 MH	F2958	F3008	F2108		F1729	F1803	F1632	F2148	F1829	F1582	F1557	4 MH					
5 MH	F2959	F3009	F2109	F1785	F1730	F1804	F1633	F2149	F1830	F1583	F1558	5 MH					
7.5 MH	F2960	F2010	F2110	F1786	F1731		F1634	F2150	F1831	F1584	F1559	7.5 MH					
10 MH	F2961	F3011	F2111	F1787	F1732	F1805	F1635	F2151	F1832	F1585	F1560	10 MH					
12.5 MH	F2962	F3012										12.5 MH					
15 MH	F2963	F3013	F2112	F1788	F1733	F1806	F1636	F2152	F1833	F1586	F1561	15 MH					
17.5 MH		F3014										17.5 MH					
20 MH		F3015	F2113	F1789	F1734			F2153	F1834			20 MH					
25 MH		F3016		F1790					F1835			25 MH					
30 MH		F3017	F2114	F1791	F1735	F1807	F1637	F2154	F1836	F1587	F1562	30 MH					
40 MH				F1792					F1837			40 MH					
50 MH				F2115	F1793	F1736	F1808	F1638	F2155	F1838	F1588	F1563	50 MH				
75 MH				F2116	F1794	F1737	F1809	F1639	F2156	F1839	F1589	F1564	75 MH				
100 MH				F2117	F1795	F1738	F1810	F1640	F2157	F1840	F1590	F1565	100 MH				
150 MH					F1796	F1739	F1811	F1641			F1591	F1566	150 MH				
200 MH					F1797	F1740	F1812	F1642			F1592	F1567	200 MH				
250 MH						F1741							250 MH				
300 MH						F1742	F1813	F1643				F1568	300 MH				
400 MH							F1814	F1644				F1569	400 MH				
500 MH						F1743	F1815	F1645				F1570	500 MH				

**FREED TRANSFORMER CO., INC.****HIGH FREQUENCY TOROIDAL INDUCTORS**

Freq. Range		10 KC to 100 KC		50 KC to 200 KC			20 KC to 2 MC	50 KC to 5 MC		100 KC to 10 MC	Freq. Range	
TYPE		TI-15	TI-14	TI-19	TI-3	TI-3A	TI-20	TI-22	TI-23	TI-21	TYPE	
Temp. Stability		SN	SN	SN	SD	SB	SP	SP	SP	SP	Temp. Stability	
Size	Uncased Case Mold	OS3 DT1, DM2 MR3	OS5 DT2, DM11 MR4	OS1 DST 1 MR1, MS1	OS6 DT3, DT5 MR5	OS10 DT4 MR8	OS4 DT2 MR3A	OS2 DT1 MR2	OS2 DT1 MR2	OS1 DT1 MR1, MS1	Size	Uncased Case Mold
	Nominal Inductance	Catalog Number										Nominal Inductance
.010 MH								F2270	F2301	F2240	.010 MH	
.015 MH								F2271	F2302	F2241	.015 MH	
.020 MH								F2272	F2303	F2242	.020 MH	
.030MH								F2273	F2304	F2243	.030MH	
.040 MH								F2274	F2305	F2244	.040 MH	
.050 MH							F2201	F2275	F2306	F2245	.050 MH	
.075 MH								F2276	F2307	F2246	.075 MH	
.100 MH	F1870			F2180	F1846		F2202	F2277	F2308	F2247	.100 MH	
.125 MH										F2248	.125 MH	
.150 MH								F2278	F2309	F2249	.150 MH	
.200 MH	F1871			F2181	F1847		F2203	F2279	F2310		.200 MH	
.300 MH	F1872			F2182	F1848		F2204	F2280	F2311		.300 MH	
.400 MH	F1873			F2183	F1849			F2281	F2312		.400 MH	
.500 MH	F1874			F2184	F1850		F2205	F2282	F2313		.500 MH	
.600 MH				F2185				F2283			.600 MH	
.700 MH				F2186				F2284			.700 MH	
.750 MH							F2206				.750 MH	
.800 MH				F2187							.800 MH	
.900 MH				F2188							.900 MH	
1 MH	F1875	F1920		F2189	F1851		F2207				1 MH	
1.5 MH							F2208				1.5 MH	
2 MH	F1876	F1921		F2190	F1852		F2209				2 MH	
2.5 MH							F2210				2.5 MH	
3 MH	F1877	F1922		F2191	F1853		F2211				3 MH	
3.5 MH							F2212				3.5 MH	
4 MH	F1878	F1923		F2192	F1854		F2213				4 MH	
4.5 MH							F2214				4.5 MH	
5 MH	F1879	F1924		F2193	F1855		F2215				5 MH	
7.5 MH	F1880	F1925			F1845						7.5 MH	
10 MH	F1881	F1926			F1844	F1856					10 MH	
15 MH	F1882	F1927				F1857					15 MH	
20 MH	F1883	F1928				F1858					20 MH	
25 MH	F1884										25 MH	
30 MH	F1885	F1929				F1659					30 MH	
40 MH	F1886					F1860					40 MH	
50 MH	F1887	F1930				F1861					50 MH	
75 MH	F1888	F1931				F1862					75 MH	
100 MH	F1889	F1932				F1863					100 MH	
150 MH		F1933									150 MH	
200 MH		F1934									200 MH	
250 MH		F1935									250 MH	
300 MH		F1936									300 MH	

# FREED TRANSFORMER CO., INC.

## MAGNETIC AMPLIFIERS AND SATURABLE TRANSFORMERS

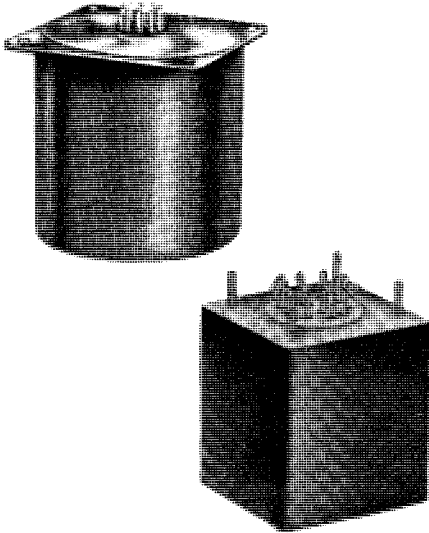
The ever increasing demand for reliability, ruggedness, miniaturization and high performance has made the magnetic amplifier an indispensable component of many military and industrial automatic control and servo systems. Recent advances in materials and techniques permit an ever greater utilization of the well-known inherent advantages of magnetic amplifiers such as direct operation from line voltage, no warm-up time, long life components, ease of signal mixing and hermetic sealing.

Freed Transformer Co. manufactures an extensive line of magnetic amplifiers, ranging from saturable transformers to half-wave type, fast-response servo amplifiers. Choice of catalog amplifiers assures standardization, lowest possible cost and rapid delivery.

All standard units are designed for continuous operation and will operate in an ambient temperature range of  $-55^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ .

In addition to standard items, Freed Transformer Co. has extensive facilities for the design and production of special amplifiers, saturable reactor and magnetic components.

ALL ITEMS LISTED ARE AVAILABLE FROM STOCK.



## FAST RESPONSE MAGNETIC AMPLIFIERS

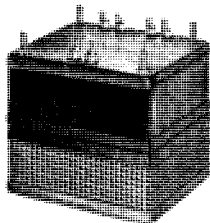
The MAF Type of fast response magnetic amplifier combines high power gain, ruggedness, and reliability with a maximum 2 cycle response. All MAF units are phase-reversible.

Freed No.	MAF-4*	MAF-5*	MAF-6	MAF-7
Power Supply	115V 400 cps	115V 400 cps	115V 400 cps	115V 400 cps
Maximum Output Wattage	10	15	10	15
Output Voltage	57.5V RMS	57.5V RMS	57.5V RMS	57.5V RMS
Typical Load	Kearfott R110-2 Kearfott R111-2	Kearfott R112-2	Kearfott R110-2 Kearfott R111-2	Kearfott R111-2 Kearfott R112-2
Input Signal Required for Full Output	8V AC	8V AC	R110-2 10K 1K 1.2V .4V R111-2 10K 1K 1.6V .6V	R111-2 10K 1K 1.2V .6V R112-2 10K 1K 2.5V 1.0V
Control Winding Resistance	60 Ohms CT 150 Ohms CT	60 Ohms CT 150 Ohms CT	AC or DC 10,000 Ohms Min. 1,000 Ohms Min.	AC or DC 10,000 Ohms Min. 1,000 Ohms Min.
Physical Dimensions	2 $\frac{3}{8}$ " O.D. x 2 $\frac{3}{8}$ " H	2 $\frac{1}{2}$ " O.D. x 2 $\frac{1}{2}$ " H	4 $\frac{3}{8}$ " x 4 $\frac{1}{4}$ " x 2 $\frac{3}{8}$ " H	4 $\frac{3}{8}$ " x 4 $\frac{1}{4}$ " x 2 $\frac{3}{8}$ " H
Weight	13 oz.	18 oz.	4 $\frac{1}{2}$ lbs.	4 $\frac{1}{2}$ lbs.

\*Designed for use with MAT-1 Transistor Preamplifier.

## PUSH-PULL MAGNETIC AMPLIFIERS

The map line of push-pull magnetic amplifiers features high gain, polarity-sensitive amplification and a phase-reversible output.



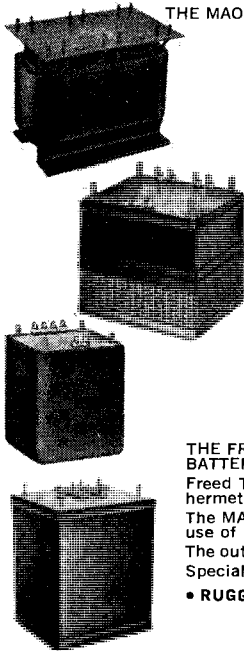
Freed No.	MAP-1	MAP-2	MAP-3	MAP-301
Power Supply	115V A.C. 60 Cycles (To MAPT-1)	115V A.C. 60 Cycles (To MAPT-2)	115V A.C. 60 Cycles (To MAPT-3)	115V A.C. 60 Cycles (To MAPT-301)
Maximum Output Wattage	2.8 Watts	15 Watts	50 Watts	50 Watts
Voltage	140V	150V	120V	140V
Typical Load	Kollsman 951-016D	Diehl FPE 25-11	Diehl FPF 49-9	Diehl FPF 49-9
Input Signal Required for Full Output	1.2 ma.	1 ma.	2 ma.	4.5 ma.
Resp. Time	ON OFF 15 cycles 60	ON OFF 5 cycles 38	ON OFF 3 cycles 15	ON OFF 5 cycles 20
Control Winding Resistance	620 ohms each	1230 ohms each	250 ohms each	1700 ohms each
Physical Dimensions	3 $\frac{3}{4}$ "x3 $\frac{1}{4}$ "x5 $\frac{1}{2}$ "H M.A. 2 $\frac{3}{8}$ "x2 $\frac{1}{2}$ "x3 $\frac{3}{4}$ "H T.	3 $\frac{3}{4}$ "x4 $\frac{3}{4}$ "x7 $\frac{1}{2}$ "H M.A. 2 $\frac{3}{8}$ "x2 $\frac{3}{4}$ "x3 $\frac{3}{4}$ "H T.	5 $\frac{1}{2}$ "x6 $\frac{7}{8}$ "x8 $\frac{1}{2}$ "H M.A. 3 $\frac{3}{8}$ "x3 $\frac{3}{8}$ "x4 $\frac{1}{4}$ "H T.	5 $\frac{1}{2}$ "x5"x8 $\frac{1}{2}$ "H M.A. 3 $\frac{3}{8}$ "x4 $\frac{1}{4}$ "x3 $\frac{3}{8}$ "H T.
Weight	6 lbs. M.A. 3 lbs. T.	11 lbs. M.A. 3 $\frac{1}{2}$ lbs. T.	26 $\frac{1}{2}$ lbs. M.A. 8 lbs. T.	20 lbs. M.A. 8 lbs. T.

Freed No.	MAP-4	MAP-7	MAP-8	MAP-11
Power Supply	115V A.C. 60 Cycles (To MAPT-4)	115V A.C. 400 Cycles	115V A.C. 400 Cycles (To MAPT-8)	115V A.C. 400 Cycles
Maximum Output Wattage	175 Watts	15 Watts	50 Watts	10 Watts
Voltage	130V	125V	115V	115V
Typical Load	Diehl FPF 85-18-1	Kearfott R112-2A	Bendix CK-3000-1-A	Kearfott R111-2A
Input Signal Required for Full Output	8 ma.	.5 ma.	1.8 ma.	.9 ma.
Resp. Time	ON OFF 17 cycles 66	ON OFF 5 cycles 15	ON OFF 45 cycles 60	ON OFF 4 cycles 75
Control Winding Resistance	3000 ohms each	4,400 ohms each	320 ohms each	3300 ohms each
Physical Dimensions	7 $\frac{1}{4}$ "x5"x7 $\frac{1}{2}$ "H M.A. 4"x4 $\frac{3}{4}$ "x5 $\frac{1}{2}$ "H T.	3 $\frac{1}{4}$ "x3 $\frac{3}{8}$ "x7"H	3 $\frac{3}{4}$ "x3 $\frac{3}{8}$ "x7 $\frac{1}{2}$ "H M.A. 2 $\frac{3}{8}$ "x2 $\frac{3}{4}$ "x3 $\frac{3}{4}$ "H T.	4 $\frac{1}{8}$ "x3 $\frac{1}{2}$ "x5 $\frac{1}{4}$ "H
Weight	35 lbs. M.A. 12 lbs. T.	7 lbs.	7 $\frac{1}{2}$ lbs. M.A. 4 lbs. T.	5 lbs.

# FREED TRANSFORMER CO., INC.

## SINGLE ENDED MAGNETIC AMPLIFIERS

THE MAO LINE OF SINGLE-ENDED MAGNETIC AMPLIFIERS PROVIDES A SINGLE STAGE OF DC CONTROLLED AMPLIFICATION, UTILIZING POSITIVE FEEDBACK TO OBTAIN MUCH HIGHER GAIN THAN THAT OF A SATURABLE REACTOR.



Freed No.	MAO-1	MAO-2	MAO-3	MAO-4	MAO-5
Power Supply	115V A.C. 60 Cycles	115V A.C. 60 Cycles	115V A.C. 60 Cycles	115V A.C. 60 Cycles	115V A.C. to the MAO-T-5 Transformer 60 Cycles
Maximum Output Wattage	4 watts	20 watts	100 watts	400 watts	575 watts
Voltage	120V	120V	100V	100V	135V
Typical Load	4000 ohms	700 ohms	100 ohms	25 ohms	25 ohms
Input Signal Req. for Full Output	3 ma.	1.8 ma.	9 ma.	9 ma.	6 ma.
Control Winding Resistance	300 ohms each	700 ohms each	5600 ohms each	4500 ohms each	4,500 ohms
Physical Dimensions	3¼" x 4" x 3½" H	4¼" x 3¾" x 6¾" H	3¼" x 5½" x 4½" H	5" x 7½" x 6" H	5" x 7½" x 6" H Trans. 3¾" x 3¾" x 3¾" H
Weight	4 lbs.	7 lbs.	8½ lbs.	21 lbs.	21 lbs. Trans. 7¼ lbs.

## TRANSISTOR CONVERTERS

THE FREED LINE OF DC TO AC AND DC TO DC TRANSISTOR CONVERTERS PROVIDE A HIGH EFFICIENCY VOLTAGE CONVERSION FROM BATTERY SOURCES TO AN AC LINE VOLTAGE OR HIGH DC VOLTAGE WITHOUT THE USE OF MOVING PARTS.

Freed Transformer Co. maintains a stock line of reliable, highly efficient static DC to DC and DC to AC converters. DC to DC converters in hermetically sealed cans. RF filters included inside case.

The MAC Line of Static DC to AC Converters provide a highly efficient voltage conversion from battery sources to AC voltage without the use of moving parts.

The output voltage and/or frequency is directly proportional to source voltage variation.

Special regulators can be supplied to compensate for this variation.

• RUGGED, QUIET, MAINTENANCE FREE, LONG LIFE OPERATION.

• HIGH POWER TO WEIGHT RATIO, ARC-FREE OPERATION.

### UNREGULATED TDC STOCK UNITS

Type No.	NOM. V in	V out	MAX I out MA	Case Size	Type No.	NOM. V in	V out	MAX I out MA	Case Size
TDC 12-30-15	12v	300	150	2½" x 2¼" x 3½"	TDC 28-30-15	28v	300	150	2½" x 2¼" x 3½"
TDC 12-25-12	12v	250	120	2½" x 2¼" x 3½"	TDC 28-25-12	28v	250	120	2½" x 2¼" x 3½"
TDC 12-30-05	12v	300	50	2" x 2¼" x 3½"	TDC 28-30-05	28v	300	50	2" x 2¼" x 3½"
TDC 12-20-05	12v	200	50	2" x 2¼" x 3½"	TDC 28-20-05	28v	200	50	2" x 2¼" x 3½"

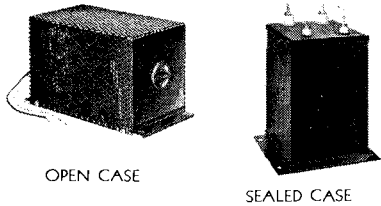
### DC TO DC CONVERTERS

All TDC units are Hermetically Sealed, Oil Filled. Mtg. base plate must be mounted on a sink of sufficient area to maintain a base temperature of 70°C. Maximum output regulation 5% from half load to full load. Ripple frequency 4 to 5 KC; Ripple content 0.1%.

## DC TO AC TRANSISTOR CONVERTERS

Input Voltage—12 VDC

Output Frequency—60 CPS.—Square Wave



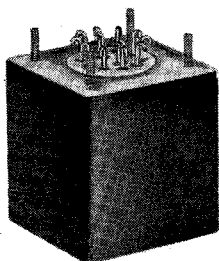
Freed No.	Output Voltage	Power	Type of Case	Dimensions
MAC 12-3-60	115 VRMS	30 VA	Cased	7¼" x 3½" x 4¾"
MAC 12-10-1	115 VRMS	100 VA	Cased	7¼" x 4" x 5"
MAC 12-10-2	115 VRMS	100 VA	Herm. Sealed	7¼" x 4½" x 4¾"
MAC 12-20-1	115 VRMS	180 VA	Cased	6" x 4¾" x 6"
MAC 12-20-2	115 VRMS	180 VA	Herm. Sealed	6" x 4½" x 6"
MAC 12-30-1	115 VRMS	250 VA	Cased	5½" x 6½" x 7½"
MAC 12-30-2	115 VRMS	250 VA	Herm. Sealed	5½" x 6½" x 7½"

- Output Waveform—Square Wave
- Output Frequency—60 cps (Adjustment Control)
- Frequency Stability ±3%
- Hermetically Sealed
- Maximum Ambient Temperature 50°C
- Temperature of Base Mounting Plate must not exceed 70°C
- Output Voltage Variation—Varies Directly with Input Voltage

	Nominal Input V.D.C.	Output @ 115V VA	Unregulated
TAC-12-50	12	50	4½" x 3½" x 4½" H
TAC-12-90	12	90	4½" x 3½" x 4½" H
TAC-12-175	12	175	5" x 4½" x 6" H
TAC-28-50	28	50	4½" x 3½" x 4½" H
TAC-28-100	28	100	4½" x 3½" x 4½" H
TAC-28-175	28	175	5" x 4½" x 6" H
TAC-28-250	28	250	5½" x 5" x 6¾" H

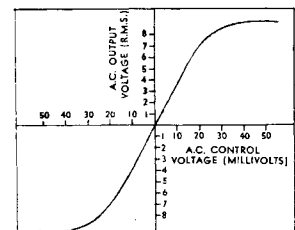
## MINIATURIZED SILICON TRANSISTOR PREAMPLIFIER

THE MAT TYPE OF TRANSISTOR PREAMPLIFIER COMBINES LOW POWER CONSUMPTION, HIGH POWER GAIN AND SMALL SIZE AND WEIGHT.



Freed No.	MAT-1-1
Power Supply	115V 400~
Voltage Gain	400
Maximum Output Voltage	10V (RL = 1.5K)
Typical Load	Freed MAF-4 and MAF-5 Magnetic Amplifiers
Input Signal Required for Full Output	50MV
Input Impedance	>10,000 OHMS
Physical Dimensions	1¾" x 1¾" x 2½" H
Weight	10 oz.

### TRANSFER CHARACTERISTIC CURVE



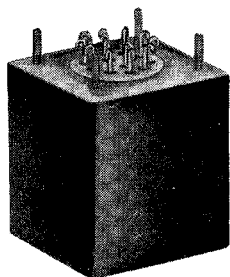


# FREED TRANSFORMER CO., INC.

## FREED SATURABLE TRANSFORMERS

DC CONTROLLED

The MAS line of saturable transformers, commonly controlled by dual-triodes or transistors, emphasizes low cost, small size, extreme reliability (no rectifiers) and phase-reversible output.



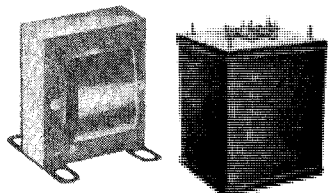
Freed No.	MAS-1	MAS-101	MAS-2	MAS-3	MAS-4	MAS-5	MAS-6	MAS-7	MAS-8
Power Supply	115V A.C. 60 Cycles	115V A.C. 60 Cycles	115V A.C. 60 Cycles	115V A.C. 400 Cycles	115V A.C. 60 Cycles	115V A.C. 400 Cycles	115V A.C. 400 Cycles	115V A.C. 400 Cycles	115V A.C. 400 Cycles
Maximum Output	15 watts	15 watts	6 watts	30 watts	60 watts	2.7 watts	30 watts	40 watts	10 watts
Wattage Voltage	130V	120V	120V	120V	120V	26V	120V	115V	125V
Typical Load	Diehl FPE 25-11	Diehl FPE 25-11	Kearfott R-110	Diehl FPE 49-7	250 ohms	Kearfott R-118	Diehl FPE 49-13-1	Bendix CK-3000-1A	Kearfott R-110, R-111
Input Signal Required for Full Output	6 ma.	9 ma.	3 ma.	8 ma.	20 ma.	4 ma.	4 ma.	6 ma.	11 ma.
Resp. Time	ON OFF 2 cycles 5	ON OFF 3 cycles 6	ON OFF 3 cycles 6	ON OFF 3 cycles 30	ON OFF 10 cycles 35	ON OFF 12 cycles 9	ON OFF 12 cycles 9	ON OFF 12 cycles 9	ON OFF 6 cycles 3
Control Winding Resistance	14 k ohms each	3200 ohms each	2000 ohms each	6800 ohms each	2000 ohms each	1500 ohms each	4000 ohms each	4000 ohms each	7000 ohms each
Physical Dimensions	3 1/2" x 4 1/4" x 5 1/2" H	3 1/2" x 4 1/4" x 5 1/2" H	1 3/4" x 2 3/4" x 2 3/4" H	4 3/4" x 5 7/8" x 5 1/2" H	7" x 5 1/2" x 7" H	2 1/2" x 2 1/2" x 2 1/2" H	3 3/4" x 3 1/2" x 4" H	3 3/4" x 3 1/2" x 4" H	1 5/8" x 2 3/4" x 3 1/2" H
Weight	9 lbs.	9.75 lbs.	2 lbs.	18.5 lbs.	29 lbs.	1.25 lbs.	6 lbs.	6 lbs.	21 oz.

## CONSTANT VOLTAGE TRANSFORMERS

The MCV line of constant voltage transformers provides accurate regulation against line and/or load variations, without the use of tubes or moving parts.

- MILITARY SPECIFICATIONS
- NO TUBES
- COMMERCIAL
- NO MOVING PARTS
- ACCURATE REGULATIONS
- FAST RESPONSE
- FULLY AUTOMATIC

Rated output within  $\pm 2\%$  of nominal value. Regulation automatically maintained within  $\pm 1\%$ . Regulation from 25% to full load  $\pm 2\%$ .



COMMERCIAL

MILITARY

Reg. Output in R.M.S. Volts	Input Range in R.M.S. Volts	Output in V.A. P.F.-1	CATALOG NUMBERS			
			60 Cycles		400 Cycles	
			Comm.	Military*	Comm.*	Military*
115	95-130	5	MCV65LC	MCV65LM	MCV45LC	MCV45LM
115	95-130	25	MCV625LC	MCV625LM	MCV425LC	MCV425LM
115	95-130	75	MCV675LC	MCV675LM	MCV475LC	MCV475LM
115	95-130	125	MCV6125LC	MCV6125LM	MCV4125LC	MCV4125LM
115	95-130	175	MCV6175LC	MCV6175LM	MCV4175LC	MCV4175LM
115	95-130	250	MCV6250LC	MCV6250LM	MCV4250LC	MCV4250LM
115	95-130	375	MCV6375LC	MCV6375LM	MCV4375LC	MCV4375LM
115	95-130	500	MCV6500LC	MCV6500LM	MCV4500LC	MCV4500LM
115	95-130	750	MCV6750LC	MCV6750LM	MCV4750LC	MCV4750LM
115	95-130	1000	MCV61000LC	MCV61000LM	MCV41000LC	MCV41000LM
26	95-130	5	MCV654FC	MCV654FLM	MCV454FC	MCV454FLM
26	95-130	25	MCV6254FC	MCV6254FLM	MCV4254FC	MCV4254FLM
26	95-130	75	MCV6754FC	MCV6754FLM	MCV4754FC	MCV4754FLM
26	95-130	125	MCV61254FC	MCV61254FLM	MCV41254FC	MCV41254FLM
6.4	95-130	5	MCV65FC	MCV65FLM	MCV45FC	MCV45FLM
6.4	95-130	25	MCV625FC	MCV625FLM	MCV425FC	MCV425FLM
6.4	95-130	75	MCV675FC	MCV675FLM	MCV475FC	MCV475FLM
6.4	95-130	125	MCV6125FC	MCV6125FLM	MCV4125FC	MCV4125FLM

\*Condensers are not provided with units. Where condensers are provided they are external to units.

## TELEMETERING COMPONENTS

A complete line of Band Pass Filters, Low Pass Filters and Discriminators is available for multi-channel telemetering applications. These components cover the frequency range from 400 cps to 70,000 cps. The filters feature exceptional phase linearity, excellent selectivity characteristics and plug-in construction. The Discriminators, either fixed or slug tuned, have exceptional linearity, high amplification, and utmost stability.

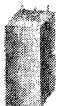
### TELEMETERING BAND PASS FILTERS

Hermetically sealed to MIL-T-27A and MIL-F-18327

These filters cover the frequencies from 400 c.p.s. to 70Kc. Narrow frequency B.P.F. have a band width of  $\pm 9\%$  of center frequency and 45 DB (minimum) points at  $\pm 7\%$  of center frequency of higher or lower adjacent channels. Wide frequency B.P.F. have a band width of  $\pm 19\%$  of center frequency and 50 D.B. points at  $\pm 15\%$  of center frequencies of higher or lower second adjacent channels.



FA-5 CASE



FA-10 CASE

Height: 4 1/2"  
Width: 3 1/2"  
Depth: 2 1/8"  
Mtg. Cen.: 2 1/8" x 1 1/8"  
Studs: 5 8-32 x 1/2"

Height: 4 1/2"  
Width: 3 1/2"  
Depth: 2 1/8"  
Mtg. Cen.: 1 1/4" x 1 1/8"  
Studs: 4 8-32 x 1/2"  
Knockout: 1 1/2" dia.

### FA-15 CASE

Height: 4 1/2"  
Width: 2 7/8"  
Depth: 2 1/8"

Mtg. Cen.: 1 1/4" x 1 1/8"  
Studs: 4 8-32 x 1/2"  
Knockout: 1 1/2" dia.

### CASE SIZES



DF-01  
3/4 x 3/4 x 1 3/8  
MTN-2.3 Thru MTW-70

DF-02  
1 x 1 x 1 3/8  
MTN-4 Thru MTN 1.7

Characteristic Impedance 500 $\Omega$			
Catalog No.	Center Frequency c.p.s.	3 DB Band Width % of C.F.	Case No.
FBP-10	400	$\pm 9\%$	FA-10
FBP-11	560	$\pm 9\%$	FA-10
FBP-12	730	$\pm 9\%$	FA-10
FBP-13	960	$\pm 9\%$	FA-10
FBP-14	1,300	$\pm 9\%$	FA-10
FBP-15	1,700	$\pm 9\%$	FA-10
FBP-16	2,300	$\pm 9\%$	FA-10
FBP-17	3,000	$\pm 9\%$	FA-15
FBP-18	3,900	$\pm 9\%$	FA-15
FBP-19	5,400	$\pm 9\%$	FA-15
FBP-20	7,350	$\pm 9\%$	FA-15
FBP-21	10,500	$\pm 9\%$	FA-15
FBP-22	12,300	$\pm 9\%$	FA-15
FBP-23	14,500	$\pm 9\%$	FA-15
FBP-24	22,000	$\pm 9\%$	FA-15
FBP-25	22,000	$\pm 19\%$	FA-15
FBP-26	30,000	$\pm 9\%$	FA-15
FBP-27	30,000	$\pm 19\%$	FA-15
FBP-28	40,000	$\pm 9\%$	FA-15
FBP-29	40,000	$\pm 19\%$	FA-15
FBP-30	52,500	$\pm 9\%$	FA-15
FBP-31	52,500	$\pm 19\%$	FA-15
FBP-32	70,000	$\pm 9\%$	FA-15
FBP-33	70,000	$\pm 19\%$	FA-15

Characteristic Impedance 500 $\Omega$			
Catalog No.	Center Frequency c.p.s.	3 DB Band Width % of C.F.	Case No.
FBP-34	400	$\pm 9\%$	FA-5
FBP-35	560	$\pm 9\%$	FA-5
FBP-36	730	$\pm 9\%$	FA-5
FBP-37	960	$\pm 9\%$	FA-5
FBP-38	1,300	$\pm 9\%$	FA-5
FBP-39	1,700	$\pm 9\%$	FA-5
FBP-40	2,300	$\pm 9\%$	FA-5
FBP-41	3,000	$\pm 9\%$	FA-5
FBP-42	3,900	$\pm 9\%$	FA-5
FBP-43	5,400	$\pm 9\%$	FA-5
FBP-44	7,350	$\pm 9\%$	FA-5
FBP-45	10,500	$\pm 9\%$	FA-5
FBP-46	12,300	$\pm 9\%$	FA-5
FBP-47	14,500	$\pm 9\%$	FA-5
FBP-48	22,000	$\pm 9\%$	FA-5
FBP-49	22,000	$\pm 19\%$	FA-5
FBP-50	30,000	$\pm 9\%$	FA-5
FBP-51	30,000	$\pm 19\%$	FA-5
FBP-52	40,000	$\pm 9\%$	FA-5
FBP-53	40,000	$\pm 19\%$	FA-5
FBP-54	52,500	$\pm 9\%$	FA-5
FBP-55	52,500	$\pm 19\%$	FA-5
FBP-56	70,000	$\pm 9\%$	FA-5
FBP-57	70,000	$\pm 19\%$	FA-5

### SUBMINIATURE TELEMETERING BAND PASS FILTERS

Manufactured to Specification MIL-F-18327A—Type FR-4RX22YY  
RBD Standard Frequency Channels

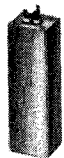
Input and Output Impedance 10K ohms							
Type No.	Center Frequency Fo-in KC	Band Width <3DB	Stop Band Attenuation	Type No.	Center Frequency Fo-in KC	Band Width <3DB	Stop Band Attenuation
MTN-4	.4	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTN-14.5	14.5	$\pm 7\%$	7/38 DB @ 1.75 + .58 I
MTN-56	.56	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTN-22	22	$\pm 7\%$	7/38 DB @ 1.75 + .58 I
MTN-73	.73	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTN-30	30	$\pm 7\%$	7/38 DB @ 1.75 + .58 I
MTN-96	.96	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTN-40	40	$\pm 7\%$	7/38 DB @ 1.75 + .58 I
MTN-1.3	1.3	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTN-52.5	52.5	$\pm 7\%$	7/38 DB @ 1.75 + .58 I
MTN-1.7	1.7	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTN-70	70	$\pm 7\%$	7/38 DB @ 1.75 + .58 I
MTN-2.3	2.3	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTW-22	22	$\pm 15\%$	7/40 DB @ 2.5 + .4 F
MTN-3.0	3.0	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTW-30	30	$\pm 15\%$	7/40 DB @ 2.5 + .4 F
MTN-3.9	3.9	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTW-40	40	$\pm 15\%$	7/40 DB @ 2.5 + .4 F
MTN-5.4	5.4	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTW-52.5	52.5	$\pm 15\%$	7/40 DB @ 2.5 + .4 F
MTN-7.35	7.35	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo	MTW-70	70	$\pm 15\%$	7/40 DB @ 2.5 + .4 F
MTN-10.5	10.5	$\pm 7\%$	7/38 DB @ 1.76 + .58 Fo				

# FREED TRANSFORMER CO., INC.

## DISCRIMINATOR INPUT LOW PASS FILTER

HERMETICALLY SEALED TO MIL-T-27A AND MIL-F-18327 SPECIFICATIONS

### CASE DIMENSIONS



#### FA-1 CASE

Height: 4 1/2"  
Width: 1 1/2"  
Depth: 1 1/2"  
Mtg. Cen.: 3/32" sq.  
4 Inserts: 6-32  
Knockout: 1"

#### FA-185 CASE

Height: 4 1/2"  
Width: 1 1/8"  
Depth: 1 5/8"  
Mtg. Cen.: 1 1/4" x 1 1/8"  
4 Inserts: 6-32  
Knockout: 1 1/2"

Catalog No.	Fo Center Freq. in c.p.s.	Characteristic Impedance Ohms	Case No.
LPI-10	400	30,000	FA-1
LPI-11	560	30,000	FA-1
LPI-12	730	30,000	FA-1
LPI-13	960	30,000	FA-1
LPI-14	1,300	30,000	FA-1
LPI-15	1,700	30,000	FA-1
LPI-16	2,300	30,000	FA-1
LPI-17	3,000	30,000	FA-1
LPI-18	3,900	30,000	FA-1

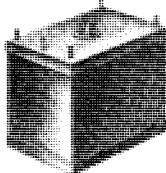
Band Pass Attenuation: 0.05 DB  $\pm$  9 1/2 % of Center Frequency  
30 DB at second harmonic of Pass Band Frequencies  
50 DB at third harmonic of Pass Band Frequencies  
40 DB above third harmonic of Pass Band Frequencies

Catalog No.	Fo Center Freq. in c.p.s.	Characteristic Impedance Ohms	Case No.
LPI-19	5,400	30,000	FA-1
LPI-20	7,350	30,000	FA-1
LPI-21	10,500	30,000	FA-1
LPI-22	12,300	30,000	FA-1
LPI-23	14,500	30,000	FA-1
LPI-24	22,000	5,100	FA-1
LPI-25	30,000	5,100	FA-1
LPI-26	40,000	5,100	FA-1
LPI-27	52,500	5,100	FA-1
LPI-28	70,000	5,100	FA-1

Band Pass Attenuation: 0.05 DB  $\pm$  15% of Center Frequency  
30 DB at second harmonic of Pass Band Frequencies  
50 DB at third harmonic of Pass Band Frequencies  
40 DB above third harmonic of Pass Band Frequencies

## DISCRIMINATOR OUTPUT LOW PASS FILTER

HERMETICALLY SEALED TO MIL-T-27A AND MIL-F-18327 SPECIFICATIONS



#### FA-190 CASE

Height: 4 1/2"  
Width: 2 1/4"  
Depth: 1 3/8"  
Mtg. Cen.: 1 1/2" x 1 1/8"  
4 Inserts: 6-32  
Knockout: 1 1/2"

#### FA-410 CASE

Height: 4 1/2"  
Width: 6"  
Depth: 4"  
Mtg. Cen.: 5 1/4" x 3 1/4"  
5 Studs: 10-32  
Octal Header

Catalog No.	Fo c.p.s.	Characteristic Impedance Ohms	Case No.
LPO-10	6	330	FA-410
LPO-11	8	330	FA-410
LPO-12	11	330	FA-410
LPO-13	14	330	FA-410
LPO-14	20	330	FA-410
LPO-15	25	330	FA-410
LPO-16	35	330	FA-410
LPO-17	45	330	FA-410
LPO-18	60	330	FA-410
LPO-19	81	330	FA-410
LPO-20	110	330	FA-410
LPO-21	160	330	FA-410
LPO-22	185	330	FA-410

Catalog No.	Fo c.p.s.	Characteristic Impedance Ohms	Case No.
LPO-23	220	330	FA-410
LPO-24	330	330	FA-410
LPO-25	450	330	FA-410
LPO-26	600	330	FA-410
LPO-27	660	330	FA-410
LPO-28	790	330	FA-410
LPO-29	900	330	FA-410
LPO-30	1,050	330	FA-410
LPO-31	1,200	330	FA-410
LPO-32	1,600	330	FA-410
LPO-33	2,100	330	FA-410
LPO-34	2,200	330	FA-410
LPO-35	10,000	330	FA-410

Attenuation: <0.2 DB up to 0.5 times Fo  
<0.7 DB from 0.5 to 1. times Fo  
>20 DB at 2 Fo to 2.5 Fo  
>30 DB from 2.5 times Fo to 100 Kc

## FIXED DISCRIMINATORS

HERMETICALLY SEALED TO MIL-T-27A AND MIL-F-18327 SPECIFICATIONS

Catalog No.	Center Frequency (cps)	% Deviation of Fo	Linearity	D.C. Output Volts	Case No.
DST-10	400	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-185
DST-11	560	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-185
DST-12	730	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-185
DST-13	960	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-185
DST-14	1,300	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-185
DST-15	1,700	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-185
DST-16	2,300	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-185

## SLUG TUNED DISCRIMINATORS

Catalog No.	Center Frequency (Kc.)	% Deviation of Fo	Linearity	D.C. Output Volts	Case No.
DST-17	3.0	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-18	3.9	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-19	5.4	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-20	7.35	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-21	10.5	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-22	12.3	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-23	14.5	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-24	22.0	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-25	30.0	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190

Catalog No.	Center Frequency (Kc.)	% Deviation of Fo	Linearity	D.C. Output Volts	Case No.
DST-26	40.0	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-27	52.5	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-28	70.0	$\pm$ 8 1/2	$\pm$ 0.5%	32.5	FA-190
DST-29	22.0	$\pm$ 15	$\pm$ 1.0%	26.0	FA-190
DST-30	30.0	$\pm$ 15	$\pm$ 1.0%	26.0	FA-190
DST-31	40.0	$\pm$ 15	$\pm$ 1.0%	26.0	FA-190
DST-32	52.5	$\pm$ 15	$\pm$ 1.0%	26.0	FA-190
DST-33	70.0	$\pm$ 15	$\pm$ 1.0%	26.0	FA-190

# FREED FILTERS

To MIL-T-27A and MIL-F-18327

Freed Standard Filters are Hermetically Sealed Miniature and Sub-Miniature high performance components designed for both production and laboratory applications in the Communications and Electronic industry. In order to achieve attenuation requirements not obtainable with one single filter, one can combine several tandem filters of different transmission characteristics. Wide Band Pass characteristics are obtainable by combining low and high Pass Units. The astatic construction of inductive components together with special shielding reduces the hum pick-up of the standard filters.

The standard filters are available in Low Pass, High Pass and Band Pass Filters.

**Low Pass Filters:** The attenuation characteristics of Low Pass Filters are 6db or less at cut-off frequency, 35db or more at 1.5 cut-off frequency and 40db or more at 2 cut-off frequency.

**ILP Interstage Low Pass Filter.** Characteristic Impedance 10,000 ohms, in and out.

**LLP Line Low Pass Filter.** Characteristic Impedance 500 to 600  $\Omega$ , in and out.

**High Pass Filters:** The attenuation characteristics of High Pass Filters are 6db or less at cut-off frequency, 35db and 40db or more at 0.67 and 0.5 cut-off frequency.

**IHP Interstage High Pass Filter.** Characteristic Impedance 10,000 ohms, in and out.

**LHP Line High Pass Filter.** Characteristic Impedance 500 to 600  $\Omega$ , in and out.

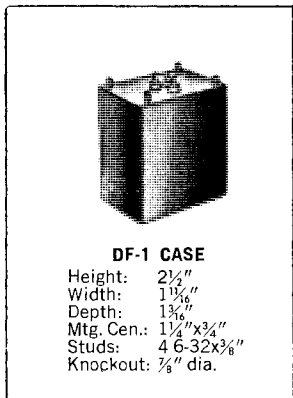
**Band Pass Filters:** The attenuation characteristics of Band Pass Filters are 2db or less at plus or minus 3% of center frequency 40db or more at 0.5 and 2 center frequency.

**IBP Interstage Band Pass Filter.** Nominal input impedance—10,000 ohms. Nominal output impedance 5 megohms or grid of vacuum tube. Effective voltage step-up 2:1. (Output voltage to source voltage.)

**LBP Line Band Pass Filter.** Nominal input impedance 500 to 600 ohms. Nominal output impedance 5 megohms or grid of vacuum tube. Effective voltage step-up 1. (Output voltage to source voltage.)

# FREED TRANSFORMER CO., INC.

## FREED FILTERS TO MIL-T-27A AND MIL-F-18327



**DF-1 CASE**  
Height: 2 1/2"  
Width: 1 1/4"  
Depth: 1 3/8"  
Mtg. Cen.: 1 1/8" x 3/4"  
Studs: 4 - 6-32 x 3/8"  
Knockout: 1/8" dia.

Catalog No.	Cut-off Frequency c.p.s.
ILP- 100	100
ILP- 200	200
ILP- 300	300
ILP- 500	500
ILP- 750	750
ILP- 1,000	1,000
ILP- 1,500	1,500
ILP- 2,000	2,000
ILP- 2,500	2,500
ILP- 3,000	3,000
ILP- 5,000	5,000
ILP- 7,000	7,000
ILP- 10,000	10,000
ILP- 15,000	15,000
ILP- 20,000	20,000
ILP- 23,000	23,000
ILP- 25,000	25,000
ILP- 32,000	32,000
ILP-130,000	130,000
ILP-150,000	150,000

Catalog No.	Cut-off Frequency c.p.s.
LLP- 500	500
LLP- 1,000	1,000
LLP- 1,500	1,500
LLP- 1,600	1,600
LLP- 2,000	2,000
LLP- 2,500	2,500
LLP- 3,000	3,000
LLP-16,000	16,000
LLP-20,000	20,000
LLP-70,000	70,000
LLP-80,000	80,000
IHP- 200	200
IHP- 250	250
IHP- 300	300
IHP- 400	400
IHP- 500	500
IHP- 1,000	1,000
IHP- 2,000	2,000
IHP- 3,000	3,000
IHP-10,000	10,000
IHP-15,000	15,000
LHP- 200	200
LHP- 300	300
LHP- 400	400
LHP- 500	500
LHP- 600	600
LHP- 800	800
LHP- 1,000	1,000
LHP- 2,000	2,000
LHP- 6,000	6,000
LHP-10,000	10,000

Catalog No.	Cut-off Frequency c.p.s.
IBP- 100	100
IBP- 200	200
IBP- 250	250
IBP- 400	400
IBP- 500	500
IBP- 700	700
IBP- 800	800
IBP- 900	900
IBP- 1,000	1,000
IBP- 1,500	1,500
IBP- 2,000	2,000
IBP- 3,000	3,000
IBP- 5,000	5,000
IBP- 7,200	7,200
IBP-10,000	10,000
IBP-12,000	12,000
IBP-15,000	15,000
IBP-30,000	30,000
IBP-57,600	57,600
LBP- 100	100
LBP- 300	300
LBP- 400	400
LBP- 600	600
LBP- 800	800
LBP- 1,000	1,000
LBP- 1,500	1,500
LBP- 2,000	2,000
LBP- 3,000	3,000
LBP- 7,200	7,200
LBP-10,000	10,000
LBP-14,400	14,400
LBP-20,000	20,000
LBP-28,800	28,800

Special filters in all six types are available for any frequency from 100 to 20,000 cycles

## HERMETICALLY SEALED SUB-MINIATURE FILTERS

**Low Pass Filters:** The attenuation characteristics of Low Pass Filters are 6db or less at cut-off frequency, 30db or more at 1.5 cut-off frequency and 40db or more at 2 cut-off frequency.

**ILM Interstage Low Pass Filter.** Characteristic impedance 10,000 ohms, in and out.

**LLM Line Low Pass Filter.** Characteristic Impedance 500 to 600 ohms, in and out.

**High Pass Filters:** The attenuation characteristics of High Pass Filters are 6db or less at cut-off frequency, 30db and 40db or more at 0.67 and 0.5 cut-off frequency.

**IHM Interstage High Pass Filter.** Characteristic Impedance 10,000 ohms, in and out.

**LHM Line High Pass Filter.** Characteristic Impedance 500 to 600 ohms, in and out.

**Band Pass Filters:** The attenuation characteristics of Band Pass Filters are 2db or less at plus or minus 3% of center frequency 35db or more at 0.5 and 2 center frequency.

**IBM Interstage Band Pass Filter.** Nominal input impedance—10,000 ohms. Nominal output impedance 5 megohms or grid of vacuum tube. Effective voltage step-up 2:1. (Output voltage to source voltage.)

**LBM Line Band Pass Filter.** Nominal input impedance 500 to 600 ohms. Nominal output impedance 5 megohms or grid of vacuum tube. Effective voltage step-up 5:1. (Output voltage to source voltage.)

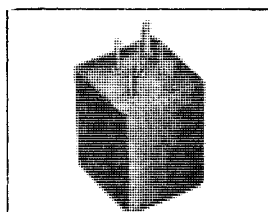
Special filters in all six types are available for any frequency from 200 to 20,000 cycles.

Catalog No.	Cut-off Freq. c.p.s.	Case No.
IBM- 400	400	DF-02
IBM- 500	500	DF-02
IBM- 700	700	DF-02
IBM- 800	800	DF-02
IBM- 900	900	DF-02
IBM- 1,000	1,000	DF-02
IBM- 1,500	1,500	DF-02
IBM- 2,000	2,000	DF-01
IBM- 3,000	3,000	DF-01
IBM- 5,000	5,000	DF-01
IBM- 7,200	7,200	DF-01
IBM-10,000	10,000	DF-01
IBM-12,000	12,000	DF-01
IBM-15,000	15,000	DF-01
IBM-30,000	30,000	DF-01
IBM-57,600	57,600	DF-01
IHM- 300	300	DF-01
IHM- 400	400	DF-01
IHM- 500	500	DF-01
IHM- 1,000	1,000	DF-01
IHM- 2,000	2,000	DF-01
IHM- 3,000	3,000	DF-01
IHM-10,000	10,000	DF-01
IHM-15,000	15,000	DF-01

Catalog No.	Cut-off Freq. c.p.s.	Case No.
ILM- 300	300	DF-01
ILM- 500	500	DF-01
ILM- 750	750	DF-01
ILM- 1,000	1,000	DF-01
ILM- 1,500	1,500	DF-01
ILM- 2,000	2,000	DF-01
ILM- 2,500	2,500	DF-01
ILM- 3,000	3,000	DF-01
ILM- 5,000	5,000	DF-01
ILM- 7,000	7,000	DF-01
ILM- 10,000	10,000	DF-01
ILM- 15,000	15,000	DF-01
ILM- 20,000	20,000	DF-01
ILM- 23,000	23,000	DF-01
ILM- 25,000	25,000	DF-01
ILM- 32,000	32,000	DF-01
ILM-130,000	130,000	DF-01
ILM-150,000	150,000	DF-01
LHM- 300	300	DF-03
LHM- 400	400	DF-03
LHM- 500	500	DF-03
LHM- 800	800	DF-03
LHM- 1,000	1,000	DF-02
LHM- 2,000	2,000	DF-02
LHM- 6,000	6,000	DF-02
LHM-10,000	10,000	DF-02

Catalog No.	Cut-off Freq. c.p.s.	Case No.
LBM- 300	300	DF-02
LBM- 400	400	DF-02
LBM- 600	600	DF-02
LBM- 800	800	DF-02
LBM- 1,000	1,000	DF-01
LBM- 1,500	1,500	DF-01
LBM- 2,000	2,000	DF-01
LBM- 3,000	3,000	DF-01
LBM- 7,200	7,200	DF-01
LBM-10,000	10,000	DF-01
LBM-14,400	14,400	DF-01
LBM-20,000	20,000	DF-01
LBM-28,800	28,800	DF-01
LLM- 500	500	DF-03
LLM- 1,000	1,000	DF-03
LLM- 1,500	1,500	DF-02
LLM- 1,600	1,600	DF-02
LLM- 2,000	2,000	DF-02
LLM- 2,500	2,500	DF-02
LLM- 3,000	3,000	DF-02
LLM-16,000	16,000	DF-02
LLM-20,000	20,000	DF-02
LLM-70,000	70,000	DF-02
LLM-80,000	80,000	DF-02

## CASE DIMENSIONS



### DF CASE STYLE

#### DF-01

Height: 1 3/8"  
Width: 3/4"  
Depth: 1 3/8"  
Mtg. Cen.: 1/8" Dia.  
Studs: 2 - 4-40

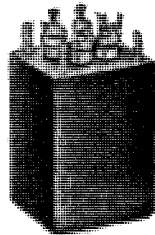
#### DF-02

Height: 1 3/8"  
Width: 1"  
Depth: 1"  
Mtg. Cen.: 3/4" Dia.  
Studs: 2 - 4-40

#### DF-03

Height: 1 3/8"  
Width: 1"  
Depth: 1"  
Mtg. Cen.: 3/4" Dia.  
Studs: 2 - 4-40

## SERIES 1950 NULL "T" FILTERS



The Freed Series 1950 Null T networks consist of two resistance capacitance networks, whose outputs completely cancel each other at the balance frequency. They may be used as rejection networks particularly at low frequencies where LC filters become excessively large and unstable.

Standard models are available for 30, 60 and 120 cycles in a wide range of impedances. Each network will give a minimum of 50 db attenuation at the null frequency.

The null frequency is adjusted to a tolerance of ±2%.

All Null T Filters are hermetically sealed.

Prices on request.

Catalog No.	Frequency
NTF- 30	30 cps
NTF- 60	60 cps
NTF-120	120 cps

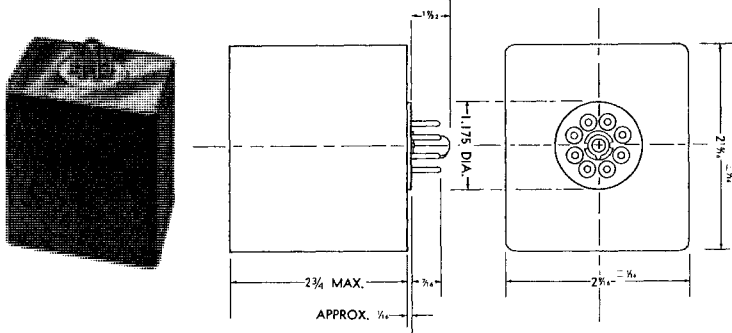
# FREED TRANSFORMER CO., INC.

## TELEGRAPH TONE CHANNEL FILTERS

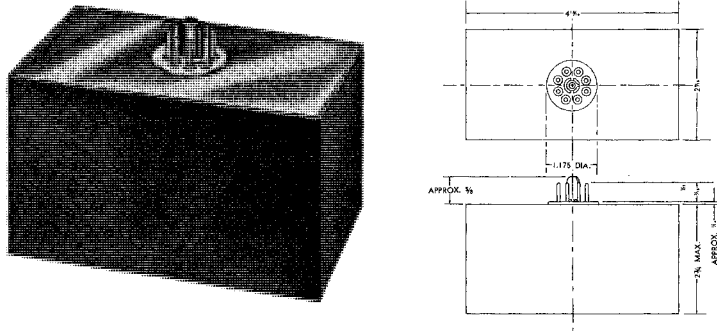
HERMETICALLY SEALED TO MIL-T-27A AND MIL-F-18327 SPECIFICATIONS

Freed Band Pass Filters are extensively used in multiplex frequency shift transmitting and receiving. Stock filters cover all narrow and wide band channels. All units are built with a standard octal socket.

FBT Transmitting Filters are built for a 600 ohm in and out characteristic impedance. Filter configuration allows paralleling of channel outputs, 10db adjacent channel crossover attenuation.



FBR Receiving Filters are designed for a characteristic impedance of 600 ohms in and out. Filter configuration permits paralleling of channel inputs, 20db adjacent channel crossover attenuation.



### RECEIVING FILTERS

Catalog No. Case FA-950	Center Frequency (c.p.s.) Insertion Loss 6db	Pass Band (c.p.s.) Attenuation 2db	Stop Band (c.p.s.) Attenuation 33db
FBR-10	425	±42.5	±130
FBR-11	595	±42.5	±130
FBR-12	765	±42.5	±130
FBR-13	935	±42.5	±130
FBR-14	1,105	±42.5	±130
FBR-15	1,275	±42.5	±130
FBR-16	1,445	±42.5	±130
FBR-17	1,615	±42.5	±130
FBR-18	1,785	±42.5	±130
FBR-19	1,955	±42.5	±130
FBR-20	2,125	±42.5	±130
FBR-21	2,295	±42.5	±130
FBR-22	2,465	±42.5	±130
FBR-23	2,635	±42.5	±130
FBR-24	2,805	±42.5	±130
FBR-25	2,975	±42.5	±130
FBR-26	1,955	±85	±260
FBR-27	2,380	±85	±260
FBR-28	2,805	±85	±260
FBR-29	3,230	±85	±260

### TRANSMITTING FILTERS

Catalog No. Case FA-955	Center Frequency (c.p.s.) Insertion Loss 5db	Pass Band (c.p.s.) Attenuation 2db	Stop Band (c.p.s.) Attenuation 20db
FBT-10	425	±42.5	±130
FBT-11	595	±42.5	±130
FBT-12	765	±42.5	±130
FBT-13	935	±42.5	±130
FBT-14	1,105	±42.5	±130
FBT-15	1,275	±42.5	±130
FBT-16	1,445	±42.5	±130
FBT-17	1,615	±42.5	±130
FBT-18	1,785	±42.5	±130
FBT-19	1,955	±42.5	±130
FBT-20	2,125	±42.5	±130
FBT-21	2,295	±42.5	±130
FBT-22	2,465	±42.5	±130
FBT-23	2,635	±42.5	±130
FBT-24	2,805	±42.5	±130
FBT-25	2,975	±42.5	±130
FBT-26	1,955	±85	±260
FBT-27	2,380	±85	±260
FBT-28	2,805	±85	±260
FBT-29	3,230	±85	±260

## ULTRASONICS

New developments and applications of ultrasonics for industrial cleaning, soldering, welding, and mixing have created a demand for generators and components specifically designed for ultrasonic applications.

Using the latest developments in the field of special magnetic materials the FREED ultrasonic transformers are designed for greatest efficiency and maximum reliability. They feature small size excellent performance and long life under continuous duty operation.

Transformers with an extended frequency range (frequencies up to 2 MC) can be supplied upon request.

### ULTRASONIC DRIVER AND INPUT TRANSFORMERS

Frequency Response: ±1 DB 10 KC to 60 KC.

Catalog No.	Application	Primary Impedance Ohms	Ratio	Maximum Power Watts	Maximum Primary D.C. per Side Ma.	Case Size
ULI-20	Transducer to PP 811A	1, 2, 4	1:17.3	5		DM-03
ULD-20	PP 6CM6 to PP 811A	10,000	4.4:1	5	50	DM-03
ULD-50	PP 5881 to PP 8000	7,200	1.7:1	25	90	EA

### ULTRASONIC OUTPUT TRANSFORMERS

Frequency response: ±1 DB 20 KC to 60 KC.

Catalog No.	Application	Impedance in Ohms		Maximum Power Watts	Maximum Primary D.C. per Side Ma.	Case Size
		Primary	Secondary			
ULO-10	PP 6083 to transducer	7,600	1/4	100	120	DC-4B
ULO-11	Same	7,600	2/8	100	120	DC-4B
ULO-12	Same	7,600	4/16	100	120	DC-4B
ULO-13	Same	7,600	7.5/30	100	120	DC-4B
ULO-30	PP 811A to transducer	12,400	1/4	300	170	DC-4B
ULO-31	Same	12,400	2/8	300	170	DC-4B
ULO-32	Same	12,400	4/16	300	170	DC-4B
ULO-33	Same	12,400	7.5/30	300	170	DC-4B
ULO-34	Same	12,400	25	300	170	DC-4B
ULO-35	Same	12,400	125/500	300	170	DC-4B
ULO-36	Same	12,400	250/1000	300	170	DC-4B
ULO-37	Same	12,400	75/300	300	170	DC-4B
ULO-52	PP 8000 to transducer	10,800	4/16	500	230	MA-2
ULO-53	Same	10,800	7.5/30	500	230	MA-2
ULO-54	Same	10,800	25/100	500	230	MA-2
ULO-55	Same	10,800	125/500	500	320	MA-2
ULO-56	Same	10,800	250/1000	500	230	MA-2
ULO-101	PP. Par. 8000 to transducer	5,400	25/100	1000	430	DC-6B
ULO-104	Same	5,400	75/300	1000	430	DC-6B
ULO-110	PP 4-250A to transducer	10,900	18.8/75/300	800	250	OL-112-1

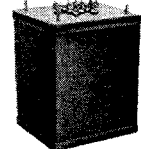
### CASE DIMENSIONS

#### OL-112-1 CASE

Height: 6"  
Width: 5 1/2"  
Length: 4 1/4"  
Mounting: 4 1/2"-20 Studs  
Mtg. Cen.: 4 3/8"x3 3/8"  
Cutout: 3" dia.

#### DC-4B CASE

Height: 4 3/4"  
Width: 3 1/4"  
Length: 3"  
Mounting: 4-8-32 Studs  
Mtg. Cen.: 2 1/2"x2 1/2"  
Cutout: (2) 1 1/8"x3/4"



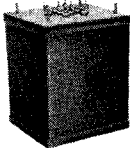
#### DC-6B CASE

Height: 6"  
Width: 5"  
Length: 4 1/4"  
Mounting: 4-10-32 Studs  
Mtg. Cen.: 3 3/4"x3"  
Cutout: 3" Dia.



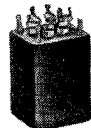
#### EA CASE

Height: 2 1/8"  
Width: 1 1/8"  
Length: 1 1/2"  
Mounting: 4-6-32 Studs  
Mtg. Cen.: 1 1/8"x1 1/4"  
Cutout: 1 1/8"



#### MA-2 CASE

Height: 4"  
Width: 4 1/2"  
Length: 3 1/8"  
Mounting: 4-10-32 Studs  
Mtg. Cen.: 2 1/4"x3 3/4"  
Cutout: (2) 2 3/8"x3/4"



#### DM-03 CASE

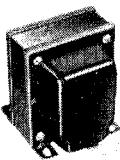
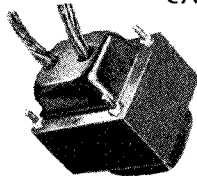
Height: 2 1/2"  
Width: 1 1/2"  
Length: 1 1/2"  
Mounting: 4-6-32 Studs  
Mtg. Cen.: 1 1/8"x1 1/8"  
Cutout: 1 1/4" Dia.

# FREED TRANSFORMER CO., INC.

## COMMERCIAL GRADE COMPONENTS

These components are designed to meet the demand for low-cost replacement parts for commercial electronic equipment. The best commercially available materials have been utilized in the design of these units, to insure reliability and excellent performance characteristics. Vacuum impregnation with a non-hygroscopic varnish to prevent penetration of humidity are employed to give these units long life and trouble-free performance. 230-115 V, 50-60 C.P.S. Stepdown Transformers rated from 25 V A up to 5,000 V A Rating and line booster transformers are included in this series. All units, with only a few exceptions, are uncased or of shell-type construction. Isolation transformers and Stepdown transformers are equipped with line cord and receptacle.

### CASE DIMENSIONS



Case No.	Height	Width	Depth	Mtg. Centers	Mtg. Studs
HS300	2 1/2"	3"	2 1/2"	2 1/2 x 2"	(4) 3/16 x 3/16"
HS303	2 1/2"	3"	2 1/2"	2 1/2 x 2"	(4) 3/16 x 3/16"
HS306	3 1/4"	3"	2 1/2"	2 1/2 x 2"	(4) 3/16 x 3/16"
HS307	3 3/8"	3"	2 1/2"	2 1/2 x 2"	(4) 3/16 x 3/16"
HS503	3 1/2"	3 3/4"	3 1/8"	3 1/8 x 2 1/2"	(4) 3/16 x 3/16"
HS505	3 3/4"	3 3/4"	3 1/8"	3 1/8 x 2 1/2"	(4) 3/16 x 3/16"
HS603	3 3/4"	4 1/2"	3 3/4"	3 3/4 x 3"	(4) 3/16 x 3/16"
HS605	4"	4 1/2"	3 3/4"	3 3/4 x 3"	(4) 3/16 x 3/16"
HS606	4 1/8"	4 1/2"	3 3/4"	3 3/4 x 3"	(4) 3/16 x 3/16"
HS610	4 1/8"	4 1/2"	3 3/4"	3 3/4 x 3"	(4) 3/16 x 3/16"
HS612	4 3/8"	4 1/2"	3 3/4"	3 3/4 x 3"	(4) 3/16 x 3/16"
HS708	5 1/2"	5 1/4"	4 3/8"	4 3/8 x 3 1/2"	(4) 3/16 x 3/16"
HS709	6"	5 1/4"	4 3/8"	4 3/8 x 3 1/2"	(4) 3/16 x 3/16"

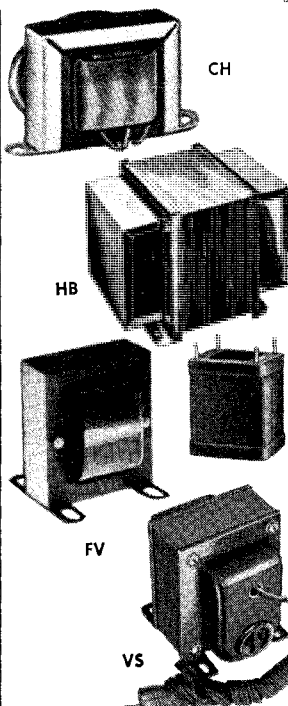
Case No.	Height	Width	Depth	Mtg. Centers	Mtg. Studs
VS300	3 3/8"	2 1/2"	2 1/4"	2x1 1/16"	(4) 3/16 x 3/16"
VS303	3 3/8"	2 1/2"	3"	2x1 1/16"	(4) 3/16 x 3/16"
VS304	3 3/8"	4 1/4"	3 1/4"	2 1/2 x 3"	(4) 3/16 x 3/16"
VS306	3 3/8"	2 1/2"	3 3/8"	2x2 1/8"	(4) 3/16 x 3/16"
VS307	3 3/8"	2 1/2"	3 1/2"	2x2 1/8"	(4) 3/16 x 3/16"
VS503	3 3/8"	3 1/4"	3 1/4"	2 1/2 x 2 3/8"	(4) 3/16 x 3/16"
VS505	3 3/8"	3 1/4"	3 1/8"	2 1/2 x 2 3/8"	(4) 3/16 x 3/16"
VS506	3 3/8"	3 1/4"	4 1/4"	2 1/2 x 3"	3/16 x 3/16"
VS508	3 3/8"	2 1/2"	3 1/8"	2x2 1/8"	(4) 3/16 x 3/16"
VS603	4 1/2"	3 1/4"	3 1/4"	3x2 1/16"	(4) 3/16 x 3/16"
VS605	4 1/2"	3 1/4"	4 1/8"	3x2 1/16"	(4) 3/16 x 3/16"
VS606	4 1/2"	3 1/4"	4 1/4"	3x3 1/8"	(4) 3/16 x 3/16"
VS610	4 1/2"	3 1/4"	4 1/4"	3x3 1/8"	(4) 3/16 x 3/16"
VS612	4 1/2"	3 1/4"	5"	3x3 1/8"	(4) 3/16 x 3/16"
VS708	5 1/2"	4 3/8"	5 1/4"	3 1/2 x 4"	(4) 3/16 x 3/16"
VS709	5 1/2"	4 3/8"	5 1/4"	3 1/2 x 4"	(4) 3/16 x 3/16"

### POWER TRANSFORMERS

All primaries designed for 115-volt, 50-60 cycle operation.

Catalog No.	Py Va	Hi Volt	Choke Input D.C.V. D.C.Ma.	Cond. Input D.C.V. D.C.Ma.	Bias Tap	Rectifier	Fil. No.1	Fil. No.2	Fil. No.3	Case No.
RGP 1	45	500V CT		270 40		6X4.5Y3	5/6.3V @ 2A	6.3V @ 2A		VS300
RGP 2	45	500V CT		270 40		6X4.5Y3	5/6.3V @ 2A	6.3V @ 2A		HS300
RGP 3	57	600V CT		330 50		6X4.5Y3	5/6.3V @ 2A	6.3V @ 2.5A		VS303
RGP 4	57	600V CT		330 50		6X4.5Y3	5/6.3V @ 2A	6.3V @ 2.5A		HS303
RGP 5	64	650V CT		370 50		6X4.5Y3	5/6.3V @ 2A	6.3V @ 3A		VS303
RGP 6	64	650V CT		370 50		6X4.5Y3	5/6.3V @ 2A	6.3V @ 3A		HS303
RGP 7	73	800V CT		320 70		6X4.5Y3	5/6.3V @ 2A	6.3V @ 3A		VS306
RGP 8	73	800V CT		320 70		6X4.5Y3	5/6.3V @ 2A	6.3V @ 3A		HS306
RGP 9	110	650V CT	225 140	330 100		5Y3.5U4	5V @ 3A	6.3V @ 5A		VS503
RGP 10	110	650V CT	225 140	330 100		5Y3.5U4	5V @ 3A	6.3V @ 5A		HS503
RGP 11	76	700V CT	260 100	385 70		5Y3	5V @ 2A	6.3V @ 2.5A		VS307
RGP 12	76	700V CT	260 100	385 70		5Y3	5V @ 2A	6.3V @ 2.5A		HS307
RGP 13	108	700V CT	250 125	370 90		5Y3.5U4	5V @ 3A	6.3V @ 5A		VS503
RGP 14	108	700V CT	250 125	370 90		5Y3.5U4	5V @ 3A	6.3V @ 5A		HS503
RGP 15	127	700V CT	260 170	350 120		5U4	5V @ 3A	6.3V @ 5A		VS505
RGP 16	127	700V CT	260 170	350 120		5U4	5V @ 3A	6.3V @ 5A		HS505
RGP 17	146	700V CT	260 210	350 150		5U4	5V @ 3A	6.3V @ 5A	6.3V @ 1A	VS603
RGP 18	146	700V CT	260 210	350 150		5U4	5V @ 3A	6.3V @ 5A	6.3V @ 1A	HS603
RGP 19	207	800V CT	295 280	400 200		5U4, 2-5Y3	5V @ 4A	6.3V @ 6A		VS606
RGP 20	207	800V CT	295 280	400 200		5U4, 2-5Y3	5V @ 4A	6.3V @ 6A		HS606
RGP 21	225	800V CT	295 280	400 200	80	5U4, 2-5Y3	5V @ 4A	6.3V @ 6A	5/6.3V @ 2A	VS606
RGP 22	225	800V CT	295 280	400 200	80	5U4, 2-5Y3	5V @ 4A	6.3V @ 6A	5/6.3V @ 2A	HS606
RGP 23	268	840V CT	330 350	450 250	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	VS612
RGP 24	268	840V CT	330 350	450 250	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	HS612
RGP 25	320	900V CT	340 420	490 300	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	VS708
RGP 26	320	900V CT	340 420	490 300	80	2-5U4	5V @ 6A	6.3V @ 6A	5/6.3V @ 2A	HS708
RGP 27	127	900V CT	360 150			5U4	5V @ 3A	6.3V @ 5A		VS603
RGP 28	127	900V CT	360 150			5U4	5V @ 3A	6.3V @ 5A		HS603
RGP 29	150	900V CT	350 200			5U4	5V @ 3A	6.3V @ 5A		VS605
RGP 30	150	900V CT	350 200			5U4	5V @ 3A	6.3V @ 5A		HS605
RGP 31	203	1100V CT	400 250			5R4GY	5V @ 3A	6.3V @ 5A		VS610
RGP 32	203	1100V CT	400 250			5R4GY	5V @ 3A	6.3V @ 5A		HS610
RGP 33	248	1100V CT	420 300			2-5R4GY	5V @ 4A	6.3V @ 7A		VS612
RGP 34	248	1100V CT	420 300			2-5R4GY	5V @ 4A	6.3V @ 7A		HS612
RGP 35	310	1280V CT	480 350			2-5R4GY	5V @ 4A	6.3V @ 7A		VS709
RGP 36	310	1280V CT	480 350			2-5R4GY	5V @ 4A	6.3V @ 7A		HS709

Case No.	Height	Width	Depth	Mtg. Centers	Mtg. Studs
DC2B	3 1/2"	2 1/2"	2 1/4"	2x1 1/4"	(4) 8-32
DC4A	3 3/4"	3 1/2"	3"	2 1/2 x 2 1/2"	(4) 8-32
DC5C	4 1/4"	4 1/8"	3 1/2"	3 1/8 x 2 3/8"	(4) 10-32
DC6A	4 1/2"	5"	4 1/8"	3 3/4 x 3"	(4) 10-32
CH50	1 1/8"	2 1/8"	1 3/4"	2 3/8"	(2) 3/16
CH60	2"	3 1/4"	1 3/4"	2 3/8"	(2) 3/16
CH62	2"	3 1/4"	2 1/8"	2 3/8"	(2) 3/16
CH70	2 1/8"	3 1/8"	2 1/4"	3 1/8"	(2) 3/16
CH80	2 3/8"	4"	2 3/8"	3 1/8"	(2) 3/16
FV10	3 1/4"	2 1/2"	2 3/8"	2x2"	(4) 1/8 x 3/16
FV12	3 3/8"	2 1/2"	2 3/8"	2x2 1/8"	(4) 1/8 x 3/16
FV22	3 3/8"	2 3/8"	2 1/2"	2 1/2 x 2 1/2"	(4) 3/16 x 3/16
FV30	4 1/8"	3 1/4"	3"	2 1/2 x 2 1/4"	(4) 3/16 x 3/16
HB718	6 1/4"	6 1/2"	8 1/2"	4 3/4 x 4 1/2"	(4) 3/8 x 3/32
HB728	6 1/4"	6 1/2"	9 3/8"	4 3/4 x 5 3/8"	(4) 3/8 x 3/32
HB828	6 5/8"	7 1/8"	9 7/8"	5 3/8 x 5 3/4"	(4) 3/8 x 3/32
HB920	6 1/2"	7 1/8"	10 1/4"	6 1/2 x 7 1/8"	(4) 3/8 x 3/32
VS300	3 3/8"	2 1/2"	3"	2x2"	(4) 3/16 x 3/16
VS401	3 3/8"	2 1/8"	3 1/4"	2 1/4 x 1 1/8"	(4) 3/16 x 3/16
VS501	3 3/8"	3 1/4"	3 3/8"	2 1/2 x 2 1/8"	(4) 3/16 x 3/16
VS503	3 3/8"	3 1/4"	3 3/8"	2 1/2 x 2 3/8"	(4) 3/16 x 3/16
VS601	4 1/2"	3 1/8"	3 3/8"	3x2 1/8"	(4) 3/16 x 3/16
VS604	4 1/2"	3 1/8"	4"	3x2 1/8"	(4) 3/16 x 3/16
VS611	4 1/2"	3 1/8"	4 3/8"	3x3 1/8"	(4) 3/16 x 3/16
VS612	4 1/2"	3 1/8"	5"	3x3 1/8"	(4) 3/16 x 3/16
VS700	5 1/8"	3 3/8"	5"	3 1/2 x 3 1/4"	(4) 3/16 x 3/16
VS706	5 1/8"	4 1/8"	5 1/2"	3 1/2 x 3 3/8"	(4) 3/16 x 3/16
VS714	5 1/8"	4 1/8"	6 1/2"	3 1/2 x 4 3/8"	(4) 3/16 x 3/16
VS718	5 1/8"	4 1/8"	7"	3 1/2 x 5 1/4"	(4) 3/16 x 3/16
VS728	5 1/8"	4 1/8"	8 1/4"	3 1/2 x 6 1/2"	(4) 3/16 x 3/16



### FILAMENT TRANSFORMERS

All primaries are for 115V, 50/60 c.p.s.

Catalog No.	Secondary Voltage	Secondary Current Amps	Secondary Test Voltage RMS	Case Size
TF 1	2.5 (C.T.)	7.5	1500	CH60
TF 2	2.5 (C.T.)	10	1500	CH70
TF 3	2.5 (C.T.)	5	7500	DC2B
TF 4	2.5 (C.T.)	10	7500	DC4A
TF 5	5.0 (C.T.)	4	1500	CH60
TF 6	5.0 (C.T.)	6	1500	CH70
TF 7	5.0 (C.T.)	10	1500	CH80
TF 8	5.0 (C.T.)	10	1500	FV10
TF 9	5.0 (C.T.)	20	2800	FV30
TF 10	5.0 (C.T.)	20	10,000	DC6A
TF 11	6.3 (C.T.)	1.35	1500	CH50
TF 12	6.3 (C.T.)	3	1500	CH60
TF 13	6.3 (C.T.)	5	1500	CH70
TF 14	6.3 (C.T.)	7	1500	FV12
TF 15	6.3 (C.T.)	10	1500	FV22
TF 16	10 (C.T.)	5	2800	CH80
TF 17	10 (C.T.)	5	2800	FV10
TF 18	10 (C.T.)	12 or 11 (tapped primary)	7500	DC-SC
TF 19	12.6 (C.T.)	2	1500	CH62

TF 3, 4, 10 & 18 supplied with terminals. All others with leads.

### AUTO TRANSFORMERS

To be used as step-down transformer. Equipped with standard receptacle and line cord

Catalog No.	Transformation	VA Rating	Weight (lbs.)	Case Size
SDT 1*	230/115 V. 50/60 c.p.s.	25	1	CH-60
SDT 2*	230/115 V. 50/60 c.p.s.	50	1 1/4	CH-62
SDT 3	230/115 V. 50/60 c.p.s.	50	2 1/2	VS-300
SDT 4	230/115 V. 50/60 c.p.s.	100	3	VS-401
SDT 5*	230/115 V. 50/60 c.p.s.	200	5	VS-501
SDT 6	230/115 V. 50/60 c.p.s.	300	6 1/2	VS-601
SDT 7	230/115 V. 50/60 c.p.s.	400	8	VS-604
SDT 8	230/115 V. 50/60 c.p.s.	500	11	VS-611
SDT 9	230/115 V. 50/60 c.p.s.	750	15	VS-706
SDT 10	230/115 V. 50/60 c.p.s.	1000	23	VS-718
SDT 11	230/115 V. 50/60 c.p.s.	1500	29 1/2	VS-728
SDT 12*	230/115 V. 50/60 c.p.s.	2000	37	HB-718
SDT 13*	230/115 V. 50/60 c.p.s.	2500	47	HB-728
SDT 14*	230/115 V. 50/60 c.p.s.	3000	58	HB-828
SDT 15*	230/115 V. 50/60 c.p.s.	5000	72	HB-920

\*Supplied with leads without line cord and receptacle.

### LINE BOOSTER TRANSFORMERS

Operates from 90 to 110 volts input to provide 10% step-up.

Catalog Number	Primary Voltage	Secondary Voltage	VA Rating	Case Size
LB-1	90-110	1.1 x input	350	VS-300
LB-2	90-110	1.1 x input	2000	VS-611

### ISOLATION TRANSFORMERS

Electrostatic shield between primary and secondary. Equipped with standard receptacle and line cord.

Catalog Number	Primary Voltage 50/60 c.p.s.	Secondary Voltage	VA Rating	Case Size
IT 1	115	115	50	VS-401
IT 2	115	115	100	VS-503
IT 3	115	115	300	VS-700
IT 4	115</			

# FREED TRANSFORMER CO., INC.

## COMMERCIAL GRADE COMPONENTS

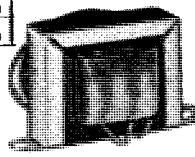
### AUDIO TRANSFORMERS

Catalog No.	Application	Impedance Level Primary Secondary	Max. Power Level Level DBM or Power in Watts	Ratio	Max. Pri. D.C. Side Ma.	D.C. Un- balance Ma.	Freq. Response C.F.S.	Case No.
RG1	Input; multiple line or double button mike to single or push-pull grids.	500 CT 200 CT	100,000 CT	+20	1:14.1	50	±2DB 200-5000	CH-40
RG2	Input; single button mike to single or push-pull grids.	100	100,000 CT	+20	1:31.6	50	±2DB 200-5000	CH-40
RG3	Input; voice coil to grid. Intercom.	3.2	100,000	+20	1:179		±2DB 200-5000	CH-40
RG4	Mixing and matching line to line	600 CT 500 CT 200 CT 150/125/50	600 CT 500 CT 200 CT 150/125/50	+20	1:1		±2DB 100-5000	CH-40
RG5	Interstage; single triode plate to single or P.P. grids.	10,000	90,000 CT	+30	1:3	10	±2DB 200-5000	CH-40
RG6	Output; single plate to line or mixer.	10,000	600 CT 500 CT 200 CT 150/125/50	+30	4.8:1	10	±2DB 200-5000	CH-40
RG7	Output; Push-pull plate to line or mixer.	20,000 CT	600 CT 500 CT 200 CT 150/125/50	+30	6.32:1	10	±2DB 200-5000	CH-40
RG8	Output; plate to V.C. 6A16, 6L6, 6Y6, 25B6, 25C6, 35A5, 35B5, 35C5, 50B5, 50C5, 50C6, 50L6, 117N7.	2500	3.2	5W		70	±30B 200-10000	CH-40
RG9	Output; plate to V.C. 6A05, 6A05, 6A85, 7C5.	5000	3.2	5W		50	±30B 200-10000	CH-40
RG10	Output; plate to V.C. 6A05, 6V6, 6V6, 7B5, 14A5, 35A, 30A, 30A, 30S, 3C5, 3A4.	10,000 7500	3.2	5W		30	±30B 200-10000	CH-40
RG11	Output; P.P. plates to V.C. P.P. 6V6, P.P.6K6.	12,000 CT or 8000 CT	3.2	15W		50	±2DB 200-10000	CH-60
RG12	Output; TP to V.C. 6V6, 6A05, 7C5, C1A8.	10,000 CT	3.2	10W	5.6:1	40	±30B 200-10000	CH-60

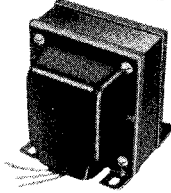
### COMMERCIAL GRADE CHOKES

Catalog No.	Inductance in Henries	Rated Current D.C. Ma.	D.C. Resistance	Dielectric Test Voltage	Case Number
RG17	40	15	2000	1000	CH-40
RG1	4	40	200	1000	CH-40
RG2	9	40	400	1000	CH-40
RG3	6	50	400	1000	CH-40
RG18	20	50	425	1500	CH-60
RG4	10	55	400	1500	CH-50
RG19	3	75	200	1500	CH-40
RG5	10	75	250	1500	CH-60
RG6	10	75	250	1500	VS-100
RG7	6	100	150	1500	CH-60
RG8	6	100	150	1500	VS-100
RG9	3.5	150	100	1500	CH-60
RG10	3.5	150	100	1500	VS-100
RG20	12	160	180	2500	VS-306
RG11	2	200	60	1500	CH-60
RG12	2	200	60	1500	VS-100
RG13	3.7	200	65	1500	CH-80
RG21	7	200	100	2500	VS-303
RG14	3.7	200	65	1500	VS-300
RG15	2.8	300	65	1500	CH-80
RG16	2.8	300	65	1500	VS-300
RG22	5	300	65	2500	VS-308

### CASE DIMENSIONS



CH CASE



VS CASE

#### CH-40 CASE

Height: 1 1/4"  
Width: 2 3/8"  
Depth: 1 3/8"  
Mtg. Cen.: 2"

#### CH-50 CASE

Height: 1 1/4"  
Width: 2 1/2"  
Depth: 1 3/8"  
Mtg. Cen.: 2 3/8"

#### CH-60 CASE

Height: 2"  
Width: 3 1/2"  
Depth: 1 3/8"  
Mtg. Cen.: 2 1/4"

#### CH-80 CASE

Height: 2 3/8"  
Width: 4 1/8"  
Depth: 2 1/2"  
Mtg. Cen.: 3 3/8"

#### VS-100 CASE

Height: 2 1/2"  
Width: 1 7/8"  
Depth: 2 1/2"  
Mtg. Cen.: 1 1/2" x 1 3/8"

#### VS-300 CASE

Height: 3 3/8"  
Width: 2 5/8"  
Depth: 2 3/8"  
Mtg. Cen.: 2 7/8" x 1 1/8"

#### VS-303 CASE

Height: 3 3/8"  
Width: 2 5/8"  
Depth: 3"  
Mtg. Cen.: 2 1 1/2" x 1 1/8"  
Mtg. Hole: (4) 3/16 x 3/8"

#### VS-306 CASE

Height: 3 3/8"  
Width: 2 5/8"  
Depth: 3 3/8"  
Mtg. Cen.: 2 2 3/8" x 1 1/8"  
Mtg. Hole: (4) 3/16 x 3/8"

#### VS-308 CASE

Height: 3 3/8"  
Width: 2 5/8"  
Depth: 3 3/8"  
Mtg. Cen.: 2 7/8" x 2 3/8"

## PRICE LIST

Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price
EPT-1	7.50	MAS-1	55.00	MCV-6-25FC	18.00	MGC-32	6.80	MPT-20M	18.60	PGC-10	7.50
EPT-2	7.50	MAS-2	37.00	MCV-6-75FC	28.00	MGC-33	6.80	MPT-20C	24.00	PGC-11	10.20
EPT-3	7.50	MAS-3	65.00	MCV-6-125FC	35.00	MGC-34	6.80	MPT-21C	20.80	PGC-12	10.20
EPT-4	7.50	MAS-4	73.00	MCV-6-5LM	20.00	MGC-35	6.80	MPT-21M	23.50	PGC-13	11.55
EPT-5	7.50	MAS-5	33.00	MCV-6-25LM	25.00	MGC-36	6.80	MPT-21H	24.00	PGC-14	7.25
EPT-6	7.50	MAS-6	50.00	MCV-6-75LM	37.00	MGC-37	6.80	MPT-22C	18.50	PGC-15	7.65
EPT-7	7.50	MAS-7	60.00	MCV-6-125LM	45.00			MPT-22M	22.60	PGC-16	7.60
EPT-8	9.50	MAS-8	24.00	MCV-6-175LM	53.00			MPT-22H	26.60	PGC-17	7.20
EPT-9	9.50	MAS-101	62.50	MCV-6-250LM	62.00			MPT-23C	20.80	PGC-18	10.20
EPT-11	7.50	MAT-1-1	148.50	MCV-6-375LM	76.00			MPT-23M	25.50	PGC-19	10.20
EPT-12	7.50	MCV-4-5LC	14.00	MCV-6-500LM	90.00	MGF-1	9.30	MPT-23H	26.60	PGC-20	11.55
EPT-13	9.50	MCV-4-75LC	66.00	MCV-6-750LM	123.00	MGF-2	12.50	MPT-24C	13.70	PGC-21	13.50
EPT-14	9.50	MCV-4-75LC	30.00	MCV-6-1000LM	150.00	MGF-3	10.50	MPT-24M	15.00	PGC-22	15.00
EPT-15	12.50	MCV-4-125LC	38.00	MCV-6-54FM	20.00	MGF-4	14.25	MPT-25C	14.00	PGP-3	8.01
EPT-16	12.50	MCV-4-175LC	45.00	MCV-6-25-4FM	26.00	MGF-5	10.50	MPT-25M	18.10	PGP-4	8.40
EPT-17	11.50	MCV-4-250LC	54.00	MCV-6-75-4FM	37.00	MGF-6	12.00	MPT-25H	23.10	PGP-5	8.40
EPT-18	11.50	MCV-4-375LC	69.00	MCV-6-125-4FM	45.00	MGF-7	14.85	MPT-26C	20.80	PGP-6	9.00
EPT-19	11.50	MCV-4-500LC	85.00	MCV-6-5FM	21.00	MGF-8	20.70	MPT-26M	22.00	PGP-7	10.50
Note—Molded Units \$1.00 additional.											
IT-1	7.25	MCV-4-750LC	115.00	MCV-6-25FM	27.00	MGF-9	16.50	MPT-26H	30.00	PGP-8	9.00
IT-2	10.55	MCV-4-1000LC	14.00	MCV-6-125FM	46.00	MGF-10	18.60	MPT-27C	22.00	PGP-9	9.00
IT-3	26.40	MCV-4-25-4FC	20.00	MGA-1	10.15	MGF-11	17.40	MPT-27M	30.00	PGP-10	10.95
IT-4	31.95	MCV-4-75-4FC	30.00	MGA-2	10.15	MGF-12	20.40	PGA-1	15.00	PGP-11	13.85
IT-5	25.40	MCV-4-125-4FC	38.00	MGA-3	10.65	MGF-13	24.00	PGA-2	15.00	PGP-12	16.50
IT-6	34.95	MCV-4-25FC	21.00	MGA-4	10.65	MGF-14	27.60	PGA-3	15.00	PGP-13	18.15
KA-10	16.50	MCV-4-75FC	21.00	MGA-5	9.90	MGF-15	18.60	PGA-4	12.75	PGP-14	21.80
KP-11	9.05	MCV-4-125FC	39.00	MGA-6	9.90	MGF-16	23.40	PGA-5	13.50	PGP-15	25.35
KC-10	4.30	MCV-4-5LM	22.00	MGA-7	9.90	MGF-17	32.70	PGA-6	16.50	PGP-16	12.60
KC-11	1.45	MCV-4-5LM	22.00	MGA-8	10.15	MPT-1	17.50	PGA-7	11.25	PGP-17	13.50
LB-1	6.60	MCV-4-25LM	38.00	MGA-9	10.15	MPT-2	15.00	PGA-8	11.25	PGP-18	18.15
MAS-2-F1	19.20	MCV-4-75LM	48.00	MGA-10	7.50	MPT-3	22.50	PGA-9	11.25	PGP-19	21.80
MAS-5-1-F2	42.50	MCV-4-125LM	81.00	MGA-11	6.15	MPT-4	20.00	PGA-10	12.00	PGP-20	27.00
MAS-5-3-F2	42.50	MCV-4-250LM	100.00	MGA-12	6.50	MPT-5	17.50	PGA-11	12.75	PMA-1	9.90
MAS-5-4-F	42.50	MCV-4-375LM	131.00	MGA-13	7.25	MPT-6	15.00	PGA-12	12.75	PMA-2	8.10
MAS-12-3-60	29.95	MCV-4-500LM	160.00	MGA-14	7.50	MPT-7	17.50	PGA-13	15.00	PMA-3	11.40
MAS-12-10-1	36.50	MCV-4-750LM	22.00	MGA-15	6.15	MPT-8	15.00	PGA-14	15.00	PMA-4	8.10
MAS-12-10-2	44.20	MCV-4-1000LM	28.00	MGA-16	6.50	MPT-9	22.50	PGA-15	18.75	PMA-5	9.90
MAS-12-20-1	46.50	MCV-4-5-4FM	28.00	MGA-17	7.00	MPT-10	20.00	PGA-16	18.75	PMA-6	9.90
MAS-12-20-2	57.00	MCV-4-25-4FM	28.00	MGA-18	7.00	MPT-11	17.50	PGA-17	18.75	PMA-7	9.90
MAS-12-30-1	63.70	MCV-4-75-4FM	23.00	MGA-19	8.75	MPT-12	27.50	PGA-18	17.25	PMA-8	9.90
MAS-12-30-2	77.50	MCV-4-125-4FM	29.00	MGA-20	8.75	MPT-13	12.50	PGA-19	18.75	PMA-9	9.90
MAF-4	78.00	MCV-4-5FM	29.00	MGA-21	9.50	MPT-14	19.20	PGA-20	18.75	PMA-10	7.20
MAF-5	80.00	MCV-4-25FM	40.00	MGA-22	8.75	MPT-15	16.90	PGA-21	20.55	PMA-11	9.90
MAF-6	180.00	MCV-4-75FM	49.00	MGA-23	9.50	MPT-16	20.90	PGA-22	20.55	PMA-12	10.10
MAF-7	180.00	MCV-4-125FM	49.00	MGA-24	7.00	MPT-17	26.30	PGA-23	18.75	PMA-13	9.90
MAF-8	180.00	MCV-6-5LC	11.00	MGA-25	8.75	MPT-18	15.60	PGA-24	33.00	PGC-1	7.50
MAF-9	180.00	MCV-6-75LC	17.00	MGA-26	10.00	MPT-19	19.50	PGA-25	18.75	PGC-2	7.50
MAF-10	180.00	MCV-6-125LC	23.00	MGA-27	12.50	MPT-20	22.60	PGA-26	18.75	PGC-3	7.50
MAF-11	180.00	MCV-6-175LC	34.00	MGA-28	8.75	MPT-21	18.90	PGA-27	18.75	PGC-4	7.50
MAF-12	102.00	MCV-6-250LC	41.00	MGA-29	8.75	MPT-22	22.90	PGA-28	18.75	PGC-5	7.50
MAF-13	155.00	MCV-6-375LC	50.00	MGA-30	8.75	MPT-23	28.90	PGA-29	18.75	PGC-6	7.50
MAF-14	175.00	MCV-6-500LC	64.00	MGA-31	9.50	MPT-24	33.00	PGA-30	33.00	PGC-7	7.50
MAF-15	175.00	MCV-6-750LC	76.00	MGA-32	7.00	MPT-25	22.60	PGA-31	33.00	PGC-8	7.50
MAF-16	90.00	MCV-6-1000LC	104.00	MGA-33	18.00	MPT-26	26.60	PGA-32	33.00	PGC-9	7.50
WAP-1	225.00	MCV-6-5-4FM	28.00	MGA-34	16.00	MPT-27	26.60	PGA-33	33.00	PGC-10	7.50
WAP-2	225.00	MCV-6-25-4FM	28.00	MGA-35	16.00	MPT-28	15.60	PGA-34	33.00	PGC-11	7.50
WAP-301	175.00	MCV-6-75-4FM	11.00	MGA-36	16.00	MPT-29	19.50	PGA-35	33.00	PGC-12	7.50
WAP-4	280.00	MCV-6-125-4FM	27.00	MGA-37	16.00	MPT-30	22.60	PGA-36	33.00	PGC-13	7.50
WAP-5	280.00	MCV-6-175-4FM	27.00	MGA-38	16.00	MPT-31	26.60	PGA-37	33.00	PGC-14	7.50
WAP-6	105.00	MCV-6-25-4FC	27.00	MGA-39	16.00	MPT-32	19.50	PGA-38	33.00	PGC-15	7.50
WAP-7	133.00	MCV-6-75-4FC	34.00	MGA-40	16.00	MPT-33	22.60	PGA-39	33.00	PGC-16	7

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Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price
QGC-26	10.50	TF-3	9.90	TSA-4	6.30	ULO-11	25.00	FBP-10	86.00	LPO-22	55.60	F-1521	8.55
QGC-27	10.50	TF-4	12.15	TSA-5	6.30	ULO-12	25.00	FBP-11	86.00	LPO-23	48.20	F-1522	8.55
QGC-28	10.50	TF-5	2.97	TSA-6	7.00	ULO-13	25.00	FBP-12	86.00	LPO-24	47.10	F-1523	8.75
QGC-29	10.50	TF-6	3.96	TSA-7	6.50	ULO-14	32.50	FBP-13	86.00	LPO-25	47.10	F-1524	8.75
QGC-30	10.50	TF-7	4.35	TSA-8	6.50	ULO-31	32.50	FBP-14	70.80	LPO-26	47.10	F-1525	9.05
QGC-31	10.50	TF-8	4.62	TSA-9	7.50	ULO-32	32.50	FBP-15	70.80	LPO-27	48.20	F-1526	9.05
QGC-32	10.50	TF-9	7.59	TSA-10	7.00	ULO-33	32.50	FBP-16	70.80	LPO-28	47.10	F-1527	9.25
QGC-33	10.50	TF-10	15.84	TSA-11	7.00	ULO-34	32.50	FBP-17	70.80	LPO-29	47.10	F-1528	9.75
QGC-34	10.50	TF-11	1.98	TSA-12	7.50	ULO-35	32.50	FBP-18	70.80	LPO-30	47.10	F-1529	10.10
QGC-35	10.50	TF-12	2.97	TSA-13	7.50	ULO-36	32.50	FBP-19	70.80	LPO-31	48.20	F-1530	10.10
QGC-36	10.50	TF-13	3.96	TSA-14	7.50	ULO-37	32.50	FBP-20	70.80	LPO-32	47.10	F-1531	10.35
QGC-37	10.50	TF-14	4.80	TSA-15	8.00	ULO-52	75.00	FBP-21	70.80	LPO-33	47.10	F-1532	10.75
QGC-38	10.80	TF-15	5.85	TSA-16	7.00	ULO-53	75.00	FBP-22	70.80	LPO-34	47.10	F-1533	11.25
QGC-39	10.50	TF-16	4.35	TSA-17	7.00	ULO-54	75.00	FBP-23	70.80	LPO-35	47.10	F-1534	11.75
QGC-40	10.50	TF-17	4.62	TSA-18	7.00	ULO-55	75.00	FBP-24	86.00	NTF-30	25.00	F-1535	11.75
QGC-41	10.50	TF-18	15.84	TSA-19	7.50	ULO-56	75.00	FBP-25	70.80	NTF-60	25.00	F-1536	12.75
QGC-42	10.50	TF-19	3.30	TSA-20	7.00	ULO-101	145.00	FBP-26	86.00	NTF-120	25.00	F-1537	13.10
RGA-1	3.60	TMA-1	7.50	TSA-21	6.50	ULO-104	145.00	FBP-27	86.00			F-1538	13.60
RGA-2	2.90	TMA-2	9.60	TSA-22	6.25	ULO-110	145.00	FBP-28	86.00				
RGA-3	2.90	TMA-3	7.80	TSA-23	6.50	VHI-1	9.50	FBP-29	86.00				
RGA-4	3.60	TMA-4	9.90	TSA-25	6.50	VHI-2	9.50	FBP-30	86.00				
RGA-5	2.90	TMA-5	9.90	TSA-26	6.50	VHI-3	9.50	FBP-31	86.00				
RGA-6	3.45	TMA-6	9.90	TSA-27	7.50	VHI-4	9.50	FBP-32	86.00				
RGA-7	3.60	TMA-7	8.10	TSA-28	6.00	VHI-5	9.50	FBP-33	86.00				
RGA-8	1.65	TMA-8	9.60	TSA-29	6.00	VHI-6	9.50	FBP-34	86.00				
RGA-9	1.65	TMA-9	7.80	TSA-30	6.00	VHI-7	9.50	FBP-35	73.00				
RGA-10	1.98	TMA-10	7.50	TSA-31	6.00	VHI-8	9.50	FBP-36	73.00				
RGA-11	2.90	TMA-11	7.80	TSA-32	6.00	VHI-9	9.50	FBP-37	73.00				
RGA-12	3.60	TMA-12	9.90	TSA-33	6.30	VHI-10	9.50	FBP-38	73.00				
RGC-1	1.47	TMA-13	7.50	TSA-34	6.50	VHI-11	9.50	FBP-39	80.00				
RGC-2	1.47	TMA-14	9.90	TSA-35	6.50	VHI-12	9.50	FBP-40	80.00				
RGC-3	1.47	TMA-15	6.70	TSA-36	6.00	VHI-13	9.50	FBP-41	80.00				
RGC-4	1.65	TMO-16	3.90	TSA-37	6.00	VHI-14	9.50	FBP-42	88.00				
RGC-5	1.98	TMO-17	3.30	TSA-38	6.50	VHI-15	9.50	FBP-43	88.00				
RGC-6	2.97	TMO-18	3.90	TSA-39	7.00	VHI-16	9.50	FBP-44	88.00				
RGC-7	1.98	TMA-19	7.50	TSA-40	6.50	VHI-17	9.50	FBP-45	88.00				
RGC-8	2.97	TNA-1	6.30	TSA-41	6.75	VHI-18	9.50	FBP-46	88.00				
RGC-9	1.98	TNA-2	6.30	TIA-1	8.10	VHI-19	9.50	FBP-47	88.00				
RGC-10	2.97	TNA-3	6.70	TIA-2	6.60	VHI-20	9.50	FBP-48	88.00				
RGC-11	1.98	TNA-4	6.10	TIA-3	6.60	VHI-21	9.50	FBP-49	88.00				
RGC-12	2.97	TNA-5	6.10	TIA-4	9.10	VHI-22	9.50	FBP-50	88.00				
RGC-13	3.15	TNA-6	6.70	TIA-5	8.60			FBP-51	88.00				
RGC-14	4.50	TNA-7	6.30	TIA-6	6.60			FBP-52	88.00				
RGC-15	3.15	TNA-8	6.30	TIA-7	8.75			FBP-53	88.00				
RGC-16	4.50	TNA-9	7.30	TIA-8	8.60			FBP-54	88.00				
RGC-17	1.80	TNA-10	6.70	TIA-9	8.90			MTN 4 TO 7.35	35.00				
RGC-18	1.80	TNA-11	6.80	TIA-10	8.90			MTN 10.5 TO MTW 70	38.00				
RGC-19	1.47	TNA-12	7.30	TIA-11	8.45	IBM*	25.00	FBP-56	88.00				
RGC-20	5.10	TNA-13	7.30	TIA-12	8.50	IBP*	25.00	FBP-57	88.00				
RGC-21	5.10	TNA-14	7.30	TIA-13	8.10			FBP-58	88.00				
RGC-22	72.60	TNA-15	7.50	TIA-14	9.10	IHM*	25.00	FBP-59	88.00				
RGP-1	5.76	TNA-16	6.70	TIA-15	8.10			FBP-60	88.00				
RGP-2	5.76	TNA-17	6.70	TIA-16	8.60	IHP*	25.00	FBP-61	88.00				
RGP-3	5.12	TNA-18	7.70	TIA-17	8.45			FBP-62	88.00				
RGP-4	6.12	TNA-19	7.20	TIA-18	8.10	ILM*	25.00	FBP-63	88.00				
RGP-5	6.12	TNA-20	6.70	TIA-19	8.10			FBP-64	88.00				
RGP-6	6.12	TNA-21	6.10	TIA-20	8.10	ILP*	25.00	FBP-65	88.00				
RGP-7	6.75	TNA-22	6.60	TIA-21	8.10			FBP-66	88.00				
RGP-8	6.75	TNA-23	6.30	TIA-22	8.10	LBM*	25.00	FBP-67	88.00				
RGP-9	8.25	TNA-24	6.30	TIA-23	8.45			FBP-68	88.00				
RGP-10	8.25	TNA-25	6.30	TIA-24	8.45	LBP*	25.00	FBP-69	88.00				
RGP-11	6.75	TNA-26	7.20	TIA-25	8.45			FBP-70	88.00				
RGP-12	6.75	TNA-27	5.80	TIA-26	8.10	LHM*	25.00	FBP-71	88.00				
RGP-13	8.25	TNA-28	5.80	TIA-27	8.90			FBP-72	88.00				
RGP-14	8.25	TNA-29	5.80	TIA-28	8.45	LHP*	25.00	FBP-73	88.00				
RGP-15	8.25	TNA-30	5.80	TIA-29	8.45			FBP-74	88.00				
RGP-16	8.25	TNA-31	6.00	TIA-30	8.45	LLM*	25.00	FBP-75	88.00				
RGP-17	10.20	TNA-32	6.00	TIA-31	8.90			FBP-76	88.00				
RGP-18	10.20	TNA-33	6.30	TIA-32	8.45	LLP*	25.00	FBP-77	88.00				
RGP-19	10.80	TNA-34	6.30	TIA-33	8.90			FBP-78	88.00				
RGP-20	10.80	TNA-35	6.30	TIA-34	8.90			FBP-79	88.00				
RGP-21	14.04	TNA-36	5.90	TIA-35	8.60			FBP-80	88.00				
RGP-22	14.04	TNA-37	6.30	TIA-36	8.60			FBP-81	88.00				
RGP-23	18.96	TNA-38	6.30	TIA-37	8.50			FBP-82	88.00				
RGP-24	18.96	TNA-39	6.80	TIA-38	8.10			FBP-83	88.00				
RGP-25	22.80	TNA-40	6.50	TIA-39	8.10			FBP-84	88.00				
RGP-26	22.80	TNA-41	6.50	TIA-40	8.35	DSF-10	39.50	FBP-85	88.00				
RGP-27	8.40	TPA-1	7.60	TUA-1	8.60	DSF-11	39.50	FBP-86	88.00				
RGP-28	8.40	TPA-2	7.60	TUA-2	6.00	DSF-12	39.50	FBP-87	88.00				
RGP-29	10.20	TPA-3	6.00	TUA-3	6.00	DSF-13	39.50	FBP-88	88.00				
RGP-30	10.20	TPA-4	8.05	TUA-4	6.00	DSF-14	39.50	FBP-89	88.00				
RGP-31	15.15	TPA-5	7.60	TUA-5	6.00	DSF-15	39.50	FBP-90	88.00				
RGP-32	15.15	TPA-6	7.60	TUA-6	6.00	DSF-16	39.50	FBP-91	88.00				
RGP-33	18.96	TPA-7	6.00	TUA-7	6.00	DSF-17	39.50	FBP-92	88.00				
RGP-34	18.96	TPA-8	8.05	TUA-8	6.30	DSF-18	39.50	FBP-93	88.00				
RGP-35	22.80	TPA-9	7.60	TUA-9	6.30	DSF-19	39.50	FBP-94	88.00				
RGP-36	22.80	TPA-10	7.60	TUA-10	6.30	DSF-20	39.50	FBP-95	88.00				
SDT-1	2.25	TPA-11	8.05	TUA-11	6.60	DSF-21	39.50	FBP-96	88.00				
SDT-2	2.64	TPA-12	7.60	TUA-12	6.30	DSF-22	39.50	FBP-97	88.00				
SDT-3	4.50	TPA-13	8.30	TUA-13	6.50	DSF-23	39.50	FBP-98	88.00				
SDT-4	6.12	TPA-14	8.05	TUA-14	5.40	DSF-24	39.50	FBP-99	88.00				
SDT-5	6.93	TPA-15	8.30	TUA-15	6.30	DSF-25	39.50	FBP-100	88.00				
SDT-6	8.82	TPA-16	8.30	TUA-16	6.60	DSF-26	39.50	FBP-101	88.00				
SDT-7	11.04	TPA-17	7.80	TUA-17	5.70	DSF-27	39.50	FBP-102	88.00				
SDT-8	12.03	TPA-18	8.50	TUA-18	6.60	DSF-28	39.50	FBP-103	88.00				
SDT-9	16.08	TPA-19	7.80	TUA-19	6.60	DSF-29	39.50	FBP-104	88.00				
SDT-10	22.56	TPA-20	7.50	TUA-20	6.00	DSF-30	39.50	FBP-105	88.00				
SDT-11	33.00	TPA-21	8.30	TUA-21	5.70	OSt-11	50.00	FBP-106	88.00				
SDT-12	39.60	TPA-22	8.30	TUA-22	5.75	OSt-12	50.00	FBP-107	88.00				
SDT-13	53.61	TPA-23	8.30	TUA-23	5.75	OSt-13	50.00	FBP-108	88.00				
SDT-14	84.00	TPA-24	8.30	TUA-24	6.10	OSt-14	50.00	FBP-109	88.00				
SDT-15	112.50	TPA-25	8.30	TUA-25	6.00	OSt-15	50.00	FBP-110	88.00				
TAC-12-50	51.70	TPA-26	8.30	TUA-26	6.60	OSt-16	50.00	FBP-111	88.00				
TAC-12-90	73.00	TPA-27	8.80	TUA-27	5.40	OSt-17	50.00	FBP-112	88.00				
TAC-12-175	88.50	TPA-28	8.80	TUA-28	6.00	OSt-18	50.00	FBP-113					



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Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price	Catalog No.	Net Price
<b>Type TI-5</b>													
F-1700	5.70	F-1793	8.65	F-2053	5.85	<b>Type TI-23s</b>		F-2556	8.10	F-2711	13.60	<b>Type TI-34</b>	
F-1701	5.70	F-1794	8.65	F-2054	5.85	F-2301	6.25	F-2557	8.20	F-2712	13.75	F-2900	5.60
F-1702	5.70	F-1795	9.00	F-2055	6.30	F-2302	6.25	F-2558	8.40	F-2713	14.10	F-2901	5.60
F-1703	6.20	F-1796	9.45	F-2056	6.80	F-2303	6.25	F-2559	8.20	F-2714	14.20	F-2902	5.60
F-1704	6.65	F-1797	10.00	F-2057	7.05	F-2304	6.25	F-2560	8.30	F-2715	14.30	F-2903	5.60
F-1705	6.90	<b>Type TI-2s</b>		F-2058	7.25	F-2305	6.25	F-2561	8.50	F-2716	14.50	F-2904	5.60
F-1706	7.10	F-1800	14.20	F-2059	7.35	F-2306	6.25	F-2562	8.60	F-2717	14.70	F-2905	5.80
F-1707	7.35	F-1801	14.20	F-2060	7.70	F-2307	6.75	F-2563	8.80	F-2718	15.10	F-2906	5.80
F-1708	7.60	F-1802	14.20	F-2061	8.00	F-2308	6.75	F-2564	8.95	F-2719	15.20	F-2907	6.00
F-1709	7.85	F-1803	14.20	F-2062	8.20	F-2309	6.75	F-2565	9.10	F-2720	15.30	F-2908	6.00
F-1710	8.05	F-1804	14.20	F-2063	8.45	F-2310	6.75	F-2566	9.30	F-2721	15.50	F-2909	6.00
F-1711	8.30	F-1805	14.65	F-2064	8.75	F-2311	7.50	F-2567	9.50	F-2722	15.70	F-2910	6.30
F-1712	9.00	F-1806	14.65	F-2065	10.80	F-2312	7.50	F-2568	9.90	F-2723	15.80	F-2911	6.60
F-1713	9.60	F-1807	14.65	F-2066	11.00	F-2313	7.50	F-2569	10.50	F-2724	15.95	F-2912	6.60
F-1714	9.80	F-1808	14.65	F-2067	11.40	<b>Type TI-24</b>		F-2570	10.70	F-2725	16.05	F-2913	7.30
F-1715	10.25	F-1809	14.65	F-2068	11.65	F-2400	5.90	F-2571	10.90	F-2726	16.20	F-2914	8.30
F-1716	10.60	F-1810	14.65	F-2069	12.00	F-2401	5.90	F-2572	11.40	F-2727	16.50	F-2915	8.30
F-1717	10.95	F-1811	14.90	<b>Type TI-17</b>		F-2402	5.90	F-2573	11.60	F-2728	16.70	F-2916	8.40
F-1718	11.20	F-1812	14.90	F-2100	7.90	F-2403	5.90	F-2574	12.10	F-2729	17.00	F-2917	8.60
F-1719	11.50	F-1813	14.90	F-2101	7.90	F-2404	5.90	F-2575	12.40	F-2730	17.50	F-2918	8.80
F-1720	11.90	F-1814	14.90	F-2102	7.90	F-2405	6.05	F-2576	12.90	F-2731	17.95	F-2919	8.80
<b>Type TI-5s</b>		<b>Type TI-8 and 8s</b>		F-2103	7.90	F-2406	6.05	F-2577	13.40	F-2732	18.90	F-2920	9.20
F-1700s	7.90	F-1821	8.65	F-2104	7.90	F-2407	6.05	F-2578	13.70	F-2733	19.45	<b>Type TI-35</b>	
F-1701s	7.90	F-1822	8.65	F-2105	7.90	F-2408	6.05	F-2579	13.90	F-2734	20.40	F-2950	6.60
F-1702s	7.90	F-1823	8.65	F-2106	7.90	F-2409	6.30	F-2580	14.20	F-2735	21.85	F-2951	6.90
F-1703s	7.90	F-1824	8.65	F-2107	7.90	F-2410	6.80	F-2581	14.50	F-2736	22.50	F-2952	7.20
F-1704s	7.90	F-1825	8.65	F-2108	7.90	F-2411	7.05	<b>Type TI-28</b>		F-2737	23.00	F-2953	7.40
F-1705s	8.15	F-1826	8.65	F-2109	7.90	F-2412	7.25	F-2600	6.75	F-2738	23.50	F-2954	7.60
F-1706s	8.50	F-1827	8.65	F-2110	7.90	F-2413	7.35	F-2601	6.85	F-2739	24.00	F-2955	7.80
F-1707s	8.80	F-1828	8.65	F-2111	8.05	F-2414	7.70	F-2602	6.90	F-2740	24.50	F-2956	8.00
F-1708s	8.95	F-1829	8.65	F-2112	8.05	F-2415	8.00	F-2603	6.95	F-2741	25.00	F-2957	8.10
F-1709s	9.05	F-1830	8.65	F-2113	8.25	F-2416	8.20	F-2604	7.05	F-2742	25.50	F-2958	8.30
F-1710s	9.20	F-1831	8.65	F-2114	8.25	F-2417	8.45	F-2605	7.10	F-2743	26.00	F-2959	8.50
F-1711s	9.30	F-1832	8.65	F-2115	8.65	F-2418	8.75	F-2606	7.30	F-2744	26.50	F-2960	8.70
F-1712s	9.60	F-1833	8.85	F-2116	8.65	F-2419	10.50	F-2607	7.40	F-2745	27.00	F-2961	8.90
F-1713s	9.80	F-1834	9.00	F-2117	9.05	F-2420	10.80	F-2608	7.80	F-2746	27.50	F-2962	9.05
F-1714s	9.80	F-1835	9.00	<b>Type TI-18</b>		F-2421	11.00	F-2609	7.80	F-2747	28.00	F-2963	9.20
F-1715s	10.25	F-1836	9.00	F-2140	8.65	F-2422	11.40	F-2610	7.80	F-2748	28.50	<b>Type TI-36</b>	
F-1716s	10.65	F-1837	9.00	F-2141	8.65	<b>Type TI-25</b>		F-2611	7.20	F-2749	29.00	F-3000	5.90
F-1717s	10.85	F-1838	9.00	F-2142	8.65	F-2450	7.90	F-2612	7.60	F-2750	29.50	F-3001	5.90
F-1718s	11.20	F-1839	9.00	F-2143	8.65	F-2451	7.90	F-2613	8.40	F-2751	30.00	F-3002	5.90
F-1719s	11.50	F-1840	9.00	F-2144	8.65	F-2452	7.90	F-2614	8.50	F-2752	30.50	F-3003	6.00
F-1720s	11.90	F-1841	9.00	F-2145	8.65	F-2453	8.00	F-2615	8.70	F-2753	31.00	F-3004	6.00
<b>Type TI-6 and 6s</b>		<b>Type TI-3s</b>		F-2146	8.65	F-2454	7.70	F-2616	9.40	F-2754	31.50	F-3005	6.00
F-1726	8.15	F-1844	14.25	F-2147	8.65	F-2455	7.70	F-2617	9.40	F-2755	32.00	F-3006	6.30
F-1727	8.15	F-1845	14.25	F-2148	8.65	F-2456	7.50	F-2618	9.55	F-2756	32.50	F-3007	6.30
F-1728	8.15	F-1846	14.25	F-2149	8.65	F-2457	7.50	F-2619	9.70	F-2757	33.00	F-3008	6.60
F-1729	8.15	F-1847	14.25	F-2150	8.65	F-2458	7.30	F-2620	9.90	F-2758	33.50	F-3009	6.60
F-1730	8.15	F-1848	14.25	F-2151	8.75	F-2459	7.30	F-2621	10.05	F-2759	34.00	F-3010	6.80
F-1731	8.15	F-1849	14.25	F-2152	8.85	F-2460	7.30	F-2622	10.10	F-2760	34.50	F-3011	7.20
F-1732	8.45	F-1850	14.25	F-2153	9.00	F-2461	7.10	F-2623	10.20	F-2761	35.00	F-3012	7.40
F-1733	8.45	F-1851	14.25	F-2154	9.00	F-2462	7.10	F-2624	10.30	F-2762	35.50	F-3013	7.70
F-1734	8.54	F-1852	14.25	F-2155	9.20	F-2463	7.05	F-2625	10.50	F-2763	36.00	F-3014	8.20
F-1735	8.55	F-1853	14.25	F-2156	9.50	F-2464	7.00	F-2626	10.80	F-2764	36.50	F-3015	8.50
F-1736	8.55	F-1854	14.25	F-2157	9.70	F-2465	7.00	F-2627	11.80	F-2765	37.00	F-3016	8.80
F-1737	9.00	F-1855	14.25	<b>Type TI-19</b>		F-2466	7.05	F-2628	12.20	F-2766	37.50	F-3017	8.90
F-1738	10.00	<b>Type TI-3As</b>		F-2180	7.90	F-2467	7.10	F-2629	12.35	F-2767	38.00	<b>Type TI-38</b>	
F-1739	10.00	F-1856	20.00	F-2181	7.90	F-2468	7.20	F-2630	12.55	F-2768	38.50	F-3555	7.50
F-1740	10.00	F-1857	20.50	F-2182	7.90	F-2469	7.20	F-2631	13.30	F-2769	39.00	F-3556	7.50
F-1741	10.00	F-1858	20.50	F-2183	7.90	F-2470	7.40	F-2632	14.65	F-2770	39.50	F-3557	7.50
F-1742	10.45	F-1859	22.30	F-2184	7.90	F-2471	7.40	F-2633	15.20	F-2771	40.00	F-3558	7.45
F-1743	11.90	F-1860	22.80	F-2185	7.90	F-2472	7.60	F-2634	16.15	F-2772	40.50	F-3559	7.40
<b>Type TI-11s</b>		F-1861	22.80	F-2186	7.90	F-2473	7.80	<b>Type TI-29</b>		F-2773	41.00	F-3560	7.35
F-1747	14.20	F-1862	23.30	F-2187	7.90	F-2474	8.00	F-2650	8.05	F-2774	41.50	F-3561	7.30
F-1748	14.20	F-1863	23.30	F-2188	7.90	F-2475	8.40	F-2651	8.10	F-2775	42.00	F-3562	7.25
F-1749	14.20	<b>Type TI-15</b>		F-2189	7.90	F-2476	8.80	F-2652	8.20	F-2776	42.50	F-3563	7.25
F-1750	14.20	F-1870	7.25	F-2190	7.90	F-2477	9.50	F-2653	8.20	F-2777	43.00	F-3564	8.00
F-1751	14.20	F-1871	7.25	F-2191	7.90	F-2478	9.80	F-2654	8.20	F-2778	43.50	F-3565	8.00
F-1752	15.20	F-1872	7.25	F-2192	7.90	F-2479	9.95	F-2655	8.20	F-2779	44.00	F-3566	8.25
F-1753	15.20	F-1873	7.25	F-2193	7.90	F-2480	10.20	F-2656	8.20	F-2780	44.50	F-3567	8.50
F-1754	15.20	F-1874	7.25	<b>Type TI-20s</b>		F-2481	10.50	F-2657	8.20	F-2781	45.00	F-3568	8.50
F-1755	15.20	F-1875	7.25	F-2201	6.40	<b>Type TI-26</b>		F-2658	8.10	F-2782	45.50	F-3569	8.85
F-1756	15.20	F-1876	7.25	F-2202	6.40	F-2500	5.70	F-2659	8.10	F-2783	46.00	F-3570	9.00
F-1757	14.20	F-1877	7.25	F-2203	6.95	F-2501	5.70	F-2660	7.90	F-2784	46.50	F-3571	9.10
F-1758	14.20	F-1878	7.25	F-2204	6.95	F-2502	5.70	F-2661	7.60	F-2785	47.00	F-3572	9.30
F-1759	14.65	F-1879	7.25	F-2205	6.95	F-2503	5.70	F-2662	7.70	F-2786	47.50	F-3573	9.60
F-1760	14.65	F-1880	7.25	F-2206	7.15	F-2504	5.70	F-2663	7.80	F-2787	48.00	F-3574	9.80
F-1761	15.20	F-1881	7.45	F-2207	7.45	F-2505	5.70						

# PRICES

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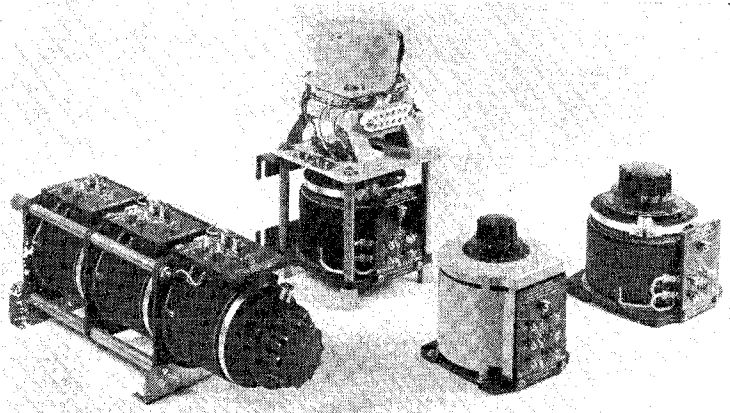
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# DELIVERY

Delivery is often dependent on availability of raw materials. Check with your distributor for delivery information at the time you place your order.

# GE *volt-pac*<sup>®</sup>

## VARIABLE TRANSFORMERS



Typical volt-pac variable transformers. On the left is a manual, three-phase, 240-volt, 10-amp unit; second from the left is a motor-operated, single-phase, 120-volt, 15-amp unit; third from the left is a cased, manual, single-phase, 120/240-volt, 4-amp unit; and on the right is a manual, single-phase, 120 volt, 20-amp unit. All are for 50/60-cycle operation.

### STANDARD RATINGS

Single-core construction: 120 or 240 volts, 2 to 65 amp

Multiple-core construction: 120, 240, or 480 volts; up to 390 amp

Single-phase, three-phase; 50/60 cycles

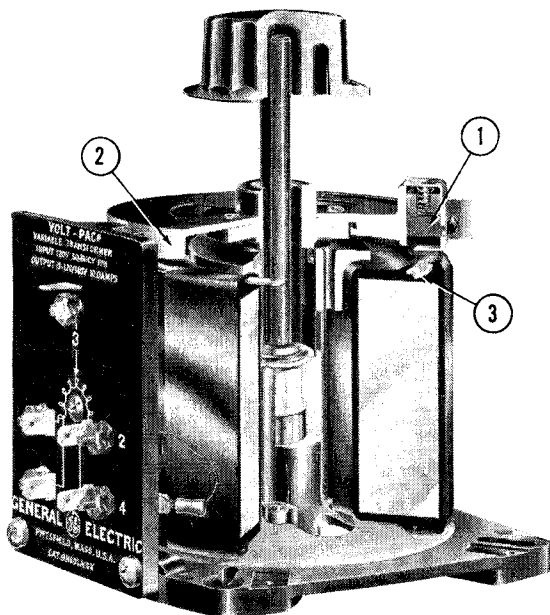
### AVAILABLE DESIGNS

Manual: for variable output from stable input voltage

Plug-in: for laboratory or shop source of adjustable a-c voltage

Motor-operated: for variable output from stable input voltage

Automatic: for closely regulated output from varying input voltage



### DOLLAR SAVINGS . . .

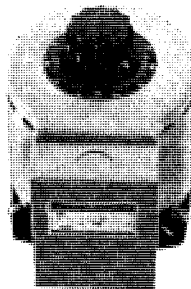
19 Basic Single-core Ratings, Wider Selection

### LONGER LIFE . . .

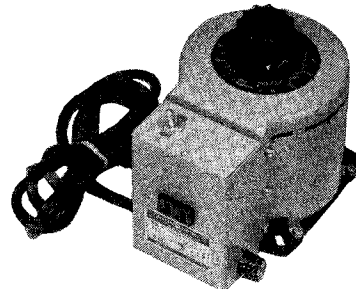
30-100% Greater Overload Capability

### SPACE SAVINGS . . .

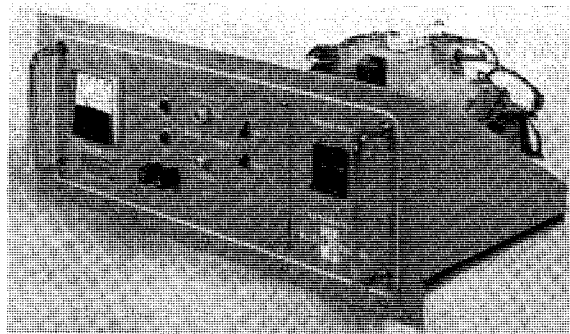
Up to 33% Greater Over-all Capacity in Same Physical Size



Manual, single-phase, cased — terminals enclosed



Plug-in unit, 120-volt, 7.5-amp. Available with NEMA standard 2- or 3-blade plug and receptacle



Single-phase automatic unit rated 115 volts, 8.5 amp

### NEW EXCLUSIVE FEATURES

The volt-pac design incorporates many important new features which provide new levels of performance for users. Significant among these are the heat-sink ring, quick-transfer current collector, and grain-oriented solid-carbon brush. These three exclusive features help increase the load capacity of present core sizes as much as 33 percent. The ability to pack more capacity in less volume is of vital importance in many applications where space is very limited.

- ① Brush design, with solid-carbon brush, eliminates carbon-to-metal soldering, keeps brush temperature down by lowering resistance to load currents
- ② Quick transfer current collector increases performance and reliability by eliminating hidden contact surfaces and providing a direct low-resistance path for load current
- ③ New unique heat-sink ring located beneath the gold-plated brush track quickly dissipates heat from the hot spot



VARIABLE TRANSFORMERS



SINGLE-PHASE — MANUAL OPERATION

THREE-PHASE — MANUAL OPERATION

OUTPUT CURRENT			Freq. †	No. of Cores	UNCASED MODEL		CASED MODEL	
Line-voltage Connection	Over-voltage Connection	Amperes *			Catalog Number	Approx. Net Wt. (lb.)	Catalog Number	Approx. Net Wt. (lb.)
Rated Amp	Max Amp							

OUTPUT CURRENT			Freq. †	No. of Cores	UNCASED MODEL		CASED MODEL	
Line-voltage Connection	Over-voltage Connection	Amperes *			Catalog Number	Approx. Net Wt. (lb.)	Catalog Number	Approx. Net Wt. (lb.)
Rated Amp	Max Amp							

120-VOLT INPUT (SINGLE CORE): OUTPUT — 0-120 V (Line-voltage Conn.); 0-140 V (Overvoltage Conn.)

2.0	2.9	2.0†	50/60†	1	9H30AA10X	2¼	—	—
2.25	3.2	2.25†	50/60†	1	9H30LA10X	2¼	—	—
4.0	5.8	4.0	50/60†	1	9H40AA10X	4¼	—	—
7.5	10.8	7.5	50/60†	1	9H60AA10X	9¼	9H60AA13X	10
10.0	14.5	—	60	1	9H60BA10X†	9¼	9H60BA13X†	10
10.0	14.5	10.0	50/60†	1	9H60LA10X	9¼	9H60LA13X	10
13.0	18.8	—	60	1	9H60MA10X†	9¼	9H60MA13X†	10
15.0	21.7	15.0	50/60†	1	9H75AA10X	15¼	9H75AA13X	16¼
20.0	29.0	20.0	50/60†	1	9H75LA10X	15¼	9H75LA13X	16¼
30.0	30.0	30.0	50/60†	1	9H85AA10X	30	9H85AA13X	32½
40.0	40.0	40.0	50/60†	1	9H85LA10X	30	9H85LA13X	32½
50.0	50.0	50.0	50/60	1	9H95AA10X	60	9H95AA13X	63½
65.0	65.0	65.0	50/60	1	9H95LA10X	60	9H95LA13X	63½

240-VOLT INPUT: OUTPUT — 0-240 V (Line-voltage Conn.); 0-280 V (Overvoltage Conn.)

2.0	2.9	—	60	3	9H30AC30X†	8½	—	—
2.25	3.2	—	60	3	9H30LC30X†	8½	—	—
4.0	5.8	—	60	3	9H40AC30X†	13¾	—	—
7.5	10.8	7.5	50/60	3	9H60AC30X	30	9H60AC33X	32¼
10.0	14.5	—	60	3	9H60BC30X†	30	9H60BC33X†	32¼
10.0	14.5	10.0	50/60	3	9H60LC30X	30	9H60LC33X	32¼
13.0	18.8	—	60	3	9H60NC30X†	30	9H60NC33X†	32¼
15.0	21.7	15.0	50/60	3	9H75AC30X	51	9H75AC33X	54
20.0	29.0	20.0	50/60	3	9H75LC30X	51	9H75LC33X	54
30.0	30.0	30.0	50/60	3	9H85AC30X	99½	9H85AC33X	107
40.0	40.0	40.0	50/60	3	9H85LC30X	99½	9H85LC33X	107
50.0	50.0	50.0	50/60	3	9H95AC30X	211	9H95AC33X	224½
65.0	65.0	65.0	50/60	3	9H95LC30X	211	9H95LC33X	224½
80.0	80.0	80.0	50/60	6	9H85LF30X	347	9H85LF33X	369½
100.0	100.0	100.0	50/60	6	9H95AF30X	413	9H95AF33X	440
130.0	130.0	130.0	50/60	6	9H95LF30X	413	9H95LF33X	440

120-VOLT INPUT (MULTIPLE CORE): OUTPUT — 0-120 V (Line-voltage Conn.); 0-140 V (Overvoltage Conn.)

80.0	80.0	80.0	50/60†	2	9H85LB50X	67	9H85LB53X	72
100.0	100.0	100.0	50/60	2	9H95AB50X	131	9H95AB53X	140
130.0	130.0	130.0	50/60	2	9H95LB50X	131	9H95LB53X	140
150.0	150.0	150.0	50/60	3	9H95AV50X	211	9H95AV53X	224½
195.0	195.0	195.0	50/60	3	9H95LC50X	211	9H95LC53X	224½
260.0	260.0	260.0	50/60	4	9H95LD50X	278	9H95LD53X	296
325.0	325.0	325.0	50/60	5	9H95LE50X	347	9H95LE53X	369½
390.0	390.0	390.0	50/60	6	9H95LF50X	413	9H95LF53X	440

240/480-VOLT INPUTS: OUTPUT — 0-480 V (Line-voltage Conn.); 0-560 V (Overvoltage Conn.)

3.0	4.3	—	50/60	3	9H60CC30X	30	9H60CC33X	32¼
4.0	5.8	—	60	3	9H60DC30X*	30	9H60DC33X*	32¼
4.0	5.8	4.0	50/60	3	9H60MC30X	30	9H60MC33X	32¼
5.5	7.9	—	60	3	9H60PC30X*	30	9H60PC33X*	32¼
7.0	10.1	7.0	50/60	3	9H75BC30X	51	9H75BC33X	54
9.5	13.7	9.5	50/60	3	9H75MC30X	51	9H75MC33X	54
14.0	14.0	14.0	50/60	3	9H85BC30X	99½	9H85BC33X	107
16.0	16.0	16.0	50/60	3	9H85MC30X	99½	9H85MC33X	107
30.0	30.0	30.0	50/60	3	9H95BC30X	211	9H95BC33X	224½
40.0	40.0	40.0	50/60	3	9H95MC30X	211	9H95MC33X	224½
60.0	60.0	60.0	50/60	6	9H95BF30X	413	9H95BF33X	440
80.0	80.0	80.0	50/60	6	9H95MF30X	413	9H95MF33X	440

120/240-VOLT INPUTS (SINGLE CORE): OUTPUT — 0-240 V (Line-voltage Conn.); 0-280 V (Overvoltage Conn.)

3.0	4.3	3.0	50/60†	1	9H60CA10X	9¼	9H60CA13X	10
4.0	5.8	—	60	1	9H60DA10X*	9¼	9H60DA13X*	10
4.0	5.8	4.0	50/60†	1	9H60MA10X	9¼	9H60MA13X	10
5.5	7.9	—	60	1	9H60PA10X*	9¼	9H60PA13X*	10
7.0	10.1	7.0	50/60†	1	9H75BA10X	15¼	9H75BA13X	16¼
9.5	13.7	9.5	50/60†	1	9H75MA10X	15¼	9H75MA13X	16¼
14.0	14.0	14.0	50/60†	1	9H85BA10X	30	9H85BA13X	32½
16.0	16.0	16.0	50/60†	1	9H85MA10X	30	9H85MA13X	32½
30.0	30.0	30.0	50/60	1	9H95BA10X	60	9H95BA13X	63½
40.0	40.0	40.0	50/60	1	9H95MA10X	60	9H95MA13X	63½

PLUG-IN SETS

OUTPUT CURRENT			Freq. †	Catalog Number	Fuse Rating	OVER-ALL DIMENSIONS (Inches)			Approx Net Wt (lb)
Line-voltage Connection	Over-voltage Connection	Amperes *				Ht.	Width	Depth	
Rated Amp	Max Amp								

120/240-VOLT INPUTS (MULTIPLE CORE): OUTPUT — 0-240 V (Line-voltage Conn.); 0-280 V (Overvoltage Conn.)

60.0	60.0	60.0	50/60	2	9H95BB50X	131	9H95BB53X	140
80.0	80.0	80.0	50/60	2	9H95MB50X	131	9H95MB53X	140
90.0	90.0	90.0	50/60	3	9H95CB50X	211	9H95CB53X	224½
120.0	120.0	120.0	50/60	3	9H95MC50X	211	9H95MC53X	224½
160.0	160.0	160.0	50/60	4	9H95MD50X	278	9H95MD53X	296
200.0	200.0	200.0	50/60	5	9H95ME50X	347	9H95ME53X	369½
240.0	240.0	240.0	50/60	6	9H95MF50X	413	9H95MF53X	440

120-VOLT INPUT: OUTPUT — 0-120 V (Line-Conn.); 0-140 V (Overvoltage Conn.)

7.5	10.8	7.5	50/60	8	9H60AA17XB	8	6¼	5	7	11
7.5	10.8	7.5	50/60	8	9H60AA17XA	8	6¼	5	7	11
10.0	14.5	10.0	50/60	9	9H60LA17XB	10	6¼	5	7	11
10.0	14.5	10.0	50/60	9	9H60LA17XA	10	6¼	5	7	11
15.0	21.7	15.0	50/60	15	9H60LA17XA	15	6¼	5	7	11
15.0	21.7	15.0	50/60	10	9H75AA17XA	10	6¼	6¼	8¼	17
20.0	29.0	20.0	50/60	20	9H75LA17XA	20	6¼	6¼	8¼	17

240/480-VOLT INPUTS (MULTIPLE CORE): OUTPUT — 0-480 V (Line-voltage Conn.); 0-560 V (Overvoltage Conn.)

3.0	4.3	3.0	50/60†	2	9H60CB40X	21¾	9H60CB43X	23¼
4.0	5.8	—	60	2	9H60DB40X*	21¾	9H60DB43X*	23¼
4.0	5.8	4.0	50/60†	2	9H60MB40X	21¾	9H60MB43X	23¼
5.5	7.9	—	60	2	9H60PB40X*	21¾	9H60PB43X*	23¼
7.0	10.1	7.0	50/60†	2	9H75BB40X	34	9H75BB43X	36
9.5	13.7	9.5	50/60†	2	9H75MB40X	34	9H75MB43X	36
14.0	14.0	14.0	50/60†	2	9H85BB40X	67	9H85BB43X	72
16.0	16.0	16.0	50/60†	2	9H85MB40X	67	9H85MB43X	72
30.0	30.0	30.0	50/60	2	9H95BB40X	131	9H95BB43X	140
40.0	40.0	40.0	50/60	2	9H95MB40X	131	9H95MB43X	140
60.0	60.0	60.0	50/60	4	9H95BD60X	278	9H95BD63X	296
80.0	80.0	80.0	50/60	4	9H95MD60X	278	9H95MD63X	296
90.0	90.0	90.0	50/60	6	9H95BF60X	413	9H95BF63X	440
120.0	120.0	120.0	50/60	6	9H95MF60X	413	9H95MF63X	440

120/240-VOLT INPUTS: OUTPUT — 0-240 V (Line Conn.); 0-280 V (Overvoltage Conn.)

3.0	4.3	3.0	50/60	3	9H60CA17XB	3	6¼	5	7	11
3.0	4.3	3.0	50/60	3	9H60CA17XC	3	6¼	5	7	11
4.0	5.8	4.0	50/60	4	9H60MA17XB	4	6¼	5	7	11
4.0	5.8	4.0	50/60	4	9H60MA17XC	4	6¼	5	7	11
7.0	10.1	7.0	50/60	8	9H75BA17XC	8	6¼	6¼	8¼	17
9.5	13.7	9.5	50/60	10	9H75MA17XC	10	6¼	6¼	8¼	17

\* When Overvoltage Connection is used, rated current should not be exceeded. Output kva for Overvoltage Connection is maximum output voltage times rated current.

† When using extended tap connections, operation is for 60 cycles per second only.

‡ Output at Overvoltage Connection is 0-132 volts.

§ When operated on lower input-voltage tap, rated current must be reduced when output voltage exceeds 140 percent of input voltage.

¶ For Line-voltage Connection only — No Overvoltage Connection provided.

■ For 240-volt input, 0-240-volt output, application only.

• For 480-volt input, 0-480-volt output, application only.

MOTOR-OPERATED AND AUTOMATIC UNITS ALSO AVAILABLE FROM STOCK

For the full story on G-E's manual and motor-operated volt-pac lines, and the automatic line with solid-state SCR control, ask your G-E Supplier for Bulletin GEC-1559. Or write to General Electric Company, Schenectady, N. Y.



Leader in... VOLTAGE REGULATION



# MICROTRAN

## Miniaturized Transformers

### PICO MINIATURE TRANSFORMERS — PM SERIES (FIG. A)

PM-M (Fig. A) Epoxy molded finish with gold plated leads, 0.020" x 3/4". Frequency Response ±2db, 300 cps to 100 kc, except PM3 and PM5, to 45 kc. Power level given for 15% max. distortion, except PM35, 20% and PM37, 25%. Maximum size, .465" x .310". Weight, 0.1 oz. MIL type TF5RX-ZZ (Insert MIL No. from table). PM-F (Fig. G) Open Frame 4 inch #30 plastic leads, resin impregnated. Size .250" x .375" x .406" MIL type TF5RX-ZZ (Insert MIL No. from table).

Microtran No.	Application	Impedance		Pri DC Ma*	DC Resist., Ohms		Power Level Mw	MIL No.	Net Each Lots of 1-9*	
		Primary	Secondary		Pri.	Sec.			-M	-F
PM3	Input	200K CT	1K CT	0	5300	110	10	16	\$7.65	—
PM5	Input	200K	1K	0	5300	110	10	16	6.60	—
PM7	Interstage	50K CT	1K CT	0	3300	75	10	16	7.10	—
PM9	Interstage	50K	1K/250‡	0	3300	75	10	16	7.50	—
PM11	Interstage	25K CT	1K CT	0.5	1700	110	40	12	7.05	—
PM13	Interstage	25K	1K/250‡	0.25	1700	110	40	12	7.65	—
PM15	Interstage	25K	1K	0.25	1700	110	40	12	6.15	5.10
PM17	Isolation	10K CT	10K CT	1	1000	1300	50	12	7.65	—
PM19	Driver	10K CT	2K CT	1	1000	300	50	12	6.75	—
PM21	Driver	10K	2K/500‡	0.5	1000	300	50	12	7.35	—
PM23	Driver	10K CT	1200 CT	1	1000	300	50	12	7.35	—
PM25	Driver	10K	1200/300‡	0.5	1050	280	50	12	6.75	—
PM27	Driver	10K	1200	0.5	1050	280	50	12	6.00	4.80
PM29	Driver	10K CT	500 CT	1	1050	80	50	12	6.75	—
PM31	Isolation	2500	2500 CT	1	250	325	50	12	6.30	5.25
PM33	Output	1500 CT	600	3	170	95	50	12	6.15	4.95
PM35	Output	500	50	3	60	8	50	17	5.40	4.35
PM37	Output	120 CT	3.2	10	16	0.75	50	17	5.70	4.65
PM39	Audio Choke	6 hys.	.....	2	1800	.....	.....	20	5.40	4.20
PM41	Audio Choke	.3 hys.	.....	42	.....	.....	.....	20	4.65	3.90

\*Unbalanced. ‡Split. •These items available in open frame construction.

### DC TO DC CONVERTER TRANSFORMERS SWITCHING TYPE

Provides improved reliability and efficiency over vibrator and rotary power converters. Approx. 800 cps repetition rate. Full wave and CT loads may be drawn simultaneously, but VA output should not be exceeded for continuous duty. Fig. B except M8072, Fig. C.

Microtran No.	In-put VDC	VA Out-put	Transistors Suggested	DC Output				Size, Inches W. x D. x H.	Mtg. Ctrs., In.		MIL Case	Net Each, 1-9*
				V.	Ma	CT FW V.	CT FW Ma		ML	MW		
M8034	28	125	Delco 2N174	500	250	250	420	2 3/8 x 2 3/4 x 3 3/8	2 1/8	1 3/4	GA	\$26.70
M8035	13.6	125	Delco 2N442	500	250	250	420	2 3/8 x 2 3/4 x 3 3/8	2 1/8	1 3/4	GA	26.70
M8036	13.6	40	Delco 2N442	450	90	225	155	2 1/4 x 2 3/4 x 3 3/8	1 1/8	1 1/8	FA	24.90
M8072	2.7	190‡	Delco 2N1307	480*	400‡	.....	.....	1 3/8 x 1 1/4 x 2 3/8	1 3/8	.....	ZZ	5.40

\*Output when used with half wave cap. input rectifier. ‡a. †Mw.

### BLOCKING OSCILLATOR TYPE

Approx. 400 cps repetition rate. Fig. C, except M8051, Fig. D.

Microtran No.	Turns Ratio HV: Coll.: Feedback	Input		Output		Sizes, Inches W. x D. x H.	Mtg. Ctr., In.	Net Each, 1-9*
		DC V.	DC Ma	DC Volts	DC µa			
M8050	600:12:1	3	20	1000*	25	1 3/8 x 1 1/4 x 2 3/8	1 3/8	\$ 5.55
M8051	600:12:1	3	20	1000*	25	1 x 1 x 1 3/8	1 1/8	11.85
M8073	44:1:1	4	2-15‡	425-500‡	50‡	3/4 x 1/2 x 3/4	.....	5.25
M8074	65.5:33:1	3	45	535*	90	1 3/8 x 1 1/4 x 2 3/8	1 3/8	5.10

\*When used in blocking oscillator circuit with single cap. input rectifier. ‡Varies with load and bias conditions. Frequency varies from 100 to 2800 cps. •Maximum.

### MICRO-MINIATURE AUDIO AND TRANSISTOR TRANSFORMERS — MM AND MMT SERIES

MM-M (Fig. E): Molded, for plug-in printed circuit applications. Cast epoxy resin for high resistance to extremes of ambient temperature. MIL Type TF6RX — ZZ (Insert MIL No. from table). Size 7/8" x 3/2" x 1/2" with 3/32" pins, .020" dia. Weight, 1/2 oz. MM-H (Fig. F): Hermetically sealed with high compression glass Gray enamel

finish. MIL Type TF4RX — YY. Size, 1/2" x 1/2" x 1/4". Weight, 3/4 oz. MM-FB (Fig. G): Open frame with channel on special order. MIL Type TF6RX — ZZ. Size, 1 1/2" x 1/2" x 1/2", plus tabs. MM-CM (Fig. H): Contour molded on special order only, size 7/8" x 1/2" x 3/2". Designed for chassis mounting with solder terminals on top of transformer.

Microtran No. †	Application	Impedance		Pri. Unbal. DC Ma	Oper. Level, dbm	Freq. Resp. ±2 db CPS	MIL No.	Net Each, Lots of 1-9*		
		Pri.	Sec.					-FB	-H	-M, -CM
MM1-	Input	200/50	250K/62.5K	0	4	200-10K	10	\$4.50	\$7.35	\$8.55
MM2-	Interstage 3:1	10K	90K	0	4	150-10K	10	4.80	7.50	8.70
MM3-	Plate to line	10K	200	3	20	150-10K	13	4.20	7.20	8.40
MM4-	Output	30K	50	1	20	150-10K	13	4.05	7.05	8.25
MM5-	Reactor 50 hy. at 1 mil DC	4.7K ohms	DC Res.	.....	.....	.....	20	4.05	6.90	8.10
MM6-	Output	100K	60	0.5	20	250-10K	13	4.20	7.20	8.40
MM7-	Output	30K	1200	0.5	20	200-10K	13	3.30	6.45	7.65
MMT1-	Line to base	600	600	8	22	200-15K	17	3.90	7.35	8.55
MMT3-	Coll. to base or line	50K	600	0.7	20	200-15K	13	4.05	7.50	8.70
MMT4-	P-p coll. to p-p base	50K CT	600 CT	1.4	20	200-15K	13	4.80	8.55	9.75
MMT5-	Coll. to speaker	50K	6	1	20	200-15K	13	4.35	7.95	9.15
MMT7-	Coll. to p-p base	25K	1200 CT	1	20	200-15K	13	4.50	8.40	9.60
MMT8-	P-p coll. to p-p base	50K CT	1200 CT	1.4	20	200-15K	13	4.65	8.55	9.75
MMT9-	Line to p-p base	600 CT	1200 CT	16	22	200-15K	17	4.20	7.65	8.85
MMT10-	Coll. to base	25K	600	1	20	200-15K	13	3.45	7.20	8.40
MMT11-	P-p coll. to p-p base or line	4K CT	600 CT	5	28	200-15K	12	4.35	7.80	9.00
MMT12-	Coll. to speaker	2K	3.4	5	28	200-15K	13	3.90	7.35	8.55
MMT13-	Output p-p coll. to speaker	4K CT	3.4	5	28	200-15K	13	4.05	7.50	8.70
MMT16-	Coll. to p-p base	10K	1500 CT	1	20	200-15K	13	4.50	8.40	9.60
MMT17-	P-p coll. to p-p base	10K CT	200 CT	6	20	200-15K	13	4.50	8.10	9.30
MMT18-	P-p coll. to p-p base	25K CT	1200 CT	2	20	200-15K	13	4.65	8.55	9.75
MMT19-	Coll. to p-p base	2500	2500 CT	2	23	200-15K	13	4.05	7.50	8.70
MMT21-	P-p coll. to p-p base	4K CT	600/150 Split	5	28	200-15K	13	4.65	8.55	9.75
MMT25-	P-p coll. to p-p base	7500 CT	600 CT	4	22	200-15K	13	4.35	7.80	9.00
MMT26-	Line to base	600 CT	600 CT	16	22	200-15K	17	4.20	7.65	8.85
MMT27-	P-p coll. to p-p base	25K CT	600 CT	2	20	200-15K	13	4.50	8.40	9.60
MMT28-	P-p coll. to p-p base	10K CT	1500 CT	2	20	200-15K	13	4.65	8.55	9.75
MMT29-	Driver/Isolation	10K CT	10K CT	2	20	200-15K	13	4.65	8.55	9.75
MMT30-	P-p coll. to p-p base	7500 CT	1200 CT	4	22	200-15K	13	4.50	8.40	9.60
MMT31-	P-p coll. to p-p base	2K CT	500 CT	10	28	200-15K	13	4.35	8.25	9.45
MMT32-	Line to p-p base	600 CT	1200/300 Split	16	22	200-15K	17	4.65	8.55	9.75

★SEE FOURTH MICROTRAN PAGE FOR QUANTITY PRICING AND MIL CASE SIZES

-CM \$12.50 setup charge

†ORDER BY COMPLETE MICROTRAN NUMBER; EXAMPLE MM1-FB.

Also see EEM pages for additional items and list of franchised distributors.

# Miniaturized Transformers

## ULTRA-MINIATURE TRANSISTOR TRANSFORMERS — UM SERIES

Frequency Response:  $\pm 2$  db, 300-10K cps. Leads supplied, 4" #27 color-coded. Power Levels given for 7 1/2% max. distortion. UM-F (Fig. A): Size, 3/8" x 3/8" x 1/2". Weight, 0.08 oz. MIL type TF6RX—ZZ (Insert MIL No. from table). UMM-M (Fig. B): Size, 1/2" dia. x 1/2". Wt., 0.14 oz. MIL type TF5RX—ZZ.

Microtran No.†	Application	Impedance		Unbal. Pri. DC Ma	DC Resist., Ohms		Level at 1 kc, mw	MIL No.	Net Each, 1-9*	
		Primary	Sec.		Pri.	Sec.			-F	-M
UM21-	Input	100K	1K	0	1900	135	70	16	\$6.00	\$6.60
UM22-	Driver	20K	1K	0.5	1100	100	300	13	4.35	5.40
UM23-	Driver	20K	1200 CT	0.5	1100	110	300	13	4.65	6.00
UM24-	Output	1K	50	3	65	10	500	17	3.90	4.95
UM25-	Output	400	50	3	35	5	500	17	3.90	4.95
UM26-	Output	400	11	3	35	1.5	500	17	3.90	4.95
UM27-	Output	400 CT	11	6	35	1.5	500	17	4.20	5.25
UM28-	Choke	10 hy., (0 DC)	.....	8 hy., (0.5 ma)	650	.....	.....	20	3.75	5.25
UM29-	Interstage	600 CT	600 CT	7	45	60	400	21	4.65	5.70
UM30-	Choke	1.5 hy., (0 DC)	.....	7 hy., (2 ma)	100	.....	.....	20	3.60	4.50
UM31-	Interstage	10K CT	1200 CT	2	850	120	500	21	4.80	5.85
UM32-	Output	1500 CT	600	5	135	65	500	17	4.35	5.40
UM33-	Output	1K CT	600	6	80	65	500	17	4.35	5.40
UM34-	Driver	10K CT	600 CT	2	850	40	500	13	4.50	5.55
UM35-	Isolation	15K CT	15K CT	1	930	1210	300	15	4.95	6.15

UM-90: Shield can for all UM-M Series, UM90 (Fig. J).

## VERI-MINIATURE TRANSISTOR TRANSFORMERS — VM SERIES

Frequency Response:  $\pm 2$  db, 200-10K cps. Leads supplied, 4" #27 color-coded. Power levels given for 7 1/2% max. distortion. VM-M (Fig. C): For plug-in printed circuit applications. Cast Epoxy resin provides high resistance. Size, 1/2" x 1/4" x 1/2". Weight, 0.25 oz. MIL type TF2RX—ZZ (Insert MIL No. from table). VM-FPB (Fig. D): Plug-in tab mounted channel. Size, 1/2" x 1/32" x 1/4". Weight, 0.2 oz. MIL type TF6RX—ZZ.

Micro- No.†	Application	Impedance		DCR, Ohms	Level, mw	MIL No.	Net Ea., 1-9*		
		Primary	Secondary				-FPB	-M	
VM1-	Input	50	600, (1.5 ma)	7	90	15	21	\$4.20	\$5.55
VM2-	Input or intrstg.	200K	600, (1.0 ma)	3000	110	5	21	5.70	7.20
VM3-	Interstage	25K	600, (1.0 ma)	720	45	5	21	4.50	6.30
VM4-	Input or intrstg.	200K	1200, (.72 ma)	3100	165	5	21	5.70	7.20
VM5-	Interstage	50K	600, (1.0 ma)	830	55	5	21	4.65	6.60
VM6-	Interstage	100K	1200±, (.72 ma)	2000	150	5	21	5.85	7.35
VM7-	Output	500, (3.5 ma)	3.4	50	0.5	15	21	4.20	5.55
VM8-	Output	1250, (2.0 ma)	3.4	135	0.5	15	21	4.35	5.70
VM9-	Output	1250, (2.0 ma)	50	135	6.5	15	21	4.35	5.70
VM10-	Interstage	2500, (1.5 ma)	2500 CT	225	215	3	21	4.65	6.90
VM11-	Choke	20 hy., (0 ma)	12 hy., (.5 ma)	1000	.....	.....	21	4.05	5.10
VM12-	Interstage	20K	1000, (.75 ma)	625	85	5	21	4.50	6.30
VM13-	Interstage	20K	1000±, (.75 ma)	625	85	5	21	4.65	6.90
VM14-	Interstage	600±, (.7 ma)	600 CT	50	65	15	17	4.50	6.75
VM15-	Isolation	50K CT	50K CT	2000	2600	5	15	6.00	8.40
VM16-	Driver	500±, (.75 ma)	250 CT	40	13	15	17	4.50	6.75

## TRANSISTOR DRIVER AND OUTPUT TRANSFORMERS (FIG. E)

Hermetically sealed and magnetically shielded with MIL-T-27B construction. MIL Type TF4RX— (Add MIL No. 17 and Case from table). MIL No. 17 except where noted.

Micro. No.	Application	Impedance		Pri. Unb. DC Ma	Level Watts	Freq. Resp. $\pm 2$ db, cps	MIL Case	Net Ea., 1-9*
		Pri.	Sec.					
M8002*	Coll. to p-p base	560	400 CT	18	0.15	200-20K	AJ	\$11.25
M8003*	Coll. to p-p base	625 CT	100 CT	20	1.5	200-20K	AJ	12.30
M8004	Coll. to p-p base	5400	600 CT	15	0.075	200-15K	AH#	14.85
M8005	Coll. to p-p base	7000	320 CT	7	0.040	70-15K	AH#	14.85
M8006	Coll. to p-p base	10K	6500 CT	0.75	0.005	200-15K	YY#	9.45
M8008	Coll. to speaker	25	3-4	600	3	200-20K	AJ	11.10
M8007*	P-p auto transformer	30 CT	3-4	200	2	100-20K	AJ	11.40
M8009	P-p output to spkr.	48 CT	3.2/8	50	5	200-20K	AJ	11.70
M8010	P-p coll. to servo	120 CT	1K	40	6	300-15K	AJ	11.55
M8011	P-p output to spkr.	125 CT	3-4	20	1.5	200-15K	AH	14.55
M8012*	P-p coll. to servo	140 CT	500	50	6	300-15K	AJ	11.25
M8013*	P-p output to spkr.	250 CT	3-4	20	0.4	70-15K	AH	14.55
M8014	P-p output to spkr.	400 CT	11	2	0.25	300-15K	YY	9.15
M8015	P-p coll. to servo	1600 CT	800	5	2.5	150-20K	AJ	12.00
M8016	P-p output to spkr.	2500 CT	12	4	0.10	300-15K	YY	9.30
M8054	P-p output to servo	250 CT	130	20	3	200-15K	AH	14.55

†CT. \*Bi-filar wound to minimize switching transients. #MIL No. 13.

## SUBMINIATURE AUDIO AND TRANSISTOR TRANSFORMERS — SM, SMT and SM-CM SERIES

SM-AF (Fig. F): MIL-T-27B-AF modified case with compression sealed ceramic terminals. Gray enamel finish. MIL Type TF4RX—YY (Insert MIL No. from table). Max. Size, 3/4" x 3/4" x 1 1/8" with two 4-40NC-2 spade mtg. bolts. Weight, 1 1/8 oz. SM-H (Fig. G): Hermetically sealed with high compression glass terminals, gray enamel finish. MIL Type TF4RX—YY. Size, 1/8" dia. x 1/8" h. Weight, 1 oz. SM-FB (Fig. H): Open

frame with channel. Available with plug-in tab mounted channel or without channel on special order. MIL Type TF6RX—ZZ. Size, 1/2" x 1/2" x 3/4", plus tabs. Weight, 0.710 oz. SM-M (Fig. I): Molded, for plug-in printed circuit applications. MIL Type TF5RX—ZZ. Size, 1/2" max. x 7/8" x 3/4". Weight, 1/2 oz. SM-CM (Fig. K): Contour molded, not stocked—on special order only.

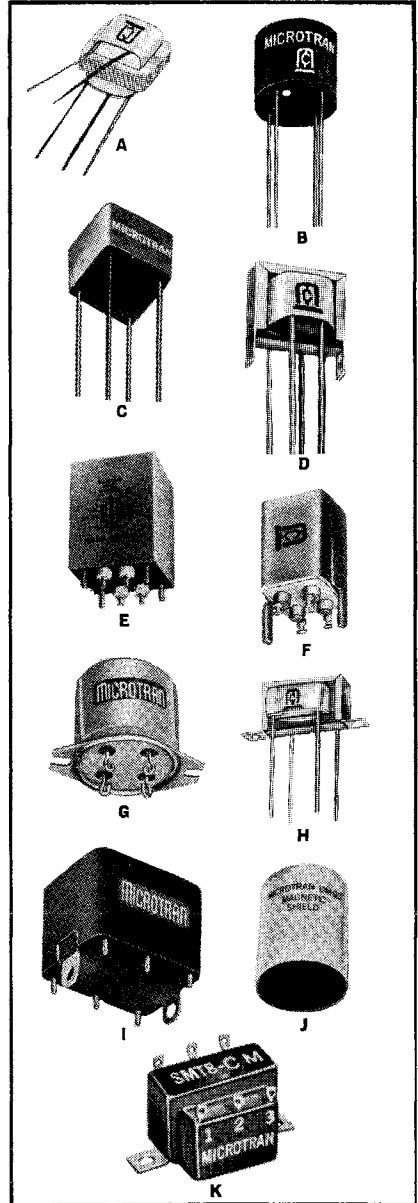
Microtran No.†	Application	Impedance		Pri. Unbal. DC Ma	Oper. Level, dbm	Frequency Resp., $\pm 2$ db, cps	MIL No.	Net Each, Lots of 1-9*			
		Pri.	Sec.					AF-	-FB	-H	-M, -CM
SM1-	Input	200/50	250K/62.5K	0	6	80-10K	10	\$9.00	\$4.35	\$7.20	\$9.00
SM2-	Interstage 3:1	10K	90K	0	8	100-10K	10	8.70	3.90	6.90	9.00
SM3-	Plate-to-line	10K	200	3	21	150-10K	13	8.70	3.90	6.90	9.00
SM4-	Output	30K	50	1	21	150-10K	13	8.70	3.90	6.90	9.00
SM5-	Reactor 50 hy. at 1 mil DC	3K ohms	DC Resist.	.....	.....	.....	20	7.20	3.30	6.30	8.40
SM6-	Output	100K	60	0.5	21	150-10K	13	8.70	4.35	7.05	9.00
SMT1-	Line to base	600	600	9	23	200-15K	17	6.75	3.90	6.00	7.20
SMT3-	Coll. to base or line	50K	600	1	20	300-15K	13	7.35	4.50	6.60	7.80
SMT4-	P-p coll to p-p base	50K CT	600 CT	2	20	200-15K	13	.....	4.95	7.05	8.25
SMT5-	Coll. to speaker	50K	6	1	20	300-15K	13	7.20	4.35	6.45	7.65
SMT7-	Coll. to p-p base	25K	1200 CT	1.5	20	200-15K	13	7.50	4.65	6.75	7.95
SMT8-	P-p coll. to p-p base	50K CT	1200 CT	2	20	200-15K	13	.....	4.95	7.05	8.25
SMT9-	Line to p-p base	600 CT	1200 CT	18	23	200-15K	17	.....	4.20	6.30	7.50
SMT10-	Coll. to base	25K	600	2	20	200-15K	13	7.05	4.20	6.30	7.50
SMT12-	Output coll. to speaker	2K	3.4	5	30	200-15K	13	6.75	3.90	6.00	7.20
SMT13-	Output p-p coll. to speaker	4K CT	3.4	5	30	200-15K	13	6.90	4.05	6.15	7.35
SMT16-	Coll. to p-p base	10K	1500 CT	1	23	200-15K	13	7.50	4.65	6.75	7.95
SMT17-	P-p coll. to p-p base	10K CT	200 CT	6	20	200-15K	13	.....	4.80	6.90	8.10
SMT18-	P-p coll. to p-p base	25K CT	1200 CT	3	20	200-15K	13	.....	4.95	7.05	8.25
SMT19-	Coll. to p-p base	2500	2500 CT	2.5	26	200-15K	13	7.50	4.65	6.75	7.95
SMT26-	Line to base	600 CT	600 CT	18	23	200-15K	17	.....	4.50	6.60	7.80

\*SEE FOURTH PAGE FOR QUANTITY PRICING AND MIL CASE SIZES

†ORDER BY COMPLETE MICROTRAN NO. EXAMPLE, UM21-M

Also see EEM pages for additional items and list of franchised distributors.

-CM \$12.50 setup charge





# Miniaturized Transformers

## POWER SUPPLY TRANSFORMERS

For silicon rectifier circuitry and filament applications. Hermetically sealed. Primary, 105/115/125 v. Output voltage given for resistive or inductive loads, based on approx. 1 v. drop per rectifier. MIL Type TF4RX01—(Add MIL Case Type from table) per MIL-T-27B. Fig. A except M8063 and M8069, Fig. B.

### 400 CYCLE TYPE

Micro. No.	Secondary		Rect. Cir.		Size, inches W. x D. x H.	MIL Case	Net, 1-9*
	VAC	RMS	VDC±	VDC#			
M8063§	2.85	.045 a.	1.5	3	1 1/8 dia. x 1 1/8	YY	\$10.56
	2.85	.045 a.					
M8064§	6.3 CT	.6 a.	1.9	3.8	1 1/8 x 1 1/8 x 1 3/8	AH	11.10
M8039	12.6 CT	.8 a.	10.5	21	1 1/8 x 1 1/8 x 2 3/8	AJ	15.15
	12.6 CT	.8 a.					
M8018	18.5 CT	1 a.	7	14	1 1/8 x 1 1/8 x 2 3/8	EA	15.30
M8019	18.5 CT	3 a.	7	14	2 1/8 x 2 1/8 x 3 3/8	FA	15.90
M8085	26 CT	1.5 a.	10.7	21.5	1 1/8 x 1 1/8 x 2 3/8	EA	15.60
M8086	26 CT	3	10.7	21.5	2 1/8 x 2 1/8 x 3 3/8	FA	16.05
M8067	30 CT	.5 a.	12.5	25	2 1/8 x 2 1/8 x 2 1/2	FB	15.00
M8020	35 CT	3	14.5	29	2 3/8 x 2 3/8 x 3 3/8	GA	18.00
M8068	40 CT	.2 a.	17	34	1 3/8 x 1 1/8 x 2 3/8	AJ	13.20
M8041§	50 CT	.25 a.	21.5	43	1 3/8 x 1 1/8 x 1 3/4	AH	11.10
M8069	60 CT	.003 a.	26	52	1 1/8 dia. x 1 1/8	YY	9.75
M8070§	65 CT	.170 a.	28.4	56.8	1 3/8 x 1 1/8 x 1 3/4	AH	11.25
M8021	70 CT	1 a.	30	60	2 1/8 x 2 1/8 x 3 3/8	FA	16.05
M8071	80 CT	.90 a.	35.2	70.4	2 1/8 x 2 1/8 x 3 3/8	FA	16.20

### 60 CYCLE TYPE

M8042	6.3 CT	.6 a.	1.9	3.8	1 1/8 x 1 1/8 x 2 3/8	AJ	\$10.20
M8043	6.3 CT	2 a.	1.9	3.8	2 1/8 x 2 1/8 x 2 1/2	FB	12.00
M8044	12.6 CT	2 a.	10.5	21	3 1/8 x 3 1/8 x 3 3/8	JB	21.60
	12.6 CT	2 a.					
M8022	18.5 CT	3 a.	7	14	3 1/8 x 3 1/8 x 3 3/8	JB	20.25
M8045	28 CT	.6 a.	11.7	23.4	2 1/8 x 2 1/8 x 3 3/8	FA	16.35
M8055	30 CT	2.5 a.	12.5	25	3 1/8 x 3 1/8 x 4 7/8	JA	25.65
M8023	35 CT	3 a.	14.5	29	3 3/8 x 3 1/8 x 5 1/4	KA	26.10
M8046	49 CT	2.5 a.	21	42	3 1/8 x 4 1/8 x 5 3/8	LA	28.20
M8024	70 CT	1 a.	30	60	3 1/8 x 3 1/8 x 4 7/8	JA	25.65
M8056	80 CT	.6 a.	35	70.5	2 3/8 x 3 1/8 x 4 1/4	HA	16.65
M8057	115 CT	.9 a.	51	102	3 3/8 x 3 1/8 x 5 1/4	KA	25.35

‡CT full wave. #F.W. bridge. §Pri. 115v. only.

## 400 CYCLE ISOLATION TRANSFORMERS

Electrostatic shielding. Also for use in either F.W. bridge or F.W. CT circuit. MIL Type TF4RX01— Fig. A except M8058, Fig. B.

No. Micro.	Volts Input	Volts Output	Amps RMS	VA	Size, inches W. x D. x H.	MIL Case	Net, 1-9*
M8058	115	115 CT	.017	2	1 1/8 dia. x 1 1/8	YY	\$ 9.60
M8059	115	115 CT	.35	40	1 1/8 x 1 1/8 x 2 1/8	EB	14.70
M8060	115	115 CT	1.3	150	2 3/8 x 2 3/8 x 3 1/8	GA	18.45
M8061	115*	115 CT	2.6	300	3 1/8 x 3 1/8 x 4 7/8	JA	24.90
M8062	115*	115 CT	4.4	500	3 3/8 x 3 1/8 x 5 1/4	KA	26.85

\*Primary 105/115/125v.

## MINIATURE TRANSISTOR AND AUDIO TRANSFORMERS—MT AND M SERIES

M-M (Fig. C): Molded, for plug-in printed circuit use. Cast epoxy resin provides highest resistance to temperature extremes. MIL Type TF5RX—ZZ (Insert MIL No. from table). Max. Size, 1 1/2" x 7/8" x 7/8". Weight, 1 3/4 oz. M-AG (Fig. D): Enclosed in modified MIL-T-27 BG case with compression sealed ceramic terminals. MIL Type TF4RX—YY. Max. Size, 1" x 1" x 1 3/8". Weight, 2 3/8 oz. M-H (Fig. E): Hermetically sealed with high compression glass terminals, gray enamel finish. Available on special order with .120" holes. MIL Type TF4RX—YY. Size 1 1/8" dia. x 1 1/8" max. Weight, 1 1/4 oz. M-A (Fig. F): Aluminum case with 2-56 screws. MIL Type TF6RX—ZZ. Size .875" dia. x 1 1/8". Weight, 1.25 oz. M-FB (Fig. G): Open frame with channel. Available

with plug-in tab channel or without channel on special order. MIL Type TF6RX—ZZ. Size, 1 1/8" x 1 1/8" x 1/2" max., plus tabs. Weight, 1.13 oz. M-P (Fig. H): Octal plug-in type in sealed plastic housing. MIL Type TF6RX—ZZ. Size, 1 1/8" dia. x 1 1/8". Weight, 2 oz. M-A-Sh Shield: 25 db magnetic shield to match Type M-A. Two clearance holes on 1/8" centers. M-PC (fig. J) Open Frame printed circuit with terminals molded into bobbin to maintain accurate dimensions for printed circuit board, weight 1.2 oz. size 7/8" x 1 1/2" x 1", terminals 3/8" below bobbin, MIL type TF6RX—ZZ. M-CM (fig. I) Contour molded, not stocked-on special order only. Size 1 1/2" x 7/8" x 7/8". \$12.50 setup charge.

### MINIATURE AUDIO TRANSFORMERS—M SERIES

Micro-tran No.†	Application	Impedance		Pri. DC Ma*	Oper. Level, dbm	Freq. Resp. ± 2 db, cps	MIL No.	Net Each, Lots of 1-9*					
		Pri.	Sec.					-A	-AG	-FB, -PC	-H	-M, -CM	-P
•M1-	Mike or line to 1 grid	±	50K	0	5	20—20K	10	\$ 7.50	\$ 9.90	\$ 4.05	\$ 9.00	\$ 9.90	\$ 8.85
•M2-	Mike or line to 2 grids	±	50K CT	0	5	20—20K	10	7.65	10.35	4.20	9.45	10.20	8.85
M3-	Dynamic mike to 1 grid	±.5/30	50K	0	5	20—20K	10	7.50	9.90	3.90	9.00	9.75	8.40
M4-	Single plate to 1 grid	15K	60K	0	6	20—15K	10	6.45	8.55	3.45	7.65	8.55	7.50
M5-	Single plate to 1 grid	15K	60K	4	14	200—20K	15	6.45	8.55	3.45	7.65	8.55	7.50
M6-	Single plate to 2 grids	15K	95K CT	0	5	20—15K	10	7.35	9.45	3.60	8.55	9.45	8.25
M7-	Single plate to 2 grids	15K	95K CT	4	11	200—20K	15	7.35	9.75	3.75	8.85	9.75	8.25
M8-	Single plate to line	15K	±	0	8	20—20K	16	7.65	10.50	3.75	9.60	10.50	8.85
M9-	Single plate to line	15K	±	0	21	150—20K	13	7.65	10.50	3.75	9.60	10.50	8.85
•M10-	Push-pull plate to line	30K, p-p	±	0	8	30—50K	16	8.25	10.80	3.90	9.60	10.80	9.00
•M11-	Crystal mike to line	50K	±	0	5	20—20K	16	7.65	10.50	3.75	9.30	10.50	8.85
•M12-	Mixing and matching	±	±	0	8	20—20K	16	7.50	10.50	3.75	9.30	10.50	9.00
M13-	Reactor	300#	±	.....	.....	6K ohms DCR	20	6.15	8.25	3.30	7.35	8.25	7.50
M14-	50:1 mike to grid	200	1/2 meg.	0	9	80—3K	10	7.35	9.90	3.90	9.00	10.20	8.85
M15-	10:1 plate to grid	10K	1 meg.	0	11	100—2500	10	7.35	9.30	3.60	8.40	9.30	8.85

### MINIATURE TRANSISTOR TRANSFORMERS—MT SERIES

MT1-	Line to base	600	600	10	23	200—15K	17	\$7.20	\$8.70	\$3.60	\$7.80	\$9.00	\$7.35
•MT2-	Coll. to p-p base 2N57	100	10 CT/40 CT	100	27	200—20K	17	8.10	9.60	4.20	8.70	9.90	8.25
MT3-	Coll. to base or line	50K	600	3	20	300—15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT5-	Coll. to speaker	50K	6	3	20	300—15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT6-	Coll. to p-p base	100K	1200 CT	1.4	17	200—15K	13	7.95	9.45	4.05	8.55	9.75	8.10
MT7-	Coll. to p-p base	25K	1200 CT	3	22	200—15K	13	7.95	9.45	4.05	8.55	9.75	8.10
•MT8-	P-p coll. to p-p base	50K CT	1200 CT	3	20	300—15K	13	8.10	9.60	4.20	8.70	9.90	8.25
MT9-	Line to p-p base	600 CT	1200 CT	4	23	200—15K	17	8.10	9.60	4.20	8.70	9.90	7.80
MT10-	Coll. to base	600	600	3	22	200—15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT11-	P-p coll. to p-p base	4K CT	600 CT	3	32	200—15K	13	8.10	9.60	4.20	8.70	9.90	8.25
MT12-	Output coll. to spkr.	2K	3.4	10	32	200—15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT13-	P-p coll. to spkr.	4K CT	3.4	3	32	200—15K	13	7.95	9.45	4.05	8.55	9.75	8.10
MT14-	Coll. to spkr. 2N179	400	10	50	25	200—20K	13	7.20	8.70	3.60	7.80	9.00	7.35
MT15-	P-p servo output 2N57	500 CT	210	30	27	300—20K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT18-	P-p coll. to p-p base	25K CT	1200 CT	6	22	200—15K	13	8.10	9.60	4.20	8.70	9.90	8.25
•MT20-	P-p coll. to p-p base	50K CT	±	3	20	300—15K	13	8.40	9.90	4.50	9.00	10.20	8.55
•MT21-	P-p coll. to p-p base	4K CT	△	3	32	200—15K	13	8.25	9.75	4.35	8.85	10.05	8.40
•MT22-	Line to p-p base	±	1200 CT	4	23	200—15K	17	8.25	9.75	4.35	8.85	10.05	8.40
MT23-	P-p coll. to servo	250 CT	1000	10	30	200—15K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT24-	Coll. to p-p base	2500	600 CT	10	32	200—15K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT25-	P-p coll. to p-p base	7500 CT	600 CT	8	32	200—15K	12	8.10	9.60	4.20	8.70	9.90	8.25
MT26-	Line to p-p base	600 CT	600 CT	20	23	200—15K	17	7.95	9.45	4.05	8.55	9.75	8.10
MT29-	P-p coll. to servo	1600 CT	450	15	30	200—15K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT30-	P-p coll. to servo	250 CT	500	10	30	200—15K	17	7.80	9.30	3.90	8.40	9.60	7.95
M-A-Sh	Shield can for M-A	.....	.....	.....	.....	.....	.....	1.35	.....	.....	.....	.....	.....

\*Unbalanced. †50/250/600 CT. §50/250 CT. #Hy. 0 DC. †50 h. at 3 ma. △1200/300 split. ▽600/150 split. •These items are not available in —PC construction.

★SEE FOURTH PAGE FOR QUANTITY PRICING. †ORDER BY COMPLETE MICROTRAN NUMBER: EXAMPLE M1-A. Also see EEM pages for additional items and list of franchised distributors.





# Miniaturized Transformers

## LOW LEVEL CHOPPER INPUT TRANSFORMERS

Efficiently transfers 30—500 cps. Transducer or thermocouple signals to instrument amplifiers. Resin impregnated to minimize mechanical vibration noise signal. Three mu-metal and two copper shields insure low hum pickup. Accurate center taps and external electrostatic shield connection improve low level operation. Signal level range. 0.5  $\mu$ v to 0.5 v. 90 db magnetic shielding. Size, 1 $\frac{3}{8}$ " dia. x 1 $\frac{3}{32}$ " h. with two 6-32 x  $\frac{3}{8}$ " mtg. studs on 1 $\frac{1}{2}$ " centers. Weight, 4.5 oz.

Micro-tran No.	Turn Ratio		Full Pri. Hys*	Full Pri. Imped.*	DC Resis.		Fig. No.	Net Each, 1-9*
	Full Pri. Full Sec.	1/2 Pri. Full Sec.			Full Pri.	Sec.		
M8025	1:7.7	1:15.4	17.5	6,600	365 $\Omega$	4140 $\Omega$	A	\$13.80
M8026	1:3.2	1:6.4	60 hy	22,500	455 $\Omega$	3500 $\Omega$	A	13.80
M8052	1:4.53	1:9.06	90	34,000	760 $\Omega$	5220 $\Omega$	A	14.25
M8053	1:0.5	1:1	140	53,000	920 $\Omega$	653 $\Omega$	A	13.65

\*At 0.5 v., 60 cps.

Micro-tran No.	Turn Ratio		Full Pri. Hys*	Full Pri. Imped.*	DC Resis.		Fig. No.	Net Each, 1-9*
	Full Pri. Full Sec.	1/2 Pri. Full Sec.			Full Pri.	Sec.		
M8525	1:7.7	1:15.4	17.5	6,600	365 $\Omega$	4140 $\Omega$	AA	\$16.65
M8526	1:3.2	1:6.4	60 hy	22,500	455 $\Omega$	3500 $\Omega$	AA	16.55
M8552	1:4.53	1:9.06	90	34,000	760 $\Omega$	5220 $\Omega$	AA	17.10
M8553*	1:0.5	1:1	140	53,000	920 $\Omega$	653 $\Omega$	AA	16.50

\*Secondary is center tapped.

## PLUG-IN TRANSFORMERS (FIG. B)

Broadcast fidelity type, double mu-metal shielded. Octal base, except M8032 and M8033, 9-pin.

M8030 is designed as a replacement for Ampex No. 1733-1; M8032 and M8033 mate with sockets on many RCA amplifiers. Frequency Response:  $\pm 2$  db, 20-20K. (M8031,  $\pm 2$  db, 30-20K.) Magnetic shielding, 65 db. Level, +5 dbm.

Micro No.	Impedance		Size, In. H. x Dia.	Wt., Oz.	Net Ea., 1-9*
	Pri.	Sec.			
M8030	200/50 CT	50K	2 $\frac{1}{8}$ x 1 $\frac{1}{8}$ dia.	6	\$13.50
M8031	600 CT/150	50K	2 $\frac{1}{8}$ x 1 $\frac{1}{8}$ dia.	6	13.35
M8032	250 CT	50K	2 $\frac{1}{8}$ x 1 $\frac{1}{8}$ dia.	6	13.05
M8033	50 CT	50K	2 $\frac{1}{8}$ x 1 $\frac{1}{8}$ dia.	6	13.05

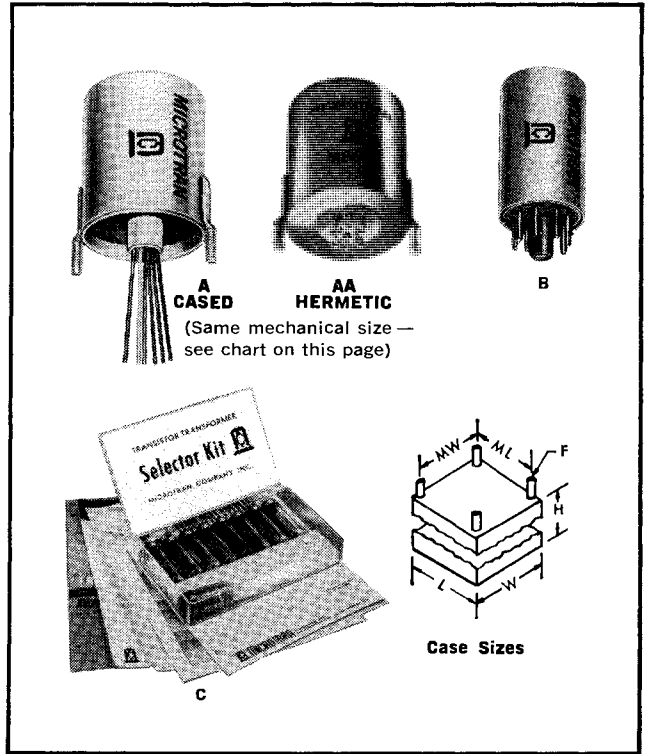
## MODEL 400K TRANSISTOR TRANSFORMER SELECTOR KIT (FIG. C)

• IDEAL FOR BREADBOARD CIRCUITRY • FULL DESIGN DATA

Set of nine transistor transformers covers impedance range of 150 through 200K ohms, matching most new transistor impedance ratings. Sizes range from a  $\frac{3}{8}$ " cube to  $\frac{3}{8}$ " x  $\frac{3}{4}$ " x 1". All units vacuum resin impregnated for long, reliable life and for protection against rough handling. Each type has 4" color-coded leads. Includes full design data; nomographs and circuitry for determining correct impedances for Class A and B transistor amplifiers; power versus dbm chart; terminal connection sheet; guide to MIL-T-27B; cross reference index; outline drawings for later selection of stock items with same electrical ratings in many other mechanical constructions. Individually boxed in transparent plastic case. Model 400K Transistor Transformer Selector Kit Net Each **\$29.50\***

\*Standard quantity discounts do not apply.

**MICROTRAN TRANSFORMERS ARE AVAILABLE IN MANY OTHER MECHANICAL AND ELECTRICAL TYPES ON SPECIAL ORDER. WRITE FOR COMPLETE INFORMATION.**



## STANDARD MIL-T-27B CASE SIZES

Case Type	Size, Inches W. x L. x H.	Mtg. Centers, In.		Stud Type F
		ML	MW	
AF	$\frac{3}{4}$ x $\frac{3}{4}$ x 1 $\frac{1}{8}$	1 $\frac{1}{8}$ *	.....	4-40 x $\frac{3}{8}$
AG	1 x 1 x 1 $\frac{3}{8}$	1 $\frac{3}{8}$ *	.....	6-32 x $\frac{3}{8}$
AH	1 $\frac{1}{2}$ x 1 $\frac{1}{2}$ x 1 $\frac{3}{4}$	1 $\frac{1}{4}$ †	.....	6-32 x $\frac{3}{8}$
AJ	1 $\frac{1}{8}$ x 1 $\frac{1}{8}$ x 2 $\frac{3}{8}$	1 $\frac{1}{4}$	1 $\frac{1}{8}$	6-32 x $\frac{3}{8}$
EA	1 $\frac{1}{16}$ x 1 $\frac{1}{16}$ x 2 $\frac{3}{4}$	1 $\frac{3}{8}$	1 $\frac{1}{4}$	6-32 x $\frac{3}{8}$
EB	1 $\frac{1}{16}$ x 1 $\frac{1}{16}$ x 2 $\frac{1}{2}$	1 $\frac{3}{8}$	1 $\frac{1}{4}$	6-32 x $\frac{3}{8}$
FA	2 $\frac{1}{16}$ x 2 $\frac{1}{16}$ x 3 $\frac{1}{8}$	1 $\frac{1}{16}$	1 $\frac{1}{16}$	6-32 x $\frac{3}{8}$
FB	2 $\frac{1}{16}$ x 2 $\frac{1}{16}$ x 2 $\frac{1}{2}$	1 $\frac{1}{16}$	1 $\frac{1}{16}$	6-32 x $\frac{3}{8}$
GA	2 $\frac{3}{8}$ x 2 $\frac{3}{4}$ x 3 $\frac{1}{16}$	2 $\frac{1}{8}$	1 $\frac{3}{4}$	6-32 x $\frac{3}{8}$
HA	2 $\frac{5}{8}$ x 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	2 $\frac{1}{4}$	1 $\frac{3}{4}$	8-32 x $\frac{3}{8}$
JA	3 $\frac{1}{16}$ x 3 $\frac{1}{16}$ x 4 $\frac{7}{8}$	2 $\frac{5}{8}$	2 $\frac{1}{8}$	8-32 x $\frac{3}{8}$
JB	3 $\frac{1}{16}$ x 3 $\frac{1}{16}$ x 3 $\frac{7}{8}$	2 $\frac{5}{8}$	2 $\frac{1}{8}$	8-32 x $\frac{3}{8}$
KA	3 $\frac{3}{8}$ x 3 $\frac{1}{16}$ x 5 $\frac{1}{4}$	3	2 $\frac{1}{16}$	10-32 x $\frac{1}{2}$
LA	3 $\frac{1}{16}$ x 4 $\frac{1}{8}$ x 5 $\frac{1}{16}$	3 $\frac{1}{16}$	2 $\frac{1}{16}$	10-32 x $\frac{1}{2}$
YY	All metal not included above or with non-std. mtg. ctrs.			
ZZ	Open type and encapsulated			

\*Not in conformance with MIL-T-27B. †Two studs in a diagonal.

## \*QUANTITY PRICING

Net Each, 1-9	Net Each, Lots of			Net Each, 1-9	Net Each, Lots of			Net Each, 1-9	Net Each, Lots of		
	10-49	50-99	100-249		10-49	50-99	100-249		10-49	50-99	100-249
\$ 1.35	\$ 1.22	\$ 1.13	\$ 0.90	\$ 7.65	\$ 6.89	\$ 6.38	\$ 5.10	\$13.20	\$11.88	\$11.00	\$ 8.80
3.30	2.97	2.75	2.20	7.80	7.02	6.50	5.20	13.35	12.01	11.13	8.90
3.45	3.10	2.88	2.30	7.95	7.15	6.63	5.30	13.50	12.15	11.25	9.00
3.60	3.24	3.00	2.40	8.10	7.29	6.75	5.40	13.65	12.28	11.38	9.10
3.75	3.38	3.13	2.50	8.25	7.42	6.88	5.50	13.80	12.42	11.50	9.20
3.90	3.51	3.25	2.60	8.40	7.56	7.00	5.60	14.25	12.82	11.88	9.50
4.05	3.64	3.38	2.70	8.55	7.69	7.13	5.70	14.55	13.09	12.13	9.70
4.20	3.78	3.50	2.80	8.70	7.83	7.25	5.80	14.70	13.23	12.25	9.80
4.35	3.91	3.63	2.90	8.85	7.97	7.38	5.90	14.85	13.36	12.38	9.90
4.50	4.05	3.75	3.00	9.00	8.10	7.50	6.00	15.00	13.50	12.50	10.00
4.65	4.18	3.88	3.10	9.15	8.24	7.63	6.10	15.15	13.63	12.63	10.10
4.80	4.32	4.00	3.20	9.30	8.37	7.75	6.20	15.30	13.77	12.75	10.20
4.95	4.45	4.13	3.30	9.45	8.51	7.88	6.30	15.60	14.04	13.00	10.40
5.10	4.59	4.25	3.40	9.60	8.64	8.00	6.40	15.90	14.31	13.25	10.60
5.25	4.73	4.38	3.50	9.75	8.77	8.13	6.50	16.05	14.44	13.38	10.70
5.40	4.86	4.50	3.60	9.90	8.91	8.25	6.60	16.20	14.58	13.50	10.80
5.55	4.99	4.63	3.70	10.05	9.04	8.38	6.70	16.35	14.71	13.63	10.90
5.70	5.13	4.75	3.80	10.20	9.18	8.50	6.80	16.65	14.98	13.88	11.10
5.85	5.27	4.88	3.90	10.35	9.32	8.63	6.90	18.00	16.20	15.00	12.00
6.00	5.40	5.00	4.00	10.50	9.45	8.75	7.00	18.45	16.60	15.37	12.30
6.15	5.54	5.13	4.10	10.80	9.72	9.00	7.20	20.25	18.22	16.87	13.50
6.30	5.67	5.25	4.20	11.10	9.99	9.25	7.40	21.60	19.44	18.00	14.40
6.45	5.81	5.38	4.30	11.25	10.12	9.38	7.50	24.90	22.41	20.75	16.60
6.60	5.94	5.50	4.40	11.40	10.26	9.50	7.60	25.35	22.81	21.12	16.90
6.75	6.08	5.63	4.50	11.55	10.39	9.63	7.70	25.65	23.09	21.38	17.10
6.90	6.21	5.75	4.60	11.70	10.53	9.75	7.80	26.10	23.49	21.75	17.40
7.05	6.35	5.88	4.70	11.85	10.66	9.88	7.90	26.70	24.03	22.25	17.80
7.20	6.48	6.00	4.80	12.00	10.80	10.00	8.00	26.85	24.16	22.38	17.90
7.35	6.61	6.13	4.90	12.30	11.07	10.25	8.20	28.20	25.38	23.50	18.80
7.50	6.75	6.25	5.00	13.05	11.74	10.88	8.70				

ORDER BY COMPLETE MICROTRAN NUMBER  
Also see EEM pages for additional items and list of franchised distributors.



# Toroidal Inductors

## MICRO-MINIATURE TOROIDAL INDUCTORS — QG SERIES

**QG-F:** Open frame microcrystalline wax dipped with 4" #27 plastic leads. Size, 5/8" dia. x 3/8".  
**QG-M:** Molded in high temperature epoxy resin with .020" x 2" gold plated nickel alloy leads. Leads may be bent downward for plug-in printed circuit use. Size, 7/8" dia. x 3/8".

### QGL SERIES

Frequency range, to 20 kc; accuracy, ±2%.

Microtran No.†	Inductance	Typ. DC Res., Ohms	Typ. Dist. Cap., μμf	-F Open Frame Net Each, Lots of				-M Molded Net Each, Lots of			
				1-9	10-49	50-99	100-249	1-9	10-49	50-99	100-249
QGL5-	5 mh	2.5	30	\$4.35	\$3.92	\$3.63	\$2.90	\$5.70	\$5.13	\$4.75	\$3.80
QGL10-	10 mh	5	33	4.35	3.92	3.63	2.90	5.70	5.13	4.75	3.80
QGL15-	15 mh	8	34	4.50	4.05	3.75	3.00	5.85	5.27	4.88	3.90
QGL50-	50 mh	28	40	4.80	4.32	4.00	3.20	6.30	5.67	5.25	4.20
QGL100-	100 mh	50	42	4.95	4.46	4.13	3.30	6.45	5.81	5.38	4.30
QGL500-	500 mh	290	48	5.40	4.86	4.50	3.60	7.20	6.48	6.00	4.80
QGL1000-	1 hy.	530	51	6.15	5.54	5.13	4.10	7.95	7.16	6.63	5.30
QGL1500-	1.5 hys.	825	53	6.30	5.67	5.25	4.20	8.70	7.83	7.25	5.80

### QGM SERIES

Frequency range, 2-100 kc; accuracy, ±2%.

QGM1-	1 mh	1.4	22	\$4.80	\$4.32	\$4.00	\$3.20	\$6.45	\$5.81	\$5.38	\$4.30
QGM5-	5 mh	6	28	5.10	4.59	4.25	3.40	6.60	5.94	5.50	4.40
QGM10-	10 mh	12	31	5.25	4.73	4.38	3.50	6.75	6.08	5.63	4.50
QGM15-	15 mh	18	32	5.40	4.86	4.50	3.60	6.90	6.21	5.75	4.60
QGM25-	25 mh	30	35	5.70	5.13	4.75	3.80	7.05	6.35	5.88	4.70
QGM50-	50 mh	52	37	6.30	5.67	5.25	4.20	7.35	6.62	6.13	4.90

## SUBMINIATURE TOROIDAL INDUCTORS — QIL SERIES

Frequency range to 20 kc; accuracy ±2%. **QIL-M:** Molded in high temperature epoxy with silver plated turret lugs. Size, 1 1/4" dia. x 1/2".  
**QIL-F:** Open frame. Microcrystalline wax dipped with 4" #27 plastic leads. Size, 1" dia. x 1/2".  
**QIL-H:** Hermetically sealed in metal case with Teflon® terminals. Size, 1 1/4" x 1/2" x 1/2".

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Microtran No.†	Inductance	Type DC Res., Ohms	Type Dist. Cap., μμf	-F Open Frame Net Each, Lots of				-H Hermetic Net Each, Lots of			-M Molded Net Each, Lots of				
				1-9	10-49	50-99	100-249	1-9	10-49	50-99	100-249	1-9	10-49	50-99	100-249
QIL5-	5 mh	1.1	38	\$3.90	\$3.51	\$3.25	\$2.60	\$6.75	\$6.08	\$5.63	\$4.50	\$5.25	\$4.73	\$4.38	\$3.50
QIL10-	10 mh	2.1	40	3.90	3.51	3.25	2.60	6.75	6.08	5.63	4.50	5.25	4.73	4.38	3.50
QIL25-	25 mh	5.3	45	4.05	3.65	3.38	2.70	7.20	6.48	6.00	4.80	5.40	4.86	4.50	3.60
QIL50-	50 mh	11	47	4.05	3.65	3.38	2.70	7.20	6.48	6.00	4.80	5.40	4.86	4.50	3.60
QIL100-	100 mh	22	49	4.20	3.78	3.50	2.80	7.65	6.89	6.38	5.10	5.70	5.13	4.75	3.80
QIL250-	250 mh	55	53	4.50	4.05	3.75	3.00	8.25	7.43	6.88	5.50	6.00	5.40	5.00	4.00
QIL500-	500 mh	95	55	4.80	4.32	4.00	3.20	8.55	7.70	7.13	5.70	6.30	5.67	5.25	4.20
QIL1000-	1 hy.	210	57	5.10	4.59	4.25	3.40	9.00	8.10	7.50	6.00	6.75	6.08	5.63	4.50
QIL2500-	2.5 hys.	550	61	6.75	6.08	5.63	4.50	10.00	9.12	8.50	7.20	8.70	7.83	7.25	5.80

## MINIATURE TOROIDAL INDUCTORS — QK SERIES

**QK-F:** Open frame, microcrystalline wax dipped; 4" #27 plastic leads. Size, 1 1/4" dia. x 3/8".  
**QK-H:** Hermetic with Teflon terminals. Size, 1 1/2" x 3/2" x 1 1/4".  
**QK-M:** Molded in high temperature epoxy resin; silver plated turret lugs. Size, 1 3/8" dia. x 3/4".

Frequency range, 10 kc; accuracy, ±2%.

### QKL SERIES

Microtran No.†	Inductance	Type DC Res., Ohms	Type Dist. Cap., μμf	-F Open Frame Net Each, Lots of				-H Hermetic Net Each, Lots of			-M Molded Net Each, Lots of				
				1-9	10-49	50-99	100-249	1-9	10-49	50-99	100-249	1-9	10-49	50-99	100-249
QKL10-	10 mh	1.1	66	\$4.50	\$4.05	\$3.75	\$3.00	\$7.20	\$6.48	\$6.00	\$4.80	\$6.15	\$5.54	\$5.13	\$4.10
QKL25-	25 mh	2.8	72	4.65	4.19	3.88	3.10	7.50	6.75	6.25	5.00	6.15	5.54	5.13	4.10
QKL50-	50 mh	6	76	4.65	4.19	3.88	3.10	7.80	7.02	6.50	5.20	6.15	5.54	5.13	4.10
QKL100-	100 mh	11	81	4.80	4.32	4.00	3.20	8.40	7.56	7.00	5.60	6.60	5.94	5.50	4.40
QKL250-	100 mh	28	87	4.95	4.46	4.13	3.30	8.85	7.97	7.38	5.90	6.75	6.08	5.63	4.50
QKL500-	500 mh	63	91	5.10	4.59	4.25	3.40	9.15	8.24	7.63	6.10	6.90	6.21	5.75	4.60
QKL1000-	1 hy.	110	96	5.25	4.73	4.38	3.50	9.60	8.64	8.00	6.40	7.20	6.48	6.00	4.80
QKL5000-	5 hys.	645	106	6.75	6.08	5.63	4.50	11.10	9.99	9.25	7.40	8.40	7.56	7.00	5.60
QKL10,000-	10 hys.	1175	112	7.50	6.75	6.25	5.00	12.45	11.20	10.38	8.30	9.60	8.64	8.00	6.40

Frequency range, 5-50 kc; accuracy, ±2%.

### QKM SERIES

QKM2-	2 mh	0.45	52	\$5.10	\$4.59	\$4.25	\$3.40	\$8.25	\$7.43	\$6.88	\$5.50	\$6.30	\$5.67	\$5.25	\$4.20
QKM5-	5 mh	1.1	58	5.25	4.73	4.38	3.50	8.40	7.56	7.00	5.60	6.45	5.81	5.38	4.30
QKM10-	10 mh	2.5	62	5.25	4.73	4.38	3.50	8.55	7.70	7.13	5.70	6.60	5.94	5.50	4.40
QKM25-	25 mh	6.5	70	5.40	4.86	4.50	3.60	8.85	7.97	7.38	5.90	6.75	6.08	5.63	4.50
QKM50-	50mh	11	74	5.55	5.00	4.63	3.70	9.00	8.10	7.50	6.00	6.90	6.21	5.75	4.60

## HIGH-Q TOROIDAL INDUCTORS — QPL SERIES

Frequency range to 10 kc; accuracy ±2%. **QPL-F:** Open frame, microcrystalline wax dipped; 4" #24 leads. Size, 1 1/4" dia. x 7/8".  
**QPL-H:** Hermetically sealed with Teflon terminals. Size, 1 1/4" x 1 1/4" x 2 1/2".  
**QPL-M:** Molded in high temperature epoxy resin; silver plated turret lugs. Size, 2" dia. x 1".

Microtran No.†	Inductance	Type DC Res., Ohms	Type Dist. Cap., μμf	-F Open Frame Net Each, Lots of				-H Hermetic Net Each, Lots of			-M Molded Net Each, Lots of				
				1-9	10-49	50-99	100-249	1-9	10-49	50-99	100-249	1-9	10-49	50-99	100-249
QPL25-	25 mh	1.5	100	\$ 6.90	\$ 6.21	\$ 5.75	\$ 4.60	\$10.35	\$ 9.32	\$ 8.63	\$ 6.90	\$ 8.55	\$ 7.70	\$ 7.13	\$ 5.70
QPL50-	50 mh	2.5	105	7.05	6.35	5.88	4.70	10.50	9.45	8.75	7.00	8.70	7.83	7.25	5.80
QPL100-	100 mh	6	110	7.20	6.48	6.00	4.80	10.65	9.58	8.88	7.10	8.85	7.97	7.38	5.90
QPL500-	500 mh	25	120	7.50	6.75	6.25	5.00	10.95	9.82	9.13	7.30	9.60	8.64	8.00	6.40
QPL1000-	1 hy.	60	125	7.80	7.02	6.50	5.20	11.40	10.26	9.50	7.60	9.90	8.91	8.25	6.60
QPL5000-	5 hys.	350	138	9.45	8.51	7.88	6.30	13.20	11.88	11.00	8.80	11.10	9.99	9.25	7.40
QPL10,000-	10 hys.	600	142	11.10	9.99	9.25	7.40	15.00	13.50	12.50	10.00	12.90	11.61	10.75	8.60
QPL25,000-	25 hys.	1500	150	13.05	11.74	10.88	8.70	17.55	15.80	14.63	11.70	15.45	13.90	12.88	10.30

## HIGH-Q TOROIDAL INDUCTORS — QTL SERIES

Frequency range to 15 kc; accuracy, ±2%. **QTL-F:** Open frame, microcrystalline wax dipped with 4" #24 leads. Size 2 1/4" dia. x 1".  
**QTL-H:** Hermetic, Teflon terminals. Size, 2 1/4" x 1 1/4" x 2 1/4".  
**QTL-M:** Molded in epoxy resin. Size, 2 7/8" dia. x 1 3/8".

QTL50-	50 mh	1.5	136	\$10.95	\$ 9.85	\$ 9.13	\$ 7.30	\$13.65	\$12.28	\$11.38	\$ 9.10	\$12.75	\$11.47	\$10.63	\$ 8.50
QTL100-	100 mh	2.8	144	11.25	10.12	9.38	7.50	13.95	12.55	11.63	9.30	13.05	11.74	10.88	8.70
QTL500-	500 mh	15	164	11.85	10.66	9.88	7.90	14.85	13.36	12.38	9.90	13.05	11.74	10.88	8.70
QTL1000-	1 hy.	27	173	12.15	10.93	10.13	8.10	15.15	13.63	12.63	10.10	13.95	12.55	11.63	9.30
QTL2500-	2.5 hys.	70	184	13.05	11.74	10.88	8.70	16.05	14.44	13.38	10.70	14.85	13.36	12.38	9.90
QTL5000-	5 hys.	140	192	13.05	11.74	10.88	8.70	16.65	14.98	13.88	11.10	15.00	13.50	12.50	10.00
QTL10,000-	10 hys.	270	200	14.25	12.82	11.88	9.50	17.25	15.53	14.38	11.50	16.20	14.58	13.50	10.80
QTL25,000-	25 hys.	850	212	16.50	14.85	13.75	11.00	19.50	17.55	16.25	13.00	18.45	16.61	15.38	12.30
QTL50,000-	50 hys.	1500	221	22.20	19.98	18.50	14.80	25.20	22.68	21.00	16.80	24.15	21.74	20.13	16.10

†ORDER BY COMPLETE MICROTRAN NUMBER; EXAMPLE QGL5-F.  
 Also see EEM pages for additional items and list of franchised distributors.



company, inc.

VALLEY STREAM, N. Y.

designs to meet your needs

PROTOTYPES • SHORT RUNS • PRODUCTION RUNS SOLICITED

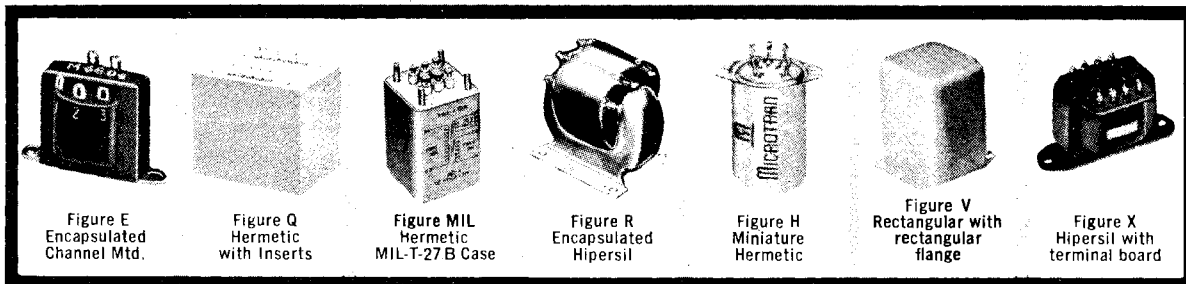


Figure E Encapsulated Channel Mtd.

Figure Q Hermetic with Inserts

Figure MIL Hermetic MIL-T-27 B Case

Figure R Encapsulated Hipersil

Figure H Miniature Hermetic

Figure V Rectangular with rectangular flange

Figure X Hipersil with terminal board

Separate Sampling Department for quick delivery. Immediate service assured by large stocks of high temperature insulation and other specialized materials. IN-PLANT TESTING assures full compliance with military requirements and often saves weeks on contract completion. Units can be supplied to meet MIL-T-27B, MIL-T-9219, CAA-R-9786, MIL-E-5400, MIL-E-16400, MIL-E-4158, MIL-E-8189A, MCREE-533, MIL-T-21200, MIL-Q-9858.

**NOT STOCK, CUSTOM BUILT TO ORDER ONLY**

**400 CYCLE POWER SUPPLY TRANSFORMERS**

Part No.	Secondary		Test Volts R.M.S.	Figure
	A.C. Volts	R.M.S. Amps.		
M3144	1	3	1000	AG
M2655	6.3/6.3#	1.5/1.5	1500	MIL
M2810	6.3C.T./6.3C.T.#	2.0/2.0	100	MIL-EA
M2611	6.3C.T./6.3C.T.#	2.0/10.0	100	Q
M4282*†	6.3C.T.	10.0	2500	MIL-FA
M4076††	6.3	20.0	2000	MIL-JB
M4042	12.6	0.25	1000	MIL-AH
M2724	12.6C.T./6.3#	3.0/1.2	1000	MIL
M2830	12.6C.T./12.6C.T.#	5.0/5.0	500	MIL-JA
M4017	26C.T./6.3C.T.#	0.1/1.7	1000	FB
M3142	26	6.5	1500	MIL-JA
M2880**	32	5.5	500	MIL-KA

**400 CYCLE PLATE/FILAMENT POWER TRANSFORMERS**

Part No.	Plate Supply		Rectifier Volts	Filament Amps	Figure
	A.C. Volts	D.C. Ma.			
M2751	115	5	6.3	0.35	W
M2448	128/26	20/800	6.3	2.6	MIL-FA
M1092-2	800C.T.	60	12.6C.T.	1.0	R
M1144	40	180	26.0	1.2	MIL-FA

\*105/115/125 Pri. \*\*110/115/120 Pri. †MS 16472 ††MS 16402 #Separate Wdgs

**60 CYCLE POWER SUPPLY TRANSFORMERS**

Part No.	Secondary		Test Volts R.M.S.	Figure
	A.C. Volts	R.M.S. Amps		
M1606	2.5	.01	500	H
M2229	6.3C.T./6.3C.T.#	0.6	1,000	FB
M2551	6.3	2.0	1,500	FB
M1395*	24.0	1.0	1,500	MIL-GA
M2530	25.0/25.0#	.23/.23	1,000	MIL-GB
M2808	34.0	15.0	500	MIL
M2531	40.0/40.0#	4/.4	1,000	MIL-HB

\*117V Primary

**60 CYCLE ISOLATION TRANSFORMER**

Part No.	Input Voltage	Output Voltage	V.A. Rating	Figure
M2787†	110	110	0.8	FB
M2901	115	115	6.0	V
M2294†	105/115/125	118C.T.	90.	MIL
M2595	117	117	250.	K

\*117V Primary. #Separate Winding. †Electrostatic Shielding.

**FILTER REACTORS**

Part No.	Current D.C. Ma.	Inductance Henries	D.C.R. Ohms	Test Volts	Figure
FR-2	60	10	230	2,000	MIL-FA
M2490	85	15	300	2,500	V
M2243	500	2	30	1,500	MIL-KA
M2278	1A	0.05	2	500	MIL-FA
M2909	1.75A	0.016	0.5	500	MIL-GA
M2474	5A	0.005	0.03	500	MIL
M3494	6.5A	0.04	0.5	1,000	MIL-NA
M2473	25A	0.005	0.032	500	MIL

**400 CYCLE SERVO DRIVER & OUTPUT TRANSFORMERS**

Part No.	Primary Impedance	Pri. Unbal. D.C. Ma.	Secondary Impedance	Power Level	Figure
M2996	120 K	3.	25	25 Mw.	MIL-AG
M2956	1,000 C.T.	0.	1,000 C.T.	150 Mw.	FPB
M2477	8,000 C.T.	4.	500 C.T.	500 Mw.	FB
M1378	6,000	38.	180	1.3 Watts	H
M2254	200 C.T.	20.	1,000	3.0 Watts	F
M2769	10,000 C.T.	9.	500	7 Watts	E
M2795	48 C.T.	30.	176	9 Watts	FB
M2849	62 C.T.	75.	510 C.T.	16 Watts	MIL-FB

†40 db Magnetic Shielding

**400 CYCLE DEMODULATOR SUPPLY TRANSFORMERS**

Part No.	Primary Volts	Secondary A.C. Volts	Secondary R.M.S. Ma.	Figure
M4035	6.3	2.2/2.2	10/10	M
M4284	26	3.5/3.5	15/15	F
M3434	115/57.5	5/5	1/1	R
M3472	115	30 C.T./0.5	4/50	E

**AUDIO REACTORS**

Part No.	Inductance Henries	Current D.C. Ma.	D.C.R. Ohms.	Figure
M2495	1.0	0	50	F
M1812	2.0	3.0	780	F
M2501	10.0	0	318	FPB
M3285	30.0	0	390	F
M2402	100.0	0	1,700	FB
M2180	25/50/250	1/0.5/0	770	F

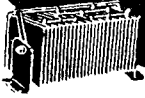
**LOW LEVEL CHOPPER INPUT TRANSFORMERS**

Part No.	Freq.	Turns Ratio 1/2 Pri. to Full Pri.	Ind. of Full Pri.	Imped. of Full Pr.	Magnetic Shielding	Figure
M3297	400	15.8/1	.65 Hy.	1 MEG	45 db	G
M3174	100	1/1	50	30 K	90 db	S
M2988	55	1/1	140	10 K	90 db	S
M2057	400	1/2.81	100	250 K	None	H

Also see EEM pages for additional items and list of franchised distributors.

**DIRECTRON**

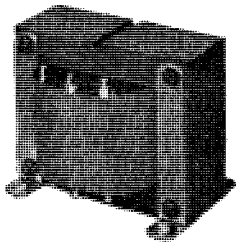
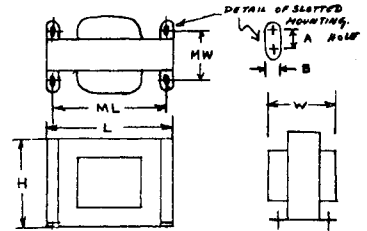
# Industrial Transformers, Selenium and Silicon Rectifiers, Chokes and Power Supplies



## RECTIFIER TRANSFORMERS

Transformers are with 2 — 18 volt center-tapped windings. Connected in series delivers 36 volts as rated. Connected in parallel — delivers 18 volts at twice rated current. (Taps 9, 18, 27, 36 V.)

Primary taps at 100, 105, 110 and 115 volts available on 12 amp, 24 amp, 30 amp and 50 amp transformers. No extra charge.



12 amp. Transformer 18T12

Part No.	Amps.	Users Net Price	L (MAX)	W (MAX)	H (MAX)	ML ±1/16	MW ±1/8	A ±1/64	B ±1/64	Weight
18 T 1	1	\$ 5.25	2 3/32	3	2 3/4	2 1/2	2 1/4	1/8	1 3/4	2.5
18 T 2	2	7.20	3 1/16	3	2 3/8	3 1/8	2	↓	↓	3.4
18 T 4	4	8.75	4 3/16	3	3 3/4	3 3/16	2 3/8	↓	↓	5.5
18 T 8	8	15.00	4 3/8	3 5/8	4	3 3/4	3	↓	↓	9.5
18 T 12	12	16.75	5 5/16	4 1/4	4 1/2	4 3/8	3 3/8	↓	↓	14.5
18 T 24	24	35.75	6 1/2	4 5/8	5 1/2	5 5/16	3 3/8	3/32	↓	22
18 T 30	30	45.00	6 1/2	5	5 1/2	5 5/16	3 5/8	↓	↓	25
18 T 50	50	54.00	6 1/2	5 3/4	5 1/2	5 5/16	4 3/8	↓	↓	33

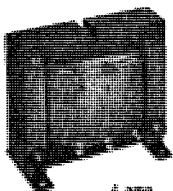
## WITH 2-28 CENTER TAP WINDINGS

28 T 2	2	8.50	3 7/8	3 1/4	3 1/8	2 1/2	2 3/8	1/8	1 3/16	5
28 T 4	4	12.50	4 1/4	3 3/4	3 3/16	3	3	↓	↓	8
28 T 6	6	22.50	5 5/16	4 1/4	4 1/2	4 3/8	3 5/8	3/8	3/32	14
28 T 12	12	30.00	6 1/2	5	5 1/2	5 5/16	3 3/8	↓	↓	21
28 T 24	24	67.50	6 1/2	6 1/2	5 1/2	5 5/8	3 1/2	↓	↓	24.5

## STEP UP TRANSFORMERS

PRIMARY WINDINGS — 100-105-110-115 VOLT			SECONDARY WINDINGS — 130-135-140 VOLT		
Part No.	Amps.	Users Net Price	Part No.	Amps.	Users Net Price
SU 10	10	65.00	SU 25	25	120.00
SU 15	15	80.00	SU 30	30	150.00
SU 20	20	105.00	SU 35	35	175.00

## HIGH CURRENT CHOKES



High Current Choke CK4

Part No.	Amps.	Hy.	Ohms	Users Net Price	L (MAX)	W (MAX)	H (MAX)	ML ±1/16	MW ±1/8	A ±1/64	B ±1/64	Weight
CK 1	1	.1	1.5	\$ 4.95	3 3/32	2 3/4	2 3/4	2 1/2	2	1/8	1 3/4	2
CK 2	2	.04	.9	6.00	3 3/16	3 3/4	3 3/8	2 13/16	2 1/8	↓	↓	3.1
CK 4	4	.07	.6	7.95	3 3/16	3 1/8	3 3/8	3 1/8	2 1/2	↓	↓	5
CK 8	8	.03	.3	12.00	4 3/16	3 5/8	3 3/4	3 3/16	3	↓	↓	8
CK 12	12	.01	.1	14.95	5 5/16	3 3/4	4 1/2	4 3/8	2 7/8	↓	3/32	11.5
CK 20	20	.004	.05	18.00	5 1/4	5	4 1/2	4 1/2	4	1/2	↓	14
CK 24	24	.004	.025	27.00	5 5/16	4 3/4	4 1/2	4 3/8	3 7/8	↓	↓	17.5
CK 30	30	.003	.01	36.00	6 1/2	4 5/8	5 1/2	5 5/16	3 3/8	↓	↓	22
CK 50	50	.001	.001	45.00	6 1/2	4 7/8	5 1/2	5 5/16	3 3/8	↓	↓	23
CK 100	100	.0005	.005	54.00	6 1/2	6	5 1/2	5 5/16	4 1/8	↓	↓	30

CUSTOM BUILT TRANSFORMERS AND CHOKES — 48 HOUR SERVICE

POWER SUPPLIES TO YOUR SPECIFICATIONS, QUOTATIONS ON REQUEST

SEE OUR AD UNDER "RECTIFIERS" IN SECTION 4800 FOR SELENIUM AND SILICON STACKS

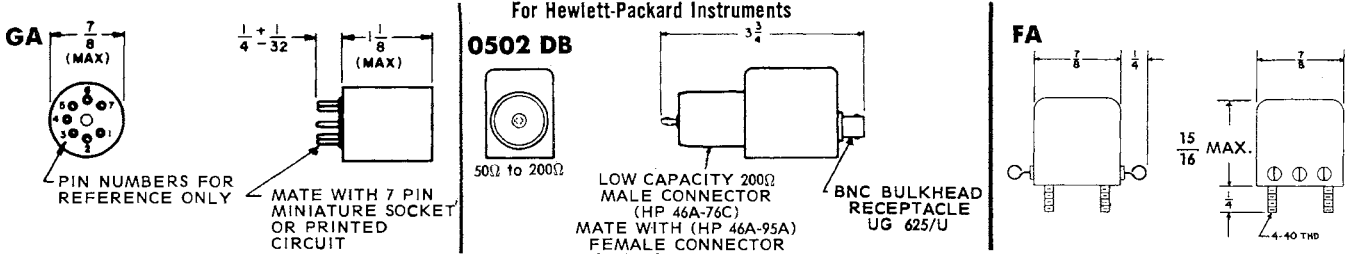
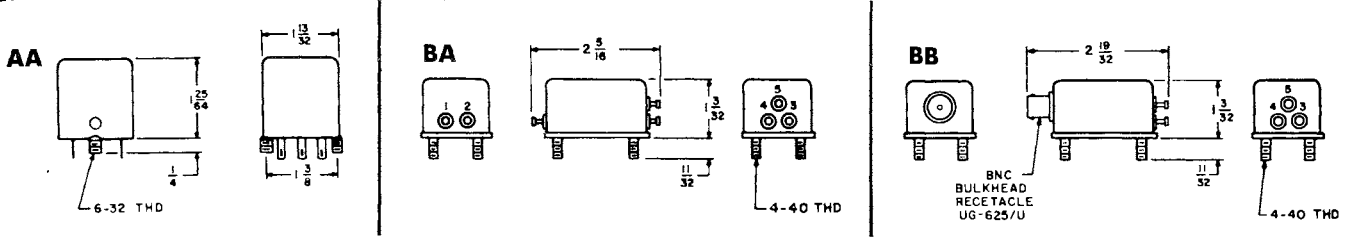


Mfd. by **SANFORD MILLER CORP.**

BROOKLYN 6, N. Y.



# NORTH HILLS WIDE BAND TRANSFORMERS



- Antenna Matching
- Interstage Coupling
- Impedance Matching
- Computer Drive Circuits
- Signal Distribution
- Pulse Applications
- Voltage Step-Up
- DC Isolation
- Phase Detectors
- Balanced Modulators

Type Number	Impedance Ratio	Type Number	Impedance Ratio
1100	75 Unb/75 Bal	0100	50 Unb/100 Bal
1300	75 Unb/100 Bal	0300	50 Unb/100 Bal
1400	75 Unb/150 Bal	0400	50 Unb/150 Bal
1500	75 Unb/200 Bal	0500	50 Unb/200 Bal
1501	75 Unb/300 Bal	0501	50 Unb/300 Bal
1600	75 Unb/450 Bal	0600	50 Unb/450 Bal
1700	75 Unb/600 Bal	0700	50 Unb/600 Bal
1701	75 Unb/600 Bal	0800	50 Unb/800 Bal
1702	75 Unb/600 Bal	0900	50 Unb/1200 Bal
1703*	75 Unb/600 Bal	7700	600 Unb/600 Bal
1800	75 Unb/800 Bal		
1900	75 Unb/1200 Bal		
1901	75 Unb/1850 Bal		

\* 10 watts

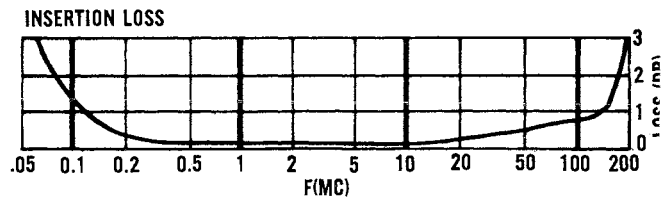
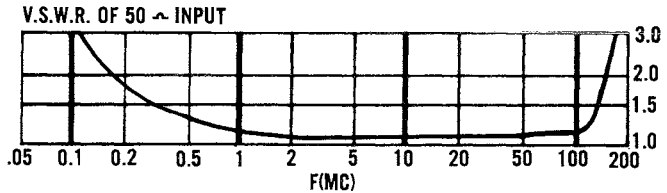
Data sheets for all types on request.

Frequency range on most of these units is contained within 100 kc to 100 mc band except for the 1702 and 1901 which cover from 20 kc to 8 mc. Data sheets with individual curves are available upon request.

North Hills wideband transformers have been designed for low insertion loss (less than 1 db) and good matching characteristics over wide frequency ranges. Balanced windings feature extremely low unbalanced voltages and have a center tap. Complete specifications are available upon request.

Several case styles are offered. Series AA models are potted in metal cases with a terminal board on the bottom and two 6-32 spade mounting bolts. Series BA are hermetically sealed with glass terminals at the case ends and two 4-40 studs on the bottom for mounting. Series BB is similar to BA except that the unbalanced connection is provided by a BNC connector. The above three styles are rated at 2 watts and the GA and the FA package are rated at 1/2 watt. Both GA and FA packages are hermetically sealed. Note that the types AA, BA and BB feature lower cut-off frequency than that of type GA and FA because of the larger core dimensions.

### TYPICAL CHARACTERISTICS (0501)\*



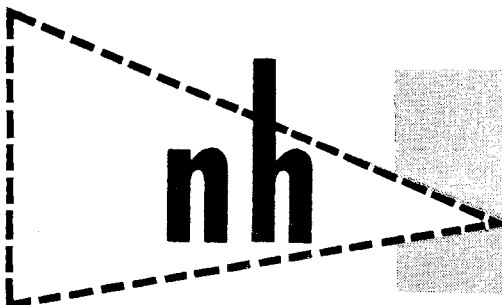
\*Data sheets for all types on request.

Custom units designed to your specifications include power wideband transformers, pulse transformers, filters and adjustable inductors. See Radio Masters for standard line of inductors.

See Section 4000 for Precision AC and DC Power Sources in current edition of eem.

See Section 2900 for Bridges, Potentiometers, Galvanometers, etc. in current edition of eem.

See Variable Inductors in Section 1800 of current edition of Radio-Electronic Master.



**NORTH HILLS**  
**ELECTRONICS, INCORPORATED**  
 GLEN COVE, LONG ISLAND, N. Y.

# **PRICES**

Prices in this *MASTER* should not be considered as final.  
*Inquire about latest prices and delivery.*

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# **DISCOUNTS**

Trade discounts apply in most cases  
where *list prices* are shown.

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# **ORDERING**

Since previous editions of The *MASTER* are frequently referred to, it is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.

# OHMITE

resistors • rheostats • tap switches • relays  
variable transformers • tantalum capacitors  
semiconductor diodes • r.f. chokes

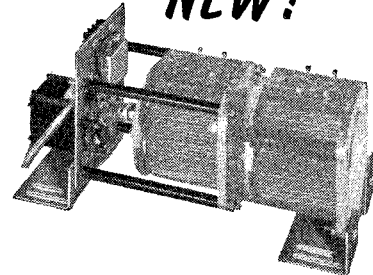


## "V.T." VARIABLE TRANSFORMERS

**NEW!**

Toroidal core type autotransformers providing distortion-free continuously adjustable voltage from fixed 0 to input. Highly advanced Ohmite design. Suitable bonus in current available in all units where output greater than line volts ("over-voltage") is not required ("N" suffix); "LN" suffix indicates low input (40V max.) and very high current output; positive current transfer achieved with direct brush to slip spring shunt. **Mounting:** VT2 panel mounting by 3/32 bushing; VT2

tandem units by 1/4-20 bolts; all VT4 and VT8 types panel or table mounting by four 3/8 dia. bolts or three 3/4 bolts. Shafts of VT4, VT8, VT20 units slide to brush or base side. Units not cased except where indicated. Over-all dimensions include shaft. Suffixes "2" and "3" indicate number of units in tandem assembly (shipped with connection instructions).



**MOTOR MODULE PACKAGE**  
For VT4, VT8 or VT20, single or ganged, unenclosed models. Attaches in 15 minutes with everyday tools. Five speeds in stock for VT4 and VT8. Four speeds for VT20. Call your distributor or the factory.

Input Volts	Freq. cps. from	Maximum Output Amps	Volts	Feature or Connection	Size, Inches	Stk. No.	Weight Lbs. 7	Net \$ 1-5
<b>SINGLE TRANSFORMERS — UNCASED</b>								
40	60	5	0-40	Hi-amps, low volts	2-13/16 dia. x 3	VT2LN	2.4	9.75
40	50	12.0	0-40	Hi-amps, low volts	4-5/32 x 4-13/16 x 4 3/4	VT4LN	5.25	14.50
40	50	22.0	0-40	Hi-amps, low volts	4 1/2 x 5-11/16 x 5 1/2	VT8LN	10.25	20.50
120	60 8	1.75	0-120/132	Basic 1.75A Model	2-13/16 dia. x 3	VT2L	2.4	8.50
120	60	2.0	0-120	No overvoltage	2-13/16 dia. x 3	VT2N	2.4	9.00
120	50	3.5	0-120/140	Basic 3.5A Model	4-5/32 x 4-13/16 x 4 3/4	VT4N	5.25	12.50
120	50	4.75	0-120	No overvoltage	4-5/32 x 4-13/16 x 4 3/4	VT4L	5.25	13.00
120	50	7.5	0-120/140	Basic 7.5A Model	4 1/2 x 5-11/16 x 5 1/2	VT8N	10.25	18.00
120	50	10.0	0-120	No overvoltage	4 1/2 x 5-11/16 x 5 1/2	VT8L	10.25	18.50
120	50	20.0	0-120/140	Basic 20A Model	7 1/2 x 8-1/16 x 5 1/2	VT20N	22.0	45.00
120	50	25.0	0-120	No overvoltage	7 1/2 x 8-1/16 x 5 1/2	VT20L	22.0	45.50
240 2	50	3.0	0-240/280	240V Input 2	4 1/2 x 5-11/16 x 5 1/2	VT8H	10.25	20.00
240 2	50	4.0	0-240	240V In. No ovrlt. 2	4 1/2 x 5-11/16 x 5 1/2	VT8HN	10.25	21.00

<b>SINGLE TRANSFORMERS — CASED</b>								
120	60 8	1.4	0-132 4	Fixed Mtg.	3 3/8 x 2 1/2 x 4 1/4	VT2E	2.8	12.50
120	60 8	1.75	0-132 3	Portable	3 3/8 x 2 1/2 x 4 1/4	VT2F	3.2	14.50
120	60	1.60	0-120	Portable	3 3/8 x 2 1/2 x 4 1/4	VT2NE	2.8	13.00
120	60	2.0	0-120	Portable	3 3/8 x 2 1/2 x 4 1/4	VT2NF	3.2	15.00
120	50	2.8	0-140 4	Fixed Mtg.	4 1/2 x 4 1/2 x 6-3/16	VT4E	7.4	17.50
120	50	3.5	0-140 3	Portable	4 1/2 x 4 1/2 x 6-3/16	VT4F	7.8	18.50
120	50	3.5	0-140 3	VT4F w/gnd. in. & out.	4 1/2 x 4 1/2 x 6 1/4	VT4FC	7.8	21.00
120	50	3.8	0-120	Fixed Mtg.	4 1/2 x 4 1/2 x 6-3/16	VT4NE	7.4	18.00
120	50	4.75	0-120	Portable	4 1/2 x 4 1/2 x 6 1/4	VT4NF	7.8	19.00
120	50	4.75	0-120	VT4NF w/gnd. in. & out.	4 1/2 x 4 1/2 x 6 1/4	VT4NFC	7.8	21.50
120	50	6.0	0-140 4	Fixed Mtg.	5-3/16 x 5 1/4 x 7-3/16	VT6E	13.5	23.00
120	50	7.5	0-140 3	Portable	5-17/32 x 5 1/4 x 7 3/8	VT6F	13.8	24.00
120	50	7.5	0-140 3	VT6F w/gnd. in. & out.	5-17/32 x 5 1/4 x 7 3/8	VT6FC	13.8	26.50
120	50	6.0	0-120/140 3	Deluxe Portable	5-3/16 x 5 1/4 x 7 3/8	VT8G	14.2	28.50
120	50	6.0	0-120/140 3	VT8G w/gnd. in. & out.	5-3/16 x 5 1/4 x 7 3/8	VT8GC	14.2	31.00
120	50	8.0	0-120	Fixed Mtg.	5-3/16 x 5 1/4 x 7-3/16	VT8NE	13.5	23.50
120	50	10.0	0-120	Portable	5-17/32 x 5 1/4 x 7 3/8	VT8NF	13.8	24.50
120	50	10.0	0-120	VT8NF w/gnd. in. & out.	5-17/32 x 5 1/4 x 7 3/8	VT8NFC	13.8	27.00
120	50	20.0	0-120/140 4	Basic Case	7 3/8 x 5 1/2 x 4 1/2	VT20E	22.5	50.00
120	50	25.0	0-120	Basic Case	7 3/8 x 5 1/2 x 4 1/2	VT20F	22.5	50.50
120	50	16.0	0-120/140 4	Fixed Mtg.	7 3/8 x 5 1/2 x 10-15/16	VT20E	29.0	61.00
120	50	20.0	0-140	Portable	8 1/4 x 5 1/2 x 11 1/4	VT20FC	31.0	65.00
120	50	16.0	0-120/140 4	Portable	7 3/8 x 5 1/2 x 11 1/4	VT20GC	31.0	80.00
120	50	20.0	0-120	Fixed Mtg.	7 3/8 x 5 1/2 x 10-15/16	VT20NE	29.0	61.50
120	50	25.0	0-120	Portable	8 1/4 x 5 1/2 x 11 1/4	VT20NFC	31.0	65.50

<b>SINGLE TRANSFORMERS — CASED WITH METERS</b>								
120	50	6.0	0-120/140 3	w/volmeter, gnd. conn.	7 x 5 1/4 x 10 1/2	VT8GCV	15.2	58.00
120	50	6.0	0-120/140 3	w/volt. & amntr., gnd. conn.	7 x 5 1/4 x 10 1/2	VT8GCVV	15.5	91.00
120	50	6.0	0-120/140 3	w/volt. & wattmtr., gnd. conn.	7 x 5 1/4 x 10 1/2	VT8GCVW	15.5	118.00
120	50	10.0	0-120	w/volmeter, gnd. conn.	7 3/8 x 5 1/2 x 10 1/2	VT8NFCV	14.8	53.00
120	50	10.0	0-120	w/volt. & amntr., gnd. conn.	7 3/8 x 5 1/2 x 10 1/2	VT8NFCVV	15.2	86.00
120	50	10.0	0-120	w/volt. & wattmtr., gnd. conn.	7 3/8 x 5 1/2 x 10 1/2	VT8NFCVW	15.2	113.00
120	50	16.0	0-120/140 3	w/volmeter, gnd. conn.	8 1/4 x 5 1/2 x 14	VT20GCV	32.0	118.50
120	50	16.0	0-120/140 3	w/volt. & amntr., gnd. conn.	8 1/4 x 5 1/2 x 14	VT20GCVV	32.2	145.50
120	50	16.0	0-120/140 3	w/volt. & wattmtr., gnd. conn.	8 1/4 x 5 1/2 x 14	VT20GCVW	32.2	216.50
120	50	25.0	0-120	w/volmeter, gnd. conn.	8 1/4 x 5 1/2 x 14	VT20NFCV	32.0	103.00
120	50	25.0	0-120	w/volt. & amntr., gnd. conn.	8 1/4 x 5 1/2 x 14	VT20NFCVV	32.2	130.00
120	50	25.0	0-120	w/volt. & wattmtr., gnd. conn.	8 1/4 x 5 1/2 x 14	VT20NFCVW	32.2	201.00

<b>TWO-IN-TANDEM ASSEMBLIES 5 10</b>								
240	60 8	1.75	0-240/280 4	Series Conn. 6	3-13/16 dia. x 6 3/8	VT2-2	5.25	25.00
240	60	2.0	0-240	Series Conn. 6	3-13/16 dia. x 6 3/8	VT2N-2	5.25	26.00
240	50	3.5	0-240/280	Series Conn. 6	4-5/32 x 4-13/16 x 8-15/16	VT4-2	11.3	37.00
240	50	4.75	0-240	Series Conn. 6	4-5/32 x 4-13/16 x 8-15/16	VT4N-2	11.3	38.00
240	50	7.5	0-240/280	Series Conn. 6	4 1/2 x 5-11/16 x 10-7/16	VT8-2	20.6	44.50
240	50	10.0	0-240	Series Conn. 6	4 1/2 x 5-11/16 x 10-7/16	VT8N-2	20.6	45.50
240	50	20.0	0-240/280	Series Conn. 6	7 1/2 x 8-1/16 x 11 1/4	VT20-2	45.0	107.00
240	50	20.0	0-240/280	Above unit, B case	7 1/2 x 8-1/16 x 11 1/4	VT20-2B	46.0	117.00
240	50	25.0	0-240	Series Conn. 6	7 1/2 x 8-1/16 x 11 1/4	VT20N-2	45.0	108.00
240	50	25.0	0-240	Above unit, B case	7 1/2 x 8-1/16 x 11 1/4	VT20N-2B	46.0	118.00
480	50	3.0	0-480/560	Series Conn. 6	4 1/2 x 5-11/16 x 10-7/16	VT8H-2	20.6	49.00
480	50	4.0	0-480	Series Conn. 6	4 1/2 x 5-11/16 x 10-7/16	VT8HN-2	20.6	51.00

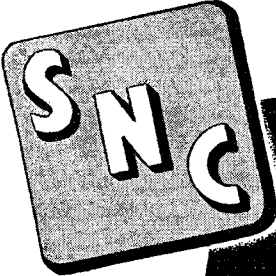
<b>THREE-PHASE TWO-IN-TANDEM ASSEMBLIES 5 10</b>								
120	60	1.75	0-120/132	Open Delta Conn.	3-13/16 dia. x 6 3/8	VT2-2	5.25	25.00
120	60	2.0	0-120	Open Delta Conn.	3-13/16 dia. x 6 3/8	VT2N-2	5.25	26.00
120	50	3.5	0-120/140	Open Delta Conn.	4-5/32 x 4-13/16 x 8-15/16	VT4-2	11.3	37.00
120	50	4.75	0-120	Open Delta Conn.	4-5/32 x 4-13/16 x 8-15/16	VT4N-2	11.3	38.00
120	50	7.5	0-120/140	Open Delta Conn.	4 1/2 x 5-11/16 x 10-7/16	VT8-2	20.6	44.50
120	50	10.0	0-120	Open Delta Conn.	4 1/2 x 5-11/16 x 10-7/16	VT8N-2	20.6	45.50
120	50	20.0	0-120/140	Open Delta Conn.	7 1/2 x 8-1/16 x 11 1/4	VT20-2	45.0	107.00
120	60	25.0	0-120	Above unit, B case	7 1/2 x 8-1/16 x 11 1/4	VT20-2B	46.0	117.00
120	60	25.0	0-120	Open Delta Conn.	7 1/2 x 8-1/16 x 11 1/4	VT20N-2	45.0	108.00
120	60	25.0	0-120	Above unit, B case	7 1/2 x 8-1/16 x 11 1/4	VT20N-2B	46.0	118.00
240	50	3.0	0-240/280	Open Delta Conn.	4 1/2 x 5-11/16 x 10-7/16	VT8H-2	20.6	49.00
240	50	4.0	0-240	Open Delta Conn.	4 1/2 x 5-11/16 x 10-7/16	VT8HN-2	20.6	51.00

<b>THREE-IN-TANDEM ASSEMBLIES 5 10</b>								
240	60	1.75	0-240 3	"Y" Conn.	3-13/16 dia. x 9-1/16	VT2-3	8.0	40.00
240	60 8	3.5	0-240/280	"Y" Conn.	4-5/32 x 4-13/16 x 13	VT4-3	17.0	59.50
240	60 8	7.5	0-240/280	"Y" Conn.	4 1/2 x 5-11/16 x 15 1/4	VT8-3	31.0	61.50
240	60 8	6.0	0-240/280	Above unit, E case	5-3/16 x 7-3/16 x 15 3/4	VT8-3E	40.0	77.00
240	60 8	20.0	0-240/280	"Y" Conn.	7 1/2 x 8-1/16 x 18-3/16	VT20-3	68.0	150.00
240	60 8	20.0	0-240/280	Above unit, B case	7 1/2 x 8-1/16 x 16-15/16	VT20-3B	69.5	170.00
240	60	25.0	0-240	"Y" Conn.	7 1/2 x 8-1/16 x 16-3/16	VT20N-3	69.0	156.50
240	60	25.0	0-240	Above unit, B case	7 1/2 x 8-1/16 x 16-15/16	VT20N-3B	69.5	171.50
480	60 8	3.0	0-480/560	"Y" Conn.	4 1/2 x 5-11/16 x 15 1/4	VT8H-3	31.0	69.50




<b>ACCESSORIES, PARTS</b>								
<b>Brush-Contact Assemblies for . . .</b>								
				Stk. No.	Net 1-5			
VT2 Types except VT2LN				6514	\$1.00			
VT2LN				6517	2.00			
VT4 Types except VT4LN				6515	1.00			
VT4LN				6518	2.00			
VT8 Types except VT8H, HN, LN				6516	1.25			
VT8H, HN only				6516H	1.25			
VT8LN only				6519	2.50			
VT20 Types except VT20N				6590	1.75			
VT20N				6594	1.75			
<b>Extra Dials or Dials with C.C.W. Calibration</b>								
				Stk. No.	Net 1-5			
VT2			0-120, 0-132 C.W.	5005	\$ 25			
			0-100, 100-0* C.W.	5011	.25			
VT4			0-120, 0-140 C.W.	5006	.50			
and			0-120, 0-140 C.C.W.	5008	.50			
VT8			0-240, 0-280 C.W.	5009	.50			
			0-240, 0-280 C.C.W.	5010	.50			
			0-100, 100-0* C.W.					






SECTION 5600



QUALITY TRANSFORMERS Give OUTSTANDING PERFORMANCE!

Style AL Mtg.      Style CL Mtg.      Style BL Mtg.

Style DL Mtg.      Style ET Mtg.      Style FL Mtg.

Skillful Engineering, latest production techniques and highest quality materials . . . backed by careful workmanship, exacting step-by-step inspection and rigorous final testing . . . are combined in every SNC transformer to provide a quality product that gives MORE in dollar value.

**AUDIO TRANSFORMERS — THE "ONE" SERIES**

**AUDIO INPUT**

Type Number	Application	Impedance		Pri. Mils (D.C.)	Max. Turns Ratio	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions				Net Wt.	Net Price
		Primary	Secondary			50	200	1M	5M	10M		A	B	C	C		
1P121	P.M. Speaker to Grid	4	100,000	0	1:58	-4.0	-1.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.55
1P124	S.B. Mic. to Sgl. or P.P. Grids	100	400,000 C.T.	50	1:63	-6.0	-6.0	0	-2.0	-6.0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.67
1P125	Low Z to Sgl. or P.P. Grids	50	100,000 C.T.	0	1:45	-3.0	0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.49
1P128	Sgl. or O.B. Mic. or Line to Sgl. or P.P. Grids	200*/50	100,000 C.T.	50	1:45	-2.0	-0.3	0	-0.7	-2.0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.3	3.93
1P138	Line to Sgl. or P.P. Grids	500*/125	100,000 C.T.	0	1:28	-3.0	-0.4	0	-0.4	-1.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.4	3.93
1P145	Sgl. or P.P. Plates to Line	20,000 C.T.	500*/125	8	12.6:1	-3.5	-1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.24
1P152	Sgl. or P.P. Plates to Line	20,000 C.T.	200*/50	8	20:1	-4.0	-1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.24
1P161	Line to Line	500	500*/125	0	2:1	-0.4	-0.1	0	-0.4	-1.0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.51

\*Indicates Balanced Center Tap

**AUDIO INTERSTAGE**

1P323	Sgl. Plate to Sgl. Grid	10,000	90,000	8	1:3	-5.0	-1.5	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.37	
1P331	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	-6.0	-2.0	0	0	-1.0	BL	1-7/8	1-1/16	1-1/2	2	.5	2.55	
1P339	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	-3.0	-0.5	0	+0.1	+0.5	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	2.85	
1P342	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	-2.5	-0.5	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	3.66	
1P346	P.P. Plates to P.P. Grids	20,000 C.T.	45,000 C.T.	10	1:1.5	-1.0	-0.2	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	3.75	
1P351	Universal			8	1:3	-2.0	-0.4	0	0	0	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.00	
3P363	Sgl. Type 30 to 19, 1J5 or P.P. 30 Class B	Universal																
		10,000	7,000 C.T.	8	2.4:1	-0.5	0	0	0	-0.2	-1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.04

**TELEVISION REPLACEMENT (VERTICAL BLOCKING OSCILLATOR)**

Type Number	Primary Inductance	Leakage Inductance	Turns Ratio	Mounting Style	Mounting	Dimensions				Net Wt.	Net Price
						H	W	D	Ctrs.		
1P412	1.15 Hy. ±20%	.008 Hy. ±25-15%	1:42	Comp. Filled Case	Flange Studs	1-7/8	2-5/16	1-1/2	1-15/16	.5	2.64
1P416	1.15 Hy. ±20%	.008 Hy. ±25-15%	1:42	Comp. Filled Case	Flange Studs	1-5/8	1-3/16	1-3/16	1-13/16	.4	2.43

**CHOKES AND REACTORS — THE "TWO" SERIES**

**AUDIO REACTORS**

Type Number	D.C. Mils		Inductance			Insul. Test Voltage	D.C. Res.	Mtg. Style	Dimensions					Net Weight	Net Price	
	Nom.	Max.	0-D.C.	50% Nom. D.C.	Nom. D.C.				Max. D.C.	A	B	C	D			E
2P123	5-0.5	15	550	—	300-500	80	2000	5500	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	2.55
2P124	5-0.5	15	550	—	300-500	80	2000	5500	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	2.85
2P126	35-15	45	65	—	25-35	20	2000	800	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	2.01
2P127	35-15	45	65	—	25-35	20	2000	800	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	2.37

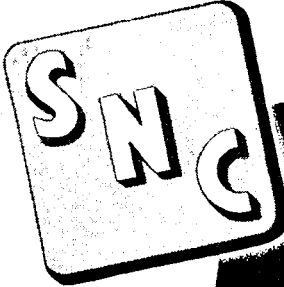
**FILTER AND SWINGING CHOKES**

2P132	40	50	22	13	8	6	2000	450	AL	1-5/16	1-5/8	1-1/8	2		.3	1.32
2P135	65	80	18	11	8	7	2000	300	AL	1-9/16	1-7/8	1-3/8	2-3/8		.5	1.56
2P138	85	100	30	16	8	7	2000	350	AL	1-7/8	2-1/4	1-7/8	2-13/16		1.2	1.98
2P141	110	135	20	10.5	8	7	2000	200	BL	2-5/8	2-3/16	1-7/8	2-13/16		1.5	2.67
2P142	110	135	20	10.5	8	7	2000	200	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	2.85
2P144	150	180	26	13	8	5.5	2000	190	BL	3	2-1/2	2-1/8	3-1/8		2.1	2.67
2P145	150	180	26	13	8	5.5	2000	190	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.2	3.66
2P147	200	250	16	10	8	6.5	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	4.71
2P148	200-20	—	—	—	3-15	7	5000	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	4.71
2P151	300	350	18	11	8	7	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	8.04
2P152	300-30	—	—	—	3-15	—	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	8.04
2P155	500	600	16	10	8	5.5	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	22.65
2P156	500-50	—	—	—	3-15	—	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	22.65

**DRIVER TRANSFORMERS — THE "THREE" SERIES**


Type Number	Primary Impedance	Watts	Ratio, Pri. to 1/2 Sec. or Sec. Z	Pri. D.C. Mils	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	Net Price
					50	200	1M	5M	10M		A	B	C	D	E		
3P323	6,000 C.T. to 10,000 C.T.	25	6, 5.5, 5:1	60	-0.5	0	0	0	-0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.22
3P328	3,000 C.T. to 5,000 C.T.	25	6, 5.5, 5:1	60	-0.4	0	0	0	-0.1	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.22
3P334	6,000 C.T. to 10,000 C.T.	25	4.5, 4, 3.5:1	60	-1.0	-0.3	0	+0.1	+0.6	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.10
3P338	3,000 C.T. to 5,000 C.T.	25	4.5, 4, 3.5:1	60	-1.7	-0.5	0	0	0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.25
3P342	6,000 C.T. to 10,000 C.T.	25	3, 2, 1:1	60	-0.7	-0.1	0	+0.1	+0.4	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.55
3P347	3,000 C.T. to 5,000 C.T.	25	3, 2, 1:1	60	-0.8	0	0	0	-0.8	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.43
3P353	6,000 C.T. to 10,000 C.T.	25	500 Ohms	60	-1.1	-0.3	0	0	+0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.28
3P358	3,000 C.T. to 5,000 C.T.	25	500 Ohms	60	-0.9	-0.1	0	-0.4	-1.0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	8.28
3P363	10,000	5	2.4:1	10	-0.5	0	0	-0.2	-1.0	BL	1-7/8	1-9/16	1-1/2	2		.5	2.04

SECTION 5600




QUALITY TRANSFORMERS


Give OUTSTANDING PERFORMANCE!




Style AL Mtg.



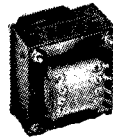
Style CL Mtg.




Style BL Mtg.



Style DL Mtg.

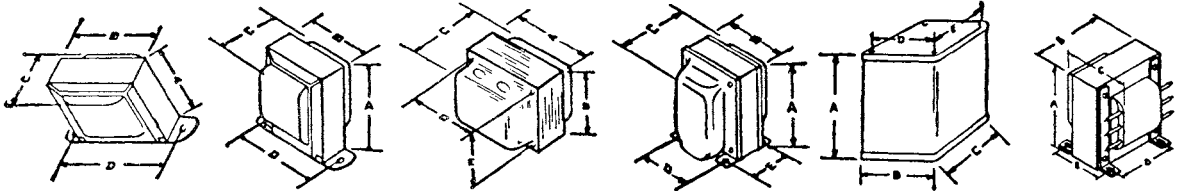


Style ET Mtg.



Style FL Mtg.

DIMENSIONAL ILLUSTRATIONS



OUTPUT TRANSFORMERS — THE "SIX" SERIES

SPECIFIC DUTY REPLACEMENT TYPES—TUBE TO VOICE COIL

Type Number	Primary Imp.—Ohms		Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	Net Price
							A	B	C	D		
6P300	Single	2,000 Plate	50	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.32
6P306	Single	4,000 Plate	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.32
6P312	Single or P.P.	7,500 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.74
6P316	Single or P.P.	10,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.74
6P319	Push-Pull	15,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.77
6P321	Push-Pull	20,000 Plates	30	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.77
6P325	Push-Pull	25,000 Plates	20	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.77

UNIVERSAL REPLACEMENT TYPES—TUBE TO VOICE COIL—TUBE TO LINE—LINE TO VOICE COIL

Type Number	Primary Imp.—Ohms		Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	Net Price
							A	B	C	D		
6P165	Sgl. or P.P. 4M to 14M Plates		40	1.1 to 14	4	ATL	1-5/16	1-5/8	1-3/8	2	.3	2.04
6P166	Sgl. or P.P. 4M to 14M Plates		50	1.1 to 14	8	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.04
6P167	Sgl. or P.P. 3M to 10M Plates		50	1.2 to 13	15	BTL	1-7/8	1-9/16	1-3/4	2	.5	2.55
6P169	Sgl. 1500 to 7M Plate		55	.8 to 19	10	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.04
6P172	P.P. 3500 to 12M Plates		60	1.3 to 14	20	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	3.69
6P701	Single 2500 to 7500 Plate		45	165 to 1500	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	3.24
6P710	P.P. 7500 to 15M Plates		45	250 to 1000	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	3.66
6P714	Sgl. or P.P. 2500 to 12M Plates		45	150 to 2400	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	3.87
6P717	125 to 500 Line		0	1 to 32	35	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	3.93
6P722	500 to 3M Line in 500-Ohm Steps		0	1.3 to 48	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	3.69

AMPLIFIER AND EQUIPMENT TYPES—TUBE TO LINE AND VOICE COIL

Type Number	Primary Imp.—Ohms		Pri. D.C. Mils	Secondary Imp.—Ohms	Watts	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	Net Price
						50	200	1M	5M	10M		A	B	C	D	E		
												3-3/4	3-1/16	3-3/8	2-1/2	2-3/16		
6P726	P.P. 3300 or 3800 Plates		90	4-8-16-250-500	60	-0.3	0	0	+0.1	+0.5	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	7.77
6P731	P.P. 4500 or 6800 Plates		90	4-8-16-250-500	60	-0.3	0	0	+0.2	0	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	7.77
6P736	P.P. 5000 Plates		70	4-8-16-250-500	25	-0.9	-0.2	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.22	
6P740	P.P. 4300 Plates		70	4-8-16-250-500	25	-0.9	-0.3	0	+0.3	+0.5	OL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.22	
6P743	P.P. 6600 Plates		70	4-8-16-250-500	25	-0.7	-0.1	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.22	
6P746	P.P. 8000 Plates		70	4-8-16-250-500	25	-0.7	-0.1	0	+0.1	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.22	
6P749	P.P. 10,000 Plates		60	4-8-16-250-500	25	-0.4	-0.1	0	+0.2	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.49	
6P752	Sgl. 2500 Plate		60	4-8-16-250-500	10	-3.0	-0.4	0	+0.3	+0.5	DL	2-1/4	1-7/8	2-1/8	2-3/8	1.0	4.14	

TELEVISION REPLACEMENT (VERTICAL DEFLECTION)

Type Number	Ratio Pri. to Sec.	Primary Imp.—Ohms	Leakage Inductance	Mounting Style	Dimensions					Net Wt.	Net Price
					A	B	C	D	E		
6P860	10:1	19,000 Min.	0.33 Hy. Max.	B x L	3-3/16	2-3/4	2-9/16	1-19/32	2	2.2	4.86

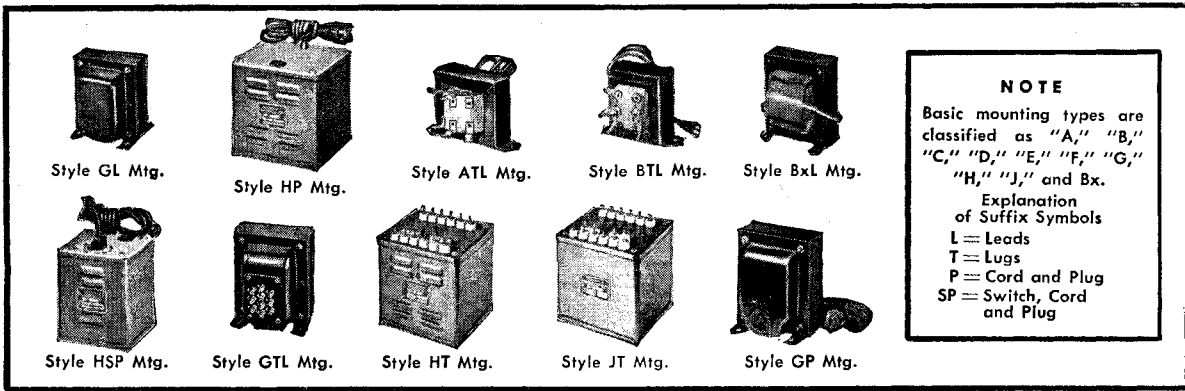
MODULATION TRANSFORMERS — THE "FIVE" SERIES

SNC universal modulation transformers are specifically designed to provide maximum application possibilities per type. All units are provided with two identical secondary windings, permitting series or parallel operation. Changes in the ratio can be readily accomplished, when desired, without removing the unit from the chassis. Most units available in either air cooled or compound filled cases.

UNIVERSAL TYPES

Type Number	Watts	Primary Current Mils	Secondary Characteristics				Primary Impedance Ohms	Mtg. Style	Dimensions					Net Weight	Net Price
			Series Sec.		Parallel Sec.				A	B	C	D	E		
			Impedance	Mils.	Impedance	Mils.									
5P341	15	60	3M to 8M	50	1000 to 5000	100	3M to 8M	DL	2-5/8	2-3/16	2-3/8	2-13/16		1.5	6.54
5P346	50	80	2M to 18M	75	500 to 4500	150	3M to 15M	GTL	3-7/8	3-1/8	3-3/8	2-1/2	2-3/16	4	10.23
5P352	100	120	2M to 18M	100	500 to 4500	200	3M to 15M	GTL	4-5/8	3-3/4	3-7/8	3	2-13/16	9.7	16.35
5P354								HT						24	37.47
5P355	200	200	2M to 18M	150	500 to 4500	300	3M to 15M	JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	32	40.95
5P357								JT						33	45.30
5P358	300	250	2M to 18M	250	500 to 4500	500	3M to 15M	JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	41	48.78
5P363								HT						51	91.47
5P364	500	300	2M to 18M	300	500 to 4500	600	3M to 15M	JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	64	100.20

## SECTION 5600



**NOTE**

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and "X."

Explanation of Suffix Symbols

L = Leads  
 T = Lugs  
 P = Cord and Plug  
 SP = Switch, Cord and Plug

### POWER TRANSFORMERS — THE "EIGHT" SERIES

All units conservatively rated for operation on either 50 or 60 cycles and contain an electrostatic shield between primary and all other windings.

#### REPLACEMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Sec. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	Net Price
							A	B	C	D	E		
8P040	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	2-3/4	2-1/2	2	2.3	3.93
8P055	117	300-0-300	55	5V. @ 2A.	6.3A. @ 2.5A.	FL	3	2-1/2	3-1/8	2-1/2	2	2.8	3.95
8P070	117	325-0-325	70	5V. @ 2A.	6.3V. @ 3A.	FL	3	2-1/2	3-1/2	2-1/2	2	3.2	5.01

#### HEAVY DUTY REPLACEMENT AND NEW EQUIPMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Sec. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	Net Price
							A	B	C	D	E		
8P180	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	3-1/4	2-1/2	2	3.2	5.37
8P180G						GL	3-1/16	2-7/32	3-1/8	2	2-3/16		
8P183	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	FL	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.5	5.67
8P183G						GL	3-7/16	2-27/32	3-1/4	2-1/4	2-1/8		
8P186	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	FL	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	5.94
8P186G						GL	3-7/16	2-27/32	3-1/2	2-1/4	2-3/8		
8P189	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	6.53
8P189G						GL	3-13/16	3-5/32	3-5/8	2-1/2	2-7/16		
8P192	117	350-0-350	90	5V. @ 3A.	6.3A. @ 4A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.7	7.20
8P192G						GL	3-13/16	3-5/32	3-7/8	2-1/2	2-11/16		
8P194	117	375-0-375	110	5V. @ 3A.	6.3A. @ 4A.	FL	3-3/4	3-1/8	4-1/8	3-1/8	2-1/2	6.0	8.05
8P194G						GL	3-13/16	3-5/32	4	2-1/2	2-13/16		
8P196	117	350-0-350	150	5V. @ 3A.	6.3V. @ 4.8A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.7	8.49
8P196G						GL	4-3/16	3-15/32	4-3/8	3-5/16	3-5/16		
8P199	117	400-0-400	70	5V. @ 3A.	6.3V. @ 3.5A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.8	7.62
8P199G						GL	3-13/16	3-5/32	3-7/8	2-1/2	2-11/16		
8P202	117	450-0-450	200	5V. @ 3A.	6.3V. @ 5A.	FL	4-1/2	3-3/4	4-3/4	3-3/4	3	10.7	10.89
8P202G						GL	4-9/16	3-25/32	4-3/8	3	3-11/16		
8P205	117	450-0-450	325	5V. @ 6A.	6.3V. @ 8A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.3	29.64
8P208	117	550-0-550	275	5V. @ 6A.	6.3V. @ 6A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	29.64

#### REPLACEMENT TYPES (2.5 Volt Heater Winding)

8P287	117	350-0-350	70	5V. @ 3A.	2.5V. @ 6A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	6.53
8P293	117	350-0-350	90	5V. @ 3A.	2.5V. @ 8A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.6	7.14
8P295	117	350-0-350	150	5V. @ 3A.	2.5V. @ 12A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.3	8.49

#### REPLACEMENT TYPES (Two 2.5 Volt Heater Windings)

8P487	117	350-0-350	70	5V. @ 3A.	No. 1=2.5V. @ 3.5A. No. 2=2.5V. @ 8A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.8	7.86
8P487G						GL	3-13/16	3-5/32	3-7/8	2-1/2	2-11/16		
8P494	117	375-0-375	110	5V. @ 3A.	No. 1=2.5V. @ 3.5A. No. 2=2.5V. @ 10A.	FL	3-3/4	3-1/8	4-1/4	3-1/8	2-1/2	6.2	8.58
8P494G						GL	3-13/16	3-5/32	4-1/8	2-1/2	2-15/16		

#### GENERAL PURPOSE TYPES WITH CONVENIENT LUG TERMINALS (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Sec. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	Net Price
							A	B	C	D	E		
8P382	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	ET	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.2	5.16
8P385	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	ET	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	5.51
8P388	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	ET	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	4.7	6.03

#### BIAS TYPES

8P510	117	40-0-40	25	5V. @ 2A.		CL	1-7/8	2-1/4	1-3/4	2-13/16		1.0	3.27
8P511	117	0-90-150-200-250	50	5V. @ 2A.		GL	3-1/16	2-7/32	2-5/8	2	1-11/16	2.0	4.74

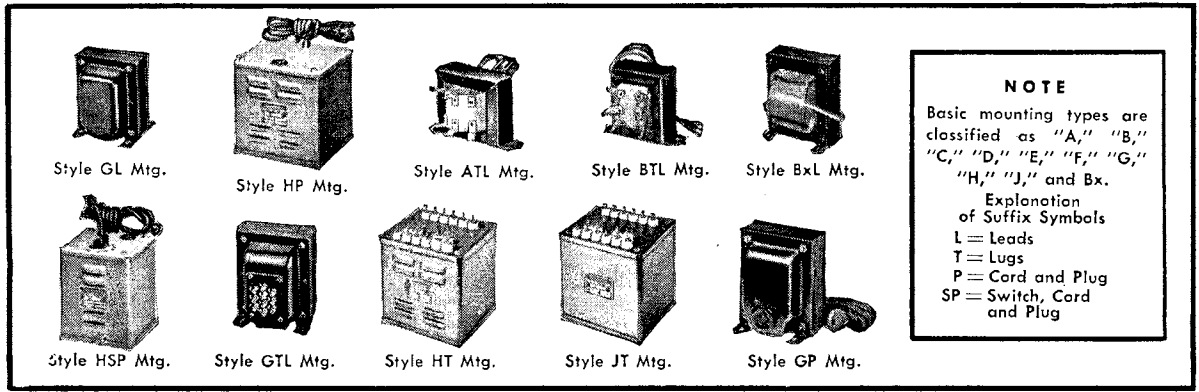
#### VIBRATOR TYPES

8P610	6	225-0-225	40			AL	2-3/16	2-5/8	2	3-1/8		1.3	3.69
8P611	6	320-0-320	40			GL	3-1/16	2-7/32	2-1/2	2	1-9/16	2.1	4.41
8P612	6	390-0-390	60			GL	3-7/16	2-27/32	3-5/16	2-1/4	2-3/16	3.7	5.01

#### TELEVISION REPLACEMENT TYPES

8P803	117	375-0-375	210	5V. @ 3A.	No. 1=5V. @ 2A. No. 2=6.3V. @ 5.6A.	FL	4-1/2	3-3/4	4-3/4	3-3/4	3	10.7	12.90
8P805	117	235-0-235	90	5V. @ 2A.	6.3V. @ 5.5A.	FL	3-3/8	2-13/16	4	2-13/16	2-1/4	5.1	7.44
8P807	117	365-0-365	300	5V. @ 6A.	No. 1=12.6V. @ 5A. No. 2=5V. @ 2A.	FL	4-23/32	3-27/32	6-3/4	4-1/16	3-3/16	16.0	22.38

**SECTION 5600**



**PLATE TRANSFORMERS — THE "SEVEN" SERIES**

All SNC plate transformers have dual secondary ratings. Most units available in either air cooled or compound filled cases. All units electrostatic shields between primary and high voltage windings. 50/60 Cycle Operation

Type Number	Primary Voltage	Pri. V.A.	Secondary R.M.S. Voltage	D.C. Voltage From Filter*	D.C. Current	Mtg. Style	Dimensions					Net Wt.	Net Price
							A	B	C	D	E		
7P530	115-230	220	920-0-920 or 740-0-740	750 or 600	200MA	GL	4-3/4	3-3/4	5-1/8	3	4-1/16	12	13.08
7P535 7P536	115-230	320	930-0-930 or 750-0-750	750 or 600	300MA	HT JT	7-1/8	5-1 2	5-15/16	4-3/8	4-13/16	22 30	30.48 34.86
7P542 7P543	115-230	530	1470-0-1470 or 1220-0-1220	1250 or 1000	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	36.60 40.65
7P551 7P552	115-230	750	2050-0-2050 or 1740-0-1740	1750 or 1500	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	43 51	39.21 47.93
7P557 7P558	115-230	1060	2880-0-2880 or 2350-0-2350	2500 or 2000	300MA	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	53 69	54.03 58.38
7P563 7P564	115-230	1760	2900-0-2900 or 2370-0-2370	2500 or 2000	500MA	HT JT	10-3/4	9	7-1/4	7	5-13/16	96 126	78.42 108.90

\*All units may be operated with simultaneous loads—provided the total D.C. Current of the two loads does not exceed the rating listed.

**FILAMENT TRANSFORMERS — THE "FOUR" SERIES**

Most SNC Filament Transformers are constructed to provide two identical center tapped secondary windings and offer a minimum of three applications. They provide three-fold the number of possible applications of ordinary filament types. A few are single secondary units and are so designed. All have 117 V. 50/60 cycle primary.

Type Number	Parallel Secondaries	Applications Series Secondaries	Independent Identical Secondaries	Test Voltages	Mtg. Style	Dimensions					Net Wt.	Net Price
						A	B	C	D	E		
4P222	2.5V. C.T. @ 5 A.	5 V. C.T. @ 2.5 A.	Two of 2.5V. C.T. @ 2.5 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	2.58
4P226*	2.5V. C.T. @ 10 A.*			7500	BL	3	2-1/2	2-3/8	3-1/8		2.0	3.93
4P227	2.5V. C.T. @ 10 A.	5 V. C.T. @ 5 A.	Two of 2.5V. C.T. @ 5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	3.51
4P234	2.5V. C.T. @ 15 A.	5 V. C.T. @ 7.5 A.	Two of 2.5V. C.T. @ 7.5 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	4.14
4P239	5 V. C.T. @ 6.5A.	10 V. C.T. @ 3.25A.	Two of 5 V. C.T. @ 3.25A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	3.69
4P242*	5 V. C.T. @ 20 A.*			10000	BxL	4-1/8	3-7/16	2-3/4	2-3/4	2-1/8	4.6	7.38
4P243	5 V. C.T. @ 20 A.	10 V. C.T. @ 10 A.	Two of 5 V. C.T. @ 10 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.3	6.54
4P244*	6.3V. C.T. @ 0.6A.*			2000	BL	1-7/8	1-9/16	1-1/2	2		.6	2.55
4P245*	6.3V. C.T. @ 1.2A.*			2000	BL	1-7/8	1-9/16	1-5/8	2		.7	2.76
4P246	6.3A. C.T. @ 2 A.	12.6V. C.T. @ 1 A.	Two of 6.3V. C.T. @ 1 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	3.03
4P251	6.3V. C.T. @ 6 A.	12.6V. C.T. @ 3 A.	Two of 6.3V. C.T. @ 3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	3.54
4P256	6.3V. C.T. @ 10 A.	12.6V. C.T. @ 5 A.	Two of 6.3V. C.T. @ 5 A.	2000	BxL	3-3/8	2-13/16	2-1/2	2-1/4	2-1/8	2.9	4.59
4P260	7.5V. C.T. @ 3 A.	15 V. C.T. @ 1.5 A.	Two of 7.5V. C.T. @ 1.5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	3.69
4P267	7.5V. C.T. @ 4.5A.	15 V. C.T. @ 2.3 A.	Two of 7.5V. C.T. @ 2.3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	4.59
4P272	11 V. C.T. @ 10 A.	22 V. C.T. @ 5 A.	Two of 11 V. C.T. @ 5 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.1	6.54

\*Single Secondary Units.

**VOLTAGE CHANGER AND ISOLATION — THE "NINE" SERIES**

All Units Have Primary Cord and Secondary Plug and Are For 50/60 Cycle Operation.

**VOLTAGE CHANGER (ISOLATION)**

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	Dimensions					Net Wt.	Net Price
					A	B	C	D	E		
9P707	220-250	110-125	75	GP	3-13/16	3-5/32	3-1/8	2-1/2	1-15/16	3.9	6.90
9P713	220-250	110-125	150	GP	4-9/16	3-25/32	3-7/8	3	2-13/16	8.0	10.02
9P718	220-250	110-125	360	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	26.13

**ISOLATION TYPES**

9P721	110-250	110-250	150	GP	4-9/16	3-25/32	4-5/8	3	3-9/16	12.1	13.80
9P725	110-250	110-250	250	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	21.36
9P728	110-250	110-250	500	HP	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	34.8	30.06

**VOLTAGE ADJUSTMENT TYPES WITH TAP CHANGE SWITCH**

9P732	95-130 in 5V. Steps	115	150	HSP	4-7/8	3-7/8	3-7/8	3-1/8	3-1/8	4.7	18.74
9P737	95-130 in 5V. Steps	115	250	HSP	5-3/8	4-3/8	4-1/4	3-5/8	3-1/2	8.0	24.00
9P739	80-130 in 5V. Steps	115	500	HSP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	35.70

All list prices given are subject to regular trade discounts and may be changed without notice.

**S N C MANUFACTURING CO., INC., OSHKOSH, WISCONSIN**



A DIVISION OF  
BASIC PRODUCTS CORPORATION

In Canada: Sola-Basic Products Ltd.,  
377 Evans Avenue, Toronto 18, Ontario

SECTION 5600

CV Transformers

*AUTOMATIC, INSTANTANEOUS VOLTAGE  
REGULATION FOR A WIDE VARIETY  
OF ELECTRIC AND ELECTRONIC DEVICES*

Constant-voltage Sola transformers provide a stabilized output voltage even though the input voltage varies over a considerable range. Their applications are numerous and varied. CV's are especially ideal for high-accuracy requirements such as in computers and data-processing equipment:

Another advantage in CV transformers is their ability to prolong the life of electronic components by eliminating injurious over- and under-voltages. The Sola transformer's current-limiting factor protects semiconductors and other components from excessive inrush and fault currents.

**Sola Sinusoidal Type (CVS) LESS THAN 3% HARMONIC CONTENT**

**ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE**

**MECHANICAL SPECIFICATIONS**

Voltage Rating		VA	Catalog Number	Price Ind'l & Govt. Users	Nominal Dimensions		Approximate Shipping Weight Lbs.	* Structure Code
Regulated Output	Input Range				Outline	Mounting		
118	95-130	30	23-13-030(a)	\$25.00	6 1/8 x 4 x 5 1/8	3 x 3 1/2	9	W
	190-260X 380-520	30	23-23-030(a)	27.00	6 1/8 x 4 x 5 1/8	3 x 3 1/2	9	W
	95-130	60	23-13-060(a)	30.00	6 1/8 x 4 x 5 1/8	3 x 3 1/2	10	W
	190-260X 380-520	60	23-23-060(a)	32.00	6 1/8 x 4 x 5 1/8	3 x 3 1/2	10	W
	95-130X 190-260	120	23-22-112(a)	38.00	8 x 4 x 5 1/8	3 x 3 1/2	14	W
	190-260X 380-520	120	23-23-112(a)	41.00	8 x 4 x 5 1/8	3 x 3 1/2	14	W
	95-130X 190-260	250	23-22-125(b)	52.00	9 3/8 x 5 3/8 x 7 1/8	4 1/8 x 4 3/8	28	W
	190-260X 380-520	250	23-23-125(b)	56.00	10 x 5 3/8 x 7 1/8	4 1/8 x 4 3/8	28	W
95-130X 190-260	500	23-22-150(c)	81.00	12 1/8 x 9 x 6 1/8	5 1/8 x 8 1/8	47	W	
118 x 236	190-260X 380-520	500	23-26-150(c)	86.00	12 1/8 x 9 x 6 1/8	5 1/8 x 8 1/8	47	W
	95-130X 175-235X	1000	23-25-210(c)	135.00	17 1/8 x 9 x 6 1/8	5 1/8 x 8 1/8	80	W
	190-260X 380-520	1000	23-26-210(c)	135.00	17 1/8 x 9 x 6 1/8	5 1/8 x 8 1/8	80	W
	95-130X 175-235X	2000	23-25-220	245.00	19 1/8 x 12 3/4 x 10 1/8	4 1/2 x 11 3/4	145	W
	190-260X 380-520	2000	23-26-220	245.00	19 1/8 x 12 3/4 x 10 1/8	4 1/2 x 11 3/4	145	W
	95-130X 175-235X	3000	23-25-230-3	330.00	21 1/8 x 12 3/4 x 10 1/8	6 1/8 x 11 3/4	192	W
	190-260X 380-520	3000	23-26-230	330.00	21 1/8 x 12 3/4 x 10 1/8	6 1/8 x 11 3/4	192	W
	95-130X 175-235X	5000	23-25-250	515.00	20 1/8 x 25 1/8 x 10 1/8	5 1/8 x 24 1/8	475	Y
	190-260X 380-520	5000	23-26-250	515.00	20 1/8 x 25 1/8 x 10 1/8	5 1/8 x 24 1/8	475	Y
	190-260X 380-520	7500	23-28-275	765.00	20 1/8 x 38 1/4 x 11 1/8	5 1/8 x 37 1/4	710	Z

An adjustable CVS, the ac Solavolt is available with output range from 0-130 v. 500 va. Write for Solavolt bulletin.

**Normal Harmonic Type (CVN)**

**ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE**

**MECHANICAL SPECIFICATIONS**

Voltage Rating		Output Capacity in VA	Catalog Numbers	Approx. Net Price Each to Industrial, Commercial or Govt. Users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
Regulated Output	Input Range				Outline	Mounting		
118	95-130	15	20-10-015	\$15.00	5 1/2 x 2 1/2 x 3 1/2	5 1/8 x 1 1/8	4	D
			20-11-015	20.00	5 1/2 x 3 1/2 x 2 1/4	3 x 1 1/2	4	S
			20-14-015	14.00	4 3/8 x 2 3/8 x 2 1/8	1 3/4 x 1 1/8	3	E
		30	20-14-030	16.00	4 3/8 x 2 3/8 x 3 3/8	1 7/8 x 2 3/8	5	E
			20-13-030(a)	20.00	6 x 4 x 5 1/8	3 x 3 1/2	7	W
			20-13-060(a)	25.00	6 1/8 x 4 x 5 1/8	3 x 3 1/2	10	W
60	20-14-060	21.00	4 3/8 x 3 3/8 x 3 3/8	2 1/2 x 3 3/8	8	E		
	118	95-130	20-14-112	29.00	4 1/8 x 3 1/8 x 4 1/8	2 1/2 x 3 3/8	11	E
20-13-112(a)			33.00	7 3/8 x 4 x 5 1/8	3 x 3 1/2	13	W	
236	190-260	120	20-21-112(a)	33.00	7 3/8 x 4 x 5 1/8	3 x 3 1/2	13	W
118	95-130	150	20-13-115(b)	40.00	8 3/8 x 5 3/8 x 7 3/8	4 3/8 x 4 3/8	22	W
			20-13-125(c)	49.00	11 1/8 x 6 1/8 x 6 1/8	4 3/8 x 6 1/8	25	W
		250	20-23-125(c)	49.00	11 1/8 x 6 1/8 x 6 1/8	4 3/8 x 6 1/8	25	W
			20-13-150(c)	77.00	12 1/8 x 6 1/8 x 6 1/8	4 3/8 x 6 1/8	36	W
			20-23-150(c)	77.00				
236	190-260X 380-520	500	20-24-150(c)	77.00	12 1/2 x 6 1/8 x 6 1/8			
118	95-130	1000	20-13-210	128.00	15 1/4 x 6 1/8 x 6 1/8	4 3/8 x 6 1/8	54	W
			20-20-210	128.00				
118x 236	95-130X 175-235X 190-260	2000	20-25-220	232.00	20 x 10 1/2 x 10 1/8	4 3/8 x 9 1/2	166	W
		3000	20-25-230	315.00	22 x 10 1/2 x 10 1/8	6 3/8 x 9 1/2	230	W
		5000	20-27-250	490.00	21 x 14 1/2 x 14 3/8	7 x 13	279	W
		10000	20-26-310	925.00	21 x 29 1/8 x 14 3/8	7 x 27 1/8	590	Y

Letter following a catalog number designates units which may be converted to card input and receptacle output. See Adapter Kit table on page 3.

Outline dimensions are the overall outside dimensions of the unit, not including separate capacitor where employed. Dimensions are subject to manufacturing tolerances of ±1/32 to ±1/8 inch.

For more information on the SOLATRON Voltage Regulator, see page 1066 in Sec. 4000.



A DIVISION OF  
BASIC PRODUCTS CORPORATION



SECTION 5600

Electronic-Power Types

± 1% REGULATION FOR FILAMENT TYPE,  
± 3% FOR PLATE-FILAMENT TYPE

In Canada: Sola-Basic Products Ltd.,  
377 Evans Avenue, Toronto 18, Ontario

The electronic-power type of Sola transformer is designed as a component for simple assembly into many kinds of electronic equipment. The filament type (CVF) provides 6.0 or 6.3 volts of output regulated within ± 1% over line variations of ± 15%; the combination plate-and-filament type (CVE) regulates within ± 3%.

for filament service (Type CVF)

ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE

MECHANICAL SPECIFICATIONS

Voltage Rating		Output Capacity in Amps.	Catalog Number	Approx. Net Price Each to Industrial Users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
Regulated ±1% Output	Input Range				Outline	Mounting		
6.0	95-130	2.50	20-01-015	\$15.00	5 5/8 x 2 3/8 x 3 1/2	5 1/8 x 1 1/8	6	D
			20-06-015	14.00	4 1/8 x 2 3/8 x 2 3/8	1 3/4 x 1 1/8	4	E
6.3	95-130	2.38	20-02-015	15.00	5 5/8 x 2 3/8 x 3 1/2	5 1/8 x 1 1/8	6	D
			20-03-015	20.00	4 1/8 x 2 3/8 x 2 3/8	1 3/4 x 1 1/8	4	S
			20-04-015	14.00	4 1/8 x 2 3/8 x 2 3/8	1 3/4 x 1 1/8	4	E
			20-04-030	16.00	4 1/8 x 3 3/8 x 3 3/8	2 1/2 x 2 3/8	6	E
	95-130X 190-260	10.0	20-04-065	20.00	4 3/8 x 3 3/8 x 3 3/8	2 1/2 x 2 11/8	7	E
		15.0	20-04-095	24.00	4 3/8 x 3 3/8 x 4 11/8	2 1/2 x 3 3/8	11	E
	25.0	20-04-116	35.00	7 x 4 1/2 x 5 11/8	3 3/8 x 4 1/8	23	E	

for plate filament service (Type CVE)

ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE  
Input range, 100-130 volts

MECHANICAL SPECIFICATIONS

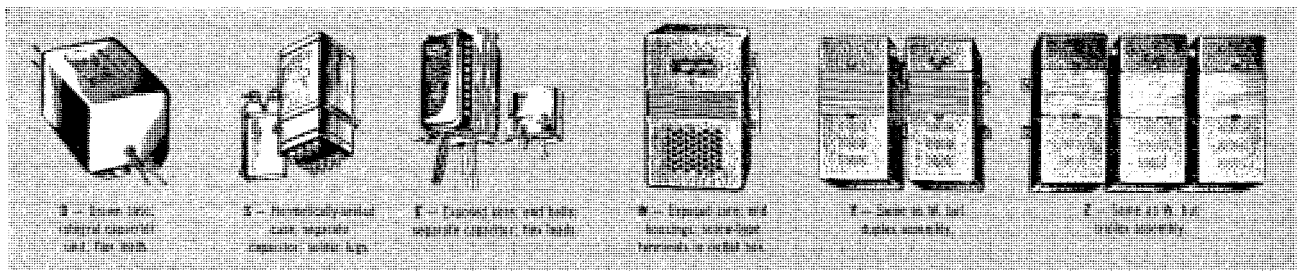
Typical Rectifier Tube	Average D.C. Input Volts to Filter*	Filament Windings		Catalog Number	Approx. Net Price Each to Industrial Users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
		6.3 Volts	5.0 Volts			Outline	Mounting		
5Y3	275v D.C. @ 50 M.A.	2.5 amps C.T.	2.0 amps	7104	\$12.00	4 1/8 x 3 3/8 x 3 3/8	2 1/2 x 2 1/8	6	E
5Y3	385v D.C. @ 110 M.A.	3.0 amps C.T.	2.0 amps	7106	15.00	4 1/8 x 3 3/8 x 3 1/8	2 1/2 x 2 1/8	8	E
5U4	380v D.C. @ 250 M.A.	No. 1: 4.0 amps No. 2: 8.0 amps unregulated	3.0 amps	7107	27.00	7 x 4 1/2 x 4 1/8	3 3/8 x 3 3/8	19	E

\*Voltage values are taken at output of 5Y3GT rectifier for No. 7104 and No. 7106 transformers and at output of 5U4GA-GB for No. 7107. Guaranteed regulation of ±3% on plate voltage output is contingent

on the use of Sola-regulated 5.0v filament supply winding for the rectifier tube.

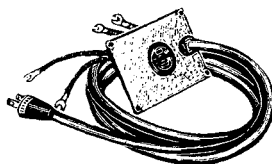
\*Mechanical Structures

"STRUCTURE CODE" LETTER REFERS TO ONE OF THESE GENERAL TYPES OF MECHANICAL ASSEMBLIES:



Cord/Receptacle Adapter Kits

Adapter kits may be used when the convenience of input plug and output receptacle is preferred to the standard arrangement of terminals in the transformer housing. See accompanying chart.



Code	Adapter Kit Catalog No.	Input Cord	Output-Connections	Net price each to industrial users
(a)	999-004	2-wire	2-wire receptacle	\$1.75
	999-018	3-wire	3-wire receptacle	2.50
(b)	999-005	2-wire	2-wire receptacle	1.75
	999-019	3-wire	3-wire receptacle	2.50
(c)	999-009	2-wire	2-wire receptacle	2.00
	999-020	3-wire	3-wire receptacle	2.50

The transformers described in this folder are manufactured under one or more of the following United States Patents: Nos. 2,694,177; 2,753,513; 2,806,199, and patents pending.

For more information on the SOLATRON Voltage Regulator, see page 1066 in Sec. 4000.

# All-New From Sola!

## 112 REGULATED OUTPUT VOLTAGES IN ONE OFF-THE-SHELF UNIT!

Sola's Multi-Tap constant voltage transformer is so completely new that it gives your electronics lab, prototype shop, service or repair department the boon of real voltage versatility — all in one new package. It is the equivalent of having 112 different special-output constant-voltage transformers immediately available — and at less cost. One unit covers the entire output range.

### Typical AC & DC Output Voltages

SPECIFICATIONS: Input range for all units: 105-125 volts.

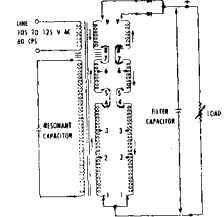
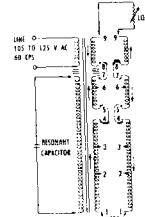
CATALOG NUMBER	AC LOAD	DC LOAD							
		Full-wave Center Tap				Full-wave Bridge			
		Resistive Load		Capacitive Load*		Resistive Load		Capacitive Load**	
		Secondary vac	Output vdc	Secondary vac	Output vdc	Secondary vac	Output vdc	Secondary vac	Output vdc
73-13-115 150 va.	31.4	30.8	13.0	31.0	14.5	30.8	27.8	31.2	32.9
	27.2	27.2	11.4	28.3	12.6	27.4	24.4	27.6	28.6
	24.0	24.0	9.9	25.0	10.9	24.3	21.4	24.2	24.8
VAC Output at 5 amp.	22.0	22.0	9.0	23.0	9.9	22.2	19.5	22.3	22.6
	20.2	20.4	8.3	21.0	8.8	20.2	17.8	20.3	20.4
FW-CT Output at 8 amp.	18.4	18.7	7.4	19.2	7.9	18.6	16.0	18.4	18.3
	16.0	16.5	6.3	16.8	6.6	16.4	13.9	16.1	15.8
FW-Bridge Output at 4 amp.	14.9	15.0	6.0	15.7	6.3	15.0	12.8	15.1	14.0
	13.4	13.6	5.3	14.0	5.4	13.6	11.4	13.6	12.5
	12.6	12.8	4.9	13.0	5.0	12.8	10.6	12.8	11.6
	11.6	11.6	4.4	12.0	4.5	11.6	9.6	11.8	10.4
*4000 mfd. **2000 mfd.	10.8	10.8	4.0	11.0	4.0	10.8	8.8	10.8	9.5

**Catalog No.**

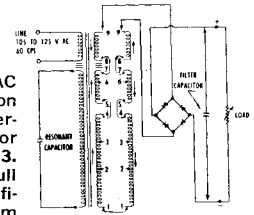
- 73-13-040
- 73-13-075
- 73-13-115
- 73-13-122
- 73-13-130
- 73-13-145

**VA rating**

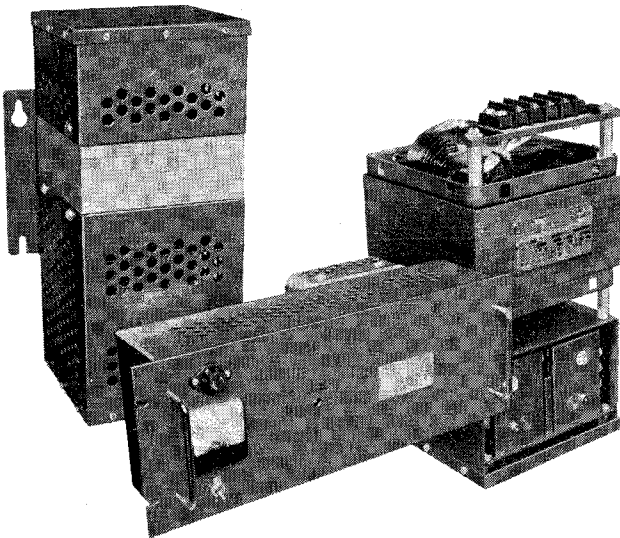
- 40 VA
- 75 VA
- 150 VA
- 225 VA
- 300 VA
- 450 VA



1. Connections for AC output; 2. Connection for full-wave, center-tap rectification (for maximum output); 3. Connections for full wave, bridge rectification (for maximum output).



## NEW compact 1-kva SOLATRON VOLTAGE REGULATOR (static-magnetic principle)



The new 1-kva Solatron is designed for use as an OEM component, or for applications where size and weight are critical factors. One-fourth the size, one-third the weight of previous Solatron models — yet it provides closer regulation and lower harmonic distortion.

The new compact Solatron is available in three separate versions: external mounting, rack-panel mounting, and open core-and-coil for component installation. A wide range of styles ranging from .5 kva upwards are available in these three styles, in controlling fluctuation ranges of  $\pm 10\%$ ,  $\pm 20\%$  and  $+10\%$ ,  $-20\%$ . For complete information on the compact Solatron regulator, please write for bulletin No. VR-200.

**SOLA**  
DIVISION OF  
BASIC PRODUCTS CORPORATION



In Canada: Sola-Basic Products Ltd., 377 Evans Avenue, Toronto 18, Ontario  
A DIVISION OF BASIC PRODUCTS CORPORATION

For more information on the SOLATRON Voltage Regulator, see page 1066 in Sec. 4000.



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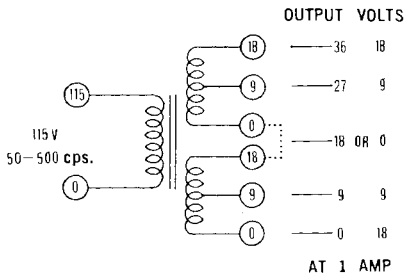
# MOST COMPLETE LINE IN THE INDUSTRY HIGH CURRENT TRANSFORMERS

**ALL ITEMS AVAILABLE IMMEDIATELY FROM STOCK**

PART NO.	PRIMARY 50-500 cps	SECONDARY VOLTS		SECONDARY AMPS		APPROX. DIMENSIONS					APX. LBS.	USERS NET PRICE
		SERIES	PARALLEL	SERIES	PARALLEL	L	W	H	ML	MW		
<b>12.8 or 6.4 VOLTS</b>												
0-3-2-6.4-9.6-12.8 V 12.8 V C.T. or parallel 6.4 V C.T. @ 2 x current												
12.8-2	115V	0-3-2 6.4-9.6-12.8	0-6.4-12.8	2	4	3 1/16	2 1/2	2 5/8	2 1/2	2	2.2	\$ 4.65
12.8-4	115	"	"	4	8	3 1/16	3	2 5/8	2 1/2	2 3/8	3	6.00
12.8-6	115	"	"	6	12	3 1/2	3 1/4	3 3/4	2 3/16	2 1/2	4.2	6.90
12.8-8	115	"	"	8	16	3 3/16	2 5/8	3	3 1/8	2 1/4	4.5	7.20
12.8-12	115	"	"	12	24	4 3/16	3 1/4	3 5/8	3 1/16	2 3/8	6	8.50
12.8-25	115	"	"	25	50	5 3/8	4 1/4	4 5/8	4 3/8	2 7/8	12	18.00
12.8-50	105, 115, 125	"	"	50	100	5 1/2	5 3/4	4 5/8	4 3/8	4 1/8	20	25.00
12.8-100	105, 115, 125	"	"	100	200	6 1/2	6 3/8	5 5/8	5 1/16	4 1/8	32	37.00
<b>24 or 12 VOLTS</b>												
0-6-12-18-24 V 24 V C.T. or Parallel 12 V C.T. @ 2 x current												
24-1	115V	0-6 12-18-24	0-6-12	1	2	3 1/16	2 1/2	2 5/8	2 1/2	2	2.2	\$ 4.65
24-2	115	"	"	2	4	3 1/16	3	2 5/8	2 1/2	2 3/8	3	5.90
24-4	115	"	"	4	8	3 3/16	2 5/8	3	3 1/8	2 1/4	4.5	7.20
24-6	115	"	"	6	12	4 1/16	3 1/4	3 3/8	3 3/16	2 3/8	6	8.45
24-8	115	"	"	8	16	4 3/16	3 3/4	3 5/8	3 1/16	3	8	12.00
24-12	105, 115, 125	"	"	12	24	4 7/16	4 1/2	4	3 3/4	3 3/8	11.5	15.00
24-20	105, 115, 125	"	"	20	40	5 1/4	4 3/4	4 5/8	4 3/8	3 3/8	15	18.00
24-25	105, 115, 125	"	"	25	50	5 1/2	5 3/4	4 5/8	4 3/8	4 1/8	20	24.00
24-50	105, 115, 125	"	"	50	100	6 1/2	6 3/8	5 5/8	5 1/16	4 3/8	32	36.00
24-100A	115/230	"	"	100	200	7 5/8	7	6 3/8	6 3/4	4 1/8	45	52.00
<b>36 or 18 VOLTS</b>												
0-9-18-27-36 V 36 V C.T. or Parallel 18 V C.T. @ 2 x current												
36-1	115 V	0-9 18-27-36	0-9-18	1	2	3 1/16	2 3/4	2 5/8	2 1/2	2 1/4	2.5	4.60
36-2	115	"	"	2	4	3 1/2	3	3 1/4	2 3/16	2 3/8	3.8	6.25
36-4	115	"	"	4	8	4 3/16	3 3/4	3 3/4	3 1/16	2 5/8	6.7	7.70
36-6	115	"	"	6	12	4 7/16	3 3/4	4	3 3/4	2 3/4	8.6	12.60
36-8	115	"	"	8	16	4 9/16	4 1/8	4	3 3/4	3 3/8	11	13.90
36-12	105, 115, 125	"	"	12	24	5 1/16	4 7/8	4 5/8	4 3/8	3 3/8	14.5	15.25
36-20	105, 115, 125	"	"	20	40	6 1/2	5 1/2	5 5/8	5 1/16	3 3/8	23	27.60
36-25	105, 115, 125	"	"	25	50	6 1/2	6	5 5/8	5 1/16	3 3/4	27	29.75
36-30	105, 115, 125	"	"	30	60	6 1/2	6 1/2	5 5/8	5 1/16	4 3/8	32	36.00
36-50	115/230	"	"	50	100	6 1/2	7 3/4	5 5/8	5 1/16	5 1/8	40	43.00
36-100A	115/230	"	"	100	200	7 5/8	8 1/16	6 3/8	6 3/4	5 1/16	62	85.00
<b>56 or 28 VOLTS</b>												
0-14-28-42-56 V 56 V C.T. or Parallel 28 V C.T. @ 2 x current												
56-1	115	0-14 28-42-56	0-14-28	1	2	3 1/2	2 3/4	3	2 1/16	2 1/4	3.8	6.75
56-2	115	"	"	2	4	3 7/8	3 3/4	3 3/8	3 3/8	2 1/2	5	7.25
56-4	115	"	"	4	8	4 1/4	3 3/4	3 3/4	3 1/16	3	8	11.25
56-6	115	"	"	6	12	5 3/8	4 1/4	4 5/8	4 3/8	2 7/8	12	18.00
56-8	105, 115, 125	"	"	8	16	5 3/8	5	4 5/8	4 3/8	3 3/8	17	22.00
56-12	105, 115, 125	"	"	12	24	6 1/2	5 1/2	5 5/8	5 1/16	3 3/8	22	27.00
56-25	105, 115, 125	"	"	25	50	6 1/2	7 1/8	5 5/8	5 1/16	5 1/8	38	45.00
56-50A	115/230	"	"	50	100	7 5/8	7 1/4	6 3/8	6 3/4	4 7/8	54	85.00
56-100	115/230	"	"	100	200	7 5/8	11	6 3/8	6 3/4	8 1/8	100	125.00
<b>68 or 34 VOLTS</b>												
0-17-34-51-68 V 68 V C.T. or parallel 34 V C.T. @ 2 x current												
68-1/2	115V	0-17- 34-51-68	0-17-34	1/2	1	3 1/16	2 3/4	2 5/8	2 1/2	2 1/4	2.5	\$ 5.00
68-1	115	"	"	1	2	3 1/2	3	3 1/4	2 3/16	2 3/8	3.8	6.50
68-2	115	"	"	2	4	4 3/16	3 3/4	3 3/4	3 1/16	2 5/8	6.7	8.35
68-4	115	"	"	4	8	4 7/16	4 1/8	4	3 3/4	3 3/8	11	14.25
68-6	105, 115, 125	"	"	6	12	5 1/16	4 7/8	4 5/8	4 3/8	3 3/8	14.5	16.00
68-8	105, 115, 125	"	"	8	16	5 5/16	5 1/2	4 5/8	4 3/8	3 7/8	19	23.00
68-12	105, 115, 125	"	"	12	24	6 1/2	6	5 5/8	5 1/16	3 3/4	27	31.00
68-25	115/230	"	"	25	50	6 1/2	7 3/4	5 5/8	5 1/16	5 1/8	40	45.00
68-50	115/230	"	"	50	100	7 5/8	8 1/16	6 3/8	6 3/4	5 1/16	62	85.00
<b>80 or 40 VOLTS</b>												
0-20-40-60-80 V 80 V C.T. or Parallel 40 V C.T. @ 2 x current												
80-1/2	115	0-20 40-60-80	0-20-40	0.5	1	3 1/16	2 3/4	2 5/8	2 1/2	2 1/4	3	4.80
80-1	115	"	"	1	2	3 1/2	3 1/4	3 1/4	2 3/16	2 1/2	4.2	7.00
80-2	115	"	"	2	4	4 1/4	3 3/8	3 3/4	3 1/16	2 5/8	7	10.50
80-4	115	"	"	4	8	5 3/8	4 1/4	4 5/8	4 3/8	2 7/8	13	18.00
80-6	105, 115, 125	"	"	6	12	5 3/8	5 1/8	4 5/8	4 3/8	3 7/8	19	23.00
80-8	105, 115, 125	"	"	8	16	6 1/2	5 3/4	5 5/8	5 1/16	3 3/4	22	26.00
80-12	105, 115, 125	"	"	12	24	6 1/2	6	5 5/8	5 1/16	4 1/8	29	34.00
80-25	115/230	"	"	25	50	7 5/8	6 1/2	6 3/8	6 3/4	3 7/8	40	55.00
80-50	115/230	"	"	50	100	7 5/8	9	6 3/8	6 3/4	6 1/2	78	105.00
<b>160 or 80 VOLTS</b>												
0-40-80-120-160 V 160 V C.T. or Parallel 80 V C.T. @ 2 x current												
160-1/2	115	0-40 80-120-160	0-40-80	0.5	1	3 1/2	3 1/4	3 3/4	2 3/16	2 1/2	4.2	7.25
160-1	115	"	"	1	2	4 1/4	3 1/2	3 3/4	3 1/16	2 5/8	6.4	10.50
160-2	115	"	"	2	4	4 7/16	4 3/8	4	3 3/4	3 3/8	11	14.50
160-4	105, 115, 125	"	"	4	8	6 1/2	5	5 5/8	5 1/16	3 3/4	19	26.00
160-8	105, 115, 125	"	"	8	16	6 1/2	6 5/8	5 5/8	5 1/16	4 7/8	36	41.00
160-12	115/230	"	"	12	24	7 5/8	6 1/2	6 3/8	6 3/4	3 7/8	40	55.00
<b>230 or 115 VOLTS</b>												
0-57 1/2-115-172 1/2 V 230 V C.T. or Parallel 115 V C.T. @ 2 x current												
230-1/2	115	0-57.5 115-172 1/2-230	0-57.5-115	0.5	1	3 7/8	4	3 3/4	3 3/8	3	7	8.70
230-1	115	"	"	1	2	4 3/16	4	4	3 3/4	3	10	12.50
230-2	115	"	"	2	5	5 3/8	4 3/4	4 5/8	4 3/8	3 3/8	14.5	16.75
230-4	105, 115, 125	"	"	4	8	6 1/2	6	5 5/8	5 1/16	4 1/8	30	34.00

# MOST COMPLETE LINE IN THE INDUSTRY HIGH CURRENT TRANSFORMERS & CHOKES

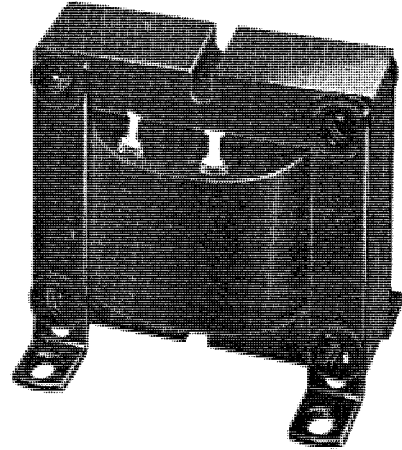
## SERIES CONNECTED SECONDARIES



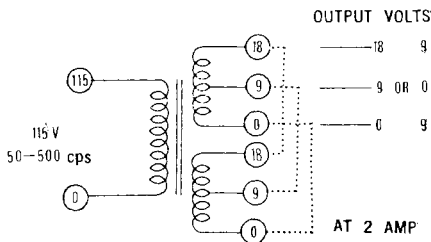
## ALL ITEMS AVAILABLE IMMEDIATELY FROM STOCK

The line is designed conservatively for a max of 50° C rise above ambient, for use on 115V power line from 50-500 cps. Only prime raw materials are used. Units are thoroughly impregnated and baked with Signal's own high gloss black baking varnish. The transformers and chokes are rugged in construction, well-insulated, and have a consistently uniform appearance. All ratings are at full load current continuous operation.

Electrical ratings have been chosen to cover a wide range of applications. All transformers have two center-tapped secondary windings. This is indicated on the schematic diagram below.



## PARALLEL CONNECTED SECONDARIES



It is possible to make connections for many different voltage and current combinations. A number of possible applications are illustrated in the diagrams to the left. It should be noted that Part No. 36-1 is used in these specific examples. Since the user can choose from a line having 12.8, 24, 36, 56, 68, 80, 160 or 230 volt output with current ratings from 1/2 to 100 amperes, it is apparent that an almost limitless number of combinations can be selected.

If you should have any questions regarding these or any of the possible combinations which may occur to you, our engineering staff will be pleased to furnish prompt answers.

## METHOD OF DETERMINING SECONDARY CURRENT RATING

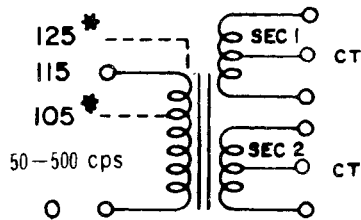
Since our transformers may be used in many possible configurations, the current shown is rms secondary winding current. Secondary current ratings are rms ac values, NOT dc values. When selecting the "Secondary Amp" rating, the conversion chart at the right should be used.

RECTIFIER TYPE
Full Wave Center-Tap
Full Wave Center-Tap
Full Wave Bridge
Full Wave Bridge

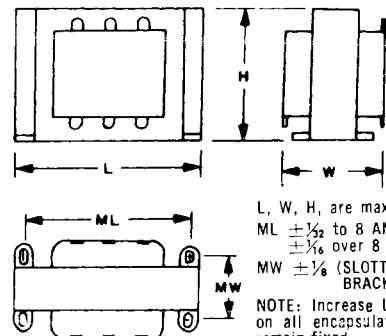
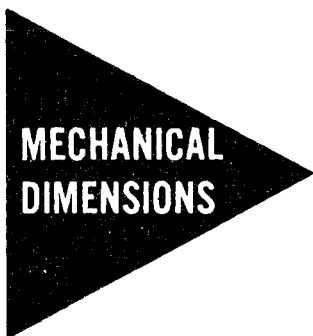
FILTER TYPE
Choke Input
Capacitor Input
Choke Input
Capacitor Input

SECONDARY CURRENT
.7 times DC current
1.2 times DC current
Equal to DC current
1.8 times DC current

## SCHEMATIC DIAGRAM



\*Taps are standard on higher current units, consult chart above.



L, W, H, are maximum dimensions  
 ML ± 1/32 to 8 AMP  
 ± 1/16 over 8 AMP  
 MW ± 1/8 (SLOTTED HOLE IN BRACKET)  
 NOTE: Increase L, W, H by 1/4 inch on all encapsulated units, ML, MW remain fixed.

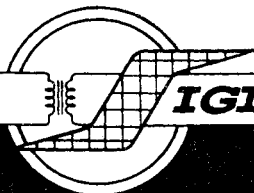
# HIGH CURRENT CHOKES

Signal's line of High Current Chokes is designed to complement the selection of rectifier transformers, so that a set may be specified for power supplies using choke input filters.

Inductance ratings are minimum guaranteed at full rated dc current. Resistances are maximum values.

Special variations or intermediate values of inductance, current, or resistance can be supplied promptly and accurately.

PART NO.	INDUCTANCE (Milli-hy.)	CURRENT (amps)	RESIS. (ohms)	DIMENSIONS				APPR. WT.	USERS NET
				L	W	H	ML		
CH-1	100	1	1.5	3 1/16	2 1/2	2 3/4	2 1/2	2	2.5 \$ 4.25
CH-2	70	2	0.9	3 3/16	2 3/4	3 1/8	2 1/16	2 1/8	3.5 5.00
CH-4	70	4	0.6	3 3/16	3 3/8	3 3/8	3 1/8	2 1/2	5.5 6.25
CH-6	40	6	0.4	3 1/16	3 3/4	3 3/8	3 1/8	3	7 8.70
CH-8	30	8	0.3	4 1/16	3 3/8	3 3/4	3 1/16	3	8 10.80
CH-12	15	12	0.1	5 1/16	4	4 3/8	4 3/8	3 1/8	13 14.00
CH-20	7	20	0.05	5 1/16	4	4 5/8	4 3/8	3 1/8	13 14.90
CH-25	5	25	0.025	5 1/16	4 3/4	4 5/8	4 3/8	3 3/8	18 22.00
CH-30	4	30	0.01	6 1/2	5 1/2	5 5/8	5 1/16	3 3/8	25 27.00
CH-50	1.4	50	0.01	6 1/2	5 3/4	5 5/8	5 1/16	3 3/4	27 30.00
CH-100	0.5	100	0.005	6 1/2	6 1/2	5 5/8	5 1/16	4 1/8	32 34.00
CH-200	0.3	200	0.0025	7 3/16	7	6 3/8	6 3/4	4 1/8	45 50.00



**SIGNAL TRANSFORMER CO., INC**

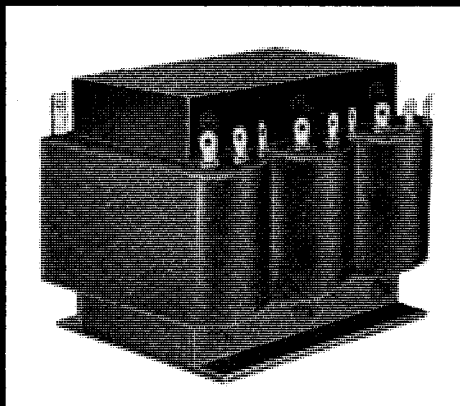
ENGINEERS • DESIGNERS • MANUFACTURERS

FACTORY: 1661 McDONALD AVENUE, BROOKLYN 30, NEW YORK — 212 ES 6-0615

AVAILABLE IMMEDIATELY FROM STOCK

# 3 PHASE

HIGH CURRENT RECTIFIER TRANSFORMERS



### DC OUTPUT VOLTAGE

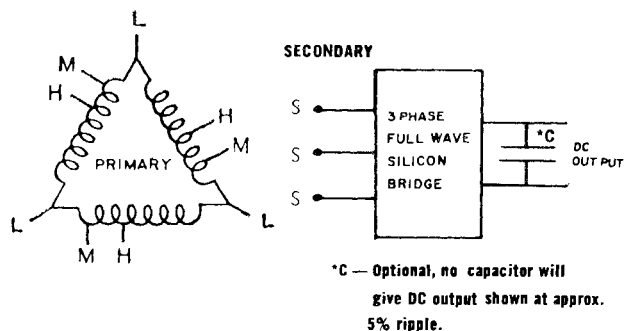
PART NO.	PRI TAP "L" SUPPLY VOLTAGE		PRI TAP "M" SUPPLY VOLTAGE		PRI TAP "H" SUPPLY VOLTAGE		DC RATED AMPS	APPROX. DIMENSIONS					APX. LBS.	NET PRICE
	208	220	208	220	208	220		L	W	H	ML	MW		
3PH 24-50	24	25	26	27.5	28	30	50	7 $\frac{3}{4}$	6	5 $\frac{1}{2}$	4.8	4 $\frac{7}{8}$	35	70.00
3PH 24-100	24	25	26	27.5	28	30	100	11 $\frac{1}{2}$	5	8 $\frac{1}{4}$	7.2	4	42	100.00
3PH 24-00	24	25	26	27.5	28	30	200	11 $\frac{1}{2}$	8 $\frac{5}{8}$	8 $\frac{1}{4}$	7.2	6 $\frac{1}{4}$	90	165.00
3PH 48-30	42	44	47	50	52	55	30	7 $\frac{3}{4}$	6	5 $\frac{1}{2}$	4.8	4 $\frac{7}{8}$	35	70.00
3PH 48-60	42	44	47	50	52	55	60	11 $\frac{1}{2}$	5	8 $\frac{1}{4}$	7.2	4	42	100.00
3PH 48-120	42	44	47	50	52	55	120	11 $\frac{1}{2}$	8 $\frac{5}{8}$	8 $\frac{1}{4}$	7.2	6 $\frac{1}{4}$	90	165.00

At higher power loads (above 2-3 KVA) it becomes inefficient to use single phase 115 or 230 volt standard lines. With this in mind, our engineering staff has developed a line of 3 phase transformers for use off 208 or 220V 3 phase power lines. These offer the significantly higher

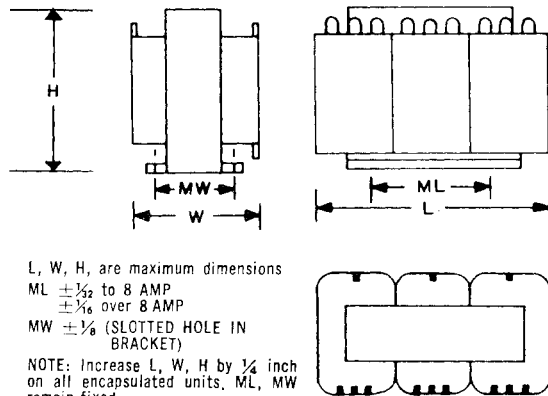
conversion efficiency and lighter power line drain of 3 phase systems.

Since the principal application of these items is in high power dc power supplies, output ratings are given in dc voltage and current assuming the use of a 3 phase full wave rectifier.

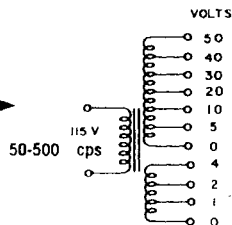
### SCHEMATIC DIAGRAM



### MECHANICAL DIMENSIONS

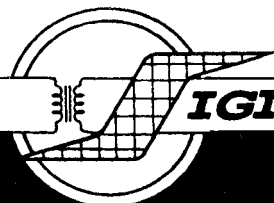


**MULTI-VOLT**  
**1 to 54 VOLTS**  
in 1 VOLT STEPS



MV (multi-voltage) secondaries may be series connected for any output from 1 to 54 volts, in 1 volt steps, at rated current. This is accomplished by using the small buck-boost secondary.

PART NO.	SECONDARY AMPS	DIMENSIONS					APPR. WT.	USERS NET
		L	W	H	ML	MW		
MV-2	2	4 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{4}$	3 $\frac{3}{8}$	2 $\frac{3}{8}$	5	12.00
MV-4	4	5 $\frac{1}{4}$	3 $\frac{5}{8}$	4	3 $\frac{3}{4}$	2 $\frac{1}{2}$	7.5	16.00

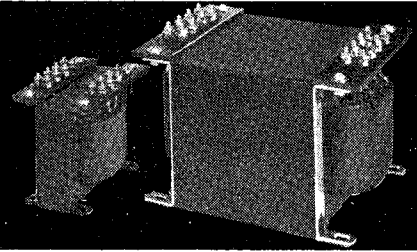


**IGNAL TRANSFORMER CO., INC**

ENGINEERS • DESIGNERS • MANUFACTURERS  
BROOKLYN, NEW YORK

# INDUSTRIAL GRADE STEP-UP OR STEP-DOWN POWER ISOLATION OR AUTO-TRANSFORMERS

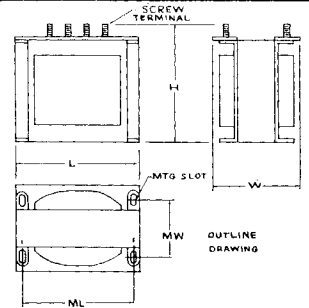
HIGH DEGREE OF VERSATILITY OFFERS MANY POSSIBLE VOLTAGE RATINGS



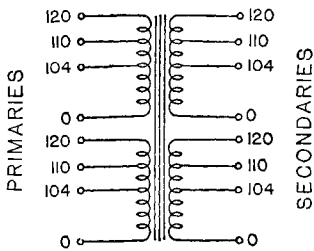
AVAILABLE FROM STOCK FOR IMMEDIATE SHIPMENT

The "DU" and "UP" lines are designed for a maximum of 55°C rise above ambient, for use on standard power lines from 50 to 500 Cps. Only prime raw materials are used. Units are thoroughly impregnated and baked with Signal's own high gloss black baking varnish. The transformers are rugged in construction, well-insulated, and have a consistently uniform appearance. All ratings are at full load current, continuous operation.

Heavy 1/4 inch phenolic terminal boards are provided with plated brass screws and flat washers. Connections can be easily made with a nut driver. It is also simple to alter the inter-connections to change transformer ratings.



## "DU SERIES" 110/220 Dual Primary To 110/220 Dual Sec.



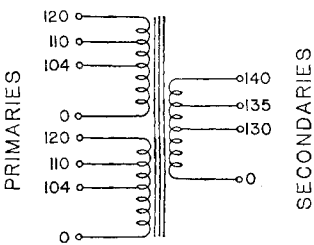
As shown on the schematic diagram the "DU" line is designed with dual primaries and secondaries. All four windings are identically rated at 0/104/110/120 volts. This permits series or parallel connections on either primary or secondary. Therefore, a nominal 110 to 110 volt, 220 to 220 volt, 110 to 220 volt, or 220 to 110 volt transformer can be set up. The winding taps permit intermediate series ratings such as

208, 214, or 230 volts.

It is also possible to make auto-transformer connections by connecting a primary group in series with a secondary group. Such nominal ratings as 440 to 220 volts or 220 to 440 volts can be set-up, in addition to the standard ratings described above. A further advantage to auto-transformer connection is the fact that the KVA rating of a particular type is **doubled**.

Part No.	KVA	Series Secondaries		Parallel Secondaries		Mechanical Dimensions						User Net Price	
		Volts	Max. Amps	Volts	Max. Amps	L (Max.)	W (Max.)	H (Max.)	ML ± 1/32	MW ± 1/16	Mtg. Screw		Appr. Lbs.
DU-1/4	1/4	0/208/220/240	1.1	0/104/110/120	2.2	5 5/16	4 1/4	5 1/4	4 3/8	2 1/2	#10	12	\$23.00
DU-1/2	1/2	0/208/220/240	2.3	0/104/110/120	4.6	5 5/16	5 5/16	5 1/4	4 3/8	3 3/8	#10	18	28.50
DU-1	1	0/208/220/240	4.5	0/104/110/120	9	7 9/16	6 1/4	7 1/4	6 3/4	4 1/8	1/4	33	45.00
DU-2	2	0/208/220/240	9	0/104/110/120	18	7 9/16	8 1/4	7 1/4	6 3/4	6	1/4	56	60.00
DU-3	3	0/208/220/240	14	0/104/110/120	28	7 9/16	9 1/4	7 1/4	6 3/4	7	1/4	70	82.00
DU-5	5	0/208/220/240	23	0/104/110/120	46	7 9/16	10 3/4	7 1/4	6 3/4	8 1/2	1/4	89	125.00

## "UP SERIES" 110/220 Dual Primary To 0/130/135/140 V. Sec.



The "UP" line utilizes the same dual primary as the "DU" line. It has, however, a single secondary rated at 0/130/135/140 volts. This type is quite useful to boost -low line

voltages or raise line voltages to compensate for drops in series elements. It also finds application in bridge rectifiers for DC voltage outputs of approximately 115 to 130 volts.

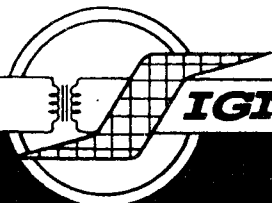
Part No.	KVA	Series Secondaries		Mechanical Dimensions						User Net Price	
		Volts	Max. Amps	L (Max.)	W (Max.)	H (Max.)	ML ± 1/32	MW ± 1/16	Mtg. Screw		Appr. Lbs.
UP-2	1/4	0/130/135/140	2	5 5/16	4 1/4	5 1/4	4 3/8	2 1/2	#10	12	\$21.50
UP-4	1/2	0/130/135/140	4	5 5/16	5 5/16	5 1/4	4 3/8	3 3/8	#10	18	27.00
UP-8	1	0/130/135/140	8	7 9/16	6 1/4	7 1/4	6 3/4	4 1/8	1/4	33	42.00
UP-15	2	0/130/135/140	15	7 9/16	8 1/4	7 1/4	6 3/4	6	1/4	56	58.00
UP-25	3	0/130/135/140	25	7 9/16	9 1/4	7 1/4	6 3/4	7	1/4	70	80.00
UP-40	5	0/130/135/140	40	7 9/16	10 3/4	7 1/4	6 3/4	8 1/2	1/4	89	120.00

### SIGNALS CUSTOM SERVICE

Many of our customers do not realize that the major portion of our shipments consists of "special" or "custom" items.

Usually, the final application of one of our stock transformers does not require the full number of taps or windings provided. These naturally are part of the cost of the item. If

we are advised as to the specific taps used as to what intermediate voltage or current required we can begin production quickly on that variation of our stock item. If we define production quantities as roughly over 25 pieces, customer will do better price-wise on his custom made item than on the standard.

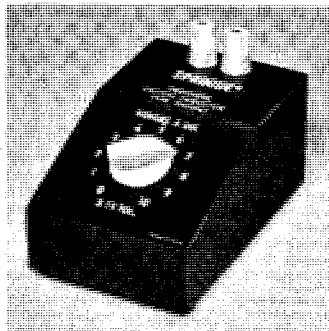


## SIGNAL TRANSFORMER CO., INC

ENGINEERS • DESIGNERS • MANUFACTURERS  
BROOKLYN, NEW YORK

# SPRAGUE PULSE TRANSFORMERS AND DECADE INDUCTORS

## TYPE 850W PRECISION DECADE INDUCTORS



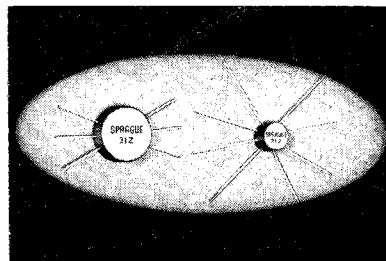
- Indispensable For Design and Experimental Work on Audio Filters, Equalizers, and Tuned Circuits. Frequency Range is 150 to 20,000 Cycles per Second
- Excellent Stability With Respect to Current and Ambient Temperature Changes
- All Four Decade Inductors May Be Connected in Series to Provide 11,110 Steps of Inductance
- Housed in Blue Aluminum Case with Sloping Front to Facilitate Bench-Top Readings. Measures 3" Wide, 2 1/2" High, 5 1/2" Long. Fitted with Five-way Binding Posts.

Cat. No.	Inductance Steps	Optimum Freq. Range in cps	Average Q Factor		Max. Milliamperes		Net Each
			at 1000 cps	at 4500 cps	D-C	A-C	
850WA1	10 x 0.001H	400 to 20,000	40	75	250	700	\$31.90
850WA2	10 x 0.01H	400 to 20,000	60	125	79	220	31.90
850WA3	10 x 0.1H	400 to 20,000	60	125	25	70	31.90
850WA4	10 x 1.0H	400 to 5,000	60	125	8	22	31.90

● For Complete Technical Data, Refer to Latest Issue of Engineering Bulletin 90,500.

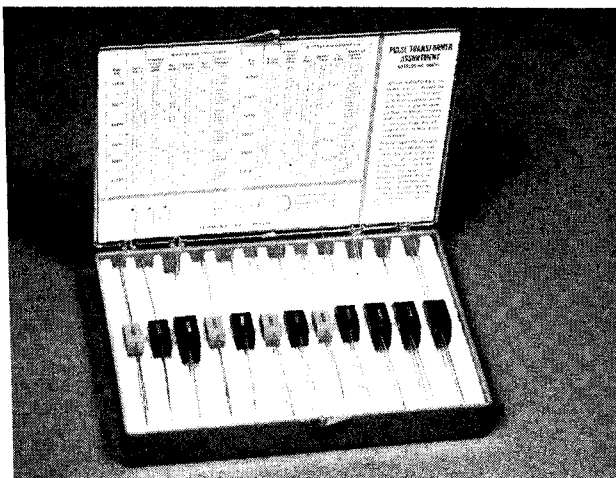
## TYPE 31Z 'PANCAKE' PULSE TRANSFORMERS

- Miniature Units with Transformer Section Embedded in Epoxy Resin Inside a Pre-molded Outer Shell.
- "Pancake" Design is Excellent for Mounting on Printed Wiring Boards as Well as On Conventional Chassis.
- For Complete Technical Data, Refer to Latest Issue of Engineering Bulletin 40,230.
- 31Z382 Is Recommended for Pulse Voltages up to 200 Volts at Average Power Rating of 1.0 Watt. Maximum Suggested Volt-microsecond Product is 1200.
- 31Z204 and 31Z286 Are Recommended for Pulse Voltages up to 100 Volts at Average Power Rating of 0.5 Watt. Moximum Suggested Volt-microsecond Product is 340.



Cat. No.	Turns Ratio	Lp (mH)	Ll (μH)	Ci (μF)	Cc (μF)	Typical Pulse Width Range and Impedance Level for 10% Droop			Net, ea.
						Width at 100Ω (μsec)	Width at 250Ω (μsec)	Width at 500Ω (μsec)	
31Z204	1 : 1	6.0	10.0	14	29	13.0	4.80	2.6	\$5.00
31Z286	1 : 1 : 1	6.0	10.0	14	29	13.0	4.80	2.6	6.80
31Z382	1 : 1 : 1	15	25	24	49	33	12	6.4	6.20

## PULSE TRANSFORMER ASSORTMENT No. 100Z41



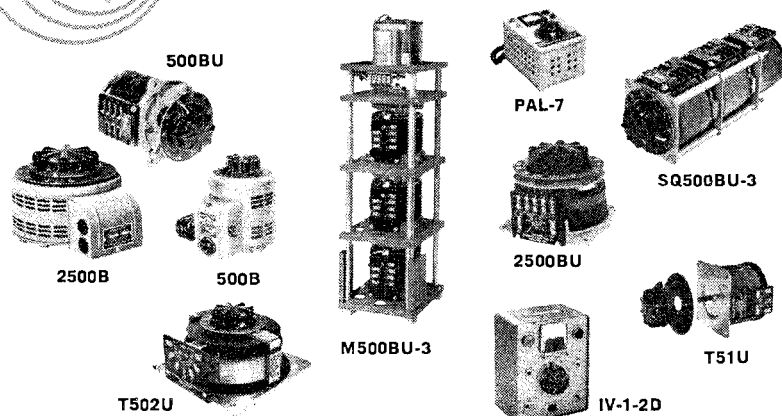
- A Special Selection of Pulse Transformers for Low-Power High-speed Computer Circuitry
- Covers a Wide Range of Turns Ratios and Primary Inductance Combinations
- Ideal for Experimental Circuit Design on Transistorized or Electron Tube Circuits.
- Transformer Cores and Windings are Potted in Pre-Molded Epoxy Cases for Mechanical and Moisture Protection
- Can Be Mounted Flush on Printed Wiring Boards or Used in Conventional Point-to-Point Wiring
- For Complete Technical Data on Assortment 100Z41, Refer to Latest Issue of Engineering Bulletin 40,002.
- Packed in Clear, Hinged-Lid Reusable Plastic Case

at. No. 100Z41 .....Net, \$65.00



# STACO<sup>®</sup> Adjust-A-Volt<sup>®</sup>

## VARIABLE AUTO-TRANSFORMERS



Industries widest selection of adjustable variable auto-transformers designed to deliver variable output voltages with high efficiency, reliability and minimum maintenance. Ratings from .165 to 265 KVA. Bench and panel mounting. Manual or motor driven. Single or ganged assemblies. Military designs, specials, 36 volt types. All Adjust-A-Volts feature zero wave form distortion with high voltage resolution, and regulation with conservative ratings. Design features rugged mechanical construction and precious metal-plated commutators.

Brush design provides smooth flow of input current and voltage and ease of brush replacement which is seldom required. All Adjust-A-Volts operate on 50/60 cycle current except certain SQ models which are 60 cycle\*. Operation is permissible at 50% of rated power output. Bench models are housed in grey wrinkle painted die-cast aluminum cases equipped with pilot light, switch, line cord, and an output receptacle. Write for complete catalog.

MFR. MODEL NO.	MAX. KVA	INPUT VOLT.	OUTPUT VOLTS	OUTPUT AMPS	DESCRIPTION	SIZE	WGT. LBS.	PRICE
100BU	.165	120	0-132/0-120	1.25	Panel type for panels to 1/4" thick	2-3/32 x 2-13/16"	2	\$ 8.25
PA-1	.165	120	0-132	1.25	Portable; fused w/switch; pilot light, line cord	3 7/8 x 3 7/8 x 3 1/2"	3	15.75
175BU	.23	120	0-132/0-120	1.75	Panel type for panels to 1/4" thick	2-3/32 x 2-13/32"	2	8.50
PA-175	.23	120	0-132	1.75	Portable; fused w/switch; pilot light, line cord	3 3/8 x 3 7/8 x 3 1/2"	3	16.00
250BU	.33	120	0-132/0-120	2.5	Panel type for panels to 1/4" thick	2-1/16 x 2-13/16"	2.5	9.50
PA-2	.33	120	0-132	2.5	Portable; fused w/switch; pilot light, line cord	3 7/8 x 3 7/8 x 3 1/2"	3.5	18.50
T21U	.33	120	0-140/0-120	2.4	Panel type for panels to 3/8" thick	3 1/4 x 3 1/4 x 3-15/16"	3	15.00
300BU	.42	120	0-140/0-120	3.0	Panel type for panels to 1/2" thick	3-11/16 x 4"	4	12.50
PA-3	.42	120	0-140	3.0	Portable; fused w/switch; pilot light, line cord	6 1/4 x 6 1/8 x 5 1/2"	5	23.00
375BU	.53	120	0-140/0-120	3.75	Panel type for panels to 1/2" thick	3 3/4 x 3 3/4 x 3 1/2"	5	12.50
PA-375	.53	120	0-140	3.75	Portable; fused w/switch; pilot light, line cord	6 1/2" x 6 1/8 x 6 1/2"	6	23.50
T51U	.84	120	0-140/0-120	6.0	Panel type for panels to 3/8" thick	4 1/2 x 4 1/2 x 3-15/16"	7	18.00
500BU	1.05	120	0-140/0-120	7.5	Panel type for panels to 1/2" thick	5-11/16 x 5"	8	18.00
SQ500BU	1.05	120	0-140/0-120	7.5	Panel type for panels to 1/2" thick	4 1/2 x 4 1/2 x 3-15/16"	9	16.00
500B	1.05	120	0-140	7.5	Enclosed; fused w/switch & pilot light, line cord	7 1/4 x 6 1/2"	9	23.00
3PN500B	1.05	120	0-140	7.5	Enclosed; 3 prong plug & outlet, fused w/switch, pilot light	7 1/4 x 6 1/2"	10	30.00
T101U	1.4	120	0-140/0-120	10.0	Panel type for panels to 1/2" thick	5 3/4 x 5 3/4 x 4-1/16"	12.5	31.00
T1500U	2.1	120	0-140/0-120	15.0	Panel type for panels to 1/2" thick	6 1/8 x 6 3/8 x 4 3/8"	16	36.00
1500B	2.1	120	0-140/0-120	15.0	For panels to 1/2" or bench use, enclosed	8-1/16 x 8 1/4"	17	44.00
3PN1500B	2.1	120	0-140	15.0	Enclosed, 2 blade & U blade, receptacle, fuse	9 x 8 1/4"	17	56.00
SQ510BU	1.2	120	0-120	10.0	Panel type for panels to 1/2" thick	4 1/4 x 4 1/4 x 3-15/16"	9	16.50
510BU	1.2	120	0-120	10.0	Panel type for panels to 1/2" thick	5-11/16 x 5"	9	18.50
3PN510B	1.2	120	0-120	10.0	Enclosed, 3 prong plug & outlet, receptacle, fuse	7 1/4 x 6 1/2"	9	31.50
520BU	.84	240	0-280/0-240	3.0	Panel type for panels to 1/2" thick	5-11/16 x 5"	9	20.00
SQ520BU	.84	240	0-280/0-240	3.0	Panel type for panels to 1/2" thick	4 1/4 x 4 1/4 x 3-15/16"	9	18.00
520B	.84	240	0-280	3.0	Enclosed, fused with switch, pilot light, line cord	5-11/16 x 5"	9	26.00
3PN520B	.84	240	0-280	3	Enclosed, 2 blade & U blade, receptacle, fuse	7 1/4 x 6 1/2"	9	30.00
530BU	.96	240	0-240	4	Panel type for panels to 1/2" thick	5-11/16 x 5"	9	21.00
SQ530BU	.96	240	0-240	4	Panel type for panels to 1/2" thick	4 1/4 x 4 1/4 x 3-15/16"	9	18.50
3PN530B	.96	240	0-240	4	Enclosed, 2 blade & U blade, receptacle, fuse	7 1/4 x 6 1/2"	9	31.50
F1500B	2.1	240	0-140	15	With fuse & conduit box, panel or bench use	9 x 8 1/4"	17	50.00
1520B	2.5	240	0-280	9	Panel type to 1/2" panel or bench use	8-1/16 x 8 1/4"	17	46.00
F1520B	2.5	240	0-280	9	With fuse & conduit box, panel or bench use	9 x 8 1/4"	17	50.00
3PN1520B	2.5	240	0-280	9	Enclosed, 2 blade & U blade, receptacle, fuse	9 x 8 1/4"	17	56.00
1500BD	2.1	120	0-140	15.0	Cased; output voltmeters, cord, receptacle; fused	9 1/2 x 8 1/4"	17	69.00
1520BD	2.5	240	0-280	9.0	Cased; output voltmeters, cord, receptacle; fused	9 1/2 x 8 1/4"	17	69.00
2500BU	3.5	120	0-140/0-120	25	Panel type for panels to 1/2" thick	8-3/16 x 7 7/8 x 5-21/32"	17	49.00
F2500BU	3.5	120	0-140/0-120	25	Panel type for panels to 1/2" thick with fuse	8-3/16 x 7 7/8 x 5-21/32"	17	54.00
2500B	3.5	120	0-140/0-120	25	Enclosed; with junction box	9-9/16 x 7 7/8 x 5-21/32"	17	55.00
F2500B	3.5	120	0-140/0-120	25	Enclosed; with junction box and fuse	9-9/16 x 7 7/8 x 5-21/32"	17	60.00
2520BU	2.8	240	0-280/0-240	10	Panel type for panels to 1/2" thick	8-3/16 x 7 7/8 x 5-21/32"	17	49.00
F2520BU	2.8	240	0-280/0-240	10	Panel type for panels to 1/2" thick with fuse	8-3/16 x 7 7/8 x 5-21/32"	17	54.00
2520B	2.8	240	0-280/0-240	10	Enclosed with junction box	9-9/16 x 7 7/8 x 5-21/32"	17	55.00
F2520B	2.8	240	0-280/0-240	10	Enclosed with junction box with fuse	9-9/16 x 7 7/8 x 5-21/32"	17	60.00
T501U	7.0	120	0-140	50	For panels to 3/8" thick or bench use	12 1/2 x 12 1/2 x 5 1/2"	5.2	115.00
T501U-25	14	240	0-280	50	Panel type to 3/8" thick or bench use 2 stack	12 1/2 x 12 1/2 x 14 5/8"	120	255.00
T501U-2P	14.0	120	0-140	100	Panel type to 3/8" thick or bench use 2 stack	12 1/2 x 12 1/2 x 14 5/8"	120	263.00
T501U-2D	12	120	0-140	50	Panel type to 3/8" thick or bench use 2 stack	12 1/2 x 12 1/2 x 14 5/8"	120	255.00
T501U-3P	21	120	0-140	150	Panel type to 3/8" thick or bench use 3 stack	12 1/2 x 12 1/2 x 20 3/4"	181	409.00
T502U	7.8	240	0-280/0-240	28	Panel type to 3/8" thick or bench use	12 1/2 x 12 1/2 x 5 1/2"	52	115.00
175BU-36	0.22	36	0-36	6	Panel type for panels to 1/4" thick	2-13/16 x 2 5/8"	3.5	10.00
375BU-36	0.55	36	0-36	15	Panel type for panels to 1/2" thick	3 3/4 x 3 3/4 x 2 7/8"	6	14.51
500BU-36	0.9	36	0-36	25	Panel type for panels to 1/2" thick	5-11/16 x 5"	10	20.51

### THREE PHASE TYPES

100BU-3	.52	240	0-240UG	1.25	3 stack panel type for panels to 1/4" thick	3 7/8 x 7 3/8"	6	39.7
175BU-3	.73	240	0-240UG	1.75	3 stack panel type for panels to 1/4" thick	3 7/8 x 7 3/8"	6	40.01
250BU-3	1.04	240	0-240UG	2.5	3 stack panel type for panels to 1/4" thick	3 7/8 x 9 1/2"	7.5	42.5
T21U-3	1.15	240	0-280UG/0-240	2.4	3 stack panel type for panels to 3/8" thick	3 1/4 x 3 1/4 x 11-31/32"	12	48.0
300BU-3	1.25	240	0-240UG	3	3 stack panel type for panels to 1/2" thick	3 7/8 x 3 7/8 x 12-3/8"	13	59.5
375-BU-3	1.6	240	0-240UG	3.75	3 stack panel type for panels to 1/2" thick	3 3/4 x 3 3/4 x 11 5/8"	15	59.5
T51U-3	2.9	240	0-280UG/0-240UG	6	3 stack panel type for panels to 3/8" thick	4 1/2 x 4 1/2 x 12-3/32"	21	61.0
510B-U-2	2.1	120	0-120	10	2 stack panel type for panels to 1/2" thick	5-11/16 x 10-9/16"	18	45.5
510B-U-3	4.2	240	0-240UG	10	3 stack panel type for panels to 1/2" thick	5-11/16 x 15 1/2"	28	63.0
500BU-5	3.6	240	0-280UG/0-240UG	7.5	3 stack panel type for panels to 1/2" thick	5-11/16 x 15 1/2"	28	60.7
500B-3	3.6	240	0-280UG/0-240UG	7.5	3 stack panel type for panels to 1/2" thick	7 1/4" x 16 3/4"	28	69.0
500B-2	1.8	120	0-140/0-120	7.5	2 stack panel type for panels to 1/2" thick	7 1/4 x 17 7/8"	18	40.7
500BU-2	1.8	120	0-140/0-120	7.5	2 stack panel type for panels to 1/2" thick	5-11/16 x 10-9/16"	18	44.0
1500B-2	3.6	12	0-140	15	2 stack panel type for panels to 1/2" thick	8-1/16 x 12-15/32"	39	96.0
1500B-3	7.3	240	0-280UG	15	3 stack panel type for panels to 1/2" thick	8-1/16 x 15-31/32"	60	147.0
2500BU-2	6	120	0-140/0-120	25	2 stack panel type for 1/2" panel thickness	8-3/16 x 7 7/8 x 10-1/16"	43	114.0
2500B-2	6	120	0-140/0-120	25	2 stack bench type, enclosed, with terminal cover	9-9/16 x 7 7/8 x 10-1/16"	46	126.0
2500B-3	12	240	0-280UG/0-240UG	25	2 stack bench type, enclosed, with terminal cover	9-9/16 x 7 7/8 x 14-7/8"	66	126.0
2500BU-3	12	240	0-280UG/0-240UG	25	2 stack panel type for 1/2" panel thickness	8-3/16 x 7 7/8 x 14 7/8"	66	164.7
1520B-3	8.7	480	0-560UG	9	3 stack bench type, enclosed, with terminal board	8-1/16 x 15-15/32"	60	147.0
F1520B-3	8.7	480	0-560UG	9	3 stack bench type, with conduit box and use	9 x 15-15/32"	60	—
2520B-U-3	9.7	480	0-560/0-480UG	10	3 stack panel type for 1/2" panel thickness	8-3/16 x 7 7/8 x 14-7/8"	68	164.0
2520B-3	9.7	480	0-560UG/0-480UG	10	3 stack bench type, enclosed with terminal cover	9-9/16 x 7 7/8 x 14 7/8"	71	182.0

STANDARD ELECTRICAL PRODUCTS DIV., Dayton, Ohio



MIL-T-27A Transformers, Audio, Power & Rectifier Power

PUBLIC ADDRESS RANGE AUDIO TRANSFORMERS  
DRIVER TRANSFORMERS

Designed and built in accordance with MIL-T-27A; Grade 4, Class R operating temperature; life expectancy, 10,000 hours (minimum). Maximum operating altitude, 10,000 feet. Frequency response, ±1 db, 50-10,000 cps. Mounting type H.

Part No.	Typical Driver Tubes	Pri. Imped.	Max. DC in Pri.	Watts	Case Size	Net Each, Quantities of				
						1-9	10-24	25-49	50-99	100-249
PHD-10	P-p 6N7's, 6A6's, 6J5's, 6CA's	20K CT	10 ma	3	14	\$15.84	\$14.52	\$13.00	\$11.61	\$10.89
PHD-25	Same as PHD-10	20K CT	25 ma	5	15	14.96	13.72	12.28	10.92	10.29

Note: PHD-10 and PHD-25 have a ratio of 3:1 pri./1/2 sec.

COMMUNICATIONS RANGE AUDIO TRANSFORMERS

Designed and built in accordance with MIL-T-27A; Grade 4, Class R operating temperature. Life expectancy, 10,000 hours (minimum). Maximum operating altitude, 10,000 feet. Frequency response, ±1 db, 200-3,500 cps. Mounting type H.

INPUT TRANSFORMER

Part No.	Application	Impedance		Case Size	Net Each, Quantities of				
		Primary	Secondary		1-9	10-24	25-49	50-99	100-249
CIH-2	Low level SB or DB mike to single, or p-p grids	125/50†	125K CT	12	\$11.45	\$10.50	\$9.40	\$8.40	\$7.88

† At 80 ma.

OUTPUT TRANSFORMERS

Single plate to line or voice coil, 5 watts. Mounting type H.

Part No.	Typical Output Tubes	Class	Impedance		Max. DC*	Case Size	Net Each, Quantities of				
			Pri.	Sec.			1-9	10-24	25-49	50-99	100-249
COH-1	Sgl., 6L6, 6V6, 25A6	A	5K	600/150, 16/8/4	55 ma	14	\$14.93	\$13.68	\$12.25	\$10.95	\$10.26
COH-2	Sgl., 6F6, 6V6, 6N6, 6K6, 7B5	A	8K	Same as COH-1	55 ma	14	16.56	15.18	13.60	12.15	11.39

\* In primary.

WIDE RANGE INPUT TRANSFORMERS

Designed and built according to MIL-T-27A requirements. Transformers have an operating level of +15 dbm. Reference level of 0 dbm equals one mw. Hum reduction is -70 dbm. Maximum operating altitude, 10,000 feet; frequency response, ±1 db, 30-15,000 cps. Case size, 13. Shipping Weight, 1 1/2 lbs. Mounting type H.

Part No.	Application	Impedance		Case Size	Net Each, Quantities of				
		Primary	Secondary		1-9	10-24	25-49	50-99	100-249
BIH-1	Line to single or p-p grids	600/150 CT†	50K CT†		\$28.55	\$26.17	\$23.43	\$20.93	\$19.63
BIH-4	Line-to-line	600/150 CT	600/150 CT		28.80	26.40	23.64	21.12	19.80
BIH-8	Plate to p-p grids	10K	50K CT†		24.64	22.58	20.22	18.07	16.94

† Split and balanced windings.

MS (MILITARY STANDARD) TRANSFORMERS

Housed in one-piece steel cases, dimensions for case and mountings within tolerances of MS specifications. All units meet requirements of Grade 4, MIL-T-27A for Class R operation. All secondary AC voltages, ±3%. Maximum operating altitude, 10,000 feet.

POWER TRANSFORMERS—REACTOR INPUT SYSTEMS (PRIMARY 105/115/125 V., 54-66 CYCLES) Mounting Type H

Part Number	MIL-T-27A Classification	MIL-T-27A Part No.	High Voltage Secondary		DC, V. Output	Rectifier Filament		Filament No. 2		Wt., Lbs.	Case Size	Net Each, Quantities of				
			AC Volts	DC Ma		Volts	Amps	Volts	Amps			1-9	10-24	25-49	50-99	100-249
PMS-70	TF4RX03HA001	MS-90026	200-100-0-100-200	70	156	6.3/5	2	6.3	3	4	HA	\$29.91	\$22.83	\$20.45	\$18.27	\$17.13
PMS-70A	TF4RX03JB002	MS-90027	325-0-325	70	260	6.3/5	2	6.3	4	5	JB	24.40	22.37	20.03	17.89	16.78
PMS-150	TF4RX03KB006	MS-90028	325-0-325	150	245	6.3	5	5	3	7 1/4	KB	26.38	24.18	21.64	19.35	18.14
PMS-175	TF4RX03LB003	MS-90029	400-0-400	175	318	5	3	6.3	8	10	LB	31.56	28.93	25.91	23.15	21.70
PMS-250	TF4RX03MB004	MS-90030	450-0-450	250	345	5	3	6.3	8	13	MB	37.80	34.65	31.03	27.72	25.99
PMS-550	TF4RX02LB002	MS-90032	550-0-550	250	419					11	LB	28.55	26.17	23.43	20.93	19.63

FILAMENT TRANSFORMERS (PRIMARY 105-115-125 V., 54-66 CYCLES) Mounting Type H

Part Number	MIL-T-27A Classification No.	MIL-T-27A Part No.	Secondary		Insulation Volts RMS	Weight, Lbs.	Case Size	Net Each, Quantities of				
			Volts	Amps				1-9	10-24	25-49	50-99	100-249
FMS-210	TF4RX01GB003	MS-90017	2.5	10	2500	2 1/2	GB	\$15.22	\$13.95	\$12.49	\$11.16	\$10.46
FMS-53	TF4RX01FB004	MS-90018	5.0	3.0	2500	1 1/2	FB	13.36	12.25	10.97	9.80	9.19
FMS-510	TF4RX01HB005	MS-90019	5.0	10	2500	4	HB	18.22	16.70	14.96	13.36	12.53
FMS-62	TF4RX01FB006	MS-90020	6.3	2.0	2500	1 1/2	FB	13.71	12.57	11.25	10.05	9.43
FMS-65	TF4RX01GB007	MS-90021	6.3	5.0	2500	3 1/2	GB	15.60	14.30	12.81	11.44	10.73
FMS-610	TF4RX01JB008	MS-90022	6.3	10	2500	5	JB	19.31	17.70	15.85	14.16	13.28
FMS-620	TF4RX01KB009	MS-90023	6.3	20	2500	8	KB	23.64	21.67	19.40	17.33	16.25
FMS-210H	TF4RX01JB012	MS-90024	2.5	10	10000	4 1/2	JB	23.51	21.55	19.30	17.24	16.16

CASE SIZES

Case Type	Dim. in Inches D. x W. x H.	Stud Size	Case Type	Dim. in Inches D. x W. x H.	Stud Size
FB	2 1/16 x 2 1/16 x 2 1/2	6-32	JB	3 9/16 x 3 1/16 x 3 3/8	8-32
GB	2 3/8 x 2 3/8 x 2 13/16	6-32	KB	3 15/16 x 3 3/8 x 4 1/16	10-32
HB	3 1/16 x 2 3/8 x 3 1/16	8-32	LB	4 1/8 x 3 1/16 x 4 1/8	10-32
HA	3 1/16 x 2 3/8 x 4 1/2	8-32	MB	4 1/8 x 4 x 4 15/16	1 1/2-20

SATURABLE TRANSFORMER (MAGNETIC AMPLIFIER)

For use with two-phase, 115 v. AC, 400-cycle servo-motors. All primaries are 115 v. AC, 400 cycles. Maximum operating altitude, 50,000 feet. Control current, 8 ma. Control coil bypass capacitors must be .1 µf. MIL-T-27A specification TF4RX40YY. Mounting Type STH. Size: 2 3/16" x 1 13/16" x 1 13/16".

Part No.	Out. Watts	Out. Volts	Load Res., Ohms	Cap.* µf	Pri. Amps	Coil Res., Ohms†	Net Each, Quantities of				
							1-9	10-24	25-49	50-99	100-249
STH-3	2.7‡	26§	250‡	.28●	.085▲	2900	\$29.45	\$27.00	\$24.18	\$21.60	\$20.25

\* Tuning. † Per coil. ‡ Other, 3.5. § Other, 115. ¶ Other, 3800. ● Other, .19. ▲ Other, 0.1.

SILICON RECTIFIER POWER TRANSFORMERS

COMMERCIAL GRADE

Combination plate and filament power transformers bridge the gap between low voltage, high current output for use with transistor power amplifiers and the lower range of plate voltages used with electronic tubes. Two 6.3 v. filament windings, on each unit supply heater power for tubes or low voltage DC for many applications when used with suitable rectifier. Mtg. type C. Size: 4 3/16" x 3 3/8" x 4 1/4".

Part No.	Secondary No. 1		Secondaries 2 & 3		Base Area, Inches	Wt., Lbs.	Net Each, Quantities of				
	Volts	DC Ma	Volts	Amps			1-9	10-24	25-49	50-99	100-249
RP-400	400 CT	400	6.3	3.0	3 3/8 x 4 3/16	7.1	\$13.38	\$12.27	\$10.99	\$9.81	\$7.36
RP-600	300 CT	600	6.3	2.5	3 3/8 x 4 3/16	7.1	13.35	12.23	10.96	9.79	7.35
RP-800	200 CT	800	6.3	2.0	3 3/8 x 4 3/16	6.9	13.31	12.20	10.93	9.76	7.32
RP-1600	100 CT	1600	6.3	1.5	3 3/8 x 4 3/16	6.0	11.82	10.83	9.70	8.67	6.51
RP-2000	80 CT	2000	6.3	1.5	3 3/8 x 4 3/16	6.5	12.87	11.80	10.57	9.44	7.08
RP-2500	60 CT	2500	6.3	1.5	3 3/8 x 4 3/16	6.0	12.91	11.83	10.60	9.47	7.11

MILITARY GRADE

Same electrical specifications as commercial units, above. Mounting Type H; Size: 3 1/16" x 4 3/16" x 5 9/16". Hermetically sealed. Manufactured to meet MIL-T-27A; military type No. TF4RX03LA.

Part No.	Secondary No. 1		Secondaries 2 & 3		Wt., Lbs.	Net Each, Quantities of				
	Volts	DC Ma	Volts	Amps		1-9	10-24	25-49	50-99	100-249
HRP-400	400 CT	400	6.3	3.0	10.5	\$29.73	\$27.25	\$24.40	\$21.80	\$20.44
HRP-600	300 CT	600	6.3	2.5	10.5	29.64	27.17	24.33	21.73	20.38
HRP-800	200 CT	800	6.3	2.0	10.0	29.64	27.17	24.33	21.73	20.38
HRP-1600	100 CT	1600	6.3	1.5	10.5	29.64	27.17	24.33	21.73	20.38
HRP-2000	80 CT	2000	6.3	1.5	9.6	28.64	26.25	23.51	21.00	19.69
HRP-2500	60 CT	2500	6.3	1.5	9.0	28.73	26.33	23.58	21.07	19.75

STANCOR ELECTRONICS, INC.

# CHICAGO STANCOR

## MIL-T-27A Transformers, 400 Cycle

### 400-CYCLE TRANSFORMERS, MILITARY STANDARD CASES

#### POWER TRANSFORMERS—MOUNTING TYPE H

Designed and built in accordance with MIL-T-27A specifications, Grade 4, Class S, for high temperature operation at 85° C ambient, 45° C rise. Life expectancy, 10,000 hours; maximum operating altitude, 70,000 feet.

All Primaries 105/115/125 Volts, 380-1000 Cycles.

Part Number	High Volt. Sec.		Rectifier Filament		Other Filament		Case Size, In., W. x D. x H.	Net Each, Quantities of				
	AC Volts	DC Ma	V.	Amps	V.	Amps		1-9	10-24	25-49	50-99	100-249
4PMS-70	335-0-335	70	5	2	6.3 CT	3	2 3/8 x 2 3/4 x 2 1/8	\$30.20	\$27.80	\$24.85	\$22.20	\$20.80
4PMS-150	370-0-370	150	5	3	6.3 CT	4	3 1/8 x 3 1/8 x 3 3/8	43.50	39.90	35.70	31.95	29.90

#### FILTER REACTORS—MOUNTING TYPE H

Part Number	Inductance (Henries)	Max. DC Ma	DC Res. Ohms	Insulation Volts RMS	Case Size, In., W. x D. x H.	Net Each, Quantities of				
						1-9	10-24	25-49	50-99	100-249
4RMS-285	2	85	135	2500	1 1/2 x 1 1/2 x 1 1/4	\$8.90	\$8.20	\$7.32	\$6.55	\$6.15
4RMS-2200	2	200	73	2500	2 1/2 x 2 1/2 x 3 1/8	12.15	11.15	10.00	8.95	8.35

#### FILAMENT TRANSFORMERS—MOUNTING TYPE H

All Primaries 105/115/125 Volts, 380-1000 Cycles.

Part Number	Secondary Volts	Secondary Amps	Insulation Volts RMS	Case Size, In., W. x D. x H.	Net Each, Quantities of				
					1-9	10-24	25-49	50-99	100-249
4FMS-63	6.3 CT	3	2500	1 1/2 x 1 1/2 x 2 1/8	\$18.60	\$17.00	\$15.25	\$13.65	\$12.75
4FMS-65	6.3 CT	5.5	2500	1 1/2 x 1 1/2 x 2 3/4	19.35	18.20	16.30	14.60	13.65
4FMS-610	6.3 CT	10	2500	2 1/8 x 2 1/8 x 3 3/8	21.60	19.75	17.75	15.85	14.85
4FMS-620	6.3 CT	20	2500	2 3/8 x 2 3/8 x 3 1/2	26.20	24.00	21.50	19.20	18.00
4FMS-2415*	24 CT	1.5	1500	1 1/2 x 1 1/2 x 2 3/4	16.30	14.70	13.20	12.20	11.60
4FMS-1208*	12.6 CT	0.8	1500	1 5/8 x 1 5/8 x 2 3/4	16.00	14.40	13.85	12.00	11.40
4FMS-122*	12.6 CT	2.0	1500	1 1/2 x 1 1/2 x 2 3/4	19.00	17.00	15.40	14.25	13.45
	12.6	2.0	1500						

\*Class R

#### ISOLATION TRANSFORMERS—MOUNTING TYPE H

All primaries 115 v., 380-1000 cycles. Insulation test, 1500 VRMS. Class R, 1:1 Ratio.

Part No.	Sec. Amps	VA	Size, In., W. x D. x H.	Wt., Lbs.	Net Each, Quantities of				
					1-9	10-24	25-49	50-99	100-249
4IMS-40	0.35	40	1 1/2 x 1 1/2 x 2 3/4	1.5	\$13.65	\$12.25	\$11.05	\$10.20	\$9.65
4IMS-160	1.39	160	2 3/8 x 2 3/8 x 3 1/2	3.1	18.50	16.65	14.95	13.80	13.00

#### 400-CYCLE TRANSFORMERS, YY ALTERNATE CASES

Meet MIL-T-27A, Grade 4, Class S specifications for operation, etc. Temperature Ratings: 85° C ambient, 45° C rise. Maximum operating altitude, 10,000 feet.

#### POWER TRANSFORMERS (ALL PRIMARIES 105/115/125 V., 380-1000 CYCLES)—MOUNTING TYPE H

Part Number	High Volt. Sec.		Rectifier Filament		Other Filament		Case Size, In., W. x D. x H.	Net Each, Quantities of				
	AC Volts	DC Ma	V.	Amps	V.	Amps		1-9	10-24	25-49	50-99	100-249
4PHC-55	270-0-270	55	5.0	2	6.3 CT	2	2 1/8 x 2 1/4 x 2 1/8	\$23.00	\$21.10	\$18.90	\$16.85	\$15.80
4PHC-70	335-0-335	70	5.0	2	6.3 CT	3	2 1/8 x 2 1/4 x 2 1/8	26.85	24.60	22.00	19.70	18.45
4PHC-120	375-0-375	120	5.0	3	6.3 CT	4	2 1/8 x 2 1/4 x 3 3/4	32.90	30.10	27.00	24.10	22.60

#### FILAMENT TRANSFORMERS (ALL PRIMARIES 105/115/125 V., 380-1000 CYCLES)—MOUNTING TYPE H

Part Number	Secondary Volts	Secondary Amps	Insulation VRMS	Case Size, Inches			Net Each, Quantities of				
				D.	W.	H.	1-9	10-24	25-49	50-99	100-249
4FH-63	6.3 CT	3	2500	1 7/8	1 3/4	2 3/8	\$15.95	\$14.60	\$13.10	\$11.70	\$10.95
4FH-65	6.3 CT	5.5	2500	1 7/8	1 3/4	2 7/8	17.42	15.95	14.30	12.75	12.00
4FH-610	6.3 CT	10	2500	2 1/8	2 1/8	2 1/2	19.35	17.75	15.90	14.20	13.30
4FH-620	6.3 CT	20	2500	2 1/8	2 3/8	3 1/8	24.30	22.30	20.00	17.80	16.70

#### FILAMENT TRANSFORMERS 50/60 CPS.

##### HERMETICALLY SEALED

Conform to MIL-T-27A specification TF4RX01YY. Provide voltages and currents for heating a wide range of receiving and transmitting tubes. All primaries 115/230 volts. All secondary AC voltages, ±3%. Mounting type H.

Part No.	Sec. V. (CT)	Sec. A	Test V. RMS	Case Size, In., W. x D. x H.	Net Each, Quantities of				
					1-9	10-24	25-49	50-99	100-249
FH-25	2.5	5.25	3500	2 3/8 x 2 3/8 x 3 1/8	\$15.38	\$14.10	\$12.63	\$11.28	\$10.58
FH-50	5	10	2500	2 1/2 x 2 1/2 x 3 1/4	17.91	16.42	14.70	13.13	12.31
FH-615	6.3	1.5	2500	2 1/8 x 2 1/8 x 2 1/4	13.78	12.63	11.31	10.11	9.48
FH-63	6.3	3	2500	2 3/8 x 2 3/8 x 3 1/8	14.18	13.00	11.64	10.40	9.76
FH-65	6.3	5.5	2500	2 1/8 x 2 1/8 x 3 1/8	15.69	14.38	12.88	11.51	10.79
FH-610	6.3	10	2500	3 x 3 1/4 x 4 1/4	17.18	15.75	14.10	12.60	11.82
FH-104	10	4	2500	2 1/2 x 2 1/2 x 3 1/4	16.60	15.22	13.63	12.17	11.41

#### MULTIPLE FILAMENT TRANSFORMERS 50/60 CPS.

Meet MIL-T-27A, Grade 4, for Class R operation. All primaries are 105/115/125 v. AC. Insulation test voltage is 2500 for all except No. FMS-8, 5000 v. Mounting type H.

Part No.	Secondary Windings			Case Size, In., W. x D. x H.	Net Each, Quantities of				
	Sec. No. 1	Sec. No. 2	Sec. No. 3		1-9	10-24	25-49	50-99	100-249
FMS-1	5 v., 2 a.	6.3 v., 2.5 a.*	.....	2 3/8 x 2 3/8 x 3 1/8	\$19.45	\$17.83	\$15.97	\$14.27	\$13.38
FMS-2	5 v., 2 a.	12.6 v., 1.25 a.*	.....	2 3/8 x 2 3/8 x 3 1/8	19.42	17.80	15.94	14.24	13.35
FMS-3	5 v., 3 a.	6.3 v., 5 a.*	.....	2 3/8 x 2 3/8 x 4 1/4	21.40	19.62	17.57	15.69	14.71
FMS-4†	5 v., 3 a.	6.3 v., 3 a.*	.....	2 3/8 x 2 3/8 x 3 1/8	28.62	26.23	23.49	20.99	19.68
FMS-5	5 v., 3 a.	6.3 v., 1 a.*	6.3 v., 5 a.*	3 1/8 x 3 1/8 x 3 3/8	30.36	27.83	24.93	22.27	20.88
FMS-6‡	6.3 v., 3 a.*	6.3 v., 3 a.*	.....	2 3/8 x 3 1/8 x 4 1/4	19.67	18.03	16.15	14.43	13.53
FMS-7§	6.3 v., 6 a.*	6.3 v., 6 a.*	.....	3 3/8 x 3 1/8 x 5 1/4	26.04	23.92	21.42	19.13	17.94
FMS-8	5 v., 3 a.*	5 v., 3 a.*	5 v., 6 a.*	3 3/8 x 3 1/8 x 5 1/4	37.85	34.70	31.07	27.76	26.03

\* Center Tapped. † Secondaries 2 and 3 also tapped, 12.6 v. CT at 3 amps. ‡ Secondaries 1 and 2 also tapped at 12.6 v. CT at 3 amps. § Secondaries 1 and 2 also tapped 12.6 v. CT at 6 amps.

### SPECIAL POWER TRANSFORMERS ALL PRIMARIES: 115 V. AC, 50/60 CPS.

#### FOR REGULATED POWER SUPPLIES

##### MIL-T-27A—"H" TYPE MOUNTING

Part No.	High Volt. Secondary			Rect.		Filament			Case Size	Net Each, Quantities of					
	AC Volts	DC Ma	Out. VDC	V.	A.	No. 2	Amps	No. 3		V.	A.	1-9	10-24	25-49	50-99
PHC-165	440-0-440	165	430	5	3	6.3	7.5, 0.6	6.3	3.3	4 1/2 x 4 1/2 x 5 1/2	\$37.33	\$34.22	\$30.64	\$27.37	\$25.66

##### SEMI-SEALED—"S" TYPE MOUNTING

Part No.	High Volt. Secondary			Rect.		Filament			Case Size	Net Each, Quantities of					Bulk
	AC Volts	DC Ma	Out. VDC	V.	A.	No. 2	Amps	No. 3		V.	A.	1-9	10-24	25-49	
PSC-165	440-0-440	165	430	5	3	6.3	7.5, 0.6	6.3	3.3	4 1/2 x 4 1/2 x 5 1/2	\$32.80	\$30.07	\$26.93	\$24.02	\$18.04

##### COMBINATION PLATE AND FILAMENT

##### MIL-T-27A—"H" TYPE MOUNTING

Part No.	Pri. Volts	High Volt. Secondary		Rect. Fila.		Case Size	Net Each, Quantities of				
		AC Volts	DC Ma	Volts	Amps		1-9	10-24	25-49	50-99	100-249
IBH-150	115	180-160-140-120-0-120-140-160-180	150	5.0	3.0	3 1/2 x 3 x 4 1/4	\$22.75	\$20.80	\$18.60	\$16.65	\$15.60

# STANCOR ELECTRONICS, INC.

# CHICAGO STANCOR

## Transistor Transformers

### MIL-T-27A PRINTED CIRCUIT "POLYCHROMATRANS"

Printed circuit board transistor transformers. Test volts, 500 rms. Color-coded by application. Up to 50% reduction in distortion over other brands. Improved lower-end frequency response. Leads are fatigue resistant nickel-iron alloy, .020" dia., .563" long, gold-plated to MIL-G-45204, Class I. Size: .405" w. x .305" d. x .460" h.

Part No.	MIL Type Number	Max. Pwr. Mw	Use	Matching Impedance		Max. DC Ma*	Net Each, Quantities of				
				Primary	Secondary		1-9	10-24	25-49	50-99	100-249
PCT-14	TFSSX16ZZ	15	Input	200K CT	1K CT	0	\$7.80	\$7.41	\$7.02	\$6.50	\$5.85
PCT-15	TFSSX16ZZ	35	Input	50K CT	1K CT	0	7.65	7.27	6.89	6.38	5.75
PCT-17	TFSSX16ZZ	35	Input	200K	1K	0	6.75	6.41	6.08	5.63	5.07
PCT-21	TFSSX13ZZ	55	Interst.	25K	1K	.5	6.30	5.99	5.67	5.25	4.73
PCT-23	TFSSX13ZZ	55	Interst.	25K CT	1K CT	.5	7.20	6.84	6.48	6.00	5.40
PCT-25	TFSSX13ZZ	75	Interst.	10K CT	1.5K CT	1	7.20	6.84	6.48	6.00	5.40
PCT-30	TFSSX13ZZ	75	Driver	10K CT	1.2K CT	1	6.90	6.56	6.21	5.75	5.18
PCT-31	TFSSX13ZZ	75	Driver	10K CT	2K CT	1	6.90	6.56	6.21	5.75	5.18
PCT-39	TFSSX13ZZ	75	Driver	10K CT	500 CT	1	6.90	6.56	6.21	5.75	5.18
PCT-43	TFSSX17ZZ	75	Output	1K	50	3	5.85	5.56	5.27	4.88	4.39
PCT-54	TFSSX17ZZ	75	Output	600 CT	12	4.5	6.00	5.70	5.40	5.00	4.50
PCT-60	TFSSX17ZZ	75	Output	500 CT	600	3	6.00	5.70	5.40	5.00	4.50
PCT-61	TFSSX17ZZ	75	Output	900 CT	600	4	6.15	5.84	5.54	5.13	4.62
PCT-62	TFSSX13ZZ	75	Output	1.5K CT	600	3	6.30	5.99	5.67	5.25	4.73
PCT-70	TFSSX17ZZ	75	Output	320 CT	3.2	6	5.85	5.56	5.27	4.88	4.39
PCT-71	TFSSX17ZZ	75	Output	600 CT	3.2	4.5	6.00	5.70	5.40	5.00	4.50
PCT-76	TFSSX13ZZ	75	Output-Isolation	10K CT	10K CT	1	7.80	7.41	7.02	6.50	5.85
PCT-77	TFSSX17ZZ	75	Output-Isolation	600 CT	600 CT	3	7.20	6.84	6.48	6.00	5.40
PCT-116	TFSSX20ZZ	.....	Choke	6 hys.	.....	2	5.70	5.42	5.13	4.75	4.28
PCT-117	TFSSX20ZZ	.....	Choke	1.25 hys.	.....	2	4.80	4.58	4.32	4.00	3.60
PCT-118	TFSSX20ZZ	.....	Choke	3.5 hys.	.....	2	4.80	4.58	4.32	4.00	3.60
PCT-128	TFSSX20ZZ	.....	Choke	3 hys.	.....	4	4.80	4.58	4.32	4.00	3.60

\* Max. Ma, DC unbalanced in primary. Part No. SPCT-10—Magnetic alloy shield for all PCT transformers. Net Each: 1-9, 84c; 10-24, 80c; 25-49, 76c; 50-99, 70c; 100-249, 67c.

### ULTRA-MINIATURE MIL-T-27A ENCAPSULATED TYPES

Excellent for use with printed circuitry, etc., as lead spacing is 1/10" grid type for easy mounting on punched boards. Dimensions: .312" x .400" x .426". Weight (Approx.), .125 oz. Mtg. Type UME.

Part No.	Application	DC Ma#	Impedance, Ohms		DC Res. Ohms		Net Each, Quantities of				
			Primary	Secondary	Pri.	Sec.	1-9	10-24	25-49	50-99	100-249
UME-20	Driver	1	10K	1200 CT	1000	100	\$6.67	\$6.12	\$5.48	\$4.89	\$4.59
UME-23	Single†	7	12.5K	1500 CT	35	2.5	5.95	5.45	4.88	4.36	4.09
UME-34	Input	0	400 CT	16	6500	250	7.67	7.03	6.30	5.63	5.28
UME-37	Reactor	2	200K CT	1000 CT	190	.....	5.25	4.82	4.31	3.85	3.61

\* At 2 DC ma. † Or p-p output. # In primary.

### MIL-T-27A AUDIO TRANSFORMERS

Maximum operating altitude, 50,000 feet. Mounting Type TAMS. Size: 1 3/8" x 1" x 1". Weight: 2 oz.

Part No.	Application	Impedance, Ohms		Pri. DC Ma	DC Ohms		Net Each, Quantities of				
		Primary	Secondary		Pri.	Sec.	1-9	10-24	25-49	50-99	100-249
TAMS-5	Driver	1000	200 CT	10	400	115	\$15.60	\$14.30	\$12.81	\$11.44	\$10.73
TAMS-6	Driver	2000	200 CT	5	720	115	12.71	11.65	10.43	9.32	8.74

### IRON CORE AUDIO TRANSFORMERS

Small iron core weighing only 1/10 of an ounce. Useful range is below 1 mw. Mtg. Type, UM.

Part No.	Application	Imped., Ohms		DC Ohms		Wt. Lbs.	Net Each, Quantities of					Bulk 100-249
		Pri.	Sec.	Pri.	Sec.		1-9	10-24	25-49	50-99		
UM-110	Interstage	20K	1000	1675	285	.07	\$6.22	\$5.70	\$5.10	\$4.56	\$3.43	
UM-112	Hi-Z Mic. In.	200K	1000	4000	195	.10	6.87	6.30	5.64	5.04	3.79	
UM-113	Interstage	20K	1000	1350	205	.10	4.75	4.35	3.90	3.48	2.61	
UM-114	Out. or Mtchg.	500	50/60	70	9.0	.10	4.25	3.90	3.49	3.12	2.35	

Dimensions: UM-110 1/4" x 3/8" x 3/8"; others, 3/8" x 3/8" x 3/8", ±.015".

### TRANSISTOR POWER TRANSFORMERS

Primary, 117 v., 60 cycle operation.

Part No.	Plate Supply		Size, In., W. x D. x H.	Mtg. Type	Net Each, Quantities of					Bulk 100-249
	AC Volts	DC Ma			1-9	10-24	25-49	50-99		
TP-1*	13 or 18	900	3" x 2 1/2" x 3"	C	\$4.47	\$4.00	\$3.57	\$3.19	\$2.75	
P-8196	20 CT	1200	2 1/2" x 3 1/2" x 3 1/2"	C	6.55	6.00	5.37	4.80	3.69	
TP-2†	10/20 CT/40 CT	1000	2 1/2" x 1 3/8" x 1 3/8"	C	4.00	3.80	3.00	2.20	2.20	
TP-3†	10/20 CT/40 CT	300	3 3/4" x 2" x 2 1/4"	A	5.20	4.60	4.20	3.90	2.88	
TP-4†	10/20 CT/40 CT	1000	2 1/2" x 3" x 3 1/8"	C	8.50	7.60	6.80	6.30	4.72	

\* For bridge rectifier systems, has 2 identical plate supplies. † Tapped primary to obtain lower secondary voltages.

### SPECIAL TRANSISTOR TRANSFORMERS

Special transformers for transistor applications. Mtg. Types: TA-56, J; TA-57 and TA-61, S; TA-13 and TA-14, TD; TA-60, TS; all others, Mtg. Type A.

Part Number	Impedance, Ohms		DC Res., Ohms		Max. Pri. DC Ma	Watts	Net Each, Quantities of					Bulk 100-249
	Pri.	Sec.	Pri.	Sec.			1-9	10-24	25-49	50-99		
TA-1*	600 CT	10	42	.8	20	.05	\$1.89	\$1.73	\$1.55	\$1.39	\$1.11	
TA-2†	100 CT	10 CT	4.3	.8	100	.25	1.89	1.73	1.55	1.39	1.07	
TA-3†	100	1000 CT	5.8	.45	100	.25	1.89	1.73	1.55	1.39	1.07	
TA-4†	500 CT	5000 CT	37	250	12	.03	2.49	2.28	2.04	1.83	1.41	
TA-5‡	1000	200 CT	400	115	10	.05	4.71	4.32	3.86	3.45	2.60	
TA-6‡	2000	200 CT	720	115	5	.05	4.33	4.08	4.37	3.91	2.93	
TA-7‡	100	100 CT	12	12	100	.5	1.89	1.73	1.55	1.39	1.07	
TA-9§	1000	4/8/16	180	3.5	10	.2	4.87	4.49	4.00	3.57	2.84	
TA-10§	2000 CT	4/8/16	250	4	.....	.2	5.33	4.88	4.37	3.91	2.93	
TA-11§	48 CT	8/16	5	1.5	275	5	3.65	3.35	3.00	2.68	2.01	
TA-12§	80 CT	8	1200	2 1/2" x 3 1/2" x 3 1/2"	500	10	1.89	1.73	1.55	1.39	1.07	
TA-52†	500 CT	500 CT	40	55	.....	.30	3.00	2.75	2.46	2.20	1.69	
TA-56§	48 CT	3.2/8/16	3.6	1.4	550	10	3.04	2.78	2.49	2.23	1.68	
TA-57§	100 CT	3.2/8/16	6.6	1.5	500	10	3.00	2.75	2.46	2.20	1.65	
TA-58‡	100	200 CT	6.5	15.5	200	.5	2.13	1.95	1.75	1.56	1.20	
TA-59‡	500 CT	200 CT	36.5	15.5	50	.5	2.36	2.17	1.94	1.73	1.34	
TA-61‡	1.8	.....	.....	.....	.....	.....	2.60	2.38	2.13	1.91	1.47	
TA-63‡	20K CT	2K CT	2140	325	.....	.....	4.47	4.10	3.67	3.28	2.48	

\* Input. † Interstage. ‡ Driver. § Output. # CT, 2 secondaries 16 ohm series, 4 ohms parallel. ● Turns ratio: primary to 1/2 secondary, 1:1. ▲ Per winding.

### MINIATURE AUDIO TRANSFORMERS (MTG. TYPE A)

.150-Watt Group—Dimensions: 1 3/16" w. x 3/8" d. x 2 1/8" h. Mtg. tabs; 25 3/32" centers, 3/16" w. Wt., .65 oz.  
 Net Each, 1-9 ..... \$3.65  
 Net Each, 10-24 ..... \$3.35  
 Net Each, 50-99 ..... 2.68  
 Net Each, 100-249 ..... 2.51

Part No.	Application	Impedance, Ohms		DC Resis., Ohms	
		Primary	Secondary	Pri.	Sec.
TA-35*	Interstage	10,000	2,000 CT	1200	257
TA-36*	Interstage	10,000	3,000 CT	1200	385
TA-38*	Interstage	500 CT	150 CT	62	21.2

Part No.	Application	Impedance, Ohms		DC Resis., Ohms	
		Primary	Secondary	Pri.	Sec.
TA-20*	Output	350 CT	4, 12	38	1.45
TA-21†	Output	500 CT	4, 8, 16	75.3	3.55
TA-23†	Output	600 CT	4, 8, 16	73.2	3.2
TA-26*	Output	1,250	4, 12	132.5	1.4
TA-27*	Interstage	1,200	20,000 CT	142	1860
TA-28*	Interstage	1,500	500 CT	104	46.5
TA-30*	Interstage	5,000 CT	7,500 CT	650	790
TA-31*	Interstage	5,000 CT	10,000 CT	635	825
TA-32†	Interstage	5,000 CT	80,000 CT	573	5740
TA-33†	Output	10,000 CT	4, 8, 16	1174	2.6
TA-34†	Interstage	10,000	200 CT	1200	33.4

\* 100-249 Bulk packed \$2.01 ea. † 100-249 Bulk packed \$2.06 ea.

.300-Watt Group—Dimensions: 1 5/8" w. x 3/4" d. x 1 1/2" h. Mtg. Centers, 13/16". Weight, 1.2 oz.  
 Net Each, 1-9 ..... \$3.65  
 Net Each, 10-24 ..... \$3.35  
 Net Each, 50-99 ..... 2.68  
 Net Each, 100-249 ..... 2.51

Part No.	Application	Impedance, Ohms		DC Resis., Ohms	
		Primary	Secondary	Pri.	Sec.
TA-39*	Output	100 CT	4, 8, 16	10.9	1.45
TA-41†	Output	400 CT	4, 8, 16	34	1.5
TA-42†	Output	500 CT	4, 8, 16	47	.85
TA-43†	Output	700 CT	4, 8, 16	77	1.15
TA-46*	Interstage	100,000	1,500 CT	3250	143
TA-47†	Input	1,000 CT	200,000 CT	123	1815

# STANCOR ELECTRONICS, INC.

# CHICAGO STANCOR

## SECTION 5600 Power, Plate & Rectifier Transformers

### PLATE AND FILAMENT SUPPLIES

All primary windings for 117 v., 60 cps operation. All plate supplies center-tapped. PC Series—Type PC Mfg.; PM Series—Type PM Mfg.; Series PA—Type PA Mfg.; Series PS—Type PS. Provide approximately 260 v. DC to condenser input filter.

Part No.	Plate		Rec. Fil.		Amp. Fil.		Base Area, Inches	Wt., Lbs.	Net Each, Quantities of					Bulk
	A.C. V.-C.T	DC Ma	V.	A.	V.	A.			1-9	10-24	25-49	50-99	100-249	
PC8401	470	40	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	2.2	\$5.42	\$4.97	\$4.45	\$3.97	\$3.06	
PM8401	470	40	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	2.2	5.69	5.38	4.67	4.17	3.21	
PC8402	480	55	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	2.4	5.38	4.93	4.42	3.95	3.04	
PM8402	480	55	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	2.4	5.53	5.07	4.54	4.05	3.12	
PC8403	500	70	5	2	6.3 CT	2.5	2 3/8 x 3 1/8	3.2	6.25	5.73	5.13	4.59	3.53	
PM8403	500	70	5	2	6.3 CT	2.5	2 3/8 x 3 1/8	3.2	6.25	5.73	5.13	4.59	3.53	
PC8404	520	90	5	2	6.3 CT	3.0	3 x 3 1/8	4.0	6.93	6.35	5.69	5.08	3.91	
PM8404	520	90	5	2	6.3 CT	3.0	3 x 3 1/8	4.0	6.93	6.35	5.69	5.08	4.05	
PC8405	540	120	5	3	6.3 CT	3.5	3 1/4 x 3 1/8	4.9	9.04	8.28	7.42	6.63	4.97	
PM8405	540	120	5	3	6.3 CT	3.5	3 1/4 x 3 1/8	4.9	9.04	8.28	7.42	6.63	4.97	

Use with choke input, VR supply, Spkr. field or Hi-V. with condenser input filter.

PM8423	600	90	5	2	6.3 CT	3.5	2 1/2 x 3 3/8	4	\$ 7.98	\$ 7.32	\$ 6.55	\$ 5.85	\$4.40
PC8406	650	40	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	2.4	5.65	5.18	4.64	4.15	3.19
PM8406	650	40	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	2.4	5.65	5.18	4.64	4.15	3.19
PC8407	650	55	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	3.2	5.89	5.40	4.84	4.32	3.45
PM8407	650	55	5	2	6.3 CT	2.0	2 1/2 x 2 3/8	3.2	5.89	5.40	4.84	4.32	3.45
PC8422	650	150	5	3	6.3 CT	5.0	3 1/4 x 3 3/8	5.8	9.40	8.62	7.72	6.89	5.50
PM8422	650	150	5	3	6.3 CT	5.0	3 1/4 x 3 3/8	5.8	9.42	8.63	7.73	6.91	5.32
PC8408	680	70	5	2	6.3 CT	2.5	2 3/8 x 3 1/8	3.8	7.36	6.75	6.04	5.40	4.15
PM8408	680	70	5	2	6.3 CT	2.5	2 3/8 x 3 1/8	3.8	7.36	6.75	6.04	5.40	4.31
PC8409	700	90	5	2	6.3 CT	3.0	2 3/8 x 3 3/8	4.5	7.76	7.12	6.37	5.69	4.54
PM8409	700	90	5	2	6.3 CT	3.0	2 3/8 x 3 3/8	4.5	7.76	7.12	6.37	5.69	4.54
PC8410	720	120	5	3	6.3 CT	3.5	3 1/4 x 3 3/8	5.5	8.82	8.08	7.24	6.47	4.97
PM8410	720	120	5	3	6.3 CT	3.5	3 1/4 x 3 3/8	5.5	9.18	8.42	7.54	6.73	5.37
PC8411	750	150	5	3	6.3 CT	4.5	3 1/2 x 3 3/8	5.8	11.82	10.83	9.70	8.67	6.67
PM8411	750	150	5	3	6.3 CT	4.5	3 1/2 x 3 3/8	5.8	12.31	11.28	10.10	9.03	6.77
PC8412	800	200	5	3	6.3 CT	5.0	4 x 4 1/8	8.2	12.31	11.28	10.10	9.03	7.20
PM8412	800	200	5	3	6.3 CT	5.0	4 x 4 1/8	8.2	12.35	11.32	10.13	9.05	6.97
PC8413	800	250	5	3	6.3 CT	5.0	4 x 4 1/8	10.0	14.07	12.90	11.55	10.32	8.23
PM8414	1200	200	5	3	6.3	3.0	4 x 4 1/4	8.3	14.47	13.27	11.88	10.61	8.16

For use with 6AX5, 6X4, 6X5, or selenium rectifiers.

Part No.	A.C. V.	DC Ma	V.	A.	Filter	Amp.	Base Area	Wt.	Half-Wave Rectifier Type				
									1-9	10-24	25-49	50-99	100-249
PS8415	125*	15	5	2	6.3	0.6	2 3/8 x 1 3/8	0.7	\$2.33	\$2.13	\$1.91	\$1.71	\$1.36
PS8416	125	25	5	2	6.3	1.0	2 3/8 x 1 3/8	1.0	2.80	2.57	2.30	2.05	1.65
PA8421	250*	50	5	2	6.3	2.0	3 1/8 x 2 1/8	1.5	3.76	3.45	3.09	2.76	2.08
PC8417	440	50	6.3	6	25.2	0.5	2 3/8 x 2 3/8	2.2	6.29	5.77	5.16	4.61	3.47
PC8418	460	50	6.3	6	25.2	0.5	2 3/8 x 2 3/8	2.2	4.71	4.32	3.87	3.45	2.66
PM8418	460	50	6.3	2.5	2.5	2.5	2 3/8 x 3	2.2	4.71	4.32	3.87	3.45	2.76
PC8419	480	70	6.3	3.0	2.5	2.5	2 3/8 x 2 3/8	2.6	5.42	4.97	4.45	3.97	3.06
PM8419	480	70	6.3	3.0	2.5	2.5	2 3/8 x 3	2.6	5.42	4.97	4.45	3.97	3.06
PC8420	520	90	6.3	4.0	3	3	3 x 3 1/8	3.5	6.29	5.77	5.16	4.61	3.56
PM8420	520	90	6.3	4.0	3	3	2 3/8 x 3 3/8	3.5	6.56	6.02	5.39	4.81	3.70

Special or combination filament windings.

P-8359†	▲	70	.....	.....	6.3	0.6	2 1/2 x 2 3/8	2.8	\$ 7.55	\$ 6.80	\$ 6.15	\$ 5.65	\$4.08
P-6348*	480	60	.....	.....	6.3 CT	2.75	2 3/8 x 2 1 1/8	2.3	5.47	5.02	4.49	4.01	3.01
P-6358†	600	65	.....	.....	6.3 CT	2.7	2 3/8 x 2 1 1/8	3	5.84	5.35	4.79	4.28	3.21
P-8173††	500	10	.....	.....	6.3	0.6	2 3/8 x 2 3/8	1.0	4.58	4.20	3.76	3.36	2.52
P-8174††	500	20	.....	.....	6.3	0.6	3 1/8 x 2 1/4	1.5	4.75	4.35	3.90	3.48	2.61
P-8175†	600	70	5.0	3	6.3 CT	3.0	2 3/8 x 3 1/8	4.0	7.71	7.07	6.33	5.65	4.35
P-8177†	600	120	5	3	6.3 CT	3.0	3 1/8 x 3 3/8	5.75	9.40	8.62	7.72	6.89	5.30
P-8176†	700	110	5	2	6.3 CT	3.0	3 1/8 x 3 3/8	5.5	10.36	9.50	8.51	7.60	6.07
P-6007*	800	110	5 CT	3	2.5 CT	15.0	3 1/8 x 3 3/8	5.4	11.16	10.23	9.16	8.19	6.53
P-8360†	875■	185	5.0■	3.0	6.3	3.0	4 x 4 1/8	9.5	16.00	14.40	12.95	12.00	9.27
P-6143†	880	130	5	3	6.3 CT	3.5	3 3/8 x 4 1/8	7.0	11.07	10.15	9.09	8.12	6.47
P-5059†#	675	200	5 CT	3	6.3 CT	5.0	3 3/8 x 4 1/8	9.6	13.07	11.98	10.73	9.59	7.38
P-6315*	740	275	5 CT	3	6.3 CT	7.0	3 3/8 x 4 1/8	9.3	13.69	12.55	11.24	10.04	7.72

\* Type M Mfg. † Type C Mfg. †† Type C1 mounting. # 117/107 primary. ‡ 1/2 wave. ▲ 190/160-0-160/190. ■ 2000 v. rms test.

### PLATE TRANSFORMERS

DC output rated CC5 at load terminals of single-action, reactor-input filter, ICAS with single-section capacitor-input filter (secondary CT must be grounded). Primary, 117 volts, AC. Mounting PC.

Part No.	Secondary AC Volts	DC Output		Filter Input	Rectifier	Wt., Lbs.	Size—Inches	Net Each, Quantities of					Bulk
		Volts	Ma					1-9	10-24	25-49	50-99	100-249	
PC-8301	415-0-415	300 425	200 160	Reactor Capacitor#	5U4G 5U4G	5	4 x 3 1/2 x 3 3/8	\$ 7.89	\$ 7.23	\$ 6.48	\$ 5.79	\$4.46	
PC-8302	515-0-515	385 500	235 200	Reactor Capacitor#	5U4G 5R4GY	7	4 1/8 x 3 3/8 x 4 1/8	10.33	9.47	8.48	7.57	5.83	
PC-8303	665-0-665	500 750	250 200	Reactor Capacitor#	5R4GY 5R4GY	10	4 3/4 x 4 x 4 3/8	13.11	12.02	10.76	9.61	7.66	
PC-8304	750-0-750	600 850	265 200	Reactor Capacitor#	2-5R4GY 5R4GY	12	4 3/4 x 4 x 4 7/8	14.76	13.53	12.12	10.83	8.63	
PC-8305	920-0-920	750 1000	250 200	Reactor Capacitor#	2-5R4GY 5R4GY	12	4 3/4 x 4 x 5	15.36	14.08	12.61	11.27	8.98	

# Capacitor input rating is for intermittent duty.

### SILICON AND SELENIUM RECTIFIER TRANSFORMERS

For nominal input of 117 v. AC, 50-60 cps. Mfg. Type BV.

Part No.	Applied VAC under Load	Output, Max. DC				Filter Cap., μf	Net Each, Quantities of					Bulk	Wt., Lbs.	Size—Inches
		Resistive/Induct. Load		Capacitive Load*			1-9	10-24	25-49	50-99	100-249			
		Volts	Amps	Volts	Amps									
RT-201#	11.7-29.4	11.2	2.0	13.8	2.0	1 K	\$ 4.98	\$ 4.57	\$ 4.09	\$ 3.63	\$ 3.02	3	3 3/8 x 2 1/2 x 3 3/8	
RT-201†	11.1-28.5	23.0	1.25	30.0	1.25	.5 K	4.98	4.57	4.09	3.63	3.02	3	3 3/8 x 2 1/2 x 3 3/8	
RT-202#	12.0-29.8	11.1	4.0	14.7	4.0	2 K	6.70	6.20	5.55	4.96	4.10	4	3 3/8 x 2 3/8 x 3 1/2	
RT-202†	12.0-29.8	24.3	2.0	33.0	2.0	1 K	6.70	6.20	5.55	4.96	4.10	4	3 3/8 x 2 3/8 x 3 1/2	
RT-204#	11.7-29.2	12.0	8.0	14.5	8.0	4 K	8.75	8.02	7.18	6.41	5.29	6	4 x 3 1/4 x 4 1/8	
RT-204†	11.6-29.2	24.0	4.0	32.4	4.0	2 K	8.75	8.02	7.18	6.41	5.29	6	4 x 3 1/4 x 4 1/8	
RT-206#	12.0-29.7	11.5	12.0	14.4	12.0	6 K	11.87	10.88	9.75	8.71	7.35	9	4 1/4 x 3 3/8 x 5 1/8	
RT-206†	12.0-29.7	24.0	6.0	32.0	6.0	3 K	11.87	10.88	9.75	8.71	7.35	9	4 1/4 x 3 3/8 x 5 1/8	
RT-208#	12.1-29.2	11.4	15.0	14.8	15.0	7.5 K	14.96	13.72	12.28	10.97	9.06	13	4 3/4 x 3 3/8 x 5 1/4	
RT-208†	12.1-29.2	23.7	8.0	32.5	8.0	4 K	14.96	13.72	12.28	10.97	9.06	13	4 3/4 x 3 3/8 x 5 1/4	
RT-2012#	12.2-29.0	11.4	22.5	14.3	22.5	12 K	22.07	20.23	18.12	16.19	13.67	21	5 3/8 x 4 3/8 x 6 3/8	
RT-2012†	12.2-29.0	23.5	12.0	33.0	12.0	6 K	22.07	20.23	18.12	16.19	13.67	21	5 3/8 x 4 3/8 x 6 3/8	
RT-408†	25.0-53.5	44.0	8.0	63.0	8.0	4 K	32.64	29.92	26.79	23.93	20.20	27	5 3/8 x 4 3/8 x 7 1/4	
RT-4012†	25.0-53.0	43.5	12.0	60.0	12.0	6 K	42.98	39.40	35.28	31.52	26.60	34	7 1/8 x 5 3/8 x 6 1/4	
P-8193‡	17 or 18	.....	.....	.....	.....	.....	8.45	7.75	6.94	6.20	4.77	6	3 3/4 x 3 3/8 x 3 3/8	
P-8194§	36 at 3A	.....	.....	.....	.....	.....	14.36	13.17	11.79	10.53	7.91	10	4 1/2 x 3 3/4 x 4	

# CT Rectifier Circuit. † Bridge Rectifier Circuit. \* For complete details and instructions, write for Stancor Bulletin No. 518R. ‡ Sec., 6 amps rms. § Dual Sec., rms rated.

## STANCOR ELECTRONICS, INC.

# CHICAGO STANCOR Power, Bias & CRT Transformers

## SPECIAL POWER TRANSFORMERS

### POWER TRANSFORMERS AND FILTER REACTORS

Three types of construction are available: Hermetically sealed, semi-sealed, and compound sealed. All units have high grade magnet wire coils wound on non-aging, silicon steel cores. Core and coil are vacuum-impregnated with varnish and baked at high temperatures to achieve a vibration-proof unit. Housed in seamless, drawn-steel cases and sealed with a special moisture-resistant compound. Hermetically sealed units, H-Type meet the rigid standards of Grade 4, MIL-T-27A specifications for Class R operation. One-piece steel covers are bonded by deep-seal soldering. Semi-sealed units, S-Type have steel base covers fitted with phenolic terminal boards, numbered solder lugs. Compound-sealed units, C-type, have fiber-board covers and 10" color-coded leads.

#### FOR CAPACITOR INPUT SYSTEMS—PRIMARY 117 VOLTS, 50-60 CYCLES MIL-T-27A—"H" TYPE MOUNTING

High Volt. Second.			Filaments				Part No.	Case No.	Net Each, Quantities of				
Volts, AC	DC Ma	Out. V. DC	Rect.		Others				1-9	10-24	25-49	50-99	100-249
			V.	A.	Volts	Amps							
250-0-250	10	320	.....	.....	6.3	1.2	PHC-10	14	\$16.91	\$15.50	\$13.88	\$12.40	\$11.63
250-0-250	20	300	.....	.....	6.3	0.6	PHC-20	15	16.05	14.72	13.18	11.77	11.04
225-0-225	40	210	.....	.....	6.3	0.6	PHC-40	17	18.38	16.85	15.09	13.48	12.64
270-0-270	55	260	5	2	6.3 CT	2	PHC-55	17	19.45	17.83	15.97	14.27	13.38
300-0-300	60	285	5	2	6.3 CT	3	PHC-60	19	19.95	18.28	16.37	14.63	13.71
335-0-335	70	320	5	2	6.3 CT	3	PHC-70	19	20.73	19.00	17.01	15.20	14.25
330-0-330	85	320	5	2	6.3 CT	3	PHC-85	20	22.16	20.32	18.19	16.25	15.24
345-0-345	105	320	5	2	6.3 CT	3.5	PHC-105	21	24.44	22.40	20.06	17.92	16.80
375-0-375	120	380	5	3	6.3 CT	4	PHC-120	21	25.27	23.17	20.75	18.53	17.38
370-0-370	150	390	5	3	6.3 CT	4	PHC-150	22	30.12	28.07	25.13	22.45	21.05

#### SEMI-SEALED "S" TYPE MOUNTING

High Volt. Second.			Filaments				Part No.	Case No.	Net Each, Quantities of					Bulk
Volts, AC	DC Ma	Out. V. DC	Rect.		Others				1-9	10-24	25-49	50-99	100-249	
			V.	A.	Volts	Amps								
225-0-225	40	210	5	2	6.3 CT	2	PSC-40	17	\$14.80	\$13.57	\$12.55	\$11.21	\$ 8.41	
270-0-270	55	260	5	2	6.3 CT	2	PSC-55	17	15.13	13.87	12.42	11.09	8.32	
325-0-325	70	320	5	2	6.3 CT	3	PSC-70	19	17.16	15.73	14.09	12.59	9.44	
330-0-330	85	320	5	2	6.3 CT	3	PSC-85	20	17.95	16.45	14.73	13.16	9.87	
345-0-345	105	320	5	2	6.3 CT	3.5	PSC-105	21	19.33	17.72	15.87	14.17	10.63	
385-0-385	200	390	5	3	6.3 CT	4.5	PSC-200	22	27.27	25.00	22.39	20.00	15.00	

#### SEMI-SEALED "C" TYPE MOUNTING

High Volt. Second.			Filaments				Part No.	Case No.	Net Each, Quantities of					Bulk
Volts, AC	DC Ma	Out. V. DC	Rect.		Others				1-9	10-24	25-49	50-99	100-249	
			V.	A.	Volts	Amps								
225-0-225	40	210	5	2	6.3 CT	2	PCC-40	16	\$ 9.73	\$ 8.92	\$ 7.99	\$ 7.13	\$ 5.36	
270-0-270	55	260	5	2	6.3 CT	2	PCC-55	16	10.42	9.55	8.55	7.64	5.73	
300-0-300	60	285	5	2	6.3 CT	3	PCC-60	18	11.62	10.65	9.54	8.52	6.40	
335-0-335	70	320	5	2	6.3 CT	3	PCC-70	18	12.00	11.00	9.85	8.80	6.60	
330-0-330	85	320	5	2	6.3 CT	3	PCC-85	20	13.02	11.93	10.69	9.55	7.16	
345-0-345	105	320	5	2	6.3 CT	3.5	PCC-105	20	13.53	12.40	11.10	9.92	7.44	
385-0-385	200	390	5	3	6.3 CT	4.5	PCC-200	22	20.89	19.15	17.15	15.32	11.49	

#### FOR REACTOR INPUT SYSTEMS—PRIMARY 117 VOLTS, 50-60 CYCLES MIL-T-27A—"H" TYPE MOUNTING

High Volt. Second.			Filaments				Part No.	Case No.	Net Each, Quantities of				
Volts, AC	DC Ma	Out. V. DC	Rect.		Others				1-9	10-24	25-49	50-99	100-249
			V.	A.	Volts	Amps							
350-0-350	55	260	5	2	6.3 CT	2	PHR-55	17	\$19.64	\$18.00	\$16.12	\$14.40	\$13.50
425-0-425	70	320	5	2	6.3 CT	3	PHR-70	19	20.29	18.60	16.66	14.88	13.95
450-0-450	105	320	5	2	6.3 CT	3.5	PHR-105	21	23.16	21.23	19.01	16.99	15.93
500-0-500	120	390	5	3	6.3 CT	4	PHR-120	21	23.75	21.77	19.49	17.41	16.33

#### SEMI-SEALED "S" TYPE MOUNTING

350-0-350	55	260	5	2	6.3 CT	2	PSR-55	17	\$16.09	\$14.75	\$13.21	\$11.80	\$ 8.85*
425-0-425	70	320	5	2	6.3 CT	3	PSR-70	19	17.65	16.18	14.49	12.95	9.71*
450-0-450	105	320	5	2	6.3 CT	3.5	PSR-105	21	18.91	17.33	15.52	13.87	10.40*
520-0-520	200	390	5	3	6.3 CT	4.5	PSR-200	22	31.38	28.77	25.76	23.01	17.26*

\* Bulk packed.

#### SEMI-SEALED "C" TYPE MOUNTING

350-0-350	55	260	5	2	6.3 CT	2	PCR-55	16	\$11.24	\$10.30	\$ 9.22	\$ 8.24	\$ 6.19*
425-0-425	70	320	5	2	6.3 CT	3	PCR-70	18	12.58	11.53	10.33	9.23	6.92*
450-0-450	105	320	5	2	6.3 CT	3.5	PCR-105	20	13.64	12.50	11.19	10.00	7.51*
550-370-75-0-75-370-550	300	420	5	6	6.3 CT	5	PCR-300	24	29.53	27.07	24.24	21.65	16.24*

\* Bulk packed.

#### CASE SIZES

Case	Depth	Width	Height
8	1 1/8"	1 1/8"	1 15/16"
9	1 1/8"	1 1/8"	2 1/8"
12	2 1/4"	2 1/8"	2 1/8"
13	2 1/4"	2 1/8"	2 15/16"
14	2 1/4"	2 3/8"	3 3/4"
15	2 3/8"	2 3/8"	3 1/8"
16	2 3/8"	2 15/16"	3 1/8"
17	2 3/8"	2 15/16"	3 3/8"
18	3 1/8"	3"	3 3/8"
19	3 1/8"	3"	4 1/8"
20	3 1/8"	3 5/8"	4 5/8"
21	3 1/8"	3 5/8"	4 11/16"
22	4 9/16"	4 1/8"	5 1/8"
24	5 1/8"	4 15/16"	6 1/8"
26	6 3/8"	5 3/4"	7 1/8"

#### BIAS SUPPLY TRANSFORMERS

Rectifier Filament, 5 v., 3 amps. Type CD mounting.

Part No.	High Voltage Supply (CT) VAC at DC Milliamps	H. x W. x D. Inches	Net Each, Quantities of				Bulk
			1-9	10-24	25-49	50-99	
P-6317*	200/170/130/90 @ 200 ma.	4 x 3 1/4 x 3 3/8	\$11.25	\$10.32	\$ 9.24	\$8.25	\$6.35
P-6318†	450/400/350/250 @ 200 ma.	4 5/16 x 3 3/8 x 4 5/8	13.38	12.27	10.99	9.81	7.55

Shipping Weight: \*4.9 lbs. †7 lbs.

#### CATHODE-RAY TUBE POWER TRANSFORMER

For use with type 2 x 2 rectifier tubes in half-wave high voltage supply circuit. Primary, 117 v. AC, 50-60 cps. Mtg. Type PC. Supplies 1,800 v. AC at 2.0 ma DC; 2.5 v. rect. fil. at 1.8 amps; and 2.5 v. at 2.2 amps or 6.3 v. at 0.6 amp other winding. Size: 3 3/8" w. x 3 1/4" d. x 3 3/8" h. Shipping Weight, 5 lbs.

Part No. P-8178—Net Each, 1-9	\$9.04
Net Each, 10-24	\$8.28
Net Each, 25-49	7.42
Net Each, 50-99	6.63
Net Each, 100-249 Bulk packed	5.10

# STANCOR ELECTRONICS, INC.

# CHICAGO STANCOR

## Filament Transformers

### COMMERCIAL GRADE FILAMENT TRANSFORMERS

#### SINGLE SECONDARY

Primary 50 or 60 cycle operation.

Part No.	Secondary		H. x W. x D. Inches	Wt., Lbs.	Mfg. Type	Net Each, Quantities of				Bulk 100-249
	Volts	Amps				1-9	10-24	25-49	50-99	
P-4026*	2.5 CT	1.5	1 1/8 x 2 7/8 x 1 1/2	0.7	A	\$ 2.71	\$ 2.22	\$ 1.99	\$ 1.49	\$ 1.49
P-4082†	2.5 CT	2.5	2 1/16 x 2 3/8 x 2 1/4	1.5	TD	4.75	4.35	3.90	3.48	2.61
P-6133*	2.5 CT	5.0	2 1/16 x 2 3/8 x 2 1/4	1.5	S	3.73	3.42	3.06	2.73	2.18
P-3024†	2.5 CT	10.0	3 9/16 x 2 3/8 x 2 1/4	2.5	C	4.91	4.50	4.03	3.60	2.78
P-6454†	2.5 CT	10.0	3 3/8 x 2 3/8 x 2 1/4	2.5	S	3.93	3.60	3.22	2.85	2.22
P-3060*	2.5 CT	10.0	3 1/8 x 2 7/8 x 2 1/4	2.5	BV	6.60	6.05	5.42	4.84	3.73
P-3026†	5.0 CT	3.0	3 1/8 x 2 3/8 x 2 1/4	2.4	C	4.91	4.50	4.03	3.60	2.78
P-4088*	5.0 CT	3.0	3 1/8 x 2 1/8 x 2 1/4	1.8	BV	4.16	3.82	3.42	3.05	2.35
P-6467*	5.0 CT	3.0	2 1/8 x 3 1/16 x 2 1/4	1.4	A	3.15	2.88	2.58	2.31	1.73
P-6453†	5.0 CT	6.0	2 3/8 x 3 1/16 x 2 1/4	1.9	S	4.25	3.90	3.49	3.12	2.35
P-3062*	5.0 CT	6.0	3 3/8 x 2 1/4 x 2 1/4	2.3	BV	5.04	4.62	4.13	3.69	2.95
P-5000*§	5.0 CT	6.0	3 9/16 x 2 1/8 x 3	3.1	C	5.69	5.22	4.67	4.17	3.21
P-6135*	5.0 CT	10.0	3 1/8 x 2 3/8 x 2 1/4	3.0	BV	5.49	5.03	4.51	4.03	3.22
P-4086*	5.0 CT	14.0	5 1/8 x 4 1/8 x 8 1/8	12.3	FA	22.45	20.58	18.43	16.47	13.59
P-6432*§	5.0 CT	21.0	3 3/8 x 3 x 3 3/8	4.5	BV	8.18	7.50	6.72	6.00	4.62
P-6433*§	5.0 CT	15.0	3 3/8 x 2 1/8 x 2 3/8	3	BV	7.02	6.43	5.76	5.15	3.97
P-6302†	5.0 CT	22.0	5 1/4 x 4 1/8 x 8 1/8	13.5	FA	32.69	29.97	26.84	23.97	18.44
P-6492*§	5.0 CT	30.0	4 3/4 x 3 3/4 x 3 3/8	7.5	FA	10.73	9.83	8.81	7.87	6.28
P-6468†	5.0 CT	30.0	4 3/16 x 3 3/16 x 3 3/8	6.3	D	12.55	11.50	10.30	9.20	7.34
P-6305†	5.0 CT	30.0	5 1/8 x 4 3/8 x 10	18.3	FA	30.36	27.83	24.93	22.27	18.38
P-6134*	6.3 CT	1.2	1 3/8 x 2 3/4 x 1 1/4	0.8	A	2.05	1.88	1.69	1.51	1.16
P-8190*	6.3	1.2	2 x 3 1/4 x 1 3/4	1.0	A	2.71	2.48	2.22	1.99	1.53
P-8191#	6.3	1.2	2 x 3 1/4 x 1 3/4	1.0	A	2.91	2.67	2.39	2.13	1.60
P-5014*§	6.3 CT	3.0	3 1/8 x 2 3/8 x 2 1/4	2.0	BV	4.58	4.20	3.76	3.36	2.68
P-6466*	6.3 CT	3.0	2 x 3 1/8 x 2	1.4	A	3.33	3.05	2.73	2.44	1.88
P-6462†	6.3	3.0	3 x 3 1/8 x 2 3/8	2.0	S	5.49	5.03	4.51	4.03	3.03
P-4019†	6.3 CT	4.0	3 1/16 x 2 3/8 x 2 3/8	2.7	C	4.95	4.53	4.06	3.63	2.89
P-6465*	6.3 CT	0.6	1 3/8 x 2 3/8 x 1 3/8	0.4	A	1.95	1.78	1.60	1.43	1.10
P-3064*	6.3 CT	6.0	3 1/8 x 2 1/4 x 2 3/8	2.4	BV	5.31	4.87	4.36	3.89	3.00
P-4089†	6.3 CT	6.0	3 3/8 x 3 x 3 1/4	3.5	C	6.49	5.95	5.33	4.76	3.66
P-6456*	6.3 CT	6.0	2 1/8 x 3 3/8 x 2 1/4	2.0	A	3.75	3.43	3.07	2.75	2.12
P-6308†	6.3 CT	10.0	3 1/4 x 2 3/8 x 2 3/8	3.4	BV	6.45	5.92	5.30	4.73	3.75
P-6464*	6.3 CT	10.0	3 1/8 x 3 x 3 1/4	3.5	C	6.80	6.23	5.58	4.99	3.84
P-6309†	6.3 CT	20.0	4 5/8 x 3 3/4 x 3	6.7	NV	10.02	9.18	8.22	7.35	5.86
P-5015*§	7.5 CT	4.0	3 1/8 x 2 3/8 x 2 3/8	2.7	BV	4.65	4.27	3.82	3.41	2.82
P-4091*§	7.5 CT	8.0	3 3/8 x 3 x 3	3.7	C	6.58	6.03	5.40	4.83	3.72
P-6138*	7.5 CT	5.0	3 3/8 x 3 3/4 x 2 3/8	4.4	BV	7.15	6.55	5.87	5.24	4.18
P-6457†	7.5 CT	2.1	4 1/8 x 3 3/4 x 4	8.0	C	12.47	11.43	10.24	9.15	7.30
P-5016†	10.0 CT	4.0	3 1/8 x 2 3/8 x 2 3/8	3.3	BV	5.95	5.45	4.88	4.36	3.36
P-6458†	10.0 CT	5.0	3 1/16 x 2 1/4 x 2 3/8	4.0	C	4.62	4.23	3.79	3.39	2.71
P-4096*	10.0 CT	8.0	4 x 3 1/4 x 3 3/8	4.9	C	7.09	6.50	5.82	5.20	4.15
P-6139†	10.0 CT	5.0	3 3/8 x 4 x 3 1/8	5.2	BV	7.36	6.75	6.04	5.40	4.31
P-4097*	10.0 CT	8.0	4 x 3 1/4 x 3 3/8	5.2	C	7.67	7.03	6.30	5.63	4.49
P-6461*	10.0 CT	10.0	3 3/8 x 3 1/4 x 3 3/8	5.0	C	8.62	7.90	7.07	6.32	4.87
P-3020†	11.0 CT	10.0	4 3/4 x 4 x 3 1/2	7.7	C	9.78	8.97	8.03	7.17	5.52
P-8130†	12.6 CT	2.0	2 x 3 1/4 x 2	1.4	A	3.36	3.08	2.76	2.47	1.85
P-6469*	25.2	1.0	2 x 3 1/4 x 2	1.4	A	3.20	2.93	2.63	2.35	1.76

#### MULTIPLE SECONDARY

P-6333*	5.0	3.0	2 1/2 x 2 3/8 x 3 3/8	4.7	BH	\$9.24	\$8.47	\$7.58	\$6.77	\$5.21
	5.0	3.0								
	6.3 CT	4.0								
	7.5/6.3 CT	3.0								
P-6428*§	6.3	1.75	3 1/8 x 2 1/4 x 3	3.0	C	6.09	5.58	5.00	4.47	3.44
	6.3	1.75								
	6.3 CT	1.75								
P-6429*§	6.3	3.5	3 3/8 x 3 1/8 x 3 1/2	4.8	C	8.25	7.57	6.78	6.05	4.66
	6.3	3.5								
	6.3 CT	3.5								
P-6430*§	6.3 CT	3.0	3 1/8 x 2 1/4 x 2 3/8	2.8	C	5.40	4.95	4.43	3.96	3.05
	6.3 CT	3.0								
P-6431*§	6.3 CT	6.0	3 3/8 x 3 1/8 x 3 1/2	4.8	C	8.18	7.50	6.72	6.00	4.62
	6.3 CT	6.0								

Primary Volts: \* 117 v.; † 117/107 v.; # 6.3 v. ‡ Shipping. § Has electrostatic shield.

#### F-SERIES FILAMENT TRANSFORMERS

Units with secondaries rated for less than 6 amps have solder-lug terminals; those with secondaries rated at more than 6 amps have screw-type terminals. Numbers F-210, F-210H and F-520HB are for high voltage rectifier supply. All primaries: 115/230 v. AC, 50/60 cps.

Part No.	Secondary		Insul. VRMS	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Quantities of				Bulk 100-249
	Volts	Amps				1-9	10-24	25-49	50-99	
F-210	2.5 CT	10	5000	3 3/4 x 2 1/4 x 2 3/8	3	\$10.64	\$ 9.75	\$ 8.73	\$ 7.80	\$ 6.22
F-210H	2.5 CT	10	9000	4 1/4 x 3 x 2 1/4	4	12.93	11.85	10.61	9.48	8.01
F-54	5.0 CT	4	2500	3 1/8 x 2 3/8 x 2 1/4	2 1/4	7.11	6.52	5.84	5.21	4.31
F-58	5.0 CT	10	2500	3 3/4 x 2 1/4 x 2 3/8	3 1/2	14.75	13.52	12.10	10.81	8.12
F-516	5.0 CT	20	2500	4 1/16 x 3 1/8 x 3 1/8	6 1/2	18.64	17.08	15.30	13.67	10.25
F-520HB	5.0 CT	20	10,000	5 1/8 x 4 1/8 x 4 1/8	13	18.49	16.95	15.18	13.56	12.08
F-530	5.0 CT	30	2500	5 1/8 x 4 1/8 x 4 1/8	10 1/2	23.91	21.92	19.63	17.53	13.16
F-615	6.3 CT	1.5	2500	2 1/8 x 2 1/8 x 2 1/4	1	11.71	10.73	9.61	8.59	6.44
F-63	6.3 CT	3	2500	3 1/8 x 2 3/8 x 2 1/4	2	6.87	6.30	5.64	5.04	3.79
F-65	6.3 CT	5.5	2500	3 3/4 x 2 1/4 x 2 3/8	3	12.47	11.22	10.04	8.97	6.73
F-610	6.3 CT	10	2500	4 1/4 x 3 x 3 1/4	5	16.47	15.10	13.52	12.08	10.60
F-725	7.5 CT	25	2500	5 1/8 x 4 1/8 x 4 1/8	12	26.45	24.25	21.72	19.40	14.56
F-104	10 CT	4	2500	3 3/4 x 2 1/4 x 2 3/8	3 1/4	12.11	11.10	9.94	8.88	6.67

#### CASE SIZES

Case	Depth	Width	Height
8	1 1/2"	1 1/2"	1 1/2"
9	1 1/2"	1 1/2"	2 1/4"
12	2 1/2"	2 1/2"	2 1/4"
13	2 1/2"	2 1/2"	2 1/8"
14	2 1/2"	2 3/8"	3 1/4"
15	2 1/2"	2 3/8"	3 1/8"
16	2 1/2"	2 1/8"	3 1/8"
17	2 1/2"	2 1/8"	3 3/8"
18	3 1/4"	3 1/8"	3 3/8"
19	3 1/4"	3 3/8"	4 1/4"
20	3 1/8"	3 1/8"	4 3/8"
21	3 1/8"	3 1/8"	4 3/8"
22	4 1/8"	4 1/8"	5 1/8"
24	5 1/8"	4 1/8"	6 1/8"
26	6 1/8"	5 1/4"	7 1/8"

#### F-SERIES MULTIPLE FILAMENT TRANSFORMERS

All primaries: 105/115/125 v., 50/60 cycles. Insul. test, 2500 v., except F-8, 5000 v.

Part Number	Secondary Windings			Case Size	Wt., Lbs.	Net Each, Quantities of				Bulk 100-249
	Section No. 1	Section No. 2	Section No. 3			1-9	10-24	25-49	50-99	
F-1	5 v., 2 a.	6.3 v., 2.5 a.*	.....	15	2 3/4	\$17.64	\$16.17	\$14.48	\$12.93	\$ 9.71
F-2	5 v., 2 a.	12.6 v., 1.25 a.*	.....	15	2 3/4	15.05	13.80	12.36	11.04	8.28
F-3	5 v., 3 a.	6.3 v., 5 a.*	.....	17	3 1/8	17.95	16.45	14.73	13.16	9.88
F-4†	5 v., 3 a.	6.3 v., 3 a.*	6.3 v., 3 a.*	18	4 1/8	20.64	18.92	16.94	15.13	11.64
F-5	5 v., 3 a.	6.3 v., 1 a.*	6.3 v., 5 a.*	18	4 1/8	22.09	20.25	18.13	16.20	12.16
F-6‡	6.3 v., 3 a.*	6.3 v., 3 a.*	.....	17	3 1/8	18.16	16.65	14.91	13.32	10.00
F-7‡	6.3 v., 6 a.*	.....	.....	21	6 1/8	20.36	18.67	16.72	14.93	11.48
F-8	5 v., 3 a.*	5 v., 3 a.*	5 v., 6 a.*	21	7	25.13	23.03	20.63	18.42	13.83

\* Center Tapped. † Sections 2 and 3 also tapped, 12.6 v. CT at 3 amps. ‡ Sections 1 and 2 also tapped at 12.6 v. CT at 3 amps.

§ Sections 1 and 2 also tapped 12.6 v. CT at 6 amps.

# STANCOR ELECTRONICS, INC.

### Audio Transformers: MIL-T-27A, Commercial Grade

#### WIDE RANGE OUTPUT TRANSFORMERS

Maximum operating altitude, 10,000 feet. Frequency Response:  $\pm 1$  db, 30-15,000 cps. Designed and built according to MIL-T-27A requirements. Mounting type B.

Part No.	Application	Impedance		Oper. Lev.*	Case Size	Net Each, Quantities of				
		Primary	Sec.			1-9	10-24	25-49	50-99	100-249
BOH-2	P-p plates to line, 6C5's or equiv.	20K CT†	600/150 CT†	+30	16	\$19.38	\$17.77	\$15.91	\$14.21	\$13.33
BOH-4	P-p plates to line, 6L6's or equiv.	7500 CT	600/150 CT†	+43	20	25.04	22.95	20.55	18.36	17.21
BOH-5	P-p plates to line or VC, 6V6's, equiv.	10K CT†	600/16/8 CT†	+37	18	24.40	22.37	20.03	17.89	16.78

\* Reference level of 0 dbm equals 1 mw. † Split and balanced windings. ‡ Tertiary winding for 15% inv. feedback.

#### MS (MILITARY STANDARD) AUDIO TRANSFORMERS

Maximum operating altitude, 50,000 feet. Frequency Response:  $\pm 2$  db, 300-10,000 cps. Case size, 1 3/8" sq. x 2 3/8" h., Type AMS. Weight, 0.6 lbs. (max.).

Part No.	MIL-T-27A Classification	Application	Impedance		Oper. Lev.*	Mtg. Type	Case Size	Net Each, Quantities of				Bulk
			Primary	Secondary				1-9	10-24	25-49	50-99	
AMS-2	TFIRX16AJ002	Line to VC	600 CT	4/8/16	+15 dbm	B	14	\$15.56	\$14.27	\$12.78	\$11.41	\$ 8.56
AMS-3	TFIRX10AJ001	Line to p-p grids	600 CT	135K CT	+30 dbm	B	16	18.80	17.23	15.43	14.77	10.35
AMS-4	TFIRX16AJ001	Line to line	600 CT	600 CT	5 watts	B	18	22.27	20.42	18.28	16.33	12.25
AMS-5	TFIRX13AJ001	Single pl. to line	150 CT	600 CT		B	16	18.80	17.23	15.43	14.77	10.35
AMS-6	TFIRX13AJ002	Single pl. to VC	7600/4800	150 CT		B	18	22.27	20.42	18.28	16.33	12.25

#### FULL FREQUENCY RANGE OUTPUT TRANSFORMERS

Frequency Response:  $\pm 1.5$  db, 30-20,000 cps. Mounting type B semi-sealed.

Part No.	Application	Impedance, Ohms		Oper. Level†	Mtg. Type	Case Size	Net Each, Quantities of				Bulk
		Primary	Secondary				1-9	10-24	25-49	50-99	
BO-1	Sing. Pl. to line	15K†	600/150 CT‡	+15 dbm	B	14	\$15.56	\$14.27	\$12.78	\$11.41	\$ 8.56
BO-2	Push-pull plates to line	20K CT‡	600/150 CT‡	+30 dbm	B	16	18.80	17.23	15.43	14.77	10.35
BO-5	P-p plates to line or VC	10K CT‡	600/16/8 CT and 150/4†		B	18	22.27	20.42	18.28	16.33	12.25

\* 0 dbm, reference level, 1 mw. † 0-10 DCMa. ‡ Split and balanced windings

#### FULL FREQUENCY RANGE INPUT TRANSFORMERS

Frequency Response:  $\pm 1$  db, 30-15,000 cps. Primary and secondary windings split and balanced. Mounting type B semi-sealed.

Part No.	Application	Impedance, Ohms		Oper. Level	Mtg. Type	Case Size	Net Each, Quantities of				Bulk
		Primary	Secondary				1-9	10-24	25-49	50-99	
BI-2	Line to single or p-p grids	600/150 CT	50K CT	+15 dbm	B	12	\$36.33	\$33.30	\$29.82	\$26.64	\$19.99
BI-3	Line bridging to p-p grids	8K/6K CT	50K CT	+15 dbm	B	12	32.64	29.92	26.79	23.93	18.41

#### PUBLIC ADDRESS RANGE DRIVER TRANSFORMER

Frequency Response:  $\pm 1/2$  db, 50-10,000 cps. Ratio of primary to 1/2 secondary, 3:1. Mounting type C semi-sealed. Weight, 2 1/4 lbs.

Part No.	Typical Driver Tubes	Primary Imped.	Max. DC in Pri.	Case Size	Net Each, Quantities of				Bulk
					1-9	10-24	25-49	50-99	
PCD-25	P-p 6N7's, 6A6's, 6J5's, 6C4's, etc.	20K CT	25 ma	15	\$7.82	\$7.17	\$6.42	\$5.73	\$4.31

#### OUTPUT TRANSFORMERS

##### PUSH-PULL

Power level, 15 watts. Max. DC in pri., 200 ma. Mtg. type C semi-sealed. Case size 19. Wt., 5 lbs.

Part No.	Typical Output Tubes	Class	Impedance, Ohms		Net Each, Quantities of				Bulk
			Primary	Secondary	1-9	10-24	25-49	50-99	
PCO-150	6V6's, 6F6's	AB	10K CT	600/150/16/8/4	\$13.18	\$12.08	\$10.82	\$ 9.67	\$7.25
PCO-150A	6V6's, 6F6's	AB	12K CT	600/150/16/8/4	14.05	12.88	11.54	10.31	7.73

##### SINGLE-PLATE TO LINE OR VOICE COIL

Power level, 5 watts. Max. DC in pri., 55 ma. Mtg. type C semi-sealed. Case size, 14. Wt., 2 1/4 lbs.

Part No.	Typical Output Tubes	Class	Impedance, Ohms	Net Each, Quantities of				Bulk	
				1-9	10-24	25-49	50-99		100-249
COC-1	6L6, 6V6, 25A6	A	5K	600/150/16/8/4	\$8.29	\$7.60	\$6.81	\$6.08	\$4.56
COC-2	6F6, 6V6, 6N6, 6K6, 7B5	A	8K	600/150/16/8/4	9.93	9.10	8.15	7.28	5.47

#### COMMUNICATIONS RANGE INPUT TRANSFORMERS

Frequency Response: 1 db, 200-3500 cps. Mtg. type C semi-sealed. Case size 9. Wt., 3/4 lbs.

Part No.	Application	Impedance, Ohms		Net Each, Quantities of				Bulk
		Primary	Secondary	1-9	10-24	25-49	50-99	
CIC-1	Low level line to single or p-p grids	600/150 CT	100K CT	\$16.40	\$15.03	\$13.46	\$12.03	\$ 9.03
CIC-2	Low level SB or DB mic. to sgl. or p-p grids	125/50, 80 ma	125K CT	7.29	6.68	5.99	5.35	4.01

#### WF SERIES FULL FREQUENCY RANGE AUDIO TRANSFORMERS

Frequency Response:  $\pm 2$  db, 30-20,000 cps. Maximum operating level, +7 db. Mtg. type WF. Size, 1 1/2" sq. x 2". Weight, 0.6 lbs.

Part No.	Application	Impedance, Ohms		Net Each, Quantities of				Bulk
		Primary	Secondary	1-9	10-24	25-49	50-99	
WF-20	Low imped. mic., pickup or line to grid	50, 125/150, 200, 250, 333, 500/600	50K	\$13.09	\$12.00	\$10.75	\$9.60	\$9.00
WF-21*	Low imp. mic., pickup or line to sgl. or p-p grids	50, 200, 500	50K	11.91	10.92	9.78	8.73	8.19
WF-22	Low imp. mic., pickup or line to p-p grids	50, 125/150, 200, 250, 333, 500/600	80K overall, 2 sections	11.91	10.92	9.78	8.73	8.19
WF-30	Low imp. mixer, mic., pickup or line to line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	13.62	12.48	11.18	9.99	9.36
WF-36†	P-p low level plates to line (output)	30,000 plate-to-plate	50, 125/150, 200, 250, 333, 500/600	13.09	12.00	10.75	9.60	9.00

\* Frequency Response:  $\pm 2$  db, 50-20,000 cps, magnetic shield. † Use shunt plate feed to keep DC out of primary winding.

#### HIGH FIDELITY OUTPUT TRANSFORMERS

Frequency response excellent from 20 to 20,000 cps. Extremely low level of intermodulation distortion over entire range and at any power level. Type PC upright shell mounting for all units. Shipping Weight, 6.5 lbs. Size: 4 1/16" h. x 3 3/16" w. x 4 1/4" d.

Part No.	Pri. Imp. (PP) Ohms	Sec. Imp. Ohms*	Max. Watts	Max. Pri. DCMa†	Net Each, Quantities of				Bulk
					1-9	10-24	25-49	50-99	
A-8953	5000	8, 16	50	150	\$13.38	\$12.27	\$10.99	\$ 9.81	\$7.36
A-8954	6500	8, 16	50	135	13.38	12.27	10.99	9.81	7.36
A-8954	9000	8, 16	50	100	12.27	10.99	9.81	9.81	7.36
A-8972**	7600	4, 8, 16	25	100	16.36	15.00	13.43	12.00	9.00

\* Where more than one secondary impedance is shown, only one value is to be used at any time. \*\* Primary provided with screen taps for ultra-linear use. † DCMa per half of primary.

## STANCOR ELECTRONICS, INC.



### Audio, Special Purpose

#### SINGLE PLATE TO VOICE COIL

Part No.	Impedance in Ohms		Max. Watts	Mtg. Type	Net Each, Quantities of				Bulk 100-249
	Primary	Secondary			1-9	10-24	25-49	50-99	
A-3332	2,000	3.2	3	A	\$1.36	\$1.25	\$1.12	\$1.00	\$ .78
A-3876	2,000	4	5	A	1.45	1.33	1.19	1.07	.85
A-3328	4,000	3.5	3	A	1.35	1.23	1.09	.99	.77
A-2203	4,000	8	5	A	2.42	2.22	1.99	1.77	1.33
A-3877	5,000	4	5	A	1.45	1.33	1.19	1.07	.85
A-8092	5,000	3-4	8	A	2.05	1.88	1.69	1.51	1.13
A-3337	5,000	6-8	10	S	2.29	2.10	1.88	1.68	1.30
A-3310	5,000	500, 15, 8, 4	20	C	5.60	5.13	4.60	4.11	3.16
A-3878	7,000	4	5	A	1.49	1.37	1.22	1.09	.88
A-2313	7,000	8	10	A	2.51	2.30	2.06	1.84	1.39
A-8114	7,600	3.2	5	A	1.73	1.58	1.42	1.27	.98
A-3329	8,000	3.5	3	A	1.35	1.23	1.10	.99	.80
A-3879	10,000	4	5	A	1.45	1.33	1.19	1.07	.86
A-3881	15,000	4	5	A	1.60	1.47	1.31	1.17	.91
A-3327	25,000	4	5	A	1.80	1.65	1.48	1.32	1.05

#### PUSH-PULL PLATES TO VOICE COIL

Part No.	Impedance in Ohms		Max. Watts	Mtg. Type	Net Each, Quantities of				Bulk 100-249
	Primary, CT	Secondary			1-9	10-24	25-49	50-99	
A-8098†	2,000	8, 16, 32	15	C	\$ 7.98	\$ 7.32	\$ 6.55	\$ 5.85	\$ 4.40
A-3802	3,800/3,300	500, 250, 8, 4	75	C	11.78	10.80	9.67	8.64	6.65
A-8094†	4,000	8, 16, 32	71½	C	4.00	3.67	3.28	2.93	2.26
A-3851*	4,400	500, 250, 15, 8, 4	30	C	7.27	6.67	5.60	5.33	4.25
A-3872	5,000	15, 8, 4	18	TD	4.58	4.20	3.76	3.36	2.59
A-3800	5,000	500, 250, 15, 8, 4	30	C	6.75	6.18	5.54	4.95	3.81
A-3307	6,000	500, 15, 8, 4	30	C	7.76	7.12	6.37	5.69	4.28
A-3801	6,000	500, 250, 15, 8, 4	35	C	8.58	7.87	7.04	6.29	4.84
A-3885	9,000	500, 250, 15, 8, 4	35	C	8.51	7.80	6.99	6.24	4.80
A-4432	10,000	4	10	S2	2.42	2.22	1.99	1.77	1.47
A-3304	10,000/7,000	500, 15, 8, 4	25	C	6.31	5.78	5.18	4.63	3.56
A-3311	10,000	500, 15, 8, 4	25	C	6.78	6.22	5.57	4.97	3.83
A-3831	10,000	8, 4, 2	5	A	2.65	2.43	2.18	1.95	1.51
A-8093	10,000	3-4	10	A	2.13	1.95	1.75	1.56	1.17
A-3335	10,000	6-8/3-2-4	10	S	3.09	2.83	2.54	2.27	1.71
A-3839	10,000	2,000, 15, 8, 4	10	TD	4.75	4.35	3.90	3.48	2.61
A-3312	14,000	4	10	A	2.80	2.57	2.30	2.05	1.59
A-3496	14,000	4	5	A	2.65	2.43	2.18	1.95	1.47
A-3303	14,000	500, 15, 8, 4	20	C	6.42	5.88	5.27	4.71	3.53
A-3857	25,000	4	5	A	2.36	2.17	1.94	1.73	1.31

\* Has tertiary winding to provide 10% inverse feedback. † For use in "Twin-Coupled" amplifier.

#### SINGLE PLATE TO PUSH-PULL GRIDS

Single Plate (7,000 to 15,000 ohms) to p-p class "A" grid; rated 10 ma DC, A-53 Single Plate to Single Grid (7,000-20,000 ohms).

Part No.	Turns Ratio	H. x W. x D. Inches	Mtg. Type	Net Each, Quantities of				Bulk 100-249
				1-9	10-24	25-49	50-99	
A-53	1:3	1½ x 2½ x 1½	A	\$1.98	\$1.82	\$1.63	\$1.45	\$1.12
A-53-C	1:3	1½ x 2½ x 1½	A	2.36	2.17	1.94	1.73	1.34

#### VIBRATOR TRANSFORMER

Part No.	Secondary VAC	Filter Input VDC*	DC Ma	Recom. Buffer Capac.	Mtg. Type	Net Each, Quantities of				Bulk 100-249
						1-9	10-24	25-49	50-99	
P-6166†	350-0-350	6.3‡	135	.01 µf	C	\$11.87	\$10.88	\$9.75	\$8.71	\$6.94

\* When used with sync vibrator. † 6 v. DC and 117 v. AC primaries. ‡ Filament, at 2.25 amps.

#### AUTOMATION CONTROL TRANSFORMERS

Primary, 115/230 v. AC, 50/60 cps on all models.

Part No.	Secondary		VA Rating	Mtg. Type	Wt., Lbs.	Net Each, Quantities of				Bulk 100-249
	Parallel	Series				1-9	10-24	25-49	50-99	
P-6375	6 v. at 2 amps	12 v. at 1 amp	12	J	1	\$ 3.42	\$ 3.13	\$ 2.81	\$ 2.51	\$1.93
P-6376	6 v. at 4 amps	12 v. at 2 amps	24	J	1½	3.71	3.40	3.04	2.72	2.10
P-6377	12 v. at 4 amps	24 v. at 2 amps	48	J	2½	4.69	4.30	3.85	3.44	2.65
P-6378	12 v. at 8 amps	24 v. at 4 amps	96	BV	4½	7.58	6.95	6.22	5.65	4.28
P-6379	12 v. at 16 amps	24 v. at 8 amps	192	BV	8	13.07	11.98	10.73	9.59	7.65

#### MOBILE OR FIXED TRANSISTOR POWER TRANSFORMER

Part Number	Primarys	Secondarys	RMS V. Test	Mtg. Type	Size, In.		Net Each, Quantities of				Bulk 100-249	
					H.	W.	1-9	10-24	25-49	50-99		
P-8195	12 v. DC or 117 v. AC 60 cycles	280 v. DC at 150 ma* and 12.6 v. AC at 3 amps†	1500	C	3½	3½	3½	\$13.60	\$12.47	\$11.16	\$9.97	\$7.48

\* Continuous duty, 250 ma intermittent. † With 117 v. AC primary only.

#### STEPUP-STEPDOWN TRANSFORMERS

Use with air conditioners. 60 cps; 208/230 v.; 230/208 v.

Part No.	Output, KVA	For Motor Size	Size, Inches H. x W. x D.	Shpg. Wt., Lbs.	Mtg. Type	Net Each, Quantities of				Bulk 100-249
						1-9	10-24	25-49	50-99	
PSU-2000	2.3	.5-1 hp	3½ x 3¾ x 6½	9	PSU	\$16.40	\$15.03	\$13.46	\$12.03	\$ 9.93
PSU-3000	3	1-2 hp	4 x 4½ x 6	10	PSU	19.71	18.07	16.18	14.45	11.93

#### STEP-DOWN TRANSFORMERS (PRIMARY, 50/60 CYCLES)

Input side is provided with an eight-foot covered cord and plug for use in wall receptacle, etc; output side has standard female receptacle. Mounting type SD.

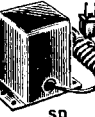
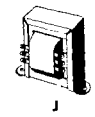
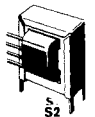
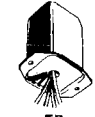
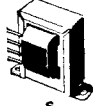
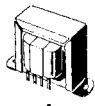
Part Number	Input Voltage	Output Voltage	Rating, Cont. Duty	Wt., Lbs.	Net Each, Quantities of				Bulk 100-249
					1-9	10-24	25-49	50-99	
SD-50	220-250	110-125	50 watts	2¾	\$ 5.96	\$ 5.47	\$ 4.90	\$ 4.37	\$ 3.49
SD-100	220-250	110-125	100 watts	24	7.47	6.85	6.13	5.48	4.37
SD-150	220-250	110-125	150 watts	7	9.47	8.68	7.78	6.95	5.54
SD-250	220-250	110-125	250 watts	7	11.24	10.30	9.22	8.24	6.50
SD-500	220-250	110-125	500 watts	14½	16.96	15.55	13.93	12.44	9.92
SD-1000	220-250	110-125	1000 watts	22½	24.09	22.08	19.78	17.67	14.08

#### ISOLATION TRANSFORMERS (PRIMARY, 50/60 CYCLES)

Eight-foot rubber-covered cord with plug is provided on the primary, secondary has standard female receptacle. Mounting type IS.

Part Number	Input Voltage†	Output Voltage	Rating, Cont. Duty	Wt., Lbs.	Net Each, Quantities of				Bulk 100-249
					1-9	10-24	25-49	50-99	
IS-50	105/115/125	125/115/105*	50 watts	5	\$11.20	\$10.27	\$ 9.19	\$ 8.21	\$ 6.78
IS-100	105/115/125	125/115/105*	100 watts	8½	14.69	13.47	12.06	10.77	8.59
IS-150	105/115/125	125/115/105*	150 watts	12½	17.29	15.85	14.19	12.68	10.11
IS-250	105/115/125	125/115/105*	250 watts	18½	23.44	21.48	19.24	17.19	13.70

\* With 115 v. AC primary only. † Switch selected.



Filter Reactors; Isolation, Line Adjusting Transformers

FILTER REACTORS

Units have high grade magnet wire coils wound on non-aging, silicon steel cores; housed in seamless, drawn steel cases and sealed with special moisture-resistant compound. Hermetically sealed units, H-Type meet the rigid standards of Grade 4, MIL-T-27A specifications for Class R operation. One-piece steel covers are bonded by deep-seal soldering. Semi-sealed units, S-Type, have steel base covers fitted with phenolic terminal boards, numbered solder lugs. Compound sealed units, C-Type have fiber board covers and 10" color-coded leads.

MIL-T-27A "H" TYPE MOUNTING UNITS

Part No.	Inductance in Henries	Max. Cur. DC Ma	DC Resist. in Ohms	Insul. Test Volts RMS	Wt., Lbs.	Case No.	Net Each, Quantities of				
							1-9	10-24	25-49	50-99	100-249
RH-1510	15	10	680	1,000	1	8	\$ 8.91	\$ 8.17	\$ 7.31	\$ 6.53	\$ 6.13
RH-1520	15	20	680	1,000	1	8	7.16	6.57	5.88	5.25	4.93
RH-1540	15	40	475	2,500	1 1/2	12	8.78	8.05	7.21	6.44	6.04
RH-1555	15	55	420	2,500	2	13	8.82	8.08	7.24	6.47	6.06
RH-1585	15	85	285	2,500	2 3/4	14	9.76	8.95	8.01	7.16	6.71
RH-12105	12	105	170	2,500	4	17	11.76	10.78	9.66	8.63	8.09
RH-12150	12	150	150	2,500	5 1/2	19	13.49	12.37	11.07	9.89	9.28
RH-12200	12	200	140	2,500	7	20	15.60	14.30	12.81	11.44	10.73
RH-1055	10	55	230	2,500	1 3/4	13	8.75	8.02	7.18	6.41	6.01
RH-1085	10	85	175	2,500	2 1/2	14	9.60	8.80	7.88	7.04	6.60
RH-8105	8	105	100	2,500	3 3/4	17	11.89	10.90	9.76	8.72	8.18
RH-8150	8	150	100	2,500	5 1/4	18	13.00	11.92	10.67	9.53	8.94
RH-8200	8	200	85	2,500	7	20	15.45	14.17	12.69	11.33	10.63
RH-8250	8	250	90	2,500	10 1/2	22	17.78	16.30	14.60	13.04	12.23
RH-8300	8	300	60	3,500	12 1/2	22	22.45	20.58	18.43	16.47	15.44

SEMI-SEALED "S" TYPE MOUNTING UNITS WITH LUGS

Part No.	Inductance in Henries	Max. Cur. DC Ma	DC Resist. in Ohms	Insul. Test Volts RMS	Wt., Lbs.	Case No.	Net Each, Quantities of					Bulk 100-249
							1-9	10-24	25-49	50-99		
RS-1540	15	40	475	2,500	1 1/2	12	\$ 7.22	\$ 6.62	\$ 5.93	\$ 5.29	\$ 4.97	
RS-1555	15	55	421	2,500	2	12	7.53	6.90	6.18	5.52	5.22	
RS-1585	15	85	285	2,500	2 3/4	15	8.69	7.97	7.13	6.37	4.79	
RS-12105	12	105	170	2,500	4	17	10.38	9.52	8.52	7.61	5.72	
RS-12150	12	150	150	2,500	5 1/2	19	11.69	10.72	9.60	8.57	6.44	
RS-12200	12	200	140	2,500	7	21	13.71	12.57	11.25	10.05	7.74	
RS-1055	10	55	230	2,500	1 3/4	12	7.47	6.85	6.13	5.48	4.12	
RS-1085	10	85	175	2,500	2 1/2	15	8.29	7.60	6.81	6.08	4.56	
RS-8105	8	105	100	2,500	3 3/4	17	10.51	9.63	8.63	7.71	5.79	
RS-8150	8	150	100	2,500	5 1/4	19	12.42	11.38	10.19	9.11	6.84	
RS-8200	8	200	85	2,500	7	21	15.51	14.30	12.69	11.33	8.57	
RS-8300	8	300	60	3,500	12 1/2	22	22.93	21.85	19.61	17.48	13.01	

SEMI-SEALED "C" TYPE MOUNTING UNITS WITH LEADS

Part No.	Inductance in Henries	Max. Cur. DC Ma	DC Resist. in Ohms	Insul. Test Volts RMS	Wt., Lbs.	Case No.	Net Each, Quantities of					Bulk 100-249
							1-9	10-24	25-49	50-99		
RC-1540	15	40	475	2,500	1 1/2	12	\$ 5.15	\$ 4.72	\$ 4.22	\$ 3.77	\$ 2.84	
RC-1555	15	55	421	2,500	2	12	5.89	5.40	4.84	4.32	3.24	
RC-1585	15	85	285	2,500	2 3/4	14	6.78	6.22	5.57	4.97	3.73	
RC-12105	12	105	170	2,500	4	16	10.38	9.52	8.52	7.61	5.72	
RC-12200	12	200	140	2,500	7	20	11.11	10.18	9.12	8.15	6.12	
RC-1055	10	55	230	2,500	1 3/4	12	5.42	4.97	4.45	3.97	2.99	
RC-1085	10	85	175	2,500	2 1/2	14	6.16	5.65	5.06	4.52	3.40	
RC-8150	8	150	100	2,500	5 1/4	18	9.58	8.78	7.87	7.03	5.28	
RC-8200	8	200	85	2,500	7	20	10.85	9.95	8.91	7.96	5.97	
RC-8300	8	300	60	3,500	12 1/2	22	14.49	13.28	11.90	10.63	8.47	

CASE SIZES

Case	Depth	Width	Height	Case	Depth	Width	Height	Case	Depth	Width	Height
8	1 1/2"	1 1/2"	1 1/2"	15	2 1/2"	2 3/4"	3 1/2"	20	3 1/2"	3 3/4"	4 5/8"
9	1 1/2"	1 1/2"	2 1/8"	16	2 1/2"	2 3/4"	3 1/2"	21	3 1/2"	3 3/4"	4 1/2"
12	2 1/4"	2 1/8"	2 1/8"	17	2 1/2"	2 1/8"	3 3/4"	22	4 1/8"	4 1/8"	5 1/8"
13	2 1/4"	2 1/8"	2 1/8"	18	3 1/4"	3 1/4"	3 3/4"	24	5 1/8"	5 1/8"	6 1/8"
14	2 1/2"	2 3/8"	3 3/8"	19	3 1/4"	3"	4 1/4"	26	6 1/8"	5 1/4"	7 1/8"

Built-in electrostatic shields grounded to core internally.

ISOLATION TRANSFORMERS

Part No.	Watts	Mtg. Type	H. x W. x D. Inches	Shpg. Wt., Lbs.	Net Each, Quantities of					Bulk 100-249
					1-9	10-24	25-49	50-99		
P-6410*	50	K	3 1/8 x 2 1/8 x 3 1/8	3.7	\$ 7.78	\$ 7.13	\$ 6.39	\$ 5.71	\$ 4.39	
P-6160	100	KA	4 3/4 x 4 x 5 3/8	7	14.22	13.03	11.67	10.43	8.61	
P-6161	250	KA	4 3/4 x 4 x 5 3/8	14.2	21.02	19.27	17.25	15.41	12.29	
P-6298	500	KA	7 3/4 x 6 1/2 x 7 3/8	28	42.31	38.78	34.73	31.03	25.60	
P-6125	1000	FK	7 3/4 x 5 3/8 x 7 3/4	34.8	66.53	60.98	54.61	48.79	38.88	
P-6125	1500	FK	7 3/4 x 5 3/8 x 9	49.8	92.64	84.92	76.05	67.93	54.14	
P-6371†	175	TE	5 1/8 x 4 1/8 x 5 1/4	9	18.98	17.40	15.58	13.92	10.44	

\* Primary 115 v. only. † Specifically designed for AC-DC Portable TV Receivers. Primary 117 v. only.

STEP-DOWN ISOLATION (250/230/210 V. 50/60 cps. TO 115 V.)

P-6383	100	KA	4 3/4 x 4 x 3 3/4	7.3	\$14.36	\$13.17	\$11.79	\$10.53	\$ 8.40
P-6385	250	KA	4 3/4 x 4 x 5 3/8	14.2	23.40	21.45	19.21	17.16	13.68

ISOLATION TESTING (117 V. 50/60 cps. TO 105/115/125 V.)

P-6415	350	KC	5 3/8 x 4 3/8 x 5 3/4	17	\$23.07	\$21.15	\$18.94	\$16.92	\$13.49
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115 v. secondary; 230 v. primary. 50/60 cps.

AUTOTRANSFORMERS

Part No.	Watts	H. x W. x D. Inches	Shpg. Wt., Lbs.	Mtg. Type	Net Each, Quantities of					Bulk 100-249
					1-9	10-24	25-49	50-99		
P-6287	40	3 1/4 x 2 1/8 x 2 7/16	2.2	K2	\$ 6.36	\$ 5.83	\$ 5.22	\$ 4.67	\$ 3.73	
P-5062	80	3 3/8 x 3 x 3 1/4	3.8	K	7.78	7.13	6.39	5.71	4.55	
P-5063	100	4 x 3 1/4 x 3 1/4	4.5	K	8.25	7.57	6.78	6.05	4.83	
P-5064	150	4 3/8 x 3 3/8 x 3 3/8	5.2	K	9.73	8.92	7.99	7.13	5.69	
P-5065	300	4 3/4 x 4 x 4 1/2	8.8	K	13.51	12.38	11.09	9.91	7.62	
P-6141	500	4 3/4 x 4 x 5 3/8	13.7	K	17.78	16.30	14.60	13.04	10.41	

LINE ADJUSTING TRANSFORMERS

Nominal output, 115 v. Input (50-60 cps); 65/75/90/100/115/130/145 v. Type PV case with output meter.

Part No.	Watts	H. x W. x D. Inches	Shpg. Wt., Lbs.	Mtg. Type	Net Each, Quantities of					Bulk 100-249
					1-9	10-24	25-49	50-99		
PV-6441	150†	5 1/2 x 3 7/8 x 5 3/8	6.4	PV	\$19.44	\$17.82	\$15.96	\$14.25	\$11.36	
PV-6442	350†	5 1/2 x 3 7/8 x 6 1/8	10.5	PV	22.38	20.52	18.37	16.41	12.99	
PV-6443	500†	5 1/2 x 3 7/8 x 6 7/8	15.0	PV	24.75	22.68	20.31	18.15	14.46	

† Watts to pure resistive load. To other types of loads, multiply rating of line adjuster by power factor of load for actual wattage.

STANCOR ELECTRONICS, INC.

**CHICAGO  
STANCOR**

**Chokes, Filters, Toroids**



**Voltage Stabilizers**

**SMOOTHING CHOKES**

For DC power supplies. Rated 10 v., 60 cps. with max. DC in windings. Tolerance of -15% + 50% on all ratings.

Part No.	Hys.	Ma	Ohms	H. x W. x D. Inches	Mtg. Type	Wt., Lbs.	Net Each, Quantities of					Bulk
							1-9	10-24	25-49	50-99	100-249	
C-2707	2.0	15	70	1 3/16 x 2 3/16 x 1 3/4	A	0.4	\$ 1.50	\$ 1.35	\$ 1.22	\$ 1.13	\$ .86	
C-2344	1.5	85	85	1 1/4 x 2 3/4 x 1 3/8	A	0.5	1.09	1.00	.90	.80	.66	
C-1515	20.0	15	900	1 3/8 x 2 3/8 x 1 3/8	A	0.7	2.11	1.93	1.73	1.55	1.19	
C-2318	12.0	30	400	1 1/2 x 2 1/2 x 1 1/2	A	0.5	1.80	1.62	1.48	1.32	1.00	
C-1706	4.5	50	300	1 3/8 x 2 3/8 x 1 3/8	A	0.4	1.25	1.15	1.03	.92	.74	
C-1707	7.0	50	550	1 3/8 x 2 3/8 x 1 3/8	A	0.4	1.38	1.27	1.13	1.01	.78	
C-1003	16.0	50	580	2 x 3 1/4 x 1 3/4	A	1.1	2.13	1.95	1.75	1.56	1.25	
C-1708	13.0	65	500	2 x 3 1/4 x 1 3/4	A	1.0	2.36	2.17	1.94	1.73	1.34	
C-1355	8.0	75	290	2 1/16 x 2 3/16 x 1 3/4	L	1.0	2.60	2.38	2.13	1.91	1.53	
C-1002	15.0	75	400	2 1/4 x 3 3/4 x 2 1/4	A	1.7	2.84	2.60	2.33	2.08	1.60	
C-1420	16.0	80	360	3 3/16 x 2 5/8 x 2 5/8	C	2.5	4.55	4.17	3.73	3.33	2.67	
C-1709	8.0	85	250	2 x 3 1/4 x 2	A	1.4	2.36	2.17	1.94	1.73	1.34	
C-2305	5.0	100	300	2 1/16 x 2 3/16 x 2 1/16	TD	1.5	3.38	3.10	2.78	2.48	1.93	
C-1001	10.5	110	225	2 3/8 x 3 x 1 3/4	A	2.3	3.50	3.22	2.88	2.57	2.05	
C-2704	9	125	250	2 3/4 x 3 3/4 x 1 3/4	A	1.8	3.02	2.77	2.48	2.21	1.71	
C-2303	2.5	130	100	2 x 3 1/4 x 1 3/4	A	1.0	2.20	2.02	1.81	1.61	1.24	
C-1421	7.0	140	165	3 3/16 x 2 3/8 x 2 3/8	C	2.5	4.55	4.17	3.73	3.33	2.67	
C-2304	2.3	150	60	2 x 3 1/4 x 1 3/4	A	1.0	2.20	2.02	1.81	1.61	1.24	
C-2309	3.0	150	90	2 1/4 x 3 3/4 x 2 1/4	A	1.7	2.53	2.32	2.07	1.81	1.43	
C-1710	7.0	150	200	2 5/8 x 4 x 2 1/4	A	2.2	3.53	3.23	2.90	2.59	2.07	
C-2335	7.0	150	170	3 x 2 1/2 x 3	TD	2.3	4.91	4.50	4.03	3.60	2.71	
C-1410	4.0	175	100	3 3/16 x 2 3/8 x 2 3/8	C	2.4	4.45	4.08	3.66	3.27	2.51	
C-2327	1.5	200	85	1 5/8 x 2 3/8 x 1 1/2	A	0.8	1.76	1.62	1.45	1.29	1.00	
C-2325	2.0	200	60	2 1/4 x 3 3/4 x 2 1/4	A	1.8	2.80	2.57	2.30	2.05	1.59	
C-1646	5.0	200	90	4 x 3 1/4 x 3 3/4	C	4.5	6.67	6.12	5.48	4.89	3.77	
C-1411	4.5	200	80	3 3/8 x 3 x 3 3/4	C	3.5	5.56	5.10	4.57	4.08	3.15	
C-1721	8.5	200	120	3 3/8 x 3 1/2 x 3 1/2	NV	4.4	7.36	6.75	6.04	5.54	4.31	
C-2705	10	200	150	3 3/8 x 3 1/2 x 3 1/2	C	4.5	7.11	6.52	5.84	5.21	4.01	
C-1703	4.0	250	60	3 1/2 x 2 7/8 x 3 1/2	BV	4.2	6.09	5.58	5.00	4.47	3.57	
C-1412	4.0	250	60	3 3/8 x 3 x 3 3/8	C	4.3	6.84	6.27	5.61	5.01	3.86	
C-2326	1.0	300	43	2 1/4 x 3 3/4 x 2 1/4	A	1.7	2.85	2.62	2.34	2.09	1.61	
C-2334	2.8	300	60	2 5/8 x 2 3/4 x 2 3/4	A	2.5	3.47	3.18	2.85	2.55	2.04	
C-1722	8.0	300	80	4 3/8 x 3 3/4 x 3 1/2	NV	7.3	10.84	9.93	8.90	7.95	6.11	
C-1413	8.0	300	80	4 3/8 x 4 x 4 1/4	D	7.8	11.25	10.32	9.24	8.25	6.58	
C-2308	8.0	300	80	4 3/4 x 4 x 3 3/4	C	7.8	10.84	9.93	8.90	7.95	6.34	
C-2328	0.8	375	25	2 1/4 x 3 3/4 x 2	A	1.5	3.53	3.23	2.90	2.59	1.95	
C-1414	7.5	400	60	4 3/4 x 4 x 5 1/4	D	11.8	15.40	14.12	12.64	11.29	9.01	
C-2708	0.32	600	10	1 1/16 x 2 3/16 x 2	A	1.3	2.87	2.65	2.40	2.16	1.52	
C-1723	4.5	50	325	1 3/8 x 2 3/8 x 1 3/8	A	0.4	1.38	1.27	1.13	1.01	.78	

**SWINGING CHOKES**

For AC-DC power supplies. Rated at 10 v., 60 cps. with max. DC in winding. Tolerance of -15% + 50% on all ratings.

Part No.	Hys.	Ma	Ohms	H. x W. x D. Inches	Mtg. Type	Wt., Lbs.	Net Each, Quantities of					Bulk
							1-9	10-24	25-49	50-99	100-249	
C-1718	13.5-3.5	15-150	130	3 3/16 x 2 3/8 x 2 1/4	C	2.3	\$ 4.35	\$ 3.98	\$ 3.57	\$ 3.19	\$ 2.46	
C-1400	12-2	17.5-175	100	3 3/16 x 2 3/8 x 2 3/8	C	2.4	4.65	4.27	3.82	3.41	2.63	
C-1401	12-2	20-200	80	3 3/8 x 3 x 3 3/8	C	3.5	5.84	5.35	4.79	4.28	3.29	
C-1402	12-2	25-250	60	3 3/8 x 3 x 3 3/8	C	4.3	6.84	6.27	5.61	5.01	3.86	
C-2307	20-4	30-300	80	4 3/8 x 4 x 3 3/8	D	7.9	11.22	10.28	9.21	8.23	6.56	
C-1404	17-3	40-400	60	4 3/4 x 4 x 5 1/4	D	11.7	14.95	13.70	12.27	10.96	8.74	

**AUDIO FILTER**

For use between the Modulator and RF Amplifier.

**SPLATTER SUPPRESSOR FILTER**

Part No.	Ind. Range Henrys*	Max. DC Ma	Mtg. Type	H. x W. x D. Inches	Net Each, Quantities of					Bulk
					1-9	10-24	25-49	50-99	100-249	
C-2317	0.048-0.9	300	BH	2 5/8 x 3 x 3	\$5.47	\$5.02	\$4.49	\$4.01	\$3.01	

\* Taps provided to obtain various amounts of inductance.

**AUDIO CHOKES**

Rated at 2 v., 200 cps. with max. DC in windings. Tolerance of -15% + 50% on rating.

Part No.	Hys.	Ma	Ohms	H. x W. x L. Inches	Mtg. Type	Net Each, Quantities of					Bulk
						1-9	10-24	25-49	50-99	100-249	
C-1003	16	50	580	2 x 3 1/4 x 1 3/4	A	\$2.13	\$1.95	\$1.75	\$1.56	\$1.25	

Inductance values rated at 1 v. rms, 60 cps.

**HIGH CURRENT FILTER CHOKES**

Part No.	Hys.	Amps	Ohms	H. x W. x D. Inches	Mtg. Type	Wt., Lbs.	Net Each, Quantities of					Bulk
							1-9	10-24	25-49	50-99	100-249	
C-2685	.035	2.0	.75	2 3/8 x 2 3/8 x 2 3/4	NH	1.9	\$ 3.49	\$ 3.20	\$ 2.87	\$ 2.56	\$ 2.04	
C-2686	.025	4.0	.425	3 x 3 x 2 5/8	NH	3.4	5.95	5.45	4.88	4.36	3.36	
C-2687	.01	8.0	.15	3 1/4 x 3 3/4 x 3 3/8	NH	5.3	7.82	7.17	6.42	5.73	4.58	
C-2688	.01	12.5	.11	3 3/4 x 4 1/8 x 3 1/2	NH	5.9	9.00	8.27	7.39	6.60	5.08	
C-2689	.005	22.5	.03	3 3/4 x 4 1/8 x 4 1/8	NH	11.9	13.20	12.10	10.84	9.68	7.72	
C-2690	0.3†	1‡	3§	3 1/2 x 2 3/8 x 3 1/4	NV	5	7.87	7.22	6.46	5.77	4.44	
C-2691	80#	2.5●	0.6▲	3 3/4 x 3 3/8 x 3 3/4	NV	7	10.04	9.20	8.24	7.36	5.66	

† Series, 0.075 hy parallel. ‡ Series, 2 parallel. § Series, .75 parallel. # Mh. series, 20 mh parallel. ● Series, 5 parallel. ▲ Series, 0.15 parallel.

**POWERGUARD VOLTAGE STABILIZERS—60 Cps. Single Phase, AC—Mounting Type CV**

Automatically provide stable output voltages (+/-) for input voltage variations of +/-15%. No moving parts and compact, shock resistant construction insure maintenance free operation. Regulation occurs within 25 milli-seconds or 1 1/2 cycles. Safeguard and improve the operation, efficiency and life of equipment being regulated. Complete integrated construction except\* units below have separate capacitors.

Part No.	VA Rating	Input Volts	Output Volts	Wt., Lbs.	Size—Inches			Net Each, Quantities of				
					H	W	D	1-4	5-9	10-24	25-49	
CV15D	15	95-130	117	4 1/2	3 1/2	2 3/8	5 9/16	\$ 15.00	\$ 13.00	\$ 12.75	\$ 12.00	
CV30H	30	95-130	117	7	5 1/2	3 3/8	6	20.00	18.00	17.00	16.00	
CV105*	30	95-130	117	7	5 1/2	3 3/8	6	16.00	14.40	13.60	12.80	
CV60H	60	95-130	117	9	5 1/2	3 3/8	6 5/8	25.00	22.50	21.25	20.00	
CV60S*	60	95-130	117	9	5 1/2	3 1/8	3 1/16	21.00	18.90	17.85	16.80	
CV120H	120	95-130	117	11 1/2	5 1/2	3 3/8	7 3/8	33.00	29.75	28.00	26.50	
CV120S*	120	95-130	117	11 1/2	5 1/2	3 3/8	5 1/8	29.00	26.20	24.60	23.30	
CV250H	250	95-130	117	26	6 1/4	5 1/2	12 5/4	49.00	44.00	41.50	39.00	
CV500H	500	95-130	117	33	6 1/4	5 1/2	13 7/8	77.00	69.00	65.50	61.50	
CV750H	750	95-130	117	46	6 1/4	5 1/2	14 5/4	97.00	87.00	82.50	77.50	
CV1000H	1000	95-130	117	57	6 1/4	5 1/2	16 3/4	128.00	115.00	109.00	102.50	
CV1500H	1500	#	117/234	85	9	8 1/4	17 3/4	173.00	155.00	147.00	138.00	
CV2000H	2000	#	117/234	105	9	8 1/4	19 3/8	232.00	208.00	197.00	185.00	
CV3000H	3000	#	117/234	138	9	8 1/4	22 3/8	315.00	282.00	266.00	250.00	

\* Separate capacitor unit. # 95-130, 175-235, 200-260.

ADAPTER KITS—3 conductor input cord and 3 way receptacle.

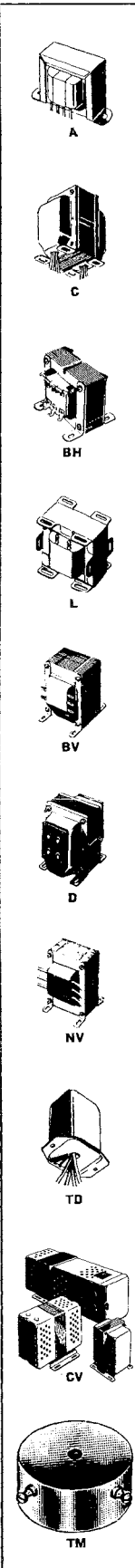
Part No. A-18K, 30-120 VA range, \$2.00 net.

Part No. A-16K, 250-1000 VA range, \$2.50 net.

**MOLDED TOROIDAL INDUCTORS**

Tolerance +/- 1% on inductance. Temperature range, -55° C. to +85° C. Size: 1 1/8" dia. x 1 1/2" h. Shpg. Wt., 1 1/2 oz.

Part Number	Ind. Mh	DC Ω	Net Each, Quantities of					Part Number	Ind. Mh	DC Ω	Net Each, Quantities of				
			1-9	10-24	25-49	50-99	100-249				1-9	10-24	25-49	50-99	100-
TM-2A	2	.72	\$4.91	\$4.50	\$4.03	\$3.60	\$3.38	TM-50A	50	18.5	\$4.91	\$4.50	\$4.03	\$3.60	\$3
TM-5A	5	1.85	4.91	4.50	4.03	3.60	3.38	TM-100A	100	32.5	4.91	4.50	4.03	3.60	3.38
TM-10A	10	3.25	4.91	4.50	4.03	3.60	3.38	TM-1000A	1000	340	6.22	5.70	5.10	4.56	4
TM-20A	20	7.0	4.91	4.50	4.03	3.60	3.38								



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# transformers

## FOR EVERY APPLICATION

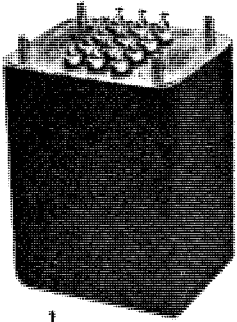


POWER  
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ISOLATION  
AUDIO  
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REACTORS

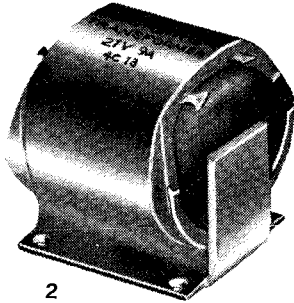
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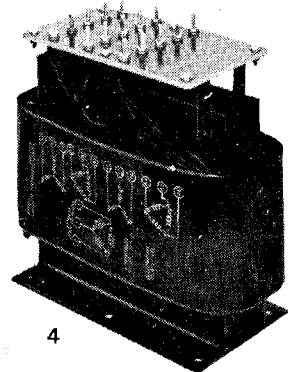
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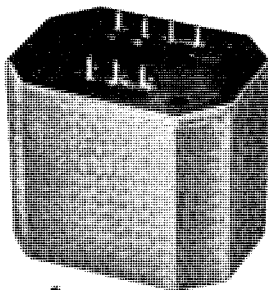
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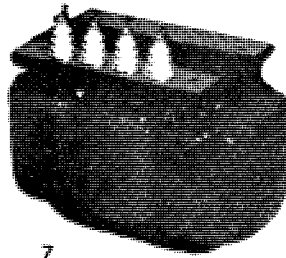
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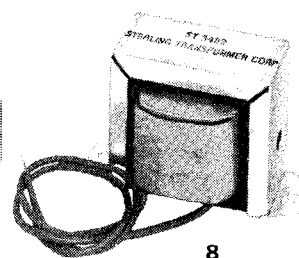
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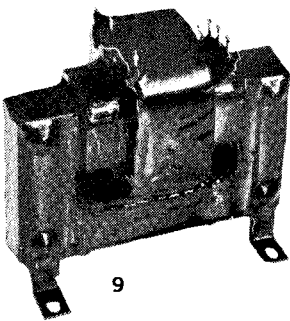
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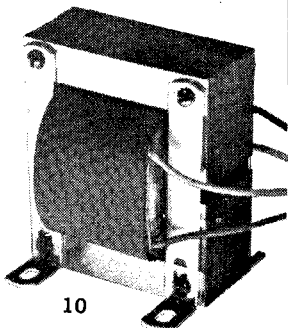
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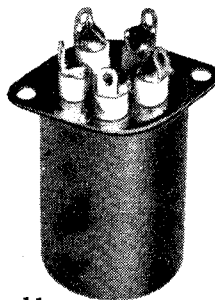
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11

**TRANSFORMERS** — LARGE, SMALL, ENCAPSULATED, MOLDED, HERMETICALLY SEALED, AND OPEN — ALL WIDELY ACCEPTED AS FIRST QUALITY AND SURE PERFORMANCE. WE INTRODUCE SOME OF THE SPECIAL STERLING TRANSFORMERS ALONG WITH APPLICATIONS WHERE THEY HAVE PROVEN THEMSELVES SUPERIOR.

1. Transistor Power Module Transformer. Ideal for use in computers where precision and long component life are necessary for optimum performance.
2. Miniature Molded Transformer. Small in size, light in weight, suitable for gyro applications.
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4. Three Phase Multi-Output Transformer. Capable of exceptionally long life in the rugged operation conditions of ground support and ground test equipment.

5. Commercial "End Bell" Transformer. Widely accepted Sterling 2K series for application in regulated power supplies.
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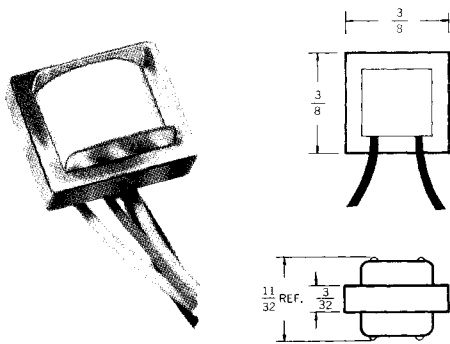
9. High voltage Dip Encapsulated Low Capacitance Filament Transformer. For special test equipment. Provides constant voltage output for precision operation of specialized test equipment.
10. Commercial Open Frame Transformer. Sturdy, high power unit for use in spot welding and induction heating equipment.
11. Lightweight Miniature Military Transformer. Ruggedly constructed to withstand shock and handling encountered in mobile communication systems.



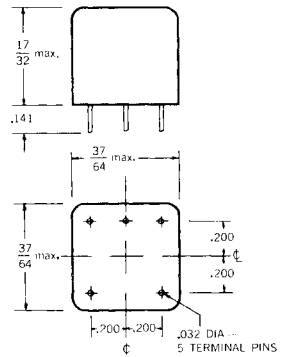
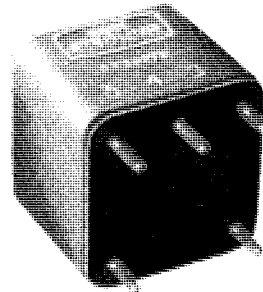
# DENSE-PAK miniature transformers DP SERIES (manufactured to MIL T 27A)

On this page are listed units designed for the extremes in miniaturization. The 4 inch #28 color coded leads (DP-F type) supplied, are suitable for dip soldering in printed circuits. The M type use rugged terminals (.032 dia.) which assure easy plug-in and positive location. Finished in polished epoxy case.

Thorough baking and resin impregnation assure reliable life. Insulating materials used are compatible for later epoxy potting of complete assemblies. Highest efficiency — space factor obtained by use of high permeability Nickel-Alloy Cores, Nylon Bobbins, Formvar Wire. Available from stock.



**OPEN FRAME DP-F**  
ULTRA MINIATURE SIZE Weight .08 oz.  
To order add -F to Part Number  
i.e. DPOI-F  
**MIL DESIGNATION TF6RX††ZZ**  
††See Family Designation in Chart



**MOLDED DP-M VERI-MINIATURE SIZE**  
Designed for plug-in printed circuit applications. Cast Epoxy resin provides highest resistance to extremes of ambient. Wt. .25 oz.  
To order add -M to Part Number.  
i.e. DPOI-M, DPIO-M  
**MIL DESIGNATION TF5RX††ZZ**  
††See Family Designation in Chart

## ULTRA-MINIATURE TRANSISTOR TRANSFORMERS-DP Series

Frequency Response ± 2 db 300 to 10,000 Cycles,  
Measured at level stated for 300 Cy.

Part No.	Application	Primary Impedance	Secondary Impedance	Unbal. Pri. DC Ma	Pri. D.C.R.	Sec. D.C.R.	Level @ 300 cy.	Level @ 1 kc	†† Family	NET EACH 1-9 Style-F Style-M	
DP01-(* )	Input	1,00,000	1,000	0	1900	135	5mw	70mw	16	\$6.00	\$6.60
DP02-(* )	Driver	20,000	1,000	0.5	1100	100	5mw	300mw	13	5.40	6.00
DP03-(* )	Driver	20,000	1,200 C.T.	0.5	1100	110	5mw	300mw	13	5.40	6.00
DP04-(* )	Output	1,000	50	3	65	10	5mw	500mw	17	4.30	4.95
DP05-(* )	Output	400	50	3	35	5	15mw	500mw	17	4.30	4.95
DP06-(* )	Output	400	11	3	35	1.5	15mw	500mw	17	4.30	4.95
DP07-(* )	Output	400 C.T.	11	6	35	1.5	15mw	500mw	17	4.60	5.25
DP08-(* )	Choke	10 hy (0 dc)		8hy (0.5ma)	650				20	4.60	5.25
DP09-(* )	Interstage	600 C.T.	600 C.T.	7	45	60	5mw	400mw	21	5.10	5.70
DP10-(* )	Choke	1.5 hy (0 dc)		0.7hy (2ma)	100				20	3.90	4.50
DP11-(* )	Interstage	10,000 C.T.	1,200 C.T.	2	850	120	5mw	500mw	21	5.40	6.00
DP12-(* )	Output	1,500 C.T.	600	5	135	65	5mw	500mw	17	4.70	5.40
DP13-(* )	Output	1,000 C.T.	600	6	80	65	5mw	500mw	17	4.70	5.40
DP14-(* )	Driver	10,000 C.T.	600 C.T.	2	850	40	5mw	500mw	13	5.00	5.60
DP15-(* )	Isolation	15,000 C.T.	15,000 C.T.	1	930	1210	5mw	300mw	15	5.40	6.00

\*Add either -F, or -M to Part No. to designate construction. See Photos.  
Power levels shown are for 7½% maximum distortion.



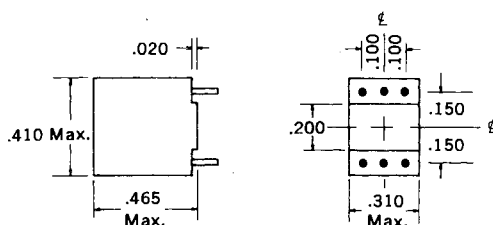


# transistor transformers

## NANOSPEC TRANSISTOR TRANSFORMERS—900 SERIES

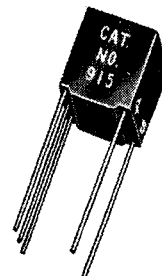
Frequency Response  $\pm 2$  db 300 Cycles to 90 KC

Part No.	Application	Color Application Guide	Primary Impedance	Secondary Impedance	Unbal. Pri. DC Ma.	Power Level MW.	DC Resistance		Net Price 1-9 Pcs.
							Primary	Secondary	
901	Input	Brown	200,000 CT	1,000 CT	0	10	5300	110	7.65
902	Input	Brown	200,000	1,000	0	10	5300	110	6.60
903	Interstage	Red	50,000 CT	1,000 CT	0	10	3300	75	7.50
904	Interstage	Red	50,000	1000/250 Split	0	10	3300	75	8.10
905	Interstage	Red	25,000 CT	1,000 CT	0.5	40	1700	115	7.05
906	Interstage	Red	25,000	1000/250 Split	0.25	40	1700	115	7.65
907	Interstage	Red	25,000	1,000	0.25	40	1700	115	6.50
908	Isolation	Green	10,000 CT	10,000 CT	1	50	1200	1300	7.65
909	Driver	Orange	10,000 CT	2,000 CT	1	50	1050	300	6.75
910	Driver	Orange	10,000	2000/500 Split	0.5	50	1050	300	7.35
911	Driver	Orange	10,000 CT	1,200 CT	1	50	1050	280	6.75
912	Driver	Orange	10,000	1200/300 Split	0.5	50	1050	280	7.20
913	Driver	Orange	10,000	1,200	0.5	50	1050	280	6.00
914	Driver	Orange	10,000 CT	500 CT	1	50	1050	80	6.75
915	Isolation	Green	2,500	2,500 CT	1	50	250	325	6.30
916	Output	Yellow	1,500 CT	600	3	50	170	135	6.15
917	Output	Yellow	500	50	3	50	60	8	5.40
918	Output	Yellow	120 CT	3.2	10	50	17	.75	5.70
919	Audio Choke	Blue	6 HY.	DCR 1800 OHMS	2				5.40
920	Audio Choke	Blue	.3 HY.	DCR 45 OHMS	4				4.65
921	Audio Choke	Blue	1.25 H	DCR 180 OHMS	2				4.80
922	Audio Choke	Blue	3.5 H	DCR 1040 OHMS	2				4.80
923	Audio Choke	Blue	.9 H	DCR 110 OHMS	2				4.80
924	Audio Choke	Blue	.1 H	DCR 15 OHMS	5				4.80
925	Interstage	Red	10,000 CT	1,500 CT	1	50	1050	300	7.20
926	Isolation	Green	600 CT	600 CT	3	50	72	92	7.20
927	Output	Yellow	1,000	50	3	50	145	8	5.85
928	Output	Yellow	300 CT	600	7	50	41	98	6.00
929	Output	Yellow	500 CT	600	3	50	67	98	6.00
930	Output	Yellow	900 CT	600	4	50	104	96	6.15
931	Output	Yellow	150 CT	12	10	50	18	3.5	5.85
932	Output	Yellow	300 CT	12	7	50	42	3.4	5.85
933	Output	Yellow	600 CT	12	4.5	50	77	3	6.00
934	Output	Yellow	1,000 CT	12	3.5	50	120	3	6.15
935	Output	Yellow	1,500 CT	12	3	50	179	2.9	6.30
936	Output	Yellow	7,500 CT	12	1	50	796	2.9	6.75
937	Output	Yellow	320 CT	3.2	6	50	44	.77	5.85
938	Output	Yellow	600	3.2	3	50	70	.76	5.55
939	Output	Yellow	600 CT	3.2	4.5	50	70	.85	6.00
940	Output	Yellow	800 CT	3.2	4	50	107	.86	6.15
941	Output	Yellow	1,200	3.2	2	50	131	.76	5.55
942	Output	Yellow	1,200 CT	3.2	3	50	131	.87	6.15
943	Output	Yellow	1,600 CT	3.2	2.5	50	186	.8	6.30
944	Output	Yellow	10,000	3.2	1	50	1160	.81	6.15
945	Output	Yellow	8,000 CT	3.2	1	50	790	.76	6.75



### NANOSPEC 900 SERIES

Designed for printed circuit transistor use in high component density applications. Nickel alloy leads on 0.1 inch centers and stepped mounting face to insure ease of installation. Epoxy resin encapsulated.



# transistor transformers



## MINISPEC TRANSISTOR TRANSFORMERS — 300 SERIES

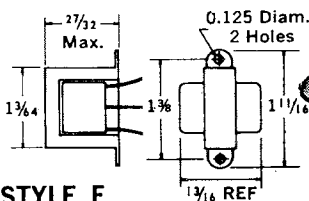
Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response $\pm 2$ db.	Net Price 1-9 pcs.	
							F	H
300	Line to Base	600	600	10	23	200-15,000	\$3.60	\$7.80
301	Coll. to P.P. Base	100	10 C.T./40 C.T.	100	27	200-20,000	4.20	8.70
302	Coll. to Base or line	50,000	600	3	20	300-15,000	3.90	8.40
303	Collector to speaker	50,000	6	3	20	300-15,000	3.90	8.40
304	Coll. to P.P. Base	100,000	1,200 C.T.	1.4	17	200-15,000	4.05	8.55
305	Coll. to P.P. Base	25,000	1,200 C.T.	3	22	200-15,000	4.05	8.55
306	P.P. Coll. to P.P. Base	50,000 C.T.	1,200 C.T.	3	20	300-15,000	4.20	8.70
307	Line to P.P. Base	600 C.T.	1,200 C.T.	4	23	200-15,000	4.20	8.70
308	Collector to Base	25,000	600	3	22	200-15,000	3.90	8.40
309	P.P. Coll. to P.P. Base	4,000 C.T.	600 C.T.	3	32	200-15,000	4.20	8.70
310	Output Coll. to speaker	2,000	3.4	10	32	200-15,000	3.90	8.40
311	P.P. Coll. to speaker	4,000 C.T.	3.4	3	32	200-15,000	4.05	8.55
312	Coll. to Speaker	400	10	50	25	200-20,000	3.60	7.80
313	P.P. Servo Output	500 C.T.	210	30	27	300-20,000	3.90	8.40
314	P.P. Coll. to P.P. Base	25,000 C.T.	1,200 C.T.	6	22	200-15,000	4.20	8.70
315	P.P. Coll. to P.P. Base	50,000 C.T.	1200/300 Split	3	20	300-15,000	4.50	9.00
316	P.P. Coll. to P.P. Base	4,000 C.T.	600/150 Split	3	32	200-15,000	4.35	8.85
317	Line to P.P. Base	600/150 Split	1,200 C.T.	4	23	200-15,000	4.35	8.85
318	P.P. Coll. to Servo	250 C.T.	1,000	10	30	200-15,000	3.90	8.40
319	Coll. to P.P. Base	2,500	600 C.T.	10	32	200-15,000	3.90	8.40
320	P.P. Coll. to P.P. Base	7,500 C.T.	600 C.T.	8	32	200-15,000	4.20	8.70
321	Line to P.P. Base	600 C.T.	600 C.T.	20	23	200-15,000	4.05	8.55
322	P.P. Coll. to Servo	1,600 C.T.	450	15	30	200-15,000	3.90	8.40
323	P.P. Coll. to Servo	250 C.T.	500	10	30	200-15,000	3.90	8.40

## MINISPEC AUDIO TRANSFORMERS — 300 SERIES

Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response $\pm 2$ db.	Net Price 1-9 pcs.	
							F	H
375	Mike or line to 1 grid	50/250/600 C.T.	50,000	0	5	20-20,000	\$4.05	\$9.00
376	Mike or line to 2 grids	50/250/600 C.T.	50,000 C.T.	0	5	20-20,000	4.20	9.45
377	Dynamic mike to 1 grid	7.5/30	50,000	0	5	20-20,000	3.90	9.00
378	Single plate to 1 grid	15,000	60,000	0	6	20-15,000	3.45	7.65
379	Single plate to 1 grid	15,000	60,000	4	14	200-20,000	3.45	7.65
380	Single plate to 2 grids	15,000	95,000 C.T.	0	5	20-15,000	3.60	8.55
381	Single plate to 2 grids	15,000	95,000 C.T.	4	11	200-20,000	3.75	8.85
382	Single plate to line	15,000	50/250/600 C.T.	0	8	20-20,000	3.75	9.60
383	Single plate to line	15,000	50/250/600 C.T.	4	21	150-20,000	3.75	9.60
384	Push pull plates to line	30,000 C.T.	50/250/600 C.T.	0	8	30-50,000	3.90	9.60
385	Crystal mike to line	50,000	50/250/600 C.T.	0	5	20-20,000	3.75	9.30
386	Mixing and matching	50/250 C.T.	50/250/600 C.T.	0	8	20-20,000	3.75	9.30
387	Reactor	300 hy. 0 d.c.	50 hy. @ 3 ma.			DCR 6,000	3.30	7.35
388	50:1 mike to grid	200	1/2 Megohm	0	9	80-3,000	3.90	9.00
389	10:1 plate to grid	10,000	1 Megohm	0	11	100-2,500	3.60	8.40

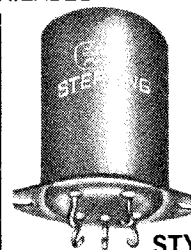
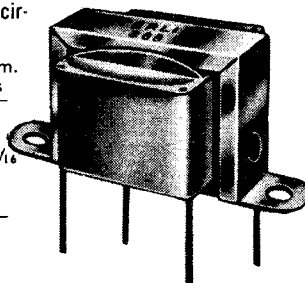
### MINISPEC 300 SERIES

Highest efficiency miniature transformer for transistor and audio circuit applications.

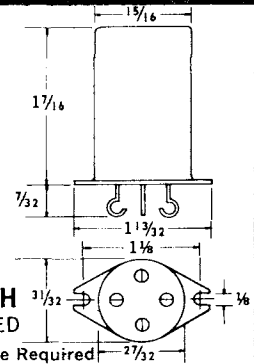


**STYLE F**  
INDUSTRIAL

MILITARY STYLE ENCAPSULATED VERSIONS ARE AVAILABLE



**STYLE H**  
HERMETICALLY SEALED



Clearance Hole Required



# transistor transformers

## MICROSPEC TRANSISTOR TRANSFORMERS — 600 SERIES

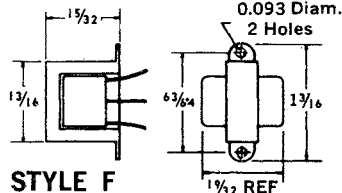
Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response $\pm 2$ db.	Net Price 1-9 pcs.	
							F	H
601	Line to Base	600	600	8	22	200-15,000	\$3.90	\$7.35
602	Coll. to Base or line	50,000	600	0.7	20	200-15,000	4.05	7.50
603	P.P. coll. to P.P. Base	50,000 C.T.	600 C.T.	1.4	20	200-15,000	4.80	8.55
604	Collector to speaker	50,000	6	1	20	200-15,000	4.35	7.95
605	Coll. to P.P. Base	25,000	1,200 C.T.	1	20	200-15,000	4.50	8.40
606	P.P. coll. to P.P. Base	50,000 C.T.	1,200 C.T.	1.4	20	200-15,000	4.65	8.55
607	Line to P.P. Base	600 C.T.	1,200 C.T.	16	22	200-15,000	4.20	7.65
608	Collector to Base	25,000	600	1	20	200-15,000	3.45	7.20
609	P.P. coll. to P.P. Base or line	4,000 C.T.	600 C.T.	5	28	200-15,000	4.35	7.80
610	Coll. to Spkr.	2,000	3.4	5	28	200-15,000	3.90	7.35
611	Output P.P. coll. to spkr.	4,000 C.T.	3.4	5	28	200-15,000	4.05	7.50
612	Coll. to P.P. Base	10,000	1,500 C.T.	1	20	200-15,000	4.50	8.40
613	P.P. Coll. to P.P. Base	10,000 C.T.	200 C.T.	6	20	200-15,000	4.50	8.10
614	P.P. Coll. to P.P. Base	25,000 C.T.	1,200 C.T.	2	20	200-15,000	4.65	8.55
615	Coll. to P.P. Base	2,500	2,500 C.T.	2	23	200-15,000	4.05	7.50
616	P.P. Coll. to P.P. Base	4,000 C.T.	600/150 split	5	28	200-15,000	4.65	8.55
617	P.P. Coll. to P.P. Base	7,500 C.T.	600 C.T.	4	22	200-15,000	4.35	7.80
618	Line to Base	600 C.T.	600 C.T.	16	22	200-15,000	4.20	7.65
619	P.P. Coll. to P.P. Base	25,000 C.T.	600 C.T.	2	20	200-15,000	4.50	8.40
620	P.P. Coll. to P.P. Base	10,000 C.T.	1,500 C.T.	2	20	200-15,000	4.65	8.55
621	Driver/Isolation	10,000 C.T.	10,000 C.T.	2	20	200-15,000	4.65	8.55
622	P.P. Coll. to P.P. Base	7,500 C.T.	1,200 C.T.	4	22	200-15,000	4.50	8.40
623	P.P. Coll. to P.P. Base	2,000 C.T.	500 C.T.	10	28	200-15,000	4.35	8.25
624	Line to P.P. Base	600 C.T.	1200/300 split	16	22	200-15,000	4.65	8.55

## MICROSPEC AUDIO TRANSFORMERS — 600 SERIES

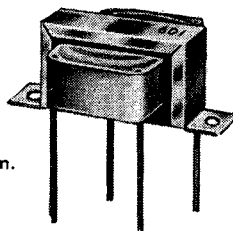
Part No.	Application	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal. Ma.	Oper. Lev. DBM	Freq. Response $\pm 2$ db.	Net Price 1-9 pcs.	
							F	H
675	Input	200/50	250,000/62,500	0	4	200-10,000	\$4.50	\$7.35
676	Interstage 3:1	10,000	90,000	0	4	150-10,000	4.80	7.50
677	Plate to line	10,000	200	3	20	150-10,000	4.20	7.20
678	Output	30,000	50	1	20	150-10,000	4.05	7.05
679	Reactor 50 HY at 1 mads				4700	chms DCR	4.05	6.90
680	Output	100,000	60	0.5	20	250-10,000	4.20	7.20
681	Output	30,000	1,200	0.5	20	200-10,000	3.30	6.45

### MICROSPEC 600 SERIES

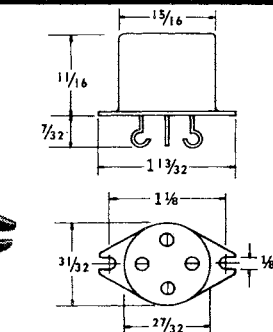
Subminiature transformers for high efficiency circuits.



**STYLE F**  
INDUSTRIAL



MILITARY STYLE ENCAPSULATED  
VERSIONS ARE AVAILABLE



Clearance Hole Required  
**STYLE H**  
HERMETICALLY SEALED

# transistor transformers



## TRANSISTOR POWER MODULE TRANSFORMERS — 7K SERIES

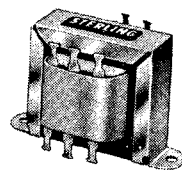
PRIMARY 115V, 50/60 CYCLES (Tapped for dual secondary voltages) The chart below shows the secondary voltages available and the approximate DC voltages which result in typical silicon rectifier circuits (at MIL currents shown). Primary taps can modify nom. AC voltages by -6%, +6%, and +12%. Since the capacitor following the rectifier affects the DC voltage, values used (in 1000 mfd) are shown, in parenthesis ( ), after each current rating. \*Nom. AC and DC volts are at 115 volt input . . . primary taps can modify -6%, +6%, and +12%. 50/60 CPS

MIL-T-27A RATINGS IN REGULAR TYPE, INDUSTRIAL RATINGS IN ITALICS													HERM. SEALED MIL STYLE H TF45X02		INDUSTRIAL, OPEN STYLE TYPE F OR L			
FULL WAVE BRIDGE SILICON RECTIFIER													FULL WAVE CT		Case Size	Net Price	Style	Net Price 1-9 pcs.
Type No.	Nom. AC Volts* Appr. DC Volts*	40.5 53	32.25 41	28.5 34	24 25	20.25 24	16.5 18	12 12	8.25 6	40.5 CT 24	24 CT 12	16.5 CT 6.6						
7K1	MIL - DC Amp. IND - DC Amp.	.02 (.1) .025 (.1)	.023 (.1) .035 (.1)	.025 (.1) .040 (.1)	.027 (.1) .042 (.1)	.042 (.2) .055 (.2)	.035 (.2) .042 (.2)	.055 (.2) .070 (.2)	.065 (.2) .085 (.2)	.035 (.2) .042 (.2)	.040 (.2) .055 (.2)	.055 (.2) .068 (.2)	AH	11.70	F	7.15		
7K2	MIL - DC Amp. IND - DC Amp.	.07 (.1) .085 (.1)	.08 (.1) .12 (.1)	.085 (.1) .13 (.1)	.09 (.1) .14 (.1)	.14 (.2) .18 (.2)	.11 (.2) .14 (.2)	.18 (.2) .23 (.2)	.22 (.2) .28 (.2)	.11 (.2) .14 (.2)	.13 (.2) .17 (.2)	.17 (.2) .21 (.2)	AJ	12.90	L	8.35		
7K3	MIL - DC Amp. IND - DC Amp.	.4 (.5) .48 (.5)	.44 (.5) .6 (.5)	.48 (.5) .6 (.5)	.52 (.5) .64 (.5)	.8 (1.0) 1.0 (1.0)	.6 (1.0) 1.0 (1.0)	1.0 (2.0) 1.2 (2.0)	1.2 (2.0) 1.52 (2)	.6 (1) .8 (1)	.72 (1) .88 (1)	.92 (2) 1.12 (2)	FA	14.40	F	7.40		
7K4	MIL - DC Amp. IND - DC Amp.	1 (.5) 1.2 (.5)	1.1 (.5) 1.5 (.5)	1.2 (.5) 1.5 (.5)	1.3 (.5) 1.6 (.5)	2 (1) 2.5 (1)	1.5 (1) 2 (1)	2.5 (2) 3 (2)	3 (2) 3.8 (2)	1.5 (1) 2 (1)	1.8 (1) 2.2 (1)	2.3 (2) 2.8 (2)	HA	19.80	L	12.15		
7K5	MIL - DC Amp. IND - DC Amp.	2.5 (1) 3 (1)	3 (1) 3.5 (1)	3 (1) 3.8 (1)	3.5 (1) 4 (1)	5 (2) 6 (2)	3.7 (2) 4.5 (2)	6 (4) 7.5 (4)	7.5 (4) 9 (4)	3.7 (2) 4.5 (2)	4.5 (2) 5.5 (2)	5.5 (4) 6.7 (4)	KA	28.80	L	20.55		
7K6	MIL - DC Amp. IND - DC Amp.	6 (4) 7.5 (4)	7 (4) 8.5 (4)	7.5 (4) 9.5 (4)	8 (4) 10 (4)	12 (6) 15 (6)	9 (6) 11 (6)	15 (12) 19 (12)	18 (12) 23 (12)	9 (6) 11 (6)	11 (6) 13.5 (6)	13.5 (12) 17 (12)	OA	48.00	L	36.15		
7K7	Type No. Nom. AC Volts* Appr. DC Volts* MIL - DC Amp. IND - DC Amp.	81 106 0.5 (.125) 0.6 (.125)	64.5 82 0.55 (.125) 0.75 (.125)	57 68 0.6 (.125) 0.75 (.125)	48 50 0.65 (.125) 0.8 (.125)	40.5 48 1.0 (.25) 1.25 (.25)	33 36 0.75 (.25) 1.0 (.25)	24 24 1.25 (.5) 1.5 (.5)	16.5 12 1.5 (.5) 1.9 (.5)	81 CT 48 0.75 (.25) 1.0 (.25)	48 CT 24 0.9 (.25) 1.1 (.25)	33 CT 13 1.15 (.5) 1.4 (.5)	HA	20.40	L	12.75		

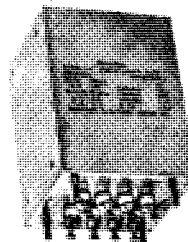
PRIMARY 115V, 50/60 CYCLES (tapped on 7K10 thru 7K13 for dual secondary voltages). DC ratings are approximate, based on silicon bridge rectifier (except 7K8, 7K9, also shown F.W.C.T.). Choke input DCV is based on 10% voltage drop in choke. Condenser value, C, is in 1000 mfd. 7K8, 7K9, 7K14 listing under "Secs in parallel" is single winding.

													HERM. SEALED MIL STYLE H TF45X02		INDUSTRIAL, OPEN STYLE TYPE F OR L		
Type No.	Application	Sec. V Rms	Sec. A Rms	Choke DCV	Sec. in Parallel				Sec. in Series				Case Size	Net Price	Style	Net Price 1-9 pcs.	
					Input DCA	Cond. DCV	Input DCA	Cond. DCV	Choke DCV	Input DCA	Cond. DCV	Input DCA	Cond. DCV				
7K8	F.W. Bridge Full Wave CT	20 CT	.3	16.5	.3	26	.2	.2						EB	10.20	F	5.15
7K9	F.W. Bridge Full Wave CT	20 CT	.6	16.5	.6	26	.4	.4						EA	12.90	F	7.85
7K10	Full Wave Bridge	17/21.5	1.5	14/17.5	3	18.5/25	2	1	28/35	1.5	43/56	1	.5	HA	18.60	L	12.15
7K11	Full Wave Bridge	17/21.5	4	14/17.5	8	18.5/25	5	2	28/35	4	43/56	2.5	1	LA	30.00	L	21.45
7K12	Full Wave Bridge	17/21.5	9	14/17.5	18	18.5/25	12	6	28/35	9	43/56	6	4	4 3/4 x 6 x 7H	45.90	L	33.70
7K13	Full Wave Bridge	34/43	4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3	1	4 3/4 x 6 x 7H	45.90	L	33.70
7K14	F.W. Bridge	10	20	8.2	20	10	13	12						KA	27.00	L	20.85

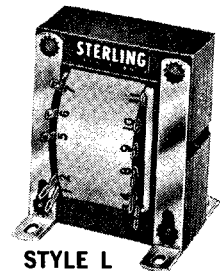
Universal transistor power supply module transformers with output voltage selection by varied secondary connections. Designed for silicon rectifier application with choke or capacitor input filters.



STYLE F



STYLE H  
HERMETICALLY SEALED



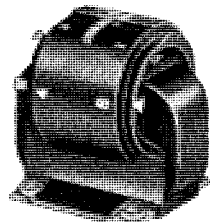
STYLE L



# ENCAPSULATED 400 cps transformers

## CLIPPER SERIES

	Cat. No.	Secondary Volts	Secondary Amps.	Rms. V Insulation	Primary Volts	Mold Size	Maximum Operating Ambient	Net Price 1-9 pcs.	
<b>FILAMENT</b>	4C1	6.3 CT	.8	1500	115	SM3	100°C	12.52	
	4C2	6.3 CT	1.2	1500	115	SM2	100°C	12.52	
	4C3	6.3 CT	6.75	1500	110/115/120	2	100°C	20.11	
	4C4	6.3 6.3	4.9 2.7	1500 1500	115	3	90°C	17.99	
	4C5	6.3 CT	7.2	1500	115	35	120°C	20.87	
	4C6	6.3 6.3 6.3	7 7 1.5	1500 1500 1500	120	35	80°C	20.34	
	4C7	6.3 CT 6.3 CT	7 7	1500 1500	120	4	100°C	24.21	
	4C8	6.3 6.3 6.3	13.7 2.93 0.3	1500 1500 1500	115	4	90°C	24.21	
	4C9	6.3 CT	12.3	1500	115	5	100°C	22.39	
	4C10	20 CT	0.6	1500	115	SM1	100°C	15.94	
	4C11	6.3 6.3 6.3	2.4 2.5 2.7	1500 1500 1500	115	3	100°C	22.39	
	4C26	6.3 CT	2	1500	115	SM1	100°C	15.94	
	4C27	6.3 CT	3	1500	115	1A	100°C	16.55	
	4C28	6.3 CT	5	1500	115	2	100°C	17.16	
	4C29	5.0 CT	3	2500	115	SM1	100°C	15.94	
	4C30	5.0 CT	6	2500	115	2	100°C	17.16	
	<b>POWER</b>	4C12	14.1	3	1500	115	3	100°C	17.08
		4C13	21	9	1500	115	4	65°C	18.98
		4C14	26	0.5	1500	115	SM1	55°C	15.56
		4C15	26 CT	1.5	1500	115	3	65°C	16.09
4C16		28 CT 6.3 CT	0.75 7A	1500 1500	115	2	65°C	24.14	
4C17		52 CT	.192	1500	115	SM1	100°C	17.27	
4C18		90 CT	4.5	1500	115	9	100°C	32.64	
4C19		115	.05	1500	115	SM2	100°C	12.75	
4C20		105/115/125	0.4	1500	105/115/125	2	90°C	18.45	
4C21		115	2.83	1500	115	8	100°C	26.57	
4C22		334	.025	1500	115	SM1	120°C	14.65	
4C23		26 CT	3	1500	115	4	100°C	19.35	
4C24		26 CT	5	1500	115	6	100°C	22.31	
4C25		52 CT	2	1500	115	5	100°C	21.33	



FOR MINIMUM SIZE & MINIMUM WEIGHT  
 • CONTOUR MOLDED  
 • HIPERSIL CORES

Built to pass MIL-T-27A specifications, including Grade 2 humidity tests, and to operate continuously at 150° C.

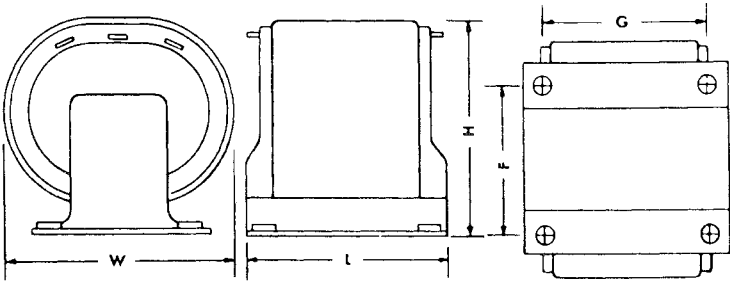
Result: Savings up to 50% in space and weight without sacrifice in performance.

- HIGH SHOCK
- EXTREME ENVIRONMENT CONDITIONS
- LIGHT WEIGHT FOR AIRBORNE USE
- 10,000 HOUR PLUS-LIFE
- SERVO APPLICATIONS
- ISOLATION
- POWER SUPPLIES
- AIRBORNE CONTROL CIRCUITS
- MISSILE CIRCUITS

MOLD NO.	OVERALL DIMENSIONS			MTG. DIMENSIONS		APP. WT. (LBS.)	MTG. METH.
	L	W	H	F	G		
SM3	1	1-1/4	1-3/16	1	Note 1	0.06	Note 1
SM2	1-1/2	1-1/4	1-11/16	1	Note 1	0.10	Note 1
SM1	1-1/2	1-1/2	1-11/16	1-1/8	Note 1	0.16	Note 1
1	1-13/16	1-7/8	1-13/16	1-1/4	1-7/16	0.25	Note 2
1A	1-11/16	1-17/32	1-13/16	1-5/32	1-1/8	0.25	Note 2
2	2	1-15/16	2-1/8	1-9/32	1-1/4	0.40	Note 2
3	2-5/16	1-13/16	2-1/8	1-9/32	1-7/16	0.45	Note 2
35	2-1/16	2-3/8	2-3/16	1-17/32	1-11/16	0.70	Note 2
4	2-5/16	2-3/8	2-9/16	1-17/32	1-11/16	0.90	Note 2
5	2-3/4	2-3/8	2-7/8	1-17/32	2-3/16	1.20	Note 2
6	2-3/4	2-5/8	3-1/8	1-17/32	2-3/16	1.50	Note 2
7	3	2-7/8	3-3/8	1-25/32	2-1/2	2.00	Note 2
8	3-3/8	2-7/8	3-3/8	1-25/32	2-1/2	2.50	Note 2
83	3-3/4	3-1/4	3-3/8	2-1/4	3	3.25	Note 3
86	3-3/4	3-3/4	3-3/8	2-3/4	3-1/8	4.25	Note 3
9	4-1/16	3-3/8	3-7/8	2-3/16	3-1/2	5.00	Note 3
10	4-1/2	3-15/16	3-15/16	2-3/4	3-1/8	6.00	Note 3

Note 1—SM series are two hole mounting with holes on center line. #4-40 Pem nuts are fastened to the bracket.  
 Note 2—#6-32 Pem nuts on bracket are standard.  
 Note 3—#8-32 Pem nuts on bracket are standard.

- All primaries 380-1000 cps
- Dielectric test voltages:  
 PRIMARIES 1000 Volts RMS  
 SECONDARIES 1500 Volts RMS
- Epoxy resin used as encapsulant
- Prices subject to change without notice





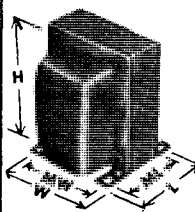
# transformers for electronically regulated power supplies



2K SERIES																				
PLATE AND FILAMENT TRANSFORMERS	Cat. No.	Supply Rating	High Voltage Secondary AC Volts	DC MA	Rectifier Fil.		Pass Tube Fil.		Regulator Fil.		Auxiliary Fil.		Overall			Mtg. Dim.		Rec. Mtg. Screw	Wt Lbs.	Net Price 1-9 pcs
					V	A	V	A	V	A	V	A	L	W	H	ML	MW			
2K6	300/250VDC 400MADC	550-480-0 480-550V	440		Use with 2K20				Use with 2K20		6	4 1/4	5 1/2	4 1/2	3 1/2	# 10	19	\$18.48		
2K8	300/250VDC 300MADC	540-475-0 475-540V	340	5	6	6.3	6	6.3	1.2	6.3CT	6	6 1/4	4 1/2	5 1/2	4 3/4	3 1/2	# 10	20	21.62	
2K10	300/250VDC 200MADC	500-440-0 440-500V	240	5	3	6.3	3	6.3	1.2	6.3CT	6	5	4 1/4	5 1/2	3 1/2	# 10	14	17.66		
2K12	300/250VDC 100MADC	540-465-0 465-540V	140	5	3	6.3	3	6.3	1.2	6.3CT	3	4 3/4	4 1/4	5 1/2	3 3/4	3 1/2	# 10	12	15.18	
2K13	150/100VDC 400MADC	370-310-0 310-370V	440		Use with 2K20				Use with 2K20		4 3/4	4 1/4	5 1/2	3 3/4	3 1/2	# 10	12	15.18		
2K14	150/100VDC 300MADC	375-320-0 320-375V	340	5	6	6.3	6	6.3	1.2	6.3CT	6	5 1/2	4 1/4	5 1/2	4	3 1/2	# 10	16	17.82	
2K15	150/100VDC 200MADC	355-300-0 300-355V	240	5	3	6.3	3	6.3	1.2	6.3CT	6	4 3/4	4 1/4	5 1/2	3 3/4	3 1/2	# 10	12	15.18	
2K16	150/100VDC 100MADC	350-310-0 310-350V	140	5	3	6.3	3	6.3	1.2	6.3CT	3	4 3/4	3 3/4	4 1/4	3 3/4	# 8	10	13.20		
2K17	300/250VDC 600MDC	565-500-0 500-565V	640		Use with 2K20				Use with 2K20		6 1/4	4 1/2	6	4 1/2	3 1/4	# 10	22	27.19		
2K18	300/250VDC 800MADC	580-520-0 520-580V	840		Use with 2K21				Use with 2K21		6	6 1/4	7 1/4	4	4 1/2	1/4	33	35.64		
2K19	300/250VDC 1.0 Amp.	590-525-0 525-590V	1040		Use with 2K21				Use with 2K21		7 1/2	6 1/4	7 1/4	5 1/2	4 1/2	1/4	48	50.16		
2K20	(Filament Transformer for 400MA and 600MA Supplies)			5	6	6.3	6	6.3	1.2	6.3CT	6	3 3/4	3 3/4	4 1/4	2 1/4	# 8	7.5	11.22		
2K21	(Filament Transformer for 800MA and 1 Amp. Supplies)			5	10	6.3	10	6.3	2	6.3CT	10	4 1/4	3 3/4	4 1/4	3 1/4	# 8	12	15.51		

2K SERIES													
CHOKES	Cat. No.	Inductance	Rated Current MADC	DC Resist.	Dielectric Test Volt.	Overall			Mtg. Dim.		Rec. Mtg. Screw	Wt Lbs.	Net Price 1-9 pcs.
						L	W	H	ML	MW			
2K5	4 hys. min.	440	50	2500V RMS	3 3/4	3 1/4	4 1/4	2 1/4	2 1/4	# 8	6	\$ 7.66	
2K7	4 hys. min.	340	60	2500V RMS	3 1/4	2 1 1/4	3 1/2	2	2 1/4	# 8	3.3	5.15	
2K9	4 hys. min.	240	90	2500V RMS	2 3/4	2 3/4	3 1/4	1 1 1/4	2	# 8	2.3	3.89	
2K11	4 hys. min.	140	185	2500V RMS	3 1 1/4	2 3/4	2 3/4	3 1/4	Chan.	# 8	1.5	2.64	
2K22	4 hys. min.	.64A	52	2500V RMS	4 3/4	4 3/4	5 1/2	3 1/4	3 1/2	# 10	12	13.20	
2K23	4 hys. min.	.84A	25	2500V RMS	5 1/2	4 3/4	5 1/2	4	3 1/2	# 10	17	16.96	
2K24	4 hys. min.	1.04A	20	2500V RMS	7	4 3/4	5 1/2	5 1/2	3 1/2	# 10	25	23.56	

6K SERIES													
SPECIALS	Cat. No.	Secondary Volts	Secondary Amperes	RMS Volts Insulation	Primary Volts	Overall Dim.			Mtg. Dim.		Rec. Mtg. Screw	Wt Lbs.	Net Price 1-9 pcs.
						L	W	H	ML	MW			
6K1	6.3	4	1000	115/230	3 1 1/4	2 1/2	2 1/4	3 3/8	Chan.	8	1 3/4	\$ 5.61	
6K2	6.3	12	1500	115/230	3 3/4	3 1/4	4	2 1/4	2 1/2	8	6	10.30	
6K3	6.3 CT	16	3000	115	3 3/8	3 1/4	4	2 1/4	2 1/2	8	6 1/2	10.96	
6K4	5	3	2000	115/230	3 1/2	3 1/4	4	1 3/4	2 1/2	8	5	10.89	
	6.3 CT	4	2000										
	6.3 CT	4	2000										
6K5	6.3	1.5	1000	115/230	4	2 1/2	2 3/4	3 1/4	Chan.	8	2 1/4	6.14	
	6.3	1.5	1000										
6K6	800 CT	.036 DC	4000	115/230	3 1/2	2 3/4	3 1/4	2 1/4	2	8	4	6.93	
6K7	28 CT	7 DC	1000	115	4 1/4	3 1/4	4	2 1 1/4	2 1/2	8	8	10.43	
6K8	660 CT	.25 DC	1500	115/230	3 3/4	3 3/4	4 1/2	2 1 1/4	3	8	8	12.67	
	5	4.5	1500										
6K9	1130 CT	.062 DC	3300	115/230	3 3/4	3 3/4	4 1/2	2 1 1/4	3	8	8	12.67	
	5	2	3300										



- ONE UNIT PROVIDES PLATE AND FILAMENT POWER FOR ENTIRE SUPPLY.
- RATINGS BASED ON D.C. OUTPUT OF SUPPLY.
- APPLICATION BULLETIN WITH EACH UNIT.

Standard Color Code

Primary: Black  
High Voltage: Center Tap: Red-Yellow  
High Voltage: High Tap: Red  
High Voltage: Low Tap: Blue

Rectifier Filaments: Yellow  
Pass Tube Filaments: Brown  
Regulator Filaments: Green  
Auxiliary Filaments: Slate

- NOTES
1. All Primaries 115 Volts 50/60 Cps
  2. Ratings Based On Capacitor Input Filters
  3. Dielectric Test Voltages: Primaries: 1500 V. RMS All Secondaries: 2500 V. RMS



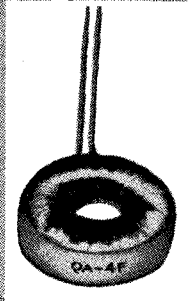
# hi-Q toroidal inductors

MANUFACTURED TO MIL-T-27A. ALL HERMETICALLY SEALED UNITS (STYLE H) ARE MIL TYPE TF4RX20YY

■ ALL MOLDED UNITS STYLE M ARE MIL TYPE TF5RX20ZZ

■ ALSO TOROIDAL INDUCTORS IN OTHER SIZES AND VALUES AVAILABLE ON SPECIAL ORDER.

■ MOLYBDENUM PERMALLOY POWDER CORES USED IN ALL UNITS.



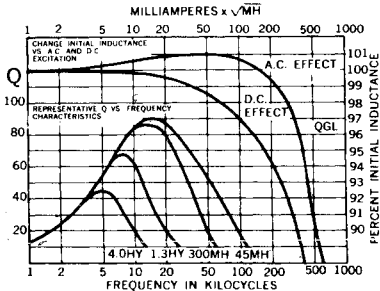
STYLE F  
 ■ ALL INDUCTORS SHOWN AVAILABLE IN OPEN STYLE F.

## QA SERIES

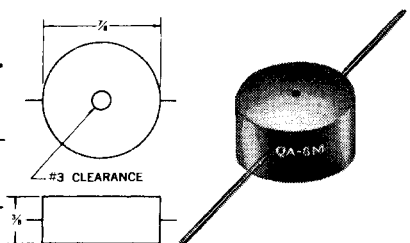
AVAILABLE ON SPECIAL ORDER  
 HERMETICALLY SEALED

FREQUENCY TO 20KC•ACCURACY ± 1%

The QA series is designed to optimize small size and high "Q" for miniaturized applications. These units are available on special order with stabilized cores and inductance from 1MH to 4.0H.



Part No.	Inductance	Approx. DCR Ohms	Approx. Distributed Capacity PF	Net Price 1-9 pcs.	
				Style F	Style M
QA-1	5MH	2.5	30	4.35	5.70
QA-2	10	5	33	4.35	5.70
QA-3	15	8	34	4.50	5.85
QA-4	20	11.2	36	4.60	6.00
QA-5	30	17	37	4.65	6.15
QA-6	50	28	40	4.80	6.30
QA-7	100	50	42	4.95	6.45
QA-8	150	80	44	5.10	6.60
QA-9	200	120	45	5.20	6.70
QA-10	300	150	46	5.30	6.95
QA-11	500	290	48	5.40	7.20
QA-12	1.00H	530	51	6.15	7.95
QA-13	1.50	825	53	6.30	8.70

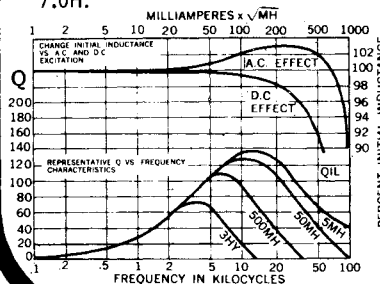


MOLDED STYLE M  
 Encapsulated in Epoxy Resin. Pigtail leads for printed circuit applications.

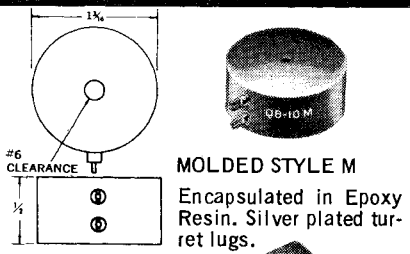
## QB SERIES

FREQUENCY TO 20KC•ACCURACY ± 1%

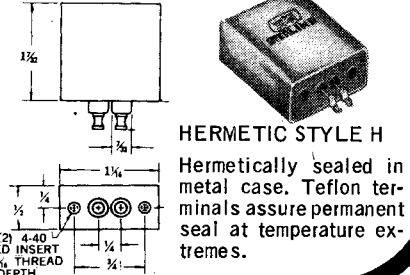
The QB series is designed for airborne applications where stable high "Q" is needed with minimized size and weight. Available on special order with stabilized cores and inductance to 7.0H.



Part No.	Inductance	Approx. DCR Ohms	Approx. Distributed Capacity PF	Net Price 1-9 pcs.		
				Style F	Style H	Style M
QB-1	5MH	1.1	38	3.90	6.75	5.25
QB-2	10	2.1	40	3.90	6.75	5.25
QB-3	15	3.3	42	3.90	6.75	5.40
QB-4	20	3.7	43	3.95	6.85	5.50
QB-5	30	5.8	45	4.00	7.00	5.55
QB-6	50	11	47	4.05	7.20	5.65
QB-7	100	22	49	4.20	7.65	5.70
QB-8	150	34	50	4.35	7.80	5.85
QB-9	200	47	52	4.55	8.15	6.05
QB-10	300	60	53	4.65	8.40	6.15
QB-11	500	95	55	4.80	8.55	6.30
QB-12	1.00H	213	57	5.10	9.00	6.75
QB-13	1.50	335	59	5.85	9.45	7.35



MOLDED STYLE M  
 Encapsulated in Epoxy Resin. Silver plated turret lugs.



HERMETIC STYLE H  
 Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.







**STANDARD INTERSTAGE AND LINE TRANSISTOR AND TUBE APPLICATIONS**

*filters*

Hermetically Sealed - Manufactured to MIL-F-18327B Available in Other Frequencies

**LOW PASS**

**INTERSTAGE**

LI units have a loss of approximately 3 db at cutoff frequency, and an attenuation of 35 db at 1.5 cutoff frequency. Input and output 10,000 ohms. LI units are MIL type FR4RX11YY.

Part No.	Frequency	Case Size	Net Price
LI-60	60 cps	A	31.50
LI-100	100 cps	A	31.50
LI-200	200 cps	B	31.50
LI-400	400 cps	B	31.50
LI-500	500 cps	B	31.50
LI-800	800 cps	B	31.50
LI-1,000	1,000 cps	B	31.50
LI-1,500	1,500 cps	B	31.50
LI-2,000	2,000 cps	B	31.50
LI-2,500	2,500 cps	B	31.50
LI-3,000	3,000 cps	B	31.50
LI-4,000	4,000 cps	B	31.50
LI-5,000	5,000 cps	B	31.50
LI-10,000	10,000 cps	B	31.50

**LINE**

LL units have a loss of approximately 3 db at cutoff frequency, and an attenuation of 35 db at 1.5 cutoff frequency. Input and output 500/600 ohms. LL units are MIL type FR4RX11YY.

Part No.	Frequency	Case Size	Net Price
LL-600	600 cps	A	31.50
LL-1,000	1,000 cps	A	31.50
LL-1,500	1,500 cps	A	31.50
LL-2,000	2,000 cps	A	31.50
LL-2,500	2,500 cps	A	31.50
LL-4,000	4,000 cps	A	31.50
LL-8,000	8,000 cps	A	31.50
LL-10,000	10,000 cps	A	31.50
LL-12,000	12,000 cps	A	31.50

**HIGH PASS**

**INTERSTAGE**

HI units have a loss of less than 6 db at cutoff frequency, and an attenuation of 35 db at .67 cutoff frequency. Input and output 10,000 ohms. HI units are MIL type FR4RX33YY.

Part No.	Frequency	Case Size	Net Price
HI-100	100 cps	A	31.50
HI-200	200 cps	A	31.50
HI-300	300 cps	A	31.50
HI-400	400 cps	A	31.50
HI-500	500 cps	A	31.50
HI-800	800 cps	A	31.50
HI-1,000	1,000 cps	A	31.50
HI-2,000	2,000 cps	A	31.50
HI-3,000	3,000 cps	A	31.50

**LINE**

HL units have a loss of less than 6 db at cutoff frequency, and an attenuation of 35 db at .67 cutoff frequency. Input and output 500/600 ohms. HL units are MIL type FR4RX33YY.

Part No.	Frequency	Case Size	Net Price
HL-200	200 cps	A	39.00
HL-300	300 cps	A	39.00
HL-500	500 cps	A	39.00
HL-1,000	1,000 cps	A	39.00

FOR WIDE BAND PASS FILTERS THE LI & HI OR LL & HL MAY BE CONNECTED IN SERIES.

**BAND PASS**

**INTERSTAGE**

BI units have 2:1 voltage gain. They are sharply peaked, having approximately 2 db attenuation at plus or minus 3% from center frequency and attenuation greater than 40 db at 1/2 and twice center frequency. Input 10,000 ohms, output to grid. BI units are MIL type FR4RX22YY.

Part No.	Frequency	Case Size	Net Price
BI-50	50 cps	A	30.00
BI-60	60 cps	A	30.00
BI-100	100 cps	A	30.00
BI-120	120 cps	B	30.00
BI-200	200 cps	B	30.00
BI-240	240 cps	B	30.00
BI-400	400 cps	B	30.00
BI-500	500 cps	B	30.00
BI-750	750 cps	B	30.00
BI-800	800 cps	B	30.00
BI-1,000	1,000 cps	B	30.00
BI-1,500	1,500 cps	B	30.00
BI-2,000	2,000 cps	B	30.00
BI-3,000	3,000 cps	B	30.00
BI-4,000	4,000 cps	B	30.00
BI-5,000	5,000 cps	B	30.00
BI-10,000	10,000 cps	B	30.00

**LINE**

BL units have 9:1 voltage gain. They are sharply peaked, having approximately 2 db attenuation at plus or minus 3% from center frequency and attenuation greater than 40 db at 1/2 and twice center frequency. Input 500/600 ohms, output to grid. BL units are MIL type FR4RX22YY.

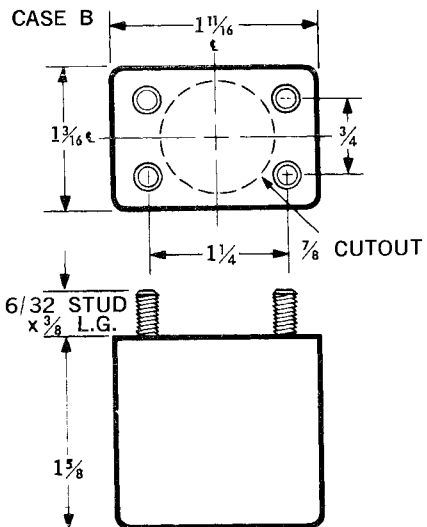
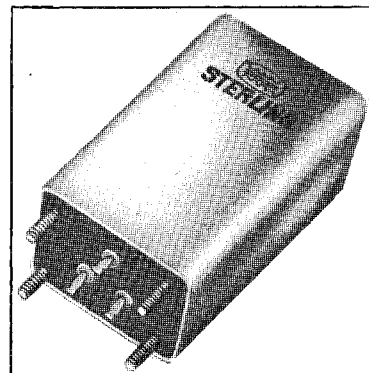
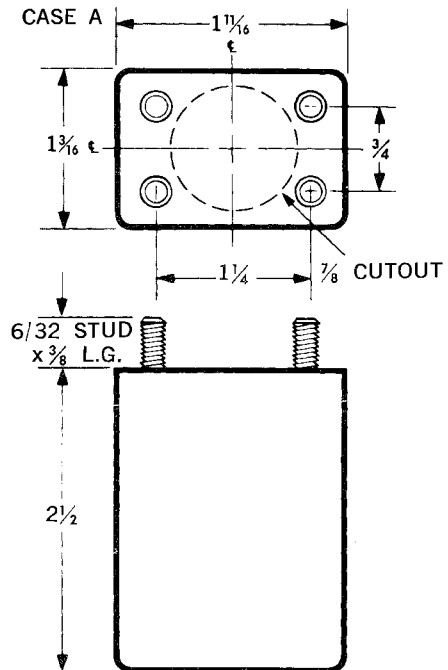
Part No.	Frequency	Case Size	Net Price
BL-400	400 cps	B	30.00
BL-1,000	1,000 cps	B	30.00

**TRANSISTOR INTERSTAGE**

They are sharply peaked, having approximately 2 db attenuation at plus or minus 3% from center frequency and attenuation greater than 40 db at 1/2 and twice center frequency. Input 10,000 ohms, output 10,000 ohms. BIT units are MIL type FR4RX22YY.

Part No.	Frequency	Case Size	Net Price
BIT-60	60 cps	A	36.00
BIT-100	100 cps	A	36.00
BIT-120	120 cps	B	36.00

**CASE DETAIL**



# filters

## TELEGRAPH TONE CHANNEL TELEMETERING

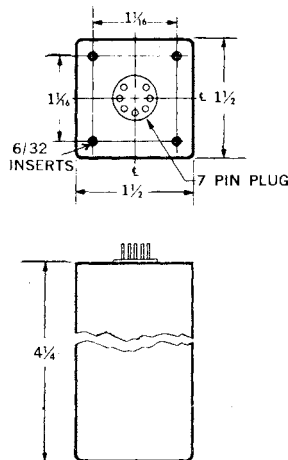
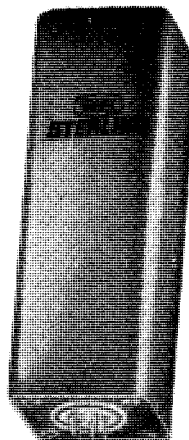


Available in Other Frequencies

### TELEGRAPH TONE CHANNEL — RECEIVING

- Attenuation at  $\pm 42.5$  cps from center frequency—less than 3 db.
- Attenuation at crossover with adjacent channels—at least 15 db.
- Attenuation at  $\pm 170$  cps from center frequency—at least 35 db.
- Impedance: 600 ohms; units are MIL type FR4RX22YY.

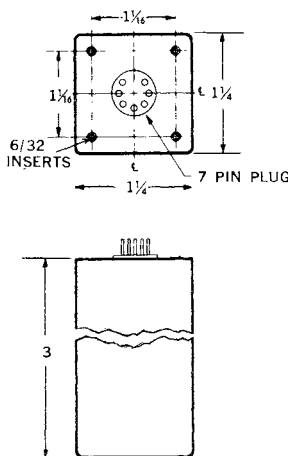
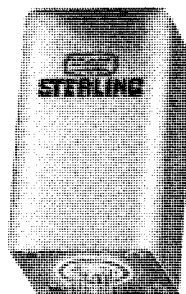
Part No.	Frequency	Net Price
TR-425	425 cps	72.00
TR-595	595 cps	72.00
TR-765	765 cps	72.00
TR-935	935 cps	72.00
TR-1105	1105 cps	63.00
TR-1275	1275 cps	63.00
TR-1445	1445 cps	63.00
TR-1615	1615 cps	63.00
TR-1785	1785 cps	60.00
TR-1955	1955 cps	60.00
TR-2125	2125 cps	60.00
TR-2295	2295 cps	60.00
TR-2465	2465 cps	57.00
TR-2635	2635 cps	57.00
TR-2805	2805 cps	57.00
TR-2975	2975 cps	57.00
TR-3145	3145 cps	57.00
TR-3315	3315 cps	57.00



### TELEGRAPH TONE CHANNEL — TRANSMITTING

- Attenuation at  $\pm 42.5$  cps from center frequency—less than 3 db.
- Attenuation at crossover with adjacent channels—at least 10 db.
- Attenuation at  $\pm 170$  cps from center frequency—at least 25 db.
- Impedance: 600 ohms; units are MIL type FR4RX22YY.

Part No.	Frequency	Net Price
TT-425	425 cps	42.00
TT-595	595 cps	42.00
TT-765	765 cps	42.00
TT-935	935 cps	42.00
TT-1105	1105 cps	36.00
TT-1275	1275 cps	36.00
TT-1445	1445 cps	36.00
TT-1615	1615 cps	36.00
TT-1785	1785 cps	33.00
TT-1955	1955 cps	33.00
TT-2125	2125 cps	33.00
TT-2295	2295 cps	33.00
TT-2465	2465 cps	30.00
TT-2635	2635 cps	30.00
TT-2805	2805 cps	30.00
TT-2975	2975 cps	30.00
TT-3145	3145 cps	30.00
TT-3315	3315 cps	30.00

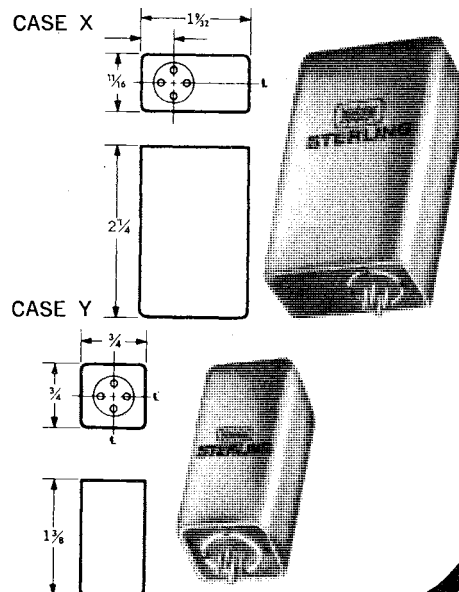


### TELEMETERING FILTERS

- Impedance: 100K ohms input and output. Insertion loss: less than 6 DB.
- Attenuation Characteristics for  $\pm 7.5\%$  Bandwidth Filters  
At  $\pm 7.5\%$  of center frequency—less than 3 db.  
At  $\pm 25\%$  of center frequency—more than 20 db.  
At 1.75 times center frequency and above—greater than 40 db.  
At 0.57 times center frequency and below—greater than 40 db.  
Attenuation characteristics for  $\pm 15\%$  Bandwidth filters is proportional.  
... all units MIL type FR4RX22YY.

Part No.	Channels	Frequency	Bandwidth $\pm$	Case Size	Price
TM-1	1	400 cps	7 1/2%	X	39.00
TM-2	2	560 cps	7 1/2%	X	39.00
TM-3	3	730 cps	7 1/2%	X	39.00
TM-4	4	960 cps	7 1/2%	X	39.00
TM-5	5	1.3 KC	7 1/2%	X	39.00
TM-6	6	1.7 KC	7 1/2%	X	39.00
TM-7	7	2.3 KC	7 1/2%	Y	39.00
TM-8	8	3.0 KC	7 1/2%	Y	39.00
TM-9	9	3.9 KC	7 1/2%	Y	39.00
TM-10	10	5.4 KC	7 1/2%	Y	39.00
TM-11	11	7.35 KC	7 1/2%	Y	39.00
TM-12	12	10.5 KC	7 1/2%	Y	42.00
TM-13	13	14.5 KC	7 1/2%	Y	42.00
TM-14	14	22.0 KC	7 1/2%	Y	42.00
TM-15	15	30.0 KC	7 1/2%	Y	42.00
TM-16	16	40.0 KC	7 1/2%	Y	42.00
TM-17	17	52.5 KC	7 1/2%	Y	42.00
TM-18	18	70.0 KC	7 1/2%	Y	42.00
TM-A	A	22.0 KC	15%	Y	42.00
TM-B	B	30.0 KC	15%	Y	42.00
TM-C	C	40.0 KC	15%	Y	42.00
TM-D	D	52.5 KC	15%	Y	42.00
TM-E	E	70.0 KC	15%	Y	42.00

4 Pin Plugs for Printed Circuit Application



# POWERSTAT® Variable Transformers

- ZERO WAVEFORM DISTORTION
- RUGGED CONSTRUCTION
- GOLD-ALLOY PLATED COMMUTATORS

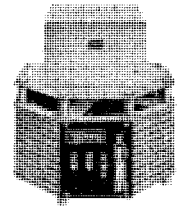
Deliver continuously-adjustable voltage from a-c power lines. All manually-operated types listed in charts except 10B, EN116-EN216 and EN117-EN217 Series are also available with motor-drives if desired. Motor-driven speeds are 5, 15, 30 or 60 seconds for full range travel except types suffixed 4P, 4PS, 4D, 5P, 6P, 6PS, 6D and 6Y which do not offer the 5 second speed. 117-217, 126-226 and 136B-236B types are also available with 2- or 3-wire cord-plug sets. 1156D-1256D Series types are available in ratings up to 244 KVA.



TYPE 116



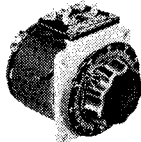
TYPE 3PN126



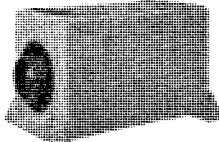
TYPE 5MB1156D



TYPE 10B



TYPE 21



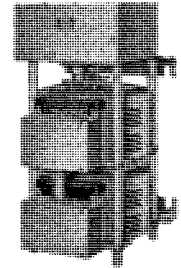
TYPE EN216-2



TYPE 136BT



TYPE 1156D



TYPE 15MD136BT-2

RATINGS AND SPECIFICATIONS									
10B SERIES									
INPUT		OUTPUT				TYPE	Ship. Wt. Lbs.		
Volts	Cycles	Volts	Const. Current Load Max. Amps.	Max. KVA	Const. Impedance Load Max. Amps.			Max. KVA	
<b>Single Phase</b>									
120	60	0-132	1	0.13	—	—	2PF10		3.3
120	50/60	0-120	2.25*	0.27	31	0.36	10B		2.4
120	60	0-132	2.25*	0.30	—	—			
240	50/60	0-240	2.25*	0.54	31	0.72	10B-2		5.6
240	60	0-264	2.25*	0.59	—	—			
<b>Three Phase</b>									
120	50/60	0-120	2.25*	0.47	31	0.62	10B-2		5.6
120	60	0-132	2.25*	0.51	—	—			
240	60	0-240	2.25*	0.94	31	1.2	10B-3		8.3
<b>21-22 SERIES</b>									
<b>Single Phase</b>									
120	50/60	0-120	3.75	0.45	5.5	0.66	21		6
120	50/60	0-140	3.75	0.53	—	—			
240	50/60	0-240	2.25	0.54	3.25	0.78	22		6
240	50/60	0-280	2.25	0.63	—	—			
240	50/60	0-240	3.75	0.90	5.5	1.3	21-2		12
240	50/60	0-280	3.75	1.0	—	—			
480	50/60	0-480	2.25	1.1	3.25	1.6	22-2		12
480	50/60	0-560	2.25	1.3	—	—			
<b>Three Phase</b>									
120	50/60	0-120	3.75	0.78	5.5	1.1	21-2		12
120	50/50	0-140	3.75	0.91	—	—			
240	50/60	0-240	2.25	0.94	3.25	1.4	22-2		12
240	50/60	0-280	2.25	1.1	—	—			
240	50/60	0-240	3.75	1.6	5.5	2.3	21-3		17
240	60	0-280	3.75	1.8	—	—			
480	50/60	0-480	2.25	1.9	3.25	2.7	22-3		17
480	60	0-560	2.25	2.2	—	—			
<b>116-216 and 117-217 SERIES†</b>									
<b>Single Phase</b>									
120	50/60	0-120	7.5	0.90	10	1.2	116††		12
120	50/60	0-140	7.5	1.0	—	—			
120	60	0-120	10	1.2	13	1.6	117T††		12
240	50/60	0-240	3	0.72	4.5	1.1	216††		12
240	50/60	0-280	3	0.84	—	—			
240	60	0-240	4	1.0	6.3	1.5	217T††		12
240	50/60	0-240	7.5	1.8	10	2.4	116T-2		24
240	50/60	0-280	7.5	2.1	—	—			
240	60	0-240	10	2.4	13	3.1	117T-2		24

116-216 and 117-217 SERIES† (contd.)									
INPUT		OUTPUT						TYPE	Ship. Wt. Lbs.
Volts	Cycles	Volts	Const. Current Load Max. Amps.	Max. KVA	Const. Impedance Load Max. Amps.	Max. KVA			
<b>Single Phase</b>									
480	50/60	0-480	3	1.4	4.5	2.2	216T-2		24
480	50/60	0-560	3	1.7	—	—			
480	60	0-480	4	1.9	6.3	3.0	217T-2		24
<b>Three Phase</b>									
120	50/60	0-120	7.5	1.6	10	2.1	116T-2		24
120	50/60	0-140	7.5	1.8	—	—			
120	60	0-120	10	2.1	13	2.7	117T-2		24
240	50/60	0-240	3	1.2	4.5	1.9	216T-2		24
240	50/60	0-280	3	1.5	—	—			
240	60	0-240	4	1.7	6.3	2.6	217T-2		24
240	50/60	0-240	7.5	3.1	10	4.2	116T-3		36
240	60	0-280	7.5	3.6	—	—			
240	60	0-240	10	4.2	13	5.4	117T-3		36
480	50/60	0-480	3	2.5	4.5	3.7	216T-3		36
480	60	0-560	3	2.9	—	—			
480	60	0-480	4	3.3	6.3	5.2	217T-3		36
<b>EN116-EN216 and EN117-EN217 SERIES</b>									
<b>Single Phase</b>									
120	50/60	0-120	6.5	0.78	10	1.2	EN116		15
120	50/60	0-140	6.5	0.91	—	—			
120	60	0-120	8.5	1.0	12.5	1.5	EN117		15
240	50/60	0-240	2.6	0.62	4	0.96	EN216		15
240	50/60	0-280	2.6	0.73	—	—			
240	60	0-240	3.5	0.84	5.2	1.2	EN217		15
240	50/60	0-240	6.5	1.6	10	2.4	EN116-2		28
240	50/60	0-280	6.5	1.8	—	—			
240	60	0-240	8.5	2.0	12.5	3.0	EN117-2		28
480	50/60	0-480	2.6	1.2	4	1.9	EN216-2		28
480	50/60	0-560	2.6	1.5	—	—			
480	60	0-480	3.5	1.7	5.2	2.5	EN217-2		28
<b>Three Phase</b>									
120	50/60	0-120	6.5	1.4	10	2.1	EN116-2		28
120	50/60	0-140	6.5	1.6	—	—			
120	60	0-120	8.5	1.8	12.5	2.6	EN117-2		28
240	50/60	0-240	2.6	1.1	4	1.7	EN216-2		28
240	50/60	0-280	2.6	1.3	—	—			
240	60	0-240	3.5	1.5	5.2	2.2	EN217-2		28
240	50/60	0-240	6.5	2.7	10	4.2	EN116-3		39
240	60	0-280	6.5	3.2	—	—			
240	60	0-240	8.5	3.5	12.5	5.2	EN117-3		39
480	50/60	0-480	2.6	2.2	4	3.3	EN216-3		39
480	60	0-560	2.6	2.5	—	—			
480	60	0-480	3.5	2.9	5.2	4.3	EN217-3		39

FOOTNOTES

- \*Rating if mounted on a metal panel. When mounted on a bracket or nonmetallic panel, derate to 1.75 amperes with corresponding reduction in maximum KVA.
- †Rating if mounted on a metal panel. When mounted on a bracket or nonmetallic panel, derate to 2.5 amperes with corresponding reduction in maximum KVA.
- ††Also available with open construction for back-of-panel mounting (suffix U when ordering). Prefix Q if square frame is desired instead of round frame on open construction (U) types.
- ‡‡Also available with metered knobs. Add prefix V when ordering.



THE SUPERIOR ELECTRIC COMPANY  
Bristol, Connecticut, U.S.A.

SEE OTHER SUPERIOR ELECTRIC PRODUCT PAGES IN SECTIONS 2100, 3500 AND 4000

# POWERSTAT® Variable Transformers

● EXCELLENT REGULATION

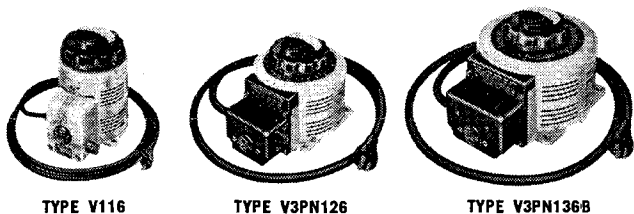
● HIGH EFFICIENCY

● CONSERVATIVE RATINGS

126-226 SERIES**									LW136B SERIES**						
INPUT		OUTPUT					TYPE	Ship. Wt. Lbs.	INPUT		OUTPUT††			TYPE	Ship. Wt. Lbs.
Volts	Cycles	Volts	Const. Max. Amps.	Current Load Max. KVA	Const. Max. Amps.	Impedance Load Max. KVA			Volts	Cycles	Volts	Max. Amps.	Max. KVA		
<b>Single Phase</b>									<b>Single Phase</b>						
120	50/60	0-120	12.5	1.5	18	2.2	126-11	17	120/240	50/60	15-0-15	35	0.52	LW136B	25
120	50/60	0-140	12.5	1.8					120/240/480	50/60	30-0-30	35	1.0	LW136B-2	52
240	50/60	0-240	6	1.4	9	2.2	226-11	17	120/240	50/60	45-0-45	35	1.6	LW136B-3	76
240	50/60	0-280	6	1.7					120/240	50/60	0-30	25	0.75	LW136B	25
240	50/60	0-240	12.5	3.0	18	4.3	126-2	32	120/240/480	50/60	0-50	25	1.5	LW136B-2	52
240	50/60	0-280	12.5	3.5					120/240	50/60	0-90	25	2.2	LW136B-3	76
480	50/60	0-480	6	2.9	9	4.3	226-2	32	<b>Three Phase</b>						
480	50/60	0-560	6	3.4					120/240	50/60	0-30	25	1.3	LW136B-2	52
<b>Three Phase</b>									<b>Three Phase</b>						
120	50/60	0-120	12.5	2.6	18	3.7	126-2	32	120/240	50/60	0-30	43.3	2.2	LW136B-3	76
120	50/60	0-140	12.5	3.0					120/240	50/60	0-52	25	2.2	LW136B-3	76
240	50/60	0-240	6	2.5	9	3.7	226-2	32	240/480	60	0-35	43.3	2.6	LW136B-3	76
240	50/60	0-280	6	2.9					240/480	60	0-60	25	2.6	LW136B-3	76
240	50/60	0-240	12.5	5.2	18	7.5	126-3	49	<b>1156D-1256D SERIES §</b>						
240	50/60	0-280	12.5	6.1					<b>Single Phase</b>						
480	50/60	0-480	6	5.0	9	7.5	226-3	49	120	50/60	0-140	45	6.3	1156D	79
480	60	0-560	6	5.8					120	50/60	0-140	90	12.6	1156D 2P	158
<b>136B-236B SERIES**</b>									120	50/60	0-140	135	18.9	1156D 3P	274
<b>Single Phase</b>									120	50/60	0-140	180	25.2	1156D 4P	395
120	50/60	0-120	20	2.4	25	3.0	136B-11	25	120	50/60	0-140	225	31.5	1156D 5P	490
120	50/60	0-140	20	2.8					120	50/60	0-140	270	37.8	1156D 6P	584
120	50/60	0-120	40	4.8	50	6.0	136B-21	52	240	50/60	0-280	28	7.8	1256D	79
120	50/60	0-140	40	5.6					240	50/60	0-280	45	12.6	1256D 2S	152
240	50/60	0-240	9	2.2	12.5	3.0	236B-11	25	240	50/60	0-280	56	15.7	1256D 3P	158
240	50/60	0-280	9	2.5					240	50/60	0-280	84	23.5	1256D 3P	274
240	50/60	0-240	20	4.8	25	6.0	136B-2	52	240	50/60	0-280	90	25.2	1156D 4PS	386
240	50/60	0-280	20	5.6					240	50/60	0-280	112	31.4	1256D 4P	391
480	50/60	0-480	9	4.3	12.5	6.0	236B-2	52	240	50/80	0-280	140	39.2	1256D 5P	490
480	50/60	0-560	9	5.0					240	50/60	0-280	135	37.8	1156D 6PS	583
<b>Three Phase</b>									240	50/60	0-280	168	47.0	1256D 6P	588
120	50/60	0-120	20	4.2	25	5.2	136B-2	52	480	50/60	0-560	28	15.7	1256D 2S	152
120	50/60	0-140	20	4.8					480	50/60	0-560	56	31.4	1256D 4PS	386
240	50/60	0-240	9	3.7	12.5	5.2	236B-2	52	480	50/60	0-560	84	47.0	1256D 6PS	583
240	50/60	0-280	9	4.4					<b>Three Phase</b>						
240	50/60	0-240	20	8.3	25	10.4	136B-3	76	120	50/60	0-140	45	10.9	1156D 20	152
240	50/60	0-280	20	9.7					120	50/60	0-140	90	21.8	1156D 40	386
480	50/60	0-480	9	7.5	12.5	10.4	236B-3	76	120	50/60	0-140	135	32.7	1156D 60	583
480	60	0-560	9	8.7					240	50/60	0-280	28	13.6	1256D 20	152
									240	60	0-280	45	21.8	1156D 3Y	225
									240	50/60	0-280	56	27.2	1256D 40	386
									240	50/60	0-280	84	40.7	1256D 60	583
									240	60	0-280	90	43.6	1156D 6Y	569
									480	60	0-560	28	27.2	1256D 3Y	225
									480	60	0-560	56	54.3	1256D 6Y	569

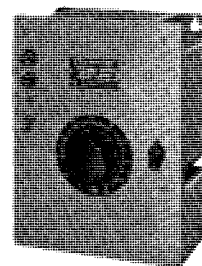
FOOTNOTES

§ Requires also one paralleling choke type T5000.  
 \*\* 126-226, 136B-236B and LW136B Series also available with open construction for back-of-panel mounting (suffix U when ordering).  
 †† LW136B Series ratings are for use as low voltage isolated output transformer. Also permits connection for use as limited range transformer or as a line corrector. Full connections and ratings on request.  
 §§ 1156D-1256D Series types also have terminals for limiting output voltage to line voltage.  
 †† Also available with metered knobs. Add prefix V when ordering.



METERED KNOB TYPES

POWERSTATS of the V116-V216, V117-V217, V126-V226 and V136B-V236B Series have an accurate voltmeter integral with the knob. They have the same ratings and mounting dimensions as single types with enclosed construction (with and without cord-plugs) in the 116-216, 117-217, 126-226 and 136B-236B Series listed in the charts. Voltmeter is insensitive to stray magnetic fields. Conversion kits also available to modify currently cataloged types not having metered knobs.

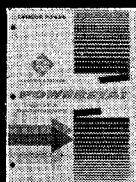


TYPE MSC33

POWERSTAT® DC MOTOR SPEED CONTROLLERS

Provide continuously adjustable speed control of d-c shunt-wound or series motors from a-c power lines. Full rated torque available at any speed. Instant start, stop and reverse; dynamic braking in "stop" position. Type MSC16 designed for motors up to 1/8 hp and type MSC33 for motors up to 1/2 hp. Rated for 120 volt, 60 cycle single phase input. NEMA frame 56, 1725 rpm, d-c motors in 1/8 and 1/2 hp also available.

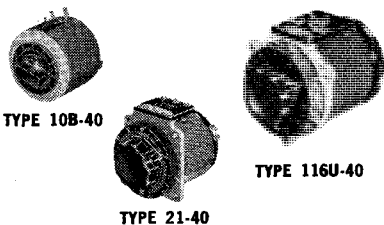
COMPLETE LITERATURE on all standard and special use POWERSTATS is available on request. Specify whether 50/60 cycle, 400/800 cycle or complete file is desired.



# POWERSTAT® Variable Transformers

## 40-VOLT SERIES

Meet high current, low voltage requirements of low voltage power supplies and a wide range of transistor circuit applications. Manually-operated and motor-driven single, 2- and 3-gang single phase types available.



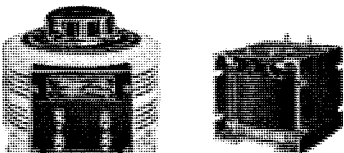
TYPE 10B-40

TYPE 21-40

TYPE 116U-40

## LINE CORRECTORS

Used to correct line voltage variations to maintain a constant output voltage or to supply a limited range of output voltage from a stable a-c source. Manually operated and motor-driven types available.

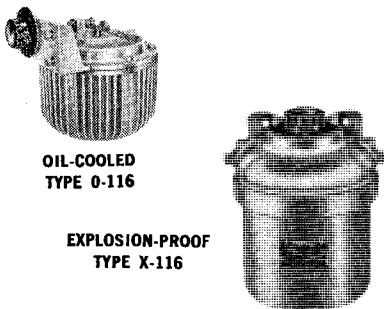


TYPE LC2106C

TYPE 5MLC2115C

## OIL-COOLED AND EXPLOSION-PROOF

Oil-cooled POWERSTATS substantially increase ratings above equivalent air-cooled types and provide a measure of safety; Explosion-proof POWERSTATS are Underwriters' Laboratories Approved for Class 1, Group D service. Both types are manually operated only.



OIL-COOLED  
TYPE 0-116

EXPLOSION-PROOF  
TYPE X-116

### 40-VOLT SERIES

INPUT		OUTPUT			TYPE	SHIP. WT. LBS.
VOLTS	CYCLES	VOLTS	MAX. AMPS.	MAX. KVA		
Single Phase						
40	60	0-40	6	0.24	10B-40	3.3
			15	0.6	21-40	6
			25	1.0	116U-40	11

### LINE CORRECTOR SERIES

INPUT		OUTPUT			TYPE	SHIP. WT. LBS.
VOLTS	CYCLES	VOLTS	MAX. AMPS.	MAX. KVA		
Used as Line Correctors — SINGLE PHASE						
95-135	50/60	115	17.5	2.0	LC2102C	55
95-135	50/60	115	52	6.0	LC2106C	80
95-135	50/60	115	130	15.0	LC2115C	200
195-255	50/60	230	32.5	7.5	LC2207C	85
205-250	50/60	230	120	27.5	LC2228C	205
400-520	50/60	460	15	6.6	LC2407C	85
400-520	50/60	460	40	17.6	LC2416C	205
Used as Line Correctors — THREE PHASE						
195-255	50/60	230	25	10.0	LC3210YC	211
195-255	50/60	230	38	15.0	LC3215YC	276
195-255	50/60	230	50	20.0	LC3220YC	241
195-255	50/60	230	113	45.0	LC3245YC	615
195-255	50/60	230	175	70.0	LC32700D	795
400-520	50/60	460	16	12.5	LC3412YC	200
400-520	50/60	460	22	17.5	LC3417YC	215
400-520	50/60	460	33	25.0	LC3425YC	230
400-520	50/60	460	66	50.0	LC3450YD	580
400-520	50/60	460	100	75.0	LC3475YD	630
420-500	50/60	460	131	100.0	LC34100YD	630

When units of the LC series are used as limited range adjustable transformers, the input voltage is the output voltage shown in the above chart and the output voltage is the input voltage shown in the above chart.

### EXPLOSION-PROOF

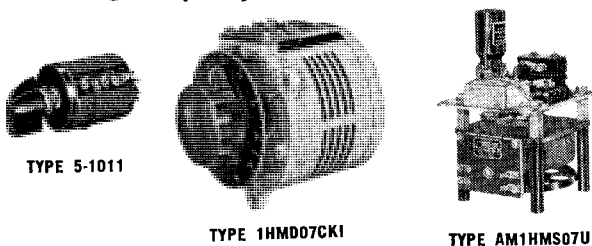
INPUT		OUTPUT			TYPE	SHIP. WT. LBS.
VOLTS	CYCLES	VOLTS	MAX. AMPS.	MAX. KVA		
120	50/60	0-120	7.5	0.90	X-116	47
120	50/60	0-140	7.5	1.0	X-1126	142
120	50/60	0-140	12	1.7		
240	50/60	0-240	3	0.72	X-216	47
240	50/60	0-280	3	0.84		
240	50/60	0-280	6	1.7	X-1226	142

### OIL-COOLED

INPUT		OUTPUT			TYPE	SHIP. WT. LBS.
VOLTS	CYCLES	VOLTS	MAX. AMPS.	MAX. KVA		
120	50/60	0-120	15.0	1.8	O-116	32
120	50/60	0-140	15.0	2.1		
120	50/60	0-140	30.0	4.2	O-1126	100
240	50/60	0-240	6.0	1.4	O-216	32
240	50/60	0-280	6.0	1.7		
240	50/60	0-280	18.0	5.0	O-1226	105

OTHER TYPES AVAILABLE ON SPECIAL ORDER

## High Frequency POWERSTATS



TYPE 5-1011

TYPE 1HMDD7CK1

TYPE AM1HMS07U

Standard types designed to meet applicable military specifications are available: manually operated and motor-driven types for 28, 120, 240 and 480 volt, 400/800 cycle single and three phase operation in ratings from 56 VA to 8.7 KVA; manually operated types for 115 volt, 400/800 cycle single phase service with outputs of 0-28 volts, 2.5, 5 or 8 amperes and 0-5 volts, 6 or 12 amperes; manually operated types for 400/1600 cycle service as limited range variable transformers, low voltage output variable transformers or line correctors.

## FLEXIFORMER® Packaged Transformer Primary

This "do-it-yourself" transformer is essentially a self-contained toroidal primary coil encased in durable high impact plastic. Colored SUPERIOR 5-WAY Binding Posts for connections are integrally mounted. When used as a source of a-c voltage, the center opening permits hand-threading the correct number of secondary winding turns to obtain the desired output voltage. When used as a current transformer, the FLEXIFORMER winding is shunted by an ammeter which indicates the current flow in a conductor hand-threaded through the center opening.



TYPE TP150

TYPE	AS A SOURCE OF A-C VOLTAGE			AS A CURRENT TRANSFORMER		
	NOMINAL PRIMARY VOLTS	VOLTS PER SECONDARY TURN	MAXIMUM VA	INPUT/OUTPUT RATIO	MAXIMUM PRIMARY AMPERES	MAXIMUM SECONDARY AMPERES
TP150	120	0.3	150	400/1	400	1.0
TP1000	120	0.75	1000	160/1	800	5.0
TP152	240	0.3	150	800/1	400	0.5
TP1020	240	0.75	1000	320/1	800	2.5

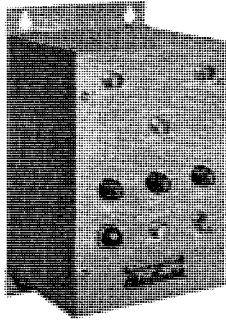


THE SUPERIOR ELECTRIC COMPANY

Bristol, Connecticut, U.S.A.

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**STABILTEMP** Proportioning Temperature Coupler

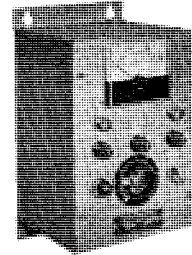


TYPE PTC5

Automatically maintains voltage required to keep electric furnaces and ovens at correct temperature when incorporated into control systems using most commercially available current proportioning temperature

controllers. Designed for use with cataloged motor-driven POWERSTAT Variable Transformers rated for 120 or 240 volt, 50/60 cycle single phase service. For three phase operation, the unit can be used to monitor one line-to-neutral or one line-to-line voltage depending on POWERSTAT used. To maintain the desired temperature a STABILTEMP will regulate the voltage at any point within the range of the POWERSTAT as determined by the controller current command signal regardless of variations in line voltage or load current. STABILTEMP type PTC5 is designed for 5 milliamperes maximum command signal; shunting resistors must be provided by user for 20 or 50 milliamperce command signals.

**STABILINE®**  
Full Range Regulator Controller

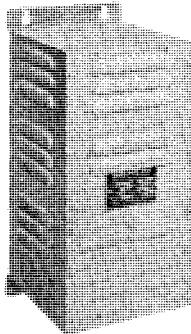


TYPE FR500MP

Designed for use with motor-driven POWERSTAT Variable Transformers to maintain constant output voltage, adjustable to any value within the full range of the POWERSTAT used. Can regulate output voltage from any motor-driven POWERSTAT rated for 120 or 240 volt, 50/60 cycle single phase duty. Depending on the POWERSTAT used, the unit may be used for three phase applications to maintain one line-to-neutral or one line-to-line voltage. It can also be used in 480 volt, 50/60 cycle, three phase applications but an auxiliary step-down transformer is required when sensing line-to-line voltage. Output voltage will remain within a 2 volt band when used with 120 volt POWERSTATS and within a 4 volt band when used with 240 volt types. Has 0-300 voltmeter mounted on front panel to monitor POWERSTAT output voltage.

**SOLIDSTAT®**  
Variable Voltage Controls

Solid-state, semiconductor type variable a-c voltage controls for all loads from unity power factor to zero power factor lagging inductive load. Can be controlled by small indicating potentiometer, current feedback sensing or voltage sensing circuits. For 60 cycle service.

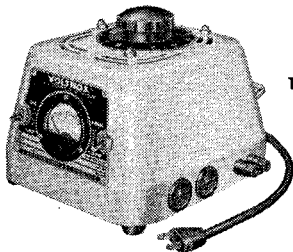


TYPE CSR106

INPUT		OUTPUT			TYPE	APPROXIMATE NET WEIGHT (POUNDS)
VOLTS*	FREQUENCY (CYCLES)	VOLTS	MAX. AMPS AT MAX. VOLTS	MAX. KVA		
120	60	0-115	50	6.0	CSR106	16
240	60	0-230	50	12.0	CSR212	16
480	60	0-470	50	24.0	CSR424	18
120	60	0-115	100	12.0	CSR112	34
240	60	0-230	100	24.0	CSR224	34
480	60	0-470	100	48.0	CSR448	38

\*208 and 277 volt types available on special order.

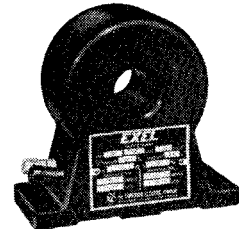
**VOLTBOX®**  
A-C Power Supply



TYPE UC1M

Compact versatile instrument containing all the necessary components for tests involving a-c voltage: POWERSTAT Variable Transformer, direct reading voltmeter, three output receptacles; two SUPERIOR 5-WAY Binding Posts, "on-off" switch, line-load meter switches, fuse and 6-foot cord-plug. Designed for 50/60 cycle service. Type UC1M ratings are 120 volt input and 0-140 volt, 7.5 ampere, 1.0 KVA output; type UC2M ratings are 240 volt input and 0-280 volt, 3 ampere, 0.84 KVA output. Other types available on special order.

**EXEL** Loading Reactor

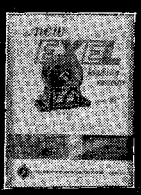
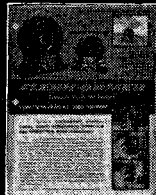


TYPE LR2

Designed to provide a convenient inductive load which can be made adjustable when used with a POWERSTAT Variable Transformer. Used primarily for testing apparatus at various lagging power factor loads, i.e. to simulate an inductive load. Ratings: 120 volts, 60 cycles; 2.0 amperes at 120 volts; inductive reactance 60 ohms; d-c resistance 4.0 ohms; inductance 0.16 henrys. At 60 cycles, the EXEL has essentially a linear current curve from 0 to nominal 2.0 amperes for continuous duty and up to 3.0 amperes for intermittent duty.

REQUEST BULLETINS AND DATA SHEETS

giving complete information on  
STABILTEMP Proportioning Temperature Coupler,  
SOLIDSTAT Variable Voltage Controls,  
STABILINE Full Range Regulator Controller,  
FLEXIFORMER Packaged Transformer Primaries  
and EXEL Loading Reactors



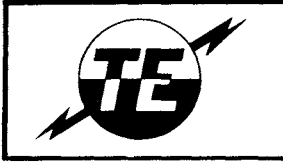


*You can depend on your local  
**ELECTRONIC DISTRIBUTOR for ...***

- *Instant off-the-shelf delivery*
- *In-depth inventories*
- *Wide varieties*
- *Prompt service*
- *Technical assistance*
- *Availability of the latest products*
- *Speedy purchasing – one order does the job*



*Contact your local **ELECTRONIC DISTRIBUTOR**  
for all your requirements!*



**STEP-DOWN  
AUTO TRANSFORMER**

**MICROPHONE  
PLUG-IN**

**LINE  
ISOLATION**

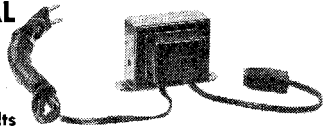
**STEP-DOWN AUTO TRANSFORMERS  
50/60 CYCLES**

**HEAVY  
DUTY  
MODEL**  
220/240 —  
110/120 volts



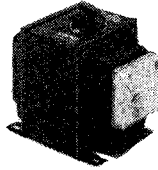
Catalog Number	Rating Watts	Weight Lbs.	Dimension Inches			List Price
			H	W	D	
SD-15	75	2 1/4	3 3/16	2 3/4	3 3/16	\$ 7.90
SD-16	100	2 1/2	3 3/16	2 3/4	3 3/16	8.10
SD-17	150	3 3/8	3 3/16	2 3/4	3 3/16	9.60
SD-12	250	6	4 5/8	3 7/8	3 5/8	13.20
SD-18	350	6 3/8	4 5/8	3 7/8	3 3/4	14.25
SD-11	500	10 3/8	4 5/8	3 7/8	4 7/8	17.10
SD-19	750	12	4 5/8	3 7/8	5 1/8	21.80
SD-13	1000	15 3/8	4 5/8	3 7/8	6 1/8	28.50
SD-14	1500	20	4 5/8	3 7/8	7 1/8	37.20
SD-20	2000	24	6	4 1/2	6 5/8	70.00

**NORMAL  
DUTY  
MODEL**  
220/240 —  
110/120 volts



Catalog Number	Rating Watts	Weight Lbs.	Dimension Inches			List Price
			H	W	D	
SD-24	50	1 1/2	2 3/8	3 3/4	2 1/4	\$4.90
SD-21	65	1 3/8	2 3/8	3 3/4	2 1/4	5.15
SD-25	80	1 3/8	2 3/8	3 3/4	2 1/4	5.40
SD-23	100	1 3/8	2 3/8	3 3/4	2 3/8	5.70
SD-26	125	2	2 3/16	4	2 5/8	6.35
SD-27	150	2 1/4	2 3/16	4	2 5/8	6.90

**HEAVY DUTY  
VOLTAGE  
REGULATOR**



Type	Input Taps								Sec.
11	84	92	100	108	115	122	130	138	115
12	84	92	100	108	115	122	130	138	208/230
21	170	185	200	215	230	245	260	275	115
22	170	185	200	215	230	245	260	275	230

Catalog Number	Type	Rating W.	WT. Lbs.	Dimension (")			List Price
				H	W	D	
TC-17	11 or 22	150	6	5 1/2	3 3/8	5	\$ 25.20
TC-18	11 or 22	350	7	5 1/2	3 3/8	5 3/8	35.60
TC-11	11 or 22	500	11	5 1/2	3 3/8	5 3/4	41.00
TC-19	11 or 22	750	15	5 1/2	3 3/8	6 3/8	51.30
TC-13	11 or 22	1000	20	5 1/2	3 3/8	7 1/8	62.25
TC-14	11 or 22	1500	25	5 1/2	3 3/8	8 1/8	81.50
TC-20	11 or 22	2000	30	6 3/4	4 3/8	8 3/4	155.00
TC-17	12 or 21	150	6	5 1/2	3 3/8	5 1/4	29.50
TC-18	12 or 21	350	7	5 1/2	3 3/8	5 3/4	41.15
TC-11	12 or 21	500	11	5 1/2	3 3/8	6	47.30
TC-19	12 or 21	750	15	5 1/2	3 3/8	6 3/4	60.50
TC-13	12 or 21	1000	20	6 3/4	4 3/8	7 3/4	75.00
TC-14	12 or 21	1500	25	6 3/4	4 3/8	8 3/4	92.25
TC-20	12 or 21	2000	30	6 3/4	4 3/8	9 3/4	178.00

**PANEL MOUNTED  
VOLTAGE  
REGULATOR**



Type	Input Taps								Sec.
11	84	92	100	108	115	122	130	138	115
12	84	92	100	108	115	122	130	138	208/230
21	170	185	200	215	230	245	260	275	115
22	170	185	200	215	230	245	260	275	208/230

Catalog Number	Type	Rating W.	WT. Lbs.	Dimension (")			List Price
				H	W	D	
TA-20	11 or 22	2000	40	6 7/8	7 1/2	17 3/8	\$182.00
TA-28	11 or 22	3000	50	6 7/8	7 1/2	17 3/8	208.00
TA-29	11 or 22	4000	60	6 7/8	7 1/2	17 3/8	253.00
TA-22	11 or 22	5000	70	6 7/8	7 1/2	17 3/8	293.00
TA-30	11 or 22	6000	85	6 7/8	7 1/2	17 3/8	348.00
TA-20	12 or 21	2000	40	6 7/8	7 1/2	17 3/8	198.00
TA-28	12 or 21	3000	50	6 7/8	7 1/2	17 3/8	222.00
TA-29	12 or 21	4000	60	6 7/8	7 1/2	17 3/8	270.00
TA-22	12 or 21	5000	70	6 7/8	7 1/2	17 3/8	313.00
TA-30	12 or 21	6000	85	6 7/8	7 1/2	17 3/8	370.00

Packed One Per Carton

**INDUSTRIAL  
MODEL**

208/220/240 — 110/120 volts  
Step-up or Step-down



Catalog Number	Rating Watts	Weight Lbs.	Dimension Inches			List Price
			H	W	D	
SD-28	3000	38	6 1/8	7 1/8	6 1/4	\$171.00
SD-29	4000	47	6 1/8	7 1/8	6 1/4	200.00
SD-22	5000	58	6 1/8	7 1/8	6 1/4	233.00
SD-30	6000	70	6 1/8	7 1/8	6 1/4	283.00

**INDUSTRIAL PANEL MODEL**

208/220/240 — 110/120 volts  
Step-up or Step-down

Catalog Number	Rating Watts	WT. Lbs.	Dimension Inches			List Price
			H	W	D	
SD-28TA	3000	50	6 7/8	7 1/2	17 3/8	\$198.00
SD-29TA	4000	60	6 7/8	7 1/2	17 3/8	229.00
SD-22TA	5000	72	6 7/8	7 1/2	17 3/8	265.00
SD-30TA	6000	85	6 7/8	7 1/2	17 3/8	316.00

**ALL IN STOCK...  
same day shipment!**

**MICROPHONE PLUG-IN**

**INPUT TRANSFORMERS**

- 9 pin novel plug • Triple mu-metal shielded • Completely molded case and plug



Model	Type	Pri Z	Sec Z	Oper. Level	Freq. Response	Shield @ 60cy	Size	Net Price
MI-10	Low Z Micro	50	50K	.5mw	±2.5DB 20 - 20KC	55db	1 x 1 1/2 x 1 1/2	\$10.20
MI-20	Low Z Micro	200	50K	.5mw	±2.5DB 20 - 20KC	55db	1 x 1 1/2 x 1 1/2	9.50
MI-30	Micro	500	50K	.5mw	±2.5DB 20 - 20KC	55db	1 x 1 1/2 x 1 1/2	12.00
MI-40	Line	500/600	10K	1.0mw	±1.0DB 20 - 15KC	40db	1 x 1 1/2 x 1 1/2	9.25
MI-50	Bridging	10K	50K	1.0mw	±.5DB 20 - 15KC	40db	1 x 1 1/2 x 1 1/2	11.85



- Standard 9 pin octal type • Aluminum cased, triple mu-metal shielded

Model	Type	Pri Z	Sec Z	Oper. Level	Freq. Response	Shield @ 60cy	Size	Net Price
IT-41	Low Z Micro	50	50K	.5mw	±2.5DB 20 - 20KC	55db	1 1/2 x 2 3/8	8.15
IT-42	Low Z Micro	200	50K	.5mw	±1.0DB 20 - 20KC	55db	1 1/2 x 2 3/8	7.80
IT-43	Micro	500	50K	.5mw	±1.0DB 20 - 20KC	55db	1 1/2 x 2 3/8	9.60
IT-45	Line	500/600	10K/12K	1.0mw	±.5DB 20 - 20KC	40db	1 1/2 x 3 1/4	10.95
IT-48	Line	500/600	10K/12K	1.0mw	Hum-bucking const	40db	1 1/2 x 2 3/8	7.40
IT-50	Bridging	10K	50K	1.0mw	±.5DB 20 - 15KC	40db	1 1/2 x 2 3/8	9.50

**LINE ISOLATION TRANSFORMERS**

230/115V : 115V

- 45°C Temp rise. • Minimum Regulation.
- Fully Encased. • Supplied with standard 2-prong line cord and receptacle. • "U" type grounded receptacle and line cord available.



Cat. No.	Rating Va	H	W	D	Approx. Wt. Lbs.	Net Price
LI-50	50	3 3/16	2 3/4	3 3/8	2.3	\$ 5.25
LI-100	100	4 3/8	3 7/8	3 5/8	5.5	6.25
LI-175	175	4 3/8	3 7/8	3 3/4	6.7	9.20
LI-250	250	4 3/8	3 7/8	4 7/8	10.7	11.00
LI-500	500	4 3/8	3 7/8	6 1/8	15.7	18.15
LI-1000	1000	6	4 1/2	6 3/8	24.0	45.15
LI-1500	1500	6 1/8	7 1/8	6 3/4	38.0	87.60
LI-2000	2000	6 1/8	7 1/8	7 1/4	47.0	102.90



**ENGINEERING • RELIABILITY • SERVICE**

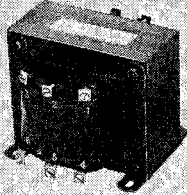
**TODD ELECTRIC CO., INC., YONKERS, N. Y.**



# HIGH CURRENT TRANSFORMERS & CHOKES

## ELECTRICAL SPECIFICATIONS

**SHIP**



**50-500 cy ALL UNITS**

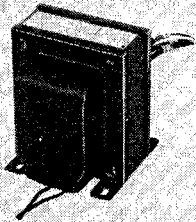
**24 VOLTS**  
Series 6-12-18-24  
Parallel 6-12

PART NO.	PRIMARY VOLTS
24 01	115
24 02	115
24 04	115
24 06	115
24 08	115
24 12	105, 115, 125
24 20	105, 115, 125
24 25	105, 115, 125
24 50	105, 115, 125
24 100	115, 230

**SECONDARY AMPS FOR OPTIONAL HOOKUPS**

SERIES		PARALLEL	
1	A M P S	2	A M P S
2			
4			
8			
12			
16			
24			
40			
50			
100			
200			

**SAME**

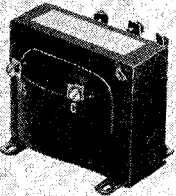


**56 VOLTS**  
Series 14-28-42-56  
Parallel 14-28

PART NO.	PRIMARY VOLTS
56 01	115
56 02	115
56 04	115
56 06	115
56 08	105, 115, 125
56 12	105, 115, 125
56 25	105, 115, 125
56 50	115, 230
56 100	115, 230

SERIES		PARALLEL	
1	A M P S	2	A M P S
2			
4			
8			
12			
16			
24			
40			
50			
100			
200			

**DAY**



**80 VOLTS**  
Series 20-40-60-80  
Parallel 20-40

PART NO.	PRIMARY VOLTS
80 005	115
80 01	115
80 02	115
80 04	115
80 06	105, 115, 125
80 08	105, 115, 125
80 12	105, 115, 125
80 25	115, 230
80 50	115, 230

SERIES		PARALLEL	
0.5	A M P S	1	A M P S
1			
2			
4			
6			
8			
12			
16			
24			
50			
100			

**120 VOLTS**  
Series 30-60-90-120  
Parallel 30-60

PART NO.	PRIMARY VOLTS
120 005	115
120 01	115
120 02	115
120 04	115
120 06	105, 115, 125
120 08	105, 115, 125
120 12	105, 115, 125
120 20	105, 115, 125

SERIES		PARALLEL	
0.5	A M P S	1	A M P S
1			
2			
4			
6			
8			
12			
16			
24			
40			

**180 VOLTS**  
Series 45-90-135-180  
Parallel 45-90

PART NO.	PRIMARY VOLTS
180 005	115
180 01	115
180 02	115
180 04	115
180 06	115
180 08	105, 115, 125
180 12	105, 115, 125

SERIES		PARALLEL	
0.5	A M P S	1	A M P S
1			
2			
4			
6			
8			
12			
16			
24			

**230 VOLTS**  
Series 57.5-115-172.5-230  
Parallel 57.5-115

PART NO.	PRIMARY VOLTS
230 005	115
230 01	115
230 02	115
230 04	105, 115, 125
230 06	105, 115, 125

SERIES		PARALLEL	
0.5	A M P S	1	A M P S
1			
2			
4			
6			
12			

**300 VOLTS**  
Series 75-150-225-300  
Parallel 75-150

PART NO.	PRIMARY VOLTS
300 005	115
300 01	115
300 02	115
300 04	105, 115, 125

SERIES		PARALLEL	
0.5	A M P S	1	A M P S
1			
2			
4			

**Transformer Current = DC Current × Factor Below**

	Choke Input Filter or Inductive Load	Resistive Load	Capacitor Input Filter or Capacitive Load
FULL WAVE BRIDGE	1.0	1.0	1.8
FULL WAVE C.T.	.7	.7	1.1

This series of high current transformers and chokes are most widely used for high power rectifier and high current A.C. applications. It is one of the industries most popular items. All types are designed for a nominal temperature rise of 45°C at full load and will easily withstand unusual overloads. The regulation is extremely low, varying from 5% on the smallest unit to 1% on the largest. All units have name plates and wiring diagrams for installation ease, future reference and permanent identification.

Five constructional types are available for maximum flexibility for use in either the laboratory or production.

**HORIZONTAL BRACKET MOUNT (STYLE B)** is an "open" unit, double vacuum varnish impregnated to insure long life and give maximum protection against humidity.

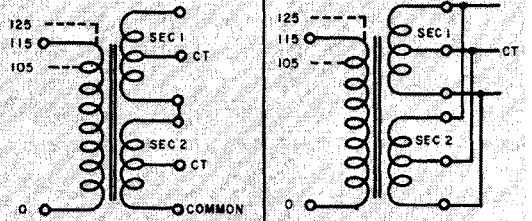
**EPOXY UNITS (STYLE BE)** are electrically and mechanically identical to style B and are vacuum encapsulated to withstand environmental conditions per MIL-T-27B, Grade S, Class S.

**SHELL ENCLOSED (STYLE V)** offers excellent mechanical protection to the coil. This is in addition to functional appearance and the ease of "wiring with leads." Double vacuum varnish impregnation further assures adequate moisture protection and long life.

**CAN ENCLOSED (STYLE C)** units are ruggedly constructed and embedded in a rigid potting compound to insure maximum heat transfer. Professional Todd finish enhances any chassis.

**HERMETICALLY SEALED (STYLE CM)** units are manufactured to MIL-T-27B, Grade S to withstand the most rigorous environmental conditions.

CONTACT TODD FOR CUSTOM VARIATIONS



**CHOKES 50-400 ~ line frequency**

PART NO.	INDUCTANCE	CURRENT (D.C.)	RESISTANCE
CH-01	100 M	1	1.5
CH-02	80 I	2	.9
CH-04	70 L	4	.6
CH-06	40 L	6	.4
CH-08	30 H	8	.3
CH-12	20 T	12	.1
CH-20	10 E	20	.05
CH-25	7 N	25	.025
CH-30	5 R	30	.01
CH-50	2 I	50	.01
CH-100	1.0 E	100	.005
CH-200	.3 S	200	.003



• ENGINEERING • RELIABILITY • SERVICE

**TODD ELECTRIC** CO., INC., YONKERS, N. Y.

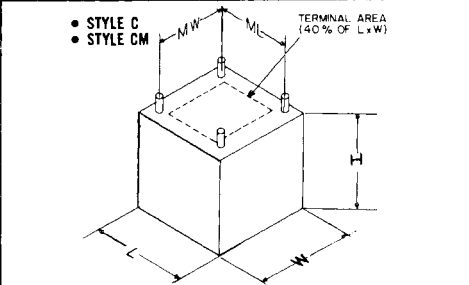
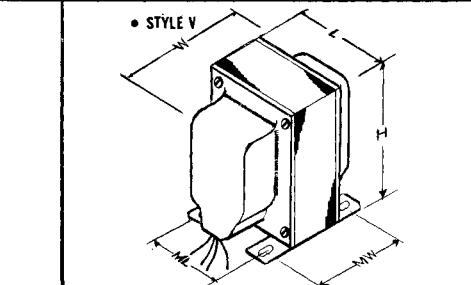
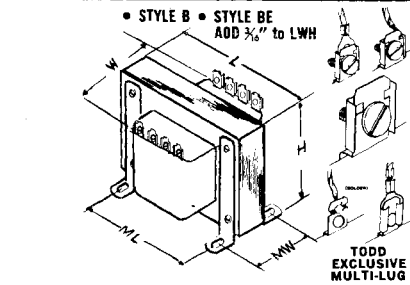
# MECHANICAL SPECIFICATIONS FOR HIGH CURRENT TRANSFORMERS & CHOKES

SPECIFY STYLE DESIRED WHEN ORDERING

45°  
TEMPERATURE RISE  
MINIMUM  
REGULATION

All units have name plates  
and wiring diagrams for  
installation ease, future  
reference and permanent  
identification.

• BRACKET MTD (STYLE B) • ENCAPSULATED (STYLE BE)		STYLE B		STYLE BE		• FULLY MTD. SHELLS STYLE V						STYLE V		• ENCASED COMMERCIAL (STYLE C) • HERMETIC SEALED MIL-T (STYLE CM)						STYLE C		STYLE CM								
L	W	H	MW	MH	WT	Price	Price	L	W	H	ML	MW	WT	Price	L	W	H	MW	MH	WT	Price	Price	L	W	H	MW	MH	WT	Price	Price
3	2 1/2	2 1/2	2 1/2	2	2.6	4.54	5.81	2 1/2	2 1/2	3 1/8	2	1 1/4	2.6	4.88	3	3 1/2	4 1/4	2 1/8	2 5/8	3.1	9.77	13.49	3	3 1/2	4 1/4	2 1/8	2 5/8	4.0	12.39	17.11
3	2 3/4	2 1/2	2 1/2	2	2.8	5.94	7.38	2 1/2	2 1/2	3 1/8	2	1 1/4	2.8	6.20	3	3 1/2	4 1/4	2 1/8	2 5/8	3.1	10.12	14.88	3	3 1/2	4 1/4	2 1/8	2 5/8	4.0	12.39	17.11
3 3/4	2 3/4	3 1/8	3 1/8	2 3/4	5.0	7.03	9.00	3 1/2	3 1/8	3 3/4	2 1/2	2 3/8	5.0	7.56	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	5.5	15.12	20.88	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	6.6	17.75	24.51
4 1/8	4 1/4	3 1/8	3 1/8	3	6.5	8.51	10.56	3 1/2	3 1/8	4 1/2	2 3/4	2 1/8	6.5	8.87	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	6.6	17.75	24.51	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	6.6	17.75	24.51
4 1/8	4 1/4	3 1/8	3 1/8	3	8.7	11.79	15.00	3 1/2	3 1/8	4 1/2	2 3/4	2 1/8	8.7	12.60	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	8.8	25.20	34.80	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	8.8	25.20	34.80
4 1/2	4 1/2	3 3/4	3 3/4	3 3/8	11.0	15.08	18.75	3 1/2	3 1/8	4 1/2	3	3 1/8	11.0	15.75	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	14.7	31.50	43.50	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	14.7	31.50	43.50
5 1/4	5 3/4	4 3/8	4 3/8	3 1/2	15.4	17.70	22.50	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	15.4	18.90	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	17.6	37.80	52.20	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	21.0	50.40	69.60
5 1/4	5 3/4	4 3/8	4 3/8	4 1/2	22.0	24.28	30.00	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	22.0	25.20	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	21.0	50.40	69.60	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	21.0	50.40	69.60
6 3/8	6 3/8	6 3/8	6 3/8	5 3/8	32.0	35.15	45.00	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	32.0	35.15	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	37.0	75.60	109.40	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	37.0	75.60	109.40
7 1/2	7	6 1/4	6 3/4	4 7/8	38.0	51.10	65.00	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	38.0	51.10	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	60.0	109.20	150.80	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	60.0	109.20	150.80



• BRACKET MTD (STYLE B) • ENCAPSULATED (STYLE BE)		STYLE B		STYLE BE		• FULLY MTD. SHELLS STYLE V						STYLE V		• ENCASED COMMERCIAL (STYLE C) • HERMETIC SEALED MIL-T (STYLE CM)						STYLE C		STYLE CM								
L	W	H	MW	MH	WT	Price	Price	L	W	H	ML	MW	WT	Price	L	W	H	MW	MH	WT	Price	Price	L	W	H	MW	MH	WT	Price	Price
3	2 1/2	2 3/4	2 1/2	2	2.6	4.65	6.00	2 1/2	2 1/2	3 1/8	2	1 1/4	2.6	5.04	3	3 1/2	4 1/4	2 1/8	2 5/8	3.0	10.08	13.92	3	3 1/2	4 1/4	2 1/8	2 5/8	3.8	12.18	16.82
3	2 1/2	2 3/4	2 1/2	2	2.6	5.91	7.25	2 1/2	2 1/2	3 1/8	2	1 1/4	3.2	6.09	3	3 1/2	4 1/4	2 1/8	2 5/8	3.8	12.18	16.82	3	3 1/2	4 1/4	2 1/8	2 5/8	4.0	12.39	17.11
3 3/4	4 1/4	3 1/8	3 1/8	2 3/4	6.0	7.58	9.75	3 1/2	3 1/8	3 3/4	2 1/2	2 1/8	6.0	8.19	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	7.0	19.32	26.68	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	7.0	19.32	26.68
4 1/8	4	3 1/8	3 1/8	3	8.7	11.35	14.63	3 1/2	3 1/8	4 1/2	2 3/4	2 1/8	8.7	12.29	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	10.0	24.57	33.93	3 3/8	4 1/4	5 1/2	2 1/8	3 3/8	10.0	24.57	33.93
5 1/4	4 1/4	4 5/8	4 3/8	3 1/8	13.0	14.48	18.38	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	13.0	15.44	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	16.0	30.87	42.63	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	16.0	30.87	42.63
5 1/4	4 1/4	4 5/8	4 3/8	3 1/8	13.0	14.98	18.63	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	13.0	15.65	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	16.0	31.29	43.21	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	21.0	47.80	66.10
5 1/4	5	4 5/8	4 3/8	3 7/8	18.0	21.40	27.50	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	18.0	20.10	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	21.0	47.80	66.10	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	21.0	47.80	66.10
6 3/8	5	4 5/8	4 3/8	3 1/4	21.5	26.90	33.75	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	21.5	23.10	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	25.0	56.70	78.30	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	25.0	56.70	78.30
6 3/8	5 1/2	5 5/8	5 1/8	3 3/4	24.0	30.30	37.50	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	24.0	25.20	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	30.0	63.00	87.00	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	30.0	63.00	87.00
6 3/8	6 1/2	5 5/8	5 1/8	4 1/8	32.0	33.35	42.50	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	32.0	33.35	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	37.0	75.60	109.40	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	37.0	75.60	109.40
7 1/2	7	6 1/4	6 3/4	4 7/8	45.0	49.60	63.20	4 1/2	5 1/8	5 1/8	3 1/2	3 1/2	45.0	51.10	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	60.0	109.20	150.80	4 1/4	5 1/4	6 1/4	3 1/2	4 3/8	60.0	109.20	150.80

• ENGINEERING • RELIABILITY • SERVICE

# TODD ELECTRIC CO., INC., YONKERS, N. Y.

# Transistor

## Output-Transistor to Voice Coil

LISTED IN ORDER OF THE PRIMARY IMPEDANCE

Part No.	Impedance		Primary MADC	Resistance		Power In Watts	Mfg. Type	Mfg. Centers	Dimensions		
	Primary	Secondary		Primary	Secondary				H	W	D
TR 192	6CT	4/8/16	5A	-17	.24	40	GGV	2 1/2 x 2 1/4	3 7/8	3 9/32	3 1/8
TR 161	9	3.5	750	1.1	.7	5	BAH	2	3 7/8	2 7/16	3 3/8
TR 160	9 S	3.5	750	1.9	1.2	8	BCH-1	1 5/8 x 1 1/16	3 5/8	2 7/16	3 3/8
TR 162	9 S	3.5	750	1.3	.48	8	BAH	2 3/8	3 5/8	2 7/8	3 3/8
TR 168	9 S	3.5	920	1.5	1.0	10	BCH-1	1 15/16 x 13/16	2 3/8	2 3/4	1 1/2
TR 164	12 S	3.5/8	750	1.6	.9	5	BAH	2	3 7/8	2 7/8	1 1/8
TR 165	18 S	6-8	425	2.8	1.0	8	BAH	2 3/8	1 5/8	2 7/8	1 1/4
Feedback - 168:1 Pri. to Top											
TR 300	20CT	8	500	.55	.35	10	BAH	2	3 7/8	2 7/8	1 1/2
TR 166	32CT	1.6/4	575	2.23	.48	5	BCV-2	1 3/16	1 3/8	2 1/16	1 1/4
TR 167	42	3.5	400	2	.6	5	BAH	2	3 7/8	2 7/8	1 3/8
TR 168	22 S	3.5	425	2.5	.6	5	BAH	2	3 7/8	2 7/8	1 3/8
TR 169	22 S	8-10	375	3.5	1.8	5	BAH	2	3 7/8	2 3/8	1 1/8
TR 169	22CT	4/8	500	2.6	2.2	8	BAH	2 13/16	1 13/16	3 1/16	1 15/16
250CT	16CT*	220	275	4	1.2	3	BAH	3 7/8 x 2-3/4	4 1/4	1 3/8	3 9/8
TR 904	24CT	4/8	400	1.5	.4	4	BAH	2 3/8	1 5/8	2 3/16	1 1/2
TR 170	30 S	3.5	400	1.8	.7	5	BAH	2	3 7/8	2 3/8	1 5/16
TR 171	30CT	3.5 Tapped	350	2	.3	8	BAV	2	2	2	1 1/2
Feedback - 3.16:1 Pri. to Top											
TR 57	32CT	1.6/4	575	10	BAH	2 13/16	2	3 5/16	1 7/8		
TR 58	32CT	3.5/8/16	575	10	BAH	2 13/16	2	3 5/16	1 7/8		
TR 172	40 S	3.5	300	2.5	.7	5	BAH	2	3 7/8	2 7/8	1 1/4
TR 173	45CT	3.5	350	1.3	.4	8	BAH	2 3/8	1 5/8	2 3/8	1 1/4
TR 8	48CT	4/8	4	1.2	.3	BAH	3 7/8	3 5/8	1 3/8	1 3/8	1 3/8
TR 48CT	4/8	220	275	4	1.2	3	BAH	3 7/8	3 5/8	1 3/8	1 3/8
TR 110	48CT	4/8/16	4.1	.78	.3	BAH	3 7/8	3 5/8	1 3/8	1 3/8	1 3/8
TR 348	48CT	8	550	2.4	1	5	BAH	2	3 7/8	2 3/8	1 1/4
TR 61	48CT	3.2/8/16	550	2.4	1	5	BHV	3 3/4	3 3/4	2 1/4	1 1/4
2551A	48CT	4/8/16CT*	750	4.5	1.4	8	UVJ	1 5/32 x 1-5/32	2 1/2	1 1/2	1 1/2
TR 196	48CT	4/8	550	2.5	1.4	8	BAH	2 3/8	1 15/16	1 3/8	1 1/4
TR 60	48CT	1.6/4	550	2.5	1.4	10	BAH	2 3/8	2 5/16	2 7/8	2
TR 60	48CT	3.2/8/16	550	2.5	1.4	10	BHV	2 3/8	2 5/16	2 7/8	2
TR 111	100CT	4/8/16	11	1.5	.3	BAH	3 3/4	3 1/8	1 5/8	1 3/16	
TR 193	100CT	3.2/8/16	10	14.4	1.1	2	BAH	3 3/4	3 1/8	2 7/16	1 1/4
TR 193	100	3.2/8/16	10	14.4	1.1	2	BAH	3 3/4	3 1/8	2 7/16	1 1/4
TR 63	100CT	3.2/8/16	500	3	10	BAH	3 3/4	2 5/16	2 7/8	2	
TR 43	125CT	10	11	1	.05	MAH	1 1/2	7/16	1/2	7/16	
TR 67	125CT	8	50	1.5	XAV	1 1/4	3 1/4	1 1/4	1 1/4		
TR 21	160CT	4/8	12	1	.3	BAH	3 7/8	3 5/8	1 3/8	1 3/8	
TR 112	160CT	4/8	12	1	.3	BAH	3 7/8	3 5/8	1 3/8	1 3/8	
TR 112	160	4/8/16	19	1.5	.3	BAH	3 7/8	3 5/8	1 3/8	1 3/8	
TR 50	200CT	3.2	18	.36	.05	MAH	7/16	1/2	7/16		
TR 49	200CT	10	16	1	.05	MAH	7/16	1/2	7/16		
TR 192	200CT	4/8	50	27	1.4	2	BAH	1 3/4	1 3/8	1 1/2	1 1/4
TR 192	250CT	4/8/16	10	34	3	3	BAH	1 3/8	1 1/2	1 1/2	1 1/4
TR 51	300CT	3.2	27	.36	.05	MAH	7/16	1/2	7/16		
TR 17	300CT	10	27	1	.05	MAH	7/16	1/2	7/16		
TR 325	300CT	15	21	2.5	.15	BCH	13/16	13/16	5/8		
TR 325	300CT	15	21	2.5	.15	PCT	See Dwg.	11 1/16	3/4	9/16	
TR 174	350CT	4/12	38	1.45	.15	BCH	13/16	13/16	5/8		
TR 340	360CT	3.2	100	56	1.3	.3	BCH	1 1/16	5/8	9/32	3/4
TR 450	400	10	50	56	1.3	.3	BAH	1 3/8	3/4	1 5/8	13/16
TR 354	400	11	3	35	1.5	.015	MAH	3/8	3/8	3/8	
TR 365	400CT	11	6	35	1.5	.015	MAH	3/8	3/8	3/8	
TR 19	480CT	11	27	1.3	.15	BCH	13/16	13/16	5/8		
TR 19	480CT	11	27	1.3	.15	BCH	13/16	13/16	5/8		
TR 16	480CT	15	28	2	.15	BCH	13/16	13/16	5/8		
TR 326	480CT	16	28	2	.15	PCT	See Dwg.	11 1/16	3/4	9/16	
TR 22	490CT	4/8	26	1.1	.3	BAH	1 3/8	3/4	1 3/8	13/16	
TR 332	490CT	4/8	26	1.1	.3	PCT-3	See Dwg.	13/16	1	7/8	
TR 101	490CT	4/8/16	32	3.2	1.5	.3	BAH	3 3/4	3 1/8	1 5/8	1 1/4
TR 389	500	3.2	3.5	50	.5	.015	BCH	17/32	15/32	7/16	
TR 53	500CT	3.2	40	.36	.05	MAH	7/16	1/2	7/16		
TR 49	500CT	10	40	1	.05	MAH	7/16	1/2	7/16		
TR 27	500CT	3.2	30	.3	.15	BCH	13/16	13/16	5/8		
TR 307	500CT	3.2/8	30	.3	.15	PCT	See Dwg.	11 1/16	3/4	9/16	
TR 102	500CT	4/8/16	75	3.5	.15	BCH	13/16	13/16	5/8		
TR 102	500CT	4/8/16	30	2	.15	BCH	13/16	13/16	5/8		
TR 328	500CT	16.4	30	1.7	.15	PCT	See Dwg.	11 1/16	3/4	9/16	
TR 220	500CT	3.2	15	.36	.25	MAH	19/32	7/8	43/64		
TR 114	500CT	4/8/16	47	.85	.3	BAH	1 3/8	3/4	1 5/8	13/16	
TR 103	500CT	16CT	36	1	1 1/2	UVJ	2 1/2	1 1/2	1 1/2	1 1/4	
TR 330	600CT	4/8/16	72	3.2	.15	BCH	13/16	13/16	5/8		
TR 20	650CT	16.8	38	1.4	.15	BCH	13/16	13/16	5/8		
TR 330	650CT	16.8	38	1.4	.15	PCT	See Dwg.	11 1/16	3/4	9/16	
TR 115	700CT	4/8/16	77	1.15	.300	BAH	1 3/8	3/4	1 5/8	13/16	
TR 825C	825C	4.4	40	.25	.15	BCH	13/16	13/16	5/8		
TR 339	825C	3.4	40	.25	.15	PCT	See Dwg.	11 1/16	3/4	9/16	
TR 104	825C	4/8/16	74	2.7	.15	BCH	13/16	13/16	5/8		
TR 116	1,000	4/8/16	120	1.6	.3	BAH	1 3/8	3/4	1 5/8	13/16	
TR 209	1,200 to 1,500	3.2 to 4	70	.45	1	MAH	7/16	3/4	5/8		
TR 309	1,250	3.4	2	1.35	.5	.015	BCH	17/32	15/32	7/16	
TR 105	1,250	4/12	132	1.4	.15	BCH	13/16	13/16	5/8		
TR 408	2,000	3.4	5	1	.6	BAH	1	15/32	1 3/16	19/32	
TR 408	2,000	3.4	5	1	.6	BAH	1	15/32	1 3/16	19/32	
TR 448	2,000	3.4	10	3	1.5	.15	BAH	3 7/8	3/4	1 5/8	13/16
TR 288	2,000CT	4/8/16	10	260	4	.2	BAH	1 3/8	3/4	1 5/8	13/16
TR 221	2,000 to 8 to 1,500	4 to 3.2 to 4	290	2	.25	MAH	19/32	7/8	43/64		
TR 107	2,500	4/16	370	2.3	.15	BCH	13/16	11 1/16	7/16	5/8	
TR 117	2,500	4/8/16	172	1.15	.3	BAH	1 3/8	3/4	1 5/8	13/16	
TR 118	3,000	4/8/16	192	1.2	.3	BAH	1 3/8	3/4	1 5/8	13/16	
TR 469	4,000CT	3.4	5	1	.6	BAH	1	15/32	1 3/16	19/32	
TR 452	4,000CT	3.4	5	1	.6	BAH	1 5/32	5/8	1 1/16	3/2	
TR 449	4,000CT	3.4	3	1	.6	BAH	1 3/8	3/4	1 5/8	13/16	
TR 282	4,000CT	4/8/16	333	1.8	.2	BAH	1 3/8	13/16	5/8	1 1/2	
TR 211	7,500 to 9,000CT	4 to 3.2 to 4	770	.73	1	MAH	7/16	3/4	5/8		
TR 209	9,800	15	2	855	1.73	MAW	1 1/16	5/8	1 9/32	11/16	
TR 209	9,800	15	2	840	1.7	.85	BAH	2 3/8	3 7/8	2 7/16	3 1/8
TR 32	9,800	15	1,070	2.5	.15	BCH	13/16	11 1/16	13/16	5/8	
TR 342	9,800	15	1,070	2.5	.15	PCT	See Dwg.	11 1/16	3/4	9/16	
TR 268	10,000	4	2	709	1.5	.1	BAH	1 1/16	5/8	1 9/32	1 1/8
TR 203	10,000	3.2	2	800	.65	1	MAH	7/16	3/4	5/8	
TR 202	10,000	16	2	800	2.7	1	MAH	7/16	3/4	5/8	
TR 109	10,000CT	4/8/16	1,174	2.6	.150	BCH	13/16	11 1/16	13/16	5/8	
TR 205</											

Audio Transistor-Open Frame

INCLUDES: (A) INPUT, (J) INTERSTAGE, (D) DRIVER, (S) OUTPUT TO LINE. Continued

Table of Audio Transistor-Open Frame components. Columns include Part No., Appl. cat., Impedance, Unbl. Pri. MADC, Resistance, Power, Mfg. Type, Mfg. Centers, and Dimensions.

Special Purpose-Transistor

Complete instructions supplied with each unit.

Table of Special Purpose-Transistor components. Columns include Part No., Typical Application, Impedance, Pri. MADC, Power In Watts, Mfg. Type, Mfg. Centers, and Dimensions.

Printed Circuit - Open Frame - Transistor

300 Milliwatt MOUNTING PCT-3 WEIGHT .08LBS. INCLUDES: (A) INPUT, (J) INTERSTAGE, (L) LINE TO TRANSISTOR, (S) OUTPUT.

This new line of printed circuit transformers has been developed to fill the gap between the wire-in units and the molded-print circuit type transistor transformers.

Table of 300 Milliwatt Printed Circuit - Open Frame - Transistor components. Columns include Part No., Turns Ratio, Impedance, Resistance, Appl. cat., Part No., Impedance, Resistance, Appl. cat.

150 Milliwatt MOUNTING PCT WEIGHT .051LBS.

Table of 150 Milliwatt Printed Circuit - Open Frame - Transistor components. Columns include Part No., Turns Ratio, Impedance, Resistance, Appl. cat., Part No., Impedance, Resistance, Appl. cat.

Audio Reactor MOUNTING PCT-3 WEIGHT .08LBS.

Table of Audio Reactor components. Columns include Part No., Inductance, DC Res. In Ohms, Test Vrms, Mfg. Type.

Encased-Transistor Transformers

The high performance characteristics such as frequency response, high permeability lamination, and low insertion losses equal those of the more costly hermetically sealed units.

Table of Encased-Transistor Transformers components. Columns include Part No., Appl. cat., Impedance, Resistance, Power In W, Response, Mfg. Type.



Miniature Audio Inductors

OPEN FRAME AND ENCASED

Similar in operation to the military units above these units are ideally suited for coupling inductors, filters or audio suppressor applications in either transistor or tube type circuitry.

Part No.	Series Connected			Parallel Connected			Mtg. Type	Mtg. Centers	Dimensions		
	Inductance Henrys	MADC	Resistance In Ohms	Inductance Henrys	MADC	Resistance In Ohms			H	W	D
MIT 140	3.5	2	160	1.5	5	40	MAH	7/16	7/16	3/4 x 5/8	
MIT 152	4	0	400	0	100	100	BAH	9/16	1/2	3/4 x 1/2	
MIT 139	8	2	650	4	5	162	MAH	7/16	7/16	3/4 x 3/8	
MIT 168	8 1/2	3/4	220				BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 19	12	0	830				MAH	3/8	3/8	3/8 x 11/32	
MIT 29	20	1	2,200				MAH	3/8	3/8	3/8 x 3/8	
MIT 65	30	1	4,700				MAH	7/16	7/16	1/2 x 7/16	
MIT 173	30	1	4,700				BAH	1/2	1/2	3/16 x 19/32	
MIT 82	30	1	4,500				MAH	7/16	7/16	3/4 x 5/8	
MIT 83	30	1	4,500				RAV-3	1 5/32	29/32	7/8 Dia.	
MIT 100	30	1	3,200				BAH	1 1/16	5/8	1 1/4 x 19/32	
MIT 101	30	1	3,200				RAV-3	1 5/32	1 3/32	7/8 Dia.	
MIT 145	30	1	2,625				MAH	19/32		3/8 x 43/64	
MIT 180	30	1	3,000				BAH	1 5/32	5/8	3/32 x 3/4	
MIT 130	30	3	500				BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 131	30	3	500				NAV-2	1 1/8	1 7/16	1 5/16 Dia.	
MIT 194	300/50	0/3	6,000				BAH	1 3/8	3/4	1 5/8 x 13/16	

Miniature Transformers

INCLUDES: (A) INPUT, (J) INTERSTAGE, (S) OUTPUT, (C) REACTOR, (L) LINE TO LINE.

The most complete line of top efficiency miniature transformers ever made available. These Miniature transformers are designed for a wide range of civilian and government applications. Used by many manufacturers of hearing aids and a variety of miniature electronic devices where maximum efficiency is necessary. Ideally suited for installation in original equipment and for replacement.

Part No.	Typical Appli- cation	Impedance		Unbal. Pri. MADC	Power In MW	Resistance		Mtg. Type	Mtg. Centers	Dimensions		
		Primary	Secondary			Primary	Secondary			H	W	D
MIT 106	A	8/4	50,000CT	0	20	.35	2,600	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 149	A	8/4	50,000CT	0	20	.35	2,600	NAV-2	1 1/8	1 7/16	15/16 Dia.	
MIT 156	A	30/12/4	50,000	0	4	11.3	3,800	MAH	4	4	7/8 x 7/16	
MIT 184	A	30/7.5	50,000	0	12	7	3,500	BAH	1 1/16	5/8	1 7/32 x 3/4	
MIT 141	A	30 to 10	62,500 to 250,000	0	12	16	2,500	MAH	19/32		7/8 x 43/64	
MIT 121	S	160	4/8	35	20	13.7	7.50	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 122	S	160	4/8	35	20	13.7	7.79	NAV-2	1 1/8	1 7/16	15/16 Dia.	
MIT 148	A	200CT	250,000	0	4	35	5,000	BCH	9/16	1/2	9/16 x 7/16	
MIT 169	A	200CT	250,000CT*	0	4	35	5,000	BAH	1 1/16	5/8	1 1/4 x 19/32	
MIT 176	A	200CT	250,000CT*	0	4	35	5,000	MAH	5/32	9/8	1 1/32 x 3/4	
MIT 67	A	200	250,000	0	9	13.4	3,580	MAH	7/16	3/4	3/4 x 5/8	
MIT 68	A	200	250,000	0	9	13.4	3,580	RAV-3	1 5/32	29/32	7/8 Dia.	
MIT 85	A	200	250,000	0	12	21.5	2,600	BAH	1 1/16	5/8	1 1/4 x 19/32	
MIT 86	A	200	250,000	0	12	21.5	2,650	RAV-3	1 5/32	29/32	7/8 Dia.	
MIT 160	A	200	500,000	0	12	63	2,800	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 133	A	200	500,000	0	20	17.5	4,800	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 134	A	200	500,000	0	20	17.5	4,800	NAV-2	1 1/8	1 7/16	15/16 Dia.	
MIT 196	A	200	500,000	0	20	17.5	4,800	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 127	A	250/50	600/250/50	0	20	17.5	33.5	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 193	L	250/50CT	600/250/50CT	0	4			BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 128	A	250/50	600/250/50	0	20	17.5	33.5	NAV-2	1 1/8	1 7/16	15/16 Dia.	
MIT 109	S	400CT	4/8	0	20	37	1	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 110	S	400CT	4/8	0	20	37	1	NAV-2	1 1/8	1 7/16	15/16 Dia.	
MIT 11	S	400	50	3	1	70	9.3	RAV-1	27/64		3/8 x 1 1/32	
MIT 24	S	400	50	3	2.5	54	6.3	MAH	3/8	3/8	3/8 x 3/8	
MIT 25	S	400	50	3	2.5	54	6.3	RAV-2	41/64		17/32 Dia.	
MIT 41	J	500	500	0	4	45	4.5	MAH	7/16	7/16	7/16 x 7/16	
MIT 62	J	500	500	0	4	45	4.5	NAV-2	23/32		21/32 Dia.	
MIT 7	S	600	50	3	1	66	7.7	MAH	3/8	3/8	3/8 x 1 1/32	
MIT 8	S	600	50	3	1	66	7.7	RAV-1	27/64		7/16 Dia.	
MIT 27	S	600	50	3	2.5	64	7.5	MAH	3/8	3/8	3/8 x 3/8	
MIT 44	S	600	50	3	2.5	64	7.5	NAV-2	41/64		17/32 Dia.	
MIT 45	S	600	50	3	4	58	5.4	MAH	7/16	7/16	1/2 x 7/16	
MIT 46	S	600	50	3	4	58	5.4	RAV-2	23/32		21/32 Dia.	
MIT 166	L	600/250/50	600/250/50	2	12	80	85	BAH	1 1/16	5/8	1 7/32 x 3/4	
MIT 86	A	600CT	1,200CT	.5	4	35	109	MAH	7/16	7/16	1/2 x 7/16	
MIT 87	A	600CT	1,200CT	.5	4	35	109	RAV-2	23/32		21/32 Dia.	
MIT 153	A	600/250/50	50,000	0	12	80	3,200	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 182	A	600/250/50CT	50,000	0	3			BAH	1 3/4	3/4	1 5/8 x 13/16	
MIT 183	A	600/250/50CT	50,000CT	0	3			BAH	1 3/4	3/4	1 5/8 x 13/16	
MIT 103	A	600/250/50	50,000CT	0	20	24.5	2,480	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 104	A	600/250/50	50,000CT	0	20	24.5	2,480	NAV-2	1 1/8	1 7/16	15/16 Dia.	
MIT 147	A	600/250/50	60,000	0	4	350	4,100	MAH	7/16	7/16	7/16 x 7/16	
MIT 155	A	600/250/50	60,000CT	0	12	100	3,600	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 154	A	600/250/50	250,000	0	12	44	3,600	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 16	S	1,000	50/60	3	1	160	9	MAH	3/8	3/8	3/8 x 1 1/32	
MIT 17	S	1,000	50/60	3	1	160	9	NAV-1	27/64		7/16 Dia.	
MIT 33	S	1,000	50	3	2.5	163	11.7	MAH	3/8	3/8	3/8 x 3/8	
MIT 34	S	1,000	50	3	2.5	163	11.7	RAV-2	41/64		17/32 Dia.	
MIT 62	S	4,000	3.2	0	4	488	5	MAH	7/16	7/16	1/2 x 7/16	
MIT 63	S	4,000	3.2	0	4	488	5	RAV-2	23/32		21/32 Dia.	
MIT 167	J	10,000	500CT	0	12	1,710	2,425	MAH	1 1/16	5/8	1 1/2 x 7/16	
MIT 151	J	10,000	500	0	4	3,500	120	BAH	1 1/2	1 1/2	3/16 x 19/32	
MIT 171	S	10,000	200	3	100			BAH	1 1/2	1 1/2	3/16 x 19/32	
MIT 178	S	10,000	200	3	120			BAH	1 5/32	5/8	1 1/32 x 3/4	
MIT 143	S	10,000 to 50	200 to 100	1.5	3	200	1,225	30	MAH	19/32		7/8 x 43/64
MIT 170	J	10,000	90,000	0	3			BAH	1 1/2	1 1/2	1 3/16 x 19/32	
MIT 70	J	10,000	90,000	.25	9	820	3,500	MAH	7/16	7/16	3/4 x 5/8	
MIT 71	J	10,000	90,000	.25	9	820	3,500	RAV-3	1 5/32	29/32	7/8 Dia.	
MIT 88	J	10,000	90,000	.25	12	222	2,800	BAH	1 1/16	5/8	1 1/4 x 19/32	
MIT 89	J	10,000	90,000	.25	12	222	2,800	NAV-2	1 1/16	5/8	1 1/4 x 19/32	
MIT 177	J	10,000	90,000	0	9			BAH	1 5/32	5/8	1 1/32 x 3/4	
MIT 142	J	10,000	90,000	0	200	215	1,850	MAH	19/32		7/8 x 43/64	
MIT 192	J	10,000	1 MEG	0	12			BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 136	J	10,000	1 MEG	0	20	377	5,400	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 137	J	10,000	1 MEG	0	20			NAV-2	1 1/8	1 7/16	15/16 Dia.	
MIT 165	J	12,000CT	600CT	2	12	1,000	60	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 163	S	15,000	600/250/50	3	12	1,450	59	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 162	S	15,000	600/250/50	4	12	1,330	58	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 118	S	15,000	600/250/50	4	20	1,250	32	NAV-2	1 3/8	3/4	1 5/8 x 13/16	
MIT 119	S	15,000	600/250/50	4	20	1,250	32	BAH	1 1/8	1 7/16	15/16 Dia.	
MIT 189	S	15,000	600/250/50	2	8			BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 190	S	15,000	600/250/50CT	21	4			BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 157	S	15,000	50,000	3	12	1,100	2,850	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 158	S	15,000	60,000CT	3	12	1,350	2,700	BAH	1 1/16	5/8	1 1/4 x 3/4	
MIT 185	J	15,000	60,000	0	4			BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 184	J	15,000	60,000	0	4			BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 112	J	15,000	60,000	2	20	1,250	3,450	BAH	1 3/8	3/4	1 5/8 x 13/16	
MIT 113	J	15,000	60,000	2	20	1,250	3,450	NAV-2	1 1/8	1 7/16	15/16 Dia.	



Converter- DC to DC

POITED & OPEN FRAME

Part No.	DC Supply Voltage	DC Output Voltage	Output Current In MADC	Power Output In Watts	Mtg. Type	Mtg. Centers	Dimensions		
							H	W	D
TR 78	12	250/125	65/130	16.5	DAH	1 1/2	1 3/4	1 3/4	1 3/8
TR 79	6	250	200	50	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16
TR 80	12	250	200	50	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16
TR 81	12	250/125	400/800	100	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2	3
TR 99	6 or 12	275-250	72	20	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16
TR 74	12	300/150	67/133	20	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8	2 7/16
TR 83	12	300/150	100/200	30	DAH	1 1/2	1 7/8	2 3/8	1 7/8
TR 84	12	300/150	400/800	120	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16
TR 85	12	325/162	150/300	50	DAH	1 1/2	2	2 3/8	2 7/16
TR 87	12	375/187	200/400	75	DAH	1 1/2	2	2 3/8	2 7/16
TR 86	4.5	390/195	30/60	12	DAH	1 1/2	1 3/4	1 1/4	1 1/8
TR 75	12	400/200	50/100	20	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8	2 7/16
TR 89	12	400	125	50	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16
TR 76	6	450/225	40/80	18	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8	2 7/16
TR 77	12	450/225	40/80	18	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8	2 7/16
TR 90	12	450/225	80/160	40	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16
TR 91	12	450/225	270/540	120	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2	3
TR 92	12	500/250	165/325	50	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16
TR 93	12	500/250	200/400	100	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2	3
TR 94	12	500/250	300/600	150	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2	3
TR 82	12	500/225	62.5/125	35	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8	2 7/16
TR 95	12	600/300	200/400	120	DAH	3 11/16	2	4 1/8	3
TR 86	12	700/350	43/86	30	TAV	1 1/4 x 2 1/8	2 1/4	1 7/8	2 7/16
TR 96	12	800/400	150/300	120	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2	3
TR 97	12	1,000/500	100/200	100	TAV	1 3/4 x 2 11/16	3 5/16	2 1/2	3
TR 98	12	3,000/1,500	6.5/13	20	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 11/16

Converter

MOBILE OR FIXED POWER SUPPLY

Part No.	Primaries	Secondaries	Mtg. Type	Mtg. Centers	Dimensions		
					H	W	D
TR 294	12.6 Volts DC or 117 Volts AC @ 60 Cycles	280 Volts DC @ 150 MADC and 12.6 Volts AC @ 3 Amps (With 117 Volt Pri., only)	GGV	2 1/2 x 2 11/16	3 7/8	3 7/8	3 1/8

Converter-Photoflash Power Supply

Part No.	Primary	Secondary	Mtg. Type	Mtg. Centers	Dimensions		
					H	W	D
2SR58	Discharge for .25 MFD at 225 or 250 Volts DC Trigger Type Transformer	6 KV Peak	RTV		15/16	7/8 Dia.	
2SR57	4.5 VDC (Inverter Type)	Output to Feed 2SR58	RTV	11/16	1 3/16	7/8 Dia.	
2SR56	115 V, 50/60 CPS or 4.5 Volts DC. Battery switched with 2SR57 Inverter.	400 Volts DC from Voltage Doubler Circuit.	KTH-A	2 3/8	1 7/8	2 13/16	1 3/4

Blocking Oscillator-Converters

Designed specifically for use in single transistor blocking oscillator circuits. The DC output voltage of TR 464 is rated for a quadruple rectifier circuit and may vary from these ratings due to bias and component values. All other DC voltage ratings are with 1/2 wave single capacitor input filter.

Part No.	DC Supply Voltage	DC Output Voltage	Output Current In Micro Amps	Turns Ratio			Mtg. Type	Mtg. Centers	Dimensions		
				Pri.	Sec.	Feed-back			H	W	D
TR 464	4	425/500	50	44	1	1	NAH		7/16	7/16	1/2
TR 465	3	535 (1/2 Wave)	90	65.5	33	1	BAH	1 3/8	3/4	5/8	13/16
TR 462	3	1,000 (1/2 Wave)	25	600	12	1	BAH	1 3/8	3/4	5/8	13/16
2TR167	3	1,000 (1/2 Wave)	25	600	12	1	AG-2	1 1/8	1 3/8	1	1

Mil-T-27B Steel Jacket Line TRANSFORMERS

Mil-T-27B Case Dimensions

AS DESIGNATED IN MIL-T-27B SPECIFICATIONS

Mtg. Type	-A-			-B-			-C-			D, x E.	Stud Size
	1	2	3	1	2	3	1	2	3		
AF	3/4	3/4	1 1/8	9/16	1 1/8	1 1/8	4-40 x 3/8				
AG	1	1	1 3/8	3/4	3/4	3/4	4-40 x 3/8				
AH	1 5/16	1 5/16	1 3/4	1 1/4	1 1/4	1 1/4	6-32 x 3/8				
AJ	1 5/8	1 5/8	2 3/8	1 3/16 x 1 3/16	1 3/8 x 1 3/8	1 3/8 x 1 3/8	6-32 x 3/8				
EA	1 15/16	1 13/16	2 3/4	1 3/8 x 1 1/4	1 3/8 x 1 1/4	1 3/8 x 1 1/4	6-32 x 3/8				
EJ	1 15/16	1 13/16	2 7/16	1 3/8 x 1 1/4	1 3/8 x 1 1/4	1 3/8 x 1 1/4	6-32 x 3/8				
FA	2 5/16	2 1/16	3 1/8	1 11/16 x 1 7/16	1 11/16 x 1 7/16	1 11/16 x 1 7/16	6-32 x 3/8				
FB	2 5/16	2 1/16	2 1/2	1 11/16 x 1 7/16	1 11/16 x 1 7/16	1 11/16 x 1 7/16	6-32 x 3/8				
FC	2 5/16	2 1/16	2 1/2	1 11/16 x 1 7/16	1 11/16 x 1 7/16	1 11/16 x 1 7/16	6-32 x 3/8				
GA	3 3/4	2 3/8	3 13/16	2 1/8 x 1 3/4	2 1/8 x 1 3/4	2 1/8 x 1 3/4	6-32 x 3/8				
GB	2 3/4	2 3/8	2 13/16	2 1/8 x 1 3/4	2 1/8 x 1 3/4	2 1/8 x 1 3/4	6-32 x 3/8				
HA	3 1/16	2 5/8	4 1/4	2 19/64 x 1 55/64	2 19/64 x 1 55/64	2 19/64 x 1 55/64	8-32 x 3/8				
HB	3 1/16	2 5/8	3 3/16	2 19/64 x 1 55/64	2 19/64 x 1 55/64	2 19/64 x 1 55/64	8-32 x 3/8				
IA	3 9/16	3 1/16	4 7/8	2 5/8 x 2 1/8	2 5/8 x 2 1/8	2 5/8 x 2 1/8	8-32 x 3/8				
IB	3 9/16	3 1/16	3 7/8	2 5/8 x 2 1/8	2 5/8 x 2 1/8	2 5/8 x 2 1/8	8-32 x 3/8				
KA	3 15/16	3 3/8	5 1/4	3 x 2 7/16	3 x 2 7/16	3 x 2 7/16	10-32 x 1/2				
KB	3 15/16	3 3/8	4 5/16	3 x 2 7/16	3 x 2 7/16	3 x 2 7/16	10-32 x 1/2				
LA	4 5/16	3 11/16	5 9/16	3 5/16 x 2 11/16	3 5/16 x 2 11/16	3 5/16 x 2 11/16	10-32 x 1/2				
LB	4 5/16	3 11/16	4 1/2	3 5/16 x 2 11/16	3 5/16 x 2 11/16	3 5/16 x 2 11/16	10-32 x 1/2				
MA	4 11/16	4	6	3 11/16 x 3	3 11/16 x 3	3 11/16 x 3	1 1/4-20 x 5/8				
MB	4 11/16	4	4 15/16	3 11/16 x 3	3 11/16 x 3	3 11/16 x 3	1 1/4-20 x 5/8				
NA	5 1/16	4 5/16	6 13/16	4 1/16 x 3 5/16	4 1/16 x 3 5/16	4 1/16 x 3 5/16	1 1/4-20 x 5/8				
NB	5 1/16	4 5/16	5 1/2	4 1/16 x 3 5/16	4 1/16 x 3 5/16	4 1/16 x 3 5/16	1 1/4-20 x 5/8				
OA	5 1/2	4 1/2	6 3/4	3 3/4 x 3	3 3/4 x 3	3 3/4 x 3	1 1/4-20 x 5/8				

YY-27	A					B					C					D					E				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
YY-1	1.199	1.198	2.171	2.171	3.492	2	1.778																		
YY-2	1.174	1.174	2.171	2.171	3.492	2	1.778																		
YY-3	1.576	1.576	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	1.374	
YY-4	1.776	1.776	1.2	1.2	1.378																				
YY-5	1.776	1.776	2 1/2	2 1/2	1																				
YY-6	1.361	1.361	2.037	2.037	1.516																				
YY-7	1.172	1.172	2.378	2.378	1.532																				
YY-8	1.172	1.172	2	2	1.532																				
YY-9	1.172	1.172	2 1/2	2 1/2	1																				
YY-10	1.354	1.354	2.964	2.964	1																				
YY-11	1.916	1.916	3	3	1																				
YY-12	1.374	1.374	3 1/2	3 1/2	1																				
YY-13	2	2	3 1/2	3 1/2	1																				
YY-14	1.578	1.578	2 3/8	2 3/8	1																				
YY-15	1.901	1.901	2.205	2.205	1.616																				
YY-16	1.901	1.901	2.424	2.424	1.616																				
YY-17	2.241	2.241	2.680	2.680	1.916																				
YY-18	2.241	2.241	2.930	2.930	1.916																				
YY-19	2.516	2.516	3 1/8	3 1/8	1.916																				
YY-20	2 1/2	2 1/2	3 1/8	3 1/8	1.916																				
YY-21	2.507	2.507	3.049	3.049	1.916																				
YY-22	2.507	2.507	3.199	3.199	1.916																				
YY-23	2 13/32	2 13/32	3 1/4	3 1/4	1.916																				
YY-24	2 9/16	2 3/16	4	4	1.916																				
YY-25	2 3/4	2 3/8	3 3/16	3 3/16	2 1/8																				
YY-26	1 13/16	1 11/16	2 1/8	2 1/8	1 1/2																				

YY-54	A					B					C					D					E				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3</		



SECTION 5600

Input-Interstage - Driver INCLUDES: TRANSISTOR AND TUBE TYPE - MOLDED AND ENCASED

Part No. Molded/Encased	MIL-T-27B Classification	Application	Impedance		Unbol. MADC	Power In MW	Frequency Response MHz	Case Size
			Primary	Secondary				
M11 296	TF48X13YV	Tr. Interstage	2,000/2,500CT	2,000/2,500CT*	3	100	11	RAV-6
M11 289	TF48X13YV	Tr. Interstage	2,000/2,500CT	8,000/10,000CT*	3	100	11	RAV-4
M11 288	TF48X13YV	Tr. Interstage	2,000/2,500CT	8,000/10,000CT*	3	100	11	RAV-5
M11 237	TF48X13YV	Tr. Interstage	2,000/2,500CT	8,000/10,000CT*	3	100	11	RAV-6*
27A34	TF58X13Z	Tr. Interstage	2,500	4,000CT	10	1.5W	200-15,000	M11
27A34	TF48X13Z	Tr. Interstage	2,500	600CT	10	1.5W	200-15,000	NSV-2
27A308	TF48X12Z	Tr. Interstage	2,500	600CT	10	1.5W	200-15,000	AG-2
27A176	TF58X21Z	Tr. Interstage	2,500	2,500CT	1.5	3	200-10,000	M8
27A165	TF58X13Z	Tr. Interstage	2,500	2,500CT	1	50	300-100,000	M9
27A154	TF58X13Z	Tr. Interstage	2,500	2,500CT	1	50	300-100,000	M11
27A218	TF58X13Z	Tr. Interstage	2,500	2,500CT	2	200	200-15,000	M9
27A197	TF48X13YV	Tr. Interstage	2,500	2,500CT	2	200	200-15,000	NSV-2B
27A254	TF58X13Z	Tr. Interstage	2,500	2,500CT	2.5	400	200-15,000	M10
27A232	TF48X13YV	Tr. Interstage	2,500	2,500CT	2.5	400	200-15,000	NSV-2C
27A214	TF48X13YV	Tr. Interstage	2,500	2,500CT	2.5	400	200-15,000	AF-2
27A193	TF58X12Z	Tr. Interstage	4,000CT	600CT	5	600	200-15,000	M9
27A193	TF48X13YV	Tr. Interstage	4,000CT	600CT	5	600	200-15,000	NSV-2B
27A219	TF58X13Z	Tr. Interstage	4,000CT	600CT*	5	600	200-15,000	M9
27A198	TF48X13YV	Tr. Interstage	4,000CT	600CT*	5	600	200-15,000	M9
27A332	TF58X13Z	Tr. Interstage	4,000CT	600CT	3	1.5W	200-15,000	M11
27A319	TF48X13YV	Tr. Interstage	4,000CT	600CT	3	1.5W	200-15,000	NSV-2
27A303	TF48X13YV	Tr. Interstage	4,000CT	600CT	3	1.5W	200-15,000	AG-2
27A338	TF58X13Z	Tr. Interstage	4,000CT	600CT*	3	1.5W	200-15,000	M11
27A322	TF48X13YV	Tr. Interstage	4,000CT	600CT*	3	1.5W	200-15,000	NSV-2
27A306	TF48X13YV	Tr. Interstage	4,000CT	600CT*	3	1.5W	200-15,000	AG-2
M11 275	TF48X13YV	Tr. Interstage	4,000CT to Static Shielded	8,000CT to 10,000CT	2	100	11	RAV-4
M11 297	TF48X13YV	Tr. Interstage	4,000CT to Static Shielded	8,000CT to 10,000CT	2	100	11	RAV-6
27A911	TF48X13YV	Isolation	5,000CT	5,000CT	1	10	60-15,000	AF-1
27D53	TF48X13AH	Driver	5,400	600CT	15	75	200-15,000	AH
27D54	TF48X13YV	Driver	5,400	300CT	7	40	200-15,000	M9
27A220	TF58X13Z	Tr. Interstage	7,500CT	600CT	4	150	200-15,000	M9
27A199	TF48X13YV	Tr. Interstage	7,500CT	600CT	4	150	200-15,000	NSV-2B
27A341	TF58X12Z	Tr. Interstage	7,500CT	600CT	4	150	200-15,000	M11
27A325	TF48X13YV	Tr. Interstage	7,500CT	600CT	8	1.5W	200-15,000	NSV-2
27A309	TF48X13YV	Tr. Interstage	7,500CT	600CT	8	1.5W	200-15,000	AG-2
27A225	TF58X13Z	Tr. Interstage	7,500CT	1,600CT	3	1.5W	300-15,000	M9
27A204	TF48X13YV	Tr. Interstage	7,500CT	1,200CT	4	150	200-15,000	NSV-2B
27A151	TF48X12YV	Chopper	8,000CT/2,000CT	312,000		(Pri. Ind. = 30 H <sub>Y</sub> @ 1 V/60 CPS)	100-10,000	NSV-6
M11 248	TF48X13YV	Tr. Interstage	8,000CT to Static Shielded	1,200CT to 10,000CT	1	100	11	RAV-6
M11 247	TF48X13YV	Tr. Interstage	8,000CT to Static Shielded	9,000CT to 10,000CT	1	100	11	RAV-6
27A185	TF58X13Z	Plate to Line	10,000	200	3	100	150-10,000	M9
27A182	TF48X13YV	Plate to Line	10,000	200	3	100	150-10,000	NSV-2B
27A211	TF48X13Z	Interstage	10,000	200CT	6	100	200-15,000	M10
27A252	TF58X13Z	Interstage	10,000	200CT	6	100	200-15,000	M10
27A195	TF48X13YV	Interstage	10,000	200CT	6	100	200-15,000	NSV-2B
27A240	TF48X13YV	Interstage	10,000	200CT	6	100	200-15,000	NSV-2C
27A261	TF48X13YV	Interstage	10,000	200CT	2	100	250-20,000	TFH
27A55	TF58X13Z	Interstage	10,000	200CT	1	100	100-20,000	M2A
27D39	TF58X13Z	Driver	10,000	500CT	1	50	100-100,000	M3
27D46	TF58X13Z	Driver	10,000	500CT	1	50	100-100,000	M3
M11 251	TF48X13YV	Driver	10,000	500CT	1	100	11	RAV-4
M11 289	TF48X13YV	Driver	10,000	500CT	1	100	11	RAV-5
M11 209	TF48X13YV	Driver	10,000	500CT	1	100	11	RAV-6
TR 133	TF58X13Z	Driver	10,000	500CT*	1	100	100-100,000	M3
27A39	TF48X13YV	Tr. Interstage	10,000	500CT*	4	100	100-10,000	NSV-2
27D49	TF48X13Z	Driver	10,000	600CT	2	5	300-10,000	MA7A
27A168	TF58X13Z	Driver	10,000	1,200CT	2	5	300-10,000	MA7A
27A18	TF48X13YV	Driver	10,000	1,200CT	2	5	300-10,000	TSM
27D45	TF58X13Z	Driver	10,000	2,500	2	50	300-100,000	M3
27D41	TF58X13Z	Driver	10,000	1,200	5	50	100-100,000	M3
27D37	TF58X13Z	Driver	10,000	1,000CT	1	50	100-100,000	M3
27D43	TF58X13Z	Driver	10,000	1,200CT	1	50	100-100,000	M3
27D44	TF58X13Z	Driver	10,000	1,200CT	1	50	100-100,000	M3
27D40	TF58X13Z	Driver	10,000	2,000CT*	5	50	100-100,000	M3
TR 127	TF58X13Z	Driver	10,000	1,200CT*	1	100	100-100,000	M1
M11 259	TF48X13YV	Driver	10,000	1,200CT	1	100	11	RAV-4
M11 290	TF48X13YV	Driver	10,000	1,200CT	2	100	11	RAV-5
M11 210	TF48X13YV	Driver	10,000	1,200CT	1	100	11	RAV-6
27A112	TF58X13Z	Tr. Interstage	10,000	1,500CT	1	50	100-100,000	M3
27A118	TF58X13Z	Tr. Interstage	10,000	1,500CT	1	50	100-100,000	M3
27A251	TF58X13Z	Tr. Interstage	10,000	1,500CT	1	50	80-20,000	M2A
M11 264	TF48X13YV	Tr. Interstage	10,000	1,800CT	1	100	11	RAV-4
M11 225	TF48X13YV	Tr. Interstage	10,000	1,800CT	1	100	11	RAV-6
27A194	TF48X13YV	Tr. Interstage	10,000	1,500CT	1	100	200-15,000	NSV-2B
27A223	TF58X13Z	Tr. Interstage	10,000	1,500CT	2	100	200-15,000	M9
TR 130	TF58X13Z	Tr. Interstage	10,000	1,500CT*	1	100	100-100,000	M1
27A239	TF48X13YV	Tr. Interstage	10,000	1,500CT	1	200	200-15,000	NSV-2C
27A350	TF48X13YV	Tr. Interstage	10,000	1,500CT	1	200	200-15,000	AF-2
27A164	TF58X12Z	Tr. Interstage	10,000	1,500CT	2	100	200-15,000	NSV-2B
27A153	TF58X13Z	Tr. Interstage	10,000	2,000CT*	5	50	100-100,000	M3
27A53	TF48X13YV	Driver	10,000	2,000CT	1	50	90-20,000	M2A
M11 260	TF48X13YV	Driver	10,000	2,000CT	1	100	11	RAV-4
TR 125	TF58X13Z	Driver	10,000	2,000CT	1	100	100-100,000	M1
27A219	TF48X13Z	Tr. Interstage	10,000	2,000CT	1	100	100-100,000	M1
27A44	TF48X13YV	Tr. Interstage	10,000	2,000CT	1	200	50-20,000	AF-1
27A89	TF48X13YV	Tr. Interstage	10,000	2,000CT*	8	1	40-20,000	NSV-4
27A19	TF48X13YV	Tr. Interstage	10,000	2,000CT	2	30	250-15,000	TSM
27D38	TF58X13Z	Driver	10,000	2,000CT	1	50	200-15,000	M3
27D42	TF58X13Z	Driver	10,000	2,000CT	1	50	300-100,000	M3
M11 291	TF48X13YV	Tr. Interstage, Driver	10,000	2,000CT	1	100	11	RAV-5
M11 244	TF48X13YV	Tr. Interstage, Driver	10,000	2,000CT	1	100	11	RAV-6
M11 270	TF48X13YV	Tr. Interstage, Driver	10,000	2,000CT*	1	100	11	RAV-4
M11 292	TF48X13YV	Tr. Interstage, Driver	10,000	2,000CT*	1	100	11	RAV-5
M11 238	TF48X13YV	Tr. Interstage, Driver	10,000	2,000CT*	1	100	11	RAV-6
27A33	TF48X13YV	Tr. Interstage	10,000	2,000CT*	4	100	100-10,000	NSV-2
27A34	TF48X13YV	Tr. Interstage	10,000	2,000CT*	4	100	100-10,000	NSV-2
27D55	TF48X13YV	Tr. Interstage	10,000	5,000CT	7.5	5	200-15,000	AF-1
27A59	TF58X13Z	Interstage	10,000	10,000CT	1	100	50-20,000	M2A
27A224	TF58X13Z	Interstage	10,000	10,000CT	2	100	200-15,000	M9
27A203	TF48X13YV	Interstage	10,000	10,000CT	2	100	200-15,000	NSV-2B
27A27	TF48X13YV	Interstage	10,000	10,000CT	1	100	250-15,000	TSM
M11 268	TF48X13YV	Interstage	10,000	10,000CT	1	100	11	RAV-4
M11 293	TF48X13YV	Interstage	10,000	10,000CT	1	100	11	RAV-5
M11 236	TF48X13YV	Interstage	10,000	10,000CT	1	100	11	RAV-6
TR 141	TF48X15YV	Interstage	10,000	20,000CT*	10	50	100-10,000	RSV##
27A08	TF48X10FA	Interstage	10,000	50,000CT*	0	31	30-15,000	FA
27A124	TF48X10YV	Interstage	10,000	50,000CT*	0	31	30-15,000	YV
27A184	TF58X10Z	Interstage	10,000	90,000	0	3	150-10,000	M9
27A181	TF48X10YV	Interstage	10,000	90,000	0	3	150-10,000	NSV-2B
27A348	TF58X10Z	Interstage	10,000	90,000	0	6	100-10,000	M10
27A344	TF48X10YV	Interstage	10,000	90,000	0	6	100-10,000	AF-2
27A34	TF48X10YV	Interstage	10,000	90,000	0	6	100-10,000	NSV-2C
27S18	TF48X15YV	Plate to Grid	10,000	90,000	0	20	250-15,000	TSM

Input-Interstage - Driver

Part No. Molded/Encased	MIL-T-27B Classification	Application	Impedance		Unbol. MADC	Power In MW	Frequency Response MHz	Case Size
			Primary	Secondary				

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Input-Interstage - Driver INCLUDES: TRANSISTOR AND TUBE TYPE - MOLDED AND ENCASED

Part No. Molded Encased	MIL-T-278 Classification	Application	Impedance		Unbal. Pri. MADC	Power In MW	Frequency Response #20B	Case Size
			Primary	Secondary				
27A248	TF5RX13Z2	Tr. Interstage	50,000CT	1,200CT	2	100	200-15,000	M10
27A332	TF5RX13Z2	Tr. Interstage	50,000CT	1,200CT	3	100	200-15,000	M11
27A316	TF4RX13Y1	Tr. to V.C.	50,000CT	1,200CT	3	100	200-15,000	NSV-2
27A190	TF4RX13Y1	Tr. to V.C.	50,000CT	1,200CT	1.4	100	200-15,000	NSV-2C
27A237	TF4RX13Y1	Tr. Interstage	50,000CT	1,200CT	2	100	200-15,000	NSV-2C
27A300	TF4RX13Y1	Tr. Interstage	50,000CT	1,200CT	3	100	300-15,000	AG-2
27A337	TF5RX13Z2	Tr. Interstage	50,000CT	1,200CT	3	100	300-15,000	M11
27A321	TF4RX13Y1	Tr. to V.C.	50,000CT	1,200CT	3	100	200-15,000	NSV-2
27A305	TF4RX13Y1	Tr. Interstage	50,000CT	1,200CT	3	100	300-15,000	AG-2
27A179	TF5RX15Z2	Isolation	50,000CT	50,000CT	0	5	200-10,000	M8
27A147	TF5RX15Z2	Interstage	80,000	5,000	3	130	300-10,000	MAH
27A135	TF4RX21Y1	Tr. Input	100,000	50	0	300	200-10,000	NSV-2
MIT 246	TF4RX16Y1	Input or Chopper	100,000CT	300CT	0	25	11	RAV-6
27A166	TF5RX16Z2	Input	100,000	1,000	0	5	200-10,000	MA7A
27A173	TF5RX21Z2	Input or Interstage	100,000	1,200CT	0.75	5	200-10,000	M8
27A330	TF5RX13Z2	Input or Interstage	100,000	1,200CT	1.4	50	200-15,000	M11
27A314	TF4RX13Z2	Input or Interstage	100,000	1,200CT	1.4	50	200-15,000	NSV-2
27A298	TF4RX21Z2	Input or Interstage	200,000	600	1	5	200-10,000	AG-2
27A171	TF5RX16Z2	Input	200,000	1,000	0	5	200-10,000	M2A
27A158	TF5RX16Z2	Input	200,000	1,000	0	10	300-45,000	M7
27A109	TF5RX16Z2	Input	200,000	1,000	0	10	300-45,000	M3
TR 142	TF5RX16Z2	Input	200,000	1,000	0	25	11	RAV-6
MIT 207	TF4RX16Y1	Input	200,000	1,000	0	25	100-20,000	RAV-6
27A57	TF5RX16Z2	Input or Chopper	200,000CT	1,000CT	0	5	80-20,000	M2A
27A157	TF5RX16Z2	Input or Chopper	200,000CT	1,000CT	0	10	300-45,000	M7
27A107	TF5RX16Z2	Input or Chopper	200,000CT	1,000CT	0	10	300-45,000	M3
TR 143	TF5RX16Z2	Input or Chopper	200,000CT	1,000CT	0	25	11	RAV-6
MIT 224	TF4RX16Y1	Input or Chopper	200,000CT	1,000CT	0	25	11	RAV-6
27A173	TF5RX21Z2	Input or Chopper	200,000	1,200	0.75	5	200-10,000	M8
27A69	TF5RX16Z2	Input or Chopper	200,000	1,000	0	10	200-20,000	TAM

Drivers

Part No.	MIL-T-278 Classification	Application	Primary Impedance	Power Output In W	Turns Ratio Pri: 1/2 Sec.	Frequency Response # 1DB	Case Size	Wt. Lbs.
27D32	TF4RX12GA	PP Plates to Grid 6N7, 6A6, 6J5, 6C4, etc.	20,000CT	10	3: 1	50-10,000	GA	2.25
27D30	TF4RX12GA	PP Plates to Grid 6N7, 6A6, 6J5, 6C4, etc.	20,000CT	10	3: 1	50-10,000	YY-21	2.25
27D33	TF4RX12GA	PP Plates to Grid 6N7, 6J5, 6C4, etc.	20,000CT	25	5: 1	50-10,000	GA	2.5
27D31	TF4RX12Y1	PP Plates to Grid 6N7, 6A6, 6J5, 6C4, etc.	20,000CT	75	5: 1	50-10,000	YY-25	2.5
27D35	TF4RX12HA	PP Plates to PP Grids 2A3, 6B6, 6	5,000CT	100	10: 3: 1	200-3,500	HA	3.5
27D34	TF4RX12JA	PP Plates to Grid 6B4, 45, 2A3, 6L6, etc.	5,000CT	100	10: 3: 1	50-10,000	JA	4.5

Output

Designed and built to meet all the requirements of MIL-T-278 specifications for their specified class of operation. Listed in order of the primary impedance—this complete list of output transformers makes available under one listing a wide variety of high quality output transformers for both transistor and tube type circuitry.

Part No. Molded Encased	MIL-T-278 Classification	Application	Impedance		Unbal. Pri. MADC	Power In MW	Frequency Response #20B	Case Size
			Primary	Secondary				
27S124	TF2RX16Z2	70.7V Line Matching Autotrans 50 to 70.7V				125	LH1	
27S10	TF4RX17Y1	Tr. to V.C.	20CT	4/8/16	1A(Bal.)	10	70-20,000	NSV-5
27S116	TF4RX17AJ	Tr. to V.C.	20CT	8	50	10W	50	10W
27S204	TF4RX17AJ	Tr. to V.C.	25	3.4	600	3W	200-20,000	AJ
27S203	TF4RX17AJ	Output Autotransformer	39CT	3.4	200	2W	100-20,000	AJ
27S205	TF4RX17AJ	Tr. to Servo	48CT	3.2/8	50	5W	200-20,000	MA7
27S115	TF4RX17FA	Tr. to V.C.	48CT	8/16	275	5W	200-20,000	FA
27S219	TF4RX17Y1	Tr. to V.C.	48CT	4/8/16	750(Bal.)	5W	40-20,000	NSV-4
27S103	TF5RX17Z2	Tr. to V.C.	120CT	3.2	10	50	100-100,000	M3
27S139	TF5RX17Z2	Tr. to V.C.	120CT	3.2	10	50	100-100,000	M2
MIT 229	TF4RX17Y1	Tr. to V.C.	120CT	3.2	10	50	11	RAV-6
27S206	TF4RX17AJ	Tr. to Servo	120CT	1,000	40	6W	300-15,000	AJ
27S207	TF4RX17AH	Tr. to V.C.	125CT	3.4	20	1.5W	200-15,000	AH
27S208	TF4RX17AJ	Tr. to Servo	140CT	50	6W	300-15,000	AJ	
27S209	TF4RX17Y1	Tr. to V.C.	150CT	12	10	50	100-100,000	NSV-2
MIT 212	TF4RX17Y1	Tr. to V.C.	150CT	12	10	50	11	RAV-6
TR 129	TF5RX17Z2	Tr. to V.C.	200CT	16	10	500	100-100,000	M1
27S209	TF4RX17AH	Tr. to V.C.	250CT	3.4	20	400	70-15,000	AH
27S213	TF4RX17Y1	Tr. to Servo	250CT	10	30	50	200-15,000	AJ
27S202	TF5RX17Z2	Tr. to Servo	250CT	500	10	1W	200-15,000	M9
27S194	TF4RX17Y1	Tr. to Servo	250CT	500	10	1W	200-15,000	NSV-2
27S191	TF4RX17Y1	Tr. to Servo	250CT	500	10	1W	200-15,000	AG-2
27S200	TF5RX17Z2	Tr. to Servo	250CT	1,000	10	1W	200-15,000	M11
27S192	TF4RX17Y1	Tr. to Servo	250CT	1,000	10	1W	200-15,000	NSV-2
27S189	TF4RX17Y1	Tr. to Servo	250CT	1,000	10	1W	200-15,000	AG-2
27S187	TF4RX17Z2	Tr. to V.C.	300CT	12	7	50	100-100,000	M3
MIT 213	TF4RX17Y1	Tr. to V.C.	300CT	12	7	50	11	RAV-6
27S199	TF4RX17Y1	Tr. to Line	400CT	16	7	50	100-100,000	M3
MIT 261	TF4RX17Y1	Tr. to Line	300CT	600	7	500	11	RAV-4
MIT 281	TF4RX17Y1	Tr. to Line	300CT	600	7	500	11	RAV-3
MIT 219	TF4RX17Y1	Tr. to Line	300CT	600	7	500	11	RAV-6
TR 122	TF5RX17Z2	Tr. to Line	300CT	600	7	500	100-100,000	M1
27S104	TF5RX17Z2	Tr. to Line	300CT	600	6	500	100-100,000	M3
MIT 230	TF4RX17Y1	Tr. to V.C.	320CT	3.2	7	500	11	RAV-6
27S198	TF5RX17Z2	Tr. to V.C.	400	10	50	300	200-20,000	M11
27S187	TF4RX17Y1	Tr. to V.C.	400	10	50	300	200-20,000	NSV-2
27S182	TF5RX17Z2	Tr. to V.C.	400	10	50	300	200-20,000	AG-2
27S143	TF5RX17Z2	Tr. to V.C.	400	11	3	15	300-10,000	M7A
27S142	TF5RX17Z2	Tr. to V.C.	400CT	11	6	15	300-10,000	M7A
27S210	TF4RX17Y1	Tr. to V.C.	400CT	11	2	250	300-15,000	AF-1
TR 136	TF5RX17Z2	Tr. to Line	400CT	16	7	500	100-100,000	M1
27S141	TF5RX17Z2	Tr. to Line	400CT	50	3	15	300-10,000	MA7
TR 126	TF5RX17Z2	Tr. to Line	400CT	50	3	100	100-100,000	M1
MIT 271	TF4RX17Y1	Tr. to Line & 2:1 Pulse	400CT to 500CT	400CT to 500CT	8	500	11	RAV-4
MIT 283	TF4RX17Y1	Tr. to Line & 2:1 Pulse	400CT to 500CT	400CT to 500CT	8	50	11	RAV-5
MIT 241	TF4RX17Y1	Tr. to Line & 2:1 Pulse	400CT to 500CT	400CT to 500CT	6	50	11	NSV-6
27S28	TF4RX17Y1	Tr. to V.C.	500CT	4/16CT	20	15	40-20,000	NSV-4
27S144	TF5RX17Z2	Tr. to V.C.	500CT	3.2	5	15	200-10,000	M8
27S152	TF5RX17Z2	Tr. to V.C.	500CT	3.2	0	250	50-20,000	M2
27S21	TF4RX17Y1	Tr. to Line	500CT	50	3.3	30	250-15,000	TSM
27S188	TF5RX17Z2	Tr. to Line	500CT	50	3	30	300-100,000	M3
27S138	TF5RX17Z2	Tr. to Line	500CT	30	3	30	300-100,000	M2
TR 128	TF5RX17Z2	Tr. to Line	500CT	30	3	30	300-100,000	M2
27S142	TF5RX17Z2	Tr. to Line	500-500	30-30	3.5	100	80-20,000	M7A
MIT 202	TF4RX17Y1	Tr. to Line	500-600	50-60	3	100	11	RAV-4
MIT 255	TF4RX17Y1	Tr. to Line	500-600	50-60	3	100	11	RAV-6
MIT 284	TF4RX17Y1	Tr. to Line	500-600CT	50-60CT	3	500	11	RAV-5
27S199	TF5RX17Z2	Tr. to Servo	500CT	210	30	500	300-20,000	M11
27S188	TF4RX17Y1	Tr. to Servo	500CT	210	30	500	300-20,000	NSV-2
27S183	TF4RX17Y1	Tr. to Servo	500CT	210	30	500	300-20,000	AG-2
27S22	TF4RX17Y1	Output or Mixing	500CT	600CT	10	30	250-15,000	NSV-6
27S100	TF5RX17Z2	Output or Mixing	500CT	600CT	3	50	100-100,000	M3
27S147	TF5RX17Z2	Output or Mixing	500CT	600CT	10	100	80-20,000	M2A
MIT 262	TF4RX17Y1	Output or Mixing	500CT	600CT	5	5	5	RAV-4
MIT 285	TF4RX17Y1	Output or Mixing	500CT	600CT	5.5	500	11	RAV-5
MIT 220	TF4RX17Y1	Output or Mixing	500CT	600CT	5.5	500	11	RAV-6
27S190	TF5RX17Z2	Tr. to V.C.	600	3.2	3	50	100-100,000	M3
TR 141	TF5RX17Z2	Tr. to V.C.	600	3.2	3	100	100-100,000	M1
MIT 204	TF4RX17Y1	Tr. to V.C.	600	3.2	3	3	3	RAV-6
27S105	TF5RX17Z2	Tr. to V.C.	600CT	3.2	4.5	50	100-100,000	M3

Outputs INCLUDES: TRANSISTOR AND TUBE TYPE - MOLDED AND ENCASED

Part No. Molded Encased	MIL-T-278 Classification	Application	Impedance		Unbal. Pri. MADC	Power In MW	Frequency Response #20B	Case Size
			Primary	Secondary				
27S95	TF5RX17Z2	Tr. to V.C.	600CT	12	16	4.5	50	100-100,000
MIT 214	TF4RX17Y1	Tr. to V.C.	600-800CT	12/16	5	300	11	RAV-6
27S78	TF4RX17Y1	Output-Line to Line	600/250/0	150/62.5/0	0	100	10-30,000	
27S77	TF4RX16Y1	Output-Line to						

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Output									
Part No. Molded Encased	MIL-T-27 B Classification	Application	Impedance		Unbal. Pri. MADC	Power In MW	Frequency Response dB	Core Size	Cose Size
			Primary	Secondary					
27572	TF4RX13GA	PP Plate to Line or V.C.	9,000CT	4/8/16/250/500	120	25W	70-20,000S	GA	
275125	TF4RX13GA	PP Plate to Line	9,000CT	500	90	20W	50-10,000S	GA	
275122	TF4RX13ZG	Tr. to V.C.	9,000CT	1.2	12	50	100-10,000S	AG	
27541	TF5RX13ZZ	Tr. to V.C.	10,000	3.2	2	100	80-20,000S	M2A	
TR 146	TF5RX13ZZ	Tr. to V.C.	10,000	3.2	2	100	100-10,000S	M1	
MIT 206	TF4RX13YY	Tr. to V.C.	10,000	3.2	1	100	100-10,000S	RAY-6	
27540	TF5RX13ZZ	Tr. to V.C.	10,000CT	16	2	50	80-20,000S	M2A	
TR 145	TF5RX13ZZ	Tr. to V.C.	10,000CT	16	2	50	100-10,000S	M1	
27510	TF4RX13HA	PP Plate to Line or Voice Coil	10,000CT*	4/8*/16*	1	5W	30-15,000S	HA	
275120	TF4RX13HA	PP Plate to Line or Voice Coil	10,000CT*	4/8*/16*	1	5W	30-15,000S	HA	
27517	TF4RX13EB	PP Plate to Line or Voice Coil	10,000CT	4/8/16/250/500	50	10W	100-25,000S	EB	
27513	TF4RX13JA	Plate to Line or V.C. + 10% Feedback Winding	10,000CT	4/8/16/150/600	200	15W	50-10,000S	JA	
27562	TF4RX13KB	Plate to V.C. with Screen Taps	10,000CT*	4/8/16	100	25W	15-30,000S	KB	
27563	TF4RX13KB	Plate to Line with Screen Taps	10,000CT*	125/250/500	100	25W	15-30,000S	KB	
275126	TF5RX13ZZ	Plate to Line	10,000CT	150CT	0	53	300-3,000S	ZZ	
27586	TF5RX13ZZ	Plate to Tr. or Tr.	10,000	200	1	50	70-20,000S	M2A	
27519	TF4RX13YY	Plate to Line	10,000	200 to 500	3	20	250-15,000S	YY-1	
27537	TF5RX13ZZ	Plate to Line	25,000	500	1.5	100	80-20,000S	M2A	
27549	TF5RX13ZZ	Plate to Line	25,000	500	1.5	200	90-20,000S	M2	
275107	TF5RX13ZZ	Plate to Line	10,000	200	3	120	150-10,000	M10	
275164	TF4RX13YY	Plate to Line	10,000	200	3	120	150-10,000	NSV-2C	
275161	TF4RX13YY	Plate to Line	10,000	200	3	120	150-10,000	AF-2	
27545	TF5RX13ZZ	Output or Driver	12,500	600CT	2	160	80-20,000S	M2A	
MIT 251	TF4RX13YY	Output or Driver	10,000 to 12,500	500CT to 600CT	1	100	11	RAY-4	
MIT 289	TF4RX13YY	Output or Driver	10,000 to 12,500	600CT to 600CT	1	100	11	RAY-5	
MIT 209	TF4RX13YY	Output or Driver	10,000 to 12,500	500CT to 600CT	1	100	11	RAY-6	
27569	TF4RX13YY	Plate to Line	10,000	600*	10	2W	150-15,000S	YY-3	
MIT 290	TF4RX13YY	Output or Driver	10,000CT to 12,500CT	1,200CT to 1,500CT	1	100	11	RAY-4	
MIT 210	TF4RX13YY	Output or Driver	10,000 to 12,500	1,200CT to 1,500CT	1	100	11	RAY-6	
275132	TF4RX13FA	Plate to Line	10,000	2,000	40	5W	200-5,000S	FA	
275110	TF5RX13ZZ	Output or Isolation	10,000CT	10,000CT	1	50	300-100,000S	M3	
275134	TF5RX13ZZ	Output or Isolation	10,000CT	10,000CT	1	50	300-100,000S	M3	
275127	TF5RX13ZZ	Plate to Line	15,000CT	30	5	15	100-50,000S	AF-1	
27580	TF4RX16YY	Plate to Line	15,000	50/250/600	0	10	60-15,000S	AF-1	
27527	TF4RX16YY	Plate to Line	15,000	50/250/600	0	10	50-15,000S	NSV-2	
27528	TF4RX13YY	Plate to Line	15,000	50/250/600	3	10	200-10,000S	NSV-2	
27581	TF4RX13YY	Plate to Line	15,000	50/250/600	3	10	100-50,000S	AF-1	
27583	TF4RX13YY	Tr. to Tr. or Line	15,000CT	600CT*	1	15	50-15,000S	AF-1	
27585	TF4RX13YY	Tr. to Tr. or Line	15,000CT	600CT*	2	25	50-15,000S	AF-1	
27507	TF4RX13FA	Plate to Line	15,000	600CT*	10	31	30-50,000S	FA	
275117	TF4RX13YY	Plate to Line	15,000	600CT*	10	31	30-50,000S	YY-2	
27524	TF4RX13YY	Plate to Line	15,000	50/125/200/500	8	200	30-20,000S	NSV-4	
27573	TF4RX16YY	Plate to Line	15,000	62.5/150/250/500*	0	20	20-20,000S	YY-2	
27574	TF4RX13YY	Plate to Line	15,000	62.5/150/250/500*	5	200	40-15,000S	YY-9	
27517*	TF4RX13YY	Plate to Line	15,000	62.5/150/250/500	10	40	30-15,000S	YY-9	
27582	TF4RX13YY	Plate to Line	20,000CT	50/250/600	0	10	40-30,000S	AF-1	
27576A	TF4RX13YY	Plate to Line	20,000CT*	62.5/150/250/500*	30	20	20-20,000S	YY-12	
27575	TF4RX13YY	Plate to Line	20,000CT*	62.5/150/250/500*	400	20	20-20,000S	YY-12	
27531	TF4RX13YY	Plate to Line	20,000CT*	600CT*	4	125	200-10,000S	NSV-2	
27508	TF4RX13GA	Plate to Line	20,000CT*	600CT*	1W	30	15-10,000S	GA	
275118	TF4RX13FA	Plate to Line	20,000CT*	4/8/16	20	5W	40-20,000S	FA	
27554	TF4RX13FA	PP Plate to Line	20,000CT*	62.5/150/250/500CT	20	5W	40-20,000S	FA	
27555	TF4RX13FA	PP Plate to Line	20,000CT*	62.5/150/250/500CT	20	5W	40-20,000S	FA	
27520	TF4RX13YY	Plate to low Imp.	30,000	50	1	30	250-15,000S	TSM	
27521	TF5RX13ZZ	Plate to low Imp.	30,000	50	1	100	80-20,000S	M2A	
275162	TF5RX13ZZ	Plate to low Imp.	30,000	50	1	100	150-10,000S	NSV-2B	
275149	TF4RX13YY	Plate to low Imp.	30,000	50	1	100	150-10,000S	NSV-2B	
275165	TF4RX13YY	Plate to low Imp.	30,000	50	1	120	150-10,000S	NSV-2C	
275162	TF4RX13YY	Plate to low Imp.	30,000	50	1	120	150-10,000S	AF-2	
27550	TF5RX13ZZ	Plate to low Imp.	30,000	50	1	200	50-20,000S	M2	
27525	TF4RX13YY	Plate to low Imp.	30,000CT*	50/125/200/500	0	80	30-20,000S	NSV-4	
275154	TF5RX13ZZ	Plate to Line	30,000	1,200	.5	100	200-10,000S	M9	
275151	TF4RX13YY	Plate to Line	30,000	1,200	.5	100	200-10,000S	NSV-2B	
275158	TF4RX13YY	Tr. to V.C.	50,000	6	1	100	200-15,000S	NSV-2	
275155	TF4RX13YY	Tr. to V.C.	50,000	6	1	100	200-15,000S	NSV-2B	
275176	TF5RX13ZZ	Tr. to V.C.	50,000	6	1	100	300-15,000S	M10	
275173	TF4RX13YY	Tr. to V.C.	50,000	6	1	100	300-15,000S	NSV-2C	
275170	TF4RX13YY	Tr. to V.C.	50,000	6	1	100	300-15,000S	AF-2	
275195	TF5RX13ZZ	Tr. to V.C.	50,000	6	3	100	300-15,000S	M11	
275184	TF4RX13YY	Tr. to V.C.	50,000	6	3	100	300-15,000S	NSV-2	
275179	TF4RX13YY	Tr. to V.C.	50,000	6	3	100	300-15,000S	AG-2	
27584	TF4RX13YY	Tr. to Tr. or Line	50,000CT	600CT*	.5	10	100-15,000S	AF-1	
275133	TF5RX13ZZ	Output	100,000	60	.5	100	250-10,000S	M9	
27539	TF5RX13ZZ	Output	100,000	60	.5	100	80-20,000S	M2A	
275150	TF4RX13YY	Output	100,000	60	.5	120	250-10,000S	NSV-2B	
275169	TF5RX13ZZ	Output	100,000	60	.5	120	150-10,000S	M10	
275166	TF4RX13YY	Output	100,000	60	.5	120	150-10,000S	NSV-2C	
275160	TF4RX13YY	Output	100,000	60	.5	120	150-10,000S	AF-2	
275167	TF5RX13ZZ	Output	100,000	60	.5	200	50-20,000S	AF-2	
27516	TF4RX13YY	Plate to Grid	100,000	90,000	0	20	250-15,000S	TSM	

\* Split CT Winding  
 † Frequency response at ±3dB  
 ‡ Frequency response at ±10dB

▲ This unit shielded for -70dB hum reduction  
 ▲ This unit shielded for -90dB hum reduction

Chokes									
Part No.	MIL-T-27 B Classification	Inductance In Henrys	MADC	Resistance In Ohms	Test Volts RMS	Core Size	Wt. Lbs.	Cose Size	Pn Lbs.
27C100	TF4RX04AH	2*	40	100	2,500	AH	25		
27C170	TF4RX04YY	4*	40	375	1,200	YV-3	35		
27C113	TF4RX04YY	4*	400	400	1,760	YY-11	1.5		
27C13	TF4RX04FB	15	40	475	2,300	FB	1.5		
27C87	TF4RX04YY	15	40	475	2,300	YY-17	1.5		
27C132	TF4RX04FB	15	40	475	2,300	FB	1.75		
27C114	TF4RX04YY	20	40	350	2,500	YY-4	1.25		
27C118	TF4RX04YY	5.5 or 6	50	100	1,500	YY-4	1.25		
27C155	TF4RX04YY	10	50	160	1,765	YY-6P	1		
27C115	TF4RX04YY	10	50	160	2,300	YY-41	3.5		
27C23	TF4RX04EB	12	30	385	2,500	EB	1.25		
27C36	TF4RX04AH	2*	55	160	2,500	AH	25		
27C105	TF4RX04YY	2*	55	160	2,500	YY-1	25		
27C167	TF4RX04ZZ	3.2	35	360	2,000	BHV	2		
27C14	TF4RX04FB	10	55	230	2,500	FB	1.75		
27C116	TF4RX04EB	10	55	250	1,500	EB	1.12		
27C108	TF4RX04YY	10	55	230	2,500	YY-18	1.75		
27C15	TF4RX04FB	15	55	420	2,500	FB	1.12		
27C89	TF4RX04YY	15	55	420	2,500	YY-18	2		
27C154	TF5SX04ZZ	2.25	65	110	1,000	ZZ-2	28		
		1.75	80						
		1.25	100						
27C161	TF4RX04AJ	6	65	450	1,500	AJ	1		
27C27	TF4RX04AH	2*	70	165	2,500	AH	5		
27C101	TF4RX04AJ	2*	70	165	2,500	AJ	5		
27C117	TF4RX04EB	2*	70	165	1,500	EB	1.12		
27C106	TF4RX04YY	2*	70	165	2,500	YY-6	5		
27C21	TF4RX04YY	3*	70	225	1,500	YY-14	7.5		
27C48	TF4RX04GB	13 or 11.5 or 9.5 or 7.5	70	215	2,500	GB	2.5		
		13 or 11.5 or 9.5 or 7.5	85						
		13 or 11.5 or 9.5 or 7.5	105						
		13 or 11.5 or 9.5 or 7.5	125						
27C72	TF4RX04GB	15	70	300	2,500	GB	2.4		
27C119	TF4RX04YY	4*	75	240	500	YY-28	1.2		
27C120	TF4RX04GA	15	75	270	1,500	GA	2.5		
27C121	TF4RX04YY	12	80	300	2,500	YY-24	2.5		



SECTION 5600

Dual Winding - Chokes and Inductors

Designed and built to meet MIL-T-278 specifications. These units provide the maximum inductance at the given current ratings in a minimum size. All AJ, FA, GA, etc. case sizes are identical to MIL-T-278 specifications.

Part No.	MIL-T-278 Classification	Series Connected		Parallel Connected		Case Size	Wt. Lbs.
		Inductance In Henrys	MADC	Inductance In Henrys	MADC		
27C44	TF48X20Y	450 or 250	0	6,000	65	1,500	NSV-4 .05
27C66	TF58X20Z	20	2	7,425	5	670	M2 .05
MIT 249	TF48X20Y	20 or 8	3	5,100	5 or 2	1,270	RAV-6 .1 oz.
27C41	TF48X04Y	2.4	2	160	.6	40	TFH .8 oz.
MIT 278	TF48X20Y	.90	4	635	20	155	RAV-5 .07 oz.
MIT 279	TF48X20Z	2.5	2	2,300	.30	4	575 RAV-5 .07 oz.
27C234	TF48X20Y	8	4	1,100	2	275	M2 .05
TR 357	TF48X20Y	8	4	1,100	2	275	MAH .04
27C65	TF58X20Z	1.5	5	160	.40	10	40 M2A .04
27C64	TF58X20Z	3.5	2	600	1	150	M2A .04
MIT 277	TF48X20Y	.50	2	100	.20	25	RAV-5 .07 oz.
MIT 276	TF48X20Y	.08	10	25	.02	20	6 RAV-5 .07 oz.
27C62	TF55X04Z	1 or 2 or 16	5 or 100	40	1.25 or 100	10	ZZ-3 .05
27C40	TF48X04Y	1	8	100	25	10	25 TFH .8 oz.
MIT 250	TF48X20Y	75 MH or 20 MH	10	10	18 MH or 5 MH	20	25 RAV-6 .1 oz.
27C46	TF48X04Y	1	15	1,000	10	250	NSV-4 .5
27C43	TF48X04Y	1	20	60	25	40	NSV-2 .1
27C170	TF48X20Y	20	200	400			DHF 2.5
27C39	TF48X04Y	60 MH	32	6	15 MH	64	1.5 TFH .8 oz.
27C53	TF48X04G	32 MH or 40 MH or 20 MH	35	1	13 MH or 10 MH or 4.5 MH or 2.25 MH	70	.25 AG .1
27C41	TF48X04AH	125 MH or 80 MH or 20 MH	50	1.2	31 MH or 20 MH or 5 MH or 3 MH	100	.3 AH .4
27C45	TF48X04Y	10	10	100	10	25	NSV-4 .5
27C149	TF48X04FA	9	60	30	2.5	120	75 FA .1
27C57	TF48X04JA	9 MH or 5 MH or 2.2 MH or 1.5 MH	75	.03	2.25 MH or 1.5 MH or .55 MH	15	.0075 JA 4.5
27C42	TF48X04Y	60 MH	80	4	15 MH	160	1 NSV-2 .1
27C151	TF48X04HA	4	90	50	1	180	12.5 HA .4
27C55	TF48X04AJ	68 MH or 52 MH or 20 MH or 14 MH	100	8	17 MH or 13 MH or 5 MH or 3.5 MH	200	2 AJ .6
27C56	TF48X04GB	180 MH or 140 MH or 25 MH or 11 MH	125	.6	45 MH or 35 MH or 6.5 MH or 3 MH	250	15 GB 1.75
27C150	TF48X04JA	200 MH or 25 MH or 11 MH	140	1.00	2.5 MH or 2.2 MH or 2.7 MH	280	25 JA 5.7
27C152	TF48X04KA	70 MH or 65 MH or 20 MH or 9 MH	250	.22	12.5 MH or 16 MH or 5 MH or 4 Amp.	500	.055 KA 2.5
27C59	TF48X04KA	90 MH or 80 MH or 18 MH or 9 MH	300	.15	22.5 MH or 20 MH or 4 MH or 2.25 MH	600	.035 KA 5.2

1 500 Volts RMS Test      2 1,700 Volts RMS Test      3 1,000 Volts RMS Test  
 \* 750 Volts RMS Test      4 1,500 Volts RMS Test      5 1,875 Volts RMS Test

Audio Inductors

Designed and built to provide a full range of inductance and current ratings in epoxy molded, enclosed, and encapsulated units from .06 H to .450 H, at tolerances of less than ±5%. Units marked \* have a tolerance ±3% and a Q of 22 or more at approximately 1,000 cycles. Units marked # have an inductance tolerance of ±2% and a Q of 25 or more at 1,700 cycles for low inductance units and 400 cycles for high inductance units. Stable operation is provided from 1 to 30 volts and over the full MIL temperature range.

Part No.	MIL-T-278 Classification	Inductance		Resistance		Inductance		Resistance		Case Size	Mtg. Type
		Maximum	Minimum	Maximum	Minimum	Maximum	Minimum				
27C288	TF48X20Y	.0655	.0653	200		.45	AL-1	27/32	1.7/32	1.1/8	25/32
27C203	TF48X20Y	.015	.0646	75		.91	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C287	TF48X20Y	.016	.013	125		1.00	AL-1	27/32	1.7/32	1.1/8	25/32
27C180	TF48X20Y	.020	.062	100		.51	AL-1	27/32	1.7/32	1.1/8	25/32
12C191	TF48X20Y	.020	.007	100		.51	AL-3	17/16 x 29/32	1.7/32	1.1/8	25/32
27C205	TF48X20Y	.039	.011	50		2.35	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C289	TF48X20Y	.044	.035	87		2.80	AL-1	27/32	1.7/32	1.1/8	25/32
27C181	TF48X20Y	.056	.005	60		1.42	AL-1	27/32	1.7/32	1.1/8	25/32
12C192	TF48X20Y	.050	.005	60		1.42	AL-2	17/32	1.7/32	1.1/8	25/32
27C286	TF48X20Y	.065	.019	46		1.35	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C207	TF48X20Y	.098	.029	36		6.0	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C290	TF48X20Y	.111	.091	50		7.0	AL-1	27/32	1.7/32	1.1/8	25/32
27C182	TF48X20Y	.111	.011	40		3.5	AL-1	27/32	1.7/32	1.1/8	25/32
12C193	TF48X20Y	.111	.011	40		3.5	AL-2	17/32	1.7/32	1.1/8	25/32
27C208	TF48X20Y	.155	.046	30		9.3	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C209	TF48X20Y	.240	.071	25		15.5	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C292	TF48X20Y	.275	.225	30		8.0	AL-1	27/32	1.7/32	1.1/8	25/32
27C183	TF48X20Y	.300	.030	30		18.7	AL-1	27/32	1.7/32	1.1/8	25/32
12C194	TF48X20Y	.300	.030	30		18.7	AL-2	17/32	1.7/32	1.1/8	25/32
27C210	TF48X20Y	.390	.115	20		24.7	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C211	TF48X20Y	.628	.187	20		36	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C291	TF48X20Y	.660	.540	20		43	AL-1	27/32	1.7/32	1.1/8	25/32
27C184	TF48X20Y	.760	.070	20		22	AL-1	27/32	1.7/32	1.1/8	25/32
12C195	TF48X20Y	.760	.070	20		22	AL-2	17/32	1.7/32	1.1/8	25/32
27C212	TF48X20Y	1.00	.300	15		58	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C213	TF48X20Y	1.57	.467	13		94	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C293	TF48X20Y	1.65	.135	14		103	AL-1	27/32	1.7/32	1.1/8	25/32
27C185	TF48X20Y	2.00	.200	16		55	AL-1	27/32	1.7/32	1.1/8	25/32
12C196	TF48X20Y	2.00	.200	16		55	AL-2	17/32	1.7/32	1.1/8	25/32
27C214	TF48X20Y	2.40	.716	10		150	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C215	TF48X20Y	4.07	1.2	8		235	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C294	TF48X20Y	4.40	3.60	7		270	AL-1	27/32	1.7/32	1.1/8	25/32
27C186	TF48X20Y	5.00	.500	10		140	AL-1	27/32	1.7/32	1.1/8	25/32
12C197	TF48X20Y	5.00	.500	10		140	AL-2	17/32	1.7/32	1.1/8	25/32
27C216	TF48X20Y	6.28	1.87	6.5		375	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C217	TF48X20Y	10.0	3.00	6		585	AL-3	13/16 x 29/32	1.7/16	1.7/32	1.11/32
27C295	TF48X20Y	11.0	9.00	5		720	AL-1	27/32	1.7/32	1.1/8	25/32
27C187	TF48X20Y	11.5	1.10	7		365	AL-1	27/32	1.7/32	1.1/8	25/32
12C198	TF48X20Y	11.0	1.10	7		365	AL-2	17/32	1.7/32	1.1/8	25/32
27C218	TF48X20Y	15.7	4.65	5		935	AL-3	13/32 x 29/32	1.7/16	1.7/32	1.11/32
27C219	TF48X20Y	24.0	7.16	4		1,500	AL-3	13/32 x 29/32	1.7/16	1.7/32	1.11/32
27C296	TF48X20Y	27.5	22.4	3		1,760	AL-1	27/32	1.7/32	1.1/8	25/32
27C188	TF48X20Y	30.0	3.00	5		945	AL-1	27/32	1.7/32	1.1/8	25/32
12C199	TF48X20Y	30.0	3.00	5		945	AL-2	17/32	1.7/32	1.1/8	25/32
27C220	TF48X20Y	39.0	11.5	3.5		2,300	AL-3	13/32 x 29/32	1.7/16	1.7/32	1.11/32
27C221	TF48X20Y	61.0	18.0	3		3,580	AL-3	13/32 x 29/32	1.7/16	1.7/32	1.11/32
27C297	TF48X20Y	66.0	54.0	2		4,325	AL-1	27/32	1.7/32	1.1/8	25/32
27C189	TF48X20Y	70.0	7.0	3.6		2,200	AL-1	27/32	1.7/32	1.1/8	25/32
12C200	TF48X20Y	70.0	7.0	3.6		2,200	AL-2	17/32	1.7/32	1.1/8	25/32
27C222	TF48X20Y	96.0	26.6	2		5,840	AL-3	13/32 x 29/32	1.7/16	1.7/32	1.11/32
27C223	TF48X20Y	154	45.7	1.5		9,340	AL-3	13/32 x 29/32	1.7/16	1.7/32	1.11/32
27C298	TF48X20Y	165	135	1.3		10,500	AL-1	27/32	1.7/32	1.1/8	25/32
27C189	TF48X20Y	200	2.0	2.1		5,500	AL-1	27/32	1.7/32	1.1/8	25/32
12C201	TF48X20Y	200	2.0	2.1		5,500	AL-2	17/32	1.7/32	1.1/8	25/32
27C224	TF48X20Y	240	71.6	1		14,900	AL-3	13/32 x 29/32	1.7/16	1.7/32	1.11/32
27C190	TF48X20Y	500	5.0	1.5		15,500	AL-1	27/32	1.7/32	1.1/8	25/32
12C202	TF48X20Y	500	5.0	1.5		15,500	AL-2	17/32	1.7/32	1.1/8	25/32

\* Inductance Range given for 0 MADC      † Winding Tapped at 30% and 50%

Audio Inductors

Part No.	MIL-T-278 Classification	S E R I E S		C O N N E C T E D		P A R A L L E L		C O N N E C T E D		Mtg. Type
		Inductance Henrys	MADC	Inductance Henrys	MADC	Inductance Henrys	MADC	Inductance Henrys	MADC	
TR 131	MIT 40	TF58X20Z	20	2	2,850					M1
27C66	27C66	TF48X20Y	20/40	0/1	2,675	5/10	4/2	670		NSV-1A
27C178	MIT 66	TF58X20Z	25*	.35	2,300					TAM
27C509	27C67	TF48X20Y	50	0	4,000					RSV-1B
27C507	27C507	TF48X20Y	50	.75	4,000					AF-1
27C508	MIT 102	TF48X20Y	50	0	3,000					M10
27C509	27C509	TF48X20Y	50	1	3,000					AF-2
27C510	MIT 102	TF48X20Y	50	0</						

SECTION 5600

Filament Single Secondary

50/60 CYCLES

Part No.	MIL-T-27B Classification	Primary Voltage	Secondary		Test Volts RMS	Case Size	Wt. Lbs.
			Volts	Amps.			
27456	TF4RX01KB	105/115/210/230	5.0	10	10,000	KB	7.5
27457	TF4RX01KB03	105/115/125	3.0	10	10,000	KB	7.5
27F109	TF4RX01Y	115	5.0CT	20	2,500	YY-62	4.3
27F53	TF4RX01MA	115/230	5.0CT	20	10,000	MA	13
27F31	TF4RX01Y	115/230	5.0CT	20	10,000	YY-43	13
27F67	TF4RX01A	105/115/210/230	5.0	20	10,000	LA	15.5
27F68	TF4RX01NA	105/115/210/230	5.0	20	21,000	NAH	18
27F69	TF4RX01Y	105/115/210/230	5.0	60	21,000	YY-52	34
27F110	TF4RX01Y	105/115/125†	5.25CT	14	2,500	YY-39	4
27F71	TF4RX01AH	115	6.3CT	.3	1,500	AH	.5
27F72	TF4RX01AJ	115	6.3CT	.6	1,500	AJ	1
27F91	TF4RX01Y	115	6.3	.6	1,500	YY-14	.75
27F113	TF4RX01EA	115†	6.3CT	1	1,600	EA	1
27F116	TF2RX01ZZ	117	6.3CT	1	1,600	BHV(o)	.4
27F125	TF4RX01Y	115†	6.3	1	1,780	YY-63	1
27F54	TF4RX01EA	115/230	6.3CT	1.5	2,500	FA	1
27F32	TF4RX01Y	115/230	6.3CT	1.5	2,500	YY-17	1
27F111	TF4RX01Y	120†	6.3	1.6	1,500	YY-64	2
27F33	TF4RX01Y	105/115/125	6.3CT	2	2,000	EA	1
27F40	TF4RX01FB06	105/115/125	6.3CT	3	2,500	FB	1.75
27F41	TF4RX01FA	115/230	6.3CT	2	2,500	FA	1.75
27F112	TF4RX01Y	115†	6.3CT	3	1,600	FA	1
27F133	TF4RX01Y	115†	6.3	3	1,600	FA	1
27F55	TF4RX01GA	115/230	6.3CT	3	2,500	GA	2
27F90	TF4RX01Y	115/230	6.3CT	3	2,500	YY-21	2
27F54	TF4RX01EA	105/115/125	6.3CT	3.6	2,000	FA	1.75
27F41	TF4RX01GB007	105/115/125	6.3	5	2,500	GB	2.75
27F56	TF4RX01HA	115/230	6.3CT	5.5	2,500	HA	3
27F02	TF4RX01HB	105/115/125	6.3CT	5.5	2,000	HB	4
27F91	TF4RX01Y	115/230	6.3CT	5.5	2,500	YY-27	3
27F75	TF4RX01HB	105/115/210/230	6.3CT	7	2,500	HB	4
27F05	TF4RX01JB	105/115/125	6.3CT	8	2,500	JB	5
27F57	TF4RX01JA	115/230	6.3CT	10	2,500	JA	5
27F42	TF4RX01JB008	105/115/125	6.3	10	2,300	JB	5
27F76	TF4RX01HA	105/115/210/230	6.3CT	10	2,500	HA	3.5
27F92	TF4RX01Y	115/230	6.3CT	10	2,500	YY-32	5
27F107	TF4S01Y	105/115/125	6.3CT	10	2,500	YY-18	1.75
27F43	TF4RX01KB009	105/115/125	6.3	20	2,500	KB	8
27F58	TF4RX01HA	115/230	10.0CT	4	2,500	HA	3.25
27F93	TF4RX01Y	115/230	10.0CT	2	2,000	YY-28	3
27F77	TF4RX01Y	105/115/210/230	10.0CT	10	2,500	JB	5
27F117	TF4RX01Y	115†	10.7	1.5	2,700	YY-66	2.1
27F78	TF4RX01LA	105/115/210/230	11/12/14CT	10	2,500	LA	10.5
27F06	TF4RX01Y	105/115/125	12.6CT	.8	1,500	EA	1.25
27F07	TF4RX01FA	105/115/125	12.6CT	2	2,000	FA	2
27F08	TF4RX01FA	105/115/125	24CT	.8	1,500	FA	2
27F09	TF4RX01GA	105/115/125	24CT	1.5	1,500	GA	3.25

† Static Shielded † Terminals located opposite mounting studs † @ 60 Cycles only  
(a) Width: 2-5/8; Depth: 2; Height: 2-1/8; Mtg. Ctrs: 2-1/32

Filament-Multiple Secondary

These transformers have been designed and built to meet all requirements of MIL-T-27B for their specific class of operation. All EB, GA, GB, etc. case sizes are identical to MIL-T-27B specifications

Part No.	MIL-T-27B Classification	Primary Voltage	Secondary		Test Volts RMS	Case Size	Wt. Lbs.
			Volts	Amps.			
27F64	TF4RX01NB	105/115/210/230	2.5	5	10,000	NB	15
27F101	TF4RX01KA	105/115/125	5.0CT	3	5,000	KA	7
27F70	TF4RX01Y	105/115/210/230	5.0	10	21,000	YY-49	28
27F94	TF4RX01GA	105/115/125	5.0	2	2,500	GA	3.5
27F123	TF4RX01Y	115	5.0CT	2	1,780	JA†	5.5
27F13	TF4RX01HA	105/115/125	5.0	3	2,300	HA	4
27F13	TF4RX01JB	105/115/125	5.0CT	3	2,500	JB	4.75
27F97	TF4RX01JB	105/115/125	5.0	3	2,500	JB	4.75
27F98	TF4RX01JB	105/115/125	5.0CT	3	2,500	JB	4.75
27F119	TF4RX01KA	115	5.0CT	1	1,500	KA	7
27F118	TF4RX01Y	105/115/125/210/230/250	5.0	3	1,600	YY-67	12.3
27F95	TF4RX01GA	105/115/125	5.0	2	2,500	GA	3.5
27F132	TF4RX01Y	105/115/125	12.6CT	1.25	2,500	YY-44	5
27F115	TF4RX01Y	115†	5.3/5.5/5.7CT Plus 89% Tap from CT	4.75	500	YY-68†	10
27F79	TF4RX01EB	115	6.3CT	.6	1,500	EB	.8
27F127	TF4RX01Y	115	6.3	.75	2,000	YY-23	1.2
27F126	TF4RX01JA	115	6.3	1.2	2,700	JA	5.5
27F128	TF4RX01GA	115†	6.3	10	1,000	GA	2
27F04	TF4RX01GA	105/115/125	6.3	6	2,500	GA	2.25
27F99	TF4RX01HA	105/115/125	6.3CT	3	2,500	HA	4
27F131	TF4RX01JA	115	6.3	3	2,500	JA	4
27F18	TF4RX01Y	105/115/125	6.3	3.5	2,000	FA	1.85
27F17	TF4RX01FA	105/115/125	6.3	5	2,500	FA	2
27F102	TF4RX01JA	105/115/125	6.3CT	6	2,500	JA	6.3
27F04	TF4RX01KA	105/115/125	6.3CT	6	2,500	KA	8
27F74	TF4RX01JA	105/115/210/230	6.3CT	6	2,500	JA	6.3
27F03	TF4RX01KA	105/115/125	6.3CT	10	2,500	KA	8
27F130	TF4RX01GA	115	6.3	2.5	1,500	GA	2.75
27F129	TF4RX01EA	115	12.6	.25	500	EA	1
27F10	TF4RX01Y	105/115/125	12.6CT	1.5	1,500	GA	3.25
27F11	TF4RX01JB	105/115/125	12.6CT	2	2,500	JB	6.5

† Secondary Voltage changed by means of primary taps † Static Shielded † Terminals located opposite mounting studs

Filament - Multiple Secondary

Part No.	MIL-T-27B Classification	Primary Voltage	Secondary		Test Volts RMS	Case Size	Wt. Lbs.
			Volts	Amps.			
27F80	TF4RX01GA	115	12.6CT	2	1,500	GA	3.5
27F23	TF4RX01JA	105/115/125	12.6CT	2	2,000	JA	6.3

Filament 400 CPS OPERATION

These transformers have been designed and built to meet all requirements of MIL-T-27B for their specific class of operation. All EB, GA, GB, etc. case sizes are identical to MIL-T-27B specifications

Part No.	MIL-T-27B Classification	Primary Voltage	Secondary		Test Volts RMS	Case Size	Wt. Lbs.
			Volts	Amps.			
27F87	TF5RX01ZZ	105/115/125	6.3CT	.3	500	M-2	.05
27F92	TF4RX01Y	115	6.3	.6	500	N5V-2	.1
27F14	TF4RX01AH	115	6.3CT	1	1,500	AH	.3
27F124	TF5RX01ZZ	115	6.3	1.2	500	CHH(o)	.1
27F121	TF5RX01ZZ	115	6.3CT	2	1,500	ZZ-1	.33
27F35	TF4S01Y	105/115/125	6.3CT	2	2,000	YY-14	.75
27F135	TF4S01Y	105/115/125	6.3CT	2	2,500	AH	.25
27F59	TF4S01AJ	105/115/125	6.3CT	3	2,000	AJ	.25
27F102	TF4S01EB	105/115/125	6.3CT	3	2,500	EB	1
27F105	TF4S01Y	105/115/125	6.3CT	3	2,500	YY-15	.75
27F83	TF5S01ZZ	105/115	6.3CT	3.5	2,300	ZZ-1	.3
27F106	TF5S01Y	105/115/125	6.3CT	4	2,500	YY-16	.45
27F120	TF4S01FB	105/115/125	6.3	5	2,500	FB	.75
27F60	TF4S01EA	105/115/125	6.3CT	5.5	2,500	EA	1
27F84	TF5S01ZZ	105/115	6.3CT	5.5	2,500	ZZ-1	.44
27F108	TF4S01Y	105/115/125	6.3CT	5.5	2,500	YY-16	.45
27F61	TF4S01FA	105/115/125	6.3CT	10	2,500	FA	1.75
27F85	TF5S01ZZ	105/115	6.3CT	10	2,500	ZZ-1	.8
27F136	TF4S01FA	105/115/125	6.3CT	10	2,500	FA	1.75
27F108	TF4S01Y	105/115/125	6.3CT	20	2,500	YY-22	2.5
27F62	TF4S01GA	105/115/125	6.3CT	20	2,500	GA	2.5
27F86	TF5S01ZZ	105/115	6.3CT	25	2,500	ZZ-1	1.5
27F15	TF4R01EA	105/115/125	12.6CT	2.5	2,000	EA	1.2
27F16	TF4R01EA	105/115/125	24CT	1.5	1,500	EA	1.2
27F19	TF4R01HA	105/115/125	2.5CT	10	2,500	HA	4
27F114	TF5X01ZZ	115†	5.0	1.8	1,500	ZZ-1(d)	.8
			6.3	2.5	4,000		
			6.3	3.2	1,500		
			7.5	.6	1,500		
27F137	TF4S01GB	105/115/125	6.3CT	6††	2,500	GB	2.5
27F103	TF4R01AJ	105/115/125	12.6CT	.8	1,500	AJ	.8
27F20	TF4R01Y	105/115/125	12.6CT	.8	1,500	YY-14	.75
27F104	TF4R01EA	105/115/125	12.6CT	.8	1,500	EA	1.3
27F21	TF4R01EA	57.5/99.7/115/120*	12.6CT	2	1,500	EA	1.25
27F81	TF4R01FA	57.5/99.7/115*	12.6CT	2	1,500	FA	1.75
27F22	TF4R01FA	57.5/99.7/115/120*	26CT	2	2,000	FA	1.9

†† Both windings rated 7 Amps. for industrial application † † Rated 2.5 Amps. for industrial application  
‡ Two units Scott connected provide 26 Volts two phase from 115 Volts 3 - phase, 400 cycle input. † Static Shielded  
(a) Width: 1 5/16; Depth: 1 1/2; Height: 1 7/16; Mtg. Ctrs: 1.687 x 1 1/2  
(d) Width: 2 1/2; Depth: 2 1/8; Height: 2 1/4; Max; Mtg. Ctrs: 1.687 x 1 1/2

Power Transformers

PRIMARY 117 VOLTS 50/60 CYCLES

These units have been designed and built to all requirements of MIL-T-27B for their specific class of operation. All EB, GA, GB, etc. case sizes are identical to MIL-T-27B specifications. These units meet the requirements for circuit and mobile communications, control equipment, guided missile controls as well as marine equipment and any field where maximum sealing quality is a prime requisite.

Part No.	MIL-T-27B Classification	Primary Voltage	RECTIFIER			FILAMENT	Case Size	Wt. Lbs.	
			Volts	Amps.	Volts				
27R18	TF4RX03EA	120	100	127	6.3CT	1.6	FA	2	
27R149	DF5RX03ZZ	125(o)	100	127	6.3	2	DHF-1	2.3	
*27R150	TF4RX02Y	220(o)	1.15A				YY-53	9.6	
27R17	TF4RX03HA	*800/1,600/220(o)	5†	1.25	.2	6.3	.6	HA	4
27R127	TF4RX03KA	3,200	3	1.25	.2	1.25	.2	KA	8
*27R105	TF4RX03LA	30-0-30	2.5A	3.9A	3.9A	6.3	1.5	LA	9
*27R104	TF4RX03LA	40-0-40	2A	2.9A	2.9A	6.3	1.5	LA	9.6
*27R103	TF4RX03LA	50-0-50	1.6A	2.6A	2.6A	6.3	1.5	LA	10.5
27R13	TF4RX03HA	100-0-100	85†	140		6.3	3.5	HA	4
*27R102	TF4RX03LA	100-0-100	800	1,34A		6.3	2	LA	10
27R14	TF4RX03IA	108-0-108	180†	285		6.3	5	JA	5
27R15	TF4RX03KA	232-0-232	150	240		6.3	5	KA	8
27R16	TF4RX03MB	142-0-142	235	380		6.3	1.5	MB	14
*27R101	TF4RX03LA	150-0-150	600	1A		6.3	2.5	LA	10.5
27R85	TF4RX03JA	180-0-180	150	5.0	3	6.3			



SECTION 5600

**Power** PRIMARY 117 VOLTS 50/60 CYCLES

Part No.	MIL-T-27B Classification	P L A T E			S U P P L Y			RECTIFIER		FILAMENT		Case Size	Wt. Lbs.
		Volts	M	A D C T	Volts	Amps.	Volts	Amps.	Volts	Amps.			
27R24	TF4RX03JB	300-0-300	50	63.5	5.0	2	6.3CT	2.5	JB	5			
27R27	TF4RX03JA	300-0-300	20		5.0	2	6.3CT	3	JA	5.5			
27R42	TF4RX03YY	300-0-300	60		5.0	2	6.3CT	3	YY-22	5.3			
27R04	TF4RX03JA	300-0-300	100†	165	5.0	2	6.3CT	5	JA	5.5			
		335-0-335	90	150									
27R87	TF4RX03B002	325-0-325	70		6.3/5	2	6.3	4	JB	5			
27R88	TF4RX03K006	325-0-325	150	5.0	3		6.3	5	KB	7.23			
27R69	TF4RX03JA	330-0-330	85		5.0	2	6.3CT	3	JA	6			
27R44	TF4RX03YY	330-0-330	85		5.0	2	6.3CT	3	YY-23	6			
27R68	TF4RX03JA	335-0-335	70		5.0	2	6.3CT	3	JA	4.5			
27R43	TF4RX03YY	335-0-335	70		5.0	2	6.3CT	3	YY-22	4.5			
27R134	TF4RX03KB	340-0-340	75		5.0	3		6.3	KB	2.6			
27R70	TF4RX03KA	345-0-345	105		5.0	2	6.3CT	3.5	KA	6.5			
27R145	TF4RX03YY	350-0-350	40		5.0	2	6.3CT	2.5	YY-24	5.5			
27R45	TF4RX03YY	345-0-345	105		5.0	2	6.3CT	3.5	YY-24	6.5			
27R75	TF4RX03HA	350-0-350	55		5.0	2	6.3CT	2	HA	3.23			
27R50	TF4RX03YY	350-0-350	55		5.0	2	6.3CT	2	YY-28	3.23			
27R61	TF4RX03JA	350-0-350	70		5.0	3	6.3CT	3	JA	4.2			
27R147	TF4RX03YY	350-0-350	70		5.0	3	6.3CT	3	YY-24	4.2			
27R25	TF4RX03KA	350-0-350	120	153	5.0	3	6.3CT	5	KA	8.75			
27R05	TF4RX03KA	350-0-350	135†	225	5.0	3	6.3CT	1	KA	8.75			
		375-0-375	125	205									
27R26	TF4RX03LA	350-70-350	150	190	5.0	3	6.3CT	6	LA	10.75			
27R06	TF4RX03LA	350-0-350	190	300	5.0	3	6.3CT	6	LA	10.75			
		375-0-375	200	254	5.0	6	6.3CT	1.5					
27R28	TF4RX03HA	350-0-350	200	254	5.0	6	6.3CT	6	HA	15			
		400-0-400											
		0-70											
		Bias											
27R30	TF4RX03YY	350-0-350	300	380	5.0	6	6.3CT	8	YY-45	21.75			
		400-0-400											
		0-70											
27R07	TF4RX03MB	360-0-360	180†	310	5.0	3	6.3CT	2	MB	14			
		385-0-385	160										
27R08	TF4RX03NB	365-0-365	275	420	5.0	4	6.3CT	2	NB	15			
		400-0-400	250	400									
27R72	TF4RX03MA	370-0-370	150		5.0	3	6.3CT	4	MA	11.5			
27R47	TF4RX03YY	370-0-370	150		5.0	3	6.3CT	4	YY-42	11.5			
27R82	TF4RX03NA	370-0-370	300	5.0	6		6.3CT	5	NA	17.5			
		550-0-550											
		75-0-75											
		Bias											
27R57	TF4RX03YY	370-0-370	300	5.0	6		6.3CT	5	YY-43	17.5			
		550-0-550											
		75-0-75											
		Bias											
27R71	TF4RX03KA	375-0-375	120		5.0	3	6.3CT	4	KA	9.5			
27R46	TF4RX03YY	375-0-375	120		5.0	3	6.3CT	4	YY-24	9.5			
27R73	TF4RX03MA	385-0-385	200		5.0	3	6.3CT	4.5	MA	12			
		400-0-400											
27R48	TF4RX03YY	385-0-385	200		5.0	3	6.3CT	4.5	YY-42	12			
27R27	TF4RX03LA	400-0-400	150	190	6.3/5	4	6.3CT	4	LA	11			
27R150	TF4RX03YY	400-0-400	175		5	3	6.3CT	2.5	YY-55	11.7			
27R89	TF4RX03B003	400-0-400	175	5.0	3		6.3	8	LB	10			
27R29	TF4RX03WA	400-0-400	200	254	6.3/5	4	6.3CT	5	WA	14.5			
		500-0-500											
27R74	TF4RX03NA	400-0-400	250	5.0	6		6.3CT	7	NA	15			
		80-0-80											
27R49	TF4RX03YA	400-0-400	170		5.0	2	6.3CT	7	YA	43			
		80-0-80											
27R162	TF4S02JA	400(6)	170										
27R76	TF4RX03JA	425-0-425	70		5.0	2	6.3CT	3	JA	4.5			
27R51	TF4RX03YY	425-0-425	70		5.0	2	6.3CT	3	YY-42	4.5			
27R135	TF4RX03LB	425-0-425	80		5.0	3	6.3	5	LB	8			
27R159	TF4RX03NA	425-0-425	310				6.3CT	5.5	NA	17.5			
27R09	TF4RX03CA	425-0-425	280	430	5.0	6	6.3	8	CA	21			
		525-0-525	260	400									
27R77	TF4RX03JA	440-0-440	85	5.0	2		6.3CT	3	JA	6			
27R52	TF4RX03YY	440-0-440	85	5.0	2		6.3CT	3	YY-33	6			
27R53	TF4RX03MA	440-0-440	165		5.0	3	6.3	7.5	MA	12			
		6.3											
27R58	TF4RX03YY	440-0-440	165		5.0	3	6.3	7.5	YY-42	12			
		6.3											
27R131	TF4RX03KB	450-0-450	100		5.0	3		6.3	KB	4			
27R78	TF4RX03KA	450-0-450	105	5.0	2		6.3CT	3.5	KA	6.5			
27R53	TF4RX03YY	450-0-450	105	5.0	2		6.3CT	3.5	YY-34	6.5			
27R163	TF4RX03NB	450-0-450	180		5.0	2	6.3	6	NB	15			
27R84	TF4RX03MA	450-0-450	200		5.0	2	6.3	4	MA	12			
		6.3											
27R59	TF4RX03YY	450-0-450	200		5.0	2	6.3	4	YY-42	12			
		6.3											
27R10	TF4RX03KA	450-0-450	200		5.0	3	6.3CT	5	KA	6.5			
		500-0-500	190										
27R90	TF4RX03B004	450-0-450	250		5.0	4	6.3	8	MB	13			
27R11	TF4RX03MB	450-0-450	265	5.0	4		6.3	6	MB	13			
		525-0-525	240										
27R132	TF4RX03HB	500-0-500	55		5.0CT	3		6.3	HB	3.8			
27R79	TF4RX03KA	500-0-500	120	5.0	3		6.3CT	4	KA	9.5			
27R54	TF4RX03YY	500-0-500	120	5.0	3		6.3CT	4	YY-24	9.5			
27R12	TF4RX03CA	500-0-500	300	5.0	6		6.3CT	8	CA	21			
		600-0-600	265										
27R80	TF4RX03MA	510-0-510	150	5.0	3		6.3CT	4	MA	11.5			
		6.3CT											
27R55	TF4RX03YY	510-0-510	150	5.0	3		6.3CT	4	YY-42	11.5			
		6.3CT											
27R81	TF4RX03MA	520-0-520	200	5.0	3		6.3CT	4.5	MA	12.5			
		6.3CT											
27R56	TF4RX03YY	520-0-520	200	5.0	3		6.3CT	4.5	YY-42	12.5			
		6.3CT											
27R133	TF4RX03GA	600-0-600	15		5.0CT	3			GA	2.2			
27R152	TF4RX02JA	1,350†	25										
27R158	TF4RX03YY	1,050†	10										
		625†	5										
27R161	TF4RX03EB	1,550†	1.5										
27R148	TF4RX03YY	2,900†	30										

**Power** PRIMARY 105/115/125 VOLTS 380-1,000 CYCLES

Part No.	MIL-T-27B Classification	P L A T E			S U P P L Y			RECTIFIER		FILAMENT		Case Size	Wt. Lbs.
		Volts	M	A D C T	Volts	Amps.	Volts	Amps.	Volts	Amps.			
27R35	TF4RX03JA	225-0-225	200	254	6.3/5	4	6.3CT	6	JA	5.5			
27R31	TF4RX03AJ	238-0-238	20	25.4			6.3CT	1.5	AJ	.75			
27R62	TF4RX03EB	250-0-250	40				6.3CT	2	EB	1.5			
		6.3											
27R106	TF4S03GB	255-0-255	40		5.0	2	6.3CT	2	GB	1.5			
27R94	TF4S03FA	270-0-270	35		5.0	2	6						

**Line Isolation Transformers**

50/60 CYCLES

Part No.	MIL-T-278 Classification	Primary Voltage	Secondary Voltage	VA Output	Case Size	Wt. Lbs.
27V20	TF4RX01Y	440	220	25	YY-29	2
27V44	TF4RX01JB	115/230	105/115/125	50	JB	4.7
27V23	TF4RX01KB	115	115	115	KB	6
27V45	TF4RX01KA	115/230	105/115/125	125	KA	9.25
27V46	TF4RX01NB	115/230	105/115/125	250	NB	17.25
27V24	TF45X01YY	115	115	600	YY-47	27
27V78	TF4RX01YY	115/230	106/110/120/126	650	YY-77	13.9
27V21	TF4RX01ZZ	115/230	115/230†	670	ZZ-2	21
27V29	TF45X01YY	115	115*	1,000	YY-47A	25
27V19	TF4RX01YY	440	115*	1,000	YY-47	40
AUTOFORMER						
27V22	TF4RX01YY	105/115/125	25/35/45/65/75/85/95/105/115/125	2,000	TSV	20

† Secondary windings may be used independently to supply two isolated 115 Volt windings of 2.9 Amps. each  
\* Static Shielded

**Multi Shielded-Line Isolation**

50/60 CYCLES

These Multi-shielded line isolation transformers have been specifically designed for critical circuitry where minimum coupling capacity is imperative and battery-type isolation is desired. 27V47, 27V48, 27V49 are vacuum potted with epoxy resin in standard MIL-T-278 cases and have less than .03 MMFED capacity coupling between windings. Other units in YY cases have coupling capacitance of less than .1 MMFED. 27V43 is for 400 cycle operation only.

Part No.	MIL-T-278 Classification	Primary Voltage	Secondary Voltage	VA Output		Case Size	Wt. Lbs.
				Military	Industrial		
27V47	TF2RX01GA	115	115	25	30	GA	3
27V50	TF4RX01YY	115	115	50	60	YY-73	5.5
27V43	TF4RX01YY	115 @ 400 CFS	115	80	100	YY-73	5.5
27V48	TF2RX01KA	115	115	140	140	KA	8.5
27V51	TF4RX01YY	115	115	120	150	YY-74	13
27V52	TF4RX01YY	115	115	160	200	YY-75	15.5
27V49	TF2RX01NB	115	115	300	360	NB	20
27V53	TF4RX01YY	115	115	400	480	YY-76	35

**Signaling and Power Circuit Transformers**

50/60 CYCLES

Part No.	MIL-T-278 Classification	Primary Voltage	Secondary Voltage	VA Output	Case Size	Wt. Lbs.
27V31	TF4RX01AJ	115	6	7.2	AJ	75
27V75	TF2RX01ZZ	115/230	12	48	OHV	7
27V28	TF4RX01JB	115	6, 8, 10, 12, 14	50	JB	5
			26	250	MB	13

**Low Voltage Rectifier Transformers**

400 CYCLES

These units have been designed and built for 400 cycle power supply applications. Full Wave, Bridge, Rectifier, and Filament circuitry values are specified. All units meet MIL-T-278, Grade 4, Class R specifications.

Part No.	MIL-T-278 Classification	Primary Volts	Secondary		Approx. DC Volts Res. or Ind. Load	Case Size	Wt. Lbs.	
			Volts	Amps				
27V36	TF4RX02AH	115	6.3CT	.6	1.9	3 B	.37	
27V37	TF4RX02YY	115	2.85	.045	1.5	3	.1	
27V85	TF4RX02EA	105/115/125	18.5CT	1	7	14	EA	1.5
			18.5CT	3	7	14	FA	2
27V35	TF4RX02EA	105/115/125	26CT	1.5	10.7	21.5	EA	1.5
27V14	TF4RX02EA	105/115/125	26CT	3	10.7	31.5	FA	2
27V33	TF4X02FF	105/115/125	30CT	5	12.5	25	FF	1.75
27V87	TF4R02GA	105/115/125	35CT	3	14.5	29	GA	3.1
27V16	TF4RX02AJ	105/115/125	48CT	2	17	34	AJ	.75
27V92	TF4RX02AH	115	59CT	25	21.5	43	AH	.37
27V15	TF4RX02YY	115	60CT	.003	26	52	NSV-28	.1
27V14	TF4RX02AH	115	65CT	1.0	28.4	56.8	AH	.37
27V88	TF4RX02FA	105/115/125	70CT	1	30	60	FA	2
27V13	TF4RX02FA	105/115/125	80CT	9	35.2	70.4	FA	2
27V77	TF4RX02YJ	115	122CT	.04	53	106	RSV	.2
27V62	TF4RX02AJ	115	6	1.2			AJ	.75
			53	4				
27V83	TF4RX02FA	115	6	3			FA	2
			to 53	1				
27V84	TF4RX02HA	115	6	7.5			HA	3
			to 53	2.5				

**Line Isolation Transformers**

380 TO 1,500 CYCLES

These units have been designed and built to MIL-T-278, Grade 4, Class R specifications. Applicable to communications, lighting, and equipment systems requiring isolation. All units are static shielded.

Part No.	MIL-T-278 Classification	Primary Voltage	Secondary Voltage	VA Output	Case Size	Wt. Lbs.
27V42	TF4RX01YY	115	115CT†	2	NSV-2	.1
27V54	TF4RX01EA	115	115	40	EA	1.5
27V41	TF4RX01EB	115	115CT†	40	EB	1.5
27V55	TF4RX01FA	115	115	80	FA	2
27V40	TF4RX01GA	115	115CT†	150	GA	3.1
27V56	TF4RX01GA	115	115	160	GA	3.1
27V42	TF4RX01JA	115	115	300	JA	6.25
27V39	TF4RX01JA	105/115/125	115CT†	300	JA	6.25
27V38	TF4RX01KA	105/115/125	115CT†	300	KA	8.75
27V58	TF4RX01KA	105/115/125	115	305	KA	8.75
A27V43	TF4RX01YY	115	115	80†	YY-73	5.5

† May be used for Full Wave Bridge or Full Wave Center top applications  
‡ 100 VA output for industrial applications  
▲ Multi-shielded; Less than .1 MMFED coupling between windings.

**Step Down Transformers**

THREE PHASE - 400 CYCLES

These transformers are designed primarily for airborne communication and control equipment. 27V17 and 27V18 are YY connected 400 cycle, three-phase, Primary - 115 volts per phase. 27V80 is delta-delta connected, Primary - 200 volts per phase.

Part No.	MIL-T-278 Classification	Primary Voltage	Secondary Voltage	VA Output	Case Size	Wt. Lbs.
27V17	TF4RX01HA	115	28.5	140	HA	3
27V18	TF4RX01YY	115	28.5	140	YY-28	3
27V80	TF45Y01JA	200	115	500	JA	6

**Chopper Input Transformers**

STATIC SHIELDED

Part No.	Impedance In Ohms		Primary Inductance	DC Resistance		Turns Ratio	Case Type	Wt. In Oz.
	Primary	Secondary		Primary	Secondary			
GEO 68	10,000CT or 2,500	640,000CT	120 h.	370	21,000	1:8	3A	5.25
GEO 69	20,000CT	12,500CT	1,200 h.	4,000	1,300	4:1	3A	5.25
GEO 70	50,000CT	800,000CT	1,000 h.	2,200	19,000	1:4	4A	7.75
GEO 71*	30,000CT	800,000CT	1,000 h.	2,200	19,000	1:4	6A	11.5
GEO 72	40,000CT or 10,000CT	1,000CT	1,000 h.	4,400	1,600	6:32:1	3A	5.25
GEO 73	40,000CT or 10,000CT	1,000CT	800 h.	3,200	2,200	2:1	3A	5.25

**Input**

ALL UNITS HAVE HUMBUCKING CORE AND COIL CONSTRUCTION

Part No.	Impedance In Ohms		Primary Inductance	DC Resistance		Turns Ratio	Case Type	Wt. In Oz.
	Primary	Secondary		Primary	Secondary			
GEO 1	5003-333-233-2003-125*	157,000CT	8.7 h.	50	10,400	1:17.7	3	5.25
GEO 74*	67-55-50-17*	157,000CT	8.7 h.	50	10,400	1:17.7	4A	8
GEO 2*	5003-333-233-2003-125*	157,000 or 39,250	8.7 h.	50	10,400	1:17.7	5	11.5
GEO 3	603-44-303-25-15*-7.5*-51-1.25	157,000CT	9 h.	9	10,400	1:51	4	5.25
GEO 75*	603-44-303-25-15*-7.5*-51-1.25	157,000CT	9 h.	9	10,400	1:51	4A	8
GEO 4*	603-44-303-25-15*-7.5*-51-1.25	157,000CT or 39,250	9 h.	9	10,400	1:51	5	11.5
GEO 5	1,0003-666-466-4003-250-135-100*-34*	137,000 or 34,250*	55 h.	225	15,500	1:11.75	4	7.75
GEO 76*	1,0003-666-466-4003-250-135-100*-34*	137,000 or 34,250*	55 h.	225	15,500	1:11.75	6A	11.5
GEO 6	5003-333-233-2003-125*-67-55-50-17*	315,000 or 78,250*	11.5 h.	58	16,200	1:25	4	7.75
GEO 7*	5003-333-233-2003-125*-67-55-50-17*	315,000 or 78,250*	11.5 h.	58	16,200	1:25	6	11.5
GEO 8	5003-333-233-2003-125*-67-55-50-17*	712,000 or 178,000*	8 h.	72	20,000	1:37.7	4	7.75
GEO 9*	5003-333-233-2003-125*-67-55-50-17*	712,000 or 178,000*	8 h.	72	20,000	1:37.7	6	11.5
GEO 10	5003 or 125*	50,000CT	10 h.	150	20,000	1:10	3	5.25
GEO 11	5003-333-233-2003-125*-67-55-50-17*	450,000CT	6.8 h.	54	12,500	1:30	3	5.25
GEO 77*	5003-333-233-2003-125*-67-55-50-17*	145,000CT Bal.	8.3 h.	120	10,000	1:17	4A	10
GEO 12*	5003CT	200,000CT	12 h.	80	9,800	1:20	6	11.5
GEO 13*	5003 or 125*	50,000CT	10 h.	200	36,000	1:10	4	7.75
GEO 14*	2003 or 50*	442,000CT	4 h.	17	26,000	1:47	4	8

**Input**

MINIATURE AND SUB MINIATURE ALL UNITS HAVE HUMBUCKING CORE AND COIL CONSTRUCTION

Part No.	Impedance In Ohms		Primary Inductance	DC Resistance		Turns Ratio	Case Type	Wt. In Oz.
	Primary	Secondary		Primary	Secondary			
GEO 15	5003-333-233-2003-125*-67-55-50-17*	145,000CT	8.8 h.	100	10,000	1:17	2	3.2
GEO 16	5003-125*	145,000CT	8.8 h.	100	10,000	1:17	2	3.2
GEO 17	5003-125*	145,000CT	3 h.	106	5,860	1:17	1	1.5
GEO 18	5003-125*	60,000CT	7 h.	140	5,600	1:11	1	1.5
GEO 19	5003-125*	36,000CT	10.5 h.	320	5,300	1:8.5	1	1.5
GEO 20	5003-125*	114,000CT	5.2 h.	210	6,200	1:15.1	1	1.5
GEO 21	5003-125*	157,000CT	8	100	9,500	1:17.7	2	3.2

**Interstage**

ALL UNITS HAVE HUMBUCKING CORE AND COIL CONSTRUCTION

Part No.	Impedance In Ohms		Primary Inductance	DC Resistance		Turns Ratio	Case Type	Wt. In Oz.
	Primary	Secondary		Primary	Secondary			
GEO 22	10,000 or 2,500*	100,000 or 25,000*	350 h.	1,540	10,000	1:3.16	3	5.25
GEO 23*	10,000 or 2,500*	100,000 or 25,000*	350 h.	1,540	10,000	1:3.16	5	11.5
GEO 24	10,000 or 2,500*	100,000 or 25,000*	725 h.	2,100	14,000	1:3	4	7.75
GEO 25*	10,000 or 2,500*	100,000 or 25,000*	725 h.	2,100	14,000	1:3	6	11.5
GEO 26	10,000 or 2,500*	483,000 or 120,700*	230 h.	1,100	17,000	1:7	4	7.75
GEO 84	10,000 or 2,500*	483,000 or 120,700*	230 h.	1,100	17,000	1:7	6A	11.5
GEO 27*	10,000 or 2,500*	22,500 or 5,625*	135 h.	1,600	2,350	1:1.5	2	2.75
GEO 83*	10,000 or 2,500*	22,500 or 5,625*	135 h.	1,600	2,350	1:1.5	4A	

**Output** FOR AUTOMATIC VOLUME CONTROL CIRCUITS ALL UNITS HAVE HUMBUCKING CORE AND COIL CONSTRUCTION

Part No.	Impedance In Ohms		Primary Inductance	DC Resistance		Turns Ratio	Case Type	Wt. In. Oz.
	Primary	Secondary		Primary	Secondary			
GEO 49	16,000 or 4,000*	256,000 or 64,000* and 1500 or 37.5*	500 h.	1,900	16,000 32	1:4 10:3:1	4	7.25
GEO 50	15,000	240,000 CT and 35 or 32*	300 h.	2,100	12,000	1:4	3	5.25
GEO 51	10,000 or 2,500*	10,000 or 10,000	150 h.	700	1,220 1,440	10:2:1 11:1:1	2	3.2
GEO 52	15,000	240,000 CT and 1403 or 35*	200 h.	2,000	9,800 55	1:4 10:3:1	2	3.2
GEO 53	15,000 CT	240,000 CT and 245 CT	200 h.	2,000	9,800 20.6:1	1:4 20.6:1	2	3.2
GEO 54	20,000 CT	240,000 CT and 245 CT	230 h.	2,400	11,000 5 28.8:1	1:4 20.6:1	2	3.2
GEO 55	15,000 CT	240,000 CT and 35*	230 h.	2,400	11,000 10	1:4 20.6:1	2	3.2

**Reactor** ALL UNITS HAVE HUMBUCKING CORE AND COIL CONSTRUCTION

Part No.	Inductance In Henrys	D.C. Resistance In Ohms		Low Percentage Taps	Mtg. Type	Wt. In. Oz.
		Primary	Secondary			
GEO 56	1,050-8001-5501-4001-2801	13,000	None	None	3	5.5
GEO 57	1,000-250*	10,000	4 - 2-1/2%	2 - 5%	4	8.25
GEO 58	500-125*	6,000	4 - 3%	3 - 5%	4	8.25
GEO 59	100 to 53	750	6 - 1/2 h. Taps From one end	3	5.5	
GEO 60	1,050-8001-5501-4001-2801-2451-1531-1331-801-691-451	11,500	None	None	2A	3.4
GEO 61	1,000-250*	13,000	4 - 2%	2A	3	3.4
GEO 62	500-125*	10,500	4 - 2-1/2%	2A	3	3.4
GEO 63	1,090-770-551-385-275	12,000	None	2	3	3.2
GEO 64	1,000	12,000	2 - 2%	2	1.5	
GEO 65	300	12,000	2 - 2%	2	1.5	
GEO 66	300	5,450	2 - 2%	1	1.5	
GEO 67	100	11,950	2 - 2%	1	1.5	

**Low Frequency Transistor Transformers**

Part No.	Impedance In Ohms		Primary Inductance	DC Resistance		Turns Ratio	Freq. Resp. @ 5 MAACP ±3dB	Case Type
	Primary	Secondary		Primary	Secondary			
GEO 78	1,000 or 250*	1253 or 31*	60 h.	500	44	2.83:1	1 to 20,000	2
GEO 79*	1,000 or 250*	1253 or 31*	60 h.	500	44	2.83:1	7 to 20,000	4B
GEO 80	1,000 or 250*	1,000 or 250*	65 h.	540	230	1:1	20 to 7,000	3A
GEO 81	1,000 CT	2,500 CT	20 h.	350	1,800	1:1.58	70 to 8,000	2

\* Balanced, two windings.  
 \* Balanced, parallel windings.  
 \* Single coil construction.  
 \* Constructed with 5 interleaved Cores

**Band Pass Filters**

These units have been designed and built to meet MIL-F-18327B for their specific class of operation and are high performance units applicable to production or laboratory communication and electronic equipment. They have been carefully adjusted to the specified frequencies with proper input and output impedances.  
 Output impedances indicated "To Grid" should be terminated in an open grid circuit. Tapped outputs - marked (\*) - provide for either 10,000 ohm transistor termination or high impedance grid termination.

Part No.	MIL-F-18327B Classification	Center Frequency (Fc)	Approximately 2 dB Attenuation (In Cycles)	Attenuation At Fc/2 & 2 Fc	Impedance		Case Type	Mtg. Centers	Dimensions		
					Input	Output			H	W	D
27C386	FR4RX22YY	30	29-31	40dB	10,000	To Grid	YY	3/4 x 1/4	2/2	1/3/16	1/16/16
27C387	FR4RX22YY	50	48.5-51.6	40dB	10,000	To Grid	YY	3/4 x 1/4	2/2	1/3/16	1/16/16
27C310	FR4RX22YY	60	58-62	40dB	10,000	10,000	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C300	FR4RX22YY	60	58-62	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C388	FR4RX22YY	90	87.4-92.8	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C314	FR4RX22YY	100	97-103	40dB	10,000	To Grid	YY	3/4 x 1/4	1/3/8	1/3/16	1/16/16
27C301	FR4RX22YY	90	87-93	40dB	10,000	To Grid	YY	3/4 x 1/4	1/3/8	1/3/16	1/16/16
27C315	FR4RX22YY	120	116.5-123.6	40dB	10,000	10,000	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C302	FR4RX22YY	120	116.5-123.6	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C389	FR4RX22YY	150	143.5-154.5	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C390	FR4RX22YY	200	194-206	40dB	10,000	To Grid	YY	3/4 x 1/4	1/3/8	1/3/16	1/16/16
27C391	FR4RX22YY	240	233-247	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C349	FR4RX22AF	400	388-412	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C303	FR4RX22YY	400	389-412	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C335	FR4RX22YY	400	389-412	40dB	500/600	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C395	FR4RX22AF	440	427-458	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C396	FR4RX22AF	500	485-515	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C304	FR4RX22YY	500	485-515	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C397	FR4RX22AF	600	580-620	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C350	FR4RX22AF	750	728-772	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C398	FR4RX22AF	800	778-822	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C398	FR4RX22AF	800	778-822	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C392	FR4RX22YY	800	778-822	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C351	FR4RX22AF	800	778-822	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C306	FR4RX22YY	1,000	970-1,030	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C399	FR4RX22AF	1,000	970-1,030	40dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C307	FR4RX22AF	2,000	1,940-2,060	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C399	FR4RX22AF	2,000	1,940-2,060	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C352	FR4RX22AF	1,500	1,455-1,545	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C307	FR4RX22YY	1,500	1,455-1,545	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C400	FR4RX22AF	1,600	1,550-1,650	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C311	FR4RX22AF	2,000	1,940-2,060	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C308	FR4RX22YY	2,000	1,940-2,060	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C401	FR4RX22AF	2,500	2,420-2,570	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C402	FR4RX22AF	3,000	2,910-3,090	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C389	FR4RX22YY	3,000	2,910-3,090	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C403	FR4RX22AF	3,200	3,100-3,290	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C404	FR4RX22AF	4,000	3,880-4,120	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C310	FR4RX22YY	4,000	3,880-4,120	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C405	FR4RX22AF	4,800	4,650-4,940	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C406	FR4RX22AF	5,000	4,850-5,150	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C407	FR4RX22AF	6,000	5,750-6,050	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C408	FR4RX22AF	8,000	7,760-8,250	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C354	FR4RX22AF	10,000	9,500-10,500	36dB	10,000	To Grid	AF	9/16	1/8	3/4	3/4
27C312	FR4RX22YY	10,000	9,500-10,500	40dB	10,000	To Grid	YY	3/4 x 1/4	1/5/8	1/3/16	1/16/16
27C394	FR4RX22AF	50,000	47,500-52,500	40dB	500	500	AF	9/16	1/8	3/4	3/4
27C394	FR4RX22AF	100,000	95,000-105,000	40dB	500	500	AF	9/16	1/8	3/4	3/4

**Telemetering Band Pass Filters**

These units have been designed and built to meet MIL-F-18327B for their specific class of operation. The Steel Jacket filters in YY case are designed with 4 pin plug-in type terminals and the Molded (ZZ) units have straight wire terminals. Twenty-three separate channels are provided with a choice of either Molded or Steel jacket case types.

Part No.	MIL-F-18327B Classification	Center Frequency (Fc)	3dB Bandwidth % of Fc	Approx. Attenuation Fc/2 & 2Fc	Impedance		Case Type	Mtg. Centers	Dimensions		
					Input	Output			H	W	D
27C363	FR4RX22YY	400	± 7.6%	45dB	100,000	100,000	YY	4 Pin Plug	1/3/8	3/4	3/4
27C421	FR4RX22ZZ	400	± 7.6%	45dB	100,000	100,000	YY	4 Leads	1/2	3/4	3/4
27C364	FR4RX22YY	500	± 7.6%	45dB	100,000	100,000	YY	4 Pin Plug	1/3/8	3/4	3/4
27C423	FR4RX22ZZ	500	± 7.6%	45dB	100,000	100,000	YY	4 Leads	1/2	3/4	3/4
27C425	FR4RX22YY	730	± 7.6%	45dB	100,000	100,000	YY	4 Pin Plug	1/3/8	3/4	3/4
27C422	FR4RX22ZZ	730	± 7.6%	45dB	100,000	100,000	YY	4 Leads	1/2	3/4	3/4
27C366	FR4RX22YY	950	± 7.6%	45dB	100,000	100,000	YY	4 Pin Plug	1/3/8	3/4	3/4

\* Output tapped for 10,000 ohm transistor or high impedance grid.

**Telemetering Band Pass Filters** (Continued)

Part No.	MIL-F-18327B Classification	Center Frequency (Fc)	3dB Bandwidth % of Fc	Approx. Attenuation Fc/2 & 2Fc	Impedance		Case Type	Mtg. Centers	Dimensions		
					Input	Output			H	W	D
27C424	FR4RX22ZZ	950	± 7.6%	45dB	100,000	100,000	YY	4 Leads	1/2	3/4	3/4
27C367	FR4RX22YY	1,300	± 7.6%	45dB	100,000	100,000	YY	4 Pin Plug	1/3/8	3/4	3/4
27C425	FR4RX22ZZ	1,300	± 7.6%	45dB	100,000	100,000	YY	4 Leads	1/2	3/4	3/4
27C368	FR4RX22YY	1,700	± 7.6%	45dB	100,000	100,000	YY	4 Pin Plug	1/3/8	3/4	3/4
27C426	FR4RX22ZZ	1,700	± 7.6%	45dB	100,000	100,000	YY	4 Leads	1/2	3/4	3/4
27C369	FR4RX22YY	2,300	± 7.6%	45dB	100,000	100,000	YY	4 Pin Plug	1/3/8	3/4	3/4
27C427	FR4RX22ZZ	2,300	± 7.6%	45dB	100,000	100,000	YY	4 Leads	1/2	3/4	3/4
27C370	FR4RX22YY</										

**MIL-T-27B Low Frequency High Q Inductors**

These inductors have been designed and built to meet the requirements of MIL-T-27B for their specific class of operation. Constructed with only the highest grade materials these units have magnetic shielding as well as humbucking construction. Designed to a Q of 40 or more on frequencies ranging from 50 to 300 cycles. Split winding termination permits series, parallel or series center tap connections, such as might be used in filters, tuned circuits or coupling inductors.

Part No.	MIL-T-27B Classification	Series Inductance ±2%	Series Resistance ±20%	Parallel Inductance ±2%	Parallel Resistance ±20%	Mfg. Type
27C225	TF48X20YY	1	5	.25	1.25	NSV-5
27C500	TF45X20YY	2	21	.5	5.25	NSV-3
27C226	TF48X20YY	10	50	2.5	12.5	NSV-5
27C501	TF45X20YY	16	143	4	36	NSV-3
27C227	TF48X20YY	20	82	5	20	NSV-5
27C503	TF45X20YY	40	365	10	91	NSV-3
27C228	TF48X20YY	200	820	50	205	NSV-5
27C502	TF45X20YY	300	5,700	75	937	NSV-3
27C229	TF48X20YY	400	2,100	100	525	NSV-5
27C504	TF45X20YY	600	5,700	150	1,425	NSV-3
27C300	TF48X20YY	2,500	13,100	625	3,275	NSV-5

**Pulse Transformers** DESIGNED AND BUILT TO MEET MIL-T-21038B

**Tube Type**

When used as coupling transformers this group of units have the following additional parameters: Overshoot ranges from 5 to 30 micro-seconds with the lower overshoot at the higher pulse widths. Output voltages of 15 to 25 volts may be expected with a normal drop of 10 to 15%. Blocking oscillator overshoots are held to less than 2%.

Part No.	MIL-T-21038B Classification	Turns Ratio	COUPLING CIRCUIT			BLOCKING OSC.			Case Type	Dimensions	
			Pulse Width (Micro-Sec.)	Rise Time (Micro-Sec.)	Impedance (In/Out)	Pulse Width (Micro-Sec.)	Rise Time (Micro-Sec.)	Case Type		Diag.	H
PUL 10	TP75X110AZ	1:1:1	.05	.010	250/250	.05	.020	M6	3/8	3/8	
PUL 11	TP75X110AZ	1:1:1	.10	.010	250/250	.10	.020	M6	3/8	3/8	
PUL 12	TP75X110AZ	1:1:1	.20	.010	500/500	.20	.025	M6	9/16	9/16	
PUL 13	TP75X110AZ	1:1:1	.50	.010	500/500	.50	.030	M6	9/16	9/16	
PUL 14	TP75X110AZ	1:1:1	1.0	.02	500/500	1.0	.042	M6	9/16	9/16	
PUL 15	TP75X110AZ	5:3:1	7.0	.22	2,800/1,000	7.0	.31	M6	3/8	5/8	
PUL 16	TP75X110AZ	5:3:1	2.0	.062	1,400/500	2.0	.075	M6	9/16	9/16	
PUL 17	TP75X110AZ	1:1:1	3.0	.071	500/500	3.0	.11	M6	9/16	9/16	
PUL 18	TP75X110AZ	1:1:1	5.0	.15	1,000/1,000	5.0	.14	M6	9/16	9/16	
PUL 19	TP75X110AZ	1:1:1	7.0	.27	1,000/1,000	7.0	.27	M6	5/8	5/8	
PUL 20	TP75X110AZ	1:1:1	10.0	.40	1,000/1,000	10.0	.40	M6	5/8	5/8	
PUL 21	TP75X110AZ	1:1:1	20.0	.62	1,000/1,000	20.0	1.20	M6	5/8	5/8	
PUL 22	TP75X110AZ	5:3:1	20.0	.71	2,800/1,000	20.0	1.70	M6	5/8	5/8	
PUL 23	TP75X110AZ	1:1:1	25.0	1.52	1,000/1,000	25.0	2.1	M6	3/8	5/8	

**Pulse Transformers** DESIGNED AND BUILT TO MEET MIL-T-21038B

**Transistor Type**

Additional parameters for these transistor type pulse transformers are: 0% overshoot in almost all of these units. Output voltage of approximately 8 volts may be expected with no drop on units below 5 micro-seconds pulse width and approximately 15% drop on units above 5 micro-seconds pulse width. The average blocking will be 20-30% when connected in the transistor blocking oscillator circuit.

Part No.	MIL-T-21038B Classification	Turns Ratio	COUPLING CIRCUIT			BLOCKING OSC.			Case Type	Dimensions	
			Pulse Width (Micro-Sec.)	Rise Time (Micro-Sec.)	Impedance (In/Out)	Pulse Width (Micro-Sec.)	Rise Time (Micro-Sec.)	Case Type		Diag.	H
PUL 24	TP68X4410CZ	4:4:1	.05	.017	50/50	.05	.02	RAV-7	5/16	3/16	
PUL 27	TP75X4410AZ	4:4:1	.05	.013	30/30	.05	.017	M5	3/8	3/8	
PUL 40	TP68X4410CZ	4:4:1	.10	.024	50/50	.10	.022	RAV-7	5/16	3/16	
PUL 28	TP75X4410AZ	4:4:1	.10	.020	50/50	.10	.016	M5	3/8	3/8	
PUL 48	TP68X4410CZ	5:3:1	.10	.010	145/50	.10	.010	RAV-7	5/16	3/16	
PUL 36	TP75X4410AZ	5:3:1	.10	.021	145/50	.10	.020	M5	3/8	3/8	
PUL 41	TP68X4410CZ	4:4:1	.20	.035	100/100	.20	.033	RAV-7	5/16	3/16	
PUL 29	TP75X4410AZ	5:3:1	1.0	.050	100/100	1.0	.025	M5	3/8	3/8	
PUL 42	TP68X4410CZ	4:4:1	.50	.061	100/100	.50	.052	RAV-7	5/16	3/16	
PUL 30	TP75X4410AZ	4:4:1	3.0	.046	100/100	3.0	.029	M5	3/8	3/8	
PUL 43	TP68X4410CZ	4:4:1	1.0	.150	100/100	1.0	.09	RAV-7	5/16	3/16	
PUL 31	TP75X4410AZ	4:4:1	1.0	.09	100/100	1.0	.035	M5	3/8	3/8	
PUL 49	TP68X4410CZ	5:3:1	1.0	.050	285/100	1.0	.022	RAV-7	5/16	3/16	
PUL 37	TP75X4410AZ	5:3:1	1.0	.070	285/100	1.0	.042	M5	3/8	3/8	
PUL 44	TP68X4410CZ	4:4:1	2.0	.181	100/100	2.0	.110	RAV-7	5/16	3/16	
PUL 32	TP75X4410AZ	4:4:1	2.0	.142	100/100	2.0	.070	M5	3/8	3/8	
PUL 45	TP68X4410CZ	4:4:1	3.0	.210	100/100	3.0	.210	RAV-7	5/16	3/16	
PUL 33	TP75X4410AZ	4:4:1	3.0	.180	100/100	3.0	.088	M5	3/8	3/8	
PUL 46	TP68X4410CZ	4:4:1	5.0	.230	200/200	5.0	.31	RAV-7	5/16	3/16	
PUL 34	TP75X4410AZ	4:4:1	5.0	.210	200/200	5.0	.095	M5	3/8	3/8	
PUL 47	TP68X4410CZ	5:3:1	5.0	.091	565/200	5.0	.051	RAV-7	5/16	3/16	
PUL 35	TP75X4410AZ	4:4:1	10.0	.41	200/200	10.0	.31	RAV-7	5/16	3/16	
PUL 38	TP75X4410AZ	4:4:1	10.0	.41	200/200	10.0	.141	M5	3/8	3/8	

**Pulse Transformers** DESIGNED AND BUILT TO MEET MIL-T-21038B

Part No.	MIL-T-21038B Classification	Turns Ratio	Pulse Width (Micro-Sec.)	Rise Time (Micro-Sec.)	Impedance (In/Out)	Case Type	Dimensions	
							Diameter	H
PUL 63	TP68X1100BZ	1:1	.07	.030	200/200	RSV-1C	1/2	3/4
PUL 64	TP68X1100CZ	1:1	.07	.030	200/200	RSV-1E	3/4	3/4
PUL 65	TP68X1100DZ	1:1	.07	.030	200/200	M7B	3/8	3/8
PUL 60	TP68X2100BZ	2:1	.07	.030	250/200	RSV-1C	1/2	3/4
PUL 61	TP68X2100CZ	2:1	.07	.030	200/200	RSV-1E	1/2	3/4
PUL 62	TP68X2100DZ	2:1	.07	.030	200/200	M7B	3/4	3/4
PUL 57	TP68X3100BZ	3:1	.08	.030	100/100	RSV-1C	3/4	3/4
PUL 58	TP68X3100CZ	3:1	.08	.030	100/100	RSV-1E	3/4	3/4
PUL 59	TP68X3100DZ	3:1	.08	.030	100/100	M7B	1/2	3/4
PUL 54	TP68X4100BZ	4:1	.08	.030	100/100	RSV-1C	1/2	3/4
PUL 55	TP68X4100CZ	4:1	.08	.030	100/100	RSV-1E	3/4	3/4
PUL 56	TP68X4100DZ	4:1	.08	.030	100/100	M7B	1/2	3/4
PUL 51	TP68X5100BZ	5:1	.08	.030	100/100	RSV-1C	1/2	3/4
PUL 52	TP68X5100CZ	5:1	.08	.030	100/100	RSV-1E	3/4	3/4
PUL 53	TP68X5100DZ	5:1	.08	.030	100/100	M7B	3/2	3/8
PUL 23	TP75X3100CZ	5:3:1	1.0	.020	700/250	M6	3/8	3/8
PUL 72	TP62X1100CZ	1:1	3 to 1.5	.020	250/250	ZZ-4	1 1/8 x 1 1/8	1 1/8
PUL 73	TP62X1100DZ	1:1	3 to 1.5	.020	250/250	YY-79	1 1/8 x 9/32	1 1/8
PUL 74	TP62X1100E	1:1	3 to 1.5	.020	250/250	AF	See Page 35	
PUL 67	TP62X1110BZ	1:1:1	.36 to .54	.020	2,000/2,000	RSV-1D	1 1/2	1 1/2
PUL 68	TP62X1110CZ	1:1:1	.36 to .54	.020	2,000/2,000	RSV-1B	1 1/2	1 1/2
PUL 66	TP62X1100BZ	1:1	.54 to .66	.020	500/500	RSV-1C	13/32	3/8
PUL 79	TP62X1110CZ	4:4:1	.6 to 5	.020	150/150	ZZ-4	1 1/16 x 11/16	1 1/8
PUL 78	TP62X1110BZ	1:1:1	.6 to 5	.020	150/150	YY-79	1 1/8 x 9/32	1 1/8
PUL 75	TP62X1110DZ	1:1:1	.6 to 5	.020	175/175	ZZ-4	1 1/16 x 11/16	1 1/8
PUL 76	TP62X1110E	1:1:1	.6 to 5	.020	175/175	YY-79	1 1/8 x 9/32	1 1/8
PUL 77	TP62X1110CZ	1:1:1	.6 to 5	.020	175/175	ZZ-4	See Page 35	
PUL 69	TP62X1110DZ	1:1	.6 to 5	.020	250/250	ZZ-4	1 1/16 x 11/16	1 1/8
PUL 70	TP62X1100BZ	1:1	.6 to 5	.020	250/250	YY-79	1 1/8 x 9/32	1 1/8
PUL 71	TP62X1100CZ	1:1	.6 to 5	.020	250/250	AG	See Page 35	

**TRANSFORMERS**

**Output**

**Single Plate to Line or Voice Coil**

Part No.	Primary Impedance	Secondary Impedance	Primary MADC	Watts	*Mfg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
							H	W	D	
24541	900	4/8	120	10	BAH	2 13/16	2	3 1/8	2 3/4	1.2
24578	1,500	2 1/4	55	5	BAH	2	1 3/8	2 3/8	1 3/4	.5
22545	1,500	3.5	55	5	BAH	2	1 3/8	2 3/8	1 3/4	.5
22520	2,000	3.5	50	3	BAV	1 1/2	1 7/16	1 7/8	1 1/4	.2
24553	2,000	3.5	50	3	BAH	1 3/4	1 3/16	2 1/8	1	.2
24550	2,000	3.5	55	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
24550A	2,000	3.5	55	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
24552	2,000	3.5	50	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
24595	2,000 or 6,000	3.5	60	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
22546	2,300	3.5	35	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
26559	2,500	3.5	50	13	BAV	1 1/2	1 3/8	1 7/8	1 1/4	.2
24587	2,500	3.5	50	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
22534	2,500	3.5	60	6	BAH	2	1 3/8	2 3/8	1 1/4	.5
22515	2,500	4/8/16/500	80	8	GGV	1 3/4 x 1 5/8	2 3/4	2 3/8	2 7/8	6.75
24588	2,500	4/8/16	60	10	BAH	2 13/16	2	3 1/8	1 3/4	1
22522	3,000	3.5	50	3	BAH	1 3/4	1 3/16	2 1/16	1 1/4	.21
24589	3,000	3.5	50	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
22538	3,000	3.5	70	8	BAH	2 13/16	2	3 1/8	1 3/4	1
26550	3,000	3.5	60	8	BAH	2 3/8	1 5/8	2 7/8	1 5/8	

Push Pull Plates to Line or Voice Coil

Part No.	Impedance		Balanced Pri. MADC	Watts	Mfg. Type	Mfg. Centers	Dimensions			Wt. Lbs.
	Primary	Secondary					H	W	D	
255102A	3,000/5,000CT	1.2/2.5/7.5/10/15/20		20	UTV	2 11/16 x 3 11/16	4 3/16	4 7/16	3 1/2	7.5
255101A	3,000/5,000CT	1.2/2.5/7.5/10/15/20/30/50/125/150/200-250/333/500-600		20	UTV	2 11/16 x 3 11/16	4 3/16	4 7/16	3 1/2	7.5
25566	3,000/6,000/9,000/10,000CT	2/8/15/500		30	KTH-D	3 5/8 x 3 1/8	2 15/16	4 1/8	2 5/16	3
22510	3,300CT	4/8/16	130	50	GGV	3 x 3 3/8	4 5/8	4	4 1/2	8
25551	3,300CT	4/8/16	90	50	NTV	3 9/16 x 3 9/16	5 1/2	4 1/2	4 1/2	11
22578	3,300CT	3.5/8/16/250/500	180	60	GGV	2 1/2 x 2 1/2	3 7/8	3 1/4	3 3/4	5.25
245142	3,300CT	4/8/16/25V/70V	140	60	GGV	3 3/4 x 3 1/4	4 5/16	3 1/2	4 3/8	8
24557	3,300CT	4/8/250/500	125	75	GGV	3 x 2 13/16	4 3/4	4	3 7/8	8
25529	3,400CT	3.5	90	18	BAV	2 13/16	2 3/4	3 1/8	2	1.6
255124	3,500CT	4/8/16/125/150/500	130	50	GGV	2 1/2 x 2 1/2	3 3/4	3 1/8	2 5/8	4
245141	3,800CT	4/8/16/25V/70V	130	50	GGV	2 3/4 x 3 1/4	4 5/16	3 1/2	4 3/8	8
255109C	3,800/4,500CT	1.2/2.5/7.5/10/15/20/30/50/125-150/200-250/333/500-600		55	UTV	4 3/16 x 5 1/32	4 11/16	5 13/16	5	15
25588	3,800/4,500/5,000CT	2/8/15/500		55	KTH-E	3 7/8 x 2 7/16	3 3/4	3 1/8	4 1/2	4.5
745134	4,000CT	4-8	80	5	BAH	2	1 3/8	2 3/8	1 1/4	4.5
22521	4,000CT	8/16/32	75	7.5	BAH	3 1/8	2 1/4	3 3/4	2	2
22512	4,000CT	4/8/16	200	65	GGV	2 3/4 x 3 1/2	4 1/4	3 5/8	4 5/8	8
25580	4,000CT	4/8/16	100	65	FTV	2 1/2 x 4 3/4	5 5/16	5 1/4	4 1/2	10
25513	4,000CT	4/8/16	210	70	GGV	3 x 3 7/8	4 5/8	4	5	12.5
25565	4,000/5,000/10,000CT	2/8/15/500		12	KTH-B	2 7/8 x 2 3/8	2 5/16	3 3/8	1 15/16	1.5
25576	4,000CT	8/16	65	5	TAV	2 1/2 x 4 3/4	5 5/16	5 1/4	4 9/16	12
24577	4,400CT	4/8/16/250/500	70	30	GGV	2 x 2 1/4	3 5/8	3	3 1/8	3.5
22511	4,500CT	4/8/16	140	50	GGV	2 3/4 x 3 1/2	4 1/4	3 5/8	4 5/8	8.25
22514	4,500CT	4/8/16	120	100	GGV	3 1/2 x 4 1/8	5 5/16	4 9/16	5 1/8	14.7
25558	5,000/7,000CT	3.5/8	40	10	BAH	2 13/16	2	3 1/8	1 3/4	2.5
24517	5,000CT	4/8/16	80	15	BAV	2 3/8	2 3/8	2 7/8	1 3/4	1
22554	5,000CT	4/8/16	60	18	BAV	2 13/16	2 3/4	3 1/8	2	1.6
25577	5,000CT	4/8/16	75	18	TAV	1 1/2 x 2 3/8	1 1/2	2 11/16	2 1 1/2	1.75
24543	5,000CT	2 1/4/8/16/250/500	70	20	BHH	3 1/8	2 3/16	3 11/16	2 1/4	5
22504	5,000CT	4/8/16	80	20	GGV	2 x 2 7/8	3 1/8	2 3/4	3 5/8	4.3
22505	5,000CT	125/500/500	80	20	GGV	2 1/2 x 2 7/8	3 1/8	2 3/4	3 5/8	4.3
25535	5,000CT	4/8/16/150/600	120	20	IAV	2 3/4 x 3 7/8	4 1/4	3 5/8	4 7/16	6.5
22540	5,000CT	4/8/16/150/600	120	20	ITV	2 3/4 x 3 7/8	4 1/4	3 5/8	4 7/16	6.5
25550	5,000CT	3 5/8/16/250/500	80	25	GGV	1 3/4 x 2	3 1/8	2 5/8	2 5/8	2.5
25550	5,000CT	4/8/16/70V	90	25	NTV	3 x 3	4 1/2	3 3/4	3 3/4	6.5
22571	5,000CT	4/8/16/250/500	80	30	GGV	2 x 2 1/4	3 5/8	3	3 3/8	3.7
22563	5,000CT	8/16	150	50	GGV	2 3/4 x 3 1/6	4 5/16	3 1/2	4 1/4	6
25575	5,000CT	3 1/6/70V	100	100	TAV	3 1/2 x 5 3/8	6 1/16	5 7/8	5 5/16	16
22547	6,000/7,000CT	3.5	35	5	BAH	2	1 3/8	2 3/8	1 1/4	.5
25547	6,000/10,000CT	1.5/3.5/8/10/20/50	20	20	NTV	2 3/8 x 2 3/8	3 3/4	3	3	3.5
25520	6,000CT	4/8/16	20	20	UTV	2 x 2 3/4	3 1/2	2 13/16	3 9/16	5
22598	6,000CT	3.5/8/16/250/500	60	20	WTV	2 3/4 x 2 3/8	4 3/4	3	3 3/8	7.25
22597	6,000CT	4/8/16/250/500	40	35	GGV	2 x 1 3/4	3 1/8	2 5/8	2 5/8	2.5
225108*	6,000CT	4/8/16	40	30	GGH	3 1/4 x 2 7/16	3 7/16	3 3/4	3 5/8	6
245119	6,000CT	4/8/16/500	100	30	GGV	2 1/4 x 2	3 5/8	3	3 1/8	3.5
25537	6,000CT	4/8/16/150	250	30	TAV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	9
25542	6,000CT	4/8/16/150/600	250	30	TTV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	9
255107*	6,000/70,000CT	1.2/2.5/5/7.5/10/15/20/30/50/125-150/200-250/333/500-600		20	UTV	2 11/16 x 3 11/16	4 7/16	4 7/16	3 1/2	7.5
255106*	6,000/10,000CT	1.2/2.5/5/7.5/10/15/20/30/50/125-150/200-250/333/500-600		20	UTV	2 11/16 x 3 11/16	4 7/16	4 7/16	2 1/2	7.5
22568	6,500CT	3.5/8/16/250/500	70	25	GGV	1 3/4 x 2	3 1/8	2 5/8	2 5/8	2.5
22539	6,600CT	4/8/16	100	20	TAV	2 3/4 x 3 7/8	4 1/4	3 9/16	4 7/16	4
22507	6,600CT	4/8/16	80	25	GGV	2 1/4 x 3 1/8	3 1/2	3	4 1/4	5.75
245138	6,600CT	4/8/16/25V/70V	80	25	GGV	2 x 2	3 1/8	2 5/8	3	3
22509	6,600CT	4/8/16	80	30	GGV	2 1/4 x 2 5/8	3 1/2	3	3 3/4	5
245139	6,600CT	4/8/16/25V/70V	80	30	GGV	2 1/4 x 2 1/4	3 1/2	3	3 3/8	4.5
245140	6,600CT	4/8/16/25V/70V	100	35	GGV	2 1/4 x 2 5/8	3 1/2	3	3 3/4	5
24557	6,600CT	4/8/16/250/500	150	35	GGV	2 1/2 x 2 3/16	4	3 1/4	3 1/8	4
24518	6,600CT	4/8/16/250/500	150	35	GGV	2 1/2 x 2 3/16	4	3 1/4	3 3/8	4.8
22567	7,000CT	3.5/8/16/500	125	50	GGV	2 3/4 x 3 1/16	4 5/16	3 9/16	4 1/4	6
24558	7,000CT	3.5/8/16/500	65	25	GGV	2 x 1 11/16	3 3/16	2 5/8	2 5/8	2.7
22542	7,400CT	4/8/16	100	40	GGV	2 1/2 x 2 7/8	3 7/8	3 1/4	3 7/8	6
22543	7,400CT	4/8/16	100	40	TAV	2 3/4 x 3 7/8	4 1/4	4 7/16	3 5/8	7.5
22526	7,500CT	8/20	120	20	UTV	2 5/8 x 2 1/8	4 7/8	3 1/16	3 9/16	5.75
22582	7,500CT	600CT/250CT	0	1	RTV	2 1/8 x 2 1/8	3 1/32	2 15/16	DIA.	.3
22565	7,600CT	4/8/16	100	25	GGV	2 3/4 x 3 1/16	4 5/16	3 9/16	4 1/4	6
245143	8,000CT	8	80	10	BAH	2 13/16	2	3 1/8	2 1/8	1
22556	8,000CT	3.5/8	35	10	BAH	2 13/16	2	3 1/8	1 3/4	1.2
22501	8,000CT	4/8/16	40	15	GGV	2 x 2 5/8	3 1/8	2 5/8	3 3/8	3.8
22502	8,000CT	125/250/500	40	15	GGV	2 x 2 5/8	3 1/8	2 5/8	3 3/8	3.8
22503	8,000CT	4/8/16	50	15	GGV	2 x 2 5/8	3 1/8	2 5/8	3 3/8	3.8

▲ SPECIFIC APPLICATIONS:  
 255101 PP 6A57G, 6L6, 300B, 6080  
 255102 7027, 7355, 7581, 7868.  
 255103

● SPECIFIC APPLICATIONS:  
 255104 PP 6L6, 6V6, 6AQ5, 6BQ5,  
 255105 12BA5, 58B1, 7189A.  
 255106 PP 6146, 6159, 6L6  
 Fixed Or Self Bias

\* SPECIFIC APPLICATIONS:  
 255106 PP TRIODE, XT66, 6A57G, 6L6,  
 807, 1A14, 58B1, 6080

□ SPECIFIC APPLICATIONS:  
 255108 PP 6146, 6159, 6L6  
 Fixed Or Self Bias

■ Has cathode feedback winding  
 ■ Has extra 10% feedback winding  
 ■ Split Center Tap

Push Pull Plates to Line or Voice Coil

Part No.	Impedance		Balanced Pri. MADC	Watts	Mfg. Type	Mfg. Centers	Dimensions			Wt. Lbs.
	Primary	Secondary					H	W	D	
22557	8,000CT	3.5	55	18	BAV	2 13/16	2 3/4	3 1/8	2	1.6
245144	8,000CT	8	80	18	BAH	3 1/8	2 1/4	3 11/16	2 1/8	1.5
22558	8,000CT	8	55	18	GGV	1 3/4 x 1 5/8	2 13/16	2 3/8	2 3/8	1.75
245145	8,000CT	8/25V/70V	100	20	BAH	3 1/8	2 1/4	3 11/16	3 1/8	1.5
255105*	8,000CT	1.2/2.5/5/7.5/10/15/20/30		20	UTV	2 11/16 x 3 11/16	4 3/16	4 7/16	3 1/2	7.5
255104*	8,000CT	1.2/2.5/5/7.5/10/15/20/30/50/125-150/200-250/333/500-600		20	UTV	2 11/16 x 3 11/16	4 3/16	4 7/16	3 1/2	7.5
25545	8,000CT	1.5/3.5/8/16/200/500		20	NTV	2 3/8 x 2 3/8	3 3/4	3	3	3.5
245137	8,000CT	4/8/16/25V/70V	80	25	GGV	2 x 2	3 1/8	2 5/8	3	3
22506	8,000CT	3.5/8/16/250/500	60	25	GGV	1 3/4 x 2	3 1/8	2 5/8	2 5/8	2.5
245120	9,000CT	3.5	40	5	BCH	1 13/16 x 1 11/16	2	2 3/8	1 5/8	1
255106*	9,000CT	1.2/2.5/5/7.5/10/15/20/30/50/125-150/200-250/333/500-600		30	UTV	4 3/16 x 5 1/32	4 11/16	5 13/16	5	15
25549	9,000CT	1.5/3.5/8/16/200/500		30	NTV	3 x 3	4 1/2	3 3/4	3 3/4	6.5
245121	9,000CT	4/8/15/500	150	35	GGV	2 1/2 x 2 3/16	4	3 1/4	3 3/8	4.8
22549	9,000CT	4/8/16	100	30	GGV	2 3/4 x 3 1/16	4 5/16	3 9/16	4 1/4	6
25544	9,500CT	3.5/8/16	38	12	BAV	1 7/8 x 2	3	3 1/2	2 5/8	2.5
245136	9,500CT	4/8/16/25V/70V	40	15	GGV	2 x 1 3/4	3 1/8	2 5/8	2 5/8	2.5
22549	9,500CT	4/8/16	100	15	TAV	2 3/4 x 3 7/8	4 1/4	3 9/16	4 7/16	4
22584	9,500CT	3.5/8/16	50	20	WTV	2 3/4 x 2 3/8	4 3/8	3	3 3/8	7.25
22593	10,000CT	4/8	750	MMW	1/4	3/8	HOLE	1 3/		

SECTION 5600

Line To Voice Coil

Part No.	Impedance		Output Watts	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
	Primary	Secondary				H	W	D	
TR 141	600	3.2	.025	M1		.312	.426	.400	.1
TR 133	500CT	3.2	.050	MAH		7/16	1/2	7/16	1.0x
TR 49	500CT	70	.050	MAH		7/16	1/2	7/16	1.0x
25577	500CT	4.6**	.100	BCH	3/8 Hole	1 3/4	1 3/8 Dia.	1 3/8	.35
TR 27	500CT	3.2	.150	BCH	13/16	11/16	3/4	9/16	.05
TR 337	500CT	3.2	.150	PCT	Printed Ckt.	11/16	3/4	9/16	.05
TR 18	500CT	16.4	.150	BCH	13/16	11/16	3/4	9/16	.05
TR 128	500CT	16.4	.150	PCT	Printed Ckt.	11/16	3/4	9/16	.05
TR 102	500CT	4.6**	.150	BCH	13/16	11/16	3/4	9/16	.05
TR 303	600CT	4.8/16	.150	BCH	13/16	11/16	3/4	9/16	.05
TR 220	500CT	3.2	.250	MAH		19/32	7/8	43/64	.03
TR 110	48CT(50)	4.8/16	.300	BAH	1 3/8	3/4	1 5/8	13/16	.1
TR 8	48CT(50)	4.8	.300	BAH	1 3/8	3/4	1 5/8	13/16	.1
TR 114	500CT	4.8/16	.300	BAH	1 3/8	3/4	1 5/8	13/16	.1
TR 18	500CT	16.4	.300	BAH	1 3/8	3/4	1 5/8	13/16	.1
255100	30	3.5	1	BAH	1 3/4	1 3/16	2 1/16	1 1/4	.21
25555	125/500**	4.6**	1	NTV	1 5/16 x 1 5/16	2 1/4	1 5/8	1 5/8	.5
25583	400-500CT	3.2-4	1	TTV	3 1/8 x 2	3 1/2	3 1/2	2 25/32	1.5
25596	500CT	4.6**	1	UTV	1 5/32 x 1 5/32	2	1 1/2	1 1/2	.5
255118	25-50	3.5/6-8	3	BHH	2	1 3/8	2 3/8	1 1/2	.5
225102	500	4.8/16	3	BAH	2	1 3/8	2 3/8	1 3/8	.45
225126	500	3.2	3	BHH	2	1 3/8	2 3/8	1 5/8	.25
225101	50/500	3.2	4	BAH	1 3/4	1 1/2	2 1/16	1 1/4	.21
TR 61	48CT(50)	3.2/8/16	5	BHV	1 3/4	3/4	2	1 1/4	.5
225125	50/250/500	6/8	5	BHH	2 13/16	2	3 1/16	2 1/8	.25
225103	500	4.8	5	BAH	2	1 3/8	2 3/8	1 3/8	.45
24575	500CT	4.8/16	40	BHV	2	1 3/8	2 3/8	1 1/4	.45
225181	45-50	3.5/8	8	BAH	2 3/8	1 5/8	2 7/8	1 3/8	.45
225127	45-50	6/16	8	BAH	2 13/16	2	3 1/16	2 1/8	.45
22580	500/600	3.2/8/16	8	BHH	3 1/8	2 1/4	3 3/4	2 1/4	1.5
22584	500/1,000/1,500/2,000	3.2/8/16	8	BAH	2 13/16	2	3 1/8	1 3/4	1.1
24546	500/1,000/1,500/2,000	3.2/8/16	8	BHH	2 13/16	2	3 1/8	1 3/4	1.1
22585	500/1,000/1,500/2,000	3.2/8/16	8	BAH	2 3/8	1 5/8	2 7/8	1 5/8	1.2
225104	31/62.5/125/250	4.8/16	10	BHV	2 13/16	2 23/32	3 1/8	2 1/8	1.8
24566	500/1,000/1,500/2,000	3.5/8	10	BAH	2	2 1/2	1 5/8	1 3/4	1.5
225109	500/1,000/1,500/2,000	4.8/16	10	BHV	2 3/8	2 5/16	2 15/16	1 3/4	1.5
25564	2,500/4,000/7,000/10,000	2.8/15/500	10	KTH	2 7/8 x 2 3/8	2 5/16	3 3/8	1 15/16	1.5
24547	500/1,000/1,500/2,000	3.5/8	12	BHV	2 3/8	2 5/16	2 7/8	1 7/8	1.2
24510	2,500/4,000/7,000/10,000	2.8/15	12	BAV	2 3/8	2 5/16	2 7/8	1 3/4	1.1
25527	2 to 75	15	15	NTV	2 3/32 x 2 3/32	3 1/4	2 7/8	2 1/4	2.5
24545	500	4.8/8/15	15	BHV	2 3/8	2 5/16	2 7/8	1 3/4	1.2
22583	500/1,000/1,500/2,000	3.5/8/16	15	BAH	3 1/8	2 1/4	3 3/4	2	2.25
22582	500/2,000/4,000	2.4/8/15	15	KTH	2 7/8 x 2 3/8	2 5/16	3 3/8	1 15/16	1.2
24587	500/1,000/1,500/2,000	3.5/8	18	BHV	2 3/8	2 5/16	2 7/8	1 1/2	1.2
22582	500/1,000/1,500/2,000	3.5/8	25	BHV	3 5/8	2 1/2	4 1/8	2 5/8	2.25
24500	500/1,000/1,500	4.8/16	25	BHV	3 1/8	3 1/8	3 5/8	2 1/4	2.5
225105	500**	2.4/8/16/32	30	LHV	2 1/4 x 3 1/8	3 7/16	1 13/16	4 1/16	5
25563	500/2,000/4,000	2.4/8/15	30	KTH	3 5/8 x 3 1/8	2 15/16	4 1/8	2 5/16	3
25558	500	2.8/8/15	40	NTV	2 3/8	2 1/2	3 3/4	2 3/4	6.5
25579	4	.017/.05/1/.25/.5/1	50	KTV	2 3/8 x 3 1/8	4 7/16	4 7/16	3 3/16	6
25599	500	2 to 75	75	NTV	3 9/16 x 3 9/16	5 1/2	4 1/2	4 1/2	11

VOICE COIL TO MULTIPLE VOICE COIL

Line To Multiple Voice Coil

Part No.	Impedance In Ohms		Output Watts	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
	Primary	Secondary				H	W	D	
24576	Prim. 500/1,000/1,500/2,000/2,500/3,000	Sec. .06 to 8 ohms when pri. is 500 ohms	15	BHV	2 3/8	2 5/16	2 7/8	2	1.4
24562	Prim. 500/1,000/1,500/2,000/2,500/3,000	Sec. .06 to 8 ohms when pri. is 500 ohms	25	BAV	3	3	3 3/8	2 1/8	2

Tube To Line Or Line Mixer

Part No.	Impedance		Primary MADC	Output Watts	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
	Primary	Secondary					H	W	D	
25501	15,000	50/200-250/500-600	0	.006	RTV	11/16	1 3/16	7/8 Dia.		
25507	15,000	50/200-250/500-600	0	.006	Plug-In	8 Pin Octal	1 15/32	1 3/32 Dia.		
25502	15,000	50/200-250/500-600	4	.006	RTV	11/16	1 3/16	7/8 Dia.		
25508	15,000	50/200-250/500-600	4	.006	Plug In	8 Pin Octal	1 15/32	1 3/32 Dia.		
25503	30,000CT	50/200-250/500-600	0*	.006	RTV	11/16	1 3/16	7/8 Dia.		
25509	30,000CT	50/200-250/500-600	0*	.006	Plug-In	8 Pin Octal	1 15/32	1 3/32 Dia.		
22553	8,000 to 15,000CT*	50/125/200/250/333/500	1	.031	BAV	2 1/4	2 5/8	1 3/4		
25523	15,000	150/600**	70	.031	UTV	1 3/8 x 1 9/16	3 1/8	2 1/16	2 5/16	
25512	15,000**	50/125-150/200-250/333/500-600	0*	.031	UTV	1 5/32 x 1 5/32	2	1 1/2	1 1/2	
25513	15,000	50/125-150/200-250/333/500-600	8	.031	UTV	1 5/32 x 1 5/32	2	1 1/2	1 1/2	
25569	15,000	50/250/500/500-600	5	.1	TAJ	3/8 Hole	1 3/4	1 3/8 Dia.		
25570	15,000CT	150/600**	0	.1	TAJ	3/8 Hole	1 3/4	1 3/8 Dia.		
25572	15,000CT	150/600**	4	.1	TAJ	3/8 Hole	1 3/4	1 3/8 Dia.		
25515	15,000**	50/125-150/200-250/333/500-600	0	.125	UTV	1 3/8 x 1 13/16	3 1/8	1 15/16	2 3/8	
25517	15,000**	250/333/500-600	8	.160	UTV	1 3/8 x 1 13/16	3 1/8	1 15/16	2 3/8	
25596	15,000	50/125-150/200-250/333/500-600	8	.12	UTV1	1 15/16 x 2 5/16	3 1/4	3 1/8	2 5/8	
25573	25,000**	50/125-150/200-250/333/500-600	3	.2	TAJ	3/8 Hole	29/32	1 1/2	1 1/4	
25516	30,000CT	50/125-150/200-250/333/500-600	2	.2	UTV	1 3/8 x 1 13/16	3 1/8	1 15/16	2 5/8	
25597	15,000	50/125-150/200-250/333/500-600	0	.2	UTV1	1 5/16 x 2 7/16	3 1/4	3 1/8	2 5/8	
25532	15,000	50/150/200/250/333/500	0	.5	UTV-1	1 1/8 x 1 1/8	2	1 1/2	1 1/2	
25534	15,000	50/150/200/250/333/500	0	.5	UTV-1	1 1/8 x 1 1/8	2	1 1/2	1 1/2	
25533	30,000CT	50/150/200/250/333/500	5	.5	UTV-1	1 1/8 x 1 1/8	2	1 1/2	1 1/2	
25521	15,000	50/200/500	8	1	NTV	1 5/16 x 1 5/16	2 1/4	1 3/8	1 5/8	
225172	20,000CT	500	10	1W	BHH	2 13/16	2	3 1/16	2 1/8	
25524	20,000CT	150/600**	0	1	TAJ	3/8 Hole	1 3/4	1 3/8 Dia.		
25522	30,000CT	50/200/500	0	1.5	NSV	1 5/16 x 1 5/16	2 1/4	1 5/8	1 5/8	
24580	10,000	50 end 2,000	2	BAH	2	1 3/8	2 3/8	1 3/8	.3	
25561	15,000	200/500	10	2	KTH	2 7/8 x 2 3/8	2 5/16	3 3/8	1 15/16	
25575	7,500	125/500**	30	3	BAH	1 3/8	2 1/8	1 3/8 Dia.		
25560	20,000CT	125/500**	10	3	RTV	1 3/8 x 1 3/8	2	1 3/8 Dia.		
22592	20,000CT	125/200/500	10	3	RTV	1 3/8 x 1 3/8	2	1 5/8 Dia.		
22599	15,000	500CT	10	4	BGH	2 3/8	1 5/8	2 7/8	1 5/8	
22519	10,000	50 end 2,000	5	5	BAH	2 3/8	1 5/8	2 7/8	1 1/2	
25525	10,000CT	8/15/600**	60	5	UTV	1 7/8 x 2	4 1/4	2 5/8	3 7/16	
245114	10,000CT	50/250/600	20	5	BAH	2 3/8	1 5/8	2 13/16	1 1/2	
22591	20,000CT	125/200/500	25	8	BAH	2 13/16	2	3 1/8	2	
22590	20,000CT	125/200/500	25	8	FGV	2 3/8	2 3/8	2 7/8	1 7/8	
24527	2,500 to 7,000	500	60	10	BHV	2 13/16	2 11/16	3 1/8	2 1/4	
25577	5,000/10,000/20,000CT	50/125/333/500	15	10	BHH	2 13/16	2	3 1/8	1 3/4	
24525	8,000	500	55	10	BHV	2 13/16	2 3/4	3 1/8	2 1/4	
25518	5,000/9,400CT	50/150-200/250/333/500-600	15	15	UTV	2 x 2 3/4	3 1/2	2 13/16	1 9/16	
22502	8,000CT	125/250/500	40	15	GGV	2 x 2 5/8	3 1/8	2 5/8	3 3/8	
22516	2,500/4,000/5,000	500	60	20	BHV	3 1/8	3 1/8	3 5/8	2 1/4	
22505	5,000CT	125/250/500	80	20	GGV	2 x 2 7/8	3 1/8	2 5/8	3 5/8	
22576	3,000 to 14,000CT	500	50	50	BHH	3 5/8	2 1/2	4 1/2	12 3/8	

10KC to 50KC Output Transformers

Frequency Range 10KC to 50KC

Ideally suited for Ultrasonic generators and amplifiers for use in military and industrial cleaning, degreasing, mixing and other ultrasonic applications.

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SECTION 5600

70.7V Line To Voice Coil

Part No.	Power Steps In Watts	Impedance In Ohms		Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
		Primary	Secondary			H	W	D	
24501	2 1 .5 .25 .125	2,500/5,000/10,000	4/8	BHV	1 3/4	1 5/8	2	1 1/4	.5
245100	5 2.5/1.25/.625/.3125	2,000/4,000/8,000	4/8	BAV	1 3/4	1 5/8	2	1 3/8	.5
24524	5 2.5/1.25/.625/.3125	1,000/2,000/4,000/8,000/16,000	4/8	BHH	2	1 3/8	2 3/8	1 1/4	.5
245125	5 4/3/2/1	1,000/1,250/1,667	8/16	BHH	2	1 3/8	2 3/8	1 3/8	.5
24521	8 4/2/1/1/5	625/1,250/2,500/5,000/10,000	4/8/16	BHV	2	2	2 1/2	1 5/8	1
24523	10 5/2.5/1.25	500/1,000/2,000/4,000	4/8/16	BAV	2	2	2 3/8	1 1/2	.6
245101	10 5/2.5/1.25	500/1,000/2,000/4,000	4/8/16	BAV	2	2	2 3/8	1 1/2	.6
245124	10 9/8/7/6	500/555/625/715/833	8/16	BHV	2	2	2 3/8	1 5/8	.7
245102	10 5/2.5/1.25	500/1,000/2,000/4,000	4/8/16	BAV	2	2	2 3/8	1 1/2	.6
245103	10 5/2.5/1.25	500/1,000/2,000/4,000	4/8/16	BAV	2 13/16	2 3/4	3 1/8	2 1/8	1.8
245104	10 5/2.5/1.25	500/1,000/2,000/4,000	4/8/16	TTV	1 3/4 x 2 1/16	3 5/16	3	2 1/2	2.25
245123	15 12/13/12/11	333/357/384/417/455	8/16	BHV	2 3/8	2 5/16	2 7/8	1 3/4	1.2
24522	16 8/4/2/1/5	312.5/625/1,250/2,500/5,000/10,000	4/8/16	BHV	2 13/16	2 5/8	3 1/8	2 1/4	1.75
245270	16 8/4/2/1/5 WITH WATTAGE SELECTION SWITCH	2,500/5,000/10,000	4/8/16	TAV Special	3 1/8 x 2	3 9/16	3 1/2	2 7/8	2.5
245107	20 10/5/2.5	250/500/1,000/2,000	4/8/16	BAV	2 3/8	2 3/8	2 7/8	1 3/4	1
245105	20 10/5/2.5	250/500/1,000/2,000	4/8/16	BAV	2 3/8	2 3/8	2 7/8	1 3/4	1
245108	20 10/5/2.5	250/500/1,000/2,000	4/8/16	GGV	2 x 2 5/8	3 1/8	2 5/8	3 3/8	4
245106	20 10/5/2.5 WEATHER PROOF AUTOFORMER	250/500/1,000/2,000	4/8/16	TTV	2 3/4 x 3 7/8	4 5/16	3 11/16	4 7/16	6
24502	24 12/6/3/1.5	208/416/832/1,664/2,330	4/8/16	BHV	3 1/8	3 1/16	3 5/8	2	2.5
245148	32 16/8/4/2/1/5 WITH TAP SWITCH	156/312/625/1,250/2,500/5,000/10,000/20,000	4/8/16	Special Plate Mounting To Fit 4 x 4 Junction Box.					7.5

Molded And Plastic Coated Toroid Inductors

These high Q Toroid inductors have the highest inductive stability available to the industry. Each coil has an inductance tolerance of plus or minus 2%. Available in either plastic coated units with leads (TOR 800 and TOR 900 series) or in epoxy molded MIL-1-278 encapsulation (TOR 700 and TOR 7100 and up).

Part No.	Inductance In MH ± 2%	Resistance In Ohms	MADC For 5% Ind. Drop	Typical		Mtg. Type	Dimensions		
				Q @	Center Frequency		Diameter	Height	Hole Dia.
TOR 7257	.6	1.5	91*	100	100KC	IM2	7/16	1/4	
TOR 940	1	1.4	110	120	60KC	TO	5/8	9/32	
TOR 7310	1	1.4	110	120	60KC	IM3	7/8	3/8	.100
TOR 800	1	1.25	150	75	25KC	TO	3/4	3/8	
TOR 750	1	1.5	150	75	25KC	IM	3/4	3/8	.116
TOR 848	1	2.0	270	110	18KC	TO	3/4	3/8	
TOR 748	1	4.0	270	110	18KC	TO	1 1/16	1/2	.144
TOR 875	1	4.0	320	160	10KC	TO	1 1/4	5/8	
TOR 719	1	4.0	320	160	10KC	IM	1 5/16	23/32	.173
TOR 824	1	2.0	680	180	20KC	TO	1 1/4	5/8	
TOR 724	1	2.0	680	180	20KC	IM	1 5/16	23/32	.173
TOR 7258	1.5	4.1	55*	98	100KC	IM2	7/16	1/4	
TOR 941	2	2.5	95*	120	75KC	TO	5/8	9/32	
TOR 7311	2	2.5	95*	120	75KC	IM	7/8	3/8	.100
TOR 801	2	1.7	108	75	25KC	TO	3/4	3/8	
TOR 701	2	1.7	108	75	25KC	IM	3/4	3/8	.116
TOR 849	2	3.8	192	110	18KC	TO	1	3/8	
TOR 719	2	3.8	192	110	18KC	IM	1 1/16	1/2	.144
TOR 876	2	3.68	368	160	20KC	TO	1 1/4	5/8	
TOR 776	2	3.68	368	160	20KC	IM	1 5/16	23/32	.173
TOR 825	2	3.0	480	180	20KC	TO	1 1/4	5/8	
TOR 725	2	3.0	480	180	20KC	IM	1 5/16	23/32	.173
TOR 877	2.5	4.75	45*	90	100KC	IM2	7/16	1/4	
TOR 7249	3	4.1	51*	60	25KC	IM2	7/16	1/4	
TOR 802	3	2.25	87	70	20KC	TO	3/4	3/8	
TOR 702	3	2.25	87	70	20KC	IM	3/4	3/8	.116
TOR 850	3	2.73	157	110	18KC	TO	1	3/8	
TOR 750	3	2.73	157	110	18KC	IM	1 1/16	1/2	.144
TOR 877	3	7.0	300	160	10KC	TO	1 1/4	5/8	
TOR 777	3	7.0	300	160	10KC	IM	1 5/16	23/32	.173
TOR 826	3	6.8	396	160	20KC	TO	1 1/4	5/8	
TOR 726	3	6.8	396	160	20KC	IM	1 5/16	23/32	.173
TOR 823	4	2.6	74	70	20KC	TO	3/4	3/8	
TOR 703	4	2.6	74	70	20KC	IM	3/4	3/8	.116
TOR 851	4	8.5	135	110	18KC	TO	1	3/8	
TOR 751	4	8.5	135	110	18KC	IM	1 1/16	1/2	.144
TOR 878	4	8.2	260	160	10KC	TO	1 1/4	5/8	
TOR 778	4	8.2	260	160	10KC	IM	1 5/16	23/32	.173
TOR 827	4	8.1	342	180	20KC	TO	1 1/4	5/8	
TOR 727	4	8.1	342	180	20KC	IM	1 5/16	23/32	.173
TOR 750	5	5.8	40*	60	22KC	IM2	7/16	1/4	
TOR 942	5	6	40	110	50KC	TO	5/8	9/30	
TOR 7312	5	6	40	110	50KC	IM3	7/8	3/8	.100
TOR 804	5	3.1	68	70	20KC	TO	3/4	3/8	
TOR 704	5	3.1	68	70	20KC	IM	3/4	3/8	.116
TOR 930	5	2.4	80	90	18KC	TO	5/8	9/32	
TOR 784	5	2.4	80	90	18KC	IM3	7/8	3/8	.100
TOR 824	5	1.1	121	110	15KC	TO	1	3/8	
TOR 754	5	1.1	121	110	15KC	IM	1 1/16	1/2	.144
TOR 92	5	1.1	233	160	10KC	TO	1 1/4	5/8	
TOR 879	5	2.9	233	160	10KC	IM	1 5/16	23/32	.173
TOR 828	5	1.1	306	180	22KC	TO	1 1/4	5/8	
TOR 758	5	1.1	306	180	22KC	IM	1 5/16	23/32	.173
TOR 7260	5	1.5	28*	85	75KC	IM2	7/16	1/4	
TOR 805	7	4.5	51*	70	20KC	TO	3/4	3/8	
TOR 705	7	4.5	51*	70	20KC	IM	3/4	3/8	.116
TOR 853	7	1.35	102	105	15KC	TO	1	3/8	
TOR 753	7	1.35	102	105	15KC	IM	1 1/16	1/2	.144
TOR 829	7	1.5	260	175	20KC	TO	1 1/4	5/8	
TOR 729	7	1.5	260	175	20KC	IM	1 5/16	23/32	.173
TOR 880	7	1.05	195	155	10KC	TO	1 1/4	5/8	
TOR 780	7	1.05	195	155	10KC	IM	1 5/16	23/32	.173
TOR 751	8	10.5	30*	60	22KC	IM2	7/16	1/4	
TOR 854	8	7	95*	105	15KC	TO	1	3/8	
TOR 754	8	7	95*	105	15KC	IM	1 1/16	1/2	.144
TOR 81	10	26.5	23*	65	90KC	IM2	7/16	1/4	
TOR 943	10	12	30	110	45KC	TO	5/8	9/32	
TOR 7313	10	12	30	110	45KC	IM3	7/8	3/8	.100
TOR 856	10	6.5	48	70	20KC	TO	3/4	3/8	
TOR 706	10	6.5	48	70	20KC	IM	3/4	3/8	.116
TOR 931	10	5	30	85	10KC	TO	5/8	9/32	
TOR 855	10	5	30	85	10KC	IM	5/8	9/32	.116
TOR 780	10	2.1	86	110	12KC	TO	1	3/8	
TOR 750	10	2.1	86	110	12KC	IM	1 1/16	1/2	.144
TOR 881	10	1.3	165	135	9KC	TO	1 1/4	5/8	
TOR 781	10	1.3	165	135	9KC	IM	1 5/16	23/32	.173
TOR 830	10	2	217	180	19KC	TO	1 1/4	5/8	
TOR 730	10	2	217	180	19KC	IM	1 5/16	23/32	.173
TOR 904	10	92	92	220	8KC	TO	1 15/16	7/8	
TOR 7104	12.5	15.5	24*	60	22KC	IM2	7/16	1/4	
TOR 7252	15	40	18.5*	65	90KC	IM2	7/16	1/4	

Molded And Plastic Coated Toroid Inductors

Part No.	Inductance In MH ± 2%	Resistance In Ohms	MADC For 5% Ind. Drop	Typical Center Frequency	Mtg. Type	Dimensions		
						Diameter	Height	Hole Dia.
TOR 944	15	18	20	110	50KC	TO	5/8	9/32
TOR 7314	15	18	20	110	50KC	IM3	7/8	3/8
TOR 807	15	10	39	70	18KC	TO	3/4	3/8
TOR 707	15	10	39	70	18KC	IM	3/4	3/8
TOR 856	15	8	40	85	15KC	TO	5/8	9/32
TOR 932	15	40	40	40	3KC	IM3	7/8	3/8
TOR 852	15	3.1	70	130	11KC	TO	1 1/4	5/8
TOR 706	15	3.1	70	130	11KC	IM	1 1/16	1/2
TOR 831	15	2.83	177	160	13KC	TO	1 1/4	5/8
TOR 751	15	2.85	177	160	13KC	IM	1 5/16	23/32
TOR 882	15	1.6	134	140	10KC	TO	1 1/4	5/8
TOR 782	15	1.6	134	140	10KC	IM	1 5/16	23/32
TOR 7253	20	25	20.5*	65	30KC	IM2	7/16	1/4
TOR 808	20	11	34	70	20KC</			



SECTION 5600

Molded And Plastic Coated Toroid Inductors

Part No.	Inductance In MH ± %	Resistance In Ohms	MADC For 5% Ind. Drop	Typical			Mtg. Type	Dimensions		Hole Dia.
				Q @	Center Frequency	Q @		Diameter	Height	
TOR 717	200	115	11	68	15KC	TM	3/4	3/8	.116	
TOR 866	200	42	19	90	8KC	TO	1	3/8	.173	
TOR 766	200	42	19	90	8KC	TM	1 1/16	1/2	.144	
TOR 841	200	44	48	100	8KC	TO	1 1/4	5/8	.173	
TOR 741	200	44	48	100	8KC	TM	1 5/16	23/32	.173	
TOR 899	200	37	140	100	10KC	TO	1 1/4	5/8	.173	
TOR 789	200	23	37	120	10KC	TM	1 5/16	23/32	.173	
TOR 914	200	7.5	58	180	3KC	TO	1 15/16	7/8	.173	
TOR 7114	200	7.5	58	180	3KC	TM	2	1	.173	
TOR 818	250	155	9.6	65	15KC	TO	3/4	3/8	.116	
TOR 718	250	155	9.6	65	15KC	TM	3/4	3/8	.116	
TOR 7420	250	155	11*	80	14KC	TM2	23/32	13/32	.116	
TOR 936	250	130	12	85	12KC	TO	5/8	9/32	.100	
TOR 7290	250	130	12	85	12KC	TM3	7/8	3/8	.100	
TOR 842	250	64	43	100	7KC	TO	1 1/4	5/8	.173	
TOR 742	250	64	43	100	7KC	TM	1 5/16	23/32	.173	
TOR 867	250	60	17	90	7KC	TO	1	3/8	.173	
TOR 767	250	60	17	90	7KC	TM	1 1/16	1/2	.144	
TOR 930	250	55	20	120	10KC	TO	1	13/32	.144	
TOR 7336	250	35	33	140	10KC	TM	1 1/16	1/2	.144	
TOR 890	250	33	33	140	7KC	TO	1 1/4	5/8	.173	
TOR 790	250	33	33	140	7KC	TM	1 5/16	23/32	.173	
TOR 961	250	15	40	190	7KC	TO	1 15/16	7/8	.173	
TOR 7379	250	15	40	190	7KC	TM	2	1	.173	
TOR 915	250	10.3	52	180	3KC	TO	1 15/16	7/8	.173	
TOR 7115	250	10.3	52	180	3KC	TM	2	1	.173	
TOR 974	250	7	55	220	3KC	TO	2 7/16	1	.173	
TOR 7407	250	7	55	220	3KC	TM	2 7/8	1 3/8	.173	
TOR 819	300	180	8.8	62	12KC	TO	3/4	3/8	.116	
TOR 719	300	180	8.8	62	12KC	TM	3/4	3/8	.116	
TOR 843	300	40	72	40	80	4KC	TO	1 1/4	5/8	.173
TOR 743	300	72	40	80	4KC	TM	1 5/16	23/32	.173	
TOR 868	300	70	16	80	7KC	TO	1	3/8	.173	
TOR 768	300	70	16	80	7KC	TM	1 1/16	1/2	.144	
TOR 891	300	38	30	120	5KC	TO	1 1/4	5/8	.173	
TOR 791	300	38	30	120	5KC	TM	1 5/16	23/32	.173	
TOR 916	300	17	47	200	3KC	TO	1 15/16	7/8	.173	
TOR 7116	300	17	47	200	3KC	TM	2	1	.173	
TOR 820	400	265	7.6	60	10KC	TO	3/4	3/8	.116	
TOR 720	400	265	7.6	60	10KC	TM	3/4	3/8	.116	
TOR 869	400	95	14	80	7KC	TO	1	3/8	.173	
TOR 769	400	95	14	80	7KC	TM	1 1/16	1/2	.144	
TOR 844	400	94	34	80	3KC	TO	1 1/4	5/8	.173	
TOR 744	400	94	34	80	3KC	TM	1 5/16	23/32	.173	
TOR 892	400	44	26	120	4KC	TO	1 1/4	5/8	.173	
TOR 792	400	44	26	120	4KC	TM	1 5/16	23/32	.173	
TOR 917	400	14.5	41	180	3KC	TO	1 5/16	7/8	.173	
TOR 7117	400	14.5	41	180	3KC	TM	2	1	.173	
TOR 821	500	295	7	60	12KC	TO	3/4	3/8	.116	
TOR 721	500	295	7	60	12KC	TM	3/4	3/8	.116	
TOR 937	500	290	8	80	12KC	TO	5/8	9/32	.100	
TOR 739	500	290	8	80	12KC	TM3	7/8	3/8	.100	
TOR 7421	500	250	8*	80	12KC	TO	23/32	13/32	.100	
TOR 870	500	113	12	80	7KC	TO	1	3/8	.173	
TOR 770	500	113	12	80	7KC	TM	1 1/16	1/2	.144	
TOR 845	500	108	31	80	5KC	TO	1 1/4	5/8	.173	
TOR 745	500	108	31	80	5KC	TM	1 5/16	23/32	.173	
TOR 951	500	95	15	100	7KC	TO	1 1/16	1/2	.144	
TOR 7337	500	95	15	100	7KC	TM	1 1/16	1/2	.144	
TOR 893	500	63.5	23	120	4KC	TO	1 1/4	5/8	.173	
TOR 793	500	63.5	23	120	4KC	TM	1 5/16	23/32	.173	
TOR 918	500	19	37	180	3KC	TO	1 15/16	7/8	.173	
TOR 7118	500	19	37	180	3KC	TM	2	1	.173	
TOR 975	500	15	38	200	2KC	TO	2 7/16	1	.173	
TOR 7408	500	15	38	200	2KC	TM	2 7/8	1 3/8	.173	
TOR 871	600	150	11	70	6KC	TO	1	3/8	.173	
TOR 771	600	150	11	70	6KC	TM	1 1/16	1/2	.144	
TOR 894	600	71	21	120	4KC	TO	1 1/4	5/8	.173	
TOR 794	600	71	21	120	4KC	TM	1 5/16	23/32	.173	
TOR 822	700	440	5.8	60	11KC	TO	3/4	3/8	.116	
TOR 722	700	440	5.8	60	11KC	TM	3/4	3/8	.116	
TOR 844	700	173	26	80	3KC	TO	1 1/4	5/8	.173	
TOR 746	700	173	26	80	3KC	TM	1 5/16	23/32	.173	
TOR 872	700	160	10	80	7KC	TO	1	3/8	.173	
TOR 772	700	160	10	80	7KC	TM	1 1/16	1/2	.144	
TOR 895	700	80	19.5	120	5KC	TO	1 1/4	5/8	.173	
TOR 795	700	80	19.5	120	5KC	TM	1 5/16	23/32	.173	
TOR 919	700	30	31	180	2.5KC	TO	1 15/16	7/8	.173	
TOR 7119	700	30	31	180	2.5KC	TM	2	1	.173	
TOR 7422	750*	350	7*	60	10KC	TM2	23/32	13/32	.100	
TOR 873	800	300	9	60	5KC	TO	1	3/8	.173	
TOR 773	800	300	9	60	5KC	TM	1 1/16	1/2	.144	
TOR 823	1,000	650	4.8	55	10KC	TO	3/4	3/8	.116	
TOR 723	1,000	650	4.8	55	10KC	TM	3/4	3/8	.116	
TOR 938	1,000	530	5.5	60	7KC	TO	5/8	9/32	.100	
TOR 739	1,000	530	5.5	60	7KC	TM3	7/8	3/8	.100	
TOR 7423	1,000	500	6*	60	10KC	TM2	23/32	13/32	.100	
TOR 874	1,000	260	8.6	60	5KC	TO	1	3/8	.173	
TOR 774	1,000	260	8.6	60	5KC	TM	1 1/16	1/2	.144	
TOR 847	1,000	230	22	50	3KC	TO	1 1/4	5/8	.173	
TOR 747	1,000	230	22	50	3KC	TM	1 5/16	23/32	.173	
TOR 952	1,000	210	25	80	3KC	TO	1	13/32	.100	
TOR 7338	1,000	210	25	80	3KC	TM	1 1/16	1/2	.144	
TOR 896	1,000	128	16.5	80	3KC	TO	1 1/4	5/8	.173	
TOR 796	1,000	128	16.5	80	3KC	TM	1 5/16	23/32	.173	
TOR 962	1,000	60	20	160	3KC	TO	1 15/16	7/8	.173	
TOR 7381	1,000	60	20	160	3KC	TM	2	1	.173	
TOR 920	1,000	45	26	160	2.5KC	TO	1 15/16	7/8	.173	
TOR 7120	1,000	45	26	160	2.5KC	TM	2	1	.173	
TOR 976	1,000	27	50	200	2KC	TO	2 7/16	1	.173	
TOR 7409	1,000	27	50	200	2KC	TM	2 7/8	1 3/8	.173	
TOR 7424	1,200*	350	5*	60	10KC	TM2	23/32	13/32	.100	
TOR 7293	1,500	825	5	60	7KC	TM3	7/8	3/8	.100	
TOR 835	1,500	335	6	80	5KC	TO	1	13/32	.100	
TOR 7339	1,500	335	6	80	5KC	TM	1 1/16	1/2	.144	
TOR 897	1,500	200	13.5	80	7.5KC	TO	1 1/4	5/8	.173	
TOR 797	1,500	200	13.5	80	7.5KC	TM	1 5/16	23/32	.173	
TOR 963	1,500	90	30	140	2.5KC	TO	1 15/16	7/8	.173	
TOR 7382	1,500	90	30	140	2.5KC	TM	2	1	.173	
TOR 977	1,500	40	33	200	3KC	TO	2 7/16	1	.173	
TOR 7410	1,500	40	33	200	3KC	TM	2 7/8	1 3/8	.173	
TOR 7425	2,000*	875	4*	55	8KC	TM2	23/32	13/32	.100	
TOR 898	2,000	220	11.6	80	2KC	TO	1 1/4	5/8	.173	
TOR 798	2,000	220	11.6	80	2KC	TM	1 5/16	23/32	.173	
TOR 921	2,000	100	18.4	160	2KC	TO	1 15/16	7/8	.173	
TOR 7121	2,000	100	18.4	160	2KC	TM	2	1	.173	
TOR 954	2,500	350	5	80	5KC	TO	1	13/32	.100	
TOR 7340	2,500	350	5	80	5KC	TM	1 1/16	1/2	.144	
TOR 857	2,500	275	10	85	3KC	TO	1 1/4	5/8	.173	
TOR 7352	2,500	275	10	85	3KC	TM	1 5/16	23/32	.173	
TOR 964	2,500	150	15	140	2.5KC	TO	1 15/16	7/8	.173	
TOR 7383	2,500	150	15	140	2.5KC	TM	2	1	.173	
TOR 978	2,500	70	18	200	3KC	TO	2 7/16	1	.173	
TOR 7411	2,500	70	18	200	3KC	TM	2 7/8	1 3/8	.173	
TOR 7426	3,000*	1,350	3.5*	50	7KC	TM2	23/32	13/32	.100	
TOR 899	3,000	370	9	60	2.5KC	TO	1 1/4	5/8	.173	
TOR 799	3,000	370	9	60	2.5KC	TM	1 5/16	23/32	.173	
TOR 922	3,000	116	15	160	2KC	TO	1 15/16	7/8	.173	
TOR 7122	3,000	116	15	160	2KC	TM	2	1	.173	
TOR 900	4,000	435	8.2	60	2.5KC	TO	1 1/4	5/8	.173	
TOR 7100	4,000	435	8.2	60	2.5KC	TM	1 5/16	23/32	.173	
TOR 923	4,000	175	13	140	3KC	TO	1 15/16	7/8	.173	
TOR 7123	4,000	175	13	140	3KC	TM	2	1	.173	
TOR 7427	5,000*	2,400	3*	50	5KC	TM2	23/32	13/32	.100	
TOR 901	5,000	645	7.4	60	2.5KC	TO	1 1/4	5/8	.173	
TOR 7101	5,000	645	7.4	60	2.5KC	TM	1 5/16	23/32	.173	
TOR 965	5,000	350	8	120	2KC	TO	1 15/16	7/8	.173	
TOR 7384	5,000	350	8	120	2KC	TM	2	1	.173	
TOR 924	5,000	200	11.6	140	2KC	TO	1 15/16	7/8	.173	
TOR 7124	5,000	200	11.6	140	2KC	TM	2	1	.173	

Molded And Plastic Coated Toroid Inductors

Part No.
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SECTION 5600

Encased Shielded Toroid Inductors

Part No.	Inductance In MH ±%	Resistance In Ohms ±%	MADC For 3% Inductance Drop	Typical		Case Size
				Q @	Center Frequency	
TOR 7301	100	115	30	80	20KC	TH1
TOR 2309	100	115	30	80	20KC	TH9
TOR 7269	100	50	18	85	15KC	TH1
TOR 7279	100	50	18	85	15KC	TH9
TOR 7148	100	25	35*	115	10KC	TH3
TOR 7342	100	24	63	140	7KC	TH6
TOR 7318	100	22	30	120	10KC	TH4
TOR 7136	100	18	36*	140	7KC	TH3
TOR 7346	100	13	52	190	7KC	TH6
TOR 7378	100	5	88*	190	7KC	TH6
TOR 7399	100	5	100	220	7KC	TH10
TOR 7199	120CT	12	61*	160	5KC	TH5
TOR 7180	120	10	61*	160	5KC	TH5
TOR 7165	120	3.7	125*	240	4KC	TH12
TOR 7153	120	3.7	125*	210	3KC	TH12
TOR 7218	125	9.2	86*	130	4KC	TH2
TOR 7319	150	34	23	130	10KC	TH4
TOR 7137	150	28	30*	140	10KC	TH3
TOR 7326	150	17	60*	180	7KC	TH6
TOR 7392	150	4	70	220	3KC	TH10
TOR 7149	200	15	26*	115	9KC	TH3
TOR 7200	200CT	21	51*	160	5KC	TH5
TOR 7181	200	16	51*	160	5KC	TH5
TOR 7219	200	14.5	66*	190	3.75KC	TH2
TOR 7270	250	100	12	85	3KC	TH1
TOR 7280	250	130	12	85	12KC	TH9
TOR 7363	256	64	43	100	7KC	TH6
TOR 7320	250	55	20	120	10KC	TH4
TOR 7138	250	42	23*	120	5KC	TH3
TOR 7348	250	15	40	140	3KC	TH10
TOR 7367	250	15	40	190	7KC	TH11
TOR 7393	250	7	55	220	3KC	TH10
TOR 7201	300CT	31	41*	160	5KC	TH5
TOR 7182	300	26	41*	160	5KC	TH5
TOR 7374	300	25.3	51*	160	5KC	TH5
TOR 7139	400	70	18*	120	5KC	TH3
TOR 7271	500	290	8	80	12KC	TH1
TOR 7281	500	290	8	80	12KC	TH9
TOR 7364	500	108	31	80	8KC	TH2
TOR 7321	500	95	27*	100	7KC	TH4
TOR 7349	500	63.5	23	120	4KC	TH6
TOR 7202	500CT	50	30*	130	4KC	TH5
TOR 7183	500	40	30*	130	4KC	TH5
TOR 7221	500	38	41*	130	3KC	TH2
TOR 7380	500	19	67*	180	3KC	TH11
TOR 7166	500	16	61*	240	4KC	TH12
TOR 7124	500	15	61*	210	3KC	TH7
TOR 7394	500	13	68*	200	2KC	TH10
TOR 7160	500	100	11*	110	2KC	TH1
TOR 7203	700CT	75	25*	130	4KC	TH5
TOR 7184	700	40	25*	155	5KC	TH5
TOR 7222	750	55	37*	160	4KC	TH2
TOR 7141	900	165	12*	110	3KC	TH3
TOR 7272	1,000	530	5.5	60	7KC	TH9
TOR 7282	1,000	230	22	50	3KC	TH3
TOR 7322	1,000	210	25	80	5KC	TH6
TOR 7330	1,000	128	16.5	80	3KC	TH6
TOR 7204	1,000CT	105	20*	130	4KC	TH5
TOR 7185	1,000	85	20*	120	4KC	TH5
TOR 7368	1,000	60	20	160	2KC	TH11
TOR 7395	1,000	27	50	200	2KC	TH10
TOR 7167	1,000	27	41*	180	2KC	TH12
TOR 7165	1,000	26	41*	180	2KC	TH12
TOR 7223	1,250	95	27*	150	4KC	TH2
TOR 7273	1,300	825	3	60	7KC	TH1
TOR 7283	1,300	825	3	60	7KC	TH9
TOR 7323	1,500	335	6	80	5KC	TH3
TOR 7142	1,500	245	10*	100	3KC	TH4
TOR 7351	1,500	200	13.5	80	2.5KC	TH6
TOR 7205	1,500CT	160	18*	110	4KC	TH5
TOR 7186	1,500	135	18*	120	3KC	TH5
TOR 7369	1,500	90	30*	140	2.5KC	TH11
TOR 7396	1,500	40	30*	200	3KC	TH10
TOR 7143	2,000	380	9*	110	5KC	TH3
TOR 7224	2,000	155	19*	120	4KC	TH2
TOR 7168	2,000	65	30*	180	2.5KC	TH12
TOR 7156	2,000	60	30*	210	3KC	TH2
TOR 7324	2,500	350	7*	80	3KC	TH4
TOR 7327	2,500	275	10	85	3KC	TH6
TOR 7206	2,500CT	140	14*	125	4KC	TH5
TOR 7187	2,500	120	14*	120	4KC	TH5
TOR 7370	2,500	150	14*	140	2.5KC	TH11
TOR 7397	2,500	70	18	150	3KC	TH10
TOR 7144	2,800	550	8*	110	5KC	TH3
TOR 7225	3,000	250	15*	130	4KC	TH2
TOR 7169	3,500	105	22*	180	2KC	TH12
TOR 7157	3,500	104	22*	210	3KC	TH7
TOR 7247	4,000	855	5.1*	110	3KC	TH3
TOR 7207	4,000CT	450	10*	130	4KC	TH5
TOR 7188	4,000	330	10	120	3KC	TH5
TOR 7353	5,000	645	7.4	60	2.5KC	TH6
TOR 7226	5,000	400	14*	130	4KC	TH2
TOR 7391	5,000	350	8	120	2KC	TH11
TOR 7398	5,000	140	15	140	1.5KC	TH10
TOR 7208	6,000CT	650	9.5*	130	4KC	TH5
TOR 7189	6,000	505	9.5*	130	4KC	TH5
TOR 7209	7,000	600	10*	140	4KC	TH2
TOR 7372	7,300	525	8	110	1.8KC	TH11
TOR 7170	7,500	235	16*	180	2.5KC	TH12
TOR 7158	7,500	225	16*	210	3KC	TH7
TOR 7354	10,000	1,100	5.2	70	1.8KC	TH6
TOR 7209	10,000CT	1,050	7.2*	130	4KC	TH5
TOR 7190	10,000	850	7.2*	120	3KC	TH5
TOR 7228	10,000	750	8.5*	140	4KC	TH2
TOR 7373	10,000	600	6	90	1.5KC	TH11
TOR 7399	10,000	270	9	100	3KC	TH10
TOR 7171	12,000	380	11.5*	190	2.5KC	TH12
TOR 7159	12,000	360	11.5*	210	3KC	TH7
TOR 7210	15,000CT	1,750	5.1*	130	4KC	TH5
TOR 7191	15,000	1,345	5.1*	120	3KC	TH5
TOR 7229	15,000	1,120	8.2*	140	4KC	TH2
TOR 7374	15,000	900	7	80	1KC	TH11
TOR 7400	15,000	430	7	90	.7KC	TH10
TOR 7160	18,000	480	9.5*	210	3KC	TH2
TOR 7172	18,000	470	9.5*	180	2.5KC	TH12
TOR 7211	22,000CT	2,500	4	130	5KC	TH5
TOR 7192	22,000	2,000	4	118	3KC	TH5
TOR 7375	25,000	1,500	4	70	.8KC	TH11
TOR 7401	25,000	850	6	80	.8KC	TH10
TOR 7161	25,000	660	8*	210	3KC	TH7
TOR 7173	25,000	625	8*	180	2.5KC	TH12
TOR 7248	35,000CT	4,000	3*	130	4KC	TH5
TOR 7235	35,000	3,250	3*	120	3KC	TH5
TOR 7236	40,000	1,050	6*	180	2.5KC	TH12
TOR 7402	50,000	1,800	3*	65	.5KC	TH10
TOR 7237	60,000	1,690	4*	180	2.5KC	TH12

Chokes

IN ORDER OF MADC

Part No.	Inductance Henrys	MADC	DC Res. In Ohms	Test Volts RMS	Mtg. Type	Mtg. Centers		Dimensions		Wr. Lbs.
						H	W	H	D	
26C40	1.5	10	95	2,500	BAH	1 3/4	1 1/4	2 1/8	1 1/8	.5
20C150	10	10	700	1,000	BAH	1 3/8	3/4	1 5/8	1 1/4	.05
20C112	40	10	1,200	3,000	CHV	1 1/4 x 1 3/16	2 1/4	1 7/8	1 1/4	.75
25C38	4*	15	150	1,500	NTV	1 1/4	1 3/4	2 1/8	1 1/4	.5
20C102	2	15	70	1,500	BAH	1 3/4	1 3/16	2 3/16	1 1/4	.4
25C39	2.4*	15	280	500	ITV-1	2	1 3/4	2 3/8	1 1/2	.5
20C43	20	15	200	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C51	35	15	1,600	2,500	BAH	2	1 3/8	2 3/8	1 1/4	.5
20C04	2	15	3,500	1,500	BAH	2	1 3/8	2 3/8	1 1/4	.5
25C43	250	15	2,000	1,750	NTV	2 3/32 x 2 3/32	3 1/8	2 1/16	2 9/16	2.5
20C05	15	26	1,000	1,000	BAH	1 3/4	1 3/16	2 1/16	1 1/4	.21
20C36	15	30	630	2,500	BAH	2 3/8	1 11/16	2 7/8	1 1/2	.75
25C81	50	30	600	1,200	KTH-B	2 7/8 x 2 3/8	2 5/16	3 3/8	1 5/16	1.5
20C159	22	35	405	1,400	FGV	2 3/8	2 3/8	3 3/4	2 1/8	1.5
20C44	30	35	700	2,500	BAH	2 15/16	2	3 1/4	1 5/4	1.0
20C113	1	40	170	500	BAH	2	1 3/8	2 3/8	1 1/4	.5
20C114	4	40	219	500	BAV	2 1/8	2	2 5/8	1 5/8	.75
20C35	8	40	290	1,900	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C52	8	40	450	2,500	BAH	2 3/8	1 3/8	2 1/4	1 1/2	.5
20C45	12	40	400	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C46	15	40	400	2,500	BAH	2 13/16	2	3 1/4	1 3/4	1.0
25C25	15	40	475	2,500	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 1/16	1.5
25C49	15	40	475	2,500	ITV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 1/16	1.5
20C37	20	40	600	1,900	BAH	2 13/16	2	3 5/16	1 5/8	1.1
20C116	15	55	420	2,500	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 1/16	1.2
20C82	3.5	50	200	2,500	BPH	2 3/8	1 5/8	2 7/8	1 1/2	.75
25C42	4.5	50	200	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C47	4.5	50	300	2,500	BAH	2	1 3/8	2 3/8	1 3/8	.5
20C83	6	50	300	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C84	7	50	300	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C117	8.5	50	290	1,000	BHH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C81	8.5	50	400	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C66	9	50	500	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
20C87	16	50	500	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
25C64	75	50	2,200	1,750	NTV	2 3/32 x 2 3/32	3 1/4	2 9/16	2 9/16	2.5
20C59	7	55	200	2,500	BAH	2 3/8	1 5/8	2 7/8	1 1/2	.75
25C26	10	55	230	2,500	TAV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 1/16	1.25
25C50	10	55	230	2,500	ITV	1 1/2 x 2 3/8	2 7/8	2 1/4	2 1/16	1.25
25C27	15	55	420	2,500	TAV					

SECTION 5600

Filament Transformers with Single Secondary

Part No.	Primary Voltage	Secondary		Test Volts RMS (Sec.)	*Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
		Volts	Amps				H	W	D	
21F13	117	7.5CT	4	2,500	BAV	2 1/16	2 3/4	3 3/8	2 1/8	2
21F45	117	7.5CT	4	2,500	LHV	2 x 2 1/8	3 1/8	2 7/8	2 1/8	2.7
21F10	107/117	7.5CT	5	2,500	GGV	2 1/4 x 1 7/8	3 5/8	3 1/8	3 1/8	3.4
25F71	115/230	7.5CT	8	2,500	ITV	2 1/2 x 1 7/8	3 7/8	3 1/4	3 1/2	3.25
21F78	117	7.5CT/6.3CT	8	3,000	LAV	2 1/4 x 2 5/16	3 1/2	2 7/8	2 13/16	3.55
21F16	117	7.5CT	8	2,500	CAV	2 x 2	3 1/8	2 3/4	2 1/2	3.25
21F62	117	7.5CT	8	2,500	LAV	2 1/2 x 2 3/8	3 7/8	3 1/8	2 7/8	4.7
21F46	107/117	7.5CT	8	2,500	GGV	2 1/2 x 2 3/16	3 7/8	3 1/4	3 1/2	4.7
25F82	105/115/210/220/230	7.5/6.3	10	4,000	NTV	3 x 3	4 1/2	3 3/4	3 3/4	6.5
21F17	117	7.5CT	12	2,500	CAV	2 1/4 x 2 1/4	3 1/2	2 7/8	3 1/4	5
25F72	115/230	7.5CT	12	2,500	ITV	2 3/4 x 3 7/8	4 1/4	3 5/8	4 7/16	6.5
21F11	107/117	7.5CT	21	2,500	GGV	2 3/4 x 3	4 1/2	3 3/4	4	6
21F79	117	25CT/6.3CT	25	3,000	LHV	3 3/4 x 1 1/2	4 5/8	3 13/16	3 7/16	7.5
25F18	115/230	7.5CT	25	2,500	ITV	2 1/2 x 4 3/4	5 5/16	4 9/16	5 1/4	12
21F26	115/230	7.5CT	51	9,000	CTH	3 5/8 x 4 1/16	4 1/8	4 3/8	4 7/8	15
25F17	115/230	7.5CT	51	2,500	TSV	4 1/4 x 6	7 1/16	6 1/8	6 1/2	29
21F61	117	10.0CT	4	2,500	LHV	2 1/4 x 2 1/8	3 1/2	2 7/8	2 5/8	3.25
25F73	115/230	10.0CT	4	2,500	ITV	2 1/2 x 2 1/8	3 1/2	2 7/8	3 1/2	3.25
21F18	117	10.0CT	5	2,500	CAV	2 x 1 3/4	3 1/8	2 1/4	2 1/2	2.29
25F95	220(a)	10CT	5	1,500	LAV	2 x 3 1/8	3 1/2	3 1/2	2 25/32	3
21F47	107/117/10CT	5	2,500	GGV	2 1/2 x 1 15/16	3 7/8	3 1/4	3 1/8	4	
25F74	115/230	10.0CT	6.3	2,500	ITV	2 1/4 x 3 1/2	3 7/8	3 1/4	4	
21F28	117	10.0CT	8	2,500	CAV	2 1/2 x 2 3/8	3 7/8	3 1/8	3 1/8	4.9
25F75	107/117	10.0CT	8	2,500	GGV	2 1/2 x 2 7/16	3 7/8	3 1/4	3 5/8	5.2
21F12	115/230	10.0CT	10	2,500	GGV	2 1/2 x 2 7/16	3 7/8	3 1/4	3 5/8	5.2
25F76	115/230	10.0CT	10	2,500	ITV	2 3/4 x 3 7/8	4 1/4	3 5/8	4 7/16	6.5
25F29	105/115	10.0CT	10	3,000	KTH	3 7/8 x 2 7/16	3 3/4	3 1/8	4 1/2	4.5
25F83	105/115/210/220/230	10	10	4,000	NTV	3 9/16 x 3 9/16	5 1/2	4 1/2	4 1/2	11
21F48	107/117/10CT	12	7,500	KTV	2 3/4 x 6	5 1/8	4 1/4	8 1/2	14.7	
21F68	115	10CT/11CT/12CT	11	3,000	LAV	2 3/4 x 2 9/16	4 3/8	3 1/2	3 1/16	6.5
21F44	117	10	15	2,500	CAV	2 5/4 x 2 3/8	4 3/16	3 7/16	3	5
21F47	210/220/230	10.0CT	23.5	10,000	CTH	3 3/4 x 3 1/4	4 3/16	4 1/2	3 3/4	12
21F13	107/117	11.0CT	10	2,500	GGV	3 x 2 7/16	4 3/4	4	3 1/2	7.7
21F49	107/117	11.0CT	10	7,500	KTV	2 3/4 x 6	5 1/8	4 1/4	8 1/2	13
25F84	105/115/210/220/230	11/12/6.3	14	4,000	NTV	3 9/16 x 3 9/16	5 1/2	4 1/2	4 1/2	11
26F70	117	12.6 or 6.3	1	5,000	BAH	2 13/16	2	3 1/4	2	1.25
26F67	117	12.6CT	2	2,500	BAH	2 13/16	2	3 1/4	2	1.25
21F81	117	12.6CT	3	2,500	BAH	3 1/8	2 1/4	3 5/8	2 1/8	1.6
21F50	117	12.6 or 7.5	3	2,500	BAH	2 x 2 1/16	3	3 1/2	2 7/8	1.5
21F52	117	12.6 or 25.2	3.5	2,500	GGV	2 1/4 x 2 5/8	3 5/8	3	3 1/2	5
26F68	117	24.0	1	2,500	BAH	2 13/16	2	3 1/4	2	1.5
21F84	117	24.0CT	1	2,500	BAH	2 13/16	2	3 1/4	2	1.5
21F85	117	24.0CT or 12	2	2,500	BAH	3 1/8	2 5/16	3 5/4	2 1/8	1.5
21F97	117	24.0CT or 12	2	1,500	BAH	3 9/16	2 11/16	4	2 5/8	2.5
21F153	117	24.0CT	10	1,500	CAV	3 x 3 3/4	4 9/16	3 3/4	3 1/4	7.5
21F51	117	25.2	2	2,500	BAH	2 13/16	2	3 1/4	2	1.5
21F83	117	25.2CT	2	1,500	BAH	3 9/16	2 9/16	4	2 1/4	2.2
21F114	117	25.2CT	3	2,500	BAH	3 9/16	2 9/16	4	2 1/4	2.2
21F100	117	26.0CT	104	2,500	BAH	1 3/4	1 1/4	2 1/8	1 3/4	1.25
21F101	117	26.0CT	25	2,500	BAH	2 3/8	1 11/16	2 7/8	1 5/8	2.5
21F27	117	26.5CT	6	7,500	BAH	2 13/16	2	3 1/4	2 1/8	1.5
21F82	117	26.8CT	1	1,500	BAH	2 13/16	2	3 1/4	2	1.5
21F66	230(a)	26.8CT	1	1,000	BAH	2 13/16	2	3 1/16	2 1/8	1.3
21F99	117	36.0CT or 18	2.6	1,500	BAH	3 9/16	2 5/8	4	2 5/8	2.5

Filament Transformers with Multiple Secondary

Part No.	Primary Voltage	Secondary		Test Volts RMS (Sec.)	*Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
		Volts	Amps				H	W	D	
21F89	115	5.0 6.0CT 5.0CT	4	1,500	GGV	2 1/2 x 2 5/8	3 7/8	3 9/32	3 1/2	6
25F87	105/115/125	5.0 6.3CT 5.0	2	2,500	ITV	2 11/16 x 1 3/4	3 5/16	3	2 1/2	2.75
25F26	115	12.6CT 6.3CT	1.25 2	1,500	UTV	1 5/32 x 1 5/32	2	1 1/2	1 1/2	3
21F161	107/117	6.3	6	7,500	BAH	3 1/8	2 1/4	3 11/16	2	1.5
25F36	115	6.3	6	1,500	KTH	2 3/8 x 2	1 7/8	2 13/16	1 3/4	1
21F134	117	6.3	1	1,000	BAV	2 3/8	1 5/8	2 13/16	1 3/8	.5
21F88	115	6.3 6.3 6.3 6.3CT	1 1.75 1.75 1.75	1,500	GGV	2 x 2 1/4	3 1/8	2 5/8	3	3.5
26F63	117	6.3	3	5,000	BAV	3 1/8	3	3 5/8	2 1/2	2
21F87	117	6.3CT	3	1,500	GGV	2 1 7/8	3 3/32	2 21/32	2 5/8	2.5
25F91	105/115/125	6.3CT	3	2,500	ITV	3 1/8 x 2	3 9/16	3 1/2	2 7/8	3.5
21F24	117	6.3CT 6.3 6.3 6.3	3 3 3 3	2,500	GGV	2 1/2 x 2 1/4	3 7/8	3 1/4	3 3/8	5
25F97	105/115/210/220/230	6.3 6.3	5 5	2,000	NTV	2 3/8	3 3/4	3	3	3.5
25F34	105/115	6.3CT	5	3,000	*TH	3 7/8 x 2 7/16	3 3/4	3 1/8	4 1/2	4.5
26F69	117	6.3 6.3	3 6	1,600	HKI	2 1/4 x 2 13/16	3 1/4	3 3/8	2 7/8	3
21F119	117	6.3CT	6	2,500	GGV	2 1/2 x 2 3/16	3 7/8	3 1/8	3 1/2	4.8
25F92	105/115/125	6.3CT	6	2,500	ITV	3 7/8 x 2 3/4	4 5/16	4 7/16	3 11/16	6.5
25F28	105/115	6.3CT	10	3,000	KTH	3 7/8 x 2 7/16	3 3/4	3 1/8	4 1/2	4.5
21F19	117	10.0CT	12	2,500	CAV	2 1/2 x 2 1/4	3 7/8	3 1/8	2 7/8	6
25F37	115	12.6 12.6	2	1,500	KTH	3 5/8 x 3 1/8	2 15/16	4 1/8	2 5/16	3
21F90	115	12.6	2.5	1,500	GGV	2 1/4 x 2	3 1/2	3	3 1/8	3.7
21F91	105/115/125	12.6 12.6CT	5 2.5	2,500	GGV	2 1/2 x 2 5/8	3 7/8	3 7/32	3 1/2	6
25F30	105/115/210/220/230	11/12/14CT	10	5,000	KTH	4 27/32 x 3 25/32	4 5/8	4 5/8	5 1/2	8
25F85	105/115/210/220/230	14/11/10	10	4,000	NTV	4 1/8 x 4 1/8	5 1/2	5 1/8	5 1/8	15.5
26F64	117	25 6.31 6.3	.30 6 1.2	1,500 1,500 2,500	GGV	2 x 1 3/4	3 1/8	2 5/8	2 3/4	3.5

111 Industrial Rating - Use 7 Amps. for Military Rating  
 \* Autotaper Winding  
 † Industrial Rating - Use 2 Amps. for Military Rating  
 ‡ Industrial Rating - Use 6 Amps. for Military Rating  
 (a) Both winding rated 7 Amps. for Industrial applications  
 (b) Two units may be scott connected to provide two  
 \* Industrial Rating - Use .6 Amps. for Military Rating  
 (c) Static Shielded  
 \*\* Industrial Rating - Use 10 Amps. for Military Rating  
 †† Industrial Rating - Use 20 Amps. for Military Rating  
 # Terminals located opposite mounting studs  
 (e) Secondary voltage changed by means of primary taps  
 \* Industrial Rating - Use 5 Amps. for Military Rating  
 †† Industrial Rating - Use 20 Amps. for Military Rating  
 (e) 60 Cycles only

Filament Transformers with Multiple Secondary

Part No.	Primary Voltage	Secondary		Test Volts RMS (Sec.)	*Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
		Volts	Amps				H	W	D	
21F53	117	2.5CT 5.0CT	6 1,500	LAV	2 x 2	3	2 1/2	2 1/2	2.5	
21F14	117	5.0 or 6.3	2.5	1,500	BAH	2 13/16	2	3 1/4	1 3/4	1.5
21F115	117	2.5CT 5.0CT	3.5 2,500	GGV	2 1/4 x 2	3 5/8	3	3 1/8	3.7	
21F16	117	2.5 5.0CT	2 2,500	LHV	2 1/4 x 2 1/8	3 1/2	2 7/8	2 3/4	3.4	
25F31	105/115	6.3CT 2.5CT	3 3,000	KTH	3 7/8 x 2 7/16	3 3/4	3 1/8	4 1/2	4.5	
25F35	105/115	2.5CT 5.0CT	6 10,000	KTH	4 27/32 x 3 25/32	4 5/8	4 5/8	5 1/2	8	
21F85	117	2.5CT 10.0CT	10 1,500	LAV	2 3/4 x 2 9/16	4 3/4	3 1/2	3 1/16	6.2	
21F22	117	5.0 or 6.3 or 5.0	3 2,500	GGV	2 x 2 1/2	3 7/8	3 1/4	3 1/4	5.5	
21F54	117	5.0CT	3	2,500	BAV	2 13/16	2 3/4	3 1/4	2 1/2	1.7
25F38	105/115	5.0CT	3	2,500	KTH	3 7/8 x 2 7/16	3 3/4	3 1/8	4 1/2	4.5
25F93	105/115/125	5.0CT 5.0CT	3 5,000	ITV	2 3/4 x 3 7/8	4 5/16	4 7/16	3 11/16	7.7	
25F33	105/115	5.0CT 6.3CT	3 9,000	KTH	3 7/8 x 2 7/16	3 3/4	3 1/8	4 1/2	4.5	
25F32	105/115	5.0CT 6.3CT	3 3,000	KTH	3 7/8 x 2 7/16					

Chokes

Table of Chokes with columns: Part No., Inductance (Henry, MADC), DC Res. in Ohms, Test Volts RMS, Mtg. Type, Mtg. Centers, Dimensions (H, W, D), and Wt. Lbs.

Filament Transformers with Single Secondary

50/60 cycles

Table of Filament Transformers with columns: Part No., Primary Voltage, Secondary Volts, Amps., Test Volts RMS (Sec.), Mtg. Type, Mtg. Centers, Dimensions (H, W, D), and Wt. Lbs.

Dual Winding Chokes

LISTED IN ORDER OF MADC

Table of Dual Winding Chokes with columns: Part No., Series Inductance (Henry, MADC), Parallel Inductance (Henry, MADC), Total D.C. Res., Test Volts RMS, Mtg. Type, Mtg. Centers, Dimensions (H, W, D), and Wt. Lbs.

Swinging Chokes

Table of Swinging Chokes with columns: Part No., Inductance (Henry, MADC), D.C. Res. in Ohms, Test Volts RMS, Mtg. Type, Mtg. Centers, Dimensions (H, W, D), and Wt. Lbs.

Industrial Rating - Use 10 Amps. for Military Rating
Industrial Rating - Use 20 Amps. for Military Rating
Industrial Rating - Use 40 Amps. for Military Rating
Secondary Voltage varied by means of a Primary Tap
Industrial Rating - Use .3 Amps. for Military Rating
Industrial Rating - Use .6 Amps. for Military Rating
60 Cycles only





SECTION 5600

Power Transformers

Port No.	Notes	Flt. Supply	Rectifier	Flt. Amps.	Other Fil.	Mfg. Type	Mfg. Centers	Dimensions			Wt. Lbs.		
		Volts	Volts	Volts	Volts			H	W	D			
22108	8	350-0-350	90	5	3	2.5CT	3.5 GGV	2 1/4 x 2 5/8	3 1/2	2 7/8	3 3/4	4.5	
22109		350-0-350	90	5	3	6.3CT	3.5 GGV	2 3/4 x 2 1/8	4 1/4	2 3/8	3 1/2	4.4	
22110	8	350-0-350	110	5	2	6.3CT	3 GGV	2 1/2 x 2 3/4	3 7/8	3 1/4	4	5.8	
22111		350-0-350	110	5	2	6.3CT	3 GGV	2 1/2 x 2 3/4	3 7/8	3 1/4	4	5.8	
22115		350-0-350	110	5	2	6.3CT	3 WAV	3 1/2 x 3 5/8	5 1/2	4 1/8	4 1/4	6.1	
22116		350-0-350	110	5	2	6.3CT	4.5 GGV	3 x 2 5/8	4 5/8	3 3/4	3 3/8	4.5	
24R134		350-0-350	120	5	3	6.3CT	3.5 GGV	2 1/2 x 2 3/4	3 7/8	3 1/8	3 3/8	5.5	
24R36		350-0-350	120	5	3	2.5CT	3.5 AGF	2 3/4 x 3 7/16	3 5/8	3 7/16	4 1/8	5.5	
24R05		350-0-350	120	5	3	2.5CT	12.5 AGF	2 1/2 x 3 1/8	4 7/8	3 1/8	3 3/4	5.7	
24R05U		350-0-350	120	5	3	6.3CT	4.7 GGV	2 1/2 x 2 3/4	3 7/8	3 1/4	3 7/8	5.7	
24R135	8	350-0-350	120	5	3	6.3CT	4.7 GGV	2 3/4 x 2 1/2	3 7/8	3 1/4	3 7/8	5.7	
24R18		350-0-350	120	5	3	6.3	6.5 GGV	2 1/2 x 2 7/8	3 7/8	4 1/4	4 1/8	6	
24R60		350-0-350	160	5	3	6.3CT	5 GGV	2 1/2 x 2 5/8	3 7/8	3 9/32	3 1/2	5.7	
24R61		350-0-350	160	5	3	6.3CT	5 GGV	3 1/8 x 2 1/2	2 5/8	3 3/4	3 1/8	5.6	
24R98		350-0-350	175	5	2	6.3	7	3 x 3 3/4	4 1/8	3 3/4	4 1/2	8.5	
24R74		350-0-350	180	5	3	6.3	10	AGF	3 x 3 3/4	4 3/4	3 3/4	11.3	
2207		220-0-220	70	5	3	6.3	2	AGF	3 x 3 3/4	3 7/8	3 3/4	4 1/2	7
2208		220-0-220	70	5	3	6.3CT	8 AGF	3 7/16 x 2 3/4	3 1/8	4 1/8	3 7/8	5.3	
22107	8	350-0-350	200	5	3	6.3CT	6 AGF	3 x 3 3/4	3 7/8	3 3/4	4 1/2	7	
24R65		350-0-350	200	5	3	6.3CT	8 AGF	3 7/16 x 2 3/4	2 7/8	4 1/8	3 7/16	8	
22R87		350-0-350	200	5	3	6.3CT	8 GGV	2 3/4 x 3 1/4	4 1/4	3 5/8	4 3/8	8	
22R112		350-0-350	200	5	3	6.3CT	6 GGV	3 x 2 9/16	4 5/8	3 3/4	3 1/2	7	
24R04		350-0-350	200	5	3	6.3CT	8 GGV	2 3/4 x 3 1/2	4 1/4	3 5/8	4 1/8	8	
24R99		350-0-350	200	5	3	6.3	6	AGF	3 x 3 3/4	2 5/8	3 3/4	4 1/2	9
26R25U		350-0-350	200	5	3	6.3	7	GGV	3 x 3 3/4	4 5/8	3 7/8	4 7/8	11.2
26R20		350-0-350	225	5	3	6.3	10.7	ARF	3 x 3 3/4	4 3/4	3 3/4	4 1/2	11.5
26R21		350-0-350	225	5	3	6.3	10	AGF	3 x 3 3/4	4 3/4	3 3/4	4 1/2	11.5
26R49		350-0-350	270	5	2	6.3	2	AGF	3 x 3 3/4	5 1/4	3 3/4	4 1/2	13.1
26R54		350-0-350	280	5	3	12.0CT	6 GGV	3 x 4	4 1/2	3 3/4	5	11.6	
26R73		350-0-350	295	5	2	12.6	5	AGF	3 5/16 x 4 1/16	6 5/8	3 13/16	4 3/4	17.2
26R82		350-0-350	458	5	6	6.3	14.5	VAV	3 5/16 x 4 1/16	4 3/4	4 7/8	4	11
22R31		360-0-360	80	5	2	6.3CT	2.5 GGV	2 x 2 3/4	3 1/8	2 9/16	3 4	4	
24R22		360-0-360	120	5	3	6.3CT	3.5 AGF	2 1/2 x 3 1/8	3 3/4	3 1/8	3 3/4	5.5	
24R23		360-0-360	120	5	3	6.3CT	3.5 GGV	2 1/2 x 2 7/16	3 7/8	3 1/4	3 3/4	5.5	
26R23		360-0-360	180	5	3	6.3	9	AGF	2 3/4 x 3 1/2	4 1/4	3 1/2	4 1/8	8
26R22		360-0-360	180	5	3	6.3	9	ARF	2 3/4 x 3 1/2	4 1/4	3 1/2	4 1/8	8
26R82		360-0-360	185	5	3	6.45	12	AGF	3 x 3 3/4	4 1/4	3 3/4	4 1/2	9.6
26R96	12	165-0-165	65	5	3	6.3	12	AGF	3 x 3 3/4	4 3/8	3 3/4	4 1/2	10.5
26R96		165-0-165	185	5	3	6.3	12	AGF	3 x 3 3/4	4 3/8	3 3/4	4 1/2	10.5
26R55		360-0-360	200	5	3	6.3	1.2	AGF	3 5/16 x 4 1/16	5 9/16	3 13/16	4 3/4	10
26R141		360-0-360	220	5	2	12.0CT	5.75 GGV	3 x 3 7/8	4 7/8	3 3/4	5 1/4	11.5	
26R17		360-0-360	250	5	3	6.3	9	AGF	3 x 3 3/4	5 1/8	3 3/4	4 1/2	11
26R15		360-0-360	250	5	3	6.3	9	AGF	3 x 3 3/4	5 1/8	3 3/4	4 1/2	11
26R68		360-0-360	250	5	3	6.3	8	AGF	3 3/16 x 4 1/16	5 5/16	3 3/4	4 1/2	11.5
26R134		360-0-360	260	5	2	6.3	8.85	AGF	3 3/16 x 4 1/16	5 1/2	3 3/4	4 1/2	13
26R35		360-0-360	270	5	3	6.3	4.5	AGF	3 x 3 3/4	4 1/4	3 3/4	4 1/2	10
22R116		360-0-360	300	5	3	6.3	4	HMF	2 3/4 x 3 7/16	3 3/16	3 7/16	4 7/8	7.8
26R16		360-0-360	295	5	2	12.0CT	5	AGF	3 x 3 3/4	4 3/4	3 3/4	4 1/2	10.7
24R94		365-0-365	210	5	2	6.3	5	AGF	3 x 3 3/4	5 7/8	3 3/4	4 1/2	16
26R133		365-0-365	270	5	6	6.7	4.5	AGF	3 3/16 x 4 1/16	4 7/8	3 3/4	4 1/2	10
26R01		367.5-0-367.5	275	5	6	6.3CT	8.5 AGF	3 x 3 3/4	3 7/8	3 3/4	4 1/2	13	
25R09		370-0-370	150	5	3	6.3CT	4	TAV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	11.5
25R32		370-0-370	150	5	3	6.3CT	4	TTV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	11.5
26R83		370-0-370	190	5	3	6.3	7.75	AGF	3 x 3 3/4	4 9/16	3 3/4	4 1/2	10.8
26R66		370-0-370	190	5	3	6.3	7.9	AGF	3 3/16 x 4 1/16	5 3/16	3 3/4	4 1/2	11.2
24R24		370-0-370	275	5	3	6.3CT	7	AGF	3 x 3 3/4	4 1/4	3 3/4	4 1/2	9.5
25R08		375-0-375	120	5	3	6.3CT	4	TAV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	9.5
25R31		375-0-375	120	5	3	6.3CT	4	TTV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	9.5
24R06		375-0-375	150	5	2	12.0CT	4.7 AGF	2 3/4 x 3 1/2	3 7/8	3 7/8	4 1/8	6.2	
24R06U		375-0-375	150	5	3	6.3CT	4.7 GGV	2 3/4 x 2 7/8	4 1/4	3 1/2	4	6.2	
24R137		375-0-375	150	5	3	6.3CT	4.7 GGV	2 3/4 x 2 7/8	4 1/4	3 1/2	4	6.2	
24R138		375-0-375	150	5	3	12.0CT	2.5 AGF	2 3/4 x 3 7/16	3 7/8	3 1/2	4	5.5	
22R17		375-0-375	160	5	3	12.0CT	3.5 WAV	3 3/4 x 5 5/8	5 3/4	4 5/8	5 1/8	12.2	
22R33		375-0-375	160	5	3	6.3CT	5	GGV	2 3/4 x 3 1/2	4 5/8	3 3/4	4 1/2	10
22R68		375-0-80	160	5	3	6.3CT	5	GGV	2 3/4 x 3 1/8	4 1/4	3 5/8	4 1/2	10
26R18		375-0-375	170	5	3	12.0CT	5	AGF	3 x 3 3/4	4 3/4	3 3/4	4 1/2	11.5
24R48		375-0-375	175	5	3	6.3CT	8	GGV	2 3/4 x 3 1/4	4 1/4	3 5/8	4 3/8	6.5
24R62		375-0-375	175	5	3	6.3CT	8	GGV	2 3/4 x 2 7/8	4 1/4	3 5/8	4 3/8	6.5
24R49		375-0-375	175	5	3	6.3CT	8	AGF	3 7/16 x 2 3/4	3 1/8	4 1/8	3 7/16	6.5
24R95		375-0-375	175	5	3	6.3	7.65	AGF	3 x 3 3/4	3 3/4	4 1/2	11	
24R95		375-0-375	180	5	3	6.3CT	3.3 AGF	2 3/4 x 3 7/16	3 3/8	4 1/8	3 7/16	8.2	
22R66		375-80-0	200	5	3	2.5CT	6	GGV	3 x 3 3/8	4 5/8	4	4 1/2	9
26R84		375-0-375	205	5	3	6.3	5.6	AGF	3 x 3 3/4	4 5/8	4 3/4	4 1/2	9.1
26R85		375-0-375	225	5	3	6.3	9	ARF	3 x 3 3/4	5	3 3/4	4 1/2	10.5
26R66		378-0-378	205	5	3	6.3	9.5	GGV	3 x 3 9/16	4 5/8	3 3/4	4 5/8	10.8
22R118		380-0-380	125	5	3	6.3CT	2.85 GGV	2 3/4 x 3	4 1/8	3 1/2	4 1/8	4.9	
22R125		380-0-380	150	5	2	12.0CT	4	HMF	2 3/4 x 3 7/16	2 9/16	4 1/8	3 7/16	4.7
26R97		380-0-380	180	5	3	6.3	7	ARF	2 3/4 x 3 7/16	5 1/2	3 7/16	4 1/8	9.7
26R86		380-0-380	220	5	3	6.3	9	GGV	3 x 3 9/16	4 3/4	4	4 3/4	10.5
26R95		380-0-380	250	5	3	6.3	1.2	AGF	3 x 3 3/4	5	3 3/4	4 1/2	10.5
26R126		380-0-380	340	5	6	6.3CT	5.6 GGV	3 x 3 3/4	4 1/2	3 3/4	4 7/8	10.5	
4R42		35V, Bias Top	160	5	3	6.3CT	5	AGF	2 1/2 x 3 1/8	4 5/16	3 3/4	3 1/8	7
6R87		385-0-385	195	5	2	6.3	7.65	AGF	3 x 3 3/4	4 3/4	3 3/4	4 1/2	11
5R10		385-0-385	200	5	3	6.3CT	4.5 TAV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	12	
5R33		385-0-385	200	5	3	6.3CT	4.5 TTV	2 1/2 x 4 3/4	5 5/16	4 1/2	5 1/4	12	

Power Transformers		PRIMARY 117 VOLTS 50/60 CYCLES											
Part No.	Notes	Plate Supply		Rectified Fil. Volts	Fil. Amps	Other Fil. Volts	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.	
		Volts	MADC						H	W	D		
23R60	1	600-0-600	200	5	3	6.3CT 6.3 7.5	3	KTH-F	4 27/32 x 3 25/32	4 5/8	4 5/8	5 1/2	8
23R36		600-0-600	200	5	3	6.3 6.3 7.5	3	GGV	3 x 3 3/8	4 5/8	3 7/8	4 1/2	9.5
24R27		600-0-600	200	5	3	6.3 6.3 7.5	3	GGV	3 x 3 1/16	4 5/8	3 7/8	4 1/4	18.5
23R48		600-0-600	200	5	3	6.3 6.3 7.5	3	NTV	4 1/8 x 4 1/8	5 1/2	5 1/8	5 1/8	15.5
23R61	1	600-225-0-600	300	5	6	6.3CT 6.3 7.5	3	KTH-G4	4 25/32 x 4 3/4	4 5/8	5 3/8	5 3/8	12
24R85		617-0-617	250	5	4	6.3 6.3 7.5	3	GGV	3 x 3 1/8	4 5/8	4	4 1/4	9
24R86		617-0-617	250	5	4	6.3 6.3 7.5	3	GGV	3 1/2 x 4 5/8	5 5/16	4 1/2	5 5/8	20
22R51		625-0-625	250	5	6	6.3CT 6.3 7.5	3	GGV	3 1/2 x 4 5/8	5 5/16	4 1/2	5 5/8	20
22R56		625-0-625 and 130	278	5	4	6.3 6.3 7.5	3	GGV	3 1/2 x 4 5/8	5 5/16	4 1/2	5 5/8	20
22R58		750-0-750	315	5	6	6.3 6.3 7.5	3	GGV	3 1/2 x 6 1/8	5 1/2	5 5/16	7 1/8	30

Half-Wave Power Transformers		PRIMARY 117 VOLTS 50/60 CYCLES										
Part No.	Notes	Plate Wave		Filament Supply Volts	Supply Amps	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.	
		Volts	MADC					H	W	D		
25R54	23	30	50	6.3CT	3S	21RMS	KAV	2 3/8 x 2 3/16	2 5/16	3 1/4	2 3/4	
22R129	18	7.5	100AC	6.3CT	3S	21RMS	FGV	2 3/8 x 21/32	2 3/8	2 7/8	1 7/8	.75
24R145		85	300	6.3 6.3 6.3	6.6 5 6.3		HFF	3 x 3 3/4	2 5/16	4 1/2	3 3/4	7
26R55		96	145	6.3	6.45		AGF	2 5/16	3 1/8	2 1/2	3	2.6
24R144	23	100	100	6.3	6.45		HFF	3 x 3 3/4	2 5/16	4 1/2	3 3/4	2.5
24R72		117	15	6.3	.6		BAH	2 3/8	1 5/8	2 13/16	1 5/8	1
26R22		117	20	6.3CT	1.7		GGV	2 1/2	2	2 1/2	1 1/2	1
26R144		117	20	6.3	1.7		BGV	2 1/8	2	2 5/8	1 5/8	1
22R134		117*	100	6.3	1.1		BHH	3 1/8	2 1/4	3 11/16	2 1/4	2.1
26R14		117	200	6.3	4.5		AGF	2 3/4 x 2 1/2	3 1/2	3 1/2	4 1/8	5.2
24R155	26	117	400(RMS)	6.3 6.3 24	1 1 1		GGV	2 1/2 x 1 3/4	3 7/8	3 1/8	3 7/8	4.6

Half-Wave Power Transformers		PRIMARY 117 VOLTS 50/60 CYCLES										
Part No.	Notes	Plate Supply		Filament Supply Volts	Supply Amps	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.	
		Volts	MADC					H	W	D		
26R106		117/110	900	6.3	10	AGF	2 13/16 x 2 1/4	2 5/8	3 3/8	2 13/16	4	
26R105		117/110	900	6.3	10	GGH	3 5/16 x 3 3/16	3 1/8	3 3/4	3 3/4	4	
26R37		125	15	6.3	.6	BAV	2	2 3/8	1 3/8	1 3/8	.7	
26R38		125	50	6.3	2	BAH	3 1/8	2 1/4	2 13/16	2 1/8	1.5	
26R107		127/115	1,000	12.6CT	5	AGF	3 1/8 x 2 1/2	3 1/2	3 3/4	3 1/8	6	
24R111		128	300	6.3	2.5	GGV	2 1/2 x 2 1/8	3 1/8	3 1/4	3 1/2	1.5	
24R73		130	20	6.3	1.1	GGV	1 3/4 x 2	2 3/4	2 3/8	2 3/4	2	
24R67		135	15	6.3	.9	HFF	1 1/4	1 3/4	1 7/8	1 9/16	1	
24R71		135	50	6.3	1.5	BAH	3 1/8	2 1/4	3 3/4	2 1/8	1.5	
24R74		135	200	6.3CT	5.3	AGF	2 13/16 x 2 1/4	3 1/8	3 3/4	2 13/16	5.5	
26R13		140/117	300	6.3	3	AGF	3 x 3 3/4	3 7/8	3 3/4	4 1/2	7.5	
26R108		140/127/115	1,000	6.3	6	AGF	2 1/4 x 2 13/16	3 1/8	3 3/8	2 13/16	6	
26R60		150	25	6.3	2	GGV	2 1/4 x 2 1/8	3 1/2	3 1/4	3 1/8	1.5	
22R12		150	25	6.3	1.5	BAH	3 1/8	2 1/4	2	3 3/4	1.5	
22R21	11	170/160/150	500	6.3CT	6	GGV	2 3/4 x 3 3/4	4 1/4	3 5/8	4 7/8	9	
26R39		184	260	6.3	2.5	AGF	1 3/4 x 2 3/16	2 3/4	2 3/16	2 5/8	2	
22R03	14	177	500	6.3	5.5	GGH	3 3/4 x 4 5/8	3 15/16	4 5/8	5 1/2	17	
22R120		225	8.5	6.3	5	BAH	2 3/8	1 5/8	2 13/16	1 3/4	5	
24R146	k	300	50	6.3	2	CHV	2 1/2 x 2 3/8	3 3/4	3 1/8	2 1/2	4.2	
24R112		325-0-325	100	12.6	6	BHV	2 3/8	2 3/8	2 7/8	1 3/4	1	
24R113	8	550	25	6.3	1.5	AGF	2 x 2 1/2	2 3/4	3	2 1/2	2	
24R109	15	550	30	6.3	1.5	DAF		2 1/4	2 5/8	2 3/16	1.4	
22R133		800	40	6.3	1.2	BAH	3 9/16	2 1/2	4	2 5/8	1.7	
24R149	27	950	20	6.3	1.5	BAV	2 13/16	2 11/16	3 5/16	2 1/8	1.5	
22R121		1,000*	2	2.5	1.75	AGF	2 1/2 x 3 1/8	3 3/8	3 3/4	3 1/8	7	
24R152		1,000*	4	6.3CT	5	BAV	2 13/16	2 11/16	3 5/16	2 1/8	9	
24R148		1,100	.5	6.3	.75	BAV	3 1/8	2 1/4	3 11/16	2 1/4	1.5	
24R139		1,200	4	1.25	4	GGV	2 1/2 x 2 11/16	3 3/4	3 1/8	4	6.2	
24R31		1,500	10	2.5	1.75	GGV	2 1/2 x 2 1/16	3 7/16	3 1/4	3 1/4	4	
24R28		1,600	2	2.5	2.1	GGV	2 1/2 x 2 1/16	3 7/8	3 1/4	3 1/4	4	
24R77		1,600	3	2.5-5-6.3	3	HFF	2 1/2 x 2	2 3/8	3 1/16	2 9/16	3.5	
22R131	8,h	1,600*	2	2.5	1.75	GGV	2 3/4 x 2 1/2	3 3/4	3 1/8	3 1/2	4.7	
26R28U		1,750	2	2.5	2	GGV	2 x 2	3 1/8	2 5/8	2 7/8	2.6	
22R40		1,800	2	2.5	1.8	GGV	2 1/2 x 1/2	3 7/8	3 1/4	3 3/4	5	
24R91		1,800	4	2.5	1.75	GGV	2 x 2	3 1/8	2 5/8	2 7/8	2.7	
24R153	5	1,800	4	2.5	1.75	GGV	2 x 2	3 1/8	2 5/8	2 7/8	2.7	
25R55	8	1,800*	4	6.3CT	5	TTV	3 7/8 x 2 3/4	4 1/4	4 7/16	3 5/8	3.5	
24R79	16	1,825	3	6.3CT	5.65	GGV	2 1/2 x 3 3/4	3 7/8	3 1/4	4 5/8	7.5	
22R42		2,500	1.5	2.5	1.75	BAH	3 5/8	2 1/2	2 5/8	4	2	
24R92		2,500	5	2.5	1.75	GGV	2 3/4 x 2 3/4	4 1/4	3 1/2	3 7/8	5.6	
24R30		2,400	5	2.5	2	GGV	2 3/4 x 2 11/16	4 1/4	3 1/4	3 3/4	5.3	
22R127		2,500	1.16	2.5	1.8	BAH	3 9/16	2 1/2	4	2 5/8	11.8	
26R29V		2,500	5	2.5	2	GGV	2 1/4 x 2 1/2	3 7/8	3 1/4	3 1/2	4.6	

Half-Wave Power Transformers		PRIMARY 117 VOLTS 50/60 CYCLES										
Part No.	Notes	Plate Wave		Filament Supply Volts	Supply Amps	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.	
		Volts	MADC					H	W	D		
22R119		2,700*	2	1.25 or 2	1.75	GGV	2 1/2 x 2 1/4	3 3/4	3 1/8	2 1/2	3.5	
24R29		2,700	2	2.1/75 6.3 6.3	1.75 .6 .6	GGV	2 1/2 x 2 1/4	3 7/8	3 1/4	3 1/2	4.6	

Photoflash Transformers		PRIMARY 117 VOLTS 50/60 CYCLES											
Part No.	Notes	Primary		Secondary		Filament Volts	Supply Amps	Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
		Volts	MADC	Volts	Amperes					H	W	D	
22R41		4 V DC		450 V DC or 900 V DC in Doubler Ckt.	16	8	BAV	2 3/8	2 3/8	2 1/8	2 7/8	1	
22R42		117 @ 60 CPS		1,100 or 4 V DC	1.5	2.5	1.75	BAH	3 5/8	2 1/2	2 5/8	4	
22R43		117 @ 60 CPS or 4 V DC		2,200 V in Doubler Ckt.	4	4	3.5	BAV	2 13/16	2 3/4	2 1/8	3 3/8	2
22R24		117 @ 60 CPS or 6 V DC		350-0-350	135	6.3	4.7	GGV	3 x 3 1/8	4 5/8	3 7/8	4 1/4	8.75
22R46		117 @ 60 CPS or 6 or 12 V DC		350-0-350	135	6.3	3	GGV	3 x 3	4 5/8	3 7/8	4	8.7
24R107		105/115/125 60 CPS		Charges up to 1,050 MFD to 450 Volts DC				BAV	2 3/8	2 5/16	2 15/16	2	1.4
22R47		115 60 CPS		Charges up to 100 MFD to 2,200 Volts DC				KTH	3 1/4	2 1/2	3 3/4	2 5/32	2
22R44		Discharge From 200 Volt Condenser		13 KV Peak				Single Hole Mounting		1 1/2	1 1/8	2 1/4	.2
22R45		Discharge From 200 Volt Condenser		13KV Peak				Phenolic Tube		3 long	7/8 Dia.		.2
22R113		Photoflash trigger coil for 450 V flash tube								3 1/4 long	9/16 Dia.		

Converter-Photoflash Transformers		PRIMARY 117 VOLTS 50/60 CYCLES										
Part No.	Notes	Primary		Secondary		Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.	
		Volts	MADC	Volts	Amperes			H	W	D		
22R58		Discharge for .25 MFD or 225 or 250 Volt DC		6 KV Peak		RTV		15/16	7/8 Dia.			
25R57		4.5 V DC (Inverter Type)		Output to Feed 22R56		RTV		1 1/16	1 3/16	7/8 Dia.		
25R56		115 V, 50/60 CPS or 4.5 Volts DC		400 Volts DC from Voltage Doubler Circuit		KTH-A		2 3/8	1 7/8	2 13/16	1 3/4	

Low Voltage Rectifier Transformers		50/60 CYCLES										
Part No.	Notes	Primary		Secondary AC		Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.	
		Volts	MADC	Volts	Amperes			H	W	D		
23V103		115	6.3	13/16	5/28	3	LAV	2 1/4 x 2 3/16	3 1/2	2 7/8	2 11/16	3.5



**Multi-Tapped-Low Voltage Rectifier**

SELENIUM OR SILICON RECTIFIERS  
PRIMARY 117 VOLT 50/60 CYCLES

Each Selenium Rectifier Transformer listed in this section has terminal numbering and winding arrangement as shown in schematics. Primary connections are made to terminals 1, 4, 5, and 7. The winding connected to terminals 5, 6 and 7 is separate. Isolated primary winding, designed for the purpose of extending the voltage range of the transformer. This is accomplished by connecting the winding in series adding in for series bucking with terminals 2, 3 or 4. Two identical secondary windings are connected to terminals 8 and 9 and to 10 and 11. Complete connection data supplied with each unit.

Part No.	Rectifier Circuit	Secondary AC Volts (Approx.)	Res. or Ind. Load		Capacitive Load		Recommended Capacitor	Mtg. Centers
			DC Volts	DCA	DC Volts	DCA		
23V60	Full Wave Bridge	11.7 to 29.8 11.1 to 26.5	3.3 to 11.2	2	3.5 to 13.8	2	1,000 MFD	2 x 2 1/8
			7.4 to 23.0	1.25	8.7 to 30.0	1.25	500 MFD	
23V61	Full Wave Bridge	12.2 to 29.7 12.2 to 29.7	3.7 to 11.1	2	4.1 to 14.7	2	2,000 MFD	2 1/4 x 2 3/8
			6.9 to 24.3	2	10.8 to 33	2	1,000 MFD	
23V62	Full Wave Bridge	11.7 to 29.2 11.8 to 29.2	3.5 to 11.2	2	4.3 to 14.5	2	4,000 MFD	2 1/2 x 2 7/8
			8.8 to 24	2	11.4 to 32.4	2	2,000 MFD	
23V63	Full Wave Bridge	12.0 to 29.4 12.0 to 29.4	3.4 to 11.5	12	3.9 to 14.4	12	6,000 MFD	2 3/4 x 3 1/4
			8.4 to 24	12	10 to 32	6	3,000 MFD	
23V64	Full Wave Bridge	12.2 to 29.7 12.1 to 29.2	3.9 to 11.4	15	4.4 to 14.8	15	7,500 MFD	2 15/16 x 3 3/4
			8.7 to 23.7	8	10.4 to 32.5	8	4,000 MFD	
23V66	Full Wave Bridge	12.2 to 29.1 12.2 to 29.0	3.9 to 11.4	22.5	4.4 to 14.3	22.5	11,250 MFD	3 1/2 x 4 1/4
			8.6 to 23.5	12	10.8 to 33	12	6,000 MFD	
23V65	Bridge	25 to 53.5 25 to 53.5	5.3 to 17.8	4	5.8 to 18.4	4	4,000 MFD	3 1/2 x 5 1/4
			8 to 44	3	25 to 63	3	4,000 MFD	
23V67	Bridge	25 to 53 25 to 53	5.3 to 17.8	5	5.8 to 18.4	5	6,000 MFD	4 5/8 x 5 1/2
			8 to 44	2	24 to 60	2	12,000 MFD	

\* DC Voltages may vary slightly from those shown due to rectifier voltage drops, lead losses and capacitor value used.

**Low Voltage Control**

Part No.	VA Output	Primary Voltage	Secondary		Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.	
			Voltage	Amps.			H	W	D		
23V153	5	115**	24	40MA	DAF	2	7/8	1 3/4	1	1	
23V141	1.2	115	12	100MA	BAH	1 3/4	1 3/16	2 1/8	1 3/8	2	
23V179	2	115	21	95MA	BAH	2	1 3/8	2 3/8	1 5/8	3	
23V182	2	440	21	95MA	BAH	2	1 3/8	2 3/8	1 5/8	3	
23V154	3.1	115**	24	130MA	BGH	2	1 3/8	2 3/8	1 5/8	5	
23V170	3.1	115	25	125MA	BGH	2	1 3/8	2 3/8	1 5/8	5	
23V174	3.4	117	25	125MA	BGH	2	1 3/8	2 3/8	1 5/8	5	
23V175	4	117	16 or 19	250 or 125MA	BHH	2	1 3/8	2 3/8	1 5/8	5	
23V178	4	250	16 or 19	250 or 125MA	BHH	2	1 3/8	2 3/8	1 5/8	5	
23V147	4.5	115**	20	225MA	BAH	2 5/8	1 3/8	2 1/8	1 5/8	5	
23V198	4.8	220	6	800MA	BHV	2 13/16	2	3 1/2	1 7/8	1.2	
23V199	5	115	20	200MA	BAH	2	1 3/8	2 1/8	1 5/8	5	
23V172	5.6	115**	28	260MA	BAH	2 3/8	2 3/8	2 1/8	1 5/8	1.2	
23V123	6	115	6	1	BHH	2 13/16	2	3 1/2	1 7/8	1.3	
23V132	6	115/230	12	500MA	BAV	2	2 5/8	1 3/4	1	1	
23V136	7.4	117	21	3.5	LAH	2 1/4 x 2 13/16	2 25/32	3 3/8	2 5/8	1.5	
23V156	9.4	220**	24	400MA	BAH	2 3/8	2 3/8	2 1/8	1 5/8	3	
23V139	9.6	440	24	400MA	BAH	2 3/8	2 3/8	2 1/8	1 5/8	3	
23V155	10	115	24	417MA	BAH	2 3/8	2 3/8	2 1/8	1 5/8	3	
23V157	10	115/230	24	417MA	BAH	2 3/8	2 3/8	2 1/8	1 5/8	3	
23V193	10	110/220	35	285MA	BAH	2 13/16	2	3 1/2	1 7/8	1.3	
23V150	12	115/230	6	2 or 12	BHV	2 3/8	2 3/8	2 7/8	2	7.5	
23V225	14.5	110/115**	4/6, 7.5/7.25	2	BAH	2 13/16	2	3 1/8	2 1/8	1.5	
23V138	16.5	115	24	600MA	BAH	2 13/16	2	3 1/8	2 1/8	1.5	
23V15	15	25	25	600MA	BAH	2 13/16	2	3 1/8	2 1/8	1.5	
21F27	15	115	26	32CT	600MA	BAH	2 13/16	2	3 1/4	1.6	
23V51	24	115/230	6 or 12	4	BHV	2 13/16	3 5/8	3 3/8	2 1/4	1.5	
21F68	24	115	24	1	BAH	2 13/16	2	3 1/4	2	1.3	
23V142	24	115	24CT	1	BAH	2 13/16	2	3 1/4	2	1.3	
23V160	24	115	24	1	BGH	2 13/16	2	3 1/4	1 7/8	1.3	
23V97	24	220	24	1	BGH	2 13/16	2	3 1/4	1 7/8	1.2	
23V159	24	110/220	24	1	BAH	2 13/16	2	3 1/4	1 7/8	1.3	
23V134	25	115	1	25	CAV	2 x 1 3/4	3	1 1/2	1 1/2	2	
23V151	25	115	12	2	1, 2, 18	CAH	3 3/4 x 2 11/16	3 1/8	3 2/16	1.3	
21F51	25.2	115	25.2	1	BAH	2 13/16	2	3 1/4	2 9/16	1.3	
23V176	25.6	220**	32	800MA	BAH	3 1/8	2 1/4	3 11/16	2 1/8	1.7	
21F82	26.8	115	26.8CT	1	BAH	2 13/16	2	3 1/4	2	1.3	
23V226	36	115	6/12/18/24	1.5	BAH	3 1/8	2 1/4	3 11/16	2 1/8	1.5	
23V163	36	115	12	2	BAH	2 13/16	2	3 1/4	2 1/8	1.3	
23V160	36	100/110/125	40	600MA	BSV	3 1/8	3 1/2	3 1/2	2 5/32	1.8	
23V223	40	100/115/125	6/10/15/20/25	1.6 Max.	CAH	3 9/16	2 1/2	4	2 1/2	2	
23V03	48	115	4/8/12/16/20/24	2 Max.	BAH	3 1/8	2 1/4	3 11/16	2 1/2	1.7	
23V224	48	115**	12	2	BAH	3 1/8	2 1/4	3 11/16	2 1/8	1.5	
23V52	48	115/230	12 or 24	4	BHV	3 1/8	3 1/8	3 5/8	2 3/8	2	
23V192	48	115	24	1	BAH	3 9/16	2 1/2	4	2 5/8	2.2	
23V40	50	115	4/8/12/16/24	2.08 Max.	GTV	2 1/4 x 1 7/8	3 9/16	3	3 1/2	3	
23V142	50	220	12	3	CAH	3 1/8 x 2 1/8	3 1/16	3 5/8	2 1/4	3	
23V144	50	120	12	3	CAH	2 13/16 x 2 7/8	2 7/8	3 3/8	2 1/4	3	
23V165	50	240	2.4	2.08	GGV	2 x 2 1/4	3 1/2	2 7/8	3 1/4	2.8	
23V166	50	440	2.4	2.08	GGV	2 x 2 1/4	3 1/2	2 7/8	3 1/4	2.8	
23V22	50	440	20/24/28	1.785	FAV	3 1/8 x 2 13/16	4 3/16	3 1/8	4 1/16	2.2	
21F83	50	115	25.2CT	1	BAH	3 9/16	2 1/2	3 1/4	2 1/4	2.2	
23V177	54	440	3	1.56	CAV	2 1/4 x 2	3 7/16	2 13/16	2 1/2	3.4	
23V151	80	115/230	22.6	3.5	LAV	2 x 2 1/4	3 1/2	2 1/2	2 1/4	3	
23V152	80	230	22.6	3.5	CGV	2 1/4 x 2	3 1/2	2 7/8	3 1/4	3	
23V04	90	115	4/8/12/16/20/24	4 Max.	LAV	1 1/4 x 1 1/16	3 1/2	2 7/8	2 9/16	3.1	
23V53	96	115/230	12 or 24	4	CHV	2 3/8 x 1 1/4	3 3/8	2 7/8	3	3.5	
23V41	100	115	4/8/12/16/20/24	4.2 Max.	CHV	2 1/2 x 2 1/8	4	3 1/4	4	5	
23V145	100	115	16	165	CAH	3 1/8	3 5/4	2 1/2	1 3/4	3.3	
23V183	100	115/230	15.5	4	CHV	2 3/8 x 1 1/4	3 1/8	2 13/16	2 7/8	3.5	
23V148	120	115	20	4	GGV	2 1/2 x 2 5/8	3 7/8	3 1/8	3 3/4	3.5	
23V03	150	230	20/24/28	3.36	FAV	3 1/8 x 2 13/16	4 3/4	3 1/8	4 3/4	4.2	
23V146	180	115	18	10	CAH	3 1/16 x 2 3/8	3 7/8	4 1/8	3 1/2	6	
23V218	190	115/230	7.5/12.5	15	CAH	2 1/2 x 1 1/4	3 1/2	3 1/8	3 3/4	4.5	
23V54	192	115/230	12 or 16	2	CAH	2 7/8 x 3 3/4	4 1/8	3 1/2	3 1/2	8	
23V21	200	115	16/18/20	10	KFV	4 1/16 x 3 5/16	5 1/2	5 1/16	4 5/16	11	
23V140	210	220/440	2.5	40	CAH	3 1/4 x 3 3/8	5	4 1/16	4	10	
23V137	215	105/125	110	1	LAV	1 1/4 x 3 1/8	3 1/16	3 3/4	2 5/8	3	
23V186	230	117	18.2	2.34	DAF	2 3/4 x 3 7/16	3	4 1/8	3 7/16	8	
23V143	240	115	31.5	5.55	GGV	3 3/8 x 3	4 5/8	3 3/4	4 3/4	10	
23V42	250	115	4/8/12/16/24	10.5 Max.	CGV	3 3/8 x 1 1/4	4 5/8	4	4 1/4	11.5	
23V181	250	115	24	8.2	CHH	3 3/4 x 2 3/4	3 7/8	4 1/2	3 3/8	7	
23V29	250	230	20/24/28	5.9	KAV	8 3/8 x 2 13/16	4 3/4	3 1/8	4 11/16	11.7	
23V80	430	115	36	12	LHH	4 1/16 x 3 3/8	4 1/8	4 7/8	4 1/4	14	
23V81	500	115	20/28/32	17.5	KAV	10 3/16 x 4 1/4	5 3/4	5 1/4	5 7/8	17	
23V85	570	117/208/230	24.1	1	LHH	3 3/4 x 3 3/8	3 3/4	4 1/2	4 3/8	10.7	
23V21	1,200	115	8	150 Max.	1	CAH	6 x 4 1/4	6 1/2	5 5/16	7	
23V138	1,200	115	8	150 Max.	1	CAH	7 3/4 x 4 1/8	6 1/2	8 3/4	6 1/4	21
23V22	1,900	115/230	8	180 Max.	1	CAH	8 x 5	7 5/8	9	6	54

■ Maximum current may be increased 40% when using any of the 3 low voltage taps.  
 \* Isolated winding.  
 † Any combination of the given voltages and currents may be used as long as the total VA does not exceed the rated VA.  
 ‡ Any combination may be used.  
 § Unit has internal 80° C thermal cutout with maximum protection. † Encapsulated to meet MIL-7278

**Automation Control**

These units have been ruggedized to provide trouble-free performance for high speed automatic assembly equipment. Particularly well adapted to relays and pilot lamps.

Part No.	VA Rating	Secondary		Mtg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
		Parallel	Series			H	W	D	
23V50	12	6V @ 2A	12V @ 1A	BHV	2 3/8	2 3/8	2 7/8	2	1.75
23V51	24	6V @ 4A	12V @ 2A	BHV	2 7/8	3 5/8	3 3/8	2 1/4	1.5

Isolation Transformers									
50/60 CYCLES									
Part No.	VA Output	Primary Voltage	Secondary Voltage	Mfg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
						H	W	D	
23V133	300	220/440	115	GGV	3 x 3 3/8	4 5/8	3 15/16	4 1/2	10 2
23V19	350	115	105/115/125	GMV	3 1/2 x 3 7/8	5 3/8	4 1/2	5 3/4	13
23V28	500	105/115/125	115	GMV	4 5/8 x 4 1/4	6 3/8	5 3/8	7 5/8	22
23V130	300	210/230/250	115	GMV	4 5/8 x 4 1/4	7 3/4	5 5/8	7 7/8	29.5
23V44	600	115	115	GMV	5 1/8	4 5/8	3 7/8	6 7/8	16
23V27	1,200	105/115/125	115	IMV	4 5/8 x 3 3/4	9 7/8	6 3/4	6 1/4	38
23V88	1,200	110/120	110/120	GMV	3 5/8 x 6 5/8	7 7/8	4 1/2	5 1/2	30

† Ultrathinned - epoxy potted with leads  
 ‡ Complete with top switch  
 †† Split winding  
 ‡‡ Has octagon outlet box for house wiring connections

Autotransformers									
50/60 Cycles									
Part No.	VA Output	Primary Voltage	Secondary Voltage	Mfg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
						H	W	D	
23V191	40	220	115	GMV	2 x 1 7/16	3 1/2	2 11/16	2 7/16	2.2
23V19	50	230	115	BAH	3 1/8	2 1/4	3 5/8	2	1.5
23V10	50	220/250	110/125	IMV	3 1/8	3 9/16	3 1/2	2 7/8	2.7
23V70	65	230	115	GMV	2 x 1 11/16	3 1/16	2 1/2	2 3/4	6.7
23V202	80	115	230	CAV	1 3/4 x 2 1/4	2 5/8	2 3/16	2 7/8	2
23V81	85	220/240	110/120	GMV	2 1 7/8	3 1/8	2 5/8	2 7/8	4
23V21	100	220/250	110/125	GMV	2 1/2 x 1 3/4	3 7/8	3 1/4	2 7/8	3
23V71	100	230	115	GMV	2 1/2 x 1 7/4	3 1/2	3	3 1/8	5.7
23V11	100	220/250	110/125	IMV	2 3/4 x 3 7/8	4 5/16	3 11/16	4 7/16	6.5
23V82	125	220/240	110/120	GMV	2 1/16 x 2 1/4	3 1/2	3	3 1/2	4
23V22	150	220/250	110/125	GMV	2 x 2 1/2	3 7/8	3 1/4	3 1/8	4
23V12	150	220/250	110/125	IMV	2 1/2 x 4 3/4	5 5/16	4 9/16	5 1/4	9
23V83	175	220/240	110/120	GMV	2 1/2 x 2 1/4	3 7/8	3 1/4	3 3/4	5.5
23V131	250	115	190/220	LHM	2 7/16 x 3 7/16	3 5/8	4 1/8	3	6
23V23	250	220/250	110/125	GMV	3 x 2 3/8	4 5/8	3 7/8	3 1/2	6.2
23V72	250	230	115	GMV	2 3/4 x 2 7/8	4 1/4	3 7/8	3 1/2	7
23V13	250	220/250	110/125	IMV	2 1/2 x 4 3/4	5 5/16	4 9/16	5 1/4	8.7
23V20	300	230	115	GMV	3 x 3 1/16	4 5/8	3 7/8	4 1/8	10
23V24	500	220/250	110/125	GMV	3 x 3 3/8	4 5/8	3 7/8	4 1/2	10.2
23V14	500	220/250	110/125	IMV	3 1/2 x 5 3/8	6 1/16	5 7/8	5 5/16	14.5
23V78	600	230	115	GMV	3 x 3 7/8	4 5/8	4	5 3/4	12
23V73	1,000	230	115	GMV	3 1/2 x 4 1/4	5 1/4	4 3/8	5 3/4	19.5
23V32	1,000	220/250	110/125	JUV	4 1/4 x 3 1/2	6 5/8	5	6 5/8	20
23V15	1,000	220/250	110/125	IMV	4 1/4 x 6	7 1/16	6 1/8	6 1/2	22
23V201	1,000	120	440	GGV	3 7/16 x 5 5/8	5 3/4	4 1/4	7 1/2	25
23V84	1,200	220/240	110/120	GMV	3 x 5 1/2	4 5/8	3 7/8	6 7/8	18
23V120	2,500	230	115	GMV	3 1/2 x 4 7/8	5 5/16	4 1/2	7 7/8	33
23V85	2,500	220/240	110/120	JUV	3 7/8 x 7 7/8	6 3/8	5 1/4	10 1/2	30
23V200	3,000	230	115	JUV	4 1/4 x 6	6 3/8	5 5/16	7 5/8	40
23V46	3,000	208	230	GMM	2 1/2 x 3 3/4	4	4 1/2	6	10

# Has octagon outlet box for house wiring connections. ▲ VA Ratings are for industrial applications.

Line Voltage Regulators-Autotransformers									
50/60 CYCLES									
Part No.	VA Output	Primary Voltage	Secondary Voltage	Mfg. Type	Mtg. Centers	Dimensions			Wt. Lbs.
						H	W	D	
23V91	85 1/2	105/115/125/135/150/210/230/250	115	GMV	2 1/4 x 2 1/4	3 1/2	3	4 5/8	4.5
23V77	150	95/105/115/125/135	115	BHH	3 9/16	2 5/8	4	2 1/4	2.2
23V92	150 1/2	105/115/125/135/150/210/230/250	115	GMV	2 1/2 x 2 1/2	4	3 1/4	4 3/4	5.5
23V76	350	95/100/105/115/115/120/125/130	115	GMV	2 3/4 x 2	4 1/2	3 5/8	3 1/4	4.2
23V93	350	85/90/95/100/105/110/115/120/125	115	GMV	2 1/2 x 2 3/4	4	3 1/4	5	5
23V203	125	115	80/95/100/105/110/115/120/125/130/155/160	LHH	3 1/8 x 3	3 1/8	3 3/4	3 1/4	6
25V01	150	115	25/35/45/55/65/75/85/95/105/110/115/120/125/130	NTV	2 11/16 x 2 11/16	4 1/8	3 7/16	3 7/16	5
25V02	250	115	25/35/45/55/65/75/85/95/105/110/115/120/125/130	NTV	3 x 3	4 1/2	3 3/4	3 3/4	6.5
23V204	250	230	180/190/200/210/230/240/250/290/300/310	CHH	3 7/16 x 2 3/8	3 1/2	4 1/8	5 1/2	7.5
25V03	500	115	25/35/45/55/65/75/85/95/105/110/115/120/125/130	NTV	3 9/16 x 3 9/16	5 1/2	4 1/2	4 1/2	11
23V205	500	230	180/190/200/210/230/240/250/290/300/310	LHH	4 1/16 x 3 1/2	4 1/8	4 7/8	4 1/2	13.5
25V04	1,000	115	25/35/45/55/65/75/85/95/105/110/115/120/125/130	NTV	4 1/8 x 4 1/8	5 1/2	5 1/8	5 1/8	15.5
25V05	2,000	115	25/35/45/55/65/75/85/95/105/110/115/120/125/130	NTV	4 7/8 x 4 7/8	7	5 3/4	5 3/4	22

MTC. TYPE - GMV WITH METER

Line Voltage Regulators-Isolation									
COMPLETE WITH TAP SWITCH TO COVER 95 TO 145 V. RANGE									
Part No.	VA Output	Input Voltage	Output Voltage	Mtg. Centers	Dimensions			Wt. Lbs.	
						H	W	D	
23V55	150	95/100/105/110/115/120/125/130	115	3 x 4 1/4	4 5/8	3 15/16	5 3/8	7	
23V57	350	95/100/105/110/115/120/125/130	115	3 x 6 5/8	4 5/8	3 15/16	7 3/4	17	

Varivolt Isolation Transformers									
COMPLETE WITH TAP SWITCH TO COVER 95 TO 145 V. RANGE									
Part No.	Output Range on 117 Volt Line	VA Output (Resistive Load)	Dimensions			Wt. Lbs.			
			H	W	D				
23V56	95-145	500	7 1/4	5 7/8	8	25			
23V75	95-145	150	5 1/4	6	4 13/16	12			

Line Voltage Regulators-Autotransformers-With Meter									
Those Line Voltage Regulators provide the correct voltage to radios, TV Sets, air conditioners, refrigerators, deep freezers, automatic washers and many other appliances, even with variation in line voltage of 65-75-90-105-130 or 145 volts. They are also useful in altering the 115 volt line above and below the line voltage. An output receptacle and volt meter are internally connected to the 115 volt tap. All units are supplied with 6 ft. line cord and plug. All units have GMV Type Mounting with Meters.									
Part No.	VA Output	Input Voltage	Output Voltage	Mtg. Centers	Dimensions			Wt. Lbs.	
						H	W	D	
23V11	150	65/75/90/100/115/130/145	115	3 x 4 5/16	3 1/8	3 7/8	5 3/8	6.4	
23V12	150	65/75/90/100/115/130/145	115	3 x 5 1/16	3 1/2	3 7/8	6 1/8	10.5	
23V13	500	65/75/90/100/115/130/145	115	3 x 5 13/16	5 1/2	3 7/8	6 7/8	19.5	
23V07	500	95/100/105/110/115/120/125/130	115	3 x 4 1/8	4 5/8	3 15/16	5 1/4	7.25	
23V14	750	65/75/90/100/115/130/145	115	3 1/2 x 6 5/8	6 5/16	4 1/2	8 1/8	19	
23V09	1,200	65/75/90/100/115/130/145	115	3 1/2 x 7 3/4	6 5/16	4 1/2	10 1/4	25	
		230		3 x 9 1/8	4 5/8	3 15/16	10 1/4	21	

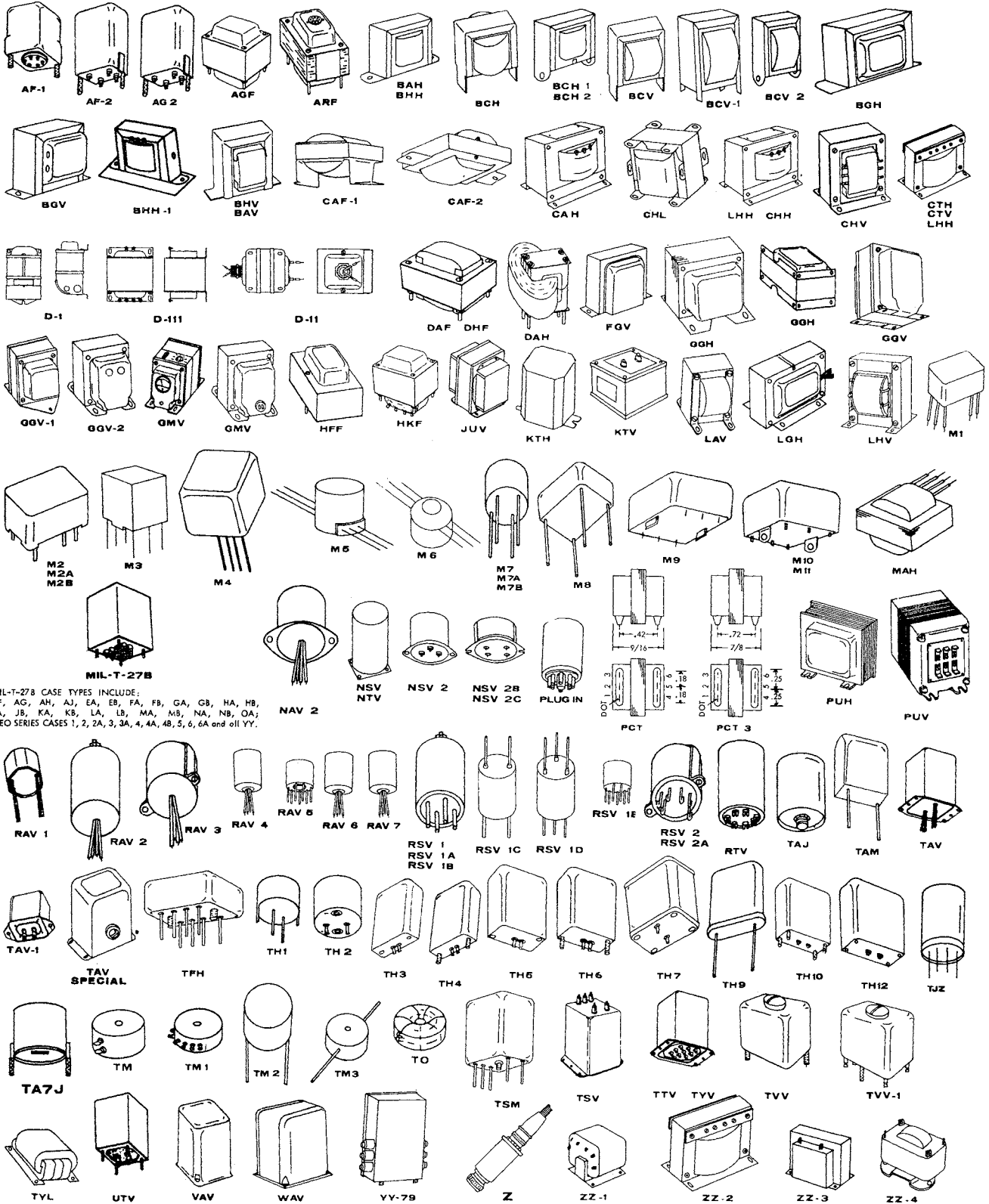
APPLICATIONS:  
 1. To provide 120 Volt Lighting or 120/240 Volt Power from 240-480-600 Volt distribution circuits.  
 2. To isolate or isolate lighting circuits from power circuits allowing the use of grounded or ungrounded circuits independent of power or other lighting circuit grounds.  
 3. The auto-transformers provide a smaller and more economical method of voltage changing. These auto-transformers may be used to obtain 120 Volts from a 240 Volt circuit, to establish a neutral ground from a 240 Volt circuit, or to balance the 120/240 Volt loading on a three phase line to obtain lower demand billing by the utility company.

Dry Type - Distribution											
INDOOR - SINGLE PHASE - DOUBLE WOUND - 50/60 CYCLES											
DRY TYPE GENERAL PURPOSE TRANSFORMERS are supplied in either double winding isolation or single winding auto-transformer types for 50/60 CPS applications. Either type may be used single phase or connected in a group of three for three phase. All units are Class B insulation for 80°C rise except the units marked (S) Class A for 55°C rise.											
CASE AND JUNCTION BOX. A stamped steel case encloses the entire coil assembly and provides an attractive appearance. The junction box is an integral part of the case and provides easy access and wiring to the individually marked primary and secondary leads. Knock outs are provided on the junction box for attaching conduit or bushings.											
WRINGING DIAGRAMS AND INSTRUCTIONS are furnished with each unit. On the inside of the junction box cover, a decal shows the schematic diagram and ratings of each transformer.											
Part No.	VA Output	Primary Voltage	Secondary Voltage	Wiring Diagram	Mtg. Centers			Dimensions			Wt. Lbs.
					D	E	A	B	C		
G-301	500	230/460	115/230	S-1	5 3/8	2 1/2	6 1/4	3 3/16	3	1.5	
G-302	500	230/460	115/230	S-2	5 3/8	2 1/2	6 1/4	3 3/16	3	1.5	
G-303	750	230/460	115/230	S-1	5 3/4	2 1/2	6 1/2	3 3/16	3	4	
G-304	750	575	115/230	S-2	5 3/4	2 1/2	6 1/2	3 3/16	3	4	
G-305	100	240/480	120/240	S-1	6	2 1/2	6 13/16	3 3/16	3	5	
G-306	100	600	120/240	S-2	6	2 1/2	6 13/16	3 3/16	3	5	
G-307	150	240/480	120/240	S-1	6 3/8	2 1/2	7 3/8	3 7/8	3 1/2	6	
G-308	150	600	120/240	S-2	6 3/8	2 1/2	7 3/8	3 7/8	3 1/2	6	
G-309	250	240/480	120/240	S-1	7	3 1/4	8	3 7/8	3 1/2	8	
G-310	250	600	120/240	S-2	7	3 1/4	8	3 7/8	3 1/2	8	
G-311	500	240/480	120/240	S-1	8 7/8	3 7/8	10	4 11/16	4 9/32	15	
G-312	500	600	120/240	S-2	8 7/8	3 7/8	10	4 11/16	4 9/32	15	
G-313	750	240/480	120/240	S-1	10 7/8	3 7/8	12	4 11/16	4 9/32	20	
G-314	750	600	120/240	S-2	10 7/8	3 7/8	12	4 11/16	4 9/32	20	
G-315	1,000	240/480	120/240	S-1	8 3/4	4 1/2	10 1/4	5 1/2	4 7/8	29	
G-316	1,000	480*	120/240	S-3	8 3/4	4 1/2	10 1/4	5 1/2	4 7/8	29	
G-317	1,000	600*	120/240	S-3	8 3/4	4 1/2	10 1/4	5 1/2	4 7/8	29	

\* Has octagon outlet box for house wiring connections. ▲ VA Ratings are for industrial applications.

Dry Type - Distribution											
INDOOR - SINGLE PHASE - AUTOTRANSFORMERS - 50/60 CYCLES											
DRY TYPE GENERAL PURPOSE TRANSFORMERS are supplied in either double winding isolation or single winding auto-transformer types for 50/60 CPS applications. Either type may be used single phase or connected in a group of three for three phase. All units are Class B insulation for 80°C rise except the units marked (S) Class A for 55°C rise.											
CASE AND JUNCTION BOX. A stamped steel case encloses the entire coil assembly and provides an attractive appearance. The junction box is an integral part of the case and provides easy access and wiring to the individually marked primary and secondary leads. Knock outs are provided on the junction box for attaching conduit or bushings.											
WRINGING DIAGRAMS AND INSTRUCTIONS are furnished with each unit. On the inside of the junction box cover, a decal shows the schematic diagram and ratings of each transformer.											
Part No.	VA Output	Primary Voltage	Secondary Voltage	Wiring Diagram	Mtg. Centers			Dimensions			Wt. Lbs.
					D	E	A	B	C		
G-318	1000	115/230	115/230								

# Mounting Illustrations



MIL-T-27B CASE TYPES INCLUDE:  
 AF, AG, AH, AJ, EA, EB, FA, FB, GA, GB, HA, HB,  
 JA, JB, KA, KB, LA, LB, MA, MB, NA, NB, OA;  
 GEO SERIES CASES 1, 2, 2A, 3, 3A, 4, 4A, 4B, 5, 6, 6A and all YY.

SECTION 5600

PART NO.	INDUSTRIAL NET				PART NO.	INDUSTRIAL NET				PART NO.	INDUSTRIAL NET				PART NO.	INDUSTRIAL NET							
	LIST	NET and 1 to 4	5 to 49	50 to 99		100 to 499	LIST	NET and 1 to 4	5 to 49		50 to 99	100 to 499	LIST	NET and 1 to 4		5 to 49	50 to 99	100 to 499	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499
<b>A</b>					25A132	39.00	33.10	31.20	28.60	27A60	9.30	7.90	7.44	6.82	27A203	7.70	6.55	6.16	5.40				
25A133					25A133	75.00	63.75	60.00	55.00	27A61	6.60	5.61	5.28	4.59	27A204	7.56	6.42	6.04	5.27				
25A134					25A134	63.00	53.35	50.40	46.20	27A62	6.75	5.73	5.40	4.70	27A205	7.43	6.22	5.95	5.17				
25A135					25A135	9.00	7.85	7.20	6.37	27A63	7.05	6.45	6.12	5.40	27A206	7.40	6.55	6.16	5.40				
25A136					25A136	22.00	18.80	17.20	15.40	27A64	7.05	6.00	5.64	4.91	27A207	7.70	6.55	6.16	5.40				
25A137					25A137	22.50	19.15	18.00	16.20	27A65	11.46	8.97	8.12	7.36	27A208	7.83	6.66	6.27	5.46				
25A138					25A138	13.50	11.46	10.80	9.39	27A66	12.75	10.83	10.20	9.35	27A209	8.11	7.46	7.07	6.15				
25A139					25A139	13.50	11.46	10.80	9.39	27A67	12.75	10.83	10.20	9.35	27A210	8.64	7.35	6.92	6.02				
25A140					25A140	23.00	18.80	17.20	15.40	27A68	7.20	6.12	5.76	5.00	27A211	8.77	7.45	7.01	6.12				
25A141					25A141	24.00	20.40	19.20	16.70	27A69	7.50	6.37	6.00	5.25	27A212	7.98	6.76	6.36	5.55				
25A142					25A142	21.00	17.85	16.80	14.60	27A70	25.50	21.67	20.40	18.70	27A213	7.56	6.42	6.06	5.27				
25A143					25A143	21.00	17.85	16.80	14.60	27A71	19.20	16.32	15.36	14.08	27A214	8.10	6.89	6.48	5.64				
25A144					25A144	24.00	20.40	19.20	16.70	27A72	27.75	23.58	22.20	20.34	27A215	8.64	7.35	6.92	6.02				
25A145					25A145	21.00	17.85	16.80	14.60	27A73	25.20	21.42	20.16	18.46	27A216	8.37	7.11	6.69	5.83				
25A146					25A146	30.00	25.50	24.00	20.90	27A74	23.40	19.90	18.72	17.18	27A217	8.77	7.45	7.01	6.12				
25A147					25A147	21.00	17.85	16.80	14.60	27A75	24.40	20.90	19.69	18.05	27A218	8.77	7.45	7.01	6.12				
25A148					25A148	21.00	17.85	16.80	14.60	27A76	25.20	21.42	20.16	18.46	27A219	8.77	7.45	7.01	6.12				
25A149					25A149	24.00	20.40	19.20	16.70	27A77	19.20	16.32	15.36	14.08	27A220	8.10	6.89	6.48	5.64				
25A150					25A150	30.00	25.50	24.00	20.90	27A78	19.20	16.32	15.36	14.08	27A221	7.97	6.77	6.37	5.56				
25A151					25A151	21.00	17.85	16.80	14.60	27A79	17.40	14.84	13.97	12.76	27A222	8.64	7.35	6.92	6.02				
25A152					25A152	24.00	20.40	19.20	16.70	27A80	19.60	16.65	15.88	14.74	27A223	8.77	7.45	7.01	6.12				
25A153					25A153	54.00	45.90	42.20	37.20	27A81	11.70	9.95	9.36	8.59	27A224	8.77	7.45	7.01	6.12				
25A154					25A154	7.20	6.12	5.76	5.02	27A82	12.00	10.20	9.60	8.80	27A225	8.64	7.35	6.92	6.02				
25A155					25A155	19.00	16.00	15.10	13.09	27A83	12.00	10.20	9.60	8.80	27A226	8.51	7.23	6.81	5.94				
25A156					25A156	24.00	20.40	19.20	16.70	27A84	12.00	10.20	9.60	8.80	27A227	8.77	7.45	7.01	6.12				
25A157					25A157	21.00	17.85	16.80	14.60	27A85	11.25	9.56	9.00	8.25	27A228	6.07	5.17	4.88	4.22				
25A158					25A158	30.00	25.50	24.00	20.90	27A86	9.60	8.25	7.80	7.19	27A229	6.61	5.63	5.29	4.59				
25A159					25A159	4.20	3.57	3.36	2.93	27A87	12.00	10.20	9.60	8.80	27A230	6.75	5.74	5.40	4.58				
25A160					25A160	5.40	4.59	4.32	3.76	27A88	12.00	10.20	9.60	8.80	27A231	6.75	5.74	5.40	4.58				
25A161					25A161	4.05	3.44	3.24	2.83	27A89	12.75	10.84	10.20	9.35	27A232	6.75	5.74	5.40	4.58				
25A162					25A162	4.80	4.08	3.84	3.34	27A90	12.75	10.84	10.20	9.35	27A233	5.94	5.09	4.75	4.12				
25A163					25A163	4.05	3.44	3.24	2.83	27A91	12.75	10.84	10.20	9.35	27A234	5.94	5.09	4.75	4.12				
25A164					25A164	11.90	1.00	96	84	27A92	12.60	10.10	9.08	8.24	27A235	6.34	5.40	5.08	4.40				
25A165					25A165	19	17	16	14	27A93	12.60	10.10	9.08	8.24	27A236	6.07	5.17	4.88	4.22				
25A166					25A166	2.40	2.04	1.92	1.67	27A94	10.50	8.92	8.40	7.70	27A237	6.34	5.40	5.08	4.40				
25A167					25A167	1.22	1.04	.98	.85	27A95	10.80	9.17	8.63	7.91	27A238	5.67	4.82	4.54	3.94				
25A168					25A168	5.80	4.94	4.64	4.03	27A96	10.50	8.92	8.40	7.70	27A239	6.07	5.17	4.88	4.22				
25A169					25A169	5.80	4.94	4.64	4.03	27A97	10.50	8.92	8.40	7.70	27A240	6.21	5.28	4.97	4.33				
25A170					25A170	6.75	5.74	5.40	4.68	27A98	10.50	8.92	8.40	7.70	27A241	6.34	5.40	5.08	4.40				
25A171					25A171	6.75	5.74	5.40	4.68	27A99	11.00	10.45	9.90	9.25	27A242	6.34	5.40	5.08	4.40				
25A172					25A172	7.96	6.77	6.37	5.56	27A100	7.50	6.37	6.00	5.30	27A243	5.94	5.05	4.75	4.12				
25A173					25A173	6.48	5.51	5.18	4.50	27A101	7.50	6.37	6.00	5.30	27A244	6.48	5.51	5.18	4.50				
25A174					25A174	7.29	6.19	5.83	5.06	27A102	6.60	5.67	5.28	4.84	27A245	7.02	5.97	5.62	4.87				
25A175					25A175	7.02	5.97	5.62	4.87	27A103	6.15	5.23	4.92	4.52	27A246	7.42	6.31	5.94	5.15				
25A176					25A176	7.15	6.09	5.72	4.96	27A104	5.86	5.06	4.72	4.08	27A247	7.15	6.09	5.72	4.96				
25A177					25A177	7.15	6.09	5.72	4.96	27A105	6.90	5.88	5.52	4.84	27A248	7.15	6.09	5.72	4.96				
25A178					25A178	7.29	6.19	5.83	5.06	27A106	6.90	5.88	5.52	4.84	27A249	6.75	5.74	5.40	4.68				
25A179					25A179	7.29	6.19	5.83	5.06	27A107	15.00	12.75	12.00	11.00	27A250	6.75	5.74	5.40	4.68				
25A180					25A180	7.29	6.19	5.83	5.06	27A108	15.00	12.75	12.00	11.00	27A251	6.75	5.74	5.40	4.68				
25A181					25A181	7.02	5.97	5.62	4.87	27A109	15.00	12.75	12.00	11.00	27A252	7.15	6.09	5.72	4.96				
25A182					25A182	7.29	6.19	5.83	5.06	27A110	15.00	12.75	12.00	11.00	27A253	7.29	6.19	5.83	5.06				
25A183					25A183	7.29	6.19	5.83	5.06	27A111	15.00	12.75	12.00	11.00	27A254	7.42	6.31	5.94	5.15				
25A184					25A184	7.42	6.31	5.94	5.15	27A112	15.00	12.75	12.00	11.00	27A255	7.02	5.97	5.62	4.87				
25A185					25A185	7.42	6.31	5.94	5.15	27A113	23.25	19.75	18.60	17.05	27A256	8.91	7.57	7.13	6.18				
25A186					25A186	6.61	5.63	5.29	4.59	27A114	23.25	20.01	18.84	17.27	27A257	9.32	8.03	7.66	6.50</				

SECTION 5600

INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET										
PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499		
27A231		8.91	7.57	7.13	6.18	20C124		4.80	4.08	3.84	3.52	26C76		3.25	1.95	1.65	1.55	1.43	27C117		11.40	9.67	9.12	8.36	
27A232		8.77	7.45	7.01	6.12	20C125		1.50	1.28	1.20	1.10	26C77		2.75	1.65	1.39	1.30	1.21	27C118		12.00	10.20	9.60	8.80	
27A233		8.10	6.89	6.48	5.64	20C126		1.50	1.28	1.20	1.10	26C78		5.34	3.20	2.72	2.56	2.35	27C119		18.00	15.30	14.40	13.20	
27A234		7.40	6.20	5.79	5.07	20C127		18.00	15.30	14.40	13.20	26C79		3.37	2.02	1.72	1.62	1.49	27C120		18.00	15.30	14.40	13.20	
27A235		6.48	5.31	5.19	4.51	20C128		18.00	15.30	14.40	13.20	26C80		3.05	1.83	1.56	1.47	1.35	27C121		11.40	9.67	9.12	8.36	
27A236		6.21	5.28	4.97	4.33	20C129		8.40	7.14	6.72	6.16	26C81		3.87	2.32	1.98	1.86	1.71	27C122		9.60	8.16	7.68	7.04	
27A237		8.10	6.89	6.48	5.62	20C130		9.30	7.90	7.44	6.82	26C82		2.90	1.74	1.48	1.39	1.27	27C123		7.20	6.12	5.76	5.28	
27A238		8.10	6.89	6.48	5.62	20C131		8.70	7.40	6.96	6.38	26C83		5.00	3.00	2.55	2.40	2.20	27C124		15.00	12.75	12.00	11.00	
27A239		5.65	4.83	4.53	3.95	20C132		6.00	5.61	5.28	4.84	26C84		3.50	2.00	1.68	1.58	1.42	27C125		15.00	12.75	12.00	11.00	
27A240		6.75	5.70	5.40	4.68	20C133		6.40	5.61	5.28	4.84	26C85		4.60	2.40	2.06	1.96	1.84	27C126		18.00	15.30	14.40	13.20	
27A241		5.67	4.83	4.53	3.95	20C134		12.00	10.20	9.60	8.84	26C86		4.00	2.40	2.00	1.90	1.75	27C127		10.00	8.67	8.16	7.48	
20C00		5.00	3.00	2.55	2.40	2.20	20C135		1.50	1.28	1.20	1.10	26C87		3.40	2.02	1.72	1.62	1.49	27C128		6.00	5.10	4.80	4.40
20C01		9.00	5.40	4.59	4.32	3.96	20C136		1.80	1.53	1.44	1.32	26C88		3.40	2.02	1.72	1.62	1.49	27C129		15.00	12.75	12.00	11.00
20C02		12.25	7.35	6.30	5.88	5.39	20C137		3.00	2.55	2.40	2.20	26C89		3.40	2.02	1.72	1.62	1.49	27C130		15.00	12.75	12.00	11.00
20C03		13.75	8.25	7.01	6.60	6.05	20C138		3.00	2.55	2.40	2.20	26C90		5.20	3.00	2.60	2.50	2.30	27C131		15.00	12.75	12.00	11.00
20C04		3.40	2.04	1.75	1.65	1.57	20C139		60.00	51.00	48.00	41.80	26C91		3.30	3.30	2.80	2.64	2.42	27C132		18.00	15.30	14.40	13.20
20C05		2.46	1.66	1.35	1.30	1.17	20C140		3.00	2.55	2.40	2.20	26C92		5.50	3.30	2.80	2.64	2.42	27C133		18.00	15.30	14.40	13.20
20C06		4.10	2.40	2.09	1.96	1.80	20C141		3.00	2.55	2.40	2.20	26C93		4.00	2.40	2.00	1.90	1.75	27C134		18.00	15.30	14.40	13.20
20C07		3.75	2.25	1.92	1.80	1.65	20C142		4.20	3.57	3.36	3.08	26C94		4.00	2.40	2.00	1.90	1.75	27C135		18.00	15.30	14.40	13.20
20C08		4.50	2.70	2.30	2.16	1.98	20C143		18.00	15.30	14.40	13.20	26C95		15.00	9.00	7.65	7.20	6.60	27C136		18.00	15.30	14.40	13.20
20C09		4.50	2.70	2.30	2.16	1.98	20C144		60.00	51.00	48.00	41.80	27C01		11.25	9.60	9.00	8.25	27C137		18.00	15.30	14.40	13.20	
20C10		7.02	4.40	3.75	3.53	3.27	20C145		40.00	30.00	28.00	24.80	27C02		13.50	11.47	10.80	9.40	27C138		18.00	15.30	14.40	13.20	
20C11		5.35	3.21	2.72	2.56	2.37	20C146		60.00	51.00	48.00	41.80	27C03		24.00	20.40	19.20	16.72	27C139		18.00	15.30	14.40	13.20	
20C12		4.75	2.85	2.42	2.28	2.09	20C147		45.00	3.82	3.60	3.30	27C04		16.50	14.65	13.20	12.10	27C140		93.00	79.00	74.00	68.00	
20C13		7.75	4.65	3.95	3.72	3.41	20C148		15.00	12.75	12.00	11.00	27C05		24.00	20.40	19.20	16.72	27C141		18.00	15.30	14.40	13.20	
20C14		5.75	3.45	2.93	2.76	2.53	20C149		36.00	30.60	28.80	26.40	27C06		30.00	25.50	24.00	22.00	27C142		18.00	15.30	14.40	13.20	
20C15		5.75	3.45	2.93	2.76	2.53	20C150		15.00	12.75	12.00	11.00	27C07		30.00	25.50	24.00	22.00	27C143		18.00	15.30	14.40	13.20	
20C16		5.75	3.45	2.93	2.76	2.53	20C151		15.00	12.75	12.00	11.00	27C08		30.00	25.50	24.00	22.00	27C144		18.00	15.30	14.40	13.20	
20C17		14.00	8.40	7.14	6.72	6.16	20C152		180.00	150.00	132.00	118.00	27C09		48.00	40.80	39.40	33.44	27C145		72.00	61.20	57.60	52.40	
20C18		10.80	8.40	9.18	8.64	7.92	20C153		30.00	7.90	7.44	6.82	27C10		75.00	63.75	60.00	55.00	27C146		18.00	15.30	14.40	13.20	
20C19		9.00	5.40	4.59	4.32	3.96	20C154		30.00	25.50	24.00	22.00	27C11		12.00	10.20	9.40	8.36	27C147		18.00	15.30	14.40	13.20	
20C20		10.80	9.18	8.64	7.92	20C155		37.50	31.90	30.00	27.50	27C12		6.00	5.10	4.80	4.40	27C148		72.00	61.20	57.60	52.40		
20C21		4.50	2.70	2.30	2.16	1.98	20C156		18.00	15.30	14.40	13.20	27C13		6.00	5.10	4.80	4.40	27C149		9.90	8.41	7.92	7.26	
20C22		11.10	9.44	8.88	8.14	20C157		18.00	15.30	14.40	13.20	27C14		24.00	20.40	19.20	16.72	27C150		15.00	12.75	12.00	11.00		
20C23		19.50	15.50	15.00	14.30	20C158		1.65	1.38	1.30	1.21	27C15		6.00	5.10	4.80	4.40	27C151		15.00	12.75	12.00	11.00		
20C24		45.00	38.25	36.00	33.00	20C159		45.00	38.25	36.00	33.00	27C16		7.05	5.99	5.64	5.17	27C152		18.00	15.30	14.40	13.20		
20C25		6.60	5.60	5.28	4.84	20C160		12.00	10.20	9.60	8.84	27C17		12.00	10.20	9.40	8.36	27C153		8.25	7.01	6.60	6.05		
20C26		15.00	9.00	7.65	7.20	6.60	20C161		11.10	9.43	8.87	8.13	27C18		24.00	20.40	19.20	16.72	27C154		5.25	4.46	4.20	3.66	
20C27		11.25	9.56	9.00	8.24	20C162		12.00	10.20	9.60	8.84	27C19		7.50	6.38	6.00	5.50	27C155		48.00	40.80	38.40	35.20		
20C28		33.75	27.75	26.25	24.75	20C163		15.00	12.75	12.00	11.00	27C20		10.20	8.67	8.16	7.11	27C156		30.00	25.50	24.00	22.00		
20C29		5.40	4.59	4.32	3.96	20C164		2.37	2.01	1.89	1.74	27C21		10.20	8.67	8.16	7.11	27C157		24.00	20.40	19.20	16.72		
20C30		6.60	5.60	5.28	4.84	20C165		4.95	4.21	3.96	3.63	27C22		11.55	9.82	9.24	8.05	27C158		24.00	20.40	19.20	16.72		
20C31		11.25	9.56	9.00	8.24	20C166		4.95	4.21	3.96	3.63	27C23		12.75	10.83	10.20	9.33	27C159		28.50	24.22	22.80	20.90		
20C32		11.10	9.44	8.88	8.14	20C167		4.95	4.21	3.96	3.63	27C24		12.00	10.20	9.40	8.36	27C160		24.00	20.40	19.20	16.72		
20C33		11.25	9.56	9.00	8.24	25C01		5.64	4.79	4.51	3.92	27C25		12.00	10.20	9.40	8.36	27C161		24.00	20.40	19.20	16.72		
20C34		30.00	25.50	24.00	22.00	25C02		4.59	3.90	3.67	3.20	27C26		12.00	10.20	9.40	8.36	27C162		24.00	20.40	19.20	16.72		
20C35		2.90	1.75	1.40	1.30	2.20	25C03		4.59	3.90	3.67	3.20	27C27		12.00	10.20	9.40	8.36	27C163		24.00	20.40	19.20	16.72	
20C36		2.90	1.75	1.40	1.30	2.20	25C04		4.59	3.90	3.67	3.20	27C28		12.00	10.20	9.40	8.36	27C164		24.00	20.40	19.20	16.72	



SECTION 5600

INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET									
PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	
27C254		7.56	6.42	6.04	5.52	27C404		24.30	20.66	19.45	16.93	21F41		4.38	3.72	3.50	3.21	25F63		10.30	9.92	8.40	7.70	
27C257		7.29	6.21	5.85	5.08	27C405		24.30	20.66	19.45	16.93	21F42		6.00	5.10	4.80	4.18	25F64		21.00	12.65	11.76	10.20	
27C258		7.29	6.21	5.85	5.08	27C406		24.30	20.66	19.45	16.93	21F43		7.50	6.38	6.00	5.22	25F65		18.90	16.06	15.12	13.86	
27C259		7.56	6.42	6.04	5.52	27C407		24.30	20.66	19.45	16.93	21F44		3.90	3.31	3.12	2.86	25F66		27.00	22.95	21.60	19.80	
27C260		7.56	6.42	6.04	5.52	27C408		24.30	20.66	19.45	16.93	21F45		6.00	5.10	4.80	4.20	25F67		11.10	9.43	8.87	8.13	
27C261		7.83	6.66	6.24	5.46	27C409		25.32	21.72	20.49	17.97	21F46		8.70	7.39	6.95	6.38	25F68		6.75	5.73	5.40	4.70	
27C262		7.83	6.66	6.24	5.46	27C410		28.35	24.10	22.69	19.75	21F47		7.50	6.38	6.00	5.22	25F69		12.00	10.50	9.75	8.70	
27C263		7.83	6.66	6.24	5.46	27C411		28.35	24.10	22.69	19.75	21F48		24.00	20.10	19.20	17.00	25F70		12.00	10.50	9.75	8.70	
27C264		8.10	6.89	6.46	5.64	27C412		27.00	22.95	21.60	18.81	21F49		24.00	20.40	19.20	17.00	25F71		6.00	5.10	4.80	4.18	
27C265		5.70	4.85	4.56	3.97	27C413		27.00	22.95	21.60	18.81	21F50		6.00	5.10	4.80	4.18	25F72		16.50	14.03	13.20	12.10	
27C266		5.70	4.85	4.56	3.97	27C414		54.00	45.90	43.20	37.62	21F51		5.00	3.00	2.55	2.20	25F73		13.50	11.46	10.80	9.90	
27C267		5.70	4.85	4.56	3.97	27C415		28.35	24.10	22.69	19.75	21F52		9.00	7.65	7.20	6.20	25F74		10.30	8.92	8.40	7.70	
27C268		5.70	4.85	4.56	3.97	27C416		28.35	24.10	22.69	19.75	21F53		6.00	5.10	4.80	4.18	25F75		15.75	14.40	13.60	11.55	
27C269		5.70	4.85	4.56	3.97	27C417		27.00	22.95	21.60	18.81	21F54		7.50	6.38	6.00	5.22	25F76		9.45	8.03	7.56	6.93	
27C270		6.00	5.10	4.80	4.18	27C418		27.00	22.95	21.60	18.81	21F55		6.00	5.10	4.80	4.18	25F77		8.10	6.88	6.48	5.64	
27C271		6.00	5.10	4.80	4.18	27C419		27.00	22.95	21.60	18.81	21F56		6.75	5.74	5.40	4.95	25F78		9.30	7.90	7.44	6.48	
27C272		6.00	5.10	4.80	4.18	27C420		27.00	22.95	21.60	18.81	21F57		7.50	6.38	6.00	5.50	25F79		13.50	11.47	10.80	9.41	
27C273		6.00	5.10	4.80	4.18	27C421		35.10	29.86	28.10	24.45	21F58		6.75	5.49	4.32	3.96	25F80		16.20	13.77	12.96	11.28	
27C274		6.48	5.52	5.20	4.51	27C422		35.10	29.86	28.10	24.45	21F59		7.50	6.50	5.40	4.70	25F81		13.50	11.47	10.80	9.41	
27C275		5.52	5.20	4.51		27C423		35.10	29.86	28.10	24.45	21F60		4.00	3.50	3.20	2.86	25F82		9.45	8.03	7.56	6.93	
27C276		10.80	9.18	8.56	7.52	27C424		35.10	29.86	28.10	24.45	21F61		5.25	4.89	4.16	3.91	2.58	25F83		16.20	13.77	12.96	11.28
27C277		10.80	9.18	8.56	7.52	27C425		35.10	29.86	28.10	24.45	21F62		5.85	4.97	4.68	4.29	25F84		21.00	18.34	17.28	15.05	
27C278		10.80	9.18	8.56	7.52	27C426		35.10	29.86	28.10	24.45	21F63		7.20	6.20	5.57	5.06	25F85		14.55	12.37	11.64	10.73	
27C279		10.80	9.18	8.56	7.52	27C427		35.10	29.86	28.10	24.45	21F64		12.25	7.35	6.24	5.88	5.39	25F86		12.30	10.46	9.84	9.02
27C280		10.80	9.18	8.56	7.52	27C428		37.80	32.13	30.24	26.34	21F65		10.95	6.57	5.92	5.33	25F87		14.70	12.70	12.00	10.28	
27C281		9.18	8.56	7.52		27C429		35.10	29.86	28.10	24.45	21F66		5.25	4.66	4.50	3.85	25F88		16.95	14.41	13.56	12.43	
27C282		11.40	9.84	9.28	8.10	27C430		35.10	29.86	28.10	24.45	21F67		15.00	9.00	7.65	7.20	6.60	25F89		18.00	15.30	14.40	13.30
27C283		11.40	9.84	9.28	8.10	27C431		35.10	29.86	28.10	24.45	21F68		16.25	9.75	8.26	7.78	6.78	25F90		15.00	12.75	12.00	11.00
27C284		11.40	9.84	9.28	8.10	27C432		37.80	32.13	30.24	26.34	21F69		6.50	3.90	3.31	3.12	2.86	25F91		16.80	14.28	13.44	12.32
27C285		11.40	9.84	9.28	8.10	27C433		37.80	32.13	30.24	26.34	21F70		6.00	4.80	4.40	3.84	3.33	25F92		20.25	17.21	16.20	14.85
27C286		11.40	9.84	9.28	8.10	27C434		37.80	32.13	30.24	26.34	21F71		5.75	3.45	2.93	2.76	2.53	25F93		3.90	3.32	3.12	2.86
27C287		11.40	9.84	9.28	8.10	27C435		37.80	32.13	30.24	26.34	21F72		6.50	3.90	3.31	3.12	2.86	25F94		45.00	38.20	36.00	33.30
27C288		11.40	9.84	9.28	8.10	27C436		37.80	32.13	30.24	26.34	21F73		6.50	3.90	3.31	3.12	2.86	25F95		8.70	7.39	6.95	6.05
27C289		11.40	9.84	9.28	8.10	27C437		37.80	32.13	30.24	26.34	21F74		10.00	6.00	5.10	4.80	4.18	25F96		11.10	9.43	8.87	7.70
27C290		11.40	9.84	9.28	8.10	27C438		37.80	32.13	30.24	26.34	21F75		10.50	6.30	5.56	5.04	4.62	26F00		5.00	3.00	2.55	2.40
27C291		11.40	9.84	9.28	8.10	27C439		37.80	32.13	30.24	26.34	21F76		11.35	11.35	10.68	9.79	26F01		8.75	5.25	4.44	4.16	
27C292		11.40	9.84	9.28	8.10	27C440		37.80	32.13	30.24	26.34	21F77		11.00	9.40	8.87	8.13	26F02		12.00	7.20	6.12	5.78	
27C293		11.40	9.84	9.28	8.10	27C441		37.80	32.13	30.24	26.34	21F78		11.00	9.40	8.87	8.13	26F03		4.50	2.70	2.30	1.87	
27C294		11.40	9.84	9.28	8.10	27C442		37.80	32.13	30.24	26.34	21F79		11.00	9.40	8.87	8.13	26F04		12.00	7.20	6.12	5.78	
27C295		11.40	9.84	9.28	8.10	27C443		37.80	32.13	30.24	26.34	21F80		11.00	9.40	8.87	8.13	26F05		4.50	2.70	2.30	1.87	
27C296		11.40	9.84	9.28	8.10	27C444		37.80	32.13	30.24	26.34	21F81		11.00	9.40	8.87	8.13	26F06		10.00	6.00	5.10	4.80	
27C297		11.40	9.84	9.28	8.10	27C445		37.80	32.13	30.24	26.34	21F82		11.00	9.40	8.87	8.13	26F07		5.00	3.00	2.55	2.40	
27C298		11.40	9.84	9.28	8.10	27C446		37.80	32.13	30.24	26.34	21F83		11.00	9.40	8.87	8.13	26F08		10.00	6.00	5.10	4.80	
27C299		11.40	9.84	9.28	8.10	27C447		37.80	32.13	30.24	26.34	21F84		11.00	9.40	8.87	8.13	26F09		5.00	3.00	2.55	2.40	
27C300		11.40	9.84	9.28	8.10	27C448		37.80	32.13	30.24	26.34	21F85		11.00	9.40	8.87	8.13	26F10		5.00	3.00	2.55	2.40	
27C301		11.40	9.84	9.28	8.10	27C449		37.80	32.13	30.24	26.34	21F86		11.00	9.40	8.87	8.13	26F11		5.00	3.00	2.55	2.40	
27C302		11.40	9.84	9.28	8.10	27C450		37.80	32.13	30.24	26.34	21F87		11.00	9.40	8.87	8.13	26F12		5.00	3.00	2.55	2.40	
27C303		11.40	9.84	9.28	8.10	27C451		37.80	32.13	30.24	26.34	21F88		11.00	9.40	8.87	8.13	26F13		5.00	3.00	2.55	2.40	
27C304		11.40	9.84	9.28	8.10	27C452		37.80	32.13	30.24	26.34	21F89		11.00	9.40	8.87	8.13	26F14		5.00	3.00	2.55	2.40	
27C305		11.40	9.84	9.28	8.10	27C453		37.80	32.13	30.24	26.34	21F90		11.00	9.40	8.87	8.13	26F15		5.00	3.00	2.55	2.40	
27C306		11.40	9.84	9.28	8.10	27C454		37.80	32.13	30.24	26.34	21F91		11.00	9.40	8.87	8.13	26F16		5.00	3.00	2.55	2.40	
27C307		11.40	9.84	9.28	8.10	27C455		37.80	32.13	30.24	26.34	21F92		11.00	9.40	8.87	8.13	26F17		5.00	3.00	2.55	2.40	
27C308		11.40	9.84	9.28	8.10	27C456		37.80	32.13	30.24	26.34	21F93		11.00	9.40	8.87	8.13	26F18		5.00	3.00	2.55	2.40	
27C309		11.40	9.84	9.28	8.10	27C457		37.80	32.13	30.24	26.34	21F94		11.00	9.40	8.87	8.13	26F19		5.00	3.00	2.55	2.40	
27C310		11.40	9.84	9.28	8.10	27C458		37.80	32.13	30.24	26.34	21F95		11.00	9.40	8.87	8.13	26F20		5.00	3.00	2.55	2.40	
27C311		11.40	9.84	9.28	8.10	27C459		37.80	32.13	30.24	26.34	21F9												

SECTION 5600

PART NO.	LIST	INDUSTRIAL NET			
		NET and 1 to 4	5 to 49	50 to 99	100 to 499
27F91		12.40	10.70	10.08	9.24
27F92		14.10	11.29	10.67	9.84
27F93		13.50	11.47	10.80	9.90
27F94		16.05	13.64	12.84	11.77
27F95		15.90	13.51	12.72	11.67
27F96		17.55	14.92	14.04	12.87
27F97		23.75	17.76	16.40	15.05
27F98		24.25	18.50	17.00	15.60
27F99		16.20	13.77	12.96	11.88
27F100		24.00	20.40	19.20	17.60
27F101		30.00	25.50	24.00	22.00
27F102		15.00	12.75	12.00	11.00
27F103		13.20	11.22	10.56	9.68
27F104		15.60	13.26	12.48	11.44
27F105		13.20	11.22	10.56	9.68
27F106		14.70	12.65	11.76	10.78
27F107		15.00	12.75	12.00	11.00
27F108		19.50	16.58	15.60	14.30
27F109		45.00	38.20	36.00	33.30
27F110		30.00	25.50	24.00	22.00
27F111		45.00	38.20	36.00	33.30
27F112		18.00	15.30	14.40	13.20
27F113		45.00	38.20	36.00	33.30
27F114		45.00	38.20	36.00	33.30
27F115		75.00	63.80	60.00	55.20
27F116		6.75	5.73	5.40	4.70
27F117		24.00	20.40	19.20	17.60
27F118		75.00	63.80	60.00	55.20
27F119		75.00	63.80	60.00	55.20
27F120		18.00	15.30	14.40	13.20
27F121		15.00	12.75	12.00	11.00
27F122		15.00	12.75	12.00	11.00
27F123		75.00	63.80	60.00	55.20
27F124		10.50	8.92	8.40	7.70
27F125		10.50	8.92	8.40	7.70
27F126		37.50	31.90	30.60	27.90
27F127		30.00	25.50	24.00	22.00
27F128		24.00	20.40	19.20	17.60
27F129		18.00	15.30	14.40	13.20
27F130		15.00	12.75	12.00	11.00
27F131		30.00	25.50	24.00	22.00
27F132		36.00	30.60	28.80	26.40
27F133		48.00	40.80	38.40	35.20
27F134		18.00	15.30	14.40	13.20
27F135		8.10	6.88	6.48	5.64
27F136		10.80	9.17	8.63	7.51
27F137		13.50	11.47	10.80	9.90

PART NO.	LIST	INDUSTRIAL NET			
		NET and 1 to 4	5 to 49	50 to 99	100 to 499
GEO 33		17.55	14.92	14.04	12.87
GEO 34		17.55	14.92	14.04	12.87
GEO 35		17.55	14.92	14.04	12.87
GEO 36		18.60	15.81	14.88	13.64
GEO 37		18.60	15.81	14.88	13.64
GEO 38		18.60	15.81	14.88	13.64
GEO 39		18.60	15.81	14.88	13.64
GEO 40		23.25	19.76	18.60	17.05
GEO 41		15.00	12.75	12.00	11.00
GEO 42		14.70	12.65	11.76	10.78
GEO 43		14.70	12.65	11.76	10.78
GEO 44		17.55	14.92	14.04	12.87
GEO 45		17.55	14.92	14.04	12.87
GEO 46		16.95	14.41	13.56	12.43
GEO 47		16.95	14.41	13.56	12.43
GEO 48		17.55	14.92	14.04	12.87
GEO 49		19.05	16.19	15.24	13.97
GEO 50		22.50	19.15	18.00	16.50
GEO 51		18.45	15.68	14.76	13.53
GEO 52		18.45	15.68	14.76	13.53
GEO 53		18.30	15.55	14.64	13.42
GEO 54		18.30	15.55	14.64	13.42
GEO 55		18.30	15.55	14.64	13.42
GEO 56		21.75	18.49	17.40	15.95
GEO 57		21.75	18.49	17.40	15.95
GEO 58		19.05	16.19	15.24	13.97
GEO 59		19.05	16.19	15.24	13.97
GEO 60		22.50	19.15	18.00	16.50
GEO 61		18.00	15.30	14.40	13.20
GEO 62		18.00	15.30	14.40	13.20
GEO 63		15.75	13.39	12.60	11.55
GEO 64		17.25	14.66	13.80	12.65
GEO 65		17.25	14.66	13.80	12.65
GEO 66		16.95	14.41	13.56	12.43
GEO 67		16.95	14.41	13.56	12.43
GEO 68		21.00	17.85	16.80	15.40
GEO 69		21.00	17.85	16.80	15.40
GEO 70		23.25	19.76	18.60	17.05
GEO 71		23.25	19.76	18.60	17.05
GEO 72		21.00	17.85	16.80	15.40
GEO 73		21.00	17.85	16.80	15.40
GEO 74		21.00	17.85	16.80	15.40
GEO 75		21.00	17.85	16.80	15.40
GEO 76		21.00	17.85	16.80	15.40
GEO 77		21.00	17.85	16.80	15.40
GEO 78		18.00	15.30	14.40	13.20
GEO 79		21.75	18.49	17.40	15.95
GEO 80		18.00	15.30	14.40	13.20
GEO 81		16.05	13.64	12.84	11.77
GEO 82		21.90	18.62	17.52	16.06
GEO 83		23.25	19.76	18.60	17.05
GEO 84		24.00	20.40	19.20	17.60
GEO 85		23.25	19.76	18.60	17.05
GEO 86		23.25	19.76	18.60	17.05
GEO 87		23.25	19.76	18.60	17.05

**M**

PART NO.	LIST	INDUSTRIAL NET			
		NET and 1 to 4	5 to 49	50 to 99	100 to 499
MIT 1		9.00	7.65	7.20	6.60
MIT 2		9.00	7.65	7.20	6.60
MIT 3		13.50	11.47	10.80	9.90
MIT 4		7.50	6.38	6.00	5.50
MIT 5		9.00	7.65	7.20	6.60
MIT 6		12.00	10.20	9.60	8.80
MIT 7		7.50	6.38	6.00	5.50
MIT 8		7.50	6.38	6.00	5.50
MIT 9		12.00	10.20	9.60	8.80
MIT 10		7.50	6.38	6.00	5.50
MIT 11		7.50	6.38	6.00	5.50
MIT 12		12.00	10.20	9.60	8.80
MIT 13		9.00	7.65	7.20	6.60
MIT 14		10.50	8.92	8.40	7.70
MIT 15		13.50	11.47	10.80	9.90
MIT 16		7.50	6.38	6.00	5.50
MIT 17		7.50	6.38	6.00	5.50
MIT 18		12.00	10.20	9.60	8.80
MIT 19		7.50	6.38	6.00	5.50
MIT 20		10.50	8.92	8.40	7.70
MIT 21		9.00	7.65	7.20	6.60
MIT 22		9.00	7.65	7.20	6.60
MIT 23		12.00	10.20	9.60	8.80
MIT 24		6.00	5.10	4.80	4.40
MIT 25		6.00	5.10	4.80	4.40
MIT 26		12.00	10.20	9.60	8.80
MIT 27		6.00	5.10	4.80	4.40
MIT 28		7.50	6.38	6.00	5.50
MIT 29		12.00	10.20	9.60	8.80
MIT 30		9.00	7.65	7.20	6.60
MIT 31		9.00	7.65	7.20	6.60
MIT 32		13.50	11.47	10.80	9.90
MIT 33		6.90	5.87	5.52	5.06
MIT 34		7.50	6.38	6.00	5.50
MIT 35		12.00	10.20	9.60	8.80
MIT 36		7.50	6.38	6.00	5.50
MIT 37		9.00	7.65	7.20	6.60
MIT 38		12.00	10.20	9.60	8.80
MIT 39		6.00	5.10	4.80	4.40
MIT 40		10.50	8.92	8.40	7.70
MIT 41		7.50	6.38	6.00	5.50
MIT 42		7.50	6.38	6.00	5.50
MIT 43		10.50	8.92	8.40	7.70
MIT 44		6.00	5.10	4.80	4.40
MIT 45		8.25	7.01	6.60	6.05
MIT 46		11.25	9.58	9.00	8.25
MIT 47		6.00	5.10	4.80	4.40
MIT 48		7.50	6.38	6.00	5.50

PART NO.	LIST	INDUSTRIAL NET			
		NET and 1 to 4	5 to 49	50 to 99	100 to 499
MIT 78		7.50	6.38	6.00	5.50
MIT 79		3.75	3.19	3.00	2.81
MIT 80		5.25	4.44	4.20	3.92
MIT 81		8.25	7.01	6.60	6.05
MIT 82		3.60	3.06	2.88	2.64
MIT 83		6.75	5.74	5.40	4.95
MIT 84		9.00	7.65	7.20	6.60
MIT 85		7.80	6.63	6.24	5.72
MIT 86		7.80	6.63	6.24	5.72
MIT 87		9.00	7.65	7.20	6.60
MIT 88		6.00	5.10	4.80	4.40
MIT 89		6.75	5.74	5.40	4.95
MIT 90		7.50	6.38	6.00	5.50
MIT 91		6.00	5.10	4.80	4.40
MIT 92		7.50	6.38	6.00	5.50
MIT 93		9.00	7.65	7.20	6.60
MIT 94		3.60	3.06	2.88	2.64
MIT 95		7.50	6.38	6.00	5.50
MIT 96		9.00	7.65	7.20	6.60
MIT 97		7.50	6.38	6.00	5.50
MIT 98		7.50	6.38	6.00	5.50
MIT 99		9.00	7.65	7.20	6.60
MIT 100		9.00	7.65	7.20	6.60
MIT 101		6.00	5.10	4.80	4.40
MIT 102		6.00	5.10	4.80	4.40
MIT 103		9.00	7.65	7.20	6.60
MIT 104		9.00	7.65	7.20	6.60
MIT 105		10.50	8.92	8.40	7.70
MIT 106		9.00	7.65	7.20	6.60
MIT 107		8.25	7.01	6.60	6.05
MIT 108		10.50	8.92	8.40	7.70
MIT 109		9.00	7.65	7.20	6.60
MIT 110		7.50	6.38	6.00	5.50
MIT 111		9.00	7.65	7.20	6.60
MIT 112		5.40	4.59	4.32	3.96
MIT 113		6.00	5.10	4.80	4.40
MIT 114		7.50	6.38	6.00	5.50
MIT 115		6.90	5.87	5.52	5.06
MIT 116		7.50	6.38	6.00	5.50
MIT 117		9.00	7.65	7.20	6.60
MIT 118		8.10	6.88	6.48	5.94
MIT 119		8.10	6.88	6.48	5.94
MIT 120		10.80	9.17	8.63	7.70
MIT 121		7.50	6.38	6.00	5.50
MIT 122		7.50	6.38	6.00	5.50
MIT 123		10.50	8.92	8.40	7.70
MIT 124		7.50	6.38	6.00	5.50
MIT 125		7.50	6.38	6.00	5.50
MIT 126		10.50	8.92	8.40	7.70
MIT 127		6.90	5.87	5.52	5.06
MIT 128		9.00	7.65	7.20	6.60
MIT 129		9.00	7.65	7.20	6.60
MIT 130		5.40	4.59	4.32	3.96
MIT 131		6.00	5.10	4.80	4.40
MIT 132		7.50	6.38	6.00	5.50
MIT 133		7.50	6.38	6.00	5.50
MIT 134		7.50	6.38	6.00	



SECTION 5600

INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET								
PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499
22802	12.50	7.50	6.38	6.00	5.50	24810U	8.25	4.95	4.21	3.96	3.63	24819	9.60	8.16	7.68	7.04	6.82	26846	30.00	18.00			
22803	39.50	21.00	17.85	16.80	15.40	24802T	10.85	6.51	5.53	5.21	4.77	248130	7.90	7.90	7.44	6.82	6.60	26847	25.00	15.00			
22804	12.50	7.50	6.38	6.00	5.50	24803U	10.85	6.51	5.53	5.21	4.77	248131	9.50	7.90	7.44	6.82	6.60	26848	25.00	15.00			
22805	17.00	10.20	7.65	7.20	6.60	24804	20.00	12.00	10.20	9.60	8.80	248132	9.60	8.16	7.68	7.04	6.82	26849	25.00	15.00			
22806U	17.00	10.20	7.65	7.20	6.60	24804T	11.75	7.05	5.99	5.64	5.17	248134	18.00	15.30	14.40	13.20	12.00	26850	28.50	17.10			
22807	21.00	12.60	10.70	10.00	9.30	24805	12.75	7.65	6.50	6.12	5.61	248135	15.00	12.75	12.00	11.00	10.00	26851	24.00	14.00			
22808	10.80	6.40	5.10	4.80	4.50	24806U	12.75	7.65	6.50	6.12	5.61	248136	15.00	12.75	12.00	11.00	10.00	26852	25.00	15.00			
22809	11.00	6.60	5.60	5.10	4.20	24806T	15.00	10.80	9.18	8.64	7.92	248139	45.00	38.20	36.00	33.30	30.00	26853	25.00	15.00			
22810	17.00	10.20	7.65	7.20	6.60	24806U	18.00	10.80	9.18	8.64	7.92	248140	15.00	12.75	12.00	11.00	10.00	26854	25.00	15.00			
22811	17.50	10.50	8.90	8.40	7.70	24807	18.00	10.80	9.18	8.64	7.92	248141	18.00	15.30	14.40	13.20	12.00	26855	17.50	10.50			
22812	8.00	4.80	4.10	3.80	3.60	24807U	18.00	10.80	9.18	8.64	7.92	248142	18.00	15.30	14.40	13.20	12.00	26856	25.00	15.00			
22813	8.00	4.80	4.10	3.80	3.60	24808	8.75	5.25	4.46	4.20	3.85	248143	18.00	15.30	14.40	13.20	12.00	26857	30.00	18.00			
22814	31.25	18.75	15.94	15.00	13.75	24808U	9.75	5.25	4.46	4.20	3.85	248144	75.00	63.80	60.00	52.20	48.00	26858	30.00	18.00			
22815	25.00	15.00	12.75	12.00	11.00	24809	9.25	5.55	4.72	4.44	4.07	248145	13.50	11.47	10.80	9.90	9.00	26859	6.00	3.60			
22816	20.00	12.00	10.30	9.60	8.80	24809U	9.25	5.55	4.72	4.44	4.07	248146	42.00	35.70	33.60	30.80	28.00	26860	30.00	18.00			
22817	25.00	15.00	12.75	12.00	11.00	24810	9.25	5.55	4.72	4.44	4.07	248147	30.00	25.20	24.00	22.00	20.00	26861	30.00	18.00			
22818	9.50	5.70	4.85	4.60	4.20	24811	6.75	4.05	3.44	3.24	2.97	248148	24.00	20.40	19.20	17.60	16.00	26862	50.00	30.00			
22819	10.00	6.00	5.10	4.80	4.40	24811U	6.75	4.05	3.44	3.24	2.97	248149	18.00	15.30	14.40	13.20	12.00	26863	13.00	7.80			
22820	10.00	6.00	5.10	4.80	4.40	24812	8.00	4.80	4.08	3.84	3.55	248150	45.00	38.20	36.00	33.30	30.00	26864	24.00	14.00			
22821	22.50	13.50	11.50	10.60	9.90	24812U	8.00	4.80	4.08	3.84	3.55	248151	7.50	6.38	6.00	5.22	4.80	26865	30.00	18.00			
22822	9.50	6.70	4.85	4.60	4.18	24813	10.25	6.15	5.23	4.92	4.51	248152	18.00	15.30	14.40	13.20	12.00	26866	31.00	18.90			
22823	7.50	4.50	3.80	3.60	3.30	24813U	10.25	6.15	5.23	4.92	4.51	248153	45.00	38.20	36.00	33.30	30.00	26867	25.00	15.00			
22824	17.50	10.50	8.90	8.40	7.70	24814	21.25	12.75	10.83	10.20	9.35	248154	24.00	20.40	19.20	17.60	16.00	26868	29.80	17.85			
22825	7.50	5.40	4.80	4.60	4.40	24815	21.75	13.05	10.59	10.44	9.57	248155	24.00	20.40	19.20	17.60	16.00	26869	25.00	15.00			
22826	10.00	6.00	5.10	4.80	4.40	24816	7.25	4.25	3.54	3.24	2.97	26870	35.00	21.00									
22827	8.25	5.05	4.25	4.00	3.70	24817	12.25	7.35	6.24	5.88	5.37	26871	35.00	21.00									
22828	10.90	6.50	5.50	5.20	4.30	24818	17.50	10.50	8.93	8.40	7.70	26872	35.00	21.00									
22829	10.00	6.00	5.10	4.80	4.40	24819	8.00	4.80	4.08	3.84	3.52	26873	30.00	18.00									
22830	11.00	6.60	5.60	5.10	4.20	24819U	8.00	4.80	4.08	3.84	3.52	26874	30.00	18.00									
22831	17.50	10.50	8.90	8.40	7.70	24820	12.25	7.35	6.24	5.88	5.37	26875	37.40	22.44									
22832	17.00	10.20	8.70	8.00	7.50	24820U	12.25	7.35	6.24	5.88	5.37	26876	40.00	24.00									
22833	22.50	13.50	11.40	10.80	9.90	24821	10.75	6.45	5.48	5.16	4.73	26877	25.00	15.00									
22834	25.00	15.00	12.75	12.00	11.00	24821U	10.75	6.45	5.48	5.16	4.73	26878	25.00	15.00									
22835	28.50	17.10	14.50	13.70	12.60	24822	13.50	8.10	6.88	6.48	5.94	26879	30.00	18.00									
22836	25.00	15.00	12.75	12.00	11.00	24822U	13.50	8.10	6.88	6.48	5.94	26880	34.00	20.82									
22837	15.00	7.50	6.40	6.00	5.50	24823	17.50	10.50	8.93	8.40	7.70	26881	31.00	18.90									
22838	11.50	6.90	5.90	5.50	5.10	24824	18.75	11.25	9.56	9.00	8.25	26882	27.00	16.20									
22839	4.25	2.55	2.16	2.04	1.87	24825	15.00	9.00	7.65	7.20	6.65	26883	25.00	15.00									
22840	20.00	12.00	10.20	9.60	8.80	24826	16.25	9.75	8.29	7.80	7.15	26884	21.00	12.60									
22841	7.50	4.50	3.80	3.60	3.30	24826U	16.25	9.75	8.29	7.80	7.15	26885	25.00	15.00									
22842	12.50	7.50	6.40	6.00	5.50	24827	17.25	11.85	10.07	9.48	8.69	26886	30.00	18.00									
22843	17.50	10.50	8.90	8.40	7.70	24828	22.50	13.50	11.58	10.98	10.00	26887	36.00	21.60									
22844	10.00	6.00	5.10	4.80	4.40	24829	25.00	15.00	12.75	12.00	11.00	26888	35.00	21.00									
22845	17.50	10.50	8.90	8.40	7.70	24830	9.45	8.03	7.56	6.93	26889	30.00	18.00										
22846	20.00	12.00	10.20	9.60	8.80	24831	18.75	15.94	15.00	13.75	26890	31.00	18.90										
22847	12.50	7.50	6.38	6.00	5.50	24832	18.75	15.94	15.00	13.75	26891	34.00	20.82										
22848	9.00	5.40	4.60	4.40	4.00	24833	6.30	3.36	3.04	2.85	26892	31.00	18.90										
22849	27.50	16.50	14.00	13.20	12.20	24834	7.20	6.12	5.74	5.28	26893	38.00	22.80										
22850	10.00	6.00	5.10	4.80	4.40	24835	9.15	7.78	7.33	6.71	26894	35.00	21.00										
22851	37.51	22.50	19.13	18.00	16.50	24836	9.75	6.29	7.80	7.15	26895	30.00	18.00										
22852	6.25	3.75	3.18	3.00	2.75	24837	31.25	18.75	15.94	15.00	13.75	26896	28.50	17.10									
22853	11.25	6.75	5.75	5.40	4.20	24838	11.10	9.44	8.88	8.14	26897	28.00	16.80										
22854	10.00	6.00	5.10	4.80	4.40	24839	12.00	7.20	6.48	6.00	26898	10.00	19.80										
22855	5.00	3.00	2.55	2.40	2.20	24840	6.75	5.74	5.40	4.70	26899	28.00	16.80										
22856	40.00	24.00	20.40	19.20	17.60	24840U	6.75	5.74	5.40	4.70	26900	28.00	16.80										
22857	5.00	3.00	2.55	2.40	2.00	24841	6.75	5.74	5.40	4.70	26901	31.00	18.90										
22858	50.00	30.00	25.50	24.00	22.00	24842	10.20	6.67	6.16	7.11	26902	31.00	18.90										
22859	37.50	22.50	19.13	18.00	16.50	24843	6.45	5.48	5.16	4.73	26903	25.00	15.00										
22860	27.00	16.20	13.75	12.96	11.88	24844	6.75	5.74	5.40	4.70	26904	25.00	15.00										
22861	5.75	3.45	2.95	2.75	2.55	24845	10.50	8.93	8.40	7.70	26905	25.00	15.00										
22862	11.25	6.75	5.74	5.40	4.95	24846	9.32	7.93	7.46	6.57	26906	20.00	12.00										
22863	25.00	15.00	12.75	12.00	11.00	24848	11.10	9.44	8.88	8.14	26907	24.00	14.40										
22864	25.00	15.00	12.75	12.00	11.00	24849	11.25	9.56	9.00	8.25	26908	25.00	15.00										
22865	25.00	15.00	12.75	12.00	11.00	24850	10.00	6.00	5.10	4.80	4.40	26909	25.00	15.00									
22866	7.75	4.65	3.95	3.70	3.40	24851	5.10																

SECTION 5600

INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET				
PART NO.	LIST	NET and 1 to 4	5 to 9	10 to 499	PART NO.	LIST	NET and 1 to 4	5 to 9	10 to 499	PART NO.	LIST	NET and 1 to 4	5 to 9	10 to 499	PART NO.	LIST	NET and 1 to 4	5 to 9	10 to 499
27837		45.00	38.25	36.00	33.00	22507		22.50	13.50	11.48	10.80	9.90	24523		5.50	3.30	2.80	2.64	2.42
27838		13.50	11.48	10.80	9.90	22508		20.00	12.00	10.20	9.60	8.80	24524		3.85	2.30	1.95	1.84	1.70
27839		13.05	10.59	10.44	9.57	22509		25.00	15.00	12.75	12.00	11.00	24525		7.50	4.50	3.82	3.60	3.30
27840		12.75	10.29	10.14	9.27	22510		30.00	18.00	15.30	14.40	13.20	24526		4.00	2.40	2.04	1.92	1.76
27841		13.00	10.75	10.60	9.73	22511		22.50	13.50	11.48	10.80	9.90	24527		6.00	3.60	3.06	2.88	2.64
27842		15.75	13.39	12.60	11.55	22512		30.00	18.00	15.30	14.40	13.20	24528		3.75	2.25	1.91	1.80	1.65
27843		16.80	14.28	13.44	12.32	22513		36.25	21.75	18.48	17.40	15.95	24529		3.75	2.25	1.91	1.80	1.65
27844		18.00	15.30	14.40	13.20	22514		50.00	30.00	25.50	24.00	22.00	24530		3.00	1.80	1.53	1.44	1.32
27845		19.50	16.58	15.60	14.30	22515		8.50	5.10	4.33	4.08	3.74	24531		3.00	1.80	1.53	1.44	1.32
27846		17.25	14.51	13.60	12.35	22516		8.50	5.10	4.33	4.08	3.74	24532		3.00	1.80	1.53	1.44	1.32
27847		24.75	21.04	20.54	18.15	22517		4.25	2.75	3.19	3.00	2.75	24533		3.00	1.80	1.53	1.44	1.32
27848		27.00	22.95	21.60	19.80	22518		6.00	3.60	3.06	2.88	2.64	24534		3.00	1.80	1.53	1.44	1.32
27849		33.75	28.68	27.00	24.75	22519		7.50	4.50	3.82	3.60	3.30	24535		3.00	1.80	1.53	1.44	1.32
27850		18.00	15.30	14.40	13.20	22520		2.75	1.65	1.40	1.32	1.21	24536		3.00	1.80	1.53	1.44	1.32
27851		18.00	15.30	14.40	13.20	22521		6.00	3.60	3.07	2.88	2.64	24537		3.00	1.80	1.53	1.44	1.32
27852		20.25	17.21	16.20	14.85	22522		3.00	1.80	1.53	1.44	1.25	24538		3.00	1.80	1.53	1.44	1.32
27853		18.75	15.94	15.00	13.75	22523		3.00	1.80	1.53	1.44	1.25	24539		3.00	1.80	1.53	1.44	1.32
27854		20.25	17.21	16.20	14.85	22524		3.00	1.80	1.53	1.44	1.25	24540		3.00	1.80	1.53	1.44	1.32
27855		30.00	25.50	24.00	22.00	22525		3.00	1.80	1.53	1.44	1.25	24541		7.50	4.50	3.83	3.60	3.30
27856		30.00	25.50	24.00	22.00	22526		3.00	1.80	1.53	1.44	1.25	24542		7.50	4.50	3.83	3.60	3.30
27857		30.00	25.50	24.00	22.00	22527		3.00	1.80	1.53	1.44	1.25	24543		7.50	4.50	3.83	3.60	3.30
27858		30.00	25.50	24.00	22.00	22528		3.00	1.80	1.53	1.44	1.25	24544		7.50	4.50	3.83	3.60	3.30
27859		27.00	22.95	21.60	19.80	22529		3.00	1.80	1.53	1.44	1.25	24545		5.00	3.00	2.55	2.40	2.20
27860		18.00	15.30	14.40	13.20	22530		3.00	1.80	1.53	1.44	1.25	24546		4.35	2.55	2.17	2.04	1.87
27861		36.00	30.00	28.80	26.40	22531		3.00	1.80	1.53	1.44	1.25	24547		5.00	3.00	2.55	2.40	2.20
27862		15.25	13.39	12.60	11.55	22532		3.00	1.80	1.53	1.44	1.25	24548		2.00	1.20	1.02	.96	.88
27863		12.00	10.20	9.60	8.80	22533		3.00	1.80	1.53	1.44	1.25	24549		2.00	1.20	1.02	.96	.88
27864		13.50	11.47	10.80	9.90	22534		3.00	1.80	1.53	1.44	1.25	24550		2.00	1.20	1.02	.96	.88
27865		14.40	12.24	11.52	10.56	22535		3.50	2.10	1.78	1.68	1.54	24551		2.15	1.30	1.10	1.04	.95
27866		20.10	17.09	16.08	14.00	22536		3.25	1.95	1.65	1.55	1.43	24552		2.25	1.35	1.15	1.08	.99
27867		16.50	14.03	13.20	12.10	22537		3.25	1.95	1.65	1.55	1.43	24553		2.25	1.35	1.15	1.08	.99
27868		16.50	14.03	13.20	12.10	22538		3.75	2.25	1.91	1.80	1.65	24554		2.50	1.50	1.25	1.20	1.07
27869		24.00	20.40	19.20	17.60	22539		3.00	1.80	1.53	1.44	1.25	24555		2.50	1.50	1.25	1.20	1.07
27870		19.50	16.58	15.60	14.30	22540		20.00	12.00	10.20	9.60	8.80	24556		6.50	3.90	3.30	3.12	2.86
27871		30.00	25.50	24.00	22.00	22541		37.50	22.50	19.13	18.00	16.50	24557		12.50	7.50	6.37	6.00	5.50
27872		30.00	25.50	24.00	22.00	22542		11.25	6.75	5.74	5.40	4.95	24558		9.50	5.70	4.85	4.56	4.18
27873		30.00	25.50	24.00	22.00	22543		2.25	1.65	1.40	1.32	1.21	24559		5.70	3.40	2.85	2.70	2.54
27874		30.00	25.50	24.00	22.00	22544		2.25	1.65	1.40	1.32	1.21	24560		4.25	2.55	2.17	2.04	1.87
27875		18.00	15.30	14.40	13.20	22545		3.60	2.16	1.84	1.73	1.58	24561		4.25	2.55	2.17	2.04	1.87
27876		18.00	15.30	14.40	13.20	22546		4.00	2.40	2.04	1.92	1.76	24562		4.25	2.55	2.17	2.04	1.87
27877		18.00	15.30	14.40	13.20	22547		22.50	13.50	11.48	10.80	9.90	24563		5.00	3.00	2.55	2.40	2.20
27878		18.00	15.30	14.40	13.20	22548		3.50	2.10	1.78	1.68	1.54	24564		3.80	2.28	1.94	1.82	1.67
27879		30.00	25.50	24.00	22.00	22549		7.00	4.20	3.57	3.36	3.08	24565		3.00	1.80	1.53	1.44	1.32
27880		30.00	25.50	24.00	22.00	22550		7.00	4.20	3.57	3.36	3.08	24566		7.50	4.50	3.83	3.60	3.30
27881		30.00	25.50	24.00	22.00	22551		25.00	15.00	12.75	12.00	11.00	24567		6.75	3.45	2.75	2.70	2.53
27882		39.00	33.00	31.00	28.50	22552		7.50	4.50	3.83	3.60	3.30	24568		5.00	3.00	2.55	2.40	2.20
27883		33.00	27.05	26.40	24.20	22553		7.50	4.50	3.83	3.60	3.30	24569		5.00	3.00	2.55	2.40	2.20
27884		30.00	25.50	24.00	22.00	22554		5.50	3.30	2.80	2.64	2.42	24570		7.15	4.29	3.58	3.42	3.15
27885		24.00	20.40	19.20	17.60	22555		5.50	3.30	2.80	2.64	2.42	24571		5.05	3.03	2.58	2.42	2.22
27886		18.75	15.94	15.00	13.07	22556		5.50	3.30	2.80	2.64	2.42	24572		7.15	4.29	3.58	3.42	3.15
27887		20.10	17.09	16.08	14.00	22557		6.00	3.60	3.06	2.88	2.64	24573		6.00	3.60	3.06	2.88	2.64
27888		24.00	20.40	19.20	17.60	22558		5.50	3.30	2.80	2.64	2.42	24574		2.50	1.50	1.25	1.20	1.07
27889		30.00	25.50	24.00	22.00	22559		5.50	3.30	2.80	2.64	2.42	24575		2.55	1.53	1.30	1.22	1.12
27890		30.45	25.88	24.36	21.21	22560		5.50	3.30	2.80	2.64	2.42	24576		5.50	3.30	2.80	2.64	2.42
27891		15.00	12.75	12.00	11.00	22561		5.00	3.00	2.55	2.40	2.20	24577		10.50	6.30	5.35	5.04	4.62
27892		23.50	20.02	18.84	16.41	22562		6.25	3.75	3.19	3.00	2.75	24578		3.25	1.95	1.65	1.56	1.43
27893		33.75	28.68	27.00	23.50	22563		18.75	11.25	9.60	9.00	8.25	24579		2.50	1.50	1.25	1.20	1.07
27894		22.20	18.87	17.76	16.20	22564		23.75	14.25	12.11	11.40	10.45	24580		2.50	1.50	1.25	1.20	1.07
27895		22.50	19.13	18.00	16.50	22565		11.25	6.75	5.74	5.40	4.95	24581		2.50	1.50	1.25	1.20	1.07
27896		30.00	25.50	24.00	22.00	22566		15.00	9.00	7.65	7.20	6.60	24582		2.50	1.50	1.25	1.20	1.07
27897		30.00	25.50																

SECTION 5600

INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET								
PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and 1 to 4	5 to 49	50 to 99	100 to 499
27326		13.50	11.48	10.80	9.41	275166		6.34	5.40	5.08	4.40	27875		5.85	4.97	4.68	4.29	29295		8.10	6.88	6.48	5.94
27327		18.00	15.50	14.40	13.20	275167		8.10	6.89	6.48	5.62	27876		5.85	4.97	4.68	4.29	29296		8.40	7.14	6.72	6.18
27328		12.00	10.20	9.60	8.80	275168		8.10	6.89	6.48	5.62	27877		6.00	5.10	4.80	4.40	29297		8.70	7.40	6.96	6.36
27329		10.80	9.20	8.60	7.52	275169		8.10	6.89	6.48	5.62	27878		6.00	5.10	4.80	4.40	29298		9.60	8.16	7.68	7.04
27330		11.55	9.82	9.24	8.03	275170		6.48	5.51	5.19	4.51	27879		6.00	5.10	4.80	4.40	29299		10.20	8.67	8.16	7.48
27331		8.40	7.14	6.72	5.85	275171		6.07	5.17	4.86	4.22	27880		6.00	5.10	4.80	4.40	29300		3.91	3.33	3.13	2.77
27332		8.10	6.88	6.48	5.65	275172		6.21	5.28	4.97	4.31	27881		6.00	5.10	4.80	4.40	29301		4.31	3.57	3.13	2.77
27333		8.10	6.88	6.48	5.65	275173		5.80	4.94	4.64	4.03	27882		6.15	5.23	4.92	4.51	29302		4.05	3.44	3.24	2.82
27337		7.50	6.38	6.00	5.23	275174		5.40	4.59	4.32	3.75	27883		6.15	5.23	4.92	4.51	29303		4.18	3.56	3.25	2.91
27338		7.20	6.12	5.76	5.24	275175		5.53	4.71	4.43	3.84	27884		6.15	5.23	4.92	4.51	29304		4.32	3.67	3.46	3.00
27339		7.80	6.43	6.04	5.72	275176		6.88	5.86	5.51	4.78	27885		6.30	5.36	5.04	4.62	29305		4.45	3.79	3.56	3.10
27340		7.20	6.12	5.76	5.24	275177		6.48	5.51	5.18	4.50	27886		6.30	5.36	5.04	4.62	29306		4.59	3.90	3.67	3.19
27341		5.85	4.97	4.68	4.07	275178		4.61	5.63	5.29	4.59	27887		6.50	5.61	5.28	4.84	29307		4.86	4.13	3.84	3.38
27342		5.85	4.97	4.68	4.07	275179		8.37	7.11	6.70	5.80	27888		6.40	5.61	5.28	4.84	29308		5.53	4.71	4.43	3.84
27343		5.85	4.97	4.68	4.07	275180		8.37	7.11	6.70	5.80	27889		6.40	5.61	5.28	4.84	29309		5.67	4.82	4.54	3.94
27344		6.00	5.10	4.80	4.40	275181		8.50	7.23	6.80	5.90	27890		6.00	5.10	4.80	4.40	29310		4.32	3.67	3.46	3.00
27345		6.00	5.10	4.80	4.40	275182		7.83	6.65	6.26	5.43	27891		3.75	3.19	3.00	2.75	29311		4.32	3.67	3.46	3.00
27346		6.00	5.10	4.80	4.40	275183		8.37	7.11	6.70	5.80	27892		3.75	3.19	3.00	2.75	29312		4.59	3.90	3.67	3.19
27347		7.50	6.38	6.00	5.23	275184		7.56	6.42	6.05	5.24	27893		3.75	3.19	3.00	2.75	29313		4.72	4.02	3.78	3.28
27348		7.50	6.38	6.00	5.23	275185		7.56	6.42	6.05	5.24	27894		3.75	3.19	3.00	2.75	29314		4.86	4.13	3.89	3.38
27349		7.02	5.96	5.62	4.90	275186		7.69	6.54	6.16	5.34	27895		3.75	3.19	3.00	2.75	29315		5.13	4.36	4.10	3.56
27350		6.30	5.36	5.04	4.62	275187		7.02	5.97	5.62	4.87	27896		3.75	3.19	3.00	2.75	29316		5.67	4.82	4.54	3.94
27351		7.20	6.12	5.76	5.24	275188		7.56	6.42	6.05	5.24	27897		4.05	3.45	3.24	2.97	29317		5.80	4.94	4.74	4.20
27352		7.02	5.96	5.62	4.90	275189		8.37	7.11	6.70	5.80	27898		4.05	3.45	3.24	2.97	29318		3.80	3.13	2.82	2.48
27353		7.20	6.12	5.76	5.24	275190		8.37	7.11	6.70	5.80	27899		4.05	3.45	3.24	2.97	29319		4.99	4.26	4.02	3.56
27354		18.90	16.04	15.12	13.17	275191		8.37	7.11	6.70	5.80	27900		4.05	3.45	3.24	2.97	29320		4.65	3.44	3.24	2.82
27355		18.75	15.94	15.00	13.75	275192		7.56	6.42	6.05	5.24	27901		4.05	3.45	3.24	2.97	29321		4.32	3.67	3.46	3.00
27356		21.00	17.85	16.80	15.40	275193		7.56	6.42	6.05	5.24	27902		4.05	3.45	3.24	2.97	29322		4.59	3.99	3.67	3.19
27357		21.00	17.85	16.80	15.40	275194		7.56	6.42	6.05	5.24	27903		4.20	3.57	3.36	3.08	29323		5.28	4.48	4.21	3.68
27358		21.00	17.85	16.80	15.40	275195		8.64	7.34	6.91	5.99	27904		4.20	3.57	3.36	3.08	29324		5.12	4.36	4.10	3.56
27359		21.00	17.85	16.80	15.40	275196		8.64	7.34	6.91	5.99	27905		4.20	3.57	3.36	3.08	29325		4.18	3.56	3.35	2.91
27360		21.00	17.85	16.80	15.40	275197		8.77	7.46	7.02	6.08	27906		4.20	3.57	3.36	3.08	29326		4.45	3.79	3.56	3.10
27361		27.00	22.95	21.60	19.80	275198		8.10	6.88	6.48	5.62	27907		4.20	3.57	3.36	3.08	29327		5.40	4.59	4.32	3.75
27362		27.00	22.95	21.60	19.80	275199		8.64	7.34	6.91	5.99	27908		4.20	3.57	3.36	3.08	29328		4.68	4.13	3.89	3.38
27363		27.00	22.95	21.60	19.80	275200		8.64	7.34	6.91	5.99	27909		4.20	3.57	3.36	3.08	29329		4.45	3.79	3.56	3.10
27364		27.00	22.95	21.60	19.80	275201		8.64	7.34	6.91	5.99	27910		4.20	3.57	3.36	3.08	29330		4.72	4.02	3.78	3.28
27365		27.00	22.95	21.60	19.80	275202		8.64	7.34	6.91	5.99	27911		4.20	3.57	3.36	3.08	29331		4.86	4.13	3.89	3.38
27366		39.00	33.15	31.20	28.60	275203		10.26	8.72	8.18	7.16	27912		4.20	3.57	3.36	3.08	29332		5.07	5.67	5.62	4.87
27367		39.00	33.15	31.20	28.60	275204		9.99	8.48	8.00	6.95	27913		5.55	4.72	4.44	4.07	29333		7.29	6.19	5.83	5.06
27368		39.00	33.15	31.20	28.60	275205		10.53	8.95	8.42	7.34	27914		3.75	3.19	3.00	2.75	29334		7.63	6.65	6.26	5.43
27369		13.20	11.22	10.56	9.68	275206		10.39	9.85	9.43	8.25	27915		3.75	3.19	3.00	2.75	29335		8.05	6.83	6.50	6.00
27370		13.20	11.22	10.56	9.68	275207		10.39	9.85	9.43	8.25	27916		3.75	3.19	3.00	2.75	29336		9.05	7.79	7.25	6.31
27371		15.00	12.75	12.00	11.00	275208		10.12	8.61	8.10	7.05	27917		3.75	3.19	3.00	2.75	29337		9.99	8.49	8.00	6.96
27372		18.90	16.04	15.12	13.86	275209		13.09	11.14	10.49	9.13	27918		3.75	3.19	3.00	2.75	29338		10.80	9.18	8.64	7.52
27373		16.50	14.02	13.20	12.10	275210		8.24	7.01	6.60	5.75	27919		3.75	3.19	3.00	2.75	29339		11.74	9.98	9.40	8.19
27374		18.75	15.94	15.00	13.75	275211		10.80	9.13	8.64	7.34	27920		3.75	3.19	3.00	2.75	29340		13.77	11.87	11.20	9.74
27375		21.00	17.85	16.80	15.40	275212		8.37	7.11	6.70	5.83	27921		4.50	3.82	3.60	3.30	29341		9.85	8.58	7.89	6.87
27376		25.50	21.67	20.40	18.70	275213		13.09	11.14	10.49	9.13	27922		4.05	3.45	3.24	2.97	29342		10.12	8.60	8.09	7.06
27377		22.50	19.12	18.00	16.50							27923		4.05	3.45	3.24	2.97	29343		9.73	8.35	7.85	6.82
27378		21.00	17.85	16.80	15.40							27924		4.05	3.45	3.24	2.97	29344		10.80	9.18	8.64	7.52
27379		21.00	17.85	16.80	15.40							27925		4.05	3.45	3.24	2.97	29345		10.68	9.06	8.54	7.43
27380		12.00	10.20	9.60	8.80							27926		4.05	3.45	3.24	2.97	29346		10.95	9.30	8.75	7.63
27381		12.00	10.20	9.60	8.80							27927		4.20	3.57	3.36	3.08	29347		11.20	9.52	8.96	7.81
27382		12.00	10.20	9.60	8.80							27928		4.20	3.57	3.36	3.08	29348		11.74	9.98	9.40	8.19
27383		12.00	10.20	9.60	8.80							27929		4.20	3.57	3.36	3.08	29349		11.74	9.98	9.40	8.19
27384		12.00	10.20	9.60	8.80							27930		4.20	3.57	3.36	3.08	29350		12.82	10.90	10.26	8.93
27385		12.00	10.20	9.60	8.80							27931		4.20	3.57	3.36	3.08	29351		13.77	11.87	11.20	9.74
27386		10.80	9.20	8.60	7.52							27932		4.50	3.82	3.60	3.30	29352	</				

SECTION 5600

INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET					INDUSTRIAL NET								
PART NO.	LIST	NET and to 1	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and to 1	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and to 1	5 to 49	50 to 99	100 to 499	PART NO.	LIST	NET and to 1	5 to 49	50 to 99	100 to 499
TOR 7170	7.50	6.37	6.00	5.22		TOR 7314	6.21	5.28	4.97	4.31		TR 21	5.00	3.00	2.80	2.64	2.42	TR 160	5.00	3.00	2.55	2.40	2.20
TOR 7178	8.10	6.63	6.24	5.44		TOR 7315	6.34	5.40	5.08	4.40		TR 22	5.50	3.30	2.80	2.64	2.42	TR 161	5.00	3.00	2.55	2.40	2.20
TOR 7179	7.80	6.88	6.48	5.64		TOR 7316	6.61	5.63	5.29	4.59		TR 23	5.00	3.00	2.55	2.40	2.20	TR 162	5.00	3.00	2.55	2.40	2.20
TOR 7180	8.10	6.88	6.48	5.64		TOR 7317	7.15	6.05	5.72	5.04		TR 24	5.50	3.30	2.80	2.64	2.42	TR 163	5.00	3.00	2.55	2.40	2.20
TOR 7181	8.70	7.39	6.96	6.06		TOR 7318	6.88	5.86	5.51	4.78		TR 25	5.50	3.30	2.80	2.64	2.42	TR 164	5.00	3.00	2.55	2.40	2.20
TOR 7182	8.85	7.58	7.08	6.15		TOR 7319	7.02	5.97	5.62	4.87		TR 26	5.00	3.00	2.55	2.40	2.20	TR 165	5.00	3.00	2.55	2.40	2.20
TOR 7183	9.00	7.65	7.20	6.27		TOR 7320	7.42	6.31	5.94	5.15		TR 27	5.00	3.00	2.55	2.40	2.20	TR 166	5.00	3.00	2.55	2.40	2.20
TOR 7184	9.45	8.03	7.56	6.58		TOR 7321	7.69	6.54	6.16	5.34		TR 28	5.00	3.00	2.55	2.40	2.20	TR 167	5.00	3.00	2.55	2.40	2.20
TOR 7185	9.45	8.03	7.56	6.58		TOR 7322	8.10	6.88	6.48	5.64		TR 29	5.00	3.00	2.55	2.40	2.20	TR 168	5.00	3.00	2.55	2.40	2.20
TOR 7186	10.00	8.50	8.00	7.00		TOR 7323	8.50	7.23	6.80	5.91		TR 30	5.00	3.00	2.80	2.64	2.42	TR 169	5.00	3.00	2.55	2.40	2.20
TOR 7187	10.20	8.70	8.19	7.11		TOR 7324	9.22	8.26	7.78	6.77		TR 31	5.50	3.30	2.80	2.64	2.42	TR 170	5.00	3.00	2.55	2.40	2.20
TOR 7188	10.80	9.17	8.63	7.51		TOR 7325	6.75	5.74	5.40	4.68		TR 32	5.50	3.30	2.80	2.64	2.42	TR 171	5.00	3.00	2.55	2.40	2.20
TOR 7189	11.70	9.95	9.36	8.16		TOR 7326	7.69	6.54	6.16	5.34		TR 33	5.00	3.00	2.55	2.40	2.20	TR 172	5.00	3.00	2.55	2.40	2.20
TOR 7190	12.45	10.59	9.96	8.66		TOR 7327	9.05	7.88	7.23	6.30		TR 34	5.00	3.00	2.55	2.40	2.20	TR 173	5.00	3.00	2.55	2.40	2.20
TOR 7191	13.50	11.47	10.80	9.40		TOR 7328	6.07	5.17	4.84	4.22		TR 35	6.00	3.60	3.06	2.88	2.64	TR 174	7.50	4.50	3.87	3.60	3.30
TOR 7192	14.20	11.99	11.28	9.84		TOR 7329	6.07	5.17	4.84	4.22		TR 36	6.00	3.60	3.06	2.88	2.64	TR 175	5.00	3.00	2.55	2.40	2.20
TOR 7193	8.10	6.88	6.48	5.64		TOR 7330	6.07	5.17	4.84	4.22		TR 37	6.00	3.60	3.06	2.88	2.64	TR 176	5.00	3.00	2.55	2.40	2.20
TOR 7194	8.40	7.14	6.72	5.85		TOR 7331	6.07	5.17	4.84	4.22		TR 38	6.50	3.90	3.32	3.12	2.86	TR 177	5.00	3.00	2.55	2.40	2.20
TOR 7195	8.70	7.40	6.96	6.06		TOR 7332	6.48	5.51	5.18	4.50		TR 39	6.00	3.60	3.06	2.88	2.64	TR 178	5.00	3.00	2.55	2.40	2.20
TOR 7196	9.00	7.65	7.20	6.27		TOR 7333	6.48	5.51	5.18	4.50		TR 40	6.50	3.90	3.32	3.12	2.86	TR 179	3.00	1.80	1.33	1.44	1.32
TOR 7197	9.00	7.65	7.20	6.27		TOR 7334	5.13	4.36	4.10	3.56		TR 41	6.00	3.60	3.06	2.88	2.64	TR 180	5.00	3.00	2.55	2.40	2.20
TOR 7198	9.45	8.03	7.56	6.58		TOR 7335	5.26	4.48	4.21	3.66		TR 42	6.00	3.60	3.06	2.88	2.64	TR 181	5.00	3.00	2.55	2.40	2.20
TOR 7199	9.45	8.03	7.56	6.58		TOR 7336	5.40	4.59	4.32	3.75		TR 43	6.00	3.60	3.06	2.88	2.64	TR 182	5.00	3.00	2.55	2.40	2.20
TOR 7200	10.20	8.67	8.16	7.11		TOR 7337	5.67	4.82	4.54	3.94		TR 44	6.00	3.60	3.06	2.88	2.64	TR 183	5.00	3.00	2.55	2.40	2.20
TOR 7201	10.20	8.67	8.16	7.11		TOR 7338	6.07	5.17	4.84	4.22		TR 45	6.50	3.90	3.32	3.12	2.86	TR 184	5.00	3.00	2.55	2.40	2.20
TOR 7202	10.50	8.92	8.40	7.32		TOR 7339	6.61	5.63	5.29	4.59		TR 46	6.50	3.90	3.32	3.12	2.86	TR 185	5.00	3.00	2.55	2.40	2.20
TOR 7203	10.80	9.17	8.63	7.49		TOR 7340	7.83	6.63	6.28	5.43		TR 47	6.50	3.90	3.32	3.12	2.86	TR 186	3.00	1.80	1.33	1.44	1.32
TOR 7204	11.10	9.43	8.87	7.72		TOR 7341	6.54	5.40	5.08	4.40		TR 48	6.50	3.90	3.32	3.12	2.86	TR 187	5.00	3.00	2.55	2.40	2.20
TOR 7205	11.40	9.67	9.12	7.94		TOR 7342	6.48	5.51	5.18	4.50		TR 49	6.00	3.60	3.06	2.88	2.64	TR 188	5.00	3.00	2.55	2.40	2.20
TOR 7206	11.40	9.67	9.12	7.94		TOR 7343	6.61	5.63	5.29	4.59		TR 50	6.00	3.60	3.06	2.88	2.64	TR 189	5.00	3.00	2.55	2.40	2.20
TOR 7207	12.00	10.20	9.60	8.36		TOR 7344	5.53	4.71	4.43	3.84		TR 51	6.00	3.60	3.06	2.88	2.64	TR 190	5.00	3.00	2.55	2.40	2.20
TOR 7208	13.50	11.46	10.80	9.41		TOR 7345	7.02	5.97	5.62	4.87		TR 52	6.50	3.90	3.32	3.12	2.86	TR 191	5.00	3.00	2.55	2.40	2.20
TOR 7209	14.55	12.37	11.64	10.14		TOR 7346	7.56	6.42	6.05	5.24		TR 53	6.50	3.90	3.32	3.12	2.86	TR 192	4.50	2.67	2.27	2.13	1.96
TOR 7210	15.40	13.76	12.48	10.87		TOR 7347	5.94	5.08	4.75	4.12		TR 54	6.50	3.90	3.32	3.12	2.86	TR 193	4.50	2.67	2.27	2.13	1.96
TOR 7211	18.00	16.06	15.12	13.17		TOR 7348	7.96	6.77	6.37	5.52		TR 55	6.50	3.90	3.32	3.12	2.86	TR 200	5.00	3.00	2.55	2.40	2.20
TOR 7212	6.75	5.74	5.40	4.71		TOR 7349	8.23	7.00	6.59	5.71		TR 56	6.50	3.90	3.32	3.12	2.86	TR 201	5.00	3.00	2.55	2.40	2.20
TOR 7213	7.20	6.12	5.76	5.02		TOR 7350	8.64	7.34	6.91	5.99		TR 57	6.50	3.90	3.32	3.12	2.86	TR 202	4.50	2.70	2.30	2.16	1.88
TOR 7214	7.20	6.12	5.76	5.02		TOR 7351	8.77	7.46	7.02	6.08		TR 58	6.50	3.90	3.32	3.12	2.86	TR 203	4.50	2.70	2.30	2.16	1.88
TOR 7215	7.50	6.36	6.00	5.23		TOR 7352	6.75	5.74	5.40	4.68		TR 59	6.50	3.90	3.32	3.12	2.86	TR 204	4.50	2.70	2.30	2.16	1.88
TOR 7216	7.80	6.63	6.24	5.45		TOR 7353	9.95	8.49	7.98	6.75		TR 60	6.50	3.90	3.32	3.12	2.86	TR 205	4.50	2.70	2.30	2.16	1.88
TOR 7217	8.10	6.88	6.48	5.64		TOR 7354	11.20	9.52	8.95	7.80		TR 61	6.50	3.90	3.32	3.12	2.86	TR 206	6.50	3.90	3.32	3.12	2.86
TOR 7218	8.10	6.88	6.48	5.64		TOR 7355	7.96	6.77	6.37	5.52		TR 62	6.50	3.90	3.32	3.12	2.86	TR 207	6.50	3.90	3.32	3.12	2.86
TOR 7219	8.70	7.39	6.96	6.06		TOR 7356	8.10	6.88	6.48	5.64		TR 63	6.50	3.90	3.32	3.12	2.86	TR 208	6.50	3.90	3.32	3.12	2.86
TOR 7220	8.70	7.39	6.96	6.06		TOR 7357	7.42	6.31	5.94	5.15		TR 64	6.50	3.90	3.32	3.12	2.86	TR 209	4.50	2.70	2.30	2.16	1.88
TOR 7221	9.00	7.65	7.20	6.27		TOR 7358	7.56	6.42	6.05	5.24		TR 65	6.50	3.90	3.32	3.12	2.86	TR 210	4.50	2.70	2.30	2.16	1.88
TOR 7222	9.00	7.65	7.20	6.27		TOR 7359	7.69	6.54	6.16	5.34		TR 66	6.50	3.90	3.32	3.12	2.86	TR 211	5.00	3.00	2.55	2.40	2.20
TOR 7223	9.75	8.29	7.80	6.80		TOR 7360	6.07	5.17	4.84	4.22		TR 67	6.00	3.60	3.06	2.88	2.64	TR 212	5.00	3.00	2.55	2.40	2.20
TOR 7224	10.50	8.93	8.40	7.32		TOR 7361	6.21	5.28	4.92	4.31		TR 68	6.00	3.60	3.06	2.88	2.64	TR 213	5.00	3.00	2.55	2.40	2.20
TOR 7225	11.40	9.80	9.24	8.04		TOR 7362	8.10	6.88	6.48	5.64		TR 69	6.00	3.60	3.06	2.88	2.64	TR 214	7.50	4.50	3.87	3.60	3.30
TOR 7226	12.00	10.20	9.60	8.36		TOR 7363	8																



SECTION 5600

INDUSTRIAL NET						INDUSTRIAL NET						INDUSTRIAL NET						INDUSTRIAL NET					
PART NO.	LIST	NET				PART NO.	LIST	NET				PART NO.	LIST	NET				PART NO.	LIST	NET			
		1 to 4	5 to 49	50 to 99	100 to 499			1 to 4	5 to 49	50 to 99	100 to 499			1 to 4	5 to 49	50 to 99	100 to 499			1 to 4	5 to 49	50 to 99	100 to 499
IR 304	3.80	2.10	1.79	1.68	1.59	IR 429		3.78	3.21	3.02	2.63	23V88		37.50	31.90	30.00	27.50	25V01		10.50	8.92	8.40	7.70
IR 305	2.50	1.50	1.28	1.20	1.10	IR 430		3.78	3.21	3.02	2.63	23V89	6.00	3.60	3.06	2.88	2.64	25V02		12.00	10.20	9.60	8.80
IR 306	2.50	1.50	1.28	1.20	1.10	IR 431		3.51	2.98	2.81	2.44	23V90	22.50	13.50	11.48	10.80	9.50	25V03		16.50	14.02	13.20	11.50
IR 307	7.50	4.50	3.85	3.60	3.14	IR 432		3.64	3.10	2.92	2.54	23V91		9.30	7.90	7.44	6.49	25V04		18.90	16.07	15.12	13.20
IR 308	6.00	3.60	3.06	2.88	2.64	IR 433		4.18	3.55	3.33	2.90	23V92		10.50	8.92	8.40	7.71	25V05		33.00	28.06	26.40	23.00
IR 309	7.00	4.20	3.57	3.36	3.08	IR 434		4.39	3.67	3.46	3.04	23V93	17.50	10.50	8.92	8.40	7.71	25V06		37.50	33.00	31.20	27.50
IR 310	6.00	3.60	3.06	2.88	2.64	IR 435		4.45	3.79	3.56	3.10	23V94	25.00	15.00	12.75	12.00	11.00	25V07		33.00	31.90	30.00	27.50
IR 311	6.00	3.60	3.06	2.88	2.64	IR 436		4.18	3.55	3.33	2.90	23V95	11.00	6.00	5.61	5.28	4.84	25V08		16.50	14.02	13.20	11.50
IR 312	6.00	3.60	3.06	2.88	2.64	IR 437		4.05	3.44	3.24	2.82	23V96	15.50	9.30	7.90	7.44	6.82	25V09		37.50	33.00	31.20	27.50
IR 313	6.00	3.60	3.06	2.88	2.64	IR 438		3.78	3.21	3.02	2.63	23V97		3.60	3.06	2.88	2.64	25V10		4.80	4.08	3.84	3.52
IR 314	6.00	3.60	3.06	2.88	2.64	IR 439		3.51	2.98	2.81	2.44	23V98		4.50	3.85	3.60	3.14	25V11		6.15	5.23	4.92	4.51
IR 315	6.00	3.60	3.06	2.88	2.64	IR 440		3.51	2.98	2.81	2.44	23V99		5.40	4.59	4.32	3.96	25V12		8.10	6.88	6.48	5.94
IR 316	6.00	3.60	3.06	2.88	2.64	IR 441		3.51	2.98	2.81	2.44	23V100	9.25	5.55	4.72	4.44	4.07	25V13		12.75	10.83	10.20	9.35
IR 317	6.00	3.60	3.06	2.88	2.64	IR 442		3.64	3.10	2.92	2.54	23V101	12.00	7.20	6.12	5.76	5.24	25V14		15.00	12.75	12.00	11.00
IR 318	6.00	3.60	3.06	2.88	2.64	IR 443		3.64	3.10	2.92	2.54	23V102	20.00	12.00	10.20	9.60	8.80	25V15		21.00	17.85	16.80	15.40
IR 319	6.00	3.60	3.06	2.88	2.64	IR 444		3.78	3.21	3.02	2.63	23V103	10.00	6.00	5.10	4.80	4.40	25V16		9.60	8.16	7.68	7.04
IR 320	6.00	3.60	3.06	2.88	2.64	IR 445		3.78	3.21	3.02	2.63	23V104	14.50	8.70	7.40	6.96	6.38	25V17		12.00	10.20	9.60	8.80
IR 321	6.00	3.60	3.06	2.88	2.64	IR 446		3.51	2.98	2.81	2.44	23V105	25.00	15.00	12.75	12.00	11.00	25V18		15.00	12.75	12.00	11.00
IR 322	6.00	3.60	3.06	2.88	2.64	IR 447		3.78	3.21	3.02	2.63	23V106	9.25	5.55	4.72	4.44	4.07	25V19		18.00	15.75	15.00	13.75
IR 323	6.00	3.60	3.06	2.88	2.64	IR 448		3.51	2.98	2.81	2.44	23V107	10.00	6.00	5.10	4.80	4.40	25V20		15.00	12.75	12.00	11.00
IR 324	6.00	3.60	3.06	2.88	2.64	IR 449		3.64	3.10	2.92	2.54	23V108	27.50	16.50	14.02	13.20	11.50	25V21		36.00	30.60	28.80	26.40
IR 325	6.00	3.60	3.06	2.88	2.64	IR 450		3.24	2.75	2.59	2.25	23V109	15.50	9.30	7.90	7.44	6.82	25V22		12.75	10.83	10.20	9.35
IR 326	6.00	3.60	3.06	2.88	2.64	IR 451		3.51	2.98	2.81	2.44	23V110	12.50	7.50	6.38	6.00	5.50	25V23		12.75	10.83	10.20	9.35
IR 327	6.00	3.60	3.06	2.88	2.64	IR 452		3.78	3.21	3.02	2.63	23V111	37.50	22.50	19.13	18.00	16.50	25V24		12.75	10.83	10.20	9.35
IR 328	6.00	3.60	3.06	2.88	2.64	IR 453		4.05	3.44	3.24	2.82	23V112	37.50	22.50	19.13	18.00	16.50	25V25		12.75	10.83	10.20	9.35
IR 329	6.00	3.60	3.06	2.88	2.64	IR 454		3.91	3.33	3.13	2.72	23V113	62.50	37.50	31.90	30.00	27.50	25V26		15.00	12.75	12.00	11.00
IR 330	6.00	3.60	3.06	2.88	2.64	IR 455		3.91	3.33	3.13	2.72	23V114	27.50	16.50	14.02	13.20	11.50	25V27		15.00	12.75	12.00	11.00
IR 331	6.00	3.60	3.06	2.88	2.64	IR 456		3.51	2.98	2.81	2.44	23V115	5.00	3.00	2.55	2.40	2.20	25V28		60.00	51.00	48.00	41.80
IR 332	6.00	3.60	3.06	2.88	2.64	IR 457		3.51	2.98	2.81	2.44	23V116	3.00	2.00	1.80	1.68	1.56	25V29		24.00	20.40	19.20	17.40
IR 333	6.00	3.60	3.06	2.88	2.64	IR 458		3.78	3.21	3.02	2.63	23V117	6.00	3.60	3.06	2.88	2.64	25V30		67.50	57.00	54.00	47.00
IR 334	6.00	3.60	3.06	2.88	2.64	IR 459		3.64	3.10	2.92	2.54	23V118	8.50	5.10	4.33	4.08	3.74	25V31		45.00	38.00	36.00	33.00
IR 335	6.00	3.60	3.06	2.88	2.64	IR 460		3.51	2.98	2.81	2.44	23V119	12.00	7.20	6.12	5.76	5.24	25V32		90.00	76.50	72.00	66.00
IR 336	6.00	3.60	3.06	2.88	2.64	IR 461		3.51	2.98	2.81	2.44	23V120		48.00	40.80	38.40	35.20	25V33		60.00	51.00	48.00	41.80
IR 337	6.00	3.60	3.06	2.88	2.64	IR 462		4.99	4.25	4.00	3.47	23V121	6.75	4.05	3.45	3.24	2.97	25V34		9.00	7.65	7.20	6.72
IR 338	6.00	3.60	3.06	2.88	2.64	IR 463		4.56	3.82	3.58	3.08	23V122	8.75	5.25	4.46	4.20	3.85	25V35		27.00	23.00	21.60	18.80
IR 339	6.00	3.60	3.06	2.88	2.64	IR 464		4.72	4.02	3.78	3.28	23V123		2.04	1.73	1.63	1.49	25V36		14.58	12.39	11.67	10.16
IR 340	6.00	3.60	3.06	2.88	2.64	IR 465		4.59	3.90	3.67	3.19	23V124	27.50	16.50	14.02	13.20	11.50	25V37		10.12	8.61	8.10	7.05
IR 341	6.00	3.60	3.06	2.88	2.64	IR 466		.90	.77	.72	.66	23V125	19.00	11.40	9.67	9.12	8.36	25V38		11.88	10.10	9.52	8.28
IR 342	6.00	3.60	3.06	2.88	2.64	IR 467		5.35	4.62	4.44	4.07	23V126		10.50	8.92	8.40	7.71	25V39		30.00	25.50	24.00	22.00
IR 343	6.00	3.60	3.06	2.88	2.64	IR 468		3.81	3.24	3.05	2.79	23V127	30.00	18.00	15.30	14.40	13.20	25V40		54.00	46.00	43.20	39.60
IR 344	6.00	3.60	3.06	2.88	2.64	IR 469		6.30	5.36	5.04	4.22	23V128	70.00	40.00	32.75	30.00	27.50	25V41		30.00	25.50	24.00	22.00
IR 345	6.00	3.60	3.06	2.88	2.64	IR 470		4.35	3.68	3.47	3.19	23V129		45.00	38.25	36.00	33.00	25V42		16.50	14.02	13.20	11.50
IR 346	6.00	3.60	3.06	2.88	2.64	IR 471		3.81	3.24	3.05	2.79	23V130		17.50	15.00	14.02	13.20	25V43		30.00	25.50	24.00	22.00
IR 347	6.25	3.75	3.19	3.00	2.75							23V131		10.50	8.92	8.40	7.70	25V44		18.00	15.75	15.00	13.75
IR 348	6.00	3.60	3.06	2.88	2.64							23V132		45.00	38.25	36.00	33.00	25V45		24.00	20.40	19.20	17.40
IR 349	6.00	3.60	3.06	2.88	2.64							23V133		10.50	8.92	8.40	7.70	25V46		30.00	25.50	24.00	22.00
IR 350	6.00	3.60	3.06	2.88	2.64							23V134	7.50	4.50	3.82	3.60	3.30	25V47		18.00	15.75	15.00	13.75
IR 351	6.00	3.60	3.06	2.88	2.64							23V135		10.50	8.92	8.40	7.70	25V48		30.00	25.50	24.00	22.00
IR 352	.50	.30	.25	.24	.22							23V136		10.50	8.92	8.40	7.70	25V49		30.00	25.50	24.00	22.00
IR 353	.50	.30	.25	.24	.22							23V137		24.00	20.40	19.20	17.40	25V50		30.00	25.50	24.00	22.00
IR 354	8.70	7.39	6.95	6.38							23V138		24.00	20.40	19.20	17.40	25V51		30.00	25.50	24.00	22.00	
IR 355	11.10	9.43	8.87	8.13							23V139		24.00	20.40	19.20	17.40	25V52		42.00	35.70	33.60	29.26	
IR 356	4.50	3.85	3.60	3.14							23V140		24.00	20.40	19.20	17.40	25V53		33.00	31.90	30.00	27.50	
IR 357	3.75	3.19	3.00	2.62							23V141		24.00	20.40	19.20	17.40	25V54		12.00	10.20	9.60	8.80	
IR 358	3.75	3.19	3.00	2.62							23V142												

**TRIAD to THORDARON MEISSNER (T-M)**

**Cross Reference To Competitor**  
XR-64-T5

PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M									
A-1-X	20A35	EA-100	TOR 864	EK-4000	TOR 923	F-9A	21F64	G-9	GEO 59	HSM-309	27C20***	R-48	24R11 11	R-115A	24R58	S-552	26546	T-32X	TOR 237
A-4-X	20A08	EA-100A	TOR 764	EK-4000A	TOR 7123	F-9U	21F65	G-101	GEO 15	HSM-315	27C76	R-5A	22R90	R-115B	24R59	S-562	26579	T-35X	MIT 167
A-5-X	20A09	EA-150	TOR 865	EK-5000	TOR 924	F-10U	21F67	G-101TS	GEO 77	HSM-319	27C36	R-6A	24R19U	R-116A	24R60	S-572	24514#	T-34X	TOR 240
A-6-X	20A12	EA-200	TOR 866	EK-7000	TOR 925	F-11U	21F68	G-150	GEO 44	HS-331	27C70	R-6B	24R19	R-116B	24R61	S-592	22589	T-35X	TOR 241
A-7-X	25A10U	EA-200A	TOR 867	EK-7000A	TOR 7125	F-12X	21F63	G-155	GEO 45	HS-335	27C71	R-7A	24R21U	R-118A	24R62	S-60A	24557	T-41X	TOR 238
A-9J	25A101	EA-250	TOR 867	EK-10000	TOR 926	F-13X	21F61	G-201	GEO 26	HS-339	27C73	R-7B	24R22	R-118B	24R63	S-62X	24555#	T-42X	TOR 239
A-11J	25A102	EA-250A	TOR 867	EK-10000A	TOR 7126	F-14X	21F69	G-235	GEO 29	HS-401	27C72	R-8A	24R20U	R-120A	24R64	S-62X	22561	T-101X	MIT 100
A-12J	25A103	EA-300	TOR 868	EK-20000	TOR 927	F-15U	26F66	G-250	GEO 44	HS-405	27C74	R-8B	24R20U	R-120B	24R65	S-63X	24504#	T-102X	MIT 168
A-13X	25A104	EA-300A	TOR 868	EK-20000A	TOR 7127	F-16X	21F10	G-255	GEO 45	HS-405	27C73	R-8B	24R20U	R-121A	24R67	S-64X	22547c	T-23X	TOR 242
A-21X	20A80	EA-400	TOR 869	EK-30000	TOR 928	F-17U	21F76	G-266	GEO 51	HS-405	27C72	R-9A	24R21U	R-121B	24R67	S-65X	225103	T-24X	TOR 243
A-23X	24580	EA-400A	TOR 869	EK-30000A	TOR 7128	F-18A	21F42*	G-274	GEO 52	HS-407	27C73	R-9B	24R21U	R-122A	24R07	S-66X	225102	T-25X	TOR 244
A-31X	20A18	EA-500	TOR 870	EK-40000	TOR 929	F-19X	21F72*	G-285	GEO 53	HS-409	27C74	R-10A	24R22	R-122B	24R07	S-67X	26550	T-26X	TOR 245
A-33X	20A22	EA-500A	TOR 870	EK-40000A	TOR 7129	F-19X	21F73	G-285	GEO 54	HS-415	27C73	R-10B	24R22	R-123A	24R08	S-68Z	22552	T-27XT	TOR 233
A-35A	20A23*	EA-600	TOR 871	EM-001	TOR 810	F-20U	21F75	G-276	GEO 54	HS-415	27C73	R-11A	24R04U	R-124B	24R105	S-69Z	22554	T-28XT	TOR 232
A-39A	20A13	EA-600A	TOR 871	EM-001A	TOR 700	F-21A	21F74	G-284	GEO 61	HS-415	27C73	R-11B	24R04	R-125B	24R113	S-70Z	245100	T-29X	TOR 191
A-40A	25A110	EA-700	TOR 872	EM-002	TOR 801	F-22A	21F77	G-285	GEO 62	HS-417	27C73	R-12A	24R22	R-126A	24R112	S-71Z	245102	T-30X	TOR 192
A-41J	25A111	EA-700A	TOR 872	EM-002A	TOR 701	F-23U	21F28*	G-301	GEO 17	HS-425	27F35	R-12B	24R22	R-127A	24R112	S-72Z	245107	T-31X	TOR 193
A-42Z	20A14	EA-700A	TOR 872	EM-002A	TOR 701	F-24U	21F78	G-306	GEO 18	HS-427	27F60	R-1A	24R05U	R-127B	24R112	S-73X	245104	T-32X	TOR 146
A-50J	25568	EA-1000A	TOR 874	EM-003	TOR 802	F-25X	26F67A	G-313	GEO 19	HS-433	27F17	R-1B	24R05U	R-128A	24R112	S-74X	245105	T-33X	TOR 247
A-51X	25275	EA-1000A	TOR 874	EM-003A	TOR 702	F-26X	21F81	G-315	GEO 20	HS-435	27F18	R-1B	24R05U	R-128B	24R112	S-74X	245105	T-34X	TOR 248
A-52J	25A105	EA-1000A	TOR 874	EM-003A	TOR 702	F-27U	21F85	G-335	GEO 30	HS-436	27F14	R-1B	24R05U	R-128C	24R112	S-74X	245105	T-35X	TOR 249
A-53X	245114	EA-1000A	TOR 874	EM-004A	TOR 703	F-28U	21F79	G-336	GEO 31	HS-438	27F16	R-1B	24R05U	R-128D	24R112	S-74X	245105	T-36X	TOR 250
A-55X	25569	EA-1000A	TOR 874	EM-005	TOR 804	F-29U	21F80	G-350	GEO 46	HS-441	27F19	R-1B	24R05U	R-128E	24R112	S-74X	245105	T-37X	TOR 251
A-56J	25567	EA-1000A	TOR 874	EM-005A	TOR 704	F-30A	21F86	G-355	GEO 47	HS-442	27F21	R-1B	24R05U	R-128F	24R112	S-74X	245105	T-38X	TOR 252
A-57J	25A112	EA-1000A	TOR 874	EM-007	TOR 805	F-32A	21F87	G-389	GEO 65	HS-443	27F22	R-1B	24R05U	R-128G	24R112	S-74X	245105	T-39X	TOR 253
A-58J	25A109	EA-1000A	TOR 874	EM-007A	TOR 705	F-34A	21F88	G-391	GEO 66	HS-444	27F22	R-1B	24R05U	R-128H	24R112	S-74X	245105	T-40X	TOR 254
A-64J	25A106	EA-1000A	TOR 874	EM-010A	TOR 706	F-36A	21F24	G-396	GEO 67	HS-445	27F15	R-1B	24R05U	R-128I	24R112	S-74X	245105	T-41X	TOR 255
A-65J	25570	EA-1000A	TOR 874	EM-015	TOR 807	F-38A	21F89	G-396	GEO 67	HS-447	27V54	R-1B	24R05U	R-128J	24R112	S-74X	245105	T-42X	TOR 256
A-66J	25571	EA-1000A	TOR 874	EM-015A	TOR 807	F-40X	21F89	G-401	GEO 21	HS-471	27V55	R-1B	24R05U	R-128K	24R112	S-74X	245105	T-43X	TOR 257
A-67J	25A113	EA-1000A	TOR 874	EM-020	TOR 808	F-41X	21F93	G-435	GEO 32	HS-472	27V57	R-1B	24R05U	R-128L	24R112	S-74X	245105	T-44X	TOR 258
A-69J	25572	EA-1000A	TOR 874	EM-020A	TOR 708	F-42A	21F90	G-435TS	GEO 86	HS-474	27V57	R-1B	24R05U	R-128M	24R112	S-74X	245105	T-45X	TOR 259
A-70J	25A107	EA-1000A	TOR 874	EM-025	TOR 809	F-43X	21F91	G-437	GEO 33	HS-475	27V58	R-1B	24R05U	R-128N	24R112	S-74X	245105	T-46X	TOR 260
A-71J	25C10	EA-1000A	TOR 874	EM-025A	TOR 709	F-44X	26F67	G-437TS	GEO 87	JAF-1	27A81	R-1B	24R05U	R-128O	24R112	S-74X	245105	T-47X	TOR 261
A-72J	25574	EA-1000A	TOR 874	EM-030	TOR 810	F-45X	21F84	G-455	GEO 48	JAF-2	27A82	R-1B	24R05U	R-128P	24R112	S-74X	245105	T-48X	TOR 262
A-73J	25A108	EA-1000A	TOR 874	EM-030A	TOR 710	F-47U	23V101	G-475	GEO 55	JAF-3	27A83	R-1B	24R05U	R-128Q	24R112	S-74X	245105	T-49X	TOR 263
A-81X	20D88	EA-1000A	TOR 874	EM-040	TOR 811	F-48U	23V102	G-493	GEO 63	JAF-5	27A84	R-1B	24R05U	R-128R	24R112	S-74X	245105	T-50X	TOR 264
A-83X	20D89	EA-1000A	TOR 874	EM-040A	TOR 711	F-49U	23V102	HC-25	27V47	JAF-11	27A85	R-1B	24R05U	R-128S	24R112	S-74X	245105	T-51X	TOR 265
A-85X	20D86	EA-1000A	TOR 874	EM-050	TOR 812	F-50X	26F65	HC-115	27V48	JAF-12	27A86	R-1B	24R05U	R-128T	24R112	S-74X	245105	T-52X	TOR 266
A-200P	25A114	EA-1000A	TOR 874	EM-050A	TOR 712	F-51X	21F69	HC-300	27V49	JAF-13	27A15	R-1B	24R05U	R-128U	24R112	S-74X	245105	T-53X	TOR 267
A-202P	25A115	EA-1000A	TOR 874	EM-060	TOR 813	F-52X	26F60	HC-101	27A70	JAF-14	27A87	R-1B	24R05U	R-128V	24R112	S-74X	245105	T-54X	TOR 268
C-1-X	20C05	EC-040A	TOR 885	EM-060A	TOR 713	F-53X	21F70	HC-300	27V49	JAF-15	27A88	R-1B	24R05U	R-128W	24R112	S-74X	245105	T-55X	TOR 269
C-2X	20C102	EC-050	TOR 886	EM-070	TOR 814	F-60U	23V103	HC-300	27V49	JAF-21	27S80	R-1B	24R05U	R-128X	24R112	S-74X	245105	T-56X	TOR 270
C-3X	20C66	EC-050A	TOR 886	EM-070A	TOR 714	F-61U	23V104	HC-300	27V49	JAF-22	27S81	R-1B	24R05U	R-128Y	24R112	S-74X	245105	T-57X	TOR 271
C-4X	20C47	EC-070	TOR 887	EM-100	TOR 815	F-62U	23V108	HC-300	27V49	JAF-23	27S82	R-1B	24R05U	R-128Z	24R112	S-74X	245105	T-58X	TOR 272
C-5X	20C53	EC-070A	TOR 887	EM-100A	TOR 715	F-63U	23V106	HC-300	27V49	JAF-24	27S83	R-1B	24R05U	R-128AA	24R112	S-74X	245105	T-59X	TOR 273
C-6X	20C59P11	EC-100A	TOR 888	EM-150	TOR 816	F-64U	23V107	HC-300	27V49	JAF-25	27S83	R-1B	24R05U	R-128AB	24R112	S-74X	245105	T-60X	TOR 274
C-7X	20C06	EC-100A	TOR 888	EM-150A	TOR 816	F-65U	23V110	HC-300	27V49	JAF-26	27S84	R-1B	24R05U	R-128AC	24R112	S-74X	245105	T-61X	TOR 275
C-8X	20C48	EC-200	TOR 889	EM-200	TOR 817	F-66U	23V111	HC-300	27V49	JAF-31	27A90	R-1B	24R05U	R-128AD	24R112	S-74X	245105	T-62X	TOR 276
C-9X	20C07	EC-200A	TOR 889	EM-200A	TOR 717	F-67U	23V105	HC-300	27V49	JAF-32	27S85	R-1B	24R05U	R-128AE	24R112	S-74X	245105	T-63X	TOR 277
C-10X	20C09	EC-250	TOR 890	EM-250	TOR 818	F-68U	23V109	HC-300	27V49	JAF-33	27A91	R-1B	24R05U	R-128AF	24R112	S-74X	245105	T-64X	TOR 278
C-11X	20C08	EC-250A	TOR 890	EM-250A	TOR 718	F-71U	21F58*	HC-300	27V49	JAF-35	27A92	R-1B	24R05U	R-128AG	24R112	S-74X	245105	T-65X	TOR 279
C-12X	20C10	EC-300	TOR 891	EM-300	TOR 819	F-72Z	21F31	HC-300	27V49	JAF-35	27A92	R-1B	24R05U	R-128AH	24R112	S-74X	245105	T-66X	TOR 280
C-13X	20C12	EC-300A	TOR 891	EM-300A	TOR 719	F-79U	23V112	HC-300	27V49	JAF-101	27C67	R-1B	24R05U	R-128AI	24R112	S-74X	245105	T-67X	TOR 281
C-14A	20C13	EC-400	TOR 892	EM-400	TOR 820	F-80U	23V113	HC-300	27V49	JAF-102	27C68	R-1B	24R05U	R-128AJ	24R112	S-74X	245105	T-68X	TOR 282
C-14X	20C14	EC-400A	TOR 892	EM-400A	TOR 720	F-83A	21F91	HC-300	27V49	JAF-102	27C68	R-1B	24R05U	R-128AK	24R112	S-74X	245105	T-69X	TOR 283
C-15A	20C15	EC-500	TOR 893	EM-500	TOR 821	F-84AC	23V114	HC-300	27V49	JAF-102	27C68	R-1B	24R05U	R-128AL	24R112	S-74X	245105	T-70X	TOR 284
C-16A	26C45	EC-500A	TOR 893	EM-500A	TOR 721	F-90X	23V												

**UNITED TRANSFORMER CORP.**  
to  
**THORDARSON MEISSNER (T-M)**

**Cross Reference  
To Competitor**

XR-64-U5

PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M		PART NUMBER Competitor T-M					
A-10	25A58	CG-112	25C78	DI-1273	MIT 290	H-39	27A19	H-22C	27A41	HVC-10	27C188	MM-4	TOR 7252	N-586A	27F39	R-86	23V08	SO-CH	TR 352
A-11	25A59	CG-113	25C79	DI-1276	MIT 291	H-40A	27B22	H-221	27A42	HVC-11	27C189	MM-5	TOR 7253	N-587A	27F40	R-97	23V90	SSO-2	MIT 70
A-12	25A18*	CG-120	25F80	DI-1278	MIT 292	H-41A	27B23	H-222	27C42	HVC-12	27C190	MM-6	TOR 7254	N-588A	27F41	R-101	22R01	SSO-2	MIT 70
A-15	25A64	CG-121	25F81	DI-1283	MIT 293	H-42A	27A27	H-224	27C43	HVV-006	27C288	MM-8	TOR 7256	N-590A	27F43	R-102	22R01	SSO-3	MIT 73c
A-16	25A20	CG-122	25F82	DI-1288	MIT 294	H-45	PUL 10	H-225	27A149	HVV-015	27C287	MM-8	TOR 7255	N-591A	27F44	R-110	24R04	SSO-4	MIT 76
A-17	25A65	CG-124	25F83	DI-1291	MIT 295	H-46	PUL 11	H-226	27D36	HVV-04	27C289	MM-8	TOR 7255	N-592A	27F45	R-105	24R04	SSO-5	MIT 82
A-18	25A21	CG-125	25F84	DO-11	MIT 201	H-47	PUL 12	H-280	27S29	HVV-1	27C290	MM-8	TOR 7255	N-593A	27F46	R-110	24R04	SSO-6	MIT 79c
A-19	25A66	CG-126	25F85	DO-12	MIT 202	H-48	PUL 13	H-282	27S30	HVV-2	27C291	MM-8	TOR 7255	N-594A	27F47	R-111	24R04	SSO-7	TR 300
A-20	25A22*	CG-131	25A85	DO-13	MIT 203	H-49	PUL 14	H-283	27A48	HVV-5	27C292	MM-8	TOR 7255	N-595A	27F48	R-112	24R04	SSO-8	TR 301
A-21	25A60	CG-132	25A86	DO-14	MIT 204	H-50	PUL 15	H-284	27C45	HVV-1.5	27C293	MM-8	TOR 7255	N-596A	27F49	R-113	24R04	SSO-9	TR 302
A-22	25S10	CG-133	25A87	DO-15	MIT 205	H-51	PUL 16	H-286	27C46	HVV-2	27C294	MM-8	TOR 7255	N-597A	27F50	R-113	24R04	SSO-10	TR 303
A-23	25S11	CG-134	25A88	DO-16	MIT 206	H-52	PUL 17	H-290	27A150	HVV-10	27C295	MM-8	TOR 7255	N-598A	27F51	R-220	20C40	SSO-11	TR 304
A-24	25S12	CG-135	25A89	DO-17	MIT 207	H-53	PUL 18	H-291	27A151	HVV-25	27C296	MM-8	TOR 7255	N-599A	27F52	S-1	25A159	SSO-12	TR 305
A-25	25S13	CG-136	25A91	DO-18	MIT 208	H-54	PUL 19	H-295	27A152	HVV-60	27C297	MM-8	TOR 7255	N-600A	27F53	S-2	25A160	SSO-13	TR 306
A-26	25S33*	CG-137	25A92	DO-19	MIT 209	H-55	PUL 20	H-300	27C62	HVV-150	27C298	MM-8	TOR 7255	N-601A	27F54	S-3	25A161	SSO-14	TR 307
A-27	25A61	CG-140	25S21	DO-20	MIT 210	H-56	PUL 21	H-301	PUL 23	LP-10	27C414	MM-8	TOR 7255	N-602A	27F55	S-4	25A162	SSO-15	TR 308
A-28	25S14	CG-141	25S22	DO-21	MIT 211	H-57	PUL 22	H-501	PUL 24	LP-100	27C415	MM-8	TOR 7255	N-603A	27F56	S-5	25A163	SSO-16	TR 309
A-30	25C06	CG-233	25A93	DO-22	MIT 212	H-60	PUL 27	H-561	PUL 25	LM-200	27C315	MM-8	TOR 7255	N-604A	27F57	S-6	25A164	SSO-17	TR 310
A-32	25C07	CG-235	25A94	DO-23	MIT 213	H-61	PUL 28	H-561	PUL 26	LM-400	27C324	MM-8	TOR 7255	N-605A	27F58	S-7	25A165	SSO-18	TR 311
A-34	25A166	CG-300	25F92	DO-24	MIT 214	H-62	PUL 29	H-611	PUL 27	LM-500	27C325	MM-8	TOR 7255	N-606A	27F59	S-8	25A166	SSO-19	TR 312
A-35	25A167	CG-301	25F93	DO-25	MIT 215	H-63	PUL 30	H-641	PUL 28	LM-800	27C326	MM-8	TOR 7255	N-607A	27F60	S-9	25A167	SSO-20	TR 313
A-36	25A70	CG-302	25F94	DO-26	MIT 216	H-64	PUL 31	H-615	27V60	LM-1000	27C327	MM-8	TOR 7255	N-608A	27F61	S-10	25A168	SSO-21	TR 314
A-37	25A71	CG-303	25F95	DO-27	MIT 217	H-65	PUL 32	H-915	27V61	LM-1500	27C328	MM-8	TOR 7255	N-609A	27F62	S-11	25A169	SSO-22	TR 315
A-38	25A72	CG-304	25F96	DO-28	MIT 218	H-66	PUL 33	H-925	27V62	LM-2000	27C329	MM-8	TOR 7255	N-610A	27F63	S-12	25A170	SSO-23	TR 316
A-39	25A73	CG-305	25F97	DO-29	MIT 219	H-67	PUL 34	H-935	27V63	LM-2500	27C330	MM-8	TOR 7255	N-611A	27F64	S-13	25A171	SSO-24	TR 317
A-40	25F26	CG-306	25F98	DO-30	MIT 220	H-68	PUL 35	H-965	27V64	LM-3000	27C331	MM-8	TOR 7255	N-612A	27F65	S-14	25A172	SSO-25	TR 318
A-41	25C08	CG-307	25F99	DO-31	MIT 221	H-70	27C47	HA-100	25A72	LM-4000	27C332	MM-8	TOR 7255	N-613A	27F66	S-15	25A173	SSO-26	TR 319
A-42	25C09	CG-308	25F00	DO-32	MIT 222	H-71	27C48	HA-100X	25A73	LM-5000	27C333	MM-8	TOR 7255	N-614A	27F67	S-16	25A174	SSO-27	TR 320
A-43	25A63	CG-309	25F01	DO-33	MIT 223	H-72	27C49	HA-101	25A74	LM-6000	27C334	MM-8	TOR 7255	N-615A	27F68	S-17	25A175	SSO-28	TR 321
A-44	25A135	CG-310	25F02	DO-34	MIT 224	H-73	27C50	HA-101X	25A75	LM-7000	27C335	MM-8	TOR 7255	N-616A	27F69	S-18	25A176	SSO-29	TR 322
A-45	25S85	CG-311	25F03	DO-35	MIT 225	H-74	27C51	HA-103A	25A76	LM-8000	27C336	MM-8	TOR 7255	N-617A	27F70	S-19	25A177	SSO-30	TR 323
A-46	25A138	CG-312	25F04	DO-36	MIT 226	H-75	27C52	HA-104	25A80	LM-9000	27C337	MM-8	TOR 7255	N-618A	27F71	S-20	25A178	SSO-31	TR 324
A-47	25A139	CG-313	25F05	DO-37	MIT 227	H-76	27C53	HA-106	25A82	LM-10000	27C338	MM-8	TOR 7255	N-619A	27F72	S-21	25A179	SSO-32	TR 325
BMI-30	27C386	CG-308	25F96	DO-38	MIT 228	H-77	27C54	HA-107	25A83	LM-15000	27C339	MM-8	TOR 7255	N-620A	27F73	S-22	25A180	SSO-33	TR 326
BMI-50	27C387	CG-309	25F97	DO-39	MIT 229	H-78	27C55	HA-108	25A77	LM-20000	27C340	MM-8	TOR 7255	N-621A	27F74	S-23	25A181	SSO-34	TR 327
BMI-60	27C388	CG-310	25F98	DO-40	MIT 230	H-79	27C56	HA-108X	25A78	LM-25000	27C341	MM-8	TOR 7255	N-622A	27F75	S-24	25A182	SSO-35	TR 328
BMI-90	27C389	CG-311	25F99	DO-41	MIT 231	H-80	27R01	HA-113	25S15	LM-30000	27C342	MM-8	TOR 7255	N-623A	27F76	S-25	25A183	SSO-36	TR 329
BMI-100	27C390	CG-312	25F00	DO-42	MIT 232	H-81	27R02	HA-114	25S16	LM-40000	27C343	MM-8	TOR 7255	N-624A	27F77	S-26	25A184	SSO-37	TR 330
BMI-120	27C391	CG-313	25F01	DO-43	MIT 233	H-82	27R03	HA-130X	25A79	LM-50000	27C344	MM-8	TOR 7255	N-625A	27F78	S-27	25A185	SSO-38	TR 331
BMI-150	27C392	CG-314	25F02	DO-44	MIT 234	H-83	27R04	HA-130X	25A79	LM-60000	27C345	MM-8	TOR 7255	N-626A	27F79	S-28	25A186	SSO-39	TR 332
BMI-200	27C393	CG-315	25F03	DO-45	MIT 235	H-84	27R05	HA-134	25S18	LM-70000	27C346	MM-8	TOR 7255	N-627A	27F80	S-29	25A187	SSO-40	TR 333
BMI-240	27C394	CG-316	25F04	DO-46	MIT 236	H-85	27R06	HA-135	25S19	LM-80000	27C347	MM-8	TOR 7255	N-628A	27F81	S-30	25A188	SSO-41	TR 334
BMI-400	27C395	CG-317	25F05	DO-47	MIT 237	H-86	27R07	HA-136	25S20	LM-90000	27C348	MM-8	TOR 7255	N-629A	27F82	S-31	25A189	SSO-42	TR 335
BMI-500	27C396	CG-318	25F06	DO-48	MIT 238	H-87	27R08	HA-137	25A84	LM-100000	27C349	MM-8	TOR 7255	N-630A	27F83	S-32	25A190	SSO-43	TR 336
BMI-750	27C397	CG-319	25F07	DO-49	MIT 239	H-88	27R09	HIT-1	27V50	LM-150000	27C350	MM-8	TOR 7255	N-631A	27F84	S-33	25A191	SSO-44	TR 337
BMI-1000	27C398	CG-320	25F08	DO-50	MIT 240	H-89	27R10	HIT-2	27V52	LM-200000	27C351	MM-8	TOR 7255	N-632A	27F85	S-34	25A192	SSO-45	TR 338
BMI-1500	27C399	CG-321	25F09	DO-51	MIT 241	H-91	27R11	HIT-3	27V53	LM-250000	27C352	MM-8	TOR 7255	N-633A	27F86	S-35	25A193	SSO-46	TR 339
BMI-2000	27C400	CG-322	25F10	DO-52	MIT 242	H-92	27R12	HIT-4	27V54	LM-300000	27C353	MM-8	TOR 7255	N-634A	27F87	S-36	25A194	SSO-47	TR 340
BMI-3000	27C401	CG-323	25F11	DO-53	MIT 243	H-93	27R13	HIT-5	27V55	LM-400000	27C354	MM-8	TOR 7255	N-635A	27F88	S-37	25A195	SSO-48	TR 341
BMI-4000	27C402	CGU-1	25D62	DO-54	MIT 244	H-94	27R14	HIT-6	27V56	LM-500000	27C355	MM-8	TOR 7255	N-636A	27F89	S-38	25A196	SSO-49	TR 342
BMI-5000	27C403	CGU-2	25D63	DO-55	MIT 245	H-95	27R15	HIT-7	27V57	LM-600000	27C356	MM-8	TOR 7255	N-637A	27F90	S-39	25A197	SSO-50	TR 343
BMI-10000	27C404	CGU-3	25D64	DO-56	MIT 246	H-96	27R16	HIT-8	27V58	LM-700000	27C357	MM-8	TOR 7255	N-638A	27F91	S-40	25A198	SSO-51	TR 344
BPH-50000	27C396	CGU-4	25D65	DO-57	MIT 247	H-97	27R17	HIT-9	27V59	LM-800000	27C358	MM-8	TOR 7255	N-639A	27F92	S-41	25A199	SSO-52	TR 345
BPH-100000	27C397	CGU-5	25D66	DO-58	MIT 248	H-98	27R18	HIT-10	27V60	LM-900000	27C359	MM-8	TOR 7255	N-640A	27F93	S-42	25A200	SSO-53	TR 346
BPH-400	27C398	CGU-6	25D67	DO-59	MIT 249	H-99	27R19	HIT-11	27V61	LM-1000000	27C360	MM-8	TOR 7255	N-641A	27F94	S-43	25A201	SSO-54	TR 347
BPH-500	27C399	CGU-7	25D68	DO-60	MIT 250	H-100	27R20	HIT-12	27V62	LM-1500000	27C361	MM-8	TOR 7255	N-642A	27F95	S-44	25A202	SSO-55	TR 348
BPH-750	27C400	CGU-8	25D69	DO-61	MIT 251	H-101	27R21	HIT-13	27V63	LM-2000000	2								





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**ELECTRONIC DISTRIBUTOR for ...***

■ *Instant off-the-shelf delivery*

■ *In-depth inventories*

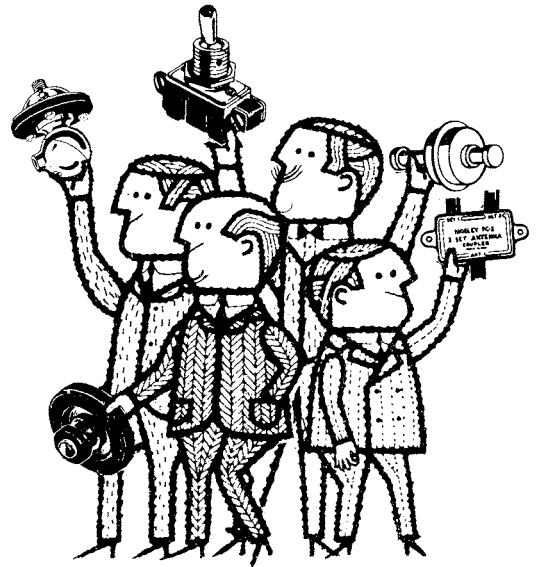
■ *Wide varieties*

■ *Prompt service*

■ *Technical assistance*

■ *Availability of the latest products*

■ *Speedy purchasing – one order does the job*



*Contact your local **ELECTRONIC DISTRIBUTOR**  
for all your requirements!*

# TRIAD DISTRIBUTOR DIVISION



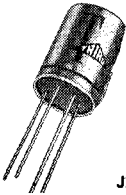
A DIVISION OF LITTON INDUSTRIES



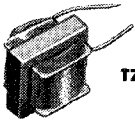
## MINIATURES

### †† JAF SERIES — Hermetically Sealed

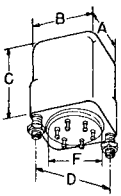
Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.	** MTG.
JAF-1‡	600/250/50	50000	0	60-15000	AF
JAF-2‡	600/250/50	250000	0	100-15000	AF
JAF-3	600/250/50	60000 CT.	0	60-15000	AF
JAF-5‡	30/12/4	50000	0	50-15000	AF
JAF-11	15000	50000	10	60-15000	AF
JAF-12	15000	60000 CT.	10	250-15000	AF
JAF-13	15000 (3 Ma.)	95000 CT.	10	250-15000	AF
JAF-14‡	200	1/2 megohm	10	350-5000	AF
JAF-15	15000	1 megohm	10	300-3000	AF
JAF-21	15000	600/250/50	10	60-15000	AF
JAF-22	15000 (3 Ma.)	600/250/50	10	350-7000	AF
JAF-23	20000 CT.	600/250/50	10	60-15000	AF
JAF-24	10000 CT.	2000 CT.	10	50-20000	AF
JAF-25	12000CT.(2 Ma.)	600 CT./150	12	50-15000	AF
JAF-26	50000CT.(.5Ma.)	600 CT./150	10	100-15000	AF
JAF-31‡	600/250/50	600/250/50	10	60-15000	AF
JAF-32	1500 CT. (2Ma.)	600 CT./150	14	20-20000	AF
JAF-33‡	5000 CT.	5000 CT.	10	60-15000	AF
JAF-34	5000 CT.	500 CT./125	14	50-20000	AF
JAF-35	600 CT.	2000 CT./500	14	50-20000	AF
JAF-101	50 h.-.75 Ma.				AF
JAF-102	6 HY.—3 MA. or 4 HY.—6 Ma.				



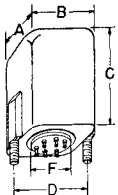
JZ



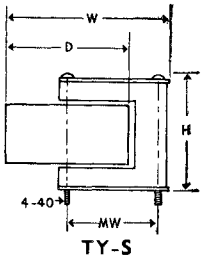
TZ



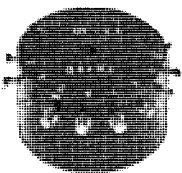
AF  
AJ



AG  
AH



TY-S



TY-MOLDED

### SUB-MINIATURE AUDIO — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	DC Res. Ohms (Approx.)		** Case
			Pri.	Sec.	
JZ-1	600/250/50	60000	350	4100	JZ
JZ-5	30/12/4	50000	11.5	3800	JZ
JZ-7	30/12/4	1000	12	480	JZ
JZ-13	15000 (1. Ma.)	135000 CT.	1150	4400	JZ
JZ-15	20000 (.5 Ma.)	1200/600/100	2700	350	JZ
JZ-25	10000 (1 Ma.)	200	1500	120	JZ
JZ-26	1000 (5 Ma.)	50	355	30	JZ

### SUB-MINIATURE AUDIO — Open Frame

Type No.	Primary Impedance	Secondary Impedance	DC Res. Ohms (Approx.)	
			Pri.	Sec.
TZ-1	600/250/50	60000	350	4100
TZ-2XT	200 CT.	200000	35	5000
TZ-5	30/12/4	50000	6	3500
TZ-7	30/12/4	1000	5	480
TZ-13	15000 (1 Ma.)	135000 CT.	985	4400
TZ-15	20000 (.5 Ma.)	1200/600/100	2700	350
TZ-24XT	25000 CT.	500 CT.	2000	60
TZ-17XT	10000 CT.	2000 CT	1000	250
TZ-29XT	10000 CT.	10,000 CT	1100	1400
TZ-25	10000 (1 Ma.)	200	1500	120
TZ-32XT	1500 CT.	600 CT./150	160	65
TZ-26	1000 (5 Ma.)	50	355	20
TZ-28	600	50	95	11
TZ-103XT	4 Hy. or 1 Hy.	—	400	—
T-41X	1000 (10 Ma.)	200 CT.	430	130
T-42X	9800 (2 Ma.)	16	855	1.7
TY-44X	1000 (10 Ma.)	16/8/4	180	3.8
TY-47X	2000 CT.(10 Ma.)	16/8/4	260	4

### TRANSFORMERS FOR TRANSISTOR POWER SUPPLIES

Type No.	D.C. Volts		Dimensions—Inches			MW
	Out of Rect.	Max.	H	W	D	
TY-68S	250	65	1 3/4	1 3/4	1 1/2	1 1/2
TY-69S	300	100	1 7/8	2 3/8	1 7/8	1 1/2
TY-70S	325	150	2	2 3/8	2 1/4	1 1/2
TY-71S	375	200	2	2 3/8	2 1/4	1 1/2
TY-74S	600	200	2	4 1/8	3	3 3/4

### EPOXY MOLDED TOROIDAL TYPE

Type No.	D.C. Source Volts	D.C. Volts		Dimension—Inches		
		Out Of Rectifier	D.C. Ma.	Dia.	Ht.	Wt. Lbs.
TY-78	12.6	250/125	100	1 3/4	1 1/8	.35
TY-79	12.6	300/150	200	1 3/4	1	.35
TY-80	12.6	325/162.5	150	1 3/4	1	.35
TY-81	12.6	375/187.5	200	2	1	.50

‡Static Shield •New item

TY-82	12.6	450/225	150	2	1	.50
TY-83	12.6	500/250	250	2 3/4	1 3/8	.85
TY-84	12.6	600/300	200	2 3/4	1 3/8	1.00
TY-85	12.6	600/300	350	2 7/8	2 1/2	2.00
•TY-86	12.6	425/212.5	350	2 3/4	1 3/8	1.00
TY-88	28	250/125	80	1 1/4	1 1/8	.25
TY-89	28	300/150	100	1 3/4	1 1/8	.35
TY-90	28	325/162.5	200	1 3/4	1	.35
TY-91	28	375/187.5	200	2	1	.50
TY-92	28	450/225	200	2	1	.50
TY-93	28	500/250	250	2 3/4	1 3/8	.85
TY-94	28	600/300	200	2 3/4	1 3/8	1.00
TY-99	6.3	300/150	100	1 3/4	1	.35
TY-100	6.3	325/162.5	150	2	1	.50
TY-101	6.3	375/187.5	200	2 3/4	1 3/8	1.00
TY-102	6.3	450/225	150	2 3/4	1 3/8	1.00

### †† MINIATURE AUDIO — "Trijets"

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.
T-1X‡	600/250/50	50000	0	60-15000
T-2X‡	600/250/50	250000	0	100-15000
T-3X	600/250/50	60000 CT.	0	60-15000
T-5X‡	30/12/4	50000	0	50-15000
T-11X	15000	50000	10	60-15000
T-12X	15000	60000 CT.	10	60-15000
T-13X	15000 (3 Ma.)	950000 CT.	10	250-15000
T-14X‡	200	500000	10	200-10000
T-15X	15000	1 Megohm	10	150-15000
T-20X	15000	600/250/50	10	60-15000
T-21X	3000	50	10	100-15000
T-22X	15000 (3 Ma.)	600/250/50	10	100-50000
T-23X	2000 CT.	600/250/50	10	40-30000
T-24X	10000 CT.	2000 CT.	10	50-20000
T-25X	12000 CT.(2 Ma.)	600 CT. 150	10	50-16000
T-26X	50000 CT.(.5 Ma.)	600 CT./150	10	100-15000
T-31X‡	600/250/50	600/250/50	10	50-15000
T-32X	1500 CT. (2 Ma.)	600 CT./150	13	50-20000
T-33X‡	5000 CT.	5000 CT.	10	60-15000
T-34X	500 CT.	500 CT./125	13	50-20000
T-35X	600 CT.	2000 CT./500	13	50-20000
T-101X	50 henries @ .75 Ma.			
T-102X	6 Hy.-3 Ma. or 4 Hy.-6 Ma.			

††Low frequency loss will result from DC in windings other than where specified.

\*\*See Case Chart on Triad Page 15

## MINIATURES

### TRANSISTOR TRANSFORMERS

Type No.	Primary Matching Impedance	Primary Current MA	Secondary Matching Impedance	Maximum Level
TY-23X	50000	.5	500 CT.	100 MW
TY-24X	50000	.5	3000 CT.	200 MW
TY-25X	100000	.5	200 CT.	200 MW
TY-26X	100000	.5	3000 CT.	200 MW
TY-27XT	500 CT.	2	500 CT.	10 MW
TY-28XT	500 CT.	2	200 CT.	10 MW
TY-29X	24 CT.	500	8/4	8W
TY-30X	100 CT.	100	8/4	2W
TY-31X	200 CT.	50	8/4	2W
TY-32X	200 CT.	2	2000 CT.	200 MW
TY-33X	400 CT.	5	16/8/4	200 MW
TY-34X	400 CT.	5	2000 CT.	200 MW
TY-35X	500 CT.	2	150 CT.	100 MW
TY-36X	2000	2	1500 CT.	200 MW
TY-37X	2000 CT.	4	8000 CT.	200 MW
TY-38X	3000 CT.	4	1000 CT.	200 MW
TY-39X	4000 CT.		16/8/4	200 MW
TY-40X	5000	1	200 CT.	100 MW
TY-41X	16000	1	4000	100 MW
TY-42X	20000	.5	8/4	100 MW
TY-43X	20000	.5	800 CT.	100 MW
TY-44X	1000	10	16/8/4	200 MW

Continued on TRIAD Page 2

# TRIAD DISTRIBUTOR DIVISION



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## MINIATURES (Continued)

Type No.	Primary Matching Impedance	Primary Current MA	Secondary Matching Impedance	Maximum Level
TY-45X	500 CT.	5	16/8/4	200 MW
TY-46X	100	100	1000 CT.	1 W
TY-47X	2000 CT.	10	16/8/4	200 MW
TY-48X	100 CT.	40	16/8/4	.5 W
TY-49X	500 CT.	12	5000 CT.	1 W
TY-50X	125000	0	2000 CT.	40 MW
TY-51X	2000 CT.	10	200 CT.	100 MW
TY-52X	20000 CT.	1	2000 CT.	200 MW
TY-53X	200 CT.	10	400 CT.	6 W
TY-54X	15000	1.5	200 CT.	200 MW
TY-55X	2000 CT.	2	500 CT.	200 MW
TY-56X	10000	1	2000 CT.	200 MW
TY-57X	250 CT.	10	16/8/4	200 MW
TY-58X	125 CT.	15	8/4	200 MW
TY-59X	5000 CT.	1	50000 CT.	200 MW
TY-60X	200000	0	1000	100 MW
TY-61X	100	100	100 CT.	4 W
TY-62X	10000	2	4	100 MW
TY-63X	48 CT.	275	16/8	8 W
TY-64X	32 CT.	575	16/8/4	10 W
TY-65Z	32 CT.	575	6K/4K/3K	10 W
TY-66A	6 CT.	5A	6K/4K/3K	40 W
TY-67A	6 CT.	5A	16/8/4	40 W

### †† JO SERIES — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-DBM	Freq. Resp.	Case
JO-1	600/250/50	50000	0	60-15000	JOA
JO-2	600/250/50	250000	0	60-15000	JOA
JO-3	600/250/50	60000 CT.	0	50150000	JOA
JO-5	30/12/4	50000	0	50-12000	JOA
JO-11	15000	60000	10	50-15000	JOB
JO-12	15000	60000 CT.	10	50-15000	JOB
JO-13	15000-3 Ma.	95000 CT.	10	50-15000	JOB
JO-21	15000	600/250/50	10	20-20000	JOB
JO-22	15000-3 Ma.	600/250/50	10	100-10000	JOB
JO-23	20000 CT.	600/250/50	10	40-30000	JOB
JO-31	600/250/50	600/250/50	10	40-20000	JOB
JO-101	50 h.-2 Ma.				JOB

### DC TO AC TRANSISTOR TRANSFORMERS

Type	Primary	Secondary		
TY-75A	12v	115v	60cps	115 watts
TY-76A	12v	115v	60cps	60 watts
TY-468	28v	115v	400cps	60 watts
TY-462	12v	115v	400cps	60 watts

### DC TO DC CONVERTER TRANSFORMERS

For use in blocking oscillator type power supplies

No. Type	L.	W.	H.	Mtg. Cent. ers	*Typical Operation Input	Output
TY-200X	1 7/8	7/8	1 3/8	1 3/8	3VDC @ 20 Ma.	1050VDC @ 25 μa
TY-201TZ	1/2	3/8	3/8	—	4VDC @ 15 Ma.	500VDC @ 50 μa
TY202X	1 1/8	7/8	1 3/8	1 3/8	3VDC @ 45 Ma.	550VDC @ 80 μa

### POWER COMPONENTS HERMETICALLY SEALED

#### Combined PLATE and FILAMENT Transformers Primary 115V — 50/60 cycle

Type No.	Plate Supply AC Volts	DC Ma.	Filaments	F Dim. (Min.) Inches	Case
HSM-200	120	100	6.3 CT.-1.6A.	1	FA
HSM-201	500 CT.	20	6.3 CT.-2A.	1 1/6	GA
HSM-202	120	20	6.3 CT.-.6A.	1 1/6	EA
HSM-203	600 CT.	50	6.3 CT.-2.5A. 5 -2A.	1 1/6	JB
HSM-205	700 CT.	70	6.3 CT.-3A. 5 -3A.	1 1/6	JA
HSM-207	700 CT.	120	6.3 CT.-5A. 5 -3A.	1 1/6	KA
HSM-208	626 CT.	200	6.3/5.0-3A. 6.3 CT. 5	1 1/6	KA
HSM-241	700 CT.-70V. bias.tap.	150	6.3 CT.-6A. 6.3-V.-2A. 5 -3A.	1 1/6	LA

•New item

HSM-212	1000/800 CT.	190 (ch. in.) 150 (cd. in.)	6.3/5-4A. 6.3 CT.-4A. 6.3 V-4A.	1 1/6	FA
HSM-245	800/700 CT. 70 V. bias tap.	200	6.3 CT.-6A. 6.3-V.-4A. 5 -6A.	1 1/6	MA
HSM-216	1000/800 CT.	254 (ch. in.) 200 (cd. in.)	6.3/5-4A. 6.3 CT.-5A. 6.3-5A.	1 1/6	MA
HS-247	800/700 CT. 70 V. bias tap.	300	6.3 CT.-8A. 6.3-V.-4A. 5 -6A.	1 1/6	GP-15
HSM-218	1000/800 CT.	300 (ch. in.) 235 (cd. in.)	6.3/5-6A. 6.3 CT.-6A. 6.3-6A.	1 1/6	GP-15
HSM-219	(115/230 pri.) 760/1600 CT.	40/230 (ch.input)		Spcl.	GP-15

All types electrostatically shielded  
GP-15 dims. 4 3/4" x 5 7/8" x 6 5/8" high. Wt. approx. 22 lbs.  
Mtg. centers 3 3/4" x 4 7/8".

### Combined PLATE and FILAMENT Transformers

Primary 115V—400 cycle to operate 380 to 1500 cycles

Type No.	Plate Supply AC Volts	DC Ma.	Filaments	Insul. Test Volt.	F Dim. (Min.) Inches	Case
HS-402	475 CT.	20	6.3 CT.-1.5A. 6.3-1A	1500	1 1/6	AJ
HS-401	500 CT.	40	6.3 CT.-1A. 6.3-1A	1500	1	EB
HS-400	125	25	6.3 CT.-8A.	1500	2 9/32	AH
HS-404	500 CT.	120	6.3 CT.-3A. 6.3/5.0-3A.	1500	1 1/6	FA
HS-405	600 CT.	70	6.3 CT.-2A. 6.3-2A. *6.3-2A.	1500	1 1/6	GA
HS-407	600 CT.	120	6.3 CT.-3.5A. 6.3-3.5A. *6.3/5-3A.	1500	1 1/6	JB
HS-409	700 CT.	150	6.3 CT.-4A. *6.3/5-3A.	1500	1 1/6	HA
HS-413	450 CT.	200	6.3 CT.-6A. 6.3 -6A. *6.3/5-4A.	1500	1 1/6	JA
HS-415	800/600 CT.	200	63. CT.-6A. 6.3-6A. 6.3/5-6A.	2500	1 1/6	KB
HS-417	800/600 CT.	300	6.3 CT.-6A. 6.3-6A. 6.3/5-6A.	2500	1 1/6	LA

\* Tapped for 5 volt rectifier use. All types electrostatically shielded.

### SOLID STATE LOW-VOLTAGE TRANSFORMER

Primary 10/115/125 volts — 50/60 cycles

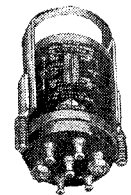
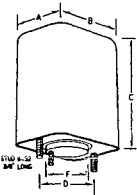
Type No.	Secondary AC Volts	RMS Amps	Rectifier Circuit CT. Full Wave	Bridge FW	Case
•HSM-248	35 CT.	3	14.5v	29v	KA

### AUDIO INTERSTAGE Transformers

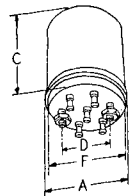
Type No.	Primary Imped.	Turn Ratio	Freq. Resp.	Power Output	Shielding	Case
HS-23	15000	1:2.7	20-20000	40 MW	P-3	GP-4
HS-25	15000	1:2.72 overall	20-20000	75 MW	P-1	GP-4
HS-35	15000	1:2.72 overall	20-20000	26 MW	P-1	GP-2
HS-27	20000/5000	1:1.72 overall	20-20000	130 MW	P-1	GP-4
HS-29	20000/5000	1:2 overall	20-20000	30 MW	P-5	GP-4
HSM-31	20000/5000	1:1 or 2:1	20-20000	3 W		FA
HS-32	15000 (6 Ma.)	1:2 overall	20-15000	200 MW	P-1	GP-5



HS Series



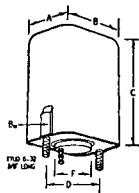
JO Series



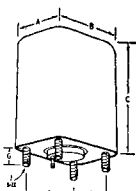
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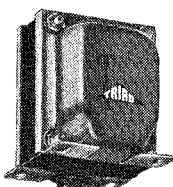
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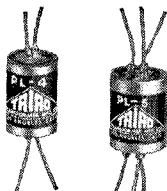
GP 1, 2, 3



MIL-T-27A CASE



Case A

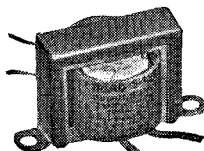


PL-4

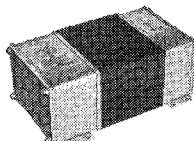
PL-5



PL-6



Case X



Case SC

## POWER OUTPUT to Line and VC. Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Max. Level-Watts	Freq. Resp.	** Case
HS-71	10000 (10 Ma.)	600/150	2	150-15000	AH-2
HS-73	5000 (40 Ma.)	500/250/ 16/8/4	5	70-15000	AJ-2
HS-75	1000 CT. (50 Ma. bal.)	500/250/ 16/8/4	10	100-25000	EB
HS-77	9000 CT. (120 Ma. bal.)	500/250/ 16/8/4	25	70-20000	GA

## LOW LEVEL AUDIO

### AUDIO INPUT TRANSFORMERS Hermetically Sealed

Type No.	Primary Imped.	Turn Ratio	Freq. Resp.	Power Output MW	Shielding	** Case
HS-1	600*/250*/ 150/62.5	1:11.3	20- 20000	10	P-5	GP-4
HS-11	Same as above	Same as above	Same as above	Same as above	P-1	GP-2
HS-3	600*/250*/ 150/62.5	1:14 overall	20- 20000	10	P-5	GP-4
HS-4	Same as above	Same as above	Same as above	Same as above	P-3	GP-4
HS-14	Same as above	Same as above	Same as above	Same as above	P-1	GP-3
HS-15	600*/250*/ 150/62.5 (10 Ma.)	1:8 overall	30- 20000	100	P-3	GP-5
HS-5	30	1:65.7	40- 12000	1	P-5	GP-4
HS-8	600*/250** 150/62.5	1:14 overall	20- 20000	100	P-1	GP-4

\*Balanced center tap.

### OUTPUT, MIXING, MATCHING, BRIDGING

Type No.	Primary Imped.	Secondary Impedance	Freq. Resp.	Power Output MW	Shielding	** Case
HS-50	15000	600*/250*/ 150/62.5	20- 20000	400	P-3	GP-4
HS-60	15000	600*/350*/ 150/62.5	20- 20000	20	P-1	GP-4
HS-61	15000 (5 Ma.)	600*/250*/ 150/62.5	40- 15000	200	P-1	GP-5
HS-52	20000 CT./ 5000	600*/250*/ 150/62.5	20- 20000	400	P-1	GP-4
HS-54	20000 CT./ 5000	600*/250*/ 150/62.5	20- 20000	30	P-5	GP-4
HS-56	600*/250*/ 150*62.5	600*/250*/ 150/62.5	10- 30000	100	P-3	GP-4
HS-66	600*/250*/ 150*62.5	600*/250*/ 150/62.5	10- 30000	100	P-1	GP-3
HS-58	600*/250*/ 150*62.5	600*/250*/ 150/62.5	20- 30000	50	P-3H	GP-5

\*Balanced center tap.

## POWER COMPONENTS

Type No.	Primary Volts	Secondary Volts	Secondary Amperes	Insulation Test Voltage	** Case
HSM-223	115	6.3	0.6	1500	AJ-2
HSM-225	105-115-125	6.3 CT.	2	1500	EA
HSM-226	105-115-125	6.3 CT.	3.6	1500	FA
HSM-224	105-115-125	6.3 CT.	5.5	2500	HB
HSM-234	105-115-125	†6.3 CT. 6.3	10	2500	KA
HSM-227	105-115-125	†6.3 CT. 6.3	3	2500	GA
HSM-229	105-115-125	6.3 CT.	8	2500	JB
HSM-233	105-115-125	12.6 CT.	8	1500	EA
HSM-237	105-115-125	12.6 CT.	2	2000	FA
HSM-230	105-115-125	24 CT.	0.8	1500	FA
HSM-239	105-115-125	24 CT.	1.5	2500	GA
HSM-240	115/230	†12.6 CT. †12.6	1.5	2500	GA
HSM-236	105-115-125	†12.6 CT. 12.6	2	2500	JB
HSM-228	105-115-125	†6.3 CT. 6.3	6	2500	JA
HSM-231	105-115-125	6.3 CT. 5 CT. 3	5	2500	JB
HSM-235	105-115-125	2.5 CT. 10 CT.	10	7500	MA

† Series or parallel connections.

\*\* See case chart Triad Page 15.

■ Discontinued item. Available until supply is exhausted

TRIAD PAGE 3

## POWER COMPONENTS (cont.)

HSM-238	105-115-125	†26 CT. †26	2	2500	JA
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### FILAMENT Transformers, 380/1500 cycle

Type No.	Primary Volts	Secondary Volts	Secondary Amperes	Insulation Test Voltage	** Case
HS-436	115	6.3 CT.	1	1500	AH
HS-425	105-115-125	6.3 CT.	2	1500	AJ-2
HS-427	105-115-125	6.3 CT.	5	2500	EA
HS-445	105-115-125	24 CT.	3	2500	EA
HS-438	105-115-125	24 CT.	1.5	1500	EA
HS-433	105-115-125	*6.3 CT. *6.3	5	2500	FA
HS-435	105-115-125	*6.3 CT. *6.3 †6.3/5	3.5	2000	FA
HS-441	105-115-125	*5 CT. *5 2.5 CT.	10	2000	HA
HS-443	105-115-125	*12.6 CT. *12.6	0.8	1500	AJ-2
HS-442△	57.5-99.7-115-120 Single phase.	*12.6 CT. *12.6	2	1500	EA
HS-444△	57.5-99.7-115-120*26 CT. *26 CT.	2	2	2000	FA

△ Two Units can be used, 115 volt 3 phase to 26 volt 2 phase, Scott-connected. \* Series or parallel connection. † 5 volt tap for filament type rectifiers.

## HIGH FIDELITY OUTPUT

### HIGH LEVEL OUTPUT — Hermetically Sealed

Type No.	Primary Impedance	Secondary Impedance	Freq. Resp.	Max. Level Watts	F Di. Min. In.	** Case
HSM-79	20000 CT. (20 Ma.) or 5000 (40 Ma.)	16/8/4	40-20000	5	1 1/2	FA
HSM-80	20000 CT. (20 Ma.) or 5000 (40 Ma.)	600/ 250 CT. 150/62.5	40-20000	5	1 1/2	FA
HSM-81	8000 CT. Split primary.	16/8/4	7-50000	15	1 1/2	JB
HSM-82	8000 CT.	600/ 250/125	7-50000	15	1 1/2	JB
HSM-181	8000/2000 CT. Split primary.	16/8/4	7-50000	15	1 1/2	JB
HSM-182	8000/2000 CT. Split primary.	600/ 250/125	7-50000	15	1 1/2	JB
HSM-84	5000 CT.	16/8/4	15-30000	20	1 1/2	JB
HSM-184	8000	16/8/4	10-50000	25	1 1/2	KB
HSM-189	10000/2500 CT. Split primary.	16/8/4	7-50000	25	1 1/2	KB
HSM-190	10000/2500 CT. Split primary.	500/ 250/125	7-50000	25	1 1/2	KB
HSM-186	6600 CT. or 1650 CT. Split primary.	16/8/4	7-50000	25	1 1/2	KB
HSM-187	6600 CT. or 1650 CT. Split primary.	500/ 250/125	7-50000	25	1 1/2	KB

(Continued on next page.)

# TRIAD DISTRIBUTOR DIVISION



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## HIGH FIDELITY OUTPUT (cont.)

Type No.	Primary Impedance	Secondary Impedance	Output Watts
HSM-94	4500 CT. 16/8/4	7-50000 55 1 1/4	LA
HSM-192	4000 CT. or 1000/445 CT. Split primary.	7-50000 65 1 1/4	LA
HSM-193	4000 CT. or 1000/150/125 445 CT. Split primary.	7-50000 65 1 1/4	LA

## HIGH LEVEL OUTPUT

Type No.	Primary Impedance	Secondary Impedance	Output Watts
S-34X	4000 CT.	32/16/8	7.5
S-31A	8000 CT.	16/8/4	15
S-32A	8000 CT.	500/250/125	15
†S-142A	8000 CT.	16/8/4	15
S-35A	5000 CT.	16/8/4	20
S-36A	5000 CT.	500/250/125	20
†S-144A	8000 CT.	16/8/4	25
†S-146A	6600 CT.	16/8/4	25
†S-148A	10000 CT.	16/8/4	25
S-42A	4500 CT.	16/8/4	50
†S-152A	4000 CT.	16/8/4	65
SR-45Z*	4000/2000/1000/500	16/8/4	10
S-46A	2000/1000/500/250	16/8/4	20
†SX-201	3300 ohms CT.	4-8-16 ohms	10-15
†SX-202	4500 ohms CT.	4-8-16 ohms	10-15
SX-203	5000 ohms	4-8-16 ohms	5-7
SX-204	5000 ohms CT.	4-8-16 ohms	10-15
SX-205	6600 ohms CT.	4-8-16 ohms	10-15
†SX-206	6600 ohms CT.	4-8-16 ohms	10-15
†SX-207	8000 ohms CT.	4-8-16 ohms	10-15
SX-208	8000 ohms CT.	4-8-16 ohms	10-15

† Williamson type circuit. Proper taps on primary for screen operation, leads out both end bells.

\* Replaces S-45Z.

## LINE POWER

### ISOLATION Transformers, 50/60 cycles

(See Triad page 6 for 380/1500 cycle isolation transformers)

Type No.	V. A. Output	Input Volts	Output Volts
N-51X	35	115	115
N-68X	50	230/115	115
N-53M	85	115	115
N-54M	150	115	115
N-67A	150	230/115	115
N-55M	250	115	115
N-66A	250	230/115	115
N-57M	500	115	115
N-59M	1000	115	115
†N-52M	350	95 to 130 (in 5V steps)	115
†N-56M	150	95 to 130 (in 5V. steps)	115
†With switch and meter for primary voltage control. Detachable cord.			
N-469A	50	460/230	115
N-470A	150	460/230	115
N-471A	300	460/230	115

### CONSTANT VOLTAGE TRANSFORMERS

Type No.	Rating V. A.	Input Volts	Output Volts
K-100	30	95-130	117
K-101	60	95-130	117
K-102	120	95-130	117

### STEPDOWN Autoformers, 50/60 cycles

Type No.	V. A. Output	Input Volts	Output Volts
N-1X	50	230	115
N-3M	85	230	115
N-4M	150	230	115
N-5M	250	230	115
N-7M	600	230	115
N-9M	1250	230	115
N-11M	2000	230	115
N-34X	150	95/105/115/125/135	115
†N-35M	250	95 to 130 (in 5V. steps)	115
†N-50M	500	95 to 130 (in 5V. steps)	115

With switch and meter.

† M case with switch for primary voltage control and detachable cord.

Note: Last letter of Type No. denotes case style.

■ Discontinued item. Available until supply is exhausted.

## FILTER REACTORS

Type No.	Current DC Ma.	Inductance *Henries	Resistance Ohms	Insulation Test Voltage
HSM-301	20	30	1000	1500
HSM-302	20	14	560	1500
HS-331	40	4	375	1500
HS-303	50	12	385	1500
HS-333	70	3	225	1500
HSM-305	70	15	300	2500
HS-335	120	3	150	1500
HSM-307	120	15	185	2500
HSM-309	150	9	115	2500
HS-339	200	3	105	2000
HSM-315	200	10	100	2500
HS-341	300	2	48	2000
HSM-319	300	10	85	2500

Minimum Inductance—20%

## PULSE TRANSFORMERS BLOCKING OSCILLATOR TYPE

Type No.	Pulse Voltage per Winding	Pulse Duration—us	Load Impedance—Ohms
PL-4	100-100	.54 to .66	500*
*PL-5	100-100-100	.36 to .54	2000*
PL-6	100-100-100	.36 to .54	2000*

\* As blocking oscillator in Triad circuit. Can be used with lower impedances and higher peak power at lower duty cycle.

## HIGH SPEED FERRITE TOROIDAL CORE LOW POWER

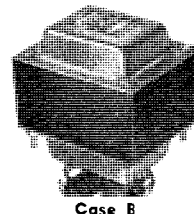
Type No.	Turns Ratio	Pulse Width $\mu$ Sec.	Rise Time $\mu$ Sec.	Repetition Rate	Suggested Load Ohms	Volts
PL-80E PL-80H PL-80P	1-1	.07	.03	1-2 Mc	200	15
PL-81E PL-81H PL-81P	2-1	.07	.03	1-2 Mc	200	20
PL-82E PL-82H PL-82P	3-1	.08	.03	1-2 Mc	100	15
PL-83E PL-83H PL-83P	4-1	.08	.03	1-2 Mc	100	15
PL-84E PL-84H PL-84P	5-1	.08	.03	1-2 Mc	100	15

The letter "H" indicates Hermetically Sealed, the letter "P" indicates Miniature Plug-in and the letter "E" indicates Epoxy Molded.

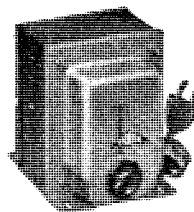
## LOW SPEED SILICON CORE LOW POWER

Type No.	Pulse Voltage per Winding	Pulse Duration— $\mu$ Sec.	Load Impedance—Ohms
■PL-124E PL-124H	300-300-300	.6 to 5	150
PL-140E PL-140H PL-140M	100-400-100	.6 to 5	175
PL-139E PL-139H PL-139M	100-100	.3 to 1.5	250
PL-146E PL-146H PL-146M	300-300	.6 to 5	250

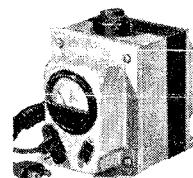
Letter "M" indicates MIL type case. For pulse types only.



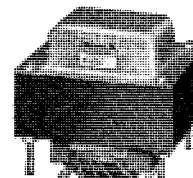
Case B



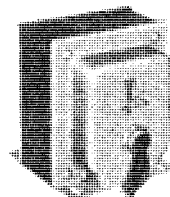
Case M



Case M with Meter



Case C



Case AC

# TRIAD DISTRIBUTOR DIVISION



A DIVISION OF LITTON INDUSTRIES



## Instrument POWER SUPPLY Transformers

For PREAMPLIFIERS, VTVM, etc.

Primary 115 volts — 60 cycles

Type No.	Plate Supply		Filament Windings Volts and Amperes
	AC Volts	DC Ma.	
R-68A	800 CT.	30	5V.-2A, 6.3V-1.2A, 6.3V-1.2A.
R-2C	135	15	6.3V.-9A.
R-23B	250 CT.	22	6.3.-8A. 15.5/12.6V.-6A.
R-3A	500 CT.	20	6.3V CT.-2A.
R-29A	230 CT.	40	6.3V CT.-1.5A.
R-30X	135	50	6.3V.-1.5A.
R-54X	115	15	6.3V.-.6A.
R-56A	130	20	0/15/22.5/30V.-6A.
R-73B	135	200	6.3V CT.-5.5A.

For CATHODE RAY Tubes

Primary 115 volts — 60 cycles

Type No.	Plate Supply		Filament Windings Volts and Amperes	
	AC Volts	DC Ma.		
R-41C	440-0- 440-1250.	125/5	*6.3V.-.6A. †2.5V.-1.75A. 5V.-3A.	†2.5V.-1.75A. 5V.-3A.
R-45C	400-0- 400-800.	30/5	*6.3V.-.6A. 6.3 CT.-3A. †5V.-2A	6.3V.-1A. 5V.-2A.
R-43C	1600	3	*6.3/5/2.5V.-1A. †6.3/5/2.5V.-3A.	

\* Static shielded and insulated for full plate voltage.

† Insulated for full plate voltage.

For REGULATED POWER SUPPLIES

Primary 115 volts — 60 cycles

Type No.	Plate Supply		Filament Windings Volts and Amperes	
	AC Volts	DC Ma. Choke Input		
R-70A	880 CT.	75	6.3V.-.6A. 6.3V.-.3A.	6.3V.-.9A. 6.3V.-.3A.
R-26A	880-720 CT.	200	6.3 CT.-8A. 6.3V.-1A.	6.3V.-3A. 5V.-3A.
R-28A	1250 CT.	300	6.3 CT.-8A. 6.3V.-3A.	6.3V.-3A. 5V.-6A.
R-46A	1250 CT. 130 (Bias winding)	350	5V.-4A.	6.3V.-4A. 6.3V.-1A. 6.3V.-1A.
R-46A will supply 550 V. D.C. using 2 5R4G rectifier tubes, choke input. Will also supply 130 V. for bias using Selenium rectifier. Sufficient filament windings to regulate screen voltages.				
R-27A	1500 CT.	400	5V.-6A.	6.3V.-3A. 6.3V.-8A.

UNIVERSAL

Isolation, Autoformer, Voltage Control 50/60CPS

Type No.	V.A. (Isolation)	V.A. (Autoformer)
N-64AC	500	1000
N-62AC	1000	2000
N-60SC	2000	4000

SOLID STATE RECTIFIER POWER TRANSFORMERS

Primary 117 volts — 50/60 cycles

Type No.	Secondary No. 1 Volts	MADC	Secondary No. 2 Volts @ A	Secondary No. 3 Volts @ A	Mounting Centers
R200A	200-0-200	400	6.3 3	6.3 3	2 3/4 x 3 1/8
R201A	150-0-150	600	6.3 2.5	6.3 2.5	2 3/4 x 3 1/8
R202A	100-0-100	800	6.3 2	6.3 2	2 3/4 x 2 1 1/8
R-203A	50-0-50	1600	6.3 1.5	6.3 1.5	2 3/4 x 2 1 1/8
R-204A	40-0-40	2000	6.3 1.5	6.3 1.5	2 3/4 x 2 1 1/8
R-205A	30-0-30	2500	6.3 1.5	6.3 1.5	2 3/4 x 2 1 1/8

## SELENIUM RECTIFIER Transformers Primary 60 cycles

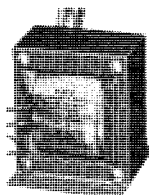
These transformers are for use with Selenium rectifiers. Rectifiers not included.

Type No.	Primary Volts	Secondary Amperes		Half Wave	Full Wave
		AC Volts	RMS	Volts DC	Volts DC
F-47U	115	17-18	3	6-7	13-14
F-48U	115	17-18	6	6-7	13-14
F-49U	115	36 36	3 3	13	26
F-60U	115	6.5-13- 19.5-26	3 (nt.)	9	18
F-61U	115	24-27-30 33-36	3	13	26
F-67U	110-120	24-27-30- 33-36	8	13	26
F-63U	115	8-9 8-9	2 2		6-7
F-64U	115	7-8-9	7		6-7
F-62U	105-115- 125	9-9-9-9	10 ea. wdg.		6-7 ea. wdg.
F-68U	115	9 CT. 9 9 9	3.5 3.5 3.5 3.5		6-7 ea. wdg.
F-65U	110-120	140-150-160	.75	60	115
F-66U	110-120	140-150-160	2.5	60	115
F-79U	115	24-26-28-30	15	11.4	22.8
F-80U	tapped for mult. sec.	12 to 18 or 24 to 36CT	40 20	—	13
F-84AC	230-115	24CT or 12CT	10 20	—	8.5
F-90X	115 tapped	40CT-20CT-10	100ma	15	30
F-91X	115 tapped	40CT-20CT-10	300ma	15	30
F-92A	115 tapped	40CT-20CT-10	1 amp	15	30
R-93A	115	6.3CT (voltage doubler circuit) 150-160-170 (500ma)	6	65	120
F-93X	115V tapped	40CT-20CT-10	750ma	15	30
F-94X	115X tapped	40CT-20CT-10	35ma	15	30

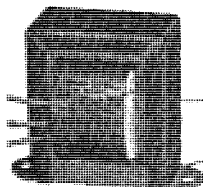
## FILAMENT Transformers, Single Secondary Primary 115 volts — 60 cycles

Type No.	Secondary Volts	Secondary Amperes	Test Volts
F-1X	2.5 CT.	3	1500
F-72Z	2.5 CT.	5	7500
F-6X	2.5 CT.	6	2500
F-3X	2.5 CT.	10	3000
F-5U	2.5 CT.	10	7500
F-71U	2.5 CT.	10	10000
F-7X	5 CT.	3	1500
F-8X	5 CT.	6	1500
F-12X	5 CT.	8	2500
F-9A	5.2 CT.	13	1500
F-10U	5 CT.	14	10000
F-9U	5.2 CT.	13	1500
F-15U	5 CT.	15	3000
F-11U	5.2 CT.	24	1500
F-13X	6.3	.6	1500
F-14X	6.3 CT.	1.2	2500
†F-52X	6.3	1.2	5000
†F-51X	6.3/5	2	5000
†F-53X	6.3	4	5000
F-16X	6.3 CT.	3	2500
F-18X	6.3 CT.	6	1500
F-18A	6.3 CT.	6	1500
F-19X	6.3/6 CT.	6	2000
F-21A	6.3 CT.	10	1500
F-20U	6.3/6 CT.	11	3000
F-22A	6.3 CT.	20	2000
F-24U	7.5/6.3 CT.	8	3000
F-28U	7.5/6.3 CT.	25	3000
F-23U	10 CT.	7	1500
F-29U	12/11/10 CT.	11	3000
F-25X	12.6 CT.	1.5	1500

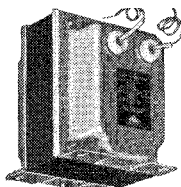
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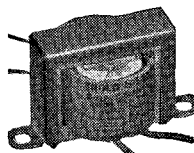
Case W



Case Z



Case AL



Case X



# TRIAD DISTRIBUTOR DIVISION



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F-44X	12.6 CT.	2	1500
F-26X	12.6 CT.	2.5	1500
F-45X	24 CT	1	1500
F-41X	25.2 CT.	2	1500
F-40X	26.8 CT	1	1500
F-50X	Filament line transformer Pri. 6.3V/5V Sec. 6.3/5V 2A		5000
F-83A	12.6 CT.	5	1500
	12.6 CT.	5	

† Low capacity—High voltage for damper tube operation.

## CHOKES

SWINGING FILTER REACTORS				
Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS
C-31A	25/5	20/200	150	2500
C-33A	25/5	30/300	105	3000
C-32AL	20/4	35/350	105	5000
C-35A	20/4	40/400	65	3000
C-39A	25/5	50/500	65	3000
C-38AL	25/5	50/500	65	5000

SMOOTHING FILTER REACTORS				
Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS
C-30X	50	15	3500	1500
C-2X	2	15	70	1500
C-1X	15	20	1000	1500
C-3X	10	50	500	1500
C-4X	4	50	360	1500
C-6X	5	65	330	1500
C-5X	12	75	390	1500
C-8X	7	75	240	1500
C-7X	10	90	270	1500
C-9X	4	90	100	1500
C-11X	6	110	160	1500
C-10X	9	125	250	1500
C-12X	6	160	165	1500
C-12A	6	160	165	1500
C-13X	3	160	75	1500
C-14X	6	200	150	1500
C-14A	6	200	150	1500
C-16A	10	200	150	2500
C-21X	1.5	225	65	1500
C-15X	4	250	100	1500
C-15A	4	250	100	1500
C-23X	1.2	260	45	1500
C-24X	1	240	50	1500
C-27X	.7	290	25	1500
C-36X	.5	300	30	1500
C-17X	1.5	300	40	1500
C-18A	8	300	90	2500
C-19A	10	300	105	3000
C-25A	2.6	310	60	1500
C-42AL	8	350	105	5000
C-34X	.6	350	35	1500
C-28X	1	350	35	1500
C-29X	1.5	375	50	1500
C-20A	6	400	60	3000
C-22A	10	500	65	3000
C-45AL	10	500	65	5000
C-40X	.32	600	10	1500
C-47U	.3-.075	1A-2A	3-.75	1500
C-48U	.08-.02	2.5A-5A	.57-.143	1500
C-49U	.032-.008	5A-10A	.19-.05	1500
C-80U	.024-.006	20A-40A	.096-.024	1500

## ISOLATION Transformers

Primary 115V—400 cycle to operate 380 to 1500 cycles

Type No.	Secondary Volts	Amp.	V. A.	F Dim. (Min.) Inches	Case
HS-470	115	.35	40	1	EA
HS-471	115	.7	80	1	FA
HS-472	115	1.4	160	1	GA
HS-474	115	2.6	300	1	JA
HS-475	115	4.4	500	1	KA
60 cycle — hermetically sealed					
Type No.	secondary volts	amp.	V.A.	F dim. (Min.) inches	Case
HSM-270	105-115-125	.4	50	1	JB
HSM-271	105-115-125	1	125	1	KA
HSM-272	105-115-125	2	250	1 3/8	NB

All isolation transformers electrostatically shielded.

## FILAMENT Transformers, Multiple Secondary

Primary 115 volts — 60 cycles

Type No.	Secondary Volts and Amperes		Test Volts RMS
F-27U	10 CT.-10A.	2.5 CT.-10A.	1500 7500
F-30A	5 CT.-3A.	6.3 CT.-8A.	1500
F-32A	6.3 CT.-3A.	6.3 CT.-3A.	1500
F-34A	6.3 CT.-1.75A.	6.3V.-1.75A.	1500
	6.3V.-1.75A.	6.3V.-1.75A.	
F-36A	6.3 CT.-3.5A.	6.3V.-3.5A.	1500
	6.3V.-3.5A.	6.3V.-3.5A.	
F-38A	6.3 CT.-5A.	6.3V.-5A.	1500
	6.3V.-1A.	5 CT.-2A.	
	5V.-4A.		
F-42A	12.6 CT.-2.5A.	12.6-2.5A.	1500

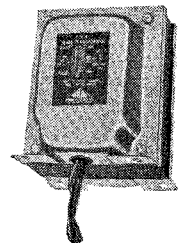
## AUDIO INPUT TRANSFORMERS

Low Level Input

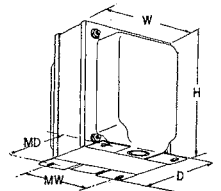
Type No.	Application	Frequency Response	Primary Impedance	Turn Ratio
A-9J	line or mike to grid	30-15000	600/250/50	12
A-10J	line to grid	30-15000	600/150 split wdgs.	10.5
A-11J	line or mike to grid 60-80dB shielding	30-15000	600/250/50	10
A-12J	same as A-11J	30-15000	600 CT./150 split windings	10
A-13J	line to transistor or line to line (70 db Shldg)	30-15000	600/300/ 200 CT./110/50 split windings	1
A-40J	par. fed 6J5 or 6SN7 plate to P.P. grids	30-15000	15000	2.76
A-41J	same as A-40J 8ma DC in primary	30-15000	15000	2.3
A-50J	pp plates to voice coil	30-15000	10000 CT.	35.3
A-52J	line or transistor to line or transistor	30-15000	500 CT./125 20 MA. D.C. Split Winding	2
A-55J	par. fed 6J5 or 6SN7 to line	30-15000	15000	5
A-56J	lin or transistor to Voice Coil	30-15000	500 CT./125 20 MA. D.C. Split Winding	5.6
A-58J	pp plates or transistors to line or transistors	30-15000	10000 CT./2500 Split Winding	2.24
A-64J	line or transistor to transistor	30-15000	100 CT.*25 30 MA. D.C. Split Winding	1.58
A-65J	par. fed 6J5 or 6SN7 to line	30-15000	15000 CT.	5
A-66J	same as A-65J—5 ma DC in primary	40-15000	15000	5
A-67J	line to line	30-15000	600 CT./150 split windings	1
A-68J	pp plate to line 4 ma DC in primary	30-15000	15000 CT.	5
A-69J	pp plates or bridging to line 3 MA. D.C. in Primary	30-15000	25,000 CT./ 6250 Split Winding	7.1
A-70J	line or transistor to line or transistor	30-15000	500 CT./125 15 MA. D.C. Split Winding	2.24
A-77J	Audio choke — dual winding	250 henries - 5 ma DC 62.5 henries - 10 ma DC		
A-78J	output pp transistors to line	30-15000	2000CT	1.82
A-79J	Transistor inter-stage 10ma in primary	20-15000	1000	2.2

## Line or Microphone to Grid

Type No.	Application	Frequency Response	Primary Impedance	Turn Ratio
A-1X	Line or single button mike to grid.	100-150000	100	31.4
A-3X	Line or D.B. mike to grid.	200-10000	400 CT.	22.1
A-4X	Line to grid.	100-20000	500/200/ 67.5 CT.	12
A-5X	Single button mike to p.p. grids—Hi-gain.	100-15000	100	84
A-6X	Speaker V.C. to grid	150-20000	8/3.2	79
A-7J	Voice coil to grid	150-10000	3.2	124



Case A



Case A

Triad J Series offers flexibility enabling your amplifiers to exceed broadcast standards. Although economy in construction has cut costs, these transformers approach and closely approximate performance characteristics found in more costly hermetically sealed parts. Single hole mounting provides for maximum reduction of hum... alloy shielding gives you 40-60 db hum reduction (60-80 db in Types A-11J & A-12J)... you can obtain wide frequency ranges... flexible leads facilitate ease in mounting... input units are electrostatically and magnetically shielded... light weight and encased in Triad's satin smooth baked gray enamel cases, 1 3/8" diameter, 1 3/4" above chassis... legible circuit diagrams are permanently affixed to every case.

# TRIAD DISTRIBUTOR DIVISION



A DIVISION OF LITTON INDUSTRIES



## AUDIO OUTPUT TRANSFORMERS Line to Voice Coil

Type No.	Primary Impedance	Output Imped.	Output Watts	Freq. Resp.
S-23X	50 (autoformer).	3.2	1	100-8000
S-26X	500/50 (autoformer).	3.2	4	100-8000
S-65X	500	8/4	5	100-10000
S-66X	500 (autoformer).	16/8/4	3	100-10000
S-76Z	250/125/62.5/31	16/8/4	10	40-15000
S-77U	500 CT./125 split wdgs.	32/16/8/4/2	30	40-15000

## POWER

### Combined PLATE and FILAMENT Transformers Primary 115 volts — 60 cycles

Type No.	Plate Supply		Rect. Fil.		Other Fil.	
	AC Volts	DC Ma.	Volts	Amp.	Volts	Amp.
R-22A	380/320 CT.	70	6.3	.6	6.3 CT.	3
R-22B	380/320 CT.	70	6.3	.6	6.3 CT.	3
R-4A	500 CT.	40			6.3 CT.	2
R-4B	500 CT.	40			6.3 CT.	2
R-5A	600 CT.	65			6.3 CT.	2.7
R-5B	600 CT.	65			6.3 CT.	2.7
R-6A	480 CT.	50	5	2	6.3 CT.	2
R-6B	480 CT.	50	5	2	6.3 CT.	2
R-7A	600 CT.	50	5	2	6.3 CT.	2
R-7B	600 CT.	50	5	2	6.3 CT.	2
R-8A	500 CT.	75	5	2	6.3 CT.	2.5
R-8B	500 CT.	75	5	2	6.3 CT.	2.5
R-9A	600 CT.	75	5	2	6.3 CT.	3

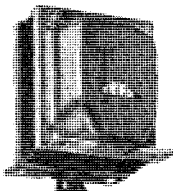
R-9B	600 CT.	75	5	2	6.3 CT.	3
R-10A	525 CT.	90	5	2	6.3 CT.	5
R-10B	525 CT.	90	5	2	6.3 CT.	5
R-11A	700 CT.	90	5	2	6.3 CT.	3.5
R-11B	700 CT.	90	5	2	6.3 CT.	3.5
R-12A	550 CT.	110	5	2	6.3 CT.	5
R-12B	550 CT.	110	5	2	6.3 CT.	5
R-14A	700 CT.	125	5	3	6.3 CT.	4.5
R-14B	700 CT.	125	5	3	6.3 CT.	4.5
R-16A	700 CT.	160	5	3	6.3 CT.	5
R-16B	700 CT.	160	5	3	6.3 CT.	5
R-17A	750 CT. 80 Tap	160	5	3	6.3 CT. 2.5 CT.	5 5
R-18A	750 CT.	175	5	3	6.3 CT.	8
R-18B	750 CT.	175	5	3	6.3 CT.	8
R-19A	750 CT. 80 Tap	200	5	3	6.3 CT. 2.5 CT.	6 10
R-20A	700 CT.	200	5	3	6.3 CT.	8
R-20B	700 CT.	200	5	3	6.3 CT.	8
R-72A	800 CT.	140	5	3	6.3 CT.	4
R-21A	800 CT.	200	5	3	6.3 CT.	6
R-21B	800 CT.	200	5	3	6.3 CT.	6
R-24A	800 CT.	300	5	6	6.3 CT.	6
R-24B	800 CT.	300	5	6	6.3 CT.	6
R-25A	800 CT.	500	5	6	6.3 6.3 CT.	3 7
R-58A	875 CT.	185	5	3	6.3 6.3	4 3
R-71A	900 CT.	250	5 CT.	4	6.3 CT. 6.3	2 4
R-93A	150-160-170 250	500	Silicon Rectifier Voltage doubler		6.3 CT.	6

### Combined PLATE and FILAMENT Transformers "100" Series

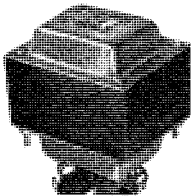
Never have the outstanding features of Triad Combined Plate and Filament Power Transformers been available at such realistic costs. No quality or performance requirement has been overlooked... specify Triad and be certain. Shielding, impregnation, chatter freedom... to Triad's demanding quality control standards.

#### PRIMARY 115 VOLTS 60 CYCLES

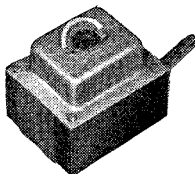
Type No.	Plate Supply		Rect. Filaments		Other Filaments		Case Dim.			Mtg. Dim.		Wt. Lbs.
	AC Volts	DC Ma.	Volts	Amp.	Volts	Amp.	H	W	D	MW	MD	
R-104A	500 C.T.	40			6.3 V.C.T.	2	2 3/4	2 3/8	2 1/4	1 3/4	1 1/2	1.55
R-104B	500 C.T.	40			6.3 V.C.T.	2	1 5/8	2 3/4	2 1/4	2 3/8	1 3/4	1.55
R-105A	600 C.T.	65			6.3 V.C.T.	2.7	3 1/8	2 5/8	2 1/2	2	1 3/4	2
R-105B	600 C.T.	65			6.3 V.C.T.	2.7	1 3/4	3 1/8	2 5/8	2 1/2	2	2
R-106A	480 C.T.	50	5	2	6.3 V.C.T.	2	3 1/8	2 5/8	2 3/8	2	1 5/8	2.05
R-106B	480 C.T.	50	5	2	6.3 V.C.T.	2	1 5/8	3 1/8	2 5/8	2 1/2	2	2.05
R-107A	600 C.T.	50	5	2	6.3 V.C.T.	2	3 1/8	2 5/8	2 1/2	2	1 3/4	2.35
R-107B	600 C.T.	50	5	2	6.3 V.C.T.	2	1 3/4	3 1/8	2 5/8	2 1/2	2	2.35
R-108A	500 C.T.	75	5	2	6.3 V.C.T.	2.5	3 1/8	2 5/8	2 5/8	2	1 7/8	2.4
R-108B	500 C.T.	75	5	2	6.3 V.C.T.	2.5	1 7/8	3 1/8	2 5/8	2 1/2	2	2.4
R-109A	600 C.T.	75	5	2	6.3 V.C.T.	3	3 1/2	3	2 7/8	2 1/4	1 3/4	2.9
R-109B	600 C.T.	75	5	2	6.3 V.C.T.	3	1 3/4	3 1/8	2 7/8	2 1 3/16	2 1/4	2.9
R-110A	525 C.T.	90	5	2	6.3 V.C.T.	5	3 1/2	3	3 1/4	2 1/4	2	3.25
R-110B	525 C.T.	90	5	2	6.3 V.C.T.	5	2	3 1/8	2 7/8	2 1 3/16	2 1/4	3.25
R-111A	700 C.T.	90	5	3	6.3 V.C.T.	3.5	3 1/2	3	3 1/4	2 1/4	2	3.55
R-111B	700 C.T.	90	5	3	6.3 V.C.T.	3.5	2	3 1/8	2 7/8	2 1 3/16	2 1/4	3.55
R-112A	550 C.T.	110	5	2	6.3 V.C.T.	5	3 1/2	3	3 3/8	2 1/4	2 1/8	3.7
R-112B	550 C.T.	110	5	2	6.3 V.C.T.	5	2 1/8	3 1/8	2 7/8	2 1 3/16	2 1/4	3.7
R-113A	650 C.T.	40	5	2	6.3 V.C.T.	2	3 1/8	2 5/8	2 3/4	2	1 3/4	2.3
R-113B	650 C.T.	40	5	2	6.3 V.C.T.	2	2	3	2 1/2	2 1/2	2	2.3
R-114A	700 C.T.	125	5	3	6.3 V.C.T.	4.5	3 7/8	3 1/4	3 1/4	2 1/2	2 3/8	4.7
R-114B	700 C.T.	125	5	3	6.3 V.C.T.	4.5	2 1/2	3 3/4	3 3/8	3 3/8	2 1/2	4.7
R-115A	680 C.T.	70	5	2	6.3 V.C.T.	2.5	3 3/8	3	3 3/8	2 1/4	2 1/8	3.5
R-115B	680 C.T.	70	5	2	6.3 V.C.T.	2.5	2	3 1/8	2 7/8	2 1 3/16	2 1/4	3.5
R-116A	700 C.T.	160	5	3	6.3 V.C.T.	5	3 7/8	3 1/4	3 3/8	2 1/2	2 5/8	5.65
R-116B	700 C.T.	160	5	3	6.3 V.C.T.	5	2 5/8	3 3/4	3 3/8	3 3/8	2 1/2	5.65
R-118A	750 C.T.	175	5	3	6.3 V.C.T.	8	4 1/4	3 5/8	4	2 3/4	2 7/8	7.45
R-118B	750 C.T.	175	5	3	6.3 V.C.T.	8	2 7/8	4 1/8	3 1/2	3 3/8	2 3/4	7.45
R-120A	700 C.T.	200	5	3	6.3 V.C.T.	8	4 1/4	3 5/8	4 1/8	2 3/4	2 7/8	8.25
R-120B	700 C.T.	200	5	3	6.3 V.C.T.	8	3	4 1/8	3 1/2	3 3/8	2 3/4	8.25
R-121A	800 C.T.	200	5	3	6.3 V.C.T.	6	4 1/4	3 5/8	4 3/8	2 3/4	3 1/4	8.25
R-121B	800 C.T.	200	5	3	6.3 V.C.T.	6	3 1/4	4 1/8	3 1/2	3 3/8	2 3/4	8.25



Case A



Case B



Case BS

# TRIAD DISTRIBUTOR DIVISION



A DIVISION OF LITTON INDUSTRIES



## PLATE POWER Transformers

Type No.	Secondary Volts		Sec. D.C. Ma.		Rect. Fil.
	AC	DC	CCS	ICAS	
P-1A	440/220 CT.	180/90	160	190	5V-3A
P-3A	600/300 CT.	250/125	300	360	5V-4A
P-5A <sup>o</sup>	1100 CT.	400	250	300	5V-4A
P-7A <sup>o</sup>	1235 CT.	500	250	300	5V-4A
P-9A	1235 CT.	500	500	600	5V-6A
P-11A <sup>o</sup>	1455 CT.	600	250	300	
P-213AL*†	1780 CT.	750	250	300	
§P-14A	1780 CT.	750/600	250	300	
P-215AL*†	2340 CT.	1000	250	300	
P-216AL*†	2430 CT.	1000	500	600	
P-217AL*†	2880 CT.	1250	250	300	
P218AL*†	2880 CT.	1250	500	600	
P-220AL*†	3300 CT.	1500	350	420	
PR-21AL	3300 CT.	1500	500	600	

† Plate leads out side of case for 866 rectifiers.

§ Tapped Pri. to produce the lower D.C. voltage.

\*Pri. is 230/115V.

<sup>o</sup>60 cycle only.

## TELEVISION COMPONENTS

### Replacement POWER Transformers, Combined Plate and Filament

Electrostatically shielded. Primary 115 volts 60 cycles.

Type No.	Plate Supply		Filaments— Volts and Amperes	
	AC Volts	DC Ma.	Volts	Amperes
R-37BC	735 V.C.T.	275	5V.—6A. 6.3V.—8.5A. 6.3V./5V.—2A.*	
R-38A	750 V.C.T.	225	5V.—3A. 6.3V.—10A. 6.3V.—1.2A.* 6.3V.—2.5A.	
R-38BC				
R-39BC	640 V.C.T.	225	5V.—3A. 6.3V.—10A. 6.3V.—1.2A.*	
R-40BC	780/440 V.C.T.	300	5V.—3A. 5V.—3A. 5V.—2A. 6.3V.—8.5A. 6.3V.—3.5A.	
R-42BC	675 V.C.T.	185	5V.—3A. 6.3V.—7A. 6.3V.—2A.*	
R-49BS	650 V.C.T.	240	5V.—3A. 6.3V.—9A. 6.3V.—0.9A. 6.3V.—1.2A.*	
R-49BC				
R-50A	790/650 V.C.T.	310	5V.—3A. 5V.—3A. 5V.—2A. 6.3V.—5A. 6.3V.—5A. 6.3V.—2.6A.	
R-50BC				
R-51BC	505 V.C.T.	320	5V.—6A. 6.3V.—5A. 6.3V.—5A. 6.3V.—1.2A.*	
R-52BC	600 V.C.T.	270	5V.—3A. 6.3V.—5A. 6.3V.—5A. 6.3V.—1.2A.*	
R-60BC	460 V.C.T.	300	5V.—6A. 6.3V.—10A. 6.3V.—1.2A.* 6.3V.—2.5A.	
R-61BC	560 V.C.T.	275	5V.—6A. 6.3V.—6A. 6.3V.—6A. 6.3V.—1.2A.*	
R-62BC	680 V.C.T.	290	5V.—6A. 6.3V.—10A. 6.3V.—1.5A. 6.3V.—1.2A.*	
R-64BC	520 V.C.T.	270	5V.—3A. 6.3V.—10A.	
R-65BC	550 V.C.T.	270	5V.—3A. 6.3V.—10A.	
R-66BC	580 V.C.T.	270	5V.—3A. 6.3V.—10A.	
R-67BC	600 V.C.T.	250	5V.—3A. 6.3V.—9A.	
R-69BC	550 V.C.T.	270	5V.—3A. 6.3V.—10A.	
R-74BC	680 V.C.T.	190	6.3V.—7.8A. 5V.—3A. 6.3V.—1.2A. (damper wdg)	
R-75BA	560 .C.T.	280	5V.—3A. 6.3V.—9.5A.	
R-79BA	127V.	1000	6.3V.—2A 6.3V.—10A. 12.6V.CT.—2A.	
R-80BA	500V.CT.	300	5V.—6A 6.3V.—8A 6.3V.—2.0A 6.3V.—5A	
R-86BA	117/129*141 multi-purpose	1000	6.3V.—6A 6.3V.—6A 12.6V.CT.—2A	

\* Less than 100 m.m.f.d. capacity to ground and insulated for high voltage damper tube.

Height of transformers in BC cases is measured from chassis line to top of case. Copper shading ring on all BC cases to reduce external magnetic field.

Note: Last letter of Type No. denotes case style.

## AUDIO

Triad Replacement Output Transformers furnish a wide range of size and mounting characteristics... specifically engineered for mounting in precise location in chassis. Climatite treated... manufactured to exacting quality standards of more costly types... progressively designed for advanced circuitry and audio tubes... total complete coverage over impedance and wattage ranges... Triad units provide finest response in minimum space... and outlive all others.

### REPLACEMENT OUTPUT TRANSFORMERS

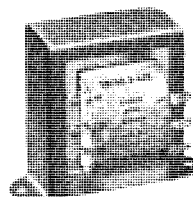
#### Single Tube To Standard Voice Coil 3-4 Ohms

Type No.	Primary Impedance	D.C. Ma	Audio Watt
S-20X	2000	50	2-3
S-20Z	2000	50	2-3
S-2X	2000	55	3-5
S-12X	2500	50	2-3
S-12Z	2500	50	2-3
S-1X	2500	60	3-5
S-16X	3000 5% Tap	50	2-3
S-30X	3000	60	3-5
S-67X	3200	60	4-6
S-4X	3000	70	5-8
S-14Z	4000	50	2-3
S-41X	4000	50	3-5
S-41Z	4000	50	3-5
S-6X	5000	35	2-3
S-6Z	5000	35	2-3
S-3X	5000	40	3-5
S-5X	5000	50	5-8
S-5Z	5000	50	5-8
S-48X	6500	35	2-3
S-48Z	6500	35	2-3
S-49X	6500	35	3-5
S-7X	7500	30	3-5
S-9X	7500	50	5-8
S-9Z	7500	50	5-8
S-8X	8000	30	2-3
S-8Z	8000	30	2-3
S18X	8000	45	4-6
S-18Z	8000	45	4-6
S-11X	10000	30	2-3
S-11Z	10000	30	2-3
S-17X	10000	30	3-5
S-10X	10000	45	4-6
S-40X	14000	5.5	1/4
S-38X	16000	15	2-3
S-38Z	16000	15	2-3
S-37X	25000	4.0	1/4
S-13X	25000	10	2-3
S-13Z	25000	10	2-3

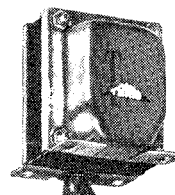
### REPLACEMENT PUSH-PULL OUTPUT TRANSFORMERS

#### Push-Pull Tubes To Voice Coil 3-4 Ohms

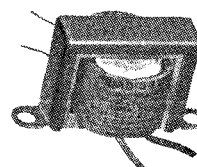
Type No.	Impedance	D.C. MA. Each Side	Audio Watts
S-39X	12000 CT.	30	3-4
S-64X	6000 CT.	40	4-6
S-15X	10000 CT.	35	7-10
S-19Z	10000 CT.	50	10-14
S-68Z	3000/3800 CT.	90	15-18
S-69Z	5000 CT.	60	15-18
S-21A	8000 CT.	55	15-18
S-21Z	8000 CT.	55	15-18



Case Z



Case A



Case X

# TRIAD DISTRIBUTOR DIVISION



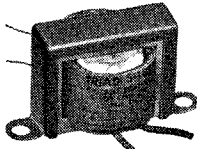
A DIVISION OF LITTON INDUSTRIES



## AUDIO

### LOW LEVEL OUTPUT Transformers

Type No.	Application	Freq. Resp.	Pri. Imped.	Second. Imped.
A-51X	Tube to line.	300-3000	7000	50
A-53X	Single or p.p. tubes to line.	70-7000	18000 CT.	600/250/50
A-54X	P.P. Tubes to V.C.	150-30000	7700 CT.	8/4
A-55J	Parallel-fed 6J5 or 6SN7 to line. 45 db. shielding.	30-15000	15000	600/250/50
A-65J	Parallel-fed 6J5 or 6SN7 to line. 45 db. shielding.	30-15000	15000	600/150 Split winding
S-58X	Line to line.	300-3000	600/150 —Split windings—	600/150
A-67J	Line to line. 45 db. shielding.	30-15000	600/150 —Split windings—	600/150



Case X

### SPLATTER Chokes

Type No.	Inductance Henries	Current Ma.	Res. Ohms	Wt. Lbs.
C-26X	Tapped to 1.5	100	95	1 1/4
C-43X	Tapped .05 to 1	300	40	2



Case J

### UNIVERSAL OUTPUT Transformers

Single Or Push-Pull Tubes To Voice Coil

Type No.	Application	Impedance	DC MA	Audio Watts
S-62X	Single or P.p. plates	2000-10000	30	2
S-52X	Single or p.p. plates	4000-24000	30	4
S-51X	Single or p.p. plates	4000-14000	35	5
S-63X	Single or p.p. plates	1500- 7000	50	6
S-54X	Single	1500- 5000	70	8
S-53X	Single or p.p. plates	4000-14000	40	8
S-55X	P.p. plates	4000-14000	40	10
S-55Z	P.p. plates	4000-14000	40	10
S-56Z	Single	1500- 6000	85	12
S-59Z	P.p. plates	1500- 4000	65	15
S-57Z	P.p. plates	4000-14000	55	15
S-61Z	P.p. plates	4000-10000	60	20



Case P

### PLUG-IN INPUT Transformers

Type No.	Application	Pri. Imped.	Second Imped.	Freq. Resp.	Shid'g
A-200P	Line to mike to grid.	200/50 CT. Δ	36,000	30-20000	70 db.
A-202P	Same as above.	200/50 CT. Δ	36,000	20-20000	90 db.
HS-273P	Same as above	200/50 CT. Δ	80,000	30-30000	70 db.
A-210P	Stereo Isolation	1:1 ratio	30,000	20-20000	45 db.

Δ Split Winding

### INTERSTAGE Transformers Plate to Grid

Type No.	Application	Freq. Resp.	Pri. Imped.	Second Imped.	Ratio
A-31X	Plate to single or p.p. grids	300-3000	10000	90000CT	1 : 3
A-33X	Plate to single or p.p. grids	70-7000	10000	90000CT	1 : 3
A-42Z	Multi-ratio single or p.p. plates to single or p.p. grids.	70-7000	15000 CT.	135000CT. or 33750	1 : 1.5 1 : 3 1 : 6
A-35A	Plate to single or p.p. grids	50-10000	10000	90000CT	1 : 3
A-39A	P.p. plates to p.p. grids	50-10000	20000	45000CT	1 : 1.5
A-40J	Parallel-fed 6J5 or 6SN7. Plate to p.p. grid 45 db. shielding.	30-15000	15000	115000CT	1 : 2.76

### MODULATION Transformers Tube to RF Load

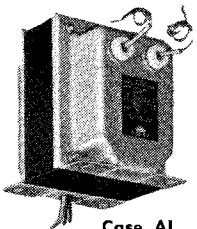
Type No.	Primary	Freq. Resp.	Secondary Impedance	Ma.	Aud. Wtts.
TY-65Z	32 CT. (575 Ma.) (Transistor use)	70-15000	3000-4000-6000	100	10
M-4Z	5000 (Auto-former).	300-3000	6750 4	100 (total)	10
M-5Z	5000 (Auto-former).	300-3000	6750 4	165 (total)	20
M-1X	10000 CT. for 19, 1J6, 6N7, 6A6, etc.	300-3000	5000-8000-10000	50	5
M-3X	10000 CT. for 6N7, 6A6, 6F6's, etc.	300-3000	3000-5000-8000	100	20
TY-66A	6 CT. (5A) (Transistor use)	300-3000	3000-4000-6000	200	40
†M-74L	4250 CT. for 807's	300-3000	3000-5000-8000	200	60
M-15A	Multi-match	300-3000	4000 to 20000	150	30
†M-12AL	Multi-match	300-3000	4000 to 20000	300	125

### DRIVER Transformers

Type No.	Driver Tubes	Output Tubes	Frequency Response	Ratio Primary 1/2 Sec.	Primary D.C. Ma.
A-81X	30, 1H4, etc.	19, 30's, 1J6, etc.	200-20,000	2.66:1	15
A-83X	6F6, 42, 45, etc.	6L6, 6F6, 6V6, 807, etc.	70-7000	1.33:1	40
A-85X	6F6, 42, 45, etc.	6L6, 6F6, 6V6, 807, etc.	50-10000	2.66:1	40
A-89A	P.p. plates to class B or AB grids— Universal 15 watt.	Any class B or AB tubes. 100-500 watts output	50-10000	3.1 or 1.8:1	100 per side
TY-61X	Transistor use		70-10000	1:0.5	100

■Discontinued item. Available until supply is exhausted

†Plate leads out side



Case AL

# TRIAD DISTRIBUTOR DIVISION



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## OUTPUT Transformers

Tube to Voice Coil and Line

Type No.	Tubes	Pri. Imped.	Sec. Imped.	DC Pri.	Audio Watts
S-27A	2A3, 6A3, 6B4, 6L6, 6U6, 6Y6, 12A5, 25B6, 35B5, 50A5.	2500	500/16/8/4	80	8
S-28X	2A5, 6AC5, 6B5, 6F6, 6K6, 7B5, 14A5, 25AC5.	7500	500/16/8/4	40	5
S-29X	6AQ5, 6AS5, 6V6, 7C5, 25A6, 25B5, 25L6, 25N6, 35A5, 35L6.	5000	500/16/8/4	45	5
S-22A	P.p. 2A3, 6B4, 6A5, 6L6, etc.	5000 CT.	500/16/8/4	100 (bal.)	15
S-24A	P.p. 6V6, 7C5, 6K6, 6F6, etc.	8000 CT.	500/16/8/4	80 (bal.)	15
S-60A	P.p. 6L6, 5881, 807, etc.	6600 CT.	500/250/16/8/4	120 (bal.)	35

## 70.7 volt Line to Voice Coil

Type No.	Primary Impedance	Sec. Imped.	Output Watts	Freq. Resp.
S-70Z	Autoformer 16000/8000/4000/2000/1000.	8/4	5	40-15000
S-71Z	Autoformer 4000/2000/1000/500.	16/8/4	10	40-20000
S-25Z	Autoformer 4000/2000/1000/500.	8/4	10	30-20000
SR-45Z	Autoformer 4000/2000/1000/500.	16/8/4	10	20-20000
SR-74K	Weatherproof autoformer 4000/2000/1000/500.	16/8/4	10	20-20000
S-72Z	Autoformer 2000/1000/500/250.	16/8/4	20	40-20000

## 70.7 volt Line to Voice Coil (Cont.)

Type No.	Primary Impedance	Sec. Imped.	Output Watts	Freq. Resp.
S-46A	Autoformer 2000/1000/500/250.	16/8/4	20	20-20000
S-75K	Weatherproof autoformer 2000/1000/500/250.	16/8/4	20	20-20000
S-78Z	Isolation 4000/2000/1000/500.	16/8/4	10	40-20000
S-79Z	Isolation 2000/1000/500/250.	16/8/4	20	40-20000
S-47Z	10K/5K/2.5K/1250/625	16/8/4	8	20-20000
S-73X	Isolation 16K/8K/4K/2K/1K	16/8/4	5	40-15000

## 25 VOLT LINE TRANSFORMERS

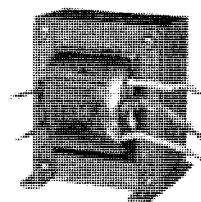
Type No.	Primary Matching Impedance	Secondary Load Impedance	Output Watts
S-131X	1250/625/312	8/4	2
S-132X	1000/500/250/125	16/8/4	5
S-133Z	500/250/125/62.5	16/8/4	10

## MATCHING TRANSFORMERS FOR 25 OR 70.7 VOLT LINE

S-129Z	70.7V line to 25V line or, 25V line to 70.7V line	30	20-15000
S-130Z	70.7V line to 25V line or, 25V line to 70.7V line	10	20-15000

## Special TRANSCEIVER Transformers (Voice Frequencies)

Type No.	Application	Primary Impedance	Secondary Impedance
A-21X	S.B. mike or plate to grid (2 primaries)	100 10000	100000
A-23X	Tube to line and hi-impedance phones.	10000	50 and 2000



Case U

## INSTRUMENTATION GEOFORMERS

### LOW FREQUENCY TRANSISTOR TRANSFORMERS

Type No.	Impedance Ohms		Turns Ratio	Min. pri. Ind. @ 100MV-60 cy. With No Unbalanced D.C. Current	D. C. Resistance (Ohms)	Frequency Response in Cycles Primary Signal of 1 Volt Unbalanced D.C. Secondary Current of								Shielding	Case Mtg.	Wt.	
	Pri.	Sec.				1 Ma.		2 Ma.		3 Ma.		5 Ma.					
						-3DB	-1DB	-3DB	-1DB	-3DB	-1DB	-3DB	-1DB				
G-18	1000 or 250	125 or 31	2.83:1	60.	500	44	5 to 20000	8 to 7000	5 to 20000	8 to 7000	6 to 20000	9 to 7000	7 to 20000	10 to 7000	P1-H	GP-1F	3.2 oz.
G-19	1000 or 250	1000 or 250	1:1	65.	540	230	12 to 7000	15 to 3800	12 to 7000	15 to 3800	12 to 7000	15 to 3800	20 to 7000	40 to 3800	P1-H	GP-2L	5 1/4 oz.
G-30	1000 CT.	2500 CT.	1:1.58	20.	350	1800	20 to 8000	40 to 4200	22 to 8000	45 to 4200	40 to 8000	75 to 4200	70 to 8000	160 to 4200	P1	GP-1F	3.2 oz.

### CHOPPER INPUT TRANSFORMERS

Triad Chopper Input Transformers provide exceedingly close balance between the two halves of the primary winding . . . minimum noise in microvolt ranges of input signals is assured with Triad's special core treatment techniques. For demanding transistor and tube applications, Triad's special design capabilities have an outstanding record. For special applications, consult Triad.

Type No.	Turns Ratio	Minimum Primary Inductance @ 1V-60	Maximum Primary Volts @ 60	Primary Matching Impedance In Ohms	Secondary Matching Impedance In Ohms	D.C. Resistance Primary In Ohms	D.C. Resistance Secondary In Ohms	Stray Fields Shield	Case and Mounting	Weight
G-20‡ G-20H‡	1:8	120 h.	25	10,000 CT or 2500	640,000 CT	370	21,000	P5-H P1-H	GP-4T GP-2L	11 1/2 oz. 5 1/4 oz.
G-21‡ G-21TS‡	4:1	1200 h.	84	20,000 CT	12,500 CT	4000	1300	P1-H P5-H	GP-2L GP-4T	5 1/4 oz. 11 1/2 oz.
G-22H‡ G-22‡	1:4	1000 h.	90	50,000 CT	800,000 CT	2200	19,000	P1-H P5-H	GP-3R GP-5W	7 3/4 oz. 1 lb.
G-23‡ G-23TS‡	6.32:1	1000 h.	75	40,000 CT	1000 CT	4400	160	P1-H P5-H	GP-2L GP-4T	5 1/4 oz. 11 1/2 oz.
G-24‡	1:1	400 h. Low capacity coupling less than .02 μF between windings.	19.5	40,000 CT	40,000 CT	1625	1625	P5	GP-5S	1 lb.
G-25‡ G-25TS‡	2:1	800 h.	70	40,000 CT or 10,000 CT	10,000 CT	3200	2200	P1-H P5-H	GP-2L GP-4T	5 1/4 oz. 11 1/2 oz.

‡Static Shield

# TRIAD DISTRIBUTOR DIVISION

## TOROIDS



A DIVISION OF LITTON INDUSTRIES



Triad toroids may be ordered with standard leads in strong plastic coating, or epoxy molded encapsulated per Specification MIL-T-27A; TF5RX20Z. To specify molded toroids with gold-plated fixed terminals, an "A" should be added to the full type number; for example, EM-001A.

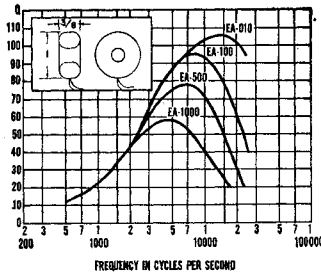


A

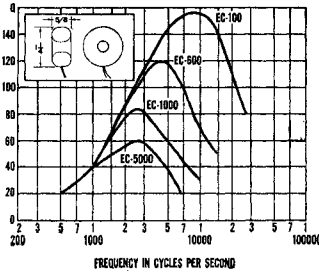
TOROIDS



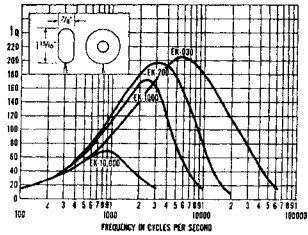
EA SERIES



EC SERIES



EK SERIES



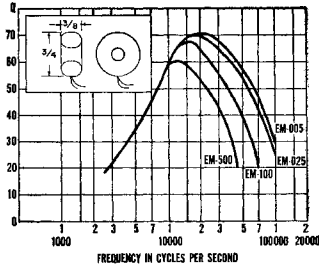
Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EA-001	1 mh	.40	270
EA-002	2 mh	.58	192
EA-003	3 mh	.73	157
EA-004	4 mh	.85	135
EA-005	5 mh	1.20	121
EA-007	7 mh	1.42	102
EA-010	10 mh	2.20	86
EA-015	15 mh	3.40	70
EA-020	20 mh	5.05	60
EA-025	25 mh	5.80	54
EA-030	30 mh	7.90	50
EA-040	40 mh	11.40	43
EA-050	50 mh	12.80	38
EA-070	70 mh	19.00	32
EA-100	100 mh	30.00	27
EA-150	150 mh	46.00	22
EA-200	200 mh	52.00	19
EA-250	250 mh	73.00	17
EA-300	300 mh	80.00	16
EA-400	400 mh	115.00	14
EA-500	500 mh	126.00	12
EA-600	600 mh	178.00	11
EA-700	700 mh	193.00	10
EA-1000	1000 mh	297.00	8.6

Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EC-001	1 mh	.40	520
EC-002	2 mh	.56	368
EC-003	3 mh	.70	300
EC-004	4 mh	.82	260
EC-005	5 mh	.92	233
EC-007	7 mh	1.05	195
EC-010	10 mh	1.30	165
EC-015	15 mh	1.60	134
EC-020	20 mh	1.85	116
EC-030	30 mh	2.85	95
EC-040	40 mh	4.20	82
EC-050	50 mh	4.60	74
EC-070	70 mh	4.60	74
EC-100	100 mh	8.00	52
EC-200	200 mh	25.00	37
EC-250	250 mh	28.00	33
EC-300	300 mh	38.20	30
EC-400	400 mh	44.00	26
EC-500	500 mh	63.50	23
EC-600	600 mh	71.00	21
EC-700	700 mh	80.00	19.5
EC-1000	1000 mh	113.00	16.5
EC-1500	1500 mh	175.00	13.5
EC-2000	2000 mh	243.00	11.6
EC-3000	3000 mh	370.00	9.5
EC-4000	4000 mh	435.00	6.2
EC-5000	5000 mh	645.00	7.4
EC-7000	7000 mh	780.00	6.2
EC-10000	10000 mh	1190.00	5.2

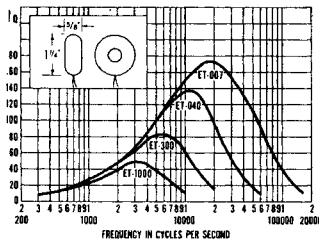
Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EK-010	10 mh	.92	262
EK-020	20 mh	1.30	184
EK-030	30 mh	1.65	150
EK-040	40 mh	1.90	130
EK-050	50 mh	3.50	116
EK-060	60 mh	4.00	106
EK-080	80 mh	4.60	92
EK-100	100 mh	5.20	82
EK-120	120 mh	5.50	75
EK-150	150 mh	6.20	67
EK-200	200 mh	7.50	58
EK-250	250 mh	10.30	52
EK-300	300 mh	12.00	47
EK-400	400 mh	16.50	41
EK-500	500 mh	23.60	37
EK-700	700 mh	30.00	31
EK-1000	1000 mh	45.00	26
EK-2000	2000 mh	100.00	18.4
EK-3000	3000 mh	151	15
EK-4000	4000 mh	175	13
EK-5000	5000 mh	250	11.6
EK-7000	7000 mh	380	9.8
EK-10000	10000 mh	500	8.2
EK-20000	20000 mh	1000	5.8
EK-30000	30000 mh	1500	4.1
EK-40000	40000 mh	1850	4.1

Type No.	Ind.	Res-Ohms Average	D.C.-Ma. for 5% Ind. drop
EM-001	1 mh	2.8	150
EM-002	2 mh	4.1	108
EM-003	3 mh	5.1	87
EM-004	4 mh	6.0	76
EM-005	5 mh	6.8	68
EM-007	7 mh	8.2	57
EM-010	10 mh	10	48
EM-015	15 mh	12.5	39
EM-020	20 mh	14.5	34
EM-025	25 mh	16.5	30
EM-030	30 mh	18	27.6
EM-040	40 mh	27	24
EM-050	50 mh	30	22
EM-060	60 mh	40	19.5
EM-070	70 mh	43	18
EM-100	100 mh	66	15
EM-150	150 mh	100	12.5
EM-200	200 mh	115	11
EM-250	250 mh	167	9.6
EM-300	300 mh	180	8.8
EM-400	400 mh	265	7.6
EM-500	500 mh	295	7
EM-700	700 mh	440	5.8
EM-1000	1000 mh	650	4.8

EM SERIES



ET SERIES



Type No.	Ind.	Res-Ohms Approx.	D.C.-Ma. for 5% Ind. drop
ET-001	1 mh	.57	680
ET-002	2 mh	.82	480
ET-003	3 mh	.98	396
ET-004	4 mh	1.10	342
ET-005	5 mh	1.35	306
ET-007	7 mh	1.50	260
ET-010	10 mh	2	217
ET-015	15 mh	3	177
ET-020	20 mh	4.3	153
ET-025	25 mh	4.8	137
ET-030	30 mh	6.9	125
ET-040	40 mh	7.2	108
ET-050	50 mh	8	97
ET-060	60 mh	15.5	88
ET-070	70 mh	16.8	82
ET-100	100 mh	26.0	68
ET-150	150 mh	38.5	56
ET-200	200 mh	44.5	48
ET-250	250 mh	64	43
ET-300	300 mh	72	40
ET-400	400 mh	103	34
ET-500	500 mh	118	31
ET-700	700 mh	173	26
ET-1000	1000 mh	245	22

# TRIAD DISTRIBUTOR DIVISION



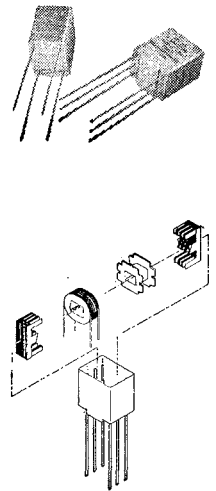
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## RED SPEC TRANSISTOR TRANSFORMERS

Type No.	Application Type	MIL-T-27A Designation	Primary Impedance	D.C. Res. Pri. Ohms	Max. Unbal. Pri. D.C. Ma.	Secondary Impedance	Max. Power MW
SP-4	Input	TF5RX16ZZ	20000 c.t.	5300	0	1000 c.t.	10
SP-5	Input	TF5RX16ZZ	50000 c.t.	3800	0	1000 c.t.	25
SP-7	Input	TF5RX16ZZ	200000	5300	0	1000	10
SP-11	Interstage	TF5RX13ZZ	25000	1700	.5	1000	40
SP-13	Interstage	TF5RX13ZZ	25000 c.t.	1700	.5	1000 c.t.	40
SP-15	Interstage	TF5RX13ZZ	10000 c.t.	1050	1	1500 c.t.	50
SP-20	Driver	TF5RX13ZZ	10000 c.t.	1050	1	1200 c.t.	50
SP-21	Driver	TF5RX13ZZ	10000 c.t.	1050	1	2000 c.t.	50
SP-22	Driver	TF5SX13ZZ	10000	1050	1	2000 c.t./500†	50
SP-29	Driver	TF5RX13ZZ	10000 c.t.	1050	1	500 c.t.	50
*SP-32	Output	TF5RX17ZZ	500	60	3	50	50
SP-33	Output	TF5RX17ZZ	1000	145	3	50	50
SP-34	Output	TF5RX17ZZ	600	70	3	3.2	50
SP-35	Output	TF5RX13ZZ	1200	120	2	3.2	50
SP-36	Output	TF5RX13ZZ	10000	1160	1	3.2	50
SP-42	Output	TF5RX17ZZ	150 c.t.	18	10	12	50
SP-43	Output	TF5RX17ZZ	300 c.t.	38	7	12	50
SP-44	Output	TF5RX17ZZ	600 c.t.	75	4.5	12	50
SP-46	Output	TF5RX17ZZ	1000 c.t.	120	3.5	12	50
SP-47	Output	TF5RX13ZZ	1500 c.t.	180	3	12	50
SP-49	Output	TF5RX13ZZ	7500 c.t.	820	1	12	50
SP-49	Output	TF5RX17ZZ	300 c.t.	37	7	600	50
SP-50	Output	TF5RX17ZZ	500 c.t.	60	3	600	50
SP-51	Output	TF5RX17ZZ	900 c.t.	100	4	600	50
SP-52	Output	TF5RX13ZZ	1500 c.t.	170	3	600	50
SP-59	Output	TF5RX17ZZ	120 c.t.	15	10	3.2	50
SP-60	Output	TF5RX17ZZ	320 c.t.	40	6	3.2	50
SP-61	Output	TF5RX17ZZ	600 c.t.	70	4.5	3.2	50
SP-62	Output	TF5RX17ZZ	800 c.t.	100	4	3.2	50
SP-63	Output	TF5RX13ZZ	1200 c.t.	125	3	3.2	50
SP-64	Output	TF5RX13ZZ	1600 c.t.	190	2.5	3.2	50
SP-65	Output	TF5RX13ZZ	8000 c.t.	820	1	3.2	50
SP-66	Output Isolation	TF5RX13ZZ	10000 c.t.	1000	1	10000 c.t.	50
SP-67	Output Isolation	TF5RX17ZZ	600 c.t.	73	3	600 CT.	50
SP-68	Output Isolation	TF5SX13ZZ	10000	1000	1	10000 c.t./2500†	50
SP-69	Output Isolation	TF5SX17ZZ	600	72	3	600 c.t./150†	50
SP-106	Choke	TF5RX20ZZ	6 hy.	1700	2		
SP-107	Choke	TF5RX20ZZ	1.25 hy.	180	2		
SP-108	Choke	TF5RX20ZZ	3.5 hy.	1100	2		
SP-117	Choke	TF5RX20ZZ	.9HY	110	2	---	---
SP-118	Choke	TF5RX20ZZ	.3 hy.	42	4		
SP-128	Choke	TF5RX20ZZ	.1HY	15	5	---	---
SP-310	Magnetic shielding case						

CT For Center Tap. †Split secondary



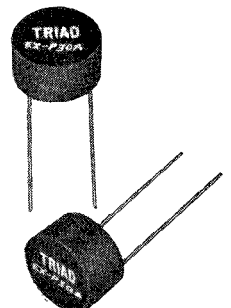
## Sub-miniature Encapsulated TOROIDAL INDUCTORS

Triad sub-miniature toroidal inductors, designed for quick, easy printed-circuit board mounting, are now stocked for immediate delivery in a range of standard ratings from 50 micro-henries to 500 milli-henries. Many uses, especially in airborne telemetering applications incorporating Triad's sub-miniature filters FL-384 through FL-388. Case size of units is  $\frac{1}{8}$  inch diameter by  $\frac{1}{4}$  inch high. Providing an optimum combination of high Q and extremely small-size, this series is ideal for printed board, transistor or vacuum tube application.

Triad sub-miniature inductors are toroidally wound on permalloy powdered cores. Encapsulated in high temperature epoxy resin. Weldable or solderable leads of gold plated nickel alloy. Highly resistant to severe acceleration, shock or vibration. Manufactured to MIL-T-27A, Grade 5 Class S (MIL type TF5SX20ZZ).

**NOTE:** Ma. DC maximum is for approximately 5% drop in inductance. Those figures marked \* will give less than 5% inductance drop but should not be exceeded under operating conditions. Inductance tolerance of EX-P05A through EX-P50A is  $\pm 5\%$ ; EX-001A through EX-500A is  $\pm 2\%$ .

Cat. No.	Inductance (0 DC)	DCR (ohms) $\pm 25\%$	Maximum Ma. DC
EX-P05A	50 $\mu$ h	1.0	150*
EX-P10A	100 $\mu$ h	1.4	150*
EX-P20A	200 $\mu$ h	1.9	150*
EX-P30A	300 $\mu$ h	2.3	150*
EX-P50A	500 $\mu$ h	3.0	150*
EX-001A	1 mh	4.3	150*
EX-002A	2 mh	8	110
EX-003A	3 mh	6.5	60
EX-005A	5 mh	11	47
EX-010A	10 mh	15.6	33
EX-020A	20 mh	28	23
EX-030A	30 mh	42	19
EX-050A	50 mh	48	14
EX-100A	100 mh	86	10
EX-200A	200 mh	139	6
EX-300A	300 mh	206	5
EX-400A	400 mh	310	4.5
EX-500A	500 mh	415	4



Prices subject to change without notice. Net prices shown for 1-9 quantity. For 1 to 249 pieces, see your stocking Triad Distributor for quantity discount schedule. For 250 or more pieces, contact your Triad Representative or call the factory.





A DIVISION OF LITTON INDUSTRIES

# TRIAD DISTRIBUTOR DIVISION



## PRICE INDEX BY TYPE NUMBER

Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price
A-1X	2.23	A-200P	15.00	D-62	5.82	D-163	6.62	D-629	3.57	EC-700	4.95	EM-025A	5.57	EX-400A	8.70
A-3X	2.62	A-202P	20.85	D-63	6.40	D-164	7.05	D-630	7.68	EC-700A	6.73	EM-030	4.55	EX-500A	8.70
A-4X	2.67	A210P	10.86	D-64	7.50	D-165	7.41	D-631	7.86	EC-1000	5.27	EM-030A	6.02	F-1X	2.77
A-5X	2.97	A-300X	5.00	D-65	8.44	D-166	6.45	D-632	7.86	EC-1000A	6.77	EM-040	4.98	F-X3	4.55
A-6X	2.57	A-301X	4.40	D-66	9.60	D-167	6.10	D-638	7.72	EC-1500	5.44	EM-040A	6.43	F-5U	6.38
A-7J	4.78	A-302X	4.35	D-67	11.65	D-168	5.35	E-631	3.45	EC-1500A	7.10	EM-050	4.55	F-6X	3.78
A-9J	8.67	A-304X	3.80	D-68	9.05	D-169	8.40	EA-001A	5.07	EC-2000	5.50	EM-050A	6.02	F-7X	3.57
A-10J	7.68	A-305X	3.60	D-69	7.28	D-170	6.77	EA-002	3.60	EC-2000A	7.15	EM-060	4.48	F-8X	5.39
A-11J	10.90	C-1X	1.87	D-70	8.40	D-171	7.33	EA-002A	5.00	EC-3000	5.90	EM-060A	5.93	F-9A	8.89
A-12J	9.52	C-2X	1.65	D-71	7.20	D-172	8.49	EA-003	3.52	EC-3000A	7.60	EM-070	5.32	F-9U	7.93
A-13J	10.12	C-3X	2.10	D-72	7.50	D-173	6.77	EA-003A	5.12	EC-4000	5.32	EH-070A	6.43	F-10U	10.07
A-21X	2.77	C-4X	1.77	D-73R	8.57	D-174	7.60	EA-004	3.68	EC-4000A	7.10	EM-100	5.33	F-11U	10.50
A-23X	2.85	C-5X	2.34	D-74	7.14	D-175	8.40	EA-004A	5.35	EC-5000	5.02	EM-100A	7.15	F-12X	4.62
A-31X	2.73	C-6X	2.04	D-75	8.40	D-176	2.85	EA-005	3.82	EC-5000A	6.78	EM-150	4.18	F-13X	2.45
A-33X	3.88	C-7X	2.67	D-76R	8.22	D-177	7.50	EA-005A	5.47	EC-7000	4.83	EM-150A	5.57	F-14X	2.85
A-35A	6.18	C-8X	2.50	D-77R	8.22	D-178	7.83	EA-007	4.35	EC-7000A	6.77	EM-200	5.50	F-15U	7.00
A-39A	6.22	C-9X	2.34	D-78	6.96	D-179	6.88	EA-007A	4.35	EC-10000	8.69	EM-200A	7.95	F-16X	4.73
A-40J	8.44	C-10X	3.21	D-79	7.57	D-180	7.88	EA-10	3.78	EC-10000A	10.49	EM-250	4.40	F-17U	11.74
A-41J	9.15	C-11X	3.18	D-80	7.95	D-181	9.49	EA-010A	5.32	EK-010	6.15	EM-250A	5.73	F-18A	7.05
A-42J	9.15	C-12A	5.00	D-81	7.27	D-182	7.20	EA-015	3.83	EK-010A	8.90	EM-300	5.17	F-18X	5.02
A-42Z	3.60	C-12X	3.39	D-82	9.32	D-183	8.40	EA-015A	5.45	EK-020	6.40	EM-300A	6.55	F-19X	4.23
A-50J	6.55	C-13X	3.24	D-83R	5.95	D-184	8.22	EA-020	3.17	EK-020A	9.17	EM-400	5.93	F-20U	7.82
A-51X	2.22	C-14A	5.43	D-84	9.35	D-185	8.70	EA-020A	5.12	EK-030	6.27	EM-400A	7.38	F-21A	9.00
A-52J	7.73	C-14X	3.33	D-85	9.44	D-186	7.80	EA-025	3.88	EK-030A	9.02	EM-500	4.73	F-22A	12.50
A-53X	3.18	C-15A	5.25	D-86	9.77	D-187	7.65	EA-025A	5.60	EK-040	6.67	EM-500A	6.15	F-23U	7.77
A54X	2.73	C-15X	3.68	D-87	8.18	D-188R	7.88	EA-030	3.35	EK-040A	9.24	EM-700	5.93	F-24U	6.68
A-55J	8.00	C-16A	7.68	D-88	7.40	D-189	9.05	EA-030A	5.38	EK-050	6.27	EM-700A	7.60	F-25X	3.17
A56J	7.15	C-17X	2.93	D-89R	9.55	D-190 Kit	7.73	EA-040	3.40	EK-050A	9.02	EM-1000	5.62	F-26X	3.65
A-58J	7.73	C-18A	8.49	D-90	8.45	D-191	8.60	EA-040A	5.55	EK-060	7.15	EM-1000A	6.90	F-27U	11.39
A-64J	5.95	C-19A	11.57	D-91	6.99	D-192	6.98	EA-050A	5.48	EK-060A	9.95	ET-001	4.27	F-28U	14.65
A-65J	8.89	C-20A	12.12	D-92	6.78	D-193	9.32	EA-050	3.45	EK-080	7.17	ET-001A	5.68	F-29U	11.52
A-66J	8.94	C-21X	2.38	D-93	6.17	D-194	7.20	EA-070	3.57	EK-080A	7.28	ET-002	4.27	F-30A	8.49
A-67J	8.90	C-22A	19.74	D-94R	7.50	D-195	6.50	EA-070A	6.40	EK-100	7.07	ET-002A	7.23	F-32A	5.82
A-68J	9.07	C-23X	2.48	D-95	7.20	D-196	6.57	EA-100	3.65	EK-100A	9.95	ET-003	4.00	F-34A	8.67
A-69J	8.34	C-24X	2.02	D-96	7.50	D-197	6.33	EA-100A	5.67	EK-120	7.62	ET-003A	5.50	F-36A	10.27
A-70J	7.15	C-25A	6.10	D-97R	6.82	D-198	6.67	EA-150	3.18	EK-120A	11.07	ET-004	4.27	F-38A	11.94
A-75J	7.73	C-26X	3.55	D-98R	10.57	D-199	7.35	EA-150A	5.10	EK-150	6.73	ET-004A	5.32	F-40X	3.39
A-77J	8.90	C-27X	2.10	D-99	7.35	D-200	6.68	EA-200	4.15	EK-150A	9.14	ET-005	3.40	F-41X	4.43
A-78J	8.90	C-28X	3.57	D-100	7.22	D-201	6.67	EA-200A	6.17	EK-200	7.14	ET-005A	5.43	F-42A	6.77
A-79J	8.60	C-29X	2.93	D-101	7.27	D-202	6.98	EA-250	4.44	EK-200A	9.99	ET-007	4.23	F-43X	3.84
A-81X	2.62	C-30X	2.17	D-102	7.65	D-203	6.27	EA-250A	6.62	EK-250	7.24	ET-007A	5.60	F-44X	3.32
A-83X	2.58	C-31A	7.12	D-103	7.50	D-204	6.38	EA-300	4.44	EK-250A	9.84	ET-010	5.02	F-45X	3.39
A-85X	3.06	C-32AL	11.57	D-104	6.30	D-205	6.67	EA-300A	6.22	EK-300	7.50	ET-010A	6.37	F-47U	6.30
A-89A	6.33	C-33A	10.34	D-105	8.90	D-206	7.65	EA-400	5.90	EK-300A	10.32	ET-015	3.65	F-48U	9.02
A-91A	8.45	C-34X	2.02	D-106	6.78	D-207	7.92	EA-400A	5.95	EK-400	7.50	ET-015A	5.33	F-49U	13.55
A-95X	2.57	C-35A	12.00	D-107	8.44	D-208	6.88	EA-500	7.33	EK-400A	10.30	ET-020	3.77	F-50X	4.88
A-96X	3.67	C-36X	1.82	D-108	9.90	D-209	8.00	EA-500A	7.27	EK-500	5.85	ET-020A	5.12	F-51X	4.55
A-97K	4.28	C-38AL	21.62	D-109	6.90	D-210	6.67	EA-600	3.22	EK-500A	8.22	ET-025	3.68	F-52X	3.67
A-97X	2.38	C-39A	21.25	D-110	8.28	D-211	7.60	EA-600A	5.18	EK-700	5.78	ET-025A	5.45	F-53X	5.48
A-97Z	2.50	C-40X	2.67	D-111	8.10	D-212	7.41	EA-700	5.32	EK-700A	8.45	ET-030	5.98	F-60U	6.15
A-97Y	5.78	C-42AL	9.52	D-112	7.68	D-213	7.86	EA-700A	7.27	EK-1000	7.72	ET-030A	7.35	F-61U	9.27
A-98K	5.10	C-43X	4.77	D-113	8.57	D-214	8.94	EA-1000	4.37	EK-1000A	10.49	ET-040	3.78	F-62U	23.49
A-98X	2.68	C45AL	30.74	D-115R	7.17	D-215	8.34	EA-1000A	5.95	EK-1500	7.17	ET-040A	5.38	F-63U	6.43
A-99X	3.90	C-47U	7.48	D-114	8.44	D-216	8.94	EC-001	3.60	EK-1500A	10.39	ET-050	3.78	F-64U	6.57
A-101U	5.32	C-48U	9.55	D-116	10.94	D-217	6.57	EC-001A	5.10	EK-2000	7.88	ET-050A	5.48	F-65U	8.79
A-102X	3.40	C-49U	12.65	D-117	7.02	D-218	8.94	EC-002	3.72	EK-2000A	10.34	ET-060	3.83	F-66U	27.60
A-103X	3.93	C-80U	34.52	D-118R	7.65	D-219	8.94	EC-002A	5.33	EK-3000	6.52	ET-060A	5.55	F-67U	17.72
A-104X	3.87	CE-1	10.50	D-119	8.07	D-220	7.50	EC-003	3.78	EK-3000A	9.62	ET-070	3.48	F-68U	9.50
A-105X	3.93	CE-4	12.50	D-120	7.65	D-221	8.10	EC-003A	5.35	EK-4000	7.15	ET-070A	5.32	F-71U	5.15
A-107X	4.74	CL-1	6.00	D-121	7.72	D-222	8.10	EC-004	3.83	EK-4000A	9.52	ET-100	4.87	F-72Z	4.52
A-108X	3.72	D-2	6.90	D-122	7.10	D-300	11.79	EC-004A	5.45	EK-5000	9.17	ET-100A	5.83	F-79U	24.74
A-109X	3.72	D-11	10.22	D-123	7.88	D-301	11.55	EC-005	4.02	EK-5000A	9.84	ET-150	4.55	F-80U	39.31
A-110X	3.57	D-14R	7.28	D-124	6.67	D-302	11.79	EC-005A	5.50	EK-7000	7.15	ET-150A	6.38	F-83A	10.84
A-111X	2.73	D-19	7.23	D-125	8.94	D-303	9.79	EC-007	4.00	EK-7000A	9.55	ET-200	4.65	F-84AC	20.27
A-112X	3.68	DA-20	3.93	D-126	9.17	D-304	11.55	EC-007A	5.62	EK-10000	9.67	ET-200A	6.43	F-90X	3.40
A-113X	2.98	D-22	7.80	D-127	7.44	D-601	7.80	EC-010	4.15	EK-10000A	12.69	ET-250	4.65	F-91X	4.00
A-113Z	3.43	D-27	7.35	D-128	2.38	D-602	7.52	EC-010A	5.37	EK-20000	12.15	ET-250A	6.43	F-92A	7.73
A-114X	4.78	D-27	7.14	D-129	6.82	D-603	7.65	EC-015	4.60	EK-20000A	15.34	ET-300	4.00	F-93X	5.48
A-115X	3.40	D-28	6.57	D-130R	4.77	D-604	7.65	EC-015A	5.83	EK-25000	8.94	ET-300A	5.68	F-94X	3.22
A-115Z	3.40	D-33	7.14	D-131	7.80	D-605	11.07	EC-020	4.67	EK-25000A	10.60	ET-400	4.00	F-102X	4.77
A-116X	3.82	D-35	8.40	D-132	7.77	D-606	6.98	EC-020A	6.10	EK-30000	12.02	ET-400A	5.68	F-104U	9.15
A-117X	3.67	DA-36	3.77	D-133	7.72	D-607	8.28	EC-030	4.07	EK-30000A	15.22	ET-500	4.07	FL-381	3.90
A-118X	3.65	DA-37	2.49	D-134	8.94	D-608	7.50	EC-030A	5.45	EK-40000	9.05	ET-500A	5.67	FL-384	62.25
A-119X	3.23	D-40	9.95	D-135	2.02	D-609	6.82	EC-040	4.23	EM-001	4.34	ET-700	4.15	FL-385	61.42
A-120X	2.40	D-41	8.62	D-136	5.23	D-610	7.80	EC-040A	6.02	EK-40000A	11.44	ET-700A	5.83	FL-386	61.42
A-120Z	2.57	D-42	7.40	D-137	7.23	D-611	7.93	EC-050	4.60	EM-001A	5.68	ET-1000	5.27	FL-387	61.42
A-122X	2.16	D-44	6.65	D-138	7.68	D-612	7.80	EC-050A	6.38	EM-002	4.34	ET-1000A	7.00	FL-388	63.62
A-122Z	2.16	D-45R	6.40	D-139	6.18	D-613									

# TRIAD DISTRIBUTOR DIVISION



A DIVISION OF LITTON INDUSTRIES



## PRICE INDEX BY TYPE NUMBER

Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price
G-19	20.00	G-394	18.91	HSM-207	26.40	HS-475	25.62	N-35M	15.79	PL-82E	11.39	R-38A	18.18	R-111B	8.34
G-19TS	24.53	G-401	19.60	HSM-208	27.90	JAF-1	13.21	N-50M	23.94	PL-82H	12.69	R-38BC	20.45	R-112A	8.34
G-20	28.90	G-435	19.60	HSM-212	34.56	JAF-2	13.74	N-51X	4.17	PL-82P	12.02	R-39A	18.05	R-112B	8.23
G-20H	23.65	G-534TS	25.85	HSM-216	40.50	JAF-3	13.74	N-52M	28.07	PL-83E	12.17	R-39BC	18.90	R-113A	7.57
G-21	23.65	G-437	19.60	HSM-281	54.60	JAF-5	13.74	N-35M	15.79	PL-83H	12.92	R-40BC	23.65	R-113B	7.72
G-21TS	28.90	G-437TS	25.85	HSM-219	49.95	JAF-11	12.84	N-50M	23.94	PL-83P	12.27	R-41C	15.12	R-114A	9.95
G-22	31.22	G-455	19.60	HSM-223	11.61	JF-12	13.21	N-52M	28.07	PL-84E	11.82	R-42BC	14.49	R-114B	9.95
G-22H	25.85	G-475	20.32	HSM-224	18.32	JAF-13	13.74	N-51X	4.17	PL-84H	13.07	R-43C	12.22	R-115A	7.80
G-23	23.65	G-493	17.65	HSM-225	14.28	JAF-14	13.74	N-53M	9.32	PL-84P	12.42	R-45C	13.47	R-115B	7.68
G-23TS	28.90	G-500	32.80	HSM-226	16.32	JAF-15	13.74	N-54M	12.69	PL-124E	11.39	R-46A	25.12	R-116A	11.07
G-24	37.83	G-501	32.80	HSM-227	19.44	JAF-21	13.21	N-55M	17.82	PL-124H	12.77	R-49BC	20.32	R-116B	11.07
G-25	23.65	G-502	32.80	HSM-228	23.19	JAF-22	13.21	N-56M	34.27	PL-139E	9.80	R-49BS	21.27	R-118A	12.35
G-25TS	28.90	GF-600	36.84	HSM-229	21.96	JAF-23	13.74	N-57M	35.84	PL-139H	10.88	R-50A	26.06	R-118B	12.45
G-30	17.89	GF-601	47.87	HSM-230	15.72	JAF-24	14.30	N-59M	48.66	PL-139M	11.75	R-50BC	24.60	R-120A	12.45
G-30TS	24.40	GF-602	33.25	HSM-231	20.64	JAF-25	14.15	N60SC	104.79	PL-140E	11.39	R-51BC	14.17	R-120B	12.74
G-31	19.60	HC-25	21.25	HSM-232	22.41	JAF-26	14.30	N-52AC	54.30	PL-140H	12.77	R-52BC	17.15	R-121A	13.34
G-32	24.53	HC-115	29.25	HSM-233	14.00	JAF-31	14.18	N-64AC	27.39	PL-139E	9.80	R-54X	4.35	R-121B	11.65
G-33	21.20	HC-300	38.10	HSM-234	25.80	JAF-32	14.10	N-66A	15.22	PL-139H	10.88	R-56A	6.23	R-112A	15.19
G-34	27.89	HS-1	28.58	HSM-235	33.30	JAF-33	14.18	N-67A	10.39	PL-139M	11.75	R-58A	15.49	R-123HA	12.60
G-36	16.81	HS-3	31.10	HSM-236	21.54	JAF-34	14.10	N-68X	5.67	PL140E	11.39	R-60BC	20.39	R-124BC	11.90
G-36TS	25.85	HS-4	28.40	HSM-237	16.49	JAF-35	14.10	N-73A	10.60	PL-140H	12.77	R-61BC	22.29	R-125BC	15.15
G-40	21.20	HS-5	27.55	HSM-238	24.58	JAF-101	12.61	N-74A	10.45	PL-140M	13.85	R-62BC	26.82	R-126A	15.44
G-40TS	26.89	HS-8	28.58	HSM-239	18.00	JAF-102	12.70	N-469A	6.05	PL-146E	11.39	R-63BC	16.15	R-127A	15.07
G-48	16.39	HS-11	21.68	HSM-240	19.44	JO-1	13.38	N-470A	8.91	PL-146H	12.72	R-64BC	14.58	R-128BC	16.17
G-48TS	25.85	HS-14	22.52	HSM-241	33.00	JO-2	13.92	N-471A	12.15	PL-146M	13.84	R-65BC	14.35	R-129BC	15.22
G-51	19.60	HS-15	26.65	HSM-245	39.90	JO-3	14.04	NM-1	.60	R-2C	4.50	R-66BC	16.02	R-131A	17.02
G-51A	19.60	HS-23	21.73	HS-247	45.99	JO-5	13.92	NM-2	.72	R-3A	6.28	R-67BC	16.15	R-132BC	15.55
G-52	20.80	HS-25	21.73	HSM-248	26.10	JO-11	13.32	NW-3	.78	R-4A	6.15	R-68A	9.00	R-133A	14.62
G-53	20.80	HS-27	19.70	HSM-270	20.52	JO-12	13.74	NW-4	.78	R-4B	6.33	R-69BC	16.07	R-134A	14.50
G-53A	20.80	HS-29	27.50	HSM-271	26.10	JO-13	13.74	NW-5	.78	R-5A	7.40	R-70A	11.10	R-135BC	15.60
G-54	20.80	HSM-31	21.08	HSM-272	36.96	JO-21	13.74	NW-6	.72	R-5B	7.45	R-71A	17.72	R-136BC	15.84
G-57	16.81	HS-32	27.50	HS-273P	17.10	JO-22	13.74	NW-7	.60	R-6A	7.17	R-72A	11.77	R-138A	15.74
G-58	25.85	HS-35	19.51	HSM-301	11.82	JO-23	13.92	NW-10	.60	R-6B	7.50	R-73B	7.45	R-139A	15.45
G-64	16.39	HS-50	23.23	HSM-302	11.04	J-31	13.98	NW-11	.78	R-7A	8.44	R-74BC	17.99	R-200A	13.38
G-65	16.39	HS-52	24.02	HS-303	11.34	JO-101	12.60	NW-18	.60	R-7B	8.44	R-75BA/BC	16.07	R-201A	13.35
G-72	21.20	HS-54	28.58	HSM-305	12.24	JZ-1	11.79	NW-19	.60	R-8A	8.28	R-76BC	17.92	R-202A	13.31
G-80	24.58	HS-56	25.82	HSM-307	15.15	JZ-5	12.13	NW-22	.82	R-8B	8.34	R-77BC	19.50	R-203A	11.82
G-84	21.20	HS-58	30.32	HSM-309	16.32	JZ-7	11.79	NW-21	.67	R-9A	8.67	R-77BS	21.45	R-204A	12.87
G-85	21.20	HS-60	19.51	HSM-315	18.84	JZ-13	11.79	NW-23	.72	R-9B	9.05	R-78BC	16.90	R-205A	12.91
G-92	22.06	HS-61	20.65	HSM-319	26.01	JZ-15	11.79	NW-24	.72	R-10A	10.69	R-79BA	13.19	R-675A	17.57
G-101	19.60	HS-66	23.18	HS-331	8.16	JZ-25	11.47	NW-25	.67	R-10B	9.27	R-80BA/BC	18.84	S-1X	1.98
G-101TS	23.65	HS-71	14.41	HS-333	9.09	JZ-26	11.47	P-1A	9.12	R-11A	10.34	R-81BC	21.44	S-2X	2.45
G-135	19.60	HS-73	15.43	HS-335	11.49	K-20 Kit	4.50	P-3A	11.74	R-11B	10.22	R-81BS	21.42	S-3X	2.38
G-135	19.60	HS-75	18.19	HS-339	12.48	K-100	20.00	P-5A	12.50	R-12A	10.67	R-83A	14.24	S-4X	2.57
G-155	19.60	HS-77	21.20	HS-341	13.32	K-101	25.00	P-7A	14.65	R-12B	10.72	R-84K	6.15	S-5X	2.62
G-183	24.92	HSM-79	19.51	HS-400	13.31	K-102	33.00	P-9A	25.46	R-14A	12.40	R-85A	15.99	S-5Z	2.72
G-201	19.60	HSM-80	21.31	HS-401	17.64	M-1X	2.52	P-11A	12.50	R-14B	11.45	R-86BA	12.48	S-6X	1.98
G-202	20.00	HSM-81	23.60	HS-402	15.96	M-3X	4.50	P-14A	19.12	R-16A	13.00	R-87BC	14.64	S-6Z	2.17
G-235	19.60	HSM-82	23.60	HS-404	21.00	M-4Z	2.22	P-15AL	22.12	R-16B	13.69	R-88A	15.79	S-7X	2.02
G-250	19.60	HSM-84	23.60	HS-405	21.90	M-5Z	4.11	P-16AL	45.60	R-17A	15.39	R-89BC	16.15	S-8X	1.90
G-255	19.60	HSM-85	23.60	HS-407	26.34	M-6X	4.77	P-17AL	25.22	R-18A	12.66	R-90BC	16.07	S-8X	2.02
G-266	20.50	HSM-91	39.33	HS-409	22.38	M-7AL	11.22	P-18AL	52.20	R-18B	13.79	R-91HA	13.95	S-9X	2.33
G-274	20.41	HSM-94	43.65	HS-413	27.30	M-8AL	14.77	P-20AL	51.75	R-19A	17.94	R-92A	13.57	S-9Z	2.62
G-275	20.50	HSM-95	43.65	HS-415	34.20	M-12AL	17.89	PR-21AL	50.67	R-20A	12.50	R-93A	16.17	S-11X	1.98
G-276	20.50	HS-97	82.26	HS-417	37.44	M-15A	9.05	P-213AL	19.50	R-20B	13.52	R-94H	26.11	S-11Z	2.10
G-283	24.92	HSM-181	23.60	HS-425	13.32	M-16AL	11.34	P-215AL	21.65	R-21A	15.82	R-104A	5.48	S-12X	1.90
G-284	20.00	HSM-182	23.60	HS-427	16.02	MB-20	.72	P-216AL	43.32	R-21B	14.79	R-104B	5.78	S-12Z	1.90
G-285	20.00	HSM-184	30.02	HS-433	17.76	MB-31	.45	P-217AL	24.67	R-22A	7.52	R-105A	6.90	S-13X	2.27
G-301	19.30	HSM-186	30.02	HS-435	19.86	MK-1	3.95	P-218AL	48.30	R-22B	7.85	R-105B	7.02	S-13Z	2.27
G-306	19.30	HSM-187	30.02	HS-436	11.40	MK-2	3.95	P-220AL	41.68	R-23B	6.15	R-106A	6.33	S-14Z	2.02
G-313	19.30	HSM-189	30.02	HS-438	16.38	MK-3	4.95	PL-4	10.68	R-24A	16.74	R-106B	6.65	S-15X	2.73
G-315	19.30	HSM-192	45.04	HS-441	27.15	MK-4	4.95	PL-5	12.14	R-24B	16.57	R-107A	7.60	S-10X	2.23
G-335	18.91	HSM-190	30.02	HS-442	19.08	N-1X	3.43	PL-6	12.14	R-25A	25.34	R-107B	7.62	S-16X	2.02
G-336	18.91	HSM-193	45.04	HS-443	16.08	N-3M	7.82	PL-10	1.78	R-26A	18.90	R-108A	7.28	S-17X	2.10
G-350	18.91	HSM-200	16.98	HS-444	26.70	N-4M	7.88	PL-80E	10.94	R-27A	37.29	R-108B	7.40	S-18X	2.33
G-355	18.91	HSM-201	21.66	HS-445	16.22	N-5M	11.55	PL-80H	12.14	R-28A	25.86	R-109A	9.17	S-18Z	2.35
G-388	19.30	HSM-202	14.75	HS-470	13.74	N-7M	18.52	PL-80P	11.52	R-29A	5.50	R-109B	7.17	S-19Z	3.12
G-389	19.30	HSM-203	22.86	HS-471	14.82	N-9M	36.33	PL-81E	11.47	R-30X	4.89	R-110A	11.82	S-20X	1.85
G-391	18.91	HSM-205	24.42	HS-472	18.60	N-11M	50.59	PL-81H	12.25	R-35A	16.85	R-110B	8.85	S-20Z	1.85
				HS-474	22.85	N-34X	6.07	PL-81P	11.67	R-37BC	21.94	R-111A	8.34	S-21A	4.72

†New item

■Discontinued item. Available until supply is exhausted

Prices subject to change without notice. Net prices shown for 1-9 quantity. For 1 to 249 pieces, see your stocking Triad Distributor for quantity discount schedule. For 250 or more pieces, contact your Triad Representative or call the factory.



# TRIAD DISTRIBUTOR DIVISION

A DIVISION OF LITTON INDUSTRIES



## PRICE INDEX BY TYPE NUMBER

Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price	Type No.	Net Price
S-21Z	4.05	S-64X	2.40	SP-36	6.32	T-14X	4.00	TY-44X	4.23	TY-92	15.50	WLC-8A	1.80	Y-41	6.90
S-22A	6.27	S-65X	2.57	SP-42	7.00	T-15X	4.11	TY-45X	4.78	TY-93	18.07	WLC-9	1.88	Y-41-2	8.55
S-23X	2.15	S-66X	2.57	SP-43	6.50	T-20X	3.68	TY-46X	2.45	TY-94	15.96	WLC-10	1.59	Y-41-3	7.68
S-24A	6.77	S-67X	2.27	SP-44	7.02	T-21X	3.45	TY-47X	4.67	TY-99	13.45	WLC-11	2.05	Y-42-2	8.73
S-25Z	4.52	S-68Z	3.78	SP-46	7.12	T-22X	3.45	TY-48X	4.50	TY-100	20.62	WLC-12	1.38	Y-43	6.98
S-26X	2.22	S-69Z	5.35	SP-47	7.38	T-23X	4.48	TY-49X	3.28	TY-101	19.67	WLC-17	1.41	Y-43-1	7.73
S-27A	5.85	S-70Z	3.83	SP-48	6.82	T-24X	3.72	TY-50X	6.28	TY-102	18.90	WLC-21	1.33	Y-44	5.95
S-28X	3.90	S-71Z	5.10	SP-49	5.38	T-25X	3.35	TY-51X	4.85	TY-200X	5.55	WLC-23	1.33	Y-44-1	8.10
S-29X	4.50	S-72Z	4.20	SP-50	6.67	T-26X	3.40	TY-52X	5.35	TY-201TZ	5.25	WLC-25	1.52	Y-45	7.27
S-30X	2.10	S-73X	4.00	SP-51	6.28	T-31X	4.23	TY-53X	3.67	TY-202A	5.10	WLC-26	1.62	Y-45-2	8.12
S-31A	6.85	SR-74K	6.45	SP-52	8.10	T-32X	3.45	TY-54X	5.00	TY-462	16.32	WLC-29	1.85	Y-46	5.95
S-32A	8.82	S-75K	11.32	SP-59	6.88	T-33X	4.90	TY-55X	4.73	TY-468	12.35	WLC-30	1.68	Y-46-3	7.57
S-34X	4.73	S-76Z	5.23	SP-60	7.00	T-34X	3.19	TY-56X	4.12	TZ-1	4.62	WLC-31	1.88	Y-47	5.98
S-35A	8.32	S-77U	11.32	SP-62	6.84	T-35X	3.68	TY-57X	4.55	TZ-2XT	5.83	Y-12	6.52	Y-48	6.40
S-36A	9.32	S-78Z	4.85	SP-63	6.28	T-41X	3.90	TY-58X	4.07	TZ-5	4.98	Y-12-1	7.23	Y-48-3	7.48
S-37X	5.07	S-79Z	5.32	SP-64	6.43	T-42X	3.90	TY-59X	5.83	TZ-7	3.95	Y-12-3	7.23	Y-49	7.68
S-38X	2.15	S-129Z	4.95	SP-65	7.50	T-101X	2.62	TY-60X	4.50	TZ-13	6.17	Y-17	6.33	Y-49-1	8.28
S-38Z	2.15	S-130Z	3.23	SP-66	7.68	T-102X	2.38	TY-61X	2.72	TZ-15	5.00	Y-17-1	7.15	Y-60	8.94
S-39X	2.40	S-131X	2.82	SP-67	6.90	TY-1XT	2.10	TY-62X	3.55	TZ-17XT	4.60	Y-17-2	8.55	Y-60-1	11.55
S-40X	4.60	S-132X	2.93	SP-68	7.95	TY-2Z	2.97	TY-63X	3.82	TZ-24XT	4.98	Y-17-3	7.00	Y-60-2	9.77
S-41X	2.05	S-133X	5.90	SP-69	7.18	TY-3XT	2.79	TY-64X	5.95	TZ-25	4.27	Y-19	6.78	Y-62	8.94
S-41Z	2.05	S-142A	11.17	SP-106	5.83	TY-3XT	2.10	TY-65Z	2.83	TZ-26	3.67	Y-19-1	6.82	Y-64	7.15
S-42A	15.19	S-144A	15.24	SP-107	5.34	TY-16XT	1.35	TY-66A	8.94	TZ-28	3.67	Y-19-3	6.82	Y-64-1	9.52
SR-45Z	6.79	S-146A	14.84	SP-108	5.90	TY-17XT	1.23	TY-67A	9.24	TZ-29XT	4.77	Y-20	6.78	Y-66-1	8.60
S-46A	9.67	S-148A	13.69	SP-117	4.88	TY-23X	5.00	TY-68S	5.50	TZ-32XT	5.02	Y-20-2	7.35	Y-70	8.94
S-47Z	3.84	S-149A	22.62	SP-118	5.68	TY-24X	3.23	TY-69S	9.49	TZ-103XT	3.00	Y-20-3	6.77	Y-70-1	9.52
S-48X	2.00	S-152A	19.05	SP-128	4.48	TY-25X	6.22	TY-70S	10.44	V-21	5.23	Y-21	6.27	Y-72-1	9.32
S-49X	2.12	S-154A	23.82	SP-310	.84	TY-26X	5.22	TY-71S	9.19	V-21B	5.39	Y-21-1	6.93	Y-81-3	10.02
S-50X	2.27	S-156A	16.50	SX-201	7.44	TY-28XT	4.28	TY-74S	8.94	V-21K	9.19	Y-21-3	7.05	Y-82-1	7.60
S-51X	3.77	S-158A	32.74	SX-202	7.41	TY-27XT	4.12	TY-75A	12.82	V-21Z	5.38	Y-22	6.78	Y-83-1	9.25
S-52X	4.38	SP-4	8.17	SX-203	7.26	TY-29X	3.68	TY-76A	9.60	V-23	5.50	Y-22-1	7.23	YC-1	.60
S-53X	3.93	SP-5	8.12	SX-204	7.44	TY-30X	2.98	TY-78	14.72	V-23B	6.65	Y-22-3	6.78	YC-110	.75
S-54X	4.52	SP-7	7.50	SX-205	7.50	TY-31X	2.73	TY-79	15.34	V-23K	8.34	Y-24	6.57	YC-111	.75
S-55X	4.17	SP-11	7.00	SX-206	7.59	TY-32X	2.95	TY-80	15.94	V-23Z	5.67	Y-24-3	7.00	YC-112	.75
S-55Z	4.12	SP-15	7.48	SX-207	7.62	TY-33X	3.90	TY-81	15.19	VR-30Z	4.15	Y-25	5.83	YC-300-1	23.10
S-56Z	5.27	SP-20	7.27	SX-208	7.50	TY-34X	3.12	TY-82	15.27	V-31	4.47	Y-25-1	6.45	YT-101	9.50
S-57Z	5.39	SP-21	7.48	T-1X	4.98	TY-35X	3.17	TY-83	18.34	V-31K	6.96	Y-25-3	6.33	YT-102-2	9.80
S-58X	2.50	SP-22	7.77	T-2X	3.95	TY-36X	3.33	TY-84	15.84	WC-13	1.32	Y-26-2	6.68	YT-103-1	11.00
S-59Z	5.72	SP-29	7.50	T-3X	4.55	TY-37X	3.99	TY-85	28.20	WLC-3	1.33	Y-28	6.62	13500	6.85
S-60A	10.24	SP-32	6.34	T-5X	4.07	TY-38X	3.99	TY-86	19.75	WLC-4	1.32	Y-28-3	6.78	13510	6.85
S-61Z	5.39	SP-33	6.82	T-11X	3.57	TY-39X	5.15	TY-88	11.10	WLC-5	1.33	Y-30C	8.94	13750	3.92
S-62X	4.17	SP-34	6.55	T-12X	3.88	TY-40X	3.75	TY-89	13.72	WLC-6	1.32	Y-31G	8.94	13751	3.92
S-63X	3.05	SP-35	6.65	T-13X	3.72	TY-41X	3.84	TY-90	16.00	WLC-7	1.35	Y-40	6.78	13800	1.40
						TL-42X	4.40	TY-91	15.60	WLC-8	1.80	Y-40-3	7.65	13801	1.40

### TRIAD CASES

GB	HA	HB	JA	JB	KA	KB	LA	LB	MA	MB	NA	NB	AH	AJ	EA	EB	FA	FB	GA		
A	2 3/8	2 3/8	2 3/8	3 1/8	3 1/8	3 3/8	3 1/8	3 1/8	4	4	4 5/8	4 5/8	A	1 3/8	1 3/8	1 3/8	1 3/8	2 1/8	2 1/8	2 3/8	
B	2 3/4	3 1/8	3 1/8	3 1/8	3 3/8	3 1/8	4 3/8	4 3/8	4 1/8	4 1/8	5 1/8	5 1/8	B	1 3/8	1 3/8	1 3/8	1 3/8	2 1/8	2 1/8	2 3/4	
C	2 1/8	4 1/4	3 3/8	4 7/8	3 7/8	5 1/4	5 1/8	4 1/2	6	4 1/8	6 1/8	5 1/2	C	1 3/4	2 3/8	2 3/4	2 1/8	3 1/8	2 1/2	3 1/8	
D	2 1/8	2 1/4	2 1/4	2 5/8	2 5/8	3	3 3/8	3 3/8	3 1/8	3 1/8	4 1/8	4 1/8	D	1 1/4	1 3/8	1 3/8	1 3/8	1 1/8	1 1/8	2 1/8	
E	1 3/4	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	3	3	3 3/8	3 3/8	E	1 3/8	1 1/4	1 1/4	1 1/4	1 1/8	1 1/8	1 3/4	
G	3/8	3/8	3/8	3/8	3/8	1/2	1/2	1/2	5/8	5/8	5/8	5/8	G	3/8	3/8	3/8	3/8	3/8	3/8	3/8	
I	6-32	8-32	8-32	8-32	8-32	10-32	10-32	10-32	1/4-20	1/4-20	1/4-20	1/4-20	I	6-32	6-32	6-32	6-32	6-32	6-32	6-32	
Wt. (avg.) lbs.	1 3/4	2 1/2	2 1/4	4 1/2	4	7 3/4	9 1/4	8 1/2	13 1/2	12 1/2	18	16	Wt. (avg.) lbs.	4 oz.	9 oz.	1	15 oz.	1 3/4	1 1/2	2	
AF	AG	AH-2	AJ-2	JZ*†									GP-1	GP-2	GP-3	GP-4	GP-5				
A	3/4	1	1-5/16	1-5/8	9/16 dia.								A	7/8	1 1/8	1 1/4	1 1/8	1 5/8			
B	3/4	1	1-5/16	1-5/8	Round								B	1 1/8	1 1/4	1 1/2	1 3/4	2			
*†Bw	1-3/64	1-3/32	1-11/32										Bw	1 1/8	1 1/2	1 3/8					
C	1-1/8	1-3/8	1-3/4	2-3/8	25/32								C	1 1/8	2 1/4	2 3/8	2 1/2	2 3/4			
D	*27/32	*1-1/32	*1-11/32	*1-5/8									D	1 3/2	1 3/8	1 1/2	1 1/2	1 1/2			
F	5/8	3/4	7/8	7/8									F	3/4	3/4	1 1/8	1 1/8	1 1/8			
I	4/40	6/32	6/32	6/32									Wt.	3 oz.	5 1/2 oz.	8 oz.	12 oz.	17 oz.			
Unit	1-1/4	2-1/2	5-1/4	11	.5								JOA	JOB							
Wt.	oz.	oz.	oz.	oz.	oz.								A	1 5/8 dia.	1 5/8 dia.						
													B	Round	Round						
													C	1 1/2	1 25/32						
													D	3/8	3/8						
													F	7/8	7/8						
													Unit Wt.	2 oz.	2 1/2 oz.						

### SHIELDING

- P-1—One nickel alloy high permeability shield — 45db. reduction in pickup.
- P-3—Two nickel alloy shields interleaved with one heavy copper shading ring — 70db. reduction in pickup.
- P-5—Three nickel alloy shields interleaved with two heavy copper shading rings— 95 db. reduction in pickup.

Prices subject to change without notice. Net prices shown for 1-9 quantity. For 1 to 249 pieces, see your stocking Triad Distributor for quantity discount schedule. For 250 or more pieces, contact your Triad Representative or call the factory.

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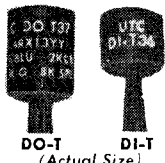
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sold through  
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TRANSISTOR TRANSFORMERS Hermetically sealed to MIL-T-27B



DO-T\* AND DI-T\* TRANSISTOR TRANSFORMERS



Revolutionary transistor transformers hermetically sealed to MIL-T-27B specs. Plastic insulated solderable leads, firmly anchored to withstand 10 pound pull. Ideal for printed circuits. DO-T: 5/16" dia. x 1 1/2" long, wt., 1/10 oz. DI-T: 5/16" dia. x 1 1/2" long, wt., 1/15 oz. these compact units provide frequency response, high efficiency and low distortion. U.S. Pat. No. 2,949,591

DO-T Type	DI-T Type	Net Each	Application	Pri. Imped., Ohms	Sec. Imped. Ohms
DO-T1	DI-T1	\$6.00	a	20K/30K, 0.5 ma	800/1200
DO-T2	DI-T2	5.40	b	500/600, 3 ma	50/60
DO-T3	DI-T3	5.40	b	1K/1.2K, 3 ma	50/60
DO-T4		5.40	b	600, 3 ma	3.2
DO-T5	DI-T5	5.40	b	1.2K, 2 ma	3.2
DO-T6		6.00	b	10K, 1 ma	3.2
DO-T7		6.60	c	200K	1K
DO-T8	DI-T8	4.80	d	3.5 hys. @ 2 ma	2.5 hys.±±
DO-T9	DI-T9	6.60	e	10K/12K, 1 ma	500/600 CT
DO-T10	DI-T10	6.60	f	10K/12.5K, 1 ma	1.2K-1.5K CT
DO-T11	DI-T11	6.60	f	10K/12.5K, 1 ma	2K/2.5K CT
DO-T12		5.70	b	150/200 CT, 10 ma	12/16
DO-T13		5.70	b	300/400 CT, 7 ma	12/16
DO-T14		6.00	b	600/800 CT, 5 ma	12/16
DO-T15		6.00	b	800/1070 CT, 4 ma	12/16
DO-T16		6.00	b	1K/1330 CT, 3.5 ma	12/16
DO-T17		6.00	b	1.5K/2K CT, 3 ma	12/16
DO-T18		6.30	b	7.5K/10K CT, 1 ma	12/16
DO-T19	DI-T19	6.00	b	300 CT, 7 ma	600
DO-T20	DI-T20	6.00	b	500 CT, 5.5 ma	600
DO-T21	DI-T21	6.00	b	900 CT, 4 ma	600
DO-T22	DI-T22	6.00	b	1500 CT, 3 ma	600
DO-T23	DI-T23	6.90	a	20K/30K CT, .5 ma	0.8K/1.2K CT
DO-T24		7.50	c	200K CT	1K CT
DO-T25	DI-T25	7.20	a	10K/12K CT, 1 ma	1.5K/1.8K CT
DO-T26	DI-T26	5.70	d†	6 hys. @ 2 ma	4.5 hys.±±
DO-T27	DI-T27	4.80	d†	1.25 hys. @ 2 ma	0.9 hy.±±
DO-T28	DI-T28	4.80	d§	0.3 hy. @ 4 ma	0.1 hy.±±
DO-T29		5.70	b	120/150 CT, 10 ma	3.2/4
DO-T30		5.70	b	320/400 CT, 7 ma	3.2/4
DO-T31		6.00	b	640/800 CT, 5 ma	3.2/4
DO-T32		6.00	b	800/1K CT, 4 ma	3.2/4
DO-T33		6.00	b	1060/1330 CT, 3.5 ma	3.2/4
DO-T34		6.00	b	1.6K/2K CT, 3 ma	3.2/4
DO-T35		6.30	b	8K/10K CT, 1 ma	3.2/4
DO-T36	DI-T36	7.50	a	10K/12K CT, 1 ma	10K/12K CT
DO-T37	DI-T37	7.80	a	2K/2.5K CT, 3 ma	8K/10K Split
DO-T38	DI-T38	7.80	a	10K/12K CT, 1 ma	2K/2.4 Split
DO-T39		7.80	a	20K/30K CT, .5 ma	1K/1.5K Split
DO-T40		8.40	a	40K/50K CT, .25 ma	400/500 Split
DO-T41	DI-T41	7.50	a	400/500 CT, 8/6 ma	400/500 Split
DO-T42		7.50	a	400/500 CT, 8/6 ma	120/150 Split
DO-T43	DI-T43	7.50	a	400/500 CT, 8/6 ma	40/50 Split
DO-T44	DI-T44	7.50	a	80/100 CT, 12/10 ma	32/40 Split
DO-T45		7.80	a	1K/1.25K CT, 3.5 ma	16K/20K Split
DO-T46		8.40	c	100K CT	500 CT
DO-T47		8.10	a	9K/10K, 1 ma	9K/10K CT
DO-T48		7.80	a	8K/10K, 1 ma	1.2K/1.5K CT
DO-T49		7.80	d§§	Series—.075 hys @ 10 ma, 5100Ω Parallel—.018 hys @ 20 ma, 2.6Ω	
DO-T50		5.70	d§§	Series—20 hys @ 1 ma, 5100Ω Parallel—5 hys @ 2 ma, 1275Ω	
DO-T51	DI-T51	7.80	a	2K/2.5K CT, 3 ma	2K/2.5 K split
DO-T52	DI-T52	7.80	a	4K/5K CT, 2 ma	8K/10K CT
DO-T400		6.60	h	28V, 380-1 KC	6.3 V, 60 ma
DO-T410		7.80	h	28V, 380-1 KC	Two 6.3 V, 30 ma
DO-T420		7.80	h	28V, 380-1 KC	28 V, 10 ma
DO-T5H	DI-T5H	.90		High mu shield and cover; 25 db	

\*630 ohms. †2100 ohms. ‡100 ohms. §25 ohms.  
 †DI-T primary impedance. §§2 Wdgs.  
 a—Interstage; b—Output; c—Input; d—Inductor; e—Driver or Output; f—Driver; g—matching; h—Power Unit.

NEW

DI-T200\* SERIES TRANSISTOR TRANSFORMERS

These revolutionary transistor transformers embody the same rugged reliable construction afforded by the unique winding techniques and physical construction found in the DO-T & DI-T transformers. DI-T200 series differ by having straight pin, 1" long, .017 d. Dumet wire, gold plated leads. To MIL-T-27B, size 3/16 x 3/8", wt. 1/15 oz. U.S. Pat. No. 2,949,591

Type No.	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	Net Each
DI-T225	Interstage	80 CT 100 CT	32 Split 40 Split	\$8.40
DI-T230	Output or Matching	300 CT	600 Split	7.20
DI-T235	Interstage	400 CT 500 CT	40 Split 50 Split	8.40
DI-T240	Interstage or Output (Ratio 2:1:1)	400 CT 500 CT	400 Split 500 Split	8.40
DI-T245	Output or Matching	500 CT 600 CT	50 CT 60 CT	6.90
DI-T250	Output or Mixing	500 CT	600 CT	7.20
DI-T255	Output or Matching	1,000 CT 1,200 CT	50 CT 60 CT	6.90
DI-T260	Output	1,500 CT	600 CT	7.20
DI-T265	Isolation or Interstage	2,000 CT 2,500 CT	8,000 Split 10,000 Split	8.70
DI-T270	Output or Driver	10,000 CT 12,000 CT	500 CT 600 CT	7.80
DI-T273	Output or Driver	10,000 CT 12,500 CT	1,200 CT 1,500 CT	7.80
DI-T276	Interstage or Driver	10,000 CT 12,000 CT	2,000 CT 2,400 CT	7.80
DI-T278	Interstage or Driver	10,000 CT 12,500 CT	2,000 Split 2,500 Split	8.70
DI-T283	Isolation or Interstage	10,000 CT 12,000 CT	10,000 CT 12,000 CT	8.40
DI-T288	Interstage or Driver	20,000 CT 30,000 CT	800 CT 1,200 CT	8.10
DI-T204	Split Inductor (2 wdgs)	Series: 1 hy @ 4 ma DC, 25Ω Parallel: .025 hy @ 8 ma DC, 6Ω		6.00
DI-T208	Split Inductor (2 wdgs)	Series: 9 hy @ 2 ma DC, 105Ω Parallel: 2 hy @ 4 ma DC, 26Ω		6.00
DI-T212	Split Inductor (2 wdgs)	Series: 2.5 hy @ 2 ma DC, 630Ω Parallel: .6 hy @ 4 ma DC, 157Ω		6.00
DI-T216	Split Inductor (2 wdgs)	Series: 4.5 hy @ 2 ma DC, 2300Ω Parallel: 1.1 hy @ 4 ma DC, 575Ω		6.90

DI-T200SH Drawn Hipermalloy shield provides 15 to 20 db shielding through side of case

NEW PIL\* ULTRAMINIATURE AUDIO INDUCTORS

The new PIL series constitutes the smallest audio inductors available. These units are metal encased, ruggedized manufactured and guaranteed to MIL-T-27B. They are MIL Type TF4RX-20Y. Physical construction is that of the PIP (DO-T, DI-T) units shown on this page.

Type No.	Con-Ind. Hys. nec- Min @ 1V, 1KC	DC CR	DC CR
PIL-5	Series .12	0	43
	Parallel .03	0	10.7
	Series .10	10	
	Parallel .025	10	
PIL-8	Series .32	0	115
	Parallel .08	0	28
	Series .16	10	
	Parallel .06	10	
PIL-12	Series .8	0	300
	Parallel .2	0	75
	Series .4	5	
	Parallel .15	5	



5/16" Dia. x 3/16" high  
Wt. 1/20 oz.

PIP\* SERIES TRANSISTOR PULSE TRANSFORMERS

UTC's PIP series of subminiature transistor type pulse transformers is designed to give a maximum of component density in equipments, their configuration being especially compatible with transistors. The design is based on the UTC DO-T and DI-T series to impart exceptional reliability. PIP-1 through PIP-9 have a ratio of 4:4:1, PIP-10 through PIP-12 have a ratio of 5:3:1. All units are checked and adjusted in a transistor test circuit to give the required pulse width.

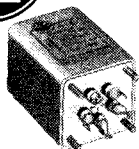
Hermetically sealed, manufactured & guaranteed to MIL-T-20138B by full environmental testing... all units, completely METAL CASED, MIL type TP6RX4410CZ. See UTC page 6 for other miniature pulse transformers.

All Units Individually Adjusted to Parameters Shown in Table  
 U.S. Pat. No. 2,949,591  
 5/16" Dia. x 3/16" high  
 Weight 1/20 oz.



Type No.	APPROX. DCR, OHMS				BLOCKING OSCILLATOR PULSE				COUPLING CIRCUIT CHARACTERISTICS								Net Each
	1-Brn 2-Rd	3-Org 4-Yel	5-Grn 6-Blu		Width μSec.	Rise Time	% Over Shoot	Drop %	% Back Swing	P Width μSec.	Volt Out	Rise Time	% Over Shoot	Drop %	Back Swing	Imp. in, out,	
PIP-1	.18	.20	.07		.05	.02	0	0	37	.05	9	.018	0	0	12	50	
PIP-2	.18	.56	.17		.1	.025	0	0	25	.1	7	.02	0	0	5	50	
PIP-3	1.01	1.25	.37		.2	.030	2	0	15	.2	7	.035	0	0	5	100	
PIP-4	1.5	1.65	.54		.5	.05	0	0	15	.5	7	.06	0	0	0	100	
PIP-5	2.45	3.1	.9		1	.08	0	0	14	1	6.8	.15	0	0	5	100	
PIP-6	3.0	3.7	1.1		2	.10	0	0	15	2	6.6	.18	0	2	10	100	
PIP-7	4.9	6.05	1.8		3	.20	0	0	14	3	6.8	.20	0	2	10	100	
PIP-8	8.0	9.7	2.9		5	.30	0	0	3	5	7.9	.22	0	13	25	200	
PIP-9	13.1	15.9	4.7		10	.35	0	5	12	10	6.5	.4	0	15	20	200	
PIP-10	.55	.41	.15		1	.01	0	0	20	.1	8	.01	0	0	5	140/50	
PIP-11	2.9	2.2	.82		1	.02	4	6	1	6	6.6	.05	0	6	12	280/100	
PIP-12	9.4	7.1	2.6		5	.05	0	12	12	5	8	.09	2	12	25	560/200	
PIP-100	Transistor pulse transformer kit, consisting of PIP-1 thru PIP-9 in plastic case.																
PIP-5H	Drawn Hipermalloy shield and cover for PIP's provides 20 to 30 db shielding.																

TRANSISTOR TRANSFORMERS Hermetically sealed to MIL-T-27B



Primary 115V. 50/60 cycles (tapped on H-143 thru H-146 for dual secondary voltages). DC ratings are approximate, based on silicon bridge rectifier (except H-141, H-142 also shown F.W.C.T.). Choke input DCV is based on 10% voltage drop in choke. Condenser value, C, is in 1000 mfd. H-141, H-142, H-147 listing under "Secs in parallel" is single winding. All units MIL type TF4RX02.

TRANSISTOR SUPPLY TRANSFORMERS

Type No.	Sec. V Rms	Sec. A Rms	Choke DCV	Sec. in Parallel		Choke DCV	Sec. in Series		MIL Case	Net Each				
				Input DCA	Cond. DVC		Input DCA	Cond. DVC						
H-141	20 CT	.3	16.5	.3	26	.2	.2		EB	\$10.20				
H-142	20 CT	.6	16.5	.43	12	.3	.5		EA	12.90				
				.6	26	.4	.4							
H-143	17/21.5	1.5	14/17.5	.9	13	.6	1		HA	18.60				
				3	18.5/25	2	1	28/35	1.5	43/56	1	.5	HA	18.60
H-144	17/21.5	4	14/17.5	8	18.5/25	5	2	28/35	4	43/56	2.5	1	LA	30.00
				17/21.5	4	14/17.5	18	18.5/25	12	6	28/35	9	43/56	6
H-145	17/21.5	9	14/17.5	9	43/56	6	4	56/70	4.5	85/110	3	1	UTC	45.90
				34/43	4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3
H-146	34/43	4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3	1	UTC	45.90
				34/43	4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3
H-147	10	20	8.2	20	10	13	12		KA	27.00				

UNIVERSAL TRANSISTOR SUPPLY TRANSFORMERS

Low Voltage DC Supply  
Telephone Supply  
Bias Supply  
Battery Chargers  
Plating Rectifiers

UTC universal transistor supply transformers are high reliability units in drawn MIL cases. Primary tapes can modify nom. AC voltages by -6%, +6%, and +12%. The capacitor following the rectifier affects the DC voltage.

PRIMARY 115 VOLTS, 50/60 CYCLES  
NOMINAL SEC. VOLTS, 8.25 TO 40.5

Type No.	MIL DC Range	Indust. DC Range	MIL CASE	Net Each
H-915	6V-.065A to 53V-.02A	6V-.085A to 53V-.025A	AH	\$11.70
H-925	6V-.22A to 53V-.07A	6V-.28A to 53V-.085A	AJ	12.90
H-935	6V-1.2A to 53V-.4A	6V-1.52A to 53V-.48A	FA	14.40
H-94	6V-3A to 53V-1A	6V-3.8A to 53V-1.2A	HA	19.80
H-95	6V-7.5A to 53V-2.5A	6V-9A to 53V-3A	KA	28.80
H-96	6V-18A to 53V-6A	6V-23A to 53V-7.5A	OA	48.00

PRIMARY 115 VOLTS, 50/60 CYCLES  
NOMINAL SEC. VOLTS, 16.5 TO 81

H-965	12V-1.5A to 106V-.5A	12V-1.9A to 106V-.6A	HA	20.40
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NEW 400-CYCLE MET\* TYPES  
PRIMARY 115 VOLTS, 400 CPS.  
NOMINAL SEC., 8.25-40.5 VOLTS

MET 455	6V-1.2A to 53V-.4A	6V-1.52A to 53V-.48A	AJ	\$12.90
MET 465	6V-3A to 53V-.4A	6V-3.8A to 53V-1.2A	FA	14.40
MET 475	6V-7.5A to 53V-2.5A	6V-9A to 53V-3A	HA	20.40

400 CYCLE MOLDED TYPES

Primary 105/115 Volts 380-1000 Cycles. Sec. 6.3 VCT 2500V RMS Test

MOLDED 400 CYCLE TYPE TF5SX01ZZ

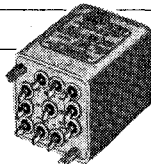


Type No.	Sec. Amp.	L In.	W In.	H In.	Wt. Lbs.	Net Each
H-101	3.5	1 7/8	1 3/8	2	.3	\$14.10
H-102	5.5	1 3/4	2	2 1/4	.44	15.00
H-103	10	2 3/8	2 1/8	2 1/2	.8	17.40
H-104	25	2 7/8	2 1/2	3 1/2	1.5	21.90
H-118	.3	Sub ounces mold see pg. 10				9.00

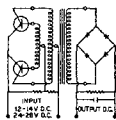
TRANSISTOR INVERTER TRANSFORMERS

High reliability (layer insulated) types providing high efficiency in small size. Units are in drawn MIL cases. Circuit details supplied with transformer. With 6 V. input instead of 12 V., output voltage is halved, current rating remains the same.

FOR 12/14 OR 24/48 VOLT BATTERY



Type No.	DC output, when used in circuit shown	MIL Case	Net Each
H-97	250V-.60MA	AH	\$14.70
H-98	375V-.100MA	AJ	15.90
H-99	425V-.175MA	FA	20.40
H-100	550V-.200MA	GB	21.00



**IMMEDIATE DELIVERY ON ALL ITEMS FROM STOCK**

NEW MET\* 400-CYCLE SERIES

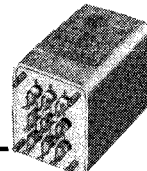
Type No.	MIL Type	Sec. Volts (MIL)	Amps. (Indust.)	Amps. (Indust.)	Sec. Test V. RMS	MIL Case	Net Each
MET-410#	TF4SX01YY 400 cy. pri.	6.3	.6	.75	500	RC-25	\$ 7.80
MET-420	TF4SX01AH 3800-1000 cy.†	6.3CT	2	2.5	1500	AH	9.60
MET-430±	TF4SX01FA 400 cycles‡	12.6CT	2	2.5	1500	FA	18.00
MET-435	TF4SX01FA 380-1000 cy.‡	6.3CT	10	12	2500	FA	12.00
MET-440	TR4SX01GB 380-1000 cy.‡	6.3CT	6	7	2500	GB	15.00

†Two MET-430's, Scott-connected, provide 26v., 2-phase from 115 v., 3-phase 400 cps input. Replaces former No. H-139. ‡105/115/125 v. primary. §57.5/99.7/115 v. primary. #Replaces former No. H-140.

HERMETIC SEALED TRANSISTOR/FILAMENT SUPPLY TRANSFORMER

Primary: 105/115/210/220 volts, 50/60 cycles, except H-130, H-137, H-138, H-104 (115v.) and H-131 (115/220v.) Suited to 400/100 cycle service. H-128: 6 1/2" x 5 1/2" x 7 3/4" h. (wt. 34 lbs.) H-129: 6 1/2" x 5 1/2" x 7 3/4" h. (wt. 28 lbs.)

METAL CASED TF4 TYPE



MIL T-27B RATINGS IN REGULAR TYPE, INDUSTRIAL RATINGS IN BOLD TYPE

Type No.	MIL Type	Sec. Volts	Amps. (MIL)	Amps. (Indust.)	Sec. Test V. RMS	MIL Case	Net Each
H-119	TF4RX01AH	6.3CT	.3	.38	1500	AH	\$ 8.40
H-120	TF4RX01GB	2.5	10	12	4000	GB	13.80
H-121	TF4RX01JB	2.5	10	12	10000	JB	18.00
H-122	TF4RX01KB	2.5	20	26	10000	KB	21.00
H-123	TF4RX01NB	2.5	5	7.5	10000	NB	36.00
		2.5	5	7.5			
H-124	TF4RX01FB	2.5	10	15			
		5	3	3	2000	FB	12.00
H-125	TF4RX01KB	5	10	12	10000	KB	21.00
H-126	TF4RX01LA	5	20	25	10000	LA	27.00
H-127	TF4RX01NA	5	20	30	21000	NA	45.00
H-128	TF4RX01YY	5	60	75	21000		81.00
H-129	TF4RX01YY	5	10	12	21000		90.00
H-130	TF4RX01AJ	5	10	12			
		5	10	12			
H-131	TF4RX01AJ	6.3CT	.6	.75	1500	AJ	9.00
H-132	TF4RX01JA	6.3CT	2	2.5	2500	FB	12.00
H-133	TF4RX01HA	6.3CT	6	7	2500	JA	19.20
		6.3CT	6	7			
H-134	TF4RX01HB	6.3CT	7	8	2500	HB	15.00
H-135	TF4RX01HA	6.3CT	10	12	2500	HA	16.80
H-136	TF4RX01JB	10 CT	10	13	2500	JB	21.00
H-137	TF4RX01EA	14, 12, 11 CT	10	14	2500	LA	27.00
		6.3	.6	.75	1500	EB	12.00
H-138	TF4RX01GA	6.3	.6	.75			
		12.6	2	2.5	1500	GA	19.50
H-139*	TF4RX01FA	12.6	2	2.5	1500	FA	18.00
		12.6	2	2.5			
H-140	TF4RX01YY	6.3	.6	.75	500	RC-25	7.80

\*Two H-139's Scott connected provide 26 volt two phase from 115V. three phase 400 cycle input.



# TRANSISTOR TRANSFORMERS (Commercial Types) & M-S Transformers & Inductors

## TRANSISTOR TRANSFORMERS (Commercial Type)

### NEW CAT★ TRANSISTOR IMPEDANCE TYPES

All units in RC-50 case. Frequency range, ±2 db, 50-15,000 cps. Power level 1 watt except CAT-15, 5 watts.

UTC Type	Application	Imped. Ohms	Primary Unbal. Ma DC	Secondary Imped., Ohms	Net Each
CAT-15	Output	48/12 spl.	750*	16 spl./8/4	\$8.10
CAT-20	Isfg./outp.	500/125 spl.	20	16/4 split	7.80
CAT-25	Isol./outp.	500/125 spl.	20	500/125 spl.	7.80
CAT-30	Input/isfg.	500/125 spl.	20	2K/500 spl.	7.80
CAT-40	Isfg./outp.	10K/2.5K spl.	8	2K/500 split	7.80

\*Balance. ★Trade mark.

### CHANNEL FRAME FILAMENT/TRANSISTOR TRANSFORMERS Pri. 115 V. 50/60 Cycles—Test Volts RMS: 1500

Type No.	Secondary	W	D	H	M	Lbs.	Net Each
FT-1	2.5 VCT-3A	27/8	1 1/8	1 1/16	2 3/8	3/4	\$4.05
FT-2	6.3 VCT-1.2A	27/8	1 1/8	1 1/16	2 3/8	3/4	3.90
FT-3	2.5 VCT-6A	3 3/16	1 7/8	2	2 1/16	1	4.50
FT-4	5.3 VCT-3A	3 3/16	1 7/8	2	2 1/16	1	4.50
FT-5	2.5 VCT-10A	3 3/4	2 1/8	2 3/16	3 1/8	1 1/2	4.65
FT-6	5 VCT-3A	3 3/4	2 1/8	2 3/16	3 1/8	1 1/2	4.65
FT-7	7.5 VCT-3A	3 3/4	2 1/8	2 3/16	3 1/8	1 1/2	4.65
FT-8	6.3 VCT-8A	4	2 1/4	2 3/8	3 1/4	2 1/2	5.40
FT-10	24 VCT-2A or 12V-4A	4	2 5/8	2 1/16	3 3/8	2 1/2	5.55
FT-11	24 VCT-1A or 12 V-2A	3 3/4	2 1/8	2 3/16	3 1/8	1 1/2	4.95
FT-12	36 VCT-1.3A or 18 V-2.6A	4	2 5/8	2 3/8	3 3/8	2 1/2	5.55

Taps on pri. of FT-13, FT-14 & FT-15 to modify sec. nominal V, -6% +6%, +12%

FT-13	26 VCT-.04A	2 1/8	1 3/8	1 1/2	1 3/4	1/4	\$4.20
FT-14	26 VCT-.25A	2 1/8	1 3/8	1 1/2	2 3/8	3/4	4.50
FT-15	48VCT-1A	4	2 1/2	2 3/8	3 3/8	2 1/2	6.30

### TRANSISTOR/FILAMENT TRANSFORMERS

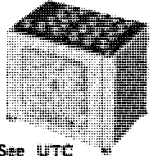
Pri. 115 x 50/60 Cycles; Bridge Rectifier  
S-77, S-78 & S-79 Tapped For Dual Secondary Voltages

UTC Type	DCV	DCA	Case No. See Page 11	Net Each
S-75	5.2/14	1.2/4	G-1	6.00
S-76	10/26	4/1.4	G-4	9.00
S-77	14/56	3/1	G-5	10.20
S-78	28/110	9/3	G-10	30.00
S-79	32/120	3/1	G-7	18.00

### CIRCUIT DEVELOPMENT TRANSFORMERS FOR TRANSISTORS

The UTC Laboratory circuit development transformers aid the designer in selecting optimum impedances for best power and distortion results from his transistor circuit.

LAB\* UNIT



See UTC page 8 for dimensions  
Terminal board as shown above

**LAB-5**  
20 Cycles to 20kc  
Up to 50mw Continuous

Pri. Imp. Ω	Sec. Imp. Ω
125	125
200 split	200 split
500 split	500 split
2000 split	2000 split
Net Each: \$48.00	

LAB-10 units in LS-1 case

LAB-20 units in LS-3 case

**LAB-10**  
20 Cycles to 20kc  
Up to 1W Continuous

Pri. Imp. Ω	Pri. Ratio	Sec. Imp. Ω
1900 Ω to 14,400 Ω	20:1 or 10:1	19 Ω to 36 Ω
925 Ω to 7600 Ω	10:1 or 5:1	37 Ω to 76 Ω
Net Each: \$30.00		

**LAB-20**  
20 Cycles to 20kc  
Up to 50W Continuous

Pri. Imp. Ω	Sec. Imp. Ω
6, 12, 24, 40, 54, 70,	4, 8, 16, 64
Net Each: \$60.00	

### TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS

Primary 115 volts 50/60 cycles

Type No.	Sec. V RMS	Sec. A RMS	Choke in DCV	In Parallel C in DCA	Choke in DCV	In Series C in DCA	Case No. See Pg. 9	Net Each				
CG-30	17/21.5	1.5	14/17.5	3	18.5/25	2	28/35	1.5	43/56	1	RC-112	\$18.90
CG-31	34/43	4.5	28/35	9	43/56	6	56/70	4.5	85/110	3	RC-175	42.00
CG-32	6.3VCT	1.2									RC-62	10.50

### FILAMENT/TRANSISTOR SUPPLY TRANSFORMERS

Primary 105, 115, 210, 220, 230 volts, 50/60 cycles, except CG-34 . . . 105, 115, 220, 230. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half.

Type No.	Sec. Volts C.T.	Sec. Amp.	Working Voltage	Sec. Test Volts RMS	Case No. See Page 9	Net Each
CG-33	6.3	4	500	2000	RC-75	\$ 9.00
CG-34	2.5	10	2500	6000	RC-112	10.20
CG-35	6.3	6	500	2000	RC-87	9.60
CG-36	6.3/6.3	5/5	500	2000	RC-100	13.50
CG-120	2.5	10	5000	11000	RC-125	15.00
CG-121	5	25	5000	11000	RC-150	18.00
CG-122	7.5/6.3	10	1500	4000	RC-125	15.00
CG-124	10	10	1500	4000	RC-150	15.00
CG-125	14/12/11	10	1500	4000	RC-150	18.00
CG-126	14/11/10	10	1500	4000	RC-152	24.00



RC CASE See Pg. 9

## MILITARY STANDARD TRANSFORMERS AND INDUCTORS

Hermetically Sealed To MIL-T-27B Specifications

Made and guaranteed to meet MIL-T-27B by full environmental testing.

### FILAMENT, POWER, PLATE TRANSFORMERS

Primary 105/115/125 v., 54/66 cycles. Current ratings are for high voltage secondary DC, choke input filter. For condenser input, reduce by 70%. All units are MIL grade 4, ruggedized; equally usable where grade 1 is specified. Electrostatically shielded.

UTC Type	MS No.	MIL Type TF4RX-	Secondary Rating	MIL Case	Net Each
N-583A	90016-2	01EB002	2.5 v.-3 a.; 1000 WV	EB	\$10.20
N-584A	90017-2	01GB003	2.5 v.-10 a.; 1000 WV	GB	14.10
N-585A	90018-2	01FB004	5 v.-3 a.; 1000 WV	FB	11.10
N-586A	90019-2	01HB005	5 v.-10 a.; 1000 WV	HB	15.30
N-587A	90020-2	01FB006	6.3 v.-2 a.; 1000 WV	FB	11.10
N-588A	90021-2	01GB007	6.3 v.-5 a.; 1000 WV	GB	12.90
N-589A	90022-2	01JB008	6.3 v.-10 a.; 1000 WV	JB	17.70
N-590A	90023-2	01KB009	6.3 v.-20 a.; 1000 WV	KB	22.50
N-591A	90024-2	01JB012	2.5 v.-10 a.; 6300 WV	JB	18.00
N-592A	90025-2	01KB013	5 v.-10 a.; 6300 WV	KB	21.00
N-593A	90026-2	03HA001	200-100-0-100-200, 70 ma; 6.3/5 v.-2 a.; 6.3 v.-3 a.	HA	20.70
N-594A	90027-2	03JB002	325-0-325, 70 ma; 6.3/5 v.-2 a.; 6.3 v.-4 a.	JB	22.35
N-595A	90028-2	03KB006	325-0-325, 150 ma; 5 v.-3 a.; 6.3 v.-5 a.	KB	25.35
N-596A	90029-2	03LB003	400-0-400, 175 ma; 5 v.-3 a.; 6.3 v.-8 a.	LB	27.30
N-597A	90030-2	03MA004	450-0-450, 250 ma; 5 v.-3 a.; 6.3 v.-8 a.	MA	33.90
N-598A	90031-2	02KB001	350-0-350, 250 ma	KB	19.80
N-599A	90032-2	02LB002	550-0-550, 250 ma	LB	26.85
N-600A	90036-2	02NB003	800-0-800, 250 ma	NB	37.50

### AUDIO TRANSFORMERS

Frequency response 300-10,000 cps, ±2 db. Split 600-ohm units provides for 600 ohms CT and 1500 ohms. Electrostatic shielding provided on W-784, W-785 and W-786. No. W-783 has center-tapped secondary for 90K CT or 22.5K CT. All units in AJ case. Wt., 0.6 lb.

UTC Type	MS No.	MIL Type TF1RX-	#	Pri. Ohms	Pri. DC Ma.,	Sec. Ohms	Net Each
W-783	90000-1	15AJ001	a	10K CT	10	90K spl.	\$15.90
W-784	90001-1	16AJ002	b	600 spl.	.....	4/8/16	14.70
W-785	90002-1	10AJ001	c	600 spl.	.....	135K CT	14.10
W-786	90003-1	16AJ001	d	600 spl.	.....	600 spl.	14.10
W-787	90004-1	13AJ001	e	7.6K/4.8K	40	600 spl.	12.75
W-788	90005-1	13AJ002	f	7.6K/4.8K	40	4/8/16	12.90
W-789	90006-1	13AJ003	g†	15K CT	10	600 spl.	12.45
W-790	90007-1	13AJ004	g†	24K CT	20†	600 spl.	12.90
W-791	90008-1	13AJ005	g#	60K CT	20†	600 spl.	12.45

# Use: a—PP plates to pp grids, 15 dbm level. b—Line to VC, 2 watts. c—Line to pp grids, 15 dbm. d—Line to line, 15 dbm. e—Plate to line, 2 watts. f—Plate to VC, 2 watts. g—PP plates to line. †Balanced. ‡2 watts. \*1 watt. #0.5 watt.

### INDUCTORS

Two windings for series or parallel connection. Inductance shown for series connection. All but Z-847 are standard MIL case types. Rated 3500 WVDC, unless otherwise noted.

UTC Type	MS No.	MIL Type	Induct. Ma DC	DCR Ohms	MIL Case	Net Each
Z-848*	90009-1	04FA001	16	80	FA	\$11.40
Z-849*	90010-1	04GA002	25	80	GA	14.10
Z-850*	90011-1	04HA003	40	80	HA	21.30
Z-851†	90013-1	04IA005	16	125	IA	16.50
Z-852†	90014-1	04JB006	25	125	JB	24.30
Z-853	90037-1	04KA007	40	125	KA	29.40
Z-854	75000-2	04LA009	16	200	LA	31.50
Z-855	75001-2	04MA010	25	200	MA	36.90
Z-856	75002-2	04NA012	16	315	NA	43.20
Z-857	75003-2	04Y013	25	315	YY	75.00

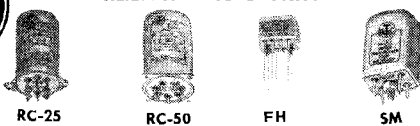
\*1000 WVDC. †2000 WVDC. ‡TF1RX-. •TF4RX.





HERMETIC COMPONENTS Hermetically sealed to MIL-T-27B

HERMETIC AUDIO UNITS

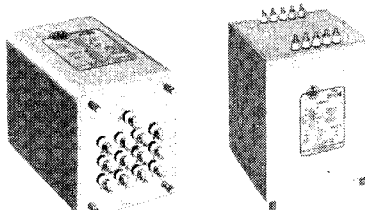


These extremely compact units are proved to specifications of MIL-T-27B. Response & level ratings: RC-25: Similar to Quacors for case (1 1/32" x 1/4" x 1 1/8" h. 1.5 oz.). RC-50: Similar to ultra compact units for case (1 9/16" x 1 5/8" x 2 1/4" h. 8 oz.). SM: Similar to SSO units for case (1 1/16" x 1 1/2" x 3/32" h. 0.8 oz.). FH: 2 3/32" x 2 3/32" x 1/8" h. .8 oz.

UTC Type	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	Net Each
H-1	Line to grid	50, 200 CT, 500 CT	50K	a 59.00
H-2	Mike to grid	87, 50 ma	135K	a 9.90
H-3	Pl. to grid	15K	60K	a 7.80
H-4	Pl. to grid	15K, 4 ma	60K	a 7.80
H-5	Pl. to grid	15K	95K CT	a 8.40
H-6	Pl. to p-p	15K, 4 ma	95K split	a 10.20
H-7	Pl. to line	20K CT, 4 ma	150/600	a 9.60
H-8	Mixing	150/600	600 CT	a 6.00
H-9	Input	150/600	1 meg.	a 9.00
H-10	Pl. to grid	10K	600 ohms	a 8.40
H-11	Reactor: 300 hys.	50 hys @ 3 ma.	600 ohms	e 7.50
H-12	Line to p-p	50, 200 CT, 500 CT	50K CT	a 9.60
H-13	Interstage	10K/2.5K split	2K/5K split	a 9.00
H-14	Interstage	10K/2.5K split	4K/1K split	a 9.00
H-15	Tr. to line	1.5K CT	500/125 split	a 9.00
H-16	Tr. to V.C.	2K/4K CT	8/16	a 9.00
H-17	Tr. input	600/150 split	2K/500 split	a 8.70
H-18	Tr. Interstage	10K CT	500/125 split	a 8.70
H-19A	Input	250 CT/500 CT	50K/100 CT	b 16.50
H-20	Interstage	15K split	80K split	b 15.00
H-21	Pl. to p-p	15K, 8 ma	800 split	b 18.00
H-21P	Tr. Interstage	50K CT	500/125 split	a 9.00
H-22	Pl. to line	15K, 8 ma	50/200, 125/500	b 15.90
H-22P	Tr. Interstage	500/125 split	500/125 split	a 8.70
H-22I	Tr. Interstage	500/125 split	150/37.5 split	a 8.70
H-22Z	Split Inductor:	Series: 60 Mhy-80 ma, 4 ohms Parallel: 15 Mhy-40 ma, 1 ohm		a 6.00
H-224	Split Inductor:	Series: 1 Hy-20 ma, 40 ohms Parallel: .25 Hy-40 ma, 15 ohms		a 6.00
H-225	Tr. Interstage	10K/2.5K split	40/10 split	a 9.70
H-23	P-p to line	30K split	50/200, 125/500	b 16.20
H-24	Inductor: 250 hys.	@ 5 mat, 65 hys. @ 10 mat		b 10.80
H-25	Mixing	500 CT	500/500	b 15.00
H-26	Interstage	10K/2.5K split	2K/500 split	b 15.00
H-27	Tr. to V.C.	500 CT	16/4 split	b 15.00
H-28P	Tr. to V.C.	200 CT	600 CT	b 12.00
H-28I	Tr. to V.C.	48 CT	16, 8, 4	b 12.00
H-28Z	Tr. to V.C.	20 CT	16, 8, 4	c 12.40
H-28S	Mixing	50, 125/150, 200/250, 333	200/250, 333	d 17.40
H-284	Split Inductor:	Series: 4 Hys-50 ma, 100 ohms Parallel: 1 Hy-100 ma, 25 ohms		b 7.20
H-286	Split Inductor:	Series: 40 Hys-15 ma, 1000 ohms Parallel: 10 Hys-40 ma, 250 ohms		b 7.50
H-290	Shld. chopper	2500 e. s.	100K	b 19.80
H-291	Max. shld. chopper	2000/500 e. s.	312K	c 28.80
H-295	Shld. chopper	10K/2.5K e. s.	50K	f 18.00
H-30	Input	50	62, 200	d 8.40
H-31	Pl. to grid	10K	60, 40	d 8.40
H-32	Pl. to line	10K, 3 ma	200	d 8.40
H-33	Output	30K, 1 ma	200	d 8.40
H-35	Inductor: 100 hys.	60 hys. @ 1 ma, 4400 ohms		d 7.50
H-36	Interstage	25K, 0.5 ma	1K	d 7.50
H-37A	Tr. output	500 CT	2K CT	d 7.50
H-38	Interstage	10K CT, 2 ma	2K CT	d 7.50
H-39	Interstage	500 CT	600 CT	d 7.50
H-40A	Tr. output	1500 CT	600 CT	d 7.50
H-41A	Tr. output	1500 CT	600 CT	d 7.50
H-42A	Isol./Tr. Inter.	10K CT	200 CT/50 split	d 8.40
FHA-15	Tr. Interstage	10K CT/2.5K split	200 CT/50 split	e 8.10
FHA-25	Tr. Interstage	20K CT/5K split	800 CT/200 split	e 8.10
FHI-3	Split Inductor:	Series: 40 Mhy-32 ma, 6 ohms Parallel: 15 Mhy-64 ma, 1.5 ohms		e 6.00
FHI-7	Split Inductor:	Series: 1 Hy-8 ma, 100 ohms Parallel: 1 Hy-16 ma, 25 ohms		e 6.00
FHI-11	Split Inductor:	Series: 2.4 Hys-2 ma, 160 ohms Parallel: .6 Hys-4 ma, 40 ohms		e 6.00

\*Has 75 db shielding. †6000 ohms. ‡1500 ohms. \$5 watts. ††10 watts.  
#Case: a—RC-25, b—RC-50, c—RC-62, d—SM, e—FH, f—RC-37. (See above & pg. 9)

HERMETIC SEALED POWER and PLATE TRANSFORMERS



H-114, H-115, H-117 have terminals opposite mounting.

Power transformers: Primary 115V, 60 cycles suited to 50\*-1000 cycles service. Plate transformers: primary 105/115/210/220 volts, 50/60 cycles. "L" ratings are choke input. "C" ratings are condenser input. H-80 thru H-197 MIL type TF4RX03, H-110 thru H-117 MIL type TF4RX02. The tapped high voltage winding provides either of two secondary voltages for greatest versatility. The power transformer listings indicate DC voltages and permissible currents for both choke and condenser input filters, as well as for military and industrial applications.

"W" suffix units designed for full wave center tap and full wave bridge application. Center tap of secondary may be disconnected from ground.

MIL-T-27B Type No.	Regular Type			Industrial Ratings in Bold Type			MIL Case	Net Each	
	HV C. T.	Sec. Approx. DC Volts	DC	Fil. Wdg.	Approx. DC Volts	DC MA			Fil. Wdg.
H-80	450	C 240	30	6.3VCT-2A	C 215	38	6.3VCT-2.5A	FA	\$12.90
H-81	500	L 170	95		L 160	110			
		C 270	55	6.3VCT-3A	C 245	75	6.3VCT-3A	HA	18.00
		L 200	85	5V-2A	L 180	105	5V-2A		
H-82	550	C 310	50		C 280	65			
		L 180	145		L 160	190			
		C 290	90	6.3VCT-4A	C 270	115	6.3VCT-4.5A	JB	20.40
H-83	600	L 215	135	5V-2A	L 190	180			
		C 330	85		C 315	100			
		C 315	100	6.3V-5A	L 200	210			
H-84	700	C 315	150	5V-2A	C 320	120	6.3V-6A	JA	21.00
		C 400	90		C 380	110			
		L 245	225	6.3V-5A	L 240	255			
H-85	750	C 390	135	6.3V-1A	C 375	160	6.3V-6A	KA	26.40
		L 275	205		L 270	230	6.3V-1.5A		
		C 430	125	5V-3A	C 410	150	5V-4A		
H-86	700	L 245	300		L 230	370			
		C 390	190	6.3V-6A	C 355	230	6.3V-6A	LA	30.00
		L 270	280	6.3V-1.5A	L 250	350	6.3V-2A		
H-87	750	C 425	170	5V-3A	C 395	210	5V-4A		
		L 270	310		L 250	360			
		C 425	180	6.3V-6A	C 395	225	6.3V-7.5A	MB	30.90
H-88	790	L 295	300	6.3V-2A	L 280	350	6.3V-2A		
		C 475	160	5V-3A	C 440	210	5V-4A		
		L 245	420		L 230	515			
H-89	850	C 390	275	6.3V-6A	C 390	300	6.3V-6A	NB	36.00
		L 275	400	6.3V-2A	L 275	480	6.3V-2A		
		C 440	250	5V-4A	C 430	290	5V-6A		
H-90	1000	L 305	430		L 275	550			
		C 460	280	6.3V-8A	C 445	340	6.3V-10A	OA	49.50
		L 400	400	6.3V-4A	L 370	500	6.3V-5A		
H-91	900	C 400	260	5V-6A	C 575	320	5V-6A		
		L 340	200	6.3V-5A	L 330	220	6.3V-6A	KA	27.00
		L 390	190	6.3V-1A	L 385	195	6.3V-1.5A		
H-92	900	C 425	265	6.3V-6A	L 330	310	6.3V-8A	MB	33.00
		L 400	240	6.3V-2A	L 395	290	6.3V-2A		
		C 475	160	5V-3A	C 440	210	5V-4A		
H-93	1000	L 370	300	6.3V-8A	L 340	390	6.3V-10A	OA	49.50
		L 465	265	6.3V-4A	L 455	350	6.3V-5A		
		C 475	160	5V-6A	C 440	210	5V-6A		
H-194**	200	L 170	140	6.3V-3.5A	L 160	155	6.3V-4A	HA	21.00
		C 275	85		C 260	95			
		L 200	125		L 190	135			
H-195**	235	C 325	75		C 310	85			
		L 185	285	6.3V-5A	L 175	300			
		C 300	180		C 285	195	6.3V-6A	JA	24.00
H-196**	265	L 230	240		L 220	255			
		C 375	150		C 360	165			
		L 200	445	6.3V-5A	L 190	480			
H-197**	285	C 320	280	6.3V-1.5A	C 300	300	6.3V-6A	KA	30.00
		L 250	380		L 240	420	6.3V-2A		
		C 400	235		C 380	260			
H-198	320	L 230	500	6.3V-6A	L 220	550			
		C 360	320	6.3V-2A	C 340	350	6.3V-7A	MB	42.00
		L 280	420		L 270	470	6.3V-2A		
H-110	1050	C 430	260		C 430	290			
		L 365	300		L 350	320			
		L 430	275		L 420	300			
H-111	1200	L 730	210		L 280				29.70
		L 860	190		L 265				
		L 415	500		L 600				
H-112	1500	L 480	450		L 550				33.00
		L 830	350		L 420				36.00
		L 960	310		L 380				
H-113	1500	L 615	320		L 385				36.00
		L 790	275		L 330				
		L 1230	220		L 270				39.60
H-114	2500	L 1580	190		L 230				54.00
		L 1050	310		L 375				
		L 1275	275		L 330				
H-115	2500	L 1050	475		L 525				81.00
		L 1265	425		L 475				
		L 1500	275		L 375				81.00
H-117	4000	L 1900	235		L 320				
		L 2125	90		L 1150				291.00
		L 2550	850		L 1050				

\*For 50 cycles, secondary current ratings reduced by 10%.  
\*\*DC ratings for bridge rectifier circuits.  
†6x5x6x6, †6x6x6x6, †11x11x14  
‡ New full wave bridge rectifier types

IMMEDIATE DELIVER ON ALL UTC STOCK ITEMS



METAL CASED TF4 TYPE H-70 thru H-79, H-104 thru H-173

The multiple ratings for the "H" series of filter chokes suit these units for the complete gamut of military and industrial applications. Transistor supply units are swinging type to enhance regulation. H-79 terminals opposite mounting.

\*Relates to ripple voltage, in input filter circuits only.

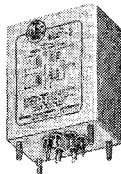
Type No.	Ind. Hys.	@	MA DC	Res. Ohms	Max. DCV <sup>†</sup> Ch. Input	Test V RMS	MIL Case	Net Each
H-70	20		20	925	350	1000	AH	\$ 7.20
H-71	20		40	350	300	2300	FB	8.40
H-72	13		100	215	500	2500	GB	9.00
H-73	11		100	150	700	2500	HB	11.40
H-74	11		150	135	700	2500	JB	12.90
H-75	11		200	90	700	2500		



**HERMETIC COMPONENTS Hermetically sealed to MIL-T-27B**

**MAT\* MAGNETIC AMPLIFIERS FOR SERVO MOTOR APPLICATIONS**

**VACUUM TUBE TYPE**



The MAT 1-4 Magnetic Amplifiers are exceptionally stable units designed for the control of 2 phase, 115V., 400 cycle servo motors. They are compact... hermetically sealed... magnetically shielded... and meet MIL-T-27B and MIL-E-5400 Specifications. The output is sinusoidal, amplitude variable, and phase reversible. Control is provided by a dual triode such as 12AU7 operating with a plate voltage of 115 volts, 400 cycles, or higher. The signal to the triode grids can be polarity reversible DC or phase reversible 400 cycles with or without suppressed carrier modulation. These units eliminate DC power requirements as well as temperature sensitive dry disc rectifiers. The high input impedance provides minimum loading on sensing elements and high power gain. Ringing at low load level has been reduced to a minimum through high internal damping factors. The power output figures are conservative... power gain of the Magnetic Structure is approximately 40... response time approximately 7.5 milliseconds. The maximum null voltage is 3 volts RMS. For single phase supply voltage the load capacitor should effect 90° phase shift with motor load... for 3 phase, 30° phase shift.

or phase reversible 400 cycles with or without suppressed carrier modulation. These units eliminate DC power requirements as well as temperature sensitive dry disc rectifiers. The high input impedance provides minimum loading on sensing elements and high power gain. Ringing at low load level has been reduced to a minimum through high internal damping factors. The power output figures are conservative... power gain of the Magnetic Structure is approximately 40... response time approximately 7.5 milliseconds. The maximum null voltage is 3 volts RMS. For single phase supply voltage the load capacitor should effect 90° phase shift with motor load... for 3 phase, 30° phase shift.

Type No.	MAT-1	MAT-2	MAT-3	MAT-4
<b>230 Volt Supply</b>				
Power output	4 W.	8 W.	11 W.	18 W.
RL, ohms	3300	1600	1200	720
CL, mfd., approx.	.2	.3	.5	.7
<b>115 Volt Supply</b>				
Power output	2 W.	4 W.	6 W.	9 W.
RL, ohms	6500	3300	2200	1450
CL, mfd.	.13	.2	.3	.45
Reson. Freq.	40 cyc.	35 cyc.	35 cyc.	20 cyc.
Log-Decr.	.18	.23	.03	.65
Cont. Wdg. Res.	6200 ohms	8450 ohms	4750 ohms	5650 ohms
Case, length, in.	1 1/4	1 1/2	1 3/4	2 1/8
Width, in.	1 1/4	2 1/8	2 1/2	3 1/8
Height, in.	2 3/4	2 3/4	2 1/4	3 3/8
Mtg. Dim., in.	1 3/4 x 1 1/2	1 x 1 5/8	1 1/2 x 1 7/8	1 1/2 x 2 1/2
Studs, stainless	4-40	6-32	8-32	8-32
Cutout, in.	1	1	1	1
Unit Weight, lbs.	.67	1.1	1.7	2.75
Net Each	\$27.00	\$30.00	\$36.00	\$39.00

MAT-5 115V.-400 cyc. to 460 VCT; provides 230V. 48 MA DC or 460V. 24 MA DC. RC-37 Case (UTC pg. 9). MIL type TF4SY02YY. Net Each \$10.80

MAT-6 Input... 10,000 ohms pri... 1:15 C.T. ratio... phase shift under 1°... RC-25 case (UTC pg. 5). MIL-type TF4RX10YY. Net Each \$9.00

**TRANSISTOR TYPE**

UTC transistor MAT units are identical to their vacuum tube counterparts, but designed for low impedance control. The input transformer may be chosen by impedance ratio rather than precise rated impedance.

Type No.	MAT-7	MAT-8	MAT-9	MAT-10	MAT-60
Power output	4 W.	8 W.	11 W.	18 W.	50 W.
RL, ohms	3300	1600	1200	720	260
CL, mfd approx.	.2	.3	.5	.7	.7
Cont. Wind. Res.	38Ω	52Ω	30Ω	36Ω	50
Case Length, in.	2 3/4	2 1/2	2 3/4	2 3/4	MIL MB
Width, in.	1 1/4	2 1/4	2 1/2	2 3/4	
Height, in.	1 1/2	1 1/4	2	2 1/4	
Mtg. Dim., in.	1 3/8 x 1 7/8	1 1/2 x 2	1 1/4 x 2 3/4	2 3/8 x 2 3/8	60 cycle type
Studs, stainless	4-40	6-32	8-32	8-32	
Cutout, in.	1	1	1	1	
Weights, lbs.	.65	1.1	1.7	2.75	
Net Each	\$25.80	\$28.80	\$34.50	\$37.50	\$54.00

MAT-11 115V.-400 cyc. to two 28 Volt .2A windings for 56 VCT-.2A or 28 V-.4 A. RC-37 (UTC pg. 9) case. MIL type. TF4SY02YY. Net Each \$10.05

MAT-65 115V. 60 cyc. to 8.5 VCT @ 500 ma & 63 VCT @ 300 ma. FA case. MIL Type TF4SX02FA. Net Each 12.60

**ULTRASHIELDED POWER-LINE ISOLATION TRANSFORMERS**

Simulates battery operation for critical circuits requiring extreme isolation from power line.

Designed to give the ultimate in isolation, for line-powered equipment, which formerly could only be obtained from battery power. The effective capacity coupling between primary and secondary windings is less than 0.1 MMFD.

For this purpose shields are individually terminated to allow maximum flexibility. Input and output terminals are brought out on opposite sides of a special housing in order to maintain the excellent isolation between line and load.

MIL-T-27B Ratings in Regular Type Industrial Ratings in Bold Type Primary 115 V 50/60 Cycles

Type No.	Power Watts	Power Case	Size	Net Each
HIT-1	50	60	4 1/2 x 4 1/2 x 3 1/2"	\$33.00
HIT-15	120	150	5 1/2 x 5 x 3 1/2"	39.00
HIT-2	160	200	5 1/2 x 5 1/2 x 4 1/2"	48.00
HIT-3	400	480	8 x 6 1/2 x 5 1/2"	69.00
HIT-4	1000	1200	9 x 7 1/2 x 7 1/2"	120.00
HIT-450†	80	100	4 1/2 x 4 1/2 x 3 1/2"	33.00

† Primary, 115v. 400 cps. Secondary, 115 volts.



**PRECISION MINIATURE WIDE APPLICATION PULSE TRANSFORMERS**

UTC miniature, wound core, pulse transformers are individually precision adjusted in standard test circuits to close tolerances. They are high reliability units, hermetically sealed by vacuum molding and suited for service from -70° C. to +130° C. Wound core structure provides excellent temperature stability (un-

like ferrite). Designs are high inductance type to provide minimum of droop and assure true pulse width. H-45 thru H-57 ratio 1:1. H-60 thru H-69 ratio 4:4:1. Others ratio 5:3:1.

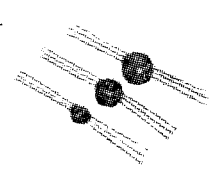
See PIP pulse units on UTC page 1

**TRANSISTOR PULSE TRANSFORMERS**

APPROX. DCR, OHMS | BLOCKING OSCILLATOR PULSE | COUPLING CIRCUIT CHARACTERISTICS

Type No.	APPROX. DCR, OHMS			BLOCKING OSCILLATOR PULSE				COUPLING CIRCUIT CHARACTERISTICS								
	1-2	3-4	5-6	Width μ Sec.	Rise Time	Over Shoot	Droop %	Back Swing μ Sec.	P	Width μ Sec.	Volts Out	Rise Time	Over Shoot	Droop %	Back Swing μ Sec.	Imp. in, out, Net Each
H-60	.124	.14	.05	.05	.016	0	0	30	.05	9.3	.012	0	0	20	50	6.60
H-61	.41	.48	.19	.1	.016	0	0	30	.1	8.2	.021	0	0	15	50	6.60
H-62	.78	.94	.33	.2	.022	0	0	18	.2	7.4	.034	0	5	12	100	6.60
H-63	1.86	2.26	.70	.5	.027	2	10	20	.5	7.5	.045	0	20	25	100	6.60
H-64	3.73	4.4	1.33	1	.033	0	12	25	1	7	.078	0	15	23	100	6.60
H-65	6.2	7.3	2.22	2	.066	0	15	25	2	5.6	.14	0	10	20	100	7.50
H-66	10.2	12	3.6	3	.087	0	18	30	3	6.8	.17	0	10	20	100	7.50
H-67	14.5	17.5	5.14	5	.097	0	23	28	5	7.9	.2	0	18	28	200	7.50
H-68	42.3	52.1	14.8	10	.14	0	15	28	10	6.5	.4	0	15	30	200	7.50
H-611	.426	.32	.132	.1	.018	8	0	12	.1	8.2	.02	0	0	30	140/50	6.60
H-641	5	3.6	1.4	1	.04	0	10	10	1	7	.07	0	20	30	280/100	6.60
H-671	21	16	6	5	.08	0	14	12	5	8	.2	0	25	30	560/200	7.50
H-69	Transistor pulse transformer kit, consists of H-60 thru H-68 in plastic case.															

**ALL UNITS INDIVIDUALLY ADJUSTED TO PARAMETERS SHOWN IN TABLES**



Size & weight of H-60 thru H-68 same as H-45.

**VACUUM TUBE PULSE TRANSFORMERS**

APPROX. DCR, OHMS | BLOCKING OSCILLATOR PULSE | COUPLING CIRCUIT CHARACTERISTICS | DIMENSIONS

Type No.	APPROX. DCR, OHMS			BLOCKING OSCILLATOR PULSE				COUPLING CIRCUIT CHARACTERISTICS							DIMENSIONS				
	1-2	3-4	5-6	Width μ Sec.	Rise Time	Over Shoot	Droop %	Back Swing μ Sec.	P	Width μ Sec.	Volts Out	Rise Time	Over Shoot	Droop %	Back Swing μ Sec.	Imp. in, out, ohms	L in.	W in.	Wt. Grams
H-45	3	3.5	4	.05	.022	0	20	10	.05	17	.01	20	0	35	250	3/8	3/8	1	\$ 6.75
H-46	5.5	6.5	7	.10	.024	0	25	10	.10	19	.01	30	10	50	250	3/8	3/8	1	6.75
H-47	3.7	4.0	4	.20	.026	0	25	8	.20	18	.01	30	15	65	500	1/2	3/4	4	6.00
H-48	5.5	5.8	6	.50	.03	0	20	5	.50	20	.01	30	20	65	500	1/2	3/4	4	6.00
H-49	8	8.5	9	1	.04	0	20	10	1	24	.02	15	15	65	500	1/2	3/4	4	6.00
H-50	20	21	22	2	.05	0	20	10	2	27	.05	10	15	35	500	1/2	3/4	4	6.00
H-51	28	31	33	3	.10	1	20	8	3	26	.07	10	10	35	500	1/2	3/4	4	6.00
H-52	36	41	44	5	.13	1	25	8	5	23	.15	10	10	45	1000	1/2	3/4	4	6.00
H-53	37	44	49	7	.28	0	25	8	7	24	.20	10	10	50	1000	3/8	5/8	6	6.00
H-54	50	58	67	10	.30	0	20	8	10	24	.25	10	10	50	1000	3/8	5/8	6	6.30
H-55	78	96	112	16	.75	0	20	10	16	23	.40	5	15	20	1000	3/8	5/8	6	6.30
H-56	93	116	138	20	1.25	0	25	10	20	23	.6	5	10	10	1000	3/8	5/8	6	6.30
H-57	104	135	165	25	2.0	0	30	10	25	24	1.5	5	10	10	1000	3/8	5/8	6	6.30
H-461	9.6	6.4	2.5	.1	.025	0	0	8	.1	19	.02	3	5	20	700/250	3/8	3/8	1	6.75
H-501	30	20	7	2	.08	0	12	5	2	27	.06	12	15	35	1400/500	1/2	1/2	4	6.00
H-531	66	47	17	7	.32	0	12	3	7	24	.23	12	10	40	2800/1000	3/8	5/8	6	6.00
H-561	180	142	53	20	1.75	0	13	5	20	23	.7	5	10	10	2800/1000	3/8	5/8	6	6.30
H-58	Pulse transformer kit. Consisting of H-45 thru H-57 in a partitioned plastic case.																		

UTC PAGE 5.

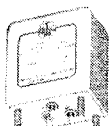
\*UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1964 United Transformer Corp., New York, N. Y.



# ELECTRIC WAVE FILTERS *Manufactured to MIL-F-18327B*



BM & LM Series



HM Series

## INTERSTAGE AND LINE FILTERS

Available in stock frequencies listed below (numerical part of type number is cutoff frequency in cps). Compact shielded cases hermetically sealed to MIL-T-27B specs. BMI, LMI, BML cases: 1 1/16" x 1 1/8" x 1 5/8" h.; wt., 6 oz. HMI, LMI cases: 1 1/16" x 1 1/8" x 2 1/2" h.; wt., 9 oz. The BMI filters are band pass interstage units designed to operate between a vacuum tube plate (or 10,000 ohms) and a grid. They provide a gain of 2 at center frequency. BTL units are some as BMI, but 10,000 ohms output.

BML band pass filters, similarly, work into a grid, but have an input impedance of 500/600 ohms. They provide a gain of 9.

HMI filters are high pass interstage units.

LMI filters are low pass interstage units.

HML filter are high pass with input and output impedance of 500/600 ohms.

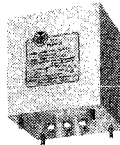
LML filters are low pass filters with input and output impedance of 500/600 ohms.

LLP low frequency low pass filter, loss of less than 40 db at 20 cycles. Source & load 100K ohms.

UTC Type	Net Ea.	UTC Type	Net Ea.	UTC Type	Net Ea.
BMI-30	\$36.00	LMI-200	\$31.50	HMI-800	\$31.50
BMI-50	30.00	LMI-400	31.50	HMI-1000	31.50
BMI-60	30.00	LMI-500	31.50	HMI-2000	31.50
BMI-90	30.00	LMI-800	31.50	HMI-3000	31.50
BMI-100	30.00	LMI-1000	31.50	BML-400	30.00
BMI-120	30.00	LMI-1500	31.50	BML-1000	30.00
BMI-150	30.00	LMI-2000	31.50	HML-200	39.00
BMI-200	30.00	LMI-2500	31.50	HML-300	39.00
BMI-240	30.00	LMI-3000	31.50	HML-500	39.00
BMI-300	30.00	LMI-4000	31.50	HML-1000	39.00
BMI-400	30.00	LMI-5000	31.50	LML-1000	31.50
BMI-500	30.00	LMI-10000	31.50	LML-1500	31.50
BMI-750	30.00	BTI-60	36.00	LML-2000	31.50
BMI-800	30.00	BTI-100	36.00	LML-2500	31.50
BMI-1000	30.00	BTI-120	36.00	LML-3000	31.50
BMI-1500	30.00	HMI-50	31.50	LML-4000	31.50
BMI-2000	30.00	HMI-100	31.50	LML-8000	31.50
BMI-3000	30.00	HMI-200	31.50	LML-10000	31.50
BMI-4000	30.00	HMI-300	31.50	LML-12000	31.50
BMI-5000	30.00	HMI-400	31.50	LLP-10	60.00
BMI-10000	30.00	HMI-500	31.50		
LMI-100	31.50				

## NEW 400-CYCLE 115 V. LINE FILTERS

intended for use on 115 v., 400 cps line to eliminate harmonic distortion.



UTC No. PLF-25 — Gives 150 v. output into 500 ohm load with ±1 db, 375-425 cps. Will attenuate 800 cycles by 30 db; 1200 cycles and higher by at least 50 db. MIL type, FR4RX11NB. Meets MIL-F-18327B. Size 4 3/8" w. x 5 1/4" d. x 5 1/2" h. Weight, 10 lbs. Net Each .....\$66.00

UTC No. PLP-13 — Eliminates harmonic distortion, rejects 60 and 120 cycles, and gives zero phase shift at 400 cycles. Operating into 1000 ohm load, provides 115 v. output at 400 cycles, within ±1 db, 375-425 cps. Attenuates 800 cycles by 15 db; 1200 cps by 45 db; above 1200 cps by at least 35 db; 120 cps by 20 db; and, 60 cps by 30 db. MIL type FR4RX22-LB; meets MIL-F-18327B specifications. Size, 3 1/4" w. x 4 3/4" d. x 4 1/2" h. Weight, 6 1/2 lbs. Net Each .....\$66.00

## TELEGRAPH TONE CHANNEL FILTERS



**TGT CASE**  
1 1/2 x 1 1/2 x 2 1/2  
Mtg 1 1/16 x 1 1/16"  
Screws ..... 6-32  
Weight ..... 8 oz.



**TGR CASE**  
1 1/2 x 1 1/2 x 4 1/4  
Mtg 1 1/16 x 1 1/16"  
Screws ..... 6-32  
Weight ..... 15 oz.

UTC band pass filters for multiplex transmitting and receiving provide maximum stability in miniature sizes. Stock filters cover all standard transmit and receive bands. All units employ 7 terminal header matching subminiature 7 pin socket.

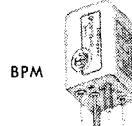
TGR (receiving) & TGT (transmitting) filters are 600 ohms in and out. They are down less than 3 db at ± 42.5 cycles from center frequency.

TGR units are down more than 30 db at ± 170 cycles. Attenuation is greater than 15 db at adjacent channel crossover.

TGT units are down more than 16 db at ± 170 cycles. Attenuation is greater than 7.5 db at adjacent channel crossover. All units are MIL type FR4RX-22YY.

UTC Type	Net Each	Center Frequency (Cyc.)	UTC Type	Net Each
TGT-425	\$42.00	425	TGR-425	\$72.00
TGT-595	42.00	595	TGR-595	72.00
TGT-765	42.00	765	TGR-765	72.00
TGT-935	42.00	935	TGR-935	72.00
TGT-1105	36.00	1105	TGR-1105	63.00
TGT-1275	36.00	1275	TGR-1275	63.00
TGT-1445	36.00	1445	TGR-1445	63.00
TGT-1615	36.00	1615	TGR-1615	63.00
TGT-1785	33.00	1785	TGR-1785	60.00
TGT-1955	33.00	1955	TGR-1955	60.00
TGT-2125	33.00	2125	TGR-2125	60.00
TGT-2295	33.00	2295	TGR-2295	60.00
TGT-2465	30.00	2465	TGR-2465	57.00
TGT-2635	30.00	2635	TGR-2635	57.00
TGT-2805	30.00	2805	TGR-2805	57.00
TGT-2975	30.00	2975	TGR-2975	57.00
TGT-3145	30.00	3145	TGR-3145	57.00
TGT-3315	30.00	3315	TGR-3315	57.00

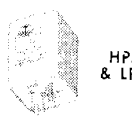
**IMMEDIATE DELIVERY ON ALL ITEMS**



BPM



MINIFILTERS\*



HPM & LPM

These units provide almost the same characteristics as the standard interstage units listed to the left, although extremely miniaturized. Hermetically sealed to MIL-T-27B specs. B type case: 3/4" x 3/4" x 1 1/8" h.; wt., 1 oz. H and L cases: 1" x 1" x 1 3/8" h.; wt., 2 1/4 oz. Cutoff frequencies in cps indicated by type number.

BPM units (BAND PASS) have 2:1 gain. Attenuation is approximately 2 db ± 3% from center frequency, and 35 db per octave as shown. Input 10,000 ohms, output to grid, tapped for 10,000 ohms to provide for transistor circuits. For tube circuits continuity is on grid side, for transistor use continuity is on input side.

BPH units (BAND PASS) attenuation less than 3 db ± 5% from center frequency, and 40 db per octave. Source and load 500 ohms.

HPM units (HIGH PASS) are down less than 6 db at cutoff frequency, and more than 30 db at .67 cutoff frequency, 40 db at .6 cutoff frequency. Input and output 10,000 ohms.

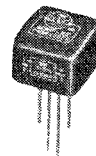
LPM units (LOW PASS) are down less than 6 db at cutoff frequency, and more than 30 db at 1.5 cutoff frequency, 40 db at 1.65 cutoff frequency. Input and output 10,000 ohms.

UTC Type	Net Ea.	UTC Type	Net Ea.	UTC Type	Net Ea.
BPM-50000	\$27.00	BPM-2500	\$27.00	HPM-1500	\$30.00
BPH-100000	27.00	BPM-3000	27.00	HPM-4000	30.00
BPM-400	27.00	BPM-3200	27.00	LPM-200	30.00
BPM-440	27.00			LPM-300	30.00
BPM-500	27.00	BPM-4000	27.00	LPM-500	30.00
BPM-600	27.00	BPM-4800	27.00	LPM-1000	30.00
BPM-750	27.00	BPM-5000	27.00	LPM-1500	30.00
BPM-800	27.00	BPM-6000	27.00	LPM-2000	30.00
BPM-1000	27.00	BPM-8000	27.00	LPM-3000	30.00
BPM-1200	27.00	BPM-8000	27.00	LPM-5000	30.00
BPM-1500	27.00	BPM-10000	27.00	LPM-6000	30.00
BPM-1600	27.00	BPM-20000	27.00	LPM-8000	30.00
BPM-1800	27.00	HPM-500	30.00	LPM-10000	30.00
BPM-2000	27.00	HPM-1000	30.00	LPM-15000	30.00

## TELEMETERING BAND PASS FILTERS



TMN-4 thru  
TMN-1.7  
1 1/16 x 1 3/32 x 2"  
Weight 3.5 oz  
TMN-2.3 thru  
TMW-70  
2 3/32 x 2 3/32 x 1 3/16"  
Weight 1.2 oz.



MNF-4 thru  
MNF-5.4  
1 3/16" Sq. x  
1/2" high  
Weight 1 oz.  
MNF-7.35 thru  
MWF-70  
2 3/32" Sq. x  
1/2" high  
Weight 1/3 oz.

Both TMN and TMW types are designed for 100 K input and output impedance and have an insertion loss of less than 6 db. Four pin hermetic header matches small Winchester socket.

TMN filters are down less than 3 db at ± 7.5% of center frequency. They are down more than 18 db at ± 25% of center frequency. Attenuation is greater than 40 db beyond 1.75 Fc and .58 Fc.

TMW filters are down less than 3 db at ± 15% of center frequency. They are down more than 20 db at ± 50% of center frequency. Attenuation is greater than 40 db beyond 2.5 Fc and .4 Fc.

MNF and MWF (Minifilter) provide same performance as filters described above but are extremely miniaturized. Slanted toward use with transistors. Pin terminals ideally suited for printer circuits.

UTC Type	Net Each	Center Frequency KC	Band Width ±	UTC Type	Net Each
TMN-.4	\$39.00	.4	7 1/2%	MNF-.4	\$39.00
TMN-.56	39.00	.56	7 1/2%	MNF-.56	39.00
TMN-.73	39.00	.73	7 1/2%	MNF-.73	39.00
TMN-.96	39.00	.96	7 1/2%	MNF-.96	39.00
TMN-1.3	39.00	1.3	7 1/2%	MNF-1.3	39.00
TMN-1.7	39.00	1.7	7 1/2%	MNF-1.7	39.00
TMN-2.3	39.00	2.3	7 1/2%	MNF-2.3	39.00
TMN-3.0	39.00	3.0	7 1/2%	MNF-3.0	39.00
TMN-3.9	39.00	3.9	7 1/2%	MNF-3.9	39.00
TMN-5.4	39.00	5.4	7 1/2%	MNF-5.4	39.00
TMN-7.35	39.00	7.35	7 1/2%	MNF-7.35	39.00
TMN-10.5	42.00	10.5	7 1/2%	MNF-10.5	42.00
TMN-14.5	42.00	14.5	7 1/2%	MNF-14.5	42.00
TMN-22	42.00	22	7 1/2%	MNF-22	42.00
TMN-30	42.00	30	7 1/2%	MNF-30	42.00
TMN-40	42.00	40	7 1/2%	MNF-40	42.00
TMN-52.5	42.00	52.5	7 1/2%	MNF-52.5	42.00
TMN-70	42.00	70	7 1/2%	MNF-70	42.00
TMW-22	42.00	22	15%	MWF-22	42.00
TMW-30	42.00	30	15%	MWF-30	42.00
TMW-40	42.00	40	15%	MWF-40	42.00
TMW-52.5	42.00	52.5	15%	MWF-52.5	42.00
TMW-70	42.00	70	15%	MWF-70	42.00

## HIGH Q PRECISION INDUCTANCE DECADE

Invaluable instruments for design and experimental work with tuned circuits, wave filters, and equalizers. The low hum pickup toroid coils equip a new permalloy dust core which, combined with special winding methods, provides very high Q, excellent voltage and temperature stability, and high self resonance frequency. The inductance values are laboratory adjusted to better than 1% precision, with calibration noted on base.



**DI CASE**  
Length ..... 4 1/8"  
Width ..... 4 3/8"  
Height ..... 2 9/8"  
Weight ..... 2 lbs

Type No.	Induct. Henries	Optimum Range	Max. Q	Max. ACMA	Ins. Test Volts	Test RMS	Net Each
DI-1	10 x .01	2-60 KC	200	500	500	500	\$42.00
DI-2	10 x .1	25-20 KC	200	150	500	500	54.00
DI-3	10 x 1	25-10 KC	200	50	500	500	57.00
DI-4	10 x 10	2-1.5 KC	100	15	500	500	72.00



HIGH Q COILS & INDUCTORS

MININDUCTORS \*

All these ultracompact high Q units are grade 5, hermetically sealed to (MIL-T-27B). All give extra temperature stability rated at 1%, -55° C to +100° C.

MM—Ultraminature epoxy molded toroidal inductors with pin terminals for printed circuit application. Maximum Q at 30 KC. 3/16" dia. x 1/2" h.; wt. .07 oz.

MH—Ultraminature epoxy molded toroidal inductors similar to MM except maximum Q at 100 KC. Size & wt. as MM. ML—Ultraminature hyperalloy cased inductors with epoxy board and pin terminals for printed circuit application. Maximum Q at 800 cps to 2 KC, depending on inductance. 7/16" x 3/16" x 3/16"; wt. .2 oz.

MO—Miniature epoxy molded inductors with pin terminals for printed circuit application. Maximum Q at 600 cps to 1500 cps depending on inductance. 3/4" x 1 1/16" x 1 1/16"; wt. 1 oz.

MW—Miniature epoxy molded toroidal inductors with pin terminals for printed circuit application. Maximum Q at 5 to 10 KC. 2 3/32" dia. x 1 1/32" h.; wt. .25 oz.



Table with columns: UTC Type, Induct., Net Each, UTC Type, Induct., Net Each, UTC Type, Induct., Net Each. Lists various inductor models like ML-0, ML-1, etc.

HIGH Q TOROID INDUCTORS

Favorites for over fifteen years, UTC HQ Toroids are only excelled by the preferred new "M" series. As typical Q curves show, HQ coils are available for application from 100 cycles to 100 KC. Adjusted to 1%, the inductance is virtually independent of frequency, temperature, and vibration. Voltage stability is excellent, and shielding case assures 80 db coupling attenuation. Hermetically to MIL-T-27B. All units MIL type TF4RX-20YY.



HQA and HQC CASE Length 2 5/8" Diameter 1 1/8" Height 1 3/8" Mounting 1 1/8" Screws 6-32 Cutout 3/8" x 1 1/8" Weight 5 oz.



HBQ CASE Length 2 3/8" Width 1 5/8" Height 2 5/8" Mounting 1 1/8" x 2 1/4" Screws 6-32 Cutout 3/8" x 1 1/8" Weight 14 oz.



HQE CASE Length 1 1/4" Width 1 1/2" Height 1 3/8" Mounting 3/4" Screws 4-40 Cutout 3/8" x 1/2" Weight 1.5 oz.

Table with columns: Type No., Inductance (O DC), DC MA Max., Net Each, Type No., Inductance (O DC), DC MA Max., Net Each. Lists HQA-1 through HQE-5.

HERMETIC "M" TYPE TOROIDS

UTC permalloy dust toroids provide highest Q factor with miniaturized dimensions. Lab adjusted to 1% tolerance and sealed to MIL-T-27B specs. Magnetic case plus toroid provide 80 db shielding.

- Type MQA 40 at 500 cps, 160 at 5 kc, approx. 40 at 20 kc. SIZE 1 1/8" x 1 1/2" x 1 3/32" h.; wt. 4 oz. MQB 40 at 250 cps, 250 at 3 kc, approx. 40 at 20 kc. SIZE 1 1/8" x 2 3/8" x 2 3/8" h.; wt. 14 oz. MQD 40 at 5 kc, 185 at 50 kc, approx. 40 at 300 kc. SIZE 1 1/8" x 1 3/8" x 1 3/8" h.; wt. 4 oz. MQE 20 at 600 cps, 140 at 10 kc, approx. 40 at 40 kc. SIZE 1/2" x 1 1/8" x 1 3/32" h.; wt. 1.5 oz.

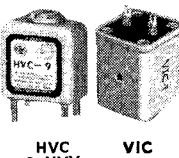


TQA units are similar to MQA but center tapped for oscillator application, etc. Net each: TQA-1 thru TQA-15, \$1.50 more than MQA's; TQA-16, 14.70; TQA-17, 15.90; TQA-18, 17.40; TQA-19, 21.00; TQA-20, 23.40.

Table with columns: UTC Type, Ind., Net Each, UTC Type, Ind., Net Each, UTC Type, Ind., Net Each. Lists MQA-1 through MQA-20 and MQB-1 through MQE-16.

VARIDUCTORS

These variable inductors are ideal for use in tuned circuits, equalizers, oscillators, etc. TYPE HVC:—Gives highest Q and stability; adjustable -70% to +200% of mean value. Hermetically sealed to MIL-T-27B.



HVV Types: For precise matching; vernier inductance variation ±10% of nominal value. Offer high Q over a wide frequency range and high temperature stability.

VIC:—Adjustable -45% to +85% of mean value.

Size: HVC, TVC and HVV types, 1 1/8" lg. x 2 3/8" w. x 1 1/2" h.; weight 2 oz. VIC type, 1 1/8" lg. x 1 1/4" w. x 1 1/4" h.; weight 5/8 oz. HVC, TVC, U.S. Pat. No. 2,879,489; HVV, Pat. Pend. TVC type inductors are identical to HVC units, but provide taps at 30% and 50% of total turns — ideal for oscillator circuits, etc. HVC & TVC, U. S. Pat. No. 2,879,489

Table with columns: UTC Type, Mean Hys., DC Ma., Net Each, UTC Type, Mean Hys., DC Ma., Net Each. Lists HVC-1 through HVC-15, HVV-1 through HVV-15, and VIC-1 through VIC-17.

LOW FREQUENCY HIGH Q COILS

MQL TYPES

All these units of MIL type TF4RX20YY induct value to 2% tolerance at 1v., 60 cycles. Exceptional Q and stability, inductance swing less than 3.5% from -55°C to +85°C. The case, sealed hermetically to MIL-T-27B is 1 1/8" dia. 2 1/2" h. Either transformer, parallel, series or center type connections are permitted due to dual windings to 4 terminals. Mounting 1 1/8" sq. with a 6-32 screw. Cutout 1 1/2" dia wt. 1 lb.

Table with columns: Type No., Hys. (0 DC) Parallel, Net Each, Type No., Hys. (0 DC) Parallel, Net Each. Lists MQL-0 through MQL-5.



MQM TYPES

Designed for high Q at low frequencies. Structure provides exceptional stability, adjusted to 2% at 1v., 60 cycles. Inductance variation less than 2% from -55°C to +130°C. Made to MIL-T-27B, MIL type TF4S20YY. Size 1 1/8" d x 1 3/8" h., cutout: 1" d., wt. 5 oz.

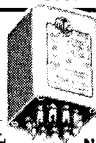
Table with columns: Type No., Series Hy (0 DC), Parallel Hy (0 DC), Series DCR ±20%, Net Each. Lists MQM-2 through MQM-600.



HI-FI & BROADCASTING COMPONENTS

ULTRACOMPACT\* HI-FI AUDIOS

Small light weight, wide range units. Level +15 dbm except where otherwise noted. Tap and bottom mounting. Die cast case, 1 1/2" x 1 1/2" x 2" h. Weight, 1/2 lb.



UTC Type	Application	Primary Impedance, Ohms	Sec. Imped., Ohms	#	Net Each
A-10	Input	50, 125/150, 200/250, 333, 500/600	50K split	a	\$13.20
A-11	Shield. Input	50, 200, 500	50K CT	a	12.00
A-12	Input	Same as A-10	80K split	a	12.00
A-15	Interstage*	10K/2.5K split**	2K/500 sp.	c	9.90
A-16	Pl. to grid	15K	60K	a	9.90
A-17	Pl. to grid	15K, 8 ma	60K	c	12.00
A-18	Pl. to p-p	15K split	80K split	a	12.00
A-19	Pl. to p-p	15K, 8 ma	80K split	c	12.00
A-20	Mixing	Same as A-10	Same as pri.	d	14.40
A-21	Shield Mixing	50, 200/250, 500/600	Same as pri.	e	12.00
A-22	Tr. to line*	500 CT	500/125 spl.	c	9.90
A-23	Tr. to V.C.*	500 CT	16/4 split	c	9.90
A-24	Pl. to line	15K split	See A-10 pri.	f	12.90
A-25	Pl. to line	15K, 8 ma	See A-10 pri.	c	12.00
A-26	P-p to line	30K CT	See A-10 pri.	f	13.20
A-27	Input	100K split	See A-10 pri.	b	12.00
A-28	Tr. to V.C.	48 CT, 5 w.	16 (split), 8, 4	c	10.20
A-34		25K/6250 split	500/125 split	b	10.20
A-35	Transistor	10K/2.5K split	500/125 split	b	9.90
A-36	Interstage	500/125 split	150/37.5 split	c	9.60
A-37		500/125 split	50/12.5 split	c	9.60
A-38		100/25 split	40/10 split	c	9.30
A-39	line to transit.	600/150 split	2K/500 split	a	11.10
A-30	Inductor: 250 hys.	@ 5 mat; 65 hys @ 10 mat			10.20
A-32	Split Filter (2-wdgs.)	Series: 60 Hys @ 15 ma, 2000 ohms	Parallel: 15 Hys @ 30 ma, 500 ohms		6.60
A-33	Hypermalloy shield fits A units	20 db			2.70
A-40	Power transformer: 115v 60 cycles to two 6.3 CT—2A Secs.				9.90
A-41	Split Filter (2-wdgs.)	Series: 240 Mhy @ .2A, 6 ohms	Parallel: 60 Mhy @ .4A, 1.50 ohms		6.30
A-42	Split Filter (2-wdgs.)	Series: 4 hys-50 ma, 100 ohms	Parallel: 1 hy-100 ma, 25 ohms		6.60
A-43	Matching to 2 simult. lines or Tr.	600/150 split	(2) 600/150 split g		14.10
A-44	1'stge/output	4K/1K split, 12 ma	600/150 spl.	b	9.90
A-45	Sprk. match	4, 8, 16	4 w. max lvl.	c	6.60
A-46	Chopper	10K/2.5K	500		15.00
A-47	3-wdq. hybrd.	500/600CT	2 x 500/600CT		15.00

\*+30 dbm. †6K ohms. ‡1.5K ohms. §2K ohms. ¶150 ohms. \*\*8 ma. #Frequency response (±2 db), cps: a—20-20,000, b—30-20,000, c—40-20,000, d—10-50,000, e—30-30,000, f—20-40,000, g—20-30,000.

HIPERMALLOY\* TRANSFORMERS

Hipermalloy audio and power transformers are specifically designed for portable and compact service. High fidelity though light in weight and dependable. The frequency characteristic of the Hipermalloy audio units is uniform from 30 to 20,000 cycles. They incorporate a Hipermalloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down. DC in Primary shown is maximum unbalanced.



**TYPE H-2 CASE**  
 Length ..... 3 1/2"  
 Width ..... 2 1/4"  
 Height ..... 3 1/2"  
 Mounting 2 x 2 3/8"  
 Screws 6-32  
 Cutout 2 1/8" dia.  
 Unit Wt. .5 lbs.

**TYPE H-1 CASE**  
 Length ..... 2 3/4"  
 Width ..... 1 1/2"  
 Height ..... 3 1/2"  
 Mount 1 3/8 x 1 1/2"  
 Screws 6-32  
 Cutout 1 1/8" dia.  
 Unit Wt. .2 lbs.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS  
Units Housed in Type H-1 Case

UTC Type	Applica-tion	Primary Imped. Ohms	Sec. Imped. Ohms	Level dbm	Net Each
HA-100	Line to grid	50, 125/150, 200, 250, 333, 500/600	60K split	+18	\$17.40
HA-100X	As above but multiple alloy shields for low hum pick up			+16	17.40
HA-101	Line to grids	Same as HA-100	120K split	+18	22.20
HA-101X	As above but multiple alloy shields for low hum pickup		80K split	+16	18.00
HA-103A	Mike/mixer to grid	2.5, 5, 5, 10, 15, 22, 30, 38, 60	60K split	+18	15.00
HA-108*	Mixing	Same as HA-100	Same as Pri	+20	19.80
HA-108X*	As above but multiple alloy shields for low hum pick up			+18	19.80
HA-130X	Line to grids.	30, 50, 200, 250	60K Split	+18	21.00

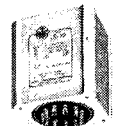
INTERSTAGE AUDIO TRANSFORMERS  
Units Housed in Type H-1 Case, except HA-107: in H-2 Case

UTC Type	Applica-tion	Primary Imped. Ohms	Sec. Imped. Ohms	Level Mw.	Net Each
HA-104	Pl. to grids	15K split	95K	100	\$15.00
HA-105	Pl. to grid	15K	60K	100	21.00
HA-106	Pl. to grids	15K split	135K	100	18.90
HA-107	Pi's. to grids	30K	80K	600	27.00
HA-137	Pi's. to grids	30K	100K	100	16.80

Continued on next column

LINEAR STANDARD\* TRANSFORMERS

Guaranteed frequency response of ±1 db 20-20,000 cps, ±1 db 7-50,000 cps on high level units, make these ideal transformers for uniform frequency response and low distortion. High efficiency and dependability through shielding. Tap and bottom mounting.



LOW LEVEL TRANSFORMERS  
Type LS-1 case, 2 5/8" x 3 1/4" h. Suffix X indicates multiple alloy shield. Weight, 3 lbs.

UTC Type	Application	Pri. Imp., Ohms	Sec. mp., Ohms	Level, dbm	Net Each
LS-10	Input	50, 125/150, 200, 250, 333, 500/600	60K split	+19	\$24.00
LS-10X	Input	As above	50K	+17	24.00
LS-12	Input	As above	120K split	+19	27.00
LS-12X	Input	As above	80K split	+17	24.00
LS-30	Mixing	As above	Same as pri.	+23	24.00
LS-30X	Mixing	As above	Same as pri.	+20	27.00
LS-19	Pl. to grids	15K	95K	+20	19.50
LS-21	Pl. to p-p	15K	135K split	+20	24.00
LS-40	Pl. to p-p	15K, 8 ma	135K split	+20	33.00
LS-25	P-p to p-p	30K split	50K split	+23	27.00
LS-27	Pl. to line	15K, 8 ma	See LS-10 pri.	+23	24.00
LS-50	Pl. to line	15K	See LS-10 pri.	+23	24.00
LS-51	P-p to line	30K split	See LS-10 pri.	+24	27.00
LS-14X	Lo-Z to grids	2.5, 5, 5, 10, 15, 22, 30, 38, 60	50K	+17	24.00
LS-26	Line to grids	5K	60K	+23	27.00
LS-31	Line to line	30, 50, 200, 250	See LS-10 pri.	+23	24.00
LS-32	Lo-Z to line	Same as LS-14X	See LS-10 pri.	+23	33.00
LS-68	Matching to 2 Simult. lines or Tr.	600/150 split	(2) 600/150 split	+15	24.00
LS-150	Line to line	4K	See LS-10 pri.	+23	21.00
LS-151	Line to line	16K	See LS-10 pri.	+26	21.00
LS-140	70 db hybrid	500/600 split	Same as pri.	+18	27.00
LS-141	Hybrid †	500/600 split	Same as pri.	+18	21.00

† Has 3 sets of coils.

HIGH LEVEL TRANSFORMERS

Sizes: LS-33, -34, -35, -47, -52, -54, -55, -56, -61, -63, 3 1/2" x 4 1/8" x 4 1/8" h. (Wt., 7 1/2 lbs.). LS-61L, -614, -48, -58, -65, -666, -667, 5" x 5 1/4" x 4 1/8" h. (Wt., 15 lbs.). LS-691, 13" x 15 1/4" x 24" h. (Wt. 370 lbs.). LS-692, 13" x 15 3/4" x 28" h. (Wt. 520 lbs.).

UTC Type	Application	Pri. Imped., Ohms	Level Watts	Net Each
LS-33	Matching	50, 125/150, 200, 250, 333, 500/600	a 20	\$24.00
LS-34	Matching	As above	a 40	33.00
LS-47	Driver	5K	i 20	24.00
LS-48	Driver	12K	j 40	60.00
LS-61	P-p output	9K	b 30	36.00
LS-614	P-p output	4,500/3,800	b 55	66.00
LS-58	P-p output	2.5K/1.5K	b 40	57.00
LS-52	P-p output	8000	b 20	24.00
LS-55	P-p output	5K/3K split	b 20	24.00
LS-61	P-p output	10K/6K split	b 20	24.00
LS-57	P-p output	8000	c 20	21.00
LS-57	P-p output	5K/3K split	c 20	21.00
LS-63	P-p output	10K/6K split	c 20	21.00
LS-56	P-p output	5K/3K split	d 20	27.00
LS-35	EL-34's †	5K CT 43% taps	e 35	24.00
LS-65	6550's †	3.3K CT 40% taps	e 60	42.00
LS-666	P-p transistor	8 split	f 50	21.00
LS-667	P-p transistor	8 split	e 50	21.00
LS-691	Modulation	10,400	g 1,000	600.00
LS-692	Modulation	4,750	h 2,500	930.00

\* With feedback. #Secondary Impedance: a—1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125/150, 200/250, 333, 500/600 ohms. b—500, 333, 250/200, 125, 50, 30, 20, 10, 7.5, 5, 2.5, 1.2 ohms. c—30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. d—6K, 5K, 4K, 1.8K, 1.5K, 1K, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. e—4, 8, 16 ohms. f—500 ohms split. g—4.5K, 4K, 3.5K, 2.75K, 2K. h—2.5K, 2K, 1.75K, 1.5K, 1.25K. i—Pri./1/2 Sec. 3.2:1. j—Pri./1/2 Sec. 5:1:1.

Continued from bottom of previous column

PLATE TO LINE TRANSFORMERS  
Units Housed in Type H-1 Case

UTC Type	Application	Prim. Imped. Ohms	Sec. Imped. Ohms	Level Mw	Net Each
HA-113	to multiple line	15K split	50, 125/150, 200, 250	125	\$18.00
HA-114	Lo-Z to multi-line	30K	250, 333, 500/600	200	21.00
HA-133	to multi-line	15K split		160	21.00

OUTPUT TRANSFORMERS  
Units Housed in Type H-2 Case

UTC Type	Applica-tion	Prim. Imped. Ohms	Sec. Imped. Ohms	Level Watts	Net Each
HA-134	P-p to line	5K/9.4K	50, 125/150, 200, 250, 330, 500/600	15	\$16.80
HA-135	P-p to V.C.	3K/5K	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	18	16.80
HA-136	5881's screen-taps	6.6K	4, 8, 16	20	18.00

POWER TRANSFORMERS

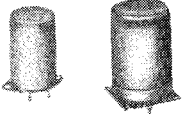
Units Housed: HP-122 in Type H-1 Case; HP-123 in Type H-2 Case					
UTC Type	Applica-tion	Psi. Volt 50/60u	Hi-Volt	Fil. Wind	Net Each
HP-122	Pre-amp	115	220-O-220	6.3 V.C.T.—.6A	\$12.00
HP-123	Pre-amp or Tuner	115	15 Ma	6.3 V.C.T.—1.2A	12.00
			35 Ma	6.3 V.C.T.—.6A	

UTC PAGE 8. \*UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1964 United Transformer Corp., New York, N. Y.



COMMERCIAL GRADE COMPONENTS

DIMENSIONS, COMMERCIAL GRADE "RC" CASE



Performance insured during constant usage due to the ruggedness of this vacuum impregnated component with special sealing compound. Case, finished in light gray enamel, is ready for mounting on chassis. (All audio components linear).

Case No.	Base Dim. (Sq.)	Mounting Dim. (Sq.)	Ht., ±1/8, -1/16	Cutout Dia.	Unit Wt. (Lbs.)
RC-37	1 3/8	1 1/8	1 5/8	1 1/4	.35
RC-50	1 9/8	1 3/4	2 1/4	1 1/2	1/2
RC-62	1 13/16	1 1/2	2 1/2	1 1/2	1
RC-75	2 3/16	1 13/16	2 7/8	1 7/8	1 1/2
RC-87	2 3/16	2 3/16	3 1/4	2	2 1/2
RC-100	3	2 9/8	3 3/4	2 5/8	3 1/2
RC-112	3 3/16	2 13/16	4 1/8	2 7/8	5
RC-125	3 3/4	3	4 1/2	3	6 1/2
RC-150	4 1/2	3 3/16	5 1/2	3 3/4	11
RC-152	5 1/8	4 1/8	5 1/2	4	15 1/2
RC-175	5 3/4	4 7/8	7	4	22

SWINGING INPUT AND FILTER INDUCTORS

UTC Type	Induct. Henries	DC MA	DC Res. Ohms	Test Volts	Case No.	Net Each
CG-40	10	200	110	1750	RC-112	\$ 8.10
CG-44	30	100	400	1750	RC-100	6.90
CG-45	250	15	5000	1750	RC-87	6.00
CG-48C	75	50	2200	1750	RC-87	7.50
CG-100	12	150	110	2500	RC-125	9.00
CG-102	12	250	100	3000	RC-150	13.20
CG-104	10	350	90	5000	RC-152	15.00
CG-108	10	500	52	7000	RC-175	27.00
CG-15	10	1000	40	9000	11 1/2 x 4 3/4 x 6 7/8 H. Wt., 40 lbs.	54.00
CG-101	25/5	150	110	2500	RC-125	9.00
CG-103	25/5	250	100	3000	RC-150	13.20
CG-105	25/5	350	90	5000	RC-152	15.00
CG-109	25/5	500	52	7000	RC-175	27.00
CG-111§	100/10mh	2.5a.	.6	1500	RC-87	11.40
(2 wdgs)‡	25/2.5mh	.5a.	.15			
CG-112§	40/10mh	6 a.	.24	1500	RC-112	12.60
(2 wdgs)‡	10/2.5mh	12 a.	.06			
CG-113§	7/1.75mh	17.5a.	.036	1500	RC-125	14.70
(2 wdgs)‡	1.8/.45mh	35 a.	.009			
CG-1C	25/5	1000	40	9000	11 1/2 x 4 3/4 x 6 7/8 H. Wt., 40 lbs.	54.00

§ Split winding in series. † Wt., 40 lbs. ‡ Split winding in parallel.

PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts; 50/60 cycles. For reduced power, secondary can be cut in half, using 220 v. primary on 110 volts; may be used on 25 to 43 cycles in this case. "W" suffix units designed for full wave center tap and full wave bridge application. Center tap may be disconnected from ground.

UTC Type	High Voltage	DC Volts	Case No.	Net Each
CG-300	625-515-0-515-625	500/400	RC-150	\$16.20
CG-300W	625-515-0-515-625	1000/800	RC-150	17.70
CG-301	580-530-300-0-300-530-580	475/425/250	RC-152	24.00
CG-301W	580-530-300-0-300-530-580	950/850/500	RC-152	26.40
CG-302	950-750-0-750-950	760/610	RC-175	30.00
CG-302W	950-750-0-750-950	1520/1220	RC-175	33.00
CG-303	1500-1235-400-0-400-1235-1500	1250/1000	RC-175	36.00
CG-303W	1500-1235-400-0-400-1235-1500	2500/2000	RC-175	39.60

POWER AND BIAS TRANSFORMERS

Primary 115 volts, 50/60 cycles. DCMA is for choke input; reduce 70% for condenser input. Filament 1 is 5 volts, 3 amps., and Filament 2 is 5 volts, 2 amps., except as otherwise noted.

UTC Type	High Voltage	DC Ma	Filament 3	Filament 4	Case No.	Net Each
CG-422	435-365-0-365-435	125	6.3 VCT-3A	2.5 VCT-5A	RC-150	\$21.00
CG-428	500-0-500-80-0-80	25	6.3 VCT-100 4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152	24.90
CG-429*	600-525-0-525-600	250	7.5 VCT-3A, tapped 6.3 VCT-4A		RC-152	24.90
CG-431†	500-400-0-400-500-80-0-80	500	6.3 VCT-100 5A	6.3 VCT-3A	RC-175	36.00
CG-315	Tapped for any DC voltage from 15 to 100 volts within 6%—250 MA				RC-125	14.40
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6%—250 MA				RC-152	21.00

\*Filament 2 is 6.3 VCT-3A. †Filament 1 is 5V-6A.

AUDIO UNITS

UTC Type	Use †	Pri. Imped., Ohms	Level	Case RC-	Net Each
CG-131	a	15K	+28 dbm	50	\$ 9.90
CG-132	b	15K	+30 dbm	62	9.90
CG-133	c	30K CT	+32 dbm	75	10.50
CG-134	d	50, 200, 500	+30 dbm	50	9.00
CG-135	e	50, 200, 500	+30 dbm	50	9.90
CG-235	f	50, 200, 500	+28 dbm	75	12.00
CG-136	g	15K, 50, 200	+30 dbm	62	13.20
CG-137	h	50, 200, 500	+28 dbm	50	8.40
CG-140	i	15K	+30 dbm	50	7.80
CG-141	j	30K CT	+32 dbm	50	9.00
CG-233	k	30K CT	+35 dbm	87	9.00
CG-333	k	30K CT	+35 dbm	87	9.00
CG-433	k	5K CT	10 w.	100	9.90
CG-15	l	8K CT	20 w.	100	12.00
CG-16	l	3K/5K CT	20 w.	100	12.00
CG-19	l	6K/10K CT	20 w.	100	12.00
CG-710	l	14K/20K CT	20 w.	100	12.00
CG-216	l	9K CT	30 w.	125	13.80
CG-20	m	5K CT, 43% screen taps	25 w.	125	15.00
CG-21	m	3.3K CT, 40% screen taps	50 w.	150	24.00
CVP-1	n	3K/5K/6K/8K/10K/14K CT	12 w.	100	13.20
CVP-2	n	"	30 w.	125	14.40
CVP-3	n	"	60 w.	150	21.00
CVP-4	n	"	125 w.	152	24.00
CVP-5	n	"	300 w.	175	39.00
CVL-1	p	500	15 w.	87	9.00
CVL-2	p	500	40 w.	125	10.50
CVL-3	p	500	75 w.	150	15.00
CVM-0	q	Any Class B	12 w.	100	10.50
CVM-1	q	"	30 w.	125	13.80
CVM-2	q	"	60 w.	150	18.00
CVM-3	q	"	125 w.	152	21.00
CVM-4	q	"	125 w.	175	39.00
CVM-5	q	"	300 w.	†	105.00
CG-51AX	r	15K	5 w.	87	9.00
CG-53AX	r	3K/10K/CT	20 w.	112	10.50
CG-59AX	r	50, 200, 500	20 w.	112	10.80

† 7" x 12" x 9", Wt., 60 lbs. †a—Pl. to grid. b—Pl. to 2 grids. c—2 pl. to 2 grids. d—Input, humbucking. e—P-p input, humbucking. f—Input, mag. shielded. g—Dual input, humbucking. h—Mixing. i—Pl. to line. j—P-p to line. k—Driver. l—Output. m—Feedback output. n—Universal output. p—Universal matching. q—Universal modulator. r—Universal driver.

END CASTING UNITS

See note on "W" suffix units under plate transformers.

UCT Type	High Volt	DC Volt	L	W	H	Wt. Lbs.	Net Each
CG-304	1500-1235-0-1235-1500	1.25K	1K	14 5/8	8 1/2	10 3/8	100 \$141.00
CG-304W†	1500-1235-0-1235-1500	2.5K	2K	14 5/8	8 1/2	10 3/8	100 156.00
CG-305	2400-1750-0-1750-2400	2K	1.5K	10 1/2	4 3/4	6 7/8	50 63.00
CG-305W†	2400-1750-0-1750-2400	4K	3K	10 1/2	4 3/4	6 7/8	50 69.00
CG-306	as above	2K	1.5K	13 7/8	8 1/2	10 3/8	100 150.00
CG-306W†	as above	4K	3K	13 7/8	8 1/2	10 3/8	100 165.00
CG-307	3500-3000-2400-0-2400-3000-3500	3K	2.5K	13 3/8	8 1/2	10 3/8	90 138.00
CG-308	as CG-307	3K	2.5K	15 1/8	8 1/2	10 3/8	125 162.00
CG-309	as CG-307	3K	2.5K	21	10	13 1/4	253 360.00
CG-310	4600-4050-3500-0-3500-4050-4600	4K	3.5K	17 1/4	10	13 1/4	150 309.00
CG-311	1500-1235-0-1235-1500	1.25K	1K	10 1/2	4 3/4	6 7/8	50 66.00
CG-311W†	1500-1235-0-1235-1500	2.5K	2K	10 1/2	4 3/4	6 7/8	50 69.00
CG-312	1800-1500-0-1500-1800	1.5K	1.25K	10 1/2	4 3/4	6 7/8	38 66.00

† Full Wave Bridge Rectifier types.

VARIPOWER \* AUTOFORMERS

Simultaneous control of filament, plate and line voltage. Filament voltage control within 2 1/2%. Output voltage from 0 to 130 volts, 50/60 cycles. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125, and 130 volts.

UTC Type	Watts Output	Case No.	Net Each	UTC Type	Watts Output	Case No.	Net Each
CVA-1	150	RC-112	\$12.00	CVA-4	1000	RC-152	\$21.00
CVA-2	250	RC-125	14.10	CVA-5	2000	RC-175	36.00
CVA-3	500	RC-150	18.00				

UTC PAGE 9. \*UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1964 United Transformer Corp., New York, N. Y.

MINIATURE, OUNCER, SUBOUNCER & SUB-SUBOUNCER UNITS



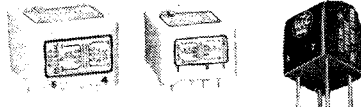
SUBOUNCER\* & SUB-SUBOUNCER\* AUDIO TRANSFORMERS  
TRANSISTOR & TUBE TYPES HERMETICALLY SEALED

TO MIL-T-27B

UTC SSO-#P and SO-#P units are ideal miniaturized components having high efficiency and wide frequency response. Special nickel iron core materials and winding methods provide exceptional performance and reliability.

These units are vacuum molded to MIL Grade 5. They employ 50 mil deeply anchored pin terminals ideally suited for printed circuit and transistor application. Terminals are strong enough to support these light weight units.

The UTC SML-70 is an ultra miniature transformer providing high shielding, extremely low insertion loss with wide band response, 200 cycles to 20 kc. These units are provided with pin terminals (.025 dia.) strong enough to support the unit and are ideal for printed circuits.



**SO-#P UNIT**  
Dim.  $\frac{3}{4} \times 1 \times \frac{3}{32}$ "  
Pin Length  $\frac{1}{4}$ "  
Wt. .05 lb.

**SSO-#P UNIT**  
Dim.  $\frac{3}{4} \times \frac{7}{8} \times \frac{3}{16}$ "  
Pin Length  $\frac{1}{4}$ "  
Wt. .04 lb.

**SML-70**  
 $\frac{3}{16} \times \frac{3}{16} \times \frac{3}{16}$ "  
Wt. .2 oz.

PRINTED CIRCUIT AUDIO UNIT — HIPERMALLOY SHIELD CASE

Type No.	Application	Pri. Imp. ohms	Sec. Imp. ohms	Net Each
SML-70	Input or Chopper Service	200K	1K	\$8.40

MIL TYPE: TF5RX16ZZ.

PRINTED CIRCUIT MOLDED TYPES TO MIL GRADE 5

Type No.	Application	Pri. Imp. ohms	Sec. Imp. ohms	Net Each
SO-2P	Interstage/3:1	10K	90K	\$6.90
SO-3P*	Plate to Line	10K 25K	200 500	6.90
SO-5P	Inductor: 40 hy at 1 ma, 2675 ohms, series; 4 hy at 4 ma, 670 ohms, parallel;			6.90
SO-7P*	Transistor	20K	800	6.60
	Interstage	30K	1200	
SO-8P	Transistor	10K	2000 CT	7.50
	to PP Sec.			
SO-9P	PP Transistor	500 CT	3.2	7.50
	to V.C.			
SO-14P	Transistor	80 CT	32 Split	7.80
	Interstage	100 CT	40 Split	
SO-15P	Tr. output	600 CT	600 Split	7.80
SO-17P	Inductor: 16 hy at 2 ma, 1.1K ohms, series; 4 hy at 4 ma, 275 ohms, parallel;			6.90

MIL TYPES: TF5RX13ZZ: SO-3P, SO-7P, SO-8P; TF5RX15ZZ: SO-2P; TF5RX17ZZ: SO-9P, SO-14P, SO-15P, SO-17P; TF5RX20ZZ: SO-5P.

SSO-3P	Plate to line	10K 25K	200	\$7.20
SSO-5P	Inductor: 100 hy at 0 ma, 4.4K ohms, series; 25 hy at 0 ma, 1.1K ohms, parallel			6.90
SSO-8P	Transistor to pp sec.	10K	2000 CT	7.20
SSO-14P	Transistor	10K CT	200 CT	7.50
	Interstage	25K CT	500 CT	
SSO-15P	Transistor	20K CT	800 CT	7.50
	Interstage	30K CT	1200 CT	
SSO-19P	Output matching	500 CT	600 CT	7.20
SSO-20P	Output	1.5K CT	600 CT	7.20
SSO-21P	Crystal/Chopper	200K CT	1000 CT	8.10
SSO-22P	Interstage	10K CT 12K CT	1500 CT 1800 CT	7.20
SSO-23P	Inductor: 8 hy at 2 ma, 600 ohms, series; 2 hy at 4 ma, 150 ohms, parallel			6.90
SSO-24P	Inductor: 3.5 hy at 2 ma, 160 ohms, series; 0.9 hy at 4 ma, 40 ohms, parallel			6.90
SSO-25P	Transistor	10K CT	10K/ 2.5K spl.	8.10
SSO-27P	Tr. Output	4K CT 2.5 ma	600 spl.	8.10

MIL TYPES: TF5RX13ZZ: SSO-3P, SSO-8P, SSO-14P, SSO-15P, SSO-22P, SSO-25P, SSO-27P; TF5RX16ZZ: SSO-21P; TF5RX17ZZ: SSO-19P, SSO-20P; TF5RX20ZZ: SSO-5P, SSO-23P, SSO-24P.

SUB-SUBOUNCERS\* AND SUBOUNCERS\*



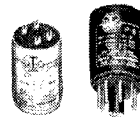
Lead mounted (channel available as separate item) miniature nickel iron core units for transistor or vacuum tube circuits. Plastic mounted leads. SSO Sub-Subouncers: Approx. 2 db, 140-10,000 cps; +20 VU except inputs +7 VU. ( $\frac{7}{32}$ " x  $\frac{3}{4}$ " x  $\frac{3}{16}$ " dia.; wt., .02 lb.) SO Subouncers: Approx. 2 db., 100-10,000 cps; +24 VU except inputs +10 VU. ( $\frac{19}{32}$ " x  $\frac{3}{4}$ " x  $\frac{7}{8}$ " dia.; wt., .03 lbs.)

UTC SSO	Net Each	Application	Pri. Imp., Ohms	Sec. Imp., Ohms	UTC SO	Net Each
1	\$4.50	Input	50/200	62.5K/250K	1	\$3.60
2	4.80	Interstage	10K, 25 ma	90K	2	3.30
3	4.20	Pl. to line	10K/25K, 1.5 ma	200/500	3	3.30
4	3.90	Output	30K, 1 ma	50	4	3.30
5	3.90	Inductor:	50 hys. @ 1 ma	4400 ohms #	5†	3.00
6	4.20	Output	100K, .5 ma	600	6†	3.90
7	3.30	Tr. intrstg.	20K/30K†	8K/1200	7	3.00
8	3.90	Tr. intrstg.	10K, 1 ma	2K CT	8	3.60
9	3.00	Tr. to V.C.	10K, 2 ma	16		
		Tr. to V.C.	500 CT	3.2	9	3.60
10	3.00	Tr. to V.C.	10K, 2 ma	3.2		
		Tr. to V.C.	2K/4K CT	8/16	10	3.60
11	3.00	Tr. Output	500/600S	50/60		
		Transist. Int.	400/500 CT	400/500 Split	11	4.20
12	3.00	Tr. Output	1K/1.2K††	50/60		
		Transist. Int.	400/500 CT	120/150 Split	12	4.20
13	4.50	Input	200K	1K		
		Transist. Int.	400/500 CT	40/50 Split	13	4.20
14	4.20	Tr. intrstg.	10K/25K CT	200/500 CT		
		Transist. Int.	80/100 CT	32/40 Split	14	4.20
15	4.20	Tr. intrstg.	20K/30K CT	.8K/1.2K CT		
		Tr. output	600 CT, 5 ma	600 Split	15	4.20
16	3.00	Tr. output	1.2K/1.5K††	3.2/4		
		Tr. intrstg.	2.5K CT, 4 ma	2500 Split	16	4.20
17	3.30	Output	10K/12.5K**	500/600 CT		
		Inductor:	16 hy at 2ma, 1.1K ohms, series; 4 hv at 4 ma, 275 ohms, parallel		17	3.30
18	3.30	Output	7.5K/9.4K CT	3.2/4		
19	3.30	Matching	500 CT	600 CT		
20	3.30	Output	1.5K CT	600 CT		
21	4.80	Chopper	200K CT	1K CT		
22	3.90	Tr. intrstg.	10K/12K CT	1.5K/1.8K CT		
23	3.00	Inductor:	4 hys @ 5 ma, 650 ohms			
24	3.00	Inductor:	1.5 hys @ 5 ma, 160 ohms			
25	5.10	Transist. Int.	10K/20K CT	10K/12 CT		
26	5.10	Transist. Int.	40K/50K CT	400/500 Split		
27	5.10	Tr. output	10K CT, 2.5 ma	600 Split		
CH	.30	Mounting channel for any of above			CH	.30

†0.5 ma. †Resis., 2675 ohms. \$3.5 ma. \*\*2 ma. ††3 ma. #DC resis.

OUNCER\* AUDIO UNITS

Standard and Plug-in Types



UTC ouncer components provide wide range ±1 db, 30 to 20,000 cps (except Nos. O-14 and O-15). In compact  $\frac{7}{8}$ " dia. case. No. O-16 has heavy shielding (case  $1\frac{1}{16}$ " dia.). P-16 has 9 pin plug ( $1\frac{1}{8}$ " dia.). Wt., 4 oz. max.

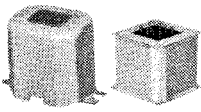
UTC No.	Net Each	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	UTC No.	Net Each
O-1	\$7.80	Input	50, 200, 500	50K	P-1	\$9.00
O-2	7.80	P-p input	50, 200, 500	50K CT	P-2	9.00
O-3	7.50	Input	7.5/30	50K	P-3	8.40
O-4	6.60	Pl. to grid	15K	60K		
O-5	6.60	Pl. to grid	15K, 2 ma	60K		
O-6	7.50	Pl. to p-p	15K	90K CT	P-6	8.40
O-7	7.50	Pl. to p-p	15K, 2 ma	95K CT	P-7	8.40
O-8	7.80	Pl. to line	15K	50, 200, 500	P-8	9.00
O-9	7.80	Pl. to line	15K, 2 ma	50, 200, 500	P-9	9.00
O-10	8.40	P-p to line	30K CT	50, 200, 500	P-10	9.00
O-11	7.80	Cryst. out.	50K	50, 200, 500	P-11	9.00
O-12	7.80	Mixing	50, 200, 500	50, 200, 500	P-12	9.00
O-13	6.30	Inductor	300 Hys-0 ma;	6000 ohms		
O-14	7.50	50:1 input	200	500K		
O-15	7.50	10:1 P/G	15K	1 meg.	P-15	9.00
O-16	10.20	Shld. input	250 CT	50K	P-16	11.40
O-17	1.50	Hipermalloy shield, 25 db, for Ouncers				
O-18	7.80	Tr. intrstg.	10K split	2K split		
O-19	7.80	Tr. intrstg.	10K split	4K split		
O-20	6.30	Tr. to line	1.5K CT	500 split		
O-21	5.40	Tr. to V.C.	2K/4K CT	8/16		
O-22	5.40	Tr. to V.C.	500/400 CT	4/3.2		
O-23	5.10	Inductor	7 Hys-3 ma;	230 ohms		
O-24	5.10	Inductor	1.6 Hys-3 ma;	25 ohms		
O-25	8.10	Transist.	600/150 split	2K/500 split		
		Input				
O-26	8.10	Transist. Int.	10K CT 4 ma.	10K CT		
O-27	8.40	Transist. Int.	10K CT 4 ma.	500/125 split		
O-28	8.40	Transist. Int.	50K CT, 2 ma.	500/125 split		
O-29	8.70	Transist. Int.	100K CT 1 ma.	500/125 split		
		or chopper				
O-30	8.10	Transist. Int.	500/125 split	500/125 split		
O-31	8.10	Transist. Int.	500/125 split	150/37.5 split		
O-32	8.10	Transist. Int.	500/125 split	50/12.5 split		
O-33	8.10	Transist. Int.	100/25 split	40/10 split		
O-34	5.10	Split	Series: 60 Mhy-80 ma;	4 ohms		
		Inductor	Parallel: 15 Mhy-160 ma;	1 ohm		
O-36	5.10	Inductor	Series: 1 Hy-20 ma;	60 ohms		
		Inductor	Parallel: .25 Hy-40 ma;	15 ohms		
O-37	8.10	Tr. to line	4K/1K spl., 4 ma	650/150 split		
O-38	5.10	Spkr. match	0, 4, 8, 16 ODC			
O-BR	.21	Mounting U-bracket for ouncers				





# AMATEUR & PUBLIC ADDRESS TRANSFORMERS "S" SERIES

## DIMENSIONS, SPECIAL SERIES TRANSFORMERS



G-1 thru G-4

G-5 thru G-12

UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. These units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided, permitting above chassis or bread-board wiring in addition to standard chassis type.

### G-CASE SIZES

Case	Height, In.	Width, In.	Depth, In.	Wt., Lbs.
G-1	17/8	2 13/16	1 3/4	1
G-2	2 1/8	3 3/8	1 15/16	1 1/2
G-3	2 1/2	3 3/4	2 5/32	2
G-4	2 13/16	4 1/8	2 1/2	3
G-5	3 3/4	3 1/8	4 1/2	4 1/2
G-7	4 5/8	4 5/8	5 1/2	8
G-8	4 5/8	5 3/8	5 5/8	12
G-9	5 7/8	5 3/8	6 3/4	21
G-10	5 7/8	6 1/8	6 5/8	24
G-11	5 7/8	6 1/2	7 3/8	31
G-12	10 1/4	7 3/8	9 1/4	52

## INPUT AND DRIVER TRANSFORMERS

Type UTC	Application	Ratio Pri. to Sec.	Level	Case	Net Each
S-1	Plate to grid	1:3 1/2	+30 dbm	G-2	\$4.80
S-2	Plate to p-p grids	1:4 †	+30 dbm	G-2	6.00
S-3	Pl. to 1 or 2 grids	1:4 †	+25 dbm	G-1	4.50
S-5	Line to grid, humbkg.	1:16	+30 dbm	G-2	5.10
S-6	Line to grid, compact	1:16	+25 dbm	G-1	4.50
S-8	Driver pl. to p-p	2.66:1, 5:1 †	5 w.	G-3	6.60
S-9	Driver p-p to p-p	2.66:1, 3.6:1 †	20 w.	G-4	8.70
S-10	Driver p-p to p-p	5:1 †	5 w.	G-3	6.60

† Center tapped.

## MATCHING, OUTPUT AND MODULATION UNITS

UTC Type	Application	Pri. Imped., Ohms	†	Level, Watts	Case	Net Each
S-11	Pl. to line	15K	a	.25	G-2	\$5.10
S-12	Line to V.C.	.5K/2K/4K	b	15	G-2	5.40
S-13	Line to V.C.	.5K/2K/4K	b	30	G-4	7.80
S-14	Output	2.5K/4K/7K/10K	c	10	G-2	6.60
S-15	PP output	4K/5K/10K CT	c	12	G-2	7.20
S-16	PP output	3K/6K/9/10K CT	c	30	G-4	8.40
S-17	PP output	3.8K/4.5/5K CT	c	55	G-5	12.00
S-18	Univ. modul.	Any Class B	d	12	G-3	7.20
S-19	Univ. modul.	Any Class B	d	30	G-4	9.30
S-20	Univ. modul.	Any Class B	d	55	G-5	15.00
S-21	Univ. modul.	Any Class B	d	110	G-7	21.00
S-22	Univ. modul.	Any Class B	d	250	G-9	33.00

† Secondary Impedance: a-200/500 ohms. b-2, 4, 8, 15 ohms. c-2, 8, 15, 500 ohms. d-Any Class C.

## FILTER, SWINGING AND AUDIO INDUCTORS

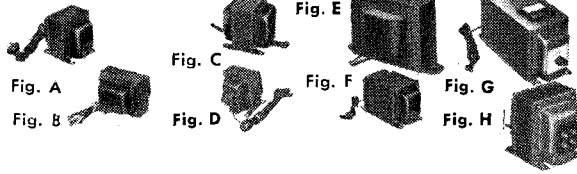
Type	Henries	Ma. DC	Ohms	Insul.	Case	Net Each
S-23 §	300	5	5000	1500 v.	G-2	\$4.50
S-24 †	500	3	6000	1500 v.	G-2	5.10
S-25	30	30	800	1500 v.	G-2	3.90
S-26	12	60	250	1500 v.	G-2	3.90
S-27	25	75	350	1500 v.	G-4	5.10
S-28	20	100	350	1500 v.	G-4	6.30
S-29	6	175	90	1500 v.	G-4	5.10
S-30 †	4/20	175	90	1500 v.	G-4	5.10
S-31	6	225	100	2700 v.	G-5	6.90
S-32 †	4/20	225	100	2700 v.	G-5	6.90
S-33	8	300	100	4000 v.	G-7	9.30
S-34 †	4/20	300	100	4000 v.	G-7	9.60
S-35	8	400	60	5000 v.	G-8	12.00
S-36 †	4/20	400	60	5000 v.	G-8	12.00
S-37	8	550	60	6000 v.	G-8	15.00
S-38 †	4/20	550	60	6000 v.	G-8	15.00
S-80	50/10 Mhy	1.75A	.5	500 v.	G-1	3.90
S-81	100/8 Mhy	2.5A	.6	1500 v.	G-3	6.00
(2Wdgs)	25/2 Mhy	5A	.15			

§ Audio. † P.P. Audio C. T. ‡ Swinging.

Information on components in this box listed on UTC page 12.

## REPLACEMENT TYPE COMPONENTS

The shells and brackets of these vacuum sealed components are finished in shiny black enamel. A minimum number covers any replacement requirement.



## FILAMENT TRANSFORMERS

Primary Tapped 105, 115 Volts, 50-60 Cy.

UTC Type	Secondary Volts	Secondary Current	Insulation	Case No.	Net Each
S-53	2.5 VCT	10 Amp	1500 V	G-3	\$6.30
S-54	5 VCT	4 Amp	2500 V	G-3	5.70
S-55	6.3 VCT	3 Amp	1500 V	G-3	5.40
S-57	2.5 VCT	10 Amp	10000 V	G-5	9.00
S-58	2.5 VCT	20 Amp	10000 V	G-5	9.90
S-59	5 to 5.25 VCT	13 Amp	5000 V	G-5	9.30
S-60	5 to 5.25 VCT	22 Amp	10000 V	G-7	13.20
S-61	7.5 VCT tapped	10 Amp	3000 V	G-5	10.20
S-62	10 VCT	10 Amp	3000 V	G-5	9.30
S-63	14 VCT tapped	10 Amp	5000 V	G-7	13.20
	12 VCT & 11 VCT				

Type	Filament 1	Filament 2	Filament 3	Case	Net
‡ S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	G-5	\$10.80
‡ S-67	5 VCT-6A	6.3 VCT-5A		G-5	10.20
‡ S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	G-5	10.50
‡ S-70	6.3 VCT-5A	6.3 VCT-5A		G-5	10.20
‡ S-71	2.5 VCT 6A	2.5 VCT-6A	2.5 VCT-12A	G-7	15.00
‡ S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	G-5	11.40

§ Insulation 10,000 v. † Insulation 5000 v. ‡ Insulation 3000 v.

## COMBINED PLATE AND FILAMENT TRANSFORMERS

Primary 115 V., 50-60 Cy.

UTC Type	Voltage	DC V.	Rect. Fil.	Filament No. 1	Filament No. 2	Case No.	Net Each
S-39	490-400-0-400-490	400/310	5V-3A	2.5 VCT-175 ma	6.3 VCT-4A	G-7	\$16.50
S-40	525-425-0-425-525	400/310	5V-3A	6.3 VCT-3A	6.3 VCT-3A	G-7	18.00
S-41	600-0-600-200 ma	475	5 V-3A	7.5 V tapped 6.3 V-3A	6.3 VCT-2A	G-7	18.00
S-42	600-525-0-525-600	480/400	5 V-6A	7.5 V tapped 6.3 V-3A	6.3 VCT-3A	G-7	19.50

## PLATE AND BIAS TRANSFORMERS

Primary 115 V. 50/60 Cycles

UTC Type	2.5 VCT-12A High Voltage	DC Voltages †	DC Ma	Case	Net Each
S-44	575-525-0-525-575	470/430	500	G-9	\$25.80
S-45	900-750-0-750-900	750/620	200	G-8	21.00
S-46	1000-750-0-750-1000	825/600	300	G-9	24.00
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300	G-10	33.00
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500	G-11	39.00
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300	G-11	36.00
S-50	3000-2500-0-2500-3000	2625/2175	300	G-12	60.00
S-51	Any bias voltage from 15 to 100 ± 6%	200	6%	G-5	12.00
S-52	Any bias voltage from 75 to 400 ± 6%	200	6%	G-7	15.60

† Based on two section filter for 200 ma. and 300 mo. units. Single section filter for 500 ma. units, both choke input.

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TRANSFORMERS FOR INDUSTRY WIDE APPLICATIONS

DOUBLE SHELL POWER TRANSFORMERS (FIG. B SEE PG. 11)  
Rectifier filaments 5 volts, 3 amps except R-101, 2 amps.

UTC Type	High V.	DC Ma.	Amplifier Filament	Overall Height	Wt., Lbs.	Net Each
R-101	275-0-275	50	6.3 v. CT-2.7A	3"	2 1/2	\$ 8.70
R-102	350-0-350	70	6.3 v. CT-3A	3 3/8"	3 1/2	10.20
R-103	350-0-350	90	6.3 v. CT-3.5A	3 1/2"	4 1/2	10.35
R-104	350-0-350	120	6.3 v. CT-5A	3 7/8"	5 1/2	11.10
R-105	385-0-385	160	6.3 v. CT-5A	4 1/4"	7	12.00

VERTICAL SHELL POWER TRANSFORMERS (FIG. C SEE PG. 11)  
Rectifier filaments 5 volts, 3 amps., except R-110, 2 amps.

UTC Type	High V.	DC Ma.	Amplifier Filament	Overall Height	Wt., Lbs.	Net Each
R-110	300-0-300	50	6.3 v. CT-2.7A	3 1/4"	2 1/2	\$ 8.70
R-111	350-0-350	70	6.3 v. CT-3A	3 1/4"	3 1/2	10.20
R-112	350-0-350	120	6.3 v. CT-5A	4"	5 1/2	11.10
R-113	400-0-400	200	6.3 v. CT-6A	4 5/8"	8	14.10

CHANNEL FRAME FILTER INDUCTORS (FIG. E SEE PG. 11)

Inductance Shown is at Rated D.C.M.A.—Test Volts RMS: 1500

Type No.	Induct. Hys.	Current	Resist. Ohms	Dimensions, in.				Wt. Lbs.	Net Each
				W	D	H	M		
R-55	6	40MA	300	2 3/8	1 3/8	1 3/8	2	1/2	\$1.65
R-14	8	40MA	250	2 7/8	1 1/2	1 1/2	2 3/8	3/4	1.95
R-15	12	30MA	450	2 7/8	1 1/2	1 1/2	2 3/8	3/4	1.95
R-16	15	30MA	630	2 7/8	1 1/2	1 1/2	2 3/8	3/4	1.95
R-17	20	40MA	850	3 1/8	1 5/8	2	2 13/16	1	2.25
R-18	8	80MA	250	3 1/8	1 5/8	2	2 13/16	1	2.52
R-19	14	100MA	450	3 1/8	1 7/8	2 1/2	3 1/8	1 1/2	3.00
R-20	5	200MA	90	4 1/8	2 1/4	2 3/8	3 3/8	2 1/2	3.60
R-21	15/3	200MA	90	4 1/8	2 1/4	2 3/8	3 3/8	2 1/2	3.60
R-220	100/8	Mhy. 2.5A	.6	3 3/4	2	2 3/8	3 1/8	1 1/2	4.20
	25/2	Mhy. 5A	.16						

PHOTOFLASH TRANSFORMERS  
STANDARD 982

Can be used for either standard (Amglo type) or trigger (Sylvania type) multiple flash tubes. Circuit details included with transformer.

PF-1 Primary for 115 volts, 50/60 cycles. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. Compound sealed in G-3 (Pg. 11) case 2 1/8 x 2 3/4 (3 3/4 including flanges) x 2 1/2 inches high. Weight 2 lbs. Net Each \$8.40  
PF-3 Trigger Transformer 15 KV peak. 7/8 O.D. x 3 long. Weight 2 oz. Net each: \$6.00



TRANSISTOR TYPE

PF-6

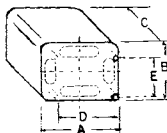
These are miniaturized light weight units for transistor type photo-flash supply.

PF-5 Primary for 115 volts, 50/60 cycles or for 4 1/2 V. battery switched by PF-6 inverter transformer. Output delivers 400 V. DC when used in voltage doubler circuit to charge photoflash capacitor (typically 40 wait-sec.). G-1 case (Pg. 11) Net each: \$8.40

PF-6 Inverter transformer transforms 4 1/2 V. DC from battery to input for PF-5 stepup transformer. Cuncer case (Pg. 11) Net each: \$5.10

PF-7 Trigger transformer. Shorting .25 mfd. capacitor (charged to approx. 225 V. DC) across terminals 1-2 produces 6 KV pulse at terminal 3 for triggering flash tube. 7/8" Dia. x 1 5/16"; Wt. 1/2 oz. Net each: \$3.60

MIL-T-27B CASE SIZES



MIL Case	Size, Inches: Dimension					Mfg. Studs
	A	B	C	D	E	
AF	3/4	3/4	1 1/8	Diag.	3/8	4-40 x 3/8
AG	1	1	1 3/8	Diag.	3/4	4-40 x 3/8
AH	1 1/8	1 1/8	1 3/4	Diag.	1 1/4	6-32 x 3/8
AJ	1 1/8	1 1/8	2 3/8	1 3/4	1 3/8	6-32 x 3/8
EA	1 1/8	1 1/8	2 3/4	1 3/4	1 1/4	6-32 x 3/8
EB	1 1/8	1 1/8	2 7/8	1 3/4	1 1/4	6-32 x 3/8
FA	2 1/8	2 1/8	3 1/8	1 1/2	1 3/8	6-32 x 3/8
FB	2 3/8	2 3/8	2 1/2	1 1/2	1 3/8	6-32 x 3/8
GA	2 3/8	2 3/8	3 1/8	1 3/4	1 3/4	6-32 x 3/8
GB	2 3/8	2 3/8	2 1/8	1 3/4	1 3/4	6-32 x 3/8
HA	3 1/8	2 3/8	4 1/4	2 1/8	1 5/8	8-32 x 3/8
HB	3 1/8	2 3/8	3 3/8	2 1/8	1 5/8	8-32 x 3/8
JA	3 3/8	3 3/8	4 7/8	2 3/8	2 1/8	8-32 x 3/8
JB	3 3/8	3 3/8	3 7/8	2 3/8	2 1/8	8-32 x 3/8
KA	3 1/2	3 3/8	5 1/4	3	2 1/4	10-32 x 1/2
KB	3 1/2	3 3/8	4 3/8	3	2 1/4	10-32 x 1/2
LA	4 3/8	3 1/2	5 3/4	3 3/8	2 1/4	10-32 x 1/2
LB	4 3/8	3 1/2	4 1/2	3 3/8	2 1/4	10-32 x 1/2
MA	4 1/2	4	6	3 1/2	3	1/4-20 x 5/8
MB	4 1/2	4	4 1/2	3 1/2	3	1/4-20 x 5/8
NA	5 1/8	4 3/8	6 1/8	4 1/8	3 3/8	1/4-20 x 5/8
NB	5 1/8	4 3/8	5 1/2	4 1/8	3 3/8	1/4-20 x 5/8
OA	5 1/2	4 1/2	6 3/4	3 3/4	3	1/4-20 x 5/8

STEP-DOWN AUTO-TRANSFORMERS (FIG. A SEE PG. 11)  
With 6-ft. cord and female receptacle, except R-64; 220/240 to 110/120 v., 50/60 cps.

UTC Type	Rating	Size, Inches			Wt., Lbs.	Net Each
		L	W	H		
R-41	85 watt capacity	3 3/8	2 5/8	3 1/8	4	\$6.75
R-42	125 watt capacity	3 1/2	3	3 1/2	5	7.65
R-43	175 watt capacity	3 3/4	3 1/4	3 7/8	5 1/2	8.40
R-44	250 watt capacity	4 3/8	3 1/4	3 7/8	6 1/2	11.10
R-45	500 watt capacity	4 5/8	3 7/8	4 5/8	12	12.00
R-46	1200 watt capacity	6 7/8	3 7/8	4 5/8	18	24.00
R-64	2500 watts, no cord	10 1/2	4 3/4	6 3/4	30	57.00

ISOLATION TRANSFORMERS (FIG. F SEE PG. 11)  
Ideal for isolating line noise. AC-DC sets, etc. Excellent electrostatic shielding 1500 volt breakdown test. Six foot cord and female receptacle, except R-77.

Primary 110-120 volts 50/60 cycles—Secondary 110-120 volts  
Except R-97 220 volt Primary—120 volt Sec.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
R-72	40	3 1/8	2 5/8	3 1/8	2x1 7/8	4	\$ 7.20
R-73	100	3 3/4	3 1/4	3 7/8	1 1/2x2 3/8	6	10.50
R-74	250	4 7/8	3 7/8	4 5/8	3x3 1/2	12	18.00
R-75	600	7 3/8	3 7/8	4 5/8	3x5 7/8	20	24.00
R-76	1200	8 1/2	4 1/2	6 1/8	3 5/8x6 5/8	30	57.00
R-77	2500	12	7	9	6x11	70	99.00
R-97	250	4 7/8	3 7/8	4 5/8	3x3 1/2	12	15.00

LINE VOLTAGE ADJUSTERS WITH METER (FIG. G SEE PG. 11)

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage. These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly. The nine tap switch provides for line voltage of 60 to 140 volts on 115 volt output models and 160 to 240 volts on 230 volt output model. All units are designed for 50/60 cycles service and come complete with 6 foot input cord and plug and outlet receptacle.

Type No.	Primary Voltages	Sec. Volts	Watts Ratings	L	W	H	Wgt. Lbs.	Net Each
R-78	↑	115	150	7	4	4 3/4	6	\$17.70
R-79	↑	115	300	7	4	4 3/4	9	18.90
R-80	↑	115	600	10 1/4	4	4 3/4	13	22.80
R-81	↑	115	1200	10 1/4	4	4 3/4	21	33.00
R-86	↓	230	1200	10 1/4	4	4 3/4	21	33.00

↑ 60, 70, 80, 90, 100, 110, 120, 130, 140  
↓ 160, 170, 180, 190, 200, 210, 220, 230, 240

EXPORT VOLTAGE ADAPTER (FIG. D SEE PG. 11)

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
R-47	85	4 5/8	3	3 1/2	2 1/4x2 1/4	4 1/2	\$10.20
R-48	150	4 3/4	3 1/4	4	2 1/2x2 1/2	5 1/2	11.70

TV VOLTAGE REGULATOR (FIG. D SEE PG. 11)

Complete with cord, plug, and special locking switch. Permits operation of 115 volt 50/60 cycle TV sets on line voltages of 85, 90, 95, 100, 105, 110, 120, 125 V.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
R-49	350	5	3 1/4	4	2 1/2x2 3/4	5	\$12.00

SIGNALLING AND CONTROL TRANSFORMERS (FIG. H SEE PG. 11)

Primary 110-120 volts, 50/60 cycles—Secondary 4/8/12/16/20/24 volts

High power transformers suitable for operating relays, sirens horns, gongs, etc. from 115 V. 50/60 cycle line. These units have four secondary terminals providing 4, 8, 12, 16, 20 and 24 volt output. The volt ampere rating is based on the 24 volt secondary tap with corresponding reduction at the lower voltages. Underwriters' approved primary leads are employed, and screw-type binding posts.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
SC-3	50	3	3 1/8	3 1/8	1 3/4x2 1/4	3	\$8.40
SC-4	100	3 1/4	3 1/8	4	2 1/8x2 1/2	5	9.90
SC-5	250	4	4 3/8	4 3/4	3 3/8x3	10	14.40

INDUSTRIAL DISCOUNTS

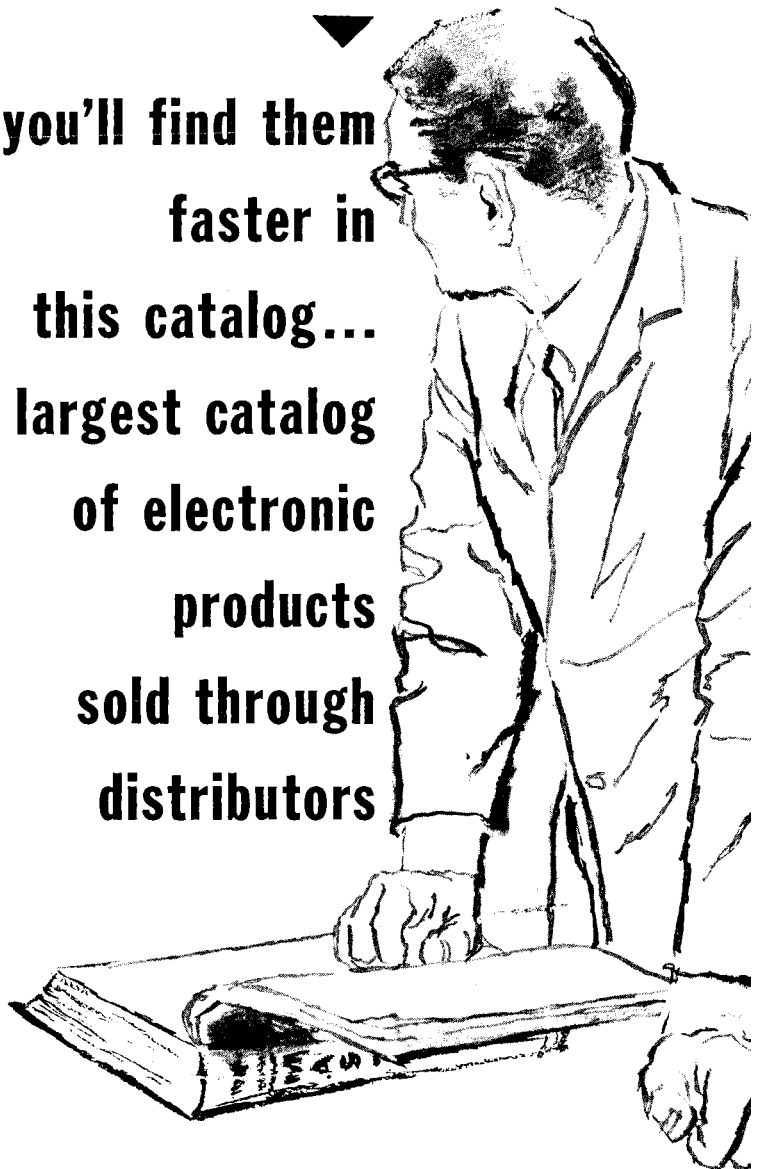
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# Amperex Industrial, Communication,

TUBE TYPE	TUBE TYPE	TUBE TYPE	TUBE TYPE	TUBE TYPE	TUBE TYPE
0A2	6AL5/EEA91	6U8A	60AVP	912NB4/900V	6693
0B2	6AL5W	6U9/ECF201	75N	967	6756
0E3	6AM5	6V4/EZ80	75NB3	2050	6759
0G3	6AM6	6V9/ECH200	76NB3	3200	6779
1A3/DA90	6AQ5/EL90	6W4GT	80N	5544	6786
1AB6	6AQ5/EL90MP	6X2	85A1/OE3	5545	6816
1AC6	6AQ5A	6X4/EZ90	85A2/OG3	5551A	6883
1AH5	6AQ8/ECC85	6X9/ECF200	85NB3	5552A	6884
1AJ4	6AT6/EBC90	6Y9/EFL200	90C1	5553B	6907
1AN5	6AU4GTA	7AN7	90NB3/900V	5555	6907 USAF
1B3GT	6AU6/EF94	7AU7	90NB3/700V	5557/FG17	6922
1CP31/DH3-91	6AU6A	7C24	90NB4/700V	5559	6922 USN
1G3GT/1BG3GT	6AV6/EBC91	7D78	90NB4/900V	5560/FG95	6922M
1L4/DF92	6AX4GT	7HG8/PCF86	90NS	5586	6923
1M3/DM70	6AX4GTB	8BQ5/XL84	100C	5604	6939
1N3/DM71	6BA6/EF93	8CW5/XL86	100CB	5632/C3J	6960
1R5/DK91	6BD7A	8GJ7/PCF801	100HB	5651	6961
1S2A/DY87	6BE6/EK90	8U9/PCF201	100LB	5654/6AK5W	6977
1S5/DAF91	6BE7	8X9/PCF200	100NB/700V	5658	6979
1T4/DF91	6BH6	9A8/PCF80	100NB/900V	5666	7025
1U4	6BJ6	9AB4	120C	5667	7034
1U5/DAF92	6BL8/ECF80	9AK8	120N/700V	5684/C3JA	7034W
1X2B	6BM8/ECL82	9AQ8/PC85	120N/900V	5685/C6JA	7035
2D21	6BQ5/EL84	9V9/PC8200	120NB/700V	5726/6AL5W	7035W
2ER5/XC95	6BQ5/EL84MP	9CV8/XCL85	120NB/900V	5727	7062
2FY5/XC97	6BR5/EM80	9U8/PCF82	150AVP	5759	7090
2GK5	6BT4	9U8A	150B2/6354	5762	7091
3AMP1/DG7-32	6BX6/EF80	10CW5/LL86	150CVP	5771	7092
3A4/DL93	6BY7	10DX8/LCL84	150N/700V	5822A	7119
3A5/DC90	6BZ6	11Y9/LFL200	150N/900V	5823	7136
3AU6	6CA4/E281	12AC5	150NB/700V	5842	7189
3BU8	6CA7/EL34	12AJ7	150NB/900V	5842 (JAN)	7189A
3B28	6CA7/EL34MP	12AT6/HBC90	150UVP	5847	7189MP
3BK2P/DN7-78	6CD7/EM34	12AT7/EC81	152AVP	5847 (JAN)	7203
3BK7/DP7-78	6CJ7	12AU6/HF94	152UVP	5866	7203W
3BK11/DB7-78	6CJ5	12AU7/EC82	153AVP	5866A	7204
3BK31/DH7-78	6CJ6	12AU7A	153C	5867	7204W
3BYP2/DN7-11	6CK5	12AV6/HBC91	155N	5867A	7237
3BYP7/DP7-11	6CK6	12AX4GTA	160G	5868	7292
3BYP11/DB7-11	6CM4/EC86	12AX4GTB	161G	5869	7308
3BYP31/DH7-11	6CM5	12AX7/EC83	171G	5870	7308 USN
3BZ6	6CM6	12AX7A	200C	5894 COMM	7316
3CA/DL96	6CQ6	12BL6	200CB	5894 MIL	7316
3CB6	6CS6/EH90	12D57	200HB	5894A	7320/E84L
3EH7/XF183	6CT7	12D57A	200LB	5895	7378
3EJ7/XF184	6CU7	12S7	200N	5911	7459
3ER5	6CV7	12SN7GTA	200NB/700V	5913	7527
3GK5	6CW5/EL86	12X4/HZ90	200NB/900V	5920	7534
3HA5/LC900	6CW7	13GB5/XL500	230NB	5923	7580
3Q4/DL95	6DA5/EM81	14K7	356	5924	7580W/4CX250R
3S4/DL92	6DA6/EF89	14L7	300PC	5924A	7609
3V4/DL94	6DC8/EBF89	14GW8	310PC	6007	7609 USN
3-400Z	6DE6	15A6	400PC	6008	7643
4-65A	6DJ8/EC88	6DJ8/EC88	404A	6075	7645
4-125A	6DL4/EC88	6DL4/EC88	417A	6076	7650
4-250A	6DL5	6DL5	500N	6077	7693
4-400A	6DL5MP	6DL5MP	501N	6078	7694
4B32	6DR8	6DR8	501R	6079	7699
4BL8/XCF80	6DS8	6DS8	502N	6083	7709
4C35	6DT6	6DT6	504R	6084	7710
4CX250B	6DX8/ECL84	6DX8/ECL84	505N	6085	7714
4CX250F	6DY5	6DY5	506N	6146	7722/E280F
4CX250R	6EH7/EF183	6EH7/EF183	507N	6155	7737
4EH7	6EJ7/EF184	6EJ7/EF184	575A	6156	7737M
4EJ7	6ER5/EC95	6ER5/EC95	632B	6159	7737 USN
4ES8	6ES6	6ES6	651	6201	7753
4ES8/XCC189	6ES8/ECC189	6ES8/ECC189	652	6211	7788
4GK5	6ET6	6ET6	653B	6218	7788 USN
4HA5/PC900	6EU7	6EU7	655	6227	7800
4X150A	6FG6/EM84	6FG6/EM84	673	6252	7804
4X150D	6FY5/EC97	6FY5/EC97	805	6252 USN	7805
4X250B	6GB5/EL500	6GB5/EL500	807	6267/EF86	7806
4X250F	6GJ7/ECF801	6GJ7/ECF801	810	6268	7807
4X500A	6GK5	6GK5	811A	6279	7854
4AQ4	6GK6	6GK6	812A	6333	7899
4AR4/GZ34	6GM8/ECC86	6GM8/ECC86	813	6339	7900
4BHP2	6GV8/ECL85	6GV8/ECL85	828	6354	7983
4BHP7	6GW8/ECL86	6GW8/ECL86	829B	6360 COMM	7986/5866A
4BHP31	6HA5/EC900	6HA5/EC900	832A	6360 MIL	808AX
4C22	6HG8/ECF86	6HG8/ECF86	833A	6360A	8020AX
4EJP31/D13-22GH	6HU6/EM87	6HU6/EM87	834	6370	8032
4AQ4	6J6/EC91	6J6/EC91	838	6375	8042
4R4GY	6JX8/ECH84	6JX8/ECH84	845	6445	8078
4R4GYB	6LN8/LCF80	6LN8/LCF80	849	6446	8108/EC157
4U8	6N3	6N3	849A	6447	8116
4U9/LCF201	6N8	6N8	857B	6463	8117
4V9/LCH200	6Q4/EC80	6Q4/EC80	866AX	6508	8118
4X9/LCF200	6R3/EY81	6R3/EY81	869B	6617	8163
4Z4	6R4/EC81	6R4/EC81	869BL	6618	8177
4B8	6S2	6S2	872AX	6686	8179
4J8/ECH81	6S2A	6S2A	880	6687	8228
4K5/EF95	6S4A	6S4A	891R	6688	8233
4K5W	6SN7GTB	6SN7GTB	892	6688A	8254
4K8	6U3	6U3	892R	6688 (JAN)	8268
4L3/EY88	6U8	6U8	912NB3/900V	6689	8269

AMPEREX ELECTRONIC CORPORATION  
Hicksville, Long Island, New York 11802

# Amperex®



**AUTOMATIC**

**AMPERITE**

**REGULATOR**

**BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE**



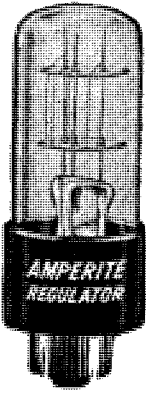
**AUTOMATIC REGULATION  
WHAT IT IS**

The **AMPERITE** Ballast-Regulating Tube is an automatic "rheostat" designed to keep the current in a circuit at a definite value, for example, 0.5 amp.

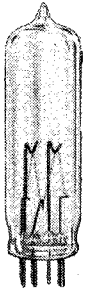
Should the supply voltage increase, the *Amperite* will automatically increase in resistance enough to take up the increase in supply voltage — keeping the voltage on the load constant. It consists of an iron wire *hermetically sealed* in a bulb containing hydrogen or helium — the two gases with the highest heat conductivity. Its regulating action is based on the high temperature co-efficient of resistance of the iron wire and the rapid cooling of hydrogen or helium gas.

Being a constant current device, the **AMPERITE** Ballast-Regulating Tube can be used only to regulate a constant load—fixed wattage. Thermostatic relays can sometimes be included in these regulators to reduce initial surge.

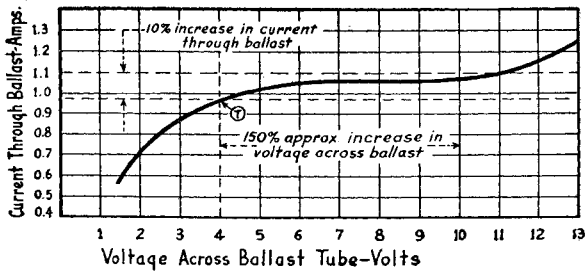
**We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.**



STANDARD



MINIATURE



⊕ = Threshold Current & Voltage

Characteristic curve of a typical *Amperite*. Approximate curve of any other *Amperite* can be obtained by multiplying or dividing the current or voltage scale by any number.

**Standard Types of Amperite Ballast Tubes.....Net \$1.80**  
**Amperite NE70V Neon Lamp.....Net \$1.80**

D6-1E	1H20	*3TF4	4A10	6-3	7-4	9-4A	12-4
*D6T4	1H22	*3T4A	4-12	6-4	**7TF4	9-7	12-7
**D6TK7	**2PK7	*3TF4A	4H3	6-4A	7A10	9-8	12A10
*D6TF10	2A10	*3TF4	4H4	6-4B	7-11	9A10	12-11
**D6TF30	2A12	*3TFV4	4HAC	*6T4	**7HTF2	10T1	13-4
D7-20	2A20	3V4	**4HTF4	*6T4F	**7HTF3	**10TF2	15-2
D7H4	*2HT2	3-7	*4HTF7	**6TF4	**7HTF4	10-3	15-4
*D7HT4	2H4	*3TF7	4H10	6-7	7H4	10-4A	16-4
*D7HT11	*2HT4	3A10	4H11	**6TF7	7H4B	10-4B	17-3
1A10	**2HTF4	3-11	5E1	6-8B	7H7	10-4C	20-3
*1TF10	2H10	3H11	*5TF2	6A10	7H11	10-4D	20-4
1-15	3-2	*3T11	*5TF4	6-11	**8TF2	10-4E	22-4
*1HT2	*3TF2	3TF11	*5TF4	6-12	8-3B	10A10	24-3
*1HT4	*3TK3	*3TF12	5A10	6-13	8-4	10A12	34-2
1H10	3-4	3-14	5-11	6A15	8A10	10-25	35-4
*1HTF10	3H-1-7	3-16	5-16	6-36	**9TF2	11-3	40-6E
*1HT11	3H4	3A20	5H3	6H4	9-3	11-4	41-7E
*1HTF11	*3HTF4	3H-25	5H4	**6HTF4	9-4	11A10	55-1
		3-38A	5H10	6H6		11-11	55-4
		3-50A	5H11				

\*T denotes T5½ bulb-7 pin miniature, e.g., 3T4.  
 \*TF denotes T6½ bulb-9 pin miniature, e.g., 3TF4.  
 base Wiring: Octal, 7 and 9 pin miniature—prongs 2-7.

**AMPERITE NEON LAMP**  
**TYPE NE70V Net \$1.80**

**GENERAL ADVANTAGES:**

- Light, compact • No moving parts • Rugged; will withstand vibration of 10G. minimum
- Hermetically sealed; not affected by altitude or humidity changes • Can be changed as easily as a radio tube • Operates equally well on A.C. or D.C. • Inexpensive

**CAPACITIES AVAILABLE**

Current values of 60 ma. to 5 amps; threshold voltage 0.4 to 40 V. Maximum dissipation per **AMPERITE** 50w per tube (ST19 bulb). Any number of **AMPERITES** with the same voltage range can be operated in parallel. **AMPERITES** should not be used in series.

**AGEING**

**AMPERITE** Ballast Tubes may change approximately up to 3% in current if aged for 4 to 8 hours, at maximum voltage. They will change very little thereafter.

**LIFE EXPECTANCY**

- Average life if operated as recommended ..... **2000 Hours**
- If operated continuously at maximum voltage ..... **1000 Hours**
- If operated continuously at 80% maximum voltage ..... **5000 Hours**
- If filament is operated below glow point ..... **5000 Hours up**

In operation, the *Amperite* filament starts to glow at one point; as the voltage is increased, the glow spreads over the entire filament. Like incandescent lamps, turning *Amperite* on and off reduces its life, especially if operating near its maximum voltage.

**TIME LAG CHARACTERISTICS**

Time lag encountered in an *Amperite* Ballast Tube depends upon the wattage consumed by the ballast and the size of the bulb. Where the wattage is small for the size of the bulb, the action can be made practically instantaneous — less than 1 second. In such cases the bulb will remain at practically ambient temperature. When the wattage is high enough to heat the bulb to a temperature uncomfortable to the hand (160°F) the lag might be as much as several minutes for final readings—but normally reaches within 90% of final readings within a few seconds.

**AMPERITE NUMBERING SYSTEM**

In general, the **AMPERITE** number approximately denotes the current—voltage threshold value. For example:

Amperite Number	3-4	3H4	10-7	12-11	12H11
Threshold Current	0.3	0.35	1.0	1.2	1.25
Threshold Voltage	4.0	4.0	7.0	11.0	11.0

**We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.**



**AUTOMATIC**

# AMPERITE

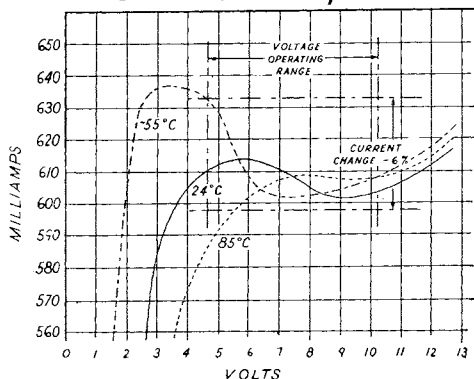
**REGULATOR**

**BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE**

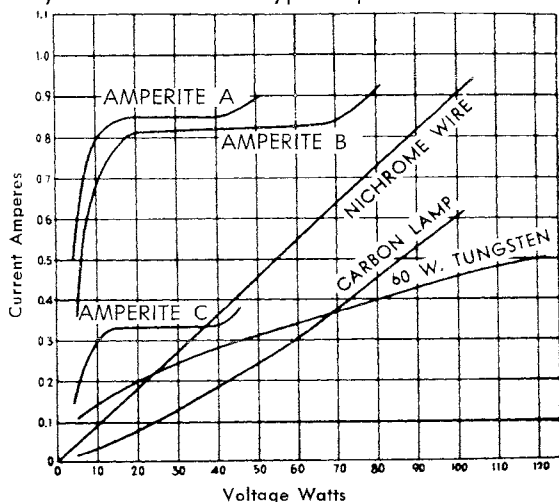


### AMBIENT EFFECTS

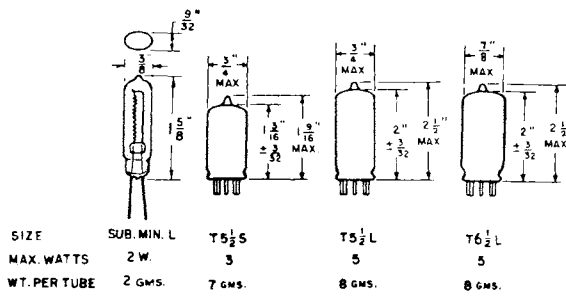
Ambient temperature variation of  $-50^{\circ}$  to  $+70^{\circ}$  C will change the current value of an *Amperite* approximately 2% on regulating portion of curve as shown directly below. Being hermetically sealed the *Amperite* is not affected by altitude or humidity changes. **We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.**



*Amperite* Ballast-Type 6-4 current voltage characteristic under ambient conditions of  $-55^{\circ}$ ,  $24^{\circ}$ , and  $85^{\circ}$  C. The percentage change with ambient is approximately the same with all type *Amperite* ballasts.

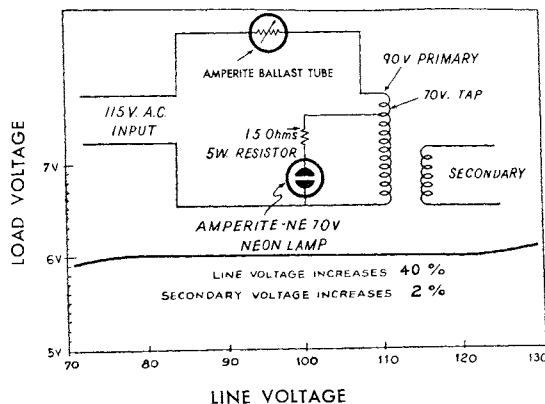


This diagram illustrates far superior regulating characteristics of the *Amperite* Ballast-Regulating Tube. **STANDARD SIZES** available for various wattage consumption . . . For good regulation, a bulb should not be required to dissipate more than 50% of maximum wattage.



### BATTERY CHARGING AND DISCHARGING

*Amperite* Ballast Tubes are very successfully used for keeping the current constant in charging and discharging batteries. Any number of *Amperites* of the same voltage range can be placed in parallel to obtain proper current. The current can be kept to  $\pm 1\%$ . Advise voltage variation and currents desired.



A light, compact, and inexpensive method of obtaining close regulation is to use an *Amperite* Ballast Tube with an *Amperite* Neon Lamp — type NE70V. Base octal-base wiring prongs 2-5. One NE70V is used for all loads up to 100W

### POWER SUPPLIES

We strongly recommend, for any particular application, to fill in and return one of our special problem sheets (ASP 343) and permit us to recommend the most suitable *AMPERITE*.

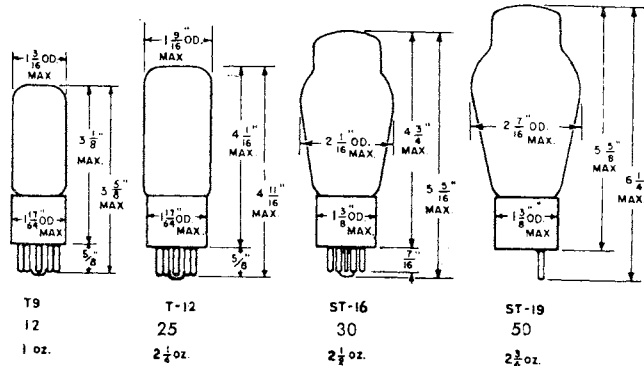
POWER SUPPLY	Dry Cells	6 Volts	12 Volts	26 Volts	115 Volts
Supply Variation	2.2-3.0V	5.5-7.5V	11.4-13.8V	22.0-30.0V	105-125V
Desired on Load	1.8-2.0V	3.9-4.1V	6.1- 6.4V	12.4-12.8V	90- 95V
Required on <i>AMPERITE</i>	0.4-1.0V	1.6-3.4V	5.3- 7.4V	9.6-19.2V	15- 30V
Current Variation	.29-.32a	.29-.32a	.29-.32a	.29-.32a	29-.32a

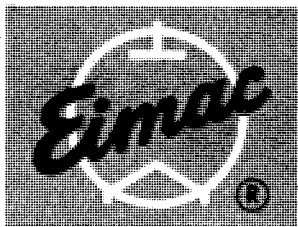
The above chart shows the maximum load voltage for the give supply to obtain  $\pm 2\%$  current regulation on load. Better regulation is obtainable by increasing the voltage across the *AMPERITE*. Up to a point, the higher the percentage of the supply voltage take up by the *AMPERITE*, the better the regulation.

Radio tube filament loads — have low cold resistance which cause a high initial surge. For such loads we recommend a bleeder of 2 to 50% prox. of load and the corresponding *AMPERITE*. e.

FILAMENT LOAD	USE <i>AMPERITE</i>	TOTAL CURRENT
0.3a	4HTF4	0.45a
0.6a	8-4	0.8a
0.7a	9H4	0.95a

On Radio tube filament loads the bleeder will also improve the regulatic





# EIMAC POWER GRID TUBES and Accessories

(24 hour factory delivery on most distributor orders)

At Eimac you'll find the most complete line of power grid tubes available today: triodes, tetrodes, pulse modulators, diodes, zero-bias tubes, ceramic tubes, glass tubes, air cooled, water cooled and vapor cooled tubes. And there are more to come! Continuing Eimac projects are ever increasing the scope of power grid tube capabilities.

Tube Type	User Price	Socket Type	Socket Price	Chimney Type	Chimney Price	Tube Type	User Price	Socket Type	Socket Price	Chimney Type	Chimney Price
2-01C	\$ 18.00	None	\$ ....	None	\$ ....	4-1000A/8166	\$ 131.50	SK-500	\$ 24.30	SK-506	\$12.00
2-25A	24.00	E F Johnson No. 122-224	....	None	....			SK-510	6.50	SK-506	12.00
2-50A	27.00	E F Johnson No. 122-224	....	None	....	4CN15A	58.50	SK-700	36.40	SK-606	0.75
2-150D	44.50	E F Johnson No. 123-211	....	None	....			SK-740	10.70	None	....
2-240A	50.00	E F Johnson No. 123-211	....	None	....	4CN15L	90.00	None	....	None	....
2-450A	138.00	E F Johnson No. 124-214	....	None	....	4CPX250K	68.50	None	....	None	....
2-2000A	250.00	E F Johnson No. 124-214	....	None	....	4CS100L	100.00	None	....	None	....
2C39A	20.75	Jettron No. 76-020	....	None	....	4CV8000A	470.00	SK-1490	88.50	None	....
2C39WA	29.00	Jettron No. 76-020	....	None	....	4CV20,000A	590.00	SK-310	....	None	....
2X1000A	144.00	E F Johnson No. 122-244	....	None	....	4CV35,000A	825.00	SK-310	....	None	....
2X3000F	168.00	None	....	None	....	4CV100,000C/8351	2,350.00	SK-1510	250.00	None	....
322	26.00	Jettron No. 76-020	....	None	....	4CW2000A/8244	220.00	SK-800B	54.00	None	....
3C24	16.00	E F Johnson No. 122-224	....	None	....			SK-810	56.00	None	....
3CPN10A5/7815	32.00	Jettron No. 76-020	....	None	....	4CW10,000A	610.00	SK-890	65.00	None	....
3CPX100A5/7815R	32.00	Jettron No. 76-020	....	None	....			SK-300	103.00	SK-306	6.50
3CV30,000A3	710.00	SK-1300	64.50	None	....	4CW50,000C/8350	2,100.00	SK-1500	220.00	SK-316	9.65
3CW20,000A1	560.00	SK-1300	64.50	None	....	4CX125C	61.50	SK-700	36.40	SK-606	0.75
3CW20,000A3	560.00	SK-1300	64.50	None	....	4CX125F	123.50	SK-740	10.70	None	....
3CW20,000A7	710.00	SK-1300	64.50	None	....	4CX125F	123.50	SK-710	36.40	None	....
3CW25,000A3	625.00	SK-1300	64.50	None	....			SK-740	10.70	None	....
3CX100A5/7289	31.00	Jettron No. 76-020	....	None	....	4CX250B/7203	35.75	*See SK-600 Series Socket listing			
3CX100F5/8250	34.00	Jettron No. 76-020	....	None	....	4CX250F/7204	39.00	*See SK-600 Series Socket listing			
3CX1000A7/8283	194.00	SK-860	38.00	SK-816	7.00	4CX250K/8245	64.00	None	....	None	....
		SK-870	40.00	SK-816	7.00	4CX250L	92.50	None	....	None	....
3CX10,000A1/8158	490.00	SK-1300	64.50	SK-1306	6.50	4CX250M/8246	92.50	None	....	None	....
3CX10,000A3/8159	490.00	SK-1300	64.50	SK-1306	6.50	4CX250R/7580W	45.00	*See SK-600 Series Socket listing			
3CX10,000A7/8160	650.00	SK-1300	64.50	SK-1306	6.50	4CX300A/8167	58.50	SK-710	36.40	SK-606	0.75
3CX15,000A3	600.00	SK-1300	64.50	SK-1306	6.50			SK-760	10.70	None	....
3W5000A1/8240	280.00	None	....	None	....	4CX300Y	105.00	SK-770	10.70	None	....
3W5000A3/8242	245.00	None	....	None	....			SK-711A	25.70	SK-606	0.75
3W5000F1/8241	260.00	None	....	None	....	4CX350A/8321	55.50	SK-760	10.70	None	....
3W5000F3/8243	250.00	None	....	None	....	4CX350F/8322	60.00	SK-770	10.70	None	....
X2500A3/8161	200.00	None	....	None	....	4CX600A	430.00	SK-760	10.70	None	....
CX2500A3	205.00	None	....	None	....	4CX1000A/8168	181.00	SK-770	10.70	None	....
X2500F3/8251	205.00	None	....	None	....			SK-800B	54.00	SK-806	8.50
CX2500F3	210.00	None	....	None	....	4CX1000K/8352	218.00	SK-810	56.00	SK-806	8.50
X3000A1/8238	210.00	None	....	None	....			SK-890	65.00	SK-806	8.50
X3000A7	290.00	None	....	None	....	4CX3000A/8169	420.00	SK-820	178.00	SK-806	8.50
X3000F1/8239	220.00	None	....	None	....			SK-830	178.00	SK-806	8.50
X3000F7/8162	260.00	None	....	None	....	4CX5000A/8170	495.00	SK-1400A	107.00	SK-1406	6.50
-400Z/8163	34.00	SK-410	6.50	SK-416	6.50			SK-1470A	107.00	SK-1406	6.50
-1000Z/8164	119.00	SK-510	6.50	SK-516	12.00	4CX5000R/8170W	705.00	SK-300	103.00	SK-306	6.50
-65A/8165	27.00	E F Johnson No. 122-101	....	None	....			SK-300A	103.00	SK-316	9.65
125A	36.00	SK-400	17.50	SK-406	6.50	4CX5000R/8170W	705.00	SK-300A	103.00	SK-306	6.50
		SK-410	6.50	SK-406	6.50			SK-300A	103.00	SK-316	9.65
250A	46.50	SK-400	17.50	SK-406	6.50	4CX10,000D/8171	550.00	SK-300A	103.00	SK-306	6.50
		SK-410	6.50	SK-406	6.50			SK-300A	103.00	SK-316	9.65
400A/8438	48.00	SK-400	17.50	SK-406	6.50	4CX15,000A/8281	695.00	SK-300A	103.00	SK-306	6.50
		SK-410	6.50	SK-406	6.50			SK-300A	103.00	SK-316	9.65
								SK-300A	103.00	SK-1306	6.50
						4CX35,000C/8349	1,765.00	SK-1500	220.00	None	....
						4E27A/5-125B	45.00	E F Johnson No. 122-237	....	None	....
						4PR60B/8252	107.00	E F Johnson No. 122-234	....	None	....
						4PR65A/8187	43.00	E F Johnson No. 122-101	....	None	....
						4PR125A/8247	57.00	SK-400	17.50	SK-406	6.50
								SK-410	6.50	SK-406	6.50
						4PR250C/8248	188.00	SK-400	17.50	SK-406	6.50
								SK-410	6.50	SK-406	6.50
						4PR400A/8188	\$ 64.00	SK-400	\$ 17.50	SK-406	\$ 6.50
								SK-410	6.50	SK-406	6.50
						4PR1000A/8189	156.00	SK-500	24.30	SK-506	12.00
								SK-510	6.50	SK-506	12.00
						4W300B/8249	57.00	*See SK-600 Series Socket listing			
						4W20,000A/8173	1,950.00	None	....	None	....
						4X150A/7034	23.25	*See SK-600 Series Socket listing			
						4X150D/7035	27.90	*See SK-600 Series Socket listing			
						4X150G/8172	58.00	None	....	None	....
						4X150R/8296	45.50	*See SK-600 Series Socket listing			

SECTION 5700

Tube Type	User Price	Socket Type	Socket Price	Chimney Type	Chimney Price	Tube Type	User Price	Socket Type	Socket Price	Chimney Type	Chimney Price
4X150S/8297	48.50	*See SK-600 Series Socket listing				8170/4CX5000A	495.00	SK-300	103.00	SK-306	6.5
4X250B	35.75	*See SK-600 Series Socket listing								SK-316	9.6
4X250F	36.50	*See SK-600 Series Socket listing				8170W/4CX5000R	705.00	SK-300	103.00	SK-306	6.5
4X500A	127.50	SK-900	68.50	SK-906	15.00					SK-316	9.6
6C21	93.00	E F Johnson No. 123-211	....	None	....	8171/4CX10,000D	\$ 550.00	SK-300	\$103.00	SK-306	\$ 6.5
25T	28.50	E F Johnson No. 122-224	....	None	....	8172/4X150G	58.00	None	....	None	....
35T	33.00	E F Johnson No. 122-224	....	None	....	8173/4W20,000A	1,950.00	None	....	None	....
35TG	36.00	E F Johnson No. 122-224	....	None	....	8187/4PR65A	43.00	E F Johnson No. 122-101	....	None	....
75TH	43.00	E F Johnson No. 122-224	....	None	....	8188/4PR400A	64.00	SK-400	17.50	SK-406	6.5
75TL	43.00	E F Johnson No. 122-224	....	None	....	8189/4PR1000A	156.00	SK-410	6.50	SK-406	6.5
100IG	107.00	None	....	None	....			SK-500	24.30	SK-506	12.0
100TH	23.50	E F Johnson No. 122-224	....	None	....			SK-510	6.50	SK-506	12.0
100TL	23.50	E F Johnson No. 122-224	....	None	....	8238/3X3000A1	210.00	None	....	None	....
152TH	93.00	E F Johnson No. 124-213	....	None	....	8239/3X3000F1	220.00	None	....	None	....
152TL	125.00	E F Johnson No. 124-213	....	None	....	8240/3W5000A1	280.00	None	....	None	....
250R	36.00	E F Johnson No. 123-211	....	None	....	8241/3W5000F1	260.00	None	....	None	....
250TH	38.50	E F Johnson No. 123-211	....	None	....	8242/3W5000A3	245.00	None	....	None	....
250TL	38.50	E F Johnson No. 123-211	....	None	....	8243/3W5000F3	250.00	None	....	None	....
253	37.00	E F Johnson No. 123-211	....	None	....	8244/4CW2000A	220.00	SK-800B	54.00	None	....
304TH	75.00	E F Johnson No. 124-213	....	None	....			SK-810	56.00	None	....
304TL	75.00	E F Johnson No. 124-213	....	None	....	8245/4CX250K	64.00	SK-890	65.00	None	....
450TH	85.00	E F Johnson No. 123-211	....	None	....	8246/4CX250M	92.50	None	....	None	....
450TL	85.00	E F Johnson No. 123-211	....	None	....	8247/4PR125A	57.00	SK-400	17.50	SK-406	6.5
592/3-200A3	46.00	None	....	None	....	8248/4PR250C	188.00	SK-410	6.50	SK-406	6.5
750TL	169.00	E F Johnson No. 124-214	....	None	....			SK-410	6.50	SK-406	6.5
1000T	169.00	E F Johnson No. 123-211	....	None	....	8249/4PR250C	188.00	SK-400	17.50	SK-406	6.5
1500T	320.00	E F Johnson No. 124-214	....	None	....			SK-410	6.50	SK-406	6.5
2000T	425.00	E F Johnson No. 124-214	....	None	....	8251/3X2500F3	205.00	None	....	None	....
5867A	30.60	SK-410	6.50	SK-416	6.50	8252/4PR60B	107.00	E F Johnson No. 122-234	....	None	....
7034/4X150A	23.25	*See SK-600 Series Socket listing				8281/4CX15,000A	695.00	SK-300A	103.00	SK-306	6.5
7035/4X150D	27.90	*See SK-600 Series Socket listing								SK-316	9.6
7203/4CX250B	35.75	*See SK-600 Series Socket listing				8283/3CX1000A7	194.00	SK-860	38.00	SK-816	7.0
7204/4CX250F	39.00	*See SK-600 Series Socket listing						SK-870	40.00	SK-816	7.0
7211	110.00	Jettron No. 76-020	....	None	....	8296/4X150R	45.50	*See SK-600 Series Socket listing			
7289/3CX100A5	31.00	Jettron No. 76-020	....	None	....	8297/4X150S	48.50	*See SK-600 Series Socket listing			
7580W/4CX250R	45.00	*See SK-600 Series Socket listing				8321/4CX350A	55.50	*See SK-600 Series Socket listing			
7698	110.00	Jettron No. 76-020	....	None	....	8322/4CX350F	60.00	*See SK-600 Series Socket listing			
7815/3CPN10A5	32.00	Jettron No. 76-020	....	None	....	8349/4CX35,000C	1,765.00	SK-1500	220.00	None	....
7815R/3CPX100A5	32.00	Jettron No. 76-020	....	None	....	8350/4CW50,000C	2,100.00	SK-1500	220.00	None	....
7843	60.00	None	....	None	....	8351/4CV100,000C	2,350.00	SK-1510	250.00	None	....
8020 (100R)	16.00	E F Johnson No. 122-224	....	None	....	8352/4CX1000K	218.00	SK-820	178.00	SK-806	8.5
8158/3CX10,000A1	490.00	SK-1300	64.50	SK-1306	6.50	8438/4-400A	48.00	SK-830	178.00	SK-806	8.5
8159/3CX10,000A3	490.00	SK-1300	64.50	SK-1306	6.50			SK-400	17.50	SK-406	6.5
8160/3CX10,000A7	650.00	SK-1300	64.50	SK-1306	6.50	KY21A	26.75	SK-410	6.50	SK-406	6.5
8161/3X2500A3	200.00	None	....	None	....	RX21A	25.75	E F Johnson No. 122-225	....	None	....
8162/3X3000F7	260.00	None	....	None	....			E F Johnson No. 122-225	....	None	....
8163/3-400Z	34.00	SK-410	6.50	SK-416	6.50	<b>*SK-600 Series Socket Listing</b>					
8164/3-1000Z	119.00	SK-510	6.50	SK-516	12.00	For the following tubes, use the socket and chimney schedule shown below:					
8165/4-65A	27.00	E F Johnson No. 122-101	....	None	....	<b>Tubes</b>		<b>Socket Type</b>	<b>Socket Price</b>	<b>Chimney Type</b>	<b>Chimney Price</b>
8166/4-1000A	131.50	SK-500	24.30	SK-506	12.00	4X150A/7034					
8167/4CX300A	58.50	SK-510	6.50	SK-506	12.00	4X150D/7035					
8168/4CX1000A	181.00	SK-710	36.40	SK-606	0.75	4X150R/8296					
		SK-760	10.70	None	....	4X150S/8297					
		SK-770	10.70	None	....	4X250B	SK-600	\$ 11.50	SK-606	\$ 0.7	
8169/4CX3000A	420.00	SK-800B	54.00	SK-806	8.50	4X250F	SK-600A	12.00	SK-606	0.7	
		SK-810	56.00	SK-806	8.50	4CX250B/7203	SK-610	11.50	SK-606	0.7	
		SK-890	65.00	SK-806	8.50	8322/4CX350F	SK-620	12.50	SK-626	0.7	
		SK-1400A	107.00	SK-1406	6.50	4CX250R/7580W				SK-636B	11.0
		SK-1470A	107.00	SK-1406	6.50	4CX350A/8321	SK-620A	15.00	SK-626	0.7	
						4CX350F/8322				SK-636B	11.0
						4W300B/8249	SK-630	12.50	SK-626	0.7	
						7203/4CX250B				SK-636B	11.0
						7204/4CX250F	SK-630A	15.10	SK-626	0.7	
						7580W/4CX250R				SK-636B	11.0
						8321/4CX350A	SK-640	7.50	SK-606	0.7	
						8322/4CX350F	SK-650	8.50	None	....	
						8249/4W300B	SK-655	7.00	SK-626	0.7	
						7034/4X150A					
						7035/4X150D					
						8296/4X150R					
						8297/4X150S					

Prices subject to change without notice. Write for complete specifications on any tube to: Power Grid Tube Marketing, EITEL-McCULLOUGH, INC., San Carlos, California.



# Electrons Industrial Control Tubes

Ready Reference Data for Reliable, Temperature Free Thyatron and Rectifier Tubes.

TYPE	OTHER DESIG NATIONS	DESCRIPTION	MAX. CONTINUOUS AVERAGE DC ANODE CURRENT (AMPS)	OSCILLOGRAPH PEAK ANODE CURRENT CONTINUOUSLY RECURRING (AMPS)	MAX. INSTANTANEOUS PEAK FORWARD VOLTAGE	MAX. INSTANTANEOUS PEAK INVERSE VOLTAGE
<b>RECTIFIERS Xenon-Filled</b>						
EL 1C	3B22	Full Wave, A4-10 Base, Single End.	1.0	4.0		725
EL 3B	6013	Half Wave, A4-10 Base, Anode Cap.	2.5	20		920
EL 3C	4B24	Full Wave, A4-81 Base, Single End.	2.5	10		725
EL 3C/L	6982	Full Wave, Lug Type Base, Single End.	2.5	10		725
EL 6B	5892	Half Wave, A4-81 Base, Anode Cap.	6.4	77		920
EL 6B/L	6983	Half Wave, Lug Type Base, Anode Cap.	6.4	77		920
EL 6C		Full Wave, A4-81 Base, Single End	6.4	25.6		725
EL 6F	6015	Half Wave, Panel Mounted, Flexible Leads	6.4	77		920
EL 16F		Half Wave, Panel Mounted, Flexible Leads	16	96		620
<b>THYRATRONS Xenon-Filled</b>						
EL C1B	3C31	A4-10 Base, Anode Cap.	1.0	8.0	525	700
EL C1B/A	5664	A4-10 Base, Anode Cap.	1.0	8.0	750	1250
EL C1K	6014	A4-10 Base, Single End	1.0	8.0	1000	1250
EL C1K/B	7319	A4-10 Base, Single End.	1.0	8.0	2000	2000
EL C3J	5632	A4-10 Base, Anode Cap.	2.5	30	900	1250
EL C3J/A	5684	A4-10 Base, Anode Cap.	2.5	30	1000	1250
EL C3J/L	7216	Lug Type Base, Anode Cap.	2.5	30	900	1250
EL C3J/AL	7556	Lug Type Base, Anode Cap.	2.5	30	1000	1250
EL C4H-1		A4-81 Base, Anode Cap.	4.0	50	1700	1700
EL C4H-2		Panel Mounted, Anode Cap.	4.0	50	1700	1700
EL C4H-3		Lug Type Base, Anode Cap.	4.0	50	1700	1700
EL C4H-4		Panel Mounted, Flexible Leads	4.0	50	1700	1700
EL C4H-5		Lug Type Base, Flexible Lead.	4.0	50	1700	1700
EL C6C	6987	#4310 Base, Anode Cap.	6.4	77	2000	4000
EL C6H-1		A4-81 Base, Anode Cap.	6.4	80	1700	1700
EL C6H-2		Panel Mounted, Anode Cap.	6.4	80	1700	1700
EL C6H-3		Lug Type Base, Anode Cap.	6.4	80	1700	1700
EL C6H-4		Panel Mounted, Flexible Leads.	6.4	80	1700	1700
EL C6H-5		Lug Type Base, Flexible Lead.	6.4	80	1700	1700
EL C6J	5C21	A4-81 Base, Anode Cap.	6.4	77	750	1250
EL C6J/A	5685	A4-81 Base, Anode Cap.	6.4	77	1000	1250
EL C6J/F	6860	Panel Mounted, Anode Cap.	6.4	77	1000	1250
EL C6J/L	6988	Lug Type Base, Anode Cap.	6.4	77	750	1250
EL C6J/K	6864	A4-81 Base, Anode Cap.	6.4	77	1000	1250
EL C6J/KF	6871	Panel Mounted, Flexible Leads.	6.4	77	1000	1250
EL C6J/KL	6989	Lug Type Base, Anode Cap.	6.4	77	1000	1250
EL C16J	5665	Panel Mounted, Flexible Leads.	16.0	160	1000	1250
EL C16H		Panel Mounted, Flexible Leads.	16.0	160	1700	1700

## ELECTRONS COMPANY

A Unit of General Signal Corporation

Newark, New Jersey

# **PRICES**

Prices in this *MASTER* should not be considered as final.  
*Inquire about latest prices and delivery.*

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# **DISCOUNTS**

Trade discounts apply in most cases  
where *list prices* are shown.

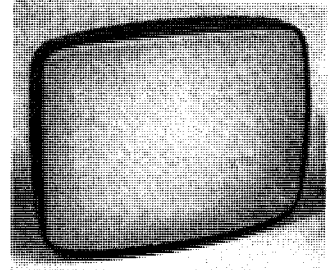
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# **ORDERING**

Since previous editions of The *MASTER* are frequently referred to, it is important, when ordering, to mention specifically the edition and page number, also, the catalog number of each item. This will avoid possible confusion and delay.



# TV PICTURE TUBES



General Electric TV picture tubes feature many multipurpose designs that replace several of the most commonly used types. Each SG type replaces a number of other types, as shown in the tables.

All material and parts used in the manufacture of General Electric picture tubes are new except for the envelope (and screen and aperture mask assembly in the case of color tubes) which, prior to re-use, have been inspected and tested to meet our high quality standards.

Tube Type	List Price‡	Tube Type	List Price‡
★ 5TP4.....	\$60.00	17HP4.....	Use SG-17HP4B
★ 8AP4A.....	19.00	17HP4A.....	Use SG-17HP4B
★ 9QP4A.....	36.00	★ 17HP4B.....	Use SG-17HP4B
★ 10BP4A.....	Use SG-10FP4A	★ SG-17HP4B.....	\$37.30
★ 10FP4A.....	Use SG-10FP4A	★ 17JP4.....	Use SG-17BP4B
★ SG-10FP4A.....	39.00	★ 17LP4.....	Use SG-17LP4A
★ 11AP4.....	49.20	★ 17LP4A.....	Use SG-17LP4A
★ 12KP4A.....	Use SG-12KP4A	★ SG-17LP4A.....	34.20
★ SG-12KP4A.....	39.00	★ 17QP4.....	Use SG-17QP4A
★ 12LP4A.....	Use SG-12KP4A	★ 17QP4A.....	Use SG-17QP4A
★ 12TP4.....	Use SG-12KP4A	★ SG-17QP4A.....	37.30
★ 14AJ4.....	Use SG-14AJ4	★ 17RP4.....	Use SG-17HP4B
★ SG-14AJ4.....	40.00	★ 17RP4C.....	Use SG-17HP4B
★ 14AS4.....	Use SG-14AJ4	★ 17TP4.....	46.50
★ 14AT4.....	40.00	★ 17UP4.....	Use SG-17QP4A
★ 14AUP4.....	40.00	★ 17VP4.....	Use SG-17LP4A
★ 14AVP4.....	Use SG-14AJ4	★ 17VP4B.....	Use SG-17LP4A
★ 14BP4A.....	Use SG-14QP4A	★ 17YP4.....	Use SG-17QP4A
★ 14BP4.....	Use SG-14CP4A	★ 19ABP4.....	54.00
★ 14BP4A.....	Use SG-14CP4A	★ 19ACP4.....	Use 19CFP4
★ 14CP4.....	Use SG-14CP4A	★ 19AFP4.....	59.05
★ 14CP4A.....	Use SG-14CP4A	★ 19AHP4.....	50.00
★ SG-14CP4A.....	40.00	★ 19AJ4.....	50.00
★ 14DP4.....	Use SG-14CP4A	★ 19APA.....	46.75
★ 14EP4.....	Use SG-14CP4A	★ 19AP4B.....	54.00
★ 14HP4.....	Use SG-14QP4A	★ 19ARP4.....	Use 19AFP4
★ 14NP4.....	Use SG-14WP4	★ 19AUP4.....	Use 19AFP4
★ 14NP4A.....	Use SG-14WP4	★ 19AVP4.....	50.00
★ 14AP4.....	Use SG-14QP4A	★ 19AXP4/AYP4.....	50.00
★ 14QP4A.....	Use SG-14QP4A	★ 19BDP4.....	50.00
★ SG-14QP4A.....	40.00	★ 19BHP4.....	50.00
★ 14RP4.....	Use SG-14WP4	★ 19BLP4.....	50.00
★ 14RP4A.....	Use SG-14WP4	★ 19BMP4.....	Use 19AFP4
★ 14SP4.....	Use SG-14WP4	★ 19BNP4.....	Use 19BP4A
★ 14WP4.....	Use SG-14WP4	★ 19BQP4.....	59.50
★ SG-14WP4.....	40.00	★ 19BTP4/YP4.....	50.00
★ 14XP4.....	40.00	★ 19BVP4.....	Use 19AVP4
★ 14ZP4.....	Use SG-14WP4	★ 19CFP4.....	50.00
★ 16AP4A.....	39.75	★ 19GHP4.....	Use 19CFP4
★ 16AS4.....	60.55	★ 19GK4.....	Use 19CFP4
★ 16AZP4.....	66.00	★ 19CUP4.....	55.40
★ 16AT4.....	57.80	★ 19DEP4.....	55.40
★ 16BUP4.....	72.00	★ 19DFP4.....	55.00
★ 16BVP4.....	58.00	★ 19DUP4.....	63.00
★ 16DP4A.....	41.35	★ 19DVP4.....	55.40
★ 16GP4.....	39.90	★ 19DZP4.....	55.40
★ 16GP4B.....	39.90	★ 19ECP4.....	68.00
★ 16KP4.....	Use SG-16KP4A	★ 19XP4.....	Use 19AVP4
★ 16KP4A.....	Use SG-16KP4A	★ 19YP4.....	Use 19BTP4/YP4
★ SG-16KP4A.....	39.00	★ 19ZP4.....	Use 19BHP4
★ 16LP4A/ZP4.....	43.00	★ 20CP4.....	Use SG-20CP4D
★ 16QP4.....	Use SG-16KP4A	★ 20CP4A.....	Use SG-20CP4D
★ 16RP4.....	Use SG-16KP4A	★ 20CP4B.....	Use SG-20CP4D
★ 16RP4A.....	Use SG-16KP4A	★ 20CP4C.....	Use SG-20CP4D
★ 16TP4.....	Use SG-16KP4A	★ 20CP4D.....	Use SG-20CP4D
★ 16UP4.....	Use SG-16KP4A	★ SG-20CP4D.....	49.00
★ 16WP4A.....	43.00	★ 20DP4.....	Use SG-20CP4D
★ 16ZP4.....	Use SG-16KP4A	★ 20DP4A.....	Use SG-20CP4D
★ 16ZP4A.....	Use 16LP4A/ZP4	★ 20DP4B.....	Use SG-20CP4D
★ 17AP4.....	Use SG-17BP4B	★ 20DP4C.....	Use SG-20CP4D
★ 17ATP4.....	Use SG-17BJP4	★ 20HP4.....	Use SG-20HP4D
★ 17ATP4A.....	Use SG-17BJP4	★ 20HP4A.....	Use SG-20HP4D
★ 17AVP4.....	Use SG-17BJP4	★ 20HP4B.....	Use SG-20HP4D
★ 17AVP4A.....	Use SG-17BJP4	★ 20HP4C.....	Use SG-20HP4D
★ 17BJP4.....	Use SG-17BJP4	★ 20HP4D.....	Use SG-20HP4D
★ SG-17BJP4.....	39.00	★ SG-20HP4D.....	49.00
★ 17BP4.....	Use SG-17BP4B	★ 20LP4.....	Use SG-20HP4D
★ 17BP4A.....	Use SG-17BP4B	★ 20MP4.....	Use SG-20HP4D
★ 17BP4B.....	Use SG-17BP4B	★ 21ACP4.....	Use SG-21ACP4A
★ SG-17BP4B.....	37.50	★ 21ACP4A.....	Use SG-21ACP4A
★ 17BP4C.....	Use SG-17BP4B	★ SG-21ACP4A.....	45.90
★ 17BRP4.....	Use 17DSP4	★ 21AFP4.....	Use SG-21YP4A
★ 17BUP4.....	Use SG-17BJP4	★ 21ALP4.....	Use SG-21FLP4
★ 17BVP4.....	Use SG-17BWP4	★ 21ALP4A.....	Use SG-21FLP4
★ 17BWP4.....	Use SG-17BWP4	★ 21ALP4B.....	Use SG-21FLP4
★ SG-17BWP4.....	44.90	★ 21AMP4.....	Use SG-21ACP4A
★ 17BZP4.....	Use 17DSP4	★ 21AMP4A.....	Use SG-21ACP4A
★ 17CAP4.....	Use 17DSP4	★ 21AMP23A.....	Use SG-21ACP4A
★ 17CP4.....	Use SG-17BJP4	★ 21ANP4.....	Use SG-21FLP4
★ 17CDP4.....	52.00	★ 21ANP4A.....	Use SG-21FLP4
★ 17CFP4.....	39.00	★ 21AP4.....	58.00
★ 17CKP4.....	Use 17DSP4	★ 21AQ4.....	Use SG-21ACP4A
★ SG-17CKP4.....	44.90	★ 21AQP4A.....	Use SG-21ACP4A
★ 17CLP4.....	Use SG-17BJP4	★ 21ASP4.....	Use SG-21XP4A
★ 17CP4.....	40.00	★ 21ATP4.....	Use SG-21FLP4
★ 17CRP4.....	39.00	★ 21ATP4A.....	Use SG-21FLP4
★ 17CSP4.....	Use SG-17BWP4	★ 21ATP4B.....	Use SG-21FLP4
★ 17CTP4.....	44.90	★ 21AUP4.....	Use SG-21AUP4B
★ 17CWP4.....	Use 17DSP4	★ 21AUP4A.....	Use SG-21AUP4B
★ 17DAP4.....	52.00	★ 21AUP4B.....	Use SG-21AUP4B
★ 17DKP4/DTP4.....	44.90	★ SG-21AUP4B.....	49.50
★ 17DLP4.....	44.90	★ 21AVP4.....	Use SG-21AUP4B
★ 17DQP4.....	44.90	★ 21AVP4A.....	Use SG-21AUP4B
★ 17DRP4.....	52.00	★ 21AVP4B.....	Use SG-21AUP4B
★ 17DSP4.....	44.90	★ 21AWP4.....	Use SG-AWP4
★ 17DTP4.....	Use 17DKP4/DTP4	★ SG-21AWP4.....	45.90
★ 17ZP4/DZP4.....	44.90	★ 21AXP22A(Color).....	127.00
★ 17FP4/FP4A.....	37.30	★ 21AYP4.....	Use SG-21XP4A
★ 17GP4.....	44.00	★ 21BAP4.....	Use SG-21FLP4
		★ 21BCP4.....	Use SG-21YP4A

Tube Type	List Price‡	Tube Type	List Price‡
★ 21BDP4.....	Use SG-21AUP4B	★ 23BLP4.....	Use 23BKP4
★ 21BNP4.....	Use SG-21FLP4	★ 23BMP4.....	Use 23BTP4
★ 21BSP4.....	Use SG-21ACP4	★ 23BNP4.....	\$68.75
★ 21BTP4.....	Use SG-21FLP4	★ 23BQP4.....	68.75
★ 21CBP4.....	Use SG-21FLP4	★ 23BTP4.....	68.75
★ 21CBP4A.....	Use SG-21FLP4	★ 23BVP4.....	68.75
★ 21CEP4/CEP4A/DFP4.....	50.00	★ 23CBP4.....	Use 23BQP4
★ 21CMP4.....	Use SG-21FLP4	★ 23CP4.....	68.75
★ 21CQP4.....	50.00	★ 23CP4A.....	Use 23CP4
★ 21CVP4.....	Use SG-21FLP4	★ 23CP4A.....	Use 23AHP4
★ 21CWP4.....	Use SG-21FLP4	★ 23DBP4.....	61.00
★ 21CYP22A(Color).....	127.00	★ 23DKP4.....	68.75
★ 21CZP4.....	Use SG-21DEP4A	★ 23DLP4.....	68.75
★ 21DAP4.....	Use SG-21DEP4A	★ 23DQP4.....	80.25
★ 21DEP4/DEP4A.....	50.00	★ 23DSP4A.....	78.00
★ SG-21DEP4A.....	50.00	★ 23DWP4.....	78.00
★ 21DFP4.....	Use 21CEP4/CEP4A/DFP4	★ 23DYP4.....	70.20
★ 21DHP4.....	50.00	★ 23EP4.....	68.75
★ 21DLP4/DQP4.....	45.90	★ 23ESP4.....	92.50
★ 21DNP4.....	Use SG-21FLP4	★ 23FP4.....	Use 23FP4A
★ 21DQP4.....	Use 21DLP4/DQP4	★ 23FP4A.....	61.00
★ 21DSP4.....	Use 21CXP4/DSP4	★ 23GP4.....	Use 23CP4
★ 21EAP4.....	Use 21FDP4	★ 23HP4.....	Use 23CP4
★ 21EMP4.....	Use 21EQP4	★ 23JP4.....	68.75
★ 21EP4.....	Use SG-21EP4B	★ 23KP4/KP4A.....	61.00
★ 21EP4A.....	Use SG-21EP4B	★ 23MP4.....	Use 23FP4A
★ 21EP4B.....	Use SG-21EP4B	★ 23MP4A.....	Use 23FP4A
★ SG-21EP4B.....	43.15	★ 23NP4.....	61.00
★ 21EQP4.....	50.00	★ 23TP4.....	68.75
★ 21ESP4.....	50.00	★ 23UP4.....	68.75
★ 21EVP4.....	63.00	★ 23WP4.....	Use 23FP4A
★ 21FB22(Color).....	135.00	★ 23XP4.....	Use 23BTP4
★ 21FD4.....	63.00	★ 23YP4.....	Use 23BTP4
★ 21FJ22(Color).....	148.00	★ 23ZP4.....	68.75
★ 21FLP4.....	Use SG-21FLP4	★ 24ADP4.....	Use SG-24CP4A
★ 21FMP4.....	45.90	★ 24AEP4.....	Use SG-24AEP4
★ 21MP4.....	50.00	★ SG-24AEP4.....	65.90
★ 21FP4.....	Use SG-21FP4C	★ 24AHP4/ALP4.....	72.00
★ 21FP4A.....	Use SG-21FP4C	★ 24AJP4.....	65.90
★ 21FP4C.....	Use SG-21FP4C	★ 24ALP4.....	Use 24AHP4/ALP4
★ 21WP4.....	59.00	★ 24ANP4.....	Use SG-24AEP4
★ 21WP4A.....	Use SG-21WP4A	★ 24AUP4.....	65.90
★ SG-21WP4A.....	Use SG-21WP4A	★ 24AVP4.....	Use 24BEP4
★ 21WPH4A.....	45.90	★ 24BEP4.....	85.00
★ 21XP4A.....	Use SG-21XP4A	★ 24CP4.....	Use SG-24CP4A
★ 21XP4A.....	Use SG-21XP4A	★ 24CP4A.....	Use SG-24CP4A
★ SG-21XP4A.....	45.90	★ 24DP4.....	Use SG-24AEP4
★ 21YP4.....	Use SG-21YP4A	★ 24DPA.....	Use SG-24AEP4
★ 21YPA.....	Use SG-21YP4A	★ 24QPA.....	Use SG-24CP4A
★ SG-21YPA.....	44.80	★ 24TP4.....	Use SG-24CP4A
★ 21ZP4.....	Use SG-21ZP4B	★ 24VP4.....	Use SG-24CP4A
★ 21ZPA.....	Use SG-21ZP4B	★ 24VPA.....	Use SG-24CP4A
★ 21ZPB.....	Use SG-21ZP4B	★ 24XP4.....	Use SG-24CP4A
★ SG-21ZPB.....	44.80	★ 24YP4.....	Use SG-24AEP4
★ 23AFP4.....	Use 23BTP4	★ 24ZP4.....	Use SG-24AEP4
★ 23AHP4.....	61.00	★ 27EP4.....	Use SG-27RP4
★ 23ANP4.....	Use 23BKP4	★ 27GP4.....	Use SG-27RP4
★ 23ASP4.....	61.00	★ 27LP4.....	96.40
★ 23ATP4.....	Use 23BKP4	★ 27NP4.....	Use SG-27RP4
★ 23AVP4.....	Use 23CP4	★ SG-27RP4.....	96.40
★ 23AUP4.....	Use 23AHP4	★ 27RP4.....	Use SG-27RP4
★ 23AWP4/BJP4.....	61.00	★ 27RP4.....	96.40
★ 23BDP4.....	Use 23BTP4	★ 27XPA.....	96.40
★ 23BGP4.....	Use 23BHP4		
★ 23BHP4.....	70.50		
★ 23BJP4.....	Use 23AWP4/BJP4		
★ 23BKP4.....	70.50		

★ Black-Daylight aluminized tube.  
‡ Manufacturer's suggested list price, subject to change without notice.





# RECEIVING TUBES



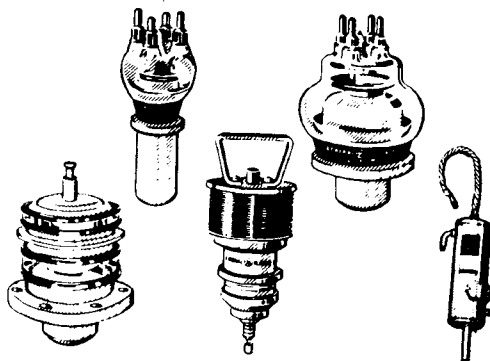
Type	List Price†	Type	List Price†	Type	List Price†	Type	List Price†	Type	List Price†	Type	List Price†	Type	List Price†	Type	List Price†
O24	\$2.45	4HA7*	\$3.20	6BE6	\$2.20	6EA7	\$3.80	6KT8	\$3.80	12AF6	\$2.80	12SA7	\$4.30	25CA5	\$3.10
O24A(N)	2.15	4HS8	3.20	6BF5	3.55	6EA8	3.20	6KZ8	2.80	12AJ6	2.55	12SC7	5.50	25CD6GB	5.85
O24G	2.60	5AM8	3.55	6BF6	1.90	6EB5	4.90	6L6(N)	8.65	12AL5	1.90	12SF5	4.25	25DK4	1.75
1A7GT	5.75	5AN8	4.00	6BF8	4.35	6EB8	4.25	6L6C(N)	4.35	12AL8	6.60	12SF7	6.60	25DN6	6.35
1AD2*	3.00	5AQ5	2.35	6BF11*	4.80	6EH5	3.05	6GH5	5.75	12AL11*	4.45	12SG7	4.65	25EG6	5.70
1AX2	3.05	5AR4	4.50	6BG6GA	6.50	6EH7	4.10	6M3	12.05	12AQ5	2.90	12SH7	6.05	25EH5	2.50
1B3GT	2.90	5AS4A	3.30	6BH6	2.70	6EH8	3.60	6M11*	4.85	12AT6	1.40	12SJ7	4.20	25F5	4.10
1DN5	3.65	5AS8	4.15	6BH8	3.65	6EJ7	3.80	6N7	5.10	12AT7	3.05	12SK7	3.95	25L6GT	2.65
1G3GT/1B3GT	2.90	5AT8	3.70	6BH11*	4.15	6EM5	3.40	6Q7	5.35	12AU6	2.15	12SL7GT	3.75	25W4GT	2.70
1H2	3.05	5AU4	3.40	6BJ3*	2.65	6EM7	5.10	6S4A	2.50	12AU7	2.45	12SN7GTA	2.70	25W6GT	3.25
1H5GT	4.15	5AV8	4.10	6BJ6	2.60	6E07	2.90	6S8GT	4.45	12AU7A	2.45	12SQ7	3.75	25Z5	4.60
1J3	2.90	5AZ4	5.65	6BJ6A	2.70	6ER5	3.80	6SA7	4.30	12AV5GA	4.10	12SR7	5.75	25Z6GT	3.05
1K3	2.90	5B8	5.30	6BJ7	3.15	6ES5	3.05	6SB7Y	6.35	12AV6	1.65	12V6GT	2.90	27CB5/-	3.65
1L4(N)	3.20	5BC3	2.80	6BJ8	3.50	6ES8	5.80	6SC7	4.50	12AV7	3.55	12W6GT	3.20	PL500	3.95
1L6	6.85	5BE8	3.35	6BK4	8.00	6ET7	4.25	6SF5	3.75	12AW6	3.30	12X4	1.95	29GK6	3.80
1LA6	6.20	5BK7A	3.40	6BK5	3.70	6EU7	2.70	6SF7	6.30	12AX3*	2.75	13DE7	3.00	30AG11*	3.95
1LH4	8.10	5BQ7A	4.00	6BK7B	3.40	6EU8	3.30	6SG7	4.65	12AX4GTB	2.70	13DR7	3.40	32E15A	2.55
1LN5	8.20	5BR8	4.25	6BL7GTA	4.05	6EV5	3.00	6SH7	4.65	12AX7	2.55	13EM7/15EA7	4.75	33GT7*	7.40
1N2A	4.65	5BT8	3.30	6BL8	3.95	6EV7	2.90	6SJ7	4.15	12AZ7A	2.75	13FD7	4.85	33GY7*	6.45
1R5	3.05	5BW8	3.40	6BM8	3.05	6EW6	2.50	6SK7	4.25	12BA4	2.85	13GB5	3.55	33JV6	4.50
1S2A	3.10	5C8	3.35	6BN4	2.65	6EW7	4.05	6SL7GT	3.55	12BA6	2.85	13J10*	5.35	EL-34/-	3.65
1S4	4.35	5CL8A	3.50	6BN6	3.20	6EX6	8.00	6SN7GTB	2.60	12BA7	5.95	14A7	5.95	6CA7(N)	5.20
1S5	2.90	5CM8	3.80	6BN8	3.55	6FY6	3.40	6S07	3.75	12BD6	2.45	14AF7	6.05	34GD5	2.55
1T4	2.90	5C08	4.10	6BQ5	2.40	6EZ5	3.60	6SR7	3.90	12BE3*	2.80	14B6	6.60	35A5	6.00
1U4	2.90	5CZ5	4.35	6BQ6GA	4.35	6EZ8	3.80	6SS7	5.50	12BE6	1.75	14CT8	3.20	35B5	3.40
1U5	2.65	5DH8	5.90	6BQ6GTB	4.35	6F5	4.60	6T4	5.45	12BF6	2.20	14J8	3.00	35C5	2.15
1V2	2.10	5DJ4	2.65	6BQ7A	3.95	6F6	5.90	6T8A	3.40	12BH7A	3.05	14Q7	6.20	35DZ8	3.45
1X2A/B	3.05	5EA8	3.35	6BR8A	3.80	6F6GT	5.90	6T9*	3.65	12BK5	4.00	15AF11*	5.05	35EH5	2.30
2A3	10.50	5E8	5.80	6BS8	3.75	6FD6	3.80	6T10*	4.50	12BL6	2.65	15BD11	5.15	35GL6	2.50
2AF4A	4.10	5EU8	3.35	6BU8	3.10	6FD7	4.65	6U5/6G5(N)	5.55	12BN6	3.90	15CW5/PL84	2.80	35TB8	4.55
2AF4B	4.10	5EW6	2.65	6BV8	3.20	6FC5	5.20	6U8A	3.30	12BQ6GA	4.50	15DQ8	3.75	35L6GT	2.45
2AH2*	3.20	5FG7	2.80	6BW4	2.90	6FC6(N)	3.25	6U10*	3.90	12BQ6GTB	4.50	15EA7	4.25	35W4	4.80
2AS2*	3.20	5FV8	3.15	6BW8	3.55	6FG7	2.90	6V3A	4.85	12BR7	3.20	15EW6	2.80	35Y4	5.00
2BN4A	2.55	5GH8	3.95	6BX7GT	4.35	6FH5	2.90	6V4	1.60	12BT3*	2.90	15FM7*	3.65	36Z3	3.80
2CW4	4.45	5GX6	2.65	6BY5GA	5.10	6FJ7*	3.70	6V6	6.80	12BV7	3.50	15FY7*	3.45	35Z5GT	1.85
2CY5	3.05	5HG8	4.45	6BY6	2.65	6FM7*	3.50	6V6GT	2.15	12BW4	2.90	15HB6	4.10	36AM3A	1.65
2DS4	4.50	5J6	2.85	6BY8	2.65	6FM8	3.00	6VG6TA	2.15	12BY7A	3.20	15LE8	8.10	38HE7	7.10
2DV4	6.30	5T8	3.65	6BZ6	2.25	6F05	4.10	6VG7(N)	2.85	12BZ7	4.45	16A8	3.70	42	5.15
2DZ4	4.10	5UAGB	2.10	6BZ7	4.00	6F07	2.30	6WAGT	2.45	12C5	2.45	16AQ3/XY88	2.80	45B5/UL84	3.00
2EN5	3.40	5U8	3.35	6BZ8	4.45	6F55	4.35	6WAGTA	2.45	12CA5	2.80	16GK6	3.20	50A5	6.25
2EH5	3.55	5V3	3.85	6C4	1.85	6FV6	3.95	6WGGT	2.85	12CN5	3.45	16GYS	4.95	50B5	2.80
2FH5	4.55	5V4GA	3.90	6C5	4.30	6FV8	3.15	6X4	1.65	12CR6	2.75	17AV5GA	3.75	50C5	2.15
2FQ5A	4.05	5V6GT	2.45	6C9	5.80	6FW5	4.10	6X5GT	2.10	12CT8	4.30	17AX3	2.75	50DCA	1.90
2FS5	5.15	5X8	3.45	6C10*	3.95	6FY5	2.90	6X8A	3.50	12CU5/12C5	2.45	17AX4GT	2.70	50EH5	2.30
2FY5	2.80	5Y3GT	1.75	6CA4	2.10	6FY7*	3.40	6Y6G	3.45	12CJ6	4.50	17AY3	3.35	50FE5	4.35
2GK5	4.05	5Y4GA	2.55	6CA5	3.20	6G11*	4.35	6Y6GT	3.45	12CX6	2.90	17BE3*	3.05	50HC6	2.30
2GU5	4.35	5Y4GT	2.65	6CA7(N)	5.20	6G05	4.25	7A4	7.55	12D4	2.80	17BF11*	4.85	50HK6	2.30
2HK5	3.20	5Z3	3.30	6CA8A	8.60	6G05*	4.10	7A6	7.45	12DB5	2.80	17C9	7.60	50L6GT	2.55
2M2	4.85	6A7	8.55	6CB6A	2.25	6G05*	3.70	7A7	7.60	12DE8	3.35	17CU5	2.45	50X6	6.25
3A3	3.40	6A8	6.90	6CD6GA	5.80	6GF7	5.15	7A8	8.30	12DK7	2.95	17D4	2.75	50Y6GT	4.60
3AF4A	4.10	6BA4	2.15	6CE5/6BC5	2.35	6GH8	3.20	7AF7	6.00	12DL8	6.20	17DE4	3.35	50Y7GT	4.50
3AF4B	4.10	6AC7	5.55	6CF6	2.55	6GF7	3.65	7AG7	8.40	12DM6B	4.25	17DM4	3.20	60FX5	2.80
3AL5	2.05	6AC7Y(N)	5.80	6CG7	2.45	6GK5	4.10	7B7	2.60	12DQ7	3.45	17DQ6A	4.20	75	6.80
3AT2*	3.20	6AF3	2.90	6CC8A	3.30	6GK6	3.05	7B8	8.85	12DS7	3.95	17DQ6B	4.20	80	4.25
3AU6	2.35	6AF4	4.00	6CH8	5.20	6GL7	5.10	7B6	5.60	12DT5	3.30	17E8	2.80	ECCF80/6BL8	3.95
3AV6	1.90	6AF4A	4.00	6CK4	3.40	6GM5	2.70	7B7	8.10	12DT8	3.75	17E5*	4.15	EZ80/6V4	1.60
3B2	10.35	6AF11*	5.05	6CL5	9.60	6GM6	2.70	7C5	3.50	12DU7	4.65	17G5*	4.45	XCF80/4BL8	2.55
3BC5	2.35	6AG5	2.75	6CL6	3.75	6GM8/ECC86	4.65	7C6	7.75	12DV7	3.65	17G6	4.25	XM81/-	3.00
3BE6	2.25	6AG7	6.25	6CL8A	3.35	6GN8	3.95	7C7	3.60	12DW8	3.80	17H3	2.50	6DA5(N)	2.80
3BN4	3.10	6AG11*	3.90	6CM6	3.30	6GU5	4.35	7E6	3.20	12DW7	3.25	17JM6	4.45	ECL82/6BM8	3.05
3BN6	3.75	6AH4GT	3.45	6CM7	2.90	6GU7	3.40	7F7	8.00	12DW8	3.55	17JZ8*	3.80	84/6Z4	2.60
3BU8	3.35	6AH6	4.70	6CM8	4.25	6GV5*	4.40	7F8	8.80	17D8	8.45	18A5	4.10	EM84/-	3.00
3BY6	2.90	6AK5(N)	4.30	6CN7	2.90	6GW6	4.15	7G7	4.15	12DZ6/-	2.80	18F6	2.15	6FG6(N)	3.25
3BZ6	2.30	6AL3	2.95	6CQ4	3.20	6GW8	3.20	7HG8/PCF86	3.35	12EA6	2.80	18FX6	2.35	ECC85/6AQ8	3.20
3CB6	2.30	6AL5	1.85	6CQ8	3.50	6GX6	2.50	7H7	7.55	12EA6	2.80	18FY6	1.90	HCC85	3.95
3CE5/3BC5	2.35	6AL7GT(N)	5.75	6CR6	2.40	6GY5*	4.90	7S7	6.85	12ED5	2.85	19AU4GTA	3.45	17E8/-	2.80
3CF6	2.70	6AL11*	4.40	6CS6	2.65	6GY6	3.50	7X7	8.10	12EG6	3.20	19BG6GA	6.50	ECL86/6GW8	3.20
3CS6	2.65	6AM4	5.90	6CS7	3.00	6GY8	2.80	7Y4	7.15	12EK6	3.00	19CL8A	3.50	117L7/MTG10	10.15
3CY5	3.25	6AM8A	3.45	6CU5	2.65	6GZ5	2.90	7Z4	6.90	12EM6	3.15	19EA8	3.45	117N7GT	13.65
3DG4	3.65	6AN4	6.35	6CU6	4.35	6H6	4.00	8A8	4.10	12EN6	3.05	19E28	3.80	117Z3	4.35
3DK6	2.45	6AN8A	4.00	6CU8	4.35	6HA5/ECC900	4.05	8A8A*	3.65	12EQ7	2.90	19HV8	3.80	117Z6GT	7.15
3DT6	2.20	6AQ5A	2.15	6CW4	4.45	6HA6	4.75	8B10*	3.55	12EZ6	2.30	19J6	3.15	EF183/6EH7	4.10
3DZ4	4.10	6AQ6	2.60	6CW5	3.60	6HA6*	4.45	8BQ5	2.90	12F8	3.40	19JN8	3.20	FM100/6EJ7	3.80
3EA5	3.75	6AQ7GT	4.00	6CX8	3.85	6HB5*	4.45	8CG7	2.50	12FK6	2.30	19K8	2.80	FM184	9.55
3EH7	3.80	6AQ8	3.20	6CY5	3.80	6HB6	4.75	8CM7	2.80	12FM6	2.30	19T8	3.55	6973	4.50
3EJ7	3.80	6AR5	2.60	6CY7	2.20	6HD5*	5.70	8CN7	3.20	12FQ8(N)	3.20	19X8	4.35	7025	3.00
3ER5	3.55	6AR8	5.15	6CZ5	4.10	6HE5*	3.95	8CS7	3.30	12FR8	4.80	20E27	4.15	1789A	2.85
3FS5	4.60	6AR11*	4.35	6D10*	4.10	6HF5*	7.80	8CX8	4.35	12FX8A	4.00	21EK6	5.70	7199	4.70
3GK5	4.15	6AS5	2.90	6DA4	3.10	6HF8	3.95	8E8	4.00	12GA6	2.55	21GY5*	4.95	7247	3.05
3GS8/3BU8	3.35	6AS8	3.80	6DA5(N)	2.80	6HG8	4.35	8EM5	3.45	12GC6	4.60	21HB5	4.60	7355(N)	3.05
3HA5	4.10	6AS11*	5.05	6DB5	5.30	6HJ8	3.35	8ET7	4.40	12GE5*	3.80	21HJ5*	6.25	7408	2.65
3HM5	4.10	6AT6	1.90	6DC8	3.25	6HK5	4.75	8FQ7	2.75	12GN7	4.80				





# INDUSTRIAL TUBES

- CATHODE-RAY
- FIVE-STAR
- MILITARY
- POWER
- COMMUNICATION
- TRANSMITTING



G-E Type	Price Each†	G-E Type	Price Each†	G-E Type	Price Each†	G-E Type	Price Each†
0A2†	\$ 1.50	GL-7C29	\$ 189.50	GL-870A■	\$ 1982.00	5703WA*	\$ 7.10
0A3†	1.55	GL-7D21	735.00	872A/872	9.90	5703WB*	8.80
0A4G†	1.30	7RP4	64.00	GL-880	610.00	5718†*	3.65
0B2†	1.45	PJ-8	Use GL-5556	884†	2.30	5719†*	3.15
0B3†	2.35	8D21‡	1985.00	889A	250.00	GL-5720/FG-33	34.75
0C3†	1.50	12A6†	3.10	892	345.00	5725/6AS6W†*	3.15
0D3†	1.45	12A7WB	Use 6201/12A7WB	892R	440.00	5726/6AL5W†*	1.55
1A4D†	2.80	12AY7†	2.45	GL-893AR‡	1260.00	5727/2A21W†*	2.90
1D21/SN4	7.80	FA-13	Use GL-5628	920‡	7.30	GL-5728	74.00
C1K	Use GL-6014/C1K	C16J	Use GL-5665/C16J	923	3.40	5736	213.00
GL-1121	25.00	FG-17	Use GL-5557	927	4.25	5744WA*	7.10
GL-1136	18.50	PJ-23	Use GL-868	929	2.35	5744WB*	9.00
1138	33.25	FG-27A	52.00	930	3.80	5749/6BA6W†*	2.20
1P39	2.80	28D7	4.95	931A	12.25	5750/6BE6W†*	3.45
1P40	3.85	FG-32	Use GL-5558	1612†	5.00	5751†*	2.55
2B22■	31.00	FG-33	Use GL-5720	1614†	4.90	5751WA†*	2.95
GL-2B23	70.00	FG-41	Use GL-5830	1619†‡	5.70	5762/7C24	255.00
2C†	6.90	B-47	Use GL-5623	1620†	7.55	5763†	2.55
C6M	56.00	FG-57	Use GL-5559	2050†	2.40	GL-5779	200.00
2C39A	20.75	FG-67	Use GL-5728	2050A	2.25	GL-5788	500.00
2C39B	32.15	FG-81A	32.50	GL-5513	572.00	5814A†*	2.35
2C39WA	32.15	83†	1.75	GL-5518	1275.00	5814WB†*	6.25
2C40	28.00	FG-95	Use GL-5560/FG-95	5528†	56.00	GL-5820A	1100.00
2C40A■	34.00	FG-97	62.00	GL-5544	32.50	GL-5822A	116.00
2C42■	27.10	FG-98A	77.00	GL-5549	653.50	5823†	1.75
2C43■	27.20	100TH‡	23.60	GL-5550	49.00	5824†	3.60
2C46■	29.50	FG-104	Use GL-5561	GL-5551A	65.00	GL-5830	504.00
2D21†	1.30	FG-105	59.00	GL-5551A/P	65.00	5840†*	5.35
2D21W	Use 5727/2D21W	FG-154	108.00	GL-5552A	99.00	5844†*	2.30
2E26†	3.85	FG-172■	122.00	GL-5552A/P	99.00	5855	85.00
GL-2H21	288.00	FG-280	105.00	GL-5553B	245.00	5879†	1.85
2X2A†	3.30	393A■	13.25	GL-5553B/P	245.00	5881†	3.50
3B24W	11.25	407A†	5.90	GL-5554	215.00	5886†	5.00
3B28	6.30	408A†	4.95	GL-55555	316.00	5894	26.10
3C23■	11.98	GL-411	478.75	GL-5556	47.50	5896†*	3.75
3CX100A5	32.00	GL-414	254.00	5557■	9.50	5899†*	5.50
KC-4	Use GL-5575/100	GL-415	Use GL-5550	5558	17.50	5902†*	4.80
4-65A	28.50	502A	2.30	5559■	23.00	5963†	1.50
4-250A/5D22	46.50	GL-506	Use GL-6228	5560■	33.00	5964†	1.55
4-400A	51.00	575A■	21.50	5561	59.00	5965A†*	1.90
4-1000A	143.00	627‡	31.50	5563A	51.25	GL-5973	495.00
4D21/4-125A	37.80	672A	42.50	GL-5564	850.00	5998A†	12.20
4X150A	26.25	673	21.50	GL-5575/100/616	250.00	6005/6AQ5W†*	3.95
4X500A	125.60	678	50.75	GL-5593	310.00	6011/710	13.00
5AHP7A	47.00	740	Use GL-6856/740	5610†	1.05	6012†	7.65
5AUP24†	160.00	760	Use GL-6858/760	GL-5623	30.00	GL-6014/C1K	12.90
5R4CYA†	2.05	760P	Use GL-6859/760P	GL-5627	80.00	6019	751.75
5RGYB†	2.05	805	22.10	GL-5628	60.00	6021†*	3.50
5Y3WGTB (6087/-		807†■	2.95	GL-5630	1900.00	GL-6039	1590.00
5Y3WGTB)■	5.75	809†	7.95	5632/C3J	13.80	6046†	1.55
FA-6	Use GL-5627	810	26.95	5636†*	6.10	6072A†*	3.90
6AC7WA†■	5.70	811A†	6.90	5642†§	3.85	6080†■	5.35
6AL5W	Use 5726/6AL5W	812A†	6.90	5651†	1.78	6087/5Y3WGTB†*	5.75
6AK5W	Use 5654/6AK5W	813	24.10	5654/6AK5W†*	2.45	6100†*	2.50
6AK5WB†■	5.45	815	29.35	5662†‡	1.45	6111†*	3.70
6AK6†	1.40	816	3.10	5663†■	2.10	6112†*	4.10
6AN5†	4.20	828	32.95	5665/C16J	56.90	6134†	5.70
6AS6†	3.45	829B	20.00	5670†*	2.45	6135†*	2.40
6AS6W	Use 5725/6AS6W	830B†	17.35	GL-5674	225.00	6136/6AUGW/B†*	2.70
6A57GA†	4.95	832A	16.70	5675†	16.75	6137/6SK7WA†	2.85
6AU6WB†	Use 6136/6AU6WB	833A	56.00	5681	2060.00	6146A†	4.35
6BA6W	Use 5749/6BA6W	836	11.10	5686†*	3.40	6161	132.00
6BE6W	Use 5750/6BE6W	GL-838	20.00	5687†*	4.00	6166A	Use 9007/6166A
6C4WA†■	3.15	845	25.00	5687WA†■	5.70	GL-6183	Use GL-6942
6D4†	2.85	GL-851	717.00	5691†	8.75	6189/12AU7WA†■	3.65
6DJ8†	2.40	GL-857B	218.50	5692†	8.25	6197†	2.65
6J4†	4.20	862A	1775.00	5693†	6.60	6198A	185.00
6SK7WA†■	2.85	866A	2.80	5696A†	2.05	6201/12A7WB†*	2.55
6X4W†	1.60	868/PJ-23	4.50	5702WA*	6.50	6202/6X4WA*■	2.85
6X4WA†	Use 6202/6X4WA	GL-869B	138.00	5702WB*	9.55	6203†*	4.10

† Manufacturer's suggested price.  
 \* Five-Star Types  
 ‡ Industrial Receiving Type.  
 ■ Available to MIL specifications.

‡ Discontinued Type; available while stock lasts.  
 § Subject to F.E.T.  
 #Coated plates.

**INDUSTRIAL TUBES (Cont'd)**

G-E Type	Price Each¶	G-E Type	Price Each¶	G-E Type	Price Each¶	G-E Type	Price Each¶
6205†*■	\$ 5.35	6771	\$ 71.90	7296	\$ 41.85	GL-7964	\$ 85.00
6206†*■	7.25	6807	29.30	7325	185.00	7984	5.35
6211A†*	2.35	6808	30.50	7370	10.80	GL-7985	1740.00
6216†*■	3.47	6809	31.00	7391	67.00	GL-7998	155.00
6222†*	7.35	6814†*■	5.05	GL-7399	520.00	8005†	17.85
GL-6228/GL-506	3695.25	6829†*■	6.10	7427†	2.65	8008	9.90
GL-6251	2555.00	GL-6848	1840.00	7462	33.75	GL-8020	24.00
6265†*	4.10	6856/740	20.80	7468	33.75	8068	3.60
GL-6283	500.00	6858/760	28.10	7518/710L	17.00	8081	35.10
6299■	56.00	6859/760P	29.80	7588	74.25	8082	35.10
6336A†	19.40	GL-6878	3060.00	7625	33.75	8083	35.10
GL-6346	70.00	6883†	4.55	GL-7629A	1800.00	GL-8092A	1975.00
6350†	2.35	6894	25.50	7644	65.00	GL-8093	1350.00
6360†	4.95	6897■	32.15	GL-7669	65.00	8102†	1.45
6286†*■	7.40	6907	27.00	GL-7669/P	65.00	8106†	1.55
6397†	8.30	6919†*	1.35	GL-7670	77.20	8113*	6.45
6414†*■	3.65	6942	960.00	GL-7671	99.00	8156	4.10
6427	895.00	7007/6166A■	1050.00	GL-7671/P	99.00	GL-8205	825.00
6442■	39.25	7034/4X150A	25.00	GL-7672	116.00	GL-8360	77.20
6463†	1.90	7036†*	1.50	GL-7673	245.00	GL-8465	500.00
6485†	2.05	GL-7038	185.00	GL-7673/P	245.00	GL-8466	535.00
GL-6512	285.00	7044	3.20	GL-7681	155.00	8507	250.00
GL-6513	382.00	7054†	1.55	7697	185.00	8511	315.00
GL-6514	525.00	7056†	1.20	7701†	3.00-	8541	310.00
GL-6515	960.00	7057†	1.95	GL-7703	190.00	9001†	5.40
6550†	4.30	7058†	1.30	7716†	1.75	9002†	4.85
GL-6621	10.35	7059†	1.75	7717/6CY5†	1.40	9003†	5.40
6660†	1.10	7061†	1.30	7720	33.75		
6661†	1.40	7077	33.75	7724/14GT8†	1.50		
6662†	1.35	GL-7151	750.00	7725	13.50		
6663†	1.00	7167†	2.00-	7726	16.30		
6664†	1.15	GL-7171	81.50	7735A	185.00		
6669†	1.15	7226	315.00	7736	850.00		
6676†	1.20	7233†	2.40	7768	77.50		
6677†	1.90	7239†*	6.25	7784	65.00		
6678†	1.70	7262A	250.00	7815	39.25		
6679†	1.55	7263A	430.00	7815R	39.25		
6680†	1.30	7266■	29.70	7841	29.70		
6681†	1.30	7289■	32.15	7861†*	3.50		
6688A†*	8.75	7293	1300.00	7913	91.80		

¶ Manufacturer's suggested price.  
 \* Five-Star Types.  
 † Industrial Receiving Type.  
 ■ Available to MIL specifications.  
 • List Price.  
 # Coated plates.

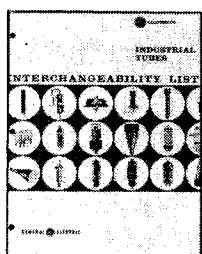
**RADIATOR CREDITS.** Contingent on purchase of a new tube. Radiator must be returned prepaid to General Electric Company, Schenectady, N. Y.

G-E Type	Radiator Credit	Salvage Credit	Crate Credit
GL-891R	\$20.00	.....	None
GL-892R	20.00	.....	None
GL-5681	.....	\$150.00	None
GL-7007/6166A	25.00	.....	None

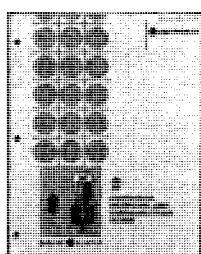
**THERMOSTAT KITS FOR IGNITRON**

Kit No.	Price, Each¶
N-15272AA	\$ 7.30
N-24900 AAG2	5.15
N-15286AA	9.30
N-15287AA	8.00

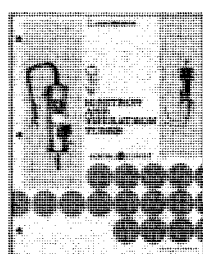
**NEW G-E INDUSTRIAL TUBE CATALOGS**



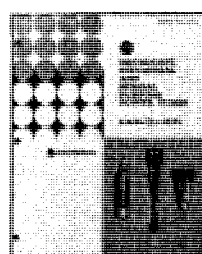
**ETI-719D 25¢**  
 Alpha-numerical listing of G-E replacements for nearly 3,000 types of industrial tubes.



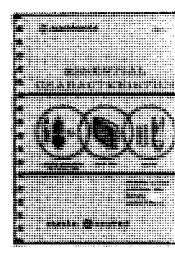
**ETI-2387A 25¢**  
 Complete specifications of G-E industrial receiving, communications, 5-Star and ceramic receiving tubes.



**ETI-2388A 25¢**  
 Specifications and data on 80 types of G-E Ignitrons and Thyatrons, plus operating guide.



**ETI-2389A 25¢**  
 Lists 125 special-purpose and broadcast power tubes and rectifiers, including installation information.



**ETR-15L \$1.50**  
 Lists all receiving, TV picture, 5-Star, and small special-purpose tubes, and G-E capacitors.

These Catalogs Are Available From Your General Electric Tube Distributor

# Mullard

## PREFERRED ENTERTAINMENT RECEIVING TUBES



- For • High-Fidelity • AM-FM
- Television • Industry
- Foreign Replacement

Mullard electron tubes, universally recognized for their advanced designs and reliability, offer comprehensive range of tubes for High-Fidelity, AM-FM, Television, and Industrial Applications. The vast manufacturing resources of the Mullard organization, including the world's most modern research laboratories, is your assurance of guaranteed tube design advantages for maximum performance in electronic equipment.

Tube Type	Cross Ref.	List Price	Tube Type	Cross Ref.	List Price	Tube Type	List Price
DAF96	1AH5	\$ 3.15	HBC91	12AV6	\$ 1.70	6CA	1.85
DK96	1AB6	3.40	HCC85	17EW8	2.80	6CA4	2.05
DM70	1M3	2.05	HK90	12BE6	2.10	6CA7	5.10
DM71	1N3	2.15	HK90	12BE6	2.20	6CB6	2.25
DY87	1S2A	2.75	HL92	50C5	2.20	6CD7	3.95
EABC80	6AK8	3.55	HY90	35W4	1.45	6CM4	5.70
EB91	6AL5	1.85	KT66		7.35	6CW5	2.60
ECB90	6AT6	1.80	KT88		11.20	6DA5	2.75
ECB91	6AV6	1.60	LC900	3HA5	2.50	6DA6	3.05
EBF80	6N6	3.10	LCF801	5GJ7	3.05	6DB8	3.20
EBF83	6DR8	2.60	LF93	4E7H	2.40	6DJ8	4.20
EBF89	6DC8	3.20	LF184	4EJ7	2.40	6DL4	5.55
EC80	6QA	6.80	PC900	4HA5	2.50	6DL5	2.30
EC81	6R4	5.15	PC885	9AQ8	3.00	6DR8	3.60
EC86	6CM4	5.70	PC888	7DJ8	4.65	6DX8	3.10
EC88	6DL4	5.55	PCF80	9A8	2.55	6EB8	4.20
EC90	6C4	1.85	PCF86	7HG8	2.90	6EH7	2.40
EC92	6AB4	2.45	PCF81	8GJ7	3.05	6EJ7	2.40
EC95	6E95	2.45	PCL82	16A8	4.45	6EM5	3.40
EC97	6FV5	2.80	PCL84	15DQ8	4.10	6ER5	2.45
EC900	6HA5	2.50	PCL85	18GV8	2.80	6ES8	4.10
ECC33		5.90	PCL86	14GW8	3.25	6EU7	2.75
ECC81	12AT7	3.05	PL36	25E5	6.10	6FG6	3.00
ECC82	12AU7	2.45	PL81	21A6	4.55	6FY5	2.80
ECC83	12AX7	2.55	PL84	15CW5	2.60	6GB5	3.90
ECC85	6AQ8	3.15	PL500	27GB5	3.90	6GK5	2.50
ECC86	6GM8	4.55	PY81	17Z3	3.45	6GJ7	3.05
ECC88	6DJ8	4.20	PY88	30AE3	2.20	6GM8	4.55
ECC91	6J6	2.80	UBF80	17C8	3.50	6GV8	2.80
ECC189	6E58	4.10	UCL82	50BM8	3.00	6GW8	3.20
ECF80	6BL8	2.55	UL84	45B5	2.85	6HA5	2.50
ECF82	6U8	3.30	UY85	38A3	1.65	6HG8	2.90
ECF86	6H8	2.90	XC95	2ER5	2.10	6HU6	3.25
ECF801	6GJ7	3.05	XC97	2FV5	2.80	6J6	2.80
ECH81	6AJ8	2.95	XC90	2HA5	2.50	6JX8	2.80
ECH84	6JX8	2.85	XC90	2HA5	2.50	6K4	1.65
ECL80	6AB8	3.40	XC90	2HA5	2.50	6M4	6.50
ECL82	6BM8	3.00	XC90	2HA5	2.50	6R3	2.70
ECL84	6DX8	3.10	XC90	2HA5	2.50	6R4	5.15
ECL85	6GV8	2.80	XC90	2HA5	2.50	6R8A	3.40
ECL86	6GW8	3.20	XC90	2HA5	2.50	6U8	3.30
EF80	6BX6	3.20	XC90	2HA5	2.50	6V4	1.60
EF85	6B7	3.25	XC90	2HA5	2.50	6W4GT	2.40
EF86	6267	2.70	XC90	2HA5	2.50	6W6GT	2.85
EF89	6DA6	3.05	XC90	2HA5	2.50	6XA	1.65
EF91	6AM6	3.30	XC90	2HA5	2.50	6X8	2.90
EF92	6CQ6	3.70	XC90	2HA5	2.50	6BQ5	2.40
EF93	6BA6	2.00	XC90	2HA5	2.50	8GJ7	3.05
EF94	6AU6	2.10	XC90	2HA5	2.50	9A8	2.55
EF95	6AK5	4.40	XC90	2HA5	2.50	9AQ8	3.00
EF183	6EH7	2.40	XC90	2HA5	2.50	12AT7	3.05
EF184	6EJ7	2.40	XC90	2HA5	2.50	12AU7	2.45
EK90	6B6E	2.25	XC90	2HA5	2.50	12AV6	1.70
EL34	6CA7	5.10	XC90	2HA5	2.50	12AX7	2.55
EL37		6.65	XC90	2HA5	2.50	12BA6	2.10
EL41	6CK5	6.65	XC90	2HA5	2.50	12BE6	2.10
EL81	6CJ6	4.35	XC90	2HA5	2.50	12BEG	3.25
EL84	6BQ5	3.25	XC90	2HA5	2.50	14GW8	3.25
EL85	6BN5	5.80	XC90	2HA5	2.50	15CW5	2.60
EL86	6CV5	2.60	XC90	2HA5	2.50	15DQ8	4.10
EL87	6AO5	2.40	XC90	2HA5	2.50	16A8	4.45
EL91	6AM5	3.30	XC90	2HA5	2.50	16AQ3	2.80
EL95	6DL5	2.30	XC90	2HA5	2.50	17EW8	2.50
EL500	6G85	3.90	XC90	2HA5	2.50	17Z3	3.45
ELL80		4.50	XC90	2HA5	2.50	18GV8	2.80
EM34	6CD7	3.95	XC90	2HA5	2.50	21A6	4.55
EM81	6DA5	2.75	XC90	2HA5	2.50	25E5	6.10
EM84	6FG6	3.00	XC90	2HA5	2.50	27GB5	3.90
EM87	6HIJ6	3.25	XC90	2HA5	2.50	30AE3	2.20
EY81	6E7	2.70	XC90	2HA5	2.50	35W4	1.45
EY88	6AL3	2.85	XC90	2HA5	2.50	45B5	2.85
EZ80	6V4	1.60	XC90	2HA5	2.50	50BM8	3.00
EZ81	6CA4	2.05	XC90	2HA5	2.50	50C5	2.20
EZ90	6C4	1.65	XC90	2HA5	2.50	50E7	2.70
GZ30	52AG	5.30	XC90	2HA5	2.50	60A5	2.20
GZ32	5AQ4	4.70	XC90	2HA5	2.50	60C8	2.55
GZ34	5AR4	4.50	XC90	2HA5	2.50	60D8	3.00
			XC90	2HA5	2.50	60E8	2.85
			XC90	2HA5	2.50	60F8	2.85
			XC90	2HA5	2.50	60G8	2.85
			XC90	2HA5	2.50	60H8	2.85
			XC90	2HA5	2.50	60J8	2.85
			XC90	2HA5	2.50	60K8	2.85
			XC90	2HA5	2.50	60L8	2.85
			XC90	2HA5	2.50	60M8	2.85
			XC90	2HA5	2.50	60N8	2.85
			XC90	2HA5	2.50	60P8	2.85
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			XC90	2HA5	2.50	60S8	2.85
			XC90	2HA5	2.50	60T8	2.85
			XC90	2HA5	2.50	60U8	2.85
			XC90	2HA5	2.50	60V8	2.85
			XC90	2HA5	2.50	60W8	2.85
			XC90	2HA5	2.50	60X8	2.85
			XC90	2HA5	2.50	60Y8	2.85
			XC90	2HA5	2.50	60Z8	2.85
			XC90	2HA5	2.50	61A8	2.85
			XC90	2HA5	2.50	61B8	2.85
			XC90	2HA5	2.50	61C8	2.85
			XC90	2HA5	2.50	61D8	2.85
			XC90	2HA5	2.50	61E8	2.85
			XC90	2HA5	2.50	61F8	2.85
			XC90	2HA5	2.50	61G8	2.85
			XC90	2HA5	2.50	61H8	2.85
			XC90	2HA5	2.50	61I8	2.85
			XC90	2HA5	2.50	61J8	2.85
			XC90	2HA5	2.50	61K8	2.85
			XC90	2HA5	2.50	61L8	2.85
			XC90	2HA5	2.50	61M8	2.85
			XC90	2HA5	2.50	61N8	2.85
			XC90	2HA5	2.50	61O8	2.85
			XC90	2HA5	2.50	61P8	2.85
			XC90	2HA5	2.50	61Q8	2.85
			XC90	2HA5	2.50	61R8	2.85
			XC90	2HA5	2.50	61S8	2.85
			XC90	2HA5	2.50	61T8	2.85
			XC90	2HA5	2.50	61U8	2.85
			XC90	2HA5	2.50	61V8	2.85
			XC90	2HA5	2.50	61W8	2.85
			XC90	2HA5	2.50	61X8	2.85
			XC90	2HA5	2.50	61Y8	2.85
			XC90	2HA5	2.50	61Z8	2.85
			XC90	2HA5	2.50	62A8	2.85
			XC90	2HA5	2.50	62B8	2.85
			XC90	2HA5	2.50	62C8	2.85
			XC90	2HA5	2.50	62D8	2.85
			XC90	2HA5	2.50	62E8	2.85
			XC90	2HA5	2.50	62F8	2.85
			XC90	2HA5	2.50	62G8	2.85
			XC90	2HA5	2.50	62H8	2.85
			XC90	2HA5	2.50	62I8	2.85
			XC90	2HA5	2.50	62J8	2.85
			XC90	2HA5	2.50	62K8	2.85
			XC90	2HA5	2.50	62L8	2.85
			XC90	2HA5	2.50	62M8	2.85
			XC90	2HA5	2.50	62N8	2.85
			XC90	2HA5	2.50	62O8	2.85
			XC90	2HA5	2.50	62P8	2.85
			XC90	2HA5	2.50	62Q8	2.85
			XC90	2HA5	2.50	62R8	2.85
			XC90	2HA5	2.50	62S8	2.85
			XC90	2HA5	2.50	62T8	2.85
			XC90	2HA5	2.50	62U8	2.85
			XC90	2HA5	2.50	62V8	2.85
			XC90	2HA5	2.50	62W8	2.85
			XC90	2HA5	2.50	62X8	2.85
			XC90	2HA5	2.50	62Y8	2.85
			XC90	2HA5	2.50	62Z8	2.85
			XC90	2HA5	2.50	63A8	2.85
			XC90	2HA5	2.50	63B8	2.85
			XC90	2HA5	2.50	63C8	2.85
			XC90	2HA5	2.50	63D8	2.85
			XC90	2HA5	2.50	63E8	2.85
			XC90	2HA5	2.50	63F8	2.85
			XC90	2HA5	2.50	63G8	2.85
			XC90	2HA5	2.50	63H8	2.85
			XC90	2HA5	2.50	63I8	2.85
			XC90	2HA5	2.50	63J8	2.85
			XC90	2HA5	2.50	63K8	2.85
			XC90	2HA5	2.50	63L8	2.85
			XC90	2HA5	2.50	63M8	2.85
			XC90	2HA5	2.50	63N8	2.85
			XC90	2HA5	2.50	63O8	2.85
			XC90	2HA5	2.50	63P8	2.85
			XC90	2HA5	2.50	63Q8	2.85
			XC90	2HA5	2.50	63R8	2.85
			XC90	2HA5	2.50	63S8	2.85
			XC90	2HA5	2.50	63T8	2.85
			XC90	2HA5	2.50	63U8	2.85
			XC90	2HA5	2.50	63V8	2.85
			XC90	2HA5	2.50	63W8	2.85
			XC90	2HA5	2.50	63X8	2.85
			XC90	2HA5	2.50	63Y8	2.85
			XC90	2HA5	2.50	63Z8	2.85
			XC90	2HA5	2.50	64A8	2.85
			XC90	2HA5	2.50	64B8	2.85
			XC90	2HA5	2.50	64C8	2.85
			XC90	2HA5	2.50	64D8	2.85
			XC90	2HA5	2.50	64E8	2.85
			XC90	2HA5	2.50	64F8	2.85
			XC90	2HA5	2.50	64	

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## A COMPLETE GUIDE TO ELECTRON TUBE SELECTION...

- COMPLETE SPECIFICATIONS ON OVER 75 TUBES
- DETAILED ILLUSTRATIONS
- COMPLETE PRICE SCHEDULE
- INCLUDES BASE DIAGRAMS

### **M**ARSHALL PRECISIONEERED TYPES

0A2WA	Voltage Regulator, Ruggedized
0A3/VR75	Voltage Regulator
0A3A	Voltage Regulator
0A3W	Voltage Regulator, Ruggedized
0B3/VR9D	Voltage Regulator
0B3A	Voltage Regulator
0B3W	Voltage Regulator, Ruggedized
0C3/VR105	Voltage Regulator
0C3A	Voltage Regulator
0C3W	Voltage Regulator, Ruggedized
0D3/VR150	Voltage Regulator
0D3A	Voltage Regulator
0D3W	Voltage Regulator
2B23	High Vacuum, Low Current Diode
3B28	Xenon Half Wave Rectifier
3C23	Argon, Mercury Vapor Thyatron
4B32	Half Wave Gas Rectifier
HF300	Triode Power Amplifier
323B	Grid Controlled Rectifier, Gas & Mercury
393A	Grid Controlled Rectifier
394A	Grid Controlled Rectifier, Gas & Mercury
811A	Triode Power Amplifier
812A	Triode Power Amplifier
ME811A	Triode Power Amplifier (Special)
ME812A	Triode Power Amplifier (Special)
816	Half Wave, Mercury Vapor Rectifier
826	Power Triode
826WA	Power Triode (Ruggedized)
836	Half Wave Rectifier
866A	Half Wave, Mercury Vapor Rectifier
866JR	Half Wave, Mercury Vapor Rectifier
872A	Half Wave Rectifier, Mercury Vapor
872AX	Ultra-Reliable Version of 872A
873	Grid Controlled Rectifier, Mercury Vapor
5557/FG17	Grid Controlled Rectifier, Mercury Vapor
5847/404A	Miniature Broad Band Pentode



### LEWIS and KAUFMAN, Ltd. **LONG LIFE** TYPES

6901	Thyratron, Gas & Mercury Vapor
741C	Thyratron, Gas
8008	Rectifier, Mercury Vapor
3B24W	Half Wave High Vacuum Rectifier
3B24WA	Half Wave High Vacuum Rectifier, Ruggedized
3C24/24G	Medium MU Power Triode
4D21/4-125A	Beam Power Tetrode
4E27/8001	Power Pentode
4E27A/5-125B	Power Pentode
5D21	Pulse Amplifier Tetrode
25T	Medium MU Power Triode
100R	High Voltage Medium Current Rectifier
100TH	High MU Medium Power Triode
100TL	Low MU Medium Power Triode
250R	High Voltage Medium Current Rectifier
250TH	High Mu Power Triode
250TL	Low MU Power Triode
253	High Vacuum High Current Rectifier
254	Medium MU Triode
254W	Ultra-Reliable Version of 254
254WA	Ultra-Reliable Version of 254 (Ruggedized)
LK300	Triode Power Amplifier
543	High Vacuum High Voltage Rectifier, Ruggedized
705A	High Vacuum Half Wave Rectifier
705WA	High Vacuum Half Wave Rectifier, Ruggedized
715C	Pulse Amplifier Tetrode
719A	High Vacuum High Voltage Clipper Diode
LK811A	Triode Power Amplifier (Special)
LK812A	Triode Power Amplifier (Special)
3200	Transmitting Triode
8020	High Voltage Medium Current Rectifier
8020WB	High Voltage Med. Current Rectifier (Ruggedized)
UH50	Medium MU Power Triode

**Specifications:** Detailed data sheets are available on request. All types listed are manufactured to conform with applicable MIL-E-1 specifications.  
**Prices, Terms, Delivery & Transportation Information:** Available at our plant. Most types are in stock. Large quantity discount price schedules are in effect.  
**Technical Assistance:** The Marshall engineering staff is available for consultation in regard to application and/or developmental problems.  
 Marshall is a prime contractor for U.S. government agencies and all branches of the Armed Forces.

\* REGISTERED U.S. PAT. OFF.

## **M**ARSHALL ELECTRONICS COMPANY

Manufacturers of Precisioneered Electron Tubes  
AND

LEWIS and KAUFMAN, Ltd.



\*LOS GATOS BRAND ELECTRON TUBES

INDUSTRIAL, COMMUNICATIONS AND MILITARY TYPES  
NEWARK, NEW JERSEY

**NATIONAL**<sup>®</sup>**ELECTRONIC CONTROL DEVICES  
FOR INDUSTRY****Ignitrons, Rectifier Tubes, Thyratrons, Silicon Devices and Readout Tubes****IGNITRONS**

Type Number	Maximum Demand	Net Selling Price	Type Number	Maximum Demand	Net Selling Price	Type Number	Maximum Demand	Net Selling Price
NL-1005A	600 Kva	\$ 65.00	NL-1051A*	600 Kva	\$ 65.00	NL-1081*	1000 Kva	\$ 75.00
NL-1009A	1700 Kva	155.00	NL-1052A*	1200 Kva	99.00	NL-1082*	2000 Kva	107.00
NL-1011A	600 Kva	65.00	NL-1053A	3000 Kva	284.00	NL-1091*	1000 Kva	75.00
NL-1012A	1200 Kva	99.00	NL-1054A	4800 Kva	750.00	NL-1092*	2000 Kva	107.00
NL-1013A	2400 Kva	245.00	NL-1059	100K Amps	333.00	NL-5550	300 Kva	49.00
NL-1014A	4800 Kva	750.00	NL-1061*	600 Kva	65.00	NL-5553B*	2400 Kva	245.00
NL-1016A	1700 Kva	155.00	NL-1062*	1200 Kva	99.00	NL-5553BL	2400 Kva	245.00
NL-1022A	1200 Amps	116.00	NL-1063	3000 Kva	284.00	NL-5555	1200 Amps	316.00
NL-1036	35K Amps	98.00	NL-1064	4800 Kva	825.00	NL-5555A	1200 Amps	316.00
NL-1037	100K Amps	134.00	NL-1066*	2000 Amps	77.20	NL-7673*	2400 Kva	245.00
NL-1038	100K Amps	333.00	NL-1068*	1200 Amps	116.00	NL-7703	100K Amps	190.00
NL-1039	100K Amps	132.00	NL-1069	1700 Kva	155.00	NL-7703H	100K Amps	190.00

**THYRATRONS**

Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price
NL-C3J/L	2.5	\$15.25	NL-710A/7725	2.5	\$13.50	NL-5559/FG57	2.5	\$23.00
NL-C3J/AL	2.5	16.00	NL-710AL	2.5	16.30	NL-5560/FG-95	2.5	33.00
NL-C3J/AL-Ne	2.5	18.40	NL-710L/7518	2.5	15.25	NL-5632/C3J	2.5	13.80
NL-3C23	1.5	11.98	NL-714	1	10.00	NL-5563A	1.6	50.00
NL-C6J†§	6.4	28.10	NL-716	1	12.50	NL-5665/C16J	18	52.50
NL-C6J/K†	6.4	28.30	NL-718	18	64.00	NL-5684/C3J/A	2.5	14.50
NL-C6J/K-Ne	6.4	32.50	NL-732	30	120.00	NL-5684-Ne	2.5	16.70
NL-KY21A	.75	26.75	NL-734/5544§	3.2	22.50	NL-5684A-Ne	2.5	17.90
FG-105	0.25	59.00	NL-740/6856†§	4	20.80	NL-6014/C1K	1	13.10
NL-632B	2.5	33.00	NL-760†§	6.4	28.10	NL-6989/C6J/KL	6.4	29.45
NL-678	1.6	49.00	NL-770L†	10.0	45.25	NL-6989-Ne	6.4	33.90
NL-710/6011	2.5	13.00	NL-5557/FG17/715	1	9.50	NL-7556A-Ne	2.5	19.60

**FULL AND HALF WAVE RECTIFIERS**

Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price
NL-RX21A	.75	\$25.75	NL-623	15	\$13.35	NL-869B/L	5	\$138.00
NL-575A	2.5	20.15	NL-635/7019†§	6.4	13.00	NL-5558/FG32	2.5	17.50
NL-604§	2.5	11.80	NL-643	15	13.50	NL-6894	2.5	25.00
NL-606§	6.4	21.40	NL-649/5834	2	10.20	NL-6895	2.5	25.00
NL-610/7723	2.5	11.40	NL-660†§	6.4	13.00	NL-7723-Ne	2.5	13.10
NL-615	2.5	10.05	NL-664L†	10	26.00	NL-7786-Ne	6.4	15.50
NL-617	5	15.00	NL-673	2.5	20.15			
NL-619	6	10.00	NL-869B	5	138.00			

**STUD MOUNTED SILICON CONTROLLED RECTIFIERS**

11 Amp r. m. s.

16 Amp r. m. s.

35 Amp r. m. s.

Type Number	V <sub>FOM</sub>	PRV	Net Selling Price	Type Number	PRV	Net Selling Price	Type Number	PRV	Net Selling Price
NL-510-3	800V	100	\$32.00	NL-2N1842	25	\$ 7.75	NL-2N681	25	\$ 8.65
NL-510-4	1000V	100	42.00	NL-2N1843	50	8.50	NL-2N682	50	9.40
NL-510-6	1200V	100	68.00	NL-2N1844	100	9.45	NL-2N683	100	10.50
NL-511-3	800V	800	38.00	NL-2N1845	150	11.50	NL-2N684	150	12.75
NL-511-4	1000V	1000	62.00	NL-2N1846	200	13.50	NL-2N685	200	15.00
NL-511-6	1200V	1200	93.00	NL-2N1847	250	16.15	NL-2N686	250	18.00
				NL-2N1848	300	18.75	NL-2N687	300	21.00
				NL-2N1849	400	23.65	NL-2N688	400	26.25
				NL-2N1850	500	27.00	NL-2N689	500	31.90
				NL-516M	600	30.00	NL-2N690	600	37.50
				NL-516S	700	32.25	NL-2N691	700	42.75
				NL-516N	800	36.00	NL-2N692	800	48.00

**READOUT TUBES**

Type Number	Character Size	Net Selling Price	Type Number	Character Size	Net Selling Price	Type Number	Character Size	Net Selling Price
NL-4021	0.3"	\$33.00	NL-7009	0.3"	\$19.00	NL-8421/5092	0.6"	\$15.75
NL-4031	0.3"	33.00	NL-7094	2.0"	45.00	NL-8423/6091	0.8"	20.00
NL-5991	0.6"	16.75	NL-7153	0.8"	14.50	NL-50911	0.6"	15.75
NL-5992	0.6"	16.75	NL-7977/4032	0.3"	33.00			
NL-6844A	0.6"	11.00	NL-8091	1.375"	30.00			

**WRITE FOR INDIVIDUAL DATA SHEETS FOR DETAILED RATINGS**

NOTES: \* Plastic coated version available, indicated by the addition of the suffix letter P.

† Available with bracket base for panel mounting, designated by the addition of suffix letter P.

§ Available with lug base, designated by the addition of suffix letter L.

**NATIONAL ELECTRONICS INC.**

GENEVA • ILLINOIS • U. S. A.

A Subsidiary of Eitel-McCullough, Inc.

*You can depend on your local  
**ELECTRONIC DISTRIBUTOR** for ...*

■ *Instant off-the-shelf delivery*

■ *In-depth inventories*

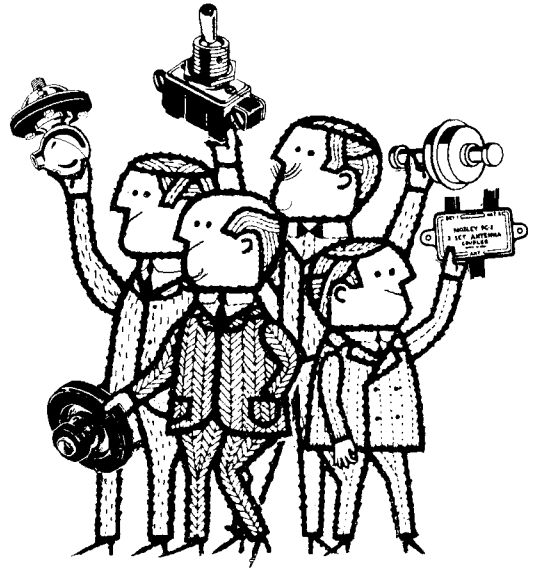
■ *Wide varieties*

■ *Prompt service*

■ *Technical assistance*

■ *Availability of the latest products*

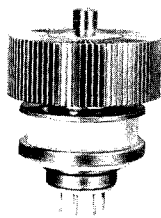
■ *Speedy purchasing — one order does the job*



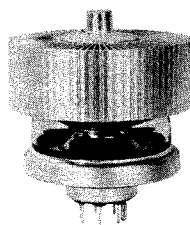
*Contact your local **ELECTRONIC DISTRIBUTOR**  
for all your requirements!*



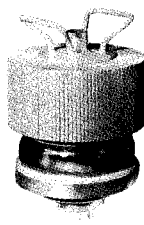
PL-6775



PL-8432



PL-8295/PL-172



PL-195



PL-175A

# PENTA

Beam Pentodes • Tetrodes • Triodes • Vacuum Switches

# POWER TUBES

Proven reliability, long life, and high efficiency are the resultant effects of "extra care" production and test methods employed by Penta in the manufacture of power tubes. Enjoy all of the benefits that hundreds of power tube users and equipment manufacturers receive by specifying Penta Power Tubes.

## POWER TUBES

Type	Fil. Volt.	Fil. Current Amps.	Plate Diss. Max. W.	Plate Volt. Max.	Plate Current Ma., Max.	Screen Voltage Max.	Price
<b>BEAM PENTODES</b>							
PL-4E27A	5.0	7.5	125	4,000	200	750	\$ 45.00
PL-172 (See PL-8295/PL-172)							
PL-175A	5.0	14.5	400	4,000	350	800	\$ 50.00
PL-177A	6.0	3.2	75	2,000	175	600	\$ 29.00
PL-177WA	6.0	3.2	75	2,000	175	600	\$ 33.50
PL-195	6.0	17.0	4000	5,000	2000	1000	\$350.00
PL-210	6.0	85.0	5000	7,500	2500	1500	\$475.00
PL-6549	6.0	3.2	75	2,000	175	600	\$ 29.00
PL-8295/PL-172	6.0	8.2	1000	3,000	1000	600	\$142.00
PL-8295A	6.0	8.2	1000	3,000	1000	600	\$152.00
PL-8432	6.0	8.2	1000	3,000	1000	600	\$152.00
PL-8576/PL-264	6.0	17.0	3000	5,000	2000	1000	\$370.00
<b>POWER TETRODES</b>							
PL-4-65A (See PL-8165/4-65A)							
PL-4-125A (See PL-4D21 (4-125A) )							
PL-4-250A (See PL-5D22 (4-250A) )							
PL-4-400A (See PL-8438/4-400A)							
PL-4-1000 (See PL-8166/4-1000A)							
PL-4D21 (4-125A)	5.0	6.5	125	3,000	225	600	\$ 36.00
PL-4D21A	5.0	6.5	175	3,000	225	600	\$ 37.50
PL-4X500A	5.0	13.5	500	4,000	350	500	\$125.00
PL-5D22 (4-250A)	5.0	14.5	250	4,000	350	800	\$ 46.50
PL-6775	5.0	14.5	400	4,000	350	800	\$ 50.00
PL-8165/4-65A	6.0	3.5	65	2,000	150	600	\$ 27.00
PL-8166/4-1000A	7.5	21.0	1000	6,000	700	1000	\$132.00
PL-8438/4-400A	5.0	14.5	400	4,000	350	800	\$ 48.00
<b>PULSE TETRODES</b>							
PL-8187/4PR65A	6.0	3.5	65	15,000	1a. pk.	2,000	\$ 43.00
PL-8188/4PR400A	5.0	14.5	400	20,000	4a. pk.	2,500	\$ 64.00



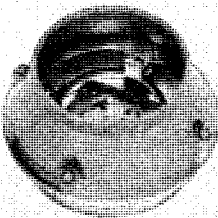
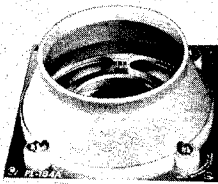
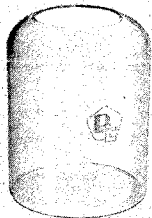
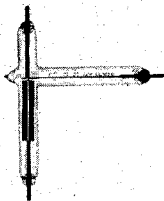
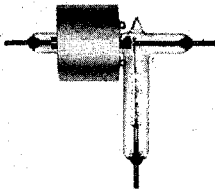
## PENTA LABORATORIES, INC. / SANTA BARBARA, CALIFORNIA



SECTION 5700



PL-177A



**POWER TUBES Cont'd**

**POWER TRIODES**

	Fil. Volt.	Fil. Current Amps.	Plate Diss. Max. W.	Plate Volt. Max.	Plate Current Ma., Max.	μ	Price
PL-254W	5.0	7.5	100	4,000	225	25	\$ 25.00
PL-6569	5.0	14.5	250	4,000	300	45	\$ 37.50
PL-6580	5.0	14.5	400	4,000	350	45	\$ 45.00

**HIGH-VOLTAGE RECTIFIER**

PL-250R	5.0	10.5	....	60,000	250	....	\$ 36.00
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**VACUUM SWITCHES**

Type	Voltage, Maximum	Current Max. Ampere		Coil	Price
		AC or DC	Pulse		
PL-R1	21,000	6	150	Not supplied; requires 1100 ampere-turns	\$33.00
PL-169A	21,000	30	500	Not supplied; requires 1900 ampere-turns	\$40.00
PL-186	21,000	6	—	Not supplied; requires 1000 ampere-turns	\$38.00
PL-187	21,000	30	500	Integral; 28 V, 500 Ma., D-C	\$58.00
PL-190	21,000	6	150	Integral; 28 V, 250 Ma., D-C	\$58.00
PL-191	21,000	6	—	Not supplied; requires 1000 ampere-turns	\$28.00

Penta vacuum switches are single-pole, double-throw switches enclosed in evacuated glass envelopes. They are ideal for use wherever compact, fast-acting relays are required to switch high-voltage circuits under a wide range of ambient atmospheric conditions, including explosive atmospheres, and in other applications where exposed-contact relays would be unsuitable.

These vacuum switches are operated by external actuating coils, which are excited by direct current and designed so that the soft-iron pole piece and the armature assembly enclosed in the envelope act to complete the magnetic circuit.

**ACCESSORIES**

Type	Description	Price
PL-C1	Glass chimney for PL-8438/4-400A, PL-175A, PL-6580, PL-6775.	\$ 6.50
PL-C184	Plastic chimney, only for PL-8295/172 and PL-8295A. Same chimney as used on PL-184 and PL-184A sockets (see below).	\$ 5.00
PL-C205	Chimney only (for PL-195 and PL-210). Same chimney as used on PL-205A and PL-261A sockets (see below).	\$12.00
PL-C209	Chimney only (for PL-8432). Same chimney as used on PL-209A socket (see below).	\$ 6.50
PL-C265	Chimney only (for PL-8576/PL-264). Same chimney as used on PL-265A socket (see below).	\$12.00
PL-184	Socket for PL-8295/172 and PL-8295A, including the chimney; built-in screen-grid and suppressor-grid by-pass capacitors. Includes contact provisions for all base pins and screen-grid and suppressor-grid ring terminals. Provides proper air distribution for correct tube cooling at full plate dissipation rating.	\$53.00
PL-184A	Socket for PL-8295/172 and PL-8295A, including the chimney. Same as socket PL-184 (above), except that suppressor-grid contacts are grounded.	\$48.00
PL-205A	Socket for PL-195. Includes chimney, built-in screen-grid by-pass capacitors. Suppressor-grid contacts grounded. Provides proper distribution of air for correct cooling of tube at full plate dissipation.	\$60.00
PL-209A	Socket for PL-8432. Includes chimney, screen-grid by-pass capacitors. Suppressor-grid contacts grounded. Distributes air for adequate cooling at full rated plate dissipation.	\$48.00
PL-261A	Socket for PL-210. Same features as PL-205A socket (above), similar in appearance.	\$60.00
PL-265A	Socket for PL-8576/PL-264. Includes chimney, screen-grid by-pass capacitors. Provides for correct distribution of air for proper tube cooling at full rated plate dissipation.	\$48.00

**FIELD ENGINEERING REPRESENTATIVES AND DISTRIBUTORS SERVING MAJOR CITIES.** Export Representative: Frazar & Hansen, Ltd., San Francisco 11, Calif.



SECTION 5700

**RCA** RCA ELECTRON TUBES  
ENTERTAINMENT RECEIVING TYPES

PRICE SCHEDULE • JULY 1964

RCA Type	List Price*	RCA Type	List Price*	RCA Type	List Price*	RCA Type	List Price*	RCA Type	List Price*	RCA Type	List Price*		
0Z4	\$2.40	5AT8	\$3.65	6BH8	\$3.65	6EW6	\$2.50	6W4GT	\$2.40	12BT3	\$2.90	17DQ6B	\$4.20
0Z4A	2.15	5AU4	3.40	6BJ6	2.60	6EW7	3.90	6W6GT	2.85	12BV7	3.50	17GJ5	4.60
0Z4G	2.60	5AV8	4.05	6BJ7	3.15	6EX6	7.25	6X4	1.65	12BW4	2.90	17GT5	4.25
1A3	6.55	5AW4	2.80	6BJ8	3.50	6EY6	3.40	6X5GT	2.10	12BY7A	3.05	17GW6	4.25
1A5GT	4.25	5AZ4	5.65	6BK4	8.00	6EZ5	3.60	6X8	3.15	12BZ6	2.25	17H3	2.50
1A7GT	5.75	5B8	5.30	6BK5	3.70	6EZ8	3.80	6Y6G	4.30	12BZ7	4.40	17JG6	6.10
1AX2	3.05	5BC3	2.30	6BK7B	3.40	6F5	4.60	6Y6GA	4.30	12C5		18A5	4.15
1B3GT	2.90	5BE8	3.30	6BL7GTA	3.95	6F6;6F6G	5.85	6Z4		(See 12CU5/12C5)		18FW6	2.15
1CSGT	5.30	5BK7A	3.40	6BL8	3.95	6F6GT	5.85	(See 84/6Z4)		12C8	9.70	18FX6	2.15
1DN5	3.65	5BQ7A	4.05	6BM8/ECL82	3.05	6F7	11.70	7A4	7.50	12CA5	2.85	18FY6	1.65
1G3GT/ 1B3GT	2.90	5BR8	3.65	6BN4A	2.50	6FBG	8.95	7A5	6.00	12CN5	3.45	18GD6A	2.15
1H5GT	4.15	5BW8	3.40	6BN6	3.20	6FA7	2.90	7A6	7.40	12CR6	2.65	19AU4	3.50
1J3	2.90	5CG8	3.35	6BN8	3.05	6FD7	5.05	7A7	7.55	12CT8	4.25	19AU4GTA	3.45
1K3	2.90	5CL8A	3.35	6BQ5	2.40	6FG6		7A8	8.25	12CU5/ 12CQ6B		19BG6GA	6.50
1L4		5CM8	3.80	6BQ6GTB/ 6CU6	4.35	(See EM84/6FG6)		7AF7	6.60	12C5	2.45	19CL8A	3.50
(see industrial type)		5CQ8	3.95	6BQ7A	3.95	6FG7	2.90	7AG7	8.40	12CU6		19EA8	3.40
1L6	6.80	5CZ5	4.35	6BR8A	3.65	6FH5	2.55	7AH7	6.40	(See 12BQ6GTB/ 12CU6)		19HS6	2.55
1LA6	6.20	5DH8	5.10	6BS8	3.75	6FH8	3.65	7AU7	2.60	12CX6	2.90	19J6	3.95
1LB4	8.65	5DJ4	2.65	6BU8	2.80	6FM8	3.00	7B4	7.20	12CX6	2.90	19T8	3.50
1LC6	8.30	5EA8	3.15	6BV8	3.15	6FQ7	4.25	7B5	8.85	12D4	2.75	19X8	4.35
1LD5	8.40	5EU8	3.35	6BW4	2.90	6FS5	3.05	7B6	5.60	12DB5	2.75	20EZ7	3.65
1LE3	7.00	5EW6	2.65	6BW8	3.50	6FV6	3.55	7B7	8.10	12DE8	3.30	22BH3	3.05
1LG5	6.80	5FG7	2.75	6BX7GT	4.35	6FV8	3.15	7C5	3.50	12DK6	2.40	22DE4	3.10
1LH4	8.05	5FV8	3.15	6BY5GA	5.10	6FW5	4.10	7C6	7.75	12DK7	2.95	24A	6.60
1LN5	8.15	5GH8	3.95	6BY6	2.50	6FW8*	9.20	7C7	3.60	12DL8	5.80	25AV5GA	4.25
1N2A	4.65	5GM6	2.65	6BY8	2.65	6G6G	7.20	7E7	6.70	12DQ6A*	4.20	25AX4GT	2.90
1N5GT	5.20	5GX6	2.35	6BZ6	2.25	6GB5	3.95	7EY6	3.15	12DQ6B	4.20	25BK5	3.65
1R5	3.05	5J6	2.85	6BZ7	4.00	6GC5	3.20	7F7	7.95	12DQ7	3.45	25BQ6GTB/ 25CU6	4.65
1S4	4.35	5T4	12.10	6BZ8	4.45	6GH8	3.15	7F8	8.75	12DS7	3.95	25C5	2.15
1S5	2.90	5T8	3.40	6C4	1.85	6GJ5	4.55	7G7	6.40	12DT5	3.05	25CA5	3.10
1T4	2.90	5U4G;GB	ea. 2.10	6C5	4.25	6GK5	4.05	7H7	6.40	12DT8	3.80	25CD6GB	5.85
1U4	2.90	5U8	3.30	6C6	8.30	6GK6	2.75	7J7	7.25	12DU7	4.05	25CU6	
1U5	2.65	5V3A	3.85	6C8G	8.55	6GM5	3.20	7K7	8.60	12DV8	3.55	(See 25BQ6GTB/ 25CU6)	
1V	5.85	5V4GA	3.50	6CA4	2.10	6GM6	2.40	7N7	7.55	12DW7	3.25	25DN6	6.80
1V2	2.10	5V6GT	2.40	6CA5	3.15	6GN8	3.70	7Q7	6.20	12DY8	4.60	25EN6	5.70
1X2A; B	ea. 3.05	5X4G	3.35	6CA5A	8.25	6GT5	4.20	7R7	6.65	12DZ6	2.55	25EH5	2.30
2A3	10.50	5X8	3.45	6CB6A	2.25	6GV8	3.30	7V7	4.90	12EA6	2.65	25EH5	2.30
2AF4B	4.05	5Y3GT	1.75	6CD6GA	5.80	6GW6	4.15	7W7	7.00	12EC8	3.60	25L6	8.85
2BN4A	2.55	5Y4GA	2.60	6CE5	2.35	6GW8/ECL86	3.20	7X7	8.10	12ED5	2.85	25L6	8.85
2CW4	4.45	5Y4GT	2.65	6CF6	2.55	6GX6;Y6	ea. 2.30	7Y4	7.15	12EG6	3.20	25L6GT	2.65
2CY5	3.05	5Z3	3.30	6CG7	2.45	6GY8	3.80	7Z4	6.90	12EH5	2.90	25T5	4.60
2D54	4.45	5Z4	8.35	6CG8A	3.30	6GZ5	2.90	8A8	4.05	12EK6	2.90	25Z6GT	3.05
2EN5	3.40	6A7	6.85	6CH8	5.20	6H6	4.00	8A8BA	3.70	12EL6	2.00	27	5.40
2ER5	3.50	6A8	8.50	6CK4	3.00	6HB6	3.10	8BA8A	3.65	12EN6	3.05	32E5	2.20
2FH5	3.05	6A8G*	8.60	6CL6	3.75	6HB7	3.25	8BH8	3.55	12EQ7	2.90	33GV7	6.40
2GK5	4.05	6A8GT	8.60	6CL8A	3.15	6HF8	3.90	8BN8	3.55	12F8	2.75	34GD5	2.10
2GU5	4.35	6AB4	2.15	6CM6	3.30	6HG5	2.15	8B5	3.25	12FK6	2.10	34GD5A	2.10
3A2	4.85	6AN5	8.05	6CM7	2.90	6HJ8	3.30	8C7	2.90	12FM6	2.00	35A5	6.00
3A3	3.40	6A87	8.25	6CM8	4.25	6HM5/6HA5	4.05	8C7G	2.90	12FQ8	3.20	35B5	3.40
3AF4A	4.05	6AC5GT	6.25	6CN7	2.90	6HS6	2.50	8CN7	2.80	12FR8	4.80	35C5	2.15
3AL5	2.05	6AC7	5.10	6CQ4	3.00	6HS8	3.20	8CW5	2.95	12FV7	3.65	35DZ8	3.45
3AU6	2.35	6AD7G	9.40	6CQ8	3.50	6HZ8	4.50	8CX8	3.90	12F8	3.80	35EH5	2.30
3AV6	1.90	6AF3	2.90	6CR6	2.40	6J5;GT	ea. 3.65	8E5	3.75	12GA6	2.55	35L6	2.40
3B2	9.85	6AF4	4.00	6CS7	2.35	6JA6	4.80	8E85	3.45	12GC6	4.20	35L6GT	2.40
3BA6	2.50	6AF4A	4.00	6CS7	2.95	6J7;GT	4.95	8E77	4.40	12GJ5	4.25	35W4	1.10
3BC5	2.35	6AF6G	6.20	6CU6	2.35	6JC8	3.05	8FQ7	2.75	12H6	3.95	35Y4	4.80
3BE6	2.25	6AG5	2.75	(See 6BQ6GTB/ 6CU6)		6JG6	6.05	8GN8	3.75	12J5GT	4.35	35Z3	5.00
3BN4A	3.05	6AG7	6.20	6CU8	4.15	6JH8	4.35	8KA8	3.85	12JGT	7.40	35Z4GT	2.70
3BU8	3.10	6AH4GT	3.45	6CW4	4.45	6JT6	5.10	9A8	3.95	12J8	4.60	35Z5GT	1.85
3BY6	2.60	6AH6	4.70	6CX8	3.85	6JUB	2.95	9AU7	2.80	12J6	5.10	36AM3A	1.60
3BZ6	2.30	6AK5	4.40	6CY5	2.85	6K6GT	2.65	9BR7	3.35	12J6	3.35	41	5.80
3CA3	3.40	6AK6	4.40	6CY7	3.20	6K7;GT	4.95	9CL8	3.15	12K7GT	7.00	42	5.15
3CB6	2.30	(see industrial type)		6CZ5	4.10	6KA8	3.80	10DE7	3.40	12K8	8.70	43	7.60
3CE5	2.35	6AL3	2.75	6D6	7.80	6KUB	5.10	10DR7	4.20	12L6GT	2.75	47	9.15
3CF6	2.70	6AL5	1.85	6DA4	2.70	6KY8	7.70	10EG7	4.60	12Q7GT	5.80	50A5	6.25
3CG6	2.45	6AL7GT	5.75	6DB5	5.30	6KZ8	2.75	10EM7	4.75	12R5	3.10	50B5	2.95
3CY5	3.05	6AM4	5.90	6DC6	3.40	6L6	8.60	10FH8	4.65	12SA7	4.30	50C5	2.15
3DG4	3.40	6AM8A	3.45	6DC8	3.20	6LGC	4.20	11CY7	3.25	12SA7GT	4.30	50DC4	1.90
3DK6	2.40	6AN4	6.55	6DE4	2.85	6L7	7.35	12A8GT	8.85	12SC7	5.50	50EH5	2.30
3DT6A	2.20	6AN8A	4.00	6DE6	2.55	6LF8	3.70	12AB5	3.50	12SF5	4.10	50FE5	3.65
3EA5	2.85	6AQ5A	2.15	6DE7	3.40	6N5	2.20	12AC6	2.50	12SF7	6.60	50FK5	2.30
3ER5	3.50	6AQ6	6.20	6DG6GT	2.55	(See 6AB5/6N5)		12AD6	2.40	12SG7	4.65	50L6GT	2.55
3GK5	4.05	6AQ7GT	4.00	6DK6	2.35	6N7	5.00	12AE6A	2.05	12SH7	5.75	50X6	6.20
3GS8/ 3BU8	3.10	6AR5	2.65	6DN6	7.45	6N7GT	5.00	12AE7	3.75	12SJ7	4.20	50Y6GT	4.60
3LF4	6.40	6AS5	2.40	6DN7	3.50	6N7GT	5.00	12AF3	2.90	12SK7	3.95	50Y7GT	4.50
3Q4	3.55	6AS8	3.80	6DQ5	8.35	6Q7GT	5.65	12AF6	2.75	12SL7GT	3.75	60FX5	2.50
3Q5GT	5.65	6AT6	1.90	6DQ6A*	4.15	6R7	5.45	12AH7GT	5.55	12SN7GTA	2.70	70L7GT	10.15
3S4	3.20	6AT8A	3.80	6DQ6B	4.15	6S4A	2.45	12AJ6	2.55	12ST7	3.75	75	6.80
3V4	2.50	6AU4GTA	3.60	6DS4	4.45	6DR7	7.20	12AL5	1.90	12TQ7GT	5.45	78	7.20
4AU6	2.35	6AU5GT	4.30	6DS5	3.20	6DS4	4.45	12AL8	6.55	12U7	2.65	80	4.20
4AV6	1.85	6AU6A	2.10	6DT5	3.25	6SA7GT	4.30	12AQ5	2.60	12V6GT	2.40	84/6Z4	3.65
4BC5	2.35	6AU8A	3.50	6DT6A	2.15	6SB7Y	6.30	12AT6	1.85	12W6GT	3.00	117L7GT/ 117M7GT	10.15
4BC8	4.05	6AV5GA	4.20	6DT8	3.80	6SC7	4.20	12AT7	3.05	12X4	1.90	117M7GT	10.15
4BL8	2.55	6AV6	1.65	6DW4									



# RCA PICTURE TUBES

June 1, 1964

## RCA SILVERAMA Black & White Picture Tubes

All materials and parts used in the manufacture of RCA Silverama Picture Tubes are new except for the envelope which, prior to re-use, was carefully inspected to meet the standards of the original new envelope.

## RCA COLORAMA Color Picture Tubes

RCA Colorama Picture Tubes contain used materials which, prior to re-use, are carefully inspected to meet RCA's high quality standards.

### RCA SILVERAMA BLACK & WHITE LIST PRICE\* SCHEDULE —

RCA TYPE	OPTIONAL LIST PRICE	RCA TYPE	OPTIONAL LIST PRICE	RCA TYPE	OPTIONAL LIST PRICE	RCA TYPE	OPTIONAL LIST PRICE
5TP4	\$87.00	17BZP4	use 17DSP4	20LP4	use 20HP4E	23AFP4	use 23YP4
7JP4	34.75	17CP4	40.00	20MP4	use 20HP4E	23AHP4	61.00
8DP4	37.50	17CAP4	use 17DSP4	21AP4	64.75	23ALP4	61.00
9QP4A	44.75	17CBP4	use 17BJP4	21ACP4	use 21AMP4B	23ANP4	use 23BLP4
10BP4A	43.00	17CDP4	55.50	21ACP4A	use 21AMP4B	23ASP4	61.00
10BP4C	use 10FP4A	17CFP4	40.00	21AFP4	use 21YP4B	23ATP4	use 23BLP4
10BP4D	use 10FP4A	17CKP4	use 17DSP4	21ALP4	use 21CBP4A	23AUP4	use 23AHP4
10CP4	use 10FP4A	17CLP4	use 17BJP4	21ALP4A	use 21CBP4A	23AVP4	use 23CP4
10EP4	use 10BP4A	17CSP4	44.75	21ALP4B	use 21CBP4A	23AWP4	use 23JP4
10FP4A	45.75	17CWP4	use 17DSP4	21AMP4A	use 21AMP4B	23BDP4	use 23YP4
12JP4	use 12KP4A	17CYP4	50.75	21AMP4B	40.00	23BGP4	68.75
12KP4A	use 12KP4A	17DAP4	53.25	21ANP4	use 21CBP4A	23BHP4	use 23BGP4
12LP4A	use 12KP4A	17DKP4	44.75	21ANP4A	use 21CBP4A	23BJP4	61.00
12LP4C	use 12KP4A	17DLP4	use 17DSP4	21AQP4	use 21AMP4B	23BKP4	use 23BLP4
12QP4	use 12KP4A	17DQP4	44.00	21AQP4A	use 21AMP4B	23BLP4	70.50
12QP4A	use 12KP4A	17DRP4	52.50	21ASP4	use 21XP4A	23BNP4	use 23CP4
12TP4	use 12KP4A	17DSP4	44.00	21ATP4	use 21CBP4A	23BQP4	use 23BP4
12ZP4	use 12KP4A	17DTP4	use 17DKP4	21ATP4A	use 21CBP4A	23BTP4	23YP4
12ZP4A	use 12KP4A	17DXP4	44.00	21ATP4A	use 21CBP4A	23BVP4	use 23YP4
14ATP4	42.00	17DXP4	use 17DXP4	21AUP4	use 21AVP4C	23CP4	68.75
14BP4	use 14EP4	17GP4	44.00	21AUP4A	use 21AVP4C	23CBP4	70.50
14BP4A	use 14EP4	17HP4B	use 17HP4C	21AUP4B	use 21AVP4C	23CQP4	61.00
14CP4	use 14EP4	17HP4C	37.25	21AVP4B	use 21AVP4C	23DAP4	64.75
14CP4A	use 14EP4	17JP4	use 17BP4D	21AVP4C	45.75	23DBP4	61.00
14DP4	use 14EP4	17LP4A	use 17LP4B	21AVP4C	use 21AVP4C	23DLP4	use 23ENP4
14EP4	42.00	17LP4B	36.25	21AWP4A	45.75	23EP4	68.75
14HP4	use 14QP4B	17LP4B	36.25	21AYP4	use 21XP4A	23ENP4	63.00
14NP4	use 14WP4	17QP4A	use 17QP4B	21BAP4	use 21CBP4A	23FBP4	56.75
14NP4A	use 14WP4	17QP4B	37.25	21BNP4	use 21CBP4A	23FP4A	61.00
14QP4A	use 14QP4B	17RP4	use 17HP4C	21BSP4	use 21AMP4B	23GP4	use 23CP4
14QP4B	use 14QP4B	17RP4C	use 17HP4C	21BTP4	use 21CBP4A	23HP4	use 23CP4
14RP4	44.00	17TP4	31.50	21CBP4A	40.00	23JP4	68.75
14RP4A	use 14WP4	17UP4	use 17QP4B	21CEP4	use 21DFP4	23KP4	use 23FP4A
14SP4	use 14WP4	17VP4	use 17LP4B	21CEP4A	use 21DFP4	23KP4A	use 23FP4A
14WP4	46.75	17VP4B	use 17LP4B	21CMP4	use 21CBP4A	23MP4	use 23FP4A
14ZP4	use 14WP4	17YP4	use 17QP4B	21CQP4	51.50	23MP4A	use 23FP4A
16AP4A	41.25	19AP4B	55.25	21CQP4	use 21AMP4B	23NP4	61.00
16AYP4	45.75	19ABP4	55.25	21CVP4	use 21CBP4A	23UP4	use 23CBP4
16CP4	use 16LP4A	19AFP4	use 19AUP4	21CWP4	use 21CBP4A	23WP4	use 23FP4A
16DP4A	28.75	19AHP4	49.50	21CXp4	use 21DSP4	23XP4	use 23YP4
16GP4B	40.50	19ACP4	use 19CHP4	21CZP4	use 21DEP4A	23YP4	68.75
16KP4	use 16RP4A	19AJP4	49.50	21DAP4	use 21DEP4A	24ADP4	use 24CP4B
16KP4A	use 16RP4A	19AUP4	59.25	21DEP4A	51.50	24AEP4	67.25
16LP4A	32.50	19AVP4	49.50	21DFP4	51.50	24AHP4	71.75
16QP4	use 16RP4A	19AXP4	use 19AYP4	21DHP4	48.25	24ALP4	use 24AHP4
16RP4A	44.00	19AYP4	49.50	21DLP4	45.75	24ANP4	use 24EP4
16SP4A	use 16WP4A	19BDP4	49.50	21DMP4	use 21FAP4	24ATP4	84.75
16TP4	44.00	19BLP4	use 19AVP4	21DNP4	use 21CBP4A	24AUP4	67.25
16UP4	use 16RP4A	19BTP4	49.50	21DQP4	use 21DLP4	24AVP4	use 24BEP4
16VP4	use 16WP4A	19BVP4	use 19AVP4	21DSP4	45.75	24BAP4	90.75
16WP4A	47.75	19BWP4	use 19AYP4	21EP4B	use 21EP4C	24BEP4	84.75
16XP4	use 16RP4A	19CFP4	use 19CHP4	21EP4C	45.75	24CP4A	use 24CP4B
16YP4	use 16WP4A	19CHP4	49.50	21EMP4	use 21FDP4	24CP4B	67.25
16ZP4	use 16LP4A	19CMP4	use 19CHP4	21EQP4	51.50	24DP4	use 24AEP4
17AP4	use 17BP4D	19DQP4	53.50	21ESP4	use 21FAP4	24DP4A	use 24AEP4
17ATP4	use 17BJP4	19DWP4	use 19DQP4	21EVP4	62.00	24QP4	use 24CP4B
17ATP4A	use 17BJP4	19XP4	use 19AVP4	21FAC	use 21FFP4D	24TP4	use 24CP4B
17AVP4	use 17BJP4	19YP4	use 19BTP4	21FFP4D	45.75	24VP4	use 24CP4B
17AVP4A	use 17BJP4	19ZP4	use 19AVP4	21FAP4	51.50	24VP4A	use 24CP4B
17BP4B	use 17BP4D	20CP4	use 20DP4D	21FDP4	62.00	24XP4	use 24CP4B
17BP4D	37.25	20CP4A	use 20DP4D	21FLP4	use 21CBP4A	24YP4	use 24AEP4
17JP4	40.00	20CP4B	use 20DP4D	21MP4	67.75	24ZP4	use 24AEP4
17BRP4	use 17DSP4	20CP4C	use 20DP4D	21XP4A	47.25	27EP4	use 27RP4A
17BP4	use 17BJP4	20CP4D	use 20DP4D	21YP4A	47.25	27GP4	use 27RP4A
17BP4A	use 17CSP4	20DP4C	use 20DP4D	21YP4B	use 21YP4B	27MP4	114.25
17BWP4	use 17CSP4	20HP4	51.50	21ZP4B	39.25	27NP4	use 27RP4A
17BWP4	use 17CSP4	20HP4E	use 20HP4E	21ZP4C	use 21ZP4C	27RP4	use 27RP4A
			51.50	21ZP4C	39.25	27RP4A	111.50

### RCA COLORAMA PICTURE TUBES LIST PRICE\* SCHEDULE —

RCA TYPE	OPTIONAL LIST PRICE	RCA TYPE	OPTIONAL LIST PRICE	RCA TYPE	OPTIONAL LIST PRICE
15GP22	Price on Request	21CYP22	use 21CYP22A	21FJP22	147.00
21AXP22	use 21AXP22A	21CYP22A	\$120.00	21FKP22	use 21FJP22
21AXP22A	130.00	21FBP22	130.00		

\*Optional. Prices include Federal Excise tax where applicable. All prices subject to change or withdrawal without notice.



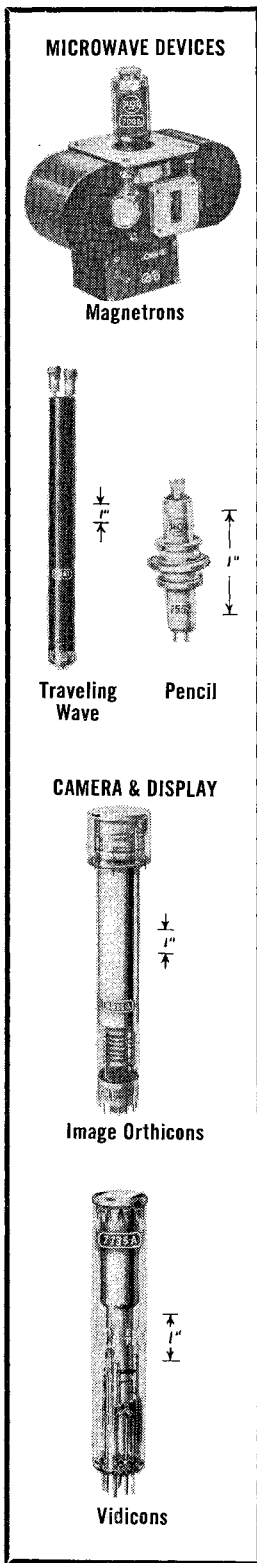
# RCA ELECTRON TUBES

FOR INDUSTRY AND COMMUNICATIONS

RESALE PRICE SCHEDULE • AUGUST 1, 1964

## POWER/MICROWAVE/PHOTOSENSITIVE/CAMERA/DISPLAY/INDUSTRIAL RECEIVING

RCA Type	Dist. Resale Price Optional	RCA Type	Dist. Resale Price Optional	RCA Type	Dist. Resale Price Optional	RCA Type	Dist. Resale Price Optional
<b>RCA POWER TUBES</b>				7870	\$95.00	<b>RCA THYRATRONS</b>	
<b>RCA VACUUM POWER TUBES FOR CW APPLICATIONS</b>				8000	24.40	<b>TRIODES</b>	
2C39A	\$20.75	8121	25.90	(Mercury-Vapor Types)—			
2C39WA	25.00	8122	31.60	For Control Service			
2C40	29.30	8165/4-65A	27.00	(except as noted)			
2C40A	34.00	8166/4-1000A	132.00	3C23	\$11.98	<b>RCA PHOTOJUNCTION CELLS</b>	
2C43	26.95	8170/4CX1000A	181.00	627	31.50	4420	6.40
2E24	5.85	8170/4CX5000A	495.00	676	63.80	SQ2516	10.00
2E26	3.75	8226	83.00	677	63.80	<b>RCA PHOTOVOLTAIC CELLS</b>	
4-125A/4D21	36.00	8239/3X3000F1	215.00	710/6011	13.00	SL2205	10.30
4-250A/5D22	46.50	8437	1950.00	714/7021	9.50	SL2206	14.30
4E27A/5-125B	45.00	8438/4-400A	48.00	716/6855	12.50	<b>RCA PHOTOTUBES</b>	
4X500A	128.50	<b>RCA VACUUM POWER TUBES FOR RF-PULSE APPLICATIONS</b>		760/6858	28.10	<b>SINGLE- AND TWIN-UNIT TYPES — Gas Types</b>	
9C21	1,610.00	2C40A	34.00	5557	9.50	1P29	5.60
9C25	1,690.00	2041	7825.00	5559	23.00	1P37	4.50
207	330.00	4605V2	8090.00	5563A	50.00	1P40	3.45
801A	13.00	4612	63,890.00	<b>TRIODES (Gas Types)—</b>			
802	13.00	4616	11,225.00	For Control Service			
805	22.10	4617	57,225.00	(except as noted)			
807	3.00	4622	70.00	3D22A	28.00	1P41	3.75
809	8.15	4622	70.00	629	18.25	868	4.45
810	26.95	4622	70.00	6130/3C45	14.00	918	5.25
811A	6.90	4622	70.00	C1K/6014	13.10	920	6.25
812A	6.90	4622	70.00	C3J/5632	13.80	921	3.45
813	23.15	4622	70.00	C3JA/5684	14.50	923	3.15
814	28.35	4622	70.00	C3JL	15.25	927	3.60
815	28.35	4622	70.00	C6J/5C21	28.10	928	6.60
827R	370.00	4622	70.00	C6JA/5685	29.00	930	3.65
828	32.95	4622	70.00	C16J/5665	52.50	4409	5.00
829B	19.00	4622	70.00	<b>TETRODES</b>			
832A	15.90	4622	70.00	(Mercury-Vapor Types)—			
833A	53.65	4622	70.00	For Control Service			
834	21.70	4622	70.00	(except as noted)			
837	10.60	4622	70.00	105	59.00	6405/1640	7.85
845	25.00	4622	70.00	172	122.00	6953	4.45
880	660.00	4622	70.00	632B	33.00	<b>SINGLE AND TWIN-UNIT TYPES — Vacuum Tubes</b>	
889A	235.00	4622	70.00	672A	39.85	1P39	2.10
889RA	430.00	4622	70.00	5560	33.00	1P42	13.95
891	342.00	4622	70.00	<b>RCA HARD-TUBE MODULATORS</b>			
891R	540.00	4622	70.00	3E29	21.35	917	7.00
892	342.00	4622	70.00	4610	21.35	919	7.15
892R	535.00	4622	70.00	6293	5.95	922	3.30
1624	6.80	<b>RCA VACUUM POWER TUBES FOR SPECIAL APPLICATIONS</b>		<b>RCA MICROWAVE TUBES</b>			
1625	4.75	3C33	29.30	<b>RCA MAGNETRONS</b>			
2029	7875.00	4600A	330.00	(For Pulsed-Oscillator Service)			
4602	P	4614	310.00	6521	700.00	925	4.15
4604	8.00	<b>RCA RECTIFIERS VACUUM TYPES — Half-Wave Types</b>		7008	1110.00	926	3.75
4615	75.00	2X2A	3.35	6865-A	1,590.00	929	2.10
5556	39.00	579B	20.50	4011-A	1,585.00	934	4.15
5671	1,760.00	836	11.10	<b>RCA TRAVELING-WAVE TUBES</b>			
5713	340.00	1616	14.15	4012	1,425.00	935	11.90
5762/7C24	230.00	5825	22.90	4013	1,425.00	5652	6.25
5770	1,250.00	8013A	17.05	4015	3160.00	5653	2.80
5771	675.00	8020	15.00	4017	1340.00	6570	9.00
5786	220.00	<b>MERCURY-VAPOR TYPES — Half-Wave Types (except as noted)</b>		4019	1725.00	7043	4.40
6146	4.35	575A	20.15	4020	2845.00	<b>RCA MULTIPLIER PHOTOTUBES</b>	
6146A	4.35	604/7014	11.80	4021	2635.00	1P21	54.50
6146B/8298A	5.20	615/7018	9.75	6861	955.00	1P22	15.80
6146W/7212	6.75	635/7019	13.00	7642	1265.00	1P28	21.60
6155	36.00	635L/7020	13.50	<b>RCA PENCIL TUBES</b>			
6156	46.50	673	20.15	4037	20.50	1P29	12.40
6159	4.80	816	2.95	4046	58.00	2020	85.00
6159W/7357	6.90	857B	218.50	5675	8.95	2067	155.00
6161	125.00	866A	2.65	5876	8.60	4438	105.00
6166	735.00	869B	138.00	5876A	23.10	4439	105.00
6166A/7007	1,020.00	872A	9.90	5893	20.75	4440	105.00
6524	19.30	5558	17.50	6173	13.35	4441	155.00
6806	69.75	5561	59.00	6263A	13.05	4411A	320.00
6816	52.90	6894	25.00	6264A	13.85	4459	490.00
6850	19.30	6895	25.00	6562/5794A	6.80	4460	205.00
6883	4.45	8008	9.90	7533	6.80	4461	260.00
6883B/8032A/8552	5.40	<b>GAS TYPES — Half-Wave Types</b>		7552	47.70	4463	310.00
6884	60.00	3B25	8.50	7553	57.10	4464	340.00
6893	4.15	3B28	6.00	7554	46.10	4465	340.00
6897	32.15	<b>RCA IGNITRONS</b>		<b>RCA PHOTOSENSITIVE TUBES &amp; DEVICES</b>			
7034/4X150A	25.00	5550	49.00	<b>RCA PHOTOCONDUCTIVE CELLS</b>			
7035/4X150D	27.90	5551A	65.00	SQ2500	1.55	7029	605.00
7094	32.25	5552A	99.00	SQ2501	2.85	7046	570.00
7203/4CX250B	35.75	5553B	245.00	SQ2502	2.85	7102	110.00
7204/4CX250F	39.35	<b>RCA VACUUM POWER TUBES FOR RF-PULSE APPLICATIONS</b>		SQ2504	1.55	7117	12.65
7213	465.00	2C40A	34.00	SQ2505	1.50	7200	205.00
7271	27.70	2041	7825.00	SQ2506	1.65	7264	265.00
7457	65.25	4605V2	8090.00	SQ2508	1.90	7265	375.00
7580	45.05	4612	63,890.00	SQ2509	1.00	7326	410.00
7650	290.00	4616	11,225.00	SQ2514	13.20	7746	200.00
7801	95.00	4617	57,225.00	4402	2.30	7764	125.00
7842	65.25	4622	70.00	4403	1.50	7767	120.00
7843	52.50	4622	70.00	4404	1.45	7850	240.00
7844	52.00	4622	70.00	4413	2.65	8053	107.25
		4622	70.00	4423	1.65	8054	125.00
						8055	170.00



F—Price and Delivery on Request

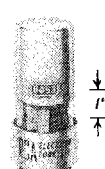

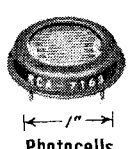
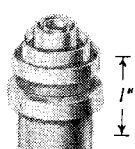
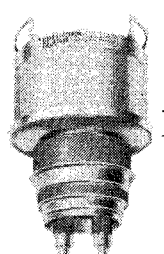
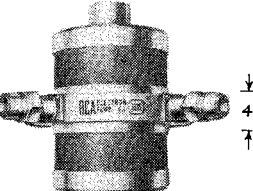


# RCA ELECTRON TUBES

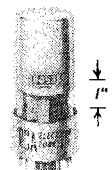
FOR INDUSTRY AND COMMUNICATIONS

RESALE PRICE SCHEDULE • AUGUST 1, 1964

## POWER/MICROWAVE/PHOTOSENSITIVE/CAMERA/DISPLAY/INDUSTRIAL RECEIVING

RCA Type	Dist. Resale Price Optional	RCA Type	Dist. Resale Price Optional	RCA Type	Dist. Resale Price Optional	RCA Type	Dist. Resale Price Optional
<b>RCA CAMERA &amp; DISPLAY TUBES</b>		<b>MONITOR KINESCOPIES</b>		1C21	\$4.15	Miniature:	
RCA IMAGE ORTHICONS		7TP4	\$75.80	991	.87	6J4	\$4.19
8092-A	\$1,870.00	8HP4	48.30	5651	1.78	6J4WA	5.60
8093-A	1,320.00	8NP4	24.70	5651A	1.78	6J6WA	5.35
7293-A	1,300.00	8QP4	35.05	5651WA	3.80	6664/6AB4	1.12
5820-A	1,100.00	14BAP4	36.25	5823	1.72	9002	4.14
7513	1,320.00	17DWP4	37.30	6072	3.90	Nuvistor:	
7513/V1*	1,400.00	21EYP4	31.85	6073	3.00	7586	3.35
4401/V1	1,320.00			6073/0A2	3.35	7895	3.35
4414/7611	1,620.00	<b>PROJECTION KINESCOPIES</b>		6074	3.45	8056	5.00
4415**	1,400.00	5AZP4	127.00	6074/0B2	3.70	8058	13.25
4416**	1,400.00	7NP4	1,085.00	6626/0A2WA	3.35	8203	3.80
7295-B	1,440.00	7WP4	1,110.00	<b>Pentodes</b>		8393	3.60
7389-B	1,440.00	<b>FLYING-SPOT CATHODE-RAY TUBES</b>		<b>Subminiature:</b>		<b>Acorn:</b>	
7629-A	1,700.00	5AUP24	150.00	5636	6.10	6F4	13.10
		5WP15	99.40	5639	5.25	6L4	8.40
		5ZP16	92.25	5840	5.35	955	7.05
		4452	90.00	5899	5.55	<b>Twin Diodes</b>	
				6205	6.40	5726	1.55
				6206	7.25	5726/6AL5W	1.55
						5726/6AL5W/6097	1.55
						5896	3.80
						6663/6AL5	.98
						6887	1.25
						7055	1.00
<b>RCA MONOSCOPES</b>		<b>STORAGE TUBES</b>		<b>Miniature:</b>		<b>TWIN PENTODES</b>	
2F21	275.00	<b>COMPUTER STORAGE TUBE</b>		1L4	1.37	6939	11.90
1699	p	<b>Primary-Current-Modulation Type</b>		3A4	1.25	<b>TWIN TRIODES</b>	
		6571	77.95	6AK6	1.40	3A5	2.03
				6AS6	3.43	6AS7G	4.93
				6AU6WA	2.70	12AT7WA	2.53
				6AU6WB	2.70	12AT7WB	2.53
				26A6	3.70	12SX7GT	2.53
				5618	6.75	1635	3.82
				5654	2.41	5670	2.45
				5654/6AK5W	2.45	5670WA	2.45
				5654/6AK5W/6096	4.35	5687	4.05
				5725	3.15	5691	8.75
				5749	2.20	5692	8.25
				5749/6BA6W	2.20	5751	2.55
				5847/404A	9.55	5751WA	2.55
				6136	2.70	5814A	2.35
				6186	3.85	5814WA	2.40
				6186/6AG5WA	3.85	5842/417A	7.35
				6189/12AU7WA	3.70	5963	1.36
				6197	2.30	5964	1.55
				6660/6BA6	1.08	5965	1.92
				6661/6BH6	1.39	6021	3.50
				6662/6BJ6	1.34	6072	3.90
				6676/6CB6A	1.16	6080	5.33
				6677/6CL6	1.86	6080WA	10.80
				7054	1.54	6082	5.60
				7056	1.02	6101	5.35
				8077/7054	1.53	6101/6J6WA	5.35
				9001	5.38	6111	3.70
				9003	5.38	6112	4.15
						6189/12AU7WA	3.70
						6201	2.95
						6211	2.15
						6336A	19.04
						6350	1.85
						6386	7.38
						6679/12AT7	1.53
						6680/12AU7A	1.26
						6681/12AX7A	1.29
						6922	4.87
						7044	2.70
						7057	1.95
						7058	1.29
						7898	1.34
						<b>TWIN DIODE TRIODES AND TRIODE PENTODES</b>	
						12SW7	1.49
						26C6	3.05
						6678/6U8A	1.67
						7059	1.72
						7060	1.85
						<b>MISCELLANEOUS TYPES</b>	
						2K26	65.00
						12SY7	2.67
						26D6	3.05
						1612	5.77
						1629	1.86
						5734	22.05
						5750	3.45
						5915	1.62
						6550	4.59
						7724/14GT8	1.48
<b>RCA CATHODE-RAY TUBES OSCILLOGRAPH TYPES</b>		<b>RECEIVING TYPE TUBES FOR INDUSTRY AND COMMUNICATIONS</b>		<b>Acorn:</b>		<b>PHOTOSENSITIVE</b>	
1EP1	25.75	<b>Beam Deflection</b>		959	13.85		
1EP11	28.10	7360	3.77	<b>Other Air-Cooled Types:</b>		<b>Multiplier</b>	
2AP1-A	17.70	<b>Beam Power Subminiature:</b>		6AC7W	4.20		
2BP1	20.15	5902	4.80	6AG7Y	2.80	<b>Phototubes</b>	
2BP11	21.60	<b>Miniature:</b>		1613	3.00		
3AP1-A	22.75	5686	3.37	1620	7.55	<b>Photocells</b>	
3AQP1	23.10	5763	2.53	1621	3.50		
3BP1-A	18.50	6005	3.93	5693	6.60	<b>Small</b>	
3JP1	23.20	6005/6AQ5W	3.95	<b>Rectifiers</b>			
3KP1	21.90	6005/6AQ5W/6095	3.95	<b>Vacuum:</b>		<b>Large</b>	
3RP1	13.20	6417	3.04	83	1.89		
3RP1-A	23.35	6669/6AQ5A	1.12	5R4GYB	2.03	<b>Super</b>	
3WP1	28.30	7061	1.29	6X4W	1.60		
5ABP1	34.00	7551	3.49	5642	3.82		
5ADP1	34.00	7558	3.49	<b>Tetrapodes</b>			
5BP1-A	35.05	7905	3.85	<b>Nuvistor:</b>			
5CP1-A	24.30	<b>Other Air-Cooled Types:</b>		7587	5.20		
5UP1	13.25	12A6	3.36	<b>Thyratrons</b>			
5UP7	26.25	1614	4.93	<b>Gas:</b>			
7MP7	40.45	1619	5.67	2D21	1.29		
7VP1	25.30	1622	4.85	2D21W	2.90		
7VP31	24.85	1631	3.43	884	2.28		
902-A	21.45	<b>Diodes, Misc.</b>		502A	2.28		
		9005	8.05	2050	2.37		
		9006	2.70	2050A	2.21		
		<b>Glow-Discharge</b>		5696	2.05		
		0A2	1.32	5727	2.90		
		0A3	1.54	5727/2D21W	2.90		
		0A3A	1.54	6012	7.65		
		0A4G	1.86	<b>Triodes</b>			
		0B2	1.37	<b>Subminiature:</b>			
		0C2	1.50	5718	3.65		
		0C3	1.50	5719	3.15		
		0C3A	1.50	6814	5.90		
		0D3	1.44				
		0D3A	1.44				

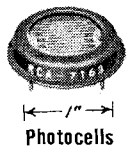
**PHOTOSENSITIVE**



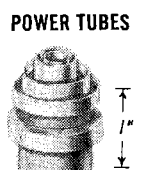
Multiplier



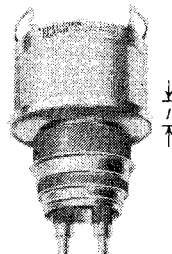
Phototubes



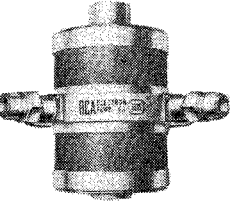
Photocells



Small



Large



Super

\*Available in matched sets of three

\*\*Available as matched set of three—two 4415's, one 4416

P—Price and Delivery on Reque

## SYLVANIA INDUSTRIAL PRODUCTS

Type	Sugg. User Price	Type	Sugg. User Price	Type	Sugg. User Price	Type	Sugg. User Price	Type	Sugg. User Price
*OA2	\$ 1.32	6AS7G	\$4.93	GB-1219/5670	\$3.70	*5840	\$ 5.85	6879	\$13.37
GB-OA2WA	3.35	*6AU6WA	2.70	GB-1220/5654	3.05	*5840A	5.85	*6883	4.45
OA3	1.54	*6AU6WB	2.70	1222A	2.45	5845	9.95	*6883A	4.45
*OA4G	1.86	6BA6W (See		1229	5.35	5879	1.95	6897	32.15
OA5	6.96	5749/6BA6W)		GB-1252/6U8A	2.00	5881	3.50	6909	11.43
*OB2	1.37	*6BF7W	4.20	SY1301	198.00	5894	25.00	6910	13.37
*OB2WA	2.40	*6C4W	1.55	SY1301A	248.00	*5896	4.15	6922	4.95
GB-OB2WA	2.40	*6C4WA	3.15	1500T	320.00	*5896A	4.15	6939	12.45
*OB3	2.35	*6D4	2.85	1616	13.90	*5899	6.05	*6943	11.10
*OC3	1.50	6DJ8 (Receiving Type)		1624	6.25	*5899A	6.05	*6944	11.10
*OD3	1.44	6J4	4.19	2050	2.37	*5902	5.25	*6945	11.10
OZ4A	1.20	*6J4WA	5.60	2050A	2.21	*5902A	5.25	*6946	10.85
VG1A	32.60	GB-6J4WA	5.60	CT4251	11.10	*5903	7.45	*6947	11.35
C1K/6014	12.90	C6J/A/5685	X	SYT-4260	1065.00	*5904	7.90	*6948	11.35
1P39	2.10	*6J6WA	5.35	SYT-4260C	1100.00	*5905	8.40	6973 (t)	
1P40	3.45	6J7 (See 1620/6J7)		SYT-4261	1065.00	*5906	8.40	(Receiving Type)	
2-01C	18.00	*6SJ7WGT	2.70	SYT-4267	1065.00	*5907	8.40	6977	2.50
2-25A	24.00	*6SL7WGT	3.15	SYT-4268	1065.00	*5908	9.80	7006	1110.00
2-150D	44.50	GB-6SL7WGT	3.15	SYT-4268C	1100.00	5916	9.80	7007	1020.00
*2C36	36.90	*6SN7WGT	2.35	SYT-4273	1250.00	*5931	6.80	7025 (t)	
2C37	37.50	GB-6SN7WGT	2.35	SYT-4273C	1285.00	GB-5931	6.80	(Receiving Type)	
2C39A	20.75	*6SN7WGTA	4.90	SYT-4278	1250.00	*5932	11.30	7034/4X150A	25.00
2C39B	32.15	*6V6GTY	1.45	SYT-4278C	1285.00	GB-5932	11.30	7035/4X150D	27.90
2C39WA	32.00	*6X4W	1.60	SYT-4281	1250.00	*5933	12.35	7044	3.20
2C40	29.30	*6X4WA	2.85	SYT-4282	1250.00	GB-5933	12.35	*7054	1.45
2C43	26.95	GB-6X4WA	2.85	5530	402.00	*5933WA	16.50	*7055	1.00
2C51	3.65	*6X5WGT	1.55	5530-H	402.00	5934	22.00	*7056	1.20
2D21	1.25	GB-6X5WGT	1.55	5531	795.00	*5963	1.34	*7057	1.95
2D21W (See		*7AK7	8.15	5541	670.00	5964	1.54	*7058	1.30
5727/2D21W)		GB-7AK7	8.15	5551A/652	65.00	5965	1.95	*7059	1.75
2E24	5.20	*7F8W	7.05	5552A	99.00	5966	42.00	*7060	2.05
2E26	3.75	PCK-10	9.95	5557†	9.50	*5977	6.55	*7061	1.30
*2J42	185.00	*12AT7WA	2.55	5558	17.50	*5977A	6.55	*7137	7.10
2X2A	3.35	*12AT7WB	2.55	5559†	23.00	*5987	11.10	7155	13.37
3-400Z (See		12AU7WA (See		5560/FG95†	33.00	5996	210.00	*7167	1.45
8163/3-400Z)		6189/12AU7WA)		5575/100	225.00	GB-6005	3.95	7199 (t)	
3A5	2.03	12AY7	2.45	5576/200	245.00	*6005/6AQ5W	3.95	(Receiving Type)	
3B28	6.00	C16J/5665	52.50	5604	570.00	6005/6AQ5W/		7203/4CX250B	39.00
3C23	11.98	RX21A	25.75	5606	305.00	6095	3.95	7204/4CX250F	39.00
3CPN10A5 (See		25T	28.50	5632 (See C3J/5632)		6011/710	13.00	*7258	2.75
7815/3CPN10A5)		*28D7	4.95	*5636	6.75	6012	7.65	7289/3CX100A5	31.00
3CX100A5 (See		S28D7	4.95	*5636A	6.75	6014 (See C1K/6014)	7.35	7325	185.00
7289/3CX100A5)		*28D7W	10.75	*5639	6.55	*6021	3.50	GB-7327	12.45
3E29	20.85	FG-95 (See 5560/		*5639A	6.55	*6021A	3.50	GB-7550	13.25
C3J/5632	X	FG-95)		*5641	7.55	6027	160.00	7738	2.80
C3J/A/5684	X	100 (See 5575/100)		*5641A	7.55	*6028	4.95	*7759	7.35
3W5000F3 (See		100TH	23.50	5642 (t)		*6080	5.33	*7760	15.25
8243/3W5000F3)		102A	174.00	(Receiving Type)		GB-6080	5.33	*7761	7.40
3X2500A3 (See		200 (See 5576/200)		*5643	9.05	*6080WA	10.80	*7762	7.40
8161/3X2500A3)		250TH	38.50	*5644	9.90	6097 (See 5726/		7803	2.55
3X2500F3 (See		304TH	75.00	*5644A	9.90	6AL5W/6097)		7815/	
8251/3X2500F3)		304TL	75.00	*5647	8.65	GB-6101	5.35	3CPN10A5	32.00
3X3000A1	210.00	GB-407A	5.90	*5647A	8.65	*6110	8.05	*7887	6.70
3X3000F1 (See		GB-408A	4.95	5651	1.90	*6111	5.05	*7888	5.25
8239/3X3000F1)		450TL	85.00	*5651WA	3.75	*6111A	5.05	*7889	6.70
4-65A (See		481B	10.90	GB-5654	2.45	*6112	4.10	7962	7.50
8165/4-65A)		502A	2.30	*5654/6AK5W	2.45	*6112A	4.10	7963	7.50
4-125A	36.00	575A†	20.15	5658	660.00	*6135	2.40	8008	9.90
4-250A	46.50	579B	20.50	5665 (See		GB-6135	2.40	8035	11.10
4-400A	48.00	592/3-200A3	46.00	C16J/5665)		GB-6136	2.90	*8064	7.50
4-1000A (See		604	11.80	5667 (889RA)†	430.00	*6146A	4.35	8070	7.50
8166/4-1000A)		604L	13.00	5668	350.00	6146B/8298A	5.20	8071	7.50
4CX250B (See		SYT-620B	650.00	5669	515.00	*6159	4.80	8100	1.40
7203/4CX250B)		615	9.75	*5670	2.45	*6159A	4.80	8103	7.50
4CX250F (See		627	31.50	GB-5670	2.45	GB-6186	3.85	8142	1.40
7204/4CX250F)		629	18.25	*5670WA	2.45	*6186/6AG5WA	3.85	8143	1.40
4CX250K (See		632B	33.00	5684 (See		GB-6189	3.70	8161/	
8245/4CX250K)		635	13.00	C3J/A/5684)		*6189/12AU7WA	3.70	3X2500A3	200.00
4CX250M (See		635L	13.50	5685 (See		*6197	2.48	8163/3-400Z	34.00
8246/4CX250M)		642	17.00	C6J/A/5685)		GB-6201	2.55	8165/4-65A	27.00
4CX300A (See		652 (See 5551A/652)		GB-5687	4.00	*6205	5.90	8166/4-1000A	131.50
8167/4CX300A)		672A	39.85	*5687WA	5.66	*6205A	5.90	8167/4CX300A	58.50
4CX1000A (See		673	20.15	*5692	8.25	*6206	8.00	8168/	
8168/4CX1000A)		678	49.50	5693	6.60	*6206A	8.00	4CX100A	181.00
4CX5000A (See		710 (See 6011/710)		5696	2.05	6211	1.95	8170/	
8170/4CX5000A)		760	28.10	*5718	4.00	*6216	4.15	4CX5000A	495.00
4E27A/5-125B	45.00	760L	29.40	*5718A	4.00	6257	330.00	8173/	
4PR60B (See		807†	3.00	*5719	3.50	*6308	8.25	4W20,000A	1950.00
8252/4PR60B)		810	26.95	*5719A	3.50	6350	1.85	8186	10.75
4W300B (See		811A	6.90	5722	6.60	*6352	9.85	8210	10.75
8249/4W300B)		812A	6.90	GB-5725	3.15	*6360	4.95	8239/	
4W20,000A (See		813	23.15	*5725/6AS6W	3.15	6421	525.00	3X3000F1	220.00
8173/4W20,000A)		815	28.35	GB-5726	1.55	6421 F	545.00	8243/	
4X150A (See		816	2.95	*5726/6AL5W	1.55	6423-F	605.00	3W2500F3	250.00
7034/4X150A)		828	32.95	*5726/6AL5W/		6425-F	675.00	8245/4CX250K	64.00
4X150D (See		829B	19.00	6097	1.55	6476A	14.95	8246/4CX250M	92.50
7035/4X150D)		832A	15.90	GB-5727	2.90	6481	30.25	8249/4W300B	57.00
4X250B	35.75	833A†	53.65	*5727/2D21W	2.90	6483	3.09	8251/	
4X500A	127.50	866A	2.65	5736	205.00	6503	60.50	3X2500F3	205.00
5C21 (See C6J/5C21)		869B†	138.00	GB-5749	2.20	6550	4.95	8252/4PR60B	107.00
5R4GYB	2.03	872A	9.90	*5749/6BA6W	2.20	*6660/6BA6	1.01	8298A (See 6146B/	
*5Y3WGTA	4.05	884	2.28	GB-5750	3.45	*6661/6BH6	1.34	8298A)	
GB-5Y3WGTA	4.05	889RA (See		*5750/6BE6W	3.45	*6662/6BJ6	1.29	8345	1.40
GAD4 (t)	3.70	5667/889RA)		*5751	2.55	*6663/6AL5	.92	8346	1.40
*GAH6WA	9.15	921	3.50	GB-5751	2.55	*6669/6AQ5A	1.06	8347	1.40
*GAJ5	3.85	922	3.25	*5751WA	2.55	*6676/6CB6A	1.06	8353	11.10
6AK5W (See		923	3.40	*5763	2.53	*6677/6CL6	1.85	9001	5.40
5654/6AK5W)		927	4.25	5767	30.25	*6678/6U8A	1.62	9003	5.40
6AL5W (See		929	2.35	*5768	31.15	*6679/12AT7	1.50	70780	.65
5726/6AL5W)		930	3.65	5796	17.25	*6680/12AU7	1.22	7460-0008	1.20
*6AN5WA	10.80	931A	12.15	*5814A	2.35	*6681/12AX7	1.26		
6AQ5W (See		1000T	169.00	GB-5814A	2.35	*6788	10.85		
6005/6AQ5W)		R1111	12.70	*5814WA	2.35	6802	15.70		
6AS6	3.43	R1111M	26.00	5820A	1100.00	6807	29.40		
6AS6W (See		1218A	5.00	*5823	1.72	*6832	20.65		
5725/6AS6W)									

## KLYSTRONS

SK-113	\$195.00
SK-114	195.00
SK-115	195.00

**SYLVANIA INDUSTRIAL PRODUCTS**

Type	Sugg. User Price	Type	Sugg. User Price	Type	Sugg. User Price	Type	Sugg. User Price	Type	Sugg. User Price
<b>KLYSTRONS (con't.)</b>		S840	\$ 20.40	5ABP11	\$40.80	5DLP4	\$ 33.65	10SP4	\$ 77.25
SK-220A-G	\$140.00	S841	20.40	5ABP11A	43.75	5FP4A	31.15	10VP7	83.80
SK-220Z	315.00	S844	20.40	5ABP31A	43.75	*5FP7A	32.95	10VP15	83.80
SK-221A	160.00	S852	17.00	*5ADP1	37.85	5FP11A	39.55	10WP7	36.60
SK-221B-G	145.00	R4350	29.70	5ADP1A	40.75	*5FP14A	32.25	10WP7A	38.00
SK-221H	205.00	<b>Flash Tubes</b>		*5ADP2	37.85	5RP1A	169.70	10WP14	60.90
SK-221K	160.00	FT118	9.00	5ADP2A	40.75	5RP2A	169.70	10WP14A	70.90
SK-222A-G	145.00	FT218	9.10	5ADP7	40.20	5RP4A	169.70	10WP19	60.90
SK-222Z	320.00	R4306	9.90	*5ADP7A	40.80	5RP5A	169.70	10WP19A	70.90
SYK-720A-G	145.00	R4307	5.60	5ADP11	40.80	5RP7A	169.70	12ABP7	71.30
SYK-720Z	325.00	R4307C	5.60	*5ADP11A	43.75	5RP11A	169.70	*12ABP7A	56.80
SYK-722A-G	150.00	R4319	8.70	5ADP31A	43.75	*5UP1	28.90	12ABP14	69.85
SYK-722Z	330.00	R4329	9.60	*5AHP4A	53.20	5UP7	29.05	*12ABP14A	81.40
K-839B (t)	195.00	R4330	29.10	*5AHP7	37.85	5UP11	28.90	12ABP19	81.40
K-841B (t)	195.00	R4336	36.00	*5AHP7A	45.95	5WP11	105.35	*12ABP19A	89.80
K-4008	195.00	R4337	49.00	5AHP14	37.85	5WP15	105.35	*12DP7A	67.95
K-4009	195.00	R4340	60.50	*5AHP14A	46.50	5ZP15	109.75	*12DP7C	79.85
K-4010	195.00	<b>Mite-T-Lites</b>		5AHP19	37.85	5ZP16	109.75	12SP7	46.80
K-4011	205.00	ML202A	1.10	*5AHP19A	46.50	5ZP24	109.75	12SP7B	51.20
K-4012	195.00	<b>INDUSTRIAL and MILITARY CATHODE RAY TUBES</b>		5AMP1	53.00	7ABP7	55.45	12SP7D	55.60
K-4013	195.00	2AP1A	\$ 19.30	*5AMP1A	56.55	*7ABP7A	57.65	14BAP7	37.25
K-4014	195.00	2BP1	20.60	5AMP2	53.00	7ABP14	49.00	16AMP7	350.00
K-4015	195.00	2BP11	22.25	*5AMP2A	56.55	7ABP14A	69.80	17DWP4	25.65
6468	195.00	*3ACP1A	43.40	5AMP7	56.55	7ABP19	70.25	21EYP4	33.30
6469	195.00	*3ACP2A	43.40	5AMP7A	71.90	7ABP19A	69.80	SC-2558-P1	118.55
6470	195.00	*3ACP7A	43.40	5AMP11	56.55	7AEP1	48.45	SC-2558-P4	118.55
*6BL6	40.00	*3ACP11A	43.40	*5AMP11A	71.90	7AEP2	48.45	SC-2558-P7	118.55
*6BM6	50.00	*3ACP12A	43.40	5AQP1	44.00	*7AEP7	48.45	SC-2782	X
*6BM6A	50.00	*3ADP1	61.60	5AQP1A	47.50	7AEP11	48.45	SC-2809	X
*5836	69.00	3ADP2	61.60	5AQP2	44.90	7AQP4	63.85	SC-2812-P1	47.50
*5837	69.00	3ADP7	61.60	5AQP2A	47.50	7AQP7	63.85	SC-2830-P1	53.35
<b>MICROWAVE DIODES</b>		3ADP11	61.60	5AQP7	47.50	7AQP16	63.85	SC-2854	58.25
1N21	\$ .68	3ASP1	38.40	5AQP7A	47.70	7AQP19	63.85	SC-3016-P11	69.85
1N21A	.68	3ASP2	38.40	5AQP11	47.50	7AQP25	63.85	SC-3037-P7	85.00
1N21B	.68	3ASP7	38.40	5AQP11A	47.70	7AUP4	63.85	SC-3042-P1	68.55
1N21BM	1.69	3ASP11	38.40	5AUP24	166.30	7AUP7	63.85	SC-3061-P1	X
1N21BR	1.02	3BEP1	43.20	5AXP4	27.25	7BP2A	49.95	SC-3090	X
1N21BMR	2.04	*3BGP1	49.25	5BCP1	81.00	*7BP7A	43.00	SC-3093 (Monoscope)	
1N21C	1.02	3BGP2	49.25	5BCP4	81.00	7JPI/7VP1	36.30	SC-3116-P1	110.00
1N21CM	2.43	3BGP7	49.25	*5BCP7	81.00	7JP7	36.95	SC-3116-P2	110.00
1N21CR	1.41	3BGP11	49.25	5BGP1	75.00	7MP7	40.80	SC-3116-P5	110.00
1N21CMR	3.07	3BGP12	49.25	5BGP2	75.00	7MP14	45.15	SC-3116-P7	110.00
1N21D	2.45	3BMP1	55.95	5BGP5	75.00	7UP7	47.50	SC-3116-P11	110.00
1N21DM	6.13	3BMP2	55.95	5BGP7	75.00	7UP25	47.50	SC-3116-P15	110.00
1N21DR	3.68	3BMP7	57.90	5BGP11	75.00	8CP1	47.50	SC-3168	X
1N21DMR	7.35	3BMP11	57.90	5BGP15	75.00	8CP2	47.50	SC-3179-P7	332.50
1N23	.67	3BMP12	57.90	5BHP1	92.50	8CP7	47.50	SC-3180-P7	332.50
1N23A	.67	*3BP1A	29.80	5BHP1A	92.50	8CP11	47.50	ST-3183	X
1N23B	.67	*3FP7A	31.00	5BHP2	92.50	8DP4	31.70	SC-3185	X
1N23BM	1.69	*3JP1	30.75	*5BHP2A	92.50	8FP4	51.25	SC-3195	X
1N23BR	1.02	*3JP2	30.75	5BHP7	92.50	8KP4	33.65	SC-3301-P1	110.00
1N23BMR	2.04	*3JP7	30.75	5BHP11	92.50	8XP4	30.75	SC-3301-P2	110.00
1N23C	1.02	*3JP12	37.40	5BHP15	92.50	8YP4	32.95	SC-3301-P5	110.00
1N23CM	2.43	3KP1	28.55	5BHP15A	92.50	*10AKP7	54.90	SC-3301-P7	110.00
1N23CR	1.41	3KP7	30.35	5BNP16	34.45	*10ANP4	89.80	SC-3301-P11	110.00
1N23CMR	3.07	3KP11	30.35	*5BP1A	33.55	10ANP7	89.80	SC-3301-P15	110.00
1N23D	2.45	3KP16	50.15	5BRP1	55.35	*10ANP7M	89.80	SC-3377	X
1N23DM	6.13	3MP1	25.90	5BRP4	55.35	10ANP16	89.80	SC-3397	X
1N23DR	3.68	3RP1	24.65	5BRP7	55.35	10ANP19	89.80	SC-3399	X
1N23DMR	7.35	3RP4	27.20	5BRP11	55.35	10ANP25	89.80	SC-3511	X
<b>SPECIAL LAMP PRODUCTS</b>		3SP1	34.45	*5CP1A	35.90	10KP7	46.35	SC-3525	X
<b>Glow Modulators</b>		*3SP1M	34.45	*5CP1B	38.85	*10KP7A	51.65	SC-3557	X
GM514	\$59.60	3SP2	34.45	*5CP7A	35.90	10KP7B	56.95	SC-3561	X
GM514C	69.60	3SP5	34.45	5CP11A	35.90	10NP11	148.50	SC-3814	X
R1130B	20.80	3SP11	34.45	*5CP12	35.90	Types listed in Bold Face are Sylvania Gold Brand Tubes.			
R1131C	19.60	3WPI	33.35	5CVP1	169.70	<b>GB-</b> Manufactured to Commercial and Industrial Specifications.			
R1166	20.00	*3WPI1M	33.35	5CVP7	169.70	* Tubes are "Communications Quality" types.			
R1168	24.50	3WP2	33.35	5CVP19	169.70	* Indicates Military Type Approval.			
R1169	21.90	3WP11	33.35	5DEP1	31.70	(t) Federal Excise Tax included in price. (All other types nontaxable.)			
<b>Strobrotrons</b>		*4MP1	63.35	5DEP2	31.70	† These tubes may be of foreign manufacture and, in many cases, manufactured by the foreign affiliate of Sylvania Electric Products Inc.			
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SN5	12.80	5ABP1	37.85	5DEP11	31.70	<b>PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.</b>			
SA309	20.40	5ABP1A	40.75	5DKP4	33.65				
SA309A	21.30	5ABP4	40.20	5DKP11	33.65				
SA413	15.30	5ABP4A	40.80	5DKP15	33.65				
SS501	29.30	5ABP7	40.20	5DKP16	33.65				
S696	23.70	5ABP7A	40.80	5DKP24	33.65				
S836	17.00								

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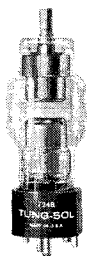
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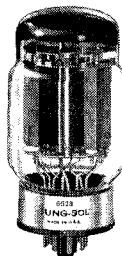
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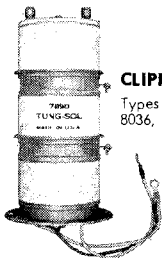
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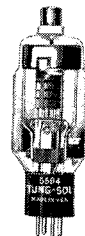
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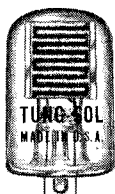
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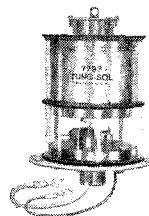
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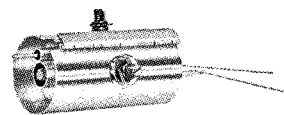
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# TUNG-SOL

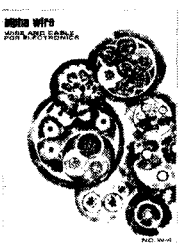



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FOR ALL  
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CABLE AND  
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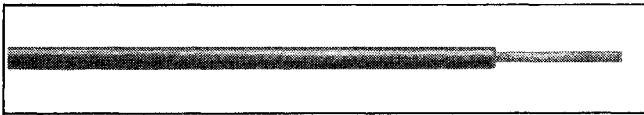
 <p><b>Complete 52-Page Wire and Cable Catalog</b></p>	<p>With sections on MIL-W-76B plastic wire; MIL-W-16878D plastic wire; audio and hook-up wire and cable; Teflon wire, multiconductor cable; retractile coil cords; power and service cords; shielding and braiding; and a wide range of other wire and cable items.</p>	 <p><b>New 24-Page Tubing Catalog</b></p>	<p>Complete details on irradiated heat shrinkable tubing, the versatile insulation that shrinks skin-tight to predetermined size; plus all-purpose PVC tubing; zipper tubing; lacing cord and Teflon tubing.</p>
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**ALPHA WIRE CORPORATION**  
Subsidiary of LORAL Electronics Corporation

PLANTS IN UNION, NEW JERSEY • LOS ANGELES, CALIFORNIA • HOLBROOK, NEW YORK

ALPHA WIRE CORPORATION



MIL-W-76B-PLASTIC WIRE

TYPE MW-UNCOVERED PLASTIC

DESCRIPTION: Solid or extra flexible stranded tinned copper, color coded medium wall polyvinylchloride insulation. The stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating -40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

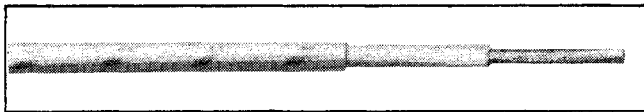
STRANDED

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1550	MW-C 24( 7)U	24	7/32	.016"	.059"	1-30 AS LISTED BELOW
1551	MW-C 22( 7)U	22	7/30	.016"	.064"	
1553	MW-C 20(10)U	20	10/30	.016"	.073"	
1555	MW-C 18(16)U	18	16/30	.016"	.084"	
1557	MW-C 16(26)U	16	26/30	.016"	.095"	
1559	MW-C 14(41)U	14	41/30	.016"	.110"	
1560	MW-C 12(65)U	12	65/30	.016"	.125"	

SOLID

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1561/24	MW-C 24( 1)U	24	1	.016"	.055"	1-30 AS LISTED BELOW
1561	MW-C 22( 1)U	22	1	.016"	.060"	
1563	MW-C 20( 1)U	20	1	.016"	.066"	
1565	MW-C 18( 1)U	18	1	.016"	.074"	
1567	MW-C 16( 1)U	16	1	.016"	.083"	

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED



MIL-W-76B-PLASTIC WIRE

TYPE MW-GLASS BRAID

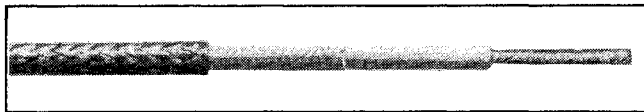
DESCRIPTION: Extra flexible stranded tinned copper, white medium wall polyvinylchloride insulation, color coded flame retardant lacquered glass braid overall. The stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating -40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1580	MW-C 22( 7)B	22	7/30	.016"	.080"	1-19 as listed below
1581	MW-C 20(10)B	20	10/30	.016"	.090"	1-19 as listed below
1582	MW-C 18(16)B	18	16/30	.016"	.100"	1-19 as listed below
1583	MW-C 16(26)B	16	26/30	.016"	.115"	1-19 as listed below
1584	MW-C 14(41)B	14	41/30	.016"	.125"	1 & 11-19 as listed below
1585	MW-C 12(65)B	12	65/30	.016"	.140"	1 & 11-19 as listed below

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

\*Other solid colors and striped combinations available to order.



MIL-W-76B-PLASTIC WIRE

TYPE MW-GLASS BRAID-SHIELDED

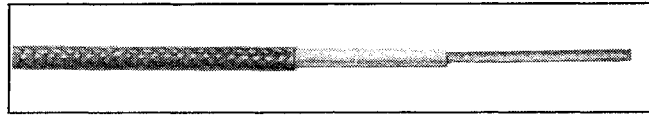
DESCRIPTION: Extra flexible stranded tinned copper, white medium wall polyvinylchloride insulation, white flame retardant lacquered glass braided with tinned copper shield overall, 80% coverage. The stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating -40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLOR
1194/24	MW-C 24( 7)BS	24	7/32	.016"	.090"	White
1194/22†	MW-C 22( 7)BS	22	7/30	.016"	.095"	White
1194†	MW-C 20(10)BS	20	10/30	.016"	.108"	White
1196†	MW-C 18(16)BS	18	16/30	.016"	.124"	White
1197†	MW-C 16(26)BS	16	26/30	.016"	.133"	White
1198†	MW-C 14(41)BS	14	41/30	.016"	.144"	White
1199†	MW-C 12(65)BS	12	65/30	.016"	.168"	White

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

\*Other solid colors and striped combinations available to order. †1194/22 to 1199 formerly 1361 to 1365



MIL-W-76B-PLASTIC WIRE

TYPE MW-SHIELDED

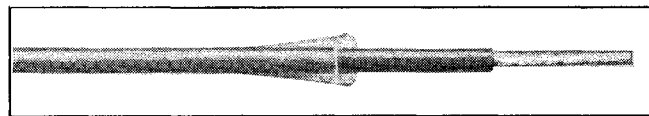
DESCRIPTION: Extra flexible stranded tinned copper, color coded medium wall polyvinylchloride insulation, braided tinned copper shield overall, 80% coverage. Stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating -40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1350	MW-C 24( 7)S	24	7/32	.016"	.075"	White
1351	MW-C 22( 7)S	22	7/30	.016"	.085"	White
1352	MW-C 20(10)S	20	10/30	.016"	.095"	White
1353	MW-C 18(16)S	18	16/30	.016"	.105"	White
1354	MW-C 16(26)S	16	26/30	.016"	.115"	White
1355	MW-C 14(41)S	14	41/30	.016"	.130"	White
1356	MW-C 12(65)S	12	65/30	.016"	.145"	White

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

\*Other solid colors and stripe combinations available to order



MIL-W-76B-PLASTIC WIRE

TYPE MW-NYLON JACKET

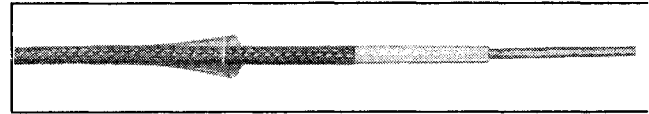
DESCRIPTION: Extra flexible stranded tinned copper, color coded medium wall polyvinylchloride insulation, clear nylon (polyamide) jacket overall. Stranded conductor has an extra tight lay to prevent springing open when stripped.

CHARACTERISTICS: Temperature rating -40°C to +90°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOM. THICK.	NOM. O.D.	* STOCK COLORS
1503	MW-C 24( 7)J	24	7/32	.016"	.002"	.065"	1-19 as listed below
1504	MW-C 22( 7)J	22	7/30	.016"	.003"	.072"	1-19 as listed below
1505	MW-C 20(10)J	20	10/30	.016"	.003"	.079"	1-19 as listed below
1506	MW-C 18(16)J	18	16/30	.016"	.003"	.090"	1-19 as listed below
1507	MW-C 16(26)J	16	26/30	.016"	.004"	.103"	1-19 as listed below
1508	MW-C 14(41)J	14	41/30	.016"	.004"	.118"	1-6 as listed below
1509	MW-C 12(65)J	12	65/30	.016"	.005"	.135"	1-3 as listed below

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

\*Other solid colors and striped combination available to order.



MIL-W-76B-PLASTIC WIRE

TYPE MW-SHIELDED-NYLON JACKET

DESCRIPTION: Stranded tinned copper, white medium wall polyvinylchloride insulation, braided tinned copper shield, 80% minimum coverage, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating -40° to +90°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOMINAL JACKET	NOMINAL O.D.
1370	MW-C 24( 7)SJ	24	7/32	.016"	.005"	.091"
1371	MW-C 22( 7)SJ	22	7/30	.016"	.005"	.100"
1372	MW-C 20( 7)SJ	20	7/28	.016"	.005"	.105"
1373	MW-C 18(19)SJ	18	19/30	.016"	.005"	.115"
1374	MW-C 16(19)SJ	16	19/29	.016"	.005"	.125"
1375	MW-C 14(19)SJ	14	19/27	.016"	.005"	.138"
1376	MW-C 12(19)SJ	12	19/25	.016"	.005"	.156"

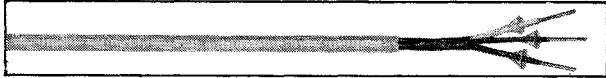
STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT. ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

\* STOCK COLORS

- 1—White
- 7—Brown
- 13—White/Green
- 19—White/Violet
- 25—White/Black/Orange
- 2—Black
- 8—Orange
- 14—White/Yellow
- 20—White/Black/Red
- 26—White/Black/Gray
- 3—Red
- 9—Gray (slate)
- 15—White/Blue
- 21—White/Black/Green
- 27—White/Black/Violet
- 4—Green
- 10—Violet (purple)
- 16—White/Brown
- 22—White/Black/Yellow
- 28—Tan
- 5—Yellow
- 11—White/Black
- 17—White/Orange
- 23—White/Black/Blue
- 29—Pink
- 6—Light Blue
- 12—White/Red
- 18—White/Gray
- 24—White/Black/Brown
- 30—Dark Blue

\*Other striped color combinations available to order.

ALPHA WIRE CORPORATION



**MIL-W-16878D  
MULTI-CONDUCTOR CABLE  
TYPE B - NYLON SHIELDED-PLASTIC JACKET**

DESCRIPTION: Each conductor stranded tinned copper, .010" polyvinylchloride insulation, color coded, clear nylon (polyamide) jacket, conductors braided, braided tinned copper shield 90% coverage, white polyvinylchloride jacket overall.

CHARACTERISTICS: Temperature rating -55°C to +105°C. Voltage rating 600 volts, resistant to acids, alkalis, oil, flame, moisture, fungus, solvents.

ALPHA NO.	NO. OF COILS	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. NYLON THICKNESS	NOM. OVERALL JACKET	NOM. O.D.
3210	1	24	19/36	.010"	.003"	.010"	.010"	.092"
3211	2	24	19/36	.010"	.003"	.010"	.016"	.152"
3212	3	24	19/36	.010"	.003"	.010"	.016"	.161"
3220	1	22	19/34	.010"	.003"	.010"	.010"	.100"
3221	2	22	19/34	.010"	.003"	.010"	.016"	.168"
3222	3	22	19/34	.010"	.003"	.010"	.017"	.178"
3230	1	20	19/32	.010"	.003"	.010"	.010"	.106"
3231	2	20	19/32	.010"	.003"	.010"	.019"	.186"
3232	3	20	19/32	.010"	.003"	.010"	.019"	.196"
3240	1	18	19/30	.010"	.003"	.010"	.012"	.120"
3241	2	18	19/30	.010"	.003"	.010"	.021"	.210"
3242	3	18	19/30	.010"	.003"	.022"	.022"	.227"

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT., 1420-1473-100 FT., 500 FT., 1000 FT., 5000 FT. COLOR CODE BY CONDUCTORS: 1-White 2-Black 3-Red



**MIL-W-16878D PLASTIC WIRE  
TYPE C - SHIELDED-NYLON JACKET**

DESCRIPTION: Stranded tinned copper, white .016" polyvinylchloride insulation, braided tinned copper shield, 90% coverage, clear nylon (polyamide) jacket overall (which can be striped to order for color identification).

CHARACTERISTICS: Temperature rating -55°C to +115°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOMINAL O.D.
1470	C-24	24	7/32	.016"	.005"	.091"
1471	C-22	22	7/30	.016"	.005"	.086"
1472	C-20	20	7/28	.016"	.005"	.081"
1473	C-18	18	7/26	.016"	.005"	.076"
1474	C-16	16	7/24	.016"	.005"	.071"
1475	C-14	14	7/22	.016"	.005"	.066"
1476	C-12	12	7/20	.016"	.005"	.061"

STANDARD SPOOL PUT-UP: 1420-1473-100 FT., 500 FT., 1000 FT., 5000 FT. 1474-1476-100 FT., 500 FT., 1000 FT., 3000 FT.

ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED.

**MIL-W-16878 D - PLASTIC WIRE**



**TYPE B - UNCOVERED PLASTIC  
REGULAR TINNED COPPER CONDUCTOR**

DESCRIPTION: Stranded tinned copper, color coded, .010" polyvinylchloride insulation.

CHARACTERISTICS: Temperature rating, -55°C to 105°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	* STOCK COLORS
1850	B-32	32	7/40	.010"	.028"	1-White 2-Black 3-Red 4-Green 5-Yellow 6-Light Blue 7-Brown 8-Orange 9-Gray (slate) 10-Violet (purple) 11-White/Black 12-White/Red 13-White/Green 14-White/Yellow 15-White/Blue 16-White/Brown 17-White/Orange 18-White/Gray 19-White/Violet
1851	B-30	30	7/38	.010"	.032"	
1852	B-28	28	7/36	.010"	.034"	
1853	B-26	26	7/34	.010"	.038"	
1854	B-24	24	7/32	.010"	.043"	
1854/19	B-24	24	19/36	.010"	.043"	
1855	B-22	22	7/30	.010"	.050"	
1855/19	B-22	22	19/34	.010"	.050"	
1856	B-20	20	7/28	.010"	.058"	
1856/19	B-20	20	19/32	.010"	.058"	
1857	B-18	18	7/26	.010"	.068"	
1857/19	B-18	18	19/30	.010"	.068"	
1858/19	B-16	16	19/29	.010"	.071"	
1859/19	B-14	14	19/27	.010"	.091"	

Standard Put-Ups

#1850 and #1851 -100, 500, 1000 ft. spools  
#1852 thru #1857/19 -100, 500, 1000, 5000 ft. spools  
#1858/19 and #1859/19 -100, 500, 1000, 3000 ft. spools

ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED.

**TYPE B - NYLON JACKET  
REGULAR TINNED COPPER CONDUCTOR**

DESCRIPTION: Stranded tinned copper, color coded, .010" polyvinylchloride insulation, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating, -55°C to 115°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOMINAL O.D.	* STOCK COLORS
1860	B-32	32	7/40	.010"	.003"	.035"	1-White 2-Black 3-Red 4-Green 5-Yellow 6-Light Blue 7-Brown 8-Orange 9-Gray (slate) 10-Violet (purple) 11-White/Black 12-White/Red 13-White/Green 14-White/Yellow 15-White/Blue 16-White/Brown 17-White/Orange 18-White/Gray 19-White/Violet
1861	B-30	30	7/38	.010"	.003"	.039"	
1862	B-28	28	7/36	.010"	.003"	.041"	
1863	B-26	26	7/34	.010"	.003"	.044"	
1864	B-24	24	7/32	.010"	.003"	.049"	
1864/19	B-24	24	19/36	.010"	.003"	.049"	
1865	B-22	22	7/30	.010"	.003"	.056"	
1865/19	B-22	22	19/34	.010"	.003"	.056"	
1866	B-20	20	7/28	.010"	.003"	.064"	
1866/19	B-20	20	19/32	.010"	.003"	.064"	
1867	B-18	18	7/26	.010"	.003"	.074"	
1867/19	B-18	18	19/30	.010"	.003"	.074"	
1868/19	B-16	16	19/29	.010"	.003"	.085"	
1869/19	B-14	14	19/27	.010"	.004"	.099"	

Standard Put-Ups

#1860 and #1861 -100, 500, 1000 ft. spools  
#1862 thru #1867/19 -100, 500, 1000, 5000 ft. spools  
#1868/19 and #1869/19 -100, 500, 1000, 3000 ft. spools

ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED.



UNCOVERED PLASTIC



NYLON JACKET

**MIL-W-16878D PLASTIC WIRE  
TYPE C - UNCOVERED PLASTIC**

DESCRIPTION: Stranded tinned copper, color coded .016" polyvinylchloride insulation.

CHARACTERISTICS: Temperature rating -55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1830	C-24	24	7/32	.016"	.058"	1-19 as listed below
1831	C-22	22	7/30	.016"	.064"	1-19 as listed below
1832	C-20	20	7/28	.016"	.072"	1-19 as listed below
1833	C-18	18	7/26	.016"	.082"	1-19 as listed below
1834	C-16	16	7/24	.016"	.091"	1 & 11-19 as listed below
1835	C-14	14	7/22	.016"	.105"	1 & 11-19 as listed below
1836	C-12	12	7/20	.016"	.124"	1 & 11-19 as listed below

STANDARD SPOOL PUT-UP: 1830-1833-100 FT., 500 FT., 1000 FT., 5000 FT. 1834-1836-100 FT., 500 FT., 1000 FT., 3000 FT.

ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED

**TYPE C - NYLON JACKET**

DESCRIPTION: Stranded tinned copper, color coded .016" polyvinylchloride insulation, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating -55°C to +115°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOMINAL O.D.	* STOCK COLORS
1840	C-24	24	7/32	.016"	.002"	.065"	1-19 as listed below
1841	C-22	22	7/30	.016"	.003"	.072"	1-19 as listed below
1842	C-20	20	7/28	.016"	.003"	.079"	1-19 as listed below
1843	C-18	18	7/26	.016"	.003"	.090"	1-19 as listed below
1844	C-16	16	7/24	.016"	.004"	.099"	1 & 11-19 as listed below
1845	C-14	14	7/22	.016"	.004"	.114"	1 & 11-19 as listed below
1846	C-12	12	7/20	.016"	.005"	.135"	1 & 11-19 as listed below

STANDARD SPOOL PUT-UP: 1840-1843-100 FT., 500 FT., 1000 FT., 5000 FT. 1844-1846-100 FT., 500 FT., 1000 FT., 3000 FT.

ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED

**TYPE C - UNCOVERED PLASTIC**

DESCRIPTION: Stranded tinned copper, color coded .016" polyvinylchloride insulation.

CHARACTERISTICS: Temperature rating -55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	* STOCK COLORS
1830	C-24	24	7/32	.016"	.058"	1-19 as listed below
1831	C-22	22	7/30	.016"	.064"	1-19 as listed below
1832	C-20	20	7/28	.016"	.072"	1-19 as listed below
1833	C-18	18	7/26	.016"	.082"	1-19 as listed below
1834	C-16	16	7/24	.016"	.091"	1-19 as listed below
1835	C-14	14	7/22	.016"	.105"	1 & 11-19 as listed below
1836	C-12	12	7/20	.016"	.124"	1 & 11-19 as listed below

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.  
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

**TYPE C - NYLON JACKET**

DESCRIPTION: Stranded tinned copper, color coded .016" polyvinylchloride insulation, clear nylon (polyamide) jacket overall.

CHARACTERISTICS: Temperature rating -55°C to +115°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOMINAL O.D.	* STOCK COLORS
1840	C-24	24	7/32	.016"	.002"	.065"	1-19 as listed below
1841	C-22	22	7/30	.016"	.003"	.072"	1-19 as listed below
1842	C-20	20	7/28	.016"	.003"	.079"	1-19 as listed below
1843	C-18	18	7/26	.016"	.003"	.090"	1-19 as listed below
1844	C-16	16	7/24	.016"	.004"	.099"	1-19 as listed below
1845	C-14	14	7/22	.016"	.004"	.114"	1 & 11-19 as listed below
1846	C-12	12	7/20	.016"	.005"	.135"	1-19 as listed below

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.  
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

**TYPE C - SHIELDED-NYLON JACKET**

DESCRIPTION: Stranded tinned copper, white .016" polyvinylchloride insulation, braided tinned copper shield, 90% coverage, clear nylon (polyamide) jacket (which can be striped to order for color identification) overall.

CHARACTERISTICS: Temperature rating -55°C to +115°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL JACKET THICKNESS	NOMINAL O.D.
1470		24	7/32	.016"	.005"	.091"
1471		22	7/30	.016"	.005"	.098"
1472		20	7/28	.016"	.005"	.105"
1473		18	7/26	.016"	.005"	.115"
1474		16	7/24	.016"	.005"	.125"
1475		14	7/22	.016"	.005"	.138"
1476		12	7/20	.016"	.005"	.156"

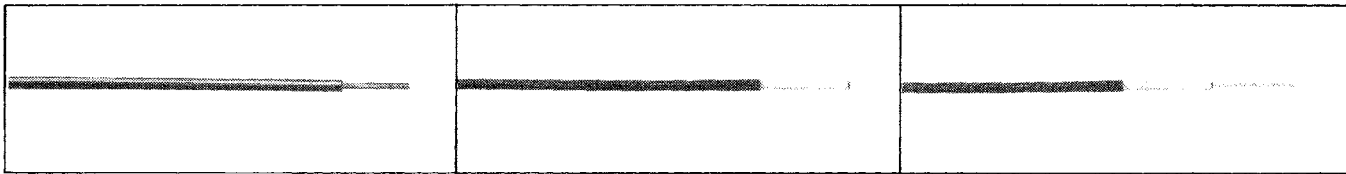
STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.  
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED.

\* STOCK COLORS

- 1-White
- 2-Black
- 3-Red
- 4-Green
- 5-Yellow
- 6-Light Blue
- 7-Brown
- 8-Orange
- 9-Gray (slate)
- 10-Violet (purple)
- 11-White/Black
- 12-White/Red
- 13-White/Green
- 14-White/Yellow
- 15-White/Blue
- 16-White/Brown
- 17-White/Orange
- 18-White/Gray
- 19-White/Violet

\*Other solid and striped combinations \*available to order.

**ALPHA WIRE CORPORATION**



HOOK-UP WIRE

SEMI-RIGID BUSINESS MACHINE WIRE

COTTON BRAID HOOK-UP WIRE

**U.L. HOOK-UP WIRE**

**DESCRIPTION:** Stranded tinned copper, color coded polyvinylchloride insulation.  
**CHARACTERISTICS:** Temperature rating (-10°C to +80°C, 300V) (-10°C to +105°C, 600V)  
 Resistant to acids, alkalis, oil, flame, moisture and fungus.

**300 VOLT 80°C—STYLE No. 1007**

ALPHA NO.	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
3050	24	7/32	.016"	.057"	1—White 11—White/Black 2—Black 12—White/Red 3—Red 13—White/Green 4—Green 14—White/Yellow 5—Yellow 15—White/Blue 6—Light Blue 16—White/Brown 7—Brown 17—White/Orange 8—Orange 18—White/Gray 9—Gray (slate) 19—White/Violet 10—Violet (purple)
3051	22	7/30	.016"	.065"	
3053	20	10/30	.016"	.071"	
3055	18	16/30	.016"	.080"	
3057	16	26/30	.016"	.095"	

**STANDARD SPOOL PUT-UP:**  
 3050-3055—100 FT., 500 FT., 1000 FT., 000 FT.  
 3057—100 FT., 500 FT., 1000 FT., 3000 FT.

\*Other striped color combinations to order

**600 VOLT\* 105°C—STYLE No. 1015**

ALPHA NO.	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
3071	22	7/30	.032"	.095"	1—White 6—Light Blue 2—Black 7—Brown 3—Red 8—Orange 4—Green 9—Gray (slate) 5—Yellow 10—Violet (purple)
3073	20	10/30	.032"	.102"	
3075	18	16/30	.032"	.112"	
3077	16	26/30	.032"	.125"	
3079	14	41/30	.032"	.142"	*Other striped color combinations to order

**STANDARD SPOOL PUT-UP:**  
 3071-3075—100 FT., 500 FT., 1000 FT., 5000 FT.  
 3077-3079—100 FT., 500 FT., 1000 FT., 3000 FT.

\*Also C.S.A. approved 600 volt 90°C type TR-32

**U.L. SEMI-RIGID BUSINESS MACHINE WIRE**

**DESCRIPTION:** Stranded tinned copper, color coded semi-rigid polyvinylchloride insulation.  
**CHARACTERISTICS:** Temperature rating -10°C to +80°C, 300 volts in business machine or electronic computers only.

**300 VOLT 80°C—STYLE No. 1061**

ALPHA NO.	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOM. O.D.	STOCK COLORS
3250	24	7/32	.009"	.042"	1—White 6—Blue 2—Black 7—Brown 3—Red 8—Orange 4—Green 9—Gray 5—Yellow 10—Violet
3251	22	7/30	.009"	.048"	
3252	20	7/28	.009"	.056"	*Other striped color combinations available to order.

**STANDARD SPOOL PUT-UP:** 100 FT., 500 FT., 1000 FT. 5000 FT.

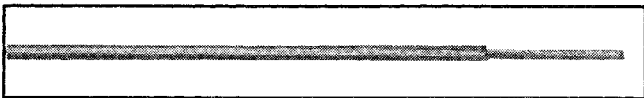
**U.L. COTTON BRAID HOOK-UP WIRE**

**DESCRIPTION:** Stranded tinned copper, white polyvinylchloride insulation, lacquered cotton braid overall.  
**CHARACTERISTICS:** Temperature rating -10°C to +90°C, \*600 volts in electronic circuits, 300 volts for other applications.

ALPHA NO.	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	STOCK COLORS
1480	22	7/30	.016"	.090"	1—White 6—Blue 2—Black 7—Brown 3—Red 8—Orange 4—Green 9—Gray 5—Yellow 10—Violet
1481	20	10/30	.016"	.100"	
1482	18	16/30	.016"	.110"	
1483	16	26/30	.016"	.125"	

**STANDARD SPOOL PUT-UP:** 100 FT., 500 FT., 1000 FT.  
**ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED.**

ALPHA WIRE CORPORATION



**MIL-W-16878C-TEFLON† WIRE 260° C  
TYPE E-EXTRUDED (600 VOLTS)**

DESCRIPTION: Single conductor stranded silver plated copper, .010" TFE Teflon insulation.

CHARACTERISTICS: Temperature rating -65°C. to +260°C. Voltage rating 600 volts. Resistant to acid, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. O.D.	*STOCK COLORS
2850	E-32	32	7/40	.029"	1-19 as listed
2851	E-30	30	7/38	.032"	1-19 as listed
2852	E-28	28	7/36	.036"	1-19 as listed
2853	E-26	26	7/34	.040"	1-19 as listed
2854	E-24	24	19/36	.045"	1-19 as listed
2855	E-22	22	19/34	.051"	1-19 as listed
2856	E-20	20	19/32	.059"	1-19 as listed
2857	E-18	18	19/30	.070"	1-19 as listed
2858	E-16	16	19/29	.083"	1-19 as listed
2859	E-14	14	19/27	.097"	1-6 & 11-19 as listed
2859/12	E-12	12	19/25	.113"	1 & 11-19 as listed
2859/10	E-10	10	37/26	.134"	1 & 11-19 as listed

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

ALSO AVAILABLE TO ORDER CUT AND STRIPPED.

\* STOCK COLORS

- 1-White
- 2-Black
- 3-Red
- 4-Green
- 5-Yellow
- 6-Light Blue
- 7-Brown
- 8-Orange
- 9-Gray (slate)
- 10-Violet (purple)
- 11-White/Black
- 12-White/Red
- 13-White/Green
- 14-White/Yellow
- 15-White/Blue
- 16-White/Brown
- 17-White/Orange
- 18-White/Gray
- 19-White/Violet

\* Other solid colors and striped combinations available to order.

**TYPE E-SPIRAL WRAPPED (600 VOLTS)**

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. O.D.	*STOCK COLORS
2883	E-26	26	7/34	.040"	1-White
2884	E-24	24	19/36	.045"	2-Black
2885	E-22	22	19/34	.051"	3-Red
2886	E-20	20	19/32	.059"	4-Green
2887	E-18	18	19/30	.070"	5-Yellow

- 6-Light Blue
- 7-Brown
- 8-Orange
- 9-Gray (slate)
- 10-Violet (purple)
- \*Other solid colors and striped combinations available to order.

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

ALSO AVAILABLE TO ORDER CUT AND STRIPPED.

**TYPE EE-EXTRUDED (1000 VOLTS)**

DESCRIPTION: Single conductor stranded silver plated copper, .016" TFE extruded Teflon insulation.

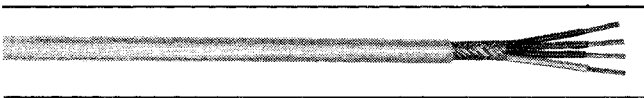
CHARACTERISTICS: Temperature rating -60°C. to +260°C. Voltage rating 1000 volts. Resistant to acid, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	STRAND	NOM. O.D.	*STOCK COLORS
2874	EE-24	24	19/36	.055"	1-White
2875	EE-22	22	19/34	.062"	11-White/Black
2876	EE-20	20	19/32	.070"	12-White/Red
2877	EE-18	18	19/30	.080"	13-White/Green
2878	EE-16	16	19/29	.089"	14-White/Yellow
2879	EE-14	14	19/27	.106"	15-White/Blue
2879/12	EE-12	12	19/25	.124"	16-White/Brown
2879/10	EE-10	10	37/26	.145"	17-White/Orange
2879/8	EE-8	8	133/29	.210"	18-White/Gray

- 19-White/Violet

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

ALSO AVAILABLE TO ORDER CUT AND STRIPPED.



**TEFLON FEP EXTRUDED JACKET OVER SHIELD**

DESCRIPTION: Each conductor stranded silver plated copper, Type E extruded TFE insulation color coded, braided silver plated copper shield 90% coverage, extruded FEP white Teflon jacket overall.

CHARACTERISTICS: Temperature rating -65°C to +200°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus. Extruded FEP Teflon jacket is tough and abrasion resistant.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.	NOM. CAP. IN MMF SHIELD TO COND.	COND. TO COND.
2831	1	24	19/36	.010"	.010"	.085"	45	—
2831/2	2	24	19/36	.010"	.010"	.130"	35	25
2831/3	3	24	19/36	.010"	.010"	.135"	35	20
2834	1	22	19/34	.010"	.010"	.091"	55	—
2834/2	2	22	19/34	.010"	.014"	.150"	45	25
2834/3	3	22	19/34	.010"	.014"	.158"	35	25
2837	1	20	19/32	.010"	.010"	.100"	55	—
2837/2	2	20	19/32	.010"	.014"	.168"	95	25
2837/3	3	20	19/32	.010"	.014"	.178"	85	25
2839	1	18	19/30	.010"	.010"	.110"	70	—
2839/2	2	18	19/30	.010"	.014"	.188"	60	35
2839/3	3	18	19/30	.010"	.018"	.207"	60	35

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS  
1-White  
2-Black  
3-Red

Other solid colors and striped combinations available to order.



**MIL-W-16878C  
SHIELDED TEFLON† CABLES**

DESCRIPTION: Each conductor stranded silver plated copper, type E extruded TFE .010" insulation, braided silver plated copper shield over conductor(s), 90% coverage. When covered, either a Teflon impregnated fiberglass braid or a .010" Teflon fused tape jacket overall.

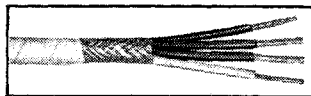
CHARACTERISTICS: Temperature rating -65°C. to +260°C. Voltage rating 600 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

**NO OUTER COVERING OVER SHIELD**

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	STRAND	NOM. O.D.
2809	1	24	19/36	.069"
2809/2	2	24	19/36	.112"
2809/3	3	24	19/36	.120"
2809/4	4	24	19/36	.132"
2812	1	22	19/34	.075"
2812/2	2	22	19/34	.124"
2812/3	3	22	19/34	.132"
2812/4	4	22	19/34	.146"
2815	1	20	19/32	.083"
2815/2	2	20	19/32	.142"
2815/3	3	20	19/32	.151"
2815/4	4	20	19/32	.168"
2818	1	18	19/30	.093"
2818/2	2	18	19/30	.162"
2818/3	3	18	19/30	.172"
2818/4	4	18	19/30	.192"

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS  
1-White  
2-Black  
3-Red  
4-Green



**TEFLON TAPE WRAP  
JACKET OVER SHIELD**

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	STRAND	NOM. O.D.
2821	1	24	19/36	.084"
2821/2	2	24	19/36	.128"
2821/3	3	24	19/36	.135"
2821/4	4	24	19/36	.148"
2824	1	22	19/34	.090"
2824/2	2	22	19/34	.140"
2824/3	3	22	19/34	.148"
2824/4	4	22	19/34	.162"
2827	1	20	19/32	.099"
2827/2	2	20	19/32	.158"
2827/3	3	20	19/32	.167"
2827/4	4	20	19/32	.184"
2829	1	18	19/30	.109"
2829/2	2	18	19/30	.178"
2829/3	3	18	19/30	.189"
2829/4	4	18	19/30	.208"

COLOR CODE OF CONDUCTORS  
1-White  
2-Black  
3-Red  
4-Green

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.



**TEFLON IMPREGNATED  
BRAID OVER SHIELD**

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	STRAND	NOM. O.D.
2811	1	24	19/36	.081"
2811/2	2	24	19/36	.126"
2811/3	3	24	19/36	.133"
2811/4	4	24	19/36	.144"
2814	1	22	19/34	.088"
2814/2	2	22	19/34	.137"
2814/3	3	22	19/34	.144"
2814/4	4	22	19/34	.158"
2817	1	20	19/32	.097"
2817/2	2	20	19/32	.154"
2817/3	3	20	19/32	.163"
2817/4	4	20	19/32	.180"
2819	1	18	19/30	.106"
2819/2	2	18	19/30	.174"
2819/3	3	18	19/30	.185"
2819/4	4	18	19/30	.205"

COLOR CODE OF CONDUCTORS  
1-White  
2-Black  
3-Red  
4-Green

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.



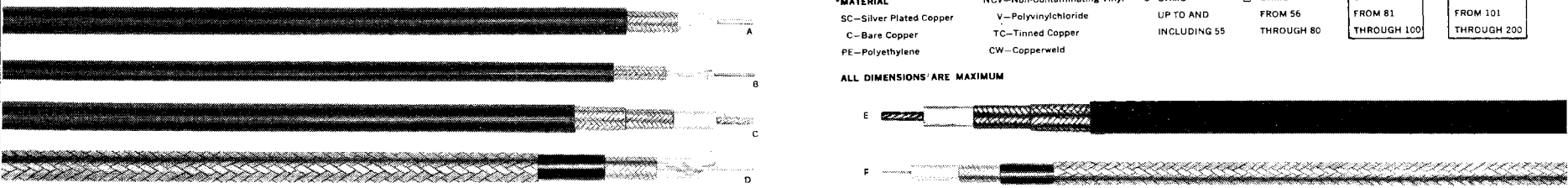
# COAXIAL CABLES

TYPE RG  
MANUFACTURED TO MEET ALL MILITARY SPECIFICATIONS

RG CABLE TYPE	5B/U	8/U	8A/U	9B/U	10A/U	11/U	11A/U	13A/U	14A/U	17A/U	18A/U	55B/U	58/U	58A/U	58C/U	59/U	59A/U	59B/U	62/U	62A/U	63B/U	71B/U	79B/U	174/U	212/U	213/U	214/U	215/U	218/U	219/U	223/U	
ALPHA PART NO.	800	803	804	805	806	807	808	810	811	812	813	817	818	819	820	821	822	823	824	846	847	841	848	827	829	830	831	832	835	836	837	
ILLUSTRATION FACING PAGE	E	A	A	E	F	A	A	E	E	A	F	E	A	A	A	A	A	A	B	B	B	C	D	A	E	A	E	F	A	F	E	
INNER CONDUCTOR	MAT.*	SC	C	C	SC	C	TC	TC	TC	C	C	C	SC	C	TC	TC	CW	CW	CW	CW	CW	CW	CW	CW	SC	C	SC	C	C	C	SC	
	STRAND	1	7 .0285	7 .0285	7 .0285	7 .0285	7 .0159	7 .0159	7 .0159	1	1	1	1	1	19 .0071	19 .0071	1	1	1	1	1	1	1	1	7 .0063	1	7 .0296	7 .0296	7 .0296	1	1	1
	O. D.	.051	.086	.0285	.086	.086	.048	.048	.048	.102	.188	.188	.032	.032	.0375	.0375	.0253	.023	.023	.025	.025	.0253	.025	.025	.019	.056	.090	.090	.090	.195	.195	.036
DIELECTRIC	MAT.*	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE	
	O. D.	.185	.295	.295	.285	.295	.295	.292	.290	.383	.695	.695	.121	.121	.120	.120	.150	.150	.150	.151	.151	.295	.151	.295	.060	.189	.292	.292	.292	.690	.690	.120
SHIELDS	INNER	SC	C	C	SC	C	C	C	C	C	C	TC	C	TC	TC	C	C	C	C	C	C	C	C	TC	SC	C	SC	C	C	C	SC	
	OUTER	SC	-	-	SC	-	-	-	C	C	-	-	TC	-	-	-	-	-	-	-	-	-	TC	-	-	SC	-	SC	-	-	SC	
	O. D.	.260	.340	.340	.355	.340	.340	.355	.463	.760	.760	.176	.150	.150	.150	.191	.191	.191	.191	.191	.191	.191	.191	.340	.208	.340	.069	.265	.340	.360	.340	.760
JACKET	MAT.*	NCV	V	NCV	NCV	NCV	V	NCV	NCV	NCV	NCV	PE	V	V	NCV	V	NCV	NCV	V	NCV	NCV	PE	NCV	V	NCV	NCV	NCV	NCV	NCV	NCV	NCV	
	O. D.	.335	.415	.415	.430	.415	.415	.412	.430	.558	.885	.885	.206	.206	.199	.199	.250	.246	.250	.249	.415	.250	.415	.105	.336	.412	.432	.412	.880	.880	.216	
ARMOR (.0126 ALUM. WIRE)	-	-	-	-	.475	-	-	-	-	-	.945	-	-	-	-	-	-	-	-	-	-	-	-	.475	-	-	-	-	-	.945	-	
OPR VOLTS RMS	3000	4000	4000	4000	4000	4000	4000	4000	5500	11000	11000	1900	1900	1900	1900	2300	2300	2300	750	750	1000	750	1000	-	3000	4000	4000	4000	11000	11000	1900	
LBS. PER MFT.	83	99	99	126	121	89	89	114	201	446	496	32	24	25	25	36	36	36	34	34	78	42	122	-	85	100	129	122	457	507	36	
NOM. IMPED. OHMS	50 O	52 O	52 O	50 O	52 O	75 □	75 □	74 □	52 O	52 O	52 O	53.5 O	53.5 O	50 O	50 O	73 □	75 □	75 □	93 ■	93 ■	125 ■	93 ■	125 ■	50 O	50 O	50 O	50 O	50 O	50 O	50 O	50 O	
CAP. MMF/FT.	29.5	29.5	29.5	30	29.5	20.5	20.5	20.5	29.5	29.5	29.5	28.5	28.5	29.5	29.5	21	20.5	20.5	13.5	13.5	10	13.5	10	30	29.5	30.5	30.5	30.5	30	30	30	
ATTEN. (db/100 Ft.)	10	.65	.56	.56	.45	.56	.65	.65	.65	.28	.23	.23	1.3	1.4	1.6	1.6	1.1	1.1	1.1	.82	.82	.60	.82	.60	-	.65	.56	.45	.56	.225	.225	1.3
	50	1.6	1.35	1.35	1.26	1.35	1.5	1.5	1.5	.85	.60	.60	3.2	3.5	4.1	4.1	2.7	2.7	2.7	1.9	1.9	1.4	1.9	1.4	-	1.6	1.35	1.26	1.35	.60	.60	3.2
	100	2.4	2.1	2.1	2.3	2.1	2.15	2.15	2.15	1.5	.95	.95	4.8	5.3	6.2	6.2	4.0	4.0	4.0	2.7	2.7	2.0	2.7	2.0	-	2.4	2.1	2.3	2.1	.95	.95	4.8
	200	3.6	3.1	3.1	3.4	3.1	3.2	3.2	3.2	2.3	1.5	1.5	7.0	8.3	9.2	9.2	5.7	5.7	5.7	3.9	3.9	2.9	3.9	2.9	-	3.6	3.1	3.4	3.1	1.5	1.5	7.0
	400	5.2	5.0	5.0	5.2	5.0	4.7	4.7	4.7	3.5	2.4	2.4	10.5	11.5	14.0	14.0	8.5	8.5	8.5	5.8	5.8	4.1	5.8	4.1	2.0	5.2	5.0	5.2	5.0	2.4	2.4	10.5
IN MEQS.	600	6.6	6.5	6.5	6.5	6.0	6.0	6.0	4.4	3.2	3.2	13.0	17.8	17.5	17.5	10.8	10.8	10.8	7.0	7.0	5.1	7.0	5.1	-	6.6	6.5	6.5	6.5	3.2	3.2	13.0	
	1000	8.8	8.8	8.8	9.0	8.8	8.2	8.2	8.2	6.0	4.5	4.5	17	20	23.5	23.5	14.0	14.0	14.0	9.0	9.0	6.5	9.0	6.5	-	8.8	8.8	9.0	8.8	4.5	4.5	17.0
	3000	16.7	17.5	17.5	17	17.5	18	18	18	11.7	9.5	9.5	32	40	45	45	26	26	26	17	17	11.3	17	11.3	-	16.7	17.5	17	16.7	9.5	9.5	32
VP %	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9

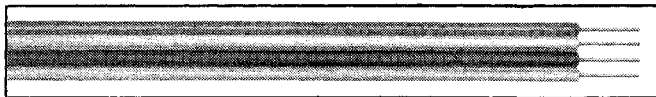
\*MATERIAL  
 SC—Silver Plated Copper  
 C—Bare Copper  
 PE—Polyethylene  
 NCV—Non-Contaminating Vinyl  
 V—Polyvinylchloride  
 TC—Tinned Copper  
 CW—Copperweld  
 □ OHMS FROM 56 THROUGH 80  
 ○ OHMS FROM 81 THROUGH 100  
 ● OHMS FROM 101 THROUGH 200  
 UP TO AND INCLUDING 55

ALL DIMENSIONS ARE MAXIMUM





ALPHA WIRE CORPORATION

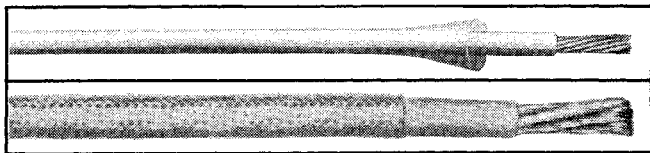


**FLAT RIBBON CABLE**  
MULTI-CONDUCTOR - PLASTIC INSULATION  
CONDUCTORS PER MIL-W-16878D, TYPE C

**DESCRIPTION:** Each conductor stranded tinned copper, color coded .016" polyvinylchloride insulation, conductors bonded together to form flat ribbon cable.  
**CHARACTERISTICS:** Temperature rating -55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.  
**APPLICATIONS:** Saves time, weight, and space on circuit connections, interconnecting assemblies and systems, wiring harnesses for racks, sliding drawer and drop panels. Conductors fully color coded and easily separated for neat terminations.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.	STOCK COLORS
3504	4	22	7/30	.016"	.065" x .260"	1-White 11-White Black
3508	8	22	7/30	.016"	.065" x .520"	2-Black 12-White Red
3512	12	22	7/30	.016"	.065" x .780"	3-Red 13-White Green
3516	16	22	7/30	.016"	.065" x 1.040"	4-Green 14-White Yellow
3520	20	22	7/30	.016"	.065" x 1.300"	5-Yellow 15-White Blue
						6-Light Blue 16-White Brown
						7-Brown 17-White Orange
						8-Orange 18-White Gray
						9-Gray (slate) 19-White Violet
						10-Violet (purple) 20-White/Black/Red

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.



**MIL-W-5086A & MIL-C-7078A**

**AIRCRAFT WIRE FOR ELECTRICAL SYSTEMS**

**DESCRIPTION:**

- MIL-W-5086A—Type I—AN-22 thru AN-12—Single conductor stranded tinned copper, white polyvinylchloride insulation, clear nylon (polyamide) jacket overall.
- MIL-W-5086A—Type II—AN-22 thru AN-12—Single conductor stranded tinned copper, white polyvinylchloride insulation, white glass braid, clear nylon (polyamide) jacket overall.
- MIL-W-5086A—Type II—AN-10 thru AN-00—Single conductor stranded tinned copper, white polyvinylchloride insulation, white glass braid, flame retardant nylon lacquered nylon braid overall.
- MIL-C-7078A—Type I—Single conductor stranded tinned copper, white polyvinylchloride insulation, clear nylon jacket, braided tinned copper shield overall, 85% coverage.

**CHARACTERISTICS:** Temperature rating: -55°C. to +105°C. Voltage Rating: 600 volts. Resists effects of water, oil, aircraft fuels, hydraulic fluid, skydral, ethyleneglycol, alcohol, dilute acids, alkalis, fungus and abrasion.

**UNSHIELDED (MIL-W-5086A) TYPE I**

ALPHA NO.	MIL TYPE DESIGNATION	SIZE	CONDUCTOR STRAND	NOMINAL O.D.
1381	AN-22	22	19/34	.068"
1382	AN-20	20	19/32	.078"
1383	AN-18	18	19/30	.088"
1384	AN-16	16	19/29	.098"
1385	AN-14	14	19/27	.117"
1386	AN-12	12	19/25	.137"

**UNSHIELDED (MIL-W-5086A) TYPE II**

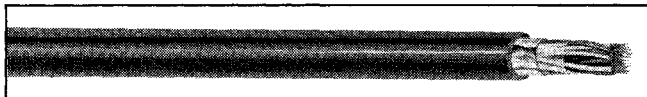
ALPHA NO.	MIL TYPE DESIGNATION	SIZE	CONDUCTOR STRAND	NOMINAL O.D.
1341†	AN-22	22	19/34	.075"
1342†	AN-20	20	19/32	.085"
1343†	AN-18	18	19/30	.095"
1344†	AN-16	16	19/29	.105"
1345†	AN-14	14	19/27	.125"
1346†	AN-12	12	19/25	.143"
1387	AN-10	10	49/27	.189"
1388	AN-8	8	133/29	.240"
1389	AN-6	6	133/27	.293"
1389/4	AN-4	4	133/25	.355"
1389/2	AN-2	2	665/30	.425"
1389/0	AN-0	0	1045/30	.525"
1389/00	AN-00	00	1330/30	.590"

†1341 to 1346 formerly 2381 to 2386

**SHIELDED (MIL-C-7078A) TYPE I**

ALPHA NO.	MIL TYPE DESIGNATION	SIZE	CONDUCTOR STRAND	NOMINAL O.D.
1391	AN-22	22	19/34	.100"
1392	AN-20	20	19/32	.110"
1393	AN-18	18	19/30	.125"
1394	AN-16	16	19/29	.140"
1395	AN-14	14	19/27	.155"
1396	AN-12	12	19/25	.165"

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.  
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED



**TELEMETERING & SUPERVISORY SHIELDED CONTROL CABLE**

**DESCRIPTION:** Each conductor, bare solid copper, .015" high molecular weight polyethylene insulation, color coded, twisted into pairs, cabled with a non-hygroscopic binder tape .008" aluminum shield, black polyethylene jacket overall. Operating voltage 300 volts.  
**APPLICATIONS:** Remote control of rocket recording data and test-firing control, transmission of signals which telemeter temperature, voltage pressure, etc. control of multiple circuits, measuring devices, quality control equipment, radar antenna. For aerial, duct and conduit installations.

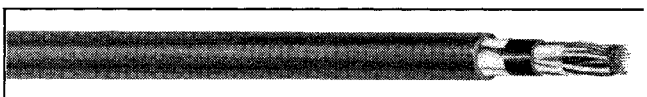
**22 AWG SOLID**

ALPHA NO.	NO. OF PAIRS	NOM. INSUL. THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.	APPROX. LBS./M
3706	6	.015"	.045"	.47"	108
3712	12	.015"	.060"	.59"	171
3718	18	.015"	.060"	.67"	210
3725	25	.015"	.060"	.76"	266
3750	50	.015"	.060"	1.10"	510

**19 AWG SOLID**

ALPHA NO.	NO. OF PAIRS	NOM. INSUL. THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.	APPROX. LBS./M
3806	6	.015"	.045"	.52"	140
3812	12	.015"	.060"	.66"	232
3818	18	.015"	.060"	.76"	301
3825	25	.015"	.060"	.92"	426
3850	50	.015"	.060"	1.20"	767

STANDARD SPOOL PUT-UP:  
CUT TO SPECIFIC LENGTHS  
COLOR CODE: SEE BELOW.



**HEAVY DUTY TELEMETERING & SUPERVISORY SHIELDED CONTROL CABLE**

**DESCRIPTION:** Each conductor, bare solid copper, .015" high molecular weight polyethylene insulation, color coded, twisted into pairs, cabled with a non-hygroscopic binder tape, inner black polyethylene jacket, .005" copper shield, outer black polyethylene jacket overall. Operating voltage 300 volts.  
**APPLICATIONS:** Same as above control cables except this cable has a double jacket which provides additional mechanical protection and high dielectric strength between paired conductor and shield. For direct burial installations.

**22 AWG SOLID**

ALPHA NO.	NO. OF PAIRS	NOM. INSUL. THICKNESS	NOM. JKT. THICKNESS INNER	NOM. JKT. THICKNESS OUTER	NOM. O.D.	APPROX. LBS./M
3906	6	.015"	.047"	.045"	.57"	149
3912	12	.015"	.047"	.060"	.69"	226
3918	18	.015"	.047"	.060"	.77"	281
3925	25	.015"	.047"	.080"	.92"	374
3950	50	.015"	.047"	.080"	1.20"	645

**19 AWG SOLID**

ALPHA NO.	NO. OF PAIRS	NOM. INSUL. THICKNESS	NOM. JKT. THICKNESS INNER	NOM. JKT. THICKNESS OUTER	NOM. O.D.	APPROX. LBS./M
4006	6	.015"	.047"	.060"	.62"	200
4012	12	.015"	.047"	.060"	.76"	297
4018	18	.015"	.047"	.060"	.92"	415
4025	25	.015"	.047"	.080"	1.00"	558
4050	50	.015"	.047"	.080"	1.30"	929

STANDARD SPOOL PUT-UP: CUT TO SPECIFIC LENGTHS.

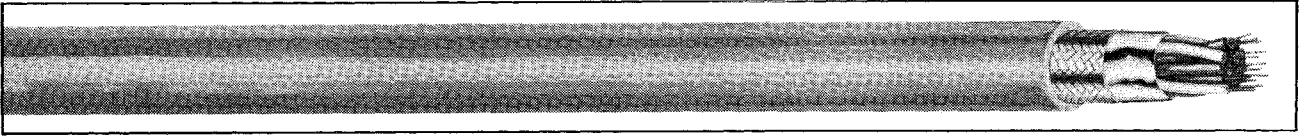
**COLOR CODE OF CONDUCTORS**

Pair No.	COND. A Tip	COND. B Ring	Pair No.	COND. A Tip	COND. B Ring	Pair No.	COND. A Tip	COND. B Ring
1	White	Blue	9	Red	Brown	18	Yellow	Green
2	White	Orange	10	Red	Slate	19	Yellow	Brown
3	White	Green	11	Black	Blue	20	Yellow	Slate
4	White	Brown	12	Black	Orange	21	Violet	Blue
5	White	Slate	13	Black	Green	22	Violet	Orange
6	Red	Blue	14	Black	Brown	23	Violet	Green
7	Red	Orange	15	Black	Slate	24	Violet	Brown
8	Red	Green	16	Yellow	Blue	25	Violet	Slate
			17	Yellow	Orange			

Cables with 25 pairs or less as shown in table.  
For 50 pair cable, color code is repeated with a colored binder over each group, 1-25 pair, covered with white-blue binder, 25-50 pair, covered with white-orange binder.

SECTION 6000

ALPHA WIRE CORPORATION



**CONTROL AND INSTRUMENTATION CABLE**  
**MULTI-CONDUCTOR SHIELDED PLASTIC JACKET**  
**PER MIL-W-16878D**

**DESCRIPTION:** Each conductor stranded tinned copper. Color coded, polyvinylchloride insulation, cabled, mylar wrap. Braided tinned copper shield 90% coverage, chrome gray polyvinylchloride jacket overall.

**CHARACTERISTICS:** Temperature rating -55°C to +105°C. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus.

**APPLICATIONS:** Interconnecting cables for electronic equipment, instrumentation and control cable, telemetry data, remote control of sensitive recording instruments.

**MINIATURE SHIELDED CONTROL CABLE—**  
**300 VOLT**

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JACKET THICKNESS	NOM. O.D.
3302	2	B-28	7/36	.010"	.012"	.125"
3303	3	B-28	7/36	.010"	.012"	.130"
3304	4	B-28	7/36	.010"	.012"	.140"
3306	6	B-28	7/36	.010"	.015"	.170"
3308	8	B-28	7/36	.010"	.015"	.175"
3310	10	B-28	7/36	.010"	.018"	.210"
3312	12	B-28	7/36	.010"	.018"	.215"
3315	15	B-28	7/36	.010"	.020"	.230"
3320	20	B-28	7/36	.010"	.022"	.260"

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

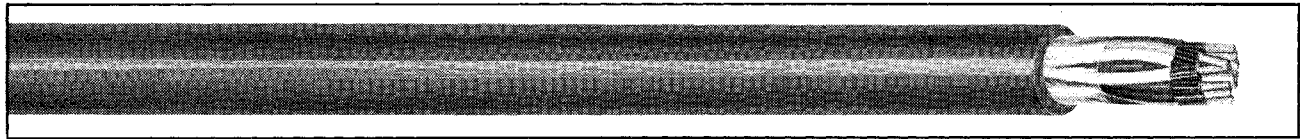
**HEAVY DUTY SHIELDED CONTROL CABLE—**  
**1000 VOLT**

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JACKET THICKNESS	NOM. O.D.
3405	5	C-18	19/30	.016"	.025"	.300"
3410	10	C-18	19/30	.016"	.035"	.405"
3415	15	C-18	19/30	.016"	.040"	.470"
3420	20	C-18	19/30	.016"	.045"	.530"
3430	30	C-18	19/30	.016"	.055"	.650"

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

**COLOR CODE OF CONDUCTORS**

- 1—Black
- 2—White
- 3—Red
- 4—Green
- 5—Orange
- 6—Blue
- 7—White/Black
- 8—Red/Black
- 9—Green/Black
- 10—Orange/Black
- 11—Blue/Black
- 12—Black/White
- 13—Red/White
- 14—Green/White
- 15—Blue/White
- 16—Black/Red
- 17—White/Red
- 18—Orange/Red
- 19—Blue/Red
- 20—Red/Green
- 21—Orange/Green
- 22—Black/White/Red
- 23—White/Black/Red
- 24—Red/Black/White
- 25—Green/Black/White
- 26—Orange/Black/White
- 27—Blue/Black/White
- 28—Black/Red/Green
- 29—White/Red/Green
- 30—Red/Black/Green



**UNSHIELDED STATION CONTROL CABLE**  
**HEAVY-DUTY MULTI-CONDUCTOR**  
**PLASTIC JACKET—600 VOLTS**

**DESCRIPTION:** Each conductor, stranded bare copper, .020" polyethylene insulation, .010" polyvinylchloride jacket over each conductor, color coded, cabled with fillers where necessary, moisture resistant tape, black polyvinylchloride jacket overall, 600 volt operating voltage.

**APPLICATIONS:** Remote control of automatic electrical equipment, recording and relaying devices, telemetering, switchgear operations and indicators, substation operation, temperature voltage, pressure and motor control, dimensional tolerance on automatic quality control.

**16 GAUGE — 26/30 BARE COPPER**

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4102	2	.045"	.360"
4103	3	.045"	.480"
4105	5	.045"	.520"
4106	6	.045"	.550"
4107	7	.045"	.570"
4108	8	.045"	.590"
4110	10	.045"	.620"
4112	12	.045"	.660"
4114	14	.045"	.690"
4116	16	.045"	.750"

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4119	19	.060"	.800"
4121	21	.060"	.810"
4122	22	.060"	.880"
4124	24	.060"	.930"
4126	26	.060"	.990"
4130	30	.060"	1.01"
4137	37	.060"	1.09"
4140	40	.060"	1.16"
4150	50	.080"	1.22"
4160	60	.080"	1.32"

**14 GAUGE — 7/22 BARE COPPER**

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4202	2 Twin	.045"	*
4203	3 Rd.	.045"	.390"
4204	4	.045"	.425"
4205	5	.045"	.462"
4206	6	.045"	.481"
4207	7	.045"	.502"
4208	8	.060"	.556"
4209	9	.060"	.622"
4210	10	.060"	.657"
4212	12	.060"	.696"

**12 GAUGE — 7/20 BARE COPPER**

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4214	14	.060"	.744"
4216	16	.060"	.798"
4219	19	.060"	.861"
4224	24	.080"	.947"
4227	27	.080"	1.002"
4230	30	.080"	1.110"
4234	34	.080"	1.118"
4237	37	.080"	1.124"
4240	40	.080"	1.290"

**12 GAUGE — 7/20 BARE COPPER**

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4302	2 Twin	.045"	**
4303	3 Rd.	.045"	.431"
4304	4	.045"	.471"
4305	5	.045"	.523"
4306	6	.045"	.564"
4307	7	.060"	.599"
4308	8	.060"	.644"
4309	9	.060"	.690"
4310	10	.060"	.727"
4312	12	.060"	.775"
4314	14	.060"	.807"

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4315	15	.060"	.832"
4316	16	.060"	.901"
4318	18	.080"	.928"
4319	19	.080"	.943"
4320	20	.080"	.966"
4322	22	.080"	1.017"
4325	25	.080"	1.097"
4327	27	.080"	1.129"
4330	30	.080"	1.168"
4334	34	.080"	1.201"
4337	37	.080"	1.257"

STANDARD SPOOL PUT-UP: CUT TO SPECIFIC LENGTHS.

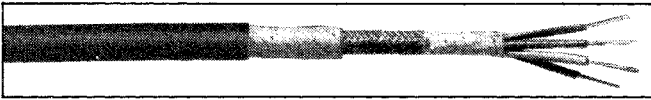
\*FLAT DIMENSION .233" x .366"

\*\*FLAT DIMENSION .252" x .404"

COLOR CODE: The color code of neoprene jacketed control cables conforms to IPCEA standards either with full color code or surface printed with color name and number.

SECTION 6000

ALPHA WIRE CORPORATION



SHIELDED CONTROL CABLE

HEAVY-DUTY MULTI-CONDUCTOR  
RUGGED NEOPRENE JACKET

DESCRIPTION: Each conductor stranded tinned copper, color coded rubber insulation, cabled with fillers where necessary, cotton wrap, braided tinned copper shield, cotton wrap, rugged black neoprene jacket overall.

CHARACTERISTICS: Operating Temperature: 20°C to +60°C.

#18 GAUGE CABLE

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1450	2	18	41/34	.020"	.035"	.295"
1451	3	18	41/34	.020"	.035"	.305"
1452	4	18	41/34	.020"	.035"	.330"
1454	6	18	41/34	.020"	.035"	.370"
1456	8	18	41/34	.020"	.035"	.420"
1458	10	18	41/34	.020"	.035"	.480"
1459	12	18	41/34	.020"	.065"	.555"
1459/15	15	18	41/34	.020"	.065"	.640"
1459/20	20	18	41/34	.020"	.065"	.730"

#16 GAUGE CABLE

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1450/16	2	16	65/34	.025"	.035"	.335"
1451/16	3	16	65/34	.025"	.035"	.355"
1452/16	4	16	65/34	.025"	.035"	.385"
1454/16	6	16	65/34	.025"	.040"	.445"
1456/16	8	16	65/34	.025"	.040"	.510"
1458/16	10	16	65/34	.025"	.040"	.575"

#14 GAUGE CABLE

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1400	2	14	41/30	.030"	.040"	.395"
1401	3	14	41/30	.030"	.040"	.425"
1402	4	14	41/30	.030"	.040"	.455"
1404	6	14	41/30	.030"	.040"	.515"

#12 GAUGE CABLE

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1410	2	12	65/30	.030"	.040"	.440"
1411	3	12	65/30	.030"	.040"	.465"
1412	4	12	65/30	.030"	.040"	.505"

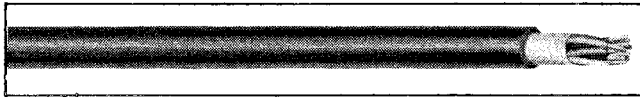
#10 GAUGE CABLE

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1420	2	10	105/30	.030"	.040"	.495"
1421	3	10	105/30	.030"	.040"	.520"

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS

- 1—Black
- 2—White
- 3—Red
- 4—Green
- 5—Yellow
- 6—Blue
- 7—Brown
- 8—Orange
- 9—Slate
- 10—Purple
- 11—White/Black (Braid)
- 12—White/Red (Braid)
- 13—White/Green (Braid)
- 14—White/Yellow (Braid)
- 15—White/Blue (Braid)
- 16—White/Brown (Braid)
- 17—White/Purple (Braid)
- 18—White/Slate (Braid)
- 19—Black/Red (Braid)
- 20—Black/Yellow (Braid)



UNSHIELDED CONTROL CABLE

HEAVY-DUTY MULTI-CONDUCTOR  
RUGGED NEOPRENE JACKET — 600 VOLTS

DESCRIPTION: Each conductor stranded bare copper, color coded rubber insulation, cabled with fillers where necessary, wrap over conductors, heavy duty black neoprene jacket overall. 600 volt operating voltage.

APPLICATIONS: Remote control of automatic electrical equipment and sub-stations, tele-metering, voltage pressure and motor control, signal transmission. Flexible heavy duty neoprene jacketed cable, recommended for outside installation, cable resists oil, ozone, sunlight, moisture, abrasion and impact.

18 GAUGE # 41/34 BARE COPPER — 1/32" INSULATION THICKNESS

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4505	5	.045"	.500"
4506	6	.045"	.540"
4507	7	.045"	.580"
4508	8	.060"	.610"
4509	9	.060"	.640"
4510	10	.060"	.730"
4514	14	.060"	.810"

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4520	20	.060"	.965"
4526	26	.080"	1.04"
4530	30	.080"	1.10"
4540	40	.080"	1.25"
4550	50	.080"	1.35"
4560	60	.080"	1.50"

16 GAUGE # 65/34 BARE COPPER — 1/32" INSULATION THICKNESS

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4605	5	.045"	.530"
4606	6	.045"	.580"
4607	7	.045"	.620"
4608	8	.060"	.660"
4610	10	.060"	.790"
4612	12	.060"	.811"
4614	14	.060"	.844"
4616	16	.060"	.875"
4619	19	.060"	.995"
4620	20	.060"	1.02"

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4622	22	.080"	1.065"
4624	24	.080"	1.11"
4626	26	.080"	1.156"
4630	30	.080"	1.194"
4637	37	.080"	1.296"
4640	40	.080"	1.346"
4644	44	.080"	1.426"
4650	50	.080"	1.526"
4660	60	.080"	1.616"

14 GAUGE #105/34 BARE COPPER — 3/64" INSULATION THICKNESS

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4705	5	.095"	.700"
4706	6	.095"	.765"
4707	7	.095"	.820"
4708	8	.095"	.882"

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4709	9	.095"	.936"
4710	10	.095"	.976"
4712	12	.110"	1.016"

12 GAUGE #165/34 BARE COPPER — 3/64" INSULATION THICKNESS

ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4805	5	.095"	.760"
4806	6	.095"	.810"
4807	7	.095"	.870"
4808	8	.110"	.945"
4809	9	.110"	1.02"

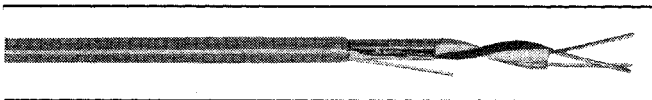
ALPHA NO.	NO. OF COND.	NOM. JKT. THICKNESS	NOM. O.D.
4810	10	.110"	1.106"
4812	12	.110"	1.226"
4816	16	.110"	1.366"
4818	18	.125"	1.506"

STANDARD SPOOL PUT-UP: CUT TO SPECIFIC LENGTHS.

COLOR CODE: The color code of neoprene jacketed control cables conforms to IPCEA standards except with full color code or surface printed with color name and number.

SECTION 6000

ALPHA WIRE CORPORATION



SHIELDED PLASTIC JACKETED CABLE  
MYLAR SUPPORTED ALUMINUM FOIL SHIELD

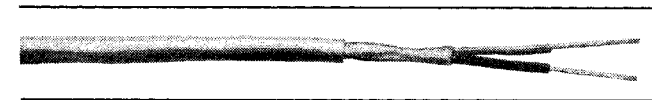
DESCRIPTION: Each conductor stranded tinned copper, color coded polyethylene insulation, conductors cabled, wrapped mylar supported aluminum foil shield, 100% coverage with drain wire laid parallel, aluminum foil facing outward to provide maximum grounding contact, chrome gray polyvinylchloride jacket overall.

CHARACTERISTICS: Suggested operating temperature: -20°C to +60°C. Suggested operating voltage: 400 volts. Shielded cable with a mylar laminated aluminum foil is lighter in weight, reduces cable diameter, and provides 100% shield coverage at audio and radio frequencies. Drain wire facilitates quick and easy shield termination to ground.

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
2402	2	22	7/30	.016"	.020"	.195"
2403	3	22	7/30	.016"	.020"	.210"
2404	4	22	7/30	.016"	.020"	.225"
2412	2	20	10/30	.016"	.020"	.210"
2413	3	20	10/30	.016"	.020"	.225"
2414	4	20	10/30	.016"	.020"	.240"
2422	2	18	16/30	.016"	.020"	.230"
2423	3	18	16/30	.016"	.020"	.245"
2424	4	18	16/30	.016"	.020"	.265"
2432	2	16	26/30	.016"	.020"	.255"
2433	3	16	26/30	.016"	.020"	.275"
2442	2	14	41/30	.016"	.020"	.290"
2443	3	14	41/30	.016"	.020"	.310"

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS: 1-Black 2-Red 3-White 4-Green



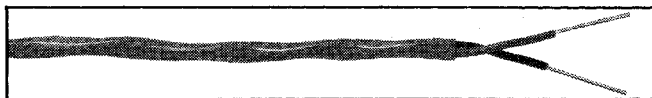
SHIELDED PLASTIC JACKETED CABLE  
SPIRAL WRAPPED COPPER SHIELD

DESCRIPTION: Each conductor stranded or solid tinned copper, color coded polyvinylchloride insulation, conductors twisted, spiral wrapped copper shield, gray polyvinylchloride jacket overall. Nominal jacket thickness .029".

CHARACTERISTICS: Use of spiral shield makes pigtail off extremely simple and fast. Excellent for production line work. Provides close to 100% shielded coverage for audio and RF frequencies.

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	SUGG. WORKING VOLTAGE
55 1	2	22	7/30	.016"	.170"	350V
54 1	1	22	7/30	.016"	.115"	350V
54 2	2	22	7/30	.016"	.175"	350V
54 3	3	22	7/30	.016"	.190"	350V
54 4	4	22	7/30	.016"	.200"	350V
54 6	6	22	7/30	.016"	.235"	350V
56 1	1	20	10/30	.016"	.130"	350V
56 2	2	20	10/30	.016"	.195"	350V
56 3	3	20	10/30	.016"	.210"	350V
56 4	4	20	10/30	.016"	.225"	350V
2258 1	1	18	16/30	.016"	.135"	350V
2258 2	2	18	16/30	.016"	.230"	350V
2258 3	3	18	16/30	.016"	.235"	350V
2258 4	4	18	16/30	.016"	.245"	350V
2260 1	1	16	26/30	.016"	.240"	350V
2260 3	3	16	26/30	.016"	.245"	350V
2265 2	2	14	41/30	.020"	.285"	450V
2265 3	3	14	41/30	.020"	.290"	450V
2268 2	2	12	65/30	.020"	.325"	450V
2268 3	3	12	65/30	.020"	.330"	450V

IDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.  
COLOR CODE OF CONDUCTORS: 1-Black 2-Red 3-White 4-Green 5-Yellow 6-Blue



UNSHIELDED AUDIO CABLE  
MULTI-CONDUCTOR-PLASTIC JACKET

DESCRIPTION: Each conductor tinned copper, color coded polyvinylchloride insulation, conductors twisted, gray polyvinylchloride jacket overall. Suitable for outdoor installations.

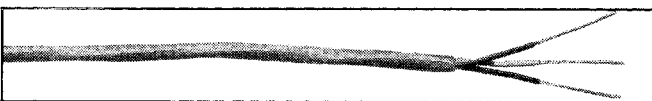
APPLICATIONS: Intercoms, Interconnecting cables. Remote control circuits. Telephones. Telemetering connecting cable. "Baby Sitter" intercom.

CHARACTERISTICS: Suggested Operating Temperature: -20°C to -60°C. Suggested Operating Voltage: 300 volts.

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.	COLOR CODE OF CONDUCTORS
1897	2	18	16/30	.016"	.020"	.200"	1-Black 2-Red
1898	3	18	16/30	.016"	.020"	.210"	1-Black 2-Red 3-White
1898/4	4	18	16/30	.016"	.020"	.240"	1-Black 2-Red 3-White 4-Green
1898/6	6	18	16/30	.016"	.020"	.290"	1-Black 2-Red 3-White 4-Green 5-Yellow 6-Blue
1898/8	8	18	16/30	.016"	.020"	.315"	1-Black 2-Red 3-White 4-Green 5-Yellow 6-Blue 8-Pink
1898/10	10	18	16/30	.016"	.020"	.370"	1-Black 2-Red 3-White 4-Green 5-Yellow 6-Blue 8-Pink 10-Steel
1898/12	12	18	16/30	.016"	.020"	.385"	1-Black 2-Red 3-White 4-Green 5-Yellow 6-Blue 8-Pink 10-Steel 12-Tan

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.	COLOR CODE OF CONDUCTORS
1797	2	18	.016"	.020"	.190"	1-Black 2-Red	
1798	3	18	.016"	.020"	.200"	1-Black 2-Red 3-White	
1798 4	4	18	.016"	.020"	.220"	1-Black 2-Red 3-White 4-Green	
1798 5	5	18	.016"	.020"	.235"	1-Black 2-Red 3-White 4-Green 5-Orange	
1798 6	6	18	.016"	.020"	.265"	1-Black 2-Red 3-White 4-Green 5-Orange 6-Brown	

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.



UNSHIELDED AUDIO CABLE  
MULTI-CONDUCTOR-PLASTIC JACKET

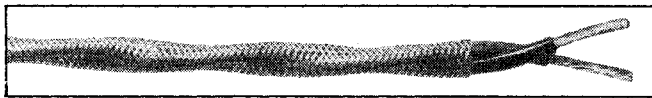
DESCRIPTION: Each conductor stranded tinned copper, color coded polyvinylchloride insulation, conductors twisted, gray polyvinylchloride jacket overall. Suitable for outdoor installations.

APPLICATIONS: Unbalanced intercom systems. Low voltage relay control cable. P.A. systems. Electronic computer cable.

CHARACTERISTICS: Suggested Operating Temperature: 20°C to 60°C. Suggested Operating Voltage: 200 volts.

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.	COLOR CODE OF CONDUCTORS
1172	2	22	7/30	.010"	.020"	.140"	1-Black 2-White
1173	3	22	7/30	.010"	.020"	.145"	1-Black 2-White 3-Brown
1174	4	22	7/30	.010"	.020"	.170"	1-Black 2-White 3-Brown 4-Red
1175	5	22	7/30	.010"	.020"	.175"	1-Black 2-White 3-Brown 4-Red 5-Orange
1176	6	22	7/30	.010"	.020"	.185"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green
1177	7	22	7/30	.010"	.020"	.190"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple
1179	8	22	7/30	.010"	.020"	.200"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow
1179 9	9	22	7/30	.010"	.020"	.225"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink
1179 10	10	22	7/30	.010"	.020"	.235"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan
1181	12	22	7/30	.010"	.020"	.255"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red
1181 15	15	22	7/30	.010"	.020"	.280"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red 12-Black
1181 20	20	22	7/30	.010"	.020"	.310"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red 12-Black 13-White
1181 25	25	22	7/30	.010"	.020"	.340"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red 12-Black 13-White 14-Blue
1181 30	30	22	7/30	.010"	.020"	.365"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red 12-Black 13-White 14-Blue 15-White
1181 40	40	22	7/30	.010"	.025"	.425"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red 12-Black 13-White 14-Blue 15-White 16-Purple
1181 50	50	22	7/30	.010"	.035"	.500"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red 12-Black 13-White 14-Blue 15-White 16-Purple 17-White
1181 60	60	22	7/30	.010"	.035"	.530"	1-Black 2-White 3-Brown 4-Red 5-Orange 6-Green 7-Purple 8-Yellow 9-Pink 10-Tan 11-Red 12-Black 13-White 14-Blue 15-White 16-Purple 17-White 18-White

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.



SHIELDED AUDIO CABLE  
2 CONDUCTOR-NO OUTER JACKET

DESCRIPTION: Each conductor tinned copper, color coded polyvinylchloride insulation, conductors twisted, braided tinned copper shield overall.

APPLICATIONS: For public address and sound systems. Transmission line. Industrial paging and call systems. Recording equipment. Hospital and school sound installations. Broadcast and audio cable. Rack and panel wiring.

CHARACTERISTICS: Suggested Operating Temperature: -20°C to +60°C.

ALPHA NO.	NO. OF COND.	SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	SUGG. OPER. VOLTAGE	COLOR CODE OF CONDUCTORS
1261/26	2	26	7/34	.010"	.095"	200V	1-Black 2-Red
1261	2	24	16/36	.016"	.125"	350V	1-Black 2-Red
1265/22V	2	22	7/30	.016"	.140"	350V	1-Black 2-Red
1265W	2	20	10/30	.016"	.155"	350V	1-Black 2-Red
1265VW	2	18	16/30	.016"	.170"	350V	1-Black 2-Red
1260V	2	16	26/30	.020"	.210"	450V	1-Black 2-Red
1260/14	2	14	41/30	.020"	.225"	450V	1-Black 2-Red
1260/12	2	12	65/30	.025"	.295"	600V	1-Black 2-Red

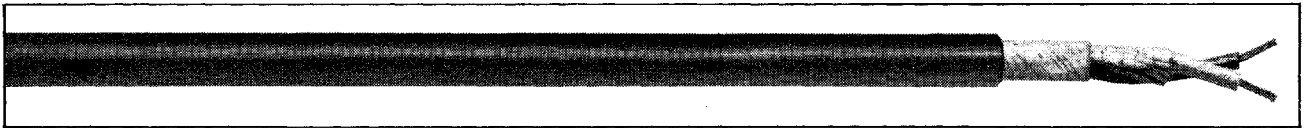
COLOR CODE OF CONDUCTORS: 1-Black 2-Red

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

\* 22 AWG solid tinned copper ground wire under braided copper shield.

SECTION 6000

ALPHA WIRE CORPORATION



**SERVICE & POWER CORDS**  
U.L. APPROVED

**DESCRIPTION: RUBBER PORTABLE CORDS, TYPE SV, SJ, & S**  
Each conductor stranded bare copper, separator, color coded rubber insulation, cabled with fillers, separator, tough black rubber jacket overall.

**NEOPRENE PORTABLE CORDS, TYPE SVO, SJO, & SO**  
Each conductor stranded bare copper, separator, color coded, rubber insulation cabled with fillers, separator, black neoprene jacket overall. Oil, grease, ozone, acid, moisture resistant.

**\*YELLOW PORTABLE CORDS, TYPE SVTO, SJTO, & STO**  
Each conductor, stranded bare copper, oil resistant polyvinylchloride insulation, cabled with fillers, separator, plastic jacket overall. Resistant to oil, acid, moisture, abrasion resistant, easy to clean.

**CHARACTERISTICS & APPLICATIONS:** Suggested Operating Temperatures: -20°C to +60°C.

U.L. TYPE	TYPE OF USAGE	VOLTAGE RATING
SV, SVO, SVTO	Light appliances such as fans, mixers, and office equipment.	300V
SJ, SJO, SJTO	Medium appliances, small motors, tools, amplifiers, speakers.	600V
S, SO, STO	Heavy duty equipment, generators, heaters, tools, air-conditioners.	600V

**RUBBER PORTABLE CORD 300 VOLT**

ALPHA NO.	TYPE	NO. OF COND.	COND. SIZE	NOM. THICKNESS INS.	NOM. THICKNESS JKT.	CURRENT CARRYING CAPACITY IN AMPS	NOM. O.D.
1951	SV	2	18	.016"	.032"	7	.250"
1952	SJ	2	18	.032"	.032"	7	.305"
1952/3	SJ	3	18	.032"	.032"	7	.330"
1952/4	SJ	4	18	.032"	.032"	6	.370"
1953	SJ	2	16	.032"	.032"	10	.330"
1953/3	SJ	3	16	.032"	.032"	10	.360"
1953/4	SJ	4	16	.032"	.032"	8	.400"

**NEOPRENE PORTABLE CORD 300 VOLT**

ALPHA NO.	TYPE	NO. OF COND.	COND. SIZE	NOM. THICKNESS INS.	NOM. THICKNESS JKT.	CURRENT CARRYING CAPACITY IN AMPS	NOM. O.D.
1931	SVO	2	18	.016"	.032"	7	.250"
1932	SJO	2	18	.032"	.032"	7	.305"
1932/3	SJO	3	18	.032"	.032"	7	.330"
1932/4	SJO	4	18	.032"	.032"	6	.370"
1933	SJO	2	16	.032"	.032"	10	.330"
1933/3	SJO	3	16	.032"	.032"	10	.360"
1933/4	SJO	4	16	.032"	.032"	8	.400"

**PLASTIC PORTABLE CORD 300 VOLT**

ALPHA NO.	TYPE	NO. OF COND.	COND. SIZE	NOM. THICKNESS INS.	NOM. THICKNESS JKT.	CURRENT CARRYING CAPACITY IN AMPS	NOM. O.D.
1991	SVTO	2	18	.016"	.032"	7	.250"
1992	SJTO	2	18	.032"	.032"	7	.305"
1992/3	SJTO	3	18	.032"	.032"	7	.330"
1992/4	SJTO	4	18	.032"	.032"	6	.370"
1993	SJTO	2	16	.032"	.032"	10	.330"
1993/3	SJTO	3	16	.032"	.032"	10	.360"
1993/4	SJTO	4	16	.032"	.032"	8	.400"

\* As a safety feature jacket color is yellow for maximum visibility.

STANDARD SPOOL PUT-UP: 50 FT., 100 FT., 250 FT.

COLOR CODE OF CONDUCTORS: 1—White 2—Black 3—Green 4—Red

**SERVICE & POWER CORDS**  
U.L. APPROVED

**RUBBER 600 VOLT PORTABLE CORD**

ALPHA NO.	TYPE	NO. OF COND.	COND. SIZE	NOM. THICKNESS INS.	NOM. THICKNESS JKT.	CURRENT CARRYING CAPACITY IN AMPS	NOM. O.D.
1954	S	2	18	.030"	.060"	7	.250"
1954/3	S	3	18	.030"	.060"	7	.405"
1955/3	S	4	18	.030"	.060"	6	.435"
1955	S	2	16	.030"	.060"	10	.405"
1955/3	S	3	16	.030"	.060"	10	.430"
1955/4	S	4	16	.030"	.060"	8	.485"
1956	S	2	14	.045"	.075"	15	.530"
1956/3	S	3	14	.045"	.075"	15	.560"
1956/4	S	4	14	.045"	.075"	12	.605"
1957	S	2	12	.045"	.090"	20	.600"
1957/3	S	3	12	.045"	.090"	20	.635"
1957/4	S	4	12	.045"	.090"	16	.665"
1958	S	2	10	.045"	.090"	25	.640"
1958/3	S	3	10	.045"	.090"	25	.690"
1958/4	S	4	10	.045"	.090"	20	.745"
1959	S	2	*8	.050"	.090"	35	.700"
1959/3	S	3	*8	.050"	.090"	35	.750"
1959/4	S	4	*8	.050"	.090"	28	.820"
1960	S	2	*6	.050"	.090"	45	.820"
1960/3	S	3	*6	.050"	.090"	45	.885"
1960/4	S	4	*6	.050"	.090"	36	.975"

**NEOPRENE 600 VOLT PORTABLE CORD**

ALPHA NO.	TYPE	NO. OF COND.	COND. SIZE	NOM. THICKNESS INS.	NOM. THICKNESS JKT.	CURRENT CARRYING CAPACITY IN AMPS	NOM. O.D.
1934	SVO	2	18	.030"	.060"	7	.250"
1934/3	SVO	3	18	.030"	.060"	7	.405"
1935	SVO	2	16	.030"	.060"	10	.405"
1935/3	SVO	3	16	.030"	.060"	10	.430"
1935/4	SVO	4	16	.030"	.060"	8	.485"
1936	SVO	2	14	.045"	.075"	15	.530"
1936/3	SVO	3	14	.045"	.075"	15	.560"
1936/4	SVO	4	14	.045"	.075"	12	.605"
1937	SVO	2	12	.045"	.090"	20	.600"
1937/3	SVO	3	12	.045"	.090"	20	.635"
1937/4	SVO	4	12	.045"	.090"	16	.665"
1938	SVO	2	10	.045"	.090"	25	.640"
1938/3	SVO	3	10	.045"	.090"	25	.690"
1938/4	SVO	4	10	.045"	.090"	20	.745"
1939	SVO	2	*8	.050"	.090"	35	.700"
1939/3	SVO	3	*8	.050"	.090"	35	.750"
1939/4	SVO	4	*8	.050"	.090"	28	.820"
1940	SVO	2	*6	.050"	.090"	45	.820"
1940/3	SVO	3	*6	.050"	.090"	45	.885"
1940/4	SVO	4	*6	.050"	.090"	36	.975"

**PLASTIC 600 VOLT PORTABLE CORD**

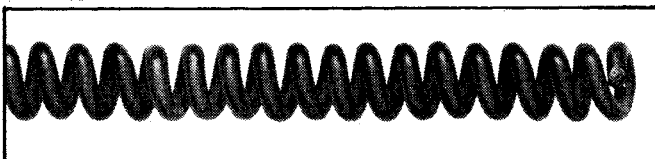
ALPHA NO.	TYPE	NO. OF COND.	COND. SIZE	NOM. THICKNESS INS.	NOM. THICKNESS JKT.	CURRENT CARRYING CAPACITY IN AMPS	NOM. O.D.
1994	SVTO	2	18	.030"	.060"	7	.250"
1994/3	SVTO	3	18	.030"	.060"	7	.405"
1994/4	SVTO	4	18	.030"	.060"	6	.435"
1995	SVTO	2	16	.030"	.060"	10	.405"
1995/3	SVTO	3	16	.030"	.060"	10	.430"
1995/4	SVTO	4	16	.030"	.060"	8	.485"
1996	SVTO	2	14	.045"	.075"	15	.530"
1996/3	SVTO	3	14	.045"	.075"	15	.560"
1996/4	SVTO	4	14	.045"	.075"	12	.605"
1997	SVTO	2	12	.045"	.090"	20	.600"
1997/3	SVTO	3	12	.045"	.090"	20	.635"
1997/4	SVTO	4	12	.045"	.090"	16	.665"
1998	SVTO	2	10	.045"	.090"	25	.640"
1998/3	SVTO	3	10	.045"	.090"	25	.690"
1998/4	SVTO	4	10	.045"	.090"	20	.745"

\*Not listed by Underwriters Laboratories  
STANDARD SPOOL PUT-UP: 50 FT., 100 FT., 250 FT.

COLOR CODE OF CONDUCTORS: 1—White 2—Black 3—Green 4—Red



ALPHA WIRE CORPORATION



RETRACTILE COIL CORDS

RETRACTILE COMMUNICATION COIL CORDS  
 RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Multi-conductor communication cord manufactured with extra flexible #23 AWG-21-36 tinned soft cadmium copper for maximum flex life. Insulated with rubber for communication circuits of maximum 120 working volts. The overall jacket is a specially compounded cured neoprene jacket giving long life to the retractile cord.

APPLICATION: Used in communication equipment, such as telephone car carriers, mobile radio equipment, ham operations, head sets, citizen band units and radio transmitter to receiver head sets, communication cords eliminate hazards and inconveniences caused by tangled straight cords.

2 FT. LTHS.	4 FT. LTHS.	ALPHA NO.	NO. OF CONDS.	CONDUCTOR SIZE	STRANDS	AMP. RATING	VOLTAGE RATING	NOM. COIL O.D.	NOM. CORD O.D.	COLOR CODE OF CONDUCTORS
680/2	680/4	2	23	21/36	1	120	3/4"	215"		1-Black
681/2	681/4	3	23	21/36	1	120	13/16"	220"		2-White
682/2	682/4	4	23	21/36	1	120	15/16"	250"		3-Red
683/2	683/4	5	23	21/36	1	120	1-1/16"	285"		4-Green
684/2	684/4	6	23	21/36	1	120	1-1/8"	305"		5-Blue
685/2	685/4	7	23	21/36	1	120	1-1/4"	320"		6-Yellow
										7-Brown

RETRACTILE COIL CORDS

POWER CORDS—NEOPRENE JACKET U.L. APPROVED

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Long-lasting service is assured with this quality multi-conductor power cord. Each conductor is stranded copper, with rubber installation, and a rugged weather and oil resistant neoprene jacket overall.

APPLICATION: Used on electric tools, portable drills, soldering wires, electrical appliances, household appliances, etc., to eliminate loose hanging wires and to prevent wires from tangling and twisting.

CHARACTERISTICS: Suggested operating temperature: 20°C to 60°C.

2 FT. LTHS.	4 FT. LTHS.	ALPHA NO.	NO. OF CONDS.	CONDUCTOR SIZE	STRANDS	U.L. TYPE	AMP. RATING	VOLT RATING	NOM. COIL O.D.	NOM. CORD O.D.
650/2	650/4	1	18	41/34	1	SVO	7	300	7/8"	200"
760/2	760/4	3	18	41/34	1	SVO	7	300	1"	275"
661/2	661/4	2	18	41/34	1	SJO	7	300	1-3/16"	320"
662/2	662/4	3	18	41/34	1	SJO	7	300	1-3/8"	350"
663/2	663/4	4*	18	41/34	1	SJO	5.6	300	1-7/16"	385"
762/2	762/4	3	18	41/34	1	SO	7	600	1-5/8"	405"
763/2	763/4	4*	18	41/34	1	SO	5.6	600	1-5/8"	435"
664/2	664/4	2	16	65/34	1	SJO	10	300	1-3/8"	360"
665/2	665/4	3	16	65/34	1	SJO	10	300	1-7/16"	390"
666/2	666/4	4*	16	65/34	1	SJO	8	300	1-1/2"	425"
670/2	670/4	3	16	41/34	1	SO	10	600	1-13/16"	470"
671/2	671/4	4*	16	65/34	1	SO	8	600	1-7/8"	500"
672/2	672/4	2	14	41/30	1	SO	15	600	2-1/8"	540"
673/2	673/4	3	14	41/30	1	SO	15	600	2-1/8"	560"
674/2	674/4	4*	14	41/30	1	SO	12	600	2-1/4"	605"
675/2	675/4	2	12	65/30	1	SO	20	600	2-1/4"	605"
676/2	676/4	3	12	65/30	1	SO	20	600	2-3/8"	635"
677/2	677/4	4*	12	65/30	1	SO	16	600	2-3/8"	678"

COLOR CODE OF CONDUCTORS  
 1-Black 2-White  
 3-Green 4-Red

\*If all four conductors normally carry current, amp rating is as shown. If one lead is used as a ground, amp rating is the same as 2 and 3 conductor cords.  
 †A 12" retracted length with a 12" straight lead on each end for easy stripping and termination. Cord extends to approximately 6 feet.

RETRACTILE POWER CORD SETS U.L. APPROVED

RETRACTED LENGTH 18"—EXTENDED LENGTH 7½ FEET

DESCRIPTION: Coiled power cord with a sturdy molded male plug on one end. On the other end we have removed a portion of the neoprene jacket, exposed the conductors and stripped them for easy termination. Operating voltage, 300 volts.

APPLICATION: Same as power cords, but with a plug on one end.

ALPHA NO.	NO. OF CONDS.	CONDUCTOR SIZE	STRANDS	U.L. TYPE	NOM. COIL O.D.	NOM. CORD O.D.
654	2	18	41/34	SVO	7/8"	260"
655	2	18	41/34	SJO	1-3/16"	320"
656	3	18	41/34	SJO	1-3/8"	350"
657	2	16	65/34	SJO	1-3/8"	360"
658	3	16	65/34	SJO	1-7/16"	390"

COLOR CODE OF CONDUCTORS  
 1-Black 2-White 3-Green

RETRACTILE TEST LEAD WIRE

RETRACTED LENGTH 12"—EXTENDED LENGTH 6 FEET

DESCRIPTION: A high grade quality rubber insulation for maximum flex life extruded over a single conductor of extra flexible tinned copper which gives long life to this retractile test lead wire. Available in a 12" retracted length with a 6" straight lead on each end, the cord extends to approximately 6 feet.

ALPHA NO.	CONDUCTOR SIZE	NO. OF CONDS.	AMP. RATING	VOLT RATING	NOM. COIL O.D.	NOM. CORD O.D.	COLOR CODE
650	20	2	4	5,000	¾"	185"	Black-Red

COLOR CODE SPECIFY BLACK OR RED.

RETRACTILE COMMUNICATION CORDS (SHIELDED)

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Same as above, except that shielded conductors are individually shielded with a cadmium copper shield to eliminate external electrical interference. Shield can be pigtailed for direct soldering connections.

APPLICATION: When shielded communication cords are needed.

ALPHA NO.	2 FT. LTHS.	4 FT. LTHS.	NO. OF CONDS.	CONDUCTOR SIZE	STRANDS	VOLTAGE RATING	SHIELDING	NOM. COIL O.D.	NOM. CORD O.D.	COLOR CODE OF CONDUCTORS
690/2	690/4	24	41/40	75		75	Shielded	¾"	160"	White
692/2	692/4	2	1-23	21/36	120	120	Unshielded	¾"	240"	Black
			1-24	41/40	75	75	Shielded	¾"	240"	White
694/2	694/4	3	2-23	21/36	120	120	Unshielded	¾"	240"	Black & Red
			1-24	41/40	75	75	Shielded	¾"	240"	White
696/2	696/4	4	2-23	21/36	120	120	Unshielded	1"	270"	Red & Black
			2-24	41/40	75	75	Individually Shielded	1"	270"	White & Green

RETRACTILE COMMUNICATION CORDS

PREPARED FOR EASY INSTALLATION AND REPLACEMENT

RETRACTED LENGTH 12"—EXTENDED LENGTH 6 FEET

DESCRIPTION: Same as communication cords except each end is prepared as indicated.

ALPHA NO.	NO. OF CONDS.	AWG	NOM. COIL O.D.	NOM. CORD O.D.	PREPARATION
686	3	23-21/36	13/16"	.220"	1 end: total length 1½". Conductors stripped and tinned. Other end: total length 1½" jacket removed.
687	4	23-21/36	15/16"	.250"	1 end: total length 1". Conductors stripped and tinned. Other end: total length 1½" jacket removed.
688	5	23-21/36	1-1/16"	.285"	1 end: total length 4¼". Conductors stripped and tinned. Other end: total length 4¼" conductors stripped and tinned.

MINIATURE RETRACTILE COMMUNICATIONS CORDS

RETRACTED LENGTH 2 FEET—EXTENDED LENGTH 10 FEET

DESCRIPTION: A small diameter plastic cord with stranded lined copper conductors for maximum flexibility, insulated and jacketed with polyvinylchloride. Each cord is available in a 2 ft. retracted length with a 6" straight lead on each end and extends to approximately 10 feet.

APPLICATION: For low voltage power and communication equipment where miniaturization is required due to space and weight limitations.

ALPHA NO.	NO. OF CONDS.	SIZE	CONDUCTOR STRANDS	AMP. RATING	VOLT RATING	NOM. COIL O.D.	NOM. CORD O.D.	COLOR CODE OF CONDUCTORS
651	2	28	19/40	0.5	100	½"	.135"	1-Black 2-White
652	4	28	19/40	0.5	100	½"	.150"	3-Green 4-Red

For 3 conductor, use a conductor with one lead unused

SECTION 6000

ALPHA WIRE CORPORATION



FLAT BRAID

**DESCRIPTION:** A woven braid, composed of tinned copper strands, which is rolled flat at time of manufacture to a specific width depending upon construction.

**APPLICATIONS:** Flat braid is usually employed for its current carrying capacity and its extreme flexibility. It is generally used as a high current conductor at low voltages. Battery groundings is typical of this application. It is also used as a bonding strap in vehicles and aircraft to help eliminate ignition interference. Because of its extreme flexibility it can be used in confined areas or as electrical connections on moving parts.



OVAL COMMERCIAL BRAID

**DESCRIPTION:** A woven tinned copper braid which is left in the tubular configuration as it leaves the braiding equipment. It is manufactured to a specific inside diameter but because of its extreme flexibility cannot maintain its completely round shape and becomes oval.

**APPLICATIONS:** Oval braid is used as an electrostatic shield to cover a conductor, a series of conductors, a cable, or other components. It is specifically constructed and left in its tubular or oval form so that it can easily be slipped over wire, cable, or other components for which shielding is required.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	NOM. THICKNESS	BRAID CONSTRUCTION			APPROX. AVG. EDU/V	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY	PUT-UP CODE
			AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS				
1221	1.02"	.015"	36	8	8	27	250	2.0 AMPS	1 thru 5
1222	1.32"	.070"	36	16	16	24	400	6.0 "	1 thru 5
1223	3.64"	.070"	36	24	24	22	600	7.0 "	1 thru 5
1224	3.32"	.070"	36	16	48	19	1200	11.0 "	1 thru 5
1225	1.8"	.070"	36	74	72	8	1800	16.0 "	1 thru 5
1230	3.16"	.070"	36	74	120	15	3000	25.0 "	1 thru 5
1231	3.4"	.030"	36	24	168	14	4200	32.0 "	1 thru 5
1232	3.8"	.030"	36	48	288	17	7750	46.0 "	1 thru 5
1233 2	1.2"	.030"	36	48	384	10	9600	53.0 "	1 thru 5
1233	5/8"	.030"	36	48	384	10	9600	53.0 "	1 thru 5
1234	3.4"	.040"	36	48	832	7	20800	85.0 "	1 thru 5
1235	1"	.045"	36	48	832	7	20800	85.0 "	1 thru 5
1236	1.3/8"	.050"	36	48	832	7	20800	85.0 "	1 thru 5
1240	1.1/2"	.060"	30	48	576	3	43764	150.0 "	1 thru 3
1241	1.3/4"	.060"	30	48	1748	000	17474	280.0 "	1 thru 3
1242	2"	.120"	30	48	1536	000	154368	310.0 "	1 thru 3
1242 1	2 1/4"	.150"	30	48	1680	000	168840	370.0 "	1 & 2
1242 2	2 1/2"	.170"	30	48	1920	000	192000	340.0 "	1 & 2
1242 3	2 3/4"	.180"	30	48	2160	000	216000	370.0 "	1 & 2
1242 4	3"	.200"	30	48	2256	000	225000	390.0 "	1 & 2

PUT UP CODE: 1-50 Ft. 2-100 Ft. 3-250 Ft. 4-500 Ft. 5-1000 Ft.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AVG. EDU/V	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY	PUT-UP CODE
2130	1.32"	34	24	24	20	354	5.0 AMPS	1 thru 5
2132	1.16"	34	16	32	19	1192	11.0 "	1 thru 5
2134	7/64"	34	16	64	16	2544	20.0 "	1 thru 5
2136	1/8"	34	24	72	15	2862	25.0 "	1 thru 5
2138	11/64"	34	24	120	14	4770	32.0 "	1 thru 5
2140	3/16"	34	24	144	13	5724	38.0 "	1 thru 4
2142	1/4"	34	24	168	12	6678	41.0 "	1 thru 4
2144	3/8"	34	24	192	11	7632	46.0 "	1 thru 4
2146	1/2"	34	48	336	9	13356	62.0 "	1 thru 3
2148	5/8"	34	48	384	8	14264	64.0 "	1 thru 3
2148	11/16"	34	48	480	7	19080	81.0 "	1 thru 3
2152	25/32"	34	48	528	7	20988	85.0 "	1 thru 3

PUT UP CODE: 1-50 Ft. 2-100 Ft. 3-250 Ft. 4-500 Ft. 5-1000 Ft.

\*Values shown are for bare cable in free air at 30°C (86°F) and intended as a reference guide only. Actual values will depend on permissible temperature rise, permissible voltage drop and other conditions of service.



TINNED COPPER TUBULAR BRAID TO MIL SPEC QQ-B-575

**DESCRIPTION:** A woven tinned copper braid which is manufactured completely round as outlined in Mil Spec QQ-B-575. Each strand of the braid is soft drawn tinned copper wire. The braid is self-supporting and maintains its round configuration. The percentage of shielding coverage is 95% or more when placed over a mandrel of an equivalent diameter to the inside braid diameter.

**APPLICATIONS:** Maximum shielding against electrostatic interference for wires, cables and other components. Also as a protective covering against mechanical abrasion and stresses.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	AWG EACH END	BRAID CONSTRUCTION			APPROX. AVG. EDU/V	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY	PUT-UP CODE
			CARRIERS	TOTAL NO. OF INDIV. ENDS					
2160	1.32"	36	24	24	22	600	7.0 AMPS	1-3	
2162	1.16"	36	24	48	19	1200	11.0 "	1-3	
2163	5/64"	36	24	72	18	1800	16.0 "	1-3	
2164	7/64"	36	24	96	16	2400	19.0 "	1-3	
2166	1/8"	36	24	120	15	3000	25.0 "	1-3	
2167	5/32"	36	24	240	12	6000	40.0 "	1-3	
2168	11/64"	36	24	168	14	4200	32.0 "	1-3	
2170	13/64"	34	24	192	11	7630	46.0 "	1-2	
2171	1/4"	36	24	384	10	9600	53.0 "	1-2	
2171 1	9/32"	30	24	120	9	12060	60.0 "	1-2	
2172	3/8"	36	48	384	10	9600	53.0 "	1-2	
2173	7/16"	30	24	240	6	24170	90.0 "	1-2	
2174	1/2"	36	48	576	9	13200	62.0 "	1-2	
2175	9/16"	30	48	480	3	48240	145.0 "	1-2	
2175 1	21/32"	30	48	768	1	77180	190.0 "	1-2	
2176	25/32"	36	48	864	7	21600	88.0 "	1-2	

PUT UP CODE: 1-50 Ft. 2-100 Ft. 3-250 Ft.

EXTRA LARGE TINNED COPPER TUBULAR BRAID

**DESCRIPTION:** These tubular braids manufactured to standards of QQ-B-575 although these sizes are not listed in the specification.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AVG. EDU/V	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY	PUT-UP CODE
2177	7/8"	30	48	336	5	33700	100.0 "	1 & 2
2178	1"	30	48	384	4	38600	120.0 "	1 & 2
2179	1 1/8"	30	48	432	4	43300	130.0 "	1 & 2
2180	1 1/4"	30	48	480	3	48150	145.0 "	1 & 2
2181	1 3/8"	30	48	528	3	53000	150.0 "	1 & 2
2182	1 1/2"	30	48	576	2	57775	165.0 "	1 & 2

PUT UP CODE: 1-50 Ft. 2-100 Ft.

SILVER PLATED TUBULAR BRAID CONSTRUCTION TO MIL SPEC QQ-B-575

**DESCRIPTION:** A woven silver plated copper braid which is manufactured completely round as outlined in Mil Spec QQ-B-575. Each strand of the braid is soft drawn silver plated copper wire. The braid is self-supporting and maintains its round configuration. The percentage of shielding coverage is 95% or more when placed over a mandrel of an equivalent diameter to the inside braid diameter. Silver plated braid is used where a high operating temperature (200°C) and corrosion resistance is required.

ALPHA NO.	NOM. I.D. WHEN ROUNDED	AWG OF INDIV. ENDS	CARRIERS	TOTAL NO. OF INDIV. ENDS	APPROX. AVG. EDU/V	NOM. CIRCULAR MILLS	*CURRENT CARRYING CAPACITY	PUT UP CODE
2190	1.32"	36	24	24	22	600	7.0	1-1
2191	1.16"	36	24	48	19	1200	11.0	1-1
2192	5/64"	36	24	72	18	1800	16.0	1-1
2193	7/64"	36	24	96	16	2400	19.0	1-1
2194	1/8"	36	24	120	15	3000	25.0	1-1
2195	5/32"	36	24	240	12	6000	40.0	1-1
2196	11/64"	36	24	168	14	4200	32.0	1-1
2197	13/64"	34	24	192	11	7640	46.0	1 & 1
2198	1/4"	36	24	384	10	9600	53.0	1 & 1

PUT UP CODE: 1-50 Ft. 2-100 Ft. 3-250 Ft.

\*Values shown are for bare cable in free air at 30°C (86°F) and intended as a reference guide only. Actual values will depend on permissible temperature rise, permissible voltage drop and other conditions of service.

# ALPHLEX® TUBING SECTION

## PLASTIC TUBING (PVC-105)

### DESCRIPTION

PVC-105's exceptional integration of desirable qualities endows it with excellent versatility and durability. Its dielectric strength is high and remains unaffected by increasing temperature throughout its range. It displays high resistance to the agents of heat, oil, chemicals, corrosion, fungi and even abrasion with no loss in tensile strength, non-flammability—or flexibility.

Under all the above adverse conditions, PVC-105 will retain its ability to hug and protect irregular-shaped objects, will "snake" beautifully, and will always be easy to handle.

To achieve this combination of advantages, special care is taken in the making of PVC-105. It is compounded with only first-grade quality non-migratory resinous type plasticizers. From laboratory to production line, from raw material to finished product, strict quality control prevails. Behind it are the same engineering and production know-how that have made the name Alpha famous in the electronics industry.

As with all Alpha and Alphlex items, PVC-105 is "IN STOCK" for immediate delivery, and can be supplied to desired lengths as well as standard spools.

For your special problems, please call on us for consultation and recommendations—no obligation, of course.

Dielectric Strength	Temp. Rating	Low Temp. Flexibility	Flammability	Tensile Strength	Ultimate Elongation	Insulation Resistance	Fungi Resistance	Oil Resistance	Corrosion & Abrasion Resistance	Applicable Specifications
800 V/MIL	105°C	-30°C	Non-Flammable	2500 PSI	300%	Over 1,000,000 Megs.	Yes	Remains Flexible Indefinitely	Excellent	MIL-I-631C ASTM-D876 ASTM-D922

#### Standard Colors

#24 thru #12	—Clear, Black, Yellow, Red, Blue, Brown, Green, White, Orange
#11 thru #2	—Clear, Black, Yellow, Red, Green, White
#1 thru 2½"	—Clear, Black

#### Standard Put-Ups

#24 thru #15	—1,000 ft. spools
#14 thru #5	— 500 ft. spools
#4 thru ¾"	— 250 ft. coils
¾" thru ½"	— 100 ft. coils
¾" & larger	— 50 ft. coils

#### APPLICATIONS

Alphlex® PVC-105 Plastic Tubing is designed and manufactured specifically for electronic, aircraft and electrical applications involving temperatures as high as 105°C. It conforms to Specification MIL-I-631C, Type F, Form U, Grade C, Class I, Category I.

ALPHA NO.	SIZE	NOM. INSIDE DIAMETER	NOM. WALL THICKNESS
PVC-105/24	24	.022"	.013"
PVC-105/22	22	.027"	.012"
PVC-105/20	20	.034"	.016"
PVC-105/19	19	.038"	.016"
PVC-105/18	18	.042"	.016"
PVC-105/17	17	.047"	.016"
PVC-105/16	16	.053"	.016"
PVC-105/15	15	.059"	.016"
PVC-105/14	14	.066"	.016"
PVC-105/13	13	.076"	.016"
PVC-105/12	12	.085"	.016"
PVC-105/11	11	.095"	.016"
PVC-105/10	10	.106"	.016"
PVC-105/9	9	.118"	.020"
PVC-105/8	8	.133"	.020"
PVC-105/7	7	.148"	.020"
PVC-105/6	6	.166"	.020"
PVC-105/5	5	.186"	.020"
PVC-105/4	4	.208"	.020"
PVC-105/3	3	.234"	.020"

ALPHA NO.	SIZE	NOM. INSIDE DIAMETER	NOM. WALL THICKNESS
PVC-105/2	2	.263"	.020"
PVC-105/1	1	.294"	.020"
PVC-105/0	0	.330"	.020"
PVC-105/¾"	¾"	.312"	.025"
PVC-105/¾"	¾"	.375"	.025"
PVC-105/½"	½"	.438"	.025"
PVC-105/½"	½"	.500"	.025"
PVC-105/¼"	¼"	.562"	.030"
PVC-105/¼"	¼"	.625"	.030"
PVC-105/¼"	¼"	.750"	.035"
PVC-105/¼"	¼"	.875"	.035"
PVC-105/1"	1"	1.000"	.035"
PVC-105/1¼"	1¼"	1.125"	.035"
PVC-105/1¼"	1¼"	1.250"	.040"
PVC-105/1¾"	1¾"	1.375"	.040"
PVC-105/1½"	1½"	1.500"	.045"
PVC-105/1¾"	1¾"	1.750"	.055"
PVC-105/2"	2"	2.000"	.060"
PVC-105/2¼"	2¼"	2.250"	.065"
PVC-105/2½"	2½"	2.500"	.070"

NOTE: PVC-105 manufactured under the recognition component section of UL is available to order.

## TEFLON® EXTRUDED TUBING (TFT-200) (THIN WALL)

### DESCRIPTION

ALPHLEX® THIN WALL TEFLON TUBING, a high temperature insulation (designated by A.I.E.E. for continuous operation at 220°C minimum), while classified as a thermoplastic resin, does not melt and flow as do conventional thermoplastic materials.

### APPLICATIONS

Because of its combination of electrical, chemical and mechanical properties, ALPHLEX TEFLON is unmatched by any other type tubing for use in electrical applications at high frequencies and temperatures. As a thin, flexible insulation, it permits miniaturization and compactness of design heretofore impossible.

Dielectric Strength	Temp. Rating	Low Temp. Flexibility	Flammability	Tensile Strength	Ultimate Elongation	Fungi & Oil Resistance	Corrosion & Abrasion Resistance	Applicable Specifications
500-1000 V/MIL	250°C	-90°C	Non-Flammable	1500-3000 PSI	100-200%	Excellent	Excellent	ASTM

ALPHA NO.	SIZE	NOM. INSIDE DIAMETER	NOM. WALL THICKNESS	ALPHA NO.	SIZE	NOM. INSIDE DIAMETER	NOM. WALL THICKNESS
TFT-200/30	30	.012"	.009"	TFT-200/12	12	.085"	.012"
TFT-200/28	28	.015"	.009"	TFT-200/11	11	.095"	.012"
TFT-200/26	26	.018"	.010"	TFT-200/10	10	.106"	.012"
TFT-200/24	24	.022"	.010"	TFT-200/9	9	.118"	.015"
TFT-200/22	22	.027"	.010"	TFT-200/8	8	.133"	.015"
TFT-200/20	20	.034"	.012"	TFT-200/7	7	.148"	.015"
TFT-200/19	19	.038"	.012"	TFT-200/6	6	.166"	.015"
TFT-200/18	18	.042"	.012"	TFT-200/5	5	.186"	.015"
TFT-200/17	17	.047"	.012"	TFT-200/4	4	.208"	.015"
TFT-200/16	16	.053"	.012"	TFT-200/3	3	.234"	.015"
TFT-200/15	15	.059"	.012"	TFT-200/2	2	.263"	.015"
TFT-200/14	14	.066"	.012"	TFT-200/1	1	.294"	.015"
TFT-200/13	13	.076"	.012"	TFT-200/0	0	.330"	.015"

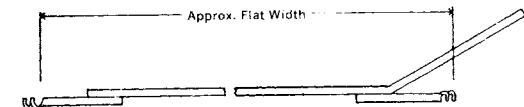
Sizes	Standard Colors	Standard Put-Ups
#30-#15 Inclusive	Natural Yellow Black Red	1000 ft. Spools or 10-100 ft. Spools per 1000 ft. Box
#14-#8 Inclusive	Natural Yellow Black Red	500 ft. Spools or 5-100 ft. Spools per 500 ft. Box
#7-#0 Inclusive	Natural	Random Lengths Packed in 100 ft. Coils or 36" Lengths

# ALPHLEX® ZIPPER TUBING

**DESCRIPTION** Alphlex Zipper Tubing is the all purpose modern way to harness, cover and protect cables. Just zip to close — and zip to reopen. If you wish, it may be permanently sealed with PB-200 Special Compound Liquid Sealer. Alphlex Zipper Tubing is strong, flexible, durable, and offers new freedom in design, production and repair.

**APPLICATIONS** To shield, to harness wire, to custom-cable to any length, to enclose, to encase, to identify (such as cable markers), to protect, to replace worn jackets.

TYPES OF ZIPPER TUBING						
TYPE	MATERIAL	WALL THICKNESS (inches)	OPER. TEMP.	APPLICATIONS	STOCK COLORS	STANDARD PUT-UPS
ZIP-31	Polyvinylchloride made from MIL-I-631 D, GRADE C Materials	.020	-20° C to 105° C	All Purpose Type	Clear Black Yellow	25' 50' 100' 25' 50' 100' 25' 50' 100'
ZIP-31M	Polyvinylchloride made from MIL-I-631 D, GRADE C Materials	.040	-20° C to 105° C	Heavy Duty Constructions	Clear Black	100' 100'
ZIP-44	Polyvinylchloride made from MIL-I-7444 B Materials	.020	-67° C to 70° C	Extreme Flexibility, Low Temperature & Aircraft industry	Clear Black	100' 100'
ZIP-50	Polyvinylchloride "sandwich" of aluminum foil laminated between two sheets of polyvinyl	.040	-20° C to 105° C	100% RF shielding	Silver-Grey	100'

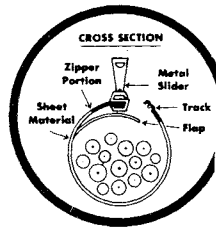
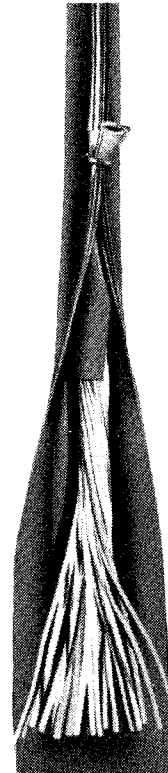


**ZIPPER SPECIFICATIONS FOR ALL TYPES OF ALPHLEX ZIPPER TUBING**

Material	Polyvinylchloride	Cold Brittleness	-86° C
Track Thickness (when closed)	.095"	Fungus-proof	will not support fungus
Dielectric Strength, V/mil	759	Flammability	self-extinguishing
Tensile Strength P.S.I.	3810	Lateral Pull Strength (unsealed)	42.7 pounds/inch
Ultimate Elongation	255%	Lateral Pull Strength (permanently sealed)	59.8 pounds/inch
Operating Temperature, Upper Limit	106° C	Standard Colors	Black, Clear, Yellow

Contrasting color combinations of zipper and body are available to order. The zipper portion can be supplied in any of the following colors: Black, Yellow, Clear, Blue, White, Brown, Purple, Red, Orange, Green, Slate.

STANDARD SIZES FOR ALL ZIPPER TUBING	
Zipper Tubing Inside Diameter	Approx. Flat Width (From track to track — excluding flap)
1/4"	1 1/4"
3/8"	1 3/4"
1/2"	2"
5/8"	2 1/4"
3/4"	2 1/2"
7/8"	3"
1"	3 1/4"
1 1/8"	3 3/4"
1 1/4"	4"
1 1/2"	4 1/4"
1 3/4"	5"
2"	6"



**HOW TO ORDER**

Select the type of Zipper Tubing desired from the chart and the required inside Diameter. When ordering, request as follows: For example, ZIP-31 Tubing in 1/2" Inside Diameter order — ZIP-31 — 1/2".

Because of small Inside Diameter, these sizes cannot be closed by using the slider. The tracks must be closed by manual pressure.

## ALPHLEX® ELECTRONIC LACING CORDS AND TAPES

### MIL-T-713A NYLON TWISTED CORD

ALPHA NO.	CLASS	TYPE	BREAKING STRENGTH	FINISH	NOMINAL DIAMETER	STOCK COLORS	YARDS PER POUND	STANDARD PUT-UP
LC-113	I	P Twine	70 lbs.	MW	.050"	Wh., Bik.	560	8 oz. spls.
LC-114	II	P Twine	48 lbs.	MW	.035"	Wh., Bik.	750	8 oz. spls.
LC-115	III	P Twine	32 lbs.	MW	.030"	Wh., Bik.	1180	8 oz. spls.

### MIL-T-713A NYLON FLAT BRAIDED TAPE

ALPHA NO.	CLASS	TYPE	BREAKING STRENGTH	NOMINAL WIDTH	NOMINAL THICKNESS	FINISH	STOCK COLORS	STANDARD PUT-UP
LC-136	II	P Tape	50 lbs.	.090" (3/32")	.014"	MW	Wh., Bik.	500 yd. spls.

### NYLON FLAT BRAIDED TAPE

ALPHA NO.	WIDTH	THICKNESS	TENSILE STRENGTH	FINISH	STOCK COLORS	STANDARD PUT-UP
LC-132	3/32"	.014"	50 lbs.	GE	Wh., Bik.	500 yd. tubes
LC-134	1/16"	.010"	30 lbs.	MW	Wh., Bik.	500 yd. spls.
LC-136	3/32"	.014"	50 lbs.	MW	Wh., Bik.	500 yd. spls.
LC-140	3/32"	.014"	50 lbs.	SR	Wh., Bik.	500 yd. spls.
LC-143	3/32"	.014"	50 lbs.	AM	Wh., Bik.	500 yd. spls.

### DACRON FLAT BRAIDED TAPE

ALPHA NO.	WIDTH	THICKNESS	TENSILE STRENGTH	FINISH	STOCK COLORS	STANDARD PUT-UP
LC-158	3/32"	.014"	50 lbs.	GE	Wh., Bik.	500 yd. tubes
LC-162	3/32"	.014"	50 lbs.	MW	Wh., Bik.	500 yd. spls.

Other materials, finishes and sizes available to order.

### TYPES OF LACING CORD

**flat braided tape** This construction was developed to prevent the "cold flow" that often is encountered in wire having plastic or rubber insulations. It is specifically designed to create a wider contact area with the insulation, so that it does not pull away from the contact point. It is considerably more flexible and easier on the user's hands and is recommended for all types of harness work. Flat tape does not appreciably increase the diameter of the cable.

**round twisted cord** Available in various strand thicknesses to produce different tensile strengths. This type, while it may be used for plastic and rubber insulated wire, is particularly suited for use having a secondary insulation or those utilizing textile as an insulating material.

### MATERIALS

**nylon** Synthetic fiber resistant to fungus, acids, abrasion. Excellent tensile strength, weight, small size.

**dacron** A synthetic fiber which retains all the characteristics of Nylon plus: less elongation, resistance to acids, no appreciable discoloration.

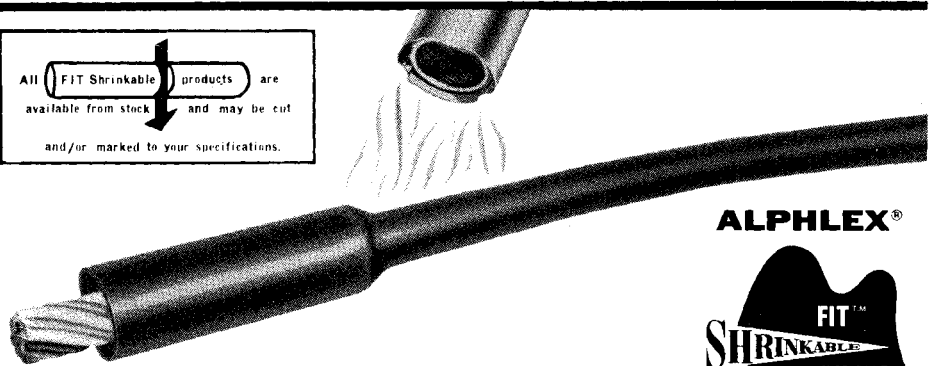
### FINISHES

- ge synthetic rubber-like resin
- mw micro-crystalline wax
- am thermoplastic synthetic resin
- sr fungistatic synthetic rubber

ALPHA WIRE CORPORATION

A host of electronic, electrical, medical, laboratory, automotive and aircraft applications. FIT Tubing displays high resistance to heat, oils, moisture, chemicals, acid, corrosion, fungi and abrasion.

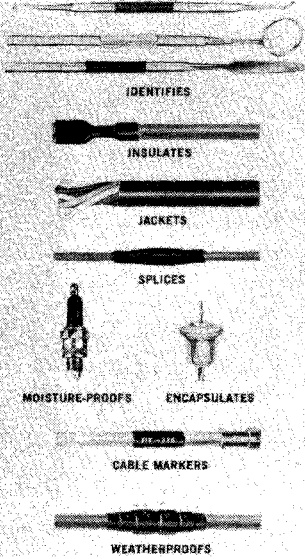
All FIT Shrinkable products are available from stock and may be cut and/or marked to your specifications.



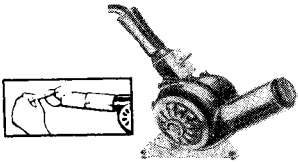
New Alphlex all-purpose FIT Shrinkable Tubing shrinks in seconds when heated, forming a permanent tight-fitting mechanical bond even over irregularly shaped materials. Shrinkage is predetermined.

TYPES OF FIT™ SHRINKABLE PRODUCTS

FIT-221	An excellent all-purpose polyolefin tubing, Shrinkage Ratio — 2:1 (50% shrinkage).
FIT-105	A shrinkable polyvinylchloride with all the advantages of PVC plus the convenience factors of Shrinkable Tubing. Recommended as a superior quality, economical material for cabling and jacketing. Shrinkage Ratio 2:1 (50% shrinkage).
FIT-295	An extremely tough, semi-rigid abrasion resistant tubing with unusual mechanical strength. Recommended for jacket-termination, connection, or splice that is subject to mechanical stress. Shrinkage Ratio 2:1 (50% shrinkage).
FIT-Cap	Electrical insulating, flame-resistant sealed wire and cable terminations. Answers the need for a strong, space-saving, lightweight end cap for splices and cables. Shrinkage Ratio 2:1 (50% shrinkage).
FIT-Mrk	FIT-Markers are pre-cut and stamped wire markers made of a flexible abrasion-proof, durable polyolefin tubing. Shrinkage Ratio 2:1 (50% shrinkage).



HEAT GUN (HG-1)



FIT - KIT

An ideal laboratory / prototype / production kit. A selection of 6-inch lengths of FIT-221; FIT-295, FIT-105, FIT-Caps and FIT-Markers in a handy plastic case, each type in its separate compartment. Includes a wide variety of sizes and colors.

6" PACKAGED ASSORTMENTS

FIT-221 — assorted sizes and colors per box — contains an assortment of 6" lengths in various sizes and colors. Every length identified as to size and supplied in Black, White, Red, Yellow, Blue, and Clear.

ALPHLEX NUMBER	TUBING SIZE RANGE	LENGTHS PER BOX
FIT-221 MS-1	1/4" thru 3/8"	30
FIT-221 MS-2	1/2" thru 3/4"	16
FIT-221 MS-3	1" thru #4	10

**IRADIATED POLYOLEFIN TUBING** The All-Purpose Shrinkable Tubing  
**IT-221** Shrinkage Ratio 2:1 (50% shrinkage).

DIMENSIONS CHART

ALPHLEX NO. FIT-221	EQUIVALENT TO FIT-275/270	SIZE	MIN. I.D. BEFORE SHRINKAGE (inches)	RECOVERED I.D. AFTER SHRINKAGE (inches)	RECOVERED NOM. WALL THICKNESS (inches)	STND. 4' PKG.*		STND. 6' PKG.*	
						TOT. FTG.	NO. OF LGTHS.	TOT. FTG.	NO. OF LGTHS.
FIT-221-3/4"	FIT-275-24	3/4	.046	.023	.016	100'	25	20'	40
FIT-221-1/16"	FIT-275-22, 20	1/16	.063	.031	.017	100'	25	18'	36
FIT-221-3/32"	FIT-275-18, 16	3/32	.093	.046	.020	100'	25	16'	32
FIT-221-1/8"	FIT-275-14	1/8	.125	.062	.020	100'	25	14'	28
FIT-221-3/16"	FIT-275-12, 10	3/16	.187	.093	.020	100'	25	12'	24
FIT-221-1/4"	FIT-275-8	1/4	.250	.125	.025	100'	25	10'	20
FIT-221-3/8"	FIT-275-6, 4	3/8	.375	.187	.025	100'	25	8'	16
FIT-221-1/2"	FIT-275-2, 3/16"	1/2	.500	.250	.025	20'	5	7'	14
FIT-221-3/4"	FIT-275-3/8", 7/16"	3/4	.750	.375	.030	20'	5	6'	12
FIT-221-1"	FIT-225-1/2", 5/8"	1	1.000	.500	.035	20'	5	4'	8
FIT-221-1 1/2"	FIT-275-3/4", 7/8"	1 1/2	1.500	.750	.040	20'	5	2.5'	5
FIT-221-2"	FIT-275-1", 1 1/4"	2	2.000	1.000	.045	20'	5	1.5'	3
FIT-221-3"	FIT-275-1 1/2", 1 3/4"	3	3.000	1.500	.050	8'	2	1'	2
FIT-221-4"	FIT-275-2"	4	4.000	2.000	.055	8'	2	.5'	1

STOCK COLORS — Black, White, Red, Yellow, Blue, and Clear

STANDARD PACKAGE FIT-221 Tubing is available ONLY in the specified packages. When ordering, indicate package desired (6 inches or 4 foot).

SECTION 6000

ALPHA WIRE CORPORATION

**IRRADIATED POLYVINYLCHLORIDE TUBING** Highly Flexible — Ideal for Cable Jacketing  
**FIT-105** Shrinkage Ratio 2:1 (50% Shrinkage)

ALPHLEX NO. (BLACK ONLY)	SIZE (Inches)	MINIMUM I.D. BEFORE SHRINKING (Inches)	RECOVERED I.D. AFTER SHRINKING (Inches)	NOMINAL WALL THICKNESS (Inches)	STANDARD PUT-UP (Feet)
FIT-105-3/4	3/4	.046	.023	.020	25, 100, 500
FIT-105-5/8	5/8	.062	.031	.020	25, 100, 500
FIT-105-1/2	1/2	.093	.046	.020	25, 100, 200
FIT-105-3/8	3/8	.125	.062	.020	25, 100, 200
FIT-105-5/16	5/16	.187	.093	.025	25, 100, 200
FIT-105-1/4	1/4	.250	.125	.025	25, 100, 200
FIT-105-3/16	3/16	.375	.187	.030	25, 100, 200
FIT-105-1/8	1/8	.500	.250	.030	25, 100
FIT-105-3/32	3/32	.775	.375	.035	25, 100
FIT-105-1/16	1/16	1.000	.500	.040	25, 100
FIT-105-1/32	1/32	1.500	.750	.045	25, 100
FIT-105-2	2	2.000	1.000	.050	10, 25, 50

**FIT-105-MS PACKAGED ASSORTMENTS**  
 Contains an assortment of 6" lengths in various sizes. Every length identified as to size and supplied in black only.

ALPHLEX NO.	TUBING SIZE RANGE	LENGTHS PER BOX
FIT-105-MS-1	3/4" thru 1 1/2" (6 sizes)	10 lengths per size (60 lengths)
FIT-105-MS-2	3/4" thru 1" (4 sizes)	10 lengths per size (40 lengths)
FIT-105-MS-3	1 1/2" and 2" (2 sizes)	7 lengths per size (14 lengths)

**IRRADIATED POLYOLEFIN SEMI-RIGID TUBING** For Maximum Strength At All Stress Points  
**FIT-295** Shrinkage Ratio 2:1 (50% Shrinkage)

ALPHLEX PART NUMBER FIT-295 COLORED	* STOCK COLORS	SIZE (Inches)	MINIMUM I.D. BEFORE SHRINKING (Inches)	RECOV'D I.D. AFTER SHRINKING (Inches)	NOMINAL WALL THICKNESS (Inches)	STANDARD PACKAGE* 2 Foot Lengths		STANDARD PACKAGE* 6 Inch Lengths	
						Tot. Ftg.	No. Lgths.	Tot. Ftg.	No. Lgths.
FIT-295-3/4	Yellow	3/4	.046	.023	.020	100'	50	20'	40
FIT-295-5/8	White	5/8	.063	.032	.020	100'	50	18'	36
FIT-295-1/2	Blue	1/2	.093	.045	.020	100'	50	16'	32
FIT-295-3/8	Red	3/8	.125	.063	.020	100'	50	14'	28
FIT-295-5/16	Green	5/16	.187	.093	.025	100'	50	12'	24
FIT-295-1/4	Slate	1/4	.250	.125	.025	100'	50	10'	20
FIT-295-3/16	Brown	3/16	.375	.187	.030	100'	50	8'	16
FIT-295-1/8	Black	1/8	.500	.250	.030	20'	10	7'	14
FIT-295-3/32	White	3/32	.750	.375	.040	20'	10	6'	12
FIT-295-1	Red	1	1.000	.500	.050	20'	10	4'	8

**PACKAGED ASSORTMENTS FIT-295-MS**  
 Contains an assortment of 6" lengths in various sizes. Every length identified as to size.

ALPHLEX NO.	TUBING SIZE RANGE	LENGTHS PER BOX
FIT-295-MS-1	3/4" thru 1 1/2" (6 sizes)	5 lengths per size (30 lengths)
FIT-295-MS-2	3/4" thru 1" (4 sizes)	6 lengths per size (24 lengths)

**\*STANDARD PACKAGE**  
 295 Tubing is available only in the specified standard packages. When ordering, indicate package desired (6 Inch or 2 Foot).

\*Each size available in "Clear."

**FIT-CAPS — SHRINKABLE WIRE TERMINATION CAPS** An Irradiated Semi-Rigid Polyolefin Product  
 Shrinkage Ratio 2:1 (50% Shrinkage)

DIMENSION CHART		Alphlex No.	A Minimum I.D. Before Shrinking (Inches)	AA Recovered I.D. After Shrinking (Inches)	Nominal Wall Thickness (Inches)	B Nominal Length (Inches)	Stock Colors	Standard Package Put-Up (Pieces)
	Actual Size							
		CAP-2	.125	.050	.020	1	Red	100 or 1000
		CAP-3	.250	.100	.025	1	Slate	100 or 1000
		CAP-4	.500	.200	.030	1 1/4	Black	100 or 1000

**FIT-CAP ASSORTMENT** CAP-A contains 10 each of the 4 sizes of shrinkable wire termination caps. Packed in a handy transparent plastic storage box.

**FIT-MARKERS — SHRINKABLE WIRE MARKERS**  
 An Irradiated Flexible Polyolefin Product  
 Shrinkage Ratio 2:1 (50% Shrinkage)

Alphlex No.	O.D. of Wire to be Identified (Inches)	Minimum I.D. Before Shrinking (Inches)	Recovered I.D. After Shrinking (Inches)	Nominal Wall Thickness (Inches)	Marker Length Before Shrinkage (Inches)	Stock Color
MRK-A	.049-.065	.098	.049	.016	3/4	Black
MRK-B	.066-.095	.122	.061	.016	3/4	Black
MRK-C	.096-.150	.178	.089	.016	3/4	Black

**FIT-MARKER ASSORTMENTS** Contains a selection of markers printed in numerical or alphabetical sequence.

Alphlex No.	Minimum I.D. Before Shrinking (Inches)	Printing On Markers	Standard Package *2 of each number *4 of each letter	Stock Color
MRK-A-NS	.098	1-50	100*	Black
MRK-B-NS	.122	1-50	100*	Black
MRK-C-NS	.178	1-50	100*	Black
MRK-A-LS	.098	A-Z	100†	Black
MRK-B-LS	.122	A-Z	100†	Black
MRK-C-LS	.178	A-Z	100†	Black

**HOW TO ORDER**

- Determine O.D. of wire to be identified.
- Select recommended size and part number from chart above.
- To order, add number or letter to be printed on marker as suffix to the Alpha part number: For example: To order FIT-Markers printed with number "22", for use on wire with O.D. of .075, order: MRK-B-22.

## ALPHA WIRE PRICE LIST

Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'
112	\$13.50	690/2	4.73	1255/10	420.00	1459/20	1440.00	1721	292.50	1888	246.00	1960†††	252.00
136	9.00	692/4	11.40	1255/12	585.00	1470	39.00	1723	441.00	1889	330.00	1960/3†††	337.50
286	15.75	692/2	6.30	1256/22V	37.20	1471	42.00	1726	720.00	1891	108.00	1960/4†††	390.00
289	23.25	694/4	16.20	1256V	46.20	1472	45.60	1728	855.00	1891/3	147.00	1979	28.50
292	52.50	694/2	8.70	1259V	66.00	1473	54.75	1735	38.10	1892	153.00	1967	27.00
292/6	130.20	696/4	18.75	1260V	73.50	1474	66.30	1736	42.00	1892/3	225.00	1977	21.00
292/8	81.45	696/2	9.98	1260/12	240.00	1475	91.20	1737	55.50	1893	22.80	1978	36.00
295	10.50	760/4	9.30	1260/14	122.40	1476	144.00	1738	72.60	1894	33.00	1991†††	16.50
296	7.50	760/2	5.25	1261	48.60	1480	10.35	1740	43.05	1894/4	45.75	1992†††	21.00
297	4.80	762/4	15.90	1261/26	51.15	1481	11.55	1741	57.45	1895	27.90	1992/3†††	23.25
298	3.53	762/2	8.55	1300	12.75	1482	15.00	1742	72.75	1896	54.15	1992/4†††	39.00
299	3.15	763/4	17.85	1302	23.25	1483	19.80	1743	105.90	1896/4	72.00	1993†††	24.00
299/1	2.85	763/2	9.60	1304	32.25	1503	9.75	1745	50.70	1897	39.90	1993/3†††	33.00
299/2	2.78	1100	27.45	1307	55.50	1504	10.20	1746	69.45	1898	70.20	1993/4†††	51.30
299/3	2.78	1101	38.40	1307/7	76.20	1505	12.60	1747	100.20	1898/4	102.15	1994†††	30.15
600	.63	1102	51.15	1307/9	77.25	1506	18.75	1747/4	138.75	1898/6	148.50	1994/3†††	39.45
602	.72	1105	46.20	1308/11	105.00	1507	24.00	1748	101.25	1898/8	199.35	1994/4†††	53.10
604	.95	1106	54.60	1309	118.50	1508	31.50	1749	138.75	1898/12	297.00	1995†††	33.75
606	.77	1107	64.20	1309/15	133.50	1509	46.50	1750	135.00	1899	54.15	1995/3†††	49.50
608	.84	1110	57.75	1310	189.00	1550	6.45	1751	192.75	1899/3	107.40	1995/4†††	63.90
610	.84	1115	19.50	1313	247.50	1551	7.50	1760	210.00	1899/4	147.60	1996†††	55.05
612	.96	1116	29.40	1313/31	585.00	1553	9.90	1761	288.00	1900	13.50	1996/3†††	74.70
615	.81	1120	49.20	1313/41	840.00	1555	14.25	1775	36.00	1901	18.90	1996/4†††	93.00
616	1.04	1121	58.65	1314	1080.00	1557	21.00	1779	57.15	1903	18.15	1997†††	70.95
618	1.11	1122	74.40	1316	23.40	1559	32.10	1783	68.40	1903	18.15	1997/3†††	93.60
619	1.25	1150	14.93	1317	52.35	1560	52.50	1793	18.00	1904	29.25	1997/4†††	120.75
620	.72	1153	18.75	1318	63.75	1561	6.15	1794	27.75	1906	28.20	1998†††	93.00
622	.81	1156	36.00	1319	69.00	1561/24	6.00	1794/4	39.60	1907	41.25	1998/3†††	126.00
624	.93	1157	24.75	1320	72.75	1563	8.25	1795	33.00	1909	49.50	1998/4†††	148.50
626	2.16	1159	33.45	1322	75.00	1565	12.00	1796	47.70	1910	72.00	2130	18.75
628	1.04	1160	44.10	1323	108.00	1567	16.95	1796/4	56.25	1912	15.75	2132	30.00
630	3.30	1161	60.00	1327	180.00	1571	9.60	1797	38.70	1913	25.50	2134	45.75
632	4.20	1163	93.60	1327/19	297.00	1573	11.25	1798	52.35	1915	20.25	2136	57.00
634	7.80	1164	132.60	1328	315.00	1575	15.00	1798/4	69.30	1916	27.00	2138	69.75
536	1.29	1172	16.50	1329	337.50	1577	19.50	1798/6	90.60	1918	23.40	2140°	39.15
538	2.63	1173	18.75	1329/31	870.00	1579	36.00	1798/6	108.60	1919	34.95	2142°	46.50
539	5.40	1174	24.75	1329/41	1185.00	1590	15.75	1799	66.90	1921	27.30	2144°	54.00
540	2.34	1175	30.00	1330	1380.00	1591	19.50	1799/3	81.60	1922	40.05	2146†††	54.00
542	4.05	1176	46.50	1332	37.50	1592	24.00	1799/4	112.50	1924	30.60	2148†††	58.13
544	6.30	1177	52.50	1341	18.00	1593	29.25	1830	8.40	1925	57.45	2150†††	71.25
545	1.35	1178	58.50	1343	24.30	1594	34.50	1831	9.60	1927	64.20	2152†††	78.00
546	1.65	1179	64.50	1344	28.13	1595	60.00	1832	11.40	1928	111.00	2160†††	6.00
547	1.95	1180	66.00	1345	34.50	1598	99.00	1833	15.00	1931†††	18.00	2162†††	10.50
548	2.40	1181	70.50	1346	48.00	1599	165.00	1834	19.50	1932†††	23.10	2163†††	12.45
549	2.85	1181/15	207.00	1350	20.40	1599/6	222.00	1835	28.35	1932/3†††	28.13	2164†††	15.90
550	.89	1181/20	270.00	1351	21.60	1610	9.75	1836	49.50	1932/4†††	42.15	2166†††	16.50
551	2.70	1181/25	337.50	1352	24.00	1632	19.50	1840	13.50	1933†††	28.05	2167†††	30.00
552	3.38	1181/30	405.00	1353	28.50	1635	21.00	1841	13.50	1933/3†††	39.30	2168†††	22.50
554	3.15	1182	36.00	1354	38.25	1636	22.50	1842	16.50	1933/4†††	57.45	2170**	13.05
555	3.75	1183	53.40	1355	45.00	1638	39.00	1843	18.30	1934†††	37.05	2171**	15.75
557	5.70	1184	65.40	1356	60.00	1639	27.00	1844	24.00	1934/3†††	45.00	2171/1**	18.00
558	4.05	1185	84.60	1370	30.75	1640	26.40	1845	36.00	1934/4†††	56.25	2172**	18.30
60/4	6.15	1186	108.60	1371	31.50	1641	30.90	1846	63.75	1935†††	39.60	2173**	26.70
60/2	6.00	1187	126.00	1372	33.00	1642	47.25	1850	9.75	1935/3†††	57.00	2174**	27.00
60/1	3.38	1188	147.00	1373	37.50	1643	37.20	1851	7.80	1935/4†††	69.15	2175**	48.75
61/4	1.80	1189	190.00	1374	49.50	1644	58.13	1852	6.75	1936†††	67.05	2175/1**	75.75
61/2	6.75	1190	204.00	1375	75.00	1645	90.00	1853	8.10	1936/3†††	82.50	2176**	36.30
51/1	3.75	1192	240.00	1376	126.00	1646	51.60	1854	6.98	1936/4†††	99.00	2177**	52.50
51/2	2.10	1192/15	315.00	1381	12.75	1647	74.40	1854/19	8.63	1937†††	78.15	2178**	58.50
52/4	8.70	1192/20	435.00	1382	14.10	1648	103.20	1855	7.65	1937/3†††	105.00	2179**	63.00
52/2	4.65	1194	36.00	1383	16.95	1651	45.00	1855/19	8.93	1937/4†††	129.00	2180**	72.00
52/1	2.63	1194/22	33.00	1384	20.25	1653	75.00	1856	8.25	1938†††	104.25	2181**	81.00
53/4	10.50	1194/24	32.25	1385	27.00	1655	195.00	1856/19	10.58	1938/3†††	135.00	2182**	88.50
53/2	5.55	1196	39.00	1386	37.50	1657	240.00	1857	10.20	1938/4†††	168.75	2190†††	10.35
54/4	8.63	1197	51.00	1387	82.50	1660	76.50	1857/19	11.93	1939†††	187.50	2191†††	20.25
54/2	4.35	1198	58.50	1388	180.00	1661	81.75	1858/19	12.98	1939/3†††	262.50	2192†††	27.00
54/1	2.55	1199	78.00	1389	240.00	1662	122.25	1859/19	33.00	1939/4†††	345.00	2193†††	37.50
5/4	11.25	1200	28.35	1389/4	330.00	1663	93.75	1860	11.10	1940†††	270.00	2194†††	40.50
5/2	5.85	1201	39.75	1389/2	465.00	1664	183.75	1861	10.50	1940/3†††	360.00	2195†††	75.00
5/1	2.85	1202	26.10	1389/0	750.00	1665	202.50	1862	9.90	1940/4†††	435.00	2196†††	56.25
6/4	13.80	1221	25.50	1389/00	960.00	1666	127.50	1863	10.43	1944	9.00	2197**	45.15
6/2	7.50	1222	26.10	1391	27.00	1667	168.75	1864	9.38	1945	10.13	2198**	56.25
0/4	15.60	1222/3	28.65	1392	30.00	1668	213.75	1864/19	8.25	1946	14.40	2254	27.00
0/2	8.40	1224	33.60	1393	33.00	1670	8.25	1865	9.75	1947	17.10	2254/1	25.20
1/4	17.40	1229	37.20	1394	39.00	1671	9.75	1865/19	13.13	1951†††	11.25	2254/3	42.00
1/2	9.30	1230	41.25	1395	49.50	1672	13.50	1866	11.18	1952	13.50	2254/4	67.50
2/4	17.25	1231	57.30	1396	63.00	1675	8.10	1866/19	13.28	1952/3†††	24.90	2254/6	105.00
2/2	9.38	1232	93.00	1397	427.50	1676	8.10	1867	14.03	1952/4†††	40.13	2255	24.00
3/4	19.50	1233	130.20	1401	345.00	1677	8.25	1867/19	15.98	1953†††	16.88	2256	33.00
3/2	10.50	1233/2	123.00	1402	510.00	1678	8.40	1868/19	17.18	1953/3†††	36.90	2256/1	28.65
4/4	22.50	1234	294.00	1404	720.00	1679	9.00	1869/19	37.50	1953/4†††	54.30	2256/3	46.50
4/2	12.00	1235	315.00	1410	588.00	1680	10.35	1869/19	18.70	1954†††	33.00	2256/4	99.00
5/4	26.40	1239	360.00	1411	735.00	1685	5.25	1870	15.45	1954/3†††	42.30	2256/6	133.50
5/2	13.95	1243	34.50	1412	918.00	1686	4.95	1871	16.50	1954/4†††	54.15	2258	40.25
5/4	33.30	1243/5	9										



# ALPHA WIRE PRICE LIST

Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'	Number	Sug. Resale Ea. 1000'
2404	54.00	3055	9.00	4207	.90	<b>SERIES "5000"</b>		<b>COAXIAL CABLES</b>		TFT-200-1/8"	25.88	<b>LACING CORDS</b>	
2412	30.00	3057	11.85	4208	1.05	<b>TEFLON HOOK-UP WIRE</b>		800	172.00	TFT-200-8	27.52	LC-113	
2413	37.50	3071	9.00	4209	1.20			803	78.00	TFT-200-7	29.45	White	4.73
2414	69.00	3073	9.90	4210	1.32			804	86.40			Black	5.51
2422	35.25	3075	12.00	4212	1.56			805	241.20			LC-114	
2423	47.25	3077	16.05	4214	1.89			806	150.00			White	4.73
2424	78.00	3079	21.75	4216	2.13			807	69.60			Black	5.51
2432	72.00	3154	8.55	4219	2.34			808	80.40			LC-115	
2433	96.00	3155	10.05	4224	3.24			810	124.80			White	4.73
2442	104.10	3156	13.88	4227	3.45			811	192.00			Black	5.51
2443	137.70	3157	19.65	4230	3.84			812	360.00			LC-132	
2809	147.00	3210	51.00	4234	4.32			813	480.00			White	8.45
2809/2	315.00	3211	76.05	4237	4.53			817	55.20			TFT-200-1	52.71
2809/3	458.55	3212	102.90	4240	5.85			818	28.80			TFT-200-0	59.14
2809/4	585.00	3220	49.50	4302	.39			819	31.20			LC134	
2811	252.00	3221	83.10	4303	.60			820	33.60			White	5.41
2811/2	395.63	3222	114.30	4304	.72			821	29.40			Black	6.09
2811/3	525.00	3230	56.25	4305	.96			822	34.80			LC-136	
2811/4	690.00	3231	93.75	4306	1.11			823	35.40			White	8.45
2812	165.00	3232	127.50	4307	1.23			824	33.00			Black	9.14
2812/2	352.50	3240	57.30	4308	1.43			827	21.60			LC-140	
2812/3	510.00	3241	111.00	4309	1.50			829	168.00			White	8.45
2812/4	644.25	3250	6.60	4310	1.68			830	86.40			Black	9.14
2814	270.00	3251	7.20	4312	2.04			831	234.00			LC-143	
2814/2	435.00	3252	9.60	4314	2.19			832	144.00			White	8.45
2814/3	570.00	3302	76.50	4315	2.70			835	360.00			Black	9.14
2814/4	749.25	3303	99.60	4316	2.82			836	480.00			LC-158	
2815	198.00	3304	117.00	4318	2.99			837	84.00			White	8.45
2815/2	456.00	3306	144.00	4319	3.08			841	59.40			Black	9.14
2815/3	600.00	3308	171.00	4320	3.30			846	36.00			LC-162	
2815/4	795.00	3310	207.00	4322	3.60			847	87.60			White	8.45
2817	332.25	3312	240.00	4325	4.17			848	132.00			Black	9.14
2817/2	537.75	3315	288.00	4327	4.49			F-606	33.30			ALPHLEX ZIPPER	
2817/3	734.25	3320	382.50	4330	4.80			2987	134.60			TUBING — 20 MI	
2817/4	975.00	3321	382.50	4334	5.40			2988	132.00			(TYPE ZIP-31)	
2818	240.00	3405	285.00	4337	5.93			2995	229.70			(100'-499'-)	
2818/2	562.50	3410	486.00	4505	.75			2996	90.50			100' Spools	
2818/3	690.00	3415	672.00	4506	.89			<b>ALPHLEX TUBING</b>				ZIP-31-1/4"	36.00
2818/4	930.00	3420	870.00	4507	1.02			Fit-Caps and				IP-31-3/8"	37.00
2819	351.00	3430	1260.00	4508	1.17			Markers				ZIP-31-1/2"	37.50
2819/2	623.40	3504	76.50	4509	1.35			CAP-1 35.50				ZIP-31-5/8"	38.00
2819/3	810.00	3508	140.40	4510	1.53			CAP-2 44.00				ZIP-31-3/4"	38.50
2819/4	1095.00	3512	232.20	4514	2.04			CAP-3 54.00				ZIP-31-7/8"	39.50
2821	330.00	3516	309.00	4520	2.79			CAP-4 66.80				ZIP-31-1"	40.00
2821/2	555.00	3600	16.80	4526	3.81			<b>SHIELD-TAPE</b>				ZIP-31-1-1/8"	41.50
2821/3	822.00	3602	23.55	4530	4.41			ASF-1-1/4"*** 7.50				ZIP-31-1-1/4"	42.00
2821/4	975.00	3604	33.75	4540	6.18			ASF-1-5/8"*** 9.00				ZIP-31-1-1/2"	43.00
2824	375.00	3606	48.75	4550	7.65			ASF-2-1/4"*** 13.50				ZIP-31-1-1/2"	43.00
2824/2	681.00	3608	96.00	4605	8.84			ASF-3-1/4"*** 18.00				ZIP-31-2"	46.00
2824/3	900.00	3618	141.00	4606	.96			ASF-4"*** 22.50				<b>ALPHLEX ZIPPER</b>	
2824/4	1170.00	3620	55.20	4607	1.14			ASF-4-1/2"*** 27.00				TUBING — 40 MI	
2827	435.00	3622	72.00	4608	1.35			<b>"ALMAG" MAGNET WIRE</b>				(TYPE ZIP-44)	
2827/2	780.00	3630	63.00	4610	1.71			WIRE				(100' Spools)	
2827/3	1065.00	3632	67.50	4612	2.04			HEAVY FORMVAR				ZIP-31M-1/4"	42.00
2827/4	1335.00	3634	55.50	4614	2.37			HF-10# 13.65				ZIP-31M-3/8"	42.00
2829	522.00	3636	54.00	4616	2.58			HF-12# 13.80				ZIP-31M-1/2"	43.00
2829/2	855.00	3706	.60	4619	3.21			HF-14# 13.95				ZIP-31M-5/8"	43.00
2829/3	1140.00	3712	.81	4620	3.33			HF-16# 14.10				ZIP-31M-3/4"	44.00
2829/4	1470.00	3718	.99	4622	3.60			HF-18# 14.25				ZIP-31M-7/8"	44.00
2831	297.00	3725	1.20	4624	4.08			HF-20# 14.25				ZIP-31M-1"	44.00
2831/2	501.00	3750	2.04	4626	4.41			HF-22# 14.70				ZIP-31M-1-1/8"	47.00
2831/3	739.50	3806	.75	4637	6.51			HF-24# 15.45				ZIP-31M-1-1/4"	48.00
2834	337.50	3812	1.02	4640	7.20			HF-26# 16.95				ZIP-31M-1-1/2"	49.00
2834/2	613.50	3818	1.29	4644	8.10			HF-28# 18.75				ZIP-31M-2"	52.00
2834/3	810.00	3825	1.62	4650	8.85			HF-30# 21.75				<b>ALPHLEX ZIPPER</b>	
2837	391.50	3850	2.76	4660	10.50			HF-32# 24.00				TUBING (Low Tem	
2837/2	702.00	3912	.75	4705	1.23			HF-34# 13.95				20 MIL	
2837/3	960.00	3918	.96	4706	1.50			HF-36# 18.00				(TYPE ZIP-44)	
2839	471.00	3925	1.20	4707	1.62			HF-38# 5.03				(100' Spools)	
2839/2	771.00	3950	1.44	4708	2.01			HF-40# 7.28				ZIP-44-1/4"	37.00
2839/3	1026.00	4006	2.28	4709	2.28			HF-42# 11.10				ZIP-44-3/8"	37.00
2850	64.50	4012	.87	4710	2.49			HF-44# 15.30				ZIP-44-1/2"	39.00
2851	69.00	4018	1.20	4712	2.94			<b>TEFLON THIN WALL TUBING—</b>				ZIP-44-5/8"	42.00
2852	72.00	4025	1.50	4805	1.50			<b>(500'-1000')</b>				ZIP-44-3/4"	44.00
2853	73.50	4050	3.09	4806	1.71			100' Spools				ZIP-44-7/8"	47.00
2854	80.25	4102	.27	4807	1.92			TFT-200-30 9.00				ZIP-44-1"	45.00
2855	93.00	4103	.54	4808	2.19			TFT-200-28 8.00				ZIP-44-1-1/8"	51.00
2856	120.00	4105	.72	4809	2.58			TFT-200-26 7.70				ZIP-44-1-1/4"	51.00
2857	143.10	4106	.66	4810	2.82			TFT-200-24 7.70				ZIP-44-1-1/2"	51.00
2858	187.50	4107	.81	4812	3.36			TFT-200-22 9.50				ZIP-44-1-3/4"	62.00
2859	240.00	4108	.90	4816	4.23			TFT-200-20 12.00				ZIP-44-2"	67.00
2859/10	585.00	4110	.99	4818	4.74			TFT-200-19 12.50				<b>ALPHLEX SHIELD</b>	
2859/12	369.00	4112	1.20	<b>SERIES "5000"</b>				TFT-200-18 12.90				ZIPPER TUBIN	
2874	85.50	4114	1.35	<b>PLASTIC HOOK-UP WIRE</b>				TFT-200-17 14.18				(TYPE ZIP-50)	
2875	99.75	4116	1.50	5110	5.25			TFT-200-16 14.53				(100' Spools)	
2876	126.90	4119	1.68	5111	5.85			TFT-200-15 14.58				ZIP-50-1/4"	4.00
2877	148.50	4121	1.92	5113	7.13			TFT-200-14 16.04				ZIP-50-1/2"	4.00
2878	202.50	4122	2.01	5115	9.08			TFT-200-13 17.17				ZIP-50-3/8"	4.00
2879	270.00	4124	2.07	5117	12.90			TFT-200-12 22.00				ZIP-50-1/2"	4.00
2879/8	1260.00	4126	2.28	5119	17.25			TFT-200-11 20.45				ZIP-50-5/8"	5.00
2879/10	705.00	4130	2.58	5120	24.00			TFT-200-10 22.00				ZIP-50-3/4"	5.00
2879/12	420.00	4137	2.85	5121	4.50			TFT-200-9 25.00				ZIP-50-7/8"	5.00
2883	96.00	4140	3.15	5123	5.40			TFT-200-8 27.50				ZIP-50-1"	6.00
2884	99.00	4150	3.90	5125	7.50			TFT-200-7 27.70				ZIP-50-1-1/8"	6.00
2885	111.00	4160	4.80	5127	10.13			TFT-200-6 28.80				ZIP-50-1-1/4"	6.00
2886	144.00	4202	.33	5150	9.00			TFT-200-5 29.95				ZIP-50-1-1/2"	7.00
2887	177.00	4203	.54	5152	12.75			TFT-200-4 29.95				ZIP-50-1-3/4"	7.00
3050	4.95	4204	.66	5153	13.88			TFT-200-3 30.00				ZIP-50-2"	8.00
3051	5.70	4205	.84					TFT-200-2 30.00					
3053	6.98	4206	.87					TFT-200-1 30.00					

All Standard Put-Ups are 1000 feet except as Indicated by the following symbols:  
 □ 1 lb., § 5 lb., # 10 lb., ↓ ¼ lb., → ½ lb., ° 500', †† 250', \*\* 100', \*\*\*50', x 500 yards. φ per foot 1-99'

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Reference —  
Bulletin E 64 P — 1D  
Effective Aug. 3, 1964

Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each	
6000-50	.83	8230-25	.84	*8279-100	8.40	(TBO)	4.80	8327-100	†Solid▲ 9.40	
8000-75	1.13	8230-50	1.28	*8279-250	19.50	8308-100	†Solid▲ 7.90	8327-250	†Solid▲ (TBO) 92.25M'	
8000-100	1.45	8230-75	1.70	*8279-500	72.00M'	8308-250	†Solid▲ (TBO) 78.75M'	8327-500	†Solid▲ 87.75M'	
8000-1000	13.50	8230-100	2.13	8280	§(Cut to customer's specified length Maximum 1500')	600.00M'	8308-500	†Solid▲ 72.00M'	8327-1000	†Solid▲ 87.00M'
8002-50	.60	*8230-250	5.25	8281-500	142.50M'	8308-1000	†Striped▲ 80.25M'	8327-1000†	Striped▲ 96.00M'	
8002-75 (TBO)	.75	8230-500	10.20	8281-1000	142.50M'	8309-25	†Solid▲ 3.15	8328-25	†Solid▲ 3.15	
8002-100	.98	8230-1000	19.20	8282	§(Cut to customer's specified length Maximum 2000')	270.00M'	8309-50	†Solid▲ (TBO) 5.85	8328-50	†Solid▲ (TBO) 5.40
8002-1000 (Obs)	9.00	8232-500	87.00M'	8283	§(Cut to customer's specified length Maximum 1000')	2250.00M'	8309-100	†Solid▲ 9.90	8328-100	†Solid▲ 9.15
8008-100	2.55	8232-1000	87.00M'	8284	§(Cut to customer's specified length Maximum 1000')	750.00M'	8309-250	†Solid▲ 9.90	8328-250	†Solid▲ 92.25M'
8008-200	4.65	8233-500	165.00M'	8285-50	2.85	8310-25	†Solid▲ 4.15	8328-500	†Solid▲ 85.50M'	
8008-500	10.90	8233-1000	165.00M'	8285-75	4.20	8310-50	†Solid▲ (TBO) 7.50	8328-1000	†Solid▲ 84.75M'	
8009-100	1.73	8233-2000	165.00M'	8285-100	5.40	8310-100	†Solid▲ 12.00	8328-1000†	Striped▲ 93.75M'	
8009-200	3.30	8235-100	4.80	*8285-250	13.50	8310-250	†Solid▲ 126.00M'	8329-25	†Solid▲ 3.75	
8009-500	7.35	8235-500	21.00	*8285-500	25.50	8310-500	†Solid▲ 114.00M'	8329-50	†Solid▲ 6.90	
8011-100	2.35	8237-100 (RG-8/U)	11.40	*8285-1000	51.00	8310-1000	†Solid▲ 112.50M'	8329-100	†Solid▲ 12.00	
8012-100	1.58	8237-250 (RG-8/U)	97.50M'	*8289-25	6.25	8320-50	†Solid▲ 3.90	8330-50	†Solid▲ (TBO) 9.00	
8012-1000	12.15	8237-500 (RG-8/U)	97.50M'	8300-25	†Solid▲ (25 per box) 1.90	8320-100	†Solid▲ 3.90	8330-100	†Solid▲ (TBO) 144.75M'	
8013-100	1.20	8237-1000 (RG-8/U)	97.50M'	8300-100	†Solid▲ 4.75	8320-250	†Solid▲ 69.00M'	8330-250	†Solid▲ 127.50M'	
8013-1000	8.40	8238-100 (RG-11/U)	10.80	8300-250	†Solid▲ 47.25M'	8320-500	†Solid▲ 65.25M'	8330-1000	†Solid▲ 126.00M'	
8014-25	.53	8238-250 (RG-11/U)	99.00M'	8300-500	†Solid▲ 41.25M'	8320-1000	†Solid▲ 65.25M'	*8390-25	9.00	
8014-500	3.00	8238-500 (RG-11/U)	99.00M'	8300-1000	†Striped▲ 49.50M'	8320-1000†	Striped▲ 64.50M'	*8390-100	33.75	
8018-50	.98	8238-1000 (RG-11/U)	99.00M'	8301-25	†Solid▲ 1.90	8320-1000†	Striped▲ 73.50M'	*8390-250	337.50M'	
8018-500	7.65	8238-1500 (RG-11/U) (TBO)	99.00M'	8301-50	†Solid▲ (TBO) 3.00	8321-100	†Solid▲ 7.50	*8391-25	11.25	
8019-100	.83	8239-500 (RG-54A/U)	67.50M'	8301-100	†Solid▲ 4.90	8321-250	†Solid▲ 64.50M'	*8391-100	42.00	
8020-100	.68	8239-1000 (RG-54A/U)	67.50M'	8301-250	†Solid▲ (TBO) 48.75M'	8321-500	†Solid▲ 73.50M'	*8391-250	420.00M'	
8020-1000	4.15	8240-25 (RG-58/U)	1.50	8301-500	†Solid▲ 27.00	8321-1000	†Solid▲ 2.40	*8392-100	13.50	
8021-100	.60	8240-50 (RG-58/U)	2.40	8301-1000	†Solid▲ 43.50M'	8321-250	†Solid▲ 2.40	*8392-250	50.25	
8021-1000	3.55	8240-100 (RG-58/U)	4.20	8301-1000†	Striped▲ 42.75M'	8321-500	†Solid▲ 3.90	*8392-500	502.50M'	
8022-100	.60	8240-250 (RG-58/U)	36.00M'	8301-1000†	Striped▲ 51.75M'	8321-1000	†Solid▲ 7.50	8401-15	1.01	
8022-1000	3.15	8240-500 (RG-58/U)	36.00M'	8302-25	†Solid▲ 1.90	8321-250	†Solid▲ 64.50M'	8401-25	1.31	
8023-100	.60	8241-25 (RG-59/U)	1.73	8302-50	†Solid▲ (TBO) 3.15	8321-500	†Solid▲ 60.75M'	8401-50	2.35	
8023-1000	2.85	8241-100 (RG-59/U)	4.95	8302-100	†Solid▲ 5.05	8321-1000	†Solid▲ 60.00M'	8401-100	4.30	
8024-100	.60	8241-250 (RG-59/U)	2.70	8302-250	†Solid▲ (TBO) 49.50M'	8321-2500	†Solid▲ 60.00M'	8401-250	9.00	
8024-1000	2.80	8241-500 (RG-59/U)	42.00M'	8302-500	†Solid▲ 45.00M'	8321-5000	†Solid▲ 60.00M'	8401-500	18.00	
8025-100	.60	8241-1000 (RG-59/U)	42.00M'	8302-1000	†Solid▲ 44.25M'	8321-1000†	Striped▲ 69.00M'	8401-15	1.58	
8025-1000	2.48	8242-100 (RG-9/U)	27.00	8302-1000†	Striped▲ 53.25M'	8321-2500	†Solid▲ 2.25	8403-50	4.35	
8026-100 (TBO)	.50	*8242-500 (RG-9/U)	270.00M'	8303-25	†Solid▲ 2.10	8321-5000	†Solid▲ 60.00M'	8403-100	8.05	
8026-1000 (TBO)	2.25	*8243-500 (RG-9B/U)	340.50M'	8303-50	†Solid▲ 3.30	8321-1000†	Striped▲ 69.00M'	8403-250	18.75	
8027-100 (TBO)	.50	*8243-1000 (RG-9B/U)	340.50M'	8303-100	†Solid▲ 6.00	8321-2500	†Solid▲ 60.75M'	8403-500	36.00	
8027-1000 (TBO)	2.25	*8243-1000 (RG-9B/U)	340.50M'	8303-250	†Solid▲ (TBO) 55.50M'	8321-5000	†Solid▲ 60.00M'	8403-1000	72.00	
8127-10 (TBO)	.38	*8245-500 (RG-55/U)	61.50M'	8303-500	†Solid▲ 52.50M'	8321-1000†	Striped▲ 69.00M'	8404-15	1.95	
8127-500 (Obs)	5.25	*8245-1000 (RG-55/U)	61.50M'	8303-1000	†Solid▲ 51.75M'	8321-2500	†Solid▲ 69.00M'	8404-100	9.00	
8200-100 (Obs)	1.65	8245-500 (RG-55/U)	61.50M'	8303-1000†	Striped▲ 60.75M'	8321-5000	†Solid▲ 69.00M'	8404-250	21.75	
8200-500 (Obs)	6.45	8245-1000 (RG-55/U)	61.50M'	8304-25	†Solid▲ 2.05	8321-1000	†Solid▲ 63.00M'	8404-500	42.00	
8200-1000 (Obs)	12.15	8245-500 (RG-62/U)	46.50M'	8304-50	†Solid▲ (TBO) 3.25	8321-2500	†Solid▲ 60.75M'	8404-1000	84.00	
8205-25 (TBO)	.83	8245-1000 (RG-62/U)	46.50M'	8304-100	†Solid▲ 5.40	8321-5000	†Solid▲ 60.00M'	8405-250	24.75	
8205-100	2.50	*8255-500 (RG-62B/U)	54.00M'	8304-250	†Solid▲ (TBO) 53.25M'	8321-1000†	Striped▲ 69.00M'	8405-500	47.25	
8205-500	9.75M'	8255-1000 (RG-62B/U)	54.00M'	8304-500	†Solid▲ 49.50M'	8321-2500	†Solid▲ 69.00M'	8405-1000	94.50	
8205-1000	19.15M'	8255-500 (RG-71/U)	67.50M'	8304-1000	†Solid▲ 48.75M'	8321-5000	†Solid▲ 69.00M'	8406-100	9.30	
8206-15 (Obs)	.75	*8255-1000 (RG-71B/U)	67.50M'	8304-2500	†Solid▲ 55.75M'	8321-1000	†Solid▲ 67.50M'	8406-250	22.50	
8206-50 (Obs)	2.03	*8258-500 (RG-71B/U)	67.50M'	8304-5000	†Solid▲ 52.50M'	8321-2500	†Solid▲ 73.15M'	8406-500	45.00	
8206-100 (Obs)	3.60	*8258-1000 (RG-71B/U)	67.50M'	8304-10000	†Solid▲ 51.75M'	8321-5000	†Solid▲ 67.50M'	8407-100	19.50	
8206-250 (Obs)	7.90	*8258-500 (RG-71B/U)	67.50M'	8304-25	†Solid▲ 2.05	8321-1000†	Striped▲ 73.15M'	8407-250	189.00M'	
8208-15 (TBO)	1.17	*8258-1000 (RG-71B/U)	67.50M'	8304-50	†Solid▲ 3.30	8321-2500	†Solid▲ 67.50M'	8409	.98	
8208-50 (TBO)	3.25	8258-25 (RG-58A/U)	1.73	8304-100	†Solid▲ 6.00	8321-5000	†Solid▲ 66.75M'	8410-15 (TBO)	1.65	
8208-100	5.95	8258-50 (RG-58A/U)	3.70	8304-250	†Solid▲ (TBO) 55.50M'	8321-1000†	Striped▲ 75.75M'	8410-250	2.50	
8208-500	25.50	8258-100 (RG-58A/U)	5.05	8304-500	†Solid▲ 2.25	8321-2500	†Solid▲ 2.50	8410-500	7.95	
8208-1000	51.00M'	8258-500 (RG-58A/U)	40.50M'	8304-1000	†Solid▲ (TBO) 4.00	8321-5000	†Solid▲ 4.50	8410-1000	18.75	
8209-500	27.75	8261-100 (RG-11A/U)	103.50M'	8304-2500	†Solid▲ 6.55	8321-1000†	Striped▲ 72.00M'	8411-15	.83	
8209-1000	54.00M'	8261-500 (RG-11A/U)	103.50M'	8304-5000	†Solid▲ 78.85M'	8321-2500	†Solid▲ 72.00M'	8411-25	1.13	
8210-100	5.65	8261-1000 (RG-11A/U)	103.50M'	8305-500	†Solid▲ 57.75M'	8321-5000	†Solid▲ 66.00M'	8411-50	3.15	
8210-250	13.50	8262-500 (RG-58C/U)	42.00M'	8305-1000	†Solid▲ 57.00M'	8321-1000†	Striped▲ 75.00M'	8411-100	6.70	
8210-500 (Obs)	27.00	8262-1000 (RG-58C/U)	42.00M'	8305-2500	†Solid▲ 66.00M'	8321-2500	†Solid▲ 2.65	8411-250	13.25	
8211-500	42.00M'	8263-500 (RG-59B/U)	45.00M'	8306-25	†Solid▲ 2.40	8321-5000	†Solid▲ 2.65	8412-15 (TBO)	1.65	
8211-1000	42.00M'	8263-1000 (RG-59B/U)	45.00M'	8306-50	†Solid▲ (TBO) 4.15	8321-1000	†Solid▲ 4.50	8412-25	2.65	
8211-2000	42.00M'	8264-500 (RG-5A/U)	246.00M'	8306-100	†Solid▲ 6.85	8321-2500	†Solid▲ 7.65	8412-50	4.75	
8212-500	42.00M'	8264-1000 (RG-5A/U)	246.00M'	8306-250	†Solid▲ (TBO) 6.85	8321-5000	†Solid▲ 7.65	8412-100	8.80	
8212-1000	42.00M'	*8265-100 (RG-178B/U)	12.00	8306-500	†Solid▲ 66.75M'	8321-1000†	Striped▲ 75.75M'	8412-250	20.25	
8212-2000	42.00M'	*8266-100 (RG-178B/U)	111.00M'	8306-1000	†Solid▲ 63.00M'	8321-2500	†Solid▲ 69.00M'	8412-500	40.50	
8213-500	102.00M'	*8266-500 (RG-180B/U)	33.75	8306-2500	†Solid▲ 62.25M'	8321-5000	†Solid▲ 68.25M'	8413-15	1.65	
8213-1000	102.00M'	*8266-1000 (RG-180B/U)	300.00M'	8307-25	†Solid▲ 2.65	8321-1000†	Striped▲ 77.25M'	8413-25	2.35	
8213-2000	102.00M'	8267-1000 (RG-213/U)	111.00M'	8307-50	†Solid▲ 4.80	8321-2500	†Solid▲ 2.80	8413-50	4.20	
8214-100	12.00	*8268-500 (RG-214/U)	352.50M'	8307-100	†Solid▲ (TBO) 8.10	8321-5000	†Solid▲ 2.80	8413-100	7.65	
8214-500	114.00M'	*8268-1000 (RG-214/U)	352.50M'	8307-250	†Solid▲ 78.85M'	8321-1000†	Striped▲ 84.75M'	8413-250	18.00	
8214-1000	114.00M'	*8269-500 (RG-188A/U)	202.50M'	8307-500	†Solid▲ 75.00M'	8321-2500	†Solid▲ 8.35	8413-500	36.00	
8215-100	10.20	*8269-1000 (RG-188A/U)	202.50M'	8307-1000	†Solid▲ 75.00M'	8321-5000	†Solid▲ 8.35	8414-50	4.50	
8215-500	94.50M'	8267-500 (RG-213/U)	111.00M'	8307-2500	†Solid▲ 78.85M'	8321-1000†	Striped▲ 81.90M'	8414-1000	37.50	
8215-1000	94.50M'	8267-1000 (RG-213/U)	111.00M'	8307-5000	†Solid▲ 78.85M'	8321-2500	†Solid▲ 8.35	8415-15	1.30	
8216-100 (RG-174/U)	3.00	*8268-500 (RG-214/U)	352.50M'	8307-10000	†Solid▲ 74.25M'	8321-5000	†Solid▲ 76.50M'	8416-15	1.43	
8216-500 (RG-174/U)	24.00M'	*8268-1000 (RG-214/U)	352.50M'	8307-25000	†Solid▲ 71.25M'	8321-1000†	Striped▲ 84.75M'	8416-25	2.65	
8216-1000 (RG-174/U)	24.00M'	*8269-500 (RG-188A/U)	202.50							

SECTION 6000

# BELDEN • PRICE LIST

Reference —  
Bulletin E 64 P — 1D  
Effective Aug. 3, 1964

Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each	Trade Number Lgth. in Ft.	Sug. Resale Price Each
8417-25	1.20	8449-500	32.25	8484-500	13.15	(TBO)	6.45	8529-500 † Striped	3.60
8417-50	1.95	8449-1000	64.50M	8484-1000	26.25M	8512-1000† Striped	12.30	8529-1000† Striped	6.55
8417-100	3.70	8450-100	3.00	8485-100	3.70	8513-100 † Solid	1.43	8530-25 † Solid	4.45
8417-250	7.95	8450-500	11.25	8485-500	17.00	8513-500 † Solid		8530-100 † Solid	.83
8418-100	19.50	8450-1000	22.50M	8485-1000	34.00M	(TBO)	5.55	8530-500 † Solid	2.55
8418-250	48.00	8451-100	3.40	8486-500	16.95M	8513-1000† Solid	10.45	8530-1000† Solid	4.50
8419-10	.85	8451-500	14.25	8486-1000	16.95M	8513-100 † Striped	1.55	8530-100 † Striped	.95
8419-25	1.45	8451-1000	28.50M	8487-500	23.10M	8513-500 † Striped		8530-500 † Striped	3.15
8419-250	10.50	8452-15 (TBO)	1.13	8487-1000	23.10M	(TBO)		8530-1000† Striped	5.65
8420-15	1.50	8452-25	1.65	8488-100	4.50	8513-1000† Striped	11.55	8531-100 † Solid	1.43
8420-25	2.25	8452-50	2.80	8488-500	20.25	8514-100 † Solid	1.32	8531-500 † Solid	5.25
8420-50	3.40	8452-100	4.80	8488-1000	40.50M	8514-500 † Solid		8531-1000† Solid	10.15
8420-100	6.40	8452-250	11.25	8491	1.58	(TBO)	4.95	8531-100 † Striped	1.55
8420-250	16.50	8452-500	21.00	8492-100 † (Obs)	1.80	8514-1000† Solid	9.40	8531-500 † Striped	
8420-500	30.00	8452-1000	42.00	8492-500 † (Obs)	7.15	8514-100 † Striped	1.44	8531-1000† Striped	5.85
8421-15	.98	8453-15 (TBO)	1.35	8492-1000†	13.90M	8514-500 † Striped		(TBO)	11.25
8421-25	1.20	8453-50	3.15	8493-1000	21.00M	(TBO)	5.55	8532-100 † Solid	5.10
8421-50	2.35	8453-100	6.30	8494	1.44	8514-1000† Striped	10.50	8532-500 † Solid	
8421-100	3.75	8453-500	31.50	8495	1.22	8515-100 † Solid	1.41	8532-1000† Solid	22.50
8421-250	8.50	8454-15 (TBO)	1.65	8496 (TBO)	1.35	8515-500 † Solid	5.48	8533-500 † Solid	43.50
8422-15	1.20	8454-50	4.05	8497	1.35	(TBO)		8533-100 † Solid	16.50
8422-25	1.90	8454-100	7.20	8498	.98	8515-1000† Solid	10.45	8533-1000† Solid	30.00
8422-50	3.25	8454-500	34.50	8499	.90	8515-100 † Striped	1.53	8534-100 † Solid	2.70
8422-100	5.85	8454-1000	69.00M	8500-100 † Solid	1.65	8515-500 † Striped		8534-500 † Solid	12.00
8422-250	13.15	8455-100	7.50	8500-500 † Solid	6.90	(TBO)	6.10	8534-1000† Solid	22.50
8422-500	26.25	8455-250	75.00M	8500-1000† Solid	13.00	8516-1000† Striped	11.55	8534-500 † Striped	2.85
8423-15	2.03	8456-100	7.05	8500-500 † Striped	1.77	8516-1000† Solid	15.60	8534-1000† Solid	12.50
8423-50	5.20	8456-500	66.00M	8500-100 † Striped	7.50	8516-100 † Striped	2.15	8534-500 † Striped	2.85
8423-100	9.75	8456-1000	66.00M	(TBO)	14.10	8516-1000† Striped	17.10	8534-1000† Striped	12.60
8423-250	22.50	8457-100	7.50	8501-100 † Solid	1.38	8517-100 † Solid	1.73	8534-500 † Striped	23.65
8423-500	45.00	8457-500	70.50M	8501-500 † Solid	5.40	8517-1000† Solid	13.30	(TBO)	12.60
8423-1000	90.00	8457-1000	70.50M	8501-1000† Solid	10.20	8517-100 † Striped	1.85	8534-1000† Striped	26.65
8424-15	2.25	*8458-100	13.50	8501-500 † Solid	1.50	8517-1000† Striped	14.40	8535-100 † Solid	2.25
8424-50	6.00	*8458-500	60.00	8501-1000† Striped	6.00	8518-100 † Solid	1.71	8535-500 † Solid	8.25
8424-100	11.25	*8458-1000	120.00M	(TBO)	11.35	8518-1000† Solid	13.15	(TBO)	15.00
8424-250	27.00	*8459-100	21.00	8501-1000† Striped	11.35	8518-1000† Striped	1.83	8535-1000† Solid	2.37
8424-500	52.50	*8459-500	93.75	8502-100 † Solid	1.29	8518-1000† Striped	14.25	8535-500 † Striped	8.95
8424-1000	105.00	*8459-1000	187.50M	8502-500 † Solid	4.50	8519-100 † Solid	1.52	8535-1000† Striped	16.15
8425-100	13.20	8460-100	2.50	8502-1000† Solid	8.25	8519-1000† Solid	11.50	8536-100 † Solid	1.65
8425-250	32.25	8460-500	9.90	8502-100 † Striped	1.41	8519-1000† Striped	12.60	8536-500 † Solid	6.45
8426-100	15.75	8460-1000	19.20M	(TBO)	5.10	8520-100 † Solid	2.03	(TBO)	1.70
8426-250	39.45	8461-100	3.45	8502-1000† Striped	9.40	8520-500 † Solid	9.55	8536-1000† Solid	12.00
8427-100	17.25	8461-500	13.80	8503-100 † Solid	1.16	8520-1000† Solid	17.50	8436-100 † Striped	1.77
8427-250	42.00	8461-1000	27.00M	8503-500 † Solid	4.20	8520-100 † Striped	2.15	8536-500 † Striped	7.05
8428-100	11.25	8462-25 †	2.96	8503-1000† Solid	7.65	8520-500 † Striped	10.15	(TBO)	13.15
8428-500	53.25	8462-100 †	6.75	8503-500 † Striped	1.28	8520-1000† Striped	18.40	8537-100 † Striped	1.50
8429-10	.68	8462-250 †	6.75	8503-1000† Striped	4.80	8521-100 † Solid	1.80	8537-500 † Solid	5.50
8429-25	1.08	*8463-50	1.95	8503-500 † Striped	8.80	8521-1000† Solid	6.70	(TBO)	9.55
8429-250	7.65	*8463-100	3.40	8503-1000† Striped	8.80	8521-500 † Solid	12.90	8537-1000† Solid	1.62
8430-10	.53	*8463-500	15.75	8504-100 † Solid	1.11	8521-1000† Striped	1.92	8537-500 † Striped	6.10
8430-25	.68	8464-50	1.75	8504-500 † Solid	3.85	8521-500 † Striped	7.30	8537-1000† Solid	10.65
8430-250	4.20	8464-75	2.35	8504-1000† Solid	7.00	8521-1000† Striped	14.05	8537-500 † Striped	6.10
8431-10	.60	8464-100	2.95	8504-100 † Striped	1.23	8522-25 † Solid	.60	(TBO)	1.87
8431-15	.75	8464-500	12.40	8504-500 † Striped	4.45	8522-100 † Solid	1.38	*8538-100 † Solid	.87
8431-25	1.13	8464-1000	24.75	8504-1000† Striped	8.10	8522-500 † Solid	4.80	*8538-500 † Solid	2.35
8431-100	3.45	8465-100	6.00	8505-100 † Solid	1.15	8522-1000† Striped	10.20	*8538-1000† Solid	4.00
8431-500	16.05	8465-500	27.75	8505-500 † Solid	4.35	8522-500 † Striped	5.40	*8538-500 † Striped	.99
8432-500 (Obs)	29.25	8465-1000	55.00M	8505-1000† Solid	8.10	8522-1000† Striped	10.20	*8538-1000† Striped	2.95
8432-1000 (Obs)	58.50M	*8466-100	16.50	8505-500 † Striped	1.28	8523-25 † Solid	.54	*8538-1000† Striped	5.10
8434-100	4.65	*8466-500	76.50	(TBO)	4.95	8523-100 † Solid	1.17	8541-100	1.88
8434-500	22.50	*8466-1000	153.00M	8505-1000† Striped	9.25	8523-500 † Solid	3.90	8541-500 (TBO)	6.60
8434-1000	45.00M	8467-100	8.25	8506-100 † Solid	1.80	8523-1000† Solid	7.15	8541-1000	12.75
8436-500	45.00M	8467-500	36.75	8506-1000† Striped	11.95	8523-100 † Striped	1.29	8542-100	2.05
8436-1000	45.00M	8467-1000	73.50M	8506-100 † Striped	1.92	8523-500 † Striped	4.50	8542-500 (TBO)	7.65
8437-500	36.00M	*8468-100	24.00	8507-100 † Solid	1.43	8524-25 † Solid	.47	8543-100	2.35
8437-1000	36.00M	*8468-500	108.75	8507-1000† Solid	10.60	8524-100 † Solid	.98	8543-500 (TBO)	9.00
8440-500 (TBO)	42.00M	*8468-1000	217.50M	8507-1000† Striped	11.70	8524-500 † Solid	3.25	8543-1000	16.95
Use 8450		8469-100	11.25	8508-100 † Solid	1.40	8524-1000† Solid	5.85	8544-100	2.55
8440-1000 (TBO)	42.00M	8469-500	48.75	8508-1000† Solid	8.95	8524-500 † Striped	1.10	8544-500	10.50
or 8451		8469-1000	97.50M	8509-100 † Solid	1.55	8524-1000† Striped	3.85	8544-1000	20.25
8441-100	4.50	8470-500	24.00M	8509-1000† Solid	10.60	8525-100 † Solid	1.01	8545-100	3.30
8441-500	21.00	8470-1000	24.00M	8509-1000† Striped	1.40	8525-500 † Solid	2.95	8545-500	14.25
8441-1000	42.00M	8471-500	34.20M	8509-1000† Striped	9.75	8525-1000† Solid	5.25	8545-1000	27.00
8442-500	16.50M	8471-1000	34.20M	8509-1000† Striped	1.28	8525-100 † Striped	1.13	8546-100	4.50
8442-1000	16.50M	8472-25	2.10	8509-1000† Striped	1.40	8525-500 † Striped	3.55	8546-500	19.50
8443-25	.98	8472-50 (Obs)	3.75	8510-100 † Solid	2.10	8525-1000† Striped	6.40	8546-1000	37.50
8443-100	2.48	8472-100	7.15	8510-500 † Solid	8.95	8527-100 † Solid	3.15	8547-100	75.00
8443-500	9.40	8472-250	67.50M	8510-1000† Solid	17.20	8527-500 † Solid	12.75	8547-500 (TBO)	375.00
8443-1000	18.75M	8473-500	55.50M	8510-100 † Striped	2.22	8527-1000† Solid	24.00	8547-1000 (TBO)	750.00
8444-25	1.13	8473-1000	55.50M	8510-500 † Striped	9.55	8527-1000† Striped	3.30	8548-100	60.00
8444-100	3.00	8474-100	9.00	(TBO)	18.30	8527-500 † Striped	13.35	8548-500 (TBO)	300.00
8444-500	12.40	8474-250	85.50M	8510-1000† Striped	1.80	(TBO)	24.15	8548-1000 (TBO)	600.00
8444-1000	24.75M	8475-100	4.50	8511-100 † Solid	1.80	8527-1000† Striped	24.15	8549-100	42.00
8445-25	1.20	8475-500	40.50M	8511-500 † Solid	7.35	8528-100 † Solid	1.20	8549-500 (TBO)	210.00
8445-100	3.70	8476-100	6.00	(TBO)	14.05	8528-500 † Solid	4.05	8549-1000 (TBO)	420.00
8445-500	15.00	8476-500	55.50M	8511-1000† Solid	1.92	8528-1000† Solid	7.50	8550-100	30.00
8445-1000	30.00M	8478-25 (TBO)	1.65	8511-1000† Striped	7.95	8528-100 † Striped	1.32	8550-500	150.00
8446-15	1.13	8478-100	5.40	8511-500 † Striped	15.15	(TBO)	4.65	8550-1000 (TBO)	300.00
8446-100	23.25	8478-250	13.50	8512-100 † Solid	1.50	8528-1000† Striped	8.65	8551-100	22.50
8446-1000	46.50M	8478-1000	49.50M	(TBO)	5.85	8528-25 † Solid	.47	8551-500	112.50
8447-15 (Obs)	1.15	8481-100	1.50	8512-500 † Solid	11.20	8529-100 † Solid	.96	8551-1000 (TBO)	225.00
8447-100	6.15	8481-500	4.95	8512-1000† Solid	1.62	8529-500 † Solid	3.00	8552-100	16.50
8447-500	26.25	8481-1000	9.00M	8512-500 † Striped		8529-1000† Solid	5.40	8552-500	82.50
8447-1000	52.50M	8482-100	1.80	8512-1000† Striped		8529-100 † Striped	1.08	8552-1000 (TBO)	165.00
8448-15	1.28	8482-500	6.60	8512-500 † Striped				8553-100	9.00
8448-100	6.40	8482-1000	12.00M				</		

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8553-500	42.00	8575-1000† Striped	10.15	8597-1000† Striped‡		8700-25	1.43	8757-1000	41.25M'
8553-1000	82.50	8576-100 † Solid	1.28	(TBO)	7.90	8700-50	2.35	8758-100	3.15
8554-100	5.25	8576-500 † Solid	4.50	8598-100 † Solid	1.13	8700-100	4.15	8758-500	13.90
8554-500	22.50	(TBO)	8.40	8598-500 † Solid		8700-250	37.50M'	8758-1000	27.75M'
8554-1000	44.25	8576-1000† Solid	8.40	(TBO)	4.35	8701-100	2.05	8759-100	3.75
8555-100	3.75	8576-100 † Striped‡	1.40	8598-1000† Solid	7.80	8701-500	7.50	8759-500	16.50
8555-500	17.25	8576-500 † Striped‡		8599-100 † Solid	1.35	8701-1000	14.25M'	8759-1000	33.00M'
8555-1000	33.75	(TBO)	5.10	8599-500 † Solid		*8719-500	52.50M'	8760-500	35.25M'
8556-100	3.25	8576-1000† Striped‡	9.55	(TBO)	5.25	*8719-1000	52.50M'	8760-1000	35.25M'
8556-500 (TBO)	13.65	8577-100 † Solid	1.28	8599-1000† Solid	9.75	*8720-500	79.50M'	8761-500	24.00M'
8556-1000	26.65	8577-500 † Solid		8601	.98	*8720-1000	79.50M'	8761-1000	24.00M'
8557-100	3.00	(TBO)	4.35	8602	1.47	8722-500	48.00M'	8762-100	3.45
8557-500 (TBO)	12.00	8577-1000‡ Solid	8.25	8603	1.50	8722-1000	48.00M'	8762-500	15.00
8557-1000	22.95	8577-100 † Striped‡	1.40	8604	2.33	8723-100	4.65	8762-1000	30.00M'
8558-100	2.55	8577-500 † Striped‡		*8620-100	8.25	8723-500	40.50M'	8763-500	38.25M'
8558-500 (TBO)	10.20	(TBO)	4.95	*8620-500	72.00M'	8723-1000	40.50M'	8763-1000	38.25M'
8558-1000	19.50	8577-1000† Striped‡	9.40	*8620-1000	72.00M'	8724-500	40.50M'	8764-100	18.00
8559-100	2.50	8578-100 † Solid	1.28	*8621-100	13.50	8724-1000	40.50M'	8764-500	180.00M'
8559-500 (TBO)	9.00	8578-500 † Solid		*8621-500	127.50M'	*8725-500	165.00M'	8764-1000	180.00M'
8559-1000	16.50	(TBO)	4.35	*8621-1000	127.50M'	*8725-1000	165.00M'	8765-1000	21.60
8561-100 †	5.25	8578-1000† Solid	8.10	*8622-100	24.00	*8726-100	14.40	8765-500	216.00M'
8561-500 † (TBO)	22.50	8578-100 † Striped‡	1.40	*8622-500	217.50M'	*8726-500	129.00M'	8765-1000	216.00M'
8561-1000†	42.00	8578-500 † Striped‡		*8622-1000	217.50M'	*8726-1000	129.00M'	8766-100	28.50
8562-100 †	3.75	(TBO)	4.95	*8623-100	33.00	*8727-100	30.00	8766-500	285.00M'
8562-500 † (TBO)	18.00	8578-1000† Striped‡	9.25	*8623-500	300.00M'	*8727-500	292.50M'	8766-1000	285.00M'
8562-1000†	33.00	8579-100 † Solid	1.20	*8623-1000	300.00M'	*8727-1000	292.50M'	8767-100	6.60
8563-100 †	3.40	8579-500 † Solid		*8624-100	39.00	8731-500	28.50M'	8767-500	66.00M'
8563-500 (TBO)	14.65	(TBO)	4.35	*8624-500	367.50M'	8731-1000	28.50M'	8767-1000	66.00M'
8563-1000†	27.75	8579-1000† Solid	8.10	*8624-1000	367.50M'	8732-100	4.75	8768-100	12.90
8564-100 †	2.63	8580-100 † Solid	22.50	*8627-100	13.90	8732-500	42.75M'	8768-500	129.00M'
8564-500 † (TBO)	12.00	8580-500 † Solid	97.50	*8627-500	129.00M'	8732-1000	47.32-1000	8768-1000	129.00M'
8564-1000†	22.50	8580-1000† Solid		*8627-1000	129.00M'	8733-100	4.50	8769-100	49.50
8565-100 †	2.25	(TBO)	195.00	*8628-100	24.00	8733-500	40.50M'	8769-500	495.00M'
8565-500 (TBO)	9.75	8581-100 † Solid	19.50	*8628-500	217.50M'	8733-1000	40.50M'	8769-1000	495.00M'
8565-1000†	18.00	8581-500 † Solid	90.00	*8623-1000	217.50M'	8734-100	3.75	8770-500	47.25M'
8566-100 †	1.80	8581-1000† Solid		*8629-100	42.00	8734-500	17.25	8770-1000	47.25M'
8566-500 (TBO)	8.10	(TBO)	180.00	*8629-500	390.00M'	8734-1000	34.50M'	8771-500	30.00M'
8566-1000†	15.00	8582-100 † Solid	6.75	*8629-1000	390.00M'	8735-15	.98	8771-1000	30.00M'
8567-100 † Solid	1.05	8582-500 † Solid		8640-250	6.00	8735-50	2.40	8772-500	37.50M'
8567-500 † Solid	4.15	(TBO)	30.00	8640-500	22.50M'	8735-100	4.30	8772-1000	37.50M'
8567-1000† Solid	6.75	8582-1000, Solid	60.00	8642-250	16.50	8735-500	19.15	8773 \$(Cut to customer's specified length maximum	748.50M'
8567-1000† Striped‡	1.17	8583-100 † Solid	4.50	8642-500	61.50M'	8735-1000	38.25M'	8774-100	23.40
8567-500 † Striped‡		8583-500 † Solid		8660-10	.60	8737-100	3.40	8774-500	234.00M'
8567-1000† Striped‡	4.75	(TBO)	20.25	8660-50	1.65	8737-500	13.50	8774-1000	234.00M'
8568-100 † Solid	.90	8583-1000† Solid	40.50	8660-250	7.20	8737-1000	27.00M'	8775-100	27.45
8568-500 † Solid	3.60	8584-100 † Solid	4.05	8661-10	.83	(Obs)	2.55	8775-500	274.50M'
8568-1000† Solid	6.75	8584-500 † Solid		8661-50	2.55	(Obs)	10.50	8775-1000	274.50M'
8568-1000† Striped‡	1.02	(TBO)	16.50	8661-250•	11.50	8738-100	2.95	8776-100	35.40
8568-500 † Striped‡	3.60	8584-1000† Solid	33.00	8662-10	1.80	8738-500	12.00	8776-500	354.00M'
8568-1000† Striped‡	6.75	8585-100 † Solid	2.25	8662-50	7.35	8739-100	24.00M'	8776-1000	354.00M'
8469-100 † Solid	.90	8585-500 † Solid		8662-250•	36.00	8739-500	1.80	8777-100	8.65
8469-500 † Solid	3.00	(TBO)	8.25	8663-10	.81	8740-100	6.60	8777-500	86.25M'
8469-1000† Solid	6.55	8585-1000† Solid	16.50	8663-50	2.40	8740-500	12.75M'	8777-1000	86.25M'
8469-500 † Solid	1.02	8586-100 † Solid	1.88	8663-250	11.35	8740-1000	3.00	8778-100	16.50
8469-1000† Striped‡	3.60	8586-500 † Solid		8668-10	.78	8741-100	12.00	8778-500	165.00M'
8469-500 † Striped‡	6.75	8586-1000† Solid	12.00	8668-50	2.06	8741-500	23.25M'	8778-1000	165.00M'
8469-1000† Striped‡	1.02	8587-100 † Solid	1.28	8668-250	9.00	8742-100	3.90	8779-100	49.50M'
8469-500 † Striped‡	3.60	8587-500 † Solid		8669-10	1.28	8742-500	16.50	8779-500	49.50M'
8469-1000† Striped‡	6.10	(TBO)	5.25	8669-50	5.50	8742-1000	32.25M'	8780-100	5.70
8469-500 † Striped‡	1.02	8587-1000† Solid	10.50	8669-250•	24.90	8743-100	6.30	8780-500	27.00
8469-1000† Striped‡	6.10	8588-100 † Solid	1.13	8670-10	2.40	8743-500	27.75	8781-100	54.00M'
8469-500 † Striped‡	.90	8588-500 † Solid		8670-50	10.65	8743-1000	55.50M'	8781-500	1.50
8469-1000† Striped‡	3.00	(TBO)	4.15	8670-250•	51.30	8744-100	8.50	8781-1000	4.20
8469-500 † Striped‡	5.40	8588-1000† Solid	8.25	8671-10	2.25	8744-500	38.65	8781-500	7.65M'
8469-1000† Striped‡	1.02	8589-100 † Solid	21.75	8671-50	10.15	8744-1000	77.25M'	8782-25	.60
8469-500 † Striped‡	3.60	8589-500 † Solid	105.00	8671-250•	48.75	8745-100	13.95	8782-50	.90
8469-1000† Striped‡	6.55	8589-1000† (TBO)	210.00	8672-10	1.60	8745-500	67.50	8782-100	1.35
8469-500 † Striped‡	.89	8590-100 † Solid	16.50	8672-50	6.70	8745-1000	133.50M'	8782-500	9.00M'
8469-1000† Striped‡	2.70	8590-500 † Solid	78.00	8672-250•	30.75	8746 \$(Cut to customer's specified length maximum	247.50M'	8782-1000	9.00M'
8469-500 † Striped‡	4.95	8590-1000† (TBO)	156.00	8673-100	7.50	1500'	247.50M'	8783-100	4.50
8469-1000† Striped‡	1.01	8591-100 † Solid	9.00	8673-500	72.00M'	8747-100	8.25	8783-500	42.00M'
8469-500 † Striped‡	3.30	8591-500 † (TBO)	39.75	8674-10	.56	8747-500	37.50	8784-500	87.00M'
8469-1000† Striped‡	6.10	8591-1000† Solid	79.50	8674-50	1.35	8747-1000	75.00M'	8786-100	5.75
8469-500 † Striped‡	1.50	8594-100 † Solid	1.28	8674-250	6.00	8748-100	11.40	8786-500	55.50M'
8469-1000† Striped‡	1.50	8594-500 † Solid		8675-100	6.00	8748-500	54.00	8787-500	117.00M'
8469-500 † Striped‡	5.40	(TBO)	5.95	8676-10	.50	8748-1000	108.00M'	8788-500	67.50M'
8469-1000† Striped‡	10.35	8594-1000† Solid	9.90	8676-50	.90	8749-100	19.50	8789-500	19.35
8469-500 † Striped‡	1.62	8594-500 † Striped‡	1.40	8676-250	4.20	8749-500	90.00	8789-1000	38.70M'
8469-1000† Striped‡	6.00	(TBO)	6.55	8677-100	4.60	8749-1000	180.00M'	8790-100	4.45
8469-500 † Striped‡	11.50	8594-500 † Striped‡		8677-500	43.50M'	8750 \$(Cut to customer's specified length maximum	337.50M'	8790-500	20.00
8469-1000† Striped‡	1.35	8594-1000† Striped‡	11.05	8678-100	16.65	1500'	337.50M'	8791-1000	40.00M'
8469-500 † Striped‡	4.75	(TBO)	13.35	*8678-500	156.75M'	8751 \$(Cut to customer's specified length maximum	735.00M'	8791-500	25.20
8469-1000† Striped‡	9.00	8595-100 † Solid	1.35	8680-100	14.40	1500'	735.00M'	8791-1000	50.40M'
8469-500 † Striped‡	1.47	8595-500 † Solid		8681-100	10.35	8753-100	10.95	8792-100 (TBO)	22.50
8469-1000† Striped‡	5.35	(TBO)	5.70	8682-100	5.25	8753-500	52.50	8792-500 (TBO)	225.00M'
8469-500 † Striped‡	10.35	8595-1000† Solid	10.50	8683-100	3.75	8753-1000	105.00M'	8792-100 (TBO)	225.00M'
8469-1000† Striped‡	1.62	8596-100 † Solid	1.38	8684-100	2.65	8754-100	12.40	8793 \$(Cut to customer's specified length maximum	465.00M'
8469-500 † Striped‡	6.00	8596-500 † Solid	6.60	8685-100	2.05	8754-500	59.25	1000' (TBO)	465.00M'
8469-1000† Striped‡	11.50	8596-1000† Solid	11.10	*8690-100					

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8819	8.10	8889-1	.42	8952-1000† Solid	13.50	(TBO)	105.60	8972-500 † Solid	
8820	5.04	8889-100	.27	8952-100 † Striped‡	1.77	8963-1000† Striped‡		(TBO)	6.75
8821	8.25	*8890-25 †	.83	(TBO)		(TBO)	211.15	8972-1000† Solid	
8822	4.70	*8890-100 †	1.88	8952-500 † Striped‡	7.35	8964-100 Solid	18.45	(TBO)	13.50
8823	4.80	*8890-500 †	7.35	8952-1000† Striped‡	14.65	8964-500 Solid	92.25	8972-100 † Striped‡	
8824	4.32	8892-100	4.50	8953-100 † Solid	1.50	8964-1000† Solid		(TBO)	1.85
8825	7.63	8892-500	18.75	8953-500 † Solid		(TBO)	184.50	8972-500 † Striped‡	
8826	7.48	8892-1000	37.50	(TBO)	5.85	8964-100 † Striped‡		(TBO)	7.35
8827	8.55	8893-100	3.60	8953-1000† Solid	11.40	(TBO)	18.60	8972-1000† Striped‡	
8850-100	6.75	8893-500	15.75	8953-100 † Striped‡	1.62	8964-500 † Striped‡		(TBO)	14.65
8850-500 (TBO)	29.25	8893-1000	31.50	8953-500 † Striped‡		(TBO)	92.85		
8850-1000 (TBO)	58.50	8894-100	5.25	8953-1000† Striped‡	6.45	8964-1000† Striped‡			
8851-100	5.25	8894-500 (TBO)	24.75	(TBO)	12.55	(TBO)	185.65		
8851-500 (TBO)	23.25	8894-1000	49.50	8954-100 † Solid	1.43	8965-100 Solid	6.00		
8851-1000 (TBO)	46.50	8895-1	.44	8954-500 † Solid		8965-500 † Solid			
8852-100	4.50	8895-100	.23	(TBO)	4.80	(TBO)	30.00		
8852-500	18.75	8896-100	3.75	8954-1000† Solid	9.60	8965-1000 Solid	60.00		
8852-1000 (TBO)	37.50	8896-500	16.50	8954-100 † Striped‡	1.55	8965-100 † Striped‡			
8853-100	3.90	8896-1000	33.00	8954-500 † Striped‡		(TBO)	6.15		
8853-500 (TBO)	16.50	8897-500	13.50	(TBO)	5.40	8965-500 † Striped‡			
8853-1000	33.00	8897-1000	27.00	8954-1000† Striped‡	10.75	(TBO)	30.60		
8854-100	3.75	8898-10 †	.98	8955-100 † Solid	1.35	8965-1000† Striped‡			
8854-500 (TBO)	15.00	8898-25 †	1.80	8955-500 † Solid		(TBO)	61.15		
8854-1000	30.00	8898-100 †	4.65	(TBO)	4.20	8966-100 Solid	4.80		
8855-100	3.40	8898-500 †	19.50	8955-1000† Solid	8.40	8966-500 † Solid			
8855-500 (TBO)	13.50	8899-10 †	.68	8955-100 † Striped‡	1.47	(TBO)	24.00		
8855-1000	27.00	8899-14	1.05	8955-500 † Striped‡	4.80	8966-1000 Solid	48.00		
8858-100	7.50	8899-25 †	1.75	8955-1000† Striped‡	9.55	(TBO)	4.95		
8858-500 (TBO)	35.65	8899-100 †	3.00	8956-100 † Solid	3.15	8966-500 † Striped‡			
8858-1000	71.25	8899-500 †	12.00	8956-500 † Solid		(TBO)	24.60		
8859-100	5.40	8899-1000†	22.50	8956-1000† Striped‡	13.50	8966-1000† Striped‡			
8859-500 (TBO)	27.00	8916-100 †	2.70	(TBO)	27.00	(TBO)	49.15		
8859-1000	54.00	8916-500 †	10.90	8956-1000† Solid		8967-100 Solid	3.40		
8860-100	4.65	8917-100 †	2.03	8956-100 † Striped‡	3.30	8967-500 † Solid			
8860-500 (TBO)	23.25	8917-500 †	8.05	8956-500 † Striped‡		(TBO)	15.00		
8860-1000	46.50	8918-100 †	1.65	(TBO)	14.10	8967-1000 Solid	30.00		
8861-100	4.15	8918-1000†	12.00	8956-1000† Striped‡	28.15	8967-100 † Striped‡			
8861-500 (TBO)	18.75	8919-100 †	1.34	8957-100 † Solid	2.55	(TBO)	3.50		
8861-1000	37.50	8919-1000†	9.90	8957-500 † Solid		8967-500 † Striped‡			
8862-100	3.75	8920-100 †	1.23	(TBO)	12.00	(TBO)	15.60		
8862-500 (TBO)	16.90	8920-1000†	9.00	8957-1000† Solid	24.00	8967-1000† Striped‡			
8862-1000	33.75	8933-100 †	3.45	8957-500 † Striped‡	2.67	(TBO)	31.15		
8863-100	3.40	8933-500 †	15.75	(TBO)	12.60	8968-100 Solid	3.00		
8863-500 (TBO)	15.75	8934-100 †	2.25	8957-1000† Striped‡	25.15	8968-500 † Solid			
8863-1000	31.50	8934-500 †	9.90	(TBO)	2.18	(TBO)	14.25		
8868-25	.98	8935-100 †	1.88	8958-500 † Solid		8968-1000 Solid	28.50		
8868-100	2.40	8935-1000†	15.00	(TBO)	9.15	8968-100 † Striped‡			
8868-500	9.45	8936-100 †	1.50	8958-1000† Solid	18.30	(TBO)	3.15		
8869-25	.83	8936-1000†	11.55	8958-100 † Striped‡	2.30	8968-500 † Striped‡			
8869-100	1.95	8937-100 †	1.38	(TBO)	9.75	(TBO)	14.85		
8869-500	7.50	8937-1000†	10.35	8958-1000† Striped‡	19.45	8968-1000† Striped‡			
8870-100	30.00	8938-100 †	2.95	8958-500 † Striped‡		8969-100 † Solid			
*8873-1	.47	8938-500 † (Obs)	12.90	(TBO)	9.75	8969-500 † Solid			
*8873-100	.30	8941-25 †	.63	8959-100 † Solid	1.95	(TBO)	2.25		
8874	.54	8941-100 †	1.62	8959-500 † Solid		8969-1000† Solid			
8875	.41	8941-1000†	12.00	(TBO)	8.25	8969-100 † Striped‡			
8878	2.85 pr	8942-100 †	2.20	8959-1000† Solid	16.50	(TBO)	2.37		
8879	1.28 pr	8942-1000†	18.75	8959-500 † Striped‡	2.07	8969-500 † Striped‡			
8880-100 †	5.25	8943-25 †	.63	(TBO)	8.85	(TBO)	10.35		
8880-500 † (TBO)	24.00	8943-100 †	1.65	8959-1000† Striped‡	17.65	8969-1000† Striped‡			
8880-1000†	48.00	8943-1000†	12.80	8960-100 † Solid	1.95	(TBO)	20.65		
8881-100 †	4.50	8945-25 † (Obs)	.60	8960-500 † Solid		8970-100 † Solid			
8881-500 † (TBO)	20.25	8945-100 †	1.73	(TBO)	6.75	8970-500 † Solid			
8881-1000†	40.50	8945-1000†	14.20	8960-1000† Solid	13.50	(TBO)	8.25		
8882-100 †	2.80	8947-25 † (Obs)	.63	8960-100 † Striped‡	2.07	8970-1000† Solid			
8882-500 † (TBO)	13.50	8947-100 †	1.88	(TBO)	7.35	8970-100 † Striped‡			
8882-1000†	27.00	8947-1000†	15.90	8960-500 † Striped‡		(TBO)	2.25		
8883-100	2.25	8950-100 † Solid	3.00	8960-1000† Striped‡	14.65	8970-500 † Striped‡			
8883-500 † (TBO)	9.75	8950-500 † Solid	11.25	8961-100 † Solid	1.80	(TBO)	8.85		
8883-1000†	19.50	8950-1000† Solid	22.50	8961-500 † Solid		8970-1000† Striped‡			
8884-100 †	3.75	8950-100 † Striped‡	3.15	8961-1000† Solid	13.50	(TBO)	17.65		
8884-500 † (TBO)	17.25	8950-500 † Striped‡	11.85	8961-100 † Striped‡	1.92	8971-100 † Solid	1.80		
8884-1000†	34.50	8950-1000† Striped‡	23.65	8961-500 † Striped‡		8971-500 † Solid			
8885-15	.90	8951-100 † Solid	2.18	(TBO)	7.35	(TBO)	7.15		
8885-25	1.13	8951-500 † Solid	9.00	8961-1000† Striped‡	14.65	8971-1000† Solid	14.25		
8885-100	3.15	8951-100 † Striped‡	18.00	8961-500 † Solid	21.00	8971-100 † Striped‡			
8885-500	29.25M	8951-500 † Striped‡	2.30	8963-500 Solid	105.00	(TBO)	1.92		
8886-100 †	2.65	(TBO)	9.60	8963-1000† Solid		8971-500 † Striped‡			
8886-500 † (TBO)	11.25	8951-1000† Solid	19.15	(TBO)	210.00	(TBO)	7.75		
8886-1000†	22.50	8952-100 † Solid	1.65	8963-100 † Striped‡		8971-1000† Striped‡			
8887-100 †	2.25	8952-500 † Solid	6.75	(TBO)	21.15	(TBO)	15.40		
8887-500 † (TBO)	9.75			8963-500 † Striped‡		8972-100 † Solid			
8887-1000†	19.50					(TBO)	1.75		
8888-25 †	1.05								
8888-100 †	2.40								
8888-250 †	5.25								

\* New Item † Specify Color (TBO) To Be Obsolete. (Obs) Obsolete.

ALL SPOOLS ARE ONE PIECE UNLESS OTHERWISE INDICATED BY (\*).

• Spools may contain more than one piece, minimum length of any one piece is 25 ft.

When priced per M ft. length may vary ± 10% from length shown; all other lengths are exact.

‡ Cut to Customer's Specified Length subject to available stock lengths—minimum length 25'; 25' to 199', plus 25', minus 0; 200' or over, plus 50', minus 0.

† (Vinyl Hook-up Wire) Prices apply to standard stock colors as listed in our current catalog and to non-stock striped colors over stock solid colors in quantities of 10,000' or more. Non-stock striped colors over stock solid colors in quantities of 1000' to 9999', add pro-rata set-up charge of \$3.00 per color combination. Minimum order 1000' per special stripe combination. Special stripe colors in any quantity will be subject to 2 piece put-up and plus or minus 10% per spool.

▲ (Teflon Hook-up Wire) Prices apply to any striped color combination in quantities of 1000' or more. Minimum order 1000' per stripe color combination. Stripin adders do not apply to braided tracers—Write for prices on non-stock tracer colors.

Prices Subject to Change Without Notice



# Belden

*electronic wire*

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# Belden

## BEIDFOIL<sup>††</sup> *The Total Shield*

Since Belden introduced Beldfoil in 1957, this 100% shield has won the reputation as "The Total Shield."

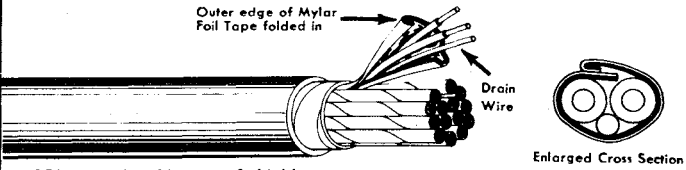
For critically sensitive circuit applications the combination of 100% shield coverage and the exclusive Belden fold (U.S. Patent 3,032,604) proves superior to previously available shields in guarding against cross talk and spurious signal impulses.

The benefits of Beldfoil include:

- 1) Increased electrical integrity.
- 2) Reduction of cross talk to unmeasurable levels.
- 3) Reduced weight and space requirements.
- 4) Easier and faster shield terminations.
- 5) Reduced costs.

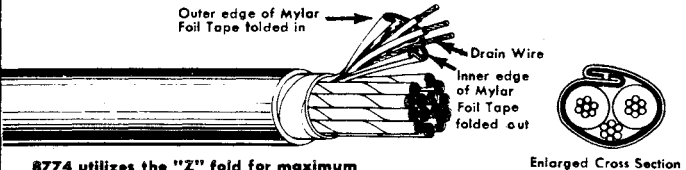
The basic Beldfoil tape is .00035" thick rolled aluminum foil per ASTM B373-61T laminated to a .0005" thick sheet of high dielectric strength DuPont Mylar<sup>‡</sup> per MIL-I-631D, Type G, Form F, by means of a high strength color code adhesive for circuit identification.

The exclusive Belden fold is used in several ways to give added value to the cable:



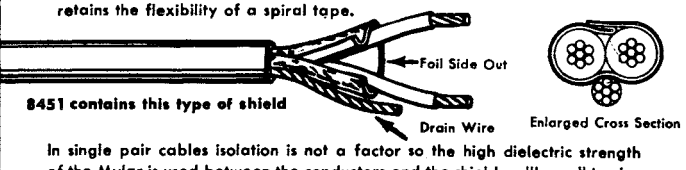
**8766 contains this type of shield**

For multi-pair cables with each pair separately shielded the Beldfoil tape is applied Mylar side out with the outer edge folded under to obtain isolation between shields of adjacent pairs. The fold eliminates current loops caused by random metallic contact between shields.



**8774 utilizes the "Z" fold for maximum shield effectiveness at radio frequencies**

Single conductors and paired conductors requiring minimum shield inductance have the Beldfoil shield applied with a "Z" fold. The additional fold on the inner tape edge provides a continuous metallic path around the circumference of the cable. This is electrically equivalent to a solid aluminum tube but retains the flexibility of a spiral tape.



**8451 contains this type of shield**

In single pair cables isolation is not a factor so the high dielectric strength of the Mylar is used between the conductors and the shield as "bonus" insulation with the metal edge folded under the Mylar to insure a full layer of extra protection.

All Beldfoil shields include a drain wire for ease of termination. This drain wire is in intimate contact with the foil throughout the length of the cable.

<sup>††</sup>Belden trademark—Reg. U.S. Pat. Off.






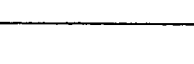




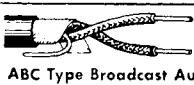
<sup>‡</sup>Du Pont trademark

shielded sound and broadcast audio cables

**Belden**

GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS

**TWO CONDUCTOR SHIELDED CABLES**

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
 <p>With JACKET BELDFOIL<sup>†</sup></p>	8640	26 (Solid)	.002	.020	.089	Red, Clear	100	80	140	100	250, 500
	Solid copper, BELDSOL <sup>††</sup> (solderable—no stripping required) insulated BELDFOIL aluminum-Mylar shield, 30 AWG solid tinned Copperweld <sup>▲</sup> ground drain wire, WHITE vinyl jacket. Maximum operating temperature 105°C. Ideal for instrumentation and audio console work where subminiaturization is required.										
 <p>BELDFOIL<sup>†</sup></p>	8450	22 (Solid)	.006	.018	.118	Blk, Red	100	40	76	200	100, 500, 1000
	8451	22 (7x30)	.008	.020	.135	Blk, Red	100	34	67	200	100, 500, 1000
 <p>BELDFOIL<sup>†</sup> Miniature Broadcast Audio Cable</p>	Tinned copper, Polypropylene insulated, conductors cabled, stranded tinned copper ground drain wire, BELDFOIL aluminum-Mylar shield, paper wrap, BLACK or GRAY vinyl jacket. Belden's Miniature Type Broadcast Audio Cable occupies 1/2 to 2/3 less space than required by Standard Broadcast Audio Cables. The Beldfoil shield combines high cable reliability with ease of termination.										
	8761	22 (7x30)	.014	.025	.167	Blk, Wht	100	24	47	350	500, 1000
 <p>BELDFOIL<sup>†</sup></p>	8762	20 (7x28)	.014	.028	.196	Blk, Wht	100	27	49	350	100, 500, 1000
	8760	18 (16x30)	.018	.028	.222	Blk, Wht	100	24	44	450	500, 1000
	NEW 8719	16 (19x29)	.025	.030	.274	Blk, Wht	100	24	47	600	500, 1000
	NEW 8720	14 (19x27)	.032	.035	.340	Blk, Wht	100	24	47	750	500, 1000
	Tinned copper, polyethylene insulated, BELDFOIL aluminum-Mylar shield, stranded tinned copper ground drain wire, (22 AWG for 8761, and 20 AWG for 8760 and 8762, 18 AWG for 8719, 16 AWG for 8720), chrome vinyl jacket.										
	8739	22 (Solid)	.015	.025	.160	Blk, Red	94.0	38	66	350	100, 500, 1000
	8737	22 (7x30)	.015	.025	.170	Blk, Red	89.3	40	70	350	100, 500, 1000
	8759	20 (7x28)	.015	.025	.195	Blk, Red	81.0	47	79	350	100, 500, 1000
	8790	18 (7x26)	.020	.028	.231	Red, Wht	76.5	53	92	450	100, 500, 1000
	8780	16 (19x29)	.023	.030	.266	Blk, Wht	84.1	57	98	450	100, 500, 1000
Tinned copper, vinyl insulated, tinned copper spiral wrapped shield, chrome vinyl jacket.											
 <p>High Temperature</p>	NEW 8390	22 (19x34)	.015	.015	.180	Blk, Wht	90	23	40	1000	25, 100, 500
	Stranded tinned copper, FEP teflon <sup>■</sup> insulated, cabled tinned copper braid shield, white FEP teflon jacket. 200°C maximum operating temperature.										
	8208	18 (16x30)	.020	.025	.255	Red, Wht	69	46	77	200	100, 500, 1000
	Tinned copper, rubber insulated, braided tinned copper shield, chrome vinyl jacket.										
 <p>ABC Type Broadcast Audio Cable</p>	8436	22 (Solid)	.016	.025	.190	Blk, Red	89.3	31	52	100	500, 1000
	Tinned copper, Celanese <sup>†</sup> wrap, Celanese braid lacquered, conductors cabled, solid tinned copper drain wire, tinned copper spiral wrapped shield, black vinyl jacket.										
 <p>CBS Type Broadcast Audio Cable</p>	8437	22 (Solid)	.015	.025	.200	Blk, Red	88	48	85	200	500, 1000
	8441	22 (16x34)	.015	.025	.210	Blk, Red	88	49	86	200	100, 500, 1000
Tinned copper, vinyl insulated, conductors cabled, solid tinned copper drain wire, tinned copper braid shield, black vinyl jacket.											
 <p>With Cotton Braid</p>	8209	18 (16x30)	.020	—	.258	Red, Wht	69	51	89	200	500, 1000
	Tinned copper, rubber insulated, braided tinned copper shield, white cotton braid, treated for weather resistance.										
 <p>Without JACKET</p>	8738	22 (Solid)	.015	—	.130	Blk, Red	72.8	35	61	350	1000
	8758	20 (7x28)	.015	—	.165	Blk, Red	63.8	42	72	350	100, 500, 1000
	8789	18 (7x26)	.020	—	.204	Blk, Wht	74	50	89	450	500, 1000
	8779	16 (19x29)	.023	—	.225	Blk, Wht	83	63	112	600	500, 1000
Tinned copper, vinyl insulated, braided tinned copper shield.											

\*Capacitance between conductors.    †Belden U.S. Patent 3,032,604.    ††Belden trademark—Reg. U.S. Pat. Off.  
 \*\*Capacitance between 1 conductor and other conductor connected to shield.    ‡Trademark of Celanese Corp.    ▲Trademark of Copperweld Steel Co.  
 ■DuPont Tradename for fluorocarbon resins.

For underground burial recommendations of all types of vinyl jacketed cables, please write for Bulletin #6 Electronic Wire Section.

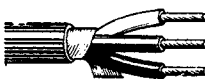


SECTION 6000

**Belden**




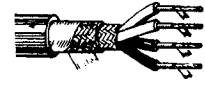
shielded instrumentation, strain gauge, sound and audio cables

GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS




**THREE CONDUCTOR SHIELDED**

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. Cap. (mmf ft)	Nom. Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
	<b>8731</b>	22 (Solid)	.015	.025	.178	Blk, Red, Wht	76.2	36	63	350	500, 1000
	<b>8791</b>	18 (7x26)	.020	.028	.236	Blk, Red, Wht	78.2	47	84	450	100, 500, 1000
<i>Tinned copper, vinyl insulated, conductors cabled, tinned copper spiral wrapped shield, chrome vinyl jacket.</i>											
	<b>8771</b>	22 (7x30)	.014	.025	.175	Blk, Red, Wht	100	23	41	350	500, 1000
	<b>8772</b>	20 (7x28)	.014	.028	.200	Blk, Red, Wht	100	27	51	350	500, 1000
	<b>8770</b>	18 (16x30)	.018	.028	.236	Blk, Red, Wht	100	24	48	450	500, 1000
<i>Tinned copper, polyethylene insulated, conductors cabled, BELDFOIL aluminum-Mylar shield, stranded tinned copper ground drain wire (22 AWG for 8771, and 20 AWG for 8770 and 8772), chrome vinyl jacket.</i>											
	<b>8735</b>	22 (7x30)	.015	.025	.199	Blk, Red, Wht	70	34	60	350	15, 50, 100, 500, 1000
	<b>NEW 8391</b>	22 (19x34)	.015	.015	.190	Blk, Red, Wht	90	20	35	1000	25, 100, 500
<i>Tinned copper, vinyl insulated, conductors cabled, tinned copper braid shield, chrome vinyl jacket.</i>											
<b>HIGH TEMPERATURE</b> <i>Stranded tinned copper, FEP teflon insulated, cabled, tinned copper braid shield, white FEP teflon jacket. 200°C maximum operating temperature.</i>											

**QUADS AND MULTIPLE QUADS STRAIN GAUGE CABLES**

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. Cap. (mmf ft)	Nom. Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
	<b>8434</b>	4	22 (7x30) 3 copper 4 copper-weld	.015	.025	.178	Red, Blk, Grn, Wht	100	23	48	400	100, 500, 1000
<i>Tinned copper, polyethylene insulated, black and red conductors under BELDFOIL aluminum-Mylar shield, stranded ground wire green and white conductors under area of BELDFOIL aluminum-Mylar shield, chrome vinyl jacket.</i>												
	<b>8723</b>	4	22 (7x30) copper	.008	.019	.165	Red, Blk, Grn, Wht	100	25	43	400	100, 500, 1000
<i>Tinned copper, polyethylene insulated, black and red under a BELDFOIL aluminum-Mylar shield. Green and white under a BELDFOIL aluminum-Mylar shield, each pair separate, stranded tinned copper drain wire, chrome vinyl jacket.</i>												
	<b>8404</b>	4	20 (26x34)	.015	.033	.233	Red, Blk, Grn, Wht	87	25	45	400	15, 100, 250, 500, 1000
<i>Tinned copper, polyethylene insulated, cabled, rayon braid, tinned copper braid shield, chrome vinyl jacket.</i>												
	<b>8407</b>	4	16 (65x34)	.032	.043	.422	Red, Blk, Grn, Wht	84	37	65	600	100, 250
<i>Tinned copper, separator, rubber insulated, cabled, rayon braid, tinned copper braid shield, cotton wrap, black neoprene jacket.</i>												
	<b>8424</b>	4	20 (26x34)	.020	.040	.295	Red, Blk, Grn, Wht	83.5	55	95	600	15, 50, 100, 250, 500, 1000
<i>Tinned copper, cotton wrap, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket.</i>												
	<b>NEW 8392</b>	4	22 (19x34)	.015	.015	.205	Red, Blk, Grn, Wht	90	20	35	1000	25, 100, 500
<b>HIGH TEMPERATURE</b> <i>Stranded tinned copper, FEP teflon insulated, cabled, tinned copper braid shield, white FEP teflon jacket. 200°C maximum operating temperature.</i>												

**AUDIO AND SOUND CABLES**

	<b>8724</b>	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	.008 .008	.019	.165	Red, Blk, Grn, Wht	100	34	67	200	500, 1000
	<b>8722</b>	2 shielded 2 unshielded	20 (7x28) 20 (7x28)	.015 .015	.028	.260	Red, Blk, Grn, Wht	100	60	99	350	500, 1000
<i>Tinned copper, 8722 vinyl insulated, 8724 polypropylene insulated, BELDFOIL aluminum-Mylar shield over 2 conductors, stranded tinned copper ground drain wire (22 AWG for 8722, and 24 AWG for 8724), chrome vinyl jacket.</i>												
	<b>8732</b>	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	.015 .015	.030	.188x.296	Blk, Wht Blk, Wht	62	21	37	350	100, 500, 1000
<i>Tinned copper, polyethylene insulated, tinned copper braid shield over 2 conductors, chrome vinyl jacket.</i>												
	<b>NEW 8726</b>	12	22 (7x30)	.008	.025	.230	Red, Blk, Grn, Wht	100	34	67	200	100, 500, 1000
	<b>NEW 8727</b>	28	22 (7x30)	.008	.040	.430	Red, Blk, Grn, Wht	100	34	67	200	100, 500, 1000

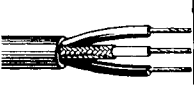


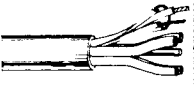
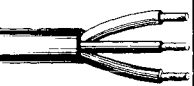
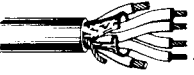
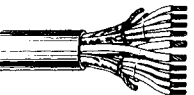
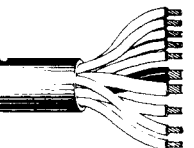
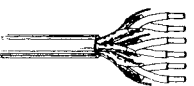
22 AWG tinned copper, polypropylene insulation, cabled in quads, BELDFOIL shield over black and red conductors.  
24 AWG stranded tinned copper drain wire. clear Mylar tape over entire quad, shields color coded, chrome vinyl jacket.  
©Belden U.S. Patent 3,032,604

multi-purpose and special audio and sound cables

**Belden**

GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS

**SPECIAL AUDIO AND SOUND CABLES**

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Cond. Color Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O. D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Standard Spool Lengths in ft
	<b>8734</b>	1 shielded 2 unshielded	22 (7x30) 22 (7x30)	Wht Blk, Red	.015 .015	.025	.194	82	350	—	79	100, 500, 1000
	<i>Tinned copper, vinyl insulated, tinned copper braid shield over 1 conductor, 3 conductors cabled, chrome vinyl jacket.</i>											
 <b>BELDFOIL</b>	<b>8763</b>	2 shielded 1 unshielded	20 (7x28) 20 (7x28)	Blk, Red Wht	.014 .014	.028	.210	100	350	26	48	500, 1000
	<i>Tinned copper, polyethylene insulated, BELDFOIL aluminum-Mylar shield over 2 conductors, 20 stranded tinned copper ground drain wire, chrome vinyl jacket.</i>											
 <b>BELDFOIL</b>	<b>8733</b>	3 shielded	22 (7x30)	Blk, Red, White	.014	.030	.205	100	350	—	51	100, 500, 1000
	<i>Tinned copper, polyethylene insulated, each conductor separately BELDFOIL aluminum-Mylar shielded. Ground wire for each conductor is tinned cadmium bronze ribbon under BELDFOIL "Z" fold, chrome vinyl jacket.</i>											
 <b>BELDFOIL</b>	<b>8788</b>	3 shielded 2 unshielded	22 (7x30)	Blk, Red, Grn, Yel, Blue	.015	.028	.236	100	350	—	125	500
	<i>Tinned copper, vinyl insulated, 3 conductors each separately BELDFOIL shielded, ground drain wire for each conductor is tinned cadmium bronze ribbon under BELDFOIL "Z" fold, 2 conductors unshielded, cabled around a vinyl filler, chrome vinyl jacket.</i>											
	<b>8783</b>	3 (3 unshielded)	1-20 (10x30) 2-16 (26x30)	Blue, Grn, Org	.020 .020	.025	.250	—	450	—	—	100, 500
	<i>Tinned copper, vinyl insulated, conductors cabled, chrome vinyl jacket.</i>											
 <b>BELDFOIL</b>	<b>8786</b>	6 (2 unshielded) (4 shielded)	22 (7x30) 24 (7x32)	Blu, Wht Blk, Grn, Red, Yel	.015 .015	.028	.256	100	350	—	—	100, 500
	<i>Tinned copper, vinyl insulated, 4 conductors twisted under BELDFOIL aluminum-Mylar shield, 2 conductors unshielded, 22 AWG drain wire, chrome vinyl jacket.</i>											
 <b>BELDFOIL</b>	<b>8787</b>	10 (4 shielded) (4 shielded) (2 unshielded)	24 (7x32) 24 (7x32) 22 (7x30)	Gry, Wht, Blu, Grn, Red, Brn, Yel, Org Wht, Blu	.012 .012 .013	.030	.290	100	350	—	—	500
	<i>Tinned copper, 22 AWG conductors vinyl insulated, 24 AWG conductors polyethylene insulated, cabled in 2 quads, each with transparent Mylar tape wrap, 24 AWG tinned copper ground wire, Red BELDFOIL shield over one quad, green BELDFOIL shield over the other quad, plus 2 unshielded conductors, chrome vinyl jacket.</i>											
	<b>8784</b>	10 (10 unshielded)	2-16 (26x30) 1-20 (10x30) 7-22 (7x30)	Blk, Wht Gray Red, Grn, Org, Yel, Blu, Purple Brown	.016 .018 .013	.040	.295	—	300	—	—	500
	<i>Tinned copper, vinyl insulated, conductors cabled vinyl jacket.</i>											
 <b>BELDFOIL</b>	<b>8640</b>	2	26 (Solid) 1 Pair	Red, Clear	.002	.020	.089	100	100	80	140	250, 500
	<b>8642</b>	6	26 (Solid) 3 Pair	Red, Clear	.002	.025	.140	100	100	80	140	250, 500
	<i>Solid copper, BELDFOIL†† (solderable—no stripping required), BELDFOIL aluminum-Mylar shield on each pair, red, brown, orange textile marker and isolating Mylar tape for each pair on 8642, Copperweld ground drain wire, WHITE vinyl jacket. Ideal for instrumentation and audio console work where miniaturization is required. 105° C maximum operating temperature. Belden U.S. Patent 3,032,604. †† Belden Trademark—Reg. U.S. Pat. Off.</i>											



# Belden


miniature coaxial and shielded paired instrumentation and sound cables

### COLOR CODING FOR PAIRED CABLES


GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS

Pair Number	Color Combination	Pair Number	Color Combination	Pair Number	Color Combination
1	Black paired with Red	10	Red paired with Blue	19	White paired with Blue
2	Black paired with White	11	Red paired with Yellow	20	White paired with Yellow
3	Black paired with Green	12	Red paired with Brown	21	White paired with Brown
4	Black paired with Blue	13	Red paired with Orange	22	White paired with Orange
5	Black paired with Yellow	14	Green paired with White	23	Blue paired with Yellow
6	Black paired with Brown	15	Green paired with Blue	24	Blue paired with Brown
7	Black paired with Orange	16	Green paired with Yellow	25	Blue paired with Orange
8	Red paired with White	17	Green paired with Brown	26	Brown paired with Yellow
9	Red paired with Green	18	Green paired with Orange	27	Brown paired with Orange


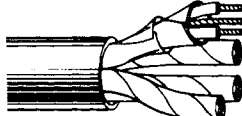
### MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO AND SOUND CABLES

Description	Trade Number	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Cap. (mmf ft)	Nom. Cap. (mmf ft)	Standard Spool Lengths in ft
<b>22 GAUGE VINYL INSULATION</b> 	8767	3	Solid	.013	.033	.270	40	77	100, 500, 1000
	8768	6	Solid	.013	.037	.304	60	77	100, 500, 1000
	8764	9	Solid	.013	.040	.423	40	77	100, 500, 1000
	8765	11	Solid	.013	.040	.483	60	77	100, 500, 1000
	8766	15	Solid	.013	.043	.510	40	77	100, 500, 1000
				Insulation resistance between shields: 100 megohms/ft Capacitance between adjacent shields: 11.5 mmf/ft Voltage breakdown between adjacent shields: 1500 volts Working voltage between adjacent shields: 50 volts					
Vinyl insulation is used for ease of stripping and soldering. Recommended for audio frequency applications requiring excellent circuit isolation. Maximum operating temperature 20° C.									

### MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO AND DATA CABLES

Description	Trade Number	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Cap. (mmf ft)	Nom. Cap. (mmf ft)	Standard Spool Lengths in ft
<b>22 GAUGE POLYPROPYLENE INSULATION</b> 	8777	3	7x30	.010	.036	.270	30	55	100, 500, 1000
	8778	6	7x30	.010	.037	.304	50	55	100, 500, 1000
	8774	9	7x30	.010	.040	.423	30	55	100, 500, 1000
	8775	11	7x30	.010	.040	.483	50	55	100, 500, 1000
	8776	15	7x30	.010	.043	.510	30	55	100, 500, 1000
	8769	19	7x30	.010	.045	.620	30	55	100, 500, 1000
	8773	27	7x30	.010	.070	.760	30	55	500 to customer specified length Maximum length 1000
				Insulation resistance between shields: 100 megohms/ft Capacitance between adjacent shields: 11.5 mmf/ft Voltage breakdown between adjacent shields: 1500 volts Working voltage between adjacent shields: 50 volts					
Recommended for audio, pulse, and radio frequency applications requiring superior circuit isolation. Polypropylene insulation is used for excellent high frequency properties and mechanical toughness. Maximum operating temperature 105° C.									

### SPECIAL INSTRUMENTATION CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. Cap. (mmf ft)	Nom. Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft	
	8700	28 (Solid) Coaxial	.005	.008	.054	Black	80	48		100	25, 50, 100, 250	
	Solid tinned copper, polypropylene insulation, copper braid, black vinyl jacket. May be steam sterilized for medical research.											
	NEW 8725	4 pairs 20 (7x28)	.015	.030	.360	Red, Blk	100	27	49	400	500 1000	
						Grn, Wht						
						Wht/Red						
						Wht/Blk						
						Wht/Grn						
						Wht/Yel						
Tinned copper conductors, Polypropylene insulated, four groups of two conductors with #22 AWG drain wire. Each group individually BELDFOIL shielded with Mylar tape wrap, chrome vinyl jacket. 105° C Maximum operating temperature.												

\*Capacitance between conductors.

Belden U.S. Patent 3,032,604.

§Minimum length 25'

\*\*Capacitance between 1 conductor and other conductor connected to shield.

25' to 199', plus 25', minus 0.  
200' or over, plus 50', minus 0.

unshielded paired sound cables


**Belden**

**MULTIPLE PAIR UNSHIELDED SOUND CABLES**

TYPICAL APPLICATIONS: Balanced line sound systems.


Made with 80°C vinyl plastic compounds for high dielectric strength and the best physical properties, such as free stripping, small

diameter, and tear resistance. It also resists the effects of water, sun, oil, grease, and ozone. The conductors are paired with a short-lay twist for conductor balance, providing a quiet circuit, free from cross talk.

1 to 27 Pairs	Trade Number	No. of Pairs	AWG & Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
<p><b>ALL CONSTRUCTIONS:</b> Tinned copper, vinyl insulated cabled in pairs, chrome vinyl jacket.</p> 	8740	1	22 Solid	.015	.025	.150	200	100, 500, 1000
	8741	2	22 Solid	.015	.028	.201	200	100, 500, 1000
	8742	3	22 Solid	.015	.030	.240	200	100, 500, 1000
	NEW 8690	3	18 (16x30)	.018	.037	.362	400	100, 500, 1000
	8757	4	22 Solid	.015	.030	.255	200	500, 1000
	8743	6	22 Solid	.010	.035	.305	200	100, 500, 1000
	8747	6	22 (7x30)	.010	.035	.340	200	100, 500, 1000
	NEW 8691	6	18 (16x30)	.018	.045	.550	400	100, 500, 1000
	8744	9	22 Solid	.010	.037	.354	200	100, 500, 1000
	8748	9	22 (7x30)	.010	.037	.389	200	100, 500, 1000
	NEW 8692	9	18 (16x30)	.018	.055	.638	400	100, 500, 1000
	8753	11	22 Solid	.010	.037	.384	200	100, 500, 1000
	8754	13	22 Solid	.010	.037	.409	200	100, 500, 1000
	8745	15	22 Solid	.010	.040	.420	200	100, 500, 1000
	8749	15	22 (7x30)	.010	.040	.425	200	100, 500, 1000
	8755	19	22 Solid	.010	.040	.480	200	500, 1000
	8756	23	22 Solid	.010	.040	.510	200	500, 1000
	8746	27	22 Solid	.010	.045	.550	200	§Cut to customer's specified length. Maximum length 1500'
	8750	27	22 (7x30)	.010	.045	.595	200	§Cut to customer's specified length. Maximum length 1500'

For color coding please refer to page 6

**51 PAIR CABLE**

Description	Trade Number	No. of Pairs	Conductors	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Standard Spool Lengths in ft
	8751	51	Solid Tinned Copper	.010	.050	.725	§Cut to customer's specified length. Maximum length 1500'

#22 tinned copper, vinyl insulated, cabled in pairs, BELDFOIL aluminum-Mylar shield over cabled pairs, #22 (7x30) stranded ground drain wire, chrome vinyl jacket. 200 Volts suggested working voltage. Color coding available on request.

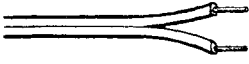



§Minimum length 25'.  
25' to 199', plus 25', minus 0.  
200' or over, plus 50', minus 0.

For color coding information on 8751 write for Technical Data Electronic Wire Section 50-4

**Belden**




two and three conductor unshielded cables

**TWO CONDUCTOR UNSHIELDED CABLES**

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Conductor Color Coding	Nominal O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
 Copper, vinyl insulated, PARALLEL	<b>8781</b>	22 (Solid)	.016	—	Chrome 1 cond. tinned	.060x .120	100	100, 500, 1000
	<b>8782</b>	24 (7x32)	.017	—	Chrome, Sand, Clear White, 1 cond. tinned	.058x .115	300	25, 50, 100, 500, 1000
 Copper, vinyl insulated, TWISTED.	<b>Without JACKET</b>							
	<b>8481</b>	22 (Solid)	.015	—	Brn, Tan	.112	350	100, 500, 1000
	<b>8482</b>	19 (Solid)	.015	—	Brn, Tan	.130	350	100, 500, 1000
	<b>8492</b>	19 (Solid)	.025	—	Brown or White 1 cond. tinned	.170	600	1000
	<b>8460</b>	18 (7x26) tinned	.020	—	Blk, Wht	.175	450	100, 500, 1000
	<b>8470</b>	16 (19x29) tinned	.023	—	Blk, Wht	.195	600	500, 1000
 SOLID  STRANDED Copper, vinyl insulated, CABLED, chrome vinyl jacket.	<b>With JACKET</b>							
	<b>8740</b>	22 (Solid) tinned	.015	.025	Blk, Red	.150	200	100, 500, 1000
	<b>8442</b>	22 (7x30) tinned	.015	.025	Blk, Red	.165	350	500, 1000
	<b>8205</b>	20 (10x30) tinned	.018	.025	Blk, Red	.190	350	100, 500, 1000
	<b>8486</b>	19 (Solid)	.015	.025	Brn, Tan	.162	350	500, 1000
	<b>8461</b>	18 (7x26) tinned	.020	.028	Blk, Wht	.226	450	100, 500, 1000
	<b>8471</b>	16 (19x29) tinned	.023	.030	Blk, Wht	.256	600	500, 1000
<b>8473</b>	14 (19x27) tinned	.031	.035	Blk, Wht	.332	600	500, 1000	

For additional 2 conductor cables see PORTABLE CORDAGE on page 12, and DUPLEX PRIMARY WIRE on page 26

**THREE CONDUCTOR UNSHIELDED CABLES**

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Conductor Color Coding	Nominal O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
 Copper, vinyl insulated, PARALLEL	<b>8701</b>	22 (Solid)	.016	—	Chrome 1 cond. tinned	.060x .190	100	100, 500, 1000
	<b>8475</b>	16 (19x29) bare	.023	—	Wht, Brn, Red	.102x .295	300	100, 500
<b>Without JACKET</b>  Bare copper, vinyl insulated, CABLED	<b>8483</b>	19 (Solid)	.015	—	Brn, Gray, Tan	.132	350	100, 500, 1000
	<b>8493</b>	19 (Solid)	.025	—	Brn, 1 cond. tinned, 1 cond. insulation is ribbed	.170	600	1000
<b>With JACKET</b>  Copper, vinyl insulated, CABLED, chrome vinyl jacket.	<b>8443</b>	22 (7x30) tinned	.010	.025	Blk, Grn, Red	.150	200	25, 100, 500, 1000
	<b>8487</b>	19 (Solid) bare	.015	.025	Brn, Gray, Tan	.180	350	500, 1000

For additional 3 conductor cables see PORTABLE CORDAGE on pages 12.


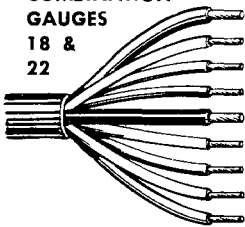
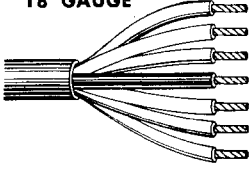
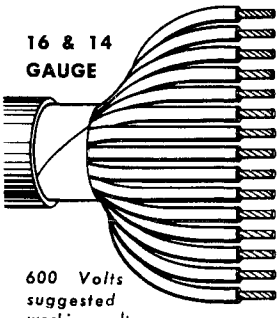
**BELDEN PAGE 8**



multiple unshielded cables  
and telephone cables

**Belden**

**MULTIPLE CONDUCTOR CONTROL AND AUDIO CABLES (NOT PAIRED)**

Description and Gauge	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Color Code or Chart No	Standard Spool Lengths in ft.
<p>Bare copper, polyethylene insulated, cabled, rose gray vinyl jacket</p> <p><b>All Constructions:</b> Tinned copper, vinyl plastic insulated, cabled, vinyl jacket.</p> <p><b>22 GAUGE</b></p>  <p>200 Volts suggested working voltage.</p> <p><b>COMBINATION GAUGES</b> <b>18 &amp; 22</b></p> 	<b>8794</b>	3	22 (Solid) <b>Triplet telephone cable</b>	.016	.022	.168	Red, Grn, Yellow	500, 1000
	<b>8443</b>	3	22 (7x30)	.010	.025	.150	1	25, 100, 500, 1000
	<b>8444</b>	4	22 (7x30)	.010	.025	.168	1	25, 100, 500, 1000
	<b>8445</b>	5	22 (7x30)	.010	.025	.180	1	25, 100, 500, 1000
	<b>8456</b>	10	22 (7x30)	.010	.030	.260	1	100, 500, 1000
	<b>8457</b>	12	22 (7x30)	.010	.030	.260	1	100, 500, 1000
	<b>NEW 8458</b>	15	22 (7x30)	.010	.040	.320	2	100, 500, 1000
	<b>NEW 8459</b>	25	22 (7x30)	.010	.040	.370	2	100, 500, 1000
	<b>8446</b>	6	4-22 (7x30) 2-18 (16x30)	.010 .018	.025	.222	1	15, 100, 500, 1000
	<b>8447</b>	7	5-22 (7x30) 2-18 (16x30)	.010 .018	.028	.246	1	100, 500, 1000
<b>8448</b>	8	6-22 (7x30) 2-18 (16x30)	.010 .018	.028	.250	1	15, 100, 500, 1000	
<b>8449</b>	9	7-22 (7x30) 2-18 (16x30)	.010 .018	.028	.261	1	15, 100, 500, 1000	
<p><b>18 GAUGE</b></p>  <p>400 Volts suggested working voltage.</p>	<b>8465</b>	5	18 (16x30)	.018	.030	.272	1	100, 500, 1000
	<b>8467</b>	7	18 (16x30)	.018	.035	.320	1	100, 500, 1000
	<b>8469</b>	9	18 (16x30)	.018	.035	.375	1	100, 500, 1000
	<b>NEW 8466</b>	12	18 (16x30)	.018	.040	.402	2	100, 500, 1000
	<b>NEW 8468</b>	15	18 (16x30)	.018	.045	.490	2	100, 500, 1000
<p><b>16 &amp; 14 GAUGE</b></p>  <p>600 Volts suggested working voltage.</p>	<b>NEW 8620</b>	4	16 (19x29)	.030	.045	.375	2	100, 500, 1000
	<b>NEW 8621</b>	7	16 (19x29)	.030	.045	.455	2	100, 500, 1000
	<b>NEW 8622</b>	12	16 (19x29)	.030	.060	.600	2	100, 500, 1000
	<b>NEW 8623</b>	15	16 (19x29)	.030	.060	.650	2	100, 500, 1000
	<b>NEW 8624</b>	19	16 (19x29)	.030	.065	.715	2	100, 500, 1000
	<b>NEW 8627</b>	4	14 (19x27)	.045	.045	.495	2	100, 500, 1000
	<b>NEW 8628</b>	7	14 (19x27)	.045	.060	.630	2	100, 500, 1000
	<b>NEW 8629</b>	12	14 (19x27)	.045	.065	.820	2	100, 500, 1000

For 22 AWG and 18 AWG Combinations—22 AWG is rated at 200 volts and 18 AWG is rated at 400 volts.

**COLOR CODE**  
Chart No. 1

Conductor	Color
1st	Black
2nd	Red
3rd	Green
4th	White
5th	Brown
6th	Blue
7th	Orange
8th	Yellow
9th	Purple
10th	Gray
11th	Pink
12th	Tan



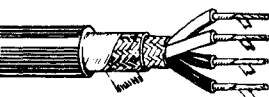

18 Gauge conductors in cables 8446 through 8449 are Black and Red.

**IPCEA COLOR CODE**  
(Insulated Power Cable Engineers Association)




Chart No. 2

Conductor	Color	Conductor	Color	Conductor	Color
1st	Black	9th	Green/Black	17th	White/Red
2nd	White	10th	Orange/Black	18th	Orange/Red
3rd	Red	11th	Blue/Black	19th	Blue/Red
4th	Green	12th	Black/White	20th	Red/Green
5th	Orange	13th	Red/White	21st	Orange/Green
6th	Blue	14th	Green/White	22nd	Blk/Wht/Red
7th	White/Black	15th	Blue/White	23rd	Wht/Blk/Red
8th	Red/Black	16th	Black/Red	24th	Red/Blk/Wht
				25th	Grn/Blk/Wht

**Belden**rubber and plastic microphone  
and shielded power supply cables**RUBBER AND NEOPRENE MICROPHONE AND SHIELDED POWER SUPPLY CABLES**

Description	Trade Number	No. of Cond.	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Impedance (Ohms)	Cap. (mmf/ft)	Cap. (mmf/ft)	Standard Spool Lengths in ft
<b>SINGLE CONDUCTOR</b> 	<b>8410</b>	1	25(7x33)	.063	.025	.245	80	3000	52	—	33	25, 50, 100, 250, 500
	3 strands copper, 4 strands Copperweld tinned, cellulose yarn braid, rubber insulated, rayon braid, tinned copper braid shield, cellulose yarn wrap, black rubber jacket.											
<b>MINIATURE</b> 	<b>8413</b>	2	24(45x40)	.019	.025	.190	100	300	—	38	71	15, 25, 50, 100, 250, 500
	<b>8406</b>	3	24(45x40)	.019	.025	.223	100	300	—	43	76	100, 250, 500
Tinned cadmium bronze, cotton serve, rubber insulated, cabled with fillers, conductive textile serve, tinned copper braid shield, cotton serve, black rubber jacket.												
<b>MULTIPLE CONDUCTOR</b>  Tinned copper, cotton wrap, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket.	<b>8412</b>	2	20(26x34)	.020	.043	.268	84	600	—	42	68	25, 50, 100, 250, 500
	<b>8423</b>	3	20(26x34)	.020	.040	.277	84	600	—	50	85	15, 50, 100, 250, 500, 1000
	<b>8424</b>	4	20(26x34)	.020	.040	.295	83.5	600	—	55	95	15, 50, 100, 250, 500, 1000
	<b>8425</b>	5	20(26x34)	.020	.040	.323	76	600	—	44	80	100, 250
	<b>8426</b>	6	20(26x34)	.020	.040	.349	90	600	—	40	78	100, 250
	<b>8427</b>	7	20(26x34)	.020	.043	.360	90	600	—	40	75	100, 250
	<b>8418</b>	8	20(26x34)	.020	.043	.386	92	600	—	42	75	100, 250
	<b>8428</b>	2	18(41x34)	.022	.038	.295	91	600	—	47	80	100, 500
<b>NEOPRENE HEAVY DUTY</b> <b>8407</b>	4	16(65x34)	.032	.043	.422	84	600	—	37	65	100, 250	
Tinned copper, separator, rubber insulated, cabled, rayon braid, tinned copper braid shield, cotton wrap, black neoprene jacket.												
<b>EXTRA LIMP</b> 	<b>8414</b>	2	20(26x34)	.020	.043	.256	100	600	—	45	80	50, 500
Tinned copper, cotton wrap, rubber insulated, cabled, conductive textile wrapped shield, stranded ground wire, black rubber jacket. Recommended for desk microphone and applications under 20 ft. For studio application use 8412 and 8413.												

**VINYL MICROPHONE AND SHIELDED POWER SUPPLY CABLES**

Description	Trade Number	No. of Cond.	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Impedance (Ohms)	Cap. (mmf/ft)	Cap. (mmf/ft)	Standard Spool Lengths in ft
<b>SINGLE CONDUCTOR</b> 	<b>8411</b>	1	25(7x33)	.020	.020	.144	72	3500	52	—	34	15, 25, 50, 100, 250, 500
	<b>8401</b>	1	25(7x33)	.043	.025	.200	74	5000	57	—	25	15, 25, 50, 100, 250, 500
3 strands copper, 4 strands Copperweld, tinned, cellulose yarn braid, polyethylene insulated, tinned copper braid shield, chrome vinyl jacket.												
<b>MINIATURE</b> 	<b>8420</b>	2	24(45x40)	.015	.020	.185	77	500	—	22	40	15, 25, 50, 100, 250, 500
Tinned cadmium bronze, cotton wrap, polyethylene insulated, cabled with fillers, rayon braid, tinned copper braid shield, chrome vinyl jacket.												
<b>MULTIPLE CONDUCTOR</b>  Tinned copper, polyethylene insulated, cabled, rayon braid, tinned copper braid shield, chrome vinyl jacket.	<b>8422</b>	2	22(16x34)	.023	.023	.231	87	1000	—	18	32	15, 25, 50, 100, 250, 500
	<b>8403</b>	3	20(26x34)	.015	.033	.244	89	600	—	25	45	15, 50, 100, 250, 500, 1000
	<b>8404</b>	4	20(26x34)	.015	.033	.255	87	600	—	25	45	15, 100, 250, 500, 1000
	<b>8405</b>	5	20(26x34)	.015	.035	.275	83	600	—	25	45	250, 500, 1000

Color coding of individual conductors for cables on this page and coiled microphone cables on page 11: (1) White, (2) Black, (3) Red, (4) Green, (5) Blue, (6) Brown, (7) Yellow, (8) Orange.

\*Capacitance between conductors.

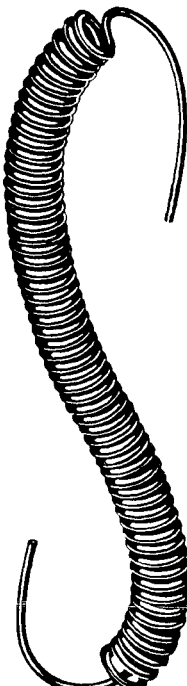
\*\*Capacitance between 1 conductor and remaining conductors (if any) connected to shield.

**BELDEN PAGE 10**

retractile (coiled) cables and cords

**Belden**

**NEOPRENE RETRACTILE (COILED) MICROPHONE CABLES**

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Percent Shield Coverage	***Cap. (mmf/cord)	Retracted Length	Practical Extended Length	Standard Put-Up
	<b>8409</b>	4 unshielded	28 (7x36)	.005	.050	.165	3/8	Noshield	—	12"	6'	1
	<i>Tinned copper, nylon insulated, neoprene jacket.</i>											
	<b>8415</b>	4 unshielded	23 (21x36)	.020	.055	.250	3/8	Noshield	—	11 1/2"	6'	1
	<b>8499</b>	1 shielded	24 (45x40)	.019	.043	.160	7/16	80	285	7 1/2"	4'	1
	<b>8497</b>	3 1 shielded 2 unshielded	23 (21x36)	.020	.046	.250	7/8	100	480	11 1/2"	6'	1
<b>8491</b>	4 2 individually shielded 2 unshielded	23 (21x36)	.020	.050	.300	1 1/16	100	480	12"	6'	1	

*Tinned cadmium bronze, rubber insulated, paper tape wrap, black neoprene jacket. 8499 has a spiral tinned copper shield. 8497 and 8491 have a double BELDFOIL tape shield with a (21x36) tinned cadmium bronze drain wire for each shield conductor.*

**VINYL RETRACTILE (COILED) MICROPHONE CABLES**

Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Percent Shield Coverage	***Cap. (mmf/cord)	Retracted Length	Practical Extended Length	Standard Put-Up
<b>8498</b>	1 shielded	24 (45x40)	.019	.060	.195	11/16	80	285	7 1/2"	3 1/2'	1
<i>Tinned cadmium bronze, rubber insulated, over-all vinyl jacket. 8498 has a spiral tinned copper shield.</i>											

**NEOPRENE RETRACTILE (COILED) POWER CONTROL CABLES**


Longer lengths are available on request.

Trade Number	No. of Cond.	UL Type	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Retracted Length	Practical Extended Length	Standard Put-Up
<b>8601</b>	2	SVO	18 (41x34)	.016	.045	.270	1	12"	6'	1 in bag
<b>8602</b>	3	SJO	18 (41x34)	.031	.045	.360	1 3/8	12"	6'	1 in bag
<b>8603</b>	3	SJO	16 (65x34)	.031	.045	.370	1 1/2	12"	6'	1 in bag
<b>8604</b>	3	SJO	16 (65x34)	.031	.045	.370	1 1/2	24"	12'	1 in bag

*Bare copper, paper wrap, rubber insulation, cabled with fillers, paper tape wrap, black neoprene jacket. 6" straight portion each end. Jacket removed 1 1/2" each end.*

**TYPICAL APPLICATIONS**  
Hams  
Citizen Band  
Hand Mikes  
Desk Mikes  
Language Labs  
Mobile Controls  
Mobile Communications  
Industry Applications

**VINYL RETRACTILE (COILED) TELEPHONE CORDS**

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Retracted Length	Practical Extended Length	Standard Put-Up
	<b>8495</b>	3	23 (21x36)	.020	.041	.220	7/8	10"	4 1/2'	1
	<b>8494</b>	4	23 (21x36)	.020	.043	.245	7/8	10"	4 1/2'	1

*Bare cadmium bronze, vinyl insulated, cabled, paper wrapped, black vinyl jacket. 8494 one end stripped 7 3/4", spade terminals attached and hook strain relief clamped over jacket. Other end stripped 6 1/4" and spade terminals attached. 8495 one end stripped 2 3/4", spade terminals attached and hook strain relief clamped over jacket. Other end stripped 3 7/16" and spade terminals attached.*

**RUBBER—PLASTIC—NEOPRENE**

PLASTIC CABLES RECOMMENDED FOR: Lower capacitance, lower loss, greater ozone and oil resistance, lighter weight, smaller diameter.  
RUBBER CABLES RECOMMENDED FOR: Greater abrasion and impact resistance, and extra limpness so cable will lie flat on stage or studio floor.  
NEOPRENE CABLES RECOMMENDED FOR: Outside use, cold weather applications. Resistant to effects of sun, oil, and ozone.

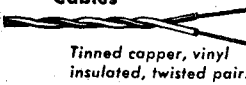
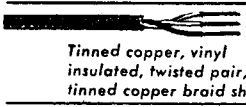




\*\*\*Capacitance of shielded conductor.

Belden U.S. Patent 3,032,604.



# Belden

phonograph, hi-fi and stereo cables  
portable cordage and test prod wire





## HI-FI AND STEREO CABLES

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Nom. Cap. between condns. (mmf ft)	Nom. Cap. condr. to other condr. & shield (mmf ft)	Standard Spool Lengths in ft
 Phone Pick-Up Arm Cables Tinned copper, vinyl insulated, twisted pair.	8430	2	32 (7x40)	.009	—	.050	Blk, Red	21	—	10, 25, 250
	→	4	Use two 8430s for maximum channel isolation, one for each channel.							
 Tinned copper, vinyl insulated, twisted pair, tinned copper braid shield.	8429	2	32 (7x40)	.009	—	.057	Blk, Red	22	38	10, 25, 250
	8419	3	32 (7x40)	.009	—	.067	Blk, Red, Wht	30	50	10, 25, 250
	→	4	Use two 8429s for maximum channel isolation, one for each channel.							
 Tinned copper, rubber insulated, tinned copper braid shield, brown cotton braid.	8431	1	24 (16x36)	.015	—	.095	—	96	—	10, 15, 25 100, 500
 Hi-Fi Connecting Cable 3 strands tinned copper and 4 tinned Copperweld, cellular polyethylene insulated, tinned copper spiral wrapped shield, chrome vinyl jacket.	8421	1	25 (7x33)	.025	.025	.180	—	18	—	15, 25, 50 100, 250
	8416	2	25 (7x33)	.018	.020	.106 x .213	1 Wht 1 Red	35 each channel	—	15, 25, 50 100, 250
 Dual Channel Audio Cable for stereo and language labs 3 strands tinned copper and 4 tinned Copperweld, polyethylene insulated, individual tinned copper spiral wrapped shield, chrome vinyl jacket, polarity rib on red conductor.	8417	1	25 (7x33)	.020	.026	.140	Chrome	25	—	15, 25, 50 100, 250
	8417	1	25 (7x33)	.020	.026	.140	Chrome	25	—	15, 25, 50 100, 250
 BELDFOIL Miniature Audio Connecting Cable totally shielded 3 strands tinned copper and 4 tinned Copperweld, cellular polyethylene insulated double BELDFOIL aluminum-Mylar shield, inner shield "Z" folded 26 AWG stranded tinned copper ground drain wire, chrome vinyl jacket.	8417	1	25 (7x33)	.020	.026	.140	Chrome	25	—	15, 25, 50 100, 250

## RUBBER-VINYL MULTI-CONDUCTOR PORTABLE CORDAGE—300V-60C

Description	Trade Number	U.L. Type	Insulation	No. of Conductors	AWG & Stranding	Insulation Thickness (Inch)	Conductor Coding	Jacket Thickness (Inch)	Nominal O.D. (Inch)	Color	Standard Spool Lengths in ft
	8462	SP-1	Rubber	2	18 (41x34) Tinned	.031	Polarity Ribbed	—	.123 x .223	Brown or Ivory	25, 100, 250
	8888	SPT-1	Vinyl	2	18 (41x34)	.031	Polarity Ribbed	—	.110 x .207	Brn, Ivory, or Gray	25, 100, 250
Two conductors, stranded copper, parallel, insulated with one conductor polarity ribbed.											
 Stranded copper, rubber insulated, cabled with fillers, rubber jacket	8452	SV	Rubber	2	18 (41x34)	.016	Blk, Wht	.031	.245	Black	25, 50, 100, 250, 500, 1000
	8478	SJ	Rubber	2	18 (41x34)	.031	Blk, Wht	.031	.298	Black	100, 250, 1000
	8472	SJ	Rubber	2	16 (65x34)	.031	Blk, Wht	.031	.325	Black	25, 100, 250
	8474	—	Rubber	2	14 (41x30)	.031	Blk, Wht	.035	.360	Black	100, 250
	8453	SV	Rubber	3	18 (41x34) Tinned	.016	Blk, Wht, Green	.031	.265	Black	50, 100, 500
	8454	—	Rubber	4	18 (41x34) Tinned	.016	Blk, Wht, Brn, Red	.031	.265	Black	50, 100, 500, 1000
	8455	—	Rubber	5	3-20 (26x34) 2-18 (41x34) Tinned	.015 .015	Brn, Grn, White Blk, Red	.031	.280	Black	100, 250

## TEST PROD WIRE

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Breakdown Voltage	Suggested Working Voltage	Standard Package	Standard Spool Lengths in ft.
 Tinned copper, separator, rubber insulated, red or black.	8899	18 (65x36)	.045	.144	20,000	5,000	—	10, 14*, 25, 100, 500, 1000 *7' of red and 7' of black.
	8897	18 (65x36)	.045	.144	20,000	5,000	—	500, 1000
	Manufactured per MIL-W-13169							
 Miniature	8898	18 (65x36)	.088	.230	29,000	10,000	—	10, 25, 100, 500
	NEW 8890	24 (45x40)	.019	.066	10,000	1,000	—	25, 100, 500
 COILED With Prods	8878	20 (42x36)	.063	.173	20,000	5,000	1 pair Red and Black	—
	Tinned copper, rubber insulated, red or black. Retracted length 8". Stretches to 5'.							
 Without Prods	8879	20 (42x36)	.063	.173	20,000	5,000	1 pair Red and Black	—
	Tinned copper, rubber insulated, red or black. Retracted length 8". Stretches to 5'.							

\* Belden U.S. Patent 3,032,604

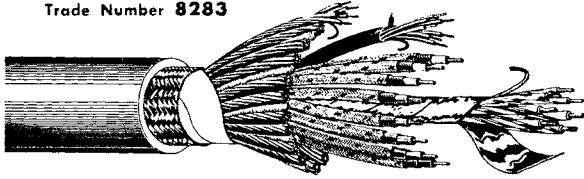
tv camera cable and 75 ohm video cables

**TV CAMERA CABLES**

Belden TV Broadcasting and closed circuit TV Camera Cables are precision engineered to assure reliable performance and long service life. In addition to lighter weight, greater flexibility, and easier termination

these cables are designed to maintain high conductor insulation resistance regardless of changes in ambient temperatures.

Trade Number **8283**

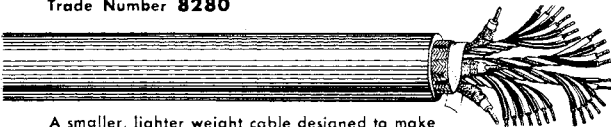


Designed to meet the critical electrical and physical requirements necessary for color television broadcast applications.

**82 Conductor TV Color Camera Cable**

4-14 AWG (19x27) tinned copper, vinyl plastic insulated, color coded  
3-16 AWG (26x30) tinned copper, vinyl plastic insulated, color coded  
BELDFOIL aluminum-Mylar wrapped shield around the above 7  
conductors cabled with stranded tinned copper drain wire  
8 coaxial cables. Nom. impedance 53.5 ohms, color coded  
67-22 AWG (7x30) tinned copper, vinyl plastic insulated, color coded,  
7 under conductive textile shield with stranded ground wire  
Tinned copper braid shield  
Chrome vinyl plastic jacket. 1.22" Nom. O.D.  
§Cut to customer's specified length.  
Maximum length 1000'

Trade Number **8280**

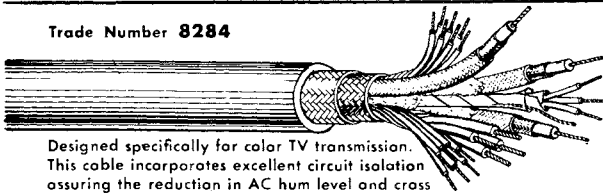


A smaller, lighter weight cable designed to make long runs easier. Recommended for black and white (Monochrome) systems.

**28 Conductor TV Camera Cable**

4-18 AWG (16x30) tinned copper, vinyl insulated, color coded  
21-22 AWG (7x30) tinned copper, vinyl insulated, cabled in 3  
groups of 7, color coded  
3 coaxial cables. Nom. impedance 51 ohms, color coded  
Tinned copper braid shield  
Chrome vinyl jacket. .750" Nom. O.D.  
§Cut to customer's specified length.  
Maximum length 1500'

Trade Number **8284**

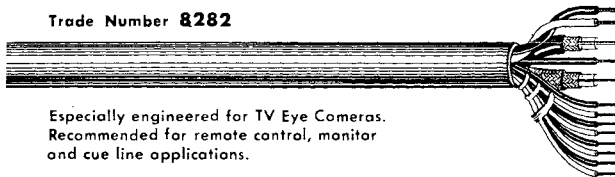


Designed specifically for color TV transmission. This cable incorporates excellent circuit isolation assuring the reduction in AC hum level and cross talk essential for color TV broadcasting.

**24 Conductor TV Camera Cable**

17-22 AWG (7x30) tinned copper, vinyl insulated, color coded  
3 under BELDFOIL shield with stranded drain wire  
4-16 AWG (26x30) tinned copper, vinyl insulated, color coded  
3 coaxial cables. Nom. impedance 53.5 ohms, color coded  
Tinned copper braid shield  
Heavy cotton braid  
Chrome vinyl plastic jacket. .800" Nom. O.D.  
§Cut to customer's specified length.  
Maximum length 1000'

Trade Number **8282**



Especially engineered for TV Eye Cameras. Recommended for remote control, monitor and cue line applications.

**13 Conductor TV Eye Cable**

9-22 AWG (7x30) tinned copper, vinyl insulated, color coded  
2-18 AWG (16x30) tinned stranded copper conductor vinyl  
insulated. Black and Red  
1-RG-58A/U cable 50-ohm coax  
1-72-ohm coax, stranded conductor, Mylar tape wrapped  
Chrome vinyl jacket. .470" Nom. O.D.  
§Cut to customer's specified length.  
Maximum length 2000'

This series of cables is also recommended as interconnecting cables in complex electronic applications. Each cable contains coaxial cables for



RF and Video signals, pulse voltages or high voltage lines as well as many conductor groups for control and power circuits.

§Minimum length 25'. 25' to 199', plus 25', minus 0. 200' or over, plus 50, minus 0.

**75 OHM PRECISION VIDEO CABLE**

TYPICAL APPLICATIONS: Video signal transmission in color and monochrome TV studios. Provides high quality carrier of video signal with superior picture definition and eliminates problems of periodicity. Cable

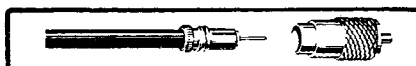
is manufactured with rigid control of concentricity and all dimensional tolerances. The black polyethylene jacket is manufactured with a non-contaminating, non-migratory compound. 100% SWEEP TESTED.

Description	Trade Number	AWG & (Stranding) Material	Nom. O.D. (Inch)	Percent Shield Coverage	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf/ft)	Nom. Attenuation		Standard Spool Lengths in ft
								mc	db	
 Conductor, polyethylene insulated, tinned copper double braid shield, black polyethylene jacket.	<b>8281</b>	20 (Solid) copper	.304	96.4	75	66%	21.	5	.55	500, 1000
								10	.8	
								20	1.3	
								100	2.7	
								300	5.1	
								500	6.8	
700	8.4									
 Miniature Compacted conductor, polyethylene insulated, tinned copper braid shield, black polyethylene jacket. Fits RG 59/U connectors. Compacted conductor combines impedance uniformity of solid conductor and "nick-resistance" of stranded conductor.	<b>NEW 8279</b>	23 (7x31) Tinned compacted conductor	.242	96	75	66%	21.	5	1.0	100, 250, 500
								10	1.4	
								20	2.0	
								100	4.4	
								300	7.6	
								500	9.8	
700	11.5									

Compacted conductor, polyethylene insulated, tinned copper braid shield, black polyethylene jacket. Fits RG 59/U connectors. Compacted conductor combines impedance uniformity of solid conductor and "nick-resistance" of stranded conductor.









For Use on 8281 Only  
**NEW 8299 Adapter** for use with PL-259 connector. 25 in a box.



# Belden

## 300 ohm transmission line cables

### TWIN LEAD WIRES

Description & Trade Number	AWG & (Stranding)	Color	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Nom. Capacitance (mmf/ft)	Nom. Attenuation per 100'		Standard Package Lengths in ft
						mc	db	
 <p><b>PermoHM* 8285</b></p> <p>Copperweld, 2 conductors parallel, orange polyethylene insulation and web between conductors, cellular polyethylene oval jacket.</p>	22 (7x30)	Brown	.255	73.3%	5.3	100	1.4	50, 75, 100 coils in counter dispenser 250, 500 coils 1000 spool
			x					
			.468					
 <p><b>Celluline** 8275</b></p> <p>Copperweld; 2 conductors parallel, polyethylene jacket with inert gas filled unicellular polyethylene core.</p>	20 (7x28)	Brown	.300	80%	4.6	100	1.05	50, 75, 100 coils in counter dispenser 250, 500 1000 spools
			x					
			.400					
 <p><b>8235</b></p> <p>Bore copper, 2 conductors parallel, polyethylene insulated.</p>	18 (7x26)	Brown	.185	77%	5.0	100	.85	100 coil 500 spool
			x					
			.520					
 <p><b>WeldoHM†† 8230</b></p> <p>Copperweld; 2 conductors parallel, polyethylene insulated.</p>	20 (7x28)	Brown	.072	80%	4.4	100	1.1	25, 50, 75, 100 pancake coils in a sleeve 250, 500 1000 spools
			x					
			.400					
 <p><b>8225</b></p> <p>Bare copper, 2 conductors parallel, polyethylene insulated.</p>	20 (7x28)	Brown	.058	80%	4.4	100	1.1	25, 50, 75, 100 pancake coils in a sleeve 250, 500 1000 spools
			x					
			.400					
 <p><b>8226</b></p> <p>Bare copper, 2 conductors parallel, polyethylene insulated.</p>	20 (7x28)	Ivory	.058	80%	4.4	Same as 8225		25, 50, 75, 100 pancake coils in a sleeve
			x					
			.400					

PERMOHM Encapsulated twin lead for strong, clear signals on all channels despite salt spray, industrial contamination, rain, ice and fringe area reception. An excellent color, UHF or VHF cable.

First choice for all weather, all channel T.V. reception

CELLULINE Maintains uniform electrical characteristics by eliminating all possible moisture between conductors. Installation is easier as no end-sealing is necessary. Losses are lower because of its lower dielectric constant (1.5).

The thick outer wall of brown polyethylene protects the cable from abrasion and sun damage, and the round shape offers less wind resistance. The result is a longer lasting, more efficient line which helps maintain a strong UHF or VHF reception for black and white or color.

Amateur transmitting and receiving twin lead—1KW(RF) rated.

WELDOHM This cable is 1 1/2 times STRONGER and has 2 1/2 times more FLEX LIFE than equivalent twin lead with all copper conductors, without changing the RF electrical characteristics. Tests prove its superior resistance to the pulling, whipping, and twisting that is so important to a long lasting installation.

Brown polyethylene for the best weathering.

Recommended for indoor use.

†† Belden Trademark Reg. U.S. Pat. Off.

\* Belden Trademark, Reg. U.S. Pat. Off., and Belden U.S. Pat. 2,782,251.

\*\* Belden Trademark, Reg. U.S. Pat. Off., and Belden U.S. Pat. 2,814,666.

### BELDEN MERCHANDISERS



10 Pancake Coils per Box

#### 300 ohm Line Package Coils

- 8225**
- 8226** (New Indoor Ivory)
- 8230** (WeldoHM)
- Put-ups 25', 50', 75', 100'
- Antenna Rotor Cables**
- 8464** (4 conductor, flat)
- Put-ups 50', 75', 100'
- NEW 8463** (5 conductor, flat).
- Put-ups 50', 100'





#### 300 ohm Line Coils

- 8275** (Celluline)
- 8285** (PermoHM)
- Put-ups 50', 75', 100'
- 10 Coils per box

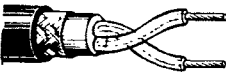
transmission line cables  
and antenna rotor cables

**Belden**

**72 OHM TRANSMISSION LINE CABLES**



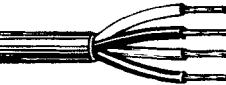
Description	Trade Number	AWG & (Stranding)	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Nom. Capacitance (mmf ft)	Nom. Attenuation per 100'		Standard Spool Lengths in ft
						mc	db	
<b>72 OHM LINE</b> 	<b>8222</b>	20 (7x28)	.075 x .128	69%	20.3	100	7.7	100, 500
						200	11.0	
						300	13.6	
						400	15.9	
<i>Bare copper, 2 conductors parallel, brown polyethylene insulated.</i>								
<b>72 OHM 1 KW (RF) RATED</b> 	<b>8210</b>	13 (7x21)	.166 x .278	68%	21.0	100	3.8	100, 250
						200	6.0	
						300	7.8	
						400	9.3	
						500	11.0	
						700	13.7	
						900	16.0	
<i>Bare copper, 2 conductors parallel, brown polyethylene insulated.</i>								

**SHIELDED 100 OHM TRANSMISSION LINE**

Description	Trade Number	AWG & (Stranding)	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Percent Shield Coverage	Nom. Capacitance (mmf ft)	Nom. Attenuation per 100'		Standard Spool Lengths in ft
							mc	db	
	<b>8227</b>	20 (7x28)	.325	62%	83	15.5	100	4.1	500
							200	6.4	
							300	8.4	
							400	10.2	

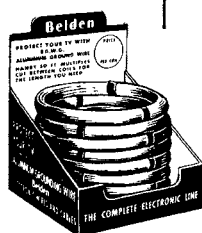
One conductor tinned, one bare copper, polyethylene insulated, cabled, polyethylene jacket, tinned copper braid shield, black vinyl jacket. This shielded transmission line offers low-loss signal transmission which remains unaffected by outside signals or noise fields. Recommended for RF applications requiring a cross-talk free, balanced operation.

**ANTENNA ROTOR CABLE**



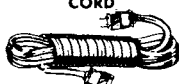
Description	Trade Number	No. of Cond.	AWG & (Stranding)	Cond. Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Standard Package Lengths in ft
	<b>8464</b>	4	20 (7x28)	1 cond. tinned and insulation ribbed	—	—	.070 x .390	200	50, 75, 100 pancake coils 500, 1000 spools
				<i>Bare copper, parallel, chrome vinyl insulated.</i>					
	<b>NEW 8463</b>	5	20 (7x28)	1 cond. tinned	—	—	.070 x .375	200	50, 100 pancake coils 500, spools
				<i>Bare copper, parallel, brown polyethylene insulated. Suggested working voltage 200 volts.</i>					
	<b>8484</b>	4	20 (7x28)	Blk, Grn, Red, Wht	.010	.020	.180	200	100, 500, 1000 spools
	<b>8485</b>	5	20 (7x28)	Blk, Grn, Red, Wht, Yel	.010	.020	.190	200	100, 500, 1000 spools
	<b>8488</b>	8	22 (7x30)	Blk, Blu, Brn, Grn, Org, Red, Wht, Yel	.010	.020	.205	200	100, 500, 1000 spools
<i>Bare copper, vinyl insulated, cabled, chrome vinyl jacket.</i>									

**ALUMINUM GROUND WIRE**

Packaged in counter dispensers of 10-50' connected coils, or spools of 500 ft. Wire on spools is marked every 100' for easy measuring.

Description	Trade Number	Nom. O.D. (Inch)	Standard Package Lengths in ft
	<b>8018</b>	.128	500 in 10-50 connected coils 500 spools
			8 AWG solid, soft annealed aluminum

**TV AND CHEATER CORDS**












Description	Trade Number	Length in ft.	Standard Package
<b>CHEATER CORDS</b> 	<b>8874</b>	6	1 in polyethylene bag with description. SP-1 brown rubber parallel cord with male plug and TV connector.
	<b>8895</b>	6	1 in polyethylene bag with description. 100 bulk hanked.
	<b>8889</b>	9	
	<b>NEW 8873</b>	6	1 in polyethylene bag with description. 100 bulk hanked. SPT-1 brown plastic parallel cord with Polarized male plug and TV connector.
	<b>Polarized</b>		
<b>CHEATER EXTENSION CORD</b> 	<b>8875</b>	6	1 in polyethylene bag with description. SPT-1 red plastic parallel cord with male and female TV connectors.



**Belden**

RG/U, transmission line cables

RG/U CABLES

Description	Trade Number	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (Inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf ft.)	Nom. Attenuation per 100'		Standard Spool Lengths in ft.
											mc	db	
	<b>8264</b> JAN-C-17A	5A/U	16 (Solid) silver coated copper	Polyethylene	2 silver-coated copper	Gray non-contaminating vinyl	.328	50	66%	28.5	100 200 400	2.40 3.50 5.25	500 1000
	<b>8237</b> JAN-C-17A	8/U	13 (7x21) bare copper	Polyethylene	1 bare copper	Black vinyl	.405	52	66%	29.5	100 200 400	2.10 3.30 4.50	100 250, 500 1000
	<b>8242</b> JAN-C-17A	9/U	13 (7x21) silver coated copper	Polyethylene	2 inner-silver-coated outer-bare copper	Gray non-contaminating vinyl	.420	51	66%	30.0	100 200 400	2.10 3.30 4.50	100 1000
	<b>NEW 8243</b> MIL-C-17D	9B/U	13 (7x21) silver coated copper	Polyethylene	2 silver coated copper	Black non-contaminating vinyl	.420	50	66%	30.0	100 200 400	2.10 3.30 4.50	500 1000
	<b>8238</b> JAN-C-17A	11/U	18 (7x26) tinned copper	Polyethylene	1 bare copper	Black vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 250, 500 1000
	<b>8261</b> MIL-C-17D	11A/U	18 (7x26) tinned copper	Polyethylene	1 bare copper	Black non-contaminating vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 500 1000
	<b>8239</b> JAN-C-17A	54A/U	18 (7x.0152) bare copper	Polyethylene	1 tinned copper	Clear polyethylene	.245	58	66%	26.5	100 200 400	3.10 4.40 6.70	500 1000
	<b>8245</b> JAN-C-17A	55/U	20 (Solid) bare copper	Polyethylene	2 tinned copper	Clear polyethylene	.201	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	500 1000
	<b>8240</b> JAN-C-17A	58/U	20 (Solid) bare copper	Polyethylene	1 tinned copper	Black vinyl	.195	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	25, 50, 100 250, 500 1000
	<b>8259</b> JAN-C-17A	58A/U	20(19x.0071) tinned copper	Polyethylene	1 tinned copper	Black vinyl	.195	50	66%	30.8	100 200 400	5.30 8.20 12.60	25, 50 100, 500 1000
	<b>8262</b> MIL-C-17D	58C/U	20(19x.0071) tinned copper	Polyethylene	1 tinned copper	Black non-contaminating vinyl	.195	50	66%	28.5	100 200 400	5.30 8.20 12.60	500 1000
	<b>8241</b> JAN-C-17A	59/U	22 bare Copperweld	Polyethylene	1 bare copper	Black vinyl	.242	73	66%	21.0	100 200 400	3.75 5.60 8.30	25, 50, 100 250, 500 1000
	<b>8263</b> MIL-C-17D	59B/U	.023 bare Copperweld	Polyethylene	1 bare copper	Black non-contaminating vinyl	.242	75	66%	20.5	100 200 400	3.75 5.60 8.30	500 1000
	<b>8254</b> JAN-C-17A	62/U	22 bare Copperweld	Semi-solid Polyethylene	1 bare copper	Black vinyl	.242	93	84%	13.5	100 200 400	3.10 4.40 6.30	100 500 1000
	<b>NEW 8255</b> MIL-C-17-D	62B/U	24 (7x32) bare Copperweld	Semi-solid Polyethylene	1 bare copper	Black non-contaminating vinyl	.242	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	<b>8257</b> JAN-C-17A	71/U	22 bare Copperweld	Semi-solid Polyethylene	2 tinned copper	Clear Polyethylene	.245	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	<b>NEW 8258</b> MIL-C-17-D	71B/U	22 bare Copperweld	Semi-solid Polyethylene	2 tinned copper	Black non-contaminating vinyl	.245	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	<b>8216</b>	174/U	7x34 bare Copperweld	Polyethylene	1 tinned copper	Black vinyl	.100	50	65.5%	30.4	100 200 400	8.8 13.0 20.0	100 500 1000

Navy Drawing RE-49B716




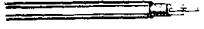


Manufactured to current Government specifications and subsequent revisions.

**BELDEN PAGE 16**

RG/U, transmission line cables

**Belden**

## RG/U CABLES

Description	Trade Number	RG No.	AWG & Stranding Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (Inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf ft.)	Nom. Attenuation per 100'		Standard Spool Lengths in ft.
											mc	db	
	<b>NEW 8265 MIL-C-17-D</b>	178B/U	30 (7x38) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	Brown FEP TEFLON	.072	50	69.5	29	400	29.0 Max.	100 500
	<b>NEW 8266 MIL-C-17-D</b>	180B/U	30 (7x38) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	Brown FEP TEFLON	.142	95	69.5	15	400	17.0 Max.	100 500
	<b>NEW 8269 MIL-C-17-D</b>	188A/U	26 (7x.0067) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	White TFE TEFLON	.106	50	69.5	29	400	20.0 Max.	100 500
	<b>NEW 8270 MIL-C-17-D</b>	196A/U	30 (7x38) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	White TFE TEFLON	.076	50	69.5	29	400	29.0 Max.	100 500
	<b>8267 MIL-C-17-D</b>	213/U	13 (7x21) bare copper	Polyethylene	1 bare copper	Black non-contaminating vinyl	.405	50	66%	28.5	100 200 400	2.10 3.30 4.50	500 1000
	<b>NEW 8268 MIL-C-17-D</b>	214/U	13 (7x.0296) Silver coated copper	Polyethylene	2 Silver coated copper	Black non-contaminating vinyl	.425	50	66%	30	100 200 400	2.10 3.30 4.50	500 1000

REQUEST QUOTATIONS ON PRODUCTION QUANTITIES OF RG/U CABLES NOT LISTED.

## RG/U COAXIAL CABLES

Belden's RG/U cables are manufactured and laboratory tested in accordance with existing military specifications. These cables combine low capacitance and low attenuation. The virgin polyethylene insulation assures constant electrical characteristics regardless of changes in frequency or temperature.


A variety of available jacket types include abrasion resistant polyethylene, polyvinylchloride (recommended for chemical and weather resistance) and a special non-contaminating vinyl compounded for applications above 3000 megacycles.

Typical applications: Flexible test leads, patch cords and high voltage leads (consult applicable Mil Spec for dielectric rating of individual RG/U types). Excellent for audio applications.

Note: Maximum temperature rating of polyethylene is 80°C (176°F). The polyethylene insulation begins to soften above this temperature.

Manufactured to current Government specifications and subsequent revisions.

## FOAM CORE RG-8/U TYPE TRANSMISSION LINE

Description	Trade Number	AWG & (Stranding) Material	Percent Shield Coverage	Nom. O.D. (Inch)	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf ft.)	Nom. Attenuation per 100'		Standard Spool Lengths in ft.
								mc	db	
	<b>8214</b>	11 (7x19)	96.8	.403	50	78%	26	50 100 200 300 400	1.20 1.80 2.60 3.30 3.80	100 500 1000

Conductor, cellular polyethylene insulated, bare copper braid shield, black vinyl jacket.

Foam core RG-8 U type—for use in citizens' band and amateur radio as a 50 ohm antenna cable.




BELDEN PAGE 17

# Belden

tv distribution cables and high voltage cables

## COMMUNITY ANTENNA AND CLOSED CIRCUIT TV CABLES

ALL CABLES IN THIS GROUP ARE SWEEP TESTED

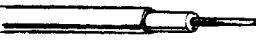
Description	Trade Number	AWG & (Stranding) Material	Percent Shield Coverage	Nom. O.D. (Inch)	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf/ft)	Nom. Attenuation per 100		Standard Spool Lengths in ft
								mc	dB	
 Conductor, cellular polyethylene insulated, bare copper braid shield, polyethylene jacket (except 8217 extra limp vinyl jacket).	<b>8211</b> Black	22 (Solid) Copperweld	94.6	.242	80	78%	16.3	50	2.4	500, 1000, 2000
								100	3.4	
								200	4.8	
								300	5.8	
<i>Fits the same connectors as RG-59/U Foam core RG-59/U type</i>								400	6.7	
	<b>8212</b> Black	20 (Solid) Copperweld	94.6	.242	75	78%	17.3	50	2.3	500, 1000, 2000
								100	3.2	
								200	4.5	
								300	5.5	
<i>Foam core RG-59/U type</i>								400	6.3	
	<b>8217</b> White	22 (Solid) Copperweld	94.6	.242	80	78%	16.3	50	2.4	100, 500, 1000
								100	3.4	
								200	4.8	
								300	5.8	
<i>Fits the same connectors as RG-59/U Foam core RG-59/U type</i>								400	6.7	
	<b>8213</b> Black	14 (Solid) copper	96.8	.405	75	78%	17.3	50	1.0	500, 1000, 2000
								100	1.5	
								200	2.3	
								300	2.9	
<i>Foam core RG-11/U type</i>								400	3.4	
 Conductor, cellular polyethylene insulated, two bare copper braid shields, black polyethylene jacket.	<b>8215</b> Black	21 (Solid) Copperweld	96.6 (inner shield)	.332	75	66%	20.5	50	2.0	100, 500, 1000
								100	2.9	
								200	4.3	
								300	5.4	
<i>RG-6A/U type</i>								400	6.5	
 Triaxial Conductor, cellular polyethylene insulated, bare copper braid shield, polyethylene insulated, bare copper braid shield, black polyethylene jacket.	<b>8232</b> Black	20 (Solid) Copperweld	94.6 (inner shield)	.315	75	78%	17.3	50	2.3	500, 1000, 2000
								100	3.2	
								200	4.5	
								300	5.5	
<i>RG-6A/U type</i>								400	6.3	
	<b>8233</b> Black	14 (Solid) copper	82.5 (inner shield)	.475	75	78%	17.3	50	1.0	500, 1000, 2000
								100	1.5	
								200	2.3	
								300	2.9	
<i>RG-11/U type</i>								400	3.4	

### SWEEP TESTING


For satisfactory transmission of a signal through a cable at any frequency, Belden Sweep Tests every length of its Community TV Cables at all channels in the VHF Frequency range on an oscilloscope. Sweep Testing, performed by trained technicians using the most modern equipment, prevents unsatisfactory program reception due to

imperfections in the cable acting as "Filter Traps" at some frequencies. The black polyethylene jackets on Belden numbers 8211, 8212, 8213, 8215, 8232, and 8233 are manufactured with a noncontaminating, nonmigratory compound specially formulated for superior weather resistance.

### HIGH VOLTAGE CATHODE-RAY TUBE LEAD

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Jacket Color	Break-down Voltage	Suggested Working Voltage	Standard Spool Lengths in ft
 Tinned copper, conductive polyethylene, polyethylene insulated, vinyl jacket.	<b>8868</b>	22 (7x30)	.045	.015	.150	Red	50,000	25,000	25, 100, 500
	<b>8869</b>	22 (7x30)	.030	.015	.120	Blk	35,000	17,000	25, 100, 500
<i>8869 for use with non-conductive ceramic flyback cores.</i>									

### 60 KV D.C. HIGH VOLTAGE CABLE

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Jacket Color	Break-down Voltage	Suggested Working Voltage	Standard Spool Lengths in ft
 Solid Copperweld, conductive polyethylene, polyethylene insulation, tinned copper braid equipotential sheath, black polyethylene jacket.	<b>8870</b>	22 (Solid) Copperweld	.142	.020	.440	Black	160,000 D.C.	60,000 D.C.	100

Conductive polyethylene over inner conductor combined with a copper wire braid over the dielectric provides uniform distribution of voltage stress. Consult Belden Engineering Department for AC or pulse applications.

SECTION 6000

mil-w-16878d vinyl plastic

**Belden**

TYPE B—VINYL—600V—105C



Tinned copper, vinyl insulated.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools			Stock Colors
					100'	500'	1000'	
8599	B-32	32(7x40)	.010	.029	1 thru 10	—	1 thru 10	1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet (purple) 8 Gray (slate) 9 White 10 Black  14 White/Black 15 White/Red 16 White/Green 17 White/Yellow 18 White/Blue 19 White/Brown 20 White/Orange 21 White/Gray 22 White/Violet
8598	B-30	30(7x38)	.010	.032	1 thru 10	—	1 thru 10	
8597	B-28	28(7x36)	.010	.035	1 thru 10	—	1 thru 10	
8505	B-26	26(7x34)	.010	.039	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22	
8509	B-24	24(19x36)	.010	.045	9, 14 thru 22	—	9, 14 thru 22	
8504	B-24	24(7x32)	.010	.044	1 thru 10 14 thru 22	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8508	B-22	22(19x34)	.010	.051	9, 14 thru 22	—	9, 14 thru 22	
8503	B-22	22(7x30)	.010	.050	1 thru 10 14 thru 22	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8507	B-20	20(19x32)	.010	.059	9, 14 thru 22	—	9, 14 thru 22	
8502	B-20	20(7x28)	.010	.058	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22	
8506	B-18	18(19x30)	.010	.069	9, 14 thru 22	—	9, 14 thru 22	
8501	B-18	18(7x26)	.010	.068	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22	
8500	B-16	16(19x29)	.010	.077	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22	

TYPE B—VINYL-NYLON JACKET—600V—115C



Tinned copper, vinyl insulated, nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		Stock Colors
					100'	1000'	
8596	B-32	32(7x40)	.010	.035	1 thru 10	1 thru 10	1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet (purple) 8 Gray (slate) 9 White 10 Black  14 White/Black 15 White/Red 16 White/Green 17 White/Yellow 18 White/Blue 19 White/Brown 20 White/Orange 21 White/Gray 22 White/Violet
8595	B-30	30(7x38)	.010	.038	1 thru 10	1 thru 10	
8594	B-28	28(7x36)	.010	.041	1 thru 10	1 thru 10	
8515	B-26	26(7x34)	.010	.045	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8519	B-24	24(19x36)	.010	.051	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8514	B-24	24(7x32)	.010	.050	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8518	B-22	22(19x34)	.010	.057	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8513	B-22	22(7x30)	.010	.056	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8517	B-20	20(19x32)	.010	.065	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8512	B-20	20(7x28)	.010	.064	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8516	B-18	18(19x30)	.010	.075	9, 14 thru 22	9, 14 thru 22	
8511	B-18	18(7x26)	.010	.074	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8510	B-16	16(19x29)	.010	.083	1 thru 10 14 thru 22	1 thru 10 14 thru 22	

Manufactured to current Government specifications and subsequent revisions.

# Belden

mil-w-16878d vinyl plastic and teflon

## TYPE C—VINYL & VINYL-NYLON—1000V

VINYL

VINYL-NYLON

Tinned copper, vinyl insulated

Tinned copper, vinyl insulated, Nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Type	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Temperature Rating	Stock Colors on Standard Spools		Stock Colors
							100'	1000'	
8955	C-24	24(7x32)	Vinyl	.018	.058	105C	9, 14 thru 22	9, 14 thru 22	1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet (purple) 8 Gray (slate) 9 White 10 Black 14 White Black 15 White Red 16 White Green 17 White Yellow 18 White Blue 19 White Brown 20 White Orange 21 White Gray 22 White Violet
8961	C-24	24(7x32)	Vinyl-Nylon	.018	.064	115C	9, 14 thru 22	9, 14 thru 22	
8954	C-22	22(7x30)	Vinyl	.018	.064	105C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8960	C-22	22(7x30)	Vinyl-Nylon	.018	.070	115C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8953	C-20	20(7x28)	Vinyl	.018	.072	105C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8959	C-20	20(7x28)	Vinyl-Nylon	.018	.078	115C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8952	C-18	18(7x26)	Vinyl	.018	.082	105C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8958	C-18	18(7x26)	Vinyl-Nylon	.018	.089	115C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8951	C-16	16(19x29)	Vinyl	.018	.091	105C	9, 14 thru 22	9, 14 thru 22	
8957	C-16	16(19x29)	Vinyl-Nylon	.018	.098	115C	9, 14 thru 22	9, 14 thru 22	
8950	C-14	14(19x27)	Vinyl	.018	.105	105C	9, 14 thru 22	9, 14 thru 22	
8956	C-14	14(19x27)	Vinyl-Nylon	.018	.114	115C	9, 14 thru 22	9, 14 thru 22	

## TYPE D—VINYL—3000V—105C

Tinned copper, vinyl insulated.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools			Stock Colors
					100'	500'	1000'	
8971	D-22	22(7x30)	.030	.090	1 thru 10	—	1 thru 10	1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet (purple) 8 Gray (slate) 9 White 10 Black 14 White Black 15 White Red 16 White Green 17 White Yellow 18 White Blue 19 White Brown 20 White Orange 21 White Gray 22 White Violet
8970	D-20	20(7x28)	.030	.098	1 thru 10	—	1 thru 10	
8969	D-18	18(7x26)	.030	.108	1 thru 10	—	1 thru 10	
8968	D-16	16(19x29)	.030	.117	9	—	9	
8967	D-14	14(19x27)	.030	.131	9	—	9	
8966	D-12	12(19x25)	.035	.160	9	—	9	
8965	D-10	10(37x26)	.035	.178	9	—	9	
8964	D-8	8(133x29)	.040	.245	9	9	—	
8963	D-6	6(133x27)	.040	.290	9	9	—	

## TYPE E—TFE TEFLON—600V—200C

## TYPE EE—TFE TEFLON—1000V—200C

TYPE E 600V—200C

TYPE EE 1000V—200C

Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated

Trade Number	Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Trade Number	Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Stock Colors
8300	E-30	30(7x38)	.033	8322	EE-26	26(7x34)	.047	<b>ALL CONSTRUCTIONS: 25, 100, 500 and 1000 ft. spools available in colors 1 thru 10</b>  1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet (purple) 8 Gray (slate) 9 White 10 Black Color striping available on 1,000 ft. minimum per item each color.
8301	E-28	28(7x36)	.036	8323	EE-24	24(19x36)	.053	
8302	E-26	26(7x34)	.041	8324	EE-24	24(7x32)	.054	
8303	E-24	24(19x36)	.046	8325	EE-22	22(7x30)	.058	
8304	E-24	24(7x32)	.045	8326	EE-22	22(19x34)	.060	
8305	E-22	22(7x30)	.051	8327	EE-20	20(19x32)	.068	
8306	E-22	22(19x34)	.052	8328	EE-20	20(7x28)	.066	
8307	E-20	20(19x32)	.060	8329	EE-18	18(19x30)	.079	
8308	E-20	20(7x28)	.059	8330	EE-16	16(19x29)	.086	
8309	E-18	18(19x30)	.071					
8310	E-16	16(19x29)	.080					

Manufactured to current Government specifications and subsequent revisions.

mil-w-76b vinyl plastic

**Belden**

**TYPE MW—VINYL & VINYL-NYLON—1000 V**

VINYL

VINYL-NYLON



Tinned copper, vinyl insulated, medium wall. The extruded vinyl insulation is flame and ozone resistant and is inert to most chemicals, oils, and solvents.

Tinned copper, vinyl insulated. Medium wall, clear nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Type	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Temperature Rating	Stock Colors on Standard Spools				Stock Colors
							25'	100'	500'	1000'	
8525	MW-C-24-(7)-U	24(7x32)	Vinyl	.017	.058	80C	—	1 thru 30	1 thru 22	1 thru 30	First color in stripe combination is body color and second or third colors are stripes. (White/Black/Red).
8538	MW-C-24-(1)-U	24(Solid)	Vinyl	.017	.054	80C	—	1 thru 30	1 thru 22	1 thru 30	
8524	MW-C-22-(7)-U	22(7x30)	Vinyl	.017	.064	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30	
8530	MW-C-22-(1)-U	22(Solid)	Vinyl	.017	.059	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30	1 Brown
8537	MW-C-22-(7)-J	22(7x30)	Vinyl-Nylon	.017	.069	90C	—	1 thru 10 14 thru 22	—	1 thru 10 14 thru 22	2 Red
8523	MW-C-20-(10)-U	20(10x30)	Vinyl	.017	.070	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30	3 Orange
8529	MW-C-20-(1)-U	20(Solid)	Vinyl	.017	.066	80C	1 thru 13	1 thru 30	1 thru 22	1 thru 30	4 Yellow
8536	MW-C-20-(10)-J	20(10x30)	Vinyl-Nylon	.017	.076	90C	—	1 thru 10 14 thru 22	—	1 thru 10 14 thru 22	5 Green
8522	MW-C-18-(16)-U	18(16x30)	Vinyl	.017	.080	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30	6 Light Blue
8528	MW-C-18-(1)-U	18(Solid)	Vinyl	.017	.074	80C	—	1 thru 30	1 thru 13	1 thru 30	7 Violet (purple)
8535	MW-C-18-(16)-J	18(16x30)	Vinyl-Nylon	.017	.086	90C	—	1 thru 10 14 thru 22	—	1 thru 10 14 thru 22	8 Gray (slate)
8521	MW-C-16-(26)-U	16(26x30)	Vinyl	.019	.098	80C	—	1 thru 30	1 thru 22	1 thru 30	9 White
8531	MW-C-16-(1)-U	16(Solid)	Vinyl	.017	.085	80C	—	1 thru 30	1 thru 10	1 thru 30	10 Black
8534	MW-C-16-(26)-J	16(26x30)	Vinyl-Nylon	.019	.106	90C	—	1 thru 10 14 thru 22	—	1 thru 10 14 thru 22	11 Tan
8520	MW-C-14-(41)-U	14(41x30)	Vinyl	.020	.111	80C	—	1 thru 30	1 thru 22	1 thru 30	12 Pink
8533	MW-C-14-(41)-J	14(41x30)	Vinyl-Nylon	.020	.119	90C	—	1, 3, 4, 5, 9, 10	—	1, 3, 4, 5, 9, 10	13 Dark Blue
8527	MW-C-12-(65)-U	12(65x30)	Vinyl	.020	.130	80C	—	1 thru 30	1 thru 10	1 thru 30	14 White/Black
8532	MW-C-12-(65)-J	12(65x30)	Vinyl-Nylon	.020	.139	90C	—	2, 9, 10	—	2, 9, 10	15 White/Red

**TYPE MW—SHIELDED—WITH & WITHOUT NYLON JACKET —1000V—80C**

WITH JACKET

WITHOUT JACKET



Tinned copper, vinyl insulation. Medium wall, tinned copper shield, nylon jacket.

Tinned copper, vinyl insulation. Medium wall, tinned copper shield overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket	Nom. O.D. (Inch)	Stock Colors on Standard Spools			Stock Colors	
						100	500	1000		
8887	MW-C-24-(7)-S	24(7x32)	.017	None	.082	1 thru 10	—	1 thru 10	1 Brown	6 Light Blue
8883	MW-C-22-(7)-S	22(7x30)	.017	None	.088	1 thru 10	—	1 thru 10	2 Red	7 Violet (purple)
8893	MW-C-22-(7)-SJ	22(7x30)	.017	Nylon	.096	9	9	9	3 Orange	8 Gray (slate)
8886	MW-C-20-(10)-S	20(10x30)	.017	None	.096	1 thru 10	—	1 thru 10	4 Yellow	9 White
8896	MW-C-20-(10)-SJ	20(10x30)	.017	Nylon	.105	9	9	9	5 Green	10 Black
8882	MW-C-18-(16)-S	18(16x30)	.017	None	.105	1 thru 10	—	1 thru 10		
8892	MW-C-18-(16)-SJ	18(16x30)	.017	Nylon	.114	9	9	9		
8884	MW-C-16-(26)-S	16(26x30)	.019	None	.122	1 thru 10	—	1 thru 10		
8894	MW-C-16-(26)-SJ	16(26x30)	.019	Nylon	.132	9	—	9		
8881	MW-C-14-(41)-S	14(41x30)	.020	None	.135	9, 10	—	9, 10		
8880	MW-C-12-(65)-S	12(65x30)	.020	None	.154	9, 10	—	9, 10		

Manufactured to current Government specifications and subsequent revisions.

# Belden mil-w-76b vinyl plastic

## TYPE MW-GLASS BRAID-SHIELDED—1000V—80C



Tinned copper, vinyl insulated. Medium wall, lacquered glass braid, tinned copper shield overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		Stock Color
					100	1000	
8863	MW-C-22(7)-BS	22(7x30)	.017	.102	9	9	White only (9)
8862	MW-C-20(10)-BS	20(10x30)	.017	.110	9	9	
8861	MW-C-18(16)-BS	18(16x30)	.017	.119	9	9	
8860	MW-C-16(26)-BS	16(26x30)	.019	.136	9	9	
8859	MW-C-14(41)-BS	14(41x30)	.020	.149	9	9	
8858	MW-C-12(65)-BS	12(65x30)	.020	.168	9	9	

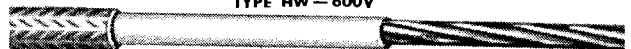
## TYPE MW & HW VINYL—GLASS BRAID (OVERALL)—80C

TYPE MW—1000V



Tinned copper, vinyl insulated. Medium wall, lacquered glass braid overall.

TYPE HW—600V



Tinned copper, vinyl insulated. Heavy wall, lacquered glass braid.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Voltage Rating	Stock Colors on Standard Spools			Stock Colors
						100	500	1000	
8566	MW-C-22(7)-B	22(7x30)	.017	.078	1000V	1 thru 10	—	1 thru 10	1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet (purple) 8 Gray (slate) 9 White 10 Black  124 White/Brown 125 White/Red 126 White/Orange 127 White/Yellow 128 White/Green 129 White/Blue 130 White/Violet 131 White/Gray 132 White/Black
8565	MW-C-20(10)-B	20(10x30)	.017	.086	1000V	1 thru 10	—	1 thru 10	
8564	MW-C-18(16)-B	18(16x30)	.017	.095	1000V	1 thru 10 124 thru 132	—	1 thru 10 124 thru 132	
8563	MW-C-16(26)-B	16(26x30)	.019	.112	1000V	1 thru 10 124 thru 132	—	1 thru 10 124 thru 132	
8562	MW-C-14(41)-B	14(41x30)	.020	.125	1000V	9, 124 thru 132	—	9, 124 thru 132	
8561	MW-C-12(65)-B	12(65x30)	.020	.144	1000V	9, 125, 132	—	9, 125, 132	
8591	HW-C-10(105)-B	10(105x30)	.048	.238	600V	9, 125, 132	—	9, 125, 132	
8590	HW-C-8(133)-B	8(133x29)	.048	.279	600V	9	9	—	
8589	HW-C-6(133)-B	6(133x27)	.048	.328	600V	9	9	—	

## TYPE LW—VINYL & VINYL-NYLON—300V

VINYL



Tinned copper, vinyl insulated. Light wall.

VINYL-NYLON



Tinned copper, vinyl insulated. Light wall, clear nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Type	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Temperature Rating	Stock Colors on Standard Spools		Stock Colors
							100	1000	
8572	LW-C-30(7)-U	30(7x38)	Vinyl	.011	.034	80C	1 thru 10	1 thru 10	1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet (purple) 8 Gray (slate) 9 White 10 Black  14 White/Black 15 White/Red 16 White/Green 17 White/Yellow 18 White/Blue 19 White/Brown 20 White/Orange 21 White/Gray 22 White/Violet
8579	LW-C-30(7)-J	30(7x38)	Vinyl-Nylon	.011	.039	90C	1 thru 10	1 thru 10	
8571	LW-C-28(7)-U	28(7x36)	Vinyl	.011	.037	80C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8578	LW-C-28(7)-J	28(7x36)	Vinyl-Nylon	.011	.042	90C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8570	LW-C-26(7)-U	26(7x34)	Vinyl	.011	.041	80C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8577	LW-C-26(7)-J	26(7x34)	Vinyl-Nylon	.011	.046	90C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8569	LW-C-24(7)-U	24(7x32)	Vinyl	.011	.046	80C	1 thru 19	1 thru 19	
8576	LW-C-24(7)-J	24(7x32)	Vinyl-Nylon	.011	.051	90C	1 thru 19	1 thru 19	
8568	LW-C-22(7)-U	22(7x30)	Vinyl	.012	.054	80C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8575	LW-C-22(7)-J	22(7x30)	Vinyl-Nylon	.012	.059	90C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8567	LW-C-20(10)-U	20(10x30)	Vinyl	.012	.060	80C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	
8574	LW-C-20(10)-J	20(10x30)	Vinyl-Nylon	.012	.065	90C	1 thru 10 14 thru 22	1 thru 10 14 thru 22	

Manufactured to current Government specifications and subsequent revisions.



SECTION 6000

mil-w-76b vinyl plastic  
mil-w-5086a & mil-w-7078a aircraft wire

**Belden**

**TYPE HW—VINYL—Gauges 16-22 2500V, Gauges 6-14 600V—80C**



Tinned copper, vinyl insulated. Heavy wall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools			Stock Colors
					100'	500'	1000'	
8588	HW-C-22(7)-U	22(7x30)	.034	.098	1 thru 10	—	1 thru 10	1 Brown 2 Red 3 Orange 4 Yellow 5 Green 6 Light Blue 7 Violet/purple 8 Gray/slate 9 White 10 Black
8587	HW-C-20(7)-U	20(10x30)	.034	.104	1 thru 10	—	1 thru 10	
8586	HW-C-18(16)-U	18(16x30)	.034	.115	1 thru 10	—	1 thru 10	
8585	HW-C-16(19)-U	16(26x30)	.034	.128	2, 9, 10	—	2, 9, 10	
8584	HW-C-14(19)-U	14(41x30)	.048	.171	2, 9, 10	—	2, 9, 10	
8583	HW-C-12(19)-U	12(65x30)	.048	.191	2, 9, 10	—	2, 9, 10	
8582	HW-C-10(37)-U	10(105x30)	.048	.220	2, 9, 10	—	2, 9, 10	
8581	HW-C-8(127)-U	8(133x29)	.048	.261	2, 9, 10	2, 9, 10	—	
8580	HW-C-6(127)-U	6(133x27)	.048	.310	2, 9, 10	2, 9, 10	—	

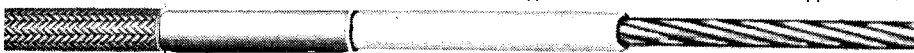
**MIL-W-5086A—TYPES 1 & 2—600V**



UNSHIELDED

Trade Number	MIL Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Spec. Type	Stock Colors on Standard Spools			Stock Color
					100'	500'	1000'	
8541	AN-22	22(19x34)	.068	No. 1	9	—	9	White only (9)
8542	AN-20	20(19x32)	.078	No. 1	9	—	9	<b>Additional Description</b> MIL-W-5086A-Type I AN-22 thru AN-12. Stranded tinned copper, white vinyl, clear nylon jacket insulation.
8543	AN-18	18(19x30)	.088	No. 1	9	—	9	
8544	AN-16	16(19x29)	.098	No. 1	9	—	9	
8545	AN-14	14(19x27)	.117	No. 1	9	9	9	
8546	AN-12	12(19x25)	.137	No. 1	9	9	9	
8559	AN-22	22(19x34)	.075	No. 2	9	—	9	<b>MIL-W-5086A-Type II</b> AN-22 thru AN-12 Stranded tinned copper, white vinyl insulation, saturated glass braid, clear nylon jacket.
8558	AN-20	20(19x32)	.085	No. 2	9	—	9	
8557	AN-18	18(19x30)	.095	No. 2	9	—	9	
8556	AN-16	16(19x29)	.105	No. 2	9	—	9	
8555	AN-14	14(19x27)	.125	No. 2	9	9	9	
8554	AN-12	12(19x25)	.143	No. 2	9	9	9	<b>MIL-W-5086A-Type II</b> AN-10 thru AN-00 Stranded tinned copper, white vinyl insulation, saturated glass braid, nylon braid, nylon lacquer.
8553	AN-10	10(49x27)	.190	No. 2	9	9	9	
8552	AN-8	8(133x29)	.240	No. 2	9	9	—	
8551	AN-6	6(133x27)	.293	No. 2	9	9	—	
8550	AN-4	4(133x25)	.355	No. 2	9	9	—	
8549	AN-2	2(665x30)	.425	No. 2	9	—	—	9 — —
8548	AN-0	0(1045x30)	.525	No. 2	9	—	—	
8547	AN-00	00(1330x30)	.590	No. 2	9	—	—	

**MIL-C-7078A—TYPE 1—600 VOLT**  
(MIL-W-5086A Type I Conductor Braided Tinned Copper Shield)



Trade Number	MIL Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Spec. Type	Stock Colors on Standard Spools			Stock Color
					100'	500'	1000'	
8855	AN-22	22(19x34)	.092	No. 1	9	—	9	White only (9)
8854	AN-20	20(19x32)	.102	No. 1	9	—	9	<b>Additional Description</b> Stranded tinned copper, white vinyl insulation, nylon jacket, braided tinned copper shield.
8853	AN-18	18(19x30)	.112	No. 1	9	—	9	
8852	AN-16	16(19x29)	.122	No. 1	9	9	—	
8851	AN-14	14(19x27)	.141	No. 1	9	—	—	
8850	AN-12	12(19x25)	.156	No. 1	9	—	—	

Manufactured to current Government specifications and subsequent revisions

**BELDEN PAGE 23**

# Belden

hook-up and lead wires—grid wire  
shielding and bonding cable—bus bar wire

### UL TYPE HOOK-UP AND LEAD WIRES

#### UL-600V-90C (CSA-TYPE TRB)

 Tinned copper, vinyl insulated, cotton braid, lacquered

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in ft
8937	22(7x30)	.016	.091	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8936	20(10x30)	.017	.098	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8935	18(16x30)	.017	.113	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8934	16(26x30)	.017	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8933	14(41x30)	.031	.177	1, 2, 3, 4, 5, 9, 10, 13	100, 500

For color coding see Page 25.

UL rated 600V for electronic circuits only—300V for other applications.

#### UL-600V-105C (CSA-600V-TYPE TEW)


 Tinned copper, vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in ft
8920	22(7x30)	.031	.095	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8919	20(10x30)	.031	.102	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8918	18(16x30)	.031	.112	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8917	16(26x30)	.031	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8916	14(41x30)	.031	.141	1, 2, 3, 4, 5, 9, 10, 13	100, 500

For color coding see Page 25.

UL rated 2500 volts peak for electronic circuits.

### GRID WIRE

Description	Trade Number	AWG & Stranding	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Breakdown Voltage	Nom. Cap. (mmf/ft)	Standard Spool Lengths in ft
	8885	20(10x30)	.015	.117	300	4000	80	15, 25, 100, 500

Tinned copper, rubber insulated, cellulose acetate braid, lacquered, tinned copper braid shield.

### SHIELDING AND BONDING CABLES



Can be manufactured to conform to QQB575.  
Braided tinned copper.  
Standard Spool: 10, 50, 250 feet

Trade Number	Stranding	Approx. Cir. Mil. Area	Nom. I.D. (Inch)	Approx. Flat Dimension (Inch)
8676	16x36	400	1/32	.025x .035
8674	24x36	600	3/64	.030x .045
8660	96x34	3,800	1/8	.050x .150
8668	120x34	4,700	11/64	.060x .205
8663	168x34	6,700	1/4	.060x .275
8661	192x34	7,600	3/8	.060x .310
8669	336x34	13,300	1/2	.060x .520
8672	528x36	13,200	5/8	.040x .580
8662	576x34	22,900	7/16	.100x .590
8670	480x30	48,000	3/4	.125x .750
8671	832x36	20,800	1	.050x1.000

This braided cable will provide approximately 90% shield coverage when applied over the recommended diameter.  
For additional sizes, see current BRAIDED AND STRANDED COPPER CABLE CATALOG.

### BUS BAR WIRE

Made in accordance with Federal Spec QQ-W-343.



Solid tinned copper.  
Standard Spool: 100, 1000 feet

Trade Number	AWG	Nom. O.D. (Inch)	Circular Mil. Area
8027	34	.006	39.7
8026	32	.008	64.0
8025	30	.010	100.0
8024	28	.012	159.0
8023	26	.016	253.0
8022	24	.020	404.0
8021	22	.025	640.0
8020	20	.032	1020.0
8019	18	.040	1620.0
8013	16	.050	2580.0
8012	14	.064	4110.0
8011	12	.080	6530.0

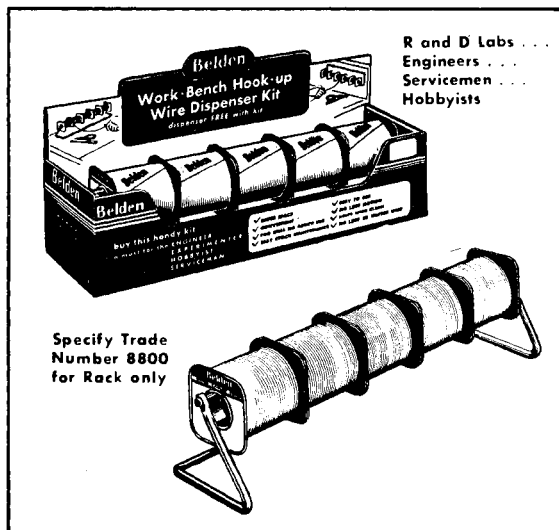
8011 Available in 100' spool only.

8026 and 8027 Available in 1000' spool only.

hook-up wire and straplocks  
antenna and litz wire

# Belden

## KITS—HOOK-UP WIRE ON RACKS



Each kit contains an assortment of Hook-Up Wire colors and types plus a portable metal dispenser rack for workbench or wall mounting. The dispenser rack provides a complete, compact, and convenient wire department for every working area.

Trade Number	No. of Spools	Spool Lengths	Type of Wire	Colors in Kit
8818	8	25'	20 solid, cellulose acetate (8941-25)	1, 2, 3, 4, 5, 6, 9, 10
8819	5	100'	20 solid, cellulose acetate (8941-100)	2, 5, 6, 9, 10
8820	8	25'	20 stranded, cellulose acetate (8943-25)	1, 2, 3, 4, 5, 6, 9, 10
8821	5	100'	20 stranded, cellulose acetate (8943-100)	2, 5, 6, 9, 10
8822	10	25'	20 solid, Type MW vinyl (8529-25)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
8823	5	100'	20 solid, Type MW vinyl (8529-100)	2, 5, 6, 9, 10
8824	8	25'	20 stranded, Type MW vinyl (8523-25)	1, 2, 3, 4, 5, 6, 9, 10
8825	5	100'	20 stranded, MIL-W-16878D vinyl (8507-100)	9, 14, 15, 16, 17
8826	5	100'	22 stranded, MIL-W-16878D vinyl (8508-100)	9, 14, 15, 16, 17
8827	5	100'	22 stranded, MIL-W-16878D vinyl-nylon (8518-100)	2, 5, 6, 9, 10

See opposite column for color coding.

†† Belden Trademark Reg. U.S. Pat. Off.

## GENERAL-PURPOSE HOOK-UP WIRES

Tinned copper, cellulose acetate wrap, cellulose acetate braid lacquered.  
Nom. d-c Insulation Resistance 200 megohms ft. Nom. Breakdown Voltage—1000.

Trade Number	AWG & (Stranding)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in ft
8941	20(Solid)	.072	1, 2, 3, 4, 5, 6, 9, 10 2, 4, 5, 6, 9, 10	25 100, 1000
8943	20(10x30)	.076	1, 2, 3, 4, 5, 6, 9, 10 2, 4, 5, 6, 9, 10 2, 4, 5, 6, 10	25 100 1000
8945	18(Solid)	.080	2, 4, 5, 6, 9, 10 10	100 1000
8947	18(16x30)	.087	2, 4, 5, 6, 9, 10 10	100 1000
8942	16(26x30)	.099	2, 10	100, 1000
8938	14(41x30)	.115	2, 10	100

## STOCK COLORS

First color in stripe combination is body color and second or third colors are stripes (White Black Red)

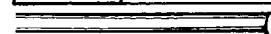
1 Brown	7 Violet (purple)	13 Dark Blue
2 Red	8 Gray (slote)	14 White Black
3 Orange	9 White	15 White Red
4 Yellow	10 Black	16 White Green
5 Green	11 Tan	17 White Yellow
6 Light Blue	12 Pink	

## ANTENNA WIRE



Stranded bare copper.

Trade Number	AWG & (Stranding)	Nom. O.D. (Inch)	Standard Spool Lengths in ft
8002	16(7x24)	.060	50, 75, 100
8000	14(7x22)	.076	50, 75, 100, 1000



Copper, HF Formvar insulated.

8009	14(Solid)	.067	100, 200, 500
8008	12(Solid)	.084	100, 200, 500

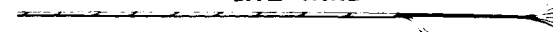
## INDOOR ANTENNA WIRE



Tinned copper, chame vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Standard Spool Lengths in ft
8014	25(13x36)	.010	.044	25, 500

## LITZ WIRE

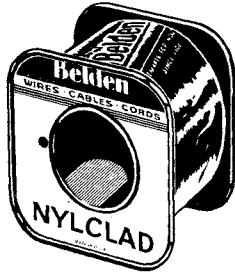


Copper, Celenamel†† insulated, nylon wrap.

Trade Number	Stranding	Nom. O.D. (Inch)	Standard Spool Lengths in ft
8817	5x44	.008	100

# Belden

magnet wire  
mobile communications cable  
for marine and automotive



Nylclad magnet wire combines the most desirable features of Formvar with the well-known toughness and solvent resistance of Nylon enamel. For difficult and exacting windings, these plus values may represent the difference between low and high rejections.

Nylclad will out-perform all other A.I.E.E., Class A, film-coated wires with respect to: (1) ability to withstand winding abuse and forming operations; (2) resistance to the solvent action of insulating varnishes and all types of thinners; (3) resistance to softening at elevated temperatures; (4) solvent crazing; (5) windability.

### BELDENAMEL††

Size	¼ Pound Spool		½ Pound Spool		Turns per Linear Inch	Turns per Square Inch
	Trade Number	Approx. Length (Feet)	Trade Number	Approx. Length (Feet)		
14			<b>8047</b>	40	152	231
16			<b>8048</b>	63	191	365
18			<b>8049</b>	100	239	571
20			<b>8050</b>	160	299	894
22			<b>8051</b>	254	374	1399
24			<b>8052</b>	404	469	2200
26			<b>8053</b>	645	590	3481
28	<b>8040</b>	510	<b>8054</b>	1020	73.8	5446
30	<b>8041</b>	807	<b>8055</b>	1615	92.2	8501
32	<b>8042</b>	1257	<b>8056</b>	2515	114.0	12996
34	<b>8043</b>	2030	<b>8057</b>	4060	144.0	20736
36	<b>8044</b>	3200	<b>8058</b>	6400	180.0	32400
38	<b>8045</b>	5070			225.0	50625
40	<b>8046</b>	8050			290.0	84100

### NYLCLAD††

Size	½ Pound Spool		1 Pound Spool		Turns per Linear Inch	Turns per Square Inch
	Trade Number	Approx. Length (Feet)	Trade Number	Approx. Length (Feet)		
14	<b>8059</b>	40	<b>8073</b>	80	14.9	222
16	<b>8060</b>	63	<b>8074</b>	126	18.6	346
18	<b>8061</b>	100	<b>8075</b>	199	23.2	538
20	<b>8062</b>	157	<b>8076</b>	315	28.9	835
22	<b>8063</b>	250	<b>8077</b>	501	36.0	1296
24	<b>8064</b>	396	<b>8078</b>	793	44.7	1998
26	<b>8065</b>	630	<b>8079</b>	1260	55.7	3102
28	<b>8066</b>	995	<b>8080</b>	1990	69.4	4816
30	<b>8067</b>	1570	<b>8081</b>	3140	86.2	7430
32	<b>8068</b>	2440	<b>8082</b>	4880	106.0	11236
34	<b>8069</b>	3930	<b>8083</b>	7860	133.0	17689
36	<b>8070</b>	6200	<b>8084</b>	12400	167.0	27889
38	<b>8071</b>	9700	<b>8085</b>	19400	206.0	42436
40	<b>8072</b>	16050	<b>8086</b>	32100	263.0	69169

### PRIMARY WIRE—MARINE AND AUTO S.A.E. TYPE G.P.T.

Bare copper, vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color	Standard Spool
<b>8685</b>	16 (19x29)	.023	.102	Black	100
<b>8684</b>	14 (19x27)	.023	.117	Green	100
<b>8683</b>	12 (19x25)	.026	.142	Red	100
<b>8682</b>	10 (19x23)	.031	.175	White	100
<b>8681</b>	8 (19x21)	.037	.219	Chrome	100
<b>8680</b>	6 (37x21)	.043	.290	Chrome	100

### DUPLEX PRIMARY WIRE



Tinned copper, vinyl insulated, conductors parallel, chrome vinyl jacket.

Standard Spools: 100 and 500 feet

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Color Coding
<b>8677</b>	16 (19x29)	.032	.022	.164 x .276	Brn, Red
<b>8675</b>	14 (19x27)	.037	.022	.189 x .326	Brn, Red
<b>8673 NEW</b>	12 (19x25)	.040	.022	.213 x .384	Brn, Red
<b>8678</b>	10 (19x23)	.040	.025	.243 x .436	Brn, Red

### 3 & 4 CONDUCTOR PARALLEL BONDED PRIMARY WIRE

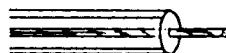


Bare copper, vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color Coding	Standard Spool
<b>8475</b>	16-3 19x29	.023	.102x .295	Wht Brn Red	100, 500
<b>8476</b>	16-4 19x29	.023	.102x .400	Wht/Brn Yel/Grn	100, 500

Conforms to SAE and Outboard Industries Association Color Coding for boat trailers.

### 7 MM IGNITION WIRE



Tinned Copperweld, POLYSIL†† clear plastic insulation.

Standard Spool: 100 feet

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color
<b>8666</b>	20 (7x28)	.121	.278	Clear

†† Belden Trademark Reg. U.S. Pat. Off.

# PRICES

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Delivery is often dependent on availability of raw materials. Check with your distributor for delivery information at the time you place your order.



**INSULATING TUBING & SLEEVING**  
BIRACO, BIRFLEX, VINYL COATED FIBERGLASS



**BIRACO PLASTIC TUBING**

UL APPROVED FOR 105° C. OPERATION — MEETS MIL-I-631C SPECS.



A quality plastic Vinyl tubing designed for electronic and electrical insulation work. Has high dielectric strength, extreme flexibility, non-flammability, abrasion resistance, impervious to oil, water, alkalis, alcohol, solvents, etc., high heat stability and resistance to aging. Meets all A.S.T.M. specifications, Mil. Spec. (Type F, Form U, Grades A and C, Class 2, Category 1).

**IN STOCK**

The Birnbach Line of insulated sleeving and tubing is the basic quality line designed for the rigid performance requirements of the Aircraft, Electrical and Electronic Industries.  
Meets or exceeds the required MIL Specifications and ASTM and NEMA standards. We invite your inquiries on special problems and requirements.

**BIRACO TUBING**

Put up on convenient 100' Spools or Coils.

**LONGER LENGTHS AVAILABLE**

Cat. No.	B & S Gauge	Approx. I.D.	Lgth. Spool
308BC..	24	.023"	100'
311BC..	22	.027"	100'
315BC..	20	.034"	100'
318BC..	18	.042"	100'
315BC..	16	.053"	100'
317BC..	14	.066"	100'
318BC..	12	.085"	100'
325BC..	10	.106"	100'
318BC..	8	.135"	100'
326BC..	6	.166"	100'
319BC..	4	.208"	100'
320BC..	2	.263"	100'
321BC..	5/16"	.3125"	100'
322BC..	3/8"	.375"	100'
323BC..	1/2"	.500"	100'
324BC..	3/4"	.750"	100'
*327BC..	7/8"	.875"	100'
*360BC..	1"	1.000"	100'
*361BC..	1 1/4"	1.250"	50'
*362BC..	1 1/2"	1.500"	50'
*328BC..	1 3/4"	1.750"	100'
*329BC..	2"	2.000"	50'
*364BC..	2 1/4"	2.250"	100'
*365BC..	2 1/2"	2.500"	100'

**SPECIAL SPOOLS BIRACO TUBING**

Cat. No.'s	B & S Gauge	Spec. Size	Approx. I.D.	Lgth. Spool
308B	24	.023"	.023"	25'
311B	22	.027"	.027"	25'
315B	20	.034"	.034"	25'
314B	18	.042"	.042"	25'
315B	16	.053"	.053"	25'
317B	14	.066"	.066"	25'
317B	12	.085"	.085"	25'
325B	10	.106"	.106"	15'
318B	8	.135"	.135"	15'
326B	6	.166"	.166"	15'
319B	4	.208"	.208"	10'
320B	2	.263"	.263"	10'
321	5/16"	.3125"	.3125"	10'
322	3/8"	.375"	.375"	10'
323	1/2"	.500"	.500"	10'
324	3/4"	.625"	.625"	10'

Standard package 36" lengths 25 each color:

In addition to Spools and Coils noted above the standard packaging is as follows on stock colors.

#24 Thru #15 .....1,000' Soft Wound Spools

#14 Thru #8 .....500' Soft Wound Spools

#7 Thru #2 .....250'

#1 and larger .....100' coils

**COLORS AVAILABLE FROM STOCK:**  
Black, Red, Green, White, Yellow, Blue, Brown, Orange, Clear.

\*Cat. Nos. 360BC, 361BC, 362BC, 363BC, 364BC, 328BC, 329BC, 365BC available in Black, White and Clear from stock.

**DIMENSIONAL TOLERANCES OF BIRACO**

Sz.	Approx. I.D., Ins.	ASTM Tolerances, Ins.	Wall Thickness, Ins.
24	.022	.020 — .027	.012±.002
22	.027	.025 — .032	.012±.002
20	.034	.032 — .039	.016±.003
18	.038	.044 — .036	.016±.003
16	.042	.040 — .049	.016±.003
14	.047	.054 — .045	.016±.003
12	.053	.051 — .061	.016±.003
10	.066	.064 — .072	.016±.003
8	.078	.080 — .072	.016±.003
6	.085	.081 — .089	.016±.003
5	.095	.101 — .091	.016±.003
4	.106	.102 — .112	.016±.003
3	.118	.124 — .114	.020±.003
2	.133	.129 — .141	.020±.003
1 1/2	.148	.158 — .144	.020±.003
1 1/4	.166	.162 — .178	.020±.003
1 1/2	.186	.198 — .182	.020±.003
1 1/4	.208	.204 — .224	.020±.003
1 1/2	.234	.249 — .229	.020±.003
1 1/4	.263	.258 — .278	.020±.003
1 1/2	.294	.311 — .289	.020±.003
1 1/4	.330	.347 — .325	.020±.003
1 1/2	.315	.3125 — .334	.025±.003
1 1/4	.375	.375 — .399	.025±.003
1 1/2	.438	.462 — .438	.025±.003
1 1/4	.500	.500 — .524	.025±.003
1 1/2	.562	.592 — .562	.030±.003
1 1/4	.625	.625 — .655	.030±.005
1 1/2	.750	.750 — .786	.035±.005
1 1/4	.875	.875 — .911	.035±.005
1 1/2	1.000	1.000 — 1.036	.035±.005
1 1/4	1.250	1.250 — 1.286	.040±.005
1 1/2	1.500	1.500 — 1.536	.045±.005
1 1/4	1.750	1.812 — 1.750	.055±.008
1 1/2	2.000	2.000 — 2.070	.060±.010
1 1/4	2.250	2.250 — 2.330	.065±.010
1 1/2	2.500	2.500 — 2.590	.070±.010

**TABLE OF PHYSICAL & ELECTRICAL PROPERTIES**



**BIRACO TUBING**

Tensile Strength—2500 Psi (Minimum Average)

Flammability—Non-Flammable

Ultimate Elongation—340%

Recommended for Temperatures to—105° C

Cold Bend—-40° C.

Dielectric Strength .020" Wall—800 V/Mil

Varnish Baking—Good

Water Absorption

Weight Increase (1 Week)—.1%

Fungi Resistance—Yes

Oil Resistance—Indefinitely flexible when immersed in oil

Insulation Resistance—over 1,000,000 megohms.

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS

**BIRFLEX VINYL COATED FIBERGLASS TUBING**

(ASTM, NEMA Grade B-B-1) MEETS MIL-I-3190 B SPECS.

Quality Electronic and Electrical Tubing. It is Class B Insulation that combines the best features of the inorganic fiberglass base sleeving with heat resistant, flexible plastic insulation. The plastic compound provides the highest electrical properties, heat stability (130° C.), flexibility and toughness. Meets performance requirements of specs. MIL-I-3190 B, NEMA VSI, ASTM D 372.

**PHYSICAL & ELECTRICAL PROPERTIES BIRFLEX VINYL COATED FIBERGLASS**

Class B  
Grade B-1  
Dielectric Strength.....4000 V.  
Temperature Rating.....180° C.  
Low Temp. Flexibility.....-30° C.

Non-Flammable  
Ins. Resistance.....Over 1,000,000 MEGS.  
Corrosion Resistance.....Excellent  
Oil Resistance.....Good

In addition to Spools and Coils noted above the standard packaging is as follows on stock colors.  
#24 Thru #15 .....1,000' Soft Wound Spools  
#14 Thru #8 .....500' Soft Wound Spools  
#7 Thru #2 .....250'  
#1 and larger .....100' coils

**COLORS:**  
Black, Red, White, Yellow, Brown, Orange, Green, Blue, Gray, Purple

**Additional Sizes Available**  
Other types of Biraco, Birflex, Birflex Tubing and sleeving available. Write for new Comprehensive Catalog on Tubing and Sleeving.

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS



**NEW THIN WALL BIRFLON T-500  
TEFLON\* SPAGHETTI TUBING**



Birflon T-500 Tubing is extruded from DuPont Tetrafluoroethylene Resin. Used in electronic and electrical equipment for connection of components. Its flexibility, ease of handling has established it as the best and most popular insulation sheathing. This high temperature Class C insulation does not melt and flow as the conventional thermoplastic materials. Birflon T-500 Teflon has unique electrical, chemical and mechanical properties unmatched by any other type tubing for use in applications requiring high frequencies and high temperatures. Because of Teflon's continuous service temperature of 250° C., which is more than 100° C. above other materials, the soldering technique is simplified since "Teflon" is not harmed by the hot barrel of the soldering iron — therefore, the assembly of aircraft, missile and electronic communication equipment is greatly speeded up. Thin Wall flexible Teflon Tubing can be processed easily into flexible and rigid printed circuits. As a thin, flexible insulation, it permits miniaturization and compactness of design never before possible.

**TABLE OF PROPERTIES**

Test	ASTM Method	Result
Tensile Strength, 73°F.	D638-52T	1500-3000 Lb/Sq. In.
Elongation, 73°F.	D638-52T	100-200%
Deformation Under Load—122°F. 1200 Lb/Sq. In., 24 Hrs.	D621-51	4-8%
2000 Lb/Sq. In., 24 Hrs.	D621-51	25%
Hardness Durometer	D676-49T	D50-D65
Heat Distortion Temp., 66 Lb/Sq. In.	D648B-45T	250°F.
Dielectric Strength, .080"	D149-44	400-500 V/MIL
Surface Arc-Resistance	D495-48T	Sec.
Volume Resistivity	D257-52T	10 <sup>15</sup> Ohm-CM
Surface Resistivity, 100% R.H.	D257-52T	3.6x10 <sup>9</sup> Megohms
Dielectric Constant, 60 to 10 <sup>6</sup> Cycles	D150-54T	2.00
Power Factor, 60 to 10 <sup>6</sup> Cycles	D150-54T	0.0003
Specific Gravity	D792-50	2.1-2.2

**ADDITIONAL ADVANTAGES OF BIRFLON T-500 TEFLON\***

- **ELECTRICAL:** Low power factor, low dielectric constant, high volume and surface resistivity, good dielectric strength (500 to 1000 volts/MIL) constant over wide ranges of temperatures and frequencies. Dielectric constant of 2.0 and dissipation factor of 0.0002 are lowest of any solid dielectric.
- **THERMAL:** No change of electrical properties with temperature (25°C. to 250°C.) or frequency (60 CPS to 100 MC). Class C insulation — capable of continuous service at temperatures to 250° C. Has color stability.
- **TOUGHNESS AND FLEXIBILITY:** Has high impact strength. Is tough and flexible over the broad temperature range of -90° C. to 250°C. Service range -320°F. to 500° F.
- **CHEMICAL INERTNESS:** Completely inert to all chemicals and solvents except molten alkali metals and fluorine at elevated temperatures and pressures. Non-corrosive to all metals.
- **MOISTURE ABSORPTION:** Zero moisture absorption. Completely sun and weather resistant.
- **NON-FLAMMABLE**
- **LOWEST COEFFICIENT OF FRICTION**
- **FUNGI RESISTANCE:** Inert to all fungi growths.
- **SIZES:** Birflon T-500 Teflon Tubing available in sizes to fit B & S gauge wires. Thin wall available from stock, in sizes No. 32 thru 1/4" I.D. Additional sizes and wall thicknesses made to order.

Birflon T-500 is made from high molecular weight virgin "Teflon" and meets AMS 3651B, 3653B, 3654, 3655, MIL-C-17B and MIL-I-22129B.

NOTE: When cutting Teflon Tubing, use single edge razor blade for clean unpeached cut.

\*Teflon\* DuPont Trade Name for Tetrafluoroethylene Resin

**Thin Wall Birflon T-500 Teflon\* Tubing Dimensional Specifications**

AWG Size	Nom. O.D.	Nom. I.D.	Nom. Wall Thickness	AWG Size	Nom. O.D.	Nom. I.D.	Nom. Wall Thickness
32	.028"	.011"	.0085"	7	.178"	.148"	.015"
30	.030"	.012"	.009"	6	.196"	.166"	.015"
28	.033"	.015"	.009"	5	.216"	.186"	.015"
26	.038"	.018"	.010"	4	.238"	.208"	.015"
24	.042"	.022"	.010"	3	.264"	.234"	.015"
22	.047"	.027"	.010"	2	.293"	.263"	.015"
20	.058"	.034"	.012"	1	.324"	.294"	.015"
19	.062"	.038"	.012"	0	.360"	.330"	.015"
18	.066"	.042"	.012"	3/8"	.430"	.390"	.020"
17	.071"	.047"	.012"	7/16"	.493"	.453"	.020"
16	.077"	.053"	.012"	1/2"	.565"	.515"	.025"
15	.083"	.059"	.012"	9/16"	.633"	.583"	.025"
14	.090"	.066"	.012"	5/8"	.700"	.640"	.030"
13	.100"	.076"	.012"	3/4"	.825"	.765"	.030"
12	.109"	.085"	.012"	7/8"	.950"	.895"	.030"
11	.119"	.095"	.012"	1"	1.085"	1.025"	.030"
10	.130"	.106"	.012"	1 1/8"	1.210"	1.150"	.030"
9	.148"	.118"	.015"	1 1/4"	1.335"	1.275"	.030"
8	.163"	.133"	.015"				

Tolerance — Nos. 32 thru 0 — ± .003" on Wall  
Tolerance — Nos. 7/8" thru 1 1/4" — .020" on I.D., .006" on Wall

**NO EXTRA CHARGE FOR SOLID COLORS  
SMALL PIECE CUTTING AVAILABLE TO ORDER**

**STOCK COLORS:** Natural, Red, Black, Blue, Brown, Green, Orange, Yellow, Gray, Violet, White.  
Nos. 8020 thru 8029 available in Natural. Additional Colors, Sizes Made To Order

Teflon Tubing can be ordered cut to your specifications.

Tracer Colors Available  
We Invite Your Inquiries For Your Special Requirements  
**WIRE — CABLE — TUBING DIVISION**

**NEW THIN WALL BIRFLON T-500 TEFLON\* SPAGHETTI TUBING**

Cat. No.	Spool B & S or Coll Put-Up No.	Cat. No.	Spool B & S or Coll Put-Up No.	Cat. No.	Spool B & S or Coll Put-Up No.	Cat. No.	Spool B & S or Coll Put-Up No.	Nom. I.D.
8013	*1000' 32	8003	*1000' 18	8009	1000' 6	8023	1000' 9/16"	9/16"
8013	500' 32	8003	500' 18	8009	* 500' 6	8023	500' 9/16"	9/16"
8013	100' 32	8003	100' 18	8009	100' 6	8023	* 100' 9/16"	9/16"
8014	*1000' 30	8003	50' 18	8009	50' 6	8023	50' 9/16"	9/16"
8014	500' 30	8003	25' 18	8008	25' 6	8023	25' 9/16"	9/16"
8014	100' 30	8004	*1000' 16	8010	1000' 4	8024	1000' 5/8"	5/8"
8015	*1000' 28	8004	500' 16	8010	500' 4	8024	500' 5/8"	5/8"
8015	500' 28	8004	100' 16	8010	* 100' 4	8024	* 100' 5/8"	5/8"
8015	100' 28	8004	50' 16	8010	50' 4	8024	50' 5/8"	5/8"
8016	*1000' 26	8004	25' 16	8010	25' 4	8024	25' 5/8"	5/8"
8016	500' 26	8005	1000' 14	8011	1000' 2	8025	1000' 3/4"	3/4"
8016	100' 26	8005	* 500' 14	8011	500' 2	8025	500' 3/4"	3/4"
8000	*1000' 24	8005	100' 14	8011	* 100' 2	8025	* 100' 3/4"	3/4"
8000	500' 24	8005	50' 14	8011	50' 2	8025	50' 3/4"	3/4"
8000	100' 24	8005	25' 14	8011	25' 2	8025	25' 3/4"	3/4"
8000	50' 24	8006	1000' 12	8012	1000' 0	8026	1000' 7/8"	7/8"
8000	25' 24	8006	* 500' 12	8012	500' 0	8026	500' 7/8"	7/8"
8001	*1000' 22	8006	100' 12	8012	* 100' 0	8026	* 100' 7/8"	7/8"
8001	500' 22	8006	50' 12	8012	50' 0	8026	50' 7/8"	7/8"
8001	100' 22	8006	25' 12	8012	25' 0	8026	25' 7/8"	7/8"
8001	50' 22	8007	1000' 10	8020	1000' 3/8"	8027	1000' 1"	1"
8001	25' 22	8007	* 500' 10	8020	500' 3/8"	8027	500' 1"	1"
8002	*1000' 20	8007	100' 10	8020	* 100' 3/8"	8027	* 100' 1"	1"
8002	500' 20	8007	50' 10	8020	50' 3/8"	8027	50' 1"	1"
8002	100' 20	8007	25' 10	8020	25' 3/8"	8027	25' 1"	1"
8002	50' 20	8008	1000' 8	8021	1000' 7/16"	8028	1000' 1 1/4"	1 1/4"
8002	25' 20	8008	* 500' 8	8021	500' 7/16"	8028	500' 1 1/4"	1 1/4"
		8008	100' 8	8021	* 100' 7/16"	8028	* 100' 1 1/4"	1 1/4"
		8008	50' 8	8021	50' 7/16"	8028	50' 1 1/4"	1 1/4"
		8008	25' 8	8021	25' 7/16"	8028	25' 1 1/4"	1 1/4"
				8022	1000' 1/2"	8029	1000' 1 1/4"	1 1/4"
				8022	500' 1/2"	8029	500' 1 1/4"	1 1/4"
				8022	* 100' 1/2"	8029	* 100' 1 1/4"	1 1/4"
				8022	50' 1/2"	8029	50' 1 1/4"	1 1/4"
				8022	25' 1/2"	8029	25' 1 1/4"	1 1/4"

\*PREFERRED PUT-UP

Extruded virgin Teflon rod sizes 1/8" thru 3/8" diam. available. Also "O" rings, washers, balls, etc.



# Birnbach

## BIRACO • BIRFLON HEAT SHRINKABLE PLASTIC TUBING



### BIRNBACH HEAT SHRINK POLYVINYL CHLORIDE PLASTIC TUBING NEW ALL PURPOSE TUBING WITH CONTROLLED SHRINKAGE

Series SK265 covers heat shrinkable PVC polyvinyl chloride plastic tubing. This flexible, electrical insulating tubing is extruded and its expansion is arrived at thru a patented secondary operation which builds a memory into the material. The memory is activated via the application of heat at approximately 130°C (266°F). The thinner the wall, the faster the shrinkage. The heavier the wall, the

slower the shrinkage. In each case, the diameter is reduced to a pre-determined size upon the application of heat and will maintain strength, insulating properties and form stability. Material is SK265 PVC (Polyvinylchloride), flame resistant, self-extinguishing, dimensions as supplied in its expanded stage and after its recovery, with application of heat in excess of 130°C (266°F) shall



be in accordance with noted table. Longitudinal shrink shall not be greater than 10%.

- NEW ALL PURPOSE TUBING—HAS CONTROLLED SHRINKAGE.
- SHRINKS IN SECONDS.
- FORMS A PERMANENT, TIGHT MECHANICAL BOND.
- PVC (POLYVINYLCHLORIDE).

#### SK 265 PVC TUBING PROPERTIES CHART

	RATING	TEST
TENSILE STRENGTH	2960 PSI	ASTM D-876-59-T
ULTIMATE ELONGATION	200%	ASTM D-876-59-T
BRITTLINESS TEMPERATURE	-34° C.	ASTM D-746-57-T MIL-1-631 D, 4. 6. 12
SPECIFIC GRAVITY	1.34	ASTM D-792-60 T
WATER ABSORPTION	0.06% 24 Hours	ASTM D-570-57-T Proc. A
DIELECTRIC STRENGTH	1050 Volts/Mil	ASTM D-149-55 T
VOLUME RESISTIVITY	5.2 x 10 <sup>14</sup> Ohm-cm	ASTM D-257-58 MIL-1-631 D 4. 6. 13
FUNGUS RESISTIVITY	0-1	MIL-1-631 D 3. 5. 7 and 4. 6. 16
FLAMMABILITY	Self-Extinguishing	ASTM D-876-60 T MIL-1-631 D, 4. 6. 13
FLEXIBILITY AFTER HEAT AGING 200 Hrs. a 100° C.	GOOD	
BEND OVER 1/8" MANDREL		
CORROSION ON COPPER, BRASS AND ALUMINUM AFTER 14 DAYS a 100° C.	EXCELLENT	MIL-1-7444 B

#### CHEMICAL RESISTANCE CHART

FUEL JP-4 MIL-J-5624	EXCELLENT
AVIATION GASOLINE 100/130 MIL-G-5572	EXCELLENT
HYDRAULIC OIL MIL-O-5606	EXCELLENT
HYDROCHLORIC ACID 35%	EXCELLENT
WATER	EXCELLENT
SODIUM CHLORIDE 5% ALKALIS	EXCELLENT

\*NOTE: SK265 PVC tubing is unsuitable in contact with organic solvents.

SK265 PVC tubing has a higher resistance to oils than low density Polyethylene.

#### BIRFLON SHRINK SERIES TE TUBING

##### HEAT SHRINKABLE TEFLON\* TUBING

Is a Class C material modified from polytetrafluoroethylene. The tubing will shrink when heated to 621 F. (It should be heated until it turns semi-transparent, then the heating process immediately stopped. Overheating can cause splitting, therefore trial and error testing is recommended to establish the proper time and temperature for each application.) Correct procedure will result in a snug-fitting insulating wrap possessing hi-heat resistance, superior chemical resistance, and excellent electrical characteristics. The tubing is available in a full range of colors.

\* Dupont Polytetrafluoroethelene

#### SK621 TEFLON TUBING

##### PROPERTIES CHART

	TE SERIES Shrinkable "Teflon"
DIELECTRIC STRENGTH (20 Mil Wall)	850 Volts/Mil
DIELECTRIC CONSTANT	2.2
POWER FACTOR	.00
VOLUME RESISTIVITY	10 <sup>17</sup> Ohms/CM
FUNGUS RESISTANCE	Inert
FLAMMABILITY	Will Not Support Combustion
FUEL and OIL RESISTANCE	Superior
HYDRAULIC FLUID RESISTANCE	Superior
SOLVENT RESISTANCE	Superior
ACID and ALKALI RESISTANCE	Superior
CORROSION RESISTANCE	Excellent
TENSILE STRENGTH	5000-7500 PSI
ULTIMATE ELONGATION	300-500%
WATER ABSORPTION	Nil
LOW TEMPERATURE BRITTLE POINT	-66°F
HARDNESS	98 Shore A
SPECIFIC GRAVITY	2.2

HAG-12 Hot Air Gun For PVC Series

HAG-13 Hot Air Gun For TE Series

The quickest and most versatile method for applying heat is the hot air gun noted herein. Also, use of an oven, radiant heat, dipping in hot liquids, or using a soldering iron or the flame of a match.



#### HEAT SHRINKABLE POLYVINYL TUBING DIMENSION CHART

Cat. No.	Sizes For AWG	Min. I.D. Before Shrinking	Recovered Dimensions After Shrinking	
			Enclosable Diam Range (Inches)	Nom. Wall Thickness
SK 265-24-26	24-26	.035"	.016-.030	.012"
SK 265-19-22	19-22	.046"	.025-.041	.016"
SK 265-17-19	17-19	.057"	.036-.052	.016"
SK-265-15-16	15-16	.069"	.046-.064	.016"
SK 265-14-15	14-15	.080"	.056-.075	.016"
SK 265-12-13	12-13	.098"	.067-.093	.016"
SK 265-10-11	10-11	.123"	.090-.118	.016"
SK 265-8-9	8-9	.153"	.111-.148	.020"
SK-265-6-7	6-7	.192"	.137-.185	.020"
SK 265-4-5	4-5	.236"	.175-.210	.020"
SK 265-2-3	2-3	.275"	.210-.238	.020"
SK 265-0-1	0-1	.315"	.238-.290	.020"
SK 265-0	0	.393"	.290-.342	.020"
SK 265-3/8	3/8"	.433"	.342-.381	.020"
SK 265-1/2	1/2"	.511"	.381-.435	.020"
SK 265-5/8	5/8"	.610"	.475-.540	.020"
SK 265-3/4	3/4"	.728"	.540-.710	.020"
SK 265-1"	1"	1.043"	.710-.944	.020"
SK 265-1 1/2"	1 1/2"	1.377"	.905-1.338	.030"
SK 265-2"	2"	1.929"	1.299-1.889	.030"
SK 265-2 1/2"	2 1/2"	2.598"	1.771-2.559	.030"

SIZES 24-26, 19-22, 17-19, 15-16, 14-15, 12-13, 10-11, 8-9, 6-7

AVAILABLE ON 25', 50', 100', 500', 1,000' PUT-UPS

STOCK COLORS: BLACK, WHITE, CLEAR, RED, YELLOW

SIZES: 4-5, 2-3, 0-1, 0 ON 25', 50', 100', 200' PUT-UPS

3/8 THRU 1" ON 50', 100', PUT-UPS

1 1/2 AND 2" ON 50', PUT-UPS

STOCK COLORS: BLACK, CLEAR ADDITIONAL COLORS AVAILABLE

#### HEAT SHRINKABLE TEFLON TUBING DIMENSIONS—BIRFLON SHRINK SERIES

##### TE TUBING

Birnbach No.	Nominal Tubing Size	Minimum Expanded ID	Recovered Dimensions	
			Maximum ID (1)	Wall Thickness (2)
SK-621-26	26	.046"	.022"	.009"
SK-621-24	24*	.050"	.027"	.010"
SK-621-22	22*	.055"	.032"	.010"
SK-621-20	20*	.060"	.039"	.012"
SK-621-19	19	.065"	.043"	.012"
SK-621-18	18*	.076"	.049"	.012"
SK-621-17	17	.085"	.054"	.012"
SK-621-16	16*	.093"	.061"	.012"
SK-621-15	15	.110"	.067"	.012"
SK-621-14	14*	.120"	.072"	.012"
SK-621-13	13	.140"	.080"	.012"
SK-621-12	12*	.150"	.089"	.012"
SK-621-11	11	.170"	.101"	.012"
SK-621-10	10*	.191"	.112"	.012"
SK-621-9	9	.205"	.124"	.015"
SK-621-8	8*	.240"	.141"	.015"
SK-621-7	7	.270"	.158"	.015"
SK-621-6	6*	.302"	.178"	.015"
SK-621-5	5	.320"	.198"	.015"
SP-621-4	4*	.348"	.224"	.015"
SP-621-3	3	.360"	.249"	.015"
SK-621-2	2*	.375"	.278"	.015"
SK-621-1	1	.385"	.311"	.015"
SK-621-0	0*	.400"	.347"	.015"
SK-621-3/8	3/8"	.560"	.399"	.020"
SK-621-1/2	1/2"	.655"	.462"	.020"
SK-621-1/2	1/2"	.750"	.524"	.020"

Standard Package—100 Feet

Standard Put-up—36" Straight Lengths—One Foot Minimums

Wall Tolerances: 26 thru 22 ±.002

20 thru 10 ±.003

9 thru 0 ±.004

(1) Tubings made to Military Standards for American Wire Gages will return within the tolerances for that gage number.

(2) Nominal wall thickness after heating. Expanded wall thickness will be 20% to 30% less.

(\*) Stock Sizes

# Birnbach

SHIELDING BRAID • BUS BAR  
INSULATED COPPER • BRONZE • COPPERWELD

BIRNBACH

### TUBULAR BRAID PER MIL SPEC. QQ-B-575

Manufactured completely round as noted in MIL Spec. QQ-B-575, this tinned copper shielded braid has self-supporting characteristics which enables it to maintain its round shape. The shielding coverage percentage is 95% or more. This tubular braid is used in military applications where maximum shielding against electrostatic interference is indicated. In addition, it is used as a protective covering against mechanical abrasion and stresses for the wires, cables and other components.

Cat. No.	Nom. Inside Diam. Rounded Wires	Construction No. Of Carriers	AWG of Indiv. Wires	Approx. AWG Equiv.	Nom. Circular Mills	*Current Carrying Cap.
2250-1/32	3/64"	24	#36	#22	640	7.0 amps.
2250-1/16	3/32"	48	#36	#19	1,290	11.0 amps.
2250-5/64	5/64"	72	#36	#17	1,900	18.0 amps.
2250-7/64	7/64"	96	#36	#16	2,500	22.0 amps.
2250-1/8	1/8"	120	#36	#15	3,260	28.0 amps.
2250-5/32	5/32"	240	#36	#12	6,200	39.0 amps.
2250-11/64	11/64"	168	#36	#14	4,500	32.0 amps.
2250-3/16	3/16"	192	#36	#13	5,100	35.0 amps.
2250-13/64	13/64"	312	#36	#11	8,200	46.0 amps.
2250-1/4	1/4"	384	#36	#10	10,400	53.0 amps.
2250-3/8	3/8"	384	#36	#10	10,400	53.0 amps.
2250-1/2	1/2"	528	#36	#9	13,200	70.0 amps.
2250-9/16	9/16"	528	#36	#9	13,200	70.0 amps.
2250-11/16	11/16"	720	#36	#7	19,000	82.0 amps.
2250-25/32	25/32"	864	#36	#7	21,750	85.0 amps.
2250-13/16	13/16"	864	#36	#7	21,750	85.0 amps.

STANDARD SPOOL PUT-UP: 50 ft., 100 ft., 250 ft.  
LARGER SPOOLS AVAILABLE—ADVISE

\*Values based on copper in free air at 65°F.  
Additional constructions and variations made to order. Also available in silver plated copper, bare copper and stainless steel.

### TINNED COPPER SHIELDING

Used for shielding and bonding on aircraft, marine and auto radio wires and cables. Shields speaker leads, lead-ins, amplifier wires. Extremely flexible, slides over wires and cables.



#### DESCRIPTION:

No. 853 thru 856/7—Composed of extremely flexible fine soft annealed copper tinned wires closely woven, braided and Rolled Flat.

No. 860—Composed of extremely flexible fine soft annealed copper wires closely woven, braided and Rolled Flat.

Cat. No.	Size & No. of Wires	Inside Diam. Flattened	Approx. O.D. Flattened	Spool
853	12 x 2/36	1/32"	3/64"	1000'
854	12 x 2/36	3/64"	1/16"	1000'
855	16 x 3/36	1/16"	5/64"	50'
858	24 x 5/36	1/8"	5/32"	50'
859	24 x 5/36	3/16"	7/32"	50'
863	24 x 7/36	1/4"	9/32"	50'
864	48 x 4/36	3/8"	15/32"	50'
868	48 x 7/36	1/2"	19/32"	50'
865	48 x 8/36	5/8"	23/32"	50'
865/1	48 x 11/36	3/4"	13/16"	50'
857	48 x 19/36	25/32"	27/32"	50'
856	48 x 19/36	1"	1-1/16"	50'
856/1	48 x 19/36	1-3/8"	1-7/16"	50'
856/2	48 x 19/36	1-1/2"	1-9/16"	50'
856/3	48 x 27/30	1-3/4"	1-7/8"	50'
856/4	48 x 32/30	2"	2-1/4"	50'
856/6	48 x 45/30	2-1/2"	2-3/4"	50'
856/7	48 x 64/30	3"	3-1/4"	50'

#### BARE

860..... 24 x 10/36..... 1/4"..... 50'  
For longer lengths and alternate put-ups—Specify.

#### BARE COPPER WIRE

(Soft Drawn)

QQ—W—341A specifications

Cat. No.	Put-Up	Size AWG	Area Circular Mills	O.D.
1560	100' Coil	8	16,510	.1285"
1562	100' Coil	10	10,380	.102"
1563	1000' Spool	10	10,380	.102"
1566	100' Coil	12	6,530	.081"
1567	1000' Spool	12	6,530	.081"
1570	100' Coil	14	4,107	.064"
1571	1000' Spool	14	4,107	.064"
1574	100' Coil	16	2,583	.051"
1575	1000' Spool	16	2,583	.051"

#### SOLID ENAMEL COPPER WIRE

Cat. No.	Put-Up	Size AWG	O.D.
497	100' Coil	10	.103"
1497	1000' Spool	10	.103"
492	100' Coil	12	.083"
492A	150' Coil	12	.083"
492B	200' Coil	12	.083"
1492	1000' Spool	12	.083"
490	100' Coil	14	.066"
490A	150' Coil	14	.066"
490B	200' Coil	14	.066"
1490	1000' Spool	14	.066"

### TINNED COPPER WIRE

SOLID SOFT BRAND

Pure Electrolytic, Copper, annealed, tinned for quick soldering

MIL—W—3861 type S, ASTM—B—33 specifications, QQ—W—343 type S

Cat. No.	Put-Up	Size AWG	Area Circular Mills	O.D.	SOLID—STRANDED STRANDED TINNED COPPER WIRE
1433/4	100' Coil	4	41,704	.204"	
1433/6	100' Coil	6	26,250	.162"	
1433	100' Coil	8	16,510	.129"	
1402	100' Coil	10	10,380	.103"	
1403	1000' Spool	10	10,380	.103"	
1406	100' Coil	12	6,530	.082"	
1407	1000' Spool	12	6,530	.082"	
1410	100' Coil	14	4,107	.065"	
1411	1000' Spool	14	4,107	.065"	
1414	100' Coil	16	2,583	.051"	
1415	1000' Spool	16	2,583	.051"	
1418	100' Coil	18	1,624	.040"	
1419	1000' Spool	18	1,624	.040"	
1422	100' Coil	20	1,022	.033"	
1423	1000' Spool	20	1,022	.033"	
1434	1000' Spool	22	624.4	.025"	
1424	1000' Spool	24	404.0	.020"	
1426	1000' Spool	26	254.1	.016"	
1428	1000' Spool	28	159.8	.013"	
1430	1000' Spool	30	100.5	.010"	
1430/32	1000' Spool	32	63.21	.008"	
1430/34	1000' Spool	34	39.75	.006"	
1430/36	1000' Spool	36	25.00	.005"	
1430/38	1000' Spool	38	15.72	.004"	

#1671 meets H4.4—1940 type W— Also available in stranded bare.

JUMPER CABLE  
PURE ELECTROLYTIC, COPPER, annealed, tinned for quick soldering  
MIL-W-3861 Type B, ASTM-B-33 Specifications

Cat. No.	Class	Descr. AWG	Strand	O.D.
1622	K	22	7/30	.030"
1620	K	20	10/30	.037"
1618	K	18	16/30	.045"
1616	K	16	26/30	.059"
1614	K	14	41/30	.073"
1612	K	12	65/30	.091"

See Magnet Wire Section For Additional Sizes

### BUS BAR WIRE (Hard Drawn)

QQ—W—343 type S

MIL—W—3861 type S, ASTM—B—33, ASTM—B—246—51 specifications

For hooking up all types of transmitters, especially ultra short wave equipment. All bus wire is made of hard drawn copper, tinned, straightened, and cut in 2 ft. lengths.



Cat. No.	No.	Shape	Finish
2010	10	Round	Tinned
2012	12	Square	Tinned
2013	12	Round	Tinned
2014	14	Square	Tinned
2015	14	Round	Tinned
2016	16	Round	Tinned
2018	18	Round	Tinned

(100 to Std. Package)

### SILICON BRONZE AERIAL WIRE

Especially designed for ships, airports, short wave and transmitting antennas where high tensile strength and resistance to the elements are important.

Cat. No.	Put-Up	Size AWG	Strand	Breaking Strength	O.D.
529*	100'	4	7/12	3670 lbs.	.240"
528*	100'	6	7/14	2140 lbs.	.190"
527	100'	8	7/16	1600 lbs.	.150"
499	100'	10	7/18	1000 lbs.	.122"
524	100'	12	7/20	650 lbs.	.100"
526	100'	14	7/22	420 lbs.	.075"

#528 and #499 meets MIL—W—13074; #524 meets MIL—W—13278

For longer lengths and alternate put-ups—Specify.

\* 1000 feet on deposit reels



### COPPERWELD ENAMEL ANTENNA WIRE

Used where high tensile strength is required as short wave and transmitting aerials. Has low frequency resistance and is ideal for transmitting doublet and directional antennas. Maintain frequency characteristics because of its stretchless qualities.

#### ENAMEL

Cat. No.	Put-Up	Size AWG	Tensile Strength	O.D.
710-100	100' Spool	10	1130 lbs.	.103"
710-250	250' Spool	10	1130 lbs.	.103"
710-500	500' Spool	10	1130 lbs.	.103"
710-1000	1000' Spool	10	1130 lbs.	.103"
710-2500	2500' Spool	10	1130 lbs.	.103"
712-100	100' Coil	12	720 lbs.	.082"
712-250	250' Coil	12	720 lbs.	.082"
712-500	500' Spool	12	720 lbs.	.082"
712-1000	1000' Spool	12	720 lbs.	.082"
712-2500	2500' Spool	12	720 lbs.	.082"
714-100	100' Coil	14	400 lbs.	.065"
714-250	250' Spool	14	400 lbs.	.065"
714-500	500' Spool	14	400 lbs.	.065"
714-1000	1000' Spool	14	400 lbs.	.065"
714-2500	2500' Spool	14	400 lbs.	.065"

#### STRANDED SIZE COPPER WIRE

Cat. No.	Put-Up	Size AWG	Str.	O.I.
493	100'	12	7/20	.101
1670	100'	14	7/22	.07
1639	1000'	14	7/22	.07
1673	100'	15	7/23	.06
1634	1000'	15	7/23	.06
1680	100'	16	7/24	.06
1647	1000'	16	7/24	.06
681	100'	18	7/26	.05
1648	1000'	18	7/26	.05
700	100'	19	7/27	.04
1741	1000'	19	7/27	.04

PUT-UP: 100' COIL 1000' SPC

# Birnbach

GOV'T. SPEC HOOK-UP WIRE • MIL-W-1687D SPEC WIRE • TEFLON\* CABLES



### SPECIFICATION MIL-W-16878D TYPE E-600 VOLT

**HIGH TEMPERATURE RATING -90° TO +250°C**

Chemically inert, non-flammable, excellent flexibility, easy stripping, high dielectric strength, unaffected by fungus. Exceeds Class H insulation requirements. Unaffected by high or low temperature. Outstanding for its dependability and long life under all operating conditions indoors or outdoors. Teflon permits miniaturization and compactness in electronic designs of sub-miniature components, computers, UHF equip., slip ring assemblies, leads to hermetically sealed and potted components, telemetering equip. and guided missiles. Nom. wall .010" TFE extruded.

DESCRIPTION: Single conductor silver plated copper wire concentrically stranded and insulated with extruded or Teflon insulation.

Cat. No.	Size AWG	Mil Type Designation	Strand	Diam. Over Insulation Max.
8532	32	E-32	7/40	.033"
8530	30	E-30	7/38	.036"
8528	28	E-28	7/36	.039"
8526	26	E-26	7/34	.043"
8524	24	E-24	19/36	.048"
8522	22	E-22	19/34	.054"
8520	20	E-20	19/32	.062"
8518	18	E-18	19/30	.074"
8516	16	E-16	19/29	.087"
8514	14	E-14	19/27	.097"
8512	12	E-12	19/25	.120"
8510	10	E-10	37/26	.139"

\*Duponts Tetrafluoroethylene Resin. Cat. Nos. 8534 thru 8552 available Per MIL-W-7139A TEFLON AIRCRAFT SPEC./Per MIL-W-27300A (USAF), also NAS-703 Cable conforming to MIL-C-27500 SPEC.

STD. PUT-UP: 100 ft., 500 ft., 1000 ft. Colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White. Additional special custom constructions available to order. Wrapped extruded with or without shielding, glass braid, silicone and in miniature multi-conductors. Price and delivery on request.

### MIL-W-16878D TEFLON\* WIRE

TYPE EE-EXTRUDED (1000 VOLTS) MIL-W-16878D

DESCRIPTION: Single conductor silver plated copper wire concentrically stranded and insulated with .016" TFE extruded TEFLON\* insulation. Temperature rating -90°C to +260°C 1000 volts.

Cat. No.	Mil Type Designation	Size AWG	Strand	Nom. O.D.
9524	EE-24	24	19/36	.055"
9522	EE-22	22	19/34	.062"
9520	EE-20	20	19/32	.070"
9518	EE-18	18	19/30	.080"
9516	EE-16	16	19/29	.089"
9514	EE-14	14	19/27	.106"
9512	EE-12	12	19/25	.124"
9510	EE-10	10	37/26	.145"
9508	EE-8	8	133/29	.210"

STANDARD SPOOL PUT-UP: 250 ft. 500 ft., 1000 ft. STOCK COLORS: 1-White, 2-Black, 3-Red, 4-Green, 5-Yellow, 6-Blue, 7-Brown, 8-Orange, 9-Gray (Slate), 10-Violet (Purple). \*TEFLON-Dupont

### SUBMINIATURE TEFLON\* HOOK-UP WIRE PER MIL-W-16878D TYPE ET 250 VOLTS, 200°C

This new exceptionally thin miniature hook-up wire is suitable in miniature slip ring assemblies, as interconnecting wire between wafers in micro-miniature electronic circuitry, instrument wire, medical wire, subminiature thermo-couple lead wire, strain gauge wire, etc. Provides lighter weight, greater flexibility and hi temperature resistance. Size Nos. 32 thru 20 conform to MIL-W-16878D type ET 250 volts, 200°C.

Cat. No.	Mil Type Designation	AWG Size	Strand	Nom. O.D.
8550/36		36	7/44	.018"
8550/34		34	7/42	.020"
8550/32	ET-32	32	7/40	.021"
8550/30	ET-30	30	7/38	.024"
8550/28	ET-28	28	7/36	.027"
8550/26	ET-26	26	7/34	.031"
8550/24	ET-24	24	7/32	.036"
8550/22	ET-22	22	7/30	.042"
8550/20	ET-20	20	7/28	.049"

STANDARD SPOOL PUT-UPS: 500 ft., 1000 ft.

### MIL-W-7139B

600 VOLTS TEMPERATURE RATING +200°C to +260°C

CLASS 1

SILVER COATED COPPER CONDUCTOR FOR +200°C OPERATION

CLASS 2

NICKEL COATED COPPER CONDUCTOR FOR +260°C OPERATION

Cat. No. Class 1	Cat. No. Class 2	Size AWG	Strand	Nom. O.D.
8700-22	8701-22	22	19/34	.085"
8700-20	8701-20	20	19/32	.095"
8700-18	8701-18	18	19/30	.110"
8700-16	8701-16	16	19/29	.130"
8700-14	8701-14	14	19/27	.143"
8700-12	8701-12	12	19/25	.163"

ADDITIONAL SIZES AVAILABLE

STANDARD SPOOL PUT-UPS: 500 ft., 1000 ft.

STANDARD COLOR: Class 1, White/ Blue Tracer  
Class 2 White/Orange Tracer

### SHIELDED AND UNSHIELDED TEFLON\* CABLES TO MIL-W-16878D

DESCRIPTION: One or more conductors, each conductor silver plated concentrically stranded copper wire, Type E Extruded TFE .010" insulation. When shielded, braided silver plated copper shield over conductor(s), 90% shield coverage. When covered, either a TEFLON\* impregnated fiberglass braid or a .010" TEFLON\* fused, double reversed tape jacket overall. Temperature -85° to +260°C. Voltage rating 600V. Fungus, solvent, moisture, flame, acid, alkali and oil resistant.

### TEFLON\* IMPREGNATED FIBERGLASS BRAID OVER SHIELD

Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.	Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
8706	1	24	19/36	.081"	8712	1	20	19/32	.093"
8706/2	2	24	19/36	.126"	8712/2	2	20	19/32	.154"
8706/3	3	24	19/36	.133"	8712/3	3	20	19/32	.163"
8706/4	4	24	19/36	.144"	8712/4	4	20	19/32	.180"
8706/5	5	24	19/36	.156"	8712/5	5	20	19/32	.195"
8709	1	22	19/34	.088"	8715	1	18	19/32	.097"
8709/2	2	22	19/34	.137"	8715/2	2	18	19/30	.162"
8709/3	3	22	19/34	.144"	8715/3	3	18	19/30	.172"
8709/4	4	22	19/34	.158"	8715/4	4	18	19/30	.192"
8709/5	5	22	19/34	.172"	8715/5	5	18	19/30	.207"

STD. PUT-UP: 250 ft., 500 ft., 1000 ft.

CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Red, 4-Green, 5-Yellow.

### TEFLON\* TAPE WRAP JACKET OVER SHIELD

Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
8521	1	24	19/36	.084"
8521/2	2	24	19/36	.128"
8521/3	3	24	19/36	.135"
8521/4	4	24	19/36	.148"
8521/5	5	24	19/36	.162"
8523	1	22	19/34	.090"
8523/2	2	22	19/34	.140"
8523/3	3	22	19/34	.148"
8523/4	4	22	19/34	.162"
8523/5	5	22	19/34	.183"
8525	1	20	19/32	.099"
8525/2	2	20	19/32	.158"
8525/3	3	20	19/32	.167"
8525/4	4	20	19/32	.184"
8525/5	5	20	19/32	.204"
8527	1	18	19/30	.109"
8527/2	2	18	19/30	.178"
8527/3	3	18	19/30	.189"
8527/4	4	18	19/30	.208"
8527/5	5	18	19/30	.230"

STD. PUT-UP: 250 ft., 500 ft., 1000 ft.

CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Red, 4-Green, 5-Yellow.

### SHIELDED BRAID OVERALL

Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
8704	1	24	19/36	.068"
8704/2	2	24	19/36	.112"
8704/3	3	24	19/36	.120"
8704/4	4	24	19/36	.132"
8704/5	5	24	19/36	.140"
8707	1	22	19/34	.075"
8707/2	2	22	19/34	.124"
8707/3	3	22	19/34	.132"
8707/4	4	22	19/34	.146"
8707/5	5	22	19/34	.154"
8710	1	20	19/32	.082"
8710/2	2	20	19/32	.142"
8710/3	3	20	19/32	.151"
8710/4	4	20	19/32	.168"
8710/5	5	20	19/32	.180"
8713	1	18	19/30	.093"
8713/2	2	18	19/30	.162"
8713/3	3	18	19/30	.172"
8713/4	4	18	19/30	.191"
8713/5	5	18	19/30	.210"

STD. PUT-UP: 250 ft., 500 ft., 1000 ft.

CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Red, 4-Green, 5-Yellow.

### NO SHIELD-TEFLON\* IMPREGNATED FIBERGLASS

Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
8705	1	24	19/36	.044"
8705/2	2	24	19/36	.088"
8705/3	3	24	19/36	.096"
8705/4	4	24	19/36	.108"
8705/5	5	24	19/36	.115"
8708	1	22	19/34	.051"
8708/2	2	22	19/34	.100"
8708/3	3	22	19/34	.108"
8708/4	4	22	19/34	.122"
8708/5	5	22	19/34	.131"
8711	1	20	19/32	.058"
8711/2	2	20	19/32	.118"
8711/3	3	20	19/32	.127"
8711/4	4	20	19/32	.144"
8711/5	5	20	19/32	.156"
8714	1	18	19/30	.069"
8714/2	2	18	19/30	.138"
8714/3	3	18	19/30	.148"
8714/4	4	18	19/30	.167"
8714/5	5	18	19/30	.186"

STD. PUT-UP: 250 ft., 500 ft., 1000 ft.

CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Red, 4-Green, 5-Yellow.



MIL-W-1687D HOOK-UP WIRE  
MIL-W-76B HOOK-UP WIRE



**PLASTIC HOOK-UP WIRE**  
**SPECIFICATION MIL-W-1687D**  
**TYPE B—HIGH TEMPERATURE VINYL**  
600 VOLT

Suitable for general purpose wiring for miniature high temperature hook-ups in aircraft, electronic instruments, devices, etc., where excellent resistance to moisture and solvents may be required.

DESCRIPTION: One conductor stranded tinned copper with rated  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$  high temperature thermoplastic light wall insulation. The letter "N" after Catalog Number designates clear Nylon Jacket overall.  $115^{\circ}\text{C}$ . Nom. Wall .010".

Cat. No.	Mil-W-1687D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
7190	B-32	32	7/40	.028"
7191	B-30	30	7/38	.030"
7192	B-28	28	7/36	.033"
7193	B-26	26	7/34	.037"
7194	B-24	24	7/32	.043"
7195	B-22	22	7/30	.048"
7196	B-20	20	7/28	.057"
7197	B-18	18	7/26	.067"
7198	B-16	16	19/29	.077"

STD. PUT-UP 100'-1000'

**TYPE B—NYLON JACKET**

NYLON JACKET THICKNESS: 32-20 .002, 18-16 .003

Cat. No.	Mil-W-1687D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
7190N	1000'	B-32	32 7/40 .010"	600 .032"
7191N	1000'	B-30	30 7/38 .010"	600 .036"
7192N	1000'	B-28	28 7/36 .010"	600 .039"
7193N	1000'	B-26	26 7/34 .010"	600 .042"
7194N	1000'	B-24	24 7/32 .010"	600 .047"
7195N	1000'	B-22	22 7/30 .010"	600 .053"
7196N	1000'	B-20	20 7/28 .010"	600 .065"
7197N	1000'	B-18	18 7/26 .010"	600 .075"
7198N	1000'	B-16	16 19/29 .010"	600 .085"

STD. PUT-UP 1000 FT.

STOCK COLORS: Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple

White/Black	White/Yellow	White/Orange
White/Red	White/Blue	White/Gray
White/Green	White/Brown	White/Violet

**SPECIFICATION MIL-W-1687D**  
**TYPE C—HIGH TEMPERATURE VINYL JACKET**  
1000 VOLT

DESCRIPTION: One Conductor Similar to Type B—Heavier Wall Hi-Temp Thermoplastic Insulation. Nom. Wall .016".

Cat. No.	Mil-W-1687C Type Designation	Size AWG	Minimum Strand	Nom. O.D.
7170	C-24	24	7/32	.058"
7171	C-22	22	7/30	.064"
7172	C-20	20	7/28	.073"
7173	C-18	18	7/26	.085"
7174	C-16	16	19/29	.095"
7175	C-14	14	19/27	.109"

**TYPE C—NYLON JACKET**

NYLON JACKET THICKNESS: 24 .002, 22, 20, 18 .003, 16-14 .004

Cat. No.	Mil-W-1687C Type Designation	Size AWG	Minimum Strand	Nom. O.D.
7170N	C-24	24	7/32	.065"
7171N	C-22	22	7/30	.072"
7172N	C-20	20	7/28	.079"
7173N	C-18	18	7/26	.090"
7174N	C-16	16	19/29	.099"
7175N	C-14	14	19/27	.114"

STOCK COLORS: Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple. Also available in tracer colors. Additional types available to order.

STD. PUT-UP 100 FT.-1000 FT.

**SPECIFICATION MIL-W-1687D**  
**TYPE D—HIGH TEMPERATURE VINYL—3000 VOLTS**

DESCRIPTION: One Conductor Stranded Similar to Type C—Heavier Wall Hi-Temp Thermoplastic Insulation. Nom. Wall 24 thru 14 .032, 12 thru 6 .040.

Cat. No.	Mil-W-1687D Type Designation	Size AWG	Cond. Strand	Nom. O.D.
7180	D-24	24	7/32	.084"
7181	D-22	22	7/30	.089"
7182	D-20	20	10/30	.097"
7183	D-18	18	16/30	.107"
7184	D-16	16	26/30	.116"
7185	D-14	14	41/30	.130"
7186	D-12	12	65/30	.163"
7187	D-10	10	105/30	.182"
7188	D-8	8	133/29	.247"
7189	D-6	6	133/27	.291"

MIL-W-16878B Type D Available with Nylon Jacket.

STD. PUT-UP 100 FT.-1000 FT.

ALL WIRES ON THIS PAGE CAN BE ORDERED CUT AND STRIPPED TO YOUR SPECIFICATIONS.

**SPECIFICATION MIL-W-76B TYPE MW**  
**(Medium Wall) PLASTIC HOOK-UP WIRE**  
**TYPE MW 1000 VOLTS (Fungus Proof)**  
**SUPERSEDES JAN-C-76 TYPE SRIR**  
1000 VOLT

TEMP. RATING:  $-40^{\circ}\text{C}$  TO  $+80^{\circ}\text{C}$

STRANDED

Cat. No.	Spool	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Nom. O.D.
7024	1000'	24	MW-C 24(16)U	16/36	.015"	.074"
7024-S	1000'	24	MW-C 24(16)U	16/36	.015"	.085"
7001	1000'	22	MW-C 22(7)U	7/30	.017"	.085"
*7001-S	1000'	22	MW-C 22(7)U	7/30	.017"	.098"
7003	1000'	20	MW-C 20(10)U	10/30	.017"	.114"
*7003-S	1000'	20	MW-C 20(10)U	10/30	.017"	.132"
7005	1000'	18	MW-C 18(16)U	16/30	.017"	.055"
*7005-S	1000'	18	MW-C 18(16)U	16/30	.017"	.055"
7007	1000'	16	MW-C 16(26)U	26/30	.017"	.066"
7009	1000'	14	MW-C 14(41)U	41/30	.017"	.066"
7011	1000'	12	MW-C 12(65)U	65/30	.017"	.074"

SOLID

7000	1000'	22	MW-C 22(1)U	1	.017"	.061"
7002	1000'	20	MW-C 20(1)U	1	.017"	.068"
7004	1000'	18	MW-C 18(1)U	1	.017"	.075"

STD. PUT-UP 100 FT.-1000 FT.

STOCK COLORS: White, Yellow, Lt. Blue, Black, Violet (purple), Blue, Brown, Lt. Green, Pink, Red, Green, Tan, Orange, Gray (slate).

\*SINGLE SPIRAL TRACER COLORS AVAILABLE:

White/Black	White/Orange	White/Blue
White/Brown	White/Yellow	White/Purple
White/Red	White/Green	White/Gray

\*DOUBLE SPIRAL TRACER COLORS AVAILABLE:

White/Black/Red	White/Black/Blue	White/Black/Gray
White/Black/Green	White/Black/Brown	White/Black/Purple
White/Black/Yellow	White/Black/Orange	

Additional spiral tracer combination available, to order, for all numbers.

**SPECIFICATION MIL-W-76B TYPE MW**  
**(Medium Wall)—NYLON JACKET 1000 VOLT**  
**(Fungus Proof)**  
**(Supersedes Jan-C-76 Types SRIR and WL Nylon Jacket)**

DESCRIPTION: One conductor stranded tinned copper with thermoplastic insulation and extruded nylon jacket overall.

TEMP. RATING:  $-40^{\circ}\text{C}$  TO  $+90^{\circ}\text{C}$

Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Nom. O.D.
7224	24	MW-C 24(16)J	16/36	.015"	.068"
*7222	22	MW-C 22(7)J	7/30	.017"	.075"
*7220	20	MW-C 20(10)J	10/30	.017"	.087"
*7218	18	MW-C 18(16)J	16/30	.017"	.100"
7216	16	MW-C 16(26)J	26/30	.017"	.122"
7214	14	MW-C 14(41)J	41/30	.017"	.122"
7212	12	MW-C 12(65)J	65/30	.017"	.140"
7210	10	HW-C 10(105)J	105/30	.045"	.240"

STD. PUT-UP 100 FT.-1000 FT.

NYLON JACKET THICKNESS: #24 .002; 22, 20, 18 .003; 16, 14 .004; 12 .005; 10 .007.

STOCK COLORS: White, Orange, Purple, Black, Yellow, Gray, Brown, Green, Red, Blue.

White/Black	White/Yellow	White/Gray	White/Black/Green
White/Brown	White/Green	White/Black/Red	White/Black/Orange
White/Red	White/Blue	White/Black/Yellow	White/Black/Brown
White/Orange	White/Purple	White/Black/Blue	White/Black/Gray

\*In addition Nos. 7218, 7220, 7222, available in Red/Black and Black/White. Nos. 7212, 7210 available solid colors only.

**SPECIFICATION MIL-W-76B**  
**TYPE MW (Medium Wall)—GLASS BRAID 1000 VOLTS**  
**(Supersedes Jan-C-76 Types SRIR and WL Glass Braid)**

DESCRIPTION: One conductor stranded tinned copper with thermoplastic insulation and lacquered glass braid overall.

Nom. Wall 1.017"

TEMP. RATING:  $-40^{\circ}\text{C}$  TO  $+80^{\circ}\text{C}$

Cat. No.	Spool	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
7022	100'-1000'	22	MW-C 22(7)B	7/30	.079"
7020	100'-1000'	20	MW-C 20(10)B	10/30	.084"
7018	100'-1000'	18	MW-C 18(16)B	16/30	.100"
7016	100'-1000'	16	MW-C 16(26)B	26/30	.116"
*7014	100'-1000'	14	MW-C 14(41)B	41/30	.129"
*7012	100'-1000'	12	MW-C 12(65)B	65/30	.149"

STOCK COLORS: White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White/Brown, White/Black, White/Orange, White/Yellow, White/Green, White/Blue, White/Red, White/Gray, White/Purple, White/Black/Red, White/Black/Yellow, White/Black/Blue, White/Black/Green, White/Black/Orange, White/Black/Brown, White/Black/Gray. \*Nos. 7014, 7012, available stock in solid colors.

**TYPE HW (Heavy Wall)—GLASS BRAID**

(Supersedes Jan-C-76 Type SRHW—Glass Braid)

TEMP. RATING:  $-40^{\circ}\text{C}$  TO  $+80^{\circ}\text{C}$

NOM. WALL .045"

Cat. No.	Spool	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
7010	100'-1000'	10	HW-C 10(105)B	105/30	.237"
7008	100'-1000'	8	HW-C 8(133)B	133/29	.293"
7006	100'-1000'	6	HW-C 6(133)B	133/27	.340"

STOCK COLORS: White, Black. Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.



MIL-W-76B, MIL-W-1687D WIRE • CABLE  
HIGH TEMP. COAX CABLES PER MIL-C-17C



**SPECIFICATION MIL-W-76B**

**TYPE HW (Heavy Wall)—2500 VOLTS (Fungus Proof)**

600 VOLTS SIZES—14 through 6—(Supersedes Jan-C-76 Type SRHW)—Temp. Rating—40°C to 80°C  
Nom. Wall Size—22 through 16 .033: Size 14 through 6 .045

DESCRIPTION: Similar to type MW. One conductor stranded tinned copper with larger wall of primary thermoplastic insulation to take 2500 V RMS.

Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.	Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
7322	22	HW-C 22(7)U	7/30	.105"	7312	12	HW-C 12(65)U	65/30	.195"
7320	20	HW-C 20(10)U	10/30	.112"	*7013	10	HW-C 10(105)U	105/30	.217"
7318	18	HW-C 18(16)U	16/30	.122"	*7015	8	HW-C 8(133)U	133/29	.268"
7316	16	HW-C 16(26)U	26/30	.135"	*7017	6	HW-C 6(133)U	133/27	.315"
7314	14	HW-C 14(41)U	41/30	.175"					

STD. PUT-UP 100'-1000'

STOCK COLORS: White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray. Additional sizes, colors available to order.

**SPECIFICATION MIL-W-76B TYPE LW (Light Wall) TYPE LW—LW—VINYL 300 VOLTS**

DESCRIPTION: One conductor stranded tinned copper with light wall of primary thermoplastic insulation. Nom. Wall .010".  
TEMP. RATING —40°C TO +80°C

Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.	Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
7330	30	LW-C 30(7)U	7/38	.033"	7330N	30	LW-C 30(7)U	7/38	.036"
7328	28	LW-C 28(7)U	7/36	.035"	7328N	28	LW-C 28(7)U	7/36	.039"
7326	26	LW-C 26(10)U	10/36	.040"	7326N	26	LW-C 26(7)U	7/34	.042"
7324	24	LW-C 24(7)U	7/32	.044"	7324N	24	LW-C 24(7)U	7/32	.047"
7324/22	22	LW-C 22(7)U	7/30	.050"	7324/20N	20	LW-C 22(7)U	7/30	.053"
7324/20	20	LW-C 20(7)U	7/28	.060"	7324/22N	22	LW-C 20(7)U	7/28	.065"

**MIL-W-1687D**

**TYPE C—SHIELDED**

**1000 V**

DESCRIPTION: Stranded tinned copper, .016" wall white polyvinylchloride insulation, braided tinned copper shield overall temp. rating —55°C to +105°C 1000 volts.

Cat. No.	Size AWG	Min. Strand	Nom. Wall	Nom. O.D.
7178/24	24	7/32	.016"	.075"
7178/22	22	7/30	.016"	.085"
7178/20	20	7/28	.016"	.095"
7178/18	18	7/26	.016"	.105"
7178/16	16	19/26	.016"	.115"

STD. PUT-UP: 1000 FT.

**MIL-W-1687D**

**TYPE C—SHIELDED—VINYL JACKET 1000V**

DESCRIPTION: Stranded tinned copper, .016" wall white with polyvinylchloride insulation braided tinned copper shield with polyvinylchloride jacket overall. Resistant to acids, oil, alkalis, flame, fungus, solvents, moisture. Temp. rating —55°C to +105°C.

Cat. No.	Size AWG	Min. Strand	Nom. Wall	Nom. O.D.
7179/24	24	7/32	.016"	.094"
7179/22	22	7/30	.016"	.104"
7179/20	20	7/28	.016"	.112"
7179/18	18	7/26	.016"	.120"
7179/16	16	19/29	.016"	.133"

STD. PUT-UP: 1000 FT.

**BIRNBACH COAXIAL CABLES WITH HIGH TEMPERATURE TEFLON\* CORE DIELECTRIC MEETS MIL-C-17C**

These Teflon\* Core Dielectric Co-Axial Cables combine both miniaturization and hi-temperature qualities. The Teflon Jackets are weatherproof, resistant to fuels and are extremely flexible.

Birn- bach No.	Military Number RG/U Type	Ohms	Jkt. Mtl.	Cap. MMF/Ft.	Dielectric Material	Inner Conductor	Shield	O.D. Inches	Max. Oper. Volts RMS	Nom. Atten. DB/100 Ft. 400 Mc	RG/U Type
B161/U	161/U	70	Black Nylon	20	Teflon	7/38 Silvered Cad. Bronze	Silver Covered Copper	.082	1000	17.4	161/U
B178/U	178/U	50	Kel-F	28.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.075	1000	28.0	178/U
B178A/U	178A/U	50	Kel-F	28.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.075	1000	28.0	178A/U
B178B/U	178B/U	50	FEP Teflon	28.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.075	1000	28.0	178B/U
B179/U	179/U	70	Kel-F	19.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.090	1200	16.0	179/U
B179A/U	179A/U	75	Kel-F	19.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.105	1200	16.0	179A/U
B179B/U	179B/U	75	FEP Teflon	19.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.105	1200	16.0	179B/U
B180/U	180/U	93	Kel-F	15.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.141	1500	11.0	180/U
B180A/U	180A/U	95	Kel-F	15.0	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.145	1500	11.0	180A/U
B180B/U	180B/U	*95	FEP Teflon	15.0	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.145	1500	11.0	180B/U
B187/U	187/U	75	TFE	19.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.110	1200	16.0	187/U
B187A/U	187A/U	75	Teflon	19.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.110	1200	16.0	187A/U
B188/U	188/U	50	TFE Teflon	29.0	Teflon	7/.0067 Silvered Copperweld	Silver Covered Copper	.110	1200	16.7	188/U
B188A/U	188A/U	50	TFE Teflon	29.0	Teflon	7/.0067 Silvered Copperweld	Silver Covered Copper	.110	1200	16.7	188A/U
B195/U	195/U	95	TFE Teflon	15.0	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.155	1500	11.0	195/U
B195A/U	195A/U	95	TFE Teflon	15.0	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.155	1500	11.0	195A/U
B196/U	196/U	50	TFE Teflon	28.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.080	1000	28.0	196/U
B196A/U	196A/U	50	TFE Teflon	28.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.080	1000	28.0	196A/U
B316/U	316/U	50	FEP Teflon	29.0	Teflon	7/.0067 Silvered Copperweld	Silver Covered Copper	.110	1200	16.7	316/U

STD. PUT-UP: 500 Ft., 1000 Ft.

\*TEFLON—DUPONT

**Birnbach**

SHIELDED PLASTIC HOOK-UP WIRE MIL-W-76B • SHIELDED • NYLON VINYL JACKETS • AIRCRAFT PLASTIC HOOK-UP WIRE MIL-W-5086A, MIL-C-7078A



**SHIELDED PLASTIC HOOK-UP WIRE**

**SPECIFICATION MIL-W-76B** TEMPERATURE RATING: -40°C TO +80°C **TYPE MW (Medium Wall) — SHIELDED**

DESCR.: One conductor stranded tinned copper with thermoplastic insulation and tinned copper shielded braid overall. (Supersedes Jan-C-76 Type SRIR Shielded)

Cat. No.	Spool	Size AWG	MIL-W-76B Type Designation	Minimum Strand	Nom. Wall	Volt Rating	Nom. O.D.
7074	1000'	24	MW-C 24(16)S	16/36	.015"	1000	.074"
7074-1	100'	24	MW-C 24(16)S	16/36	.015"	1000	.074"
7072	1000'	22	MW-C 22(7)S	7/30	.017"	1000	.084"
7072-1	100'	22	MW-C 22(7)S	7/30	.017"	1000	.084"
7070	1000'	20	MW-C 20(10)S	10/30	.017"	1000	.094"
7070-1	100'	20	MW-C 20(10)S	10/30	.017"	1000	.094"
7068	1000'	18	MW-C 18(16)S	16/30	.017"	1000	.106"
7068-1	100'	18	MW-C 18(16)S	16/30	.017"	1000	.106"
7067	1000'	16	MW-C 16(26)S	26/30	.017"	1000	.121"
7067-1	100'	16	MW-C 16(26)S	26/30	.017"	1000	.121"
*7066	1000'	14	MW-C 14(41)S	41/30	.017"	1000	.137"
*7065	1000'	12	MW-C 12(65)S	65/30	.017"	1000	.155"

**STOCK COLORS:** (Underneath Shield) Black, White, Red, Yellow, Brown, Green, Blue, Gray. \*Nos. 7066, 7065, available from stock in Black, White or Red. **ALL WIRES ON THIS PAGE CAN BE ORDERED CUT AND STRIPPED TO YOUR SPECIFICATIONS.** Also multiconductor can be formed to order twisted shielded, with or without plastic jacket overall.

**SHIELDED PLASTIC HOOK-UP WIRE**

**SPECIFICATION MIL-W-76B TYPE MW—SHIELDED—NYLON JACKET**

DESCRIPTION: One conductor stranded tinned copper, white medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, clear nylon (polyimide) jacket overall. Temperature rating -40° to +90°C. Resistant to acids, alkalis, oil, flame, moisture, fungus.

Cat. No.	Spool	Size AWG	MIL-W-76A Type Designation	Strand	Nom. Wall	Volt Rating	Nom. O.D.
7074J	1000'	24	MW-C24(16)SJ	16/36	.015"	1000	.091"
7072J	1000'	22	MW-C22(7)SJ	7/30	.017"	1000	.100"
7070J	1000'	20	MW-C20(10)SJ	10/30	.017"	1000	.105"
7068J	1000'	18	MW-C18(16)SJ	16/30	.017"	1000	.115"
7067J	1000'	16	MW-C16(26)SJ	26/30	.017"	1000	.125"
7066J	1000'	14	MW-C14(41)SJ	41/30	.017"	1000	.138"
7065J	1000'	12	MW-C12(65)SJ	65/30	.017"	1000	.160"

Additional colors available to order.

**SPECIFICATION MIL-W-76B TYPE MW—SHIELDED—VINYL JACKET**

DESCRIPTION: One conductor stranded tinned copper, white medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, black PVC (polyvinylchloride) jacket overall. Temperature rating -40° to +90°C. Resistant to acids, alkalis, oil, flame, moisture, fungus.

Cat. No.	Spool	Size AWG	MIL-W-76A Type Designation	Strand	Nom. Wall	Volt Rating	Nom. O.D.
7074VJ	1000'	24	MW-C24(16)SJ	16/36	.015"	1000	.095"
7072VJ	1000'	22	MW-C22(7)SJ	7/30	.017"	1000	.105"
7070VJ	1000'	20	MW-C20(10)SJ	10/30	.017"	1000	.112"
7068VJ	1000'	18	MW-C18(16)SJ	16/30	.017"	1000	.120"
7067VJ	1000'	16	MW-C16(26)SJ	26/30	.017"	1000	.133"
7066VJ	1000'	14	MW-C14(41)SJ	41/30	.017"	1000	.148"
7065VJ	1000'	12	MW-C12(65)SJ	65/30	.017"	1000	.170"

Additional colors available to order.

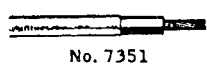
**AIRCRAFT PLASTIC HOOK-UP WIRE**

**SPECIFICATIONS MIL-W-5086A and MIL-C-7078A (105°C Rating)**

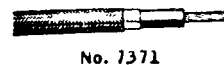
**NYLON JACKET**

Used where a single conductor, 600 volt insulated wire, is required. This aircraft electrical wire is resistant to effects of salt water, oils, aircraft engine fuels, alcohol, fungus, heat, coil, salt water, abrasion, meets -65°F temperature test.

DESCRIPTION: Type 1 MIL-W-5086A One conductor stranded tinned copper with plastic insulation, nylon jacket overall. Type 2 MIL-W-5086A—one conductor stranded tinned copper, plastic insulation, nylon lacquered glass braid. Color: White.



No. 7351



No. 7371

**MIL-W-5086A UNSHIELDED (Supersedes AN-J-C-48A)**

**600 Volt Rating**

Cat. No.	Size AWG	Mil. Type	Type	Cond. Strand.	Nom. O.D.	Cat. No.	Size AWG	Mil. Type	Type	Cond. Strand.	Nom. O.D.
7351	22	AN-22	No. 1	19/34	.070"	7385/2	2	AN-2	No. 2	665/30	.412"
7353	20	AN-20	No. 1	19/32	.080"	7365/0	0	AN-0	No. 2	1045/30	.518"
7355	18	AN-18	No. 1	19/30	.090"	7365/00	00	AN-00	No. 2	1330/30	.588"
7357	16	AN-16	No. 1	19/29	.100"	7351 NB	22	AN-22	No. 2	19/34	.068"
7359	14	AN-14	No. 1	19/27	.125"	7353 NB	20	AN-20	No. 2	19/32	.078"
7361	12	AN-12	No. 1	19/25	.140"	7355 NB	18	AN-18	No. 2	19/30	.088"
7363	8	AN-8	No. 2	133/29	.240"	7357 NB	16	AN-16	No. 2	19/29	.094"
7364	6	AN-6	No. 2	133/27	.297"	7359 NB	14	AN-14	No. 2	19/27	.117"
7365	4	AN-4	No. 2	133/25	.355"	7361 NB	12	AN-12	No. 2	19/25	.137"
						7362 NB	10	AN-10	No. 2	49/27	.189"

**MIL-C-7078A SHIELDED (Supersedes AN-C-168)**

7371	22	AN-22	No. 1	19/34	100"	7374	16	AN-16	No. 1	19/29	139"
7372	20	AN-20	No. 1	19/32	110"	7375	14	AN-14	No. 1	19/27	158"
7373	18	AN-18	No. 1	19/30	124"	7376	12	AN-12	No. 1	19/25	177"

DESCRIPTION: One conductor stranded tinned copper with plastic insulation, nylon jacket with tinned copper shielded braid overall. Color: White under shield 1,000' Spools. Additional types to order.

**ALL WIRE ON THIS PAGE CAN BE CUT AND STRIPPED TO YOUR SPECIFICATION**

**Birnbach**

**HIGH VOLTAGE, SILICONE HOOK-UP WIRE**  
KEL-F HOOK-UP, CATHODE RAY, 105° UL



**200° C. BIRSIL SILICONE RUBBER HOOK-UP LEAD WIRE 600 VOLT**

This Birsil Silicone Rubber Hook up lead wire withstands extreme temperature range and flexibility from -104° C. to +400° F. with retention of physical properties and is highly resistant to flex cracking at temperature extremes; fungus resistant; corona resistant; engineered for high-heat and hi-frequency applications; low power factor; acid-alkali-oil resistant; low dielectric constant; insulation approaching mica. Approved by U. L. but consumer must apply for Underwriter's Laboratories approval for individual product.

Cat. No.	Spool	Size AWG	Strand	Nom. Ins. Wall	Volt Rating	Breakdown Voltage AC	Nom. O.D.
7622	1000'	22	7/30	1/32"	600	11,500	.105"
7622-1	100'	22	7/30	1/32"	600	11,500	.105"
7620	1000'	20	10/30	1/32"	600	18,000	.121"
7620-1	100'	20	10/30	1/32"	600	18,000	.121"
7618	1000'	18	16/30	1/32"	600	21,000	.128"
7618-1	100'	18	16/30	1/32"	600	21,000	.128"
7616	1000'	18	26/30	1/32"	600	20,000	.144"
7616-1	100'	18	26/30	1/32"	600	20,000	.144"
7614	1000'	14	41/30	1/32"	600	15,500	.165"
7614-1	100'	14	41/30	1/32"	600	15,500	.165"
7612	1000'	12	65/30	1/32"	600	14,500	.185"
7612-1	100'	12	65/30	1/32"	600	14,500	.185"
7610	1000'	10	65/28	3/64"	600	20,000	.240"
7610-1	100'	10	65/28	3/64"	600	20,000	.240"
7608	1000'	8	84/27	1/16"	2300		.320"

**DESCRIPTION:**  
One conductor, tinned copper strands, silicone rubber insulation, glass braid, lacquered. Color: White.



STD. PUT-UP 100 FT.-1000 FT.

Additional sizes and colors available to order. Types F and FF per MIL-W-16878D available to order.

**BIRFLENE\* KEL-F HOOK-UP WIRE**  
-125° C. to +175° C. MEETS MIL-W-12349-SPEC

**PERFORMANCE SPECIFICATIONS:**

Continuous: -60° to +175° C. Operating Voltage: 1000 volts RMS. Spark Test: 7500 volts. Dielectric Strength: 5000 volts at 60° C. for 1 minute. Insulation Resistance: Greater than 5000 Meg Ohms/1000 Ft. at 60° C. Moisture Absorption: NIL. Flammability: Non-flammable. Resistance to Chemicals: All solvents and acids. Aging: Outdoor, 1 year; no detectable change.

Cat. No.	Spool	Size AWG	Strand	Nom. Ins. Wall	Nom. O.D.
7130	1000'	30	7/38	.006"	.029"
7130-1	100'	30	7/38	.006"	.029"
7128	1000'	28	7/36	.006"	.032"
7128-1	100'	28	7/36	.006"	.032"
7126	1000'	26	7/34	.008"	.037"
7126-1	100'	26	7/34	.008"	.037"
7124	1000'	24	7/32	.008"	.043"
7124-1	100'	24	7/32	.008"	.043"
7122	1000'	22	7/30	.008"	.050"
7122-1	100'	22	7/30	.008"	.050"
7120	1000'	20	7/28	.010"	.060"
7120-1	100'	20	7/28	.010"	.060"
7118	1000'	18	16/30	.010"	.070"
7118-1	100'	18	16/30	.010"	.070"
7116	1000'	16	19/29	.010"	.079"
7116-1	100'	16	19/29	.010"	.079"



**DESCRIPTION:**  
One conductor silver plated copper stranded, insulation — Monochlorotrifluoroethylene (Birfene Kel-F).

**COLORS:** White, Red, Green, Gray, Black, Orange, Dk. Blue, Lt. Blue, Brown, Yellow, Purple

Available in Spiral Tracers.

\*Made with Kellogg Co. Kel-F or Bakelite Co. Fluorothene.

**HI-VOLTAGE and CATHODE RAY CABLE**

Used for 10,000, 20,000, 40,000, 60,000 volt applications as for cathode ray tubes in TV receivers, oscilloscopes and other electronic devices. Has dielectric constant of 2.7 and power factor of .002. Shielded Hi-Voltage type used to shield RF radiation in X-Ray, diathermy, medical equipment, and in transmitters.

**UNSHIELDED**

Cat. No.	Spool	Size AWG	Strand	Nom. Ins. Wall	Suggested Working Voltage	Nom. O.D.
7402	1000'	20	10/30	.047"	10,000	.125"
7402-1	100'	20	10/30	.047"	10,000	.125"
7412	1000'	20	10/30	.088"	20,000	.169"
7412-1	100'	20	10/30	.088"	20,000	.169"
7418	1000'	18	16/30	.047"	10,000	.135"
7418-1	100'	18	16/30	.047"	10,000	.135"
7428	1000'	18	16/30	.069"	20,000	.179"
7428-1	100'	18	16/30	.069"	20,000	.179"
7448	1000'	18	16/30	.095"	40,000	.231"
7448-1	100'	18	16/30	.095"	40,000	.231"
7449	1000'	18	16/30	.123"	60,000	.285"
7449-1	100'	18	16/30	.123"	60,000	.285"



**DESCRIPTION:**

One conductor stranded copper tinned rulan (flame retarding type) polyethylene insulation. Available white/red tracer. Temp. Rating: 105°C

Shielded: Same as above with tinned copper braided shield overall.

Special constructions available to order.

**SHIELDED**

7458	1000'	18	16/30	.095"	40,000	.256"
7458-1	100'	18	16/30	.095"	40,000	.256"

**PLASTIC INSULATED HOOK-UP WIRE**

Designed for the chassis, sub-chassis wiring of radio and television receivers and transmitters inside or outside the chassis. UL approved for 105° C. (221° F.) operating temperature.

**105° C. — 600 VOLT RATING UL APPROVED (CSA 600V-90°C)**

Cat. No.	Spool	AWG	Stranding	Nom. Wall	Volt. Breakdown	DC Ins. Res. Megs./Ft.	Max. O.D.
7201	1000'	22	7/30	.032"	18000	5000	.100"
7201-1	100'	22	7/30	.032"	18000	5000	.100"
7203	1000'	20	10/30	.032"	18000	5000	.104"
7203-1	100'	20	10/30	.032"	18000	5000	.104"
7205	1000'	18	16/30	.032"	18000	5000	.112"
7205-1	100'	18	16/30	.032"	18000	5000	.112"
7207	1000'	16	26/30	.032"	18000	5000	.129"
7207-1	100'	16	26/30	.032"	18000	5000	.129"
7202	1000'	22	Solid	.032"	18000	5000	.095"
7202-1	100'	22	Solid	.032"	18000	5000	.095"
7204	1000'	20	Solid	.032"	18000	5000	.102"
7204-1	100'	20	Solid	.032"	18000	5000	.102"



**DESCRIPTION:**

One Conductor stranded annealed copper tinned, plastic insulation.

COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple

ALL WIRES ON THIS PAGE CAN BE ORDERED CUT & STRIPPED TO YOUR SPECIFICATIONS.

Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.



**Birnbach**

**MINIATURE, SUBMINIATURE, HIGH TEMP.  
SHIELDED & MULTICONDUCTOR**



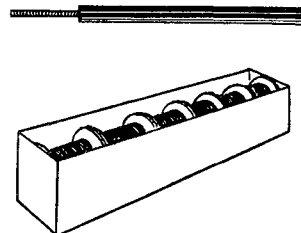
**MINIATURIZATION HOOK-UP WIRE and CABLE**

**HIGH TEMPERATURE 105°C.**

**UNSHIELDED — ONE CONDUCTOR**

Used in miniaturized equipment Phono-pickup lead computers transistor circuits, electro-medical and electro therapeutic apparatus, instrumentation projects, miniaturization programs, where fine sizes are required with high operating temperature.  
For "Lab" requirements Miniaturization Hook-Up Wire and Cable assortments—WRITE for information.

Cat. No	Spool	No. of Cond.	Size AWG	Conductor Strand	Nom. Wall	Nom. O.D.
7534	1000'	1	34	4/40	.010"	.027"
7534-500	500'	1	34	4/40	.010"	.027"
7532	1000'	1	32	7/40	.010"	.029"
7532-500	500'	1	32	7/40	.010"	.029"
7530	1000'	1	30	7/38	.010"	.030"
7530-500	500'	1	30	7/38	.010"	.030"
7529	1000'	1	29	5/36	.010"	.030"
7529-500	500'	1	29	5/36	.010"	.030"
7528	1000'	1	28	7/36	.010"	.035"
7528-500	500'	1	28	7/36	.010"	.035"
7527	1000'	1	27	7/35	.010"	.037"
7527-500	500'	1	27	7/35	.010"	.037"
7526	1000'	1	26	10/36	.010"	.038"
7526-500	500'	1	26	10/36	.010"	.038"
7524	1000'	1	24	16/36	.015"	.055"
7524-500	500'	1	24	16/36	.015"	.055"



**DESCRIPTION:**  
One conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation overall.

STOCK COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple

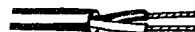
**SUB-MINIATURE**

**MULTI-CONDUCTOR CABLE**

**(Super Flexible)**



**DESCRIPTION:** Multi-Cond. tinned copper stranded 105° C high temperature P.V.C. thermoplastic insulation. When jacketed clear P.V.C. thermoplastic used over cabled wire.



**NO OUTER JACKET**

**CLEAR VINYL JACKET OVERALL**

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall	Nom. O.D.
7652	1000'	2	30	7/38	.010"	.059"
7652	500'	2	30	7/38	.010"	.059"
7653	1000'	3	30	7/38	.010"	.065"
7653	500'	3	30	7/38	.010"	.065"
7654	1000'	4	30	7/38	.010"	.072"
7654	500'	4	30	7/38	.010"	.072"

**CONDUCTOR COLOR CODE CHART:**  
1 Black, 2 White, 3 Red, 4 Green

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall Jacket	Nom. O.D.
7668	1000'	2	28	7/36	.010"	.079"
7668	500'	2	28	7/36	.010"	.079"
7669	1000'	3	28	7/36	.010"	.086"
7669	500'	3	28	7/36	.010"	.086"
7670	1000'	4	28	7/36	.010"	.095"
7670	500'	4	28	7/36	.010"	.095"

**CONDUCTOR COLOR CODE CHART:**  
1 Black, 2 White, 3 Red, 4 Green

**SUB-MINIATURE**

**SHIELDED HOOK-UP WIRE**

**(Super Flexible)**

Cat. No	Spool	No. of Cond.	Size AWG	Conductor Strand	Nom. Wall	Nom. O.D.
7538	1000'	1	30	7/38	.010"	.053"
7538	500'	1	30	7/38	.010"	.053"
7535	1000'	1	28	7/36	.010"	.058"
7535	500'	1	28	7/36	.010"	.058"
7537	1000'	1	26	10/36	.010"	.061"
7537	500'	1	26	10/36	.010"	.061"
7536	1000'	1	24	16/36	.015"	.075"
7536	500'	1	24	16/36	.015"	.075"

STOCK COLOR: White (under shield)



**DESCRIPTION:**  
One or multi-conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation and tinned copper shielded braid overall.

**SUB-MINIATURE**

**MULTI-CONDUCTOR CABLE SHIELDED**

**(Super Flexible)**



**DESCRIPTION:** Multi-conductor, tinned copper stranded 105° C high temperature P.V.C. thermoplastic insulation, tinned copper shield. When jacketed clear P.V.C. Thermoplastic jacket used over tinned copper shield.



**NO OUTER JACKET**

**CLEAR VINYL JACKET OVERALL**

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall	Nom. O.D.
7542	1000'	2	24	16/36	.015"	.114"
7542/3	1000'	3	24	16/36	.015"	.123"
7542/4	1000'	4	24	16/36	.015"	.144"

**CONDUCTOR COLOR CODE CHART:**  
1 Black, 2 White, 3 Red, 4 Green

Cat. No.	Spool	No. of Cond.	Size AWG	Cond. Strand	Nom. Wall Jacket	Nom. O.D.
7552	1000'	2	28	7/36	.010"	.137"
7552/3	1000'	3	28	7/36	.010"	.145"
7552/4	1000'	4	28	7/36	.010"	.163"

**CONDUCTOR COLOR CODE CHART:**  
1 Black, 2 White, 3 Red, 4 Green

**ALL WIRES ON THIS PAGE CAN BE ORDERED CUT & STRIPPED TO YOUR SPECIFICATIONS.**  
Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.

# Birnbach


KINKLESS TEST LEAD WIRE — SHIELDED CABLE  
PHONO PICKUP WIRE — SERVICE and POWER CORDS



## KINKLESS TEST LEAD WIRE

Used with portable test equipment; as tested, leads in analyzers, oscillators, instruments; wherever extreme flexibility and limpness is required. Has excellent dielectric properties.

### DESCRIPTION:

Nos. 61, 62—#20—41/36 extra flexible annealed tinned copper, stranded.  **COLORS: Red, Black**


Nos. 66, 67—#18—65/36 extra flexible annealed tinned copper stranded; paper serve; 3/64" special low capacity rubber, wax finish.

Cat. No.	Spool	Size AWG	Strand	Ins.	Puncture Voltage	Nom. O.D.
61	100'	20	41/36	3/64"	20,000 Volts	.137"
62	500'	20	41/36	3/64"	20,000 Volts	.137"
66	100'	18	65/36	3/64"	22,000 Volts	.145"
67	500'	18	65/36	3/64"	22,000 Volts	.145"

Types WS-16/U Black, WS-17/U Red, per MIL-W-13169 Specification available same construction as Birnbach #67 except compound per specification.

## HEAVY DUTY HI-VOLTAGE TYPE

### DESCRIPTION:

Nos. 68, 69—#18—65/36 extra flexible annealed tinned copper; stranded; paper serve; 5/64" special low capacity rubber, wax finish. 

Used for oscillators, analyzers, TV, therapeutic instruments, etc.; wherever an extremely flexible high voltage lead is indicated.


Cat. No.	Spool	Size AWG	Strand	Ins.	Puncture Voltage	Nom. O.D.
68	100'	18	65/36	5/64"	29,000 Volts	.210"
69	500'	18	65/36	5/64"	29,000 Volts	.210"

For longer lengths and alternate put-ups—Specify.

## SHIELDED PHONO WIRE

Used where small diameter, limpness and extreme flexibility is necessary as for phono pickup arms and grid wire.

### DESCRIPTION:

#1822—Single Conductor #22-7/30 Tinned Copper Strands, Vinyl plastic insulation, close tinned copper shield braided overall. 

#1824—Single Conductor #24-16/36 Extremely Flexible Tinned Copper Strands, special plastic insulation, close tinned copper shield braided overall.

#1825—Same construction as #1824 except with fine cotton braid overall.

See Page 11 for miniature and subminiature shielded wires suitable for wiring phono arm from cartridge to amplifier.

## TINNED COPPER SHIELD OVERALL

Cat. No.	Spool	Strand	Cond.	Size AWG	Insul.	Nom. O.D.
1824	500'	1	24	16/36	.010"	.080"
1824M	1000'	1	24	16/36	.010"	.080"
1822	100'	1	22	7/30	.010"	.080"
1822B	500'	1	22	7/30	.015"	.090"
1822C	1000'	1	22	7/30	.015"	.090"

## COTTON BRAID OVER SHIELD


1825	500'	1	24	16/36	.010"	.095"
1825M	1000'	1	24	16/36	.010"	.095"

For longer lengths and alternate put-ups—Specify.

## SHIELDED GRID LEAD WIRE

Used to reduce loss in grid lead use, also to reduce interference caused by motors, high tension wires, X-ray machines, etc.

### DESCRIPTION:

#820—Single Conductor #20—10/30, #818—16/30 Stranded Tinned Copper, low loss rubber insulation, cotton braid lacquered, closely woven tinned copper shield overall. 


Cat. No.	Spool	Size AWG	Strand	Ins. Under Shield	Cap./Ft. Mmf.	Nom. O.D.
820	100'	20	10/30	.085"	.70	.140"
818	100'	18	16/30	.085"	.75	.150"

For longer lengths and alternate put-ups—Specify.


## 7MM HIGH TENSION CABLE

Used as hi voltage leads in electronic equipment and instruments, photo electric cell leads, automotive, etc.

### DESCRIPTION:

#1600 — Unshielded One Conductor #18-19/29 stranded tinned copper wire, rubber insulation, cotton braid highly lacquered.  No. 1600

### DESCRIPTION:

#781 — Shielded Same construction as #1600 plus a closely woven tinned copper shield overall.  No. 781

Cat. No.	Spool	Size AWG	Strand	Insul.	Nom. O.D.
1600	100'	18	19/29	3/32"	.275"
781	100'	18	19/29	3/32"	.295"

Used for auto and aircraft ignition systems where grounding is required for elimination of interference. For longer lengths and alternate put-ups—specify.

## New Plastic Kinkless Test Lead Wire

New formulation vinyl compound

insulation allows maximum flexibility; rough treatment; extreme variation in climatic conditions; excellent abrasion resistance; greater temperature stability from -80°C to +115°C; fungus resistant; self extinguishing-flame proof; smooth surface. Resists exposure to gasoline and oil.

**DESCRIPTION:** one conductor tinned copper stranded, special formulation vinyl insulation. **COLORS:** Black, Red, Yellow, Green, White, Blue.

Cat. No.	Size AWG	Strand.	Ins.	Nom. O.D.
1922	22	26/36	.032"	.100"
1920	20	26/34	.032"	.104"
1918	18	65/36	.032"	.112"
1916	16	65/34	.032"	.129"


Standard Package: 100', 500', 1000' spools.

For portable test equipment; as test leads for instrumentation exceeds the requirements for MIL-I-3930A type JP(PVC). It is superior to synthetic rubber spec MIL-R-6855 Class II Grade 60.

## HI VOLTAGE LACQUERED WIRE

Used as primary wiring as for automobiles, tail, dashboard, horn, etc. Instrument leads, high voltage and primary voltage requirements.

### DESCRIPTION:

One Conductor tinned copper annealed stranded, rubber insulation, highly lacquered braid; oil, heat, and moisture resistant. 


Cat. No.	Spool	Size AWG	Strand	Ins.	Puncture V.	Nom. O.D.
2818	100'	18	16/30	.022"	9500	.117"
2816	100'	16	19/29	.022"	9500	.127"
2814	100'	14	19/27	.022"	9500	.148"
2812	100'	12	19/25	.027"	9500	.171"
2810	100'	10	19/23	.031"	9500	.202"

For longer lengths and alternate put-ups—Specify.

## LACQUERED HOOK-UP WIRE

Used in transformers, amplifiers, hook-ups, leads, etc. Strips easily for soldering.

### DESCRIPTION:

No. 3462—#20-10/30 Single Conductor stranded tinned copper, low loss free stripping rubber insulation, cotton braid highly lacquered. 

No. 3600—#18-16/30 Single Conductor stranded tinned copper, 1/32" low loss free stripping rubber insulation, rayon braid highly lacquered.

Cat. No.	Spool	Size AWG	Strand	Insul.	Punct. Volt.	DC Ins. Res./Ft. Meg.	Nom. O.D.
3461	100'	20	10/30	1/64"	7000	390	.090"
3462	500'	20	10/30	1/64"	7000	390	.090"
3460	100'	18	16/30	1/32"	9000	460	.125"
3600	500'	18	16/30	1/32"	9000	460	.125"


**COLORS:** Black, Red, Green, Yellow, Brown, Blue, White, Orange, Grey, Purple. For longer lengths and alternate put-ups—Specify.

## SHIELDED HOOK-UP & LEAD-IN WIRE

Used to prevent and reduce interference caused by motors, hi-tension cables, X-ray machines and various units radiating electrical impulses. Useful in grid circuits.

## TINNED COPPER SHIELD OVER RUBBER INSULATION


### DESCRIPTION:

Single Conductor, Tinned Copper Stranded, low loss rubber insulation, closely woven tinned copper shield overall. 

Cat. No.	Spool	Size AWG	Strand	Ins.	Cap./Ft. Mmf.	Nom. O.D.
810	500'	20	10/30	.015"	105	.095"
803	250'	18	16/30	.015"	125	.125"
802	250'	16	26/30	.031"	90	.145"

## TINNED COPPER SHIELD OVER LACQUERED BRAID

### DESCRIPTION:

Single Conductor, Tinned Copper Stranded, low loss Vinyl insulation, highly lacquered glass braid, closely woven tinned copper shield overall. 

Cat. No.	Spool	Size AWG	Strand.	Wall Thickness	Nom. O.D.
831	1000'	22	7/30	.016"	.095"
832	1000'	20	10/30	.016"	.105"
833	1000'	18	16/30	.016"	.125"
834	1000'	16	26/30	.016"	.135"
835	1000'	14	41/30	.016"	.155"
835/12	1000'	12	65/30	.016"	.175"
835/10	1000'	10	105/30	.025"	.200"

For longer lengths and alternate put-ups—Specify.



**RETRACTILE KINKLESS POWER COMMUNICATION CORDS**



This series of Birnbach Coiled Kinkless Retractable Cords are permanently coiled into a spring-like shape without the use of metal springs or elastic bands. They have inherent "Recovery" properties. These Retractable cords extend approximately six times its retracted length, returning to its exact original shape and length when released. Always as long as you need them and no longer, they will not kink, tangle, trail, knot or dangle on the floor or bench and cause accidents. Useful wherever cords or cables must change length or position.

**RETRACTILE (KINKLESS) POWER CORDS RUBBER, NEOPRENE AND PLASTIC UL AND CSA APPROVED**



DESCRIPTION: Multi conductor power cords, each conductor stranded copper, tough neoprene jacket overall UL and CSA approved. Available from stock in indicated lengths, can be cut to desired length.

Cat. No.	Retracted Length	Approx. Length Ext.	No. Conds.	Size AWG	Strand	UL Type	AMP Rating	Volt Rating	Coil Nom. O.D.	Cord. Nom. O.D.
886	36"	18 Ft.	2	18	41/34	SVO	7	300	3/4"	.250"
886/3	48"	18 Ft.	3	18	41/34	SVO	7	300	1"	.275"
887	36"	18 Ft.	2	18	41/34	SVT	7	300	3/8"	.250"
889	36"	18 Ft.	2	18	41/34	SJO	7	300	13/16"	.310"
890	36"	18 Ft.	2	18	41/34	SJT	7	300	13/16"	.310"
889/3	36"	18 Ft.	3	18	41/34	SJO	7	300	13/16"	.330"
889/4	36"	18 Ft.	4	18	41/34	SJO	5.6	300	13/16"	.360"
889/5	48"	25 Ft.	5	18	41/34	—	5.6	300	13/16"	.440"
889/7	48"	25 Ft.	7	18	41/34	—	5.6	300	13/16"	.500"
891	36"	18 Ft.	2	16	65/34	SJO	10	300	13/16"	.330"
891/3	36"	18 Ft.	3	16	65/34	SJO	10	300	13/16"	.365"
891/4	36"	18 Ft.	4	16	65/34	SJO	8	300	15/16"	.395"
891/5	48"	25 Ft.	5	16	65/34	—	8	600	2"	.540"
891/6	48"	25 Ft.	6	16	65/34	—	8	600	2 1/4"	.550"
891/7	48"	25 Ft.	7	6/16	#16-65/34	—	#16-8	600	2 1/4"	.600"
				1/14	#14-41/30	—	#14-12			
893	36"	18 Ft.	2	14	41/30	SO	15	600	2"	.535"
893/3	36"	18 Ft.	3	14	41/30	SO	15	600	2 1/8"	.560"
893/4	36"	18 Ft.	4	14	41/30	SO	12	600	2 1/4"	.605"
894	36"	18 Ft.	2	12	65/30	SO	20	600	2 1/4"	.605"
894/3	36"	18 Ft.	3	12	65/30	SO	20	600	2 3/8"	.635"
894/4	36"	18 Ft.	4	12	65/30	SO	16	600	2 1/2"	.665"
894/6	48"	25 Ft.	6	2-12	#12-65/30	—	#12-17	600	2 1/4"	.605"
				4-18	#18-41/34	—	#18-6			
894/7	48"	25 Ft.	7	12	65/30	—	16	600	2 5/8"	.775"

Additional conductors and sizes available

Std. Pkg. 5

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Green, 4-Red, 5-Blue, 6-Brown, 7-Yellow

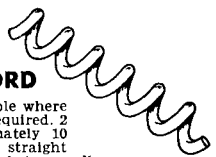
**RETRACTILE TEST LEAD WIRE**



Stretch coiled kinkless test lead wire description. 12" coil—stretches to approx. 6 feet. One conductor #20 stranded copper rubber insulation .165 O.D. Colors: Red, Black. Coil O.D. 3/4".

Cat. No.	Retracted—Approx.	Std. Pkg.
64	12" Retracted—Approx. 6'	Extended..... 6
65	24" Retracted—Approx. 12'	Extended..... 6

**BIRNBACH MINIATURE RETRACTILE CORD**



This small size is suitable where compact equipment is required. 2 ft. retracted, approximately 10 ft. extended with 6" straight ends. Black plastic jacket overall.

Nom. Cond. resistance: .07 OHMS per linear foot (approx. .6 OHMS per retracted ft.)

Maximum working voltage: 100; current capacity 1/2 amp.

Cat. No.	No. of Conds.	Size AWG	Strand	Coil O.D.	Cond. O.D.	Std. Pkg.
875/28	2	28	19/40TC	1/2"	.135	10
877/28	4	28	19/40TC	1/2"	.150	10

Conductor color code: 1-Black, 2-White, 3-Red, 4-Green. For 3 conductors, use 4 cond. and cut one dead.

**RETRACTILE (KINKLESS) POWER CORD SETS**

Excellent for portable use. All mobile equipment and office equipment wherever the device application is synonymous with repetitive movement. The "Answer" to most tough hazard problems.

2 and 3 conductors SVO and SJO Retractable Kinkless Neoprene Service Cord Sets with Molded Male Plug one end, other end stripped for application. Adds reliability, compactness and portability.

Cat. No.	Retracted Length	Approx. Length Extended	Conds.	Size AWG	UL Type	Strand	Coil O.D.
880	18"	9 FT.	2	18	SVO	41/34	1"
881	18"	9 FT.	2	18	SJO	41/34	1 1/4"
881/3	18"	9 FT.	3	18	SJO	41/34	1 1/2"
882	18"	9 FT.	2	16	SJO	65/34	1 1/2"
882/3	18"	9 FT.	3	16	SJO	65/34	1 1/2"

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Green



Standard Package—10

**RETRACTILE COILED COMMUNICATION CORD**

Multi-conductors stranded communication cord No. 23 AWG. Tinned copper wire neoprene or Geon plastic jacketed. Long lengths can be cut to exact requirement. Adds product reliability. Useful wherever cords must change length or position. Nom. cond. resistance .022 ohms per linear foot, .185 ohms per retracted foot. Maximum working voltage 120 volts. Current carrying capacity 1 ampere.



Cat. No.	Retracted Length	Approx. Length Extended	Conds.	Size AWG	Strand	Coil O.D.	O.D.	Cat. No.	Retracted Length	Approx. Length Extended	Conds.	Size AWG	Strand	Coil O.D.	O.D.
875	36"	18 Ft.	2	23	21/36	3/4"	.200"	878/8	48"	25 Ft.	8	23	21/36	1 3/8"	.360"
876	36"	18 Ft.	3	23	21/36	3/4"	.210"	878/10	48"	25 Ft.	10	23	21/36	1 3/8"	.380"
877	36"	18 Ft.	4	23	21/36	3/8"	.240"	878/12	48"	25 Ft.	12	23	21/36	1 3/8"	.410"
878	36"	18 Ft.	5	23	21/36	1"	.285"	878/15	48"	25 Ft.	15	23	21/36	1 3/8"	.470"
878/6	36"	18 Ft.	6	23	21/36	1 1/8"	.305"	878/37	48"	25 Ft.	37	23	21/36	2 1/2"	.680"
878/7	36"	18 Ft.	7	23	21/36	1 1/4"	.320"								

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Red, 4-Green, 5-Blue, 6-Yellow, 7-Brown, 8-Orange, 9-White/Black Tracer, 10-White/Red Tracer, 11-White/Green Tracer, 12-White/Blue Tracer, 13-White/Yellow Tracer, 14-White/Brown Tracer, 15-White/Orange Tracer.

**RETRACTILE (KINKLESS) COILED SHIELDED COMMUNICATION CORDS**



DESCRIPTION: Single and multi-conductor shielded microphone cable neoprene or geon plastic jacketed. This cable remains neat and compact with no danger of tripping or of the wire becoming entangled in equipment. Also suitable for stereo and additional speaker extensions. Shield can be pigtailed for soldering. No. 24 AWG Str. is 41/40 tinned soft cad. copper: No. 23 has 21/37 tinned soft cad. copper. Spiral wrapped tinned soft copper shielding.

Cat. No.	Retr. Length	Approx. Length Extended	Cond.	Size AWG	Coil O.D.	Nom. O.D.	Maximum Working Voltage	Capacitance		Std. Pkg.
								MMF Lin. Ft.	MMF Retr. Ft.	
895	48"	25'	1	No. 24 Shielded	5/8"	.160"	75	56	440	10
895A	12"	6'	1	No. 24 Shielded	5/8"	.160"	75	56	440	10
895B	6"	3'	1	No. 24 Shielded	5/8"	.160"	75	56	440	10
896	48"	25'	2	1-No. 23 1-No. 24 Shielded	7/8"	.200"	#23-120 #24-75	56	450	10
896A	12"	6'	2	1-No. 23 1-No. 24 Shielded	7/8"	.200"	#23-120 #24-75	56	450	10
897	48"	25'	3	2-No. 23 1-No. 24 Shielded	7/8"	.240"	#23-120 #24-75	56	450	10
897A	12"	6'	3	2-No. 23 1-No. 24 Shielded	7/8"	.240"	#23-120 #24-75	56	450	10
899	48"	25'	2	2-No. 24 Shielded	7/8"	.210"	75	56	450	10
899A	12"	6'	2	2-No. 24 Shielded	7/8"	.210"	75	56	450	10
898	48"	25'	4	2-No. 23 2-No. 24 Shielded	1"	.270"	#23-120 #24-75	56	460	10
898A	12"	6'	4	2-No. 23 2-No. 24 Shielded	1"	.270"	#23-120 #24-75	56	460	10

Additional conductors and sizes available

CONDUCTORS ARE COLOR CODED.

# Birnbach

**SUPER HEAVY DUTY RETRACTILE POWER CORDS  
CONTROL • STEREO • SPEAKER CABLE**



### NEW Sound Cable with "VI-CON" Shield

"VI-CON" Shield is the new Birnbach conductive vinyl plastic shield that provides:

- HI-FLEXIBILITY
- LONG FLEX LIFE
- EASY WORKING
- 100% SHIELDING COVERAGE

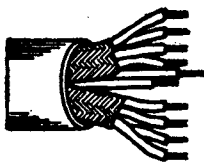
No. 24 Solid Tinned ground wire used for ground termination

Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. O.D.
1812	500'	2	22	7/30	.160
1313	500'	2	20	7/28	.190
1814	500'	2	18	16/30	.220

### STEREO VOLUME CONTROL CABLE

ESPECIALLY DESIGNED FOR STEREO COIN OPERATED MACHINES

Description: Ten conductors containing 2 quads individually shielded with tinned copper braid; 2 conductors not shielded; chrome vinyl jacket overall.



- 4 Shielded #24 (7 x 32)
- 4 Shielded #24 (7 x 32)
- 2 Unshielded #22 (7 x 30)

Cat. No.	Spool	Nom. Jacket	Nom. O.D.
4520	500'	.025"	.325"

CONDUCTOR COLOR CODE: GRAY, WHITE, BLUE, GREEN (SHIELDED), RED, BROWN, YELLOW, ORANGE (SHIELDED), WHITE, BLUE (UNSHIELDED)

### JUKE BOX SPEAKER CABLE

Small, compact diamter. Useful. Practical. Ideal for rear auto speaker extension cable

**DESCRIPTION:**

Composed of 7 strand #32-1 Bare—copper conductor, 1 tinned copper conductor, 2 conductors parallel chrome vinyl plastic insulation.

Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. O.D.
4500	1000'	2	24	7/32	.015"	.058" x .115"

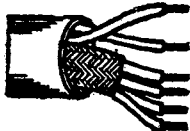
Additional colors available to order.

### SHIELDED JUKE BOX CONTROL CABLE

**DESCRIPTION.**

5 Conductor cable. Three cond. twisted color coded, black, green red with tinned copper shielded braid overall. Two conductor twisted color coded blue, yellow and chrome vinyl jacket overall.

6 Conductor Cable: 4 cond. twisted tinned copper shielded braid, conductor color code black, green, red, yellow; 2 cond. unshielded color code white, blue.



Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
4515	500'	5	#22 (shielded) 2 (unshielded)	7/30	.015"	.020"	.200" x .300"
4516	500'	6	2 unshielded #22 (7 x 30) 4 shielded #24 (7 x 32)		.015"	.025"	.205" x .310"



### JUKE BOX CONTROL CABLE

Used as replacement cable in Juke Boxes.

**DESCRIPTION:**

Two Conductors #16 stranded vinyl insulation tinned copper, color coded green-orange. One conductor #20 stranded tinned copper, vinyl insulation. Color coded Blue; 3 conductors cable with .020" chrome vinyl plastic jacket overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
510	500'	3	2—#16 1—#20	28/30 10/30	.020"	.020"	.240"

# B I R N B A C H RETRACTILE

## SUPER HEAVY DUTY

### POWER CORDS

GUARANTEED TO RETRACT FOR  
**4 YEARS**  
MILITARY INDUSTRIAL

AWG SIZES  
12, 14, 16  
3 and 4 COND.

THIS IS A NEW CORD and should not be confused with cords of lesser quality.



Especially desirable in the maintenance of industrial automation equipment, refrigerated trucks and trailers, mass assembly and production equipment, plane maintenance, control cable for cherry pickers, magnetic cranes, standby power distribution, heavy duty machinery.

Useful whenever and wherever a tougher, more rugged heavy duty power cable is indicated as in foundries, aboard ships, reels on overhead cranes and hoists, tanks, plug-in power for refrigeration and immersion heaters, etc. Usable around salt water, chemicals and many other areas which makes the use of reels undesirable.

These cords are Bureau of Mines, C. S. A. (Canada), U. S. Coast Guard, UL and Army/Navy approved.

BB CAT. NO.	CONDS.	SIZE AWG	STRAND	NOM. JKT. THKNS.	NOM. O.D.
1300	3	16	65/34	7/64"	.505"
1300/4	4	16	65/34	7/64"	.535"
1301	3	14	41/30	7/64"	.620"
1301/4	4	14	41/30	7/64"	.650"
1302	3	12	65/30	8/64"	.715"
1302/4	4	12	65/30	8/64"	.770"

### NEW STEREO MONAURAL WIRE AND CABLE

The following items were specifically developed for use in recording and playback equipment including all stereo cartridges; ceramic, magnetic, crystal and tone arms. Designed for extremely low hum and noise pickup. Individual conductors are #32 AWG, 7 strands #40 AWG tinned copper, .010" wall. Special formulation PVC +80° C to -40° C operation allowing ease of stripping and soldering. When shielded #40 AWG tinned copper, 30% coverage for maximum flexibility, minimum weight and diameter and for quick pushback.

**TWISTED—UNSHIELDED**

Cat. No.	Spool	Cond.	Size AWG	Strand	Nom. Wall	Nom. O.D.
7571	1000'	1	32	7/40	.010"	.028"
7571	500'	1	32	7/40	.010"	.028"
7572	1000'	2	32	7/40	.010"	.047"
7572	500'	2	32	7/40	.010"	.047"
7573	1000'	3	32	7/40	.010"	.053"
7573	500'	3	32	7/40	.010"	.053"
7574	1000'	4	32	7/40	.010"	.061"
7574	500'	4	32	7/40	.010"	.061"
7575	1000'	5	32	7/40	.010"	.069"
7575	500'	5	32	7/40	.010"	.069"

**TWISTED—SHIELDED**

Cat. No.	Spool	Cond.	Size AWG	Strand	Nom. Wall	Nom. D.D.
7581	1000'	1	32	7/40	.010"	.040"
7581	500'	1	32	7/40	.010"	.040"
7582	1000'	2	32	7/40	.010"	.067"
7582	500'	2	32	7/40	.010"	.067"
7583	1000'	3	32	7/40	.010"	.072"
7583	500'	3	32	7/40	.010"	.072"
7584	1000'	4	32	7/40	.010"	.080"
7584	500'	4	32	7/40	.010"	.080"
7585	1000'	5	32	7/40	.010"	.089"
7585	500'	5	32	7/40	.010"	.089"
7580	1000'	2	32	7/40	.010"	.080"

(Ind. Shielded)

CONDUCTOR COLOR CODE: 1-WHITE, 2-RED, 3-BLACK, 4-GREEN, 5-YELLOW

# Birnbach

**RUBBER AND NEOPRENE POWER SUPPLY CABLE  
MICROPHONE • MULTI-CONDUCTOR • UL-MIL SPEC**

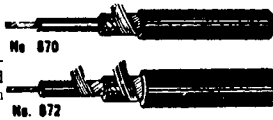


## RUBBER MICROPHONE CABLE Especially Designed for Heavy Studio Use RUBBER CRYSTAL MICROPHONE CABLE

Designed for long service life and low loss. Use with crystal, ribbon, dynamic and velocity microphones and photoelectric cells. Birnbach #1870 is used widely for lapel microphones and phono pick ups.

### DESCRIPTION:

Single Conductor, 26 Strands  
#34 extra flexible tinned copper, special low loss rubber compound, tinned copper braid shield, cotton wrap, tough black rubber jacket overall.



Cat. No.	Spool	Cond.	Size Awg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
870	100'	1	20	26/34	40 Mmf.	175"
1870	250'	1	20	26/34	40 Mmf.	175"
872	100'	1	20	26/34	30 Mmf.	245"
1872	250'	1	20	26/34	30 Mmf.	245"

## RUBBER OR NEOPRENE MICROPHONE CABLE

### DESCRIPTION:

Each Conductor, extra flexible stranded tinned copper, insulated with a .002" wall special low capacity rubber, color coded, conductors twisted, filler cotton wrap, tinned copper braided shield, cotton wrap with tough weatherproof black rubber or neoprene jacket overall.



Nos. 772 to 778

Used for indoor and outdoor crystal, carbon and condenser microphones and for public address systems.

## RUBBER JACKET

Cat. No.	Spool	Cond.	Size Awg.	Strand.	Nom. Cap. Between 1-Cond. & Shield	Nom. Cap. 1-Cond. Connected to Shield	Nom. Cap. Between 1-Cond. & Others	Nom. O.D.
772	100'	2	20	26/34	65 Mmf.	88 Mmf.	43 Mmf.	280"
1772	250'	2	20	26/34	65 Mmf.	68 Mmf.	43 Mmf.	280"
772/18	100'	2	18	41/34	70 Mmf.	73 Mmf.	48 Mmf.	300"
773	100'	3	20	26/34	68 Mmf.	72 Mmf.	55 Mmf.	290"
1773	250'	3	20	26/34	68 Mmf.	72 Mmf.	55 Mmf.	290"
773/18	100'	3	18	41/34	68 Mmf.	72 Mmf.	55 Mmf.	350"
774	100'	4	20	26/34	68 Mmf.	74 Mmf.	57 Mmf.	300"
1774	250'	4	20	26/34	68 Mmf.	74 Mmf.	57 Mmf.	300"
774/18	250'	4	18	41/34	68 Mmf.	74 Mmf.	57 Mmf.	335"
775	100'	5	20	26/34	70 Mmf.	76 Mmf.	58 Mmf.	330"
1775	250'	5	20	26/34	70 Mmf.	76 Mmf.	58 Mmf.	330"
776	100'	6	20	26/34	71 Mmf.	80 Mmf.	60 Mmf.	350"
1776	250'	6	20	26/34	71 Mmf.	80 Mmf.	60 Mmf.	350"
777	100'	7	20	26/34	72 Mmf.	85 Mmf.	62 Mmf.	365"
1777	250'	7	20	26/34	72 Mmf.	85 Mmf.	62 Mmf.	365"
778	100'	8	20	26/34	74 Mmf.	90 Mmf.	65 Mmf.	390"
778/10	100'	10	20	26/34	75 Mmf.	92 Mmf.	67 Mmf.	440"
778/12	250'	12	20	26/34	77 Mmf.	93 Mmf.	69 Mmf.	575"

For longer lengths and alternate put-ups—Specify.

## NEOPRENE JACKET

No.	Spool	Cond.	Size Awg.	Strand.	Wall Thickness	Nom. Jacket	Nom. O.D.
1781	500'	1	18	41/34	.040"	.030"	250"
1782	500'	2	18	41/34	.020"	.035"	305"
1788	500'	3	18	41/34	.020"	.035"	325"
1784	500'	4	18	41/34	.020"	.035"	385"
1786	500'	6	18	41/34	.020"	.035"	430"

### MICROPHONE CABLE COLOR CODE CHART

1—Black	5—Yellow	9—Purple
2—White	6—Blue	10—Slate
3—Red	7—Brown	11—White/Blk. (Braid)
4—Green	8—Orange	12—White/Red (Braid)

See our pages covering retractile cords and cables.

## RUBBER & NEOPRENE SERVICE CORD (HEAVY DUTY) — UL APPROVED

For power line requirement where rough usage is indicated as for amplifiers, sound systems, speakers, vacuum cleaners, washing machines, trouble lights, refrigerators, etc. Color coded. Underwriters approved. Neoprene construction recommended for equipment exposed to oil, acids, outdoor use, direct burial, etc.

Each conductor, copper conductor, paper separator, color coded, rubber insulation, filler, separator, tough rubber or neoprene jacket.



RUBBER Cat. No.	U/L	NEOPRENE Cat. No.	U/L	Std. Put-ups	Size No. Conds.	AWG.	Amp Rating	Volt Nom.
701	SV	690	SV0	250' .2	18	41/34	7	300
*701/3	SV	690/3	SV0	250' .3	18	41/34	7	300
574	SJ	691	SJ0	250' .2	18	41/34	7	300
575	SJ	692	SJ0	250' .3	18	41/34	7	300
575/4	SJ	692/4	SJ0	250' .4	18	41/34	7	300
578	SJ	693	SJ0	250' .2	16	65/34	10	300
578/3	SJ	693/3	SJ0	250' .3	16	65/34	10	300
578/4	SJ	693/4	SJ0	250' .4	16	65/34	10	300
702	S	694	S0	250' .2	18	16/30	7	600
702/3	S	694/3	S0	250' .3	18	16/30	7	600
702/4	S	694/4	S0	250' .4	18	16/30	7	600
703	S	695	S0	250' .2	16	26/30	10	600
703/3	S	695/3	S0	250' .3	16	26/30	10	600
703/4	S	695/4	S0	250' .4	16	26/30	10	600
704	S	696	S0	250' .2	14	41/30	15	600
704/3	S	696/3	S0	250' .3	14	41/30	15	600
704/4	S	696/4	S0	250' .4	14	41/30	15	600
705	S	697	S0	250' .2	12	65/30	20	600
705/3	S	697/3	S0	250' .3	12	65/30	20	600
705/4	S	697/4	S0	250' .4	12	65/30	20	600
706	S	698	S0	250' .2	10	103/30	25	600
706/3	S	698/3	S0	250' .3	10	103/30	25	600
706/4	S	698/4	S0	250' .4	10	103/30	25	600

\* 701/3 has tinned copper wire

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Green, 4—Red

## SERVICE CORD PER MIL-C-3432B SPEC

WITH CERTIFICATION — INSPECTION AVAILABLE



Cat. No.	MIL Type	Spec. Designation	Conds.	AWG. Size	Spec. No.	Nom. OD
M-218	CO-02	MGF	2	18	MIL-C-3432A	.300"
H-218	CO-02	HGF	2	18	MIL-C-3432A	.380"
L-218	CO-02	LGF	2	18	MIL-C-3432A	.250"
H-216	CO-02	HGF	2	16	MIL-C-3432A	.405"
M-216	CO-02	MGF	2	16	MIL-C-3432A	.338"
M-214	CO-02	MGF	2	14	MIL-C-3432A	.400"
H-214	CO-02	HGF	2	14	MIL-C-3432A	.535"
M-318	CO-03	MGF	3	18	MIL-C-3432A	.330"
M-316	CO-03	MGF	3	16	MIL-C-3432A	.375"
H-312	CO-03	HOE	3	12	MIL-C-3432A	.635"

ADDITIONAL NUMBERS AVAILABLE — YOUR INQUIRIES INVITED

## RUBBER JACKETED MULTI-CONDUCTOR CABLE (NOT SHIELDED)

Used for permanent or portable P.A. systems, sound recording, indoor or outdoor speakers, interconnecting cable for all electronic uses.

Each conductor, extra flexible stranded tinned copper, insulated with a .022" wall, special low capacity rubber, color coded, conductors twisted, filler, cotton wrap with tough weatherproof black rubber jacket overall.



### CONDUCTOR COLOR CODE CHART

1—Black	5—Yellow	9—Purple
2—White	6—Blue	10—Slate
3—Red	7—Brown	11—White/Blk. (Braid)
4—Green	8—Orange	12—White/Red (Braid)

Cat. No.	Spool	Cond.	Size Awg.	Strand.	Cap. Bet. 1 Cond. & Others	Nom. O.D.
788	100'	2	20	26/34	40 Mmf.	.275"
789	250'	2	20	26/34	40 Mmf.	.275"
790	100'	3	20	26/34	50 Mmf.	.285"
791	250'	3	20	26/34	50 Mmf.	.285"
792	100'	4	20	26/34	53 Mmf.	.305"
793	250'	4	20	26/34	53 Mmf.	.305"
794	100'	5	20	26/34	56 Mmf.	.335"
795	250'	5	20	26/34	56 Mmf.	.335"
796	100'	6	20	26/34	58 Mmf.	.355"
797	250'	6	20	26/34	58 Mmf.	.355"
798	100'	7	20	26/34	60 Mmf.	.370"
749	100'	8	20	26/34	63 Mmf.	.390"
749/10	100'	10	20	26/34	65 Mmf.	.435"
749/12	100'	12	20	26/34	67 Mmf.	.540"

For longer lengths and alternate put-ups—Specify

# Birnbach

SHIELDED MULTI-CONDUCTORS • MICROPHONE INTERCOM • MULTI-PAIR • ARMORED CABLE



## 2 CONDUCTOR SHIELDED

Used for transmission line, P. A. and sound systems, school, hospital sound installations, industrial paging systems, broadcast and audio cable, paging and rack panel wiring.

**DESCRIPTION:**  
Each conductor copper tinned, plastic insulation, color coded twisted, tinned copper shield overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Insul.	NOM O.D.
826/30	500'	2	30	7/38	.010"	.085"
826/28	500'	2	28	7/88	.010"	.090"
826/26	500'	2	26	7/84	.010"	.100"
826	500'	2	24	7/86	.015"	.120"
825	500'	2	22	7/30	.017"	.140"
972S	500'	2	20	1/30	.017"	.155"
827	500'	2	18	1/30	.017"	.180"
828	500'	2	18	2/30	.020"	.210"
829	500'	2	14	4/30	.020"	.235"
830	500'	2	12	6/30	.025"	.295"
830/10	500'	2	10	105/30	.025"	.375"

**3 CONDUCTOR SHIELDED**

973S	500'	3	20	1/30	.017"	.192"
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**2 CONDUCTOR SHIELDED WAXED COTTON BRAID OVER SHIELD**

972B	500'	2	20	1/30	.017"	.180"
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**SOLID CONDUCTORS**

1701	500'	2	22 Solid	1	.017"	.135"
1702	500'	2	20 Solid	1	.017"	.145"
1703	500'	2	18 Solid	1	.017"	.170"

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White

Microphone Cables with Birnbach's NEW

## "VI-CON" SHIELD

HI-FLEXIBILITY • LONG FLEX LIFE • EASY WORKING

This series of cable is Birnbach's new outstanding shield in combination with vinyl plastic that is conductive thereby providing 100% shield coverage. Easy handling; lighter in weight than comparative types; extremely flexible; #24 Stranded Bare Tinned Wire is used for grounding termination; this is in continuous contact with the "Vi-Con" Shield.

Cat. No.	Spool	Conds.	Size AWG	Stranding	Nom. O.D.
1800	500'	1	25	7/33	.125"
1801	500'	1	25	7/33	.160"
1802	500'	2	22	16/34	.225"

## SHIELDED MULTI-CONDUCTOR CABLE

Used indoors for permanent or portable work to prevent interference pickup on P.A. systems, recording equipment, photo electric circuits, etc.

**DESCRIPTION:**

Each Conductor #20 10/30 Stranded Tinned Copper, 1/64" pvc wall, waxed cotton braid color coded, twisted conductors, tinned copper shield overall. No. 1972 with cotton braid overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Insul.	Cap/Ft. Bet. Cond. & Shield	Cap/Ft. Bet. Conds.	Nom. O.D.
972	100'	2	20	10/30	1/64	.65 Mmf.	.43 Mmf.	.215"
973	100'	3	20	10/30	1/64	.68 Mmf.	.55 Mmf.	.220"
974	100'	4	20	10/30	1/64	.69 Mmf.	.57 Mmf.	.250"
975	100'	5	20	10/30	1/64	.70 Mmf.	.58 Mmf.	.280"
976	100'	6	20	10/30	1/64	.71 Mmf.	.60 Mmf.	.290"
977	100'	7	20	10/30	1/64	.72 Mmf.	.62 Mmf.	.315"
978	100'	8	20	10/30	1/64	.74 Mmf.	.65 Mmf.	.350"
1972	100'	2	20	10/30	1/64	.65 Mmf.	.43 Mmf.	.225"

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green, 5—Brown, 6—Yellow, 7—Blue, 8—Orange

## SHIELDED TWO WIRE SPEAKER CABLE

For master control sound systems, photo electric circuits, P.A. systems, etc.

TINNED COPPER SHIELD, PAPER WRAP OVERALL

Cat. No.	Spool	Strand	Insul.	Cap/Ft. Bet. Cond. & Shield	Cap/Ft. Bet. Conds.	Nom. O.D.
972A	500'	16/30	1/32	.65	.43	.250"

**WAXED COTTON BRAID OVER SHIELD**

1972A	500'	16/30	1/32	.65	.43	.275"
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CONDUCTOR COLOR CODE: Black and Red  
For longer lengths and alternate put-ups—Specify.

## Multiple Pair Individually Shielded Intercom Cable

Used where several mikes are operated from a single cable. This series is helpful in reducing the bulk of required cables.

**DESCRIPTION:** Multi-pairs #22 solid tinned copper, vinyl insulated .013" oled in pairs. Each pair and ground wire is under aluminum foil mylar shield rail grey vinyl jacket; Nom. Cap. between Conds. 40Mmf/ft.; Nom. Cap. between Cond. and others connected to shield—77Mmf/ft.

Additional Variations in construction available to order.

I. No.	Spool	Pairs	Cond.	Nom. Jkt.	Nom. O.D.
10/3	500'	3	6	.030	.298
10/6	500'	6	12	.037	.394
10/9	500'	9	18	.040	.425
10/11	500'	11	22	.040	.485
10/15	500'	15	30	.045	.510
10/19	500'	19	38	.055	.678
10/27	500'	27	54	.070	.860

4800/19 and 4800/27 is #22 strand 7/30 with .015 wall.

## PLASTIC MICROPHONE CABLE

Designed to stand up under physical abuse and is resistant to oil, moisture and aging for long life. These cables have low capacitance, high insulation resistance and low attenuation at audio frequencies. Will not stain or mark.

#1839 is used for high impedance microphone, lapel, contact, crystal, ribbon, velocity and HI-FI interconnecting cable.  
#1840 is used for high impedance lapel microphones.  
#1841 is used for crystal, ribbon and other impedance microphones.

Above recommended for HI-FI installations because of low loss and low capacitance.

## PLASTIC — ONE-CONDUCTOR MICROPHONE CABLE

**DESCRIPTION:**

Single Conductor Stranded

3 strands #33 copper tinned, and 4 strands #33 (steel-tinned 1840 and 1841) cellulose yarn braid, Polyethylene insulation, tinned copper shielded braid, with chrome vinyl plastic jacket overall.

Cat. No.	Spool	Cond.	Size No. Avg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
1839	500'	1	20	26/84	39MMF	.175"
1840	500'	1	25	7/38"	34MMF	.144"
1841	500'	1	25	7/88"	25MMF	.200"

\*3X33 Copper, 4X33 Steel (All tinned)

## SPIRAL SHIELDED MICROPHONE CABLE

Constructed with tinned copper spiral wrapped concentric shield. Extremely flexible, smaller size.

Cat. No.	Spool	Cond.	Size No. Avg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
1835	500'	1	25	7/33	25MMF	.159"
1836	500'	1	25	7/33	33MMF	.125"

## PLASTIC — MULTI-CONDUCTOR MICROPHONE CABLE

**DESCRIPTION:** Each conductor tinned copper, Polyethylene insulation — color coded. Multi conductors are cushioned with fillers, cotton wrapped under tinned copper shield, chrome vinyl jacket overall.

Cat. No.	Spool	Cond.	Size No. Avg.	Stranding	Nom. Cap./Ft.	Nom. O.D.
1842	500'	2	22	16/34	31MMF	.231"
1842/24	500'	2	24	10/34	38MMF	.190"
1843	500'	3	20	26/34	39MMF	.250"
1844	500'	4	20	26/34	43MMF	.255"
1845	500'	5	20	26/34	48MMF	.275"
1846	500'	6	20	26/34	54MMF	.300"
1846/8	500'	8	20	26/34	57MMF	.330"
1846/10	500'	10	20	26/30	60MMF	.375"

CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Red, 4-Green, 5-Yellow, 6-Blue, 7-Brown, 8-Orange, 9-Purple, 10-Slate

## PLASTIC INTER-COM CABLE

### 4 CONDUCTORS (2 Shielded — 2 Unshielded)

Widely used for wiring from station to station where a shielded twisted pair is indicated in order to eliminate cross talk.

**DESCRIPTION:**

No. 925 — 4 conductors #22

7/30 stranded tinned copper, vinyl plastic insulation color coded, tinned copper shield over one pair (2 cond.). One pair (2 cond.) unshielded. Tubed gray vinyl jacket overall.

CONDUCTOR COLOR CODE: Black/white shielded, Black/red unshielded

Cat. No.	Spool	Conds.	Size AWG	Strand	Insul.	Nom. Jacket	Nom. O.D.
925	500'	4	22	7/30	.016"	.020"	.310"

### 3 CONDUCTORS (1 Shielded — 2 Unshielded)

Widely used for wiring from station to station where a single shielded conductor is indicated in order to eliminate cross talk.

**DESCRIPTION:**

No. 924 — 3 conductors #22

7/30 stranded tinned copper, vinyl plastic insulation color coded, tinned copper shield over one conductor, tubed gray vinyl jacket overall.

Cat. No.	Spool	Conds.	Size AWG	Strand	Insul.	Nom. Jacket	Nom. O.D.
924	500'	3	22	7/30	.016"	.020"	.205"

CONDUCTOR COLOR CODE: Black/red unshielded White shielded

## ARMORED INDUSTRIAL CABLE

Used for P.A. systems on speaker extensions, oil burner installations, auto wiring, etc.

Two Conductors Parallel #18 16/30 Stranded Tinned Copper, rubber insulation, lacquered cotton braid color coded, spiral galvanized steel armor overall.

Cat. No.	Spool	Size AWG	Strand	Nom. Jacket	Nom. O.D.
1111	250'	18	16/30	.155"	x .240"
1112	500'	18	16/30	.155"	x .240"
1113	1000'	18	16/30	.155"	x .240"

# Birnbach

BROADCAST • AUDIO • STRAIN GAUGE CABLE  
SHIELDED • MULTI-CONDUCTOR CABLES

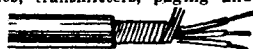


## SPIRAL WRAPPED SHIELDED AUDIO and MULTI-CONDUCTOR CABLE

**Plastic Jacketed—with Spiral wrapped copper shield**  
Designed for P. A. and sound systems, installations in schools, hospitals, and institutions, recording studios, transmitters, paging and call systems.

**DESCRIPTION:**

Each conductor copper tinned, 1/64 plastic insulation, color coded, twisted, spiral wrapped tinned copper shield, gray plastic jacket overall.



Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	O. D.
941	500'	2	22	7/30	.017"	.020"	.171"
941/1	500'	1	22	7/30	.017"	.020"	.120"
941/3	500'	3	22	7/30	.017"	.020"	.190"
941/4	500'	4	22	7/30	.017"	.020"	.205"
950	500'	2	22	1	.017"	.020"	.169"
942	500'	2	20	10/30	.017"	.020"	.190"
942/1	500'	1	20	10/30	.017"	.020"	.129"
943	500'	3	20	10/30	.017"	.020"	.208"
944	500'	4	20	10/30	.017"	.020"	.222"
947	500'	2	18	16/30	.017"	.020"	.230"
947/3	500'	3	18	16/30	.017"	.020"	.228"
948	500'	2	16	26/30	.017"	.020"	.250"

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green

## SHIELDED PLASTIC JACKETED CABLE WITH ALUMINUM MYLAR\* FOIL SHIELD

This cable is extremely light in weight and provides 100% shield coverage at audio and radio frequencies.

**DESCRIPTION:** Each conductor tinned copper, color coded polyethylene insulation, twisted with #22 7/30 stranded tinned copper drain wire, aluminum Mylar\* foil shield, gray polyvinylchloride jacket overall.

Cat. No.	No. of Conductors	AWG Size	Strand	Nom. Insul.	Nom. Jacket	Nom. O. D.
1890	2	22	7/30	.015"	.020"	.165"
1890/3	3	22	7/30	.015"	.020"	.175"
1891	2	20	10/30	.015"	.020"	.180"
1891/3	3	20	10/30	.015"	.020"	.190"
1892	2	18	16/30	.017"	.020"	.220"
1892/3	3	18	16/30	.017"	.020"	.230"

STANDARD SPOOL PUT-UP: 500 ft., 1000 ft.

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White

\*Mylar-Dupont

## Multi-Conductor Flexible Cable PLASTIC INSULATED — Cotton Braid Overall

**DESCRIPTION:**

Each Conductor, #20—10/30 Tinned Copper Stranded, 1/64" plastic insulated, cotton braid, color coded, conductors twisted, closely woven brown cotton braid overall.

Used for multiple circuit hookups, connecting speakers, remote control units, analyzers, etc.



Cat. No.	Spool	Conds.	Size AWG	Strand	Ins.	Nom. O. D.
172	100'	2	20	10/30	1/64"	.205"
173	100'	3	20	10/30	1/64"	.245"
174	100'	4	20	10/30	1/64"	.265"
175	100'	5	20	10/30	1/64"	.290"
176	100'	6	20	10/30	1/64"	.310"
177	100'	7	20	10/30	1/64"	.325"
178	100'	8	20	10/30	1/64"	.360"
179	100'	9	20	10/30	1/64"	.395"
180	100'	10	20	10/30	1/64"	.425"
182	100'	12	20	10/30	1/64"	.440"

**CONDUCTOR COLOR CODE:**

- 1—Black
- 2—White
- 3—Red
- 4—Green
- 5—Orange
- 6—Blue
- 7—Brown
- 8—Yellow
- 9—White/Black Tracer
- 10—Red/Black Tracer
- 11—Green/Black Tracer
- 12—Orange/Black Tracer

## Twisted Pair Transmission Cable WEATHERPROOF BRAID

**DESCRIPTION:**

No. 952—Two Conductors, #22-7/30 Tinned Copper Stranded, special low loss rubber insulation, color coded, twisted conductors, cotton braid overall with rugged weatherproof finish.

No. 919, 920—Two Conductors, #18-16/30 Tinned Copper Stranded, same construction as above.

Used for low loss transmission coupling between antenna and receiver as doublet twisted lead-in wire for inter-com. setup.



Cat. No.	Spool	Size AWG	Strand	Insul.	Nom. O. D.
952	500'	22	7/32	1/32"	.180"
919	500'	18	16/30	1/32"	.195"
920	1000'	18	16/30	1/32"	.195"

For longer lengths and alternate put-ups—Specify.

## SHIELDED PLASTIC JACKETED CABLE BRAIDED COPPER SHIELD

Designed for P.A. and sound systems, installations in schools, hospitals and institutions, transmitters, recording studios, electronic circuits, etc. The construction of the shield allows ease of pigtail soldering and the shield provides additional strength for the cable.

**DESCRIPTION:** Each conductor tinned copper, polyvinylchloride insulation color coded, twisted, braided copper tinned shield, gray polyvinylchloride jacket overall. Cables suitable for outdoor installations.

**STRANDED**

Cat. No.	No. of Conductors	AWG Size	Strand	Nom. Insul.	Nom. Jacket	Nom. O. D.
1790	2	22	7/30	.017"	.020"	.175"
1790/3	3	22	7/30	.017"	.020"	.195"
1791	2	20	10/30	.017"	.020"	.195"
1791/3	3	20	10/30	.017"	.020"	.215"
1792	2	18	16/30	.017"	.020"	.235"
1792/3	3	18	16/30	.017"	.020"	.245"
1793	2	16	26/30	.017"	.020"	.265"
1794	2	14	41/30	.020"	.020"	.290"

**SOLID**

**DESCRIPTION:** Same as above using solid conductors with black PVC jacket overall.

Cat. No.	No. of Conductors	AWG Size	Strand	Nom. Insul.	Nom. Jacket	Nom. O. D.
*1797	2	22	1	.017"	.020"	.170"
1798	2	20	1	.017"	.020"	.195"
1799	2	18	1	.017"	.020"	.220"

\*No. 22 solid T.C. ground wire under braided copper shield  
St. Put-up: 500 ft., 1000 ft.

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White

## STRAIN GAUGE CABLE

**DESCRIPTION:** Tinned conductors, plastic insulation, 2 pairs—4 cond., aluminum Mylar shields, stranded copper tinned ground wire, polyvinylchloride gray jacket overall.

Cat. No.	No. of Cond.	AWG	Strand	Nom. Insul.	Nom. Jacket	Cap. Nom./Ft.	Nom. O. D.
1717	4	25	7/33 3 copper 4 copperweld	.013"	.020"	25	.169"

Polyethylene insulated, black and red conductors under aluminum Mylar shield. Str. grd. wire, green and white conductors under overall aluminum Mylar shield, gray vinyl jacket.

St. Put-up: 500 ft., 1000 ft.

1718	4	22	7/30	.008"	.020"	35	.165"
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Polypropylene insulated black and red under aluminum Mylar shield, green and white under aluminum Mylar shield (separate pairs), stranded ground wire, gray vinyl jacket overall.

St. Put-up: 500 ft., 1000 ft.

## SHIELDED BROADCAST AUDIO CABLE

Designed to provide maximum performance on all equipment. Conductors twisted correctly assures quiet, clear operation which eliminates interference and cross talk. Used by Broadcast studios, for P. A. and sound systems, rack wiring, etc.

**DESCRIPTION:**

#938—#22 Solid Tinned Copper Conductor, enamelled, heavy cellulose acetate yarn wrap, cotton braid waxed; cabled with #22 AWG solid tinned copper wire laid parallel to twisted pair under tinned copper braid shield; tubed-on Vinyl plastic jacket overall.



No. 938 CBS, ABC TYPE

#939—#22-7/30 Stranded Tinned Copper, plastic insulation, color coded, twisted, copper braid shield, tubed-on Vinyl plastic jacket overall.



No. 939

#940—2 Conductors #22 solid plastic insulation, color coded, twisted with #22 AWG solid tinned copper ground wire under tinned copper shield with vinyl plastic jacket overall.



No. 940

#940/1 same construction as #940 however with tinned copper spiral wrapped shield.  
#822 and #824 have solid enamelled copper wire, cotton wrap, cotton braid waxed twisted pair, bare copper braid overall.



Nos. 822 and 824

Cat. No.	Spool	Conds.	AWG Size No.	Strand	Nom. O. D.
938	500'	2	22	Solid	.210"
939	500'	2	22	7/30	.170"
940	500'	2	22	Solid	.160"
940/1	500'	2	22	Solid	.160"
822	500'	2	22	Solid	.125"
824	500'	2	19	Solid	.145"
927	500'	2	20	Solid	.210"
928	500'	2	18	Solid	.220"

CONDUCTOR COLOR CODE: Black and Red  
For larger lengths and alternate put-ups—Specify.



# Birnbach

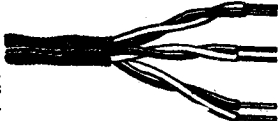
INTER-COM • MULTI-COND • AUDIO • INDUSTRIAL  
TWISTED PAIRS



## PLASTIC INTERCOMMUNICATING CABLES TWISTED PAIRS—SOLID CONDUCTORS

**DESCRIPTION:**

Each Conductor #22 Solid Copper Tinned, .010" Wall Vinyl Plastic Insulation, conductors color coded, twisted pairs cabled, tubed gray Vinyl plastic jacket overall. Suitable for outdoor installations.



No. 4701 to 4729

Cat. No.	Spool	Pairs	Cond.	Size No. AWG	Nom. Jkt.	Nom. O.D.
4701	500'	1	2	22 Solid	.020"	.145"
4702	500'	2	4	22 Solid	.020"	.205"
4703	500'	3	6	22 Solid	.020"	.215"
4706	500'	6	12	22 Solid	.020"	.250"
4709	500'	9	18	22 Solid	.020"	.310"
4711	500'	11	22	22 Solid	.020"	.350"
4711/13	500'	13	26	22 Solid	.025"	.385"
4715	500'	15	30	22 Solid	.025"	.390"
4716	500'	16	32	22 Solid	.025"	.405"
4727	500'	27	54	22 Solid	.035"	.495"
4727/31	500'	31	62	22 Solid	.035"	.555"
4727/41	500'	41	82	22 Solid	.035"	.630"
4729	500'	51	102	22 Solid	.045"	.760"
4729/76	500'	76	152	22 Solid	.070"	.970"
4729/101	500'	101	202	22 Solid	.080"	1.140"

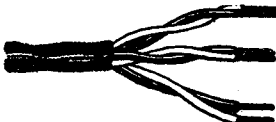
\* Bare copper conductors.

For longer lengths and alternate put-ups—Specify.

## TWISTED PAIRS—STRANDED CONDUCTORS

**DESCRIPTION:**

Each Conductor #22 7/30 Stranded Tinned Copper, .010" Vinyl plastic insulation, twisted pairs cabled, conductors color coded, tubed gray Vinyl plastic jacket overall.



Cat. No.	Spool	Pairs	Cond.	Size No. AWG	Strand	Nom. O.D.
4731	500'	1	2	22	7/30	.145"
4732	500'	2	4	22	7/30	.210"
4733	500'	3	6	22	7/30	.225"
4734	500'	4	8	22	7/30	.235"
4735	500'	5	10	22	7/30	.245"
4736	500'	6	12	22	7/30	.270"
4739	500'	9	18	22	7/30	.325"
4745	500'	15	30	22	7/30	.455"
4747	500'	27	54	22	7/30	.570"

For longer lengths and alternate put-ups—Specify.

## MULTI-CONDUCTOR FLEXIBLE CABLE

**DESCRIPTION:**

Each conductor #22 7/30 tinned copper stranded 1/64" thermoplastic insulation, color coded, conductors twisted, gray vinyl plastic jacket overall. Used for signal, P.A. systems. Electronic computer cable,



Cat. No.	Spool	Conds.	Size AWG	Strand	Nom. Insul.	Nom. Jacket	Nom. O.D.
156	500'	2	22	7/30	.010"	.020"	.140"
157	500'	3	22	7/30	.010"	.020"	.145"
158	500'	4	22	7/30	.010"	.020"	.170"
159	500'	5	22	7/30	.010"	.020"	.175"
160	500'	6	22	7/30	.010"	.020"	.185"
161	500'	7	22	7/30	.010"	.020"	.190"
162	250'	8	22	7/30	.010"	.020"	.200"
163	250'	9	22	7/30	.010"	.020"	.225"
164	250'	10	22	7/30	.010"	.020"	.235"
165	250'	12	22	7/30	.010"	.020"	.255"
165/15	250'	15	22	7/30	.010"	.020"	.280"
165/20	250'	20	22	7/30	.010"	.020"	.310"

CONDUCTOR COLOR CODE:

1—Black 2—Red 3—White 4—Green 5—Orange 6—Blue 7—Brown  
8—Yellow 9—Violet 10—Slate 11—Pink 12—Tan 13—Red/Green  
14—Red/Yellow 15—Red/Black

## Multi-Conductor Industrial Cable PLASTIC JACKET OVERALL

**DESCRIPTION:**

#18 solid tinned copper plastic insulation, color coded, twisted conductors. Gray vinyl jacket overall. Used for inter-com systems, speaker cable, alarm, signal, P. A. systems, thermostats, remote control circuits. Suitable for outdoor installations.



Cat. No.	Spool	Conds.	Size AWG	Insul.	Jacket	O.D.
4752	500'	2	18 solid	.017"	.020"	.185"
4753	500'	3	18 solid	.017"	.020"	.190"
4754	500'	4	18 solid	.017"	.020"	.235"
4755	500'	5	18 solid	.017"	.020"	.240"
4756	500'	6	18 solid	.017"	.020"	.275"

CONDUCTOR COLOR CODE:

1—Black, 2—Red, 3—White, 4—Green, 5—Orange, 6—Blue

## Unshielded Audio Cable Stranded and Solid Cond. (2 & 3)

Widely used for connecting sound and inter-com systems, audio hookups, indoors—outdoors. Telephones, telemetering connections. For Baby Sitter Intercoms.

### FOR INDOOR USE Without Outer Jacket

**DESCRIPTION:**

Stranded & Solid Tinned Copper Conductors, vinyl plastic insulation, color coded, conductors twisted.



Cat. No.	Spool	Conds.	Size AWG	Nom. Insul.	Nom. O.D.
931	1000'	2	22 Solid	.016"	.100"
935	1000'	3	22 Solid	.016"	.115"
981	1000'	2	20 Solid	.016"	.120"
983	1000'	3	20 Solid	.016"	.140"
985	1000'	2	18 Solid	.016"	.145"
987	1000'	3	18 Solid	.016"	.155"
989	1000'	2	16 Solid	.016"	.175"
989/3	1000'	3	16 Solid	.016"	.190"
990	1000'	2	22 Stranded	7/30	.125"
990/3	1000'	3	22 Stranded	7/30	.140"
991	1000'	2	20 Stranded	10/30	.145"
991/3	1000'	3	20 Stranded	10/30	.160"
992	1000'	2	18 Stranded	16/30	.165"
992/3	1000'	3	18 Stranded	16/30	.180"
993	1000'	2	16 Stranded	28/30	.190"
993/3	1000'	3	16 Stranded	26/30	.210"
994	1000'	2	14 Stranded	41/30	.220"
994/3	1000'	3	14 Stranded	41/30	.240"
995	1000'	2	12 Stranded	65/30	.250"
995/3	1000'	3	12 Stranded	65/30	.275"

CONDUCTOR COLOR CODE: 1—Brown 2—Tan 3—Gray

### FOR OUTDOOR USE With Plastic Jacket Overall

**DESCRIPTION:**

Solid and Stranded Tinned Copper Conductors, vinyl plastic insulation, color coded, conductors twisted with weatherproof plastic jacket overall.



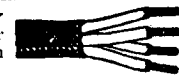
Cat. No.	Spool	Conds.	Size AWG	Insul.	Jacket	O.D.
932	1000'	2	22 solid	.010"	.020"	.125"
934	1000'	3	22 solid	.010"	.020"	.130"
934/4	1000'	4	22 solid	.010"	.020"	.150"
982	1000'	2	20 solid	.016"	.020"	.170"
984	1000'	3	20 solid	.016"	.020"	.180"
984/4	1000'	4	20 solid	.016"	.020"	.200"
986	1000'	2	18 solid	.016"	.020"	.185"
988	1000'	3	18 solid	.016"	.020"	.190"
988/4	1000'	4	18 solid	.016"	.020"	.220"
988/5	1000'	5	18 solid	.016"	.020"	.235"
988/6	1000'	6	18 solid	.016"	.020"	.265"
921	1000'	2	22 Stranded	7/30	.010"	.130"
921/3	1000'	3	22 Stranded	7/30	.010"	.140"
921/4	1000'	4	22 Stranded	7/30	.010"	.165"
922	1000'	2	20 Stranded	10/30	.016"	.020"
922/3	1000'	3	20 Stranded	10/30	.016"	.185"
922/4	1000'	4	20 Stranded	10/30	.016"	.195"
923	1000'	2	18 Stranded	16/30	.016"	.020"
923/3	1000'	3	18 Stranded	16/30	.016"	.205"
923/4	1000'	4	18 Stranded	16/30	.016"	.235"
926	1000'	2	16 Stranded	26/30	.016"	.020"
926/3	1000'	3	16 Stranded	26/30	.016"	.245"
926/4	1000'	4	16 Stranded	26/30	.016"	.270"

For longer lengths and alternate put-ups—Specify.

CONDUCTOR COLOR CODE: 1-Black, 2-Red, 3-White, 4-Green.

### THERMO-PLASTIC INSULATED — Cotton Braid Overall

Each Conductor #22 — 7/30 Tinned Copper Stranded, 1/64" Thermoplastic insulation, color coded, conductors twisted, closely woven brown cotton braid overall.



Cat. No.	Spool	Conds.	Size AWG	Strand	Ins.	Nom. O.D.
263	100'	3	22	7/30	1/64"	.160"
264	100'	4	22	7/30	1/64"	.170"
265	100'	5	22	7/30	1/64"	.195"
266	100'	6	22	7/30	1/64"	.210"
267	100'	7	22	7/30	1/64"	.230"
268	100'	8	22	7/30	1/64"	.245"
269	100'	9	22	7/30	1/64"	.260"
270	100'	10	22	7/30	1/64"	.295"
272	100'	12	22	7/30	1/64"	.325"

For longer lengths and alternate put-ups—Specify.

CONDUCTOR 1—Black, 2—White, 3—Red, 4—Green, 5—Orange,  
COLOR CODE: 6—Blue, 7—Brown, 8—Yellow, 9—Purple,  
10—Pink, 11—Gray, 12—Dk. Blue

# Birnbach

**CORD SETS • COAX CABLE  
COMMUNITY COAX • DIATHERMY • LAMP CORD**



### HEAVY DUTY SERVICE CORD

CSA APPROVED — (HEAVY DUTY) — UL APPROVED

Used for heavy duty replacement on refrigerators, washing machines, machinery, tools and electronic devices.

**DESCRIPTION:**

Two and Three Conductors, Stranded Bare Copper, cotton serve, rubber insulation, jute filler, cotton wrap, tough rubber jacket overall, molded plug one end, free end stripped and tinned for easy attachment—Hankd.

No. 346 and 347 Same as above with 3 prong plug.



Cat. No.	Length Ft.	Conds.	Size AWG	Type	Strand	O.D.	Std. Pkg.
348	8	2	16	S.J.	65/34	.325"	25
346	8	3	16	S.J.	65/34	.355"	25
347	8	3	18	S.J.	41/34	.330"	25
309	9	2	18	S.V.	41/34	.250"	25
312	12	2	18	S.V.	41/34	.250"	25
309/3	9	3	18	S.V.	41/34	.265"	25
312	12	2	18	S.V.	41/34	.250"	25

### TV POWER SUPPLY CORD—UL APPROVED

Used extensively as replacement of damaged or worn out TV cords.

**DESCRIPTION:**

Six Foot Rip Strip TV U.L. Approved Safety Cord. 2-cond. No. 18 SP-1 (POSJ) brown rubber cord with molded male plug and TV molded-on connector on other end.



Cat. No.	Std. Pkg.
815	Television Power Supply Cord 6 Feet 100

### SERVICE LINE CORDS—UL APPROVED

An all purpose approved power supply cord for radios, record players, lamps, and small appliances.

**DESCRIPTION:**

Two Conductors Rubber Parallel SP-1 (POSJ) with Molded-on Male Plug, double brass blades, conductor end striped and tinned, hanked. Available in Black and Brown.



Cat. No.	Lgth. Ft.	Conds.	Size No. AWG	Strand	Nom. O.D.	Std. Pkg.
816	6	2	18	41/34	130" x .235"	100
817	7½	2	18	41/34	130" x .235"	100
819	10	2	18	41/34	130" x .235"	50

### BIRNBACH COMMUNITY TV COAXIAL CABLES

New, developed for industry where weight, lower attenuation and superior performance are paramount. New cellular polyethylene construction offers low loss and light weight to community TV use. Note supported numbers—ideal for long lengths and self supporting. Hi-molecular weight 'poly' jacketing assures longer life and all weather conditions.

C=Copper  
CC=2 Copper  
CW=Copperweld  
PE=Polyethylene

PEC=Cellular Polyethylene  
BV=Black Vinyl  
CSB=Copper Strip Braid  
HMW=High Molecular Weight Polyethylene

Cat. No.	R.G. No.	A.W.G.	Cond. Material	Insulation	Shield	Jkt.	O.D.	Nom. Impedance	Nom. Velocity of Propagation	Nom. Capacitance	Nom. Attenuation per 100' Chan.	db.
4901	59/U	22 Sol.	C.W.	PE	C	BV or HMW	.246	75	78%	16.2	2	2.7/4
4902	59/U Supported	22 Sol.	C.W.	PE	C	BV or HMW	.246	75	78%	16.2	6	2.9/8
4903	59/U Double	22 Sol.	C.W.	PE	CC	BV or HMW	.300	75	78%	16.2	10	5.0/12
4904	59/U Cellular	20 Sol.	C	PEC	C	BV or HMW	.246	75	78%	17.3	2	1.6/4
											4	1.8/6
											8	1.9/8
											10	3.2/10
											12	3.4/12
											12	3.5/12
4905	11/U Cellular	14 Sol.	C	PEC	C	HMW	.410	75	78%	17.3	2	1.1/4
4906	11/U Supported	14 Sol.	C	PEC	C	HMW	.410	75	78%	17.3	6	1.3/8
4907	11/U Double Cellular	14 Sol.	C	PEC	CC	HMW	.470	75	78%	17.3	10	2.1/12
4908	11/U Double Supported	14 Sol.	C	PEC	CC	HMW	.470	75	78%	17.3	12	2.2/12
4909	11/U Cellular	14 Sol.	C	PEC	CSB	HMW	.410	75	78%	17.3	6	1.1/13
4910	11/U Double Cellular	14 Sol.	C	PEC	CSB	HMW	.410	75	78%	17.3	13	2.1/13
4912	Cellular	12 Sol.	C	PEC	CSB	HMW	.460	75	78%	17.3	6	1.1/13
4913	Double Cellular	12 Sol.	C	PEC	CSB	HMW	.460	75	78%	17.3	13	1.1/13
4915	Cellular	9 Sol.	C	PEC	CSB	HMW	.637	75	78%	17.3	6	1.1/13
4916	Double Cellular	9 Sol.	C	PEC	CSB	HMW	.637	75	78%	17.3	13	1.1/13

STANDARD SPOOL PUT-UPS: 500 Ft., 1000 Ft. In addition, all are available on continuous length reels of 3000 feet or more.

### RG/U COAXIAL TRANSMISSION CABLE

DESCRIPTION: One and Two Conductor, Polyethylene plastic insulation, copper braid shield, plastic jacket overall.

Cat. No.	Spool	Type	Nom. Imped.	Nom. Mmfd. Ft.	Size AWG	Strand	Nom. O.D.
901	500'	RG-8/U	52	29.5	13	7/21 Bare	.405"
902	500'	RG-9/U	51	30	13	7/21S	.420"
903	500'	RG-11/U	75	20.5	18	7/26 Tinned	.405"
904F	500'	RG-11/U	75	16.5	15	Solid	.405"
904DS	500'	RG-11/U	75	20.5	18	7/26T	.470"
904DSF	500'	RG-11/U	75	16.5	15	Solid	.470"
912	500'	RG-22/U	95.0	16.0	18	2 Cond. 7/0152	.405"
907	1000'	RG-29/U	53.5	28.5	20	Solid	.174"
909	1000'	RG-54A/U	58	26.5	18	7/0152	.250"
905	1000'	RG-58A/U	50	29.0	20	19/0068 Tinned	.195"
906	1000'	RG-58/U	53.5	28.5	20	Solid	.195"
910	1000'	RG-59/U	73	21.0	22	Solid Copperweld	.242"
914	1000'	RG-62/U	93	13.5	22	Solid	.242"
916	1000'	RG-108/U	78	23.5	20	2 Cond. 7/28T	.235"

Additional RG numbers available including double shields, non-contaminating jackets—all conforming to MIL-C-17B specifications. Also, "TEFLON" dielectrics available for hi. temp. miniaturization.

No. 904F is RG-11/U with Poly-cell foam; No. 904 DSF has double shield Poly-cell dielectric constant of 1.50 solid Polyethylene 2.25.

### DIATHERMY CABLE

Cat. No.	Spool	Size AWG	Strand	Ins.	Nom. O.D.
756	100'	14	104/34	3/64"	.300"
757	1000'	14	104/34	3/64"	.300"

### RIP-STRIP LAMP CORD

TYPE SP-1 (POSJ-64) — TYPE SPT-1 (POT) — UL APPROVED

All purpose approved cords SP-1 (rubber) SPT-1 (Plastic) for line cord on lamps, radios, clocks, small electronic instruments and appliances.

**DESCRIPTION:**

Two Conductors Parallel, #18—41/34 Extra Flexible Copper, rubber or plastic jacket slit for easy separation.



Cat. No.	Spool	Size Cond.	AWG	Strand	Insul.	Type	UL Type	Nom. O.D.
570	100'	2	18	41/34	Rubber	SP-1 (POSJ)	(POSJ)	.130" x .235"
572	250'	2	18	41/34	Rubber	SP-1 (POSJ)	(POSJ)	.130" x .235"
573	500'	2	18	41/34	Rubber	SP-1 (POSJ)	(POSJ)	.130" x .235"
569	500'	2	18	41/34	Plastic	SPT-1 (POT)	(POT)	.130" x .235"

Colors: (Rubber) Brown, Black, White. (Plastic) Brown, Black, Ivory, Gray, Pink, Light Blue, Yellow, Green.

# Birnbach

**MAGNET WIRE • SLIPBACK WIRE  
TINNED COPPER • ROTOR CABLE**



**MAGNET WIRE PER MIL-W-583B**

**HEAVY FORMVAR (HF) TYPE, T2**

Single conductor round bare copper, baked film insulation from a varnish based on a vinyl acetal resin, 105°C.

Cat. No.	Size B&S	Nom. O.D.
BHF-10	10	.1056"
BHF-12	12	.0842"
BHF-14	14	.0673"
BHF-16	16	.0539"
BHF-18	18	.0432"
BHF-20	20	.0346"
BHF-22	22	.0277"
BHF-24	24	.0224"
BHF-26	26	.0180"
BHF-28	28	.0144"
BHF-30	30	.0116"
BHF-32	32	.0095"
BHF-34	34	.0075"
BHF-36	36	.0060"
BHF-38	38	.0049"
BHF-40	40	.0038"
BHF-42	42	.0032"
BHF-44	44	.0026"

**PLAIN ENAMEL (PE) TYPE T**

Single conductor round bare copper covered with a continuous insulating film of enamel, 105°C.

Cat. No.	Size B&S	Nom. O.D.
BPE-10	10	.1037"
BPE-12	12	.0825"
BPE-14	14	.0657"
BPE-16	16	.0522"
BPE-18	18	.0416"
BPE-20	20	.0332"
BPE-22	22	.0266"
BPE-24	24	.0212"
BPE-26	26	.0165"
BPE-28	28	.0135"
BPE-30	30	.0108"
BPE-32	32	.0087"
BPE-34	34	.0069"
BPE-36	36	.0055"
BPE-38	38	.0044"
BPE-40	40	.0034"
BPE-42	42	.0028"
BPE-44	44	.0023"

STANDARD PUT-UP: ¼ lb., ½ lb., 1 lb., 5 lbs., 10 lbs.  
 Sizes 38, 40, 42, 44 largest put-up 1 lb.  
 Sizes 34, 36 largest put-up 5 lbs.

**SOLID TINNED (SOFT DRAWN) SYMBOL TC**

Specification MIL-W-3861 Type S, QQ-W-343 Type S, ASTM-B-33

Cat. No.	Size B&S	Nom. O.D.
IST-10	10	.103"
IST-12	12	.082"
IST-14	14	.065"
IST-16	16	.051"
IST-18	18	.040"
IST-20	20	.033"
IST-22	22	.025"
IST-24	24	.020"
IST-26	26	.016"
IST-28	28	.013"
IST-30	30	.010"
IST-32	32	.008"
IST-34	34	.006"
IST-36	36	.005"
IST-38	38	.004"
IST-40	40	.003"

STANDARD PUT-UP: ¼ lb., ½ lb., 1 lb., 5 lbs., 10 lbs.  
 Sizes 34, 36 largest put-up 5 lbs.  
 Sizes 38, 40, 42, 44 largest put-up 1 lb.

**TINNED COPPER WIRE—BUS BAR**

Pure Electrolytic, Copper, annealed, tinned for quick soldering  
 MIL—W—3861 type S, ASTM—B—33 specifications, QQ—W—343 type S

Cat. No.	Put-Up	Size AWG	Area Circular Mills	O.D.
1433/4	100' Coil	4	41,704	.204"
1433/6	100' Coil	6	26,250	.162"
1433	100' Coil	8	16,510	.129"
1402	100' Coil	10	10,380	.103"
1403	1000' Spool	10	10,380	.103"
1406	100' Coil	12	6,530	.082"
1407	1000' Spool	12	6,530	.082"
1410	100' Coil	14	4,107	.065"
1411	1000' Spool	14	4,107	.065"
1414	100' Coil	16	2,583	.051"
1415	1000' Spool	16	2,583	.051"
1418	100' Coil	18	1,624	.040"
1419	1000' Spool	18	1,624	.040"
1422	100' Coil	20	1,022	.033"
1423	1000' Spool	20	1,022	.033"
1434	1000' Spool	22	624.4	.025"
1424	1000' Spool	24	404.0	.020"
1426	1000' Spool	26	254.1	.016"
1428	1000' Spool	28	159.8	.013"
1430	1000' Spool	30	100.5	.010"
1430/32	1000' Spool	32	63.21	.008"
1430/34	1000' Spool	34	39.75	.006"
1430/36	1000' Spool	36	25.00	.005"
1430/38	1000' Spool	38	15.72	.004"

See Magnet Wire Section For Additional Sizes

**DOUBLE NYLON (DN)**

Single conductor round bare copper covered with double nylon insulation overall. Type F-2.

Cat. No.	Size B&S	Nom. O.D.
BDN-10	10	.109"
BDN-12	12	.086"
BDN-14	14	.069"
BDN-16	16	.056"
BDN-18	18	.045"
BDN-20	20	.037"
BDN-22	22	.030"
BDN-24	24	.024"
BDN-26	26	.020"
BDN-28	28	.017"
BDN-30	30	.014"
BDN-32	32	.012"
BDN-34	34	.010"
BDN-36	36	.009"
BDN-38	38	.008"
BDN-40	40	.007"

**DOUBLE COTTON (DC)**

Single conductor round bare copper covered with double cotton insulation overall. Type C-2.

Cat. No.	Size B&S	Nom. O.D.
BDC-10	10	.113"
BDC-12	12	.091"
BDC-14	14	.074"
BDC-16	16	.060"
BDC-18	18	.050"
BDC-20	20	.041"
BDC-22	22	.034"
BDC-24	24	.029"
BDC-26	26	.024"
BDC-28	28	.020"
BDC-30	30	.017"
BDC-32	32	.015"
BDC-34	34	.014"
BDC-36	36	.012"
BDC-38	38	.011"
BDC-40	40	.011"

STANDARD PUT-UP: ¼ lb., ½ lb., 1 lb., 5 lbs., 10 lbs.  
 Sizes 34, 36 largest put-up 5 lbs.  
 Sizes 38, 40, 42, 44 largest put-up 1 lb.

**BIRNBACH DOUBLE BRAID SLIPBACK HOOK-UP WIRE**



Has a double cotton braid over the conductor, brightly color coded, saturated with paraffin. This construction will not cause the cotton insulation to fray or bunch up when pushed back. Has high dielectric strength and will withstand all climatic changes without breakdown. Tinned copper wire.

**COLORS:**

Black, Red, Blue, Yellow, Green, White, Brown, Orange

Cat. No.	Put-Up	SOLID		Puncture V.	
		Size	Strands	60-cy. AC	O.D.
380	100' Spool	20	Solid	2000	.090"
382	100' Spool	18	Solid	2100	.098"
384	100' Coil	16	Solid	2100	.108"
386	100' Spool	14	Solid	2100	.122"
388	100' Spool	12	Solid	2200	.135"
580	1000' Spool	20	Solid	2000	.090"
582	1000' Spool	18	Solid	2100	.098"
584	1000' Spool	16	Solid	2100	.108"
586	1000' Spool	14	Solid	2100	.122"
588	1000' Spool	12	Solid	2200	.135"

**STRANDED**

381	100' Spool	20	10/30	2100	.093"
383	100' Spool	18	16/30	2200	.103"
385	100' Spool	16	26/30	2200	.118"
387	100' Spool	14	41/30	2200	.135"
389	100' Spool	12	65/30	2300	.155"
581	1000' Spool	20	10/30	2100	.093"
583	1000' Spool	18	16/30	2200	.103"
585	1000' Spool	16	26/30	2200	.118"
587	1000' Spool	14	41/30	2200	.135"
589	1000' Spool	12	65/30	2300	.155"

**BIRNBACH BIRNTEX SLIPBACK WIRE**

This wire is constructed of quality materials and carefully insulated with a cotton wrap over which a cotton braid is closely woven, and then saturated with paraffin. Pushes back easily. Tinned copper wire.

**SOLID**

Cat. No.	Put-Up	SOLID		Puncture V.	
		Size	Strands	60-cy. AC	O.D.
72	100' Spool	22	Solid	1500	.060"
76	1000' Spool	22	Solid	1500	.060"
85	100' Spool	20	Solid	1500	.065"
86	100' Spool	18	Solid	1500	.075"
92	1000' Spool	20	Solid	1500	.065"
94	1000' Spool	18	Solid	1500	.075"

**STRANDED**

73	100' Spool	22	7/30	1500	.065"
77	1000' Spool	22	7/30	1500	.065"
85	100' Spool	20	10/30	1500	.070"
87	100' Spool	18	16/30	1500	.080"
93	1000' Spool	20	10/30	1500	.070"
95	1000' Spool	18	16/30	1500	.080"

COLORS: Blue, Black, Red, Yellow, Green, White, Brown, Orange

**ANTENNA CONTROL ROTOR CABLE**

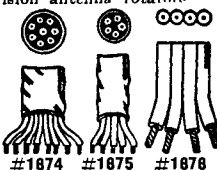
Developed for remote control of television antenna rotators

**DESCRIPTION:**

#1874—4 Conductors flat parallel polyethylene plastic insulation — One outer conductor tinned, balance bare copper.

#1875 — 5 Conductors twisted, color coded. Vinyl plastic jacket overall.

#1878 — 8 Conductors twisted, color coded. Vinyl plastic jacket overall.



Cat. No.	Spool	Cond.	Size AWG	Strand.	Nom. O.D.
1874	1000'	4	20	7/28	.072" x .390"
1874A	500'	4	20	7/28	.072" x .390"
1875	1000'	5	20	7/28	.180"
1875A	500'	5	20	7/28	.180"
1878	1000'	8	22	7/30	.205"
1878A	500'	8	22	7/30	.205"

CONDUCTOR COLOR CODE CHART FOR #1875, #1878  
 1—Black 3—Red 5—Yellow 7—Brown  
 2—White 4—Green 6—Blue 8—Orange

# Birnbach

LACINE CORD AND TAPES • CABLE AND TUBING CLAMPS • WIRE TIES



## LACING CORD/TAPE TO MEET MIL-T-713A TYPE P\* FLAT BRAIDED LACING TAPE

**NYLON** Flat braided Hi-Tenacity Nylon Fiber impregnated with (MW) microcrystalline fungicidal wax. Engineered to stay flat. Distributes stress evenly over a wide area. Resistant to fungus, flame, abrasion, acids. Will not cut or damage insulation. Has strength, toughness and stability.

Put up on 500 yards per tube.

Cat. No.	Class	Width	Thickness	Test Lbs.	Yard/Lb.
1035	Natural White	.200"	.014"	150	250
1035B	Black	.200"	.014"	150	250
1036	Natural White	.120"	.014"	80	550
1036B	Black	.120"	.014"	80	550
1037	Natural White	.090"	.014"	50	750
1037B	Black	.090"	.014"	50	750
1038	Natural White	.062"	.010"	30	1500
1038B	Black	.062"	.010"	30	1500
1039	Natural White	.046"	.010"	15	2400
1039B	Black	.046"	.010"	15	2400

**DACRON** Flat Braided Hi-Tenacity Dacron Fiber impregnated with special non-slip fungicidal finish. Will not cut or damage insulation. Engineered to stay flat—for strength, toughness, stability. Will not cut insulation.

Put up on 500 yards per tube.

Cat. No.	Width	Thickness	Test Lbs.	Yard/Lb.
1041	.120"	.014"	80	450
1041B	.120"	.014"	80	450
1042	.090"	.014"	48	600
1042B	.090"	.014"	48	600
1043	.060"	.010"	35	850
1043B	.060"	.010"	35	850
1044	.046"	.010"	25	1100
1044B	.046"	.010"	25	1100

**TEFLON-FIBERGLASS** Flat Braided Fiberglass, teflon coated and bonded for hi-temperature applications (550°F). Engineered to stay flat—for strength, toughness and stability. Teflon finish increases tensile strength and abrasion resistant surface. Will not cut or damage insulation. Color White.

Put up on 500 yards per spool.

Cat. No.	Width	Thickness	Test Lbs.	Yard/Lb.
1045	.170"	.025"	150	200
1046	.120"	.020"	90	200
1047	.080"	.020"	70	280

**TEFLON** Flat Braided Teflon for hi-temperature applications (550°F). Engineered to stay flat. Will not cut or damage insulation. Color: Brown.

Put up on 500 yards per spool.

Cat. No.	Width	Thickness	Test Lbs.	Yard/Lb.
1048	.100"	.016"	35	325
1049	.075"	.010"	15	700

## ROUND NYLON LACING CORDS

This nylon lacing cord manufactured to meet Spec. MIL-T-713A Type P, Composition P, Classes 3, 2, 1. Wax finished—compounded with a fungicide to resist mildew.

Put up on 1 lb. Tubes.

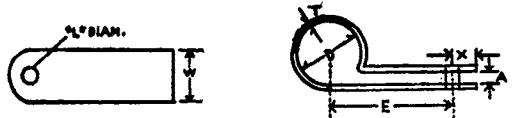
Class	Cat. Nos.		Yds.	Diam.	Breaking Strength
	Natural	Black			
Class 1	1070	1070B	600	.039"	70 Lbs.
Class 2	1071	1071B	800	.029"	48 Lbs.
Class 3	1072	1072B	1140	.025"	32 Lbs.
Class 4	1072/1	1072/1B	2400	.020"	20 Lbs.

## ROUND LINEN LACING CORDS

This linen lacing cord is made from pure flax treated with microcrystalline wax compounded with fungicide to resist mildew. The twelve, eight and six ply cord meet Spec. MIL-T-713A Type N, Classes 1, 2 and 3 respectively. Color: Natural. Also available in Black in 1 lb. Tubes.

4 oz. Tube		8 oz. Tube		1 lb. Tubes.		Yds.	Class Ply	Diam.	Lb. Test
Cat. No.	Yds.	Cat. No.	Yds.	Natural	Black				
1073	210	1074	425	1075	1075B	850	—	4 .036"	22
1076	150	1077	300	1078	1078B	600	3	6 .044"	33
1082	115	1083	235	1084	1084B	470	2	8 .051"	50
1079	100	1080	200	1081	1081B	400	—	9 .054"	56
1085	75	1086	150	1087	1087B	300	1	12 .063"	72

## NYLON CABLE AND TUBING CLAMPS MEETS MIL-P-20693A



MADE OF DUPONT NYLON FORMULA FM 10001 (Zytel 101)

Used as a clamp, strain relief, clip hanger, fastener, strap, these nylon cable clamps are light and tough. Have smooth, non-abrasive surfaces, rounded edges will not chafe conductors or cause shorts or grounds in cable. Insoluble in solvents, oils, gasoline, alcohol, hydraulic fluids, alkalies, acids. Temperature resistant from -60°F to +300°F. Do not support combustion. Moisture and heat resistant. Inside matte finish surfaces prevent slippage under vibration and are self aligning when tightened by screw. Snaps onto cable. Meets MIL-P-20693A specs. Fungus resistant.

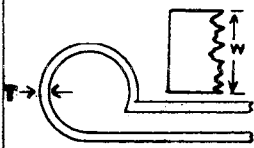
Cat. No.	Put-Up	To Fit Size	D	E	W	T	L	X	A
725	100	1/4"	.125	.316	3/8	.050	.177	.227	.062
726	100	3/16"	.187	.378	3/8	.050	.177	.277	.062
727	100	1/4"	.250	.409	3/8	.050	.177	.277	.062
728	100	3/8"	.312	.441	3/8	.050	.177	.277	.062
729	100	3/8"	.375	.471	3/8	.050	.177	.277	.062
730	100	3/8"	.437	.519	3/8	.050	.177	.277	.062
731	100	1/2"	.500	.550	3/8	.050	.177	.277	.062
731A	100	3/8"	.563	.625	3/8	.060	.177	.227	.062
732	100	3/8"	.625	.634	1/2	.060	.177	.227	.062
732A	100	1/4"	.687	.752	1/2	.060	.177	.227	.062
733	100	3/8"	.750	.718	1/2	.060	.177	.227	.062
734	100	3/8"	.875	.760	1/2	.060	.177	.227	.062
735	100	1"	1.000	.802	1/2	.060	.177	.227	.062
736	100	1 1/8"	1.125	.968	1/2	.062	.204	.250	.125
737	100	1 1/4"	1.250	1.156	3/8	.062	.204	.250	.125
738	100	1 1/2"	1.500	1.188	3/8	.070	.204	.250	.125

## ETHYL CELLULOSE PLASTIC CABLE & TUBING CLAMPS

Recommended for general use. They withstand age, shock and vibration. Moisture and corrosion. This tough, lightweight and durable clamp withstands temperatures from -60° to +175°F. Approved 7-21-44 Army-Navy aeronautical AN-742. Approved for inside-outside, hi-tension, primary and secondary. Standard pkg. 100, 1000.

Cat. No.	To Fit	D	E	W	T	L	X	A
715	1/8"	.125	.325	1/2	.060	.204	3/32	.062
715A	3/16"	.188	.390	1/2	.060	.204	3/32	.062
715B	1/4"	.250	.421	1/2	.060	.204	3/32	.062
715C	5/16"	.313	.457	1/2	.060	.204	3/32	.062
715D	3/8"	.375	.483	1/2	.060	.204	3/32	.062
715E	7/16"	.438	.531	1/2	.060	.204	3/32	.062
716	1/2"	.500	.562	1/2	.060	.204	3/32	.062
716A	5/8"	.563	.625	1/2	.060	.204	3/32	.062
716B	3/4"	.625	.610	1/2	.060	.204	3/32	.062
716C	7/8"	.688	.666	1/2	.060	.204	3/32	.062
716D	1"	.750	.766	1/2	.060	.204	3/32	.062
716E	1 1/8"	.875	.813	1/2	.060	.204	3/32	.062
717	1"	1.000	.906	1/2	.060	.204	3/32	.062
717A	1 1/8"	1.125	.969	1/2	.060	.204	3/32	.062
717B	1 1/4"	1.250	1.156	1/2	.060	.204	3/32	.062
717C	1 1/2"	1.5	1.0625	3/8	.070	.204	3/32	.062
717D	2"	2.0	1.313	3/8	.070	.204	3/32	.062
717E	2 1/2"	2.5	1.563	3/8	.070	.204	3/32	.062

## BIRNBACH ALUMINUM CABLE AND TUBING CLAMPS



These Tube Clamps are made of hard drawn aluminum and are found to be extremely desirable when mounting resonant lines, or element of directive beam antennas. The 3/8" thru 3/4" clamps have a clearance for No. 10 Screw. The 3/4" to the 1 1/4" clamps have a clearance for 3/4 bolts.

Cat. No.	To Fit Tube	Width "W"	Length "L"	Thickness	Std Pkg
51A	1/8"	1/2"	1 1/2"	.050"	10
51	1/8"	1/2"	1 1/2"	.050"	10
52	3/16"	1/2"	1 1/2"	.050"	10
53	1/4"	1/2"	1 1/2"	.050"	10
54	5/16"	1/2"	1 1/2"	.050"	10
54A	3/8"	1/2"	1 1/2"	.050"	5
55	3/8"	1/2"	1 1/2"	.090"	5
57	7/8"	3/4"	1 1/2"	.090"	5
56	1"	3/4"	1 1/2"	.090"	5
56A	1 1/8"	3/4"	1 1/2"	.090"	5
56B	1 1/4"	3/4"	1 1/2"	.090"	5

## PUSH BUTTON WIRE TIES (PAT. PENDING)



Push Button Wire Ties useful for harnessing wires fast saves labor; eliminates screws and usual time required for string tying. Measures 4 1/2" in length and is adjustable to 30 different diameters. Insert the tie in the hole for anchoring; wires can be replaced or added by loosening the tie and pulling tight again. Constructed of tough Polyethylene; chemically inert, heat resistant; breakhi point 45 to 95 lbs. Push button ties are designed to fit a .250"—.265" hole in .031 to .140 thick panel.

Cat. No.	Color (Specify)	Std. Pkg.
PBT-4	Red, Blue, Yellow	100, 1000

MATERIAL CONFORMS TO SPEC. LP 590

# Birnbach PRICE LIST

Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale
OO	11.10 C	87	2.70 ea.	173	70.50 ea.	275	42.00 C	326 B	.45 ea.	406	13.20 C	470	.60 ea.
1-50	.40 ea.	82	17.70 ea.	174	9.60 ea.	276	42.00 C	326 BC	3.00 ea.	407	13.20 C	471	.84 ea.
1	.79 ea.	93	19.80 ea.	174	48.00 ea.	278	24.00 C	327 BC	17.40 ea.	408	1.89 ea.	472	.27 ea.
1	6.44 M	94	21.60 ea.	174	96.00 ea.	279	18.00 C	328 BC	48.00 ea.	409	15.00 C	473	.14 ea.
2	.40 ea.	95	24.00 ea.	175	11.25 ea.	287	.29 ea.	329 BC	64.95 ea.	410	.33 ea.	474	.12 ea.
2	.79 ea.	96-40	.40 ea.	175	56.25 ea.	288	7.35 ea.	330	15.00 C	411	.79 ea.	475	.88 ea.
2	6.44 M	96	.79 ea.	175	112.50 ea.	289 VC	4.32 ea.	330 A	13.20 C	412	19.80 C	476	.66 ea.
3-50	.40 ea.	96	7.10 M	176	12.60 ea.	290 VC	4.38 ea.	331	15.00 C	413	1.05 ea.	478	.27 ea.
3	.79 ea.	97-40	.40 ea.	176	63.00 ea.	291	.18 ea.	331 A	10.20 C	414	15.00 C	478 J	.32 ea.
3	6.44 M	97	.79 ea.	176	126.00 ea.	291 V	1.38 ea.	332	10.80 C	415	15.00 C	479	.47 ea.
3	6.44 M	97	7.10 M	177	13.90 ea.	291 VC	4.80 ea.	332 A	1.20 C	416	13.20 C	479 J	.57 ea.
3A	6.44 M	98-35	.40 ea.	178	19.50 ea.	293	.18 ea.	333	16.20 C	417	.33 ea.	490	1.89 ea.
4	24.75 M	98	.99 ea.	179	22.50 ea.	293 V	1.41 ea.	334	33.00 C	418	.36 ea.	490	18.90 ea.
5	33.00 M	98	8.25 M	180	24.00 ea.	293 VC	5.10 ea.	335	39.00 C	419	24.00 C	490 A	2.83 ea.
6	6.30 C	99-35	.40 ea.	182	28.80 ea.	294	.18 ea.	336	39.00 C	420	.87 ea.	490 B	3.78 ea.
8	6.30 C	99	.92 ea.	184	16.20 C	294 V	1.44 ea.	337	42.00 C	421	.87 ea.	492	2.76 ea.
10	7.50 C	99	8.25 M	185	13.80 C	294 VC	5.40 ea.	340	6.60 C	422	.87 ea.	492	27.60 ea.
11	9.00 C	100-20	.40 ea.	186	15.00 C	295	.18 ea.	341	39.00 C	423	.87 ea.	492 A	4.14 ea.
15	4.62 C	100	1.48 ea.	193	9.00 M	295 V	1.47 ea.	341 B	60.00 C	426	16.20 C	492 B	5.52 ea.
16	16.50 C	100	13.20 M	194	9.00 M	295 VC	5.55 ea.	342	285.00 C	426 A	16.20 C	493	2.70 ea.
17	36.00 C	102	.60 ea.	195	9.00 M	296	1.50 ea.	342 B	315.00 C	430	.24 ea.	493	27.00 ea.
18	60.00 C	103	.60 ea.	196	10.80 M	296 VC	45.00 ea.	343	.36 ea.	431	3.12 ea.	495	3.00 ea.
19	.27 ea.	104	.99 ea.	197	10.80 M	297	.36 ea.	344	.33 ea.	431 J	.45 ea.	495	30.00 ea.
20	.54 ea.	105	.99 ea.	200	6.00 M	298	.42 ea.	345	.36 ea.	432	.51 ea.	497	4.74 ea.
20 A	.45 ea.	106	.60 ea.	201-35	.40 ea.	299	1.26 ea.	346	1.56 ea.	432 J	1.05 ea.	497	47.40 ea.
21-35	.40 ea.	107	.99 ea.	201-100	.92 ea.	299 VC	39.00 ea.	347	1.50 ea.	433	1.20 ea.	499	8.76 ea.
21	.99 C	108	1.38 ea.	201-1000	8.25 M	300	.18 ea.	348	1.20 ea.	433 J	1.65 ea.	499	83.40 ea.
21	8.25 M	109	1.80 ea.	202	5.10 M	300 V	1.53 ea.	350	1.20 ea.	434	2.10 ea.	501	2.85 ea.
22-15	.40 ea.	113	75.00 C	203	.39 ea.	300 VC	6.00 ea.	351	1.20 ea.	435	1.59 ea.	503	2.34 ea.
22	2.11 C	114	6.60 C	203-A	2.25 ea.	301	.30 ea.	352	1.20 ea.	436	.36 ea.	505	2.25 ea.
22	19.47 M	115	7.20 C	203-H	2.25 ea.	301 V	1.41 ea.	353	1.20 ea.	437	.39 ea.	506	.23 ea.
23	9.60 C	116	7.80 C	204	.39 ea.	301 VC	7.95 ea.	354	6.00 ea.	438	.45 ea.	507	.24 ea.
24	10.20 C	117	16.50 C	204-A	2.25 ea.	302	.33 ea.	359	1.20 ea.	439	.24 ea.	508	.25 ea.
26	10.20 C	118	15.00 C	204 H	2.25 ea.	302 V	1.11 ea.	360 BC	19.50 ea.	440 A	17.40 C	510	.24 ea.
27	6.60 C	119	13.20 C	205	.39 ea.	302 VC	9.60 ea.	361 BC	21.00 ea.	440 B	15.00 C	510-01	.24 ea.
27-C	12.60 C	120	1.80 ea.	205 H	2.25 ea.	303	.54 ea.	362 BC	13.50 ea.	440 C	23.40 C	510-02	.24 ea.
27-R	11.70 C	121	.36 ea.	206	.39 ea.	303 VC	18.00 ea.	363 BC	18.00 ea.	440 E	27.60 C	510-02	.24 ea.
28	6.60 C	122	.54 ea.	206-A	2.25 ea.	304	.66 ea.	364 BC	76.50 ea.	440 F	29.40 C	511	.24 ea.
29	10.20 C	123	.60 ea.	206-H	2.25 ea.	304 VC	22.80 ea.	366	10.20 C	441 A	12.00 C	511-01	.24 ea.
30	21.69 C	124	.69 ea.	207	.39 ea.	305 V	1.26 ea.	367	13.20 C	441 B	12.00 C	511-02	.24 ea.
31	7.50 C	125	1.80 ea.	207-H	2.25 ea.	305 VC	10.50 ea.	368	1.50 C	442	15.00 C	511-02	.24 ea.
31-FB	3.90 C	126	1.50 ea.	208	.39 ea.	306 V	1.35 ea.	369	1.50 C	442 A	15.90 C	512	.24 ea.
31-MG/C	7.80 C	127	1.80 ea.	208 H	2.25 ea.	306 VC	13.20 ea.	370	3.00 C	443	15.00 C	512-01	.24 ea.
31-MG/S	6.60 C	128	2.22 ea.	209	.39 ea.	307	.24 ea.	371	1.80 C	443 A	16.50 C	512-01	.24 ea.
31-C	12.60 C	130	.42 ea.	209 H	2.25 ea.	307 V	1.35 ea.	372	1.50 C	444	16.20 C	514	.23 ea.
31 MC	9.00 C	131	.51 ea.	209 VC	6.60 ea.	307 VC	6.60 ea.	373	3.90 C	444 A	15.00 C	515	.23 ea.
31 MB	6.60 C	132	.24 ea.	212 A	2.25 ea.	308 B	.45 ea.	377	.29 ea.	444 B	16.50 C	516	.25 ea.
31 MS	8.40 C	133	.27 ea.	220	4.80 ea.	308 BC	1.65 ea.	378	.38 ea.	444 C	23.40 C	517	.24 ea.
31-R	6.60 C	134	.36 ea.	220 A	4.05 ea.	309	.96 ea.	379	.41 ea.	445	15.00 C	517	.24 ea.
31-S	9.60 C	135	.27 ea.	221	1.08 ea.	309/3	1.35 ea.	380	2.34 ea.	445 A	15.00 C	518	.24 ea.
32	1.80 C	136	.21 ea.	221 A	.84 ea.	309/3	1.32 ea.	381	2.55 ea.	445 B	18.00 C	519	.25 ea.
32 A	1.35 C	140-4	9.00 M	231-MC	21.00 C	309/3	1.20 ea.	382	2.70 ea.	445 C	25.50 C	520	.29 ea.
33	8.40 C	140-6	9.00 M	232-FC	31.80 C	310	10.80 C	383	2.85 ea.	446	20.40 C	521	.30 ea.
34	.90 ea.	140-8	9.00 M	233-CC	22.80 C	310 B	21.00 C	384	3.15 ea.	446 A	21.00 C	522	.34 ea.
35	.90 ea.	140-10	9.00 M	234-CLC	36.00 C	310 C	13.80 C	385	3.48 ea.	446 B	21.00 C	523	.45 ea.
36	.90 ea.	140-14	10.00 M	239-FC2	3.72 ea.	310 S	11.40 C	386	4.26 ea.	446 C	22.50 C	524	6.00 ea.
37	.90 ea.	141-4	9.00 M	245-MFC	3.72 ea.	311 B	.45 ea.	387	5.10 ea.	447	27.60 C	524	56.10 ea.
38	.90 ea.	141-6	9.00 M	246	24.00 C	311 BC	1.65 ea.	388	6.84 ea.	447 B	38.40 C	525-01	.24 ea.
39	.90 ea.	141-8	9.00 M	248	4.80 C	312	1.08 ea.	389	7.20 ea.	447 D	47.40 C	525-02	.24 ea.
40	.90 ea.	142-4	9.00 M	248 S	4.80 C	313	.10 ea.	391	15.00 C	447 E	57.00 C	526	4.50 ea.
41	.90 ea.	142-6	9.00 M	249	6.60 C	313 B	.45 ea.	392	46.20 C	448	36.00 C	526	40.95 ea.
15	.90 ea.	142-8	9.00 M	251	48.00 C	313 BC	1.65 ea.	392 A	33.00 C	449	52.50 C	527	126.75 ea.
17	.90 ea.	143-4	9.00 M	252	72.00 C	314	.10 ea.	392 B	66.00 C	450	.35 ea.	528	19.50 ea.
19	.90 ea.	143-6	9.00 M	257	30.00 C	314 B	.45 ea.	393	42.00 C	450 J	.43 ea.	528	191.40 ea.
11	10.50 C	143-8	9.00 M	258	34.20 C	314 BC	1.65 ea.	394	30.00 C	451	.43 ea.	529	30.96 ea.
11-A	10.50 C	144-4	9.00 M	259	36.00 C	315	.11 ea.	395	30.00 C	452	.46 ea.	529	293.40 ea.
12	10.50 C	144-6	9.00 M	260	45.00 C	315 B	.45 ea.	396	30.00 C	452 J	.60 ea.	531	16.20 C
13	10.50 C	144-8	9.00 M	263	5.40 ea.	315 BC	1.65 ea.	397	33.00 C	453	.82 ea.	532	16.20 C
14	10.50 C	144-10	9.00 M	263	26.70 ea.	316	.11 ea.	399 A	33.00 C	453 J	.95 ea.	533	16.20 C
14 A	10.80 C	145-4	9.00 M	263	53.40 ea.	316 B	.48 ea.	400	15.00 C	454	1.08 ea.	534	16.20 C
15	12.00 C	145-6	9.00 M	264	6.96 ea.	316 BC	1.80 ea.	400 A	15.00 C	455	1.28 ea.	535	16.20 C
6	13.50 C	145-8	9.00 M	264	34.50 ea.	317	.11 ea.	400 B	24.00 C	455 BC	24.00 C	536	16.20 C
6 A	18.00 C	146-4	9.00 M	264	69.00 ea.	317 B	.48 ea.	401	15.00 C	457	.45 ea.	538	19.80 C
6 B	19.50 C	146-6	9.00 M	265	41.70 ea.	317 BC	1.80 ea.	401 B	24.00 C	458	.19 ea.	538 A	18.00 C
7	13.50 C	146-8	9.00 M	265	83.40 ea.	318	.24 ea.	402	2.64 C	462	.16 ea.	539	19.80 C
8	.96 ea.	149	4.50 ea.	265	8.40 ea.	318 B	.45 ea.	402 A	3.30 C	463	.30 ea.	540	.20 ea.
9	1.20 ea.	151	.39 ea.	266	9.78 ea.	318 BC	2.82 ea.	402 B	6.90 C	464	.24 ea.	541	.40 ea.
1	2.40 ea.	155 H	27.00 ea.	266	48.60 ea.	319	.27 ea.	403	10.20 C	465	.1800 C	542	.30 ea.
2	10.50 ea.	156	10.80 ea.	266	97.20 ea.	319 B	.45 ea.	404	21.00 C	465 B	30.00 C	543	.15 ea.
2	21.00 ea.	157	15.00 ea.	267	11.10 ea.	319 BC	4.05 ea.	404 A	18.00 C	466	18.00 C	544	.30 ea.
4	.84 ea.	158	19.50 ea.	267	54.60 ea.	320	.30 ea.	404 B	27.00 C	466 A	24.00 C	545	.36 ea.
5	1.50 ea.	159	24.75 ea.	267	109.20 ea.	320 B	.45 ea.	404 BC	36.00 C	467	30.00 C	546	24.00 C
6	3.30 ea.	160	30.00 ea.	268	12.30 ea.	320 BC	4.05 ea.	404 CB	30.00 C	467 B	42.00 C	547 A	.24 ea.
7	15.30 ea.	161	33.00 ea.	268	61.20 ea.	321	.36 ea.	404 C	18.00 C	468	.33 ea.	547	33.00 C
7	30.60 ea.	162	18.00 ea.	268	122.40 ea.	321 BC	5.10 ea.	405	.099 ea.	469	.36 ea.	550	.15 ea.
8	4.50 ea.	163	21.00 ea.	269	14.25 ea.	322	.39 ea.						
9	21.00 ea.	164	24.00 ea.	269	70.95 ea.	322 BC	8.40 ea.						
9	42.00 ea.	165	28.50 ea.	269	141.90 ea.	323	.60 ea.						
2	1.74 ea.	165/15	39.60 ea.	270	15.75 ea.	323 BC	13.50 ea.						
3	2.04 ea.	166	1.32 ea.	270	78.45 ea.	324	.66 ea.						
6	15.60 ea.	172	5.10 ea.	270	156.90 ea.	324 BC	16.50 ea.						
7	17.70 ea.	172	25.50 ea.	272	19.53 ea.	325	.21 ea.						
4	2.04 ea.	172	51.00 ea.	272	97.35 ea.	325 B	.45 ea.						
5	2.25 ea.	173	7.05 ea.	272	194.70 ea.	325 BC	2.64 ea.						
5	2.40 ea.	173	35.2										

# Birnback PRICE LIST

Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale
550 A	.15 ea.	690/3	25.20 ea.	726	3.90 C	776	174.00 ea.	835/10	195.00 ea.	875	2.70 ea.	933	22.50 ea.
550 B	.18 ea.	691	19.50 ea.	726	17.70 5C	777	20.40 ea.	835/12	129.00 ea.	876	3.30 ea.	933-	2.37 ea.
550 C	.18 ea.	692	27.00 ea.	726	31.80 M	777	48.00 ea.	835	39.60 ea.	877/28	4.05 ea.	934	14.10 ea.
551	.33 ea.	692/4	41.70 ea.	727	4.20 C	777	95.70 ea.	835	78.00 ea.	877	4.05 ea.	934	28.20 ea.
552	.39 ea.	693	25.05 ea.	727	19.50 5C	777	191.40 ea.	853	3.15 ea.	878	4.80 ea.	934/4	34.50 M
553	.45 ea.	693/3	31.50 ea.	727	34.80 M	778	24.00 ea.	853	15.00 ea.	878/6	6.66 ea.	935	9.00 ea.
554	.60 ea.	693/4	49.20 ea.	728	4.65 C	778	58.50 ea.	853	29.10 ea.	878/7	8.70 ea.	935	18.00 ea.
555	1.50 ea.	694	31.50 ea.	728	21.30 5C	778	117.00 ea.	854	3.15 ea.	878/8	18.00 ea.	936	9.00 ea.
556	1.17 ea.	694/3	37.50 ea.	728	38.40 M	778	231.00 ea.	854	15.00 ea.	878/10	21.00 ea.	936	18.00 ea.
557	1.50 ea.	694/4	57.00 ea.	729	4.80 C	778/10	33.00 ea.	854	29.10 ea.	878/12	28.50 ea.	938	6.90 ea.
558	.57 ea.	695	35.40 ea.	729	22.05 5C	778/10	84.00 ea.	855/50	1.75 ea.	878/15	31.20 ea.	938	29.28 ea.
559	.87 ea.	695/3	45.54 ea.	729	40.20 M	778/10	165.00 ea.	855	3.30 ea.	880	3.30 ea.	938	58.41 ea.
559 A	.48 ea.	695/4	68.40 ea.	730	5.10 C	778/10	327.00 ea.	855	15.39 ea.	881	3.75 ea.	939	5.55 ea.
560	1.50 ea.	696	51.00 ea.	730	23.70 5C	781	14.10 ea.	855	30.00 ea.	881/3	5.49 ea.	939	25.50 ea.
561	1.50 ea.	696/3	73.20 ea.	730	42.60 M	778/12	460.35 ea.	856/50	15.00 ea.	882	4.05 ea.	939	52.50 ea.
562	3.96 ea.	696/4	104.10 ea.	731	5.40 C	778/12	231.84 ea.	856	29.10 ea.	882/3	6.06 ea.	940	26.70 ea.
564	2.91 ea.	697	73.50 ea.	731	24.90 5C	778/12	46.86 ea.	856	144.60 ea.	886	4.65 ea.	940/1	21.00 ea.
569	12.60 ea.	697/3	91.50 ea.	731	45.00 M	778/12	78.86 ea.	856	297.10 ea.	886/3	9.00 ea.	941	15.60 ea.
570	3.36 ea.	697/4	132.00 ea.	731 A	6.60 C	786	19.80 ea.	856/1-50	16.80 ea.	887	4.35 ea.	941/1	14.40 ea.
572	7.80 ea.	698	97.50 ea.	732	7.20 C	787	28.50 ea.	856/1	32.40 ea.	889	5.28 ea.	941/3	24.00 ea.
573	15.00 ea.	698/3	136.50 ea.	732	34.50 5C	788	7.50 ea.	856/1	159.00 ea.	889/3	6.90 ea.	941/4	38.25 ea.
574	15.15 ea.	698/4	167.40 ea.	732	65.40 M	788	18.30 ea.	856/1	59.00 ea.	889/4	7.77 ea.	942	19.50 ea.
575	21.60 ea.	700	.75 ea.	732 A	7.50 C	788	36.00 ea.	856/1	315.00 ea.	889/5	12.00 ea.	942/1	17.85 ea.
575/4	38.22 ea.	701	12.60 ea.	733	8.10 C	788	72.00 ea.	856/2	54.30 ea.	889/7	18.30 ea.	943	27.00 ea.
578	20.40 ea.	701/3	20.70 ea.	733	39.00 5C	789	18.30 ea.	856/2	316.00 ea.	890	5.70 ea.	944	46.20 ea.
578/3	27.90 ea.	702	26.40 ea.	733	75.00 M	790	8.55 ea.	856/2	426.00 ea.	891	6.66 ea.	947	31.50 ea.
578/4D	44.10 ea.	702/3	37.20 ea.	734	8.70 C	790	21.15 ea.	856/2	426.00 ea.	891/3	8.55 ea.	947/3	33.00 ea.
580	21.15 ea.	702/4	51.00 ea.	734	43.20 5C	790	41.40 ea.	856/3-50	42.30 ea.	891/4	9.75 ea.	948	43.50 ea.
581	23.15 ea.	703	30.00 ea.	734	81.00 M	790	82.80 ea.	856/3	210.00 ea.	891/5	13.05 ea.	950	13.20 ea.
582	24.45 ea.	703/3	45.00 ea.	735	10.20 C	791	21.15 ea.	856/3	420.00 ea.	891/6	ON REQUEST	952	19.50 ea.
583	26.16 ea.	703/4	60.00 ea.	735	49.20 5C	792	10.44 ea.	856/3	840.00 ea.	891/7	13.05 ea.	963	8.40 C
584	27.96 ea.	704	47.70 ea.	735	95.40 M	792	25.50 ea.	856/3	103.65 ea.	893	13.05 ea.	964	11.70 C
585	35.22 ea.	704/3	70.50 ea.	736	12.00 C	792	50.10 ea.	856/4-50	51.90 ea.	893/3	15.00 ea.	965	.12 ea.
586	35.22 ea.	704/4	102.00 ea.	736	54.00 5C	792	100.20 ea.	856/4	103.65 ea.	893/4	16.50 ea.	966	.12 ea.
587	39.96 ea.	705	67.50 ea.	736	108.00 M	793	25.50 ea.	856/4	258.90 ea.	894	19.80 ea.	966 J	.16 ea.
588	63.36 ea.	705/3	96.00 ea.	737	13.80 C	794	12.39 ea.	856/4	517.20 ea.	894/3	24.00 ea.	967	27.00 C
589	70.32 ea.	705/4	120.00 ea.	737	60.00 5C	794	30.39 ea.	856/4	1034.10 ea.	894/4	28.20 ea.	972	9.30 ea.
590	18.00 C	706	94.80 ea.	737	120.00 M	794	60.00 ea.	856/6-50	79.20 ea.	894/6	ON REQUEST	972 A	10.50 ea.
591	21.00 C	706/3	126.00 ea.	738	28.80 C	794	120.00 ea.	856/6	156.00 ea.	894/7	107.70 ea.	972 A	45.60 ea.
592	18.00 C	706/4	147.00 ea.	738	129.00 5C	795	30.39 ea.	856/6	774.00 ea.	895	7.65 ea.	972 A	90.00 ea.
593	.90 C	710 C	7.80 ea.	738	258.00 M	796	15.90 ea.	856/6	1545.00 ea.	895 A	2.10 ea.	972 B	9.15 ea.
595	15.00 C	710 D	19.20 ea.	738	258.00 M	796	37.80 ea.	856/7	1140.00 ea.	895 B	1.20 ea.	972	45.30 ea.
597	7.20 C	710 E	38.40 ea.	749	20.70 ea.	796	75.00 ea.	856/7	2250.00 ea.	896	15.90 ea.	972	90.00 ea.
598	6.60 C	710 M	73.20 ea.	749	99.00 ea.	796	149.10 ea.	856/7-50	128.40 ea.	896 A	4.50 ea.	972 S	7.50 ea.
600	13.20 C	710 F	180.00 ea.	749	198.00 ea.	797	37.80 ea.	856/7	234.00 ea.	897	16.65 ea.	972 S	33.00 ea.
603	24.00 C	710 G	180.00 ea.	749/10	33.00 ea.	798	19.50 ea.	857-50	14.40 ea.	897 A	4.65 ea.	972 S	66.00 ea.
604	18.00 C	712 C	5.10 ea.	749/10	128.25 ea.	798	47.64 ea.	857	28.20 ea.	898	17.10 ea.	973	10.80 ea.
605	24.00 C	712 D	12.00 ea.	749/10	255.00 ea.	798	93.75 ea.	857	139.00 ea.	898 A	5.22 ea.	973 S	8.40 ea.
606	18.00 C	712 E	24.00 ea.	749/12	380.10 ea.	798	187.50 ea.	857	277.80 ea.	899	16.95 ea.	973 S	39.60 ea.
607	54.00 C	712 M	46.80 ea.	749/12	190.56 ea.	799	12.00 ea.	858-50	1.95 ea.	899 A	6.75 ea.	973 S	79.20 ea.
608	60.00 C	712 F	116.25 ea.	749/12	38.79 ea.	800	16.50 ea.	858	3.90 ea.	901	81.00 ea.	974	13.80 ea.
609	66.00 C	714 C	3.06 ea.	756	13.50 ea.	802	15.04 ea.	858	18.30 ea.	902	120.00 ea.	975	18.90 ea.
610	72.00 C	714 D	7.50 ea.	756	66.00 ea.	803	13.20 ea.	859-50	2.10 ea.	903	75.00 ea.	976	20.70 ea.
611	13.50 C	714 E	15.00 ea.	756	120.80 ea.	810	23.40 ea.	859	4.05 ea.	904 F	78.00 ea.	977	24.60 ea.
613	9.00 C	714 M	29.10 ea.	757	126.00 ea.	811	1.35 ea.	859	19.80 ea.	904 DS	120.00 ea.	978	27.60 ea.
616	.84 ea.	714 F	71.10 ea.	762	12.00 C	812	45.00 C	859	38.70 ea.	904 DSF	126.00 ea.	981	19.68 ea.
617	18.00 C	715	2.34 C	762	12.00 C	813	10.05 C	860-50	2.67 ea.	905	58.35 ea.	982	25.50 ea.
618	1.35 ea.	715 A	2.40 C	763-3	18.00 C	814	10.80 C	860	5.34 ea.	906	58.20 ea.	983	29.70 ea.
619	.27 ea.	715 A	19.80 M	763-5	22.80 C	814 T	.54 ea.	860	26.55 ea.	907	66.00 ea.	984	38.70 ea.
621	.21 ea.	715 A	2.58 C	763-7	51.00 C	815	.50 ea.	860	53.10 ea.	909	100.50 ea.	984/4	38.70 ea.
625	13.80 C	715 B	21.60 M	764	.21 ea.	816	.34 ea.	863-50	3.15 ea.	910	58.20 ea.	985	25.50 ea.
628		715 C	2.85 C	766	.35 ea.	817	.43 ea.	863	6.30 ea.	912	126.00 ea.	986	31.80 ea.
631	15.00 C	715 C	24.00 M	766 J	.53 ea.	818	0.76 ea.	863	30.00 ea.	914	90.00 ea.	987	38.10 ea.
632	15.00 C	715 D	3.00 C	772 C	8.85 ea.	818	43.80 ea.	863	60.00 ea.	916	120.00 ea.	988	44.70 ea.
633	15.00 C	715 D	25.20 M	772 D	21.45 ea.	818	87.60 ea.	864-50	4.95 ea.	919	27.00 ea.	988/4	58.80 M
634	15.00 C	715 E	3.30 C	772 E	42.75 ea.	819	.45 ea.	864	9.90 ea.	920	54.00 ea.	988/5	69.00 M
635	15.00 C	715 E	27.60 M	772 M	85.50 ea.	820	7.59 ea.	864	48.00 ea.	921	26.10 ea.	988/6	83.40 M
636	15.00 C	716	3.60 C	772/18	12.00 ea.	820	37.95 ea.	864	96.00 ea.	921/3	40.20 ea.	989	40.50 ea.
650	.30 ea.	716	30.00 M	772/18	27.40 ea.	820	75.90 ea.	865-50	6.90 ea.	921/4	54.00 M	989/3	53.70 ea.
653-8	.87 ea.	716 A	4.20 C	772/18	57.00 ea.	822	26.40 ea.	865	13.80 ea.	922/4	51.00 M	990	16.50 ea.
653-12	.93 ea.	716 A	34.20 M	773	10.20 ea.	824	31.35 ea.	865	66.00 ea.	923/4	67.50 M	990/3	24.60 ea.
653-24	.99 ea.	716 B	4.50 C	773	25.50 ea.	825	18.96 ea.	865	132.00 ea.	922	35.70 ea.	991	21.90 ea.
653-36	1.05 ea.	716 B	39.60 M	773	50.10 ea.	826	45.00 ea.	865/1-50	14.40 ea.	922/3	53.10 ea.	991/3	32.10 ea.
655-8	.90 ea.	716 C	4.80 C	773	100.20 ea.	826/26	24.00 ea.	865/1	27.90 ea.	923	5.70 ea.	992	29.40 ea.
655-12	.90 ea.	716 C	42.60 M	773	100.20 ea.	826/28	25.50 ea.	865/1	138.00 ea.	923	27.00 ea.	992/3	45.00 ea.
655-24	.96 ea.	716 D	5.10 C	773/18	18.75 ea.	826/30	26.40 ea.	865/1	274.80 ea.	923	46.50 ea.	993	43.50 ea.
655-36	1.02 ea.	716 D	44.40 M	773/18	45.90 ea.	827	30.00 ea.	866	.159 ea.	923/3	72.00 ea.	993/3	66.00 ea.
657-8	.54 ea.	716 E	5.40 C	773/18	90.00 ea.	828	44.40 ea.	866 J	.21 ea.	924	5.10 ea.	994	65.40 ea.
657-12	.60 ea.	716 E	48.00 M	774	12.60 ea.	829	54.60 ea.	866 SJ	.49 ea.	924	24.00 ea.	994/3	96.00 ea.
657-24	.66 ea.	717	5.70 C	774	29.70 ea.	830	96.00 ea.	867	.25 ea.	924	47.40 ea.	995	93.00 ea.
657-36	.72 ea.	717	51.60 M	774	58.50 ea.	830/10	147.00 ea.	867 J	.32 ea.	925	6.75 ea.	995/3	144.00 ea.
657-48	.78 ea.	717 A	6.00 C	774	117.00 ea.	831	4.95 ea.	868-50	6.00 ea.	925	31.80 ea.	1017-10	.40 ea.
663	13.68 C	717 A	54.60 M	774/18	20.70 ea.	831	21.00 ea.	868	11.85 ea.	925	63.00 ea.	1017	1.54 ea.
664	11.70 C	717 B	6.30 C	774/18	51.00 ea.	831	42.00 ea.	868	57.60 ea.	927	36.00 ea.	1017	23.10 ea.
666	11.10 C	717 B	58.20 M	774/18	102.00 ea.	832	4.80 ea.	868	115.20 ea.	928	39.60 ea.	1035	33.00 ea.
667	27.00 C	717 C	13.50 C	774/18									

# Birnback PRICE LIST

Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale
1039 B	13.50 ea.	1141	6.30 C	1385	4.20 C	1792/3	75.00 M	2022	3.45 ea.	4500	12.60 ea.	4904	
1041	19.50 ea.	1142	7.20 C	1385 A	4.20 C	1793	83.34 M	2025-25'	.81 ea.	4510	24.00 ea.	4905	
1041 B	22.50 ea.	1143	8.25 C	1385 B	4.35 C	1794	116.70 M	2050-50'	1.50 ea.	4515	27.54 ea.	4905	
1042	13.89 ea.	1144	9.30 C	1386	4.95 C	1797	48.00 M	2051	2.70 ea.	4516	37.50 ea.	4906	
1042 B	16.89 ea.	1145	3.90 C	1386 A	5.40 C	1798	54.00 M	2052	16.80 ea.	4520	129.00 ea.	4906	
1043	13.89 ea.	1146	4.95 C	1386 B	6.45 C	1799	72.00 M	2100	.99 ea.	4701	2.40 ea.	4907	
1043 B	16.89 ea.	1147	6.00 C	1387	6.45 C	1800	19.50 ea.	2125	.27 ea.	4701	10.50 ea.	4907	
1044	13.89 ea.	1148	7.20 C	1388	5.85 C	1801	22.50 ea.	2250-1/32	3.15 C	4701	19.50 ea.	4908	
1044 B	16.89 ea.	1149	3.90 C	1389	6.45 C	1802	36.00 ea.	2250-1/16	3.36 C	4702	3.60 ea.	4908	
1045	120.00 ea.	1150	4.95 C	1390	6.57 C	1812	29.40 ea.	2250-5/64	4.05 C	4702	15.00 ea.	4909	
1046	90.00 ea.	1151	6.00 C	1402	4.74 ea.	1813	32.40 ea.	2250-7/64	4.95 C	4702	30.00 ea.	4910	
1047	63.00 ea.	1152	7.20 C	1403	43.50 ea.	1814	41.97 ea.	2250-1/8	4.80 C	4703	4.80 ea.	4910	
1048	162.00 ea.	1153	.90 C	1406	2.50 ea.	1822	4.26 ea.	2250-5/32	8.88 C	4703	21.00 ea.	4910	
1049	90.00 ea.	1154	1.08 C	1407	24.00 ea.	1822 B	18.90 ea.	2250-11/64	6.75 C	4703	42.00 ea.	4912	
1050	1.50 ea.	1155	1.20 C	1410	1.74 ea.	1822 C	35.28 ea.	2250-3/16	7.95 C	4706	8.40 ea.	4912	
1051	2.70 ea.	1156	1.35 C	1411	15.75 ea.	1824	3.45 ea.	2250-13/64	11.85 C	4706	42.00 ea.	4913	
1052	21.00 ea.	1157	1.50 C	1414	1.20 ea.	1824	16.50 ea.	2250-1/4	13.50 C	4706	82.50 ea.	4915	
1053	.45 ea.	1160	.21 ea.	1415	10.65 ea.	1824	32.40 ea.	2250-3/8	13.80 C	4709	13.50 ea.	4915	
1054	.84 ea.	1161	.24 ea.	1418	7.95 ea.	1825	3.60 ea.	2250-1/2	20.85 C	4709	60.00 ea.	4916	
1055	1.65 ea.	1162	.27 ea.	1419	.93 ea.	1825	17.40 ea.	2250-9/16	20.91 C	4709	120.00 ea.	4916	
1056	12.60 ea.	1163	.30 ea.	1422	.66 ea.	1825	33.90 ea.	2250-11/16	24.00 C	4711	17.40 ea.	5000	.99 ea.
1057	.87 ea.	1164	.21 ea.	1423	4.98 ea.	1835	19.20 ea.	2250-25/32	27.90 C	4711	82.80 ea.	5002	1.06 ea.
1058	1.74 ea.	1165	.24 ea.	1424	3.60 ea.	1836	14.10 ea.	2250-13/16	27.90 C	4711	159.00 ea.	5003	1.44 ea.
1059	3.00 ea.	1166	.27 ea.	1426	3.48 ea.	1839	27.00 ea.	2250-3/4	31.65 C	4711/13	83.40 ea.	5004	.45 ea.
1060	24.00 ea.	1167	.30 ea.	1428	3.36 ea.	1839	54.00 ea.	2250-1	37.50 C	4715	18.00 ea.	5005	.51 ea.
1065-3	.72 ea.	1168	.18 ea.	1430	3.15 ea.	1840	4.20 ea.	2318	10.80 ea.	4715	87.00 ea.	5006	.90 ea.
1065-4	.84 ea.	1169	.15 ea.	1430/32	3.23 ea.	1840	20.04 ea.	2500	4.50 ea.	4715	174.00 ea.	5007	.54 ea.
1065-5	.87 ea.	1170	.168 ea.	1430/34	3.15 ea.	1840	40.04 ea.	2611	.34 ea.	4716	21.75 ea.	5008	.75 ea.
1065-6	.87 ea.	1171	.168 ea.	1430/36	3.07 ea.	1841	5.55 ea.	2617	35.00 C	4716	102.00 ea.	5009	.90 ea.
1068	15.00 C	1172	.18 ea.	1430/38	3.00 ea.	1841	26.40 ea.	2650	27.00 C	4716	204.00 ea.	5010	2.55 ea.
1070	9.00 ea.	1173	.21 ea.	1433 C	7.20 ea.	1841	52.80 ea.	2810	9.41 ea.	4727	31.05 ea.	5011	2.55 ea.
1070 B	10.80 ea.	1174	.24 ea.	1433 M	67.50 ea.	1842	7.80 ea.	2810	49.05 ea.	4727	155.25 ea.	5012	3.60 ea.
1071	9.00 ea.	1175	.27 ea.	1433/4	18.00 ea.	1842	37.80 ea.	2812	6.30 ea.	4727	309.00 ea.	5013	3.60 ea.
1071 B	11.10 ea.	1177	.252 ea.	1433/4	174.00 ea.	1842	75.60 ea.	2812	31.20 ea.	4727/31	219.00 ea.	5051	.33 ea.
1072	9.60 ea.	1179	36.00 C	1433/6	111.00 ea.	1843	10.50 ea.	2814	4.38 ea.	4727/41	291.00 ea.	5052	.36 ea.
1072 B	11.40 ea.	1180	30.00 C	1434	3.75 ea.	1843	49.50 ea.	2814	21.60 ea.	4729	414.00 ea.	5053	.30 ea.
1072/1	11.10 ea.	1182	36.00 C	1490	18.90 ea.	1843	99.00 ea.	2816	3.63 ea.	4729/76	792.00 ea.	5050	.21 ea.
1072/1B	11.85 ea.	1184	33.00 C	1492	27.60 ea.	1844	10.20 ea.	2816	18.00 ea.	4729/101	1005.00 ea.	5071	.30 ea.
1073	1.77 ea.	1190	39.00 C	1492	27.60 ea.	1844	50.40 ea.	2818	3.00 ea.	4731	3.30 ea.	5071	.30 ea.
1074	3.09 ea.	1192	54.00 C	1497	47.40 ea.	1844	100.20 ea.	2818	14.70 ea.	4731	11.76 ea.	5075	.18 ea.
1075	5.85 ea.	1194	42.00 C	1516	17.10 ea.	1845	66.00 ea.	3025	.81 ea.	4731	23.40 ea.	5076	.18 ea.
1075 B	6.00 ea.	1220	9.60 ea.	1560	8.91 ea.	1845	129.00 ea.	3050	1.50 ea.	4732	4.86 ea.	5080	.30 ea.
1076	1.65 ea.	1220 A	7.50 ea.	1562	89.10 ea.	1846	90.00 ea.	3051	2.70 ea.	4732	22.50 ea.	5081	.30 ea.
1077	2.85 ea.	1260	15.00 C	1562	4.59 ea.	1846	180.00 ea.	3052	16.80 ea.	4732	45.00 ea.	5085	.30 ea.
078	5.40 ea.	1261	15.00 C	1566	2.91 ea.	1846/8	114.00 ea.	3460	3.14 ea.	4733	6.36 ea.	5086	.30 ea.
078 B	6.00 ea.	1262	15.00 C	1567	27.60 ea.	1846/10	138.00 ea.	3461	2.31 ea.	4733	30.00 ea.	5090	.33 ea.
079	1.77 ea.	1263	26.40 C	1570	1.98 ea.	1870	15.90 ea.	3462	10.89 ea.	4733	60.00 ea.	5091	.33 ea.
080	2.85 ea.	1264	30.00 C	1571	18.00 ea.	1872	19.50 ea.	3600	14.85 ea.	4734	8.10 ea.	5095	.22 ea.
081	5.40 ea.	1265	36.00 C	1574	1.29 ea.	1874	41.40 ea.	4025	.51 ea.	4734	37.50 ea.	5096	.21 ea.
081 B	6.00 ea.	1266	41.40 C	1575	11.58 ea.	1874 A	21.66 ea.	4050	.96 ea.	4734	75.00 ea.	5105	.27 ea.
082	1.77 ea.	1300	18.62 ea.	1600	8.85 ea.	1875	51.66 ea.	4051	1.68 ea.	4735	10.56 ea.	5106	.36 ea.
083	2.85 ea.	1300/4	32.40 ea.	1600	88.20 ea.	1875 A	27.00 ea.	4052	15.00 ea.	4735	51.00 ea.	5110	.36 ea.
084	5.40 ea.	1301	38.40 ea.	1612	39.00 ea.	1878	66.00 ea.	4125	.30 ea.	4735	102.00 ea.	5111	.36 ea.
084 B	6.00 ea.	1301/4	45.00 ea.	1614	24.00 ea.	1878 A	35.01 ea.	4125 J	.35 ea.	4736	13.20 ea.	5130	.12 ea.
085	1.77 ea.	1302	51.00 ea.	1616	15.00 ea.	1890	34.50 M	4175	.69 ea.	4736	60.00 ea.	5131	.12 ea.
086	2.85 ea.	1302/4	52.50 ea.	1618	9.45 ea.	1890/3	45.84 M	4175 J	.99 ea.	4736	120.00 ea.	5141	.24 ea.
087	5.40 ea.	1352	2.40 C	1620	6.24 ea.	1891	42.51 M	4176	.44 ea.	4739	15.60 ea.	5142	.15 ea.
087 B	6.00 ea.	1352 A	2.70 C	1622	4.95 ea.	1891/3	52.92 M	4176 J	.58 ea.	4739	75.60 ea.	5143	.36 ea.
101	3.00 ea.	1352 B	3.30 C	1628	12.90 ea.	1892	54.18 M	4200	.204 ea.	4739	151.50 ea.	5160	.14 ea.
111	22.50 ea.	1352 C	3.15 C	1633	16.20 ea.	1892/3	69.99 M	4200	180.00 M	4745	21.60 ea.	5161	.15 ea.
112	45.00 ea.	1353	3.30 C	1634	13.50 ea.	1916	5.55 ea.	4201	.58 ea.	4745	105.00 ea.	5165	.18 ea.
113	87.00 ea.	1353 A	3.90 C	1638	20.10 ea.	1916	25.35 ea.	4201	510.00 M	4745	210.00 ea.	5166	.18 ea.
120	3.30 C	1354	3.90 C	1639	16.35 ea.	1916	49.50 ea.	4202	.96 ea.	4747	43.50 ea.	5170	.30 ea.
121	1.80 C	1354 A	4.14 C	1647	10.29 ea.	1918	3.60 ea.	4202	858.00 M	4747	210.00 ea.	5171	.18 ea.
122	3.60 C	1354 B	4.50 C	1648	9.15 ea.	1918	16.65 ea.	4203	3.24 ea.	4747	420.00 ea.	5180	.33 ea.
123	1.50 C	1355	5.25 C	1670	1.80 ea.	1918	32.10 ea.	4204	.174 ea.	4752	3.75 ea.	5181	.33 ea.
124	1.50 C	1355 A	5.25 C	1671	2.16 ea.	1920	1.80 ea.	4204	158.40 M	4752	16.50 ea.	5185	.18 ea.
125	3.30 C	1355 B	5.70 C	1673	1.41 ea.	1920	14.85 ea.	4205	.195 ea.	4752	33.00 ea.	5190	.10 ea.
125 T	3.90 C	1356	6.00 C	1674	1.65 ea.	1920	28.50 ea.	4205	178.20 M	4753	4.80 ea.	5191	.10 ea.
26	4.35 C	1356 A	6.16 C	1680	1.14 ea.	1922	2.55 ea.	4206	.174 ea.	4753	23.10 ea.	5195	.33 ea.
26 T	4.95 C	1356 B	6.60 C	1701	16.95 ea.	1922	11.85 ea.	4206	158.40 M	4753	46.20 ea.	5200	.33 ea.
127	5.28 C	1357	6.60 C	1702	19.80 ea.	1922	22.50 ea.	4207	.27 ea.	4754	6.45 ea.	5201	.33 ea.
127 T	6.00 C	1358	6.60 C	1703	19.80 ea.	1963	3.60 C	4207	243.00 M	4754	30.60 ea.	5300	.69 ea.
28	6.30 C	1359	7.80 C	1716	25.20 ea.	1964	6.00 C	4208	110.00 ea.	4754	60.00 ea.	5301	.81 ea.
28 T	7.20 C	1360	8.10 C	1717	69.66 ea.	1965	6.00 C	4208	1080.00 M	4755	8.10 ea.	5302	.81 ea.
29	7.20 C	1372	7.80 C	1717	69.66 ea.	1967	12.00 C	4209	2.76 ea.	4755	39.00 ea.	5303	.93 ea.
29 T	8.25 C	1373	10.80 C	1718	51.54 ea.	1968	6.00 C	4215	.072 ea.	4755	78.00 ea.	5304	1.26 ea.
30	3.30 C	1374	13.20 C	1741	7.50 ea.	1972	12.00 ea.	4215	66.00 M	4756	9.60 ea.	5305	1.38 ea.
30 T	3.90 C	1375	18.00 C	1772	21.45 ea.	1972	29.40 ea.	4233	.69 ea.	4756	45.60 ea.	5306	1.44 ea.
31	4.35 C	1376	21.00 C	1773	25.50 ea.	1972	58.35 ea.	4234	.75 ea.	4756	91.20 ea.	5307	1.56 ea.
31 T	4.95 C	1377	22.80 C	1774	29.70 ea.	1972	116.70 ea.	4235	1.77 ea.	4800/3	45.00 ea.	5308	.84 ea.
32	5.28 C	1378	25.20 C	1775	36.00 ea.	1972 A	13.20 ea.	4235	1.95 ea.	4800/6	81.60 ea.	5309	.96 ea.
32 T	6.00 C	1379	26.40 C	1776	43.80 ea.	1972 A	64.20 ea.	4237	2.07 ea.	4800/9	167.00 ea.	5310	1.11 ea.
33	6.30 C	1380	28.80 C	1777	48.00 ea.	1972 A	128.10 ea.	4238	2.70 ea.	4800/11	151.50 ea.	5311	1.65 ea.
33 T	7.20 C	1382	1.80 C	1781	58.80 ea.	1972 A	128.10 ea.	4238	2.70 ea.	4800/15	202.50 ea.	5312	1.89 ea.
34	7.20 C	1382 A	1.95 C	1782	82.80 ea.	2000	9.00 ea.	4275	.42 ea.	4800/19	276.00 ea.	5313	2.01 ea.
34 T	8.25 C	1382 B	2.34 C	1783	117.30 ea.	2010	9						



## Birnback PRICE LIST

Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale
5316	1.05 ea.	5462	9.45 ea.	6238 D	1.98 ea.	6353 A	6.60 M	6493	4.65 M	6574	117.90 M	6650 B	3.36 C
5317	1.23 ea.	5463	9.45 ea.	6239	6.00 C	6354	8.10 M	6494	7.80 M	6575	16.20 C	6650 B	30.60 M
5318	2.19 ea.	5464	9.45 ea.	6240	1.50 ea.	6354 A	4.95 M	6494/1	7.80 M	6575	147.00 M	7000	6.36 ea.
5319	2.70 ea.	5465	9.45 ea.	6241	1.32 ea.	6355	4.62 M	6494/2	7.80 M	6576	16.20 C	7000	.80 ea.
5320	.81 ea.	5466	9.45 ea.	6242	2.07 ea.	6356	4.62 M	6500	1.20 Gr.	6576	147.00 M	7001	7.98 ea.
5321	.96 ea.	5470	12.90 ea.	6244	.78 ea.	6357	4.62 M	6501	1.50 Gr.	6577	16.35 C	7001-1	.96 ea.
5322	1.26 ea.	5471	12.90 ea.	6244 A	.78 ea.	6358	3.30 M	6502	1.65 Gr.	6577	143.40 M	7001-5	9.09 ea.
5323	1.56 ea.	5472	12.90 ea.	6244 B	.99 ea.	6359	3.30 M	6503	1.83 Gr.	6578	21.00 C	7001-15	1.03 ea.
5324	2.55 ea.	5473	12.90 ea.	6244 C	.99 ea.	6360	3.45 M	6504	2.01 Gr.	6578	195.00 M	7002	8.49 ea.
5325	3.24 ea.			6244 D	1.02 ea.	6361	3.60 M	6505	2.16 Gr.	6579	21.00 C	7002-1	1.02 ea.
5326	.96 ea.	5474	12.90 ea.	6244 E	1.02 ea.	6362	4.65 M	6506	2.34 Gr.	6579	195.00 M	7003	10.38 ea.
5327	1.08 ea.	5475	12.90 ea.	6245	.15 ea.	6363	7.80 M	6507	2.55 Gr.	6585	7.50 C	7003-1	1.20 ea.
5328	1.08 ea.	5476	12.90 ea.	6245 S	24.00 C	6400	6.00 M	6510	1.65 Gr.	6585	60.00 M	7003-5	11.49 ea.
5329	.81 ea.	5480 K1	6.06 ea.	6246	.15 ea.	6401	7.20 M	6511	1.68 Gr.	6586	7.50 C	7003-15	1.27 ea.
5330	1.26 ea.	5480 K2	6.84 ea.	6246 S	28.80 C	6402	7.95 M	6512	1.92 Gr.	6586	60.00 M	7004	12.00 ea.
5331	2.70 ea.	5480 K3	6.84 ea.	6247	.22 ea.	6403	9.60 M	6513	1.92 Gr.	6587	7.50 C	7004-1	1.38 ea.
5332	.96 ea.	5480 K4	6.06 ea.	6248	.22 ea.	6404	11.70 M	6514	1.92 Gr.	6587	60.00 M	7005	14.64 ea.
5333	1.56 ea.	5480 K5	6.06 ea.	6249	1.47 ea.	6405	8.40 M	6515	2.01 Gr.	6588	7.20 C	7005-1	1.63 ea.
5334	3.24 ea.	5480 K6	6.84 ea.	6250	1.23 ea.	6406	8.40 M	6516	2.10 Gr.	6588	57.00 M	7005-5	15.75 ea.
5335	.84 ea.	5480 K7	6.06 ea.	6251	1.40 ea.	6407	9.00 M	6517	2.16 Gr.	6589	7.50 C	7005-15	1.70 ea.
5336	.96 ea.	5481 K1	7.56 ea.	6251 C	1.62 ea.	6408	9.90 M	6518	1.92 Gr.	6589	60.00 M	7006	294.00 ea.
5337	.48 ea.	5481 K2	8.82 ea.	6251 V	1.44 ea.	6409	11.40 M	6519	2.34 Gr.	6590	7.65 C	7006-1	30.00 ea.
5338	.54 ea.	5481 K3	8.82 ea.	6252	1.77 ea.	6410	15.84 M	6520	1.59 Gr.	6590	63.00 M	7007	21.48 ea.
5339	.36 ea.	5481 K4	7.56 ea.	6252 M	2.13 ea.	6410 A	17.70 M	6521	2.25 Gr.	6592	15.00 M	7007-1	2.31 ea.
5340	.39 ea.	5481 K5	7.56 ea.	6253	1.92 ea.	6411	18.00 M	6522	2.34 Gr.	6593	15.00 M	7008	209.70 ea.
5341	1.32 ea.	5481 K6	8.82 ea.	6261	1.68 ea.	6412	20.10 M	6523	2.34 Gr.	6593	1.80 C	7008-1	21.00 ea.
5342	1.32 ea.	6100	.39 ea.	6262	1.89 ea.	6413	11.70 M	6524	21.00 M	6594	15.00 M	7009	32.40 ea.
5343	2.31 ea.	6102	.42 ea.	6263	2.07 ea.	6414	12.90 M	6525	21.00 M	6594	1.86 C	7009-1	3.39 ea.
5344	2.31 ea.	6103	.50 ea.	6270	1.26 ea.	6415	15.00 M	6526	22.20 M	6595	15.60 M	7010	121.65 ea.
5345	3.24 ea.	6104	.53 ea.	6271	1.47 ea.	6416	17.10 M	6527	24.00 M	6595	2.04 C	7010-1	12.54 ea.
5346	4.29 ea.	6105	1.86 ea.	6272	1.50 ea.	6417	21.00 M	6528	27.00 M	6595	16.80 M	7011	54.00 ea.
5347	5.16 ea.	6110	1.32 ea.	6273	1.68 ea.	6418	21.60 M	6529	3.78 C	6596	2.22 C	7011-1	5.55 ea.
5360	1.68 ea.	6111	1.50 ea.	6274	1.68 ea.	6420	4.05 M	6530	33.90 M	6597	18.00 M	7012	66.00 ea.
5361	1.86 ea.	6112	1.89 ea.	6280	.93 ea.	6421	4.38 M	6531	3.78 C	6597	3.00 C	7012-1	7.50 ea.
5362	1.86 ea.	6113	2.07 ea.	6280 A	.93 ea.	6422	4.65 M	6531 A	33.90 M	6601	4.20 M	7013	109.35 ea.
5363	2.04 ea.	6114	.21 ea.	6281	1.11 ea.	6423	4.95 M	6532	3.45 C	6602	4.80 M	7013-1	11.28 ea.
5364	2.04 ea.	6115	.75 ea.	6281 A	1.50 ea.	6424	5.25 M	6532 A	31.20 M	6603	5.85 M	7014	36.63 ea.
5365	2.19 ea.	6184	1.35 ea.	6282	1.35 ea.	6425	6.00 M	6532 B	3.45 C	6604	5.85 M	7014-1	4.17 ea.
5366	2.19 ea.	6184 A	1.35 ea.	6282 A	1.89 ea.	6426	5.01 M	6532 B	31.20 M	6605	6.15 M	7015	192.00 ea.
5367	2.19 ea.	6185	1.56 ea.	6283	1.56 ea.	6427	4.96 M	6532 B	31.20 M	6606	6.15 M	7015-1	19.50 ea.
5370	1.26 ea.	6185 A	1.56 ea.	6283 A	2.07 ea.	6428	5.76 M	6532 B	31.20 M	6607	7.35 M	7016	30.81 ea.
5371	1.38 ea.	6186	1.86 ea.	6284	1.14 ea.	6429	6.00 M	6533	3.36 C	6608	5.85 M	7016-1	3.75 ea.
5372	1.38 ea.	6190	1.11 ea.	6300	3.75 M	6430	6.69 M	6533	30.60 M	6609	6.15 M	7017	269.40 ea.
5373	1.47 ea.	6191	1.11 ea.	6301	4.05 M	6431	7.59 M	6534	3.36 C	6609	6.15 M	7017-1	27.00 ea.
5374	1.47 ea.	6192	1.29 ea.	6302	4.20 M	6432	9.90 M	6534	30.60 M	6610	7.20 M	7018	24.42 ea.
5375	1.62 ea.	6193	1.68 ea.	6303	4.86 M	6433	5.76 M	6535	3.36 C	6611	7.20 M	7018-1	2.58 ea.
5376	1.62 ea.	6194	1.68 ea.	6304	4.20 M	6434	6.00 M	6535	30.60 M	6611 A	8.70 M	7020	19.32 ea.
5377	1.62 ea.	6195	1.86 ea.	6305	4.50 M	6435	6.72 M	6536	3.36 C	6612	6.60 M	7020-1	2.07 ea.
5380	2.25 ea.	6200	.69 ea.	6306	5.10 M	6436	7.50 M	6536	3.36 C	6613	6.60 M	7022	15.90 ea.
5381	2.70 ea.	6201	.84 ea.	6307	4.44 M	6437	7.95 M	6537	3.45 C	6614	7.20 M	7022-1	1.74 ea.
5382	2.70 ea.	6202	.87 ea.	6308	4.44 M	6438	9.00 M	6537	31.20 M	6640	3.60 C	7024	9.00 ea.
5383	2.70 ea.	6202 A	.93 ea.	6309	5.04 M	6439	11.40 M	6538	3.45 C	6640 A	32.40 M	7024-1	1.02 ea.
5384	2.70 ea.	6203	1.08 ea.	6310	19.20 M	6440	6.18 M	6538	31.20 M	6640 B	32.40 M	7024-15	10.20 ea.
5385	2.94 ea.	6204	1.26 ea.	6311	39.00 M	6441	7.20 M	6539	31.20 M	6641	3.60 C	7024-15	1.20 ea.
5386	2.94 ea.	6205	1.44 ea.	6312	6.30 M	6442	6.18 M	6539	3.45 C	6641 A	32.40 M	7032	.57 ea.
5387	2.94 ea.	6206	1.44 ea.	6313	6.45 M	6443	9.90 M	6539	31.20 M	6641 B	3.60 C	7033	3.57 ea.
5390	1.50 ea.	6207	1.59 ea.	6314	6.90 M	6444	11.10 M	6540	3.45 C	6642	37.50 M	7034	9.00 C
5391	1.68 ea.	6208	.05 ea.	6315	8.70 M	6445	9.54 M	6540	3.45 C	6643	32.40 M	7036	6.00 C
5392	1.68 ea.	6208 A	.05 ea.	6316	15.60 M	6446	12.60 M	6541	31.20 M	6644	33.30 M	7037	6.00 C
5393	1.68 ea.	6210	.87 ea.	6317	17.40 M	6447	16.50 M	6541	177.60 M	6644 A	3.75 C	7038	5.40 C
5394	1.95 ea.	6211	1.17 ea.	6318	19.20 M	6448	5.25 M	6542	3.45 C	6644 A	33.30 M	7061	.93 ea.
5395	1.95 ea.	6212	1.05 ea.	6318 A	22.95 M	6449	5.55 M	6542	31.20 M	6644 B	3.75 C	7062	1.80 ea.
5396	1.95 ea.	6213	1.38 ea.	6319	23.10 M	6450	5.75 M	6543	31.20 M	6644 B	32.40 M	7063	8.40 ea.
5400	3.87 ea.	6214	1.44 ea.	6319 A	43.80 M	6451	5.75 M	6543	3.45 C	6644 B	33.30 M	7064	15.00 ea.
5401	4.62 ea.	6215	1.74 ea.	6320	31.20 M	6462	2.94 Gr.	6544	3.45 C	6644 B	30.00 M	7065	99.00 ea.
5402	4.62 ea.	6216	1.62 ea.	6320 A	57.00 M	6463	3.30 Gr.	6544	3.45 C	6644 B	30.00 M	7065-1	10.50 ea.
5410	4.98 ea.	6217	1.98 ea.	6320 B	72.00 M	6464	4.59 Gr.	6545	3.45 C	6644 B	30.00 M	7065 VJ	102.00 ea.
5411	4.44 ea.	6220	.69 ea.	6320 C	81.60 M	6465	5.13 Gr.	6546	3.45 C	6644 B	30.00 M	7066	69.00 ea.
5412	6.69 ea.	6221	.87 ea.	6321	3.75 M	6466	5.64 Gr.	6546	31.20 M	6644 B	30.00 M	7066-1	6.93 ea.
5413	6.24 ea.	6221 A	.93 ea.	6322	4.05 M	6467	1.38 Gr.	6547	31.20 M	6644 A	30.00 M	7066 J	79.50 ea.
5414	5.67 ea.	6222	1.26 ea.	6323	4.35 M	6471	1.50 Gr.	6547	3.45 C	6644 A	30.00 M	7066 VJ	79.50 ea.
5415	6.24 ea.	6223	1.44 ea.	6324	4.80 M	6472	1.56 Gr.	6548	3.45 C	6644 B	30.00 M	7067	51.00 ea.
5416	5.67 ea.	6224	.96 ea.	6325	5.19 M	6473	1.32 Gr.	6548	31.20 M	6644 B	30.00 M	7067-1	5.34 ea.
5417	7.47 ea.	6225	1.32 ea.	6326	5.58 M	6474	1.80 Gr.	6549	3.45 C	6644 B	30.00 M	7067 J	63.00 ea.
5418	7.47 ea.	6225 A	1.32 ea.	6330	5.40 M	6475	2.22 Gr.	6549	3.45 C	6646	30.60 M	7068	42.00 ea.
5420	4.95 ea.	6225 B	1.32 ea.	6331	5.40 M	6476	2.40 Gr.	6550	18.60 C	6646 A	30.60 M	7068-1	4.14 ea.
5421	4.56 ea.	6225 C	1.32 ea.	6332	5.16 M	6477	1.98 Gr.	6550	177.00 M	6646 A	30.60 M	7068 J	52.50 ea.
5422	6.18 ea.	6226	1.98 ea.	6333	5.28 M	6478	1.98 Gr.	6571	18.60 C	6646 B	30.60 M	7070	35.10 ea.
5423	5.61 ea.	6227	4.89 ea.	6334	5.82 M	6479	2.88 M	6572	4.05 C	6646 B	30.60 M	7070-1	3.99 ea.
5424	6.18 ea.	6228	7.53 ea.	6335	6.90 M	6480	3.30 M	6572 A	33.60 M	6648	31.80 M	7070 J	42.00 ea.
5425	5.61 ea.	6229	10.05 ea.	6336	15.00 M	6480 A	2.88 M	6572 B	33.60 M	6648 A	31.80 M	7072	30.00 ea.
5426	.69 ea.	6230	.75 ea.	6337	16.50 M	6481	3.60 M	6572 B	33.60 M	6648 B	31.80 M	7072-1	3.60 ea.
5427	6.33 ea.	6231	1.86 ea.	6337 A	15.00 M	6482	3.60 M	6573	5.10 C	6648 B	31.80 M	7072 VJ	40.80 ea.
5428	6.69 ea.	6231 A	1.86 ea.	6338	18.00 M	6483	9.00 M	6573	42.00 M	6650	30.60 M	7074	29.70 ea.
5429	6.33 ea.	6231 B	2.07 ea.	6339	30.00 M	6484	2.97 M	6574	13.50 C	6650 A	30.60 M	7074-1	3.30 ea.
5430	7.44 ea.	6232	.24 ea.	6350	6.00 M	6485	2.79 M						
5431	6												

## Birnback PRICE LIST

Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale
7074 J	40.50 ea.	7203-1	2.19 ea.	7373-1	5.70 ea.	7653	39.00 ea.	8021	114.00 ea.	8544	135.00 ea.	9514	240.00 ea.
7074 VJ	40.50 ea.	7204	16.05 ea.	7374	74.85 ea.	7653	19.80 ea.	8022	2850.00 ea.	8544-1	14.40 ea.	9516	174.90 ea.
7116	168.00 ea.	7204-1	1.89 ea.	7374-1	8.70 ea.	7654	51.00 ea.	8022	1425.00 ea.	8546	105.00 ea.	9516	166.95 ea.
7116-1	18.60 ea.	7205	23.55 ea.	7375	91.56 ea.	7654	25.80 ea.	8022	291.00 ea.	8546-1	12.30 ea.	9516	159.00 ea.
7118	135.00 ea.	7205-1	2.76 ea.	7376	106.50 ea.	7668	21.00 ea.	8022	151.50 ea.	8548	93.00 ea.	9518	141.90 ea.
7118-1	15.00 ea.	7207	31.65 ea.	7389-A	151.50 ea.	7668	10.65 ea.	8022	76.50 ea.	8548-1	10.80 ea.	9518	134.50 ea.
7120	111.00 ea.	7207-1	3.60 ea.	7390	915.00 ea.	7669	30.00 ea.	8023	3300.00 ea.	8550	87.00 ea.	9518	129.00 ea.
7120-1	12.30 ea.	7210	105.00 ea.	7390 D	87.00 ea.	7669	15.00 ea.	8023	1650.00 ea.	8550/20	75.00 M	9520	115.50 ea.
7122	75.00 ea.	7210-1	12.30 ea.	7398-1 M	21.00 ea.	7670	36.00 ea.	8023	336.00 ea.	8550/22	75.00 M	9520	110.25 ea.
7122-1	8.25 ea.	7212	70.20 ea.	7398-2 M	105.00 ea.	7670	18.00 ea.	8023	174.00 ea.	8550/22	54.00 M	9520	105.00 ea.
7124	66.00 ea.	7212-1	7.26 ea.	7398-3 M	35.40 ea.	8000	84.00 ea.	8023	87.90 ea.	8550/22	54.00 M	9522	89.10 ea.
7124-1	7.26 ea.	7214	44.10 ea.	7400	375.00 ea.	8000	42.00 ea.	8024	4080.00 ea.	8550/24	46.50 M	9522	85.05 ea.
7126	60.00 ea.	7214-1	4.80 ea.	7400 D	27.00 ea.	8000	9.60 ea.	8024	2040.00 ea.	8550/26	46.50 M	9522	81.00 ea.
7126-1	6.60 ea.	7216	30.30 ea.	7402	25.05 ea.	8000	6.00 ea.	8024	414.00 ea.	8550/26	45.00 M	9524	79.20 ea.
7128	45.00 ea.	7216-1	3.60 ea.	7402-1	2.70 ea.	8000	3.60 ea.	8024	213.00 ea.	8550/28	43.50 M	9524	75.60 ea.
7128-1	5.10 ea.	7218	23.70 ea.	7412	34.20 ea.	8001	101.40 ea.	8024	107.10 ea.	8550/28	43.50 M	9524	72.00 ea.
7130	44.40 ea.	7218-1	2.70 ea.	7412-1	3.60 ea.	8001	51.00 ea.	8025	4860.00 ea.	8550/30	43.50 M		
7130-1	5.04 ea.	7220	18.00 ea.	7418	36.30 ea.	8001	10.50 ea.	8025	2430.00 ea.	8550/30	43.50 M	D-50	3.60 M
7170	8.34 ea.	7220-1	2.10 ea.	7418-1	4.02 ea.	8001	6.00 ea.	8025	492.00 ea.	8550/30	43.50 M	Spool Special	.61 ea.
7170-1	.96 ea.	7222	15.00 ea.	7428	56.10 ea.	8001	3.90 ea.	8025	252.00 ea.	8550/32	45.90 M	Spool Special	.61 ea.
7170-N	11.88 ea.	7222-1	1.65 ea.	7428-1	5.94 ea.	8002	130.50 ea.	8025	126.90 ea.	8550/32	45.90 M	BHF-10-1/4	.53 ea.
7171	9.60 ea.	7224	17.40 ea.	7448	67.50 ea.	8002	65.40 ea.	8025	126.90 ea.	8550/32	45.90 M	BHF-12-1/4	.54 ea.
7171-1	1.11 ea.	7224-1	1.95 ea.	7448-1	6.90 ea.	8002	13.50 ea.	8026	5205.00 ea.	8550/34	105.00 M	BHF-14-1/4	.54 ea.
7171 N	13.50 ea.	7312	70.95 ea.	7449	81.00 ea.	8002	7.50 ea.	8026	2602.50 ea.	8550/34	105.00 M	BHF-16-1/4	.55 ea.
7172	12.00 ea.	7312-1	7.59 ea.	7449-1	10.50 ea.	8002	4.80 ea.	8026	526.00 ea.	8550/36	124.80 M	BHF-18-1/4	.57 ea.
7172-1	1.38 ea.	7314	54.00 ea.	7458	126.00 ea.	8003	150.00 ea.	8026	269.25 ea.	8550/36	124.80 M	BHF-20-1/4	.59 ea.
7172 N	16.74 ea.	7314-1	5.70 ea.	7458-1	13.20 ea.	8003	75.60 ea.	8026	135.30 ea.	8550/36	124.80 M	BHF-22-1/4	.60 ea.
7173	16.65 ea.	7316	34.50 ea.	7524	8.70 ea.	8003	15.60 ea.	8027	6750.00 ea.	8552	87.00 ea.	BHF-24-1/4	.63 ea.
7173-1	1.80 ea.	7316-1	3.60 ea.	7524	4.50 ea.	8003	9.00 ea.	8027	3375.00 ea.	8552-1	10.50 ea.	BHF-26-1/4	.66 ea.
7173 N	21.18 ea.	7318	24.00 ea.	7526	8.10 ea.	8003	6.00 ea.	8027	681.30 ea.	8704	144.00 ea.	BHF-28-1/4	.72 ea.
7174	20.10 ea.	7318-1	2.61 ea.	7526	4.20 ea.	8004	175.50 ea.	8027	346.65 ea.	8704/2	252.00 ea.	BHF-30-1/4	.75 ea.
7174-1	2.19 ea.	7320	18.90 ea.	7527	7.80 ea.	8004	88.20 ea.	8027	174.00 ea.	8704/3	342.00 ea.	BHF-32-1/4	.90 ea.
7174-N	27.00 ea.	7320-1	2.01 ea.	7527	4.05 ea.	8004	18.00 ea.	8028	6990.00 ea.	8704/4	450.00 ea.	BHF-34-1/4	1.02 ea.
7175	31.65 ea.	7322	15.75 ea.	7528	7.50 ea.	8004	10.20 ea.	8028	3495.00 ea.	8704/5	576.00 ea.	BHF-36-1/4	1.17 ea.
7175-1	3.33 ea.	7322-1	1.71 ea.	7528	3.90 ea.	8004	7.80 ea.	8028	705.00 ea.	8705	138.00 ea.	BHF-38-1/4	1.41 ea.
7175 N	40.74 ea.	7324	8.70 ea.	7529	10.80 ea.	8005	193.50 ea.	8028	358.50 ea.	8705/2	306.00 ea.	BHF-40-1/4	1.83 ea.
7178/24-24	30.00 M	7324-1	1.26 ea.	7529	5.70 ea.	8005	97.20 ea.	8029	180.00 ea.	8705/3	366.00 ea.	BHF-42-1/4	2.40 ea.
7178/22-22	33.00 M	7324 N	10.92 ea.	7530	7.20 ea.	8005	20.40 ea.	8029	7740.00 ea.	8705/4	504.00 ea.	BHF-44-1/4	4.17 ea.
7178/20-20	36.00 M	7324/22	11.19 ea.	7530	3.75 ea.	8005	12.00 ea.	8029	3870.00 ea.	8705/5	612.00 ea.	BHF-46-1/4	.87 ea.
7178/18-18	39.00 M	7324/22N	11.70 ea.	7532	9.00 ea.	8005	9.30 ea.	8029	780.00 ea.	8706	192.00 ea.	BHF-48-1/4	.88 ea.
7178/16-16	45.90 M	7324/20	11.70 ea.	7532	4.65 ea.	8006	228.00 ea.	8029	396.00 ea.	8706/2	378.00 ea.	BHF-50-1/4	.88 ea.
7179/24-24	33.00 M	7324/20N	12.30 ea.	7533	10.80 ea.	8006	114.60 ea.	8029	198.90 ea.	8706/3	504.00 ea.	BHF-52-1/4	.90 ea.
7179/22-22	39.00 M	7326	9.15 ea.	7534	5.70 ea.	8006	25.20 ea.	8510	52.50 ea.	8706/4	612.00 ea.	BHF-54-1/4	1.01 ea.
7179/20-20	42.00 M	7326-1	1.32 ea.	7534	5.70 ea.	8006	15.00 ea.	8512	300.00 ea.	8706/5	720.00 ea.	BHF-56-1/4	1.07 ea.
7179/18-18	45.90 M	7326 N	9.99 ea.	7535	36.00 ea.	8006	15.00 ea.	8512-1	36.00 ea.	8707	162.00 ea.	BHF-58-1/4	1.07 ea.
7179/16-16	57.90 M	7328	8.91 ea.	7535	18.30 ea.	8006	10.80 ea.	8514	210.00 ea.	8707/2	288.00 ea.	BHF-60-1/4	1.08 ea.
180	12.00 ea.	7328-1	1.14 ea.	7536	39.00 ea.	8007	258.00 ea.	8514-1	24.60 ea.	8707/3	396.00 ea.	BHF-62-1/4	1.14 ea.
180-1	1.44 ea.	7328 N	10.98 ea.	7536	19.95 ea.	8007	129.60 ea.	8516	144.00 ea.	8707/4	510.00 ea.	BHF-64-1/4	1.26 ea.
181	14.70 ea.	7330	9.30 ea.	7537	37.50 ea.	8007	30.00 ea.	8516-1	18.00 ea.	8707/5	630.00 ea.	BHF-66-1/4	1.38 ea.
181-1	1.62 ea.	7330-1	1.23 ea.	7537	19.20 ea.	8007	18.00 ea.	8518	126.00 ea.	8708	177.00 ea.	BHF-68-1/4	1.44 ea.
182	17.70 ea.	7330 N	11.70 ea.	7538	35.40 ea.	8007	12.30 ea.	8518-1	15.00 ea.	8708/2	300.00 ea.	BHF-70-1/4	1.74 ea.
182-1	1.92 ea.	7351	12.90 ea.	7538	18.00 ea.	8008	386.00 ea.	8520	93.00 ea.	8708/3	414.00 ea.	BHF-72-1/4	1.95 ea.
183	21.00 ea.	7351-1	1.83 ea.	7542	42.00 ea.	8008	193.80 ea.	8520-1	12.60 ea.	8708/4	576.00 ea.	BHF-74-1/4	2.28 ea.
183-1	2.40 ea.	7351 NB	18.32 ea.	7542/3	52.50 ea.	8008	45.00 ea.	8521	126.00 ea.	8708/5	720.00 ea.	BHF-76-1/4	2.84 ea.
84	25.50 ea.	7351-1 NB	2.09 ea.	7542/4	63.00 ea.	8008	24.00 ea.	8521	330.00 M	8709	231.00 ea.	BHF-78-1/4	3.48 ea.
84-1	2.70 ea.	7353	14.66 ea.	7552	45.90 ea.	8008	19.50 ea.	8521/2	510.00 M	8709/2	306.00 ea.	BHF-80-1/4	4.62 ea.
85	38.40 ea.	7353-1	2.00 ea.	7552/3	58.50 ea.	8009	459.00 ea.	8521/3	630.00 M	8709/3	306.00 ea.	BHF-82-1/4	7.95 ea.
85-1	4.14 ea.	7353 NB	19.98 ea.	7552/4	69.60 ea.	8009	229.80 ea.	8521/4	750.00 M	8709/4	576.00 ea.	BHF-84-1/4	1.61 ea.
86	58.65 ea.	7353-1 NB	2.16 ea.	7571	5.40 ea.	8009	229.80 ea.	8521/5	870.00 M	8709/5	831.00 ea.	BHF-86-1/4	1.61 ea.
87	75.00 ea.	7355	19.65 ea.	7571	9.45 ea.	8009	55.20 ea.	8522	66.00 ea.	8710	156.00 ea.	BHF-88-1/4	1.62 ea.
88	150.00 ea.	7355-1	2.33 ea.	7572	15.00 ea.	8009	29.70 ea.	8522-1	9.60 ea.	8710/2	306.00 ea.	BHF-90-1/4	1.65 ea.
89	204.00 ea.	7355 NB	25.47 ea.	7572	28.65 ea.	8009	24.00 ea.	8523	375.00 M	8710/3	540.00 ea.	BHF-92-1/4	1.80 ea.
90	10.14 ea.	7355-1 NB	2.67 ea.	7573	22.05 ea.	8010	562.50 ea.	8523/2	555.00 M	8710/4	648.00 ea.	BHF-94-1/4	1.89 ea.
90-1	1.32 ea.	7357	23.15 ea.	7573	42.60 ea.	8010	281.40 ea.	8523/3	714.00 M	8710/5	792.00 ea.	BHF-96-1/4	2.04 ea.
90 N	12.30 ea.	7357-1	2.67 ea.	7574	27.90 ea.	8010	66.00 ea.	8523/4	855.00 M	8711	231.00 ea.	BHF-98-1/4	2.16 ea.
91	9.30 ea.	7157 NB	27.81 ea.	7574	54.30 ea.	8010	36.60 ea.	8523/5	990.00 M	8711/2	405.00 ea.	BHF-24-1	2.34 ea.
91	1.23 ea.	7357-1 NB	3.17 ea.	7575	43.50 ea.	8010	27.90 ea.	8524	60.00 ea.	8711/3	552.00 ea.	BHF-26-1	2.55 ea.
91 N	11.64 ea.	7359	41.63 ea.	7575	78.00 ea.	8011	699.00 ea.	8524-1	8.40 ea.	8711/4	717.00 ea.	BHF-28-1	2.70 ea.
92	8.88 ea.	7359-1	4.50 ea.	7575	81.60 ea.	8011	349.80 ea.	8525	405.00 M	8711/5	900.00 ea.	BHF-30-1	3.30 ea.
92-1	1.14 ea.	7359 NB	39.96 ea.	7578	18.90 ea.	8011	75.00 ea.	8525/2	705.00 M	8712	240.00 ea.	BHF-32-1	3.75 ea.
92 N	10.98 ea.	7359-1 NB	4.17 ea.	7581	36.00 ea.	8011	45.00 ea.	8525/3	870.00 M	8712/2	390.00 ea.	BHF-34-1	4.35 ea.
93	8.97 ea.	7361	64.44 ea.	7582	27.75 ea.	8011	33.60 ea.	8525/4	1150.00 M	8712/3	585.00 ea.	BHF-36-1	5.10 ea.
93-1	1.26 ea.	7361-1	6.99 ea.	7582	58.80 ea.	8012	862.20 ea.	8525/5	1224.00 M	8712/4	756.00 ea.	BHF-38-1	6.75 ea.
93 N	11.52 ea.	7361-1 NB	5.84 ea.	7583	34.95 ea.	8012	431.40 ea.	8526	52.50 ea.	8712/5	945.00 ea.	BHF-40-1	8.70 ea.
94	7.74 ea.	7362 NB	91.58 ea.	7583	66.00 ea.	8012	96.00 ea.	8526-1	5.70 ea.	8713	225.00 ea.	BHF-42-1	8.70 ea.
94-1	1.17 ea.	7362-1 NB	9.99 ea.	7584	41.10 ea.	8012	55.50 ea.	8527	435.00 M	8713/2	435.00 ea.	BHF-44-1	15.15 ea.
94 N	10.38 ea.	7363	166.50 ea.	7584	78.00 ea.	8012	39.00 ea.	8527/2	795.00 M	8713/3	595.00 ea.	BPE-10-1/4	.41 ea.
95	8.70 ea.	7363-1	18.32 ea.	7585	66.00 ea.	8013	93.30 ea.	8527/3	945.00 M	8713/4	765.00 ea.	BPE-12-1/4	.41 ea.
95-1	1.26 ea.	7364	266.40 ea.	7585	102.40 ea.	8013	48.33 ea.	8527/4	1320.00 M	8713/5	990.00 ea.	BPE-14-1/4	.42 ea.
95 N	11.55 ea.	7364-1	28.31 ea.	7610	330.00 ea.	8014	10.20 ea.	8527/5	153				

# Birnbach PRICE LIST

Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale	Cat. No.	Sug'd Resale
952 <sup>2</sup>	72.00 ea.	BPE-20-1/4	.44 ea.	BST-40-1/4	1.02 ea.	BDN-32-1/2	5.40 ea.	BDC-36-1	11.79 ea.	P-1330-CCT	2.62 ea.	SK-165-3/64	7.20 C
D-50	3.60 M	BPE-22-1/4	.48 ea.	BST-42-1/4	2.40 ea.	BDN-34-1/2	7.62 ea.	BDC-38-1	17.64 ea.	P-1330-FHE	2.42 ea.	SK-265-1/16	7.50 C
Spool Special	.61 ea.	BPE-24-1/4	.48 ea.	BST-44-1/4	3.39 ea.	BDN-36-1/2	12.60 ea.	BDC-40-1	26.21 ea.	P-1330-FHT	2.42 ea.	SK-265-3/32	8.40 C
BHF-10-1/4	.53 ea.	BPE-26-1/4	.49 ea.	BST-10-1/2	.75 ea.	BDN-38-1/2	17.46 ea.	C-1001-1	.12 ea.	P-1330-SB	2.70 ea.	SK-265-1/8	8.85 C
BHF-12-1/4	.54 ea.	BPE-28-1/4	.52 ea.	BST-12-1/2	.76 ea.	BDN-40-1/2	30.36 ea.	C-1001-2	.13 ea.	P-1333-AB	2.38 ea.	SK-265-3/16	11.25 C
BHF-14-1/4	.54 ea.	BPE-30-1/4	.53 ea.	BST-14-1/2	.77 ea.	BDN-12-1	2.88 ea.	C-1001-3	.13 ea.	P-1333-CCE	2.86 ea.	SK-265-1/4	13.20 C
BHF-16-1/4	.55 ea.	BPE-32-1/4	.57 ea.	BST-16-1/2	.77 ea.	BDN-14-1	2.95 ea.	C-1001-4	.21 ea.	P-1333-CCT	2.86 ea.	SK-265-3/8	15.90 C
BHF-18-1/4	.57 ea.	BPE-34-1/4	.60 ea.	BST-18-1/2	.77 ea.	BDN-16-1	3.06 ea.	D-50	3.60 M	P-1333-FHE	2.73 ea.	SK-265-1/2	19.20 C
BHF-20-1/4	.59 ea.	BPE-36-1/4	.66 ea.	BST-20-1/2	.78 ea.	BDN-18-1	3.35 ea.	GL-1-100'	3.30 ea.	P-1333-FHT	2.73 ea.	SK-265-3/4	25.95 C
BHF-22-1/4	.60 ea.	BPE-38-1/4	.78 ea.	BST-22-1/2	.81 ea.	BDN-20-1	3.96 ea.	GL-1-500'	16.35 ea.	P-1333-SB	2.96 ea.	SK-265-1	36.00 C
BHF-24-1/4	.62 ea.	BPE-40-1/4	1.02 ea.	BST-24-1/2	.84 ea.	BDN-22-1	4.32 ea.	GL-2-1000'	32.40 ea.	PBT-4	2.52 ea.	SK-275-24	16.00 C
BHF-26-1/4	.66 ea.	BPE-42-1/4	2.40 ea.	BST-26-1/2	.87 ea.	BDN-24-1	5.40 ea.	GL-1-2500'	80.40 ea.	PBT-4	20.85 ea.	SK-275-22	16.70 C
BHF-28-1/4	.72 ea.	BPE-44-1/4	3.35 ea.	BST-28-1/2	.93 ea.	BDN-26-1	6.66 ea.	GL-2-100'	6.45 ea.	R-100	3.36 M	SK-275-20	17.50 C
BHF-30-1/4	.75 ea.	BPE-46-1/4	4.59 ea.	BST-30-1/2	.96 ea.	BDN-28-1	7.20 ea.	GL-2-500'	31.98 ea.	S-1315-AB	.94 ea.	SK-275-18	19.15 C
BHF-32-1/4	.90 ea.	BPE-48-1/4	6.00 ea.	BST-32-1/2	1.02 ea.	BDN-30-1	8.28 ea.	GL-2-1000'	63.60 ea.	S-1315-CCE	1.34 ea.	SK-275-16	20.75 C
BHF-34-1/4	1.02 ea.	BPE-50-1/4	7.50 ea.	BST-34-1/2	1.11 ea.	BDN-32-1	10.72 ea.	GL-2-2500'	158.40 ea.	S-1318-AB	1.56 ea.	SK-275-14	22.70 C
BHF-36-1/4	1.17 ea.	BPE-52-1/4	9.00 ea.	BST-36-1/2	1.23 ea.	BDN-34-1	14.98 ea.	GL-3-100'	12.24 ea.	S-1315-FHE	1.14 ea.	SK-275-12	24.90 C
BHF-38-1/4	1.41 ea.	BPE-54-1/4	10.50 ea.	BST-38-1/2	1.56 ea.	BDN-36-1	24.48 ea.	GL-3-500'	61.38 ea.	S-1315-FHT	1.14 ea.	SK-275-10	27.25 C
BHF-40-1/4	1.83 ea.	BPE-56-1/4	12.00 ea.	BST-40-1/2	2.04 ea.	BDN-38-1	33.48 ea.	GL-3-1000'	122.40 ea.	S-1315-SB	1.37 ea.	SK-275-B	31.80 C
BHF-42-1/4	2.40 ea.	BPE-58-1/4	15.00 ea.	BST-42-1/2	2.45 ea.	BDN-40-1	59.04 ea.	GL-3-2500'	305.40 ea.	S-1318-AB	1.13 ea.	SK-275-6	34.30 C
BHF-44-1/4	4.17 ea.	BPE-60-1/4	18.00 ea.	BST-44-1/2	2.86 ea.	BDN-10-1/4	.61 ea.	HAG-12	41.25 ea.	S-1318-CCE	1.56 ea.	SK-275-4	37.30 C
BHF-10-1/2	.87 ea.	BPE-62-1/4	21.00 ea.	BST-10-1	1.41 ea.	BDC-12-1/4	.61 ea.	HAG-1	5.70 ea.	S-1318-CCT	1.56 ea.	SK-275-2	40.95 C
BHF-12-1/2	.88 ea.	BPE-64-1/4	24.00 ea.	BST-12-1	1.41 ea.	BDC-14-1/4	.62 ea.	HAG-13	52.00 ea.	S-1318-FHE	1.35 ea.	SK-275-2	8.20
BHF-14-1/2	.88 ea.	BPE-66-1/4	27.00 ea.	BST-14-1	1.42 ea.	BDC-16-1/4	.65 ea.	H-214	200.00 ea.	S-1318-FHT	1.35 ea.	SK-275-3/8	44.55 C
BHF-16-1/2	.90 ea.	BPE-68-1/4	30.00 ea.	BST-16-1	1.42 ea.	BDC-18-1/4	.71 ea.	M-214	162.50 ea.	S-1318-SB	1.64 ea.	SK-275-3/4	8.90
BHF-18-1/2	1.01 ea.	BPE-70-1/4	33.00 ea.	BST-18-1	1.43 ea.	BDC-20-1/4	.80 ea.	H-216	145.00 ea.	S-1321-AB	1.40 ea.	SK-275-3/8	55.50 C
BHF-20-1/2	1.07 ea.	BPE-72-1/4	36.00 ea.	BST-20-1	1.50 ea.	BDC-22-1/4	.90 ea.	M-216	95.00 ea.	S-1321-CCE	1.79 ea.	SK-275-3/8	11.10
BHF-22-1/2	1.08 ea.	BPE-74-1/4	39.00 ea.	BST-22-1	1.59 ea.	BDC-24-1/4	1.00 ea.	H-218	125.00 ea.	S-1321-CCT	1.79 ea.	SK-275-3/8	70.40 C
BHF-24-1/2	1.14 ea.	BPE-76-1/4	42.00 ea.	BST-24-1	1.62 ea.	BDC-26-1/4	1.12 ea.	L-218	70.00 ea.	S-1321-FHE	1.58 ea.	SK-275-3/8	14.10
BHF-26-1/2	1.26 ea.	BPE-78-1/4	45.00 ea.	BST-26-1	1.71 ea.	BDC-28-1/4	1.30 ea.	M-218	91.50 ea.	S-1321-FHT	1.58 ea.	SK-275-1/2	81.45 C
BHF-28-1/2	1.38 ea.	BPE-80-1/4	48.00 ea.	BST-28-1	1.80 ea.	BDC-30-1/4	1.58 ea.	H-312	395.00 ea.	S-1321-SB	1.91 ea.	SK-275-1/2	16.30
BHF-30-1/2	1.44 ea.	BPE-82-1/4	51.00 ea.	BST-30-1	1.86 ea.	BDC-32-1/4	1.91 ea.	M-316	155.00 ea.	S-1324-AB	1.67 ea.	SK-275-3/8	97.00 C
BHF-32-1/2	1.74 ea.	BPE-84-1/4	54.00 ea.	BST-32-1	1.98 ea.	BDC-34-1/4	2.81 ea.	M-318	137.50 ea.	S-1324-CCE	2.12 ea.	SK-275-3/8	19.40
BHF-34-1/2	1.95 ea.	BPE-86-1/4	57.00 ea.	BST-34-1	2.16 ea.	BDC-36-1/4	3.28 ea.	P-1315-AB	.81 ea.	S-1324-CCT	2.12 ea.	SK-275-3/8	115.40 C
BHF-36-1/2	2.28 ea.	BPE-88-1/4	60.00 ea.	BST-36-1	2.46 ea.	BDC-38-1/4	5.76 ea.	P-1315-CCCE	1.21 ea.	S-1324-FHE	1.90 ea.	SK-275-3/8	23.10
BHF-38-1/2	2.84 ea.	BPE-90-1/4	63.00 ea.	BST-38-1	2.97 ea.	BDC-40-1/4	8.28 ea.	P-1315-FCT	1.21 ea.	S-1324-FHT	1.90 ea.	SK-275-3/8	136.50 C
BHF-40-1/2	3.48 ea.	BPE-92-1/4	66.00 ea.	BST-40-1	4.05 ea.	BDC-10-1/2	.96 ea.	P-1315-FHE	1.01 ea.	S-1324-SB	2.24 ea.	SK-275-3/8	27.30
BHF-42-1/2	4.62 ea.	BPE-94-1/4	69.00 ea.	BST-42-1	9.00 ea.	BDC-12-1/2	.96 ea.	P-1315-FHT	1.01 ea.	S-1327-AB	1.95 ea.	SK-275-1	161.00 C
BHF-44-1/2	7.95 ea.	BPE-96-1/4	72.00 ea.	BST-44-1	13.50 ea.	BDC-14-1/2	.97 ea.	P-1315-SB	1.21 ea.	S-1327-CCE	2.39 ea.	SK-276-1	32.20
BHF-10-1	1.61 ea.	BPE-98-1/4	75.00 ea.	BDN-12-1/4	.79 ea.	BDC-16-1/2	1.02 ea.	P-1318-AB	1.01 ea.	S-1327-CCT	2.39 ea.	SK-621-22	37.50 C
BHF-12-1	1.61 ea.	BPE-100-1/4	78.00 ea.	BDN-14-1/4	.83 ea.	BDC-18-1/2	1.14 ea.	P-1318-CCE	1.43 ea.	S-1327-FHE	2.23 ea.	SK-621-20	45.75 C
BHF-14-1	1.62 ea.	BPE-102-1/4	81.00 ea.	BDN-16-1/4	.94 ea.	BDC-20-1/2	1.38 ea.	P-1318-CCT	1.43 ea.	S-1327-FHT	2.23 ea.	SK-621-19	50.10 C
BHF-16-1	1.65 ea.	BPE-104-1/4	84.00 ea.	BDN-18-1/4	1.01 ea.	BDC-22-1/2	1.58 ea.	P-1318-FHE	1.22 ea.	S-1327-SB	2.51 ea.	SK-621-18	52.50 C
BHF-18-1	1.80 ea.	BPE-106-1/4	87.00 ea.	BDN-20-1/4	1.15 ea.	BDC-24-1/2	1.69 ea.	P-1318-FHT	1.23 ea.	S-1330-AB	2.26 ea.	SK-621-17	54.00 C
BHF-20-1	1.89 ea.	BPE-108-1/4	90.00 ea.	BDN-22-1/4	1.33 ea.	BDC-26-1/2	1.98 ea.	P-1318-SB	1.57 ea.	S-1330-CCE	2.78 ea.	SK-621-16	55.50 C
BHF-22-1	2.04 ea.	BPE-110-1/4	93.00 ea.	BDN-24-1/4	1.44 ea.	BDC-28-1/2	2.52 ea.	P-1321-AB	1.26 ea.	S-1330-CCT	2.78 ea.	SK-621-15	60.84 C
BHF-24-1	2.16 ea.	BPE-112-1/4	96.00 ea.	BDN-26-1/4	1.73 ea.	BDC-30-1/2	3.02 ea.	P-1321-CCE	1.72 ea.	S-1330-FHE	2.57 ea.	SK-621-14	64.17 C
BHF-26-1	2.34 ea.	BPE-114-1/4	99.00 ea.	BDN-28-1/4	1.87 ea.	BDC-32-1/2	3.60 ea.	P-1321-CCT	1.72 ea.	S-1330-FHT	2.57 ea.	SK-621-13	70.00 C
BHF-28-1	2.55 ea.	BPE-116-1/4	102.00 ea.	BDN-30-1/4	2.23 ea.	BDC-34-1/2	5.22 ea.	P-1321-FHE	1.46 ea.	S-1330-SB	2.85 ea.	SK-621-12	73.25 C
BHF-30-1	2.70 ea.	BPE-118-1/4	105.00 ea.	BDN-32-1/4	2.81 ea.	BDC-36-1/2	6.28 ea.	P-1321-FHT	1.46 ea.	S-1333-AB	2.50 ea.	SK-621-11	79.17 C
BHF-32-1	3.30 ea.	BPE-120-1/4	108.00 ea.	BDN-34-1/4	3.89 ea.	BDC-38-1/2	9.43 ea.	P-1321-SB	1.77 ea.	S-1333-CCE	2.99 ea.	SK-621-10	150.00 C
BHF-34-1	3.75 ea.	BPE-122-1/4	111.00 ea.	BDN-36-1/4	6.48 ea.	BDC-40-1/2	14.11 ea.	P-1324-AB	1.56 ea.	S-1333-FHE	2.81 ea.	SK-621-9	116.67 C
BHF-36-1	4.35 ea.	BPE-124-1/4	114.00 ea.	BDN-38-1/4	9.00 ea.	BDC-10-1	1.68 ea.	P-1324-CCE	2.00 ea.	S-1333-FHT	2.81 ea.	SK-621-8	142.50 C
BHF-38-1	5.10 ea.	BPE-126-1/4	117.00 ea.	BDN-40-1/4	15.98 ea.	BDC-12-1	1.68 ea.	P-1324-CCT	2.00 ea.	S-1333-SB	3.12 ea.	SK-621-7	145.83 C
BHF-40-1	6.75 ea.	BPE-128-1/4	120.00 ea.	BDN-12-1/2	1.51 ea.	BDC-14-1	1.80 ea.	P-1324-FHE	1.78 ea.	T-6	12.00 C	SK-621-6	159.00 C
BHF-42-1	8.70 ea.	BPE-130-1/4	123.00 ea.	BDN-14-1/2	1.55 ea.	BDC-16-1	1.95 ea.	P-1324-FHT	1.78 ea.	T-B	24.00 C	SK-621-5	179.16 C
BHF-44-1	15.15 ea.	BPE-132-1/4	126.00 ea.	BDN-16-1/2	1.73 ea.	BDC-18-1	2.16 ea.	P-1324-SB	2.11 ea.	T-10	8.25 C	SK-621-4	189.00 C
BPE-10-1/4	.41 ea.	BPE-134-1/4	129.00 ea.	BDN-18-1/2	1.91 ea.	BDC-20-1	2.50 ea.	P-1327-AB	1.84 ea.	T-14	.42 ea.	SK-621-3	212.49 C
BPE-12-1/4	.41 ea.	BPE-136-1/4	132.00 ea.	BDN-20-1/2	2.20 ea.	BDC-22-1	2.99 ea.	P-1327-CCE	2.28 ea.	T-14A	.48 ea.	SK-621-2	225.00 C
BPE-14-1/4	.42 ea.	BPE-138-1/4	135.00 ea.	BDN-22-1/2	2.45 ea.	BDC-24-1	3.31 ea.	P-1327-CCT	2.28 ea.	T-15	15.00 C	SK-621-1	330.00 C
BPE-16-1/4	.43 ea.	BPE-140-1/4	138.00 ea.	BDN-24-1/2	2.74 ea.	BDC-26-1	3.78 ea.	P-1327-FHE	2.04 ea.	T-16	15.00 C	SK-621-0	367.50 C
BPE-18-1/4	.43 ea.	BPE-142-1/4	141.00 ea.	BDN-26-1/2	3.31 ea.	BDC-28-1	4.68 ea.	P-1327-FHT	2.04 ea.	T-16A	15.00 C	SK-621-3/8	4.80 ft
		BPE-144-1/4	144.00 ea.	BDN-28-1/2	3.60 ea.	BDC-30-1	5.58 ea.	P-1327-SB	2.34 ea.	TK-1	55.05 ea.	SK-621-1/2	6.24 ft
		BPE-146-1/4	147.00 ea.	BDN-30-1/2	4.25 ea.	BDC-32-1	6.84 ea.	P-1330-AB	2.10 ea.	TK-2	50.55 ea.	Special Spools	.61 ea.
		BPE-148-1/4	150.00 ea.			BDC-34-1	9.72 ea.	P-1330-CCE	2.62 ea.				

# **PRICES**

Prices in this *MASTER* should not be considered as final.  
*Inquire about latest prices and delivery.*

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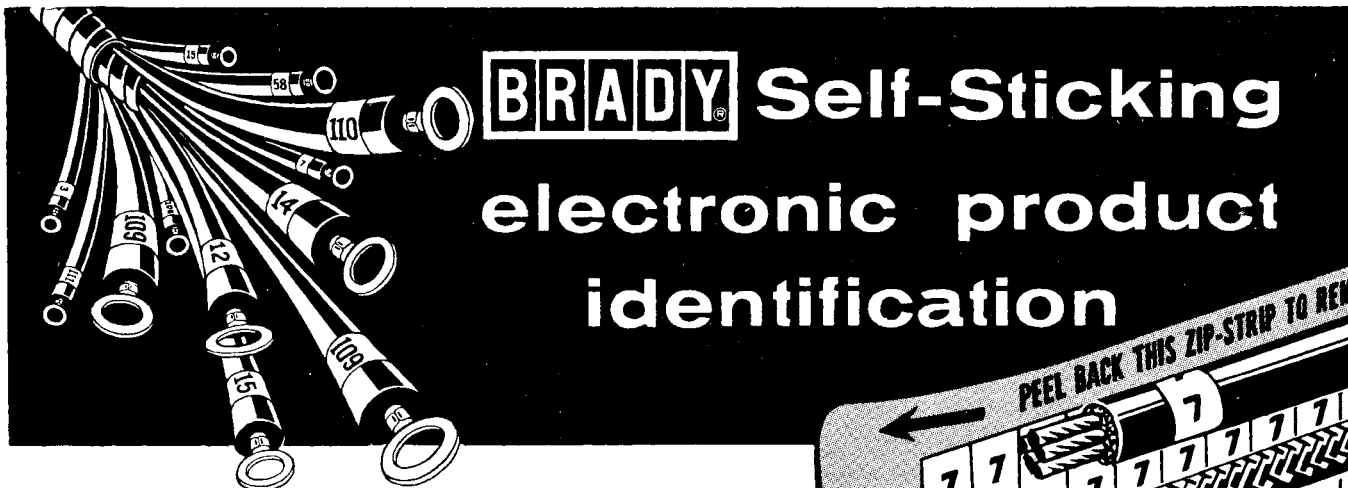
# **DISCOUNTS**

Trade discounts apply in most cases  
where *list prices* are shown.

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# **ORDERING**

Since previous editions of The *MASTER* are frequently referred to, it is important, when ordering, to mention specifically the edition and page number, also the catalog number of each item. This will avoid possible confusion and delay.



# BRADY Self-Sticking electronic product identification

**Self-Sticking, Sub-Surface Printed Perma-Shield WIRE MARKERS Tell Which Wire Goes Where . . . PERMANENTLY!**

Mark with Brady B-600 and you mark for the operational life of your equipment.

The legend on Brady B-600 Wire Markers is protected by tough, glass-clear Mylar.\* Brady's exclusive sub-surface printing process deposits number, letter or symbol on the *underside* of the Mylar. Even hardest handling and abrasion can't deface the legend. It stays sharp and clear *permanently*.

Brady B-600 Markers resist heat to 400° F. . . repel dirt, detergents, chemicals and moisture like no other markers you can buy. Numbers, Letters, Symbols in sizes 1½" long for wires under .425" o.d.; ¾" long for wires under .250" o.d.; and ½" long for miniature wires under .150" o.d. **IN STOCK** for immediate delivery.

**ONLY BRADY SELF-STICKING WIRE MARKERS CAN BE MANUALLY AND MACHINE APPLIED.**

\*DuPont's Reg. T.M.

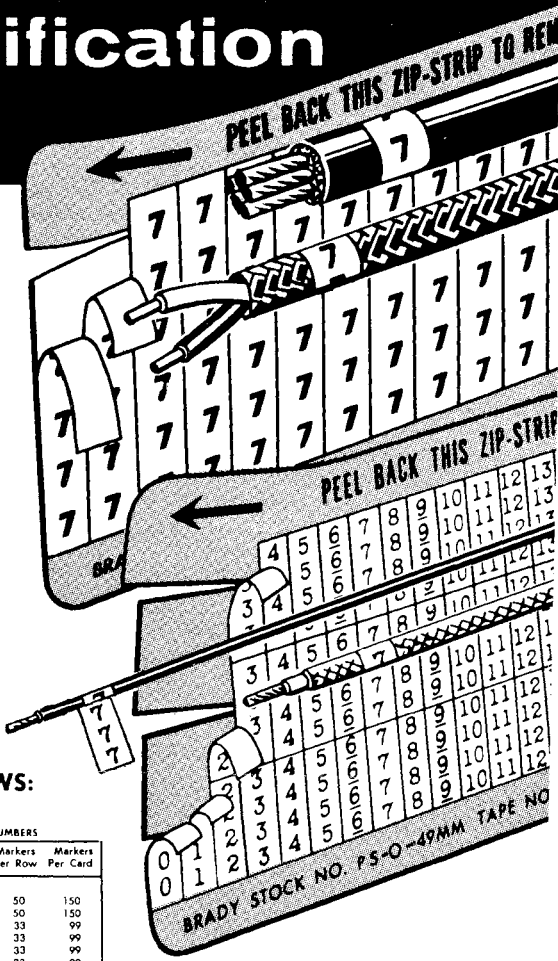
**BRADY B-600 WIRE MARKERS ARE STOCKED AS FOLLOWS:**

SOLID NUMBERS				SOLID CAPITAL LETTERS				CONSECUTIVE NUMBERS			
Brady Stock No.	Printing on Markers	Markers Per Row	Markers Per Card	Brady Stock No.	Printing on Markers	Markers Per Row	Markers Per Card	Brady Stock No.	Printing on Markers	Markers Per Row	Markers Per Card
(All markers on each card the same)				(All markers on each card same)				(3 complete sets per card)			
MM-0	0	50	150	MM-A-CAP	A	50	150	MM-0-49	0 thru 49	50	150
MM-1	1	50	150	MM-B-CAP	B	50	150	MM-50-99	50 thru 99	50	150
MM-2	2	50	150	MM-C-CAP	C	50	150	MM-100-132	100 thru 132	33	99
and so on thru				and so on thru				MM-133-165	133 thru 165	33	99
MM-99	99	50	150	MM-Z-CAP	Z	50	150	MM-166-198	166 thru 198	33	99
MM-100	100	33	99	<b>COMBINATION PACS</b>				MM-199-231	199 thru 231	33	99
MM-101	101	33	99	1 Card each of Solid Numbers or Letters per Pac				MM-232-264	232 thru 264	33	99
and so on thru				Stock No.	Assortment	Cards in Pac		MM-265-297	265 thru 297	33	99
MM-497	497	33	99	CPC-MM-1-25	Solid Numbers 1 thru 25	25		MM-298-330	298 thru 330	33	99
MM-498	498	33	99	CPC-MM-26-50	Solid Numbers 26 thru 50	25		MM-331-363	331 thru 363	33	99
MM-499	499	33	99	CPC-MM-51-75	Solid Numbers 51 thru 75	25		MM-364-396	364 thru 396	33	99
MM-500	500	33	99	CPC-MM-76-100	Solid Numbers 76 thru 100	25		MM-397-429	397 thru 429	33	99
				and so on thru				MM-430-462	430 thru 462	33	99
				CPC-MM-476-500	Solid Numbers 476 thru 500	25		MM-463-495	463 thru 495	33	99
				CPC-MM-A-Z	Solid Letters A thru Z	26					

SOLID NUMBER CARDS			SOLID LETTER CARDS			CONSECUTIVE NUMBER CARDS			SOLID MACHINE TOOL SYMBOLS		
Brady Stock No.	Printing on Each Marker	No. of Markers on Each Card ¾" 1½"	Brady Stock No.	Printing on Each Marker	No. of Markers on Each Card ¾" 1½"	Brady Stock No.	Printing on Markers	No. of Markers on Each Card ¾" 1½"	Brady Stock No.	Printing on Each Marker	No. of Markers on Each Card ¾" 1½"
VP-0	0	72 36	VP-A	A	72 36	<b>CONSECUTIVE NUMBER CARDS</b>			VP-111	111	50 25
VP-1	1	72 36	VP-B	B	72 36	VP-1-33	1-33	2 1	VP-112	112	50 25
VP-2	2	72 36	VP-C	C	72 36	VP-34-66	34-66	2 1	VP-113	113	50 25
VP-3	3	72 36	and so on thru			VP-67-99	67-99	2 1	VP-211	211	50 25
and so on thru			VP-Z	Z	72 36	VP-100-124	100-124	2 1	VP-212	212	50 25
VP-97	97	72 36	<b>COMBINATION PACS</b>			VP-125-149	125-149	2 1	VP-213	213	50 25
VP-98	98	72 36	1 Card each of Solid Numbers or Letters per Pac			VP-150-174	150-174	2 1	VP-311	311	50 25
VP-99	99	72 36	BRADY Assortment No. of Stock Solid Cards in Pac			and so on thru			VP-312	312	50 25
VP-100	100	50 25	CPC-VP-1-25	1-25	25	VP-475-499	475-499	2 1	VP-313	313	50 25
and so on thru			CPC-VP-26-50	26-50	25	<b>CONSECUTIVE LETTER CARDS</b>			VP-411	411	50 25
VP-301	301	50 25	CPC-VP-51-75	51-75	25	VP-A-Z-CAP	A-Z	2 1	VP-412	412	50 25
VP-302	302	50 25	CPC-VP-76-100	76-100	25	<b>CONSECUTIVE D.C. MOTOR GENERATOR MARKERS</b>			VP-413	413	50 25
and so on thru			and so on thru			VP-AFS	A1, A2, F1, F2, S1, S2,	12 6	VP-511	511	50 25
VP-499	499	50 25	CPC-VP-476-500	476-500	25				VP-512	512	50 25
VP-500	500	50 25	CPC-VP-A-Z	A-Z	26				VP-513	513	50 25
									VP-611	611	50 25
									VP-612	612	50 25
									VP-613	613	50 25
									VP-711	711	50 25
									VP-712	712	50 25
									VP-713	713	50 25

**W. H. BRADY CO.**  
MILWAUKEE

Manufacturers of Quality Pressure-Sensitive Industrial Tape Products, Self-Bonding Nameplates, Automatic Machines for Dispensing Labels, Nameplates, Masks and Tape. Est. 1914



Write for Brady Bulletin 130 for complete list of stock items, prices and free testing samples.

**PRICE PER 100 CARDS**

	½" long Miniature Markers	1½" or ¾" long Wire Markers
25 to 99 Cards	\$27.00/C	\$20.00/C
100 to 499 Cards	21.60/C	16.00/C
500 to 999 Cards	18.90/C	14.00/C
1000 to 2499 Cards	17.55/C	13.00/C
2500 to 4999 Cards	16.88/C	12.50/C
5000 to 9999 Cards	16.20/C	12.00/C



**PERMALINE TV TRANSMISSION LINES**

It is now over ten years since Columbia introduced Permaline television transmission line, the only television wire available today with a written guarantee against deterioration. In all this time we have yet to replace one single foot of this wire for reasons of deterioration, proving beyond all doubt that Permaline insulation has no equal for long life under the most severe atmospheric conditions.

Permaline is a high molecular weight polyethylene containing a very small percentage of carbon black to provide maximum resistance to the ultra violet rays in sunlight which has been proven the chief factor in the deterioration of ordinary television wire.

Electrical characteristics of Permaline are very similar to brown polyethylene television lines, but as there is no deterioration attenuation remains constant instead of increasing as is the case with brown polyethylene which becomes brittle and cracks. Remember it is not how THICK but how GOOD!

**25 YEAR WARRANTY**

**80 Mil 20 Ga. Str. PERMALINE Television Transmission Line .080 x .395**

CAT NO.		Net
5050M	1,000 Ft. Metal Spool	22.72
5050D	500 Ft. Metal Spool	11.74
5050C	100 Ft. Coil } 12 coils come packed in FREE counter	2.48
5050S	65 Ft. Coil } display	1.70
5050R	35 Ft. Coil	.98

**15 YEAR WARRANTY**

**50 Mil 20 Ga. Str. PERMALINE Television Transmission Line .050 x .385**

CAT NO.		Net
5150M	1,000 Ft. Metal Spool	17.67
5150D	500 Ft. Metal Spool	9.16
5150C	100 Ft. Coil } 12 coils come packed in FREE counter	2.05
5150S	65 Ft. Coil } display	1.40
5150R	35 Ft. Coil	.82

**Highly resistant to:**

- SUNLIGHT
- MOISTURE
- FAR BELOW ZERO TEMP.
- CHEMICAL FUMES
- OIL REFINERY FUMES
- SALT AIR & SALT SPRAY
- ABRASION

Tensile Strength — 2300 lbs. per Sq. In.

Separate Warranty Certificate with every spool or package of Permaline Television Transmission Line.

**PERMALINE VHF-UHF TV TRANSMISSION LINE**



Since the introduction of this cable in May, 1956 it has been proven beyond any doubt that this cable has no equal for reliability over the entire range of VHF and UHF channels under the most adverse conditions, such as salt spray, sunlight, extremes of heat and cold, stress cracking, chemical fumes, whipping in high winds, etc. In many areas throughout the country where other cables have failed due to salt deposits on transmission lines, this cable has given satisfactory reception at all times. Foam polyethylene tubes provide excellent low loss dielectric and require no sealing. 22 gauge solid copperweld conductors mean high tensile strength so necessary where whipping of cable is a problem. Heavy duty jacket of high molecular weight BLACK PERMALINE POLYETHYLENE is a protection against all hazards. We believe this is the finest all-purpose television transmission line available today. Impedance is 270 ohms, nominal attenuation is 3.2 D/B at 500 M/C and 4.6 D/B at 900 M/C. Cable size is approximately .295 x .402.

**15 Year Written Guarantee Certificate**

CAT. NO.		Net
5684C	100 Ft. Carton	6.95
5684D	500 Ft. Spool	32.71
5684M	1000 Ft. Spool	63.57

**PERMAFOAM LOW LOSS COAXIAL CABLES**

PERMAFOAM is a new type of coaxial cable for television systems, communication work, and all other co-ax applications. A foam polyethylene dielectric replaces the conventional solid polyethylene thus providing far lower capacity and attenuation. In fact, attenuation is approximately 25% lower than standard coaxial cables of same type. Overall jacket is our PERMALINE high molecular weight polyethylene. This non-contaminating jacket is unaffected by salt air, chemical fumes, damp rot, fungus, acids, alkalis, etc., and is remarkably resistant to all extreme weather conditions. Moisture resistance is so high that this insulation is now used on submarine cables. Will withstand severe temperature extremes and is immune to the deteriorating effects of sunlight and other ultra violet. Note: In addition to the PERMAFOAM cables listed below, any other RG U cable is available with a foam polyethylene dielectric on special order.

**PERMAFOAM 72-75 OHM COAXIAL CABLE**



R.G. No.	Nom. Imp.	Attenuation 100 Ft.	Wire Size	Spool O.D. Size	Cat. No.	Net
RG 59 U	73	2.95 DB.	22 Cp.wld.	.240 500 Ft. 1000 Ft.	5035D 5035M	26.92 52.97
RG 11 U	75	1.50 DB.	14 Solid	.405 500 Ft. 1000 Ft.	5025D 5025M	63.32 124.60

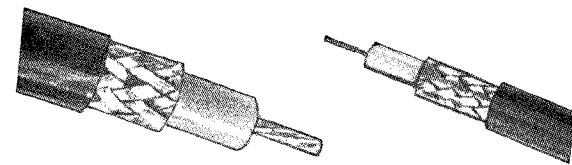
**PERMAFOAM 52-53 OHM COAXIAL CABLE**



R.G. No.	Nom. Imp.	Attenuation 100 Ft.	Wire Size	Spool O.D. Size	Cat. No.	Net
RG 58 U	53	3.10 DB.	20 Solid	.195 100 Ft. 500 Ft. 1000 Ft.	5045C 5045D 5045M	5.63 26.68 52.06
RG 8 U	52	1.50 DB.	7/21	.405 100 Ft. 500 Ft. 1000 Ft.	5015C 5015D 5015M	15.62 74.59 146.21
RG 17 U	52	.712 DB.	5 Solid	.870 100 Ft. 500 Ft. 1000 Ft.	5090C 5090D 5090M	63.74 311.21 620.39

**COLUMBIA STANDARD COAXIAL CABLES**

Premium quality standard coaxial cable. Meets all specifications. Black vinyl jacket.



R.G. No.	Nom. Imp.	Nom. Mmfd. Ft.	Wire Size	Overall Jacket	Spool Size	Cat. No.	Net
RG 59 U	73.0	21.0	22 C Weld	Black Vinyl .240 O.D.	100 Ft. 500 Ft. 1000 Ft.	1104C 1104D 1104M	5.48 26.06 51.27
RG 8 U	52.0	29.5	7/21	Black Vinyl .405 O.D.	100 Ft. 500 Ft. 1000 Ft.	1154C 1154D 1154M	13.76 67.21 132.36
RG 11 U	75.0	20.5	7/26	Black Vinyl .405 O.D.	100 Ft. 500 Ft. 1000 Ft.	1160C 1160D 1160M	13.26 63.31 124.61
RG 58 U	53.5	28.5	20 Ga.	Black Vinyl .195 O.D.	100 Ft. 500 Ft. 1000 Ft.	1166C 1166D 1166M	5.35 25.18 49.45
RG 58 A/U	50.0	29.0	19/.0068	Black Vinyl .159 O.D.	100 Ft. 500 Ft. 1000 Ft.	1178C 1178D 1178M	5.85 27.94 54.94

Long Lengths of Any Co-ax Available Upon Request

WRITE TO YOUR LOCAL PARTS DISTRIBUTOR FOR COMPLETELY ILLUSTRATED COLUMBIA WIRE & SUPPLY CO. CATALOG



**FLEXFOAM ULTRA LOW CAPACITANCE MICROPHONE CABLES — EXCLUSIVE WITH COLUMBIA**

Another Columbia first is a complete line of microphone cables with capacity as much as 35% lower than the best regular microphone cables available today. This drastic lowering of capacity has been made possible by the use of foamed polyethylene as the inner dielectric instead of solid polyethylene as normally used. This low capacitance means that lengths of microphone cable can be increased as much as 50%. These cables are also ideal for Hi-Fi and high quality sound work because of the extremely low attenuation, particularly at the higher audio-frequencies. The use of a special flexible vinyl as an outer jacket provides flexibility practically as good as rubber yet has much greater abrasion resistance. Color—Grey.

Also available in high gloss gleaming white jackets.

**FLEXFOAM MIKE CABLE WITH BRAIDED SHIELD**

	Per Ft.	250 Ft. Spool		500 Ft. Spool	
		No.	Net	No.	Net
Crystal Size (.190" O.D.)	16 MMF	No. 1399T	11.90	1399D	23.18
Lapel Size (.140" O.D.)	19 MMF	No. 1379T	9.02	1379D	17.57

**FLEXFOAM MIKE CABLE WITH SPIRAL SHIELD**

	Per Ft.	250 Ft. Spool		500 Ft. Spool	
		No.	Net	No.	Net
Crystal Size (.190" O.D.)	16 MMF	No. 1389T	11.07	1389D	21.54
Lapel Size (.140" O.D.)	19 MMF	No. 1369T	8.29	1369D	16.12
Miniature (.085" O.D.)	35 MMF	No. 1359T	6.11	1359D	11.72

**TWO CONDUCTOR PLASTIC MICROPHONE CABLE — .230 O.D. T/C BRAID SHIELD**

	250 Ft. Spool	22 Ga.	16/34 Stranding	1322T	Net
	500 Ft. Spool	22 Ga.	16/34 Stranding	1322D	36.83
Nominal Capacitance 30 MMF Per Ft. Between 1 Cond. and Remaining Cond. Connected to Shield					

**ECONOMY SPIRAL SHIELDED MICROPHONE CABLES**

Plastic insulated with wrapped concentric spiral shield for more effective shielding. Cables are more flexible and of smaller size.

**CRYSTAL MICROPHONE CABLE .160 O.D.**

CAT. NO.		25 Ga. 7 x 33 Str.		Net
1314T	250 Ft. Spool	Nominal Cap.	25 MMF Per Ft.	9.92
1314D	500 Ft. Spool	Nominal Cap.	25 MMF Per Ft.	19.36

**LAPEL MICROPHONE CABLE .125 O.D.**

CAT. NO.		25 Ga. 7 x 33 Str.		Net
1366T	250 Ft. Spool	Nominal Cap.	33 MMF Per Ft.	7.31
1366M	250 Ft. Spool	Nominal Cap.	33 MMF Per Ft.	29.59

**HEAVY DUTY MICROPHONE CABLE**

Heavy duty studio type plastic insulated microphone cable that will withstand abrasion and rough usage.

**18 Ga. Str. 41 x 34 Tinned Copper Conductors.**  
Jute Fillers T/C Shield  
.295 O.D.

	CAT. NO.	Net
100 Ft. Spool	Color—Black 3302C	10.77
500 Ft. Spool	Color—Black 3302D	51.43

Nominal Capacitance 75 MMF. Per Ft.

Also available with bright red jackets for easy identification.

**H'VY GAUGE JUKE BOX-H.F. SPKR CABLE**

FOR LONG RUNS—LESS LOSS

This cable is similar to the 24 ga. juke box speaker cable listed in our general catalog, except that the 21 ga. conductors in this cable reduce the line loss to exactly half. Ridge in insulation over one conductor plus one tinned and one bare conductor provide double indication of polarity.

COLORS: Clear, Grey, Brown, White, Clear Gold



.180" x .090"

2 COND. 21 GA. STR. 10/31

	Net
No. 1360C ..... 100 Ft. Spool	1.64
No. 1360D ..... 500 Ft. Spool	7.40
No. 1360M ..... 1000 Ft. Spool	14.27

**COLUMBIA SUPER-FLEX**

ULTRA FLEXIBLE FOAM COAXIAL CABLES

We believe Super-Flex Coaxial Cables are the finest available today — not only because of their appearance and flexibility, but because they actually out-perform any similar type of coaxial cable in use today. Cables feature High Glass Non Contaminating Jackets and have a primary insulation of foam Polyethylene to reduce attenuation as much as 25% over regular types of coaxial cables. In addition to the above features Super-Flex Coaxial Cables will not become rigid in severe cold. Can be used with standard connectors. Ideal for citizens band and amateur use. Perfect for master television systems due to the wide range of colors available. Standard stock colors are: Black-White-Silver or Beige. Other colors to special order with a minimum of 5000 ft. of a color.



**SUPER-FLEX RG 8/U 52 OHM IMPEDANCE**

19/.020 Conductor. Insulation Foam Poly Dielectric

Cat. No.	100 Ft.	500 Ft.	1000 Ft.	RG 8/U Super-Flex	.405 O.D.	Net
1198C	100 Ft.			RG 8/U Super-Flex	.405 O.D.	15.95
1198D		500 Ft.		RG 8/U Super-Flex	.405 O.D.	76.22
1198M			1000 Ft.	RG 8/U Super-Flex	.405 O.D.	151.13

Cap. 22.1 MMFD Per Ft.

Attenuation 1.50 DB Per 100 Ft. at 100 MC.

**SUPER-FLEX RG 58 A/U 50 OHM IMPEDANCE**

19/.0068 Conductor. Insulation Foam Poly Dielectric

Cat. No.	100 Ft.	500 Ft.	1000 Ft.	RG 58 A/U Super-Flex	.195 O.D.	Net
1188C	100 Ft.			RG 58 A/U Super-Flex	.195 O.D.	6.47
1188D		500 Ft.		RG 58 A/U Super-Flex	.195 O.D.	29.63
1188M			1000 Ft.	RG 58 A/U Super-Flex	.195 O.D.	58.12

Cap. 22.9 MMFD Per Ft.

Attenuation 4.25 DB Per 100 Ft. at 100 MC.

**SUPER-FLEX RG 59/U 73 OHM IMPEDANCE**

22 Solid Copperweld Conductor. Insulation Foam Poly Dielectric

Cat. No.	100 Ft.	500 Ft.	1000 Ft.	RG 59/U Super-Flex	.242 O.D.	Net
1135C	100 Ft.			RG 59/U Super-Flex	.242 O.D.	6.23
1135D		500 Ft.		RG 59/U Super-Flex	.242 O.D.	28.52
1135M			1000 Ft.	RG 59/U Super-Flex	.242 O.D.	56.12

Cap. 16.6 MMFD Ft.

Attenuation 2.95 DB Per 100 Ft. at 100 MC

Super-Flex RG 59/U is also available with a 7/31 stranded conductor to provide still more flexibility. Center conductor can be used only with Pin Type Fittings such as used to plug into wall plates for Master Television Systems.

WRITE TO YOUR LOCAL PARTS DISTRIBUTOR FOR COMPLETELY ILLUSTRATED COLUMBIA WIRE & SUPPLY CO. CATALOG



SECTION 6000

CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

See Following Pages for Specifications

CHICAGO, ILLINOIS



PRICE LIST

No.	Unit Pkg. or Length	Net Price Each												
637	100'	1.25	921	25'	.38	1456	15'	1.50	1475	100'	11.17	4072	25'	.72
637	500'	5.60	921	100'	1.42	1456	25'	2.55	1475	250'	9.27	4072	50'	1.35
637	1000'	10.00	921	500'	7.00	1456	50'	4.88	1475	500'	106.50	4072	100'	2.70
642	100'	1.50	921	1000'	13.85	1456	100'	9.45	1475	1000'	105.00	4072	250'	23.63M'
642	500'	6.35	931	25'	.51	1456	250'	93.00M'	1476	100'	15.75	4072	500'	23.25M'
642	1000'	11.00	931	100'	1.60	1456	500'	90.00M'	1476	250'	37.50	4072	1000'	23.25M'
647	100'	1.85	931	500'	7.85	1456	1000'	90.00M'	1476	500'	144.00	4074	25'	1.65
647	500'	8.50	931	1000'	15.45	1457	9'	.50	1476	1000'	142.50	4074	50'	3.15
647	1000'	15.75	1001	10'	.35	1457	10'	.60	1477	100'	18.75	4074	100'	5.75
667	100'	1.35	1001	100'	1.88	1457	25'	1.08	1477	250'	45.00	4074	250'	55.00M'
667	500'	6.35	1001	250'	4.50	1457	50'	2.10	1477	500'	168.75	4074	500'	54.00M'
667	1000'	12.00	1001	500'	8.50	1457	100'	3.82M'	1477	1000'	168.75	4074	1000'	53.00M'
672	100'	1.65	1001	1000'	16.50	1457	250'	36.50M'	1481	100'	3.00	4077	25'	.60
672	500'	7.80	1006	10'	.50	1457	500'	35.25M'	1481	250'	27.00	4077	50'	1.20
672	1000'	13.75	1006	100'	3.30	1457	1000'	35.25M'	1481	500'	25.50	4077	100'	2.32
677	100'	2.10	1006	250'	7.85	1458	8'	.60	1481	1000'	25.50	4077	250'	18.00M'
677	500'	9.35	1006	500'	15.35	1458	15'	.98	1482	100'	3.22	4077	500'	17.90M'
677	1000'	16.75	1006	1000'	30.35	1458	25'	1.50	1482	250'	30.00	4077	1000'	17.50M'
707	100'	.70	1386	50'	1.35	1458	50'	2.85	1482	500'	28.50	4079	25'	1.75
707	500'	3.00	1386	100'	2.63	1458	100'	5.15	1482	1000'	28.50	4079	50'	2.45
707	1000'	4.65	1386	250'	5.40	1458	250'	51.75M'	1483	100'	4.50	4079	100'	4.50
717	100'	.90	1386	500'	10.50	1458	500'	50.25M'	1483	250'	42.00	4079	250'	43.50M'
717	500'	4.15	1386	1000'	20.25	1459	25'	1.35	1483	500'	40.50	4079	500'	42.75M'
717	1000'	7.65	1387	50'	1.42	1459	50'	2.55	1483	1000'	40.50	4079	1000'	42.00M'
727	100'	1.20	1387	100'	2.70	1459	100'	4.95	1484	100'	5.48	4087	100'	6.65
727	500'	5.70	1387	250'	6.78	1459	250'	47.50M'	1484	250'	52.88	4087	250'	64.25M'
727	1000'	10.25	1387	500'	12.38	1459	500'	46.00M'	1484	500'	51.38	4092	100'	5.75
737	100'	.80	1387	1000'	24.00	1459	1000'	46.00M'	1484	1000'	51.38	4092	250'	54.35M'
737	500'	3.90	1388	50'	1.50	1460	15'	1.20	1485	100'	6.75	4202	25'	1.20
737	1000'	7.15	1388	100'	2.85	1460	25'	1.88	1485	250'	65.63	4202	50'	2.25
747	100'	1.05	1388	250'	6.75	1460	50'	3.52	1485	500'	64.78	4202	100'	4.45
747	500'	4.95	1388	500'	13.13	1460	100'	6.60	1485	1000'	64.78	4202	250'	40.25M'
747	1000'	9.30	1388	1000'	25.50	1460	250'	63.75M'	1486	100'	8.25	4207	25'	1.50
757	100'	1.45	1389	50'	1.57	1460	500'	61.75M'	1486	250'	80.10	4207	50'	2.55
757	500'	6.90	1389	100'	2.92	1460	1000'	61.75M'	1486	500'	78.60	4207	100'	4.90
757	1000'	13.00	1389	250'	7.12	1461	10'	.43	1486	1000'	78.60	4207	250'	44.50M'
801	25'	.30	1389	500'	13.87	1461	15'	.57	1487	100'	9.98	4212	25'	2.15
801	100'	.90	1389	1000'	27.37	1461	25'	.90	1487	250'	96.75	4212	50'	3.45
801	500'	4.15	1390	50'	1.62	1461	50'	1.50	1487	500'	95.25	4212	100'	7.70
801	1000'	7.85	1390	100'	3.07	1461	100'	2.85	1487	1000'	95.25	4212	250'	72.50M'
811	25'	.35	1390	250'	7.27	1461	250'	27.75M'	1488	100'	11.55	4214	25'	3.75
811	100'	1.05	1390	500'	14.25	1461	500'	25.50M'	1488	250'	110.25	4214	50'	7.00
811	500'	4.85	1390	1000'	27.10	1462	15'	1.28	1488	500'	105.75	4214	100'	13.50
811	1000'	9.00	1391	50'	1.87	1462	25'	2.10	1488	1000'	105.75	4214	250'	127.50M'
821	25'	.35	1391	100'	3.52	1462	50'	3.90	1489	100'	12.91	4217	25'	1.80
821	100'	1.05	1391	250'	9.00	1462	100'	7.50	1489	250'	125.55	4217	50'	3.30
821	500'	4.85	1391	500'	17.62	1462	250'	75.00M'	1489	500'	124.05	4217	100'	6.30
821	1000'	9.00	1391	1000'	34.50	1462	500'	68.25M'	1489	1000'	124.05	4217	250'	58.50M'
831	25'	.43	1392	50'	2.48	1462	1000'	68.25M'	1490	100'	14.78	4222	25'	2.70
831	100'	1.20	1392	100'	4.80	1463	15'	1.50	1490	250'	144.00	4222	50'	4.50
831	500'	6.00	1392	250'	12.00	1463	25'	2.40	1490	500'	142.50	4222	100'	9.65
831	1000'	11.75	1392	500'	23.60	1463	50'	3.65	1490	1000'	142.50	4222	250'	92.25M'
841	25'	.46	1392	1000'	46.85	1463	100'	8.70	1494	100'	16.88	4224	25'	4.20
841	100'	1.65	1393	50'	3.22	1463	250'	21.00	1494	250'	165.00	4224	50'	8.25
841	500'	7.50	1393	100'	6.35	1463	500'	84.00M'	1494	500'	163.50	4224	100'	16.20
841	1000'	14.00	1393	250'	14.50	1463	1000'	84.00M'	1494	1000'	163.50	4224	250'	150.00M'
846	25'	.51	1393	500'	28.50	1464	15'	1.72	1495	100'	17.48	4227	25'	2.45
846	100'	1.70	1393	1000'	56.25	1464	25'	2.85	1495	250'	171.00	4227	50'	4.45
846	500'	7.85	1394	50'	4.85	1464	50'	5.25	1495	500'	169.50	4227	100'	8.35
846	1000'	15.00	1394	100'	9.35	1464	100'	10.00	1495	1000'	169.50	4227	250'	79.25M'
851	25'	.42	1394	250'	24.00	1464	250'	24.25	1501	100'	21.00	4232	25'	3.20
851	100'	1.50	1394	500'	47.25	1464	500'	97.50M'	1501	250'	190.50	4232	50'	6.00
851	500'	6.60	1394	1000'	93.00	1464	1000'	97.50M'	1501	500'	189.00	4232	100'	11.50
851	1000'	12.35	1395	50'	5.55	1465	15'	2.03	1501	1000'	189.00	4232	250'	110.50M'
856	25'	.50	1395	100'	10.80	1465	25'	3.38	1502	100'	22.13	4234	25'	4.72
856	100'	1.85	1395	250'	27.00	1465	50'	6.30	1502	250'	211.50	4234	50'	9.00
856	500'	7.65	1395	500'	53.60	1465	100'	12.30	1502	500'	210.00	4234	100'	16.95
856	1000'	14.50	1395	1000'	106.50	1465	250'	30.00	1502	1000'	210.00	4234	250'	165.00M'
861	25'	.60	1396	50'	12.35	1465	500'	120.00M'	1466	15'	2.55	4237	25'	3.00
861	100'	2.15	1396	100'	24.30	1466	1000'	120.00M'	1466	25'	4.13	4237	50'	5.40
861	500'	9.90	1396	250'	60.00	1466	15'	2.55	1466	50'	7.72	4237	100'	10.30
861	1000'	19.00	1396	500'	119.25	1466	25'	4.13	1466	100'	15.50	4237	250'	98.55M'
866	25'	.55	1396	1000'	237.00	1466	50'	7.72	1466	250'	37.50	4242	25'	3.97
866	100'	1.90	1397	50'	7.95	1466	100'	15.50	1466	500'	150.00M'	4242	50'	7.50
866	500'	7.65	1397	100'	15.75	1466	250'	37.50	1466	1000'	150.00M'	4242	100'	14.00
866	1000'	14.50	1397	250'	39.00	1466	500'	150.00M'	1466	1000'	150.00M'	4242	250'	135.95M'
871	25'	.61	1397	500'	77.25	1467	15'	2.78	1467	15'	2.78	4244	25'	5.75
871	100'	2.20	1397	1000'	153.75	1467	25'	4.58	1467	25'	4.58	4244	50'	10.80
871	500'	8.70	1398	50'	12.25	1467	50'	8.48	1467	50'	8.48	4244	100'	20.70
871	1000'	16.85	1398	100'	26.25	1467	100'	16.50	1467	100'	16.50	4244	250'	202.50M'
876	25'	.70	1398	250'	65.25	1467	250'	40.00	1467	250'	40.00	4247	25'	3.90
876	100'	2.55	1398	500'	127.50	1467	500'	160.50M'	1467	500'	160.50M'	4247	50'	7.45
876	500'	10.55	1399	1000'	247.50	1467	1000'	160.50M'	1467	1000'	160.50M'	4247	100'	13.95
876	1000'	20.50	1399	50'	14.60	1471	100'	4.13	1471	100'	4.13	4247	250'	135.00M'
881	100'	3.20	1399	100'	28.85	1471	250'	9.00	1471	250'	9.00	4252	25'	5.85
881	500'	15.00	1399	250'	71.60	1471	500'	35.25	1471	500'	35.25	4252	50'	11.30
881	1000'	29.75	1399	500'	142.50	1471	1000'	33.75	1471	1000'	33.75	4252	100'	21.60
901	25'	.33	1399	1000'	281.25	1472	100'	4.13	1472	100'	4.13	4252	250'	211.90M'





SECTION 6000

CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

SEND FOR COMPLETE CATALOG

CHICAGO, ILLINOIS

RG TYPE COAXIAL CABLES



Non-Contaminating Low Temp. Black Jacket		Vinyl & Poly. Jackets		Armor O.D.	Jacket O.D.	Vinyl Jacket	Shields		Dielectric O.D.	Center Conductor	V.P. %	Cap. Mmfd. /Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms
Number RG-/U	Cat. Number	No. RG/U	Cat. No.				Outer	Inner						
		5	4431		.332	Black	C	C	.185	16	65.9	28.5	3000	52.5
5B	4432				.332	Black	S	S	.185	.053S	65.9	29.5	3000	50
6A	4433				.332	Black	C	S	.185	21CW	65.9	20.	2700	75
		7	4434		.370	Black	-	C	.250**	19	84	12.5	1000	97
		8	4415		.405	Black	-	C	.285	7/21	65.9	29.5	4000	52
8A	4435				.405	Black	-	C	.285	7/.0296	65.9	30.5	4000	52
		9	4436		.420	Grey	C	S	.280	7/21S	65.9	30	4000	51
9A	4437				.420	Grey	S	S	.280	7/21S	65.9	30	4000	51
9B	4438				.425	Black	S	S	.285	7/.0296S	65.9	30.5	4000	50
10A	4439			.475	.405	Black	-	C	.285	7/.0296	65.9	30.5	4000	50
		11	4419		.405	Black	-	C	.285	7/26T	65.9	20.5	4000	75
11A	4440				.405	Black	-	C	.285	7/26T	65.9	20.5	4000	75
12A	4441			.475	.405	Black	-	C	.285	7/26T	65.9	20.5	4000	75
		13	4442		.425	Black	C	C	.285	7/26T	65.9	20.5	4000	75
13A	4443				.425	Black	C	C	.285	7/26T	65.9	20.5	4000	75
14A	4467				.545	Grey	C	C	.370	10	65.9	29.5	5500	52
14A	4468				.545	Black	C	C	.370	.106	65.9	30	5500	52
17A	4482				.870	Black	-	C	.680	.188C	65.9	29.5	11000	52
18A	4483			.945	.870	Black	-	C	.680	.188C	65.9	29.5	11000	52
		21	4444		.322	Grey	S	S	.185	16N	65.9	29	2700	53
21A	4445				.332	Black	S	S	.185	.053N	65.9	30	2700	50
		22	4471		.405	Black	-	T	.285	Two 7/.0152	65.9	16	1000	95
22B	4475				.420	Black	T	T	.285	Two 7/.0152	65.9	16	1000	95
		29	4446		.184	Poly	-	T	.116	20	65.9	28.5	1900	53.5
		54A	4469		.250	Poly	-	T	.178	7/.0152	65.9	26.5	3000	58
		55	4447		.206	Poly	T	T	.116	20	65.9	28.5	1900	53.5
55A	4448				.216	Black	S	S	.116	.035S	65.9	29.5	1900	50
55B	4484				.206	Black	T	T	.116	20S	65.9	28.5	1900	53.5
		58	4405		.195	Black	-	T	.116	20	65.9	28.5	1900	53.5
58A	4449				.195	Black	-	T	.116	19/.0071T	65.9	29.5	1900	50
58B	4474				.195	Black	-	T	.116	20	65.9	28.5	1900	53.5
58C	4450				.195	Black	-	T	.116	19/.0071T	65.9	29.5	1900	50
		59	4401		.242	Black	-	C	.146	22CW	65.9	21	2300	73
		59	4402		.242	Grey	-	C	.146	22CW	65.9	21	2300	73
59A	4451				.242	Black	-	C	.146	.023CW	65.9	20.5	2300	75
59B	4470				.242	Black	-	C	.146	.023CW	65.9	20.5	2300	75
		62	4452		.242	Black	-	C	.146**	22CW	84	13.5	750	93
62A	4453				.242	Black	-	C	.146**	22CW	84	13.5	750	93
62B	4472				.242	Black	-	C	.146	22CW	84	13.5	750	93
		63	4454		.405	Black	-	C	.285**	22CW	84	10	1000	125
63B	4455				.405	Black	-	C	.285**	22CW	84	10	1000	125
65A	4473				.405	Black	-	C	.340	32F	65	44	3000	950
		71	4456		.250	Poly	T	T or C	.146**	22CW	84	13.5	750	93
71A	4466				.245	Black	T	T or C	.146**	22CW	84	13.5	750	93
71B	4485				.250	Black	T	C	.146	22CW	84	13.5	750	93
74A	4486			.615	.545	Black	C	C	.370	10C	65.9	29.5	7000	52
79B	4487			.475	.405	Black	-	C	.285	22CW	84	10	1000	125
		108	4464		.235	Black	-	T	.079 ea.	Two 7/28T	68	23.5	1000	78
108A	4465				.235	Black	-	T	.079 ea.	Two .7/28T	65.9	23.5	1000	78
122	4457				.160	Black	-	T	.096	27/36T	65.9	29.5	1900	50
212	4488				.332	Black	S	S	.185	.0556S	65.9	29.5	3000	50
213	4489				.405	Black	-	C	.285	7X.0296C	65.9	29.5	5000	50
214	4490				.425	Black	S	S	.285	7X.0296C	65.9	29.5	5000	50
215	4497				.475	Black	-	C	.285	7/.029C	65.9	29.5	4000	50
216	4491				.425	Black	C	C	.285	7X26TC	65.9	20.5	5000	75
217	4492				.545	Black	C	C	.370	.106C	65.9	29.5	7000	50
218	4493				.870	Black	-	C	.680	.195C	65.9	29.5	11000	50
219	4494			.945	.870	Black	-	C	.680	.195C	65.9	29.5	11000	50
222	4495				.332	Black	S	S	.185	.0556N	65.9	29.0	2700	50
223	4496				.216	Black	S	S	.116	.035S	65.9	29.5	1900	50

\*\*Semi-Solid Dielectric N-Nichrome C-Cooper S-Silvered Copper CW-Copperweld T-Tinned Cooper F-Formvar

## CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

SEND FOR COMPLETE CATALOG

CHICAGO, ILLINOIS



## RG TYPE COAXIAL CABLES



## MINIATURE COAXIAL CABLE

Number RG/U	Cat. Number	Vinyl & Poly. Jackets		Armor O. D.	Jacket O. D.	Vinyl Jacket	Shields		Dielectric O. D.	Center Conductor	V. P. %	Cap. Mmfd. /Ft.	Max. Oper. Volts Rms.	Nom. Imp. Ohms
		Cat. No.	No. RG/U				Outer	Inner						
		4459	174		.105	Black	—	—	.060**	7/.0063CW		30		50

\*\*Semi-Solid Dielectric N—Nichrome C—Copper S—Silvered Copper CW—Copperweld T—Tinned Copper F—Formvar

## FOAM POLYETHYLENE COAXIAL CABLE

		8	4477		.405	Black	—	C	.285	7/19C	80	24.5	1500	50
11	4476				.405	Black	—	C	.285	14C	80	16.5	3000	75
		58	4498		.195	Black	—	T	.116	20C	80	28.5	1900	53.5
		59	4478		.195	Black	—	C	.107	22CW	80	17	500	72
62	4479				.242	Black	—	C	.146	.023CW	80	14.5	700	93
11	4480				.406	Black	C	C	.285	14C	80	16.5	3000	75
59	4481				.242	Black	C	C	.107	.107	80	17	500	72

\*\*Semi-Solid Dielectric N—Nichrome C—Copper S—Silvered Copper CW—Copperweld T—Tinned Copper F—Formvar

## TRIAxIAL CABLE DOUBLE SHIELD DOUBLE JACKET

RG/U Type	Cat. No.	Impedance in Ohms	Jacket Diameter	Vinyl Jacket	Shields		O. D. Dielectric	Inner Conductor	V. P. %	Cap. MMFD./Ft.	Max. Oper. Volts-RMS
					1st	2nd					
Triaxial 58A	4463	50	.285	Black	T	T	.116	19 .0071T	65.9	28.5	1,900
Triaxial 59	4460	73	.242	Black	C	C	.146	22CW	65.9	21.0	2,300
Triaxial 11	4461	75	.460	Black	C	C	.285	7 26T	65.9	20.5	4,000
Triaxial 8	4462	52	.490	Black	C	C	.285	7 21C	65.9	29.5	4,000

\*\*Semi-Solid Dielectric N—Nichrome C—Copper S—Silvered Copper CW—Copperweld T—Tinned Copper F—Formvar

## TEFLON COAXIAL CABLE

Number RG/U	Cat. Number	Inner Conductor	Dielectric Material	Nominal Diameter of Dielectric (inch)	Type of Shielding Braids	Protective Covering	Nominal Over-all Diameter (inch)	Nominal Capacitance (mmfd./ft.)	Maximum Operating Voltage (Volts rms)	Nominal Impedance (Ohms)
87A	4701	7/.032 Silver Covered Copper	F-1	.280	Silver Coated Copper Double Braid	V	.425	29.5	5000	50
94	4702	19/.0225 Silver Covered Copper	F-2	.292	Copper Double Braid	V	.445	29.0	7000	50
94A	4703	19/.0254 Silver Plated Copper	F-2	.370	Copper Double Braid	V	.500	27.0	7000	50
115	4704	7/.028 Silver Covered Copper	F-2	.250	Silver Coated Copper Double Braid	V	.375	29.5	5000	50
115A	4705	7/.028 Silver Covered Copper	F-2	.255	Silver Coated Copper Double Braid	V	.415	29.5	4000	50
116	4706	7/.032 Silver Covered Copper	F-1	.280	Silver Coated Copper Double Braid	V with armor	.490	29.5	5000	50
117	4707	.188 Copper	F-1	.620	Copper Single Braid	V	.730	29.0	7000	50
117A	4708	.188 Copper	F-1	.620	Copper Single Braid	V	.730	—	7000	50
118	4709	.188 Copper	F-1	.620	Copper Single Braid	V with armor	.795	29.0	7000	50
118A	4710	.188 Copper	F-1	.620	Copper Single Braid	V with armor	.780	—	7000	50
119	4711	.102 Copper	F-1	.332	Copper Double Braid	V	.465	29.0	6000	50
120	4712	.102 Copper	F-1	.332	Copper Double Braid	V with armor	.525	29.0	6000	50
126	4713	7/.0203 Karma or Equal	F-1	.185	Karma or Equal Single Braid	V	.280	29.0	3000	50
140	4714	.025 Silver Coated Copper Steel	F-1	.146	Silver Coated Copper Single Braid	V	.233	21.0	2300	75
141	4715	.0359 Silver Plated Copper Weld	F-1	.116	Silver Coated Copper Single Braid	V	.190	28.5	1900	50
141A	4716	.039 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Single Braid	V	.190	28.5	1900	50
142	4717	.0359 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Double Braid	V	.206	28.5	1900	50
142A	4718	.039 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Double Braid	V	.206	28.5	1900	50

Continued on following page

F-1—Solid Teflon F-2—Taped Teflon F-3—Air Spaced Teflon  
 V—High Temperature Lacquer Impregnated Fiberglass Braid with Teflon Tape Between Shield and Jacket  
 VI—Polyester Fiber Impregnated with High Temperature Lacquer over Wrapped or Extruded Silicone Impregnated Fiberglass  
 IIA—Low Temperature Black Polyvinylchloride Non-Contaminating  
 FEP—Fluorinated Ethylene Propylene Copolymer, 200° Teflon  
 TFE—Tetrafluoride Ethylene Propylene Copolymer, 250°C Teflon



SECTION 6000

CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

SEND FOR COMPLETE CATALOG

CHICAGO, ILLINOIS

TEFLON COAXIAL CABLE



Number RG/U	Cat. Number	Inner Conductor	Dielectric Material	Nominal Diameter of Dielectric (inch)	Type of Shielding Braids	Protective Covering	Nominal Over-all Diameter (inch)	Nominal Capacitance (mmfd./ft.)	Maximum Operating Voltage (Volts rms)	Nominal Impedance (Ohms)
142B	4719	.039 Silver Covered Copper Steel	F-1	.116	Silver Coated Copper Double Braid	FEP	.195	28.5	1900	50
143	4720	.057 Silver Plated Copper Weld	F-1	.185	Silver Coated Copper Double Braid	V	.325	28.5	3000	50
143A	4721	.059 Silver Covered Copper Steel	F-1	.185	Silver Coated Copper Double Braid	V	.325	28.5	3000	50
144	4722	7/.0179 Silver Covered Copper Steel	F-1	.285	Silver Coated Copper Single Braid	V	.410	20.5	5000	75
146	4723	.007 Copper Covered Steel	F-3	.285	Copper Single Braid	V	.375	6.0	1000	190
161	4724	7/38 Silver Plated Cadmium Bronze	F-1	.057	Single Silver Copper	Extruded Black Nylon	.090	20.0	1000	70
165	4725	7/.032 Silver Covered Copper	F-1	.285	Silver Covered Copper Single Braid	V	.410	--	5000	50
166	4726	7/.032 Silver Covered Copper	F-1	.285	Silver Covered Copper Single Braid	V with armor	.460	--	5000	50
178	4727	7/.0039 Silver Plated Copper Weld	F-1	.036	Silver Plated Copper Single Braid	KEL-F	.079	27.9	1000	50
178A	4728	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Plated Copper Single Braid	KEL-F	.075	27.9	1000	50
178B	4729	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Covered Copper Single Braid	FEP	.075	--	1000	50
179A	4730	7/.004 Silver Covered Copper Steel	F-1	.063	Silver Plated Copper Single Braid	KEL-F	.105	20.0	1200	75
179B	4731	7/.004 Silver Covered Copper Steel	F-1	.063	Silver Covered Copper Single Braid	FEP	.105	--	1200	75
180	4732	7/.0039 Silver Plated Copper Weld	F-1	.103	Silver Plated Copper Single Braid	KEL-F	.141	15.3	1500	93
180A	4733	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Plated Copper Single Braid	KEL-F	.145	14.5	1500	95
180B	4734	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Covered Copper Single Braid	FEP	.145	--	1500	95
187	4735	7/.004 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	Teflon	.110	--	1200	75
187A	4736	7/.004 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	TFE	.110	--	1200	75
188	4737	7/.0067 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	Teflon	.110	--	1200	50
188A	4738	7/.0067 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	TFE	.110	--	1200	50
195	4739	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Covered Copper Single Braid	Teflon	.155	--	1500	95
195A	4740	7/.004 Silver Covered Copper Steel	F-1	.102	Silver Covered Copper Single Braid	TFE	.155	--	1500	95
196	4741	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Covered Copper Single Braid	Teflon	.080	--	1000	50
196A	4742	7/.004 Silver Covered Copper Steel	F-1	.034	Silver Covered Copper Single Braid	TFE	.080	--	1000	50
209	4743	19/.037 Silver Covered Copper	F-3	.500	Silver Covered Copper Double Braid	VI	.750	--	3200	50
210	4744	.0253 Silver Covered Copper Steel	F-3	.146	Silver Covered Copper Single Braid	V	.242	14.5	750	93
211	4745	.190 Copper	F-1	.620	Copper Single Braid	V	.730	--	7000	50
211A	4746	.190 Copper	F-1	.620	Copper Single Braid	V	.730	--	7000	50
225	4747	7/.0312 Silver Covered Copper	F-1	.285	Silver Covered Copper Double Braid	V	.430	--	5000	50
226	4748	19/.0254 Silver Covered Copper	F-2	.370	Copper Double Braid	V	.500	--	7000	50
227	4749	7/.0312 Silver Covered Copper	F-1	.285	Silver Covered Copper Double Braid	V with armor	.490	--	5000	50
228	4750	.190 Copper	F-1	.620	Copper Single Braid	V with armor	.795	--	7000	50
228A	4751	.190 Copper	F-1	.620	Copper Single Braid	V with armor	.795	--	7000	50
235	4752	7/.028 Copper	F-2	.255	Silver Covered Copper Double Braid	VI	.490	--	5000	50
280	4753	.1144 Copper	F-2	.327	Silver Covered Copper Double Braid	IIA	.480	27.5	4000	50
281	4754	19/.0378 Silver Covered Copper	F-2	.500	Silver Covered Copper Double Braid	VI	.750	29.5	4000	50
301	4755	7/.0203 Karma	F-1	.185	Karma Single Braid	FEP	.245	29.0	3000	50
302	4756	.025 Silver Covered Copper Steel	F-1	.146	Silver Covered Copper Single Braid	FEP	.206	21.0	2300	75
303	4757	.039 Silver Covered Copper Steel	F-1	.116	Silver Covered Copper Single Braid	FEP	.170	28.5	1900	50
304	4758	.059 Silver Covered Copper Steel	F-1	.185	Silver Covered Copper Double Braid	FEP	.280	28.5	3000	50
316	4759	7/.0067 Silver Covered Copper Steel	F-1	.060	Silver Covered Copper Single Braid	FEP	.102	--	1200	50

F-1—Solid Teflon      F-2—Taped Teflon      F-3—Air Spaced Teflon  
 V—High Temperature Lacquer Impregnated Fiberglass Braid with Teflon Tape Between Shield and Jacket  
 VI—Polyester Fiber Impregnated with High Temperature Lacquer over Wrapped or Extruded Silicone Impregnated Fiberglass  
 IIA—Low Temperature Black Polyvinylchloride Non-Contaminating  
 FEP—Flourinated Ethylene Propylene Copolymer, 200° Teflon  
 TFE—Tetrafluoride Ethylene Propylene Copolymer, 250°C Teflon

# CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

SEND FOR COMPLETE CATALOG

CHICAGO, ILLINOIS



## MIL-W-76

### TYPE MW-VINYL — 1000V — 80C



Tinned copper, vinyl insulated, medium wall. The polyvinylchloride insulation is flame and ozone resistant and is inert to most chemicals, oils, and solvents.

#### STRANDED CONDUCTOR

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9001	MW-C-24-(7)-U	24(7x32)	.017	.058	As Listed	As Listed	As Listed
9002	MW-C-22-(7)-U	22(7x30)	.017	.064	As Listed	As Listed	As Listed
9003	MW-C-20-(10)-U	20(10x30)	.017	.070	As Listed	As Listed	As Listed
9004	MW-C-18-(16)-U	18(16x30)	.017	.080	As Listed	As Listed	As Listed
9005	MW-C-16-(26)-U	16(26x30)	.019	.098	As Listed	As Listed	As Listed
9006	MW-C-14-(41)-U	14(41x30)	.020	.111	As Listed	As Listed	As Listed
9007	MW-C-12-(65)-U	12(65x30)	.020	.130	As Listed	As Listed	As Listed

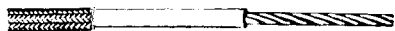
#### Stock Colors\*

0 Black	92 White/Red
1 Brown	93 White/Orange
2 Red	94 White/Yellow
3 Orange	95 White/Green
4 Yellow	96 White/Blue
5 Green	97 White/Violet
6 Dark Blue	98 White/Gray
7 Violet (Purple)	901 White/Black/Brown
8 Gray (Slate)	902 White/Black/Red
9 White	904 White/Black/Orange
11 Tan	908 White/Black/Yellow
12 Pink	905 White/Black/Green
13 Light Blue	906 White/Black/Blue
90 White/Black	907 White/Black/Violet
91 White/Brown	908 White/Black/Gray

#### SOLID CONDUCTOR

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	100'	500'	1000'
9010	MW-C-22-(1)-U	22 (Solid)	.017	.059	As Listed	As Listed	As Listed
9011	MW-C-20-(1)-U	20 (Solid)	.017	.066	As Listed	As Listed	As Listed
9012	MW-C-18-(1)-U	18 (Solid)	.017	.074	As Listed	As Listed	As Listed
9013	MW-C-16-(1)-U	16 (Solid)	.017	.085	As Listed	As Listed	As Listed

### TYPE MW-SHIELED — 1000V — 80C



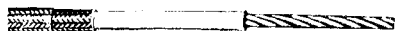
Tinned copper, polyvinylchloride insulation. Medium wall, tinned copper shield overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9014	MW-C-24-(7)-S	24(7x32)	.017	.082	As Listed	As Listed	As Listed
9015	MW-C-22-(7)-S	22(7x30)	.017	.088	As Listed	As Listed	As Listed
9016	MW-C-20-(10)-S	20(10x30)	.017	.094	As Listed	As Listed	As Listed
9017	MW-C-18-(16)-S	18(16x30)	.017	.104	As Listed	As Listed	As Listed
9018	MW-C-16-(26)-S	16(26x30)	.019	.122	As Listed	As Listed	As Listed
9019	MW-C-14-(41)-S	14(41x30)	.020	.135	0, 2, 9	0, 2, 9	0, 2, 9
9020	MW-C-12-(65)-S	12(65x30)	.020	.154	0, 2, 9	0, 2, 9	0, 2, 9

#### Stock Colors\*

0 Black	5 Green
1 Brown	6 Dark Blue
2 Red	7 Violet (Purple)
3 Orange	8 Gray (Slate)
4 Yellow	9 White

### TYPE MW-SHIELED — NYLON JACKET — 1000V — 80C



Tinned copper, polyvinylchloride insulation. Medium wall, tinned copper shield, nylon jacket.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9021	MW-C-22-(7)-SJ	22(7x30)	.017	.095	9	9	9
9022	MW-C-20-(7)-SJ	20(10x30)	.017	.101	9	9	9
9023	MW-C-18-(16)-SJ	18(16x30)	.017	.112	9	9	9
9024	MW-C-16-(19)-SJ	16(26x30)	.019	.131	9	9	9

#### Stock Color\*

9 Vinyl insulation. White only.

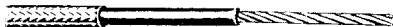
\*Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

CONSOLIDATED WIRE PAGE 6



## MIL-W-76

## TYPE MW-GLASS BRAID — 1000V — 80C



Tinned copper, polyvinylchloride insulated. Medium wall, lacquered glass braid overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9025	MW-C-22(7)-B	22(7x30)	.017	.076	As Listed	As Listed	As Listed
9026	MW-C-20(10)-B	20(10x30)	.017	.084	As Listed	As Listed	As Listed
9027	MW-C-18(16)-B	18(16x30)	.017	.094	As Listed	As Listed	As Listed
9028	MW-C-16(26)-B	16(26x30)	.019	.112	As Listed	As Listed	As Listed
9029	MW-C-14(41)-B	14(41x30)	.020	.125	9,90thru98	9,90thru98	9,90thru98
9030	MW-C-12(65)-B	12(65x30)	.020	.144	9, 90, 92	9, 90, 92	9, 90, 92

## Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	

## TYPE MW-GLASS BRAID-SHIELDED — 1000V — 80C



Tinned copper, polyvinylchloride insulated. Medium wall, lacquered glass braid, tinned copper shield overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9031	MW-C-22(7)-BS	22(7x30)	.017	.102	9	9	9
9032	MW-C-20(7)-BS	20(10x30)	.017	.108	9	9	9
9033	MW-C-18(16)-BS	18(16x30)	.017	.118	9	9	9
9034	MW-C-16(19)-BS	16(26x30)	.019	.136	9	9	9
9035	MW-C-14(19)-BS	14(41x30)	.020	.149	9	9	9
9036	MW-C-12(19)-BS	12(65x30)	.020	.168	9	9	9

## Stock Color\*

9 Vinyl insulation. White only.

## TYPE MW — NYLON JACKET — 1000V — 90C



Tinned copper, polyvinylchloride insulated. Medium wall, clear nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9037	MW-C-22(7)-J	22(7x30)	.017	.069	As Listed	As Listed	As Listed
9038	MW-C-20(10)-J	20(10x30)	.017	.075	As Listed	As Listed	As Listed
9039	MW-C-18(16)-J	18(16x30)	.017	.086	As Listed	As Listed	As Listed
9040	MW-C-16(26)-J	16(26x30)	.019	.106	As Listed	As Listed	As Listed
9041	MW-C-14(41)-J	14(41x30)	.020	.118	0, 1, 3, 4 5, 9	0, 1, 3, 4 5, 9	0, 1, 3, 4 5, 9
9042	MW-C-12(65)-J	12(65x30)	.020	.139	0, 1, 3, 4, 5, 9	0, 1, 3, 4, 5, 9	0, 1, 3, 4, 5, 9

## Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	

\*Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.



# CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

SEND FOR COMPLETE CATALOG

CHICAGO, ILLINOIS



## MIL-W-76

### TYPE HW — VINYL — Gauges 16-22 2500V, Gauges 6-14 600—80C



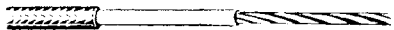
Tinned copper, polyvinylchloride insulated. Heavy wall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9100	HW-C-22(7)-U	22(7x30)	.034	.098	As Listed	As Listed	As Listed
9101	HW-C-20(10)-U	20(10x30)	.034	.104	As Listed	As Listed	As Listed
9102	HW-C-18(16)-U	18(16x30)	.034	.114	As Listed	As Listed	As Listed
9103	HW-C-16(26)-U	16(26x30)	.034	.128	0, 2, 9	0, 2, 9	0, 2, 9
9104	HW-C-14(41)-U	14(41x30)	.048	.171	0, 2, 9	0, 2, 9	0, 2, 9
9105	HW-C-12(65)-U	12(65x30)	.048	.191	0, 2, 9	0, 2, 9	0, 2, 9
9106	HW-C-10(105)-U	10(105x30)	.048	.214	0, 2, 9	0, 2, 9	0, 2, 9
9107	HW-C-8(133)-U	8(133x29)	.048	.261	0, 2, 9	0, 2, 9	0, 2, 9
9108	HW-C-6(133)-U	6(133x27)	.048	.296	0, 2, 9	0, 2, 9	0, 2, 9

#### Stock Colors\*

0 Black	5 Green
1 Brown	6 Dark Blue
2 Red	7 Violet (Purple)
3 Orange	8 Gray (Slate)
4 Yellow	9 White

### TYPE HW — GLASS BRAID — 600V — 80C



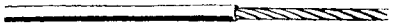
Tinned copper, polyvinylchloride insulated. Heavy wall, lacquered glass braid.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9110	HW-C-10(105)-B	10(105x30)	.048	.232	As Listed	As Listed	As Listed
9111	HW-C-8(133)-B	8(133x29)	.048	.279	As Listed	As Listed	As Listed
9112	HW-C-6(133)-B	6(133x27)	.048	.314	As Listed	As Listed	As Listed

#### Stock Colors\*

9 White
90 White/Black
92 White/Red

### TYPE LW — VINYL — 300V — 80C



Tinned copper, polyvinylchloride insulated. Light wall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9200	LW-C-30(7)-U	30(7x38)	.011	.034	0 thru 9	0 thru 9	0 thru 9
9201	LW-C-28(7)-U	26(7x36)	.011	.037	As Listed	As Listed	As Listed
9202	LW-C-26(7)-U	26(7x34)	.011	.041	As Listed	As Listed	As Listed
9203	LW-C-24(7)-U	24(7x32)	.011	.046	As Listed	As Listed	As Listed
9204	LW-C-22(7)-U	22(7x30)	.012	.054	As Listed	As Listed	As Listed
9205	LW-C-20(10)-U	20(10x30)	.012	.060	As Listed	As Listed	As Listed

#### Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	

### TYPE LW — NYLON JACKET — 300V — 90C



Tinned copper, polyvinylchloride insulated. Light wall, clear nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9210	LW-C-30(7)-J	30(7x38)	.011	.039	0 thru 9	0 thru 9	0 thru 9
9211	LW-C-28(7)-J	28(7x36)	.011	.042	As Listed	As Listed	As Listed
9212	LW-C-26(7)-J	26(7x34)	.011	.046	As Listed	As Listed	As Listed
9213	LW-C-24(7)-J	24(7x32)	.011	.051	As Listed	As Listed	As Listed
9214	LW-C-22(7)-J	22(7x30)	.012	.059	As Listed	As Listed	As Listed
9215	LW-C-20(10)-J	20(10x30)	.012	.065	As Listed	As Listed	As Listed

#### Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	

\*Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.



## MIL-W-16878

## TYPE B — VINYL — 600V — 105C



 Tinned copper, polyvinylchloride insulated.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9300	B-32	32(7x40)	.010	.029	0 thru 9	0 thru 9	0 thru 9
9301	B-30	30(7x38)	.010	.032	0 thru 9	0 thru 9	0 thru 9
9302	B-28	28(7x36)	.010	.035	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98
9303	B-26	26(7x34)	.010	.039	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98
9304	B-24	24(19x36)	.010	.045	9,90thru98	9,90thru98	9,90thru98
9305	B-24	24(7x32)	.010	.044	As Listed	As Listed	As Listed
9306	B-22	22(19x34)	.010	.051	9,90thru98	9,90thru98	9,90thru98
9307	B-22	22(7x30)	.010	.050	As Listed	As Listed	As Listed
9308	B-20	20(19x32)	.010	.059	9,90thru98	9,90thru98	9,90thru98
9309	B-20	20(7x28)	.010	.058	As Listed	As Listed	As Listed
9310	B-18	18(19x30)	.010	.069	9,90thru98	9,90thru98	9,90thru98
9311	B-18	18(7x26)	.010	.068	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98
9312	B-16	16(19x29)	.010	.077	0 thru 9 90 thru 98	0 thru 9 90 thru 98	0 thru 9 90 thru 98

## Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	
11 Tan	
12 Pink	
13 Light Blue	

## TYPE B — VINYL-NYLON JACKET — 600V — 115C


 Tinned copper, polyvinylchloride insulated, nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9313	B-32	32(7x40)	.010	.035	0 thru 9	0 thru 9	0 thru 9
9314	B-30	30(7x38)	.010	.038	0 thru 9	0 thru 9	0 thru 9
9315	B-28	28(7x36)	.010	.041	As Listed	As Listed	As Listed
9316	B-26	26(7x34)	.010	.045	As Listed	As Listed	As Listed
9317	B-24	24(19x36)	.010	.051	As Listed	As Listed	As Listed
9318	B-24	24(7x32)	.010	.050	As Listed	As Listed	As Listed
9319	B-22	22(19x34)	.010	.057	As Listed	As Listed	As Listed
9320	B-22	22(7x30)	.010	.056	As Listed	As Listed	As Listed
9321	B-20	20(19x32)	.010	.065	As Listed	As Listed	As Listed
9322	B-20	20(7x28)	.010	.064	As Listed	As Listed	As Listed
9323	B-18	18(19x30)	.010	.075	9,90thru98	9,90thru98	9,90thru98
9324	B-18	18(7x26)	.010	.074	As Listed	As Listed	As Listed
9325	B-16	16(19x29)	.010	.083	As Listed	As Listed	As Listed

## Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	

\*Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

# CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

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CHICAGO, ILLINOIS



## MIL-W-16878

### TYPE C VINYL — 1000V — 105C

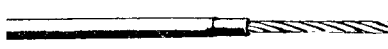

 Tinned copper, polyvinylchloride insulated.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9400	C-24	24(7x32)	.018	.060	9,90thru98	9,90thru98	9,90thru98
9401	C-22	22(7x30)	.018	.066	As Listed	As Listed	As Listed
9402	C-20	20(7x28)	.018	.074	As Listed	As Listed	As Listed
9403	C-18	18(7x26)	.018	.084	As Listed	As Listed	As Listed
9404	C-16	16(19x29)	.018	.093	9,90thru98	9,90thru98	9,90thru98
9405	C-14	14(19x27)	.018	.107	9,90thru98	9,90thru98	9,90thru98

#### Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	

### TYPE C — VINYL-NYLON JACKET — 1000V — 115C


 Tinned copper, polyvinylchloride insulated, nylon jacket overall.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9410	C-24	24(7x32)	.018	.066	9,90thru98	9,90thru98	9,90thru98
9411	C-22	22(7x30)	.018	.072	As Listed	As Listed	As Listed
9412	C-20	20(7x28)	.018	.080	As Listed	As Listed	As Listed
9413	C-18	18(7x26)	.018	.091	As Listed	As Listed	As Listed
9414	C-16	16(19x29)	.018	.100	9,90thru98	9,90thru98	9,90thru98
9415	C-14	14(19x27)	.018	.114	9,90thru98	9,90thru98	9,90thru98

#### Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	97 White/Violet
8 Gray (Slate)	98 White/Gray
9 White	

### TYPE D — VINYL — 3000V — 105C


 Tinned copper, polyvinylchloride insulated.

Catalog Number	Type Designation	Size & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
					100'	500'	1000'
9500	D-24	24(7x32)	.030	.084	9,90thru98	9,90thru98	9,90thru98
9501	D-22	22(7x30)	.030	.090	As Listed	As Listed	As Listed
9502	D-20	20(7x28)	.030	.098	As Listed	As Listed	As Listed
9503	D-18	18(7x26)	.030	.108	As Listed	As Listed	As Listed
9504	D-16	16(19x29)	.030	.117	9,90thru98	9,90thru98	9,90thru98
9505	D-14	14(19x27)	.030	.131	9,90thru98	9,90thru98	9,90thru98
9506	D-12	12(19x25)	.035	.160	9,90thru98	9,90thru98	9,90thru98
9507	D-10	10(37x26)	.035	.181	9,90thru98	9,90thru98	9,90thru98
9508	D- 8	8(133x29)	.040	.245	9,90thru98	9,90thru98	9,90thru98
9509	D- 6	6(133x27)	.040	.290	9,90thru98	9,90thru98	9,90thru98

#### Stock Colors\*

0 Black	90 White/Black
1 Brown	91 White/Brown
2 Red	92 White/Red
3 Orange	93 White/Orange
4 Yellow	94 White/Yellow
5 Green	95 White/Green
6 Dark Blue	96 White/Blue
7 Violet (Purple)	98 White/Gray
8 Gray (Slate)	
9 White	

\*Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

**MIL-W-5086A**  
**AIRCRAFT WIRE & CABLE**  
**TYPES 1 & 2 — 600V**



**UNSHIELDED**

Catalog Number	MIL Type Designation	Size & (Stranding)	Nom. O.D.	Spec. Type	Stock Colors on Standard Spools		
					100'	500'	1000'
9700	AN-22	22(19x34)	.068	No. 1	9	9	9
9701	AN-20	20(19x32)	.078	No. 1	9	9	9
9702	AN-18	18(19x30)	.088	No. 1	9	9	9
9703	AN-16	16(19x29)	.098	No. 1	9	9	9
9704	AN-14	14(19x27)	.117	No. 1	9	9	9
9705	AN-12	12(19x25)	.137	No. 1	9	9	9
9706	AN-22	22(19x34)	.075	No. 2	9	9	9
9707	AN-20	20(19x32)	.085	No. 2	9	9	9
9708	AN-18	18(19x30)	.095	No. 2	9	9	9
9709	AN-16	16(19x29)	.105	No. 2	9	9	9
9710	AN-14	14(19x27)	.125	No. 2	9	9	9
9711	AN-12	12(19x25)	.143	No. 2	9	9	9
9713	AN-10	10(49x27)	.189	No. 2	9	9	9
9714	AN-8	8(133x29)	.240	No. 2	9	9	9
9715	AN-6	6(133x27)	.293	No. 2	9	9	9
9716	AN-4	4(133x25)	.355	No. 2	9	9	9
9717	AN-2	2(665x30)	.425	No. 2	9	9	9
9718	AN-0	0(1045x30)	.525	No. 2	9	9	9
9719	AN-00	00(1330x30)	.590	No. 2	9	9	9

**Stock Color\***

White only (9)

**Additional Description****MIL-W-5086A-Type I**  
AN-22 thru AN-12.

Stranded tinned copper, white polyvinylchloride clear nylon jacket insulation.

**MIL-W-5086A-Type II**  
AN-22 thru AN-12

Stranded tinned copper, white polyvinylchloride insulation, saturated glass braid, clear nylon jacket.

**MIL-W-5086A-Type II**  
AN-10 thru AN-00

Stranded tinned copper, white polyvinylchloride insulation, saturated glass braid, nylon braid, nylon lacquer.

**MIL-C-7078A — TYPE 1 — 600 VOLT**

(MIL-W-5086A Type I Conductor Braided Tinned Copper Shield)



**SHIELDED**

Catalog Number	MIL Type Designation	Size & (Stranding)	Nom. O.D.	Spec. Type	Stock Colors on Standard Spools		
					100'	500'	1000'
9720	AN-22	22(10x34)	.092	No. 1	9	9	9
9721	AN-20	20(19x32)	.102	No. 1	9	9	9
9722	AN-18	18(19x30)	.112	No. 1	9	9	9
9723	AN-16	16(19x29)	.122	No. 1	9	9	9
9724	AN-14	14(19x27)	.141	No. 1	9	9	9
9725	AN-12	12(19x25)	.161	No. 1	9	9	9

**Stock Color\***

White only (9)

**Additional Description**

Stranded tinned copper, white polyvinylchloride insulation, nylon jacket, braided tinned copper shield.

Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.

# CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

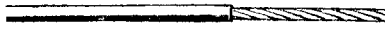
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## MIL-W-16878-D

### TYPE E — TFE TEFLON — 600V — 200C



Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated.

Catalog Number	Type Designation	Size & (Stranding)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
				100'	500'	1000'
9600	E-32	32(7x40)	.032	As Listed	As Listed	As Listed
9601	E-30	30(7x38)	.032	As Listed	As Listed	As Listed
9602	E-28	28(7x36)	.035	As Listed	As Listed	As Listed
9603	E-26	26(19x38)	.039	As Listed	As Listed	As Listed
9604	E-26	26(7x34)	.039	As Listed	As Listed	As Listed
9605	E-24	24(19x36)	.044	As Listed	As Listed	As Listed
9606	E-24	24(7x32)	.044	As Listed	As Listed	As Listed
9607	E-22	22(19x34)	.050	As Listed	As Listed	As Listed
9608	E-22	22(7x30)	.050	As Listed	As Listed	As Listed
9609	E-20	20(19x32)	.058	As Listed	As Listed	As Listed
9610	E-20	20(7x28)	.058	As Listed	As Listed	As Listed
9611	E-18	18(19x30)	.069	As Listed	As Listed	As Listed
9612	E-18	18(7x26)	.069	As Listed	As Listed	As Listed
9613	E-16	16(19x29)	.080	As Listed	As Listed	As Listed
9614	E-14	14(19x27)	.095	As Listed	As Listed	As Listed
9615	E-12	12(19x25)	.115	As Listed	As Listed	As Listed
9616	E-10	10(37x26)	.131	As Listed	As Listed	As Listed

#### Stock Colors\*

0 Black	5 Green
1 Brown	6 Dark Blue
2 Red	7 Violet (Purple)
3 Orange	8 Gray (Slate)
4 Yellow	9 White

NOTE: Tracer colors available upon customer request. Minimum quantity 500 feet.

### TYPE EE — TFE TEFLON — 1000V — 200C



Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated.

Catalog Number	Type Designation	Size & (Stranding)	Nom. O.D. (Inch)	Stock Colors on Standard Spools		
				100'	500'	1000'
9620	EE-32	32(7x40)	.042	As Listed	As Listed	As Listed
9621	EE-30	30(7x38)	.042	As Listed	As Listed	As Listed
9622	EE-28	28(7x36)	.045	As Listed	As Listed	As Listed
9623	EE-26	26(19x38)	.049	As Listed	As Listed	As Listed
9624	EE-26	26(7x34)	.049	As Listed	As Listed	As Listed
9625	EE-24	24(19x36)	.054	As Listed	As Listed	As Listed
9626	EE-24	24(7x32)	.054	As Listed	As Listed	As Listed
9627	EE-22	22(19x34)	.060	As Listed	As Listed	As Listed
9628	EE-22	22(7x30)	.060	As Listed	As Listed	As Listed
9629	EE-20	20(19x32)	.068	As Listed	As Listed	As Listed
9630	EE-20	20(7x28)	.068	As Listed	As Listed	As Listed
9631	EE-18	18(19x30)	.079	As Listed	As Listed	As Listed
9632	EE-18	18(7x26)	.079	As Listed	As Listed	As Listed
9633	EE-16	16(19x29)	.089	As Listed	As Listed	As Listed
9634	EE-14	14(19x27)	.110	As Listed	As Listed	As Listed
9635	EE-12	12(19x25)	.129	As Listed	As Listed	As Listed
9636	EE-10	10(37x26)	.149	As Listed	As Listed	As Listed

#### Stock Colors\*

0 Black	5 Green
1 Brown	6 Dark Blue
2 Red	7 Violet (Purple)
3 Orange	8 Gray (Slate)
4 Yellow	9 White

NOTE: Tracer colors available upon customer request. Minimum quantity 500 feet.

## ROME SYNTHINOL

### UL TYPE HOOK-UP AND LEAD WIRES

#### UL-300V-80C

#### UL-600V-105C (CSA 600V-90C)

Catalog Number	Size Awg.	Stranding	Nom. Ins. Thckns.	Volts	Max. Dia. Inches
801	22	Solid	1/64	300	.065
811	20	Solid	1/64	300	.071
841	18	Solid	1/64	300	.080
821	22	7 x No. 30	1/64	300	.069
831	20	10 x No. 30	1/64	300	.078
846	18	16 x No. 30	1/64	300	.085
881	20—2 cond. Black & Red	10 x No. 30	.025	300	.170

Catalog Number	Size Awg.	Stranding	Nom. Ins. Thckns.	Volts	Max. Dia. Inches
851	22	Solid	1/32	600	.097
856	20	Solid	1/32	600	.104
861	18	Solid	1/32	600	.112
866	22	7 x No. 30	1/32	600	.102
871	20	10 x No. 30	1/32	600	.110
876	18	16 x No. 30	1/32	600	.119

Colors: Black, Blue, Brown, Green, Orange, Pink, Purple, Red, Slate, White, Yellow  
STANDARD SPOOL PUT-UP: 25 FT., 100 FT., 500 FT., 1000 FT.

\*Stock Color Numbers in Accordance to Military Type Designation and EIA Color Coding.



SECTION 6000

CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS

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CHICAGO, ILLINOIS

SHIELDED TEFLON CABLES MIL-W-16878

Each conductor stranded silver plated copper Type E extruded Teflon .010" insulation—90% braided silver copper shield, also supplied with either a Teflon impregnated Fiberglass braid or Teflon fused tape overall jacket.

Temperature rating -65°C to +260°C. Voltage rating 600 volts.



NO OUTER COVERING OVER SHIELD

Table with 4 columns: Catalog Number, No. of Cond., Size & Stranding, Nom. O.D. (Inch). Rows 9800-9815.

STOCK COLORS

Catalog Numbers 9800 thru 9855

Specify color coding when ordering.

Standard spool put up Catalog Numbers 9800 thru 9855: 100 ft., 500 ft., 1000 ft.



TEFLON TAPE WRAP JACKET OVER SHIELD

Table with 4 columns: Catalog Number, No. of Cond., Size & Stranding, Nom. O.D. (Inch). Rows 9820-9835.



TEFLON IMPREGNATED BRAID OVER SHIELD

Table with 4 columns: Catalog Number, No. of Cond., Size & Stranding, Nom. O.D. (Inch). Rows 9840-9855.

Stock Color Numbers in accordance to Military Type Designation and E.I.A. Color Coding.

CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS




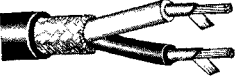




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CHICAGO, ILLINOIS

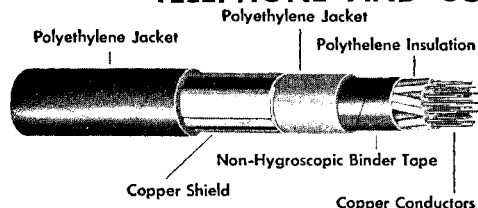
INTERCOMMUNICATING AND SOUND SYSTEM CABLES

STANDARD SPOOL PUT-UP: 10 FT., 25 FT., 50 FT., 100 FT., 500 FT., 1000 FT.

	NO.	TYPE	Size & Stranding	INSULATION THICKNESS (INCHES)	SPECIFICATION AND GENERAL APPLICATION	NOMINAL DIAMETER (INCHES)
 <p>STATION-TO-STATION EXTENSION WIRING SHIELDED</p>	5501	2 Condr.	22 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 cond. red—1 cond. black—closely woven braided tinned copper shield.	.110
	5506	3 Condr.	22 Solid	.015	Same as 5501—cond. red—1 cond. black—1 cond. blue.	.145
	5521	2 Condr.	20 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 cond. red—1 cond. black—closely woven braided tinned copper shield.	.155
 <p>EXTENSION WIRING SHIELDED—PLASTIC JACKET</p>	5511	2 Condr.	22 Solid	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 cond. red—1 cond. black—and a spiral tinned copper shield with .020" tubed gray vinyl plastic jacket.	.170
	5516	2 Pair 4 Condr.	22 7x30	.015	Stranded tinned copper vinyl plastic insulation, 2 pair cabled (4 conductors—1 pair black & white with braided tinned copper shield—1 pair black & brown unshielded—both pair bunched and .020" gray vinyl plastic jacket overall.	.168x.276
 <p>PAIRED CABLE—SHIELDED PLASTIC JACKET</p>	5526	2 Condr.	20 10x30	.015	Tinned copper vinyl plastic insulation, wires twisted together—1 cond. red—1 cond. black—closely woven tinned copper shield.	.215
	5531	3 Condr.	20 10x30	.015	Same as 5526—1 cond. red—1 cond. black—1 cond. blue.	.230
	5536	2 Condr.	18 16x30	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together, 1 cond. red—1 cond. white, closely woven braided tinned copper shield.	.235
	5568	2 Condr.	22 7x30	.015	Tinned copper vinyl plastic insulation, 2 condrs.—cabled black and red—tinned copper spiral wrapped shield .025" chrome vinyl plastic jacket.	.166
 <p>EXPANSION-SPEAKERS SHIELDED—PLASTIC JACKET</p>	5569	3 Condr.	22 7x30	.015	Tinned copper vinyl plastic insulation, 3 condrs.—cabled black, red, white—tinned copper spiral shield—chrome vinyl plastic jacket.	.193
	5538	2 Condr.	18 16x30	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together, 1 cond. red, 1 cond. white. Spiral tinned copper shield and .020" gray vinyl plastic jacket overall.	.225
	5543	2 Condr.	20 10x30	.015	Same as 5538 1 cond. Red, 1 cond. Black.	.185
	5541	2 Condr.	18 16x30	.015	Stranded tinned copper vinyl plastic insulation, wires twisted together, 1 cond. red—1 cond. white, closely woven braided tinned copper shield and .020" gray vinyl plastic jacket overall.	.260
	5547	2 Condr.	24 7x32	.015	Stranded 1 cond. bare copper—1 cond. tinned copper—2 condrs. parallel gray vinyl plastic insulation. Colors—brown, clear, gray, white.	.058x.115
 <p>HIGH IMPEDANCE LAPEL MICROPHONES</p>	5551	1 Condr.	24 16x34	.020	Stranded tinned copper polyethylene insulation closely woven braided tinned copper shield with .020" gray vinyl jacket.	.125
	5556	2 Condr.	19 Solid	.015	Bare copper vinyl plastic insulation, wires twisted together—1 cond. brown—1 cond. tan.	.115
 <p>INTER COMMUNICATING SOUND SYSTEM</p>	5561	3 Condr.	19 Solid	.015	Same as 5556—1 cond. brown—1 cond. tan—1 cond. gray.	.132
	5566	2 Condr.	22 Solid	.015	Bare copper .015 rubber insulation with a black cotton braid weatherproof finish. Conductors coded for easy identification. Ideal for exterior or interior communication installations.	.131x.203

TELEPHONE AND COMMUNICATION CABLE DIRECT BURIAL TYPE

FULLY COLOR CODED



SPECIFICATIONS

Solid bare annealed copper 22 Awg. gauge conductors; thin wall, color coded, polyethylene insulation; conductors twisted to form pairs with symmetrically varying lays to minimize cross-talk; cabled (for 6 thru 50 pairs) by stranding pairs in concentric layers, or (for 75 thru 400 pairs) by stranding pairs into concentrically formed units, which are in turn cabled to form the complete assembly; non-hygroscopic binder tape furnishing high dielectric strength between shield and individual conductors; continuous copper shielding tape; high-molecular weight, polyethylene jacket.

NO.	NO. OF PAIRS	NO. OF COND.	COND. SIZE	NOMINAL JACKET THICKNESS, MILS	NOMINAL O. D. (Inches)
				INNER	OUTER
6006	6	12	22 Solid	40	40
6012	12	24	22 Solid	40	40
6018	18	36	22 Solid	40	40
6025	25	50	22 Solid	40	40
6050	50	100	22 Solid	40	40
6075	75	150	22 Solid	50	50
6100	100	200	22 Solid	50	50
6150	150	300	22 Solid	50	50
6200	200	400	22 Solid	50	50
6300	300	600	22 Solid	50	60
6400	400	800	22 Solid	50	60

**GENERAL APPLICATION AND ADVANTAGE**  
**APPLICATION:** Communication and Telephone Cable for use in direct burial installations provides a high quality product similar to that used for aerial and duct systems, but with the addition of protective armoring. This minimizes the possibility of damage to the cable from rodents and insects and, correctly installed, reduces the dangers to the cable from sharp stones and other hazards of underground burial installations.  
**ADVANTAGE:** The lightweight, but rugged construction of direct burial Communication and Telephone Cable permits fast and economical underground installation of communication systems with the assurance of dependable and enduring service. This is made possible through utilization of the same high quality polyethylene compounds that are used in its counterpart for aerial and duct type installations, with the added protection of copper armoring tapes and a durable, high-molecular weight, polyethylene jacket.



**CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS**

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CHICAGO, ILLINOIS



**PAIRED PLASTIC CONDUCTORS**

SPECIFICATIONS AND GENERAL APPLICATIONS Tinned copper conductor .010" vinyl plastic insulation. Cabled .202" gray vinyl plastic Jacket overall

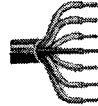


NO.	TYPE	SIZE AND STRANDING	NOMINAL DIAMETER (Inches)
5201	1 Pr. 2 Condr.	22 Solid	.145
5205	2 Pr. 4 Condr.	22 Solid	.190
5211	3 Pr. 6 Condr.	22 Solid	.230
5221	5 Pr. 10 Condr.	22 Solid	.250
5226	6 Pr. 12 Condr.	22 Solid	.265
5231	7 Pr. 14 Condr.	22 Solid	.280
5236	8 Pr. 16 Condr.	22 Solid	.300
5241	9 Pr. 18 Condr.	22 Solid	.320
5251	11 Pr. 22 Condr.	22 Solid	.360
5271	15 Pr. 30 Condr.	22 Solid	.390
5286	27 Pr. 54 Condr.	22 Solid	.510

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

**MULTIPLE CONDUCTORS FULLY COLOR CODED**

SIZE & STRANDING 22 - 7x30 SPECIFICATION AND GENERAL APPLICATION Tinned copper conductor .010" vinyl plastic insulation. Cabled .020" gray vinyl plastic Jacket overall



NO.	TYPE	SIZE AND STRANDING	NOMINAL DIAMETER (Inches)
5400	2 Condr.	22 7x30	.130
5401	3 Condr.	22 7x30	.140
5406	4 Condr.	22 7x30	.158
5411	5 Condr.	22 7x30	.170
5416	6 Condr.	22 7x30	.212
5421	7 Condr.	22 7x30	.230
5426	8 Condr.	22 7x30	.235
5431	9 Condr.	22	.245
5434	12 Condr.	22 7x30	.250

STANDARD SPOOL PUT-UP: 10 FT., 15 FT., 25 FT., 100 FT., 500 FT., 1000 FT.

**PHONOGRAPH MULTIPLE CABLE STANDARD SPOOL PUT-UP: 500 FT., 1000 FT.**



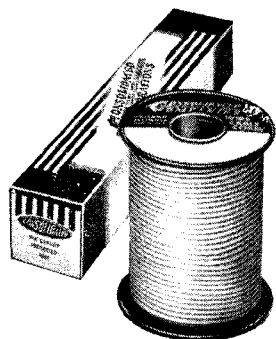
TYPE No.	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O.D. (Inches)
5103	3-22	Same as 5030	3 condrs. No. 22 with 1/4" thermoplastic insulation, all individually color coded. All conductors grouped into cable form with a treated cotton braid overall lacquered.	7 x 30	.125
5123	2-16 1-18	Same as 5030	2 condrs. No. 16 1/4" thermoplastic insulation. 1 condr. No. 18 1/2" thermoplastic insulation, all individually color coded. All conductors grouped into cable form with gray vinyl plastic jacket.	2-26 x 30 1-16 x 30	.215
5135	22 5 condr.	Same as 5030	5 condr. No. 22 with 1/4" thermoplastic insulation; 3 condr. twisted together with a braided tinned copper shield; 2 condr. twisted; all condr. grouped into cable form with a brown cotton braid overall.	5-7 x 30	.225
5124	4-18	Same as 5030	No. 18 solid 4 condr. color coded gray plastic jacket overall.	Solid	.225



**MICROPHONE CABLE CONDUCTOR COLOR CHART: 1—Black; 2—White; 3—Red; 4—Green; 5—Yellow; 6—Blue; 7—Brown.**

STANDARD SPOOL PUT-UP: 9 FT., 10 FT., 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT. SHIELDED; Weatherproof rubber jacket for all microphone or weatherproof extension work. (Longer continuous lengths if desired.)

No.	TYPE	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O.D. (Inches)	NOMINAL CAPACITY per ft. (mmf)
1461	1 conductor	22	Lapel microphone	Tinned copper polyethylene insulation with a closely woven tinned copper shield. Gray vinyl plastic jacket.	16 x 34	.125	34.
1457	1 conductor	22	Crystal, Ribbon and other high Impedance microphones	Same as 1461 except heavier polyethylene insulation on conductor.	16 x 34	.200	25.
1458	2 conductor	22	Low impedance microphones	Tinned copper conductors polyethylene insulation conductors; black and white. Cabled with fillers closely woven tinned copper shield. Gray vinyl plastic jacket.	26 x 34	.175	40.
1459	1 conductor	20	Lapel microphone	Tinned Copper Wire, with polyethylene to .087" O.D. with a closely woven tinned copper shielded braid, and a heavy black plastic jacket overall.	16 x 34	.231	32.
1460	1 conductor	20	Crystal microphone	Tinned copper, yarn serve; wall of live rubber; tinned copper braid shield; rubber jacket overall.	26 x 34	.240	33.
1462	2 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.240	68.
1456	2 conductor	18	Heavy duty studio cable	Same as 1460; color coded	00 x 00	.268	
1463	3 conductor	20	Carbon microphones	Same as 1460; color coded	41 x 34	.295	80.
1464	4 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.277	85.
1465	5 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.295	95.
1466	6 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.323	
1467	7 conductor	20	Carbon microphones	Same as 1460; color coded	26 x 34	.350	
1455	8 conductor	20	Carbon microphones Same as 1465	Same as 2460; color coded	26 x 34	.360	
					26 x 34	.386	



# MAGNET WIRE

Popular, profitable specialty wire packaged for easy selling in radio-electrical, department, specialty and hardware stores. Wide variety of sizes and insulations. Keeps stock in perfect order, always saleable. Supplied on Spool as shown and in Heavier Weights for whatever weight desired. Here is a handy and convenient way to stock small quantities of wire. It prevents wire from matting or tangling.

## No. 2000 VARIOUS OTHER INSULATIONS

Film	Technical Classification
ENAMEL	oleoresinous
FORMVAR	poly vinyl acetal
SODEREZE	polyurethane
THERMALEZE	epoxide polyester
NYFORM	formvar, nylon sheath
NYLON	
BONDEZE	
GRIFEZE	
LECTRON	acrylic
ISONSEL	terephthalic polyester
ALKANVAR	terephthalic polyester
SYLKDY ENAMELED	
COTTON AND COMBINATIONS	
SILK AND COMBINATIONS	
CELANESE AND COMBINATIONS	
GLASS AND COMBINATIONS	
PAPER AND COMBINATIONS	

### PLAIN ENAMEL MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	\$0.45	\$0.75	\$1.39
15	.45	.80	1.40
16	.50	.84	1.42
17	.50	.87	1.44
18	.50	.89	1.45
19	.55	.92	1.49
20	.55	.94	1.50
21	.55	.95	1.50
22	.55	.97	1.70
23	.58	.99	1.75
24	.60	1.00	1.87
25	.65	1.10	1.95
26	.65	1.10	2.03
27	.70	1.15	2.14
28	.75	1.20	2.25
29	.75	1.25	2.30
30	.80	1.30	2.35
31	.89	1.35	2.45
32	.90	1.40	2.50
33	.95	1.50	2.65
34	1.00	1.70	2.75
35	1.09	1.84	3.14
36	1.29	2.00	3.50
37	1.45	2.25	4.00
38	1.70	2.50	4.50
39	1.87	3.00	5.00
40	2.50	3.75	6.00
41	3.00	5.63	8.48
42	3.48	6.00	12.99
43	4.35	8.25	15.75
44	4.88	9.38	18.45

### SINGLE FORMVAR MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	\$0.66	\$1.12	\$2.07
15	.66	1.20	2.10
16	.75	1.25	2.14
17	.75	1.30	2.15
18	.75	1.34	2.17
19	.83	1.39	2.23
20	.83	1.40	2.25
21	.83	1.42	2.37
22	.83	1.45	2.56
23	.89	1.49	2.62
24	.90	1.50	2.80
25	.97	1.65	2.92
26	.99	1.65	3.05
27	1.05	1.74	3.20
28	1.10	1.80	3.37
29	1.14	1.87	3.46
30	1.20	1.95	3.52
31	1.34	2.02	3.67
32	1.35	2.10	3.75
33	1.42	2.25	3.95
34	1.50	2.55	4.12
35	1.64	2.81	4.70
36	1.92	3.00	5.26
37	2.17	3.37	6.00
38	2.55	3.75	6.76
39	2.80	4.50	7.50
40	3.75	5.64	9.00
41	3.75	6.75	12.60
42	4.28	7.40	15.43
43	5.18	7.88	14.25
44	6.60	11.70	22.58

### HEAVY FORMVAR MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	\$0.73	\$1.24	\$2.27
15	.73	1.34	2.33
16	.84	1.39	2.35
17	.84	1.44	2.37
18	.84	1.47	2.39
19	.92	1.52	2.45
20	.92	1.54	2.51
21	.92	1.55	2.61
22	.92	1.60	2.80
23	.97	1.64	2.87
24	1.00	1.65	3.07
25	1.15	1.97	3.50
26	1.19	1.98	3.64
27	1.25	2.07	3.84
28	1.34	2.15	4.04
29	1.37	2.24	4.14
30	1.44	2.34	4.22
31	1.67	2.52	4.58
32	1.69	2.63	4.67
33	1.77	2.81	4.94
34	1.87	3.19	5.16
35	2.04	3.46	5.68
36	2.39	3.75	6.58
37	2.72	4.20	7.50
38	3.17	4.69	8.45
39	3.50	5.64	9.38
40	4.69	7.04	11.27
41	5.18	7.59	13.65
42	5.78	8.15	14.72
43	6.00	8.63	15.08
44	7.43	11.40	23.33

### DOUBLE COTTON COVERED MAGNET WIRE

Size	¼ lb.	½ lb.	1 lb.
14	\$0.55	\$0.95	\$1.87
15	.58	.98	1.90
16	.60	1.00	1.95
17	.60	1.05	2.00
18	.60	1.10	2.05
19	.65	1.15	2.28
20	.65	1.25	2.34
21	.77	1.34	2.50
22	.82	1.39	2.64
23	.88	1.50	2.75
24	.94	1.60	3.00
25	.95	1.65	3.14
26	1.00	1.75	3.39
27	1.15	1.89	3.64
28	1.20	2.14	4.00
29	1.30	2.39	4.50
30	1.32	2.50	4.75
31	1.50	2.75	5.00
32	1.75	3.00	5.64
33	1.99	3.37	6.25
34	2.14	3.89	7.00
35	2.39	4.25	7.50
36	2.75	4.89	8.65
37	2.25	6.25	11.40
38	4.75	8.65	16.50
39	6.00	11.50	20.00
40	8.00	15.00	28.15

### BARE COPPER WIRE

Size	¼ lb.	½ lb.	1 lb.
14	\$0.53	\$0.97	\$1.54
15	.57	1.00	1.60
16	.60	1.10	1.83
17	.52	1.12	1.87
18	.63	1.14	1.90
19	.65	1.17	1.95
20	.67	1.20	2.00
21	.68	1.20	2.07
22	.70	1.24	2.14
23	.70	1.27	2.17
24	.70	1.30	2.20
25	.72	1.30	2.20
26	.73	1.34	2.27
27	.75	1.37	2.30
28	.77	1.40	2.40
29	.77	1.42	2.47
30	.77	1.42	2.47
31	.77	1.44	2.53
32	.77	1.44	2.60
33	.78	1.47	2.68
34	.80	1.50	2.77
35	.82	1.55	2.90
36	.84	1.60	3.04
37	.92	1.75	3.22
38	1.00	1.90	3.40
39	1.02	1.97	3.45
40	1.04	2.04	3.50

### TINNED COPPER WIRE

Size	¼ lb.	½ lb.	1 lb.
14	\$0.67	\$1.13	\$1.75
15	.73	1.27	1.92
16	.80	1.40	2.00
17	.84	1.44	2.03
18	.87	1.47	2.08
19	.90	1.50	2.12
20	.94	1.53	2.17
21	.95	1.53	2.24
22	.97	1.57	2.30
23	.98	1.58	2.34
24	1.00	1.60	2.37
25	1.00	1.60	2.37
26	1.00	1.60	2.37
27	1.05	1.67	2.64
28	1.10	1.75	2.90
29	1.13	1.84	2.94
30	1.17	1.92	2.97
31	1.20	2.00	3.04
32	1.24	2.09	3.10
33	1.27	2.17	3.19
34	1.30	2.25	3.27
35	1.32	2.30	3.40
36	1.34	2.34	3.54
37	1.36	2.42	3.72
38	1.38	2.50	3.90
39	1.39	2.50	3.95
40	1.40	2.67	4.00

## SPECIAL MAGNET WIRES

In addition to the standard listing shown here, we maintain an extensive stock of all other sizes in round, rectangular and square magnet wire.

## BARE NICKEL CHROMIUM WIRE

### No. 2000

Recommended for electrical heating appliances and other devices where the highest quality in performance is required, whose operating temperatures do not exceed 1850° F. Particularly suited for heavy duty rheostats and controls which require compact resistance.

### ON PROTECTA-METAL SPOOLS

Size	1 Oz.	¼ Lb.	1 Lb.
14	.....	\$1.52	\$5.56
15	.....	1.56	5.65
16	.....	1.58	5.73
17	.....	1.63	5.80
18	.....	1.67	5.87
19	.....	1.71	6.02
20	\$0.67	1.76	6.17
21	.71	1.85	6.49
22	.72	1.93	6.79
23	.74	2.08	7.44
24	.76	2.22	8.09
25	.82	2.37	8.74
26	.87	2.53	9.39
27	.89	2.57	9.96

Size	1 Oz.	¼ Lb.	1 Lb.
28	\$0.92	\$2.84	\$10.53
29	1.00	2.98	11.16
30	1.09	3.11	11.83
31	1.14	3.28	12.28
32	1.18	3.43	12.73
33	1.31	3.79	14.73
34	1.44	4.16	16.73
35	1.58	4.55	17.71
36	1.71	4.94	18.69
37	2.22	6.50	23.86
38	2.74	8.05	29.03
39	2.86	8.39	31.62
40	2.98	8.95	34.20

**CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS**

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CHICAGO, ILLINOIS

**MULTIPLE CONDUCTOR COTTON  
BRAIDED CABLE**FOR SPEAKERS, TESTERS,  
BATTERY HOOK-UP, ETC.SPECIFICATIONS: Tinned flexible copper; colored plastic insulation;  
bunched individual conductors; heavy brown cotton braid overall; color  
coded. Size 20; Stranding 10x30; Insulation Thickness  $\frac{1}{64}$ "

TYPE NO.	TYPE	FINISHED O.D. (Inches)	TYPE NO.	TYPE	FINISHED O.D. (Inches)
1481	1 cond.	.150	1487	7 cond.	.275
1482	2 cond.	.175	1488	8 cond.	.300
1483	3 cond.	.200	1489	9 cond.	.310
1484	4 cond.	.275	1490	10 cond.	.325
1485	5 cond.	.250	1494	11 cond.	.335
1486	6 cond.	.260	1495	12 cond.	.350

**MULTIPLE CONDUCTOR  
TINNED COPPER  
SHIELD CABLE**SPECIFICATIONS: Tinned flexible copper, 912E20, Stranding 10x30— $\frac{1}{64}$ "  
plastic insulation, color coded, Braided tinned copper shield.

TYPE NO.	TYPE	FINISHED O.D. (Inches)
1471	1 conductor	.110
1472	2 conductors	.190
1473	3 conductors	.200
1474	4 conductors	.220
1475	5 conductors	.235
1476	6 conductors	.250
1477	7 conductors	.265

**ANALYZER CABLE**SPECIFICATIONS: Extra flexible tinned copper; plastic insulation; color  
coded; Brown cotton braid overall.

TYPE	SIZE	STRAND- ING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)
1501	8 cond.	2-14	41 x 30	$\frac{1}{64}$
		6-18	16 x 30	
1502	9 cond.	2-14	41 x 30	$\frac{1}{64}$
		7-18	16 x 30	

**BEST PROD WIRE**Specially Constructed High Grade Wire For Use On Laboratory Test  
equipment, Bench Analyzers, Etc.SPECIFICATIONS: Extra flexible tinned copper; cotton wrap; red or black;  
rubber insulation.

001	5,000 volts	20	41 x 36	.043	.140
006	10,000 volts	18	65 x 36	.088	.230

**SHIELDING AND BONDING CABLE  
DESIGNED FOR SHIELDING INSULATED  
WIRES AND CABLES . . . BONDING AND  
MANY OTHER USES**STANDARD SPOOL PUT-UP:  
50 FT., 100 FT., 250 FT., 1000 FT.

NO.	APPROX. I. D.	SIZE & NUMBER OF WIRES	APPROX. AWG.	CARRYING CAPACITY IN AMPERES
1386	$\frac{1}{32}$ "	24 x 36	24	7
1387	$\frac{3}{64}$ "	24 x 36	23	7
1388	$\frac{3}{32}$ "	48 x 36	19	12
1389	$\frac{1}{64}$ "	72 x 36	18	14
1390	$\frac{1}{8}$ "	96 x 36	18	15
1391	$\frac{3}{16}$ "	120 x 36	15	23
1392	$\frac{1}{4}$ "	168 x 36	14	30
1393	$\frac{3}{8}$ "	288 x 36	11	50
1394	$\frac{1}{2}$ "	386 x 36	10	55
1395	$\frac{5}{8}$ "	396 x 36	10	61
1396	$\frac{3}{4}$ "	832 x 36	7	80
1397	$\frac{25}{32}$ "	832 x 36	7	80
1398	1"	832 x 36	7	84
1399	$1\frac{1}{8}$ "	912 x 36	7	105

**TINNED COPPER BUS BAR WIRE  
SOLID SOFT DRAWN COPPER AND BRIGHTLY  
TINNED FOR ALL TYPES OF SOLDERING  
CONNECTIONS AND OTHER APPLICATIONS**

STANDARD SPOOL PUT-UP: 100 FT., 1000 FT.

NO.	NOMINAL DIAMETER	SIZE SOLID	CIRCULAR MIL. AREA
3845	.129"	8	16510
3841	.102"	10	10380
3831	.082"	12	6530
3821	.064"	14	4110
3815	.051"	16	2583
3816	.040"	18	1624
3817	.032"	20	1022
3818	.025"	22	642
3819	.020"	24	404
3846	.016"	26	254.1
3847	.013"	28	159.8
3848	.010"	30	100.5

**LEAD COVERED CABLE**

FOR FREEDOM FROM INTERFERENCE, CORROSION AND DAMPNES.

SPECIFICATIONS: Tinned copper wire; heavy rubber insulation and cotton  
braid; heavy lead shield.

1453	2 cond.	18	Solid	$\frac{1}{32}$	240 x .200
1454	3 cond.	18	Solid	$\frac{1}{32}$	.420

CONSOLIDATED WIRE AND ASSOCIATED CORPORATIONS



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CHICAGO, ILLINOIS

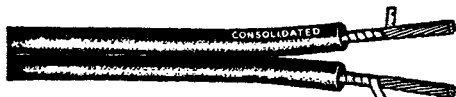
ELECTRICAL CORDAGES  
UNDERWRITERS APPROVED

SUPPLIED ON ATTRACTIVE TRI-COLOR  
LITHOGRAPHED METAL SPOOLS

RUBBER HANDYCORD  
CENTERSTRIP



PLASTIC HANDYCORD  
CENTERSTRIP



RUBBER SHEATHED  
SERVICE CORD  
UNDERWRITERS APPROVED



SPECIFICATIONS AND APPLICATION

Extra flexible bare copper cotton served. 1/32" rubber insulation color coded conductors cabled with fillers, cotton wrap and black, tough rubber jacket.

For all electronic equipment, household appliances, garden and power tools.

NEOPRENE SHEATHED  
SERVICE CORD  
UNDERWRITERS APPROVED



SPECIFICATIONS AND APPLICATION

Same specifications as 4200 Series except black Neoprene jacket.

For all types of equipment exposed to oils, acid and excessive moisture.

HEATER CORD



Colors: Black and White Marker.

STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000FF.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	STRAND-ING	NOM. INS. THICKNESS	NOM. O. D.
4072	2	18	SP(P.O.S.J.)	41 x 34	1/64"	.235 x .130
4074	2	16	SP(P.O.S.J.)	65 x 34	1/32"	.300 x .160

Colors: Black, Brown, White, Gray.

STANDARD SPOOL PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT., 500 FT., 1000 FT.

4077	2	18	SPT(P.O.T.)	41 x 34	1/64"	.235 x .130
4079	2	16	SPT(P.O.T.)	65 x 34	1/32"	.300 x .160

Colors: Black, Brown, White, Gray.

STANDARD PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	CURRENT CARRYING CAPACITY	VOLTAGE RATING	NOM. O. D.
4202	2	18	SV	5 Amps.	300	.250"
4207	2	18	SJ	5 Amps.	300	.310"
4212	3	18	SJ	5 Amps.	300	.345"
4214	4	18	SJ	5 Amps.	300	.360"
4217	2	16	SJ	7 Amps.	300	.340"
4222	3	16	SJ	7 Amps.	300	.375"
4224	4	16	SJ	7 Amps.	600	.395"
4227	2	18	S	5 Amps.	600	.390"
4232	3	18	S	5 Amps.	600	.405"
4234	4	18	S	5 Amps.	600	.435"
4237	2	16	S	7 Amps.	600	.410"
4242	3	16	S	7 Amps.	600	.430"
4244	4	16	S	7 Amps.	600	.485"
4247	2	14	S	15 Amps.	600	.540"
4252	3	14	S	15 Amps.	600	.560"
4254	4	14	S	15 Amps.	600	.605"
4257	2	12	S			
4262	3	12	S	20 Amps.	600	.635"
4264	4	12	S	20 Amps.	600	.665"
4267	2	10	S	25 Amps.	600	.640"
4272	3	10	S	25 Amps.	600	.690"
4274	4	10		25 Amps.	600	.745"

STANDARD PUT-UP: 25 FT., 50 FT., 100 FT., 250 FT.

4307	2	18	SJO	5 Amps.	300	.310"
4312	3	18	SJO	5 Amps.	300	.345"
4314	4	18	SJO	5 Amps.	300	.360"
4317	2	16	SJO	7 Amps.	300	.340"
4322	3	16	SJO	7 Amps.	300	.375"
4324	4	16	SO	7 Amps.	600	.395"
4327	2	18	SO	5 Amps.	600	.390"
4332	3	18	SO	5 Amps.	600	.405"
4334	4	18	SO	5 Amps.	600	.435"
4337	2	16	SO	7 Amps.	600	.410"
4342	3	16	SO	7 Amps.	600	.430"
4344	4	16	SO	7 Amps.	600	.485"
4347	2	14	SO	15 Amps.	600	.540"
4352	3	14	SO	15 Amps.	600	.560"
4354	4	14	SO	15 Amps.	600	.605"
4357	2	12	SO	20 Amps.	600	.605"
4362	3	12	SO	20 Amps.	600	.635"
4364	4	12	SO	20 Amps.	600	.665"
4367	2	10	SO	25 Amps.	600	.640"
4372	3	10	SO	25 Amps.	600	.690"
4374	4	10	SO	25 Amps.	600	.745"

STANDARD SPOOL PUT-UP: 100 FT., 250 FT.

NO.	NO. OF COND.	SIZE AWG.	U. L. TYPE	STRAND-ING	NOM. INS. THICKNESS	NOM. O. D.
4087	2	16	HPD	65 x 34	1/32"	.275
4092	2	18	HPD	41 x 34	1/32"	.250

CONSOLIDATED WIRE PAGE 18



**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**DAFLEX PLASTIC TUBING**  
105°C POLYVINYLCHLORIDE (PVC)

Specifically compounded vinyl resins for superior all around performance. UL approved for 105°C, conforms to Spec MIL-I-631D Type F, Form U, Grades A and C. Class 2, Category 1. Resistant to heat, oil, water, chemical corrosion, fungi and aging. Very hi abrasion resistance. Will retain its flexibility. Suitable for covering and protecting wires and cables. Designed for electrical, electronic and aircraft applications. Non-flammable. Meets ASTM—D876, ASTM—D922.

DABURN Cat. No.	Size	Nom. I.D.	Specify Std. Length, Spool or Coil
808	24	.022"	—, 25', 100', 1000'
811	22	.027"	—, 25', 100', 1000'
813	20	.034"	36", 25', 100', 1000'
814	18	.042"	36", 25', 100', 1000'
815	16	.053"	36", 25', 100', 1000'
816	14	.066"	36", 25', 100', 500'
817	12	.085"	36", 25', 100', 500'
825	10	.106"	36", 15', 100', 500'
818	8	.135"	36", 15', 100', 500'
826	6	.166"	36", 15', 100', 250'
819	4	.208"	36", 10', 100', 250'
820	2	.263"	36", 10', 100', 250'
821	3/8"	.3125"	36", —, 100', 250'
822	3/8"	.375"	36", —, 100', 250'
823	1/2"	.500"	36", —, 100', 250'
824	5/8"	.625"	36", —, 100', —
827	3/4"	.750"	—, —, 100', —
860	7/8"	.875"	—, —, 100', —
861	1"	1.000"	—, —, 50', —
862	1 1/4"	1.250"	—, —, 50', —
863	1 1/2"	1.500"	—, —, 50', —
828	1 3/4"	1.750"	—, —, 50', —
829	2"	2.000"	—, —, 50', —
864	2 1/4"	2.250"	—, —, 50', —
865	2 1/2"	2.500"	—, —, 50', —

**COLORS AVAILABLE FROM STOCK**

Sizes #24 thru 2: Clear, Black, White, Yellow, Red, Green, Brown, Blue, Orange.

Sizes 3/8" thru 3/4": Clear, Black, Yellow, Red, Green.

Sizes 7/8" thru 2 1/2": Clear, Black.

**DIMENSIONAL TOLERANCES OF DAFLEX 105**

Size	Approx. I.D., Ins.	ASTM Tolerance, Ins.	Wall Thickness Inches
24	.022	.020-.027	.012±.002
22	.027	.025-.032	.012±.002
20	.034	.032-.039	.016±.003
19	.038	.044-.036	.016±.003
18	.042	.040-.049	.016±.003
17	.047	.054-.045	.016±.003
16	.053	.051-.061	.016±.003
15	.059	.067-.057	.016±.003
14	.066	.064-.072	.016±.003
13	.076	.080-.072	.016±.003
12	.085	.081-.089	.016±.003
11	.095	.101-.091	.016±.003
9	.118	.124-.114	.020±.003
8	.133	.129-.141	.020±.003
7	.148	.158-.144	.020±.003
6	.166	.162-.178	.020±.003
5	.186	.198-.182	.020±.003
4	.208	.204-.224	.020±.003
3	.234	.249-.229	.020±.003
2	.263	.258-.278	.020±.003
1	.294	.311-.289	.020±.003
0	.330	.347-.325	.020±.003
3/8"	.315	.3125-.334	.025±.003
3/8"	.375	.375-.399	.025±.003
1/2"	.438	.462-.438	.025±.003
1/2"	.500	.500-.524	.025±.003
3/4"	.562	.592-.562	.030±.003
3/4"	.625	.625-.655	.030±.005
3/4"	.750	.750-.186	.035±.005
7/8"	.875	.875-.911	.035±.005
1"	1.000	1.000-1.036	.035±.005
1 1/8"	1.125	1.125-1.161	.035±.005
1 1/4"	1.250	1.250-1.286	.040±.005
1 3/8"	1.375	1.375-1.411	.040±.005
1 1/2"	1.500	1.500-1.536	.045±.005
1 3/4"	1.750	1.812-1.750	.055±.008
2"	2.000	2.000-2.070	.060±.010
2 1/4"	2.250	2.250-2.330	.065±.010
2 1/2"	2.500	2.500-2.590	.070±.010



**PROPERTIES OF DAFLEX-105 TUBING**

Recommended for Temperatures to 105°C

Low Temperature Flexibility to -30°C

Dielectric Strength — .020" Wall 800 V/MIL

Dielectric Constant 6.0

Tensile Strength — Min. (PSI) 2700

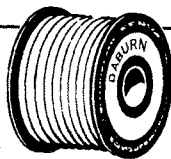
Ultimate Elongation 300%

Oil Resistance Excellent

Fungus Resistance Excellent

Flammability Self Extinguishing

ALL THE ABOVE TUBING CAN BE ORDERED CUT AND MARKED TO YOUR SPECIFICATIONS



**DAFLEX VINYL COATED FIBERGLASS TUBING 130°C**  
MEETS MIL-I-3190B SPECS (ASTM, NEMA GRADE B-B-1)

DAFLEX 130 is recommended for continuous temperatures up to 130°C. Constructed to provide a tough, flexible, heat resistant tubing. Made from an inorganic fiberglass base sleeving with heat resistant plastic coating, extremely flexible tough plastic insulation. Will not support combustion. Meets MIL-I-3190B, NEMA VSI ASTM D372.



DABURN Cat. No.	Size	Nom. I.D.	Specify Std. Length, Spool or Coil
889	24	.022"	—, —, 100', 1000'
890	22	.027"	—, —, 100', 1000'
891	20	.034"	30", 25', 100', 1000'
893	18	.042"	30", 25', 100', 1000'
894	16	.053"	30", 25', 100', 1000'
895	14	.066"	30", 25', 100', 500'
800	12	.085"	30", 25', 100', 500'
807	10	.106"	30", 20', 100', 500'
801	8	.135"	30", 15', 100', 500'
802	6	.166"	30", 10', 100', 250'
805	4	.208"	30", 10', 100', 250'
806	2	.263"	30", 10', 100', 250'
803	3/8"	.3125"	36", —, 100', —
804	3/8"	.375"	36", —, 100', —
899	1/2"	.500"	36", —, 100', —
896	5/8"	.625"	36", —, 100', —

**COLORS AVAILABLE FROM STOCK**

#24 thru #2: Black, Red, Green, Yellow, Brown, Blue. 3/8" thru 1": Black.

**DIMENSIONAL TOLERANCES OF VINYL COATED FIBERGLASS DAFLEX 130**

Size	N.E.M.A. Approx. Tolerances I.D. Inches
24	.022-.027
22	.027-.032
20	.034-.039
18	.042-.049
16	.053-.061
14	.066-.072
12	.085-.089
10	.106-.112
8	.133-.141
6	.166-.178
3/8, 4	.208-.224
1/2, 2	.263-.278
3/8	.3125-.328
3/8	.375-.399
1/2	.500-.524
5/8	.625-.655

**PROPERTIES OF DAFLEX 130 VINYL COATED FIBERGLASS**

Recommended for Temperatures to 130°C

Max. Low Temperature Flexibility -20°C

Dielectric Strength 4000 V/MIL

Dielectric Constant 7.0

Tensile Strength — Min. (PSI) 1500

Ultimate Elongation 350%

Will not support Combustion, Abrasion, Oil, Chemical Corrosion Resistance Excellent

Fungus Resistance Good

Gamma Radiation Dosage to 25% 10<sup>5</sup>

Degradation ERGS/GRAM Color Stability even on Prolonged Baking at Elevated Temperatures

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**  
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**DAFLON TEFLON® SPAGHETTI TUBING**

Daflon 500 and 550 tubing is extruded from Dupont tetrafluoroethylene resin and is unmatched by any other tubing for use in applications for hi frequencies and hi temperatures. Rated for continuous operation of 250°C it retains its toughness and flexibility thruout. Has high resistance to fatigue and stresses. Will not shrink back during soldering operation. Non-flammable, flexible, it permits miniaturization of design and compactness. Lowest coefficient of friction. Inert to all fungus growth. Conforms to MIL-I-22129C Spec.

**TABLE OF PROPERTIES**

Test	ASTM Method	Result
Tensile Strength, 73°F.	D638-52T	1500-300 Lb./Sq. In.
Elongation, 73°F.	D638-52T	100-200%
Deformation Under Load—122°F. 1200 Lb./Sq. In., 24 Hrs. 2000 Lb./Sq. In., 24 Hrs.	D621-51 D621-51	4-8% 25%
Hardness Durometer	D676-49T	D50-D65
Heat Distortion Temp., 6 Lb./Sq. In.	D648B-45T	250°C
Dielectric Strength, .080"	D149-44	400-500 V/MIL
Surface Arc-Resistance	D495-48T	Sec.
Volume Resistivity	D257-52T	10 <sup>15</sup> Ohm-CM
Surface Resistivity, 100% R.H.	D257-52T	3.6x10 <sup>4</sup> Megohms
Dielectric Constant, 60 to 10 <sup>8</sup> Cycles	D150-54T	2.00
Power Factor, 60 to 10 <sup>8</sup> Cycles	D150-54T	0.0003
Specific Gravity	D792-50	2.1-2.2

**DAFLON THIN WALL TEFLON® TUBING (DTT-500)**

DAFLON No.	Size	Nom. I.D.	Nom. Wall Thickness	Specify Std. Put-Up Spool or Coil
DTT 500-32	32	.011"	.0085"	100', 500', 1000'
DTT 500-30	30	.012"	.009"	100', 500', 1000'
DTT 500-28	28	.015"	.009"	100', 500', 1000'
DTT 500-26	26	.018"	.010"	100', 500', 1000'
DTT 500-24	20	.022"	.010"	25', 50', 100', 500', 1000'
DTT 500-22	22	.027"	.010"	25', 50', 100', 500', 1000'
DTT 500-20	20	.034"	.012"	25', 50', 100', 500', 1000'
DTT 500-19	19	.038"	.012"	100', 500', 1000'
DTT 500-18	18	.042"	.012"	25', 50', 100', 500', 1000'
DTT 500-17	17	.047"	.012"	100', 500', 1000'
DTT 500-16	16	.053"	.012"	25', 50', 100', 500', 1000'
DTT 500-15	15	.059"	.012"	100', 500', 1000'
DTT 500-14	14	.066"	.012"	25', 50', 100', 500', 1000'
DTT 500-13	13	.076"	.012"	100', 500', 1000'
DTT 500-12	12	.085"	.012"	25', 50', 100', 500', 1000'
DTT 500-11	11	.095"	.012"	100', 500', 1000'
DTT 500-10	10	.106"	.012"	25', 50', 100', 500', 1000'
DTT 500-9	9	.118"	.015"	100', 500', 1000**
DTT 500-8	8	.133"	.015"	25', 50', 100', 500', 1000**
DTT 500-7	7	.148"	.015"	100', 500', 1000**
DTT 500-6	6	.166"	.015"	25', 50', 100', 500', 1000**
DTT 500-5	5	.186"	.015"	100', 500', 1000**
DTT 500-4	4	.208"	.015"	25', 50', 100', 500', 1000**
DTT 500-3	3	.234"	.015"	100', 500', 1000**
DTT 500-2	2	.263"	.015"	25', 50', 100', 500', 1000**
DTT 500-1	1	.294"	.015"	100', 500', 1000**
DTT 500-0	0	.330"	.015"	25', 50', 100', 500', 1000**
DTT 500-3/8	3/8	.390"	.020"	50', 100**
DDT 500-1/2	1/2	.453"	.020"	50', 100**
DTT 500-1/2	1/2	.515"	.025"	25', 50', 100**
DTT 500-5/8	5/8	.583"	.025"	25', 50', 100**
DTT 500-3/4	3/4	.640"	.030"	25', 50', 100**
DTT 500-7/8	7/8	.765"	.030"	25', 50', 100**
DTT 500-1	1	1.025"	.030"	25', 50', 100**
DTT 500-1 1/8	1 1/8	1.150"	.030"	25', 50', 100**
DTT 500-1 1/4	1 1/4	1.275"	.030"	25', 50', 100**

\*Random Lengths in Coils.  
STOCK COLORS AVAILABLE: Natural, Red, Black, Yellow, Blue, Brown, Green, Orange, Gray, Violet, White.  
If no color is specified, natural will be supplied.

**SMALL PIECE CUTTING AVAILABLE TO ORDER**

STOCK COLORS: Natural, Red, Black, Blue, Brown, Green, Orange, Yellow, Gray, Violet, White.  
Nos. DTT500-3/8 thru 1 1/4" available in Natural. Additional Colors, Sizes Made to Order.  
Teflon Tubing can be ordered cut to your specifications.

Tracer Colors Available



We Invite Your Inquiries For Your Special Requirements.

**WIRE — CABLE — TUBING DIVISION**

**PROPERTIES OF DAFLON 500 & 550 TEFLON TUBING**

Continuous Service to .....	250°C
Low Temperature Flexibility .....	-90°C
Dielectric Strength	
Color Stability	
Dielectric Constant .....	2.0
Dielectric Strength. ....	500 to 1000 V/MIL
Fungus, Oil, Chemical Corrosion .....	Completely Inert

**DAFLON STANDARD WALL TEFLON® TUBING (DTT-550)**

FOR USE WHERE GREATER MECHANICAL STRENGTH IS INDICATED

DAFLON No.	Nom. Size	Nom. I.D.	Nom. Wall Thickness	Std. Put-Up Spool or Co
DTT 550-24	24	.022"	.012"	100'
DTT 550-22	22	.027"	.012"	100'
DTT 550-20	20	.034"	.016"	100'
DTT 550-19	19	.038"	.016"	100'
DTT 550-18	18	.042"	.016"	100'
DTT 550-17	17	.047"	.016"	100'
DTT 550-16	16	.053"	.016"	100'
DTT 550-15	15	.059"	.016"	100'
DTT 550-14	14	.066"	.016"	100'
DTT 550-13	13	.076"	.016"	100'
DTT 550-12	12	.085"	.016"	100'
DTT 550-11	11	.095"	.016"	100'
DTT 550-10	10	.106"	.016"	100'
DTT 550-9	9	.118"	.020"	100**
DTT 550-8	8	.133"	.020"	100**
DTT 550-7	7	.148"	.020"	100**
DDT 550-6	6	.166"	.020"	100**
DTT 550-5	5	.186"	.020"	100**
DTT 550-4	4	.208"	.020"	100**
DTT 550-3	3	.234"	.020"	100**
DTT-550-2	2	.263"	.020"	100**
DTT 550-1	1	.294"	.020"	100**
DTT 550-0	0	.330"	.020"	100**

STOCK COLORS: Natural  
Available All Other Colors.  
\*Random Lengths in Coils  
Made from Hi Molecular Weight Virgin "TEFLON."



**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**DAFLEX - DAFLOX HEAT SHRINKABLE TUBING**

**IRRADIATED POLYOLEFIN TUBING**

Shrinkage Ratio: 2:1 (50%)

DAFLEX SH-275 (colored) and SH-270 (clear) Series are an irradiated, thermally stable Class B (130°C) material extruded from specially formulated polymers. Comes thru in expanded sizes. It insulates, jackets, splices, encapsulates, weatherproofs components, connectors, cables or other irregular shapes.

When exposed to heat (235°F) the tubing shrinks 50% in diameter, 5% longitudinal contraction, forming a tough, smooth insulating covering with excellent chemical and oil resistant properties and electrical characteristics. Meets or exceeds requirements of MIL-I-23053 (WEP) Class I.

Colored DAFLEX SH-275	Clear DAFLEX SH-270	As Supplied I.D. AWG	Expanded I.D.	Recovered I.D.	Recovered Nom. Wall	Standard Package
SH-275- $\frac{1}{32}$ "	SH-270- $\frac{1}{32}$ "	22-20	.063"	.031"	.016"	100', 250'
SH-275- $\frac{3}{64}$ "	SH-270- $\frac{3}{64}$ "	18-16	.093"	.046"	.020"	100', 250'
SH-275- $\frac{1}{16}$ "	SH-270- $\frac{1}{16}$ "	14	.125"	.062"	.020"	100', 250'
SH-275- $\frac{3}{32}$ "	SH-270- $\frac{3}{32}$ "	12-10	.187"	.093"	.020"	100', 250'
SH-275- $\frac{1}{8}$ "	SH-270- $\frac{1}{8}$ "	8	.250"	.125"	.025"	100', 250'

Colored DAFLEX SH-275	Clear DAFLEX SH-270	As Supplied I.D. AWG	Expanded I.D.	Recovered I.D. Max.	Nom. Wall Recovered	Standard Package
SH-275- $\frac{1}{32}$ "	SH-270- $\frac{1}{32}$ "	6	.312"	.156"	.025"	100', 250'
SH-275- $\frac{3}{16}$ "	SH-270- $\frac{3}{16}$ "	4	.375"	.187"	.025"	100', 250'
SH-275- $\frac{1}{4}$ "	SH-270- $\frac{1}{4}$ "	2	.500"	.250"	.025"	100'
SH-275- $\frac{3}{8}$ "	SH-270- $\frac{3}{8}$ "	$\frac{3}{8}$	.750"	.375"	.030"	100'
SH-275- $\frac{1}{2}$ "	SH-270- $\frac{1}{2}$ "	$\frac{1}{2}$	1.000"	.500"	.035"	100'

Order by Cat. No. and I.D. AWG Size • SH-275 STOCK COLORS: Black, White, Red. • SH-270 STOCK COLOR: Clear.

**SPECIFICATIONS**

All Tests Made on Tubing in Recovered Dimension

Continuous Operating Temperature	135°C
Longitudinal Change	5% Max.
Tensile Strength	1500 PSI Min.
Ultimate Elongation	200% Min.
Special Gravity	1.29 Max. (SH-270) 1.01 Max.
Low Temperature Flexibility (-54°C)	No Cracking No Cracking
Shrinkage Ratio	2:1 (50%) 2:1 (50%)

Dielectric Strength	500 V/MIL Min.	500 V/MIL Min
Dielectric Constant	2.87 Max.	2.47 Max.
Corrosive Resistance	Non-Corrosive	
Resistance to Soldering Iron	Excellent	
Fuel, Oil, Solvent, Acid, Alkali,		
Hydraulic Fluid Resistance	Excellent	

**HEAT SHRINKABLE TEFLON\* TUBING**

**DAFLOX SH-400 (FEP)**

Made with Modified TEFLON\* FEP will shrink over inserted objects upon exposure to moderate heat. Heretofore, many joints, parts, components, devices could not be protected because of hi temperature required for shrinkage; Can now use this FEP TEFLON\* which has a continuous service temperature of 400°F. Will shrink at 300°F. Supplied in natural color. Complete shrinkage at 350°F. Now, many heat sensitive products can use the permanent protection of TEFLON.\* Will not burn or support flame, long lengths available. Extruded.

DABURN No.	Size	I.D.	Min. Exp. I.D.	Max. I.D.	Wall Thickness
SH-400-24	24	.023"	.031"	.027"	.008"
SH-400-22	22	.028"	.036"	.032"	.008"
SH-400-20	20	.034"	.045"	.039"	.008"
SH-400-18	18	.042"	.060"	.049"	.008"
SH-400-16	16	.053"	.075"	.061"	.008"
SH-400-14	14	.066"	.092"	.072"	.009"
SH-400-12	12	.085"	.115"	.089"	.009"
SH-400-10	10	.108"	.141"	.114"	.010"
SH-400-9	9	.118"	.158"	.124"	.010"
SH-400-8	8	.136"	.180"	.143"	.010"
SH-400-7	7	.148"	.197"	.158"	.011"
SH-400-6	6	.170"	.225"	.180"	.011"
SH-400-5	5	.186"	.248"	.198"	.011"
SH-400-4	4	.214"	.290"	.226"	.011"
SH-400-3	3	.234"	.310"	.249"	.011"
SH-400-2	2	.268"	.365"	.280"	.012"
SH-400-1	1	.294"	.400"	.311"	.012"
SH-400-0	0	.366"	.440"	.349"	.012"
SH-400- $\frac{3}{8}$ "	$\frac{3}{8}$ "	.375"	.500"	.383"	.015"
SH-400- $\frac{1}{4}$ "	$\frac{1}{4}$ "	.437"	.580"	.448"	.020"
SH-400- $\frac{1}{2}$ "	$\frac{1}{2}$ "	.500"	.666"	.510"	.020"
SH-400- $\frac{5}{8}$ "	$\frac{5}{8}$ "	.625"	.830"	.637"	.025"
SH-400- $\frac{3}{4}$ "	$\frac{3}{4}$ "	.750"	1.000"	.764"	.030"
SH-400- $\frac{7}{8}$ "	$\frac{7}{8}$ "	.875"	1.170"	.891"	.035"
SH-400-1"	1"	1.000"	1.330"	1.020"	.035"

STANDARD PACKAGE: 100 Ft. \* DUPONT

Daburn No. HG2 — Heat Gun for SH-275 and SH-270 Series.

**DAFLOX SHRINK SERIES SH-621**

TFE TUBING MIL-I-23053 (WEP) Class 2

DAFLOX No.	Nominal Tubing Size	Minimum Expanded ID	Maximum ID (1)	Recovered Dimensions Wall Thickness (2)
SH-621-26	26	.046"	.022"	.009"
SH-621-24	24*	.050"	.027"	.010"
SH-621-22	22*	.055"	.032"	.010"
SH-621-20	20*	.060"	.039"	.012"
SH-621-19	19	.065"	.043"	.012"
SH-621-18	18*	.076"	.049"	.012"
SH-621-17	17	.085"	.054"	.012"
SH-621-16	16*	.093"	.061"	.012"
SH-621-15	15	.110"	.067"	.012"
SH-621-14	14*	.120"	.072"	.012"
SH-621-13	13	.140"	.080"	.012"
SH-621-12	12*	.150"	.089"	.012"
SH-621-11	11	.170"	.101"	.012"
SH-621-10	10*	.191"	.112"	.012"
SH-621-9	9	.205"	.124"	.015"
SH-621-8	8*	.240"	.141"	.015"
SH-621-7	7	.270"	.158"	.015"
SH-621-6	6*	.302"	.178"	.015"
SH-621-5	5	.320"	.198"	.015"
SH-621-4	4*	.348"	.224"	.015"
SH-621-3	3	.360"	.249"	.015"
SH-621-2	2*	.375"	.278"	.015"
SH-621-1	1	.385"	.311"	.015"
SH-621-0	0*	.400"	.347"	.015"
SH-621- $\frac{3}{8}$ "	$\frac{3}{8}$ "*	.560"	.399"	.020"
SH-621- $\frac{1}{4}$ "	$\frac{1}{4}$ "*	.655"	.462"	.020"
SH-621- $\frac{1}{2}$ "	$\frac{1}{2}$ "*	.750"	.524"	.020"

STANDARD PACKAGE: 100 Feet.

STANDARD PUT-UP: 36' Straight Lengths — One Foot Minimums.

WALL TOLERANCES: 26 thru 22 ± .002; 20 thru 10 ± .003; 9 thru 0 ± .004.

(1) Tubing made to Military Standards for American Wire Gages will return within the tolerances for that gage number.

(2) Nominal wall thickness after heating. Expanded wall thickness will be 20% to 30% less.

(\*) Stock Sizes.

Daburn No. HG3 — Heat Gun for SH-400 and SH-621 Series.



**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**  
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**TUBULAR BRAID PER MIL SPEC QQ-B-575**

Tinned copper shielded braid m'fd completely round per Mil Spec QQ-B-575. Maintains its round configuration. Shielding coverage is 95% or more. Used in military applications where maximum shielding is required against electrostatic interference. Useful against mechanical abrasion and stresses for cables — as grounding cable.

DABURN No.	Nom. Inside Diam. When Rounded	Construction Total No. of Wires	Carriers	AWG of Indiv. Wires	Approx. AWG Equiv.	Nom. Circular Mills	*Current Carrying Cap.
2350-1/32	1/32"	24	24	#36	#22	640	7.0 amps.
2350-1/16	1/16"	48	24	#36	#19	1,290	11.0 amps.
2350-5/64	5/64"	72	24	#36	#17	1,900	18.0 amps.
2350-7/64	7/64"	96	24	#36	#16	2,500	22.0 amps.
2350-1/8	1/8"	120	24	#36	#15	3,260	28.0 amps.
2350-5/32	5/32"	240	24	#36	#12	6,200	39.0 amps.
2350-11/64	11/64"	168	24	#36	#14	4,500	32.0 amps.
2350-3/16	3/16"	192	24	#36	#13	5,100	35.0 amps.
2350-13/64	13/64"	312	24	#36	#11	8,200	46.0 amps.
2350-1/4	1/4"	384	24	#36	#10	10,400	53.0 amps.
2350-9/32	9/32"	120	24	#30	#9	12,060	60.0 amps.
2350-3/8	3/8"	384	48	#36	#10	10,400	53.0 amps.
2350-7/16	7/16"	240	24	#30	#6	24,120	90.0 amps.
2350-1/2	1/2"	528	48	#36	#9	13,200	70.0 amps.
2350-9/16	9/16"	528	48	#36	#9	13,200	70.0 amps.
2350-11/16	11/16"	720	48	#36	#7	19,000	82.0 amps.
2350-25/32	25/32"	864	48	#36	#7	21,750	85.0 amps.
2350-13/16	13/16"	864	48	#36	#7	21,750	85.0 amps.
2350-7/8	7/8"	336	48	#30	#5	33,700	100.0 amps.
2350-1	1"	384	48	#30	#4	38,600	120.0 amps.
2350-11/8	1 1/8"	432	48	#30	#4	43,330	130.0 amps.
2350-1 1/4	1 1/4"	480	48	#30	#3	48,150	145.0 amps.
2350-1 3/8	1 3/8"	528	48	#30	#3	53,000	150.0 amps.
2350-1 1/2	1 1/2"	576	48	#30	#2	57,775	165.0 amps.

STANDARD SPOOL PUT-UP: 50 Ft., 100 Ft., 250 Ft.  
Larger Spools Available — Advise.

\*Values based on copper in free air at 65°F.  
Additional constructions and variations made to order. Also available in silver plated copper, bare copper and stainless steel.

**BARE COPPER WIRE (Soft Drawn)**  
QQ-W-341A SPECIFICATIONS  
SOLID

DABURN No.	Size AWG	Area Circular Mills	O.D.
2375/8	8	16,510	.1285"
2375/10	10	10,380	.102"
2375/12	12	6,530	.081"
2375/14	14	4,107	.064"
2375/16	16	2,583	.051"

STANDARD PUT-UP: 100 Ft., 1000 Ft.

**SOLID FORMVAR COPPER WIRE**

DABURN No.	Size AWG	O.D.
2380/10	10	.103"
2380/12	12	.083"
2380/14	14	.066"

STANDARD PUT-UP: 100 Ft., 150 Ft., 200 Ft., 1000 Ft.

**TINNED COPPER WIRE**

Pure Electrolytic, Copper, annealed, tinned for quick soldering—Solid Soft Drawn MIL—W—3861 Type S, ASTM—B—33 Specifications, QQ—W—343 Type S

DABURN No.	Size AWG	Area Circ. Mills	O.D.	DABURN No.	Size AWG	Area Circ. Mills	O.D.
2360/4	4	41,704	.204"	2360/18	18	1,624	.040"
2360/6	6	26,250	.162"	2360/20	20	1,022	.033"
2360/8	8	16,510	.129"	*2360/22	22	624.4	.025"
2360/10	10	10,380	.103"	*2360/24	24	404.0	.020"
2360/12	12	6,530	.082"	*2360/26	26	254.1	.016"
2360/14	14	4,107	.065"	*2360/28	28	159.8	.013"
2360/16	16	2,583	.051"	*2360/30	30	100.5	.010"

STANDARD PUT-UP: 100 Ft., 1000 Ft. See Magnet Wire Section For Additional Sizes

**JUMPER CABLE**

Pure Electrolytic, Copper, annealed, tinned for quick soldering MIL—W—3861 Type B, ASTM—B—33 Specifications

DABURN No.	Class Descr.	Size AWG	Strand	O.D.	DABURN No.	Class Descr.	Size AWG	Strand	O.D.
2384/22	K	22	7/30	.030"	2384/16	K	16	26/30	.059"
2384/20	K	20	10/30	.037"	2384/14	K	14	41/30	.073"
2384/18	K	18	16/30	.045"	2384/12	K	12	65/30	.091"

STANDARD PUT-UP: 1000 Ft.

**BUS BAR WIRE (Hard Drawn)**

QQ—W—343 Type S

For hooking up all types of transmitters, especially ultra short wave equipment. All bus wire is made of hard drawn copper, tinned, straightened, and cut in 2 ft. lengths.

MIL—W—3861 Types S, ASTM—B—33, ASTM—B—246—51 Specifications



DABURN No.	Nom. Circ. Mil Area	Size	Nom. O.D.
2362/10	10,380	10	.103"
2362/12	6,530	12	.082"
2362/14	4,107	14	.065"
2362/16	2,583	16	.051"
2362/18	1,642	18	.040"
2362/20	1,022	20	.033"
2362/22	624	22	.025"

STANDARD PUT-UP: 100 Per Package in two foot lengths.

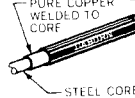
**SILICON BRONZE AERIAL WIRE**

Especially designed for ships, airports, short wave and transmitting antennas where high tensile strength and resistance to the elements are important.

DABURN No.	Size AWG	Strand	Breaking Strength	O.D.
2364/4	4	7/12	3670 lbs.	.240"
2364/6	6	7/14	2140 lbs.	.190"
2364/8	8	7/16	1600 lbs.	.150"
2364/10	10	7/18	1000 lbs.	.122"
2364/12	12	7/20	650 lbs.	.100"
2364/14	14	7/22	420 lbs.	.075"

STANDARD PUT-UP: 100 Ft., 500 Ft., 1000 Ft.  
2364/10 and 2364/6 meets MIL-W-13074, 2364/12 meets MIL-W-13276 Specs.

**COPPERWELD ANTENNA WIRE**



Used where high tensile strength is required as for short wave and transmitting aeriels. Has low R.F. resistance and is ideal for transmitting doublet and directional antennas. Will maintain frequency characteristics because of its stretch qualities. 40% conductivity.

DABURN No.	Size AWG	Tensile Strength	O.D.
2382/10	10	1130 lbs.	.103"
2382/12	12	720 lbs.	.082"
2382/14	14	400 lbs.	.065"

STANDARD PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft., 2500 Ft.

**STRANDED BARE COPPER WIRE**

DABURN No.	Size AWG	Strand	O.D.
2366/12	12	7/20	.100"
2366/14	14	7/22	.075"
2366/16	16	7/24	.060"
2366/18	18	7/26	.050"
2366/19	19	7/27	.041"

PUT-UP: 100 Ft., 1000 Ft. Spool.

**TINNED COPPER SHIELDING**



Soft annealed tinned copper woven braid, rolled flat at time of manufacture. It is extremely flexible. Used as battery grounding, bonding strap for aircraft, vehicles, marine equipment. Eliminates ignition interference and moving parts. Slides over wire and cables.

DABURN No.	Size of Wires	Indiv. Wires AWG	Flattened I.D.	Flattened O.D.
2355-1/32	12 x 2	36	1/32"	3/4"
2355-3/64	12 x 2	36	3/64"	1/16"
2355-1/16	16 x 3	36	1/16"	3/8"
2355-1/8	24 x 5	36	1/8"	3/32"
2355-3/16	24 x 5	36	3/16"	1/32"
2355-1/4	24 x 7	36	1/4"	3/32"
2355-3/8	48 x 4	36	3/8"	1/32"
2355-1/2	48 x 7	36	1/2"	1/32"
2355-5/8	48 x 8	36	5/8"	3/32"
2355-3/4	48 x 11	36	3/4"	1/16"
2355-7/8	48 x 19	36	7/8"	3/32"
2355-1	48 x 19	36	1"	1/16"
2355-1 1/8	48 x 19	36	1 1/8"	1/32"
2355-1 1/2	48 x 19	36	1 1/2"	1/16"
2355-1 3/4	48 x 27	30	1 3/4"	1/8"
2355-2	48 x 32	30	2"	2 1/4"
2355-2 1/4	48 x 35	30	2 1/4"	2 1/2"
2355-2 1/2	48 x 45	30	2 1/2"	2 3/4"
2355-3	48 x 64	30	3"	3 1/4"

STANDARD SPOOL PUT-UP: 50 Ft., 100 Ft., 500 Ft., 1000 Ft.

**DABURN****DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**NOW****BUILD YOUR OWN PRINTED CIRCUIT**with versatile **VERO** board\*

FOR INDUSTRY, GOV'T., SCHOOL USE  
FOR THE LAB, TECHNICIAN,  
EXPERIMENTER, RESEARCHER, DESIGNER

NOW make your own printed circuit board faster—cheaper with the versatile Daburn-Veroboard. There is no time lost. As easy as 1-2-3, you have a finished printed circuit. Components are easily inserted and soldered. Components can be added or removed — circuits modified or changed easily and quickly by using the Daburn-Veroboard, the spot face cutter and component jig.

Available from stock in two sizes. Boards can be cut easily by scoring to conform to your exact requirement.

DABURN-VEROBOARD NO.	SIZE OR TYPE	RESALE NET EA.
15-01	RE 1 BOARD 4.8" x 18"	7.95
15-02	RE 2 BOARD 4.8" x 5.8"	2.95

**ACCESSORIES**

15-11	DESIGN SHEETS	.75
15-12	SPOT FACE CUTTERS	1.95
15-13	COMPONENT JIG	1.75
15-14	NUMERICAL TAPE (1 TO 30) 36 YDS.	1.95
15-14A	NUMERICAL TAPE (1 TO 90) 36 YDS.	1.95
15-15	ALPHABETICAL TAPE 36 YDS.	1.95

STANDARD PKG. 6  
IN STOCK FOR IMMEDIATE SHIPMENT

**ALL YOU NEED IS—**

- **VEROBOARD** Available 4.8" x 18" and 4.8" x 5.8"

- **SPOT-FACE CUTTER—**

To break copperstrips and form a circuit.

- **DESIGN SHEET—**

Printed replica of the VEROBOARD for layout.

- **VERO COMPONENT JIG—**

Accurately forms component leads to fit VEROBOARD.

4.8 x 18 full inches — cut off the size you need. Good for 5 or more circuit boards.

Used by design engineers in 18 countries VEROBOARD gives you a finished printed circuit — not just a breadboard.

No expensive terminals and tools required — just insert components and solder.

Add or remove components — modify or change your circuits — FREELY!

Over 4000 holes and continuous parallel strips form the logical printed wiring board for all applications.

Ideal for any circuit-amplifiers, intercoms, IF, RF, transmitter, diode cards, experimental or transistor radio.

\*Patented

**TEST LEADS****ALLIGATOR CLIP TEST LEADS**

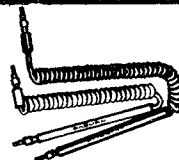
Black and red kinkless test lead wire with steel cadmium plated clips at each end.

DABURN No.	Wire Length	Pkg. Std.
17-275	12"	12
17-276	24"	12
17-277	36"	12
17-278	48"	12

**TEST LEADS****INSULATED ALLIGATOR CLIPS**

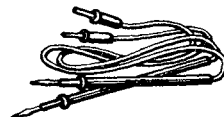
Black and red kinkless test lead wire with steel, cadmium plated clips; nyl plastic boot.

DABURN No.	Wire Length	Pkg. Std.
17-280	12"	12
17-281	24"	12
17-282	36"	12
17-283	48"	12

**TEST LEADS****RETRACTILE KINKLESS WIRE**

Black and red wire.

DABURN No.	Description	Std. Pkg.
17-364	Solderless Phone Tip, Retractable Wire, Solderless Prod	10

**TEST LEADS****NEEDLEPOINT AND SOLDERLESS**

Black and red kinkless test lead wire, handles as specified.

DABURN No.	Description	Std. Pkg.
17-308	Pencil Type Bakelite, 6" Handles	10
17-360	Deluxe Solderless Prod, 5" Handles	25
17-361	Deluxe Needlepoint Prod, 5" Handles	25
17-320	Needlepoint Prods, 4" Handles	25
17-322	Solderless Prods, 4" Handles	25

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**TYPE E — 600 VOLTS**  
**SPEC. MIL-W-16878D**  
**High Temperature Rating — 90°C to +250°C**

Single conductor, stranded silver plated copper, .010" TFE Teflon® insulation. Acid, alkalis, oil, flame, moisture, fungus, solvent resistant.

DABURN Extruded Cat. No.	DABURN Wrapped Cat. No.	Size MIL Type Designation	Strand	Max. Diam. Over Insul.
2401	—	E-32	7/40	.033"
2402	—	E-30	7/38	.036"
2403	2415/28	E-28	7/36	.039"
2404	2415/26	E-26	7/34	.043"
2405	2415/24	E-24	19/36	.048"
2406	2415/22	E-22	19/34	.054"
2407	2415/20	E-20	19/32	.062"
2408	2515/18	E-18	19/30	.074"
2409	—	E-16	19/29	.087"
2409/14	—	E-14	19/27	.097"
2409/12	—	E-12	19/25	.120"
2409/10	—	E-10	37/26	.139"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White. Additional special custom constructions available to order. Wrapped extruded with or without shielding, glass braid, silicone and in miniature multi-conductors. Price and delivery on request.

**TEFLON\* WIRE**  
**MIL-W-16878D — TYPE EE**  
**Extruded (1000 Volts) MIL-W-16878D**

DESCRIPTION: Single conductor silver plated copper wire concentrically stranded and insulated with .016 TFE extruded TEFLON\* insulation.

TEMPERATURE RATING: —90°C to +260°C, 1000 volts.

DABURN Cat. No.	Mil Type Designation	Size AWG	Strand	Nom. O.D.
2428/24	EE-24	24	19/36	.055"
2428/22	EE-22	22	19/34	.062"
2428/20	EE-20	20	19/32	.070"
2428/18	EE-18	18	19/30	.080"
2428/16	EE-16	16	19/29	.089"
2428/14	EE-14	14	19/27	.106"
2428/12	EE-12	12	19/25	.124"
2428/10	EE-10	10	37/26	.145"
2428/8	EE-8	8	133/29	.210"

STANDARD SPOOL PUT-UP: 250 Ft., 500 Ft., 1000 Ft.

STOCK COLORS: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow, 6—Blue, 7—Brown, 8—Orange, 9—Gray (Slate), 10—Violet (Purple). \*TEFLON—Dupont

**MIL-W-7139B**

CLASS 1: 600V Silver Coated Copper Conductor for +200°C Operation.

CLASS 2: 600V Nickel Coated Copper Conductor for +260°C Operation.

DABURN Cat. No. Class 1	DABURN Cat. No. Class 2	Size AWG	Strand	Nom. O.D.
2426-22	2425-22	22	19/34	.085"
2426-20	2425-20	20	19/32	.095"
2426-18	2425-18	18	19/30	.110"
2426-16	2425-16	16	19/29	.130"
2426-14	2425-14	14	19/27	.143"
2426-12	2425-12	12	19/25	.163"

STANDARD SPOOL PUT-UPS: 500 Ft., 1000 Ft.

STANDARD COLOR: Class 1 — White/Blue Tracer; Class 2 — White/Orange Tracer.

ADDITIONAL SIZES AVAILABLE.

**SUBMINIATURE TEFLON\* HOOK-UP WIRE**  
**PER MIL-W-16878D — TYPE ET — 250 VOLTS, 200°C**

Thin miniature hook-up wire is suitable in miniature slip ring assemblies, as interconnecting wire between wafers in micro-miniature electronic circuitry, instrument wire, medical wire, subminiature thermo-couple lead wire, strain gauge wire, etc. Provides lighter weight, greater flexibility and hi temp. resistance. Size Nos. 32 thru 20 conform to MIL-W-16878D type ET 250 volts, 200°C. Silver plated copper conductor.

DABURN Cat. No.	Mil Type	AWG Size	Strand	Nom. O.D.
2427/36	—	36	7/44	.018"
2427/34	—	34	7/42	.020"
2427/32	ET-32	32	7/40	.021"
2427/30	ET-30	30	7/38	.024"
2427/28	ET-28	28	7/36	.027"
2427/26	ET-26	26	7/34	.031"
2427/24	ET-24	24	7/32	.036"
2427/22	ET-22	22	7/30	.042"
2427/20	ET-20	20	7/28	.049"

STANDARD SPOOL PUT-UPS: 500 Ft., 1000 Ft.

**TEFLON\* CABLES — Shielded and Unshielded**  
**TO MIL-W-16878D**

DESCRIPTION: One or more conductors, each conductor silver plated concentrically stranded copper wire, Type E Extruded TFE .010" insulation. When shielded, braided silver plated copper shield over conductor(s), 90% shield coverage. When covered, either a TEFLON\* impregnated fiberglass braid or a .010" TEFLON\* fused, double reversed tape jacket overall. Fungus, solvent, moisture, flame, acid, alkali and oil resistant. Multiconductors are twisted.

TEMPERATURE RATING: —65°C to +260°C.

VOLTAGE RATING: 600 Volts

**TEFLON\* IMPREGNATED BRAID OVER SHIELD**

Daburn No.	Conds.	AWG Size	Strand	Nom. O.D.	Daburn No.	Conds.	AWG Size	Strand	Nom. O.D.
2445	1	24	19/36	.081"	2447	1	20	19/32	.093"
2445/2	2	24	19/36	.126"	2447/2	2	20	19/32	.154"
2445/3	3	24	19/36	.133"	2447/3	3	20	19/32	.163"
2445/4	4	24	19/36	.144"	2447/4	4	20	19/32	.180"
2445/5	5	24	19/36	.156"	2447/5	5	20	19/32	.195"
2446	1	22	19/34	.088"	2448	1	18	19/30	.097"
2446/2	2	22	19/34	.137"	2448/2	2	18	19/30	.162"
2446/3	3	22	19/34	.144"	2448/3	3	18	19/30	.172"
2446/4	4	22	19/34	.158"	2448/4	4	18	19/30	.192"
2446/5	5	22	19/34	.172"	2448/5	5	18	19/30	.207"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow.

**TEFLON\* TAPE WRAP JACKET OVER SHIELD**

Daburn No.	Conds.	AWG Size	Strand	Nom. O.D.	Daburn No.	Conds.	AWG Size	Strand	Nom. O.D.
2455	1	24	19/36	.084"	2457	1	20	19/32	.099"
2455/2	2	24	19/36	.128"	2457/2	2	20	19/32	.158"
2455/3	3	24	19/36	.135"	2457/3	3	20	19/32	.167"
2455/4	4	24	19/36	.148"	2457/4	4	20	19/32	.184"
2455/5	5	24	19/36	.162"	2457/5	5	20	19/32	.204"
2456	1	22	19/34	.090"	2458	1	18	19/30	.109"
2456/2	2	22	19/34	.140"	2458/2	2	18	19/30	.178"
2456/3	3	22	19/34	.148"	2458/3	3	18	19/30	.189"
2456/4	4	22	19/34	.162"	2458/4	4	18	19/30	.208"
2456/5	5	22	19/34	.183"	2458/5	5	18	19/30	.230"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow.

**SHIELDED BRAID**

Daburn Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.	Daburn Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
2435	1	24	19/36	.068"	2437	1	20	19/32	.082"
2435/2	2	24	19/36	.112"	2437/2	2	20	19/32	.142"
2435/3	3	24	19/36	.120"	2437/3	3	20	19/32	.151"
2435/4	4	24	19/36	.132"	2437/4	4	20	19/32	.168"
2435/5	5	24	19/36	.140"	2437/5	5	20	19/32	.180"
2436	1	22	19/34	.075"	2438	1	18	19/30	.093"
2436/2	2	22	19/34	.124"	2438/2	2	18	19/30	.162"
2436/3	3	22	19/34	.132"	2438/3	3	18	19/30	.172"
2436/4	4	22	19/34	.146"	2438/4	4	18	19/30	.191"
2436/5	5	22	19/34	.154"	2438/5	5	18	19/30	.210"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow.

**NO SHIELD—TEFLON\* IMPREGNATED FIBERGLASS**

DABURN Cat. No.	Conds.	AWG Size	Strand	Nom. O.D.
2465	1	24	19/36	.044"
2465/2	2	24	19/36	.088"
2465/3	3	24	19/36	.096"
2465/4	4	24	19/36	.108"
2465/5	5	24	19/36	.116"
2466	1	22	19/34	.051"
2466/2	2	22	19/34	.100"
2466/3	3	22	19/34	.108"
2466/4	4	22	19/34	.122"
2466/5	5	22	19/34	.131"
2467	1	20	19/32	.058"
2467/2	2	20	19/32	.118"
2467/3	3	20	19/32	.127"
2467/4	4	20	19/32	.144"
2467/5	5	20	19/32	.156"
2468	1	18	19/30	.069"
2468/2	2	18	19/30	.138"
2468/3	3	18	19/30	.148"
2468/4	4	18	19/30	.167"
2468/5	5	18	19/30	.186"

STANDARD SPOOL PUT-UPS: 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow.

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**PLASTIC HOOK-UP WIRE  
TYPE B — HIGH TEMPERATURE VINYL  
SPECIFICATION MIL-W-16878D  
600 VOLT**

**DESCRIPTION:** One conductor stranded tinned copper with rated -55°C to +105°C high temperature thermoplastic light wall insulation.

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2500/32	B-32	32	7/40	.028"
2500/30	B-30	30	7/38	.030"
2500/28	B-28	28	7/36	.033"
2500/26	B-26	26	7/34	.037"
2500/24	B-24	24	7/32	.043"
2500/22	B-22	22	7/30	.048"
2500/20	B-20	20	7/28	.057"
2500/18	B-18	18	7/26	.067"
2500/16	B-16	16	19/29	.077"
2500/14	B-14	14	19/27	.091"

STD. PUT-UP: 100'-1000'.

**TYPE B — NYLON JACKET  
NYLON JACKET THICKNESS: 32-20 .002, 18-16 .003**

DABURN Cat. No.	Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2510/32	B-32	32	7/40	.032"
2510/30	B-30	30	7/38	.036"
2510/28	B-28	28	7/36	.039"
2510/26	B-26	26	7/34	.042"
2510/24	B-24	24	7/32	.047"
2510/22	B-22	22	7/30	.053"
2510/20	B-20	20	7/28	.065"
2510/18	B-18	18	7/26	.075"
2510/16	B-16	16	19/29	.085"
2510/14	B-14	14	19/27	.099"

STD. PUT-UP: 1000 Ft.

**STOCK COLORS:** Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple, White/Black, White/Red, White/Green, White/Blue, White/Brown, White/Yellow, White/Gray, White/Violet

**TYPE C — HIGH TEMPERATURE — VINYL JACKET  
SPECIFICATION MIL-W-16878D  
1000 VOLT**

**DESCRIPTION:** One conductor similar to Type B—heavier wall hi-temp thermoplastic insulation Nom. wall .016".

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Minimum Strand	Nom. O.D.
2515/24	C-24	24	7/32	.058"
2516	C-24	24	16/36	.059"
2515/22	C-22	22	7/30	.064"
2515/20	C-20	20	7/28	.079"
2515/18	C-18	18	7/26	.090"
2515/16	C-16	16	19/29	.099"
2515/14	C-14	14	19/27	.114"
2515/12	C-12	12	19/25	.135"

**TYPE C — NYLON JACKET**

NYLON JACKET THICKNESS: 24 .002, 22-18 .003, 16-14 .004

DABURN Cat. No.	Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2520/24	C-24	24	7/32	.065"
2520/22	C-22	22	7/30	.064"
2520/20	C-20	20	7/28	.079"
2520/18	C-18	18	7/26	.090"
2520/16	C-16	16	19/29	.099"
2520/14	C-14	14	19/27	.114"
2520/12	C-12	12	19/25	.135"

**STOCK COLORS:** Black, Red, Brown, Blue, Orange, White, Yellow, Green, Gray, Purple. Also available in tracer colors. Additional types available to order.  
STD. PUT-UP: 100 Ft.-1000 Ft.

**TYPE D — HIGH TEMPERATURE — VINYL — 3000 VOLTS  
SPECIFICATION MIL-W-16878D**

**DESCRIPTION:** One conductor stranded similar to Type C—heavier wall hi-temp thermoplastic insulation. Nom. wall 24 thru 14 .032, 12 thru 6 .040.

DABURN Cat. No.	Mil-W-16878D Type Designation	Size AWG	Conductor Strand	Nom. O.D.
2525/24	D-24	24	7/32	.084"
2525/22	D-22	22	7/30	.089"
2525/20	D-20	20	10/30	.097"
2525/18	D-18	18	16/30	.107"
2525/16	D-16	16	26/30	.116"
2525/14	D-14	14	41/30	.130"
2525/12	D-12	12	65/30	.163"
2525/10	D-10	10	105/30	.182"
2525/8	D-8	8	133/29	.247"
2525/6	D-6	6	133/27	.291"

MIL-W-16878B Type D Available with Nylon Jacket.  
STD. PUT-UP: 100 Ft.-1000 Ft.

ALL WIRES ON THIS PAGE CAN BE ORDERED CUT AND STRIPPED TO YOUR SPECIFICATIONS.

**PLASTIC HOOK-UP WIRE (Medium Wall)**

1000 VOLTS (Fungus Proof)  
SPEC. MIL-W-76B

TEMP. RATING: -40°C to +80°C.

**STRANDED**

DABURN Cat. No.	Spool	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Nom. O.D.
2555/24	1000'	24	MW-C 24(7)U	7/32	.015"	.059"
2556	1000'	24	MW-C 24(16)U	16/36	.015"	.059"
*2555/22	1000'	22	MW-C 22(7)U	7/30	.017"	.065"
†2555/20	1000'	20	MW-C 20(10)U	10/30	.017"	.074"
†2555/18	1000'	18	MW-C 18(16)U	16/30	.017"	.085"
2555/16	1000'	16	MW-C 16(26)U	26/30	.017"	.096"
2555/14	1000'	14	MW-C 14(41)U	41/30	.017"	.110"
2555/12	1000'	12	MW-C 12(65)U	65/30	.017"	.130"

**SOLID**

DABURN Cat. No.	Spool	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Nom. O.D.
2560/22	1000'	22	MW-C 22(1)U	1	.017"	.060"
2560/20	1000'	20	MW-C 20(1)U	1	.017"	.066"
2560/18	1000'	18	MW-C 18(1)U	1	.017"	.074"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**STOCK COLORS:** White, Yellow, Lt. Blue, Black, Violet (purple), Blue, Brown, Lt. Green, Pink, Red, Green, Tan, Orange, Gray (slate).

\*SINGLE SPIRAL TRACER COLORS AVAILABLE: White/Black, White/Brown, White/Red, White/Orange, White/Yellow, White/Green, White/Blue, White/Purple, White/Gray.  
†DOUBLE SPIRAL TRACER COLORS AVAILABLE: White/Black/Red, White/Black/Green, White/Black/Yellow, White/Black/Blue, White/Black/Brown, White/Black/Orange, White/Black/Gray, White/Black/Purple.

Additional spiral tracer combination available, to order, for all numbers

**1000 VOLT — NYLON JACKET (Medium Wall)**

SPEC. MIL-W-76B TYPE MW  
(Fungus Proof)

**DESCRIPTION:** One conductor stranded tinned copper with thermoplastic insulation and extruded nylon jacket overall.

TEMPERATURE RATING: -40°C to +90°C.

DABURN Cat. No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. Wall	Nom. O.D.
2565/24	24	MW-C 24(16)J	16/36	.015"	.068"
2565/22	22	MW-C 22(7)J	7/30	.017"	.075"
2565/20	20	MW-C 20(10)J	10/30	.017"	.087"
2565/18	18	MW-C 18(16)J	16/30	.017"	.100"
2565/16	16	MW-C 16(26)J	26/30	.017"	.122"
2565/14	14	MW-C 14(41)J	41/30	.017"	.122"
2565/12	12	MW-C 12(65)J	65/30	.017"	.140"
2565/10	10	MW-C 10(105)J	105/30	.045"	.240"

STD. PUT-UP: 100 Ft.-1000 Ft.

NYLON JACKET THICKNESS: #24 .002; 22, 20, 18 .003; 16, 14 .004; 12 .005; 10 .007.

**STOCK COLORS:** White, Orange, Purple, Black, Yellow, Gray, Brown, Green, Red, Blue, White/Black, White/Brown, White/Red, White/Orange, White/Yellow, White/Green, White/Blue, White/Purple, White/Gray, White/Black/Red, White/Black/Yellow, White/Black/Blue, White/Black/Green, White/Black/Orange, White/Black/Brown, White/Black/Gray.

Nos. 2565/12 and /10 available solid colors only.

**1000 VOLTS GLASS BRAID (Medium Wall) TYPE MW**

SPEC. MIL-W-76B

**DESCRIPTION:** One conductor stranded tinned copper with thermoplastic insulation and lacquered glass braid overall.

TEMPERATURE RATING: -40°C to +80°C.

NOM. WALL: .017"

DABURN Cat. No.	Spool	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
2570/22	100'-1000'	22	MW-C 22(7)B	7/30	.079"
2570/20	100'-1000'	20	MW-C 20(10)B	10/30	.084"
2570/18	100'-1000'	18	MW-C 18(16)B	16/30	.100"
2570/16	100'-1000'	16	MW-C 16(26)B	26/30	.116"
*2570/14	100'-1000'	14	MW-C 14(41)B	41/30	.129"
*2570/12	100'-1000'	12	MW-C 12(65)B	65/30	.149"

**STOCK COLORS:** White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White/Brown, White/Black, White/Orange, White/Yellow, White/Green, White/Blue, White/Red, White/Gray, White/Purple, White/Black/Red, White/Black/Yellow, White/Black/Blue, White/Black/Green, White/Black/Orange, White/Black/Brown, White/Black/Gray. \*Nos. 2570/14 and /12, available stock in solid colors.

**GLASS BRAID — TYPE HW (Heavy Wall)**

TEMPERATURE RATING: -40°C to +80°C.

NOM WALL: .045"

DABURN Cat. No.	Spool	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
2575/10	100'-1000'	10	HW-C 10(105)B	105/30	.237"
2575/8	100'-1000'	8	HW-C 8(133)B	133/29	.293"
2575/6	100'-1000'	6	HW-C 6(133)B	133/27	.340"

**STOCK COLORS:** White, Black. Also multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.

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**2500 VOLTS (Fungus Proof) — TYPE HW (Heavy Wall)**

SPEC. MIL-W-76B

600 VOLTS SIZES — 14 through 6 — (Supersedes Jan-C-76 Type SRHV) — TEMP. RATING — 40°C to 80°C.  
NOM. WALL SIZE: — 22 through 16 .033; Size 14 through 6 .045

DESCRIPTION: Similar to type MW. One conductor stranded tinned copper with larger walls of primary thermoplastic insulation to take 2500 V RMS.

DABURN No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
2580/22	22	HW-C 22( 7)U	7/30	.105"
2580/20	20	HW-C 20(10)U	10/30	.112"
2580/18	18	HW-C 18(16)U	16/30	.122"
2580/16	16	HW-C 16(26)U	26/30	.135"
2580/14	14	HW-C 14(41)U	41/30	.175"

DABURN No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
2580/12	12	HW-C 12( 65)U	65/30	.195"
2580/10	10	HW-C 10(105)U	105/30	.217"
2580/8	8	HW-C 8(133)U	133/29	.268"
2580/6	6	HW-C 6(133)U	133/27	.315"

STD. PUT-UP: 100-1000 Ft.

STOCK COLORS: White, Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, Additional sizes, colors available to order.

**300 VOLTS — TYPE LW (Light Wall)**

SPEC. MIL-W-76B

DESCRIPTION: One conductor stranded tinned copper with light wall of primary thermoplastic insulation. Nom. Wall .010".

TEMPERATURE RATING: — 40°C to +80°C.

DABURN No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
2585/30	30	LW-C 30( 7)U	7/38	.033"
2585/28	28	LW-C 28( 7)U	7/36	.035"
2585/26	26	LW-C 26(10)U	10/36	.040"
2585/24	24	LW-C 24( 7)U	7/32	.044"
2585/22	22	LW-C 22( 7)U	7/30	.050"
2585/20	20	LW-C 20( 7)U	7/28	.060"

DABURN No.	Size AWG	Mil-W-76B Type Designation	Conductor Strand	Nom. O.D.
2590/30	30	LW-C 30(7)J	7/38	.036"
2590/28	28	LW-C 28(7)J	7/36	.039"
2590/26	26	LW-C 26(7)J	7/34	.042"
2590/24	24	LW-C 24(7)J	7/32	.047"
2590/20	20	LW-C 22(7)U	7/30	.053"
2590/22	22	LW-C 20(7)U	7/28	.065"

**1000 VOLTS — TYPE C — SHIELDED**

SPEC. MIL-W-16878D

DESCRIPTION: Stranded tinned copper, .061" wall white polyvinylchloride insulation, braided tinned copper shield overall temp. rating — 55°C to +105°C 1000 volts.

DABURN No.	Size AWG	Min. Strand	Nom. Wall	Nom. O.D.
2530/24	24	7/32	.016"	.075"
2530/22	22	7/30	.016"	.085"
2530/20	20	7/28	.016"	.095"
2530/18	18	7/26	.016"	.105"
2530/16	16	19/26	.016"	.115"

STD. PUT-UP: 1000 Ft.

**1000 VOLTS — TYPE C**

SHIELDED WITH VINYL JACKET — SPEC. MIL-W-16878D

DESCRIPTION: Stranded tinned copper, .016" wall white with polyvinylchloride insulation braided tinned copper shield with polyvinylchloride jacket overall. Resistant to acids, oils, alkalies, flame, fungus, solvents, moisture. Temp. rating — 55°C to +105°C.

DABURN No.	Size AWG	Min. Strand	Nom. Wall	Nom. O.D.
2535/24	24	7/32	.016"	.094"
2535/22	22	7/30	.016"	.104"
2535/20	20	7/28	.016"	.112"
2535/18	18	7/26	.016"	.120"
2535/16	16	19/29	.016"	.133"

STD. PUT-UP: 1000 Ft.

**DABURN COAXIAL CABLES  
WITH HIGH TEMPERATURE TEFLON\* CORE DIELECTRIC  
MEETS MIL-C-17C**

These Teflon\* Core Dielectric Co-Axial Cables combine both miniaturization and hi-temperature qualities. The Teflon Jackets are weatherproof, resistant to fuels and are extremely flexible.

DABURN No.	Military Number RG/U Type	Ohms	Jkt. Mtl.	Cap. MMFT./Ft.	Dielectric Material	Inner Conductor	Shield	O.D. Inches	Max. Oper. Volts RMS	Nom. Atten. DB/100Ft. 400 Mc	RG/U Type
D187A/U	187A/U	75	Teflon	19.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.110	1200	16.0	187A/U
D188/U	188/U	50	TFE Teflon	29.0	Teflon	7/.0067 Silvered Copperweld	Silver Covered Copper	.110	1200	16.7	188/U
D188A/U	188A/U	50	TFE Teflon	29.0	Teflon	7/.0067 Silvered Copperweld	Silver Covered Copper	.110	1200	16.7	188A/U
D195/U	195/U	95	TFE Teflon	15.0	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.155	1500	11.0	195/U
D195A/U	195A/U	95	TFE Teflon	15.0	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.155	1500	11.0	195A/U
D196/U	196/U	50	TFE Teflon	28.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.080	1000	28.0	196/U
D196A/U	196A/U	50	TFE Teflon	28.5	Teflon	7/38 Silvered Copperweld	Silver Covered Copper	.080	1000	28.0	196A/U

STANDARD PUT-UP: 500 Ft., 1000 Ft.

\*TEFLON—DUPONT

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**SHIELDED PLASTIC HOOK-UP WIRE**

1000 VOLT—TYPE MW (Medium Wall) SHIELDED—SPEC. MIL-W-76B  
TEMPERATURE RATING -40°C TO +80°C

**DESCRIPTION:** One conductor stranded tinned copper with thermo-plastic insulation and tinned copper shielded braid overall.



DABURN Cat. No.	Size AWG	MIL-W-76B Type Designation	Strand	Nom. Wall	Nom. O.D.
2592/24	24	MW-C24(7)S	7/32	.015"	.074"
2593	24	MW-C24(16)S	16/36	.015"	.075"
2592/22	22	MW-C22(7)S	7/30	.017"	.084"
2592/20	20	MW-C20(10)S	10/30	.017"	.094"

DABURN Cat. No.	Size AWG	MIL-W-76B Type Designation	Strand	Nom. Wall	Nom. O.D.
2592/18	18	MW-C18(16)S	16/30	.017"	.106"
2592/16	16	MW-C16(26)S	26/30	.017"	.121"
2592/14	14	MW-C14(41)S	41/30	.017"	.137"
2592/12	12	MW-C12(65)S	65/30	.017"	.155"

**STOCK COLORS:** (Underneath Shield) Black, White, Red, Yellow, Brown, Green, Blue, Gray. Nos. 2592/14 and /12, available from stock in Black, White or Red.

Also multiconductors can be formed to order twisted shielded, with or without plastic jacket overall.

**STANDARD PUT-UP:** 100 Ft., 500 Ft., 1000 Ft.

**SHIELDED PLASTIC HOOK-UP WIRE**

TYPE MW—SHIELDED—NYLON JACKET  
SPEC. MIL-W-76B

**DESCRIPTION:** One conductor stranded tinned copper, white medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, clear nylon (polyimide) jacket overall. Resistant to acids, alkalis, oil, flame, moisture, fungus.

**TEMPERATURE RATING:** -40°C to +90°C.

DABURN Cat. No.	Size AWG	MIL-W-76A Type Designation	Strand	Nom. Wall	Nom. D.D.
2595/24	24	MW-C24(16)SJ	16/36	.015"	.091"
2595/22	22	MW-C22(7)SJ	7/30	.017"	.100"
2595/20	20	MW-C20(10)SJ	10/30	.017"	.105"
2595/18	18	MW-C18(16)SJ	16/30	.017"	.115"
2595/16	16	MW-C16(26)SJ	26/30	.017"	.125"
2595/14	14	MW-C14(41)SJ	41/30	.017"	.138"
2595/12	12	MW-C12(65)SJ	65/30	.017"	.160"

Additional colors available to order.

**STANDARD PUT-UP:** 100 Ft., 500 Ft., 1000 Ft.

TYPE MW—SHIELDED—VINYL JACKET  
SPEC. MIL-W-76B

**DESCRIPTION:** One conductor stranded tinned copper, white medium wall polyvinyl chloride insulation, shielded tinned copper braid, minimum 80% coverage, black PVC (polyvinylchloride) jacket overall. Resistant to acids, alkalis, oil, flame, moisture, fungus.

**TEMPERATURE RATING:** -40°C to +90°C.

DABURN Cat. No.	Size AWG	MIL-W-76A Type Designation	Strand	Nom. Wall	Nom. O.D.
2597/24	24	MW-C24(16)SJ	16/36	.015"	.095"
2597/22	22	MW-C22(7)SJ	7/30	.017"	.105"
2597/20	20	MW-C20(10)SJ	10/30	.017"	.112"
2597/18	18	MW-C18(16)SJ	16/30	.017"	.120"
2597/16	16	MW-C16(26)SJ	26/30	.017"	.133"
2597/14	14	MW-C14(41)SJ	41/30	.017"	.148"
2597/12	12	MW-C12(65)SJ	65/30	.017"	.170"

Additional colors available to order.

**STANDARD PUT-UP:** 100 Ft., 500 Ft., 1000 Ft.

**AIRCRAFT PLASTIC HOOK-UP WIRE**

SPECIFICATIONS MIL-W-5086A and MIL-C-7078A (105°C Rating)

NYLON JACKET

**DESCRIPTION:** Type 1 MIL-W-5086A—one conductor stranded tinned copper with plastic insulation nylon jacket overall. Type 2 MIL-W-5086A—one conductor stranded tinned copper, plastic insulation, nylon lacquered glass braid. Color: White.

MIL-W-5086A UNSHIELDED (Supersedes AN-J-C-48A)

DABURN Cat. No.	Mil. Type	Type	Cond. Strand.	Nom. O.D.
2601/22	AN-22	No. 1	19/34	.070"
2601/20	AN-20	No. 1	19/32	.080"
2601/18	AN-18	No. 1	19/30	.090"
2601/16	AN-16	No. 1	19/29	.125"
2601/14	AN-14	No. 1	19/27	.125"
2601/12	AN-12	No. 1	19/25	.140"
2602/22	AN-22	No. 2	19/34	.068"
2602/20	AN-20	No. 2	19/32	.078"
2602/18	AN-18	No. 2	19/30	.088"
2602/16	AN-16	No. 2	19/29	.098"

DABURN Cat. No.	Mil. Type	Type	Cond. Strand.	Nom. O.D.
2602/14	AN-14	No. 2	19/27	.117"
2602/12	AN-12	No. 2	19/25	.137"
2602/10	AN-10	No. 2	49/27	.189"
2602/8	AN-8	No. 2	133/29	.240"
2602/6	AN-6	No. 2	133/27	.297"
2602/4	AN-4	No. 2	133/25	.355"
2602/2	AN-2	No. 2	665/30	.412"
2602/0	AN-0	No. 2	1045/30	.518"
2602/00	AN-00	No. 2	1330/30	.588"

**STANDARD PUT-UP:** 100 Ft., 1000 Ft.

MIL-C-7078A SHIELDED (Supersedes AN-C-168)

**DESCRIPTION:** One conductor stranded tinned copper with plastic insulation, nylon jacket with tinned copper shielded braid overall. Color: White under shield. Additional types to order.

DABURN Cat. No.	Size AWG	Mil. Type	Type	Cond. Strand.	Nom. O.D.
2605/22	22	AN-22	No. 1	19/34	.100"
2605/20	20	AN-20	No. 1	19/32	.110"
2605/18	18	AN-18	No. 1	19/30	.124"

DABURN Cat. No.	Size AWG	Mil. Type	Type	Cond. Strand.	Nom. D.D.
2605/16	16	AN-16	No. 1	19/29	.139"
2605/14	14	AN-14	No. 1	19/27	.158"
2605/12	12	AN-12	No. 1	19/25	.177"

**STANDARD PUT-UP:** 100 Ft., 1000 Ft.

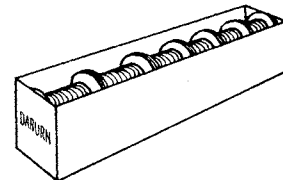
ALL WIRE ON THIS PAGE CAN BE CUT AND STRIPPED TO YOUR SPECIFICATION.

**DABURN****DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**MINIATURIZATION HOOK-UP WIRE AND CABLE  
UNSHIELDED — ONE CONDUCTOR 105°C**

Used as lead computers, transistor circuits, instruments—where fine sizes are required with high temperature conditions. One conductor stranded tinned copper, 105°C vinyl resin overall.

**DESCRIPTION:**

One conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation overall.

DABURN No.	Conductor	Size	Strand	Nom. Wall	Nom. O.D.
2670/32	1	32	7/40	.010"	.029"
2670/30	1	30	7/38	.010"	.030"
2670/28	1	28	7/36	.010"	.035"
2670/26	1	26	10/36	.010"	.038"
2670/24	1	24	16/36	.015"	.055"

STD. PUT-UP: 500 Ft., 1000 Ft.

STOCK COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple.

**MULTI CONDUCTOR CABLE  
SUB-MINIATURE • NOT SHIELDED • FLEXIBLE  
TINNED COPPER CONDUCTORS**

Suggested Operating Temp.: -55°C to +105°C

**TWISTED — NO OUTER JACKET**

DABURN No.	Cond.	Size	Strand	Wall Nom.	O.D. Nom.
2672	2	30	7/38	.010"	.058"
2672/3	3	30	7/38	.010"	.064"
2672/4	4	30	7/38	.010"	.072"

CONDUCTOR COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

**TWISTED — CLEAR VINYL JACKET OVERALL**

DABURN No.	Cond.	Size	Strand	Wall Nom.	O.D. Nom.
2674	2	28	7/36	.010"	.079"
2674/3	3	28	7/36	.010"	.086"
2674/4	4	28	7/36	.010"	.095"

CONDUCTOR COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

**SHIELDED HOOK-UP WIRE****SUB-MINIATURE • SUPER FLEXIBLE**

One conductor stranded tinned copper, 105°C vinyl resin overall.

DABURN No.	Conductor	Size	Strand	Nom. Wall	Nom. O.D.
2682	1	30	7/38	.010"	.052"
2684	1	28	7/36	.010"	.057"
2686	1	26	10/36	.010"	.060"
2688	1	24	16/36	.010"	.073"

STOCK COLOR: White (Under Shield)

STD. PUT-UP: 500 Ft., 1000 Ft.

**DESCRIPTION:**

One conductor stranded tinned copper with 105°C. high temperature thermoplastic insulation and tinned copper shielded braid overall.

**SHIELDED MULTI-CONDUCTOR CABLE****SUB-MINIATURE • SUPER FLEXIBLE****TINNED COPPER CONDUCTORS**

Suggested Operating Temp.: -55°C to +105°C

**TWISTED — SHIELDED — NO OUTER JACKET**

DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
2676	2	24	16/36	.015"	.114"
2676/3	3	24	16/36	.015"	.123"
2676/4	4	24	16/36	.015"	.144"

CONDUCTOR COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

**TWISTED — SHIELDED — CLEAR VINYL JACKET OVERALL**

DABURN No.	Cond.	Size	Strand	Wall Nom.	O.D. Nom.
2678	2	28	7/36	.010"	.137"
2678/3	3	28	7/36	.010"	.163"
2678/4	4	28	7/36	.010"	.163"

CONDUCTOR COLOR CODE: 1—Black, 2—White, 3—Red, 4—Green.

STD. PUT-UP: 500 Ft., 1000 Ft.

NOTE: Multi-conductors can be formed to order twisted, shielded with or without plastic jacket overall.



**DABURN****DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**600 VOLT — SILICONE RUBBER LEAD WIRE — 200°C  
FLEXIBILITY FROM -104°C TO +400°F**

Suitable for high-heat and hi-frequency applications. Resistant to acid, alkali, oil. Retains physical properties under extremes. Low power factor, low dielectric constant. Tinned copper, stranded, silicone rubber insulation, glass braid, lacquered. Color: White.

**DESCRIPTION:**

One conductor, tinned copper strands, silicone rubber insulation, glass braid, lacquered. Color:

DABURN No.	Size	Strand	Nom. Ins. Wall	Nom. O.D.
2625/22	22	7/30	1/32"	.105"
2625/20	20	10/30	1/32"	.121"
2625/18	18	16/30	1/32"	.128"
2625/16	16	26/30	1/32"	.144"
2625/14	14	41/30	1/32"	.165"
2625/12	12	65/30	1/32"	.185"
2625/10	10	65/28	3/64"	.240"
2625/8	8	84/27	1/16"	.320"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**SEMI-RIGID BUSINESS MACHINE WIRE — U.L.  
300 VOLT 80°C**

Stranded tinned copper, color coded semi-rigid polyvinylchloride insulation. Has Temperature Rating of -10°C to +80°C, 300 volts in electronic computers or business machines only.

**DESCRIPTION:**

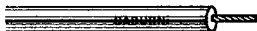
One Conductor stranded tinned copper, semi-rigid PVC.

DABURN No.	Size	Strand	Nom. Ins. Wall	Nom. O.D.
2660/24	24	7/32	.009"	.041"
2660/22	22	7/30	.009"	.048"
2660/20	20	7/28	.009"	.056"

STD. PUT-UP: 500 Ft., 1000 Ft.

**HI-VOLTAGE CABLE**

One conductor, stranded copper tinned, rulan — frame retardant — polyethylene insulation, braided tinned copper overall when shielded. Used as hi-voltage leads in electronic equipment to minimize RF radiation in equipment.

**DESCRIPTION:**

One conductor stranded copper tinned rulan (flame retarding type) polyethylene insulation. Available white/red tracer. Temp. Rating: 105°C.

Shielded: Same as above with tinned copper braided shield over-all.

Special constructions available to order.

**UNSHIELDED**

DABURN No.	Size AWG	Strand	Nom. Ins. Wall	Voltage Breakdown AC	DC	Nom. O.D.
2642	20	10/30	.047"	5,000	10,000	.125"
2643	20	10/30	.068"	10,000	20,000	.168"
2644	18	16/30	.047"	5,000	10,000	.134"
2645	18	16/30	.068"	10,000	20,000	.178"
2648	18	16/30	.095"	16,000	40,000	.235"
2649	18	16/30	.124"	26,000	60,000	.280"

**SHIELDED**

2655	18	16/30	.095"	16,000	40,000	.255"
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STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**PLASTIC HOOK-UP WIRE  
600 VOLT UL APPROVED — 105°C (CSA 600V — 90°C)**

Resistant to acids, alkalis, oil, flame, fungus and moisture. Temperature Rating: -10°C to +105°C.

**DESCRIPTION:**

One Conductor stranded annealed copper tinned, plastic insulation.

**STRANDED**

DABURN No.	Size	Strand	Nom. Ins. Wall	Nom. O.D.
2630	22	7/30	.032"	.098"
2631	20	10/30	.032"	.104"
2632	18	16/30	.032"	.112"
2633	16	26/30	.032"	.126"
2633/14	14	41/30	.032"	.142"

**SOLID**

2635/22	22	7/30	.032"	.095"
2635/20	20	10/30	.032"	.102"

COLORS: Black, Red, Green, Yellow, Blue, Brown, White, Orange, Gray, Purple.  
STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**DABURN****DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**TEST LEAD WIRE**

Suitable as Test Lead Wire in analyzers, instruments, oscillators, meters, etc. Wherever extra flexibility and limpness is necessary. Single conductor, extra flexible stranded soft tinned copper, separator, wall color coded rubber, smooth wax finish.

OPERATING TEMPERATURE: -20°C to +60°C.

DABURN No.	Size	Strand	Insul. Wall Nom.	Nom. O.D.
2715	20	41/36	3/64"	.137"
2716	18	65/36	3/64"	.145"
*2718	18	65/36	3/64"	.145"

\*Types WS-16/U Black, WS17/U Red Per MIL-W-13169.

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**PLASTIC KINKLESS TEST LEAD WIRE**

Soft formulation vinyl for maximum flexibility. Temperature stability from -80°C to +115°C. Exceed requirements for MIL-I-3930A Type JP (PVC). Suitable for test leads, etc. Resistant to gasoline and oil. Excellent abrasion Resistance.

DESCRIPTION: One conductor tinned copper stranded, special formulation vinyl insulation — smooth surface.

OPERATING TEMPERATURE: -80°C to +115°C.

COLORS: Black, Red, Yellow, Green, White, Blue.

DABURN No.	Size	Strand	Ins.	Nom. O.D.
2722/22	22	26/36	.032"	.100"
2722/20	20	26/34	.032"	.104"
2722/18	18	65/36	.032"	.112"
2722/16	16	65/34	.032"	.129"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**7MM HIGH TENSION CABLE**

#2730 — unshielded one conductor, insulation, cotton braid highly lacquered.  
#2737 — same construction as above plus a closely woven tinned copper shielded braid overall.

DABURN No.	Size	Strand	Insul.	O.D.
2730	16	19/29	3/32"	.275"
2737 (Shielded)	16	19/29	3/32"	.295"

STD. PUT-UP: 100 Ft., 500 Ft.

Suitable for auto and aircraft ignition systems where grounding is indicated.

**HI VOLTAGE LACQUERED WIRE**

Primary wire for autos, aircraft, hi-voltage instrument leads. Resistant to acid, grease, oil, gasoline, moisture.

DABURN No.	Size	Strand	Ins.	Nom. O.D.
2725/18	18	16/30	.022"	.115"
2725/16	16	19/29	.022"	.125"
2725/14	14	19/27	.022"	.146"
2725/12	12	19/25	.027"	.171"
2725/10	10	19/23	.031"	.202"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**SHIELDED PHONO WIRE**

Suitable where small diameter, limpness and extreme flexibility is necessary as for phono pickups, stereo, etc.

OPERATING TEMPERATURE: -20°C to +60°C.

DABURN No.	Tinned Size	Copper Shield Strand	Overall Insul. Wall	Nom. O.D.
2737	24	16/36	.010"	.075"
2738	22	7/30	.010"	.080"

**COTTON BRAID OVER SHIELD**

2739	24	16/36	.010"	.095"
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STD. PUT-UP: 100 Ft., 500 Ft.

**SHIELDED HOOK-UP WIRE**

One conductor, tinned copper stranded, polyvinylchloride insulation, lacquered glass braid, overall tinned copper shielded braid.

Operating Temp.: -20°C to +60°C.

DABURN No.	Size	Strand	Nom. Wall	Nom. O.D.
2727/22	22	7/30	.016"	.095"
2727/20	20	10/30	.016"	.105"
2727/18	18	16/30	.016"	.125"
2727/16	16	26/30	.016"	.135"
2727/14	14	41/30	.016"	.155"
2727/12	12	65/30	.016"	.175"
2727/10	10	105/30	.025"	.200"

STD. PUT-UP: 1000 Ft.

**MARINE & AUTOMOTIVE WIRE & CABLE****SINGLE CONDUCTOR — PRIMARY WIRE**

Type G.P.T. — SAE Type II

This wire is resistant to grease, oil, acid, gasoline and ageing. Single conductor, stranded bare copper, color coded (PVC) Polyvinylchloride insulation.

DABURN No.	Size	Strand	Nom. Wall	Nom. O.D.	Stock Color
2710/16	16	19/29	.023"	.100"	Black
2710/14	14	19/27	.023"	.122"	Green
2710/12	12	19/25	.026"	.146"	Red
2710/10	10	19/23	.031"	.181"	White
2710/8	8	65/26	.040"	.227"	Red
2710/6	6	49/23	.049"	.280"	Red

STD. PUT-UP: 500 Ft., 1000 Ft.

**DUPLEX PRIMARY WIRE**

Two conductors, each stranded bare copper, color coded (PVC) polyvinylchloride insulation; 1 black, 1 white; conductors laid parallel, heavy duty chrome vinyl jacket overall.

DABURN No.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
2712/16	16	19/29	.023"	.032"	.169"x.276"
2712/14	14	19/27	.023"	.032"	.184"x.308"
2712/12	12	19/25	.026"	.032"	.207"x.358"

STD. PUT-UP: 500 Ft., 1000 Ft.

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**AUDIO CABLE — SHIELDED  
2 CONDUCTOR SHIELDED**

**NO OUTER JACKET**

Each conductor copper tinned, plastic insulation, color coded, twisted, tinned copper shield. Suitable for sound systems, industrial paging systems, broadcast-audio cable, rack panel wiring, etc. OPERATING TEMPERATURE: -20°C to +60°C.



DABURN Cat. No.	Conds.	Size AWG.	Strand	Nom. Wall	Nom. O.D.	Nom. Operating Vol. age
2902/30	2	30	7/38	.010"	.085"	200V
2902/28	2	28	7/36	.010"	.090"	200V
2902/26	2	26	7/34	.010"	.095"	200V
2902/24	2	24	16/36	.017"	.120"	350V
2902/22	2	22	7/30	.017"	.140"	350V
2902/20	2	20	10/30	.017"	.155"	350V
2902/18	2	18	16/30	.017"	.170"	350V
2902/16	2	16	26/30	.020"	.210"	450V
2902/14	2	14	41/30	.020"	.225"	450V
2902/12	2	12	65/30	.025"	.295"	600V
2902/10	2	10	105/30	.025"	.375"	600V

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.  
CONDUCTOR COLOR CODE: 1—Black, 2—Red.

**INTERCOM CABLE  
INDIVIDUALLY SHIELDED MULTIPLE PAIR**

This construction reduces the bulk in required cables. Multipaired #22 solid tinned copper, vinyl insulated .013", cabled in pairs. Aluminum foil mylar shield over each pair and ground, over all grey vinyl jacket. Nom. Cap. between Conds. 40 MMF/Ft. Nom. Cap. between 1 Cond. and others connected to shield—77 MMF/Ft.



DABURN Cat. No.	Pairs	Conds.	Nom. Jacket	Nom. O.D.
2930/3	3	6	.030"	.298"
2930/6	6	12	.037"	.394"
2930/9	9	18	.040"	.425"
2930/11	11	22	.040"	.485"
2930/15	15	30	.045"	.510"
2930/19	19	38	.055"	.678"
2930/27	27	54	.070"	.860"

STD. PUT-UP: 500 Ft.

Variations Available to Order.

**ALUMINUM MYLAR FOIL SHIELD  
PLASTIC JACKETED CABLE**

Extremely light in weight, provides 100% shield coverage—small diameters. Each cond. tinned copper, stranded color coded polyethylene insulation, twisted, drain wire, aluminum mylar foil shield, gray polyvinylchloride jacket overall. Drain wire provides quick and easy grounding. OPERATING TEMPERATURE: -20°C to +60°C. OPERATING VOLTAGE: 400 Volts.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
296D	2	22	7/30	.015"	.020"	.168"
2960/3	3	22	7/30	.015"	.020"	.185"
2960/4	4	22	7/30	.015"	.020"	.205"
2961	2	20	7/30	.015"	.020"	.185"
2961/3	3	20	7/30	.015"	.020"	.205"
2961/4	4	20	7/30	.015"	.020"	.225"
2962	2	18	16/30	.017"	.020"	.220"
2962/3	3	18	16/30	.017"	.020"	.235"
2962/4	4	18	16/30	.017"	.020"	.255"
2963	2	16	26/30	.017"	.020"	.255"
2963/3	3	16	26/30	.017"	.020"	.275"
2964	2	14	41/30	.017"	.020"	.295"
2964/3	3	14	41/30	.017"	.020"	.305"

STD. PUT-UP: 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green.

**PLASTIC INTER-COM CABLE**

Station to station wiring to eliminate cross-talk. Each conductor tinned copper stranded, color coded PVC, T.C. braid, shield where indicated, paired, grey polyvinylchloride jacket overall.

2935 — Suitable for unbalanced systems.  
2935/4 — Suitable for balanced systems.  
2935/5 — Suitable for coin operated phonographs.

OPERATING VOLTAGE: 350 Volts.  
OPERATING TEMPERATURE: -20°C to +60°C.

DABURN Cat. No.	Cond.	Size	Strand	No. Cond. Shield	Nom. Wall	Nom. Jacket	O.D.
2935	3	22	7/30	1	.016"	.020"	.200"
2935/4	4	22	7/30	2	.016"	.020"	.180"x.285"
2935/5	5	22	7/30	3	.016"	.020"	.200"x.300"

CONDUCTOR COLOR CODE:

2935 — White shielded; Black, Red — unshielded  
2935/4 — Black, White shielded; Black, Red — unshielded.  
2935/5 — Black, White, Red — shielded; Black, Red — unshielded.

**SHIELDED  
PLASTIC MICROPHONE CABLE**



Will withstand abuse and is resistant to oil, moisture, aging. Have low capacitance, Hi insulation resistance and low attenuation. Will not strain or mark.

2772 — For hi impedance microphone  
2774 — For hi impedance lapel mikes.  
2774 — For crystal, ribbon, etc. Mikes all are suitable for hi-fi interconnecting cables.

OPERATING TEMPERATURE: -20°C to +60°C.

**PLASTIC — ONE CONDUCTOR SHIELDED CABLE**

DABURN Cat. No.	Cond.	Size	Strand	Nom. Cap./Ft.	Sug. Work Voltage	Nom. O.D.
2772	1	20	26/34	36 MMF	4000	.175"
2773	1	25	7/33*	34 MMF	3500	.144"
2774	1	25	7/33*	23 MMF	5000	.190"

\* 3 strands tinned copper, 4 strands tinned copperweld.

**SPIRAL WRAPPED  
SHIELDED MICROPHONE CABLE**

Uses tinned copper spiral shield — for ease in soldering — extremely flexible.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Cap./Ft.	Sug. Work Voltage	Nom. O.D.
2770	1	25	7/33	23 MMF	3000	.159"
2771	1	25	7/33	33 MMF	1000	.110"

**MULTI-CONDUCTOR MICROPHONE  
AND CONTROL CABLE  
PLASTIC JACKET**



Each conductor tinned copper, polyethylene insulation — color coded., twisted, tinned copper braid shield, vinyl jacket overall.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Cap./Ft.	Sug. Work Voltage	Nom. O.D.
2782	2	22	16/34	31 MMF	1000	.231"
2782/20	2	20	26/34	45 MMF	600	.240"

DABURN Cat. No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
2783	3	20	26/34	.014"	.030"	.250"
2784	4	20	26/34	.014"	.035"	.260"
2785	5	20	26/34	.014"	.035"	.275"
2786	6	20	26/34	.014"	.035"	.300"
2786/8	8	20	26/34	.014"	.035"	.330"
2786/10	10	20	26/34	.014"	.035"	.375"

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—White, 2—Black, 3—Red, 4—Green, 5—Yellow, 6—Blue, 7—Brown, 8—Orange, 9—Purple, 10—Slate.

**PLASTIC JACKETED AUDIO  
AND MULTI-COND. CABLE  
SPIRAL WRAPPED COPPER SHIELD**



Suitable for P.A. and sound systems, schools hospitals, institutions, recording studios, paging and call systems. Each conductor copper tinned, plastic insulation, color coded, twisted, spiral wrapped tinned, copper shield, gray plastic jacket.

Simplifies pig-tailing. Provides almost 100% shielding coverage.

DABURN Cat. No.	Cond.	Size	Strand	Nom. Insul.	Nom. Jacket	Sug. Working Voltage	Nom. O.D.
2950	2	22	7/30	.017"	.020"	350V	.170"
2050/1	1	22	7/30	.017"	.020"	350V	.115"
2950/3	3	22	7/30	.017"	.020"	350V	.190"
2950/4	4	22	7/30	.017"	.020"	350V	.200"
2950/6	6	22	7/30	.017"	.020"	350V	.235"
2949	2	22	1	.017"	.020"	350V	.170"
2952	2	20	10/30	.017"	.020"	350V	.190"
2952/1	1	20	10/30	.017"	.020"	350V	.129"
2952/3	3	20	10/30	.017"	.020"	350V	.205"
2952/4	4	20	10/30	.017"	.020"	350V	.222"
2952/6	6	20	10/30	.017"	.020"	350V	.260"
2953	2	18	16/30	.017"	.020"	350V	.230"
2953/1	1	18	16/30	.017"	.020"	350V	.133"
2953/3	3	18	16/30	.017"	.020"	350V	.230"
2953/4	4	18	16/30	.017"	.020"	350V	.245"
2954	2	16	26/30	.017"	.020"	350V	.235"
2954/3	3	16	26/30	.017"	.020"	350V	.245"
2954/4	4	16	26/30	.017"	.020"	350V	.255"
2955	2	14	41/30	.020"	.025"	450V	.285"
2955/3	3	14	41/30	.020"	.025"	450V	.292"
2955/4	4	14	41/30	.020"	.025"	450V	.310"
2956/3	3	12	41/30	.020"	.025"	450V	.335"

STD. PUT-UP: 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green.

**ARMORED CABLE — INDUSTRIAL**

Two conductors — suitable for P.A. systems on speaker extensions, oil burner installations, etc. — parallel, color coded conductors, spiral galvanized steel armor overall.



DABURN Cat. No.	Cond.	Size	Strand	Nom. O.D.
2932	2	18	16/30	.155"x.240"

STD. PUT-UP: 250 Ft., 500 Ft., 1000 Ft.

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**PLASTIC INTERCOMMUNICATION CABLES**  
TWISTED PAIRS — SOLID

Each Cond. #22 Solid Tinned Copper, .010" wall (Operating Temp. -20°C to +60°C). Vinyl plastic insulation, conductors color coded, twisted pairs, cabled, gray vinyl jacket overall. Suitable for outdoor installations.  
Operating Voltage: 200 Volts.

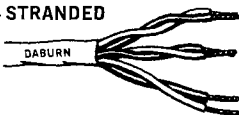


DABURN No.	Parts	Cond.	Size	Nom. Jacket	Nom. O.D.
3000	1	2	22 Solid	.020"	.130"
3000/2	2	4	22 Solid	.020"	.205"
3000/3	3	6	22 Solid	.020"	.215"
3000/6	6	12	22 Solid	.020"	.275"
3000/9	9	18	22 Solid	.020"	.310"
3000/11	11	22	22 Solid	.020"	.340"
3000/13	13	26	22 Solid	.025"	.385"
3000/15	15	30	22 Solid	.025"	.390"
3000/16	16	32	22 Solid	.025"	.415"
3000/27	27	54	22 Solid	.035"	.505"
3000/31	31	62	22 Solid	.035"	.555"
3000/41	41	82	22 Solid	.035"	.630"
3000/51	51	102	22 Solid	.045"	.735"
3000/76	76	152	22 Solid	.070"	.970"
3000/101	101	202	22 Solid	.080"	1.140"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**PLASTIC INTERCOMMUNICATION CABLES**  
TWISTED PAIRS — STRANDED

Each Cond. #22 7/30 Tinned Copper, .010" wall vinyl plastic insulation, conductors color coded, twisted pairs, cabled, gray vinyl jacket overall. Suitable for outdoor installations.  
Operating Voltage: 200 Volts.  
Operating Temp.: -20°C to +60°C.



DABURN No.	Parts	Cond.	Size	Strand	Nom. O.D.
3002	1	2	22	7/30	.145"
3002/2	2	4	22	7/30	.210"
3002/3	3	6	22	7/30	.225"
3002/4	4	8	22	7/30	.235"
3002/5	5	10	22	7/30	.245"
3002/6	6	12	22	7/30	.290"
3002/9	9	18	22	7/30	.350"
3002/15	15	30	22	7/30	.455"
3002/27	27	54	22	7/30	.570"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

**MULTI-CONDUCTOR — PLASTIC JACKET**  
UNSHIELDED AUDIO — FLEXIBLE

Each Cond. #22 7/30 Tinned Copper, stranded, .010" wall plastic insulation, color coded, twisted, gray vinyl jacket overall. Suitable for signal, P.A. systems, computer cable—for outdoor use.  
OPERATING VOLTAGE: 200 Volts.  
OPERATING TEMPERATURES: -20°C to +60°C.



DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
3054/2	2	22	7/30	.010"	.020"	.140"
3054/3	3	22	7/30	.010"	.020"	.145"
3054/4	4	22	7/30	.010"	.020"	.170"
3054/5	5	22	7/30	.010"	.020"	.175"
3054/6	6	22	7/30	.010"	.020"	.185"
3054/7	7	22	7/30	.010"	.020"	.190"
3054/8	8	22	7/30	.010"	.020"	.200"
3054/9	9	22	7/30	.010"	.020"	.225"
3054/10	10	22	7/30	.010"	.020"	.235"
3054/12	12	22	7/30	.010"	.020"	.255"
3054/15	15	22	7/30	.010"	.020"	.280"
3054/20	20	22	7/30	.010"	.020"	.310"
3054/25	25	22	7/30	.010"	.020"	.340"
3054/30	30	22	7/30	.010"	.020"	.365"

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green, 5—Orange, 6—Blue, 7—Brown, 8—Yellow, 9—Violet, 10—Slate, 11—Pink, 12—Tan, 13—Red/Green, 14—Red/Yellow, 15—Red/Black.

**SHIELDED CABLE**  
PLASTIC JACKETED — BRAIDED COPPER SHIELD

Suitable for P.A. and sound systems, installation in schools, hospitals and institutions, transmitters, electronic circuits, etc. Construction allows ease of pigtailing. Shield provides additional strength for cable. Each conductor tinned copper, PVC insulation, color coded, twisted, braided T-C shield, gray PVC jacket overall. Suitable for outdoor installations.  
OPERATING TEMPERATURE: -20°C to +60°C.



DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. Jacket	Nom. O.D.
2970	2	22	7/30	.017"	.020"	.175"
2970/3	3	22	7/30	.017"	.020"	.195"
2971	2	20	10/30	.017"	.020"	.195"
2971/3	3	20	10/30	.017"	.020"	.215"
2972	2	18	16/30	.017"	.020"	.235"
2972/3	3	18	16/30	.017"	.020"	.245"
2974	2	16	26/30	.017"	.020"	.255"
2975	2	14	41/30	.020"	.020"	.290"

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White.  
STD. PUT-UP: 500 Ft., 1000 Ft.

**UNSHIELDED AUDIO CABLE**

**SOLID AND STRANDED CONDUCTORS (2 & 3)**

FOR INDOOR USE — NO OUTER JACKET

Tinned copper, vinyl plastic insulation, color coded, conductors twisted.



DABURN No.	Cond.	Size	Strand	Insul. Wall	Nom. O.D.
3004	2	22 Solid	1	.016"	.100"
3004/3	3	22 Solid	1	.016"	.115"
3005	2	20 Solid	1	.016"	.120"
3005/3	3	20 Solid	1	.016"	.140"
3006	2	18 Solid	1	.016"	.145"
3006/3	3	18 Solid	1	.016"	.155"
3007	2	16 Solid	1	.016"	.175"
3007/3	3	16 Solid	1	.016"	.190"
3011	2	22 Stranded	7/30	.016"	.125"
3011/3	3	22 Stranded	7/30	.016"	.140"
3012	2	20 Stranded	10/30	.016"	.145"
3012/3	3	20 Stranded	10/30	.016"	.160"
3013	2	18 Stranded	16/30	.016"	.165"
3013/3	3	18 Stranded	16/30	.016"	.180"
3014	2	16 Stranded	26/30	.016"	.190"
3014/3	3	16 Stranded	26/30	.016"	.210"
3015	2	14 Stranded	41/30	.016"	.220"
3015/3	3	14 Stranded	41/30	.016"	.240"
3016	2	12 Stranded	65/30	.016"	.250"
3016/3	3	12 Stranded	65/30	.016"	.275"

CONDUCTOR COLOR CODE: 1—Brown, 2—Tan, 3—Gray.  
STD. PUT-UP: 1000 Ft.

**PLASTIC JACKET OVERALL**  
FOR OUTDOOR USE

Tinned copper, vinyl plastic insulation, color coded, twisted, plastic jacket overall.



Operating Temp.: -20°C to +60°C.  
Operating Voltage: 350 Volts.

DABURN No.	Cond.	Size	Strand	Nom. Wall	Jacket	Nom. O.D.
3020	2	22	1	.010"	.020"	.125"
3020/3	3	22	1	.010"	.020"	.130"
3020/4	4	22	1	.010"	.020"	.150"
3021	2	20	1	.016"	.020"	.170"
3021/3	3	20	1	.016"	.020"	.180"
3021/4	4	20	1	.016"	.020"	.200"
3022	2	18	1	.016"	.020"	.185"
3022/3	3	18	1	.016"	.020"	.190"
3022/4	4	18	1	.016"	.020"	.220"
3022/5	5	18	1	.016"	.020"	.235"
3022/6	6	18	1	.016"	.020"	.265"
3027	2	22	7/30	.010"	.020"	.130"
3027/3	3	22	7/30	.010"	.020"	.140"
3027/4	4	22	7/30	.010"	.020"	.165"
3028	2	20	10/30	.016"	.020"	.175"
3028/3	3	20	10/30	.016"	.020"	.185"
3028/4	4	20	10/30	.016"	.020"	.195"
3029	2	18	16/30	.016"	.020"	.195"
3029/3	3	18	16/30	.016"	.020"	.205"
3029/4	4	18	16/30	.016"	.020"	.235"
3030	2	16	26/30	.016"	.020"	.220"
3030/3	3	16	26/30	.016"	.020"	.245"
3030/4	4	16	26/30	.016"	.020"	.270"
3031	2	14	41/30	.016"	.020"	.260"
3031/3	3	14	41/30	.016"	.020"	.280"

STD. PUT-UP: 1000 Ft.

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 4—Green.

**MULTI-CONDUCTOR INDUSTRIAL AUDIO CABLE**  
UNSHIELDED (Operating Temperature: -20°C to +60°C)  
PLASTIC JACKET OVERALL

#18 Solid Tinned Copper, PVC insulation, color coded, twisted, gray vinyl jacket overall. Suitable for speaker cable, alarm, signal, remote control systems, thermostat. Suitable outdoor installations.



DABURN No.	Cond.	Size	Nom. Wall	Jacket	O.D.
3006/2	2	18 Solid	.017"	.020"	.185"
3006/3	3	18 Solid	.017"	.020"	.190"
3006/4	4	18 Solid	.017"	.020"	.235"
3006/5	5	18 Solid	.017"	.020"	.240"
3006/6	6	18 Solid	.017"	.020"	.275"

STD. PUT-UP: 100 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1—Black, 2—Red, 3—White, 5—Orange, 6—Blue.

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**  
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

Long Lasting Service—useful wherever cords must change length or position. Extend to approximately six times its retracted length. Returns to its original shape or length when released. Eliminates tangling, twisting or knots. Cords are UL and CSA approved.

**RETRACTILE COILED CORDS**

**POWER CORDS — RETRACTED LENGTHS: 1, 2, 3 & 4 FT. • EXTENDED LENGTHS: 6, 12, 18 & 25 FT.**

UL APPROVED — NEOPRENE JACKETED CORD  
Operating Temperature: -20°C to +60°C

4 Ft.† Lgth.	DABURN CAT. NOS.		1 Ft. Lgth.	No. Conds.	Size	Strand	*UL Type	Amps	Volt Rating	Coil Nom. O.D.	Cord Nom. O.D.
	3 Ft. Lgth.	2 Ft. Lgth.									
986-4	986-3	986-2	986-1	2	18	41/34	SVO	7	300	7/8"	.250"
986/3-4	986/3-3	986/3-2	986/3-1	3	18	41/34	SVO	7	300	1"	.275"
989-4	989-3	989-2	989-1	2	18	41/34	SJO	7	300	1 3/16"	.310"
989/3-4	989/3-3	989/3-2	989/3-1	3	18	41/34	SJO	7	300	1 3/8"	.330"
989/4-4	989/4-3	989/4-2	989/4-1	4	18	41/34	SJO	5.6	300	1 1/8"	.360"
989/5-4	—	989/5-2	—	5	18	41/34	—	5.6	300	1 3/4"	.440"
989/7-4	—	989/7-2	—	7	18	41/34	—	5.6	300	1 7/8"	.500"
991-4	991-3	991-2	991-1	2	16	65/34	SJO	10	300	1 3/8"	.330"
991/3-4	991/3-3	991/3-2	991/3-1	3	16	65/34	SJO	10	300	1 1/8"	.365"
991/4-4	—	991/4-2	—	4	16	65/34	SJO	8	300	1 5/8"	.395"
991/5-4	—	991/5-2	—	5	16	65/34	—	8	600	2"	.540"
991/6-4	—	991/6-2	—	6	16	65/34	—	8	600	2 1/8"	.550"
991/7-4	—	991/7-2	—	7	16	65/34	—	8	600	2 1/4"	.600"
993-4	—	993-2	—	2	14	41/30	SO	15	600	2"	.535"
993/3-4	—	993/3-2	—	3	14	41/30	SO	15	600	2 1/8"	.560"
993/4-4	—	993/4-2	—	4	14	41/30	SO	12	600	2 1/4"	.605"
994-4	—	994-2	—	2	12	65/30	SO	20	600	2 1/4"	.605"
994/3-4	—	994/3-2	—	3	12	65/30	SO	20	600	2 3/8"	.635"
994/4-4	—	994/4-2	—	4	12	65/30	SO	16	600	2 1/2"	.665"
994/6-4	—	994/6-2	—	6	2-12 4-18	#12-65/30 #18-41/34	—	#12-17 #18-6	600	2 1/4"	.605"
994/7-4	—	994/7-2	—	7	12	65/30	—	16	600	2 5/8"	.775"

\* Wherever UL type is shown, approved by CSA Testing Laboratories.  
† Preferred Put-Up.

Std. Pkg. 5

CONDUCTOR COLOR CODE: 1-Black, 2-White, 3-Green, 4-Red, 5-Blue, 6-Brown, 7-Yellow.

**DABURN MINIATURE RETRACTILE COMMUNICATION CORDS**

2 Feet Retracted — 10 Ft. Extended

Miniature size. Suitable for compact equipment. Black plastic jacket overall. Operating Temperature: -20°C to +60°C

DABURN No.	Conds.	Size	Strand	Coil O.D.	Cord O.D.
975/28	2	28	19/40 T.C.	1/2"	.135"
977/28	4	28	19/40 T.C.	1/2"	.150"

**RETRACTILE TEST LEAD WIRE**

Stretch coiled kinkless test lead wire description. 12" coil stretches to approx. 6 feet. One conductor #20 stranded copper rubber insulation .165 O.D. Colors: Red, Black. Coil O.D. 3/4".

DABURN No.	Lgth.	Size	Strand	Coil O.D.	Cord O.D.
981	12"	20	41/36	3/4"	.165"
982	24"	20	41/36	3/4"	.165"

12" Extends Approx. 6 Ft.  
24" Extends Approx. 12 Ft.

Specify Color, Red or Black  
Std. Pkg. 6

**UL APPROVED RETRACTILE POWER CORD SETS**

18" Retracted — Approx. 9 Ft. Extended — 300V — UL Approved

For portable use. Mobile and office equipment. Neoprene jacketed cord sets with molded male plug on one end. OPERATING VOLTAGE 300 VOLTS

DABURN Cat. No.	Conds.	AWG Size	Strand	Type	UL	Coil O.D.	Cord O.D.
980	2	18	41/34	SVO		7/8"	.250"
980/3	3	18	41/34	SVO		1"	.275"
981	2	18	41/34	SJO		1 3/16"	.310"
981/3	3	18	41/34	SJO		1 3/8"	.330"
982	2	16	65/34	SJO		1 3/8"	.330"
982/3	3	16	65/34	SJO		1 3/8"	.365"

CONDUCTOR COLOR CODE: 1-Black, 2-White, 3-Green.

Std. Pkg. 10

**RETRACTILE COMMUNICATION COIL CORDS**

RETRACTED LENGTHS 2, 3 & 4 FT. — EXTENDED LENGTHS 12, 18 & 25 FT.

Multi-conductors stranded extra flexible #23 AWG 21/36 tinned soft copper for long flex life. Neoprene or "Danyon" plastic jacketed cable for long life. 120 volt working, current carrying capacity 1 ampere. Nom. cond. resist. .022 ohms per linear foot., .185 ohms per retracted foot.

For communication equip. such as ham operations, telephone car carriers, radio equip., head sets, etc.

Operating Temperature: -20°C to +60°C

Operating Temperature: -20°C to +60°C

4 Ft.* DABURN CAT. NOS.	2 Ft.	No. Conds.	Size	Strand	Nom. Coil O.D.	Nom. Cord O.D.	
975-4	975-3	975-2	2	23	21/36	3/4"	.200"
976-4	976-3	976-2	3	23	21/36	1 1/8"	.210"
977-4	977-3	977-2	4	23	21/36	7/8"	.240"
978-4	978-3	978-2	5	23	21/36	1"	.285"
978/6-4	978/6-3	978/6-2	6	23	21/36	1 1/8"	.305"
978/7-4	978/7-3	978/7-2	7	23	21/36	1 1/4"	.320"

4 Ft.* DABURN CAT. NOS.	3 Ft.	No. Conds.	Size	Strand	Nom. Coil O.D.	Nom. Cord O.D.	
978/8-4	—	978/8-2	8	23	21/36	1 3/8"	.360"
978/10-4	—	978/10-2	10	23	21/36	1 3/8"	.380"
978/12-4	—	978/12-2	12	23	21/36	1 7/8"	.410"
978/15-4	—	978/15-2	15	23	21/36	1 3/2"	.470"
978/37-4	—	978/37-2	37	23	21/36	2 1/2"	.680"

CONDUCTOR COLOR CODING: 1-Black, 2-White, 3-Red, 4-Green, 5-Blue, 6-Yellow, 7-Brown, 8-Orange, 9-White / Black Tracer, 10-White / Red Tracer, 11-White / Green Tracer, 12-White/Blue Tracer, 13-White/Yellow Tracer, 14-White/Brown Tracer, 15-White / Orange Tracer. \*Preferred Put-Up. Std. Pkg. 5

**SHIELDED RETRACTILE COMMUNICATION CORDS**

RETRACTED LENGTHS 1, 2 & 4 FT.—EXTENDED LENGTHS 6, 12 & 25 FT.

Single and multi-cond. Shielded mike cables Neoprene or "Danyon" plastic jacketed shielded conductors are individually shielded. Shield can be pigtailed for soldering. Safe — Reliable.

OPERATING TEMPERATURE: -20°C TO +60°C

4 Ft. L'gth.	DABURN CAT. NOS.		No. Conds.	Size	Strand	Nom. Coil O.D.	Nom. Cord O.D.	Volt Rating	CAPACITANCE MMF Lin. Ft.	MMF Retr. Ft.
995-4†	995-2	995-1	1	24 Shielded	41/40	9/8"	.160"	75	56	440
996-4	996-2	996-1	2	1-23	21/36	41/40	7/8"	.210"	56	450
				1-24 Shielded						
997-4	997-2	997-1	3	2-23	21/36	41/40	7/8"	.240"	56	450
				1-24 Shielded						
999-4	999-2	999-1	2	2-24	21/36	41/40	7/8"	.210"	56	450
				1-24 Shielded						
998-4	998-2	998-1	4	2-23	21/36	41/40	1"	.270"	56	460
				2-24 Shielded						

† Preferred Put-Up

Conductors are Color Coded.

Std. Pkg. 10

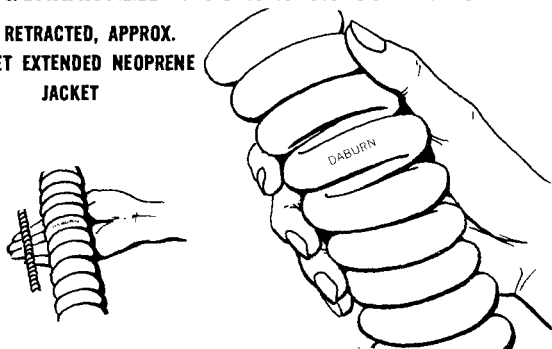
**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**RETRACTILE  
"SUPA" HEAVY DUTY POWER CORDS**  
with a  
**GUARANTEED 4 YEAR RETRACTABILITY**

**48" RETRACTED, APPROX.  
25 FEET EXTENDED NEOPRENE  
JACKET**



**SUGGESTED OPERATING TEMPERATURE: -20°C to +60°C.**

Suitable for maintenance of industrial automation equip., refrigerated trucks, mass production, cherry pickers, magnetic cranes, standby power distribution. Wherever a tougher requirement is indicated. Std. Pkg. 6

DABURN Cat. No.	No. Cond.	Size	Stranding	Nom. Jacket Thickness	Nom. Cord O.D.
960	3	16	65/34	7/64"	.505"
960/4	4	16	65/34	7/64"	.535"
961	3	14	41/30	7/64"	.620"
961/4	4	14	41/30	7/64"	.660"
962	3	12	65/30	8/64"	.715"
962/4	4	12	65/30	8/64"	.770"

**RETRACTILE COMMUNICATION CORD  
PREPARED**

Retracted length 12" — extended length 6 feet.

Same as our regular communication cord but each end is prepared as shown.

Daburn No. No. Cond.	Size & Strand	Coil O.D.	Cord O.D.	PREPARED
966	3 #23-21/36	13/16"	.220"	1 END: L'gth 1 1/2". Conductor stripped and tinned. Other end: Total L'gth 1 1/2" jacket removed.
967	4 #23-21/36	15/16"	.250"	1 END: Total length 1". Conductors stripped and tinned. Other end: Total l'gth 1 1/2" jacket removed.
968	5 #23-21/36	1-1/16"	.285"	1 END: Total l'gth 4 3/4". Conductors stripped and tinned. Other end: Total l'gth 4 3/4" conds. stripped and tinned.

Std. Pkg. 10

**HI-FI STEREO**

Interconnecting Cable — Phono Wire

Extremely flexible. Designed for low hum and noise pickup. Special PVC formulation -40°C to +80°C operation.

**TWISTED — UNSHIELDED**

DABURN No.	Cond.	Size	Strand	Nom. Wall	Nom. O.D.
2742	2	32	7/40	.010"	.047"
2743	3	32	7/40	.010"	.053"
2744	4	32	7/40	.010"	.061"
TWISTED — SHIELDED					
2746	2	32	7/40	.010"	.067"
2747	3	32	7/40	.010"	.072"
2748	4	32	7/40	.010"	.080"
2751	2	32	7/40	.010"	.080"

STD. PUT-UP: 500 Ft., 1000 Ft.

#2751 Individually Shielded.

CONDUCTOR COLOR CODE: 1-White, 2-Red, 3-Black, 4-Green.

**RUBBER & NEOPRENE  
PORTABLE CORD**

UL APPROVED — 300 AND 600 VOLT

For power line requirement where rough usage is indicated as for amplifiers, sound systems, speakers, vacuum cleaners, washing machines, trouble lights, refrigerators, etc. Color coded. Underwriters approved. Neoprene construction recommended for equipment exposed to oil, acids, outdoor use, direct burial, etc.

SUGGESTED OPERATING TEMPERATURE: -20°C to +60°C.

Each conductor, copper conductor, paper separator, color coded, rubber insulation, filler, separator, tough rubber or neoprene jacket, black.



RUBBER		NEOPRENE		Conds.		Strand	Amp. Rating	Volt Rating	Nom. O.D.
DABURN No.	UL Type	DABURN No.	UL Type	No.	Size				
2860	SV	2890	SVO	2	18	41/34	7	300	.250"
2860/3	SV	2890/3	SVO	3	18	41/34	7	300	.265"
2861	SJ	2891	SJO	2	18	41/34	7	300	.300"
2861/3	SJ	2891/3	SJO	3	18	41/34	7	300	.330"
2861/4	SJ	2891/4	SJO	4	18	41/34	6	300	.360"
2862	SJ	2892	SJO	2	16	65/34	10	300	.325"
2862/3	SJ	2292/3	SJO	3	16	65/34	10	300	.365"
2862/4	SJ	2892/4	SJO	4	16	65/34	8	300	.395"
2863	S	2893	SO	2	18	16/30	7	600	.390"
2863/3	S	2893/3	SO	3	18	16/30	7	600	.405"
2863/4	S	2893/4	SO	4	18	16/30	6	600	.435"
2864	S	2894	SO	2	16	26/30	10	600	.410"
2864/3	S	2894/3	SO	3	16	26/30	10	600	.430"
2864/4	S	2894/4	SO	4	16	26/36	8	600	.485"
2865	S	2895	SO	2	14	41/30	15	600	.540"
2865/3	S	2895/3	SO	3	14	41/30	15	600	.560"
2865/4	S	2895/4	SO	4	14	41/30	12	600	.605"
2866	S	2896	SO	2	12	65/30	20	600	.605"
2866/3	S	2896/3	SO	3	12	65/30	20	600	.635"
2866/4	S	2896/4	SO	4	12	65/30	16	600	.665"
2867	S	2897	SO	2	10	105/30	25	600	.640"
2867/3	S	2897/3	SO	3	10	105/30	25	600	.690"
2867/4	S	2897/4	SO	4	10	105/30	20	600	.745"
2868		2898		2	8†	133/29	35	600	.700"
2868/3		2898/3		3	8†	133/29	35	600	.750"
2868/4		2898/4		4	8†	133/29	28	600	.820"

Additional conductors and sizes available

† Not listed by UL.

CONDUCTOR COLOR CODE: 1-White, 2-Black, 3-Green, 4-Red.  
STD. PUT-UP: 250 FT.

**SPEC MIL-C-3432B SERVICE CORD**



DABURN Cat. No.	MIL Type	Spec. Design.	Conds.	Size	Spec. No.	Nom. O.D.
2812	CO-02	MGF	2	18	MIL-C-3432B	.300"
2813	CO-02	HGF	2	18	MIL-C-3432B	.380"
2814	CO-02	LGF	2	18	MIL-C-3432B	.250"
2815	CO-02	HGF	2	16	MIL-C-3432B	.405"
2816	CO-02	MGF	2	16	MIL-C-3432B	.338"
2817	CO-02	MGF	2	14	MIL-C-3432B	.400"
2818	CO-02	HGF	2	14	MIL-C-3432B	.535"
2919	CO-03	MGF	3	18	MIL-C-3432B	.330"
2820	CO-03	MGF	3	16	MIL-C-3432B	.375"
2821	CO-03	HOE	3	12	MIL-C-3432B	.635"

Additional Numbers Available — Your Inquiries Invited

**CONTROL CABLE (unshielded)  
MULTI-CONDUCTOR RUBBER JACKETED —  
GENERAL PURPOSE**

SUGGESTED OPERATING TEMPERATURE: -20°C to +60°C.

Used for permanent or portable P.A. systems, sound recording, indoor or outdoor speaker, interconnecting cable for all electronic uses.

Each conductor, extra flexible stranded tinned copper, insulated with a .022" wall, special low capacity rubber, color coded, conductors twisted, filler, cotton wrap with tough weatherproof black rubber jacket overall.



DABURN Cat. No.	Cond.	Size	Strand	Nom. O.D.
2802	2	20	26/34	.240"
2803	3	20	26/34	.255"
2804	4	20	26/34	.275"
2805	5	20	26/34	.300"
2806	6	20	26/34	.315"
2807	7	20	26/34	.325"
2808	8	20	26/34	.360"
2808/10	10	20	26/34	.410"
2808/12	12	20	26/34	.435"

For longer lengths and alternate Put-Ups — Specify

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.

CONDUCTOR COLOR CODE: 1-Black, 2-White, 3-Red, 4-Green, 5-Yellow, 6-Blue, 7-Brown, 8-Orange, 9-Purple, 10-Slate, 11-Wn/BK (Braid), 12-Wn/Red (Braid).

**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**

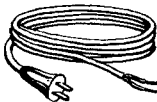
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**SERVICE CORD — HEAVY DUTY**

UL APPROVED — CSA APPROVED

Suitable for replacement on machinery, tools, refrigerators, electronic devices.

**DESCRIPTION:** Two and three conductors, stranded bare copper, serve, rubber insulation, filler, wrap, tough black rubber jacket overall. Molded plug one end, free end stripped and tinned — Hanked.



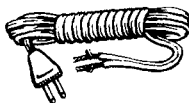
**VOLTAGE RATING: 300V**

DABURN No.	Cord L'gth.Ft.	Cond.	Size	Strand	Type	Amp Rating	Cord O.D.
1980	8	2	16	65/34	SJ	10	.325"
1980/3	8	3	16	65/34	SJ	10	.355"
1982/3	8	3	18	41/34	SJ	7	.330"
1984	9	2	18	41/34	SV	7	.245"
1984/3	9	3	18	41/34	SV	7	.265"
Std. Pkg. 25							

**UL APPROVED — SERVICE LINE CORD**

Use as an all purpose power supply cord for small appliances, lamps, radios, etc.

**DESCRIPTION:** Two conductors parallel SP-1 (POSJ) with molded-on male plug, double brass blades, conductor end stripped and tinned — Hanked. Available in black and brown.



DABURN No.	L'gth	Cond.	Size	Strand	Nom. O.D.	Std. Pkg.
1987	6	2	18	41/34	130" x .235"	50
1988	7½	2	18	41/34	130" x .235"	50

**UL APPROVED — TV POWER SUPPLY CORD**

Replacement of damaged or worn ou TV cord.

**DESCRIPTION:** Six foot, 2 cond #18 SP-1 (POSJ) brown cord with molded male plug and TV molded connector on other end.



DABURN No.	Std. Pkg.
9-45	25

Television Power Supply Cord — 6 feet

**RG/U COAXIAL CABLE**

**DESCRIPTION:** One conductor, polyethylene insulation, copper braid shield, plastic jacket overall.



DABURN No.	Spool	Type	Nom. Imp.	Size	Nom. MMFD/FT.	Strand	O.D.
1925	500'	RG-8/U	52	13	29.5	7/21 Bare	.405"
1926	500'	RG-9/U	51	13	30.0	7/21 S	.420"
1927	500'	RG-11/U	75	18	20.5	7/26 Tinned	.405"
1928	1000'	RG-58A/U	50	20	29.0	19/.0068 Tinned	.195"
1929	1000'	RG-58/U	53.5	20	28.5	Solid	.195"
1930	1000'	RG-59/U	73	22	21.0	Solid C.W.	.242"
1931	1000'	RG-62/U	93	22	13.5	Solid	.242"

Additional RG numbers available conforming to MIL-C-17B Specs.

**LAMP CORD**

TYPES SP-1 (POSJ-64) — TYPE SP-1 (POT) UL APPROVED

An all purpose approved cord both SP-1 (rubber) and SPT-1 (Plastic) for lamps, radios and small instruments and appliances.



DABURN No.	Cond.	Size	Strand	Insul.	Type	UL Type	Nom. O.D.
1990	2	18	41/34	Rubber	SP-1	POSJ	.130" x .235"
1991	2	18	41/34	Plastic	SPT-1	POT	.130" x .225"

STD. PUT-UP: 100 Ft., 250 Ft., 500 Ft., 1000 Ft.

COLORS: (Rubber) Brown, Black, White. (Plastic) Brown, Black, Ivory, Gray, Pink, Light Blue, Yellow, Green.

**DABURN MAGNET WIRE — Per MIL-W-583B Spec.**

**DESCRIPTION:** Plain Enamel — Single conductor round bare copper covered with a continuous insulating film of enamel. 105°C, Type T per MIL-W-583B.

**DESCRIPTION:** Heavy Formvar — Single conductor round baked copper, baked film insulation from varnish base on a vinyl acetate resin. 105°C, Type T2 per MIL-W-583B.

**DESCRIPTION:** Single conductor soft drawn annealed copper tinned per Spec MIL-W-3861 Type S, QQ-W-343 Type S, ASTM-B-33.

**PLAIN ENAMEL (PE)**

DABURN No.	Size	Nom. O.D.
DPE-10	10	.1037"
DPE-12	12	.0825"
DPE-14	14	.0657"
DPE-16	16	.0522"
DPE-18	18	.0416"
DPE-20	20	.0332"
DPE-22	22	.0266"
DPE-24	24	.0212"
DPE-26	26	.0169"
DPE-28	28	.0135"
DPE-30	30	.0108"
DPE-32	32	.0087"
DPE-34	34	.0069"
DPE-36	36	.0055"
DPE-38	38	.0044"
DPE-40	40	.0034"
DPE-42	42	.0028"
DPE-44	44	.0023"

**HEAVY FORMVAR (HF)**

DABURN No.	Size	Nom. O.D.
DHF-10	10	.1056"
DHF-12	12	.0842"
DHF-14	14	.0673"
DHF-16	16	.0539"
DHF-18	18	.0432"
DHF-20	20	.0346"
DHF-22	22	.0277"
DHF-24	24	.0224"
DHF-26	26	.0180"
DHF-28	28	.0144"
DHF-30	30	.0116"
DHF-32	32	.0095"
DHF-34	34	.0075"
DHF-36	36	.0060"
DHF-38	38	.0049"
DHF-40	40	.0038"
DHF-42	42	.0032"
DHF-44	44	.0026"

**TINNED COPPER (TC)**

DABURN No.	Size	Nom. O.D.
DTC-10	10	.103"
DTC-12	12	.082"
DTC-14	14	.065"
DTC-16	16	.051"
DTC-18	18	.040"
DTC-20	20	.033"
DTC-22	22	.025"
DTC-24	24	.020"
DTC-26	26	.016"
DTC-28	28	.013"
DTC-30	30	.010"
DTC-32	32	.008"
DTC-34	34	.006"
DTC-36	36	.005"
DTC-38	38	.004"
DTC-40	40	.003"

STANDARD PUT-UP: ¼ lb., ½ lb., 1 lb., 5 lbs., 10 lbs. SIZES: 34, 36. Largest Put-up 5 lbs

SIZES: 38, 40, 42, 44. Largest Put-up 1 lb.

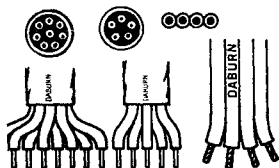
**ANTENNA CONTROL ROTOR CABLE**

USEFUL FOR TV ANTENNA ROTATORS, ETC.

#1907 — 4 cond. flat parallel polyethylene plastic insulation — one outer conductor tinned, balance bare copper.

#1908 — 5 cond. twisted, color coded, vinyl plastic jacket overall.

#1909 — 8 cond. twisted, color coded vinyl plastic jacket overall.



DABURN No.	Cond.	Size	Strand	Nom. O.D.
1907	4	20	7/28	.072" x .390"
1908	5	20	7/28	.180"
1909	8	22	7/30	.205"

CONDUCTOR COLOR CHART FOR #1908, 1909  
1-Black, 2-White, 3-Red, 4-Green, 5-Yellow, 6-Blue, 7-Brown, 8-Orange.  
STD. PUT-UP: 500 Ft., 1000 Ft.



**DABURN**

**DABURN ELECTRONICS & CABLE CORP.**  
WIRE • CABLE • TUBING • MIL/COMM • SWITCHES • ELECTRONIC HARDWARE

**DAFLEX® ELECTRONIC LACING CORDS AND TAPES**

LACING CORD-TAPE TO MEET MIL-T-713A TYPE P\*

**NYLON FLAT BRAIDED LACING TAPE**



Nylon fiber flat braided impregnated with MW microcrystalline fungicidal wax. Stays flat. Designed to create a wider contact to distribute the stress. Flexible. Won't slip when knotted. Resistant to fungus, flame, abrasion, acids.

DABURN No.	Color	Class	Nom. Width	Nom. Thickness	Tensile Strength	Standard Put-Up Tubes
2035	Natural White	—	.200"	.014"	150 lbs.	500 yd.
2035B	Black	—	.200"	.014"	150 lbs.	500 yd.
2036	Natural White	1	.120"	.014"	80 lbs.	500 yd.
2036B	Black	1	.120"	.014"	80 lbs.	500 yd.
2037	Natural White	2*	.090"	.014"	50 lbs.	500 yd.
2037B	Black	2*	.090"	.014"	50 lbs.	500 yd.
2038	Natural White	3	.062"	.010"	30 lbs.	500 yd.
2038B	Black	3	.062"	.010"	30 lbs.	500 yd.

**DACRON FLAT BRAIDED LACING TAPE**



Dacron fiber flat braided impregnated with non-slip fungicidal finish. Will not cut or damage insulation. Stays at. Has all characteristics of nylon with elongation, better resistance to acids.

DABURN No.	Color	Nom. Width	Thickness Nom.	Strength Tensile	Standard Put-Up Tubes
2041	Natural White	.120"	.014"	80	500 yd.
2041B	Black	.120"	.014"	80	500 yd.
2042	Natural White	.090"	.014"	48	500 yd.
2042B	Black	.090"	.014"	48	500 yd.
2043	Natural White	.060"	.010"	35	500 yd.
2043B	Black	.060"	.010"	35	500 yd.
2044	Natural White	.046"	.010"	25	500 yd.
2044B	Black	.046"	.010"	25	500 yd.

**TEFLON\* FIBERGLASS FLAT BRAIDED LACING TAPE**

Teflon coated fiberglass flat braided lacing tape bonded for high temp. operations (550°F). Stays flat — for strength, stability. Teflon finish increases strength and abrasion resistant surface. Will not cut or damage insulation.

DABURN No.	Color	Nom. Width	Thickness Nom.	lbs. Test	Standard Put-Up Tubes
2045	White	.170"	.025"	150	500 yd.
2046	White	.120"	.020"	90	500 yd.
2047	White	.080"	.020"	70	500 yd.

**TEFLON\* FLAT BRAIDED LACING TAPE**

for high temperature operations (550°F)

DABURN No.	Color	Nom. Width	Nom. Thickness	Test lbs.	Standard Put-Up Tubes
2048	Brown	.100"	.016"	35	500 yd.
2049	Brown	.075"	.010"	15	500 yd.



**ROUND TWISTED NYLON LACING CORD**

Manufactured to meet MIL-T-713A Type P specification, Composition P, Classes 3, 2, 1. Wax finish — compounded with fungicide to resist mildew. Easy to tie.

PUT-UP ON 1 LB. TUBES

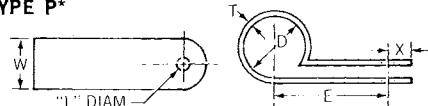
DABURN No.	Color	Class	Tensile Strength	Nom. Diam.	Yds. Per Tube
2070	Natural	1	70 lbs.	.039"	600
2070B	Black	1	70 lbs.	.039"	600
2071	Natural	2	48 lbs.	.029"	800
2071B	Black	2	48 lbs.	.029"	800
2072	Natural	3	32 lbs.	.025"	1140
2072B	Black	3	32 lbs.	.025"	1140
2072/1	Natural	4	20 lbs.	.020"	2400
2072/1B	Black	4	20 lbs.	.020"	2400

**ROUND TWISTED LINEN LACING CORD**

Manufactured from pure flax treated with microcrystalline wax compounded with fungicide to resist mildew. Classes 1, 2, 3 meet MIL-T-713A Type N specifications.

4 OZ. TUBE		8 OZ. TUBE		1 LB. TUBES		Lb. Test
DABURN No.	Yds.	DABURN No.	Yds.	DABURN No.	DABURN No.	
2073	210	2074	425	2075	2075B	850
2076	150	2077	300	2078	2078B	600
2082	115	2083	235	2084	2084B	470
2079	100	2080	200	2081	2081B	400
2085	75	2086	150	2087	2087B	300

**NYLON CABLE CLAMPS**



**MADE OF DU PONT "ZYTEL" 101 NYLON RESIN**

Meets MIL-P-26093A and MIL-P-17091A Amend. 2. Light and tough these nylon cable clamps are used as a clamp, strain relief, clip hanger, fastener or strap. Smooth non-abrasive surfaces, rounded edges will not cause shorts or grounds in cable. Insoluble in solvents, gasoline, oils, hydraulic fluids, alcohol, acids, alkalis. Temperature range -60°F to +300°F. Does not support combustion. Inside matte finish. Prevents slippage and is self aligning. Snaps on cable. Meets MIL-P-20693A specs, fungus resistant.

DABURN No.	To Fit Size	D	E	W	T	H	X
625	1/8"	.125	.316	3/8	.050	.177	.227
626	3/16"	.187	.378	3/8	.050	.177	.277
627	1/4"	.250	.409	3/8	.050	.177	.227
628	5/16"	.312	.441	3/8	.050	.177	.277
629	3/8"	.375	.471	3/8	.050	.177	.277
630	7/16"	.437	.519	3/8	.050	.177	.277
631	1/2"	.500	.550	3/8	.050	.177	.277
631A	5/16"	.563	.625	1/2	.060	.177	.227
632	5/8"	.625	.634	1/2	.060	.177	.227
632A	3/4"	.687	.752	1/2	.060	.177	.227
633	3/4"	.756	.718	1/2	.060	.177	.227
634	7/8"	.875	.760	1/2	.060	.177	.227
635	1"	1.000	.802	1/2	.060	.177	.227
636	1 1/8"	1.125	.968	1/2	.062	.204	.250
637	1 1/4"	1.250	1.156	1/2	.062	.204	.250
638	1 1/2"	1.500	1.188	5/8	.070	.204	.250

Std. Pkg. 100, 500, 1000

**ETHYL CELLULOSE CABLE CLAMPS**

Ethocel recommended for general use. Combines light weight and chemical resistance with excellent shock resisting properties in temp. range from -40°F to +185°F. Approved 7-21-44 Army-Navy Aeronautical AN-742. Also made to meet MIL STD. 242A (Ships). Suitable indoor-outdoor. Std. Pkg. 100, 1000.

DABURN No.	To Fit Size	D	E	W	T	H	X
615	1/8"	.125	.325	1/2	.060	.204	3/32
615A	3/16"	.188	.390	1/2	.060	.204	3/32
615B	1/4"	.250	.421	1/2	.060	.204	3/32
615C	5/16"	.313	.457	1/2	.060	.204	3/32
615D	3/8"	.375	.483	1/2	.060	.204	3/32
615E	7/16"	.438	.531	1/2	.060	.204	3/32
616	1/2"	.500	.562	1/2	.060	.204	3/32
616A	5/16"	.563	.625	1/2	.060	.204	3/32
616B	3/8"	.625	.610	1/2	.060	.204	3/32
616C	7/16"	.688	.666	1/2	.060	.204	3/32
616D	3/4"	.750	.766	1/2	.060	.204	3/32
616E	7/8"	.875	.813	1/2	.060	.204	3/32
617	1"	1.000	.906	1/2	.060	.204	3/32
617A	1 1/8"	1.125	.969	1/2	.060	.204	3/32
617B	1 1/4"	1.250	1.156	1/2	.060	.204	3/32
617C	1 1/2"	1.5	1.0625	5/8	.070	.204	3/32
617D	2"	2.0	1.313	5/8	.070	.204	3/32
617E	2 1/2"	2.5	1.563	5/8	.070	.204	3/32

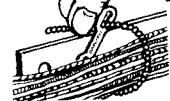


**DABURN ALUMINUM CABLE CLAMPS**

Made of hard drawn aluminum, light weight. Useful when mounting resonant lines, elements for beams, etc. Strong, durable, rust-proof.

DABURN No.	To Fit Size	Width	Length	Thickness	Clearance Hole For	Std. Pkg.
651A	1/8"	1/2"	1 1/2"	.050"	10	100
651	1/4"	1/2"	7/8"	.050"	10	100
652	3/16"	1/2"	1 1/8"	.050"	10	100
653	3/8"	1/2"	1"	.050"	10	100
654	1/2"	1/2"	1 1/8"	.050"	10	100
654S	1/2"	1/2"	1 1/2"	.050"	10	100
654A	5/8"	1/2"	1 1/2"	.050"	10	50
655	3/4"	3/4"	1 3/4"	.090"	1/4-20	50
657	7/8"	3/4"	1 5/8"	.090"	1/4-20	50
656	1"	3/4"	1 3/4"	.090"	1/4-20	50
656A	1 1/8"	3/4"	1 7/8"	.090"	1/4-20	50
656B	1 1/4"	3/4"	2"	.090"	1/4-20	50

**DABURN PUSH BUTTON WIRE TIES**



Push button wire ties for harnessing wire. 4 1/2" in length, each tie is adjustable to 30 different diameters. Made of strong polyethylene, it is inert chemically and heat resistant. Breaking strength 45 to 95 lbs. After the tie is placed in hole for anchoring, wires can be replaced or added by loosening tie and pulling tight again. Designed to fit .250" - .265" hole in a .031" to .140" thick panel. Material conforms to Spec. LP590.

DABURN No.	(Specify Color)	Std. Pkg.
601-4	Red, Blue, Yellow	100, 1000

SPIRAL WRAP FOR HARNESSING AVAILABLE. WRITE FOR BROCHURE.

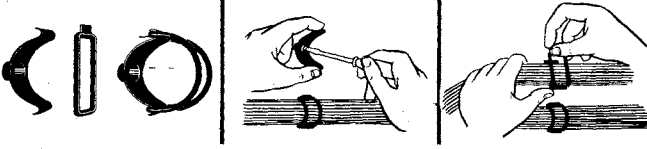
# ELECTROVERT INC.

COMPONENTS AND EQUIPMENT DIVISION  
New York, N. Y.

## Insuloid cradleclip® FOR SUPPORTED WIRING

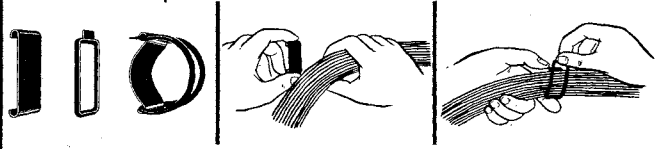
cradles and clips

• Electrical switchgear, switchboard, instrument & control panels • Electrical equipment • Chassis-mounted components & wiring • Cable runs in buildings • Fuel, lubricant, coolant & hydraulic fluid line installations • Chemical tubing & piping installations.



## FOR UNSUPPORTED WIRING

binders and clips



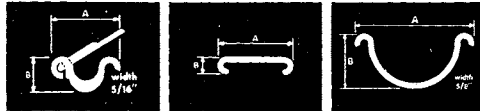
Just screw cradle to panel, position cables in cradle and hook on clip of required size, as shown.

### CRADLES



**C0 N0** Miniature with captive clip  
**C1, C2, C3**  
**C1-M C2-M C3-M** molded in cadmium-plated, chromate-treated nut to take 6/32 thread bolts

### BINDERS



**B0 N0** Miniature with captive clip  
**B1**  
**B2, B12**

### CLIPS



**N0** miniature (for replacement)  
**N1, N3, N5, N7**

### DIMENSIONS AND WEIGHTS

Type & Size	Dimensions (")		Wt/M (1000 pcs approx.)	Net Cost Per M
	A	B		
<b>Cradles</b>				
C0	.500	.335	8.2 oz	27.95
C1	.937	.562	3 lbs, 8 oz	35.75
C1-M	"	"	8 lbs	55.25
C2	1.375	.750	4 lbs, 5 oz	40.30
C2-M	"	"	9 lbs, 14 oz	61.75
C3	1.875	1.000	5 lbs, 14 oz	44.85
C3-M	"	"	10 lbs, 10 oz.	68.25
<b>Binders</b>				
B0	.500	.250	7.2 oz	27.95
B1	.875	.187	1 lb, 9 oz	20.15
B12	.937	.400	2 lbs, 7 oz.	27.95
B2	1.875	.812	4 lbs, 13 oz	38.35
<b>Clips</b>				
N0	.340	.500	3.8 oz	20.15
N1	.500	.937	2 lbs, 2 oz	13.65
N3	1.000	1.000	3 lbs, 13 oz	19.50
N5	1.750	1.000	5 lbs, 7 oz	23.40
N7	2.562	1.000	7 lbs, 7 oz	27.30

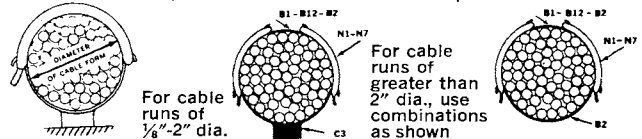
### MATERIALS

Cradles and Binders are molded from special nylon (Zytel 105). Extensible Clips are available in Neoprene, Butyl, Viton and Silicone rubber. N0 available in Neoprene only. Temperature range—76°F to +250°F.

### RECOMMENDED COMBINATIONS

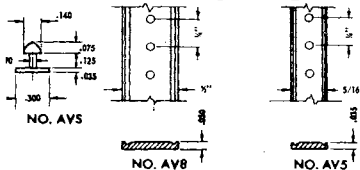
DIAMETER OF CABLE FORM	SUPPORTED* WIRING		UNSUPPORTED* WIRING	
	Cradle Clip		Binder Clip	
1/8" - 3/16"	C0	N0	B0	N0
1/4" - 5/8"	C1	N1	B1	N1
1/2" - 1 1/8"	C1	N3	B1	N5
3/4" - 1 1/4"	C2	N3	B12	N3
1 1/8" - 1 3/8"	C2	N5	B12	N5
1 1/4" - 1 1/2"	C3	N3	B2	N3
1 1/2" - 1 3/4"	C3	N5	B2	N5
1 3/4" - 2"	C3	N7	B2	N7

\*for Neoprene, Butyl and Viton Clips. Ask for special recommendations for Silicone Clips.



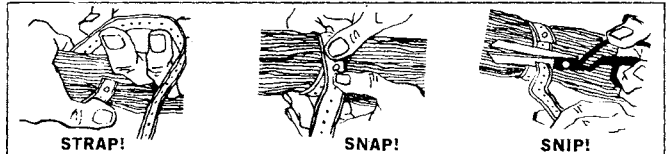
Standard pack: 500. Packed in polyethylene bags in cardboard cartons.

## Insuloid® Strapping The lowest cost, quality wire and cable tying system available to the electrical and electronics field today!



**Material:** PVC (Polyvinylchloride); extremely strong; temperature range -26°F to +180°F.

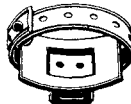
**Packing:** strap, 75 ft. coil boxed; or 500 or 1000 ft. coils on reels. Studs, 1000 per box.



**Installation:** Stud is inserted in end of strap extending from dispenser carton; strap is then passed under and around wire bringing it back, under tension, over stud again. Strap is then cut at next hole. This operation should be repeated approximately every 6 inches or as required.

### Insuloid® strap saddle

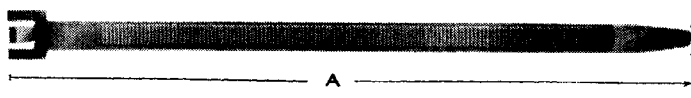
Use in combination with INSULOID Strapping. Wire bundle is laid into Strap Saddle which has been fastened to panel. Required length of Strapping is threaded through both ends of saddle. Strapping is then fastened. INSULOID Strap Saddle is a nylon molding. Temperature range: -76°F to +250°F.



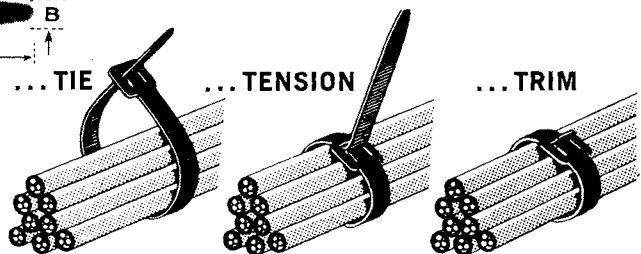
Type	75' Roll	500' Roll	1000' Roll	AVS Studs (1M/Box)
AV5	\$1.46	\$8.78	\$16.25	Black-Blunted \$3.25
AV8	2.44	14.63	27.63	White-Pointed 5.52

Strap Saddle 35.75/M

## Insuloop cable tie Simplest binding system available... one component... molded of flexible nylon... strong, virtually indestructible.



Ref.	A	B	Thickness	To Accommodate Cable Runs		Net Cost Per M
				From	To	
				Dia.	Dia.	
LK1	3"	3/4"	3/16"	3/16"	3/16"	24.70
LK2	4 1/16"	3/8"	3/16"	3/16"	1 1/16"	29.25
LK3	9"	3/8"	1/16"	3/4"	2 1/4"	74.75

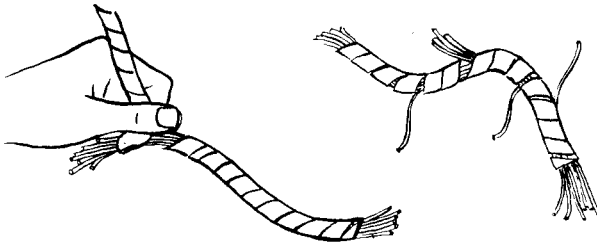


# ELECTROVERT INC.

## COMPONENTS AND EQUIPMENT DIVISION

New York, N. Y.

**Beta Spiroband** Reduces inventory costs • Three standard materials — natural polyethylene, ultraviolet resistant, fire resistant • Three diameters, each for application to a wide range of bundle sizes.



Spiroband	Outside Diameter	Wall Thickness	Length of Std. Coil	Net Cost Per Coil
1/2	.500	.062	25 ft.	2.21
3/4	.250	.045	100 ft.	3.64
1	.125	.032	100 ft.	2.05

**MATERIAL SPECIFICATIONS**

**Natural Polyethylene:** (grade specification shown in table at right) color is clear.

**Ultraviolet Resistant:** basically same as above with additives to withstand ultraviolet rays which color material black.

**Fire Resistant:** as above, but with additive which colors material bone white.

MATERIAL	Natural Polyethylene—DFD-2005
PROPERTIES	Brittleness (D746) -85°C = -121°F Dielectric constant (D150—23°C) 2.27
SPECIFICATIONS	ASTM: D1248-58T, Type 1, Class A, Grade 4 Federal: L-P-590, Type II, Grade 4 REA: PE-23

### Beta "Z" markers

PERMANENT • RELIABLE • DURABLE



**SPECIFICATIONS**

Cat.*	Recommended for Wires/Cables of O.D.	Length	Thickness	NET COST/PKG	
				Pkgs/50	Pkgs/500
22	.045"-.065"	.140"	.055"	.45	3.90
20	.066"-.085"	.140"	.050"	.45	3.90
18	.086"-.115"	.140"	.040"	.45	3.90
16	.110"-.135"	.140"	.030"	.45	3.90
14	.130"-.160"	.160"	.040"	.45	3.90
12	.150"-.175"	.160"	.045"	.45	3.90
10	.170"-.195"	.160"	.045"	.46	4.00
9	.190"-.215"	.160"	.050"	.47	4.06
8	.210"-.250"	.190"	.055"	.48	4.23
7	.245"-.295"	.190"	.055"	.55	4.88
6	.290"-.360"	.224"	.060"	.62	5.69
4-1	.355"-.460"	.224"	.060"	.72	6.66

Combination of 2—25% overcharge    Combination of 4—100% overcharge  
Combination of 3—50% overcharge    Combination of 5—125% overcharge

**Colors:** White with black markings (Standard color). Black with white markings, Blue, Green, Yellow, Red with black markings.

**Material:** PVC MIL-1-631C, Type F, Form U, Grade a & b, Class I, Category 1, finish: glossy. Specific gravity: 1.21. Hardness (shore A): 73 av. Tensile Strength: 2600 psi. av. Ultimate Elongation: 350% av. Dielectric Strength (20 mil specimen): 750 volts/mil. Cold Brittle Temp. (50% non-failure): -65° F.

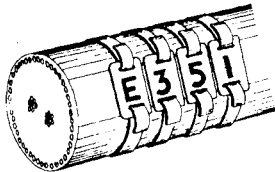
**Markings:** Single: numerals 0-9, letters A to Z, symbols +, -, ~, ±. Multiple: any 2, 3, 4 or 5 unit combinations of above.

**Packing:** Coil of 50 single markers, one size, color and character per polyethylene covered cards. Coil of 500, as above, on self-servicing reels. Coil of 500 multiple markers, one color, sizes 22, 20, 18, 16, 14, 12, 10, 9 or 8. Coil of 250 multiple markers, sizes 7, 6 or 4-1.

**Min. Quantity:** per size, and character: 50 single white, 500 multiple, 500 colored.

**Min. Order:** 500 markers.

### Beta "S" markers for cables with O.D. of more than .500".



**Strap-on-marker:** Size: 3/8" x 1/8" x .040", material P.V.C., colors and material same as BETA "Z".  
**Markings:** 0-9, A-Z, +, -, ~, ±.

**Min. Quantity:** Per size, color and character: 5 markers.

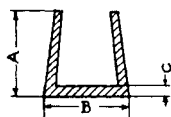
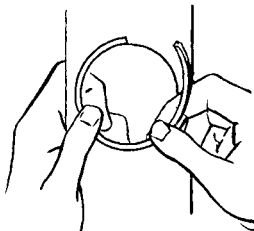
**Min. Order:** 500 Markers, 165' coil of strip.

**Application Strip:** PVC—covered aluminum, 4 mm wide 0.6 mm thick.

**Packing:** Markers, 50 per indicator card pouch strips in 165' coils.

Strip Wire Clip .....\$5.43 per 100 linear ft. (shipped in 165' coils)  
Markers .....13.00/M

### Beta grommet strip with the "Snip-n-Fit" feature



U-shaped, strip-type grommeting material can be cut to size, provides smooth surface around edge of any hole and features quick, simple application. No adhesive or special tools required.

MATERIAL	Natural Polyethylene—DFD-2005				
PROPERTIES	Brittleness (D746) -85°C = -121°F Dielectric constant (D150—23°C) 2.27				
SIZE	A	B	C	APPLICATION	PACKAGING NET/!
2	.120	.100	.035	20 Ga. and smaller	75' coils 2.93
3	.150	.150	.035	18 to 12 gauge	75' coils 3.25
4	.150	.200	.045	11 to 8 gauge	75' coils 3.90
5	.190	.280	.045	8 Ga. to 3/16" thick	75' coils 6.80
6	.250	.375	.062	3/16" to 1/4" thick	50' coils 6.50

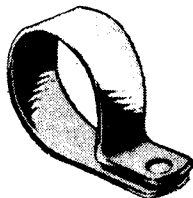
... offers the advantage of one strip only for applications to: round holes; square holes; rectangular holes; oval holes.

**Specifications:** ASTM: D-1248-58T, Type 1, Class A, Grade 4. Federal: L-P-590, Type II, Grade 4. REA: PE-23. MIL-C-17C, Cable, radio frequency, coaxial, dual coaxial, twin conductor and twin lead. MIL-W-76B, Insulated hookup wire. MIL-C-915A, Electrical cable for shipboard use.

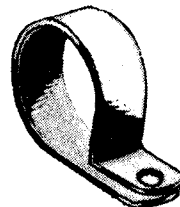


# ELECTROCRAFT COMPONENTS

## ELECTROCRAFT PLASTIC CABLE CLAMPS



Electrocraft Cable Clamps are used for fastening cables, harnesses, tubing, etc. Lightweight, durable, with excellent electrical and mechanical properties. Two materials: (1) Ethyl Cellulose, for normal industrial and commercial uses—where temperatures range from -40° F. to 185° F. (2) Nylon (Zytel), for extreme durability and high resistance to temperature (-60° F. to 300° F.) and most chemicals.



### ETHYL CELLULOSE CABLE CLAMPS

Transparent (light yellowish) plastic. Meets specifications AN742. Plastic thickness is .063".

### NYLON (ZYTEL) CABLE CLAMPS

Natural color (translucent white) Nylon. Thickness is .050" on 1/2" dia. and smaller clamps, .060" on 3/4" and larger.

### ETHYL CELLULOSE CLAMPS

For Cable O.D.	Cat. No.	Net Per C	Cat. No.	Net Per M
1/8"	34-300C	\$2.33	34-300-M	\$19.80
3/16"	34-304C	2.40	34-304-M	19.92
1/4"	34-308C	2.58	34-308-M	21.97
5/16"	34-312C	2.85	34-312-M	24.23
3/8"	34-316C	3.00	34-316-M	25.50
7/16"	34-320C	3.30	34-320-M	27.83
1/2"	34-324C	3.60	34-324-M	29.63
5/8"	34-328C	4.20	34-328-M	34.68
3/4"	34-332C	4.50	34-332-M	36.00
7/8"	34-336C	4.80	34-336-M	39.83
1"	34-340C	5.10	34-340-M	42.71
1 1/8"	34-344C	5.40	34-344-M	44.76
1 1/4"	34-348C	5.70	34-348-M	48.36
1 1/2"	34-352C	6.00	34-352-M	51.60
1 3/4"	34-356C	6.30	34-356-M	55.08
1 7/8"	34-358C	6.60	34-358-M	58.20

### NYLON (ZYTEL) CLAMPS

For Cable O.D.	Cat. No.	Net Per C	Cat. No.	Net Per M
1/8"	34-370C	\$3.60	34-370-M	\$30.00
3/16"	34-374C	3.93	34-374-M	31.77
1/4"	34-378C	4.17	34-378-M	34.73
5/16"	34-382C	4.68	34-382-M	38.37
3/8"	34-386C	4.83	34-386-M	40.32
7/16"	34-390C	5.13	34-390-M	42.63
1/2"	34-394C	5.47	34-394-M	45.38
5/8"	34-398C	6.72	34-398-M	62.26
3/4"	34-402C	7.50	34-402-M	65.63
7/8"	34-406C	7.80	34-406-M	77.33
1"	34-410C	8.40	34-410-M	75.00
1 1/8"	34-414C	9.00	34-414-M	81.00
1 1/4"	34-418C	10.50	34-418-M	96.00

**SEND TODAY FOR NEW** free GC Catalog . . . shows all GC quality products.

## WIRE and CABLE TIES

### PLASTIC

Tough and flexible. Chemically inert. Available in Red, Yellow, or Blue in three different lengths. Smart looking . . . a compliment to any assembly. Special SNAP BUTTON model holds wire and cable bundles to walls, chassis, cabinets, fire walls etc.

Part No.	Description	Net	Part No.	Box of 1000*
34-432	4-1/4" Red	.98 #	34-432-M	11.10
34-436	4-1/4" Yellow	.98 #	34-436-M	11.10
34-440	4-1/4" Blue	.98 #	34-440-M	11.10
34-444-M	10" Red (available in 1000 lots only)			21.60
34-448-M	10" Yellow			21.60
34-452-M	10" Blue			21.60
34-449-M	12" Yellow			24.90
34-450-M	12" Red			24.90
34-451-M	12" Blue			24.90
34-454-M	4-1/4" Snap-in plastic Red +			13.95
34-456-M	4-1/4" Snap-in plastic Yellow +			13.95
34-458-M	4-1/4" Snap-in plastic Blue +			13.95

\* Package of 40

+ Write for Prices on quantities of 10,000 and up.

+ Pat. Pending



### NYLON

Heavy duty, extra tough. All types are available in natural white only. Nylon withstands extreme temperature. Chemically inert.

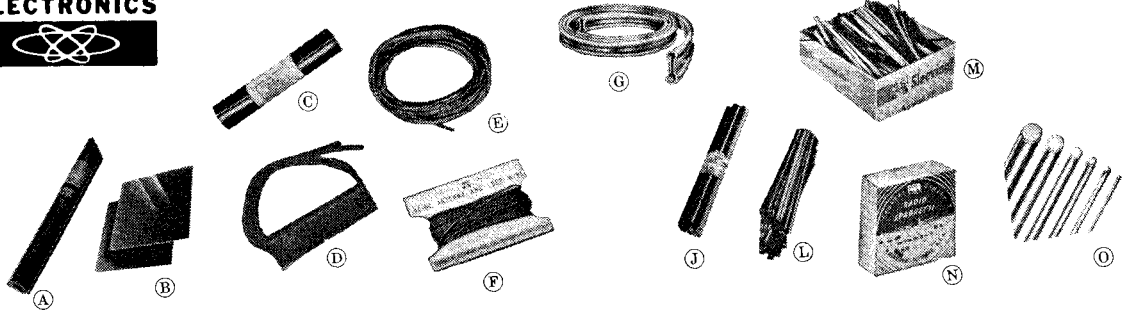
Part No.	Description	Net Box of 1000*
34-442-M	4-1/4"	14.90
34-460-M	10"	33.85

### SPECIAL CABLE TIES

Special sizes and colors, even styles of cable ties are available in large quantities. Write or call your specifications today.



# ELECTRONIC COMPONENTS



(A) **G-C INSULATING CAMBRIC**—Dry yellow varnished cambric for field coils, transformers, chokes, resistors, motors, etc.  
Cat. No. 549 .010"—Roll over 210 sq. in. Net \$ .78

(B) **G-C LAMINATED PHENOLIC PLASTIC PANELS**—Black laminated panels. 1/8" thick stock. Black color.  
Cat. No. 590 6"x6"x1/8" Net \$ .42  
591 6"x12"x1/8" .82  
592 12"x12"x1/8" 1.58

(C) **G-C FIBEROID FISH PAPER**—Fish paper has many uses around the shops for repair jobs where electrical insulation is required.  
Cat. No. 560 .010"—240 sq. in. roll Net \$ .50

(D) **G-C BATTERY CONNECTOR STRIP**—Used for connecting 67 1/2 volt "B" batteries, such as Eveready 455, 466; Burgess XX30, XX45.  
Cat. No. 8115 Net \$ .18

(E) **G-C SHIELDED PHONO PICK-UP WIRE**—Handy packages of shielded phono pick-up wire, very handy for new installations or replacements.  
Cat. No. 1738-E Envelope Net \$ .38

(F) **G-C AC-DC INDOOR ANTENNA WIRE**—Antenna lead wire for indoor type AC-DC sets. Flexible copper wire covered with brown plastic insulation.  
Cat. No. 840 25 Ft. coil Net \$ .37

(G) **G-C 300-OHM LINE PROTECTIVE TUBING**—Clear plastic tubing will fit over 300-ohm flat lines and will protect the line from grounding and rubbing on corners of buildings, eaves, etc. It actually protects and waterproofs the line.  
Cat. No. 625 Box of 8 ft. Net \$ .75  
626 250 ft. coil 15.90  
627 1000 ft. 59.33

(J) **G-C GENFLEX PLASTIC TUBING**—High grade extremely flexible plastic tubing for radio and electronic insulation work. Highly resistant to cold or heat. High dielectric strength, average 8,000 volts. Colors: Black, Red, Green and Clear (Specify Color).  
Cat. No. 603 18 B-S Gauge, .042 I.D., 20 ft. Package Net \$ .82  
605 16 B-S Gauge, .053 I.D., 20 ft. Package Net \$ .82  
607 14 B-S Gauge, .066 I.D. 20 ft. Package Net \$ .82

609 12 B-S Gauge, .085 I.D., 20 ft. Package Net \$ .82  
611 10 B-S Gauge, .106 I.D., 15 ft. Package Net \$ .82  
613 8 B-S Gauge, .133 I.D., 15 ft. Package Net \$ .82  
616 6 B-S Gauge, .162 I.D., 10 ft. Package Net \$ .82  
617 4 B-S Gauge, .208 I.D., 10 ft. Package Net \$ .82  
620 2 B-S Gauge, .263 I.D., 10 ft. Package Net \$ .82

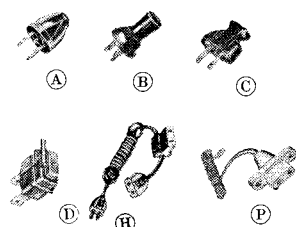
**G-C PLASTIC TUBING KITS** — Handy kits of assorted colors and sizes. Ideal for experimenters and servicemen.  
Cat. No. 635 Kit of 25 ft. assorted. Sizes 18 to 10 Genflex Tubing. Net \$ .82

(L) **G-C ASSORTED SPAGHETTI KIT**—An assortment of 7 1/2" lengths of spaghetti sleeving. 26 lengths to the kit. Sizes include from No. 17 wire to 3/8" I.D.  
Cat. No. 550 Kit of 26 Lengths. Net \$ .40

(M) **SPAGHETTI AND SLEEVING ASSORTMENT**—A variety of sizes and colors are included of high grade varnish tubing. Put up in attractive box.  
Cat. No. 551 Net \$ .90

(N) **G-C SPAGHETTI IN BOXES**—Best grade varnished tubing put in convenient 20-ft. lengths. Will fit wire from No. 12 to No. 18. Colors: Black, Red, Yellow, Green and Blue.  
Cat. No. 499 Net \$ 1.67

(O) **G-C RADIO SPAGHETTI**—High grade spaghetti for radio-television work. Average dielectric strength 4000 volts. Very flexible. Smoothly coated with best grades of varnish. Material is approved by A. S. T. M. Colors: Black, Brown, Red, Green and Yellow (Specify Color). 30" Lengths.  
Cat. No. 500 No. 20, fit 20 wire Net \$ .15  
503 No. 17, fit 18 wire \$ .17  
506 No. 14, fit 14 wire \$ .17  
508 No. 12, fit 12 wire \$ .17  
512 3/8" I.D. \$ .23  
515 1/4" I.D. \$ .25  
518 1/4" I.D. \$ .40  
521 3/8" I.D. (resist. size) \$ .63  
522 1/4" I.D. Red & Black \$ .73  
523 1/2" I.D. Red & Black \$1.03



(A) **G-C STREAMLINE ATTACHMENT CAP**—Made of rubber. Brass blades. Spring type. U.L. approved.  
Cat. No. 865 Net \$ .23

(B) **G-C SPRING ACTION CAP**—Heavy-duty type. Made of rubber. Brass blades. U.L. approved.  
Cat. No. 861 Net \$ .17

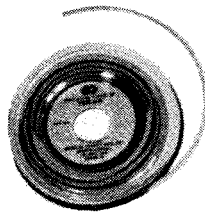
(C) **G-C SPRING ACTION CAP**—Flat plastic type. Brass blades. U.L. approved.  
Cat. No. 860 Net \$ .17

(D) **G-C ANGLE PLUG**—Plastic angle plug that assembles in a jiffy. It has no screws and requires no soldering.  
Cat. No. 8360-E Brown Net \$ .30  
8361-E Ivory .30

(E) **SERVICEMAN'S CHEATER CORD**—Special "cheater cord" for extending the standard interlock safety cord supplied with the TV set.  
Cat. No. 8948 Net \$ .87

(F) **INTERLOCK CABLE CORD**—Replacement cord for RCA, Philco, G-E, Admiral and others.  
Cat. No. 8200 Reg. TV Cord Net \$ .48  
8201 Spec. Zenith Cord .70

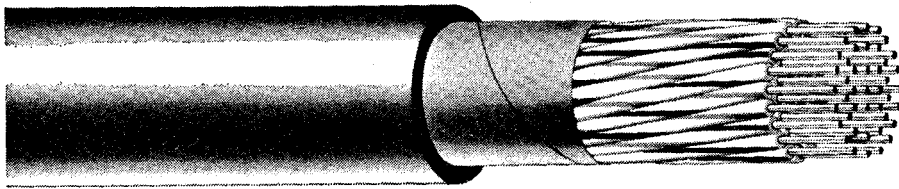
## NEW G-C INSULATING TUBING OF TEFLON\*



—Exceptionally tough and flexible. Withstands temperatures from 450° below zero F. to 500° above zero F. Will not melt near solder joints. Outstanding dielectric properties—zero moisture absorption. Chemically inert. Completely weatherproof. Wires can be inserted much more easily than in any other tubing.

\*Registered trademark Du Pont Co.

Part No.	Feet Per Spool	Color	Gauge	I.D. (Inches)	Wall Thickness Per Spool	Net
7980-7	10	Nat	24	.022	.010	\$ 1.33
7980-7C	100	Nat	24	.022	.010	11.83
7980-1	10	Red	24	.022	.010	1.33
7980-1C	100	Red	24	.022	.010	11.83
7980-4	10	Blue	24	.022	.010	1.33
7980-4C	100	Blue	24	.022	.010	11.83
7981-7	10	Nat	22	.027	.012	1.47
7981-7C	100	Nat	22	.027	.012	13.26
7981-1	10	Red	22	.027	.012	1.47
7981-1C	100	Red	22	.027	.012	13.26
7981-4	10	Blue	22	.027	.012	1.47
7981-4C	100	Blue	22	.027	.012	13.26
7982-7	10	Nat	20	.034	.012	1.83
7982-7C	100	Nat	20	.034	.012	18.27
7982-1	10	Red	20	.034	.012	1.83
7982-1C	100	Blue	20	.034	.012	18.27
7982-4	10	Nat	18	.042	.012	1.83
7982-4C	100	Blue	20	.034	.012	18.27
7983-7	10	Red	20	.034	.012	2.23
7983-7C	100	Nat	18	.042	.012	20.88
7983-1	10	Red	18	.042	.012	2.23
7983-1C	100	Red	18	.042	.012	20.88
7983-4	10	Blue	18	.042	.012	2.23
7983-4C	100	Blue	18	.042	.012	20.88
7984-7	10	Nat	16	.053	.012	2.65
7984-7C	100	Nat	16	.053	.012	25.02
7984-1	10	Red	16	.053	.012	2.65
7984-1C	100	Red	16	.053	.012	25.02
7984-4	10	Blue	16	.053	.012	2.65
7984-4C	100	Blue	16	.053	.012	25.02
7985-7	10	Nat	14	.066	.012	2.92
7985-7C	100	Nat	14	.066	.012	28.38
7985-1	10	Red	14	.066	.012	2.92
7985-1C	100	Red	14	.066	.012	28.38
7985-4	10	Blue	14	.066	.012	2.92
7985-4C	100	Blue	14	.066	.012	28.38
7986-7	5	Nat	12	.085	.014	1.83
7986-7C	100	Nat	12	.085	.014	34.28
7986-1	5	Red	12	.085	.014	1.83
7986-1C	100	Red	12	.085	.014	34.28
7986-4	5	Blue	12	.085	.014	1.83
7986-4C	100	Blue	12	.085	.014	34.28
7987-7	5	Nat	10	.106	.014	2.17
7987-7C	100	Nat	10	.106	.014	41.58
7987-1	5	Red	10	.106	.014	2.17
7987-1C	100	Red	10	.106	.014	41.58
7987-4	5	Blue	10	.106	.014	2.17
7987-4C	100	Blue	10	.106	.014	41.58



In Stock  
**MIL-SPEC**

# Multiple Conductor Cables!

National Wire & Cable Corporation manufactures a complete line of multiple conductor control cables. Conductors are of tinned copper strand with primary insulation for use up to 105°C per MIL-W-16878D Type C. Insulated for 1000 volts working voltage. Conductors are color coded using 10 standard basic colors, plus spiral tracers on white per MIL-STD. 122.

All conductors are planetary cabled and contra-helically laid with a Mylar tape serve over the cable bundle. The overall jacket is a 105°C black Thermoplastic or may be Neoprene to MIL-R-6855 Class 2 Grade 60 specification.

## SHIELDED CABLES

National Multiple Conductor SHIELDED CABLES are to the same specifications as above with addition of tinned copper braided shield over cable complex with 85-90% coverage to MIL-C-7078A. STANDARD PUT-UPS: 500 ft. and 1000 ft. No-deposit reels.

## TECHNICAL DATA (all cables)

<b>Insulation Breakdown Voltage:</b>	Greater than 8000 volts AC RMS, 60 cps.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in the cable ranges from 40 to 65 mmfd per ft., @ 1000 cps; dependent on cable construction.
<b>Insulation Leakage Res.:</b>	200. megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Res.:</b>	10. megohms/1000 ft. min. at 500 VDC from overall shield through sheath to outside world.
<b>Useable Temp. Range:</b>	Suitable for continuous use from +105°C to -55°C.
<b>Cold Bending Capability:</b>	All cables are suitable for flexing to a circle diam. of approx. 6 cable diameters from +105°C to -20°C; Recommended flex diameter should be greater than 20 cable diam. for flexing at -40°C., or for continuous flexing service to -55°C., specify our neoprene sheath, in lieu of plastic sheath.

## MULTI-CONDUCTOR STOCK CABLES

Conductor sizes 22, 20, 18, 16, 14 & 12 gauge. 22 AWG is 7 strand. All others 19 strand.

### UNSHIELDED

PART NO.	NO. COND.	COND. AWG	JKT. THICK	CABLE O.D.	WEIGHT PER M'
NW-722 J	7	22	.040	.295	40 Lbs.
NW-1222J	12	22	.050	.390	70 Lbs.
NW-1922J	19	22	.060	.460	110 Lbs.
VW-2722J	27	22	.060	.530	160 Lbs.
VW-3722J	37	22	.060	.600	200 Lbs.
VW-4822J	48	22	.060	.670	245 Lbs.
VW-6022J	60	22	.060	.730	300 Lbs.
VW-7222J	72	22	.060	.775	360 Lbs.
VW-8822J	88	22	.060	.835	425 Lbs.
VW-10222J	102	22	.060	.880	485 Lbs.
VW-720 J	7	20	.040	.300	50 Lbs.
VW-1220J	12	20	.050	.400	105 Lbs.
VW-1920J	19	20	.060	.470	160 Lbs.
VW-2720J	27	20	.060	.560	210 Lbs.
VW-3720J	37	20	.060	.610	280 Lbs.
VW-4820J	48	20	.060	.700	360 Lbs.
VW-6020J	60	20	.060	.750	435 Lbs.
VW-7220J	72	20	.060	.840	485 Lbs.
VW-8820J	88	20	.060	.900	580 Lbs.
VW-1022J	102	20	.060	.975	670 Lbs.
VW-718 J	7	18	.040	.350	75 Lbs.
VW-1218J	12	18	.050	.460	135 Lbs.
VW-1918J	19	18	.060	.560	225 Lbs.
VW-2718J	27	18	.060	.650	300 Lbs.
VW-3718J	37	18	.060	.730	390 Lbs.
VW-4818J	48	18	.060	.820	510 Lbs.
VW-6018J	60	18	.060	.900	600 Lbs.
VW-7218J	72	18	.060	1.100	720 Lbs.
VW-716 J	7	16	.040	.370	95 Lbs.
VW-1216J	12	16	.050	.500	155 Lbs.
VW-1916J	19	16	.060	.600	230 Lbs.
VW-2716J	27	16	.060	.700	320 Lbs.
VW-3716J	37	16	.060	.785	430 Lbs.
VW-4816J	48	16	.060	.900	625 Lbs.
VW-6016J	60	16	.060	.980	750 Lbs.
VW-714 J	7	14	.050	.450	150 Lbs.
VW-1214J	12	14	.050	.560	240 Lbs.
VW-1914J	19	14	.060	.675	370 Lbs.
VW-2714J	27	14	.060	.800	515 Lbs.
VW-512 J	5	12	.050	.480	175 Lbs.
VW-712 J	7	12	.050	.525	225 Lbs.
VW-1212J	12	12	.060	.700	375 Lbs.
VW-1912J	19	12	.060	.820	560 Lbs.

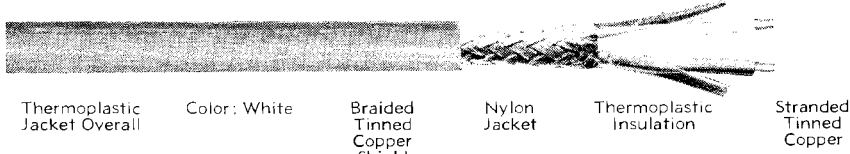
### OVERALL SHIELDED

PART NO.	NO. COND	COND AWG	T.C. SHIELD	JKT. THICK	CABLE O.D.	WEIGHT PER M'
NW-722 SJ	7	22	No. 36	.040	.320	55 Lbs.
NW-1222SJ	12	22	No. 34	.050	.420	90 Lbs.
NW-1922SJ	19	22	No. 34	.060	.490	145 Lbs.
NW-2722SJ	27	22	No. 34	.060	.560	200 Lbs.
NW-3722SJ	37	22	No. 34	.060	.630	245 Lbs.
NW-4822SJ	48	22	No. 34	.060	.700	300 Lbs.
NW-6022SJ	60	22	No. 34	.060	.760	355 Lbs.
NW-7222SJ	72	22	No. 34	.060	.810	425 Lbs.
NW-8822SJ	88	22	No. 34	.060	.870	500 Lbs.
NW-1022SJ	102	22	No. 34	.060	.915	560 Lbs.
NW-720 SJ	7	20	No. 34	.040	.335	68 Lbs.
NW-1220SJ	12	20	No. 34	.050	.435	125 Lbs.
NW-1920SJ	19	20	No. 34	.060	.500	195 Lbs.
NW-2720SP	27	20	No. 34	.060	.595	250 Lbs.
NW-3720SJ	37	20	No. 34	.050	.650	325 Lbs.
NW-4820SJ	48	20	No. 34	.060	.735	415 Lbs.
NW-6020SJ	60	20	No. 34	.060	.785	500 Lbs.
NW-7220SJ	72	20	No. 34	.060	.875	555 Lbs.
NW-8820SJ	88	20	No. 34	.060	.935	660 Lbs.
NW-10220SJ	102	20	No. 34	.060	1.010	750 Lbs.
NW-718 SJ	7	18	No. 34	.040	.380	95 Lbs.
NW-1218SJ	12	18	No. 34	.050	.490	170 Lbs.
NW-1918SJ	19	18	No. 34	.060	.590	265 Lbs.
NW-2718SJ	27	18	No. 34	.060	.680	350 Lbs.
NW-3718SJ	37	18	No. 34	.060	.760	445 Lbs.
NW-4818SJ	48	18	No. 34	.060	.850	575 Lbs.
NW-6018SJ	60	18	No. 34	.060	.935	680 Lbs.
NW-7218SJ	72	18	No. 34	.060	1.135	820 Lbs.
NW-716 SJ	7	16	No. 34	.040	.400	125 Lbs.
NW-1216SJ	12	16	No. 34	.050	.535	195 Lbs.
NW-1916SJ	19	16	No. 34	.060	.635	275 Lbs.
NW-2716SJ	27	16	No. 34	.060	.735	375 Lbs.
NW-3716SJ	37	16	No. 34	.060	.820	500 Lbs.
NW-4816SJ	48	16	No. 34	.060	.935	700 Lbs.
NW-6016SJ	60	16	No. 34	.060	1.015	830 Lbs.
NW-714 SJ	7	14	No. 34	.050	.485	180 Lbs.
NW-1214SJ	12	14	No. 34	.050	.600	280 Lbs.
NW-1914SJ	19	14	No. 34	.060	.710	420 Lbs.
NW-2714SJ	27	14	No. 34	.060	.835	575 Lbs.
NW-512 SJ	5	12	No. 34	.050	.515	210 Lbs.
NW-712 SJ	7	12	No. 34	.050	.560	265 Lbs.
NW-1212SJ	12	12	No. 34	.060	.735	430 Lbs.
NW-1912SJ	19	12	No. 34	.060	.850	625 Lbs.

# NATIONAL WIRE & CABLE CORP.

Dept. REM SERVICE DIVISION  
LOS ANGELES, CALIF.

# MIL-W-16878 TYPE B NYLON SHIELDED AND JACKETED WIRE



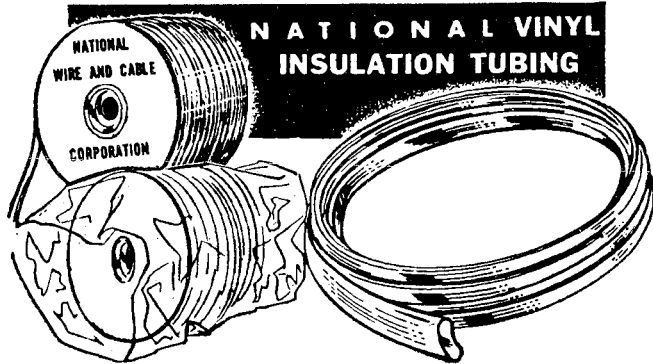
## SINGLE CONDUCTOR

Gauge of Conductors	National Catalog Number	No. of Strands Per Cond.	Ga. of Strands	Nom. Diam. Overall Wire (Inches)	Nominal Values of Capacitance Per Foot		Nom. Wt. Per 1000 Ft. (Lbs.)
					Wire-Wire MMF/FT	Wire-Shield MMF/FT	
24	NB1936N1SJ	19	36	.091		70.5	16.9
22	NB1934N1SJ	19	34	.099		102.1	18.7
20	NB1932N1SJ	19	32	.109		113.4	21.1
18	NB1930N1SJ	19	30	.123		118.9	24.6
16	NB1929N1SJ	19	29	.134		123.6	27.7

## TWO CONDUCTOR

Gauge of Conductors	National Catalog Number	No. of Strands Per Cond.	Ga. of Strands	Nom. Diam. Overall Wire (Inches)	Nominal Values of Capacitance Per Foot		Nom. Wt. Per 1000 Ft. (Lbs.)
					Wire-Wire MMF/FT	Wire-Shield MMF/FT	
24	NB1936N2SJ	19	36	.151	35.1	59.5	24.4
22	NB1934N2SJ	19	34	.166	40.0	61.3	28.4
20	NB1932N2SJ	19	32	.186	47.6	74.9	32.3
18	NB1930N2SJ	19	30	.214	57.6	97.4	40.0
16	NB1929N2SJ	19	29	.236	62.7	106.2	46.1

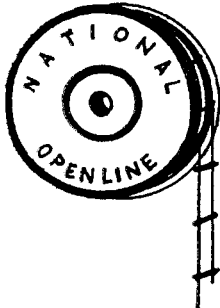
FOR LOW-CAPACITANCE INSTRUMENT CABLES SEE OUR AD IN EEM SECTION 6000.



## INSULATION

## EXTRUDED VINYL AND TEFLON TUBING

SIZES: #24 through 2½" Diam.  
 PUT-UP: #24 to ¾" on spools, completely sealed in plastic wrapping. Size ¾" to 2½" in tied coils.  
 SPEC. Vinyl +105°C to -32°C Type: MIL-I-631C, ASTM-D922 Grade C  
 GRADES: Vinyl +80°C to -55°C Type: MIL-I-7444B, MIL-I-22076  
 Teflon +250°C to -55°C Type: MIL-I-22129B (#20 to #2)



## NATIONAL OPENLINE

DESIGNED FOR COMMERCIAL TV DISTRIBUTION SYSTEMS AND RF POWER TRANSMISSION

Specifications: two inch spacing between conductors . . . 12 gauge copperweld . . . 470 ohm impedance . . . attenuation: 150 mc 0.25 DB PER 100 FEET, AT 30 mc 0.1 DB PER 100 FEET. Velocity factor 0.975 . . . copperweld steel for maximum strength and electrical stability, and to insure permanent uniform performance . . . Spreaders are brown polystyrene, spaced at average five foot intervals, staggered slightly to avoid spurious resonances.

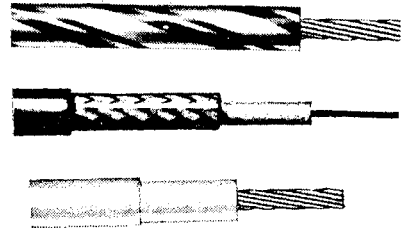
Also 1" & ½" copper line for TV leadin Formvar coated.

# COMPLETE WIRE AND CABLE INVENTORY ALWAYS AVAILABLE FOR IMMEDIATE SHIPMENT!

National Wire and Cable Corporation maintains one of the largest and most complete stocks of electronic and aircraft wire and cable in the nation. Total footage of floor stocks exceeds 50 million feet!

Your immediate source for "MIL and Jan-Spec" wires, coaxial cables and vinyl sleeving.

Special color coded, shielded and jacketed combinations of hook-up wire and multi conductor cables can be made to your specifications and delivered promptly with out delay.



## IN STOCK!

- MIL-W-76 A  
MW, HW, LW
- MIL-W-16878/D  
B, BN, C, CN, D, DN
- E, EE, K, KK
- J, JN
- NAS -702
- CLASS A, B, C
- MIL-W-5086 A  
Type I, II, III
- MIL-C-7078/A  
Type I, II, III
- JAN-C-76  
SRIR, SRHV

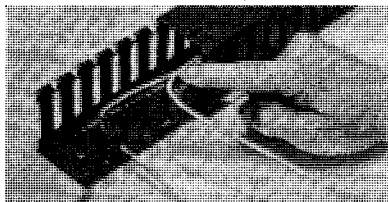
FOR COMPLETE INFORMATION AND PRICES, PHONE, WRITE OR WIRE NATIONAL.

# NATIONAL WIRE & CABLE CORP.

Dept. REM SERVICE DIVISION  
LOS ANGELES, CALIF.



# PANDUIT® wiring components



## PANDUCT® PLASTIC WIRING DUCT CORNER STRIP

Catalog Number	Approx. Shipping Weight per 100'	Price Per Foot (Standard Length: 5 ft.)			
		Under 100'	100'-499'	500'-999'	100' & over
CS-1	15 lbs.	\$.29	\$.25	\$.24	\$.23

## PLASTIC RIVETS

Catalog No.	Price Per 100		
	0-999	1000-9999	10M & Over
NR-1	\$2.00	\$1.80	\$1.60

Type E—Open Slot

### (Assembly—Includes Duct and Cover)

Catalog Assembly Number			Price/Foot (Includes Duct and Cover)						
Open* Slot	Wire Hole	Closed Slot	Nominal Width	Nominal Height	Approx. Shpg. Wt. per 100 ft.	Under 100 ft.	100 to 999 ft.	1000 to 2499 ft.	Nominal Size
E .5 x .5	None	None	1/2"	1/2"	15 lbs.	.48	.38	.34	.5 x .5
E .5 x .62	None	None	1/2"	3/8"	16 lbs.	.50	.40	.37	.5 x .62
E .5 x 1	None	None	1/2"	1"	20 lbs.	.54	.43	.40	.5 x 1
E .5 x 1.25	None	None	1/2"	1 1/4"	20 lbs.	.60	.47	.43	.5 x 1.25
E .5 x 1.75	None	None	1/2"	1 1/4"	20 lbs.	.62	.50	.46	.5 x 1.75
E .75 x .75	None	None	3/4"	3/4"	20 lbs.	.54	.43	.40	.75 x .75
E .75 x 1	None	None	3/4"	1"	22 lbs.	.55	.44	.41	.75 x 1
E .75 x 1.5	None	None	3/4"	1 1/2"	25 lbs.	.63	.50	.46	.75 x 1.5
E .75 x 2	None	None	3/4"	2"	29 lbs.	.75	.60	.55	.75 x 2
E 1 x 1	D 1 x 1	C 1 x 1	1"	1"	25 lbs.	.57	.46	.42	1 x 1
E 1 x 1.5	None	None	1"	1 1/2"	27 lbs.	.72	.58	.53	1 x 1.5
E 1 x 2	D 1 x 2	C 1 x 2	1"	2"	30 lbs.	.76	.61	.56	1 x 2
E 1 x 3	D 1 x 3	C 1 x 3	1"	3"	35 lbs.	.93	.74	.68	1 x 3
E 1.5 x .5	None	None	1 1/2"	1/2"	25 lbs.	.60	.47	.43	1.5 x .5
E 1.5 x 1.5	None	None	1 1/2"	1 1/2"	30 lbs.	.78	.63	.57	1.5 x 1.5
E 1.5 x 2	D 1.5 x 2	C 1.5 x 2	1 1/2"	2"	30 lbs.	.84	.67	.61	1.5 x 2
E 1.5 x 3	D 1.5 x 3	C 1.5 x 3	1 1/2"	3"	40 lbs.	1.02	.82	.75	1.5 x 3
E 1.5 x 4	D 1.5 x 4	None	1 1/2"	4"	50 lbs.	1.26	1.01	.93	1.5 x 4
E 2 x 1	D 2 x 1	C 2 x 1	2"	1"	30 lbs.	.80	.64	.58	2 x 1
E 2 x 2	D 2 x 2	C 2 x 2	2"	2"	35 lbs.	.93	.74	.68	2 x 2
E 2 x 3	D 2 x 3	C 2 x 3	2"	3"	50 lbs.	1.08	.86	.79	2 x 3
E 2 x 4	D 2 x 4	None	2"	4"	60 lbs.	1.34	1.07	.98	2 x 4
E 2.5 x 3	D 2.5 x 3	C 2.5 x 3	2 1/2"	3"	55 lbs.	1.17	.94	.87	2.5 x 3
E 3 x 1	D 3 x 1	C 3 x 1	3"	1"	35 lbs.	1.00	.80	.74	3 x 1
E 3 x 2	D 3 x 2	C 3 x 2	3"	2"	50 lbs.	1.07	.85	.78	3 x 2
E 3 x 3	D 3 x 3	C 3 x 3	3"	3"	60 lbs.	1.23	.98	.90	3 x 3
E 3 x 4	D 3 x 4	None	3"	4"	70 lbs.	1.46	1.17	1.07	3 x 4
E 4 x 1.5	None	None	4"	1 1/2"	55 lbs.	1.19	.95	.88	4 x 1.5
E 4 x 2	D 4 x 2	None	4"	2"	60 lbs.	1.21	.97	.89	4 x 2
E 4 x 3	D 4 x 3	None	4"	3"	70 lbs.	1.38	1.10	1.01	4 x 3
E 4 x 4	D 4 x 4	None	4"	4"	80 lbs.	1.56	1.24	1.14	4 x 4

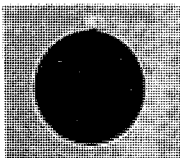
OTE: Standard Length: 6 ft. Other lengths available. Standard Colors: Dark Gray & White—Light Gray and Black available. Standard mounting holes: No charge Supplied only if specified. See duct catalog for dimensions.

OTE: Total length of all sizes of duct of each order, ordered for shipment at one time to one location, determines quantity discount. \*U. S. Pat. No. 3,024,301

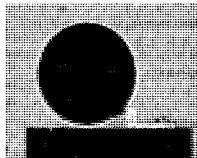
### STA-STRAP® (Permanent)

### CABLE TIES AND CLAMPS

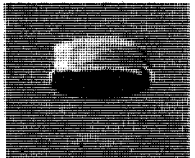
### LOK-STRAP® (Releasable)



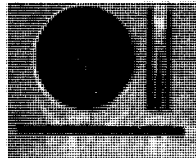
SST—Tie



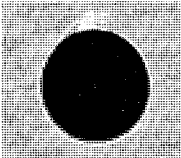
SSC—Clamp



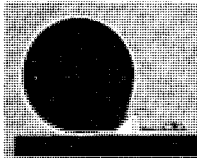
SSM—Marker



SSP—Push



LST—Tie



LSC—Clamp

Catalog Number	Maximum Bundle Diameter	Approx. Shpg. Wt. Per 100	Price/100 Less Than 100	Unit Pkg.	Price Per 100		Catalog Number
					Base Price 100-400	500	
SST-1	3/4"	4 oz.	\$ 4.40	100	\$ 3.60	\$ 2.85	SST-1
SST-2	1 3/4"	5 oz.	5.40	100	4.30	3.40	SST-2
SST-4	4"	9 oz.	12.25	100	9.80	7.80	SST-4
SST-4H	4"	19 oz.	18.25	100	14.50	11.50	SST-4H
SSC-2	1 3/4"	6 oz.	6.15	100	4.90	3.90	SSC-2
SSC-4	4"	10 oz.	13.50	100	10.80	8.60	SSC-4
SSC-4H	4"	20 oz.	21.25	100	17.00	13.60	SSC-4H
SSM-2	1 3/4"	6 oz.	10.75	100	8.60	6.80	SSM-2
SSM-4	4"	10 oz.	17.65	100	14.10	11.20	SSM-4
SSP-2	1 3/4"	6 oz.	6.15	100	4.90	3.90	SSP-2
LST-2	1 3/4"	6 oz.	8.65	100	6.90	5.45	LST-2
LST-4	4"	10 oz.	15.00	100	12.00	9.45	LST-4
LSC-2	1 3/4"	7 oz.	9.35	100	7.45	5.90	LSC-2
TM-1	Miniature	2 oz.	3.75	100	3.00	2.40	TM-1
TM-2	Standard	3 oz.	3.75	100	3.00	2.40	TM-2
TM-3	Heavy	4 oz.	8.65	100	6.90	5.45	TM-3
TA-1	Standard	3 oz.	3.75	100	3.00	2.40	TA-1
TA-2	Standard	4 oz.	4.40	100	3.60	2.85	TA-2

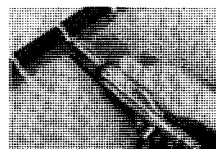
### INSTALLATION TOOLS



TS-2B—Manual \$19.00



GS-2B—Manual \$19.00



ATS-2B—Pneumatic \$183.00

Large Quantities — Bulk Packed  
on a lot Basis  
Colors: Standard - Natural Nylon White  
Other Colors - 10% additional price

Terms: Net, 30 days  
Minimum Order \$10.00  
Delivery: F.O.B. Tinley Park, Illinois  
All prices subject to change without notice

**PANDUIT CORP. • TINLEY PARK, ILL. 60477**

® Registered Trademark

**HOOK-UP WIRE**  
PLASTIC TYPE

PLASTIC INSULATION STRANDED OR SOLID TINNED CONDUCTOR



**SOLID CONDUCTOR**

Saxton Number	—Conductor— Size Stranding	Insulation Thickness	Nominal O.D.	Net Price Per M'
1AD22	22 solid	.016"	.061"	\$5.48
1AD20	20 solid	.016"	.064"	6.90
1AD18	18 solid	.016"	.072"	9.15

**STRANDED CONDUCTOR**

Saxton Number	—Conductor— Size Stranding	Insulation Thickness	Nominal O.D.	Net Price Per M'
1A24	24 7 x 32	.016"	.056"	\$5.25
1A22	22 7 x 30	.016"	.062"	5.93
1A20	20 10 x 30	.016"	.067"	7.43
1A18	18 16 x 30	.016"	.077"	9.89
1A16	16 26 x 30	.016"	.092"	16.50
1A14	14 41 x 30	.016"	.106"	21.00

**SHIELDED HOOK-UP WIRE**  
PLASTIC TYPE

TINNED COPPER SHIELD PLASTIC INSULATION



STRANDED OR SOLID TINNED CONDUCTOR

**STRANDED CONDUCTOR**

Saxton Number	—Conductor— Size Stranding	Insulation Thickness	Nominal O.D.	Net Price Per M'
1AS22	22 7 x 30	.016"	.090"	\$27.75
1AS20	20 10 x 30	.016"	.100"	30.00
1AS18	18 16 x 30	.016"	.120"	33.75
1AS16	16 26 x 30	.016"	.130"	39.00
1AS14	14 41 x 30	.016"	.150"	54.75
1AS12	12 65 x 30	.016"	.170"	87.75
1AS10	10 105 x 30	.025"	.195"	157.50

**UNSHIELDED AUDIO CABLE**

2 AND 3-CONDUCTOR • NO OUTER JACKET



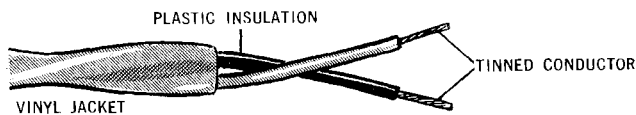
**SOLID CONDUCTOR**

Saxton Number	—Conductor— No. Size Stranding	Insulation Thickness	Nom. O.D.	Price Per M'
2AD22	2 22 solid	.016"	.100"	\$11.25
3AD22	3 22 solid	.016"	.115"	15.75
2AD20	2 20 solid	.016"	.120"	17.78
3AD20	3 20 solid	.016"	.135"	25.80
2AD18	2 18 solid	.016"	.145"	21.38
3AD18	3 18 solid	.016"	.160"	33.75
2AD16	2 16 solid	.016"	.175"	35.25
3AD16	3 16 solid	.016"	.190"	50.10

**STRANDED CONDUCTOR**

Saxton Number	—Conductor— No. Size Stranding	Insulation Thickness	Nom. O.D.	Price Per M'
2A22	2 22 7 x 30	.016"	.125"	\$14.03
3A22	3 22 7 x 30	.016"	.140"	20.63
2A20	2 20 10 x 30	.016"	.145"	19.13
3A20	3 20 10 x 30	.016"	.160"	27.90
2A18	2 18 16 x 30	.016"	.165"	21.90
3A18	3 18 16 x 30	.016"	.180"	39.00
2A16	2 16 26 x 30	.016"	.190"	37.35
3A16	3 16 26 x 30	.016"	.210"	54.75

**MULTI-CONDUCTOR JACKETED CABLE**  
.020"-WALL PLASTIC JACKET



**SOLID CONDUCTOR**

Saxton Number	—Conductor— No. Awg Stranding	Insulation Thickness	Nom. O.D.	Price Per M'
2JD22	2 22 solid	.015"	.140"	\$16.13
3JD22	3 22 solid	.015"	.150"	23.25
4JD22	4 22 solid	.015"	.170"	27.00
5JD22	5 22 solid	.015"	.185"	32.40
6JD22	6 22 solid	.015"	.190"	45.75
7JD22	7 22 solid	.015"	.200"	52.50
8JD22	8 22 solid	.015"	.210"	58.13
9JD22	9 22 solid	.015"	.240"	64.13
10JD22	10 22 solid	.015"	.250"	79.13
12JD22	12 22 solid	.015"	.270"	101.63
15JD22	15 22 solid	.015"	.300"	127.13
2JD20	2 20 solid	.015"	.155"	21.75
3JD20	3 20 solid	.015"	.165"	38.25
4JD20	4 20 solid	.015"	.195"	47.25
5JD20	5 20 solid	.015"	.220"	56.25
6JD20	6 20 solid	.015"	.230"	74.25
7JD20	7 20 solid	.015"	.240"	92.25
8JD20	8 20 solid	.015"	.285"	110.25
9JD20	9 20 solid	.015"	.300"	124.25
10JD20	10 20 solid	.015"	.315"	142.50
12JD20	12 20 solid	.015"	.330"	165.00
15JD20	15 20 solid	.015"	.345"	210.00
20JD20	20 20 solid	.015"	.400"	280.88
2JD18	2 18 solid	.015"	.188"	27.75
3JD18	3 18 solid	.015"	.208"	42.00
4JD18	4 18 solid	.015"	.223"	59.40
5JD18	5 18 solid	.015"	.233"	76.28
6JD18	6 18 solid	.015"	.263"	92.78

**STRANDED CONDUCTOR**

Saxton Number	—Conductor— No. Awg Stranding	Insulation Thickness	Nom. O.D.	Price Per M'
2J22	2 22 7 x 30	.015"	.145"	\$19.13
3J22	3 22 7 x 30	.015"	.160"	23.40
4J22	4 22 7 x 30	.015"	.185"	27.45
5J22	5 22 7 x 30	.015"	.190"	32.00
6J22	6 22 7 x 30	.015"	.195"	49.80
7J22	7 22 7 x 30	.015"	.215"	56.25
8J22	8 22 7 x 30	.015"	.225"	59.25
9J22	9 22 7 x 30	.015"	.245"	64.50
10J22	10 22 7 x 30	.015"	.260"	81.00
12J22	12 22 7 x 30	.015"	.285"	105.00
15J22	15 22 7 x 30	.015"	.340"	130.80
2J20	2 20 10 x 30	.015"	.175"	22.10
3J20	3 20 10 x 30	.015"	.185"	39.00
4J20	4 20 10 x 30	.015"	.205"	48.70
5J20	5 20 10 x 30	.015"	.230"	58.80
6J20	6 20 10 x 30	.015"	.250"	78.00
7J20	7 20 10 x 30	.015"	.260"	96.00
8J20	8 20 10 x 30	.015"	.305"	114.00
9J20	9 20 10 x 30	.015"	.320"	125.00
10J20	10 20 10 x 30	.015"	.325"	142.00
12J20	12 20 10 x 30	.015"	.345"	165.00
15J20	15 20 10 x 30	.015"	.365"	213.00
20J20	20 20 10 x 30	.015"	.420"	285.00
2J18	2 18 16 x 30	.015"	.210"	28.10
3J18	3 18 16 x 30	.015"	.230"	48.00
4J18	4 18 16 x 30	.015"	.245"	60.10
5J18	5 18 16 x 30	.015"	.260"	78.00
6J18	6 18 16 x 30	.015"	.275"	96.00

**MULTI-CONDUCTOR SHIELDED CABLE\***

.020"-WALL PLASTIC JACKET

BRAIDED OR WRAPPED TINNED COPPER SHIELD



Saxton Number	Type Shield	Conductors No.	Awg	Stranding	Insul. Thick.	Jacket Thick.	Nom. O.D.	Net Price Per M'
1SSJ22	wrap	1	22	7 x 30	.016"	.020"	.135"	\$27.63
2SSJ22	wrap	2	22	7 x 30	.016"	.020"	.175"	33.00
2SSJD22	wrap	2	22	solid	.016"	.020"	.170"	28.88
2SSJ20	wrap	2	20	10 x 30	.016"	.020"	.195"	37.50
3SSJ20	wrap	3	20	10 x 30	.016"	.020"	.210"	54.00
4SSJ20	wrap	4	20	10 x 30	.016"	.020"	.225"	83.00
2SSJ18	wrap	2	18	16 x 30	.016"	.020"	.230"	45.38
2SSJ16	wrap	2	16	26 x 30	.016"	.020"	.250"	75.00
2SJ22	braid	2	22	7 x 30	.016"	.020"	.183"	38.63
2SJ20	braid	2	20	10 x 30	.016"	.020"	.195"	48.75
2SJ18	braid	2	18	16 x 30	.016"	.020"	.235"	56.25

\*Bare conductors available. For additional constructions see Audio Cable Section.

**INTERCOM CABLE**

TWISTED PAIRS WITH PLASTIC JACKET



SOLID CONDUCTOR

Saxton Number	Number Pairs	Conductors No.	Awg	Stranding	Insul. Thick.	Jacket Thick.	Nom. O.D.	Net Price Per M'
2PD22	1	2	22	solid	.015"	.020"	.128"	\$13.65
4PD22	2	4	22	solid	.015"	.020"	.205"	25.13
6PD22	3	6	22	solid	.015"	.020"	.230"	34.73
12PD22	6	12	22	solid	.015"	.020"	.330"	56.25
14PD22	7	14	22	solid	.015"	.020"	.345"	74.25
18PD22	9	18	22	solid	.015"	.020"	.370"	77.70
22PD22	11	22	22	solid	.015"	.020"	.385"	109.50
26PD22	13	26	22	solid	.015"	.025"	.415"	108.75
30PD22	15	30	22	solid	.015"	.025"	.450"	140.25
32PD22	16	32	22	solid	.015"	.025"	.470"	175.50
54PD22	27	54	22	solid	.015"	.035"	.605"	255.00
62PD22	31	62	22	solid	.015"	.035"	.630"	423.00
82PD22	41	82	22	solid	.015"	.035"	.710"	570.00
102PD22	51	102	22	solid	.015"	.045"	.845"	897.00

**STRANDED CONDUCTOR**

Saxton Number	Number Pairs	Conductors No.	Awg	Stranding	Insul. Thick.	Jacket Thick.	Nom. O.D.	Net Price Per M'
2P22	1	2	22	7 x 30	.015"	.020"	.155"	\$22.13
4P22	2	4	22	7 x 30	.015"	.020"	.220"	35.85
6P22	3	6	22	7 x 30	.015"	.020"	.245"	52.50
8P22	4	8	22	7 x 30	.015"	.020"	.275"	68.63
10P22	5	10	22	7 x 30	.015"	.020"	.320"	73.65
12P22	6	12	22	7 x 30	.015"	.020"	.340"	79.13
18P22	9	18	22	7 x 30	.015"	.020"	.375"	113.10
22P22	11	22	22	7 x 30	.015"	.020"	.415"	146.25
30P22	15	30	22	7 x 30	.015"	.025"	.485"	182.55
54P22	27	54	22	7 x 30	.015"	.035"	.645"	345.00

**AUDIO CABLE**

COMBINATION SHIELDED & JACKETED

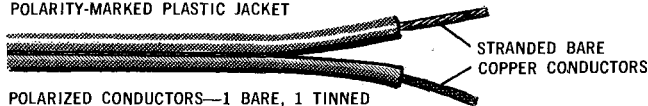


Saxton No.	Conductors No.	Awg	Stranding	Insuln. Thckns.	Jacket Thckns.	Nom. O.D.	Price Per M'
2SJ22	4	22	7 x 30	.016"	.020"	.315"	\$50.25
(Two conductors shielded, two unshielded)							
S2J22	3	22	7 x 30	.016"	.020"	.200"	37.35
(One conductor shielded, two unshielded)							

**E-Z ZIP-CORD—LAMP-CORD**

PLASTIC TYPE • 2 & 3-CONDUCTOR

POLARITY-MARKED PLASTIC JACKET



POLARIZED CONDUCTORS—1 BARE, 1 TINNED

Saxton No.	No.	Conductors AWG	Stranding	UL Type	Wall Thckns.	Nominal O.D.	Price Per M'
2F24*	2	24	7 x 32	—	.016"	.061" x .137"	see below
2F20**	2	20	10 x 30	—	.016"	.105" x .210"	see below
2F18	2	18	41 x 34	SPT-1	.016"	.130" x .215"	\$18.90
2F18B	2	18	41 x 34	SPT-2	.032"	.150" x .285"	30.75
2F16	2	16	65 x 34	SPT-2	.032"	.160" x .300"	43.50
3F24	3	24	7 x 32	—	.032"	.061" x .204"	15.00

\*2F24—clear—\$10.35 Colors—\$9.53  
\*\*2F20—clear—18.00 Colors—14.63

**PHONO WIRE**

1 AND 2-CONDUCTOR • SHIELDED, UNJACKETED

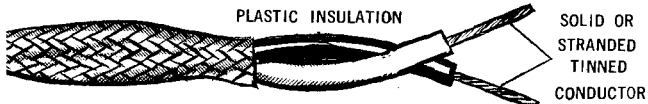


STRANDED TINNED COPPER CONDUCTOR

Saxton No.	No.	Conductors AWG	Stranding	Insuln. Thckns.	Nom. O.D.	Net Price Per M'
1S24	1	24	16 x 36	.016"	.080"	\$27.00
2S24	2	24	16 x 36	.016"	.125"	32.63

**AUDIO CABLE**

2-CONDUCTOR SHIELDED, UNJACKETED



TINNED COPPER BRAID SHIELD

SOLID CONDUCTOR

Saxton No.	No.	Conductors AWG	Stranding	Insuln. Thckns.	Nom. O.D.	Net Price Per M'
2SD22	2	22	solid	.016"	.132"	\$28.88
2SD20	2	20	solid	.016"	.148"	32.18
2SD18	2	18	solid	.016"	.175"	43.13

**STRANDED CONDUCTOR**

2S24	2	24	16 x 36	.016"	.125"	\$32.63
2S22	2	22	7 x 30	.016"	.140"	33.75
2S20	2	20	10 x 30	.016"	.155"	36.75
2S18	2	18	16 x 30	.016"	.170"	47.25
2S16	2	16	26 x 30	.020"	.210"	71.50
2S14	2	14	41 x 30	.020"	.225"	102.00
2S12	2	12	65 x 30	.025"	.295"	173.35

**AUDIO CABLE**

2-CONDUCTOR • SHIELDED & JACKETED



TINNED COPPER BRAID SHIELD

SOLID CONDUCTOR

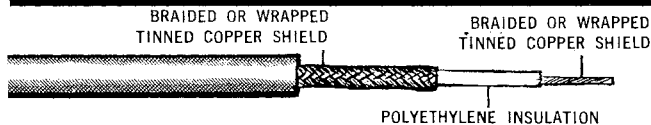
Saxton No.	Conductors No.	Awg	Stranding	Insuln. Thckns.	Jacket Thckns.	Nom. O.D.	Net Price Per M'
2SDJ22	2	22	solid	.016"	.020"	.172"	\$33.75
2SDJ20	2	20	solid	.016"	.020"	.208"	36.00
2SDJ18	2	18	solid	.016"	.020"	.218"	45.90

**STRANDED CONDUCTOR**

2SJ22	2	22	7 x 30	.016"	.020"	.183"	37.88
2SJ20	2	20	10 x 30	.016"	.020"	.195"	48.38
2SJ18	2	18	16 x 30	.016"	.020"	.235"	54.60

**AUDIO CABLE**

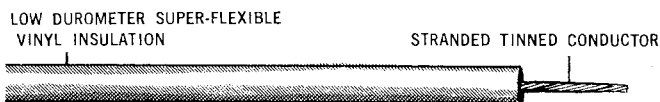
**LOW LOSS MICROPHONE & INPUT**



Saxton No.	Nom. Cap./ft.	Shield Type	Conductors No. AWG	Strdg.	Ins. Th.	Jkt. Th.	Nom. O.D.	Price Per M'
1SSJC26	36 mmf.	wrap	1 26	7x34 cprwld.	.016"	.020"	.125"	\$26.63
1SJC24	35 mmf.	braid	1 24	10x34	.016"	.030"	.145"	27.08
1SJC24A	23 mmf.	braid	1 24	10x34	.040"	.030"	.200"	35.85
1SJC20	36 mmf.	braid	1 20	26x34	.030"	.030"	.175"	49.50
2SJC20	31 mmf.	braid	2 20	16x34	.025"	.030"	.230"	51.90
3SJC20	34 mmf.	braid	3 20	26x34	.025"	.035"	.290"	66.00
4SJC20	36 mmf.	braid	4 20	26x34	.025"	.035"	.315"	84.00
5SJC20	45 mmf.	braid	5 20	26x34	.025"	.035"	.340"	99.00
6SJC20	51 mmf.	braid	6 20	26x34	.025"	.035"	.365"	156.00

**TEST LEAD WIRE**

**SUPER-FLEXIBLE VINYL INSULATION\***

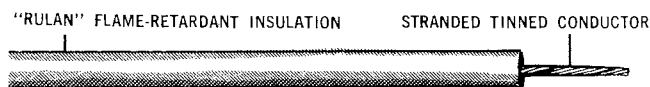


Saxton No.	Type	Conductors AWG	Strndg.	Wall Thkns.	Brkdwn. Voltage	Nom. O.D.	Net Pr. Per M'
1C20	Standard	20	41 x 36	.040"	5,000	.120"	\$14.33
1C20A	Standard	20	41 x 36	.044"	8,500	.130"	14.70
1C20B	Standard	20	41 x 36	.047"	10,000	.135"	16.50
1C18	Standard	18	41 x 34	.047"	12,000	.140"	19.88
1C18A	Hvy. Duty	18	41 x 34	.109"	22,000	.245"	29.40
1C20R*	Standard	20	41 x 36	.040"	5,000	.120"	16.88
1C18R*	Standard	18	41 x 34	.045"	5,000	.138"	20.25

\*Rubber, Also available to MIL-spec from stock. ALL TEST PROD WIRES RED or BLACK. Other colors available.

**HIGH VOLTAGE WIRE**

**FLAME-RETARDANT RULAN INSULATION**

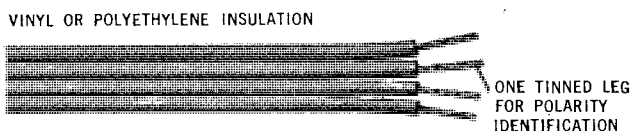


Saxton No.	Type	Conductors AWG	Strndg.	Wall Thkns.	Brkdwn. Voltage	Nom. O.D.	Net Pr. Per M'
1R20	unshielded	20	10 x 30	.047"	10,000	.120"	\$19.13
1R20A	unshielded	20	10 x 30	.063"	20,000	.170"	29.63
1R18	unshielded	18	16 x 30	.095"	40,000	.240"	57.00
1RS18	shielded	18	16 x 30	.075"	20,000	.243"	93.75

**ROTOR CABLE**

**LOW LOSS FLAT TYPE**

(round construction also available)



Saxton No.	Conductors No. AWG	Strndg.	Insulation Material	Nominal O.D.	Net Price Per M'
4FC2	4 22	7 x 30	polyethylene	.085 x .360"	\$17.48
4FC2A	4 22	7 x 30	polyvinyl chlrd.	.090 x .430"	18.75
4FC3	4 20	10 x 30	polyethylene	.085 x .360"	20.18
4FC3A	4 20	10 x 30	polyvinyl chlrd.	.090 x .430"	22.28
5FC3	5 20	7 x 28	polyethylene	.095 x .485"	24.55

**MIL-C-3432 • MIL-C-3884**

WITH CERTIFICATION • PRICES ON REQUEST

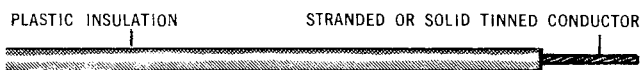
Saxton No.	Specifctn.	Desgntn.	Construction	Specification Number	Nom. O.D.
2M18	CO-02	MGF	2/18 SJO (shielded)	MIL-C-3432A	0.375
2M18A	CO-02	MGF	2/18	MIL-C-3432B	0.300
2M18B	CO-02	HGF	2/18	MIL-C-3432B	0.380
2M18C	CO-02	LGF	2/18	MIL-C-3432B	0.250
2M16	CO-02	HGF	2/16	MIL-C-3432B	0.405
2M16A	CO-02	MGF	2/16	MIL-C-3432B	0.338
2M14	CO-02	MGF	2/14	MIL-C-3432B	0.400
2M14A	CO-02	HGF	2/14	MIL-C-3432B	0.535
3M18	CO-03	MGF	3/18	MIL-C-3432B	0.330
3M16	CO-03	MGF	3/16 SJO (shielded)	MIL-C-3432	0.360
3M16A	CO-03	MGF	3/16	MIL-C-3432B	0.375
3M12	CO-03	HOE	3/12	MIL-C-3432B	0.635
5M20	CO-05	MGF	5/20	MIL-C-3432B	0.400
2M18D	COS		2/18	MIL-C-3884	0.290
3M18A	COS		3/18	MIL-C-3884	0.290
2M20	COS		2/20	MIL-C-3884	0.280
3M20	COS		3/20	MIL-C-3884	0.280

Saxton stocks a complete inventory of MIL-C-3432A and MIL-3884. Only the most popular types are listed here. We invite your inquiry on these and others.

**MIL-W-76B**

WITH CERTIFICATION

TYPE MW—Uncovered Plastic, Medium Wall, 1000V. Rating



**SOLID CONDUCTOR**

Saxton No.	Specification Designation	AWG	Insln. Thkns.	Nom. O.D.	Net Price Per M'
1MD22	MW-C 22(1)U	22	.016"	.061"	\$5.63
1MD20	MW-C 20(1)U	20	.016"	.064"	7.95
1MD18	MW-C 18(1)U	18	.016"	.072"	10.80
1MD16	MW-C 16(1)U	16	.016"	.083"	15.75

**STRANDED CONDUCTOR**

SPECIAL QUANTITY PRICES

Saxton No.	Specification Designation	Conductor AWG	Strndg.	Insln. Thkns.	Nom. O.D.	Net Pr. Per M'
1M24	MW-C 24(7)U	24	7 x 32	.016"	.056"	\$6.15
1M22	MW-C 22(7)U	22	7 x 30	.016"	.062"	7.15
1M20	MW-C 20(10)U	20	10 x 30	.016"	.067"	9.55
1M18	MW-C 18(16)U	18	16 x 30	.016"	.077"	13.25
1M16	MW-C 16(26)U	16	26 x 30	.016"	.092"	19.65
1M14	MW-C 14(41)U	14	41 x 30	.016"	.106"	29.55
1M12	MW-C 12(65)U	12	65 x 30	.016"	.127"	49.55

TYPE HW—Uncovered Plastic, Heavy Wall

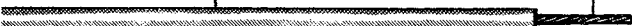
Saxton No.	Specification Designation	Conductor AWG	Strndg.	Insln. Thkns.	Nom. O.D.	Net Pr. Per M'
1M22A	HW-C 22(7)U	22	7 x 30	.032"	.094"	\$14.6
1M20A	HW-C 20(10)U	20	10 x 30	.032"	.099"	18.0
1M18A	HW-C 18(16)U	18	16 x 30	.032"	.109"	24.0
1M16A	HW-C 16(26)U	16	26 x 30	.032"	.122"	34.8
1M14A	HW-C 14(41)U	14	41 x 30	.045"	.165"	56.2
1M12A	HW-C 12(65)U	12	65 x 30	.045"	.185"	76.5

LARGE STOCK IRRADIATED POLYOLEFIN WIRE

**MIL-W-16878C**

WITH CERTIFICATION • SPECIAL QUANTITY PRICES

EXTRUDED TEFLON INSULATION      SILVER-PLATED STRANDED CONDUCTOR



**TYPE E—Extruded Teflon, 600 V. Rating**

1M30E	E-30	30	7 x 38	.010"	.033"	\$52.13
1M28E	E-28	28	7 x 36	.010"	.036"	50.25
1M26E	E-26	26	7 x 34	.010"	.041"	48.75
1M24E	E-24	24	19 x 36	.010"	.046"	52.88
1M22E	E-22	22	19 x 34	.010"	.052"	63.00
1M20E	E-20	20	19 x 32	.010"	.060"	75.75
1M18E	E-18	18	19 x 30	.010"	.072"	96.00
1M16E	E-16	16	19 x 29	.010"	.084"	135.00
1M14E	E-14	14	19 x 27	.010"	.098"	207.75

**TYPE EE—Extruded Teflon, 1000 V. Rating**

1M30EE	EE-30	30	7 x 38	.015"	.043"	\$61.50
1M28EE	EE-28	28	7 x 36	.015"	.046"	66.00
1M26EE	EE-26	26	7 x 34	.015"	.050"	58.50
1M24EE	EE-24	24	19 x 36	.015"	.056"	68.25
1M22EE	EE-22	22	19 x 34	.015"	.062"	72.30
1M20EE	EE-20	20	19 x 32	.015"	.070"	93.75
1M18EE	EE-18	18	19 x 30	.015"	.081"	114.75
1M16EE	EE-16	16	19 x 29	.015"	.090"	163.88
1M14EE	EE-14	14	19 x 27	.015"	.104"	231.00

PLASTIC INSULATION      STRANDED OR SOLID TINNED CONDUCTOR



**TYPE C—Uncovered Plastic, 1000 V. Rating**

Saxton No.	Specification Designation	Conductor AWG	Strndg.	Insitn. Thkns.	Nom. O.D.	Net Pr. Per M'
1M22C	C-22	22	7 x 30	.016"	.065"	\$9.75
1M20C	C-20	20	7 x 28	.016"	.073"	12.73
1M18C	C-18	18	7 x 26	.016"	.081"	16.80
1M16C	C-16	16	19 x 29	.016"	.092"	21.53
1M14C	C-14	14	19 x 27	.016"	.103"	33.98

**TYPE D—Uncovered Plastic, 3000 V. Rating**

1M22D	D-22	22	7 x 30	.032"	.097"	\$16.05
1M20D	D-20	20	7 x 28	.032"	.105"	19.50
1M18D	D-18	18	7 x 26	.032"	.113"	24.38
1M16D	D-16	16	19 x 29	.032"	.124"	28.88
1M14D	D-14	14	19 x 27	.032"	.135"	42.75

**SAXTON ZIP-CORD**  
IDEAL FOR ELECTRICAL LEADS



**100-PACK ZIP-CORD—18 AND 20-GAUGE**

Convenient 100-ft. spools of parallel wire for speaker extensions, amp wiring, etc. in Black, brown, white, grey and clear.

saxton No. 1055HP (20-gauge, choice of color)	100-ft.	\$1.98
saxton No. 1555HP (18-gauge, choice of color)	100-ft.	2.49
saxton No. 1055HC (20-gauge, clear, polarized)	75-ft.	1.98

**MINIATURE 24-GAUGE ZIP-CORD**

Extremely flexible, polarized parallel wire for low voltage use and speaker wire. In brown, black, blue, green, white, grey and clear.

saxton No. 2F24C/500—500-ft. roll, clear	\$ 5.25
saxton No. 2F24C/1000—1000-ft. roll, clear	10.35
saxton No. 2F24/500—500 ft. roll, color	4.95
saxton No. 2F24/1000—1000-ft. roll, color	9.75
saxton No. 1159HP—80-ft. minispools, color	1.29

**300-OHM TWIN LEAD**

VHF-UHF TRANSMISSION LINE\*\*

Catalog Number	Name	Stranding	Nom. Size Web Width	Net Price Per M'
TL-40	economy	7	0.040 x 0.0375	\$ 8.18*
TL-55	signal sender	7	0.055 x 0.385	8.93*
TL-80	trophy line	10	0.080 x 0.385	10.43*
TL-100	crusader	10	0.093 x 0.355	10.43*
TL-100DL	top notch	10	0.095 x 0.383	11.18*
TL-100EZ	E-Z Strip	10	0.080 x 0.370	11.25*
TL-100SDL	double ten	20	0.100 x 0.400	15.38
18/125	brown or gold	41	0.125 x 0.415	23.63
TTL-16	tubular	7	0.160x0.445	19.50†
1016	spongee	10	0.305x0.425	34.50
INS-500	ins. open wire	41	0.075 x 0.975	39.75

\*\*For shielded Twin Lead (#1118) or SeaCoaster marine type (#1017), see Saxton Page 10.  
\*For Clear, Silver or Gold, add \$1.67 per M' to net price.  
50'—Add \$2.50 per M' to net.  
75'—Add \$2.09 per M' to net.  
100'—Add \$1.67 per M' to net.

**SPECIAL TWIN LEAD TYPES**

PK-10-100††	10	0.100x0.395	9.62*
PK-20-100††	20	0.100x0.395	13.15*

† 22 ga.  
†† No Hanks

**UNINSULATED TINNED COPPER**



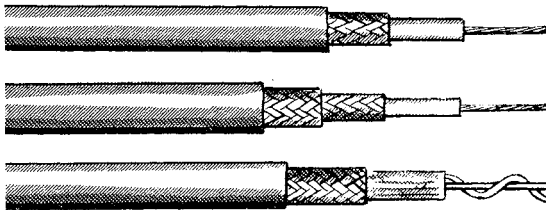
SOLID CONDUCTOR				STRANDED				
Saxton Number	Avg No.	Net Price Per M'	Saxton Number	Avg No.	Net Price Per M'	Sax. No.	Avg Strand- ing	Net Price Per M'
ADT38	38	\$2.73	ADT20	20	\$4.75	AT24	24 7x32	\$ 4.22
ADT36	36	2.87	ADT18	18	6.53	AT22	22 7x30	4.91
ADT34	34	3.22	ADT16	16	9.70	AT20	20 10x30	6.21
ADT32	32	3.28				AT18	18 16x30	8.93
ADT30	30	3.33	ADT14	14	14.03	AT16	16 26x30	13.84
ADT28	28	3.40	ADT12	12	20.40	AT14	14 41x30	19.50
ADT26	26	3.45	ADT10	10	45.75	AT12	12 65x30	27.00
ADT24	24	3.62	ADT8	8	68.25			
ADT22	22	4.01	ADT6	6	110.40			

LARGE STOCK IRRADIATED POLYOLEFIN WIRE

**COAXIAL CABLE**

**COMMERCIAL TYPES**

Quotations on cable to MIL-C-17B specifications on request. Quotations on RG-8/U and RG-11/U with 15 AWG solid copperweld conductor on request.

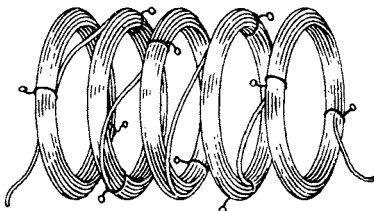


Saxton Number	Type Desig.	Ill. Type	Insulation (Ohms)	Nom. Imp. (Ohms)	Nom. O.D.	Jacket	Description	Net Price Per M'
1X14	K-14	A	reg.	.72	.870	non-cont. PVC.	comm. TV cable	\$488.00
1X8*	RG-8/U	A	reg.	.52	.405	black PE	gen'l purpose	121.41
1X8A	RG-8/U	A	foam	.52	.405	black PVC	—	124.13
1X8B*	RG-8A/U	A	reg.	.50	.405	non-cont. PE	—	135.75
1X11*	RG-11/U	A	reg.	.75	.405	black PVC	TV & comm.	108.00
1X11A	RG-11/U	A	foam	.75	.405	black PVC	—	108.75
1X11B*	RG-11A/U	A	reg.	.75	.405	non-cont. PE	—	121.50
1X11C	RG-11/UDS	B	reg.	.75	.465	black PVC	double-shielded	175.50
1X58*†	RG-58/U	A	reg.	.53.5	.195	black PVC	20 AWG solid B.C.	47.03
1X58A	RG-58A/U	A	reg.	.52	.195	black PVC	19/.0071 TC	47.83
1X58B*	RG-58C/U	A	reg.	.50	.195	non-cont. blk PE	19/.0071 TC	54.00
1X59*	RG-59/U	A	reg.	.73	.242	black PVC	TV cable	46.50
1X59A	RG-59/UDS	B	reg.	.73	.285	black PVC	double-shielded	84.75
1X59B*	RG-59/U	A	foam	.73	.242	black PVC	TV cable	47.25
1X59C	RG-59/U	A	reg.	.50	.170	black PVC	miniature "59/U"	38.25
1X59D	RG-59A/U	A	reg.	.75	.242	non-cont. blk PE	.023 copperweld	48.75
1X62	RG-62/U	C	reg.	.93	.242	black PVC	small size low cap.	54.75

\*Available in 100-ft. lengths.  
Add 10% for low-loss PE foam dielectric.  
†Add 10%.

**UNINSULATED COPPERWELD**

**40% COPPERWELD CONDUCTOR • NON-STRETCH • HARD-DRAWN**



Saxton Number	Awg	Nom. O.D.	Net Price 1M' Spools	75' Interconnected	100' Interconnected
5300	18 solid	.0403	\$ 4.80	\$ .44	\$ .55
5301	16 solid	.0508	11.40	—	—
5302	14 solid	.0641	18.23	1.49	1.89
5303	12 solid	.0808	24.38	1.89	2.50
5304	10 solid	.1019	29.25	—	—
5305	8 solid	.1285	48.75	—	—
5306	6 solid	.1620	80.63	—	—

Saxton Copperweld available on 1M' spools. Nos. 5300 to 5303 also in 50' & 100' interconnected coils of 1M' total.

**GUY WIRE & MESSENGER CABLE**  
**HEAVY GALVANIZED STEEL, ALUMINUM & COPPERWELD**

Saxton No.	Spec. Desig.	Stranding	Material	Test Strgth. —P.S.I.	Strength Yield Per C Ft.	Net Price 1M Ft. Spools
5100	GW-4/20	4 x 20	hvy. galv. steel	215	4%	\$ 4.88
5101	GW-6/20	6 x 20	hvy. galv. steel	335	3.6%	6.23
5102	GW-7/20	7 x 20	hvy. galv. steel	418	2.8%	7.28
5103	GW-6/18	6 x 18	hvy. galv. steel	515	3%	9.38
5104	GW-7/18	7 x 18	hvy. galv. steel	585	3%	10.88
5105	AL-7/18	7 x 18	EC quality aluminum, aircraft temper	370	4.5%	20.25
5106	ASL-7/18	6 x 18 alum. 1 x 18 steel	EC quality aluminum, aircraft temper	410	3.5%	20.03
5107*	CO-6/20	6 x 20	30% copperweld	600	2.7%	26.63
5109*	CO-8/18	8 x 18	30% copperweld	1450	1.8%	57.38
5110*	CO-3/18	3 x 18	30% copperweld	550	2.5%	18.83
5111	GW-12/20	12 x 20	hvy. galv. steel	655	—	18.53
5112	Tiller Cable	7 x 7 (49 str.)	3/32" cable vinyl jacket 3/16" O.D.	2100	—	71.25

\*50' and 100' interconnected coils are standard. 500' or 1000' spools available.

**ANTENNA WIRE**



Saxton Number	Stranding	Material	Packing	Net Price Per M'
1275	solid	# 12 AWG enameled solid copper	1M' interconnected coils of 100' ea.	\$26.25
1280	solid	# 14 AWG enameled solid copper	1M' interconnected coils of 100' ea.	18.00
1286/50	7 x 22	bare copper	1000' interconnected coils of 50' ea.	15.85
1286/100	7 x 22	bare copper	1M' interconnected coils of 100' ea.	15.25
1288/50	7 x 24	bare copper	1M' interconnected coils of 50' ea.	13.15
1288/100	7 x 24	bare copper	1M' interconnected coils of 100' ea.	11.95
1289	7 x 26	bare copper	1M' interconnected coils of 50' ea.	12.15

**ALUMINUM GROUND WIRE**

1240/1M	—	# 8 AWG solid dead soft alum.	1000-ft. spool	\$13.28
1240/50	—	# 8 AWG solid dead soft alum.	1M' interconnected coils of 50' ea.	14.60
1240/100	—	# 8 AWG solid dead soft alum.	1M' interconnected coils of 100' ea.	14.00
1255/1M	—	# 6 AWG solid dead soft alum.	1000-ft. spool	25.35
1255/50	—	# 6 AWG solid dead soft alum.	1M' interconnected coils of 50' ea.	27.00
1255/100	—	# 6 AWG solid dead soft alum.	1M' interconnected coils of 100' ea.	25.50

**SAXTON STOCKS AND FABRICATES CABLES UNDER THE FOLLOWING MIL SPECIFICATIONS—**

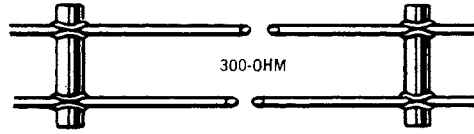
MIL-C-3432 (CO-O constructions)	MIL-B-10255	MIL-W-16878C
MIL-C-5756B	MIL-W-13169	Teflon
MIL-C-3884	MIL-W-7139A	EXTRA-LOW LOSS
MIL-S-2486	MIL-C-13077	OPEN WIRE TRANS-
MIL-C-10392	MIL-W-5086A	MISSION LINE plus
	MIL-W-16878C	MANY OTHER
	MIL-W-76B	TYPES

Whether your order is large or small, you get special service from Saxton

**OPEN WIRE TRANSMISSION LINE**  
LOW LOSS AIR DIELECTRIC • 300-OHM • BULK QUANTITIES

Saxton Number	Conductor	Spacing	Imped.	Avg. No.	Insul. Spac.	Per M'	Net Price Per 100'
2500	40% copperweld	1"	450-ohm	18	6"	\$25.13*	\$2.55
2501	40% copperweld	1"	450-ohm	18	12"	21.14*	—
2502	40% copperweld	7/16"	300-ohm	18	6"	25.13*	2.55
2507	solid copper	1"	450-ohm	18	6"	31.50*	—
2515	solid copper Formvar	1"	450-ohm	18	6"	33.38*	—
2517	solid copper Formvar	7/16"	300-ohm	18	6"	33.38*	—
2520	solid copper Formvar	1"	450-ohm	16	6"	42.75*	—
2525	40% copperweld	2"	475-ohm	14	random spaced	60.98*	—
2526	40% copperweld	2"	450-ohm	12	random spaced	73.88*	—

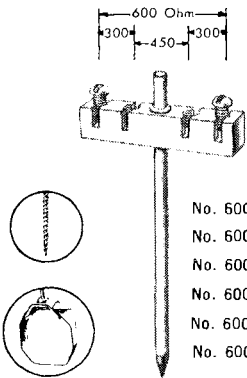
MAX. SPOOL: 6" spacing, 500 ft.; 12" spacing, 1000 ft.; 300-ohm, 500 ft. \*500' spool standard. 100' & 250' slightly higher.



Type	TRANSMISSION LINE LOSS DB LOSS PER 100 FT.					
	100 MC		500 MC		1000 MC	
	Wet	Dry	Wet	Dry	Wet	Dry
300 Ohm Open Wire	1.20	0.40	2.30	.80	1.9	1.8
450 Ohm Open Wire		0.35		.78		1.1
*Two Inch Spaced Open Wire		.19		.42		.89
300 Ohm Tubular	2.8	1.1	6.8	3.1	10.2	4.8
300 Ohm Flat	7.6	1.5	20.0	3.2	30.0	5.0
RG-59U		3.8		9.4		14.2
RG-11U		1.8		5.0		7.6

\* CHARACTERISTIC IMPEDANCE. IMPEDANCE WILL VARY WITH WIRE SIZES USED

**OPEN LINE ACCESSORIES**  
STAND-OFFS & STRESS INSULATORS



- No. 6001
- No. 6002
- No. 6003
- No. 6004
- No. 6005
- No. 6006

**BLOCKS ONLY WITHOUT DRIVE-IN HARDWARE**

Complete with 2 plated screws for use as spacer blocks in making your own open line installations.

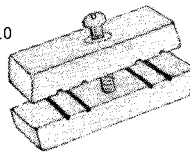
Saxton No. 6000  
Net Price ----- .11½ ea.

Especially designed for use with open line transmission wire installations. Tighten screws after pulling wire taut. For use as spacer, partially tighten set-screws. This permits movement of wire in the slots and avoids potential wire breaks. Use outside slots for 600-ohm wire. The "Tappee" Stand-off Insulator is good for community installations where random spacing of open line is desirable to avoid tuned circuits. Ideal also for use as anchor point or spacer for "fence wire" installations. "Tappee" permits inexpensive, time and labor-saving, trouble-free installations, and is made for use with No. 12 thru No. 18-gauge wire. Hardware constructed of double-dip galvanized steel; block is high impact polystyrene.

Saxton Number	Description	Net Price Ea.
6001	5½" nail type	\$.12¾
6003	5" wood screw type	.13½
6004	7½" wood screw type	.15
6005	5" pole clamp type	.16½
6006	7½" pole clamp type	.18
6007	INS-500 type	.29

**OPEN LINE ACCESSORIES**  
STRESS INSULATORS AND BLOCKS

#6010

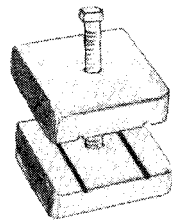


**HEAVY DUTY OPEN LINE STRESS INSULATORS**

Plastic blocks, slotted on either one or two-inch centers, for taking up slack or as anchor points in open line installations. Complete with plated screw.

Saxton No. 6010  
Net Price ----- .60 ea.

#6011



**12 AWG INSULATOR**

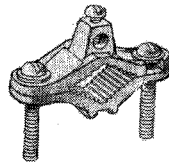
Same as Saxton No. 6010. Has 2-inch spacing for #12 AWG wires. Insulators for other gauges available on special order only.

Saxton No. 6011,  
Net Price ----- .87 ea.

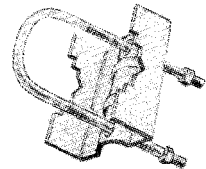
SEE PAGE 4 FOR INSULATED OPEN WIRE TYPE INS-500.

**ANTENNA ACCESSORIES**  
SPECIAL HARDWARE

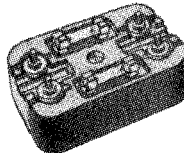
**GROUND MAST CLAMPS**  
Saxton No. 1100,  
Net Price ----- .42 ea.



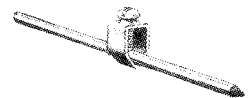
**U-BOLTS AND SADDLES**  
Saxton No. 1103,  
Net Price ----- .23 ea.  
Also available without saddle



**LIGHTNING ARRESTORS**  
(externally fused)  
Saxton No. 1098,  
Net Price ----- \$1.73 ea.



**GROUND RODS**  
Four-foot overall length.  
Saxton No. 1064,  
Net Price ----- .52½ ea.



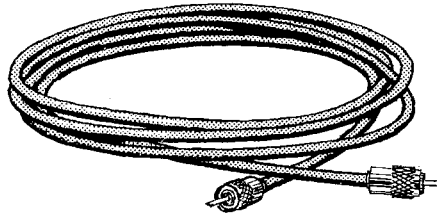
**ANTENNA WINDOW STRAPS**

Saxton No. 1126,  
Net Price ----- .20 ea.





**COAXIAL CABLE ASSEMBLIES  
FOR CITIZEN'S BAND**



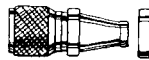
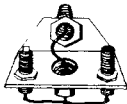
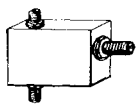
**BAG-PACKED**

Saxton Number	Length	Type	Description	Price
800	10'	RG8U	Has PL259 on one end, two terminating spade lugs on the other	\$3.50
801	10'	RG8U	Same as #800 except PL259 to PL259	3.99
802	15'	RG8U	Has PL259 on one end, two terminating spade lugs on the other	3.99
803	15'	RG8U	Same as #802 except PL259 on both ends	4.50
804	20'	RG8U	Has PL259 on one end and two terminating spade lugs on the other	4.75
805	20'	RG8U	Same as #804 except PL259 to PL259	5.25
806	10'	RG58U	Has PL259 and UG175U reducer on one end, two univ. terminating lugs on other end	\$2.20
807	10'	RG58U	Same as #806 except PL259 and UG175U reducer at both ends	2.60
808	15'	RG58U	Has PL259 and UG175U reducer on one end, two univ. type terminating lugs on other end	2.50
809	15'	RG58U	Same as #808 except PL259 and UG175U reducers are at both ends	3.25

**BUBBLE-PACKED**

810	20'	RG58U	Has PL259 and UG175U reducer on one end, two univ. type terminating lugs on other end	2.75
811	20'	RG58U	Same as #810 except PL259 and UG175U reducers are at both ends	3.25

**ISOLATION NETWORKS      SOLDERLESS COAXIAL CONNECTORS      CONNECTORS**  
**ADAPTERS & FITTERS, "F" AND "C" SERIES      UHF - BNC**



Type	Net Price
UG88U	\$.81
UG88EU	.99
CW123AU	.45
UG175U	.15
UG176U	.15

Type	Net Price
S0239	\$.56
PL258	1.14
PL259	.56
UG273AU	1.41
UG274AU	2.88
UG274BU	4.50

Type	Net Price
UG306AU	\$2.40
UG306BU	2.64
M359-A	2.76
UG710BU	5.70
MX1142/U	.90

NEW SOLDERLESS COAX. CONNEX.			
C52	48c	F59	48
C61	48c	F61	55
C81	57c	F81	69

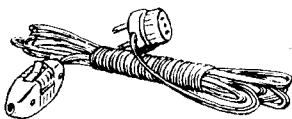
**LINE TAPS ALSO AVAILABLE—**

Attenuation: color-coded in red, yellow, green and blue.

**CUSTOM CABLES**—Available with any combination of fittings or connectors

**ATTRACTIVELY BUBBLE-PACKED ITEMS- See Page 9 for Complete Listing**

**REMOTE APPLIANCE  
CORD Plug & Switch**

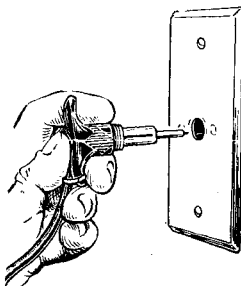


15-ft. of 18 ga. heavy duty line cord with heavy duty on-off switch & plug. Save steps: control appliances, TV, and other devices from a distance. Quickly installed, easily operated.

Saxton No. S203 ..... **\$1.89** ea.

**SAXTON "SAFE-PULL"**

**PLUG-IN DEVICE FOR MASTER TV SYSTEMS**

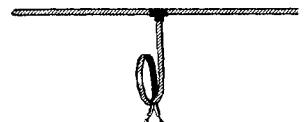


Designed to prevent needless, costly service calls due to broken or shorted leads. Simplifies room maintenance and cleaning. Replaces Motorola plug in common use. Comes complete with 10' or 20' low-loss coaxial cable and standard spade lug terminations. Crimping tool available as P/N SP-50.

Saxton No. S205 (10-ft.) ... per set **\$2.49**

Saxton No. S206 (20-ft.) ... per set **2.98**

**TV-FM  
INDOOR ANTENNA**



300-ohm Folded Dipole with 42 lugged lead-in. Center tap protected in durable molded plastic housing. Use for FM or TV receiver. Easily concealed. Saxton No. S306 ..... **\$1.1'**

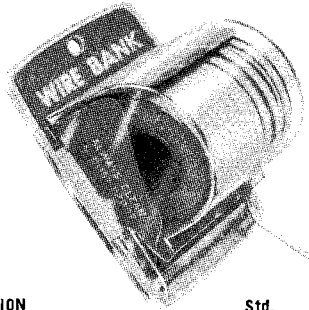
# PACKAGED WIRE SPECIALS

Designed for use at the workbench, in the laboratory, on the production line, in the home . . . wherever small lengths are useful. The unusual Saxton

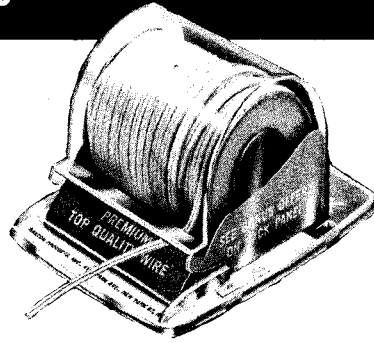
packaging offers maximum convenience, and clean, handy lengths of a wide assortment of standard wires at inexpensive, economical prices.

## WIRE BANKS

### UNI-SPOOLS



### TRI-SPOOLS



Saxton Cat. No.	DESCRIPTION	Feet	Std. Case	Price
<b>WIRE BANK—UNI SPOOL "WS" SERIES</b>				
WS-100	Cable—Miniature parallel—24 Ga.—Available in Black, Brown, Clear, Grey and White	53	36	\$1.19
WS-101	Microphone cable—Lapel	22	36	1.19
WS-108	Audio cable—Wrap shield—Easily pigtailed	23	36	1.19
WS-112	Phono or grid wire—Shielded—Single conductor	30	36	1.19
WS-113	Hi voltage wire—20 KV rating—Flame retardant	21	36	1.19
WS-115	Hook up wire—18 Ga. solid	60	36	1.19
WS-115B	Hook up wire—18 Ga. stranded	57	36	1.19
WS-116	Hook up wire—20 Ga. solid	80	36	1.19
WS-116B	Hook up wire—20 Ga. stranded	75	36	1.19
WS-117	Hook up wire—22 Ga. solid	100	36	1.19
WS-117B	Hook up wire—22 Ga. stranded	90	36	1.19
WS-118	Bell wire—18 Ga.	63	36	1.19
WS-122	Test Prod wire—Red—Plastic	25	36	1.19
WS-122A	Test Prod wire—Red—Rubber—Extra flexible	20	36	1.19
WS-123	Test Prod wire—Black—Plastic	25	36	1.19
WS-123A	Test Prod wire—Black—Rubber—Extra flexible	20	36	1.19
WS-156	Three conductor, clear, miniature, parallel cable speaker extensions—Stereo and Monaural—Low voltage applications	40	36	1.19
WS-162	Magnet wire for the hobbyist—22 Ga.	114	36	1.19
WS-163	Magnet wire for the hobbyist—24 Ga.	153	36	1.19
WS-164	Magnet wire for the hobbyist—26 Ga.	243	36	1.19
WS-165	Magnet wire for the hobbyist—16 Ga.	24	36	1.19
WS-166	Magnet wire for the hobbyist—18 Ga.	39	36	1.19
WS-167	Magnet wire for the hobbyist—20 Ga.	60	36	1.19
<b>WIRE BANK—TRI-SPOOL "WBS" SERIES</b>				
WBS-100	Speaker extension cable—Miniature parallel—24 Ga. 3 colors—Low voltage applications	60	36	\$1.19
WBS-115	Hook up wire—3 colors—18 Ga. solid—Hi quality	57	36	1.19
WBS-115B	Hook up wire—3 colors—18 Ga. stranded—Hi quality	54	36	1.19
WBS-116	Hook up wire—3 colors—20 Ga. solid—Hi quality	72	36	1.19
WBS-116B	Hook up wire—3 colors—20 Ga. stranded—Hi quality	72	36	1.19
WBS-117	Hook up wire—3 colors—22 Ga. solid—Hi quality	90	36	1.19
WBS-117B	Hook up wire—3 colors—22 Ga. stranded—Hi quality	81	36	1.19
WBS-119	Hook up wire—3 colors—24 Ga. solid—Hi quality	120	36	1.19
WBS-120	Hook up wire—3 colors—24 Ga. stranded—Hi quality	105	36	1.19
WBS-121	Bell Wire—3 colors—22 Ga.—Hi quality	75	36	1.19
WBS-122	Test Prod wire—Plastic—3 colors	30	36	1.19
WBS-123	Test Prod wire—Rubber—Extra flexible—3 colors	27	36	1.19
WBS-129	Bell wire—3 colors—20 Ga.—Hi quality	60	36	1.19
WBS-131	Bell wire—3 colors—18 Ga.—Hi quality	54	36	1.19
WBS-165	Magnet wire—3 sizes—22 Ga.—24 Ga.—26 Ga.—School experiments—Coils—Home & shop bench—Thousands of uses	Lib. Qty.	36	1.19
WBS-166	Magnet wire—3 sizes—18 Ga.—20 Ga.—22 Ga.—School experiments—Coils—Home & shop bench—Thousands of uses	Lib. Qty.	36	1.19
WBS-167	Magnet wire—3 sizes—24 Ga.—26 Ga.—28 Ga.—School experiments—Coils—Home & shop bench—Thousands of uses	Lib. Qty.	36	1.19
WBS-168	Home or shop assortment of solder—60/40—40/60—50/50 Resin core. 60/40—Printed circuit, etc. 50/50—Chassis work, etc. 40/60—General utility work, etc. Ideal shop or home assortment	Lib. Qty.	36	1.19
WBS-170	Phono pickup wire—Stereo arm assortment	Lib. Qty.	36	1.19
WBS-172	Bus wire—Tinned—20 Ga.—22 Ga.—24 Ga.—Electrical or electronic applications—Highly conductive—Easily soldered—Home or factory bench	108	36	1.19
WBS-175	Hook up wire—Nylon—assortment—Hi Temp	60	36	1.19
WBS-180	High temperature wire—Teflon coated—assdtd. colors—3 pks.	75	36	1.98

## SELF-SERVICE WIRE DEPARTMENT

Choose the floor display that best suits your operation, for increased sales and greater profit. Saxton packaged wire products stay clean, neat, saleable . . . save on storage and selling time. See your Saxton representative for details.

### THE "CONCORD" Group

Attractive heavy duty rotating floor display available in three product groupings. Four-sided modern design. Dimensions: 27-inches wide x 63" high.

Saxton No. 8000, 8100, 8200  
Retail value, approx. \$460.00

### THE "LEXINGTON" Group

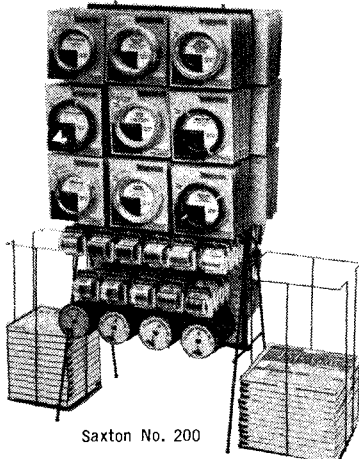
Self-selling island floor display built for long use complete with a wide assortment of popular Saxton wire products. Takes up little space, offers big returns. Dimensions: 2-ft. wide x 4-ft. high. Saxton No. 200  
Retail value, approx. \$430.00

### THE "MADISON" Group

A wide variety of Saxton wire products on a compact, sturdy island floor display. Dimensions: 4-ft. wide x 4-ft. high, including side wings. Saxton No. 375  
Retail value, approx. \$750.00

### THE "REVERE" Group

A complete wire products department on one space-saving island floor display. Has side wings and bottom shelf. Dimensions: 4-ft. wide x 4-ft. high. Saxton No. 500  
Retail value, approx. \$1000.00  
CHOICE OF WIRE PRODUCTS MAY AFFECT DISTRIBUTOR COST.



# WINDOW-PAKS

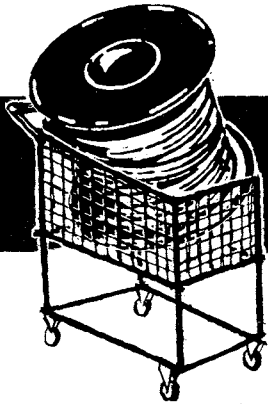
\*Special purpose cable



Saxton Window-Paks have made it feasible and profitable to move wire up front with other prime, fast-moving merchandise. Ideal for every serviceman, technician, engineer, student and "ham", Window-Paks are designed to keep wire tangle-free and clean—ready for immediate use. Over fifty constructions are listed here, for every requirement.

Saxton Cat. No.	DESCRIPTION	Feet	Std. Case	Price	Saxton Cat. No.	DESCRIPTION	Feet	Std. Case	Price
<b>WINDOW-PAK "S" SERIES</b>					S-149*	Telephone extension cord—4 conductor—Std. 4-pin moulded plug and jack—adds mobility to phone or intercom	25	20	\$3.45
S-92B	Hook up wire—Tinned copper—Stranded—12 Ga. Power supply and filament leads—General purpose—Heavy duty	15	30	\$1.19	S-160	Television wire—Twin lead—300 Ohm—Crystal clear—Highly efficient for indoor use—Assumes the color of any surface against which it is installed—Intercom or speaker extensions	40	20	1.15
S-93B	Hook up wire—Tinned copper—Stranded—14 Ga. Power supply and filament leads—General purpose—Heavy duty	17	30	1.19	S-161	4 conductor wire—Excellent for thermostat or intercom hookup—Toys—Kits—Electric trains, etc.	21	30	1.15
S-94B	Hook up wire—Tinned copper—Stranded—16 Ga. Power supply and filament leads—General purpose—Heavy duty	23	30	1.19	S-200*	Appliance cord—Accordion type—Space saver—with lugs—flexible rubber—For toasters, irons, percolators, etc. UL approved	6	20	1.15
S-95	Ignition wire for Auto, Boat or Model Airplane	20	20	1.19	S-201*	Appliance cord—Accordion type—Space saver—Flexible rubber—For toasters, irons, percolators, etc. UL approved	6	20	1.1
S-96	Audio cable—Shielded—2 cond.—22 Ga. w/ jacket. General purpose	16	30	1.19	S-202*	Extension cord—Electric—Accordion type—Space saver—With cube tap—UL approved	6	20	1.1
S-98	Mike cable—2 cond. Low impedance. Hi quality Audio cable	18	20	1.19	S-203*	Lazy bones—On/off appliance control for T.V., radio, fan, lamp, heater, percolator	15	20	1.8
S-102	Intercom wire—2 cond.—no jacket. (Excellent thermostat wire)	60	20	1.19	S-204*	Aerial kit—For improved broadcast and shortwave reception	—	20	2.6
S-103	Intercom wire—2 cond.—w/jacket. (Excellent thermostat wire)	35	20	1.19	S-205*	Safe-pull—Improved type of plug-in device for master T.V. antenna system. Replaces popular motorola type plug	10	20	2.4
S-104	Intercom wire—3 cond. no jacket. (Excellent thermostat wire)	40	20	1.19	S-206*	Safe pull—Improved type of plug-in device for master T.V. antenna system. Replaces popular motorola type plug	20	20	2.9
S-105	Intercom wire—3 cond. w/jacket. (Excellent thermostat wire)	28	20	1.19	S-207*	Stereo harness—Efficient hook up of stereo speaker systems—Approximately 40 feet of separation	—	20	1.7
S-106	Microphone cable—single cond.—Low capacitance—Hi impedance—Heavy duty	20	20	1.19	S-208*	Retractable coiled cord—Microphone cable—1 shielded—2 unshielded	6	30	2.5
S-107	Zip cord—Vinyl—2 cond.—18 Ga. Lamp cord. Available in Brown, Gray and White	30	20	1.19	S-209*	Retractable coiled cord—Microphone cable—1 shielded—3 unshielded	6	30	3.0
S-109	Zip cord—Rubber—Extra flexible—Lamp cord. Oil-resistant. Available in Brown and White	25	20	1.19	S-211*	Aerial kit—Deluxe—For improved broadcast and shortwave reception—Heavy duty antenna wire & heavy duty lead-in wire	—	20	3.0
S-110	Guy wire—Galvanized steel—4 strand—Rust resistant. Garden, house or boat use	120	20	1.19	S-301*	Test leads—3 color coded—30" leads with alligator clips attached at both ends—For all automotive and household use	—	20	1.0
S-111	Speaker cable—Clear plastic—Polarized—Heavy duty. Also may be used for lamp wiring	30	20	1.19	S-306*	FM antenna—Folded Di-Pole—Ideal for FM multiples—Improves reception	—	20	1.0
S-124	Antenna wire—Copper—7/22—Prestretched—Heavy duty.	50	30	1.19	S-810*	Citizen Band extension—RG58/U with PL-259 and UG-175/U reducer 1 end and 2 universal terminating lugs other end	20	20	2.0
S-126	Antenna wire—Copper—7/26—Prestretched	70	30	1.19	S-811*	Citizen Band extension—RG58/U with PL-259 and UG-175/U at both ends	20	20	3.0
S-127	Guy wire—Aluminum—Rustproof—Will not stain wood or masonry. Guying and general utility	40	20	1.19	<b>TWIN LEAD WINDOW-PAK</b>				
S-128	Guy wire—Steel—6 strand—20 Ga.—Bright galvanized—Rust resistant	100	20	1.19	TS-25	Twin Lead—300 Ohm—For improved FM or TV reception. Brown, Clear, Gold & Silver	25	20	
S-130	Ground wire—Aluminum—Dead soft #8 AWG solid—General utility	40	20	1.19	TS-50	Twin Lead—300 Ohm—For improved FM or TV reception. Brown, Clear, Gold & Silver	50	20	
S-134	Guy wire—Aluminum—Plastic coated—Flexible—Splinter free—Weather resistant—Non-corrosive—Long lasting—Ideal guy wire	30	20	1.19	TS-75	Twin Lead—300 Ohm—as above	75	20	
S-135	Copperweld wire—Hard drawn—Hi conductivity antenna wire—18 Ga.—Non-stretch—General Utility—House—Farm—Garden—Electric fences—Seeded lawn protection—Do it yourself projects	100	30	1.19	TS-100	Twin Lead—300 Ohm—For improved FM or TV reception. Brown, Clear, Gold & Silver	100	20	
S-138	Coaxial cable—RG58U—52 Ohm—for CB—HAM—Fixed or mobile use	20	20	1.19					
S-139	Coaxial cable—RG59U—72 Ohm—Antenna leads	20	20	1.19					
S-147*	Telephone extension kit—Color coded—4 conductor wire—with plug & jack	25	20	3.25					
S-148	Microphone Cable—3 conductor—One lead shielded—2 leads unshielded—Ideal for push to talk microphone application	16	20	1.19					

# SAXTON SPECIAL PRODUCT SECTION



## SHIELDED 300-OHM TWIN LEAD



Saxton No. 1118—Each conductor #20AWG. Features abrasion-proof Vinyl jacket. Delivers noise-free signal on FM, FM Multiplex, TV. Also available in 72-ohm type.

100-ft. coil ..... **\$9.95**  
1000-ft. spool ..... **86.93**



CORROSION AND  
CHEMICAL RESISTANT

## "SEACOASTER" TV & FM TWIN LEAD

Designed to resist air-borne corrosives and chemical reactions. 300-ohm 20 gauge (7 x 28) copper conductors encased in low loss PE foam and tough, brown outer jacket.

Saxton No. 1017—100-ft. coil. .... **\$4.49**  
Saxton No. 1017—1000-ft. spool ..... **44.63**

## TELEPHONE WIRE



Saxton No. TW-199—2-conductor, stranded for indoor or outdoor use.

100-ft. coil ..... **\$2.09**

## HEAVY DUTY SHIELDED IGNITION WIRE



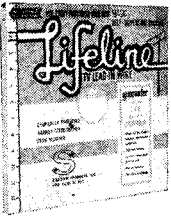
Saxton No. 1S98—For ham or CB applications. Reduces noise.

15-ft. coil ..... **\$1.25**

## DISPENSER-PACKAGED TRANSMISSION LINE

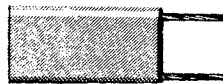
### FINEST QUALITY "LIFELINE" SERIES

### LIFELINE TWIN LEAD



Tangle-free,  
dust-proof,  
economical  
packages

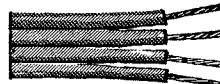
### SPECIAL DISPENSER PACKAGE



Full size, heavy duty deluxe twin lead constructed of the finest materials. Chemically protected against deterioration. In Magic Dispenser.

Saxton LTL (100-ft.), ..... **\$2.95**  
Brown  
Saxton LTLC (100-ft.), ..... **3.49**  
Clear

### LIFELINE "100" ROTOR CABLE



Extra heavy duty 4-conductor rotor cable. Superior quality. One leg polarized for easy reference. Sold in exclusive Magic dispenser carton.

Saxton L4FC (100-ft.), ..... **\$3.59**  
Brown

## ECONOMY TWIN LEAD



Fine quality twin lead constructed of 55 mil dia. with 7 strand, 22-ga. copper wire.

Saxton ETL (100-ft. Dispenser Pkg.) - Brown, **\$1.89**  
Saxton ETLC (100-ft. Dispenser Pkg.) Clear, **2.19**

## LOW LOSS UHF LIFELINE TUBULAR TWIN LEAD

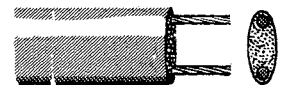


Heavy duty brown PE designed for UHF use. 20-gauge.

Saxton No. TTL (100-ft. coil) ..... **\$2.95**  
Saxton No. TTL1M (1000-ft. coil) ..... **\$23.50**

## LOW LOSS LIFELINE "SPONGEE" TWIN LEAD

Designed especially for UHF, "Spongee" provides stronger signals on VHF. 300-ohm 20-ga. stranded copper conductors encased in porous, low loss PE foam. Low cost economy type available on special request.



Saxton No. 1016/100 (100-ft. coil) ..... **\$3.59**  
Saxton No. 1016/1M (1000-ft. spool) ..... **\$34.50**

## 6-PAK TAPE STORAGE CASE



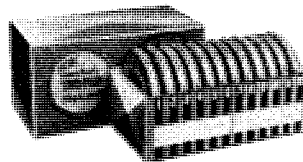
Sturdily constructed, indexed Tape Storage Case designed for bookshelf. Compartmented to accommodate six 7-inch reels, boxes and cans. Covered with attractive simulated leather. Saxton No. RT-706 ..... ea. **99c**  
Complete unit. Includes above Case plus six Saxton No. 1231 Tape Cans. Saxton No. RT-707 ..... **\$2.89**

## TAPE REELS



5" and 7" warp-proof, clear Polystyrene reels, individually boxed. Saxton No. TR-5—  
5-inch ..... **39c ea.**  
Saxton No. TR-7—  
7-inch ..... **49c ea.**

## Film & Recording Tape STORAGE CHEST



Saxton No. 1230—Complete with 12 Swivel-locked, dust-proof storage cans. Insures moisture and dust-free storage of valuable tape and film. Attractive indexed storage chest. High-impact Styrene containers accommodate 5" and 7" tape or 8mm film ..... **\$4.98**

Saxton No. 1231—Individual containers, each ..... **49c**

## INSULATORS & BLOCKS



Saxton No. 1154  
Net Price ..... **10c ea.**



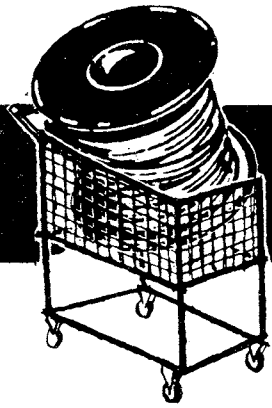
Doublet type antenna insulator, white glazed. Excellent electrical characteristics, high tensile strength. Dim.: 4 1/2" x 2 3/4". Saxton No. 1155 ..... **32c**



Airplane type "egg" insulator. Low air resistance, high tensile strength, white porcelain glaze. 2" long. Saxton No. 1156 ..... **10c**

Transposition block with porcelain glaze finish. Use with many types of doublet antennae. Saxton No. 1157 ..... **32c**

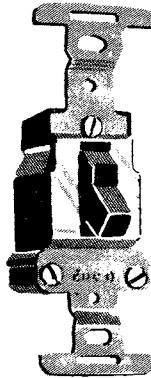
# SAXTON SPECIAL PRODUCT SECTION



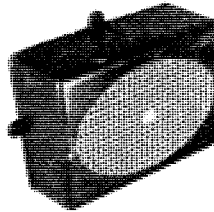
## DELAYED ACTION • COMMERCIAL SAFETY SWITCH

Switch "off" and the lamp goes out SIXTY SECONDS LATER! Allows sufficient time to reach destination SAFELY. Replaces present wall switch in seconds. Ideal for Home, Farm or Cottage. Fully guaranteed and UL Approved.

Saxton No. S560 (Ivory) or Saxton No. S561 (Brown) ..... **\$2.98**



## PATIO SPEAKER BAFFLE



Made of unbreakable, high impact styrene. Mahogany color only. Complete with hardware and mounting instructions. Use as 6" x 9" speaker for paging, monitoring, as patio and stereo extensions, or as extension speaker anywhere. **\$2.98**

6" x 9" SPEAKER—Complete with volume control and knob, baffle and instructions. Saxton No. B1206 ..... **\$4.98**

## "UNI-GRIP" UNIVERSAL TV KNOB

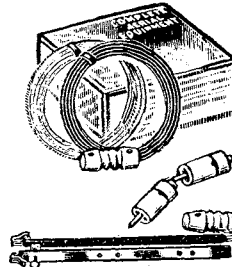


### REPLACES THOUSANDS OF LOST, OBSOLETE OR UNAVAILABLE TV KNOBS

New "UNI-GRIP" universal TV knob fits more than 90% of all TV sets! Accommodates all half-round, flat or double-slotted shafts. Choice of two types for protruding or recessed tuner shafts. EASILY INSTALLED! Sets include 2 keys and 2 skirts for channel selector and on-off volume control.

Saxton No. UK-S1 (short shaft, UHF) ..... \$3.95  
Saxton No. UK-S2 (short shaft, VHF) ..... 3.95  
Saxton No. UK-L1 (long shaft, UHF) ..... 3.95  
Saxton No. UK-L2 (long shaft, VHF) ..... 3.95

## SHORT-WAVE ANTENNA KITS

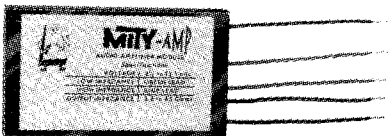


Designed for efficient operation with all receivers.

Saxton No. 4300—Short-wave kit includes 66' heavy duty antenna wire; one transposition block; 50' heavy duty twisted lead cable; two insulators; two window straps and two nail knobs ..... **\$4.98**

ALL KITS INCLUDE COMPLETE INSTRUCTIONS  
SEE SAXTON PAGE 9 FOR STANDARD AND DELUXE KITS

## "MITY-AMP" 2-WATT AUDIO AMPLIFIER



MA-100 ~ **9.95**

MA-101—2.5 Watt "Mity-Amp". Dim.: 2 5/8" L x 1 3/4" W x 1/2" D ..... **\$11.95**

OTHER AMPLIFIER TYPES AVAILABLE

### COMPLETELY EPOXY ENCAPSULATED MODULE

Shock-proof • Water & Moisture-proof • Dirt & Dust-proof

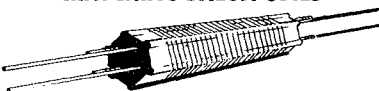
#### FEATURES

- \* SPACE-SAVING—2" x 3 1/2" x 7/8"
- \* HI-FI AMPLIFIER—20 cy. to 15KC ±db at 1-watt level
- \* LIGHTWEIGHT—Weighs total of 6 ounces
- \* RUGGED—Unconditionally guaranteed. Shock, moisture and dust-proof
- \* EASY TO INSTALL & USE—Hooked up in minutes. Simple instructions make unit functional immediately.
- \* ECONOMICAL—Low in price, big in performance. Long, trouble-free life. Total power requirement 6 or 12 volts.
- \* PORTABLE—Operates on auto or boat battery
- \* VERSATILE—Uses limited only by your ingenuity. Ideal for p. a. system, phono amplifier, stereo, intercom, signal tracer, modulation, tape monitor, etc.

#### SPECIFICATIONS

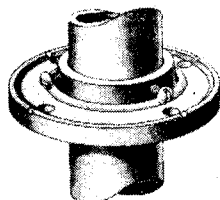
1. INPUT VOLTAGE REQUIRED TO DRIVE FULL POWER—5 Volts
2. POWER REQUIREMENTS—6 to 12 volts at 300 to 700 ma. Current determined by speaker voice coil impedance.
3. FREQUENCY RESPONSE—20 cy. to 15 KC ±2 db at 1 watt level.
4. INPUT IMPEDANCE—45 ohms to 50K ohms.
5. OUTPUT IMPEDANCE—3.2 to 45 ohms.
6. WEIGHT—Six ounces.
7. OVERALL SIZE—2" x 3 1/2" x 7/8"
8. HIGHLY SHOCKPROOF — Unaffected by dust, dirt or moisture. Operable under water.
9. GUARANTEED AGAINST DEFECTS.

## TV ANTENNA MATCHING BALUN COILS



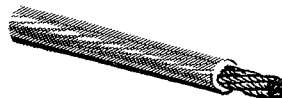
Efficiently matches 72 to 150 ohms; 72 to 450 ohms; 150 to 300 ohms; 150 to 450 ohms; 300 to 450 ohms and 75 to 300 ohms. Eliminates standing waves. Use as set coupler, impedance transformer or for line matching, etc. Instructions included. Available in bulk. Saxton No. 1121 pair, **99c**

## FLOATING GUY RINGS



Cast aluminum, two-piece floating guy ring. Fits most masts up to 1 1/2" dia. Individually packed, complete with hardware, in plastic bags. Saxton No. 1099 ..... **74c**

## Heavy Duty Super Guy Wire and MESSENGER CABLE



Super flexible (49-strand wire rope), galvanized steel wire. 2100-lb. breaking strength. Has clear vinyl jacket. Ideal for tiller or boat rudder cable. Saxton No. 5112—(100-ft. coil) ..... **\$7.25**

## FIBRE GLASS GUY LINE



Non-radiating, non-absorbing, high strength "wireless" guy wire in vinyl jacket. 500-lb test strength 100-ft. coil. Saxton No. 7000 ..... **\$2.1'**

## SUPER-STRONG FIBRE GLASS GUY WIRE

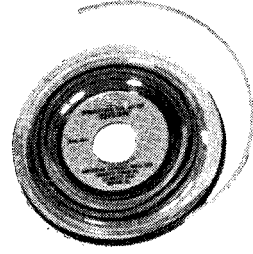
Same as above but in grey vinyl jacket, 1000-lb. tensile strength 100-ft. coil. Saxton No. 7002 ..... **\$4.1'**

# Walsco INSULATING TUBING

ELECTRONICS

## WALSOCO INSULATING TUBING OF TEFLON

TEFLON "spaghetti" has unsurpassed electrical and mechanical qualities. Withstands temperatures from 450° below zero F. to 500° above zero F. Will not melt near solder joints. Outstanding dielectric properties—zero moisture absorption. Chemically inert. Completely weatherproof. A big feature is the low co-efficient of friction.



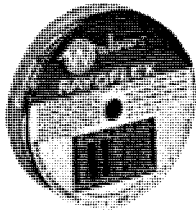
Part No.	Feet Per Spool*	Color	Gauge	I.D. (Inches)	Wall Thickness	Net Per Spool	Part No.	Feet Per Spool*	Color	Gauge	I.D. (Inches)	Wall Thickness	Net Per Spool
690-1	10	Nat	24	.022	.010	\$ 1.33	694-1C	100	Nat	16	.053	.012	25.02
690-1C	100	Nat	24	.022	.010	11.83	694-4	10	Red	16	.053	.012	2.65
690-4	10	Red	24	.022	.010	1.33	694-4C	100	Red	16	.053	.012	25.02
690-4C	100	Red	24	.022	.010	11.83	694-5	10	Blue	16	.053	.012	2.65
690-5	10	Blue	24	.022	.010	1.33	694-5C	100	Blue	16	.053	.012	25.02
690-5C	100	Blue	24	.022	.010	11.83	695-1	10	Nat.	14	.066	.012	2.92
691-1	10	Nat	22	.027	0.12	1.47	695-1C	100	Nat	14	.066	.012	28.38
691-1C	100	Nat	22	.027	.012	13.26	695-4	10	Red	14	.066	.012	2.92
691-4	10	Red	22	.027	.012	1.47	695-4C	100	Red	14	.066	.012	28.38
691-4C	100	Red	22	.027	.012	13.26	695-5	10	Blue	14	.066	.012	2.92
691-5	10	Blue	22	.027	.012	1.47	695-5C	100	Blue	14	.066	.012	28.38
691-5C	100	Blue	22	.027	.012	13.26	696-1	5	Nat	12	.085	.014	1.83
692-1	10	Nat	20	.034	.012	1.83	696-1C	100	Nat	12	.085	.014	34.28
692-1C	100	Nat	20	.034	.012	18.27	696-4	5	Red	12	.085	.014	1.83
692-4	10	Red	20	.034	.012	1.83	696-4C	100	Red	12	.085	.014	34.28
692-4C	100	Red	20	.034	.012	18.27	696-5	5	Blue	12	.085	.014	1.83
692-5	10	Blue	20	.034	.012	1.83	696-5C	100	Blue	12	.085	.014	34.28
692-5C	10	Blue	20	.034	.012	18.27	697-1	5	Nat	10	.106	.014	2.17
693-1	10	Nat	18	.042	.012	2.23	697-1C	100	Nat	10	.106	.014	41.58
693-1C	100	Blue	18	.042	.012	20.88	697-4	5	Red	10	.106	.014	2.17
693-4	10	Red	18	.042	.012	2.23	697-4C	100	Red	10	.106	.014	41.58
693-4C	100	Red	18	.042	.012	20.88	697-5	5	Blue	10	.106	.014	2.17
693-5	10	Blue	18	.042	.012	2.23	697-5C	100	Blue	10	.106	.014	41.58
693-5C	100	Blue	18	.042	.012	20.88							
694-1	10	Nat	16	.053	.012	2.65							

Std. Pack 10' and 5' Spools: 12  
Std. Pack 100' Spools: 1

\* BULK PRICES QUOTED ON REQUEST

## WALSOCO RAYOFLEX

For the serviceman and industrial user of insulated tubing. Rayoflex combines the mechanical strength of fiberglass with the protective properties of synthetic lacquer to produce a tough, rugged insulating tubing. Rayoflex is more flexible and less affected by aging than conventional varnished tubing. Rayoflex is smooth inside and out making the insertion of wires, etc., very easy. Has a dielectric strength of 4,000 to 5,000 volts. Meets MIL-I-3190. Sizes up to #6 are packed on a handy spool.



Net per spool \$ .82

Cat. No.	Size B&S	Approx. I.D.		Quantity Per Spool
	Gauge No.	Inches	mm	
630-(color)	18	.042	1	10 ft.
631-(color)	15	.059	1.5	8 ft.
632-(color)	12	.085	2	8 ft.
633-(color)	9	.118	3	5 ft.
534-(color)	6	.166	4	5 ft.

AVAILABLE IN BLACK, RED, BLUE and YELLOW COLORS. To specify COLOR add suffix to above catalog number as follows: -R3 for Black, -R4 for Red, -R5 for Blue, -R6 for Yellow. Example: — 630-R3 is 18 gauge, Black.

## WALSOCO FLEXITUBE

Walsco Flexitube is the ideal supplemental insulation for most electronic and electrical applications. Flexitube is impervious to water, oil, alcohol, most acids and alkalis. Has an outstanding dielectric strength of 15,000 volts (average) before breakdown. Is not affected by temperature extremes.

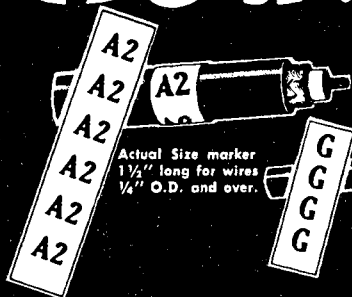
Net per spool \$ .82

Cat. No.	Size B&S	Approx. I.D.		Quantity Per Spool
	Gauge No.	Inches	mm	
600-(color)	18	.042	1	20 ft.
601-(color)	16	.053	1.4	20 ft.
602-(color)	14	.066	1.6	18 ft.
603-(color)	12	.085	2	16 ft.
604-(color)	10	.106	2.7	14 ft.
605-(color)	8	.133	3.5	12 ft.
606-(color)	6	.166	4	10 ft.
607-(color)	4	.208	5	6 ft.
608-(color)	2	.263	6.5	6 ft.

AVAILABLE IN CLEAR, GREEN, BLACK and RED COLORS. To specify COLOR add suffix to above catalog number as follows: -01 for Clear, -02 for Green, -03 for Black and -04 for Red. Example: 600-01 for 18 gauge, Clear.

# E-Z CODE self-adhering electronic WIRE MARKERS

IDENTIFY WIRE AND CABLES OF ANY SIZE



Actual Size marker  
1 1/2" long for wires  
1/4" O.D. and over.



Actual Size Marker  
3/4" long for wires  
5/32" to 1/4" O.D.

Identification applied around-the-wire without ever touching adhesive side of marker . . . "with E-Z-Codes you grab the tab—not the adhesive" . . . Available in popular Vari-Temp cloth listed below, Aluminum-foil, Vinyl-plastic, Polyester-film. Ask for complete Westline stock list (form EZ8-1) of thousands of markers . . . specials available too.

Better Stick with E-Z Codes

## VARI-TEMP CLOTH MARKERS (WBC)

PRINTING ON MARKER	MARKERS PER CARD	PRINTING ON MARKER	MARKERS PER CARD	PRINTING ON MARKER	MARKERS PER CARD
	3/4"	1 1/2"	3/4"	3/4"	1 1/2"
NUMBERS ALL THE SAME		NUMBERS IN SEQUENCE		cont'd.	
0	72	36	1-33	66	33
1	72	36	34-66	66	33
2	72	36	67-99	66	33
	and so on thru			and so on thru	
98	72	36	225-249	50	25
99	72	36	250-274	50	25
100	52	26	275-299	50	25
	and so on thru			and so on thru	
598	52	26	1975-1999	50	25
599	52	26	NUMBERS IN REPEATED SEQUENCE		
600	52	26	0-9	60	30
CAPITAL LETTERS			0-10	66	33
A	72	36	1-3	72	36
B	72	36	1-4	72	36
	and so on thru		1-5	70	35
Y	72	36	1-6	72	36
Z	72	36	LETTERS IN REPEATED SEQUENCE		
			A-Z	72	36
			plus A-J	72	36
			A-Z	70	35
			plus 0-9	70	35
			A-E	70	35
			F-J	70	35
			K-O	70	35
			P-T	70	35
			U-Z	72	36

## NET PRICES

QUANTITY	VARI-TEMP (WBC) CLOTH
30-99 cards	\$20.00/c
100-499 cards	16.00/c
500-999 cards	14.00/c
1000-2499 cards	13.00/c
2500-4999 cards	12.50/c
5000-9999 cards	12.00/c

over 10,000 write for quotation  
Specify 1 1/2" or 3/4" marker length

Also available: Numbers repeated, Letters in Sequence, lower case letters, Color Codes, Colors with numbers, Symbol, phase & cycle markers, etc.



Actual Size Marker

1/2" long stock marker for miniature wires under 5/32" O.D.

Legend appears five times for maximum "around-the-wire" visibility.

## MINI-MARKERS (Miniature) WBC

PRINTING ON MARKER	MARKERS PER CARD	PRINTING ON MARKER	MARKERS PER CARD	PRINTING ON MARKER	MARKERS PER CARD
	1/2"	1/2"	1/2"	1/2"	1/2"
NUMBERS ALL THE SAME		NUMBERS IN SEQUENCE		COMBINATION CARD	
0	100	markers per card	0-49	100	markers per card
1	100	markers per card	50-99	100	markers per card
and so on thru			100-132	66	markers per card
99	100	markers per card	133-165	66	markers per card
100	66	markers per card	166-198	66	markers per card
and so on thru			199-231	66	markers per card
250	66	markers per card	232-264	66	markers per card
			265-297	66	markers per card
LETTERS ALL THE SAME					
A	100	markers per card	Two rows: Each row consisting of one marker A thru Z and 0 thru 15 and FIL, GRD, B+, PRI, SEC, PLA. (96 markers per card).		
B	100	markers per card			
and so on thru					
Z	100	markers per card			

## NET PRICES

QUANTITY	MINI-MARKERS (WBC)
30-99 cards	\$18.00/c
100-499 cards	14.40/c
500-999 cards	12.60/c
1000-2499 cards	11.70/c
2500-4999 cards	11.25/c
5000-9999 cards	10.80/c

over 10,000 write for quote  
1/2" long marker

Also available: Sub-Miniature Markers from stock—write for form #EZ8-1.

Better Stick with E-Z Codes

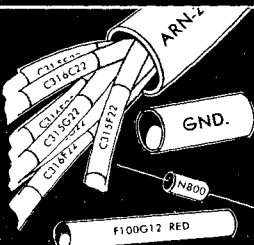


clear area wraps around itself to protect the printed area.

### SELF-LAMINATING Wire Markers

Designed to resist oils, grease, chemicals, fluids, foreign matter. Available in variety of printed and blank "write-on" type markers.

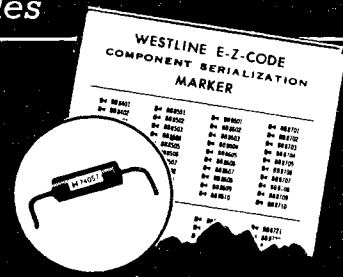
Free samples, literature write for Form #SL4-6



### SHUR-CODE Pre-printed Sleeving

Printed insulation sleeving that is slipped over wires, cables, harnesses for permanent identification. Standard and Special materials meet mil spec.

Free samples, literature write for Form #051258



### COMPONENT SERIALIZATION Micro-miniature Markers

Designed to identify miniature components. Available in any combination of codes. Self-adhering markers are ready for application. Meets mil spec.

Free samples, literature write for Form #CS1060

— Distributorships Available —

# WESTLINE E-Z-CODE® DIVISION

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